

AIP
AERONAUTICAL INFORMATION PUBLICATION
UNITED STATES OF AMERICA

TWENTY-FIFTH EDITION

DATED 13 SEPTEMBER 2018

AMENDMENT 1

28 FEB 2019

CONSULT NOTAM FOR LATEST INFORMATION

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIP Amendment 1

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28 February 2019

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PART 1 – GENERAL (GEN)

GEN 0.

GEN 0.1 Preface

1. Name of the Publishing Authority

1.1 The United States of America Aeronautical Information Publication (AIP) is published by the authority of the Federal Aviation Administration.

2. Applicable ICAO Documents

2.1 The AIP is prepared in accordance with the Standards and Recommended Practices (SARP) of Annex 15 to the Convention on International Civil Aviation and the Aeronautical Information Services Manual (ICAO Doc 8126). Charts contained in the AIP are produced in accordance with Annex 4 to the Convention on International Civil Aviation and the Aeronautical Chart Manual (ICAO Doc 8697). Differences from ICAO Standards, Recommended Practices and Procedures are given in subsection GEN 1.7.

3. The AIP Structure and Established Regular Amendment Interval

3.1 The AIP Structure

The AIP is made up of three Parts; General (GEN), En Route (ENR), and Aerodromes (AD); each divided into sections and subsections as applicable, containing various types of information subjects.

3.1.1 PART 1 – General (GEN)

PART 1 consists of five sections containing information as briefly described hereafter:

3.1.1.1 GEN 0. – Preface; Record of AIP Amendments; Checklist of AIP Pages; and Table of Contents to PART 1.

3.1.1.2 GEN 1. National Regulations and Requirements – Designated Authorities; Flights Into or Over U.S. Territorial Airspace; Entry, Transit, and Departure of Cargo; Aircraft Instruments, Equipment, and Flight Documents; Summary of National

Regulations and International Agreements/Conventions; and Differences from ICAO Standards, Recommended Practices, and Procedures.

3.1.1.3 GEN 2. Tables and Codes – Measuring System, Time System, and Aircraft Markings; Abbreviations Used in AIS Publications; Chart Symbols; Location Indicators; List of Radio Navigation Aids; Conversion Tables; and Sunrise/Sunset Tables.

3.1.1.4 GEN 3. Services – Aeronautical Information Services; Aeronautical Charts; Air Traffic Services; Communication Service; Meteorological Services; Search and Rescue; and Aircraft Rescue and Fire Fighting Communications.

3.1.1.5 GEN 4. Charges for Aerodromes/Heliports and Air Navigation Services – Fees and Charges; and Air Navigation Facility Charges.

3.1.2 PART 2 – En Route (ENR)

PART 2 consists of seven sections containing information as briefly described hereafter:

3.1.2.1 ENR 0. – Checklist of AIP Pages; and the Table of Contents to PART 2.

3.1.2.2 ENR 1. General Rules and Procedures – General Rules; Visual Flight Rules; Instrument Flight Rules; ATS Airspace Classification; Holding, Approach, and Departure Procedures; ATS Surveillance Services and Procedures; Altimeter Setting Procedures; Flight Planning; Addressing of Flight Plans for Domestic or international Flight Planning; National Security and Interception Procedures; Medical Facts for Pilots; Safety, Hazard, and Accident Reports; and Performance–Based Navigation (PBN) and Area Navigation (RNAV).

3.1.2.3 ENR 2. Air Traffic Services Airspace.

3.1.2.4 ENR 3. ATS Routes – Lower ATS Routes; Upper ATS Routes; Area Navigation Routes; and Other Routes.

3.1.2.5 ENR 4. Navigation Aids/Systems – Navigation Aids – En Route; and Special Navigation Systems.

3.1.2.6 ENR 5. Navigation Warnings – Prohibited, Restricted, and Other Areas; Military Exercise and Training Areas; Bird Migration and Areas with Sensitive Fauna; and Potential Flight Hazards.

3.1.2.7 ENR 6. Helicopter Operations – Helicopter IFR Operations; and Special Operations.

3.1.2.8 ENR 7. Oceanic Operations – General Procedures; Data Link Procedures; Special Procedures for In-Flight Contingencies in Oceanic Airspace; Operational Policy 50 NM Lateral Separation; Operational Policy ADS-C Distance-Based Separation; North Atlantic (NAT) Oceanic Clearance Procedures; North Atlantic (NAT) Time-keeping Procedures; North Atlantic (NAT) Safety Information; San Juan FIR Customs Procedures; Y-Routes; Atlantic High Offshore Airspace Offshore Routes Supporting Florida Airspace Optimization; Reduced Separation Climb/Descent Procedures; and New York Oceanic Control Area (OCA) West Flight Level Allocation.

3.1.3 PART 3 – Aerodromes (AD)

PART 3 consists of three sections containing information as briefly described hereafter:

3.1.3.1 AD 0. – Checklist of AIP Pages; and Table of Contents to PART 3.

3.1.3.2 AD 1. Aerodromes – Introduction: Aerodrome Availability.

3.1.3.3 AD 2. Aerodromes: Listing of Aerodromes.

3.2 Regular Amendment Interval

Regular amendments to the AIP will be issued every 6 months on Aeronautical Information Regulation and Control (AIRAC) effective dates listed in TBL GEN 0.1–1. A list of all AIRAC effective dates are contained in TBL GEN 0.1–2.

TBL GEN 0.1–1
Publication Schedule

New Edition or Amendment	Cutoff Date for Submission	Effective Date of Publication
Twenty-Fifth Edition	29 MAR 18	13 SEP 18
Amendment 1	13 SEP 18	28 FEB 19
Amendment 2	28 FEB 19	15 AUG 19
Amendment 3	15 AUG 19	30 JAN 20

TBL GEN 0.1–2
AIRAC System Effective Dates

2018	2019	2020	2021	2022
4 JAN	3 JAN	2 JAN	28 JAN	27 JAN
1 FEB	31 JAN	30 JAN	25 FEB	24 FEB
1 MAR	28 FEB	27 FEB	25 MAR	24 MAR
29 MAR	28 MAR	26 MAR	22 APR	21 APR
26 APR	25 APR	23 APR	20 MAY	19 MAY
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19 JUL	18 JUL	16 JUL	12 AUG	11 AUG
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11 OCT	10 OCT	8 OCT	4 NOV	3 NOV
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GEN 1. NATIONAL REGULATIONS AND REQUIREMENTS

GEN 1.1 Designated Authorities

1. Introduction

1.1 This section contains the contact information for certain designated U.S. authorities that are directly involved with flights that enter, exit, or transit U.S. territorial airspace.

2. Designated Authorities

2.1 Certain designated authorities concerned with facilitation of aircraft operations in the U.S. can be contacted as follows:

2.1.1 U.S. Customs and Border Protection (CBP) for:

2.1.1.1 Customs requirements, including Advanced Passenger Information System (APIS) at <https://www.cbp.gov>.

2.1.1.2 CBP Service Offices/Ports of Entry at www.cbp.gov/contact/ports.

2.1.2 U.S. Transportation Security Administration (TSA) for TSA security programs at <https://www.tsa.gov/>.

2.1.3 U.S. Department of Transportation (DOT) for foreign aircraft licensing and permits at <https://www.transportation.gov>.

2.1.4 Federal Aviation Administration (FAA) at <https://www.faa.gov>.

2.1.5 Additional designated authorities are listed with contact information on the FAA Prohibitions, Restrictions, and Notices website located at https://www.faa.gov/air_traffic/publications/us_restrictions/.

3. Applicable ICAO Documents

3.1 National regulations and practices concerning facilitation of international air transport are being carried out at all international airports as far as possible in accordance with the provisions set forth in the Standards and Recommended Practices of Annex 9 to the Convention on International Civil Aviation. Differences from certain Annex 9 provisions exist only in those cases where it has not yet been possible to amend national legislation accordingly. Continuous efforts are being made to eliminate these differences.

GEN 1.2 Flights Into or Over U.S. Territorial Airspace

1. General

1.1 All aircraft operators that conduct flights into or over U.S. territorial airspace must comply with the following:

1.1.1 National security requirements contained in AIP Section ENR 1.12, National Security and Intercept Procedures;

REFERENCE-

FAA Notices to Airmen (NOTAMS), Special Notices, at (http://www.faa.gov/pilots/flt_plan/notams/).

FAA Prohibitions, Restrictions, and Notices website located at https://www.faa.gov/air_traffic/publications/us_restrictions/

1.1.2 All applicable sections of Title 14, Code of Federal Regulations (CFR), Part 91, General Operating and Flight Rules, particularly Subpart H, Foreign Aircraft Operations and Operations of U.S. Registered Civil Aircraft Outside of the United States; and Rules Governing Persons on Board Such Aircraft;

1.1.3 All applicable sections of Title 49, United States Code (USC), Transportation, particularly Subtitle VII, Aviation Programs (sections 40101 through 50105);

1.1.4 All applicable sections of U.S. Customs and Border Protection (CBP) and Transportation Security Administration (TSA) requirements in Title 19 USC Part 122, Air Commerce Regulations.

1.2 U.S. CBP designates the airport of entry or other location for international aircraft that land or depart within U.S. territorial airspace. For information pertaining to U.S. CBP Service Offices/Ports of Entry, see AIP GEN 1.1, paragraph 2.1.1.

1.3 Subject to the observance of the applicable rules, conditions, and limitations of the Federal Aviation Regulations and the Department of Transportation (DOT)/Office of the Secretary of Transportation (OST), Office of International Aviation, as described below, foreign civil aircraft registered and manufactured in any foreign country which is a member of the International Civil Aviation Organization (ICAO) may be navigated in the U.S. Foreign civil aircraft manufactured in a country which at the time of manufacture was not a member of ICAO may be navigated in the U.S. if the country has notified ICAO that the aircraft meets the standards described in the

Chicago Convention or if a notice has been filed with the DOT/OST, Office of International Aviation, through diplomatic channels, that the aircraft meets the standards described in the Chicago Convention.

1.4 Aircraft registered under the laws of foreign countries, not members of the ICAO, may be navigated in U.S. territory only when authorized by the DOT/OST, Office of International Aviation.

1.5 All foreign civil aircraft operated to, from, or within the U.S. must carry on board effective certificates of registration and air worthiness issued by the country of registry. Also, each member of the flight crew must carry a valid airman certificate or license authorizing that member to perform their assigned functions in the aircraft.

1.6 Transportation of firearms by aircraft passengers. Regulations of the Alcohol, Tobacco and Firearms Division of the Internal Revenue Service make it unlawful for any person knowingly to deliver or cause to be delivered to any common or contract carrier for transportation or shipment in interstate or foreign commerce, to persons other than licensed importers, licensed manufacturers, licensed dealers, or licensed collectors, any package or other container in which there is any firearm or ammunition without written notice to the carrier that such firearm or ammunition is being transported or shipped; except that any passenger who owns or legally possesses a firearm or ammunition being transported aboard any common or contract carrier for movement with the passenger in interstate or foreign commerce may deliver said firearm or ammunition into the custody of the pilot, captain, conductor or operator of such common or contract carrier for the duration of the trip.

1.7 Miscellaneous Information

1.7.1 Commercial air transport operators in the U.S. must adhere to Annex 6 – Operation of Aircraft with the proviso that aircraft which have no operators' local representative available to them will be required to carry a fixed fuel reserve of not less than 45 minutes at the approved fuel consumption rate plus a variable reserve equivalent to 15% of the fuel required from departure to destination and to an alternate if an alternate is required; or where the reserve calculated in accordance with the above

exceeds two hours at the approved fuel consumption rate – two hours reserve fuel.

2. Public Health

2.1 Public Health Measures Applied to Aircraft

2.1.1 At airports without Public Health Service Quarantine staff, the Customs, Immigration, or Agriculture Officer present will represent the Public Health Service.

2.1.2 No public health measures are required to be carried out with respect to aircraft entering U.S. territory except that disinfection of an aircraft may be required if it has departed from a foreign area that is infected with insect-borne communicable disease, and the aircraft is suspected of harboring insects dangerous to public health. Disinfection is defined as: “The operation in which measures are taken to kill the insect vectors of human disease present in carriers and containers.”

2.1.3 Disinfection must be the responsibility of the air carrier and must be subject to monitoring by the Director of the Public Health Service.

2.1.4 Disinfection of the aircraft must be accomplished immediately after landing and blocking. The cargo compartment must be disinfected before the mail, baggage, and other cargo are discharged, and the rest of the aircraft must be disinfected after passengers and crew deplane.

2.1.5 Disinfection must be performed with an approved insecticide in accordance with the manufacturer’s instructions. The current list of approved insecticides and sources may be obtained from the Division of Quarantine, Center for Prevention Services, Centers for Disease Control, Atlanta, GA 30333.

2.1.6 All food and potable water taken on board an aircraft at any airport and intended for human consumption thereon must be obtained from sources approved in accordance with Title 21 CFR Parts 1240 and 1250.

2.1.7 Aircraft inbound or outbound on an international flight must not discharge over the U.S. any excrement or waste water or other polluting materials. Arriving aircraft must discharge such matter only at servicing areas approved under regulations cited in paragraph 2.1.6 above.

2.1.8 Aircraft on an international voyage (that are in traffic between U.S. airports) must be subject to inspection when there occurs on board, among passengers or crew, any death, or any ill person, or when illness is suspected to be caused by insanitary conditions.

2.2 Public Health Requirements

2.2.1 Disembarking passengers are not required to present a vaccination certificate except when coming directly from an area infected with cholera, yellow fever, or smallpox. Smallpox vaccination is necessary only if, within the 14 days before arrival, the traveler has been in a country reporting smallpox.

2.2.2 The pilot in command of an aircraft destined for a U.S. airport must report immediately to the Quarantine Station at or nearest the airport at which the aircraft will arrive, the occurrence, on board, of any death or an ill person among passengers or crew. Ill person is defined as:

2.2.2.1 Temperature of 100 degrees Fahrenheit (38 degrees Celsius) or greater accompanied by rash, glandular swelling, or jaundice, or which has persisted for more than 48 hours; or

2.2.2.2 Diarrhea, defined as the occurrence in a 24-hour period of three or more loose stools or of a greater than normal (for the person) amount of loose stools.

2.2.3 The pilot in command is responsible for detaining the aircraft and persons and things arriving thereon and keeping them free from unauthorized contact pending release when required by the Foreign Quarantine Regulations of the Public Health Service described in Title 42 CFR Part 71.

3. Scheduled Common Carriage Flights

3.1 General

3.1.1 Generally, when an operator of an aircraft advertises its transportation services to the general public or particular classes or segments of the public for compensation or hire, it is a common carrier. In turn, the transportation service the operator performs is considered to be in common carriage. The scheduled flights into, from and landing in the territory of the U.S. for purposes of loading or unloading passengers, cargo and mail (revenue flights), must first obtain from the U.S. DOT/OST, Office of International Aviation (X-40), a foreign air carrier permit. Applications for common carrier

authority must be filed with X-40. If X-40, with the President's approval, determines that the carrier is fit, willing, and able to perform the service it proposes and that the service is in the public interest, X-40 must issue the carrier a foreign air carrier permit, subject to the disapproval of the President of the U.S.

3.1.2 The scheduled flights in transit across the territory of the U.S. or landing for reasons other than for the purpose of loading and unloading of passengers, cargo or mail (nonrevenue flights), which are registered in a State which is a party to the International Air Services Transit Agreement, must submit a notice of transit to X-40. The notice of transit must be submitted at least 15 days prior to the flight and must include:

3.1.2.1 Name, country of organization and nationality (including the nationality of all ownership interests) of the operator;

3.1.2.2 Name of the country in which the aircraft to be used in the service is registered;

3.1.2.3 A full description of the proposed operations including the type of operations (passenger, property, mail, or combination), date of commencement, duration and frequency of flights, and routing (including each terminal and intermediate point that will be served);

3.1.2.4 Copies of advertising of the flights, if advertised in the U.S.

3.1.3 If the notice is timely filed, the flights may be operated in the absence of a contrary notification from X-40.

3.1.4 Scheduled flights in transit across the territory of the U.S. or landing for reasons other than for the purpose of loading and unloading of passengers, cargo or mail (nonrevenue flights), which are registered in a State which is not a party to the International Air Services Transit Agreement, must obtain prior permission from X-40 at least 15 days prior to the flight. All permission requests must include the same information as requested in paragraph 3.1.2 (see also paragraph 1.4). The carrier may not transit U.S. territory unless and until it receives a foreign aircraft permit to do so from X-40.

3.1.5 The permission to transit U.S. territory as described above also includes the right to make stops in the U.S. for technical purposes (for example, refueling and servicing of the aircraft) as long as the

stopover does not exceed 24 hours. Stopovers which do exceed 24 hours are permitted only in those cases where a transfer of passengers, property or mail to another aircraft is necessary for the safety of the aircraft, passengers, property, or crew. Stopovers for the pleasure or convenience of passengers are not included in the transit authority.

3.2 Documentary Requirements for Clearance of Aircraft

3.2.1 The undermentioned documents must be submitted to U.S. authorities for clearance on entry and departure of aircraft. All documents listed below must follow the ICAO standard format as set forth in the relevant appendixes to Annex 9, and are acceptable only when furnished in English.

3.2.2 Aircraft Documents Required (Arrival and Departure)

TBL GEN 1.2-1

Required by	General Declaration	Passenger Manifest	Cargo Manifest
Customs	1	0	1
Agriculture			
Plant and Quarantine	1	0	1
Immigrations	1	0	1
Public Health	1	0	0
Total	4	0	3

4. Nonscheduled, Noncommon Carriage Flights

4.1 General

4.1.1 Nonscheduled, noncommon carriage flights are transportation services for remuneration or hire that are not offered to the general public.

4.1.2 Nonscheduled flights in transit across the territory of the U.S. or landing for reasons other than the purposes of loading and unloading passengers, cargo or mail (nonrevenue flights) which are registered in a State which is a member of the International Civil Aviation Organization (ICAO) may do so without the necessity of obtaining prior permission, provided passengers are not permitted to leave the airport during stopover or provided that each stopover does not exceed 24 hours. Stopovers which do exceed 24 hours are permitted only in those cases where a transfer of passengers, property or mail to another aircraft is necessary for the safety of the

aircraft, passengers, property, or crew. Stopovers for the pleasure or convenience of passengers are not included in the transit authority.

4.1.3 Nonscheduled flights landing in the territory of the U.S. for reasons of loading or unloading passengers, cargo or mail (revenue flights), must obtain prior permission from the DOT/OST, Office of International Aviation (X-40), at least 15 days prior to the flight. All permission requests must include:

4.1.3.1 Name and address of applicant.

4.1.3.2 Aircraft make, model, and registration or identification marks.

4.1.3.3 Country in which the aircraft is registered.

4.1.3.4 Name and address of registered owner of aircraft.

4.1.3.5 Type of flight(s) (passenger, cargo, or agricultural or industrial operation).

4.1.3.6 Purpose of flight(s).

4.1.3.7 Date of the flight(s).

4.1.3.8 Routing of the flight(s).

4.1.3.9 Number of flights.

4.1.3.10 Name of charterer.

4.1.3.11 Charter price.

4.1.4 Applications should be made on DOT/OST, Office of International Aviation Form 4509; however, if time does not permit, applications by telegram will be accepted as long as they include the information described above. Telegraphic applications must include a prepaid voucher sufficient to allow a sixty word reply. The permit must be carried aboard the aircraft during flight over U.S. territory.

4.2 The following commercial air operations require preflight authorization from X-40:

4.2.1 Agricultural and industrial operations which include, but are not limited to, such services as crop dusting, pest control, pipeline patrols, mapping, surveying, banner towing, or skywriting.

4.2.2 Occasional and infrequent planeload charter flights carrying persons or property to and/or from the

U.S. The number of these flights that may be performed is limited to six in any calendar year. Foreign civil aircraft are not permitted to transport persons or property or mail for compensation or hire between points wholly within the U.S.

4.2.3 Continuing cargo operations for one or more contractors. Applicants may be authorized to serve up to 10 different contractors in a 12-month period; however, authorization may be granted only if it is clear that the service is not in common carriage and the carrier and contractor enter into a contract which provides for (a) continuing cargo operations for a period of at least 6 months; (b) an absolute or minimum number of flights or volume of cargo to be transported; and (c) a guarantee by the contractor to the carrier to pay for the minimum number of flights to be performed or volume of cargo to be transported whether or not he/she uses the capacity. Continuing cargo operations wholly within the U.S. cannot be authorized.

4.2.4 Persons wishing to operate foreign civil aircraft from, to, or within the U.S. other than as described in this section may request permission to perform those services by filing an application with X-40. The application should include the information described above in this section. Permission to perform these services may be granted if X-40 finds that the service is consistent with applicable law and is in the interest of the public of the U.S.

4.2.5 Nonscheduled flights in transit across the territory of the U.S. or landing with or without purposes of loading and unloading passengers, cargo or mail (revenue or nonrevenue flights) which are registered in a State which is not a member of the International Civil Aviation Organization (ICAO) must obtain prior permission from X-40 at least 15 days prior to the flight. All permission requests must include the same information as requested in paragraph 4.1.3. (See also paragraph 1.4).

4.3 Documentary Requirements for Clearance of Aircraft

4.3.1 Same requirements as for scheduled flights.

GEN 1.3 [RESERVED]

GEN 1.4 Entry, Transit, and Departure of Cargo

1. Requirements Concerning Cargo and Other Articles

1.1 Customs entry and clearance of cargo and unaccompanied baggage destined for points within U.S. territory must be completed at the first international airport of entry.

1.2 Transshipment of cargo and other articles must be dealt with at the first international airport of entry according to related regulations. All aircraft entering the U.S. or arriving any place in the U.S. from any other place in the U.S. carrying residue foreign cargo must not depart from the place of landing without receiving permission from the Customs officer.

2. Agricultural Quarantine Requirements

2.1 The U.S. Department of Agriculture, Plant Protection and Quarantine Division (PPQ), has strict requirements regarding the entry, handling and disposition of garbage and galley refuse on all flights arriving from any foreign country, except Canada (7 CFR Parts 94 and 330). A list of sanitary international airports approved by PPQ can be secured from any PPQ office at major airports (see Aerodrome Section).

2.2 The U.S. Department of Agriculture (USDA) specifies regulations for inspecting aircraft and persons moving from Hawaii, Puerto Rico, Guam, the Commonwealth of the Northern Mariana Islands, or the U.S. Virgin Islands. The person moving the aircraft must contact and offer an inspector the opportunity to inspect the aircraft (7 CFR Parts 318.13 and 318.58).

2.3 Meat, meat products, milk, live birds, poultry, or other domestic farm animals can only enter the U.S. under certain conditions from certain countries under the regulations of the PPQ.

2.4 No insects or other plant pests must knowingly be transported into the U.S. If the pilot of any aircraft has reason to believe any flying or crawling insects are aboard his/her aircraft, such information should be relayed to the nearest PPQ office or inspector when landing.

2.5 Permits are required to bring most fruits, vegetables, plants, seeds, etc., into the U.S. from foreign countries. A guide to restricted or prohibited products can be secured from any PPQ office.

2.6 Dogs, cats, monkeys, psittacine birds (parrot family), turtles, shipments of disease organisms and vectors, and dead bodies are subject to entry restrictions prescribed in the Foreign Quarantine Regulations of the Public Health Service (42 CFR Part 71, Subject J).

3. Exportation of Aircraft, Cargo, and Other Articles

3.1 All U.S. and foreign registered aircraft departing the U.S. for a foreign destination on a temporary sojourn must have export authorization. The two types of export authorization are a license exception (AVS) and a license. Detailed information on both the license exception and the license can be obtained from:

The U. S. Department of Commerce
Bureau of Export Administration
Exporter Counseling Division
Washington, DC 20230
Telephone: (202) 482-4811
Facsimile: (202) 482-3617

3.2 A license exception (AVS) is an authorization to export the aircraft if certain criteria are satisfied. This exception does not require an application nor will there be an issuance of a license document prior to the flight.

REFERENCE—
15 CFR Section 740.15

3.3 License exception AVS authorizes an operating civil aircraft of foreign registry that has been in the U.S. on a temporary sojourn to depart from the U.S. under its own power for any destination, provided that:

3.3.1 No sale or transfer of operational control of the aircraft to nationals of Cuba, Iran, Iraq, Libya, North Korea, Sudan, or Syria has occurred while in the U.S.

3.3.2 The aircraft is not departing for the purpose of sale or transfer of operational control to nationals of

Cuba, Iran, Iraq, Libya, North Korea, Sudan, or Syria; and

3.3.3 It does not carry from the U.S. any item for which an export license is required and has not been granted by the U.S. Government.

3.4 License exception AVS authorizes a civil aircraft of U.S. registry operating under an Air Carrier Operating Certificate, Commercial Operating Certificate, or Air Taxi Operating Certificate issued by the Federal Aviation Administration or conducting flights under operating specifications approved by the Federal Aviation Administration pursuant to 14 CFR Part 129 of the regulations of the Federal Aviation Administration, may depart from the U.S. under its own power for any destination provided that:

3.4.1 The aircraft does not depart for the purpose of sale, lease or other disposition of operational control of the aircraft or its equipment, parts, accessories, or components to a foreign country or any national thereof.

3.4.2 The aircraft's U.S. registration will not be changed while abroad.

3.4.3 The aircraft is not to be used in any foreign military activity while abroad; and

3.4.4 The aircraft does not carry from the U.S. any item for which a license is required and has not been granted by the U.S. Government.

3.5 License exception AVS authorizes any other operating civil aircraft of U.S. registry to depart from the U.S. under its own power for any destination, except to Cuba, Iran, Iraq, Sudan, Syria, Libya, and North Korea (flights to these destinations require a license), provided that:

3.5.1 The aircraft does not depart for the purpose of sale, lease or other disposition of operational control

of the aircraft, or its equipment, parts, accessories, or components to a foreign country or national thereof.

3.5.2 The aircraft's U.S. registration will not be changed while abroad.

3.5.3 The aircraft is not to be used in any foreign military activity while abroad.

3.5.4 The aircraft does not carry from the U.S. any item for which an export license is required and has not been granted by the U.S. Government; and

3.5.5 The aircraft will be operated while abroad by a U.S. licensed pilot, except that during domestic flights within a foreign country, the aircraft may be operated by a pilot currently licensed by that foreign country.

3.6 A license authorizes the departure of the aircraft within the special limitations set forth in the license document. It is issued only on the basis of a formal application requesting the issuance of a license prior to the flight.

3.7 Once it has been determined that an export license is required, an application for the license should be submitted to the Bureau of Export Administration, U.S. Department of Commerce. An application consists of Form BXA-748P (multipurpose application). This form and information on the application process can be obtained free of charge from either the U.S. Department of Commerce in Washington or any of its District Offices. (See paragraph 4.)

3.8 Applications for validated licenses by non-U.S. citizens require that the applicant appoint an agent subject to U.S. jurisdiction to act in his/her behalf. If an emergency situation necessitates the expedition of the application process, contact the Counseling Division Staff of the Bureau of Export Administration (telephone 202-482-4811) or any Department of Commerce District Office for assistance.

ANNEX 2 – RULES OF THE AIR	
Chapter 1	Definitions
Advisory Airspace	Advisory service is provided in terminal radar areas and the outer areas associated with Class C and Class E airspace areas.
Aerodrome control tower	In the U.S., an “aerodrome control facility” is referred to as a “tower” or “airport traffic control tower”; “aerodrome control” is referred to as “airport traffic control service.”
Aerodrome Traffic Zone	There are no more Control Zones (Airport Traffic Zones) or Airport Traffic Areas (ATA). In the 7110.65, PCG, Controlled Airspace covers the defined dimensions of airspace. Class D was formerly the ATA (normally a 5NM radius around the airport). The old Control Zones were extensions of the ATA to encompass (ILS) Approach Paths.
Airborne Collision Avoidance System (ACAS)	The U.S. uses “traffic alert collision avoidance system (TCAS).” TCAS is an airborne collision avoidance system based on radar beacon signals and operates independent of ground – based equipment. TCAS – I generates traffic advisories only. TCAS – II generates traffic advisories and resolution (collision avoidance) advisories in the vertical plane.
Air-ground Control Radio Station	FAA Pilot Controller Glossary defines a Flight Service Station (FSS) as an air traffic facility which provides pilot briefings, flight plan processing, en route flight advisories, search and rescue services, and assistance to lost aircraft and aircraft in emergency situations. FSSs also relay ATC clearances, process Notices to Airmen, and broadcast aviation weather and aeronautical information. In Alaska, FSSs provide Airport Advisory Services.
Air-taxiing	The U.S. uses “hover taxi” for this maneuver above 100 feet above ground level (AGL) and “air taxi” below 100 feet AGL.
Area control service	The U.S. does not use the term “area control service” to indicate controlled flight in controlled areas.
Area control centre	The U.S. equivalent facility for an Area Control Centre (ACC) is an Air Route Traffic Control Center (ARTCC).
ATS route	In U.S. domestic airspace, the term “ATS route” is not used. Routes in the U.S. include VOR airways, jet routes, substitute routes, and off-airway routes. The U.S. also uses instrument departure procedures (DPs) and standard terminal arrivals (STARs).
Controlled airspace	The U.S. terms for controlled airspace have different parameters than for ICAO.
Current Flight Plan	FAA Pilot Controller Glossary (PCG) defines flight plan as “specified information relating to the intended flight of an aircraft that is filed orally or in writing with an FSS or an ATC facility.” The Pilot Controller Glossary makes a specific distinction between current flight plan and filed flight plans, defining filed flight plans as “filed...without any subsequent changes or clearances.” Therefore, the PCG definition of flight plan includes changes brought about by clearances or amendments
Danger area	The term “danger area” is not used within the U.S. or any of its possessions or territories.
Estimated off-block time	The U.S. uses the term “estimated departure time” for domestic operations.
Flight information centre	The U.S. does not operate flight information centers (FICs). In the U.S., the services provided by FICs are performed by air traffic control (ATC) facilities, flight service stations (FSSs), and rescue coordination centers (RCCs).
Ground Visibility	The U.S. defines Ground Visibility as: Prevailing horizontal visibility near the earth’s surface as reported by the United States National Weather Service or an accredited observer.
Instrument meteorological conditions	The U.S. air traffic service units use the phrase “IFR conditions.”
Level	The U.S. uses “altitude” or “flight level” rather than “level” and “cruising altitude” rather than “cruising level.” The term “level” is not used to mean “height,” “altitude,” or “flight level.”

Movement area	<p>In the U.S., the term “movement area” means “the runways, taxiways, and other areas of an airport/heliport which are utilized for taxiing, hover taxiing, air-taxiing, take-off and landing of aircraft, exclusive of loading ramps and parking areas. At those airport/heliports with a tower, specific approval for entry onto the movement area must be obtained from ATC.”</p> <p>The U.S. does not use an all-inclusive term to denote the movement area plus loading ramps and parking areas of an airport, nor does the U.S. use the term “maneuvering area” in any related context.</p>
Repetitive flight plan (RPL)	The U.S. uses the term “stored flight plan” for domestic operations.
Terminal control area	<p>In the U.S., “terminal control area” has been replaced by “Class B airspace/area.” Standard IFR services are provided to IFR aircraft operating in Class B airspace.</p> <p>Class B airspace CFR 14 part 71.41, exceeds TCA with more restrictive airman’s qualifications and aircraft certifications.</p>
Total estimated elapsed time	The U.S. uses “estimated time en route” for domestic operations.
Traffic Avoidance Advice	The U.S. uses the term Traffic Advisory
Transition altitude	In U.S. domestic airspace, “transition altitude,” “layer” and “level” are not used; however, in the U.S., flight levels begin at FL 180 where the reference datum of 29.92 inches of mercury is used as the constant atmospheric pressure. Below FL 180, altitudes are based on barometric pressure readings. QNH and QFE altimeter settings are not provided in domestic U.S. airspace.
Visibility	The U.S. defines Visibility as: The ability, as determined by atmospheric conditions and expressed in units of distance, to see and identify prominent unlighted objects by day and prominent lighted objects by night. Visibility is reported as statute miles, hundreds of feet, or meters. The U.S. identifies the following classes of visibility: Flight Visibility, Ground Visibility, Prevailing Visibility, Runway Visibility Value, and Runway Visual Range.
Visual meteorological conditions	The U.S. air traffic service units use the phrase “VFR conditions.”
Chapter 2	Applicability of the Rules of the Air
2.2	See difference under “Movement area.”
2.5	Except in an emergency, no pilot of a civil aircraft may allow a person who appears to be intoxicated or who demonstrates by manner or physical indications that the individual is under the influence of drugs (except a medical patient under proper care) to be carried in that aircraft.
Chapter 3	General Rules
3.1.8	In addition, aircraft shall not be flown in formation flight when passengers are carried for hire.
3.2 Note	See difference under “Movement area.”
3.2.2.6.1	See difference under “Movement area.”
3.2.3.2 d)	The U.S. national regulations do not require aircraft on the movement area of an airport, whose engines are running, to display lights which indicate that fact from sunset to sunrise.

Controlled flight	The US uses the term “IFR Clearance”.
Control Zone	The US uses the term “Surface Area”. Surface area is airspace contained by the lateral boundary of the Class B, C, D, or E airspace designated for an airport that begins at the surface and extends upward.
Cruising Level	Cruising Altitude – an altitude or flight level maintained during en route level flight. This is a constant altitude and should not be confused with a cruise clearance.
Downstream Clearance	Same as air traffic control clearance. Authorization for an aircraft to proceed under conditions specified by an air traffic control unit.
Flight Information Centre	In the US, flight information service and alerting service are often provided by flight service stations.
Level	The term “altitude” is used.
Maneuvering Area	Any locality either on land, water, or structures, including airports/heliports and intermediate landing fields, which is used, or intended to be used, for the landing and takeoff of aircraft whether or not facilities are provided for the shelter, servicing, or for receiving or discharging passengers or cargo.
Meteorological office	No PCG definition. However FSSs perform this duty.
Movement Area	The runways, taxiways, and other areas of an airport/heliport which are utilized for taxiing/hover taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading ramps and parking areas. At those airports/heliports with a tower, specific approval for entry onto the movement area must be obtained from ATC.
Pilot-in-command	The person who has final authority for the operation and safety of the flight has been designated as pilot in command before or during the flight and hold the appropriate category, class and type rating for the flight.
Traffic avoidance advice	US uses the term “Safety Alert”
Traffic information	US uses the term “Traffic Advisory”
Waypoint	A predetermined geographical position used for route/instrument approach definition, progress reports, published VFR routes, visual reporting points or points for transitioning and/or circumnavigating controlled and/or special use airspace, that is defined relative to a VORTAC station or in terms of latitude/longitude coordinates.

Chapter 2	General
2.3.2	Annex 11, paragraph 2.3.2 directs the flight information service to accomplish objective d) of para 2.2, “to provide advice and information for the safe and efficient conduct of flight.” Details on procedures to accomplish this objective are contained in FAA Order JO 7210.3, Part 4, Flight Service Stations. Specific procedures for accomplishing this objective are contained in FAA Order JO 7110.10, Flight Services. Also, the FAA Pilot Controller Glossary defines a Flight Service Station (FSS) as an air traffic facility which provides pilot briefings, flight plan processing, en route flight advisories, search and rescue services, and assistance to lost aircraft and aircraft in emergency situations. FSSs also relay ATC clearances, process Notices to Airmen, and broadcast aviation weather and aeronautical information. In Alaska, FSSs provide Airport Advisory Services.
2.5.2.2.1	FAA uses the generic term “controlled airspace” and “surface areas”
2.5.2.2.1.1	FAA also provides this service in Class E.
2.5.2.2.2	Annex 11, paragraph 2.3.2 directs the flight information service to accomplish objective d) of para 2.2, “to provide advice and information for the safe and efficient conduct of flight.” Details on procedures to accomplish this objective are contained in FAA JO Order 7210.3, Part 4, Flight Service Stations. Specific procedures for accomplishing this objective are contained in FAA Order JO 7110.10, Flight Services. Also, the FAA Pilot Controller Glossary defines a Flight Service Station (FSS) as an air traffic facility which provides pilot briefings, flight plan processing, en route flight advisories, search and rescue services, and assistance to lost aircraft and aircraft in emergency situations. FSSs also relay ATC clearances, process Notices to Airmen, and broadcast aviation weather and aeronautical information. In Alaska, FSSs provide Airport Advisory Services.
2.6	The Class F airspace is not used in the designation of U.S. airspace.
2.6.1	The U.S. has chosen not to use Class F airspace.
2.10.3.2.2	Class E–5 700/1200–foot airspace areas are used for transitioning aircraft to/from the terminal or en route environment.
2.10.3.3	En Route Domestic Airspace Areas consist of Class E airspace that extends upward from a specified altitude to provide controlled airspace in those areas where there is a requirement to provide IFR en route ATC services but the Federal airway structure is inadequate. En Route Domestic Airspace Areas may be designated to serve en route operations when there is a requirement to provide ATC service but the desired routing does not qualify for airway designation. Offshore/Control Airspace Areas are locations designated in international airspace (between the U.S. 12–mile territorial limit and the CTA/FIR boundary, and within areas of domestic radio navigational signal or ATC radar coverage) wherein domestic ATC procedures may be used for separation purposes.
2.10.5.1	A Class D airspace area shall be of sufficient size to: 1. Allow for safe and efficient handling of operations. 2. Contain IFR arrival operations while between the surface and 1,000 feet above the surface, and IFR departure operations while between the surface and 1,000 feet above the surface, and IFR departure operations while between the surface and the base of adjacent controlled airspace.
2.10.5.2	A Class D airspace area shall be of sufficient size to: 1. Allow for safe and efficient handling of operations. 2. Contain IFR arrival operations while between the surface and 1,000 feet above the surface, and IFR departure operations while between the surface and the base of adjacent controlled airspace. Size and shape may vary to provide for 1 and 2. The emphasis is that a Class D area shall be sized to contain the intended operations.
2.10.5.3	Refer to Surface Areas
2.25.5	No time is issued prior to taxi for take–off. Time checks are given to the nearest quarter minute.
2.27.5	Process is described in the FAA Safety Management System Manual and the FAA Order 1100.161.

5.1.2.4 “E” for NOTAM classification “5” (domestic): No application (see ENR 1.10.)

5.2 Each NOTAM is provided with an identification letter adjoining the end of the word NOTAM meaning:

5.2.1 NOTAMN: NOTAM containing new information.

5.2.2 NOTAMC: NOTAM cancelling a previous NOTAM indicated.

5.2.3 NOTAMR: NOTAM replacing a previous NOTAM indicated.

5.3 A checklist of NOTAMs currently in force for each international NOTAM classification is issued each month over the Aeronautical Fixed Telecommunications Network (AFTN) to each International NOTAM office which exchanges International NOTAMs with the U.S. International NOTAM Office.

5.4 NOTAM Class I information is exchanged between the U.S. International NOTAM Office and the following International NOTAM Offices.

TBL GEN 3.1-1

COUNTRY	CITY
AFGHANISTAN	KABUL
ALBANIA	ROME
ALGERIA	ALGIERS
ANGOLA	LUANDA
ARGENTINA	BUENOS AIRES
AUSTRALIA	SIDNEY
AUSTRIA	VIENNA
AZORES	SANTO MARIA
BAHAMAS	NASSAU
BAHRAIN	BAHRAIN
BANGLADESH	DHAKA (DACCA)
BELGIUM	BRUSSELS
BERMUDA	BERMUDA
BOLIVIA	LA PAZ
BOSNIA	ZAGREB
BRAZIL	RIO DE JANEIRO
BULGARIA	SOFIA
CAMBODIA	PHNOM-PEHN
CANADA	OTTAWA
CAPE VERDE ISLANDS	AMILCAR CABRAL
CHILE	SANTIAGO

COUNTRY	CITY
CHINA	BEIJING
CHINA (FORMOSA)	TAIPEI
COLOMBIA	BOGOTA
CONGO	BRAZZAVILLE
CROATIA	ZAGREB
CUBA	HAVANA
CYPRUS	NICOSIA
CZECH REPUBLIC	PRAGUE
DENMARK	COPENHAGEN
DOMINICAN REPUBLIC	SANTO DOMINGO
ECUADOR	GUAYAQUIL
ENGLAND	LONDON
ESTONIA	TALLINN
ETHIOPIA	ADDIS ABABA
EYGPT	CAIRO
FIJI	NANDI
FINLAND	HELSINKI
FRANCE	PARIS
FRENCH GUIANA	MARTINIQUE
FRENCH POLYNESIA	TAHITI
GERMANY (WEST)	FRANKFURT
GHANA	ACCRA
GREECE	ATHENS
GREENLAND	SONDRE STROMFJORD
GUYANA	GEORGETOWN
HAITI	PORT-AU-PRINCE
HONDURAS	TEQUIGALPA
HONG KONG	HONG KONG
HUNGARY	BUDAPEST
ICELAND	REYKJAVIK
INDIA	BOMBAY
INDIA	CALCUTTA
INDIA	DELHI
INDIA	MADRAS
INDONESIA	JAKARTA
IRAN	TEHRAN (NOT AVBL)
IRELAND	SHANNON
ISRAEL	TEL AVIV
ITALY	ROME
JAMAICA	KINGSTON
JAPAN	TOKYO
JORDAN	AMMAN
KENYA	NAIROBI
KOREA (SOUTH)	SEOUL

COUNTRY	CITY
KUWAIT	KUWAIT
LATVIA	MOSCOW
LEBANON	BEIRUT
LIBERIA	ROBERTS
LIBYA	TRIPOLI
MALAYSIA	KUALA LUMPUR
MALTA	LUQA
MAURITIUS	PLAISANCE
MAYNNMAR	RANGOON
MEXICO	MEXICO CITY
MOROCCO	CASABLANCA
MOZAMBIQUE	MAPUTO
NAMIBIA	JOHANNESBURG
NAURU ISLAND	NAURU
NETHERLANDS	AMSTERDAM
NETHERLANDS ANTILLES	CURACAO
NEW GUINEA	PORT MOSEBY
NEW ZEALAND	AUCKLAND
NIGERIA	LAGOS
NORWAY	OSLO
OMAN	MUSCAT
PAKISTAN	KARACHI
PANAMA	TOCUMEN
PARAGUAY	ASUNCION
PERU	LIMA
PHILLIPINES	MANILLA
POLAND	WARSAW
PORTUGAL	LISBON
ROMANIA	BUCHAREST
RUSSIA	MOSCOW
SAMOA	FALEOLA
SAUDI ARABIA	JEDDAH
SENEGAL	DAKAR
SEYCHELLES	MAHE
SINGAPORE	SINGAPORE
SLOVAKIA	BRATISLAVA
SOLOMON ISLANDS	HONIARA
SOUTH AFRICA	JOHANNESBURG
SPAIN	MADRID
SRI LANKA	COLOMBO
SUDAN	KHARTOUM

COUNTRY	CITY
SURINAME	PARAMARIBO
SWEDEN	STOCKHOLM
SWITZERLAND	ZURICH
SYRIA	DAMASCUS
TANZANIA	DAR-ES-SALAAM
THAILAND	BANKOK
TRINIDAD	PORT OF SPAIN
TUNISIA	TUNIS
TURKEY	ANKARA
URUGUAY	MONTEVIDEO
VIET NAM	HO CHI MINH CITY
VENEZUELA	CARACAS
YEMEN	ADEN
YUGOSLAVIA	BELGRADE
ZAIRE	KINSHASA
ZAMBIA	LUSAKA
ZIMBABWE	HARARE

6. Pre-Flight Information Service at Aerodromes Available to International Flights

6.1 Pre-Flight Information Units in the U.S. are Flight Service Stations (FSS) operated by either FAA (in Alaska) or by federal contract facilities (elsewhere in the U.S.).

6.2 FSSs are air traffic facilities which provide pilot briefings, flight plan processing, en route flight advisories, search and rescue services, and assistance to lost aircraft and aircraft in emergency situations. FSSs also relay ATC clearances, process Notices to Airmen, and broadcast aviation weather and aeronautical information. In Alaska, designated FSSs also provide TWEB recordings, take weather observations, and provide Airport Advisory Services (AAS).

6.3 FSS locations, services and telephone information are available in the Chart Supplement U.S., Chart Supplement Alaska, and Chart Supplement Pacific.

6.4 Flight Service Stations have telecommunications access to all of the weather and NOTAM information available for preflight briefing to international locations with which the U.S. International NOTAM office exchanges information.

3.5 FAA Weather Services

3.5.1 The FAA provides the Flight Service program, which serves the weather needs of pilots through its flight service stations (FSS) (both government and contract via 1-800-WX-BRIEF) and via the Internet, through Leidos Flight Service.

3.5.2 The FAA maintains an extensive surface weather observing program. Airport observations (METAR and SPECI) in the U.S. are provided by automated observing systems. Various levels of human oversight of the METAR and SPECI reports and augmentation may be provided at select larger airports by either government or contract personnel qualified to report specified weather elements that cannot be detected by the automated observing system.

3.5.3 Other Sources of Weather Information

3.5.3.1 In Alaska, Telephone Information Briefing Service (TIBS) (FSS), and Transcribed Weather Broadcast (TWEB) locations, and telephone access to the TWEB (TEL-TWEB) provide continuously updated recorded weather information for short or local flights. Separate paragraphs in this section give additional information regarding these services.

3.5.3.2 Weather and aeronautical information is also available from numerous private industry sources on an individual or contract pay basis. Information on how to obtain this service should be available from local pilot organizations.

3.5.3.3 Pilots can access Leidos Flight Services via the Internet. Pilots can receive preflight weather data and file domestic VFR and IFR flight plans. The following is the FAA contract vendor:

Leidos Flight Service
Internet Access: <http://www.1800wxbrief.com>
For customer service: 1-800-WXBRIEF

3.6 Use of Aviation Weather Products

3.6.1 Air carriers and operators certificated under the provisions of 14 CFR Part 119 are required to use the aeronautical weather information systems

defined in the Operations Specifications issued to that certificate holder by the FAA. These systems may utilize basic FAA/National Weather Service (NWS) weather services, contractor- or operator-proprietary weather services and/or Enhanced Weather Information System (EWINS) when approved in the Operations Specifications. As an integral part of this system approval, the procedures for collecting, producing and disseminating aeronautical weather information, as well as the crew member and dispatcher training to support the use of system weather products, must be accepted or approved.

3.6.2 Operators not certificated under the provisions of 14 CFR Part 119 are encouraged to use FAA/NWS products through Flight Service Stations, Leidos Flight Service, and/or Flight Information Services–Broadcast (FIS–B).

3.6.3 The suite of available aviation weather product types is expanding, with the development of new sensor systems, algorithms and forecast models. The FAA and NWS, supported by various weather research laboratories and corporations under contract to the Government, develop and implement new aviation weather product types. The FAA's NextGen Aviation Weather Research Program (AWRP) facilitates collaboration between the NWS, the FAA, and various industry and research representatives. This collaboration ensures that user needs and technical readiness requirements are met before experimental products mature to operational application.

3.6.4 The AWRP manages the transfer of aviation weather R&D to operational use through technical review panels and conducting safety assessments to ensure that newly developed aviation weather products meet regulatory requirements and enhance safety.

3.6.5 The AWRP review and decision-making process applies criteria to weather products at various stages. The stages are composed of the following:

3.6.5.1 Sponsorship of user needs.

3.6.5.2 R & D and controlled testing.

3.6.5.3 Experimental application.

3.6.5.4 Operational application.

3.6.6 Pilots and operators should be aware that weather services provided by entities other than FAA, NWS, or their contractors may not meet FAA/NWS quality control standards. Hence, operators and pilots contemplating using such services should request and/or review an appropriate description of services and provider disclosure. This should include, but is not limited to, the type of weather product (for example, current weather or forecast weather), the currency of the product (that is, product issue and valid times), and the relevance of the product. Pilots and operators should be cautious when using unfamiliar products, or products not supported by FAA/NWS technical specifications.

NOTE—

When in doubt, consult with a FAA Flight Service Station Specialist.

3.6.7 In addition, pilots and operators should be aware there are weather services and products available from government organizations beyond the scope of the AWRP process mentioned earlier in this section. For example, governmental agencies such as the NWS and the Aviation Weather Center (AWC), or research organizations such as the National Center for Atmospheric Research (NCAR) display weather “model data” and “experimental” products which require training and/or expertise to properly interpret and use. These products are developmental prototypes that are subject to ongoing research and can change without notice. Therefore, some data on display by government organizations, or government data on display by independent organizations may be unsuitable for flight planning purposes. Operators and pilots contemplating using such services should request and/or review an appropriate description of services and provider disclosure. This should include, but is not limited to, the type of weather product (for example, current weather or forecast weather), the currency of the product (i.e., product issue and valid times), and the relevance of the product. Pilots and operators should be cautious when using unfamiliar weather products.

NOTE—

When in doubt, consult with a FAA Flight Service Station Specialist.

3.6.8 With increased access to weather products via the public Internet, the aviation community has access to an over whelming amount of weather information and data that support self-briefing. FAA AC 00-45 (current edition) describes the weather products distributed by the NWS. Pilots and operators using the public Internet to access weather from a third party vendor should request and/or review an appropriate description of services and provider disclosure. This should include, but is not limited to, the type of weather product (for example, current weather or forecast weather), the currency of the product (i.e., product issue and valid times), and the relevance of the product. Pilots and operators should be cautious when using unfamiliar weather products and when in doubt, consult with a Flight Service Specialist.

3.6.9 The development of new weather products, coupled with the termination of some legacy textual and graphical products may create confusion between regulatory requirements and the new products. All flight-related, aviation weather decisions must be based on all available pertinent weather products. As every flight is unique and the weather conditions for that flight vary hour by hour, day to day, multiple weather products may be necessary to meet aviation weather regulatory requirements. Many new weather products now have a Precautionary Use Statement that details the proper use or application of the specific product.

3.6.10 The FAA has identified three distinct types of weather information available to pilots and operators.

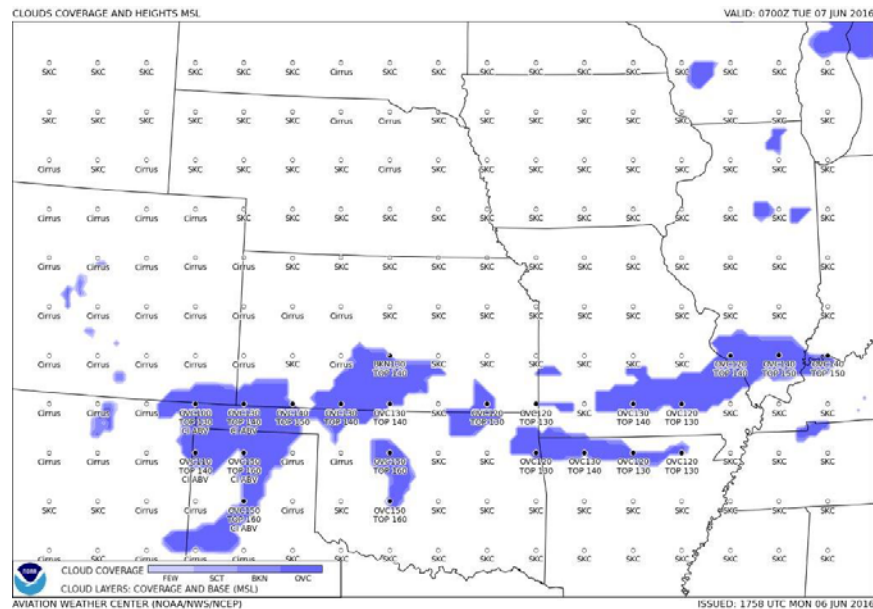
3.6.10.1 Observations. Raw weather data collected by some type of sensor suite including surface and airborne observations, radar, lightning, satellite imagery, and profilers.

3.6.10.2 Analysis. Enhanced depiction and/or interpretation of observed weather data.

3.6.10.3 Forecasts. Predictions of the development and/or movement of weather phenomena based on meteorological observations and various mathematical models.

3.6.11 Not all sources of aviation weather information are able to provide all three types of weather information. The FAA has determined that operators and pilots may utilize the following approved sources of aviation weather information:

FIG GEN 3.5–3
Aviation Cloud Forecast



3.8 Preflight Briefing

3.8.1 Flight Service Stations (FSS) are the primary sources for obtaining preflight briefings and to file flight plans by phone or the Internet. Flight Service Specialists are qualified and certified as Pilot Weather Briefers by the FAA. They are not authorized to make original forecasts, but are authorized to translate and interpret available forecasts and reports directly into terms describing the weather conditions which can be expected along the flight route and at the destination. Three basic types of preflight briefings (Standard, Abbreviated, and Outlook) are available to serve the pilot's specific needs. Pilots should specify to the briefer the type of briefing they want, along with their appropriate background information. This will enable the briefer to tailor the information to the pilot's intended flight. The following paragraphs describe the types of briefings available and the information provided in each briefing.

3.8.2 Standard Briefing. You should request a Standard Briefing any time you are planning a flight and you have not received a previous briefing or have not received preliminary information through mass dissemination media; for example, in Alaska only, TIBS and TWEB. International data may be inaccurate or incomplete. If you are planning a flight outside of U.S. controlled airspace, the briefer will

advise you to check data as soon as practical after entering foreign airspace, unless you advise that you have the international cautionary advisory. The briefer will automatically provide the following information in the sequence listed, except as noted, when it is applicable to your proposed flight.

3.8.2.1 Adverse Conditions. Significant meteorological and/or aeronautical information that might influence the pilot to alter or cancel the proposed flight; for example, hazardous weather conditions, airport closures, air traffic delays, etc. Pilots should be especially alert for current or forecast weather that could reduce flight minimums below VFR or IFR conditions. Pilots should also be alert for any reported or forecast icing if the aircraft is not certified for operating in icing conditions. Flying into areas of icing or weather below minimums could have disastrous results.

3.8.2.2 VFR Flight Not Recommended. When VFR flight is proposed and sky conditions or visibilities are present or forecast, surface or aloft, that, in the briefer's judgment, would make flight under VFR doubtful, the briefer will describe the conditions, describe the affected locations, and use the phrase "*VFR flight not recommended.*" This recommendation is advisory in nature. The final decision as to whether the flight can be conducted safely rests solely with the pilot. Upon receiving a

“VFR flight not recommended” statement, the non-IFR rated pilot will need to make a “go or no go” decision. This decision should be based on weighing the current and forecast weather conditions against the pilot’s experience and ratings. The aircraft’s equipment, capabilities and limitations should also be considered.

NOTE–

Pilots flying into areas of minimal VFR weather could encounter unforecasted lowering conditions that place the aircraft outside the pilot’s ratings and experience level. This could result in spatial disorientation and/or loss of control of the aircraft.

3.8.2.3 Synopsis. A brief statement describing the type, location, and movement of weather systems and/or air masses which might affect the proposed flight.

NOTE–

The first 3 elements of a standard briefing may be combined in any order when the briefer believes it will help to describe conditions more clearly.

3.8.2.4 Current Conditions. Reported weather conditions applicable to the flight will be summarized from all available sources; e.g., METARs, PIREPs, RAREPs. This element may be omitted if the proposed time of departure is beyond two hours, unless the information is specifically requested by the pilot.

3.8.2.5 En Route Forecast. En route conditions forecast for the proposed route are summarized in logical order; i.e., departure–climbout, en route, and descent.

3.8.2.6 Destination Forecast. The destination forecast (TAF) for the planned estimated time of arrival (ETA). Any significant changes within 1 hour before and after the planned arrival are included.

3.8.2.7 Winds Aloft. Forecast winds aloft for the proposed route will be provided using degrees of the compass. The briefer will interpolate wind directions and speeds between levels and stations as necessary to provide expected conditions at planned altitudes.

3.8.2.8 Notices to Airmen (NOTAMs)

a) Available NOTAM (D) information pertinent to the proposed flight, including special use airspace (SUA) NOTAMs for restricted areas, aerial refueling, and night vision goggles (NVG).

NOTE–

Other SUA NOTAMs (D), such as military operations

area (MOA), military training route (MTR), and warning area NOTAMs, are considered “upon request” briefing items as indicated in paragraph 3.8.2.10.

b) Prohibited Areas P-40, P-49, P-56, and the special flight rules area (SFRA) for Washington, DC.

NOTE–

For information on SFRAs, see ENR 5, Navigation Warnings, Paragraph 2.4.2.

c) FSS briefers do not provide FDC NOTAM information for special instrument approach procedures unless specifically asked. Pilots authorized by the FAA to use special instrument approach procedures must specifically request FDC NOTAM information for these procedures.

NOTE–

1. NOTAM information may be combined with current conditions when the briefer believes it is logical to do so.

2. Airway NOTAMs, procedural NOTAMs, and NOTAMs that are general in nature and not tied to a specific airport/facility (for example, flight advisories and restrictions, open duration special security instructions, and special flight rules areas) are briefed solely by pilot request. NOTAMs, graphic notices, and other information published in the NTAP are not included in pilot briefings unless the pilot specifically requests a review of this publication. For complete flight information, pilots are urged to review the printed information in the NTAP and the Chart Supplement U.S. in addition to obtaining a briefing.

3.8.2.9 Air Traffic Control (ATC) Delays. Any known ATC delays and flow control advisories which might affect the proposed flight.

3.8.2.10 Pilots may obtain the following from flight service station briefers upon request:

a) Information on Special Use Airspace (SUA) and SUA related airspace, except those listed in paragraph 3.8.2.8.

NOTE–

1. For the purpose of this paragraph, SUA and related airspace includes the following types of airspace: alert area, military operations area (MOA), warning area, and air traffic control assigned airspace (ATCAA). MTR data includes the following types of airspace: IFR training routes (IR), VFR training routes (VR), and slow training routes (SR).

2. Pilots are encouraged to request updated information from ATC facilities while in flight.

b) A review of airway NOTAMs, procedural NOTAMs, and NOTAMs that are general in nature and not tied to a specific airport/facility (for example,

flight advisories and restrictions, open duration special security instructions, and special flight rules areas), graphic notices, and other information published in the NTAP.

- c) Approximate density altitude data.
- d) Information regarding such items as air traffic services and rules, customs/immigration procedures, ADIZ rules, and search and rescue.
- e) NOTAMs, available military NOTAMs, runway friction measurement value NOTAMs.
- f) GPS RAIM availability for 1 hour before to 1 hour after ETA, or a time specified by the pilot.
- g) Other assistance as required.

3.8.3 Abbreviated Briefing. Request an Abbreviated Briefing when you need information to supplement mass disseminated data, to update a previous briefing, or when you need only one or two specific items. Provide the briefer with appropriate background information, the time you received the previous information, and/or the specific items needed. You should indicate the source of the information already received so that the briefer can limit the briefing to the information that you have not received, and/or appreciable changes in meteorological/aeronautical conditions since your previous briefing. To the extent possible, the briefer will provide the information in the sequence shown for a Standard Briefing. If you request only one or two specific items, the briefer will advise you if adverse conditions are present or forecast. Adverse conditions contain both meteorological and aeronautical information. Details on these conditions will be provided at your request.

3.8.4 Outlook Briefing. You should request an Outlook Briefing whenever your proposed time of departure is 6 or more hours from the time of the briefing. The briefer will provide available forecast data applicable to the proposed flight. This type of briefing is provided for planning purposes only. You should obtain a Standard or Abbreviated Briefing prior to departure in order to obtain such items as adverse conditions, current conditions, updated forecasts, winds aloft, and NOTAMs.

3.8.5 Inflight Briefing. You are encouraged to obtain your preflight briefing by telephone or in person before departure. In those cases where you need to obtain a preflight briefing or an update to a

previous briefing by radio, you should contact the nearest FSS to obtain this information. After communications have been established, advise the specialist of the type briefing you require and provide appropriate background information. You will be provided information as specified in the above paragraphs, depending on the type of briefing requested. En Route advisories tailored to the phase of flight that begins after climb-out and ends with descent to land are provided upon pilot request. Pilots are encouraged to provide a continuous exchange of information on weather, winds, turbulence, flight visibility, icing, etc., between pilots and inflight specialists. Pilots should report good weather as well as bad, and confirm expected conditions as well as unexpected. Remember that weather conditions can change rapidly and that a “go or no go” decision, as mentioned in paragraph 3.8.2.2, should be assessed at all phases of flight.

3.8.6 Following any briefing, feel free to ask for any information that you or the briefer may have missed. It helps to save your questions until the briefing has been completed. This way the briefer is able to present the information in a logical sequence and lessens the chance of important items being overlooked.

3.9 Inflight Aviation Weather Advisories

3.9.1 Background

3.9.1.1 Inflight Aviation Weather Advisories are forecasts to advise en route aircraft of development of potentially hazardous weather. Inflight aviation weather advisories in the conterminous U.S. are issued by the Aviation Weather Center (AWC) in Kansas City, MO, as well as 20 Center Weather Service Units (CWSU) associated with ARTCCs. AWC also issues advisories for portions of the Gulf of Mexico, Atlantic and Pacific Oceans, which are under the control of ARTCCs with Oceanic flight information regions (FIRs). The Weather Forecast Office (WFO) in Honolulu issues advisories for the Hawaiian Islands and a large portion of the Pacific Ocean. In Alaska, the Alaska Aviation Weather Unit (AAWU) issues inflight aviation weather advisories along with the Anchorage CWSU. All heights are referenced MSL, except in the case of ceilings (CIG) which indicate AGL.

3.9.1.2 There are four types of inflight aviation weather advisories: the SIGMET, the Convective SIGMET, the AIRMET (text or graphical product),

and the Center Weather Advisory (CWA). All of these advisories use the same location identifiers (either VORs, airports, or well-known geographic areas) to describe the hazardous weather areas.

3.9.1.3 The Severe Weather Watch Bulletins (WWs), (with associated Alert Messages) (AWW) supplements these Inflight Aviation Weather Advisories.

3.9.2 SIGMET (WS)/AIRMET(WA or G-AIRMET)

SIGMETs/AIRMET text (WA) products are issued corresponding to the Area Forecast (FA) areas described in FIG GEN 3.5–4 and FIG GEN 3.5–5. The maximum forecast period is 4 hours for SIGMETs and 6 hours for AIRMETs. The G-AIRMET is issued over the CONUS every 6 hours, valid at 3-hour increments through 12 hours, with optional forecasts possible during the first 6 hours. The first 6 hours of the G-AIRMET correspond to the 6-hour period of the AIRMET. SIGMETs and AIRMETs are considered “widespread” because they must be either affecting or be forecasted to affect an area of at least 3,000 square miles at any one time. However, if the total area to be affected during the forecast period is very large, it could be that in actuality only a small portion of this total area would be affected at any one time.

3.9.2.1 SIGMETs/AIRMET (or G-AIRMET) for the conterminous U.S. (CONUS)

SIGMETs/AIRMET text products for the CONUS are issued corresponding to the areas in FIG GEN 3.5–4. The maximum forecast period for a CONUS SIGMET is 4 hours and 6 hours for CONUS AIRMETs. The G-AIRMET is issued over the CONUS every 6 hours, valid at 3-hour increments through 12 hours with optional forecasts possible during the first 6 hours. The first 6 hours of the G-AIRMET correspond to the 6-hour period of the AIRMET. SIGMETs and AIRMETs are considered “widespread” because they must be either affecting or be forecasted to affect an area of at least 3,000 square miles at any one time. However, if the total area to be affected during the forecast period is very large, it could be that in actuality only a small portion of this total area would be affected at any one time. Only SIGMETs for the CONUS are for non-convective weather. The U.S. issues a special category of

SIGMETs for convective weather called Convective SIGMETs.

3.9.2.2 SIGMETs/AIRMETs for Alaska

Alaska SIGMETs are valid for up to 4 hours, except for Volcanic Ash Cloud SIGMETs which are valid for up to 6 hours. Alaska AIRMETs are valid for up to 8 hours.

3.9.2.3 SIGMETs/AIRMETs for Hawaii and U.S. FIRs in the Gulf of Mexico, Caribbean, Western Atlantic and Eastern and Central Pacific Oceans

These SIGMETs are valid for up to 4 hours, except SIGMETs for Tropical Cyclones and Volcanic Ash Clouds, which are valid for up to 6 hours. AIRMETs are issued for the Hawaiian Islands and are valid for up to 6 hours. No AIRMETs are issued for U.S. FIRs in the the Gulf of Mexico, Caribbean, Western Atlantic and Pacific Oceans.

3.9.3 SIGMET

A SIGMET advises of weather that is potentially hazardous to all aircraft. SIGMETs are unscheduled products that are valid for 4 hours. However, SIGMETs associated with tropical cyclones and volcanic ash clouds are valid for 6 hours. Unscheduled updates and corrections are issued as necessary.

3.9.3.1 In the CONUS, SIGMETs are issued when the following phenomena occur or are expected to occur:

- a) Severe icing not associated with thunderstorms.
- b) Severe or extreme turbulence or clear air turbulence (CAT) not associated with thunderstorms.
- c) Widespread dust storms or sandstorms lowering surface visibilities to below 3 miles.
- d) Volcanic ash.

3.9.3.2 In Alaska and Hawaii, SIGMETs are also issued for:

- a) Tornadoes.
- b) Lines of thunderstorms.
- c) Embedded thunderstorms.
- d) Hail greater than or equal to $\frac{3}{4}$ inch in diameter.

3.9.3.3 SIGMETs are identified by an alphabetic designator from November through Yankee excluding Sierra and Tango. (Sierra, Tango, and Zulu are reserved for AIRMET text [WA] products;

G–AIRMETS do not use the Sierra, Tango, or Zulu designators.) The first issuance of a SIGMET will be labeled as UWS (Urgent Weather SIGMET). Subsequent issuances are at the forecasters discretion. Issuance for the same phenomenon will be sequentially numbered, using the original designator until the phenomenon ends. For example, the first issuance in the Chicago (CHI) FA area for phenomenon moving from the Salt Lake City (SLC) FA area will be SIGMET Papa 3, if the previous two issuances, Papa 1 and Papa 2, had been in the SLC FA area. Note that no two different phenomena across the country can have the same alphabetic designator at the same time.

EXAMPLE–

Example of a SIGMET:

BOSR WS 050600

SIGMET ROMEO 2 VALID UNTIL 051000

ME NH VT

FROM CAR TO YSJ TO CON TO MPV TO CAR

OCNL SEV TURB BLW 080 EXP DUE TO STG NWLY FLOW. CONDS CONTG BYD

1000Z.

3.9.4 Convective SIGMET (WST)

3.9.4.1 Convective SIGMETs are issued in the conterminous U.S. for any of the following:

- a) Severe thunderstorm due to:
 - 1) Surface winds greater than or equal to 50 knots.
 - 2) Hail at the surface greater than or equal to $\frac{3}{4}$ inches in diameter.
 - 3) Tornadoes.
- b) Embedded thunderstorms.
- c) A line of thunderstorms.
- d) Thunderstorms producing precipitation greater than or equal to heavy precipitation affecting 40 percent or more of an area at least 3,000 square miles.

3.9.4.2 Any convective SIGMET implies severe or greater turbulence, severe icing, and low-level wind shear. A convective SIGMET may be issued for any convective situation that the forecaster feels is hazardous to all categories of aircraft.

3.9.4.3 Convective SIGMET bulletins are issued for the western (W), central (C), and eastern (E) United States. (Convective SIGMETs are not issued for Alaska or Hawaii.) The areas are separated at 87 and 107 degrees west longitude with sufficient overlap to cover most cases when the phenomenon crosses the boundaries. Bulletins are issued hourly at H+55. Special bulletins are issued at any time as required and updated at H+55. If no criteria meeting convective SIGMET requirements are observed or forecasted, the message “CONVECTIVE SIGMET... NONE” will be issued for each area at H+55. Individual convective SIGMETs for each area (W, C, E) are numbered sequentially from number one each day, beginning at 00Z. A convective SIGMET for a continuing phenomenon will be reissued every hour at H+55 with a new number. The text of the bulletin consists of either an observation and a forecast or just a forecast. The forecast is valid for up to 2 hours.

EXAMPLE–

CONVECTIVE SIGMET 44C

VALID UNTIL 1455Z

AR TX OK

FROM 40NE ADM-40ESE MLC-10W TXK-50WNW

LFK-40ENE SJT-40NE ADM

AREA TS MOV FROM 26025KT. TOPS ABV FL450.

OUTLOOK VALID 061455-061855

FROM 60WSW OKC-MLC-40N TXK-40WSW

IGB-VUZ-MGM-HRV-60S BTR-40N

IAH-60SW SJT-40ENE LBB-60WSW OKC

WST ISSUANCES EXPD. REFER TO MOST RECENT ACUS01 KWNS FROM STORM PREDICTION CENTER FOR SYNOPSIS AND METEOROLOGICAL DETAILS

FIG GEN 3.5-4
SIGMET and AIRMET Locations – Conterminous United States

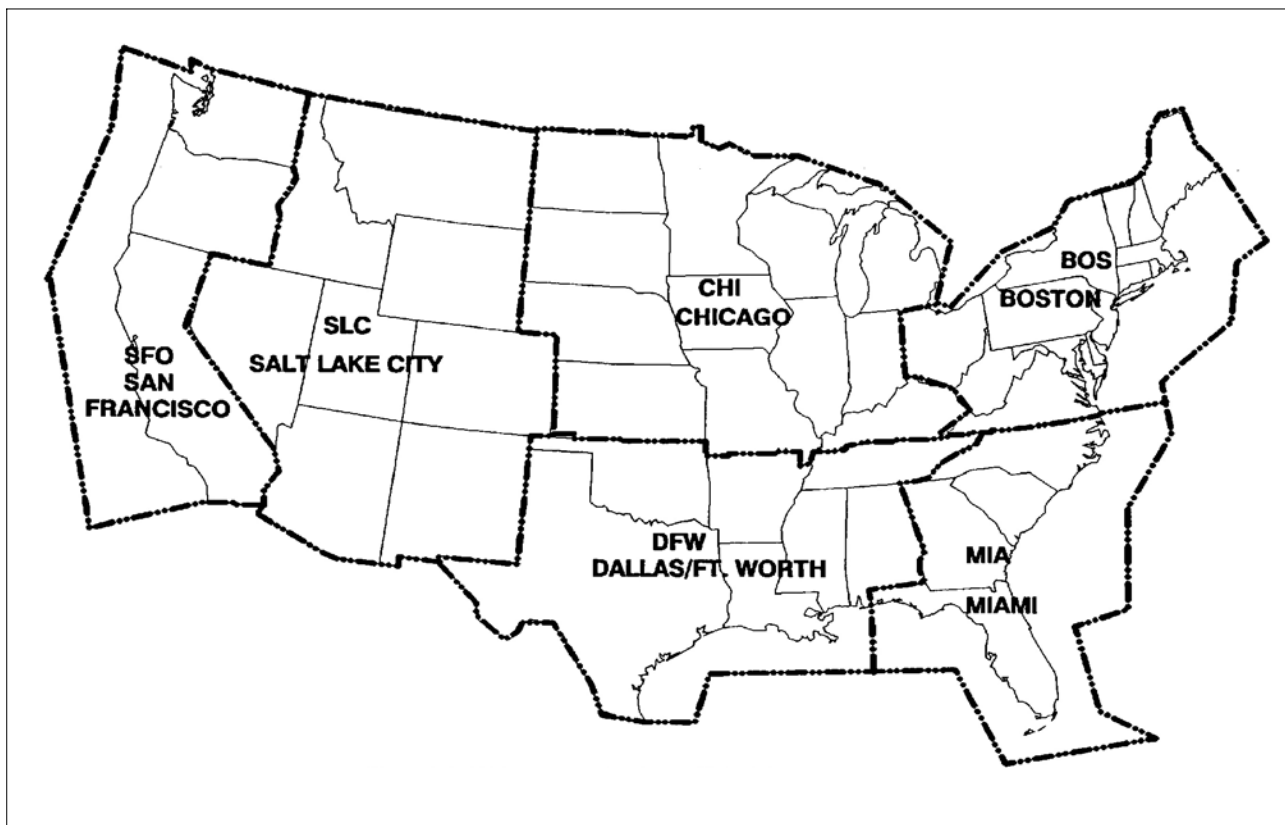
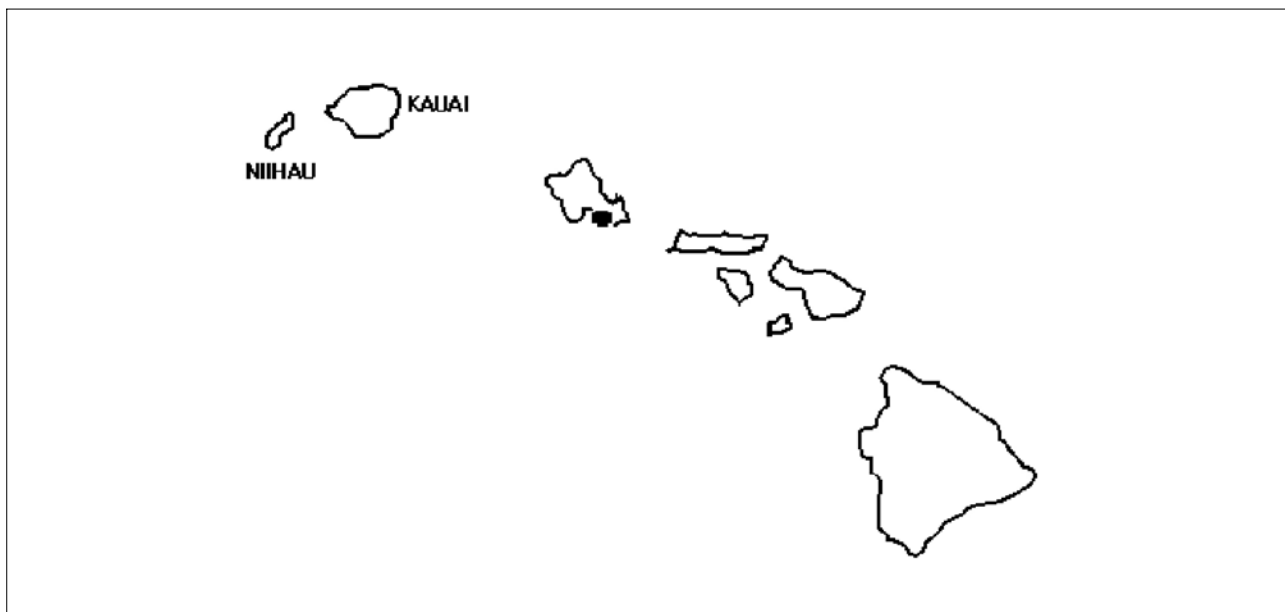


FIG GEN 3.5-5
Hawaii Area Forecast Locations



5. Telephone Information Briefing Service (TIBS) (Alaska Only)

5.1 TIBS, provided by FSS, is a system of automated telephone recordings of meteorological and aeronautical information available in Alaska. Based on the specific needs of each area, TIBS provides route and/or area briefings in addition to airspace procedures and special announcements concerning aviation interests that may be available. Depending on user demand, other items may be provided; for example, surface weather observations, terminal forecasts, wind and temperatures aloft forecast, etc.

6. Inflight Weather Broadcasts

6.1 Weather Advisory Broadcasts. ARTCCs' broadcast a Severe Weather Forecast Alert (AWW), Convective SIGMET, or CWA alert once on all frequencies, except emergency, when any part of the area described is within 150 miles of the airspace under their jurisdiction. These broadcasts contain SIGMET or CWA identification and a brief description of the weather activity and general area affected.

EXAMPLE–

Attention all aircraft, SIGMET Delta Three, from Myton to Tuba City to Milford, severe turbulence and severe clear icing below one zero thousand feet. Expected to continue beyond zero three zero zero zulu.

EXAMPLE–

Attention all aircraft, Convective SIGMET Two Seven Eastern. From the vicinity of Elmira to Phillipsburg. Scattered embedded thunderstorms moving east at one zero knots. A few intense level five cells, maximum tops four five zero.

EXAMPLE–

Attention all aircraft, Kansas City Center weather advisory one zero three. Numerous reports of moderate to severe icing from eight to nine thousand feet in a three zero mile radius of St. Louis. Light or negative icing reported from four thousand to one two thousand feet remainder of Kansas City Center area.

NOTE–

1. Terminal control facilities have the option to limit the AWW, Convective SIGMET, SIGMET, or CWA broadcast as follows: local control and approach control positions may opt to broadcast SIGMET or CWA alerts only when any part of the area described is within 50 miles of the airspace under their jurisdiction.

2. In areas where HIWAS is available, ARTCC, Terminal ATC, and FSS facilities do not broadcast inflight advisories as described in this paragraph.

6.2 Hazardous Inflight Weather Advisory Service (HIWAS). HIWAS is an automated, continuous broadcast of inflight weather advisories, provided by FSS over select VOR outlets, which include the following weather products: AWW, SIGMET, Convective SIGMET, CWA, AIRMET (text [WA] or graphical [G–AIRMET] products), and urgent PIREP. HIWAS is available throughout the conterminous United States as an additional source of hazardous weather information. HIWAS does not replace preflight or inflight weather briefings from FSS. Pilots should call FSS if there are any questions about weather that is different than forecasted or if the HIWAS broadcast appears to be in error.

NOTE–

In areas where HIWAS is available, ARTCC, Terminal ATC, and FSS facilities do not broadcast inflight advisories as described in the preceding paragraph.

6.2.1 Where HIWAS is available, a HIWAS alert will be broadcast once on all frequencies, except emergency frequencies, upon receipt by ARTCC and terminal facilities, which will include an alert announcement, frequency instruction, number, and type of advisory updated; for example, AWW, SIGMET, Convective SIGMET, or CWA.

EXAMPLE–

Attention all aircraft. Hazardous weather information (SIGMET, Convective SIGMET, AIRMET (text [WA] or graphical [G–AIRMET] product), urgent pilot weather report [UUA], or Center Weather Advisory [CWA]), (number or numbers) for (geographical area) available on HIWAS or Flight Service frequencies.

6.2.2 In HIWAS ARTCC areas, FSSs will broadcast a HIWAS update announcement once on all frequencies, except emergency frequencies, upon the addition of an update to the HIWAS broadcast. Included in the broadcast will be the type of advisory updated; for example, AWW, SIGMET, Convective SIGMET, CWA, etc.

EXAMPLE–

Attention all aircraft. Hazardous weather information for (geographical area) available from Flight Service.

6.2.3 HIWAS availability is notated with VOR listings in the Chart Supplement U.S., and is shown by symbols on IFR Enroute Low Altitude Charts and VFR Sectional Charts. The symbol depiction is identified in the chart legend.

7. Flight Information Services (FIS)

7.1 FIS. FIS is a method of disseminating meteorological (MET) and aeronautical information (AI) to displays in the cockpit in order to enhance pilot situational awareness, provide decision support tools, and improve safety. FIS augments traditional pilot voice communication with Flight Service Stations (FSSs), ATC facilities, or Airline Operations Control Centers (AOCCs). FIS is not intended to replace traditional pilot and controller/flight service specialist/aircraft dispatcher preflight briefings or inflight voice communications. FIS, however, can provide textual and graphical information that can help abbreviate and improve the usefulness of such communications. FIS enhances pilot situational awareness and improves safety.

7.1.1 Data link Service Providers (DLSP) - DLSP deploy and maintain airborne, ground-based, and, in some cases, space-based infrastructure that supports the transmission of AI/MET information over one or more physical links. DLSP may provide a free of charge or for-fee service that permits end users to uplink and downlink AI/MET and other information. The following are examples of DLSP:

7.1.1.1 FAA FIS-B. A ground-based broadcast service provided through the ADS-B Universal Access Transceiver (UAT) network. The service provides users with a 978 MHz data link capability when operating within range and line-of-sight of a transmitting ground station. FIS-B enables users of properly equipped aircraft to receive and display a suite of broadcast weather and aeronautical information products.

7.1.1.2 Non-FAA FIS Systems. Several commercial vendors provide customers with FIS data over both the aeronautical spectrum and on other frequencies using a variety of data link protocols. Services available from these providers vary greatly and may include tier based subscriptions. Advancements in bandwidth technology permits preflight as well as inflight access to the same MET and AI information available on the ground. Pilots and operators using non-FAA FIS for MET and AI information should be knowledgeable regarding the weather services being provided as some commercial vendors may be repackaging NWS sourced weather, while other commercial vendors may alter the weather information to produce vendor-tailored or vendor-specific weather reports and forecasts.

7.1.2 Three Data Link Modes. There are three data link modes that may be used for transmitting AI and MET information to aircraft. The intended use of the AI and/or MET information will determine the most appropriate data link service.

7.1.2.1 Broadcast Mode: A one-way interaction in which AI and/or MET updates or changes applicable to a designated geographic area are continuously transmitted (or transmitted at repeated periodic intervals) to all aircraft capable of receiving the broadcast within the service volume defined by the system network architecture.

7.1.2.2 Contract/Demand Mode: A two-way interaction in which AI and/or MET information is transmitted to an aircraft in response to a specific request.

7.1.2.3 Contract/Update Mode: A two-way interaction that is an extension of the Demand Mode. Initial AI and/or MET report(s) are sent to an aircraft and subsequent updates or changes to the AI and/or MET information that meet the contract criteria are automatically or manually sent to an aircraft.

7.1.3 To ensure airman compliance with Federal Aviation Regulations, manufacturer's operating manuals should remind airmen to contact ATC controllers, FSS specialists, operator dispatchers, or airline operations control centers for general and mission critical aviation weather information and/or NAS status conditions (such as NOTAMs, Special Use Airspace status, and other government flight information). If FIS products are systemically modified (for example, are displayed as abbreviated plain text and/or graphical depictions), the modification process and limitations of the resultant product should be clearly described in the vendor's user guidance.

7.1.4 Operational Use of FIS. Regardless of the type of FIS system being used, several factors must be considered when using FIS:

7.1.4.1 Before using FIS for inflight operations, pilots and other flight crewmembers should become familiar with the operation of the FIS system to be used, the airborne equipment to be used, including its system architecture, airborne system components, coverage service volume and other limitations of the particular system, modes of operation and indications of various system failures. Users should also be familiar with the specific content and format of the services available from the FIS provider(s). Sources

PART 2 – EN ROUTE (ENR)

ENR 0.

ENR 0.1 Preface – Not applicable

ENR 0.2 Record of AIP Amendments – See GEN 0.2-1

ENR 0.3 Record of AIP Supplements – Not applicable

ENR 0.4 Checklist of Pages

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may then issue a takeoff clearance if other traffic permits, since the pilot has accepted the responsibility for wake turbulence separation.

16.5 The 3-minute interval is not required when the intersection is 500 feet or less from the departure point of the preceding aircraft and both aircraft are taking off in the same direction. Controllers may permit the small aircraft to alter course after takeoff to avoid the flight path of the preceding departure.

16.6 A 4-minute interval is mandatory for small, large, and heavy aircraft behind a super aircraft. The 3-minute interval is mandatory behind a heavy aircraft in all cases, and for small aircraft behind a B757.

17. VFR Flights in Terminal Areas

17.1 Use reasonable restraint in exercising the prerogative of VFR flight, especially in terminal areas. The weather minimums and distances from clouds are minimums. Giving yourself a greater margin in specific instances is just good judgment.

17.1.1 Approach Area. Conducting a VFR operation in Class D and E Airspace when the official visibility is 3 or 4 miles is not prohibited, but good judgment would dictate that you keep out of the approach area.

17.1.2 Reduced Visibility. It has always been recognized that precipitation reduces forward visibility. Consequently, although again it may be perfectly legal to cancel your IFR flight plan at any time you can proceed VFR, it is good practice, when precipitation is occurring, to continue IFR operation into a terminal area until you are reasonably close to your destination.

17.1.3 Simulated Instrument Flights. In conducting simulated instrument flights, be sure that the weather is good enough to compensate for the restricted visibility of the safety pilot and your greater concentration on your flight instruments. Give yourself a greater margin when your flight plan lies in or near a busy airway or close to an airport.

18. Low Approach

18.1 A low approach (sometimes referred to as a low pass) is the go-around maneuver following approach. Instead of landing or making a touch-and-go, a pilot may wish to go around (low approach) in order to expedite a particular operation—a series of practice

instrument approaches is an example of such an operation. Unless otherwise authorized by ATC, the low approach should be made straight ahead with no turns or climb made until the pilot has made a thorough visual check for other aircraft in the area.

18.2 When operating within Class D airspace, a pilot intending to make a low approach should contact the tower for approval. This request should be made prior to starting the final approach.

18.3 When operating to an airport within Class E airspace, a pilot intending to make a low approach should, prior to leaving the final approach fix inbound (nonprecision approach) or the outer marker or fix used in lieu of the outer marker inbound (precision approach), so advise the FSS, UNICOM, or make a broadcast as appropriate.

19. Practice Instrument Approaches

19.1 Various air traffic incidents required adoption of measures to achieve more organized and controlled operations where practice instrument approaches are conducted. Practice instrument approaches are considered to be instrument approaches made by either a VFR aircraft not on an IFR flight plan or an aircraft on an IFR flight plan. To achieve this and thereby enhance air safety, it is Air Traffic Operations policy to provide for separation of such operations at locations where approach control facilities are located and, as resources permit, at certain other locations served by ARTCCs or approach control facilities. Pilot requests to practice instrument approaches may be approved by ATC subject to traffic and workload conditions. Pilots should anticipate that in some instances the controller may find it necessary to deny approval or withdraw previous approval when traffic conditions warrant. It must be clearly understood, however, that even though the controller may be providing separation, pilots on VFR flight plans are required to comply with basic visual flight rules (14 CFR Section 91.155). Application of ATC procedures or any action taken by the controller to avoid traffic conflicts does not relieve IFR and VFR pilots of their responsibility to see and avoid other traffic while operating in VFR conditions (14 CFR Section 91.113). In addition to the normal IFR separation minimums (which includes visual separation) during VFR conditions, 500 feet vertical separation may be applied between VFR aircraft and between a VFR aircraft and an IFR aircraft. Pilots not on IFR flight plans desiring

practice instrument approaches should always state “practice” when making requests to ATC. Controllers will instruct VFR aircraft requesting an instrument approach to maintain VFR. This is to preclude misunderstandings between the pilot and controller as to the status of the aircraft. If the pilot wishes to proceed in accordance with instrument flight rules, he/she must specifically request and obtain an IFR clearance.

19.2 Before practicing an instrument approach, pilots should inform the approach control facility or the tower of the type of practice approach they desire to make and how they intend to terminate it; i.e., full-stop landing, touch-and-go, or missed/low approach maneuver. This information may be furnished progressively when conducting a series of approaches. Pilots on an IFR flight plan, who have made a series of instrument approaches to full stop landings, should inform ATC when they make their final landing. The controller will control flights practicing instrument approaches so as to ensure that they do not disrupt the flow of arriving and departing itinerant IFR or VFR aircraft. The priority afforded itinerant aircraft over practice instrument approaches is not intended to be so rigidly applied that it causes a grossly inefficient application of services. A minimum delay to itinerant traffic may be appropriate to allow an aircraft practicing an approach to complete that approach.

NOTE—

A clearance to land means that appropriate separation on the landing runway will be ensured. A landing clearance does not relieve the pilot from compliance with any previously issued restriction.

19.3 At airports without a tower, pilots wishing to make practice instrument approaches should notify the facility having control jurisdiction of the desired approach as indicated on the approach chart. All approach control facilities and ARTCCs are required to publish a Letter to Airmen depicting those airports where they provide standard separation to both VFR and IFR aircraft conducting practice instrument approaches.

19.4 The controller will provide approved separation between both VFR and IFR aircraft when authorization is granted to make practice approaches to airports where an approach control facility is located and to certain other airports served by approach control or an ARTCC. Controller responsi-

bility for separation of VFR aircraft begins at the point where the approach clearance becomes effective or when the aircraft enters Class B or TRSA airspace whichever comes first.

19.5 VFR aircraft practicing instrument approaches are not automatically authorized to execute the missed approach procedure. This authorization must be specifically requested by the pilot and approved by the controller. Where ATC procedures require application of IFR separation to VFR aircraft practicing instrument approaches, separation will be provided throughout the procedure including the missed approach. Where no separation services are provided during the practice approach, no separation services will be provided during the missed approach.

19.6 Except in an emergency, aircraft cleared to practice instrument approaches must not deviate from the approved procedure until cleared to do so by the controller.

19.7 At radar approach control locations when a full approach procedure (procedure turn, etc.) cannot be approved, pilots should expect to be vectored to a final approach course for a practice instrument approach which is compatible with the general direction of traffic at that airport.

19.8 When granting approval for a practice instrument approach, the controller will usually ask the pilot to report to the tower prior to or over the final approach fix inbound (nonprecision approaches) or over the outer marker or fix used in lieu of the outer marker inbound (precision approaches).

19.9 When authorization is granted to conduct practice instrument approaches to an airport with a tower but where approved standard separation is not provided to aircraft conducting practice instrument approaches, the tower will approve the practice approach, instruct the aircraft to maintain VFR, and issue traffic information, as required.

19.10 When a pilot notifies an FSS providing Airport Advisory Service of intent to conduct a practice instrument approach and if separation will be provided, he/she will be instructed to contact the appropriate facility on a specified frequency prior to initiating the approach. At airports where separation is not provided, the FSS will acknowledge the message and issue known traffic information but will neither approve or disapprove the approach.

19.11 Pilots conducting practice instrument approaches should be particularly alert for other aircraft operating in the local traffic pattern or in proximity to the airport.

20. Option Approach

20.1 The “Cleared for the Option” procedure will permit an instructor, flight examiner or pilot the option to make a touch-and-go, low approach, missed approach, stop-and-go, or full stop landing. This procedure can be very beneficial in a training situation in that neither the student pilot nor examinee would know what maneuver would be accomplished. The pilot should make a request for this procedure passing the final approach fix inbound on an instrument approach or entering downwind for a VFR traffic pattern. After ATC approval of the option, the pilot should inform ATC as soon as possible of any delay on the runway during their stop-and-go or full stop landing. The advantages of this procedure as a training aid are that it enables an instructor or examiner to obtain the reaction of a trainee or examinee under changing conditions, the pilot would not have to discontinue an approach in the middle of the procedure due to student error or pilot proficiency requirements, and finally it allows more flexibility and economy in training programs. This procedure will only be used at those locations with an operational control tower and will be subject to ATC approval.

21. Communications Release of IFR Aircraft Landing at an Airport Without an Operating Control Tower

21.1 Aircraft operating on an IFR flight plan, landing at an airport without an operating control tower will be advised to change to the airport advisory frequency when direct communication with ATC is no longer required.

22. Pilot Responsibilities When Conducting Land and Hold Short Operations (LAHSO)

22.1 LAHSO is an acronym for “Land And Hold

Short Operations.” These operations include landing and holding short of an intersecting runway, an intersecting taxiway, or some other designated point on a runway other than an intersecting runway or taxiway. (See FIG ENR 1.1–8, FIG ENR 1.1–9, FIG ENR 1.1–10.)

22.2 Pilot Responsibilities and Basic Procedures

22.2.1 LAHSO is an air traffic control procedure that requires pilot participation to balance the needs for increased airport capacity and system efficiency, consistent with safety. This procedure can be done safely provided pilots and controllers are knowledgeable and understand their responsibilities. The following paragraphs outline specific pilot/operator responsibilities when conducting LAHSO.

22.2.2 At controlled airports, air traffic may clear a pilot to land and hold short. Pilots may accept such a clearance provided that the pilot-in-command determines that the aircraft can safely land and stop within the Available Landing Distance (ALD). ALD data are published in the special notices section of the Chart Supplement U.S. and in the U.S. Terminal Procedures Publications. Controllers will also provide ALD data upon request. Student pilots or pilots not familiar with LAHSO should not participate in the program.

FIG ENR 1.1–8
Land and Hold Short of an Intersecting Runway

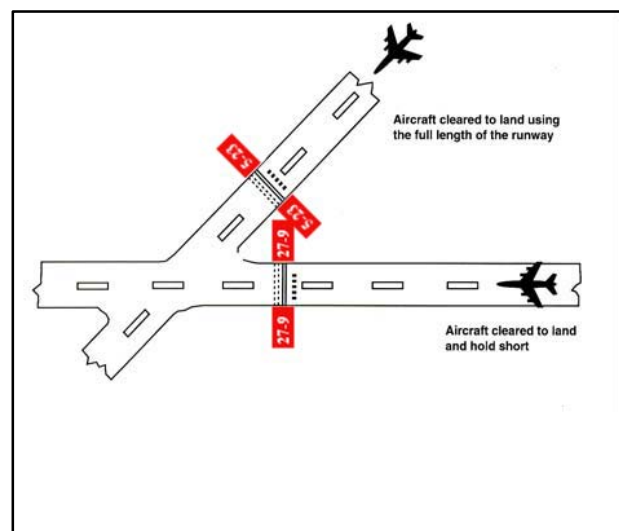


FIG ENR 1.1–9

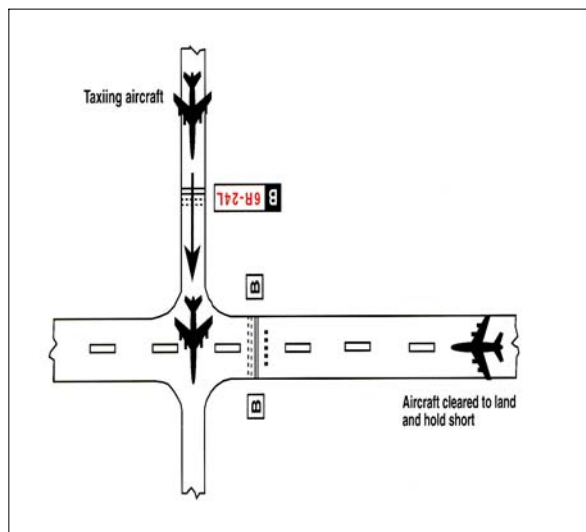
Land and Hold Short of an Intersecting Taxiway**EXAMPLE–**

FIG ENR 1.1–10 – Holding short at a designated point may be required to avoid conflicts with the runway safety area/flight path of a nearby runway.

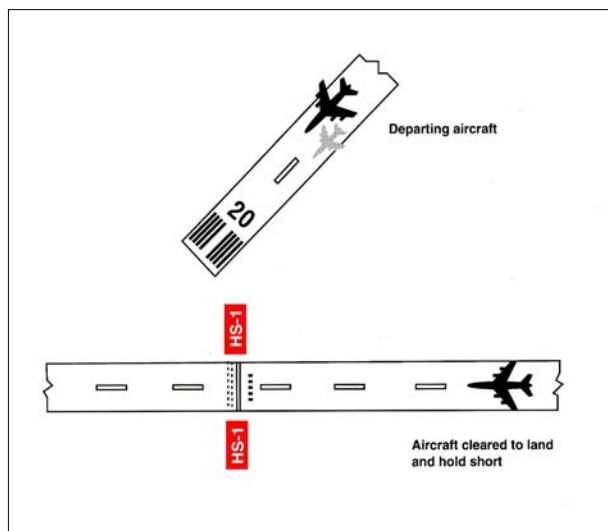
NOTE–

Each figure shows the approximate location of LAHSO markings, signage, and in-pavement lighting when installed.

REFERENCE–

AIP, Part 3 – Aerodromes.

FIG ENR 1.1–10

Land and Hold Short of a Designated Point on a Runway Other Than an Intersecting Runway or Taxiway

22.2.3 The pilot-in-command has the final authority to accept or decline any land and hold short clearance. The safety and operation of the aircraft remain the

responsibility of the pilot. Pilots are expected to decline a LAHSO clearance if they determine it will compromise safety.

22.2.4 To conduct LAHSO, pilots should become familiar with all available information concerning LAHSO at their destination airport. Pilots should have, *readily available*, the published ALD and runway slope information for all LAHSO runway combinations at each airport of intended landing. Additionally, knowledge about landing performance data permits the pilot to *readily* determine that the ALD for the assigned runway is sufficient for safe LAHSO. As part of a pilot's preflight planning process, pilots should determine if their destination airport has LAHSO. If so, their preflight planning process should include an assessment of which LAHSO combinations would work for them given their aircraft's required landing distance. Good pilot decision-making is knowing in advance whether one can accept a LAHSO clearance if offered.

22.2.5 For those airplanes flown with two crewmembers, effective intra-cockpit communication between cockpit crewmembers is also critical. There have been several instances where the pilot working the radios accepted a LAHSO clearance but then simply forgot to tell the pilot flying the aircraft.

22.2.6 If, for any reason, such as difficulty in discerning the location of a LAHSO intersection, wind conditions, aircraft condition, etc., the pilot elects to request to land on the full length of the runway, to land on another runway, or to decline LAHSO, a pilot is expected to promptly inform ATC, ideally even before the clearance is issued. A LAHSO clearance, once accepted, must be adhered to, just as any other ATC clearance, unless an amended clearance is obtained or an emergency occurs. A LAHSO clearance does not preclude a rejected landing.

22.2.7 A pilot who accepts a LAHSO clearance should land and exit the runway at the first convenient taxiway (unless directed otherwise) before reaching the hold short point. Otherwise, the pilot must stop and hold at the hold short point. If a rejected landing becomes necessary after accepting a LAHSO clearance, the pilot should maintain safe separation from other aircraft or vehicles, and should promptly notify the controller.

22.2.8 Controllers need a full read back of all LAHSO clearances. Pilots should read back their

of “NORMAL” as a master control label on some types of transponders.)

f) SQUAWK ALTITUDE. Activate Mode C with automatic altitude reporting.

g) STOP ALTITUDE SQUAWK. Turn off altitude reporting switch and continue transmitting Mode C framing pulses. If your equipment does not have this capability, turn off Mode C.

h) STOP SQUAWK (mode in use). Switch off specified mode. (Use for military aircraft when the controller is unaware if a military service requires the aircraft to continue operating on another mode.)

i) STOP SQUAWK. Switch off transponder.

j) SQUAWK MAYDAY. Operate transponder in the emergency position. (Mode A Code 7700 for civil transponder. Mode 3 Code 7700 and emergency feature for military transponder.)

k) SQUAWK VFR. Operate radar beacon transponder on code 1200 in the MODE A/3, or other appropriate VFR code.

37.8 Emergency Operation

37.8.1 When an emergency occurs, the pilot of an aircraft equipped with a coded radar beacon transponder who desires to alert a ground radar facility to an emergency condition and who cannot establish communications without delay with an ATC facility may adjust the transponder to reply on Mode A/3, Code 7700.

37.8.2 Pilots should understand that they may not be within a radar coverage area and that, even if they are, certain radar facilities are not yet equipped to automatically recognize Code 7700 as an emergency signal. Therefore, they should establish radio communications with an ATC facility as soon as possible.

37.9 Radio Failure Operation

37.9.1 Should the pilot of an aircraft equipped with a coded radar beacon transponder experience a loss of two-way radio capability the pilot should:

37.9.1.1 Adjust the transponder to reply on MODE A/3, Code 7600.

37.9.1.2 Understand that the aircraft may not be in an area of radar coverage.

37.9.2 Pilots should understand that they may not be in an area of radar coverage. Also, many radar facilities are not presently equipped to automatically display Code 7600 and will interrogate 7600 only when the aircraft is under direct radar control at the time of radio failure. However, replying on Code 7700 first, increases the probability of early detection of a radio failure condition.

37.10 Radar Services

37.10.1 Safety Alert

37.10.1.1 A safety alert will be issued to pilots of aircraft being controlled by ATC if the controller is aware the aircraft is at an altitude which, in the controller’s judgment, places the aircraft in unsafe proximity to terrain, obstructions, or other aircraft. The provision of this service is contingent upon the capability of the controller to have an awareness of situations involving unsafe proximity to terrain, obstructions, and uncontrolled aircraft. The issuance of a safety alert cannot be mandated, but it can be expected on a reasonable, though intermittent, basis. Once the alert is issued, it is solely the pilot’s prerogative to determine what course of action, if any, will be taken. This procedure is intended for use in time critical situations where aircraft safety is in question. Noncritical situations should be handled via the normal traffic alert procedures.

37.10.2 Terrain/Obstruction Alert

37.10.2.1 Controllers will immediately issue an alert to the pilots of aircraft under their control when they recognize that the aircraft is at an altitude which, in their judgment, may be in unsafe proximity to terrain/obstructions. The primary method of detecting unsafe proximity is through Mode C automatic altitude reports.

EXAMPLE–

Low altitude alert Cessna Three Four Juliet, check your altitude immediately. And if the aircraft is not yet on final approach, the MVA (MEA/MIA/MOCA) in your area is six thousand.

37.10.2.2 Most En Route and Terminal radar facilities have an automated function which, if operating, alerts controllers when a tracked Mode C equipped aircraft under their control is below or is predicted to be below a predetermined minimum safe altitude. This function, called Minimum Safe Altitude Warning (MSAW), is designed solely as a controller aid in detecting potentially unsafe aircraft proximity to terrain/obstructions. The radar facility

will, when MSAW is operating, provide MSAW monitoring for all aircraft with an operating Mode C altitude encoding transponder that are tracked by the system and are:

- a) Operating on a IFR flight plan.
- b) Operating VFR and have requested MSAW monitoring.

37.10.2.3 Terminal AN/TPX–42A (number beacon decoder system) facilities have an automated function called Low Altitude Alert System (LAAS). Although not as sophisticated as MSAW, LAAS alerts the controller when a Mode C transponder equipped aircraft operating on a IFR flight plan is below a predetermined minimum safe altitude.

NOTE–

Pilots operating VFR may request MSAW or LAAS monitoring if their aircraft are equipped with Mode C transponders.

EXAMPLE–

Apache Three Three Papa requests MSAW/LAAS.

37.10.2.4 Due to the lack of terrain and obstacle clearance data, accurate automation databases may not be available for providing MSAW information to aircraft overflying Mexico and Canada. Air traffic facilities along the United States/Mexico/Canada borders may have MSAW computer processing inhibited where accurate terrain data is not available.

37.10.3 Aircraft Conflict Alert

37.10.3.1 Controllers will immediately issue an alert to the pilots of aircraft under their control if they are aware of an aircraft that is not under their control at an altitude which, in the controller's judgment, places both aircraft in unsafe proximity to each other. With the alert, when feasible, the controller will offer the pilot the position of the traffic if time permits and an alternate course(s) of action. Any alternate course of action the controller may recommend to the pilot will be predicated only on other traffic in the controller's jurisdiction.

EXAMPLE–

American Three, traffic alert, (position of traffic, if time permits), advise you turn right/left heading (degrees) and/or climb/descend to (altitude) immediately.

37.10.4 Radar Traffic Information Service (RTIS)

37.10.4.1 This is a service provided by radar ATC facilities. Pilots receiving this service are advised of

any radar target observed on the radar display which may be in such proximity to the position of their aircraft or its intended route of flight that it warrants their attention. This service is not intended to relieve the pilot of the responsibility for continual vigilance to see and avoid other aircraft.

a) Purpose of this Service

1) The issuance of traffic information as observed on a radar display is based on the principle of assisting and advising a pilot that a particular radar target's position and track indicates it may intersect or pass in such proximity to the intended flight path that it warrants the pilot's attention. This is to alert the pilot to the traffic, to be on the lookout for it, and thereby be in a better position to take appropriate action should the need arise.

2) Pilots are reminded that the surveillance radar used by ATC does not provide altitude information unless the aircraft is equipped with Mode C and the radar facility is capable of displaying altitude information.

b) Provisions of the Service

1) Many factors, such as limitations of the radar, volume of traffic, controller workload, and communications frequency congestion could prevent the controller from providing this service. Controllers possess complete discretion for determining whether they are able to provide or continue to provide this service in a specific case. The controller's reason against providing or continuing to provide the service in a particular case is not subject to question nor need it be communicated to the pilot. In other words, the provision of this service is entirely dependent upon whether controllers believe they are in a position to provide it. Traffic information is routinely provided to all aircraft operating on IFR flight plans except when the pilot declines the service, or the pilot is operating within Class A airspace. Traffic information may be provided to flights not operating on IFR Flight Plans when requested by pilots of such flights.

NOTE–

Radar ATC facilities normally display and monitor both primary and secondary radar when it is available, except that secondary radar may be used as the sole display source in Class A airspace, and under some circumstances outside of Class A airspace (beyond primary coverage and in en route areas where only secondary is available). Secondary radar may also be used outside Class A airspace as the sole display source when the primary radar is temporarily unusable or out of service. Pilots in contact

with the affected ATC facility are normally advised when a temporary outage occurs; i.e., “primary radar out of service; traffic advisories available on transponder aircraft only.” This means simply that only the aircraft which have transponders installed and in use will be depicted on ATC radar indicators when the primary radar is temporarily out of service.

2) When receiving VFR radar advisory service, pilots should monitor the assigned frequency at all times. This is to preclude controllers’ concern for radio failure of emergency assistance to aircraft under the controller’s jurisdiction. VFR radar advisory service does not include vectors away from conflicting traffic unless requested by the pilot. When advisory service is no longer desired, advise the controller before changing frequencies, then change your transponder code to 1200 if applicable. THE, as appropriate, MEA/MVA/MOCA IN YOUR AREA IS (altitude) or if past the final approach fix, THE, as appropriate, MDA/DH (if known) is (altitude). Except in programs where radar service is automatically terminated, the controller will advise the aircraft when radar is terminated.

NOTE–

Participation by VFR pilots in formal programs implemented at certain terminal locations constitutes pilot request. This also applies to participating pilots at those locations where arriving VFR flights are encouraged to make their first contact with the tower on the approach control frequency.

c) Issuance of Traffic Information. Traffic information will include the following concerning a target which may constitute traffic for an aircraft that is:

1) Radar identified.

(a) Azimuth from the aircraft in terms of the twelve hour clock.

(b) When rapidly maneuvering civil test or military aircraft prevent accurate issuance of traffic as in a) above, specify the direction from an aircraft’s position in terms of the eight cardinal compass points (N, NE, E, SE, S, SW, W, NW). This method must be terminated at the pilot’s request.

(c) Distance from the aircraft in nautical miles.

(d) Direction in which the target is proceeding.

(e) Type of aircraft and altitude if known.

EXAMPLE–

Traffic 10 o’clock, 3 miles, west-bound (type aircraft and altitude, if known, of the observed traffic). The altitude may be known, by means of Mode C, but not verified with the pilot for accuracy. (To be valid for separation purposes by ATC, the accuracy of Mode C readouts must be verified. This is usually accomplished upon initial entry into the radar system by a comparison of the readout to pilot stated altitude, or the field elevation in the case of continuous readout being received from an aircraft on the airport.) When necessary to issue traffic advisories containing unverified altitude information, the controller will issue the indicated altitude of the aircraft. The pilot may upon receipt of traffic information, request a vector (heading) to avoid such traffic. The vector will be provided to the extent possible as determined by the controller provided the aircraft to be vectored is within the airspace under the jurisdiction of the controller.

2) Not radar identified

(a) Distance and direction with respect to a fix.

(b) Direction in which the target is proceeding.

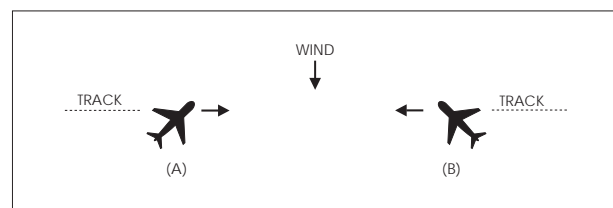
(c) Type of aircraft and altitude if known.

EXAMPLE–

Traffic 8 miles south of the airport northeastbound, (type aircraft and altitude if known).

(d) The examples depicted in FIG ENR 1.1–28 and FIG ENR 1.1–29 point out the possible error in the position of this traffic when it is necessary for a pilot to apply drift correction to maintain this track. This error could also occur in the event a change in course is made at the time radar traffic information is issued.

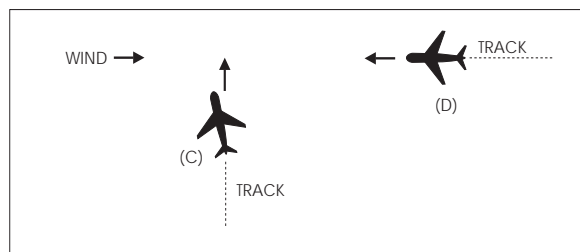
**FIG ENR 1.1–28
Induced Error in Position of Traffic**



EXAMPLE–

In FIG ENR 1.1–28, traffic information would be issued to the pilot of aircraft “A” as 12 o’clock. The actual position of the traffic as seen by the pilot of aircraft “A” would be one o’clock. Traffic information issued to aircraft “B” would also be given as 12 o’clock, but in this case, the pilot of “B” would see the traffic at 11 o’clock.

FIG ENR 1.1–29
Induced Error in Position of Traffic



EXAMPLE–

In FIG ENR 1.1–29, traffic information would be issued to the pilot of aircraft “C” as two o’clock. The actual position of the traffic as seen by the pilot of aircraft “C” would be three o’clock. Traffic information issued to aircraft “D” would be at an 11 o’clock position. Since it is not necessary for the pilot of aircraft “D” to apply wind correction (CRAB) to remain on track, the actual position of the traffic issued would be correct. Since the radar controller can only observe aircraft track (course) on the radar display, traffic advisories are issued accordingly, and pilots should give due consideration to this fact when looking for reported traffic.

37.11 Radar Assistance to VFR Aircraft

37.11.1 Radar equipped FAA ATC facilities provide radar assistance and navigation service (vectors) to VFR aircraft provided the aircraft can communicate with the facility, are within radar coverage, and can be radar identified.

37.11.2 Pilots should clearly understand that authorization to proceed in accordance with such radar navigational assistance does not constitute authorization for the pilot to violate Federal Aviation Regulations. In effect, assistance provided is on the basis that navigational guidance information issued is advisory in nature and the job of flying the aircraft safely remains with the pilot.

37.11.3 In many cases, controllers will be unable to determine if flight into instrument conditions will result from their instructions. To avoid possible hazards resulting from being vectored into IFR conditions, pilots should keep controllers advised of the weather conditions in which they are operating and along the course ahead.

37.11.4 Radar navigation assistance (vectors) may be initiated by the controller when one of the following conditions exist:

37.11.4.1 The controller suggests the vector and the pilot concurs.

37.11.4.2 A special program has been established and vectoring service has been advertised.

37.11.4.3 In the controller’s judgment the vector is necessary for air safety.

37.11.5 Radar navigation assistance (vectors) and other radar derived information may be provided in response to pilot requests. Many factors, such as limitations of radar, volume of traffic, communications frequency, congestion, and controller workload could prevent the controller from providing it. Controllers have complete discretion for determining if they are able to provide the service in a particular case. Their decision not to provide the service in a particular case is not subject to question.

38. Operational Policy/Procedures for Reduced Vertical Separation Minimum (RVSM) in the Domestic U.S., Alaska, Offshore Airspace and the San Juan FIR

38.1 Applicability and RVSM Mandate (Date/Time and Area)

38.1.1 Applicability. The policies, guidance and direction in this section apply to RVSM operations in the airspace over the lower 48 states, Alaska, Atlantic and Gulf of Mexico High Offshore Airspace and airspace in the San Juan FIR where VHF or UHF voice direct controller–pilot communication (DCPC) is normally available. Policies, guidance and direction for RVSM operations in oceanic airspace where VHF or UHF voice DCPC is not available and the airspace of other countries are posted on the FAA “RVSM Documentation” Webpage described in Paragraph 38.3, Aircraft and Operator Approval Policy/Procedures, RVSM Monitoring and Databases for Aircraft and Operator Approval.

38.1.2 Mandate. At 0901 UTC on January 20, 2005, the FAA implemented RVSM between flight level (FL) 290–410 (inclusive) in the following airspace: the airspace of the lower 48 states of the United States, Alaska, Atlantic and Gulf of Mexico High Offshore Airspace and the San Juan FIR. On the same time and date, RVSM was also introduced into the adjoining airspace of Canada and Mexico to provide a seamless environment for aircraft traversing those borders. In addition, RVSM was implemented on the same date in the Caribbean and South American regions.

38.1.3 RVSM Authorization. In accordance with 14 CFR Section 91.180, with only limited excep-

42.12.2 Controller Applies Visual Separation Only:

42.12.2.1 Within the terminal area when a controller has both aircraft in sight or by instructing a pilot who sees the other aircraft to maintain visual separation from it.

42.12.2.2 Pilots are responsible to maintain visual separation until flight paths (altitudes and/or courses) diverge.

42.12.2.3 Within en route airspace when aircraft are on opposite courses and one pilot reports having seen the other aircraft and that the aircraft have passed each other.

42.13 VFR-on-top

42.13.1 Pilot

42.13.1.1 This clearance must be requested by the pilot on an IFR flight plan, and if approved, allows the pilot the choice to select (subject to any ATC restrictions) an altitude or flight level in lieu of an assigned altitude.

NOTE—

1. *VFR-on-top is not permitted in certain airspace areas, such as Class A airspace, certain restricted areas, etc. Consequently, IFR flights operating VFR-on-top will avoid such airspace.*

2. *See paragraph 32. of this section, IFR Separation Standards; GEN 3.3, Paragraph 6, Position Reporting; and GEN 3.3, Paragraph 7, Additional Reports.*

42.13.1.2 By requesting a VFR-on-top clearance, the pilot assumes the sole responsibility to be vigilant so as to see and avoid other aircraft and to:

a) Fly at the appropriate VFR altitude as prescribed in 14 CFR Section 91.159.

b) Comply with the VFR visibility and distance from clouds criteria in 14 CFR Section 91.155 (Basic VFR Weather Minimums).

c) Comply with instrument flight rules that are applicable to this flight; i.e., minimum IFR altitudes, position reporting, radio communications, course to be flown, adherence to ATC clearance, etc.

d) Advise ATC prior to any altitude change to ensure the exchange of accurate traffic information.

42.13.2 Controller

42.13.2.1 May clear an aircraft to maintain VFR-on-top if the pilot of an aircraft on an IFR flight plan requests the clearance.

42.13.2.2 Informs the pilot of an aircraft cleared to climb to VFR-on-top the reported height of the tops or that no top report is available; issues an alternate clearance if necessary; and once the aircraft reports reaching VFR-on-top, reclears the aircraft to maintain VFR-on-top.

42.13.2.3 Before issuing clearance, ascertains that the aircraft is not in or will not enter Class A airspace.

42.14 Instrument Departures

42.14.1 Pilot

42.14.1.1 Prior to departure, considers the type of terrain and other obstructions on or in the vicinity of the departure airport.

42.14.1.2 Determines if obstruction avoidance can be maintained visually or that the departure procedure should be followed.

42.14.1.3 Determines whether an obstacle departure procedure (ODP) and/or DP is available for obstruction avoidance. One option may be a Visual Climb Over Airport (VCOA). Pilots must advise ATC as early as possible of the intent to fly the VCOA prior to departure.

42.14.1.4 At airports where instrument approach procedures have not been published, hence no published departure procedure, determines what action will be necessary and takes such action that will assure a safe departure.

42.14.2 Controller

42.14.2.1 At locations with airport traffic control service, when necessary, specifies direction of takeoff, turn, or initial heading to be flown after takeoff, consistent with published departure procedures (DP) or diverse vector areas (DVA), where applicable.

42.14.2.2 At locations without airport traffic control service but within Class E surface area, when necessary to specify direction of takeoff/turn or initial heading to be flown, obtains pilot's concurrence that the procedure will allow him/her to comply with local traffic patterns, terrain, and obstruction avoidance.

42.14.2.3 When the initial heading will take the aircraft off an assigned procedure (for example, an RNAV SID with a published lateral path to a

waypoint and crossing restrictions from the departure end of runway), the controller will assign an altitude to maintain with the initial heading.

42.14.2.4 Includes established departure procedures as part of the air traffic control clearance when pilot compliance is necessary to ensure separation.

42.15 Minimum Fuel Advisory

42.15.1 Pilot

42.15.1.1 Advises ATC of your “minimum fuel” status when your fuel supply has reached a state where, upon reaching destination, you cannot accept any undue delay.

42.15.1.2 Be aware that this is not an emergency situation but merely an advisory that indicates an emergency situation is possible should any undue delay occur.

42.15.1.3 On initial contact the term “minimum fuel” should be used after stating call sign.

EXAMPLE–

Salt Lake Approach, United 621, “minimum fuel.”

42.15.1.4 Be aware a minimum fuel advisory does not imply a need for traffic priority.

42.15.1.5 If the remaining usable fuel supply suggests the need for traffic priority to ensure a safe landing, you should declare an emergency due to low fuel, and report the fuel remaining in minutes.

42.15.2 Controller

42.15.2.1 When an aircraft declares a state of “minimum fuel,” relay this information to the facility to whom control jurisdiction is transferred.

42.15.2.2 Be alert for any occurrence which might delay the aircraft.

43. Traffic Alert and Collision Avoidance System (TCAS I & II)

43.1 TCAS I provides proximity warning only, to assist the pilot in the visual acquisition of intruder aircraft. No recommended avoidance maneuvers are provided nor authorized as a direct result of a TCAS I warning. It is intended for use by smaller commuter aircraft holding 10 to 30 passenger seats, and general aviation aircraft.

43.2 TCAS II provides traffic advisories (TA) and resolution advisories (RA). Resolution advisories provide recommended maneuvers in a vertical direction (climb or descend only) to avoid conflicting traffic. Transport category aircraft, and larger commuter and business aircraft holding 31 passenger seats or more, are required to be TCAS II equipped.

43.2.1 When a TA occurs, attempt to establish visual contact with the traffic but do not deviate from an assigned clearance based only on TA information.

43.2.2 When an RA occurs, pilots should respond immediately to the RA displays and maneuver as indicated unless doing so would jeopardize the safe operation of the flight, or the flight crew can ensure separation with the help of definitive visual acquisition of the aircraft causing the RA.

43.2.3 Each pilot who deviates from an ATC clearance in response to an RA must notify ATC of that deviation as soon as practicable, and notify ATC when clear of conflict and returning to their previously assigned clearance.

43.3 Deviations from rules, policies, or clearances should be kept to the minimum necessary to satisfy an RA. Most RA maneuvering requires minimum excursion from assigned altitude.

43.4 The serving IFR air traffic facility is not responsible to provide approved standard IFR separation to an IFR aircraft, from other aircraft, terrain, or obstructions after an RA maneuver until one of the following conditions exists:

43.4.1 The aircraft has returned to its assigned altitude and course.

43.4.2 Alternate ATC instructions have been issued.

43.4.3 A crew member informs ATC that the TCAS maneuver has been completed.

NOTE–

TCAS does not alter or diminish the pilot’s basic authority and responsibility to ensure safe flight. Since TCAS does not respond to aircraft which are not transponder equipped or aircraft with a transponder failure, TCAS alone does not ensure safe separation in every case. At this time, no air traffic service nor handling is predicated on the availability of TCAS equipment in the aircraft.

44. Traffic Information Service (TIS)

44.1 Introduction

The Traffic Information Service (TIS) provides information to the cockpit via data link, that is similar to VFR radar traffic advisories normally received over voice radio. Among the first FAA–provided data services, TIS is intended to improve the safety and efficiency of “see and avoid” flight through an automatic display that informs the pilot of nearby traffic and potential conflict situations. This traffic display is intended to assist the pilot in visual acquisition of these aircraft. TIS employs an enhanced capability of the terminal Mode S radar system, which contains the surveillance data, as well as the data link required to “uplink” this information to suitably–equipped aircraft (known as a TIS “client”). TIS provides estimated position, altitude, altitude trend, and ground track information for up to 8 intruder aircraft within 7 NM horizontally, +3,500 and –3,000 feet vertically of the client aircraft (see FIG ENR 1.1–31, TIS Proximity Coverage

Volume). The range of a target reported at a distance greater than 7 NM only indicates that this target will be a threat within 34 seconds and does not display a precise distance. TIS will alert the pilot to aircraft (under surveillance of the Mode S radar) that are estimated to be within 34 seconds of potential collision, regardless of distance or altitude. TIS surveillance data is derived from the same radar used by ATC; this data is uplinked to the client aircraft on each radar scan (nominally every 5 seconds).

44.2 Requirements

44.2.1 In order to use TIS, the client and any intruder aircraft must be equipped with the appropriate cockpit equipment and fly within the radar coverage of a Mode S radar capable of providing TIS. Typically, this will be within 55 NM of the sites depicted in FIG ENR 1.1–32, Terminal Mode S Radar Sites. ATC communication is not a requirement to receive TIS, although it may be required by the particular airspace or flight operations in which TIS is being used.

FIG ENR 1.1–31
TIS Proximity Coverage Volume

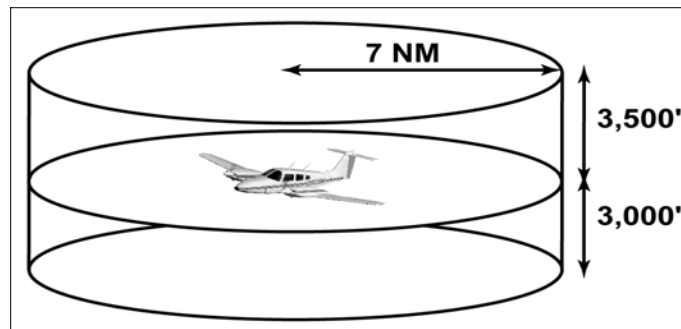


FIG ENR 1.1-32
Terminal Mode S Radar Sites

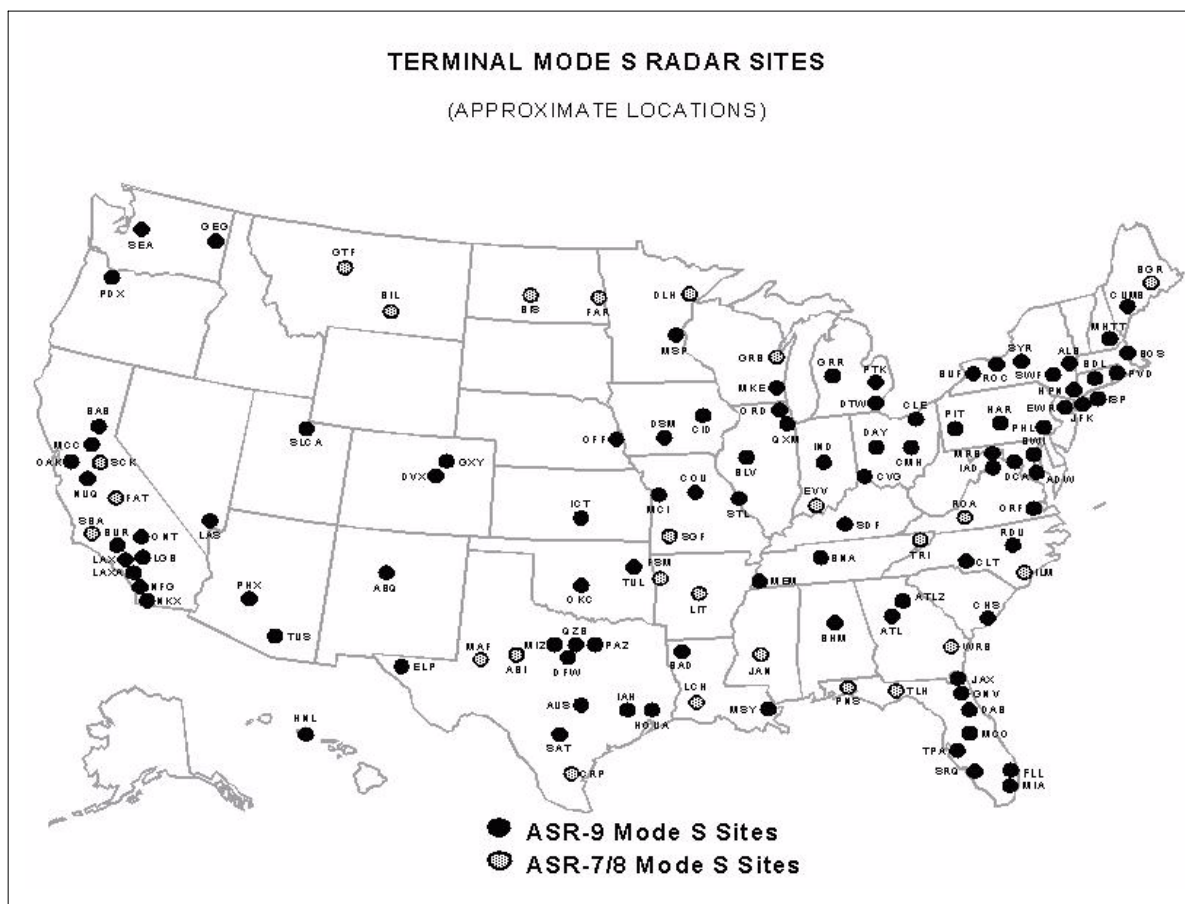


FIG ENR 1.1-35
En Route – ADS-B/ADS-R/TIS-B/FIS-B Service Ceilings/Floors

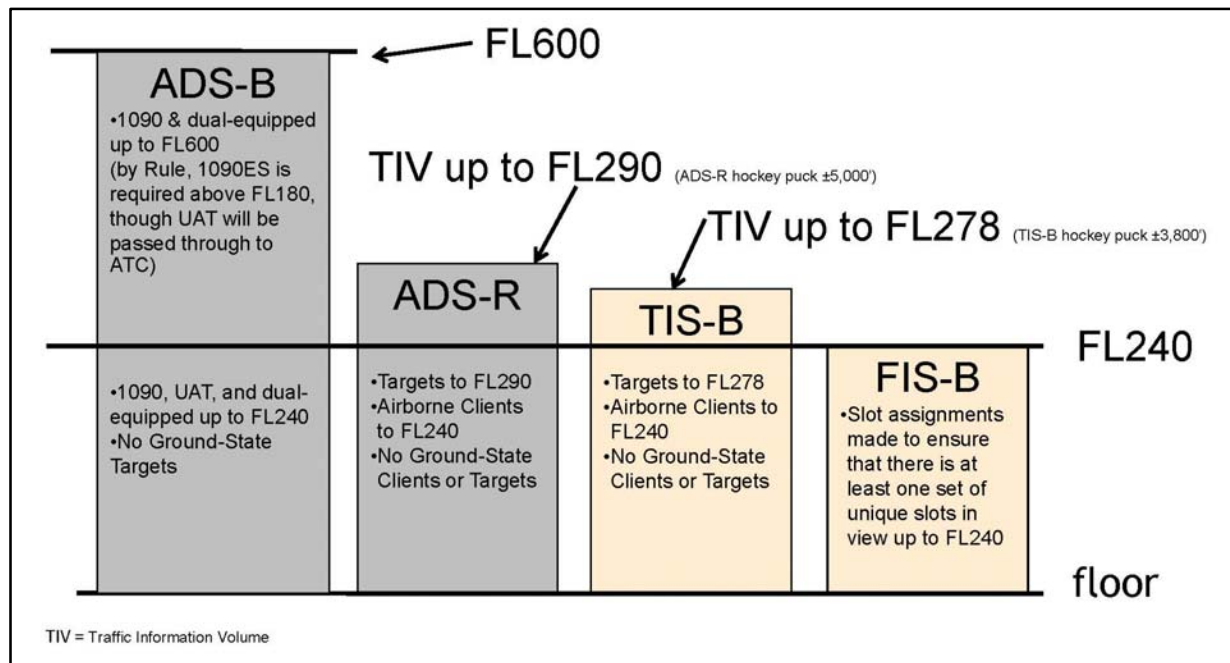
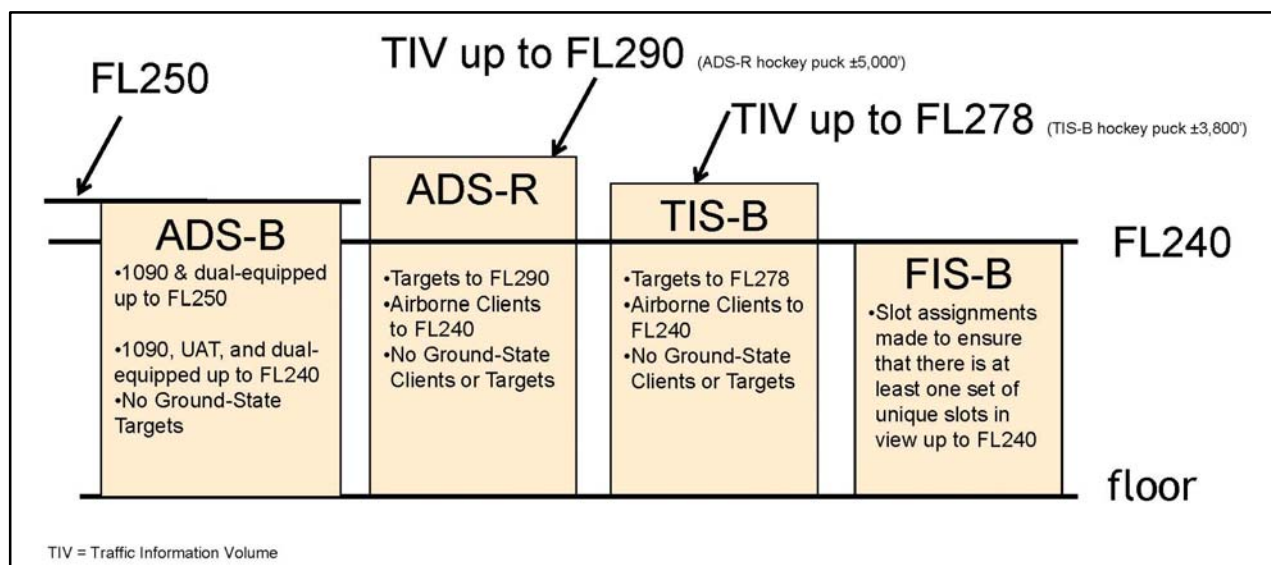


FIG ENR 1.1-36
Terminal – ADS-B/ADS-R/TIS-B/FIS-B Service Ceilings/Floors



45.2 ADS-B Certification and Performance Requirements

ADS-B equipment may be certified as a surveillance source for air traffic separation services using ADS-B Out. ADS-B equipment may also be certified for use with ADS-B In advisory services that enable appropriately equipped aircraft to display traffic and flight information. Refer to the aircraft's flight manual supplement or Pilot Operating Handbook for the capabilities of a specific aircraft installation.

45.3 ADS-B Capabilities and Procedures

45.3.1 ADS-B enables improved surveillance services, both air-to-air and air-to-ground, especially in areas where radar is ineffective due to terrain or where it is impractical or cost prohibitive. Initial NAS applications of air-to-air ADS-B are for "advisory" use only, enhancing a pilot's visual acquisition of other nearby equipped aircraft either when airborne or on the airport surface. Additionally, ADS-B will enable ATC and fleet operators to monitor aircraft throughout the available ground station coverage area.

45.3.2 One of the data elements transmitted by ADS-B is the aircraft's Flight Identification (FLT ID). The FLT ID is comprised of a maximum of seven alphanumeric characters and must correspond to the aircraft identification filed in the flight plan. For airline and commuter aircraft, the FLT ID is usually the company name and flight number (for example, AAL3432), and is typically entered into the avionics by the flight crew during preflight. For general aviation (GA), if aircraft avionics allow dynamic modification of the FLT ID, the pilot can enter it prior to flight. However, some ADS-B avionics require the FLT ID to be set to the aircraft registration number (for example, N1234Q) by the installer and cannot be changed by the pilot from the cockpit. In both cases, the FLT ID must correspond to the aircraft identification filed in its flight plan.

ATC automation systems use the transmitted ADS-B FLT ID to uniquely identify each aircraft within a given airspace, and to correlate it to its filed flight plan for the purpose of providing surveillance and separation services. If the FLT ID and the filed aircraft identification are not identical, a Call Sign Mis-Match (CSMM) is generated and ATC automation systems may not associate the aircraft with its

filed flight plan. In this case, air traffic services may be delayed or unavailable until the CSMM is corrected. Consequently, it is imperative that flight crews and GA pilots ensure the FLT ID entry correctly matches the aircraft identification filed in their flight plan.

45.3.3 Each ADS-B aircraft is assigned a unique ICAO address (also known as a 24-bit address) that is broadcast by the ADS-B transmitter. This ICAO address is programmed at installation. Should multiple aircraft broadcast the same ICAO address while transiting the same ADS-B Only Service Volume, the ADS-B network may be unable to track the targets correctly. If radar reinforcement is available, tracking will continue. If radar is unavailable, the controller may lose target tracking entirely on one or both targets. Consequently, it is imperative that the ICAO address entry is correct.

45.3.4 Aircraft that are equipped with ADS-B avionics on the UAT datalink have a feature that allows them to broadcast an anonymous 24-bit ICAO address. In this mode, the UAT system creates a randomized address that does not match the actual ICAO address assigned to the aircraft. After January 1, 2020, and in the airspace identified in 14 CFR 91.225, the UAT anonymous 24-bit address feature may only be used when the operator has not filed a flight plan and is not requesting ATC services. In the anonymity mode, the aircraft's beacon code must be set to 1200 and, depending on the manufacturer's implementation, the aircraft FLT ID might not be transmitted. Operators should be aware that in UAT anonymous mode, they will not be eligible to receive ATC separation and flight-following services and will likely not benefit from enhanced ADS-B search and rescue capabilities.

45.3.5 ADS-B systems integrated with the transponder will automatically set the applicable emergency status when 7500, 7600, or 7700 are entered into the transponder. ADS-B systems not integrated with the transponder, or systems with optional emergency codes, will require that the appropriate emergency code is entered through a pilot interface. ADS-B is intended for inflight and airport surface use. ADS-B systems should be turned "on" and remain "on" whenever operating in the air and moving on the airport surface. Civilian and military Mode A/C transponders and ADS-B systems should be adjusted to the "on" or normal operating position as soon as

practical, unless the change to “standby” has been accomplished previously at the request of ATC.

45.4 ATC Surveillance Services using ADS-B – Procedures and Recommended Phraseology

Radar procedures, with the exceptions found in this paragraph, are identical to those procedures prescribed for radar in the AIP.

45.4.1 Preflight:

If ATC services are anticipated when either a VFR or IFR flight plan is filed, the aircraft identification (as entered in the flight plan) must be entered as the FLT ID in the ADS-B avionics as described in paragraph 45.3.2.

45.4.2 Inflight:

When requesting surveillance services while airborne, pilots must disable the anonymous feature, if so equipped, prior to contacting ATC. Pilots must also ensure that their transmitted ADS-B FLT ID matches the aircraft identification as entered in their flight plan.

45.4.3 Aircraft with an Inoperative/Malfunctioning ADS-B Transmitter:

45.4.3.1 ATC will inform the flight crew when the aircraft’s ADS-B transmitter appears to be inoperative or malfunctioning:

PHRASEOLOGY–

YOUR ADS-B TRANSMITTER APPEARS TO BE INOPERATIVE/MALFUNCTIONING. STOP ADS-B TRANSMISSIONS.

45.4.3.2 ATC will inform the flight crew if it becomes necessary to turn off the aircraft’s ADS-B transmitter.

PHRASEOLOGY–

STOP ADS-B TRANSMISSIONS.

45.4.3.3 Other malfunctions and considerations: Loss of automatic altitude reporting capabilities (encoder failure) will result in loss of ATC altitude advisory services.

45.5 ADS-B Limitations

45.5.1 The ADS-B cockpit display of traffic is NOT intended to be used as a collision avoidance system and does not relieve the pilot’s responsibility to “see and avoid” other aircraft. (See paragraph 42.10, See and Avoid). ADS-B provides proximity warning only to assist the pilot in the visual acquisition of

other aircraft. ADS-B must not be used for avoidance maneuvers during IMC or other times when there is no visual contact with the intruder aircraft. ADS-B is intended only to assist in visual acquisition of other aircraft. No avoidance maneuvers are provided nor authorized, as a direct result of an ADS-B display or an ADS-B alert.

45.5.2 ADS-B does not alter or diminish the pilot’s basic authority and responsibility to ensure safe flight. ADS-B only displays aircraft that are ADS-B equipped; therefore, aircraft that are not ADS-B equipped or aircraft that are experiencing an ADS-B failure will not be displayed. ADS-B alone does not ensure safe separation.

45.5.3 Presently, no air traffic services or handling is predicated on the availability of an ADS-B cockpit display. A “traffic-in-sight” reply to ATC must be based on seeing an aircraft out-the-window, NOT on the cockpit display.

45.5.4 Use of ADS-B radar services is limited to the service volume of the GBT.

NOTE–

The coverage volume of GBTs are limited to line-of-sight.

45.6 Reports of ADS-B Malfunctions

Users of ADS-B can provide valuable assistance in the correction of malfunctions by reporting instances of undesirable system performance. Since ADS-B performance is monitored by maintenance personnel rather than ATC, report malfunctions to the nearest Flight Service Station (FSS) facility by radio or telephone. Reporters should identify:

45.6.1 Condition observed.

45.6.2 Date and time of observation.

45.6.3 Altitude and location of observation.

45.6.4 Type and call sign of the aircraft.

45.6.5 Type and software version of avionics system.

46. Traffic Information Service–Broadcast (TIS-B)

46.1 Introduction

TIS-B is the broadcast of ATC derived traffic information to ADS-B equipped (1090ES or UAT) aircraft from ground radio stations. The source of this traffic information is derived from ground-based air traffic surveillance sensors. TIS-B service will be

available throughout the NAS where there are both adequate surveillance coverage from ground sensors and adequate broadcast coverage from ADS-B ground radio stations. The quality level of traffic information provided by TIS-B is dependent upon the number and type of ground sensors available as TIS-B sources and the timeliness of the reported data. (See FIG ENR 1.1–35 and FIG ENR 1.1–36.)

46.2 TIS-B Requirements

In order to receive TIS-B service, the following conditions must exist:

46.2.1 Aircraft must be equipped with an ADS-B transmitter/receiver or transceiver, and a cockpit display of traffic information (CDTI).

46.2.2 Aircraft must fly within the coverage volume of a compatible ground radio station that is configured for TIS-B uplinks. (Not all ground radio stations provide TIS-B due to a lack of radar coverage or because a radar feed is not available).

46.2.3 Aircraft must be within the coverage of and detected by at least one ATC radar serving the ground radio station in use.

46.3 TIS-B Capabilities

46.3.1 TIS-B is intended to provide ADS-B equipped aircraft with a more complete traffic picture in situations where not all nearby aircraft are equipped with ADS-B Out. This advisory-only application is intended to enhance a pilot's visual acquisition of other traffic.

46.3.2 Only transponder-equipped targets (i.e., Mode A/C or Mode S transponders) are transmitted through the ATC ground system architecture. Current radar siting may result in limited radar surveillance coverage at lower altitudes near some airports, with subsequently limited TIS-B service volume coverage. If there is no radar coverage in a given area, then there will be no TIS-B coverage in that area.

46.4 TIS-B Limitations

46.4.1 TIS-B is NOT intended to be used as a collision avoidance system and does not relieve the pilot's responsibility to "see and avoid" other aircraft, in accordance with 14CFR §91.113b. TIS-B must not be used for avoidance maneuvers during times when there is no visual contact with the intruder

aircraft. TIS-B is intended only to assist in the visual acquisition of other aircraft.

NOTE–

No aircraft avoidance maneuvers are authorized as a direct result of a TIS-B target being displayed in the cockpit.

46.4.2 While TIS-B is a useful aid to visual traffic avoidance, its inherent system limitations must be understood to ensure proper use.

46.4.2.1 A pilot may receive an intermittent TIS-B target of themselves, typically when maneuvering (e.g., climbing turns) due to the radar not tracking the aircraft as quickly as ADS-B.

46.4.2.2 The ADS-B-to-radar association process within the ground system may at times have difficulty correlating an ADS-B report with corresponding radar returns from the same aircraft. When this happens the pilot may see duplicate traffic symbols (i.e., "TIS-B shadows") on the cockpit display.

46.4.2.3 Updates of TIS-B traffic reports will occur less often than ADS-B traffic updates. TIS-B position updates will occur approximately once every 3–13 seconds depending on the type of radar system in use within the coverage area. In comparison, the update rate for ADS-B is nominally once per second.

46.4.2.4 The TIS-B system only uplinks data pertaining to transponder-equipped aircraft. Aircraft without a transponder will not be displayed as TIS-B traffic.

46.4.2.5 There is no indication provided when any aircraft is operating inside or outside the TIS-B service volume, therefore it is difficult to know if one is receiving uplinked TIS-B traffic information.

46.4.3 Pilots and operators are reminded that the airborne equipment that displays TIS-B targets is for pilot situational awareness only and is not approved as a collision avoidance tool. Unless there is an imminent emergency requiring immediate action, any deviation from an air traffic control clearance in response to perceived converging traffic appearing on a TIS-B display must be approved by the controlling ATC facility before commencing the maneuver, except as permitted under certain conditions in 14CFR §91.123. Uncoordinated deviations may place an aircraft in close proximity to other aircraft under ATC control not seen on the airborne equipment and may result in a pilot deviation or other incident.

46.5 Reports of TIS–B Malfunctions

Users of TIS–B can provide valuable assistance in the correction of malfunctions by reporting instances of undesirable system performance. Since TIS–B performance is monitored by maintenance personnel rather than ATC, report malfunctions to the nearest Flight Service Station (FSS) facility by radio or telephone. Reporters should identify:

- 46.5.1** Condition observed.
- 46.5.2** Date and time of observation.
- 46.5.3** Altitude and location of observation.
- 46.5.4** Type and call sign of the aircraft.
- 46.5.5** Type and software version of avionics system.

47. Flight Information Service– Broadcast (FIS–B)

47.1 Introduction.

FIS–B is a ground broadcast service provided through the ADS–B Services network over the 978 MHz UAT data link. The FAA FIS–B system provides pilots and flight crews of properly equipped aircraft with a cockpit display of certain aviation weather and aeronautical information. FIS–B reception is line-of-sight within the service volume of the ground infrastructure.

(See FIG ENR 1.1–35 and FIG ENR 1.1–36.)

47.2 Weather Products Provided by FIS–B.

FIS–B does not replace a preflight weather briefing from a source listed in GEN 3.5, Paragraph 3.5, FAA Weather Services, or inflight updates from an FSS or ATC. FIS–B information may be used by the pilot for the safe conduct of flight and aircraft movement; however, the information should not be the only source of weather or aeronautical information. A pilot should be particularly alert and understand the limitations and quality assurance issues associated with individual products. This includes graphical representation of next generation weather radar (NEXRAD) imagery and Notices to Airmen (NOTAM)/temporary flight restrictions (TFR).

REFERENCE–

AIP, ENR 3.5 Paragraph 7, *Flight Information Services (FIS)*
Advisory Circular AC 00–63, “Use of Cockpit Displays of Digital Weather and Aeronautical Information”

47.3 Reports of FIS–B Malfunctions.

Users of FIS–B can provide valuable assistance in the correction of malfunctions by reporting instances of undesirable system performance. Since FIS–B performance is monitored by maintenance personnel rather than ATC, report malfunctions to the nearest Flight Service Station (FSS) facility by radio or telephone. Reporters should identify:

- 47.3.1** Condition observed.
- 47.3.2** Date and time of observation.
- 47.3.3** Altitude and location of observation.
- 47.3.4** Type and call sign of the aircraft.
- 47.3.5** Type and software version of avionics system.

48. Automatic Dependent Surveillance–Rebroadcast (ADS–R)

48.1 Introduction.

ADS–R is a datalink translation function of the ADS–B ground system required to accommodate the two separate operating frequencies (978 MHz and 1090 ES). The ADS–B system receives the ADS–B messages transmitted on one frequency and ADS–R translates and reformats the information for rebroadcast and use on the other frequency. This allows ADS–B In equipped aircraft to see nearby ADS–B Out traffic regardless of the operating link of the other aircraft. Aircraft operating on the same ADS–B frequency exchange information directly and do not require the ADS–R translation function. (See FIG ENR 1.1–35 and FIG ENR 1.1–36.)

48.2 Reports of ADS–R Malfunctions.

Users of ADS–R can provide valuable assistance in the correction of malfunctions by reporting instances of undesirable system performance. Since ADS–R performance is monitored by maintenance personnel rather than ATC, report malfunctions to the nearest Flight Service Station (FSS) facility by radio or telephone. Reporters should identify:

- 48.2.1** Condition observed.
- 48.2.2** Date and time of observation.
- 48.2.3** Altitude and location of observation.
- 48.2.4** Type and call sign of the aircraft.
- 48.2.5** Type and software version of avionics system.

49. Heavy Traffic Around Military Fields

49.1 Pilots are advised to exercise vigilance when in close proximity to most military airports. These airports may have jet aircraft traffic patterns extending up to 2,500 feet above the surface. In

addition, they may have an unusually heavy concentration of jet aircraft operating within a 25–nautical mile radius and from the surface to all altitudes. The precautionary note also applies to the larger civil airports.

3.3 STAR charts are published in the Terminal Procedures Publication (TPP) and are available on subscription from the National Aeronautical Charting Office.

3.4 PBN STAR.

3.4.1 Public PBN STARs are normally designed using RNAV 1, RNP 1, or A–RNP NavSpecs. These procedures require system performance currently met by GPS or DME/DME/IRU PBN systems that satisfy the criteria discussed in the current publication of AC 90–100, U.S. Terminal and En Route Area Navigation (RNAV) Operations. These procedures, using RNAV 1 and RNP 1 NavSpecs, must maintain a total system error of not more than 1 NM for 95% of the total flight time. Minimum values for A–RNP procedures will be charted in the PBN box (for example, 1.00 or 0.30).

3.4.2 In the U.S., a specific procedure's PBN requirements will be prominently displayed in separate, standardized notes boxes. For procedures with PBN elements, the "PBN box" will contain the procedure's NavSpec(s); and, if required: specific sensors or infrastructure needed for the navigation solution, any additional or advanced functional requirements, the minimum RNP value, and any amplifying remarks. Items listed in this PBN box are REQUIRED for the procedure's PBN elements.

3.4.3 For procedures requiring GPS, if the navigation system does not automatically alert the flight crew of a loss of GPS, the operator must develop procedures to verify correct GPS operation.

REFERENCE–

ENR 4.1 Paragraph 16.2.5.11, *Impact of Magnetic Variation on PBN Systems*

4. Local Flow Traffic Management Program

4.1 This program is a continuing effort by the FAA to enhance safety, minimize the impact of aircraft noise, and conserve aviation fuel. The enhancement of safety and reduction of noise are achieved in this program by minimizing low altitude maneuvering of arriving turbojet and turboprop aircraft weighing more than 12,500 pounds and, by permitting departure aircraft to climb to high altitudes sooner, as arrivals are operating at higher altitudes at the points where their flight paths cross. The application of these procedures also reduces exposure time between controlled aircraft and uncontrolled aircraft at the

lower altitudes in and around the terminal environment. Fuel conservation is accomplished by absorbing any necessary arrival delays for aircraft included in this program operating at the higher and more fuel efficient altitudes.

4.2 A fuel efficient descent is basically an uninterrupted descent (except where level flight is required for speed adjustment) from cruising altitude to the point when level flight is necessary for the pilot to stabilize the aircraft on final approach. The procedure for a fuel efficient descent is based on an altitude loss which is most efficient for the majority of aircraft being served. This will generally result in a descent gradient window of 250–350 feet per nautical mile.

4.3 When crossing altitudes and speed restrictions are issued verbally or are depicted on a chart, ATC will expect the pilot to descend first to the crossing altitude and then reduce speed. Verbal clearances for descent will normally permit an uninterrupted descent in accordance with the procedure as described in paragraph 4.2 above. Acceptance of a charted fuel efficient descent (Runway Profile Descent) clearance requires the pilot to adhere to the altitudes, speeds, and headings depicted on the charts unless otherwise instructed by ATC. PILOTS RECEIVING A CLEARANCE FOR A FUEL EFFICIENT DESCENT ARE EXPECTED TO ADVISE ATC IF THEY DO NOT HAVE RUNWAY PROFILE DESCENT CHARTS PUBLISHED FOR THAT AIRPORT OR ARE UNABLE TO COMPLY WITH THE CLEARANCE.

5. Advance Information on Instrument Approaches

5.1 When landing at airports with approach control services and where two or more instrument approach procedures are published, pilots will be provided in advance of their arrival with the type of approach to expect or that they may be vectored for a visual approach. This information will be broadcast either by a controller or on ATIS. It will not be furnished when the visibility is three miles or better and the ceiling is at or above the highest initial approach altitude established for any low altitude instrument approach procedure for the airport.

5.2 The purpose of this information is to aid the pilot in planning arrival actions; however, it is not an ATC clearance or commitment and is subject to change.

Pilots should bear in mind that fluctuating weather, shifting winds, blocked runway, etc., are conditions which may result in changes to approach information previously received. It is important that pilots advise ATC immediately if they are unable to execute the approach ATC advised will be used, or if they prefer another type of approach.

5.3 Aircraft destined to uncontrolled airports which have automated weather data with broadcast capability should monitor the ASOS/AWSS/AWOS frequency to ascertain the current weather for the airport. The pilot must advise ATC when he/she has received the broadcast weather and state his/her intentions.

NOTE—

1. *ASOS/AWSS/AWOS should be set to provide one-minute broadcast weather updates at uncontrolled airports that are without weather broadcast capability by a human observer.*

2. *Controllers will consider the long line disseminated weather from an automated weather system at an uncontrolled airport as trend and planning information only and will rely on the pilot for current weather information for the airport. If the pilot is unable to receive the current broadcast weather, the last long-line disseminated weather will be issued to the pilot. When receiving IFR services, the pilot/aircraft operator is responsible for determining if weather/visibility is adequate for approach/landing.*

5.4 When making an IFR approach to an airport not served by a tower or FSS, after the ATC controller advises “CHANGE TO ADVISORY FREQUENCY APPROVED,” you should broadcast your intentions, including the type of approach being executed, your position, and when over the final approach fix inbound (nonprecision approach) or when over the outer marker or the fix used in lieu of the outer marker inbound (precision approach). Continue to monitor the appropriate frequency (UNICOM, etc.) for reports from other pilots.

6. Approach Clearance

6.1 An aircraft which has been cleared to a holding fix and subsequently “cleared . . . approach” has not received new routing. Even though clearance for the approach may have been issued prior to the aircraft reaching the holding fix, ATC would expect the pilot to proceed via the holding fix (the last assigned route), and the feeder route associated with that fix (if

a feeder route is published on the approach chart) to the initial approach fix (IAF) to commence the approach. **WHEN CLEARED FOR THE APPROACH, THE PUBLISHED OFF AIRWAY (FEEDER) ROUTES THAT LEAD FROM THE EN ROUTE STRUCTURE TO THE IAF ARE PART OF THE APPROACH CLEARANCE.**

6.2 If a feeder route to an IAF begins at a fix located along the route of flight prior to reaching the holding fix, and clearance for an approach is issued, a pilot should commence the approach via the published feeder route; i.e., the aircraft would not be expected to overfly the feeder route and return to it. The pilot is expected to commence the approach in a similar manner at the IAF, if the IAF for the procedure is located along the route of flight to the holding fix.

6.3 If a route of flight directly to the initial approach fix is desired, it should be so stated by the controller with phraseology to include the words “direct . . .,” “proceed direct” or a similar phrase which the pilot can interpret without question. If a pilot is uncertain of the clearance, immediately query ATC as to what route of flight is desired.

6.4 The name of an instrument approach, as published, is used to identify the approach, even though a component of the approach aid, such as the glideslope on an Instrument Landing System, is inoperative or unreliable. The controller will use the name of the approach as published, but must advise the aircraft at the time an approach clearance is issued that the inoperative or unreliable approach aid component is unusable, except when the title of the published approach procedures otherwise allows, for example, ILS or LOC.

6.5 The following applies to aircraft on radar vectors and/or cleared “direct to” in conjunction with an approach clearance:

6.5.1 Maintain the last altitude assigned by ATC until the aircraft is established on a published segment of a transition route, or approach procedure segment, or other published route, for which a lower altitude is published on the chart. If already on an established route, or approach or arrival segment, you may descend to whatever minimum altitude is listed for that route or segment

6.5.2 Continue on the vector heading until intercepting the next published ground track applicable to the approach clearance.

6.5.3 Once reaching the final approach fix via the published segments, the pilot may continue on approach to a landing.

6.5.4 If proceeding to an IAF with a published course reversal (procedure turn or hold-in-lieu of PT pattern), except when cleared for a straight in approach by ATC, the pilot must execute the procedure turn/hold-in-lieu of PT, and complete the approach.

6.5.5 If cleared to an IAF/IF via a NoPT route, or no procedure turn/hold-in-lieu of PT is published, continue with the published approach.

6.5.6 In addition to the above, RNAV aircraft may be issued a clearance direct to the IAF/IF at intercept angles not greater than 90 degrees for both conventional and RNAV instrument approaches. Controllers may issue a heading or a course direct to a fix between the IF and FAF at intercept angles not greater than 30 degrees for both conventional and RNAV instrument approaches. In all cases, controllers will assign altitudes that ensure obstacle clearance and will permit a normal descent to the FAF. When clearing aircraft direct to the IF, ATC will radar monitor the aircraft until the IF and will advise the pilot to expect clearance direct to the IF at least 5 miles from the fix. ATC must issue a straight-in approach clearance when clearing an aircraft direct to an IAF/IF with a procedure turn or hold-in-lieu of a procedure turn, and ATC does not want the aircraft to execute the course reversal.

NOTE—
Refer to 14 CFR 91.175 (i).

6.6 RNAV aircraft may be issued a clearance direct to the FAF that is also charted as an IAF, in which case the pilot is expected to execute the depicted procedure turn or hold-in-lieu of procedure turn. ATC will not issue a straight-in approach clearance. If the pilot desires a straight-in approach, they must request vectors to the final approach course outside of the FAF or fly a published “NoPT” route. When visual approaches are in use, ATC may clear an aircraft direct to the FAF.

NOTE—
1. *In anticipation of a clearance by ATC to any fix published on an instrument approach procedure, pilots of RNAV aircraft are advised to select an appropriate IAF or feeder fix when loading an instrument approach procedure into the RNAV system.*

2. *Selection of “Vectors-to-Final” or “Vectors” option for an instrument approach may prevent approach fixes located outside of the FAF from being loaded into an RNAV system. Therefore, the selection of these options is discouraged due to increased workload for pilots to reprogram the navigation system.*

6.7 An RF leg is defined as a constant radius circular path around a defined turn center that starts and terminates at a fix. An RF leg may be published as part of a procedure. Since not all aircraft have the capability to fly these leg types, pilots are responsible for knowing if they can conduct an RNAV approach with an RF leg. Requirements for RF legs will be indicated on the approach chart in the notes section or at the applicable initial approach fix. Controllers will clear RNAV-equipped aircraft for instrument approach procedures containing RF legs:

6.7.1 Via published transitions, or

6.7.2 In accordance with paragraph 6.5.6 above, and

6.7.3 ATC will not clear aircraft direct to any waypoint beginning or within an RF leg, and will not assign fix/waypoint crossing speeds in excess of charted speed restrictions.

EXAMPLE—

1. *Controllers will not clear aircraft direct to THIRD because that waypoint begins the RF leg, and aircraft cannot be vectored or cleared to TURNN or vectored to intercept the approach segment at any point between THIRD and FORTH because this is the RF leg. (See FIG ENR 1.5–9.)*

6.8 When necessary to cancel a previously issued approach clearance, the controller will advise the pilot “Cancel Approach Clearance” followed by any additional instructions when applicable.

7. Landing Priority

7.1 A clearance for a specific type of approach (ILS, RNAV, GLS, ADF, VOR, or visual approach) to an aircraft operating on an IFR flight plan does not mean that landing priority will be given over other traffic. Traffic control towers handle all aircraft, regardless of the type of flight plan, on a “first-come, first-served” basis. Therefore, because of local traffic or runway in use, it may be necessary for the controller, in the interest of safety, to provide a different landing sequence. In any case, a landing sequence will be issued to each aircraft as soon as possible to enable the pilot to properly adjust the aircraft’s flight path.

8. Procedure Turn and Hold-in-lieu of Procedure Turn

8.1 A procedure turn is the maneuver prescribed when it is necessary to reverse direction to establish the aircraft inbound on an intermediate or final approach course. The procedure turn or hold-in-lieu-of-PT is a required maneuver when it is depicted on the approach chart, unless cleared by ATC for a straight-in approach. Additionally, the procedure turn or hold-in-lieu-of-PT is not permitted when the symbol “No PT” is depicted on the initial segment being used, when a RADAR VECTOR to the final approach course is provided, or when conducting a timed approach from a holding fix. The altitude prescribed for the procedure turn is a minimum altitude until the aircraft is established on the inbound course. The maneuver must be completed within the distance specified in the profile view. For a hold-in-lieu-of-PT, the holding pattern should be flown as depicted and the specified leg length/timing must not be exceeded.

NOTE—

The pilot may elect to use the procedure turn or hold-in-lieu-of-PT when it is not required by the procedure, but must first receive an amended clearance from ATC. If the pilot is uncertain whether the ATC clearance intends for a procedure turn to be conducted or to allow for a straight-in approach, the pilot must immediately request clarification from ATC (14 CFR Section 91.123).

8.1.1 On U.S. Government charts, a barbed arrow indicates the maneuvering side of the outbound course on which the procedure turn is made. Headings are provided for course reversal using the 45 degree type procedure turn. However, the point at which the turn may be commenced and the type and rate of turn is left to the discretion of the pilot (limited by the charted remain within xx NM distance). Some of the options are the 45 degree procedure turn, the racetrack pattern, the teardrop procedure turn, or the 80 degree ↔ 260 degree course reversal. Racetrack entries should be conducted on the maneuvering side where the majority of protected airspace resides. If an entry places the pilot on the non-maneuvering side of the PT, correction to intercept the outbound course ensures remaining within protected airspace. Some procedure turns are specified by procedural track. These turns must be flown exactly as depicted.

8.1.2 Descent to the procedure turn (PT) completion altitude from the PT fix altitude (when one has been published or assigned by ATC) must not begin until crossing over the PT fix or abeam and proceeding outbound. Some procedures contain a note in the chart profile view that says “Maintain (altitude) or above until established outbound for procedure turn” (See FIG ENR 1.5–10). Newer procedures will simply depict an “at or above” altitude at the PT fix without a chart note (See FIG ENR 1.5–11). Both are there to ensure required obstacle clearance is provided in the procedure turn entry zone (See FIG ENR 1.5–12). Absence of a chart note or specified minimum altitude adjacent to the PT fix is an indication that descent to the procedure turn altitude can commence immediately upon crossing over the PT fix, regardless of the direction of flight. This is because the minimum altitudes in the PT entry zone and the PT maneuvering zone are the same.

8.1.3 When the approach procedure involves a procedure turn, a maximum speed of not greater than 200 knots (IAS) should be observed from first overheading the course reversal IAF through the procedure turn maneuver to ensure containment within the obstruction clearance area. Pilots should begin the outbound turn immediately after passing the procedure turn fix. The procedure turn maneuver must be executed within the distance specified in the profile view. The normal procedure turn distance is 10 miles. This may be reduced to a minimum of 5 miles where only Category A or helicopter aircraft are to be operated or increased to as much as 15 miles to accommodate high performance aircraft.

8.1.4 A teardrop procedure or penetration turn may be specified in some procedures for a required course reversal. The teardrop procedure consists of departure from an initial approach fix on an outbound course followed by a turn toward and intercepting the inbound course at or prior to the intermediate fix or point. Its purpose is to permit an aircraft to reverse direction and lose considerable altitude within reasonably limited airspace. Where no fix is available to mark the beginning of the intermediate segment, it must be assumed to commence at a point 10 miles prior to the final approach fix. When the facility is located on the airport, an aircraft is considered to be on final approach upon completion of the penetration turn. However, the final approach segment begins on the final approach course 10 miles from the facility.

normal ILS minimum of RVR 2400 can be annotated with a single or double asterisk or the dagger symbol “†”; for example “** 696/24 200 (200/1/2).” A note is included on the chart stating “**RVR 1800 authorized with use of FD or AP or HUD to DA.” The pilot must use the flight director, or autopilot with an approved approach coupler, or head up display to decision altitude or to the initiation of a missed approach. In the interest of safety, single pilot operators should not fly approaches to 1800 RVR minimums on runways without touchdown and centerline lights using only a flight director, unless accompanied by the use of an autopilot with an approach coupler.

12.1.3.5 The naming of multiple approaches of the same type to the same runway is also changing. Multiple approaches with the same guidance will be annotated with an alphabetical suffix beginning at the end of the alphabet and working backwards for subsequent procedures (e.g., ILS Z RWY 28, ILS Y RWY 28, etc.). The existing annotations such as ILS 2 RWY 28 or Silver ILS RWY 28 will be phased out and replaced with the new designation. The Cat II and Cat III designations are used to differentiate between multiple ILSs to the same runway unless there are multiples of the same type.

12.1.3.6 RNAV (GPS) approaches to LNAV, LP, LNAV/VNAV and LPV lines of minima using WAAS and RNAV (GPS) approaches to LNAV and LNAV/VNAV lines of minima using GPS are charted as RNAV (GPS) RWY (Number) (e.g., RNAV (GPS) RWY 21). VOR/DME RNAV approaches will continue to be identified as VOR/DME RNAV RWY (Number) (e.g., VOR/DME RNAV RWY 21). VOR/DME RNAV procedures which can be flown by GPS will be annotated with “or GPS” (e.g., VOR/DME RNAV or GPS RWY 31).

12.1.3.7 Performance-Based Navigation (PBN) Box. As charts are updated, a procedure’s PBN requirements and conventional equipment requirements will be prominently displayed in separate, standardized notes boxes. For procedures with PBN elements, the PBN box will contain the procedure’s navigation specification(s); and, if required: specific sensors or infrastructure needed for the navigation solution, any additional or advanced functional requirements, the minimum Required Navigation Performance (RNP) value, and any amplifying remarks. Items listed in this PBN box are

REQUIRED for the procedure’s PBN elements. For example, an ILS with an RNAV missed approach would require a specific capability to fly the missed approach portion of the procedure. That required capability will be listed in the PBN box. The separate Equipment Requirements box will list ground-based equipment requirements. On procedures with both PBN elements and equipment requirements, the PBN requirements box will be listed first. The publication of these notes will continue incrementally until all charts have been amended to comply with the new standard.

12.1.4 Approach minimums are based on the local altimeter setting for that airport, unless annotated otherwise; for example, Oklahoma City/Will Rogers World approaches are based on having a Will Rogers World altimeter setting. When a different altimeter source is required, or more than one source is authorized, it will be annotated on the approach chart; e.g., use Sidney altimeter setting, if not received, use Scottsbluff altimeter setting. Approach minimums may be raised when a nonlocal altimeter source is authorized. When more than one altimeter source is authorized, and the minima are different, they will be shown by separate lines in the approach minima box or a note; e.g., use Manhattan altimeter setting; when not available use Salina altimeter setting and increase all MDAs 40 feet. When the altimeter must be obtained from a source other than air traffic a note will indicate the source; e.g., Obtain local altimeter setting on CTAF. When the altimeter setting(s) on which the approach is based is not available, the approach is not authorized. Baro-VNAV must be flown using the local altimeter setting only. Where no local altimeter is available, the LNAV/VNAV line will still be published for use by WAAS receivers with a note that Baro-VNAV is not authorized. When a local and at least one other altimeter setting source is authorized and the local altimeter is not available Baro-VNAV is not authorized; however, the LNAV/VNAV minima can still be used by WAAS receivers using the alternate altimeter setting source.

NOTE–

Barometric Vertical Navigation (baro-VNAV). An RNAV system function which uses barometric altitude information from the aircraft’s altimeter to compute and present a vertical guidance path to the pilot. The specified vertical path is computed as a geometric path, typically computed between two waypoints or an angle based computation from a single waypoint. Further guidance may be found in Advisory Circular 90–105.

12.1.5 A pilot adhering to the altitudes, flight paths, and weather minimums depicted on the IAP chart or vectors and altitudes issued by the radar controller, is assured of terrain and obstruction clearance and runway or airport alignment during approach for landing.

12.1.6 IAPs are designed to provide an IFR descent from the en route environment to a point where a safe landing can be made. They are prescribed and approved by appropriate civil or military authority to ensure a safe descent during instrument flight conditions at a specific airport. It is important that pilots understand these procedures and their use prior to attempting to fly instrument approaches.

12.1.7 TERPS criteria are provided for the following types of instrument approach procedures:

12.1.7.1 Precision Approach (PA). An instrument approach based on a navigation system that provides course and glidepath deviation information meeting the precision standards of ICAO Annex 10. For example, PAR, ILS, and GLS are precision approaches.

12.1.7.2 Approach with Vertical Guidance (APV). An instrument approach based on a navigation system that is not required to meet the precision approach standards of ICAO Annex 10 but provides course and glidepath deviation information. For example, Baro-VNAV, LDA with glidepath, LNAV/VNAV and LPV are APV approaches.

12.1.7.3 Nonprecision Approach (NPA). An instrument approach based on a navigation system which provides course deviation information, but no glidepath deviation information. For example, VOR, NDB and LNAV. As noted in subparagraph 12.10, Vertical Descent Angle (VDA) on Nonprecision Approaches, some approach procedures may provide a Vertical Descent Angle as an aid in flying a stabilized approach, without requiring its use in order to fly the procedure. This does not make the approach an APV procedure, since it must still be flown to an MDA and has not been evaluated with a glidepath.

12.2 The method used to depict prescribed altitudes on instrument approach charts differs according to techniques employed by different chart publishers. Prescribed altitudes may be depicted in four different configurations: minimum, maximum, mandatory, and recommended. The U.S. Government distributes charts produced by National Geospatial-Intelligence

Agency (NGA) and FAA. Altitudes are depicted on these charts in the profile view with underscore, overscore, both or none to identify them as minimum, maximum, mandatory or recommended.

12.2.1 Minimum altitude will be depicted with the altitude value underscored. Aircraft are required to maintain altitude at or above the depicted value, for example, 3000.

12.2.2 Maximum altitude will be depicted with the altitude value overscored. Aircraft are required to maintain altitude at or below the depicted value, for example, 4000.

12.2.3 Mandatory altitude will be depicted with the altitude value both underscored and overscored. Aircraft are required to maintain altitude at the depicted value, for example, 5000.

12.2.4 Recommended altitude will be depicted with no overscore or underscore. These altitudes are depicted for descent planning, for example, 6000.

NOTE–

1. Pilots are cautioned to adhere to altitudes as prescribed because, in certain instances, they may be used as the basis for vertical separation of aircraft by ATC. When a depicted altitude is specified in the ATC clearance, that altitude becomes mandatory as defined above.

2. The ILS glide slope is intended to be intercepted at the published glide slope intercept altitude. This point marks the PFAF and is depicted by the "lightning bolt" symbol on U.S. Government charts. Intercepting the glide slope at this altitude marks the beginning of the final approach segment and ensures required obstacle clearance during descent from the glide slope intercept altitude to the lowest published decision altitude for the approach. Interception and tracking of the glide slope prior to the published glide slope interception altitude does not necessarily ensure that minimum, maximum, and/or mandatory altitudes published for any preceding fixes will be complied with during the descent. If the pilot chooses to track the glide slope prior to the glide slope interception altitude, they remain responsible for complying with published altitudes for any preceding stepdown fixes encountered during the subsequent descent.

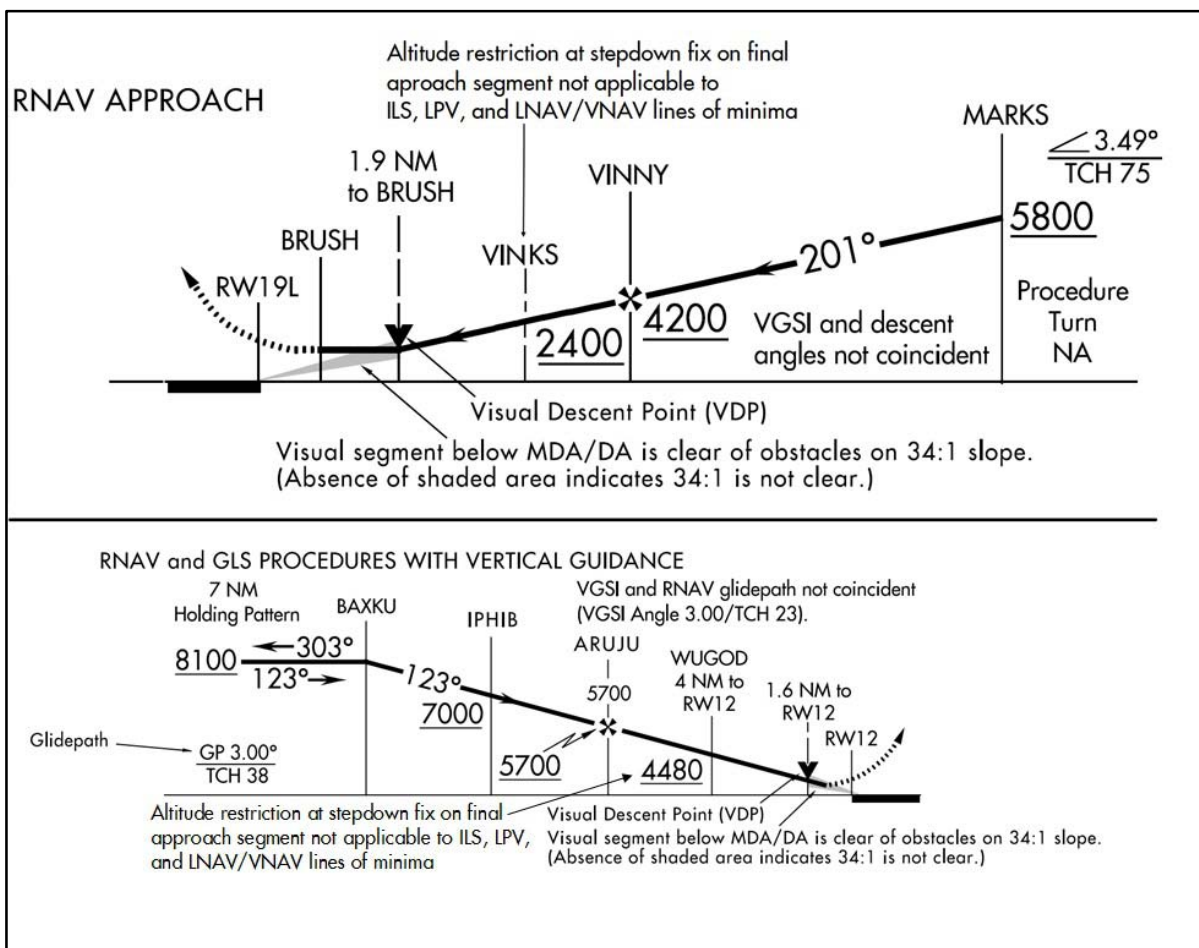
3. Approaches used for simultaneous (parallel) independent and simultaneous close parallel operations procedurally require descending on the glideslope from the altitude at which the approach clearance is issued (refer to ENR 1.5–19. and ENR 1.5–20.). For simultaneous close parallel (PRM) approaches, the Attention All Users Page (AAUP) may publish a note which indicates that descending on the glideslope/glidepath meets all crossing restrictions. However, if no such note is published, and for simultaneous

independent approaches (4300 and greater runway separation) where an AAUP is not published, pilots are cautioned to monitor their descent on the glideslope/path outside of the PFAF to ensure compliance with published crossing restrictions during simultaneous operations.

4. When parallel approach courses are less than 2500 feet apart and reduced in-trail spacing is authorized for simultaneous dependent operations, a chart note will indicate that simultaneous operations require use of vertical guidance and that the pilot should maintain last assigned altitude until established on glide slope. These approaches procedurally require utilization of the ILS glide slope for wake turbulence mitigation. Pilots should not confuse these simultaneous dependent operations with (SOIA) simultaneous close parallel PRM approaches, where PRM appears in the approach title.

12.2.5 Altitude restrictions depicted at stepdown fixes within the final approach segment are applicable only when flying a Non-Precision Approach to a straight-in or circling line of minima identified as a MDA. Stepdown fix altitude restrictions within the final approach segment do not apply to pilots using Precision Approach (ILS) or Approach with Vertical Guidance (LPV, LNAV/VNAV) lines of minima identified as a DA, since obstacle clearance on these approaches are based on the aircraft following the applicable vertical guidance. Pilots are responsible for adherence to stepdown fix altitude restrictions when outside the final approach segment (i.e., initial or intermediate segment), regardless of which type of procedure the pilot is flying. (See FIG ENR 1.5-19).

FIG ENR 1.5-19
Instrument Approach Procedure Stepdown Fixes



12.3 Minimum Safe Altitudes (MSA) are published for emergency use on IAP charts. MSAs provide 1,000 feet of clearance over all obstacles, but do not necessarily assure acceptable navigation signal coverage. The MSA depiction on the plan view of an approach chart contains the identifier of the center point of the MSA, the applicable radius of the MSA, a depiction of the sector(s), and the minimum altitudes above mean sea level which provide obstacle clearance. For conventional navigation systems, the MSA is normally based on the primary omnidirectional facility on which the IAP is predicated, but may be based on the airport reference point (ARP) if no suitable facility is available. For RNAV approaches, the MSA is based on an RNAV waypoint. MSAs normally have a 25 NM radius; however, for conventional navigation systems, this radius may be expanded to 30 NM if necessary to encompass the airport landing surfaces. A single sector altitude is normally established, however when the MSA is based on a facility and it is necessary to obtain relief from obstacles, an MSA with up to four sectors may be established.

12.4 Terminal Arrival Area (TAA)

12.4.1 The TAA provides a transition from the en route structure to the terminal environment with little required pilot/air traffic control interface for aircraft equipped with Area Navigation (RNAV) systems. A

TAA provides minimum altitudes with standard obstacle clearance when operating within the TAA boundaries. TAAs are primarily used on RNAV approaches but may be used on an ILS approach when RNAV is the sole means for navigation to the IF; however, they are not normally used in areas of heavy concentration of air traffic.

12.4.2 The basic design of the RNAV procedure underlying the TAA is normally the “T” design (also called the “Basic T”). The “T” design incorporates two IAFs plus a dual purpose IF/IAF that functions as both an intermediate fix and an initial approach fix. The T configuration continues from the IF/IAF to the final approach fix (FAF) and then to the missed approach point (MAP). The two base leg IAFs are typically aligned in a straight-line perpendicular to the intermediate course connecting at the IF/IAF. A Hold-in-Lieu-of Procedure Turn (HILPT) is anchored at the IF/IAF and depicted on U.S. Government publications using the “hold-in-lieu-of-PT” holding pattern symbol. When the HILPT is necessary for course alignment and/or descent, the dual purpose IF/IAF serves as an IAF during the entry into the pattern. Following entry into the HILPT pattern and when flying a route or sector labeled “NoPT,” the dual-purpose fix serves as an IF, marking the beginning of the Intermediate Segment. See FIG ENR 1.5–20 and FIG ENR 1.5–21 for the Basic “T” TAA configuration.

FIG ENR 1.5-20
Basic “T” Design

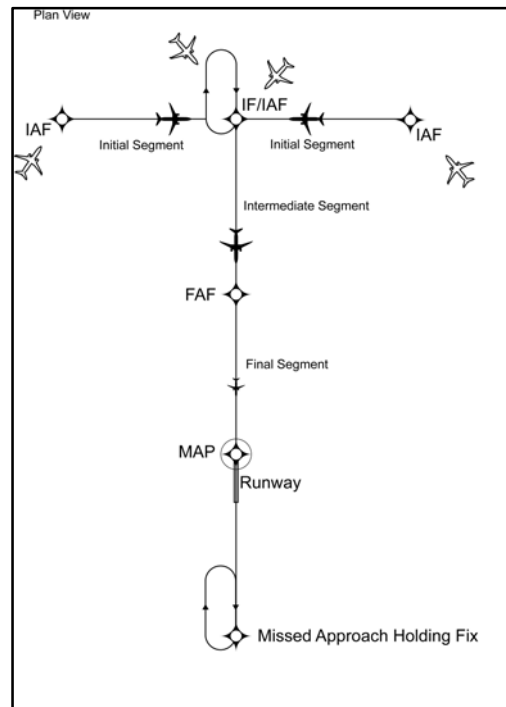
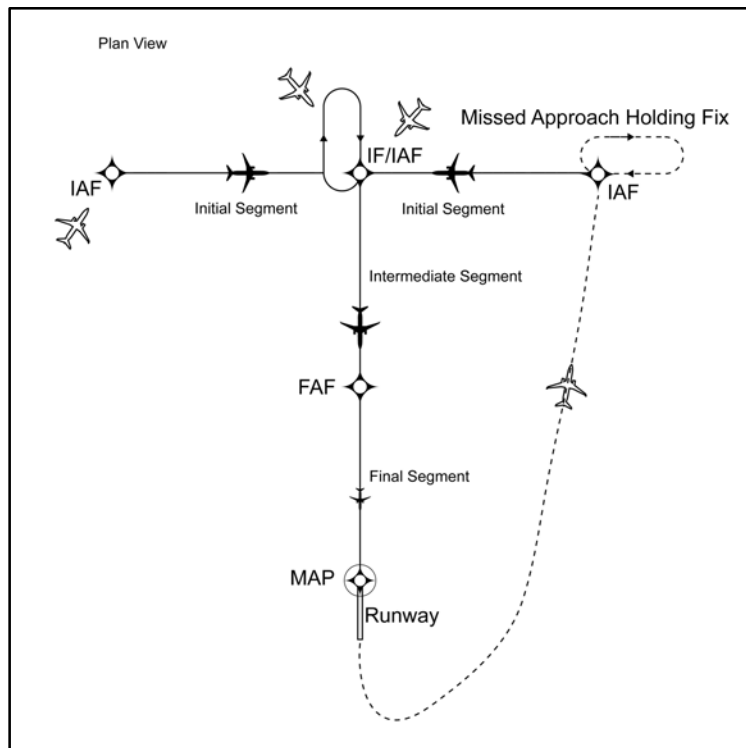


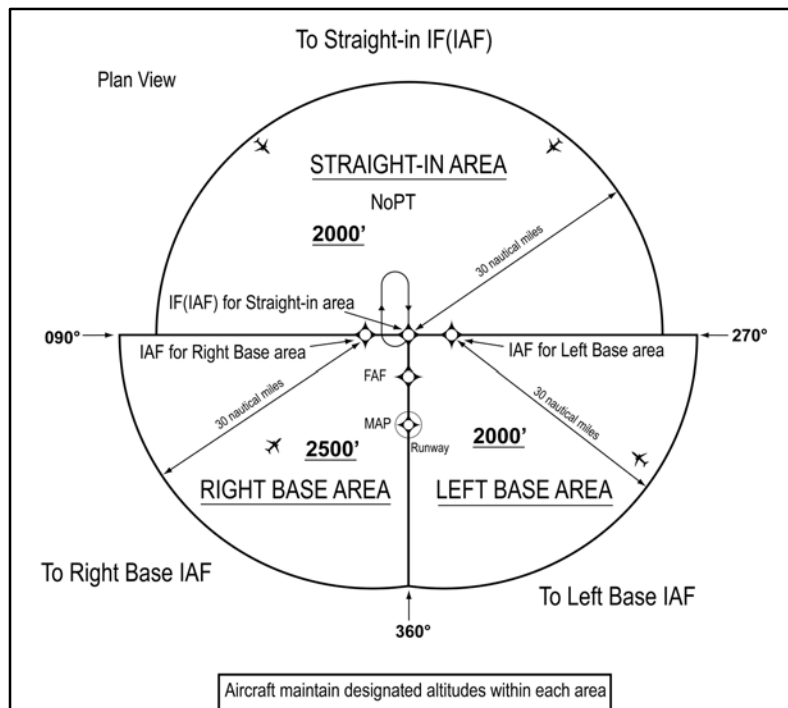
FIG ENR 1.5-21
Basic “T” Design



12.4.3 The standard TAA based on the “T” design consists of three areas defined by the Initial Approach Fix (IAF) legs and the intermediate segment course beginning at the IF/IAF. These areas are called the straight-in, left-base, and right-base areas. (See FIG ENR 1.5–22). TAA area lateral boundaries are identified by magnetic courses TO the IF/IAF. The straight-in area can be further divided into

pie-shaped sectors with the boundaries identified by magnetic courses TO the (IF/ IAF), and may contain stepdown sections defined by arcs based on RNAV distances from the IF/IAF. (See FIG ENR 1.5–23). The right/left-base areas can only be subdivided using arcs based on RNAV distances from the IAFs for those areas.

FIG ENR 1.5–22
TAA Area



12.4.4 Entry from the terminal area onto the procedure is normally accomplished via a no procedure turn (NoPT) routing or via a course reversal maneuver. The published procedure will be annotated “NoPT” to indicate when the course reversal is not authorized when flying within a particular TAA sector. Otherwise, the pilot is expected to execute the course reversal under the provisions of 14 CFR Section 91.175. The pilot may elect to use the course reversal pattern when it is not required by the procedure, but must receive clearance from air traffic control before beginning the procedure.

12.4.4.1 ATC should not clear an aircraft to the left base leg or right base leg IAF within a TAA at an intercept angle exceeding 90 degrees. Pilots must not execute the HILPT course reversal when the sector or procedure segment is labeled “NoPT.”

12.4.4.2 ATC may clear aircraft direct to the fix labeled IF/IAF if the course to the IF/IAF is within the straight-in sector labeled “NoPT” and the intercept angle does not exceed 90 degrees. Pilots are expected to proceed direct to the IF/IAF and accomplish a straight-in approach. Do not execute HILPT course reversal. Pilots are also expected to fly the straight-in approach when ATC provides radar vectors and monitoring to the IF/IAF and issues a “straight-in” approach clearance; otherwise, the pilot *is expected* to execute the HILPT course reversal.

12.4.4.3 On rare occasions, ATC may clear the aircraft for an approach at the airport without specifying the approach procedure by name or by a specific approach (for example, “cleared RNAV Runway 34 approach”) without specifying a particular IAF. In either case, the pilot should proceed direct to the IAF or to the IF/IAF associated with the

12.6 Circling. Circling minimums charted on an RNAV (GPS) approach chart may be lower than the LNAV/VNAV line of minima, but never lower than the LNAV line of minima (straight-in approach). Pilots may safely perform the circling maneuver at

the circling published line of minima if the approach and circling maneuver is properly performed according to aircraft category and operational limitations.

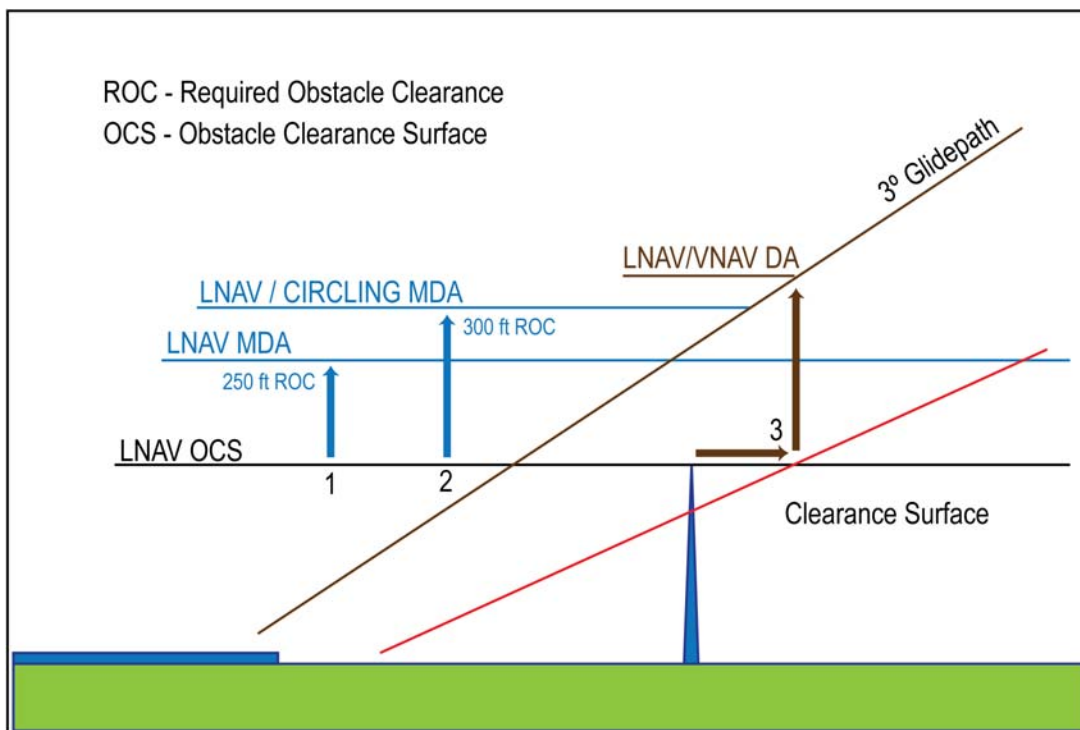
FIG ENR 1.5-30

**Example of LNAV and Circling Minima Lower Than LNAV/VNAV DA.
Harrisburgh International RNAV (GPS) RWY 13**

CATEGORY	A	B	C	D
LPV DA	558/24 250 (300 - ½)			
LNAV/VNAV DA	1572 - 5 1264 (1300 - 5)			
LNAV MDA	1180 / 24 872 (900 - ½)	1180 / 40 872 (900 - ¾)	1180 / 2 872 (900 - 2)	1180 / 2 ¼ 872 (900 - 2 ¼)
CIRCLING	1180 - 1 870 (900 - 1)	1180 - 1 ¼ 870 (900 - 1 ¼)	1180 - 2 ½ 870 (900 - 2 ½)	1180 - 2 ¾ 870 (900 - 2 ¾)

FIG ENR 1.5-31

Explanation of LNAV and/or Circling Minima Lower than LNAV/VNAV DA



12.7 FIG ENR 1.5-31 provides a visual representation of an obstacle evaluation and calculation of LNAV MDA, Circling MDA, LNAV/VNAV DA.

12.7.1 No vertical guidance (LNAV). A line is drawn horizontal at obstacle height and 250 feet added for Required Obstacle Clearance (ROC). The

controlling obstacle used to determine LNAV MDA can be different than the controlling obstacle used in determining ROC for circling MDA. Other factors may force a number larger than 250 ft to be added to the LNAV OCS. The number is rounded up to the next higher 20 foot increment.

12.7.2 Circling MDA. The circling MDA will provide 300 foot obstacle clearance within the area considered for obstacle clearance and may be lower than the LNAV/VNAV DA, but never lower than the straight in LNAV MDA. This may occur when different controlling obstacles are used or when other controlling factors force the LNAV MDA to be higher than 250 feet above the LNAV OCS. In FIG ENR 1.5–30, the required obstacle clearance for both the LNAV and Circle resulted in the same MDA, but lower than the LNAV/VNAV DA. FIG ENR 1.5–31 provides an illustration of this type of situation.

12.7.3 Vertical guidance (LNAV/VNAV). A line is drawn horizontal at obstacle height until reaching the obstacle clearance surface (OCS). At the OCS, a vertical line is drawn until reaching the glide path. This is the DA for the approach. This method places the offending obstacle in front of the LNAV/VNAV DA so it can be seen and avoided. In some situations, this may result in the LNAV/VNAV DA being higher than the LNAV and/or Circling MDA.

12.8 The Visual Descent Point (VDP) identified by the symbol (V), is a defined point on the final approach course of a nonprecision straight-in approach procedure from which a stabilized visual descent from the MDA to the runway touchdown point may be commenced. The pilot should not descend below the MDA prior to reaching the VDP. The VDP will be identified by DME or RNAV along-track distance to the MAP. The VDP distance is based on the lowest MDA published on the IAP and harmonized with the angle of the visual glide slope indicator (VGSi) (if installed) or the procedure VDA (if no VGSi is installed). A VDP may not be published under certain circumstances which may result in a destabilized descent between the MDA and the runway touchdown point. Such circumstances include an obstacle penetrating the visual surface between the MDA and runway threshold, lack of distance measuring capability, or the procedure design prevents a VDP to be identified.

12.8.1 VGSi systems may be used as a visual aid to the pilot to determine if the aircraft is in a position to make a stabilized descent from the MDA. When the visibility is close to minimums, the VGSi may not be visible at the VDP due to its location beyond the MAP.

12.8.2 Pilots not equipped to receive the VDP should fly the approach procedure as though no VDP had been provided.

12.8.3 On a straight-in nonprecision IAP, descent below the MDA between the VDP and the MAP may be inadvisable or impossible. Aircraft speed, height above the runway, descent rate, amount of turn, and runway length are some of the factors which must be considered by the pilot to determine if a safe descent and landing can be accomplished.

12.9 A visual segment obstruction evaluation is accomplished during procedure design on all IAPs. Obstacles (both lighted and unlighted) are allowed to penetrate the visual segment obstacle identification surfaces. Identified obstacle penetrations may cause restrictions to instrument approach operations which may include an increased approach visibility requirement, not publishing a VDP, and/or prohibiting night instrument operations to the runway. There is no implicit obstacle protection from the MDA/DA to the touchdown point. Accordingly, it is the responsibility of the pilot to visually acquire and avoid obstacles below the MDA/DA during transition to landing.

12.9.1 Unlighted obstacle penetrations may result in prohibiting night instrument operations to the runway. A chart note will be published in the pilot briefing strip “Procedure NA at Night.”

12.9.2 Use of a VGSi may be approved in lieu of obstruction lighting to restore night instrument operations to the runway. A chart note will be published in the pilot briefing strip “Straight-in Rwy XX at Night, operational VGSi required, remain on or above VGSi glidepath until threshold.”

12.10 The highest obstacle (man-made, terrain, or vegetation) will be charted on the planview of an IAP. Other obstacles may be charted in either the planview or the airport sketch based on distance from the runway and available chart space. The elevation of the charted obstacle will be shown to the nearest foot above mean sea level. Obstacles without a verified accuracy are indicated by a \pm symbol following the elevation value.

12.11 Vertical Descent Angle (VDA). FAA policy is to publish a VDA/TCH on all nonprecision approaches except those published in conjunction with vertically guided minimums (i.e., ILS or LOC RWY XX) or no-FAF procedures without a step-down fix (i.e., on-airport VOR or NDB). A

VDA does not guarantee obstacle protection below the MDA in the visual segment. The presence of a VDA does not change any nonprecision approach requirements.

12.11.1 Obstacles may penetrate the obstacle identification surface below the MDA in the visual segment of an IAP that has a published VDA/TCH. When the VDA/TCH is not authorized due to an obstacle penetration that would require a pilot to deviate from the VDA between MDA and touchdown, the VDA/TCH will be replaced with the note “Visual Segment- Obstacles” in the profile view of the IAP (See FIG ENR 1.5-32). Accordingly, pilots are advised to carefully review approach procedures to identify where the optimum stabilized descent to landing can be initiated. Pilots that follow the previously published descent angle, provided by the RNAV system, below the MDA on procedures with this note may encounter obstacles in the visual segment. Pilots must visually avoid any obstacles below the MDA.

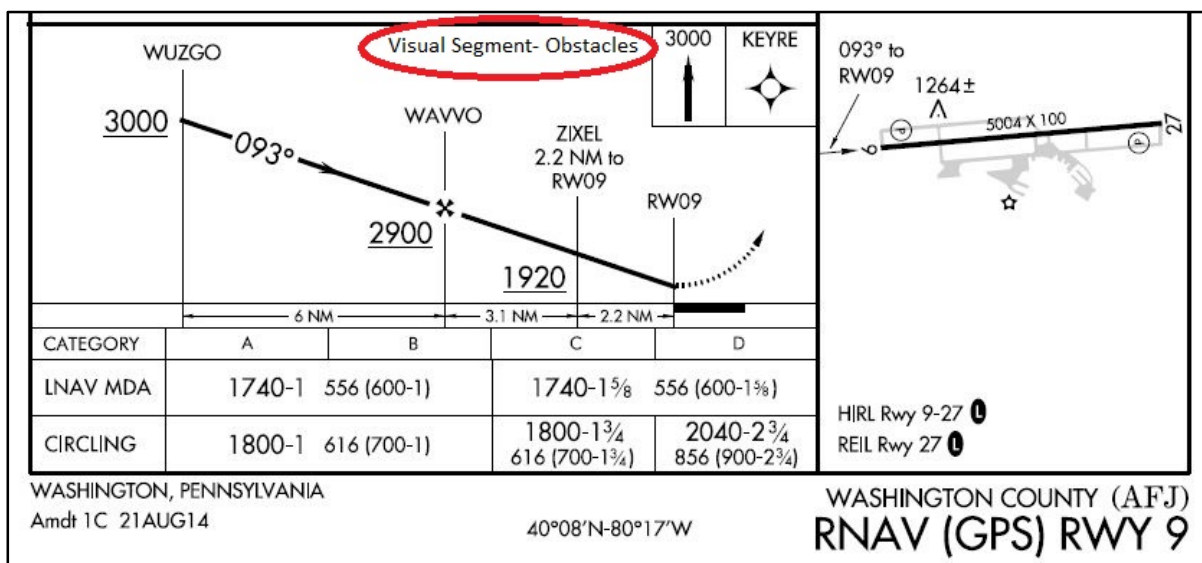
12.11.1.1 VDA/TCH data is furnished by FAA on the official source document for publication on IAP charts and for coding in the navigation database

unless, as noted previously, replaced by the note “Visual Segment – Obstacles.”

12.11.1.2 Commercial chart providers and navigation systems may publish or calculate a VDA/TCH even when the FAA does not provide such data. Pilots are cautioned that they are responsible for obstacle avoidance in the visual segment regardless of the presence or absence of a VDA/TCH and associated navigation system advisory vertical guidance.

12.11.2 The threshold crossing height (TCH) used to compute the descent angle is published with the VDA. The VDA and TCH information are charted on the profile view of the IAP following the fix (FAF/stepdown) used to compute the VDA. If no PA/APV IAP is established to the same runway, the VDA will be equal to or higher than the glide path angle of the VGSI installed on the same runway provided it is within instrument procedure criteria. A chart note will indicate if the VGSI is not coincident with the VDA. Pilots must be aware that the published VDA is for advisory information only and not to be considered instrument procedure derived vertical guidance. The VDA solely offers an aid to help pilots establish a continuous, stabilized descent during final approach.

FIG ENR 1.5-32
Example of a Chart Note



12.11.3 Pilots may use the published angle and estimated/actual groundspeed to find a target rate of descent from the rate of descent table published in the

back of the U.S. Terminal Procedures Publication. This rate of descent can be flown with the Vertical Velocity Indicator (VVI) in order to use the VDA as

an aid to flying a stabilized descent. No special equipment is required.

12.11.4 A straight-in aligned procedure may be restricted to circling only minimums when an excessive descent gradient necessitates. The descent angle between the FAF/stepdown fix and the Circling MDA must not exceed the maximum descent angle allowed by TERPS criteria. A published VDA on these procedures does not imply that landing straight ahead is recommended or even possible. The descent rate based on the VDA may exceed the capabilities of the aircraft and the pilot must determine how to best maneuver the aircraft within the circling area in order to land safely.

12.12 In isolated cases, an IAP may contain a published visual flight path. These procedures are annotated “Fly Visual to Airport” or “Fly Visual.” A dashed arrow indicating the visual flight path will be included in the profile and plan views with an approximate heading and distance to the end of the runway.

12.12.1 The depicted ground track associated with the “Fly Visual to Airport” segment should be flown as a “Dead Reckoning” course. When executing the “Fly Visual to Airport” segment, the flight visibility must not be less than that prescribed in the IAP; the pilot must remain clear of clouds and proceed to the airport maintaining visual contact with the ground. Altitude on the visual flight path is at the discretion of the pilot, and it is the responsibility of the pilot to visually acquire and avoid obstacles in the “Fly Visual to Airport” segment.

12.12.2 Missed approach obstacle clearance is assured only if the missed approach is commenced at the published MAP. Before initiating an IAP that contains a “Fly Visual to Airport” segment, the pilot should have preplanned climb out options based on aircraft performance and terrain features. Obstacle clearance is the responsibility of the pilot when the approach is continued beyond the MAP.

NOTE—

The FAA Administrator retains the authority to approve instrument approach procedures where the pilot may not necessarily have one of the visual references specified in 14 CFR § 91.175 and related rules. It is not a function of procedure design to ensure compliance with § 91.175. The annotation “Fly Visual to Airport” provides relief from § 91.175 requirements that the pilot have distinctly visible

and identifiable visual references prior to descent below MDA/DA.

12.13 Area Navigation (RNAV) Instrument Approach Charts. Reliance on RNAV systems for instrument operations is becoming more commonplace as new systems such as GPS and augmented GPS such as the Wide Area Augmentation System (WAAS) are developed and deployed. In order to support full integration of RNAV procedures into the National Airspace System (NAS), the FAA developed a new charting format for IAPs (See FIG ENR 1.5–24). This format avoids unnecessary duplication and proliferation of instrument approach charts. The original stand alone GPS charts, titled simply “GPS,” are being converted to the newer format as the procedures are revised. One reason for the revision is the addition of WAAS based minima to the approach chart. The reformatted approach chart is titled “RNAV (GPS) RWY XX.” Up to four lines of minima are included on these charts. GLS (Ground Based Augmentation System (GBAS) Landing System) was a placeholder for future WAAS and LAAS minima, and the minima was always listed as N/A. The GLS minima line has now been replaced by the WAAS LPV (Localizer Performance with Vertical Guidance) minima on most RNAV (GPS) charts. LNAV/VNAV (lateral navigation/vertical navigation) was added to support both WAAS electronic vertical guidance and Barometric VNAV. LPV and LNAV/VNAV are both APV procedures as described in paragraph 12.1.7. The original GPS minima, titled “S–XX,” for straight in runway XX, is retitled LNAV (lateral navigation). Circling minima may also be published. A new type of nonprecision WAAS minima will also be published on this chart and titled LP (localizer performance). LP will be published in locations where vertically guided minima cannot be provided due to terrain and obstacles and therefore, no LPV or LNAV/VNAV minima will be published. GBAS procedures are published on a separate chart and the GLS minima line is to be used only for GBAS. ATC clearance for the RNAV procedure authorizes a properly certified pilot to utilize any minimums for which the aircraft is certified (for example, a WAAS equipped aircraft utilizes the LPV or LP minima but a GPS only aircraft may not). The RNAV chart includes information formatted for quick reference by the pilot or flight crew at the top of the chart. This portion of the chart, developed based on a study by the Department of

Transportation, Volpe National Transportation System Center, is commonly referred to as the pilot briefing.

12.13.1 The minima lines are:

12.13.1.1 GLS. “GLS” is the acronym for GBAS Landing System. The U.S. version of GBAS has traditionally been referred to as LAAS. The worldwide community has adopted GBAS as the official term for this type of navigation system. To coincide with international terminology, the FAA is also adopting the term GBAS to be consistent with the international community. This line was originally published as a placeholder for both WAAS and LAAS minima and marked as N/A since no minima was published. As the concepts for GBAS and WAAS procedure publication have evolved, GLS will now be used only for GBAS minima, which will be on a separate approach chart. Most RNAV(GPS) approach charts have had the GLS minima line replaced by a WAAS LPV line of minima.

12.13.1.2 LPV. “LPV” is the acronym for localizer performance with vertical guidance. RNAV (GPS) approaches to LPV lines of minima take advantage of the improved accuracy of WAAS lateral and vertical guidance to provide an approach that is very similar to a Category I Instrument Landing System (ILS). The approach to LPV line of minima is designed for angular guidance with increasing sensitivity as the aircraft gets closer to the runway. The sensitivities are nearly identical to those of the ILS at similar distances. This was done intentionally to allow the skills required to proficiently fly an ILS to readily transfer to flying RNAV (GPS) approaches to the LPV line of minima. Just as with an ILS, the LPV has vertical guidance and is flown to a DA. Aircraft can fly this minima line with a statement in the Aircraft Flight Manual that the installed equipment supports LPV approaches. This includes Class 3 and 4 TSO–C146 GPS/WAAS equipment.

12.13.1.3 LNAV/VNAV. LNAV/VNAV identifies APV minimums developed to accommodate an RNAV IAP with vertical guidance, usually provided by approach certified Baro–VNAV, but with lateral and vertical integrity limits larger than a precision approach or LPV. LNAV stands for Lateral Navigation; VNAV stands for Vertical Navigation. This minima line can be flown by aircraft with a statement in the Aircraft Flight Manual that the installed equipment supports GPS approaches and

has an approach–approved barometric VNAV, or if the aircraft has been demonstrated to support LNAV/VNAV approaches. This includes Class 2, 3 and 4 TSO–C146 GPS/WAAS equipment. Aircraft using LNAV/VNAV minimums will descend to landing via an internally generated descent path based on satellite or other approach approved VNAV systems. Since electronic vertical guidance is provided, the minima will be published as a DA. Other navigation systems may be specifically authorized to use this line of minima. (See Section A, Terms/Landing Minima Data, of the U.S. Terminal Procedures books.)

12.13.1.4 LP. “LP” is the acronym for localizer performance. Approaches to LP lines of minima take advantage of the improved accuracy of WAAS to provide approaches, with lateral guidance and angular guidance. Angular guidance does not refer to a glideslope angle but rather to the increased lateral sensitivity as the aircraft gets closer to the runway, similar to localizer approaches. However, the LP line of minima is a Minimum Descent Altitude (MDA) rather than a DA (H). Procedures with LP lines of minima will not be published with another approach that contains approved vertical guidance (LNAV/VNAV or LPV). It is possible to have LP and LNAV published on the same approach chart but LP will only be published if it provides lower minima than an LNAV line of minima. LP is not a fail–down mode for LPV. LP will only be published if terrain, obstructions, or some other reason prevent publishing a vertically guided procedure. WAAS avionics may provide GNSS–based advisory vertical guidance during an approach to an LP line of minima. Barometric altimeter information remains the primary altitude reference for complying with any altitude restrictions. WAAS equipment may not support LP, even if it supports LPV, if it was approved before TSO–C145b and TSO–C146b. Receivers approved under previous TSOs may require an upgrade by the manufacturer in order to be used to fly to LP minima. Receivers approved for LP must have a statement in the approved Flight Manual or Supplemental Flight Manual including LP as one of the approved approach types.

12.13.1.5 LNAV. This minima is for lateral navigation only, and the approach minimum altitude will be published as a minimum descent altitude (MDA). LNAV provides the same level of service as the present GPS stand alone approaches. LNAV

minimums support the following navigation systems: WAAS, when the navigation solution will not support vertical navigation; and, GPS navigation systems which are presently authorized to conduct GPS approaches.

NOTE–

GPS receivers approved for approach operations in accordance with: AC 20–138, Airworthiness Approval of Positioning and Navigation Systems, qualify for this minima. WAAS navigation equipment must be approved in accordance with the requirements specified in TSO–C145() or TSO–C146() and installed in accordance with Advisory Circular AC 20–138.

12.13.2 Other systems may be authorized to utilize these approaches. See the description in Section A of the U.S. Terminal Procedures books for details. Operational approval must also be obtained for Baro–VNAV systems to operate to the LNAV/VNAV minimums. Baro–VNAV may not be authorized on some approaches due to other factors, such as no local altimeter source being available. Baro–VNAV is not authorized on LPV procedures. Pilots are directed to their local Flight Standards District Office (FSDO) for additional information.

NOTE–

RNAV and Baro–VNAV systems must have a manufacturer supplied electronic database which must include the waypoints, altitudes, and vertical data for the procedure to be flown. The system must be able to retrieve the procedure by name from the aircraft navigation database, not just as a manually entered series of waypoints.

12.13.3 ILS or RNAV (GPS) Charts.

12.13.3.1 Some RNAV (GPS) charts will also contain an ILS line of minima to make use of the ILS precision final in conjunction with the RNAV GPS capabilities for the portions of the procedure prior to the final approach segment and for the missed approach. Obstacle clearance for the portions of the procedure other than the final approach segment is still based on GPS criteria.

NOTE–

Some GPS receiver installations inhibit GPS navigation whenever ANY ILS frequency is tuned. Pilots flying aircraft with receivers installed in this manner must wait until they are on the intermediate segment of the procedure prior to the PFAF (PFAF is the active waypoint) to tune the ILS frequency and must tune the ILS back to a VOR frequency in order to fly the GPS based missed approach.

12.13.3.2 Charting. There are charting differences between ILS, RNAV (GPS), and GLS approaches.

a) The LAAS procedure is titled “GLS RWY XX” on the approach chart.

b) The VDB provides information to the airborne receiver where the guidance is synthesized.

c) The LAAS procedure is identified by a four alpha–numeric character field referred to as the RPI or approach ID and is similar to the IDENT feature of the ILS.

d) The RPI is charted.

e) Most RNAV(GPS) approach charts have had the GLS (NA) minima line replaced by an LPV line of minima.

f) Since the concepts for LAAS and WAAS procedure publication have evolved, GLS will now be used only for LAAS minima, which will be on a separate approach chart.

12.13.4 Required Navigation Performance (RNP)

12.13.4.1 Pilots are advised to refer to the “TERMS/LANDING MINIMUMS DATA” (Section A) of the U.S. Government Terminal Procedures books for aircraft approach eligibility requirements by specific RNP level requirements.

12.13.4.2 Some aircraft have RNP approval in their AFM without a GPS sensor. The lowest level of sensors that the FAA will support for RNP service is DME/DME. However, necessary DME signal may not be available at the airport of intended operations. For those locations having an RNAV chart published with LNAV/VNAV minimums, a procedure note may be provided such as “DME/DME RNP–0.3 NA.” This means that RNP aircraft dependent on DME/DME to achieve RNP–0.3 are not authorized to conduct this approach. Where DME facility availability is a factor, the note may read “DME/DME RNP–0.3 Authorized; ABC and XYZ Required.” This means that ABC and XYZ facilities have been determined by flight inspection to be required in the navigation solution to assure RNP–0.3. VOR/DME updating must not be used for approach procedures.

12.13.5 Chart Terminology

12.13.5.1 Decision Altitude (DA) replaces the familiar term Decision Height (DH). DA conforms to the international convention where altitudes relate to MSL and heights relate to AGL. DA will eventually be published for other types of instrument approach procedures with vertical guidance, as well. DA

indicates to the pilot that the published descent profile is flown to the DA (MSL), where a missed approach will be initiated if visual references for landing are not established. Obstacle clearance is provided to allow a momentary descent below DA while transitioning from the final approach to the missed approach. The aircraft is expected to follow the missed instructions while continuing along the published final approach course to at least the published runway threshold waypoint or MAP (if not at the threshold) before executing any turns.

12.13.5.2 Minimum Descent Altitude (MDA) has been in use for many years, and will continue to be used for the LNAV only and circling procedures.

12.13.5.3 Threshold Crossing Height (TCH) has been traditionally used in “precision” approaches as the height of the glide slope above threshold. With publication of LNAV/VNAV minimums and RNAV descent angles, including graphically depicted descent profiles, TCH also applies to the height of the “descent angle,” or glidepath, at the threshold. Unless otherwise required for larger type aircraft which may be using the IAP, the typical TCH is 30 to 50 feet.

12.13.6 The MINIMA FORMAT will also change slightly.

12.13.6.1 Each line of minima on the RNAV IAP is titled to reflect the level of service available; e.g., GLS, LPV, LNAV/VNAV, LP, and LNAV. CIRCLING minima will also be provided.

12.13.6.2 The minima title box indicates the nature of the minimum altitude for the IAP. For example:

a) DA will be published next to the minima line title for minimums supporting vertical guidance such as for GLS, LPV or LNAV/VNAV.

b) MDA will be published as the minima line on approaches with lateral guidance only, LNAV, or LP. Descent below the MDA must meet the conditions stated in 14 CFR Section 91.175.

c) Where two or more systems, such as LPV and LNAV/VNAV, share the same minima, each line of minima will be displayed separately.

12.13.7 Chart Symbology changed slightly to include:

12.13.7.1 Descent Profile. The published descent profile and a graphical depiction of the vertical path to the runway will be shown. Graphical depiction of

the RNAV vertical guidance will differ from the traditional depiction of an ILS glide slope (feather) through the use of a shorter vertical track beginning at the decision altitude.

a) It is FAA policy to design IAPs with minimum altitudes established at fixes/waypoints to achieve optimum stabilized (constant rate) descents within each procedure segment. This design can enhance the safety of the operations and contribute toward reduction in the occurrence of controlled flight into terrain (CFIT) accidents. Additionally, the National Transportation Safety Board (NTSB) recently emphasized that pilots could benefit from publication of the appropriate IAP descent angle for a stabilized descent on final approach. The RNAV IAP format includes the descent angle to the hundredth of a degree; e.g., 3.00 degrees. The angle will be provided in the graphically depicted descent profile.

b) The stabilized approach may be performed by reference to vertical navigation information provided by WAAS or LNAV/VNAV systems; or for LNAV-only systems, by the pilot determining the appropriate aircraft attitude/groundspeed combination to attain a constant rate descent which best emulates the published angle. To aid the pilot, U.S. Government Terminal Procedures Publication charts publish an expanded Rate of Descent Table on the inside of the back hard cover for use in planning and executing precision descents under known or approximate groundspeed conditions.

12.13.7.2 Visual Descent Point (VDP). A VDP will be published on most RNAV IAPs. VDPs apply only to aircraft utilizing LP or LNAV minima, not LPV or LNAV/VNAV minimums.

12.13.7.3 Missed Approach Symbology. In order to make missed approach guidance more readily understood, a method has been developed to display missed approach guidance in the profile view through the use of quick reference icons. Due to limited space in the profile area, only four or fewer icons can be shown. However, the icons may not provide representation of the entire missed approach procedure. The entire set of textual missed approach instructions are provided at the top of the approach chart in the pilot briefing. (See FIG ENR 1.5–24.)

12.13.7.4 Waypoints. All RNAV or GPS stand-alone IAPs are flown using data pertaining to the particular IAP obtained from an onboard database, including the sequence of all WPs used for the

approach and missed approach, except that step down waypoints may not be included in some TSO–C–129 receiver databases. Included in the database, in most receivers, is coding that informs the navigation system of which WPs are fly–over (FO) or fly–by (FB). The navigation system may provide guidance appropriately – including leading the turn prior to a fly–by WP; or causing overflight of a fly–over WP. Where the navigation system does not provide such guidance, the pilot must accomplish the turn lead or waypoint overflight manually. Chart symbology for the FB WP provides pilot awareness of expected actions. Refer to the legend of the U.S. Terminal Procedures books.

12.13.7.5 TAAs are described in subparagraph 12.4, Terminal Arrival Area (TAA). When published, the RNAV chart depicts the TAA areas through the use of “icons” representing each TAA area associated with the RNAV procedure (See FIG ENR 1.5–24). These icons are depicted in the plan view of the approach chart, generally arranged on the chart in accordance with their position relative to the aircrafts arrival from the en route structure. The WP, to which navigation is appropriate and expected within each specific TAA area, will be named and depicted on the associated TAA icon. Each depicted named WP is the IAF for arrivals from within that area. TAAs may not be used on all RNAV procedures because of airspace congestion or other reasons.

12.13.7.6 Hot and Cold Temperature Limitations. A minimum and maximum temperature limitation is published on procedures which authorize Baro–VNAV operation. These temperatures represent the airport temperature above or below which Baro–VNAV is not authorized to LNAV/VNAV minimums. As an example, the limitation will read: “Uncompensated Baro–VNAV NA below -8°C ($+18^{\circ}\text{F}$) or above 47°C (117°F).” This information will be found in the upper left hand box of the pilot briefing. When the temperature is above the high temperature or below the low temperature limit, Baro–VNAV may be used to provide a stabilized descent to the LNAV MDA; however, extra caution should be used in the visual segment to ensure a vertical correction is not required. If the VGSI is aligned with the published glidepath, and the aircraft instruments indicate on glidepath, an above or below glidepath indication on the VGSI may indicate that temperature error is causing deviations to the

glidepath. These deviations should be considered if the approach is continued below the MDA.

NOTE–

Many systems which apply Baro–VNAV temperature compensation only correct for cold temperature. In this case, the high temperature limitation still applies. Also, temperature compensation may require activation by maintenance personnel during installation in order to be functional, even though the system has the feature. Some systems may have a temperature correction capability, but correct the Baro–altimeter all the time, rather than just on the final, which would create conflicts with other aircraft if the feature were activated. Pilots should be aware of compensation capabilities of the system prior to disregarding the temperature limitations.

NOTE–

Temperature limitations do not apply to flying the LNAV/VNAV line of minima using approach certified WAAS receivers when LPV or LNAV/VNAV are annunciated to be available.

12.13.7.7 WAAS Channel Number/Approach ID.

The WAAS Channel Number is an optional equipment capability that allows the use of a 5–digit number to select a specific final approach segment without using the menu method. The Approach ID is an airport unique 4–character combination for verifying the selection and extraction of the correct final approach segment information from the aircraft database. It is similar to the ILS ident, but displayed visually rather than aurally. The Approach ID consists of the letter W for WAAS, the runway number, and a letter other than L, C or R, which could be confused with Left, Center and Right, e.g., W35A. Approach IDs are assigned in the order that WAAS approaches are built to that runway number at that airport. The WAAS Channel Number and Approach ID are displayed in the upper left corner of the approach procedure pilot briefing.

12.13.7.8 At locations where outages of WAAS vertical guidance may occur daily due to initial system limitations, a negative W symbol (**W**) will be placed on RNAV (GPS) approach charts. Many of these outages will be very short in duration, but may result in the disruption of the vertical portion of the approach. The **W** symbol indicates that NOTAMs or Air Traffic advisories are not provided for outages which occur in the WAAS LNAV/VNAV or LPV vertical service. Use LNAV or circling minima for flight planning at these locations, whether as a destination or alternate. For flight operations at these locations, when the WAAS avionics indicate that

LNAV/VNAV or LPV service is available, then vertical guidance may be used to complete the approach using the displayed level of service. Should an outage occur during the procedure, reversion to LNAV minima may be required. As the WAAS coverage is expanded, the **W** will be removed.

NOTE—

Properly trained and approved, as required, TSO-C145() and TSO-C146() equipped users (WAAS users) with and using approved baro-VNAV equipment may plan for LNAV/VNAV DA at an alternate airport. Specifically authorized WAAS users with and using approved baro-VNAV equipment may also plan for RNP 0.3 DA at the alternate airport as long as the pilot has verified RNP availability through an approved prediction program.

13. Special Instrument Approach Procedures

13.1 Instrument Approach Procedure (IAP) charts reflect the criteria associated with the U.S. Standard for Terminal Instrument [Approach] Procedures (TERPs), which prescribes standardized methods for use in developing IAPs. Standard IAPs are published in the Federal Register (FR) in accordance with Title 14 of the Code of Federal Regulations, Part 97, and are available for use by appropriately qualified pilots operating properly equipped and airworthy aircraft in accordance with operating rules and procedures acceptable to the FAA. Special IAPs are also developed using TERPS but are not given public notice in the FR. The FAA authorizes only certain individual pilots and/or pilots in individual organizations to use special IAPs, and may require additional crew training and/or aircraft equipment or performance, and may also require the use of landing aids, communications, or weather services not available for public use. Additionally, IAPs that service private use airports or heliports are generally special IAPs. FDC NOTAMs for Specials, FDC T-NOTAMs, may also be used to promulgate safety-of-flight information relating to Specials provided the location has a valid landing area identifier and is serviced by the United States NOTAM system. Pilots may access NOTAMs online or through an FAA Flight Service Station (FSS). FSS specialists will not automatically provide NOTAM information to pilots for special IAPs during telephone pre-flight briefings. Pilots who are authorized by the FAA to use special IAPs must specifically request FDC NOTAM information for the particular special IAP they plan to use.

14. Radar Approaches

14.1 The only airborne radio equipment required for radar approaches is a functioning radio transmitter and receiver. The radar controller vectors the aircraft to align it with the runway centerline. The controller continues the vectors to keep the aircraft on course until the pilot can complete the approach and landing by visual reference to the surface. There are two types of radar approaches, “Precision” (PAR) and “Surveillance” (ASR).

14.2 A radar approach may be given to any aircraft upon request and may be offered to pilots of aircraft in distress or to expedite traffic; however, a surveillance approach might not be approved unless there is an ATC operational requirement, or in an unusual or emergency situation. Acceptance of a precision or surveillance approach by a pilot does not waive the prescribed weather minimums for the airport or for the particular aircraft operator concerned. The decision to make a radar approach when the reported weather is below the established minimums rests with the pilot.

14.3 Precision and surveillance approach minimums are published on separate pages in the Federal Aviation Administration Instrument Approach Procedure charts.

14.3.1 A Precision Approach (PAR) is one in which a controller provides highly accurate navigational guidance in azimuth and elevation to a pilot. Pilots are given headings to fly to direct them to and keep their aircraft aligned with the extended centerline of the landing runway. They are told to anticipate glidepath interception approximately 10 to 30 seconds before it occurs and when to start descent. The published decision height will be given only if the pilot requests it. If the aircraft is observed to deviate above or below the glidepath, the pilot is given the relative amount of deviation by use of terms “slightly” or “well” and is expected to adjust the aircraft’s rate of descent to return to the glidepath. Trend information is also issued with respect to the elevation of the aircraft and may be modified by the terms “rapidly” and “slowly”; e.g., “well above glidepath, coming down rapidly.” Range from touchdown is given at least once each mile. If an aircraft is observed by the controller to proceed outside of specified safety zone limits in azimuth and/or elevation and continues to operate outside these prescribed limits, the pilot will be directed to execute a missed approach or to fly a specified course

unless the pilot has the runway environment (runway, approach lights, etc.) in sight. Navigational guidance in azimuth and elevation is provided the pilot until the aircraft reaches the published decision height (DH). Advisory course and glidepath information is furnished by the controller until the aircraft passes over the landing threshold, at which point the pilot is advised of any deviation from the runway centerline. Radar service is automatically terminated upon completion of the approach.

14.3.2 A Surveillance Approach (ASR) is one in which a controller provides navigational guidance in azimuth only. The pilot is furnished headings to fly to align the aircraft with the extended centerline of the landing runway. Since the radar information used for a surveillance approach is considerably less precise than that used for a precision approach, the accuracy of the approach will not be as great, and higher minimums will apply. Guidance in elevation is not possible but the pilot will be advised when to commence descent to the minimum descent altitude (MDA) or, if appropriate, to an intermediate “step down fix” minimum crossing altitude and subsequently to the prescribed MDA. In addition, the pilot will be advised of the location of the missed approach point (MAP) prescribed for the procedure and the aircraft’s position each mile on final from the runway, airport/heliport, or MAP, as appropriate. If requested by the pilot, recommended altitudes will be issued at each mile, based on the descent gradient established for the procedure, down to the last mile that is at or above the MDA. Normally, navigational guidance will be provided until the aircraft reaches the MAP. Controllers will terminate guidance and instruct the pilot to execute a missed approach unless at the MAP the pilot has the runway, airport/heliport in sight or, for a helicopter point-in-space approach, the prescribed visual reference with the surface is established. Also, if at any time during the approach the controller considers that safe guidance for the remainder of the approach cannot be provided, the controller will terminate guidance and instruct the pilot to execute a missed approach. Similarly, guidance termination and missed approach will be effected upon pilot request, and for civil aircraft only, controllers may terminate guidance when the pilot reports the runway, airport/heliport, or visual surface route (point-in-space approach) in sight or otherwise indicates that continued guidance is not required.

Radar service is automatically terminated at the completion of a radar approach.

NOTE—

1. *The published MDA for straight-in approaches will be issued to the pilot before beginning descent. When a surveillance approach will terminate in a circle-to-land maneuver, the pilot must furnish the aircraft approach category to the controller. The controller will then provide the pilot with the appropriate MDA.*

2. *ASR approaches are not available when an ATC facility is using center radar arts presentation/ processing (CENRAP).*

14.3.3 A No-Gyro Approach is available to a pilot under radar control who experiences circumstances wherein the directional gyro or other stabilized compass is inoperative or inaccurate. When this occurs, the pilot should so advise ATC and request a No-Gyro vector or approach. Pilots of aircraft not equipped with a directional gyro or other stabilized compass who desire radar handling may also request a No-Gyro vector or approach. The pilot should make all turns at standard rate and should execute the turn immediately upon receipt of instructions. For example, “TURN RIGHT,” “STOP TURN.” When a surveillance or precision approach is made, the pilot will be advised after the aircraft has been turned onto final approach to make turns at half standard rate.

15. Radar Monitoring of Instrument Approaches

15.1 PAR facilities operated by the FAA and the military services at some joint-use (civil/military) and military installations monitor aircraft on instrument approaches and issue radar advisories to the pilot when weather is below VFR minimum (1,000 and 3), at night, or when requested by a pilot. This service is provided only when the PAR final approach course coincides with the final approach of the navigational aid and only during the operational hours of the PAR. The radar advisories serve only as a secondary aid since the pilot has selected the navigational aid as the primary aid for the approach.

15.2 Prior to starting final approach, the pilot will be advised of the frequency on which the advisories will be transmitted. If, for any reason, radar advisories cannot be furnished, the pilot will be so advised.

15.3 Advisory information, derived from radar observations, includes information on:

15.3.1 Passing the final approach fix inbound (nonprecision approach) or passing the outer marker or the fix used in lieu of the outer marker inbound (precision approach).

15.3.2 Trend advisories with respect to elevation and/or azimuth radar position and movement will be provided.

NOTE—

At this point, the pilot may be requested to report sighting the approach lights or the runway.

NOTE—

Whenever the aircraft nears the PAR safety limit, the pilot will be advised that the aircraft is well above or below the glidepath or well left or right of course. Glidepath information is given only to those aircraft executing a precision approach, such as ILS. Altitude information is not transmitted to aircraft executing other than precision approaches because the descent portions of these approaches generally do not coincide with the depicted PAR glidepath.

15.3.3 If, after repeated advisories, the aircraft proceeds outside the PAR safety limit or if a radical deviation is observed, the pilot will be advised to execute a missed approach if not visual.

15.4 Radar service is automatically terminated upon completion of the approach.

16. ILS Approach

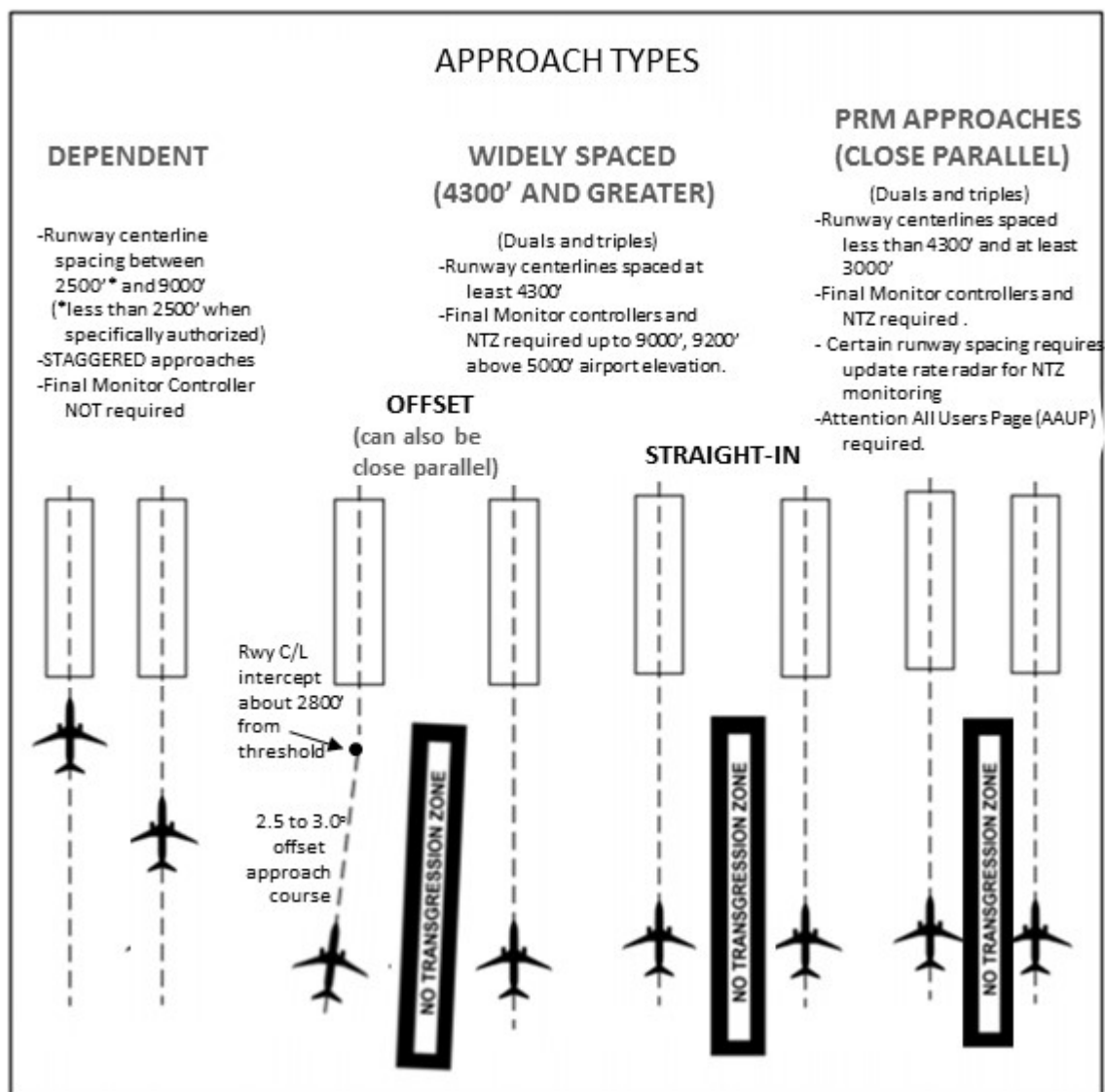
16.1 Communications should be established with the appropriate FAA control tower or with the FAA FSS where there is no control tower, prior to starting an ILS approach. This is in order to receive advisory information as to the operation of the facility. It is also recommended that the aural signal of the ILS be monitored during an approach as to assure continued reception and receipt of advisory information, when available.

17. Simultaneous Approaches to Parallel Runways

FIG ENR 1.5-33

Simultaneous Approaches

(Approach Courses Parallel and Offset between 2.5 and 3.0 degrees)



published lateral path and any published speed or altitude restrictions while climbing to the SID top altitude.

9. (An aircraft was issued the Suzan Two departure, “climb via SID” in the IFR departure clearance. After departure ATC vectors the aircraft off of the SID, and then clears the aircraft to rejoin the SID at Dvine waypoint, which has a published crossing restriction). The clearance will read:

“Proceed direct Dvine, Climb via the Suzan Two departure.”

NOTE–

In Example 9, the aircraft will join the Suzan Two departure at Dvine, at the published altitude, and then comply with the published lateral path and any published speed or altitude restrictions.

37.8.7 Pilots cleared for vertical navigation using the phraseology “climb via” must inform ATC, upon initial contact, of the altitude leaving and any assigned restrictions not published on the procedure.

EXAMPLE–

1. (Cactus 711 is cleared to climb via the Laura Two departure. The Laura Two has a top altitude of FL190):
“Cactus Seven Eleven leaving two thousand, climbing via the Laura Two departure.”

2. (Cactus 711 is cleared to climb via the Laura Two departure, but ATC changed the top altitude to 16,000):
“Cactus Seven Eleven leaving two thousand for one-six thousand, climbing via the Laura Two departure.”

37.8.8 If prior to or after takeoff an altitude restriction is issued by ATC, all previously issued “ATC” altitude restrictions are canceled including those published on a SID. Pilots must still comply with all speed restrictions and lateral path requirements published on the SID unless canceled by ATC.

EXAMPLE–

Prior to takeoff or after departure ATC issues an altitude change clearance to an aircraft cleared to climb via a SID but ATC no longer requires compliance with published

altitude restrictions:

“Climb and maintain flight level two four zero.”

NOTE–

The published SID altitude restrictions are canceled; The aircraft should comply with the SID lateral path and begin an unrestricted climb to FL240. Compliance with published speed restrictions is still required unless specifically deleted by ATC.

37.8.9 Altitude restrictions published on an ODP are necessary for obstacle clearance and/or design constraints. Crossing altitudes and speed restrictions on ODPs cannot be canceled or amended by ATC.

37.9 PBN Departure Procedures

37.9.1 All public PBN SIDs and graphic ODPs are normally designed using RNAV 1, RNP 1, or A–RNP NavSpecs. These procedures generally start with an initial track or heading leg near the departure end of runway (DER). In addition, these procedures require system performance currently met by GPS or DME/DME/IRU PBN systems that satisfy the criteria discussed in the latest AC 90–100, U.S. Terminal and En Route Area Navigation (RNAV) Operations. RNAV 1 and RNP 1 procedures must maintain a total system error of not more than 1 NM for 95 percent of the total flight time. Minimum values for A–RNP procedures will be charted in the PBN box (for example, 1.00 or 0.30).

37.9.2 In the U.S., a specific procedure’s PBN requirements will be prominently displayed in separate, standardized notes boxes. For procedures with PBN elements, the “PBN box” will contain the procedure’s NavSpec(s); and, if required: specific sensors or infrastructure needed for the navigation solution, any additional or advanced functional requirements, the minimum RNP value, and any amplifying remarks. Items listed in this PBN box are REQUIRED for the procedure’s PBN elements.

ENR 1.10 Flight Planning (Restriction, Limitation or Advisory Information)

1. Preflight Preparation

1.1 Every pilot is urged to receive a preflight briefing and to file a flight plan. This briefing should consist of the latest or most current weather, airport, and en route NAVAID information. Briefing service may be obtained from an FSS either by telephone or radio when airborne. Pilots within the contiguous U.S. may access Flight Service through **www.1800wxbrief.com** or by contacting them at 1-800-WX-Brief to obtain preflight weather data and to file IFR and VFR flight plans.

NOTE—

Pilots filing flight plans via “fast file” who desire to have their briefing recorded, should include a statement at the end of the recording as to the source of their weather briefing.

1.2 The information required by the FAA to process flight plans is contained on FAA Form 7233-1, Flight Plan. The forms are available at all flight service stations.

REFERENCE—

AIP, ENR 1.10, Paragraph 4., Flight Plan Requirements.

1.3 Consult an FSS for preflight weather briefing.

1.4 FSSs are required to advise of pertinent NOTAMs if a *standard* briefing is requested, but if they are overlooked, do not hesitate to remind the specialist that you have not received NOTAM information.

NOTE—

NOTAMs, graphic notices, and other information published in the Notices to Airmen Publication (NTAP) are not provided during a briefing unless specifically requested by the pilot since the FSS specialist has no way of knowing whether the pilot has already checked the NTAP prior to calling. Airway NOTAMs, procedural NOTAMs, and NOTAMs that are general in nature and not tied to a specific airport/facility (for example, flight advisories and restrictions, open duration special security instructions, and special flight rules areas) are briefed solely by pilot request. Remember to ask for NOTAMs and graphic notices published in the NTAP if you have not already reviewed this information, and to request all pertinent NOTAMs specific to your flight.

1.5 Pilots are urged to use only the latest issue of aeronautical charts in planning and conducting flight

operations. Aeronautical charts are revised and reissued on a periodic basis to ensure that depicted data are current and reliable. In the conterminous U.S., sectional charts are updated each 6 months, IFR en route charts each 56 days, and amendments to civil IFR approach charts are accomplished on a 56-day cycle with a change notice volume issued on the 28-day mid-cycle. Charts that have been superseded by those of a more recent date may contain obsolete or incomplete flight information.

REFERENCE—

AIP, GEN 3.2, contains a description of aeronautical charts.

1.6 When requesting a preflight briefing, identify yourself as a pilot and provide the following:

1.6.1 Type of flight planned; e.g., VFR or IFR.

1.6.2 Aircraft number or pilot's name.

1.6.3 Aircraft type.

1.6.4 Departure airport.

1.6.5 Route of flight.

1.6.6 Destination.

1.6.7 Flight altitude(s).

1.6.8 ETD and ETE.

1.7 Prior to conducting a briefing, briefers are required to have the background information listed above so that they may tailor the briefing to the needs of the proposed flight. The objective is to communicate a “picture” of meteorological and aeronautical information necessary for the conduct of a safe and efficient flight. Briefers use all available weather and aeronautical information to summarize data applicable to the proposed flight. They do not read weather reports and forecasts verbatim unless specifically requested by the pilot. FSS briefers do not provide FDC NOTAM information for special instrument approach procedures unless specifically asked. Pilots authorized by the FAA to use special instrument approach procedures must specifically request FDC NOTAM information for these procedures. Pilots who receive the information electronically will receive NOTAMs for special IAPs automatically.

REFERENCE—

See AIP, GEN 3.5 for meteorological services.

1.8 The Federal Aviation Administration has designated High Density Traffic Airports (HDTA) and has prescribed air traffic rules and requirements for operating aircraft (excluding helicopter operations) to and from these airports.

REFERENCE-

AIP, GEN 3.3, Paragraph 9.7, Airport Reservations Operations and Procedures.

1.9 In addition to the filing of a flight plan, if the flight will traverse or land in one or more foreign countries, it is particularly important that pilots leave a complete itinerary with someone directly concerned and keep that person advised of the flight's progress. If serious doubt arises as to the safety of the flight, that person should first contact the FSS.

1.10 Pilots operating under the provisions of 14 CFR Part 135 without an FAA assigned 3-letter designator, must prefix the normal registration (N) number with the letter "T" on flight plan filing.

EXAMPLE-

TN 1234B.

1.11 Cold Temperature Operations

Pilots should begin planning for operating into airports with cold temperatures during the preflight planning phase. Instrument approach charts will contain a snowflake symbol and a temperature when cold temperature correction must be applied. Pilots operating into airports requiring cold temperature corrections should request the lowest forecast temperature at the airport for departure and arrival times. If the temperature is forecast to be at or below any published cold temperature restriction, calculate an altitude correction for the appropriate segment(s) and/or review procedures for operating automatic cold temperature compensating systems, as applicable. The pilot is responsible to calculate and apply the corrections to the affected segment(s) when the actual reported temperature is at or below any published cold temperature restriction, or pilots with automatic cold temperature compensating systems must ensure the system is on and operating on each designated segment. Advise ATC when intending to apply cold temperature correction and of the amount of correction required on initial contact (or as soon as possible) for the intermediate segment and/or the published missed approach. This information is required for ATC to provide aircraft appropriate vertical separation between known traffic.

2. Follow IFR Procedures Even When Operating VFR

2.1 To maintain IFR proficiency, pilots are urged to practice IFR procedures whenever possible, even when operating VFR. Some suggested practices include:

2.1.1 Obtain a complete preflight and weather briefing. Check the NOTAMs.

2.1.2 File a flight plan. This is an excellent low-cost insurance policy. The cost is the time it takes to fill it out. The insurance includes the knowledge that someone will be looking for you if you become overdue at your destination.

2.1.3 Use current charts.

2.1.4 Use the navigation aids. Practice maintaining a good course by keeping the needle centered.

2.1.5 Maintain a constant altitude appropriate for direction of flight.

2.1.6 Estimate en route position times.

2.1.7 Make accurate and frequent position reports to the FSSs along your route of flight.

2.2 Simulated IFR flight is recommended (under the hood); however, pilots are cautioned to review and adhere to the requirements specified in 14 CFR Section 91.109 before and during such flight.

2.3 When flying VFR at night, in addition to the altitude appropriate for the direction of flight, pilots should maintain an altitude which is at or above the minimum en route altitude as shown on charts. This is especially true in mountainous terrain, where there is usually very little ground reference. Do not depend on your eyes alone to avoid rising unlighted terrain, or even lighted obstructions such as TV towers.

3. Domestic Notice to Airmen (NOTAM) System

3.1 Time-critical aeronautical information which is of either a temporary nature or is not sufficiently known in advance to permit publication on aeronautical charts or in other operational publications, receives immediate dissemination via the U.S. Notice to Airmen (NOTAM) System.

NOTE-

1. NOTAM information is that aeronautical information that could affect a pilot's decision to make a flight. It includes such information as airport or aerodrome

primary runway closures, taxiways, ramps, obstructions, communications, airspace, changes in the status of navigational aids, ILSs, radar service availability, and other information essential to planned en route, terminal, or landing operations.

2. *NOTAM information is transmitted using standard contractions to reduce transmission time. See TBL ENR 1.10–2 for a listing of the most commonly used contractions. For a complete listing of contractions, see FAA Order JO 7340.2, Contractions.*

3.2 NOTAM information is classified into five categories. These are NOTAM (D) or distant, Flight Data Center (FDC) NOTAMs, Pointer NOTAMs, Special Activity Airspace (SAA) NOTAMs, and Military NOTAMs.

3.2.1 NOTAM (D) information is disseminated for all navigational facilities that are part of the National Airspace System (NAS), all public use airports, seaplane bases, and heliports listed in the Chart Supplement U.S. The complete file of all NOTAM (D) information is maintained in a computer database at the Weather Message Switching Center (WMSC), located in Atlanta, Georgia. This category of information is distributed automatically via Service A telecommunications system. Air traffic facilities, primarily FSSs, with Service A capability have access to the entire WMSC database of NOTAMs. These NOTAMs remain available via Service A for the duration of their validity or until published. Once published, the NOTAM data is deleted from the system. NOTAM (D) information includes such data as taxiway closures, personnel and equipment near or crossing runways, and airport lighting aids that do not affect instrument approach criteria, such as VASI.

All NOTAM Ds must have one of the keywords listed in TBL ENR 1.10–1 as the first part of the text after the location identifier.

3.2.2 NOTAM Ds that crossover into International NOTAMs. These NOTAMs contain the same data as NOTAM Ds, only they are referenced differently. They are categorized, stored, and issued with a series letter preceding them and are distributed via Service A to countries requesting NOTAMs for that airport. The FAA currently uses the Series A (and may use Series K) for this type of NOTAM.

3.2.3 FDC NOTAMs. On those occasions when it becomes necessary to disseminate information which is regulatory in nature, the National Flight Data

Center (NFDC), in Washington, DC, will issue an FDC NOTAM. FDC NOTAMs contain such things as amendments to published IAPs and other current aeronautical charts. They are also used to advertise temporary flight restrictions caused by such things as natural disasters or large-scale public events that may generate a congestion of air traffic over a site.

NOTE–

NOTAM data may not always be current due to the changeable nature of the national airspace system components, delays inherent in processing the information, and occasional temporary outages of the United States NOTAM System. While en route, pilots should contact FSSs and obtain updated information for their route of flight and destination.

3.2.4 Pointer NOTAMs. NOTAMs issued by a flight service station to highlight or point out another NOTAM, such as an FDC or NOTAM (D) NOTAM. This type of NOTAM will assist users in cross-referencing important information that may not be found under an airport or NAVAID identifier. Keywords in pointer NOTAMs must match the keywords in the NOTAM that is being pointed out. The keyword in pointer NOTAMs related to Temporary Flight Restrictions (TFR) must be AIRSPACE.

3.2.5 SAA NOTAMs. These NOTAMs are issued when Special Activity Airspace will be active outside the published schedule times and when required by the published schedule. Pilots and other users are still responsible to check published schedule times for Special Activity Airspace as well as any NOTAMs for that airspace.

3.2.6 Military NOTAMs. NOTAMs pertaining to U.S. Air Force, Army, Marine, and Navy navigational aids/airports that are part of the NAS.

3.3 Notices to Airmen Publication (NTAP). The NTAP is published by Mission Support Services, ATC Products and Publications, every 28 days. Data of a permanent nature can be published in the NTAP as an interim step between publication cycles of the Chart Supplement U.S. and aeronautical charts. The NTAP is divided into three parts:

3.3.1 Part 1, provided by NFDC, contains Part 95 Revisions, Revisions to Minimum En Route IFR Altitudes and Changeover Points.

3.3.2 Part 2, International NOTAMs, is divided into two sections:

3.3.2.1 Section 1, International Flight Prohibitions, Potential Hostile Situations, and Foreign Notices.

3.3.2.2 Section 2, International Oceanic Airspace Notices.

3.3.3 Part 3, Graphic Notices, compiled by ATC Products and Publications from data provided by FAA service area offices and other lines of business, contains special notices and graphics pertaining to

almost every aspect of aviation such as: military training areas, large scale sporting events, air show information, Special Traffic Management Programs (STMP), and airport-specific information. This part is comprised of 6 sections: General, Special Military Operations, Airport and Facility Notices, Major Sporting and Entertainment Events, Airshows, and Special Notices.

stating the city name and state and/or the airport location identifier in order to clarify to ATC the exact location of the intended airport of departure.

5.1.2 When filing an IFR flight plan, include as a prefix to the aircraft type, the number of aircraft when more than one and/or heavy aircraft indicator “H/” if appropriate.

EXAMPLE–
H/DC10/A
2/F15/A

5.1.3 When filing an IFR flight plan, identify the equipment capability by adding a suffix, preceded by a slant, to the AIRCRAFT TYPE, as shown in TBL ENR 1.10–3, Aircraft Suffixes.

NOTE–

1. *ATC issues clearances based on filed suffixes. Pilots should determine the appropriate suffix based upon desired services and/or routing. For example, if a desired route/procedure requires GPS, a pilot should file /G even if the aircraft also qualifies for other suffixes.*

2. *For procedures requiring GPS, if the navigation system does not automatically alert the flight crew of a loss of GPS, the operator must develop procedures to verify correct GPS operation.*

3. *The suffix is not to be added to the aircraft identification or be transmitted by radio as part of the aircraft identification.*

5.1.4 It is recommended that pilots file the maximum transponder or navigation capability of their aircraft in the equipment suffix. This will provide ATC with the necessary information to utilize all facets of navigational equipment and transponder capabilities available.

5.1.5 When filing an IFR flight plan via telephone or radio, it is highly recommended that the departure airport be clearly identified by stating the city name and state and/or airport location identifier. With cell phone use and flight service specialists covering larger areas of the country, clearly identifying the departure airport can prevent confusing your airport of departure with those of identical or similar names in other states.

5.2 Airways/Jet Routes Depiction on Flight Plan

5.2.1 It is vitally important that the route of flight be accurately and completely described in the flight plan. To simplify definition of the proposed route, and to facilitate air traffic control, pilots are requested

to file via airways or jet routes established for use at the altitude or flight level planned.

5.2.2 If flight is to be conducted via designated airways or jet routes, describe the route by indicating the type and number designators of the airway(s) or jet route(s) requested. If more than one airway or jet route is to be used, clearly indicate points of transition. If the transition is made at an unnamed intersection, show the next succeeding NAVAID or named intersection on the intended route and the complete route from that point. Reporting points should be identified by using authorized name/code as depicted on appropriate aeronautical charts. The following two examples illustrate the need to specify the transition point when two routes share more than one transition fix.

EXAMPLE–

1. ALB J37 BUMPY J14 BHM

Spelled out: from Albany, New York, via Jet Route 37 transitioning to Jet Route 14 at BUMPY intersection, thence via Jet Route 14 to Birmingham, Alabama.

2. ALB J37 ENO J14 BHM

Spelled out: from Albany, New York, via Jet Route 37 transitioning to Jet Route 14 at Smyrna VORTAC (ENO) thence via Jet Route 14 to Birmingham, Alabama.

5.2.3 The route of flight may also be described by naming the reporting points or NAVAIDs over which the flight will pass, provided the points named are established for use at the altitude or flight level planned.

EXAMPLE–

BWI V44 SWANN V433 DQO

Spelled out: from Baltimore-Washington International, via Victor 44 to Swann intersection, transitioning to Victor 433 at Swann, thence via Victor 433 to Dupont.

5.2.4 When the route of flight is defined by named reporting points, whether alone or in combination with airways or jet routes, and the navigational aids (VOR, VORTAC, TACAN, LF, RBN) to be used for the flight are a combination of different types of aids, enough information should be included to clearly indicate the route requested.

EXAMPLE–

LAX J5 LKV J3 GEG YXC FL 330 J500 VLR J515 YWG

Spelled out: from Los Angeles International via Jet Route 5 Lakeview, Jet Route 3 Spokane, direct Cranbrook, British Columbia VOR/DME, Flight Level 330 Jet Route 500 to Langruth, Manitoba VORTAC, Jet Route 515 to Winnipeg, Manitoba.

5.2.5 When filing IFR, it is to the pilot's advantage to file a "preferred route."

NOTE–

Preferred IFR routes are described and tabulated in the Chart Supplement U.S.

5.2.6 ATC may issue a SID or a STAR as appropriate (See ENR 1.5, paragraph 3.).

NOTE–

Pilots not desiring a SID or STAR should so indicate in the remarks section of the flight plan as "no SID" or "no STAR."

5.3 Direct Flights

5.3.1 All or any portions of the route which will not be flown on the radials or courses of established airways or routes, such as direct route flights, must be defined by indicating the radio fixes over which the flight will pass. Fixes selected to define the route must be those over which the position of the aircraft can be accurately determined. Such fixes automatically become compulsory reporting points for the flight, unless advised otherwise by ATC. Only those navigational aids established for use in a particular structure; i.e., in the low or high structures, may be used to define the en route phase of a direct flight within that structure.

5.3.2 The azimuth feature of VOR aids and the azimuth and distance (DME) features of VORTAC and TACAN aids are assigned certain frequency protected areas of airspace which are intended for application to established airway and route use, and to provide guidance for planning flights outside of established airways or routes. These areas of airspace are expressed in terms of cylindrical service volumes of specified dimensions called "class limits" or "categories."

5.3.3 An operational service volume has been established for each class in which adequate signal coverage and frequency protection can be assured. To facilitate use of VOR, VORTAC, or TACAN aids, consistent with their operational service volume limits, pilot use of such aids for defining a direct route of flight in Class A, B, C, D, and E airspace should not exceed the following:

5.3.3.1 Operations above Flight Level 450. Use aids not more than 200 nautical miles apart. These aids are depicted on En Route High Altitude Charts.

5.3.3.2 Operation off established routes from 18,000 feet MSL to Flight Level 450. Use aids not more than 260 nautical miles apart. These aids are depicted on En Route High Altitude Charts.

5.3.3.3 Operation off established airways below 18,000 feet MSL. Use aids not more than 80 nautical miles apart. These aids are depicted on En Route Low Altitude Charts.

5.3.3.4 Operation off established airways between 14,500 feet MSL and 17,999 feet MSL in the conterminous United States. (H) facilities not more than 200 NM apart may be used.

5.3.4 Increasing use of self-contained airborne navigational systems which do not rely on the VOR/VORTAC/TACAN system has resulted in pilot requests for direct routes that exceed NAVAID service volume limits. With the exception of GNSS-equipped aircraft, these direct route requests will be approved only in a radar environment, with approval based on pilot responsibility for navigation on the authorized direct route. Radar flight following will be provided by ATC for ATC purposes. For GNSS-equipped aircraft, ATC may approve a direct route that exceeds ground based NAVAID service volume limits; however, in a non-radar environment, the routing must be "point-to-point," defined as navigation from a published point to a published point, and navigational assistance will not be available. (See subparagraph 5.4.1 below.)

5.3.5 At times, ATC will initiate a direct route in a radar environment that exceeds NAVAID service volume limits. In such cases ATC will provide radar monitoring and navigational assistance as necessary. For GNSS-equipped aircraft, if the route is point-to-point, radar monitoring and navigational assistance is not required. (See subparagraph 5.4.1 below.)

5.3.6 Airway or jet route numbers, appropriate to the stratum in which operation will be conducted, may also be included to describe portions of the route to be flown.

EXAMPLE–

MDW V262 BDF V10 BRL STJ SLN GCK

Spelled out: from Chicago Midway Airport via Victor 262 to Bradford, Victor 10 to Burlington, Iowa, direct St. Joseph, Missouri, direct Salina, Kansas, direct Garden City, Kansas.

NOTE–

When route of flight is described by radio fixes, the pilot

will be expected to fly a direct course between the points named.

5.3.7 Pilots are reminded that they are responsible for adhering to obstruction clearance requirements on those segments of direct routes that are outside of Class A, B, C, D, and E airspace. The MEAs and other altitudes shown on Low Altitude IFR En Route Charts pertain to those route segments within Class A, B, C, D, and E airspace, and those altitudes may not meet obstruction clearance criteria when operating off those routes.

5.4 Area Navigation (RNAV)/Global Navigation Satellite System (GNSS)

5.4.1 Except for GNSS-equipped aircraft, random impromptu routes can only be approved in a radar environment. A random impromptu route is a direct course initiated by ATC or requested by the pilot during flight. Aircraft are cleared from their present position to a NAVAID, waypoint, fix, or airport. Factors that will be considered by ATC in approving random impromptu routes include the capability to provide radar monitoring and compatibility with traffic volume and flow. ATC will radar monitor each flight; however, navigation on the random impromptu route is the responsibility of the pilot. GNSS-equipped aircraft are allowed to operate in a non-radar environment when the aircraft is cleared via, or is reported to be established on, a point-to-point route. The points must be published NAVAIDs, waypoints, fixes, or airports recallable from the aircraft's database. The distance between the points cannot exceed 500 miles and navigational assistance will not be provided.

5.4.2 Pilots of aircraft equipped with approved GNSS equipment may file for RNAV routes throughout the National Airspace System and may be filed for in accordance with the following procedures.

5.4.2.1 File airport to airport flight plans.

5.4.2.2 File the appropriate aircraft equipment suffix in the flight plan.

5.4.2.3 Plan the random route portion of the flight plan to begin and end over appropriate arrival and departure transition fixes or appropriate navigation aids for the altitude stratum within which the flight will be conducted. The use of normal preferred departure and arrival routes (DP/STAR), where established, is recommended.

5.4.2.4 File route structure transitions to and from the random route portion of the flight.

5.4.2.5 Define random routes by waypoints. File route description waypoints by using degree–distance fixes based on navigational aids which are appropriate for the altitude stratum.

5.4.2.6 File a minimum of one route description waypoint for each ARTCC through whose area the random route will be flown.

5.4.2.7 File an additional route description waypoint for each turnpoint in the route.

5.4.2.8 Plan additional route description waypoints as required to ensure accurate navigation via the filed route of flight. Navigation is the pilot's responsibility unless ATC assistance is requested.

5.4.2.9 Plan the route of flight so as to avoid Prohibited and Restricted Airspace by 3 NM unless permission has been obtained to operate in that airspace and the appropriate ATC facilities are advised.

NOTE–

To be approved for use in the National Airspace System, RNAV equipment must meet system availability, accuracy, and airworthiness standards. For additional information and guidance on RNAV equipment requirements, see Advisory Circular (AC) 20–138, Airworthiness Approval of Positioning and Navigation Systems, and AC 90–100, U.S. Terminal and En Route Area Navigation (RNAV) Operations.

5.4.3 Pilots of aircraft equipped with latitude/longitude coordinate navigation capability independent of VOR/TACAN references may file for random RNAV routes at and above FL 390 within the conterminous U.S. using the following procedures:

5.4.3.1 File airport-to-airport flight plans prior to departure.

5.4.3.2 File the appropriate RNAV capability certification suffix in the flight plan.

5.4.3.3 Plan the random route portion of the flight to begin and end over published departure/arrival transition fixes or appropriate navigation aids for airports without published transition procedures. The use of preferred departure and arrival routes, such as DP and STAR where established, is recommended.

5.4.3.4 Plan the route of flight so as to avoid prohibited and restricted airspace by 3 NM unless permission has been obtained to operate in that airspace and the appropriate ATC facility is advised.

5.4.3.5 Define the route of flight after the departure fix, including each intermediate fix (turnpoint) and the arrival fix for the destination airport in terms of latitude/longitude coordinates plotted to the nearest minute or in terms of Navigation Reference System (NRS) waypoints. For latitude/longitude filing the arrival fix must be identified by both the latitude/longitude coordinates and a fix identifier.

EXAMPLE–

MIA¹ SRQ² 3407/10615³ 3407/11546 TNP⁴ LAX⁵

¹ Departure Airport

² Departure Fix

³ Intermediate Fix (Turning Point)

⁴ Arrival Fix

⁵ Destination Airport

or

ORD¹ IOW² KP49G³ KD34U⁴ KL16O⁵ OAL⁶ MOD2⁷ SFO⁸

¹ Departure airport.

² Transition fix (pitch point).

³ Minneapolis ARTCC waypoint.

⁴ Denver ARTCC Waypoint.

⁵ Los Angeles ARTCC waypoint (catch point).

⁶ Transition fix.

⁷ Arrival.

⁸ Destination airport.

5.4.3.6 Record latitude/longitude coordinates by four figures describing latitude in degrees and minutes followed by a solidus and five figures describing longitude in degrees and minutes.

5.4.3.7 File at FL 390 or above for the random RNAV portion of the flight.

5.4.3.8 Fly all routes/route segments on Great Circle tracks or GPS-based tracks.

5.4.3.9 Make any in-flight requests for random RNAV clearances or route amendments to an en route ATC facility.

5.5 Flight Plan Form (See FIG ENR 1.10–1.)

5.5.1 Explanation of IFR Flight Plan Items.

5.5.1.1 Block 1. Check the type flight plan. Check both the VFR and IFR blocks if composite VFR/IFR.

5.5.1.2 Block 2. Enter your complete aircraft identification including the prefix “N” if applicable.

5.5.1.3 Block 3. Enter the designator for the aircraft, followed by a slant (/) and the transponder or

DME equipment code letter; e.g., C–182/U. Heavy aircraft, add prefix “H” to aircraft type; example, H/DC10/R. Consult an FSS briefer for any unknown elements.

5.5.1.4 Block 4. Enter your computed true airspeed (TAS).

NOTE–

If the average TAS changes plus or minus 5 percent or 10 knots, whichever is greater, advise ATC.

5.5.1.5 Block 5. Enter the departure airport identifier code (or the airport name, city and state, if the identifier is unknown).

NOTE–

Use of identifier codes will expedite the processing of your flight plan.

5.5.1.6 Block 6. Enter the proposed departure time in Coordinated Universal Time (UTC) (Z). If airborne, specify the actual or proposed departure time as appropriate.

5.5.1.7 Block 7. Enter the requested en route altitude or flight level.

NOTE–

Enter only the initial requested altitude in this block. When more than one IFR altitude or flight level is desired along the route of flight, it is best to make a subsequent request direct to the controller.

5.5.1.8 Block 8. Define the route of flight by using NAVAID identifier codes (or names if the code is unknown), airways, jet routes, and waypoints (for RNAV).

NOTE–

Use NAVAIDs or waypoints to define direct routes and radials/bearing to define other unpublished routes.

5.5.1.9 Block 9. Enter the destination airport identifier code (or name if identifier is unknown).

5.5.1.10 Block 10. Enter your estimated time en route based on latest forecast winds.

5.5.1.11 Block 11. Enter only those remarks pertinent to ATC or to the clarification of other flight plan information such as the appropriate radiotelephony (call sign) associated with the FAA-assigned three-letter company designator filed in Block 2, if the radiotelephony is new or has changed within the last 60 days. In cases where there is no three-letter designator but only an assigned radiotelephony, or an assigned three-letter designator is used in a medical emergency, the radiotelephony must be included in

the remarks field. Items of a personal nature are not accepted.

NOTE–

1. *The pilot is responsible for knowing when it is appropriate to file the radiotelephony in remarks under the 60-day rule or when using FAA special radiotelephony assignments.*

2. *“DVRSN” should be placed in Block 11 only if the pilot/company is requesting priority handling to their original destination from ATC as a result of a diversion as defined in the Pilot/Controller Glossary.*

3. *Do not assume that remarks will be automatically transmitted to every controller. Specific ATC or en route requests should be made directly to the appropriate controller.*

5.5.1.12 Block 12. Specify the fuel on board, computed from the departure point.

5.5.1.13 Block 13. Specify an alternate airport if desired or required, but do not include routing to the alternate airport.

5.5.1.14 Block 14. Enter the complete name, address, and telephone number of pilot-in-command or, in the case of a formation flight, the formation commander. Enter sufficient information to identify home base, airport, or operator.

NOTE–

This information would be essential in the event of a search and rescue operation.

5.5.1.15 Block 15. Enter the total number of persons on board including crew.

5.5.1.16 Block 16. Enter the predominant colors.

NOTE–

Close IFR flight plans with tower, approach control, ARTCCs, or if unable, with FSS. When landing at an airport with a functioning control tower, IFR flight plans are automatically canceled.

5.5.2 The information transmitted to the ARTCC for IFR Flight Plans will consist of only flight plan blocks 2, 3, 4, 5, 6, 7, 8, 9, 10, and 11.

6. IFR Operations to High Altitude Destinations

6.1 Pilots planning IFR flights to airports located in mountainous terrain are cautioned to consider the necessity for an alternate airport even when the forecast weather conditions would technically relieve them from the requirement to file one.

6.2 The FAA has identified three possible situations where the failure to plan for an alternate airport when flying IFR to such destination airport could result in a critical situation if the weather is less than forecast and sufficient fuel is not available to proceed to a suitable airport.

6.2.1 An IFR flight to an airport where the Minimum Descent Altitudes (MDAs) or landing visibility minimums for *all instrument approaches* are higher than the forecast weather minimums specified in 14 CFR Section 91.167(b). For example, there are 3 high altitude airports in the U.S. with approved instrument approach procedures where all of the MDAs are greater than 2,000 feet and/or the landing visibility minimums are greater than 3 miles (Bishop, California; South Lake Tahoe, California; and Aspen–Pitkin Co/Sardy Field, Colorado). In the case of these airports, it is possible for a pilot to elect, on the basis of forecasts, not to carry sufficient fuel to get to an alternate when the ceiling and/or visibility is actually lower than that necessary to complete the approach.

6.2.2 A small number of other airports in mountainous terrain have MDAs which are slightly (100 to 300 feet) below 2,000 feet AGL. In situations where there is an option as to whether to plan for an alternate, pilots should bear in mind that just a slight worsening of the weather conditions from those forecast could place the airport below the published IFR landing minimums.

6.2.3 An IFR flight to an airport which requires special equipment; i.e., DME, glide slope, etc., in order to make the available approaches to the lowest minimums. Pilots should be aware that all other minimums on the approach charts may require weather conditions better than those specified in 14 CFR Section 91.167(b). An inflight equipment malfunction could result in the inability to comply with the published approach procedures or, again, in the position of having the airport below the published IFR landing minimums for all remaining instrument approach alternatives.

7. Composite Flight Plan (VFR/IFR Flights)

7.1 Flight plans which specify VFR operation for one portion of a flight, and IFR for another portion, will be accepted by the FSS at the point of departure. If VFR flight is conducted for the first portion of the flight, the pilot should report his/her departure time to

the FSS with which he/she filed his/her VFR/IFR flight plan; and, subsequently, close the VFR portion and request ATC clearance from the FSS nearest the point at which change from VFR to IFR is proposed. Regardless of the type facility you are communicating with (FSS, center, or tower), it is the pilot's responsibility to request that facility to "CLOSE VFR FLIGHT PLAN." The pilot must remain in VFR weather conditions until operating in accordance with the IFR clearance.

7.2 When a flight plan indicates IFR for the first portion of flight and VFR for the latter portion, the pilot will normally be cleared to the point at which the change is proposed. Once the pilot has reported over the clearance limit and does not desire further IFR clearance, he/she should advise air traffic control to cancel the IFR portion of his/her flight plan. Then, he/she should contact the nearest FSS to activate the VFR portion of his/her flight plan. If the pilot desires to continue his/her IFR flight plan beyond the clearance limit, he/she should contact air traffic control at least five minutes prior to the clearance limit and request further IFR clearance. If the requested clearance is not received prior to reaching the clearance limit fix, the pilot will be expected to establish himself/herself in a standard holding pattern on the radial/course to the fix unless a holding pattern for the clearance limit fix is depicted on a U.S. Government or commercially produced (meeting FAA requirements) Low/High Altitude En Route, Area, or STAR chart. In this case the pilot will hold according to the depicted pattern.

8. Initiating a Change to Flight Plans on File

8.1 All changes to existing flight plans should be completed more than 46 minutes prior to the proposed departure time. Changes must be made with the initial flight plan service provider. If the initial flight plan's service provider is unavailable, filers may contact an ATC facility or FSS to make the necessary revisions. Any revision 46 minutes or less from the proposed departure time must be coordinated through an ATC facility or FSS.

9. Change in Proposed Departure Time

9.1 To prevent computer saturation in the en route environment, parameters have been established to delete proposed departure flight plans which have not

been activated. Most centers have this parameter set so as to delete these flight plans a minimum of 2 hours after the proposed departure time or Expect Departure Clearance Time (EDCT). To ensure that a flight plan remains active, pilots whose actual departure time will be delayed 2 hours or more beyond their filed departure time, are requested to notify ATC of their new proposed departure time.

9.2 Due to traffic saturation, ATC personnel frequently will be unable to accept these revisions via radio. It is recommended that you forward these revisions to a flight plan service provider or FSS.

10. Other Changes

10.1 In addition to altitude/flight level, destination, and/or route changes, increasing or decreasing the speed of an aircraft constitutes a change in a flight plan. Therefore, at any time the average true airspeed at cruising altitude between reporting points varies or is expected to vary from that given in the flight plan by plus or minus 5 percent, or 10 knots, whichever is greater, air traffic control should be advised.

11. Canceling Flight Plans

11.1 Closing VFR and DVFR Flight Plans

11.1.1 A pilot is responsible for ensuring that his/her VFR or DVFR flight plan is canceled. You should close your flight plan with the nearest FSS, or if one is not available, you may request any ATC facility to relay your cancellation to the FSS. Control towers do not automatically close VFR or DVFR flight plans as they may not be aware that a particular VFR aircraft is on a flight plan. If you fail to report or cancel your flight plan within $\frac{1}{2}$ hour after your ETA, search and rescue procedures are started.

11.2 Canceling IFR Flight Plan

11.2.1 14 CFR Section 91.153 includes the statement "When a flight plan has been activated, the pilot in command, upon canceling or completing the flight under the flight plan, must notify an FAA Flight Service Station or ATC facility."

11.2.2 An IFR flight plan may be canceled at any time the flight is operating in VFR conditions outside Class A airspace by the pilot stating "CANCEL MY IFR FLIGHT PLAN" to the controller or air/ground station with which he/she is communicating. Immediately after canceling an IFR flight plan, a pilot should take necessary action to change to the

appropriate air/ground frequency, VFR radar beacon code, and VFR altitude or flight level.

11.2.3 ATC separation and information services will be discontinued, including radar services (where applicable). Consequently, if the canceling flight desires VFR radar advisory service, the pilot must specifically request it.

NOTE—

Pilots must be aware that other procedures may be applicable to a flight that cancels an IFR flight plan within an area where a special program, such as a designated terminal radar service area, Class C airspace or Class B airspace, has been established.

11.2.4 If a DVFR flight plan requirement exists, the pilot is responsible for filing this flight plan to replace the canceled IFR flight plan. If a subsequent IFR operation becomes necessary, a new IFR flight plan must be filed and an ATC clearance obtained before operating in IFR conditions.

11.2.5 If operating on an IFR flight plan to an airport with a functioning control tower, the flight plan is automatically closed upon landing.

11.2.6 If operating on an IFR flight plan to an airport where there is no functioning control tower, the pilot must initiate cancellation of the IFR flight plan. This can be done after landing if there is a functioning FSS or other means of direct communications with ATC. In the event there is no FSS and air/ground communications with ATC is not possible below a certain altitude, the pilot would, weather conditions permitting, cancel his/her IFR flight plan while still airborne and able to communicate with ATC by radio. This will not only save the time and expense of canceling the flight plan by telephone but will quickly release the airspace for use by other aircraft.

11.3 RNAV and RNP Operations

11.3.1 During the pre-flight planning phase the availability of the navigation infrastructure required for the intended operation, including any non-RNAV contingencies, must be confirmed for the period of intended operation. Availability of the onboard navigation equipment necessary for the route to be flown must be confirmed.

11.3.2 If a pilot determines a specified RNP level cannot be achieved, revise the route or delay the operation until appropriate RNP level can be ensured.

11.3.3 The onboard navigation database must be current and appropriate for the region of intended operation and must include the navigation aids, waypoints, and coded terminal airspace procedures for the departure, arrival and alternate airfields.

11.3.4 During system initialization, pilots of aircraft equipped with a Flight Management System or other RNAV-certified system, must confirm that the navigation database is current, and verify that the aircraft position has been entered correctly. Flight crews should crosscheck the cleared flight plan against charts or other applicable resources, as well as the navigation system textual display and the aircraft map display. This process includes confirmation of the waypoints sequence, reasonableness of track angles and distances, any altitude or speed constraints, and identification of fly-by or fly-over waypoints. A procedure must not be used if validity of the navigation database is in doubt.

11.3.5 Prior to commencing takeoff, the flight crew must verify that the RNAV system is operating correctly and the correct airport and runway data have been loaded.

11.3.6 During the pre-flight planning phase RAIM prediction must be performed if TSO-C129() equipment is used to solely satisfy the RNAV and RNP requirement. GPS RAIM availability must be confirmed for the intended route of flight (route and time) using current GPS satellite information. In the event of a predicted, continuous loss of RAIM of more than five (5) minutes for any part of the intended flight, the flight should be delayed, canceled, or re-routed where RAIM requirements can be met. Operators may satisfy the predictive RAIM requirement through any one of the following methods:

11.3.6.1 Operators may monitor the status of each satellite in its plane/slot position, by accounting for the latest GPS constellation status (e.g., NOTAMs or NANUs), and compute RAIM availability using model-specific RAIM prediction software;

11.3.6.2 Operators may use the Service Availability Prediction Tool (SAPT) on the FAA en route and terminal RAIM prediction website;

11.3.6.3 Operators may contact a Flight Service Station to obtain non-precision approach RAIM;

11.3.6.4 Operators may use a third party interface, incorporating FAA/VOLPE RAIM prediction data

without altering performance values, to predict RAIM outages for the aircraft's predicted flight path and times;

11.3.6.5 Operators may use the receiver's installed RAIM prediction capability (for TSO–C129a/Class A1/B1/C1 equipment) to provide non-precision approach RAIM, accounting for the latest GPS constellation status (e.g., NOTAMs or NANUs). Receiver non-precision approach RAIM should be checked at airports spaced at intervals not to exceed 60 NM along the RNAV 1 procedure's flight track. "Terminal" or "Approach" RAIM must be available at the ETA over each airport checked; or,

11.3.6.6 Operators not using model-specific software or FAA/VOLPE RAIM data will need FAA operational approval.

NOTE–

If TSO–C145/C146 equipment is used to satisfy the RNAV and RNP requirement, the pilot/operator need not perform the prediction if WAAS coverage is confirmed to be available along the entire route of flight. Outside the U.S. or in areas where WAAS coverage is not available, operators using TSO–C145/C146 receivers are required to check GPS RAIM availability.

12. International Flight Plan (FAA Form 7233–4) – IFR Flights (For Domestic or International Flights)

12.1 FAA Form 7233–4, also known as the International Civil Aviation Organization (ICAO) FPL (Filed Flight Plan), is recommended for domestic IFR flights, and is mandatory for assignment of RNAV SIDs and STARs as well as all IFR flights that will depart U.S. domestic airspace.

12.2 ICAO flight plans are to be filed according to ICAO Doc 4444, Procedures for Air Navigation Services — Air Traffic Management (PANS–ATM).

12.3 ICAO flight plans are required whenever the flight intends to cross an international boundary or an oceanic CTA/FIR boundary. For flights departing U.S. airports and operating over U.S. domestic airspace and/or offshore control areas, but do not penetrate the oceanic CTA/FIR boundary or borders, a U.S. domestic flight plan can be filed, but an **ICAO is always preferred.**

12.4 If the pilot intends to fly an RNAV arrival and/or departure, then an ICAO FPL must be filed using the qualifier "R" in Item 10 with specific PBN

capabilities following PBN/ in Item 18. Operators should file their maximum capabilities in order to qualify for the most advanced procedures.

12.4.1 Item 18, Other Information

When Item 10 equipment contains the character "R", Item 18 must contain PBN/ indication of RNAV and/or RNP capabilities. Include as many of the descriptors below as apply to the flight, up to a maximum of eight entries; that is a total of not more than 16 characters.

TBL ENR 1.10–4
PBN/RNAV Specifications

PBN/	RNAV SPECIFICATIONS
A1	RNAV 10 (RNP 10)
B1	RNAV 5 all permitted sensors
B2	RNAV 5 GNSS
B3	RNAV 5 DME/DME
B4	RNAV 5 VOR/DME
B5	RNAV 5 INS or IRS
B6	RNAV 5 LORAN C
C1	RNAV 2 all permitted sensors
C2	RNAV 2 GNSS
C3	RNAV 2 DME/DME
C4	RNAV 2 DME/DME/IRU
D1	RNAV 1 all permitted sensors
D2	RNAV 1 GNSS
D3	RNAV 1 DME/DME
D4	RNAV 1 DME/DME/IRU
	RNP SPECIFICATIONS
L1	RNP 4
O1	Basic RNP 1 all permitted sensors
O2	Basic RNP 1 GNSS
O3	Basic RNP 1 DME/DME
O4	Basic RNP 1 DME/DME/IRU
S1	RNP APCH
S2	RNP APCH with BARO-VNAV
T1	RNP AR APCH with RF (special authorization required)
T2	RNP AR APCH without RF (special authorization required)

12.5 The pilot must file in accordance with (IAW) FAA Form 7233–4 for automatic assignment of

RNAV Standard Instrument Departures (SIDs), Standard Terminal Arrival Routes (STARs), and/or Point to Point (PTP) in U.S. domestic airspace and include additional information per the below guidance:

12.5.1 If you are RNAV 1 and/or RNAV 2 capable:

12.5.1.1 Item 10, Equipment

In addition to identifying all available and serviceable communication, navigation, approach aid, and surveillance equipment carried on your aircraft, insert the character “R” to indicate you are authorized Performance–Based Navigation.

12.5.1.2 Performance–Based Navigation (PBN) Item 18, Other Information

When PBN Capability has been filed in PBN/, if PBN routing is desired for only some segment(s) of the flight, then that information can be conveyed by inserting the character “Z” in Item 10 and “NAV/RNV” in field 18 followed by the appropriate RNAV accuracy value(s) per the following:

a) To be assigned an RNAV 1 SID, insert the characters “D1”.

b) To be assigned an RNAV 1 STAR, insert the characters “A1”.

c) To be assigned en route extensions and/or RNAV PTP, insert the characters “E2”.

d) To prevent assignment of an RNAV route or procedure, insert a numeric value of “0” for the segment of the flight. Alternatively, you may simply remove the segment of the flight indicator and numeric value from the character string.

EXAMPLE–

1. NAV/RNVD1 or NAV/RNVD1E0A0 (Same meaning)
2. NAV/RNVA1 or NAV/RNVD0E0A1 (Same meaning)
3. NAV/RNVE2 or NAV/RNVD0E2A0 (Same meaning)
4. NAV/RNVD1A1 or NAV/RNVD1E0A1 (Same meaning),
5. NAV/RNVD1E2A1.

NOTE–

Route assignments are predicated on NAV/ data over PBN/ data in ERAS.

12.5.2 If you are RNAV PTP capable, but not RNAV 1 and/or RNAV 2 capable:

12.5.2.1 Item 10, Equipment

In addition to identifying all available and serviceable communication, navigation, approach aid, and surveillance equipment carried on your aircraft, insert the character “R”, and follow procedures described in subparagraph 12.4.

12.5.2.2 The following variations will be accepted in ERAS for automatic assignment of RNAV routes: One or more spaces may follow “NAV/.”

EXAMPLE–

NAV/ RNVD1A1. The “D”, “E”, and “A” characters may appear in any order following “NAV/RNV”.

EXAMPLE–

NAV/RNVD1A1E2 NAV/RNVA1D1E2.

Additional items required by other automation systems may be filed after “NAV/” in any order.

EXAMPLE–

NAV/RNP10 RNVD1E2A1, NAV/RNVD1E2A1 RNP4 NAV/RNAV1 RNAV5 RNVD1E2A1.

12.5.2.3 If the Item 18 entries following “NAV/” do not follow the above instructions, the flight plan will be accepted by ERAS, but **you will not be automatically assigned RNAV**. Common errors include: Putting spaces between RNV, D1, A1, and/or E2 – no spaces are allowed between the segments. Filing “RNAV” instead of “RNV” – RNAV is not acceptable in the U.S. domestic string after “NAV/”.

12.6 If the pilot intends to operate in RVSM airspace, he/she must file the qualifier “W” in order to be cleared into RVSM airspace.

12.7 Required Surveillance Performance (RSP) Item 18, Other Information

When RSP Capability has been filed in SUR/, this can be conveyed by inserting the character “Z” in Item 10 and “SUR/” in field 18 followed by the appropriate RSP performance per the following:

12.7.1 For RSP 180 – flight plan RSP180

12.7.2 For RSP 400 – flight plan RSP400

EXAMPLE–

1. SUR/ RSP180
2. SUR/ RSP400
3. SUR/ RSP180 RSP400

12.8 For a copy of FAA Form 7233–4, and for information on how to complete the form, please go to: www.faa.gov/ato?k=fpl.

TBL ENR 1.10–5

Aircraft COM, NAV, and Approach Equipment Qualifiers

INSERT one letter as follows:

N if no COM/NAV/approach aid equipment for the route to be flown is carried, or the equipment is unserviceable,

(OR)

S if standard COM/NAV/approach aid equipment for the route to be flown is carried and serviceable (see Note 1),

(AND/OR)

INSERT one or more of the following letters to indicate the COM/NAV/approach aid equipment available and serviceable:

NOTE–

The capabilities described below comprise the following elements:

- a. Presence of relevant serviceable equipment on board the aircraft.*
- b. Equipment and capabilities commensurate with flight crew qualifications.*
- c. Where applicable, authorization from the appropriate authority.*

A	GBAS landing system	L	ILS
B	LPV (APV with SBAS)	M1	ATC RTF SATCOM (INMARSAT)
C	LORAN C	M2	ATC RTF (MTSAT)
D	DME	M3	ATC RTF (Iridium)
E1	FMC WPR ACARS	O	VOR
E2	D-FIS ACARS	P1	CPDLC RCP 400 (See Note 7.)
E3	PDC ACARS	P2	CPDLC RCP 240 (See Note 7.)
F	ADF	P3	SATVOICE RCP 400 (See Note 7.)
G	(GNSS) (See Note 2.)	P4– p9	Reserved for RCP
H	HF RTF	R	PBN approved (See Note 4.)
I	Inertial navigation	T	TACAN
J1	CPDLC ATN VDL Mode 2 (See Note 3.)	U	UHF RTF
J2	CPDLC FANS 1/A HF DL	V	VHF RTF
J3	CPDLC FANS 1/A VDL Mode 4	W	RVSM approved
J4	CPDLC FANS 1/A VDL Mode 2	X	MNPS approved/North Atlantic (NAT) High Level Airspace (HLA) approved
J5	CPDLC FANS 1/A SATCOM (INMARSAT)	Y	VHF with 8.33 kHz channel spacing capability
J6	CPDLC FANS 1/A SATCOM (MTSAT)	Z	Other equipment carried or other capabilities (See Note 5.)
J7	CPDLC FANS 1/A SATCOM (Iridium)		

NOTE–

- 1.** If the letter S is used, standard equipment is considered to be VHF RTF, VOR, and ILS within U.S. domestic airspace.
- 2.** If the letter G is used, the types of external GNSS augmentation, if any, are specified in Item 18 following the indicator NAV/ and separated by a space.
- 3.** See RTCA/EUROCAE Interoperability Requirements Standard For ATN Baseline 1 (ATN B1 INTEROP Standard – DO-280B/ED-110B) for data link services air traffic control clearance and information/air traffic control communications management/air traffic control microphone check.
- 4.** If the letter R is used, the performance–based navigation levels that are authorized must be specified in Item 18 following the indicator PBN/. For further details, see paragraph 12.5.1.2.

5. If the letter Z is used, specify in Item 18 the other equipment carried, preceded by COM/, DAT/, and/or NAV/, as appropriate.
6. Information on navigation capability is provided to ATC for clearance and routing purposes.
7. Guidance on the application of performance-based communication, which prescribes RCP to an air traffic service in a specific area, is contained in the Performance-Based Communication and Surveillance (PBCS) Manual (Doc 9869).

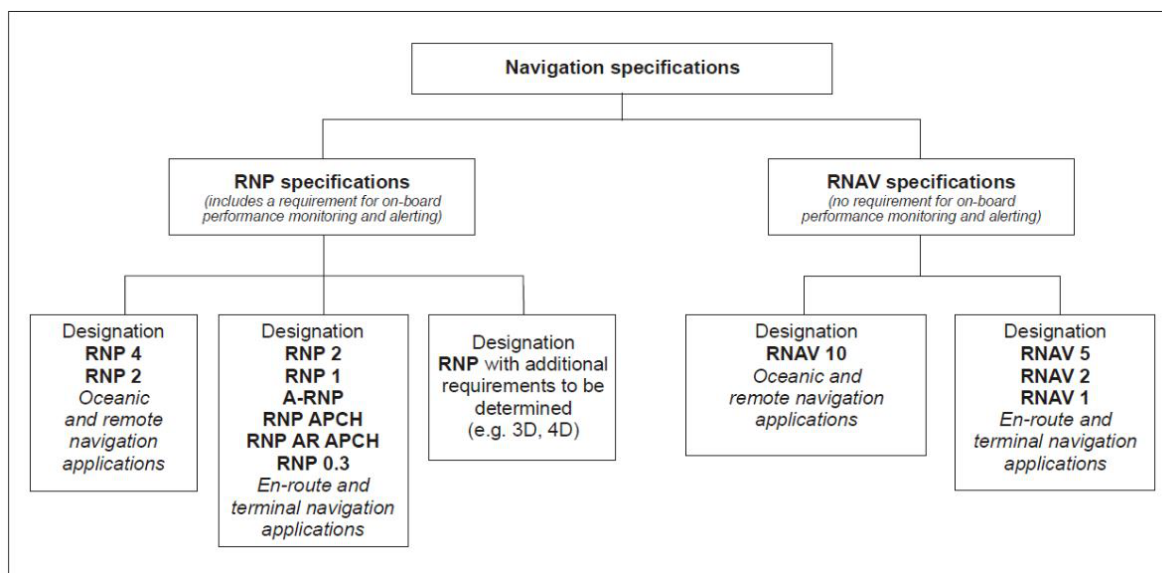
ENR 1.17 Performance-Based Navigation (PBN) and Area Navigation (RNAV)

1. General

1.1 Introduction to PBN. As air travel has evolved, methods of navigation have improved to give operators more flexibility. PBN exists under the umbrella of area navigation (RNAV). The term RNAV in this context, as in procedure titles, just means “area navigation,” regardless of the equipment capability of the aircraft. (See FIG ENR 1.17-1.) Many operators have upgraded their systems to obtain the benefits of PBN. Within PBN there are two main categories of navigation methods or specifications: area navigation (RNAV) and required navigation performance (RNP). In this context, the term RNAV *x* means a specific navigation specification with a specified lateral accuracy value. For an aircraft to meet the requirements of PBN, a specified RNAV or RNP accuracy must be met 95 percent of the flight time. RNP is a PBN system that includes

onboard performance monitoring and alerting capability (for example, Receiver Autonomous Integrity Monitoring (RAIM)). PBN also introduces the concept of navigation specifications (NavSpecs) which are a set of aircraft and aircrew requirements needed to support a navigation application within a defined airspace concept. For both RNP and RNAV NavSpecs, the numerical designation refers to the lateral navigation accuracy in nautical miles which is expected to be achieved at least 95 percent of the flight time by the population of aircraft operating within the airspace, route, or procedure. This information is detailed in International Civil Aviation Organization’s (ICAO) Doc 9613, Performance-based Navigation (PBN) Manual and the latest FAA AC 90-105, Approval Guidance for RNP Operations and Barometric Vertical Navigation in the U.S. National Airspace System and in Remote and Oceanic Airspace.

FIG ENR 1.17-1
Navigation Specifications



1.2 Area Navigation (RNAV)

1.2.1 General. RNAV is a method of navigation that permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these. In the future, there will be an increased dependence on the use of RNAV in lieu of routes defined by ground-based navigation aids. RNAV routes and terminal procedures, including departure procedures (DPs) and standard terminal arrivals (STAR), are designed with RNAV systems in mind. There are several potential advantages of RNAV routes and procedures:

1.2.1.1 Time and fuel savings;

1.2.1.2 Reduced dependence on radar vectoring, altitude, and speed assignments allowing a reduction in required ATC radio transmissions; and

1.2.1.3 More efficient use of airspace.

In addition to information found in this manual, guidance for domestic RNAV DPs, STARs, and routes may also be found in Advisory Circular 90-100, U.S. Terminal and En Route Area Navigation (RNAV) Operations.

1.2.2 RNAV Operations. RNAV procedures, such as DPs and STARs, demand strict pilot awareness and maintenance of the procedure centerline. Pilots should possess a working knowledge of their aircraft navigation system to ensure RNAV procedures are flown in an appropriate manner. In addition, pilots should have an understanding of the various waypoint and leg types used in RNAV procedures; these are discussed in more detail below.

1.2.2.1 Waypoints. A waypoint is a predetermined geographical position that is defined in terms of latitude/longitude coordinates. Waypoints may be a simple named point in space or associated with existing navaids, intersections, or fixes. A waypoint is most often used to indicate a change in direction, speed, or altitude along the desired path. RNAV procedures make use of both fly-over and fly-by waypoints.

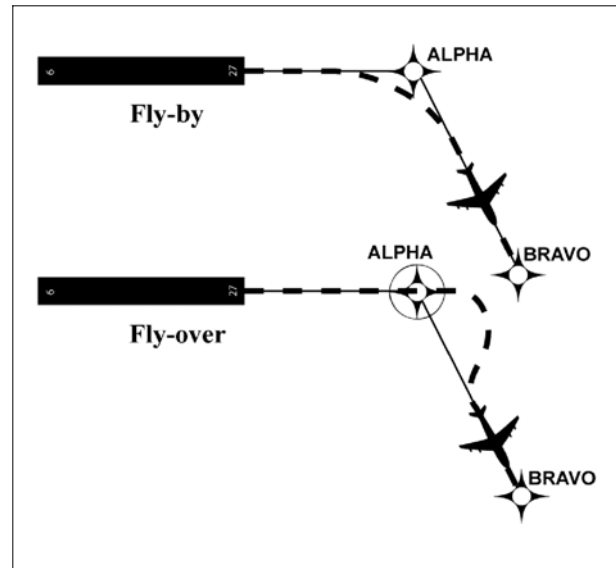
a) Fly-by waypoints. Fly-by waypoints are used when an aircraft should begin a turn to the next course prior to reaching the waypoint separating the two route segments. This is known as turn anticipation.

b) Fly-over waypoints. Fly-over waypoints are used when the aircraft must fly over the point prior to starting a turn.

NOTE-

FIG ENR 1.17-2 illustrates several differences between a fly-by and a fly-over waypoint.

FIG ENR 1.17-2
Fly-by and Fly-over Waypoints



1.2.2.2 RNAV Leg Types. A leg type describes the desired path proceeding, following, or between waypoints on an RNAV procedure. Leg types are identified by a two-letter code that describes the path (e.g., heading, course, track, etc.) and the termination point (e.g., the path terminates at an altitude, distance, fix, etc.). Leg types used for procedure design are included in the aircraft navigation database, but not normally provided on the procedure chart. The narrative depiction of the RNAV chart describes how a procedure is flown. The “path and terminator concept” defines that every leg of a procedure has a termination point and some kind of path into that termination point. Some of the available leg types are described below.

a) Track to Fix. A Track to Fix (TF) leg is intercepted and acquired as the flight track to the following waypoint. Track to a Fix legs are sometimes called point-to-point legs for this reason. **Narrative:** “direct ALPHA, then on course to BRAVO WP.” See FIG ENR 1.17-3.

b) Direct to Fix. A Direct to Fix (DF) leg is a path described by an aircraft's track from an initial area direct to the next waypoint. *Narrative:* "turn right direct BRAVO WP." See FIG ENR 1.17-4.

FIG ENR 1.17-3
Track to Fix Leg Type

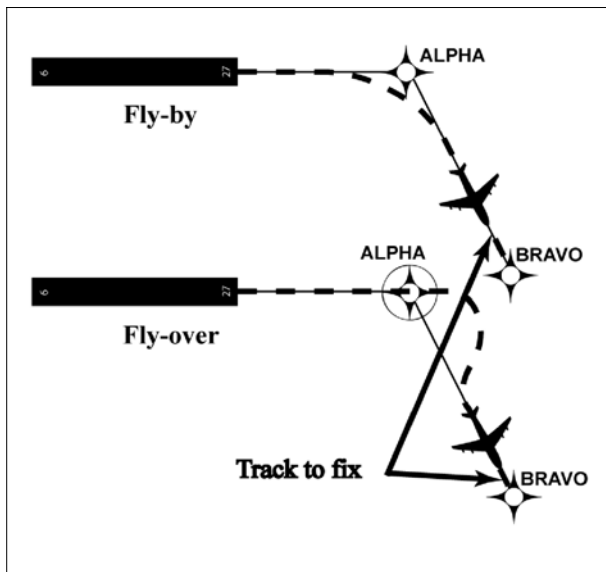
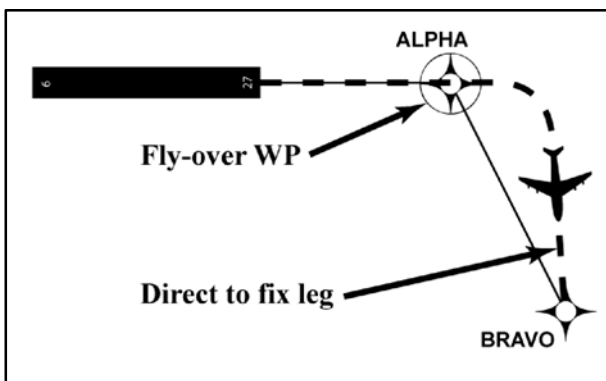
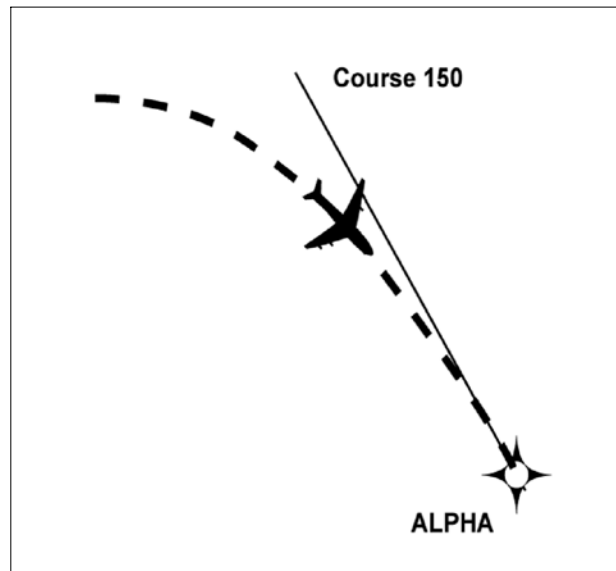


FIG ENR 1.17-4
Direct to Fix Leg Type



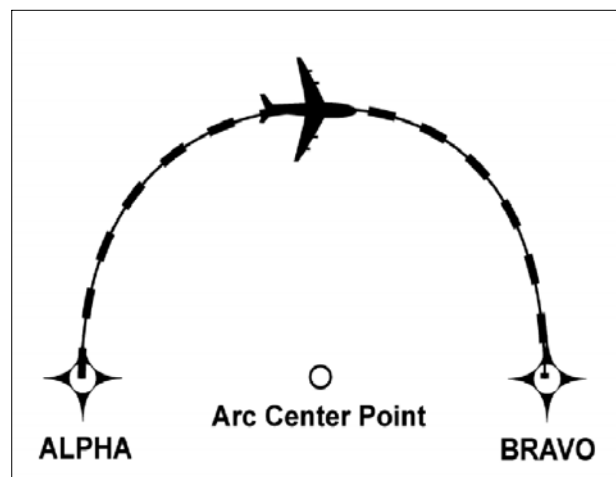
c) Course to Fix. A Course to Fix (CF) leg is a path that terminates at a fix with a specified course at that fix. *Narrative:* "on course 150 to ALPHA WP." See FIG ENR 1.17-5.

FIG ENR 1.17-5
Course to Fix Leg Type



d) Radius to Fix. A Radius to Fix (RF) leg is defined as a constant radius circular path around a defined turn center that terminates at a fix. See FIG ENR 1.17-6.

FIG ENR 1.17-6
Radius to Fix Leg Type



e) Heading. A Heading leg may be defined as, but not limited to, a Heading to Altitude (VA), Heading to DME range (VD), and Heading to Manual Termination, i.e., Vector (VM). *Narrative:* "climb heading 350 to 1500", "heading 265, at 9 DME west of PXR VORTAC, right turn heading 360", "fly heading 090, expect radar vectors to DRYHT INT."

1.2.2.3 Navigation Issues. Pilots should be aware of their navigation system inputs, alerts, and annunciations in order to make better-informed decisions. In addition, the availability and suitability of particular sensors/systems should be considered.

a) GPS/WAAS. Operators using TSO-C129(), TSO-C196(), TSO-C145() or TSO-C146() systems should ensure departure and arrival airports are entered to ensure proper RAIM availability and CDI sensitivity.

b) DME/DME. Operators should be aware that DME/DME position updating is dependent on navigation system logic and DME facility proximity, availability, geometry, and signal masking.

c) VOR/DME. Unique VOR characteristics may result in less accurate values from VOR/DME position updating than from GPS or DME/DME position updating.

d) Inertial Navigation. Inertial reference units and inertial navigation systems are often coupled with other types of navigation inputs, e.g., DME/DME or GPS, to improve overall navigation system performance.

NOTE—

Specific inertial position updating requirements may apply.

1.2.2.4 Flight Management System (FMS). An FMS is an integrated suite of sensors, receivers, and computers, coupled with a navigation database. These systems generally provide performance and RNAV guidance to displays and automatic flight control systems.

1.2.2.5 Inputs can be accepted from multiple sources such as GPS, DME, VOR, LOC and IRU. These inputs may be applied to a navigation solution one at a time or in combination. Some FMSs provide for the detection and isolation of faulty navigation information.

1.2.2.6 When appropriate navigation signals are available, FMSs will normally rely on GPS and/or DME/DME (that is, the use of distance information from two or more DME stations) for position updates. Other inputs may also be incorporated based on FMS system architecture and navigation source geometry.

NOTE—

DME/DME inputs coupled with one or more IRU(s) are often abbreviated as DME/DME/IRU or D/D/I.

1.2.2.7 RNAV Navigation Specifications (Nav Specs)

NavSpecs are a set of aircraft and aircrew requirements needed to support a navigation application within a defined airspace concept. For both RNP and RNAV designations, the numerical designation refers to the lateral navigation accuracy in nautical miles which is expected to be achieved at least 95 percent of the flight time by the population of aircraft operating within the airspace, route, or procedure. (See FIG ENR 1.17-1.)

a) RNAV 1. Typically RNAV 1 is used for DPs and STARs and appears on the charts. Aircraft must maintain a total system error of not more than 1 NM for 95 percent of the total flight time.

b) RNAV 2. Typically RNAV 2 is used for en route operations unless otherwise specified. T-routes and Q-routes are examples of this Nav Spec. Aircraft must maintain a total system error of not more than 2 NM for 95 percent of the total flight time.

c) RNAV 10. Typically RNAV 10 is used in oceanic operations. See paragraph ENR 7.4 for specifics and explanation of the relationship between RNP 10 and RNAV 10 terminology.

2. Required Navigation Performance (RNP)

2.1 General. While both RNAV navigation specifications (NavSpecs) and RNP NavSpecs contain specific performance requirements, RNP is RNAV with the added requirement for onboard performance monitoring and alerting (OBPMA). RNP is also a statement of navigation performance necessary for operation within a defined airspace. A critical component of RNP is the ability of the aircraft navigation system to monitor its achieved navigation performance, and to identify for the pilot whether the operational requirement is, or is not, being met during an operation. OBPMA capability therefore allows a lessened reliance on air traffic control intervention and/or procedural separation to achieve the overall safety of the operation. RNP capability of the aircraft is a major component in determining the separation criteria to ensure that the overall containment of the operation is met. The RNP capability of an aircraft will vary depending upon the aircraft equipment and the navigation infrastructure. For example, an aircraft may be eligible for RNP 1, but may not be capable of RNP 1 operations due to limited NAVAID coverage or avionics failure. The Aircraft Flight Manual

(AFM) or avionics documents for your aircraft should specifically state the aircraft's RNP eligibilities. Contact the manufacturer of the avionics or the aircraft if this information is missing or incomplete. NavSpecs should be considered different from one another, not “better” or “worse” based on the described lateral navigation accuracy. It is this concept that requires each NavSpec eligibility to be listed separately in the avionics documents or AFM. For example, RNP 1 is different from RNAV 1, and an RNP 1 eligibility does NOT mean automatic RNP 2 or RNAV 1 eligibility. As a safeguard, the FAA requires that aircraft navigation databases hold only those procedures that the aircraft maintains eligibility for. If you look for a specific instrument procedure in your aircraft's navigation database and cannot find it, it's likely that procedure contains PBN elements your aircraft is ineligible for or cannot compute and fly. Further, optional capabilities such as Radius-to-fix (RF) turns or scalability should be described in the AFM or avionics documents. Use the capabilities of your avionics suite to verify the appropriate waypoint and track data after loading the procedure from your database.

2.2 PBN Operations

2.2.1 Lateral Accuracy Values. Lateral Accuracy values are applicable to a selected airspace, route, or procedure. The lateral accuracy value is a value typically expressed as a distance in nautical miles from the intended centerline of a procedure, route, or path. RNP applications also account for potential errors at some multiple of lateral accuracy value (for example, twice the RNP lateral accuracy values).

2.2.1.1 RNP NavSpecs. U.S. standard NavSpecs supporting typical RNP airspace uses are as specified below. Other NavSpecs may include different lateral accuracy values as identified by ICAO or other states. (See FIG ENR 1.17–1.)

a) RNP Approach (RNP APCH). In the U.S., RNP APCH procedures are titled RNAV (GPS) and offer several lines of minima to accommodate varying levels of aircraft equipment: either lateral navigation (LNAV), LNAV/vertical navigation (LNAV/VNAV), Localizer Performance with Vertical Guidance (LPV), and Localizer Performance (LP). GPS with or without Space-Based Augmentation System (SBAS) (for example, WAAS) can provide the lateral information to support LNAV minima. LNAV/VNAV incorporates LNAV lateral

with vertical path guidance for systems and operators capable of either barometric or SBAS vertical. Pilots are required to use SBAS to fly to the LPV or LP minima. RF turn capability is optional in RNP APCH eligibility. This means that your aircraft may be eligible for RNP APCH operations, but you may not fly an RF turn unless RF turns are also specifically listed as a feature of your avionics suite. GBAS Landing System (GLS) procedures are also constructed using RNP APCH NavSpecs and provide precision approach capability. RNP APCH has a lateral accuracy value of 1 in the terminal and missed approach segments and essentially scales to RNP 0.3 (or 40 meters with SBAS) in the final approach. (See AIP ENR 1.5 Paragraph 9. RNP AR Instrument Approach Procedures.)

b) RNP Authorization Required Approach (RNP AR APCH). In the U.S., RNP AR APCH procedures are titled RNAV (RNP). These approaches have stringent equipment and pilot training standards and require special FAA authorization to fly. Scalability and RF turn capabilities are mandatory in RNP AR APCH eligibility. RNP AR APCH vertical navigation performance is based upon barometric VNAV or SBAS. RNP AR is intended to provide specific benefits at specific locations. It is not intended for every operator or aircraft. RNP AR capability requires specific aircraft performance, design, operational processes, training, and specific procedure design criteria to achieve the required target level of safety. RNP AR APCH has lateral accuracy values that can range below 1 in the terminal and missed approach segments and essentially scale to RNP 0.3 or lower in the final approach. Before conducting these procedures, operators should refer to the latest AC 90–101, Approval Guidance for RNP Procedures with AR. (See AIP ENR 1.5 Paragraph 9.)

c) RNP Authorization Required Departure (RNP AR DP). Similar to RNP AR approaches, RNP AR departure procedures have stringent equipment and pilot training standards and require special FAA authorization to fly. Scalability and RF turn capabilities is mandatory in RNP AR DP eligibility. RNP AR DP is intended to provide specific benefits at specific locations. It is not intended for every operator or aircraft. RNP AR DP capability requires specific aircraft performance, design, operational processes, training, and specific procedure design criteria to achieve the required target level of safety.

RNP AR DP has lateral accuracy values that can scale to no lower than RNP 0.3 in the initial departure flight path. Before conducting these procedures, operators should refer to the latest AC 90-101, Approval Guidance for RNP Procedures with AR. (See AIP ENR 1.5 Paragraph 9.)

d) Advanced RNP (A-RNP). Advanced RNP is a NavSpec with a minimum set of mandatory functions enabled in the aircraft's avionics suite. In the U.S., these minimum functions include capability to calculate and perform RF turns, scalable RNP, and parallel offset flight path generation. Higher continuity (such as dual systems) may be required for certain oceanic and remote continental airspace. Other "advanced" options for use in the en route environment (such as fixed radius transitions and Time of Arrival Control) are optional in the U.S. Typically, an aircraft eligible for A-RNP will also be eligible for operations comprising: RNP APCH, RNP/RNAV 1, RNP/RNAV 2, RNP 4, and RNP/RNAV 10. A-RNP allows for scalable RNP lateral navigation values (either 1.0 or 0.3) in the terminal environment. Use of these reduced lateral accuracies will normally require use of the aircraft's autopilot and/or flight director. See the latest AC 90-105 for more information on A-RNP, including NavSpec bundling options, eligibility determinations, and operations approvals.

NOTE-

A-RNP eligible aircraft are NOT automatically eligible for RNP AR APCH or RNP AR DP operations, as RNP AR eligibility requires a separate determination process and special FAA authorization.

e) RNP 1. RNP 1 requires a lateral accuracy value of 1 for arrival and departure in the terminal area, and the initial and intermediate approach phase when used on conventional procedures with PBN segments (for example, an ILS with a PBN feeder, IAF, or missed approach). RF turn capability is optional in RNP 1 eligibility. This means that your aircraft may be eligible for RNP 1 operations, but you may not fly an RF turn unless RF turns are also specifically listed as a feature of your avionics suite.

f) RNP 2. RNP 2 will apply to both domestic and oceanic/remote operations with a lateral accuracy value of 2.

g) RNP 4. RNP 4 will apply to oceanic and remote operations only with a lateral accuracy value of 4.

RNP 4 eligibility will automatically confer RNP 10 eligibility.

h) RNP 10. The RNP 10 NavSpec applies to certain oceanic and remote operations with a lateral accuracy of 10. In such airspace, the RNAV 10 NavSpec will be applied, so any aircraft eligible for RNP 10 will be deemed eligible for RNAV 10 operations. Further, any aircraft eligible for RNP 4 operations is automatically qualified for RNP 10/RNAV 10 operations. (See also the latest AC 91-70, Oceanic and Remote Continental Airspace Operations, for more information on oceanic RNP/RNAV operations.)

i) RNP 0.3. The RNP 0.3 NavSpec requires a lateral accuracy value of 0.3 for all authorized phases of flight. RNP 0.3 is not authorized for oceanic, remote, or the final approach segment. Use of RNP 0.3 by slow-flying fixed-wing aircraft is under consideration, but the RNP 0.3 NavSpec initially will apply only to rotorcraft operations. RF turn capability is optional in RNP 0.3 eligibility. This means that your aircraft may be eligible for RNP 0.3 operations, but you may not fly an RF turn unless RF turns are also specifically listed as a feature of your avionics suite.

NOTE-

On terminal procedures or en route charts, do not confuse a charted RNP value of 0.30, or any standard final approach course segment width of 0.30, with the NavSpec title "RNP 0.3." Charted RNP values of 0.30 or below should contain two decimal places (for example, RNP 0.15, or 0.10, or 0.30) whereas the NavSpec title will only state "RNP 0.3."

2.2.1.2 Application of Standard Lateral Accuracy Values. U.S. standard lateral accuracy values typically used for various routes and procedures supporting RNAV operations may be based on use of a specific navigational system or sensor such as GPS, or on multi-sensor RNAV systems having suitable performance.

2.2.1.3 Depiction of PBN Requirements. In the U.S., PBN requirements like Lateral Accuracy Values or NavSpecs applicable to a procedure will be depicted on affected charts and procedures. In the U.S., a specific procedure's Performance-Based Navigation (PBN) requirements will be prominently displayed in separate, standardized notes boxes. For procedures with PBN elements, the "PBN box" will contain the procedure's NavSpec(s); and, if required: specific sensors or infrastructure needed for the

navigation solution, any additional or advanced functional requirements, the minimum RNP value, and any amplifying remarks. Items listed in this PBN box are REQUIRED to fly the procedure's PBN elements. For example, an ILS with an RNAV missed approach would require a specific capability to fly the missed approach portion of the procedure. That required capability will be listed in the PBN box. The separate Equipment Requirements box will list ground-based equipment and/or airport specific requirements. On procedures with both PBN elements and ground-based equipment requirements, the PBN requirements box will be listed first. (See FIG ENR 1.5-19.)

2.3 Other RNP Applications Outside the U.S. The FAA and ICAO member states have led initiatives in implementing the RNP concept to oceanic operations. For example, RNP-10 routes have been

established in the northern Pacific (NOPAC) which has increased capacity and efficiency by reducing the distance between tracks to 50 NM. (See AIP Section ENR 7.4.)

2.4 Aircraft and Airborne Equipment Eligibility for RNP Operations. Aircraft eligible for RNP operations will have an appropriate entry including special conditions and limitations in its AFM, avionics manual, or a supplement. Operators of aircraft not having specific RNP eligibility statements in the AFM or avionics documents may be issued operational approval including special conditions and limitations for specific RNP eligibilities.

NOTE-

Some airborne systems use Estimated Position Uncertainty (EPU) as a measure of the current estimated navigational performance. EPU may also be referred to as Actual Navigation Performance (ANP) or Estimated Position Error (EPE).

TBL ENR 1.17-1
U.S. Standard RNP Levels

RNP Level	Typical Application	Primary Route Width (NM) – Centerline to Boundary
0.1 to 1.0	RNP AR Approach Segments	0.1 to 1.0
0.3 to 1.0	RNP Approach Segments	0.3 to 1.0
1	Terminal and En Route	1.0
2	En Route	2.0
4	Projected for oceanic/remote areas where 30 NM horizontal separation is applied.	4.0
10	Oceanic/remote areas where 50 NM lateral separation is applied.	10.0

3. Use of Suitable Area Navigation (RNAV) Systems on Conventional Procedures and Routes

3.1 Discussion. This paragraph sets forth policy, while providing operational and airworthiness guidance regarding the suitability and use of RNAV systems when operating on, or transitioning to, conventional, non-RNAV routes and procedures within the U.S. National Airspace System (NAS):

3.1.1 Use of a suitable RNAV system as a Substitute Means of Navigation when a Very-High Frequency (VHF) Omni-directional Range (VOR), Distance Measuring Equipment (DME), Tactical Air Navigation (TACAN), VOR/TACAN (VORTAC), VOR/

DME, Non-directional Beacon (NDB), or compass locator facility including locator outer marker and locator middle marker is out-of-service (that is, the navigation aid (NAVAID) information is not available); an aircraft is not equipped with an Automatic Direction Finder (ADF) or DME; or the installed ADF or DME on an aircraft is not operational. For example, if equipped with a suitable RNAV system, a pilot may hold over an out-of-service NDB.

3.1.2 Use of a suitable RNAV system as an Alternate Means of Navigation when a VOR, DME, VORTAC, VOR/DME, TACAN, NDB, or compass locator facility including locator outer marker and locator

middle marker is operational and the respective aircraft is equipped with operational navigation equipment that is compatible with conventional nav aids. For example, if equipped with a suitable RNAV system, a pilot may fly a procedure or route based on operational VOR using that RNAV system without monitoring the VOR.

NOTE–

1. *Additional information and associated requirements are available in Advisory Circular 90-108 titled “Use of Suitable RNAV Systems on Conventional Routes and Procedures.”*

2. *Good planning and knowledge of your RNAV system are critical for safe and successful operations.*

3. *Pilots planning to use their RNAV system as a substitute means of navigation guidance in lieu of an out-of-service NAVAID may need to advise ATC of this intent and capability.*

4. *The navigation database should be current for the duration of the flight. If the AIRAC cycle will change during flight, operators and pilots should establish procedures to ensure the accuracy of navigation data, including suitability of navigation facilities used to define the routes and procedures for flight. To facilitate validating database currency, the FAA has developed procedures for publishing the amendment date that instrument approach procedures were last revised. The amendment date follows the amendment number; for example, Amdt 4 14Jan10. Currency of graphic departure procedures and STARs may be ascertained by the numerical designation in the procedure title. If an amended chart is published for the procedure, or the procedure amendment date shown on the chart is on or after the expiration date of the database, the operator must not use the database to conduct the operation.*

3.2 Types of RNAV Systems that Qualify as a Suitable RNAV System. When installed in accordance with appropriate airworthiness installation requirements and operated in accordance with applicable operational guidance (e.g., aircraft flight manual and Advisory Circular material), the following systems qualify as a suitable RNAV system:

3.2.1 An RNAV system with TSO-C129/-C145/-C146 equipment, installed in accordance with AC 20-138, Airworthiness Approval of Global Positioning System (GPS) Navigation Equipment for Use as a VFR and IFR Supplemental Navigation System, or AC 20-130A, Airworthiness Approval of Navigation or Flight Management Systems Integrat-

ing Multiple Navigation Sensors, and authorized for instrument flight rules (IFR) en route and terminal operations (including those systems previously qualified for “GPS in lieu of ADF or DME” operations), or

3.2.2 An RNAV system with DME/DME/IRU inputs that is compliant with the equipment provisions of AC 90-100A, U.S. Terminal and En Route Area Navigation (RNAV) Operations, for RNAV routes. A table of compliant equipment is available at the following website:

http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs470/policy_guidance/

NOTE–

Approved RNAV systems using DME/DME/IRU, without GPS/WAAS position input, may only be used as a substitute means of navigation when specifically authorized by a Notice to Airmen (NOTAM) or other FAA guidance for a specific procedure. The NOTAM or other FAA guidance authorizing the use of DME/DME/IRU systems will also identify any required DME facilities based on an FAA assessment of the DME navigation infrastructure.

3.3 Uses of Suitable RNAV Systems. Subject to the operating requirements, operators may use a suitable RNAV system in the following ways:

3.3.1 Determine aircraft position relative to, or distance from a VOR (see NOTE 6 below), TACAN, NDB, compass locator, DME fix; or a named fix defined by a VOR radial, TACAN course, NDB bearing, or compass locator bearing intersecting a VOR or localizer course.

3.3.2 Navigate to or from a VOR, TACAN, NDB, or compass locator.

3.3.3 Hold over a VOR, TACAN, NDB, compass locator, or DME fix.

3.3.4 Fly an arc based upon DME.

NOTE–

1. *The allowances described in this section apply even when a facility is identified as required on a procedure (for example, “Note ADF required”).*

2. *These operations do not include lateral navigation on localizer-based courses (including localizer back-course guidance) without reference to raw localizer data.*

3. *Unless otherwise specified, a suitable RNAV system cannot be used for navigation on procedures that are identified as not authorized (“NA”) without exception by a NOTAM. For example, an operator may not use a RNAV system to navigate on a procedure affected by an expired or*

unsatisfactory flight inspection, or a procedure that is based upon a recently decommissioned NAVAID.

4. *Pilots may not substitute for the NAVAID (for example, a VOR or NDB) providing lateral guidance for the final approach segment. This restriction does not refer to instrument approach procedures with “or GPS” in the title when using GPS or WAAS. These allowances do not apply to procedures that are identified as not authorized (NA) without exception by a NOTAM, as other conditions may still exist and result in a procedure not being available. For example, these allowances do not apply to a procedure associated with an expired or unsatisfactory flight inspection, or is based upon a recently decommissioned NAVAID.*

5. *Use of a suitable RNAV system as a means to navigate on the final approach segment of an instrument approach procedure based on a VOR, TACAN or NDB signal, is allowable. The underlying NAVAID must be operational and the NAVAID monitored for final segment course alignment.*

6. *For the purpose of paragraph 3.3.1, “VOR” includes VOR, VOR/DME, and VORTAC facilities and “compass locator” includes locator outer marker and locator middle marker.*

3.4 Alternate Airport Considerations. For the purposes of flight planning, any required alternate airport must have an available instrument approach procedure that does not require the use of GPS. This restriction includes conducting a conventional approach at the alternate airport using a substitute means of navigation that is based upon the use of GPS. For example, these restrictions would apply when planning to use GPS equipment as a substitute means of navigation for an out-of-service VOR that supports an ILS missed approach procedure at an alternate airport. In this case, some other approach not reliant upon the use of GPS must be available. This restriction does not apply to RNAV systems using TSO-C145/-C146 WAAS equipment. For further WAAS guidance see ENR 4.1 paragraph 17.

3.4.1 For flight planning purposes, TSO-C129() and TSO-C196() equipped users (GPS users) whose navigation systems have fault detection and exclusion (FDE) capability, who perform a preflight RAIM prediction at the airport where the RNAV (GPS) approach will be flown, and have proper knowledge and any required training and/or approval to conduct a GPS-based IAP, may file based on a GPS-based IAP at either the destination or the alternate airport, but not at both locations. At the

alternate airport, pilots may plan for applicable alternate airport weather minimums using:

3.4.1.1 Lateral navigation (LNAV) or circling minimum descent altitude (MDA);

3.4.1.2 LNAV/vertical navigation (LNAV/VNAV) DA, if equipped with and using approved barometric vertical navigation (baro-VNAV) equipment;

3.4.1.3 RNP 0.3 DA on an RNAV (RNP) IAP, if they are specifically authorized users using approved baro-VNAV equipment and the pilot has verified required navigation performance (RNP) availability through an approved prediction program.

3.4.2 If the above conditions cannot be met, any required alternate airport must have an approved instrument approach procedure other than GPS that is anticipated to be operational and available at the estimated time of arrival, and which the aircraft is equipped to fly.

3.4.3 This restriction does not apply to TSO-C145() and TSO-C146() equipped users (WAAS users). For further WAAS guidance see ENR 4.1 paragraph 17.

3.5 General Operational Requirements

3.5.1 Pilots must comply with the guidelines contained in their AFM, AFM supplement, operating manual, or pilot’s guide when operating their aircraft navigation system.

3.5.2 Pilots may not use their RNAV system as a substitute or alternate means of navigation guidance if their aircraft has an AFM or AFM supplement with a limitation to monitor the underlying navigation aids for the associated operation.

3.5.3 Pilots of aircraft with an AFM limitation that requires the aircraft to have other equipment appropriate to the route to be flown may only use their RNAV equipment as a substitute means of navigation in the contiguous U.S. In addition, pilots of these aircraft may not use their RNAV equipment as a substitute for inoperable or not-installed equipment.

3.5.4 Pilots must ensure their onboard navigation data is current, appropriate for the region of intended operation, and includes the navigation aids, waypoints, and relevant coded terminal airspace procedures for the departure, arrival, and alternate airfields.

NOTE–

The navigation database should be current for the duration of the flight. If the AIRAC cycle will change during flight,

operators and pilots should establish procedures to ensure the accuracy of navigation data, including suitability of navigation facilities used to define the routes and procedures for flight. To facilitate validating database currency, the FAA has developed procedures for publishing the amendment date that instrument approach procedures were last revised. The amendment date follows the amendment number; for example, Amdt 4 14Jan10. Currency of graphic departure procedures and STARs may be ascertained by the numerical designation in the procedure title. If an amended chart is published for the procedure, or the procedure amendment date shown on the chart is on or after the expiration date of the database, the operator must not use the database to conduct the operation.

3.5.5 Pilots must extract procedures, waypoints, nav aids, or fixes by name from the onboard navigation database and comply with the charted procedure or route.

3.5.6 For the purposes described in this paragraph, pilots may not manually enter published procedure or route waypoints via latitude/longitude, place/bearing, or place/bearing/distance into the aircraft system.

3.6 Operational Requirements for Departure and Arrival Procedures

3.6.1 Pilots of aircraft with standalone GPS receivers must ensure that CDI scaling (full-scale deflection) is either ± 1.0 NM or 0.3 NM.

3.6.2 In order to use a substitute means of navigation guidance on departure procedures, pilots of aircraft with RNAV systems using DME/DME/IRU, without GPS input, must ensure their aircraft navigation system position is confirmed, within 1,000 feet, at the start point of take-off roll. The use of an automatic or manual runway update is an acceptable means of compliance with this requirement. A navigation map may also be used to confirm aircraft position, if pilot procedures and display resolution allow for compliance with the 1,000-foot tolerance requirement.

3.7 Operational Requirements for Instrument Approach Procedures

3.7.1 When the use of RNAV equipment using GPS input is planned as a substitute means of navigation guidance for part of an instrument approach procedure at a destination airport, any required alternate airport must have an available instrument approach procedure that does not require the use of GPS. This restriction includes conducting a conven-

tional approach at the alternate airport using a substitute means of navigation guidance based upon the use of GPS. This restriction does not apply to RNAV systems using WAAS as an input.

3.7.2 Pilots of aircraft with standalone GPS receivers must ensure that CDI sensitivity is ± 1 NM.

NOTE–

If using GPS distance as an alternate or substitute means of navigation guidance for DME distance on an instrument approach procedure, pilots must select a named waypoint from the onboard navigation database that is associated with the subject DME facility. Pilots should not rely on information from an RNAV instrument approach procedure, as distances on RNAV approaches may not match the distance to the facility.

3.8 Operational Requirements for Specific Inputs to RNAV Systems:

3.8.1 GPS

3.8.1.1 RNAV systems using GPS input may be used as an alternate means of navigation guidance without restriction if appropriate RAIM is available.

3.8.1.2 Operators of aircraft with RNAV systems that use GPS input but do not automatically alert the pilot of a loss of GPS, must develop procedures to verify correct GPS operation.

3.8.1.3 RNAV systems using GPS input may be used as a substitute means of navigation guidance provided RAIM availability for the operation is confirmed. During flight planning, the operator should confirm the availability of RAIM with the latest GPS NOTAMs. If no GPS satellites are scheduled to be out-of-service, then the aircraft can depart without further action. However, if any GPS satellites are scheduled to be out-of-service, then the operator must confirm the availability of GPS integrity (RAIM) for the intended operation. In the event of a predicted, continuous loss of RAIM of more than five (5) minutes for any part of the route or procedure, the operator should delay, cancel, or re-route the flight as appropriate. Use of GPS as a substitute is not authorized when the RAIM capability of the GPS equipment is lost.

NOTE–

The FAA is developing a RAIM prediction service for general use. Until this capability is operational, a RAIM prediction does not need to be done for a departure or arrival procedure with an associated “RADAR REQUIRED” note charted or for routes where the operator expects to be in radar coverage. Operators may check

RAIM availability for departure or arrival procedures at any given airport by checking approach RAIM for that location. This information is available upon request from a U.S. Flight Service Station, but is no longer available through DUATS.

3.8.2 WAAS

3.8.2.1 RNAV systems using WAAS input may be used as an alternate means of navigation guidance without restriction.

3.8.2.2 RNAV systems using WAAS input may be used as a substitute means of navigation guidance provided WAAS availability for the operation is confirmed. Operators must check WAAS NOTAMs.

3.8.3 DME/DME/IRU

3.8.3.1 RNAV systems using DME/DME/IRU, without GPS input, may be used as an alternate means of navigation guidance whenever valid DME/DME position updating is available.

4. Pilots and Air Traffic Controllers Recognizing Interference or Spoofing

4.1 Pilots need to maintain position awareness while navigating. This awareness may be facilitated by keeping relevant ground-based, legacy navigational aids tuned and available. By utilizing this practice, situational awareness is promoted and guards against significant pilot delay in recognizing the onset of GPS interference. Pilots may find cross-checks of other airborne systems (for example, DME/DME/IRU or VOR) useful to mitigate this otherwise undetected hazard.

REFERENCE–

AIP ENR 4.1, Paragraph 16. *Global Positioning System (GPS)*
AIP ENR 4.1, Paragraph 17. *Wide Area Augmentation System (WAAS)*

4.2 During preflight planning, pilots should be particularly alert for NOTAMs which could affect navigation (GPS or WAAS) along their route of flight, such as Department of Defense electronic signal tests with GPS.

REFERENCE–

AIP ENR 4.1, Paragraph 16. *Global Positioning System (GPS)*
AIP ENR 4.1, Paragraph 17. *Wide Area Augmentation System (WAAS)*

4.3 If the pilot experiences interruptions while navigating with GPS, the pilot and ATC may both incur a higher workload. In the aircraft, the pilot may need to change to a position determining method that does not require GPS-derived signals (for example, DME/DME/IRU or VOR). If transitioning to VOR navigation, the pilot should refer to the current Chart Supplement U.S. to identify airports with available conventional approaches associated with the VOR Minimum Operational Network (MON) program. If the pilot's aircraft is under ATC radar or multilateration surveillance, ATC may be able to provide radar vectors out of the interference affected area or to an alternate destination upon pilot request. An ADS-B Out aircraft's broadcast information may be incorrect and should not be relied upon for surveillance when interference or spoofing is suspected unless its accuracy can be verified by independent means. During the approach phase, a pilot might elect to continue in visual conditions or may need to execute the published missed approach. If the published missed approach procedure is GPS-based, the pilot will need alternate instructions. If the pilot were to choose to continue in visual conditions, the pilot could aid the controller by canceling his/her IFR flight plan and proceeding visually to the airport to land. ATC would cancel the pilot's IFR clearance and issue a VFR squawk; freeing up the controller to handle other aircraft.

4.4 The FAA requests that pilots notify ATC if they experience interruptions to their GPS navigation or surveillance. GPS interference or outages associated with a known testing NOTAM should not be reported to ATC unless the interference/outage affects the pilot's ability to navigate his/her aircraft.

REFERENCE–

AIP ENR 4.1, Paragraph 22. *User Reports Requested on NAVAID or Global Navigation Satellite System (GNSS) Performance or Interference.*

ENR 3. ATS ROUTES

ENR 3.1 Lower ATS Routes

See also ENR 1.10, ENR 1.17, ENR 3.3, ENR 3.5, and Appendix 1.

1. Low Altitude ATS Route Structure

1.1 The U.S. does not use the term “Lower ATS Routes.” The published low altitude route structure in the U.S. consists of VOR Federal airways, L/MF Federal airways and low altitude RNAV routes (T-routes). The low altitude route structure is for use from 1,200 feet above the surface (or in some instances higher) up to but not including 18,000 feet MSL.

1.1.1 Route designators and significant points

defining the routes are listed in FAA Order JO 7400.11, Airspace Designations and Reporting Points.

1.1.2 Applicable route tracks, radials, distances between points, changeover points, cruising altitudes for direction of flight, upper and lower limits, minimum flight altitudes and ARTCC boundaries are published on the IFR Enroute Low Altitude – U.S. chart series.

1.1.3 The low altitude routes are designated as Class E airspace.

ENR 3.3 Area Navigation (RNAV) Routes

1. Area Navigation (RNAV) Routes

1.1 Published RNAV routes, including Q-Routes and T-Routes, can be flight planned for use by aircraft with RNAV capability, subject to any limitations or requirements noted on en route charts, in applicable Advisory Circulars, or by NOTAM. RNAV routes are depicted in blue on aeronautical charts and are identified by the letter “Q” or “T” followed by the airway number (for example, Q-13, T-205). Published RNAV routes are RNAV-2 except when specifically charted as RNAV-1. These routes require system performance currently met by GPS, GPS/WAAS, or DME/DME/IRU RNAV systems that satisfy the criteria discussed in AC 90-100A, U.S. Terminal and En Route Area Navigation (RNAV) Operations.

1.1.1 Q-routes are available for use by RNAV equipped aircraft between 18,000 feet MSL and FL 450 inclusive. Q-routes are depicted on En Route High Altitude Charts.

NOTE-

Aircraft in Alaska may only operate on GNSS Q-routes with GPS (TSO-C129 (as revised) or TSO-C196 (as

revised)) equipment while the aircraft remains in Air Traffic Control (ATC) radar surveillance or with GPS/WAAS which does not require ATC radar surveillance.

1.1.2 T-routes are available for use by GPS or GPS/WAAS equipped aircraft from 1,200 feet above the surface (or in some instances higher) up to but not including 18,000 feet MSL. T-routes are depicted on En Route Low Altitude Charts.

NOTE-

Aircraft in Alaska may only operate on GNSS T-routes with GPS/WAAS (TSO-C145 (as revised) or TSO-C146 (as revised)) equipment.

1.2 Unpublished RNAV routes are direct routes, based on area navigation capability, between waypoints defined in terms of latitude/longitude coordinates, degree-distance fixes, or offsets from established routes/airways at a specified distance and direction. Radar monitoring by ATC is required on all unpublished RNAV routes, except for GNSS-equipped aircraft cleared via filed published waypoints recallable from the aircraft’s navigation database.

restrictions. When using WAAS at an alternate airport, flight planning must be based on flying the RNAV (GPS) LNAV or circling minima line, or minima on a GPS approach procedure, or conventional approach procedure with “or GPS” in the title. Code of Federal Regulation (CFR) Part 91 nonprecision weather requirements must be used for planning. Upon arrival at an alternate, when the WAAS navigation system indicates that LNAV/VNAV or LPV service is available, then vertical guidance may be used to complete the approach using the displayed level of service. The FAA has begun removing the **▲ NA** (Alternate Minimums Not Authorized) symbol from select RNAV (GPS) and GPS approach procedures so they may be used by approach approved WAAS receivers at alternate airports. Some approach procedures will still require the **▲ NA** for other reasons, such as no weather reporting, so it cannot be removed from all procedures. Since every procedure must be individually evaluated, removal of the **▲ NA** from RNAV (GPS) and GPS procedures will take some time.

NOTE—

Properly trained and approved, as required, TSO-C145 and TSO-C146 equipped users (WAAS users) with and using approved baro-VNAV equipment may plan for LNAV/VNAV DA at an alternate airport. Specifically authorized WAAS users with and using approved baro-VNAV equipment may also plan for RNP 0.3 DA at the alternate airport as long as the pilot has verified RNP availability through an approved prediction program.

17.4 Flying procedures with WAAS

17.4.1 WAAS receivers support all basic GPS approach functions and provide additional capabilities. One of the major improvements is the ability to generate glide path guidance, independent of ground equipment or barometric aiding. This eliminates several problems such as hot and cold temperature effects, incorrect altimeter setting or lack of a local altimeter source. It also allows approach procedures to be built without the cost of installing ground stations at each airport or runway. Some approach certified receivers may only generate a glide path with performance similar to Baro-VNAV and are only approved to fly the LNAV/VNAV line of minima on the RNAV (GPS) approach charts. Receivers with additional capability (including faster update rates and smaller integrity limits) are approved to fly the LPV line of minima. The lateral integrity changes dramatically from the 0.3 NM (556 meter) limit for

GPS, LNAV and LNAV/VNAV approach mode, to 40 meters for LPV. It also provides vertical integrity monitoring, which bounds the vertical error to 50 meters for LNAV/VNAV and LPVs with minima of 250’ or above, and bounds the vertical error to 35 meters for LPVs with minima below 250’.

17.4.2 When an approach procedure is selected and active, the receiver will notify the pilot of the most accurate level of service supported by the combination of the WAAS signal, the receiver, and the selected approach, using the naming conventions on the minima lines of the selected approach procedure. For example, if an approach is published with LPV minima and the receiver is only certified for LNAV/VNAV, the equipment would indicate “LNAV/VNAV available,” even though the WAAS signal would support LPV. If flying an existing LNAV/VNAV procedure with no LPV minima, the receiver will notify the pilot “LNAV/VNAV available,” even if the receiver is certified for LPV and the signal supports LPV. If the signal does not support vertical guidance on procedures with LPV and/or LNAV/VNAV minima, the receiver annunciation will read “LNAV available.” On lateral only procedures with LP and LNAV minima the receiver will indicate “LP available” or “LNAV available” based on the level of lateral service available. Once the level of service notification has been given, the receiver will operate in this mode for the duration of the approach procedure, unless that level of service becomes unavailable. The receiver cannot change back to a more accurate level of service until the next time an approach is activated.

NOTE—

Receivers do not “fail down” to lower levels of service once the approach has been activated. If only the vertical off flag appears, the pilot may elect to use the LNAV minima if the rules under which the flight is operating allow changing the type of approach being flown after commencing the procedure. If the lateral integrity limit is exceeded on an LP approach, a missed approach will be necessary since there is no way to reset the lateral alarm limit while the approach is active.

17.4.3 Another additional feature of WAAS receivers is the ability to exclude a bad GPS signal and continue operating normally. This is normally accomplished by the WAAS correction information. Outside WAAS coverage or when WAAS is not available, it is accomplished through a receiver algorithm called FDE. In most cases this operation will be invisible to the pilot since the receiver will

continue to operate with other available satellites after excluding the “bad” signal. This capability increases the reliability of navigation.

17.4.4 Both lateral and vertical scaling for the LNAV/VNAV and LPV approach procedures are different than the linear scaling of basic GPS. When the complete published procedure is flown, ± 1 NM linear scaling is provided until two (2) NM prior to the FAF, where the sensitivity increases to be similar to the angular scaling of an ILS. There are two differences in the WAAS scaling and ILS: 1) on long final approach segments, the initial scaling will be ± 0.3 NM to achieve equivalent performance to GPS (and better than ILS, which is less sensitive far from the runway); 2) close to the runway threshold, the scaling changes to linear instead of continuing to become more sensitive. The width of the final approach course is tailored so that the total width is usually 700 feet at the runway threshold. Since the origin point of the lateral splay for the angular portion of the final is not fixed due to antenna placement like localizer, the splay angle can remain fixed, making a consistent width of final for aircraft being vectored onto the final approach course on different length runways. When the complete published procedure is not flown, and instead the aircraft needs to capture the extended final approach course similar to ILS, the vector to final (VTF) mode is used. Under VTF, the scaling is linear at ± 1 NM until the point where the ILS angular splay reaches a width of ± 1 NM regardless of the distance from the FAWP.

17.4.5 The WAAS scaling is also different than GPS TSO-C129 in the initial portion of the missed approach. Two differences occur here. First, the scaling abruptly changes from the approach scaling to the missed approach scaling, at approximately the departure end of the runway or when the pilot selects missed approach guidance rather than ramping as GPS does. Second, when the first leg of the missed approach is a Track to Fix (TF) leg aligned within 3 degrees of the inbound course, the receiver will change to 0.3 NM linear sensitivity until the turn initiation point for the first waypoint in the missed approach procedure, at which time it will abruptly change to terminal (± 1 NM) sensitivity. This allows the elimination of close in obstacles in the early part of the missed approach that may otherwise cause the DA to be raised.

17.4.6 There are two ways to select the final approach segment of an instrument approach. Most receivers use menus where the pilot selects the airport, the runway, the specific approach procedure and finally the IAF, there is also a channel number selection method. The pilot enters a unique 5–digit number provided on the approach chart, and the receiver recalls the matching final approach segment from the aircraft database. A list of information including the available IAFs is displayed and the pilot selects the appropriate IAF. The pilot should confirm that the correct final approach segment was loaded by cross checking the Approach ID, which is also provided on the approach chart.

17.4.7 The Along–Track Distance (ATD) during the final approach segment of an LNAV procedure (with a minimum descent altitude) will be to the MAWP. On LNAV/VNAV and LPV approaches to a decision altitude, there is no missed approach waypoint so the along–track distance is displayed to a point normally located at the runway threshold. In most cases, the MAWP for the LNAV approach is located on the runway threshold at the centerline, so these distances will be the same. This distance will always vary slightly from any ILS DME that may be present, since the ILS DME is located further down the runway. Initiation of the missed approach on the LNAV/VNAV and LPV approaches is still based on reaching the decision altitude without any of the items listed in 14 CFR Section 91.175 being visible, and must not be delayed while waiting for the ATD to reach zero. The WAAS receiver, unlike a GPS receiver, will automatically sequence past the MAWP if the missed approach procedure has been designed for RNAV. The pilot may also select missed approach prior to the MAWP; however, navigation will continue to the MAWP prior to waypoint sequencing taking place.

18. Ground Based Augmentation System (GBAS) Landing System (GLS)

18.1 General

18.1.1 The GLS provides precision navigation guidance for exact alignment and descent of aircraft on approach to a runway. GBAS equipment provides localized differential augmentation to the Global Positioning System (GPS).

NOTE–

To remain consistent with international terminology, the FAA will use the term GBAS in place of the former term Local Area Augmentation System (LAAS).

18.1.2 GLS displays three–dimension vertical and horizontal navigation guidance to the pilot much like ILS. GLS navigation is based on GPS signals augmented by position correction, integrity parameters, and approach path definition information transmitted over VHF from the local GBAS ground station. One GBAS station can support multiple GLS precision approaches to nearby runways within the GBAS’s maximum use distance.

18.1.3 GLS provides guidance similar to ILS approaches for the final approach segment, though the approach service volume has different dimensions (see FIG ENR 4.1–3). The GLS approach is constructed using the RNP approach (RNP APCH) navigation specification, and may include vertically–guided turn(s) after the IAF or on the missed approach procedure. Portions of the approach prior to an IAF and after the final approach segment may also require Area Navigation (RNAV) typically using the Required Navigation Performance 1 (RNP 1) navigation specification. See AIP Section ENR 1.17 paragraph 1.1 for more information on navigation specifications.

18.1.4 GLS consists of a GBAS Ground Facility (GGF), at least four ground reference stations, a corrections processor, a VHF Data Broadcast (VDB) uplink antenna, an aircraft GBAS receiver, and a charted instrument approach procedure.

18.2 Procedure

18.2.1 Pilots will select the five digit GBAS channel number of the associated GLS approach within the Flight Management System (FMS) menu or manually select the five digits (system dependent). Selection of the GBAS channel number also tunes the VDB.

18.2.2 Following procedure selection, confirmation that the correct GLS procedure is loaded can be accomplished by cross checking the charted Reference Path Indicator (RPI) or approach ID with the cockpit displayed RPI or audio identification of the RPI with Morse Code (for some systems). Distance to the runway threshold will be displayed to the pilot once the aircraft is inside the approach service volume.

18.2.3 The pilot will fly the GLS approach using many of the same techniques as ILS including using a heading or lateral steering mode to intercept the GLS final approach course and then switching to the

appropriate approach navigation mode once the aircraft is within the approach service volume and prior to the glide path intercept point. See also the Instrument Procedures Handbook for more information on GLS.

19. Precision Approach Systems Other than ILS and GLS

19.1 General

Approval and use of precision approach systems other than ILS and GLS require the issuance of special instrument approach procedures.

19.2 Special Instrument Approach Procedure

19.2.1 Special instrument approach procedures must be issued to the aircraft operator if pilot training, aircraft equipment, and/or aircraft performance is different than published procedures. Special instrument approach procedures are not distributed for general public use. These procedures are issued to an aircraft operator when the conditions for operations approval are satisfied.

19.2.2 General aviation operators requesting approval for special procedures should contact the local Flight Standards District Office to obtain a letter of authorization. Air carrier operators requesting approval for use of special procedures should contact their Certificate Holding District Office for authorization through their Operations Specification.

19.3 Transponder Landing System (TLS)

19.3.1 The TLS is designed to provide approach guidance utilizing existing airborne ILS localizer, glide slope, and transponder equipment.

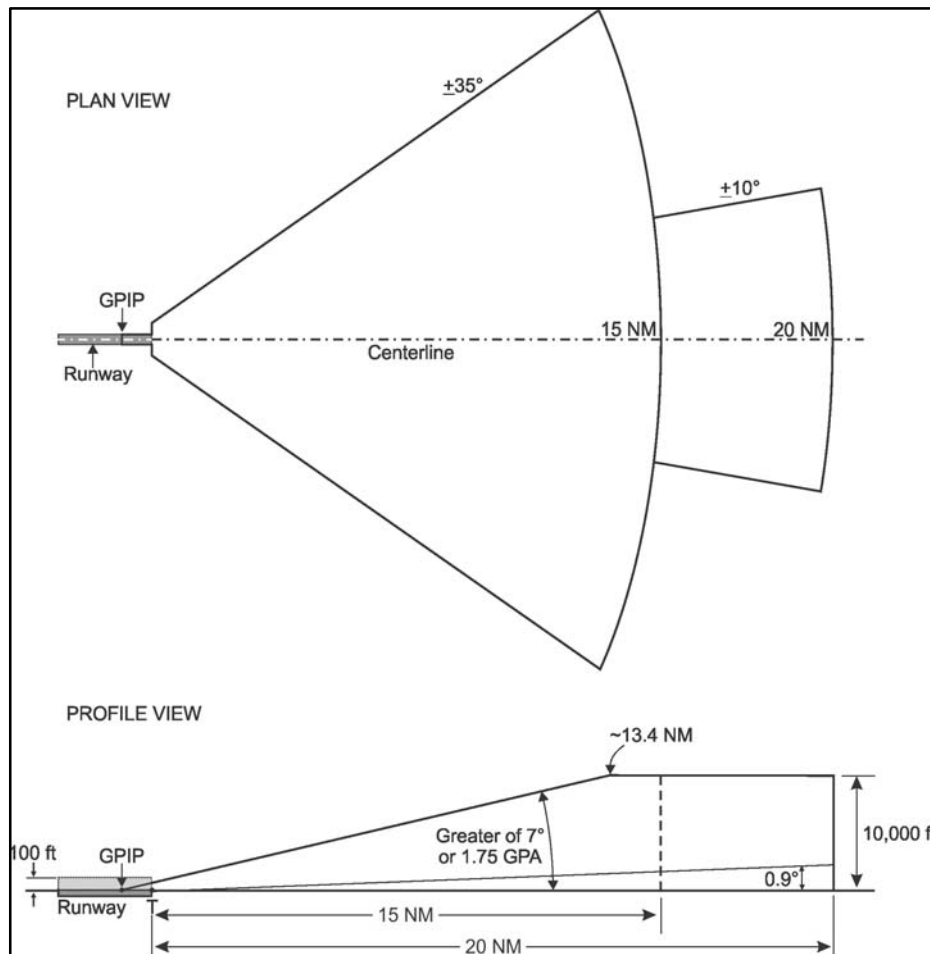
19.3.2 Ground equipment consists of a transponder interrogator, sensor arrays to detect lateral and vertical position, and ILS frequency transmitters. The TLS detects the aircraft’s position by interrogating its transponder. It then broadcasts ILS frequency signals to guide the aircraft along the desired approach path.

19.3.3 TLS instrument approach procedures are designated Special Instrument Approach Procedures. Special aircrew training is required. TLS ground equipment provides approach guidance for only one aircraft at a time. Even though the TLS signal is received using the ILS receiver, no fixed course or glidepath is generated. The concept of operation is very similar to an air traffic controller providing radar vectors, and just as with radar vectors, the guidance

is valid only for the intended aircraft. The TLS ground equipment tracks one aircraft, based on its transponder code, and provides correction signals to course and glidepath based on the position of the tracked aircraft. Flying the TLS corrections computed for another aircraft will not provide guidance relative to the approach; therefore, aircrews must not

use the TLS signal for navigation unless they have received approach clearance and completed the required coordination with the TLS ground equipment operator. Navigation fixes based on conventional NAVAIDs or GPS are provided in the special instrument approach procedure to allow aircrews to verify the TLS guidance.

FIG ENR 4.1-3
GLS Standard Approach Service Volume



19.4 Special Category I Differential GPS (SCAT-I DGPS)

19.4.1 The SCAT-I DGPS is designed to provide approach guidance by broadcasting differential correction to GPS.

19.4.2 SCAT-I DGPS procedures require aircraft equipment and pilot training.

19.4.3 Ground equipment consists of GPS receivers and a VHF digital radio transmitter. The SCAT-I DGPS detects the position of GPS satellites relative

to GPS receiver equipment and broadcasts differential corrections over the VHF digital radio.

19.4.4 Category I Ground Based Augmentation System (GBAS) will displace SCAT-I DGPS as the public-use service.

20. Area Navigation

20.1 General

20.1.1 Area Navigation (RNAV) provides enhanced navigational capability to the pilot. RNAV equipment can compute the airplane position, actual track and

ground speed and then provide meaningful information relative to a route of flight selected by the pilot. Typical equipment will provide the pilot with distance, time, bearing and crosstrack error relative to the selected “TO” or “active” waypoint and the selected route. Several navigational systems with different navigational performance characteristics are capable of providing area navigational functions. Present day RNAV includes INS, VOR/DME, and GPS systems. Modern multi-sensor systems can integrate one or more of the above systems to provide a more accurate and reliable navigational system. Due to the different levels of performance, area navigational capabilities can satisfy different levels of required navigation performance (RNP).

20.2 RNAV Operations Incorporating RNP

20.2.1 During the past four decades, domestic and international air navigation have been conducted using a system of airways and instrument procedures based upon ground-based navigational systems such as NDB, VOR, and ILS. Reliance on ground-based navigational systems has served the aviation community well, but often results in less than optimal routes or instrument procedures and an inefficient use of airspace. With the widespread deployment of RNAV systems and the advent of GPS-based navigation, greater flexibility in defining routes, procedures, and airspace design is now possible with an associated increase in flight safety. To capitalize on the potential of RNAV systems, both the FAA and International Civil Aviation Organization (ICAO) are affecting a shift toward a new standard of navigation and airspace management called RNP.

20.2.2 Navigational systems are typically described as being sensor specific, such as a VOR or ILS system. By specifying airspace requirements as RNP, various navigation systems or combination of systems may be used as long as the aircraft can achieve the RNP. RNP is intended to provide a single performance standard that can be used and applied by aircraft and aircraft equipment manufacturers, airspace planners, aircraft certification and operations, pilots and controllers, and international aviation authorities. RNP can be applied to obstacle clearance or aircraft separation requirements to ensure a consistent application level.

20.2.3 ICAO has defined RNP values for the four typical navigation phases of flight: oceanic, en route, terminal, and approach. The RNP applicable to a

selected airspace, route, or procedure is designated by its RNP Level or Type. As defined in the Pilot/Controller Glossary, the RNP Level or Type is a value typically expressed as a distance, in nautical miles, from the procedure, route or path within which an aircraft would typically operate. RNP applications also provide performance to protect against larger errors at some multiple of RNP level (e.g., twice the RNP level).

20.3 Standard RNP Levels

20.3.1 U.S. standard values supporting typical RNP airspace are as specified in TBL ENR 4.1–6 below. Other RNP levels as identified by ICAO, other states and the FAA may also be used.

TBL ENR 4.1–6

U.S. Standard RNP Levels

RNP Level	Typical Application
.3	Approach
1	Departure, Terminal
2	En Route

20.3.1.1 Application of Standard RNP Levels. U.S. standard levels of RNP typically used for various routes and procedures supporting RNAV operations may be based on use of a specific navigational system or sensor such as GPS, or on multi-sensor RNAV systems having suitable performance. New RNAV routes and procedures will be FAA’s first public use procedures to include a specified RNP level. These procedures are being developed based on earth referenced navigation and do not rely on conventional ground-based navigational aids. Unless otherwise noted on affected charts or procedures, depiction of a specified RNP level will not preclude the use of other airborne RNAV navigational systems.

20.3.1.2 Depiction of Standard RNP Levels. The applicable RNP level will be depicted on affected charts and procedures. For example, an RNAV departure procedure may contain a notation referring to eligible aircraft by equipment suffix and a phrase “or RNP–1.0.” A typical RNAV approach procedure may include a notation referring to eligible aircraft by specific navigation sensor(s), equipment suffix, and a phrase “or RNP–0.3.” Specific guidelines for the depiction of RNP levels will be provided through chart bulletins and accompany affected charting changes.

20.4 Aircraft and Airborne Equipment Eligibility for RNP Operations. Aircraft meeting RNP criteria will have an appropriate entry including special conditions and limitations, if any, in its Aircraft/Rotorcraft Flight Manual (AFM), or supplement. RNAV installations with AFM–RNP certification based on GPS or systems integrating GPS are considered to meet U.S. standard RNP levels for all phases of flight. Aircraft with AFM–RNP certification without GPS may be limited to certain RNP levels, or phases of flight. For example, RNP based on DME/DME without other augmentation may not be appropriate for phases of flight outside the certified DME service volume. Operators of aircraft not having specific AFM–RNP certification may be issued operational approval including special conditions and limitations, if any, for specific RNP levels. Aircraft navigation systems eligible for RNP airspace will be indicated on charts, or announced through other FAA media such as NOTAMs and chart bulletins.

20.5 Understanding RNP Operations. Pilots should have a clear understanding of the aircraft requirements for operation in a given RNP environment, and advise ATC if an equipment failure or other malfunction causes the aircraft to lose its ability to continue operating in the designated RNP airspace. When a pilot determines a specified RNP level cannot be achieved, he/she should be prepared to revise the route, or delay the operation until an appropriate RNP level can be ensured. Some airborne systems use terms other than RNP to indicate the current level of performance. Depending on the airborne system implementation, this may be displayed, and referred to, as actual navigation performance (ANP), estimate of position error (EPE), or other.

20.6 Other RNP Applications Outside the U.S. The FAA, in cooperation with ICAO member states has led initiatives in implementing the RNP concept to oceanic operations. For example, RNP–10 routes have been established in the Northern Pacific (NOPAC) which has increased capacity and efficiency by reducing the distance between tracks to 50 NM. Additionally, the FAA has assisted those U.S. air carriers operating in Europe where the routes have been designated as RNP–5. TBL ENR 4.1–7 below, shows examples of current and future RNP levels of airspace.

TBL ENR 4.1–7

RNP Levels Supported for International Operations

RNP Level	Typical Application
4	Projected for oceanic/remote areas where 30 NM horizontal separation is applied
5	European Basic RNAV (B–RNAV)
10	Oceanic/remote areas where 50 NM horizontal separation is applied

20.7 RNAV and RNP Operations**20.7.1 Pilot**

20.7.1.1 If unable to comply with the requirements of an RNAV or RNP procedure, pilots must advise air traffic control as soon as possible. For example, “N1234, failure of GPS system, unable RNAV, request amended clearance.”

20.7.1.2 Pilots are not authorized to fly a published RNAV or RNP procedure (instrument approach, departure, or arrival procedure) unless it is retrievable by the procedure name from the current aircraft navigation database and conforms to the charted procedure. The system must be able to retrieve the procedure by name from the aircraft navigation database, not just as a manually entered series of waypoints.

20.7.1.3 Whenever possible, RNAV routes (Q– or T–route) should be extracted from the database in their entirety, rather than loading RNAV route waypoints from the database into the flight plan individually. However, selecting and inserting individual, named fixes from the database is permitted, provided all fixes along the published route to be flown are inserted.

20.7.1.4 Pilots must not change any database waypoint type from a fly-by to fly-over, or vice versa. No other modification of database waypoints or the creation of user-defined waypoints on published RNAV or RNP procedures is permitted, except to:

a) Change altitude and/or airspeed waypoint constraints to comply with an ATC clearance/instruction.

b) Insert a waypoint along the published route to assist in complying with ATC instruction, example, “Descend via the WILMS arrival except cross 30 north of BRUCE at/or below FL 210.” This is limited only to systems that allow along-track waypoint construction.

20.7.1.5 Pilots of FMS-equipped aircraft, who are assigned an RNAV DP or STAR procedure and subsequently receive a change of runway, transition or procedure, must verify that the appropriate changes are loaded and available for navigation.

20.7.1.6 For RNAV 1 DPs and STARs, pilots must use a CDI, flight director and/or autopilot, in lateral navigation mode. Other methods providing an equivalent level of performance may also be acceptable.

20.7.1.7 For RNAV 1 DPs and STARs, pilots of aircraft without GPS, using DME/DME/IRU, must ensure the aircraft navigation system position is confirmed, within 1,000 feet, at the start point of take-off roll. The use of an automatic or manual runway update is an acceptable means of compliance with this requirement. Other methods providing an equivalent level of performance may also be acceptable.

20.7.1.8 For procedures or routes requiring the use of GPS, if the navigation system does not automatically alert the flight crew of a loss of GPS, the operator must develop procedures to verify correct GPS operation.

20.7.1.9 RNAV terminal procedures (DP and STAR) may be amended by ATC issuing radar vectors and/or clearances direct to a waypoint. Pilots should avoid premature manual deletion of waypoints from their active “legs” page to allow for rejoining procedures.

20.7.1.10 RAIM Prediction: If TSO-C129 equipment is used to solely satisfy the RNAV and RNP requirement, GPS RAIM availability must be confirmed for the intended route of flight (route and time). If RAIM is not available, pilots need an approved alternate means of navigation.

REFERENCE—

AIP, RNAV and RNP Operations, ENR 1.10 Para 11.3.

20.7.1.11 Definition of “established” for RNAV and RNP operations: An aircraft is considered to be established on-course during RNAV and RNP operations anytime it is within 1 times the required accuracy for the segment being flown. For example, while operating on a Q-Route (RNAV 2), the aircraft is considered to be established on-course when it is within 2 nm of the course centerline.

NOTE—

Pilots must be aware of how their navigation system operates, along with any AFM limitations, and confirm

that the aircraft’s lateral deviation display (or map display if being used as an allowed alternate means) is suitable for the accuracy of the segment being flown. Automatic scaling and alerting changes are appropriate for some operations. For example, TSO-C129 systems change within 30 miles of destination and within 2 miles of FAF to support approach operations. For some navigation systems and operations, manual selection of scaling will be necessary.

(a) Pilots flying FMS equipped aircraft with barometric vertical navigation (Baro-VNAV) may descend when the aircraft is established on-course following FMS leg transition to the next segment. Leg transition normally occurs at the turn bisector for a fly-by waypoint (reference paragraph 1-2-1 for more on waypoints). When using full automation, pilots should monitor the aircraft to ensure the aircraft is turning at appropriate lead times and descending once established on-course.

(b) Pilots flying TSO-C129 navigation system equipped aircraft without full automation should use normal lead points to begin the turn. Pilots may descend when established on-course on the next segment of the approach.

21. NAVAID Identifier Removal During Maintenance

21.1 During periods of routine or emergency maintenance, coded identification (or code and voice, where applicable) is removed from certain FAA NAVAIDs. Removal of the identification serves as warning to pilots that the facility is officially off the air for tune-up or repair and may be unreliable even though intermittent or constant signals are received.

NOTE—

During periods of maintenance, VHF ranges may radiate a T-E-S-T code (— ● ●●● —).

NOTE—

DO NOT attempt to fly a procedure that is NOTAMed out of service even if the identification is present. In certain cases, the identification may be transmitted for short periods as part of the testing.

22. User Reports Requested on NAVAID or Global Navigation Satellite System (GNSS) Performance or Interference

22.1 Users of the National Airspace System (NAS) can render valuable assistance in the early correction of NAVAID malfunctions or GNSS problems and are encouraged to report their observations of undesirable avionics performance. Although NAVAIDs are monitored by electronic detectors, adverse effects of electronic interference, new obstructions or changes in terrain near the NAVAID can exist without

detection by the ground monitors. Some of the characteristics of malfunction or deteriorating performance which should be reported are: erratic course or bearing indications; intermittent, or full, flag alarm; garbled, missing or obviously improper coded identification; poor quality communications reception; or, in the case of frequency interference, an audible hum or tone accompanying radio communications or NAVAID identification. GNSS problems are often characterized by navigation degradation or service loss indications. For instance, pilots conducting operations in areas where there is GNSS interference may be unable to use GPS for navigation, and ADS–B may be unavailable for surveillance. Radio frequency interference may affect both navigation for the pilot and surveillance by the air traffic controller. Depending on the equipment and integration, either an advisory light or message may alert the pilot. Air traffic controllers monitoring ADS–B reports may stop receiving ADS–B position messages and associated aircraft tracks.

In addition, malfunctioning, faulty, inappropriately installed, operated, or modified GPS re–radiator systems, intended to be used for aircraft maintenance activities, have resulted in unintentional disruption of aviation GNSS receivers. This type of disruption could result in un–flagged, erroneous position information output to primary flight displays/indicators and to other aircraft and air traffic control systems. Since receiver autonomous integrity monitoring (RAIM) is only partially effective against this type of disruption (effectively a “signal spoofing”), the pilot may not be aware of any erroneous navigation indications; ATC may be the only means available for identification of these disruptions and detect unexpected aircraft position while monitoring aircraft for IFR separation.

22.2 Pilots reporting potential interference should identify the NAVAID (for example, VOR) malfunction or GNSS problem, location of the aircraft (that is, latitude, longitude or bearing/distance from a reference NAVAID), magnetic heading, altitude, date and time of the observation, type of aircraft (make/model/call sign), and description of the condition observed, and the type of receivers in use (that is, make/model/software revision). Reports should be made in any of the following ways:

22.2.1 Immediately, by voice radio communication to the controlling ATC facility or FSS.

22.2.2 By telephone to the nearest ATC facility controlling the airspace where the disruption was experienced.

22.2.3 Additionally, GNSS problems should be reported by Internet via the GPS Anomaly Reporting Form at http://www.faa.gov/air_traffic/nas/gps_reports/.

22.3 In aircraft equipped with more than one avionics receiver, there are many combinations of potential interference between units that could cause erroneous navigation indications, or complete or partial blanking out of the display.

NOTE–

GPS interference or outages associated with known testing NOTAMs should not be reported to ATC.

23. Radio Communications and Navigation Facilities

23.1 A complete listing of air traffic radio communications facilities and frequencies and radio navigation facilities and frequencies are contained in the Chart Supplement U.S. Similar information for the Pacific and Alaskan areas is contained in the Chart Supplements Pacific and Alaska.

ENR 7.9 San Juan FIR Customs Procedures

1. Introduction

1.1 Aircraft arriving to locations in U.S. territorial airspace, including the San Juan FIR, must meet the entry requirements as described in AIP Section ENR 1.12, National Security and Interception Procedures.

1.2 Pilots must comply with all applicable U.S. Customs and Border Protection (CBP) requirements, in accordance with 19 CFR Part 122, Air Commerce Regulations. Information regarding U.S. CBP requirements, including Advance Passenger Information System (APIS), is available at <http://www.cbp.gov>.

PART 3 – AERODROMES (AD)

AD 0.

AD 0.1 Preface – Not applicable

AD 0.2 Record of AIP Amendments – See GEN 0.2-1

AD 0.3 Record of AIP Supplements – Not applicable

AD 0.4 Checklist of Pages

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AD 0.5 List of Hand Amendments to the AIP – Not applicable

beam width or shortening the usable distance due to local limitations, or the PAPI may be offset from the extended runway centerline. This will be noted in the Chart Supplement U.S. and/or applicable NOTAMs. (See FIG AD 1.1-5.)

12.2.3 Tri-color Systems. Tri-color visual approach slope indicators normally consist of a single light unit, projecting a three-color visual approach path into the final approach area of the runway upon which the indicator is installed. The below glide path indication is red, the above glide path indication is amber, and the on glide path indication is green. These types of indicators have a useful range of approximately $\frac{1}{2}$ to 1 mile during the day and up to 5 miles at night depending upon the visibility conditions. (See FIG AD 1.1-6.)

12.2.4 Pulsating Systems. Pulsating visual approach slope indicators normally consist of a single light unit projecting a two-color visual approach path into the final approach area of the runway upon which the indicator is installed. The on glide path indication may be a steady white light or alternating RED and WHITE light. The slightly below glide path indication is a steady red light. If the aircraft descends further below the glide path, the red light starts to pulsate. The above glide path indication is a pulsating white light. The pulsating rate increases as the aircraft gets further above or below the desired glide slope. The useful range of the system is about four miles during the day and up to ten miles at night. (See FIG AD 1.1-7.)

12.2.5 Alignment of Elements Systems. Alignment of elements systems are installed on some small general aviation airports and are a low cost system consisting of painted plywood panels, normally black and white or fluorescent orange. Some of these systems are lighted for night use. The useful range of these systems is approximately $\frac{3}{4}$ mile. To use the system the pilot positions the aircraft so the elements are in alignment. The glide path indications are shown in FIG AD 1.1-8.

12.3 Runway End Identifier Lights (REIL)

12.3.1 REILs are installed at many airfields to provide rapid and positive identification of the approach end of a particular runway. The system consists of a pair of synchronized flashing lights, one of which is located laterally on each side of the

runway threshold facing the approach area. They are effective for:

12.3.1.1 Identification of a runway surrounded by a preponderance of other lighting.

12.3.1.2 Identification of a runway which lacks contrast with surrounding terrain.

12.3.1.3 Identification of a runway during reduced visibility.

12.4 Runway Edge Light Systems

12.4.1 Runway edge lights are used to outline the edges of runways during periods of darkness or restricted visibility conditions. These light systems are classified according to the intensity or brightness they are capable of producing: they are the High Intensity Runway Lights (HIRL), Medium Intensity Runway Lights (MIRL), and the Low Intensity Runway Lights (LIRL). The HIRL and MIRL systems have variable intensity controls; whereas, the LIRLs normally have one intensity setting.

12.4.2 The runway edge lights are white; except on instrument runways, yellow replaces white on the last 2,000 feet or half the runway length, whichever is less, to form a caution zone for landings.

12.4.3 The lights marking the ends of the runway emit red light toward the runway to indicate the end of the runway to a departing aircraft and emit green outward from the runway end to indicate the threshold to landing aircraft.

12.5 In-Runway Lighting

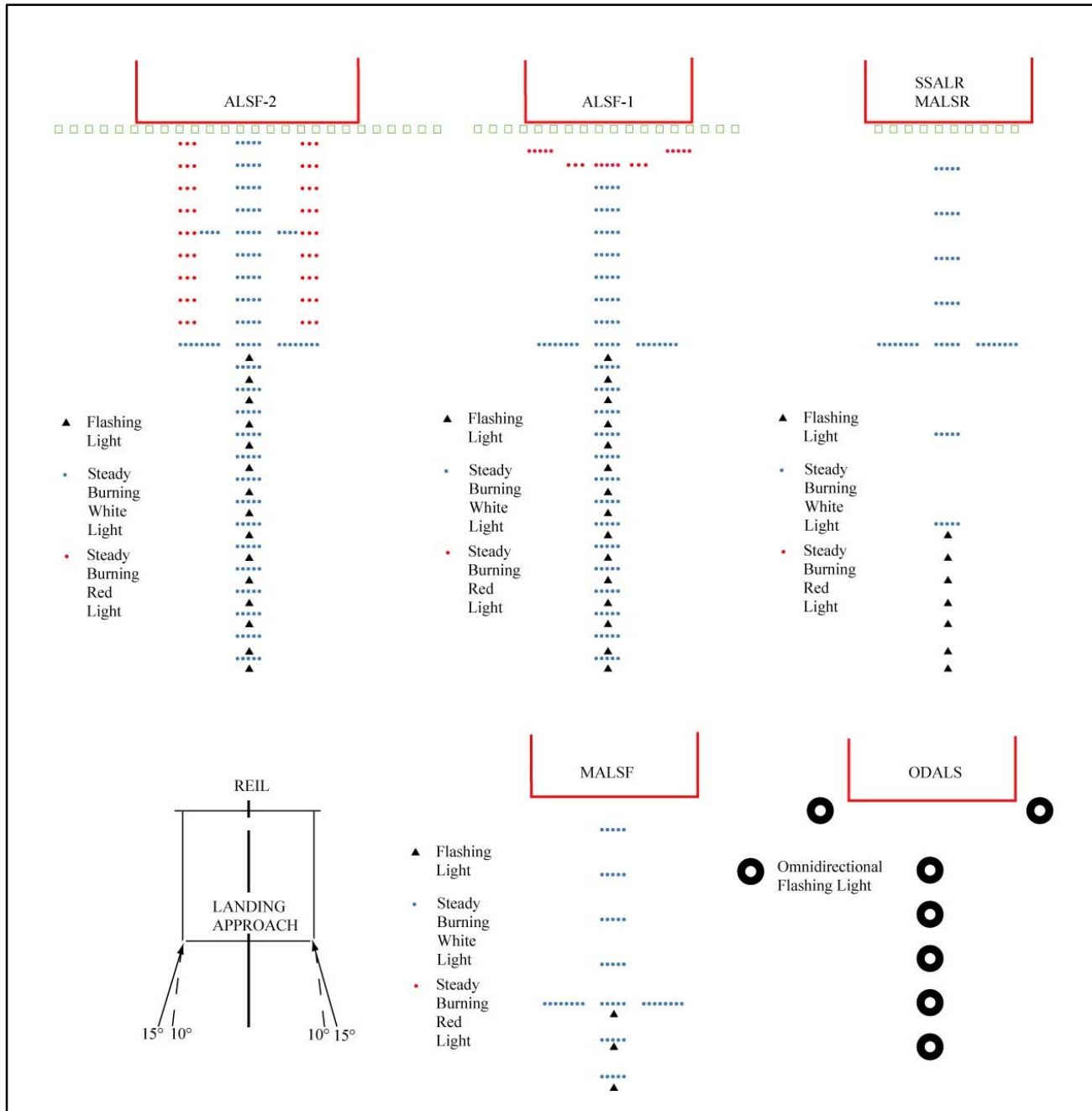
12.5.1 Runway Centerline Lighting System (RCLS). Runway centerline lights are installed on some precision approach runways to facilitate landing under adverse visibility conditions. They are located along the runway centerline and are spaced at 50-foot intervals. When viewed from the landing threshold, the runway centerline lights are white until the last 3,000 feet of the runway. The white lights begin to alternate with red for the next 2,000 feet, and for the last 1,000 feet of the runway, all centerline lights are red.

12.5.2 Touchdown Zone Lights (TDZL). Touchdown zone lights are installed on some precision approach runways to indicate the touchdown zone when landing under adverse visibility conditions. They consist of two rows of transverse light bars disposed symmetrically about the runway centerline. The system consists of

steady-burning white lights which start 100 feet beyond the landing threshold and extend to 3,000 feet

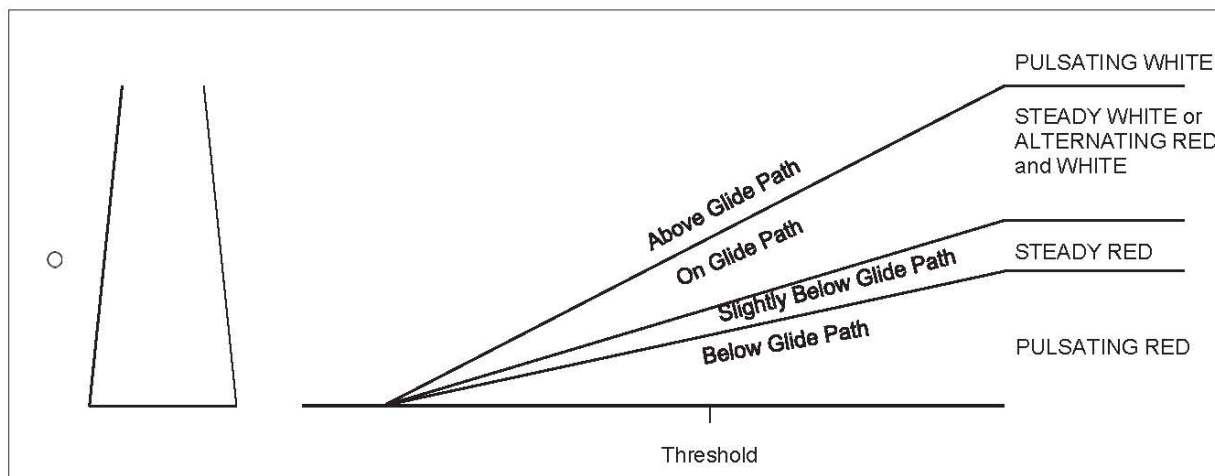
beyond the landing threshold or to the midpoint of the runway, whichever is less.

FIG AD 1.1-1
Precision & Nonprecision Configurations



NOTE—
Civil ALSF-2 may be operated as SSALR during favorable weather conditions.

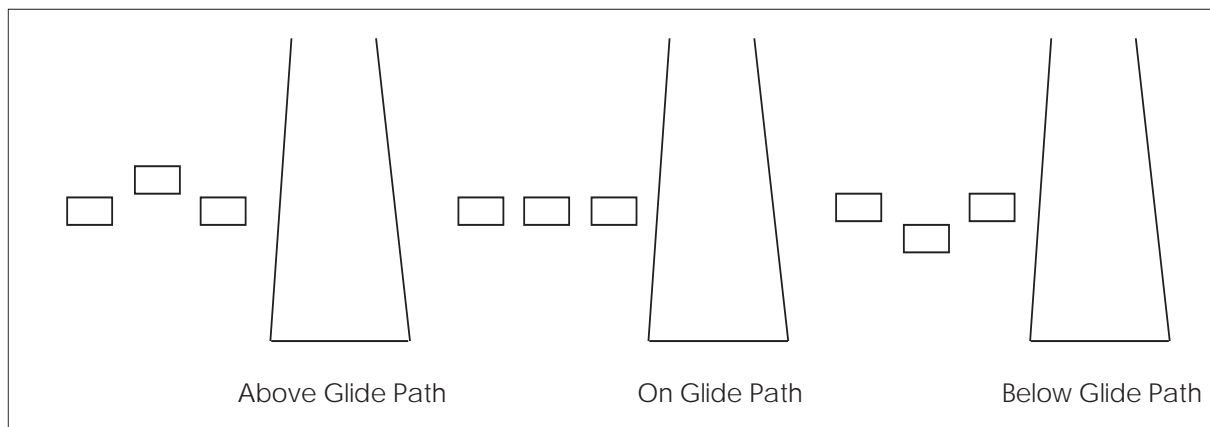
FIG AD 1.1-7
Pulsating Visual Approach Slope Indicator



NOTE-

Since the PVASI consists of a single light source which could possibly be confused with other light sources, pilots should exercise care to properly locate and identify the light signal.

FIG AD 1.1-8
Alignment of Elements



12.5.3 Taxiway Centerline Lead-Off Lights.

Taxiway centerline lead-off lights provide visual guidance to persons exiting the runway. They are color-coded to warn pilots and vehicle drivers that they are within the runway environment or instrument landing system (ILS) critical area, whichever is more restrictive. Alternate green and yellow lights are installed, beginning with green, from the runway centerline to one centerline light position beyond the runway holding position or ILS critical area holding position.

12.5.4 Taxiway Centerline Lead-On Lights.

Taxiway centerline lead-on lights provide visual guidance to persons entering the runway. These “lead-on” lights are also color-coded with the same color pattern as lead-off lights to warn pilots and vehicle drivers that they are within the runway environment or instrument landing system (ILS) critical area, whichever is more conservative. The fixtures used for lead-on lights are bidirectional, i.e., one side emits light for the lead-on function while the other side emits light for the lead-off function. Any fixture that emits yellow light for the lead-off function must also emit yellow light for the lead-on function. (See FIG AD 1.1–14.)

12.5.5 Land and Hold Short Lights. Land and hold short lights are used to indicate the hold short point on certain runways which are approved for Land and Hold Short Operations (LAHSO). Land and hold short lights consist of a row of pulsing white lights installed across the runway at the hold short point. Where installed, the lights will be on anytime LAHSO is in effect. These lights will be off when LAHSO is not in effect.

REFERENCE–

ENR 1.1, Paragraph 22, *Pilot Responsibilities When Conducting Land and Hold Short Operations (LAHSO)*.

12.6 Runway Status Light (RWSL) System

12.6.1 Introduction.

12.6.1.1 RWSL is a fully automated system that provides runway status information to pilots and surface vehicle operators to clearly indicate when it is unsafe to enter, cross, takeoff from, or land on a runway. The RWSL system processes information from surveillance systems and activates Runway Entrance Lights (REL), Takeoff Hold Lights (THL), Runway Intersection Lights (RIL), and Final Approach Runway Occupancy Signal (FAROS) in

accordance with the position and velocity of the detected surface traffic and approach traffic. REL, THL, and RIL are in-pavement light fixtures that are directly visible to pilots and surface vehicle operators. FAROS alerts arriving pilots that the approaching runway is occupied by flashing the Precision Approach Path Indicator (PAPI). FAROS may be implemented as an add-on to the RWSL system or implemented as a stand-alone system at airports without a RWSL system. RWSL is an independent safety enhancement that does not substitute for or convey an ATC clearance. Clearance to enter, cross, takeoff from, land on, or operate on a runway must still be received from ATC. Although ATC has limited control over the system, personnel do not directly use and may not be able to view light fixture activations and deactivations during the conduct of daily ATC operations.

12.6.2 Runway Entrance Lights (REL): The REL system is composed of flush mounted, in-pavement, unidirectional light fixtures that are parallel to and focused along the taxiway centerline and directed toward the pilot at the hold line. An array of REL lights include the first light at the hold line followed by a series of evenly spaced lights to the runway edge; one additional light at the runway centerline is in line with the last two lights before the runway edge (see FIG AD 1.1–9 and FIG AD 1.1–12). When activated, the red lights indicate that there is high speed traffic on the runway or there is an aircraft on final approach within the activation area.

12.6.2.1 REL Operating Characteristics – Departing Aircraft:

When a departing aircraft reaches a site adaptable speed of approximately 30 knots, all taxiway intersections with REL arrays along the runway ahead of the aircraft will illuminate (see FIG AD 1.1–9). As the aircraft approaches an REL equipped taxiway intersection, the lights at that intersection extinguish approximately 3 to 4 seconds before the aircraft reaches it. This allows controllers to apply “anticipated separation” to permit ATC to move traffic more expeditiously without compromising safety. After the aircraft is declared “airborne” by the system, all REL lights associated with this runway will extinguish.

12.6.2.2 REL Operating Characteristics – Arriving Aircraft:

AD 2. AERODROMES

1. The following is a partial list of U.S. airports designated to serve international operations. This list contains U.S. airports with scheduled passenger service in large aircraft and certain airports designated as alternate service airports. Omitted from this list are designated general aviation airports, airports with scheduled cargo but no scheduled passenger service, and certain airports having international service in commuter-type aircraft.

ICAO ID	Location	Airport Name	Designation
Alaska			
PANC	Anchorage	Ted Stevens Anchorage International	Regular
PAED	Anchorage	Elmendorf AFB	Alternate
PACD	Cold Bay	Cold Bay	Alternate
PAEI	Fairbanks	Eielson AFB	Alternate
PAFA	Fairbanks	Fairbanks International	Regular
PAJN	Juneau	Juneau International	Regular
PAKN	King Salmon	King Salmon	Alternate
American Samoa			
NSTU	Pago Pago	Pago Pago International	Regular
Arizona			
KPHX	Phoenix	Phoenix Sky Harbor International	Regular
KTUS	Tucson	Tucson International	Regular
California			
KFAT	Fresno	Fresno Yosemite International	Alternate
KLAX	Los Angeles	Los Angeles International	Regular
KOAK	Oakland	Metropolitan Oakland International	Regular
KONT	Ontario	Ontario International	Alternate
KPMD	Palmdale	Palmdale Regional/USAF Plant 42	Alternate
KSMF	Sacramento	Sacramento International	Alternate

ICAO ID	Location	Airport Name	Designation
KSAN	San Diego	San Diego International	Regular
KSFO	San Francisco	San Francisco International	Regular
KSJC	San Jose	San Jose Norman Y. Mineta International	Regular
KSCK	Stockton	Stockton Metropolitan	Alternate
Colorado			
KDEN	Denver	Denver International	Regular
KPUB	Pueblo	Pueblo Memorial	Alternate
Connecticut			
KBDL	Windsor Locks	Bradley International	Regular
District of Columbia			
KIAD	Washington	Washington Dulles International	Regular
Florida			
KFLL	Fort Lauderdale	Fort Lauderdale-Hollywood International	Regular
KRSW	Fort Myers	Southwest Florida International	Regular
KMIA	Miami	Miami International	Regular
KMCO	Orlando	Orlando International	Regular
KTPA	Tampa	Tampa International	Regular
KPBI	West Palm Beach	Palm Beach International	Regular
Georgia			
KATL	Atlanta	Hartsfield – Jackson Atlanta International	Regular
Guam			
PGUM	Agana	Guam International	Regular
PGUA	Guam Island	Andersen AFB	Alternate
Hawaii			
PHTO	Hilo	Hilo International	Alternate
PHNL	Honolulu	Honolulu International	Regular
PHOG	Kahului	Kahului	Regular

ICAO ID	Location	Airport Name	Designation
Illinois			
KORD	Chicago	Chicago–O’Hare International	Regular
Indiana			
KIND	Indianapolis	Indianapolis International	Regular
Kansas			
KICT	Wichita	Wichita Mid–Continent	Alternate
Kentucky			
KCVG	Covington	Cincinnati/ Northern Kentucky International	Regular
Louisiana			
KMSY	New Orleans	Louis Armstrong New Orleans International	Regular
Maine			
KBGR	Bangor	Bangor International	Alternate
Maryland			
KBWI	Baltimore	Baltimore– Washington International Thurgood Marshall	Regular
Massachusetts			
KBOS	Boston	General Edward Lawrence Logan International	Regular
Michigan			
KDTW	Detroit	Detroit Metropolitan Wayne County	Regular
Minnesota			
KMSP	Minneapolis	Minneapolis– St. Paul International (Wold– Chamberlain)	Regular
Missouri			
KMCI	Kansas City	Kansas City International	Regular
KSTL	St. Louis	Lambert– St. Louis International	Regular
Nevada			
KLAS	Las Vegas	McCarran International	Regular
KRNO	Reno	Reno/Tahoe International	Regular

ICAO ID	Location	Airport Name	Designation
New Jersey			
KEWR	Newark	Newark Liberty International	Regular
New York			
KJFK	New York	John F. Kennedy International	Regular
KIAG	Niagara Falls	Niagara Falls International	Alternate
KSYR	Syracuse	Syracuse Hancock International	Regular
North Carolina			
KCLT	Charlotte	Charlotte/ Douglas International	Regular
KRDU	Raleigh– Durham	Raleigh–Durham International	Regular
Northern Mariana Islands			
PGSN	Saipan Island	Francisco C. Ada/Saipan International	Regular
Ohio			
KCLE	Cleveland	Cleveland– Hopkins International	Regular
KCMH	Columbus	Port Columbus International	Regular
Oregon			
KPDY	Portland	Portland International	Regular
Palau Island			
PTRO	Babelthup Island	Babelthup/ Koror	Regular
Pennsylvania			
KPHL	Philadelphia	Philadelphia International	Regular
KPIT	Pittsburgh	Pittsburgh International	Regular
Puerto Rico			
TJMZ	Mayaguez	Eugenio Maria De Hostos	Regular
TJSJ	San Juan	Luis Munoz Marin International	Regular
Tennessee			
KMEM	Memphis	Memphis International	Regular
KBNA	Nashville	Nashville International	Regular

ICAO ID	Location	Airport Name	Designation
Texas			
KDFW	Dallas	Dallas–Fort Worth International	Regular
KELP	El Paso	El Paso International	Regular
KIAH	Houston	George Bush Intercontinental/Houston	Regular
KLRD	Laredo	Laredo International	Regular
KSAT	San Antonio	San Antonio International	Regular
Utah			
KSLC	Salt Lake City	Salt Lake City International	Regular
Virgin Islands			
TIST	Charlotte Amalie St. Thomas	Cyril E King	Regular
TISX	Christiansted St. Croix	Henry E Rohlsen	Regular
Washington			
KPAE	Everett	Snohomish County (Paine Field)	Alternate
KSEA	Seattle	Seattle–Tacoma International	Regular
KGEG	Spokane	Spokane International	Alternate

ICAO ID	Location	Airport Name	Designation
Wisconsin			
KMKE	Milwaukee	General Mitchell International	Regular

1.1 Diagrams of these airports, arranged alphabetically by state and in the order listed above, are on the pages following. The most up-to-date diagrams of these and other U.S. airports are in the Terminal Procedures Publication (TPP). For additional information on these airports, see the Chart Supplement U.S.

1.2 Public sales of the Chart Supplement U.S. and TPP are available through a network of FAA approved print providers. A listing of products, dates of latest editions, and print providers is available on the AIS website at: http://www.faa.gov/air_traffic/flight_info/aeronav.

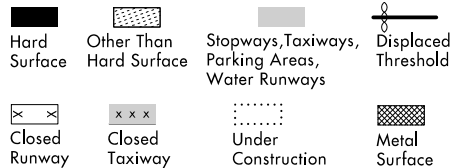
Instrument Approach Procedures (Charts) Airport Diagram/Airport Sketch

12096
LEGEND

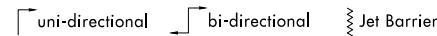
INSTRUMENT APPROACH PROCEDURES (CHARTS)

AIRPORT DIAGRAM/AIRPORT SKETCH

Runways

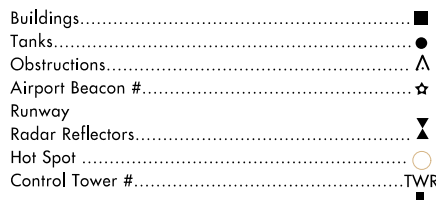


ARRESTING GEAR: Specific arresting gear systems; e.g., BAK12, MA-1A etc., shown on airport diagrams, not applicable to Civil Pilots. Military Pilots refer to appropriate DOD publications.



ARRESTING SYSTEM

REFERENCE FEATURES



When Control Tower and Rotating Beacon are co-located, Beacon symbol will be used and further identified as TWR.

Runway length depicted is the physical length of the runway (end-to-end, including displaced thresholds if any) but excluding areas designated as stopways.

A **D** symbol is shown to indicate runway declared distance information available, see appropriate A/FD, Alaska or Pacific Supplement for distance information.

Runway Weight Bearing Capacity/PCN Pavement Classification Number is shown as a codified expression.

Refer to the appropriate Supplement/Directory for applicable codes e.g., RWY 14-32 PCN 80 F/D/X/U S-75, D-185, 2S-175, 2D-325

Helicopter Alighting Areas: Symbols with 'H' and various shapes
Negative Symbols used to identify Copter Procedures landing point: Symbols with 'H' and various shapes

Runway Threshold elevation: THRE 123
Runway TDZ elevation: TDZE 123
Runway Slope: 0.3% DOWN, 0.8% UP
(shown when runway slope is greater than or equal to 0.3%)

NOTE: Runway Slope measured to midpoint on runways 8000 feet or longer.

U.S. Navy Optical Landing System (OLS) "OLS" location is shown because of its height of approximately 7 feet and proximity to edge of runway may create an obstruction for some types of aircraft.

Approach light symbols are shown in the Flight Information Handbook.

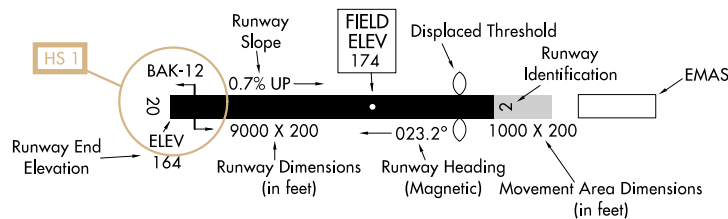
Airport diagram scales are variable.

True/magnetic North orientation may vary from diagram to diagram

Coordinate values are shown in 1 or 1/2 minute increments. They are further broken down into 6 second ticks, within each 1 minute increments.

Positional accuracy within ±600 feet unless otherwise noted on the chart.

NOTE: All new and revised airport diagrams are shown referenced to the World Geodetic System (WGS) (noted on appropriate diagram), and may not be compatible with local coordinates published in FLIP. (Foreign Only)



SCOPE

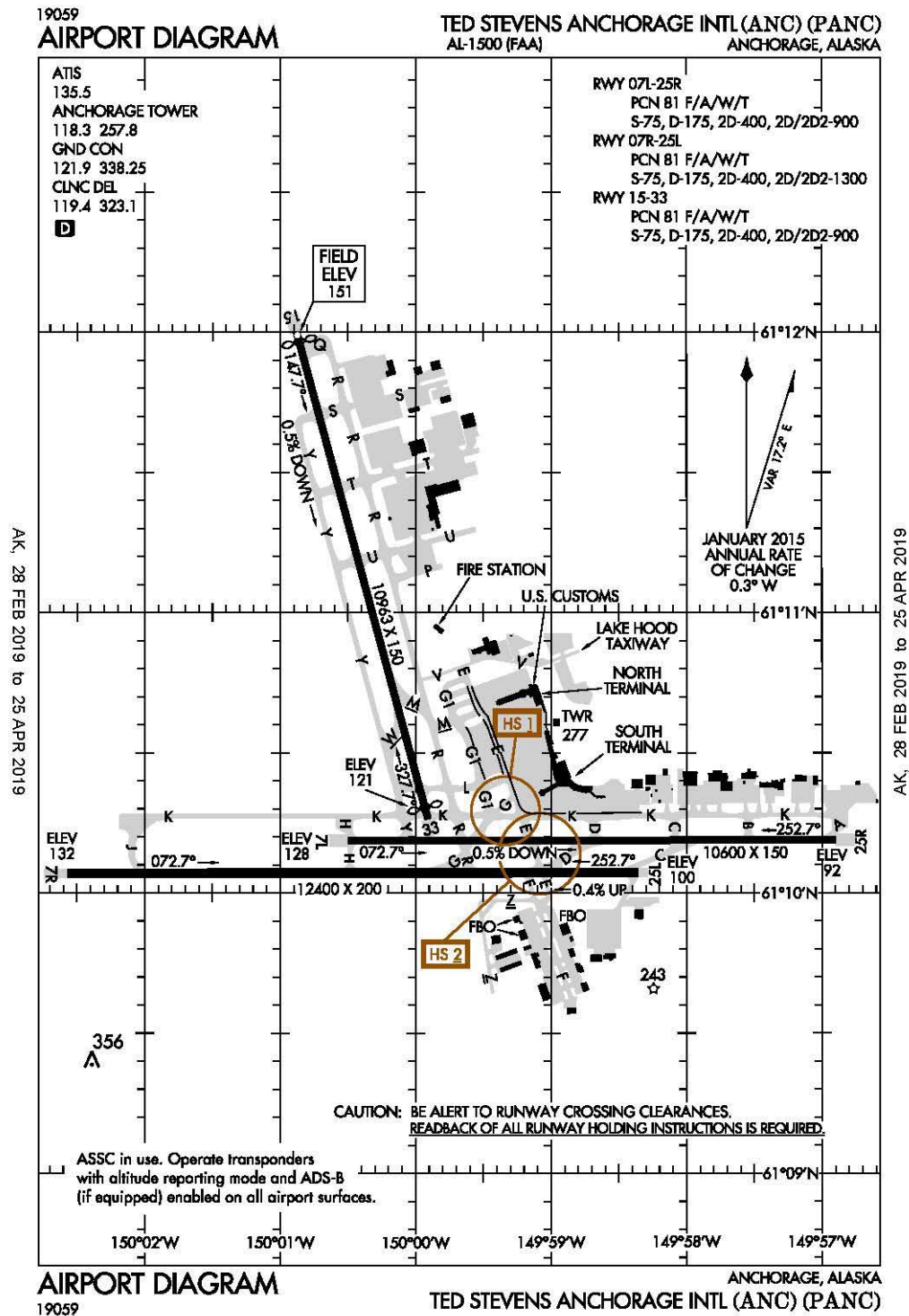
Airport diagrams are specifically designed to assist in the movement of ground traffic at locations with complex runway/taxiway configurations. Airport diagrams are not intended to be used for approach and landing or departure operations. For revisions to Airport Diagrams: Consult FAA Order 7910.4.

LEGEND

31 MAY 2012 to 28 JUN 2012

31 MAY 2012 to 28 JUN 2012

Anchorage, Alaska
Ted Stevens Anchorage International
ICAO Identifier PANC



Anchorage, AK
Ted Stevens Anchorage Intl
ICAO Identifier PANC

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 61-10-26.9634N /
149-59-53.4791W
2.2.2 From City: 4 Miles SW Of Anchorage, AK
2.2.3 Elevation: 151.4 ft
2.2.5 Magnetic variation: 16E (2020)
2.2.6 Airport Contact: Jim Szczesniak
BOX 196960
Anchorage, AK 99519
(907-266-2525)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,A1,100,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 4/1/2005

AD 2.12 Runway physical characteristics

2.12.1 Designation: 07L
2.12.2 True Bearing: 90
2.12.3 Dimensions: 10600 ft x 150 ft
2.12.4 PCN: 81 F/A/W/T
2.12.5 Coordinates: 61-10-11.1539N /
150-00-29.9998W
2.12.6 Threshold elevation: 127.6 ft
2.12.6 Touchdown zone elevation: 128.2 ft
2.12.7 Slope: 0.5 DOWN

2.12.1 Designation: 25R
2.12.2 True Bearing: 270
2.12.3 Dimensions: 10600 ft x 150 ft
2.12.4 PCN: 81 F/A/W/T
2.12.5 Coordinates: 61-10-11.3202N /

149-56-53.8826W
2.12.6 Threshold elevation: 91.5 ft
2.12.6 Touchdown zone elevation: 91.8 ft

2.12.1 Designation: 07R
2.12.2 True Bearing: 90
2.12.3 Dimensions: 12400 ft x 200 ft
2.12.4 PCN: 81 F/A/W/T
2.12.5 Coordinates: 61-10-04.1216N /
150-02-34.3367W
2.12.6 Threshold elevation: 131.7 ft
2.12.6 Touchdown zone elevation: 131.7 ft

2.12.1 Designation: 25L
2.12.2 True Bearing: 270
2.12.3 Dimensions: 12400 ft x 200 ft
2.12.4 PCN: 81 F/A/W/T
2.12.5 Coordinates: 61-10-04.3722N /
149-58-21.535W
2.12.6 Threshold elevation: 100.4 ft
2.12.6 Touchdown zone elevation: 114.6 ft
2.12.7 Slope: 0.4 UP

2.12.1 Designation: 15
2.12.2 True Bearing: 165
2.12.3 Dimensions: 10963 ft x 150 ft
2.12.4 PCN: 81 F/A/W/T
2.12.5 Coordinates: 61-11-59.97N / 150-00-52.84W
2.12.6 Threshold elevation: 151.4 ft
2.12.6 Touchdown zone elevation: 150.7 ft
2.12.7 Slope: 0.5 DOWN

2.12.1 Designation: 33
2.12.2 True Bearing: 345
2.12.3 Dimensions: 10963 ft x 150 ft
2.12.4 PCN: 81 F/A/W/T
2.12.5 Coordinates: 61-10-15.78N / 149-59-54.53W
2.12.6 Threshold elevation: 121.3 ft
2.12.6 Touchdown zone elevation: 120.9 ft

AD 2.13 Declared distances

2.13.1 Designation: 07L
2.13.2 Takeoff run available: 10600
2.13.3 Takeoff distance available: 10600

2.13.4 Accelerate-stop distance available: 10600
2.13.5 Landing distance available: 10600

2.13.1 Designation: 25R
2.13.2 Takeoff run available: 10600
2.13.3 Takeoff distance available: 10600
2.13.4 Accelerate-stop distance available: 10600
2.13.5 Landing distance available: 10600

2.13.1 Designation: 07R
2.13.2 Takeoff run available: 10900
2.13.3 Takeoff distance available: 10900
2.13.4 Accelerate-stop distance available: 10900
2.13.5 Landing distance available: 12400

2.13.1 Designation: 25L
2.13.2 Takeoff run available: 12400
2.13.3 Takeoff distance available: 12400
2.13.4 Accelerate-stop distance available: 12000
2.13.5 Landing distance available: 12000

2.13.1 Designation: 15
2.13.2 Takeoff run available: 10763
2.13.3 Takeoff distance available: 10763
2.13.4 Accelerate-stop distance available: 9898
2.13.5 Landing distance available: 9898

2.13.1 Designation: 33
2.13.2 Takeoff run available: 10963
2.13.3 Takeoff distance available: 11963
2.13.4 Accelerate-stop distance available: 10963
2.13.5 Landing distance available: 10498

AD 2.14 Approach and runway lighting

2.14.1 Designation: 07L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 25R
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 07R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 25L
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 15
2.14.2 Approach lighting system: ODALS
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 33
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ANG OPS
2.18.3 Service designation: 311 MHz

2.18.1 Service designation: ANG OPS
2.18.3 Service designation: 4897.5 MHz

2.18.1 Service designation: ANG OPS
2.18.3 Service designation: 140.15 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 323.1 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 119.4 MHz

2.18.1 Service designation: CD/S
2.18.3 Service designation: 128.65 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 135.5 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 338.25 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.3 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 07L. Magnetic variation: 16E

2.19.2 ILS identification: TGN
2.19.5 Coordinates: 61-10-14.0636N /
149-56-33.0327W
2.19.6 Site elevation: 105.5 ft

2.19.1 ILS type: Glide Slope for runway 07L. Magnetic variation: 16E

2.19.2 ILS identification: TGN
2.19.5 Coordinates: 61-10-13.6377N /
150-00-10.1844W
2.19.6 Site elevation: 122.8 ft

2.19.1 ILS type: Localizer for runway 07L. Magnetic variation: 16E

2.19.2 ILS identification: TGN
2.19.5 Coordinates: 61-10-11.3329N /
149-56-32.6534W
2.19.6 Site elevation: 84.7 ft

2.19.1 ILS type: Localizer for runway 07R. Magnetic variation: 16E

2.19.2 ILS identification: ANC
2.19.5 Coordinates: 61-10-04.3906N /
149-57-55.495W
2.19.6 Site elevation: 97.7 ft

2.19.1 ILS type: DME for runway 07R. Magnetic variation: 16E

2.19.2 ILS identification: ANC

2.19.5 Coordinates: 61-10-02.0211N /
149-57-58.3996W
2.19.6 Site elevation: 112 ft

2.19.1 ILS type: Glide Slope for runway 07R. Magnetic variation: 16E

2.19.2 ILS identification: ANC
2.19.5 Coordinates: 61-10-08.1823N /
150-02-12.4572W
2.19.6 Site elevation: 124.9 ft

2.19.1 ILS type: Inner Marker for runway 07R. Magnetic variation: 16E

2.19.2 ILS identification: ANC
2.19.5 Coordinates: 61-10-04.6834N /
150-02-51.6656W
2.19.6 Site elevation: 127 ft

2.19.1 ILS type: DME for runway 15. Magnetic variation: 16E

2.19.2 ILS identification: BSC
2.19.5 Coordinates: 61-10-00.0069N /
149-59-40.3379W
2.19.6 Site elevation: 134.7 ft

2.19.1 ILS type: Localizer for runway 15. Magnetic variation: 16E

2.19.2 ILS identification: BSC
2.19.5 Coordinates: 61-09-59.9158N /
149-59-45.6352W
2.19.6 Site elevation: 120.9 ft

2.19.1 ILS type: Glide Slope for runway 15. Magnetic variation: 16E

2.19.2 ILS identification: BSC
2.19.5 Coordinates: 61-11-45.22N / 150-00-52.6076W
2.19.6 Site elevation: 141.9 ft

General Remarks:

MIGRATORY BIRDS INVOF ARPT SPRING THROUGH FALL.

ONE HR PPR FOR NON-TRANSPONDER ACFT OPNS. PPR FOR NON-RADIO ACFT OPNS. NO NIGHTTIME NON-RADIO ACFT OPNS PERMITTED. PILOTS MUST PROVIDE AN ETA & REMAIN WITHIN PLUS OR MINUS 15 MINUTES OF ETA.

FOR WSO PHONE 907-266-5105.

NOISE SENSITIVE AREA IN EFFECT; CTC AMGR AT 907-266-2525 OR APRT OPNS 907-266-2600 FOR FURTHER INFO.

TO COORDINATE NON-TRANSPONDER OR NON-RADIO OPNS CTC ANC ATCT AT 907-271-2700 DURG ADMIN HRS (0730-1600 WKDAYS). DURG NON-ADMIN HRS & HOLIDAYS CTC FAA AT 907-271-5936.

UNLGTD 489 FT TWR 2 1/2 MILES NORTHEAST.

PORTIONS OF TWY K BTN TWY H & TWY J NOT VIS FROM ATCT.

NO COMPASS CALIBRATION PAD.

RIGHT TURN OUT OF RAMP PARKING AREA R-2 THROUGH R-4 PROHIBITED.

USE FREQ 122.55 (RCO) FOR FILING, ACTIVATING & CANCELING FLIGHT PLANS IN THE ANCHORAGE BOWL AREA.

FAA RAMP PPR – CTC ANC FIFO FREQ 135.85, 907-271-2414 OR AVN 405-954-9780 MON-FRI 0600-1430L.

ANCHORAGE WX CAMERA AVBL ON INTERNET AT [HTTP://AVCAMS.FAA.GOV](http://AVCAMS.FAA.GOV)

TWY V SECURITY GATE EAST OF TWY E; KEY 121.75 5 TIMES TO ACTVT. TWY V RESTRICTED TO ACFT WEIGHING 12500 LBS OR LESS. SUBJECT TO JET BLAST WEST OF TWY E.

TRANSIENT MILITARY ACFT PPR.

RY 07R: BACK TXG FM TWY J FOR DEP PROHIBITED.

REMOTE PARKING SPOTS R12-14 LEAD-IN LIGHTS OTS INDEFLY.

RWY END 25L HAS 200' BLAST PAD.

ASSC IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

TWYS W, M BTWN RWY 15/33 AND TWY R, U/T/S BTWN TWYS Y/R MARKINGS/LIGHTING NOT STANDARD. RWY 15/33 MARKINGS/LIGHTING NOT STANDARD.

AIRPORT DIAGRAM

AFD-1196 [USAF]

ELMENDORF AFB (PAED)
ANCHORAGE, ALASKA

ATIS ★ 124.3 273.5
ELMENDORF TOWER
127.2 352.05
GND CON
121.8 275.8
CLNIC DEL
128.8 306.925

MARCH 2017
ANNUAL RATE OF CHANGE
0.3°W

VAR 16.6°E

WEST RAMP
HANGAR
OPS RAMP
PASSENGER TERMINAL
BASE OPS/TA
FIRE STATION
RED FLAG WEST
HANGAR
CONTROL TOWER 335
HANGAR
BLUE RAMP
BULL DOG RAMP
HANGAR 22
HANGAR 26 ELBOW
HANGAR 23
CHARLIE LOOP
HANGAR 15
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RED RAMP
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ELEV 174
ELEV 219
ELEV 335
ELEV 185
ELEV 201
FIELD ELEV 213

BAK-12
GS ANTENNA
SECONDARY HOT CARGO
NORTH RAMP
AERIAL PORT
HELO PAD
C130 RAMP
JMC RAMP
C17 RAMP
PRIMARY HOT CARGO
EAST RAMP
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HANGAR 100

Rwy 6-24
PCN 58 R/B/W/T
Rwy 16-34
PCN 55 F/A/W/T

ANCHORAGE, ALASKA
ELMENDORF AFB (PAED)

**Anchorage, AK
Elmendorf AFB
ICAO Identifier PAED**

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 61-15-04.8715N /
149-48-23.4924W
2.2.2 From City: 3 Miles NE Of Anchorage, AK
2.2.3 Elevation: 213 ft
2.2.5 Magnetic variation: 18E (2015)
2.2.6 Airport Contact: Airfield Mgr
300SS/DOFJ
Elmendorf AFB, AK 99506
(907-552-2444)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: None
2.4.5 Hangar space: No
2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: None
2.6.4 Remarks: ARFF FAA Index D/ Cat 8/10.

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 16
2.10.1.b Type of obstacle: Trees Hill. Not Lighted or
Marked

2.10.1.a. Runway designation: 24
2.10.1.b Type of obstacle: Pline Pole. Not Lighted or
Marked

2.10.1.a. Runway designation: 34
2.10.1.b Type of obstacle: Pline Tree. Not Lighted or
Marked

AD 2.12 Runway physical characteristics

2.12.1 Designation: 06
2.12.2 True Bearing: 80
2.12.3 Dimensions: 10000 ft x 200 ft
2.12.4 PCN: 58 R/B/W/T
2.12.5 Coordinates: 61-14-55.08N / 149-50-39.34W
2.12.6 Threshold elevation: 174.5 ft
2.12.6 Touchdown zone elevation: 174.5 ft

2.12.1 Designation: 24
2.12.2 True Bearing: 260
2.12.3 Dimensions: 10000 ft x 200 ft
2.12.4 PCN: 58 R/B/W/T
2.12.5 Coordinates: 61-15-12.16N / 149-47-18.02W
2.12.6 Threshold elevation: 201.3 ft
2.12.6 Touchdown zone elevation: 201.3 ft

2.12.1 Designation: 16
2.12.2 True Bearing: 180
2.12.3 Dimensions: 7493 ft x 150 ft
2.12.4 PCN: 55 F/A/W/T
2.12.5 Coordinates: 61-15-43.43N / 149-47-36.52W
2.12.6 Threshold elevation: 212.5 ft
2.12.6 Touchdown zone elevation: 212.4 ft

2.12.1 Designation: 34
2.12.2 True Bearing: 360
2.12.3 Dimensions: 7493 ft x 150 ft
2.12.4 PCN: 55 F/A/W/T
2.12.5 Coordinates: 61-14-29.64N / 149-47-36.57W
2.12.6 Threshold elevation: 184.9 ft
2.12.6 Touchdown zone elevation: 194.1 ft
2.12.7 Slope: 0.4 UP

AD 2.14 Approach and runway lighting

2.14.1 Designation: 06
2.14.2 Approach lighting system: ALSAF
2.14.4 Visual approach slope indicator system: P2L
2.14.10 Remarks: Approach Lights Extended 15" Above
Surface Up To 100' Prior To Threshold Runway 06 PAPI
Unusable Beyond 8 Degs Either Side Of Course Path.

2.14.1 Designation: 24
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: PAPI Runway 24 Unusable Beyond 7
Degrees Right Of Course.

2.14.1 Designation: 16
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 34
2.14.2 Approach lighting system: ALSAF
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ATIS
2.18.3 Service designation: 124.3 MHz
2.18.4 Hours of operation: 0700-2300

2.18.1 Service designation: ATIS

2.18.3 Service designation: 273.5 MHz
2.18.4 Hours of operation: 0700–2300

2.18.1 Service designation: CD/P
2.18.3 Service designation: 306.925 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 128.8 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 275.8 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 127.2 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 352.05 MHz

2.18.1 Service designation: OPS (11AF COMD CEN)
2.18.3 Service designation: 381 MHz

2.18.1 Service designation: OPS (11AF RESCUE CO-
ORD CNTR)
2.18.3 Service designation: 282.8 MHz

2.18.1 Service designation: OPS (ARTIC WARRIOR

OPS)
2.18.3 Service designation: 381 MHz

2.18.1 Service designation: OPS (11AF RESCUE CO-
ORD CNTR)
2.18.3 Service designation: 123.1 MHz

2.18.1 Service designation: PMSV METRO
2.18.3 Service designation: 346.6 MHz

2.18.1 Service designation: PTD
2.18.3 Service designation: 134.8 MHz

2.18.1 Service designation: PTD
2.18.3 Service designation: 372.2 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 06. Magnetic
variation: 18E

2.19.2 ILS identification: EDF

2.19.5 Coordinates: 61–15–01.19N / 149–50–16.98W

2.19.6 Site elevation: 168 ft

2.19.1 ILS type: Localizer for runway 06. Magnetic vari-
ation: 18E

2.19.2 ILS identification: EDF

2.19.5 Coordinates: 61–15–14.34N / 149–46–52.33W

2.19.6 Site elevation: 212 ft

General Remarks:

LNDG RWY 16 NOT RCMND FOR JET ACFT EXCPT DURG DAY VFR DUE OBSTRN 337' MSL LCTD 1950' FM
THR & 574' W OF CNGRN.

HGR SPACE & WARM STORAGE EXTREMELY LMTD OCT–MAY.

PREVENTIVE MAINT: TACAN WED AND FRI 1600–1700Z; ILS TUE AND THR 1500–1700Z; PAR SAT–SUN
1800–2000Z; ASR SAT–SUN 2000–2200.

QUIET HR 0630–1400Z WKDAYS; 0630–1600Z WKEND & HOLDS, AMC ACFT EXEMPT.

CAUTION: MOOSE ON & INVOF RWY.

DURING VMC DEPS/MISSED APCHS/GO AROUNDS; ACFT SHALL MAINTAIN AT OR BLO 1200' MLS UNTIL
DEP END OF RWY 06.

ALL FTR ACFT ON ARR EXPECT REDUCED SEPARATION; SAME TYPE ACFT AND DAY 3000 FT; DISSIMILAR
ACFT AND/OR NIGHT 6000 FT; AHEAD/BEHIND FORMATION LDG–6000 FT.

NOTICE: A RIDGE EXTENDING FROM APPROXIMATELY 260 – 020 DEGREES ONE TO TWO MILES FROM THE
TOWER PREVENTS OBSERVATION OF FOG OVER KNIK ARM. VISIBILITY MAY DROP RAPIDLY AS FOG
POURS OVER RIDGE.

ALL ACFT MAINTAIN IDLE POWER ON OUTBOARD ENG WHILE TAXIING.

NO SIGNS OR PAINTED HOLD SHORT LINES ON INTERSECTING RYS.

EXTENSIVE SVC DELAY FOR FUEL.

FREQUENT ACTIVITY IN R2203. WHEN UNABLE TO AVOID CTC ATCT.

SPECIAL AIR TRAFFIC RULES FAR PART 93, SEE REGULATORY NOTICES IN THE SUPPLEMENT.

LIMITED MAINTENANCE CAPABILITIES ON WKEND.

JOAP, JOINT OIL ANALYSIS PROGRAM AVBL. LHNIT, LOW & HIGH PRESSURE NITROGEN SERVICING AVBL.

CHANGE JET AIRCRAFT STARTING UNITS (JASU) TO, (A/M32A-86), MC-1A), (MC-2A), (AM32A-60A). (AM32-95)150 +/-5 LBS/MIN (2055 +/-68CFM) AT 51 +/-02 PSIA. LASS 150 +/-5 LBS/MIN @ 49 +/-2 PSIA.

FUEL: J8

OIL: O-123, O-128, O-133, O-148, O-156, JOAP.

JOAP & LOW & HIGH PRESURE NITROGEN SERVICING FURNISHED DURING NORMAL DUTY HOURS, OTR TIMES ON REQUEST.

FLUID: PRESAIR, DE-ICE, NITROGEN-LHNIT.

RY 16/34 RUBBER ACCUM NORTH & SOUTH 1000FT.

IFF SVC AVBL. AFLD WX IS AUTOMATICALLY MNT BY AN/FQ-19 AUTOMATED WX OBSERVING SYSTEM AND BACKED-UP/ AUGMENTED BY HUMAN OBSERVER WHEN NECESSARY 24/7. DSN 317-552-4903/4397OR C907-552-4903/4397. FULL SVC WX BRIEFING 24HRS 17 OPERATIONAL WEATHER SQUADRON DSN 315-449-8333 OR C808-449-8333.

C17/C130 OVERT LIGHTS AVBL ON RY16/34. C17/C130 COVERT LIGHTS AVBL ON RY 16.

NVD OPS ON RY 16/34 & RY 06/24 MON-FRI FROM 0400-1000Z++.

DURING EVAC OF WX STATION, CTC 17 OPERATIONAL WX SQUADRON AT DSN 315-449-8333.

ALTERNATE WX LOCATION VISIBILITY OBSTRUCTED FROM SE-W DUE TO HANGARS. USE PHONE PATCH WHEN WX RELOCATES TO ALTERNATE LOCATION.PHONE PATCH CAPABILITY THROUGH 3 WG/CP AT 907-552-3000.

CAUTION: NUMEROUS ACFT WILL BE OPR IFR BETWEEN 1500-2000 MSL FROM BGQ 092/10 INTO R2203 TO EDF 320/07 INVOF BIG LAKE, PALMER, BIRCHWOOD, GOOSEBAY AND WASILLA, AK., MON-SAT 0300-0800Z++, AND TUES AND THU 1800-2200Z++.

CAUTION: HEAVY RAINFALL MAY CAUSE HIGH POTENTIAL FOR HYDROPLANING FOR CONC ENDS OF RWY 06 AND RWY 24.

RWY 34 DEPARTURES FOR ACFT WITH WINGSPANS GREATER THAN 98 FT RQR PRIOR COORD WITH AMC, ATC TWR, OR ALD MGT.

DV SPOTS 1 AND 3 LTD TO ACFT WITH WINGSPANS OF 136 FT OR LESS.

CAUTION: UNLIT TERRAIN 0 FT AGL/341 FT MSL, 1909 FT PRIOR TO THLD, 1914 FT RIGHT OF COURSE.

CAUTION: WHEN RWY 16 VGS I INOP, STR-IN TO RWY 16 ONLY AUTHORIZED AT NIGHT WITH MAJCOM A3 APVL.

TWYS D1, D2, N4 & N5 PERM CLOSED.

AFLD MGMT DOES NOT HAVE COMSEC STORAGE AVBL, FOR COMSEC STORAGE CTC COMMAND POST DSN 317-552-3000.

ALL TRAN AIRCREWS OPERATING AT ELMENDORF AIRFIELD MUST DROP OFF A COPY OF THEIR CREW ORDERS TO AFLD MGMT UPON ARR.

ALL VIP ACFT CTC BASE OPS 30 MIN PRIOR TO ARR ON PTD 372.2 OR 134.1 OR C907-552-2107.

ACFT REQUIRING CUSTOMS AND AG INSPECTIONS ARE RQR TO CTC BASE OPS NO LATER THAN 90 MIN PRIOR TO ARR.

PPR REQUIRED FOR ALL NON-JBER ASSIGNED ACFT EXCEPT NON-EXPLOSIVE LADEN AMCC ACFT.

SUBMIT ALL PPR REQUESTS UTILIZING THE PAED PPR REQUEST FORM LOCATED IN THE PAED GIANT REPORT STIF TO BASEOPS3@US.AF.MIL NO EARLIER THAN 30 DAYS PRIOR AND NO LATER THAN 48 HOURS PRIOR TO ARRIVAL TO BEGIN COORDINATION FOR PPR.

PPRS WILL BE ISSUED NO EARLIER THAN 7 DAYS PRIOR TO ARR.

NORMAL BARRIER CONFIGURATION DUR FTR FLY WINDOW LEAVES 5675' BTN CABLES ON RWY 06/24, OUTSIDE OF FTR FLY WINDOWS THERE IS 7658' BTN CABLES.

ACFT REQUIRING CABLES DE-RIGGED MUST CTC BASE OPS 24 HR PRIOR TO ARR OR MAKE REQ PRIOR TO PPR BEING ISSUED.

AMC ACFT ON AN AMC ASGN MSN CAN EXP TO HAVE MAINT SVC ACCOMPLISHED BY 732 AMS.

UNITS DEPLOYING TO, STAGING OUT OF, OR FLYING LCL SORTIES AT ELMENDORF AFB MUST DEPLOY WITH MAINT PERS REQUIRED TO COMPLETE OPS TO INCLUDE DE-ICE QUALIFIED CREWMEMBERS DUR COLD WX OPS.

ANY DEPLOYED OR STAGED ACFT WILL NOT RCV TA SUPPORT BYD INITIAL BLOCK IN.

UNLESS PARTICIPATING IN MAJCOM SPONSORED EXER AT ELMENDORF; DEPLOYED OR STAGED UNITS MUST CTC 3 WG SCHEDULING AT DSN 317-552-2406 OR C907-552-2406 AS EARLY AS POSSIBLE TO COORD LOCAL AREA ORIENTATION BRIEFING, MAINT SPONSORSHIP IF APPLICABLE, AND 3 OG/CC APVL PRIOR TO LCL AREA OPS.

TRAN ALERT ACFT SVC LTD TO POL SERVICING, INTAKE INSPECTIONS, MAGNETIC CHIP DETECTOR INSPECTIONS AND EOR INSPECTIONS.

IF EXP TO USE RWY 16 FOR DEP OR RWY 34 FOR LDG SEE JBER CARTEE AIRSPACE DESCRIPTION IN NOTICES SEC OF THIS SUPPLEMENT.

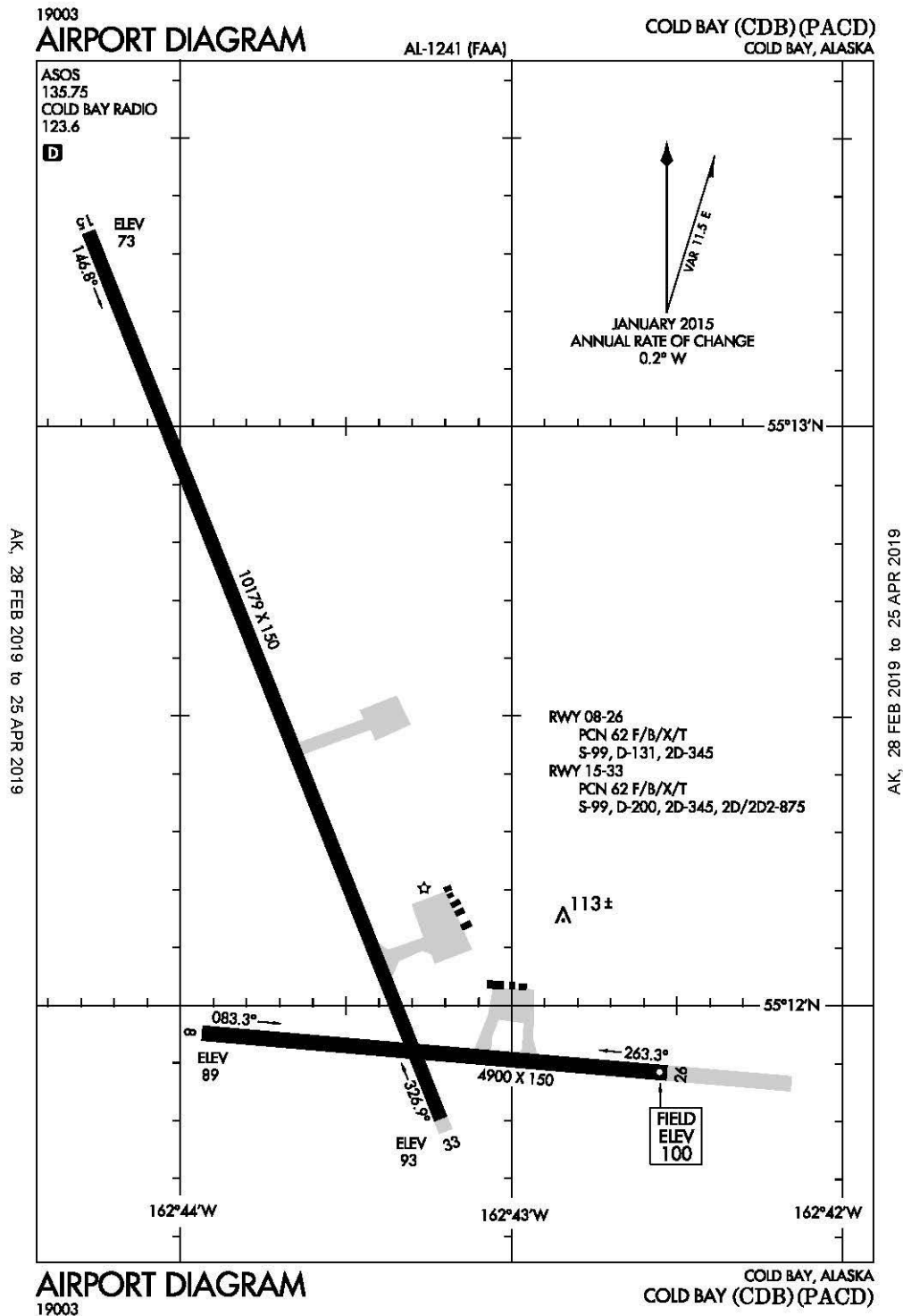
ALL NON-AMC ACFT RQR 732 AMS MAINT/SVC MAY EXPERIENCE LOGISTICAL DELAYS DUE TO MISSION NECESSITIES.

FOR CURRENT RCR/RSC'S ON RWY 06/24 AND RWY 16/34, AND AFLD RCRS CTC TWR.

EAST RAMP HOT SPOT 19 LTD, EXPLOSIVES CAT'S 1.1 AND 1.2 GREATER THAN OR EQUAL TO 450 LBS

N.E.W. RQR EVAC OF BLDGS 16521 & 16519 FOR DURATION OF HOT ON HS19. FOR BLDG EVAC CTC 907-552-2577.

Cold Bay, Alaska
Cold Bay
ICAO Identifier PACD



Cold Bay, AK
Cold Bay
ICAO Identifier PACD

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 55-12-21.3N / 162-43-34.5W
2.2.2 From City: 0 Miles N Of Cold Bay, AK
2.2.3 Elevation: 99.5 ft
2.2.5 Magnetic variation: 12E (2015)
2.2.6 Airport Contact: Harold Kremer
BOX 97
Cold Bay, AK 99571
(907-532-5000)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: OCT-APR Months, ALL Days,
0530-1800 Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: None
2.4.7 Remarks: Maint Duty Hours:0530-1730
Mon-Wed,0530-1630 Thurs, 0530-1630 Fri-Sun (1
Oct-30 Apr) 0700-1730 Mon-Wed,0700-1530 Thu-Sun
(1 May-30 Sep)

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
B certified on 4/1/2005
2.6.4 Remarks: Closed To Aircraft 0 Operations With
More Than 30 Passenger Seats Except Prior Permission
Required In Writing To Airport Manager Box 97 Cold
Bay Ak 99571. ARFF Is Available For Part 121 Carriers
Involved In Etops Operations With 30 Minutes Notice.

AD 2.12 Runway physical characteristics

2.12.1 Designation: 15
2.12.2 True Bearing: 158
2.12.3 Dimensions: 10179 ft x 150 ft
2.12.4 PCN: 62 F/B/X/T
2.12.5 Coordinates: 55-13-20.4998N /
162-44-16.4235W
2.12.6 Threshold elevation: 72.5 ft
2.12.6 Touchdown zone elevation: 75 ft
2.12.7 Slope: 0.2 UP

2.12.1 Designation: 33
2.12.2 True Bearing: 338

2.12.3 Dimensions: 10179 ft x 150 ft
2.12.4 PCN: 62 F/B/X/T
2.12.5 Coordinates: 55-11-47.2428N / 162-43-11.707W
2.12.6 Threshold elevation: 93.3 ft
2.12.6 Touchdown zone elevation: 93.4 ft
2.12.7 Slope: 0.2 DOWN

2.12.1 Designation: 08
2.12.2 True Bearing: 95
2.12.3 Dimensions: 4900 ft x 150 ft
2.12.4 PCN: 62 F/B/X/T
2.12.5 Coordinates: 55-11-57.1589N /
162-43-56.7308W
2.12.6 Threshold elevation: 88.9 ft
2.12.6 Touchdown zone elevation: 95.2 ft
2.12.7 Slope: 0.2 UP

2.12.1 Designation: 26
2.12.2 True Bearing: 275
2.12.3 Dimensions: 4900 ft x 150 ft
2.12.4 PCN: 62 F/B/X/T
2.12.5 Coordinates: 55-11-53.1425N /
162-42-32.588W
2.12.6 Threshold elevation: 99.5 ft
2.12.6 Touchdown zone elevation: 99.5 ft
2.12.7 Slope: 0.2 DOWN

AD 2.13 Declared distances

2.13.1 Designation: 15
2.13.2 Takeoff run available: 10180
2.13.3 Takeoff distance available: 10180
2.13.4 Accelerate-stop distance available: 10180
2.13.5 Landing distance available: 10180

2.13.1 Designation: 33
2.13.2 Takeoff run available: 10180
2.13.3 Takeoff distance available: 10180
2.13.4 Accelerate-stop distance available: 10180
2.13.5 Landing distance available: 10180

2.13.1 Designation: 08
2.13.2 Takeoff run available: 4900
2.13.3 Takeoff distance available: 4900
2.13.4 Accelerate-stop distance available: 4900
2.13.5 Landing distance available: 4900

2.13.1 Designation: 26
2.13.2 Takeoff run available: 4900
2.13.3 Takeoff distance available: 4900
2.13.4 Accelerate-stop distance available: 4900
2.13.5 Landing distance available: 4900

AD 2.14 Approach and runway lighting

2.14.1 Designation: 15

2.14.2 Approach lighting system: MALSR

2.14.1 Designation: 33

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 08

2.14.4 Visual approach slope indicator system: P4L

2.14.10 Remarks: Unusable Beyond 5 Degr Right Of Centerline .

2.14.1 Designation: 26

2.14.4 Visual approach slope indicator system: P4L

General Remarks:

SNOW & ICE REMOVAL AND ARPT HAZ RPRTG ONLY PERFORMED DURG DUTY HRS UNLESS BY PRIOR ARNGMT IN WRITING WITH AMGR.

LARGE BIRDS NEAR APCH ENDS OF ALL RYS.

BRAKELOCK TURNS NOT ALLOWED ON RYS.

CFR INDEX B. INDEX MAY BE REDUCED FOR ACFT LESS THAN 90'.

NO CUSTOMS AVBL; WRITTEN PERMISSION REQUIRED FOR REFUELING STOPS 24-48 HRS IN ADVANCE IF ARRIVING FROM A FOREIGN COUNTRY; FAX 907-271-2684 OR 907-271-2686.

TWR 4.8 NM NW OF ARPT UNLGTD, TWR 0.9 NM S OF ARPT UNLGTD AND TWR 0.4 NM N OF ARPT UNLGTD.

PERSONNEL AND EQUIPMENT MAY BE WORKING ON THE RY AT ANY TIME.

ARPT SAND LARGER GRADATION THAN FAA RECOMMENDED/SEE AC150/5200-30.

WX CAMERA AVBL ON INTERNET AT [HTTP://AVCAMS.FAA.GOV](http://AVCAMS.FAA.GOV)

ROTG BCN OPS UNMONITORED WHEN CDB FSS UNMANNED.

REMARK: NWS WEATHER BALLOON LAUNCH FACILITY LOCATED ON AIRPORT,SEE INSIDE BACK COVER FOR OPERATIONS DETAILS.

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 15. Magnetic variation: 12E

2.19.2 ILS identification: CDB

2.19.5 Coordinates: 55-13-12.7692N /

162-44-03.6464W

2.19.6 Site elevation: 71 ft

2.19.1 ILS type: Localizer for runway 15. Magnetic variation: 12E

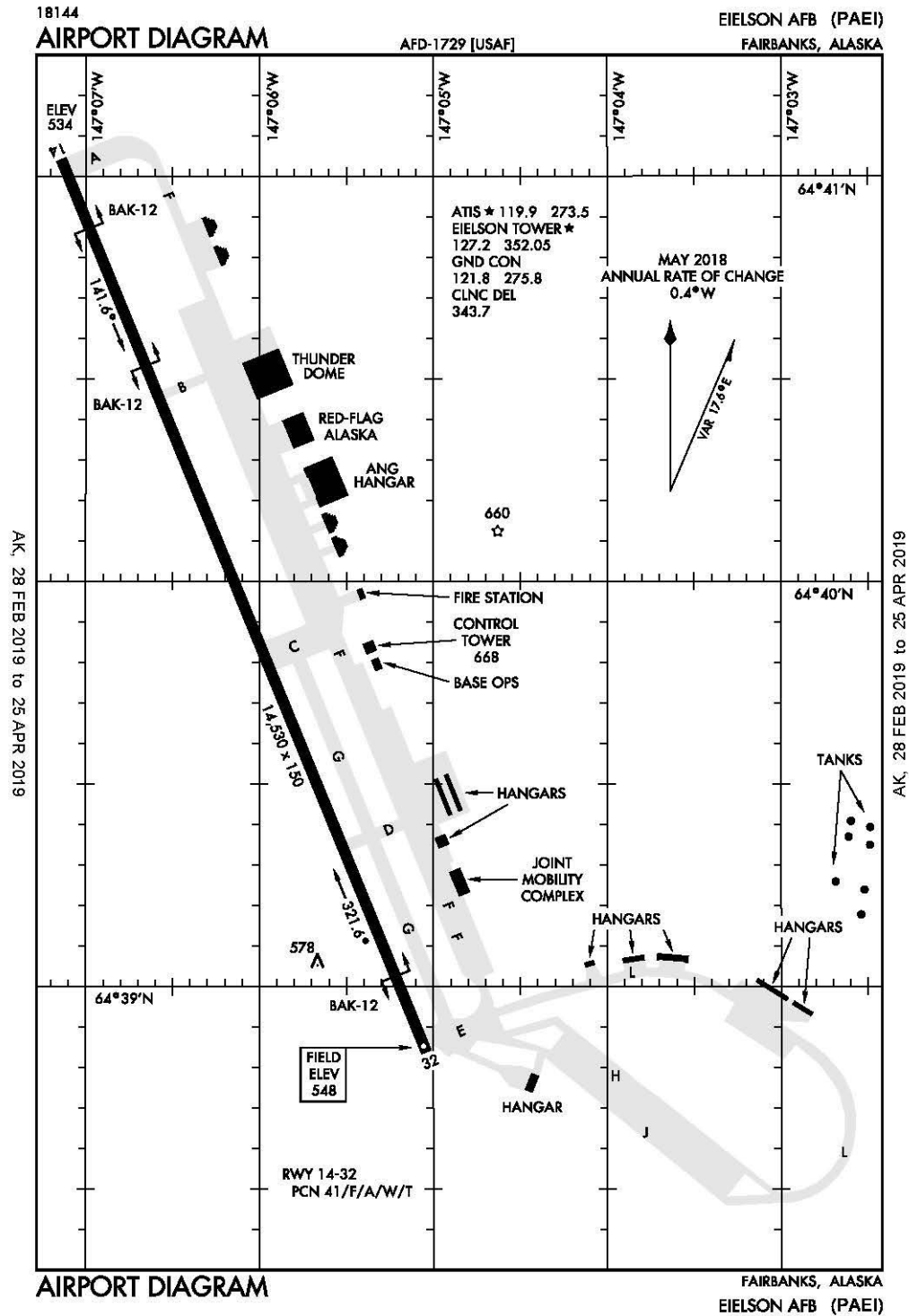
2.19.2 ILS identification: CDB

2.19.5 Coordinates: 55-11-40.9813N /

162-43-07.3592W

2.19.6 Site elevation: 95.9 ft

Fairbanks, Alaska
Eielson AFB
ICAO Identifier PAEI



Fairbanks, AK
Eielson AFB
ICAO Identifier PAEI

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 64-39-56.32N / 147-06-05.18W
2.2.2 From City: 17 Miles SE Of Fairbanks, AK
2.2.3 Elevation: 547.5 ft
2.2.5 Magnetic variation: 19E (2015)
2.2.6 Airport Contact: Chief Airfield Management
343 CSG/OTM
Eielson AFB, AK 99702
(907-377-3201)

AD 2.3 Attendance Schedule

2.3.1 - 2.3.11: ALL Months, ALL Days, 1600-0800Z++
Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: No
2.4.2 Fuel types: None
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: None

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 32
2.10.1.b Type of obstacle: Trees. Not Lighted or Marked

AD 2.12 Runway physical characteristics

2.12.1 Designation: 14
2.12.2 True Bearing: 159
2.12.3 Dimensions: 14530 ft x 150 ft
2.12.4 PCN: 41 F/A/W/T
2.12.5 Coordinates: 64-41-03.14N / 147-07-04.52W
2.12.6 Threshold elevation: 533.9 ft
2.12.6 Touchdown zone elevation: 536.8 ft

2.12.1 Designation: 32
2.12.2 True Bearing: 339
2.12.3 Dimensions: 14530 ft x 150 ft
2.12.4 PCN: 41 F/A/W/T
2.12.5 Coordinates: 64-38-49.48N / 147-05-05.85W
2.12.6 Threshold elevation: 547.5 ft
2.12.6 Touchdown zone elevation: 547.5 ft

AD 2.14 Approach and runway lighting

2.14.1 Designation: 14

2.14.2 Approach lighting system: ALSF1
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 32
2.14.2 Approach lighting system: ALSF1
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ATIS
2.18.3 Service designation: 273.5 MHz
2.18.4 Hours of operation: 1600-0800Z++

2.18.1 Service designation: ATIS
2.18.3 Service designation: 119.9 MHz
2.18.4 Hours of operation: 1600-0800Z++

2.18.1 Service designation: CD/P
2.18.3 Service designation: 343.7 MHz

2.18.1 Service designation: COMD POST (IGLOO OPS)
2.18.3 Service designation: 259.5 MHz

2.18.1 Service designation: COMD POST (IGLOO OPS (HAVE QUICK))
2.18.3 Service designation: 289.4 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 275.8 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 352.05 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 127.2 MHz

2.18.1 Service designation: OPS (SOURDOUGH)
2.18.3 Service designation: 359.15 MHz

2.18.1 Service designation: OPS (168 ANG OPS)
2.18.3 Service designation: 238.3 MHz

2.18.1 Service designation: OPS (168 ANG OPS)
2.18.3 Service designation: 293.6 MHz

2.18.1 Service designation: OPS (SOURDOUGH)
2.18.3 Service designation: 139.6 MHz

2.18.1 Service designation: PMSV METRO

2.18.3 Service designation: 346.6 MHz

2.18.1 Service designation: PTD

2.18.3 Service designation: 372.2 MHz

2.18.1 Service designation: PTD

2.18.3 Service designation: 139.3 MHz

2.18.1 Service designation: RADAR SFA

2.18.3 Service designation: 320.1 MHz

2.18.1 Service designation: RADAR SFA

2.18.3 Service designation: 318.2 MHz

2.18.1 Service designation: RADAR SFA

2.18.3 Service designation: 259.1 MHz

2.18.1 Service designation: RADAR SFA

2.18.3 Service designation: 118.6 MHz

2.18.1 Service designation: RADAR SFA

2.18.3 Service designation: 324.3 MHz

2.18.1 Service designation: RANGE CTL (SUAIS RA-
DIO)

2.18.3 Service designation: 125.3 MHz

General Remarks:

TRANS ALERT SVC AVBL 0700-0000 MON-FRI EXCP HOL; OTHER TIMES PPR THROUGH BASOPS.

CRYPTO MATERIALS NOT AVBL TRAN CREW. ALL ACFT WITH VIP CTC AIRFIELD MANAGEMENT 20-30 MINUTES PRIOR TO ETA WITH FIRM CHOCK TIME. LTD FLEET SVC AVBL, NO POTABLE WATER.

OVERHEAD TFC PAT ALT 2000 FT MSL; RECTANGULAR TFC PAT ALT 1500 FT MSL.

AVOID SMALL ARMS RANGE LCTD 2.5 NM E OF APCH END RY 32. SMALL ARM RANGE ACTIVE WKD 1700-0100Z++, SFC TO 3500 FT AGL.

CARGO & PSGR CARRYING ACFT CALL COMMAND POST 3 HRS PROIR TO LNDG AND 30 MIN PROIR TO LNDG AND STATE NUMBER OF PASSENGERS.

BASH PHASE II MONTHS ARE APR, MAY, AUG AND SEPT. DURING PERIODS OF STANDING WATER ON THE AIRFIELD, GULLS, DUCKS, GEESE AND OTHER BIRDS POSE A SIGNIFICANT HAZARD TO ACFT. REPORT ALL BIRD AND ANIMAL STRIKES ON & INVOF EILSON TO AIRFIELD MANAGEMENT, DSN 317-377-186, PTD OR 354 FW/SE DSN 317-377-4110.

TO AVOID DELAY FILE FLIGHT PLAN AT LEAST 2 HRS PRIOR TO ESTIMATED TIME OF DEPARTURE. ARRIVALS REQUIRING CUSTOMS MUST NOTIFY AIRFIELD MANAGEMENT 1.5 HRS PRIOR TO LANDING. U.S. IMMIGRATION SVC NOT AVBL. AIR TERMINAL AND GROUND HANDLING SVC OPRS 1630-0030Z++ WEEKDAYS.

DEP ACFT REMAIN AT OR BLO 1500 FT TIL DEP END OF RY.

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 14. Magnetic variation: 19E

2.19.2 ILS identification: EIL

2.19.5 Coordinates: 64-38-33.05N / 147-04-51.27W

2.19.6 Site elevation: 548 ft

2.19.1 ILS type: Glide Slope for runway 14. Magnetic variation: 19E

2.19.2 ILS identification: EIL

2.19.5 Coordinates: 64-40-51.59N / 147-07-06.54W

2.19.6 Site elevation: 532 ft

2.19.1 ILS type: Glide Slope for runway 32. Magnetic variation: 19E

2.19.2 ILS identification: EAF

2.19.5 Coordinates: 64-38-58.93N / 147-05-25.28W

2.19.6 Site elevation: 540 ft

2.19.1 ILS type: Localizer for runway 32. Magnetic variation: 19E

2.19.2 ILS identification: EAF

2.19.5 Coordinates: 64-41-22.13N / 147-07-21.41W

2.19.6 Site elevation: 528 ft

ALL PACAF FTR ACFT ON ARR EXPECT REDUCED RY SEPARATION; SIMILAR FTR TYPE/DAY – 3000 FT; DISSIMILAR FTR TYPE AND/OR NGT WET RY OR RCR RPT LESS THAN 17 – 6000 FT; BEHIND FORMATION LNDG – 6000 FT; FTR TYPE LDG BEHIND NON-FTR TYPE – 9000 FT; RCR VALIDATED AS CONDITIONS WARRANT.

TRANS BILLETING EXTREMELY LTD/EXTENSIVE FUEL DELAYS DUR RED FLAG ALASKA EXERCISE (APR–OCT).

AIR TERMINAL AND GROUND HANDLING SVC OPRS 1630–0030Z++ WEEKDAYS. ACFT REQUIRING TERMINAL AND GROUND HANDLING SVC ARE REQUIRED TO PROVIDE ADVANCE NOTICE OR DELAYS IN SVC MAY BE EXPERIENCED. ACFT REQUIRING SVC SHOULD MAKE PRIOR COORDINATION WITH AIRFIELD MANAGEMENT.

ALASKA ANG 168TH AREFS OPS DSN (317–377–8800, C 907–377–8800) ANG OPR 24 HRS. AIRFIELD MANAGEMENT DSN 317–377–1861/3201.

FOR FLT ADVISORIES OR STATUS OF RESTRICTED & MOAS CTC EIELSON RANGE CTL ON SAUIS RADIO 125.3 OR CALL 1–800–758–8723.

RY 14 & 32 PAPI GS NOT COINCIDENTAL WITH ILS GS.

CTC AIRFIELD MANAGEMENT DSN 317–377–1861, C907–377–1861 FOR PPR NUMBER NO EARLIER THAN 5 DAYS AND NO LATER THAN 24 HR PRIOR TO ARR. PPR GOOD FOR +/- 30 MIN OF PPR TIME. COORD OF PPR OUTSIDE OF TIME BY FONE IS REQ OR PPR NR WILL BE CONSIDERED CNL. EXP ARR TIME RESTRICTION FOR ALL ACFT EXC AIR EVAC AND DV CODE 7 OR HIGHER.

DURING BIRD WATCH CONDITION MODERATE LCL PATTERN WORK LIMITED TO MIN RQR WITH OG/CC APPROVAL, NO TGL, FORMATION TKOF/LNDG PROHIBITED AND LOW APCH LIMITED TO 300 FT AGL. DURING BIRD WATCH CONDITION SEVERE; TKOF, PATTERN, AND LNDG PROHIBITED WITHOUT OG/CC APPROVAL, EXCP FOR EMERG.

MOOSE HAVE BEEN SPOTTED ON OR NEAR THE RY ENVIRONMENT ALL HRS OF THE DAY.

N & S BARRIER RUNOUT REDUCED TO 950 FT.

ALL TRANSIENT AIRCREWS MUST REGISTER WITH AIRFIELD MANAGEMENT UPON ARRIVAL. SEE AP1 SUPPLEMENTARY ARPT RMKS. LIMITED SECRET AND COMSEC STORAGE AVBL AT AIRFIELD MANAGEMENT.

LIMITED SECRET AND COMSEC STORAGE AVBL AT BASE OPS. AIRFIELD MANAGEMENT DOES NOT HAVE COMSEC RESPONSIBILITIES. FOR TOP SECRET AND COMSEC ISSUE/STORAGE CTC COMMAND COMMAND POST DSN 317–377–1500.

PORTIONS OF APRON 'O' ROW AND SOUTH RAMP NOT VISIBLE FROM TWR.

ALL CONTINGENCY OPER CTC AMGR FOR COORDINATION.

TRAN ALERT: TRANSIENT MAINT LMTD TO F16 SVCG UPON AIRCREW REQ. THRU FLIGHT/BPO/PRE-FLIGHT ISNP OF F16 NOT AVBL.

ARPT OPR 1600–0800Z++.

RADIO/NAV/WEATHER REMARKS – (F) 1500–0700Z ++ DAILY.

PAEW ON RWY 14–32 WHEN TWR UNMANNED.

PRE-COORDINATE WITH MAINT OPERATIONS CENTER DSN 317-377-1205 NO LATER THAN 48 HRS FROM ETA. UHF IS THE PREF PATTERN FREQ.

AIRPORT RMKS: PRIME KNIGHT NOT AVBL.

AIRPORT RMKS: RWY 300 FT WIDE ENTIRE LENGTH, CENTER 150 FT USABLE.

FAIRBANKS FSS LC 474-0137. FOR FLIGHT ADVISORIES OR STATUS OF RESTRICTED AND MILITARY OPERATING AREAS, CTC EIELSON RANGE CONTROL ON SUAIS RADIO 125.3 OR TELEPHONE 1-800-758-8723.

BASE OPS DOES NOT HAVE COMSEC RESPONSIBILITIES. BASE OPS WILL NOT ISSUE COMSEC.

PMSV: METRO BELOW 3000 FT RECEPTION FROM 300-090 IS LIMITED BEYOND 15NM BY TERRAIN, BELOW 15000 FT LIMITED BEYOND 75NM, NO LIMITATIONS WITHIN 100NM AT 20000 FT.

AUGMENTATION CAPABLE 1600-0800Z-. DUR EVAC OF WX STN CTC OP WX SQDN AT NR ABV. ALT WX LCTN VIS SEVERELY LTD DUE TO BLDG AND PRK ACFT.

PHONE PATCH CAPABILITY THROUGH 354 FW/CP AT 907-377-1500. FMQ19 907-377-5846.

CAUTION: NSTD LGT, 2000 FT OF RWY EDGE LGT BTN DELTA-CHARLIE TWYS LCTD 12 FT FR RWY EDGE.

UNMONITORED WHEN PAEI TWR CLSD. WX SUPPORT OPR H24, DSN 317-377-3140/1160 FR 1600-0800Z-; FR 0800-1600Z- PLEASE CALL COMD POST FOR AFTERHOURS DSN 317-377-1500. SVC PRIORITY GIVEN TO LCL FLYING SCHEDULE. WX BRIEFING AVBL DSN 317-377-3140/1160.

BRIEFING FOR TRANSIENT AIRCREWS BEYOND NORMAL OPERATING HRS VIA 17TH OWS AT JOINT BASE PEARL HARBOR-HICKAM DSN 315-449-8333/7950 C808-449-8333/7950 OR DSN 315-448-3809, C808-448-3809.

CAUTION: FIRE HYDRANTS LCTD 64 FT NE OF TWY H CNTLN.

NO ENGINE RUNNING ON-LOADS/OFF-LOADS (ERO) SERVICES AVAILABLE FOR AMC AIRCRAFT.

VHF PTD FREQUENCY IS UNMONITORED.

QUIET HRS DLY 0700-1500Z-, NO TKOF, LDG, LO APCH, OR TGL, EXCEPTIONS RQR OPS GROUP COMMANDER APPROVAL. UNCONTROLLED TKOF/LDG NOT AUTH.

LOOP TWY EAST OF CORROSION/ HANGAR 1348 THROUGH THE 4/8 BAY AREA RESTRICTED TO ACFT W/WINGSPAN OF 45 FT OR SMALLER.

NSTD RWY EDGE LGTS.

RY 14/32 BAK-12 DEP END CABLES IN RAISED POSITION; BAK-12 AER 14/32 AVBL WITH 20 MIN PRIOR NOTICE. NORTH BARRIER RUNOUT REDUCED TO 950 FT, HOOK EQUIPPED ACFT BE ALERT.

MILITARY-FLUID DE-ICE, ANTI-ICE UNAVBL.

EDGE LGT NSTD RWY 32/14 AT TWY A RWY EDGE LGT AT TWY A ENTRANCE ON THE EAST SIDE OF THE RWY; RESULTING GAP BTN LGT IS 446 FT.

EDGE LGT NSTD RWY 32/14 AT TWY C RWY EDGE LGT AT TWY C ENTRANCE ON THE EAST SIDE OF THE RWY; RESULTING GAP BTN LGT IS 400 FT.

AIRCREW BE ADVISED FLD COND NOTAM (FICON) AND RWY COND CODE (RWYCC) NOT REPORTED BY AMOPS.

ARFF STATUS CRITICAL LVL OF SVC (CLS) 62% FOR USAF CAT 10; AND REDUCED LVL OF SVC (RLS) 81% FOR USAF CAT 9.

AIRPORT DIAGRAM
19059

FAIRBANKS INTL (FAI) (PAFA)
FAIRBANKS, ALASKA

ATIS 124.4
FAIRBANKS TOWER 118.3 257.8
GND CON 121.9
CLNC DEL 127.6
D

VAR 18.7° E
JANUARY 2015
ANNUAL RATE OF CHANGE 0.4° W

400' X 240
ELEV 439
FBO RAMP
FIELD ELEV 439
WEST RAMP
NWS
TERMINAL/CUSTOMS
FIRE STATION
HAZARDOUS MATERIALS LOADING
HEAVY CARGO
ELEV 436
ELEV 433
400' X 240
019.3°
11800 X 150
850 X 100
019.3°
ELEV 423
ELEV 433
HS 1
019.3°
5400 X 100 (WATER)
2800 X 175
019.3°
GENERAL AVIATION RAMP
EAST RAMP
TRANSIENT GENERAL AVIATION RAMP
TWR 540
RWY 02L-20R
PCN 78 F/A/W/T
S-75, D-220, 2D-580, 2D/2D2-1100
ELEV 423
ELEV 434
MOZ
ELEV 423
FLOAT POND
GRAVEL TIE DOWN AREA
TRANSIENT GENERAL AVIATION RAMP
64°50'N
64°49'N
64°48'N
147°53'W
147°52'W
147°51'W
147°50'W

AIRPORT DIAGRAM
19059

FAIRBANKS INTL (FAI) (PAFA)
FAIRBANKS, ALASKA

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

Fairbanks, AK
Fairbanks Intl
ICAO Identifier PAFA

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 64-48-54.4N / 147-51-23.2W
2.2.2 From City: 3 Miles SW Of Fairbanks, AK
2.2.3 Elevation: 439 ft
2.2.5 Magnetic variation: 18E (2020)
2.2.6 Airport Contact: Angie Spear
6450 AIRPORT WAY – SUITE 1
Fairbanks, AK 99709
(907-474-2500)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A1,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 3/1/2005

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 02L
2.10.1.b Type of obstacle: Tree (72 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 652 ft L of Centerline

2.10.1.a. Runway designation: 02R
2.10.1.b Type of obstacle: Trees (79 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 350 ft B of Centerline

2.10.1.a. Runway designation: 02W
2.10.1.b Type of obstacle: Fence (14 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 170 ft L of Centerline

2.10.1.a. Runway designation: 20R
2.10.1.b Type of obstacle: Tree (86 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 430 ft R of Centerline

2.10.1.a. Runway designation: 20W
2.10.1.b Type of obstacle: Fence (11 ft above runway

end). Not Lighted or Marked
2.10.1.c Location of obstacle: 0 ft of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 02W
2.12.2 True Bearing: 38
2.12.3 Dimensions: 5400 ft x 100 ft
2.12.5 Coordinates: 64-48-58.0039N /
147-51-16.5892W
2.12.6 Threshold elevation: 423.4 ft
2.12.6 Touchdown zone elevation: 423 ft

2.12.1 Designation: 20W
2.12.2 True Bearing: 218
2.12.3 Dimensions: 5400 ft x 100 ft
2.12.5 Coordinates: 64-49-39.8349N /
147-49-59.6293W
2.12.6 Threshold elevation: 423.4 ft
2.12.6 Touchdown zone elevation: 423 ft

2.12.1 Designation: 02L
2.12.2 True Bearing: 38
2.12.3 Dimensions: 11800 ft x 150 ft
2.12.4 PCN: 78 F/A/W/T
2.12.5 Coordinates: 64-48-09.4756N /
147-53-09.1838W
2.12.6 Threshold elevation: 435.6 ft
2.12.6 Touchdown zone elevation: 438.6 ft

2.12.1 Designation: 20R
2.12.2 True Bearing: 218
2.12.3 Dimensions: 11800 ft x 150 ft
2.12.4 PCN: 78 F/A/W/T
2.12.5 Coordinates: 64-49-40.9108N /
147-50-21.1293W
2.12.6 Threshold elevation: 438.9 ft
2.12.6 Touchdown zone elevation: 439 ft

2.12.1 Designation: 02R
2.12.2 True Bearing: 38
2.12.3 Dimensions: 6501 ft x 100 ft
2.12.5 Coordinates: 64-48-00.8635N /
147-52-32.2371W
2.12.6 Threshold elevation: 433.2 ft
2.12.6 Touchdown zone elevation: 433.2 ft

2.12.1 Designation: 20L
2.12.2 True Bearing: 218
2.12.3 Dimensions: 6501 ft x 100 ft
2.12.5 Coordinates: 64-48-51.2387N /
147-50-59.6666W

2.12.6 Threshold elevation: 433.1 ft
2.12.6 Touchdown zone elevation: 434.2 ft

2.12.1 Designation: 02
2.12.2 True Bearing: 38
2.12.3 Dimensions: 2900 ft x 75 ft
2.12.5 Coordinates: 64–48–57.8002N /
147–50–47.5998W
2.12.6 Threshold elevation: 433 ft
2.12.6 Touchdown zone elevation: 434.6 ft

2.12.1 Designation: 20
2.12.2 True Bearing: 218
2.12.3 Dimensions: 2900 ft x 75 ft
2.12.5 Coordinates: 64–49–20.2644N /
147–50–06.2715W
2.12.6 Threshold elevation: 433.6 ft
2.12.6 Touchdown zone elevation: 434.6 ft

AD 2.13 Declared distances

2.13.1 Designation: 02L
2.13.2 Takeoff run available: 11800
2.13.3 Takeoff distance available: 12800
2.13.4 Accelerate–stop distance available: 11800
2.13.5 Landing distance available: 11050

2.13.1 Designation: 20R
2.13.2 Takeoff run available: 11800
2.13.3 Takeoff distance available: 12800
2.13.4 Accelerate–stop distance available: 11800
2.13.5 Landing distance available: 11050

AD 2.14 Approach and runway lighting

2.14.1 Designation: 02L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 20R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Runway 20R PAPI Unusable Beyond
8 Degs Right Of Centerline .

2.14.1 Designation: 02R
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 20L
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P DEP/P (360–179)

2.18.3 Service designation: 381.4 MHz

2.18.1 Service designation: APCH/P DEP/P (360–179)
2.18.3 Service designation: 126.5 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(180–359)
2.18.3 Service designation: 363.2 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(180–359)
2.18.3 Service designation: 125.35 MHz

2.18.1 Service designation: APCH/S
2.18.3 Service designation: 118.6 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 124.4 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P
2.18.3 Service designation: 127.6 MHz

2.18.1 Service designation: DEP/S
2.18.3 Service designation: 327.1 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: RADAR
2.18.3 Service designation: 319.1 MHz

2.18.1 Service designation: TRSA (360–179)
2.18.3 Service designation: 126.5 MHz

2.18.1 Service designation: TRSA (180–359)
2.18.3 Service designation: 363.2 MHz

2.18.1 Service designation: TRSA (360–179)

2.18.3 Service designation: 381.4 MHz

2.18.1 Service designation: TRSA (180-359)

2.18.3 Service designation: 125.35 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Inner Marker for runway 02L. Magnetic variation: 18E

2.19.2 ILS identification: CNA

2.19.5 Coordinates: 64-48-07.6611N /
147-53-12.5267W

2.19.6 Site elevation: 429.8 ft

2.19.1 ILS type: Glide Slope for runway 02L. Magnetic variation: 18E

2.19.2 ILS identification: CNA

2.19.5 Coordinates: 64-48-21.0041N /
147-52-36.2974W

2.19.6 Site elevation: 431.4 ft

2.19.1 ILS type: DME for runway 02L. Magnetic variation: 18E

2.19.2 ILS identification: CNA

2.19.5 Coordinates: 64-49-50.7376N /
147-50-15.0194W

2.19.6 Site elevation: 434.8 ft

2.19.1 ILS type: Localizer for runway 02L. Magnetic variation: 18E

2.19.2 ILS identification: CNA

2.19.5 Coordinates: 64-49-49.8419N /
147-50-04.688W

2.19.6 Site elevation: 438.1 ft

2.19.1 ILS type: DME for runway 20R. Magnetic variation: 18E

2.19.2 ILS identification: FAI

2.19.5 Coordinates: 64-48-01.3387N /
147-53-28.1554W

2.19.6 Site elevation: 430 ft

2.19.1 ILS type: Localizer for runway 20R. Magnetic variation: 18E

2.19.2 ILS identification: FAI

2.19.5 Coordinates: 64-48-01.4733N /
147-53-23.8771W

2.19.6 Site elevation: 429.1 ft

2.19.1 ILS type: Glide Slope for runway 20R. Magnetic variation: 18E

2.19.2 ILS identification: FAI

2.19.5 Coordinates: 64-49-24.4215N /
147-50-39.7123W

2.19.6 Site elevation: 434.3 ft

General Remarks:

ATCT LOCATED AT 64-48-39.438N 147-50-55.722W ELEVATION 538' MSL.

SPB TAXI, TAKE-OFF AND LANDINGS CONTROLLED BY FAIRBANKS INTL TWR, CTC TWR ON FREQ. 118.3 FOR ALL REQUESTS. ALL PILOTS CTC TWR. AS SOON AS PRACTICAL AFTER START UP FOR TAXI INSTRUCTIONS. USE CAUTION TO AVOID UNAUTHORIZED OPPOSITE DIRECTION DEPARTURES. FLOAT POND TFC. AS ASSIGNED BY FAIRBANKS TWR. NO STEP TAXI EXCEPT IN CHANNEL FOR RWY 02W-20W. RWY 02W-20W TOUCHDOWN REFERENCE MARKERS 500 FT FROM SHORELINE, MARKED WITH BUOYS. LIMITED TRANSIENT FLOAT PLANE PARKING AVBL CTC OPS 907-474-2530 FOR INFORMATION. SFC FROZEN IN WINTER, NOT MONITORED. MIGRATORY BIRDS IN VICINITY OF ARPT DURING SPRING THRU FALL, CONDITION NOT MONITORED.

BE ALERT FOR SNOW REMOVAL EQUIPMENT OPNS FM 1 OCT TO 15 MAY.

MILITARY CONTRACT FUEL AVBL.

FOR FLIGHTS IN MOA'S EAST OF FAIRBANKS RECOMMEND CONTACTING EIELSON RANGR CONTROL ON 125.3 OR CALL 1-800-758-8723 FOR INFORMATION ON MILITARY ACTIVITIES.

NOISE ABATEMENT PROCEDURES IN EFFECT FM 2200-0800 ALL LARGE ACFT, TURBINE ENGINE, AND HEAVY ACFT UTILIZE RWY 02L FOR ARRIS AND 20R FOR DEPS WHEN WIND IS NOT AN OPERATIONAL FACTOR. CTC ARPT OPNS FOR ENGINE RUN-UP LOCATIONS.

RY 02R/20L CLSD TO JET ACFT.

TRANSIENT PARKING EAST RAMP FOR NON JET ACFT WITH WINGSPAN LESS THAN 79 FT. NO TRANSIENT ACFT PARKING ON WEST RAMP, CTC APT OPS 907-474-2530 FOR INFO & MEDIVAC PARKING.

FOR AVBLTY OF SUMMER GRAVEL STRIP RY 02/20 AND WINTER SKI STRIP RY 02/20 CONSULT LOCAL NOTAMS AND CTC TWR PRIOR TO ARRIVAL /DEPARTURE.

N/S TAXIWAY (TWY A) IS WEST AND PARALLEL TO RY 02L/20R. BE ALERT TO AVOID LANDING ON TAXIWAY.

NE COMPASS ROSE CLSD TO HELICOPTERS OVER 12,500 LBS. FROST HEAVES SOUTH 2600 FT RY 02R/20L CONTACT ARPT OPERS 907-474-2530 WITH SAFETY CONCERNS.

WX CAMERA AVBL ON INTERNET AT [HTTP://AVCAMS.FAA.GOV](http://AVCAMS.FAA.GOV)

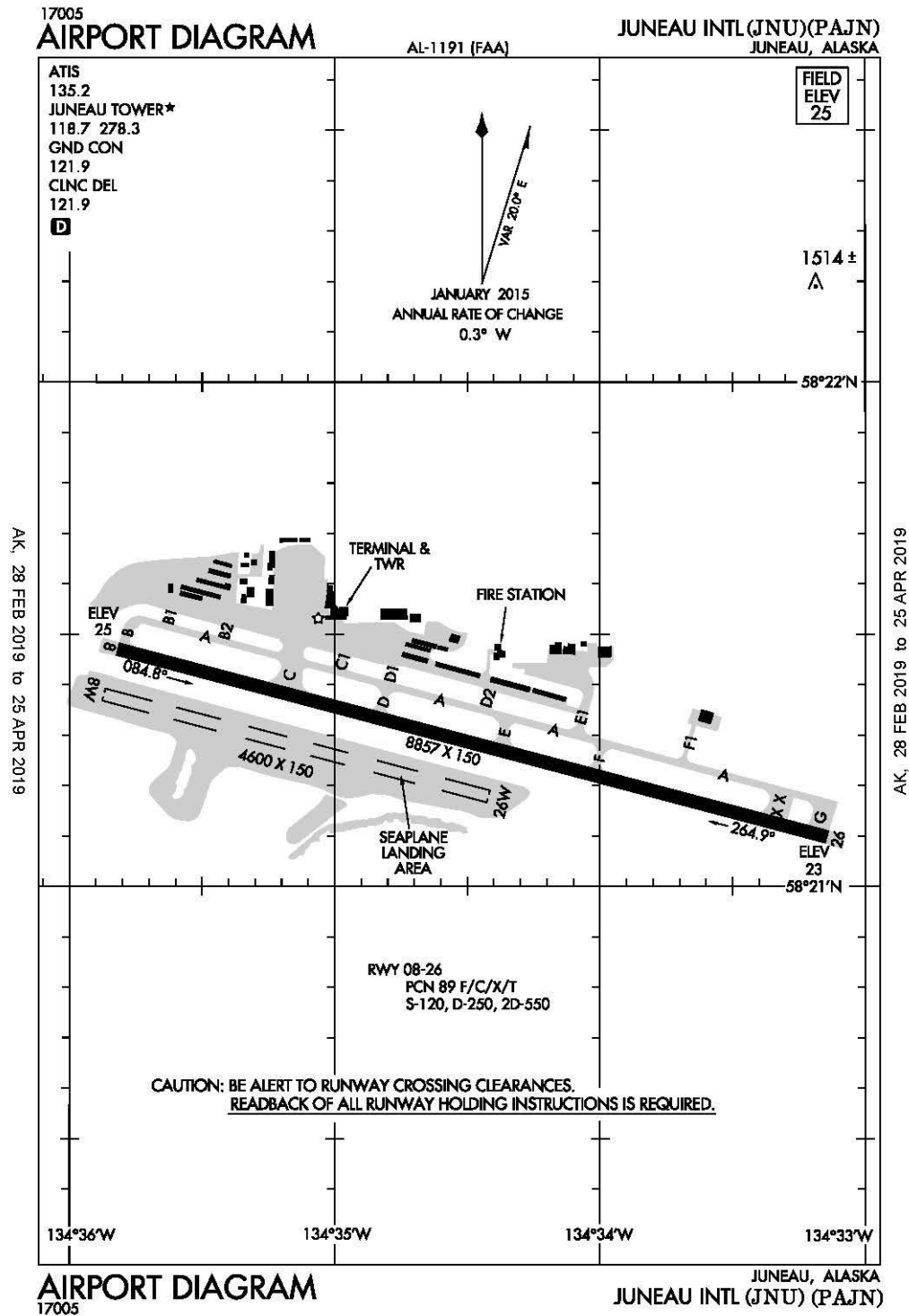
ALL RY HOLD LINES AND COMPASS ROSE AT TWY W OBSCURED OCTOBER 1 THRU APRIL 1.

FOR TRANSIENT HELICOPTER PARKING CALL ARPT OPS 907-474-2530.

COLD TEMPERATURE RESTRICTED AIRPORT. ALTITUDE CORRECTION REQUIRED AT OR BELOW -45C.

SEE ADDITIONAL PAGES UNDER NOTICES FOR TRSA AND FAIRBANKS AREA INFORMATION.

Juneau, Alaska
Juneau International
ICAO Identifier PAJN



Juneau, AK
Juneau Intl
ICAO Identifier PAJN

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 58–21–16.9625N / 134–34–42.4939W
2.2.2 From City: 7 Miles NW Of Juneau, AK
2.2.3 Elevation: 25.3 ft
2.2.5 Magnetic variation: 20E (2015)
2.2.6 Airport Contact: Patty Wahto
1873 SHELL SIMMONS DR, SUITE 200
Juneau, AK 99801 (907–789–7821)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A1+,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major
2.4.7 Remarks: Airframe/Power Plant Service For Single/Twin Prop Eng Aircraft Turbin & Avionics.

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 4/1/2005

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 08
2.10.1.b Type of obstacle: Tower (573 ft above runway end). Marked and Lighted
2.10.1.c Location of obstacle: 900 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 08
2.12.2 True Bearing: 105
2.12.3 Dimensions: 8857 ft x 150 ft
2.12.4 PCN: 89 F/C/X/T
2.12.5 Coordinates: 58–21–28.25N / 134–35–49.09W
2.12.6 Threshold elevation: 25 ft
2.12.6 Touchdown zone elevation: 25.3 ft

2.12.1 Designation: 26
2.12.2 True Bearing: 285
2.12.3 Dimensions: 8857 ft x 150 ft
2.12.4 PCN: 89 F/C/X/T
2.12.5 Coordinates: 58–21–05.88N / 134–33–08.63W
2.12.6 Threshold elevation: 23.4 ft

2.12.6 Touchdown zone elevation: 23.4 ft

2.12.1 Designation: 08W
2.12.3 Dimensions: 4600 ft x 150 ft
2.12.5 Coordinates: 58–21–22.82N / 134–35–52.23W

2.12.1 Designation: 26W
2.12.3 Dimensions: 4600 ft x 150 ft
2.12.5 Coordinates: 58–21–10.71N / 134–34–25.26W

AD 2.13 Declared distances

2.13.1 Designation: 08
2.13.2 Takeoff run available: 8857
2.13.3 Takeoff distance available: 8857
2.13.4 Accelerate–stop distance available: 8457
2.13.5 Landing distance available: 8457

2.13.1 Designation: 26
2.13.2 Takeoff run available: 8857
2.13.3 Takeoff distance available: 8857
2.13.4 Accelerate–stop distance available: 8457
2.13.5 Landing distance available: 8457

AD 2.14 Approach and runway lighting

2.14.1 Designation: 08
2.14.2 Approach lighting system: MALSF
2.14.4 Visual approach slope indicator system: V2L
2.14.10 Remarks: VASI Aligned Aprxly 13 Degr Right Of Runway Centerline And Is Not Visible On Runway Cntrl. VASI Unusable Beyond 06 Degr Left Of Crs. Rlls Lights: (Jnub Battleship Island, Jnua Engineers Cut, jnu Wetlands/Flats)

2.14.1 Designation: 26
2.14.2 Approach lighting system: MALS
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Runway 26 PAPI Unusable Beyond 2 Nm Due To Terrain. Runway 26 MALS Non Standard; Length 800 Ft.

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ATIS
2.18.3 Service designation: 135.2 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.7 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 278.3 MHz

2.18.1 Service designation: LCL/S (SEASONAL USE ONLY)
2.18.3 Service designation: 120.7 MHz

2.18.1 Service designation: NG OPS
2.18.3 Service designation: 64.7 MHz

2.18.1 Service designation: NG OPS
2.18.3 Service designation: 124.65 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 08. Magnetic variation: 20E

2.19.2 ILS identification: JDL
2.19.5 Coordinates: 58-21-32.035N / 134-38-10.3944W
2.19.6 Site elevation: 165 ft

2.19.1 ILS type: Outer Marker for runway 08. Magnetic variation: 20E
2.19.2 ILS identification: JDL
2.19.5 Coordinates: 58-21-33.5717N / 134-41-58.0236W
2.19.6 Site elevation: 57.9 ft

2.19.1 ILS type: DME for runway 08. Magnetic variation: 20E
2.19.2 ILS identification: JDL
2.19.5 Coordinates: 58-21-31.0221N / 134-38-10.216W
2.19.6 Site elevation: 179.8 ft

General Remarks:

NATIONAL GUARD 24 HR PPR DUE TO LIMITED PARKING C907-789-3366. 0730-1600 WEEKDAYS CONTACT GUARD OPS 10 MIN PRIOR TO LANDING ON 124.65.

WILDLIFE & BIRDS ON & INVOF ARPT.

BATTLESHIP ISLAND RLLS GROUPING; CENTER LIGHT 582132.88N 1344012.22W. IJDL-LOCALIZER RLLS GROUPING; CENTER LIGHT 582132.02N 1343810.39W.

INCREASED HELICOPTER/LIGH ACFT ACTIVITY APR 15-OCT 1 ENTIRE LENGTH ON GASTINEAU CHANNEL & WITHIN 5 MILES OF ARPT.

PARAGLIDING ACTIVITY 3 MILES N OF ARPT INVOF THUNDER MOUNTAIN & OVER GASTINEAU CHANNEL NEARS DOWNTOWN APR 15-OCT 1 6000 FT & BLO.

TPA 1500 AGL FOR LARGE TURBINE ACFT; 1000 FT AGL FOR FIXED WING ACFT; 500 FT AGL FOR HELICOPTERS.

FOR A LOCAL CALL TO JNU AFSS CALL 907-789-7380.

TRANSIENT DOCK AVBL FOR PUBLIC USE FOR UP TO SIX ACFT, SW CORNER.

SEE SPECIAL NOTICES AND GENERAL NOTICES FOR ADDITIONAL INFORMATION ON OPNS IN JUNEAU AREA.

LENA POINT, PEDERSON HILL AND SISTERS ISLAND WX CAMERAS AVBL ON INTERNET AT [HTTP://AVCAMS.FAA.GOV](http://AVCAMS.FAA.GOV)

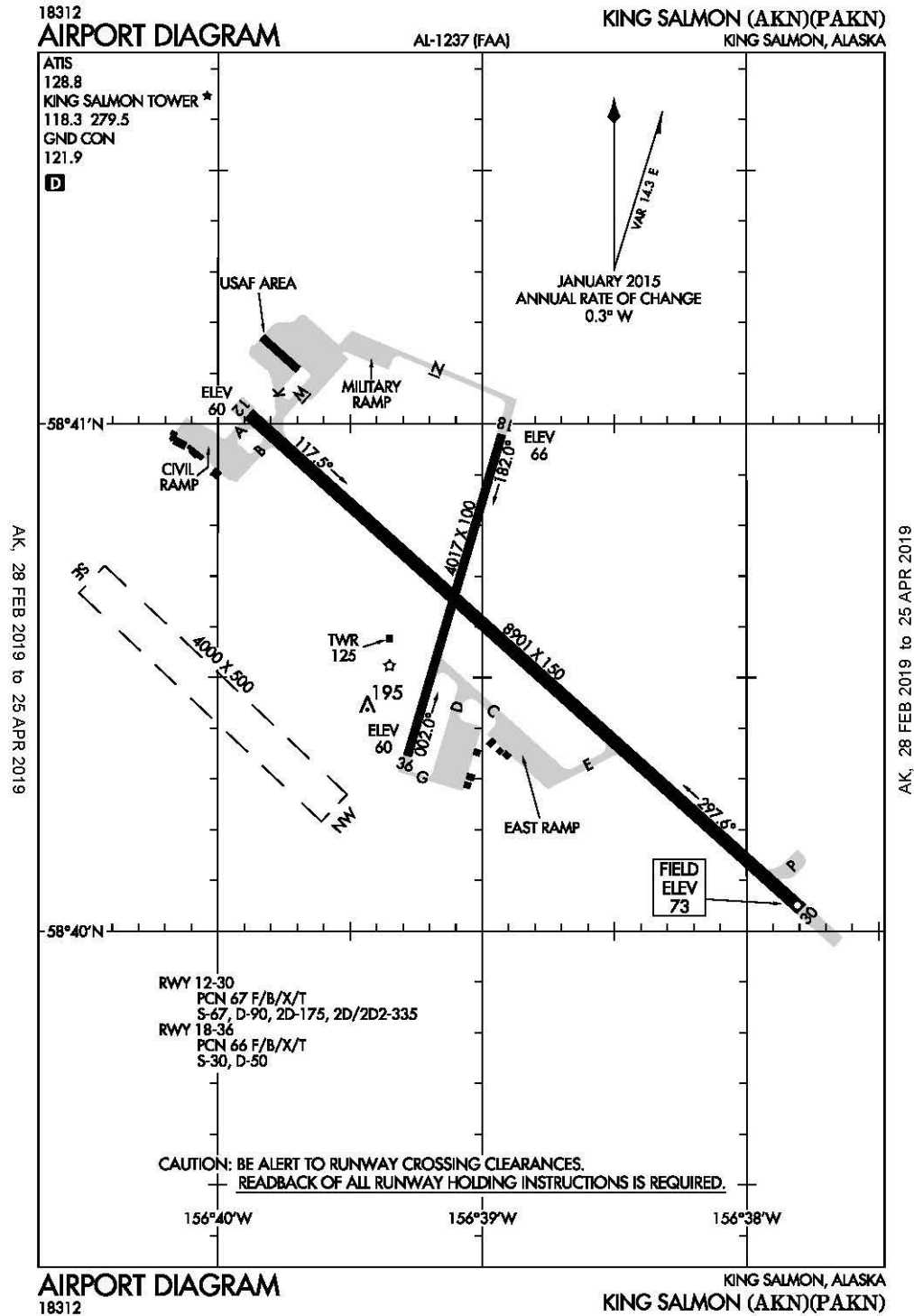
RY 08/26 SAND USED TO ENHANCE RY FRICTION MAY NOT MEET FAA SPECS.

COLD TEMPERATURE RESTRICTED AIRPORT. ALTITUDE CORRECTION REQUIRED AT OR BELOW -13C.

APRON TERMINAL RAMP CLSD TO ROTORCRAFT. APRON US CUSTOMS RAMP CLSD TO ACFT WITH

WINGSPAN MORE THAN 79 FT INTL ACFT WITH WINGSPAN MORE THAN 79 FT AND ALL INTL ROTORCRAFT USE E-1 RAMP (NTL GUARD RAMP).

King Salmon, Alaska
King Salmon
ICAO Identifier PAKN



King Salmon, AK
King Salmon
ICAO Identifier PAKN

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 58–40–35.3765N /
156–38–55.2876W
2.2.2 From City: 0 Miles SE Of King Salmon, AK
2.2.3 Elevation: 73.4 ft
2.2.5 Magnetic variation: 16E (2010)
2.2.6 Airport Contact: Paul Hansen
PO BOX 65
King Salmon, AK 99613
(907–246–3325)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, 0800–1800
Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: No
2.4.6 Repair facilities: Major
2.4.7 Remarks: Transient Parking Marked At North End
Of General Aviation Ramp And East End Of Cargo
Ramp.

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
B certified on 3/21/2005
2.6.4 Remarks: Closed To Aircraft 0 Operations With
More Than 30 Passenger Seats Except Prior Permission
Required In Writing To Airport Manager PO Box 65
King Salmon Ak, 99613.

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 18
2.10.1.b Type of obstacle: Trees (40 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 0 ft B of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: NW
2.12.3 Dimensions: 4000 ft x 500 ft

2.12.1 Designation: SE
2.12.3 Dimensions: 4000 ft x 500 ft

2.12.1 Designation: 18

2.12.2 True Bearing: 196
2.12.3 Dimensions: 4017 ft x 100 ft
2.12.4 PCN: 66 F/B/X/T
2.12.5 Coordinates: 58–40–59.7835N /
156–38–55.6139W
2.12.6 Threshold elevation: 66.1 ft
2.12.6 Touchdown zone elevation: 66.1 ft

2.12.1 Designation: 36
2.12.2 True Bearing: 16
2.12.3 Dimensions: 4017 ft x 100 ft
2.12.4 PCN: 66 F/B/X/T
2.12.5 Coordinates: 58–40–21.7997N /
156–39–16.9583W
2.12.6 Threshold elevation: 59.9 ft
2.12.6 Touchdown zone elevation: 65.2 ft

2.12.1 Designation: 12
2.12.2 True Bearing: 132
2.12.3 Dimensions: 8901 ft x 150 ft
2.12.4 PCN: 67 F/B/X/T
2.12.5 Coordinates: 58–41–02.184N /
156–39–53.0154W
2.12.6 Threshold elevation: 59.9 ft
2.12.6 Touchdown zone elevation: 61.8 ft

2.12.1 Designation: 30
2.12.2 True Bearing: 312
2.12.3 Dimensions: 8901 ft x 150 ft
2.12.4 PCN: 67 F/B/X/T
2.12.5 Coordinates: 58–40–03.68N / 156–37–47.63W
2.12.6 Threshold elevation: 73.4 ft
2.12.6 Touchdown zone elevation: 73.4 ft

AD 2.13 Declared distances

2.13.1 Designation: 12
2.13.2 Takeoff run available: 8901
2.13.3 Takeoff distance available: 8901
2.13.4 Accelerate–stop distance available: 8501
2.13.5 Landing distance available: 8501

2.13.1 Designation: 30
2.13.2 Takeoff run available: 8901
2.13.3 Takeoff distance available: 8901
2.13.4 Accelerate–stop distance available: 8501
2.13.5 Landing distance available: 8501

AD 2.14 Approach and runway lighting

2.14.1 Designation: 12
2.14.2 Approach lighting system: SSALR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 30
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ATIS
2.18.3 Service designation: 128.8 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 279.5 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: PTD
2.18.3 Service designation: 372.2 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 12. Magnetic variation: 16E
2.19.2 ILS identification: AKN
2.19.5 Coordinates: 58-39-56.5549N / 156-37-32.3734W
2.19.6 Site elevation: 78 ft

2.19.1 ILS type: DME for runway 12. Magnetic variation: 16E
2.19.2 ILS identification: AKN
2.19.5 Coordinates: 58-39-59.6N / 156-37-31.7W
2.19.6 Site elevation: 78 ft

2.19.1 ILS type: Glide Slope for runway 12. Magnetic variation: 16E
2.19.2 ILS identification: AKN
2.19.5 Coordinates: 58-40-57.3435N / 156-39-29.887W
2.19.6 Site elevation: 64 ft

General Remarks:

LANDING AREA RY NW/SE ALSO USED BY BOATS.

FLOCKS OF LARGE MIGRATORY BIRDS IN VCNTY DURG SEASON.

OFF PAVEMENT OPERATIONS BY ACFT; INCLUDING HELICOPTERS; NOT AUTHORIZED AT THE ACR APRON. NO LANDING; PARKING OR TKOFS PERMITTED FROM DIRT OR GRASS.

ONE INCH DIP ON CNTRLN 1850 FT FM AER 36 EXTDS TO THREE INCH DIP 25 FT WIDE ON WEST EDGE.

CIVILIAN TRANSIENT PARKING ON SE RAMP ONLY; OTHER PARKING LONGER THAN 48 HRS REQUIRES PERMIT.

ALL FTR ACFT ON ARR EXP REDUCED SEPARATION; SIMILAR APCH CHARACTERISTICS AND DAY - 3000 FT; DISSIMILAR APCH CHARACTERISTICS AND/OR NIGHT - 6000 FT; AHEAD/BEHIND FORMATION LANDING - 6000 FT.

600 FT SAFETY AREA APCH END RY 12.

RCR UPDATED AS REQUIRED DURING 11TH AF FTR FLYING WINDOW. AIRCREWS COORD RCR CHECKS WITH KING SALMON OPS - 907-439-3001 OR 907-439-6000. ACFT OPNS RSTRD TO LOW APCH/FULL STOP LNDG ONLY.

FTR ACFT COORDINATE DESIRED BARRIER CONFIGURATION OR ENGAGEMENT AS EARLY AS POSSIBLE. EXPECT AT LEAST 30 MIN DELAY FOR SHORT-NOTICE REQUIREMENT.

FLIGHTS ORIG OUTSIDE ALASKA REFER TO USAF FCG. NO CSTMS AVBL.

SNOW, ICE REMOVAL & ARPT HAZ COND PERFORMED & RPRTD DURING MAINT DUTY HRS.

USAF FACILITIES MINIMALLY OPR BY CIVILIAN CONTRACTORS WITH LIMITED SUPPORT CAPABILITY. CALL TO CONFIRM OPR HRS NOT LATER THAN 24 HRS IN ADVANCE OF EXPECTED ARRIVAL. MIL AIRCRAFT NEED TO CONFIRM FUEL REQUIREMENTS 24-48 HOURS IN ADVANCE.

MILITARY FTRS/EMERGENCY DIVERTS CALL WARRIOR SOF/ELMENDORF SOF ON UHF AT 395.15.

NON-EMERG/NON-FTR ACFT CALL KING SALMON OPS; 24 HR POINT NORMALLY MONITORS CTAF DURING OPR HRS.

RY 18/36 NOT INSPECTED FOR MIL OPERATIONS.

ARFF EQUIPMENT STAFFED DURING PERIODS OF ACR ACTIVITY ONLY.

PRIVATE JETS MAY PARK ON THE SE SECTION OF E RAMP; CALL AMGR AT 907-246-3325 FOR INFO.

ARPT MAINT DUTY HRS 0800-1700.

GENERAL AVIATION APRON, PAVEMENT CRUMBLING, POSSIBLE FOD HAZARD. JET AIRCRAFT BE ALERT DURING RUN-UP TO AVOID DAMAGE WITH JET WASH.

WX CAMERA AVBL ON INTERNET AT [HTTP://AVCAMS.FAA.GOV](http://AVCAMS.FAA.GOV)

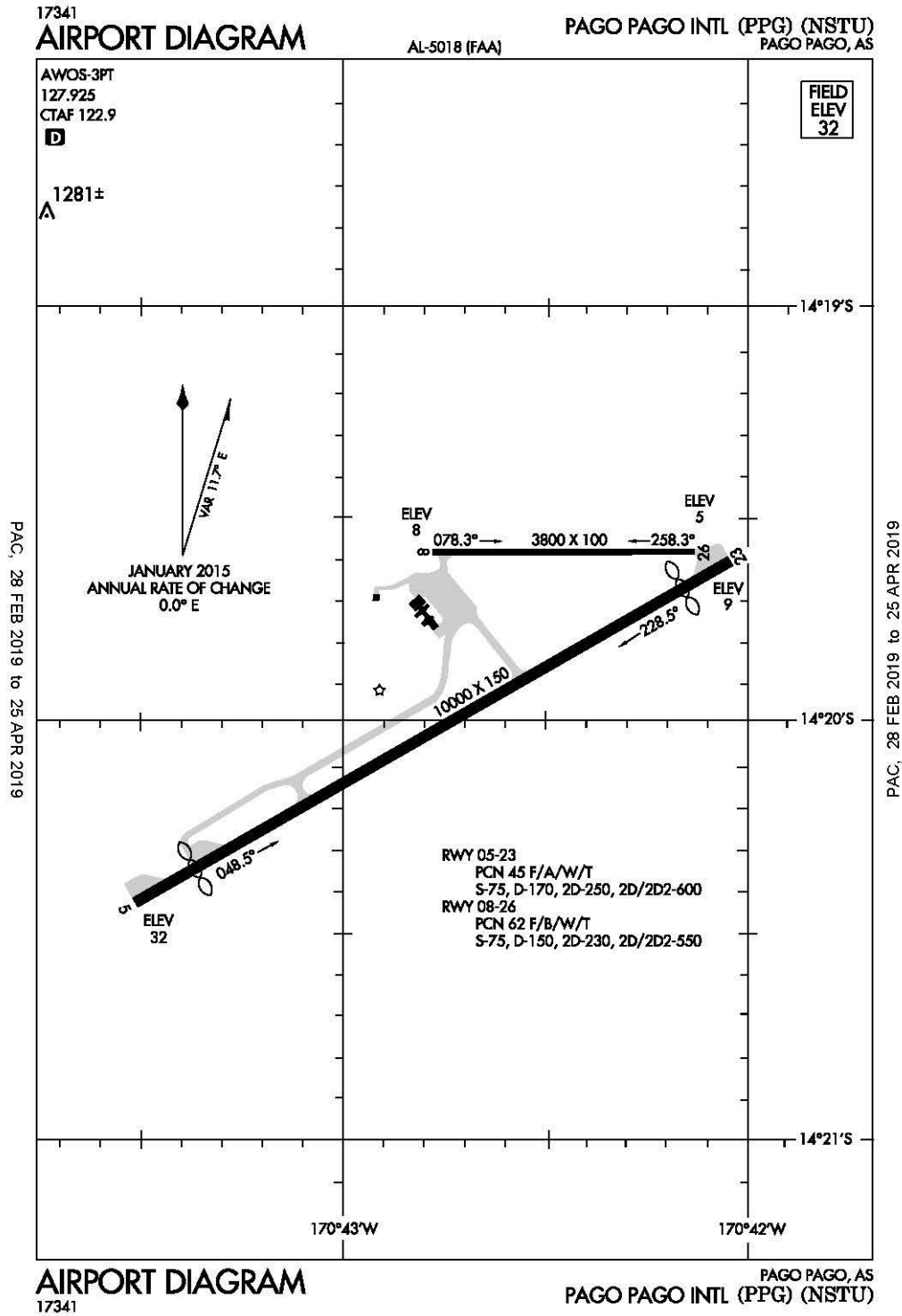
APRON SPOTS 4, 5, 6, 7 NORTH OF MILITARY HANGARS CLSD EXC PROP ACFT. TWY P CLSD.

ARFF IS AVBL FOR PART 121 CARRIERS INVOLVED IN ETOPS OPERATIONS WITH 30 MINUTES NOTICE.

COLD TEMPERATURE RESTRICTED AIRPORT. ALTITUDE CORRECTION REQUIRED AT OR BELOW -31C.

NWS WEATHER BALLOON LAUNCH FACILITY LOCATED ON AIRPORT, SEE INSIDE BACK COVER FOR OPERATION DETAILS.

Pago Pago, American Samoa
Pago Pago/International
ICAO Identifier NSTU



Pago Pago, AS
Pago Pago Intl
ICAO Identifier NSTU

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 14–19–53.976S / 170–42–41.411W
2.2.2 From City: 3 Miles SW Of Pago Pago, AS
2.2.3 Elevation: 32 ft
2.2.5 Magnetic variation: 12E (1990)
2.2.6 Airport Contact: Dr. Claire Poumele
1539 AIRPORT WAY P.O. BOX 1539
Pago Pago, AS 96799 ((684) 733–3076)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A1+,100
2.4.5 Hangar space: No
2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 05
2.10.1.b Type of obstacle: Hill (446 ft above runway end). Lighted
2.10.1.c Location of obstacle: 1000 ft L of Centerline

2.10.1.a. Runway designation: 23
2.10.1.b Type of obstacle: Fence (8 ft above runway end). Lighted

AD 2.12 Runway physical characteristics

2.12.1 Designation: 08
2.12.2 True Bearing: 90
2.12.3 Dimensions: 3800 ft x 100 ft
2.12.4 PCN: 62 F/B/W/T
2.12.5 Coordinates: 14–19–35.128S / 170–42–46.745W
2.12.6 Threshold elevation: 8.3 ft
2.12.6 Touchdown zone elevation: 6.1 ft

2.12.1 Designation: 26
2.12.2 True Bearing: 270
2.12.3 Dimensions: 3800 ft x 100 ft
2.12.4 PCN: 62 F/B/W/T

2.12.5 Coordinates: 14–19–35.104S / 170–42–08.094W
2.12.6 Threshold elevation: 5.3 ft
2.12.6 Touchdown zone elevation: 6.2 ft

2.12.1 Designation: 05
2.12.2 True Bearing: 60
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 45 F/A/W/T
2.12.5 Coordinates: 14–20–25.817S / 170–43–30.843W
2.12.6 Threshold elevation: 31.9 ft
2.12.6 Touchdown zone elevation: 31.9 ft

2.12.1 Designation: 23
2.12.2 True Bearing: 240
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 45 F/A/W/T
2.12.5 Coordinates: 14–19–36.47S / 170–42–02.613W
2.12.6 Threshold elevation: 9.3 ft
2.12.6 Touchdown zone elevation: 9 ft

AD 2.13 Declared distances

2.13.1 Designation: 08
2.13.2 Takeoff run available: 3800
2.13.3 Takeoff distance available: 3800
2.13.4 Accelerate–stop distance available: 3800
2.13.5 Landing distance available: 3800

2.13.1 Designation: 26
2.13.2 Takeoff run available: 3800
2.13.3 Takeoff distance available: 3800
2.13.4 Accelerate–stop distance available: 3800
2.13.5 Landing distance available: 3800

2.13.1 Designation: 05
2.13.2 Takeoff run available: 9200
2.13.3 Takeoff distance available: 10200
2.13.4 Accelerate–stop distance available: 9200
2.13.5 Landing distance available: 8200

2.13.1 Designation: 23
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate–stop distance available: 10000
2.13.5 Landing distance available: 9200

AD 2.14 Approach and runway lighting

2.14.1 Designation: 05
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: V4L

2.14.1 Designation: 23

2.14.4 Visual approach slope indicator system: P4L

variation: 12E

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 05. Magnetic variation: 12E

2.19.2 ILS identification: TUT

2.19.5 Coordinates: 14-20-13.06S / 170-43-15.19W

2.19.6 Site elevation: 25.4 ft

2.19.2 ILS identification: TUT

2.19.5 Coordinates: 14-19-38.78S / 170-42-12.9W

2.19.6 Site elevation: 5.7 ft

2.19.1 ILS type: DME for runway 05. Magnetic variation: 12E

2.19.2 ILS identification: TUT

2.19.5 Coordinates: 14-19-37.63S / 170-42-14.71W

2.19.6 Site elevation: 22 ft

2.19.1 ILS type: Glide Slope for runway 05. Magnetic

General Remarks:

ALL FLTS (EXCP SKED) PRIOR PMSN FROM AMGR WITH 24 HRS PRIOR NOTICE.

SEA SPRAY FM SURF & BLOW HOLES MAY DRIFT ACRS RWY 05/23 UNDER ROUGH SEA CONDS.

ALL ACFT TRANSITING PAGO PAGO (EXCP COMMERCIAL CARRIERS) MUST MAKE FUEL ARRANGEMENTS WITH PPG AT 684-733-3158.

ALL ACFT EXCDG 100000 GWT UPON TD TAXI TO THR TURN- ARND BFR TXG TO APRON. ACFT UNDER 100000 MAKE TURN-ARND WHERE FEASIBLE.

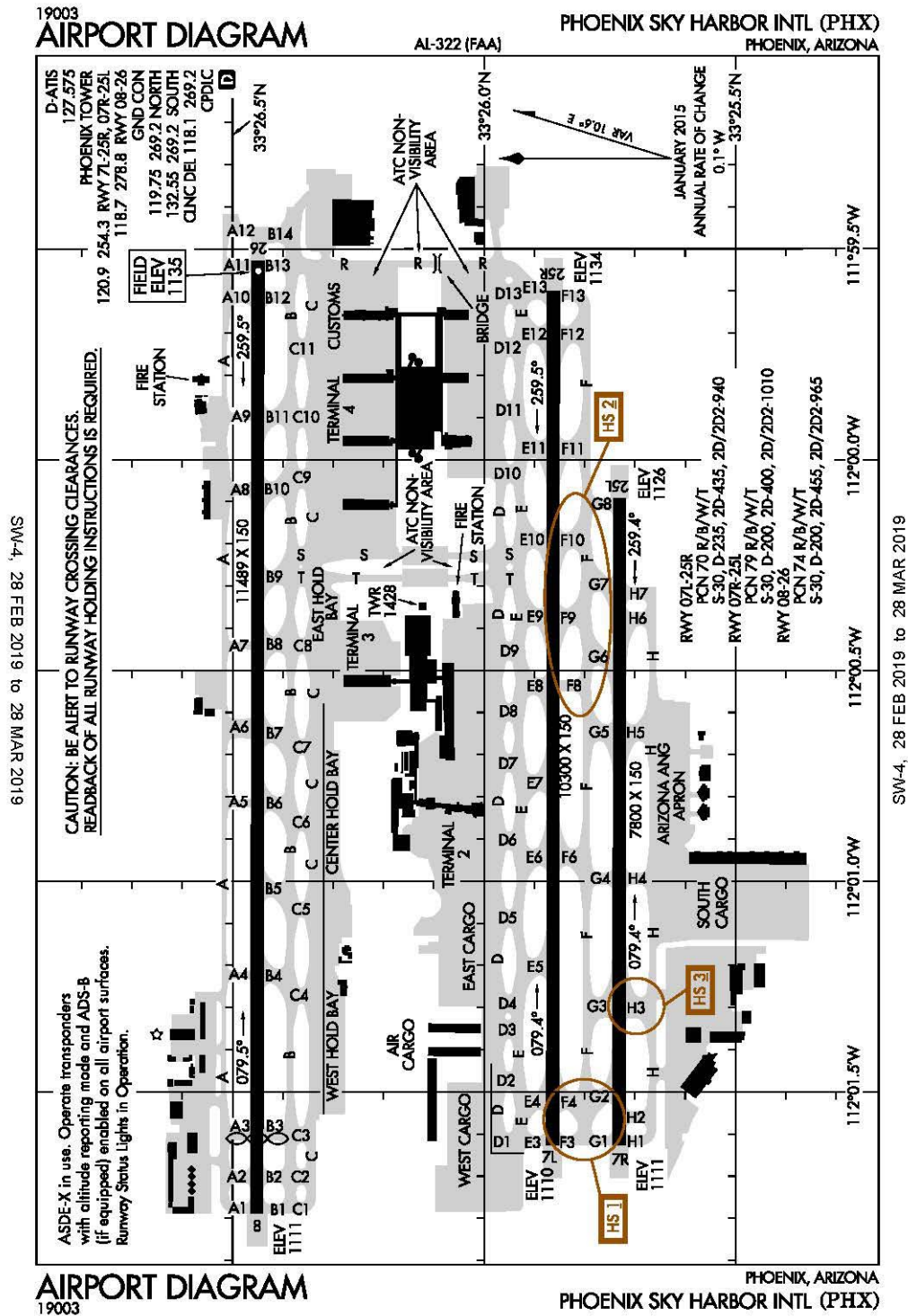
OLOTELE MT 1617 FT MSL 3.5 MILES WEST OF THLD RY 08.

PERMLY LGTD & MKD 226' TWR ATOP MT ALAVA 4.3SM NNE ARPT.

FOR NOTAM CONTACT NEW ZEALAND (643) 358-1688

FSS: NEW ZEALAND

Phoenix, Arizona
Phoenix Sky Harbor International
ICAO Identifier KPHX



Phoenix, AZ
Phoenix Sky Harbor Intl
ICAO Identifier KPHX

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 33-26-03.4N / 112-00-41.7W
2.2.2 From City: 3 Miles E Of Phoenix, AZ
2.2.3 Elevation: 1134.8 ft
2.2.5 Magnetic variation: 12E (2000)
2.2.6 Airport Contact: James E Bennett
2485 E BUCKEYE RD
Phoenix, AZ 85034
(602-306-2500)

AD 2.3 Attendance Schedule

2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 07L
2.10.1.b Type of obstacle: Pole (62 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 750 ft R of Centerline

2.10.1.a. Runway designation: 07R
2.10.1.b Type of obstacle: Pole (33 ft above runway end). Lighted
2.10.1.c Location of obstacle: 640 ft R of Centerline

2.10.1.a. Runway designation: 08
2.10.1.b Type of obstacle: Bldg (66 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 503 ft L of Centerline

2.10.1.a. Runway designation: 25L
2.10.1.b Type of obstacle: Ant (424 ft above runway end). Marked and Lighted
2.10.1.c Location of obstacle: 1193 ft L of Centerline

2.10.1.a. Runway designation: 25R
2.10.1.b Type of obstacle: Ant (416 ft above runway

end). Marked and Lighted
2.10.1.c Location of obstacle: 600 ft L of Centerline

2.10.1.a. Runway designation: 26
2.10.1.b Type of obstacle: Road (9 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 540 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 07L
2.12.2 True Bearing: 90
2.12.3 Dimensions: 10300 ft x 150 ft
2.12.4 PCN: 70 R/B/W/T
2.12.5 Coordinates: 33-25-51.8081N / 112-01-37.5659W
2.12.6 Threshold elevation: 1110.2 ft
2.12.6 Touchdown zone elevation: 1116.5 ft

2.12.1 Designation: 25R
2.12.2 True Bearing: 270
2.12.3 Dimensions: 10300 ft x 150 ft
2.12.4 PCN: 70 R/B/W/T
2.12.5 Coordinates: 33-25-51.7284N / 111-59-36.0429W
2.12.6 Threshold elevation: 1134.1 ft
2.12.6 Touchdown zone elevation: 1134.1 ft

2.12.1 Designation: 08
2.12.2 True Bearing: 90
2.12.3 Dimensions: 11489 ft x 150 ft
2.12.4 PCN: 74 R/B/W/T
2.12.5 Coordinates: 33-26-27.0993N / 112-01-47.257W
2.12.6 Threshold elevation: 1111.1 ft
2.12.6 Touchdown zone elevation: 1118 ft

2.12.1 Designation: 26
2.12.2 True Bearing: 270
2.12.3 Dimensions: 11489 ft x 150 ft
2.12.4 PCN: 74 R/B/W/T
2.12.5 Coordinates: 33-26-26.9643N / 111-59-31.6884W
2.12.6 Threshold elevation: 1134.7 ft
2.12.6 Touchdown zone elevation: 1134.8 ft

2.12.1 Designation: 07R
2.12.2 True Bearing: 90
2.12.3 Dimensions: 7800 ft x 150 ft
2.12.4 PCN: 79 R/B/W/T
2.12.5 Coordinates: 33-25-43.8923N / 112-01-37.5686W

2.12.6 Threshold elevation: 1111 ft
2.12.6 Touchdown zone elevation: 1115.9 ft

2.12.1 Designation: 25L
2.12.2 True Bearing: 270
2.12.3 Dimensions: 7800 ft x 150 ft
2.12.4 PCN: 79 R/B/W/T
2.12.5 Coordinates: 33-25-43.8354N /
112-00-05.5412W
2.12.6 Threshold elevation: 1126.3 ft
2.12.6 Touchdown zone elevation: 1126.4 ft

AD 2.13 Declared distances

2.13.1 Designation: 07L
2.13.2 Takeoff run available: 10300
2.13.3 Takeoff distance available: 10300
2.13.4 Accelerate-stop distance available: 10300
2.13.5 Landing distance available: 10300

2.13.1 Designation: 25R
2.13.2 Takeoff run available: 10300
2.13.3 Takeoff distance available: 10300
2.13.4 Accelerate-stop distance available: 10300
2.13.5 Landing distance available: 10300

2.13.1 Designation: 08
2.13.2 Takeoff run available: 11489
2.13.3 Takeoff distance available: 11489
2.13.4 Accelerate-stop distance available: 11489
2.13.5 Landing distance available: 10591

2.13.1 Designation: 26
2.13.2 Takeoff run available: 11489
2.13.3 Takeoff distance available: 11489
2.13.4 Accelerate-stop distance available: 11489
2.13.5 Landing distance available: 11489

2.13.1 Designation: 07R
2.13.2 Takeoff run available: 7800
2.13.3 Takeoff distance available: 7800
2.13.4 Accelerate-stop distance available: 7800
2.13.5 Landing distance available: 7800

2.13.1 Designation: 25L
2.13.2 Takeoff run available: 7800
2.13.3 Takeoff distance available: 7800
2.13.4 Accelerate-stop distance available: 7800
2.13.5 Landing distance available: 7800

AD 2.14 Approach and runway lighting

2.14.1 Designation: 07L

2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 25R
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 08
2.14.2 Approach lighting system: MALSF
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 26
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 07R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 25L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P
2.18.3 Service designation: 118.1 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 269.2 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 127.575 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P (NORTH)
2.18.3 Service designation: 119.75 MHz

2.18.1 Service designation: GND/P (SOUTH)
2.18.3 Service designation: 132.55 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 269.2 MHz

2.18.1 Service designation: LCL/P (RY 08/26)
2.18.3 Service designation: 278.8 MHz

2.18.1 Service designation: LCL/P (RY 07R/25L &
07L/25R)
2.18.3 Service designation: 120.9 MHz

2.18.1 Service designation: LCL/P (RY 08/26)

2.18.3 Service designation: 118.7 MHz

2.18.1 Service designation: LCL/P (RWY 07R/25L & 07L/25R)

2.18.3 Service designation: 254.3 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 07L. Magnetic variation: 12E

2.19.2 ILS identification: PHX

2.19.5 Coordinates: 33-25-51.7152N / 111-59-20.367W

2.19.6 Site elevation: 1133.5 ft

2.19.1 ILS type: DME for runway 07L. Magnetic variation: 12E

2.19.2 ILS identification: PHX

2.19.5 Coordinates: 33-25-54.0771N / 111-59-19.1054W

2.19.6 Site elevation: 1143 ft

2.19.1 ILS type: Glide Slope for runway 07L. Magnetic variation: 12E

2.19.2 ILS identification: PHX

2.19.5 Coordinates: 33-25-49.0529N / 112-01-25.2134W

2.19.6 Site elevation: 1106.5 ft

2.19.1 ILS type: Glide Slope for runway 07R. Magnetic variation: 12E

2.19.2 ILS identification: AHA

2.19.5 Coordinates: 33-25-46.628N / 112-01-25.0931W

2.19.6 Site elevation: 1107.4 ft

2.19.1 ILS type: Localizer for runway 07R. Magnetic variation: 12E

2.19.2 ILS identification: AHA

2.19.5 Coordinates: 33-25-43.8252N / 111-59-52.2902W

2.19.6 Site elevation: 1124.2 ft

2.19.1 ILS type: DME for runway 07R. Magnetic variation: 12E

2.19.2 ILS identification: AHA

2.19.5 Coordinates: 33-25-41.1847N / 111-59-52.1833W

2.19.6 Site elevation: 1135.8 ft

2.19.1 ILS type: Glide Slope for runway 08. Magnetic variation: 12E

2.19.2 ILS identification: SYQ

2.19.5 Coordinates: 33-26-29.6544N / 112-01-24.6276W

2.19.6 Site elevation: 1111.7 ft

2.19.1 ILS type: Localizer for runway 08. Magnetic variation: 12E

2.19.2 ILS identification: SYQ

2.19.5 Coordinates: 33-26-26.9483N / 111-59-19.7443W

2.19.6 Site elevation: 1134.1 ft

2.19.1 ILS type: DME for runway 08. Magnetic variation: 12E

2.19.2 ILS identification: SYQ

2.19.5 Coordinates: 33-26-24.3207N / 111-59-19.7057W

2.19.6 Site elevation: 1149.2 ft

2.19.1 ILS type: Localizer for runway 25L. Magnetic variation: 12E

2.19.2 ILS identification: RJG

2.19.5 Coordinates: 33-25-43.8995N / 112-01-49.6368W

2.19.6 Site elevation: 1103.2 ft

2.19.1 ILS type: DME for runway 25L. Magnetic variation: 12E

2.19.2 ILS identification: RJG

2.19.5 Coordinates: 33-25-46.7609N / 112-01-49.9587W

2.19.6 Site elevation: 1117.1 ft

2.19.1 ILS type: Glide Slope for runway 25L. Magnetic variation: 12E

2.19.2 ILS identification: RJG

2.19.5 Coordinates: 33-25-40.9318N / 112-00-16.8722W

2.19.6 Site elevation: 1120.3 ft

2.19.1 ILS type: Glide Slope for runway 26. Magnetic variation: 12E

2.19.2 ILS identification: CWJ

2.19.5 Coordinates: 33-26-29.603N / 111-59-44.4331W

2.19.6 Site elevation: 1129.1 ft

2.19.1 ILS type: Localizer for runway 26. Magnetic variation: 12E

2.19.2 ILS identification: CWJ

2.19.5 Coordinates: 33-26-27.1078N / 112-01-59.2267W

2.19.6 Site elevation: 1105.1 ft

2.19.2 ILS identification: CWJ

2.19.1 ILS type: DME for runway 26. Magnetic variation: 12E

2.19.5 Coordinates: 33-26-24.1815N /
112-01-59.246W

2.19.6 Site elevation: 1119 ft

General Remarks:

FEE FOR ALL CHARTERS; TRAVEL CLUBS AND CERTAIN REVENUE PRODUCING ACFT.

NOISE ABATEMENT PROCEDURES ARE IN AFFECT AT ALL TIMES.

TWY R AND PORTIONS OF TWYS S AND T DIRECTLY BELOW THE ATCT ARE NON VISIBLE AREAS FROM THE ATCT.

TWY R OVERHEAD TRAIN BRIDGE AT MIDPOINT PROVIDES 82FT-4 IN. CLEARANCE.

WHEN ANG AFLD CLSD, TRAN ACFT USE FBO CUTTER AVN FOR SVC C602-273-1237, 128.875.

NO EXPERIMENTAL FLT OR GND DMSTRN ON ARPT WO PRIOR WRITTEN CONSENT FM THE ARPT.

NATL GUARD HAS LMTD TSNT MAINTENANCE AND PARKING RON BY PRIOR PMSN.

AIRCRAFT DESIGN GROUP VI OPNS WITH PPR.

NO TOUCH AND GO OR STOP AND GO OPNS ALLOWED WO PRIOR WRITTEN CONSENT FM THE ARPT.

NO ENG RUNS ON ARPT WO PRIOR COORDN WITH AIRSIDE OPNS. NO ENG RUNS ON ARPT BETWEEN 2300L - 0500L.

INTERNATIONAL GATE USE RQS COORDN WITH ARPT OPNS 48 HOURS PRIOR TO ARRIVAL.

INTERNATIONAL LANDING RIGHTS RQRS US CUSTOMS AND BORDER PROTECTION NOTIFICATION 48 HOURS PRIOR TO LANDING.

DUE TO HOT SPOTS GA SHOULD REVIEW ARPT SAFETY VIDEO @ [HTTP://SKYHARBOR.COM/BUSINESS/](http://skyharbor.com/business/forpilots/safetyvideoforpilots)
FORPILOTS/SAFETYVIDEOFORPILOTS

RWY STATUS LGTS ARE IN OPN.

AIRPORT COMMUNICATIONS CENTER (602) 273-3302

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

TWY F BTW TWY INT G2 AND G3 CLSD TO ACFT WITH WINGSPAN GREATER THAN 135 FT DUE TO FAA NAV EQUIPMENT.

NO ENGINE RUNS AT ARPT BTN 2300L AND 0500L.

TWY H5, H6, H7, TWY H BTN TWY H4 AND TWY H7 CLSD TO ACFT WINGSPAN MORE THAN 171 FT.

TWYS A, A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, F BTN G2 AND G3, D BTN D8 AND T, D BTN S AND R, RESTRICTED TO A WINGSPAN OF LESS THAN 135 FT.

TWYS C BTN S AND R, D BTN D2 AND D7, D3, D6, H BTN H4 AND H7, H7 RESTRICTED TO WINGSPAN OF LESS THAN 171 FT.

[illegible]

Tucson, AZ
Tucson Intl
ICAO Identifier KTUS

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 32-06-57.8461N /
110-56-27.653W
2.2.2 From City: 6 Miles S Of Tucson, AZ
2.2.3 Elevation: 2643.1 ft
2.2.5 Magnetic variation: 12E (1995)
2.2.6 Airport Contact: Bonnie Allin
TUCSON APT AUTH 7250 S TUCSON BLVD
Tucson, AZ 85756 (520-573-8100)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: No
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 03
2.10.1.b Type of obstacle: Rr (21 ft above runway end).
Not Lighted or Marked
2.10.1.c Location of obstacle: 250 ft L of Centerline

2.10.1.a. Runway designation: 29L
2.10.1.b Type of obstacle: Pole (37 ft above runway
end). Lighted
2.10.1.c Location of obstacle: 350 ft L of Centerline

2.10.1.a. Runway designation: 29R
2.10.1.b Type of obstacle: Gnd (8 ft above runway end).
Not Lighted or Marked
2.10.1.c Location of obstacle: 500 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 11R
2.12.2 True Bearing: 135
2.12.3 Dimensions: 8408 ft x 75 ft
2.12.4 PCN: 38 F/B/X/T
2.12.5 Coordinates: 32-07-19.5659N /
110-56-58.741W

2.12.6 Threshold elevation: 2573.5 ft
2.12.6 Touchdown zone elevation: 2605 ft
2.12.7 Slope: 0.7 UP

2.12.1 Designation: 29L
2.12.2 True Bearing: 315
2.12.3 Dimensions: 8408 ft x 75 ft
2.12.4 PCN: 38 F/B/X/T
2.12.5 Coordinates: 32-06-20.7186N /
110-55-49.6599W
2.12.6 Threshold elevation: 2628.6 ft
2.12.6 Touchdown zone elevation: 2628.7 ft
2.12.7 Slope: 0.6 DOWN

2.12.1 Designation: 03
2.12.2 True Bearing: 45
2.12.3 Dimensions: 7000 ft x 150 ft
2.12.4 PCN: 72 F/A/X/T
2.12.5 Coordinates: 32-07-01.7975N /
110-57-32.5438W
2.12.6 Threshold elevation: 2560.2 ft
2.12.6 Touchdown zone elevation: 2572.1 ft

2.12.1 Designation: 21
2.12.2 True Bearing: 225
2.12.3 Dimensions: 7000 ft x 150 ft
2.12.4 PCN: 72 F/A/X/T
2.12.5 Coordinates: 32-07-50.7361N /
110-56-34.9535W
2.12.6 Threshold elevation: 2568.8 ft
2.12.6 Touchdown zone elevation: 2572.4 ft

2.12.1 Designation: 11L
2.12.2 True Bearing: 135
2.12.3 Dimensions: 10996 ft x 150 ft
2.12.4 PCN: 81 R/B/W/T
2.12.5 Coordinates: 32-07-24.1289N /
110-56-52.4852W
2.12.6 Threshold elevation: 2577.7 ft
2.12.6 Touchdown zone elevation: 2598.5 ft
2.12.7 Slope: 0.6 UP

2.12.1 Designation: 29R
2.12.2 True Bearing: 315
2.12.3 Dimensions: 10996 ft x 150 ft
2.12.4 PCN: 81 R/B/W/T
2.12.5 Coordinates: 32-06-07.1598N /
110-55-22.1441W
2.12.6 Threshold elevation: 2643 ft
2.12.6 Touchdown zone elevation: 2643 ft
2.12.7 Slope: 0.6 DOWN

AD 2.13 Declared distances

2.13.1 Designation: 11R
2.13.2 Takeoff run available: 6998
2.13.3 Takeoff distance available: 6998
2.13.4 Accelerate-stop distance available: 6998
2.13.5 Landing distance available: 6998

2.13.1 Designation: 29L
2.13.2 Takeoff run available: 6998
2.13.3 Takeoff distance available: 6998
2.13.4 Accelerate-stop distance available: 6998
2.13.5 Landing distance available: 6998

2.13.1 Designation: 03
2.13.2 Takeoff run available: 7000
2.13.3 Takeoff distance available: 7000
2.13.4 Accelerate-stop distance available: 7000
2.13.5 Landing distance available: 6150

2.13.1 Designation: 21
2.13.2 Takeoff run available: 6000
2.13.3 Takeoff distance available: 7000
2.13.4 Accelerate-stop distance available: 6000
2.13.5 Landing distance available: 6000

2.13.1 Designation: 11L
2.13.2 Takeoff run available: 10996
2.13.3 Takeoff distance available: 10996
2.13.4 Accelerate-stop distance available: 10996
2.13.5 Landing distance available: 10996

2.13.1 Designation: 29R
2.13.2 Takeoff run available: 10996
2.13.3 Takeoff distance available: 10996
2.13.4 Accelerate-stop distance available: 10996
2.13.5 Landing distance available: 10996

AD 2.14 Approach and runway lighting

2.14.1 Designation: 11R
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 21
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 11L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 29R
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ANG COMD POST
2.18.3 Service designation: 138.525 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 123.8 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: ATIS
2.18.3 Service designation: 279.65 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P
2.18.3 Service designation: 126.65 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 326.2 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 124.4 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: LCL/S
2.18.3 Service designation: 119 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 11L. Magnetic variation: 12E

2.19.2 ILS identification: TUS
2.19.5 Coordinates: 32-05-53.5086N /
110-55-06.122W
2.19.6 Site elevation: 2660 ft

2.19.1 ILS type: DME for runway 11L. Magnetic variation: 12E
2.19.2 ILS identification: TUS
2.19.5 Coordinates: 32-05-54.9791N /

110-55-03.2373W

2.19.6 Site elevation: 2676.1 ft

2.19.1 ILS type: Glide Slope for runway 11L. Magnetic variation: 12E

2.19.2 ILS identification: TUS

2.19.5 Coordinates: 32-07-14.7675N /
110-56-48.0598W

2.19.6 Site elevation: 2580.3 ft

General Remarks:

ACFT DEPG RWY 11R REQD TO ATTAIN AT LEAST 400 FT AGL PRIOR TO STARTING TURN. DO NOT MISTAKE TWY A FOR A LANDING SURFACE. TWY A IS NORTH AND PARALLEL TO RWY 11L. ENSURE CORRECT LINEUP. RWY 29L IS THE SHORTER RWY SOUTH OF RWY 29R.

PORTIONS OF TWY D NOT VISIBLE FROM ATCT DUE TO HANGARS.

RWY 11L/29R HAS DSTC REMAINING MKS ON NE SIDE. RWY 03/21 HAS DSTC REMAINING MKRS ON SE SIDE.

NO B-747 TRNG EXCP PPR; NO FLT TRNG 2200-0600 EXCP PPR; CALL AIRSIDE OPERATIONS DEPT 520-573-8190.

B747 ACFT TAXI WITH INBOARD ENGINES ONLY.

AIR CARRIERS USE RWY 11L/29R & RWY 03/21

RWY 11R/29L RESTRICTED TO TKOF/LAND ACFT WITH WING SPAN LESS THAN 73 FT & LNDG SPEED LESS THAN 120 KNOTS.

SERVICE-A-GEAR: BAK-14/BAK-12B APCH END RWY 11L AND BAK-14/BAK-12B APCH END RWY 29R, ENGAGEMENTS AVBL ONLY DUR ANG DUTY HR AND 15 MIN PN RQR. BAK-12B OVRN RWY 29R AND BAK-12B OVRN RWY 11L SERVICEABLE BUT NOT CERTIFIED. BAK-12B IN RWY 11L OVERRUN HAS 850 FT RUN OUT.

HELICOPTER OPNS LCTD SOUTH OF RWY 11R/29L & WEST OF TWY A13.

TWY A5 LMTD TO 70000 LBS OR LESS.

ANG - OFFL BUS ONLY. PPR DSN 844-6731, C520-295-6731, FAX EXTN 6732. 24 HR NOTIFICATION REQ FOR ALL PPR'S. BASE OPS OPR 1300-2200Z++ MON-FRI EXC HOL. NO TRAN ALERT MAINT AVBL. NO CONTRACT FUEL AVBL. TRAN ACFT EXP STR-IN FULL STOP ONLY.

ALL ACFT USE UPPER ANTENNA UNTIL AIRBORNE.

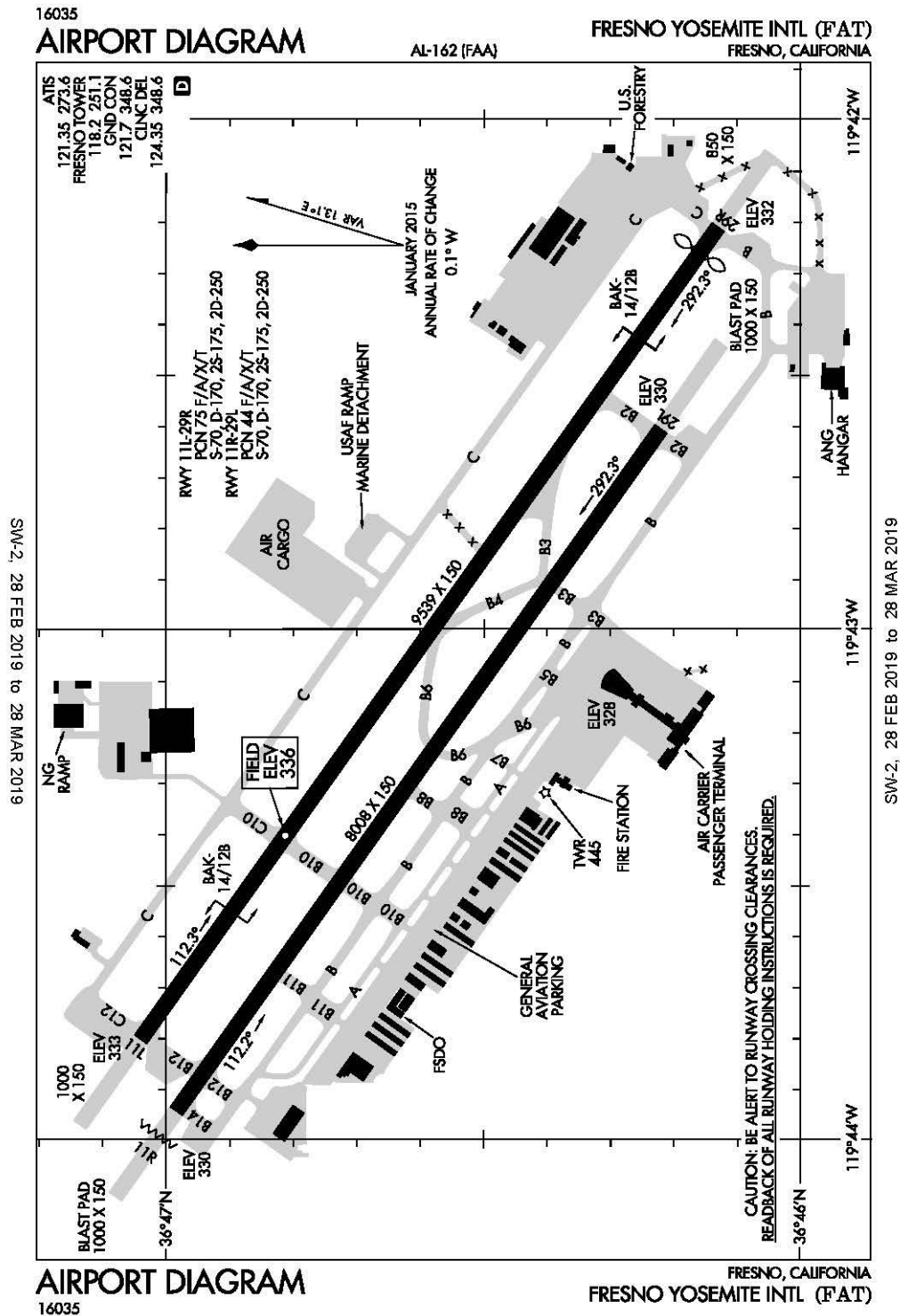
NO PUBLIC SERVICES AVAILABLE AT THE TUS EXECUTIVE TERMINAL.

CALL OPERATIONS OFFICE AT 520-573-8190.

SERVICE-FUEL: A++(MIL)

PPR REQUIRED FOR ALL CHARTER, SPORTS TEAM, CARGO AND MILITARY AIRCRAFT. CONTACT AIRSIDE OPERATIONS FOR PPR NUMBER AT 520-573-8190. LANDING AND PARKING FEES MAY APPLY FOR ACFT 12500 LBS AND UP.

Fresno, California
Fresno Yosemite International
ICAO Identifier KEAT



Fresno, CA
Fresno Yosemite Intl
ICAO Identifier KFAT

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 36-46-35.6N / 119-43-07.8W
2.2.2 From City: 5 Miles NE Of Fresno, CA
2.2.3 Elevation: 335.5 ft
2.2.5 Magnetic variation: 13E (2020)
2.2.6 Airport Contact: Kevin R. Meikle
4995 E CLINTON WAY
Fresno, CA 93727
(559-621-4500)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A++,A,100
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
B certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 11L
2.10.1.b Type of obstacle: Pole (31 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 650 ft L of Centerline

2.10.1.a. Runway designation: 29R
2.10.1.b Type of obstacle: Road (16 ft above runway end). Lighted
2.10.1.c Location of obstacle: 580 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 11L
2.12.2 True Bearing: 125
2.12.3 Dimensions: 9539 ft x 150 ft
2.12.4 PCN: 75 F/A/X/T
2.12.5 Coordinates: 36-47-02.406N /
119-43-48.3081W
2.12.6 Threshold elevation: 333 ft
2.12.6 Touchdown zone elevation: 335.5 ft

2.12.1 Designation: 29R
2.12.2 True Bearing: 305

2.12.3 Dimensions: 9539 ft x 150 ft
2.12.4 PCN: 75 F/A/X/T
2.12.5 Coordinates: 36-46-07.8228N /
119-42-12.6898W
2.12.6 Threshold elevation: 332 ft
2.12.6 Touchdown zone elevation: 332.6 ft

2.12.1 Designation: 11R
2.12.2 True Bearing: 125
2.12.3 Dimensions: 8008 ft x 150 ft
2.12.4 PCN: 44 F/A/X/T
2.12.5 Coordinates: 36-46-59.0217N /
119-43-56.7171W
2.12.6 Threshold elevation: 330 ft
2.12.6 Touchdown zone elevation: 332.9 ft

2.12.1 Designation: 29L
2.12.2 True Bearing: 305
2.12.3 Dimensions: 8008 ft x 150 ft
2.12.4 PCN: 44 F/A/X/T
2.12.5 Coordinates: 36-46-13.2042N /
119-42-36.4402W
2.12.6 Threshold elevation: 329.9 ft
2.12.6 Touchdown zone elevation: 330.7 ft

AD 2.13 Declared distances

2.13.1 Designation: 11L
2.13.2 Takeoff run available: 9539
2.13.3 Takeoff distance available: 9539
2.13.4 Accelerate-stop distance available: 9279
2.13.5 Landing distance available: 9279

2.13.1 Designation: 29R
2.13.2 Takeoff run available: 9539
2.13.3 Takeoff distance available: 9539
2.13.4 Accelerate-stop distance available: 9539
2.13.5 Landing distance available: 9227

2.13.1 Designation: 11R
2.13.2 Takeoff run available: 8008
2.13.3 Takeoff distance available: 8008
2.13.4 Accelerate-stop distance available: 8008
2.13.5 Landing distance available: 8008

2.13.1 Designation: 29L
2.13.2 Takeoff run available: 8008
2.13.3 Takeoff distance available: 8008
2.13.4 Accelerate-stop distance available: 8008
2.13.5 Landing distance available: 8008

AD 2.14 Approach and runway lighting

2.14.1 Designation: 11L

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 29R

2.14.2 Approach lighting system: ALSF2

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 29L

2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ANG OPS

2.18.3 Service designation: 140 MHz

2.18.1 Service designation: ANG OPS

2.18.3 Service designation: 298.3 MHz

2.18.1 Service designation: APCH/P DEP/P (091-239)

2.18.3 Service designation: 323.25 MHz

2.18.1 Service designation: APCH/P DEP/P (091-239)

2.18.3 Service designation: 132.35 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(240-090)

2.18.3 Service designation: 351.95 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(240-090)

2.18.3 Service designation: 119.6 MHz

2.18.1 Service designation: APCH/S DEP/S (S/SE
VISALIA AREA)

2.18.3 Service designation: 118.5 MHz

2.18.1 Service designation: APCH/S DEP/S (S/SE
VISALIA AREA)

2.18.3 Service designation: 268.7 MHz

2.18.1 Service designation: ATIS

2.18.3 Service designation: 121.35 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: ATIS

2.18.3 Service designation: 273.6 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P

2.18.3 Service designation: 124.35 MHz

2.18.1 Service designation: CD/P

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: CLASS C (240-090)

2.18.3 Service designation: 351.95 MHz

2.18.1 Service designation: CLASS C (240-090)

2.18.3 Service designation: 119.6 MHz

2.18.1 Service designation: CLASS C (091-239)

2.18.3 Service designation: 132.35 MHz

2.18.1 Service designation: CLASS C (091-239)

2.18.3 Service designation: 323.25 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 251.1 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 118.2 MHz

2.18.1 Service designation: NG OPS

2.18.3 Service designation: 255.8 MHz

2.18.1 Service designation: NG OPS

2.18.3 Service designation: 132 MHz

2.18.1 Service designation: NG OPS

2.18.3 Service designation: 40.95 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 11L. Magnetic
variation: 13E

2.19.2 ILS identification: RPW

2.19.5 Coordinates: 36-46-02.54N / 119-42-03.44W

2.19.6 Site elevation: 331.3 ft

2.19.1 ILS type: DME for runway 11L. Magnetic varia-
tion: 13E

2.19.2 ILS identification: RPW
2.19.5 Coordinates: 36-47-10.81N / 119-43-56.63W
2.19.6 Site elevation: 347.1 ft

2.19.1 ILS type: Inner Marker for runway 29R. Magnetic variation: 13E
2.19.2 ILS identification: FAT
2.19.5 Coordinates: 36-46-04.81N / 119-42-07.41W
2.19.6 Site elevation: 330.7 ft

2.19.1 ILS type: DME for runway 29R. Magnetic variation: 13E
2.19.2 ILS identification: FAT
2.19.5 Coordinates: 36-47-10.81N / 119-43-56.63W

2.19.6 Site elevation: 347.1 ft

2.19.1 ILS type: Localizer for runway 29R. Magnetic variation: 13E
2.19.2 ILS identification: FAT
2.19.5 Coordinates: 36-47-08.2801N / 119-43-58.6W
2.19.6 Site elevation: 333.7 ft

2.19.1 ILS type: Glide Slope for runway 29R. Magnetic variation: 13E
2.19.2 ILS identification: FAT
2.19.5 Coordinates: 36-46-18.84N / 119-42-23.4799W
2.19.6 Site elevation: 332 ft

General Remarks:

FRESNO YOSEMITE INTL IS NOISE SENSITIVE; NOISE ABATEMENT PROCEDURES IN EFFECT.

NO MULT APCHS AND LNDGS MON-SAT 2200-0700 AND SUN 1800-1000.

POSSIBLE WAKE TURBULENCE OR WIND SHEAR ARR TO RY 29L OR DEP FM RY 11R. JET TESTING CONDUCTED AT AIR NATIONAL GUARD RAMP LCTD AT SE CORNER OF ARPT.

NUMEROUS BIRDS INVOF ARPT.

LGTD RY DISTANCE REMAINING MARKERS ON SOUTH SIDE OF RY 11R/29L; LGTD RY DISTANCE REMAINING MARKERS BOTH SIDES OF RY 11L/29R- 11L DRM ON NORTH SIDE; 29R DRM ON SOUTH SIDE.

RETRACTABLE BAK-12/14 AVBL ON RY 11L AND RY 29R ARE KEPT IN RECESSED POSITION UNTIL REQ FOR USE; TWR MUST BE NOTIFIED AT LEAST 5 SECONDS PRIOR TO ENGAGEMENT SO THAT THE AG CABLE MAY BE RAISED.

SERVICE- JET AIR START UNIT (JASU): (AM32A-60) 2(AGPU)

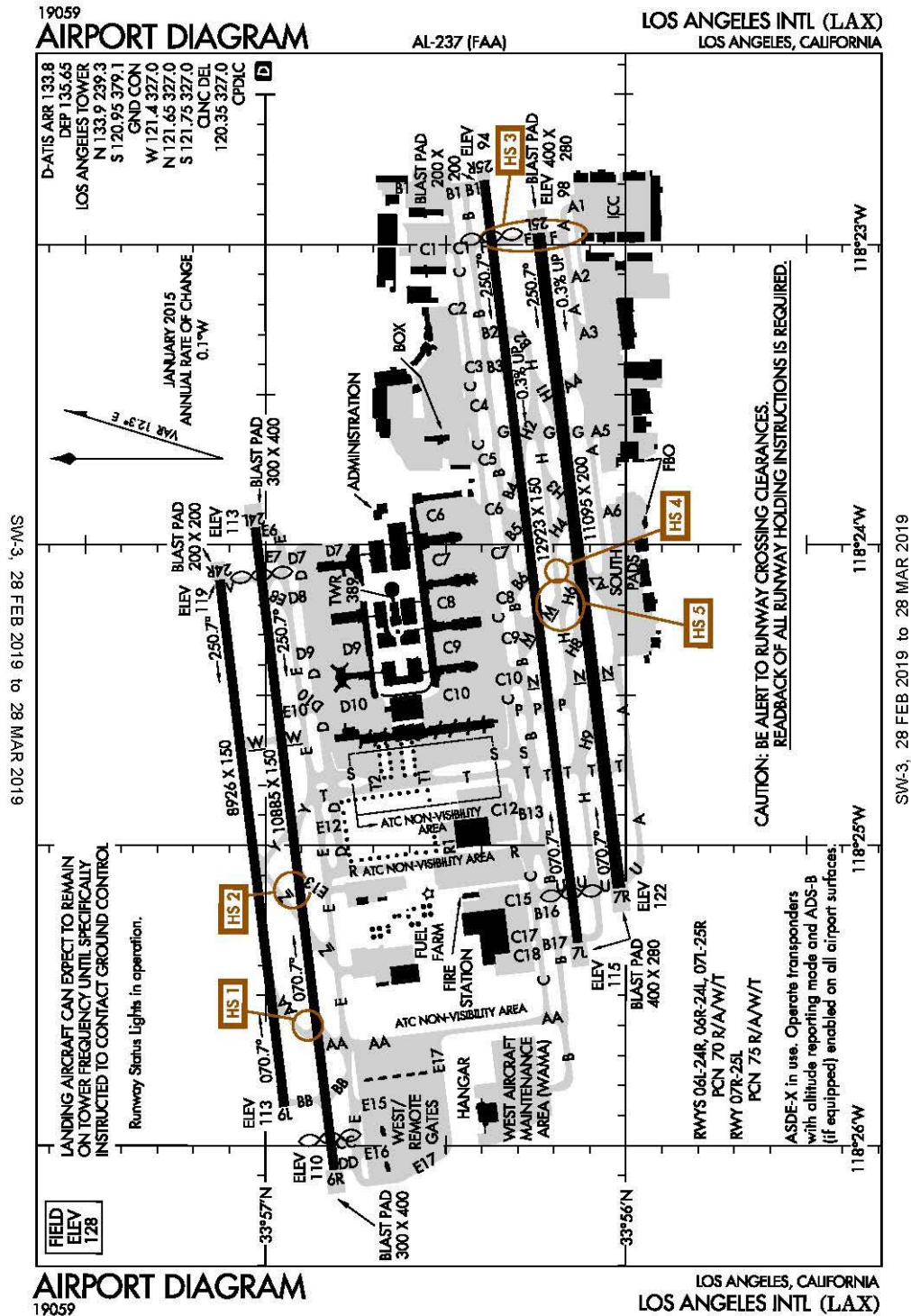
SERVICE-FUEL: SIGNATURE FLIGHT SUPPORT, C559-981-2490

SERVICE - FUEL: ROSS AVIATION, C559-251-1555

MILITARY: ANG: CTC ANG OPS FOR LCL BIRD WATCH COND (BWC).

MILITARY: SVC: RWY 29R AND 11L A-GEAR CABLE AVBL UPON REQ ONLY; DEFAULT POSN DOWN.

Los Angeles, California
Los Angeles International
ICAO Identifier KLAX



Los Angeles, CA
Los Angeles Intl
ICAO Identifier KLAX

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 33–56–32.98N / 118–24–28.98W
2.2.2 From City: 9 Miles SW Of Los Angeles, CA
2.2.3 Elevation: 127.7 ft
2.2.5 Magnetic variation: 12E (2020)
2.2.6 Airport Contact: Keith Wilschetz
ONE WORLD WAY
Los Angeles, CA 90009
(424–646–5060)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A
2.4.5 Hangar space: No
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 06L
2.10.1.b Type of obstacle: Pole (61 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 300 ft L of Centerline

2.10.1.a. Runway designation: 06R
2.10.1.b Type of obstacle: Pole (9 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 375 ft R of Centerline

2.10.1.a. Runway designation: 07R
2.10.1.b Type of obstacle: Pole (67 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 825 ft R of Centerline

2.10.1.a. Runway designation: 24R
2.10.1.b Type of obstacle: Sign (42 ft above runway end). Lighted
2.10.1.c Location of obstacle: 350 ft R of Centerline

2.10.1.a. Runway designation: 25L
2.10.1.b Type of obstacle: Rr (21 ft above runway end).

Not Lighted or Marked
2.10.1.c Location of obstacle: 600 ft L of Centerline

2.10.1.a. Runway designation: 25R
2.10.1.b Type of obstacle: Rr (25 ft above runway end). Lighted
2.10.1.c Location of obstacle: 0 ft B of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 07L
2.12.2 True Bearing: 83
2.12.3 Dimensions: 12923 ft x 150 ft
2.12.4 PCN: 70 R/A/W/T
2.12.5 Coordinates: 33–56–07.9881N / 118–25–19.4337W
2.12.6 Threshold elevation: 114.7 ft
2.12.6 Touchdown zone elevation: 127.7 ft

2.12.1 Designation: 25R
2.12.2 True Bearing: 263
2.12.3 Dimensions: 12923 ft x 150 ft
2.12.4 PCN: 70 R/A/W/T
2.12.5 Coordinates: 33–56–23.5601N / 118–22–47.1999W
2.12.6 Threshold elevation: 94.3 ft
2.12.6 Touchdown zone elevation: 103.6 ft

2.12.1 Designation: 07R
2.12.2 True Bearing: 83
2.12.3 Dimensions: 11095 ft x 200 ft
2.12.4 PCN: 75 R/A/W/T
2.12.5 Coordinates: 33–56–01.1378N / 118–25–08.466W
2.12.6 Threshold elevation: 121.7 ft
2.12.6 Touchdown zone elevation: 127.6 ft

2.12.1 Designation: 25L
2.12.2 True Bearing: 263
2.12.3 Dimensions: 11095 ft x 200 ft
2.12.4 PCN: 75 R/A/W/T
2.12.5 Coordinates: 33–56–14.5069N / 118–22–57.7701W
2.12.6 Threshold elevation: 97.8 ft
2.12.6 Touchdown zone elevation: 103.7 ft

2.12.1 Designation: 06L
2.12.2 True Bearing: 83
2.12.3 Dimensions: 8926 ft x 150 ft
2.12.4 PCN: 70 R/A/W/T
2.12.5 Coordinates: 33–56–56.8049N / 118–25–52.1755W

2.12.6 Threshold elevation: 113.1 ft
2.12.6 Touchdown zone elevation: 118.8 ft

2.12.1 Designation: 24R
2.12.2 True Bearing: 263
2.12.3 Dimensions: 8926 ft x 150 ft
2.12.4 PCN: 70 R/A/W/T
2.12.5 Coordinates: 33-57-07.5741N /
118-24-07.0161W
2.12.6 Threshold elevation: 118.9 ft
2.12.6 Touchdown zone elevation: 122.4 ft

2.12.1 Designation: 06R
2.12.2 True Bearing: 83
2.12.3 Dimensions: 10885 ft x 150 ft
2.12.4 PCN: 70 R/A/W/T
2.12.5 Coordinates: 33-56-48.5368N /
118-26-04.8042W
2.12.6 Threshold elevation: 109.9 ft
2.12.6 Touchdown zone elevation: 116.2 ft

2.12.1 Designation: 24L
2.12.2 True Bearing: 263
2.12.3 Dimensions: 10885 ft x 150 ft
2.12.4 PCN: 70 R/A/W/T
2.12.5 Coordinates: 33-57-01.6678N /
118-23-56.5656W
2.12.6 Threshold elevation: 112.9 ft
2.12.6 Touchdown zone elevation: 122.5 ft

AD 2.13 Declared distances

2.13.1 Designation: 07L
2.13.2 Takeoff run available: 12091
2.13.3 Takeoff distance available: 12091
2.13.4 Accelerate-stop distance available: 12091
2.13.5 Landing distance available: 11259

2.13.1 Designation: 25R
2.13.2 Takeoff run available: 12091
2.13.3 Takeoff distance available: 12091
2.13.4 Accelerate-stop distance available: 12091
2.13.5 Landing distance available: 11134

2.13.1 Designation: 07R
2.13.2 Takeoff run available: 11095
2.13.3 Takeoff distance available: 11095
2.13.4 Accelerate-stop distance available: 11095
2.13.5 Landing distance available: 11095

2.13.1 Designation: 25L
2.13.2 Takeoff run available: 11095

2.13.3 Takeoff distance available: 11095
2.13.4 Accelerate-stop distance available: 11095
2.13.5 Landing distance available: 11095

2.13.1 Designation: 06L
2.13.2 Takeoff run available: 8925
2.13.3 Takeoff distance available: 8925
2.13.4 Accelerate-stop distance available: 8566
2.13.5 Landing distance available: 8566

2.13.1 Designation: 24R
2.13.2 Takeoff run available: 8925
2.13.3 Takeoff distance available: 8925
2.13.4 Accelerate-stop distance available: 8925
2.13.5 Landing distance available: 8925

2.13.1 Designation: 06R
2.13.2 Takeoff run available: 10285
2.13.3 Takeoff distance available: 10285
2.13.4 Accelerate-stop distance available: 10285
2.13.5 Landing distance available: 9748

2.13.1 Designation: 24L
2.13.2 Takeoff run available: 10285
2.13.3 Takeoff distance available: 10285
2.13.4 Accelerate-stop distance available: 10285
2.13.5 Landing distance available: 9483

AD 2.14 Approach and runway lighting

2.14.1 Designation: 07L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 25R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 07R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 25L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R
2.14.10 Remarks: ALSF2 Operates As SSALR Till Wx
Goes Below Vfr.

2.14.1 Designation: 06L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 24R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: ALSF2 Operates As SSALR Till Wx Goes Below Vfr.

2.14.1 Designation: 06R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 24L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P
2.18.3 Service designation: 327 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 120.35 MHz

2.18.1 Service designation: D-ATIS (DEP)
2.18.3 Service designation: 135.65 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS (ARR)
2.18.3 Service designation: 133.8 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P (SOUTH CMPLX)
2.18.3 Service designation: 121.75 MHz

2.18.1 Service designation: GND/P (WEST)
2.18.3 Service designation: 121.4 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 327 MHz

2.18.1 Service designation: GND/P (NORTH-CMPLX)
2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: LCL/P (HELICOPTERS)
2.18.3 Service designation: 119.8 MHz

2.18.1 Service designation: LCL/P IC (SOUTH CM-

PLX)
2.18.3 Service designation: 120.95 MHz

2.18.1 Service designation: LCL/P IC (NORTH CM-PLX) & HELI
2.18.3 Service designation: 239.3 MHz

2.18.1 Service designation: LCL/P IC (NORTH CM-PLX)
2.18.3 Service designation: 133.9 MHz

2.18.1 Service designation: LCL/P IC (SOUTH CM-PLX)
2.18.3 Service designation: 379.1 MHz

2.18.1 Service designation: OPS (SAMSO FLT OPS)
2.18.3 Service designation: 372.2 MHz

2.18.1 Service designation: RAMP CTL (TXL C8 0500L-2359L)
2.18.3 Service designation: 130.85 MHz

2.18.1 Service designation: RAMP CTL (TXL C9 0530L-2230L)
2.18.3 Service designation: 130.5 MHz

2.18.1 Service designation: RAMP CTL (TXL C6 0600L-2300L)
2.18.3 Service designation: 129.5 MHz

2.18.1 Service designation: RAMP CTL (TXL C7 0600L-2300L)
2.18.3 Service designation: 129.4 MHz

2.18.1 Service designation: RAMP CTL (TXL C10 0630L-2330L)
2.18.3 Service designation: 129.325 MHz

2.18.1 Service designation: RAMP CTL (TXL D9)
2.18.3 Service designation: 131.45 MHz

2.18.1 Service designation: SPECIAL FLIGHT RULE AREA
2.18.3 Service designation: 128.55 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 06L. Magnetic variation: 12E

2.19.2 ILS identification: UWU

2.19.5 Coordinates: 33-56-54.5859N / 118-25-39.8249W

2.19.6 Site elevation: 110.5 ft

2.19.1 ILS type: DME for runway 06L. Magnetic variation: 12E

2.19.2 ILS identification: UWU

2.19.5 Coordinates: 33-56-50.7522N / 118-26-26.6221W

2.19.6 Site elevation: 139.3 ft

2.19.1 ILS type: Localizer for runway 06L. Magnetic variation: 12E

2.19.2 ILS identification: UWU

2.19.5 Coordinates: 33-57-08.5767N / 118-23-57.1965W

2.19.6 Site elevation: 108.5 ft

2.19.1 ILS type: Glide Slope for runway 06R. Magnetic variation: 12E

2.19.2 ILS identification: GPE

2.19.5 Coordinates: 33-56-53.3646N / 118-25-47.3623W

2.19.6 Site elevation: 108 ft

2.19.1 ILS type: DME for runway 06R. Magnetic variation: 12E

2.19.2 ILS identification: GPE

2.19.5 Coordinates: 33-56-49.9191N / 118-26-22.7714W

2.19.6 Site elevation: 134.3 ft

2.19.1 ILS type: Localizer for runway 06R. Magnetic variation: 12E

2.19.2 ILS identification: GPE

2.19.5 Coordinates: 33-57-02.4125N / 118-23-49.2874W

2.19.6 Site elevation: 106.3 ft

2.19.1 ILS type: Localizer for runway 07L. Magnetic variation: 12E

2.19.2 ILS identification: IAS

2.19.5 Coordinates: 33-56-24.7593N / 118-22-35.4452W

2.19.6 Site elevation: 112.2 ft

2.19.1 ILS type: Glide Slope for runway 07L. Magnetic variation: 12E

2.19.2 ILS identification: IAS

2.19.5 Coordinates: 33-56-07.748N / 118-24-56.6719W

2.19.6 Site elevation: 119.6 ft

2.19.1 ILS type: DME for runway 07L. Magnetic variation: 12E

2.19.2 ILS identification: IAS

2.19.5 Coordinates: 33-56-04.88N / 118-25-24.83W

2.19.6 Site elevation: 104.5 ft

2.19.1 ILS type: DME for runway 07R. Magnetic variation: 12E

2.19.2 ILS identification: MKZ

2.19.5 Coordinates: 33-56-03.1899N / 118-25-20.7882W

2.19.6 Site elevation: 126 ft

2.19.1 ILS type: Glide Slope for runway 07R. Magnetic variation: 12E

2.19.2 ILS identification: MKZ

2.19.5 Coordinates: 33-55-59.9253N / 118-24-55.0492W

2.19.6 Site elevation: 118.2 ft

2.19.1 ILS type: Localizer for runway 07R. Magnetic variation: 12E

2.19.2 ILS identification: MKZ

2.19.5 Coordinates: 33-56-15.7853N / 118-22-45.2443W

2.19.6 Site elevation: 92.5 ft

2.19.1 ILS type: Glide Slope for runway 24L. Magnetic variation: 12E

2.19.2 ILS identification: HQB

2.19.5 Coordinates: 33-57-02.31N / 118-24-18.51W

2.19.6 Site elevation: 116.7 ft

2.19.1 ILS type: DME for runway 24L. Magnetic variation: 12E

2.19.2 ILS identification: HQB

2.19.5 Coordinates: 33-56-49.9191N / 118-26-22.7714W

2.19.6 Site elevation: 134.3 ft

2.19.1 ILS type: Localizer for runway 24L. Magnetic variation: 12E

2.19.2 ILS identification: HQB

2.19.5 Coordinates: 33-56-46.746N / 118-26-22.2482W

2.19.6 Site elevation: 123.4 ft

2.19.1 ILS type: DME for runway 24R. Magnetic variation: 12E

2.19.2 ILS identification: OSS

2.19.5 Coordinates: 33-56-50.7522N /

118-26-26.6221W

2.19.6 Site elevation: 139.3 ft

2.19.1 ILS type: Localizer for runway 24R. Magnetic variation: 12E

2.19.2 ILS identification: OSS

2.19.5 Coordinates: 33-56-53.1648N /
118-26-27.6839W

2.19.6 Site elevation: 125.5 ft

2.19.1 ILS type: Glide Slope for runway 24R. Magnetic variation: 12E

2.19.2 ILS identification: OSS

2.19.5 Coordinates: 33-57-02.4082N /
118-24-18.522W

2.19.6 Site elevation: 116.7 ft

2.19.1 ILS type: Localizer for runway 25L. Magnetic variation: 12E

2.19.2 ILS identification: LAX

2.19.5 Coordinates: 33-55-59.8649N /
118-25-20.8676W

2.19.6 Site elevation: 118.4 ft

2.19.1 ILS type: DME for runway 25L. Magnetic variation: 12E

2.19.2 ILS identification: LAX

2.19.5 Coordinates: 33-56-03.1899N /
118-25-20.7882W

2.19.6 Site elevation: 126 ft

2.19.1 ILS type: Glide Slope for runway 25L. Magnetic variation: 12E

2.19.2 ILS identification: LAX

2.19.5 Coordinates: 33-56-17.7739N /
118-23-10.2139W

2.19.6 Site elevation: 97.3 ft

2.19.1 ILS type: DME for runway 25R. Magnetic variation: 12E

2.19.2 ILS identification: CFN

2.19.5 Coordinates: 33-56-04.88N / 118-25-24.83W
2.19.6 Site elevation: 104.5 ft

2.19.1 ILS type: Localizer for runway 25R. Magnetic variation: 12E

2.19.2 ILS identification: CFN

2.19.5 Coordinates: 33-56-07.2517N /
118-25-26.6191W

2.19.6 Site elevation: 118.1 ft

2.19.1 ILS type: Glide Slope for runway 25R. Magnetic variation: 12E

2.19.2 ILS identification: CFN

2.19.5 Coordinates: 33-56-17.8715N /
118-23-10.2246W

2.19.6 Site elevation: 97.7 ft

General Remarks:

NMRS BIRDS ON AND IN VCNTY OF ARPT.

TURB MAY BE DEFLECTED UPWARD FM THE BLAST FENCE 180 FT E OF RWY 25R.

NOISE SENS ARPT ON WESTERLY TAKEOFFS NO TURNS BEFORE CROSSING SHORELINE OVER-OCEAN
APCHS UTILIZED 0000-0630.

PRACTICE INSTRUMENT APPROACHES & TOUCH AND GO LANDINGS ARE PROHIBITED.

RWY 25L PREFERRED EMERG RWY.

SIMUL ACFT OPNS PROHIBITED ON TWYS T AND H9 BTWN RWYS 07L/25R AND 07R/25L.

SIMUL ACFT OPNS PROHIBITED ON TWY H2 AND G BTN RWYS 07L/25R AND 07R/25L.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF
EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

MILITARY RSTD: ALL MIL ACFT OFFL BUS ONLY, MIN 24 HR PPR, CTC 61 ABW/CP FLT OPS DSN
633-3779/4014,

C310-653-3779/4014.

MILITARY AF: ALL MIL AIRCREWS MUST CTC 61 ABW/CP FLT OPS FOR PRK LCTN/INSTR. NO GOVT TRANSPORTATION, QTRS OR SECURITY AVBL. VIP NOTIFICATION PRO APPLY. USER FEES ASSESSED USING AVCARD CREDIT. CTC ATLANTIC AVIATION FBO 131.6 INBD. INBD RELAY ETA, VIP CODE, SVC RQ 30 MIN PRIOR TO ARR.

TWY D BTN TWY D-7 AND D-8 (NORTH OF TERMINAL ONE) CLSD TO ACFT WITH WINGSPAN GREATER THAN 157 FT.

WEST REMOTE GATES: ACFT USE OF OPEN GATES AS TAXI PATH IS PROHIBITED (GATES 206, 207, 208, 209).

TWY E13 S OF TWY E CLSD TO ACFT WITH WINGSPAN OVER 125 FT.

ACFT USE MINIMAL PWR WHEN TXG VCNTY TRMLS DUE BLAST HAZ.

FOR ACFT WITH WINGSPAN GTR THAN 214 FT CTC LAX AIRSIDE OPS (424)-646-5292 FOR ARPT RESTRICTIONS.

MAJOR CONSTRUCTION ON AIRPORT, DAILY.

AMERICAN EAGLE TRML SOUTHBOUND TAXING ACFT USE MNM PWR DUE TO BLAST HAZ.

SBND TURN NOT AVBL FROM WEST REMOTE GATE 208 AND WEST REMOTE GATE 209

ANY ACFT THAT COMES TO A STOP OR HAS ITS MOMENTUM INTRPD WHILE TURNING AND TAXING INTO ITS PRKG PSN, MUST STOP AND BE TOWED.

ACFT WITH LEN GTR THAN 240 FT ARE PROHIBITED ON TXLS C8 AND C9 BTN TXL C AND TWY B.

B772 ACFT EASTBOUND ON TAXILANE C ARE NOT AUTHD TO TRANSITION TO TAXIWAY B AT TAXIWAY C9

B772 ACFT AND GTR OBND FM TXL D8 MAY NOT TURN WBND ONTO TXL D UNDER POWER

B763 ACFT AND GTR HLDG ON TXL C ABEAM T4 ARE NOT AUTHD TO MAKE THE LEFT TURN ON TWY C10 UNDER POWER

RWY STATUS LGTS IN OPN.

17285
AIRPORT DIAGRAM
 AL-294 (FAA)
 METROPOLITAN OAKLAND INTL (OAK)
 OAKLAND, CALIFORNIA

D-ATIS
 133.775
 OAKLAND TOWER
 118.3 291.65 (RWYS 10L-28R, 10R-28L, 15-33)
 127.2 256.9 (RWY 12-30)
 GND CON
 121.75 (RWY 12-30)
 121.9 (RWYS 10L-28R, 10R-28L, 15-33)
 CLNC DEL
 121.1
 CPDLC
D

122°14'W 122°13'W
 NWS
 HANGARS
 ELEV 5
 150.3°
 327.6 X 75
 330.9°
 330.9°
 ELEV 5
 C-33
 101
 ELEV 6
 098.7°
 098.7°
 ELEV 9
 6213 X 150
 5458 X 150
 278.7°
 278.7°
 ELEV 9
 281
 ELEV 7
 37°44'N
 37°43'N
 37°42'N

HS 3
 HS 2
 HS 1
 GENERAL AVIATION AREA
 EMAS
 BLAST PAD
 400 X 220
 116.5°
 ELEV 8
 W7
 W6
 W5
 W4
 W3
 W2
 W1
 CAT 2
 HOLDING
 BLAST PAD
 400 X 220
 ELEV 9
 290.5°
 10520 X 150
 FIELD
 ELEV 9
 TWR
 257
 FEDEX
 FIRE STATION
 CARGO
 OAKLAND MAINTENANCE
 TERMINAL
 RON PARKING

RWY 10L-28R
 PCN 67 F/B/W/T
 RWY 10R-28L
 PCN 59 F/B/W/T
 RWY 12-30
 PCN 75 F/A/W/T
 RWY 15-33
 S-12.5

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
 READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

AIRPORT DIAGRAM
17285
 OAKLAND, CALIFORNIA
 METROPOLITAN OAKLAND INTL (OAK)

Oakland, CA
Metropolitan Oakland Intl
ICAO Identifier KOAK

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 37-43-16.5N / 122-13-16.1W
2.2.2 From City: 4 Miles S Of Oakland, CA
2.2.3 Elevation: 9 ft
2.2.5 Magnetic variation: 14E (2015)
2.2.6 Airport Contact: Matt Davis
METROPOLITAN OAKLAND INTL ARPT
Oakland, CA 94621 (510-563-6436)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: No
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 28R
2.10.1.b Type of obstacle: Bldg (11 ft above runway end). Lighted
2.10.1.c Location of obstacle: 480 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 10L
2.12.2 True Bearing: 112
2.12.3 Dimensions: 5458 ft x 150 ft
2.12.4 PCN: 67 F/B/W/T
2.12.5 Coordinates: 37-43-49.6865N /
122-13-19.8481W
2.12.6 Threshold elevation: 5.5 ft
2.12.6 Touchdown zone elevation: 6.3 ft

2.12.1 Designation: 28R
2.12.2 True Bearing: 292
2.12.3 Dimensions: 5458 ft x 150 ft
2.12.4 PCN: 67 F/B/W/T
2.12.5 Coordinates: 37-43-29.3247N /
122-12-16.9329W
2.12.6 Threshold elevation: 5.8 ft
2.12.6 Touchdown zone elevation: 6.8 ft

2.12.1 Designation: 12
2.12.2 True Bearing: 130
2.12.3 Dimensions: 10520 ft x 150 ft
2.12.4 PCN: 75 F/A/W/T
2.12.5 Coordinates: 37-43-12.2256N /
122-14-31.6133W
2.12.6 Threshold elevation: 8.3 ft
2.12.6 Touchdown zone elevation: 8.6 ft

2.12.1 Designation: 30
2.12.2 True Bearing: 310
2.12.3 Dimensions: 10520 ft x 150 ft
2.12.4 PCN: 75 F/A/W/T
2.12.5 Coordinates: 37-42-05.3735N /
122-12-51.3251W
2.12.6 Threshold elevation: 9 ft
2.12.6 Touchdown zone elevation: 9 ft

2.12.1 Designation: 15
2.12.2 True Bearing: 164
2.12.3 Dimensions: 3376 ft x 75 ft
2.12.5 Coordinates: 37-44-25.0497N /
122-13-22.1076W
2.12.6 Threshold elevation: 1.5 ft
2.12.6 Touchdown zone elevation: 4.6 ft

2.12.1 Designation: 33
2.12.2 True Bearing: 344
2.12.3 Dimensions: 3376 ft x 75 ft
2.12.5 Coordinates: 37-43-52.9005N /
122-13-10.826W
2.12.6 Threshold elevation: 3.9 ft
2.12.6 Touchdown zone elevation: 4.6 ft

2.12.1 Designation: 10R
2.12.2 True Bearing: 112
2.12.3 Dimensions: 6213 ft x 150 ft
2.12.4 PCN: 59 F/B/W/T
2.12.5 Coordinates: 37-43-43.345N /
122-13-33.2509W
2.12.6 Threshold elevation: 8.1 ft
2.12.6 Touchdown zone elevation: 9 ft

2.12.1 Designation: 28L
2.12.2 True Bearing: 292
2.12.3 Dimensions: 6213 ft x 150 ft
2.12.4 PCN: 59 F/B/W/T
2.12.5 Coordinates: 37-43-20.178N /
122-12-21.6341W
2.12.6 Threshold elevation: 8.2 ft
2.12.6 Touchdown zone elevation: 8.7 ft

AD 2.13 Declared distances

2.13.1 Designation: 10L
2.13.2 Takeoff run available: 5458
2.13.3 Takeoff distance available: 5458
2.13.4 Accelerate–stop distance available: 5336
2.13.5 Landing distance available: 5336

2.13.1 Designation: 28R
2.13.2 Takeoff run available: 5458
2.13.3 Takeoff distance available: 5458
2.13.4 Accelerate–stop distance available: 5458
2.13.5 Landing distance available: 5458

2.13.1 Designation: 12
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate–stop distance available: 10000
2.13.5 Landing distance available: 10000

2.13.1 Designation: 30
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate–stop distance available: 10000
2.13.5 Landing distance available: 10000

2.13.1 Designation: 10R
2.13.2 Takeoff run available: 6213
2.13.3 Takeoff distance available: 6213
2.13.4 Accelerate–stop distance available: 6213
2.13.5 Landing distance available: 6213

2.13.1 Designation: 28L
2.13.2 Takeoff run available: 6213
2.13.3 Takeoff distance available: 6213
2.13.4 Accelerate–stop distance available: 6213
2.13.5 Landing distance available: 6213

AD 2.14 Approach and runway lighting

2.14.1 Designation: 10L
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 28R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 12
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 30
2.14.2 Approach lighting system: ALSF2

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 10R
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 28L
2.14.4 Visual approach slope indicator system: P4R

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P
2.18.3 Service designation: 121.1 MHz

2.18.1 Service designation: D–ATIS
2.18.3 Service designation: 133.775 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P (RYS 12–30)
2.18.3 Service designation: 121.75 MHz

2.18.1 Service designation: GND/P (RYS 28R–10L,
28L–10R, 15–33)
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P (RYS 28R–10L,
28L–10R, 15–33)
2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: LCL/P (RYS 12–30)
2.18.3 Service designation: 127.2 MHz

2.18.1 Service designation: LCL/P (RYS 12–30)
2.18.3 Service designation: 256.9 MHz

2.18.1 Service designation: LCL/P (RYS 28R–10L,
28L–10R, 15–33)
2.18.3 Service designation: 291.65 MHz

2.18.1 Service designation: LCL/S
2.18.3 Service designation: 124.9 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 12. Magnetic variation: 14E

2.19.2 ILS identification: AAZ

2.19.5 Coordinates: 37–42–02.2539N /
122–12–46.6503W

2.19.6 Site elevation: 7.2 ft

2.19.1 ILS type: Glide Slope for runway 12. Magnetic variation: 14E
2.19.2 ILS identification: AAZ
2.19.5 Coordinates: 37-43-02.9276N / 122-14-22.8383W
2.19.6 Site elevation: 3.3 ft

2.19.1 ILS type: Localizer for runway 28R. Magnetic variation: 14E
2.19.2 ILS identification: OAK
2.19.5 Coordinates: 37-43-54.55N / 122-13-34.86W
2.19.6 Site elevation: 5.2 ft

2.19.1 ILS type: Glide Slope for runway 28R. Magnetic variation: 14E
2.19.2 ILS identification: OAK
2.19.5 Coordinates: 37-43-28.5955N / 122-12-30.6206W
2.19.6 Site elevation: 3.3 ft

2.19.1 ILS type: Glide Slope for runway 30. Magnetic variation: 14E
2.19.2 ILS identification: INB
2.19.5 Coordinates: 37-42-09.7514N / 122-13-05.6277W
2.19.6 Site elevation: 4.3 ft

2.19.1 ILS type: Localizer for runway 30. Magnetic variation: 14E
2.19.2 ILS identification: INB
2.19.5 Coordinates: 37-43-29.8732N / 122-14-58.1043W
2.19.6 Site elevation: 9.3 ft

2.19.1 ILS type: DME for runway 30. Magnetic variation: 14E
2.19.2 ILS identification: INB
2.19.5 Coordinates: 37-43-29.85N / 122-14-58.1W
2.19.6 Site elevation: 18 ft

General Remarks:

BIRDS ON & INVOF ARPT.

400 FT BY 220 FT BLAST PAD RWY 12 AND RWY 30.

NOISE ABATEMENT PROCS N/A IN EMERGS OR WHENEVER RWY 12/30 IS CLSD DUE TO MAINT, SAFETY, WINDS OR WX.

ACFT WITH EXPERIMENTAL OR LTD CERTIF HAVING OVER 1000 HORSEPOWER OR 4000 LBS ARE RSTRD TO RWY 12/30.

1000 FT CWY RWY 12 & RWY 30.

100 FT LGTD MICROWAVE ANT TWR LCTD 1320 FT WSW OF OAK VORTAC; S OF UPWIND END OF RWY 28L.

RWYS 30, 28R AND RWY 28L DIST RMNG SIGNS L SIDE.

FOR NOISE ABATEMENT INFO CTC NOISE ABATEMENT OFC AT (510) 563-6463.

RWY 15/33 CLSD TO ACR ACFT.

PREFERENTIAL RWY USE PROGRAM IN EFFECT 2200-0600. NORTH FLD PREF ARR RWY 28L, NORTH FLD PREF DEP RWYS 10R OR 28R. IF THESE RWYS UNACCEPTABLE FOR SAFETY OR ATC INSTRN THEN RWY 12/30 MUST BE USED.

24 HR NOISE ABATEMENT PROCEDURE - TBJT AND TURBOFAN PWRD ACFT, TURBOROPS OVER 17,000 LBS, FOUR-ENGINE RECIPROCATING PWRD ACFT, AND SURPLUS MIL ACFT OVER 12,500 POUNDS SHOULD NOT DEP RWYS 28L & 28R OR LAND ON RWYS 10R & 10L.

TWY A, E, G, H BTN RWY 28R AND TWY C MAX ACFT WT 150,000 LBS.

TWY G & H BTN RWY 28L & 28R: MAX ACFT WT 12,500 LBS.

TWY P MAX ACFT WT 116,000 LBS SINGLE; 190,000 LBS DUAL; 305,000 LBS DUAL TANDEM; 735,000 LBS DOUBLE DUAL TANDEM.

TWY C BTN RWY 28R & TWY G AND TWYS B, J, AND D MAX ACFT WT 861,000 LBS.

TWY C BTN TWY G & J MAX ACFT WEIGHT 90,000 LBS SINGLE; 144,000 LBS DUAL; 257,000 LBS TANDEM.

TWY C BTN TWY J & F MAX ACFT WEIGHT 76,000 LBS SINGLE; 115,000 LBS DUAL; 257,000 LBS TANDEM (DUAL TANDEM NA).

TWY K BTN TWY D & INT TWYS F, L, K MAX ACFT WEIGHT 56,000 LBS SINGLE; 70,000 LBS DUAL; 130,000 LBS TANDEM.

TWY K BTN RWY 10R AND INT TWYS F, L, K MAX ACFT WEIGHT 33,000 LBS SINGLE; 45,000 LBS DUAL; TANDEM NA.

18312

AIRPORT DIAGRAM

AL-965 (FAA)

ONTARIO INTL (ONT)
ONTARIO, CALIFORNIA

D-ATIS
124.25
ONTARIO TOWER
120.6 360.775
GND CON
121.9 257.8
CLNC DEL
118.1
CPDLC

VAR 12.1° E

JANUARY 2015
ANNUAL RATE OF CHANGE
0.1° W

TERMINAL 1
TERMINAL 2
TERMINAL 4

INTERNATIONAL ARRIVALS TERMINAL

WEST CARGO RAMP

SOUTH CARGO RAMP

GENERAL AVIATION PARKING

RWY 08L-26R
PCN 102 R/B/W/T
S-30, D-200, 2D-560, 2D/2D2-850

RWY 08R-26L
PCN 70 R/B/W/T
S-30, D-200, 2D-560, 2D/2D2-850

BLAST PAD
400
X 250

BLAST PAD
400
X 200

TRACON

FIRE STATION

TWR 1039

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES. READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

117°37'W
117°36'W
117°35'W

34°04'N
34°03'N

FIELD ELEV 944

AIRPORT DIAGRAM

ONTARIO, CALIFORNIA
ONTARIO INTL (ONT)

Ontario, CA
Ontario Intl
ICAO Identifier KONT

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 34-03-21.6N / 117-36-04.3W
2.2.2 From City: 2 Miles E Of Ontario, CA
2.2.3 Elevation: 944 ft
2.2.5 Magnetic variation: 12E (2020)
2.2.6 Airport Contact: Mark Thorpe
1923 EAST AVION STREET
Ontario, CA 91761
(909-544-5300)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: No
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 08L
2.10.1.b Type of obstacle: Rr (20 ft above runway end).
Not Lighted or Marked
2.10.1.c Location of obstacle: 250 ft R of Centerline

2.10.1.a. Runway designation: 26L
2.10.1.b Type of obstacle: Pole (40 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 400 ft L of Centerline

2.10.1.a. Runway designation: 26R
2.10.1.b Type of obstacle: Pole (40 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 400 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 08L
2.12.2 True Bearing: 90
2.12.3 Dimensions: 12197 ft x 150 ft
2.12.4 PCN: 102 R/B/W/T
2.12.5 Coordinates: 34-03-24.7542N /
117-37-22.1464W

2.12.6 Threshold elevation: 943.2 ft
2.12.6 Touchdown zone elevation: 944 ft

2.12.1 Designation: 26R
2.12.2 True Bearing: 270
2.12.3 Dimensions: 12197 ft x 150 ft
2.12.4 PCN: 102 R/B/W/T
2.12.5 Coordinates: 34-03-24.8152N /
117-34-57.1903W
2.12.6 Threshold elevation: 931.7 ft
2.12.6 Touchdown zone elevation: 931.7 ft

2.12.1 Designation: 08R
2.12.2 True Bearing: 90
2.12.3 Dimensions: 10200 ft x 150 ft
2.12.4 PCN: 70 R/B/W/T
2.12.5 Coordinates: 34-03-17.8467N /
117-36-58.4095W
2.12.6 Threshold elevation: 936 ft
2.12.6 Touchdown zone elevation: 936 ft

2.12.1 Designation: 26L
2.12.2 True Bearing: 270
2.12.3 Dimensions: 10200 ft x 150 ft
2.12.4 PCN: 70 R/B/W/T
2.12.5 Coordinates: 34-03-17.8904N /
117-34-57.1886W
2.12.6 Threshold elevation: 926.2 ft
2.12.6 Touchdown zone elevation: 926.4 ft

AD 2.13 Declared distances

2.13.1 Designation: 08L
2.13.2 Takeoff run available: 12197
2.13.3 Takeoff distance available: 12197
2.13.4 Accelerate-stop distance available: 12197
2.13.5 Landing distance available: 11200

2.13.1 Designation: 26R
2.13.2 Takeoff run available: 12197
2.13.3 Takeoff distance available: 12197
2.13.4 Accelerate-stop distance available: 12197
2.13.5 Landing distance available: 12197

2.13.1 Designation: 08R
2.13.2 Takeoff run available: 10200
2.13.3 Takeoff distance available: 10200
2.13.4 Accelerate-stop distance available: 10200
2.13.5 Landing distance available: 10200

2.13.1 Designation: 26L
2.13.2 Takeoff run available: 10200

2.13.3 Takeoff distance available: 10200
2.13.4 Accelerate-stop distance available: 10200
2.13.5 Landing distance available: 10200

AD 2.14 Approach and runway lighting

2.14.1 Designation: 08L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 26R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 08R
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 26L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P
2.18.3 Service designation: 118.1 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 124.25 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 360.775 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 120.6 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 08L. Magnetic variation: 12E
2.19.2 ILS identification: AOD
2.19.5 Coordinates: 34-03-24.8181N /

117-34-45.0673W
2.19.6 Site elevation: 926.1 ft

2.19.1 ILS type: Glide Slope for runway 08L. Magnetic variation: 12E

2.19.2 ILS identification: AOD
2.19.5 Coordinates: 34-03-21.2052N /
117-36-59.8991W
2.19.6 Site elevation: 936 ft

2.19.1 ILS type: Localizer for runway 26L. Magnetic variation: 12E

2.19.2 ILS identification: TWO
2.19.5 Coordinates: 34-03-17.8409N /
117-37-10.2948W
2.19.6 Site elevation: 931.3 ft

2.19.1 ILS type: Glide Slope for runway 26L. Magnetic variation: 12E

2.19.2 ILS identification: TWO
2.19.5 Coordinates: 34-03-21.8933N /
117-35-10.9713W
2.19.6 Site elevation: 925.3 ft

2.19.1 ILS type: Outer Marker for runway 26L. Magnetic variation: 12E

2.19.2 ILS identification: TWO
2.19.5 Coordinates: 34-03-22.3291N /
117-28-17.7232W
2.19.6 Site elevation: 1010 ft

2.19.1 ILS type: DME for runway 26L. Magnetic variation: 12E

2.19.2 ILS identification: TWO
2.19.5 Coordinates: 34-03-20.4698N /
117-37-08.8491W
2.19.6 Site elevation: 947.9 ft

2.19.1 ILS type: Inner Marker for runway 26L. Magnetic variation: 12E

2.19.2 ILS identification: TWO
2.19.5 Coordinates: 34-03-17.8914N /
117-34-47.8499W
2.19.6 Site elevation: 921 ft

2.19.1 ILS type: Glide Slope for runway 26R. Magnetic variation: 12E

2.19.2 ILS identification: ONT
2.19.5 Coordinates: 34-03-22.0075N /
117-35-10.9749W
2.19.6 Site elevation: 925.8 ft

2.19.1 ILS type: Localizer for runway 26R. Magnetic variation: 12E
2.19.2 ILS identification: ONT
2.19.5 Coordinates: 34-03-24.7467N / 117-37-34.626W
2.19.6 Site elevation: 943 ft

2.19.1 ILS type: DME for runway 26R. Magnetic variation: 12E
2.19.2 ILS identification: ONT
2.19.5 Coordinates: 34-03-22.0269N / 117-37-33.6608W
2.19.6 Site elevation: 955 ft

General Remarks:

FBO ON FREQ 130.75.

WILDLIFE HAZARD MGT PLAN IN EFFECT; POTENTIAL BIRD HAZARDS MAY EXIST ON AND INVOF ARPT; BE ALERT TO LARGE NUMBERS OF STARLINGS AND CROWS POSSIBLE ON APCH TO RY 26L AND RY 26R, HAWKS, EAGLES, FALCONS AND OWLS SPOTTED ON OCCASION.

TWY S-3 AND TWY S-4 RSTD TO ACFT WITH WINGSPAN 117 FT OR SMALLER.

PILOTS SHOULD USE JUDGEMENTAL OVERSTEER ON TWY H, TWY S-3 AND TWY S-4.

NOISE ABATEMENT PROCEDURES IN EFFECT; FULL-LENGTH TURBOJET DEP ENCOURAGED, NIGHTLY PREFERENTIAL RWY USAGE, 2200-0700.

EASTBOUND B747, B777, A330, A340 OR LARGER ACFT ON TWY S PROHIBITED FROM NORTHBOUND TURNS ONTO TWY K.

B747, B777, A330, A340 OR LARGER ACFT ON TWY S PROHIBITED FROM NORTHBOUND TURNS ONTO TWY P.

ACFT PARKING AND CONTRACT GROUND SERVICES ARE LIMITED FOR NON-SCHEDULED OPERATIONS. FOR SCHEDULING INFORMATION CALL AIRFIELD OPERATIONS (909) 544-5344.

TWY Y EAST OF TWY W IS A NON-MOVEMENT AREA; ALL ACFT CTC RAMP CTL 131.325 FOR ACCESS.

ALL MILITARY AND GENERAL AVIATION (FIXED OR ROTOR WING) ACFT OPS ARE RESTRICTED TO FBO FACILITIES WITH ADVANCE COORDINATION; OVERNIGHT TIEDOWN AND PARKING FEE.

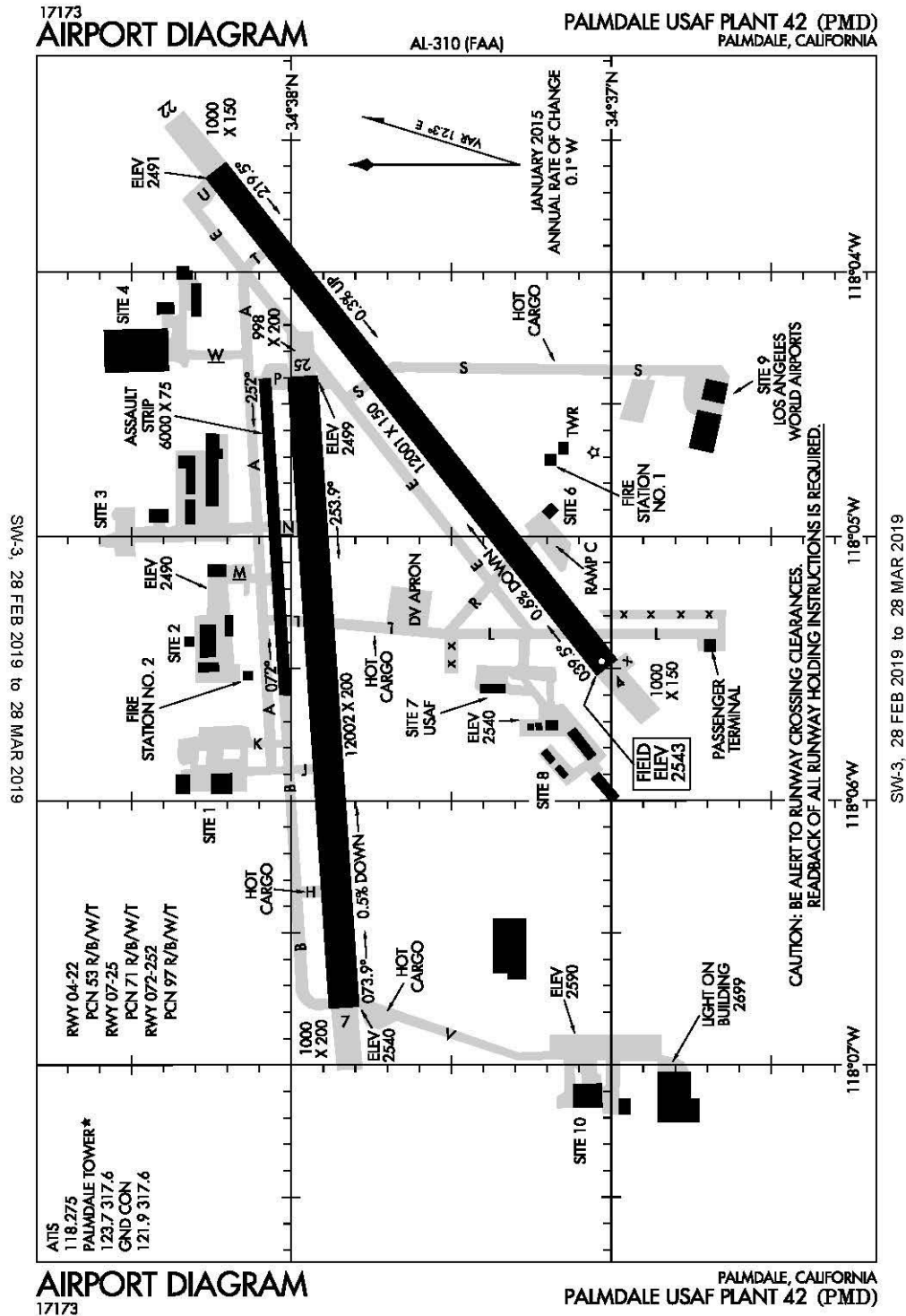
TWY S SOUTH OF CNTRLN BTN TXLN S-2 AND S-3, AND THE SOUTHERN HALF OF TXLN S-2 AND S-3 ARE NOT VISIBLE FM ATCT; PILOTS USE CAUTION ENTERING TXLN S-2 AND S-3.

ACFT ACCESS TO TWY R FROM RWY 26R PROHIBITED

TWY R ACFT ACCESS FROM RWY 26L IS PROHIBITED

TWY S2 RSTRD TO ACFT WITH 117 FT WINGSPAN AND SMALLER.

Palmdale, California
Palmdale Regional/USAF Plant 42
ICAO Identifier KPMD



Palmdale, CA
Palmdale Rgnl/USAF Plant 42
ICAO Identifier KPMD

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 34-37-45.8N / 118-05-04.39W
2.2.2 From City: 3 Miles NE Of Palmdale, CA
2.2.3 Elevation: 2542.5 ft
2.2.5 Magnetic variation: 12E (2020)
2.2.6 Airport Contact: Ken Neitzel
2503 E AVE P
Palmdale, CA 93550
(661-272-6715)

AD 2.3 Attendance Schedule

2.3.1 - 2.3.11: ALL Months, ALL Days, 1330-0600Z++
Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: No
2.4.2 Fuel types: None
2.4.5 Hangar space: No
2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: None

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 04
2.10.1.b Type of obstacle: Hill. Not Lighted or Marked

AD 2.12 Runway physical characteristics

2.12.1 Designation: 07
2.12.2 True Bearing: 86
2.12.3 Dimensions: 12002 ft x 200 ft
2.12.4 PCN: 71 R/B/W/T
2.12.5 Coordinates: 34-37-50.106N / 118-06-47.029W
2.12.6 Threshold elevation: 2540.2 ft
2.12.6 Touchdown zone elevation: 2540.2 ft
2.12.7 Slope: 0.5 DOWN

2.12.1 Designation: 25
2.12.2 True Bearing: 266
2.12.3 Dimensions: 12002 ft x 200 ft
2.12.4 PCN: 71 R/B/W/T
2.12.5 Coordinates: 34-37-57.991N / 118-04-23.743W
2.12.6 Threshold elevation: 2498.7 ft

General Remarks:

MISC: INDUS INSTLN - NO TRNSPN, LODGING OR NML SVC AVBL ON SITE.

2.12.6 Touchdown zone elevation: 2503.4 ft
2.12.7 Slope: 0.2 UP

2.12.1 Designation: 04
2.12.2 True Bearing: 52
2.12.3 Dimensions: 12001 ft x 150 ft
2.12.4 PCN: 53 R/B/W/T
2.12.5 Coordinates: 34-37-00.842N / 118-05-29.802W
2.12.6 Threshold elevation: 2542.5 ft
2.12.6 Touchdown zone elevation: 2542.5 ft
2.12.7 Slope: 0.6 DOWN

2.12.1 Designation: 22
2.12.2 True Bearing: 232
2.12.3 Dimensions: 12001 ft x 150 ft
2.12.4 PCN: 53 R/B/W/T
2.12.5 Coordinates: 34-38-14.236N / 118-03-36.966W
2.12.6 Threshold elevation: 2491.1 ft
2.12.6 Touchdown zone elevation: 2497.9 ft
2.12.7 Slope: 0.3 UP

2.12.1 Designation: 072
2.12.3 Dimensions: 6000 ft x 75 ft
2.12.4 PCN: 97 R/B/W/T

2.12.1 Designation: 252
2.12.3 Dimensions: 6000 ft x 75 ft
2.12.4 PCN: 97 R/B/W/T

AD 2.14 Approach and runway lighting

2.14.1 Designation: 25
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 22
2.14.4 Visual approach slope indicator system: P4L

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 25. Magnetic variation: 12E
2.19.2 ILS identification: PMD
2.19.5 Coordinates: 34-38-01.256N / 118-04-40.078W
2.19.6 Site elevation: 2491.8 ft

2.19.1 ILS type: Localizer for runway 25. Magnetic variation: 12E
2.19.2 ILS identification: PMD
2.19.5 Coordinates: 34-37-48.786N / 118-07-10.911W
2.19.6 Site elevation: 2552.2 ft

PRKG RAMP LCTD S OF RWY 22 & TWY V NOT VSB FM ATCT.

UNLGT OBSTN SURROUND AFLD.

DRAINAGE DITCHES PARL RWY 22 FM TWY S TO TWY U.

BIRD HAZ POTENTIAL EXISTS. MIGRATORY SEASON PHASE II 1 OCT – 31 MAR. DURG BWC MODERATE, TKOF AND LNDG PERMITTED. DURG BWC SEVERE, TKOF AND LNDG PROHIBITED.

MILITARY USE: ASSAULT LDG ZONE LCTD 1ST 6,000 EAST END OF TWY B. RWY 252 MRK ONLY FOR C-130 ASSAULT OPR; ONE-WAY LDG ONLY.

MISC: WINDS ARE EST DUE TO FMQ-13 WIND SENSORS BEING ACCURATE TO WITHIN ONLY +/- 2 KT. ATC/WX WILL NOT INCL/RELAY WIND CORR INTO FCST/PHRASEOLOGY. THEREFORE, AIRCREWS WILL INCORPORATE A +/- 2 KT ACCURACY INTO THEIR DECISION MAKING PROCESS FOR FLYING OPR.

SERVICE-LGT: GATED THLD LGT RWY 07-25 AND RWY 04-22.

TRAN ALERT (1 OF 2): NO FLEET SVC AVBL. NO FLW ME SVC AVBL. EXP PROGRESSIVE TAXI TO PRK. AIRCREW RESPONSIBLE FOR ACFT PINNING/SAFING.

MISC: COMSEC STORAGE UNAVBL.

CAUTION: USE EXTREME CAUTION FOR UNMANNED AERIAL SYSTEMS (UAS) OPS IN VCNTY.

FUEL: A++ AVBL. NO TRANS ACFT FUEL SVC AVBL. LTD FUELING AVBL; GOVT ACFT ONLY 1600-2300Z++ MON-FRI. 24 HR PN WITH AFLD MGR RQR; NO SAME DAY REQ; GAS AND GO UNAVBL. EXPECT 2+ HR DELAY FOR FUEL.

RSTD – OFFL BUS ONLY. MIL ARPT. CIVIL USE RQR USAF APVL AND DD FORM 2400/01/02. PPR RQR FOR FULL STOP LDG ONLY. CALL C661-272-6619/6614.

TRAN ALERT (2 OF 2): UNABLE TO SVC ACFT WITH ORDNANCE. LTD GRD SUPPORT EQUIPMENT AVBL. NO POTABLE WATER SVC. NO TRAN MAINT AVBL. GND SVC UNAVBL WHEN LIGHTNING WITHIN 5 NM.

MISC: FLT PLANS MUST BE FILED AND ACTIVATED WITH P42 AFLD MGMT. USE PRESCOTT FSS WHEN P42 AFLD MGMT CLSD.

CAUTION: VARIOUS ACFT TEST OPS MARKINGS PAINTED IN WHITE ON TAXIWAY UNIFORM.

CAUTION: RWY 25 NSTD MRK: SPOT LDG ZONE MRK LCTD AT 6000 FT REMAINING MRK. RWY 07-25 DECEPTIVE SFC MRK EXCEED STANDARD BY APPROX 50 FT.

RSTD: OVERNIGHT PRK UNAUTHD ON C-RAMP.

RSTD: TWY L BTN RWY 04/22 AND PAX TRML UNLGTD AND USABLE FOR DAYLT VFR ONLY.

ALL DEPT ACFT MUST FILE FPL WITH P42 AFLD MGMT OPS.

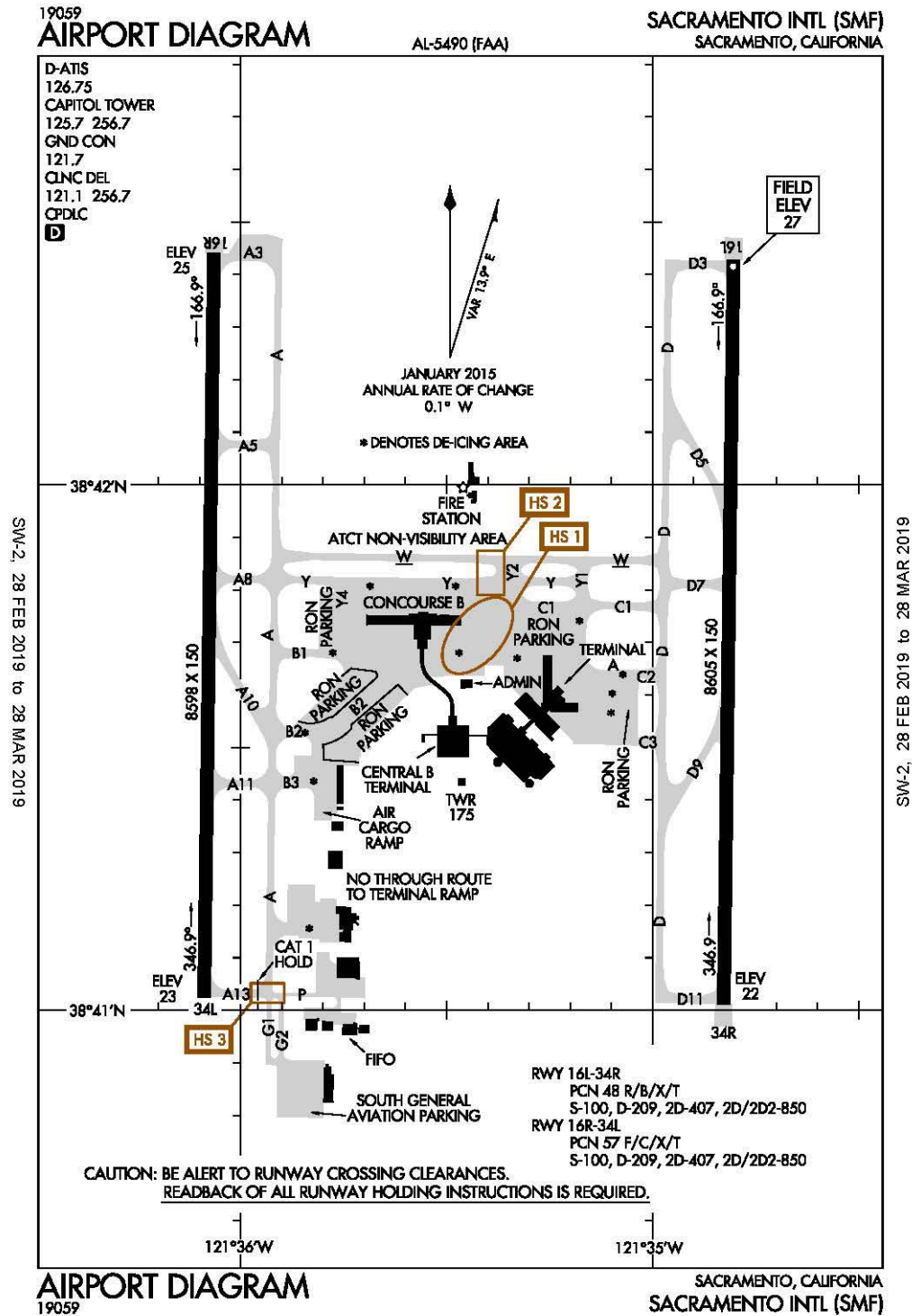
CAUTION: FOD HAZ ON TWY S; ALL LARGE BODY ACFT MUST TAXI WITH OUTBOARD MOTORS SHUT OFF.

SERVICE-JASU: POWER CARS UNAVBL.

MISC: BASE OPS OPR 1330-0600Z++, MON-SAT, CLSD SUN AND FEDERAL HOL.

RSTD: RWY RESERVED FOR ACFT BASED THEREIN ON SAT AND SUN. GRD CREWS MUST INSPECT ALL ANTICIPATED AFLD PAVEMENTS RQR FOR THEIR MSN PRIOR TO EACH ACFT ARR OR DEP.

Sacramento, California
Sacramento International
ICAO Identifier KSMF



Sacramento, CA
Sacramento Intl
ICAO Identifier KSMF

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 38–41–43.6N / 121–35–26.8W
2.2.2 From City: 10 Miles NW Of Sacramento, CA
2.2.3 Elevation: 26.9 ft
2.2.5 Magnetic variation: 13E (2020)
2.2.6 Airport Contact: Sheri Thompson–Duarte
6900 AIRPORT BLVD
Sacramento, CA 95837
((916) 874–0560)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: No
2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973

AD 2.12 Runway physical characteristics

2.12.1 Designation: 16R
2.12.2 True Bearing: 181
2.12.3 Dimensions: 8598 ft x 150 ft
2.12.4 PCN: 57 F/C/X/T
2.12.5 Coordinates: 38–42–26.4236N /
121–36–03.8961W
2.12.6 Threshold elevation: 24.8 ft
2.12.6 Touchdown zone elevation: 25.3 ft

2.12.1 Designation: 34L
2.12.2 True Bearing: 1
2.12.3 Dimensions: 8598 ft x 150 ft
2.12.4 PCN: 57 F/C/X/T
2.12.5 Coordinates: 38–41–01.439N /
121–36–05.3075W
2.12.6 Threshold elevation: 22.5 ft
2.12.6 Touchdown zone elevation: 23.9 ft

2.12.1 Designation: 16L
2.12.2 True Bearing: 181
2.12.3 Dimensions: 8605 ft x 150 ft
2.12.4 PCN: 48 R/B/X/T

2.12.5 Coordinates: 38–42–25.6973N /
121–34–48.2125W
2.12.6 Threshold elevation: 26.9 ft
2.12.6 Touchdown zone elevation: 26.9 ft

2.12.1 Designation: 34R
2.12.2 True Bearing: 1
2.12.3 Dimensions: 8605 ft x 150 ft
2.12.4 PCN: 48 R/B/X/T
2.12.5 Coordinates: 38–41–00.6506N /
121–34–49.642W
2.12.6 Threshold elevation: 22.1 ft
2.12.6 Touchdown zone elevation: 23.8 ft

AD 2.13 Declared distances

2.13.1 Designation: 16R
2.13.2 Takeoff run available: 8598
2.13.3 Takeoff distance available: 8598
2.13.4 Accelerate–stop distance available: 8598
2.13.5 Landing distance available: 8598

2.13.1 Designation: 34L
2.13.2 Takeoff run available: 8598
2.13.3 Takeoff distance available: 8598
2.13.4 Accelerate–stop distance available: 8598
2.13.5 Landing distance available: 8598

2.13.1 Designation: 16L
2.13.2 Takeoff run available: 8605
2.13.3 Takeoff distance available: 8605
2.13.4 Accelerate–stop distance available: 8605
2.13.5 Landing distance available: 8605

2.13.1 Designation: 34R
2.13.2 Takeoff run available: 8605
2.13.3 Takeoff distance available: 8605
2.13.4 Accelerate–stop distance available: 8605
2.13.5 Landing distance available: 8605

AD 2.14 Approach and runway lighting

2.14.1 Designation: 16R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 34L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 16L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 34R
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P
2.18.3 Service designation: 256.7 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 121.1 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 126.75 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 256.7 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 256.7 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 125.7 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 16L. Magnetic variation: 13E
2.19.2 ILS identification: MDK
2.19.5 Coordinates: 38-40-50.2189N / 121-34-46.3009W
2.19.6 Site elevation: 30.9 ft

2.19.1 ILS type: Localizer for runway 16L. Magnetic variation: 13E
2.19.2 ILS identification: MDK
2.19.5 Coordinates: 38-40-50.67N / 121-34-49.81W
2.19.6 Site elevation: 17.4 ft

2.19.1 ILS type: Glide Slope for runway 16L. Magnetic variation: 13E
2.19.2 ILS identification: MDK
2.19.5 Coordinates: 38-42-15.18N / 121-34-43.22W
2.19.6 Site elevation: 21.7 ft

2.19.1 ILS type: Localizer for runway 16R. Magnetic

General Remarks:

BIRDS ON AND IN VICINITY OF ARPT.

FAA GWT STRENGTH EVALUATION MD-11 = 590,000 LBS.

variation: 13E
2.19.2 ILS identification: SMF
2.19.5 Coordinates: 38-40-35.7492N / 121-36-05.7322W
2.19.6 Site elevation: 19.6 ft

2.19.1 ILS type: DME for runway 16R. Magnetic variation: 13E
2.19.2 ILS identification: SMF
2.19.5 Coordinates: 38-40-34.7038N / 121-36-03.046W
2.19.6 Site elevation: 34 ft

2.19.1 ILS type: Inner Marker for runway 16R. Magnetic variation: 13E
2.19.2 ILS identification: SMF
2.19.5 Coordinates: 38-42-34.0974N / 121-36-03.7746W
2.19.6 Site elevation: 23 ft

2.19.1 ILS type: Glide Slope for runway 16R. Magnetic variation: 13E
2.19.2 ILS identification: SMF
2.19.5 Coordinates: 38-42-15.8608N / 121-36-09.106W
2.19.6 Site elevation: 22.9 ft

2.19.1 ILS type: Localizer for runway 34L. Magnetic variation: 13E
2.19.2 ILS identification: HUX
2.19.5 Coordinates: 38-42-36.65N / 121-36-03.72W
2.19.6 Site elevation: 22 ft

2.19.1 ILS type: Glide Slope for runway 34L. Magnetic variation: 13E
2.19.2 ILS identification: HUX
2.19.5 Coordinates: 38-41-12.5012N / 121-36-00.0807W
2.19.6 Site elevation: 21.7 ft

2.19.1 ILS type: DME for runway 34L. Magnetic variation: 13E
2.19.2 ILS identification: HUX
2.19.5 Coordinates: 38-40-34.7038N / 121-36-03.046W
2.19.6 Site elevation: 34 ft

NOISE SENSITIVE AREAS W OF ARPT ON SAC RIVER. LCL TURN DISCOURAGED FOR JET ACFT. WHEN CONDUCTING IFR APCH IN VFR CONDITIONS EXECUTE MISSED APCH AT DEP END OF RYS. PLAN VFR PATTERNS TO E. USE MIN POWER SETTINGS.

ALL ACFT CTC ATC GND CTL PRIOR TO MOVEMENT ON RAMP.

CROP DUSTERS OPER INVOF ARPT AT OR BELOW 200 FT AGL.

(A49A-16R) ALSF2 OPERS AS SSALR TILL WEATHER GOES BELOW VFR.

TWY RMK #2: THE MAXIMUM ALLOWABLE GROSS AIRCRAFT LOAD FOR TWYS G1, G2, AND THE GENERAL AVIATION PARKING APRON IS: 70,000 LBS FOR SINGLE GEAR AIRCRAFT; 170,000 LBS FOR DUAL GEAR AIRCRAFT; AND 250,000 LBS FOR DUAL TANDEM GEAR AIRCRAFT.

TWY RMK #2 CONT'D: AN AIRCRAFT CANNOT EXCEED THE AIRPLANE DESIGN GROUP III CRITERIA AND MUST HAVE A WHEEL BASE OF LESS THAN 60 FT.

MILITARY AIRCRAFT PARKING LIMITED. CONTACT ARPT OPNS IF PARKING IS REQUIRED (916) 806-5309.

PORTION OF TWY W 500 FT EAST OF TWY A TO 2100 FT EAST OF TWY A IS NOT VISIBLE FROM ATCT.

TWY Y4 RESTRICTED TO AIRCRAFT WITH A WINGSPAN OF LESS THAN 118 FT (GROUP III).

[illegible]

San Diego, CA
San Diego Intl
ICAO Identifier KSAN

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 32–44–00.8N / 117–11–22.8W
2.2.2 From City: 2 Miles W Of San Diego, CA
2.2.3 Elevation: 16.8 ft
2.2.5 Magnetic variation: 11E (2020)
2.2.6 Airport Contact: Dean Robbins
3225 N HARBOR DRIVE
San Diego, CA 92101
((619) 400–2710)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 09
2.10.1.b Type of obstacle: Tree (31 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 385 ft L of Centerline

2.10.1.a. Runway designation: 27
2.10.1.b Type of obstacle: Sign (61 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 500 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 09
2.12.2 True Bearing: 106
2.12.3 Dimensions: 9400 ft x 200 ft
2.12.4 PCN: 75 F/A/W/T
2.12.5 Coordinates: 32–44–13.6413N /
117–12–15.6841W
2.12.6 Threshold elevation: 13.7 ft
2.12.6 Touchdown zone elevation: 16.6 ft

2.12.1 Designation: 27
2.12.2 True Bearing: 286

2.12.3 Dimensions: 9400 ft x 200 ft
2.12.4 PCN: 75 F/A/W/T
2.12.5 Coordinates: 32–43–48.0086N /
117–10–29.9018W
2.12.6 Threshold elevation: 16.4 ft
2.12.6 Touchdown zone elevation: 16.7 ft

AD 2.13 Declared distances

2.13.1 Designation: 09
2.13.2 Takeoff run available: 8280
2.13.3 Takeoff distance available: 9401
2.13.4 Accelerate–stop distance available: 8280
2.13.5 Landing distance available: 7280

2.13.1 Designation: 27
2.13.2 Takeoff run available: 9401
2.13.3 Takeoff distance available: 9401
2.13.4 Accelerate–stop distance available: 9401
2.13.5 Landing distance available: 7591

AD 2.14 Approach and runway lighting

2.14.1 Designation: 09
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 27
2.14.2 Approach lighting system: MALS
2.14.4 Visual approach slope indicator system: P4R
2.14.10 Remarks: PAPI Unusable Beyond 5 Degrees L &
R Of Cntln. MALS Rwy 27 Threshold To 1400'.

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P
2.18.3 Service designation: 125.9 MHz

2.18.1 Service designation: D–ATIS
2.18.3 Service designation: 134.8 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: GND/P
2.18.3 Service designation: 123.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 338.225 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 09. Magnetic varia-
tion: 11E

2.19.2 ILS identification: SAN
2.19.5 Coordinates: 32-43-47.0838N /
117-10-28.4698W
2.19.6 Site elevation: 27.4 ft

2.19.1 ILS type: Localizer for runway 09. Magnetic variation: 11E
2.19.2 ILS identification: SAN
2.19.5 Coordinates: 32-43-47.6019N /
117-10-28.237W
2.19.6 Site elevation: 25.9 ft

2.19.1 ILS type: Glide Slope for runway 09. Magnetic variation: 11E
2.19.2 ILS identification: SAN

2.19.5 Coordinates: 32-44-10.76N / 117-11-52.14W
2.19.6 Site elevation: 16 ft

2.19.1 ILS type: Localizer for runway 27. Magnetic variation: 11E
2.19.2 ILS identification: UBR
2.19.5 Coordinates: 32-44-14.7891N /
117-12-20.4337W
2.19.6 Site elevation: 10.9 ft

2.19.1 ILS type: DME for runway 27. Magnetic variation: 11E
2.19.2 ILS identification: UBR
2.19.5 Coordinates: 32-44-11.4624N / 117-12-20.064W
2.19.6 Site elevation: 22.7 ft

General Remarks:

TERRAIN & BLDGS TO 500' MSL N & E WITHIN 1 1/2 MI.

PRACTICE APPROACHES AND TGL PROHIBITED.

TO REDUCE JET BLAST IMPACT AT N END OF TWY F ACFT WILL NOT START ENG UNTIL 800 FT FM N END OF TWY F; ABEAM THE SECOND PARKING PAD.

ULTRALIGHT ACFT PROHIBITED ON AP.

747 AND LARGER ACFT ARE PROHIBITED FM MAKING INTERSECTION TKOFS.

INTERMITTENT PRESENCE OF BIRDS ON AND INVOF OF ARPT.

CROSS-BLEED ENGINE STARTS PERMITTED ONLY ON PARALLEL TWY WITH ACFT ALIGNED ON TWY CNTRLN.

OUTBOARD ENGINES OF FOUR-ENGINE ACFT ARE TO BE KEPT AT IDLE POWER FOR ALL GND MANEUVERING.

PILOTS REQUIRED TO CTC ATCT GROUND CONTROLLER PRIOR TO PUSHBACK, TOW OUT AND TAXI FOR TRAFFIC ADVISORIES.

MILITARY ACFT ON OFFICIAL BUSINESS ONLY CONTACT ARPT OPS AT 619-400-2710 FOR PPR.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

TWY C EDGE LGTS OTS INDEFLY.

ACFT CROSSING RY 09/27 ON TWY C6, HOLD SHORT OF TWY C6 FACING WEST ON TWY C, PARALLEL TO RY.

DUE TO PAEW ON RY 09-27, 30 MINUTE PPR 0830-1230Z FOR ALL LANDINGS AND DEPARTURES CALL 619-400-2710.

30 MIN PPR (619-400-2710) FOR ACFT WITH OVER 171 FT WINGSPAN.

IN THE EVENT OF A DIVERSION OR IRREGULAR OPERATIONS EVENTS, ACFT OPERATORS CONTACT THE

APT DUTY MGR (619) 400-2710 FOR PPR DUE TO LIMITATIONS ASSOCIATED WITH HANDLING DIVERTED FLTS. LIMITATIONS INCLUDE RESTRICTED GATE SPACE, CUSTOMS SERVICES AS WELL AS ACFT SERVICING & PARKING.

TAXIING ACFT ARE PROHIBITED FROM PASSING TO THE SOUTH OF ACFT LCTD ON TWY B INTO ALLEY LCTD BTWN GATES 7 AND 14.

TAXIING ACFT SHALL FOLLOW LEAD-IN LINES UNTIL THE NOSE WHEEL OF THE ACFT HAS ENTERED THE NON-MOVEMENT AREA OF THE ALLEY.

FOR ACCESS TO/FR TERMINAL 2: GATES 23, 25, 27, 29, 31, 33-51 AND THE ISLAND AND WEST RON PARKING RAMPS, CTC RAMP CONTROL ON 129.775 FR 0600-2400. FR 0000-0600 CTC GROUND CONTROL ON 123.9.

TAXILANE A RSTRD TO ACFT WITH WINGSPANS OF 135 FT OR LESS.

TWY B1 RSTRD TO A MAX WINGSPAN OF 118 FT DUE TO CONST.

RWY 09/27 CLSD MON-SAT 0000-0500.

RWY STATUS LGTS IN OPN.

ACFT WITH WINGSPANS GTR THAN 171 FT (52M) RSTD FROM USING TWY D SOUTH OF TWY B, AND WHEN EXITING RWY 09 WB ON TWY B.

19059

AIRPORT DIAGRAM

AL-375 (FAA)

SAN FRANCISCO INTL (SFO)
SAN FRANCISCO, CALIFORNIA

D-ATIS 113.7 115.8 118.85
SAN FRANCISCO TOWER 120.5 269.1
GND CON 121.8
CLNC DEL 118.2
CPDC D

NOTE: Several runway hold position signs are on the right rather than the left side of the taxiways

ASSC in use. Operate transponders with altitude reporting mode and ADS-B (if equipped) enabled on all airport surfaces.

Runway Status Lights in Operation.

RWY 01L-19R	PCN 90 F/B/X/T	S-75, D-200, 2D-400, 2D/2D2-877
RWY 01R-19L	PCN 100 F/B/X/T	S-75, D-200, 2D-400, 2D/2D2-877
RWY 10L-28R	PCN 80 F/B/X/T	S-75, 2D-400, 2D/2D2-877
RWY 10R-28L	PCN 80 F/B/X/T	S-75, D-200, 2D-400, 2D/2D2-877

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

AIRPORT DIAGRAM

19059

SAN FRANCISCO, CALIFORNIA
SAN FRANCISCO INTL (SFO)

San Francisco, CA
San Francisco Intl
ICAO Identifier KSFO

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 37–37–07.7N / 122–22–31.5W
2.2.2 From City: 8 Miles SE Of San Francisco, CA
2.2.3 Elevation: 13.1 ft
2.2.5 Magnetic variation: 14E (2015)
2.2.6 Airport Contact: Ivar Satero
PO BOX 8097
San Francisco, CA 94128
((650) 821–3355)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 01R
2.10.1.b Type of obstacle: Tree (177 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 200 ft R of Centerline

2.10.1.a. Runway designation: 10L
2.10.1.b Type of obstacle: Tower (88 ft above runway end). Marked and Lighted
2.10.1.c Location of obstacle: 1300 ft R of Centerline

2.10.1.a. Runway designation: 10R
2.10.1.b Type of obstacle: Tower (87 ft above runway end). Marked and Lighted
2.10.1.c Location of obstacle: 950 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 28X
2.12.3 Dimensions: 0 ft x 0 ft
2.12.1 Designation: 10L
2.12.2 True Bearing: 118
2.12.3 Dimensions: 11870 ft x 200 ft
2.12.4 PCN: 80 F/B/X/T

2.12.5 Coordinates: 37–37–43.4594N /
122–23–36.2107W
2.12.6 Threshold elevation: 5.5 ft
2.12.6 Touchdown zone elevation: 7 ft

2.12.1 Designation: 28R
2.12.2 True Bearing: 298
2.12.3 Dimensions: 11870 ft x 200 ft
2.12.4 PCN: 80 F/B/X/T
2.12.5 Coordinates: 37–36–48.721N / 122–21–25.708W
2.12.6 Threshold elevation: 13 ft
2.12.6 Touchdown zone elevation: 12.9 ft

2.12.1 Designation: 01L
2.12.2 True Bearing: 28
2.12.3 Dimensions: 7650 ft x 200 ft
2.12.4 PCN: 90 F/B/X/T
2.12.5 Coordinates: 37–36–28.4323N /
122–22–58.5426W
2.12.6 Threshold elevation: 10.7 ft
2.12.6 Touchdown zone elevation: 10.9 ft

2.12.1 Designation: 19R
2.12.2 True Bearing: 208
2.12.3 Dimensions: 7650 ft x 200 ft
2.12.4 PCN: 90 F/B/X/T
2.12.5 Coordinates: 37–37–35.3329N /
122–22–14.1939W
2.12.6 Threshold elevation: 9.2 ft
2.12.6 Touchdown zone elevation: 11.2 ft

2.12.1 Designation: 01R
2.12.2 True Bearing: 28
2.12.3 Dimensions: 8650 ft x 200 ft
2.12.4 PCN: 100 F/B/X/T
2.12.5 Coordinates: 37–36–22.7876N /
122–22–51.7467W
2.12.6 Threshold elevation: 11.4 ft
2.12.6 Touchdown zone elevation: 11.2 ft

2.12.1 Designation: 19L
2.12.2 True Bearing: 208
2.12.3 Dimensions: 8650 ft x 200 ft
2.12.4 PCN: 100 F/B/X/T
2.12.5 Coordinates: 37–37–38.4319N /
122–22–01.599W
2.12.6 Threshold elevation: 10.5 ft
2.12.6 Touchdown zone elevation: 11 ft

2.12.1 Designation: 10R
2.12.2 True Bearing: 118

2.12.3 Dimensions: 11381 ft x 200 ft
2.12.4 PCN: 80 F/B/X/T
2.12.5 Coordinates: 37-37-34.648N /
122-23-35.1796W
2.12.6 Threshold elevation: 7.1 ft
2.12.6 Touchdown zone elevation: 8 ft

2.12.1 Designation: 28L
2.12.2 True Bearing: 298
2.12.3 Dimensions: 11381 ft x 200 ft
2.12.4 PCN: 80 F/B/X/T
2.12.5 Coordinates: 37-36-42.163N / 122-21-30.057W
2.12.6 Threshold elevation: 12.6 ft
2.12.6 Touchdown zone elevation: 12.6 ft

AD 2.13 Declared distances

2.13.1 Designation: 10L
2.13.2 Takeoff run available: 11870
2.13.3 Takeoff distance available: 11870
2.13.4 Accelerate-stop distance available: 11193
2.13.5 Landing distance available: 11193

2.13.1 Designation: 28R
2.13.2 Takeoff run available: 11870
2.13.3 Takeoff distance available: 11870
2.13.4 Accelerate-stop distance available: 11870
2.13.5 Landing distance available: 11236

2.13.1 Designation: 01L
2.13.2 Takeoff run available: 7650
2.13.3 Takeoff distance available: 7650
2.13.4 Accelerate-stop distance available: 7650
2.13.5 Landing distance available: 7010

2.13.1 Designation: 19R
2.13.2 Takeoff run available: 7650
2.13.3 Takeoff distance available: 7650
2.13.4 Accelerate-stop distance available: 7650
2.13.5 Landing distance available: 7650

2.13.1 Designation: 01R
2.13.2 Takeoff run available: 8650
2.13.3 Takeoff distance available: 8650
2.13.4 Accelerate-stop distance available: 8650
2.13.5 Landing distance available: 8090

2.13.1 Designation: 19L
2.13.2 Takeoff run available: 8650
2.13.3 Takeoff distance available: 8650
2.13.4 Accelerate-stop distance available: 8650
2.13.5 Landing distance available: 8650

2.13.1 Designation: 10R
2.13.2 Takeoff run available: 11381
2.13.3 Takeoff distance available: 11381
2.13.4 Accelerate-stop distance available: 10704
2.13.5 Landing distance available: 10704

2.13.1 Designation: 28L
2.13.2 Takeoff run available: 11381
2.13.3 Takeoff distance available: 11381
2.13.4 Accelerate-stop distance available: 10981
2.13.5 Landing distance available: 10275

AD 2.14 Approach and runway lighting

2.14.1 Designation: 10L
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 28R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 19R
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 19L
2.14.2 Approach lighting system: MALSF
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Runway 19L MALSF Has A Non
Standard Length Of 1,115 Ft With 3 Sequenced Flashers.

2.14.1 Designation: 10R
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 28L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: AS ASSIGNED
2.18.3 Service designation: 128.65 MHz

2.18.1 Service designation: CD/P PRE TAXI CLNC
2.18.3 Service designation: 118.2 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 113.7 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 115.8 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D–ATIS
2.18.3 Service designation: 118.85 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: ILS PRM RY 28L IC
2.18.3 Service designation: 120.5 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 120.5 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 269.1 MHz

2.18.1 Service designation: LDA PRM RY 28R IC
2.18.3 Service designation: 120.5 MHz

2.18.1 Service designation: MONITOR ILS PRM RY
28L
2.18.3 Service designation: 125.15 MHz

2.18.1 Service designation: MONITOR LDA PRM RY
28R
2.18.3 Service designation: 127.675 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 19L. Magnetic varia-
tion: 14E
2.19.2 ILS identification: SIA
2.19.5 Coordinates: 37–36–18.7188N /
122–22–59.4082W
2.19.6 Site elevation: 20.6 ft

2.19.1 ILS type: Localizer for runway 19L. Magnetic
variation: 14E
2.19.2 ILS identification: SIA
2.19.5 Coordinates: 37–36–16.2796N /
122–22–56.0614W
2.19.6 Site elevation: 19 ft

2.19.1 ILS type: Glide Slope for runway 19L. Magnetic
variation: 14E
2.19.2 ILS identification: SIA
2.19.5 Coordinates: 37–37–30.7381N /
122–22–11.0577W
2.19.6 Site elevation: 6.3 ft

2.19.1 ILS type: Localizer for runway 28L. Magnetic
variation: 14E

2.19.2 ILS identification: SFO
2.19.5 Coordinates: 37–37–37.471N /
122–23–41.9198W
2.19.6 Site elevation: 9.3 ft

2.19.1 ILS type: DME for runway 28L. Magnetic varia-
tion: 14E
2.19.2 ILS identification: SFO
2.19.5 Coordinates: 37–37–39.5363N /
122–23–41.4575W
2.19.6 Site elevation: 20.3 ft

2.19.1 ILS type: Glide Slope for runway 28L. Magnetic
variation: 14E
2.19.2 ILS identification: SFO
2.19.5 Coordinates: 37–36–51.2769N /
122–21–43.1999W
2.19.6 Site elevation: 8.2 ft

2.19.1 ILS type: Localizer for runway 28R. Magnetic
variation: 14E
2.19.2 ILS identification: GWQ
2.19.5 Coordinates: 37–37–46.3566N /
122–23–43.1194W
2.19.6 Site elevation: 5.3 ft

2.19.1 ILS type: Inner Marker for runway 28R. Magnetic
variation: 14E
2.19.2 ILS identification: GWQ
2.19.5 Coordinates: 37–36–46.1575N /
122–21–19.7418W
2.19.6 Site elevation: 13 ft

2.19.1 ILS type: DME for runway 28R. Magnetic varia-
tion: 14E
2.19.2 ILS identification: GWQ
2.19.5 Coordinates: 37–37–48.1978N /
122–23–40.6085W
2.19.6 Site elevation: 17.7 ft

2.19.1 ILS type: Glide Slope for runway 28R. Magnetic
variation: 14E
2.19.2 ILS identification: GWQ
2.19.5 Coordinates: 37–36–51.3989N /
122–21–43.1171W
2.19.6 Site elevation: 8.2 ft

2.19.1 ILS type: Glide Slope for runway 28X. Magnetic
variation: 14E

2.19.2 ILS identification: FNP
2.19.5 Coordinates: 37-36-51.5421N /
122-21-43.0484W
2.19.6 Site elevation: 8.2 ft

122-22-06.2154W
2.19.6 Site elevation: 15.5 ft

2.19.1 ILS type: Localizer for runway 28X. Magnetic
variation: 14E
2.19.2 ILS identification: FNP
2.19.5 Coordinates: 37-37-16.6754N /

2.19.1 ILS type: DME for runway 28X. Magnetic varia-
tion: 14E
2.19.2 ILS identification: FNP
2.19.5 Coordinates: 37-37-14.906N /
122-22-06.9396W
2.19.6 Site elevation: 22.4 ft

General Remarks:

FLOCKS OF BIRDS FEEDING ALONG SHORELINE ADJ TO ARPT; ON OCCASIONS FLY ACROSS VARIOUS PARTS OF THE ARPT.

HIGH SPEED TWY (T) GRVD FULL WIDTH BTN RWY 28R AND 28L.

NOISE SENSITIVE ARPT; FOR NOISE ABATEMENT PROCEDURES CTC ARPT NOISE OFFICE MON-FRI 0800-1700 BY CALLING 650-821-5100.

SEVERAL RY HOLD POSITION SIGNS ARE ON THE RIGHT RATHER THAN THE LEFT SIDE OF THE TWYS.

NO GROOVING EXISTS AT ARPT RY INTERSECTIONS.

RY 10 PREFERRED RY BTWN 0100-0600 WEATHER AND FLIGHT CONDITIONS PERMITTING.

AIRLINE PILOTS SHALL STRICTLY FOLLOW THE PAINTED NOSE GEAR LINES AND NO OVERSTEERING ADJUSTMENT IS PERMITTED.

PAEW APCH END RYS 28L, 28R, 19L INDEFLY.

RYS 01L/19R, 01R/19L, 10R/28L, 10L/28R GROOVED FULL LENGTH EXCEPT AT RY INTERSECTIONS.

ALL OUTBOUND TWY YANKEE HEAVY AIRCRAFT WITH A WINGSPAN OF 171 FT. OR GREATER UNDER POWER PROHIBITED FROM ENTERING WESTBOUND TWY ZULU.

SIMULTANEOUS OPERATIONS IN EFFECT ALL RYS.

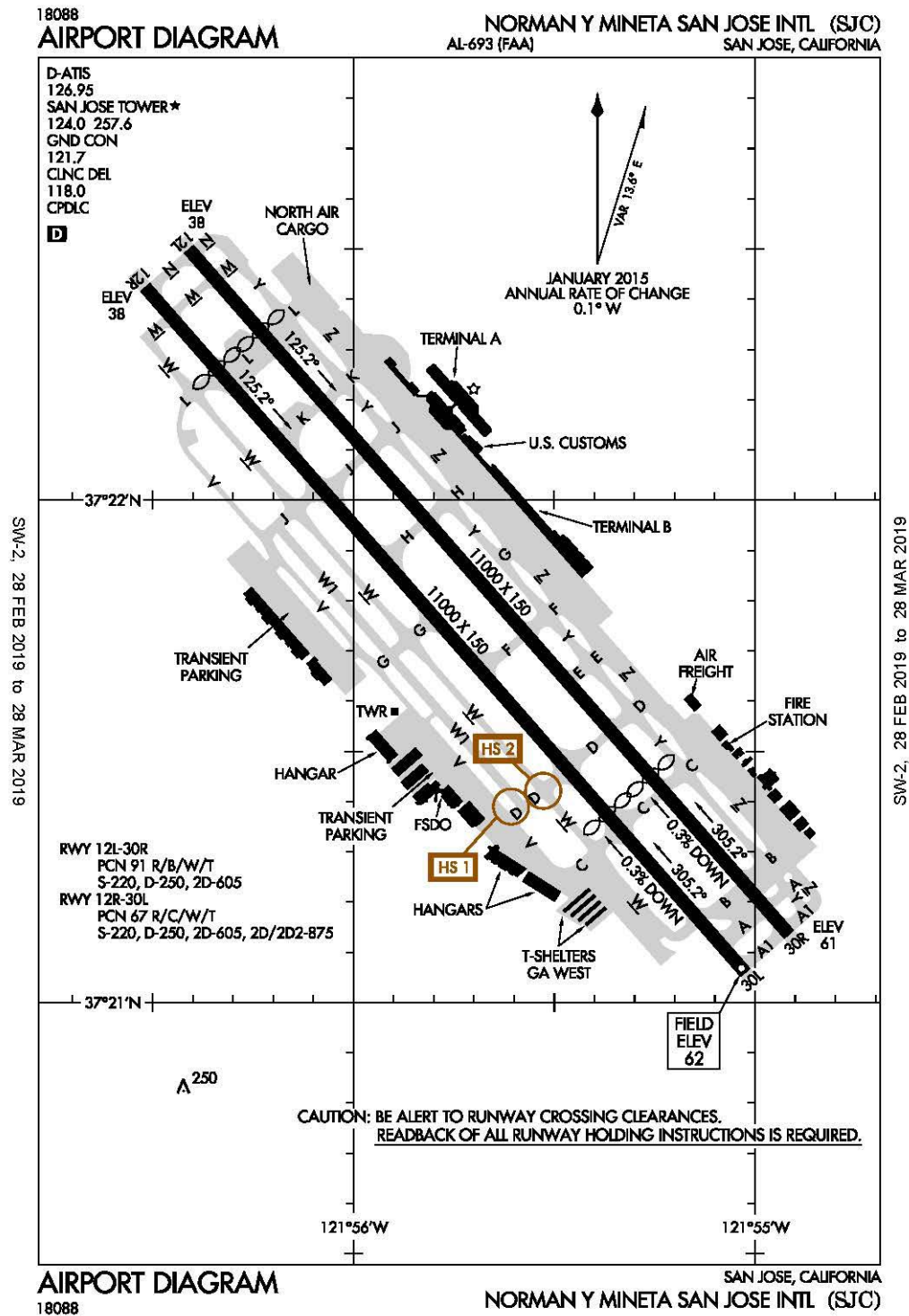
ASSC IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

RWY 1L CLSD TO DEPARTING TRIJET ACFT WITH WINGSPAN GREATER THAN 155 FT.

RWY STATUS LGTS IN OPN.

TWY S2 BTN TWY Z AND TWY S3 CLSD TO ACFT WITH WINGSPAN OVER THAN 215 FT.

San Jose, California
Norman Y. Mineta San Jose International
ICAO Identifier KSJC



San Jose, CA
Norman Y. Mineta San Jose Intl
ICAO Identifier KSJC

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 37-21-46.781N / 121-55-43.034W
2.2.2 From City: 2 Miles NW Of San Jose, CA
2.2.3 Elevation: 62.2 ft
2.2.5 Magnetic variation: 13E (2020)
2.2.6 Airport Contact: John Aitken
1701 AIRPORT BLVD., SUITE B-1130
San Jose, CA 95110 ((408) 277-5100)

AD 2.3 Attendance Schedule

2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 12L
2.10.1.b Type of obstacle: Pole (32 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 580 ft R of Centerline

2.10.1.a. Runway designation: 12R
2.10.1.b Type of obstacle: Pole (29 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 480 ft R of Centerline

2.10.1.a. Runway designation: 30L
2.10.1.b Type of obstacle: Fence (14 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 170 ft R of Centerline

2.10.1.a. Runway designation: 30R
2.10.1.b Type of obstacle: Tree (54 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 550 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 12R

2.12.2 True Bearing: 139
2.12.3 Dimensions: 11000 ft x 150 ft
2.12.4 PCN: 67 R/C/W/T
2.12.5 Coordinates: 37-22-25.4266N / 121-56-31.1597W
2.12.6 Threshold elevation: 38.2 ft
2.12.6 Touchdown zone elevation: 45.6 ft

2.12.1 Designation: 30L
2.12.2 True Bearing: 319
2.12.3 Dimensions: 11000 ft x 150 ft
2.12.4 PCN: 67 R/C/W/T
2.12.5 Coordinates: 37-21-03.5766N / 121-55-01.4432W
2.12.6 Threshold elevation: 62.1 ft
2.12.6 Touchdown zone elevation: 57 ft
2.12.7 Slope: 0.3 DOWN

2.12.1 Designation: 12L
2.12.2 True Bearing: 139
2.12.3 Dimensions: 11000 ft x 150 ft
2.12.4 PCN: 91 R/B/W/T
2.12.5 Coordinates: 37-22-29.9801N / 121-56-24.6377W
2.12.6 Threshold elevation: 37.7 ft
2.12.6 Touchdown zone elevation: 43.8 ft

2.12.1 Designation: 30R
2.12.2 True Bearing: 319
2.12.3 Dimensions: 11000 ft x 150 ft
2.12.4 PCN: 91 R/B/W/T
2.12.5 Coordinates: 37-21-08.1324N / 121-54-54.9212W
2.12.6 Threshold elevation: 61.1 ft
2.12.6 Touchdown zone elevation: 55.2 ft
2.12.7 Slope: 0.3 DOWN

AD 2.13 Declared distances

2.13.1 Designation: 12R
2.13.2 Takeoff run available: 9883
2.13.3 Takeoff distance available: 11000
2.13.4 Accelerate-stop distance available: 9883
2.13.5 Landing distance available: 8587

2.13.1 Designation: 30L
2.13.2 Takeoff run available: 10152
2.13.3 Takeoff distance available: 11000
2.13.4 Accelerate-stop distance available: 10152
2.13.5 Landing distance available: 7614

2.13.1 Designation: 12L

2.13.2 Takeoff run available: 10139
2.13.3 Takeoff distance available: 11000
2.13.4 Accelerate–stop distance available: 10139
2.13.5 Landing distance available: 8833

2.13.1 Designation: 30R
2.13.2 Takeoff run available: 10134
2.13.3 Takeoff distance available: 11000
2.13.4 Accelerate–stop distance available: 10134
2.13.5 Landing distance available: 7597

AD 2.14 Approach and runway lighting

2.14.1 Designation: 12R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 30L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Rwy 30L PAPI Unusable Beyond 7
Degr Of Centerline Of Rwy.

2.14.1 Designation: 12L
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 30R
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P PRE TAXI CLNC
2.18.3 Service designation: 118 MHz

2.18.1 Service designation: D–ATIS
2.18.3 Service designation: 126.95 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 124 MHz
2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 257.6 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 12R. Magnetic variation: 13E

2.19.2 ILS identification: SLV
2.19.5 Coordinates: 37–21–02.6639N /
121–55–01.3459W
2.19.6 Site elevation: 81.4 ft

2.19.1 ILS type: Glide Slope for runway 12R. Magnetic variation: 13E

2.19.2 ILS identification: SLV
2.19.5 Coordinates: 37–22–06.0334N /
121–56–14.5901W
2.19.6 Site elevation: 36.8 ft

2.19.1 ILS type: Localizer for runway 12R. Magnetic variation: 13E

2.19.2 ILS identification: SLV
2.19.5 Coordinates: 37–21–03.0434N /
121–55–00.8585W
2.19.6 Site elevation: 75.1 ft

2.19.1 ILS type: DME for runway 30L. Magnetic variation: 13E

2.19.2 ILS identification: SJC
2.19.5 Coordinates: 37–22–27.575N /
121–56–32.6145W
2.19.6 Site elevation: 56 ft

2.19.1 ILS type: Localizer for runway 30L. Magnetic variation: 13E

2.19.2 ILS identification: SJC
2.19.5 Coordinates: 37–22–27.1917N /
121–56–33.1047W
2.19.6 Site elevation: 49.6 ft

2.19.1 ILS type: Glide Slope for runway 30L. Magnetic variation: 13E

2.19.2 ILS identification: SJC
2.19.5 Coordinates: 37–21–33.0094N /
121–55–27.8798W
2.19.6 Site elevation: 48.6 ft

General Remarks:

BIRDS FREQUENTLY ON OR IN VICINITY OF AIRPORT.

TWY Y WILL BE PERIODICALLY RESTRICTED TO ACFT WITH A WINGSPAN OF LESS THAN 171 FT (MD–11 OR SMALLER) DURING B–787 AND A–340 OPNS ON RY 12L/30R.

TWY Z WILL BE PERIODICALLY RESTRICTED TO ACFT WITH A WINGSPAN OF LESS THAN 118 FT

(B-737-900 OR SMALLER) DURING B-787 AND A-340 OPNS.

TWY V LTD TO ACFT WITH WINGSPAN OF LESS THAN 118 FT (B-737-900 OR SMALLER).

UNSCHEDULED OPNS BY GROUP 5 ACFT (B747) AND LARGER NOT AUTH EXCEPT WITH PRIOR ARPT APPROVAL CTC AMGR (408) 392-3500.

NOISE ABATEMENT PROCEDURE: RY 30L/12R IS PREFERRED ARRIVAL RY FOR JET ACFT AND RY 12L/30R IS THE PREFERRED DEP RY FOR JET ACFT. ALL JET ACFT TKOFS ARE TO BE INITIATED FM EOR UNLESS DIRECTED OTHERWISE BY ATCT.

CURFEW HRS 2300-0700 FAR 36 STAGE II, 2330-0630 FAR 36 STAGE III ACFT LISTED ON THE SCHEDULE OF AUTHORIZED AIRCRAFT ISSUED BY THE DIRECTOR OF AVIATION. DELAYED SCHEDULED FLIGHTS, AND ALTERNATE/EMERGENCY OPERATIONS MAY BE EXEMPT FROM CURFEW HOUR RESTRICTIONS.

PRIOR AIRPORT NOTIFICATION IS REQUIRED FOR ALL LATE/EARLY ARRIVALS. CONTACT MANAGER ON DUTY AT (408) 392-3500.

FIRST 400 FT RY 30R & RY 30L CLSD FOR TKOF DC10, MD11, L1011.

ALL TURBINE ENGINE RUN-UPS REQUIRE PRIOR AIRPORT APPROVAL, CONTACT MGR ON DUTY (408) 392-3500.

TWY D BETWEEN TWY W AND TWY V LIMITED TO ACFT WITH A WINGSPAN OF LESS THAN 118 FT (B-737-900 OR SMALLER).

TWY W BETWEEN TWY J AND TWY L CAN SUPPORT GROUP IV ACFT.

HOT SPOT 3: RY 11-29 IS NOW TWY W1. SURFACE IS USABLE ONLY AS TAXIWAY AND IS MARKED AND SIGNED AS A TWY.

HIGH INTENSITY LIGHT ACTIVITY: HIGH INTENSITY LIGHTS (LASERS AND LARGE MEDIA SCREENS) MAY BE VISIBLE TO ARR AND DEP ACFT TO SAN JOSE INTERNATIONAL AIRPORT DURING EVENTS AT THE LEVI STADIUM COMPLEX (37-24-15N/121-58-14W, SJC VORTAC R-303/2.1 DME). FLIGHT CREWS SHOULD USE CAUTION WHEN OPERATING IN THIS AREA DURING STADIUM EVENTS. COCKPIT ILLUMINATION AND GLARE EFFECT REDUCING VIS MAY BE INTENSIFIED DURING ARR AND DEP OPS ESPECIALLY AT NIGHT.

RRP RQRD FM FBO FOR TSNT HEL OPS.

FOR CD WHEN ATCT IS CLSD CTC NORCAL APCH AT 916-361-3748.

STOCKTON METROPOLITAN (SCK)
STOCKTON, CALIFORNIA

ATIS
118.25
STOCKTON TOWER *
120.3 239.0
GND CON
121.9

RWY 11L-29R
PCN 46 F/C/X/T
S-40, D-150, 20D-360, 20D-702-650
RWY 11R-29L
S-12.5

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
REARBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

Stockton, CA
Stockton Metropolitan
ICAO Identifier KSCK

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 37-53-39N / 121-14-17.9W
2.2.2 From City: 3 Miles SE Of Stockton, CA
2.2.3 Elevation: 33.2 ft
2.2.5 Magnetic variation: 14E (2010)
2.2.6 Airport Contact: Russell Stark
5000 S. AIRPORT WAY ROOM 202
Stockton, CA 95206 (209-468-4700)

AD 2.3 Attendance Schedule

2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: No
2.4.2 Fuel types: A,100,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
B certified on 5/1/1973
2.6.4 Remarks: Closed To Unscheduled Air Carrier Operations With More Than 30 Passenger Seats Except One Hr Prior Permission Required Call Airport Manager (209) 468-4700 Or 4722; After Hrs Call (209) 468-4722.

AD 2.12 Runway physical characteristics

2.12.1 Designation: H1
2.12.3 Dimensions: 70 ft x 70 ft
2.12.5 Coordinates: 37-53-45.27N / 121-14-47.57W
2.12.6 Threshold elevation: 26 ft

2.12.1 Designation: 11R
2.12.2 True Bearing: 128
2.12.3 Dimensions: 4448 ft x 75 ft
2.12.5 Coordinates: 37-53-58.6715N / 121-14-57.4211W
2.12.6 Threshold elevation: 26.2 ft
2.12.6 Touchdown zone elevation: 26.4 ft

2.12.1 Designation: 29L
2.12.2 True Bearing: 308
2.12.3 Dimensions: 4448 ft x 75 ft
2.12.5 Coordinates: 37-53-31.8561N / 121-14-13.4466W

2.12.6 Threshold elevation: 25.9 ft
2.12.6 Touchdown zone elevation: 26.6 ft

2.12.1 Designation: 11L
2.12.2 True Bearing: 128
2.12.3 Dimensions: 10649 ft x 150 ft
2.12.4 PCN: 46 F/C/X/T
2.12.5 Coordinates: 37-54-08.4321N / 121-15-03.2005W
2.12.6 Threshold elevation: 26.5 ft
2.12.6 Touchdown zone elevation: 29.1 ft

2.12.1 Designation: 29R
2.12.2 True Bearing: 308
2.12.3 Dimensions: 10649 ft x 150 ft
2.12.4 PCN: 46 F/C/X/T
2.12.5 Coordinates: 37-53-04.2253N / 121-13-17.9292W
2.12.6 Threshold elevation: 33.2 ft
2.12.6 Touchdown zone elevation: 32.3 ft

AD 2.13 Declared distances

2.13.1 Designation: 11R
2.13.2 Takeoff run available: 4448
2.13.3 Takeoff distance available: 4448
2.13.4 Accelerate-stop distance available: 4448
2.13.5 Landing distance available: 4448

2.13.1 Designation: 29L
2.13.2 Takeoff run available: 4448
2.13.3 Takeoff distance available: 4448
2.13.4 Accelerate-stop distance available: 4448
2.13.5 Landing distance available: 4448

2.13.1 Designation: 11L
2.13.2 Takeoff run available: 8650
2.13.3 Takeoff distance available: 8650
2.13.4 Accelerate-stop distance available: 8650
2.13.5 Landing distance available: 8650

2.13.1 Designation: 29R
2.13.2 Takeoff run available: 8650
2.13.3 Takeoff distance available: 8650
2.13.4 Accelerate-stop distance available: 8650
2.13.5 Landing distance available: 8650

AD 2.14 Approach and runway lighting

2.14.1 Designation: H1
2.14.2 Approach lighting system: ODALS

2.14.1 Designation: 11L

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 29R

2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ANG OPS

2.18.3 Service designation: 49 MHz

2.18.1 Service designation: ATIS

2.18.3 Service designation: 118.25 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 120.3 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 239 MHz

2.18.1 Service designation: NG OPS

2.18.3 Service designation: 139.4 MHz

2.18.1 Service designation: NG OPS

2.18.3 Service designation: 356.9 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 29R. Magnetic variation: 14E

2.19.2 ILS identification: SCK

2.19.5 Coordinates: 37-54-14.4819N / 121-15-13.1295W

2.19.6 Site elevation: 23.5 ft

2.19.1 ILS type: DME for runway 29R. Magnetic variation: 14E

2.19.2 ILS identification: SCK

2.19.5 Coordinates: 37-54-12.58N / 121-15-15.2W

2.19.6 Site elevation: 22 ft

2.19.1 ILS type: Glide Slope for runway 29R. Magnetic variation: 14E

2.19.2 ILS identification: SCK

2.19.5 Coordinates: 37-53-20.8048N / 121-13-36.9471W

2.19.6 Site elevation: 29.3 ft

General Remarks:

SEAGULLS ON AND IN VCNTY OF ARPT MOSTLY DURING RAINY WEATHER.

AVOID OVERFLYING SAN JOAQUIN GENERAL HOSPITAL & THE CITY OF MANTECA.

ARPT CLSD TO TGL & PLANNED LOW APCHS FOR TURBOJET ACFT 2200-0700 EXCEPT BY PPR FM AMGR PART 36 STAGE 3 ACFT.

PRACTICE CIRCLING APPROACHES TO RWYS 11L/11R NA FOR ANY TURBINE POWERED ACFT/PROP DRIVEN ACFT EXCEEDING 12500 LBS EXCP BY PPR FM AMGR.

MILITARY USE: ARNG OPR 1500-2330Z++ MON-FRI. DSN 466-5319, C209-983-5319, FAX 5391. PPR REQUIRED. LDTD TRAN SVC AND MAINT AVBL FOR CH47.

THE FLWG AREAS NOT VISIBLE FM ATCT: TWY B FM TRML APN TO INT AT TWY M; TWY B FM 300 FT W OF TWY J TO 375 FT E OF TWY J; MOVEMENT AREA S OF TWY B FROM TRML APN TO 200 FT W OF TWY H; SE HALF OF TRML APN; TSNT PRKG APN.

TRANSIENT PARKING AVBL AT FBO.

BE ALERT TO ELEVATED MALSR APCH END RY 29R LCTD AT DSPLCD THLD DEMARCATION BAR WHEN USING FULL LENGTH OF RY 29R.

TRML APN AND TWYS B, F, D, D7, D9, AND H FOR ACFT OVER 12500 LBS. ALL OTHER TWYS RSTRD TO ACFT LESS THAN 12500 LBS.

PAVEMENT PRIOR TO THLDS NOT AVBL FOR TAXI BACK OPS.

FOR CD WHEN ATCT CLSD CTC NORCAL APCH AT 916-361-0516.

TSNT PILOTS USE CTN; DO NOT ENTER THE TSA RSTRD AREA ADJ TO THE TSNT PRKG AREA.

AIRPORT DIAGRAM

17341

AL-9077 (FAA)

DENVER INTL (DEN)
DENVER, COLORADO

D-ATIS
ARR 125.6 379.9
DEP 134.025
DENVER TOWER
135.3 351.95 RMY 16L-34R and 16R-34L
128.75 273.55 RMY 07-25
132.35 239.275 RMY 08-26 and 17L-35R
133.3 322.45 RMY 17R-35L
GND CON
127.5 379.175 RMY 07-25, 16L-34R and 16R-34L
121.85 377.1 RMY 08-26, 17L-35R, and 17R-35L
CINC DEL
118.75
CRDLC

RYW 07-25, 08-26, 16L-34R, 16R-34L, 17L-35R, 17R-35L
PON 92 R/R/W/T
S-116, D-240, 2D-515, 2D/2D2-1085

ASDE-X in use. Operate transponders
with altitude reporting mode and ADS-B
(if equipped) enabled on all airport surfaces.

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

DENVER, COLORADO
DENVER INTL (DEN)

Denver, CO
Denver Intl
ICAO Identifier KDEN

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 39-51-42N / 104-40-23.4W
2.2.2 From City: 16 Miles NE Of Denver, CO
2.2.3 Elevation: 5433.8 ft
2.2.5 Magnetic variation: 8E (2015)
2.2.6 Airport Contact: Kim Day
ADMIN BLDG, 8500 PENA BLVD
Denver, CO 80249 ((303) 342-2206)

AD 2.3 Attendance Schedule

2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: No
2.4.2 Fuel types: 100LL,100,A,MOGAS
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 2/1/1995

AD 2.12 Runway physical characteristics

2.12.1 Designation: 16L
2.12.2 True Bearing: 181
2.12.3 Dimensions: 12000 ft x 150 ft
2.12.4 PCN: 92 R/B/W/T
2.12.5 Coordinates: 39-53-49.3301N /
104-41-12.4998W
2.12.6 Threshold elevation: 5349.9 ft
2.12.6 Touchdown zone elevation: 5357.1 ft

2.12.1 Designation: 34R
2.12.2 True Bearing: 1
2.12.3 Dimensions: 12000 ft x 150 ft
2.12.4 PCN: 92 R/B/W/T
2.12.5 Coordinates: 39-51-50.7743N /
104-41-13.8782W
2.12.6 Threshold elevation: 5353.7 ft
2.12.6 Touchdown zone elevation: 5353.7 ft

2.12.1 Designation: 07
2.12.2 True Bearing: 90
2.12.3 Dimensions: 12000 ft x 150 ft
2.12.4 PCN: 92 R/B/W/T
2.12.5 Coordinates: 39-50-27.4022N /

104-43-35.963W
2.12.6 Threshold elevation: 5350.2 ft
2.12.6 Touchdown zone elevation: 5351.6 ft

2.12.1 Designation: 25
2.12.2 True Bearing: 271
2.12.3 Dimensions: 12000 ft x 150 ft
2.12.4 PCN: 92 R/B/W/T
2.12.5 Coordinates: 39-50-26.3667N /
104-41-02.1712W
2.12.6 Threshold elevation: 5355 ft
2.12.6 Touchdown zone elevation: 5355 ft

2.12.1 Designation: 08
2.12.2 True Bearing: 91
2.12.3 Dimensions: 12000 ft x 150 ft
2.12.4 PCN: 92 R/B/W/T
2.12.5 Coordinates: 39-52-39.2009N /
104-39-44.0267W
2.12.6 Threshold elevation: 5354.3 ft
2.12.6 Touchdown zone elevation: 5354.3 ft

2.12.1 Designation: 26
2.12.2 True Bearing: 271
2.12.3 Dimensions: 12000 ft x 150 ft
2.12.4 PCN: 92 R/B/W/T
2.12.5 Coordinates: 39-52-38.0769N /
104-37-10.1479W
2.12.6 Threshold elevation: 5294.4 ft
2.12.6 Touchdown zone elevation: 5309.4 ft

2.12.1 Designation: 17L
2.12.2 True Bearing: 181
2.12.3 Dimensions: 12000 ft x 150 ft
2.12.4 PCN: 92 R/B/W/T
2.12.5 Coordinates: 39-51-53.8287N /
104-38-28.6959W
2.12.6 Threshold elevation: 5328.1 ft
2.12.6 Touchdown zone elevation: 5338.5 ft

2.12.1 Designation: 35R
2.12.2 True Bearing: 1
2.12.3 Dimensions: 12000 ft x 150 ft
2.12.4 PCN: 92 R/B/W/T
2.12.5 Coordinates: 39-49-55.2707N /
104-38-30.1554W
2.12.6 Threshold elevation: 5370 ft
2.12.6 Touchdown zone elevation: 5370 ft

2.12.1 Designation: 17R
2.12.2 True Bearing: 181

2.12.3 Dimensions: 12000 ft x 150 ft
2.12.4 PCN: 92 R/B/W/T
2.12.5 Coordinates: 39-51-40.4821N /
104-39-36.5561W
2.12.6 Threshold elevation: 5377.9 ft
2.12.6 Touchdown zone elevation: 5391.9 ft

2.12.1 Designation: 35L
2.12.2 True Bearing: 1
2.12.3 Dimensions: 12000 ft x 150 ft
2.12.4 PCN: 92 R/B/W/T
2.12.5 Coordinates: 39-49-41.9262N /
104-39-37.9841W
2.12.6 Threshold elevation: 5433.8 ft
2.12.6 Touchdown zone elevation: 5433.8 ft

2.12.1 Designation: 16R
2.12.2 True Bearing: 181
2.12.3 Dimensions: 16000 ft x 200 ft
2.12.4 PCN: 92 R/B/W/T
2.12.5 Coordinates: 39-53-44.869N /
104-41-45.9006W
2.12.6 Threshold elevation: 5321.8 ft
2.12.6 Touchdown zone elevation: 5326.3 ft

2.12.1 Designation: 34L
2.12.2 True Bearing: 1
2.12.3 Dimensions: 16000 ft x 200 ft
2.12.4 PCN: 92 R/B/W/T
2.12.5 Coordinates: 39-51-06.7926N /
104-41-47.7166W
2.12.6 Threshold elevation: 5327 ft
2.12.6 Touchdown zone elevation: 5327 ft

AD 2.13 Declared distances

2.13.1 Designation: 16L
2.13.2 Takeoff run available: 12000
2.13.3 Takeoff distance available: 12000
2.13.4 Accelerate-stop distance available: 12000
2.13.5 Landing distance available: 12000

2.13.1 Designation: 34R
2.13.2 Takeoff run available: 12000
2.13.3 Takeoff distance available: 13000
2.13.4 Accelerate-stop distance available: 12000
2.13.5 Landing distance available: 12000

2.13.1 Designation: 07
2.13.2 Takeoff run available: 12000
2.13.3 Takeoff distance available: 12000
2.13.4 Accelerate-stop distance available: 12000

2.13.5 Landing distance available: 12000

2.13.1 Designation: 25
2.13.2 Takeoff run available: 12000
2.13.3 Takeoff distance available: 13000
2.13.4 Accelerate-stop distance available: 12000
2.13.5 Landing distance available: 12000

2.13.1 Designation: 08
2.13.2 Takeoff run available: 12000
2.13.3 Takeoff distance available: 13000
2.13.4 Accelerate-stop distance available: 12000
2.13.5 Landing distance available: 12000

2.13.1 Designation: 26
2.13.2 Takeoff run available: 12000
2.13.3 Takeoff distance available: 12000
2.13.4 Accelerate-stop distance available: 12000
2.13.5 Landing distance available: 12000

2.13.1 Designation: 17L
2.13.2 Takeoff run available: 12000
2.13.3 Takeoff distance available: 12000
2.13.4 Accelerate-stop distance available: 12000
2.13.5 Landing distance available: 12000

2.13.1 Designation: 35R
2.13.2 Takeoff run available: 12000
2.13.3 Takeoff distance available: 12000
2.13.4 Accelerate-stop distance available: 12000
2.13.5 Landing distance available: 12000

2.13.1 Designation: 17R
2.13.2 Takeoff run available: 12000
2.13.3 Takeoff distance available: 12000
2.13.4 Accelerate-stop distance available: 12000
2.13.5 Landing distance available: 12000

2.13.1 Designation: 35L
2.13.2 Takeoff run available: 12000
2.13.3 Takeoff distance available: 12000
2.13.4 Accelerate-stop distance available: 12000
2.13.5 Landing distance available: 12000

2.13.1 Designation: 16R
2.13.2 Takeoff run available: 16000
2.13.3 Takeoff distance available: 16000
2.13.4 Accelerate-stop distance available: 16000
2.13.5 Landing distance available: 16000

2.13.1 Designation: 34L

2.13.2 Takeoff run available: 16000
2.13.3 Takeoff distance available: 16000
2.13.4 Accelerate-stop distance available: 16000
2.13.5 Landing distance available: 16000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 16L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 34R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 07
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 25
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 08
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 26
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 17L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 35R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 17R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 35L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 16R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 34L

2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P
2.18.3 Service designation: 118.75 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 118.75 MHz

2.18.1 Service designation: D-ATIS (DEP)
2.18.3 Service designation: 134.025 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS (DEP)
2.18.3 Service designation: 134.025 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS (ARR)
2.18.3 Service designation: 125.6 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS (ARR)
2.18.3 Service designation: 125.6 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS (ARR)
2.18.3 Service designation: 379.9 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS (ARR)
2.18.3 Service designation: 379.9 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: GND/P (RYS 07/25,
16L/34R AND 16R/34L)
2.18.3 Service designation: 127.5 MHz

2.18.1 Service designation: GND/P (RYS 08/26;
17L/35R & 17R/35L)
2.18.3 Service designation: 377.1 MHz

2.18.1 Service designation: GND/P (RYS 08/26;
17L/35R & 17R/35L)
2.18.3 Service designation: 121.85 MHz

2.18.1 Service designation: GND/P (RYS 08/26;
17L/35R & 17R/35L)
2.18.3 Service designation: 121.85 MHz

2.18.1 Service designation: GND/P (RY 07/25, RY

16L/34R & RY 16R/34L)

2.18.3 Service designation: 379.175 MHz

2.18.1 Service designation: GND/P (RY 07/25, RY 16L/34R & RY 16R/34L)

2.18.3 Service designation: 379.175 MHz

2.18.1 Service designation: GND/P (RYS 08/26; 17L/35R & 17R/35L)

2.18.3 Service designation: 377.1 MHz

2.18.1 Service designation: GND/P (RYS 07/25, 16L/34R AND 16R/34L)

2.18.3 Service designation: 127.5 MHz

2.18.1 Service designation: LCL/P (RYS 16L/34R & 16R/34L)

2.18.3 Service designation: 135.3 MHz

2.18.1 Service designation: LCL/P (RYS 08/26 & 17L/35R)

2.18.3 Service designation: 132.35 MHz

2.18.1 Service designation: LCL/P (RYS 16L/34R & 16R/34L)

2.18.3 Service designation: 351.95 MHz

2.18.1 Service designation: LCL/P (RYS 16L/34R & 16R/34L)

2.18.3 Service designation: 351.95 MHz

2.18.1 Service designation: LCL/P (RY 17R/35L)

2.18.3 Service designation: 133.3 MHz

2.18.1 Service designation: LCL/P (RY 17R/35L)

2.18.3 Service designation: 133.3 MHz

2.18.1 Service designation: LCL/P (RY 07/25)

2.18.3 Service designation: 128.75 MHz

2.18.1 Service designation: LCL/P (RY 07/25)

2.18.3 Service designation: 128.75 MHz

2.18.1 Service designation: LCL/P (RY 17R/35L)

2.18.3 Service designation: 322.45 MHz

2.18.1 Service designation: LCL/P (RY 17R/35L)

2.18.3 Service designation: 322.45 MHz

2.18.1 Service designation: LCL/P (RYS 08/26 & 17L/35R)

2.18.3 Service designation: 239.275 MHz

2.18.1 Service designation: LCL/P (RYS 08/26 & 17L/35R)

2.18.3 Service designation: 239.275 MHz

2.18.1 Service designation: LCL/P (RY 07/25)

2.18.3 Service designation: 273.55 MHz

2.18.1 Service designation: LCL/P (RY 07/25)

2.18.3 Service designation: 273.55 MHz

2.18.1 Service designation: LCL/P (RYS 08/26 & 17L/35R)

2.18.3 Service designation: 132.35 MHz

2.18.1 Service designation: LCL/P (RYS 16L/34R & 16R/34L)

2.18.3 Service designation: 135.3 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 07. Magnetic variation: 8E

2.19.2 ILS identification: DZG

2.19.5 Coordinates: 39–50–23.2656N / 104–43–22.6558W

2.19.6 Site elevation: 5340.5 ft

2.19.1 ILS type: DME for runway 07. Magnetic variation: 8E

2.19.2 ILS identification: DZG

2.19.5 Coordinates: 39–50–23.6632N / 104–40–48.6232W

2.19.6 Site elevation: 5359.1 ft

2.19.1 ILS type: Localizer for runway 07. Magnetic variation: 8E

2.19.2 ILS identification: DZG

2.19.5 Coordinates: 39–50–26.2755N / 104–40–49.0613W

2.19.6 Site elevation: 5354.9 ft

2.19.1 ILS type: Localizer for runway 08. Magnetic variation: 8E

2.19.2 ILS identification: FUI

2.19.5 Coordinates: 39–52–37.9791N / 104–36–57.0352W

2.19.6 Site elevation: 5283.1 ft

2.19.1 ILS type: DME for runway 08. Magnetic variation: 8E

2.19.2 ILS identification: FUI
2.19.5 Coordinates: 39-52-41.8784N /
104-39-57.5078W
2.19.6 Site elevation: 5360.2 ft

2.19.1 ILS type: Glide Slope for runway 08. Magnetic variation: 8E
2.19.2 ILS identification: FUI
2.19.5 Coordinates: 39-52-43.1529N /
104-39-29.8599W
2.19.6 Site elevation: 5342.2 ft

2.19.1 ILS type: DME for runway 16L. Magnetic variation: 8E
2.19.2 ILS identification: LTT
2.19.5 Coordinates: 39-53-59.6091N /
104-41-15.7719W
2.19.6 Site elevation: 5357 ft

2.19.1 ILS type: Glide Slope for runway 16L. Magnetic variation: 8E
2.19.2 ILS identification: LTT
2.19.5 Coordinates: 39-53-39.5473N /
104-41-17.8695W
2.19.6 Site elevation: 5346.5 ft

2.19.1 ILS type: Localizer for runway 16L. Magnetic variation: 8E
2.19.2 ILS identification: LTT
2.19.5 Coordinates: 39-51-40.6701N /
104-41-13.996W
2.19.6 Site elevation: 5343.2 ft

2.19.1 ILS type: Glide Slope for runway 16R. Magnetic variation: 8E
2.19.2 ILS identification: DQQ
2.19.5 Coordinates: 39-53-34.8236N /
104-41-51.2764W
2.19.6 Site elevation: 5316.8 ft

2.19.1 ILS type: Localizer for runway 16R. Magnetic variation: 8E
2.19.2 ILS identification: DQQ
2.19.5 Coordinates: 39-50-56.7831N /
104-41-47.8336W
2.19.6 Site elevation: 5320.8 ft

2.19.1 ILS type: DME for runway 16R. Magnetic variation: 8E
2.19.2 ILS identification: DQQ
2.19.5 Coordinates: 39-53-55.7414N /

104-41-50.8967W
2.19.6 Site elevation: 5323.5 ft

2.19.1 ILS type: Localizer for runway 17L. Magnetic variation: 8E
2.19.2 ILS identification: BXP
2.19.5 Coordinates: 39-49-45.1652N /
104-38-30.282W
2.19.6 Site elevation: 5362.9 ft

2.19.1 ILS type: Glide Slope for runway 17L. Magnetic variation: 8E
2.19.2 ILS identification: BXP
2.19.5 Coordinates: 39-51-44.0596N /
104-38-23.5605W
2.19.6 Site elevation: 5326 ft

2.19.1 ILS type: DME for runway 17L. Magnetic variation: 8E
2.19.2 ILS identification: BXP
2.19.5 Coordinates: 39-52-04.266N /
104-38-25.1893W
2.19.6 Site elevation: 5345.1 ft

2.19.1 ILS type: Glide Slope for runway 17R. Magnetic variation: 8E
2.19.2 ILS identification: ACX
2.19.5 Coordinates: 39-51-30.9128N /
104-39-31.4164W
2.19.6 Site elevation: 5378 ft

2.19.1 ILS type: DME for runway 17R. Magnetic variation: 8E
2.19.2 ILS identification: ACX
2.19.5 Coordinates: 39-51-50.9244N /
104-39-33.0513W
2.19.6 Site elevation: 5388 ft

2.19.1 ILS type: Localizer for runway 17R. Magnetic variation: 8E
2.19.2 ILS identification: ACX
2.19.5 Coordinates: 39-49-31.8218N /
104-39-38.1041W
2.19.6 Site elevation: 5427.6 ft

2.19.1 ILS type: Glide Slope for runway 25. Magnetic variation: 8E
2.19.2 ILS identification: ERP
2.19.5 Coordinates: 39-50-22.4098N /
104-41-15.7881W
2.19.6 Site elevation: 5344.2 ft

2.19.1 ILS type: Localizer for runway 25. Magnetic variation: 8E
2.19.2 ILS identification: ERP
2.19.5 Coordinates: 39-50-27.4883N / 104-43-49.0723W
2.19.6 Site elevation: 5348.9 ft

2.19.1 ILS type: DME for runway 25. Magnetic variation: 8E
2.19.2 ILS identification: ERP
2.19.5 Coordinates: 39-50-23.6632N / 104-40-48.6232W
2.19.6 Site elevation: 5359.1 ft

2.19.1 ILS type: Glide Slope for runway 26. Magnetic variation: 8E
2.19.2 ILS identification: JOY
2.19.5 Coordinates: 39-52-42.2239N / 104-37-22.3854W
2.19.6 Site elevation: 5293.2 ft

2.19.1 ILS type: DME for runway 26. Magnetic variation: 8E
2.19.2 ILS identification: JOY
2.19.5 Coordinates: 39-52-41.8784N / 104-39-57.5078W
2.19.6 Site elevation: 5360.2 ft

2.19.1 ILS type: Localizer for runway 26. Magnetic variation: 8E
2.19.2 ILS identification: JOY
2.19.5 Coordinates: 39-52-39.2968N / 104-39-57.142W
2.19.6 Site elevation: 5347.6 ft

2.19.1 ILS type: DME for runway 34L. Magnetic variation: 8E
2.19.2 ILS identification: DXU
2.19.5 Coordinates: 39-53-55.7414N / 104-41-50.8967W
2.19.6 Site elevation: 5323.5 ft

2.19.1 ILS type: Inner Marker for runway 34L. Magnetic variation: 8E
2.19.2 ILS identification: DXU
2.19.5 Coordinates: 39-50-58.2971N / 104-41-47.8092W
2.19.6 Site elevation: 5321.4 ft

2.19.1 ILS type: Localizer for runway 34L. Magnetic variation: 8E

2.19.2 ILS identification: DXU
2.19.5 Coordinates: 39-53-54.875N / 104-41-45.7848W
2.19.6 Site elevation: 5320.1 ft

2.19.1 ILS type: Glide Slope for runway 34L. Magnetic variation: 8E
2.19.2 ILS identification: DXU
2.19.5 Coordinates: 39-51-17.5994N / 104-41-52.8493W
2.19.6 Site elevation: 5317.6 ft

2.19.1 ILS type: Inner Marker for runway 34R. Magnetic variation: 8E
2.19.2 ILS identification: OUF
2.19.5 Coordinates: 39-51-42.2879N / 104-41-13.9788W
2.19.6 Site elevation: 5345 ft

2.19.1 ILS type: Glide Slope for runway 34R. Magnetic variation: 8E
2.19.2 ILS identification: OUF
2.19.5 Coordinates: 39-52-01.3925N / 104-41-19.0115W
2.19.6 Site elevation: 5346.4 ft

2.19.1 ILS type: DME for runway 34R. Magnetic variation: 8E
2.19.2 ILS identification: OUF
2.19.5 Coordinates: 39-53-59.6091N / 104-41-15.7719W
2.19.6 Site elevation: 5357 ft

2.19.1 ILS type: Localizer for runway 34R. Magnetic variation: 8E
2.19.2 ILS identification: OUF
2.19.5 Coordinates: 39-53-59.4426N / 104-41-12.3812W
2.19.6 Site elevation: 5349.7 ft

2.19.1 ILS type: Inner Marker for runway 35L. Magnetic variation: 8E
2.19.2 ILS identification: AQD
2.19.5 Coordinates: 39-49-33.4386N / 104-39-38.091W
2.19.6 Site elevation: 5428.6 ft

2.19.1 ILS type: DME for runway 35L. Magnetic variation: 8E
2.19.2 ILS identification: AQD
2.19.5 Coordinates: 39-51-50.9244N /

104-39-33.0513W

2.19.6 Site elevation: 5388 ft

2.19.1 ILS type: Glide Slope for runway 35L. Magnetic variation: 8E

2.19.2 ILS identification: AQD

2.19.5 Coordinates: 39-49-52.7648N /

104-39-32.5991W

2.19.6 Site elevation: 5422.6 ft

2.19.1 ILS type: Localizer for runway 35L. Magnetic variation: 8E

2.19.2 ILS identification: AQD

2.19.5 Coordinates: 39-51-50.5996N /

104-39-36.4352W

2.19.6 Site elevation: 5377.3 ft

2.19.1 ILS type: Glide Slope for runway 35R. Magnetic variation: 8E

2.19.2 ILS identification: DPP

2.19.5 Coordinates: 39-50-06.3585N /

104-38-24.7651W

2.19.6 Site elevation: 5359.9 ft

2.19.1 ILS type: DME for runway 35R. Magnetic variation: 8E

2.19.2 ILS identification: DPP

2.19.5 Coordinates: 39-52-04.266N /

104-38-25.1893W

2.19.6 Site elevation: 5345.1 ft

2.19.1 ILS type: Localizer for runway 35R. Magnetic variation: 8E

2.19.2 ILS identification: DPP

2.19.5 Coordinates: 39-52-03.9404N /

104-38-28.572W

2.19.6 Site elevation: 5335.5 ft

2.19.1 ILS type: Inner Marker for runway 35R. Magnetic variation: 8E

2.19.2 ILS identification: DPP

2.19.5 Coordinates: 39-49-46.7811N /

104-38-30.2697W

2.19.6 Site elevation: 5364.5 ft

General Remarks:

OVERHEAD PSGR BRIDGE ON SOUTH SIDE OF CONCOURSE 'A' PRVDS 42 FT TAIL & 118 FT WINGSPAN CLNC WHEN ON TWY CNTRLN.

CUSTOMS AVBL WITH PRIOR PERMISSION.

INFORMAL RY USE PROGRAM IS IN EFFECT 24 HRS A DAY. FOR ADDITIONAL NOISE ABATEMENT INFORMATION CONTACT AIRPORT MANAGEMENT AT 303-342-4200.

WATERFOWL AND MIGRATORY BIRD ACTIVITY INVOF ARPT YEAR ROUND.

ARPT MAINTAINS CLEARWAYS (500 FT X 1,000 FT, 1.25% SLOPE) ON DEP RY 08, RY 25, & RY 34R.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

TWY F7 CLSD TO ACFT WINGSPAN MORE THAN 118 FT.

19003

AL-334 (FAA)

PUEBLO MEMORIAL (PUB)
PUEBLO, COLORADO

**CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.**

FIELD ELEV 4729

ATIS 125.25
PUEBLO TOWER* 119.1 257.8
GND CON 121.9
CINC DEL 120.9

1.0% DOWN
170.2°

8310 X 150
4741 A

LAHSO 4681
080.2°
8R
ELEV 4670

LAHSO 4677
260.2°
10496 X 150
26R
ELEV 4649

LAHSO 4648
350.2°
3500 X 150
25R
ELEV 4648

0.9% UP

0.4% UP
260.2°
A12
A11
A10
A9
A8
A7
A6
A5
A4
A3
A2
A1

GENERAL AVIATION PARKING
TERMINAL AVIATION PARKING
GENERAL AVIATION PARKING
TERMINAL
NWS
FIRE STATION
HANGAR

NON MOVEMENT AREA

VAR 8.1° E
JANUARY 2015
ANNUAL RATE OF CHANGE 0.1° W

104°28'W
104°29'W
104°30'W

38°18'N
38°17'N

19003

PUEBLO, COLORADO
PUEBLO MEMORIAL (PUB)

Pueblo, CO
Pueblo Memorial
ICAO Identifier KPUB

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 38-17-23.8N / 104-29-52.9W
2.2.2 From City: 5 Miles E Of Pueblo, CO
2.2.3 Elevation: 4729.4 ft
2.2.5 Magnetic variation: 8E (2015)
2.2.6 Airport Contact: Ian Turner
31201 BRYAN CIRCLE
Pueblo, CO 81001
(719-553-2760)

AD 2.3 Attendance Schedule

2.3.1 - 2.3.11: ALL Months, ALL Days, 0500-2200
Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: No
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
A certified on 5/1/1973

AD 2.12 Runway physical characteristics

2.12.1 Designation: 17
2.12.2 True Bearing: 178
2.12.3 Dimensions: 8310 ft x 150 ft
2.12.5 Coordinates: 38-18-15.0599N /
104-30-14.6945W
2.12.6 Threshold elevation: 4729.4 ft
2.12.6 Touchdown zone elevation: 4729.4 ft
2.12.7 Slope: 1 DOWN

2.12.1 Designation: 35
2.12.2 True Bearing: 358
2.12.3 Dimensions: 8310 ft x 150 ft
2.12.5 Coordinates: 38-16-52.9716N /
104-30-11.6482W
2.12.6 Threshold elevation: 4648.2 ft
2.12.6 Touchdown zone elevation: 4677 ft
2.12.7 Slope: 0.9 UP

2.12.1 Designation: 08R
2.12.2 True Bearing: 88
2.12.3 Dimensions: 10496 ft x 150 ft

2.12.5 Coordinates: 38-17-13.65N / 104-30-36.23W
2.12.6 Threshold elevation: 4669.5 ft
2.12.6 Touchdown zone elevation: 4671.3 ft

2.12.1 Designation: 26L
2.12.2 True Bearing: 268
2.12.3 Dimensions: 10496 ft x 150 ft
2.12.5 Coordinates: 38-17-16.77N / 104-28-24.67W
2.12.6 Threshold elevation: 4648.7 ft
2.12.6 Touchdown zone elevation: 4658.7 ft
2.12.7 Slope: 0.4 UP

2.12.1 Designation: 08L
2.12.2 True Bearing: 88
2.12.3 Dimensions: 4690 ft x 75 ft
2.12.5 Coordinates: 38-17-24.3082N /
104-30-36.6452W
2.12.6 Threshold elevation: 4681.1 ft
2.12.6 Touchdown zone elevation: 4681.1 ft
2.12.7 Slope: 0 DOWN

2.12.1 Designation: 26R
2.12.2 True Bearing: 268
2.12.3 Dimensions: 4690 ft x 75 ft
2.12.5 Coordinates: 38-17-25.7015N /
104-29-37.8647W
2.12.6 Threshold elevation: 4676.9 ft
2.12.6 Touchdown zone elevation: 4678.1 ft

AD 2.13 Declared distances

2.13.1 Designation: 17
2.13.2 Takeoff run available: 8308
2.13.3 Takeoff distance available: 8308
2.13.4 Accelerate-stop distance available: 8308
2.13.5 Landing distance available: 8308

2.13.1 Designation: 35
2.13.2 Takeoff run available: 8308
2.13.3 Takeoff distance available: 8308
2.13.4 Accelerate-stop distance available: 8308
2.13.5 Landing distance available: 8308

2.13.1 Designation: 08R
2.13.2 Takeoff run available: 10496
2.13.3 Takeoff distance available: 10496
2.13.4 Accelerate-stop distance available: 10496
2.13.5 Landing distance available: 10496

2.13.1 Designation: 26L
2.13.2 Takeoff run available: 10496
2.13.3 Takeoff distance available: 10496

2.13.4 Accelerate-stop distance available: 10496
2.13.5 Landing distance available: 10496

2.13.1 Designation: 08L
2.13.2 Takeoff run available: 4690
2.13.3 Takeoff distance available: 4690
2.13.4 Accelerate-stop distance available: 4690
2.13.5 Landing distance available: 4690

2.13.1 Designation: 26R
2.13.2 Takeoff run available: 4690
2.13.3 Takeoff distance available: 4690
2.13.4 Accelerate-stop distance available: 4690
2.13.5 Landing distance available: 4690

AD 2.14 Approach and runway lighting

2.14.1 Designation: 17
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 35
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 08R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 26L
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 08L
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 26R
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ATIS
2.18.3 Service designation: 125.25 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P
2.18.3 Service designation: 120.9 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 119.1 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 08R. Magnetic variation: 8E
2.19.2 ILS identification: PUB
2.19.5 Coordinates: 38-17-17.201N / 104-28-06.1129W
2.19.6 Site elevation: 4653.2 ft

2.19.1 ILS type: Glide Slope for runway 08R. Magnetic variation: 8E
2.19.2 ILS identification: PUB
2.19.5 Coordinates: 38-17-18.9319N / 104-30-21.5831W
2.19.6 Site elevation: 4672.9 ft

2.19.1 ILS type: Glide Slope for runway 26L. Magnetic variation: 8E
2.19.2 ILS identification: TFR
2.19.5 Coordinates: 38-17-21.36N / 104-28-39.2W
2.19.6 Site elevation: 4649.6 ft

2.19.1 ILS type: Localizer for runway 26L. Magnetic variation: 8E
2.19.2 ILS identification: TFR
2.19.5 Coordinates: 38-17-13.2497N / 104-30-52.5593W
2.19.6 Site elevation: 4668 ft

General Remarks:

HIGH VOLUME TRNG DA-20 ACFT SR-SS MON-FRI. OVERHEAD PATTERN DURG TRNG. EXTENSIVE USE OF TRNG AREA 12-28 DME N-SW OF ARPT 500 FT AGL-8500 FT MSL.

BE ALERT; INTENSIVE USAF STUDENT TRAINING IN VICINITY OF COLORADO SPRINGS & PUEBLO COLORADO.

SEE FLIP AP/1 SUPPLEMENTARY ARPT INFO.

CONDITIONS NOT MONITORED 2200L-0500L.

TWY A BTN TWY A2 AND A6 50 FT WID.

18088
BRADLEY INTL (BDL)
WINDSOR LOCKS, CONNECTICUT

AI-460 (FAA)

D-ATIS
 118.15
BRADLEY TOWER
 120.3 351.8
GND CON
 121.9 348.6
CLNC DEL
 121.75 322.3
CPDLC

D

JANUARY 2015
ANNUAL RATE OF CHANGE
 0.0°E

TWR
 345

ELEV 169
 61
 LAHSO
 9510 X 200
 193.0°
 4269 X 100
 013.0°
 ELEV 171
 328.4°
 ELEV 169

986 X 200
 ELEV 161
 238.4°

ARMY NATIONAL GUARD

GENERAL AVIATION

GENERAL AVIATION PARKING

INT'L ARRIVALS TERMINAL

DE-ICE AREA

FIELD ELEV 173

RWY 01-19
 S-60, D-190, 2S-175, 2D-328
RWY 06-24
 S-200, D-200, 2S-175, 2D-350
 2D/2D2-710
RWY 15-33
 S-200, D-200, 2S-175, 2D-350

ASDE-X in use. Operate transponders with altitude reporting mode and ADS-B (if equipped) enabled on all airport surfaces.

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES. REBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

72°42'W
72°41'W

41°57'N
41°56'N

CONNECTICUT ANG

AI-460 (FAA)

BRADLEY INTL (BDL)
WINDSOR LOCKS, CONNECTICUT

Windsor Locks, CT
Bradley Intl
ICAO Identifier KBDL

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 41-56-20.9N / 72-41-00.1W
2.2.2 From City: 3 Miles W Of Windsor Locks, CT
2.2.3 Elevation: 173.3 ft
2.2.5 Magnetic variation: 14W (1980)
2.2.6 Airport Contact: Kevin Dillon, Aae
BRADLEY INTL AIRPORT
Windsor Locks, CT 6096
(860-292-2003)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 01
2.10.1.b Type of obstacle: Acft (40 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 350 ft L of Centerline

2.10.1.a. Runway designation: 06
2.10.1.b Type of obstacle: Trees (185 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 400 ft R of Centerline

2.10.1.a. Runway designation: 15
2.10.1.b Type of obstacle: Trees (75 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 0 ft B of Centerline

2.10.1.a. Runway designation: 19
2.10.1.b Type of obstacle: Trees (90 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 0 ft B of Centerline

2.10.1.a. Runway designation: 24
2.10.1.b Type of obstacle: Trees (71 ft above runway

end). Not Lighted or Marked
2.10.1.c Location of obstacle: 0 ft B of Centerline

2.10.1.a. Runway designation: 33
2.10.1.b Type of obstacle: Trees (44 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 430 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 06
2.12.2 True Bearing: 44
2.12.3 Dimensions: 9510 ft x 200 ft
2.12.5 Coordinates: 41-55-55.25N / 72-41-47.6885W
2.12.6 Threshold elevation: 173 ft
2.12.6 Touchdown zone elevation: 173.3 ft

2.12.1 Designation: 24
2.12.2 True Bearing: 224
2.12.3 Dimensions: 9510 ft x 200 ft
2.12.5 Coordinates: 41-57-02.3952N /
72-40-19.6697W
2.12.6 Threshold elevation: 160.9 ft
2.12.6 Touchdown zone elevation: 170 ft

2.12.1 Designation: 15
2.12.2 True Bearing: 134
2.12.3 Dimensions: 6847 ft x 150 ft
2.12.5 Coordinates: 41-56-32.6254N /
72-41-35.7104W
2.12.6 Threshold elevation: 168.8 ft
2.12.6 Touchdown zone elevation: 170.8 ft

2.12.1 Designation: 33
2.12.2 True Bearing: 314
2.12.3 Dimensions: 6847 ft x 150 ft
2.12.5 Coordinates: 41-55-45.3238N /
72-40-30.9557W
2.12.6 Threshold elevation: 168.5 ft
2.12.6 Touchdown zone elevation: 171.4 ft

2.12.1 Designation: 01
2.12.2 True Bearing: 359
2.12.3 Dimensions: 4269 ft x 100 ft
2.12.5 Coordinates: 41-56-01.4056N /
72-40-46.6234W
2.12.6 Threshold elevation: 170.5 ft
2.12.6 Touchdown zone elevation: 170.4 ft

2.12.1 Designation: 19
2.12.2 True Bearing: 179
2.12.3 Dimensions: 4269 ft x 100 ft

2.12.5 Coordinates: 41-56-43.5734N /
72-40-47.5714W
2.12.6 Threshold elevation: 168.9 ft
2.12.6 Touchdown zone elevation: 170.2 ft

AD 2.13 Declared distances

2.13.1 Designation: 06
2.13.2 Takeoff run available: 9509
2.13.3 Takeoff distance available: 9509
2.13.4 Accelerate-stop distance available: 9509
2.13.5 Landing distance available: 9509

2.13.1 Designation: 24
2.13.2 Takeoff run available: 9509
2.13.3 Takeoff distance available: 9509
2.13.4 Accelerate-stop distance available: 9509
2.13.5 Landing distance available: 9509

2.13.1 Designation: 15
2.13.2 Takeoff run available: 6847
2.13.3 Takeoff distance available: 6847
2.13.4 Accelerate-stop distance available: 6847
2.13.5 Landing distance available: 6847

2.13.1 Designation: 33
2.13.2 Takeoff run available: 6847
2.13.3 Takeoff distance available: 6847
2.13.4 Accelerate-stop distance available: 6847
2.13.5 Landing distance available: 6847

2.13.1 Designation: 01
2.13.2 Takeoff run available: 4268
2.13.3 Takeoff distance available: 4268
2.13.4 Accelerate-stop distance available: 4268

2.13.1 Designation: 19
2.13.5 Landing distance available: 4268

AD 2.14 Approach and runway lighting

2.14.1 Designation: 06
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Vgsi And Glidepath Not Coincident.

2.14.1 Designation: 24
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Vgsi And Glidepath Not Coincident.

2.14.1 Designation: 15
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 33
2.14.2 Approach lighting system: MALSF
2.14.4 Visual approach slope indicator system: P4R
2.14.10 Remarks: Vgsi And Glidepath Not Coincident.

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ANG OPS
2.18.3 Service designation: 138.55 MHz

2.18.1 Service designation: ANG OPS
2.18.3 Service designation: 349.7 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 121.75 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 322.3 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 118.15 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 120.3 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 351.8 MHz

2.18.1 Service designation: NG OPS
2.18.3 Service designation: 41.9 MHz

2.18.1 Service designation: NG OPS
2.18.3 Service designation: 123.45 MHz

2.18.1 Service designation: NG OPS
2.18.3 Service designation: 243.9 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 06. Magnetic varia-

tion: 14W

2.19.2 ILS identification: BDL

2.19.5 Coordinates: 41-57-17.2894N /
72-39-56.5118W

2.19.6 Site elevation: 163.8 ft

2.19.1 ILS type: Inner Marker for runway 06. Magnetic
variation: 14W

2.19.2 ILS identification: BDL

2.19.5 Coordinates: 41-55-49.4746N / 72-41-56.067W

2.19.6 Site elevation: 171.3 ft

2.19.1 ILS type: Glide Slope for runway 06. Magnetic
variation: 14W

2.19.2 ILS identification: BDL

2.19.5 Coordinates: 41-56-05.5448N /
72-41-41.8869W

2.19.6 Site elevation: 169.3 ft

2.19.1 ILS type: Localizer for runway 06. Magnetic vari-
ation: 14W

2.19.2 ILS identification: BDL

2.19.5 Coordinates: 41-57-17.8499N /
72-39-59.4045W

2.19.6 Site elevation: 149.5 ft

2.19.1 ILS type: Glide Slope for runway 24. Magnetic
variation: 14W

2.19.2 ILS identification: MYQ

2.19.5 Coordinates: 41-56-53.5757N /
72-40-25.9626W

2.19.6 Site elevation: 156.7 ft

2.19.1 ILS type: Inner Marker for runway 24. Magnetic
variation: 14W

2.19.2 ILS identification: MYQ

2.19.5 Coordinates: 41-57-12.0728N /
72-40-06.9772W

2.19.6 Site elevation: 139.9 ft

2.19.1 ILS type: DME for runway 24. Magnetic varia-
tion: 14W

2.19.2 ILS identification: MYQ

2.19.5 Coordinates: 41-57-17.2894N /
72-39-56.5118W

2.19.6 Site elevation: 163.8 ft

2.19.1 ILS type: Localizer for runway 24. Magnetic vari-
ation: 14W

2.19.2 ILS identification: MYQ

2.19.5 Coordinates: 41-55-47.661N / 72-41-57.6296W

2.19.6 Site elevation: 170.3 ft

2.19.1 ILS type: DME for runway 33. Magnetic varia-
tion: 14W

2.19.2 ILS identification: IKX

2.19.5 Coordinates: 41-56-37.9724N / 72-41-47.432W

2.19.6 Site elevation: 181.8 ft

2.19.1 ILS type: Glide Slope for runway 33. Magnetic
variation: 14W

2.19.2 ILS identification: IKX

2.19.5 Coordinates: 41-55-54.7672N /
72-40-38.5896W

2.19.6 Site elevation: 167.6 ft

2.19.1 ILS type: Localizer for runway 33. Magnetic vari-
ation: 14W

2.19.2 ILS identification: IKX

2.19.5 Coordinates: 41-56-40.2961N /
72-41-46.2065W

2.19.6 Site elevation: 168.3 ft

General Remarks:

NMRS BIRDS FQTLY ON OR INVOF ARPT.

OPS CTC AUTOVON 636-8385; COML 860-627-3001.

ANG - OPR 0700-1530 TUES/FRI/SAT; 0700-2300 WED/THUR.

ANG - PPR V220-2356.

NO DE-ICING AVBL AT ANG.

TWY J CLOSED BTN S & R TO ACFT WITH WING SPANS IN EXCESS OF 170 FT.

NO TRNG FLTS, NO PLAS, NO TGLS BTN: 2300 - 0700 MON THRU SAT & 2300 - 1200 SUN.

(E117) CT ANG AND U.S. ARMY NG.

ASDE-X IN USE. OPR TRANSPONDERS WITH ALT RPRTG MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL ARPT SFCS.

EXCEPT FOR TAXIING, RY 01/19 OPEN FOR ACFT WITH WINGSPAN LESS THAN 79 FT.

RWY 01 CLSD FOR ARRS TO ALL FIXED WING ACFT.

RWY 19 CLSD FOR DEPS TO ALL FIXED WING ACFT.

ANG: NSTD YELLOW AEROSPACE GND EQPT AND FIRE BOTTLE BOXES PAINTED ON ANG RAMP.

ARNG – DSN 636-7519/7520. C860-292-4519/4520.

ANG: AFLD MGR DOES NOT ISSUE OR STORE COMSEC FOR TRAN CREWS.

CAUTION: ANG RAMP MRK MAY NOT BE APPROPRIATE FOR LARGE ACFT: FLW MARSHALLERS INSTR. KC35 ACFT USE CAUTION, FIRE HYDRANTS ARE 33" AND ARE LESS THAN 84 FT FM TAXILANE CN-TRLN.

PARL TWY OPNS ON TWY C AND TWY B RSTD TO ACFT W/ WINGSPANS OF 171 FT OR LESS.

ACFT REQG US CUST SVCS MUST PARK ON THE CUST SPOT W/ THE NOSE OF THE ACFT FACING SW. CTC CUST AT 860-292-1314 WHEN PARKED.

BASH PHASE II INCRD BIRD ACTVITY SEP-OCT AND MAR-APR.

FUEL: A++ (MIL).

COLD TEMPERATURE RESTRICTED AIRPORT. ALTITUDE CORRECTION REQUIRED AT OR BELOW -23C.

FIXED WING ACFT USE LOW IDLE FOR TAXI, NO ENGINE CHECKS OR POWER RUNS ALLOWED ON THE ARNG RAMP DUE TO POSSIBLE FOD HAZARD.

AIRPORT DIAGRAM

AL-5100 (FAA)

WASHINGTON DULLES INTL (IAD)

WASHINGTON, DC

D-ATIS
134.85
DULLES TOWER
120.1 317.8 (RWY 01R-19L)
120.25 348.6 (RWY 01C-19C)
134.425 348.6
(RWYS 01L-19R, 12-30)
GND CON
121.9 317.8 (EAST)
121.625 348.6 (WEST)
CLNIC DEL
135.7 317.8
MIDFIELD RAMP CON
129.55
CPDLC

D

ASDE-X in use. Operate transponders with altitude reporting mode and ADS-B (if equipped) enabled on all airport surfaces.

Runway Status Lights in operation.

ELEV 277.36 L
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Washington, DC
Washington Dulles Intl
ICAO Identifier KIAD

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 38-56-50.8N / 77-27-35.8W
2.2.2 From City: 20 Miles W Of Washington, VA
2.2.3 Elevation: 313 ft
2.2.5 Magnetic variation: 10W (2000)
2.2.6 Airport Contact: Mike Stewart
1 SAARINEN CIRCLE
Dulles, VA 20166
(703-572-2730)
2.2.8 Remarks: Located In Both Fairfax County Va And Loudoun County Va.

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 19L
2.10.1.b Type of obstacle: Pole (38 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 720 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 12
2.12.2 True Bearing: 111
2.12.3 Dimensions: 10501 ft x 150 ft
2.12.4 PCN: 81 R/C/W/T
2.12.5 Coordinates: 38-56-37.58N / 77-29-25.599W
2.12.6 Threshold elevation: 309.8 ft
2.12.6 Touchdown zone elevation: 309.8 ft

2.12.1 Designation: 30
2.12.2 True Bearing: 291
2.12.3 Dimensions: 10501 ft x 150 ft
2.12.4 PCN: 81 R/C/W/T
2.12.5 Coordinates: 38-56-00.997N / 77-27-21.233W
2.12.6 Threshold elevation: 287.8 ft

2.12.6 Touchdown zone elevation: 287.8 ft
2.12.7 Slope: 0.4 UP

2.12.1 Designation: 01R
2.12.2 True Bearing: 1
2.12.3 Dimensions: 11500 ft x 150 ft
2.12.4 PCN: 81 R/C/W/T
2.12.5 Coordinates: 38-55-25.526N / 77-26-11.222W
2.12.6 Threshold elevation: 311.7 ft
2.12.6 Touchdown zone elevation: 312.4 ft
2.12.7 Slope: 0.3 DOWN

2.12.1 Designation: 19L
2.12.2 True Bearing: 181
2.12.3 Dimensions: 11500 ft x 150 ft
2.12.4 PCN: 81 R/C/W/T
2.12.5 Coordinates: 38-57-19.185N / 77-26-09.526W
2.12.6 Threshold elevation: 293.2 ft
2.12.6 Touchdown zone elevation: 302.2 ft
2.12.7 Slope: 0.3 UP

2.12.1 Designation: 01L
2.12.2 True Bearing: 1
2.12.3 Dimensions: 9400 ft x 150 ft
2.12.4 PCN: 81 R/C/W/T
2.12.5 Coordinates: 38-56-41.88N / 77-28-29.3151W
2.12.6 Threshold elevation: 296 ft
2.12.6 Touchdown zone elevation: 296.1 ft
2.12.7 Slope: 0.3 DOWN

2.12.1 Designation: 19R
2.12.2 True Bearing: 181
2.12.3 Dimensions: 9400 ft x 150 ft
2.12.4 PCN: 81 R/C/W/T
2.12.5 Coordinates: 38-58-14.7845N / 77-28-27.9825W
2.12.6 Threshold elevation: 276.9 ft
2.12.6 Touchdown zone elevation: 278.4 ft

2.12.1 Designation: 01C
2.12.2 True Bearing: 1
2.12.3 Dimensions: 11500 ft x 150 ft
2.12.4 PCN: 81 R/C/W/T
2.12.5 Coordinates: 38-56-20.6392N / 77-27-35.1991W
2.12.6 Threshold elevation: 286.1 ft
2.12.6 Touchdown zone elevation: 286.3 ft

2.12.1 Designation: 19C
2.12.2 True Bearing: 181
2.12.3 Dimensions: 11500 ft x 150 ft

2.12.4 PCN: 81 R/C/W/T
2.12.5 Coordinates: 38-58-14.3066N /
77-27-33.5452W
2.12.6 Threshold elevation: 268.5 ft
2.12.6 Touchdown zone elevation: 271.3 ft

AD 2.13 Declared distances

2.13.1 Designation: 12
2.13.2 Takeoff run available: 10501
2.13.3 Takeoff distance available: 10501
2.13.4 Accelerate-stop distance available: 10501
2.13.5 Landing distance available: 10501

2.13.1 Designation: 30
2.13.2 Takeoff run available: 10501
2.13.3 Takeoff distance available: 10501
2.13.4 Accelerate-stop distance available: 10501
2.13.5 Landing distance available: 10501

2.13.1 Designation: 01R
2.13.2 Takeoff run available: 11500
2.13.3 Takeoff distance available: 11500
2.13.4 Accelerate-stop distance available: 11500
2.13.5 Landing distance available: 11500

2.13.1 Designation: 19L
2.13.2 Takeoff run available: 11500
2.13.3 Takeoff distance available: 11500
2.13.4 Accelerate-stop distance available: 11500
2.13.5 Landing distance available: 11500

2.13.1 Designation: 01L
2.13.2 Takeoff run available: 9400
2.13.3 Takeoff distance available: 9400
2.13.4 Accelerate-stop distance available: 9400
2.13.5 Landing distance available: 9400

2.13.1 Designation: 19R
2.13.2 Takeoff run available: 9400
2.13.3 Takeoff distance available: 9400
2.13.4 Accelerate-stop distance available: 9400
2.13.5 Landing distance available: 9400

2.13.1 Designation: 01C
2.13.2 Takeoff run available: 11500
2.13.3 Takeoff distance available: 11500
2.13.4 Accelerate-stop distance available: 11500
2.13.5 Landing distance available: 11500

2.13.1 Designation: 19C
2.13.2 Takeoff run available: 11500

2.13.3 Takeoff distance available: 11500
2.13.4 Accelerate-stop distance available: 11500
2.13.5 Landing distance available: 11089

AD 2.14 Approach and runway lighting

2.14.1 Designation: 12
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 30
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 01R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 19L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 01L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 19R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 01C
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 19C
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: AS ASSIGNED
2.18.3 Service designation: 132.45 MHz

2.18.1 Service designation: AS ASSIGNED
2.18.3 Service designation: 128.425 MHz

2.18.1 Service designation: AS ASSIGNED
2.18.3 Service designation: 125.8 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 317.8 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 135.7 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 134.85 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P (EAST)
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P (WEST)
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/P (WEST)
2.18.3 Service designation: 121.625 MHz

2.18.1 Service designation: GND/P (EAST)
2.18.3 Service designation: 317.8 MHz

2.18.1 Service designation: LCL/P (RY 01C/19C)
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: LCL/P (RY 01L/19R & RY 12/30)
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: LCL/P (RY 01L/19R & RY 12/30)
2.18.3 Service designation: 134.425 MHz

2.18.1 Service designation: LCL/P (RY 01C/19C)
2.18.3 Service designation: 120.25 MHz

2.18.1 Service designation: LCL/P (RY 01R/19L)
2.18.3 Service designation: 317.8 MHz

2.18.1 Service designation: LCL/P (RY 01R/19L)
2.18.3 Service designation: 120.1 MHz

2.18.1 Service designation: RAMP CTL (MIDFLD)
2.18.3 Service designation: 129.55 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 01C. Magnetic variation: 10W
2.19.2 ILS identification: OSZ
2.19.5 Coordinates: 38-56-31.0615N / 77-27-40.7425W

2.19.6 Site elevation: 283.3 ft

2.19.1 ILS type: Localizer for runway 01C. Magnetic variation: 10W

2.19.2 ILS identification: OSZ
2.19.5 Coordinates: 38-58-24.6686N / 77-27-33.3933W
2.19.6 Site elevation: 263.2 ft

2.19.1 ILS type: Localizer for runway 01L. Magnetic variation: 10W

2.19.2 ILS identification: OIU
2.19.5 Coordinates: 38-58-24.7673N / 77-28-27.8426W
2.19.6 Site elevation: 276.9 ft

2.19.1 ILS type: Glide Slope for runway 01L. Magnetic variation: 10W

2.19.2 ILS identification: OIU
2.19.5 Coordinates: 38-56-52.8723N / 77-28-34.3495W
2.19.6 Site elevation: 287.9 ft

2.19.1 ILS type: Inner Marker for runway 01L. Magnetic variation: 10W

2.19.2 ILS identification: OIU
2.19.5 Coordinates: 38-56-33.3915N / 77-28-29.4465W
2.19.6 Site elevation: 275 ft

2.19.1 ILS type: DME for runway 01L. Magnetic variation: 10W

2.19.2 ILS identification: OIU
2.19.5 Coordinates: 38-58-25.0778N / 77-28-31.1627W
2.19.6 Site elevation: 279.3 ft

2.19.1 ILS type: Localizer for runway 01R. Magnetic variation: 10W

2.19.2 ILS identification: IAD
2.19.5 Coordinates: 38-57-30.868N / 77-26-09.357W
2.19.6 Site elevation: 301.8 ft

2.19.1 ILS type: DME for runway 01R. Magnetic variation: 10W

2.19.2 ILS identification: IAD
2.19.5 Coordinates: 38-55-11.0826N / 77-26-08.8302W
2.19.6 Site elevation: 313.9 ft

2.19.1 ILS type: Glide Slope for runway 01R. Magnetic

variation: 10W

2.19.2 ILS identification: IAD

2.19.5 Coordinates: 38-55-35.845N / 77-26-04.749W

2.19.6 Site elevation: 306.5 ft

2.19.1 ILS type: Localizer for runway 12. Magnetic variation: 10W

2.19.2 ILS identification: AJU

2.19.5 Coordinates: 38-55-57.27N / 77-27-08.47W

2.19.6 Site elevation: 279.8 ft

2.19.1 ILS type: Glide Slope for runway 12. Magnetic variation: 10W

2.19.2 ILS identification: AJU

2.19.5 Coordinates: 38-56-30.399N / 77-29-15.535W

2.19.6 Site elevation: 303.5 ft

2.19.1 ILS type: Glide Slope for runway 19C. Magnetic variation: 10W

2.19.2 ILS identification: DLX

2.19.5 Coordinates: 38-58-04.1832N /

77-27-37.9999W

2.19.6 Site elevation: 266.3 ft

2.19.1 ILS type: Localizer for runway 19C. Magnetic variation: 10W

2.19.2 ILS identification: DLX

2.19.5 Coordinates: 38-56-14.614N / 77-27-35.2866W

2.19.6 Site elevation: 283.9 ft

2.19.1 ILS type: Inner Marker for runway 19C. Magnetic variation: 10W

2.19.2 ILS identification: DLX

2.19.5 Coordinates: 38-58-22.9443N /

77-27-33.4218W

2.19.6 Site elevation: 263.4 ft

2.19.1 ILS type: Glide Slope for runway 19L. Magnetic variation: 10W

2.19.2 ILS identification: SGC

2.19.5 Coordinates: 38-57-09.268N / 77-26-04.613W

2.19.6 Site elevation: 291.1 ft

2.19.1 ILS type: Localizer for runway 19L. Magnetic variation: 10W

2.19.2 ILS identification: SGC

2.19.5 Coordinates: 38-55-11.807N / 77-26-11.427W

2.19.6 Site elevation: 315.3 ft

2.19.1 ILS type: DME for runway 19L. Magnetic variation: 10W

2.19.2 ILS identification: SGC

2.19.5 Coordinates: 38-55-11.0826N /

77-26-08.8302W

2.19.6 Site elevation: 313.9 ft

2.19.1 ILS type: Inner Marker for runway 19R. Magnetic variation: 10W

2.19.2 ILS identification: ISU

2.19.5 Coordinates: 38-58-23.5142N /

77-28-27.8585W

2.19.6 Site elevation: 276 ft

2.19.1 ILS type: Localizer for runway 19R. Magnetic variation: 10W

2.19.2 ILS identification: ISU

2.19.5 Coordinates: 38-56-31.8979N /

77-28-29.4605W

2.19.6 Site elevation: 298.2 ft

2.19.1 ILS type: Glide Slope for runway 19R. Magnetic variation: 10W

2.19.2 ILS identification: ISU

2.19.5 Coordinates: 38-58-04.4568N /

77-28-33.3233W

2.19.6 Site elevation: 272 ft

2.19.1 ILS type: DME for runway 19R. Magnetic variation: 10W

2.19.2 ILS identification: ISU

2.19.5 Coordinates: 38-58-25.0778N /

77-28-31.1627W

2.19.6 Site elevation: 279.3 ft

General Remarks:

ITINERANT ACFT CTC FBO ON 122.95 FOR SERVICES.

ACR PUSH BACKS & PWR FM ALL APRON PSNS REQUIRE CLNC FM MWAA RAMP TWR.

LARGE FLOCKS OF BIRDS ON & INVOF ARPT/DEER INVOF ARPT.

DURING PERIODS OF ACFT SATURATION LONG TERM PARKING MAY NOT BE AVAILABLE. SERVICES FOR FUEL AND GO ONLY WILL BE AVAILABLE.

FLIGHT TRAINING BETWEEN 2200-0700 IS PROHIBITED.

TAXILANE 'C' ACTIVE; PUSHBACK CLNCS ON NORTH SIDE OF MIDFIELD TERMINAL ARE ONTO TAXILANE 'D' ONLY UNLESS OTHERWISE AUTH.

ALL AIRCRAFT WITH WINGSPAN EXCEEDING 118 FT ARE RESTRICTED FROM USING TAXILANE A BTN A1 & A5.

RUNUP BLOCKS FOR RY 30 DESIGNATED AS NON-MOVEMENT AREA.

ALL 180 DEG TURNS OUT OF APRON POSITIONS SHALL BE MADE USING MINIMUM POWER.

LDG FEE. FLIGHT NOTIFICATION SERVICE (ADCUS) AVBL. NOTE: SEE SPECIAL NOTICES --CONTINUOUS POWER FACILITIES.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

TWY E1 RESTRICTED TO ACFT WITH A WINGSPAN LESS THAN 79 FT.

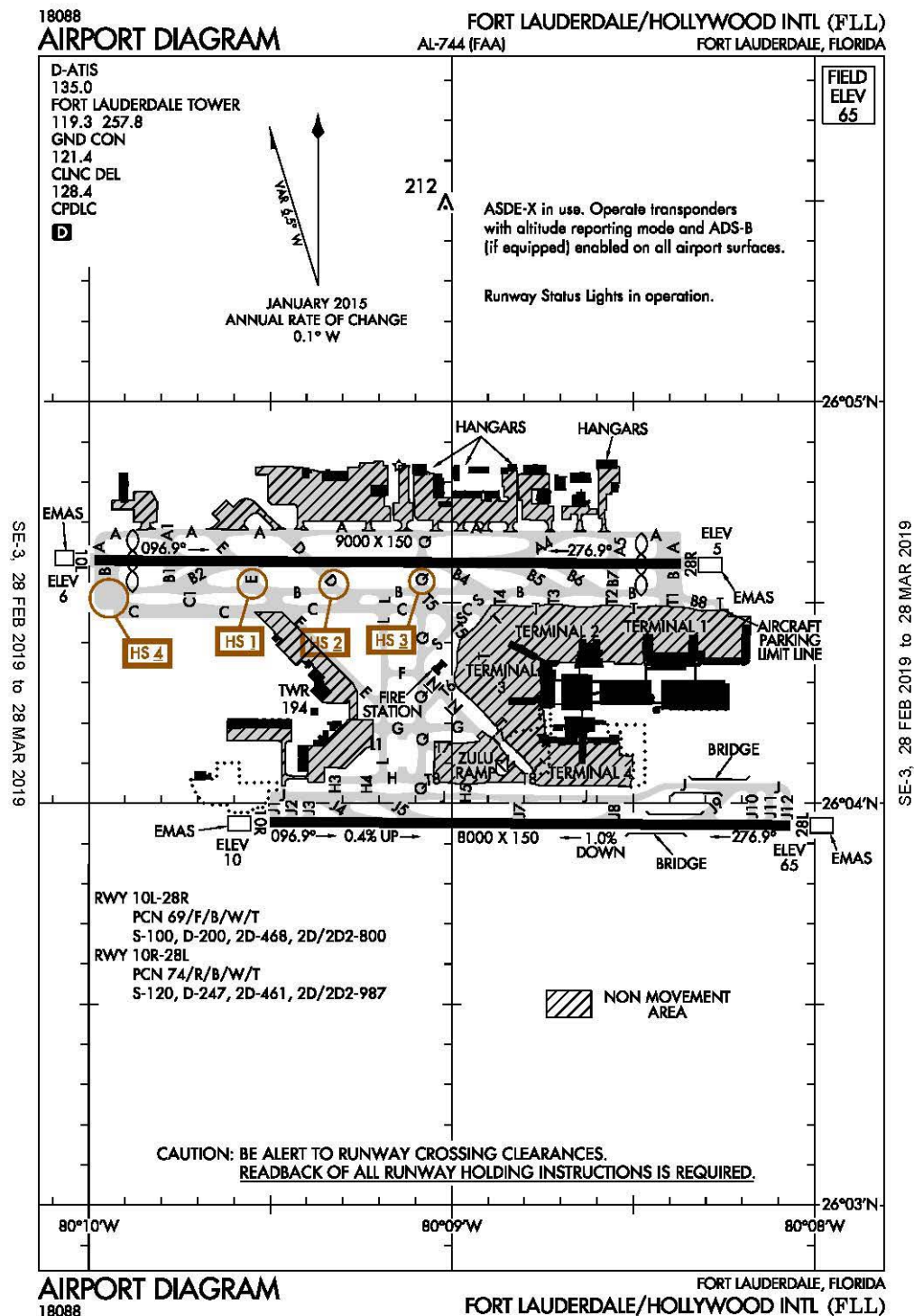
B747-8 RESTRICTED TO MAXIMUM TAXI SPEED 17 KTS (20 MPH) ON TWY J.

ENGINE RUN-UPS BTW 2200L & 0700L REQUIRE PRIOR APPROVAL FM ARPT OPS.

RY 30 DEPARTURES USE UPPER ANTENNA FOR ATC COMMUNICATIONS.

RY STATUS LGTS ARE IN OPN.

Fort Lauderdale, Florida
Fort Lauderdale-Hollywood International
ICAO Identifier KFLL



Fort Lauderdale, FL
Fort Lauderdale/Hollywood Intl
ICAO Identifier KFLI

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 26-04-18N / 80-08-58.9W
2.2.2 From City: 3 Miles SW Of Fort Lauderdale, FL
2.2.3 Elevation: 65 ft
2.2.5 Magnetic variation: 6W (2015)
2.2.6 Airport Contact: Mark Gale
2200 SW 45TH STREET, SUITE 101
Dania Beach, FL 33312 (954-359-6100)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/21/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 10L
2.10.1.b Type of obstacle: Road (14 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 0 ft B of Centerline

2.10.1.a. Runway designation: 10R
2.10.1.b Type of obstacle: Pole (35 ft above runway end). Lighted
2.10.1.c Location of obstacle: 587 ft L of Centerline

2.10.1.a. Runway designation: 28R
2.10.1.b Type of obstacle: Rr (33 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 530 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 10L
2.12.2 True Bearing: 90
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 69 F/B/W/T
2.12.5 Coordinates: 26-04-37.0166N / 80-09-59.5381W
2.12.6 Threshold elevation: 5.6 ft

2.12.6 Touchdown zone elevation: 7.1 ft

2.12.1 Designation: 28R
2.12.2 True Bearing: 270
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 69 F/B/W/T
2.12.5 Coordinates: 26-04-36.4507N / 80-08-20.835W
2.12.6 Threshold elevation: 5.3 ft
2.12.6 Touchdown zone elevation: 6.7 ft

2.12.1 Designation: 10R
2.12.2 True Bearing: 90
2.12.3 Dimensions: 8000 ft x 150 ft
2.12.4 PCN: 74 R/B/W/T
2.12.5 Coordinates: 26-03-57.1919N / 80-09-30.056W
2.12.6 Threshold elevation: 10.1 ft
2.12.6 Touchdown zone elevation: 14.3 ft
2.12.7 Slope: 0.4 UP

2.12.1 Designation: 28L
2.12.2 True Bearing: 270
2.12.3 Dimensions: 8000 ft x 150 ft
2.12.4 PCN: 74 R/B/W/T
2.12.5 Coordinates: 26-03-56.6718N / 80-08-02.3388W
2.12.6 Threshold elevation: 65 ft
2.12.6 Touchdown zone elevation: 65 ft
2.12.7 Slope: 0.1 DOWN

AD 2.13 Declared distances

2.13.1 Designation: 10L
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 8424

2.13.1 Designation: 28R
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 8394

2.13.1 Designation: 10R
2.13.2 Takeoff run available: 8000
2.13.3 Takeoff distance available: 8000
2.13.4 Accelerate-stop distance available: 8000
2.13.5 Landing distance available: 8000

2.13.1 Designation: 28L
2.13.2 Takeoff run available: 8000
2.13.3 Takeoff distance available: 8000

2.13.4 Accelerate-stop distance available: 8000
2.13.5 Landing distance available: 8000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 10L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 28R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 10R
2.14.2 Approach lighting system: MALSF
2.14.4 Visual approach slope indicator system: P4R
2.14.10 Remarks: Rwy 10R MALSF Non Standard With
A 370 Ft Gap Between 8+00 And Station 11+70. The
Standard Is 200 Ft Between Stations.

2.14.1 Designation: 28L
2.14.2 Approach lighting system: MALSF
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Runway 28L PAPI And Runway Aim-
ing Point Marking Do Not Coincide.

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ARKES DP
2.18.3 Service designation: 126.05 MHz

2.18.1 Service designation: BAHMA DP
2.18.3 Service designation: 126.05 MHz

2.18.1 Service designation: CD/P PRE TAXI CLNC
2.18.3 Service designation: 128.4 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 135 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: FORT LAUDERDALE DP
(FOR MNATE TRANSITION)
2.18.3 Service designation: 128.6 MHz

2.18.1 Service designation: FORT LAUDERDALE DP
(FOR ARKES, PREDA, THNDR, AND ZAPPA TRAN-
SITION)
2.18.3 Service designation: 126.05 MHz

2.18.1 Service designation: FORT LAUDERDALE DP
(FOR BEECH TRANSITION)
2.18.3 Service designation: 128.6 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.4 MHz

2.18.1 Service designation: GND/S
2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 119.3 MHz

2.18.1 Service designation: LCL/S
2.18.3 Service designation: 120.2 MHz

2.18.1 Service designation: PREDA DP
2.18.3 Service designation: 126.05 MHz

2.18.1 Service designation: RAMP CTL (NORTH)
2.18.3 Service designation: 118.175 MHz

2.18.1 Service designation: RAMP CTL (SOUTH)
2.18.3 Service designation: 129.875 MHz

2.18.1 Service designation: THNDR DP
2.18.3 Service designation: 126.05 MHz

2.18.1 Service designation: ZAPPA DP
2.18.3 Service designation: 126.05 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 10L. Magnetic
variation: 6W

2.19.2 ILS identification: LHI
2.19.5 Coordinates: 26-04-36.4066N /
80-08-13.1434W
2.19.6 Site elevation: 4.3 ft

2.19.1 ILS type: Glide Slope for runway 10L. Magnetic
variation: 6W
2.19.2 ILS identification: LHI
2.19.5 Coordinates: 26-04-39.6411N /
80-09-42.3329W
2.19.6 Site elevation: 2.9 ft

2.19.1 ILS type: DME for runway 10L. Magnetic varia-
tion: 6W
2.19.2 ILS identification: LHI
2.19.5 Coordinates: 26-04-40.1757N /
80-08-15.6721W
2.19.6 Site elevation: 11.3 ft

2.19.1 ILS type: DME for runway 10R. Magnetic variation: 6W

2.19.2 ILS identification: FLL

2.19.5 Coordinates: 26-03-58.8348N /
80-07-55.7162W

2.19.6 Site elevation: 68.3 ft

2.19.1 ILS type: Glide Slope for runway 10R. Magnetic variation: 6W

2.19.2 ILS identification: FLL

2.19.5 Coordinates: 26-03-53.1134N /
80-09-18.5896W

2.19.6 Site elevation: 5.7 ft

2.19.1 ILS type: Localizer for runway 10R. Magnetic variation: 6W

2.19.2 ILS identification: FLL

2.19.5 Coordinates: 26-03-56.6314N /
80-07-55.5666W

2.19.6 Site elevation: 64.4 ft

2.19.1 ILS type: DME for runway 28L. Magnetic variation: 6W

2.19.2 ILS identification: ADI

2.19.5 Coordinates: 26-03-59.4802N /
80-09-40.4489W

2.19.6 Site elevation: 14.7 ft

2.19.1 ILS type: Glide Slope for runway 28L. Magnetic variation: 6W

2.19.2 ILS identification: ADI

2.19.5 Coordinates: 26-03-52.7404N /
80-08-15.5298W

2.19.6 Site elevation: 45 ft

2.19.1 ILS type: Localizer for runway 28L. Magnetic variation: 6W

2.19.2 ILS identification: ADI

2.19.5 Coordinates: 26-03-57.2361N /
80-09-37.7655W

2.19.6 Site elevation: 7.5 ft

2.19.1 ILS type: Glide Slope for runway 28R. Magnetic variation: 6W

2.19.2 ILS identification: UDL

2.19.5 Coordinates: 26-04-39.627N / 80-08-39.0644W

2.19.6 Site elevation: 5 ft

2.19.1 ILS type: DME for runway 28R. Magnetic variation: 6W

2.19.2 ILS identification: UDL

2.19.5 Coordinates: 26-04-34.5346N /
80-10-02.4136W

2.19.6 Site elevation: 10.4 ft

2.19.1 ILS type: Localizer for runway 28R. Magnetic variation: 6W

2.19.2 ILS identification: UDL

2.19.5 Coordinates: 26-04-37.0351N /
80-10-02.8297W

2.19.6 Site elevation: 4.6 ft

General Remarks:

CLSD TO ACR TRAINING. CLSD TO LARGE ACFT TRAINING OVER 58000 LBS MAX CERTD GROSS TKOF WEIGHT. CLSD TO ALL TRAINING 2300-0700.

NOISE ABATEMENT IN EFFECT CTC AIRPORT NOISE ABATEMENT OFFICE-954-359-6181 FOR DETAILS. ALL RYS ARE NOISE SENSITIVE.

JET RUNUPS PROHIBITED 2300-0700.

FLOCKS OF BIRDS ON AND IN THE VICINITY OF THE ARPT.

PPR FOR ACFT WITH EXPLOSIVES.

ACFT WITH WINGSPANS GREATER THAN 118' MAY UTILIZE TWY E BTN TWY C AND TWY L BY PPR ONLY.

ARR ACFT FM THE NORTH MAINTAIN 6000 FT UNTIL ABEAM RY 10L ON DOWNWIND.

ARR ACFT FROM 'N' & 'W' MAINTAIN 6000 FT UNTIL ABEAM RY 28R ON DOWNWIND.

NO VFR APCHS OR BASE LEGS UNTIL OFFSHORE.

TWY B8 CLSD TO ACFT WITH WINGSPAN GREATER THAN 126 FT AND TAIL HEIGHT GREATER THAN 46 FT.

AIR CARRIER ACFT USE RAMP PUSH BACK PROCEDURES AS PRESCRIBED BY AIRPORT OPS.

EAST SIDE OF CONCOURSE B AVAILBLE ONLY TO ACFT WITH A WINGSPAN OF LESS THAN 124.9 FT.

ACFT OPERATING FROM TRML 1, 2, 3, 4 MUST CTC RAMP CTL. RAMP CTL EFF 0545-2245.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

CONCENTRATION OF BIRDS BELOW 500 FT, 2.0 NM WEST OF THE APPROACH ENDS OF RY 10L AND 10R.

TURBULENCE BELOW 1000 FT OVER LANDFILL LOCATED 2NM WEST.

NUMEROUS CRANES SE QUADRANT OF ARPT.

TWY J BEGINS TO ELEV 900' EAST OF TWY Q. DUE TO ELEV ALL ACFT SHOULD REMAIN ON TWY CNTRLN. TWY T8 AND TAXILANE T ARE NOT ACCESSIBLE FROM TWY J.

RUNWAY STATUS LIGHTS IN OPERATION

ACFT LDG RWY 10R AND EXITING AT J9 SHOULD FOLLOW TWY LEAD OFF LINE ONTO J9.

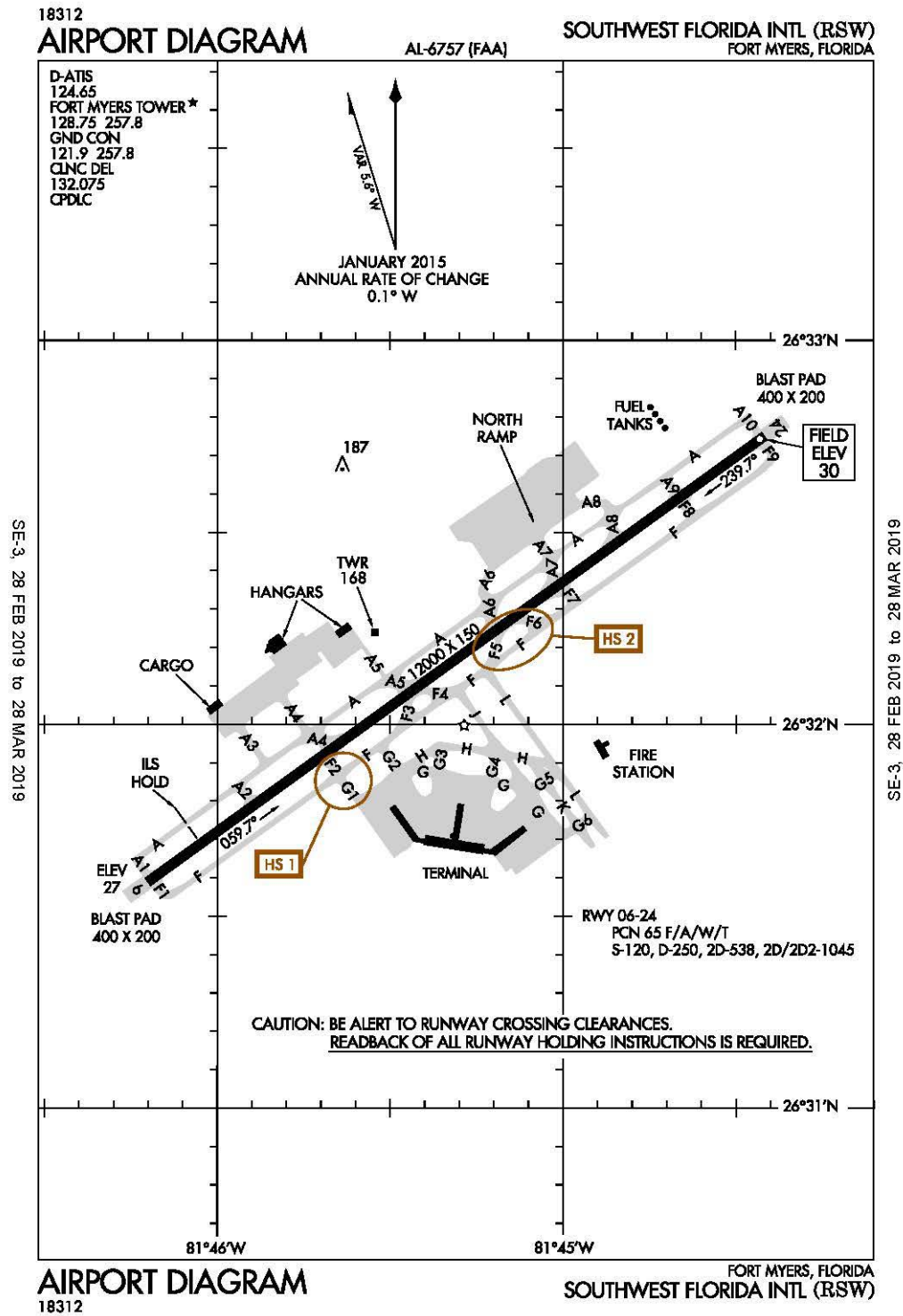
PREFERENTIAL RWY USE PROGRAM IN EFFECT. CTC NOISE ABATEMENT OFICE FOR DETAILS

APN TWY T EAST OF TWY T8 CLSD TO ACFT WINGSPAN MORE THAN 118 FT AND TAIL HEIGHT MORE THAN 45FT EXC ACFT UNDER TOW. TWY N BTN TWY Q AND TWY T6 CLSD TO ACFT WINGSPAN MORE THAN 171 FT AND TAIL HEIGHT MORE THAN 60FT.

NUMEROUS TREES SW QUADRANT OF ARPT.

HIGH LIGHT MASTS WNW APCH END RWY 28L.

Fort Myers, Florida
Southwest Florida International
ICAO Identifier KRSW



Fort Myers, FL
Southwest Florida Intl
ICAO Identifier KRSW

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 26-32-10.2N / 81-45-18.6W
2.2.2 From City: 10 Miles SE Of Fort Myers, FL
2.2.3 Elevation: 29.7 ft
2.2.5 Magnetic variation: 4W (2000)
2.2.6 Airport Contact: Jeff Mulder
11000 TERMINAL ACCESS RD.
Fort Myers, FL 33913 (239-590-4800)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL,A+
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
D certified on 5/1/1983

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 24
2.10.1.b Type of obstacle: Trees (48 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 190 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 06
2.12.2 True Bearing: 54
2.12.3 Dimensions: 12000 ft x 150 ft
2.12.4 PCN: 65 F/A/W/T
2.12.5 Coordinates: 26-31-35.3468N / 81-46-12.0693W
2.12.6 Threshold elevation: 26.5 ft
2.12.6 Touchdown zone elevation: 26.8 ft

2.12.1 Designation: 24
2.12.2 True Bearing: 234
2.12.3 Dimensions: 12000 ft x 150 ft
2.12.4 PCN: 65 F/A/W/T
2.12.5 Coordinates: 26-32-45.0236N / 81-44-25.0345W
2.12.6 Threshold elevation: 29.7 ft
2.12.6 Touchdown zone elevation: 29.7 ft

AD 2.14 Approach and runway lighting

2.14.1 Designation: 06
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 24
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ALICO DP (RWY 06/24)
2.18.3 Service designation: 306.2 MHz

2.18.1 Service designation: ALICO DP (RWY 06)
2.18.3 Service designation: 126.8 MHz

2.18.1 Service designation: ALICO DP (RWY 24)
2.18.3 Service designation: 125.15 MHz

2.18.1 Service designation: APCH/P DEP/P (121-240)
2.18.3 Service designation: 120.25 MHz

2.18.1 Service designation: APCH/P DEP/P (001-120)
2.18.3 Service designation: 126.8 MHz

2.18.1 Service designation: APCH/P DEP/P (301-360)
2.18.3 Service designation: 127.05 MHz

2.18.1 Service designation: APCH/P DEP/P (121-240)
2.18.3 Service designation: 371.85 MHz

2.18.1 Service designation: APCH/P DEP/P (241-120)
2.18.3 Service designation: 306.2 MHz

2.18.1 Service designation: APCH/P DEP/P (241-300)
2.18.3 Service designation: 125.15 MHz

2.18.1 Service designation: APCH/P DEP/P IC
2.18.3 Service designation: 126.8 MHz

2.18.1 Service designation: APCH/P DEP/P IC
2.18.3 Service designation: 306.2 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 132.075 MHz

2.18.1 Service designation: CLASS C (241-120)
2.18.3 Service designation: 306.2 MHz

2.18.1 Service designation: CLASS C (121-240)
2.18.3 Service designation: 371.85 MHz

2.18.1 Service designation: CLASS C (301-360)
2.18.3 Service designation: 127.05 MHz

2.18.1 Service designation: CLASS C (121-240)
2.18.3 Service designation: 120.25 MHz

2.18.1 Service designation: CLASS C (241-300)
2.18.3 Service designation: 125.15 MHz

2.18.1 Service designation: CLASS C (001-120)
2.18.3 Service designation: 126.8 MHz

2.18.1 Service designation: CSHEL DP (RWY 24)
2.18.3 Service designation: 125.15 MHz

2.18.1 Service designation: CSHEL DP (RWY 06)
2.18.3 Service designation: 126.8 MHz

2.18.1 Service designation: CSHEL DP (RWY 06/24)
2.18.3 Service designation: 306.2 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 124.65 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 128.75 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: MOOKY DP (RWY 24)
2.18.3 Service designation: 306.2 MHz

2.18.1 Service designation: MOOKY DP (RWY 24)
2.18.3 Service designation: 125.15 MHz

2.18.1 Service designation: MOOKY DP (RWY 06)
2.18.3 Service designation: 371.85 MHz

2.18.1 Service designation: MOOKY DP (RWY 06)
2.18.3 Service designation: 120.25 MHz

2.18.1 Service designation: SCUBY DP
2.18.3 Service designation: 371.85 MHz

2.18.1 Service designation: SCUBY DP
2.18.3 Service designation: 120.25 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 06. Magnetic variation: 4W

2.19.2 ILS identification: RSW

2.19.5 Coordinates: 26-31-43.49N / 81-46-04.32W

2.19.6 Site elevation: 26 ft

2.19.1 ILS type: DME for runway 06. Magnetic variation: 4W

2.19.2 ILS identification: RSW

2.19.5 Coordinates: 26-32-53.21N / 81-44-17.42W

2.19.6 Site elevation: 26 ft

2.19.1 ILS type: Localizer for runway 06. Magnetic variation: 4W

2.19.2 ILS identification: RSW

2.19.5 Coordinates: 26-32-51.1216N /
81-44-15.6633W

2.19.6 Site elevation: 27.6 ft

General Remarks:

ACR PILOTS USE RAMP PROC AS PRESCRIBED BY ARPT OPNS.

NO HELICOPTER OPNS PERMITTED ON TRML APRON.

LGTS ON PARALLEL ROAD & PARKING LOT NW OF RY 06/24 CAN BE MISTAKEN FOR THE RY & APCH ENVIRONMENT.

GND CLNC RQRD PRIOR TO ENTERING TWY G.

ARPT HAS RY USE PROGRAM. USE DISTANT NOISE ABATEMENT DEP PROFILE. VISUAL APCHS TO RY 06 W OF FORT MYERS BEACH ARE REQUESTED TO MAINTAIN 3000 FT UNTIL CROSSING FORT MYERS BEACH SHORELINE 12 NM SW OF ARPT. RY 24 PREFERRED BTN 2200-0600. FOR NOISE ABATEMENT PROCEDURES CTC AMGR 239-590-4810

CAUTION: OPEN BAGGAGE BAYS AND CONSTRUCTION WITHIN THE TERMINAL RAMP AREA. AIRCREWS SHOULD USE MINIMUM THRUST SETTINGS IN THESE AREAS, SPCLY DURG SINGLE ENG TAXI. CROSS-BLEED STARTS ONLY ALLOWED AFT REACHING THE TUG RELEASE POINT.

ALL ACFT TRAFFIC ON THE RAMP SHOULD EXPECT A CLOCKWISE FLOW. OUTBOUND TRAFFIC FROM GATES D2, D4, D6, D8 AND D10 PROCEED TO CALL SPOT 1. OUTBOUND TRAFFIC FROM GATES C2, C4, C6, D1, D3, D5 & D7 PROCEED TO CALL SPOT # 3. OUTBOUND TRAFFIC FROM GATES B2, B4, B6, B8, C1, C3, C5 & C7 PROCEED TO CALL SPOT # 5. OUTBOUND TRAFFIC FROM GATES B1, B3 & B5 PROCEED TO CALL SPOT # 9. ALL OUTBOUND TRAFFIC REQUEST TAXI INSTRUCTIONS.

TWY F6 EXIT SIGN IS LOCATED IMMEDIATELY BEFORE TWY F5.

ARR – INBOUND TFC FOR ALL GATES, PROCEED DIRECTLY TO THE GATE UNLESS OTHERWISE DIRECTED BY ATC. ADVISE ATC IF GATE IS NOT AVBL.

DEP – ACFT MUST OBTAIN APPROVAL FM GND CTL PRIOR TO PUSHBACK FM GATES B7, B9, C8, C9 & D10A. PILOTS ADVISE TUG OPERATORS THAT YOU HAVE OBTAINED CLNC FM GND CTL PRIOR TO ENTERING TWY G. DEPARTURES CTC GND CTL PRIOR TO LEAVING THE COMMUTER RAMP FROM GATES D9A AND D9B.

GATES B7, & B9 EXPECT CALL SPOT #7. GATES C8 & C9 EXPECT CALL SPOT #4. GATE D10A EXPECT CALL SPOT #2.

[illegible]

Miami, FL
Miami Intl
ICAO Identifier KMIA

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 25-47-43.3N / 80-17-24.4W
2.2.2 From City: 8 Miles NW Of Miami, FL
2.2.3 Elevation: 8.5 ft
2.2.5 Magnetic variation: 5W (2000)
2.2.6 Airport Contact: Lester Sola
MIAMI-DADE AVIATION DEPARTMENT
Miami, FL 33102 (305-876-7077)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 09
2.10.1.b Type of obstacle: Rr (23 ft above runway end).
Not Lighted or Marked
2.10.1.c Location of obstacle: 580 ft R of Centerline

2.10.1.a. Runway designation: 12
2.10.1.b Type of obstacle: Tower (40 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 200 ft L of Centerline

2.10.1.a. Runway designation: 30
2.10.1.b Type of obstacle: Tree (52 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 300 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 12
2.12.2 True Bearing: 119
2.12.3 Dimensions: 9355 ft x 150 ft
2.12.4 PCN: 70 F/A/X/T
2.12.5 Coordinates: 25-47-57.4262N /
80-18-08.2453W
2.12.6 Threshold elevation: 8.4 ft

2.12.6 Touchdown zone elevation: 8.4 ft

2.12.1 Designation: 30
2.12.2 True Bearing: 299
2.12.3 Dimensions: 9355 ft x 150 ft
2.12.4 PCN: 70 F/A/X/T
2.12.5 Coordinates: 25-47-11.8497N /
80-16-39.1321W
2.12.6 Threshold elevation: 8 ft
2.12.6 Touchdown zone elevation: 8.3 ft

2.12.1 Designation: 08R
2.12.2 True Bearing: 87
2.12.3 Dimensions: 10506 ft x 200 ft
2.12.4 PCN: 70 F/A/X/T
2.12.5 Coordinates: 25-48-02.515N / 80-18-05.1606W
2.12.6 Threshold elevation: 7.9 ft
2.12.6 Touchdown zone elevation: 8.3 ft

2.12.1 Designation: 26L
2.12.2 True Bearing: 267
2.12.3 Dimensions: 10506 ft x 200 ft
2.12.4 PCN: 70 F/A/X/T
2.12.5 Coordinates: 25-48-07.2672N /
80-16-10.3293W
2.12.6 Threshold elevation: 8.3 ft
2.12.6 Touchdown zone elevation: 8.3 ft

2.12.1 Designation: 09
2.12.2 True Bearing: 87
2.12.3 Dimensions: 13016 ft x 150 ft
2.12.4 PCN: 70 F/A/X/T
2.12.5 Coordinates: 25-47-09.9405N / 80-18-53.418W
2.12.6 Threshold elevation: 7.4 ft
2.12.6 Touchdown zone elevation: 7.4 ft

2.12.1 Designation: 27
2.12.2 True Bearing: 267
2.12.3 Dimensions: 13016 ft x 150 ft
2.12.4 PCN: 70 F/A/X/T
2.12.5 Coordinates: 25-47-15.8333N /
80-16-31.1721W
2.12.6 Threshold elevation: 8.4 ft
2.12.6 Touchdown zone elevation: 8.4 ft

2.12.1 Designation: 08L
2.12.2 True Bearing: 87
2.12.3 Dimensions: 8600 ft x 150 ft
2.12.4 PCN: 70 F/A/X/T
2.12.5 Coordinates: 25-48-10.4323N /
80-18-05.5518W

2.12.6 Threshold elevation: 8.3 ft
2.12.6 Touchdown zone elevation: 8.3 ft

2.12.1 Designation: 26R
2.12.2 True Bearing: 267
2.12.3 Dimensions: 8600 ft x 150 ft
2.12.4 PCN: 70 F/A/X/T
2.12.5 Coordinates: 25-48-14.3216N /
80-16-31.5492W
2.12.6 Threshold elevation: 8.1 ft
2.12.6 Touchdown zone elevation: 8.3 ft

AD 2.13 Declared distances

2.13.1 Designation: 12
2.13.2 Takeoff run available: 9355
2.13.3 Takeoff distance available: 9355
2.13.4 Accelerate-stop distance available: 8579
2.13.5 Landing distance available: 8579

2.13.1 Designation: 30
2.13.2 Takeoff run available: 9355
2.13.3 Takeoff distance available: 9355
2.13.4 Accelerate-stop distance available: 8853
2.13.5 Landing distance available: 7913

2.13.1 Designation: 08R
2.13.2 Takeoff run available: 10506
2.13.3 Takeoff distance available: 10506
2.13.4 Accelerate-stop distance available: 10506
2.13.5 Landing distance available: 10506

2.13.1 Designation: 26L
2.13.2 Takeoff run available: 10506
2.13.3 Takeoff distance available: 10506
2.13.4 Accelerate-stop distance available: 10220
2.13.5 Landing distance available: 10220

2.13.1 Designation: 09
2.13.2 Takeoff run available: 13016
2.13.3 Takeoff distance available: 13016
2.13.4 Accelerate-stop distance available: 12755
2.13.5 Landing distance available: 11397

2.13.1 Designation: 27
2.13.2 Takeoff run available: 13016
2.13.3 Takeoff distance available: 13016
2.13.4 Accelerate-stop distance available: 13016
2.13.5 Landing distance available: 12755

2.13.1 Designation: 08L
2.13.2 Takeoff run available: 8600

2.13.3 Takeoff distance available: 8600
2.13.4 Accelerate-stop distance available: 8600
2.13.5 Landing distance available: 8600

2.13.1 Designation: 26R
2.13.2 Takeoff run available: 8600
2.13.3 Takeoff distance available: 8600
2.13.4 Accelerate-stop distance available: 8600
2.13.5 Landing distance available: 8600

AD 2.14 Approach and runway lighting

2.14.1 Designation: 12
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 30
2.14.2 Approach lighting system: MALS
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 08R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 26L
2.14.2 Approach lighting system: MALSF
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 09
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 27
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 08L
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 26R
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P DEP/P (090-269)
2.18.3 Service designation: 379.9 MHz

2.18.1 Service designation: APCH/P DEP/P (090-269)
2.18.3 Service designation: 379.9 MHz

2.18.1 Service designation: APCH/P DEP/P (090-269)
2.18.3 Service designation: 120.5 MHz

2.18.1 Service designation: APCH/P DEP/P (270-089) 2.18.3 Service designation: 125.75 MHz	2.18.1 Service designation: CLASS B (270-089) 2.18.3 Service designation: 125.75 MHz
2.18.1 Service designation: APCH/P DEP/P (090-269) 2.18.3 Service designation: 120.5 MHz	2.18.1 Service designation: CLASS B (270-089) 2.18.3 Service designation: 322.3 MHz
2.18.1 Service designation: APCH/P DEP/P (270-089) 2.18.3 Service designation: 125.75 MHz	2.18.1 Service designation: CLASS B (090-269) 2.18.3 Service designation: 379.9 MHz
2.18.1 Service designation: APCH/P IC (270-089) 2.18.3 Service designation: 124.85 MHz	2.18.1 Service designation: CLASS B (090-269) 2.18.3 Service designation: 379.9 MHz
2.18.1 Service designation: APCH/P IC (270-089) 2.18.3 Service designation: 124.85 MHz	2.18.1 Service designation: CYPRESS STAR 2.18.3 Service designation: 124.85 MHz
2.18.1 Service designation: APCH/P IC (270-089) 2.18.3 Service designation: 322.3 MHz	2.18.1 Service designation: CYPRESS STAR 2.18.3 Service designation: 124.85 MHz
2.18.1 Service designation: APCH/P IC (270-089) 2.18.3 Service designation: 322.3 MHz	2.18.1 Service designation: CYPRESS STAR 2.18.3 Service designation: 120.5 MHz
2.18.1 Service designation: APCH/S (270-089) 2.18.3 Service designation: 263.025 MHz	2.18.1 Service designation: CYPRESS STAR 2.18.3 Service designation: 120.5 MHz
2.18.1 Service designation: APCH/S (270-089) 2.18.3 Service designation: 263.025 MHz	2.18.1 Service designation: D-ATIS (DEPART) 2.18.3 Service designation: 133.675 MHz 2.18.4 Hours of operation: 24
2.18.1 Service designation: APCH/S 2.18.3 Service designation: 125.75 MHz	2.18.1 Service designation: D-ATIS (DEPART) 2.18.3 Service designation: 133.675 MHz 2.18.4 Hours of operation: 24
2.18.1 Service designation: APCH/S 2.18.3 Service designation: 125.75 MHz	2.18.1 Service designation: D-ATIS (ARRIVAL) 2.18.3 Service designation: 119.15 MHz 2.18.4 Hours of operation: 24
2.18.1 Service designation: CD/P 2.18.3 Service designation: 135.35 MHz	2.18.1 Service designation: D-ATIS (ARRIVAL) 2.18.3 Service designation: 119.15 MHz 2.18.4 Hours of operation: 24
2.18.1 Service designation: CD/P 2.18.3 Service designation: 135.35 MHz	2.18.1 Service designation: D-ATIS (ARRIVAL) 2.18.3 Service designation: 119.15 MHz 2.18.4 Hours of operation: 24
2.18.1 Service designation: CLASS B (090-269) 2.18.3 Service designation: 120.5 MHz	2.18.1 Service designation: DEP/P (270-089) 2.18.3 Service designation: 290.325 MHz
2.18.1 Service designation: CLASS B (270-089) 2.18.3 Service designation: 322.3 MHz	2.18.1 Service designation: DEP/P (090-269) 2.18.3 Service designation: 125.5 MHz
2.18.1 Service designation: CLASS B (270-089) 2.18.3 Service designation: 125.75 MHz	2.18.1 Service designation: DEP/P (090-269) 2.18.3 Service designation: 125.5 MHz
2.18.1 Service designation: CLASS B (090-269) 2.18.3 Service designation: 120.5 MHz	2.18.1 Service designation: DEP/P (270-089) 2.18.3 Service designation: 290.325 MHz

2.18.1 Service designation: DEP/P (090-269)
2.18.3 Service designation: 354.1 MHz

2.18.1 Service designation: DEP/P (090-269)
2.18.3 Service designation: 354.1 MHz

2.18.1 Service designation: DEP/P IC (270-089)
2.18.3 Service designation: 119.45 MHz

2.18.1 Service designation: DEP/P IC (270-089)
2.18.3 Service designation: 119.45 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GATE HOLD
2.18.3 Service designation: 120.35 MHz

2.18.1 Service designation: GATE HOLD
2.18.3 Service designation: 120.35 MHz

2.18.1 Service designation: GND/P IC
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/P IC
(8L/8R/12/26L/26R)
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GND/P IC
(8L/8R/12/26L/26R)
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GND/P IC
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/P IC (9/27/30)
2.18.3 Service designation: 127.5 MHz

2.18.1 Service designation: GND/P IC (9/27/30)
2.18.3 Service designation: 127.5 MHz

2.18.1 Service designation: LCL/P (090-269)
2.18.3 Service designation: 123.9 MHz

2.18.1 Service designation: LCL/P (090-269)
2.18.3 Service designation: 123.9 MHz

2.18.1 Service designation: LCL/P IC (270-089)

2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: LCL/P IC (270-089)
2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 256.9 MHz

2.18.1 Service designation: LCL/P IC
2.18.3 Service designation: 256.9 MHz

2.18.1 Service designation: RTIS(120-300 WITHIN 25 NM)
2.18.3 Service designation: 125.25 MHz

2.18.1 Service designation: RTIS(120-300 WITHIN 25 NM)
2.18.3 Service designation: 125.25 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 08L. Magnetic variation: 5W

2.19.2 ILS identification: ROY

2.19.5 Coordinates: 25-48-14.86N / 80-16-18.43W

2.19.6 Site elevation: 6.8 ft

2.19.1 ILS type: DME for runway 08L. Magnetic variation: 5W

2.19.2 ILS identification: ROY

2.19.5 Coordinates: 25-48-16.34N / 80-16-18.29W

2.19.6 Site elevation: 5.2 ft

2.19.1 ILS type: DME for runway 08R. Magnetic variation: 5W

2.19.2 ILS identification: MFA

2.19.5 Coordinates: 25-48-05.0933N /
80-16-00.5764W

2.19.6 Site elevation: 4.8 ft

2.19.1 ILS type: Glide Slope for runway 08R. Magnetic variation: 5W

2.19.2 ILS identification: MFA

2.19.5 Coordinates: 25-48-06.1702N /
80-17-54.8089W

2.19.6 Site elevation: 4.1 ft

2.19.1 ILS type: Localizer for runway 08R. Magnetic variation: 5W

2.19.2 ILS identification: MFA

2.19.5 Coordinates: 25-48-07.72N / 80-15-59.35W

2.19.6 Site elevation: 8.1 ft

2.19.1 ILS type: Glide Slope for runway 09. Magnetic variation: 5W
2.19.2 ILS identification: BUL
2.19.5 Coordinates: 25-47-07.8328N / 80-18-26.708W
2.19.6 Site elevation: 6.8 ft

2.19.1 ILS type: Outer Marker for runway 09. Magnetic variation: 5W
2.19.2 ILS identification: BUL
2.19.5 Coordinates: 25-46-59.3493N / 80-23-03.3801W
2.19.6 Site elevation: 3.8 ft

2.19.1 ILS type: DME for runway 09. Magnetic variation: 5W
2.19.2 ILS identification: BUL
2.19.5 Coordinates: 25-47-15.82N / 80-16-17.24W
2.19.6 Site elevation: 6.2 ft

2.19.1 ILS type: Localizer for runway 09. Magnetic variation: 5W
2.19.2 ILS identification: BUL
2.19.5 Coordinates: 25-47-16.42N / 80-16-17.14W
2.19.6 Site elevation: 7 ft

2.19.1 ILS type: DME for runway 12. Magnetic variation: 5W
2.19.2 ILS identification: GEM
2.19.5 Coordinates: 25-47-11.2797N / 80-16-32.41W
2.19.6 Site elevation: 7.7 ft

2.19.1 ILS type: Glide Slope for runway 12. Magnetic variation: 5W
2.19.2 ILS identification: GEM
2.19.5 Coordinates: 25-47-49.3488N / 80-17-59.9018W
2.19.6 Site elevation: 6.3 ft

2.19.1 ILS type: Localizer for runway 12. Magnetic variation: 5W
2.19.2 ILS identification: GEM
2.19.5 Coordinates: 25-47-09.6408N / 80-16-34.8126W
2.19.6 Site elevation: 7.7 ft

2.19.1 ILS type: Glide Slope for runway 26L. Magnetic variation: 5W
2.19.2 ILS identification: VIN
2.19.5 Coordinates: 25-48-09.7362N / 80-16-22.5147W
2.19.6 Site elevation: 5.5 ft

2.19.1 ILS type: Localizer for runway 26L. Magnetic variation: 5W

2.19.2 ILS identification: VIN
2.19.5 Coordinates: 25-48-02.1613N / 80-18-13.7708W
2.19.6 Site elevation: 7.1 ft

2.19.1 ILS type: DME for runway 26L. Magnetic variation: 5W
2.19.2 ILS identification: VIN
2.19.5 Coordinates: 25-48-05.81N / 80-18-14.94W
2.19.6 Site elevation: 5.8 ft

2.19.1 ILS type: DME for runway 26R. Magnetic variation: 5W
2.19.2 ILS identification: CNV
2.19.5 Coordinates: 25-48-07.1189N / 80-18-16.468W
2.19.6 Site elevation: 6 ft

2.19.1 ILS type: Localizer for runway 26R. Magnetic variation: 5W
2.19.2 ILS identification: CNV
2.19.5 Coordinates: 25-48-09.9798N / 80-18-16.67W
2.19.6 Site elevation: 6.9 ft

2.19.1 ILS type: Localizer for runway 27. Magnetic variation: 5W
2.19.2 ILS identification: MIA
2.19.5 Coordinates: 25-47-09.39N / 80-19-06.61W
2.19.6 Site elevation: 8.6 ft

2.19.1 ILS type: Glide Slope for runway 27. Magnetic variation: 5W
2.19.2 ILS identification: MIA
2.19.5 Coordinates: 25-47-11.7271N / 80-16-45.3963W
2.19.6 Site elevation: 4 ft

2.19.1 ILS type: Glide Slope for runway 30. Magnetic variation: 5W
2.19.2 ILS identification: DCX
2.19.5 Coordinates: 25-47-17.642N / 80-16-59.5695W
2.19.6 Site elevation: 6.5 ft

2.19.1 ILS type: Localizer for runway 30. Magnetic variation: 5W
2.19.2 ILS identification: DCX
2.19.5 Coordinates: 25-47-59.8775N / 80-18-13.0382W
2.19.6 Site elevation: 8.3 ft

2.19.1 ILS type: DME for runway 30. Magnetic variation: 5W
2.19.2 ILS identification: DCX

2.19.5 Coordinates: 25-47-57.7725N / 80-18-14.5083W
2.19.6 Site elevation: 7.3 ft

General Remarks:

CLSD NON ENG ACFT.

ACFT WITH A WINGSPAN GREATER THAN 171 FT ARE PROHIBITED FROM TAXIING ON TWY P EAST OF TWY U. ACFT WITH A WINGSPAN GREATER THAN 143 FT ARE PROHIBITED FROM USING TWY AA.

ALL TURBOJET ACFT USE DSNT NOISE ABATEMENT DEP PROFILE FROM ALL RYS EXC A320, B727, B737-800, B767-400, AND DC9 WHICH SHOULD USE CLOSE-IN NOISE ABATEMENT ABATEMENT PROFILE.

BIRDS ON & INVOF ARPT.

PPR 3 HRS PRIOR TO ALL ARRIVALS ON THE GENERAL AVIATION CENTER (GAC) RAMP 305-876-7550 CTC RAMP CONTROL UPON ARRIVAL ON FREQUENCY 131.600. ACFT WITH WINGSPAN GREATER THAN 78 FT ARE PROHIBITED FROM ENTERING THE GAC RAMP.

ALL MEDICAL EMERGENCIES ARRIVALS, WITH THE EXCEPTION OF AIR AMBULANCE FLIGHTS, MUST SECURE DOORS UNTIL ARFF IS ON SCENE.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

PPR FOR INBOUND MILITARY FLIGHTS 100 NM ON FREQ 130.5.

ALL DIVERSION CTC FREQ 130.5 UPON ARR.

B757, HEAVY AND SUPER ACFT ARE NOT AUTH INT DEP FOR ANY RWY UNLESS A PTN IS CLSD OR UNUNSL.

[illegible]

Orlando, FL
Orlando Intl
ICAO Identifier KMCO

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 28-25-45.8N / 81-18-32.4W
2.2.2 From City: 6 Miles SE Of Orlando, FL
2.2.3 Elevation: 96.4 ft
2.2.5 Magnetic variation: 6W (2015)
2.2.6 Airport Contact: Phillip N. Brown, A.A.E.
1 JEFF FUQUA BLVD
Orlando, FL 32827
(407-825-7445)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: 100LL,A
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/21/1973

AD 2.12 Runway physical characteristics

2.12.1 Designation: 18R
2.12.2 True Bearing: 179
2.12.3 Dimensions: 12004 ft x 200 ft
2.12.4 PCN: 104 R/B/W/T
2.12.5 Coordinates: 28-26-53.8569N /
81-19-37.1091W
2.12.6 Threshold elevation: 92.5 ft
2.12.6 Touchdown zone elevation: 93.5 ft

2.12.1 Designation: 36L
2.12.2 True Bearing: 359
2.12.3 Dimensions: 12004 ft x 200 ft
2.12.4 PCN: 104 R/B/W/T
2.12.5 Coordinates: 28-24-55.007N / 81-19-35.8294W
2.12.6 Threshold elevation: 91.1 ft
2.12.6 Touchdown zone elevation: 92.6 ft

2.12.1 Designation: 17R
2.12.2 True Bearing: 179
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 106 R/B/W/T
2.12.5 Coordinates: 28-26-08.2029N /

81-17-45.1656W
2.12.6 Threshold elevation: 90.1 ft
2.12.6 Touchdown zone elevation: 90.2 ft

2.12.1 Designation: 35L
2.12.2 True Bearing: 359
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 106 R/B/W/T
2.12.5 Coordinates: 28-24-29.1952N /
81-17-44.1335W
2.12.6 Threshold elevation: 86.7 ft
2.12.6 Touchdown zone elevation: 88.3 ft

2.12.1 Designation: 18L
2.12.2 True Bearing: 179
2.12.3 Dimensions: 12005 ft x 200 ft
2.12.4 PCN: 97 R/B/W/T
2.12.5 Coordinates: 28-26-54.0038N /
81-19-20.3022W
2.12.6 Threshold elevation: 92.4 ft
2.12.6 Touchdown zone elevation: 96.4 ft

2.12.1 Designation: 36R
2.12.2 True Bearing: 359
2.12.3 Dimensions: 12005 ft x 200 ft
2.12.4 PCN: 97 R/B/W/T
2.12.5 Coordinates: 28-24-55.1469N /
81-19-19.0358W
2.12.6 Threshold elevation: 91 ft
2.12.6 Touchdown zone elevation: 92.3 ft

2.12.1 Designation: H1
2.12.3 Dimensions: 44 ft x 44 ft

2.12.1 Designation: 17L
2.12.2 True Bearing: 179
2.12.3 Dimensions: 9001 ft x 150 ft
2.12.4 PCN: 116 R/B/W/T
2.12.5 Coordinates: 28-26-37.308N / 81-16-57.2924W
2.12.6 Threshold elevation: 89.7 ft
2.12.6 Touchdown zone elevation: 89.9 ft

2.12.1 Designation: 35R
2.12.2 True Bearing: 359
2.12.3 Dimensions: 9001 ft x 150 ft
2.12.4 PCN: 116 R/B/W/T
2.12.5 Coordinates: 28-25-08.1974N /
81-16-56.3802W
2.12.6 Threshold elevation: 89.7 ft
2.12.6 Touchdown zone elevation: 89.8 ft

AD 2.13 Declared distances

2.13.1 Designation: 18R
2.13.2 Takeoff run available: 12004
2.13.3 Takeoff distance available: 12004
2.13.4 Accelerate-stop distance available: 12004
2.13.5 Landing distance available: 12004

2.13.1 Designation: 36L
2.13.2 Takeoff run available: 12004
2.13.3 Takeoff distance available: 12004
2.13.4 Accelerate-stop distance available: 11621
2.13.5 Landing distance available: 11621

2.13.1 Designation: 17R
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate-stop distance available: 10000
2.13.5 Landing distance available: 10000

2.13.1 Designation: 35L
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate-stop distance available: 10000
2.13.5 Landing distance available: 10000

2.13.1 Designation: 18L
2.13.2 Takeoff run available: 12005
2.13.3 Takeoff distance available: 12005
2.13.4 Accelerate-stop distance available: 12005
2.13.5 Landing distance available: 12005

2.13.1 Designation: 36R
2.13.2 Takeoff run available: 12005
2.13.3 Takeoff distance available: 12005
2.13.4 Accelerate-stop distance available: 11601
2.13.5 Landing distance available: 11601

2.13.1 Designation: 17L
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 9000

2.13.1 Designation: 35R
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 9000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 18R

2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 36L
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 17R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 35L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 18L
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 36R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 17L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 35R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: AR OPS
2.18.3 Service designation: 148.8 MHz

2.18.1 Service designation: AR OPS
2.18.3 Service designation: 41.5 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 341.7 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 134.7 MHz

2.18.1 Service designation: D-ATIS (ARR)
2.18.3 Service designation: 121.25 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS (DEP)
2.18.3 Service designation: 120.525 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P (EAST WEST)

2.18.3 Service designation: 275.8 MHz

2.18.1 Service designation: GND/P (WEST)

2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GND/P (EAST)

2.18.3 Service designation: 126.4 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 253.5 MHz

2.18.1 Service designation: LCL/P (RWY 18L/36R,
18R/36L)

2.18.3 Service designation: 124.3 MHz

2.18.1 Service designation: LCL/P (RWY 17L/35R,
17R/35L)

2.18.3 Service designation: 118.45 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Inner Marker for runway 17L. Magnetic
variation: 6W

2.19.2 ILS identification: ARK

2.19.5 Coordinates: 28-26-45.819N / 81-16-57.3985W

2.19.6 Site elevation: 89.6 ft

2.19.1 ILS type: Localizer for runway 17L. Magnetic
variation: 6W

2.19.2 ILS identification: ARK

2.19.5 Coordinates: 28-24-57.8892N /
81-16-56.2728W

2.19.6 Site elevation: 89.1 ft

2.19.1 ILS type: DME for runway 17L. Magnetic varia-
tion: 6W

2.19.2 ILS identification: ARK

2.19.5 Coordinates: 28-24-57.9921N / 81-16-51.737W

2.19.6 Site elevation: 97 ft

2.19.1 ILS type: Glide Slope for runway 17L. Magnetic
variation: 6W

2.19.2 ILS identification: ARK

2.19.5 Coordinates: 28-26-27.0479N /
81-16-52.5933W

2.19.6 Site elevation: 94.4 ft

2.19.1 ILS type: Inner Marker for runway 17R. Magnetic
variation: 6W

2.19.2 ILS identification: DIZ

2.19.5 Coordinates: 28-26-16.6991N /
81-17-45.2569W

2.19.6 Site elevation: 84.9 ft

2.19.1 ILS type: Glide Slope for runway 17R. Magnetic
variation: 6W

2.19.2 ILS identification: DIZ

2.19.5 Coordinates: 28-25-57.8375N /
81-17-40.5783W

2.19.6 Site elevation: 92.7 ft

2.19.1 ILS type: DME for runway 17R. Magnetic varia-
tion: 6W

2.19.2 ILS identification: DIZ

2.19.5 Coordinates: 28-24-18.9549N /
81-17-47.0755W

2.19.6 Site elevation: 86.4 ft

2.19.1 ILS type: Middle Marker for runway 17R. Mag-
netic variation: 6W

2.19.2 ILS identification: DIZ

2.19.5 Coordinates: 28-26-34.2471N /
81-17-45.4369W

2.19.6 Site elevation: 87.8 ft

2.19.1 ILS type: Localizer for runway 17R. Magnetic
variation: 6W

2.19.2 ILS identification: DIZ

2.19.5 Coordinates: 28-24-18.7729N /
81-17-44.0255W

2.19.6 Site elevation: 81.6 ft

2.19.1 ILS type: Glide Slope for runway 18R. Magnetic
variation: 6W

2.19.2 ILS identification: TFE

2.19.5 Coordinates: 28-26-43.5N / 81-19-32.21W

2.19.6 Site elevation: 89 ft

2.19.1 ILS type: Localizer for runway 18R. Magnetic
variation: 6W

2.19.2 ILS identification: TFE

2.19.5 Coordinates: 28-24-41.97N / 81-19-35.69W

2.19.6 Site elevation: 86 ft

2.19.1 ILS type: DME for runway 18R. Magnetic varia-
tion: 6W

2.19.2 ILS identification: TFE

2.19.5 Coordinates: 28-24-42.2043N /

81-19-38.5819W
2.19.6 Site elevation: 94.7 ft

2.19.1 ILS type: Middle Marker for runway 18R. Magnetic variation: 6W

2.19.2 ILS identification: TFE
2.19.5 Coordinates: 28-27-20.0402N /
81-19-37.3925W
2.19.6 Site elevation: 87.4 ft

2.19.1 ILS type: Middle Marker for runway 35L. Magnetic variation: 6W

2.19.2 ILS identification: DDO
2.19.5 Coordinates: 28-24-01.5295N /
81-17-43.8604W
2.19.6 Site elevation: 82.4 ft

2.19.1 ILS type: Inner Marker for runway 35L. Magnetic variation: 6W

2.19.2 ILS identification: DDO
2.19.5 Coordinates: 28-24-20.5349N /
81-17-44.0395W
2.19.6 Site elevation: 82.1 ft

2.19.1 ILS type: Localizer for runway 35L. Magnetic variation: 6W

2.19.2 ILS identification: DDO
2.19.5 Coordinates: 28-26-18.5959N /
81-17-45.2712W
2.19.6 Site elevation: 87.7 ft

2.19.1 ILS type: DME for runway 35L. Magnetic variation: 6W

2.19.2 ILS identification: DDO
2.19.5 Coordinates: 28-26-18.3948N /
81-17-48.1528W
2.19.6 Site elevation: 95.5 ft

2.19.1 ILS type: Glide Slope for runway 35L. Magnetic variation: 6W

2.19.2 ILS identification: DDO
2.19.5 Coordinates: 28-24-39.5307N /
81-17-39.7618W
2.19.6 Site elevation: 83.7 ft

2.19.1 ILS type: Glide Slope for runway 35R. Magnetic variation: 6W

2.19.2 ILS identification: CER
2.19.5 Coordinates: 28-25-18.6301N /
81-16-51.8726W
2.19.6 Site elevation: 87.3 ft

2.19.1 ILS type: Inner Marker for runway 35R. Magnetic variation: 6W

2.19.2 ILS identification: CER
2.19.5 Coordinates: 28-24-59.6772N /
81-16-56.2924W
2.19.6 Site elevation: 89.2 ft

2.19.1 ILS type: Middle Marker for runway 35R. Magnetic variation: 6W

2.19.2 ILS identification: CER
2.19.5 Coordinates: 28-24-45.6652N /
81-16-56.1546W
2.19.6 Site elevation: 81.1 ft

2.19.1 ILS type: DME for runway 35R. Magnetic variation: 6W

2.19.2 ILS identification: CER
2.19.5 Coordinates: 28-26-48.2377N /
81-16-52.8447W
2.19.6 Site elevation: 98.3 ft

2.19.1 ILS type: Localizer for runway 35R. Magnetic variation: 6W

2.19.2 ILS identification: CER
2.19.5 Coordinates: 28-26-47.6103N /
81-16-57.3979W
2.19.6 Site elevation: 89.6 ft

2.19.1 ILS type: Localizer for runway 36R. Magnetic variation: 6W

2.19.2 ILS identification: OJP
2.19.5 Coordinates: 28-27-01.4488N /
81-19-20.3839W
2.19.6 Site elevation: 90.8 ft

2.19.1 ILS type: Glide Slope for runway 36R. Magnetic variation: 6W

2.19.2 ILS identification: OJP
2.19.5 Coordinates: 28-25-05.5139N /
81-19-23.6289W
2.19.6 Site elevation: 87.7 ft

2.19.1 ILS type: Middle Marker for runway 36R. Magnetic variation: 6W

2.19.2 ILS identification: OJP
2.19.5 Coordinates: 28-24-31.8917N /
81-19-18.7794W
2.19.6 Site elevation: 84.5 ft

2.19.1 ILS type: Inner Marker for runway 36R. Magnetic variation: 6W

2.19.2 ILS identification: OJP
2.19.5 Coordinates: 28-24-46.6452N /
81-19-18.9395W
2.19.6 Site elevation: 86.6 ft

tion: 6W
2.19.2 ILS identification: OJP
2.19.5 Coordinates: 28-27-00.7626N /
81-19-18.0064W
2.19.6 Site elevation: 96.2 ft

2.19.1 ILS type: DME for runway 36R. Magnetic varia-

General Remarks:

BIRDS & DEER ON & INVOF ARPT.

AVOID CONTACT WITH TAXIWAY EDGE LIGHTS; ALL AIRCRAFT DETERMINED TO BE FAA DESIGN GROUP IV AND ABOVE MUST PERFORM JUDGEMENTAL OVERSTEERING INSTEAD OF COCKPIT CENTERLINE STEERING WHEN TAXIING.

WHEN ORL ILS RY 7 AND MCO ILS RYS 17 & 18R SIMULTANEOUS OPERATIONS ARE CONDUCTED, ATC RADAR REQUIRED.

BRIGHT LGTS ON ROAD BTN RY 17R/35L AND RY 17L/35R MAY BE MISTAKEN FOR RY LGTS.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

USE CAUTION IN VCNTY OF TWY "A" ALONG WEST RAMP.

UNLESS ADV BY ATIS, DEP FLTS ON INITIAL CTC WITH GND CTL: ACFT ON WEST RAMP, AIRSIDE 1 & 3 (GATES 1-59) USE GND CTL 121.8. ACFT AT AIRSIDE 2 & 4 (GATES 60 AND HIGHER), USE GND CTL 126.4.

TWY J3 AND TWY J4 RSTD TO WINGSPAN OF LESS THAN 118 FT.

RUNWAY STATUS LIGHTS ARE IN OPERATION.

ACFT WITH WINGSPAN GREATER THAN 214 FT MUST ADHERE TO SPECIFIC RY AND TAXI ROUTES. CONTACT AIRFIELD OPS AT 407-825-2036 FOR DETAILS.

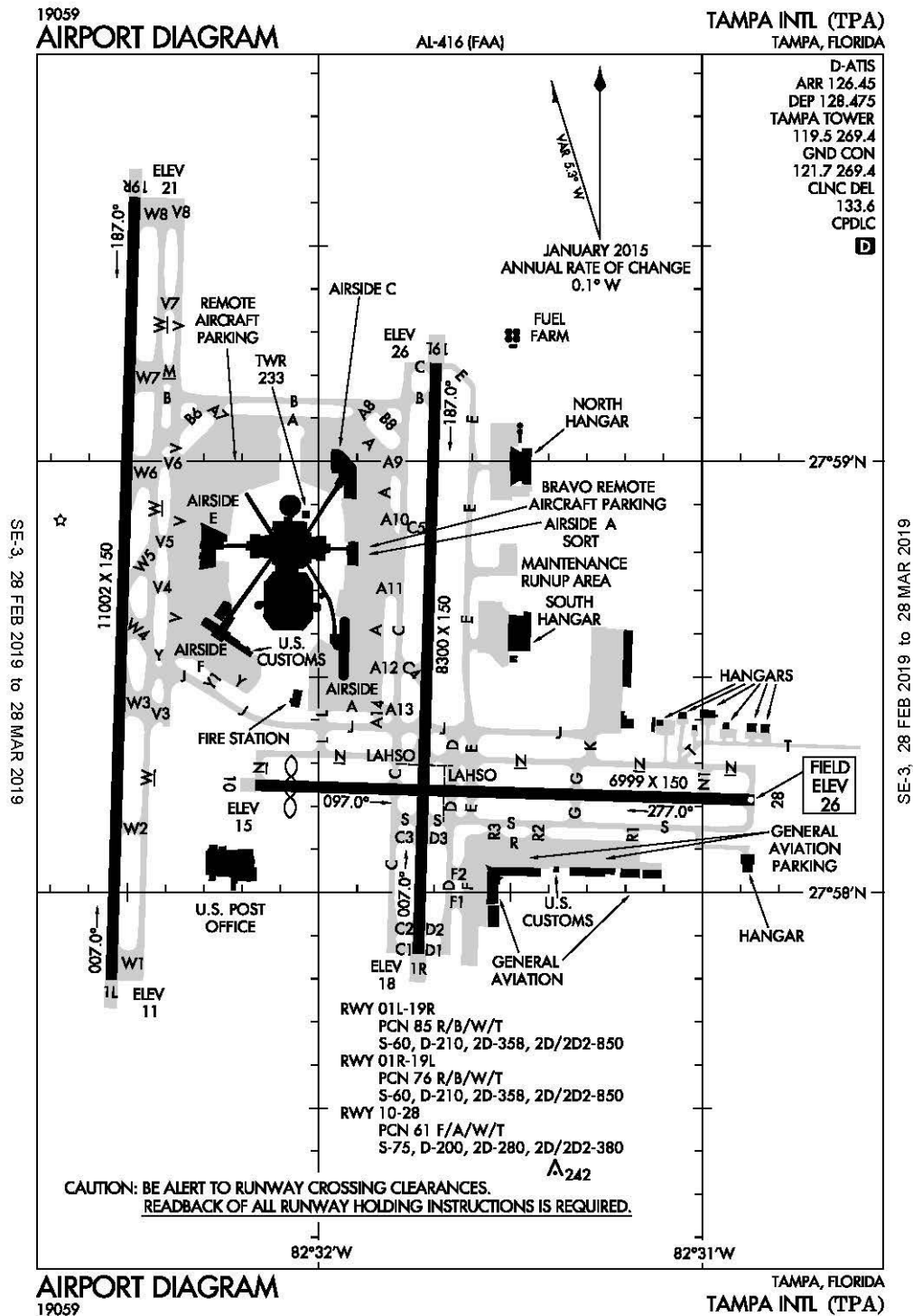
TWY A, SOUTH OF TWY A3 RSTD TO WINGSPAN OF LESS THAN 118 FT. PPR REQUIRED FOR WINGSPAN 118 FT OR GREATER.

RY 17L-35R UNLIT 0400-1100Z.

WEST RAMP CUSTOMS INSPECTION PRKG AREA RSTD TO ACFT WINGSPAN LESS THAN 118'

TWY A, BTN W RAMP S END AND TWY B10, RSTRD TO ACFT WINGSPAN LESS THAN 171 FT. PPR FOR ACFT WINGSPAN 171 FT OR GTR.

Tampa, Florida
Tampa International
ICAO Identifier KTPA



Tampa, FL
Tampa Intl
ICAO Identifier KTPA

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 27-58-31.7N / 82-31-59.7W
2.2.2 From City: 6 Miles W Of Tampa, FL
2.2.3 Elevation: 26.4 ft
2.2.5 Magnetic variation: 5W (2010)
2.2.6 Airport Contact: John Tiliacos
PO BOX 22287
Tampa, FL 33622
(813-870-8700)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: No
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 10
2.10.1.b Type of obstacle: Trees (26 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 301 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 10
2.12.2 True Bearing: 92
2.12.3 Dimensions: 6999 ft x 150 ft
2.12.4 PCN: 61 F/A/W/T
2.12.5 Coordinates: 27-58-14.9917N /
82-32-09.9027W
2.12.6 Threshold elevation: 14.5 ft
2.12.6 Touchdown zone elevation: 21.8 ft

2.12.1 Designation: 28
2.12.2 True Bearing: 272
2.12.3 Dimensions: 6999 ft x 150 ft
2.12.4 PCN: 61 F/A/W/T
2.12.5 Coordinates: 27-58-12.8902N /
82-30-51.8781W
2.12.6 Threshold elevation: 26.4 ft

2.12.6 Touchdown zone elevation: 26.4 ft

2.12.1 Designation: 01R
2.12.2 True Bearing: 2
2.12.3 Dimensions: 8300 ft x 150 ft
2.12.4 PCN: 76 R/B/W/T
2.12.5 Coordinates: 27-57-51.5169N /
82-31-44.3687W
2.12.6 Threshold elevation: 17.7 ft
2.12.6 Touchdown zone elevation: 20.5 ft

2.12.1 Designation: 19L
2.12.2 True Bearing: 182
2.12.3 Dimensions: 8300 ft x 150 ft
2.12.4 PCN: 76 R/B/W/T
2.12.5 Coordinates: 27-59-13.6607N /
82-31-41.5739W
2.12.6 Threshold elevation: 26 ft
2.12.6 Touchdown zone elevation: 26.1 ft

2.12.1 Designation: 01L
2.12.2 True Bearing: 2
2.12.3 Dimensions: 11002 ft x 150 ft
2.12.4 PCN: 85 R/B/W/T
2.12.5 Coordinates: 27-57-47.8596N /
82-32-32.4793W
2.12.6 Threshold elevation: 10.7 ft
2.12.6 Touchdown zone elevation: 10.8 ft

2.12.1 Designation: 19R
2.12.2 True Bearing: 182
2.12.3 Dimensions: 11002 ft x 150 ft
2.12.4 PCN: 85 R/B/W/T
2.12.5 Coordinates: 27-59-36.7423N /
82-32-28.7801W
2.12.6 Threshold elevation: 21 ft
2.12.6 Touchdown zone elevation: 21 ft

AD 2.13 Declared distances

2.13.1 Designation: 10
2.13.2 Takeoff run available: 6999
2.13.3 Takeoff distance available: 6999
2.13.4 Accelerate-stop distance available: 6999
2.13.5 Landing distance available: 6501

2.13.1 Designation: 28
2.13.2 Takeoff run available: 6999
2.13.3 Takeoff distance available: 6999
2.13.4 Accelerate-stop distance available: 6501
2.13.5 Landing distance available: 6501

2.13.1 Designation: 01R
2.13.2 Takeoff run available: 8300
2.13.3 Takeoff distance available: 8300
2.13.4 Accelerate-stop distance available: 8300
2.13.5 Landing distance available: 8300

2.13.1 Designation: 19L
2.13.2 Takeoff run available: 8300
2.13.3 Takeoff distance available: 8300
2.13.4 Accelerate-stop distance available: 8300
2.13.5 Landing distance available: 8300

2.13.1 Designation: 01L
2.13.2 Takeoff run available: 11002
2.13.3 Takeoff distance available: 11002
2.13.4 Accelerate-stop distance available: 10800
2.13.5 Landing distance available: 10800

2.13.1 Designation: 19R
2.13.2 Takeoff run available: 11002
2.13.3 Takeoff distance available: 11002
2.13.4 Accelerate-stop distance available: 11002
2.13.5 Landing distance available: 11002

AD 2.14 Approach and runway lighting

2.14.1 Designation: 10
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Rwy 10 PAPI Unusable 8 Degrees
Left And Right Of Rcl.

2.14.1 Designation: 28
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 01R
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 19L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 01L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 19R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P DEP/P (001-150)
2.18.3 Service designation: 118.15 MHz

2.18.1 Service designation: APCH/P DEP/P (151-219)
2.18.3 Service designation: 353.575 MHz

2.18.1 Service designation: APCH/P DEP/P (220-360)
2.18.3 Service designation: 118.8 MHz

2.18.1 Service designation: APCH/P DEP/P (001-150)
2.18.3 Service designation: 285.625 MHz

2.18.1 Service designation: APCH/P DEP/P (220-360)
2.18.3 Service designation: 269.1 MHz

2.18.1 Service designation: APCH/P DEP/P (151-219)
2.18.3 Service designation: 119.65 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 353.75 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 133.6 MHz

2.18.1 Service designation: CLASS B (001-150)
2.18.3 Service designation: 119.9 MHz

2.18.1 Service designation: CLASS B (151-219)
2.18.3 Service designation: 353.575 MHz

2.18.1 Service designation: CLASS B (151-219)
2.18.3 Service designation: 119.65 MHz

2.18.1 Service designation: CLASS B (220-360)
2.18.3 Service designation: 125.3 MHz

2.18.1 Service designation: CLASS B (220-360)
2.18.3 Service designation: 316.05 MHz

2.18.1 Service designation: CLASS B (001-150)
2.18.3 Service designation: 290.3 MHz

2.18.1 Service designation: D-ATIS (ARR)
2.18.3 Service designation: 126.45 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS (DEP)
2.18.3 Service designation: 128.475 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: FINAL-CTL IC

2.18.3 Service designation: 118.5 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 269.4 MHz

2.18.1 Service designation: GND/S

2.18.3 Service designation: 121.35 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 119.5 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 269.4 MHz

2.18.1 Service designation: LCL/S

2.18.3 Service designation: 119.05 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 01L. Magnetic variation: 5W

2.19.2 ILS identification: AMP

2.19.5 Coordinates: 27-59-43.4N / 82-32-25.65W

2.19.6 Site elevation: 20 ft

2.19.1 ILS type: Glide Slope for runway 01L. Magnetic variation: 5W

2.19.2 ILS identification: AMP

2.19.5 Coordinates: 27-57-58.2392N /

82-32-36.5897W

2.19.6 Site elevation: 7.6 ft

2.19.1 ILS type: Inner Marker for runway 01L. Magnetic variation: 5W

2.19.2 ILS identification: AMP

2.19.5 Coordinates: 27-57-39.6244N /

82-32-32.7564W

2.19.6 Site elevation: 6.4 ft

2.19.1 ILS type: Localizer for runway 01L. Magnetic variation: 5W

2.19.2 ILS identification: AMP

2.19.5 Coordinates: 27-59-44.7869N /

82-32-28.5048W

2.19.6 Site elevation: 20.6 ft

2.19.1 ILS type: Localizer for runway 01R. Magnetic variation: 5W

2.19.2 ILS identification: TWJ

2.19.5 Coordinates: 27-59-23.9328N /

82-31-41.2197W

2.19.6 Site elevation: 25.6 ft

2.19.1 ILS type: DME for runway 01R. Magnetic variation: 5W

2.19.2 ILS identification: TWJ

2.19.5 Coordinates: 27-59-22.9831N /

82-31-38.4291W

2.19.6 Site elevation: 35.9 ft

2.19.1 ILS type: Localizer for runway 19L. Magnetic variation: 5W

2.19.2 ILS identification: TPA

2.19.5 Coordinates: 27-57-40.972N / 82-31-44.7284W

2.19.6 Site elevation: 13.7 ft

2.19.1 ILS type: Outer Marker for runway 19L. Magnetic variation: 5W

2.19.2 ILS identification: TPA

2.19.5 Coordinates: 28-05-07.2047N /

82-31-30.8942W

2.19.6 Site elevation: 42.5 ft

2.19.1 ILS type: Glide Slope for runway 19L. Magnetic variation: 5W

2.19.2 ILS identification: TPA

2.19.5 Coordinates: 27-59-03.1644N /

82-31-37.4636W

2.19.6 Site elevation: 23.8 ft

2.19.1 ILS type: Inner Marker for runway 19L. Magnetic variation: 5W

2.19.2 ILS identification: TPA

2.19.5 Coordinates: 27-59-23.6601N /

82-31-41.2251W

2.19.6 Site elevation: 25.7 ft

2.19.1 ILS type: Middle Marker for runway 19L. Magnetic variation: 5W

2.19.2 ILS identification: TPA

2.19.5 Coordinates: 27-59-40.3948N / 82-31-40.663W

2.19.6 Site elevation: 29.4 ft

2.19.1 ILS type: DME for runway 19R. Magnetic variation: 5W

2.19.2 ILS identification: JRT

2.19.5 Coordinates: 27-57-37.34N / 82-32-31.94W

2.19.6 Site elevation: 5 ft

2.19.1 ILS type: Localizer for runway 19R. Magnetic variation: 5W

2.19.2 ILS identification: JRT

2.19.5 Coordinates: 27-57-37.46N / 82-32-32.84W

2.19.6 Site elevation: 5 ft

2.19.1 ILS type: Glide Slope for runway 19R. Magnetic variation: 5W

2.19.2 ILS identification: JRT

2.19.5 Coordinates: 27-59-26.4582N / 82-32-33.5927W

2.19.6 Site elevation: 17.2 ft

General Remarks:

RY 19L IS NOISE SENSITIVE TO TURBOJET DEPARTURES. RY 01R IS NOISE SENSITIVE TO TURBOJET ARRIVALS. PUBLISHED NOISE ABATEMENT PROCEDURES IN EFFECT.

ONLY ACFT WITH PRIOR PERMISSION MAY USE TERMINAL APRON; ALL OTHERS USE GA APRON.

BIRD ACTIVITY ON AND IN VCNTY OF ARPT.

TWY RSTRS: AIRPLANE DESIGN GRP V OR LGR – TWY N WEST OF TWY L UNAVBL. TWY E NORTH OF TWY J ALSO UNUSBL FOR WINGSPAN GREATER THAN 171 FT UNLESS PPR FROM ARPT OPS.

TWY RSTRS: GRP IV ACFT WITH WING SPAN GTR THAN 118 FT -- TAXILANE E SOUTH OF TWY S, AND TAXILANE R EAST OF TWY D ARE NON-MOVEMENT AREAS AND UNAVBL WO PPR FROM APRT OPS.

AIRPORT DIAGRAM

D-ATIS
123.75
PALM BEACH TOWER
119.1 257.8
GND CON
121.9 284.6
CLNC DEL
121.6 284.6

D

JANUARY 2015
ANNUAL RATE OF CHANGE
0.1° W

ELEV 17
ELEV 20
FIELD ELEV 20

HANGARS

CARGO RAMP

FIRE STATION

TWR 248 ±

CONCOURSE A

CONCOURSE B

TERMINAL

WEST REMOTE RAMP

EAST REMOTE RAMP

RWY 10L-28R
PCN 93 F/B/W/T
S-120, D-175, 2D-550, 2D/2D2-840

RWY 10R-28L
PCN 44 F/A/X/T
S-25

RWY 14-32
PCN 67 F/A/W/T
S-100, D-180, 2D-325, 2D/2D2-400

CAUTION: Pilots are cautioned not to mistake Twy L for Rwys 10L-28R or 10R-28L.

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

WEST PALM BEACH, FLORIDA
PALM BEACH INTL (PBI)

**West Palm Beach, FL
Palm Beach Intl
ICAO Identifier KPBI**

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 26-40-59.4N / 80-05-44.1W
2.2.2 From City: 3 Miles W Of West Palm Beach, FL
2.2.3 Elevation: 19.6 ft
2.2.5 Magnetic variation: 6W (2010)
2.2.6 Airport Contact: Bruce V. Pelly
846 PALM BEACH INTL AIRPORT
West Palm Beach, FL 33406
(561-471-7412)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: No
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/21/1973
2.6.4 Remarks: Index D ARFF Equipment Available

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 14
2.10.1.b Type of obstacle: Trees (84 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 150 ft R of Centerline

2.10.1.a. Runway designation: 32
2.10.1.b Type of obstacle: Road (32 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 250 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 10R
2.12.2 True Bearing: 93
2.12.3 Dimensions: 3214 ft x 75 ft
2.12.4 PCN: 44 F/A/X/T
2.12.5 Coordinates: 26-40-52.282N / 80-06-22.6416W
2.12.6 Threshold elevation: 17.1 ft
2.12.6 Touchdown zone elevation: 17.2 ft

2.12.1 Designation: 28L
2.12.2 True Bearing: 273

2.12.3 Dimensions: 3214 ft x 75 ft
2.12.4 PCN: 44 F/A/X/T
2.12.5 Coordinates: 26-40-50.7327N /
80-05-47.2501W
2.12.6 Threshold elevation: 13.6 ft
2.12.6 Touchdown zone elevation: 16.9 ft

2.12.1 Designation: 14
2.12.2 True Bearing: 135
2.12.3 Dimensions: 6926 ft x 150 ft
2.12.4 PCN: 67 F/A/W/T
2.12.5 Coordinates: 26-41-30.5645N /
80-06-14.4434W
2.12.6 Threshold elevation: 17.2 ft
2.12.6 Touchdown zone elevation: 17.3 ft

2.12.1 Designation: 32
2.12.2 True Bearing: 315
2.12.3 Dimensions: 6926 ft x 150 ft
2.12.4 PCN: 67 F/A/W/T
2.12.5 Coordinates: 26-40-41.9124N /
80-05-20.6221W
2.12.6 Threshold elevation: 15.9 ft
2.12.6 Touchdown zone elevation: 15.9 ft

2.12.1 Designation: 10L
2.12.2 True Bearing: 93
2.12.3 Dimensions: 10001 ft x 150 ft
2.12.4 PCN: 93 F/B/W/T
2.12.5 Coordinates: 26-40-59.5493N /
80-06-30.1296W
2.12.6 Threshold elevation: 19.6 ft
2.12.6 Touchdown zone elevation: 16.3 ft

2.12.1 Designation: 28R
2.12.2 True Bearing: 273
2.12.3 Dimensions: 10001 ft x 150 ft
2.12.4 PCN: 93 F/B/W/T
2.12.5 Coordinates: 26-40-54.7438N /
80-04-40.0137W
2.12.6 Threshold elevation: 16.4 ft
2.12.6 Touchdown zone elevation: 18.3 ft

AD 2.13 Declared distances

2.13.1 Designation: 10R
2.13.2 Takeoff run available: 3213
2.13.3 Takeoff distance available: 3213
2.13.4 Accelerate-stop distance available: 3213
2.13.5 Landing distance available: 3213

2.13.1 Designation: 28L

2.13.2 Takeoff run available: 3213
2.13.3 Takeoff distance available: 3213
2.13.4 Accelerate–stop distance available: 3213
2.13.5 Landing distance available: 3213

2.13.1 Designation: 14
2.13.2 Takeoff run available: 6931
2.13.3 Takeoff distance available: 6931
2.13.4 Accelerate–stop distance available: 6000
2.13.5 Landing distance available: 6000

2.13.1 Designation: 32
2.13.2 Takeoff run available: 6931
2.13.3 Takeoff distance available: 6931
2.13.4 Accelerate–stop distance available: 6931
2.13.5 Landing distance available: 6513

2.13.1 Designation: 10L
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate–stop distance available: 10000
2.13.5 Landing distance available: 8800

2.13.1 Designation: 28R
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate–stop distance available: 10000
2.13.5 Landing distance available: 9189

AD 2.14 Approach and runway lighting

2.14.1 Designation: 14
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 32
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 10L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 28R
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P (SOUTH)
2.18.3 Service designation: 343.6 MHz

2.18.1 Service designation: APCH/P (SOUTH)
2.18.3 Service designation: 125.2 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 125.925 MHz

2.18.1 Service designation: APCH/P IC (NORTH)
2.18.3 Service designation: 128.3 MHz

2.18.1 Service designation: APCH/P IC (NORTH)
2.18.3 Service designation: 317.4 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 284.6 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 121.6 MHz

2.18.1 Service designation: CLASS C (NORTH)
2.18.3 Service designation: 317.4 MHz

2.18.1 Service designation: CLASS C (SOUTH)
2.18.3 Service designation: 343.6 MHz

2.18.1 Service designation: CLASS C (NORTH)
2.18.3 Service designation: 128.3 MHz

2.18.1 Service designation: CLASS C (SOUTH)
2.18.3 Service designation: 125.2 MHz

2.18.1 Service designation: CLASS C/S (SOUTH)
2.18.3 Service designation: 127.35 MHz

2.18.1 Service designation: D–ATIS
2.18.3 Service designation: 123.75 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: DEP/P (SOUTH)
2.18.3 Service designation: 343.6 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 125.2 MHz

2.18.1 Service designation: DEP/P (NORTH)
2.18.3 Service designation: 128.3 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: FINAL APCH
2.18.3 Service designation: 125 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 284.6 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

variation: 6W
2.19.2 ILS identification: PBI
2.19.5 Coordinates: 26-40-54.2434N /
80-04-28.6079W
2.19.6 Site elevation: 13 ft

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 119.1 MHz

2.19.1 ILS type: DME for runway 10L. Magnetic varia-
tion: 6W
2.19.2 ILS identification: PBI
2.19.5 Coordinates: 26-40-51.4319N /
80-04-29.0092W
2.19.6 Site elevation: 23.3 ft

2.18.1 Service designation: LCL/S
2.18.3 Service designation: 118.75 MHz

2.18.1 Service designation: LCL/S
2.18.3 Service designation: 384.6 MHz

2.19.1 ILS type: Localizer for runway 28R. Magnetic
variation: 6W
2.19.2 ILS identification: PWB
2.19.5 Coordinates: 26-40-59.9132N /
80-06-38.5233W
2.19.6 Site elevation: 18.5 ft

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 10L. Magnetic
variation: 6W
2.19.2 ILS identification: PBI
2.19.5 Coordinates: 26-40-55.9795N /
80-06-06.0748W
2.19.6 Site elevation: 14.5 ft
2.19.1 ILS type: Localizer for runway 10L. Magnetic

2.19.1 ILS type: Glide Slope for runway 28R. Magnetic
variation: 6W
2.19.2 ILS identification: PWB
2.19.5 Coordinates: 26-40-53.0853N /
80-05-01.7298W
2.19.6 Site elevation: 13.5 ft

General Remarks:

MIGRATORY BIRDS ON AND INVOF ARPT.

NOISE ABATEMENT PROCEDURES IN EFFECT. MULTIENGINE FLIGHT TRAINING PROHIBITED SS TO SR
SUN AND HOLIDAY; STRICT ENVIRONMENTAL OPERATING STAGE 2 ACFT 0300-1200Z CALL NOISE
ABATEMENT OFFICER 561-471-7467.

BE ALERT; RYS 28L & 28R THLDS STAGGERED BY 5400 FT.

RY 10R/28L NON-AIR CARRIER ACFT ONLY.

BE ALERT: TWY L IS LCTD BTWN RYS 10L/28R & 10R/28L. TWY L IS WIDER AND LONGER THAN RY 10R/28L
- DO NOT CONFUSE TWY L FOR RY. AIRCRAFT WITH WINGSPAN OF 118 FT OR GREATER IS PROHIBITED
ON TWY L.

NO ACFT WILL CROSS HOLD LINE WITHOUT AUTHORIZATION.

[illegible]

Atlanta, GA
Hartsfield – Jackson Atlanta Intl
ICAO Identifier KATL

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 33-38-12.1186N /
84-25-40.3104W

2.2.2 From City: 7 Miles S Of Atlanta, GA

2.2.3 Elevation: 1026.2 ft

2.2.5 Magnetic variation: 5W (2015)

2.2.6 Airport Contact: John Selden

PO BOX 20509
Atlanta, GA 30320
(404-530-6600)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes

2.4.2 Fuel types: A,100,100LL

2.4.5 Hangar space: Yes

2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 08L

2.10.1.b Type of obstacle: Sign (14 ft above runway
end). Not Lighted or Marked

2.10.1.c Location of obstacle: 400 ft L of Centerline

2.10.1.a. Runway designation: 08R

2.10.1.b Type of obstacle: Rr (64 ft above runway end).
Not Lighted or Marked

2.10.1.c Location of obstacle: 500 ft R of Centerline

2.10.1.a. Runway designation: 09L

2.10.1.b Type of obstacle: Other (108 ft above runway
end). Not Lighted or Marked

2.10.1.c Location of obstacle: 200 ft L of Centerline

2.10.1.a. Runway designation: 09R

2.10.1.b Type of obstacle: Tower (88 ft above runway
end). Not Lighted or Marked

2.10.1.c Location of obstacle: 1000 ft R of Centerline

2.10.1.a. Runway designation: 10

2.10.1.b Type of obstacle: Sign (51 ft above runway
end). Not Lighted or Marked

2.10.1.c Location of obstacle: 770 ft R of Centerline

2.10.1.a. Runway designation: 26L

2.10.1.b Type of obstacle: Other (13 ft above runway
end). Not Lighted or Marked

2.10.1.c Location of obstacle: 560 ft R of Centerline

2.10.1.a. Runway designation: 26R

2.10.1.b Type of obstacle: Ant (53 ft above runway end).
Not Lighted or Marked

2.10.1.c Location of obstacle: 800 ft R of Centerline

2.10.1.a. Runway designation: 28

2.10.1.b Type of obstacle: Tower (136 ft above runway
end). Lighted

2.10.1.c Location of obstacle: 410 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 09L

2.12.2 True Bearing: 90

2.12.3 Dimensions: 12390 ft x 150 ft

2.12.4 PCN: 62 R/A/W/T

2.12.5 Coordinates: 33-38-04.936N / 84-26-52.6807W

2.12.6 Threshold elevation: 1018.7 ft

2.12.6 Touchdown zone elevation: 1018.7 ft

2.12.7 Slope: 0.3 DOWN

2.12.1 Designation: 27R

2.12.2 True Bearing: 270

2.12.3 Dimensions: 12390 ft x 150 ft

2.12.4 PCN: 62 R/A/W/T

2.12.5 Coordinates: 33-38-04.929N / 84-24-26.158W

2.12.6 Threshold elevation: 977.2 ft

2.12.6 Touchdown zone elevation: 984.6 ft

2.12.7 Slope: 0.4 UP

2.12.1 Designation: 09R
2.12.2 True Bearing: 90
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 68 R/A/W/T
2.12.5 Coordinates: 33-37-54.5282N /
84-26-52.6768W
2.12.6 Threshold elevation: 1026.1 ft
2.12.6 Touchdown zone elevation: 1026.2 ft
2.12.7 Slope: 0.4 DOWN

2.12.1 Designation: 27L
2.12.2 True Bearing: 270
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 68 R/A/W/T
2.12.5 Coordinates: 33-37-54.5649N / 84-25-06.243W
2.12.6 Threshold elevation: 984.7 ft
2.12.6 Touchdown zone elevation: 998.9 ft
2.12.7 Slope: 0.5 DOWN

2.12.1 Designation: H1
2.12.3 Dimensions: 52 ft x 52 ft
2.12.5 Coordinates: 33-39-05.52N / 84-25-32.6W
2.12.6 Threshold elevation: 988 ft

2.12.1 Designation: 08R
2.12.2 True Bearing: 90
2.12.3 Dimensions: 9999 ft x 150 ft
2.12.4 PCN: 74 R/A/W/T
2.12.5 Coordinates: 33-38-48.432N / 84-26-18.1035W
2.12.6 Threshold elevation: 1023.7 ft
2.12.6 Touchdown zone elevation: 1023.8 ft
2.12.7 Slope: 1 DOWN

2.12.1 Designation: 26L
2.12.2 True Bearing: 270
2.12.3 Dimensions: 9999 ft x 150 ft
2.12.4 PCN: 74 R/A/W/T
2.12.5 Coordinates: 33-38-48.4612N /
84-24-19.8313W
2.12.6 Threshold elevation: 995.4 ft
2.12.6 Touchdown zone elevation: 995.5 ft
2.12.7 Slope: 0.4 DOWN

2.12.1 Designation: 08L

2.12.2 True Bearing: 90
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 62 R/A/W/T
2.12.5 Coordinates: 33-38-58.3238N /
84-26-20.4923W
2.12.6 Threshold elevation: 1014.6 ft
2.12.6 Touchdown zone elevation: 1014.6 ft
2.12.7 Slope: 0.6 DOWN

2.12.1 Designation: 26R
2.12.2 True Bearing: 270
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 62 R/A/W/T
2.12.5 Coordinates: 33-38-58.3515N /
84-24-34.0341W
2.12.6 Threshold elevation: 990 ft
2.12.6 Touchdown zone elevation: 990 ft

2.12.1 Designation: 10
2.12.2 True Bearing: 90
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 74 R/A/W/T
2.12.5 Coordinates: 33-37-12.9808N /
84-26-52.3574W
2.12.6 Threshold elevation: 1000.3 ft
2.12.6 Touchdown zone elevation: 1000.3 ft

2.12.1 Designation: 28
2.12.2 True Bearing: 270
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 74 R/A/W/T
2.12.5 Coordinates: 33-37-13.0275N /
84-25-05.9358W
2.12.6 Threshold elevation: 997.5 ft
2.12.6 Touchdown zone elevation: 997.5 ft

AD 2.13 Declared distances

2.13.1 Designation: 09L
2.13.2 Takeoff run available: 12390
2.13.3 Takeoff distance available: 12390
2.13.4 Accelerate-stop distance available: 11730
2.13.5 Landing distance available: 11730

2.13.1 Designation: 27R

2.13.2 Takeoff run available: 12390
2.13.3 Takeoff distance available: 12390
2.13.4 Accelerate-stop distance available: 12190
2.13.5 Landing distance available: 11690

2.13.1 Designation: 09R
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 8925
2.13.5 Landing distance available: 8925

2.13.1 Designation: 27L
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 8865
2.13.5 Landing distance available: 8865

2.13.1 Designation: 08R
2.13.2 Takeoff run available: 9999
2.13.3 Takeoff distance available: 10999
2.13.4 Accelerate-stop distance available: 9999
2.13.5 Landing distance available: 9999

2.13.1 Designation: 26L
2.13.2 Takeoff run available: 9999
2.13.3 Takeoff distance available: 9999
2.13.4 Accelerate-stop distance available: 9999
2.13.5 Landing distance available: 9999

2.13.1 Designation: 08L
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 8800
2.13.5 Landing distance available: 8800

2.13.1 Designation: 26R
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 8800
2.13.5 Landing distance available: 8800

2.13.1 Designation: 10
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000

2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 9000

2.13.1 Designation: 28
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 9000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 09L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 27R
2.14.2 Approach lighting system: MALS
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 09R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 27L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 08R
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 26L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: PAPI Rwy 26L Unusable Beyond 7 Degrees Left And Right Of Rcl.

2.14.1 Designation: 08L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 26R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: PAPI Rwy 26R Unusable Beyond 6 Degrees Left And 7 Degrees Right Of Rcl.

2.14.1 Designation: 10
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 28
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P
2.18.3 Service designation: 118.1 MHz

2.18.1 Service designation: D-ATIS (DEP)
2.18.3 Service designation: 125.55 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS (ARR)
2.18.3 Service designation: 119.65 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: DEP/P (RY 10/28)
2.18.3 Service designation: 135.375 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P (RWYS 9L/27R & 9R/27L)
2.18.3 Service designation: 121.75 MHz

2.18.1 Service designation: GND/P (RWYS 8R/26L & 8L/26R)
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P (RYS 08L/26R & 08R/26L & 09L/27R & 09R/27L & 10/28)
2.18.3 Service designation: 254.4 MHz

2.18.1 Service designation: GND/P (RY 10/28)
2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: ILS PRM LCL/P (ILS PRM RYS 8L & 26R)

2.18.3 Service designation: 119.1 MHz

2.18.1 Service designation: ILS PRM LCL/P (ILS PRM RYS 10 & 28)

2.18.3 Service designation: 119.5 MHz

2.18.1 Service designation: ILS PRM LCL/P (ILS PRM RYS 9R & 27L)

2.18.3 Service designation: 119.3 MHz

2.18.1 Service designation: ILS PRM LCL/P (ILS PRM RYS 9L & 27R)

2.18.3 Service designation: 123.85 MHz

2.18.1 Service designation: ILS PRM LCL/P (ILS PRM RYS 8R & 26L)

2.18.3 Service designation: 125.325 MHz

2.18.1 Service designation: ILS PRM MONITOR/P (RYS 8L/26R & 8R/26L)

2.18.3 Service designation: 126.9 MHz

2.18.1 Service designation: ILS PRM MONITOR/P (RY 10/28)

2.18.3 Service designation: 133.425 MHz

2.18.1 Service designation: ILS PRM MONITOR/P (RY 9L/27R & 9R/27L)

2.18.3 Service designation: 132.55 MHz

2.18.1 Service designation: LCL/P (RYS 08L/26R & 08R/26L & 09L/27R & 09R/27L & 10/28)

2.18.3 Service designation: 254.4 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 08L. Magnetic variation: 5W

2.19.2 ILS identification: HFW

2.19.5 Coordinates: 33-39-01.782N / 84-24-24.7032W

2.19.6 Site elevation: 977.2 ft

2.19.1 ILS type: Inner Marker for runway 08L. Magnetic

variation: 5W

2.19.2 ILS identification: HFW

2.19.5 Coordinates: 33-38-58.3145N /
84-26-30.5173W

2.19.6 Site elevation: 1017.7 ft

2.19.1 ILS type: Localizer for runway 08L. Magnetic
variation: 5W

2.19.2 ILS identification: HFW

2.19.5 Coordinates: 33-38-58.3506N /
84-24-23.3901W

2.19.6 Site elevation: 985.2 ft

2.19.1 ILS type: Glide Slope for runway 08L. Magnetic
variation: 5W

2.19.2 ILS identification: HFW

2.19.5 Coordinates: 33-39-02.288N / 84-26-06.3042W
2.19.6 Site elevation: 1001.7 ft

2.19.1 ILS type: DME for runway 08R. Magnetic varia-
tion: 5W

2.19.2 ILS identification: ATL

2.19.5 Coordinates: 33-38-45.7727N /
84-24-07.5608W

2.19.6 Site elevation: 992.1 ft

2.19.1 ILS type: Localizer for runway 08R. Magnetic
variation: 5W

2.19.2 ILS identification: ATL

2.19.5 Coordinates: 33-38-48.4575N /
84-24-07.5394W

2.19.6 Site elevation: 986.8 ft

2.19.1 ILS type: Glide Slope for runway 08R. Magnetic
variation: 5W

2.19.2 ILS identification: ATL

2.19.5 Coordinates: 33-38-52.4042N / 84-26-03.334W
2.19.6 Site elevation: 1005 ft

2.19.1 ILS type: Middle Marker for runway 08R. Mag-
netic variation: 5W

2.19.2 ILS identification: ATL

2.19.5 Coordinates: 33-38-49.6956N /
84-26-48.5587W

2.19.6 Site elevation: 1008 ft

2.19.1 ILS type: Localizer for runway 09L. Magnetic
variation: 5W

2.19.2 ILS identification: HZK

2.19.5 Coordinates: 33-38-04.94N / 84-24-19.08W

2.19.6 Site elevation: 949.5 ft

2.19.1 ILS type: Outer Marker for runway 09L. Magnet-
ic variation: 5W

2.19.2 ILS identification: HZK

2.19.5 Coordinates: 33-37-57.073N / 84-32-03.073W

2.19.6 Site elevation:

2.19.1 ILS type: DME for runway 09L. Magnetic varia-
tion: 5W

2.19.2 ILS identification: HZK

2.19.5 Coordinates: 33-38-07.48N / 84-24-44.38W

2.19.6 Site elevation: 978 ft

2.19.1 ILS type: Middle Marker for runway 09L. Mag-
netic variation: 5W

2.19.2 ILS identification: HZK

2.19.5 Coordinates: 33-38-05.6398N /
84-27-20.4977W

2.19.6 Site elevation: 987 ft

2.19.1 ILS type: Glide Slope for runway 09L. Magnetic
variation: 5W

2.19.2 ILS identification: HZK

2.19.5 Coordinates: 33-38-02.4639N /
84-26-39.6677W

2.19.6 Site elevation: 1016.6 ft

2.19.1 ILS type: Localizer for runway 09R. Magnetic
variation: 5W

2.19.2 ILS identification: FUN

2.19.5 Coordinates: 33-37-54.5664N /
84-24-52.6064W

2.19.6 Site elevation: 976.2 ft

2.19.1 ILS type: DME for runway 09R. Magnetic varia-
tion: 5W

2.19.2 ILS identification: FUN

2.19.5 Coordinates: 33-37-56.6292N /
84-24-54.2376W

2.19.6 Site elevation: 995.5 ft

2.19.1 ILS type: Glide Slope for runway 09R. Magnetic
variation: 5W

2.19.2 ILS identification: FUN

2.19.5 Coordinates: 33-37-58.482N / 84-26-39.0507W

2.19.6 Site elevation: 1019.1 ft

2.19.1 ILS type: Inner Marker for runway 09R. Magnetic
variation: 5W

2.19.2 ILS identification: FUN

2.19.5 Coordinates: 33-37-54.5222N /
84-27-02.5364W

2.19.6 Site elevation: 1029.2 ft

2.19.1 ILS type: Inner Marker for runway 10. Magnetic
variation: 5W

2.19.2 ILS identification: OMO

2.19.5 Coordinates: 33-37-12.9816N /
84-27-02.5224W

2.19.6 Site elevation: 1001 ft

2.19.1 ILS type: Localizer for runway 10. Magnetic vari-
ation: 5W

2.19.2 ILS identification: OMO

2.19.5 Coordinates: 33-37-13.0192N /
84-24-53.9594W

2.19.6 Site elevation: 991.1 ft

2.19.1 ILS type: Glide Slope for runway 10. Magnetic
variation: 5W

2.19.2 ILS identification: OMO

2.19.5 Coordinates: 33-37-08.9408N /
84-26-38.7669W

2.19.6 Site elevation: 985.4 ft

2.19.1 ILS type: DME for runway 10. Magnetic varia-
tion: 5W

2.19.2 ILS identification: OMO

2.19.5 Coordinates: 33-37-12.4476N /
84-24-53.9549W

2.19.6 Site elevation: 999.7 ft

2.19.1 ILS type: Glide Slope for runway 26L. Magnetic
variation: 5W

2.19.2 ILS identification: BRU

2.19.5 Coordinates: 33-38-52.4111N / 84-24-32.8404W

2.19.6 Site elevation: 993.7 ft

2.19.1 ILS type: Middle Marker for runway 26L. Mag-
netic variation: 5W

2.19.2 ILS identification: BRU

2.19.5 Coordinates: 33-38-48.5356N /
84-23-43.5832W

2.19.6 Site elevation: 993.5 ft

2.19.1 ILS type: DME for runway 26L. Magnetic varia-
tion: 5W

2.19.2 ILS identification: BRU

2.19.5 Coordinates: 33-38-49.0988N /
84-26-30.1749W

2.19.6 Site elevation: 1030.3 ft

2.19.1 ILS type: Localizer for runway 26L. Magnetic
variation: 5W

2.19.2 ILS identification: BRU

2.19.5 Coordinates: 33-38-48.4526N /
84-26-30.1664W

2.19.6 Site elevation: 1021 ft

2.19.1 ILS type: Localizer for runway 26R. Magnetic
variation: 5W

2.19.2 ILS identification: GXZ

2.19.5 Coordinates: 33-38-58.32N / 84-26-30.19W

2.19.6 Site elevation: 1016 ft

2.19.1 ILS type: DME for runway 26R. Magnetic varia-
tion: 5W

2.19.2 ILS identification: GXZ

2.19.5 Coordinates: 33-38-53.87N / 84-26-32.61W

2.19.6 Site elevation: 1008 ft

2.19.1 ILS type: Glide Slope for runway 26R. Magnetic
variation: 5W

2.19.2 ILS identification: GXZ

2.19.5 Coordinates: 33-39-02.3139N /
84-24-47.6304W

2.19.6 Site elevation: 983.8 ft

2.19.1 ILS type: Localizer for runway 27L. Magnetic variation: 5W

2.19.2 ILS identification: FSQ

2.19.5 Coordinates: 33-37-54.53N / 84-27-03.03W

2.19.6 Site elevation: 1015.7 ft

2.19.1 ILS type: Glide Slope for runway 27L. Magnetic variation: 5W

2.19.2 ILS identification: FSQ

2.19.5 Coordinates: 33-37-58.5048N /
84-25-18.9643W

2.19.6 Site elevation: 986.7 ft

2.19.1 ILS type: DME for runway 27L. Magnetic variation: 5W

2.19.2 ILS identification: FSQ

2.19.5 Coordinates: 33-37-53.7N / 84-27-03.53W

2.19.6 Site elevation: 1003.8 ft

2.19.1 ILS type: Inner Marker for runway 27L. Magnetic variation: 5W

2.19.2 ILS identification: FSQ

2.19.5 Coordinates: 33-37-54.59N / 84-24-52.99W

2.19.6 Site elevation: 983 ft

2.19.1 ILS type: Middle Marker for runway 27R. Magnetic variation: 5W

2.19.2 ILS identification: AFA

2.19.5 Coordinates: 33-38-05.7264N /
84-23-54.3478W

2.19.6 Site elevation: 954 ft

2.19.1 ILS type: Localizer for runway 27R. Magnetic variation: 5W

2.19.2 ILS identification: AFA

General Remarks:

BE ALERT TO RY CROSSING CLEARANCES. READBACK OF ALL RY HOLDING INSTRUCTIONS IS REQUIRED.

PREFERENTIAL RY USE IN EFFECT, EXPECT TO USE RYS 08R/26L, 09L/27R FOR DEPS; RYS 08L/26R, 09R/27L ARE USED PRIMARILY FOR ARRIVALS.

RUNUPS ARE PERMITTED AT VARIOUS SITES; COORDINATE USE OF CITY FACILITIES, MOVEMENT AREAS, ALLOWABLE NON-MOVEMENT AREAS WITH DEPT OF AVIATION OPNS, 404-530-6620; AND COORDINATE THE USE OF THE AIRLINES' FACILITIES WITH THEM.

2.19.5 Coordinates: 33-38-04.931N / 84-27-02.2719W

2.19.6 Site elevation: 1019.5 ft

2.19.1 ILS type: Glide Slope for runway 27R. Magnetic variation: 5W

2.19.2 ILS identification: AFA

2.19.5 Coordinates: 33-38-07.45N / 84-24-44.13W

2.19.6 Site elevation: 977.7 ft

2.19.1 ILS type: Inner Marker for runway 28. Magnetic variation: 5W

2.19.2 ILS identification: PKU

2.19.5 Coordinates: 33-37-13.0151N / 84-24-55.769W

2.19.6 Site elevation: 982.2 ft

2.19.1 ILS type: Glide Slope for runway 28. Magnetic variation: 5W

2.19.2 ILS identification: PKU

2.19.5 Coordinates: 33-37-17.0569N /
84-25-18.9449W

2.19.6 Site elevation: 989.2 ft

2.19.1 ILS type: Localizer for runway 28. Magnetic variation: 5W

2.19.2 ILS identification: PKU

2.19.5 Coordinates: 33-37-12.9761N /
84-27-05.3149W

2.19.6 Site elevation: 994.5 ft

2.19.1 ILS type: DME for runway 28. Magnetic variation: 5W

2.19.2 ILS identification: PKU

2.19.5 Coordinates: 33-37-12.4016N /
84-27-05.3143W

2.19.6 Site elevation: 1003.5 ft

NOISE & OPNS MONITORING SYSTEM (NOMS) PROGRAM IN EFFECT; CALL THE ATLANTA DEPT OF AVIATION 770-43-NOISE OR 770-436-6473 FOR MORE INFO.

ALL RYS, TOUCH AND GO OPERATIONS, LOW APPROACHES, AND PRACTICE INSTRUMENT APPROACHES NOT PERMITTED.

GROUP VI ACFT (LOCKHEED GALAXY C-5; ANTONOV AN-124 & AN-125) WITH A WINGSPAN OF GREATER THAN 214 FT ARE RESTRICTED FM USING TWY F EAST OF RAMP 5 NORTH AND WEST OF TWY DIXIE.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

ACFT WITH WINGSPAN GREATER THAN 171 FT ARE RSTRD FROM USING TWY V. ACFT WITH WINGSPAN GREATER THAN 171 FT ARE REQUIRED TO USE TAXI SPEEDS LESS THAN 15 MPH WHEN PASSING ACFT WITH WINGSPAN GREATER THAN 214FT ON TXWY L/M (EAST OF L7).

RY 9L DEPARTURES CAN EXPECT INTERSECTION DEPARTURE FM M2 WITH RY REMAINING 11,440 FT (TORA/TODA) AND 10,780 (ASDA).

ALL ACFT WITH WINGSPANS GREATER THAN 214 FT ARE REQUIRED TO USE TAXI SPEEDS NOT GREATER THAN 15 MPH ON TWYS A, L, M, AND SJ.

WHEN ACFT WITH WINGSPANS GREATER THAN 214 FT ARE PRESENT ON THE FIELD, ALL OTHER ACFT MUST ADHERE TO THE TWY CENTERLINE ON TWYS L AND M, TWYS E AND F, AND TWYS SC AND SJ BETWEEN SG AND R DUE TO SEPARATION BETWEEN THE PARALLEL TWYS.

ACFT WITH WINGSPAN GREATER THAN 214 FT SHOULD EXPECT TO USE RWYS 09L/27R AND 9R/27L.

TWO ACFT WITH WINGSPANS GREATER THAN OR EQUAL TO 225 FT MAY NOT TAXI

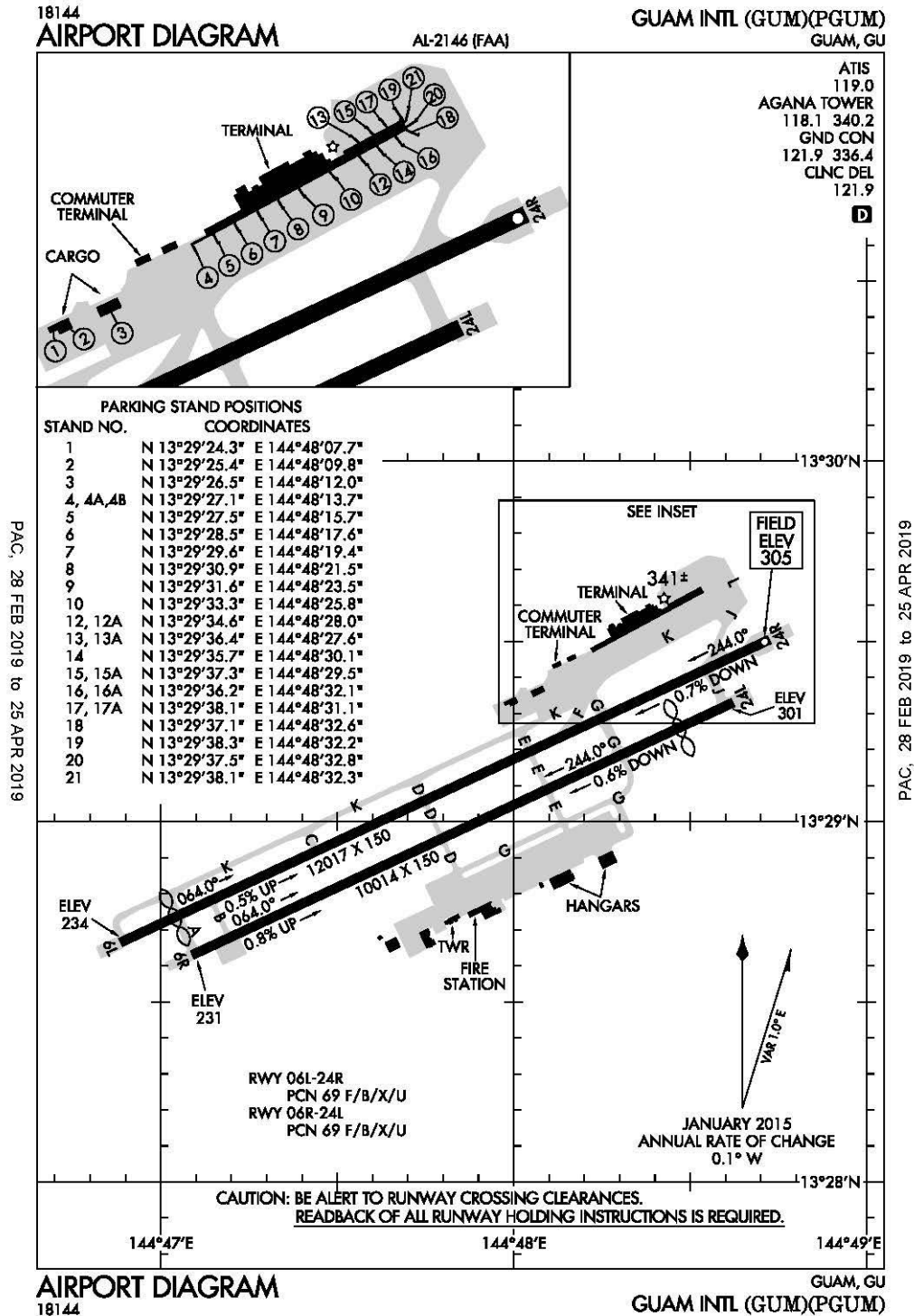
SIMULTANEOUSLY ON ADJACENT PARALLEL TWYS L/M EXCEPT WEST OF L7 AT SPEEDS LESS THAN 15 MPH.

NO ACFT WITH WINGSPAN GREATER THAN 213 FT MAY PASS ANOTHER ACFT WITH WINGSPAN GREATER THAN OR EQUAL TO 225 FT ON TWY L/M EAST OF L7.

NO ACFT WITH WINGSPAN GEATER THAN OR EQUAL TO 225 FT MAY TAXI ON TWY M BETWEEN L14 AND L16, TWY N BETWEEN P AND SC, AND TWY N BETWEEN U AND K.

TAXIWAY D IS REFERRED TO AS "DIXIE".

Agana, Guam
Guam International
ICAO Identifier PGUM



Agana, GU
Guam Intl
ICAO Identifier PGUM

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 13-29-02.2224N /
144-47-49.6576E
2.2.2 From City: 3 Miles NE Of Guam, GU
2.2.3 Elevation: 304.5 ft
2.2.5 Magnetic variation: 2E (2000)
2.2.6 Airport Contact: Charles H. Ada Ii
P.O. BOX 8770
Tamuning, GU 96931
(671-646-0300)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A1,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 4/1/1995

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 24L
2.10.1.b Type of obstacle: Hill (220 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 1200 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 06L
2.12.2 True Bearing: 65
2.12.3 Dimensions: 12017 ft x 150 ft
2.12.4 PCN: 69 F/B/X/U
2.12.5 Coordinates: 13-28-39.8522N /
144-46-53.1231E
2.12.6 Threshold elevation: 233.6 ft
2.12.6 Touchdown zone elevation: 256.3 ft

2.12.1 Designation: 24R
2.12.2 True Bearing: 245
2.12.3 Dimensions: 12017 ft x 150 ft
2.12.4 PCN: 69 F/B/X/U
2.12.5 Coordinates: 13-29-30.3057N /
144-48-43.4525E

2.12.6 Threshold elevation: 304.5 ft
2.12.6 Touchdown zone elevation: 304.5 ft

2.12.1 Designation: 06R
2.12.2 True Bearing: 65
2.12.3 Dimensions: 10014 ft x 150 ft
2.12.4 PCN: 69 F/B/X/U
2.12.5 Coordinates: 13-28-37.7713N /
144-47-05.3307E
2.12.6 Threshold elevation: 231.1 ft
2.12.6 Touchdown zone elevation: 258 ft
2.12.7 Slope: 0.8 UP

2.12.1 Designation: 24L
2.12.2 True Bearing: 245
2.12.3 Dimensions: 10014 ft x 150 ft
2.12.4 PCN: 69 F/B/X/U
2.12.5 Coordinates: 13-29-19.8177N /
144-48-37.2722E
2.12.6 Threshold elevation: 300.7 ft
2.12.6 Touchdown zone elevation: 293.1 ft
2.12.7 Slope: 0.6 DOWN

AD 2.13 Declared distances

2.13.1 Designation: 06L
2.13.2 Takeoff run available: 12015
2.13.3 Takeoff distance available: 12015
2.13.4 Accelerate-stop distance available: 12015
2.13.5 Landing distance available: 11015

2.13.1 Designation: 24R
2.13.2 Takeoff run available: 12015
2.13.3 Takeoff distance available: 12015
2.13.4 Accelerate-stop distance available: 12015
2.13.5 Landing distance available: 12015

2.13.1 Designation: 06R
2.13.2 Takeoff run available: 10014
2.13.3 Takeoff distance available: 10014
2.13.4 Accelerate-stop distance available: 10014
2.13.5 Landing distance available: 10014

2.13.1 Designation: 24L
2.13.2 Takeoff run available: 10014
2.13.3 Takeoff distance available: 10014
2.13.4 Accelerate-stop distance available: 10014
2.13.5 Landing distance available: 9014

AD 2.14 Approach and runway lighting

2.14.1 Designation: 06L
2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 24R

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 06R

2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 24L

2.14.4 Visual approach slope indicator system: P4L

2.14.10 Remarks: PAPI Rwy 24L Unusable Beyond 5 Degrees Left Of Centerline .

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 06L. Magnetic variation: 2E

2.19.2 ILS identification: GUM

2.19.5 Coordinates: 13-29-34.7116N / 144-48-53.0934E

2.19.6 Site elevation: 312.6 ft

2.19.1 ILS type: Glide Slope for runway 06L. Magnetic variation: 2E

2.19.2 ILS identification: GUM

2.19.5 Coordinates: 13-28-53.073N / 144-47-08.508E

General Remarks:

1000' OVRN S END & 450' OVRN N END RWY 6L-24R.

FOR PARKING INFORMATION ALL ACFT CTC RAMP CTL. ALL ACFT DEP TERMINAL PARKING CTC RAMP CTL FOR ENGINE START AND PUSHBACK.

TRANSIENT ACFT PROVIDE 24 HRS ADVANCE INFORMATION TO EXEC MGR GUAM INTL ARPT AUTHORITY; 1-671-642-4455 MON-FRI 0800-1700 OR FAX 1-671-646-8823.

EFFECTIVE RY GRADIENT RY 06L 0.46% UP NE; RY 24R 0.70% DOWN SW; RY 06R 0.80 % UP NE; RY 24L 0.52% DOWN SW.

LGTD TWR 780 FT 1.3 NM ENE OF RY 24L THLD .

RISING TERRAIN 75 FT FM RY 24L THLD 140 FT EAST OF CNTRLN EXTENDED +8 FT.

DEP VFR ACFT MAINT RY HDG TIL PAST DEP END OF RY AND REACHING 1000 FT AGL; RGT PAT 24L/R DO NOT EXCEED 1500 FT AGL IN TFC PAT.

CLASS III ACFT ARE PROHIBITED FROM MAKING ANY TURNS ONTO OR OFF TWY GOLF (SOUTH) WHILE UTILIZING TWY ECHO.

THE FIRST 500 FT OF THE LEFT SHOULDER OF RWY 24L IS NOT VISIBLE FROM THE TWR. PILOTS ARE ADVISED TO CAUTION FOR ANY PRESENCE OF WILDLIFE IN THAT AREA.

FOR TAXG B747-8 ACFT ON TWY K FRONTING THE ACFT PRKG APN FROM GATES 5 - 16 AT THE MAIN TRML, MAX TAXG SPEED SHALL BE NO MORE THAN 15 MPH.

2.19.6 Site elevation: 246.1 ft

2.19.1 ILS type: DME for runway 06L. Magnetic variation: 2E

2.19.2 ILS identification: GUM

2.19.5 Coordinates: 13-29-38.0674N / 144-48-51.4932E

2.19.6 Site elevation: 346.1 ft

2.19.1 ILS type: Glide Slope for runway 06R. Magnetic variation: 2E

2.19.2 ILS identification: AWD

2.19.5 Coordinates: 13-28-38N / 144-47-15.4E

2.19.6 Site elevation: 236.5 ft

2.19.1 ILS type: Localizer for runway 06R. Magnetic variation: 2E

2.19.2 ILS identification: AWD

2.19.5 Coordinates: 13-29-24.23N / 144-48-46.93E

2.19.6 Site elevation: 310.6 ft

2.19.1 ILS type: DME for runway 06R. Magnetic variation: 2E

2.19.2 ILS identification: AWD

2.19.5 Coordinates: 13-29-21.74N / 144-48-48.12E

2.19.6 Site elevation: 315.9 ft

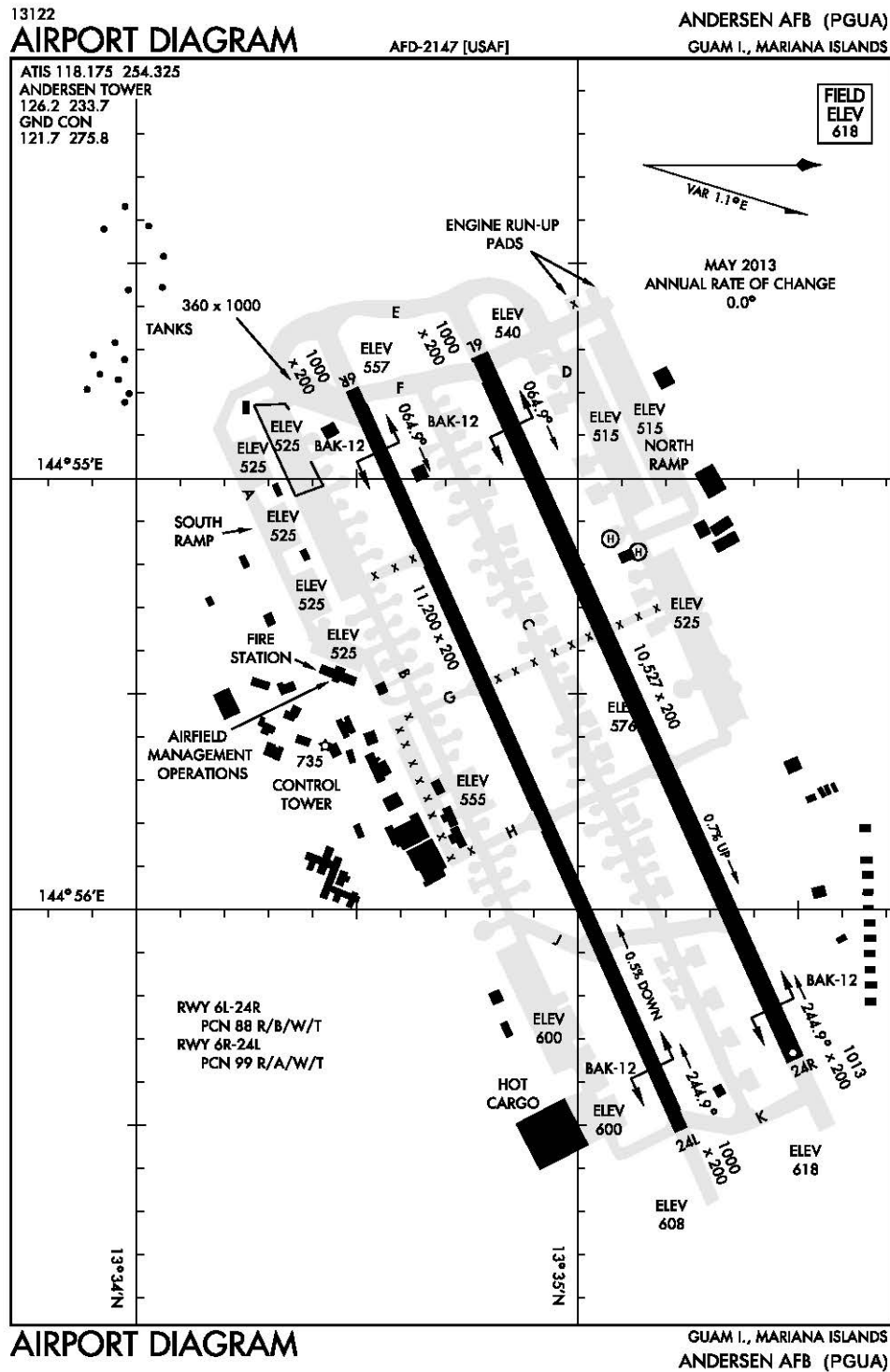
FOR THE B747-8, DRG RWY 24L & 24R OPS AND DUE TO JET BLAST EFCTS AT GATES 14, 16 & 18, THE B747-8 WILL BE TOWED FROM GATE 4 ON TWY K TO TWY J WITH THE ACFT PSND ON TWY J FACING TWD RWY 24R.

DRG TAXG OF THE B747-8 BTN GATES 5 - 16, ALL VEHICLES SHALL YIELD AND RMN CLEAR OF THE VEHICLE TFC PAT AND ARE RSTRD TO A MAX HGT OF 14 FT.

FOR ALL ARRS, THE B747-8 AIRLINE WILL TOW THE ACFT INTO GATES 4 OR 18 FROM TWY K AND AIRLINE TO PRVD WING-WALKERS AS THE ACFT IS BEING TOWED INTO GATES 4 OR 18.

ADG-VI AIRPLANES MAY DEPART ON RWY 6L AND RWY 24R WITH ACFT ON PARL TWY K AS LONG AS NO ADG-VI ACFT OCCUPIES THE PARL TWY BYD 1500 FT OF THE POINT OF TKOF ROLL.

Andersen, Mariana Island, GU
Andersen AFB
ICAO Identifier PGUA



Andersen, Mariana Island, GU
Andersen AFB
ICAO Identifier PGUA

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 13-35-01.983N / 144-55-48.205E
2.2.2 From City: 0 Miles N Of Yigo, GU
2.2.3 Elevation: 618 ft
2.2.5 Magnetic variation: 2E (1980)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: None
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: None

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 06R
2.10.1.b Type of obstacle: Tower-L. Not Lighted or Marked

AD 2.12 Runway physical characteristics

2.12.1 Designation: 06L
2.12.3 Dimensions: 10527 ft x 200 ft
2.12.4 PCN: 111 R/B/W/T
2.12.5 Coordinates: 13-34-49.281N / 144-54-56.32E
2.12.6 Threshold elevation: 539.5 ft
2.12.6 Touchdown zone elevation: 540 ft

2.12.1 Designation: 24R
2.12.3 Dimensions: 10527 ft x 200 ft
2.12.4 PCN: 111 R/B/W/T
2.12.5 Coordinates: 13-35-31.931N / 144-56-33.739E
2.12.6 Threshold elevation: 617.9 ft
2.12.6 Touchdown zone elevation: 618 ft

2.12.1 Designation: 06R
2.12.3 Dimensions: 11200 ft x 200 ft
2.12.4 PCN: 111 R/B/W/T
2.12.5 Coordinates: 13-34-31.17N / 144-54-59.38E
2.12.6 Threshold elevation: 557.1 ft
2.12.6 Touchdown zone elevation: 557.1 ft

2.12.1 Designation: 24L
2.12.3 Dimensions: 11200 ft x 200 ft
2.12.4 PCN: 111 R/B/W/T
2.12.5 Coordinates: 13-35-16.58N / 144-56-43E
2.12.6 Threshold elevation: 607.5 ft
2.12.6 Touchdown zone elevation: 608 ft

AD 2.14 Approach and runway lighting

2.14.1 Designation: 06L
2.14.2 Approach lighting system: SALS
2.14.4 Visual approach slope indicator system: P4L
2.14.1 Designation: 24R
2.14.2 Approach lighting system: ALSF1
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 06R
2.14.2 Approach lighting system: ALSF1
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 24L
2.14.2 Approach lighting system: SALS
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Mod 1300' Length.

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 06R. Magnetic variation: 2E
2.19.2 ILS identification: UAM
2.19.5 Coordinates: 13-34-40.04N / 144-55-07.21E
2.19.6 Site elevation: 544.6 ft

2.19.1 ILS type: Localizer for runway 06R. Magnetic variation: 2E
2.19.2 ILS identification: UAM
2.19.5 Coordinates: 13-35-21.67N / 144-56-54.64E
2.19.6 Site elevation: 606.6 ft

2.19.1 ILS type: Localizer for runway 24L. Magnetic variation: 2E
2.19.2 ILS identification: PMY
2.19.5 Coordinates: 13-34-25.7N / 144-54-46.9E
2.19.6 Site elevation: 568.8 ft

2.19.1 ILS type: Glide Slope for runway 24L. Magnetic variation: 2E
2.19.2 ILS identification: PMY
2.19.5 Coordinates: 13-35-15.55N / 144-56-29.18E
2.19.6 Site elevation: 596.1 ft

2.19.1 ILS type: Localizer for runway 24R. Magnetic variation: 2E

2.19.2 ILS identification: YIG

variation: 2E

2.19.5 Coordinates: 13-34-43.23N / 144-54-42.5E

2.19.2 ILS identification: YIG

2.19.6 Site elevation: 533.6 ft

2.19.5 Coordinates: 13-35-30.26N / 144-56-17.53E

2.19.6 Site elevation: 593.6 ft

2.19.1 ILS type: Glide Slope for runway 24R. Magnetic

General Remarks:

FREQUENT RAIN SHOWERS OF SHORT DURATION, EXPECT WET RWY BRAKEING ACTION.

HAZUS AIR TURB FINAL APCH RWYS 24L/24R. NO VSBY REF AVBL ON NGT TKOF BYD END RWY 6.

A-GEAR BAK-12 RWYS 06L & 06R 30 MIN NTC RQR.

AREA BTN 1000' ROLL BAR AND THU LGT RWY 06R AND 06L UNLGTD. LAST 642' PRIOR TO THU LGT 24R UNLGTD.

MAINT AVBL 0100-0400 WEEKDAY ONLY; CLOSED WEEKEND & HOL.

BASE OPS V366-4188; FAX V366-6217.

TWY B AND C BTN TWY J AND K CLSD DUE TO CONSTRUCTION.

NO ARRESTING GEAR MARKERS LOCATED ON THE LEFT SIDE OF ALL APPROACH END BARRIERS.

RSTD: BA ON BOTH RWYS MAY BE LESS THAN EXP DUE TO RUBBER BUILD-UP; PROBABILITY OF HYDROPLANING EXISTS.

RSTD: PPR NOT RQRD FOR GDSS LOADED MSN. ALL AEROMEDICAL EVAC MSN ARE RQRD TO CTC COMD POST (DSN 366-2961, C671-366-2961) BY ANY MEANS AVAIL 3 HRS PRIOR TO ARR. ALL ACFT RQRD TO MAKE CALL 30 MIN PRIOR TO ARR.

MISC: AFLD MGT HAS NO COMSEC STORAGE AVBL FOR TRAN AIRCREWS. TRANS AIRCREWS CAN STORE COMSEC UP TO TOP-SECRET AT 36 WG CP.

MISC: ALL AIRCREWS TO RON MUST CK INTO AFLD MGT OPS AND PROVIDE POC INFO UPON ARR.

MISC: BASE WX STATION PROVIDES H24 OBSN, LTD WX BRIEF SUPPORT. WX OBSERVERS VIEW OBSTRUCTED BY BLDGS N-SSW. REMOTE BRIEF AVBL H24 FOR USN/USMC FR FWCAD PH AT DSN 315-449-8333/7950.

RSTD: ALL ACFT CTC 36 WG COMD POST 90 MIN OUT AND AT 30 MIN OUT PRIOR TO ARR.

MISC: AIRCRAFT EXCEEDING AFLD WEIGHTS MUST REQUEST WEIGHT BEARING CAPACITY WAIVER WITH 24 HR NOTICE TO AIRFIELD OPS TO PROCESS ANY APPROVALS NEEDED. IF REQUESTS ARE NOT MADE WITHIN 24 HRS EXPECT DELAYS.

SERVICE-A-GEAR: CONTACT CONTROL TOWER 30 MIN PRIOR FOR DEPARTURE END BAK12 CABLE CONFIGURATION. 30 MIN PRIOR NOTICE REQ FOR CHANGE CONFIGURATION. BAK12 HOUSING LCTD 317' FROM RY CENTERLINE, 217' FROM RY EDGE, MAX HEIGHT 8'. NO ARRESTING-GEAR MARKER LCTD ON LEFT SIDE OF ALL APPROACH END BARRIERS.

RSTD: PPR DSN 366-4188/1010.

MISC: ATTN: ALL DRY ICE REQ MUST BE MADE THRU 734TH MS/ATOC DSN 315-366-3125/3137/3162 OR C671-366-3125/3137/3162. REQ MUST BE MADE AT LEAST 24 HR IN ADVANCE FOR ACFT LDG TUE-FRI AND 72 HR IN ADVANCE FOR ACFT LDG SAT-MON. DUR HOL, ADD 2 HR TO COORD TIME.

RSTD: RESTRICTIONS TO FLT OPNS DUR EA BWC. MOD: NO TOUCH AND GO LDG. RSTD LOW APPCH NO LOWER THAN 200' OR AS DETERMINED BY SOF. SEVERE: RSTD LOW APPCH NO LOWER THAN 200' OR AS DETERMINED BY SOF. EMERG LDG AND 36 OG/CC APV DEP ONLY. PHASE I: PHASE I:1 APR – 31 JUL. PHASE II: 1 AUG – 31 MAR.

RSTD 1 OF 2: THERE WILL BE NO OVFT OF MARIANA CROW TERRITORIES BLW 1,000 FT AGL FROM SEP–MAY. OVFT BLW 1,000 FT AGL IS ALLOWED BTN JUNE AND AUG, THE CROW NON-BREEDING SEASON.

MISC: RWY 06L AND 06R UNDERRUNS 1000' AVBL FOR TWY/TKOF. RWY 24R UNDERRUN AVBL 500' FOR TAXI/TKOF.

CAUTION: USE EXTREME CAUTION FOR EXTV UAS OPS IN VCNTY OF ANDERSEN AFB.

NS ABTMT: QUIET HR 1200–2000Z (2200–0600L) DLY. NO AFTERBURNER, OR OVR FLT OF BASE AND LCL POPULATED AREAS. OTHER RESTRICTIONS BY NOTAM.

CAUTION: 47' TACAN ANTENNAE LCTD 1,300 FT NE OF RY 24L & 1,300 FT SE OF RY 24R THLDS.

CAUTION: NSTD DSPLCD THLD MARKINGS FOR RYS 06R, 06L, AND 24R.

SERVICE–FLUID: C-5 NITROGEN SVC CAPABILITY UNAVBL.

CAUTION: FAA SIZE 3 SIGNS LCTD GREATER THAN 60 FT FROM TWY EDGES TO ACCOM B-52 ACFT.

SERVICE–LGT: ARPT BCN 763 FT MSL LCTD 1.4 NM SSW OF AFLD.

MISC: PAVEMENT PRIOR TO RY 06R AND RY 06L THLDS AVBL FOR TKOF RUN WHEN NECESSARY FOR MSN ACCOMPLISHMENT.

CAUTION: POTENTIAL FOR REDUCED BRAKING CAPABILITY AND/OR DIREC CTL EXISTS, PARTICULARLY DURING WET RSC FOR RWY 06L.

MISC: ANDERSEN AFB DOES NOT HAVE CAPABILITY TO STORE REFRIGERATED CARGO.

RSTD: ACFT MUST ADHERE TO PPR ARR +/- 30 MIN. ACFT WITH WINGSPANS GREATER THAN 261' NOT AUTHORIZED.

RSTD: ALL OPR MUST OBTAIN APVL FR GND AND AMOPS PRIOR TO ENG START/RUN.

RSTD: PPR REQ MUST BE MADE 24 HR PRIOR EXC FOR WX–EVAC OPS.

RSTD: PPR NOT ISSUED MORE THAN 14 DAYS PRIOR TO ARR/DEP.

MISC: "NO VHF CAPABILITIES WITH AFLD MGMT."

PRK SPOT C40, C54, C70, N2, AND S74 CLSD.

MISC: NORTHWEST FLD–CLSD.

ANY CREW RQRG ASSISTANCE FR AGENCIES OUTSIDE OF AFLD SUPPORT, CTC WING RECEPTIONS DSN 315-366-3464, C671-366-3464.

AFLD SIGNS ARE NOT FRANGIBLE.

16203

AL-756 (FAA)

HILO INTL (ITO) (PHTO)
HILO, HAWAII

ATIS
126.4
HILO TOWER*
118.1 263.1
GND CON
121.9

D

JANUARY 2015
ANNUAL RATE OF CHANGE
0.0° W

VAR 9.3° E

ELEV 25
ELEV 27
ELEV 33
ELEV 37
FIELD ELEV 38

8
26
20

080.4°
211.2°
260.4°
031.2°

9800 X 150
5600 X 150

CARGO
HANGARS
HIANG
CAP
HANGARS
FIRE STATION
TWR
CAT
TERMINAL

RWY 03-21
PCN 69 F/B/W/T
S-75, D-80, 2D-140, 2D/D1-230, 2D/2D2-410
RWY 08-26
PCN 69 F/B/W/T
S-75, D-250, 2D-350, 2D/D1-450, 2D/2D2-850

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

155°03'W
155°02'W

283

16203

HILO, HAWAII
HILO INTL (ITO) (PHTO)

Hilo, HI
Hilo Intl
ICAO Identifier PHTO

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 19-43-12.9468N / 155-02-54.4925W
2.2.2 From City: 2 Miles E Of Hilo, HI
2.2.3 Elevation: 37.6 ft
2.2.5 Magnetic variation: 11E (1985)
2.2.6 Airport Contact: Steven J. Santiago
ASSISTANT AIRPORT DISTRICT MANAGER
Hilo, HI 96720 (808-961-9300)

AD 2.3 Attendance Schedule

2.3.1 - 2.3.11: ALL Months, ALL Days, 0700-2030 Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: 100LL,A
2.4.5 Hangar space: No
2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 03
2.10.1.b Type of obstacle: Fence (7 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 0 ft B of Centerline

2.10.1.a. Runway designation: 08
2.10.1.b Type of obstacle: Tree (32 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 600 ft R of Centerline

2.10.1.a. Runway designation: 21
2.10.1.b Type of obstacle: Pole (37 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 20 ft L of Centerline

2.10.1.a. Runway designation: 26
2.10.1.b Type of obstacle: Tree (25 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 400 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 08
2.12.2 True Bearing: 90
2.12.3 Dimensions: 9800 ft x 150 ft
2.12.4 PCN: 69 F/B/W/T
2.12.5 Coordinates: 19-43-16.9328N / 155-03-27.9882W
2.12.6 Threshold elevation: 27.3 ft
2.12.6 Touchdown zone elevation: 30.1 ft

2.12.1 Designation: 26
2.12.2 True Bearing: 270
2.12.3 Dimensions: 9800 ft x 150 ft
2.12.4 PCN: 69 F/B/W/T
2.12.5 Coordinates: 19-43-16.9196N / 155-01-45.4051W
2.12.6 Threshold elevation: 37 ft
2.12.6 Touchdown zone elevation: 37.6 ft

2.12.1 Designation: 03
2.12.2 True Bearing: 41
2.12.3 Dimensions: 5600 ft x 150 ft
2.12.4 PCN: 69 F/B/W/T
2.12.5 Coordinates: 19-42-44.9639N / 155-03-44.7803W
2.12.6 Threshold elevation: 33.3 ft
2.12.6 Touchdown zone elevation: 33.7 ft
2.12.7 Slope: 0.1 DOWN

2.12.1 Designation: 21
2.12.2 True Bearing: 221
2.12.3 Dimensions: 5600 ft x 150 ft
2.12.4 PCN: 69 F/B/W/T
2.12.5 Coordinates: 19-43-26.9946N / 155-03-06.4865W
2.12.6 Threshold elevation: 25.4 ft
2.12.6 Touchdown zone elevation: 31.4 ft
2.12.7 Slope: 0.1 UP

AD 2.13 Declared distances

2.13.1 Designation: 08
2.13.2 Takeoff run available: 9800
2.13.3 Takeoff distance available: 9800
2.13.4 Accelerate-stop distance available: 9800
2.13.5 Landing distance available: 9800

2.13.1 Designation: 26
2.13.2 Takeoff run available: 9800
2.13.3 Takeoff distance available: 9800
2.13.4 Accelerate-stop distance available: 9800
2.13.5 Landing distance available: 9800

2.13.1 Designation: 03
2.13.2 Takeoff run available: 5600
2.13.3 Takeoff distance available: 5600
2.13.4 Accelerate-stop distance available: 5600
2.13.5 Landing distance available: 5251

2.13.1 Designation: 21
2.13.2 Takeoff run available: 5251
2.13.3 Takeoff distance available: 5251
2.13.4 Accelerate-stop distance available: 5510
2.13.5 Landing distance available: 5510

AD 2.14 Approach and runway lighting

2.14.1 Designation: 08
2.14.2 Approach lighting system: ODALS
2.14.4 Visual approach slope indicator system: P4R
2.14.10 Remarks: PAPI Rwy 08 Unusable Beyond 3.0 Nm

2.14.1 Designation: 26
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 03
2.14.4 Visual approach slope indicator system: V4L
2.14.10 Remarks: VASI Usable Dist Limited To 4 Nm From Threshold Due Obstruction.

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P DEP/P
2.18.3 Service designation: 119.7 MHz

2.18.1 Service designation: APCH/P DEP/P
2.18.3 Service designation: 269.2 MHz
2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 323 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 120.25 MHz

General Remarks:

RWY 08 PVD 1325' MKD BY CHEVRONS, UNUSBL FOR LNDG/TKOF/OVRN/STY; CANNOT BE USED IN COMPUTING TKOF DATA.

ATCT CTLS ENTRY/EXIT TFC ON TWYS F&E TO EAST TRML RAMP.

181' LGTD SMOKE STACK 1/2 SM SOUTH OF FLD.

PPR FROM ARPT MGR FOR TRANSIENT PARKING.

BE ALERT OCNL BIRD FLOCKS ON ARPT AND IN FLT ACROSS RWY 08/26 AND 03/21.

(A70A) JET FUEL AVBL MON-SAT 0800-1700 CALL (808) 935-6881/6122 OR 961-6601.

2.18.1 Service designation: ATIS
2.18.3 Service designation: 126.4 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 263.1 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.1 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 26. Magnetic variation: 11E

2.19.2 ILS identification: ITO

2.19.5 Coordinates: 19-43-16.933N / 155-03-38.784W

2.19.6 Site elevation: 25.8 ft

2.19.1 ILS type: Glide Slope for runway 26. Magnetic variation: 11E

2.19.2 ILS identification: ITO

2.19.5 Coordinates: 19-43-20.887N / 155-01-58.099W

2.19.6 Site elevation: 32.5 ft

2.19.1 ILS type: DME for runway 26. Magnetic variation: 11E

2.19.2 ILS identification: ITO

2.19.5 Coordinates: 19-43-13.742N / 155-03-39.505W

2.19.6 Site elevation: 39 ft

(E93) NO MKD PAD, HEL OPER FM FBO HANGER AREA.

DIVISION 1.1, 1.2, 1.3 EXPLOSIVES PROHIBITED.

PPR FROM AIRPORT MANAGER FOR TRANSPORTATION OF DIVISION 1.4 EXPLOSIVES AND HAZARDOUS MATERIAL IN OR OUT OF AIRPORT.

NOISE ABATEMENT: AVOID OVERFLIGHT OF NOISE SENSITIVE RESIDENTIAL AREAS N, W AND SW OF AIRPORT.

RY 3/21 CLSD TO TURBINE ACFT 1800-0600.

RY 08/26 SINGLE-BELLY TWIN TANDEM (SBTT) GWT 450,000 LBS.

RY 03/21 SINGLE-BELLY TWIN TANDEM (SBTT) GWT 230,000 LBS.

[illegible]

Honolulu, HI
Honolulu Intl
ICAO Identifier PHNL

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 21-19-04.179N /
157-55-12.9458W
2.2.2 From City: 3 Miles NW Of Honolulu, HI
2.2.3 Elevation: 12.9 ft
2.2.5 Magnetic variation: 11E (1990)
2.2.6 Airport Contact: Roy Sakata
300 RODGERS BLVD. #12
Honolulu, HI 96819
(808-836-6533)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,A1+,B,100
2.4.5 Hangar space: No
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 04R
2.10.1.b Type of obstacle: Tree (20 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 200 ft R of Centerline

2.10.1.a. Runway designation: 22L
2.10.1.b Type of obstacle: Stack (74 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 475 ft R of Centerline

2.10.1.a. Runway designation: 22R
2.10.1.b Type of obstacle: Ant (50 ft above runway end).
Not Lighted or Marked
2.10.1.c Location of obstacle: 20 ft L of Centerline

2.10.1.a. Runway designation: 26R
2.10.1.b Type of obstacle: Road (15 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 500 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 04R
2.12.2 True Bearing: 53
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 57 F/B/X/T
2.12.5 Coordinates: 21-18-50.1032N /
157-55-37.6841W
2.12.6 Threshold elevation: 8 ft
2.12.6 Touchdown zone elevation: 8.6 ft

2.12.1 Designation: 22L
2.12.2 True Bearing: 233
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 57 F/B/X/T
2.12.5 Coordinates: 21-19-43.7628N /
157-54-21.6483W
2.12.6 Threshold elevation: 8.3 ft
2.12.6 Touchdown zone elevation: 8.6 ft

2.12.1 Designation: 08L
2.12.2 True Bearing: 89
2.12.3 Dimensions: 12312 ft x 150 ft
2.12.4 PCN: 79 R/B/W/T
2.12.5 Coordinates: 21-19-30.8825N /
157-56-35.6551W
2.12.6 Threshold elevation: 11.6 ft
2.12.6 Touchdown zone elevation: 12.9 ft

2.12.1 Designation: 26R
2.12.2 True Bearing: 270
2.12.3 Dimensions: 12312 ft x 150 ft
2.12.4 PCN: 79 R/B/W/T
2.12.5 Coordinates: 21-19-30.8832N /
157-54-25.4307W
2.12.6 Threshold elevation: 8.4 ft
2.12.6 Touchdown zone elevation: 8.6 ft

2.12.1 Designation: 08R
2.12.2 True Bearing: 90
2.12.3 Dimensions: 12000 ft x 200 ft
2.12.4 PCN: 98 F/B/X/T
2.12.5 Coordinates: 21-18-24.4935N /
157-56-45.059W
2.12.6 Threshold elevation: 10 ft
2.12.6 Touchdown zone elevation: 10 ft

2.12.1 Designation: 26L
2.12.2 True Bearing: 270
2.12.3 Dimensions: 12000 ft x 200 ft
2.12.4 PCN: 98 F/B/X/T
2.12.5 Coordinates: 21-18-24.4868N / 157-54-38.15W

2.12.6 Threshold elevation: 10 ft
2.12.6 Touchdown zone elevation: 10 ft

2.12.1 Designation: 04W
2.12.2 True Bearing: 51
2.12.3 Dimensions: 3000 ft x 150 ft
2.12.5 Coordinates: 21-18-53.09N / 157-54-46.44W
2.12.6 Threshold elevation: 0 ft

2.12.1 Designation: 22W
2.12.2 True Bearing: 231
2.12.3 Dimensions: 3000 ft x 150 ft
2.12.5 Coordinates: 21-19-11.8N / 157-54-21.78W
2.12.6 Threshold elevation: 0 ft

2.12.1 Designation: 08W
2.12.2 True Bearing: 91
2.12.3 Dimensions: 5000 ft x 300 ft
2.12.5 Coordinates: 21-18-40.85N / 157-55-00W
2.12.6 Threshold elevation: 0 ft

2.12.1 Designation: 26W
2.12.2 True Bearing: 271
2.12.3 Dimensions: 5000 ft x 300 ft
2.12.5 Coordinates: 21-18-39.98N / 157-54-07.13W
2.12.6 Threshold elevation: 0 ft

2.12.1 Designation: 04L
2.12.2 True Bearing: 53
2.12.3 Dimensions: 6952 ft x 150 ft
2.12.4 PCN: 31 F/B/X/T
2.12.5 Coordinates: 21-19-05.9941N /
157-55-23.9494W
2.12.6 Threshold elevation: 9.8 ft
2.12.6 Touchdown zone elevation: 10.3 ft

2.12.1 Designation: 22R
2.12.2 True Bearing: 233
2.12.3 Dimensions: 6952 ft x 150 ft
2.12.4 PCN: 31 F/B/X/T
2.12.5 Coordinates: 21-19-47.4515N /
157-54-25.2248W
2.12.6 Threshold elevation: 7.4 ft
2.12.6 Touchdown zone elevation: 9.7 ft

AD 2.13 Declared distances

2.13.1 Designation: 04R
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 8950
2.13.5 Landing distance available: 8950

2.13.1 Designation: 22L
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 8937
2.13.5 Landing distance available: 8937

2.13.1 Designation: 08L
2.13.2 Takeoff run available: 12300
2.13.3 Takeoff distance available: 12300
2.13.4 Accelerate-stop distance available: 12300
2.13.5 Landing distance available: 12300

2.13.1 Designation: 26R
2.13.2 Takeoff run available: 12300
2.13.3 Takeoff distance available: 12300
2.13.4 Accelerate-stop distance available: 12300
2.13.5 Landing distance available: 12300

2.13.1 Designation: 08R
2.13.2 Takeoff run available: 12000
2.13.3 Takeoff distance available: 12000
2.13.4 Accelerate-stop distance available: 12000
2.13.5 Landing distance available: 12000

2.13.1 Designation: 26L
2.13.2 Takeoff run available: 12000
2.13.3 Takeoff distance available: 12000
2.13.4 Accelerate-stop distance available: 12000
2.13.5 Landing distance available: 12000

2.13.1 Designation: 04L
2.13.2 Takeoff run available: 6952
2.13.3 Takeoff distance available: 6952
2.13.4 Accelerate-stop distance available: 6952
2.13.5 Landing distance available: 6952

2.13.1 Designation: 22R
2.13.2 Takeoff run available: 6952
2.13.3 Takeoff distance available: 6952
2.13.4 Accelerate-stop distance available: 6952
2.13.5 Landing distance available: 6952

AD 2.14 Approach and runway lighting

2.14.1 Designation: 04R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 22L
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Rwy 22L PAPI Unusable Beyond 2 Nm.

2.14.1 Designation: 08L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 26R
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Rwy 26R PAPI Unusable Beyond 1.5 Nm From Thr

2.14.1 Designation: 08R
2.14.4 Visual approach slope indicator system: V6L
2.14.10 Remarks: Rwy 08R VASI Upper GA 3.25 Degrees Threshold Crossing Height 96 Ft; Lower GA 3.00 Degrees Threshold Crossing Height 52 Ft.

2.14.1 Designation: 26L
2.14.2 Approach lighting system: MALSF
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Rwy 26L PAPI Aligned 05 Degrees L Of Rwy Centerline . Rwy 26L PAPI Unusable Beyond 5 Degrees R Of Rwy Centerline .

2.14.1 Designation: 04L
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities
2.18.1 Service designation: ADZY (HONOLULU RAMP ADZY)
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: ADZY (HICKAM RAMP ADZY)
2.18.3 Service designation: 133.6 MHz

2.18.1 Service designation: ADZY (HICKAM RAMP ADZY)
2.18.3 Service designation: 254.4 MHz

2.18.1 Service designation: ANG OPS
2.18.3 Service designation: 293.7 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 317.6 MHz

2.18.1 Service designation: APCH/P DEP/P IC (WEST)
2.18.3 Service designation: 269 MHz

2.18.1 Service designation: APCH/P DEP/P IC (WEST)
2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: AS ASSIGNED

2.18.3 Service designation: 285.4 MHz

2.18.1 Service designation: AS ASSIGNED
2.18.3 Service designation: 120.9 MHz

2.18.1 Service designation: AS ASSIGNED
2.18.3 Service designation: 338.2 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 121.4 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 281.4 MHz

2.18.1 Service designation: CLASS B (EAST)
2.18.3 Service designation: 317.6 MHz

2.18.1 Service designation: CLASS B (ARR E/NW DEP NW)
2.18.3 Service designation: 119.1 MHz

2.18.1 Service designation: CLASS B (ARR E/NW DEP NW)
2.18.3 Service designation: 239.05 MHz

2.18.1 Service designation: CLASS B (EAST)
2.18.3 Service designation: 124.8 MHz

2.18.1 Service designation: COMD POST
2.18.3 Service designation: 141.8 MHz

2.18.1 Service designation: COMD POST
2.18.3 Service designation: 292.5 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 127.9 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 251.15 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: DEP/P (EAST)
2.18.3 Service designation: 124.8 MHz

2.18.1 Service designation: DEP/P (EAST)
2.18.3 Service designation: 317.6 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: KEAHI DP
2.18.3 Service designation: 124.8 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.1 MHz

2.18.1 Service designation: LCL/P (RY 8R/26L)
2.18.3 Service designation: 273.575 MHz

2.18.1 Service designation: LCL/P (RY 8R/26L)
2.18.3 Service designation: 123.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: MOLOKAI DP
2.18.3 Service designation: 317.6 MHz

2.18.1 Service designation: MOLOKAI DP
2.18.3 Service designation: 124.8 MHz

2.18.1 Service designation: OPS (SAC OPS)
2.18.3 Service designation: 311 MHz

2.18.1 Service designation: OPS (SHAKA OPS)
2.18.3 Service designation: 349.4 MHz

2.18.1 Service designation: OPS (SHAKA OPS)
2.18.3 Service designation: 125.3 MHz

2.18.1 Service designation: PALAY DP
2.18.3 Service designation: 317.6 MHz

2.18.1 Service designation: PALAY DP
2.18.3 Service designation: 124.8 MHz

2.18.1 Service designation: PTD
2.18.3 Service designation: 372.2 MHz

2.18.1 Service designation: PTD (HICKAM)
2.18.3 Service designation: 133.6 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 04R. Magnetic variation: 11E
2.19.2 ILS identification: IUM
2.19.5 Coordinates: 21-19-49.82N / 157-54-13.05W
2.19.6 Site elevation: 5.3 ft

2.19.1 ILS type: DME for runway 04R. Magnetic variation: 11E
2.19.2 ILS identification: IUM
2.19.5 Coordinates: 21-19-47.8614N / 157-54-11.0785W
2.19.6 Site elevation: 20 ft

2.19.1 ILS type: Glide Slope for runway 04R. Magnetic variation: 11E
2.19.2 ILS identification: IUM
2.19.5 Coordinates: 21-18-53.99N / 157-55-26.9W
2.19.6 Site elevation: 5.9 ft

2.19.1 ILS type: Outer Marker for runway 08L. Magnetic variation: 11E
2.19.2 ILS identification: HNL
2.19.5 Coordinates: 21-19-29.7N / 158-02-55.9W
2.19.6 Site elevation: 42 ft

2.19.1 ILS type: Localizer for runway 08L. Magnetic variation: 11E
2.19.2 ILS identification: HNL
2.19.5 Coordinates: 21-19-30.8778N / 157-54-14.7503W
2.19.6 Site elevation: 5.6 ft

2.19.1 ILS type: DME for runway 08L. Magnetic variation: 11E
2.19.2 ILS identification: HNL
2.19.5 Coordinates: 21-19-27.8772N / 157-54-17.1739W
2.19.6 Site elevation: 20 ft

2.19.1 ILS type: Glide Slope for runway 08L. Magnetic variation: 11E
2.19.2 ILS identification: HNL
2.19.5 Coordinates: 21-19-26.6745N / 157-56-24.533W
2.19.6 Site elevation: 6.7 ft

2.19.1 ILS type: Localizer for runway 26L. Magnetic variation: 11E
2.19.2 ILS identification: EPC
2.19.5 Coordinates: 21-19-35.0651N /

157-54-28.2922W
2.19.6 Site elevation: 6.7 ft

tion: 11E
2.19.2 ILS identification: EPC
2.19.5 Coordinates: 21-19-36.957N / 157-54-25.903W
2.19.6 Site elevation: 21 ft

2.19.1 ILS type: DME for runway 26L. Magnetic varia-

General Remarks:

RMN AT LEAST 1 MILE OFF SHORE OF WAIKIKI DIAMOND HEAD KOKO HEAD & EWA BEACH. ARR RWY 08L; FLY ILS APCH PROC OR A CLOSE-IN BASE LEG RMNG OVER CNTR OF PEARL HARBOR CHNL. ARR 26L/R; RNM AT TFC PAT ALTS AS LONG AS PSBL BFR BGNG DSCNT FOR LNDG.

RWY 04R/22L DC10 450000+; L-1011 450000+; RWY 04L/22R DC10 450000; L-1011 450000+; RWY 08L/26R DC10 400000; L-1011 410000; RWY 08R/26L DC10 415000; L-1011 400000.

PPR FM AMGR FOR TRANSPORATION OF CLASS A OR B EXPLOS IN AND/OR OUT OF HNL.

DUE TO NON-VISIBILITY TWR UNABLE TO DETERMINE IF THE FLWG AREAS ARE CLEAR OF OBSTRUCTIONS AND/OR TFC: PORTIONS OF TWY RB BTN TWY B & RY 08R; PORTIONS OF INTER-ISLAND ACFT PARKING RAMP.

DUE TO LOCATION OF ATCT, CONTROLLERS UNABLE TO DETERMINE WHETHER ACFT ARE ON CORRECT FINAL APCH TO RYS 04L-04R AND 22L-22R.

TWYS G ADG IV AND BELOW POWER IN W/PPR.

RWYS CLOSED EVERY MONTH AS FOLLOWS: RWY 04R-22L 1730-2030Z FIRST TUE; RWY 08R-26L 1700-1900Z SECOND TUE; RWY 08L-26R 1730-2030Z THIRD TUE.

CAUTION: DURING PERIODS OF REPEATED PRECIPITATION ANTICIPATE WET RY CONDITONS, IF CURRENT CONDITIONS RQR CONFIRMATION CTC HONOLULU TWR ON INITIAL CONTACT.

CAUTION: RECREATIONAL BOATING ACTIVITIES ON AND INVOF WATERWAYS.

MILITARY: ALL ACFT INBD TO HICKAM SHOULD ADDRESS FLT PLAN TO PHIKYXYX.

MILITARY: ALL MIL ACFT WITH VIP CODE 7 OR ABV CTC 15WG COMMAND POST OR RELAY THRU HF/SSB AWY 1 HR OUT TO CFM BLOCKTIME.

TFC PAT OVHD ALT 2000 FT, RESTRICTED TO HIANG AND SENTRY ALOHA ACFT.

MILITARY: ALL MIL ACFT RQR CSTMS/AG/IMG INSPECTION MUST CTC 15WG COMMAND POST OR IF AMC CTC HICKAM AMCC, NLT 3 HRS PRIOR TO ARR WITH DEPARTURE LOCATION, EST BLOCK TIME, NR OF AIRCREW, CIV/MIL PAX, FOREIGN NATIONALS, AND DV CODES.*

RYS 04W/22W AND 08W/26W RECREATIONAL BOATING ACTIVITIES

ON AND INVOF WATERWAYS.

BIRD STRIKE HAZARD ALL RUNWAYS.

MILITARY A-GEAR: HOOK MB100(B) LCTD 200 FT FM THLD RY 26R.

MILITARY: TO MINIMIZE FOD POTENTIAL, ALL AIRCRAFT SHOULD USE MINIMUM THRUST, SPCLY OUTBOARD ENGINES, WHEN TAXIING PAST THE F-22 ALERT FAC ON TWY T.

MILITARY CAUTION: FOD HAZARD EXISTS ON ALL MOVEMENT AREAS E OF TWY S. FIGHTER AIRCRAFT EXERCISE EXTREME CTN WHEN TAXIING.

MILITARY CAUTION: A FOD HAZARD EXISTS ON ALL TAXIWAYS AND RUNWAYS BUT ESPECIALLY ON RUNWAY 4L/22R AND TAXIWAYS NORTH OF RUNWAY 8L/26R.

MILITARY CAUTION: NO FIGHTER TRANSIENT SUPPORT AVAILABLE IN ACCORDANCE WITH ACC LSET FLASH SAFETY 06-02. TRANSIENT FIGHTER UNITS SHOULD PROVIDE THEIR OWN MAINTENANCE SUPPORT.

MILITARY RSTD: UPON ARRIVAL, CREWS WILL PROCEED DIRECTLY TO COMMAND POST (BLDG 2050) AND COMPLETE AN OUTBOUND SETUP SHEET TO FACILITATE DEPARTURE REQUIREMENTS.

MILITARY/COMMUNICATIONS: BEDTIME (ALL CORONET W TANKERS USE 311.0 FOR TANKER-FTR INTER-PLANE ON LAUNCH DAY. AFT DUTY HR DSN 448-8888 613AOC/AMD, FLT MGMT).

HICKAM BASE WX STN OPEN MON-FRI 1400-0800Z, FLEXING TO H24 FOR SIG WX EVENTS; FOR BRIEF SUPPORT AFTER DUTY HR/WEEKENDS/HOL CTC STANDBY FONE AT 808-658-9961.

MILITARY MISC (2 OF 2 CONT'D): LTD WX BRIEF SUPPORT.REMOTE FLT WX BRIEFINGS CTC 17TH WX SQ H24, DSN 315-449-7950/8333, FAX DSN 315-449-8336; 2 HR PN RQR FOR TIMELY BRIEF.OFFICIAL OBSN TAKEN BY FAA. COOPERATIVE WX WATCH PROCEDURES DO NOT EXIST BTW WX AND ATC.

MILITARY MISC: NO COMSEC MATERIAL AVBL THRU HICKAM AIRFIELD OPS.

MILITARY REMARKS: SEE FLIP AP/3 SUPPLEMENTARY APRT INFO, RTE AND AREA RSTD, AND OAKLAND FIR FLT HAZ.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

MILITARY MISC: AFLD OPS DSN 449-0046/0048 FAX DSN 449-7624.

MILITARY RSTD: TWR APVL REQUIRED TO USE TWY KILO FROM RY 4R. TWY RA HOLD SHORT APCH ZONE RWY 04L/R AT HOLD LINE. TWY P CLSD TO ACFT OVER 12,500 LB.

MILITARY SERVICE-A-GEAR: RWY 4R/22L AND 8R/26L SFC GROOVED WITHIN 10 FT OF A-G SYSTEM. POTENTIAL FOR FTR ACFT TAIL HOOK SKIP EXISTS.

MILITARY MISC 1 OF 2: DUE TO SENSITIVITIES OF CITIZENS, FTR ACFT DEP ONLY AUTHORIZED FR 1700-0700Z MON-SAT, AND 1800-0700Z SUN AND HOL. ALL REQ FOR WAIVERS WILL BE SENT TO THE 15/OG/CC OR 154 OG/CC FOR HIANG AIRCRAFT AT LEAST 5 WORKING DAYS IN ADVANCE.

MILITARY MISC 2 OF 2: WAIVERS WILL BE GRANTED ON EXTREME NEC. IF SHORT NOTICE MSN ESSENTIAL WAIVERS ARE NEC, CTC 15OG/CC BY FONE THRU 15 WG COMD POST(15 WG/CP) OR 154 OG/CC FOR HIANG AIRCRAFT. 15 WG COMMAND POST WILL PASS APVL TO HICKAM FLT SVC AND HICKAM RAMP ADZY.

MILITARY TRAN ALERT: 15 WG CAN PROVIDE EQPT BUT CREWS MUST PROVIDE OWN PERS WHEN NEEDED.

MILITARY RSTD: JBPH-H IS PPR TO ALL NON-TFWC MSN, AMC TRNG MSN AND KC-135 8 UN & 8 EN MSN CALL 735TH MOC AT DSN (315) 499-6970 FOR PPR. ALL AMC PPR WILL BE COORD MON-FRI 1700-0400Z ONLY. ALL NON-AMC ACFT SUCH AS FOREIGN, SISTER SVC, TRAN ACFT OR KC-135 AND, QDN, QEN, PEN, KEN, CJZ, DV1, DV7, DC5, AND C-130 MSN MUST CTC 15 OSS/OSA (AMOPS) AT DSN (315) 449-0046 FOR PPR. ALL PPR WILL BE APVD NO EARLIER THAN 72 HR BUT NO LATER THAN 24 HR PRIOR.

MILITARY RSTD: ALL TRAN ACFT NOT ON AN AMC/TWCF MSN AND HOME STN ACFT TERMINATING AT JBPH-H, WILL PROVIDE A 3 HR OUT CALL (COMM 808-448-6900) AS WELL AS A 20-30 MIN OUT CALL ON

292.5 TO THE 15 WG/CP (KOA CONTROL).

MILITARY RSTD: MIL ACFT OPR DUR BIRD WATCH COND MODERATE (INITIAL TKOF OR FULL STOP LDG ONLY, NO MULTIPLE IFR/VFR APCH) AND SEVERE (TKOF AND LDG PROH WO 15 OG/CC APVL OR 154 OG/CC APVL FOR HIANG ACFT) CTC HIK RAMP, PTD, 15 WG COMD POST, 735 AMC COMD POST, 154 WG COMD POST FOR CURRENT COND.

ALL JET ACFT CTC RAMP CONTROL PRIOR TO ENGINE START AT GATE OR HARD STAND.

WIDE BODY AND 4 ENGINE TBJTS LDG ON RY 04R ROLL TO END OF RY, NO LEFT TURN AT TWY K WO APVL.

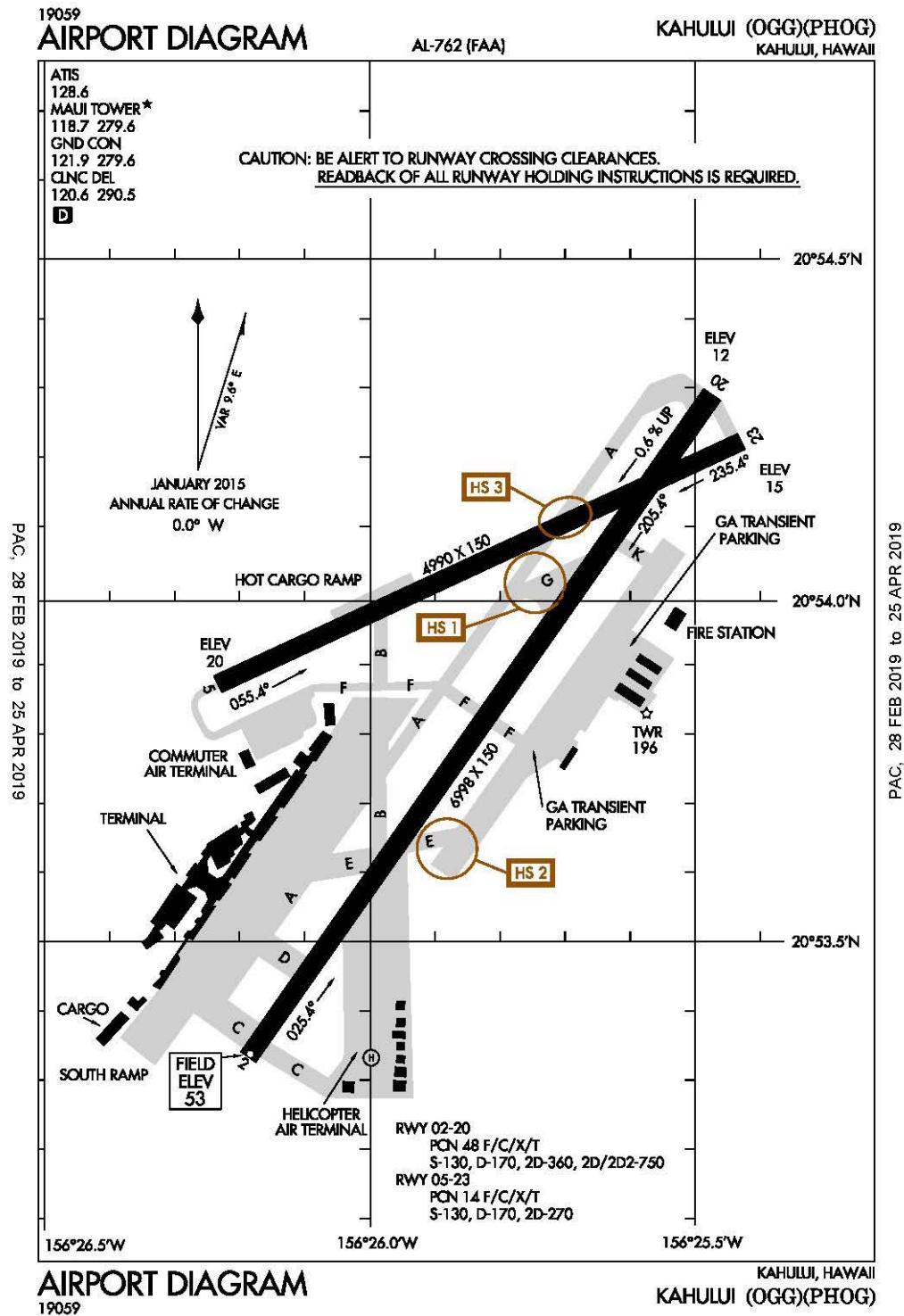
APRON TAXILANE 2 EAST END 360 FT CLSD.

APRON TAXILANE 6 BTWN TWY C AND SOUTH RAMP CLSD EXCEPT GA/FIXED WING LOADING/UNLOADING ONLY.

MILITARY SERVICE-FUEL: A++ (MIL; AVBL H24).

TWY G ADG IV AND BLO PWR IN W/PPR.

Kahului, Hawaii
Kahului
ICAO Identifier PHOG



Kahului, HI
Kahului
ICAO Identifier PHOG

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 20-53-55.151N / 156-25-49.636W
2.2.2 From City: 3 Miles E Of Kahului, HI
2.2.3 Elevation: 53.3 ft
2.2.5 Magnetic variation: 11E (1990)
2.2.6 Airport Contact: Marvin Moniz
1 KAHULUI AIRPORT ROAD, UNIT 5
Kahului, HI 96732 (808-872-3808)

AD 2.3 Attendance Schedule

2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100
2.4.5 Hangar space: No
2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
D certified on 5/1/1973
2.6.4 Remarks: Index D Airport; Hwvr, Can Accommodate Index E As Required. Call Airport Manager Prior To Arrival

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 02
2.10.1.b Type of obstacle: Stack (198 ft above runway end). Lighted
2.10.1.c Location of obstacle: 500 ft L of Centerline

2.10.1.a. Runway designation: 05
2.10.1.b Type of obstacle: Trees (31 ft above runway end). Not Lighted or Marked

2.10.1.a. Runway designation: 20
2.10.1.b Type of obstacle: Bldg (5 ft above runway end). Marked
2.10.1.c Location of obstacle: 250 ft L of Centerline

2.10.1.a. Runway designation: 23
2.10.1.b Type of obstacle: Pole (35 ft above runway end). Not Lighted or Marked

AD 2.12 Runway physical characteristics

2.12.1 Designation: 02
2.12.2 True Bearing: 35
2.12.3 Dimensions: 6998 ft x 150 ft
2.12.4 PCN: 48 F/C/X/T
2.12.5 Coordinates: 20-53-20.9052N / 156-26-10.7511W
2.12.6 Threshold elevation: 53.2 ft
2.12.6 Touchdown zone elevation: 53.3 ft

2.12.1 Designation: 20
2.12.2 True Bearing: 215
2.12.3 Dimensions: 6998 ft x 150 ft
2.12.4 PCN: 48 F/C/X/T
2.12.5 Coordinates: 20-54-17.7394N / 156-25-28.4459W
2.12.6 Threshold elevation: 12.2 ft
2.12.6 Touchdown zone elevation: 25 ft

2.12.1 Designation: 05
2.12.2 True Bearing: 65
2.12.3 Dimensions: 4990 ft x 150 ft
2.12.4 PCN: 14 F/C/X/T
2.12.5 Coordinates: 20-53-52.889N / 156-26-13.5412W
2.12.6 Threshold elevation: 20.1 ft
2.12.6 Touchdown zone elevation: 20.1 ft

2.12.1 Designation: 23
2.12.2 True Bearing: 245
2.12.3 Dimensions: 4990 ft x 150 ft
2.12.4 PCN: 14 F/C/X/T
2.12.5 Coordinates: 20-54-13.7618N / 156-25-25.8339W
2.12.6 Threshold elevation: 15.4 ft
2.12.6 Touchdown zone elevation: 16.8 ft

2.12.1 Designation: H1
2.12.3 Dimensions: 125 ft x 125 ft

AD 2.13 Declared distances

2.13.1 Designation: 02
2.13.2 Takeoff run available: 6995
2.13.3 Takeoff distance available: 6995
2.13.4 Accelerate-stop distance available: 6995
2.13.5 Landing distance available: 6995

2.13.1 Designation: 20
2.13.2 Takeoff run available: 6995
2.13.3 Takeoff distance available: 6995
2.13.4 Accelerate-stop distance available: 6995

2.13.5 Landing distance available: 6995

2.13.1 Designation: 05

2.13.2 Takeoff run available: 4990

2.13.3 Takeoff distance available: 4990

2.13.4 Accelerate-stop distance available: 4990

2.13.5 Landing distance available: 4990

2.13.1 Designation: 23

2.13.2 Takeoff run available: 4990

2.13.3 Takeoff distance available: 4990

2.13.4 Accelerate-stop distance available: 4990

2.13.5 Landing distance available: 4990

AD 2.14 Approach and runway lighting

2.14.1 Designation: 02

2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 20

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 05

2.14.4 Visual approach slope indicator system: P4L

2.14.10 Remarks: PAPI Unusable Beyond 4 Nm From Threshold Due To Rapidly Rising Terrain.

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P DEP/P IC (SOUTH)

2.18.3 Service designation: 225.4 MHz

2.18.1 Service designation: APCH/P DEP/P IC (SOUTH)

2.18.3 Service designation: 119.5 MHz

2.18.1 Service designation: APCH/P DEP/P IC (NORTH)

2.18.3 Service designation: 120.2 MHz

2.18.1 Service designation: APCH/P DEP/P IC (NORTH)

2.18.3 Service designation: 322.4 MHz

2.18.1 Service designation: ATIS

2.18.3 Service designation: 128.6 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P

2.18.3 Service designation: 120.6 MHz

2.18.1 Service designation: CD/P

2.18.3 Service designation: 290.5 MHz

2.18.1 Service designation: CLASS C (SOUTH)

2.18.3 Service designation: 225.4 MHz

2.18.1 Service designation: CLASS C (NORTH)

2.18.3 Service designation: 322.4 MHz

2.18.1 Service designation: CLASS C (NORTH)

2.18.3 Service designation: 120.2 MHz

2.18.1 Service designation: CLASS C (SOUTH)

2.18.3 Service designation: 119.5 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 279.6 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 118.7 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 279.6 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 02. Magnetic variation: 11E

2.19.2 ILS identification: OGG

2.19.5 Coordinates: 20-54-25.9158N / 156-25-22.362W

2.19.6 Site elevation: 8.3 ft

2.19.1 ILS type: DME for runway 02. Magnetic variation: 11E

2.19.2 ILS identification: OGG

2.19.5 Coordinates: 20-54-27.3738N / 156-25-23.8089W

2.19.6 Site elevation: 5.4 ft

2.19.1 ILS type: Glide Slope for runway 02. Magnetic variation: 11E

2.19.2 ILS identification: OGG

2.19.5 Coordinates: 20-53-29.55N / 156-25-59.225W

2.19.6 Site elevation: 47.7 ft

General Remarks:

570' LGTD TWR APRX 3 MI. W.

24 HRS PPR FOR DIVISION 1.1,1.2,1.3 EXPLOSIVES AND 4 HRS PPR FOR OTHER HAZARDOUS CARGO IN/OUT OF ARPT; CTC (808) 872-3830 0745-1630 OTHER TIMES (808) 872-3888.

RAMP AREA E SIDE RY 02 UNDER STATE AUTHORITY. FAA NOT RESPONSIBLE FOR DIRECTION & CTL GND TFC IN AREA.

MIGRATORY BIRD ACTIVITY BLO 1500 FT WI 5 NM RADIUS OF ARPT DURG AUG-MAY.

MILITARY HELICOPTER OPS RESTRICTED TO THE SW CORNER OF HOT CARGO APRON (HAZMAT) N OF RWY 05-23.

COMMUTER TERMINAL RAMP RESTRICTED TO ACFT 140000 LBS OR LESS.

AREA E OF APCH END RY 02 DESIGNATED AS HELICOPTER OPER AREA. NO FIXED WING ACFT MAY OPER ON HELIPAD DURG OPNL HRS SR-SS.

PPR FOR FIXED WING ACFT OPNS ON HELIPAD DURG NON-OPERATIONAL HRS CALL (808) 872-3880 5:15A-10:00P.

ACCESS TO HELIPAD FM TWY C ONLY.

DUE TO NONVISIBILITY ATCT UNABLE TO DETERMINE IF FLWG AREA IS CLEAR OF OBSTNS AND/OR TFC: PORTION OF TWY F BTN THE COMMUTER AIR TERMINAL & APCH END RY 05.

DUE TO NONVISIBILITY ATCT UNABLE TO PROVIDE ATC SVC BTN ACFT & GROUND VEHICLES ON THE COMMUTER AIR TERMINAL S OF TWY F AND THE HELICOPTER AIR TERMINAL E OF APCH END RY 02.

TSNT PARKING LCTD ON NE SECTION OF E RAMP.

RY 02/20 SINGLE-BELLY TWIN TANDEM (SBTT) GWT 460,000 LBS.

ACFT OVR 30,000 LB LDG ON RY 02/20 UNA TO TURN OFF ONTO RY 05/23 DUE TO PAVEMENT COND.

Chicago, IL
Chicago O'Hare Intl
ICAO Identifier KORD

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 41-58-28.279N / 87-54-23.75W
2.2.2 From City: 14 Miles NW Of Chicago, IL
2.2.3 Elevation: 680 ft
2.2.5 Magnetic variation: 3W (2010)
2.2.6 Airport Contact: Ginger Evans
P.O. BOX 66142, 10510 WEST ZEMKE RO
Chicago, IL 60666 (773-686-8060)
2.2.8 Remarks: And Du Page Co.

AD 2.3 Attendance Schedule

2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: No
2.4.2 Fuel types: 100LL,A
2.4.5 Hangar space: No
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 04L
2.10.1.b Type of obstacle: Pole (29 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 411 ft L of Centerline

2.10.1.a. Runway designation: 09L
2.10.1.b Type of obstacle: Ant (743 ft above runway end). Marked and Lighted
2.10.1.c Location of obstacle: 4443 ft R of Centerline

2.10.1.a. Runway designation: 10C
2.10.1.b Type of obstacle: Pole (48 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 759 ft L of Centerline

2.10.1.a. Runway designation: 10L
2.10.1.b Type of obstacle: Tree (68 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 770 ft L of Centerline

2.10.1.a. Runway designation: 10R
2.10.1.b Type of obstacle: Tree (78 ft above runway

end). Lighted
2.10.1.c Location of obstacle: 817 ft R of Centerline

2.10.1.a. Runway designation: 22L
2.10.1.b Type of obstacle: Ant (109 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 545 ft L of Centerline

2.10.1.a. Runway designation: 27L
2.10.1.b Type of obstacle: Rr (34 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 44 ft R of Centerline

2.10.1.a. Runway designation: 27R
2.10.1.b Type of obstacle: Ant (87 ft above runway end). Marked and Lighted
2.10.1.c Location of obstacle: 118 ft L of Centerline

2.10.1.a. Runway designation: 28R
2.10.1.b Type of obstacle: Sign (56 ft above runway end). Lighted
2.10.1.c Location of obstacle: 723 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 10R
2.12.2 True Bearing: 90
2.12.3 Dimensions: 7500 ft x 150 ft
2.12.4 PCN: 104 R/B/W/U
2.12.5 Coordinates: 41-57-25.924N / 87-55-40.3004W
2.12.6 Threshold elevation: 680 ft
2.12.6 Touchdown zone elevation: 680 ft
2.12.7 Slope: 0.3 DOWN

2.12.1 Designation: 28L
2.12.2 True Bearing: 270
2.12.3 Dimensions: 7500 ft x 150 ft
2.12.4 PCN: 104 R/B/W/U
2.12.5 Coordinates: 41-57-26.0865N / 87-54-01.0355W
2.12.6 Threshold elevation: 658 ft
2.12.6 Touchdown zone elevation: 666.8 ft
2.12.7 Slope: 0.3 UP

2.12.1 Designation: 09R
2.12.2 True Bearing: 90
2.12.3 Dimensions: 7967 ft x 150 ft
2.12.4 PCN: 108 R/C/W/U
2.12.5 Coordinates: 41-59-02.0302N / 87-55-06.0672W
2.12.6 Threshold elevation: 659.8 ft
2.12.6 Touchdown zone elevation: 659.8 ft

2.12.1 Designation: 27L
2.12.2 True Bearing: 270
2.12.3 Dimensions: 7967 ft x 150 ft
2.12.4 PCN: 108 R/C/W/U
2.12.5 Coordinates: 41-59-02.0405N /
87-53-20.5834W
2.12.6 Threshold elevation: 650.1 ft
2.12.6 Touchdown zone elevation: 653.6 ft

2.12.1 Designation: 04L
2.12.2 True Bearing: 39
2.12.3 Dimensions: 7500 ft x 150 ft
2.12.4 PCN: 108 R/C/W/U
2.12.5 Coordinates: 41-58-53.9601N /
87-54-50.1039W
2.12.6 Threshold elevation: 655.7 ft
2.12.6 Touchdown zone elevation: 658.2 ft

2.12.1 Designation: 22R
2.12.2 True Bearing: 219
2.12.3 Dimensions: 7500 ft x 150 ft
2.12.4 PCN: 108 R/C/W/U
2.12.5 Coordinates: 41-59-51.1336N /
87-53-46.9364W
2.12.6 Threshold elevation: 647.7 ft
2.12.6 Touchdown zone elevation: 651.5 ft

2.12.1 Designation: 04R
2.12.2 True Bearing: 42
2.12.3 Dimensions: 8075 ft x 150 ft
2.12.4 PCN: 108 R/C/W/U
2.12.5 Coordinates: 41-57-11.9778N /
87-53-57.9066W
2.12.6 Threshold elevation: 661.4 ft
2.12.6 Touchdown zone elevation: 661.4 ft

2.12.1 Designation: 22L
2.12.2 True Bearing: 222
2.12.3 Dimensions: 8075 ft x 150 ft
2.12.4 PCN: 108 R/C/W/U
2.12.5 Coordinates: 41-58-11.718N / 87-52-47.0759W
2.12.6 Threshold elevation: 654.4 ft
2.12.6 Touchdown zone elevation: 654.4 ft

2.12.1 Designation: H1
2.12.3 Dimensions: 200 ft x 100 ft

2.12.1 Designation: 09L
2.12.2 True Bearing: 90
2.12.3 Dimensions: 7500 ft x 150 ft
2.12.4 PCN: 91 R/B/W/T
2.12.5 Coordinates: 42-00-10.1954N /

87-55-36.0339W
2.12.6 Threshold elevation: 668 ft
2.12.6 Touchdown zone elevation: 668 ft
2.12.7 Slope: 0.1 DOWN

2.12.1 Designation: 27R
2.12.2 True Bearing: 270
2.12.3 Dimensions: 7500 ft x 150 ft
2.12.4 PCN: 91 R/B/W/T
2.12.5 Coordinates: 42-00-10.1909N /
87-53-56.6997W
2.12.6 Threshold elevation: 663.6 ft
2.12.6 Touchdown zone elevation: 663.6 ft
2.12.7 Slope: 0.1 UP

2.12.1 Designation: 10L
2.12.2 True Bearing: 90
2.12.3 Dimensions: 13000 ft x 150 ft
2.12.4 PCN: 120 R/B/W/T
2.12.5 Coordinates: 41-58-08.3816N /
87-55-53.5142W
2.12.6 Threshold elevation: 672.1 ft
2.12.6 Touchdown zone elevation: 672.1 ft
2.12.7 Slope: 0.3 DOWN

2.12.1 Designation: 28R
2.12.2 True Bearing: 270
2.12.3 Dimensions: 13000 ft x 150 ft
2.12.4 PCN: 120 R/B/W/T
2.12.5 Coordinates: 41-58-08.6529N /
87-53-01.4244W
2.12.6 Threshold elevation: 651.4 ft
2.12.6 Touchdown zone elevation: 651.4 ft

2.12.1 Designation: 10C
2.12.2 True Bearing: 90
2.12.3 Dimensions: 10800 ft x 200 ft
2.12.4 PCN: 96 R/C/W/T
2.12.5 Coordinates: 41-57-56.5251N /
87-55-53.4778W
2.12.6 Threshold elevation: 669.4 ft
2.12.6 Touchdown zone elevation: 669.4 ft

2.12.1 Designation: 28C
2.12.2 True Bearing: 270
2.12.3 Dimensions: 10800 ft x 200 ft
2.12.4 PCN: 96 R/C/W/T
2.12.5 Coordinates: 41-57-56.7568N /
87-53-30.5171W
2.12.6 Threshold elevation: 650.1 ft
2.12.6 Touchdown zone elevation: 651.1 ft

2.12.1 Designation: 10X
2.12.3 Dimensions: 0 ft x 0 ft

AD 2.13 Declared distances

2.13.1 Designation: 10R
2.13.2 Takeoff run available: 7500
2.13.3 Takeoff distance available: 7500
2.13.4 Accelerate-stop distance available: 7500
2.13.5 Landing distance available: 7500

2.13.1 Designation: 28L
2.13.2 Takeoff run available: 7500
2.13.3 Takeoff distance available: 7500
2.13.4 Accelerate-stop distance available: 7500
2.13.5 Landing distance available: 7500

2.13.1 Designation: 09R
2.13.2 Takeoff run available: 7967
2.13.3 Takeoff distance available: 7967
2.13.4 Accelerate-stop distance available: 7709
2.13.5 Landing distance available: 7709

2.13.1 Designation: 27L
2.13.2 Takeoff run available: 7967
2.13.3 Takeoff distance available: 7967
2.13.4 Accelerate-stop distance available: 7782
2.13.5 Landing distance available: 7782

2.13.1 Designation: 04L
2.13.2 Takeoff run available: 7500
2.13.3 Takeoff distance available: 7500
2.13.4 Accelerate-stop distance available: 7500
2.13.5 Landing distance available: 7500

2.13.1 Designation: 22R
2.13.2 Takeoff run available: 7500
2.13.3 Takeoff distance available: 7500
2.13.4 Accelerate-stop distance available: 7500
2.13.5 Landing distance available: 7500

2.13.1 Designation: 04R
2.13.2 Takeoff run available: 8075
2.13.3 Takeoff distance available: 8075
2.13.4 Accelerate-stop distance available: 8075
2.13.5 Landing distance available: 8075

2.13.1 Designation: 22L
2.13.2 Takeoff run available: 8075
2.13.3 Takeoff distance available: 8075
2.13.4 Accelerate-stop distance available: 8075
2.13.5 Landing distance available: 8075

2.13.1 Designation: 09L
2.13.2 Takeoff run available: 7500
2.13.3 Takeoff distance available: 7500
2.13.4 Accelerate-stop distance available: 7500
2.13.5 Landing distance available: 7500

2.13.1 Designation: 27R
2.13.2 Takeoff run available: 7500
2.13.3 Takeoff distance available: 7500
2.13.4 Accelerate-stop distance available: 7500
2.13.5 Landing distance available: 7500

2.13.1 Designation: 10L
2.13.2 Takeoff run available: 13000
2.13.3 Takeoff distance available: 13000
2.13.4 Accelerate-stop distance available: 13000
2.13.5 Landing distance available: 12246

2.13.1 Designation: 28R
2.13.2 Takeoff run available: 13000
2.13.3 Takeoff distance available: 13000
2.13.4 Accelerate-stop distance available: 13000
2.13.5 Landing distance available: 13000

2.13.1 Designation: 10C
2.13.2 Takeoff run available: 10801
2.13.3 Takeoff distance available: 10801
2.13.4 Accelerate-stop distance available: 10540
2.13.5 Landing distance available: 10540

2.13.1 Designation: 28C
2.13.2 Takeoff run available: 10801
2.13.3 Takeoff distance available: 10801
2.13.4 Accelerate-stop distance available: 10801
2.13.5 Landing distance available: 10801

AD 2.14 Approach and runway lighting

2.14.1 Designation: 10R
2.14.2 Approach lighting system: ALSF2

2.14.1 Designation: 28L
2.14.2 Approach lighting system: ALSF2

2.14.1 Designation: 09R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 27L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 22R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 04R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 22L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 09L
2.14.2 Approach lighting system: ALSF2

2.14.1 Designation: 27R
2.14.2 Approach lighting system: ALSF2

2.14.1 Designation: 10L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 28R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 10C
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 28C
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ALCP
2.18.3 Service designation: 252.1 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 121.6 MHz

2.18.1 Service designation: CD/S
2.18.3 Service designation: 119.25 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 282.225 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 135.4 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND METERING
2.18.3 Service designation: 121.675 MHz

2.18.1 Service designation: GND/P (TWR CENTER INBOUND)
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P (TWR SOUTH)
2.18.3 Service designation: 118.05 MHz

2.18.1 Service designation: GND/P (TWR CENTER OUTBOUND)
2.18.3 Service designation: 121.75 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 226.675 MHz

2.18.1 Service designation: GND/P (TWR NORTH)
2.18.3 Service designation: 124.125 MHz

2.18.1 Service designation: GND/S (TWR CENTER)
2.18.3 Service designation: 134.15 MHz

2.18.1 Service designation: LCL/P (TWR CENTER)
2.18.3 Service designation: 126.9 MHz

2.18.1 Service designation: LCL/P (TWR CENTER)
2.18.3 Service designation: 121.15 MHz

2.18.1 Service designation: LCL/P (TWR CENTER)
2.18.3 Service designation: 120.75 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 348 MHz

2.18.1 Service designation: LCL/P (TWR SOUTH RWY 10R/28L)
2.18.3 Service designation: 133 MHz

2.18.1 Service designation: LCL/P (TWR CENTER)
2.18.3 Service designation: 132.7 MHz

2.18.1 Service designation: LCL/P (TWR NORTH RWY 09L/27R)
2.18.3 Service designation: 128.15 MHz

2.18.1 Service designation: LCL/S (TWR CENTER)
2.18.3 Service designation: 127.925 MHz

2.18.1 Service designation: PRE TAXI CLNC
2.18.3 Service designation: 121.6 MHz

2.18.1 Service designation: PRE TAXI CLNC/S
2.18.3 Service designation: 119.25 MHz

2.18.1 Service designation: PRM (TWR CENTER RWY 28C)
2.18.3 Service designation: 119.625 MHz

2.18.1 Service designation: PRM (TWR CENTER RWY 10C)
2.18.3 Service designation: 119.625 MHz

2.18.1 Service designation: PRM (TWR SOUTH RWY 28L)
2.18.3 Service designation: 128.05 MHz

2.18.1 Service designation: PRM (TWR SOUTH RWY 10R)
2.18.3 Service designation: 128.05 MHz

2.18.1 Service designation: VFR ADZY
2.18.3 Service designation: 126.8 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 04R. Magnetic variation: 3W
2.19.2 ILS identification: FJU
2.19.5 Coordinates: 41-57-16.8552N / 87-53-44.3489W
2.19.6 Site elevation: 654.1 ft

2.19.1 ILS type: Outer Marker for runway 04R. Magnetic variation: 3W
2.19.2 ILS identification: FJU
2.19.5 Coordinates: 41-53-54.5534N / 87-57-51.4319W
2.19.6 Site elevation: 675.5 ft

2.19.1 ILS type: Localizer for runway 04R. Magnetic variation: 3W
2.19.2 ILS identification: FJU
2.19.5 Coordinates: 41-58-16.1967N / 87-52-41.7631W
2.19.6 Site elevation: 646.6 ft

2.19.1 ILS type: DME for runway 09L. Magnetic varia-

tion: 3W
2.19.2 ILS identification: SAJ
2.19.5 Coordinates: 42-00-14.0985N / 87-55-48.2323W
2.19.6 Site elevation: 669.5 ft

2.19.1 ILS type: Localizer for runway 09L. Magnetic variation: 3W
2.19.2 ILS identification: SAJ
2.19.5 Coordinates: 42-00-10.1874N / 87-53-43.3254W
2.19.6 Site elevation: 660.9 ft

2.19.1 ILS type: Inner Marker for runway 09L. Magnetic variation: 3W
2.19.2 ILS identification: SAJ
2.19.5 Coordinates: 42-00-10.1934N / 87-55-47.4231W
2.19.6 Site elevation: 668.8 ft

2.19.1 ILS type: Glide Slope for runway 09L. Magnetic variation: 3W
2.19.2 ILS identification: SAJ
2.19.5 Coordinates: 42-00-14.2182N / 87-55-20.6714W
2.19.6 Site elevation: 651.3 ft

2.19.1 ILS type: DME for runway 09R. Magnetic variation: 3W
2.19.2 ILS identification: JAV
2.19.5 Coordinates: 41-59-04.7161N / 87-53-10.2316W
2.19.6 Site elevation: 653.7 ft

2.19.1 ILS type: Localizer for runway 09R. Magnetic variation: 3W
2.19.2 ILS identification: JAV
2.19.5 Coordinates: 41-59-02.0448N / 87-53-10.493W
2.19.6 Site elevation: 642.8 ft

2.19.1 ILS type: Glide Slope for runway 09R. Magnetic variation: 3W
2.19.2 ILS identification: JAV
2.19.5 Coordinates: 41-59-07.8117N / 87-54-51.2862W
2.19.6 Site elevation: 658.2 ft

2.19.1 ILS type: DME for runway 10C. Magnetic variation: 3W
2.19.2 ILS identification: SXH
2.19.5 Coordinates: 41-58-00.9714N / 87-56-09.15W

2.19.6 Site elevation: 689.3 ft

2.19.1 ILS type: Localizer for runway 10C. Magnetic variation: 3W

2.19.2 ILS identification: SXH

2.19.5 Coordinates: 41-57-56.803N / 87-52-57.2925W

2.19.6 Site elevation: 646.3 ft

2.19.1 ILS type: Glide Slope for runway 10C. Magnetic variation: 3W

2.19.2 ILS identification: SXH

2.19.5 Coordinates: 41-57-52.8465N / 87-55-39.0226W

2.19.6 Site elevation: 663 ft

2.19.1 ILS type: Inner Marker for runway 10C. Magnetic variation: 3W

2.19.2 ILS identification: SXH

2.19.5 Coordinates: 41-57-56.5015N / 87-56-04.8681W

2.19.6 Site elevation: 674.3 ft

2.19.1 ILS type: DME for runway 10L. Magnetic variation: 3W

2.19.2 ILS identification: MED

2.19.5 Coordinates: 41-58-05.6721N / 87-52-41.6845W

2.19.6 Site elevation: 656 ft

2.19.1 ILS type: Inner Marker for runway 10L. Magnetic variation: 3W

2.19.2 ILS identification: MED

2.19.5 Coordinates: 41-58-08.5523N / 87-56-04.8866W

2.19.6 Site elevation: 676.8 ft

2.19.1 ILS type: Glide Slope for runway 10L. Magnetic variation: 3W

2.19.2 ILS identification: MED

2.19.5 Coordinates: 41-58-04.3877N / 87-55-38.7659W

2.19.6 Site elevation: 665.3 ft

2.19.1 ILS type: Localizer for runway 10L. Magnetic variation: 3W

2.19.2 ILS identification: MED

2.19.5 Coordinates: 41-58-08.6818N / 87-52-39.6951W

2.19.6 Site elevation: 644.9 ft

2.19.1 ILS type: DME for runway 10R. Magnetic varia-

tion: 4W

2.19.2 ILS identification: BYW

2.19.5 Coordinates: 41-57-28.3399N / 87-53-27.4609W

2.19.6 Site elevation: 669.6 ft

2.19.1 ILS type: Glide Slope for runway 10R. Magnetic variation: 4W

2.19.2 ILS identification: BYW

2.19.5 Coordinates: 41-57-21.909N / 87-55-25.5702W

2.19.6 Site elevation: 671.7 ft

2.19.1 ILS type: Localizer for runway 10R. Magnetic variation: 4W

2.19.2 ILS identification: BYW

2.19.5 Coordinates: 41-57-31.6045N / 87-53-26.3741W

2.19.6 Site elevation: 649.9 ft

2.19.1 ILS type: Inner Marker for runway 10X. Magnetic variation: 4W

2.19.2 ILS identification: IZJ

2.19.5 Coordinates: 41-57-25.9088N / 87-55-51.6695W

2.19.6 Site elevation: 680 ft

2.19.1 ILS type: Localizer for runway 10X. Magnetic variation: 4W

2.19.2 ILS identification: IZJ

2.19.5 Coordinates: 41-57-26.1287N / 87-53-32.5409W

2.19.6 Site elevation: 652.2 ft

2.19.1 ILS type: Glide Slope for runway 10X. Magnetic variation: 4W

2.19.2 ILS identification: IZJ

2.19.5 Coordinates: 41-57-22.1087N / 87-55-25.5572W

2.19.6 Site elevation: 671.8 ft

2.19.1 ILS type: DME for runway 10X. Magnetic variation: 4W

2.19.2 ILS identification: IZJ

2.19.5 Coordinates: 41-57-22.2251N / 87-53-34.2417W

2.19.6 Site elevation: 656.1 ft

2.19.1 ILS type: Glide Slope for runway 22L. Magnetic variation: 3W

2.19.2 ILS identification: LQQ

2.19.5 Coordinates: 41-58-00.7989N /

87-52-52.6077W

2.19.6 Site elevation: 645.9 ft

2.19.1 ILS type: Localizer for runway 22L. Magnetic variation: 3W

2.19.2 ILS identification: LQQ

2.19.5 Coordinates: 41-57-05.6133N /
87-54-05.4506W

2.19.6 Site elevation: 653 ft

2.19.1 ILS type: Localizer for runway 22R. Magnetic variation: 3W

2.19.2 ILS identification: RXZ

2.19.5 Coordinates: 41-58-46.4888N /
87-54-58.3524W

2.19.6 Site elevation: 655.5 ft

2.19.1 ILS type: Glide Slope for runway 22R. Magnetic variation: 3W

2.19.2 ILS identification: RXZ

2.19.5 Coordinates: 41-59-46.5114N / 87-53-59.027W

2.19.6 Site elevation: 645.1 ft

2.19.1 ILS type: Inner Marker for runway 27L. Magnetic variation: 3W

2.19.2 ILS identification: IAC

2.19.5 Coordinates: 41-59-01.8506N /
87-53-09.1944W

2.19.6 Site elevation: 641.5 ft

2.19.1 ILS type: Glide Slope for runway 27L. Magnetic variation: 3W

2.19.2 ILS identification: IAC

2.19.5 Coordinates: 41-59-06.8111N / 87-53-34.3515W

2.19.6 Site elevation: 646.5 ft

2.19.1 ILS type: DME for runway 27L. Magnetic variation: 3W

2.19.2 ILS identification: IAC

2.19.5 Coordinates: 41-59-04.7161N /
87-53-10.2316W

2.19.6 Site elevation: 653.7 ft

2.19.1 ILS type: Localizer for runway 27L. Magnetic variation: 3W

2.19.2 ILS identification: IAC

2.19.5 Coordinates: 41-59-02.0278N / 87-55-17.975W

2.19.6 Site elevation: 665 ft

2.19.1 ILS type: Localizer for runway 27R. Magnetic variation: 3W

2.19.2 ILS identification: ABU

2.19.5 Coordinates: 42-00-10.1939N /
87-55-50.1994W

2.19.6 Site elevation: 668.1 ft

2.19.1 ILS type: Inner Marker for runway 27R. Magnetic variation: 3W

2.19.2 ILS identification: ABU

2.19.5 Coordinates: 42-00-09.9864N /
87-53-45.3008W

2.19.6 Site elevation: 663.1 ft

2.19.1 ILS type: Glide Slope for runway 27R. Magnetic variation: 3W

2.19.2 ILS identification: ABU

2.19.5 Coordinates: 42-00-14.2137N /
87-54-11.7412W

2.19.6 Site elevation: 648.4 ft

2.19.1 ILS type: DME for runway 27R. Magnetic variation: 3W

2.19.2 ILS identification: ABU

2.19.5 Coordinates: 42-00-14.0985N /
87-55-48.2323W

2.19.6 Site elevation: 669.5 ft

2.19.1 ILS type: Localizer for runway 28C. Magnetic variation: 3W

2.19.2 ILS identification: VZE

2.19.5 Coordinates: 41-57-56.5013N /
87-56-06.8848W

2.19.6 Site elevation: 676.4 ft

2.19.1 ILS type: DME for runway 28C. Magnetic variation: 3W

2.19.2 ILS identification: VZE

2.19.5 Coordinates: 41-58-00.9714N / 87-56-09.15W

2.19.6 Site elevation: 689.3 ft

2.19.1 ILS type: Inner Marker for runway 28C. Magnetic variation: 3W

2.19.2 ILS identification: VZE

2.19.5 Coordinates: 41-57-58.7451N /
87-53-19.1677W

2.19.6 Site elevation: 648 ft

2.19.1 ILS type: Glide Slope for runway 28C. Magnetic variation: 3W

2.19.2 ILS identification: VZE

2.19.5 Coordinates: 41-57-53.0321N /
87-53-44.3196W

2.19.6 Site elevation: 642.4 ft

2.19.1 ILS type: Inner Marker for runway 28L. Magnetic variation: 4W

2.19.2 ILS identification: VQX

2.19.5 Coordinates: 41-57-26.9517N / 87-53-47.4584W

2.19.6 Site elevation: 650.4 ft

2.19.1 ILS type: Localizer for runway 28L. Magnetic variation: 4W

2.19.2 ILS identification: VQX

2.19.5 Coordinates: 41-57-25.8994N / 87-55-53.7065W

2.19.6 Site elevation: 680.2 ft

2.19.1 ILS type: Glide Slope for runway 28L. Magnetic variation: 4W

2.19.2 ILS identification: VQX

2.19.5 Coordinates: 41-57-22.0258N / 87-54-14.1801W

2.19.6 Site elevation: 654 ft

2.19.1 ILS type: DME for runway 28L. Magnetic variation: 4W

2.19.2 ILS identification: VQX

2.19.5 Coordinates: 41-57-22.2251N / 87-53-34.2417W

General Remarks:

ARPT NIGHTTIME NOISE ABATEMENT PROCEDURES ARE IN EFFECT FM 2200 TO 0700; CONTACT AMGR ON 773-686-2255.

BIRDS ON & INVOF ARPT. PYROTECHNICS & BIRD CANNONS IN USE FOR BIRD CONTROL.

ACFT WITH WINGSPAN GREATER THAN 214 FT RQR 48 HRS PPR - CALL 773-686-2255.

SEE LAND AND HOLD SHORT OPERATIONS SECTION.

BE ALERT: OF DUPE ALPHA-NUMERIC TWY DESIGNATORS & TRML GATE DESIGNATIONS INVOLVING THE LETTERS B, C, H, K, L & M.

MAGNETIC DEVIATION POSSIBLE IMMEDIATELY WEST OF TWY Y & RY 22L APCH ON TWY N.

PAEW NEAR VARIOUS TWYS.

PERIODIC FIRE DEPT TRNG AT N SECTOR OF THE ARPT.

PRIM RUN-UP LOCATION GROUND RUN UP ENCLOSURE; SECONDARY RUN UP LOCATIONS AVBL UPON REQ CONTACT CITY OPNS 773-686-2255.

LINE UP AND WAIT AUTHORIZATION IN EFF BTWN SS AND SR AT THE FLWG INTS: RWY 28R AT TWY GG, TWY EE AND TWY N5; RWY 10L AT TWY DD AND TWY CC. THESE RWYS WILL BE USED FOR DEPS ONLY WHEN EXERCISING THE PROVISIONS OF THIS AUTHORIZATION.

2.19.6 Site elevation: 656.1 ft

2.19.1 ILS type: Localizer for runway 28R. Magnetic variation: 3W

2.19.2 ILS identification: TSL

2.19.5 Coordinates: 41-58-08.356N / 87-56-06.8801W

2.19.6 Site elevation: 679.1 ft

2.19.1 ILS type: Inner Marker for runway 28R. Magnetic variation: 3W

2.19.2 ILS identification: TSL

2.19.5 Coordinates: 41-58-06.1128N / 87-52-49.1235W

2.19.6 Site elevation: 649.5 ft

2.19.1 ILS type: DME for runway 28R. Magnetic variation: 3W

2.19.2 ILS identification: TSL

2.19.5 Coordinates: 41-58-05.6721N / 87-52-41.6845W

2.19.6 Site elevation: 656 ft

2.19.1 ILS type: Glide Slope for runway 28R. Magnetic variation: 3W

2.19.2 ILS identification: TSL

2.19.5 Coordinates: 41-58-04.4701N / 87-53-15.0487W

2.19.6 Site elevation: 648.2 ft

ALL PART 91 & UNSKED PART 125, 133 & 135 CHARTER OPERATORS CTC SIGNATURE FLIGHT SUPPORT AT 773-686-7000 REGARDING NEW SECURITY REGULATIONS PRIOR TO DEP.

B747-400, B747-8, B777-300ER, B777-200LR(F), A340-600 OR A340-500, & A350-900 CANNOT PASS ON TWYS 'A' & 'B' INSUFFICIENT WINGTIP CLNC.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

RY 9L/27R TRIPLE DUAL TANDEM 690,000 LBS; DUAL TANDUM W/DUAL WHEEL (2D/D1) 633,000 LBS.

EAST AND WEST GATES ARE MANNED 24 HRS A DAY.

ATCT IS AUZD TO CONDUCT SIMUL DEPS FM RWY 4L/4R, RWY 22R/22L, RWY 9R WITH RWY 9L OR RWY 10L, RWY 27L WITH 28R OR RWY 27R, RWY 10C WITH RWY 9R AND RWY 28C WITH RWY 27L WITH COURSE DIVERGENCE BEGINNING NO LATER THAN 4 MILES FM RY END.

BE ALERT: TWY S-1 OUTBOUND OR EASTBOUND ONLY, TWY S-2 INBOUND OR WESTBOUND ONLY, TWY Y5 NORTHBOUND ONLY EXITING RWY, TWYS P1, P2, P3, P5, AND P6 NORTHBOUND ONLY, TWY A1 SOUTHBOUND ONLY FROM RWY 09R-27L.

A380-800 OPNL CONSTRAINTS EXIST ON RYS, TWYS, AND RAMPS. CTC ARPT OPNS FOR ADDNL INFO 773-686-2255.

DVRSN ACRS WO A PRESENCE AT ORD SHOULD CTC ARPT OPNS 773-686-2255 PRIOR TO DIVERTING TO THE EXTENT PRACTICAL AND PRVD: CO, FLIGHT OPS CTC INFO, ACFT TYPE, PERSONS OB, INTL OR DOMESTIC, ANY GND HANDLER AGRMTS IN PLACE.

BE ALERT: THE NORTHEAST/SOUTHWEST PORTION OF TWY YY IS NOT VSBL FM THE CENTER ATCT.

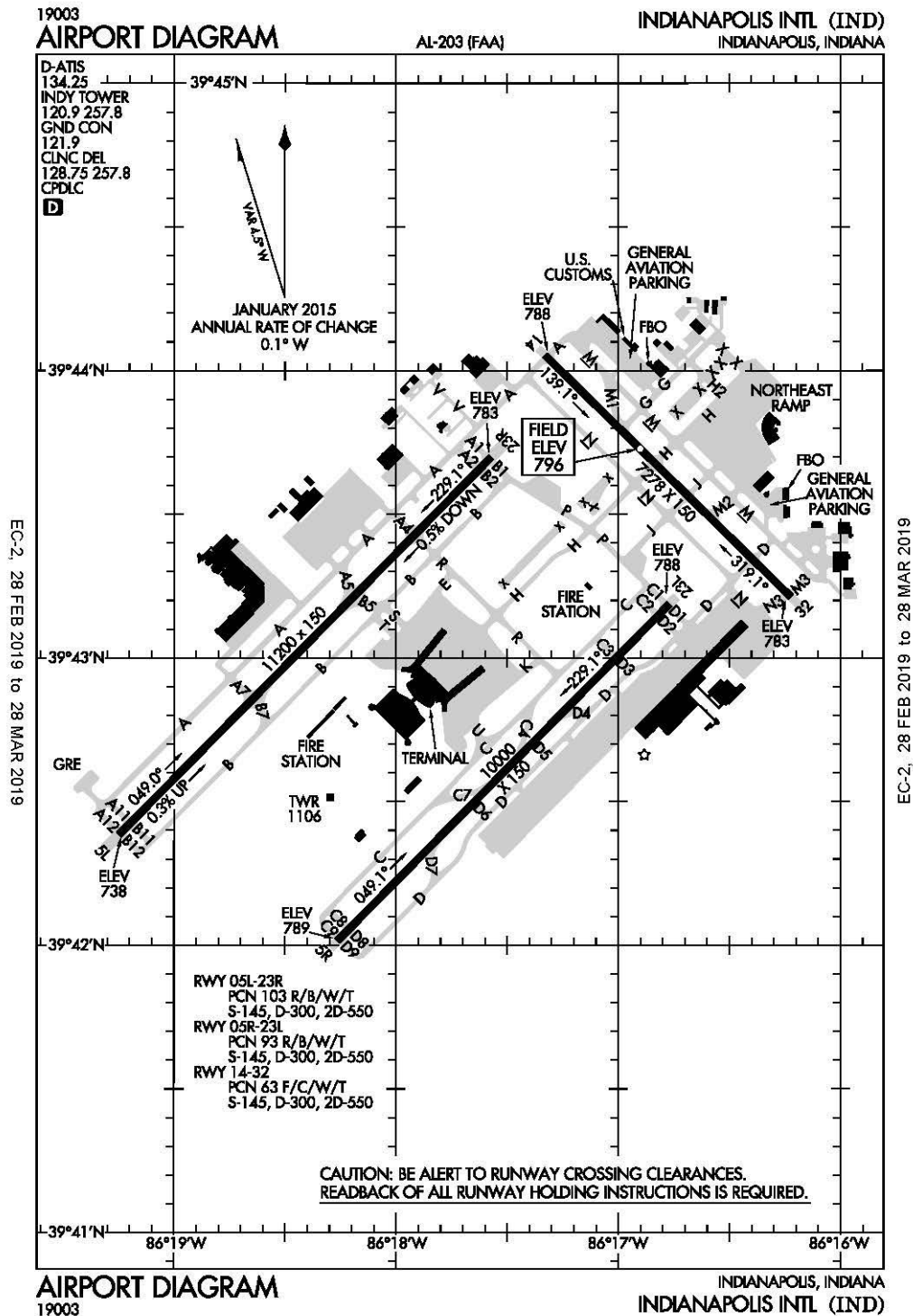
B747-8 OPS NOT AUZD ON RYS 09R/27L, 09L/27R AND 10R/28L.

ACFT ARE NOT PMTD TO STOP ON EITHER TWY A OR B BRIDGES.

RWY 9R PAPI UNUSBL BYD 5 DEG RIGHT OF CNTRLN

RWY STATUS LGTS ARE IN OPN.

Indianapolis, Indiana
Indianapolis International
ICAO Identifier KIND



Indianapolis, IN
Indianapolis Intl
ICAO Identifier KIND

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 39–43–02.3N / 86–17–40.7W
2.2.2 From City: 7 Miles SW Of Indianapolis, IN
2.2.3 Elevation: 796.2 ft
2.2.5 Magnetic variation: 5W (2015)
2.2.6 Airport Contact: Mario Rodriguez
7800 COL. H. WEIR COOK MEMORIAL DR.
Indianapolis, IN 46241 (317–487–9594)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A, A1+, 100LL
2.4.5 Hangar space: No
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 14
2.10.1.b Type of obstacle: Ant (61 ft above runway end).
Not Lighted or Marked
2.10.1.c Location of obstacle: 756 ft L of Centerline

2.10.1.a. Runway designation: 23L
2.10.1.b Type of obstacle: Ant (78 ft above runway end).
Not Lighted or Marked
2.10.1.c Location of obstacle: 484 ft R of Centerline

2.10.1.a. Runway designation: 23R
2.10.1.b Type of obstacle: Ant (140 ft above runway end).
Lighted
2.10.1.c Location of obstacle: 138 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 05R
2.12.2 True Bearing: 45
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 93 R/B/W/T
2.12.5 Coordinates: 39–42–00.873N / 86–18–15.906W
2.12.6 Threshold elevation: 788.8 ft
2.12.6 Touchdown zone elevation: 790.7 ft

2.12.1 Designation: 23L
2.12.2 True Bearing: 225
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 93 R/B/W/T
2.12.5 Coordinates: 39–43–11.2875N /
86–16–46.1248W
2.12.6 Threshold elevation: 787.6 ft
2.12.6 Touchdown zone elevation: 790.1 ft

2.12.1 Designation: 05L
2.12.2 True Bearing: 45
2.12.3 Dimensions: 11200 ft x 150 ft
2.12.4 PCN: 103 R/B/W/T
2.12.5 Coordinates: 39–42–23.0337N /
86–19–14.9025W
2.12.6 Threshold elevation: 738 ft
2.12.6 Touchdown zone elevation: 747.3 ft
2.12.7 Slope: 0.3 UP

2.12.1 Designation: 23R
2.12.2 True Bearing: 225
2.12.3 Dimensions: 11200 ft x 150 ft
2.12.4 PCN: 103 R/B/W/T
2.12.5 Coordinates: 39–43–41.9101N /
86–17–34.3591W
2.12.6 Threshold elevation: 782.9 ft
2.12.6 Touchdown zone elevation: 782.9 ft
2.12.7 Slope: 0.5 DOWN

2.12.1 Designation: 14
2.12.2 True Bearing: 135
2.12.3 Dimensions: 7278 ft x 150 ft
2.12.4 PCN: 63 F/C/W/T
2.12.5 Coordinates: 39–44–03.2059N /
86–17–19.7638W
2.12.6 Threshold elevation: 787.5 ft
2.12.6 Touchdown zone elevation: 796.2 ft

2.12.1 Designation: 32
2.12.2 True Bearing: 315
2.12.3 Dimensions: 7278 ft x 150 ft
2.12.4 PCN: 63 F/C/W/T
2.12.5 Coordinates: 39–43–12.7458N /
86–16–13.3895W
2.12.6 Threshold elevation: 782.6 ft
2.12.6 Touchdown zone elevation: 792.9 ft

AD 2.13 Declared distances

2.13.1 Designation: 05R
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000

2.13.4 Accelerate-stop distance available: 10000
2.13.5 Landing distance available: 10000

2.13.1 Designation: 23L
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate-stop distance available: 10000
2.13.5 Landing distance available: 10000

2.13.1 Designation: 05L
2.13.2 Takeoff run available: 11200
2.13.3 Takeoff distance available: 11200
2.13.4 Accelerate-stop distance available: 11200
2.13.5 Landing distance available: 11200

2.13.1 Designation: 23R
2.13.2 Takeoff run available: 11200
2.13.3 Takeoff distance available: 11200
2.13.4 Accelerate-stop distance available: 11200
2.13.5 Landing distance available: 11200

2.13.1 Designation: 14
2.13.2 Takeoff run available: 7278
2.13.3 Takeoff distance available: 7278
2.13.4 Accelerate-stop distance available: 7278
2.13.5 Landing distance available: 7278

2.13.1 Designation: 32
2.13.2 Takeoff run available: 7278
2.13.3 Takeoff distance available: 7278
2.13.4 Accelerate-stop distance available: 7278
2.13.5 Landing distance available: 7278

AD 2.14 Approach and runway lighting

2.14.1 Designation: 05R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 23L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 05L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 23R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 14

2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Unusable Beyond 8 Degrees Right Of Course.

2.14.1 Designation: 32
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R
2.14.10 Remarks: Vgsi And ILS Glidepath Not Coincident.

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P (WEST OF ACTIVE RWY)
2.18.3 Service designation: 124.65 MHz

2.18.1 Service designation: APCH/P (EAST OF ACTIVE RWY)
2.18.3 Service designation: 127.15 MHz

2.18.1 Service designation: APCH/P DEP/P
2.18.3 Service designation: 317.8 MHz

2.18.1 Service designation: APCH/P IC
2.18.3 Service designation: 128.175 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: CD/P PRE TAXI CLNC
2.18.3 Service designation: 128.75 MHz

2.18.1 Service designation: CLASS C
2.18.3 Service designation: 317.8 MHz

2.18.1 Service designation: CLASS C (WEST OF ACTIVE RWY)
2.18.3 Service designation: 124.65 MHz

2.18.1 Service designation: CLASS C (EAST OF ACTIVE RWY)
2.18.3 Service designation: 127.15 MHz

2.18.1 Service designation: CLASS C (EAST)
2.18.3 Service designation: 124.95 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 134.25 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: DEP/P (WEST)

2.18.3 Service designation: 119.05 MHz

2.18.1 Service designation: DEP/P (EAST)

2.18.3 Service designation: 124.95 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/S

2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 120.9 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Inner Marker for runway 05L. Magnetic variation: 5W

2.19.2 ILS identification: IND

2.19.5 Coordinates: 39-42-15.7098N /

86-19-24.4367W

2.19.6 Site elevation: 735.9 ft

2.19.1 ILS type: DME for runway 05L. Magnetic variation: 5W

2.19.2 ILS identification: IND

2.19.5 Coordinates: 39-43-51.3513N /

86-17-27.5671W

2.19.6 Site elevation: 797.6 ft

2.19.1 ILS type: Localizer for runway 05L. Magnetic variation: 5W

2.19.2 ILS identification: IND

2.19.5 Coordinates: 39-43-49.0283N /

86-17-25.2797W

2.19.6 Site elevation: 787.8 ft

2.19.1 ILS type: Glide Slope for runway 05L. Magnetic variation: 5W

2.19.2 ILS identification: IND

2.19.5 Coordinates: 39-42-32.7741N /

86-19-09.6768W

2.19.6 Site elevation: 735.4 ft

2.19.1 ILS type: Inner Marker for runway 05R. Magnetic variation: 5W

2.19.2 ILS identification: OQV

2.19.5 Coordinates: 39-41-52.0586N /

86-18-27.1359W

2.19.6 Site elevation: 776.4 ft

2.19.1 ILS type: Localizer for runway 05R. Magnetic variation: 5W

2.19.2 ILS identification: OQV

2.19.5 Coordinates: 39-43-18.3778N /

86-16-37.0825W

2.19.6 Site elevation: 785.5 ft

2.19.1 ILS type: DME for runway 05R. Magnetic variation: 5W

2.19.2 ILS identification: OQV

2.19.5 Coordinates: 39-43-20.1868N /

86-16-39.5353W

2.19.6 Site elevation: 802 ft

2.19.1 ILS type: Glide Slope for runway 05R. Magnetic variation: 5W

2.19.2 ILS identification: OQV

2.19.5 Coordinates: 39-42-05.3627N /

86-18-02.9983W

2.19.6 Site elevation: 788.5 ft

2.19.1 ILS type: Localizer for runway 14. Magnetic variation: 5W

2.19.2 ILS identification: BJP

2.19.5 Coordinates: 39-43-03.8771N /

86-16-01.7277W

2.19.6 Site elevation: 763.6 ft

2.19.1 ILS type: Glide Slope for runway 14. Magnetic variation: 5W

2.19.2 ILS identification: BJP

2.19.5 Coordinates: 39-43-59.3065N /

86-17-07.3342W

2.19.6 Site elevation: 790 ft

2.19.1 ILS type: DME for runway 23L. Magnetic variation: 5W

2.19.2 ILS identification: FVJ

2.19.5 Coordinates: 39-43-20.1868N /

86-16-39.5353W

2.19.6 Site elevation: 802 ft

2.19.1 ILS type: Glide Slope for runway 23L. Magnetic variation: 5W

2.19.2 ILS identification: FVJ
2.19.5 Coordinates: 39-43-02.4585N /
86-16-54.2858W
2.19.6 Site elevation: 785 ft

2.19.1 ILS type: Localizer for runway 23L. Magnetic
variation: 5W
2.19.2 ILS identification: FVJ
2.19.5 Coordinates: 39-41-53.5322N /
86-18-25.2565W
2.19.6 Site elevation: 777.3 ft

2.19.1 ILS type: Glide Slope for runway 23R. Magnetic
variation: 5W
2.19.2 ILS identification: UZK
2.19.5 Coordinates: 39-43-36.5113N /
86-17-48.4342W
2.19.6 Site elevation: 772.4 ft

2.19.1 ILS type: Localizer for runway 23R. Magnetic
variation: 5W
2.19.2 ILS identification: UZK
2.19.5 Coordinates: 39-42-15.9186N /

General Remarks:

PRIM STUDENT TGL NOT PMTD.

LARGE FLOCKS OF BIRDS ON & INVOF ARPT.

NOISE ABATEMENT PROCEDURES IN EFFECT CTC ARPT MANAGEMENT ON 317-487-9594.

BE ALERT TO CLOSE PROXIMITY OF RY 14/32 TO NORTHEAST RAMP.

TWY 'H' RUNS CONTIGUOUS AT NORTHEAST RAMP.

RY 05R/23L & RY 14/32 HAVE 200 FT BLAST PADS BOTH ENDS. RY 5L/23R HAS 400 FT BLAST PAD AT BOTH
ENDS.

TWY V IS NOT AVBL FOR ACR OPNS.

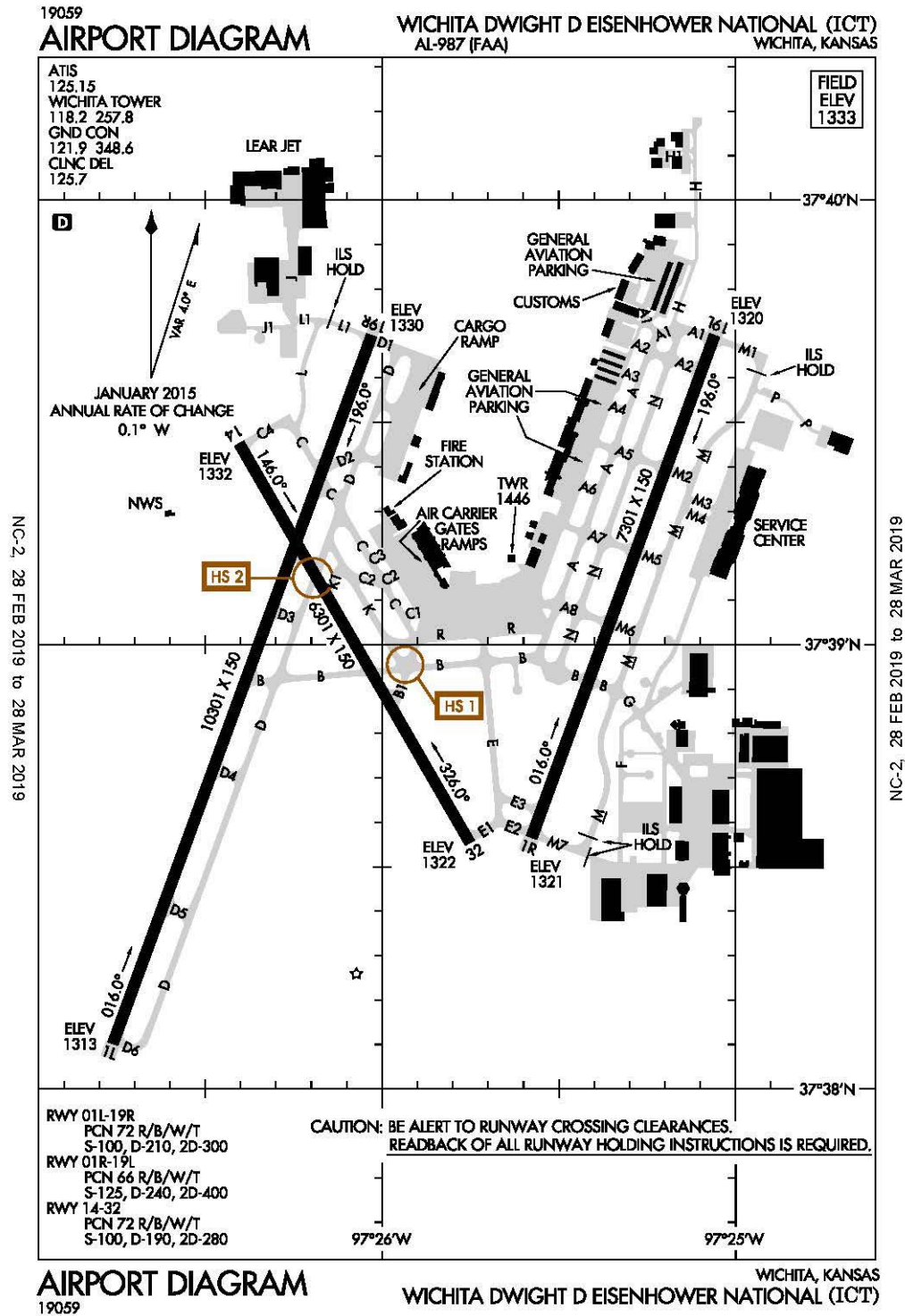
86-19-23.9666W
2.19.6 Site elevation: 736.6 ft

2.19.1 ILS type: DME for runway 23R. Magnetic varia-
tion: 5W
2.19.2 ILS identification: UZK
2.19.5 Coordinates: 39-43-51.3513N /
86-17-27.5671W
2.19.6 Site elevation: 797.6 ft

2.19.1 ILS type: Localizer for runway 32. Magnetic vari-
ation: 5W
2.19.2 ILS identification: COA
2.19.5 Coordinates: 39-44-10.3487N /
86-17-29.1696W
2.19.6 Site elevation: 782.3 ft

2.19.1 ILS type: Glide Slope for runway 32. Magnetic
variation: 5W
2.19.2 ILS identification: COA
2.19.5 Coordinates: 39-43-16.2751N /
86-16-25.5096W
2.19.6 Site elevation: 781.7 ft

Wichita, Kansas
Wichita Mid-Continent
ICAO Identifier KICT



Wichita, KS
Wichita Mid–Continent
ICAO Identifier KICT

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 37–38–59.8N / 97–25–59W
2.2.2 From City: 5 Miles SW Of Wichita, KS
2.2.3 Elevation: 1332.5 ft
2.2.5 Magnetic variation: 4E (2015)
2.2.6 Airport Contact: Mr. Victor White, A.A.E.
2173 AIR CARGO ROAD
Wichita, KS 67209
(316–946–4700)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973

AD 2.12 Runway physical characteristics

2.12.1 Designation: 01L
2.12.2 True Bearing: 20
2.12.3 Dimensions: 10301 ft x 150 ft
2.12.4 PCN: 72 R/B/W/T
2.12.5 Coordinates: 37–38–06.0674N /
97–26–45.5905W
2.12.6 Threshold elevation: 1312.6 ft
2.12.6 Touchdown zone elevation: 1314.2 ft

2.12.1 Designation: 19R
2.12.2 True Bearing: 200
2.12.3 Dimensions: 10301 ft x 150 ft
2.12.4 PCN: 72 R/B/W/T
2.12.5 Coordinates: 37–39–41.763N / 97–26–01.7928W
2.12.6 Threshold elevation: 1329.7 ft
2.12.6 Touchdown zone elevation: 1329.7 ft

2.12.1 Designation: 01R
2.12.2 True Bearing: 20
2.12.3 Dimensions: 7301 ft x 150 ft
2.12.4 PCN: 66 R/B/W/T
2.12.5 Coordinates: 37–38–33.9452N /

97–25–34.6273W
2.12.6 Threshold elevation: 1320.9 ft
2.12.6 Touchdown zone elevation: 1320.9 ft

2.12.1 Designation: 19L
2.12.2 True Bearing: 200
2.12.3 Dimensions: 7301 ft x 150 ft
2.12.4 PCN: 66 R/B/W/T
2.12.5 Coordinates: 37–39–41.7681N /
97–25–03.5639W
2.12.6 Threshold elevation: 1319.8 ft
2.12.6 Touchdown zone elevation: 1319.9 ft

2.12.1 Designation: 14
2.12.2 True Bearing: 150
2.12.3 Dimensions: 6301 ft x 150 ft
2.12.4 PCN: 72 R/B/W/T
2.12.5 Coordinates: 37–39–27.1616N /
97–26–24.2724W
2.12.6 Threshold elevation: 1332.1 ft
2.12.6 Touchdown zone elevation: 1332.5 ft

2.12.1 Designation: 32
2.12.2 True Bearing: 330
2.12.3 Dimensions: 6301 ft x 150 ft
2.12.4 PCN: 72 R/B/W/T
2.12.5 Coordinates: 37–38–33.2158N /
97–25–45.1013W
2.12.6 Threshold elevation: 1321.6 ft
2.12.6 Touchdown zone elevation: 1321.7 ft

AD 2.13 Declared distances

2.13.1 Designation: 01L
2.13.2 Takeoff run available: 10301
2.13.3 Takeoff distance available: 10301
2.13.4 Accelerate–stop distance available: 10301
2.13.5 Landing distance available: 10301

2.13.1 Designation: 19R
2.13.2 Takeoff run available: 10301
2.13.3 Takeoff distance available: 10301
2.13.4 Accelerate–stop distance available: 10301
2.13.5 Landing distance available: 10301

2.13.1 Designation: 01R
2.13.2 Takeoff run available: 7301
2.13.3 Takeoff distance available: 7301
2.13.4 Accelerate–stop distance available: 7301
2.13.5 Landing distance available: 7301

2.13.1 Designation: 19L

2.13.2 Takeoff run available: 7301
2.13.3 Takeoff distance available: 7301
2.13.4 Accelerate–stop distance available: 7301
2.13.5 Landing distance available: 7301

2.13.1 Designation: 14
2.13.2 Takeoff run available: 6301
2.13.3 Takeoff distance available: 6301
2.13.4 Accelerate–stop distance available: 6301
2.13.5 Landing distance available: 6301

2.13.1 Designation: 32
2.13.2 Takeoff run available: 6301
2.13.3 Takeoff distance available: 6301
2.13.4 Accelerate–stop distance available: 6301
2.13.5 Landing distance available: 6301

AD 2.14 Approach and runway lighting

2.14.1 Designation: 01L
2.14.2 Approach lighting system: ALSF2

2.14.1 Designation: 19R
2.14.2 Approach lighting system: MALSR

2.14.1 Designation: 01R
2.14.2 Approach lighting system: MALSR

2.14.1 Designation: 19L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 14
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 32
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P (E IAB BLO 5000 FT)
2.18.3 Service designation: 269.1 MHz

2.18.1 Service designation: APCH/P (270–009 BLO 5000 & BYD 20 NM)
2.18.3 Service designation: 325.8 MHz

2.18.1 Service designation: APCH/P (270–009 BLO 5000 & BYD 20 NM)
2.18.3 Service designation: 125.5 MHz

2.18.1 Service designation: APCH/P DEP/P (010–190)

2.18.3 Service designation: 290.275 MHz

2.18.1 Service designation: APCH/P DEP/P (010–190)
2.18.3 Service designation: 134.85 MHz

2.18.1 Service designation: APCH/P DEP/P IC (191–009)
2.18.3 Service designation: 353.5 MHz

2.18.1 Service designation: APCH/P DEP/P IC (191–009)
2.18.3 Service designation: 126.7 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 327.1 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 125.15 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P
2.18.3 Service designation: 125.7 MHz

2.18.1 Service designation: CLASS C (010–190 ABV 4,000 FT)
2.18.3 Service designation: 134.85 MHz

2.18.1 Service designation: CLASS C (010–190 ABV 4000 FT)
2.18.3 Service designation: 290.275 MHz

2.18.1 Service designation: CLASS C (010–190 AT OR BLO 4,000 FT)
2.18.3 Service designation: 134.8 MHz

2.18.1 Service designation: CLASS C (191–009)
2.18.3 Service designation: 353.5 MHz

2.18.1 Service designation: CLASS C (191–009)
2.18.3 Service designation: 126.7 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 118.2 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 257.8 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Outer Marker for runway 01L. Magnetic variation: 4E

2.19.2 ILS identification: TWI

2.19.5 Coordinates: 37-33-33.9515N / 97-28-51.777W

2.19.6 Site elevation: 1310 ft

2.19.1 ILS type: Localizer for runway 01L. Magnetic variation: 4E

2.19.2 ILS identification: TWI

2.19.5 Coordinates: 37-39-51.3419N /
97-25-57.4083W

2.19.6 Site elevation: 1319.9 ft

2.19.1 ILS type: Inner Marker for runway 01L. Magnetic variation: 4E

2.19.2 ILS identification: TWI

2.19.5 Coordinates: 37-37-57.1412N /
97-26-49.6885W

2.19.6 Site elevation: 1317 ft

2.19.1 ILS type: Glide Slope for runway 01L. Magnetic variation: 4E

2.19.2 ILS identification: TWI

2.19.5 Coordinates: 37-38-16.7093N /
97-26-46.0112W

2.19.6 Site elevation: 1310.4 ft

2.19.1 ILS type: DME for runway 01R. Magnetic variation: 4E

2.19.2 ILS identification: ICT

2.19.5 Coordinates: 37-39-52.0396N /
97-25-02.8177W

2.19.6 Site elevation: 1326.6 ft

2.19.1 ILS type: Outer Marker for runway 01R. Magnetic variation: 4E

2.19.2 ILS identification: ICT

2.19.5 Coordinates: 37-34-41.4971N /
97-27-21.0931W

2.19.6 Site elevation:

2.19.1 ILS type: Localizer for runway 01R. Magnetic variation: 4E

2.19.2 ILS identification: ICT

2.19.5 Coordinates: 37-39-51.99N / 97-24-58.88W

2.19.6 Site elevation: 1307 ft

2.19.1 ILS type: Glide Slope for runway 01R. Magnetic variation: 4E

2.19.2 ILS identification: ICT

2.19.5 Coordinates: 37-38-42.6371N /
97-25-24.6964W

2.19.6 Site elevation: 1314.7 ft

2.19.1 ILS type: Glide Slope for runway 19L. Magnetic variation: 4E

2.19.2 ILS identification: MVP

2.19.5 Coordinates: 37-39-30.78N / 97-25-03.17W

2.19.6 Site elevation: 1312.1 ft

2.19.1 ILS type: DME for runway 19L. Magnetic variation: 4E

2.19.2 ILS identification: MVP

2.19.5 Coordinates: 37-38-21.53N / 97-25-43.26W

2.19.6 Site elevation: 1320 ft

2.19.1 ILS type: Localizer for runway 19L. Magnetic variation: 4E

2.19.2 ILS identification: MVP

2.19.5 Coordinates: 37-38-21.32N / 97-25-40.42W

2.19.6 Site elevation: 1318.3 ft

2.19.1 ILS type: Localizer for runway 19R. Magnetic variation: 4E

2.19.2 ILS identification: HOV

2.19.5 Coordinates: 37-37-54.74N / 97-26-50.78W

2.19.6 Site elevation: 1319.4 ft

2.19.1 ILS type: Outer Marker for runway 19R. Magnetic variation: 4E

2.19.2 ILS identification: HOV

2.19.5 Coordinates: 37-44-16.6132N /
97-24-00.9938W

2.19.6 Site elevation: 1325.7 ft

2.19.1 ILS type: Glide Slope for runway 19R. Magnetic variation: 4E

2.19.2 ILS identification: HOV

2.19.5 Coordinates: 37-39-33.86N / 97-26-10.83W

2.19.6 Site elevation: 1325.7 ft

General Remarks:

PPR REQUIRED FOR ACFT CARRYING CLASS 1 – DIVISION 1.1; 1.2 OR 1.3 EXPLOSIVES AS DEFINED BY 49 CFR 173.50 OR AS AMENDED.

TWYS F, G, H, J, P AND ALL PARKING RAMPS ARE NON-MOVEMENT AREAS.

FLIGHT NOTIFICATION SERVICE (ADCUS) AVBL.

MIGRATORY BIRDS ON AND INVOF ARPT.

ATCT HAS LIMITED VISIBILITY OF TERMINAL GATES 1-8.

TWY H CLSD TO ACFT WITH WINGSPAN MORE THAN 75 FT.

TWY H CONGESTED AND NOT VISIBLE FROM ATCT; USE CAUTION.

TWY L AND L1 CLSD TO ACFT WITH WINGSPAN MORE THAN 118FT.

TWY P CLSD TO ACFT WITH WINGSPAN MORE THAN 79FT.

NOTE: SEE SPECIAL NOTICES-CONTINUOUS POWER FACILITIES.

ACFT ENG RUNS ABV IDLE NOT APPROVED ON ACFT PRKG RAMPS.

CALL FOR PUSHBACK NOT REQUIRED.

19003
AIROPT DIAGRAM
 D-ATIS ARR 134.375
 DEP 135.3
 CINCINNATI TOWER
 118.3 (RWYS 18C/36C, 09/27)
 118.975 360.85 (RWY 18L/36R)
 133.325 (RWY 18R/36L)
 GND CON
 121.7
 CLNC DEL
 127.175
D

AL-655 (FAA)
CINCINNATI/NORTHERN KENTUCKY INTL (CVG)
COVINGTON, KENTUCKY

RWY 09-27
 PCN 101 R/B/W/T
 S-120, D-250, 2D-550, 2D/2D2-875
 RWY 18C-36C
 PCN 112 F/C/W/T
 S-120, D-250, 2D-550, 2D/2D2-875
 RWY 18L-36R
 PCN 127 R/B/W/T
 S-120, D-250, 2D-550, 2D/2D2-875
 RWY 18R-36L
 PCN 170 R/B/W/T
 S-120, D-250, 2D-550, 2D/2D2-875

8000 X 150
 12000 X 150
 11000 X 150
 10000 X 150

ELEV 865
 ELEV 873
 ELEV 883
 ELEV 875
 ELEV 886
 ELEV 841
 ELEV 875
 FIELD ELEV 896

185.8°
 005.8°
 095.8°
 275.8°
 005.8°
 005.8°
 005.8°

39°04'N
 39°03'N
 39°02'N

84°41'W
 84°40'W
 84°39'W

ASSC in use. Operate transponders with altitude reporting mode and ADS-B (if equipped) enabled on all airport surfaces.

VAR 5.5° W
 JANUARY 2015
 ANNUAL RATE OF CHANGE
 0.1° W

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
 READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

AIROPT DIAGRAM
19003
CINCINNATI/NORTHERN KENTUCKY INTL (CVG)
COVINGTON, KENTUCKY

Covington, KY
Cincinnati/Northern Kentucky Intl
ICAO Identifier KCVG

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 39-02-55.812N / 84-40-04.16W
2.2.2 From City: 8 Miles SW Of Covington, KY
2.2.3 Elevation: 896.2 ft
2.2.5 Magnetic variation: 6W (2020)
2.2.6 Airport Contact: Candace McGraw
PO BOX 752000
Cincinnati, OH 45275
(859-767-3151)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973

AD 2.12 Runway physical characteristics

2.12.1 Designation: 18C
2.12.2 True Bearing: 180
2.12.3 Dimensions: 11000 ft x 150 ft
2.12.4 PCN: 112 F/C/W/T
2.12.5 Coordinates: 39-03-53.0727N /
84-40-07.0232W
2.12.6 Threshold elevation: 874.6 ft
2.12.6 Touchdown zone elevation: 874.6 ft

2.12.1 Designation: 36C
2.12.2 True Bearing: 0
2.12.3 Dimensions: 11000 ft x 150 ft
2.12.4 PCN: 112 F/C/W/T
2.12.5 Coordinates: 39-02-04.355N / 84-40-07.4726W
2.12.6 Threshold elevation: 840.9 ft
2.12.6 Touchdown zone elevation: 850.6 ft

2.12.1 Designation: 18L
2.12.2 True Bearing: 180
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 127 R/B/W/T
2.12.5 Coordinates: 39-03-21.078N / 84-38-48.002W

2.12.6 Threshold elevation: 886.2 ft
2.12.6 Touchdown zone elevation: 889.2 ft

2.12.1 Designation: 36R
2.12.2 True Bearing: 0
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 127 R/B/W/T
2.12.5 Coordinates: 39-01-42.243N / 84-38-48.4558W
2.12.6 Threshold elevation: 896.2 ft
2.12.6 Touchdown zone elevation: 896.2 ft

2.12.1 Designation: 09
2.12.2 True Bearing: 90
2.12.3 Dimensions: 12000 ft x 150 ft
2.12.4 PCN: 101 R/B/W/T
2.12.5 Coordinates: 39-02-46.9081N / 84-41-42.355W
2.12.6 Threshold elevation: 883.3 ft
2.12.6 Touchdown zone elevation: 883.3 ft

2.12.1 Designation: 27
2.12.2 True Bearing: 270
2.12.3 Dimensions: 12000 ft x 150 ft
2.12.4 PCN: 101 R/B/W/T
2.12.5 Coordinates: 39-02-46.5432N /
84-39-10.2575W
2.12.6 Threshold elevation: 874.9 ft
2.12.6 Touchdown zone elevation: 874.9 ft

2.12.1 Designation: 18R
2.12.2 True Bearing: 180
2.12.3 Dimensions: 8000 ft x 150 ft
2.12.4 PCN: 170 R/B/W/T
2.12.5 Coordinates: 39-04-15.1761N /
84-41-01.4563W
2.12.6 Threshold elevation: 865.4 ft
2.12.6 Touchdown zone elevation: 868.4 ft

2.12.1 Designation: 36L
2.12.2 True Bearing: 0
2.12.3 Dimensions: 8000 ft x 150 ft
2.12.4 PCN: 170 R/B/W/T
2.12.5 Coordinates: 39-02-56.1061N /
84-41-01.7599W
2.12.6 Threshold elevation: 873.4 ft
2.12.6 Touchdown zone elevation: 873.4 ft

AD 2.13 Declared distances

2.13.1 Designation: 18C
2.13.2 Takeoff run available: 11000
2.13.3 Takeoff distance available: 11000
2.13.4 Accelerate-stop distance available: 11000

2.13.5 Landing distance available: 11000

2.13.1 Designation: 36C

2.13.2 Takeoff run available: 11000

2.13.3 Takeoff distance available: 11000

2.13.4 Accelerate–stop distance available: 11000

2.13.5 Landing distance available: 11000

2.13.1 Designation: 18L

2.13.2 Takeoff run available: 10000

2.13.3 Takeoff distance available: 10000

2.13.4 Accelerate–stop distance available: 10000

2.13.5 Landing distance available: 10000

2.13.1 Designation: 36R

2.13.2 Takeoff run available: 10000

2.13.3 Takeoff distance available: 10000

2.13.4 Accelerate–stop distance available: 10000

2.13.5 Landing distance available: 10000

2.13.1 Designation: 09

2.13.2 Takeoff run available: 12000

2.13.3 Takeoff distance available: 12000

2.13.4 Accelerate–stop distance available: 11640

2.13.5 Landing distance available: 11640

2.13.1 Designation: 27

2.13.2 Takeoff run available: 12000

2.13.3 Takeoff distance available: 12000

2.13.4 Accelerate–stop distance available: 12000

2.13.5 Landing distance available: 12000

2.13.1 Designation: 18R

2.13.2 Takeoff run available: 8000

2.13.3 Takeoff distance available: 8000

2.13.4 Accelerate–stop distance available: 8000

2.13.5 Landing distance available: 8000

2.13.1 Designation: 36L

2.13.2 Takeoff run available: 8000

2.13.3 Takeoff distance available: 8000

2.13.4 Accelerate–stop distance available: 8000

2.13.5 Landing distance available: 8000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 18C

2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 36C

2.14.2 Approach lighting system: ALSF2

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 18L

2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 36R

2.14.2 Approach lighting system: ALSF2

2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 09

2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 27

2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 18R

2.14.2 Approach lighting system: ALSF2

2.14.1 Designation: 36L

2.14.2 Approach lighting system: ALSF2

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P (270–089)

2.18.3 Service designation: 123.875 MHz

2.18.1 Service designation: APCH/P (270–089)

2.18.3 Service designation: 363.15 MHz

2.18.1 Service designation: APCH/P (090–269)

2.18.3 Service designation: 254.25 MHz

2.18.1 Service designation: APCH/P (090–269)

2.18.3 Service designation: 119.7 MHz

2.18.1 Service designation: CD/P

2.18.3 Service designation: 127.175 MHz

2.18.1 Service designation: CLASS B (090–269)

2.18.3 Service designation: 119.7 MHz

2.18.1 Service designation: CLASS B (001–180)

2.18.3 Service designation: 126.65 MHz

2.18.1 Service designation: CLASS B (181–360)

2.18.3 Service designation: 128.7 MHz

2.18.1 Service designation: CLASS B (090–269)

2.18.3 Service designation: 254.25 MHz

2.18.1 Service designation: CLASS B (270–089)
2.18.3 Service designation: 363.15 MHz

2.18.1 Service designation: CLASS B (270–089)
2.18.3 Service designation: 123.875 MHz

2.18.1 Service designation: D–ATIS (ARR)
2.18.3 Service designation: 134.375 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D–ATIS (DEP)
2.18.3 Service designation: 135.3 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: DEP/P (181–360)
2.18.3 Service designation: 128.7 MHz

2.18.1 Service designation: DEP/P (001–180)
2.18.3 Service designation: 126.65 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: JAKIE STAR
2.18.3 Service designation: 254.25 MHz

2.18.1 Service designation: JAKIE STAR
2.18.3 Service designation: 119.7 MHz

2.18.1 Service designation: LCL/P (RWY 18L/36R)
2.18.3 Service designation: 118.975 MHz

2.18.1 Service designation: LCL/P (RYS 18C/36C & 09/27)
2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: LCL/P (RY 18R/36L)
2.18.3 Service designation: 133.325 MHz

2.18.1 Service designation: LCL/P (RY 18L/36R)
2.18.3 Service designation: 360.85 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 09. Magnetic variation: 4W

2.19.2 ILS identification: URN
2.19.5 Coordinates: 39–02–43.95N / 84–39–01.77W
2.19.6 Site elevation: 872 ft

2.19.1 ILS type: Glide Slope for runway 09. Magnetic variation: 4W

2.19.2 ILS identification: URN
2.19.5 Coordinates: 39–02–42.9214N / 84–41–28.2651W
2.19.6 Site elevation: 873.6 ft

2.19.1 ILS type: Localizer for runway 09. Magnetic variation: 4W

2.19.2 ILS identification: URN
2.19.5 Coordinates: 39–02–46.51N / 84–39–02.15W
2.19.6 Site elevation: 873.7 ft

2.19.1 ILS type: Localizer for runway 18C. Magnetic variation: 6W

2.19.2 ILS identification: SIC
2.19.5 Coordinates: 39–01–54.18N / 84–40–07.51W
2.19.6 Site elevation: 819 ft

2.19.1 ILS type: DME for runway 18C. Magnetic variation: 6W

2.19.2 ILS identification: SIC
2.19.5 Coordinates: 39–01–54.15N / 84–40–08.21W
2.19.6 Site elevation: 819 ft

2.19.1 ILS type: Glide Slope for runway 18C. Magnetic variation: 6W

2.19.2 ILS identification: SIC
2.19.5 Coordinates: 39–03–42.6502N / 84–40–12.1375W
2.19.6 Site elevation: 868 ft

2.19.1 ILS type: Localizer for runway 18L. Magnetic variation: 4W

2.19.2 ILS identification: CIZ
2.19.5 Coordinates: 39–01–31.7864N / 84–38–48.5034W
2.19.6 Site elevation: 899.1 ft

2.19.1 ILS type: DME for runway 18L. Magnetic variation: 4W

2.19.2 ILS identification: CIZ
2.19.5 Coordinates: 39–01–31.5754N / 84–38–45.4055W
2.19.6 Site elevation: 915 ft

2.19.1 ILS type: Glide Slope for runway 18L. Magnetic

variation: 4W
2.19.2 ILS identification: CIZ
2.19.5 Coordinates: 39-03-10.8816N / 84-38-42.9759W
2.19.6 Site elevation: 881.3 ft

2.19.1 ILS type: Glide Slope for runway 18R. Magnetic variation: 6W
2.19.2 ILS identification: CJN
2.19.5 Coordinates: 39-04-03.91N / 84-41-06.57W
2.19.6 Site elevation: 860.5 ft

2.19.1 ILS type: Inner Marker for runway 18R. Magnetic variation: 6W
2.19.2 ILS identification: CJN
2.19.5 Coordinates: 39-04-23.57N / 84-41-01.42W
2.19.6 Site elevation: 856 ft

2.19.1 ILS type: DME for runway 18R. Magnetic variation: 6W
2.19.2 ILS identification: CJN
2.19.5 Coordinates: 39-02-41.52N / 84-41-05.2W
2.19.6 Site elevation: 869 ft

2.19.1 ILS type: Localizer for runway 18R. Magnetic variation: 6W
2.19.2 ILS identification: CJN
2.19.5 Coordinates: 39-02-41.27N / 84-41-01.83W
2.19.6 Site elevation: 871 ft

2.19.1 ILS type: Localizer for runway 27. Magnetic variation: 6W
2.19.2 ILS identification: JDP
2.19.5 Coordinates: 39-02-46.94N / 84-41-55.34W
2.19.6 Site elevation: 884 ft

2.19.1 ILS type: Glide Slope for runway 27. Magnetic variation: 6W
2.19.2 ILS identification: JDP
2.19.5 Coordinates: 39-02-42.6285N / 84-39-25.1641W
2.19.6 Site elevation: 866.8 ft

2.19.1 ILS type: Localizer for runway 36C. Magnetic variation: 6W
2.19.2 ILS identification: CVG
2.19.5 Coordinates: 39-04-03.6988N / 84-40-06.98W
2.19.6 Site elevation: 882.2 ft

2.19.1 ILS type: Glide Slope for runway 36C. Magnetic variation: 6W

2.19.2 ILS identification: CVG
2.19.5 Coordinates: 39-02-15.4818N / 84-40-12.4941W
2.19.6 Site elevation: 834.3 ft

2.19.1 ILS type: Inner Marker for runway 36C. Magnetic variation: 6W
2.19.2 ILS identification: CVG
2.19.5 Coordinates: 39-01-54.0493N / 84-40-07.51W
2.19.6 Site elevation: 818 ft

2.19.1 ILS type: DME for runway 36C. Magnetic variation: 6W
2.19.2 ILS identification: CVG
2.19.5 Coordinates: 39-04-03.9116N / 84-40-10.1714W
2.19.6 Site elevation: 886 ft

2.19.1 ILS type: DME for runway 36L. Magnetic variation: 6W
2.19.2 ILS identification: VAC
2.19.5 Coordinates: 39-04-25.03N / 84-41-04.79W
2.19.6 Site elevation: 848 ft

2.19.1 ILS type: Inner Marker for runway 36L. Magnetic variation: 6W
2.19.2 ILS identification: VAC
2.19.5 Coordinates: 39-02-44.31N / 84-41-01.8W
2.19.6 Site elevation:

2.19.1 ILS type: Localizer for runway 36L. Magnetic variation: 6W
2.19.2 ILS identification: VAC
2.19.5 Coordinates: 39-04-25.49N / 84-41-01.4W
2.19.6 Site elevation: 854.7 ft

2.19.1 ILS type: Glide Slope for runway 36L. Magnetic variation: 6W
2.19.2 ILS identification: VAC
2.19.5 Coordinates: 39-03-06.56N / 84-41-06.79W
2.19.6 Site elevation: 866.5 ft

2.19.1 ILS type: DME for runway 36R. Magnetic variation: 6W
2.19.2 ILS identification: EEI
2.19.5 Coordinates: 39-03-30.8783N / 84-38-51.1801W
2.19.6 Site elevation: 905 ft

2.19.1 ILS type: Middle Marker for runway 36R. Magnetic variation: 6W

2.19.2 ILS identification: EEI
2.19.5 Coordinates: 39-01-16.5412N /
84-38-48.5766W
2.19.6 Site elevation: 915 ft

2.19.1 ILS type: Localizer for runway 36R. Magnetic
variation: 6W
2.19.2 ILS identification: EEI
2.19.5 Coordinates: 39-03-31.4852N /
84-38-47.9546W
2.19.6 Site elevation: 892.1 ft

2.19.1 ILS type: Inner Marker for runway 36R. Magnetic

variation: 6W
2.19.2 ILS identification: EEI
2.19.5 Coordinates: 39-01-33.5638N /
84-38-48.4956W
2.19.6 Site elevation: 899 ft

2.19.1 ILS type: Glide Slope for runway 36R. Magnetic
variation: 6W
2.19.2 ILS identification: EEI
2.19.5 Coordinates: 39-01-52.8046N /
84-38-43.3389W
2.19.6 Site elevation: 889.9 ft

General Remarks:

NOISE SENSITIVE AREAS NORTH & SOUTH OF ARPT. RY ASSIGNMENTS BETWEEN 2200-0700 WILL BE
PREDICATED ON NOISE ABATEMENT CONSIDERATIONS.

SUCCESSIVE OR SIMULTANEOUS DEPS FM RYS 18L AND RY 18C ARE APPROVED WITH COURSE
DIVERGENCE BEGINNING NO FURTHER THAN 2 MILES FM EOR DUE TO NOISE ABATEMENT
RESTRICTIONS.

RY 09/27 WEST 4200 FT CONC; EAST 750 FT CONC; REMAINDER ASPHALT OVERLAY .

SUCCESSIVE OR SIMULTANEOUS DEPS FM RY 36C & RY 36R ARE APPROVED WITH COURSE DIVERGENCE
BEGINNING NO FURTHER THAN 2 MILES FM EOR DUE TO NOISE ABATEMENT RESTRICTIONS.

CVG TWY'S, ALL TWY'S RESTRICTED TO 15 MPH OR LESS WITH WINGSPAN 214 FT AND GREATER.

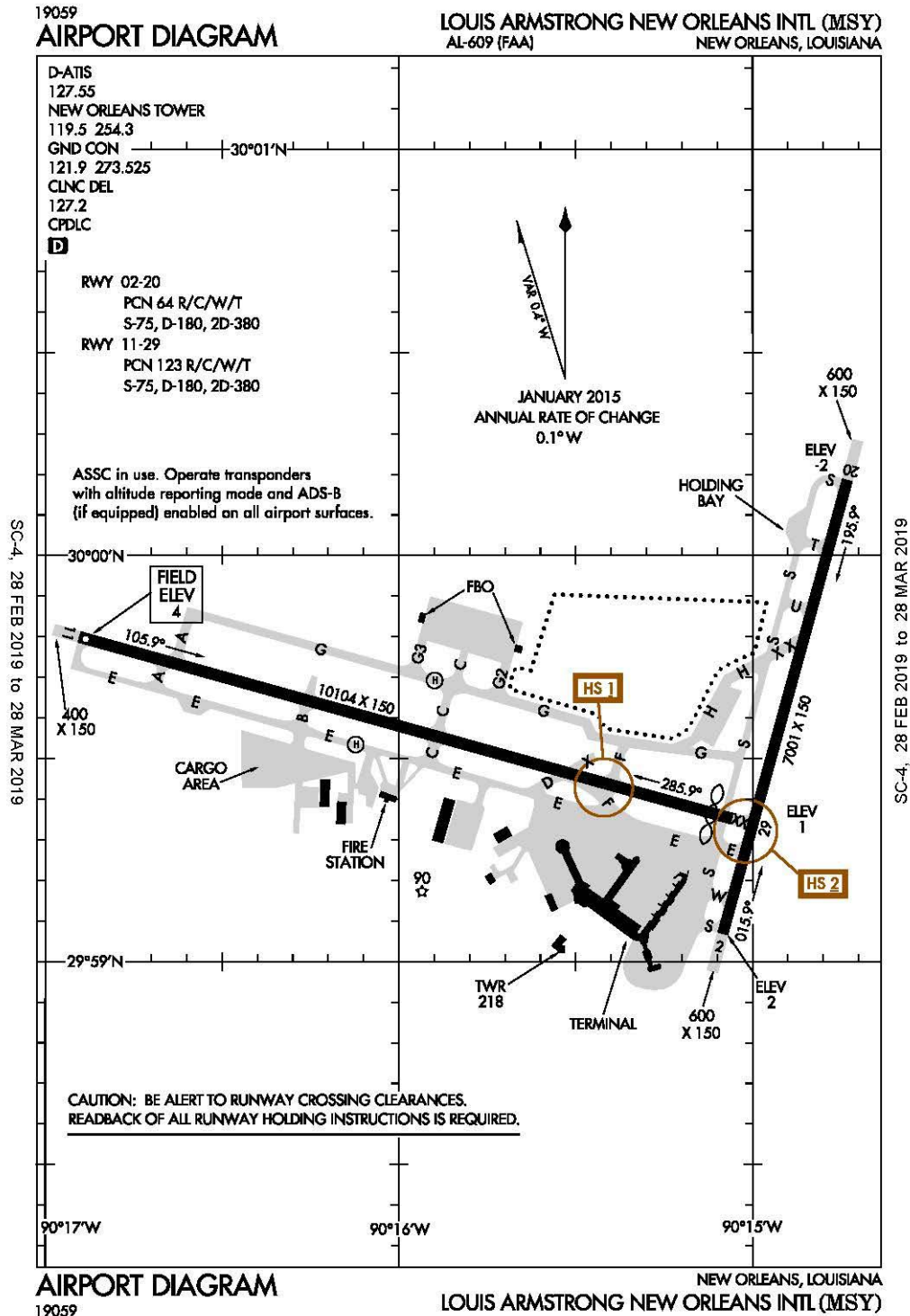
SUCCESSIVE OR SIMULTANEOUS DEPARTURES FROM RWY 36L AND RWY 36R ARE APPROVED WITH
COURSE DIVERGENCE BEGINNING NO FURTHER THAN 2 MILES FROM EOR DUE TO NOISE ABATEMENT
RESTRICTIONS.

LARGE FLOCKS OF BIRDS ON AND INVOF THE ARPT.

RAMP CTL EFFECTIVE 0800-0400Z. RAMP CTL 130.375 130.900 DHL RAMP CTL 129.475

ASSC IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED)
ENABLED ON ALL AIRPORT SURFACES.

New Orleans, Louisiana
Louis Armstrong New Orleans International
ICAO Identifier KMSY



New Orleans, LA
Louis Armstrong New Orleans Intl
ICAO Identifier KMSY

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 29-59-35.8N / 90-15-32.5W
2.2.2 From City: 10 Miles W Of New Orleans, LA
2.2.3 Elevation: 3.7 ft
2.2.5 Magnetic variation: 1W (2020)
2.2.6 Airport Contact: Kevin Dolliole
PO BOX 20007
New Orleans, LA 70141
((504) 303-7652)

AD 2.3 Attendance Schedule

2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: No
2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 02
2.10.1.b Type of obstacle: Road (12 ft above runway end). Lighted
2.10.1.c Location of obstacle: 365 ft R of Centerline

2.10.1.a. Runway designation: 20
2.10.1.b Type of obstacle: Road (13 ft above runway end). Lighted
2.10.1.c Location of obstacle: 289 ft L of Centerline

2.10.1.a. Runway designation: 29
2.10.1.b Type of obstacle: Tree (53 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 694 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 02
2.12.2 True Bearing: 15
2.12.3 Dimensions: 7001 ft x 150 ft
2.12.4 PCN: 64 R/C/W/T
2.12.5 Coordinates: 29-59-04.2055N / 90-15-05.094W
2.12.6 Threshold elevation: 1.8 ft

2.12.6 Touchdown zone elevation: 2.1 ft

2.12.1 Designation: 20
2.12.2 True Bearing: 195
2.12.3 Dimensions: 7001 ft x 150 ft
2.12.4 PCN: 64 R/C/W/T
2.12.5 Coordinates: 30-00-10.9924N /
90-14-43.8363W
2.12.6 Threshold elevation: -2.4 ft
2.12.6 Touchdown zone elevation: -0.6 ft

2.12.1 Designation: 11
2.12.2 True Bearing: 105
2.12.3 Dimensions: 10104 ft x 150 ft
2.12.4 PCN: 123 R/C/W/T
2.12.5 Coordinates: 29-59-47.8556N /
90-16-54.2241W
2.12.6 Threshold elevation: 3.7 ft
2.12.6 Touchdown zone elevation: 3.7 ft

2.12.1 Designation: 29
2.12.2 True Bearing: 285
2.12.3 Dimensions: 10104 ft x 150 ft
2.12.4 PCN: 123 R/C/W/T
2.12.5 Coordinates: 29-59-21.1654N /
90-15-03.4894W
2.12.6 Threshold elevation: 1.3 ft
2.12.6 Touchdown zone elevation: 2 ft

AD 2.13 Declared distances

2.13.1 Designation: 02
2.13.2 Takeoff run available: 7001
2.13.3 Takeoff distance available: 7001
2.13.4 Accelerate-stop distance available: 7001
2.13.5 Landing distance available: 7001

2.13.1 Designation: 20
2.13.2 Takeoff run available: 7001
2.13.3 Takeoff distance available: 7001
2.13.4 Accelerate-stop distance available: 7001
2.13.5 Landing distance available: 7001

2.13.1 Designation: 11
2.13.2 Takeoff run available: 10104
2.13.3 Takeoff distance available: 10104
2.13.4 Accelerate-stop distance available: 10104
2.13.5 Landing distance available: 10104

2.13.1 Designation: 29
2.13.2 Takeoff run available: 10104
2.13.3 Takeoff distance available: 10104

2.13.4 Accelerate-stop distance available: 10104
2.13.5 Landing distance available: 9800

AD 2.14 Approach and runway lighting

2.14.1 Designation: 02
2.14.2 Approach lighting system: RLLS
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 20
2.14.2 Approach lighting system: MALS
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 11
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 29
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P DEP/P (WEST)
2.18.3 Service designation: 350.35 MHz

2.18.1 Service designation: APCH/P DEP/P (EAST)
2.18.3 Service designation: 290.3 MHz

2.18.1 Service designation: APCH/P DEP/P (WEST)
2.18.3 Service designation: 125.5 MHz

2.18.1 Service designation: APCH/P DEP/P (EAST)
2.18.3 Service designation: 133.15 MHz

2.18.1 Service designation: APCH/S
2.18.3 Service designation: 269.2 MHz

2.18.1 Service designation: CD/P PRE TAXI CLNC
2.18.3 Service designation: 127.2 MHz

2.18.1 Service designation: CLASS B (NORTH & EAST)
2.18.3 Service designation: 290.3 MHz

2.18.1 Service designation: CLASS B (WEST)
2.18.3 Service designation: 350.35 MHz

2.18.1 Service designation: CLASS B (SE & SOUTH)
2.18.3 Service designation: 256.9 MHz

2.18.1 Service designation: CLASS B (WEST)
2.18.3 Service designation: 125.5 MHz

2.18.1 Service designation: CLASS B (SE & SOUTH)
2.18.3 Service designation: 123.85 MHz

2.18.1 Service designation: CLASS B (NORTH & EAST)
2.18.3 Service designation: 133.15 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 127.55 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 273.525 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 119.5 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 254.3 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 02. Magnetic variation: 1W

2.19.2 ILS identification: JFI
2.19.5 Coordinates: 30-00-20.5102N /
90-14-40.8078W
2.19.6 Site elevation: -4.2 ft

2.19.1 ILS type: Glide Slope for runway 02. Magnetic variation: 1W

2.19.2 ILS identification: JFI
2.19.5 Coordinates: 29-59-13.6093N /
90-14-58.5588W
2.19.6 Site elevation: -0.9 ft

2.19.1 ILS type: DME for runway 02. Magnetic variation: 1W

2.19.2 ILS identification: JFI
2.19.5 Coordinates: 30-00-21.6577N /
90-14-43.2465W
2.19.6 Site elevation: 1.3 ft

2.19.1 ILS type: Localizer for runway 11. Magnetic variation: 1W

2.19.2 ILS identification: MSY

2.19.5 Coordinates: 29-59-19.3211N / 90-14-55.8537W

2.19.6 Site elevation: -0.5 ft

2.19.1 ILS type: DME for runway 11. Magnetic variation: 1W

2.19.2 ILS identification: MSY

2.19.5 Coordinates: 29-59-17.2127N / 90-14-55.7209W

2.19.6 Site elevation: 12.4 ft

2.19.1 ILS type: Glide Slope for runway 11. Magnetic variation: 1W

2.19.2 ILS identification: MSY

2.19.5 Coordinates: 29-59-48.6197N / 90-16-39.2497W

2.19.6 Site elevation: -3.1 ft

2.19.1 ILS type: Inner Marker for runway 11. Magnetic variation: 1W

2.19.2 ILS identification: MSY

2.19.5 Coordinates: 29-59-50.256N / 90-17-04.1742W

2.19.6 Site elevation: 4.4 ft

2.19.1 ILS type: DME for runway 20. Magnetic variation: 1W

2.19.2 ILS identification: ONW

2.19.5 Coordinates: 30-00-21.6577N / 90-14-43.2465W

2.19.6 Site elevation: 1.3 ft

2.19.1 ILS type: Localizer for runway 20. Magnetic variation: 1W

2.19.2 ILS identification: ONW

2.19.5 Coordinates: 29-58-55.148N / 90-15-07.973W

2.19.6 Site elevation: 2.3 ft

2.19.1 ILS type: DME for runway 29. Magnetic variation: 1W

2.19.2 ILS identification: HOX

2.19.5 Coordinates: 29-59-17.2127N / 90-14-55.7209W

2.19.6 Site elevation: 12.4 ft

2.19.1 ILS type: Glide Slope for runway 29. Magnetic variation: 1W

2.19.2 ILS identification: HOX

2.19.5 Coordinates: 29-59-27.9656N / 90-15-16.7865W

2.19.6 Site elevation: 0.1 ft

2.19.1 ILS type: Localizer for runway 29. Magnetic variation: 1W

2.19.2 ILS identification: HOX

2.19.5 Coordinates: 29-59-50.5168N / 90-17-05.2703W

2.19.6 Site elevation: 4.4 ft

General Remarks:

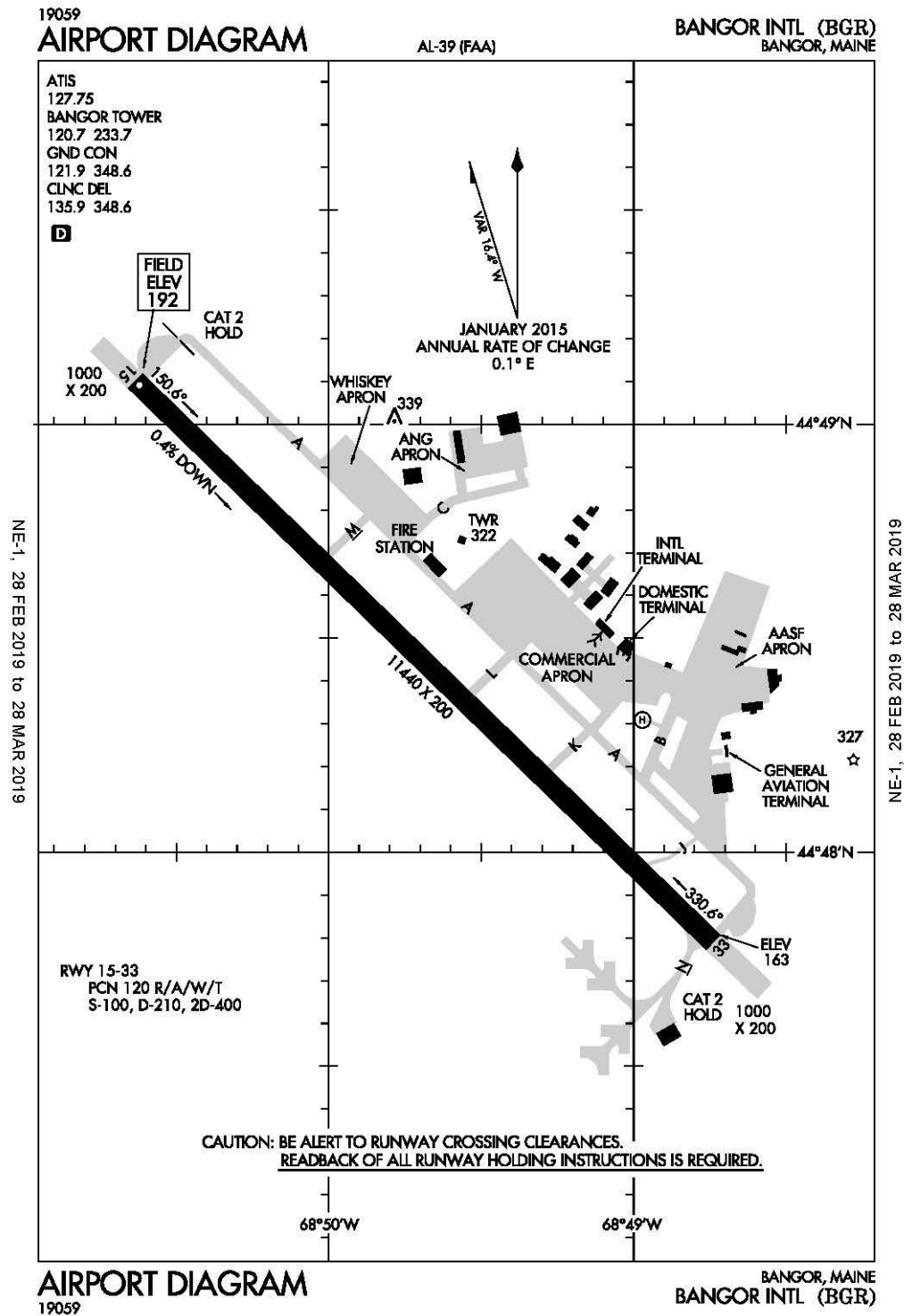
180 DEG & LOCKED WHEEL TURNS PROHIBITED ON ASPH SFC ACFT 12500 LBS & OVER.

FLOCKS OF BIRDS ON & IN VICINITY OF ARPT.

RY 11 NOISE SENSITIVE FOR DEP; AVBL FOR OPNL NECESSITY. ALL RYS NOISE SENSITIVE FOR ARR. ARRIVING TURBOJETS MUST MAKE 5 MILE FINAL APCH TO MINIMIZE NOISE.

ASSC IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

Bangor, Maine
Bangor International
ICAO Identifier KBGR



Bangor, ME
Bangor Intl
ICAO Identifier KBGR

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 44-48-26.8N / 68-49-41.3W
2.2.2 From City: 3 Miles W Of Bangor, ME
2.2.3 Elevation: 192.1 ft
2.2.5 Magnetic variation: 16W (2020)
2.2.6 Airport Contact: Tony Caruso
BANGOR INTERNATIONAL ARPT
Bangor, ME 4401 (207-992-4600)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
B certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 33
2.10.1.b Type of obstacle: Trees (76 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 0 ft B of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 15
2.12.2 True Bearing: 134
2.12.3 Dimensions: 11440 ft x 200 ft
2.12.4 PCN: 120 R/A/W/T
2.12.5 Coordinates: 44-49-06.1369N /
68-50-38.1522W
2.12.6 Threshold elevation: 192.1 ft
2.12.6 Touchdown zone elevation: 192.1 ft

2.12.1 Designation: 33
2.12.2 True Bearing: 314
2.12.3 Dimensions: 11440 ft x 200 ft
2.12.4 PCN: 120 R/A/W/T
2.12.5 Coordinates: 44-47-47.4136N /
68-48-44.3618W
2.12.6 Threshold elevation: 162.9 ft
2.12.6 Touchdown zone elevation: 162.9 ft

2.12.1 Designation: H1
2.12.3 Dimensions: 100 ft x 100 ft

AD 2.13 Declared distances

2.13.1 Designation: 15
2.13.2 Takeoff run available: 11440
2.13.3 Takeoff distance available: 11440
2.13.4 Accelerate-stop distance available: 11440
2.13.5 Landing distance available: 11440

AD 2.14 Approach and runway lighting

2.14.1 Designation: 15
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 33
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P DEP/P IC
2.18.3 Service designation: 118.925 MHz

2.18.1 Service designation: APCH/P DEP/P IC
2.18.3 Service designation: 239.3 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 124.5 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 127.75 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 135.9 MHz

2.18.1 Service designation: CLASS C
2.18.3 Service designation: 118.925 MHz

2.18.1 Service designation: CLASS C
2.18.3 Service designation: 239.3 MHz

2.18.1 Service designation: CLASS C/S
2.18.3 Service designation: 124.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

68-50-46.7197W
2.19.6 Site elevation: 184 ft

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.19.1 ILS type: Middle Marker for runway 15. Magnetic variation: 16W

2.19.2 ILS identification: JVH
2.19.5 Coordinates: 44-49-23.6858N /
68-51-03.4639W
2.19.6 Site elevation: 158 ft

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 233.7 MHz

2.19.1 ILS type: DME for runway 15. Magnetic variation: 16W

2.19.2 ILS identification: JVH
2.19.5 Coordinates: 44-47-42.4986N /
68-48-31.8082W
2.19.6 Site elevation: 166.2 ft

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 120.7 MHz

2.18.1 Service designation: NG OPS
2.18.3 Service designation: 41.2 MHz

2.19.1 ILS type: DME for runway 33. Magnetic variation: 16W

2.19.2 ILS identification: BGR
2.19.5 Coordinates: 44-47-42.4986N /
68-48-31.8082W
2.19.6 Site elevation: 166.2 ft

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 15. Magnetic variation: 16W

2.19.2 ILS identification: JVH
2.19.5 Coordinates: 44-47-40.3704N /
68-48-34.1931W
2.19.6 Site elevation: 161.7 ft

2.19.1 ILS type: Glide Slope for runway 15. Magnetic variation: 16W

2.19.2 ILS identification: JVH
2.19.5 Coordinates: 44-49-02.1756N /
68-50-22.4761W
2.19.6 Site elevation: 187.7 ft

2.19.1 ILS type: Glide Slope for runway 33. Magnetic variation: 16W

2.19.2 ILS identification: BGR
2.19.5 Coordinates: 44-47-53.7039N /
68-48-59.7081W
2.19.6 Site elevation: 148.8 ft

2.19.1 ILS type: Inner Marker for runway 15. Magnetic variation: 16W

2.19.2 ILS identification: JVH
2.19.5 Coordinates: 44-49-12.0633N /

2.19.1 ILS type: Localizer for runway 33. Magnetic variation: 16W

2.19.2 ILS identification: BGR
2.19.5 Coordinates: 44-49-13.6222N /
68-50-48.9786W
2.19.6 Site elevation: 181.7 ft

General Remarks:

TRANSIENT ACFT MAY BE DIVERTED TO CIVILIAN SIDE DURING NON-DUTY HRS & WEEKENDS. FEE REQUIRED; NO ANG TRANSIENT ALERT.

TFC PAT: RWY 33 LEFT TFC, TURBO JET TFC 2000' MSL UNLESS OTHERWISE INSTR.

MISC: RWY 15-33 GROOVED.

ANG: PPR REQUIRED DSN 698-7232 (COMM 207-990-7232), 3 HR OUT CALL (HF 6761) & 30 MIN OUT CALL (311.0) RQD TO ENSURE CUSTOMS/AG AVAIL & TIMELY TRANSIENT SVC. TRAN MAINT AVBL BY PPR. TRAN ACFT MAY BE DIVERTED TO CIV SIDE DUR OPRG HRS.

ANG: FEE RQR. ANG NOT EQPT OR MANNED WITH AN AERIAL PORT FLT 30 OR MORE PSGR WILL BE SENT TO CITY FOR PROCESSING. CAN HANDLE ALL MIL ACFT. SVC AVBL 24/7. CITY WILL ACCEPT ALL FLIGHTS. NO RESTRICTIONS FOR HAZ CRGO. CALL CITY DISPATCH AT 207-992-4623 TO COORD PARKING

ARNG: OPR 1230-2100Z++ MON-FRI EXC HOL. LTD

MAINT. J8. PPR MAY-OCT SVC DSN 626-1100.

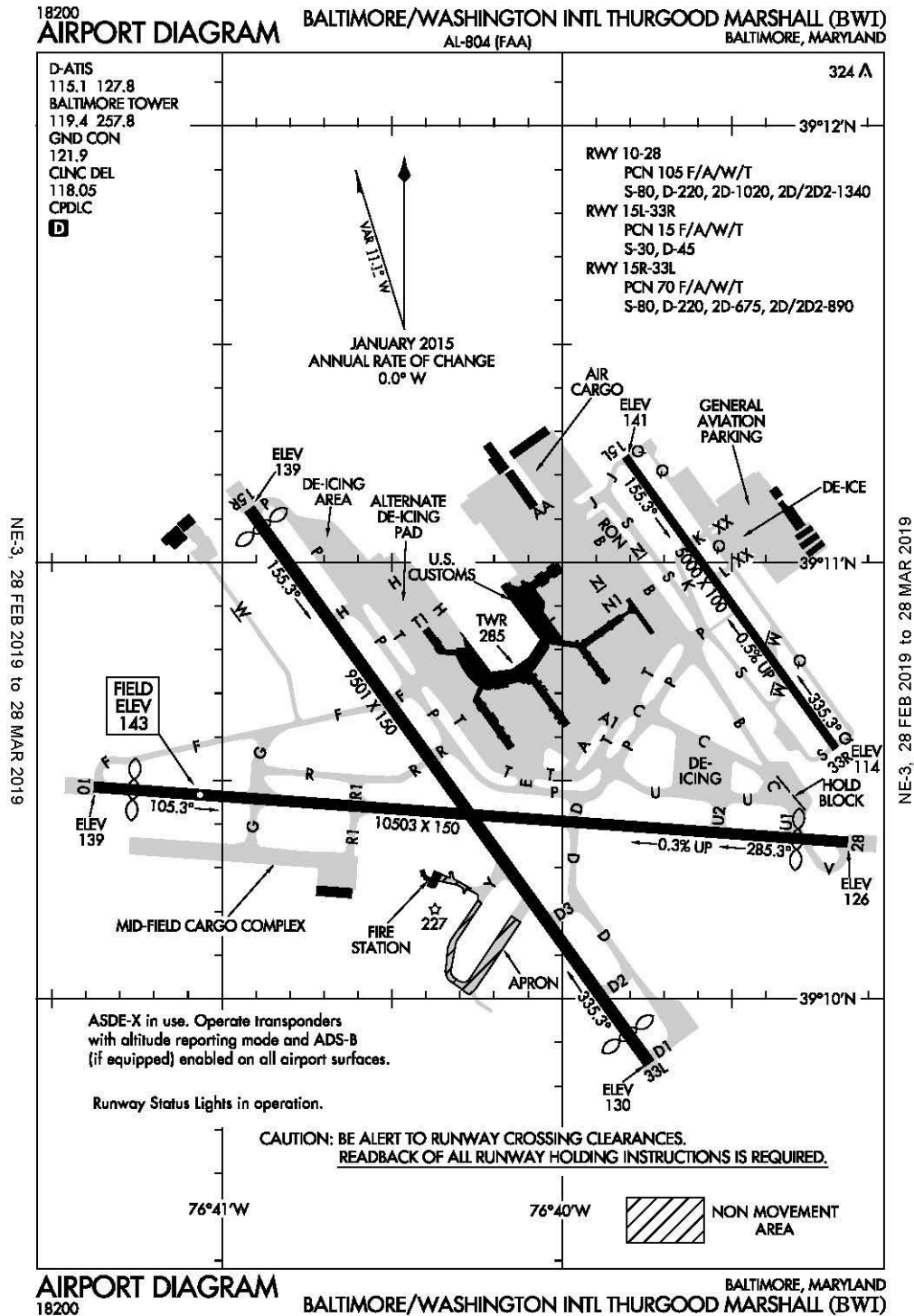
CAUTION: BASH PHASE II PERIOD SEP-NOV, APR-MAY. EXPECT INCREASED BIRD ACTIVITY. CONTACT BASE OPS/COMMAND POST/SOF FOR CURRENT BIRDWATCH COND.

SERVICE-FLUID: RMKS: FOREIGN MILITARY ONLY: ON BASE LOX SVC UNAVBL.

FUEL: A++ (MIL).

MIL SVR-FLUID: OFF-BASE CONTRACTED LOX AVBL H24-RQR 24HR NOTICE, PPR CTC C207-404-7232.

Baltimore, Maryland
Baltimore-Washington International Thurgood Marshall
ICAO Identifier KBWI



Baltimore, MD
Baltimore/Washington Intl Thurgood Marshal
ICAO Identifier KBWI

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 39-10-32.622N /
76-40-08.368W
2.2.2 From City: 9 Miles S Of Baltimore, MD
2.2.3 Elevation: 143.4 ft
2.2.5 Magnetic variation: 11W (2000)
2.2.6 Airport Contact: John Stewart
PO BOX 8766
BWI Airport, MD 21240
(410-859-7018)

AD 2.3 Attendance Schedule

2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 10
2.10.1.b Type of obstacle: Tree (35 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 305 ft R of Centerline

2.10.1.a. Runway designation: 15L
2.10.1.b Type of obstacle: Pole (31 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 615 ft R of Centerline

2.10.1.a. Runway designation: 15R
2.10.1.b Type of obstacle: Ant (126 ft above runway
end). Lighted
2.10.1.c Location of obstacle: 908 ft L of Centerline

2.10.1.a. Runway designation: 28
2.10.1.b Type of obstacle: Tree (31 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 425 ft R of Centerline

2.10.1.a. Runway designation: 33L

2.10.1.b Type of obstacle: Tower (154 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 906 ft L of Centerline

2.10.1.a. Runway designation: 33R
2.10.1.b Type of obstacle: Tree (39 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 585 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 15L
2.12.2 True Bearing: 144
2.12.3 Dimensions: 5000 ft x 100 ft
2.12.4 PCN: 15 F/A/W/T
2.12.5 Coordinates: 39-11-14.5431N /
76-39-48.7441W
2.12.6 Threshold elevation: 141.4 ft
2.12.6 Touchdown zone elevation: 141.5 ft

2.12.1 Designation: 33R
2.12.2 True Bearing: 324
2.12.3 Dimensions: 5000 ft x 100 ft
2.12.4 PCN: 15 F/A/W/T
2.12.5 Coordinates: 39-10-34.4468N /
76-39-11.6307W
2.12.6 Threshold elevation: 114 ft
2.12.6 Touchdown zone elevation: 124.4 ft

2.12.1 Designation: 15R
2.12.2 True Bearing: 144
2.12.3 Dimensions: 9501 ft x 150 ft
2.12.4 PCN: 70 F/A/W/T
2.12.5 Coordinates: 39-11-07.3007N /
76-40-55.1704W
2.12.6 Threshold elevation: 139 ft
2.12.6 Touchdown zone elevation: 138.3 ft

2.12.1 Designation: 33L
2.12.2 True Bearing: 324
2.12.3 Dimensions: 9501 ft x 150 ft
2.12.4 PCN: 70 F/A/W/T
2.12.5 Coordinates: 39-09-51.1311N /
76-39-44.6134W
2.12.6 Threshold elevation: 129.6 ft
2.12.6 Touchdown zone elevation: 142.7 ft

2.12.1 Designation: 10
2.12.2 True Bearing: 94
2.12.3 Dimensions: 10503 ft x 150 ft
2.12.4 PCN: 105 F/A/W/T
2.12.5 Coordinates: 39-10-29.0895N /

76-41-22.6248W
2.12.6 Threshold elevation: 139 ft
2.12.6 Touchdown zone elevation: 143.4 ft

2.12.1 Designation: 28
2.12.2 True Bearing: 274
2.12.3 Dimensions: 10503 ft x 150 ft
2.12.4 PCN: 105 F/A/W/T
2.12.5 Coordinates: 39-10-21.4754N /
76-39-09.6234W
2.12.6 Threshold elevation: 126.4 ft
2.12.6 Touchdown zone elevation: 142.7 ft
2.12.7 Slope: 0.3 UP

AD 2.13 Declared distances

2.13.1 Designation: 15L
2.13.2 Takeoff run available: 5000
2.13.3 Takeoff distance available: 5000
2.13.4 Accelerate-stop distance available: 5000
2.13.5 Landing distance available: 5000

2.13.1 Designation: 33R
2.13.2 Takeoff run available: 5000
2.13.3 Takeoff distance available: 5000
2.13.4 Accelerate-stop distance available: 5000
2.13.5 Landing distance available: 5000

2.13.1 Designation: 15R
2.13.2 Takeoff run available: 9500
2.13.3 Takeoff distance available: 9500
2.13.4 Accelerate-stop distance available: 8600
2.13.5 Landing distance available: 8300

2.13.1 Designation: 33L
2.13.2 Takeoff run available: 9500
2.13.3 Takeoff distance available: 9500
2.13.4 Accelerate-stop distance available: 8800
2.13.5 Landing distance available: 8300

2.13.1 Designation: 10
2.13.2 Takeoff run available: 10502
2.13.3 Takeoff distance available: 10502
2.13.4 Accelerate-stop distance available: 10502
2.13.5 Landing distance available: 9952

2.13.1 Designation: 28
2.13.2 Takeoff run available: 10502
2.13.3 Takeoff distance available: 10502
2.13.4 Accelerate-stop distance available: 10502
2.13.5 Landing distance available: 9802

AD 2.14 Approach and runway lighting

2.14.1 Designation: 15L
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 33R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 15R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 33L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 10
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 28
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P
2.18.3 Service designation: 118.05 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 115.1 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 127.8 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 119.4 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 10. Magnetic variation: 11W

2.19.2 ILS identification: BAL

2.19.5 Coordinates: 39-10-23.557N / 76-41-03.233W

2.19.6 Site elevation: 137.6 ft

2.19.1 ILS type: Localizer for runway 10. Magnetic variation: 11W

2.19.2 ILS identification: BAL

2.19.5 Coordinates: 39-10-20.5919N /
76-38-54.2857W

2.19.6 Site elevation: 137.5 ft

2.19.1 ILS type: Glide Slope for runway 15L. Magnetic variation: 11W

2.19.2 ILS identification: UQC

2.19.5 Coordinates: 39-11-03.6746N /
76-39-44.2376W

2.19.6 Site elevation: 138.1 ft

2.19.1 ILS type: Localizer for runway 15L. Magnetic variation: 11W

2.19.2 ILS identification: UQC

2.19.5 Coordinates: 39-10-29.3978N /
76-39-06.9539W

2.19.6 Site elevation: 94 ft

2.19.1 ILS type: Glide Slope for runway 15R. Magnetic variation: 11W

2.19.2 ILS identification: FND

2.19.5 Coordinates: 39-10-53.6N / 76-40-48.9W

2.19.6 Site elevation: 130 ft

2.19.1 ILS type: Localizer for runway 15R. Magnetic variation: 11W

2.19.2 ILS identification: FND

2.19.5 Coordinates: 39-09-39.11N / 76-39-33.48W

2.19.6 Site elevation: 116 ft

2.19.1 ILS type: Glide Slope for runway 28. Magnetic variation: 11W

2.19.2 ILS identification: OEH

2.19.5 Coordinates: 39-10-18.64N / 76-39-31.024W

2.19.6 Site elevation: 129.2 ft

2.19.1 ILS type: Localizer for runway 28. Magnetic variation: 11W

2.19.2 ILS identification: OEH

2.19.5 Coordinates: 39-10-29.82N / 76-41-35.417W

2.19.6 Site elevation: 134 ft

2.19.1 ILS type: Glide Slope for runway 33L. Magnetic variation: 11W

2.19.2 ILS identification: RUX

2.19.5 Coordinates: 39-10-00.53N / 76-39-59.72W

2.19.6 Site elevation: 125 ft

2.19.1 ILS type: Localizer for runway 33L. Magnetic variation: 11W

2.19.2 ILS identification: RUX

2.19.5 Coordinates: 39-11-10.51N / 76-40-58.14W

2.19.6 Site elevation: 133 ft

2.19.1 ILS type: DME for runway 33R. Magnetic variation: 11W

2.19.2 ILS identification: BWI

2.19.5 Coordinates: 39-11-18.9N / 76-39-48.5W

2.19.6 Site elevation: 128.7 ft

2.19.1 ILS type: Glide Slope for runway 33R. Magnetic variation: 11W

2.19.2 ILS identification: BWI

2.19.5 Coordinates: 39-10-40.0486N /
76-39-21.1916W

2.19.6 Site elevation: 110.3 ft

2.19.1 ILS type: Localizer for runway 33R. Magnetic variation: 11W

2.19.2 ILS identification: BWI

2.19.5 Coordinates: 39-11-19.7555N /
76-39-53.5728W

2.19.6 Site elevation: 133 ft

General Remarks:

PRACTICE LNDG & APCH BY TURBO-PWRD ACFT PROHIBITED 2200-0600; PRACTICE LNDG & TKOF BY B-747 ACFT PROHIBITED RY 15R/33L.

CONT MOWING OPERATIONS ADJ ALL RYS & TXYS - APR THRU NOV.

NO APRON PARKING FOR UNSKED ACR.

DEER & BIRDS OCNNLY ON & INVOF ARPT.

DISTRACTING LGTS (GOLF DRIVING RANGE) RIGHT SIDE EXTDD CNTRLN RY 33L FM AER TO 1/4 MI FINAL.

NOISE ABATEMENT PROCEDURES IN EFFECT – RESTRICTION FOR RY 15L/33R EXCEPT FOR EMERGENCIES OR MERCY FLIGHTS CTC AMGR FOR INFORMATION.

MAJOR CONSTRUCTION ON ARPT DLY; ACFT MOVEMENT & PARKING AREAS SUBJECT TO SHORT NOTICE CHANGE/CLOSURE. FOR CURRENT INFORMATION PHONE BWI OPNS CENTER 410-859-7018.

ACFT ON VISUAL APCHS EXPECT TO MAINTAIN 3,000 FT UNTIL 10 DME FM BAL VORTAC; DEPART ACFT SHOULD EXPECT TURNS BASED ON BALTIMORE DME.

TAXIING PROHIBITED BTN CONCOURSE C & ADJ BLDG STRUCTURE SW OF CONCOURSE C. ACCESS TO GATE C12 MUST BE VIA TWY A.

RY 15R DEICE PAD, POSITION # 1, RESTRICTED TO ACFT WITH WINGSPAN OF 156 FT 1 INCH OR LESS & LENGTH OF 180 FT 3 INCHES OR LESS. PSN'S #2 & #3 ARE RSTD TO ACFT WITH A WINGSPAN OF 156 FT 1 INCH OR LESS, POSITION #3 IS RSTD TO ACFT WITH A WINGSPAN OF 156 FT 1 INCH OR LESS & LENGTH OF 180 FT 3 INCHES OR LESS; POSITION 4 RESTRICTED TO ACFT WITH WINGSPAN OF 213 FT OR LESS & LENGTH OF 229 FT 2 INCHES OR LESS.

TWY "S", SOUTH OF TWY "P", RESTRICTED TO AIRCRAFT 60,000 LBS. & LESS.

GENERAL AVIATION ACFT CTC UNICOM PRIOR TO ARRIVING AT GENERAL AVIATION RAMP FOR SECURITY PURPOSES.

TAXILANES 'T-1' & 'H' RESTRICTED TO GROUP III ACFT WITH MAX WINGSPAN OF 118 FEET.

CONCOURSE A – ALTN DEICING AREA IS RSTRD TO B737-800 SIZE ACFT WITH WINGLETS OR SMLR ON SPOTS 6B, 7A, AND 8A. B737-700 SIZE ACFT WITH WINGLETS OR SMLR ARE RSTRD TO SPOTS 6A, 7B, AND 8B.

RY 28 DE-ICE PAD LANE 1 RSTD TO ACFT WITH WINGSPAN 171 FT OR LESS, LANE 2 RSTD TO ACFT WITH WINGSPAN 135 FT OR LESS, LANE 3 IS USED BY LARGE ACFT MAX WINGSPAN 215 FT AND WHEN IN USE- LANES 2 AND 4 ARE UNAVBL. LANES 4, 5 & 6 ARE RSTD TO ACFT WINGSPAN 135 FT OR LESS.

TWY T BTN TWY H AND TWY E RSTD TO GROUP IV ACFT WITH WINGSPAN LESS THAN 171'. TWY T BTN TWY E AND TWY B RSTD TO GROUP V ACFT WITH WINGSPAN LESS THAN 214'; WHEN GROUP V ACFT ARE ON TWY T, TWY A IS RSTD TO MAX WINGSPANS OF 110'.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

DUAL PARALLEL TAXILANES HAVE BEEN ADDED TO THE 'D'/'E' ALLEYWAY; TAXILANE 'N' AND TAXILANE 'N1'. TAXILANE 'N' IS DESIGNATED A "GROUP V" TAXILANE WITH MAX WINGSPAN OF 213 FT. TAXILANE 'N1' IS DESIGNATED A "GROUP IV" TAXILANE WITH MAX WINGSPAN OF 170 FT.

TWY 'A' IS RSTD TO GROUP IV ACFT WINGSPAN 171 FT OR LESS.

RWY LEN AVBL FOR RWY 28 DEPS FM TWY U1 IS 9802 FT.

RWY STATUS LGTS IN OPN.

ACFT DEPARTING RWY 28 EXP DEP FM TWY U1.

18256

AIRPORT DIAGRAM

GENERAL EDWARD LAWRENCE LOGAN INTL (BOS)

AL-58 (FAA)

BOSTON, MASSACHUSETTS

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES. READBAC OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

JANUARY 2015
ANNUAL RATE OF CHANGE
0.1° E

RWY 04L-22R, 04R-22L, 09-27, 15L-33R, 15R-33L
PCN 90 F/C/W/T
S-120, D-250, 2D-550

RWY 14-32
PCN 85 F/C/W/T
S-120, D-250, 2D-490

ASDE-X in use. Operate transponders with altitude reporting mode and ADS-B (if equipped) enabled on all airport surfaces.

Runway Status Lights in operation.

18256

AIRPORT DIAGRAM

GENERAL EDWARD LAWRENCE LOGAN INTL (BOS)

BOSTON, MASSACHUSETTS

Boston, MA
General Edward Lawrence Logan Intl
ICAO Identifier KBOS

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 42-21-46.6N / 71-00-23W
2.2.2 From City: 1 Miles E Of Boston, MA
2.2.3 Elevation: 19.1 ft
2.2.5 Magnetic variation: 15W (2020)
2.2.6 Airport Contact: Edward Freni
LOGAN INTERNATIONAL AIRPORT
East Boston, MA 2128 (617-567-5400)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: No
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 9/1/1972

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 04L
2.10.1.b Type of obstacle: Boat (161 ft above runway end). Not Lighted or Marked

2.10.1.a. Runway designation: 04R
2.10.1.b Type of obstacle: Boat (157 ft above runway end). Lighted

2.10.1.a. Runway designation: 09
2.10.1.b Type of obstacle: Boat (158 ft above runway end). Lighted

2.10.1.a. Runway designation: 14
2.10.1.b Type of obstacle: Bldg (174 ft above runway end). Lighted
2.10.1.c Location of obstacle: 70 ft L of Centerline

2.10.1.a. Runway designation: 15R
2.10.1.b Type of obstacle: Trees (62 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 140 ft L of Centerline

2.10.1.a. Runway designation: 22L

2.10.1.b Type of obstacle: Boat (45 ft above runway end). Not Lighted or Marked

2.10.1.a. Runway designation: 22R
2.10.1.b Type of obstacle: Boat (44 ft above runway end). Not Lighted or Marked

2.10.1.a. Runway designation: 27
2.10.1.b Type of obstacle: Boat (45 ft above runway end). Lighted

2.10.1.a. Runway designation: 33L
2.10.1.b Type of obstacle: Boat (160 ft above runway end). Not Lighted or Marked

AD 2.12 Runway physical characteristics

2.12.1 Designation: 09
2.12.2 True Bearing: 77
2.12.3 Dimensions: 7001 ft x 150 ft
2.12.4 PCN: 90 F/C/W/T
2.12.5 Coordinates: 42-21-20.715N / 71-00-46.4187W
2.12.6 Threshold elevation: 16.7 ft
2.12.6 Touchdown zone elevation: 16.8 ft

2.12.1 Designation: 27
2.12.2 True Bearing: 257
2.12.3 Dimensions: 7001 ft x 150 ft
2.12.4 PCN: 90 F/C/W/T
2.12.5 Coordinates: 42-21-36.7767N / 70-59-15.7276W
2.12.6 Threshold elevation: 14.8 ft
2.12.6 Touchdown zone elevation: 17.2 ft

2.12.1 Designation: 04L
2.12.2 True Bearing: 20
2.12.3 Dimensions: 7864 ft x 150 ft
2.12.4 PCN: 90 F/C/W/T
2.12.5 Coordinates: 42-21-28.7577N / 71-00-51.6187W
2.12.6 Threshold elevation: 13.9 ft
2.12.6 Touchdown zone elevation: 13.9 ft

2.12.1 Designation: 22R
2.12.2 True Bearing: 200
2.12.3 Dimensions: 7864 ft x 150 ft
2.12.4 PCN: 90 F/C/W/T
2.12.5 Coordinates: 42-22-41.8759N / 71-00-16.2499W
2.12.6 Threshold elevation: 14.9 ft
2.12.6 Touchdown zone elevation: 15.2 ft

2.12.1 Designation: 04R
2.12.2 True Bearing: 20
2.12.3 Dimensions: 10006 ft x 150 ft
2.12.4 PCN: 90 F/C/W/T
2.12.5 Coordinates: 42-21-03.8094N / 71-00-42.458W
2.12.6 Threshold elevation: 18.8 ft
2.12.6 Touchdown zone elevation: 17.6 ft

2.12.1 Designation: 22L
2.12.2 True Bearing: 200
2.12.3 Dimensions: 10006 ft x 150 ft
2.12.4 PCN: 90 F/C/W/T
2.12.5 Coordinates: 42-22-36.8399N /
70-59-57.4473W
2.12.6 Threshold elevation: 14.5 ft
2.12.6 Touchdown zone elevation: 15.6 ft

2.12.1 Designation: 15R
2.12.2 True Bearing: 135
2.12.3 Dimensions: 10083 ft x 150 ft
2.12.4 PCN: 90 F/C/W/T
2.12.5 Coordinates: 42-22-27.3749N /
71-01-04.4117W
2.12.6 Threshold elevation: 18.9 ft
2.12.6 Touchdown zone elevation: 17 ft

2.12.1 Designation: 33L
2.12.2 True Bearing: 315
2.12.3 Dimensions: 10083 ft x 150 ft
2.12.4 PCN: 90 F/C/W/T
2.12.5 Coordinates: 42-21-16.7428N /
70-59-29.7098W
2.12.6 Threshold elevation: 15.7 ft
2.12.6 Touchdown zone elevation: 16.2 ft

2.12.1 Designation: 14
2.12.2 True Bearing: 125
2.12.3 Dimensions: 5000 ft x 100 ft
2.12.4 PCN: 85 F/C/W/T
2.12.5 Coordinates: 42-21-23.7521N /
71-01-23.7886W
2.12.6 Threshold elevation: 16 ft
2.12.6 Touchdown zone elevation: 19.1 ft

2.12.1 Designation: 32
2.12.2 True Bearing: 305
2.12.3 Dimensions: 5000 ft x 100 ft
2.12.4 PCN: 85 F/C/W/T
2.12.5 Coordinates: 42-20-54.9565N /
71-00-29.6841W
2.12.6 Threshold elevation: 19.1 ft

2.12.6 Touchdown zone elevation: 19.1 ft

2.12.1 Designation: 15L
2.12.2 True Bearing: 135
2.12.3 Dimensions: 2557 ft x 100 ft
2.12.4 PCN: 90 F/C/W/T
2.12.5 Coordinates: 42-22-23.5008N /
71-00-31.0047W
2.12.6 Threshold elevation: 14.8 ft
2.12.6 Touchdown zone elevation: 15.8 ft

2.12.1 Designation: 33R
2.12.2 True Bearing: 315
2.12.3 Dimensions: 2557 ft x 100 ft
2.12.4 PCN: 90 F/C/W/T
2.12.5 Coordinates: 42-22-05.5791N /
71-00-07.0008W
2.12.6 Threshold elevation: 14 ft
2.12.6 Touchdown zone elevation: 15.8 ft

AD 2.13 Declared distances

2.13.1 Designation: 09
2.13.2 Takeoff run available: 7000
2.13.3 Takeoff distance available: 7000
2.13.4 Accelerate-stop distance available: 7000
2.13.5 Landing distance available: 7000

2.13.1 Designation: 27
2.13.2 Takeoff run available: 7000
2.13.3 Takeoff distance available: 7000
2.13.4 Accelerate-stop distance available: 7000
2.13.5 Landing distance available: 7000

2.13.1 Designation: 04L
2.13.2 Takeoff run available: 7861
2.13.3 Takeoff distance available: 7861
2.13.4 Accelerate-stop distance available: 7861
2.13.5 Landing distance available: 7861

2.13.1 Designation: 22R
2.13.2 Takeoff run available: 7861
2.13.3 Takeoff distance available: 7861
2.13.4 Accelerate-stop distance available: 7861
2.13.5 Landing distance available: 7046

2.13.1 Designation: 04R
2.13.2 Takeoff run available: 10005
2.13.3 Takeoff distance available: 10005
2.13.4 Accelerate-stop distance available: 10005
2.13.5 Landing distance available: 8851

2.13.1 Designation: 22L
2.13.2 Takeoff run available: 10005
2.13.3 Takeoff distance available: 10005
2.13.4 Accelerate-stop distance available: 10005
2.13.5 Landing distance available: 8806

2.13.1 Designation: 15R
2.13.2 Takeoff run available: 10083
2.13.3 Takeoff distance available: 10083
2.13.4 Accelerate-stop distance available: 10083
2.13.5 Landing distance available: 9202

2.13.1 Designation: 33L
2.13.2 Takeoff run available: 10083
2.13.3 Takeoff distance available: 10083
2.13.4 Accelerate-stop distance available: 10083
2.13.5 Landing distance available: 10083

2.13.1 Designation: 14
2.13.2 Takeoff run available: 5000
2.13.3 Takeoff distance available: 5000
2.13.4 Accelerate-stop distance available: 5000
2.13.5 Landing distance available: 5000

2.13.1 Designation: 32
2.13.2 Takeoff run available: 5000
2.13.3 Takeoff distance available: 5000
2.13.4 Accelerate-stop distance available: 5000
2.13.5 Landing distance available: 5000

2.13.1 Designation: 15L
2.13.2 Takeoff run available: 2557
2.13.3 Takeoff distance available: 2557
2.13.4 Accelerate-stop distance available: 2557
2.13.5 Landing distance available: 2557

2.13.1 Designation: 33R
2.13.2 Takeoff run available: 2557
2.13.3 Takeoff distance available: 2557
2.13.4 Accelerate-stop distance available: 2557
2.13.5 Landing distance available: 2557

AD 2.14 Approach and runway lighting

2.14.1 Designation: 27
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 04L
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 22R
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 04R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 22L
2.14.2 Approach lighting system: MALSF
2.14.4 Visual approach slope indicator system: P4R
2.14.10 Remarks: Unusable Beyond 7 Degs Left Of Centerline .

2.14.1 Designation: 15R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 33L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 32
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: CD/P PRE TAXI CLNC
2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: D-ATIS (ARR)
2.18.3 Service designation: 135 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS (617-455-3003 (DEP))
2.18.3 Service designation: 135 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GATE CTL
2.18.3 Service designation: 134.05 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/S
2.18.3 Service designation: 121.75 MHz

2.18.1 Service designation: LCL/P (ARR/DEP RWY 04R/22L, 09/27)

2.18.3 Service designation: 128.8 MHz

2.18.1 Service designation: LCL/P (HELICOPTERS)

2.18.3 Service designation: 124.725 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: LCL/P (ARR/DEP RWY 14/32)

2.18.3 Service designation: 128.8 MHz

2.18.1 Service designation: LCL/P (ARR/DEP RWY 4L/22R, 15R/33L, 15L/33R)

2.18.3 Service designation: 128.8 MHz

2.18.1 Service designation: LCL/S (ARR/DEP RWY 04R/22L, 09/27)

2.18.3 Service designation: 132.225 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 04R. Magnetic variation: 15W

2.19.2 ILS identification: BOS

2.19.5 Coordinates: 42-22-57.4695N / 70-59-50.8873W

2.19.6 Site elevation: 34.5 ft

2.19.1 ILS type: Localizer for runway 04R. Magnetic variation: 15W

2.19.2 ILS identification: BOS

2.19.5 Coordinates: 42-22-55.9736N / 70-59-48.1884W

2.19.6 Site elevation: 17.6 ft

2.19.1 ILS type: Glide Slope for runway 04R. Magnetic variation: 15W

2.19.2 ILS identification: BOS

2.19.5 Coordinates: 42-21-21.8231N / 71-00-24.5483W

2.19.6 Site elevation: 10.1 ft

2.19.1 ILS type: DME for runway 15R. Magnetic variation: 15W

2.19.2 ILS identification: MDC

2.19.5 Coordinates: 42-21-26.5111N / 70-59-35.0574W

2.19.6 Site elevation: 26.4 ft

2.19.1 ILS type: Localizer for runway 15R. Magnetic

variation: 15W

2.19.2 ILS identification: MDC

2.19.5 Coordinates: 42-21-26.3592N / 70-59-37.052W

2.19.6 Site elevation: 11.1 ft

2.19.1 ILS type: Glide Slope for runway 15R. Magnetic variation: 15W

2.19.2 ILS identification: MDC

2.19.5 Coordinates: 42-22-14.6947N / 71-00-42.4209W

2.19.6 Site elevation: 11.2 ft

2.19.1 ILS type: Localizer for runway 22L. Magnetic variation: 15W

2.19.2 ILS identification: LQN

2.19.5 Coordinates: 42-21-00.0409N / 71-00-44.2844W

2.19.6 Site elevation: 14.6 ft

2.19.1 ILS type: DME for runway 22L. Magnetic variation: 15W

2.19.2 ILS identification: LQN

2.19.5 Coordinates: 42-22-57.4695N / 70-59-50.8873W

2.19.6 Site elevation: 34.5 ft

2.19.1 ILS type: Glide Slope for runway 22L. Magnetic variation: 15W

2.19.2 ILS identification: LQN

2.19.5 Coordinates: 42-22-17.0026N / 71-00-11.9878W

2.19.6 Site elevation: 11.1 ft

2.19.1 ILS type: Localizer for runway 27. Magnetic variation: 15W

2.19.2 ILS identification: DGU

2.19.5 Coordinates: 42-21-18.4751N / 71-00-59.0489W

2.19.6 Site elevation: 16.5 ft

2.19.1 ILS type: Glide Slope for runway 27. Magnetic variation: 15W

2.19.2 ILS identification: DGU

2.19.5 Coordinates: 42-21-31.2953N / 70-59-28.3545W

2.19.6 Site elevation: 12.3 ft

2.19.1 ILS type: DME for runway 27. Magnetic variation: 15W

2.19.2 ILS identification: DGU

2.19.5 Coordinates: 42-21-15.6955N /

71-00-55.7791W
2.19.6 Site elevation: 30.5 ft

2.19.1 ILS type: Localizer for runway 33L. Magnetic variation: 15W

2.19.2 ILS identification: LIP
2.19.5 Coordinates: 42-22-37.5624N /
71-01-18.0895W
2.19.6 Site elevation: 15.9 ft

2.19.1 ILS type: Glide Slope for runway 33L. Magnetic

variation: 15W

2.19.2 ILS identification: LIP
2.19.5 Coordinates: 42-21-26.6446N /
70-59-34.7132W
2.19.6 Site elevation: 11.3 ft

2.19.1 ILS type: DME for runway 33L. Magnetic variation: 15W
2.19.2 ILS identification: LIP
2.19.5 Coordinates: 42-21-26.5111N / 70-59-35.0574W
2.19.6 Site elevation: 26.4 ft

General Remarks:

BIRDS ON & INVOF ARPT.

NOISE SENSITIVE AREA – HELS OPNG WITHIN THE CTZL ARE REQD TO MAINT THE HIGHEST POSSIBLE ALT.

BTN 0000-0600 LCL – RY 15R IS PREFERENTIAL NGT RY FOR TKOF & RY 33L IS PREFERENTIAL NGT RY FOR LNDG.

FOR NOISE ABATEMENT PROCEDURES CALL 617-561-1636 0900-1700 MON-FRI.

NO RON PARKING FOR NON-TENANT CHARTER AIRCRAFT WITHOUT PRIOR MASSPORT PERMISSION.

TERMINAL E; NORTH & SOUTH CARGO ARRIVALS CTC MASSPORT GATE CONTROL ON FREQ 131.1 BEFORE ENTERING/DEPARTING RAMP AREA.

NMRS CRANES ON AND INVOF ARPT.

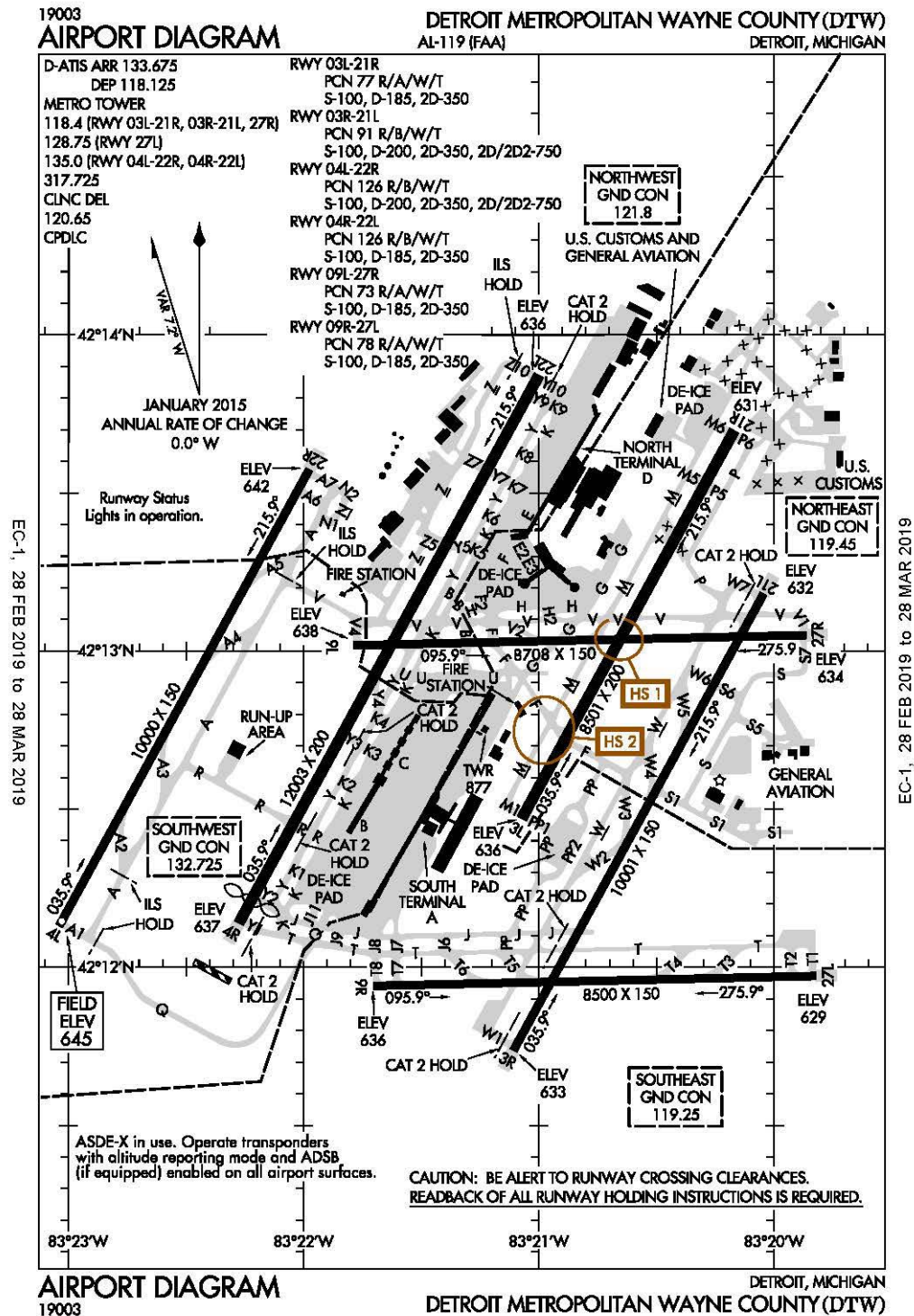
RY14/32 UNIDIRECTIONAL; NO LNDGS RY 14; NO TAKEOFFS RY 32.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

PILOTS SHOULD COMPLETE ALL CALCULATIONS PRIOR TO PUSHBACK FROM GATE.

RWY STATUS LGTS IN OPN.

Detroit, Michigan
Detroit Metropolitan Wayne County
ICAO Identifier KDTW



Detroit, MI
Detroit Metropolitan Wayne County
ICAO Identifier KDTW

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 42–12–44.8N / 83–21–12.2W
2.2.2 From City: 15 Miles S Of Detroit, MI
2.2.3 Elevation: 645.2 ft
2.2.5 Magnetic variation: 7W (2020)
2.2.6 Airport Contact: Chad Newton
1050 ROGELL DRIVE, #602
Detroit, MI 48242 (734–942–3550)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 03L
2.10.1.b Type of obstacle: Pole (19 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 569 ft L of Centerline

2.10.1.a. Runway designation: 04L
2.10.1.b Type of obstacle: Tree (48 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 157 ft R of Centerline

2.10.1.a. Runway designation: 04R
2.10.1.b Type of obstacle: Tree (75 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 159 ft R of Centerline

2.10.1.a. Runway designation: 09L
2.10.1.b Type of obstacle: Ant (107 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 461 ft R of Centerline

2.10.1.a. Runway designation: 21L
2.10.1.b Type of obstacle: Berm (19 ft above runway end). Not Lighted or Marked

2.10.1.c Location of obstacle: 529 ft L of Centerline

2.10.1.a. Runway designation: 21R
2.10.1.b Type of obstacle: Pole (42 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 179 ft R of Centerline

2.10.1.a. Runway designation: 22L
2.10.1.b Type of obstacle: Rr (27 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 597 ft R of Centerline

2.10.1.a. Runway designation: 22R
2.10.1.b Type of obstacle: Road (14 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 545 ft R of Centerline

2.10.1.a. Runway designation: 27R
2.10.1.b Type of obstacle: Berm (7 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 373 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 04R
2.12.2 True Bearing: 29
2.12.3 Dimensions: 12003 ft x 200 ft
2.12.4 PCN: 126 R/B/W/T
2.12.5 Coordinates: 42–12–08.3656N / 83–22–16.5697W
2.12.6 Threshold elevation: 637 ft
2.12.6 Touchdown zone elevation: 639.5 ft

2.12.1 Designation: 22L
2.12.2 True Bearing: 209
2.12.3 Dimensions: 12003 ft x 200 ft
2.12.4 PCN: 126 R/B/W/T
2.12.5 Coordinates: 42–13–52.3644N / 83–20–59.9655W
2.12.6 Threshold elevation: 635.8 ft
2.12.6 Touchdown zone elevation: 637.4 ft

2.12.1 Designation: 03R
2.12.2 True Bearing: 29
2.12.3 Dimensions: 10001 ft x 150 ft
2.12.4 PCN: 91 R/B/W/T
2.12.5 Coordinates: 42–11–44.2115N / 83–21–06.4868W
2.12.6 Threshold elevation: 632.8 ft
2.12.6 Touchdown zone elevation: 633.1 ft

2.12.1 Designation: 21L
2.12.2 True Bearing: 209

2.12.3 Dimensions: 10001 ft x 150 ft
2.12.4 PCN: 91 R/B/W/T
2.12.5 Coordinates: 42-13-10.8552N /
83-20-02.6517W
2.12.6 Threshold elevation: 631.8 ft
2.12.6 Touchdown zone elevation: 632.3 ft

2.12.1 Designation: 04X
2.12.2 True Bearing: 29
2.12.3 Dimensions: 0 ft x 0 ft

2.12.1 Designation: 22X
2.12.2 True Bearing: 209
2.12.3 Dimensions: 0 ft x 0 ft

2.12.1 Designation: 04L
2.12.2 True Bearing: 29
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 126 R/B/W/T
2.12.5 Coordinates: 42-12-07.8216N /
83-23-02.4003W
2.12.6 Threshold elevation: 645.2 ft
2.12.6 Touchdown zone elevation: 645.2 ft

2.12.1 Designation: 22R
2.12.2 True Bearing: 209
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 126 R/B/W/T
2.12.5 Coordinates: 42-13-34.4821N /
83-21-58.6115W
2.12.6 Threshold elevation: 642.1 ft
2.12.6 Touchdown zone elevation: 642.1 ft

2.12.1 Designation: 03L
2.12.2 True Bearing: 29
2.12.3 Dimensions: 8501 ft x 200 ft
2.12.4 PCN: 77 R/A/W/T
2.12.5 Coordinates: 42-12-28.207N / 83-21-04.3869W
2.12.6 Threshold elevation: 635.7 ft
2.12.6 Touchdown zone elevation: 636.8 ft

2.12.1 Designation: 21R
2.12.2 True Bearing: 209
2.12.3 Dimensions: 8501 ft x 200 ft
2.12.4 PCN: 77 R/A/W/T
2.12.5 Coordinates: 42-13-41.852N / 83-20-10.1125W
2.12.6 Threshold elevation: 631.4 ft
2.12.6 Touchdown zone elevation: 634.4 ft

2.12.1 Designation: 09L
2.12.2 True Bearing: 89

2.12.3 Dimensions: 8708 ft x 150 ft
2.12.4 PCN: 73 R/A/W/T
2.12.5 Coordinates: 42-13-01.0821N /
83-21-47.4044W
2.12.6 Threshold elevation: 638 ft
2.12.6 Touchdown zone elevation: 639.6 ft

2.12.1 Designation: 27R
2.12.2 True Bearing: 269
2.12.3 Dimensions: 8708 ft x 150 ft
2.12.4 PCN: 73 R/A/W/T
2.12.5 Coordinates: 42-13-03.0219N /
83-19-51.7146W
2.12.6 Threshold elevation: 634.3 ft
2.12.6 Touchdown zone elevation: 634.7 ft

2.12.1 Designation: 09R
2.12.2 True Bearing: 89
2.12.3 Dimensions: 8500 ft x 150 ft
2.12.4 PCN: 78 R/A/W/T
2.12.5 Coordinates: 42-11-56.4542N /
83-21-42.2248W
2.12.6 Threshold elevation: 636 ft
2.12.6 Touchdown zone elevation: 636.1 ft

2.12.1 Designation: 27L
2.12.2 True Bearing: 269
2.12.3 Dimensions: 8500 ft x 150 ft
2.12.4 PCN: 78 R/A/W/T
2.12.5 Coordinates: 42-11-58.3372N /
83-19-49.3276W
2.12.6 Threshold elevation: 629 ft
2.12.6 Touchdown zone elevation: 630.1 ft

AD 2.13 Declared distances

2.13.1 Designation: 04R
2.13.2 Takeoff run available: 12003
2.13.3 Takeoff distance available: 12003
2.13.4 Accelerate-stop distance available: 12003
2.13.5 Landing distance available: 11494

2.13.1 Designation: 22L
2.13.2 Takeoff run available: 12003
2.13.3 Takeoff distance available: 12003
2.13.4 Accelerate-stop distance available: 12003
2.13.5 Landing distance available: 12003

2.13.1 Designation: 03R
2.13.2 Takeoff run available: 10001
2.13.3 Takeoff distance available: 10001
2.13.4 Accelerate-stop distance available: 10001

2.13.5 Landing distance available: 10001

2.13.1 Designation: 21L

2.13.2 Takeoff run available: 10001

2.13.3 Takeoff distance available: 10001

2.13.4 Accelerate-stop distance available: 10001

2.13.5 Landing distance available: 10001

2.13.1 Designation: 04L

2.13.2 Takeoff run available: 10000

2.13.3 Takeoff distance available: 10000

2.13.4 Accelerate-stop distance available: 10000

2.13.5 Landing distance available: 10000

2.13.1 Designation: 22R

2.13.2 Takeoff run available: 10000

2.13.3 Takeoff distance available: 10000

2.13.4 Accelerate-stop distance available: 10000

2.13.5 Landing distance available: 10000

2.13.1 Designation: 03L

2.13.2 Takeoff run available: 8501

2.13.3 Takeoff distance available: 8501

2.13.4 Accelerate-stop distance available: 8501

2.13.5 Landing distance available: 8501

2.13.1 Designation: 21R

2.13.2 Takeoff run available: 8501

2.13.3 Takeoff distance available: 8501

2.13.4 Accelerate-stop distance available: 8501

2.13.5 Landing distance available: 8501

2.13.1 Designation: 09L

2.13.2 Takeoff run available: 8708

2.13.3 Takeoff distance available: 8708

2.13.4 Accelerate-stop distance available: 8618

2.13.5 Landing distance available: 8618

2.13.1 Designation: 27R

2.13.2 Takeoff run available: 8708

2.13.3 Takeoff distance available: 8708

2.13.4 Accelerate-stop distance available: 8708

2.13.5 Landing distance available: 8708

2.13.1 Designation: 09R

2.13.2 Takeoff run available: 8500

2.13.3 Takeoff distance available: 8500

2.13.4 Accelerate-stop distance available: 8500

2.13.5 Landing distance available: 8500

2.13.1 Designation: 27L

2.13.2 Takeoff run available: 8500

2.13.3 Takeoff distance available: 8500

2.13.4 Accelerate-stop distance available: 8500

2.13.5 Landing distance available: 8500

AD 2.14 Approach and runway lighting

2.14.1 Designation: 04R

2.14.2 Approach lighting system: ALSF2

2.14.10 Remarks: Also Has SSALR.

2.14.1 Designation: 22L

2.14.2 Approach lighting system: MALSR

2.14.1 Designation: 03R

2.14.2 Approach lighting system: ALSF2

2.14.4 Visual approach slope indicator system: P4R

2.14.10 Remarks: ALSF2 Required When RVR/Visibility Is 6000/1 Mile Or Less. SSALR Operated When RVR/Visibility Is 6000/1 Mile.

2.14.1 Designation: 21L

2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 04L

2.14.2 Approach lighting system: ALSF2

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 22R

2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 03L

2.14.4 Visual approach slope indicator system: P4R

2.14.10 Remarks: Unusable 8 Degrees Left/Right Course.

2.14.1 Designation: 21R

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 27R

2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 27L

2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P (RWY 03R, 21L, 27R)

2.18.3 Service designation: 125.15 MHz

2.18.1 Service designation: APCH/P (RWY 04L, 04R, 22L, 22R, 27L)

2.18.3 Service designation: 124.05 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 284 MHz

2.18.1 Service designation: BARII DP (RWY 21L/R, 3L/R 27L/R)

2.18.3 Service designation: 132.025 MHz

2.18.1 Service designation: BARII DP (RWY 22L/R, 4L/4R)

2.18.3 Service designation: 125.525 MHz

2.18.1 Service designation: BONZZ STAR

2.18.3 Service designation: 126.225 MHz

2.18.1 Service designation: CCOBB DP (RWY 27L/R)

2.18.3 Service designation: 132.025 MHz

2.18.1 Service designation: CCOBB DP (RWY 3L/R, 4L/R, 21L/R, 22L/R)

2.18.3 Service designation: 125.525 MHz

2.18.1 Service designation: CD/P PRE TAXI CLNC

2.18.3 Service designation: 120.65 MHz

2.18.1 Service designation: CLASS B (SW)

2.18.3 Service designation: 118.95 MHz

2.18.1 Service designation: CLASS B (NW/NE)

2.18.3 Service designation: 127.5 MHz

2.18.1 Service designation: CLASS B (SE)

2.18.3 Service designation: 134.3 MHz

2.18.1 Service designation: CLVIN DP (RWY 22L/R, 4L/4R)

2.18.3 Service designation: 125.525 MHz

2.18.1 Service designation: CLVIN DP (RWY 21L/R, 3L/R, 27L/R)

2.18.3 Service designation: 132.025 MHz

2.18.1 Service designation: CRAKN STAR

2.18.3 Service designation: 126.225 MHz

2.18.1 Service designation: CUUGR STAR

2.18.3 Service designation: 126.225 MHz

2.18.1 Service designation: D-ATIS (DEP)

2.18.3 Service designation: 118.125 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS (ARR)

2.18.3 Service designation: 133.675 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: DEP/P (TURBOJETS-EAST)

2.18.3 Service designation: 132.025 MHz

2.18.1 Service designation: DEP/P (PROPS/TURBO-PROPS-WEST)

2.18.3 Service designation: 118.95 MHz

2.18.1 Service designation: DEP/P (TURBOJETS-WEST)

2.18.3 Service designation: 125.525 MHz

2.18.1 Service designation: DEP/P (PROPS/TURBO-PROPS-EAST)

2.18.3 Service designation: 134.3 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: FERRL STAR

2.18.3 Service designation: 126.225 MHz

2.18.1 Service designation: GEMNI STAR

2.18.3 Service designation: 126.225 MHz

2.18.1 Service designation: GND/P (NORTHEAST)

2.18.3 Service designation: 119.45 MHz

2.18.1 Service designation: GND/P (SOUTHEAST)

2.18.3 Service designation: 119.25 MHz

2.18.1 Service designation: GND/P (SOUTHWEST)

2.18.3 Service designation: 132.725 MHz

2.18.1 Service designation: GND/P (NORTHWEST)

2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GRAYT STAR

2.18.3 Service designation: 124.975 MHz

2.18.1 Service designation: HANBLSTAR
2.18.3 Service designation: 124.975 MHz

2.18.1 Service designation: HAYLL STAR
2.18.3 Service designation: 124.975 MHz

2.18.1 Service designation: HHOWE DP (RWY 21L/R,
22L/R, 3L/R, 4L/R)
2.18.3 Service designation: 132.025 MHz

2.18.1 Service designation: HHOWE DP (RWY 27L/R)
2.18.3 Service designation: 125.525 MHz

2.18.1 Service designation: HTROD STAR
2.18.3 Service designation: 126.225 MHz

2.18.1 Service designation: KAYLN DP
2.18.3 Service designation: 125.525 MHz

2.18.1 Service designation: KKISS STAR
2.18.3 Service designation: 124.975 MHz

2.18.1 Service designation: KLYNK STAR
2.18.3 Service designation: 126.225 MHz

2.18.1 Service designation: LAYKS STAR
2.18.3 Service designation: 124.975 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 317.725 MHz

2.18.1 Service designation: LCL/P (DEP, ARPT DIAG
RWY 03L/21R, 03R/21L, 27R)
2.18.3 Service designation: 118.4 MHz

2.18.1 Service designation: LCL/P (ARRIVAL RWY
03R/21L, 27R)
2.18.3 Service designation: 118.4 MHz

2.18.1 Service designation: LCL/P (ARRIVAL RWY
04R/22L)
2.18.3 Service designation: 128.125 MHz

2.18.1 Service designation: LCL/P (ARRIVAL RWY
03L/21R, 27L)
2.18.3 Service designation: 128.75 MHz

2.18.1 Service designation: LCL/P (DEP, ARPT DIAG
RWY 27L)

2.18.3 Service designation: 128.75 MHz

2.18.1 Service designation: LCL/P (DEP, ARPT DIAG
RWY 04L/22R, 04R/22L)
2.18.3 Service designation: 135 MHz

2.18.1 Service designation: LCL/P (ARRIVAL RWY
04L/22R)
2.18.3 Service designation: 135 MHz

2.18.1 Service designation: LECTR STAR
2.18.3 Service designation: 124.975 MHz

2.18.1 Service designation: LIDDS DP
2.18.3 Service designation: 132.025 MHz

2.18.1 Service designation: MEDEVAC
2.18.3 Service designation: 259.6 MHz

2.18.1 Service designation: METRO DP (WEST-
BOUND)
2.18.3 Service designation: 118.95 MHz

2.18.1 Service designation: METRO DP (EAST-
BOUND)
2.18.3 Service designation: 134.3 MHz

2.18.1 Service designation: MIGGY DP
2.18.3 Service designation: 125.525 MHz

2.18.1 Service designation: MIZAR STAR
2.18.3 Service designation: 124.975 MHz

2.18.1 Service designation: PAVYL DP
2.18.3 Service designation: 132.025 MHz

2.18.1 Service designation: POLAR STAR
2.18.3 Service designation: 124.975 MHz

2.18.1 Service designation: PRM (RWY 04L/22R)
2.18.3 Service designation: 127.05 MHz

2.18.1 Service designation: PRM (RWY 04R/22L)
2.18.3 Service designation: 135.775 MHz

2.18.1 Service designation: RKCTY STAR
2.18.3 Service designation: 124.975 MHz

2.18.1 Service designation: SNDRS DP (RWY 21L/R,
3L/R, 27L/R)
2.18.3 Service designation: 132.025 MHz

2.18.1 Service designation: SNDRS DP (RWY 22L/R, 4L/4R)

2.18.3 Service designation: 125.525 MHz

2.18.1 Service designation: SPICA STAR

2.18.3 Service designation: 126.225 MHz

2.18.1 Service designation: TPGUN STAR

2.18.3 Service designation: 126.225 MHz

2.18.1 Service designation: TRMML DP (RWY 21L/R)

2.18.3 Service designation: 132.025 MHz

2.18.1 Service designation: TRMML DP (RWY 22L/R, 3L/R, 4L/R, 27L/R)

2.18.3 Service designation: 125.525 MHz

2.18.1 Service designation: VCTRZ STAR

2.18.3 Service designation: 124.975 MHz

2.18.1 Service designation: WEEDA STAR

2.18.3 Service designation: 126.225 MHz

2.18.1 Service designation: WNGNT STAR

2.18.3 Service designation: 126.225 MHz

2.18.1 Service designation: ZETTR DP (RWY 22L/R, 3L/R, 4L/R, 27L/R)

2.18.3 Service designation: 125.525 MHz

2.18.1 Service designation: ZETTR DP (RWY 21L/R)

2.18.3 Service designation: 132.025 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 03R. Magnetic variation: 7W

2.19.2 ILS identification: HUU

2.19.5 Coordinates: 42-11-51.1266N / 83-20-54.979W

2.19.6 Site elevation: 630.1 ft

2.19.1 ILS type: Localizer for runway 03R. Magnetic variation: 7W

2.19.2 ILS identification: HUU

2.19.5 Coordinates: 42-13-20.4082N / 83-19-55.609W

2.19.6 Site elevation: 634 ft

2.19.1 ILS type: Inner Marker for runway 03R. Magnetic variation: 7W

2.19.2 ILS identification: HUU

2.19.5 Coordinates: 42-11-36.5551N / 83-21-12.137W

2.19.6 Site elevation: 631.1 ft

2.19.1 ILS type: DME for runway 03R. Magnetic variation: 7W

2.19.2 ILS identification: HUU

2.19.5 Coordinates: 42-11-34.2185N /

83-21-09.5792W

2.19.6 Site elevation: 638.7 ft

2.19.1 ILS type: Inner Marker for runway 04L. Magnetic variation: 7W

2.19.2 ILS identification: HJT

2.19.5 Coordinates: 42-12-00.3838N /

83-23-07.8811W

2.19.6 Site elevation: 645.2 ft

2.19.1 ILS type: Localizer for runway 04L. Magnetic variation: 7W

2.19.2 ILS identification: HJT

2.19.5 Coordinates: 42-13-43.2279N / 83-21-52.161W

2.19.6 Site elevation: 642 ft

2.19.1 ILS type: Glide Slope for runway 04L. Magnetic variation: 7W

2.19.2 ILS identification: HJT

2.19.5 Coordinates: 42-12-18.9498N /

83-23-00.2665W

2.19.6 Site elevation: 640.6 ft

2.19.1 ILS type: DME for runway 04L. Magnetic variation: 7W

2.19.2 ILS identification: HJT

2.19.5 Coordinates: 42-13-41.8988N /

83-21-48.7254W

2.19.6 Site elevation: 649.7 ft

2.19.1 ILS type: Glide Slope for runway 04R. Magnetic variation: 7W

2.19.2 ILS identification: DTW

2.19.5 Coordinates: 42-12-23.21N / 83-22-11.85W

2.19.6 Site elevation: 633.1 ft

2.19.1 ILS type: DME for runway 04R. Magnetic variation: 7W

2.19.2 ILS identification: DTW

2.19.5 Coordinates: 42-13-59.7252N /

83-20-50.3339W

2.19.6 Site elevation: 645.3 ft

2.19.1 ILS type: Localizer for runway 04R. Magnetic variation: 7W

2.19.2 ILS identification: DTW

2.19.5 Coordinates: 42-14-01.3028N /

83-20-53.3772W

2.19.6 Site elevation: 636.5 ft

2.19.1 ILS type: Inner Marker for runway 04R. Magnetic variation: 7W

2.19.2 ILS identification: DTW

2.19.5 Coordinates: 42-12-04.547N / 83-22-19.3737W

2.19.6 Site elevation: 637.1 ft

2.19.1 ILS type: Glide Slope for runway 04X. Magnetic variation: 7W

2.19.2 ILS identification: ALA

2.19.5 Coordinates: 42-12-19.0378N /

83-23-00.5079W

2.19.6 Site elevation: 640.7 ft

2.19.1 ILS type: DME for runway 04X. Magnetic variation: 7W

2.19.2 ILS identification: ALA

2.19.5 Coordinates: 42-11-57.1056N /

83-23-06.1821W

2.19.6 Site elevation: 656.5 ft

2.19.1 ILS type: Localizer for runway 04X. Magnetic variation: 7W

2.19.2 ILS identification: ALA

2.19.5 Coordinates: 42-13-33.4002N /

83-21-50.9401W

2.19.6 Site elevation: 638.5 ft

2.19.1 ILS type: DME for runway 21L. Magnetic variation: 7W

2.19.2 ILS identification: EJR

2.19.5 Coordinates: 42-11-34.2185N /

83-21-09.5792W

2.19.6 Site elevation: 638.7 ft

2.19.1 ILS type: Localizer for runway 21L. Magnetic variation: 7W

2.19.2 ILS identification: EJR

2.19.5 Coordinates: 42-11-34.9459N /

83-21-13.3158W

2.19.6 Site elevation: 631.1 ft

2.19.1 ILS type: Glide Slope for runway 21L. Magnetic variation: 7W

2.19.2 ILS identification: EJR

2.19.5 Coordinates: 42-12-58.4945N /

83-20-05.1867W

2.19.6 Site elevation: 628.9 ft

2.19.1 ILS type: DME for runway 22L. Magnetic variation: 7W

2.19.2 ILS identification: DWC

2.19.5 Coordinates: 42-13-59.7252N /

83-20-50.3339W

2.19.6 Site elevation: 645.3 ft

2.19.1 ILS type: Localizer for runway 22L. Magnetic variation: 7W

2.19.2 ILS identification: DWC

2.19.5 Coordinates: 42-11-59.5406N /

83-22-23.0644W

2.19.6 Site elevation: 636.1 ft

2.19.1 ILS type: Glide Slope for runway 22L. Magnetic variation: 7W

2.19.2 ILS identification: DWC

2.19.5 Coordinates: 42-13-43.8552N /

83-21-12.2894W

2.19.6 Site elevation: 635.6 ft

2.19.1 ILS type: Glide Slope for runway 22R. Magnetic variation: 7W

2.19.2 ILS identification: JKI

2.19.5 Coordinates: 42-13-27.2272N /

83-22-10.0062W

2.19.6 Site elevation: 636.7 ft

2.19.1 ILS type: DME for runway 22R. Magnetic variation: 7W

2.19.2 ILS identification: JKI

2.19.5 Coordinates: 42-13-41.8988N /

83-21-48.7254W

2.19.6 Site elevation: 649.7 ft

2.19.1 ILS type: Localizer for runway 22R. Magnetic variation: 7W

2.19.2 ILS identification: JKI

2.19.5 Coordinates: 42-11-59.0707N / 83-23-08.842W

2.19.6 Site elevation: 644.6 ft

2.19.1 ILS type: Glide Slope for runway 22X. Magnetic variation: 7W

2.19.2 ILS identification: BZB

2.19.5 Coordinates: 42-13-27.3517N /

83-22-10.3013W

2.19.6 Site elevation: 636.8 ft

2.19.1 ILS type: DME for runway 22X. Magnetic variation: 7W

2.19.2 ILS identification: BZB

2.19.5 Coordinates: 42-11-57.1056N /
83-23-06.1821W
2.19.6 Site elevation: 656.6 ft

2.19.1 ILS type: Localizer for runway 22X. Magnetic
variation: 7W

2.19.2 ILS identification: BZB
2.19.5 Coordinates: 42-11-56.2259N /
83-23-01.9618W
2.19.6 Site elevation: 646.3 ft

2.19.1 ILS type: Glide Slope for runway 27L. Magnetic
variation: 7W
2.19.2 ILS identification: EPA
2.19.5 Coordinates: 42-11-54.6653N / 83-20-02.5117W
2.19.6 Site elevation: 625.9 ft

2.19.1 ILS type: Localizer for runway 27L. Magnetic
variation: 7W
2.19.2 ILS identification: EPA
2.19.5 Coordinates: 42-11-56.2294N /
83-21-55.6348W
2.19.6 Site elevation: 634.1 ft

2.19.1 ILS type: DME for runway 27L. Magnetic varia-
tion: 7W

General Remarks:

BRIGHTLY LIGHTED PARKING LOT 2.6 NM SW OF ARPT.

BE ALERT BIRDS, WATERFOWL, ON & INVOF ARPT.

RY 21R DEPS BE ALERT FOR 'OPTICAL ILLUSION', ACFT TAXIING ON TWY 'T' MAY APPEAR AS THOUGH
CROSSING RY 21R CNTRLN.

ACFT ON TWY 'F' AND TWY 'V' DO NOT BLOCK FIRE STATION EXITS.

TWY 'G' N OF TWY 'H' IS A NON-MOVEMENT AREA.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF
EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

RWY 9L/27R DUAL USE RWY/TWY, EDGE AVAILABLE FOR RWY OPS, GREEN CL AVAIL AND
UNIDIRECTIONAL STOPBARS AVAIL TAXI OPS BTN RWYS 3L AND 4R.

AIRCRAFT WITH WINGSPAN GREATER THAN 118 FT ARE RESTRICTED FM USING TWY H BETWEEN TWY
H2 AND TWY G.

AIRCRAFT WITH WINGSPAN GREATER THAN 171 FT CANNOT USE TWY G NORTH OF TWY V EXCEPT FOR
AIRCRAFT UNDER TOW TO RON SPOT 2H.

RY STATUS LGTS ARE IN OPN.

RWY VISUAL SCREEN 20 FT AGL 1150 FT S. AER 04R

2.19.2 ILS identification: EPA
2.19.5 Coordinates: 42-11-53.6723N /
83-21-55.0763W
2.19.6 Site elevation: 634.8 ft

2.19.1 ILS type: Localizer for runway 27R. Magnetic
variation: 7W

2.19.2 ILS identification: DMI
2.19.5 Coordinates: 42-13-00.7158N /
83-22-09.2988W
2.19.6 Site elevation: 639.3 ft

2.19.1 ILS type: DME for runway 27R. Magnetic varia-
tion: 7W

2.19.2 ILS identification: DMI
2.19.5 Coordinates: 42-12-47.2915N /
83-21-59.9856W
2.19.6 Site elevation: 636.5 ft

2.19.1 ILS type: Glide Slope for runway 27R. Magnetic
variation: 7W

2.19.2 ILS identification: DMI
2.19.5 Coordinates: 42-12-58.3552N /
83-20-04.8574W
2.19.6 Site elevation: 629 ft

PPR FOR B747-8 OPRS DUE TO CONSTRAINTS ON RWYS, TWYS AND RAMPS CTC AIRFIELD OPRS AT 734-942-3685.

AIRCRAFT WITH WINGSPAN GREATER THAN 171 FT ARE RESTRICTED FROM USING TWY PP.

AIRCRAFT WITH WINGSPAN GREATER THAN 171 FT ARE RESTRICTED FM USING TWY H BETWEEN K AND H2.

AIRCRAFT WITH WINGSPAN GREATER THAN 135 FT ARE RESTRICTED FM USING TWY G BETWEEN 27R AND TWY V.

AIRCRAFT WITH WINGSPAN GREATER THAN 171 FT ARE RESTRICTED FM USING TWY M NORTHBOUND TO TWY V WESTBOUND.

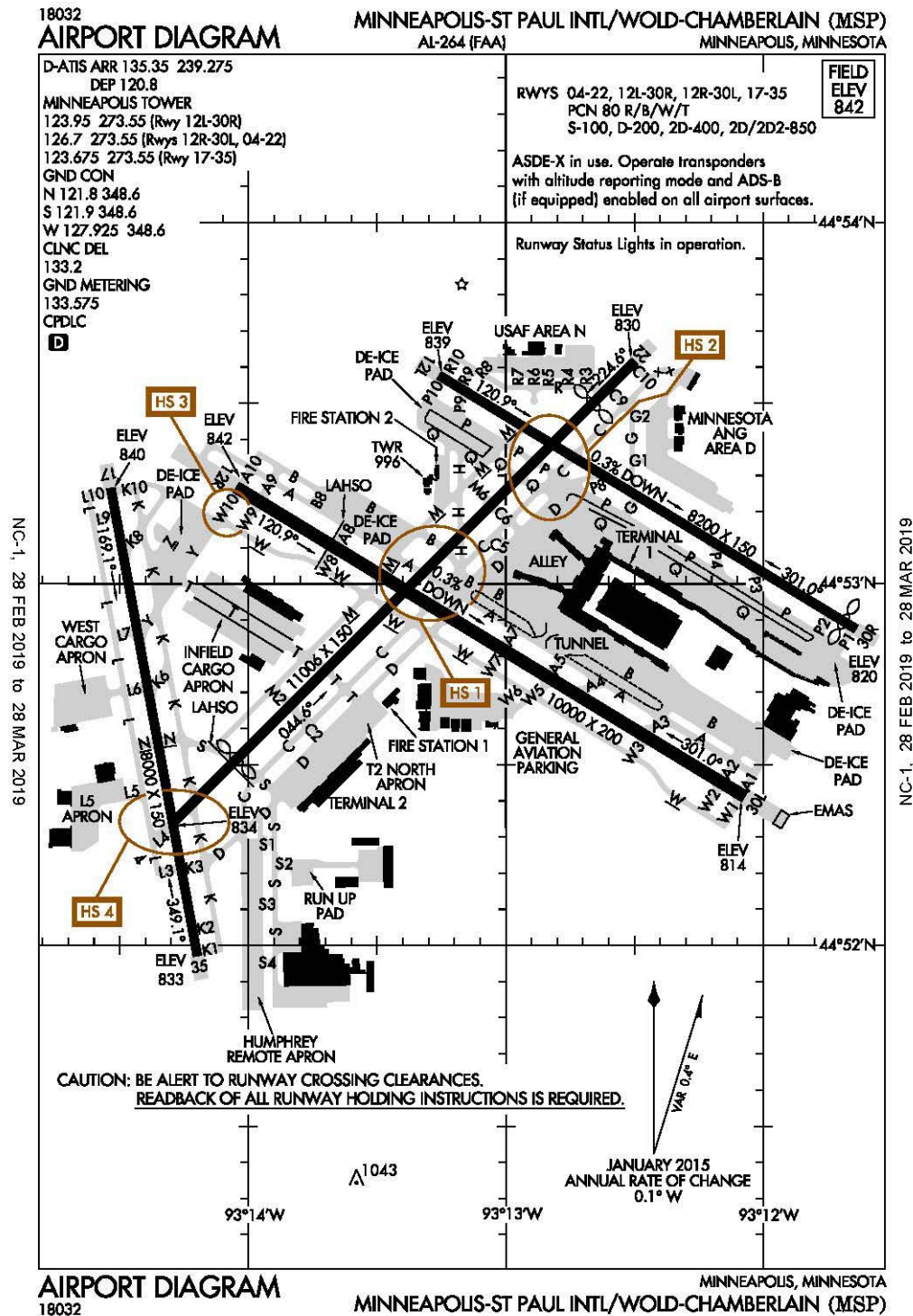
DIVERSIONAIR CARRIERS WITHOUT A PRESENCE AT DTW SHOULD CTC AIRFIELD OPRS 734-942-3685 PRIOR TO DIVERTING TO THE EXTENT PRACTICAL AND PROVIDE COMPANY, FLT OPRS, CTC INFO, AIRCRAFT TYPE, PERSONS ONBOARD, INTERNATIONAL OR DOMESTIC, ANY GRND HANDLER AGGREEMENTS IN PLACE.

AIRCRAFT WITH WINGSPAN GREATER THAN 171 FT CANNOT PASS EACH OTHER ON TWYS Y AND K BETWEEN TWYS U AND K6 INSUFFICIENT WINGTIP CLEARANCE.

TURNING RESTRICTION TWY B TO TWY K RESTRICTED TO AIRCRAFT WITH WINGSPAN 171 FT OR LESS.

TWY M-1 EDGE LTS BTN APCH END RWY 3L AND TWY M NON STD.

Minneapolis, Minnesota
Minneapolis-St. Paul International (Wold-Chamberlain)
ICAO Identifier KMSP



Minneapolis, MN
Minneapolis–St Paul Intl/Wold–Chamberlain
ICAO Identifier KMSP

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 44–52–55.1N / 93–13–18.4W
2.2.2 From City: 6 Miles SW Of Minneapolis, MN
2.2.3 Elevation: 841.8 ft
2.2.5 Magnetic variation: 0E (2015)
2.2.6 Airport Contact: Phil Burke
4300 GLUMACK SUITE 3000
St Paul, MN 55111
(612–725–6464)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL,A++
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 04
2.10.1.b Type of obstacle: Tree (101 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 834 ft L of Centerline

2.10.1.a. Runway designation: 12L
2.10.1.b Type of obstacle: Tree (61 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 667 ft R of Centerline

2.10.1.a. Runway designation: 17
2.10.1.b Type of obstacle: Tree (52 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 732 ft R of Centerline

2.10.1.a. Runway designation: 22
2.10.1.b Type of obstacle: Tree (66 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 636 ft R of Centerline

2.10.1.a. Runway designation: 30L
2.10.1.b Type of obstacle: Tree (36 ft above runway

end). Lighted
2.10.1.c Location of obstacle: 562 ft R of Centerline

2.10.1.a. Runway designation: 30R
2.10.1.b Type of obstacle: Tree (13 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 272 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 12L
2.12.2 True Bearing: 121
2.12.3 Dimensions: 8200 ft x 150 ft
2.12.4 PCN: 80 R/B/W/T
2.12.5 Coordinates: 44–53–34.6287N /
93–13–15.5666W
2.12.6 Threshold elevation: 838.6 ft
2.12.6 Touchdown zone elevation: 840.7 ft

2.12.1 Designation: 30R
2.12.2 True Bearing: 301
2.12.3 Dimensions: 8200 ft x 150 ft
2.12.4 PCN: 80 R/B/W/T
2.12.5 Coordinates: 44–52–52.5152N / 93–11–38.296W
2.12.6 Threshold elevation: 819.5 ft
2.12.6 Touchdown zone elevation: 822.4 ft

2.12.1 Designation: 12R
2.12.2 True Bearing: 121
2.12.3 Dimensions: 10000 ft x 200 ft
2.12.4 PCN: 80 R/B/W/T
2.12.5 Coordinates: 44–53–16.0438N /
93–14–02.8731W
2.12.6 Threshold elevation: 841.8 ft
2.12.6 Touchdown zone elevation: 841.8 ft

2.12.1 Designation: 30L
2.12.2 True Bearing: 301
2.12.3 Dimensions: 10000 ft x 200 ft
2.12.4 PCN: 80 R/B/W/T
2.12.5 Coordinates: 44–52–24.68N / 93–12–04.2689W
2.12.6 Threshold elevation: 814.4 ft
2.12.6 Touchdown zone elevation: 823 ft

2.12.1 Designation: 04
2.12.2 True Bearing: 45
2.12.3 Dimensions: 11006 ft x 150 ft
2.12.4 PCN: 80 R/B/W/T
2.12.5 Coordinates: 44–52–20.158N / 93–14–17.9427W
2.12.6 Threshold elevation: 833.5 ft
2.12.6 Touchdown zone elevation: 831.7 ft

2.12.1 Designation: 22
2.12.2 True Bearing: 225
2.12.3 Dimensions: 11006 ft x 150 ft
2.12.4 PCN: 80 R/B/W/T
2.12.5 Coordinates: 44-53-36.9917N /
93-12-29.8434W
2.12.6 Threshold elevation: 830.3 ft
2.12.6 Touchdown zone elevation: 828.3 ft

2.12.1 Designation: 17
2.12.2 True Bearing: 170
2.12.3 Dimensions: 8000 ft x 150 ft
2.12.4 PCN: 80 R/B/W/T
2.12.5 Coordinates: 44-53-15.9127N /
93-14-32.1137W
2.12.6 Threshold elevation: 840.4 ft
2.12.6 Touchdown zone elevation: 840.4 ft
2.12.7 Slope: 0.1 DOWN

2.12.1 Designation: 35
2.12.2 True Bearing: 350
2.12.3 Dimensions: 8000 ft x 150 ft
2.12.4 PCN: 80 R/B/W/T
2.12.5 Coordinates: 44-51-58.2366N /
93-14-11.9205W
2.12.6 Threshold elevation: 833.3 ft
2.12.6 Touchdown zone elevation: 834.4 ft
2.12.7 Slope: 0.1 UP

AD 2.13 Declared distances

2.13.1 Designation: 12L
2.13.2 Takeoff run available: 8200
2.13.3 Takeoff distance available: 8200
2.13.4 Accelerate-stop distance available: 7620
2.13.5 Landing distance available: 7620

2.13.1 Designation: 30R
2.13.2 Takeoff run available: 8200
2.13.3 Takeoff distance available: 8200
2.13.4 Accelerate-stop distance available: 8200
2.13.5 Landing distance available: 8000

2.13.1 Designation: 12R
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate-stop distance available: 10000
2.13.5 Landing distance available: 10000

2.13.1 Designation: 30L
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000

2.13.4 Accelerate-stop distance available: 10000
2.13.5 Landing distance available: 10000

2.13.1 Designation: 04
2.13.2 Takeoff run available: 11006
2.13.3 Takeoff distance available: 11006
2.13.4 Accelerate-stop distance available: 11006
2.13.5 Landing distance available: 9456

2.13.1 Designation: 22
2.13.2 Takeoff run available: 11006
2.13.3 Takeoff distance available: 11006
2.13.4 Accelerate-stop distance available: 11006
2.13.5 Landing distance available: 10006

2.13.1 Designation: 17
2.13.2 Takeoff run available: 8000
2.13.3 Takeoff distance available: 8000
2.13.4 Accelerate-stop distance available: 8000
2.13.5 Landing distance available: 8000

2.13.1 Designation: 35
2.13.2 Takeoff run available: 8000
2.13.3 Takeoff distance available: 8000
2.13.4 Accelerate-stop distance available: 8000
2.13.5 Landing distance available: 8000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 12L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 30R
2.14.2 Approach lighting system: MALSF
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 12R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 30L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 04
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 22
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 17
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 35
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P PRE TAXI CLNC
2.18.3 Service designation: 133.2 MHz

2.18.1 Service designation: D-ATIS (ARR)
2.18.3 Service designation: 239.275 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS (DEP)
2.18.3 Service designation: 120.8 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS (ARR)
612-726-9240
2.18.3 Service designation: 135.35 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND METERING
2.18.3 Service designation: 133.575 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/P (S)
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P (N)
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GND/P (W)
2.18.3 Service designation: 127.925 MHz

2.18.1 Service designation: LCL/P (RYS 12R/30L &
04/22)
2.18.3 Service designation: 126.7 MHz

2.18.1 Service designation: LCL/P (RY 17/35)
2.18.3 Service designation: 123.675 MHz

2.18.1 Service designation: LCL/P (RY 12L/30R)
2.18.3 Service designation: 123.95 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 273.55 MHz

2.18.1 Service designation: PTD
2.18.3 Service designation: 324.1 MHz

2.18.1 Service designation: PTD
2.18.3 Service designation: 282.675 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 04. Magnetic vari-
ation: 0E

2.19.2 ILS identification: APL
2.19.5 Coordinates: 44-53-44.0038N /
93-12-19.9688W
2.19.6 Site elevation: 832.1 ft

2.19.1 ILS type: DME for runway 12L. Magnetic varia-
tion: 0E

2.19.2 ILS identification: PJL
2.19.5 Coordinates: 44-53-03.674N / 93-11-48.8687W
2.19.6 Site elevation: 824 ft

2.19.1 ILS type: Localizer for runway 12L. Magnetic
variation: 0E

2.19.2 ILS identification: PJL
2.19.5 Coordinates: 44-52-50.3312N /
93-11-33.2418W
2.19.6 Site elevation: 813 ft

2.19.1 ILS type: Inner Marker for runway 12L. Magnetic
variation: 0E

2.19.2 ILS identification: PJL
2.19.5 Coordinates: 44-53-39.694N / 93-13-25.8963W
2.19.6 Site elevation: 845.3 ft

2.19.1 ILS type: Glide Slope for runway 12L. Magnetic
variation: 0E

2.19.2 ILS identification: PJL
2.19.5 Coordinates: 44-53-31.1153N /
93-12-56.6941W
2.19.6 Site elevation: 831 ft

2.19.1 ILS type: Glide Slope for runway 12R. Magnetic
variation: 0E

2.19.2 ILS identification: HKZ
2.19.5 Coordinates: 44-53-07.28N / 93-13-53.62W
2.19.6 Site elevation: 835.1 ft

2.19.1 ILS type: DME for runway 12R. Magnetic variation: 0E

2.19.2 ILS identification: HKZ

2.19.5 Coordinates: 44-52-26.9244N / 93-12-20.5476W

2.19.6 Site elevation: 825.4 ft

2.19.1 ILS type: Inner Marker for runway 12R. Magnetic variation: 0E

2.19.2 ILS identification: HKZ

2.19.5 Coordinates: 44-53-20.8698N / 93-14-12.7019W

2.19.6 Site elevation: 840 ft

2.19.1 ILS type: Localizer for runway 12R. Magnetic variation: 0E

2.19.2 ILS identification: HKZ

2.19.5 Coordinates: 44-52-20.3796N / 93-11-54.3455W

2.19.6 Site elevation: 812.8 ft

2.19.1 ILS type: DME for runway 17. Magnetic variation: 0E

2.19.2 ILS identification: TJZ

2.19.5 Coordinates: 44-53-24.6166N / 93-14-38.0356W

2.19.6 Site elevation: 832.5 ft

2.19.1 ILS type: Localizer for runway 17. Magnetic variation: 0E

2.19.2 ILS identification: TJZ

2.19.5 Coordinates: 44-51-48.4327N / 93-14-09.3727W

2.19.6 Site elevation: 830.4 ft

2.19.1 ILS type: Localizer for runway 22. Magnetic variation: 0E

2.19.2 ILS identification: SIJ

2.19.5 Coordinates: 44-52-12.792N / 93-14-28.3006W

2.19.6 Site elevation: 831.4 ft

2.19.1 ILS type: Outer Marker for runway 22. Magnetic variation: 0E

2.19.2 ILS identification: SIJ

2.19.5 Coordinates: 44-57-09.6998N / 93-07-23.0143W

2.19.6 Site elevation: 1021.9 ft

2.19.1 ILS type: Inner Marker for runway 30L. Magnetic variation: 0E

2.19.2 ILS identification: MSP

2.19.5 Coordinates: 44-52-19.4377N / 93-11-52.1826W

2.19.6 Site elevation: 808.1 ft

2.19.1 ILS type: Localizer for runway 30L. Magnetic variation: 0E

2.19.2 ILS identification: MSP

2.19.5 Coordinates: 44-53-22.4589N / 93-14-17.688W

2.19.6 Site elevation: 840 ft

2.19.1 ILS type: DME for runway 30L. Magnetic variation: 0E

2.19.2 ILS identification: MSP

2.19.5 Coordinates: 44-52-26.9244N / 93-12-20.5476W

2.19.6 Site elevation: 825.4 ft

2.19.1 ILS type: Glide Slope for runway 30L. Magnetic variation: 0E

2.19.2 ILS identification: MSP

2.19.5 Coordinates: 44-52-27.0021N / 93-12-20.2067W

2.19.6 Site elevation: 812.1 ft

2.19.1 ILS type: Glide Slope for runway 30R. Magnetic variation: 0E

2.19.2 ILS identification: INN

2.19.5 Coordinates: 44-53-03.4471N / 93-11-48.8472W

2.19.6 Site elevation: 813.2 ft

2.19.1 ILS type: Localizer for runway 30R. Magnetic variation: 0E

2.19.2 ILS identification: INN

2.19.5 Coordinates: 44-53-40.841N / 93-13-29.92W

2.19.6 Site elevation: 843.1 ft

2.19.1 ILS type: DME for runway 30R. Magnetic variation: 0E

2.19.2 ILS identification: INN

2.19.5 Coordinates: 44-53-03.674N / 93-11-48.8687W

2.19.6 Site elevation: 824 ft

2.19.1 ILS type: DME for runway 35. Magnetic variation: 0E

2.19.2 ILS identification: BMA

2.19.5 Coordinates: 44-53-24.6166N / 93-14-38.0356W

2.19.6 Site elevation: 832.5 ft

2.19.1 ILS type: Glide Slope for runway 35. Magnetic

variation: 0E
2.19.2 ILS identification: BMA
2.19.5 Coordinates: 44-52-07.7086N /
93-14-20.1127W
2.19.6 Site elevation: 829.9 ft

93-14-34.6512W
2.19.6 Site elevation: 845.3 ft

2.19.1 ILS type: Localizer for runway 35. Magnetic variation: 0E
2.19.2 ILS identification: BMA
2.19.5 Coordinates: 44-53-25.7158N /

2.19.1 ILS type: Inner Marker for runway 35. Magnetic variation: 0E
2.19.2 ILS identification: BMA
2.19.5 Coordinates: 44-51-49.9075N /
93-14-09.7433W
2.19.6 Site elevation: 832.6 ft

General Remarks:

TRNG FLTS PROHIBITED. GA FLTS MUST TRMT AT THE FBO OR US CUSTOMS UNLESS APVD BY AMGR.

FOR NOISE ABATEMENT PROCEDURES CALL (612) 726-9411; NO STAGE 1 CATEGORY CIVIL ACFT; NIGHTTIME HRS ARE 2230-0600.

BIRDS ON & INVOF ARPT.

SIGNATURE FLIGHT SUPPORT 128.95

MILITARY REMARKS: ARFC 934 AW: OPR 1300--400Z++ MON-THU, 1300-2230Z++ FRI, CLSD WKEND AND HOL, CTC AFLD MGMT FOR OPR HRS DURING UNIT TRAINING ASSEMBLY WKEND. TRANS ACFT MUST OPR 1300-2145Z++ MON-FRI, EXC HOL UNLESS DIRECTLY SUPPORTING 934 AW OR OTHER SPECIAL CIRCUMSTANCES.

MILITARY RSTD: NO HAZ CL/DIV1.1 OR 1.2 EXPLOSIVES PERMITTED. LOADING OR UNLOADING OF HAZ CL/DIV 1.3, 1.4, 1.5 OR 1.6 MUST BE APV BY ARPT DRCT PRIOR TO FLT.

COMPLEX GEOMETRY AT RY 04 APPROACH END. RY 04 DEPARTURES CHECK COMPASS TO VERIFY CORRECT RY HEADING.

VEHICLES PARKED ALONG SOUTH END OF TWY 'S'.

133 AW AFLD MGMT - 324.1 REMARKS: (CALL LIGHTHOUSE).

COMMUNICATIONS: MINNEAPOLIS AIR RESERVE STATION JOINT COMD POST - 252.1 REMARKS: CALL NORTHSTAR.

934 AW AFLD MGMT - PTD 282.675 REMARKS: (CALL VIKING OPS).

REMARKS: AFRC 934 AW: CTC PTD (VIKING OPS) 20 MIN PRIOR LDG.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

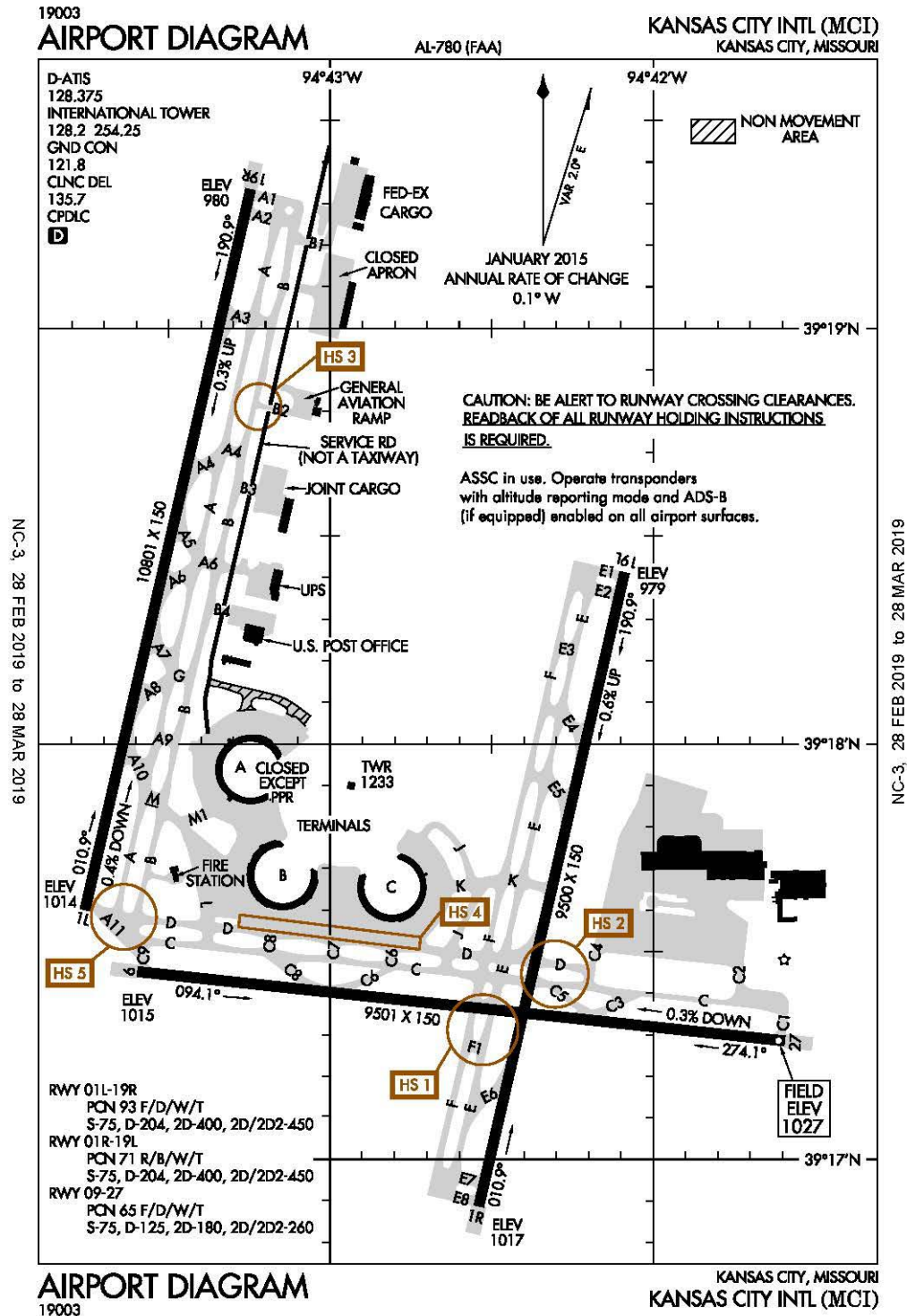
ALL UNSCHEDULED ACFT AT TERMINAL 2-HUMPHREY ARE REQUIRED TO CTC TERMINAL 2 GATE CONTROL ON 122.95 OR CALL 612-726-5742 PRIOR TO ARR.

ALL GROUP VI AIRCRAFT, WINGSPAN GREATER THAN 214 FEET, NEED TO CONTACT AIRSIDE OPERATIONS AT (612) 726-5111 PRIOR TO ARRIVAL TO OBTAIN (PRIOR PERMISSION REQUIRED) PPR.

RY STATUS LGTS ARE IN OPN.

ALL GA ACFT WITH LESS THAN 20 PSGRS THAT NEED TO CLEAR US CUSTOMS SHOULD CTC SIGNATURE FLT SUPPORT AT 128.95 OR 612-726-5700 PRIOR TO ARR.

Kansas City, Missouri
Kansas City International
ICAO Identifier KMCI



Kansas City, MO
Kansas City Intl
ICAO Identifier KMCI

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 39-17-51.4N / 94-42-50W
2.2.2 From City: 15 Miles NW Of Kansas City, MO
2.2.3 Elevation: 1026.9 ft
2.2.5 Magnetic variation: 2E (2015)
2.2.6 Airport Contact: Mr. Bob Johnson
P.O. BOX 20047
Kansas City, MO 64195
(816-243-5248)

AD 2.3 Attendance Schedule

2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: No
2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973

AD 2.12 Runway physical characteristics

2.12.1 Designation: 09
2.12.2 True Bearing: 96
2.12.3 Dimensions: 9501 ft x 150 ft
2.12.4 PCN: 65 F/D/W/T
2.12.5 Coordinates: 39-17-27.099N / 94-43-35.7371W
2.12.6 Threshold elevation: 1015.3 ft
2.12.6 Touchdown zone elevation: 1015.7 ft

2.12.1 Designation: 27
2.12.2 True Bearing: 276
2.12.3 Dimensions: 9501 ft x 150 ft
2.12.4 PCN: 65 F/D/W/T
2.12.5 Coordinates: 39-17-17.0716N /
94-41-35.5978W
2.12.6 Threshold elevation: 1026.9 ft
2.12.6 Touchdown zone elevation: 1026.9 ft
2.12.7 Slope: 0.3 DOWN

2.12.1 Designation: 01R
2.12.2 True Bearing: 13
2.12.3 Dimensions: 9500 ft x 150 ft
2.12.4 PCN: 71 R/B/W/T

2.12.5 Coordinates: 39-16-53.2341N /
94-42-32.3935W
2.12.6 Threshold elevation: 1017.2 ft
2.12.6 Touchdown zone elevation: 1017.4 ft

2.12.1 Designation: 19L
2.12.2 True Bearing: 193
2.12.3 Dimensions: 9500 ft x 150 ft
2.12.4 PCN: 71 R/B/W/T
2.12.5 Coordinates: 39-18-24.7369N /
94-42-05.3226W
2.12.6 Threshold elevation: 978.5 ft
2.12.6 Touchdown zone elevation: 995.2 ft

2.12.1 Designation: 01L
2.12.2 True Bearing: 13
2.12.3 Dimensions: 10801 ft x 150 ft
2.12.4 PCN: 93 F/D/W/T
2.12.5 Coordinates: 39-17-36.0029N /
94-43-45.5433W
2.12.6 Threshold elevation: 1014.4 ft
2.12.6 Touchdown zone elevation: 1014.4 ft
2.12.7 Slope: 0.4 DOWN

2.12.1 Designation: 19R
2.12.2 True Bearing: 193
2.12.3 Dimensions: 10801 ft x 150 ft
2.12.4 PCN: 93 F/D/W/T
2.12.5 Coordinates: 39-19-20.0396N /
94-43-14.7835W
2.12.6 Threshold elevation: 979.6 ft
2.12.6 Touchdown zone elevation: 990.5 ft

AD 2.13 Declared distances

2.13.1 Designation: 09
2.13.2 Takeoff run available: 9501
2.13.3 Takeoff distance available: 9501
2.13.4 Accelerate-stop distance available: 9501
2.13.5 Landing distance available: 9501

2.13.1 Designation: 27
2.13.2 Takeoff run available: 9501
2.13.3 Takeoff distance available: 9501
2.13.4 Accelerate-stop distance available: 9501
2.13.5 Landing distance available: 9501

2.13.1 Designation: 01R
2.13.2 Takeoff run available: 9500
2.13.3 Takeoff distance available: 9500
2.13.4 Accelerate-stop distance available: 9500
2.13.5 Landing distance available: 9500

2.13.1 Designation: 19L
2.13.2 Takeoff run available: 9500
2.13.3 Takeoff distance available: 9500
2.13.4 Accelerate–stop distance available: 9500
2.13.5 Landing distance available: 9500

2.13.1 Designation: 01L
2.13.2 Takeoff run available: 10801
2.13.3 Takeoff distance available: 10801
2.13.4 Accelerate–stop distance available: 10801
2.13.5 Landing distance available: 10801

2.13.1 Designation: 19R
2.13.2 Takeoff run available: 10801
2.13.3 Takeoff distance available: 10801
2.13.4 Accelerate–stop distance available: 10801
2.13.5 Landing distance available: 10801

AD 2.14 Approach and runway lighting

2.14.1 Designation: 09
2.14.2 Approach lighting system: MALSR

2.14.1 Designation: 27
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 01R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 19L
2.14.2 Approach lighting system: MALSR

2.14.1 Designation: 01L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 19R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 120.95 MHz

2.18.1 Service designation: APCH/P DEP/P (191–009)
2.18.3 Service designation: 284.7 MHz

2.18.1 Service designation: APCH/P DEP/P (010–190)
2.18.3 Service designation: 318.1 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 135.7 MHz

2.18.1 Service designation: CLASS B (S OF A LINE
FROM LWC ARPT TO 3GV ARPT)
2.18.3 Service designation: 294.7 MHz

2.18.1 Service designation: CLASS B (WEST OF RWY
01–19)
2.18.3 Service designation: 124.7 MHz

2.18.1 Service designation: CLASS B (WEST OF RWY
01–19)
2.18.3 Service designation: 318.1 MHz

2.18.1 Service designation: CLASS B (EAST OF RY
01/19)
2.18.3 Service designation: 118.4 MHz

2.18.1 Service designation: CLASS B (EAST OF RWY
01–19)
2.18.3 Service designation: 294.7 MHz

2.18.1 Service designation: CLASS B (S OF A LINE
FROM LWC ARPT TO 3GV ARPT)
2.18.3 Service designation: 118.9 MHz

2.18.1 Service designation: D–ATIS
2.18.3 Service designation: 128.375 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: DEP/P (191–009)
2.18.3 Service designation: 124.7 MHz

2.18.1 Service designation: DEP/P IC (010–190)
2.18.3 Service designation: 123.95 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GND/S
2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 128.2 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 254.25 MHz

2.18.1 Service designation: LCL/S
2.18.3 Service designation: 125.75 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 01L. Magnetic variation: 2E

2.19.2 ILS identification: DOT
2.19.5 Coordinates: 39-19-30.0746N /
94-43-08.2388W
2.19.6 Site elevation: 988.8 ft

2.19.1 ILS type: Glide Slope for runway 01L. Magnetic variation: 2E

2.19.2 ILS identification: DOT
2.19.5 Coordinates: 39-17-48.2654N /
94-43-47.1321W
2.19.6 Site elevation: 1002.8 ft

2.19.1 ILS type: Localizer for runway 01L. Magnetic variation: 2E

2.19.2 ILS identification: DOT
2.19.5 Coordinates: 39-19-31.1181N / 94-43-11.5232W
2.19.6 Site elevation: 972.3 ft

2.19.1 ILS type: Localizer for runway 01R. Magnetic variation: 2E

2.19.2 ILS identification: PVL
2.19.5 Coordinates: 39-18-34.4013N /
94-42-02.4648W
2.19.6 Site elevation: 963.3 ft

2.19.1 ILS type: Glide Slope for runway 01R. Magnetic variation: 2E

2.19.2 ILS identification: PVL
2.19.5 Coordinates: 39-17-03.1905N /
94-42-24.2292W
2.19.6 Site elevation: 1010.8 ft

2.19.1 ILS type: Middle Marker for runway 01R. Magnetic variation: 2E

2.19.2 ILS identification: PVL
2.19.5 Coordinates: 39-16-27.6318N /
94-42-39.9693W
2.19.6 Site elevation: 994.9 ft

2.19.1 ILS type: Inner Marker for runway 01R. Magnetic variation: 2E

2.19.2 ILS identification: PVL

2.19.5 Coordinates: 39-16-45.0995N /
94-42-34.8009W
2.19.6 Site elevation: 1011.1 ft

2.19.1 ILS type: DME for runway 01R. Magnetic variation: 2E

2.19.2 ILS identification: PVL
2.19.5 Coordinates: 39-18-35.6272N /
94-42-05.4664W
2.19.6 Site elevation: 960 ft

2.19.1 ILS type: DME for runway 09. Magnetic variation: 2E

2.19.2 ILS identification: RNI
2.19.5 Coordinates: 39-17-18.904N / 94-41-21.7047W
2.19.6 Site elevation: 1032.1 ft

2.19.1 ILS type: Glide Slope for runway 09. Magnetic variation: 2E

2.19.2 ILS identification: RNI
2.19.5 Coordinates: 39-17-21.0763N / 94-43-22.949W
2.19.6 Site elevation: 1010.7 ft

2.19.1 ILS type: Localizer for runway 09. Magnetic variation: 2E

2.19.2 ILS identification: RNI
2.19.5 Coordinates: 39-17-16.0109N /
94-41-22.9272W
2.19.6 Site elevation: 1020.2 ft

2.19.1 ILS type: Localizer for runway 19L. Magnetic variation: 2E

2.19.2 ILS identification: DYH
2.19.5 Coordinates: 39-16-43.575N / 94-42-35.2495W
2.19.6 Site elevation: 1011.8 ft

2.19.1 ILS type: Glide Slope for runway 19L. Magnetic variation: 2E

2.19.2 ILS identification: DYH
2.19.5 Coordinates: 39-18-13.9534N /
94-42-03.2934W
2.19.6 Site elevation: 977.9 ft

2.19.1 ILS type: DME for runway 19L. Magnetic variation: 2E

2.19.2 ILS identification: DYH
2.19.5 Coordinates: 39-16-43.6236N /
94-42-38.5532W
2.19.6 Site elevation: 1017.5 ft

2.19.1 ILS type: Inner Marker for runway 19R. Magnetic variation: 2E
2.19.2 ILS identification: PAJ
2.19.5 Coordinates: 39-19-30.1157N / 94-43-11.8201W
2.19.6 Site elevation: 972.4 ft

2.19.1 ILS type: DME for runway 19R. Magnetic variation: 2E
2.19.2 ILS identification: PAJ
2.19.5 Coordinates: 39-17-25.7846N / 94-43-51.9618W
2.19.6 Site elevation: 1026 ft

2.19.1 ILS type: Localizer for runway 19R. Magnetic variation: 2E
2.19.2 ILS identification: PAJ
2.19.5 Coordinates: 39-17-23.1222N / 94-43-49.3464W
2.19.6 Site elevation: 1017.6 ft

2.19.1 ILS type: Glide Slope for runway 19R. Magnetic variation: 2E
2.19.2 ILS identification: PAJ
2.19.5 Coordinates: 39-19-11.0536N / 94-43-22.6772W
2.19.6 Site elevation: 976.8 ft

2.19.1 ILS type: Middle Marker for runway 19R. Magnetic variation: 2E
2.19.2 ILS identification: PAJ
2.19.5 Coordinates: 39-19-49.2587N / 94-43-06.2032W
2.19.6 Site elevation: 965.1 ft

2.19.1 ILS type: Localizer for runway 27. Magnetic variation: 2E
2.19.2 ILS identification: UQY
2.19.5 Coordinates: 39-17-28.6283N / 94-43-54.0717W
2.19.6 Site elevation: 1015.3 ft

2.19.1 ILS type: Glide Slope for runway 27. Magnetic variation: 2E
2.19.2 ILS identification: UQY
2.19.5 Coordinates: 39-17-15.7129N / 94-41-50.2717W
2.19.6 Site elevation: 1021.4 ft

2.19.1 ILS type: DME for runway 27. Magnetic variation: 2E
2.19.2 ILS identification: UQY
2.19.5 Coordinates: 39-17-25.6745N / 94-43-54.5943W
2.19.6 Site elevation: 1024.3 ft

General Remarks:

WATERFOWL ON AND INVOF ARPT.

WINDSHEAR ALERT SYSTEM ON ARPT.

NOISE ABATEMENT PROCEDURES IN EFFECT 2200-0600 WITH LANDING ON RYS 01L & 19L; TAKEOFFS ON RYS 01R & 19R.

MIL ACFT MAY BE CHARGED RAMP/PARKING FEES.

FLIGHT NOTIFICATION SVC (ADCUS) AVBL AT GATE 90.

PPR TO PARK AT AIRLINE GATES CTC RESPECTIVE AIRLINE.

WHEN USING HIGH-SPEED EXITS C5 & C6 CONTINUE UNTIL FIRST PARALLEL TWY, THEN USE EXTREME CARE WHEN TURNING IN EXCESS OF 90 DEGREES.

NO ACFT PARKING ON POSTAL APRON.

PUSHBACK CLNC RQRD AT GATES 43 THRU 57 IN TRML B AND GATES 68 THRU 77 IN TRML C, PUSHBACK FROM THESE GATES ENTERS TWY D.

DESIGN GROUP V AND VI ACFT RQR AN ARPT ESCORT ON TWY DELTA BTN TWYS JULIET AND LIMA.

ASSC IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

TWY B1 BTN TWY B AND FEDEX APN COCKPIT OVER CNTRLN STEERING RQRD.

[illegible]

St Louis, MO
Lambert–St Louis Intl
ICAO Identifier KSTL

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 38–44–55.31N / 90–22–12.104W
2.2.2 From City: 10 Miles NW Of St Louis, MO
2.2.3 Elevation: 618 ft
2.2.5 Magnetic variation: 1W (2020)
2.2.6 Airport Contact: Ms. Rhonda Hamm–Niebruegge
BOX 10212
St Louis, MO 63145
(314–426–8000)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 06
2.10.1.b Type of obstacle: Tree (31 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 250 ft L of Centerline

2.10.1.a. Runway designation: 12L
2.10.1.b Type of obstacle: Bldg (54 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 600 ft L of Centerline

2.10.1.a. Runway designation: 12R
2.10.1.b Type of obstacle: Road (30 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 500 ft L of Centerline

2.10.1.a. Runway designation: 24
2.10.1.b Type of obstacle: Sign (18 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 450 ft R of Centerline

2.10.1.a. Runway designation: 30L
2.10.1.b Type of obstacle: Sign (86 ft above runway

end). Not Lighted or Marked
2.10.1.c Location of obstacle: 900 ft L of Centerline

2.10.1.a. Runway designation: 30R
2.10.1.b Type of obstacle: Tower (42 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 580 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 06
2.12.2 True Bearing: 63
2.12.3 Dimensions: 7607 ft x 150 ft
2.12.4 PCN: 85 R/B/W/T
2.12.5 Coordinates: 38–44–48.041N / 90–22–52.4335W
2.12.6 Threshold elevation: 550.9 ft
2.12.6 Touchdown zone elevation: 550.9 ft

2.12.1 Designation: 24
2.12.2 True Bearing: 243
2.12.3 Dimensions: 7607 ft x 150 ft
2.12.4 PCN: 85 R/B/W/T
2.12.5 Coordinates: 38–45–22.3823N /
90–21–27.0159W
2.12.6 Threshold elevation: 533.7 ft
2.12.6 Touchdown zone elevation: 533.7 ft

2.12.1 Designation: 11
2.12.2 True Bearing: 122
2.12.3 Dimensions: 9001 ft x 150 ft
2.12.4 PCN: 85 R/B/W/T
2.12.5 Coordinates: 38–45–35.8293N / 90–24–35.549W
2.12.6 Threshold elevation: 618 ft
2.12.6 Touchdown zone elevation: 618 ft

2.12.1 Designation: 29
2.12.2 True Bearing: 302
2.12.3 Dimensions: 9001 ft x 150 ft
2.12.4 PCN: 85 R/B/W/T
2.12.5 Coordinates: 38–44–48.456N / 90–22–59.3881W
2.12.6 Threshold elevation: 556 ft
2.12.6 Touchdown zone elevation: 580 ft

2.12.1 Designation: 12L
2.12.2 True Bearing: 122
2.12.3 Dimensions: 9003 ft x 150 ft
2.12.4 PCN: 85 R/B/W/T
2.12.5 Coordinates: 38–45–06.4062N /
90–21–58.6574W
2.12.6 Threshold elevation: 528.3 ft
2.12.6 Touchdown zone elevation: 540.6 ft
2.12.7 Slope: 0.7 UP

2.12.1 Designation: 30R
2.12.2 True Bearing: 302
2.12.3 Dimensions: 9003 ft x 150 ft
2.12.4 PCN: 85 R/B/W/T
2.12.5 Coordinates: 38–44–18.9854N /
90–20–22.5072W
2.12.6 Threshold elevation: 604.5 ft
2.12.6 Touchdown zone elevation: 604.5 ft
2.12.7 Slope: 1 DOWN

2.12.1 Designation: 30X
2.12.3 Dimensions: 0 ft x 0 ft

2.12.1 Designation: 12R
2.12.2 True Bearing: 122
2.12.3 Dimensions: 11019 ft x 200 ft
2.12.4 PCN: 85 R/B/W/T
2.12.5 Coordinates: 38–45–14.0486N /
90–22–44.9667W
2.12.6 Threshold elevation: 541.6 ft
2.12.6 Touchdown zone elevation: 539.8 ft

2.12.1 Designation: 30L
2.12.2 True Bearing: 302
2.12.3 Dimensions: 11019 ft x 200 ft
2.12.4 PCN: 85 R/B/W/T
2.12.5 Coordinates: 38–44–16.0148N /
90–20–47.2732W
2.12.6 Threshold elevation: 585.8 ft
2.12.6 Touchdown zone elevation: 582.8 ft

AD 2.13 Declared distances

2.13.1 Designation: 06
2.13.2 Takeoff run available: 7602
2.13.3 Takeoff distance available: 7602
2.13.4 Accelerate–stop distance available: 7352
2.13.5 Landing distance available: 7352

2.13.1 Designation: 24
2.13.2 Takeoff run available: 7602
2.13.3 Takeoff distance available: 7602
2.13.4 Accelerate–stop distance available: 7602
2.13.5 Landing distance available: 7602

2.13.1 Designation: 11
2.13.2 Takeoff run available: 9001
2.13.3 Takeoff distance available: 9001
2.13.4 Accelerate–stop distance available: 9001
2.13.5 Landing distance available: 9001

2.13.1 Designation: 29

2.13.2 Takeoff run available: 9001
2.13.3 Takeoff distance available: 9001
2.13.4 Accelerate–stop distance available: 9001
2.13.5 Landing distance available: 9001

2.13.1 Designation: 12L
2.13.2 Takeoff run available: 9003
2.13.3 Takeoff distance available: 9003
2.13.4 Accelerate–stop distance available: 9003
2.13.5 Landing distance available: 9003

2.13.1 Designation: 30R
2.13.2 Takeoff run available: 9003
2.13.3 Takeoff distance available: 9003
2.13.4 Accelerate–stop distance available: 9003
2.13.5 Landing distance available: 9003

2.13.1 Designation: 12R
2.13.2 Takeoff run available: 11019
2.13.3 Takeoff distance available: 11019
2.13.4 Accelerate–stop distance available: 11019
2.13.5 Landing distance available: 10552

2.13.1 Designation: 30L
2.13.2 Takeoff run available: 11019
2.13.3 Takeoff distance available: 11019
2.13.4 Accelerate–stop distance available: 11019
2.13.5 Landing distance available: 10819

AD 2.14 Approach and runway lighting

2.14.1 Designation: 06
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 24
2.14.2 Approach lighting system: MALS
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 11
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 29
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 12L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 30R

2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 12R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 30L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P
2.18.3 Service designation: 119.5 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 363.1 MHz

2.18.1 Service designation: D–ATIS
2.18.3 Service designation: 125.025 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D–ATIS
2.18.3 Service designation: 379.925 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND METERING (EAST)
2.18.3 Service designation: 127.55 MHz

2.18.1 Service designation: GND METERING (WEST)
2.18.3 Service designation: 346.35 MHz

2.18.1 Service designation: GND METERING (WEST)
2.18.3 Service designation: 121.075 MHz

2.18.1 Service designation: GND METERING (EAST)
2.18.3 Service designation: 360.2 MHz

2.18.1 Service designation: GND/P (INBOUND)
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P (OUTBOUND)
2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: GND/P (RWY 11/29)

2.18.3 Service designation: 227.125 MHz

2.18.1 Service designation: GND/P (INBOUND)
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/P (OUTBOUND)
2.18.3 Service designation: 377.175 MHz

2.18.1 Service designation: GND/P (RWY 11/29)
2.18.3 Service designation: 118.925 MHz

2.18.1 Service designation: LCL/P (RWY 06, 11/29)
2.18.3 Service designation: 239.275 MHz

2.18.1 Service designation: LCL/P (RWY 06, 11/29)
2.18.3 Service designation: 132.475 MHz

2.18.1 Service designation: LCL/P (RWY 12L/30R, 24)
2.18.3 Service designation: 120.05 MHz

2.18.1 Service designation: LCL/P (RWY 12R/30L)
2.18.3 Service designation: 118.5 MHz

2.18.1 Service designation: LCL/P (RWY 12L/30R, 24)
2.18.3 Service designation: 284.6 MHz

2.18.1 Service designation: LCL/P (RWY 12R/30L)
2.18.3 Service designation: 257.7 MHz

2.18.1 Service designation: PRM (RWY 30R)
2.18.3 Service designation: 278.3 MHz

2.18.1 Service designation: PRM (RWY 30L)
2.18.3 Service designation: 351.9 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 06. Magnetic variation: 1W

2.19.2 ILS identification: JAK

2.19.5 Coordinates: 38–44–39.67N / 90–23–00.61W

2.19.6 Site elevation: 556.2 ft

2.19.1 ILS type: Localizer for runway 06. Magnetic variation: 1W

2.19.2 ILS identification: JAK

2.19.5 Coordinates: 38–45–27.26N / 90–21–14.89W

2.19.6 Site elevation: 541 ft

2.19.1 ILS type: Glide Slope for runway 06. Magnetic variation: 1W

2.19.2 ILS identification: JAK

2.19.5 Coordinates: 38-44-54.72N / 90-22-40.02W
2.19.6 Site elevation: 536.2 ft

2.19.1 ILS type: DME for runway 11. Magnetic variation: 1W

2.19.2 ILS identification: OGZ

2.19.5 Coordinates: 38-44-36.71N / 90-22-41.69W

2.19.6 Site elevation: 548 ft

2.19.1 ILS type: Localizer for runway 11. Magnetic variation: 1W

2.19.2 ILS identification: OGZ

2.19.5 Coordinates: 38-44-38.7157N /
90-22-39.6272W

2.19.6 Site elevation: 544.7 ft

2.19.1 ILS type: Inner Marker for runway 11. Magnetic variation: 1W

2.19.2 ILS identification: OGZ

2.19.5 Coordinates: 38-45-40.3454N /
90-24-44.7433W

2.19.6 Site elevation: 614 ft

2.19.1 ILS type: Glide Slope for runway 11. Magnetic variation: 1W

2.19.2 ILS identification: OGZ

2.19.5 Coordinates: 38-45-26.0354N /
90-24-25.3798W

2.19.6 Site elevation: 598.2 ft

2.19.1 ILS type: Glide Slope for runway 12L. Magnetic variation: 1W

2.19.2 ILS identification: LDZ

2.19.5 Coordinates: 38-44-58.2177N /
90-21-50.3421W

2.19.6 Site elevation: 533.6 ft

2.19.1 ILS type: DME for runway 12L. Magnetic variation: 1W

2.19.2 ILS identification: LDZ

2.19.5 Coordinates: 38-44-10.39N / 90-20-12.05W

2.19.6 Site elevation: 616.4 ft

2.19.1 ILS type: Localizer for runway 12L. Magnetic variation: 1W

2.19.2 ILS identification: LDZ

2.19.5 Coordinates: 38-44-13.67N / 90-20-11.72W

2.19.6 Site elevation: 602 ft

2.19.1 ILS type: Inner Marker for runway 12L. Magnetic variation: 1W

2.19.2 ILS identification: LDZ

2.19.5 Coordinates: 38-45-11.9285N / 90-22-09.896W

2.19.6 Site elevation: 530 ft

2.19.1 ILS type: Outer Marker for runway 12R. Magnetic variation: 1W

2.19.2 ILS identification: LMR

2.19.5 Coordinates: 38-48-01.185N / 90-28-29.097W

2.19.6 Site elevation: 446 ft

2.19.1 ILS type: DME for runway 12R. Magnetic variation: 1W

2.19.2 ILS identification: LMR

2.19.5 Coordinates: 38-44-07.69N / 90-20-39.9W

2.19.6 Site elevation: 592 ft

2.19.1 ILS type: Glide Slope for runway 12R. Magnetic variation: 1W

2.19.2 ILS identification: LMR

2.19.5 Coordinates: 38-45-08.96N / 90-22-24.9W

2.19.6 Site elevation: 531.6 ft

2.19.1 ILS type: Localizer for runway 12R. Magnetic variation: 1W

2.19.2 ILS identification: LMR

2.19.5 Coordinates: 38-44-10.22N / 90-20-35.52W

2.19.6 Site elevation: 595 ft

2.19.1 ILS type: Glide Slope for runway 24. Magnetic variation: 1W

2.19.2 ILS identification: STL

2.19.5 Coordinates: 38-45-13.621N / 90-21-37.587W

2.19.6 Site elevation: 527.9 ft

2.19.1 ILS type: Localizer for runway 24. Magnetic variation: 1W

2.19.2 ILS identification: STL

2.19.5 Coordinates: 38-44-43.52N / 90-23-03.73W

2.19.6 Site elevation: 545 ft

2.19.1 ILS type: Outer Marker for runway 24. Magnetic variation: 1W

2.19.2 ILS identification: STL

2.19.5 Coordinates: 38-47-16.98N / 90-16-43.906W

2.19.6 Site elevation: 580 ft

2.19.1 ILS type: DME for runway 24. Magnetic variation: 1W

2.19.2 ILS identification: STL

2.19.5 Coordinates: 38-44-39.67N / 90-23-00.61W

2.19.6 Site elevation: 556.2 ft

2.19.1 ILS type: Localizer for runway 29. Magnetic variation: 1W
2.19.2 ILS identification: RQN
2.19.5 Coordinates: 38-45-41.3541N / 90-24-46.7698W
2.19.6 Site elevation: 612.7 ft

2.19.1 ILS type: DME for runway 29. Magnetic variation: 1W
2.19.2 ILS identification: RQN
2.19.5 Coordinates: 38-45-43.83N / 90-24-44.64W
2.19.6 Site elevation: 608 ft

2.19.1 ILS type: Glide Slope for runway 29. Magnetic variation: 1W
2.19.2 ILS identification: RQN
2.19.5 Coordinates: 38-44-49.83N / 90-23-11.86W
2.19.6 Site elevation: 556 ft

2.19.1 ILS type: Localizer for runway 30L. Magnetic variation: 1W
2.19.2 ILS identification: BKY
2.19.5 Coordinates: 38-45-19.34N / 90-22-55.7W
2.19.6 Site elevation: 551 ft

2.19.1 ILS type: Outer Marker for runway 30L. Magnetic variation: 1W
2.19.2 ILS identification: BKY
2.19.5 Coordinates: 38-41-45.984N / 90-15-44.206W
2.19.6 Site elevation: 530 ft

2.19.1 ILS type: Glide Slope for runway 30L. Magnetic variation: 1W
2.19.2 ILS identification: BKY
2.19.5 Coordinates: 38-44-28.1N / 90-21-01.81W
2.19.6 Site elevation: 563.9 ft

2.19.1 ILS type: Inner Marker for runway 30R. Magnetic variation: 1W
2.19.2 ILS identification: SJW
2.19.5 Coordinates: 38-44-14.6593N / 90-20-13.73W
2.19.6 Site elevation: 602 ft

2.19.1 ILS type: DME for runway 30R. Magnetic variation: 1W
2.19.2 ILS identification: SJW
2.19.5 Coordinates: 38-45-14.124N / 90-22-07.9128W
2.19.6 Site elevation: 545.7 ft

2.19.1 ILS type: Glide Slope for runway 30R. Magnetic variation: 1W
2.19.2 ILS identification: SJW
2.19.5 Coordinates: 38-44-21.9628N / 90-20-38.0158W
2.19.6 Site elevation: 592.4 ft

2.19.1 ILS type: Localizer for runway 30R. Magnetic variation: 1W
2.19.2 ILS identification: SJW
2.19.5 Coordinates: 38-45-12.1N / 90-22-10.2W
2.19.6 Site elevation: 533 ft

General Remarks:

WAIVER TO CONDUCT SIMULTANEOUS APCHS TO PARALLEL RYS SEPARATED BY 1,300 FT IN EFFECT.

WG TIP CLNC WITH GND VEH NOT ADEQUATE ALONG N SIDE OF MAIN TRML APN.

MISC: MIL ACFT PLANNING TO ARR WHEN WX IS ANTICIPATED TO BE LESS THAN 1200'/5 MUST FILE F;T PLAN BEFORE 0900Z++.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

A-GEAR: A-G ARE KEPT IN RECESSED POSN TIL REQ FOR USE. TWR MUST BE NOTIFIED AT LEAST 5 SEC PRIOR TO ENGAGEMENT SO THAT CABLE MAY BE RAISED.

TWY D OR TAXILANE C FM TWY S TO TWY H, B-747 OR LARGER ACFT ARE NOT AUTHORIZED TO PASS OR BE PASSED BY B-767 OR LARGER ACFT OPERATING ON THE PARALLEL TWY/TAXILANE.

TWY P, EAST OF THE PAPA PAD TO TWY F, RESTRICTED TO ACFT WITH A WINGSPAN OF LESS THAN 79 FT (JS-41 AND E-120), WHEN ACFT ARE PARKED ON THE PAPA PAD. THIS AREA IS RESTRICTED TO ALL OPS WHEN ACFT ARE PERFORMING ENGINE RUN-UPS IN THE PAPA PAD.

TWY V, UNDERLYING THE RWY 12L FINAL APPROACH COURSE IS RESTRICTED TO ACFT SMALLER THAN A DC-9 (25 FT OR LESS), WHEN ACFT ARE LANDING ON RWY 12L.

TWY E, BTN TWY P AND TWY N, RESTRICTED TO B-767 OR SMALLER ACFT (WINGSPAN LESS THAN 171 FT) WHEN ACFT ARE PARKED ON THE ECHO PAD.

TWY C, EAST OF TWY D ONE TO THE APPROACH END OF RWY 30L, RESTRICTED TO

B-727 OR SMALLER ACFT (WINGSPAN OF 118 FT OR LESS) WHEN ACFT ARE PARKED ON THE JULIET PAD.

TAXILANE C, FM TWY S TO TWY R, RESTRICTED TO B-767 OR SMALLER ACFT (156 FT AVBL) WHEN AFT ARE PARKED IN THE CHARLIE PAD. RESTRICTION IS FOR TAXIING ACFT, LARGER ACFT MAY BE TOWED THROUGH THE AREA.

TAXILANE C FM TWY P TO TWY L, RESTRICTED TO A B-757 300 SERIES OR SMALLER WHEN PASSING BEHIND ACFT THAT HAVE MADE THE INITIAL 10 FT PUSHBACK.

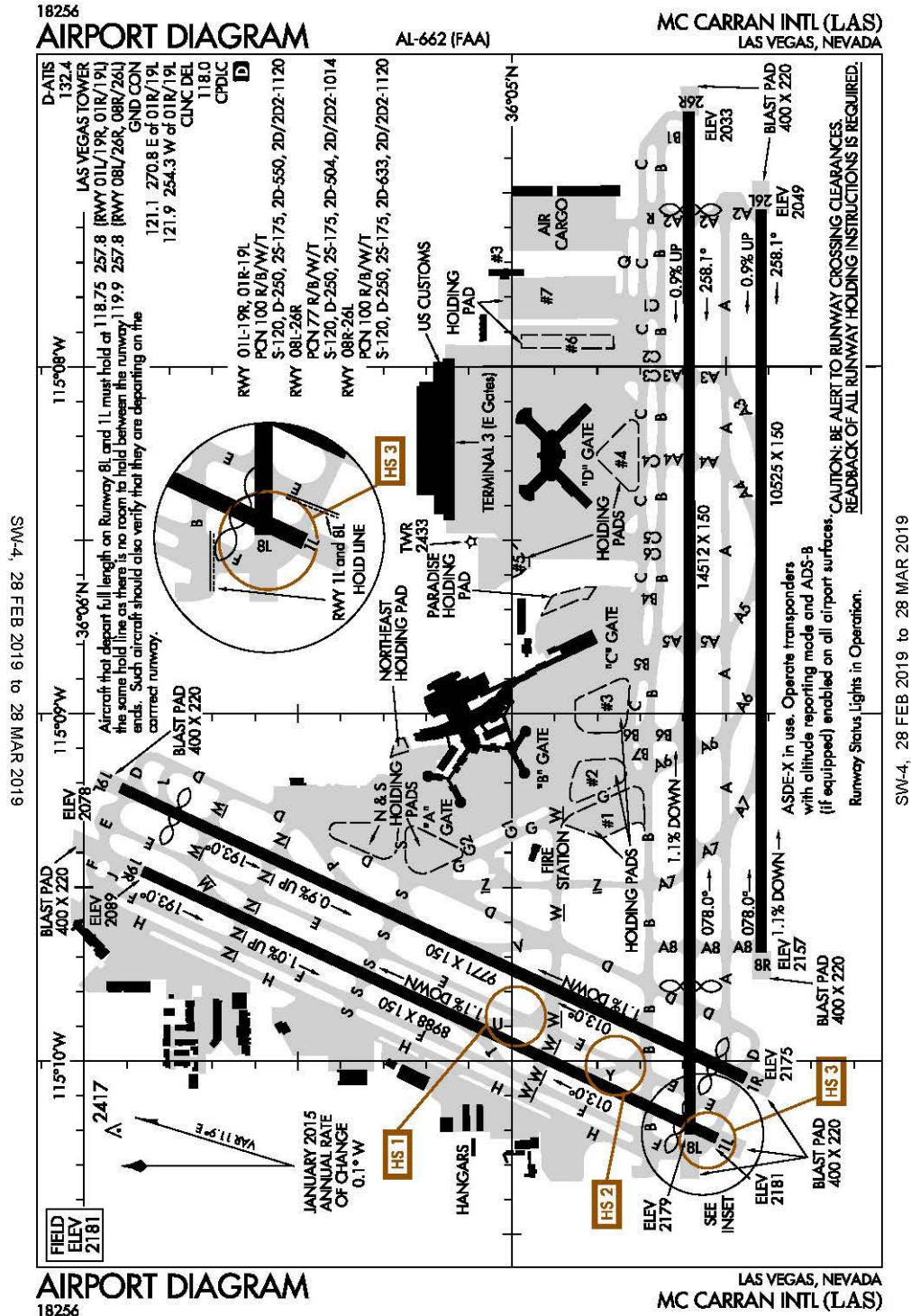
TWY A EAST OF TWY T, TWY S AND RY 06/24 SOUTH OF TWY B, NO ACFT OR VEHICLE OPS WHEN DEPARTING RY 11 OR ARRIVING RY 29.

TWY L NORTH OF RWY 12L/30R, ACFT LARGER THAN A G5 TAXIING NORTHBOUND ARE PROHIBITED FM MAKING A RIGHT TURN EASTBOUND ON TWY F.

TWY V2 CLSD TO ACFT WINGSPAN MORE THAN 118FT.

TWY V2 ACFT WITH WINGSPAN GREATER THAN 78FT MUST PERFORM JUDGEMENTAL OVERSTEERING INSTEAD OF COCKPIT OVR CL STEERING WHEN TAXIING.

Las Vegas, Nevada
McCarren International
ICAO Identifier KLAS



Las Vegas, NV
Mc Carran Intl
ICAO Identifier KLAS

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 36-04-48.2N / 115-09-08.1W
2.2.2 From City: 5 Miles S Of Las Vegas, NV
2.2.3 Elevation: 2181.4 ft
2.2.5 Magnetic variation: 11E (2020)
2.2.6 Airport Contact: Rosemary A. Vassiliadis
5757 WAYNE NEWTON BLVD
Las Vegas, NV 89119
(702-261-5211)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A1+,100,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 01L
2.10.1.b Type of obstacle: Rr (48 ft above runway end).
Not Lighted or Marked
2.10.1.c Location of obstacle: 500 ft L of Centerline

2.10.1.a. Runway designation: 01R
2.10.1.b Type of obstacle: Rr (41 ft above runway end).
Not Lighted or Marked
2.10.1.c Location of obstacle: 600 ft R of Centerline

2.10.1.a. Runway designation: 08L
2.10.1.b Type of obstacle: Hangar (25 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 500 ft L of Centerline

2.10.1.a. Runway designation: 08R
2.10.1.b Type of obstacle: Pole (53 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 540 ft R of Centerline

2.10.1.a. Runway designation: 19L
2.10.1.b Type of obstacle: Pole (17 ft above runway

end). Not Lighted or Marked
2.10.1.c Location of obstacle: 17 ft R of Centerline

2.10.1.a. Runway designation: 19R
2.10.1.b Type of obstacle: Fence (25 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 150 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 08L
2.12.2 True Bearing: 90
2.12.3 Dimensions: 14512 ft x 150 ft
2.12.4 PCN: 77 R/B/W/T
2.12.5 Coordinates: 36-04-34.9216N /
115-10-12.6755W
2.12.6 Threshold elevation: 2179.4 ft
2.12.6 Touchdown zone elevation: 2155.1 ft
2.12.7 Slope: 1.1 DOWN

2.12.1 Designation: 26R
2.12.2 True Bearing: 270
2.12.3 Dimensions: 14512 ft x 150 ft
2.12.4 PCN: 77 R/B/W/T
2.12.5 Coordinates: 36-04-35.0697N /
115-07-15.9271W
2.12.6 Threshold elevation: 2032.9 ft
2.12.6 Touchdown zone elevation: 2067.2 ft
2.12.7 Slope: 1.9 UP

2.12.1 Designation: 08R
2.12.2 True Bearing: 90
2.12.3 Dimensions: 10525 ft x 150 ft
2.12.4 PCN: 100 R/B/W/T
2.12.5 Coordinates: 36-04-25.0625N /
115-09-41.1613W
2.12.6 Threshold elevation: 2157 ft
2.12.6 Touchdown zone elevation: 2157 ft
2.12.7 Slope: 1.1 DOWN

2.12.1 Designation: 26L
2.12.2 True Bearing: 270
2.12.3 Dimensions: 10525 ft x 150 ft
2.12.4 PCN: 100 R/B/W/T
2.12.5 Coordinates: 36-04-25.1662N /
115-07-32.9677W
2.12.6 Threshold elevation: 2048.5 ft
2.12.6 Touchdown zone elevation: 2069.1 ft
2.12.7 Slope: 0.9 UP

2.12.1 Designation: 01L
2.12.2 True Bearing: 25

2.12.3 Dimensions: 8988 ft x 150 ft
2.12.4 PCN: 100 R/B/W/T
2.12.5 Coordinates: 36-04-31.1694N /
115-10-13.3156W
2.12.6 Threshold elevation: 2181.3 ft
2.12.6 Touchdown zone elevation: 2176.3 ft
2.12.7 Slope: 1.1 DOWN

2.12.1 Designation: 19R
2.12.2 True Bearing: 205
2.12.3 Dimensions: 8988 ft x 150 ft
2.12.4 PCN: 100 R/B/W/T
2.12.5 Coordinates: 36-05-51.7657N /
115-09-27.1861W
2.12.6 Threshold elevation: 2088.7 ft
2.12.6 Touchdown zone elevation: 2116.7 ft
2.12.7 Slope: 1 UP

2.12.1 Designation: 01R
2.12.2 True Bearing: 25
2.12.3 Dimensions: 9771 ft x 150 ft
2.12.4 PCN: 100 R/B/W/T
2.12.5 Coordinates: 36-04-27.2649N /
115-10-02.9559W
2.12.6 Threshold elevation: 2175.2 ft
2.12.6 Touchdown zone elevation: 2170 ft
2.12.7 Slope: 1.1 DOWN

2.12.1 Designation: 19L
2.12.2 True Bearing: 205
2.12.3 Dimensions: 9771 ft x 150 ft
2.12.4 PCN: 100 R/B/W/T
2.12.5 Coordinates: 36-05-54.8802N /
115-09-12.8039W
2.12.6 Threshold elevation: 2077.8 ft
2.12.6 Touchdown zone elevation: 2112.3 ft
2.12.7 Slope: 0.9 UP

AD 2.13 Declared distances

2.13.1 Designation: 08L
2.13.2 Takeoff run available: 14512
2.13.3 Takeoff distance available: 15101
2.13.4 Accelerate-stop distance available: 14101
2.13.5 Landing distance available: 11968

2.13.1 Designation: 26R
2.13.2 Takeoff run available: 14512
2.13.3 Takeoff distance available: 15157
2.13.4 Accelerate-stop distance available: 14157
2.13.5 Landing distance available: 12757

2.13.1 Designation: 08R
2.13.2 Takeoff run available: 10525
2.13.3 Takeoff distance available: 10525
2.13.4 Accelerate-stop distance available: 10525
2.13.5 Landing distance available: 10525

2.13.1 Designation: 26L
2.13.2 Takeoff run available: 10525
2.13.3 Takeoff distance available: 10525
2.13.4 Accelerate-stop distance available: 10525
2.13.5 Landing distance available: 10525

2.13.1 Designation: 01L
2.13.2 Takeoff run available: 8988
2.13.3 Takeoff distance available: 8988
2.13.4 Accelerate-stop distance available: 8988
2.13.5 Landing distance available: 8401

2.13.1 Designation: 19R
2.13.2 Takeoff run available: 8988
2.13.3 Takeoff distance available: 9400
2.13.4 Accelerate-stop distance available: 8400
2.13.5 Landing distance available: 8400

2.13.1 Designation: 01R
2.13.2 Takeoff run available: 9771
2.13.3 Takeoff distance available: 10168
2.13.4 Accelerate-stop distance available: 9437
2.13.5 Landing distance available: 8677

2.13.1 Designation: 19L
2.13.2 Takeoff run available: 9771
2.13.3 Takeoff distance available: 10171
2.13.4 Accelerate-stop distance available: 9681
2.13.5 Landing distance available: 8741

AD 2.14 Approach and runway lighting

2.14.1 Designation: 08L
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 26R
2.14.2 Approach lighting system: MALS
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 08R
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 26L
2.14.2 Approach lighting system: MALSF
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 01L
2.14.2 Approach lighting system: MALSF
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 19R
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 01R
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 19L
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P
2.18.3 Service designation: 118 MHz

2.18.1 Service designation: D-ATIS (ARR/DEP)
2.18.3 Service designation: 132.4 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P (E OF RY 01R/19L)
2.18.3 Service designation: 121.1 MHz

2.18.1 Service designation: GND/P (E OF RY 01R/19L)
2.18.3 Service designation: 270.8 MHz

2.18.1 Service designation: GND/P (W OF RY
01L/19R)
2.18.3 Service designation: 254.3 MHz

2.18.1 Service designation: GND/P (W OF RY
01R/19L)
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: LCL/P (RY 01L/19R,
01R/19L)
2.18.3 Service designation: 118.75 MHz

2.18.1 Service designation: LCL/P (RY 08L/26R; RY
08R/26L)
2.18.3 Service designation: 119.9 MHz

2.18.1 Service designation: RAMP CTL (D GATES
AND CARGO RAMP)
2.18.3 Service designation: 127.9 MHz

2.18.1 Service designation: RAMP CTL (A, B, C
GATES AND CHARTER INTL GATES)
2.18.3 Service designation: 129.175 MHz

2.18.1 Service designation: RAMP CTL (TERMINALS
A; B; C & CHARTER INTL)
2.18.3 Service designation: 124.4 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 01L. Magnetic
variation: 11E

2.19.2 ILS identification: CUA
2.19.5 Coordinates: 36-06-00.8505N /
115-09-21.9866W
2.19.6 Site elevation: 2079.1 ft

2.19.1 ILS type: Glide Slope for runway 01L. Magnetic
variation: 11E

2.19.2 ILS identification: CUA
2.19.5 Coordinates: 36-04-49.1417N /
115-10-06.5187W
2.19.6 Site elevation: 2158.6 ft

2.19.1 ILS type: DME for runway 01L. Magnetic varia-
tion: 11E

2.19.2 ILS identification: CUA
2.19.5 Coordinates: 36-06-01.7286N /
115-09-25.0631W
2.19.6 Site elevation: 2086 ft

2.19.1 ILS type: Localizer for runway 26L. Magnetic
variation: 11E

2.19.2 ILS identification: RLE
2.19.5 Coordinates: 36-04-25.0515N /
115-09-53.3414W
2.19.6 Site elevation: 2168.3 ft

2.19.1 ILS type: Glide Slope for runway 26L. Magnetic
variation: 11E

2.19.2 ILS identification: RLE
2.19.5 Coordinates: 36-04-21.9957N /
115-07-46.6608W
2.19.6 Site elevation: 2050.9 ft

2.19.1 ILS type: DME for runway 26L. Magnetic varia-
tion: 11E

2.19.2 ILS identification: RLE

2.19.5 Coordinates: 36-04-22.2537N /
115-09-53.2733W
2.19.6 Site elevation: 2182.3 ft

variation: 11E
2.19.2 ILS identification: LAS
2.19.5 Coordinates: 36-04-34.9111N /
115-10-19.1803W
2.19.6 Site elevation: 2186.5 ft

2.19.1 ILS type: Glide Slope for runway 26R. Magnetic
variation: 11E
2.19.2 ILS identification: LAS
2.19.5 Coordinates: 36-04-32.0807N /
115-07-46.6743W
2.19.6 Site elevation: 2047.1 ft

2.19.1 ILS type: DME for runway 26R. Magnetic varia-
tion: 11E
2.19.2 ILS identification: LAS
2.19.5 Coordinates: 36-04-30.5207N /
115-10-19.164W
2.19.6 Site elevation: 2202.5 ft

General Remarks:

EXTSV GLDR/SOARING OPNS WKENDS & HOLDS; SR-SS; LAS R187/020; ALTS UP TO BUT NOT INCLG FL180.
GLDRS RMN CLEAR OF THE TCA BUT OTHERWISE OPR WI THE ENTIRE SW QUAD OF THE TCA VEIL.

ALL NON-STD RWY OPNS PPR FM DEPT OF AVN.

TBJT DEPS NOT PMTD ON RWY 01R/19L OR RWY 01L/19R 2000-0800. XCPNS FOR WX OR OPNL NECESSITY.

ACFT MAY EXPERIENCE REFLECTION OF SUN FM GLASS HOTELS LCTD NW OF ARPT. REFLECTION MAY
OCCUR AT VARIOUS ALTS, HDGS, & DSTCS FM ARPT.

GA PRKG VERY LTD. FOR PRKG AVAILABILITY CTC EITHER FBO (702) 736-1830 OR (702) 739-1100.
RWY 08L 589 FT CWY; RWY 26R 645 FT CWY.

LGTD GOLF RANGE 1400 FT S OF RWYS 01L/19R AND 01R/19L.

TIEDOWN FEE.

(E98) PLUS 64 SHELTERS & 24 SHEDS.

ACFT USING FULL LEN DEP ON RWY 08L USE MINIMAL PWR TIL PASSING THE PWR-UP POINT ON RWY.
PWR-UP POINT IS 348 FT EAST OF BLAST PAD AND MKD WITH SIGN AND STD MARKINGS FOR BGNG OF
RWY.

LRG NR OF BIRDS AND BATS INVOF OF ARPT BTWN SS AND SR.

ACFT DEPG RWY 19R USE MINIMAL PWR UNTIL PASSING THE RWY THLD. RWY 19R THLD HAS STD RWY
MARKINGS AND IS 780 FT S OF THE BLAST PAD.

ACFT OPER NEAR THE INT OF TWYS S, D, G AND THE N END OF TWY Z SHOULD BE ALERT AS THERE ARE
CLOSELY ALIGNED TWY CNTRLN AND RADIUS TURNS.

ACFT THAT DEP FULL LENGTH OF RWYS 01L AND 08L MUST HOLD AT THE SAME HOLD LINE AS THERE
IS NO ROOM TO HOLD BTN THE RWY ENDS AND SUCH ACFT SHOULD VERIFY THAT THEY ARE ON THE
CORRECT RWY.

GA CUST AND IMG LCTD WEST SIDE OF AFLD BTWN FBO'S.

ACFT LRGR THAN B757 PPR FM DEPT OF AVN TO USE TWY H.

NMRS HOP ON WEST SIDE OF ARPT.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

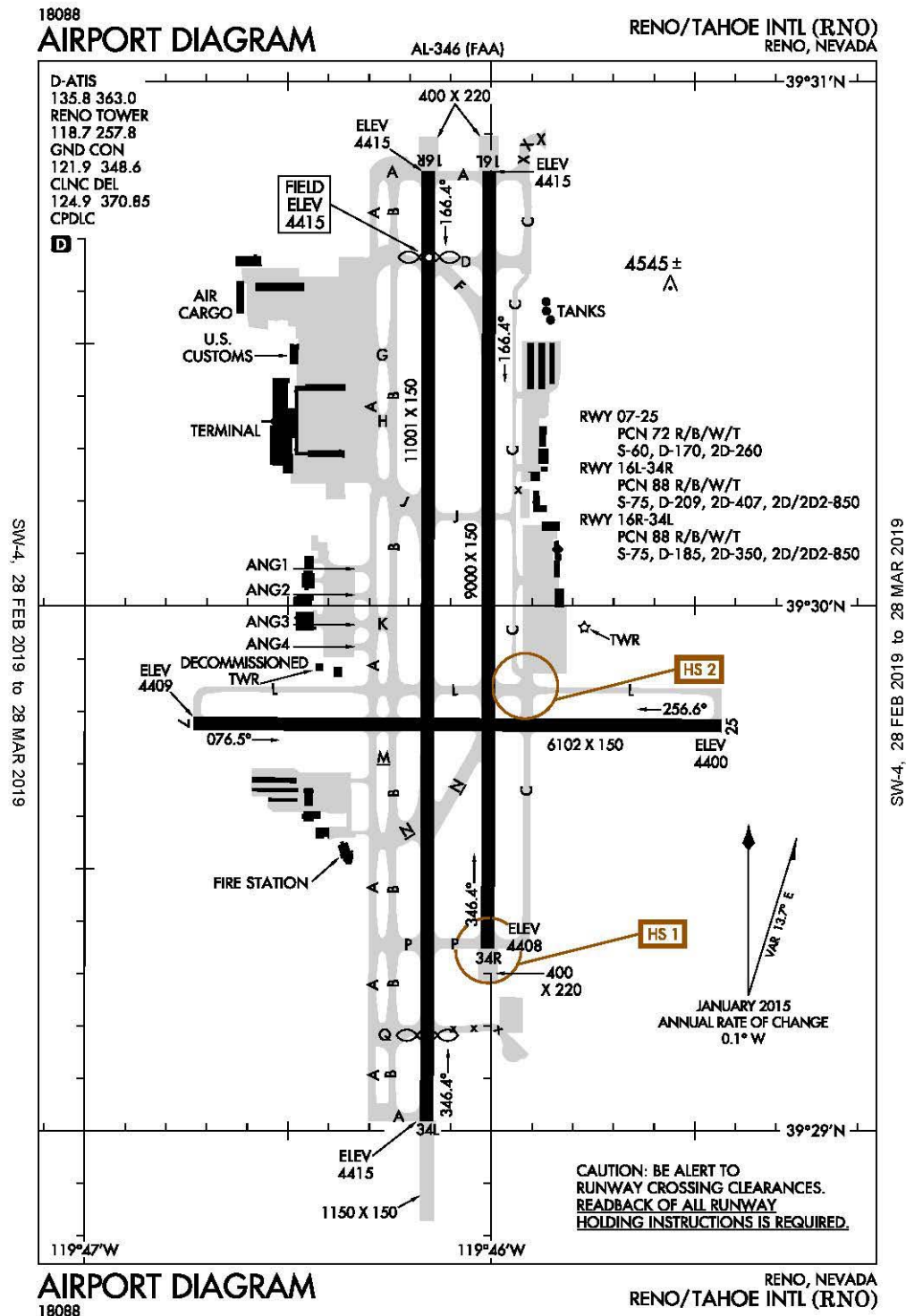
GA CBP RSVNS ARE RQRD TO BE SMTD A MIN OF 12 HOURS IN ADVN (OTHER CONDS APPLY). RSVNS MUST BE MADE ONLINE AT WWW.MCCARRAN.COM/GACBP. QNS CAN BE DCTD TO CBP559@MCCARRAN.COM. GA ACFT USING THE WEST SIDE CUST FAC MUST CTC RAMP CONTROL 124.4.

ACFT TAX WB ON TWY B NEAR TWY E USE CARE NOT TO ENTER THE RWY ON TWY Y, ACFT TAX WB ON TWY W NEAR TWY E USE CARE NOT TO ENTER THE RWY ON TWY U.

ALL ACFT CTC RAMP CTL ON FREQ 124.4 FOR OPS AT A,B, AND C GATES, CTC RAMP CTL ON FREQ 127.9 FOR OPS AT D AND E GATES AND CARGO RAMP PRIOR TO ENTERING RAMP OR PUSHING BACK FROM GATE OR PRKG SPOT.

RWY STS LGTS ARE IN OPN.

Reno, Nevada
Reno/Tahoe International
ICAO Identifier KRNO



Reno, NV
Reno/Tahoe Intl
ICAO Identifier KRNO

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 39–29–56.8N / 119–46–05.2W
2.2.2 From City: 3 Miles SE Of Reno, NV
2.2.3 Elevation: 4414.9 ft
2.2.5 Magnetic variation: 16E (1985)
2.2.6 Airport Contact: Marilyn M. Mora
P O BOX 12490
Reno, NV 89510 (775–328–6400)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A1+,100LL
2.4.5 Hangar space: No
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 07
2.10.1.b Type of obstacle: Pole (118 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 500 ft L of Centerline

2.10.1.a. Runway designation: 25
2.10.1.b Type of obstacle: Tree (44 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 275 ft L of Centerline

2.10.1.a. Runway designation: 34L
2.10.1.b Type of obstacle: Gnd (243 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 1500 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 07
2.12.2 True Bearing: 90
2.12.3 Dimensions: 6102 ft x 150 ft
2.12.4 PCN: 72 R/B/W/T
2.12.5 Coordinates: 39–29–46.6299N / 119–46–43.822W
2.12.6 Threshold elevation: 4409.2 ft

2.12.6 Touchdown zone elevation: 4409.3 ft

2.12.1 Designation: 25
2.12.2 True Bearing: 270
2.12.3 Dimensions: 6102 ft x 150 ft
2.12.4 PCN: 72 R/B/W/T
2.12.5 Coordinates: 39–29–46.3739N / 119–45–25.9978W
2.12.6 Threshold elevation: 4399.6 ft
2.12.6 Touchdown zone elevation: 4401.8 ft

2.12.1 Designation: 16L
2.12.2 True Bearing: 180
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 88 R/B/W/T
2.12.5 Coordinates: 39–30–49.8258N / 119–46–00.266W
2.12.6 Threshold elevation: 4414.8 ft
2.12.6 Touchdown zone elevation: 4414.8 ft

2.12.1 Designation: 34R
2.12.2 True Bearing: 0
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 88 R/B/W/T
2.12.5 Coordinates: 39–29–20.8949N / 119–46–00.4971W
2.12.6 Threshold elevation: 4408.3 ft
2.12.6 Touchdown zone elevation: 4408.3 ft

2.12.1 Designation: 16R
2.12.2 True Bearing: 180
2.12.3 Dimensions: 11001 ft x 150 ft
2.12.4 PCN: 88 R/B/W/T
2.12.5 Coordinates: 39–30–49.8381N / 119–46–09.1937W
2.12.6 Threshold elevation: 4414.8 ft
2.12.6 Touchdown zone elevation: 4414.8 ft

2.12.1 Designation: 34L
2.12.2 True Bearing: 0
2.12.3 Dimensions: 11001 ft x 150 ft
2.12.4 PCN: 88 R/B/W/T
2.12.5 Coordinates: 39–29–01.1337N / 119–46–09.475W
2.12.6 Threshold elevation: 4414.5 ft
2.12.6 Touchdown zone elevation: 4410.2 ft

AD 2.13 Declared distances

2.13.1 Designation: 07
2.13.2 Takeoff run available: 5854
2.13.3 Takeoff distance available: 5854

2.13.4 Accelerate-stop distance available: 6102
2.13.5 Landing distance available: 5854

2.13.1 Designation: 25
2.13.2 Takeoff run available: 6102
2.13.3 Takeoff distance available: 6102
2.13.4 Accelerate-stop distance available: 6102
2.13.5 Landing distance available: 6102

2.13.1 Designation: 16L
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 9000

2.13.1 Designation: 34R
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 9000

2.13.1 Designation: 16R
2.13.2 Takeoff run available: 11002
2.13.3 Takeoff distance available: 11002
2.13.4 Accelerate-stop distance available: 11402
2.13.5 Landing distance available: 10002

2.13.1 Designation: 34L
2.13.2 Takeoff run available: 11002
2.13.3 Takeoff distance available: 11002
2.13.4 Accelerate-stop distance available: 11402
2.13.5 Landing distance available: 10002

AD 2.14 Approach and runway lighting

2.14.1 Designation: 07
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 25
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: PAPI Not To Be Used Beyond 2 Nm
Due To Rapidly Rising Mountainous Terrain

2.14.1 Designation: 16L
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 34R
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Rwy 34R PAPI Unusable Beyond 6
Degrees Right Of Centerline .

2.14.1 Designation: 16R

2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 34L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: PAPI Not To Be Used Beyond 6 Nm
Due To High Terrain.

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ANG COMD POST
(CALLSIGN – ROLLER OPS.)
2.18.3 Service designation: 8780 MHz

2.18.1 Service designation: ANG COMD POST
(CALLSIGN – ROLLER OPS.)
2.18.3 Service designation: 378.4 MHz

2.18.1 Service designation: ANG OPS (CALLSIGN –
ROLLER OPS.)
2.18.3 Service designation: 378.4 MHz

2.18.1 Service designation: ANG OPS (CALLSIGN –
ROLLER OPS.)
2.18.3 Service designation: 8780 MHz

2.18.1 Service designation: ANG OPS
2.18.3 Service designation: 280 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 124.9 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 370.85 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 135.8 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 363 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.7 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 16R. Magnetic variation: 16E

2.19.2 ILS identification: RNO
2.19.5 Coordinates: 39-28-49.5342N /
119-46-09.505W
2.19.6 Site elevation: 4419.7 ft

2.19.1 ILS type: DME for runway 16R. Magnetic variation: 16E

2.19.2 ILS identification: RNO
2.19.5 Coordinates: 39-28-48.3183N /
119-46-06.1675W
2.19.6 Site elevation: 4433.4 ft

2.19.1 ILS type: Glide Slope for runway 16R. Magnetic variation: 16E

2.19.2 ILS identification: RNO
2.19.5 Coordinates: 39-30-28.0958N /
119-46-05.6655W
2.19.6 Site elevation: 4408.4 ft

2.19.1 ILS type: Localizer for runway 34L. Magnetic variation: 16E
2.19.2 ILS identification: AGY
2.19.5 Coordinates: 39-30-59.9826N /
119-46-09.1647W
2.19.6 Site elevation: 4433.1 ft

2.19.1 ILS type: DME for runway 34L. Magnetic variation: 16E
2.19.2 ILS identification: AGY
2.19.5 Coordinates: 39-31-00.2724N /
119-46-12.5676W
2.19.6 Site elevation: 4434.8 ft

2.19.1 ILS type: Glide Slope for runway 34L. Magnetic variation: 16E
2.19.2 ILS identification: AGY
2.19.5 Coordinates: 39-29-19.6039N /
119-46-05.3446W
2.19.6 Site elevation: 4403.3 ft

General Remarks:

WATERFOWL ALL QUADRANTS ALL SEASONS. CONCENTRATED NW OF RWY 16R AND E OF RWY 16L.

24 HRS PPR FOR TSNT ACFT PARKING WITH WINGSPANS GREATER THAN 75 FT.

TWY C BTN TWY L & TWY D RESTRICTED TO ACFT 100000 LBS OR LESS.

NOISE SENSITIVE AREA ALL QUADS. PILOTS OF TBJT ACFT USE RCMDD NOISE ABATEMENT PROCS; AVBL ON REQ.

NOISE NOTE CONT: PILOTS OF NON-TBJT ACFT USE BEST ABATEMENT PROCS AND SETTINGS. AVOID AS MUCH AS FEASIBLE FLYING OVER POPULATED AREAS.

MIL ACFT: TSNT ACFT EXECUTE STRAIGHT-IN FULL STOP APCH. OVERHEAD PAT NOT AUTH FOR TSNT ACFT.

MIL ACFT: NOISE ABTMT CRITICAL TERMINATE AFTERBURNER ASAP THEN CLIMB TO 6500 FT MSL ASAP.

GLIDER/SOARING OPER 30-50 MILES SOUTH OF ARPT DURING VFR WEATHER & MOUNTAIN WAVE WIND CONDITIONS 1100 TO SS.

PURE JET TOUCH & GO LOW APPROACH & PRACTICE INSTRUMENT APPROACHES ARE PROHIBITED; ACFT OVER 12500 LBS REQUIRE PRIOR WRITTEN APPROVAL FOR TRAINING FLIGHTS; FOR FURTHER INFORMATION CTC AIRPORT OPNS 1-877-736-6359.

TWY C BETWEEN TWY L AND TWY D CLSD TO AIR CARRIER ACFT.

TWY A BETWEEN NORTH TWY B AND TWY D CLSD TO ACFT WITH WINGSPAN GREATER THAN 149 FT.

ALL COMMERCIAL AIRCRAFT CONTACT GROUND CONTROL FOR ADVISORIES PRIOR TO PUSH BACK ON THE TERMINAL RAMP.

INTENSIVE GLIDER ACTIVITY INVOF ARPT AND SURROUNDING AREAS UP TO 18000 FT.

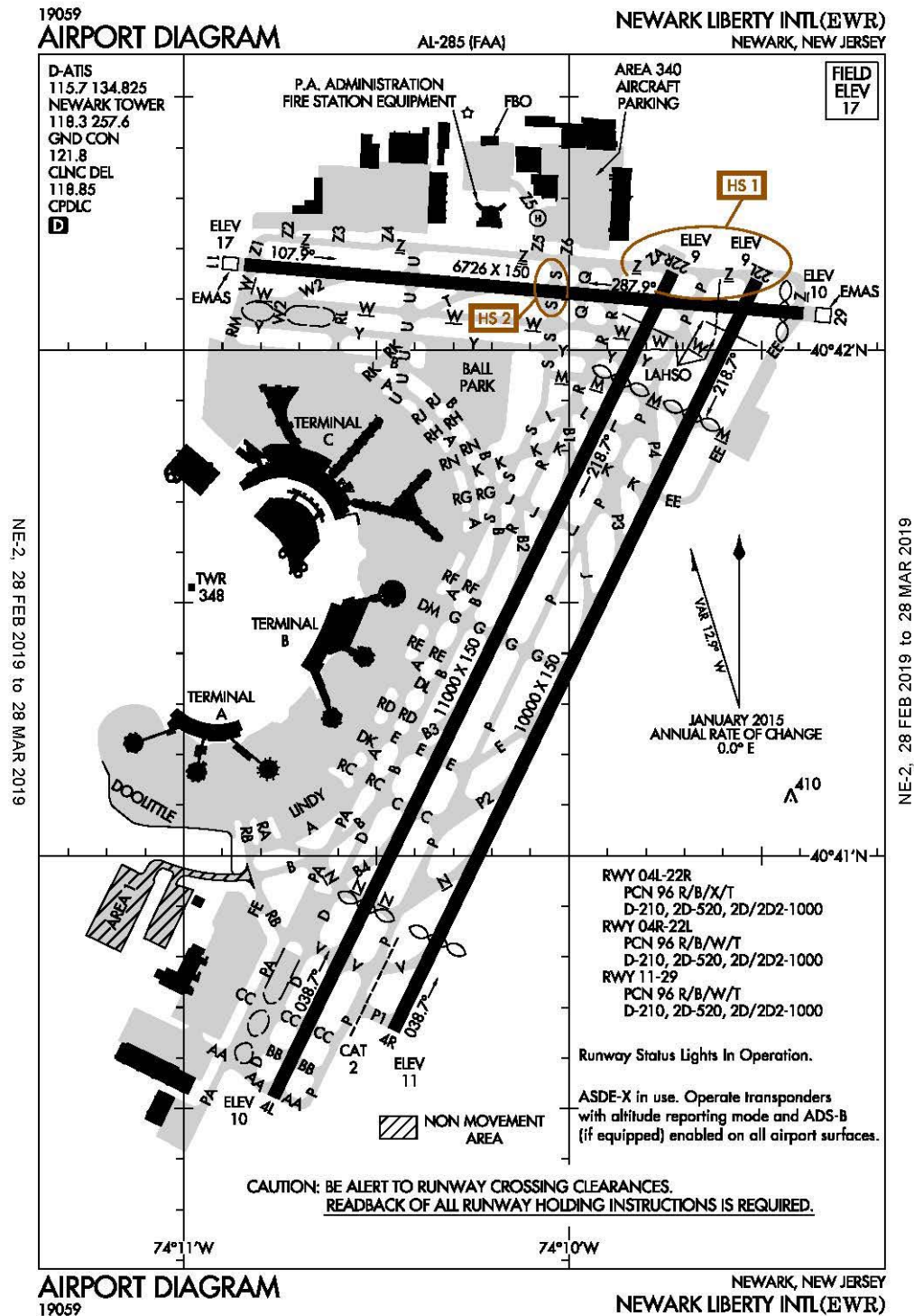
MILITARY: ANG OPS 1500-0100Z++ MON-FRI EXC HOL, OTHER TIMES BY NOTAM; DSN 830-4709.

TWY M CLSD TO AIR CARRIER ACFT.

TWY J EAST OF RY 16L/34R CLSD TO AIR CARRIER ACFT.

COLD TEMPERATURE RESTRICTED AIRPORT. ALTITUDE CORRECTION REQUIRED AT OR BELOW -15C.

Newark, New Jersey
Newark Liberty International
ICAO Identifier KEWR



Newark, NJ
Newark Liberty Intl
ICAO Identifier KEWR

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 40-41-32.9274N /
74-10-07.2724W
2.2.2 From City: 3 Miles S Of Newark, NJ
2.2.3 Elevation: 17.4 ft
2.2.5 Magnetic variation: 13W (1985)
2.2.6 Airport Contact: Doug Stearns – Acting
BUILDING #1- CONRAD ROAD
Newark, NJ 7114 (973-961-6161)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 04L
2.10.1.b Type of obstacle: Tree (65 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 572 ft L of Centerline

2.10.1.a. Runway designation: 04R
2.10.1.b Type of obstacle: Pole (28 ft above runway
end). Lighted
2.10.1.c Location of obstacle: 600 ft R of Centerline

2.10.1.a. Runway designation: 11
2.10.1.b Type of obstacle: Bldg (158 ft above runway
end). Lighted
2.10.1.c Location of obstacle: 1437 ft L of Centerline

2.10.1.a. Runway designation: 22L

2.10.1.b Type of obstacle: Ant (30 ft above runway end).
Not Lighted or Marked
2.10.1.c Location of obstacle: 534 ft R of Centerline

2.10.1.a. Runway designation: 22R
2.10.1.b Type of obstacle: Pole (28 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 477 ft R of Centerline

2.10.1.a. Runway designation: 29
2.10.1.b Type of obstacle: Sign (54 ft above runway
end). Lighted
2.10.1.c Location of obstacle: 514 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: H1
2.12.3 Dimensions: 54 ft x 54 ft
2.12.5 Coordinates: 40-42-15.85N / 74-10-05W
2.12.6 Threshold elevation: 8 ft

2.12.1 Designation: 11
2.12.2 True Bearing: 95
2.12.3 Dimensions: 6726 ft x 150 ft
2.12.4 PCN: 96 R/B/W/T
2.12.5 Coordinates: 40-42-10.0955N /
74-10-50.5467W
2.12.6 Threshold elevation: 17.4 ft
2.12.6 Touchdown zone elevation: 17.4 ft
2.12.7 Slope: 0.125 DOWN

2.12.1 Designation: 29
2.12.2 True Bearing: 275
2.12.3 Dimensions: 6726 ft x 150 ft
2.12.4 PCN: 96 R/B/W/T
2.12.5 Coordinates: 40-42-04.3181N /
74-09-23.5515W
2.12.6 Threshold elevation: 9.7 ft
2.12.6 Touchdown zone elevation: 9.8 ft
2.12.7 Slope: 0.125 DOWN

2.12.1 Designation: 04L
2.12.2 True Bearing: 26
2.12.3 Dimensions: 11000 ft x 150 ft
2.12.4 PCN: 96 R/B/X/T

2.12.5 Coordinates: 40-40-31.3716N /
74-10-46.0209W
2.12.6 Threshold elevation: 10.1 ft
2.12.6 Touchdown zone elevation: 10.4 ft

2.12.1 Designation: 22R
2.12.2 True Bearing: 206
2.12.3 Dimensions: 11000 ft x 150 ft
2.12.4 PCN: 96 R/B/X/T
2.12.5 Coordinates: 40-42-09.2091N /
74-09-43.8255W
2.12.6 Threshold elevation: 8.9 ft
2.12.6 Touchdown zone elevation: 10.4 ft

2.12.1 Designation: 04R
2.12.2 True Bearing: 26
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 96 R/B/W/T
2.12.5 Coordinates: 40-40-39.2984N /
74-10-27.2835W
2.12.6 Threshold elevation: 11.1 ft
2.12.6 Touchdown zone elevation: 11.3 ft

2.12.1 Designation: 22L
2.12.2 True Bearing: 206
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 96 R/B/W/T
2.12.5 Coordinates: 40-42-08.2438N /
74-09-30.7308W
2.12.6 Threshold elevation: 9.4 ft
2.12.6 Touchdown zone elevation: 10.7 ft

AD 2.13 Declared distances

2.13.1 Designation: 11
2.13.2 Takeoff run available: 6726
2.13.3 Takeoff distance available: 6726
2.13.4 Accelerate-stop distance available: 6726
2.13.5 Landing distance available: 6726

2.13.1 Designation: 29
2.13.2 Takeoff run available: 6726
2.13.3 Takeoff distance available: 6726
2.13.4 Accelerate-stop distance available: 6726
2.13.5 Landing distance available: 6502

2.13.1 Designation: 04L
2.13.2 Takeoff run available: 11000
2.13.3 Takeoff distance available: 11000
2.13.4 Accelerate-stop distance available: 11000
2.13.5 Landing distance available: 8460

2.13.1 Designation: 22R
2.13.2 Takeoff run available: 11000
2.13.3 Takeoff distance available: 11000
2.13.4 Accelerate-stop distance available: 11000
2.13.5 Landing distance available: 9560

2.13.1 Designation: 04R
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate-stop distance available: 10000
2.13.5 Landing distance available: 8810

2.13.1 Designation: 22L
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate-stop distance available: 10000
2.13.5 Landing distance available: 8207

AD 2.14 Approach and runway lighting

2.14.1 Designation: 11
2.14.4 Visual approach slope indicator system: V4L

2.14.1 Designation: 29
2.14.4 Visual approach slope indicator system: P4R
2.14.10 Remarks: Unusable 5 Degs Left Of Centerline .

2.14.1 Designation: 04L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 22R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 04R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 22L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P PRE TAXI CLNC
2.18.3 Service designation: 118.85 MHz

2.18.1 Service designation: CLASS B (WITHIN 6.5
NM ARE TWR CONTROLLED FREQS)
2.18.3 Service designation: 257.6 MHz

2.18.1 Service designation: CLASS B (WITHIN 6.5
NM ARE TWR CONTROLLED FREQS)
2.18.3 Service designation: 127.85 MHz

2.18.1 Service designation: D-ATIS (ARR)
2.18.3 Service designation: 115.7 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 134.825 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GATE HOLD
2.18.3 Service designation: 132.45 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GND/S
2.18.3 Service designation: 126.15 MHz

2.18.1 Service designation: LCL/P (WITHIN 6.5 NM
ARE TWR CONTROLLED FREQS)
2.18.3 Service designation: 257.6 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: LCL/S
2.18.3 Service designation: 134.05 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 04L. Magnetic varia-
tion: 13W

2.19.2 ILS identification: EWR
2.19.5 Coordinates: 40-42-15.686N / 74-09-33.736W
2.19.6 Site elevation: 34.3 ft

2.19.1 ILS type: Localizer for runway 04L. Magnetic
variation: 13W

2.19.2 ILS identification: EWR
2.19.5 Coordinates: 40-42-18.192N / 74-09-38.112W
2.19.6 Site elevation: 8.7 ft

2.19.1 ILS type: Glide Slope for runway 04L. Magnetic
variation: 13W

2.19.2 ILS identification: EWR
2.19.5 Coordinates: 40-41-02.167N / 74-10-22.759W
2.19.6 Site elevation: 7.4 ft

2.19.1 ILS type: Glide Slope for runway 04R. Magnetic
variation: 13W

2.19.2 ILS identification: EZA
2.19.5 Coordinates: 40-40-57.598N / 74-10-09.8776W
2.19.6 Site elevation: 6 ft

2.19.1 ILS type: Localizer for runway 04R. Magnetic
variation: 13W

2.19.2 ILS identification: EZA
2.19.5 Coordinates: 40-42-15.9432N /
74-09-25.8352W
2.19.6 Site elevation: 8.1 ft

2.19.1 ILS type: Inner Marker for runway 04R. Magnetic
variation: 13W

2.19.2 ILS identification: EZA
2.19.5 Coordinates: 40-40-41.4774N /
74-10-23.1671W
2.19.6 Site elevation: 9 ft

2.19.1 ILS type: DME for runway 04R. Magnetic variation: 13W

2.19.2 ILS identification: EZA

2.19.5 Coordinates: 40-41-43.5471N / 74-09-41.6275W

2.19.6 Site elevation: 33.5 ft

2.19.1 ILS type: Glide Slope for runway 11. Magnetic variation: 13W

2.19.2 ILS identification: GPR

2.19.5 Coordinates: 40-42-10.837N / 74-10-35.03W

2.19.6 Site elevation: 9.5 ft

2.19.1 ILS type: DME for runway 11. Magnetic variation: 13W

2.19.2 ILS identification: GPR

2.19.5 Coordinates: 40-42-09.5406N / 74-10-04.0694W

2.19.6 Site elevation: 7.1 ft

2.19.1 ILS type: Localizer for runway 11. Magnetic variation: 13W

2.19.2 ILS identification: GPR

2.19.5 Coordinates: 40-42-09.2938N / 74-10-04.9852W

2.19.6 Site elevation: 7 ft

2.19.1 ILS type: Glide Slope for runway 22L. Magnetic variation: 13W

2.19.2 ILS identification: LSQ

2.19.5 Coordinates: 40-41-43.6732N / 74-09-41.7368W

2.19.6 Site elevation: 7.4 ft

2.19.1 ILS type: Localizer for runway 22L. Magnetic variation: 13W

2.19.2 ILS identification: LSQ

2.19.5 Coordinates: 40-40-28.9529N / 74-10-33.8654W

2.19.6 Site elevation: 9.4 ft

2.19.1 ILS type: Inner Marker for runway 22L. Magnetic variation: 13W

2.19.2 ILS identification: LSQ

2.19.5 Coordinates: 40-42-01.3147N / 74-09-32.1813W

2.19.6 Site elevation: 9.4 ft

2.19.1 ILS type: DME for runway 22L. Magnetic variation: 13W

2.19.2 ILS identification: LSQ

2.19.5 Coordinates: 40-41-43.5471N / 74-09-41.6275W

2.19.6 Site elevation: 33.5 ft

2.19.1 ILS type: Glide Slope for runway 22R. Magnetic variation: 13W

2.19.2 ILS identification: JNN

2.19.5 Coordinates: 40-41-47.5592N / 74-09-53.883W

2.19.6 Site elevation: 8 ft

2.19.1 ILS type: Localizer for runway 22R. Magnetic variation: 13W

2.19.2 ILS identification: JNN

2.19.5 Coordinates: 40-40-22.392N / 74-10-51.726W

2.19.6 Site elevation: 9.1 ft

2.19.1 ILS type: DME for runway 22R. Magnetic variation: 13W

2.19.2 ILS identification: JNN

2.19.5 Coordinates: 40-42-15.686N / 74-09-33.736W

2.19.6 Site elevation: 34.3 ft

General Remarks:

FLOCKS OF BIRDS ON & INVOF ARPT.

NOISE RSTR CALL 212-435-3784 DRG NML BUS HRS.

PARA-SAIL & BANNER TOWING OPS 1000 FT & BLO IN UPPER & LOWER NY BAYS INCLUDING ROCKAWAY INLET INDEF.

TWY Z BTN TWY Z2 & Z4 CLSD TO ACFT WITH WINGSPANS IN EXCESS OF 171 FT.

ASDE-X IN USE. OPER TRANSPONDER WITH ALT REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL ARPT SFCS.

RWY 4R & 4L DEP USE UPPER ANT FOR ATC COM.

HIGH VOLUME OF LOW LEVEL HEL TFC ARR AND DEP HELO KEARNY HELI (65NJ) LCTD 3.5 MILES NE OF ARPT.

RWY STATUS LIGHTS IN OPR

CPDLC DEPARTURE CLEARANCE SERVICE AVAILABLE.

ADG IV ACFT RSTR FM PSG TWY Z3 ON Z

TWY Z EAST OF TWY U ACFT SPEED RSTR OF 17 KTS/20 MPH MAX FOR ALL ACFT WITH WINGSPANS IN EXCESS OF 171 FT.

TWY Y BTN RM AND TWY U CLSD TO ACFT WITH WINGSPANS IN EXCESS OF 171 FT.

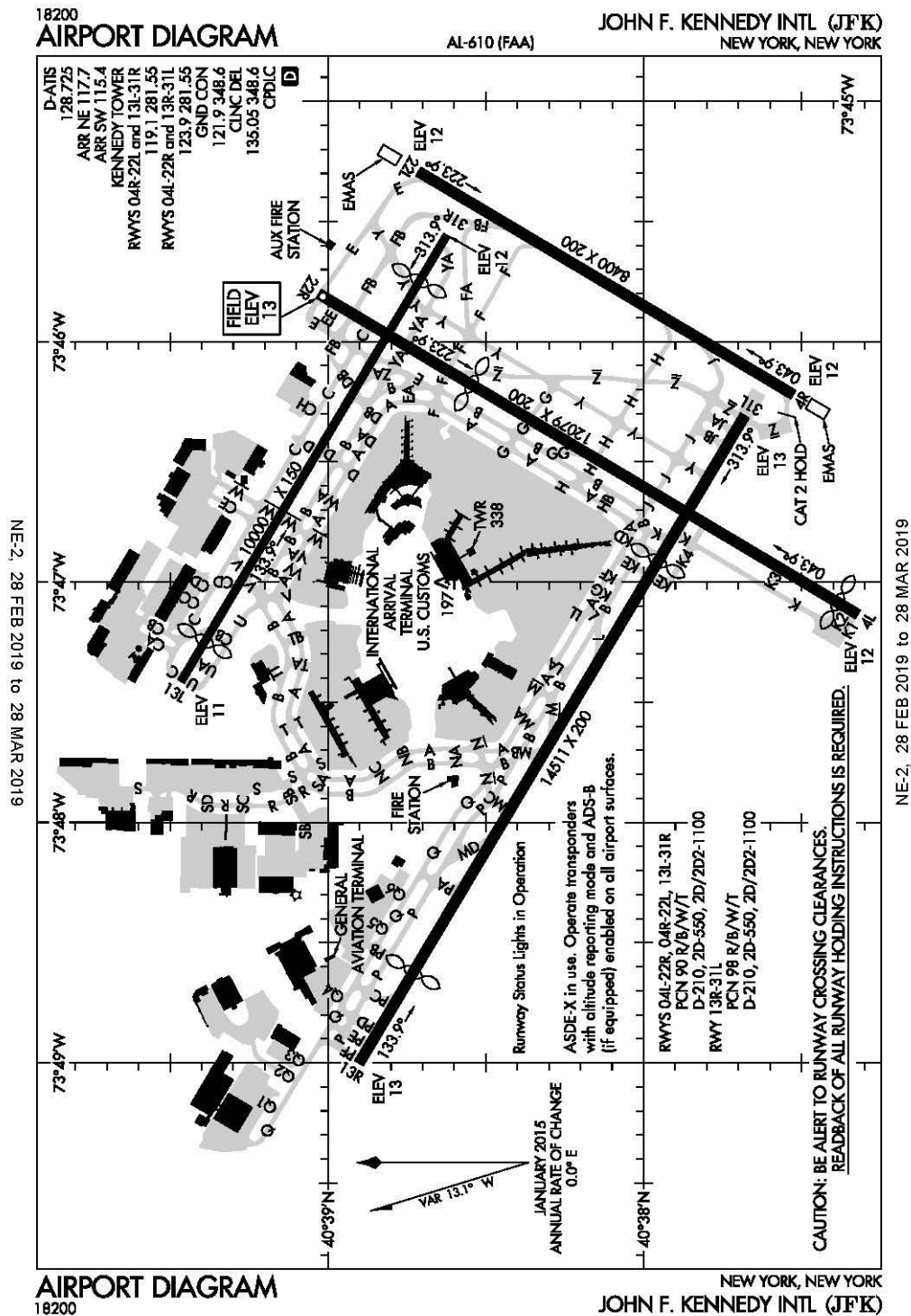
ALL TWYS SURROUNDING "BALLPARK" PRKG AREA (TWY Y BTN TWY S AND TWY U, TWY S BTN TWY Y AND TWY K, TWAY K BTN TWY S AND TWY B, TWY B BTN TWY K AND TWY U, AND TWY U BTN TWY B AND TWY Y) ACFT SPEED RSTR OF 17KTS/20MPH FOR ALL AFCT WITH WINGSPANS IN EXCESS OF 171 FT.

TWY EE BTN RWY 4R-22L AND TWY M CLSD TO AFCT WITH WINGSPANS IN EXCESS OF 118 FT.

TWY EE BTN RWY 11-29 AND TWY M CLOSED TO AFCT WITH WINGSPANS IN EXCESS OF 171 FT.

TWY PA SOUTH OF TWY AA CLSD TO ACFT WITH WINGSPANS OF 171 FT.

New York, New York
John F. Kennedy International
ICAO Identifier KJFK



New York, NY
John F Kennedy Intl
ICAO Identifier KJFK

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 40-38-23.7327N / 73-46-43.3019W
2.2.2 From City: 13 Miles SE Of New York, NY
2.2.3 Elevation: 12.7 ft
2.2.5 Magnetic variation: 13W (2020)
2.2.6 Airport Contact: Charles Everett
BLDG 14
Jamaica, NY 11430
((718) 244-3501)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 13L
2.10.1.b Type of obstacle: Pole (52 ft above runway end). Lighted
2.10.1.c Location of obstacle: 327 ft R of Centerline

2.10.1.a. Runway designation: 22L
2.10.1.b Type of obstacle: Tree (50 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 310 ft R of Centerline

2.10.1.a. Runway designation: 22R
2.10.1.b Type of obstacle: Tree (70 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 37 ft L of Centerline

2.10.1.a. Runway designation: 31R
2.10.1.b Type of obstacle: Tree (79 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 392 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 04L
2.12.2 True Bearing: 31
2.12.3 Dimensions: 12079 ft x 200 ft
2.12.4 PCN: 90 R/B/W/T
2.12.5 Coordinates: 40-37-19.2759N / 73-47-08.1038W
2.12.6 Threshold elevation: 11.9 ft
2.12.6 Touchdown zone elevation: 12.7 ft

2.12.1 Designation: 22R
2.12.2 True Bearing: 211
2.12.3 Dimensions: 12079 ft x 200 ft
2.12.4 PCN: 90 R/B/W/T
2.12.5 Coordinates: 40-39-01.8337N / 73-45-47.9596W
2.12.6 Threshold elevation: 12.7 ft
2.12.6 Touchdown zone elevation: 12.7 ft

2.12.1 Designation: 13L
2.12.2 True Bearing: 121
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 90 F/B/W/T
2.12.5 Coordinates: 40-39-27.95N / 73-47-24.89W
2.12.6 Threshold elevation: 11.3 ft
2.12.6 Touchdown zone elevation: 12.1 ft

2.12.1 Designation: 31R
2.12.2 True Bearing: 301
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 90 F/B/W/T
2.12.5 Coordinates: 40-38-37.4N / 73-45-33.41W
2.12.6 Threshold elevation: 11.8 ft
2.12.6 Touchdown zone elevation: 12.1 ft

2.12.1 Designation: 13R
2.12.2 True Bearing: 121
2.12.3 Dimensions: 14511 ft x 200 ft
2.12.4 PCN: 98 R/B/W/T
2.12.5 Coordinates: 40-38-54.102N / 73-49-00.173W
2.12.6 Threshold elevation: 12.5 ft
2.12.6 Touchdown zone elevation: 12.6 ft

2.12.1 Designation: 31L
2.12.2 True Bearing: 301
2.12.3 Dimensions: 14511 ft x 200 ft
2.12.4 PCN: 98 R/B/W/T
2.12.5 Coordinates: 40-37-40.781N / 73-46-18.413W
2.12.6 Threshold elevation: 12.5 ft
2.12.6 Touchdown zone elevation: 12.6 ft

2.12.1 Designation: 04R
2.12.2 True Bearing: 31
2.12.3 Dimensions: 8400 ft x 200 ft
2.12.4 PCN: 90 F/B/W/T
2.12.5 Coordinates: 40-37-31.532N / 73-46-13.25W
2.12.6 Threshold elevation: 11.8 ft
2.12.6 Touchdown zone elevation: 11.9 ft

2.12.1 Designation: 22L
2.12.2 True Bearing: 211
2.12.3 Dimensions: 8400 ft x 200 ft
2.12.4 PCN: 90 F/B/W/T
2.12.5 Coordinates: 40-38-42.849N / 73-45-17.509W
2.12.6 Threshold elevation: 11.8 ft
2.12.6 Touchdown zone elevation: 11.9 ft

AD 2.13 Declared distances

2.13.1 Designation: 04L
2.13.2 Takeoff run available: 11351
2.13.3 Takeoff distance available: 11351
2.13.4 Accelerate-stop distance available: 11470
2.13.5 Landing distance available: 11010

2.13.1 Designation: 22R
2.13.2 Takeoff run available: 12079
2.13.3 Takeoff distance available: 12079
2.13.4 Accelerate-stop distance available: 11219
2.13.5 Landing distance available: 7795

2.13.1 Designation: 13L
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate-stop distance available: 10000
2.13.5 Landing distance available: 9093

2.13.1 Designation: 31R
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate-stop distance available: 9513
2.13.5 Landing distance available: 8486

2.13.1 Designation: 13R
2.13.2 Takeoff run available: 14511
2.13.3 Takeoff distance available: 14511
2.13.4 Accelerate-stop distance available: 14511
2.13.5 Landing distance available: 12468

2.13.1 Designation: 31L
2.13.2 Takeoff run available: 14511
2.13.3 Takeoff distance available: 14511
2.13.4 Accelerate-stop distance available: 14511

2.13.5 Landing distance available: 11248

2.13.1 Designation: 04R
2.13.2 Takeoff run available: 8400
2.13.3 Takeoff distance available: 8400
2.13.4 Accelerate-stop distance available: 8400
2.13.5 Landing distance available: 8400

2.13.1 Designation: 22L
2.13.2 Takeoff run available: 8400
2.13.3 Takeoff distance available: 8400
2.13.4 Accelerate-stop distance available: 8400
2.13.5 Landing distance available: 8400

AD 2.14 Approach and runway lighting

2.14.1 Designation: 04L
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 22R
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Rwy 22R PAPI Unusable Beyond 8 Degrees Right Of Centerline .

2.14.1 Designation: 13L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Rwy 13L PAPI Rotated 10 Degrees Right Of Rwy Centerline . Rwy 13L PAPI Unusable Left Of Rwy Centerline .

2.14.1 Designation: 31R
2.14.2 Approach lighting system: MALSR

2.14.1 Designation: 13R
2.14.2 Approach lighting system: RLLS
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Runway 13R First P4L Horizontal Offset 22 Degs Left.
ry 13R Has Second P4L With Transitional Threshold Crossing Height And 3.00 Degrees Vgsi.

2.14.1 Designation: 31L
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 04R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 22L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.10 Remarks: Runway 22L PAPI Horizontal Offset 4 Degrees To Left. Non Standard Light Spacing.

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P

2.18.3 Service designation: 125.7 MHz

2.18.1 Service designation: CD/P PRE TAXI CLNC (NORTH & SOUTH)

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: CD/P PRE TAXI CLNC

2.18.3 Service designation: 135.05 MHz

2.18.1 Service designation: CLASS B (FREQS 2000 FT & BLO W/N 8 NM ARE TWR CNTRLD FREQS)

2.18.3 Service designation: 281.55 MHz

2.18.1 Service designation: CLASS B (FREQS 2000 FT & BLO W/N 8 NM ARE TWR CNTRLD FREQS)

2.18.3 Service designation: 125.25 MHz

2.18.1 Service designation: D-ATIS (ARR/DEP)

2.18.3 Service designation: 128.725 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS (ARR-SW)

2.18.3 Service designation: 115.4 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS (ARR-NE)

2.18.3 Service designation: 117.7 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GATE HOLD

2.18.3 Service designation: 125.05 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/S

2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: LCL/P (RYS 04R/22L & 13L/31R)

2.18.3 Service designation: 281.55 MHz

2.18.1 Service designation: LCL/P (RYS 04L/22R & 13R/31L)

2.18.3 Service designation: 123.9 MHz

2.18.1 Service designation: LCL/P (RYS 04R/22L & 13L/31R)

2.18.3 Service designation: 119.1 MHz

2.18.1 Service designation: LCL/P (RYS 04L/22R & 13R/31L)

2.18.3 Service designation: 281.55 MHz

2.18.1 Service designation: PARCH STAR

2.18.3 Service designation: 125.7 MHz

2.18.1 Service designation: ROBER STAR

2.18.3 Service designation: 125.7 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 04L. Magnetic variation: 13W

2.19.2 ILS identification: HIQ

2.19.5 Coordinates: 40-37-31.0826N / 73-46-54.9123W

2.19.6 Site elevation: 9.3 ft

2.19.1 ILS type: Localizer for runway 04L. Magnetic variation: 13W

2.19.2 ILS identification: HIQ

2.19.5 Coordinates: 40-39-06.9659N / 73-45-43.9469W

2.19.6 Site elevation: 10.5 ft

2.19.1 ILS type: DME for runway 04L. Magnetic variation: 13W

2.19.2 ILS identification: HIQ

2.19.5 Coordinates: 40-37-43.82N / 73-46-40.578W

2.19.6 Site elevation: 24 ft

2.19.1 ILS type: Localizer for runway 04R. Magnetic variation: 14W

2.19.2 ILS identification: JFK

2.19.5 Coordinates: 40-38-51.57N / 73-45-10.684W

2.19.6 Site elevation: 12.7 ft

2.19.1 ILS type: Inner Marker for runway 04R. Magnetic variation: 14W

2.19.2 ILS identification: JFK
2.19.5 Coordinates: 40-37-23.9N / 73-46-19.1W
2.19.6 Site elevation: 12 ft

2.19.1 ILS type: Glide Slope for runway 04R. Magnetic variation: 14W
2.19.2 ILS identification: JFK
2.19.5 Coordinates: 40-37-42.1007N / 73-46-11.0535W
2.19.6 Site elevation: 12.2 ft

2.19.1 ILS type: DME for runway 04R. Magnetic variation: 14W
2.19.2 ILS identification: JFK
2.19.5 Coordinates: 40-38-53.286N / 73-45-13.179W
2.19.6 Site elevation: 29 ft

2.19.1 ILS type: Localizer for runway 13L. Magnetic variation: 14W
2.19.2 ILS identification: TLK
2.19.5 Coordinates: 40-38-30.687N / 73-45-18.566W
2.19.6 Site elevation: 14.1 ft

2.19.1 ILS type: DME for runway 13L. Magnetic variation: 14W
2.19.2 ILS identification: TLK
2.19.5 Coordinates: 40-38-33.543N / 73-45-18.237W
2.19.6 Site elevation: 31 ft

2.19.1 ILS type: Glide Slope for runway 13L. Magnetic variation: 14W
2.19.2 ILS identification: TLK
2.19.5 Coordinates: 40-39-14.7571N / 73-47-04.857W
2.19.6 Site elevation: 10.5 ft

2.19.1 ILS type: Localizer for runway 22L. Magnetic variation: 14W
2.19.2 ILS identification: IWW
2.19.5 Coordinates: 40-37-27.513N / 73-46-16.387W
2.19.6 Site elevation: 10.5 ft

2.19.1 ILS type: DME for runway 22L. Magnetic variation: 14W
2.19.2 ILS identification: IWW
2.19.5 Coordinates: 40-37-43.82N / 73-46-40.578W
2.19.6 Site elevation: 24 ft

2.19.1 ILS type: Glide Slope for runway 22L. Magnetic variation: 14W
2.19.2 ILS identification: IWW
2.19.5 Coordinates: 40-38-32.9529N /

73-45-19.9899W
2.19.6 Site elevation: 13.1 ft

2.19.1 ILS type: Inner Marker for runway 22L. Magnetic variation: 14W
2.19.2 ILS identification: IWW
2.19.5 Coordinates: 40-38-51.13N / 73-45-11.04W
2.19.6 Site elevation: 12 ft

2.19.1 ILS type: Glide Slope for runway 22R. Magnetic variation: 14W
2.19.2 ILS identification: JOC
2.19.5 Coordinates: 40-38-21.2797N / 73-46-13.9085W
2.19.6 Site elevation: 8.6 ft

2.19.1 ILS type: Localizer for runway 22R. Magnetic variation: 14W
2.19.2 ILS identification: JOC
2.19.5 Coordinates: 40-37-44.5024N / 73-46-43.0851W
2.19.6 Site elevation: 9.5 ft

2.19.1 ILS type: DME for runway 22R. Magnetic variation: 14W
2.19.2 ILS identification: JOC
2.19.5 Coordinates: 40-38-53.286N / 73-45-13.179W
2.19.6 Site elevation: 29 ft

2.19.1 ILS type: Localizer for runway 31L. Magnetic variation: 14W
2.19.2 ILS identification: MOH
2.19.5 Coordinates: 40-38-59.645N / 73-49-12.422W
2.19.6 Site elevation: 13.7 ft

2.19.1 ILS type: Glide Slope for runway 31L. Magnetic variation: 14W
2.19.2 ILS identification: MOH
2.19.5 Coordinates: 40-37-59.8702N / 73-47-09.4213W
2.19.6 Site elevation: 8.7 ft

2.19.1 ILS type: DME for runway 31R. Magnetic variation: 14W
2.19.2 ILS identification: RTH
2.19.5 Coordinates: 40-38-33.543N / 73-45-18.237W
2.19.6 Site elevation: 31 ft

2.19.1 ILS type: Localizer for runway 31R. Magnetic variation: 14W
2.19.2 ILS identification: RTH

2.19.5 Coordinates: 40-39-30.778N / 73-47-31.088W
2.19.6 Site elevation: 11.9 ft

2.19.1 ILS type: Glide Slope for runway 31R. Magnetic variation: 14W

2.19.2 ILS identification: RTH
2.19.5 Coordinates: 40-38-50.3237N /
73-45-51.0237W
2.19.6 Site elevation: 9.5 ft

General Remarks:

FLOCKS OF BIRDS ON & INVOF ARPT.

RLLS RY 13L USES 1000 FT LGT STN OF THE ALS ONLY WITH CRI VOR APCHS & IS ANGLED TOWARD AQUEDUCT; ALSO 5 SFL FM 1200-2000 FT & A 5 SFL GROUPING APPROXLY 1 MI FM RY +1 ADJ FORMING APCH. APCH GATE ANGLED 35 DEGS S OF RY 13L CNTRLN DESIGNED TO PRVD EARLIER IDENT OF RY ENVI.

FOR NOISE ABATEMENT RESTRICTIONS CALL 212-435-3747 DURING NORMAL BUSINESS HOURS.

PARA-SAIL & BANNER TOWING OPNS 1000 FT & BLO IN UPPER & LOWER NEW YORK BAYS INCLUDING ROCKAWAY INLET INDEFLY.

SPECIAL AIR TFC RULES-PART 93 HIGH DENSITY ARPT. PROR RESERVATION REQUIRED. SEE AERONAUTICAL INFORMATION MANUAL.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

CONVERGING OPNS ON RYS 13R AND 22L CONDUCTED VIA ARRIVAL DISTANCE WINDOW.

METERING PROCEDURES IN EFFECT- CONTACT RAMP CONTROL PRIOR TO PUSHBACK 1200Z-1500Z DAILY/1900Z-0300Z DAILY.

ACFT OPERATIONAL & TAXIWAY RESTRICTIONS EXIST FOR A380, B747-800, B777-300ER AND A340-600, PLEASE CONTACT JFK AIRPORT OPERATIONS FOR MORE INFORMATION.

GAT HELIPAD NON-STANDARD MARKINGS & LIGHTING.

RY 13R HAS TWO (2) PAPI - P4L SYSTEMS. (RY 13R) OFFSET PAPI SUPPORTS VOR OR GPS RWY 13R & PARKWAY VISUAL RY 13R.

TWY 'A' BTN TWY 'NA' & TWY 'NB' ARCFT SPEED RESTRICTION OF 17KTS/20MPH MAXIMUM FOR A380, B747-800, B747-400, B777-300ER, B777-200, A340, A330 & B787.

TWY 'H' CL LGTS BTN TERMINAL 4 RAMP AND TWY A OTS.

TWY 'H' CL LGTS BTN TWY 'A' & RY 4L/22R OTS.

RY 31R HOLDING POSITION MARKINGS AT RY 4L/22R 'SE' SIDE OBSC.

RY 13L HOLDING POSITION MARKINGS AT RY 4L/22R 'NW' SIDE OBSC.

UFN TWY 'D' BTN TWY 'C' AND HANGAR 7 CLOSED.

OBST BLDG LGT OTS 6.3 NM ESE JFK 222 FT MSL (220 FT AGL).

NON-STANDARD ENGINEERED MATERIALS ARRESTING SYSTEM (EMAS) 393 FT IN LENGTH BY 226 FT IN WIDTH LCTD AT THE DER 4R.

NON-STANDARD ENGINEERED MATERIALS ARRESTING SYSTEM (EMAS) 405 FT IN LENGTH BY 226 FT IN WIDTH LCTD AT THE DER 22L.

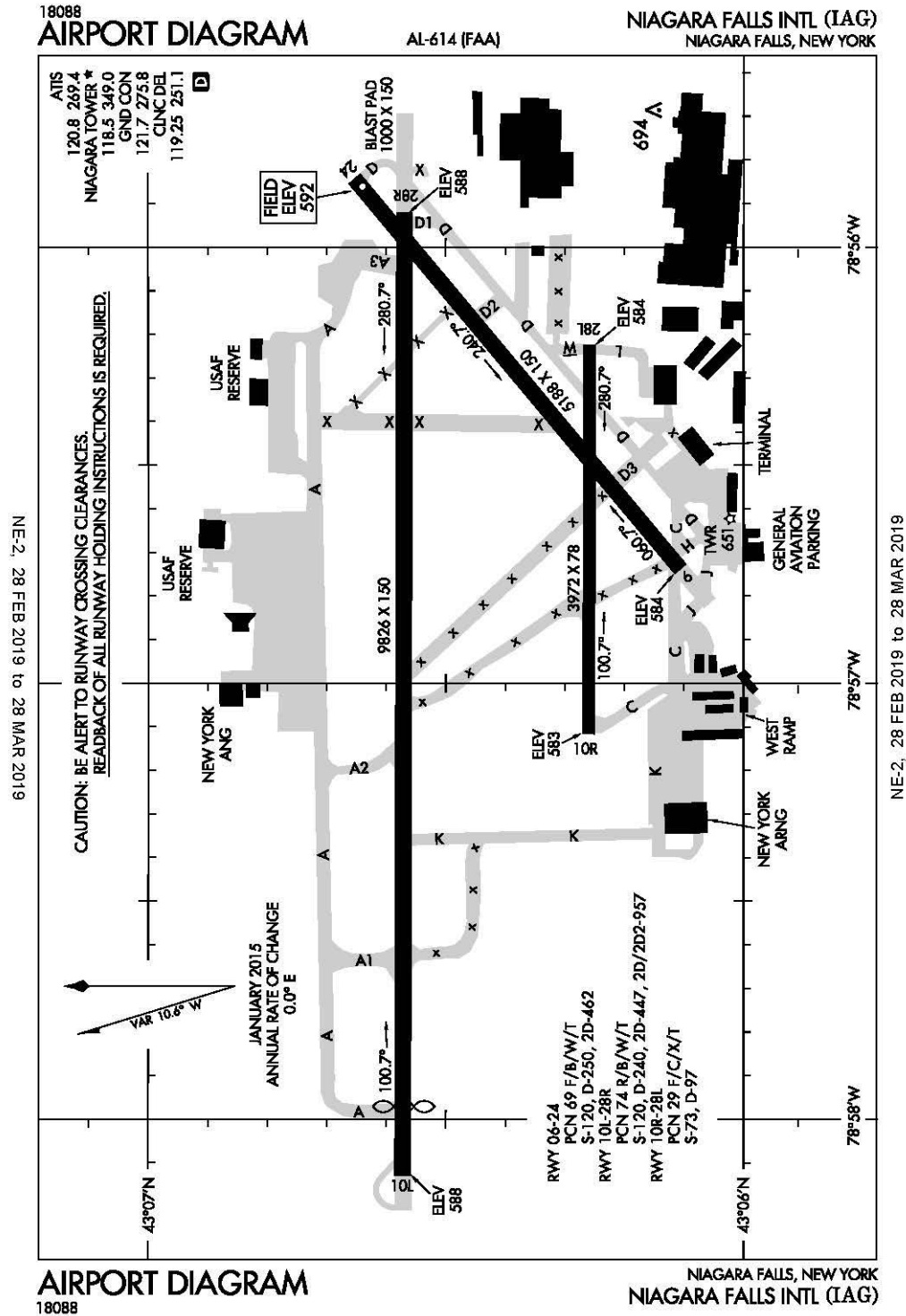
RWY STATUS LGTS IN OPS.

CONTINUOUS TAXIWAY MAINTENANCE ACTIVITIES AT NUMEROUS LOCATIONS

HIGH VOLUME OF LOW LEVEL VFR TRAFFIC, 500 FT AND BLO, ALONG SHORELINE SOUTH OF JFK.

TWY CA CLSD INDEFLY.

Niagara Falls, New York
Niagara Falls International
ICAO Identifier KIAG



Niagara Falls, NY
Niagara Falls Intl
ICAO Identifier KIAG

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 43–06–27.2065N /
78–56–45.048W
2.2.2 From City: 4 Miles E Of Niagara Falls, NY
2.2.3 Elevation: 592.3 ft
2.2.5 Magnetic variation: 10W (1985)
2.2.6 Airport Contact: Mr. Robert Stone
2035 NIAGARA FALLS BLVD
Niagara Falls, NY 14304
((716) 297–4494)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A+,A,100LL
2.4.5 Hangar space: No
2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
B certified on 7/1/1974
2.6.4 Remarks: ARFF Index E Equipment Coverage Provided.

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 06
2.10.1.b Type of obstacle: Tree (46 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 290 ft R of Centerline

2.10.1.a. Runway designation: 10L
2.10.1.b Type of obstacle: Tree (52 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 480 ft R of Centerline

2.10.1.a. Runway designation: 10R
2.10.1.b Type of obstacle: Tree (64 ft above runway end). Not Lighted or Marked

2.10.1.c Location of obstacle: 60 ft R of Centerline

2.10.1.a. Runway designation: 24
2.10.1.b Type of obstacle: Tree (59 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 320 ft R of Centerline

2.10.1.a. Runway designation: 28L
2.10.1.b Type of obstacle: Stack (59 ft above runway end). Lighted
2.10.1.c Location of obstacle: 120 ft L of Centerline

2.10.1.a. Runway designation: 28R
2.10.1.b Type of obstacle: Tree (37 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 400 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 06
2.12.2 True Bearing: 50
2.12.3 Dimensions: 5188 ft x 150 ft
2.12.4 PCN: 69 F/B/W/T
2.12.5 Coordinates: 43–06–06.3587N /
78–56–44.2955W
2.12.6 Threshold elevation: 584.3 ft
2.12.6 Touchdown zone elevation: 585.8 ft

2.12.1 Designation: 24
2.12.2 True Bearing: 230
2.12.3 Dimensions: 5188 ft x 150 ft
2.12.4 PCN: 69 F/B/W/T
2.12.5 Coordinates: 43–06–39.1997N /
78–55–50.6072W
2.12.6 Threshold elevation: 592.2 ft
2.12.6 Touchdown zone elevation: 592.3 ft

2.12.1 Designation: 10R
2.12.2 True Bearing: 90
2.12.3 Dimensions: 3972 ft x 78 ft
2.12.4 PCN: 29 F/C/X/T
2.12.5 Coordinates: 43–06–15.6025N /
78–57–07.0063W
2.12.6 Threshold elevation: 582.6 ft
2.12.6 Touchdown zone elevation: 584.1 ft

2.12.1 Designation: 28L
2.12.2 True Bearing: 270
2.12.3 Dimensions: 3972 ft x 78 ft
2.12.4 PCN: 29 F/C/X/T
2.12.5 Coordinates: 43–06–15.507N / 78–56–13.4609W
2.12.6 Threshold elevation: 584.2 ft
2.12.6 Touchdown zone elevation: 584.8 ft

2.12.1 Designation: 10L
2.12.2 True Bearing: 90
2.12.3 Dimensions: 9826 ft x 150 ft
2.12.4 PCN: 74 R/B/W/T
2.12.5 Coordinates: 43–06–34.3453N /
78–58–07.7703W
2.12.6 Threshold elevation: 588.2 ft
2.12.6 Touchdown zone elevation: 588.8 ft

2.12.1 Designation: 28R
2.12.2 True Bearing: 270
2.12.3 Dimensions: 9826 ft x 150 ft
2.12.4 PCN: 74 R/B/W/T
2.12.5 Coordinates: 43–06–34.1594N /
78–55–55.3156W
2.12.6 Threshold elevation: 587.9 ft
2.12.6 Touchdown zone elevation: 588.3 ft

AD 2.13 Declared distances

2.13.1 Designation: 06
2.13.2 Takeoff run available: 5188
2.13.3 Takeoff distance available: 5188
2.13.4 Accelerate–stop distance available: 5188
2.13.5 Landing distance available: 5188

2.13.1 Designation: 24
2.13.2 Takeoff run available: 5188
2.13.3 Takeoff distance available: 5188
2.13.4 Accelerate–stop distance available: 5108
2.13.5 Landing distance available: 5108

2.13.1 Designation: 10R
2.13.2 Takeoff run available: 3973
2.13.3 Takeoff distance available: 3973
2.13.4 Accelerate–stop distance available: 3973
2.13.5 Landing distance available: 3973

2.13.1 Designation: 28L
2.13.2 Takeoff run available: 3973
2.13.3 Takeoff distance available: 3973
2.13.4 Accelerate–stop distance available: 3973
2.13.5 Landing distance available: 3973

2.13.1 Designation: 10L
2.13.2 Takeoff run available: 9829
2.13.3 Takeoff distance available: 10829
2.13.4 Accelerate–stop distance available: 9829
2.13.5 Landing distance available: 9129

2.13.1 Designation: 28R
2.13.2 Takeoff run available: 9829
2.13.3 Takeoff distance available: 10529
2.13.4 Accelerate–stop distance available: 9129
2.13.5 Landing distance available: 9129

AD 2.14 Approach and runway lighting

2.14.1 Designation: 06
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 24
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 10R
2.14.4 Visual approach slope indicator system: P2L

2.14.1 Designation: 28L
2.14.4 Visual approach slope indicator system: P2L

2.14.1 Designation: 10L
2.14.4 Visual approach slope indicator system: V4L

2.14.1 Designation: 28R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: AFRC OPS
2.18.3 Service designation: 340.24 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 269.4 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: ATIS

2.18.3 Service designation: 120.8 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P

2.18.3 Service designation: 119.25 MHz

2.18.1 Service designation: CD/P

2.18.3 Service designation: 251.1 MHz

2.18.1 Service designation: COMD POST (914 AW)

2.18.3 Service designation: 340.025 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 275.8 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 118.5 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 349 MHz

2.18.1 Service designation: NG OPS

2.18.3 Service designation: 41 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 28R. Magnetic variation: 10W

2.19.2 ILS identification: IAG

2.19.5 Coordinates: 43-06-34.3589N /

78-58-18.8146W

2.19.6 Site elevation: 585.1 ft

2.19.1 ILS type: Glide Slope for runway 28R. Magnetic variation: 10W

2.19.2 ILS identification: IAG

2.19.5 Coordinates: 43-06-30.0921N /

78-56-16.6451W

2.19.6 Site elevation: 582.8 ft

2.19.1 ILS type: Outer Marker for runway 28R. Magnetic variation: 10W

2.19.2 ILS identification: IAG

2.19.5 Coordinates: 43-06-32.5184N /

78-50-18.2195W

2.19.6 Site elevation: 614.9 ft

General Remarks:

EXTSV ACFT ACTIVITY OPERATING INVOF US/CANADIAN FALLS ALL ALTS.

CAUTION: HEAVY CONCENTRATIONS OF GULLS-BLACKBIRDS-STARLINGS UP TO 5000 AGL ON & INVOF ARPT. BASH PHASE II OPERATIONS AT KIAG MAR-MAY AND SEP-NOV.

TWY D3 RSTRD TO 12500 LBS OR LESS.

TWY "E" CLSD PERMLY BETWEEN TWY'S "C" AND "D".

TWY "E" CLSD INDEFLY FM RY 10L/28R TO RY 06/24.

ALL MIL ACFT ONLY OPNS RESTRICTED DURING BIRD WATCH CONDITIONS. MODERATE - TKOF & LDG PERMISSION ONLY WHEN DEP/ARR RTE AVOIDS IDENTIFIED BIRD ACTIVITY; NO LCL IFR/VFR TFC PAT ACTIVITY. SEVERE - TKOF & LDG PHOIHIBITED WO OG/CC APPROVAL; CTC COMMAND POST FOR CURRENT BIRD WATCH CONDITIONS.

ALL MIL ACFT ONLY MINIMAL CLASSIFIED MATERIALS AVBL; AIRCREWS SHOULD ARRIVE WITH APPROPRIATE AMOUNT TO COMPLETE THEIR MISSION.

BEARING STRENGTH RWY 06/24: ST110 TT145 SBTT281

TDT415 TRT252.

JASU: 2(A/M32A-86) 1(AM32A-60) 1(MA-1A).

FUEL: J8, A++ (MIL).

FLUID: SP.

OIL: O-148(MIL).

REMARKS: SEE FLIP AP/1 SUPPLEMENTARY ARPT RMK.

MISC: LOCAL MISSION AIRCRAFT HAVE PRIORITY FOR DEICING; FULL AIRCRAFT DEICING FOR C-17 AND C-5 AIRCRAFT NOT AVAILABLE.

REMARKS - MISC: FOR CURRENT MIL RY CONDITION READING (RCR) CALL OR CTC 914 AW COMD POST OR 914TH AW AFLD MGMT.

AFRC/ANG: NSTD APRON MRKS IDENTIFYING PRK ROWS & PRK LCTNS.

PPR CTC AFLD MGT DSN: 238-2176, C716-236-2176.

AFLD MGMT DOES NOT ISSUE OR STORE COMSEC, FOR COMSEC STORAGE CTC COMMAND POST DSN 238-2150, C716-236-2150.

RWY 28R 1000 FT BY 150 FT BLAST PAD.

AIRPORT DIAGRAM

SYRACUSE HANCOCK INTL (SYR)

SYRACUSE, NEW YORK

AL-411 (FAA)

18088

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
REARBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

VAR 12.5° W

JANUARY 2015
ANNUAL RATE OF CHANGE
0.0° E

ELEV 415

146.3°

7500 X 150

CAT 2 HOLDING

9003 X 150

0.3% UP

326.3°

ELEV 402

279.9°

ELEV 400

152 X 150

CAT 2 HOLDING

ELEV 419

099.9°

ILS HOLDING

RON APRON

FIELD ELEV 421

TWR

TERMINAL

FIRE STATION

HS 2

HS 1

GENERAL AVIATION PARKING

NEW YORK NATIONAL GUARD

ILS HOLDING

ATIS 124.225
SYRACUSE TOWER 120.3 239.0
GND CON 121.7 348.6
CLNC DEL 125.05 257.775

43°07'N

76°07'W

43°06'N

76°06'W

SYRACUSE, NEW YORK

SYRACUSE HANCOCK INTL (SYR)

18088

Syracuse, NY
Syracuse Hancock Intl
ICAO Identifier KSYR

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 43–06–40.3N / 76–06–22.7W
2.2.2 From City: 4 Miles NE Of Syracuse, NY
2.2.3 Elevation: 421.4 ft
2.2.5 Magnetic variation: 13W (2000)
2.2.6 Airport Contact: Christina R. Callahan
1000 COL EILEEN COLLINS BLVD
Syracuse, NY 13212 (315–454–3263)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 10
2.10.1.b Type of obstacle: Trees (64 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 686 ft R of Centerline

2.10.1.a. Runway designation: 15
2.10.1.b Type of obstacle: Trees (51 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 380 ft L of Centerline

2.10.1.a. Runway designation: 28
2.10.1.b Type of obstacle: Trees (80 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 287 ft L of Centerline

2.10.1.a. Runway designation: 33
2.10.1.b Type of obstacle: Tree (34 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 520 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 15
2.12.2 True Bearing: 134

2.12.3 Dimensions: 7500 ft x 150 ft
2.12.4 PCN: 143 F/B/W/T
2.12.5 Coordinates: 43–07–16.4186N /
76–06–46.2014W
2.12.6 Threshold elevation: 415.4 ft
2.12.6 Touchdown zone elevation: 416.8 ft

2.12.1 Designation: 33
2.12.2 True Bearing: 314
2.12.3 Dimensions: 7500 ft x 150 ft
2.12.4 PCN: 143 F/B/W/T
2.12.5 Coordinates: 43–06–25.1093N /
76–05–33.2759W
2.12.6 Threshold elevation: 401.7 ft
2.12.6 Touchdown zone elevation: 409.3 ft

2.12.1 Designation: 10
2.12.2 True Bearing: 87
2.12.3 Dimensions: 9003 ft x 150 ft
2.12.4 PCN: 121 F/B/W/T
2.12.5 Coordinates: 43–06–29.5196N /
76–07–34.1499W
2.12.6 Threshold elevation: 419.2 ft
2.12.6 Touchdown zone elevation: 421.4 ft

2.12.1 Designation: 28
2.12.2 True Bearing: 267
2.12.3 Dimensions: 9003 ft x 150 ft
2.12.4 PCN: 121 F/B/W/T
2.12.5 Coordinates: 43–06–33.5075N /
76–05–32.9118W
2.12.6 Threshold elevation: 400.4 ft
2.12.6 Touchdown zone elevation: 412.7 ft
2.12.7 Slope: 0.3 UP

AD 2.13 Declared distances

2.13.1 Designation: 15
2.13.2 Takeoff run available: 7500
2.13.3 Takeoff distance available: 7500
2.13.4 Accelerate–stop distance available: 7500
2.13.5 Landing distance available: 7500

2.13.1 Designation: 33
2.13.2 Takeoff run available: 7500
2.13.3 Takeoff distance available: 7500
2.13.4 Accelerate–stop distance available: 7500
2.13.5 Landing distance available: 7500

2.13.1 Designation: 10
2.13.2 Takeoff run available: 9003
2.13.3 Takeoff distance available: 9003

2.13.4 Accelerate-stop distance available: 9003
2.13.5 Landing distance available: 9003

2.13.1 Designation: 28
2.13.2 Takeoff run available: 9003
2.13.3 Takeoff distance available: 9003
2.13.4 Accelerate-stop distance available: 9003
2.13.5 Landing distance available: 9003

AD 2.14 Approach and runway lighting

2.14.1 Designation: 15
2.14.2 Approach lighting system: MALS
2.14.4 Visual approach slope indicator system: V4L

2.14.1 Designation: 33
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 10
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: V4L

2.14.1 Designation: 28
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ANG OPS
2.18.3 Service designation: 379.5 MHz

2.18.1 Service designation: APCH/P DEP/P (100-278)
2.18.3 Service designation: 269.125 MHz

2.18.1 Service designation: APCH/P DEP/P (100-278)
2.18.3 Service designation: 126.125 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(279-099)
2.18.3 Service designation: 279.6 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(279-099)
2.18.3 Service designation: 134.275 MHz

2.18.1 Service designation: AR OPS
2.18.3 Service designation: 245.3 MHz

2.18.1 Service designation: AS ASSIGNED
2.18.3 Service designation: 118.85 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 124.225 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P
2.18.3 Service designation: 257.775 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 125.05 MHz

2.18.1 Service designation: CLASS C (100-278)
2.18.3 Service designation: 269.125 MHz

2.18.1 Service designation: CLASS C (279-099)
2.18.3 Service designation: 279.6 MHz

2.18.1 Service designation: CLASS C (279-099)
2.18.3 Service designation: 134.275 MHz

2.18.1 Service designation: CLASS C (100-278)
2.18.3 Service designation: 126.125 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 120.3 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 239 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 10. Magnetic variation: 13W

2.19.2 ILS identification: MRZ

2.19.5 Coordinates: 43-06-33.96N / 76-05-19.01W

2.19.6 Site elevation: 395.6 ft

2.19.1 ILS type: DME for runway 10. Magnetic variation: 13W

2.19.2 ILS identification: MRZ

2.19.5 Coordinates: 43-06-31.27N / 76-05-20.92W

2.19.6 Site elevation: 390.5 ft

2.19.1 ILS type: Glide Slope for runway 10. Magnetic variation: 13W
2.19.2 ILS identification: MRZ
2.19.5 Coordinates: 43-06-26.02N / 76-07-20.146W
2.19.6 Site elevation: 422.6 ft

2.19.1 ILS type: Inner Marker for runway 28. Magnetic variation: 13W
2.19.2 ILS identification: SYR
2.19.5 Coordinates: 43-06-34.1N / 76-05-18.52W
2.19.6 Site elevation: 395 ft

2.19.1 ILS type: Glide Slope for runway 28. Magnetic variation: 13W
2.19.2 ILS identification: SYR

2.19.5 Coordinates: 43-06-39.474N / 76-05-46.433W
2.19.6 Site elevation: 404.1 ft

2.19.1 ILS type: DME for runway 28. Magnetic variation: 13W
2.19.2 ILS identification: SYR
2.19.5 Coordinates: 43-06-31.27N / 76-05-20.92W
2.19.6 Site elevation: 390.5 ft

2.19.1 ILS type: Localizer for runway 28. Magnetic variation: 13W
2.19.2 ILS identification: SYR
2.19.5 Coordinates: 43-06-28.943N / 76-07-51.655W
2.19.6 Site elevation: 416.8 ft

General Remarks:

NO CHARTER OPER THRU PASSENGER TERMINAL BLDG WITHOUT PRIOR PERMISSION.

NOISE ABATEMENT PROCEDURES IN EFFECT.

DEER/COYOTE/BIRDS ON INVOF ARPT.

NO JET ENGINE MAINT RUNS ABOVE IDLE BTWN 2300-0600.

NO TSNT ACFT PARKING ON MAIN TERMINAL RAMP.

DIRECT CUSTOM NOTIFICATION IS REQUIRED. HOURS OF NOTIFICATION ARE MON-SAT 0800-1700. ARRIVALS OUTSIDE OF THESE HRS MUST MAKE ARRANGEMENTS DURING REGULAR WORK HRS; CALL 315-455-2271.

FIELD CONDITION REPORTS RECORDING AVAILABLE CALL 315-455-3444.

HVY ACFT CTC ARPT COMMISSIONER FOR PRK AVBL AT C315-455-3263. LIMITED METRO AVAIL AT DSN 243-2185. C315-233-2185 OR CTC OWS DSN 576-9755/9702. ALL TRAN ACFT REQ NOISE ABATEMENT BRIEFING.

COMMUNICATIONS - ANG - OPS - 139.625 379.5 REMARKS: (COBRA OPS) CTC ANG OPS 15 MIN PRIOR TO ARR.

RSTD: TWY J AND P SOUTH OF TWY Y CLSD TO CIV OPS.

CAUTION: TWY J AND P SOUTH OF TWY Y AND ANG RAMP HAVE UNCTL VEH AND EQPT TFC.

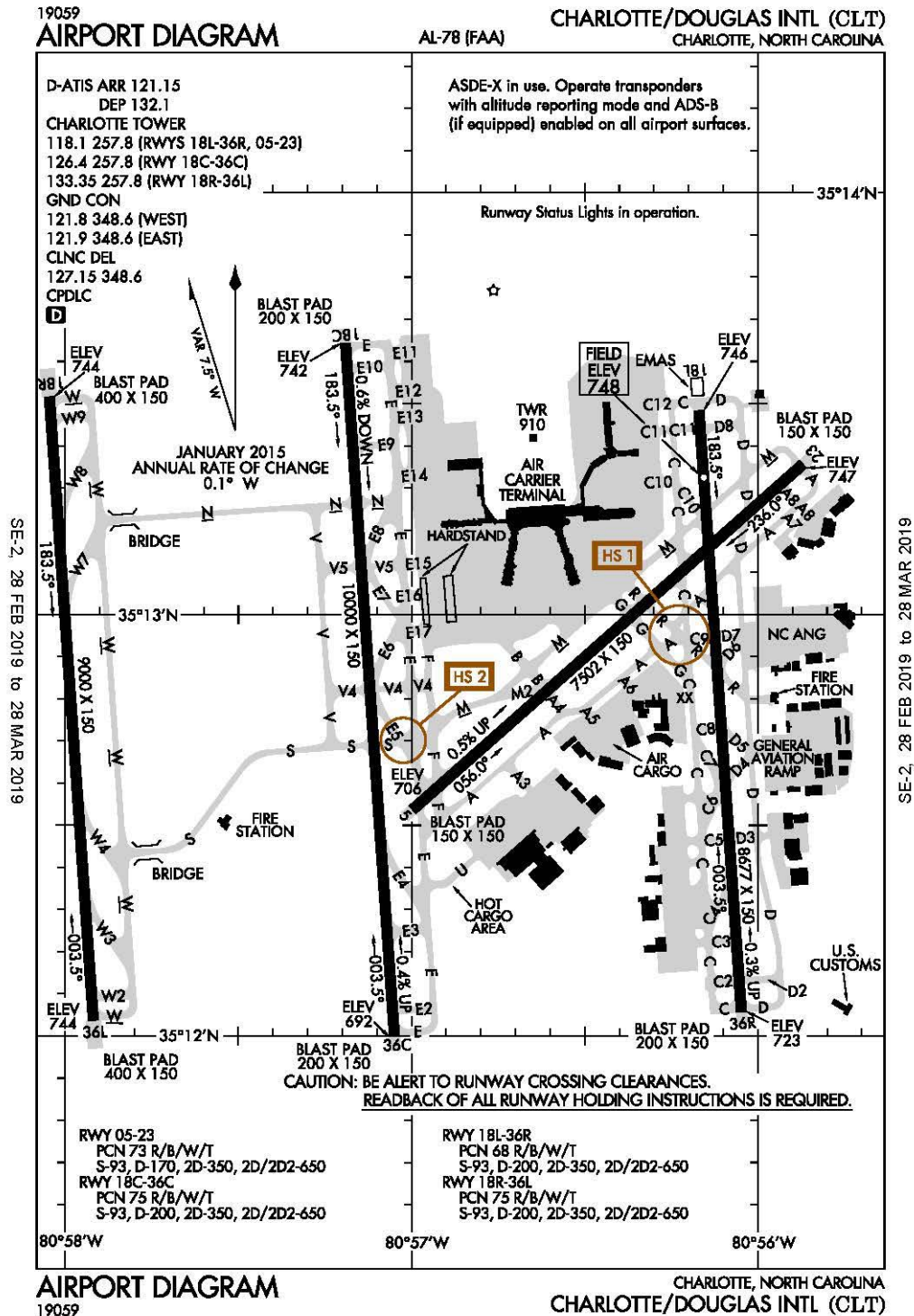
ANG: OPR 1030-2100Z++ MON-THUR EXC HOL. PPR TRANS ACFT OFFL BUS ONLY. AFLD MGR DSN 243-2208, AFT DUTY HR CTC C315-530-2520. PPR REQ FOR ALL TRAN ACFT DUE LTD TRANS SVC. NTFY AFLD MGR OF ETA DELAY OVER 30 MIN OR MSN CNL IS RQR.

ANG: HVY ACFT CTC ARPT COMMISSIONER FOR PRK AVBL AT C315-455-3666. ALL TRAN ACFT RQR NS ABTMT BRIEFING.

UAS OPERATE WITHIN THE CONFINES OF THE SYRACUSE CLASS C, TIMES VARY.

UAS OPS IN SYRACUSE APCH/DEP AIRSPACE WILL BE CONTROLLED BY SYR ATC AT ALL TIMES. NON-STD MKG ON MIL RAMP.

Charlotte, North Carolina
Charlotte/Douglas International
ICAO Identifier KCLT



Charlotte, NC
Charlotte/Douglas Intl
ICAO Identifier KCLT

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 35–12–49.5N / 80–56–56.6W
2.2.2 From City: 4 Miles W Of Charlotte, NC
2.2.3 Elevation: 747.9 ft
2.2.5 Magnetic variation: 7W (2000)
2.2.6 Airport Contact: Brent Cagle
PO BOX 19066
Charlotte, NC 28219
(704–359–4000)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: No
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 05
2.10.1.b Type of obstacle: Trees (38 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 300 ft R of Centerline

2.10.1.a. Runway designation: 18C
2.10.1.b Type of obstacle: Road (25 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 425 ft L of Centerline

2.10.1.a. Runway designation: 18L
2.10.1.b Type of obstacle: Rr (19 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 0 ft B of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 05
2.12.2 True Bearing: 48
2.12.3 Dimensions: 7502 ft x 150 ft
2.12.4 PCN: 73 R/B/W/T
2.12.5 Coordinates: 35–12–32.2287N / 80–56–59.8045W

2.12.6 Threshold elevation: 705.9 ft
2.12.6 Touchdown zone elevation: 715.6 ft
2.12.7 Slope: 0.5 DOWN

2.12.1 Designation: 23
2.12.2 True Bearing: 228
2.12.3 Dimensions: 7502 ft x 150 ft
2.12.4 PCN: 73 R/B/W/T
2.12.5 Coordinates: 35–13–21.4183N / 80–55–52.1235W
2.12.6 Threshold elevation: 746.7 ft
2.12.6 Touchdown zone elevation: 746.7 ft
2.12.7 Slope: 0.5 UP

2.12.1 Designation: 18L
2.12.2 True Bearing: 176
2.12.3 Dimensions: 8677 ft x 150 ft
2.12.4 PCN: 68 R/B/W/T
2.12.5 Coordinates: 35–13–29.0474N / 80–56–10.1652W
2.12.6 Threshold elevation: 746 ft
2.12.6 Touchdown zone elevation: 747.9 ft
2.12.7 Slope: 0.2 DOWN

2.12.1 Designation: 36R
2.12.2 True Bearing: 356
2.12.3 Dimensions: 8677 ft x 150 ft
2.12.4 PCN: 68 R/B/W/T
2.12.5 Coordinates: 35–12–03.4456N / 80–56–02.822W
2.12.6 Threshold elevation: 723.4 ft
2.12.6 Touchdown zone elevation: 726.9 ft
2.12.7 Slope: 0.3 UP

2.12.1 Designation: 18C
2.12.2 True Bearing: 176
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 75 R/B/W/T
2.12.5 Coordinates: 35–13–38.6269N / 80–57–11.4094W
2.12.6 Threshold elevation: 742 ft
2.12.6 Touchdown zone elevation: 742 ft
2.12.7 Slope: 0.6 DOWN

2.12.1 Designation: 36C
2.12.2 True Bearing: 356
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 75 R/B/W/T
2.12.5 Coordinates: 35–11–59.9721N / 80–57–02.9217W
2.12.6 Threshold elevation: 692.2 ft
2.12.6 Touchdown zone elevation: 706.7 ft

2.12.7 Slope: 0.4 UP

2.12.1 Designation: 18R
2.12.2 True Bearing: 176
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 75 R/B/W/T
2.12.5 Coordinates: 35–13–31.0182N / 80–58–02.707W
2.12.6 Threshold elevation: 744 ft
2.12.6 Touchdown zone elevation: 744 ft

2.12.1 Designation: 36L
2.12.2 True Bearing: 356
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 75 R/B/W/T
2.12.5 Coordinates: 35–12–02.2277N /
80–57–55.0671W
2.12.6 Threshold elevation: 743.9 ft
2.12.6 Touchdown zone elevation: 743.9 ft

AD 2.13 Declared distances

2.13.1 Designation: 05
2.13.2 Takeoff run available: 7502
2.13.3 Takeoff distance available: 7502
2.13.4 Accelerate–stop distance available: 7092
2.13.5 Landing distance available: 7092

2.13.1 Designation: 23
2.13.2 Takeoff run available: 7502
2.13.3 Takeoff distance available: 7502
2.13.4 Accelerate–stop distance available: 7502
2.13.5 Landing distance available: 7502

2.13.1 Designation: 18L
2.13.2 Takeoff run available: 8676
2.13.3 Takeoff distance available: 8676
2.13.4 Accelerate–stop distance available: 8676
2.13.5 Landing distance available: 8676

2.13.1 Designation: 36R
2.13.2 Takeoff run available: 8676
2.13.3 Takeoff distance available: 8676
2.13.4 Accelerate–stop distance available: 8390
2.13.5 Landing distance available: 8390

2.13.1 Designation: 18C
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate–stop distance available: 10000
2.13.5 Landing distance available: 10000

2.13.1 Designation: 36C

2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate–stop distance available: 10000
2.13.5 Landing distance available: 10000

2.13.1 Designation: 18R
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate–stop distance available: 9000
2.13.5 Landing distance available: 9000

2.13.1 Designation: 36L
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate–stop distance available: 9000
2.13.5 Landing distance available: 9000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 05
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 23
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 18L
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 36R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 18C
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 36C
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 18R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 36L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ALCP
2.18.3 Service designation: 292.25 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 126.15 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(075-245 ABV 8000 FT)
2.18.3 Service designation: 124 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(360-179)
2.18.3 Service designation: 307.8 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(180-359)
2.18.3 Service designation: 257.2 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(246-074 ABV 8000 FT)
2.18.3 Service designation: 120.5 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(120-295 8000 FT & BLO)
2.18.3 Service designation: 120.05 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(296-360 8000 FT & BLO)
2.18.3 Service designation: 134.75 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(001-119 8000 FT & BLO)
2.18.3 Service designation: 128.325 MHz

2.18.1 Service designation: BANKR STAR
2.18.3 Service designation: 377.15 MHz

2.18.1 Service designation: BANKR STAR
2.18.3 Service designation: 135.6 MHz

2.18.1 Service designation: BARMY DP
2.18.3 Service designation: 124 MHz

2.18.1 Service designation: BARMY DP
2.18.3 Service designation: 307.8 MHz

2.18.1 Service designation: BEAVY DP (RYS 05, 18R,
18L, 18C, 23, 36R)
2.18.3 Service designation: 307.8 MHz

2.18.1 Service designation: BEAVY DP (RWYS 05,
18L, 18R, 18C, 23 AND 36R)
2.18.3 Service designation: 124 MHz

2.18.1 Service designation: BEAVY DP (RYS 36L,
36C)
2.18.3 Service designation: 257.2 MHz

2.18.1 Service designation: BEAVY DP (RYS 36L,
36C)
2.18.3 Service designation: 120.5 MHz

2.18.1 Service designation: BOBZY DP
2.18.3 Service designation: 257.2 MHz

2.18.1 Service designation: BOBZY DP
2.18.3 Service designation: 120.5 MHz

2.18.1 Service designation: BTSEY STAR
2.18.3 Service designation: 125.35 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 127.15 MHz

2.18.1 Service designation: CHARLOTTE DP
(BUCKL, HARAY & PITY TRANSITIONS. RYS 36L
& 36C)
2.18.3 Service designation: 120.5 MHz

2.18.1 Service designation: CHARLOTTE DP (BUCKL
TRANSITION; RYS 05, 18L, 18R, 18C, 23 & 36R)
2.18.3 Service designation: 307.8 MHz

2.18.1 Service designation: CHARLOTTE DP
(BUCKL, GANTS, LILLS & RUNIE TRANSITIONS.)
2.18.3 Service designation: 124 MHz

2.18.1 Service designation: CHARLOTTE DP
(BUCKL, HARAY & PITY TRANSITION. RYS 36L
& 36C)
2.18.3 Service designation: 257.2 MHz

2.18.1 Service designation: CHARLOTTE DP
(GANTS, LILLS & RUNIE TRANSITIONS)
2.18.3 Service designation: 307.8 MHz

2.18.1 Service designation: CHARLOTTE DP (RYS 05,
18L, 18R, 18C, 23 & 36R)
2.18.3 Service designation: 124 MHz

2.18.1 Service designation: CHPTR STAR
2.18.3 Service designation: 135.6 MHz

2.18.1 Service designation: CHPTR STAR
2.18.3 Service designation: 377.15 MHz

2.18.1 Service designation: CHSLY STAR
2.18.3 Service designation: 126.15 MHz

2.18.1 Service designation: CHSLY STAR
2.18.3 Service designation: 282.325 MHz

2.18.1 Service designation: CLASS B (360–179)
2.18.3 Service designation: 307.8 MHz

2.18.1 Service designation: CLASS B (296–360 8000
FT & BLO)
2.18.3 Service designation: 134.75 MHz

2.18.1 Service designation: CLASS B (180–359)
2.18.3 Service designation: 257.2 MHz

2.18.1 Service designation: CLASS B (246–074 ABV
8000 FT)
2.18.3 Service designation: 120.5 MHz

2.18.1 Service designation: CLASS B (075–245 ABV
8000 FT)
2.18.3 Service designation: 124 MHz

2.18.1 Service designation: CLASS B (001–119 8000
FT & BLO)
2.18.3 Service designation: 128.325 MHz

2.18.1 Service designation: CLASS B (120–295 8000
FT & BLO)
2.18.3 Service designation: 120.05 MHz

2.18.1 Service designation: D–ATIS (DEP)
2.18.3 Service designation: 132.1 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D–ATIS (ARR)
2.18.3 Service designation: 121.15 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: ESTRR DP
2.18.3 Service designation: 257.2 MHz

2.18.1 Service designation: ESTRR DP
2.18.3 Service designation: 120.5 MHz

2.18.1 Service designation: FILPZ STAR
2.18.3 Service designation: 125.35 MHz

2.18.1 Service designation: FILPZ STAR
2.18.3 Service designation: 135.6 MHz

2.18.1 Service designation: FILPZ STAR
2.18.3 Service designation: 257.2 MHz

2.18.1 Service designation: GND/P (EAST)
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/P (WEST)
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: ICONS DP (RYS 05, 18R,
18L, 18C, 23, 36R)
2.18.3 Service designation: 307.8 MHz

2.18.1 Service designation: ICONS DP (RWYS 05, 18L,
18R, 18C, 23 AND 36R)
2.18.3 Service designation: 124 MHz

2.18.1 Service designation: ICONS DP (RYS 36L, 36C)
2.18.3 Service designation: 120.5 MHz

2.18.1 Service designation: ICONS DP (RYS 36L, 36C)
2.18.3 Service designation: 257.2 MHz

2.18.1 Service designation: JOJJO DP
2.18.3 Service designation: 257.2 MHz

2.18.1 Service designation: JOJJO DP
2.18.3 Service designation: 120.5 MHz

2.18.1 Service designation: JONZE STAR
2.18.3 Service designation: 135.6 MHz

2.18.1 Service designation: JONZE STAR
2.18.3 Service designation: 377.15 MHz

2.18.1 Service designation: KABEE STAR
2.18.3 Service designation: 126.15 MHz

2.18.1 Service designation: KABEE STAR

2.18.3 Service designation: 282.325 MHz	2.18.1 Service designation: KWEEN DP (RWYS 05, 18L, 18R, 18C, 23 AND 36R)
2.18.1 Service designation: KERMIT DP (055-235)	2.18.3 Service designation: 124 MHz
2.18.3 Service designation: 124 MHz	
2.18.1 Service designation: KERMIT DP (235-055)	2.18.1 Service designation: KWEEN DP (RYS 36L, 36C)
2.18.3 Service designation: 257.2 MHz	2.18.3 Service designation: 120.5 MHz
2.18.1 Service designation: KERMIT DP (055-235)	2.18.1 Service designation: KWEEN DP (RYS 36L, 36C)
2.18.3 Service designation: 307.8 MHz	2.18.3 Service designation: 257.2 MHz
2.18.1 Service designation: KERMIT DP (235-055)	2.18.1 Service designation: KWEEN DP (RY 05, 18R, 18L, 18C, 23, 36R)
2.18.3 Service designation: 120.5 MHz	2.18.3 Service designation: 307.8 MHz
2.18.1 Service designation: KILNS DP	2.18.1 Service designation: LCL/P
2.18.3 Service designation: 307.8 MHz	2.18.3 Service designation: 257.8 MHz
2.18.1 Service designation: KILNS DP	2.18.1 Service designation: LCL/P (RYS 05, 18L, 23 & 36R)
2.18.3 Service designation: 124 MHz	2.18.3 Service designation: 118.1 MHz
2.18.1 Service designation: KNIGHTS DP (235-055)	
2.18.3 Service designation: 257.2 MHz	2.18.1 Service designation: LCL/P (RWY 18C/36C)
2.18.1 Service designation: KNIGHTS DP (055-235)	2.18.3 Service designation: 126.4 MHz
2.18.3 Service designation: 307.8 MHz	
2.18.1 Service designation: KNIGHTS DP (055-235)	2.18.1 Service designation: LCL/P (RY 18R & RY 36L)
2.18.3 Service designation: 128.325 MHz	2.18.3 Service designation: 133.35 MHz
2.18.1 Service designation: KNIGHTS DP (FLYYN, CEGAL TRANSITIONS RY 05, 36L, 36C, 36R)	2.18.1 Service designation: LILLS DP
2.18.3 Service designation: 120.5 MHz	2.18.3 Service designation: 124 MHz
2.18.1 Service designation: KNIGHTS DP (PEKNN, LILLS, HAMLN, ANDYS TRANSITIONS)	2.18.1 Service designation: LIINN STAR
2.18.3 Service designation: 128.325 MHz	2.18.3 Service designation: 257.2 MHz
2.18.1 Service designation: KNIGHTS DP (DEBIE, NEANO TRANSITIONS)	2.18.1 Service designation: LIINN STAR
2.18.3 Service designation: 120.05 MHz	2.18.3 Service designation: 125.35 MHz
2.18.1 Service designation: KNIGHTS DP (FLYYN, CEGAL TRANSITIONS, RY 23, 18L, 18C, 18R)	2.18.1 Service designation: LILLS DP
2.18.3 Service designation: 120.05 MHz	2.18.3 Service designation: 307.8 MHz
2.18.1 Service designation: KRITR DP	2.18.1 Service designation: MAJIC STAR
2.18.3 Service designation: 120.5 MHz	2.18.3 Service designation: 126.15 MHz
2.18.1 Service designation: KRITR DP	2.18.1 Service designation: MAJIC STAR
2.18.3 Service designation: 257.2 MHz	2.18.3 Service designation: 282.325 MHz
	2.18.1 Service designation: MLLET STAR
	2.18.3 Service designation: 282.325 MHz
	2.18.1 Service designation: MLLET STAR

2.18.3 Service designation: 126.15 MHz

2.18.1 Service designation: PARQR STAR

2.18.3 Service designation: 257.2 MHz

2.18.1 Service designation: PARQR STAR

2.18.3 Service designation: 125.35 MHz

2.18.1 Service designation: RASLN STAR

2.18.3 Service designation: 126.15 MHz

2.18.1 Service designation: STOCR STAR

2.18.3 Service designation: 126.15 MHz

2.18.1 Service designation: STOCR STAR

2.18.3 Service designation: 282.325 MHz

2.18.1 Service designation: UNARM STAR

2.18.3 Service designation: 135.6 MHz

2.18.1 Service designation: UNARM STAR

2.18.3 Service designation: 377.15 MHz

2.18.1 Service designation: WEAZL DP

2.18.3 Service designation: 257.2 MHz

2.18.1 Service designation: WEAZL DP

2.18.3 Service designation: 120.5 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 05. Magnetic variation: 7W

2.19.2 ILS identification: CLT

2.19.5 Coordinates: 35–13–26.34N / 80–55–45.36W

2.19.6 Site elevation: 738.2 ft

2.19.1 ILS type: Glide Slope for runway 05. Magnetic variation: 7W

2.19.2 ILS identification: CLT

2.19.5 Coordinates: 35–12–43.05N / 80–56–52.18W

2.19.6 Site elevation: 695.1 ft

2.19.1 ILS type: DME for runway 18C. Magnetic variation: 7W

2.19.2 ILS identification: PEP

2.19.5 Coordinates: 35–11–50.2369N / 80–56–58.6363W

2.19.6 Site elevation: 684.4 ft

2.19.1 ILS type: Localizer for runway 18C. Magnetic variation: 7W

2.19.2 ILS identification: PEP

2.19.5 Coordinates: 35–11–48.5979N / 80–57–01.9439W

2.19.6 Site elevation: 683.3 ft

2.19.1 ILS type: Glide Slope for runway 18C. Magnetic variation: 7W

2.19.2 ILS identification: PEP

2.19.5 Coordinates: 35–13–26.9102N / 80–57–15.2356W

2.19.6 Site elevation: 731.4 ft

2.19.1 ILS type: DME for runway 18L. Magnetic variation: 7W

2.19.2 ILS identification: VKQ

2.19.5 Coordinates: 35–11–50.25N / 80–56–04.63W

2.19.6 Site elevation: 710 ft

2.19.1 ILS type: Localizer for runway 18L. Magnetic variation: 7W

2.19.2 ILS identification: VKQ

2.19.5 Coordinates: 35–11–50.5994N / 80–56–01.7186W

2.19.6 Site elevation: 719.2 ft

2.19.1 ILS type: Glide Slope for runway 18L. Magnetic variation: 7W

2.19.2 ILS identification: VKQ

2.19.5 Coordinates: 35–13–19.2609N / 80–56–05.097W

2.19.6 Site elevation: 743.5 ft

2.19.1 ILS type: DME for runway 18R. Magnetic variation: 7W

2.19.2 ILS identification: RGS

2.19.5 Coordinates: 35–12–13.2565N / 80–58–01.0908W

2.19.6 Site elevation: 743.8 ft

2.19.1 ILS type: Glide Slope for runway 18R. Magnetic variation: 7W

2.19.2 ILS identification: RGS

2.19.5 Coordinates: 35–13–20.0955N / 80–58–06.7207W

2.19.6 Site elevation: 733.9 ft

2.19.1 ILS type: Inner Marker for runway 18R. Magnetic variation: 7W

2.19.2 ILS identification: RGS

2.19.5 Coordinates: 35–13–38.8124N / 80–58–03.3825W

2.19.6 Site elevation: 738.6 ft

2.19.1 ILS type: Localizer for runway 18R. Magnetic variation: 7W
2.19.2 ILS identification: RGS
2.19.5 Coordinates: 35-11-51.8431N / 80-57-54.1735W
2.19.6 Site elevation: 738.1 ft

2.19.1 ILS type: Glide Slope for runway 23. Magnetic variation: 7W
2.19.2 ILS identification: APU
2.19.5 Coordinates: 35-13-12.1531N / 80-56-00.0758W
2.19.6 Site elevation: 737.7 ft

2.19.1 ILS type: Localizer for runway 23. Magnetic variation: 7W
2.19.2 ILS identification: APU
2.19.5 Coordinates: 35-12-23.38N / 80-57-11.99W
2.19.6 Site elevation: 704 ft

2.19.1 ILS type: DME for runway 23. Magnetic variation: 7W
2.19.2 ILS identification: APU
2.19.5 Coordinates: 35-12-21.2833N / 80-57-10.052W
2.19.6 Site elevation: 699.4 ft

2.19.1 ILS type: Inner Marker for runway 36C. Magnetic variation: 7W
2.19.2 ILS identification: DQG
2.19.5 Coordinates: 35-11-48.7253N / 80-57-01.9507W
2.19.6 Site elevation: 682.9 ft

2.19.1 ILS type: Glide Slope for runway 36C. Magnetic variation: 7W
2.19.2 ILS identification: DQG
2.19.5 Coordinates: 35-12-09.1687N / 80-57-08.5431W
2.19.6 Site elevation: 691.1 ft

2.19.1 ILS type: Localizer for runway 36C. Magnetic variation: 7W
2.19.2 ILS identification: DQG
2.19.5 Coordinates: 35-13-53.9477N / 80-57-12.7316W
2.19.6 Site elevation: 749.4 ft

2.19.1 ILS type: Inner Marker for runway 36L. Magnetic variation: 7W
2.19.2 ILS identification: XUW
2.19.5 Coordinates: 35-11-54.4339N / 80-57-54.3965W
2.19.6 Site elevation: 738.8 ft

2.19.1 ILS type: Glide Slope for runway 36L. Magnetic variation: 7W
2.19.2 ILS identification: XUW
2.19.5 Coordinates: 35-12-12.9817N / 80-58-00.9403W
2.19.6 Site elevation: 732.3 ft

2.19.1 ILS type: DME for runway 36L. Magnetic variation: 7W
2.19.2 ILS identification: XUW
2.19.5 Coordinates: 35-13-19.8318N / 80-58-06.8193W
2.19.6 Site elevation: 738.9 ft

2.19.1 ILS type: Localizer for runway 36L. Magnetic variation: 7W
2.19.2 ILS identification: XUW
2.19.5 Coordinates: 35-13-41.4048N / 80-58-03.6016W
2.19.6 Site elevation: 737.3 ft

2.19.1 ILS type: Glide Slope for runway 36R. Magnetic variation: 7W
2.19.2 ILS identification: BQC
2.19.5 Coordinates: 35-12-14.0034N / 80-55-58.8923W
2.19.6 Site elevation: 717.3 ft

2.19.1 ILS type: DME for runway 36R. Magnetic variation: 7W
2.19.2 ILS identification: BQC
2.19.5 Coordinates: 35-13-33.1089N / 80-56-06.903W
2.19.6 Site elevation: 752.3 ft

2.19.1 ILS type: Localizer for runway 36R. Magnetic variation: 7W
2.19.2 ILS identification: BQC
2.19.5 Coordinates: 35-13-33.7034N / 80-56-10.5664W
2.19.6 Site elevation: 741.2 ft

General Remarks:

RY SFC COND INFO DURG DUTY HRS PHONE ANG OPS V583-9177/9144 OR AIRBORNE 292.2.

NOISE ABATEMENT PROCEDURE IN EFFECT 2300-0700; LAND ON RY 05 TKOF RY 23.

BE ALERT FOR FLOCKS OF MIGRATORY BIRDS ON & INVOF ARPT.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

ANG: CTC NEWSREEL 292.25 30 MIN PRIOR LDG. AMOPS/COMD POST – 292.25 (CALL NEWSREEL).

SUCCESSIVE OR SIMULTANEOUS DEPARTURES FROM RWY 18L AND RWY 18C ARE APPROVED WITH COURSE DIVERGENCE BEGINNING NO FURTHER THAN 4 MILES FROM END OF RWY.

RWY STATUS LGTS IN OPR.

TWY C4 WHEN TAXIING AIRCRAFT WITH COCKPIT TO MAIN GEAR DISTANCE GREATER THAN 90 FT, PILOT MUST PERFORM JUDGEMENTAL OVERSTEERING INSTEAD OF COCKPIT OVER CENTERLINE STEERING.

GROUP V ACFT WITH A WINGSPAN GTR THAN 171 FT ARE PROHIBITED FM EXITING RWY 18L/36R AT TWY C10.

TWY C10 UNUSBL FOR TXG ONTO RWY 18L/36R.

CLT RAMP, NON-MOVMT AREA, IS CTLD RAMP; CTC RAMP CTL PRIOR TO ENTERING.

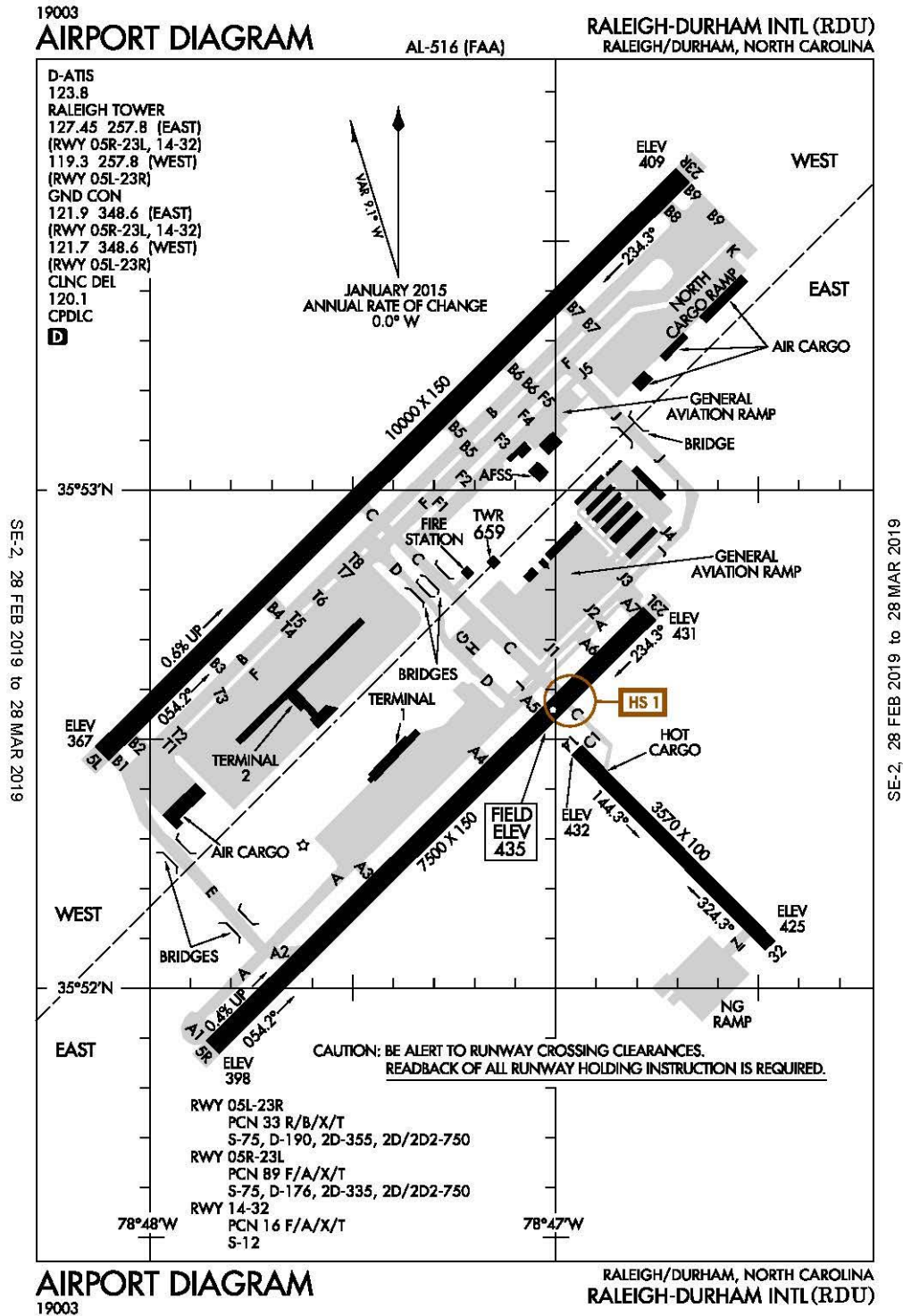
DUAL TAXI BTN DEP CALL SPOTS 11/12 AND 13N/13S RSTRD TO ONE ACFT LESS THAN 214 FT AND ONE ACFT LESS THAN 118 FT OR TWO ACFT LESS THAN 171 FT.

DUAL TAXI BTN DEP CALL SPOTS 22/23 AND 24N/24S RSTRD TO ACFT WITH WINGSPANS LESS THAN 118 FT.

TWY C10 RSTRD TO ACFT WITH WINGSPAN LESS THAN 171 FT WHEN EXITING RWY.

GROUP III ACFT WITH A WINGSPAN GTR THAN 79 FT ARE PROHIBITED FM MAKING A NBND TURN ONTO TWY C WHEN TAXIING WB ON TWY A.

Raleigh-Durham, North Carolina
Raleigh-Durham International
ICAO Identifier KRDU



Raleigh/Durham, NC
Raleigh–Durham Intl
ICAO Identifier KRDU

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 35–52–39.5N / 78–47–14.9W
2.2.2 From City: 9 Miles NW Of Raleigh/Durham, NC
2.2.3 Elevation: 435.2 ft
2.2.5 Magnetic variation: 9W (2020)
2.2.6 Airport Contact: Michael Landguth
1000 TRADE DRIVE
Rdu Airport, NC 27623
((919) 840–7701)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 32
2.10.1.b Type of obstacle: Trees (120 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 1 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 05L
2.12.2 True Bearing: 45
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 33 R/B/X/T
2.12.5 Coordinates: 35–52–28.016N / 78–48–07.069W
2.12.6 Threshold elevation: 366.8 ft
2.12.6 Touchdown zone elevation: 384.3 ft

2.12.1 Designation: 23R
2.12.2 True Bearing: 225
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 33 R/B/X/T
2.12.5 Coordinates: 35–53–37.7657N /
78–46–40.9198W
2.12.6 Threshold elevation: 408.6 ft
2.12.6 Touchdown zone elevation: 408.6 ft

2.12.1 Designation: 05R
2.12.2 True Bearing: 45
2.12.3 Dimensions: 7500 ft x 150 ft
2.12.4 PCN: 89 F/A/X/T
2.12.5 Coordinates: 35–51–52.6684N /
78–47–50.4174W
2.12.6 Threshold elevation: 397.5 ft
2.12.6 Touchdown zone elevation: 419.8 ft

2.12.1 Designation: 23L
2.12.2 True Bearing: 225
2.12.3 Dimensions: 7500 ft x 150 ft
2.12.4 PCN: 89 F/A/X/T
2.12.5 Coordinates: 35–52–44.9832N /
78–46–45.8171W
2.12.6 Threshold elevation: 430.7 ft
2.12.6 Touchdown zone elevation: 435.2 ft

2.12.1 Designation: 14
2.12.2 True Bearing: 135
2.12.3 Dimensions: 3570 ft x 100 ft
2.12.4 PCN: 16 F/A/X/T
2.12.5 Coordinates: 35–52–30.1119N / 78–46–57.6427W
2.12.6 Threshold elevation: 432.1 ft
2.12.6 Touchdown zone elevation: 432.1 ft

2.12.1 Designation: 32
2.12.2 True Bearing: 315
2.12.3 Dimensions: 3570 ft x 100 ft
2.12.4 PCN: 16 F/A/X/T
2.12.5 Coordinates: 35–52–05.0792N /
78–46–27.0499W
2.12.6 Threshold elevation: 424.7 ft
2.12.6 Touchdown zone elevation: 428.7 ft

AD 2.13 Declared distances

2.13.1 Designation: 05L
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate–stop distance available: 10000
2.13.5 Landing distance available: 10000

2.13.1 Designation: 23R
2.13.2 Takeoff run available: 10000
2.13.3 Takeoff distance available: 10000
2.13.4 Accelerate–stop distance available: 10000
2.13.5 Landing distance available: 10000

2.13.1 Designation: 05R
2.13.2 Takeoff run available: 7500
2.13.3 Takeoff distance available: 7500

2.13.4 Accelerate–stop distance available: 7500
2.13.5 Landing distance available: 7500

2.13.1 Designation: 23L
2.13.2 Takeoff run available: 7500
2.13.3 Takeoff distance available: 7500
2.13.4 Accelerate–stop distance available: 7500
2.13.5 Landing distance available: 7500

AD 2.14 Approach and runway lighting

2.14.1 Designation: 05L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 23R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 05R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 23L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 32
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P (025–229)
2.18.3 Service designation: 124.95 MHz

2.18.1 Service designation: APCH/P (025–229)
2.18.3 Service designation: 318.2 MHz

2.18.1 Service designation: APCH/P IC (230–024)
2.18.3 Service designation: 307.9 MHz

2.18.1 Service designation: APCH/P IC (230–024)
2.18.3 Service designation: 128.3 MHz

2.18.1 Service designation: BLOGS STAR
2.18.3 Service designation: 318.2 MHz

2.18.1 Service designation: BLOGS STAR
2.18.3 Service designation: 124.95 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 120.1 MHz

2.18.1 Service designation: CLASS C (025–229)
2.18.3 Service designation: 353.675 MHz

2.18.1 Service designation: CLASS C (025–229)
2.18.3 Service designation: 125.3 MHz

2.18.1 Service designation: CLASS C (230–024)
2.18.3 Service designation: 256.9 MHz

2.18.1 Service designation: CLASS C (230–024)
2.18.3 Service designation: 132.35 MHz

2.18.1 Service designation: D–ATIS
2.18.3 Service designation: 123.8 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: DEP/P (230–024)
2.18.3 Service designation: 132.35 MHz

2.18.1 Service designation: DEP/P (025–229)
2.18.3 Service designation: 125.3 MHz

2.18.1 Service designation: DEP/P (230–024)
2.18.3 Service designation: 256.9 MHz

2.18.1 Service designation: DEP/P (SOUTH)
2.18.3 Service designation: 353.675 MHz

2.18.1 Service designation: DEP/P (025–229)
2.18.3 Service designation: 353.675 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: FINAL (EAST)
2.18.3 Service designation: 385.425 MHz

2.18.1 Service designation: FINAL CTL
2.18.3 Service designation: 395 MHz

2.18.1 Service designation: FINAL CTL
2.18.3 Service designation: 124.8 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/P (WEST) RY
05L/23R

2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: GND/P (EAST) RYS

05R/23L & 14/32

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: KAROO STAR

2.18.3 Service designation: 318.2 MHz

2.18.1 Service designation: KAROO STAR

2.18.3 Service designation: 124.95 MHz

2.18.1 Service designation: LCL/P (EAST) RYS

05R/23L & 14/32

2.18.3 Service designation: 127.45 MHz

2.18.1 Service designation: LCL/P (WEST) RY

05L/23R

2.18.3 Service designation: 119.3 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: MALNR STAR

2.18.3 Service designation: 307.9 MHz

2.18.1 Service designation: MALNR STAR

2.18.3 Service designation: 128.3 MHz

2.18.1 Service designation: RADAR

2.18.3 Service designation: 134.3 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 05L. Magnetic variation: 9W

2.19.2 ILS identification: GKK

2.19.5 Coordinates: 35–53–48.0693N / 78–46–28.1855W

2.19.6 Site elevation: 408.6 ft

2.19.1 ILS type: Glide Slope for runway 05L. Magnetic variation: 9W

2.19.2 ILS identification: GKK

2.19.5 Coordinates: 35–52–37.7972N / 78–48–01.884W

2.19.6 Site elevation: 365.5 ft

2.19.1 ILS type: DME for runway 05L. Magnetic variation: 9W

2.19.2 ILS identification: GKK

2.19.5 Coordinates: 35–53–46.25N / 78–46–25.87W

2.19.6 Site elevation: 403 ft

2.19.1 ILS type: Localizer for runway 05R. Magnetic variation: 9W

2.19.2 ILS identification: RDU

2.19.5 Coordinates: 35–52–52.1055N / 78–46–37.0152W

2.19.6 Site elevation: 423.6 ft

2.19.1 ILS type: Glide Slope for runway 05R. Magnetic variation: 9W

2.19.2 ILS identification: RDU

2.19.5 Coordinates: 35–51–57.0189N / 78–47–38.1689W

2.19.6 Site elevation: 400.1 ft

2.19.1 ILS type: DME for runway 05R. Magnetic variation: 9W

2.19.2 ILS identification: RDU

2.19.5 Coordinates: 35–52–54.38N / 78–46–41.19W

2.19.6 Site elevation: 412 ft

2.19.1 ILS type: Glide Slope for runway 23L. Magnetic variation: 9W

2.19.2 ILS identification: LEI

2.19.5 Coordinates: 35–52–36.18N / 78–46–52.21W

2.19.6 Site elevation: 430.2 ft

2.19.1 ILS type: Localizer for runway 23L. Magnetic variation: 9W

2.19.2 ILS identification: LEI

2.19.5 Coordinates: 35–51–45.6108N / 78–47–59.1266W

2.19.6 Site elevation: 381 ft

2.19.1 ILS type: DME for runway 23L. Magnetic variation: 9W

2.19.2 ILS identification: LEI

2.19.5 Coordinates: 35–51–43.52N / 78–47–54.49W

2.19.6 Site elevation: 386 ft

2.19.1 ILS type: Middle Marker for runway 23R. Magnetic variation: 9W

2.19.2 ILS identification: DMP

2.19.5 Coordinates: 35–53–54.7234N / 78–46–19.9522W

2.19.6 Site elevation: 410 ft

2.19.1 ILS type: Inner Marker for runway 23R. Magnetic variation: 9W

2.19.2 ILS identification: DMP

2.19.5 Coordinates: 35–53–43.7552N / 78–46–33.5065W

2.19.6 Site elevation: 402.1 ft

2.19.1 ILS type: Glide Slope for runway 23R. Magnetic variation: 9W
2.19.2 ILS identification: DMP
2.19.5 Coordinates: 35-53-32.4744N / 78-46-54.3483W
2.19.6 Site elevation: 396.2 ft

2.19.1 ILS type: Localizer for runway 23R. Magnetic variation: 9W

2.19.2 ILS identification: DMP
2.19.5 Coordinates: 35-52-20.84N / 78-48-15.93W
2.19.6 Site elevation: 358.8 ft

2.19.1 ILS type: DME for runway 23R. Magnetic variation: 9W
2.19.2 ILS identification: DMP
2.19.5 Coordinates: 35-52-20.25N / 78-48-15.21W
2.19.6 Site elevation: 358 ft

General Remarks:

NO JET ENGINE MAINTENANCE RUNS BETWEEN 0000-0600.

NG PPR FOR LDG CTC V582-9181 C(919)664-9181.

NG 24 HR PPR FOR JET ACFT & TRANS MIL ACFT - 919-840-7510.

NO APPROVAL REQUIRED FOR PUSHBACK AT TERMINAL GATES UNLESS ACFT REQUIRES USE OF TWY. CTC ATC PRIOR TO PUSHING ONTO TWY.

RSTD: PPR FOR ALL MILITARY AIRCRAFT F/W - R/W & UNSCHEDULED CHARTER FLIGHTS WITH 30 OR MORE PASSENGERS. 24 HR PN RQR FOR MIL PRACTICE APCH. CTC ARPT OPS 919-840-7510 OR RDU APP C919-380-3125. 24 HR PPR FOR ALL F/W AND R/W MIL ACFT GOING TO ARNG RAMP. POC DSN 582-9000, EXTN 16200, C919-804-5300, EXTN 16200. OSACOM FLT DET DSN 582-9000, EXTN 16202, C919-804-5300, EXTN 16202.

ARPT CLSD TO AIRSHIPS.

TWY E BEHIND SOUTH CARGO 4 & TWY J BEHIND CORPORATE HANGARS NOT VSBL FM ATCT.

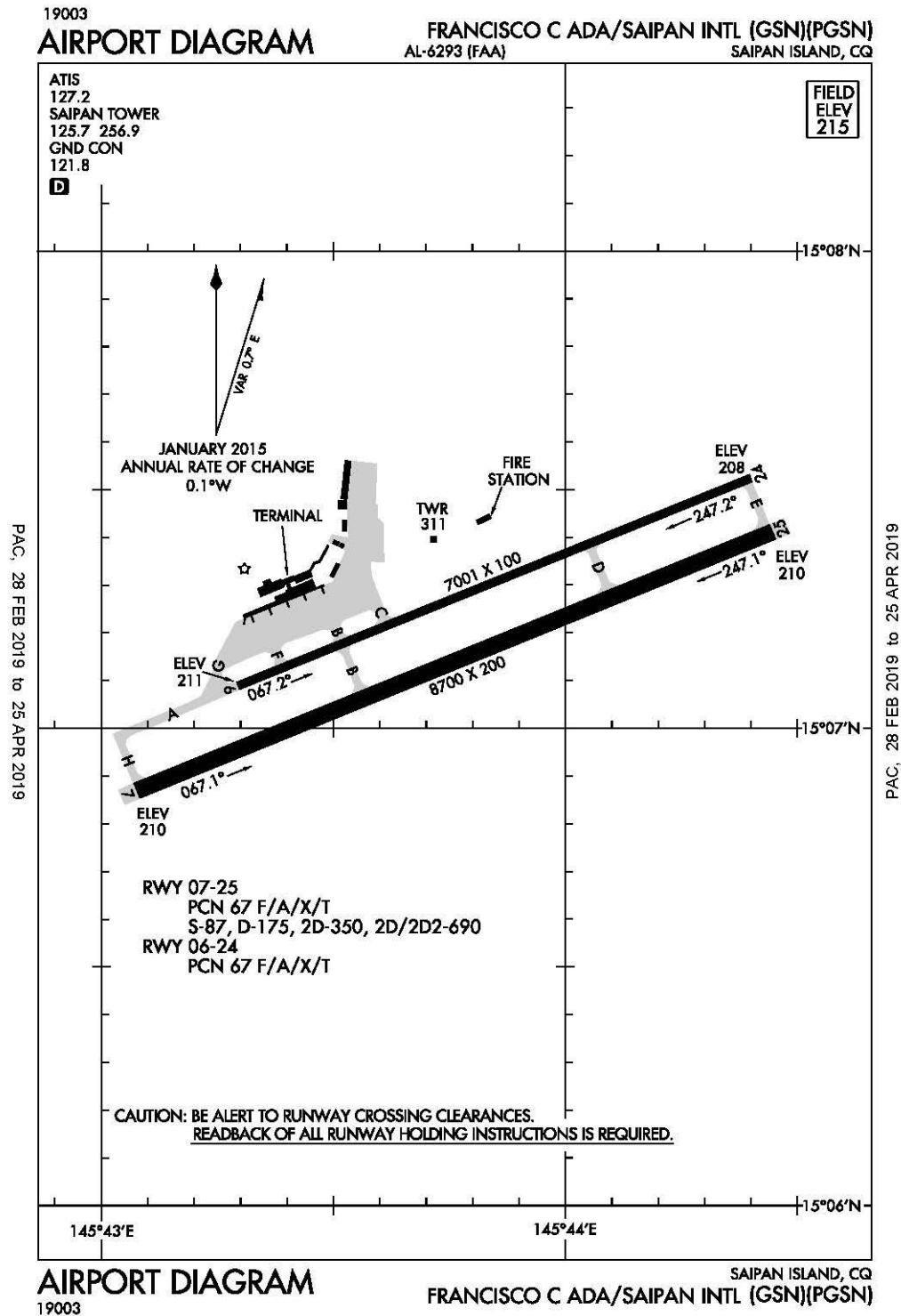
CRAN 75 FT AGL .76 NM FM AER 05R.

ARNG: LTD PRK. ARNG OPS DSN 582-9000, EXTN 16200, C919-804-5300 EXTN 16200, DSN 582-9000, X16200, C919-804-5300, X16200 CTC FORECAST BASE 10 MIN PRIOR LDG. RAMP CLSD TO ALL F/W EXCEPT ARMY & MIL TRANSPORT WITH PPR, FACILITY HRS 1300-2130Z++ MON-FRI EXC HOL. MAKE APPT FOR AFTER DUTY HRS. NO FUEL EXCARNG FERRY ACFT. OSACOM FLT DET DSN 582-9248, C919-664-6248.

TAXIWAY F1 IS CLOSED UNTIL FURTHER NOTICE.

ALL TDG V AIRCRAFT TXG ON TWY A ARE RSTD TO TAXI SPD OF 15 MPH.

North Mariana Islands, Saipan Island
Francisco C. Ada/Saipan International
ICAO Identifier PGSN



Saipan Island, CQ
Francisco C. Ada/Saipan Intl
ICAO Identifier PGSN

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 15-07-12.918N /
145-43-47.9427E
2.2.2 From City: 4 Miles SW Of Saipan Island, Mp
2.2.3 Elevation: 215.1 ft
2.2.5 Magnetic variation: 2E (1985)
2.2.6 Airport Contact: Christopher S. Tenorio
PO BOX 501055
Saipan, MP 96950
((670) 483-2447)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A1+,100,100LL
2.4.5 Hangar space: No
2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
D certified on 1/1/1978
2.6.4 Remarks: Closed To Unscheduled Aircraft 0 Operations With More Than 30 Passenger Seats Except Prior Permission Required Call Or Write Airport Manager 670-237-6500/670-285-1512(Cell); P.O. Box 501055 Saipan Mp 96950.

AD 2.12 Runway physical characteristics

2.12.1 Designation: 07
2.12.2 True Bearing: 68
2.12.3 Dimensions: 8700 ft x 200 ft
2.12.4 PCN: 67 F/A/X/T
2.12.5 Coordinates: 15-06-52.106N / 145-43-04.571E
2.12.6 Threshold elevation: 210 ft
2.12.6 Touchdown zone elevation: 215.1 ft

2.12.1 Designation: 25
2.12.2 True Bearing: 248

2.12.3 Dimensions: 8700 ft x 200 ft
2.12.4 PCN: 67 F/A/X/T
2.12.5 Coordinates: 15-07-24.702N / 145-44-26.794E
2.12.6 Threshold elevation: 210 ft
2.12.6 Touchdown zone elevation: 210.1 ft

2.12.1 Designation: 06
2.12.2 True Bearing: 68
2.12.3 Dimensions: 7001 ft x 100 ft
2.12.4 PCN: 67 F/A/X/T
2.12.5 Coordinates: 15-07-05.4841N /
145-43-17.6384E
2.12.6 Threshold elevation: 210.9 ft
2.12.6 Touchdown zone elevation: 210.9 ft

2.12.1 Designation: 24
2.12.2 True Bearing: 248
2.12.3 Dimensions: 7001 ft x 100 ft
2.12.4 PCN: 67 F/A/X/T
2.12.5 Coordinates: 15-07-31.5709N /
145-44-23.8646E
2.12.6 Threshold elevation: 207.6 ft
2.12.6 Touchdown zone elevation: 207.8 ft

AD 2.13 Declared distances

2.13.1 Designation: 07
2.13.2 Takeoff run available: 8700
2.13.3 Takeoff distance available: 8700
2.13.4 Accelerate-stop distance available: 8700
2.13.5 Landing distance available: 8700

2.13.1 Designation: 25
2.13.2 Takeoff run available: 8700
2.13.3 Takeoff distance available: 8700
2.13.4 Accelerate-stop distance available: 8700
2.13.5 Landing distance available: 8700

AD 2.14 Approach and runway lighting

2.14.1 Designation: 07
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: PSIL
2.14.10 Remarks: R Standard To 2.5nm & 5 Degs Left & Right Of Rwy Cntrlrn Due To Intensity.

2.14.1 Designation: 25
2.14.4 Visual approach slope indicator system: PSIL
2.14.10 Remarks: R Standard Beyond 2.5 Nm Due To Intensity.
vasi Upwind Threshold Crossing Height 105 Ft Glide Angle 3.25; Downwind Threshold Crossing Height 60 Ft Glide Angle 3.00. Threshold Crossing Height 105 Ft Applies To VASI 6 High Angle.

2.14.1 Designation: 06
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: PSIL
2.14.10 Remarks: R Standard Beyond 6 Degr Left And 8 Degr Right Of Rwy Centerline .

2.14.1 Designation: 24
2.14.4 Visual approach slope indicator system: PSIL
2.14.10 Remarks: R Standard Beyond 7 Degr Left And 6 Degr Right Of Rwy Centerline .

General Remarks:

IMMIGRATION & CUSTOMS AVBL DURG SCHEDULED OPNS. OTHER TIMES PRIOR ARRANGEMENTS MUST BE MADE WITH CBP PORT DIRECTOR CALL (670)288-0025/26.

FOR ARPT SECURITY CALL (670) 237-6529.

RWY 06/24 OPEN FOR TAXIING ONLY (NOT AVBL FOR LDG AND TKOF). OPEN FOR LDG AND TKOF WHEN RWY 7/25 CLSD.

PPR FM EXECUTIVE DIRECTOR COMMONWEALTH PORTS AUTHORITY SAIPAN CALL (670) 237-6500 MON-FRI 0730-1630 OTHER TIMES CALL (670) 237-6535.

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 07. Magnetic variation: 2E

2.19.2 ILS identification: GSN

2.19.5 Coordinates: 15-07-28.4671N / 145-44-36.2932E

2.19.6 Site elevation: 207 ft

2.19.1 ILS type: Glide Slope for runway 07. Magnetic variation: 2E

2.19.2 ILS identification: GSN

2.19.5 Coordinates: 15-06-58.69N / 145-43-13.05E

2.19.6 Site elevation: 207.6 ft

2.19.1 ILS type: DME for runway 07. Magnetic variation: 2E

2.19.2 ILS identification: GSN

2.19.5 Coordinates: 15-07-30.4928N / 145-44-34.108E

2.19.6 Site elevation: 220 ft

Cleveland, OH
Cleveland–Hopkins Intl
ICAO Identifier KCLE

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 41–24–33.9N / 81–51–16.9W
2.2.2 From City: 9 Miles SW Of Cleveland, OH
2.2.3 Elevation: 799.4 ft
2.2.5 Magnetic variation: 8W (2020)
2.2.6 Airport Contact: Khalid Bahhur
P.O.B. 81009, 5300 RIVERSIDE DR
Cleveland, OH 44181
((216) 265–5030)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: No
2.4.2 Fuel types: A1+,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 06L
2.10.1.b Type of obstacle: Trees (97 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 847 ft R of Centerline

2.10.1.a. Runway designation: 06R
2.10.1.b Type of obstacle: Trees (80 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 370 ft R of Centerline

2.10.1.a. Runway designation: 10
2.10.1.b Type of obstacle: Tree (51 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 490 ft L of Centerline

2.10.1.a. Runway designation: 28
2.10.1.b Type of obstacle: Pole (25 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 392 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 10

2.12.2 True Bearing: 93
2.12.3 Dimensions: 6018 ft x 150 ft
2.12.4 PCN: 80 R/B/W/T
2.12.5 Coordinates: 41–25–01.255N / 81–51–15.2844W
2.12.6 Threshold elevation: 767.2 ft
2.12.6 Touchdown zone elevation: 782.8 ft

2.12.1 Designation: 28
2.12.2 True Bearing: 273
2.12.3 Dimensions: 6018 ft x 150 ft
2.12.4 PCN: 80 R/B/W/T
2.12.5 Coordinates: 41–24–57.8201N /
81–49–56.4404W
2.12.6 Threshold elevation: 799.4 ft
2.12.6 Touchdown zone elevation: 799.4 ft

2.12.1 Designation: 06R
2.12.2 True Bearing: 50
2.12.3 Dimensions: 9956 ft x 150 ft
2.12.4 PCN: 63 R/B/W/T
2.12.5 Coordinates: 41–23–51.8543N /
81–52–11.3818W
2.12.6 Threshold elevation: 775.6 ft
2.12.6 Touchdown zone elevation: 776.5 ft

2.12.1 Designation: 24L
2.12.2 True Bearing: 230
2.12.3 Dimensions: 9956 ft x 150 ft
2.12.4 PCN: 63 R/B/W/T
2.12.5 Coordinates: 41–24–55.14N / 81–50–31.3701W
2.12.6 Threshold elevation: 785.7 ft
2.12.6 Touchdown zone elevation: 785.7 ft

2.12.1 Designation: 06L
2.12.2 True Bearing: 50
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 78 R/B/W/T
2.12.5 Coordinates: 41–23–59.5339N /
81–52–24.5521W
2.12.6 Threshold elevation: 770.4 ft
2.12.6 Touchdown zone elevation: 772.5 ft

2.12.1 Designation: 24R
2.12.2 True Bearing: 230
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 78 R/B/W/T
2.12.5 Coordinates: 41–24–56.7482N /
81–50–54.1465W
2.12.6 Threshold elevation: 780.3 ft
2.12.6 Touchdown zone elevation: 780.3 ft

AD 2.13 Declared distances

2.13.1 Designation: 10
2.13.2 Takeoff run available: 6018
2.13.3 Takeoff distance available: 6018
2.13.4 Accelerate–stop distance available: 6018
2.13.5 Landing distance available: 6018

2.13.1 Designation: 28
2.13.2 Takeoff run available: 6018
2.13.3 Takeoff distance available: 6018
2.13.4 Accelerate–stop distance available: 6018
2.13.5 Landing distance available: 6018

2.13.1 Designation: 06R
2.13.2 Takeoff run available: 9956
2.13.3 Takeoff distance available: 9956
2.13.4 Accelerate–stop distance available: 9956
2.13.5 Landing distance available: 8029

2.13.1 Designation: 24L
2.13.2 Takeoff run available: 9956
2.13.3 Takeoff distance available: 9956
2.13.4 Accelerate–stop distance available: 9956
2.13.5 Landing distance available: 9956

2.13.1 Designation: 06L
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate–stop distance available: 9000
2.13.5 Landing distance available: 9000

2.13.1 Designation: 24R
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate–stop distance available: 9000
2.13.5 Landing distance available: 9000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 10
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 28
2.14.2 Approach lighting system: MALSF
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 06R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 24L
2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 06L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 24R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 124 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 354.025 MHz

2.18.1 Service designation: CAVVS DP
2.18.3 Service designation: 135.875 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 125.05 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 273.45 MHz

2.18.1 Service designation: CLASS B (340–200)
2.18.3 Service designation: 125.35 MHz

2.18.1 Service designation: CLASS B (201–339)
2.18.3 Service designation: 126.35 MHz

2.18.1 Service designation: D–ATIS (DEP)
2.18.3 Service designation: 132.375 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D–ATIS (ARR)
2.18.3 Service designation: 127.85 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 135.875 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 128.25 MHz

2.18.1 Service designation: DEP/P
2.18.3 Service designation: 346.325 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 273.45 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: GTLKE DP
2.18.3 Service designation: 128.25 MHz

2.18.1 Service designation: KKIDS DP
2.18.3 Service designation: 135.875 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 273.45 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 124.5 MHz

2.18.1 Service designation: PFLYD DP
2.18.3 Service designation: 128.25 MHz

2.18.1 Service designation: ZAAPA DP
2.18.3 Service designation: 128.25 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Inner Marker for runway 06L. Magnetic variation: 8W

2.19.2 ILS identification: LIZ
2.19.5 Coordinates: 41-23-53.9364N /
81-52-33.3978W
2.19.6 Site elevation: 761.3 ft

2.19.1 ILS type: Localizer for runway 06L. Magnetic variation: 8W
2.19.2 ILS identification: LIZ
2.19.5 Coordinates: 41-25-10.1936N / 81-50-32.895W
2.19.6 Site elevation: 778.7 ft

2.19.1 ILS type: Glide Slope for runway 06L. Magnetic variation: 8W
2.19.2 ILS identification: LIZ
2.19.5 Coordinates: 41-24-09.1462N /
81-52-17.5196W
2.19.6 Site elevation: 764.3 ft

2.19.1 ILS type: DME for runway 06L. Magnetic variation: 8W
2.19.2 ILS identification: LIZ

2.19.5 Coordinates: 41-25-11.9439N /
81-50-35.6806W
2.19.6 Site elevation: 783.3 ft

2.19.1 ILS type: Localizer for runway 06R. Magnetic variation: 8W

2.19.2 ILS identification: CLE
2.19.5 Coordinates: 41-25-05.1757N /
81-50-15.5054W
2.19.6 Site elevation: 785.7 ft

2.19.1 ILS type: DME for runway 06R. Magnetic variation: 8W

2.19.2 ILS identification: CLE
2.19.5 Coordinates: 41-25-04.0599N /
81-50-11.0995W
2.19.6 Site elevation: 794.2 ft

2.19.1 ILS type: Glide Slope for runway 06R. Magnetic variation: 8W

2.19.2 ILS identification: CLE
2.19.5 Coordinates: 41-24-13.7198N /
81-51-45.2828W
2.19.6 Site elevation: 766 ft

2.19.1 ILS type: DME for runway 24L. Magnetic variation: 8W

2.19.2 ILS identification: HPI
2.19.5 Coordinates: 41-23-44.3409N /
81-52-18.0761W
2.19.6 Site elevation: 778.9 ft

2.19.1 ILS type: Localizer for runway 24L. Magnetic variation: 8W

2.19.2 ILS identification: HPI
2.19.5 Coordinates: 41-23-45.4326N /
81-52-21.5235W
2.19.6 Site elevation: 771.9 ft

2.19.1 ILS type: Glide Slope for runway 24L. Magnetic variation: 8W

2.19.2 ILS identification: HPI
2.19.5 Coordinates: 41-24-51.9514N /
81-50-45.3137W
2.19.6 Site elevation: 782.2 ft

2.19.1 ILS type: DME for runway 24R. Magnetic variation: 8W

2.19.2 ILS identification: PVY
2.19.5 Coordinates: 41-25-11.9439N /
81-50-35.6806W

2.19.6 Site elevation: 783.3 ft

2.19.1 ILS type: Glide Slope for runway 24R. Magnetic variation: 8W

2.19.2 ILS identification: PVY

2.19.5 Coordinates: 41-24-53.0115N /

81-51-08.2151W

2.19.6 Site elevation: 768.4 ft

2.19.1 ILS type: Inner Marker for runway 24R. Magnetic variation: 8W

2.19.2 ILS identification: PVY

2.19.5 Coordinates: 41-25-03.7892N /

81-50-47.3101W

2.19.6 Site elevation: 778.7 ft

2.19.1 ILS type: Localizer for runway 24R. Magnetic variation: 8W

2.19.2 ILS identification: PVY

2.19.5 Coordinates: 41-23-53.0818N /

81-52-34.7484W

2.19.6 Site elevation: 760.5 ft

2.19.1 ILS type: Localizer for runway 28. Magnetic variation: 8W

2.19.2 ILS identification: PXP

2.19.5 Coordinates: 41-25-01.52N / 81-51-21.25W

2.19.6 Site elevation: 756.2 ft

2.19.1 ILS type: Glide Slope for runway 28. Magnetic variation: 8W

2.19.2 ILS identification: PXP

2.19.5 Coordinates: 41-25-03.4332N /

81-50-09.4179W

2.19.6 Site elevation: 786 ft

2.19.1 ILS type: DME for runway 28. Magnetic variation: 8W

2.19.2 ILS identification: PXP

2.19.5 Coordinates: 41-24-58.7198N /

81-51-23.8369W

2.19.6 Site elevation: 766.2 ft

General Remarks:

DEER & BIRDS INCLUDING WATERFOWL ON & INVOF ARPT.

ADCUS AVBL MON-SUN 0800-1800; ALL REQ FOR SVC MUST BE MADE WITH THE U.S. CUST SVC OFC LCTD AT GATE A-14 CALL (216) 267-3600 DURG LISTED HRS.

NASA GLENN RESEARCH CENTER; NASA RAMP PPR CALL 216-433-2020; 0800-1730 MON-FRI. CONTACT NASA OPNS ON FREQ 122.925 WITHIN 50 NM.

PAD 2 AND TAXILANE Y1 RSTRD TO GROUP II ACFT LESS THAN 79 FT WINGSPAN.

ALL APCHS ARE OVR NOISE SENSITIVE AREAS. ARPT LATE NGT NOISE ABATEMENT PROCEDURES ARE IN EFFECT 2300-0600. ADDITIONAL NOISE ABATEMENT PROCEDURES ARE IN EFFECT CALL AMGR NORMAL BUSINESS HRS AT 216-265-6090.

THE FOLLOWING TWYS ARE CLSD ANNUALLY FR 15 OCT THRU 15 APR TO SUPPORT DEICING OPNS AT CLE: TWY M; TWY M1 BTN TWY L & TWY J1; TWY M2 BTN TWY L & TWY J1; TWY J2 BTN TWY A & TWY K.

RAMP AREA CONCOURSE D BTN GATES D1, D28 CLSD EXC ACFT WINGSPAN LESS THAN 86 FT.

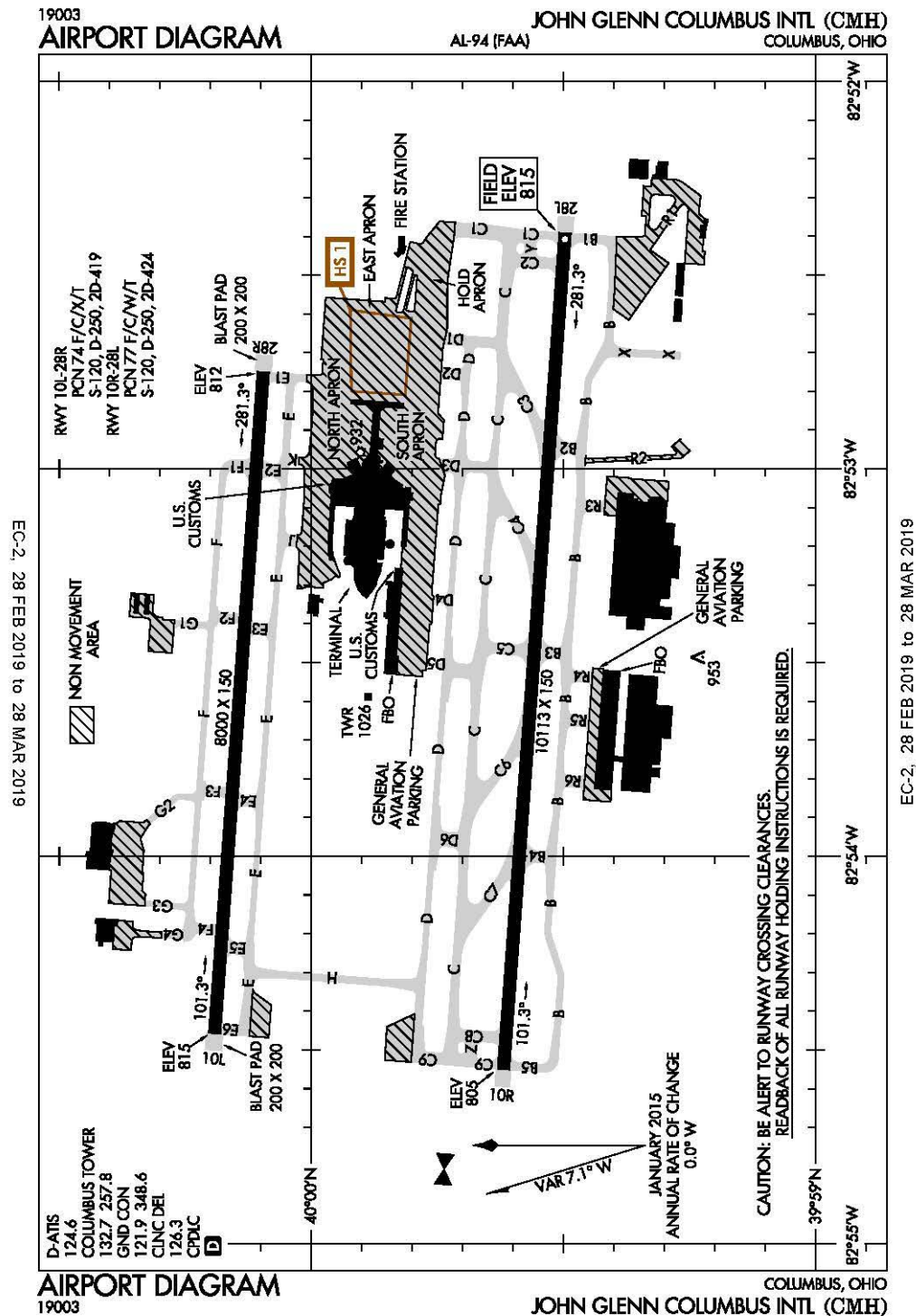
CONCOURSE C RAMP TAXILANE BETWEEN SPOT 2 AND SPOT 5 CLOSED TO ACFT WITH WINGSPAN 118 FT AND GREATER.

PAD 3 BAYS 1-5 CLOSED TO ACFT WITH WINGSPAN OVER 134 FT.

PAD 3 BAY 6 CLOSED TO ACFT WITH WINGSPAN OVER 94 FT.

ASSC IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

Columbus, Ohio
Port Columbus International
ICAO Identifier KCMH



Columbus, OH
Port Columbus Intl
ICAO Identifier KCMH

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 39-59-49N / 82-53-31.8W
2.2.2 From City: 6 Miles E Of Columbus, OH
2.2.3 Elevation: 815 ft
2.2.5 Magnetic variation: 7W (2015)
2.2.6 Airport Contact: Joe Nardone
COLUMBUS REGIONAL AIRPORT AUTHORITY
Columbus, OH 43219 (614-239-4000)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A1+,100
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973

AD 2.12 Runway physical characteristics

2.12.1 Designation: 10R
2.12.2 True Bearing: 94
2.12.3 Dimensions: 10113 ft x 150 ft
2.12.4 PCN: 77 F/C/W/T
2.12.5 Coordinates: 39-59-37.1446N / 82-54-33.0425W
2.12.6 Threshold elevation: 805 ft
2.12.6 Touchdown zone elevation: 809.3 ft

2.12.1 Designation: 28L
2.12.2 True Bearing: 274
2.12.3 Dimensions: 10113 ft x 150 ft
2.12.4 PCN: 77 F/C/W/T
2.12.5 Coordinates: 39-59-29.812N / 82-52-23.457W
2.12.6 Threshold elevation: 815 ft
2.12.6 Touchdown zone elevation: 815 ft

2.12.1 Designation: 10L
2.12.2 True Bearing: 94
2.12.3 Dimensions: 8000 ft x 150 ft
2.12.4 PCN: 74 F/C/X/T
2.12.5 Coordinates: 40-00-11.53N / 82-54-27.4949W
2.12.6 Threshold elevation: 814.7 ft

2.12.6 Touchdown zone elevation: 814.7 ft

2.12.1 Designation: 28R
2.12.2 True Bearing: 274
2.12.3 Dimensions: 8000 ft x 150 ft
2.12.4 PCN: 74 F/C/X/T
2.12.5 Coordinates: 40-00-05.7316N / 82-52-44.9701W
2.12.6 Threshold elevation: 812.2 ft
2.12.6 Touchdown zone elevation: 813 ft

AD 2.13 Declared distances

2.13.1 Designation: 10R
2.13.2 Takeoff run available: 10113
2.13.3 Takeoff distance available: 10113
2.13.4 Accelerate-stop distance available: 10113
2.13.5 Landing distance available: 10113

2.13.1 Designation: 28L
2.13.2 Takeoff run available: 10113
2.13.3 Takeoff distance available: 10113
2.13.4 Accelerate-stop distance available: 10113
2.13.5 Landing distance available: 10113

2.13.1 Designation: 10L
2.13.2 Takeoff run available: 8000
2.13.3 Takeoff distance available: 8000
2.13.4 Accelerate-stop distance available: 8000
2.13.5 Landing distance available: 8000

2.13.1 Designation: 28R
2.13.2 Takeoff run available: 8000
2.13.3 Takeoff distance available: 8000
2.13.4 Accelerate-stop distance available: 8000
2.13.5 Landing distance available: 8000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 10R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 28L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 10L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 28R
2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4R

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P DEP/P (100-279)

2.18.3 Service designation: 338.225 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 129.95 MHz

2.18.1 Service designation: APCH/P DEP/P (100-279)

2.18.3 Service designation: 279.6 MHz

2.18.1 Service designation: APCH/P DEP/P (280-099)

2.18.3 Service designation: 317.775 MHz

2.18.1 Service designation: APCH/P DEP/P (100-279)

2.18.3 Service designation: 134 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(280-099)

2.18.3 Service designation: 125.95 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(280-099)

2.18.3 Service designation: 371.975 MHz

2.18.1 Service designation: APCH/S

2.18.3 Service designation: 118.2 MHz

2.18.1 Service designation: APCH/S

2.18.3 Service designation: 119.65 MHz

2.18.1 Service designation: APCH/S

2.18.3 Service designation: 353.9 MHz

2.18.1 Service designation: APCH/S DEP/S (100-279)

2.18.3 Service designation: 132.3 MHz

2.18.1 Service designation: APCH/S DEP/S

2.18.3 Service designation: 353.7 MHz

2.18.1 Service designation: APCH/S DEP/S

2.18.3 Service designation: 324.5 MHz

2.18.1 Service designation: APCH/S DEP/S

2.18.3 Service designation: 118 MHz

2.18.1 Service designation: AS ASSIGNED

2.18.3 Service designation: 134.45 MHz

2.18.1 Service designation: CD/P

2.18.3 Service designation: 126.3 MHz

2.18.1 Service designation: CLASS C (280-099)

2.18.3 Service designation: 317.775 MHz

2.18.1 Service designation: CLASS C (280-099)

2.18.3 Service designation: 125.95 MHz

2.18.1 Service designation: CLASS C (100-279)

2.18.3 Service designation: 134 MHz

2.18.1 Service designation: CLASS C (100-279)

2.18.3 Service designation: 279.6 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 124.6 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: FINAL

2.18.3 Service designation: 327.05 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 132.7 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: RADAR

2.18.3 Service designation: 294.7 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 10L. Magnetic
variation: 7W

2.19.2 ILS identification: CBP

2.19.5 Coordinates: 40-00-14.2836N /
82-54-14.8654W

2.19.6 Site elevation: 809.9 ft

2.19.1 ILS type: DME for runway 10L. Magnetic

variation: 7W
2.19.2 ILS identification: CBP
2.19.5 Coordinates: 40-00-09.6925N /
82-54-41.0275W
2.19.6 Site elevation: 822.3 ft

2.19.1 ILS type: Localizer for runway 10L. Magnetic
variation: 7W
2.19.2 ILS identification: CBP
2.19.5 Coordinates: 40-00-04.9989N /
82-52-32.0266W
2.19.6 Site elevation: 799.4 ft

2.19.1 ILS type: Glide Slope for runway 10R. Magnetic
variation: 7W
2.19.2 ILS identification: AQI
2.19.5 Coordinates: 39-59-32.38N / 82-54-20.61W
2.19.6 Site elevation: 802.5 ft

2.19.1 ILS type: Localizer for runway 10R. Magnetic
variation: 7W
2.19.2 ILS identification: AQI
2.19.5 Coordinates: 39-59-29.0711N /
82-52-10.4148W
2.19.6 Site elevation: 814.2 ft

2.19.1 ILS type: DME for runway 10R. Magnetic
variation: 7W
2.19.2 ILS identification: AQI
2.19.5 Coordinates: 39-59-33.7394N /
82-54-45.9308W
2.19.6 Site elevation: 815.1 ft

2.19.1 ILS type: DME for runway 28L. Magnetic
variation: 7W
2.19.2 ILS identification: CMH
2.19.5 Coordinates: 39-59-33.7394N /

82-54-45.9308W
2.19.6 Site elevation: 815.1 ft

2.19.1 ILS type: Localizer for runway 28L. Magnetic
variation: 7W
2.19.2 ILS identification: CMH
2.19.5 Coordinates: 39-59-37.8813N /
82-54-46.0859W
2.19.6 Site elevation: 805.9 ft

2.19.1 ILS type: Glide Slope for runway 28L. Magnetic
variation: 7W
2.19.2 ILS identification: CMH
2.19.5 Coordinates: 39-59-26.5N / 82-52-36.66W
2.19.6 Site elevation: 810.7 ft

2.19.1 ILS type: Localizer for runway 28R. Magnetic
variation: 7W
2.19.2 ILS identification: ONB
2.19.5 Coordinates: 40-00-12.2667N /
82-54-40.5593W
2.19.6 Site elevation: 811.6 ft

2.19.1 ILS type: DME for runway 28R. Magnetic
variation: 7W
2.19.2 ILS identification: ONB
2.19.5 Coordinates: 40-00-09.6925N /
82-54-41.0275W
2.19.6 Site elevation: 822.3 ft

2.19.1 ILS type: Glide Slope for runway 28R. Magnetic
variation: 7W
2.19.2 ILS identification: ONB
2.19.5 Coordinates: 40-00-09.1368N /
82-52-56.9873W
2.19.6 Site elevation: 808.4 ft

General Remarks:

MODEL ACFT TFC WITHIN A 1 NM RDS OF A POINT 8 NM ON A 010 DEG BRG FM THE ARPT; SFC - 5000 FT
AGL; SR-SS DLY.

BIRDS INVOF ARPT.

TWY D-5 PAVEMENT (NORTH OF TWY D) IS RSTRD TO ACFT WITH WINGSPAN LESS THAN 79 FT.

BE ALERT: RY 10L/28R RESTRICTIONS ON STAGE I & II TURBOJET ACFT 2200-0800 & ON STAGE III
TURBOJET ACFT 2200-0700. PRACTICE APCHS FOR HIGH NOISE LEVEL TYPE ACFT INCLUDING
NON-STAGE III MIL JET ACFT SHALL NOT BE APPROVED UNLESS RY 10R/28L IS IN USE & THE APCH
TERMINATES IN A FULL STOP TAXI-BACK OPN.

ALL SURFACES AROUND TERMINAL; NORTH OF TWY 'D' & SOUTH OF TWY 'E' ARE NON-MOVEMENT
AREAS.

NOISE BARRIER LOCATED AT SE SIDE OF AIRFIELD RESTRICTED TO ACFT WITH WINGSPAN LESS THAN 79 FT.

TO REQ LDG RIGHTS CTC US CUSTOMS BETWEEN 1230-0300Z, MON-FRI AT 614-497-1865.

FLIGHT NOTIFICATION SERVICE (ADCUS) AVBL.

TWY F1 RSTRD TO AIRCRAFT WITH WINGSPAN LESS THAN 120 FT.

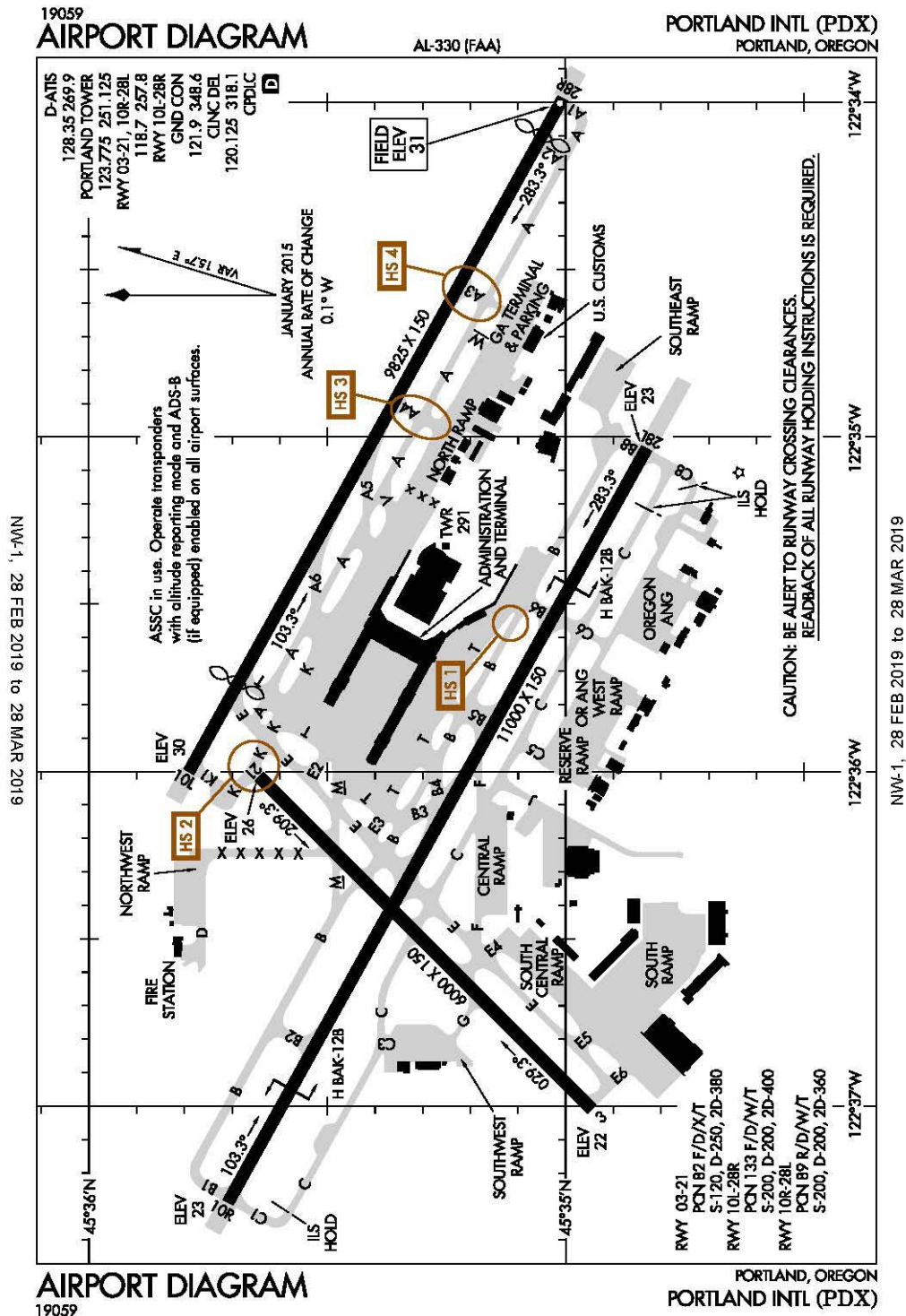
TWYS R2, R3, R4, R5 AND R6 RSTRD TO WINGSPAN LESS THAN 118 FT.

TWY R1 RSTRD TO ACFT WITH WINGSPAN LESS THAN 79 FT.

TAXILANE CONCOURSE A BTN TWY D3 AND TWY D4 CLSD TO ACFT WINGSPAN MORE THAN 130 FT.

TAXILANE CONCOURSE C BTN TWY J AND TWY K CLSD TO ACFT WINGSPAN MORE THAN 135 FT.

Portland, Oregon
Portland International
ICAO Identifier KPDX



Portland, OR
Portland Intl
ICAO Identifier KPDX

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 45-35-19.3519N /
122-35-48.7299W
2.2.2 From City: 4 Miles NE Of Portland, OR
2.2.3 Elevation: 30.8 ft
2.2.5 Magnetic variation: 16E (2010)
2.2.6 Airport Contact: Daren Griffin
7200 NE AIRPORT WAY
Portland, OR 97218
(503-415-6195)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 21
2.10.1.b Type of obstacle: Road (19 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 0 ft B of Centerline

2.10.1.a. Runway designation: 28R
2.10.1.b Type of obstacle: Road (32 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 408 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 03
2.12.2 True Bearing: 45
2.12.3 Dimensions: 6000 ft x 150 ft
2.12.4 PCN: 82 F/D/X/T
2.12.5 Coordinates: 45-34-56.73N / 122-37-00.5188W
2.12.6 Threshold elevation: 22.2 ft
2.12.6 Touchdown zone elevation: 22.9 ft

2.12.1 Designation: 21
2.12.2 True Bearing: 225

2.12.3 Dimensions: 6000 ft x 150 ft
2.12.4 PCN: 82 F/D/X/T
2.12.5 Coordinates: 45-35-38.605N /
122-36-00.8463W
2.12.6 Threshold elevation: 26.4 ft
2.12.6 Touchdown zone elevation: 26.4 ft

2.12.1 Designation: 10R
2.12.2 True Bearing: 119
2.12.3 Dimensions: 11000 ft x 150 ft
2.12.4 PCN: 89 R/D/W/T
2.12.5 Coordinates: 45-35-42.5347N /
122-37-17.3022W
2.12.6 Threshold elevation: 22.7 ft
2.12.6 Touchdown zone elevation: 23.7 ft

2.12.1 Designation: 28L
2.12.2 True Bearing: 299
2.12.3 Dimensions: 11000 ft x 150 ft
2.12.4 PCN: 89 R/D/W/T
2.12.5 Coordinates: 45-34-49.8531N /
122-35-02.0463W
2.12.6 Threshold elevation: 22.7 ft
2.12.6 Touchdown zone elevation: 22.7 ft

2.12.1 Designation: 10L
2.12.2 True Bearing: 119
2.12.3 Dimensions: 9825 ft x 150 ft
2.12.4 PCN: 133 F/D/W/T
2.12.5 Coordinates: 45-35-47.454N /
122-36-00.0581W
2.12.6 Threshold elevation: 29.5 ft
2.12.6 Touchdown zone elevation: 30.2 ft

2.12.1 Designation: 28R
2.12.2 True Bearing: 299
2.12.3 Dimensions: 9825 ft x 150 ft
2.12.4 PCN: 133 F/D/W/T
2.12.5 Coordinates: 45-35-00.3785N /
122-33-59.2636W
2.12.6 Threshold elevation: 30.8 ft
2.12.6 Touchdown zone elevation: 30.8 ft

AD 2.13 Declared distances

2.13.1 Designation: 03
2.13.2 Takeoff run available: 6000
2.13.3 Takeoff distance available: 6000
2.13.4 Accelerate-stop distance available: 6000
2.13.5 Landing distance available: 6000

2.13.1 Designation: 21

2.13.2 Takeoff run available: 6000
2.13.3 Takeoff distance available: 6000
2.13.4 Accelerate-stop distance available: 6000
2.13.5 Landing distance available: 6000

2.13.1 Designation: 10R
2.13.2 Takeoff run available: 11000
2.13.3 Takeoff distance available: 11000
2.13.4 Accelerate-stop distance available: 11000
2.13.5 Landing distance available: 11000

2.13.1 Designation: 28L
2.13.2 Takeoff run available: 11000
2.13.3 Takeoff distance available: 11000
2.13.4 Accelerate-stop distance available: 11000
2.13.5 Landing distance available: 11000

2.13.1 Designation: 10L
2.13.2 Takeoff run available: 9825
2.13.3 Takeoff distance available: 9825
2.13.4 Accelerate-stop distance available: 9825
2.13.5 Landing distance available: 8535

2.13.1 Designation: 28R
2.13.2 Takeoff run available: 9825
2.13.3 Takeoff distance available: 9825
2.13.4 Accelerate-stop distance available: 9825
2.13.5 Landing distance available: 9290

AD 2.14 Approach and runway lighting

2.14.1 Designation: 03
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Pdx Rwy 03 PAPI Unusable Bynd 4 Degrees Left And Right Of Rcl And Beyond 5 Nm Unusable

2.14.1 Designation: 21
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 10R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 28L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: Possible Rwy 28L Glideslope Fluctuation Prior To Addum When Weather Is Greater Than 800/2.

2.14.1 Designation: 10L

2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 28R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: AFRC OPS
2.18.3 Service designation: 252.8 MHz

2.18.1 Service designation: AFRC OPS
2.18.3 Service designation: 138.45 MHz

2.18.1 Service designation: ANG COMD POST (CALL STUMP TOWN)
2.18.3 Service designation: 288.9 MHz

2.18.1 Service designation: ANG OPS
2.18.3 Service designation: 281.2 MHz

2.18.1 Service designation: ANG OPS
2.18.3 Service designation: 280.5 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 318.1 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 120.125 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 128.35 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 269.9 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz
2.18.6 Remarks: Pdx Monitors 121.5 For Mcminnville (Mmv).

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/S
2.18.3 Service designation: 132.275 MHz

2.18.1 Service designation: LCL/P (RYS 03/21 & 10R/28L)
2.18.3 Service designation: 251.125 MHz

2.18.1 Service designation: LCL/P (RYS 03/21 & 10R/28L)
2.18.3 Service designation: 123.775 MHz

2.18.1 Service designation: LCL/P (RY 10L/28R)
2.18.3 Service designation: 118.7 MHz

2.18.1 Service designation: LCL/P (RY 10L/28R)
2.18.3 Service designation: 257.8 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 10L. Magnetic variation: 16E

2.19.2 ILS identification: VDG
2.19.5 Coordinates: 45-35-39.7602N / 122-35-30.1707W
2.19.6 Site elevation: 30.8 ft

2.19.1 ILS type: Localizer for runway 10L. Magnetic variation: 16E
2.19.2 ILS identification: VDG
2.19.5 Coordinates: 45-34-55.53N / 122-33-46.85W
2.19.6 Site elevation: 28.9 ft

2.19.1 ILS type: DME for runway 10L. Magnetic variation: 16E
2.19.2 ILS identification: VDG
2.19.5 Coordinates: 45-35-47.9502N / 122-36-13.551W
2.19.6 Site elevation: 25.5 ft

2.19.1 ILS type: Inner Marker for runway 10R. Magnetic variation: 16E
2.19.2 ILS identification: PDX
2.19.5 Coordinates: 45-35-46.7091N / 122-37-28.0266W
2.19.6 Site elevation: 17 ft

2.19.1 ILS type: Localizer for runway 10R. Magnetic variation: 16E
2.19.2 ILS identification: PDX
2.19.5 Coordinates: 45-34-43.5268N / 122-34-45.8188W
2.19.6 Site elevation: 19.5 ft

2.19.1 ILS type: DME for runway 10R. Magnetic variation: 16E

2.19.2 ILS identification: PDX
2.19.5 Coordinates: 45-34-46.7386N / 122-34-45.2294W
2.19.6 Site elevation: 36 ft

2.19.1 ILS type: Glide Slope for runway 10R. Magnetic variation: 16E
2.19.2 ILS identification: PDX
2.19.5 Coordinates: 45-35-33.9026N / 122-37-07.2471W
2.19.6 Site elevation: 16.1 ft

2.19.1 ILS type: Localizer for runway 21. Magnetic variation: 16E
2.19.2 ILS identification: GPO
2.19.5 Coordinates: 45-34-49.75N / 122-37-10.47W
2.19.6 Site elevation: 11.4 ft

2.19.1 ILS type: DME for runway 21. Magnetic variation: 16E
2.19.2 ILS identification: GPO
2.19.5 Coordinates: 45-34-47.97N / 122-37-07.94W
2.19.6 Site elevation: 31 ft

2.19.1 ILS type: Localizer for runway 28L. Magnetic variation: 16E
2.19.2 ILS identification: JMJ
2.19.5 Coordinates: 45-35-50.5155N / 122-37-37.8096W
2.19.6 Site elevation: 24.8 ft

2.19.1 ILS type: DME for runway 28L. Magnetic variation: 16E
2.19.2 ILS identification: JMJ
2.19.5 Coordinates: 45-34-46.7386N / 122-34-45.2294W
2.19.6 Site elevation: 36 ft

2.19.1 ILS type: Glide Slope for runway 28L. Magnetic variation: 16E
2.19.2 ILS identification: JMJ
2.19.5 Coordinates: 45-34-52.6331N / 122-35-16.7121W
2.19.6 Site elevation: 19.9 ft

2.19.1 ILS type: DME for runway 28R. Magnetic variation: 16E
2.19.2 ILS identification: IAP
2.19.5 Coordinates: 45-35-47.95N / 122-36-13.551W

2.19.6 Site elevation: 25.5 ft

2.19.1 ILS type: Localizer for runway 28R. Magnetic variation: 16E

2.19.2 ILS identification: IAP

2.19.5 Coordinates: 45-35-52.3N / 122-36-12.47W

2.19.6 Site elevation: 25.6 ft

2.19.1 ILS type: Glide Slope for runway 28R. Magnetic variation: 16E

2.19.2 ILS identification: IAP

2.19.5 Coordinates: 45-35-10.93N / 122-34-16.4W

2.19.6 Site elevation: 30.1 ft

General Remarks:

ARPT CLSD TO NON-POWERED ACFT EXCP IN EMERG.

TWY T BTN EXITS B5 & B6 CLSD TO ACFT WITH WINGSPAN OF 118 FT AND GREATER.

MIGRATORY & WINTERING FLOCKS OF LRG WATERFOWL ON & INVOF APRT. HEAVY SEAGULL ACTIVITY SEP THRU APR; EXPECT HIGH NMBR OF BIRDS YEAR AROUND; CK LCL ADVISORIES.

NOISE ABATEMENT PROCEDURES IN EFFECT; CALL NOISE OFFICE AT 503-460-4100. RY 28L ARRIVALS ARE NOISE SENSITIVE, EXPECT APCH TO 28R WITH TRANSITION TO 28L.

180 DEGREE TURNS BY ACFT WEIGHING IN EXCESS OF 12500 LBS PROHIBITED ON RY 10L/28R, RY 03/21 AND ALL TWYS.

UNCONTROLLED TFC AT PEARSON FIELD VANCOUVER WA 3 NM W OF RY 10L THLD ON EXTDD CNTRLN. (E94) WSFO/WSO/FW/RFC.

AREA OF TWY T BTN M AND E3 NOT VISIBLE FROM TOWER.

ACFT AUTHORIZED TO UTILIZE THE NORTHWEST RAMP WILL BE TOWED TO/FROM THIS RAMP.

AT THE WEST END ARM/DEARM AREA ON TWY C NO ACFT OF ANY TYPE MAY TAXI PAST THE ARM/DEARM AREA WHILE IT IS BEING USED.

BEARING STRENGTH: RWY 03-21 ST 175, RY 10L-28R ST175, RY 10R-28L ST175.

JASU - 4(A/M32A-86) (MC-11) 1(MA-1A).

FUEL - A (AIR BP - ATLANTIC AVIATION SVCS. C503-331-4220) J8(MIL) (NC-100LL, A)

FLUID - LHOXRB.

OIL - O-128-133-148(MIL).

MISC: FLT NOTIFICATION SVC, ADCUS, AVBL.

ANG : PPR/OFFL BUS ONLY. BASE OPS OPR 1500-2300Z++ MON-FRI EXC HOL.; DSN 638-4390, C503-335-4390. CTC BASE OPS 15 MIN PRIOR TO LDG AND AFTER DEP ON 281.2. TRAN QUARTERS NOT AVBL. CAUTION: OBST LIGHTING IS NOT NVD COMPATIBLE. NVD NOT AUTHORIZED WHILE AIRBORNE IN VCNTY OF AFLD.

TWY V CLSD TO ACFT WITH WINGSPAN GREATER THAN 135 FT. ACFT WITH WINGSPAN GREATER THAN 118 FT PROHIBITED FROM TURNING WESTBOUND ONTO TWY A FROM TWY V UNLESS UNDER TOW.

ANG: SEE FLIP AP/1 FOR SUPPLEMENTARY ARPT INFO. HAZARDOUS BIRD COND EXIST. PHASE 1 MAY-OCT, PHASE II NOV-APR. CURRENT BIRD WATCH CONDITIONS ARE NOT REPORTED ON ATIS.

TWY W CLSD TO ACFT WITH WINGSPAN GTR THAN 118 FEET. TWY K TO THE NORTH RAMP CLSD TO

THROUGH TFC.

NSTD YELLOW PRK SPOT DESIGNATORS AND EQPT TOOL BOX LCTN PAINTED ON RAMP. PLEASE CTC BASE OPS OR REQ FOLLOW ME IF NOT FAMILIAR WITH PANGB PRK PROCEDURES.

TWY C3 CLOSED TO ACFT WITH WINGSPAN EQUAL TO OR GREATER THAN 79 FT.

PDX HAS FACILITY CONSTRAINTS THAT LIMIT ITS ABILITY TO ACCOMMODATE DIVERTED FLIGHTS AND MAINTAIN THE AIRPORTS SAFE OPERATION DURING IRREG OPS. ACFT OPERATORS SHOULD CTCT THE ON-DUTY ARPT OPS SUPERVISOR (AOS) FOR AIRSIDE AT (503)460-4134 TO COORDINATE DIVERTED FLIGHTS EXCEPT IN THE CASE OF A DECLARED IN-FLIGHT EMERGENCY.

ACFT WITH WINGSPAN GREATER THAN 118 FEET ARE PROHIBITED FROM TURNING EASTBOUND ON TWY C FROM SOUTHWESTBOUND ON TWY F UNLESS UNDER TOW.

TWY A3 BTN TWY A AND THE GA RAMP CLSD TO ACFT WITH WINGSPAN GTR THAN 135 FEET UNLESS UNDER TOW.

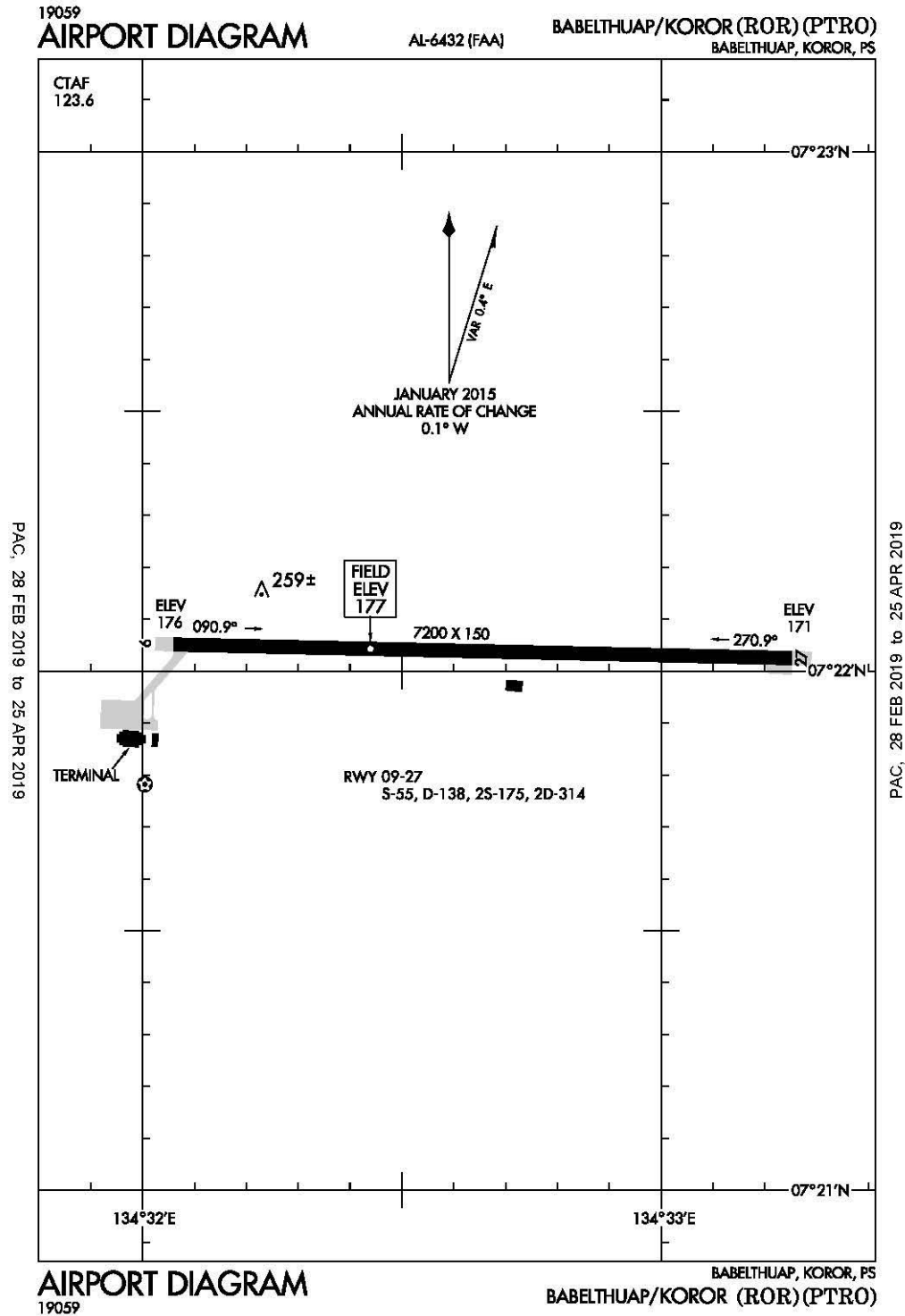
TWY E3 CLSD TO ACFT WITH WINGSPAN GREATER THAN 198.

TWY T BTN TWY E3 AND TWY B5 CLSD TO ACFT WITH WINGSPAN GREATER THAN 198.

TWY C BTN TWY C6 AND TWY C8 CLSD TO ACFT WITH WINGSPAN GREATER THAN 180.

ASSC IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

**Babelthuap Island
Babelthuap/Koror
ICAO Identifier PTRO**



Babelthuap Island, PW
Babelthuap/Koror
ICAO Identifier PTRO

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 07-22-02.3N / 134-32-39.3E
2.2.2 From City: 4 Miles NE Of Babelthuap Island, Pw
2.2.3 Elevation: 176.5 ft
2.2.5 Magnetic variation: 1E (1990)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: 115,A1
2.4.5 Hangar space: No
2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: None

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 27
2.10.1.b Type of obstacle: Trees (11 ft above runway)

General Remarks:

ALL UNSKED FLTS MUST FILE A FLT PLAN AT LEAST 7 DAYS PRIOR TO ARRIVAL AND ALL FLTS MUST CTC KOROR COMMUNICATIONS ON 123.6 AT LEAST 20 MINUTES PRIOR TO ARRIVAL.

ARFF AVBL 2 HRS PRIOR TO SKED ACFT ARR AND UNTIL 1 HR AFT DEP.

BE ALERT TO LARGE NUMBER OF BIRDS ON RY AT NIGHT.

ALL ACFT EXCEEDING 100000 LBS GWT TAXI TO THR TURN AROUND BEFORE TAXING TO APRON. ACFT UNDER 100000 LBS GWT MAY MAKE A TURN AROUND WHERE FEASIBLE.

ENTRY PERMIT RQRD CALL 011-680-488-2498 FAX 011-680-488-4385; LANDING PERMIT RQRD MUST GIVE SEVEN DAYS NOTICE CALL 011-680-488-2111 FAX 011-680-488-3207.

(E94) WX STN 5 MI FM ARPT.

FOR CD CTC HCF APCH AT 808-840-6201.

end). Not Lighted or Marked

2.10.1.c Location of obstacle: 75 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 09
2.12.2 True Bearing: 91
2.12.3 Dimensions: 7200 ft x 150 ft
2.12.5 Coordinates: 07-22-03.11N / 134-32-03.581E
2.12.6 Threshold elevation: 176.2 ft
2.12.6 Touchdown zone elevation: 176.5 ft

2.12.1 Designation: 27

2.12.2 True Bearing: 271

2.12.3 Dimensions: 7200 ft x 150 ft

2.12.5 Coordinates: 07-22-01.4713N /
134-33-15.1186E

2.12.6 Threshold elevation: 171.3 ft

2.12.6 Touchdown zone elevation: 175.9 ft

AD 2.14 Approach and runway lighting

2.14.1 Designation: 09

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 27

2.14.4 Visual approach slope indicator system: P4L

AIRPORT DIAGRAM

PHILADELPHIA INT'L (PHL)
PHILADELPHIA, PENNSYLVANIA

D-TIS ARR	DEP	TOWER	ELEVATION	CLEARANCE
ARR 133.4	DEP 135.925	PHILADELPHIA TOWER	118.5	327.05
RWYS 09L-27R, 08-26 and 17-35)	(RWY 09R-27L)	GND CON	121.9	348.6
CLNC DEL	CPDC	PCHN 08-26	F/A/T	S-100, D-210; 2D-350
PCHN 09L-27R	D-145	PCHN 60 F/A/T	S-100, D-210; 2D-350	PCHN 09K-27L
PCHN 60 F/A/T	S-200, D-210; 2D-350	PCHN 17-35	F/A/T	S-100, D-170; 2D-300

JANUARY 2015
ANNUAL RATE OF CHANGE
0.0° E

VAR 12.1° W

ASDEX in use. Operate transponders with altitude reporting mode and ADS-B (if equipped) enabled on all airport surfaces.

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

Philadelphia, PA
Philadelphia Intl
ICAO Identifier KPHL

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 39–52–19.502N / 75–14–26.387W
2.2.2 From City: 5 Miles SW Of Philadelphia, PA
2.2.3 Elevation: 35.9 ft
2.2.5 Magnetic variation: 12W (2020)
2.2.6 Airport Contact: Rochelle Cameron
DIV OF AVIATION TERMINAL E
Philadelphia, PA 19153 (215–937–6914)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 08
2.10.1.b Type of obstacle: Bldg (185 ft above runway end). Lighted
2.10.1.c Location of obstacle: 158 ft L of Centerline

2.10.1.a. Runway designation: 09L
2.10.1.b Type of obstacle: Trees (81 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 439 ft R of Centerline

2.10.1.a. Runway designation: 09R
2.10.1.b Type of obstacle: Tree (36 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 493 ft L of Centerline

2.10.1.a. Runway designation: 17
2.10.1.b Type of obstacle: Sign (53 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 644 ft L of Centerline

2.10.1.a. Runway designation: 26
2.10.1.b Type of obstacle: Trees (43 ft above runway

end). Not Lighted or Marked
2.10.1.c Location of obstacle: 421 ft L of Centerline

2.10.1.a. Runway designation: 27L
2.10.1.b Type of obstacle: Boat (189 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 0 ft B of Centerline

2.10.1.a. Runway designation: 27R
2.10.1.b Type of obstacle: Boat (189 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 0 ft B of Centerline

2.10.1.a. Runway designation: 35
2.10.1.b Type of obstacle: Boat (189 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 0 ft B of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 17
2.12.2 True Bearing: 159
2.12.3 Dimensions: 6500 ft x 150 ft
2.12.4 PCN: 27 F/A/X/T
2.12.5 Coordinates: 39–53–15.5714N / 75–14–09.9268W
2.12.6 Threshold elevation: 8.2 ft
2.12.6 Touchdown zone elevation: 10.5 ft

2.12.1 Designation: 35
2.12.2 True Bearing: 339
2.12.3 Dimensions: 6500 ft x 150 ft
2.12.4 PCN: 27 F/A/X/T
2.12.5 Coordinates: 39–52–15.5777N / 75–13–40.1314W
2.12.6 Threshold elevation: 12.9 ft
2.12.6 Touchdown zone elevation: 12.9 ft

2.12.1 Designation: 09R
2.12.2 True Bearing: 75
2.12.3 Dimensions: 12000 ft x 200 ft
2.12.4 PCN: 60 F/A/X/T
2.12.5 Coordinates: 39–51–38.9141N / 75–16–30.7061W
2.12.6 Threshold elevation: 20.3 ft
2.12.6 Touchdown zone elevation: 20.6 ft
2.12.7 Slope: 0.1 DOWN

2.12.1 Designation: 27L
2.12.2 True Bearing: 255
2.12.3 Dimensions: 12000 ft x 200 ft
2.12.4 PCN: 60 F/A/X/T

2.12.5 Coordinates: 39–52–08.65N / 75–14–01.72W

2.12.6 Threshold elevation: 10.6 ft

2.12.6 Touchdown zone elevation: 10.2 ft

2.12.7 Slope: 0.1 UP

2.12.1 Designation: 09L

2.12.2 True Bearing: 75

2.12.3 Dimensions: 9500 ft x 150 ft

2.12.4 PCN: 60 F/A/X/T

2.12.5 Coordinates: 39–52–07.2582N /
75–15–20.3809W

2.12.6 Threshold elevation: 13.2 ft

2.12.6 Touchdown zone elevation: 13.3 ft

2.12.7 Slope: 0.03 DOWN

2.12.1 Designation: 27R

2.12.2 True Bearing: 255

2.12.3 Dimensions: 9500 ft x 150 ft

2.12.4 PCN: 60 F/A/X/T

2.12.5 Coordinates: 39–52–30.7933N /
75–13–22.4291W

2.12.6 Threshold elevation: 10.4 ft

2.12.6 Touchdown zone elevation: 10.5 ft

2.12.7 Slope: 0.03 UP

2.12.1 Designation: 08

2.12.2 True Bearing: 75

2.12.3 Dimensions: 5001 ft x 150 ft

2.12.4 PCN: 27 F/A/X/T

2.12.5 Coordinates: 39–52–42.0147N / 75–13–48.05W

2.12.6 Threshold elevation: 9.3 ft

2.12.6 Touchdown zone elevation: 20.3 ft

2.12.1 Designation: 26

2.12.2 True Bearing: 256

2.12.3 Dimensions: 5001 ft x 150 ft

2.12.4 PCN: 27 F/A/X/T

2.12.5 Coordinates: 39–52–54.3825N /
75–12–45.9478W

2.12.6 Threshold elevation: 35.9 ft

2.12.6 Touchdown zone elevation: 35.9 ft

AD 2.13 Declared distances

2.13.1 Designation: 17

2.13.2 Takeoff run available: 6500

2.13.3 Takeoff distance available: 6500

2.13.4 Accelerate–stop distance available: 6500

2.13.5 Landing distance available: 6500

2.13.1 Designation: 35

2.13.2 Takeoff run available: 6500

2.13.3 Takeoff distance available: 6500

2.13.4 Accelerate–stop distance available: 6500

2.13.5 Landing distance available: 6500

2.13.1 Designation: 09R

2.13.2 Takeoff run available: 12000

2.13.3 Takeoff distance available: 12000

2.13.4 Accelerate–stop distance available: 12000

2.13.5 Landing distance available: 12000

2.13.1 Designation: 27L

2.13.2 Takeoff run available: 12000

2.13.3 Takeoff distance available: 12000

2.13.4 Accelerate–stop distance available: 11825

2.13.5 Landing distance available: 10087

2.13.1 Designation: 09L

2.13.2 Takeoff run available: 9500

2.13.3 Takeoff distance available: 9500

2.13.4 Accelerate–stop distance available: 9500

2.13.5 Landing distance available: 9500

2.13.1 Designation: 27R

2.13.2 Takeoff run available: 9500

2.13.3 Takeoff distance available: 9500

2.13.4 Accelerate–stop distance available: 9500

2.13.5 Landing distance available: 9500

2.13.1 Designation: 08

2.13.2 Takeoff run available: 5001

2.13.3 Takeoff distance available: 5001

2.13.4 Accelerate–stop distance available: 5001

2.13.5 Landing distance available: 5001

2.13.1 Designation: 26

2.13.2 Takeoff run available: 5001

2.13.3 Takeoff distance available: 5001

2.13.4 Accelerate–stop distance available: 5001

2.13.5 Landing distance available: 5001

AD 2.14 Approach and runway lighting

2.14.1 Designation: 17

2.14.2 Approach lighting system: MALSF

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 09R

2.14.2 Approach lighting system: ALSF2

2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 27L

2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4L	5000 FT. (001-089) 2.18.3 Service designation: 123.8 MHz
2.14.1 Designation: 09L	
2.14.2 Approach lighting system: MALSR	2.18.1 Service designation: APCH/P AT OR BLO 5000 FT. (270-360) 2.18.3 Service designation: 263.125 MHz
2.14.1 Designation: 27R	
2.14.2 Approach lighting system: MALSR	
2.14.4 Visual approach slope indicator system: P4L	2.18.1 Service designation: APCH/P AT OR BLO 5000 FT. (001-089) 2.18.3 Service designation: 291.7 MHz
2.14.1 Designation: 26	
2.14.2 Approach lighting system: MALSR	
2.14.4 Visual approach slope indicator system: P4R	2.18.1 Service designation: APCH/P CLASS B 8,000-6,000 (090-269) 2.18.3 Service designation: 133.875 MHz
2.14.10 Remarks: Runway 26 PAPI Unusable Beyond 8 Degr Right Of Centerline .	
AD 2.18 Air traffic services communication facilities	
2.18.1 Service designation: 5500 & BLO (NORTH)	2.18.1 Service designation: APCH/P DEP/P IC 2.18.3 Service designation: 124.35 MHz
2.18.3 Service designation: 123.8 MHz	
2.18.1 Service designation: 5500 & BLO (NORTH)	2.18.1 Service designation: APCH/P DEP/P IC 2.18.3 Service designation: 319.15 MHz
2.18.3 Service designation: 291.7 MHz	
2.18.1 Service designation: APCH/P (090-269 6,000-8,000)	2.18.1 Service designation: BUNTS STAR 2.18.3 Service designation: 128.4 MHz
2.18.3 Service designation: 317.55 MHz	
2.18.1 Service designation: APCH/P ABOVE 5,000 (270-089)	2.18.1 Service designation: BUNTS STAR 2.18.3 Service designation: 272.575 MHz
2.18.3 Service designation: 272.575 MHz	
2.18.1 Service designation: APCH/P ABOVE 5000 FT (270-089)	2.18.1 Service designation: CD/P 2.18.3 Service designation: 348.6 MHz
2.18.3 Service designation: 273.575 MHz	
2.18.1 Service designation: APCH/P ABOVE 5000 FT. (270-089)	2.18.1 Service designation: CD/P 2.18.3 Service designation: 118.85 MHz
2.18.3 Service designation: 273.575 MHz	
2.18.1 Service designation: APCH/P ABOVE 5000 FT. (270-089)	2.18.1 Service designation: CEDAR LAKE STAR 2.18.3 Service designation: 133.875 MHz
2.18.3 Service designation: 128.4 MHz	
2.18.1 Service designation: APCH/P AT & BLO 5,000 (090-269)	2.18.1 Service designation: CEDAR LAKE STAR 2.18.3 Service designation: 317.55 MHz
2.18.3 Service designation: 317.55 MHz	
2.18.1 Service designation: APCH/P AT OR BELOW 5000 FT. (090-269)	2.18.1 Service designation: CLASS B (SW 6000 FT & BLO) 2.18.3 Service designation: 118.35 MHz
2.18.3 Service designation: 127.35 MHz	
2.18.1 Service designation: APCH/P AT OR BELOW 5000 FT. (270-360)	2.18.1 Service designation: CLASS B (SE RY 09 ACTIVE 10000 FT & BLO) 2.18.3 Service designation: 119.75 MHz
2.18.3 Service designation: 126.85 MHz	
2.18.1 Service designation: APCH/P AT OR BELOW 5000 FT. (270-360)	2.18.1 Service designation: CLASS B (SE RY 27 ACTIVE 8500-10000 FT) 2.18.3 Service designation: 119.75 MHz
2.18.3 Service designation: 126.85 MHz	
2.18.1 Service designation: APCH/P AT OR BELOW	

2.18.1 Service designation: CLASS B (NW 8000–10000 FT)
2.18.3 Service designation: 124.35 MHz

2.18.1 Service designation: CLASS B (W RY 09 ACTIVE 8500–10000 FT)
2.18.3 Service designation: 124.35 MHz

2.18.1 Service designation: CLASS B (W RY 27 ACTIVE 10000 FT & BLO)
2.18.3 Service designation: 124.35 MHz

2.18.1 Service designation: CLASS B (WEST RY 09 ACTIVE 8,500–10,000)
2.18.3 Service designation: 319.15 MHz

2.18.1 Service designation: CLASS B (SE RY 09 ACTIVE 10000 FT & BLO)
2.18.3 Service designation: 269.25 MHz

2.18.1 Service designation: CLASS B (SE RY 27 ACTIVE 8500–10000 FT)
2.18.3 Service designation: 269.25 MHz

2.18.1 Service designation: CLASS B (N NE 6500–7500)
2.18.3 Service designation: 273.575 MHz

2.18.1 Service designation: CLASS B (NORTH 6500–7500)
2.18.3 Service designation: 128.4 MHz

2.18.1 Service designation: CLASS B (W RY 09 ACTIVE 8000 FT & BLO)
2.18.3 Service designation: 273.575 MHz

2.18.1 Service designation: CLASS B (NE RY 27 ACTIVE 5000 FT & BLO)
2.18.3 Service designation: 291.7 MHz

2.18.1 Service designation: CLASS B (SOUTH/ SOUTHWEST RY 27 8,500–10,000)
2.18.3 Service designation: 119.75 MHz

2.18.1 Service designation: CLASS B (SOUTH/ SOUTHWEST RY 27 8,500–10,000)
2.18.3 Service designation: 269.25 MHz

2.18.1 Service designation: CLASS B (SOUTHEAST RY 27 5,500–7,5000)
2.18.3 Service designation: 133.875 MHz

2.18.1 Service designation: CLASS B (WEST RY 09 ACTIVE 8,000 & BLO)
2.18.3 Service designation: 128.4 MHz

2.18.1 Service designation: CLASS B (RY 27 5,500–7,500)
2.18.3 Service designation: 317.55 MHz

2.18.1 Service designation: CLASS B (6,000–8,000)
2.18.3 Service designation: 317.55 MHz

2.18.1 Service designation: CLASS B (SW 6000 FT & BLO)
2.18.3 Service designation: 323.1 MHz

2.18.1 Service designation: CLASS B (NE 6500 AT & BLO)
2.18.3 Service designation: 123.8 MHz

2.18.1 Service designation: CLASS B (5,500 & BLO)
2.18.3 Service designation: 126.85 MHz

2.18.1 Service designation: CLASS B (SE–SW 5,000 & BLO)
2.18.3 Service designation: 127.35 MHz

2.18.1 Service designation: CLASS B (NE 7,000–10,000)
2.18.3 Service designation: 124.35 MHz

2.18.1 Service designation: CLASS B (5,500 & BLO)
2.18.3 Service designation: 263.125 MHz

2.18.1 Service designation: CLASS B (SE–SW 5,000 & BLO)
2.18.3 Service designation: 317.55 MHz

2.18.1 Service designation: CLASS B (NE 7,000–10,000)
2.18.3 Service designation: 319.15 MHz

2.18.1 Service designation: CLASS B (NW 8,000–10,000)
2.18.3 Service designation: 319.15 MHz

2.18.1 Service designation: CLASS B (NORTH 6,5000–7,500)
2.18.3 Service designation: 272.575 MHz

2.18.1 Service designation: CLASS B (WEST RY 09 ACTIVE 8,000& BLO)

2.18.3 Service designation: 272.575 MHz

2.18.1 Service designation: CLASS B (6000–8000 FT)
2.18.3 Service designation: 133.875 MHz

2.18.1 Service designation: D–ATIS (ARR)
2.18.3 Service designation: 133.4 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D–ATIS (DEP)
2.18.3 Service designation: 135.925 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: DEP/P (270–089)
2.18.3 Service designation: 319.15 MHz

2.18.1 Service designation: DEP/P (270–089)
2.18.3 Service designation: 124.35 MHz

2.18.1 Service designation: DEP/P (090–269)
2.18.3 Service designation: 119.75 MHz

2.18.1 Service designation: DEP/P (090–269)
2.18.3 Service designation: 269.25 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: FINAL APCH
2.18.3 Service designation: 125.4 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/S
2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: ILS PRM LCL/P (RY 27L)
2.18.3 Service designation: 135.1 MHz

2.18.1 Service designation: ILS PRM LCL/P (RY 26)
2.18.3 Service designation: 118.5 MHz

2.18.1 Service designation: ILS PRM LCL/P (RYS 26 & 27L)

2.18.3 Service designation: 327.05 MHz

2.18.1 Service designation: ILS PRM MONITOR/P (RY 27L)
2.18.3 Service designation: 120.425 MHz

2.18.1 Service designation: ILS PRM MONITOR/P (RY 26)
2.18.3 Service designation: 123.6 MHz

2.18.1 Service designation: JIIMS STAR
2.18.3 Service designation: 317.55 MHz

2.18.1 Service designation: JIIMS STAR
2.18.3 Service designation: 133.875 MHz

2.18.1 Service designation: LCL/P (RWYS 9L/27R, 17/35, 8/26)
2.18.3 Service designation: 118.5 MHz

2.18.1 Service designation: LCL/P (RWYS 9L/27R, 17/35, 8/26) & (RWY 9R/27L)
2.18.3 Service designation: 327.05 MHz

2.18.1 Service designation: LCL/P (RWY 9R/27L)
2.18.3 Service designation: 135.1 MHz

2.18.1 Service designation: PAATS STAR
2.18.3 Service designation: 133.875 MHz

2.18.1 Service designation: PAATS STAR
2.18.3 Service designation: 317.55 MHz

2.18.1 Service designation: PHL ONE DP
2.18.3 Service designation: 319.15 MHz

2.18.1 Service designation: PHL ONE DP
2.18.3 Service designation: 124.35 MHz

2.18.1 Service designation: RADAR
2.18.3 Service designation: 126.6 MHz

2.18.1 Service designation: SPUDS STAR
2.18.3 Service designation: 272.575 MHz

2.18.1 Service designation: SPUDS STAR
2.18.3 Service designation: 128.4 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: DME for runway 09L. Magnetic variation: 12W

2.19.2 ILS identification: VII
2.19.5 Coordinates: 39-52-35.4715N /
75-13-11.5053W
2.19.6 Site elevation: 19.4 ft

2.19.1 ILS type: Glide Slope for runway 09L. Magnetic
variation: 12W
2.19.2 ILS identification: VII
2.19.5 Coordinates: 39-52-06.0272N /
75-15-06.0615W
2.19.6 Site elevation: 8.9 ft

2.19.1 ILS type: Localizer for runway 09L. Magnetic
variation: 12W
2.19.2 ILS identification: VII
2.19.5 Coordinates: 39-52-33.388N / 75-13-09.4005W
2.19.6 Site elevation: 7.4 ft

2.19.1 ILS type: Localizer for runway 09R. Magnetic
variation: 12W
2.19.2 ILS identification: PHL
2.19.5 Coordinates: 39-52-11.1563N /
75-13-49.1425W
2.19.6 Site elevation: 9 ft

2.19.1 ILS type: DME for runway 09R. Magnetic varia-
tion: 12W
2.19.2 ILS identification: PHL
2.19.5 Coordinates: 39-52-07.3027N /
75-13-47.0541W
2.19.6 Site elevation: 23.5 ft

2.19.1 ILS type: Glide Slope for runway 09R. Magnetic
variation: 12W
2.19.2 ILS identification: PHL
2.19.5 Coordinates: 39-51-37.8234N /
75-16-15.7274W
2.19.6 Site elevation: 13.3 ft

2.19.1 ILS type: Inner Marker for runway 09R. Magnetic
variation: 12W
2.19.2 ILS identification: PHL
2.19.5 Coordinates: 39-51-36.7356N / 75-16-41.589W
2.19.6 Site elevation: 7.2 ft

2.19.1 ILS type: DME for runway 17. Magnetic varia-
tion: 12W
2.19.2 ILS identification: MYY
2.19.5 Coordinates: 39-52-06.7468N /
75-13-39.3372W
2.19.6 Site elevation: 24.5 ft

2.19.1 ILS type: Localizer for runway 17. Magnetic vari-
ation: 12W
2.19.2 ILS identification: MYY
2.19.5 Coordinates: 39-52-06.3204N /
75-13-35.5323W
2.19.6 Site elevation: 12 ft

2.19.1 ILS type: Glide Slope for runway 17. Magnetic
variation: 12W
2.19.2 ILS identification: MYY
2.19.5 Coordinates: 39-53-05.9004N /
75-14-08.6899W
2.19.6 Site elevation: 6.2 ft

2.19.1 ILS type: DME for runway 26. Magnetic varia-
tion: 12W
2.19.2 ILS identification: LLH
2.19.5 Coordinates: 39-52-42.2207N /
75-13-32.3765W
2.19.6 Site elevation: 28.9 ft

2.19.1 ILS type: Localizer for runway 26. Magnetic vari-
ation: 12W
2.19.2 ILS identification: LLH
2.19.5 Coordinates: 39-52-42.383N / 75-13-31.8279W
2.19.6 Site elevation: 5.4 ft

2.19.1 ILS type: Glide Slope for runway 26. Magnetic
variation: 12W
2.19.2 ILS identification: LLH
2.19.5 Coordinates: 39-52-49.3706N /
75-12-58.3473W
2.19.6 Site elevation: 21.3 ft

2.19.1 ILS type: Glide Slope for runway 27L. Magnetic
variation: 12W
2.19.2 ILS identification: GLC
2.19.5 Coordinates: 39-51-57.2838N /
75-14-37.7318W
2.19.6 Site elevation: 8.4 ft

2.19.1 ILS type: DME for runway 27L. Magnetic varia-
tion: 12W
2.19.2 ILS identification: GLC
2.19.5 Coordinates: 39-52-07.3027N /
75-13-47.0541W
2.19.6 Site elevation: 23.5 ft

2.19.1 ILS type: Localizer for runway 27L. Magnetic
variation: 12W
2.19.2 ILS identification: GLC

2.19.5 Coordinates: 39-51-36.2572N /
75-16-43.9517W
2.19.6 Site elevation: 6.8 ft

2.19.1 ILS type: DME for runway 27R. Magnetic varia-
tion: 12W
2.19.2 ILS identification: PDP
2.19.5 Coordinates: 39-52-35.4715N /
75-13-11.5053W
2.19.6 Site elevation: 19.4 ft

2.19.1 ILS type: Localizer for runway 27R. Magnetic

variation: 12W
2.19.2 ILS identification: PDP
2.19.5 Coordinates: 39-52-04.7498N /
75-15-32.9263W
2.19.6 Site elevation: 8.8 ft

2.19.1 ILS type: Glide Slope for runway 27R. Magnetic
variation: 12W
2.19.2 ILS identification: PDP
2.19.5 Coordinates: 39-52-24.0466N /
75-13-35.8144W
2.19.6 Site elevation: 7.5 ft

General Remarks:

BIRDS ON & INVOF ARPT.

RYS 27L, 27R & 35 SHIP CHNL (DELAWARE RIVER) MAX HEIGHT OF SHIPS 189 FT. RY 26 SHIP CHNL (SCHUYLKILL) MAX HEIGHT OF SHIPS 149 FT.

ARPT IS LCTD IN A NOISE SENSITIVE AREA. AIRPORT NOISE ABATEMENT TAKEOFF PROCEDURES ARE TO BE USED.

TCAS EQUIPPED ACFT-TCAS ALERT MAY BE CAUSED BY TRANSPONDER EQUIPPED SHIPS LCTD PHL NAVAL BASE 3 NM E.

UNLGTD STACK 288 FT MSL (271 FT AGL) 2.3 NM SW OF ARPT.

RY 09R ROLLOUT RVR USED FOR RY 09L MIDPOINT RVR.

ALL ENGINE RUNUPS REQUIRE PPR FM DUTY OPNS OFFICER AT 937-6914/6800; RUNUPS 20 MIN MAXIMUM.

ALL ACFT TRAVELING ON TWY J MUST USE MINIMUM POWER WHEN TURNING SOUTH DUE TO JETBLAST CONCERNS.

TWY J BTN TWYS K3 AND Q RESTRICTED TO ACFT WITH WINGSPANS 171 FT AND LESS.

ONLY NOSE-IN PARKING PERMITTED ON NORTH REMOTE APRONS. PPR FM ARPT OPNS FOR ALL ACFT PARKING ON NORTH REMOTE APRONS; CTC 215-937-6914/6800.

POSSIBLE UNMARKED SHIP OBSTRUCTION TRANSITING EAST OR WESTBOUND ALONG THE DELAWARE RIVER REACHING HEIGHTS OF 189' - BE ALERT WHEN APPROACHING PHL RUNWAY 35 AND WHENEVER CIRCLING OR VISUALLY APPROACHING ALL OTHER RUNWAYS.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

AIRPORT DIAGRAM

19003

PITTSBURGH INTL (PIT)

PITTSBURGH, PENNSYLVANIA

AL-570 (FAA)

JANUARY 2015
ANNUAL RATE OF CHANGE
0.0° W

VAR 9.1° W

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

NON-MOVEMENT AREA

ASSC in use. Operate transponders with altitude reporting mode and ADS-B (if equipped) enabled on all airport surfaces.

CARGO 1 AND 2 APRON

CARGO 3 APRON

DEICE PAD GENERAL AVIATION

FBO

DECING PAD A

DECING PAD C

TWR 1390

STATION E

DECING PAD D

DECING PAD E

USAF RESERVE

ELEV 1137

ELEV 1182

ELEV 1122

ELEV 1113

ANG APRON

PENNSYLVANIA ANG

10502 X 150

10775 X 150

11500 X 200

PASSENGER TERMINAL

PASSENGER TERMINAL

FIELD ELEV 1203

D-ATIS ARR 127.25
DEP 135.9
PITTSBURGH TOWER
128.3 291.7
GND CON
121.9 348.6 SOUTH
127.8 348.6 NORTH
CINC DEL
126.75 353.7
CPDIC

RWY 10C-28C
PCN 68 R/B/X/T
S-100, D-149, 2D-260
RWY 10I-28R
PCN 65 R/B/X/T
S-100, D-225, 2D-400
RWY 10R-28L
PCN 80 R/B/X/T
S-100, D-225, 2D-350
RWY 14-32
PCN 71 R/B/X/T
S-100, D-225, 2D-410

80°16'W

80°15'W

80°14'W

80°13'W

40°31'N

40°30'N

40°29'N

AIRPORT DIAGRAM

19003

PITTSBURGH, PENNSYLVANIA

PITTSBURGH INTL (PIT)

Pittsburgh, PA
Pittsburgh Intl
ICAO Identifier K PIT

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 40-29-29.1N / 80-13-57.7W
2.2.2 From City: 12 Miles NW Of Pittsburgh, PA
2.2.3 Elevation: 1202.9 ft
2.2.5 Magnetic variation: 9W (2020)
2.2.6 Airport Contact: Christina A. Cassotis
PO BOX 12370, SUITE 4000
Pittsburgh, PA 15231
((412) 472-3509)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
D certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 10L
2.10.1.b Type of obstacle: Trees (52 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 526 ft R of Centerline

2.10.1.a. Runway designation: 10R
2.10.1.b Type of obstacle: Trees (227 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 545 ft R of Centerline

2.10.1.a. Runway designation: 14
2.10.1.b Type of obstacle: Pole (24 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 510 ft L of Centerline

2.10.1.a. Runway designation: 28L
2.10.1.b Type of obstacle: Trees (156 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 360 ft L of Centerline

2.10.1.a. Runway designation: 28R
2.10.1.b Type of obstacle: Ant (107 ft above runway

end). Not Lighted or Marked
2.10.1.c Location of obstacle: 909 ft R of Centerline

2.10.1.a. Runway designation: 32
2.10.1.b Type of obstacle: Trees (37 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 540 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 10C
2.12.2 True Bearing: 92
2.12.3 Dimensions: 10775 ft x 150 ft
2.12.4 PCN: 68 R/B/X/T
2.12.5 Coordinates: 40-29-23.6989N /
80-14-52.5475W
2.12.6 Threshold elevation: 1140.2 ft
2.12.6 Touchdown zone elevation: 1141.4 ft

2.12.1 Designation: 28C
2.12.2 True Bearing: 272
2.12.3 Dimensions: 10775 ft x 150 ft
2.12.4 PCN: 68 R/B/X/T
2.12.5 Coordinates: 40-29-20.0419N /
80-12-33.1754W
2.12.6 Threshold elevation: 1136.6 ft
2.12.6 Touchdown zone elevation: 1133.5 ft

2.12.1 Designation: 14
2.12.2 True Bearing: 136
2.12.3 Dimensions: 8101 ft x 150 ft
2.12.4 PCN: 71 R/B/X/T
2.12.5 Coordinates: 40-29-45.6544N /
80-13-29.5187W
2.12.6 Threshold elevation: 1147.6 ft
2.12.6 Touchdown zone elevation: 1147.6 ft
2.12.7 Slope: 0.5 DOWN

2.12.1 Designation: 32
2.12.2 True Bearing: 316
2.12.3 Dimensions: 8101 ft x 150 ft
2.12.4 PCN: 71 R/B/X/T
2.12.5 Coordinates: 40-28-47.69N / 80-12-17.2183W
2.12.6 Threshold elevation: 1113.4 ft
2.12.6 Touchdown zone elevation: 1123.6 ft
2.12.7 Slope: 0.3 UP

2.12.1 Designation: 10L
2.12.2 True Bearing: 92
2.12.3 Dimensions: 10502 ft x 150 ft
2.12.4 PCN: 65 R/B/X/T
2.12.5 Coordinates: 40-30-08.4012N /

80-16-16.2687W

2.12.6 Threshold elevation: 1202.9 ft
2.12.6 Touchdown zone elevation: 1202.9 ft
2.12.7 Slope: 0.5 DOWN

2.12.1 Designation: 28R
2.12.2 True Bearing: 272
2.12.3 Dimensions: 10502 ft x 150 ft
2.12.4 PCN: 65 R/B/X/T
2.12.5 Coordinates: 40-30-04.8667N /
80-14-00.4048W
2.12.6 Threshold elevation: 1174.1 ft
2.12.6 Touchdown zone elevation: 1174.1 ft

2.12.1 Designation: 10R
2.12.2 True Bearing: 92
2.12.3 Dimensions: 11500 ft x 200 ft
2.12.4 PCN: 80 R/B/X/T
2.12.5 Coordinates: 40-29-12.2249N /
80-15-06.8568W
2.12.6 Threshold elevation: 1134.8 ft
2.12.6 Touchdown zone elevation: 1134.8 ft

2.12.1 Designation: 28L
2.12.2 True Bearing: 272
2.12.3 Dimensions: 11500 ft x 200 ft
2.12.4 PCN: 80 R/B/X/T
2.12.5 Coordinates: 40-29-08.3238N /
80-12-38.1249W
2.12.6 Threshold elevation: 1121.9 ft
2.12.6 Touchdown zone elevation: 1125 ft
2.12.7 Slope: 0.3 UP

2.12.1 Designation: H1
2.12.3 Dimensions: 60 ft x 60 ft

AD 2.13 Declared distances

2.13.1 Designation: 10C
2.13.2 Takeoff run available: 10775
2.13.3 Takeoff distance available: 10775
2.13.4 Accelerate-stop distance available: 10173
2.13.5 Landing distance available: 9708

2.13.1 Designation: 28C
2.13.2 Takeoff run available: 10775
2.13.3 Takeoff distance available: 10775
2.13.4 Accelerate-stop distance available: 10310
2.13.5 Landing distance available: 9708

2.13.1 Designation: 14
2.13.2 Takeoff run available: 8101

2.13.3 Takeoff distance available: 8101
2.13.4 Accelerate-stop distance available: 7366
2.13.5 Landing distance available: 7366

2.13.1 Designation: 32
2.13.2 Takeoff run available: 8101
2.13.3 Takeoff distance available: 8101
2.13.4 Accelerate-stop distance available: 7801
2.13.5 Landing distance available: 7466

2.13.1 Designation: 10L
2.13.2 Takeoff run available: 10502
2.13.3 Takeoff distance available: 10502
2.13.4 Accelerate-stop distance available: 10502
2.13.5 Landing distance available: 10502

2.13.1 Designation: 28R
2.13.2 Takeoff run available: 10502
2.13.3 Takeoff distance available: 10502
2.13.4 Accelerate-stop distance available: 10102
2.13.5 Landing distance available: 10102

2.13.1 Designation: 10R
2.13.2 Takeoff run available: 11500
2.13.3 Takeoff distance available: 11500
2.13.4 Accelerate-stop distance available: 11492
2.13.5 Landing distance available: 11492

2.13.1 Designation: 28L
2.13.2 Takeoff run available: 11500
2.13.3 Takeoff distance available: 11500
2.13.4 Accelerate-stop distance available: 11500
2.13.5 Landing distance available: 11500

AD 2.14 Approach and runway lighting

2.14.1 Designation: 10C
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 28C
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 14
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 32
2.14.2 Approach lighting system: MALS
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 10L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.10 Remarks: ALSF2/SSALR Is A Dual Mode System & Controlled By ATCt & Remote Monitored.

2.14.1 Designation: 28R

2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 10R

2.14.2 Approach lighting system: ALSF2

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 28L

2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ANG OPS

2.18.3 Service designation: 311 MHz

2.18.1 Service designation: APCH/P (181-270)

2.18.3 Service designation: 133.7 MHz

2.18.1 Service designation: APCH/P (270-089)

2.18.3 Service designation: 279.625 MHz

2.18.1 Service designation: APCH/P (001-090)

2.18.3 Service designation: 124.15 MHz

2.18.1 Service designation: APCH/P (090-269)

2.18.3 Service designation: 360.8 MHz

2.18.1 Service designation: APCH/P (271-360)

2.18.3 Service designation: 121.25 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 336.2 MHz

2.18.1 Service designation: APCH/P IC (091-180)

2.18.3 Service designation: 123.95 MHz

2.18.1 Service designation: CD/P

2.18.3 Service designation: 353.7 MHz

2.18.1 Service designation: CD/P PRE TAXI CLNC

2.18.3 Service designation: 126.75 MHz

2.18.1 Service designation: CLASS B (181-270)

2.18.3 Service designation: 133.7 MHz

2.18.1 Service designation: CLASS B (001-090)

2.18.3 Service designation: 124.15 MHz

2.18.1 Service designation: CLASS B (091-180)

2.18.3 Service designation: 123.95 MHz

2.18.1 Service designation: CLASS B (271-360)

2.18.3 Service designation: 121.25 MHz

2.18.1 Service designation: CLASS B (090-269)

2.18.3 Service designation: 360.8 MHz

2.18.1 Service designation: CLASS B (270-089)

2.18.3 Service designation: 279.625 MHz

2.18.1 Service designation: COMD POST

2.18.3 Service designation: 252.1 MHz

2.18.1 Service designation: D-ATIS (DEP)

2.18.3 Service designation: 135.9 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS (ARR)

2.18.3 Service designation: 127.25 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: DEP/P (NORTH)

2.18.3 Service designation: 338.2 MHz

2.18.1 Service designation: DEP/P (090-269)

2.18.3 Service designation: 285.575 MHz

2.18.1 Service designation: DEP/P (SOUTH)

2.18.3 Service designation: 119.35 MHz

2.18.1 Service designation: DEP/P (NORTH)

2.18.3 Service designation: 124.75 MHz

2.18.1 Service designation: DEP/S

2.18.3 Service designation: 125.275 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: GND/P (SOUTH)

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P (NORTH)

2.18.3 Service designation: 127.8 MHz

80-15-18.8824W

2.19.6 Site elevation: 1144.8 ft

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 128.3 MHz

2.19.1 ILS type: Localizer for runway 28L. Magnetic variation: 9W

2.19.2 ILS identification: PFS

2.18.1 Service designation: LCL/P

2.19.5 Coordinates: 40-29-12.6437N / 80-15-23.0275W

2.18.3 Service designation: 291.7 MHz

2.19.6 Site elevation: 1141.2 ft

2.18.1 Service designation: OPS

2.18.3 Service designation: 36.35 MHz

2.19.1 ILS type: Glide Slope for runway 28L. Magnetic variation: 9W

2.19.2 ILS identification: PFS

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 10L. Magnetic variation: 9W

2.19.5 Coordinates: 40-29-04.7301N / 80-12-51.2688W

2.19.2 ILS identification: LXB

2.19.6 Site elevation: 1120.3 ft

2.19.5 Coordinates: 40-30-11.9236N / 80-15-59.9044W

2.19.6 Site elevation: 1195 ft

2.19.1 ILS type: Glide Slope for runway 28R. Magnetic variation: 9W

2.19.2 ILS identification: HFE

2.19.1 ILS type: Inner Marker for runway 10L. Magnetic variation: 9W

2.19.5 Coordinates: 40-30-08.7192N / 80-14-14.6252W

2.19.2 ILS identification: LXB

2.19.6 Site elevation: 1170.6 ft

2.19.5 Coordinates: 40-30-08.7927N / 80-16-27.004W

2.19.6 Site elevation: 1175.5 ft

2.19.1 ILS type: Localizer for runway 28R. Magnetic variation: 9W

2.19.2 ILS identification: HFE

2.19.1 ILS type: Localizer for runway 10L. Magnetic variation: 9W

2.19.5 Coordinates: 40-30-08.7888N / 80-16-31.3335W

2.19.2 ILS identification: LXB

2.19.6 Site elevation: 1214.2 ft

2.19.5 Coordinates: 40-30-04.5231N / 80-13-47.1428W

2.19.6 Site elevation: 1160.8 ft

2.19.1 ILS type: DME for runway 32. Magnetic variation: 9W

2.19.2 ILS identification: TQW

2.19.1 ILS type: Glide Slope for runway 10R. Magnetic variation: 9W

2.19.5 Coordinates: 40-29-48.847N / 80-13-37.583W

2.19.2 ILS identification: GUT

2.19.6 Site elevation: 1134 ft

2.19.5 Coordinates: 40-29-15.3464N / 80-14-53.775W

2.19.6 Site elevation: 1129.2 ft

2.19.1 ILS type: Localizer for runway 32. Magnetic variation: 9W

2.19.2 ILS identification: TQW

2.19.1 ILS type: Localizer for runway 10R. Magnetic variation: 9W

2.19.5 Coordinates: 40-29-50.4118N / 80-13-35.4629W

2.19.2 ILS identification: GUT

2.19.6 Site elevation: 1139.1 ft

2.19.5 Coordinates: 40-29-08.2188N / 80-12-34.1165W

2.19.6 Site elevation: 1116.6 ft

2.19.1 ILS type: Glide Slope for runway 32. Magnetic variation: 9W

2.19.2 ILS identification: TQW

2.19.1 ILS type: Inner Marker for runway 10R. Magnetic variation: 9W

2.19.5 Coordinates: 40-28-52.663N / 80-12-29.1403W

2.19.2 ILS identification: GUT

2.19.6 Site elevation: 1112.2 ft

2.19.5 Coordinates: 40-29-12.5381N /

General Remarks:

DEER & BIRDS ON & INVOF ARPT.

ALL JETS DEPARTING RY 28R MUST BE ALIGNED WI RY PRIOR TO APPLYING TKOF POWER.

ACFT USING TWY 'N' PROHIBITED TO STOP ON OVERPASS AREA DUE TO POSSIBLE EMERGENCY EVACUATION HAZARD.

ANG ACFT MUST CTC TANKER 303.0/FTR OPNS 293.7 BEFORE CROSSING RWY 28L TO OBTAIN CLNC TO ENTER.

TERML TAXILANES E OF CONCOURSES A & B RESTRD TO GROUP 3 ACFT & SMALLER.

ATCT IS AUTHORIZED TO HAVE ACFT LINE-UP & WAIT ON RYS 28L AT TWY 'P' DURG HRS OF DARKNESS. THE SPECIFIC RY SHALL BE USED ONLY FOR DEPARTURES & THE INTXN MUST BE VSB FM ATCT.

SERVICE-JASU: (ANG) (A/M32A-86) (AM 32-95; (AFRC - 2(A/M32-86 (AM32-95).

SERVICE-FLUID: LPOX LHNIT.

SERVICE-OIL: O-156.

SERVICE-TRAN ALERT: NO PRIORITY BASIS.

ANG: OPR 1130-2030Z++MON-FRI EXCP HOL. (CLSD EV OTH MON.)

TWY G INTXN AT RY 10L/28R RIGHT TURN NA.

FUEL: A++ PROVIDED BY ANG AND AFRC.(MIL).

ASSC IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

PPR/OFFL BUS MIN 48 HR CTC AFLD MGMT DSN 277 8163, C412 474 8163. NO TRAN SVC. AFLD MGT NML DUTY HRS 1230 0400++MON FRI, EXC HOL. UNIT TRAINING ASSEMBLY 1300 2100Z++SAT SUN. TRAN ACFT MUST HAVE APPVL OF 911OG/CC FOR PPR DUR OFF DUTY HR. NO SVC AVBL FOR SPACE AVBL PAX DUR OFF DUTY HR. CALL PITT COMD POST (IRON CITY) BY RDO PRIOR TO ENTRY TO AFRC RAMP. NON STD RAMP MARKINGS DUE TO CONSTR. ALFD MGMT DOES NOT ISSUE OR STOR COMSEC. COMSEC STOR CTC COMD POST DSN 277 8146.

TWY AA NO TURN-OFF ONTO TWY A FOR ACFT WINGSPAN 171 FT OR GREATER EXC PPR (412) 472-5630.

TERMINAL APRON CONTROL FREQS ARE 130.77 FOR NORTH APRON; 131.37 FOR SOUTH APRON.

15064

AIRPORT DIAGRAM

EUGENIO MARIA DE HOSTOS (MAZ)(TJMZ)
AL-5328 (FAA) MAYAGUEZ, PUERTO RICO

CTAF/UNICOM
122.8

18°16.0'N

18°15.5'N

18°15.0'N

67°09.0'W

67°08.5'W

The diagram shows the airport layout with the following details:

- Runway 09-27:** A thick black line running from the bottom-left to the top-right. The left end is labeled "ELEV 15" and "089.1°". The right end is labeled "ELEV 23" and "269.1°".
- Runway 09-27 Dimensions:** "4998 X 100" is written along the runway.
- Taxiway 99:** A grey line branching off the runway, labeled "99" with a triangle symbol.
- Field Elevation:** A box labeled "FIELD ELEV 28" points to a specific location on the taxiway.
- Navigation Aids:** A star symbol is located near the bottom-left end of the runway. A compass rose is located in the upper right quadrant, showing a magnetic variation of "13.5° W" and a note: "JANUARY 2015 ANNUAL RATE OF CHANGE 0.1° W".
- Other Labels:** "RWY 09-27 S-85, D-108, 2D-170" is located in the bottom-left corner.

15064

AIRPORT DIAGRAM

EUGENIO MARIA DE HOSTOS (MAZ)(TJMZ)
MAYAGUEZ, PUERTO RICO

Mayaguez, PR
Eugenio Maria De Hostos
ICAO Identifier TJMZ

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 18-15-20.5N / 67-08-54.5W

2.2.2 From City: 3 Miles N Of Mayaguez, PR

2.2.3 Elevation: 27.7 ft

2.2.5 Magnetic variation: 10W (1985)

2.2.6 Airport Contact: Edgar Sierra

BOX 710

Mayaguez, PR 709

(787-832-3390)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, MON-FRI Days, 0730-1600
Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: No

2.4.2 Fuel types: None

2.4.5 Hangar space: No

2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: None

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 09

General Remarks:

1200' TWR /1207' MSL/ 9 NM NNW.

BIRDS ON AND INVOF ARPT.

2.10.1.b Type of obstacle: Tree (57 ft above runway end).

Not Lighted or Marked

2.10.1.c Location of obstacle: 80 ft L of Centerline

2.10.1.a. Runway designation: 27

2.10.1.b Type of obstacle: Trees (40 ft above runway end).

Not Lighted or Marked

2.10.1.c Location of obstacle: 150 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 09

2.12.2 True Bearing: 76

2.12.3 Dimensions: 4998 ft x 100 ft

2.12.5 Coordinates: 18-15-14.6817N / 67-09-19.728W

2.12.6 Threshold elevation: 15.3 ft

2.12.6 Touchdown zone elevation: 27.6 ft

2.12.1 Designation: 27

2.12.2 True Bearing: 256

2.12.3 Dimensions: 4998 ft x 100 ft

2.12.5 Coordinates: 18-15-26.2517N / 67-08-29.2981W

2.12.6 Threshold elevation: 23.2 ft

2.12.6 Touchdown zone elevation: 27.7 ft

AD 2.14 Approach and runway lighting

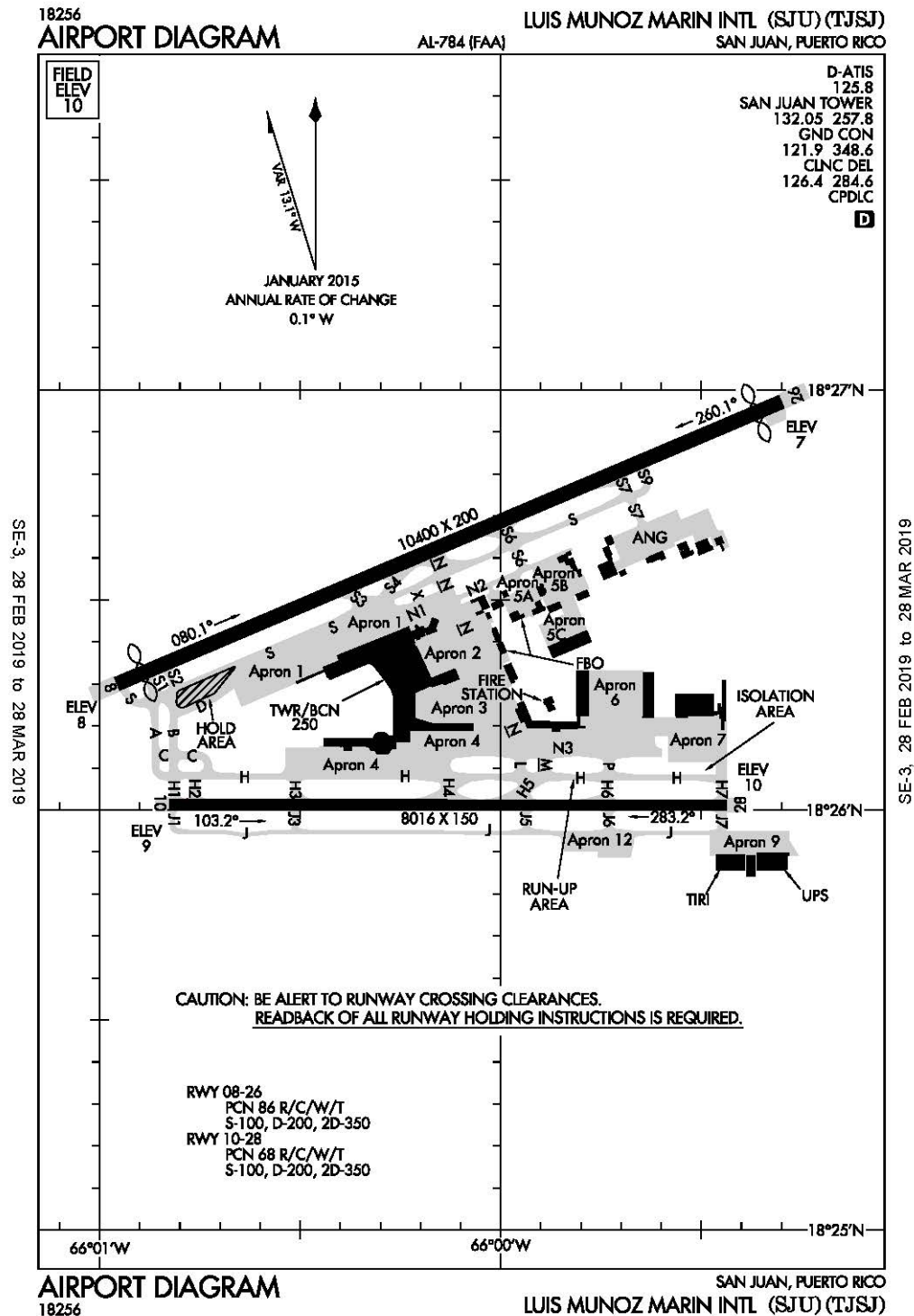
2.14.1 Designation: 09

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 27

2.14.4 Visual approach slope indicator system: P4L

San Juan, Puerto Rico
Luis Munoz Marin International
ICAO Identifier TJSJ



San Juan, PR
Luis Munoz Marin Intl
ICAO Identifier TJSJ

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 18-26-21.8352N /
66-00-07.6853W
2.2.2 From City: 3 Miles SE Of San Juan, PR
2.2.3 Elevation: 9.7 ft
2.2.5 Magnetic variation: 11W (1985)
2.2.6 Airport Contact: Mr. Agustin Arellano
P. O. BOX 38085
San Juan, PR 937
((787) 289-7240)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: 100,115,A+,A++
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
D certified on 5/1/2005

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 08
2.10.1.b Type of obstacle: Tree (59 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 300 ft R of Centerline

2.10.1.a. Runway designation: 10
2.10.1.b Type of obstacle: Tree (50 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 300 ft L of Centerline

2.10.1.a. Runway designation: 26
2.10.1.b Type of obstacle: Tree (72 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 800 ft R of Centerline

2.10.1.a. Runway designation: 28
2.10.1.b Type of obstacle: Trees (24 ft above runway
end). Not Lighted or Marked

AD 2.12 Runway physical characteristics

2.12.1 Designation: 08
2.12.2 True Bearing: 67
2.12.3 Dimensions: 10400 ft x 200 ft
2.12.4 PCN: 86 R/C/W/T
2.12.5 Coordinates: 18-26-17.9668N /
66-00-57.3182W
2.12.6 Threshold elevation: 8.3 ft
2.12.6 Touchdown zone elevation: 9.2 ft

2.12.1 Designation: 26
2.12.2 True Bearing: 247
2.12.3 Dimensions: 10400 ft x 200 ft
2.12.4 PCN: 86 R/C/W/T
2.12.5 Coordinates: 18-26-58.2705N /
65-59-17.8865W
2.12.6 Threshold elevation: 6.5 ft
2.12.6 Touchdown zone elevation: 7.3 ft

2.12.1 Designation: 10
2.12.2 True Bearing: 90
2.12.3 Dimensions: 8016 ft x 150 ft
2.12.4 PCN: 68 R/C/W/T
2.12.5 Coordinates: 18-26-00.8087N /
66-00-49.4223W
2.12.6 Threshold elevation: 9.3 ft
2.12.6 Touchdown zone elevation: 9.5 ft

2.12.1 Designation: 28
2.12.2 True Bearing: 270
2.12.3 Dimensions: 8016 ft x 150 ft
2.12.4 PCN: 68 R/C/W/T
2.12.5 Coordinates: 18-26-00.6093N /
65-59-26.1635W
2.12.6 Threshold elevation: 9.5 ft
2.12.6 Touchdown zone elevation: 9.7 ft

AD 2.13 Declared distances

2.13.1 Designation: 08
2.13.2 Takeoff run available: 9784

2.13.3 Takeoff distance available: 10400
2.13.4 Accelerate-stop distance available: 9784
2.13.5 Landing distance available: 9384

2.13.1 Designation: 26
2.13.2 Takeoff run available: 8128
2.13.3 Takeoff distance available: 10400
2.13.4 Accelerate-stop distance available: 9600
2.13.5 Landing distance available: 9600

2.13.1 Designation: 10
2.13.2 Takeoff run available: 8016
2.13.3 Takeoff distance available: 8016
2.13.4 Accelerate-stop distance available: 8016
2.13.5 Landing distance available: 8016

2.13.1 Designation: 28
2.13.2 Takeoff run available: 8016
2.13.3 Takeoff distance available: 8016
2.13.4 Accelerate-stop distance available: 8016
2.13.5 Landing distance available: 8016

AD 2.14 Approach and runway lighting

2.14.1 Designation: 08
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 26
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 10
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 28
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P DEP/P (WEST & SW)

2.18.3 Service designation: 119.4 MHz

2.18.1 Service designation: APCH/P DEP/P (NORTH & EAST)

2.18.3 Service designation: 120.9 MHz

2.18.1 Service designation: APCH/P DEP/P (WEST & SW)

2.18.3 Service designation: 269.2 MHz

2.18.1 Service designation: APCH/P DEP/P (NORTH & EAST)

2.18.3 Service designation: 290.2 MHz

2.18.1 Service designation: CD/P

2.18.3 Service designation: 284.6 MHz

2.18.1 Service designation: CD/P PRE TAXI CLNC

2.18.3 Service designation: 126.4 MHz

2.18.1 Service designation: CLASS C (WEST & SW)

2.18.3 Service designation: 269.2 MHz

2.18.1 Service designation: CLASS C (NORTH & EAST)

2.18.3 Service designation: 290.2 MHz

2.18.1 Service designation: CLASS C (WEST & SW)

2.18.3 Service designation: 119.4 MHz

2.18.1 Service designation: CLASS C (NORTH & EAST)

2.18.3 Service designation: 120.9 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 125.8 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 132.05 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 08. Magnetic variation: 11W

2.19.2 ILS identification: SJU

2.19.5 Coordinates: 18-26-27.0376N / 66-00-45.5794W

2.19.6 Site elevation: 4 ft

2.19.1 ILS type: Outer Marker for runway 08. Magnetic variation: 11W

2.19.2 ILS identification: SJU

2.19.5 Coordinates: 18-24-31.8154N / 66-05-21.834W

2.19.6 Site elevation: 67.1 ft

2.19.1 ILS type: Localizer for runway 08. Magnetic variation: 11W

2.19.2 ILS identification: SJU

2.19.5 Coordinates: 18-26-59.78N / 65-59-14.14W

2.19.6 Site elevation: 5.9 ft

2.19.1 ILS type: DME for runway 10. Magnetic variation: 11W

2.19.2 ILS identification: CLA

2.19.5 Coordinates: 18-26-02.56N / 65-59-15.7W

2.19.6 Site elevation: 6.1 ft

2.19.1 ILS type: Glide Slope for runway 10. Magnetic variation: 11W

2.19.2 ILS identification: CLA

2.19.5 Coordinates: 18-25-57.5613N / 66-00-39.0513W

2.19.6 Site elevation: 4.4 ft

2.19.1 ILS type: Localizer for runway 10. Magnetic variation: 11W

2.19.2 ILS identification: CLA

2.19.5 Coordinates: 18-26-00.5884N / 65-59-15.5261W

2.19.6 Site elevation: 9 ft

General Remarks:

APRON 12 AVBL FOR GA ACFT ONLY.

BASE OPS 1130-2000Z MON-FRI, CLSD WKEND AND HOL.

TWY J BTN J1 AND J5 (NOT INCLUDING J5) CLSD TO ACFT WITH GREATER THAN 118 FT WINGSPAN.

TWY S BTN TWY S2 AND TWY S5 CLSD LGTD AND BARRICADED.

ENGINE RUNUPS PROHIBITED ON GATES AREA.

ACFT 180 TURNS ON TWYS REQUIRES OPS COORDINATIONS.

FBO/GROUND HANDLER MUST SUBMIT 72 HRS PPR FOR ALL MIL ACFT TO: CCO@AEROSTARAIRPORTS.-COM OR BY PHONE TO: 787-253-0979

ALL PVT AND CORPORATE AIRCRAFT MUST CONTACT ARPT OPS, BEFORE ARRIVAL, FOR FBOS & GROUND HANDLING INFO AT 787-253-0979.

TWY N IS UNDER CONSTRUCTION. PLEASE, CONTACT ARPT OPS AT 787-253-0979 FOR FURTHER DETAILS AND RESTRICTIONS.

MILITARY: ANG: INBD ACFT ORIGINATING FR OCONUS WITH A PPR FOR MUNIZ ANGB APN MUST CLEAR CUSTOMS AND BORDER PROTECTION AT CIV SIDE. PRIOR COORD MUST BE MADE WITH ANG AMOPS, FONE 740-9629 AT LEAST ONE BUS DAY PRIOR TO ARRIVAL.

MILITARY: ANG: CAUTION – UNLGTD ROLLING GATE AT ENTRANCE OF MUNIZ ANGB APN; GATE MUST BE FULLY EXTDD PRIOR TO ACFT TRSN INTO ANG APN.

[illegible]

Memphis, TN
Memphis Intl
ICAO Identifier KMEM

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 35-02-32.7N / 89-58-36W
2.2.2 From City: 3 Miles S Of Memphis, TN
2.2.3 Elevation: 340.9 ft
2.2.5 Magnetic variation: 1W (2020)
2.2.6 Airport Contact: Scott A Brockman
2491 WINCHESTER RD.
Memphis, TN 38116
(901-922-8000)

AD 2.3 Attendance Schedule

2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A++,A,100LL,A+
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/21/1973
2.6.4 Remarks: Index D ARFF Equipment Available 24
Hours Per Day, 7 Days Per Week.

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 09
2.10.1.b Type of obstacle: Pole (27 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 611 ft L of Centerline

2.10.1.a. Runway designation: 18C
2.10.1.b Type of obstacle: Pole (64 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 802 ft R of Centerline

2.10.1.a. Runway designation: 27
2.10.1.b Type of obstacle: Pole (51 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 669 ft R of Centerline

2.10.1.a. Runway designation: 36C
2.10.1.b Type of obstacle: Tree (35 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 753 ft L of Centerline

2.10.1.a. Runway designation: 36L
2.10.1.b Type of obstacle: Road (24 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 622 ft R of Centerline

2.10.1.a. Runway designation: 36R
2.10.1.b Type of obstacle: Trees (71 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 686 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 18L
2.12.2 True Bearing: 179
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 82 R/C/W/T
2.12.5 Coordinates: 35-02-55.7386N /
89-58-22.6251W
2.12.6 Threshold elevation: 277.5 ft
2.12.6 Touchdown zone elevation: 300.9 ft

2.12.1 Designation: 36R
2.12.2 True Bearing: 359
2.12.3 Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 82 R/C/W/T
2.12.5 Coordinates: 35-01-26.7372N /
89-58-20.7538W
2.12.6 Threshold elevation: 334.7 ft
2.12.6 Touchdown zone elevation: 334.7 ft

2.12.1 Designation: 18R
2.12.2 True Bearing: 179
2.12.3 Dimensions: 9320 ft x 150 ft
2.12.4 PCN: 82 R/C/W/T
2.12.5 Coordinates: 35-02-58.1603N /
89-59-14.7937W
2.12.6 Threshold elevation: 288.4 ft
2.12.6 Touchdown zone elevation: 294.7 ft

2.12.1 Designation: 36L
2.12.2 True Bearing: 359
2.12.3 Dimensions: 9320 ft x 150 ft
2.12.4 PCN: 82 R/C/W/T
2.12.5 Coordinates: 35-01-25.9845N /
89-59-12.8137W
2.12.6 Threshold elevation: 320.8 ft
2.12.6 Touchdown zone elevation: 320.8 ft

2.12.1 Designation: 18C
2.12.2 True Bearing: 179
2.12.3 Dimensions: 11120 ft x 150 ft
2.12.4 PCN: 82 R/C/W/T

2.12.5 Coordinates: 35-03-16.5393N /
89-58-34.2145W
2.12.6 Threshold elevation: 270.6 ft
2.12.6 Touchdown zone elevation: 290.1 ft

2.12.1 Designation: 36C
2.12.2 True Bearing: 359
2.12.3 Dimensions: 11120 ft x 150 ft
2.12.4 PCN: 82 R/C/W/T
2.12.5 Coordinates: 35-01-26.5805N /
89-58-31.8952W
2.12.6 Threshold elevation: 340.9 ft
2.12.6 Touchdown zone elevation: 340.9 ft

2.12.1 Designation: 09
2.12.2 True Bearing: 92
2.12.3 Dimensions: 8946 ft x 150 ft
2.12.4 PCN: 92 R/B/W/T
2.12.5 Coordinates: 35-03-31.0441N /
89-59-08.6301W
2.12.6 Threshold elevation: 253.2 ft
2.12.6 Touchdown zone elevation: 258.7 ft
2.12.7 Slope: 0.1 UP

2.12.1 Designation: 27
2.12.2 True Bearing: 272
2.12.3 Dimensions: 8946 ft x 150 ft
2.12.4 PCN: 92 R/B/W/T
2.12.5 Coordinates: 35-03-28.0125N /
89-57-21.0834W
2.12.6 Threshold elevation: 292 ft
2.12.6 Touchdown zone elevation: 292 ft
2.12.7 Slope: 0.6 DOWN

AD 2.13 Declared distances

2.13.1 Designation: 18L
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 9000

2.13.1 Designation: 36R
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 9000

2.13.1 Designation: 18R
2.13.2 Takeoff run available: 9320
2.13.3 Takeoff distance available: 9320
2.13.4 Accelerate-stop distance available: 9320

2.13.5 Landing distance available: 9320

2.13.1 Designation: 36L
2.13.2 Takeoff run available: 9320
2.13.3 Takeoff distance available: 9320
2.13.4 Accelerate-stop distance available: 9320
2.13.5 Landing distance available: 9320

2.13.1 Designation: 18C
2.13.2 Takeoff run available: 11120
2.13.3 Takeoff distance available: 11120
2.13.4 Accelerate-stop distance available: 11120
2.13.5 Landing distance available: 11120

2.13.1 Designation: 36C
2.13.2 Takeoff run available: 11120
2.13.3 Takeoff distance available: 11120
2.13.4 Accelerate-stop distance available: 10715
2.13.5 Landing distance available: 10715

2.13.1 Designation: 09
2.13.2 Takeoff run available: 8946
2.13.3 Takeoff distance available: 8946
2.13.4 Accelerate-stop distance available: 8946
2.13.5 Landing distance available: 8946

2.13.1 Designation: 27
2.13.2 Takeoff run available: 8946
2.13.3 Takeoff distance available: 8946
2.13.4 Accelerate-stop distance available: 8946
2.13.5 Landing distance available: 8946

AD 2.14 Approach and runway lighting

2.14.1 Designation: 18L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 36R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R
2.14.10 Remarks: ALSF2 Unmonitored.

2.14.1 Designation: 18R
2.14.2 Approach lighting system: MALSR

2.14.1 Designation: 36L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 18C
2.14.2 Approach lighting system: MALSR

2.14.1 Designation: 36C
2.14.2 Approach lighting system: ALSF2

2.14.1 Designation: 09
2.14.2 Approach lighting system: MALSR

2.14.1 Designation: 27
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ANG COMD POST
2.18.3 Service designation: 353.45 MHz

2.18.1 Service designation: ANG COMD POST
2.18.3 Service designation: 138.1 MHz

2.18.1 Service designation: CD/P PRE TAXI CLNC
2.18.3 Service designation: 125.2 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 127.75 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P (RY 09/27)
2.18.3 Service designation: 121 MHz

2.18.1 Service designation: GND/P (RY 18R/36L)
2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: GND/P (RYS 18L/36R,
18C/36C)
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 379.2 MHz

2.18.1 Service designation: LCL/P (RY 18R/36L)
2.18.3 Service designation: 128.425 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: LCL/P (RY 09/27)
2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: LCL/P (RYS 18C/36C,
18L/36R)
2.18.3 Service designation: 119.7 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 09. Magnetic
variation: 1W

2.19.2 ILS identification: MEM

2.19.5 Coordinates: 35–03–27.2053N / 89–58–56.216W

2.19.6 Site elevation: 252.6 ft

2.19.1 ILS type: Localizer for runway 09. Magnetic vari-
ation: 1W

2.19.2 ILS identification: MEM

2.19.5 Coordinates: 35–03–27.6388N / 89–57–07.949W

2.19.6 Site elevation: 296.7 ft

2.19.1 ILS type: Glide Slope for runway 18C. Magnetic
variation: 1W

2.19.2 ILS identification: SDU

2.19.5 Coordinates: 35–03–07.5915N /

89–58–37.5136W

2.19.6 Site elevation: 273.1 ft

2.19.1 ILS type: Localizer for runway 18C. Magnetic
variation: 1W

2.19.2 ILS identification: SDU

2.19.5 Coordinates: 35–01–10.2341N / 89–58–31.562W

2.19.6 Site elevation: 345.5 ft

2.19.1 ILS type: Localizer for runway 18L. Magnetic
variation: 1W

2.19.2 ILS identification: EXS

2.19.5 Coordinates: 35–01–16.71N / 89–58–20.53W

2.19.6 Site elevation: 315.1 ft

2.19.1 ILS type: DME for runway 18L. Magnetic varia-
tion: 1W

2.19.2 ILS identification: EXS

2.19.5 Coordinates: 35–01–16.8648N /

89–58–19.2966W

2.19.6 Site elevation: 382.3 ft

2.19.1 ILS type: Glide Slope for runway 18L. Magnetic
variation: 1W

2.19.2 ILS identification: EXS

2.19.5 Coordinates: 35–02–46.7729N /

89–58–17.6268W

2.19.6 Site elevation: 278.6 ft

2.19.1 ILS type: Localizer for runway 18R. Magnetic

variation: 1W

2.19.2 ILS identification: OOI

2.19.5 Coordinates: 35-01-17.37N / 89-59-12.63W

2.19.6 Site elevation: 320 ft

2.19.1 ILS type: Glide Slope for runway 18R. Magnetic variation: 1W

2.19.2 ILS identification: OOI

2.19.5 Coordinates: 35-02-48.6978N /
89-59-18.4946W

2.19.6 Site elevation: 285.4 ft

2.19.1 ILS type: Localizer for runway 27. Magnetic variation: 1W

2.19.2 ILS identification: JIM

2.19.5 Coordinates: 35-03-31.39N / 89-59-20.72W

2.19.6 Site elevation: 251.1 ft

2.19.1 ILS type: Glide Slope for runway 27. Magnetic variation: 1W

2.19.2 ILS identification: JIM

2.19.5 Coordinates: 35-03-24.4784N /
89-57-36.2484W

2.19.6 Site elevation: 277.3 ft

2.19.1 ILS type: Glide Slope for runway 36C. Magnetic variation: 1W

2.19.2 ILS identification: TSE

2.19.5 Coordinates: 35-01-38.0839N /
89-58-36.9431W

2.19.6 Site elevation: 329.5 ft

2.19.1 ILS type: Localizer for runway 36C. Magnetic variation: 1W

2.19.2 ILS identification: TSE

2.19.5 Coordinates: 35-03-22.5012N /
89-58-34.3403W

2.19.6 Site elevation: 261.3 ft

2.19.1 ILS type: DME for runway 36C. Magnetic variation: 1W

2.19.2 ILS identification: TSE

2.19.5 Coordinates: 35-03-22.23N / 89-58-37.26W

2.19.6 Site elevation: 253 ft

2.19.1 ILS type: DME for runway 36L. Magnetic variation: 1W

2.19.2 ILS identification: OHN

2.19.5 Coordinates: 35-03-06.8584N /
89-59-17.3278W

2.19.6 Site elevation: 275.9 ft

2.19.1 ILS type: Glide Slope for runway 36L. Magnetic variation: 1W

2.19.2 ILS identification: OHN

2.19.5 Coordinates: 35-01-38.7739N / 89-59-17.897W

2.19.6 Site elevation: 307.2 ft

2.19.1 ILS type: Localizer for runway 36L. Magnetic variation: 1W

2.19.2 ILS identification: OHN

2.19.5 Coordinates: 35-03-08.62N / 89-59-15.01W

2.19.6 Site elevation: 275.9 ft

2.19.1 ILS type: DME for runway 36R. Magnetic variation: 1W

2.19.2 ILS identification: MYO

2.19.5 Coordinates: 35-03-05.9088N /
89-58-19.6745W

2.19.6 Site elevation: 281.1 ft

2.19.1 ILS type: Localizer for runway 36R. Magnetic variation: 1W

2.19.2 ILS identification: MYO

2.19.5 Coordinates: 35-03-06.1498N /
89-58-22.8441W

2.19.6 Site elevation: 278.9 ft

2.19.1 ILS type: Glide Slope for runway 36R. Magnetic variation: 1W

2.19.2 ILS identification: MYO

2.19.5 Coordinates: 35-01-37.9897N /
89-58-16.1779W

2.19.6 Site elevation: 324.4 ft

General Remarks:

ALL TRANSIENT ACFT RQR -FOLLOW ME- ASSIST ENTERING ANG RAMP. USE OF ANG RAMP RQRS PPR V966-8131 -FOR OFFICIAL BUSINESS ONLY-.

HELICOPTER OPERATIONS PROHIBITED TO/FROM TERMINAL BUILDING.

LARGE FLOCKS OF BIRDS INVOF ARPT.

TWY N NORTH OF TWY V, TWY C NORTH OF TWY V AND TWY S NORTH OF TWY V DESIGNATED AS

NON-MOVEMENT AREAS.

LARGE & HEAVY EASTBOUND ACFT ON TWY V FOR RY 27 HOLD SHORT AT MINIMUM THRUST AREA SIGN.

PPR FOR TAXI CLNC ON TWY 'N' NORTH OF TWY 'V', TWY 'S' NORTH TWY 'V', AND TWY 'C' NORTH OF TWY 'V' CTC FEDEX RAMP ATCT ON FREQ 131.5.

IF POSSIBLE ALL ACFT CONDUCT GROUND OPNS WITH TRANSPONDERS ON.

TWY V BETWEEN SPOT 7W AND AER 27 RESTRICTED TO ACFT WITH WINGSPANS OF 171 FT 6 INCHES OR LESS.

TWY V BTN TWY S TWY Y RESTRICTED TO ACFT WITH TAIL HEIGHTS LESS THAN 65 FT 10 INCHES.

ANG-PPR DSN 726-7131/7505, C901-291-7131/7505. OPER 1245-2215Z MON - FRI AND CLSD ALT MON & HOL DUE TO ALTERNATE WORK SKED. TSNT ACFT MAINT NOT AVBL. REFUEL SVC FOR OTR THAN C17 ACFT RQR QUALIFIED CREW CHIEF OR CREWMEMBERS. NON-C17 ACFT SUPPORT PRVDD BY CONTRACT FBO ON FLD. SECURITY AVBL 24 HRS, DSN 726-7101, C901-291-7101.

COMD POST DSN 726-7148/7311/7312, C901-291-7148/7311/7312. OPR 1230-0430Z++ MON-FRI, CLSD ALTN MON AND HOL DUE TO ALTN WORK SCHED.

AFLD MGR DOES NOT ISSUE OR STORE COMSEC FOR TRAN CRES. TMPRY STOR OF CLASSIFIED MATERIALS UP TO TOP SECRET AT COMD POST.

CTC RAMP CONTROL ON 121.8 FOR ENTRY ON TO ANG RAMP. ANG FREQS 138.95 353.45. AFTER HRS CTC COMMAND POST AT DSN 726-7148, C901-291-7311/7312 OR SECURITY FORCES AT DSN 726-7101, C901-291-7101/7133.

READ BACK ALL HOLD SHORT INSTRUCTIONS REQUIRED.

ACFT WITH WINGSPANS GREATER THAN 171 FT 6" RSTD FM TAXI ON TWY 'N' BTWN TWY 'M7' & TWY 'T'.

BASH PHASE II MAR-APR AND OCT-NOV; CURRENT BIRD WATCH COND ARE NOT RPT ON ATIS.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

PPR FOR TAXI CLNC FROM NORTH AND SOUTH CARGO RAMP PRKG ON FREQ 121.9.

COMMUNICATIONS-ANG COMD POST: RADIO CALL- "GRACELAND OPS".

TWY P1 IS DESIGNATED AS A NON-MOVEMENT AREA.

NOISE ABATEMENT PROCEDURES IN EFFECT. SUCCESSIVE AND/OR SIMULTANEOUS DEPARTURES APPROVED ON RY 36L-18R AND RY 36C-18C OR RY 36L-18R AND RY 36R-18L WITH COURSE DIVERGENCE NO LATER THAN 2.27 NM FROM RY END.

ANG: PPR 24 HR PN RQR, LTD TO OFFL BUS ONLY.

AIRCRAFT WITH WINGSPANS GREATER THAN 118 FEET RESTRICTED FROM TAXIING ON TWY J NORTH OF TWY C3.

ANG-ATIS INFO REPORTS BIRD ACT H24 IN AREA

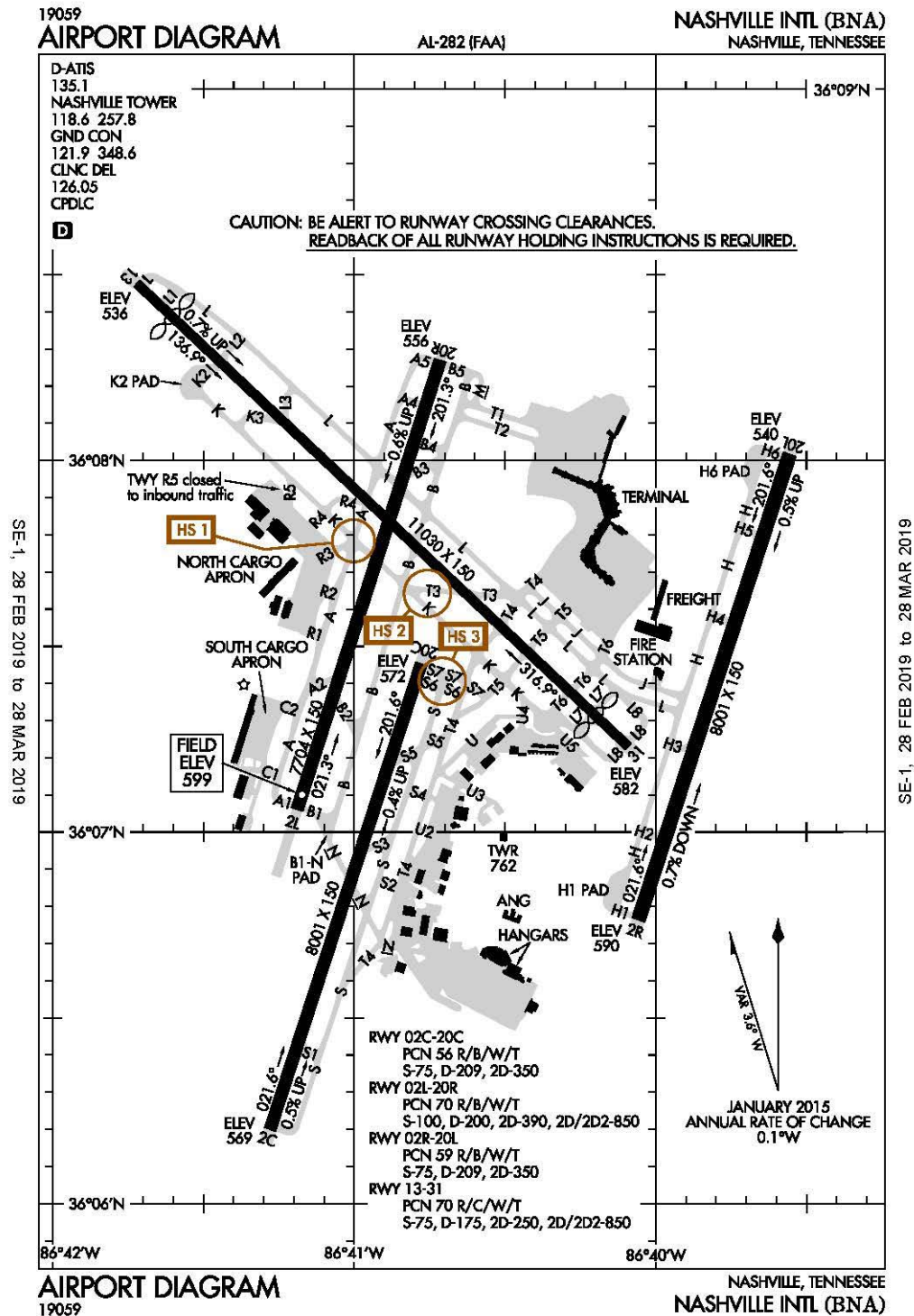
TWY N BTN APCH END RWY 09 AND TXL N CLSD TO ACFT WINGSPAN MORE THAN 171 FT INDEFLY.

TWY P2 IS A NON-MOVMT AREA INDEFLY.

TWY P1 BTN TWY T AND TRML RAMP CLSD INDEFLY.

TWY P2 BTN TWY T AND TRML RAMP CLSD INDEFLY.

Nashville, Tennessee
Nashville International
ICAO Identifier KBNA



Nashville, TN
Nashville Intl
ICAO Identifier KBNA

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 36–07–28.1N / 86–40–41.4W
2.2.2 From City: 5 Miles SE Of NASHville, TN
2.2.3 Elevation: 599 ft
2.2.5 Magnetic variation: 3W (2010)
2.2.6 Airport Contact: Doug Kreulen
ONE TERMINAL DR. SUITE 501
Nashville, TN 37214 (615–275–1703)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 13
2.10.1.b Type of obstacle: Trees. Not Lighted or Marked

2.10.1.a. Runway designation: 31
2.10.1.b Type of obstacle: Tree. Not Lighted or Marked

AD 2.12 Runway physical characteristics

2.12.1 Designation: 13
2.12.2 True Bearing: 133
2.12.3 Dimensions: 11030 ft x 150 ft
2.12.4 PCN: 70 R/C/W/T
2.12.5 Coordinates: 36–08–28.5987N / 86–41–43.278W
2.12.6 Threshold elevation: 535.9 ft
2.12.6 Touchdown zone elevation: 565.8 ft

2.12.1 Designation: 31
2.12.2 True Bearing: 313
2.12.3 Dimensions: 11030 ft x 150 ft
2.12.4 PCN: 70 R/C/W/T
2.12.5 Coordinates: 36–07–13.7846N / 86–40–05.438W
2.12.6 Threshold elevation: 582.3 ft
2.12.6 Touchdown zone elevation: 577.6 ft

2.12.1 Designation: 02R
2.12.2 True Bearing: 18
2.12.3 Dimensions: 8001 ft x 150 ft
2.12.4 PCN: 59 R/B/W/T
2.12.5 Coordinates: 36–06–45.7669N /
86–40–03.5139W
2.12.6 Threshold elevation: 589.8 ft
2.12.6 Touchdown zone elevation: 589.8 ft

2.12.1 Designation: 20L
2.12.2 True Bearing: 198
2.12.3 Dimensions: 8001 ft x 150 ft
2.12.4 PCN: 59 R/B/W/T
2.12.5 Coordinates: 36–08–01.0115N /
86–39–33.3955W
2.12.6 Threshold elevation: 539.9 ft
2.12.6 Touchdown zone elevation: 550.5 ft

2.12.1 Designation: 02C
2.12.2 True Bearing: 18
2.12.3 Dimensions: 8001 ft x 150 ft
2.12.4 PCN: 56 R/B/W/T
2.12.5 Coordinates: 36–06–11.9905N /
86–41–16.6587W
2.12.6 Threshold elevation: 569.1 ft
2.12.6 Touchdown zone elevation: 586.7 ft

2.12.1 Designation: 20C
2.12.2 True Bearing: 198
2.12.3 Dimensions: 8001 ft x 150 ft
2.12.4 PCN: 56 R/B/W/T
2.12.5 Coordinates: 36–07–27.2404N /
86–40–46.5498W
2.12.6 Threshold elevation: 571.9 ft
2.12.6 Touchdown zone elevation: 587.6 ft

2.12.1 Designation: 02L
2.12.2 True Bearing: 18
2.12.3 Dimensions: 7704 ft x 150 ft
2.12.4 PCN: 70 R/B/W/T
2.12.5 Coordinates: 36–07–03.6337N /
86–41–11.3102W
2.12.6 Threshold elevation: 598.7 ft
2.12.6 Touchdown zone elevation: 599 ft

2.12.1 Designation: 20R
2.12.2 True Bearing: 198
2.12.3 Dimensions: 7704 ft x 150 ft
2.12.4 PCN: 70 R/B/W/T
2.12.5 Coordinates: 36–08–16.2327N /
86–40–42.8381W

2.12.6 Threshold elevation: 555.5 ft
2.12.6 Touchdown zone elevation: 578 ft

AD 2.13 Declared distances

2.13.1 Designation: 13
2.13.2 Takeoff run available: 10288
2.13.3 Takeoff distance available: 11029
2.13.4 Accelerate–stop distance available: 10288
2.13.5 Landing distance available: 9487

2.13.1 Designation: 31
2.13.2 Takeoff run available: 10228
2.13.3 Takeoff distance available: 11029
2.13.4 Accelerate–stop distance available: 10228
2.13.5 Landing distance available: 9487

2.13.1 Designation: 02R
2.13.2 Takeoff run available: 8000
2.13.3 Takeoff distance available: 8000
2.13.4 Accelerate–stop distance available: 8000
2.13.5 Landing distance available: 8000

2.13.1 Designation: 20L
2.13.2 Takeoff run available: 8000
2.13.3 Takeoff distance available: 8000
2.13.4 Accelerate–stop distance available: 8000
2.13.5 Landing distance available: 8000

2.13.1 Designation: 02C
2.13.2 Takeoff run available: 8001
2.13.3 Takeoff distance available: 8001
2.13.4 Accelerate–stop distance available: 7601
2.13.5 Landing distance available: 7601

2.13.1 Designation: 20C
2.13.2 Takeoff run available: 8001
2.13.3 Takeoff distance available: 8001
2.13.4 Accelerate–stop distance available: 8001
2.13.5 Landing distance available: 8001

2.13.1 Designation: 02L
2.13.2 Takeoff run available: 7702
2.13.3 Takeoff distance available: 7702
2.13.4 Accelerate–stop distance available: 7702
2.13.5 Landing distance available: 7702

2.13.1 Designation: 20R
2.13.2 Takeoff run available: 7702
2.13.3 Takeoff distance available: 7702
2.13.4 Accelerate–stop distance available: 7702
2.13.5 Landing distance available: 7702

AD 2.14 Approach and runway lighting

2.14.1 Designation: 13
2.14.4 Visual approach slope indicator system: V6L

2.14.1 Designation: 02R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 20L
2.14.2 Approach lighting system: MALSR

2.14.1 Designation: 02C
2.14.2 Approach lighting system: MALSR

2.14.1 Designation: 20C
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 02L
2.14.2 Approach lighting system: ALSF2

2.14.1 Designation: 20R
2.14.2 Approach lighting system: MALSF
2.14.4 Visual approach slope indicator system: P4R

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ALCP
2.18.3 Service designation: 314.4 MHz

2.18.1 Service designation: APCH/P (WEST)
2.18.3 Service designation: 372 MHz

2.18.1 Service designation: APCH/P IC (EAST)
2.18.3 Service designation: 360.7 MHz

2.18.1 Service designation: APCH/P IC (EAST)
2.18.3 Service designation: 118.4 MHz

2.18.1 Service designation: CD/P PRE TAXI CLNC
2.18.3 Service designation: 126.05 MHz

2.18.1 Service designation: CLASS C (EAST)
2.18.3 Service designation: 360.7 MHz

2.18.1 Service designation: CLASS C (WEST)
2.18.3 Service designation: 119.35 MHz

2.18.1 Service designation: CLASS C (EAST)
2.18.3 Service designation: 118.4 MHz

2.18.1 Service designation: CLASS C (WEST)
2.18.3 Service designation: 372 MHz

2.18.1 Service designation: D–ATIS
2.18.3 Service designation: 135.1 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: DEP/P (WEST)
2.18.3 Service designation: 119.35 MHz

2.18.1 Service designation: DEP/P (WEST)
2.18.3 Service designation: 372 MHz

2.18.1 Service designation: DEP/P (EAST)
2.18.3 Service designation: 360.7 MHz

2.18.1 Service designation: DEP/P (EAST)
2.18.3 Service designation: 118.4 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.6 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.8 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 02C. Magnetic variation: 3W

2.19.2 ILS identification: EZN

2.19.5 Coordinates: 36–07–32.95N / 86–40–44.27W

2.19.6 Site elevation: 574.1 ft

2.19.1 ILS type: Glide Slope for runway 02C. Magnetic variation: 3W

2.19.2 ILS identification: EZN

2.19.5 Coordinates: 36–06–22.6383N /
86–41–16.8862W

2.19.6 Site elevation: 570.5 ft

2.19.1 ILS type: Localizer for runway 02L. Magnetic variation: 3W

2.19.2 ILS identification: BNA

2.19.5 Coordinates: 36–08–25.7749N /
86–40–39.0921W

2.19.6 Site elevation: 545.3 ft

2.19.1 ILS type: Inner Marker for runway 02L. Magnetic variation: 3W

2.19.2 ILS identification: BNA

2.19.5 Coordinates: 36–06–54.8265N /
86–41–14.7677W

2.19.6 Site elevation: 594.6 ft

2.19.1 ILS type: Glide Slope for runway 02L. Magnetic variation: 3W

2.19.2 ILS identification: BNA

2.19.5 Coordinates: 36–07–12.9488N /
86–41–02.5412W

2.19.6 Site elevation: 590.9 ft

2.19.1 ILS type: DME for runway 02L. Magnetic variation: 3W

2.19.2 ILS identification: BNA

2.19.5 Coordinates: 36–08–26.4813N / 86–40–42.363W

2.19.6 Site elevation: 554.3 ft

2.19.1 ILS type: DME for runway 02R. Magnetic variation: 3W

2.19.2 ILS identification: UQU

2.19.5 Coordinates: 36–08–09.8908N /
86–39–35.7775W

2.19.6 Site elevation: 536.9 ft

2.19.1 ILS type: Inner Marker for runway 02R. Magnetic variation: 3W

2.19.2 ILS identification: UQU

2.19.5 Coordinates: 36–06–37.6894N /
86–40–06.7445W

2.19.6 Site elevation: 569 ft

2.19.1 ILS type: Localizer for runway 02R. Magnetic variation: 3W

2.19.2 ILS identification: UQU

2.19.5 Coordinates: 36–08–10.5384N /
86–39–29.5817W

2.19.6 Site elevation: 531 ft

2.19.1 ILS type: Glide Slope for runway 02R. Magnetic variation: 3W

2.19.2 ILS identification: UQU

2.19.5 Coordinates: 36–06–56.0107N /
86–39–54.7386W

2.19.6 Site elevation: 576.7 ft

2.19.1 ILS type: Glide Slope for runway 20L. Magnetic variation: 3W
2.19.2 ILS identification: SSX
2.19.5 Coordinates: 36-07-50.032N / 86-39-33.1119W
2.19.6 Site elevation: 534.3 ft

2.19.1 ILS type: Localizer for runway 20L. Magnetic variation: 3W
2.19.2 ILS identification: SSX
2.19.5 Coordinates: 36-06-30.0255N / 86-40-09.8118W
2.19.6 Site elevation: 613.6 ft

2.19.1 ILS type: DME for runway 20L. Magnetic variation: 3W
2.19.2 ILS identification: SSX
2.19.5 Coordinates: 36-06-30.955N / 86-40-12.8874W
2.19.6 Site elevation: 621.2 ft

2.19.1 ILS type: Localizer for runway 20R. Magnetic variation: 3W
2.19.2 ILS identification: VIY

2.19.5 Coordinates: 36-06-49.6794N / 86-41-16.78W
2.19.6 Site elevation: 598.2 ft

2.19.1 ILS type: Glide Slope for runway 20R. Magnetic variation: 3W
2.19.2 ILS identification: VIY
2.19.5 Coordinates: 36-08-05.8205N / 86-40-42.7611W
2.19.6 Site elevation: 554.7 ft

2.19.1 ILS type: Glide Slope for runway 31. Magnetic variation: 3W
2.19.2 ILS identification: PNO
2.19.5 Coordinates: 36-07-28.2732N / 86-40-18.597W
2.19.6 Site elevation: 566.4 ft

2.19.1 ILS type: Localizer for runway 31. Magnetic variation: 3W
2.19.2 ILS identification: PNO
2.19.5 Coordinates: 36-08-30.6521N / 86-41-45.9623W
2.19.6 Site elevation: 540 ft

General Remarks:

READ BACK OF ALL RY HOLDING INSTRUCTIONS IS REQUIRED.

FLIGHT NOTIFICATION SERVICE (ADCUS) AVAILABLE.

PILOTS COMPLY WITH ALL HOLD SHORT INSTRUCTIONS PARTICULARLY AT TWY K & RY 20C APCH; TWY L8 & RY 31 APCH; TWY L AT RY 13 APCH; AND TWY H AT RY 31 APCH.

ALL TURBOJET RYS HAVE NOISE ABATEMENT PROCEDURES. MIL FIGHTER/ATTACK/TRAINER TURBOJETS USE RY 13/31 FOR ARRIVAL & DEPARTURE.

LIGHTED JET BLAST FENCE 598 MSL 1100 FT SE OF RY 31 THLD.

LIGHTED JET BLAST FENCE 568 FT MSL 1167 FT NW RY 13 THLD.

NO UNAUTHORIZED 180 DEG TURNS FOR ACFT OVER 12500 LBS ON ASPHALT SURFACES.

NO FLIGHT OVER MAIN TERMINAL BLDG IS PERMITTED.

BIRD ACTIVITY ON & INVOF ARPT.

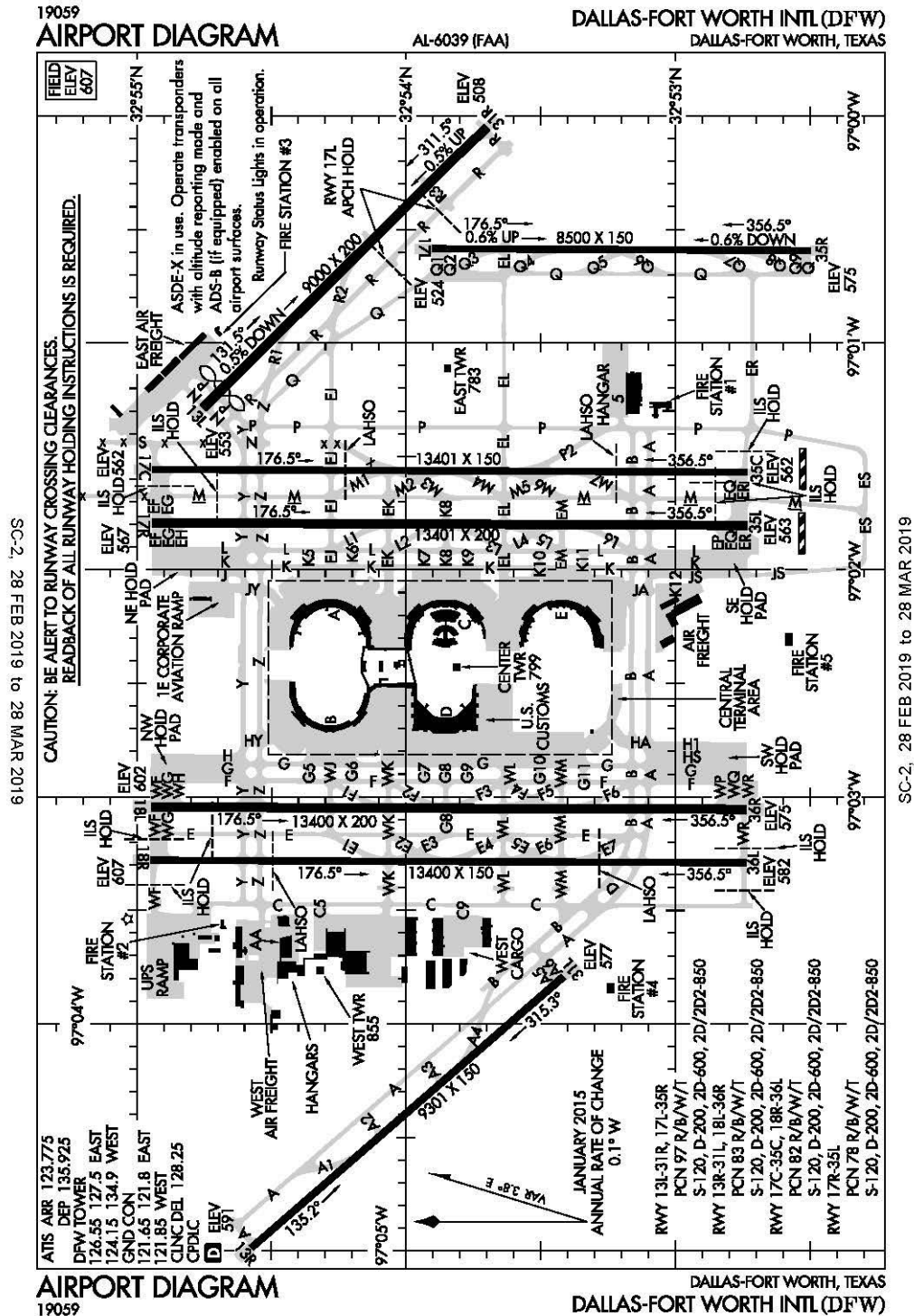
DO NOT CONFUSE 150 FT WIDE TWY S FOR RY 20C.

'C' CONCOURSE TAXILANES ARE; INNER TAXILANE FOR OUTBOUND TFC & OUTER TAXILANE FOR INBOUND TFC.

ANG: CALL SIGN MUSIC CITY OPS.

ARNG - PPR CTC 615-367-5579.

Dallas, Texas
Dallas-Fort Worth International
ICAO Identifier KDFW



Dallas–Fort Worth, TX
Dallas/Fort Worth Intl
ICAO Identifier KDFW

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 32–53–50.0336N / 97–02–15.7018W
2.2.2 From City: 12 Miles NW Of Dallas–Fort Worth, TX
2.2.3 Elevation: 607 ft
2.2.5 Magnetic variation: 4E (2015)
2.2.6 Airport Contact: Sean Donohue
PO BOX 619428
Dallas–Ft Worth, TX 75261
(972–973–3112)
2.2.8 Remarks: And Dallas Co.

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: No
2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 7/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 17L
2.10.1.b Type of obstacle: Ant (150 ft above runway end). Lighted
2.10.1.c Location of obstacle: 798 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 13L
2.12.2 True Bearing: 135
2.12.3 Dimensions: 9000 ft x 200 ft
2.12.4 PCN: 97 R/B/W/T
2.12.5 Coordinates: 32–54–45.195N / 97–01–17.321W
2.12.6 Threshold elevation: 552.9 ft
2.12.6 Touchdown zone elevation: 552.9 ft

2.12.1 Designation: 31R
2.12.2 True Bearing: 315
2.12.3 Dimensions: 9000 ft x 200 ft
2.12.4 PCN: 97 R/B/W/T
2.12.5 Coordinates: 32–53–41.933N / 97–00–03.039W
2.12.6 Threshold elevation: 508.1 ft
2.12.6 Touchdown zone elevation: 523.3 ft

2.12.1 Designation: 13R
2.12.2 True Bearing: 139
2.12.3 Dimensions: 9301 ft x 150 ft
2.12.4 PCN: 83 R/B/W/T
2.12.5 Coordinates: 32–54–34.472N / 97–04–59.278W
2.12.6 Threshold elevation: 590.9 ft
2.12.6 Touchdown zone elevation: 590.9 ft

2.12.1 Designation: 31L
2.12.2 True Bearing: 319
2.12.3 Dimensions: 9301 ft x 150 ft
2.12.4 PCN: 83 R/B/W/T
2.12.5 Coordinates: 32–53–24.97N / 97–03–47.794W
2.12.6 Threshold elevation: 577.1 ft
2.12.6 Touchdown zone elevation: 581.3 ft

2.12.1 Designation: 18L
2.12.2 True Bearing: 180
2.12.3 Dimensions: 13400 ft x 200 ft
2.12.4 PCN: 83 R/B/W/T
2.12.5 Coordinates: 32–54–56.877N / 97–03–02.6484W
2.12.6 Threshold elevation: 601.7 ft
2.12.6 Touchdown zone elevation: 601.7 ft

2.12.1 Designation: 36R
2.12.2 True Bearing: 0
2.12.3 Dimensions: 13400 ft x 200 ft
2.12.4 PCN: 83 R/B/W/T
2.12.5 Coordinates: 32–52–44.298N / 97–03–03.334W
2.12.6 Threshold elevation: 575.3 ft
2.12.6 Touchdown zone elevation: 580.5 ft

2.12.1 Designation: 18R
2.12.2 True Bearing: 180
2.12.3 Dimensions: 13400 ft x 150 ft
2.12.4 PCN: 82 R/B/W/T

2.12.5 Coordinates: 32-54-56.933N / 97-03-16.7108W
2.12.6 Threshold elevation: 606.7 ft
2.12.6 Touchdown zone elevation: 606.7 ft

2.12.1 Designation: 36L
2.12.2 True Bearing: 0
2.12.3 Dimensions: 13400 ft x 150 ft
2.12.4 PCN: 82 R/B/W/T
2.12.5 Coordinates: 32-52-44.35N / 97-03-17.401W
2.12.6 Threshold elevation: 582.2 ft
2.12.6 Touchdown zone elevation: 587.5 ft

2.12.1 Designation: 17C
2.12.2 True Bearing: 180
2.12.3 Dimensions: 13401 ft x 150 ft
2.12.4 PCN: 82 R/B/W/T
2.12.5 Coordinates: 32-54-56.548N / 97-01-33.494W
2.12.6 Threshold elevation: 561.9 ft
2.12.6 Touchdown zone elevation: 562.4 ft

2.12.1 Designation: 35C
2.12.2 True Bearing: 0
2.12.3 Dimensions: 13401 ft x 150 ft
2.12.4 PCN: 82 R/B/W/T
2.12.5 Coordinates: 32-52-43.962N / 97-01-34.218W
2.12.6 Threshold elevation: 562.2 ft
2.12.6 Touchdown zone elevation: 562.5 ft

2.12.1 Designation: 17L
2.12.2 True Bearing: 180
2.12.3 Dimensions: 8500 ft x 150 ft
2.12.4 PCN: 97 R/B/W/T
2.12.5 Coordinates: 32-53-53.954N / 97-00-35.204W
2.12.6 Threshold elevation: 524.1 ft
2.12.6 Touchdown zone elevation: 544.9 ft

2.12.1 Designation: 35R
2.12.2 True Bearing: 0
2.12.3 Dimensions: 8500 ft x 150 ft
2.12.4 PCN: 97 R/B/W/T
2.12.5 Coordinates: 32-52-29.854N / 97-00-35.671W
2.12.6 Threshold elevation: 575.2 ft
2.12.6 Touchdown zone elevation: 575.2 ft

2.12.1 Designation: 17R
2.12.2 True Bearing: 180
2.12.3 Dimensions: 13401 ft x 200 ft
2.12.4 PCN: 78 R/B/W/T
2.12.5 Coordinates: 32-54-56.6N / 97-01-47.58W
2.12.6 Threshold elevation: 566.5 ft
2.12.6 Touchdown zone elevation: 566.5 ft

2.12.1 Designation: 35L
2.12.2 True Bearing: 0
2.12.3 Dimensions: 13401 ft x 200 ft
2.12.4 PCN: 78 R/B/W/T
2.12.5 Coordinates: 32-52-44.018N / 97-01-48.292W
2.12.6 Threshold elevation: 563.3 ft
2.12.6 Touchdown zone elevation: 563.9 ft

AD 2.13 Declared distances

2.13.1 Designation: 13L
2.13.2 Takeoff run available: 9000
2.13.3 Takeoff distance available: 9000
2.13.4 Accelerate-stop distance available: 9000
2.13.5 Landing distance available: 8375

2.13.1 Designation: 31R
2.13.2 Takeoff run available: 8375
2.13.3 Takeoff distance available: 8375
2.13.4 Accelerate-stop distance available: 8375
2.13.5 Landing distance available: 8375

2.13.1 Designation: 13R
2.13.2 Takeoff run available: 9301
2.13.3 Takeoff distance available: 9301
2.13.4 Accelerate-stop distance available: 9301
2.13.5 Landing distance available: 9301

2.13.1 Designation: 31L
2.13.2 Takeoff run available: 9301
2.13.3 Takeoff distance available: 9301
2.13.4 Accelerate-stop distance available: 9301
2.13.5 Landing distance available: 9301

2.13.1 Designation: 18L
2.13.2 Takeoff run available: 13400
2.13.3 Takeoff distance available: 13400

2.13.4 Accelerate–stop distance available: 13400
2.13.5 Landing distance available: 13400

2.13.1 Designation: 36R
2.13.2 Takeoff run available: 13400
2.13.3 Takeoff distance available: 13400
2.13.4 Accelerate–stop distance available: 13400
2.13.5 Landing distance available: 13400

2.13.1 Designation: 18R
2.13.2 Takeoff run available: 13400
2.13.3 Takeoff distance available: 13400
2.13.4 Accelerate–stop distance available: 13400
2.13.5 Landing distance available: 13400

2.13.1 Designation: 36L
2.13.2 Takeoff run available: 13400
2.13.3 Takeoff distance available: 13400
2.13.4 Accelerate–stop distance available: 13400
2.13.5 Landing distance available: 13400

2.13.1 Designation: 17C
2.13.2 Takeoff run available: 13401
2.13.3 Takeoff distance available: 13401
2.13.4 Accelerate–stop distance available: 13401
2.13.5 Landing distance available: 13401

2.13.1 Designation: 35C
2.13.2 Takeoff run available: 13401
2.13.3 Takeoff distance available: 13401
2.13.4 Accelerate–stop distance available: 13401
2.13.5 Landing distance available: 13401

2.13.1 Designation: 17L
2.13.2 Takeoff run available: 8500
2.13.3 Takeoff distance available: 8500
2.13.4 Accelerate–stop distance available: 8500
2.13.5 Landing distance available: 8500

2.13.1 Designation: 35R
2.13.2 Takeoff run available: 8500
2.13.3 Takeoff distance available: 8500
2.13.4 Accelerate–stop distance available: 8500
2.13.5 Landing distance available: 8500

2.13.1 Designation: 17R
2.13.2 Takeoff run available: 13401
2.13.3 Takeoff distance available: 13401
2.13.4 Accelerate–stop distance available: 13401
2.13.5 Landing distance available: 13401

2.13.1 Designation: 35L
2.13.2 Takeoff run available: 13401
2.13.3 Takeoff distance available: 13401
2.13.4 Accelerate–stop distance available: 13401
2.13.5 Landing distance available: 13401

AD 2.14 Approach and runway lighting

2.14.1 Designation: 13L
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 31R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 13R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 31L
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 18L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 36R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 18R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 36L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 17C

2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 35C
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: PAPI Unusable Beyond 7 Degrees
Right Of Centerline .

2.14.1 Designation: 17L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 35R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 17R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 35L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P
2.18.3 Service designation: 128.25 MHz

2.18.1 Service designation: CLASS B (NE)
2.18.3 Service designation: 282.275 MHz

2.18.1 Service designation: CLASS B (SW)
2.18.3 Service designation: 379.9 MHz

2.18.1 Service designation: CLASS B (SE)
2.18.3 Service designation: 343.65 MHz

2.18.1 Service designation: CLASS B (NE)
2.18.3 Service designation: 124.3 MHz

2.18.1 Service designation: CLASS B (SE)
2.18.3 Service designation: 125.2 MHz

2.18.1 Service designation: CLASS B (SW)
2.18.3 Service designation: 135.975 MHz

2.18.1 Service designation: CLASS B (NW)
2.18.3 Service designation: 118.1 MHz

2.18.1 Service designation: CLASS B (NW)
2.18.3 Service designation: 306.95 MHz

2.18.1 Service designation: D–ATIS (ARR)
2.18.3 Service designation: 123.775 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D–ATIS (DEP)
2.18.3 Service designation: 135.925 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P (WEST)
2.18.3 Service designation: 121.85 MHz

2.18.1 Service designation: GND/P IC (EAST)
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GND/P IC (EAST)
2.18.3 Service designation: 121.65 MHz

2.18.1 Service designation: LCL/P IC (EAST)
2.18.3 Service designation: 126.55 MHz

2.18.1 Service designation: LCL/P IC (WEST)
2.18.3 Service designation: 124.15 MHz

2.18.1 Service designation: LCL/P IC (WEST)
2.18.3 Service designation: 134.9 MHz

2.18.1 Service designation: LCL/P IC (EAST)
2.18.3 Service designation: 127.5 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 13R. Magnetic
variation: 4E

2.19.2 ILS identification: LWN
2.19.5 Coordinates: 32-54-24.131N / 97-04-54.081W
2.19.6 Site elevation: 587.5 ft

2.19.1 ILS type: DME for runway 13R. Magnetic variation: 4E
2.19.2 ILS identification: LWN
2.19.5 Coordinates: 32-53-16.073N / 97-03-42.772W
2.19.6 Site elevation: 589.5 ft

2.19.1 ILS type: Localizer for runway 13R. Magnetic variation: 4E
2.19.2 ILS identification: LWN
2.19.5 Coordinates: 32-53-17.46N / 97-03-40.07W
2.19.6 Site elevation: 576.7 ft

2.19.1 ILS type: DME for runway 17C. Magnetic variation: 4E
2.19.2 ILS identification: FLQ
2.19.5 Coordinates: 32-52-34.1301N / 97-01-39.6501W
2.19.6 Site elevation: 575.1 ft

2.19.1 ILS type: Glide Slope for runway 17C. Magnetic variation: 4E
2.19.2 ILS identification: FLQ
2.19.5 Coordinates: 32-54-45.64N / 97-01-28.77W
2.19.6 Site elevation: 555.8 ft

2.19.1 ILS type: Inner Marker for runway 17C. Magnetic variation: 4E
2.19.2 ILS identification: FLQ
2.19.5 Coordinates: 32-55-04.09N / 97-01-33.46W
2.19.6 Site elevation: 562 ft

2.19.1 ILS type: Localizer for runway 17C. Magnetic variation: 4E
2.19.2 ILS identification: FLQ
2.19.5 Coordinates: 32-52-33.151N / 97-01-34.278W
2.19.6 Site elevation: 562.7 ft

2.19.1 ILS type: DME for runway 17L. Magnetic variation: 4E
2.19.2 ILS identification: PPZ

2.19.5 Coordinates: 32-52-18.74N / 97-00-40.18W
2.19.6 Site elevation: 577.3 ft

2.19.1 ILS type: Inner Marker for runway 17L. Magnetic variation: 4E
2.19.2 ILS identification: PPZ
2.19.5 Coordinates: 32-54-05.334N / 97-00-35.261W
2.19.6 Site elevation:

2.19.1 ILS type: Localizer for runway 17L. Magnetic variation: 4E
2.19.2 ILS identification: PPZ
2.19.5 Coordinates: 32-52-19.437N / 97-00-35.727W
2.19.6 Site elevation: 583.9 ft

2.19.1 ILS type: Glide Slope for runway 17L. Magnetic variation: 4E
2.19.2 ILS identification: PPZ
2.19.5 Coordinates: 32-53-45.23N / 97-00-31.14W
2.19.6 Site elevation: 526.1 ft

2.19.1 ILS type: Glide Slope for runway 17R. Magnetic variation: 4E
2.19.2 ILS identification: JHZ
2.19.5 Coordinates: 32-54-45.82N / 97-01-43.064W
2.19.6 Site elevation: 561.3 ft

2.19.1 ILS type: DME for runway 17R. Magnetic variation: 4E
2.19.2 ILS identification: JHZ
2.19.5 Coordinates: 32-52-33.67N / 97-01-53.66W
2.19.6 Site elevation: 550 ft

2.19.1 ILS type: Localizer for runway 17R. Magnetic variation: 4E
2.19.2 ILS identification: JHZ
2.19.5 Coordinates: 32-52-33.24N / 97-01-48.346W
2.19.6 Site elevation: 558.1 ft

2.19.1 ILS type: Glide Slope for runway 18L. Magnetic variation: 4E
2.19.2 ILS identification: CIX
2.19.5 Coordinates: 32-54-45.22N / 97-03-06.82W
2.19.6 Site elevation: 594.4 ft

2.19.1 ILS type: Localizer for runway 18L. Magnetic variation: 4E

2.19.2 ILS identification: CIX

2.19.5 Coordinates: 32-52-33.61N / 97-03-03.39W

2.19.6 Site elevation: 569.8 ft

2.19.1 ILS type: DME for runway 18L. Magnetic variation: 4E

2.19.2 ILS identification: CIX

2.19.5 Coordinates: 32-55-08.7N / 97-03-07.3W

2.19.6 Site elevation: 594 ft

2.19.1 ILS type: Glide Slope for runway 18R. Magnetic variation: 4E

2.19.2 ILS identification: VYN

2.19.5 Coordinates: 32-54-45.47N / 97-03-21.57W

2.19.6 Site elevation: 599.6 ft

2.19.1 ILS type: Localizer for runway 18R. Magnetic variation: 4E

2.19.2 ILS identification: VYN

2.19.5 Coordinates: 32-52-33.934N / 97-03-17.455W

2.19.6 Site elevation: 580.3 ft

2.19.1 ILS type: Inner Marker for runway 18R. Magnetic variation: 4E

2.19.2 ILS identification: VYN

2.19.5 Coordinates: 32-55-04.55N / 97-03-16.69W

2.19.6 Site elevation: 604 ft

2.19.1 ILS type: DME for runway 18R. Magnetic variation: 4E

2.19.2 ILS identification: VYN

2.19.5 Coordinates: 32-52-34.088N / 97-03-12.598W

2.19.6 Site elevation: 584 ft

2.19.1 ILS type: DME for runway 31R. Magnetic variation: 4E

2.19.2 ILS identification: RRA

2.19.5 Coordinates: 32-54-50N / 97-01-18.01W

2.19.6 Site elevation: 548 ft

2.19.1 ILS type: Localizer for runway 31R. Magnetic variation: 4E

2.19.2 ILS identification: RRA

2.19.5 Coordinates: 32-54-48.11N / 97-01-20.75W

2.19.6 Site elevation: 552 ft

2.19.1 ILS type: Glide Slope for runway 31R. Magnetic variation: 4E

2.19.2 ILS identification: RRA

2.19.5 Coordinates: 32-53-51.7442N / 97-00-07.9545W

2.19.6 Site elevation: 508.5 ft

2.19.1 ILS type: Inner Marker for runway 35C. Magnetic variation: 4E

2.19.2 ILS identification: PKQ

2.19.5 Coordinates: 32-52-35.3N / 97-01-34.26W

2.19.6 Site elevation: 875 ft

2.19.1 ILS type: Localizer for runway 35C. Magnetic variation: 4E

2.19.2 ILS identification: PKQ

2.19.5 Coordinates: 32-55-07.04N / 97-01-33.45W

2.19.6 Site elevation: 558 ft

2.19.1 ILS type: Glide Slope for runway 35C. Magnetic variation: 4E

2.19.2 ILS identification: PKQ

2.19.5 Coordinates: 32-52-54.331N / 97-01-29.472W

2.19.6 Site elevation: 556.9 ft

2.19.1 ILS type: DME for runway 35C. Magnetic variation: 4E

2.19.2 ILS identification: PKQ

2.19.5 Coordinates: 32-52-34.128N / 97-01-39.648W

2.19.6 Site elevation: 575.1 ft

2.19.1 ILS type: Glide Slope for runway 35L. Magnetic variation: 4E

2.19.2 ILS identification: UWX

2.19.5 Coordinates: 32-52-54.983N / 97-01-43.534W

2.19.6 Site elevation: 558.7 ft

2.19.1 ILS type: DME for runway 35L. Magnetic variation: 4E

2.19.2 ILS identification: UWX

2.19.5 Coordinates: 32-52-33.67N / 97-01-53.66W

2.19.6 Site elevation: 550 ft

2.19.1 ILS type: Localizer for runway 35L. Magnetic variation: 4E

2.19.2 ILS identification: UWX

2.19.5 Coordinates: 32-55-07.29N / 97-01-47.522W

2.19.6 Site elevation: 567 ft

2.19.1 ILS type: DME for runway 35R. Magnetic variation: 4E

2.19.2 ILS identification: AJQ

2.19.5 Coordinates: 32-52-18.74N / 97-00-40.18W

2.19.6 Site elevation: 577.3 ft

2.19.1 ILS type: Localizer for runway 35R. Magnetic variation: 4E

2.19.2 ILS identification: AJQ

2.19.5 Coordinates: 32-54-04.194N / 97-00-35.15W

2.19.6 Site elevation: 519.3 ft

2.19.1 ILS type: Inner Marker for runway 35R. Magnetic variation: 4E

2.19.2 ILS identification: AJQ

2.19.5 Coordinates: 32-52-22.613N / 97-00-35.708W

2.19.6 Site elevation:

2.19.1 ILS type: Glide Slope for runway 35R. Magnetic variation: 4E

2.19.2 ILS identification: AJQ

2.19.5 Coordinates: 32-52-43.44N / 97-00-30.904W

2.19.6 Site elevation: 558.8 ft

2.19.1 ILS type: DME for runway 36L. Magnetic varia-

tion: 4E

2.19.2 ILS identification: BXN

2.19.5 Coordinates: 32-52-34.088N / 97-03-12.598W

2.19.6 Site elevation: 584 ft

2.19.1 ILS type: Glide Slope for runway 36L. Magnetic variation: 4E

2.19.2 ILS identification: BXN

2.19.5 Coordinates: 32-52-54.409N / 97-03-22.04W

2.19.6 Site elevation: 579.8 ft

2.19.1 ILS type: Localizer for runway 36L. Magnetic variation: 4E

2.19.2 ILS identification: BXN

2.19.5 Coordinates: 32-55-06.87N / 97-03-16.69W

2.19.6 Site elevation: 601.3 ft

2.19.1 ILS type: DME for runway 36R. Magnetic variation: 4E

2.19.2 ILS identification: FJN

2.19.5 Coordinates: 32-55-08.7N / 97-03-07.3W

2.19.6 Site elevation: 594 ft

2.19.1 ILS type: Glide Slope for runway 36R. Magnetic variation: 4E

2.19.2 ILS identification: FJN

2.19.5 Coordinates: 32-52-54.851N / 97-03-07.968W

2.19.6 Site elevation: 577 ft

2.19.1 ILS type: Localizer for runway 36R. Magnetic variation: 4E

2.19.2 ILS identification: FJN

2.19.5 Coordinates: 32-55-06.82N / 97-03-02.59W

2.19.6 Site elevation: 594.8 ft

General Remarks:

BIRDS ON & INVOF ARPT.

PPR FM THE PRIMARY TENANT AIRLINES TO OPERATE WITHIN THE CENTRAL TERMINAL AREA. PROPER MINIMUM OBJECT FREE AREA DISTANCES MAY NOT BE MAINTAINED FOR RAMP/APRON TAXILANES.

PPR FROM ARPT OPNS FOR GEN AVN ACFT TO PROCD TO AIRLINE TRML GATE EXCP GEN AVN FAC.

STD SAWED GROOVING 160 FT WIDE FULL LENGTH RYS 13L/31R; 18L/36R & 17R/35L. STD GROOVING 130 FTWIDE FULL LENGTH RYS 17L/35R; 18R/36L; 13R/31L & 17C/35C.

ARPT UNDER CONSTRUCTION; PAEW IN MOVEMENT AREAS.

TKOF DSTC FOR RY 17R FM TWY EG IS 13082 FT & FM TWY EH IS 12816 FT.

LAND & HOLD SHORT SIGNS ON RY 17C AT TWY 'B' 10,460 FT S OF RY 17C THLD; RY 18R AT TWY 'B' 10,100 FT S OF RY 18R THLD; RY 35C AT TWY 'EJ' 9050 FT N OF RY 35C THLD; RY 36L AT TWY 'Z' 10,650 FT N OF

RY 36L THLD; LGTD & MKD WITH IN-PAVEMENT PULSATING WHITE LGTS.

TKOF DSTC FOR RY 36R FM TWY WP IS 12,815 FT; FM TWY WQ IS 13,082 FT.

TKOF DSTC FOR RY 17L FM TWY Q2 IS 8196 FT.

TWYS MAY REQUIRE JUDGMENTAL OVERSTEERING FOR LARGE ACFT.

TKOF DSTC FOR RY 35R FM TWY Q9 IS 8196 FT.

TKOF DSTC FOR RY 35L FM TWY EQ IS 13084 FT & FM TWY EP IS 12811 FT.

TWY EDGE REFLECTORS ALONG ALL TWYS.

TERMINAL B APRON TAXILANE BTN APRON ENTRANCE/EXIT POINT TAXILANES 107 & 115 CLSD TO ACFT WITH WINGSPAN 118 FT AND GREATER.

TKOF DSTC FOR RY 18L FM TWY WG IS 13,082; FM TWY WH IS 12,815.

PPR GA OPERATIONS 0000-0500; CALL ARPT OPNS 972-973-3112.

APRON ENTRANCE/EXIT POINT 124 CLSD TO ACFT WITH WINGSPAN GREATER THAN 213 FT.

TWY A5 CLSD TO ACFT WITH WINGSPAN 171 FT AND GREATER.

TKOF DSTC FOR RY 17C FM TWY EG IS 13,082 FT.

TKOF DSTC FOR RY 18R FM TWY WG IS 13,082 FT.

APRON ENTRANCE/EXIT POINTS 9, 32, 33, 34, 35, 36, 37, 38, & 53 CLSD TO ACFT WITH WINGSPAN GREATER THAN 135 FT.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

PPR ACFT WITH WINGSPAN 215 FT OR GREATER (GROUP VI) CALL ARPT OPNS 972-973-3112 FOR FOLLOW-ME SERVICES WHILE TAXIING TO & FROM RAMP & RYS.

RY VISUAL SCREEN 20 FT AGL 1180 FT S AER 35C.

RY VISUAL SCREEN 22 FT AGL 1179 FT S AER 35L.

ACFT USING TERMINAL E GATES MUST OBTAIN APPROVAL FROM DFW RAMP 131.0 PRIOR TO ENTERING RAMP AND PRIOR TO PUSHBACK 0430 LCL -0130 LCL DRG TIME CHG ONLY.

B747-8 AND A380 OPS ONLY AUZD ON RYS 18R/36L AND 18L/36R, CONTACT ARPT OPS FOR ADDNL INFO.

ACFT AT EAST AIR FREIGHT MUST CONTACT DFW TWR AT 127.5 PRIOR TO TAXI OUT.

APRON ENTRANCE/EXIT POINTS 5, 7, 42, 44, 49, 51, 52, AND 122 CLSD TO ACFT WITH WINGSPAN GREATER

THAN 118'.

APRON ENTRANCE/EXIT POINTS 1 AND 2 CLSD TO ACFT WITH WINGSPAN GREATER THAN 89' EXCEPT PPR.

APRON ENTRANCE/EXIT POINTS 3 AND 4 CLSD TO ACFT WITH WINGSPAN GREATER THAN 118' EXCEPT PPR.

APRON ENTRANCE/EXIT POINTS 31 AND 39 CLSD TO ACFT WITH WINGSPAN GREATER THAN 167'.

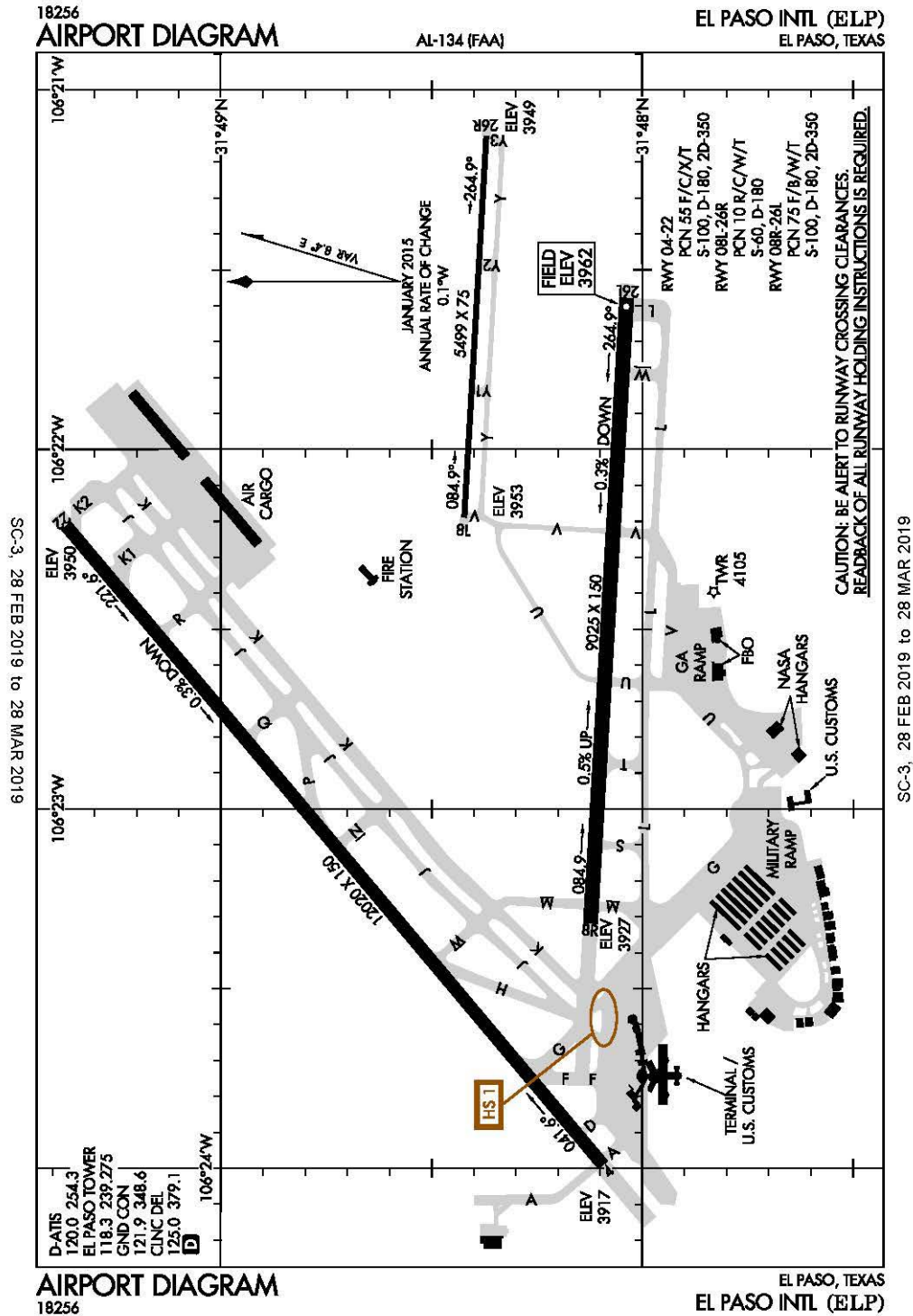
APRON ENTRANCE/EXIT POINT 48 CLSD TO ACFT WITH WINGSPAN GREATER THAN 195'. UNLESS OTHERWISE SPECIFIED, ALL APRON ENTRANCE/EXIT POINTS CLSD TO ACFT WITH WINGSPAN GREATER THAN 214' EXCEPT PPR.

RY STATUS LGTS IN OPN.

ACFT USING TERMINAL D GATES D6-17 OR APRON ENTRANCE/EXIT POINTS 138 THRU 150 MUST OBTAIN APPROVAL FROM DFW RAMP TOWER 129.95 PRIOR TO ENTERING THE RAMP AND PRIOR TO PUSHBACK 0500L-2300L

APN ENTRANCE/EXIT POINTS 145, 146, 147, 148, 149, 150 COMMISSIONED FOR ACFT WITH WINGSPAN UP TO 214 FT.

El Paso, Texas
El Paso International
ICAO Identifier KELP



El Paso, TX
El Paso Intl
ICAO Identifier KELP

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 31-48-26.4N / 106-22-34.9W
2.2.2 From City: 4 Miles NE Of El Paso, TX
2.2.3 Elevation: 3961.6 ft
2.2.5 Magnetic variation: 8E (2015)
2.2.6 Airport Contact: Monica Lombrana
6701 CONVAIR RD
El Paso, TX 79925
(915-212-0333)

AD 2.3 Attendance Schedule

2.3.1 - 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A1+,B+,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973

AD 2.12 Runway physical characteristics

2.12.1 Designation: 04
2.12.2 True Bearing: 50
2.12.3 Dimensions: 12020 ft x 150 ft
2.12.4 PCN: 55 F/C/X/T
2.12.5 Coordinates: 31-48-05.5605N /
106-23-59.4625W
2.12.6 Threshold elevation: 3916.9 ft
2.12.6 Touchdown zone elevation: 3923.2 ft

2.12.1 Designation: 22
2.12.2 True Bearing: 230
2.12.3 Dimensions: 12020 ft x 150 ft
2.12.4 PCN: 55 F/C/X/T
2.12.5 Coordinates: 31-49-22.0112N /
106-22-12.7821W
2.12.6 Threshold elevation: 3949.5 ft

2.12.6 Touchdown zone elevation: 3949.5 ft

2.12.1 Designation: 08L
2.12.2 True Bearing: 93
2.12.3 Dimensions: 5499 ft x 75 ft
2.12.4 PCN: 10 R/C/W/T
2.12.5 Coordinates: 31-48-25.3326N /
106-22-11.3796W
2.12.6 Threshold elevation: 3952.6 ft
2.12.6 Touchdown zone elevation: 3952.7 ft

2.12.1 Designation: 26R
2.12.2 True Bearing: 273
2.12.3 Dimensions: 5499 ft x 75 ft
2.12.4 PCN: 10 R/C/W/T
2.12.5 Coordinates: 31-48-22.1849N /
106-21-07.7768W
2.12.6 Threshold elevation: 3949.2 ft
2.12.6 Touchdown zone elevation: 3949.5 ft

2.12.1 Designation: 08R
2.12.2 True Bearing: 93
2.12.3 Dimensions: 9025 ft x 150 ft
2.12.4 PCN: 75 F/B/W/T
2.12.5 Coordinates: 31-48-07.3509N /
106-23-19.1333W
2.12.6 Threshold elevation: 3927.1 ft
2.12.6 Touchdown zone elevation: 3940.3 ft
2.12.7 Slope: 0.3 UP

2.12.1 Designation: 26L
2.12.2 True Bearing: 273
2.12.3 Dimensions: 9025 ft x 150 ft
2.12.4 PCN: 75 F/B/W/T
2.12.5 Coordinates: 31-48-02.195N /
106-21-34.7505W
2.12.6 Threshold elevation: 3961.6 ft
2.12.6 Touchdown zone elevation: 3961.6 ft
2.12.7 Slope: 0.3 DOWN

AD 2.13 Declared distances

2.13.1 Designation: 04
2.13.2 Takeoff run available: 12020
2.13.3 Takeoff distance available: 12020

2.13.4 Accelerate-stop distance available: 12020
2.13.5 Landing distance available: 12020

2.13.1 Designation: 22
2.13.2 Takeoff run available: 12020
2.13.3 Takeoff distance available: 12020
2.13.4 Accelerate-stop distance available: 12020
2.13.5 Landing distance available: 12020

2.13.1 Designation: 08L
2.13.2 Takeoff run available: 5499
2.13.3 Takeoff distance available: 5499
2.13.4 Accelerate-stop distance available: 5499
2.13.5 Landing distance available: 5499

2.13.1 Designation: 26R
2.13.2 Takeoff run available: 5499
2.13.3 Takeoff distance available: 5499
2.13.4 Accelerate-stop distance available: 5499
2.13.5 Landing distance available: 5499

2.13.1 Designation: 08R
2.13.2 Takeoff run available: 9025
2.13.3 Takeoff distance available: 9025
2.13.4 Accelerate-stop distance available: 9025
2.13.5 Landing distance available: 9025

2.13.1 Designation: 26L
2.13.2 Takeoff run available: 9025
2.13.3 Takeoff distance available: 9025
2.13.4 Accelerate-stop distance available: 9025
2.13.5 Landing distance available: 9025

AD 2.14 Approach and runway lighting

2.14.1 Designation: 04
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 22
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 08R
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 26L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P (SOUTH-V16)
2.18.3 Service designation: 119.15 MHz

2.18.1 Service designation: APCH/P (SOUTH-V16)
2.18.3 Service designation: 353.5 MHz

2.18.1 Service designation: APCH/P IC (NORTH-V16)
2.18.3 Service designation: 124.25 MHz

2.18.1 Service designation: APCH/P IC (NORTH-V16)
2.18.3 Service designation: 298.85 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 379.1 MHz

2.18.1 Service designation: CD/P PRE TAXI CLNC
2.18.3 Service designation: 125 MHz

2.18.1 Service designation: CLASS C (SOUTH-V16)
2.18.3 Service designation: 353.5 MHz

2.18.1 Service designation: CLASS C (NORTH-V16)
2.18.3 Service designation: 298.85 MHz

2.18.1 Service designation: CLASS C (NORTH-V16)
2.18.3 Service designation: 124.25 MHz

2.18.1 Service designation: CLASS C (SOUTH-V16)
2.18.3 Service designation: 119.15 MHz

2.18.1 Service designation: CLASS C
2.18.3 Service designation: 119.15 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 120 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 254.3 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 119.15 MHz

2.18.1 Service designation: DEP/P

2.18.3 Service designation: 263 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG

2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P

2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: LCL/P

2.18.3 Service designation: 239.275 MHz

2.18.1 Service designation: UTILITY

2.18.3 Service designation: 121.3 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 04. Magnetic variation: 8E

2.19.2 ILS identification: ETF

2.19.5 Coordinates: 31-49-28.4448N /

106-22-03.7979W

2.19.6 Site elevation: 3950.4 ft

General Remarks:

24 HR PPR CLASS A EXPLOSIVES CTC 915-212-0333.

CTN: BIGGS AAF 2NM NW RWY 21 CAN BE MISTAKEN FOR ELP RWY 22.

NORTH BOUND TFC PROHIBITED ON TWY F SOUTH OF APCH END RWY 08R.

TWY A FM 700 FT NORTH OF RWY 04 TO THE SOUTH; TWY J NE OF TWY K1; TWY K NE OF TWY K1 BTN TWY J & NORTH CARGO RAMP; TWYS U & V SOUTH OF TWY L; & TWY K2 NOT VISIBLE FM ATCT.

2.19.1 ILS type: DME for runway 04. Magnetic variation: 8E

2.19.2 ILS identification: ETF

2.19.5 Coordinates: 31-47-58.7232N /

106-24-13.5201W

2.19.6 Site elevation: 3926 ft

2.19.1 ILS type: Outer Marker for runway 22. Magnetic variation: 8E

2.19.2 ILS identification: ELP

2.19.5 Coordinates: 31-51-37.0342N /

106-19-04.2497W

2.19.6 Site elevation: 3992.8 ft

2.19.1 ILS type: DME for runway 22. Magnetic variation: 8E

2.19.2 ILS identification: ELP

2.19.5 Coordinates: 31-47-58.7232N /

106-24-13.5201W

2.19.6 Site elevation: 3926 ft

2.19.1 ILS type: Glide Slope for runway 22. Magnetic variation: 8E

2.19.2 ILS identification: ELP

2.19.5 Coordinates: 31-49-17.2839N /

106-22-26.5917W

2.19.6 Site elevation: 3940.3 ft

2.19.1 ILS type: Localizer for runway 22. Magnetic variation: 8E

2.19.2 ILS identification: ELP

2.19.5 Coordinates: 31-47-55.923N /

106-24-12.9005W

2.19.6 Site elevation: 3910.9 ft

HOLDING POSITION MARKINGS FOR RUNWAY 8R APPROACH AND RUNWAY 4/22 ARE IN CLOSE PROXIMITY TO THE TERMINAL APRON; REVIEW AIRPORT DIAGRAM PRIOR TO PUSHBACK FROM THE GATE.

MILITARY USERS SHOULD REVIEW NOISE ABATEMENT PROCEDURES LISTED FOR BIGGS AAF.

NOISE ABATEMENT PROCEDURES IN EFFECT, CTC ATCT FOR DETAILS.

ENGINE POWER IS RSTRD TO IDLE POWER ON ONE ENGINE AT A TIME FOR MAX 5 MIN ON ANY TERMINAL OR PARKING APRONS, CROSS-BLEED STARTS OR OTHER PRE DEP ACTIVITY ON MOVEMENT AREAS ONLY, MAINT OR OTR RQMT NEEDING LONGER OR HIGHER POWER CTC TWR FOR DIRECTIONS TO DESIGNATED RUNUP AREAS.

COMPASS ROSE CLSD INDEFLY.

Houston, TX
George Bush Intercontinental/Houston
ICAO Identifier KIAH

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 29–59–03.967N /
95–20–29.193W
2.2.2 From City: 15 Miles N Of Houston, TX
2.2.3 Elevation: 95.8 ft
2.2.5 Magnetic variation: 3E (2015)
2.2.6 Airport Contact: Kelly Woodward
PO BOX 60106
Houston, TX 77205
(281–230–3100)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.12 Runway physical characteristics

2.12.1 Designation: 15L
2.12.2 True Bearing: 152
2.12.3 Dimensions: 12001 ft x 150 ft
2.12.4 PCN: 72 R/A/W/T
2.12.5 Coordinates: 29–59–16.4026N /
95–21–28.3335W
2.12.6 Threshold elevation: 94.6 ft
2.12.6 Touchdown zone elevation: 95.2 ft

2.12.1 Designation: 33R
2.12.2 True Bearing: 332
2.12.3 Dimensions: 12001 ft x 150 ft
2.12.4 PCN: 72 R/A/W/T
2.12.5 Coordinates: 29–57–31.5505N / 95–20–24.189W
2.12.6 Threshold elevation: 84.9 ft
2.12.6 Touchdown zone elevation: 88 ft

2.12.1 Designation: 15R
2.12.2 True Bearing: 152
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 94 R/B/W/T

2.12.5 Coordinates: 29–59–16.1082N /
95–21–41.0384W
2.12.6 Threshold elevation: 94.8 ft
2.12.6 Touchdown zone elevation: 94.8 ft

2.12.1 Designation: 33L
2.12.2 True Bearing: 332
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 94 R/B/W/T
2.12.5 Coordinates: 29–57–48.7474N /
95–20–47.5811W
2.12.6 Threshold elevation: 86.5 ft
2.12.6 Touchdown zone elevation: 89.3 ft

2.12.1 Designation: 08R
2.12.2 True Bearing: 90
2.12.3 Dimensions: 9402 ft x 150 ft
2.12.4 PCN: 72 R/A/W/T
2.12.5 Coordinates: 29–59–36.3028N /
95–21–17.8703W
2.12.6 Threshold elevation: 94.3 ft
2.12.6 Touchdown zone elevation: 95.3 ft

2.12.1 Designation: 26L
2.12.2 True Bearing: 270
2.12.3 Dimensions: 9402 ft x 150 ft
2.12.4 PCN: 72 R/A/W/T
2.12.5 Coordinates: 29–59–36.3817N /
95–19–30.9539W
2.12.6 Threshold elevation: 92.3 ft
2.12.6 Touchdown zone elevation: 94.6 ft

2.12.1 Designation: 09
2.12.2 True Bearing: 90
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 67 R/A/W/T
2.12.5 Coordinates: 29–58–39.3363N /
95–20–02.7891W
2.12.6 Threshold elevation: 89.9 ft
2.12.6 Touchdown zone elevation: 90.1 ft

2.12.1 Designation: 27
2.12.2 True Bearing: 270
2.12.3 Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 67 R/A/W/T
2.12.5 Coordinates: 29–58–39.4071N /
95–18–09.0948W
2.12.6 Threshold elevation: 84.3 ft
2.12.6 Touchdown zone elevation: 86.2 ft

2.12.1 Designation: 08L

2.12.2 True Bearing: 90
 2.12.3 Dimensions: 9000 ft x 150 ft
 2.12.4 PCN: 72 R/A/W/T
 2.12.5 Coordinates: 30-00-25.7816N /
 95-21-31.6473W
 2.12.6 Threshold elevation: 90.6 ft
 2.12.6 Touchdown zone elevation: 94 ft

2.12.1 Designation: 26R
 2.12.2 True Bearing: 270
 2.12.3 Dimensions: 9000 ft x 150 ft
 2.12.4 PCN: 72 R/A/W/T
 2.12.5 Coordinates: 30-00-25.8612N /
 95-19-49.2891W
 2.12.6 Threshold elevation: 94.2 ft
 2.12.6 Touchdown zone elevation: 95.3 ft

AD 2.13 Declared distances

2.13.1 Designation: 15L
 2.13.2 Takeoff run available: 12001
 2.13.3 Takeoff distance available: 12001
 2.13.4 Accelerate-stop distance available: 12001
 2.13.5 Landing distance available: 12001

2.13.1 Designation: 33R
 2.13.2 Takeoff run available: 12001
 2.13.3 Takeoff distance available: 12001
 2.13.4 Accelerate-stop distance available: 12001
 2.13.5 Landing distance available: 12001

2.13.1 Designation: 15R
 2.13.2 Takeoff run available: 9999
 2.13.3 Takeoff distance available: 9999
 2.13.4 Accelerate-stop distance available: 9999
 2.13.5 Landing distance available: 9999

2.13.1 Designation: 33L
 2.13.2 Takeoff run available: 9999
 2.13.3 Takeoff distance available: 9999
 2.13.4 Accelerate-stop distance available: 9999
 2.13.5 Landing distance available: 9999

2.13.1 Designation: 08R
 2.13.2 Takeoff run available: 9402
 2.13.3 Takeoff distance available: 9402
 2.13.4 Accelerate-stop distance available: 9402
 2.13.5 Landing distance available: 9402

2.13.1 Designation: 26L
 2.13.2 Takeoff run available: 9402
 2.13.3 Takeoff distance available: 9402

2.13.4 Accelerate-stop distance available: 9402
 2.13.5 Landing distance available: 9402

2.13.1 Designation: 09
 2.13.2 Takeoff run available: 10000
 2.13.3 Takeoff distance available: 10000
 2.13.4 Accelerate-stop distance available: 10000
 2.13.5 Landing distance available: 10000

2.13.1 Designation: 27
 2.13.2 Takeoff run available: 10000
 2.13.3 Takeoff distance available: 10000
 2.13.4 Accelerate-stop distance available: 10000
 2.13.5 Landing distance available: 10000

2.13.1 Designation: 08L
 2.13.2 Takeoff run available: 9000
 2.13.3 Takeoff distance available: 9000
 2.13.4 Accelerate-stop distance available: 9000
 2.13.5 Landing distance available: 9000

2.13.1 Designation: 26R
 2.13.2 Takeoff run available: 9000
 2.13.3 Takeoff distance available: 9000
 2.13.4 Accelerate-stop distance available: 9000
 2.13.5 Landing distance available: 9000

AD 2.14 Approach and runway lighting

2.14.1 Designation: 15L
 2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 33R
 2.14.2 Approach lighting system: MALSR

2.14.1 Designation: 15R
 2.14.2 Approach lighting system: MALSR
 2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 33L
 2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 08R
 2.14.2 Approach lighting system: MALSR
 2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 26L
 2.14.2 Approach lighting system: ALSF2
 2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 09
 2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 27

2.14.2 Approach lighting system: ALSF2

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 08L

2.14.2 Approach lighting system: ALSF2

2.14.1 Designation: 26R

2.14.2 Approach lighting system: ALSF2

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P

2.18.3 Service designation: 128.1 MHz

2.18.1 Service designation: D–ATIS

2.18.3 Service designation: 124.05 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG

2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND METERING

2.18.3 Service designation: 119.95 MHz

2.18.1 Service designation: GND/P (RY 15L/33R & RY 15R/33L)

2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: GND/P (RY 08L/26R, RY 08R/26L & RY 09/27)

2.18.3 Service designation: 118.575 MHz

2.18.1 Service designation: LCL/P (RY 15R/33L & RY 15L/33R)

2.18.3 Service designation: 127.3 MHz

2.18.1 Service designation: LCL/P (RY 08L/26R, RY 08R/26L & RY 09/27)

2.18.3 Service designation: 290.2 MHz

2.18.1 Service designation: LCL/P (RY 08R & RY 26L)

2.18.3 Service designation: 125.35 MHz

2.18.1 Service designation: LCL/P (RY 09 & RY 27)

2.18.3 Service designation: 135.15 MHz

2.18.1 Service designation: LCL/P (RY 08L & RY 26R)

2.18.3 Service designation: 120.725 MHz

2.18.1 Service designation: LCL/P (RY 15R/33L & RY 15L/33R)

2.18.3 Service designation: 288.25 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 08L. Magnetic variation: 3E

2.19.2 ILS identification: BZU

2.19.5 Coordinates: 30–00–29.7528N /

95–21–18.6875W

2.19.6 Site elevation: 86 ft

2.19.1 ILS type: DME for runway 08L. Magnetic variation: 3E

2.19.2 ILS identification: BZU

2.19.5 Coordinates: 30–00–21.9187N /

95–21–44.0405W

2.19.6 Site elevation: 87.5 ft

2.19.1 ILS type: Localizer for runway 08L. Magnetic variation: 3E

2.19.2 ILS identification: BZU

2.19.5 Coordinates: 30–00–25.8701N /

95–19–36.9727W

2.19.6 Site elevation: 94.4 ft

2.19.1 ILS type: Inner Marker for runway 08L. Magnetic variation: 3E

2.19.2 ILS identification: BZU

2.19.5 Coordinates: 30–00–25.764N / 95–21–40.8592W

2.19.6 Site elevation: 90.8 ft

2.19.1 ILS type: Localizer for runway 08R. Magnetic variation: 3E

2.19.2 ILS identification: IAH

2.19.5 Coordinates: 29–59–36.3913N /

95–19–19.5749W

2.19.6 Site elevation: 89.6 ft

2.19.1 ILS type: Glide Slope for runway 08R. Magnetic variation: 3E

2.19.2 ILS identification: IAH

2.19.5 Coordinates: 29–59–40.3184N /

95–21–06.0476W

2.19.6 Site elevation: 88.8 ft

2.19.1 ILS type: DME for runway 08R. Magnetic variation: 3E

2.19.2 ILS identification: IAH

2.19.5 Coordinates: 29–59–38.9211N /

95–21–31.3127W

2.19.6 Site elevation: 92.5 ft

2.19.1 ILS type: DME for runway 09. Magnetic variation: 3E

2.19.2 ILS identification: UYO

2.19.5 Coordinates: 29-58-35.3774N / 95-20-13.5882W

2.19.6 Site elevation: 87.3 ft

2.19.1 ILS type: Localizer for runway 09. Magnetic variation: 3E

2.19.2 ILS identification: UYO

2.19.5 Coordinates: 29-58-39.4132N / 95-17-57.578W

2.19.6 Site elevation: 81 ft

2.19.1 ILS type: Glide Slope for runway 09. Magnetic variation: 3E

2.19.2 ILS identification: UYO

2.19.5 Coordinates: 29-58-35.3875N / 95-19-50.679W

2.19.6 Site elevation: 85.3 ft

2.19.1 ILS type: Localizer for runway 15R. Magnetic variation: 3E

2.19.2 ILS identification: LKM

2.19.5 Coordinates: 29-57-39.3739N / 95-20-41.8496W

2.19.6 Site elevation: 82.7 ft

2.19.1 ILS type: Glide Slope for runway 15R. Magnetic variation: 3E

2.19.2 ILS identification: LKM

2.19.5 Coordinates: 29-59-04.4118N / 95-21-39.0331W

2.19.6 Site elevation: 89.9 ft

2.19.1 ILS type: Glide Slope for runway 26L. Magnetic variation: 3E

2.19.2 ILS identification: JYV

2.19.5 Coordinates: 29-59-39.5388N / 95-19-42.8056W

2.19.6 Site elevation: 86.8 ft

2.19.1 ILS type: DME for runway 26L. Magnetic variation: 3E

2.19.2 ILS identification: JYV

2.19.5 Coordinates: 29-59-38.9211N / 95-21-31.3127W

2.19.6 Site elevation: 92.5 ft

2.19.1 ILS type: Inner Marker for runway 26L. Magnetic variation: 3E

2.19.2 ILS identification: JYV

2.19.5 Coordinates: 29-59-36.3841N / 95-19-20.5992W

2.19.6 Site elevation: 89.2 ft

2.19.1 ILS type: Localizer for runway 26L. Magnetic variation: 3E

2.19.2 ILS identification: JYV

2.19.5 Coordinates: 29-59-36.2865N / 95-21-31.2791W

2.19.6 Site elevation: 92.2 ft

2.19.1 ILS type: Localizer for runway 26R. Magnetic variation: 3E

2.19.2 ILS identification: OND

2.19.5 Coordinates: 30-00-25.7696N / 95-21-43.9647W

2.19.6 Site elevation: 90.8 ft

2.19.1 ILS type: Inner Marker for runway 26R. Magnetic variation: 3E

2.19.2 ILS identification: OND

2.19.5 Coordinates: 30-00-25.8755N / 95-19-40.4195W

2.19.6 Site elevation: 94.4 ft

2.19.1 ILS type: Glide Slope for runway 26R. Magnetic variation: 3E

2.19.2 ILS identification: OND

2.19.5 Coordinates: 30-00-29.8117N / 95-20-02.26W

2.19.6 Site elevation: 89.7 ft

2.19.1 ILS type: DME for runway 26R. Magnetic variation: 3E

2.19.2 ILS identification: OND

2.19.5 Coordinates: 30-00-21.9187N / 95-21-44.0405W

2.19.6 Site elevation: 87.5 ft

2.19.1 ILS type: Localizer for runway 27. Magnetic variation: 3E

2.19.2 ILS identification: GHI

2.19.5 Coordinates: 29-58-39.3268N / 95-20-15.3338W

2.19.6 Site elevation: 87.4 ft

2.19.1 ILS type: DME for runway 27. Magnetic variation: 3E

2.19.2 ILS identification: GHI

2.19.5 Coordinates: 29-58-35.3774N / 95-20-13.5882W

2.19.6 Site elevation: 87.3 ft

2.19.1 ILS type: Glide Slope for runway 27. Magnetic variation: 3E

2.19.2 ILS identification: GHI

2.19.5 Coordinates: 29-58-35.4434N / 95-18-20.8578W

2.19.6 Site elevation: 80 ft

2.19.1 ILS type: Inner Marker for runway 27. Magnetic variation: 3E

2.19.2 ILS identification: GHI

2.19.5 Coordinates: 29-58-39.4166N / 95-17-59.1664W

2.19.6 Site elevation: 81.1 ft

2.19.1 ILS type: Localizer for runway 33R. Magnetic variation: 3E

2.19.2 ILS identification: CDG

2.19.5 Coordinates: 29-59-31.6238N / 95-21-37.6444W

2.19.6 Site elevation: 91.9 ft

2.19.1 ILS type: Glide Slope for runway 33R. Magnetic variation: 3E

2.19.2 ILS identification: CDG

2.19.5 Coordinates: 29-57-38.8144N / 95-20-33.4594W

2.19.6 Site elevation: 80.4 ft

General Remarks:

BIRDS ON & IN VCNTY OF ARPT.

TXLN 'RA', 'RB', 'RC', 'R2', AND TWY 'SC' NORTH OF TWY 'SB' ARE DSGND NON-MOVEMENT AREAS OPERD BY UAL RAMP CTL.

9 FT AGL UNMKD SECURITY FENCE ADJ TO FBO & CORPORATE BASE OPERATOR RAMPS AND NONMOVEMENT AREA TAXILANES.

TWY 'NR' CLSD TO ACFT WITH WING SPANS GREATER THAN 125 FT BTN TWY 'WD' & TWY 'WB'.

TWY 'SF' BTN TWY 'NB' AND TXLN 'RA' IS DSGND NON-MOVEMENT AREA.

DUAL TWY OPNS TWY NK BTN TWY NB & NORTH RAMP; WEST CNTRLN RSTRD TO ACFT MAX WING SPANS 125 FT & EAST CNTRLN MAX WING SPANS 214 FT.

THE FLWG MOVEMENT AREAS ARE NOT VSB FM THE ATCT: PORTIONS OF TWYS 'WA' & 'WB' FM TWY 'WH' TO THE AER 33R; TWYS 'WA' & 'WB' FM TWY 'WD' NORTH FOR 400 FT; TWY 'WD' FM TWY 'WA' TO TWY 'NR'; TWY 'NR'; TWY 'WL' FM RY 15L TO TWY 'WB' & TWY 'WM'.

NORTH RAMP NORTH & SOUTH TAXI LANES CLSD TO ACFT WITH WING SPANS GREATER THAN 125 FT.

RY 15L/33R MAGNETIC ANOMALIES MAY AFFECT COMPASS HDG FOR TKOF.

TWYS WA & WB MAGNETIC ANOMALIES MAY AFFECT COMPASS HDG.

NORTH RAMP TAXILANE BTN TWYS NF & NR RSTRD TO ACFT WITH WING SPAN 125 FT & BLO.

TWY WC WEST OF RY 15R/33L RSTRD TO ACFT WITH 118 FT WING SPAN AND BLO.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

NOISE SENSITIVE AREA N, E AND W OF ARPT.

TXLN RC CLSD TO ACFT WITH WINGSPAN GREATER THAN 135 FT.

RY STATUS LGTS ARE IN OPN.

TWY WJ CLSD INDEFLY BTN RY 15L/33R & TWY WA; BARRICADED & LGTD.

TWY WK CLSD INDEFLY BTN RY 15L/33R & TWY WB; BARRICADED & LGTD.

TWY WZ CLSD INDEFLY BTN RY 15L/33R & TWY WB; BARRICADED & LGTD.

TWY WM CLSD INDEFLY BTN RY 15L/33R AND TWY WB; BARRICADED & LGTD.

TWY WH CLSD INDEFLY BTN RWY 15L/33R AND TWY WB; BARRICADED AND LGTD.

TWY WA CLSD INDEFLY BTN TWYS WL & WN; BARRICADED AND LGTD.

TWY WA CLSD INDEFLY BTN TWYS WG & WL; BARRICADED AND LGTD.

TWY WG CLSD INDEFLY BTN RY 15L/33R AND TWY WA.

TWY WL LGTS BTN RY 15L/33R AND TWY WB OTS INDEFLY.

TWY WW RUN UP PAD FOR RY 15L CLSD TO ACFT WITH WINGSPAN 135 FT & OVER.

RY 09/27 CLSD TO ACFT WITH WINGSPAN 215 FT & ABOVE.

TWY SF BTN RY 09/27 UP TO AND INCLUDING THE EAST BRIDGE CLSD TO ACFT WITH WINGSPAN 215 FT & OVER.

TWY NR BTN TWY NC AND TWY WW CLSD TO ACFT WINGSPAN MORE THAN 214 FT.

TWY WW BTN TWY NR AND TWY WB CLSD TO ACFT WINGSPAN MORE THAN 214 FT.

TWY NR BTN WW AND TWY WB DSGND NON-MOVEMENT AREA.

TWY NK BTN TWY NB AND TERMINAL D RAMP SIMULTANEOUS ACFT OPS PROHIBITED WHEN MIDDLE TAXILANE IN USE.

TWY SC BTN TAXILANE RA AND TAXILANE RB STEEL PLATE OVER CL LGT FIXTURE.

HELICOPTER HOVER/TAXI RSTRD TO HARD SFC MOVEMENT AREAS ONLY.

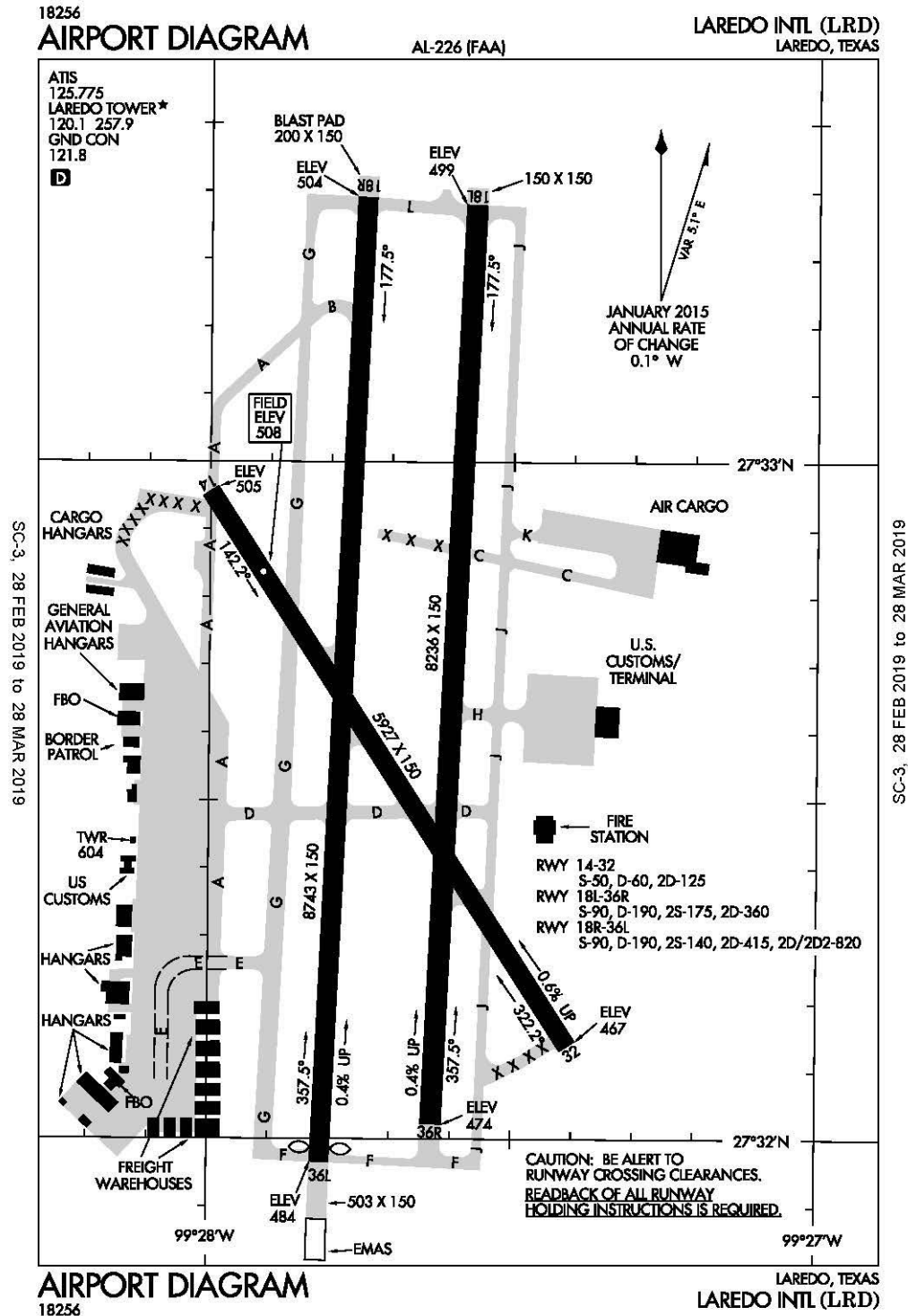
GBAS APCH SVC VOL 20NM FR THLD, ALL GLS APCHS.

HEL HOVER/TAXI RSTRD TO HARD SFC MOVEMENT AREAS ONLY.

GBAS APCH SVC VOL 20NM FR THLD, ALL GLS APCHS.

TWY NA LGT ALL BTN TWY WP AND TWY NP NOT STD.

Laredo, Texas
Laredo International
ICAO Identifier KLRD



Laredo, TX
Laredo Intl
ICAO Identifier KLRD

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 27–32–39.1N / 99–27–41.7W
2.2.2 From City: 3 Miles NE Of Laredo, TX
2.2.3 Elevation: 508 ft
2.2.5 Magnetic variation: 5E (2020)
2.2.6 Airport Contact: Mario I. Maldonado
5210 BOB BULLOCK LOOP
Laredo, TX 78041
(956–795–2000)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I B
certified on 7/1/1975

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 32
2.10.1.b Type of obstacle: Road (12 ft above runway end).
Not Lighted or Marked
2.10.1.c Location of obstacle: 250 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 14
2.12.2 True Bearing: 147
2.12.3 Dimensions: 5927 ft x 150 ft
2.12.5 Coordinates: 27–32–58.0248N / 99–28–00.2242W
2.12.6 Threshold elevation: 505.4 ft
2.12.6 Touchdown zone elevation: 508 ft

2.12.1 Designation: 32
2.12.2 True Bearing: 327
2.12.3 Dimensions: 5927 ft x 150 ft

2.12.5 Coordinates: 27–32–08.635N / 99–27–24.668W
2.12.6 Threshold elevation: 467.4 ft
2.12.6 Touchdown zone elevation: 493.6 ft
2.12.7 Slope: 0.6 UP

2.12.1 Designation: 18R
2.12.2 True Bearing: 183
2.12.3 Dimensions: 8743 ft x 150 ft
2.12.5 Coordinates: 27–33–23.3681N / 99–27–44.7128W
2.12.6 Threshold elevation: 503.7 ft
2.12.6 Touchdown zone elevation: 503.7 ft

2.12.1 Designation: 36L
2.12.2 True Bearing: 3
2.12.3 Dimensions: 8743 ft x 150 ft
2.12.5 Coordinates: 27–31–56.8817N / 99–27–49.0449W
2.12.6 Threshold elevation: 483.7 ft
2.12.6 Touchdown zone elevation: 497 ft
2.12.7 Slope: 0.4 UP

2.12.1 Designation: 18L
2.12.2 True Bearing: 183
2.12.3 Dimensions: 8236 ft x 150 ft
2.12.5 Coordinates: 27–33–22.9267N / 99–27–33.5988W
2.12.6 Threshold elevation: 499.2 ft
2.12.6 Touchdown zone elevation: 499.2 ft
2.12.7 Slope: 0.2 DOWN

2.12.1 Designation: 36R
2.12.2 True Bearing: 3
2.12.3 Dimensions: 8236 ft x 150 ft
2.12.5 Coordinates: 27–32–01.4547N / 99–27–37.6934W
2.12.6 Threshold elevation: 474.2 ft
2.12.6 Touchdown zone elevation: 486.7 ft
2.12.7 Slope: 0.4 UP

AD 2.13 Declared distances

2.13.1 Designation: 14
2.13.2 Takeoff run available: 5927
2.13.3 Takeoff distance available: 5927
2.13.4 Accelerate–stop distance available: 5927
2.13.5 Landing distance available: 5927

2.13.1 Designation: 32

2.13.2 Takeoff run available: 5927
2.13.3 Takeoff distance available: 5927
2.13.4 Accelerate–stop distance available: 5927
2.13.5 Landing distance available: 5927

2.13.1 Designation: 18R
2.13.2 Takeoff run available: 8743
2.13.3 Takeoff distance available: 8743
2.13.4 Accelerate–stop distance available: 8743
2.13.5 Landing distance available: 8743

2.13.1 Designation: 36L
2.13.2 Takeoff run available: 8743
2.13.3 Takeoff distance available: 8743
2.13.4 Accelerate–stop distance available: 8743
2.13.5 Landing distance available: 8623

2.13.1 Designation: 18L
2.13.2 Takeoff run available: 8236
2.13.3 Takeoff distance available: 8236
2.13.4 Accelerate–stop distance available: 8236
2.13.5 Landing distance available: 8236

2.13.1 Designation: 36R
2.13.2 Takeoff run available: 8236
2.13.3 Takeoff distance available: 8236
2.13.4 Accelerate–stop distance available: 8236
2.13.5 Landing distance available: 8236

AD 2.14 Approach and runway lighting

2.14.1 Designation: 14
2.14.4 Visual approach slope indicator system: V4L

2.14.1 Designation: 32
2.14.4 Visual approach slope indicator system: V4L

2.14.1 Designation: 18R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 36L

General Remarks:

RY 14/32 RESTRICTED TO ACFT LESS THAN 60,000 LBS DTW.

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 18L
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ATIS
2.18.3 Service designation: 125.775 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 120.1 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.9 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 18R. Magnetic variation: 5E
2.19.2 ILS identification: LRD
2.19.5 Coordinates: 27–31–51.7421N / 99–27–49.3028W
2.19.6 Site elevation: 477 ft

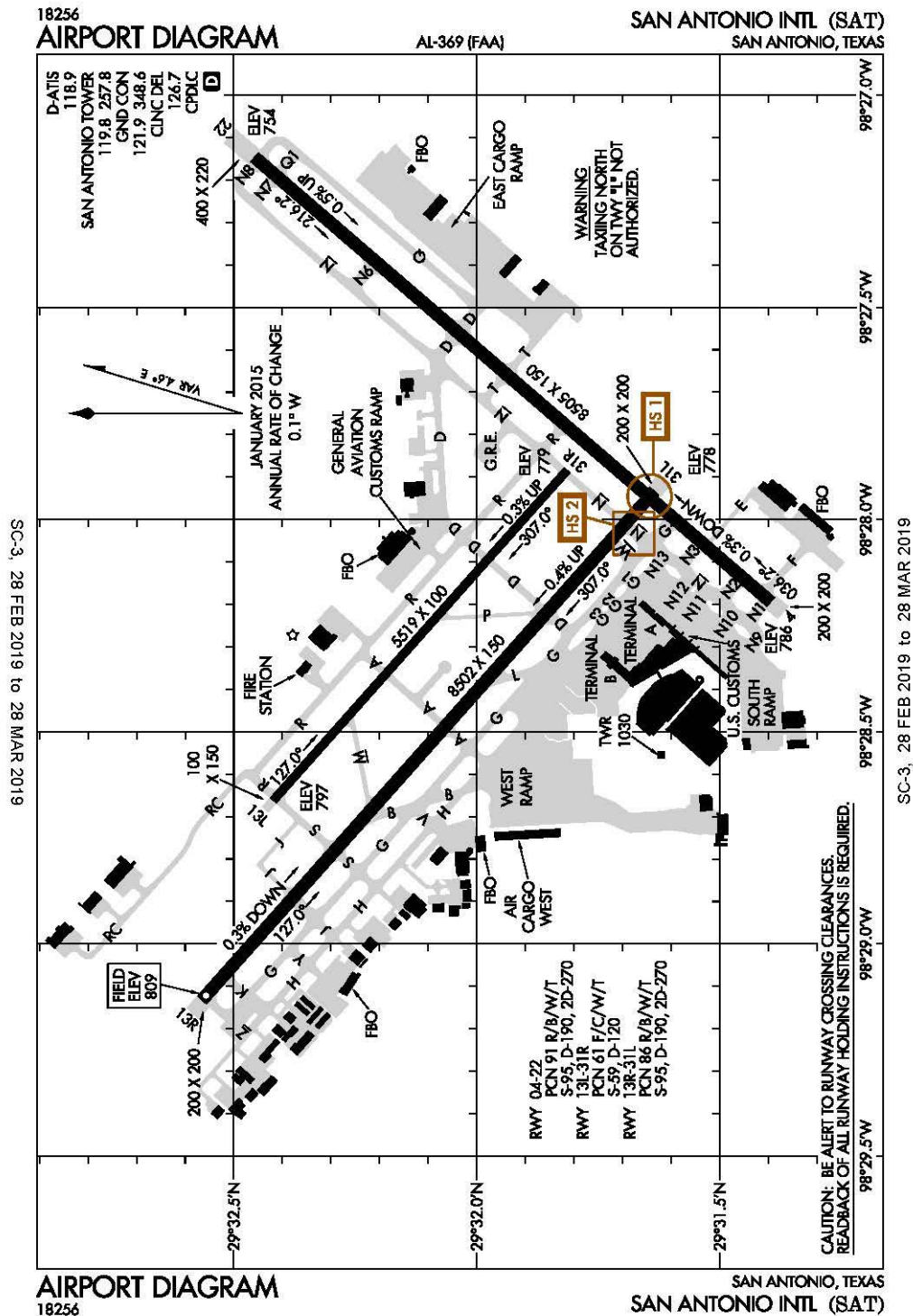
2.19.1 ILS type: DME for runway 18R. Magnetic variation: 5E
2.19.2 ILS identification: LRD
2.19.5 Coordinates: 27–31–50.8814N / 99–27–46.6673W
2.19.6 Site elevation: 477 ft

2.19.1 ILS type: Glide Slope for runway 18R. Magnetic variation: 5E
2.19.2 ILS identification: LRD
2.19.5 Coordinates: 27–33–12.4993N / 99–27–40.6967W
2.19.6 Site elevation: 497 ft

TWY C CLSD BTN RY 18L/36R & RY 18R INDEFLY.

FEDERAL INSPECTION STATION IS LCTD ON THE WEST GENERAL AVIATION/CARGO APRON.

San Antonio, Texas
San Antonio International
ICAO Identifier KSAT



San Antonio, TX
San Antonio Intl
ICAO Identifier KSAT

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 29–32–02.2488N /
98–28–08.6054W
2.2.2 From City: 7 Miles N Of San Antonio, TX
2.2.3 Elevation: 809.1 ft
2.2.5 Magnetic variation: 4E (2020)
2.2.6 Airport Contact: Russ Handy
9800 AIRPORT BLVD
San Antonio, TX 78216
(210–207–3450)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 04
2.10.1.b Type of obstacle: Pole (46 ft above runway
end). Lighted
2.10.1.c Location of obstacle: 225 ft L of Centerline

2.10.1.a. Runway designation: 31L
2.10.1.b Type of obstacle: Bldg (79 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 300 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 13R
2.12.2 True Bearing: 132
2.12.3 Dimensions: 8502 ft x 150 ft
2.12.4 PCN: 86 R/B/W/T

2.12.5 Coordinates: 29–32–33.8851N /
98–29–07.9476W
2.12.6 Threshold elevation: 809.1 ft
2.12.6 Touchdown zone elevation: 809.1 ft

2.12.1 Designation: 31L
2.12.2 True Bearing: 312
2.12.3 Dimensions: 8502 ft x 150 ft
2.12.4 PCN: 86 R/B/W/T
2.12.5 Coordinates: 29–31–38.0044N /
98–27–55.9929W
2.12.6 Threshold elevation: 778.4 ft
2.12.6 Touchdown zone elevation: 790 ft

2.12.1 Designation: 13L
2.12.2 True Bearing: 132
2.12.3 Dimensions: 5519 ft x 100 ft
2.12.4 PCN: 61 F/C/W/T
2.12.5 Coordinates: 29–32–25.0745N / 98–28–39.713W
2.12.6 Threshold elevation: 797.2 ft
2.12.6 Touchdown zone elevation: 797.2 ft

2.12.1 Designation: 31R
2.12.2 True Bearing: 312
2.12.3 Dimensions: 5519 ft x 100 ft
2.12.4 PCN: 61 F/C/W/T
2.12.5 Coordinates: 29–31–48.7836N /
98–27–53.0159W
2.12.6 Threshold elevation: 779.2 ft
2.12.6 Touchdown zone elevation: 787.8 ft

2.12.1 Designation: 04
2.12.2 True Bearing: 41
2.12.3 Dimensions: 8505 ft x 150 ft
2.12.4 PCN: 91 R/B/W/T
2.12.5 Coordinates: 29–31–23.642N / 98–28–11.6565W
2.12.6 Threshold elevation: 786 ft
2.12.6 Touchdown zone elevation: 786 ft
2.12.7 Slope: 0.5 UP

2.12.1 Designation: 22
2.12.2 True Bearing: 221
2.12.3 Dimensions: 8505 ft x 150 ft
2.12.4 PCN: 91 R/B/W/T

2.12.5 Coordinates: 29–32–27.392N / 98–27–08.771W
2.12.6 Threshold elevation: 754.2 ft
2.12.6 Touchdown zone elevation: 770.1 ft
2.12.7 Slope: 0.3 DOWN

AD 2.13 Declared distances

2.13.1 Designation: 13R
2.13.2 Takeoff run available: 8502
2.13.3 Takeoff distance available: 8502
2.13.4 Accelerate–stop distance available: 8502
2.13.5 Landing distance available: 8502

2.13.1 Designation: 31L
2.13.2 Takeoff run available: 8502
2.13.3 Takeoff distance available: 8502
2.13.4 Accelerate–stop distance available: 8502
2.13.5 Landing distance available: 8502

2.13.1 Designation: 13L
2.13.2 Takeoff run available: 5519
2.13.3 Takeoff distance available: 5519
2.13.4 Accelerate–stop distance available: 5519
2.13.5 Landing distance available: 5519

2.13.1 Designation: 31R
2.13.2 Takeoff run available: 5519
2.13.3 Takeoff distance available: 5519
2.13.4 Accelerate–stop distance available: 5519
2.13.5 Landing distance available: 5519

2.13.1 Designation: 04
2.13.2 Takeoff run available: 8505
2.13.3 Takeoff distance available: 8505
2.13.4 Accelerate–stop distance available: 8505
2.13.5 Landing distance available: 8505

2.13.1 Designation: 22
2.13.2 Takeoff run available: 8505
2.13.3 Takeoff distance available: 8505
2.13.4 Accelerate–stop distance available: 8505
2.13.5 Landing distance available: 8505

AD 2.14 Approach and runway lighting

2.14.1 Designation: 13R

2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 31L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 13L
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 31R
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 04
2.14.2 Approach lighting system: MALS
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 22
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ALAMO DP (RY 04/22/31)
2.18.3 Service designation: 125.1 MHz

2.18.1 Service designation: ALAMO DP (RY 13)
2.18.3 Service designation: 127.1 MHz

2.18.1 Service designation: ALAMO DP (RY 13)
2.18.3 Service designation: 269.1 MHz

2.18.1 Service designation: ALAMO DP (RY 04/22/31)
2.18.3 Service designation: 307 MHz

2.18.1 Service designation: ALISS DP (RY 13)
2.18.3 Service designation: 290.225 MHz

2.18.1 Service designation: ALISS DP (RY 04/22/31)
2.18.3 Service designation: 125.1 MHz

2.18.1 Service designation: ALISS DP (RY 13)
2.18.3 Service designation: 125.7 MHz

2.18.1 Service designation: APCH/P
2.18.3 Service designation: 121.375 MHz

2.18.1 Service designation: APCH/P DEP/P (141-270)
2.18.3 Service designation: 118.05 MHz

2.18.1 Service designation: AS ASSIGNED
2.18.3 Service designation: 285.45 MHz

2.18.1 Service designation: APCH/P DEP/P (360-090)
2.18.3 Service designation: 124.45 MHz

2.18.1 Service designation: AS ASSIGNED
2.18.3 Service designation: 239.025 MHz

2.18.1 Service designation: APCH/P DEP/P (091-140)
2.18.3 Service designation: 128.05 MHz

2.18.1 Service designation: AS ASSIGNED
2.18.3 Service designation: 121.2 MHz

2.18.1 Service designation: APCH/P DEP/P (091-140)
2.18.3 Service designation: 318.1 MHz

2.18.1 Service designation: BOWIE DP (RY 04 LRD
TRANSITION)
2.18.3 Service designation: 307 MHz

2.18.1 Service designation: APCH/P DEP/P (141-270)
2.18.3 Service designation: 353.5 MHz

2.18.1 Service designation: BOWIE DP (RY 04 CRP
TRANSITION)

2.18.1 Service designation: APCH/P DEP/P (360-090)
2.18.3 Service designation: 335.625 MHz

2.18.3 Service designation: 269.1 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(271-359)
2.18.3 Service designation: 125.1 MHz

2.18.1 Service designation: BOWIE DP (RY 04 CRP
TRANSITION)
2.18.3 Service designation: 127.1 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(271-359)
2.18.3 Service designation: 307 MHz

2.18.1 Service designation: BOWIE DP (RY 04 LRD
TRANSITION)
2.18.3 Service designation: 125.1 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 125.7 MHz

2.18.1 Service designation: BOWIE DP (RY 04/13/31)
2.18.3 Service designation: 290.225 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 127.1 MHz

2.18.1 Service designation: BOWIE DP (RY13/22/31)
2.18.3 Service designation: 125.7 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 290.225 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 126.7 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 251.125 MHz

2.18.1 Service designation: CLASS C (141-270)
2.18.3 Service designation: 353.5 MHz

2.18.1 Service designation: AS ASSIGNED
2.18.3 Service designation: 120.3 MHz

2.18.1 Service designation: CLASS C (271-359)
2.18.3 Service designation: 307 MHz

2.18.1 Service designation: AS ASSIGNED
2.18.3 Service designation: 317.5 MHz

2.18.1 Service designation: CLASS C (360-090)
2.18.3 Service designation: 124.45 MHz

2.18.1 Service designation: CLASS C (271-359)

2.18.3 Service designation: 125.1 MHz	2.18.1 Service designation: LEJON DP (RY 13)
	2.18.3 Service designation: 290.225 MHz
2.18.1 Service designation: CLASS C (091-140)	
2.18.3 Service designation: 128.05 MHz	2.18.1 Service designation: LEJON DP (RY 04/22/31)
	2.18.3 Service designation: 307 MHz
2.18.1 Service designation: CLASS C (091-140)	
2.18.3 Service designation: 318.1 MHz	2.18.1 Service designation: MILET DP (RY 04)
	2.18.3 Service designation: 307 MHz
2.18.1 Service designation: CLASS C (360-090)	
2.18.3 Service designation: 335.625 MHz	2.18.1 Service designation: MILET DP (RY 13/22/31)
	2.18.3 Service designation: 125.7 MHz
2.18.1 Service designation: CLASS C (141-270)	
2.18.3 Service designation: 118.05 MHz	2.18.1 Service designation: MILET DP (RY 13/22/31)
	2.18.3 Service designation: 290.225 MHz
2.18.1 Service designation: D-ATIS	
2.18.3 Service designation: 118.9 MHz	2.18.1 Service designation: MILET DP (RY 04)
2.18.4 Hours of operation: 24	2.18.3 Service designation: 125.1 MHz
2.18.1 Service designation: EMERG	2.18.1 Service designation: SETZR DP (RY 22)
2.18.3 Service designation: 243 MHz	2.18.3 Service designation: 290.225 MHz
2.18.1 Service designation: EMERG	2.18.1 Service designation: SETZR DP (RY 31)
2.18.3 Service designation: 121.5 MHz	2.18.3 Service designation: 125.1 MHz
2.18.1 Service designation: GND/P	2.18.1 Service designation: SETZR DP (RY 04 & 13)
2.18.3 Service designation: 348.6 MHz	2.18.3 Service designation: 127.1 MHz
2.18.1 Service designation: GND/P	2.18.1 Service designation: SETZR DP (RY 31)
2.18.3 Service designation: 121.9 MHz	2.18.3 Service designation: 307 MHz
2.18.1 Service designation: LCL/P	2.18.1 Service designation: SETZR DP (RY 04 & 13)
2.18.3 Service designation: 119.8 MHz	2.18.3 Service designation: 269.1 MHz
2.18.1 Service designation: LCL/P	2.18.1 Service designation: SETZR DP (RY 22)
2.18.3 Service designation: 257.8 MHz	2.18.3 Service designation: 125.7 MHz
2.18.1 Service designation: LEJON DP (RY 13)	2.18.1 Service designation: THX (RY 04)
2.18.3 Service designation: 125.7 MHz	2.18.3 Service designation: 127.1 MHz
2.18.1 Service designation: LEJON DP (RY 04/22/31)	2.18.1 Service designation: THX (RY 04)
2.18.3 Service designation: 125.1 MHz	2.18.3 Service designation: 269.1 MHz
2.18.1 Service designation: LEJON DP (RY 12)	2.18.1 Service designation: THX (RY13/22/31)
2.18.3 Service designation: 290.225 MHz	2.18.3 Service designation: 125.7 MHz

2.18.1 Service designation: THX (RY 13/22/31)

2.18.3 Service designation: 290.225 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 04. Magnetic variation: 4E

2.19.2 ILS identification: SAT

2.19.5 Coordinates: 29-31-30.203N / 98-27-58.057W

2.19.6 Site elevation: 775 ft

2.19.1 ILS type: DME for runway 04. Magnetic variation: 4E

2.19.2 ILS identification: SAT

2.19.5 Coordinates: 29-32-33.077N / 98-26-58.856W

2.19.6 Site elevation: 757.2 ft

2.19.1 ILS type: Localizer for runway 04. Magnetic variation: 4E

2.19.2 ILS identification: SAT

2.19.5 Coordinates: 29-32-35.073N / 98-27-01.192W

2.19.6 Site elevation: 748 ft

2.19.1 ILS type: Outer Marker for runway 13R. Magnetic variation: 4E

2.19.2 ILS identification: ANT

2.19.5 Coordinates: 29-36-27.4538N /

98-34-10.9206W

2.19.6 Site elevation: 960 ft

2.19.1 ILS type: Localizer for runway 13R. Magnetic variation: 4E

2.19.2 ILS identification: ANT

2.19.5 Coordinates: 29-31-31.3113N /

98-27-47.3806W

2.19.6 Site elevation: 770.9 ft

2.19.1 ILS type: Inner Marker for runway 13R. Magnetic variation: 4E

2.19.2 ILS identification: ANT

2.19.5 Coordinates: 29-32-38.9879N / 98-29-14.5111W

2.19.6 Site elevation: 803 ft

General Remarks:

TWY L CLSD NORTHBOUND.

2.19.1 ILS type: Glide Slope for runway 13R. Magnetic variation: 4E

2.19.2 ILS identification: ANT

2.19.5 Coordinates: 29-32-28.9919N /

98-28-54.8191W

2.19.6 Site elevation: 801.4 ft

2.19.1 ILS type: DME for runway 13R. Magnetic variation: 4E

2.19.2 ILS identification: ANT

2.19.5 Coordinates: 29-31-29.1054N /

98-27-49.9448W

2.19.6 Site elevation: 791 ft

2.19.1 ILS type: Outer Marker for runway 31L. Magnetic variation: 4E

2.19.2 ILS identification: IZR

2.19.5 Coordinates: 29-28-06.2944N /

98-23-19.3174W

2.19.6 Site elevation: 692 ft

2.19.1 ILS type: Localizer for runway 31L. Magnetic variation: 4E

2.19.2 ILS identification: IZR

2.19.5 Coordinates: 29-32-43.12N / 98-29-19.83W

2.19.6 Site elevation: 813 ft

2.19.1 ILS type: DME for runway 31L. Magnetic variation: 4E

2.19.2 ILS identification: IZR

2.19.5 Coordinates: 29-31-29.1054N /

98-27-49.9448W

2.19.6 Site elevation: 791 ft

2.19.1 ILS type: Glide Slope for runway 31L. Magnetic variation: 4E

2.19.2 ILS identification: IZR

2.19.5 Coordinates: 29-31-47.9N / 98-28-01.92W

2.19.6 Site elevation: 777.6 ft

NUMEROUS FLOCKS OF BIRDS INVOF ARPT.

GLIDER/SOARING OPNS APRXLY 17 MILES NW OF ARPT DURG VFR.

TWY D NON-MOVEMENT AREA FM TWY N TO 500 FT W OF TWY N.

NOISE SENSITIVE AREAS EXIST ON ALL SIDES OF ARPT, AT PILOTS DISCRETION CLIMB AS QUICKLY AND QUIETLY AS SAFELY POSSIBLE ON DEPARTURE AND USE CONSIDERATION WHEN FLYING OVER POPULATED AREAS BY MINIMIZING FLT AND HIGH PWR SETTINGS. MILITARY AIRCRAFT: DEPARTING AND ARRIVING AIRCRAFT WILL USE MINIMUM POWER SETTINGS CONSISTENT WITH AIRCRAFT FLIGHT MANUALS, AFTERBURNER TAKEOFF IS PROHIBITED UNLESS REQUIRED FOR SAFETY OF FLIGHT. ENGINE-UPS ARE PERMITTED BTN 0600-2300.

ACFT TAXIING ON RY 04 NE BOUND LOOK FOR HOLD SHORT TO RY 31L.

ACFT TAXIING ON TWY N SW BOUND LOOK FOR HOLD SHORT TO RY 31R.

WORK IN PROGRESS SCHEDULED MAINTENANCE ON & ALONG TWYS AND RAMPS AREAS AT VARIOUS TIMES.

GROUND RUN-UP ENCLOSURE AVBL 24 HRS.

TERMINAL GATES A1, A5, A6, A7 & A8 USE ONLY WITH PPR CALL OPNS 210-207-3433.

RY 13L/31R NOT AVBL FOR PART 121 ACR OPNS.

THE FOLLOWING TWYS ARE NOT AVBL FOR ACFT 59,000 LBS OR OVER: TWY A & TWY J NORTH OF RY 13R-31L, TWY M & TWY P, TWY H NORTHWEST OF TWY Z AND TWY E EAST OF RY 04/22.

TWY Z CLSD TO ACFT WITH WINGSPAN GREATER THAN 118 FT.

C130 AND C17 TYPE ACFT MUST PARK ON WEST RAMP TO CLR CUST.

INNER RAMP TAXILANE NORTH OF TRML A AND B IS CLSD TO ACFT WITH WINGSPAN GTR THAN 135 FT.

PPR WITH ARPT OPNS FOR ACFT POWERING BACK FM TERMINAL GATES.

TWYS L & B CLSD TO ACFT WITH WINGSPANS GREATER THAN 118 FT EXITING RY 31L.

A BARRICADED PAVEMENT ELEVATION CHANGE EXISTS ALONG THE EASTERN SIDE OF THE WEST RAMP.

FREQUENT RUBBER ACCUMULATION NW 2500 RY 13R/31L.

ACFT AT TERMINAL A & B ADVISE GND CTL PRIOR TO PUSH.

COMPASS DEVIATION MAY OCCUR AT THE NW PORTION OF TWY R DUE TO REBAR RE-ENFORCED CONC BRIDGE LCTD UNDER THE TWY.

TWY R WEST OF TWY D CLSD TO ACFT OVER 270,000 LBS.

AERODROME ALL SFC WIP CONST FOR CURRENT INFO CTC OPS. 210-207-3433.

ARPT RSTD TO ACFT WITH WINGSPAN GTR THAN 171 FT, PPR WITH 24HR OPS 210-207-3433. RQRD FOR AUTH.

TWY R BTN APCH END RWY 13L AND TWY D CLSD TO ACFT WINGSPAN MORE THAN 135FT. TWY S BTN APCH END RWY 13L AND RWY 13R/31L CLSD TO ACFT WINGSPAN MORE THAN 135FT.

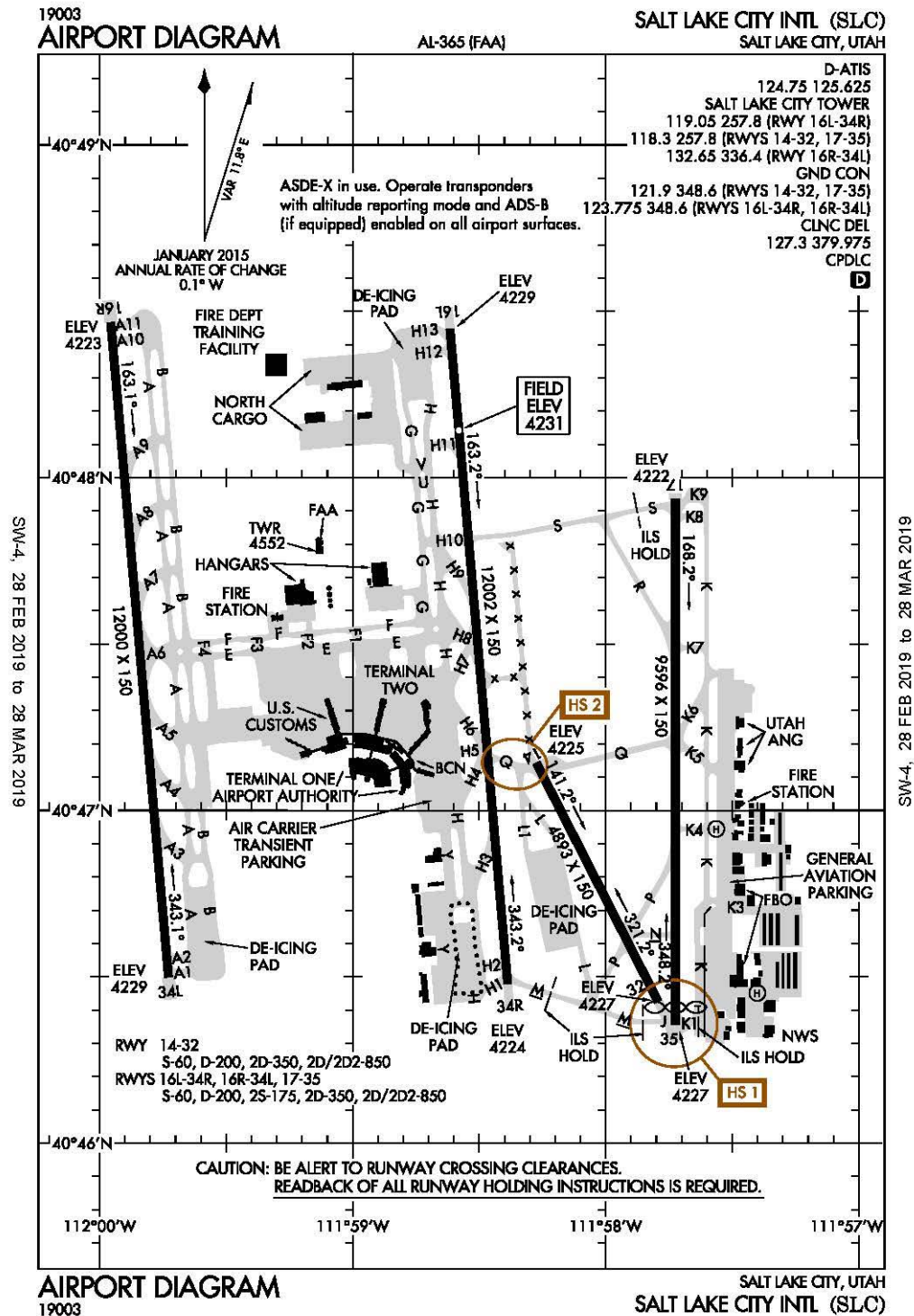
APRON EAST CARGO RAMP INT OF RWY 04/22 AND TWY DELTA ACFT ARE REQ TO APPLY THE MNM THRUST WHEN XNG THE RWY TO AVOID DMG DUE TO JET BLAST.

ALL INTL GENERAL AVIATION CLEAR U.S. CSTMS AT NORTH FIXED BASE OPERATOR RAMP EAST SIDE, CALL U.S. CSTMS 210-821-6965 UPON ARR.

ALL ACFT AFTER LDG ON RWY 13R/31L EXITING SOUTHWEST BOUND ON

TWY DELTA TO MAKE 90 DEG TURN ON TWY GOLF TO AVOID NEWLY LAID UNUSBL SFC.

Salt Lake City, Utah
Salt Lake City International
ICAO Identifier KSLC



Salt Lake City, UT
Salt Lake City Intl
ICAO Identifier KSLC

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 40-47-18.216N /
111-58-39.984W
2.2.2 From City: 3 Miles W Of Salt Lake City, UT
2.2.3 Elevation: 4230.9 ft
2.2.5 Magnetic variation: 11E (2020)
2.2.6 Airport Contact: Bill Wyatt
P.O. BOX 145550
Salt Lake City, UT 84114
((801) 575-2408)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A1+,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 35
2.10.1.b Type of obstacle: Ant (24 ft above runway end).
Not Lighted or Marked
2.10.1.c Location of obstacle: 250 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 16L
2.12.2 True Bearing: 175
2.12.3 Dimensions: 12002 ft x 150 ft
2.12.5 Coordinates: 40-48-26.8298N /
111-58-36.9557W
2.12.6 Threshold elevation: 4229.1 ft
2.12.6 Touchdown zone elevation: 4230.9 ft

2.12.1 Designation: 34R
2.12.2 True Bearing: 355
2.12.3 Dimensions: 12002 ft x 150 ft
2.12.5 Coordinates: 40-46-28.7185N /
111-58-23.2566W
2.12.6 Threshold elevation: 4224.3 ft
2.12.6 Touchdown zone elevation: 4224.7 ft

2.12.1 Designation: 16R
2.12.2 True Bearing: 175
2.12.3 Dimensions: 12000 ft x 150 ft
2.12.5 Coordinates: 40-48-28.0035N /
111-59-57.4282W
2.12.6 Threshold elevation: 4223.4 ft
2.12.6 Touchdown zone elevation: 4225.8 ft

2.12.1 Designation: 34L
2.12.2 True Bearing: 355
2.12.3 Dimensions: 12000 ft x 150 ft
2.12.5 Coordinates: 40-46-29.9171N /
111-59-43.6913W
2.12.6 Threshold elevation: 4228.8 ft
2.12.6 Touchdown zone elevation: 4228.8 ft

2.12.1 Designation: 17
2.12.2 True Bearing: 180
2.12.3 Dimensions: 9596 ft x 150 ft
2.12.5 Coordinates: 40-47-56.1043N /
111-57-43.4552W
2.12.6 Threshold elevation: 4221.7 ft
2.12.6 Touchdown zone elevation: 4222.2 ft

2.12.1 Designation: 35
2.12.2 True Bearing: 360
2.12.3 Dimensions: 9596 ft x 150 ft
2.12.5 Coordinates: 40-46-21.3022N /
111-57-43.4496W
2.12.6 Threshold elevation: 4226.8 ft
2.12.6 Touchdown zone elevation: 4226.9 ft

2.12.1 Designation: 14
2.12.2 True Bearing: 153
2.12.3 Dimensions: 4893 ft x 150 ft
2.12.5 Coordinates: 40-47-08.5848N /
111-58-16.4661W
2.12.6 Threshold elevation: 4224.7 ft
2.12.6 Touchdown zone elevation: 4224.8 ft

2.12.1 Designation: 32
2.12.2 True Bearing: 333
2.12.3 Dimensions: 4893 ft x 150 ft
2.12.5 Coordinates: 40-46-25.5192N /
111-57-47.5915W
2.12.6 Threshold elevation: 4226.8 ft
2.12.6 Touchdown zone elevation: 4226.8 ft

2.12.1 Designation: HF
2.12.3 Dimensions: 60 ft x 60 ft

2.12.1 Designation: HB
2.12.3 Dimensions: 60 ft x 60 ft
2.12.5 Coordinates: 40-46-27.0827N /
111-57-24.0562W
2.12.6 Threshold elevation: 4220.4 ft

AD 2.13 Declared distances

2.13.1 Designation: 16L
2.13.2 Takeoff run available: 12002
2.13.3 Takeoff distance available: 12002
2.13.4 Accelerate-stop distance available: 12002
2.13.5 Landing distance available: 12002

2.13.1 Designation: 34R
2.13.2 Takeoff run available: 12002
2.13.3 Takeoff distance available: 12002
2.13.4 Accelerate-stop distance available: 12002
2.13.5 Landing distance available: 12002

2.13.1 Designation: 16R
2.13.2 Takeoff run available: 12000
2.13.3 Takeoff distance available: 12000
2.13.4 Accelerate-stop distance available: 12000
2.13.5 Landing distance available: 12000

2.13.1 Designation: 34L
2.13.2 Takeoff run available: 12000
2.13.3 Takeoff distance available: 12000
2.13.4 Accelerate-stop distance available: 12000
2.13.5 Landing distance available: 12000

2.13.1 Designation: 17
2.13.2 Takeoff run available: 9597
2.13.3 Takeoff distance available: 9597
2.13.4 Accelerate-stop distance available: 9597
2.13.5 Landing distance available: 9597

2.13.1 Designation: 35
2.13.2 Takeoff run available: 9597
2.13.3 Takeoff distance available: 9597
2.13.4 Accelerate-stop distance available: 9597
2.13.5 Landing distance available: 9273

2.13.1 Designation: 14
2.13.2 Takeoff run available: 4892
2.13.3 Takeoff distance available: 4892
2.13.4 Accelerate-stop distance available: 4892
2.13.5 Landing distance available: 4892

2.13.1 Designation: 32
2.13.2 Takeoff run available: 4892

2.13.3 Takeoff distance available: 4892
2.13.4 Accelerate-stop distance available: 4892
2.13.5 Landing distance available: 4892

AD 2.14 Approach and runway lighting

2.14.1 Designation: 16L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 34R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 16R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 34L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 17
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 35
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 14
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 32
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ANG COMD POST
2.18.3 Service designation: 311 MHz

2.18.1 Service designation: ANG COMD POST
2.18.3 Service designation: 303 MHz

2.18.1 Service designation: CD/P
2.18.3 Service designation: 379.975 MHz

2.18.1 Service designation: CD/P PRE TAXI CLNC
2.18.3 Service designation: 127.3 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 125.625 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 124.75 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P (RYS 16R/34L & 16L/34R)
2.18.3 Service designation: 123.775 MHz

2.18.1 Service designation: GND/P (RYS 17/35 & 14/32)
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: LCL/P (RY 16R/34L)
2.18.3 Service designation: 132.65 MHz

2.18.1 Service designation: LCL/P (RYS 17/35 & 14/32 & 16L/34R)
2.18.3 Service designation: 257.8 MHz

2.18.1 Service designation: LCL/P (RY 16R/34L)
2.18.3 Service designation: 336.4 MHz

2.18.1 Service designation: LCL/P (RYS 17/35 & 14/32)
2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: LCL/P (RY 16L/34R)
2.18.3 Service designation: 119.05 MHz

2.18.1 Service designation: PRE DEP CLNC
2.18.3 Service designation: 127.3 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 16L. Magnetic variation: 11E
2.19.2 ILS identification: MOY
2.19.5 Coordinates: 40-46-18.5061N / 111-58-22.0717W
2.19.6 Site elevation: 4226.5 ft

2.19.1 ILS type: Inner Marker for runway 16L. Magnetic variation: 11E

2.19.2 ILS identification: MOY
2.19.5 Coordinates: 40-48-35.7038N / 111-58-38.0115W
2.19.6 Site elevation: 4222.8 ft

2.19.1 ILS type: DME for runway 16L. Magnetic variation: 11E
2.19.2 ILS identification: MOY
2.19.5 Coordinates: 40-46-18.724N / 111-58-18.1254W
2.19.6 Site elevation: 4239.9 ft

2.19.1 ILS type: Glide Slope for runway 16L. Magnetic variation: 11E
2.19.2 ILS identification: MOY
2.19.5 Coordinates: 40-48-17.0756N / 111-58-30.6172W
2.19.6 Site elevation: 4225 ft

2.19.1 ILS type: DME for runway 16R. Magnetic variation: 11E
2.19.2 ILS identification: UAT
2.19.5 Coordinates: 40-46-19.627N / 111-59-46.3581W
2.19.6 Site elevation: 4233.6 ft

2.19.1 ILS type: Localizer for runway 16R. Magnetic variation: 11E
2.19.2 ILS identification: UAT
2.19.5 Coordinates: 40-46-19.9476N / 111-59-42.5324W
2.19.6 Site elevation: 4227.2 ft

2.19.1 ILS type: Glide Slope for runway 16R. Magnetic variation: 11E
2.19.2 ILS identification: UAT
2.19.5 Coordinates: 40-48-17.3028N / 112-00-01.6005W
2.19.6 Site elevation: 4218.7 ft

2.19.1 ILS type: DME for runway 17. Magnetic variation: 11E
2.19.2 ILS identification: BNT
2.19.5 Coordinates: 40-46-09.7838N / 111-57-47.5356W
2.19.6 Site elevation: 4242.7 ft

2.19.1 ILS type: Glide Slope for runway 17. Magnetic variation: 11E
2.19.2 ILS identification: BNT
2.19.5 Coordinates: 40-47-45.7497N / 111-57-50.0372W
2.19.6 Site elevation: 4216.4 ft

2.19.1 ILS type: Localizer for runway 17. Magnetic variation: 11E

2.19.2 ILS identification: BNT

2.19.5 Coordinates: 40-46-10.0541N / 111-57-43.4502W

2.19.6 Site elevation: 4227.9 ft

2.19.1 ILS type: Glide Slope for runway 34L. Magnetic variation: 11E

2.19.2 ILS identification: UUH

2.19.5 Coordinates: 40-46-39.8998N / 111-59-50.2673W

2.19.6 Site elevation: 4222.6 ft

2.19.1 ILS type: DME for runway 34L. Magnetic variation: 11E

2.19.2 ILS identification: UUH

2.19.5 Coordinates: 40-46-19.627N / 111-59-46.3581W

2.19.6 Site elevation: 4233.6 ft

2.19.1 ILS type: Localizer for runway 34L. Magnetic variation: 11E

2.19.2 ILS identification: UUH

2.19.5 Coordinates: 40-48-37.9731N / 111-59-58.5893W

2.19.6 Site elevation: 4220 ft

2.19.1 ILS type: Localizer for runway 34R. Magnetic variation: 11E

2.19.2 ILS identification: SLC

2.19.5 Coordinates: 40-48-37.6811N / 111-58-38.2145W

2.19.6 Site elevation: 4224.5 ft

2.19.1 ILS type: Glide Slope for runway 34R. Magnetic variation: 11E

2.19.2 ILS identification: SLC

2.19.5 Coordinates: 40-46-39.3436N / 111-58-19.2908W

2.19.6 Site elevation: 4220 ft

2.19.1 ILS type: Inner Marker for runway 34R. Magnetic variation: 11E

2.19.2 ILS identification: SLC

2.19.5 Coordinates: 40-46-20.3855N / 111-58-22.2947W

2.19.6 Site elevation: 4225.1 ft

2.19.1 ILS type: DME for runway 34R. Magnetic variation: 11E

2.19.2 ILS identification: SLC

2.19.5 Coordinates: 40-46-18.71N / 111-58-18.112W

2.19.6 Site elevation: 4236 ft

2.19.1 ILS type: Localizer for runway 35. Magnetic variation: 11E

2.19.2 ILS identification: UTJ

2.19.5 Coordinates: 40-47-08.3329N / 111-57-51.5557W

2.19.6 Site elevation: 4220.8 ft

2.19.1 ILS type: Glide Slope for runway 35. Magnetic variation: 11E

2.19.2 ILS identification: UTJ

2.19.5 Coordinates: 40-46-35.1583N / 111-57-48.6413W

2.19.6 Site elevation: 4229.2 ft

2.19.1 ILS type: DME for runway 35. Magnetic variation: 11E

2.19.2 ILS identification: UTJ

2.19.5 Coordinates: 40-46-09.7838N / 111-57-47.5356W

2.19.6 Site elevation: 4242.7 ft

General Remarks:

FLOCK OF BIRDS ON AND IN VICINITY OF ARPT.

HELIPADS B AND F LOCATED ON GENERAL AVIATION APRONS.

SURFACE MOVEMENT GUIDANCE CONTROL SYSTEM & LOW VISIBILITY TAXI PROCEDURES.

DUE TO TFC VOL, LCL DEPARTURE AND ARR OPNS ARE DISCOURAGED AND DLAS CAN BE EXPCD BTN 1000-1200 AND 2000-2300.

SVFR IS NOT RCMD AT THE ARPT, IF REQD, EXPT DLAS.

ANG RAMP - OPR 1430-2230Z++ MON-THU. CLSD FRI-SUN AND HOL. OFFL BUS ONLY. PPR REQ 48 HR ALL ACFT, VALID 1 HR +/- ETA. TRAN PRK/SVC EXTREMELY LTD. BASE OPS DSN 245-2274, C801-245-2274. MIL

ALT HILL AFB (KHIF) 25 NM N. ALL ACFT CTC UTAH CTL (COMD POST) 20 MIN OUT WITH ETA AND REQ.

ANG RAMP – ALL ACFT CTC UTAH CONTROL WITH LDG & DEP TIMES. COMD POST DSN: 245-2416/2417; C801-245-2416/2417. PHASE II WILDLIFE ACT DURING MIGRATION/MORNING/EVENING HRS FR OCT-APR. CTC UTAH CTL FOR CURRENT BIRD-WATCH COND.

SEE FLIP AP/1 SUPPLEMENTARY ARPT INFO.

COMMUNICATIONS-ANG COMD POST: CALL UTAH CONTROL.

USE CAUTION FOR EXTENSIVE PARAGLIDING OPS INVOF POINT OF THE MOUNTAIN.

SEE CURRENT NOTAMS FOR DATES AND ADDITIONAL INFO.

ANG SERVICE-FUEL: A++.

TWY Y RSTD TO WINGSPANS LESS THAN 171 FT BTWN TWY H3 AND H4.

RWY 16L RUNUP AREA CLOSED PERMANENTLY.

USE MINIMUM THRUST IN CONSTRUCTION AREAS.

CONTACT GROUND ON 123.775 BEFORE TAXIING OUT OF NORTH CARGO.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

RWY 34L DE-ICE PAD 128.975

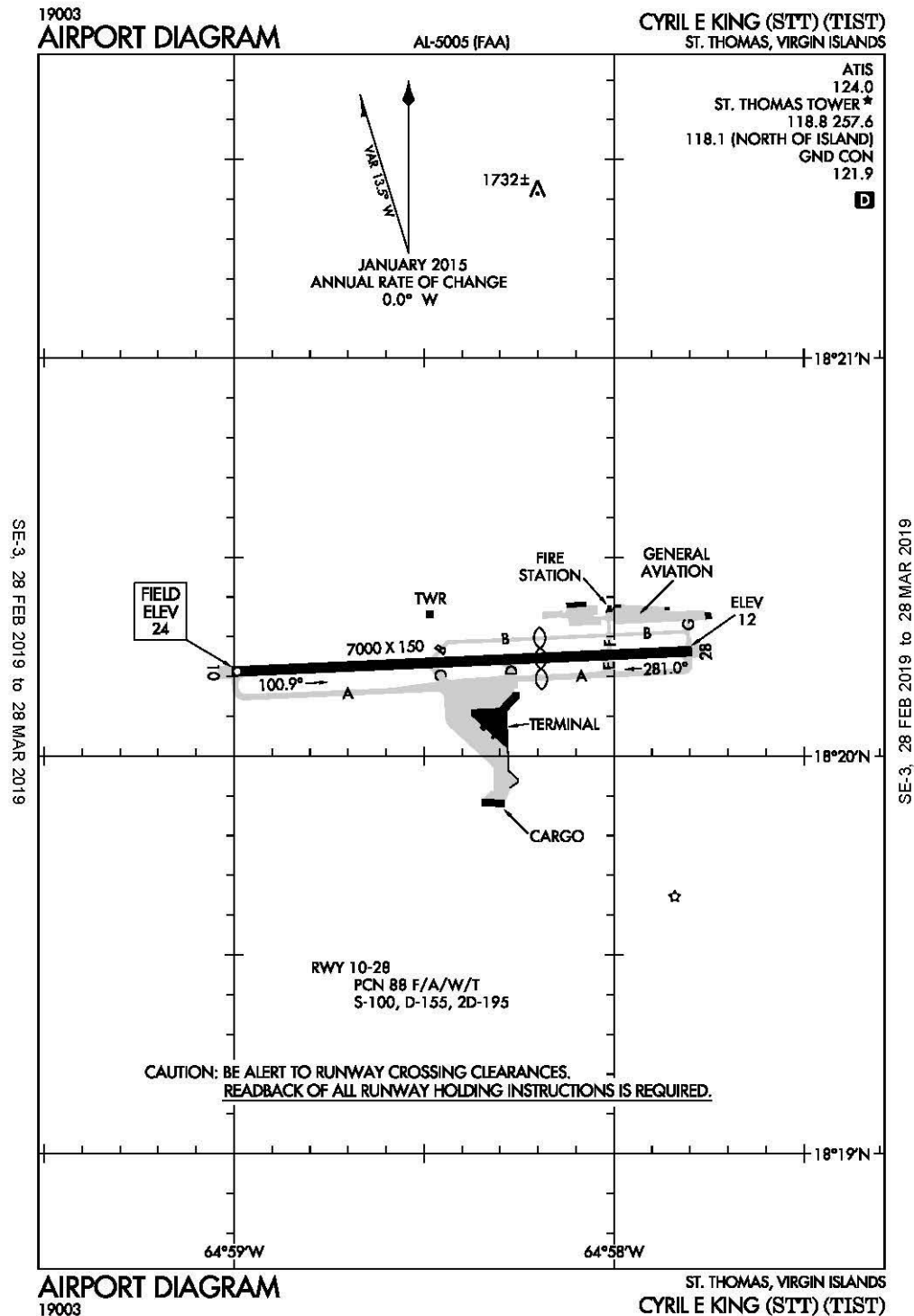
RWY 34R DE-ICE PAD 129.975

TWY L DE-ICE PAD 131.975

RWY 16L DE-ICE PAD 131.975.

ACCESS TO D CONCOURSE EVEN NUMBERED GATES AND E CONCOURSE, THROUGH SPOTS 20 AND 21 ONLY.

Charlotte Amalie St. Thomas, Virgin Islands
Cyril E King
ICAO Identifier TIST



**Charlotte Amalie, VI
Cyril E King
ICAO Identifier TIST**

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 18-20-14.3N / 64-58-24W
2.2.2 From City: 2 Miles W Of Charlotte Amalie, VI
2.2.3 Elevation: 23.6 ft
2.2.5 Magnetic variation: 13W (2000)
2.2.6 Airport Contact: Mitchell Todman
CYRIL E. KING AIRPORT
St Thomas, VI 802
(340) 714-0117

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, 0700-2300
Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Minor

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973
2.6.4 Remarks: Closed To Unscheduled Aircraft 0 Operations With More Than 30 Passenger Seats Except 24
Hrs Prior Permission Required Call Airport Manager
340-774-5100.

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 10
2.10.1.b Type of obstacle: Pole. Not Lighted or Marked

2.10.1.a. Runway designation: 28
2.10.1.b Type of obstacle: Pole (28 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 400 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 10
2.12.2 True Bearing: 87

2.12.3 Dimensions: 7000 ft x 150 ft
2.12.4 PCN: 88 F/A/W/T
2.12.5 Coordinates: 18-20-12.7247N /
64-59-00.3371W
2.12.6 Threshold elevation: 23.5 ft
2.12.6 Touchdown zone elevation: 23.6 ft

2.12.1 Designation: 28
2.12.2 True Bearing: 267
2.12.3 Dimensions: 7000 ft x 150 ft
2.12.4 PCN: 88 F/A/W/T
2.12.5 Coordinates: 18-20-15.8124N /
64-57-47.7382W
2.12.6 Threshold elevation: 11.7 ft
2.12.6 Touchdown zone elevation: 16.5 ft

AD 2.13 Declared distances

2.13.1 Designation: 10
2.13.2 Takeoff run available: 7000
2.13.3 Takeoff distance available: 7000
2.13.4 Accelerate-stop distance available: 7000
2.13.5 Landing distance available: 7000

2.13.1 Designation: 28
2.13.2 Takeoff run available: 7000
2.13.3 Takeoff distance available: 7000
2.13.4 Accelerate-stop distance available: 6000
2.13.5 Landing distance available: 3700

AD 2.14 Approach and runway lighting

2.14.1 Designation: 10
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ATIS
2.18.3 Service designation: 124 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.19.5 Coordinates: 18-20-16.1682N /
64-57-39.2072W
2.19.6 Site elevation: 16 ft

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.8 MHz

2.19.1 ILS type: Glide Slope for runway 10. Magnetic
variation: 13W

2.18.1 Service designation: LCL/P (NORTH OF IS-
LAND)
2.18.3 Service designation: 118.1 MHz

2.19.2 ILS identification: TMN
2.19.5 Coordinates: 18-20-10.7461N /
64-58-48.2946W
2.19.6 Site elevation: 15.1 ft

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 257.6 MHz

2.19.1 ILS type: DME for runway 10. Magnetic varia-
tion: 13W

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 10. Magnetic vari-
ation: 13W
2.19.2 ILS identification: TMN

2.19.2 ILS identification: TMN
2.19.5 Coordinates: 18-20-18.7659N / 64-57-39.484W
2.19.6 Site elevation: 22.6 ft

General Remarks:

ACFT THAT BACK TAXI FOR DEP ON RY 28 SHALL MAKE THEIR 180 DEG TURN CCLKWS.

NOISE SENSITIVE AREA: AVOID OVERFLIGHTS OF WATER ISLAND LOCATED 2 MI SE OF ARPT.

PILOTS MAY ENCTR FALSE ILLUSORY INDICATIONS DURG NGT VISUAL APCHS TO RY 10 WHEN USING
VISUAL CUES FOR VERTICAL GUIDANCE; RCMD USE OF THE ILS GS & FQT CROSS REF WITH THE ACFT
ALTM TO MAINT THE PROPER APCH PROFILE.

LGTS ON HILL 4 NM SE OF ARPT MAY BE MISTAKEN FOR RY 10/28 WHEN MAKING A VISUAL APCH FROM
THE SOUTH.

RY 10 DEPS MAINTAIN RY HDG UNTIL REACHING DEP END OF RY BFR TURNING ON COURSE OR
ASSIGNED HDG UNLESS OTRW AUZD BY ATCT.

ARFF UNAVBL 2300-0630.

PILOTS CTC GND CTL PRIOR TO PUSHBACK.

OBSTRUCTION SAILBOAT MAST 100FT WEST OF APPROACH END OF RWY 10 50FT AGL

18256

ATIS 135.65
ST. CROIX TOWER * 118.6 239.3
GND CON 121.7

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
REARBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

253 ☆

RWY 10-28
PCN 62 F/C/W/T
S-100, D-175, 2D-300

ELEV 74

100 X 200

0.6% DOWN

0.4% UP

277.6°

100 X 200

VAR 13.6° W
JANUARY 2015
ANNUAL RATE OF CHANGE 0.0° W

TERMINAL

FIRE STATION

TWR

10004 X 150

17°42.5'N

17°41.5'N

64°49.0'W

64°48.5'W

64°48.0'W

64°47.5'W

64°47.0'W

18256

CHRISTIANSTED, ST. CROIX, VIRGIN ISLANDS
HENRY E ROHLSEN (STX)(TISX)

Christiansted, VI
Henry E Rohlsen
ICAO Identifier TISX

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 17-42-05.416N / 64-48-06.9945W
2.2.2 From City: 6 Miles SW Of Christiansted, VI
2.2.3 Elevation: 74.1 ft
2.2.5 Magnetic variation: 13W (2000)
2.2.6 Airport Contact: Mitchell Todman
P.O. BOX 1134
St Croix, VI 821
(340-778-1012)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, 0500-2300 Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: No
2.4.2 Fuel types: A1+,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973
2.6.4 Remarks: Closed To Unscheduled Aircraft 0 Operations With More Than 30 Passenger Seats Except 24 Hrs Prior Permission Required Contact Airport Manager 340-778-1012 Or 340-778-1033(Fax). ARFF Service Unavailable 2300-0500.

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 28
2.10.1.b Type of obstacle: Bldg (217 ft above runway end). Marked
2.10.1.c Location of obstacle: 800 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 10
2.12.2 True Bearing: 84
2.12.3 Dimensions: 10004 ft x 150 ft
2.12.4 PCN: 62 F/C/W/T
2.12.5 Coordinates: 17-42-00.212N / 64-48-58.445W
2.12.6 Threshold elevation: 73.7 ft
2.12.6 Touchdown zone elevation: 74.1 ft

2.12.1 Designation: 28

2.12.2 True Bearing: 264
2.12.3 Dimensions: 10004 ft x 150 ft
2.12.4 PCN: 62 F/C/W/T
2.12.5 Coordinates: 17-42-10.62N / 64-47-15.544W
2.12.6 Threshold elevation: 22.5 ft
2.12.6 Touchdown zone elevation: 40 ft

AD 2.13 Declared distances

2.13.1 Designation: 10
2.13.2 Takeoff run available: 10004
2.13.3 Takeoff distance available: 10004
2.13.4 Accelerate-stop distance available: 9003
2.13.5 Landing distance available: 9003

2.13.1 Designation: 28
2.13.2 Takeoff run available: 10004
2.13.3 Takeoff distance available: 10004
2.13.4 Accelerate-stop distance available: 10004
2.13.5 Landing distance available: 9003

AD 2.14 Approach and runway lighting

2.14.1 Designation: 10
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 28
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: ATIS
2.18.3 Service designation: 135.65 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 239.3 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.6 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 10. Magnetic variation: 13W

2.19.2 ILS identification: STX
2.19.5 Coordinates: 17-42-11.36N / 64-47-08.28W
2.19.6 Site elevation: 26.4 ft

2.19.1 ILS type: Outer Marker for runway 10. Magnetic variation: 13W
2.19.2 ILS identification: STX
2.19.5 Coordinates: 17-41-30.92N / 64-53-04.74W

2.19.6 Site elevation: 40 ft

2.19.1 ILS type: Glide Slope for runway 10. Magnetic variation: 13W
2.19.2 ILS identification: STX
2.19.5 Coordinates: 17-41-58.77N / 64-48-45.5W
2.19.6 Site elevation: 63.5 ft

General Remarks:

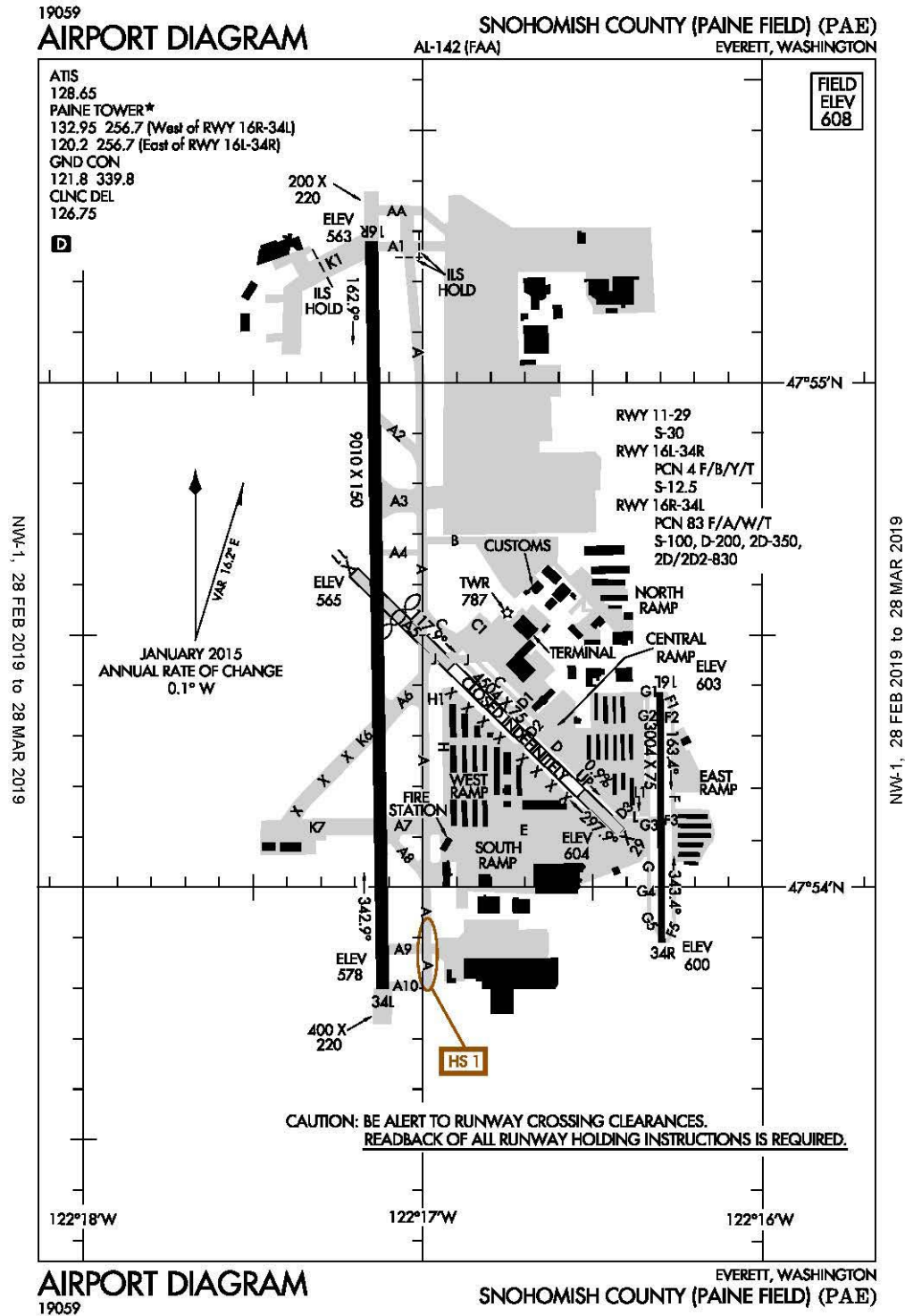
APCH TO RY 28 SMTMS OBSCD BY SMOKE FM LANDFILL LCTD E OF ARPT.

RY 10 AND 28 100' X 200' BLAST PAD.

BIRDS & WILDLIFE ON & INVOF ARPT.

TAXI INTO POSITION AND HOLD PROCEDURES NO LONGER IN EFFECT.

Everett, Washington
Snohomish County (Paine Field)
ICAO Identifier KPAE



Everett, WA
Snohomish County (Paine Fld)
ICAO Identifier KPAE

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 47-54-25.2N / 122-16-53.7W
2.2.2 From City: 6 Miles SW Of Everett, WA
2.2.3 Elevation: 607.5 ft
2.2.5 Magnetic variation: 16E (2020)
2.2.6 Airport Contact: Arif Ghouse
3220 100TH ST SW
Everett, WA 98204
((425) 388-5100)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: MAY-OCT Months, ALL Days,
0700-2100 Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: No
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index
Iv A certified on 11/1/1974
2.6.4 Remarks: Airport Closed To Aircraft 0 Operations
With More Than 30 Passenger Seats 2100-0700 Except
Prior Permission Required Contact Airport Operations
425-388-5110/5480. For Addl ARFF Capability Contact
Airport Operations 425-388-5110.

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 11
2.10.1.b Type of obstacle: Trees (9 ft above runway end).
Not Lighted or Marked
2.10.1.c Location of obstacle: 100 ft R of Centerline

2.10.1.a. Runway designation: 16L
2.10.1.b Type of obstacle: Pole (9 ft above runway end).
Not Lighted or Marked
2.10.1.c Location of obstacle: 100 ft L of Centerline

2.10.1.a. Runway designation: 29
2.10.1.b Type of obstacle: Trees (46 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 0 ft B of Centerline

2.10.1.a. Runway designation: 34L
2.10.1.b Type of obstacle: Trees (125 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 930 ft R of Centerline

2.10.1.a. Runway designation: 34R
2.10.1.b Type of obstacle: Pole (25 ft above runway
end). Not Lighted or Marked
2.10.1.c Location of obstacle: 125 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 11
2.12.2 True Bearing: 134
2.12.3 Dimensions: 4504 ft x 75 ft
2.12.5 Coordinates: 47-54-37.4797N /
122-17-12.3513W
2.12.6 Threshold elevation: 565 ft
2.12.6 Touchdown zone elevation: 607.5 ft

2.12.1 Designation: 29
2.12.2 True Bearing: 314
2.12.3 Dimensions: 4504 ft x 75 ft
2.12.5 Coordinates: 47-54-06.5309N /
122-16-24.9135W
2.12.6 Threshold elevation: 604 ft
2.12.6 Touchdown zone elevation: 607.5 ft

2.12.1 Designation: 16R
2.12.2 True Bearing: 179
2.12.3 Dimensions: 9010 ft x 150 ft
2.12.4 PCN: 83 F/A/W/T
2.12.5 Coordinates: 47-55-16.8075N /
122-17-09.0638W
2.12.6 Threshold elevation: 562.6 ft
2.12.6 Touchdown zone elevation: 570 ft

2.12.1 Designation: 34L
2.12.2 True Bearing: 359
2.12.3 Dimensions: 9010 ft x 150 ft

2.12.4 PCN: 83 F/A/W/T
2.12.5 Coordinates: 47-53-47.9027N /
122-17-07.0912W
2.12.6 Threshold elevation: 577.7 ft
2.12.6 Touchdown zone elevation: 583.6 ft

2.12.1 Designation: 16L
2.12.2 True Bearing: 180
2.12.3 Dimensions: 3004 ft x 75 ft
2.12.4 PCN: 4 F/B/Y/T
2.12.5 Coordinates: 47-54-23.1294N /
122-16-18.0937W
2.12.6 Threshold elevation: 602.8 ft
2.12.6 Touchdown zone elevation: 606.9 ft

2.12.1 Designation: 34R
2.12.2 True Bearing: 360
2.12.3 Dimensions: 3004 ft x 75 ft
2.12.4 PCN: 4 F/B/Y/T
2.12.5 Coordinates: 47-53-53.4884N /
122-16-17.7654W
2.12.6 Threshold elevation: 599.7 ft
2.12.6 Touchdown zone elevation: 606.9 ft

AD 2.13 Declared distances

2.13.1 Designation: 16R
2.13.2 Takeoff run available: 9010
2.13.3 Takeoff distance available: 9010
2.13.4 Accelerate-stop distance available: 9010
2.13.5 Landing distance available: 9010

2.13.1 Designation: 34L
2.13.2 Takeoff run available: 9010
2.13.3 Takeoff distance available: 9010
2.13.4 Accelerate-stop distance available: 9010
2.13.5 Landing distance available: 9010

2.13.1 Designation: 16L
2.13.2 Takeoff run available: 3004
2.13.3 Takeoff distance available: 3004
2.13.4 Accelerate-stop distance available: 3004
2.13.5 Landing distance available: 3004

2.13.1 Designation: 34R

2.13.2 Takeoff run available: 3004
2.13.3 Takeoff distance available: 3004
2.13.4 Accelerate-stop distance available: 3004
2.13.5 Landing distance available: 3004

AD 2.14 Approach and runway lighting

2.14.1 Designation: 11
2.14.4 Visual approach slope indicator system: V2L

2.14.1 Designation: 29
2.14.4 Visual approach slope indicator system: V2R

2.14.1 Designation: 16R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 34L
2.14.2 Approach lighting system: MALSF
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: AR OPS
2.18.3 Service designation: 34.1 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 128.65 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P
2.18.3 Service designation: 126.75 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 339.8 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: LCL/P (ACFT ARR W OF
CNTRLN OR DEP RWY 16R/34L)
2.18.3 Service designation: 132.95 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 256.7 MHz

2.18.1 Service designation: LCL/P (ACFT ARR E OF
CNTRLN OR DEP RWY 16L/34R)

122-17-13.6176W

2.19.6 Site elevation: 566.6 ft

2.18.3 Service designation: 120.2 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 16R. Magnetic
variation: 16E

2.19.1 ILS type: Localizer for runway 16R. Magnetic
variation: 16E

2.19.2 ILS identification: PAE

2.19.2 ILS identification: PAE

2.19.5 Coordinates: 47-55-07.3457N /

2.19.5 Coordinates: 47-53-34.0274N /

122-17-06.7862W

2.19.6 Site elevation: 569.6 ft

General Remarks:

RWY 16L-34R CLSD BTN 0500-1500Z-; LARGE ACFT FLY W PATTERN OVER WATER; SMALL ACFT FLY E
PATTERN OVER ARPT.

NOISE SENSITIVE ARPT; FOR NOISE ABATEMENT PROCEDURES & TFC PROCEDURES CALL ARPT OPS
425-388-5125.

IT IS REQUESTED THAT PILOTS ADHERE TO THE FOLLOWING NOISE ABATEMENT PROCEDURES UNLESS
OTHERWISE INSTRUCTED BY ATCT, ITINERANT ARRIVAL AND LOW APCH OF SMALL ACFT OVER 250
HORSEPOWER AUTHORIZED ON RYS 16L AND 34R.

BE ALERT TO CNVG TFC ON BASE TO FINAL LEGS RYS 16R/34L 2100-0700.

AVOID OVERFLIGHT OF BOEING RAMP - NE CORNER OF ARPT DUE TO JET BLAST.

TRAINING FLIGHTS DISCOURAGED AFTER 2200. RY 16R-34L TGL PROHIBITED MON-FRI FRM 0700-0900.

AVOID INTXN DEPS FM RYS 16L/34R

FLOCKS OF LARGE & SMALL BIRDS INVOF ARPT.

ITINERANT DEP OF SMALL ACFT OVER 250 HORSEPOWER ON RY 34R.

TWY A-2 RESTRICTED TO 30,000 LBS.

AREAS NOT VSB FM ATCT INCL EAST EDGE OF SOUTH 1200 FT OF TWY A, TWY E FM SE CORNER OF WEST
HNGRS TO TWY A, TWY H FROM NW EDGE OF WEST HNGRS TO TWY E.

RYS 16L/34R LTD TO HELI 8,000 LBS OR LESS.

TWY W CLSD INDEF.

TWY INTS D1, AND D2 CLOSED INDEFLY.

FOR NOISE ABATEMENT FROM 0500-1500Z++ IF ACFT PERFORMANCE/WIND ALLOWS, USE RY 16R FOR
ARRIVALS AND RY 34L FOR DEPARTURES.

TWY ECHO LTD TO ACFT WITH A WINGSPAN OF 156 FT AND LESS. ACFT OVER A WINGSPAN OF 156 FT,
TUG OPS ONLY.

TWY C BTN TRML RAMP AND CNTRL RAMP RSTRD TO WINGSPAN OF 68 FT OR LESS. TWY D BTN D1 AND
TWY GOLF RSTRD TO WINGSPAN OF 49 FT OR LESS. TWYY A4, A5, K7 & B RSTRD TO WINGSPAN OF 118
FT OR LESS.

TAXILANE H RSTRD TO WINGSPAN OF 49 FT OR LESS.

PAE HAS FAC CONSTRAINTS THAT LIMIT ITS ABILITY TO ACCOMMODATE DIVERTED FLIGHTS AND MAINTAIN THE ARPTS SAFE OPERATION DURING IRREGULAR OPS. ACFT OPERATORS SHOULD CTCT THE ON-DUTY ARPT

OPS PERSONNEL (425-610-8411) TO COORDINATE DIVERTED FLIGHTS EXCEPT IN THE CASE OF A DECLARED IN-FLIGHT EMERGENCY.

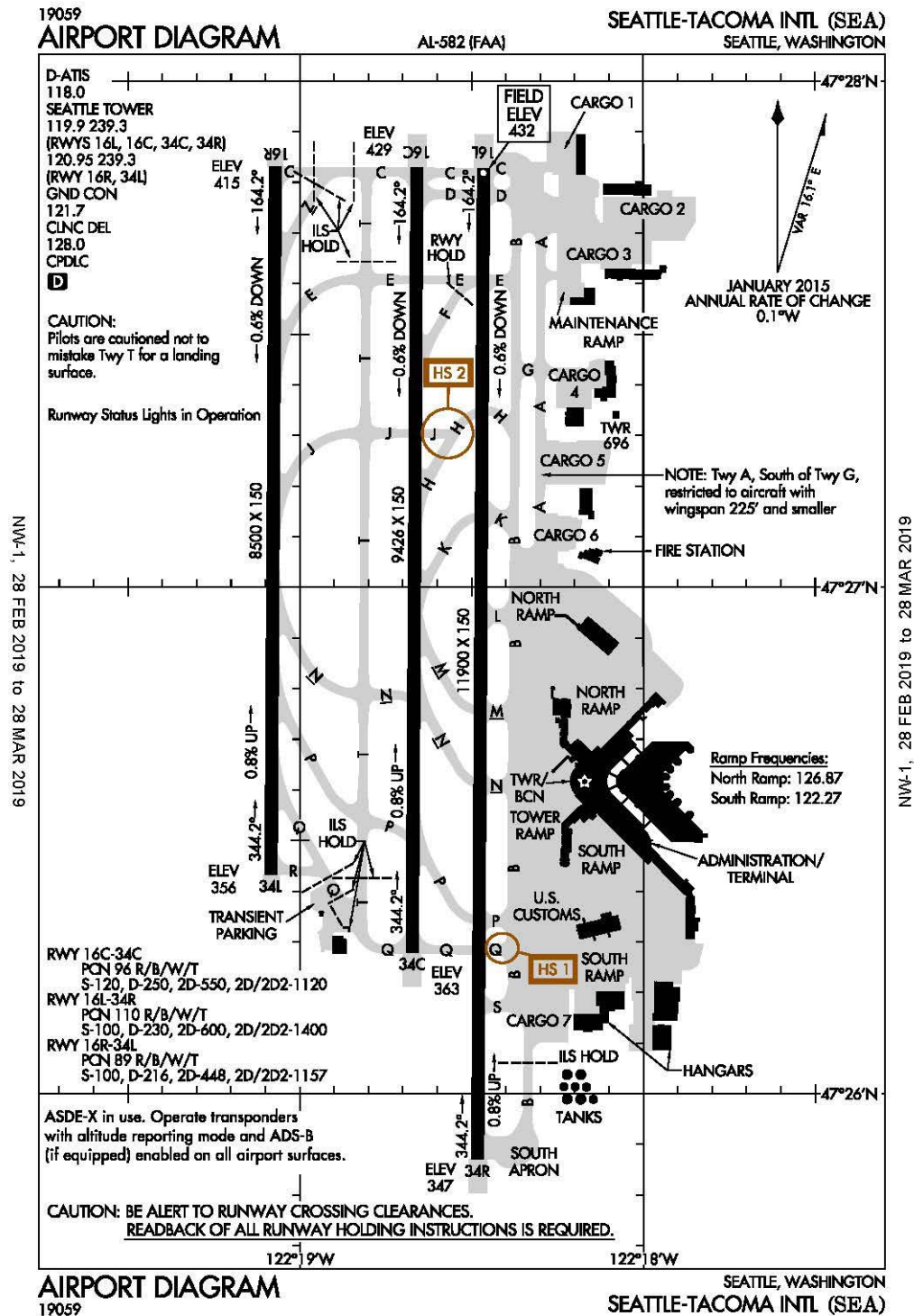
PPR REQUIRED FOR ACCESS ON BOEING RAMP. CTC BOEING FLIGHT DISPATCH 206-544-5900 FOR APPROVAL. PRIOR TO TAXI ONTO BOEING RAMP CTC BOEING RADIO TWR 123.475 OR CALL 425-342-5900. TWY K1 CLSD TO ACFT UNDER 30,000 LBS.

TRANSIENT HELICOPTERS EXPECT LANDING/TAKEOFF ON TWY B

AIRFIELD CONDITIONS NOT MONITORED AFTER BUSINESS HOURS OF 8AM-5PM LOCAL MON-FRI.

EMERG FREQ 121.5 NO AT TWR. SEATTLE APP CON-TRACON MONITORS 121.5 FOR EVERETT (PAE). FOR CD WHEN ATCT IS CLSD CTC SEA APCH AT 206-214-4722.

Seattle, Washington
Seattle-Tacoma International
ICAO Identifier KSEA



Seattle, WA
Seattle-Tacoma Intl
ICAO Identifier KSEA

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 47-26-59.6N / 122-18-42.4W
2.2.2 From City: 10 Miles S Of Seattle, WA
2.2.3 Elevation: 432.3 ft
2.2.5 Magnetic variation: 16E (2020)
2.2.6 Airport Contact: Lance Lyttle
BOX 68727
Seattle, WA 98168
((206) 787-5229)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,A1
2.4.5 Hangar space: No
2.4.6 Repair facilities: None

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
E certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 34C
2.10.1.b Type of obstacle: Tree (131 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 700 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 16R
2.12.2 True Bearing: 180
2.12.3 Dimensions: 8500 ft x 150 ft
2.12.4 PCN: 89 R/B/W/T
2.12.5 Coordinates: 47-27-49.8109N /
122-19-04.2846W
2.12.6 Threshold elevation: 414.8 ft
2.12.6 Touchdown zone elevation: 414.8 ft
2.12.7 Slope: 0.7 DOWN

2.12.1 Designation: 34L
2.12.2 True Bearing: 0
2.12.3 Dimensions: 8500 ft x 150 ft
2.12.4 PCN: 89 R/B/W/T
2.12.5 Coordinates: 47-26-25.9217N /
122-19-05.009W

2.12.6 Threshold elevation: 356.2 ft
2.12.6 Touchdown zone elevation: 379.3 ft
2.12.7 Slope: 0.7 UP

2.12.1 Designation: 16L
2.12.2 True Bearing: 180
2.12.3 Dimensions: 11900 ft x 150 ft
2.12.4 PCN: 110 R/B/W/T
2.12.5 Coordinates: 47-27-49.6628N /
122-18-27.9008W
2.12.6 Threshold elevation: 432.3 ft
2.12.6 Touchdown zone elevation: 432.3 ft
2.12.7 Slope: 0.7 DOWN

2.12.1 Designation: 34R
2.12.2 True Bearing: 0
2.12.3 Dimensions: 11900 ft x 150 ft
2.12.4 PCN: 110 R/B/W/T
2.12.5 Coordinates: 47-25-52.2202N /
122-18-28.9377W
2.12.6 Threshold elevation: 346.7 ft
2.12.6 Touchdown zone elevation: 371.5 ft
2.12.7 Slope: 0.7 UP

2.12.1 Designation: 16C
2.12.2 True Bearing: 180
2.12.3 Dimensions: 9426 ft x 150 ft
2.12.4 PCN: 96 R/B/W/T
2.12.5 Coordinates: 47-27-49.7155N /
122-18-39.5415W
2.12.6 Threshold elevation: 429.4 ft
2.12.6 Touchdown zone elevation: 429.5 ft
2.12.7 Slope: 0.7 DOWN

2.12.1 Designation: 34C
2.12.2 True Bearing: 0
2.12.3 Dimensions: 9426 ft x 150 ft
2.12.4 PCN: 96 R/B/W/T
2.12.5 Coordinates: 47-26-16.6966N /
122-18-40.3554W
2.12.6 Threshold elevation: 362.9 ft
2.12.6 Touchdown zone elevation: 387 ft
2.12.7 Slope: 0.7 UP

AD 2.13 Declared distances

2.13.1 Designation: 16R
2.13.2 Takeoff run available: 8500
2.13.3 Takeoff distance available: 8500
2.13.4 Accelerate-stop distance available: 8500
2.13.5 Landing distance available: 8500

2.13.1 Designation: 34L
2.13.2 Takeoff run available: 8500
2.13.3 Takeoff distance available: 8500
2.13.4 Accelerate-stop distance available: 8500
2.13.5 Landing distance available: 8500

2.13.1 Designation: 16L
2.13.2 Takeoff run available: 11901
2.13.3 Takeoff distance available: 11901
2.13.4 Accelerate-stop distance available: 11901
2.13.5 Landing distance available: 11901

2.13.1 Designation: 34R
2.13.2 Takeoff run available: 11901
2.13.3 Takeoff distance available: 11901
2.13.4 Accelerate-stop distance available: 11901
2.13.5 Landing distance available: 11901

2.13.1 Designation: 16C
2.13.2 Takeoff run available: 9426
2.13.3 Takeoff distance available: 9426
2.13.4 Accelerate-stop distance available: 9426
2.13.5 Landing distance available: 9426

2.13.1 Designation: 34C
2.13.2 Takeoff run available: 9426
2.13.3 Takeoff distance available: 9426
2.13.4 Accelerate-stop distance available: 9426
2.13.5 Landing distance available: 9426

AD 2.14 Approach and runway lighting

2.14.1 Designation: 16R
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 34L
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 16L
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 34R
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 16C
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 34C
2.14.2 Approach lighting system: MALSR
2.14.4 Visual approach slope indicator system: P4L

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: CD/P
2.18.3 Service designation: 128 MHz

2.18.1 Service designation: D-ATIS
2.18.3 Service designation: 118 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: GATE CTL
2.18.3 Service designation: 126.25 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.7 MHz

2.18.1 Service designation: LCL/P (RY 16R/34L)
2.18.3 Service designation: 120.95 MHz

2.18.1 Service designation: LCL/P (16L/34R, 16C/34C)
2.18.3 Service designation: 239.3 MHz

2.18.1 Service designation: LCL/P (16R/34L)
2.18.3 Service designation: 239.3 MHz

2.18.1 Service designation: LCL/P (RY 16L/16C/34C/34R)
2.18.3 Service designation: 119.9 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 16C. Magnetic variation: 16E

2.19.2 ILS identification: SZI

2.19.5 Coordinates: 47-26-06.703N / 122-18-40.4438W

2.19.6 Site elevation: 355.7 ft

2.19.1 ILS type: DME for runway 16C. Magnetic variation: 16E

2.19.2 ILS identification: SZI

2.19.5 Coordinates: 47-26-06.28N / 122-18-39.51W

2.19.6 Site elevation: 359 ft

2.19.1 ILS type: Inner Marker for runway 16C. Magnetic variation: 16E
2.19.2 ILS identification: SZI
2.19.5 Coordinates: 47-27-58.663N / 122-18-39.3237W
2.19.6 Site elevation: 403.1 ft

2.19.1 ILS type: Glide Slope for runway 16C. Magnetic variation: 16E
2.19.2 ILS identification: SZI
2.19.5 Coordinates: 47-27-38.687N / 122-18-45.462W
2.19.6 Site elevation: 417.6 ft

2.19.1 ILS type: Inner Marker for runway 16L. Magnetic variation: 16E
2.19.2 ILS identification: SNQ
2.19.5 Coordinates: 47-27-58.063N / 122-18-27.8191W
2.19.6 Site elevation:

2.19.1 ILS type: Glide Slope for runway 16L. Magnetic variation: 16E
2.19.2 ILS identification: SNQ
2.19.5 Coordinates: 47-27-38.9362N / 122-18-33.8193W
2.19.6 Site elevation: 425.2 ft

2.19.1 ILS type: DME for runway 16L. Magnetic variation: 16E
2.19.2 ILS identification: SNQ
2.19.5 Coordinates: 47-26-03.5974N / 122-18-22.6779W
2.19.6 Site elevation: 369.4 ft

2.19.1 ILS type: Localizer for runway 16L. Magnetic variation: 16E
2.19.2 ILS identification: SNQ
2.19.5 Coordinates: 47-25-42.224N / 122-18-29.0263W
2.19.6 Site elevation: 335.5 ft

2.19.1 ILS type: Localizer for runway 16R. Magnetic variation: 16E
2.19.2 ILS identification: CJL
2.19.5 Coordinates: 47-26-15.9249N / 122-19-05.0962W
2.19.6 Site elevation: 343.7 ft

2.19.1 ILS type: DME for runway 16R. Magnetic variation: 16E
2.19.2 ILS identification: CJL

2.19.5 Coordinates: 47-26-15.6195N / 122-18-59.9408W
2.19.6 Site elevation: 344.8 ft

2.19.1 ILS type: Inner Marker for runway 16R. Magnetic variation: 16E
2.19.2 ILS identification: CJL
2.19.5 Coordinates: 47-27-58.2279N / 122-19-04.1978W
2.19.6 Site elevation: 379.9 ft

2.19.1 ILS type: Glide Slope for runway 16R. Magnetic variation: 16E
2.19.2 ILS identification: CJL
2.19.5 Coordinates: 47-27-38.4647N / 122-19-00.5973W
2.19.6 Site elevation: 405.5 ft

2.19.1 ILS type: Glide Slope for runway 34C. Magnetic variation: 16E
2.19.2 ILS identification: TUC
2.19.5 Coordinates: 47-26-25.6028N / 122-18-46.1679W
2.19.6 Site elevation: 366.8 ft

2.19.1 ILS type: DME for runway 34C. Magnetic variation: 16E
2.19.2 ILS identification: TUC
2.19.5 Coordinates: 47-26-06.28N / 122-18-39.51W
2.19.6 Site elevation: 359 ft

2.19.1 ILS type: Localizer for runway 34C. Magnetic variation: 16E
2.19.2 ILS identification: TUC
2.19.5 Coordinates: 47-27-54.3525N / 122-18-39.5018W
2.19.6 Site elevation: 421.8 ft

2.19.1 ILS type: Glide Slope for runway 34L. Magnetic variation: 16E
2.19.2 ILS identification: BEJ
2.19.5 Coordinates: 47-26-34.9351N / 122-18-59.9836W
2.19.6 Site elevation: 358.5 ft

2.19.1 ILS type: DME for runway 34L. Magnetic variation: 16E
2.19.2 ILS identification: BEJ
2.19.5 Coordinates: 47-26-15.6195N / 122-18-59.9408W
2.19.6 Site elevation: 344.8 ft

2.19.1 ILS type: Localizer for runway 34L. Magnetic variation: 16E
2.19.2 ILS identification: BEJ
2.19.5 Coordinates: 47-27-59.7764N / 122-19-04.1986W
2.19.6 Site elevation: 409.5 ft

2.19.1 ILS type: DME for runway 34R. Magnetic variation: 16E
2.19.2 ILS identification: SEA
2.19.5 Coordinates: 47-26-03.5974N / 122-18-22.6779W
2.19.6 Site elevation: 369.4 ft

2.19.1 ILS type: Glide Slope for runway 34R. Magnetic variation: 16E
2.19.2 ILS identification: SEA
2.19.5 Coordinates: 47-26-03.3996N / 122-18-23.0248W
2.19.6 Site elevation: 355.1 ft

2.19.1 ILS type: Localizer for runway 34R. Magnetic variation: 16E
2.19.2 ILS identification: SEA
2.19.5 Coordinates: 47-27-54.2762N / 122-18-27.8613W
2.19.6 Site elevation: 428.1 ft

General Remarks:

BIRD FLOCKS WITHIN ARPT VCNTY – CHECK LCL ADZYS.

FLIGHT NOTIFICATION SERVICE (ADCUS) AVBL.

BTN THE HRS OF 2200-0700 THE USE OF EXTDD REVERSE THRUST IS DISCOURAGED BYD WHAT IS NECESSARY FOR OPNL OR SAFETY REASONS. NOISE ABATEMENT PROCEDURES IN EFFECT BTN 2200-0600. FOR FURTHER INFO CONTACT SEA NOISE ABATEMENT OFFICE AT 206-787-7496.

HELICOPTERS LANDING & DEPARTING AVOID OVERFLYING FUEL FARM LCTD AT THE SE CORNER OF THE ARPT.

(E110) CONTINUOUS POWER ARPT.

(E94) WSO/WSFO.

TWY A SOUTH OF TWY G RSTRD TO ACFT WITH WINGSPAN 225 FT AND SMALLER.

DO NOT MISTAKE TWY T FOR LNDG SFC.

ACCESS TO AIR CARGO 4 PARKING AND CARGO AREAS RSTD TO ACFT WITH WINGSPANS OF 170 FT OR LESS.

TWY FOR CORPORATE HANGAR RAMP LTD TO ACFT WITH 104 FT OR LESS WINGSPAN FOR TAXI OPS. GA CUSTOMS PARKING IS VERY LIMITED.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

PPR FOR ALL GEN AVIATION PARKING AND SERVICES, CTC 206-433-5481. 6 HOUR PPR FOR AVGAS FUELING, CTC 206-433-5481.

TAXILANE W RSTRD TO WINGSPAN OF 135 FT OR LESS NORTH OF TWY N AND 167 FT OR LESS SOUTH TO TWX N . SEATTLE RAMP TWR PRVDS ADVSY CTL ONLY.

GA LANDING FEES PAYABLE BY MAJOR CREDIT CARDS ONLY.

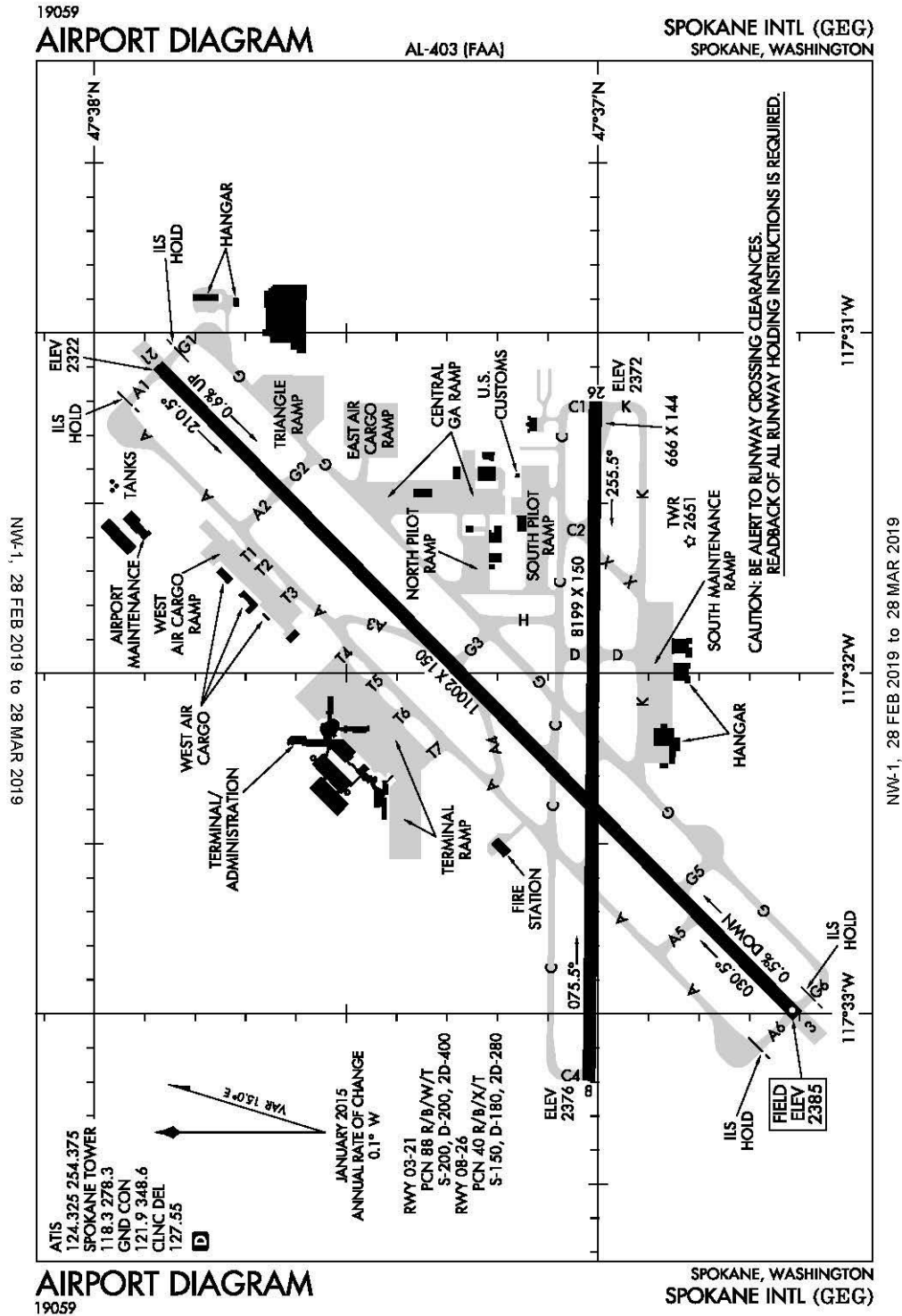
TAXILANE ON NORTH SIDE OF NORTH SATELLITE RESTRICTED TO WINGSPAN OF LESS THAN 118 FT. TRI-TAXILANES AT NORTH SATELLITE: CENTER (GREEN) TAXILANE RESTRICTED TO WINGSPAN OF 135 FT. OR LESS. WHEN AN AIRCRAFT IS ON THE CENTER (GREEN) OR OTHER (ORANGE/BLUE) TAXILANES, NO OTHER AIRCRAFT CAN SIMUL USE THE ADJACENT TAXILANE(S). ORANGE AND BLUE TAXILANES

ARE RESTRICTED TO WINGSPANS LESS THAN 118 FT. TWO AIRCRAFT CAN SIMUL USE THE OUTER TAXILANES.

RY STATUS LGTS ARE IN OPN.

ACFT WITH WINGSPANS OF 171 FT. OR MORE PARKED AT PAX GATES OR CARGO 7 MUST PROVIDE 30 MIN PPR PRIOR TO PUSHBACK TO SEATTLE RAMP TWR WHEN VSBY LESS THAN 2400 RVR.

Spokane, Washington
Spokane International
ICAO Identifier KEGG



Spokane, WA
Spokane Intl
ICAO Identifier KEGG

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 47-37-08.5N / 117-32-06.8W
2.2.2 From City: 5 Miles SW Of Spokane, WA
2.2.3 Elevation: 2385 ft
2.2.5 Magnetic variation: 14E (2020)
2.2.6 Airport Contact: Lawrence J Krauter
9000 W AIRPORT DR.
Spokane, WA 99224
((509) 455-6418)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 21
2.10.1.b Type of obstacle: Gnd (9 ft above runway end).
Not Lighted or Marked
2.10.1.c Location of obstacle: 500 ft L of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 08
2.12.2 True Bearing: 90
2.12.3 Dimensions: 8199 ft x 150 ft
2.12.4 PCN: 40 R/B/X/T
2.12.5 Coordinates: 47-37-01.0687N /
117-33-11.7639W
2.12.6 Threshold elevation: 2376.2 ft
2.12.6 Touchdown zone elevation: 2376.2 ft

2.12.1 Designation: 26
2.12.2 True Bearing: 270
2.12.3 Dimensions: 8199 ft x 150 ft
2.12.4 PCN: 40 R/B/X/T
2.12.5 Coordinates: 47-37-00.3642N /
117-31-12.1045W
2.12.6 Threshold elevation: 2371.5 ft

2.12.6 Touchdown zone elevation: 2371.5 ft

2.12.1 Designation: 03
2.12.2 True Bearing: 45
2.12.3 Dimensions: 11002 ft x 150 ft
2.12.4 PCN: 88 R/B/W/T
2.12.5 Coordinates: 47-36-36.2909N /
117-33-00.2876W
2.12.6 Threshold elevation: 2385 ft
2.12.6 Touchdown zone elevation: 2385 ft
2.12.7 Slope: 0.5 DOWN

2.12.1 Designation: 21
2.12.2 True Bearing: 225
2.12.3 Dimensions: 11002 ft x 150 ft
2.12.4 PCN: 88 R/B/W/T
2.12.5 Coordinates: 47-37-52.3811N /
117-31-05.7573W
2.12.6 Threshold elevation: 2322.4 ft
2.12.6 Touchdown zone elevation: 2346.1 ft
2.12.7 Slope: 0.6 UP

AD 2.13 Declared distances

2.13.1 Designation: 08
2.13.2 Takeoff run available: 8199
2.13.3 Takeoff distance available: 8199
2.13.4 Accelerate-stop distance available: 8199
2.13.5 Landing distance available: 8199

2.13.1 Designation: 26
2.13.2 Takeoff run available: 8199
2.13.3 Takeoff distance available: 8199
2.13.4 Accelerate-stop distance available: 8199
2.13.5 Landing distance available: 8199

2.13.1 Designation: 03
2.13.2 Takeoff run available: 11002
2.13.3 Takeoff distance available: 11002
2.13.4 Accelerate-stop distance available: 11002
2.13.5 Landing distance available: 11002

2.13.1 Designation: 21
2.13.2 Takeoff run available: 11002
2.13.3 Takeoff distance available: 11002
2.13.4 Accelerate-stop distance available: 11002
2.13.5 Landing distance available: 11002

AD 2.14 Approach and runway lighting

2.14.1 Designation: 08
2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 26
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 03
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 21
2.14.2 Approach lighting system: ALSF2
2.14.4 Visual approach slope indicator system: P4L
2.14.10 Remarks: ALSF 2 May Be Operated As SSALR
During Favorable Wx Conditions.

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P DEP/P IC
(026-204)
2.18.3 Service designation: 263 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(026-204)
2.18.3 Service designation: 133.35 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(205-025)
2.18.3 Service designation: 282.25 MHz

2.18.1 Service designation: APCH/P DEP/P IC
(205-025)
2.18.3 Service designation: 123.75 MHz

2.18.1 Service designation: APCH/S DEP/S
2.18.3 Service designation: 372.9 MHz

2.18.1 Service designation: ATIS
2.18.3 Service designation: 124.325 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: ATIS
2.18.3 Service designation: 254.375 MHz
2.18.4 Hours of operation: 24

2.18.1 Service designation: CD/P
2.18.3 Service designation: 127.55 MHz

2.18.1 Service designation: CLASS C (026-204)
2.18.3 Service designation: 263 MHz

2.18.1 Service designation: CLASS C (205-025)
2.18.3 Service designation: 282.25 MHz

2.18.1 Service designation: CLASS C (026-204)

2.18.3 Service designation: 133.35 MHz

2.18.1 Service designation: CLASS C (205-025)
2.18.3 Service designation: 123.75 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.9 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 348.6 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 118.3 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 278.3 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Localizer for runway 03. Magnetic variation: 14E

2.19.2 ILS identification: OIJ
2.19.5 Coordinates: 47-37-59.6757N /
117-30-54.7682W
2.19.6 Site elevation: 2315.7 ft

2.19.1 ILS type: DME for runway 03. Magnetic variation: 14E

2.19.2 ILS identification: OIJ
2.19.5 Coordinates: 47-36-32.05N / 117-33-15.1W
2.19.6 Site elevation: 2380.2 ft

2.19.1 ILS type: Glide Slope for runway 03. Magnetic variation: 14E

2.19.2 ILS identification: OIJ
2.19.5 Coordinates: 47-36-47.5569N /
117-32-51.8755W
2.19.6 Site elevation: 2372 ft

2.19.1 ILS type: Inner Marker for runway 03. Magnetic variation: 14E

2.19.2 ILS identification: OIJ
2.19.5 Coordinates: 47-36-30.0643N /
117-33-09.6536W
2.19.6 Site elevation: 2380.5 ft

2.19.1 ILS type: Glide Slope for runway 21. Magnetic variation: 14E

2.19.2 ILS identification: GEG

2.19.5 Coordinates: 47-37-48.959N / 117-31-19.4519W

2.19.6 Site elevation: 2324.3 ft

2.19.1 ILS type: DME for runway 21. Magnetic variation: 14E

2.19.2 ILS identification: GEG

2.19.5 Coordinates: 47-36-32.05N / 117-33-15.1W

2.19.6 Site elevation: 2380.2 ft

2.19.1 ILS type: Localizer for runway 21. Magnetic variation: 14E

2.19.2 ILS identification: GEG

2.19.5 Coordinates: 47-36-29.2008N / 117-33-10.9524W

2.19.6 Site elevation: 2380.1 ft

General Remarks:

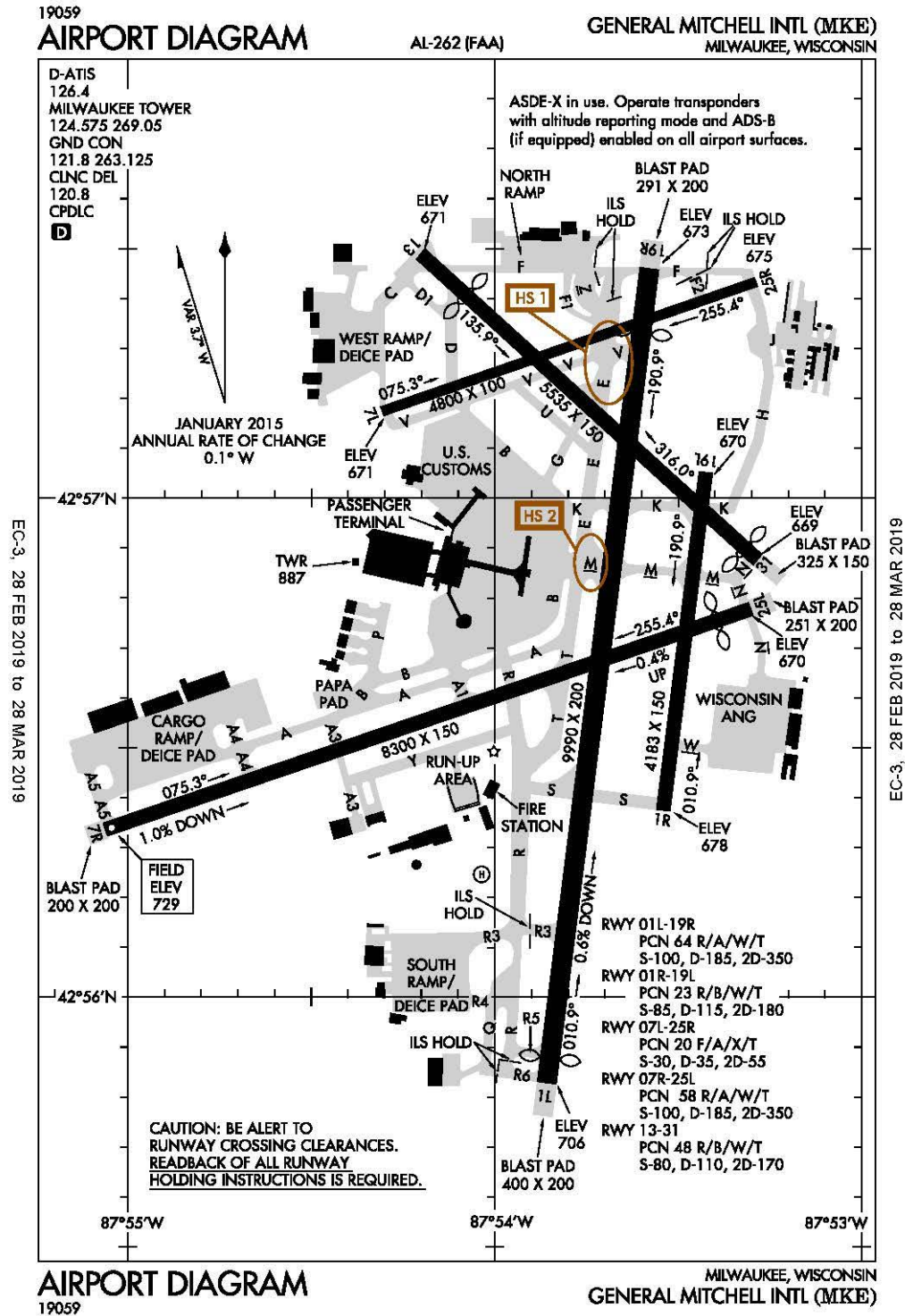
BE ALERT TO TURBULENCE OVER SMOKE STACKS 1 MILE EAST OF ARPT.

WATERFOWL & BIRDS ON & INVOF ARPT.

TWY K UNLGTD ON RAMP SIDE ALONG MAINTENANCE RAMP AND IS UNAVBL BELOW 1200 RVR UNLESS UNDER ESCORT BY "FOLLOW ME".

PORTIONS OF TWY K NOT VISIBLE FM ATCT.

Milwaukee, Wisconsin
General Mitchell International
ICAO Identifier KMKE



Milwaukee, WI
General Mitchell Intl
ICAO Identifier KMKE

AD 2.2 Aerodrome geographical and administrative data

2.2.1 Reference Point: 42-56-49N / 87-53-49.4W
2.2.2 From City: 5 Miles S Of Milwaukee, WI
2.2.3 Elevation: 728.5 ft
2.2.5 Magnetic variation: 4W (2020)
2.2.6 Airport Contact: Brian Dranzik
5300 S HOWELL AVE
Milwaukee, WI 53207
(414-747-5300)

AD 2.3 Attendance Schedule

2.3.1 – 2.3.11: ALL Months, ALL Days, ALL Hours

AD 2.4 Handling services and facilities

2.4.1 Cargo handling facilities: Yes
2.4.2 Fuel types: A,100LL
2.4.5 Hangar space: Yes
2.4.6 Repair facilities: Major

AD 2.6 Rescue and firefighting services

2.6.1 Aerodrome category for firefighting: ARFF Index I
C certified on 5/1/1973
2.6.4 Remarks: ARFF Index D Equip Available Upon Request.

AD 2.10 Aerodrome obstacles

2.10.1.a. Runway designation: 01L
2.10.1.b Type of obstacle: Tree (82 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 985 ft L of Centerline

2.10.1.a. Runway designation: 07L
2.10.1.b Type of obstacle: Tree (44 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 187 ft R of Centerline

2.10.1.a. Runway designation: 07R
2.10.1.b Type of obstacle: Tree (80 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 305 ft L of Centerline

2.10.1.a. Runway designation: 13
2.10.1.b Type of obstacle: Pole (33 ft above runway end). Lighted
2.10.1.c Location of obstacle: 69 ft L of Centerline

2.10.1.a. Runway designation: 19L
2.10.1.b Type of obstacle: Tree (125 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 463 ft L of Centerline

2.10.1.a. Runway designation: 19R
2.10.1.b Type of obstacle: Fence (6 ft above runway end). Not Lighted or Marked
2.10.1.c Location of obstacle: 404 ft R of Centerline

2.10.1.a. Runway designation: 25L
2.10.1.b Type of obstacle: Pole (41 ft above runway end). Lighted
2.10.1.c Location of obstacle: 464 ft L of Centerline

2.10.1.a. Runway designation: 25R
2.10.1.b Type of obstacle: Pole (77 ft above runway end). Lighted
2.10.1.c Location of obstacle: 195 ft R of Centerline

2.10.1.a. Runway designation: 31
2.10.1.b Type of obstacle: Rr (42 ft above runway end). Lighted
2.10.1.c Location of obstacle: 295 ft R of Centerline

AD 2.12 Runway physical characteristics

2.12.1 Designation: 13
2.12.2 True Bearing: 132
2.12.3 Dimensions: 5535 ft x 150 ft
2.12.4 PCN: 48 R/B/W/T
2.12.5 Coordinates: 42-57-29.2631N / 87-54-12.272W
2.12.6 Threshold elevation: 671.4 ft
2.12.6 Touchdown zone elevation: 670.5 ft

2.12.1 Designation: 31
2.12.2 True Bearing: 312
2.12.3 Dimensions: 5535 ft x 150 ft
2.12.4 PCN: 48 R/B/W/T
2.12.5 Coordinates: 42-56-52.508N / 87-53-17.1843W
2.12.6 Threshold elevation: 668.7 ft
2.12.6 Touchdown zone elevation: 670.3 ft

2.12.1 Designation: 07L
2.12.2 True Bearing: 72
2.12.3 Dimensions: 4800 ft x 100 ft
2.12.4 PCN: 20 F/A/X/T
2.12.5 Coordinates: 42-57-09.8842N / 87-54-19.1359W
2.12.6 Threshold elevation: 671.4 ft
2.12.6 Touchdown zone elevation: 672 ft

2.12.1 Designation: 25R
2.12.2 True Bearing: 252
2.12.3 Dimensions: 4800 ft x 100 ft
2.12.4 PCN: 20 F/A/X/T
2.12.5 Coordinates: 42-57-24.81N / 87-53-17.873W
2.12.6 Threshold elevation: 674.5 ft
2.12.6 Touchdown zone elevation: 674.5 ft

2.12.1 Designation: 07R
2.12.2 True Bearing: 72
2.12.3 Dimensions: 8300 ft x 150 ft
2.12.4 PCN: 58 R/A/W/T
2.12.5 Coordinates: 42-56-20.6656N /
87-55-03.9119W
2.12.6 Threshold elevation: 728.5 ft
2.12.6 Touchdown zone elevation: 728.5 ft
2.12.7 Slope: 1 DOWN

2.12.1 Designation: 25L
2.12.2 True Bearing: 252
2.12.3 Dimensions: 8300 ft x 150 ft
2.12.4 PCN: 58 R/A/W/T
2.12.5 Coordinates: 42-56-46.473N / 87-53-18.0009W
2.12.6 Threshold elevation: 670 ft
2.12.6 Touchdown zone elevation: 683.1 ft
2.12.7 Slope: 0.4 UP

2.12.1 Designation: 01R
2.12.2 True Bearing: 7
2.12.3 Dimensions: 4183 ft x 150 ft
2.12.4 PCN: 23 R/B/W/T
2.12.5 Coordinates: 42-56-21.7668N /
87-53-32.5021W
2.12.6 Threshold elevation: 677.6 ft
2.12.6 Touchdown zone elevation: 677.8 ft

2.12.1 Designation: 19L
2.12.2 True Bearing: 187
2.12.3 Dimensions: 4183 ft x 150 ft
2.12.4 PCN: 23 R/B/W/T
2.12.5 Coordinates: 42-57-02.7455N /
87-53-25.4882W
2.12.6 Threshold elevation: 669.6 ft
2.12.6 Touchdown zone elevation: 674.5 ft

2.12.1 Designation: 01L
2.12.2 True Bearing: 7
2.12.3 Dimensions: 9990 ft x 200 ft
2.12.4 PCN: 64 R/A/W/T
2.12.5 Coordinates: 42-55-49.801N / 87-53-51.5134W
2.12.6 Threshold elevation: 705.8 ft

2.12.6 Touchdown zone elevation: 703.5 ft

2.12.1 Designation: 19R
2.12.2 True Bearing: 187
2.12.3 Dimensions: 9990 ft x 200 ft
2.12.4 PCN: 64 R/A/W/T
2.12.5 Coordinates: 42-57-27.703N / 87-53-34.7734W
2.12.6 Threshold elevation: 672.8 ft
2.12.6 Touchdown zone elevation: 671.8 ft

AD 2.13 Declared distances

2.13.1 Designation: 13
2.13.2 Takeoff run available: 5538
2.13.3 Takeoff distance available: 5538
2.13.4 Accelerate-stop distance available: 5538
2.13.5 Landing distance available: 4797

2.13.1 Designation: 31
2.13.2 Takeoff run available: 5538
2.13.3 Takeoff distance available: 5538
2.13.4 Accelerate-stop distance available: 5538
2.13.5 Landing distance available: 5334

2.13.1 Designation: 07L
2.13.2 Takeoff run available: 4800
2.13.3 Takeoff distance available: 4800
2.13.4 Accelerate-stop distance available: 4800
2.13.5 Landing distance available: 4800

2.13.1 Designation: 25R
2.13.2 Takeoff run available: 4800
2.13.3 Takeoff distance available: 4800
2.13.4 Accelerate-stop distance available: 4800
2.13.5 Landing distance available: 4800

2.13.1 Designation: 07R
2.13.2 Takeoff run available: 8300
2.13.3 Takeoff distance available: 8300
2.13.4 Accelerate-stop distance available: 8012
2.13.5 Landing distance available: 8012

2.13.1 Designation: 25L
2.13.2 Takeoff run available: 8300
2.13.3 Takeoff distance available: 8300
2.13.4 Accelerate-stop distance available: 8300
2.13.5 Landing distance available: 7868

2.13.1 Designation: 01R
2.13.2 Takeoff run available: 4183
2.13.3 Takeoff distance available: 4183
2.13.4 Accelerate-stop distance available: 4183

2.13.5 Landing distance available: 4183

2.13.1 Designation: 19L

2.13.2 Takeoff run available: 4183

2.13.3 Takeoff distance available: 4183

2.13.4 Accelerate-stop distance available: 4183

2.13.5 Landing distance available: 4183

2.13.1 Designation: 01L

2.13.2 Takeoff run available: 9990

2.13.3 Takeoff distance available: 9990

2.13.4 Accelerate-stop distance available: 9380

2.13.5 Landing distance available: 9080

2.13.1 Designation: 19R

2.13.2 Takeoff run available: 9990

2.13.3 Takeoff distance available: 9990

2.13.4 Accelerate-stop distance available: 9990

2.13.5 Landing distance available: 9205

AD 2.14 Approach and runway lighting

2.14.1 Designation: 13

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 31

2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 07L

2.14.4 Visual approach slope indicator system: V4L

2.14.1 Designation: 25R

2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 07R

2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 25L

2.14.4 Visual approach slope indicator system: P4L

2.14.1 Designation: 01L

2.14.2 Approach lighting system: ALSF2

2.14.4 Visual approach slope indicator system: P4R

2.14.1 Designation: 19R

2.14.2 Approach lighting system: MALSR

2.14.4 Visual approach slope indicator system: P4R

AD 2.18 Air traffic services communication facilities

2.18.1 Service designation: APCH/P (B)

2.18.3 Service designation: 118 MHz

2.18.1 Service designation: APCH/P DEP/P (B)

2.18.3 Service designation: 317.725 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 263.075 MHz

2.18.1 Service designation: APCH/P DEP/P

2.18.3 Service designation: 127 MHz

2.18.1 Service designation: APCH/P DEP/P IC (A)

2.18.3 Service designation: 307 MHz

2.18.1 Service designation: APCH/P IC (A)

2.18.3 Service designation: 126.5 MHz

2.18.1 Service designation: AS ASSIGNED

2.18.3 Service designation: 127.85 MHz

2.18.1 Service designation: CD/P

2.18.3 Service designation: 120.8 MHz

2.18.1 Service designation: CLASS C (B)

2.18.3 Service designation: 317.725 MHz

2.18.1 Service designation: CLASS C (A)

2.18.3 Service designation: 307 MHz

2.18.1 Service designation: CLASS C (A)

2.18.3 Service designation: 126.5 MHz

2.18.1 Service designation: CLASS C (B)

2.18.3 Service designation: 118 MHz

2.18.1 Service designation: COMD POST (128 ARW
ANG UPSET CTL)

2.18.3 Service designation: 321 MHz

2.18.1 Service designation: COMD POST (28 ARW
ANG UPSET CON)

2.18.3 Service designation: 6761 MHz

2.18.1 Service designation: D-ATIS

2.18.3 Service designation: 126.4 MHz

2.18.4 Hours of operation: 24

2.18.1 Service designation: DEP/P (A)

2.18.3 Service designation: 125.35 MHz

2.18.1 Service designation: DEP/P (B)

2.18.3 Service designation: 135.875 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 121.5 MHz

2.18.1 Service designation: EMERG
2.18.3 Service designation: 243 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 121.8 MHz

2.18.1 Service designation: GND/P
2.18.3 Service designation: 263.125 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 124.575 MHz

2.18.1 Service designation: LCL/P
2.18.3 Service designation: 269.05 MHz

2.18.1 Service designation: MAINT OPS (MOCC)
2.18.3 Service designation: 379.85 MHz

2.18.1 Service designation: OPS
2.18.3 Service designation: 311 MHz

2.18.1 Service designation: OPS
2.18.3 Service designation: 139.5 MHz

AD 2.19 Radio navigation and landing aids

2.19.1 ILS type: Glide Slope for runway 01L. Magnetic variation: 4W

2.19.2 ILS identification: MKE
2.19.5 Coordinates: 42-56-04.4535N /
87-53-43.0457W
2.19.6 Site elevation: 691.2 ft

2.19.1 ILS type: Localizer for runway 01L. Magnetic variation: 4W
2.19.2 ILS identification: MKE
2.19.5 Coordinates: 42-57-49.955N / 87-53-30.9671W
2.19.6 Site elevation: 712.9 ft

2.19.1 ILS type: DME for runway 01L. Magnetic variation: 4W
2.19.2 ILS identification: MKE
2.19.5 Coordinates: 42-57-50.9387N /
87-53-27.4457W
2.19.6 Site elevation: 715.2 ft

2.19.1 ILS type: Inner Marker for runway 01L. Magnetic variation: 4W
2.19.2 ILS identification: MKE

2.19.5 Coordinates: 42-55-44.6571N /
87-53-52.4019W
2.19.6 Site elevation: 705.8 ft

2.19.1 ILS type: DME for runway 07R. Magnetic variation: 4W
2.19.2 ILS identification: GMF
2.19.5 Coordinates: 42-56-18.506N / 87-55-23.661W
2.19.6 Site elevation: 729.8 ft

2.19.1 ILS type: Localizer for runway 07R. Magnetic variation: 4W
2.19.2 ILS identification: GMF
2.19.5 Coordinates: 42-56-49.0937N /
87-53-07.2381W
2.19.6 Site elevation: 668.3 ft

2.19.1 ILS type: Glide Slope for runway 07R. Magnetic variation: 4W
2.19.2 ILS identification: GMF
2.19.5 Coordinates: 42-56-20.4936N /
87-54-47.1205W
2.19.6 Site elevation: 707.3 ft

2.19.1 ILS type: DME for runway 19R. Magnetic variation: 4W
2.19.2 ILS identification: BLY
2.19.5 Coordinates: 42-57-50.9387N /
87-53-27.4457W
2.19.6 Site elevation: 715.2 ft

2.19.1 ILS type: Glide Slope for runway 19R. Magnetic variation: 4W
2.19.2 ILS identification: BLY
2.19.5 Coordinates: 42-57-09.1785N /
87-53-32.5227W
2.19.6 Site elevation: 666.3 ft

2.19.1 ILS type: Localizer for runway 19R. Magnetic variation: 4W
2.19.2 ILS identification: BLY
2.19.5 Coordinates: 42-55-38.3024N /
87-53-53.4803W
2.19.6 Site elevation: 709 ft

2.19.1 ILS type: Localizer for runway 25L. Magnetic variation: 4W
2.19.2 ILS identification: PXY
2.19.5 Coordinates: 42-56-16.0653N /
87-55-22.7821W
2.19.6 Site elevation: 727.9 ft

2.19.1 ILS type: DME for runway 25L. Magnetic variation: 4W
2.19.2 ILS identification: PXY

2.19.5 Coordinates: 42-56-18.506N / 87-55-23.661W
2.19.6 Site elevation: 729.8 ft

General Remarks:

RY 07L/25R CLSD TO ALL JET ACFT.

TWY A CLSD FROM TWY R TO TWY E AND TWY E CLSD FROM TWY T TO TWY M AND TWY T NORTH OF RWY 07R-25L CLSD TO ACFT WITH TAIL HEIGHT GREATER THAN 54.5 FT DURING CAT II AND CAT III OPS.

RY 13/31 CLSD JET ACFT, UNLESS PMSN FROM TWR OR AMGR 414-747-5325.

TRNG FLGTS INVOLVING SUCCESSIVE USE OF ANY RY PROHIBITED 2200-0600.

RYS 13/31 & 01R/19L & 07L/25R CLSD EXCP LGT WT SINGLE ENG ACFT 0400-1200Z DLY.

BIRDS ON & INVOF ARPT.

PREFERRED USAGE BY ACFT BTN 2200-0600 IS TKOF RY 19R & LNDG RY 01L.

ALL APCHS ARE OVER NOISE SENSITIVE AREAS; ALL TURBOJET ACFT SHOULD REFRAIN FM CONDUCTING MULTI VFR TFC PATTERN APCHS & DEPS WO PRIOR APVL FM AMGR CALL C414-747-5325.

ANG: PPR ALL ACFT, 48HR PN, CTC AFLD OPS DSN 580-8241, C414-944-8241. 128 ARW IS A FULLY OPERATIONAL KC-135R BASE WITH HRS OF OPERATION MON-FRI 1200Z-1930Z++ TUE-FRI, CLSD HOL, SAT-SUN EXC UNIT TMG, CALL FOR AVBL.

ANG: ANY MDS'S (OTHER THAN KC-135) IS LIMITED TO STANDARD TRANSIENT MARSHALLING AND PARKING. NO TECHNICAL DATA AVAILABLE FOR TRANSIENT MAINTENANCE. FUEL AND AGE EQUIPMENT SUPPORT AVAILABLE FOR SELF-SERVICE. THERE ARE NO ADDITIONAL CONFIGURATION ITEMS SUPPORTED SUCH AS LANTIRN PODS, EDM PODS, ETC.

ANG: END OF RUNWAY FACILITIES, AIRCRAFT SHELTERS/REVTMENTS, AND ALERT FACILITIES ARE NOT AVAILABLE. AFLD/ACFT PARKING CONCERNS INCLUDE: LIMITED STATIC GROUNDING POINTS AND NO AIRCRAFT TIE DOWN POINTS.

ANG: NO FLEET SVC/HOT CARGO PARKING AVAILABLE. CTC UPSET CTRL 20 MIN PRIOR TO ARR TO RCV CURRENT BIRD WATCH COND AND PARKING INFO.

ASDE-X IN USE. OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

ACFT WITH WINGSPAN GREATER THAN 175 FT CANNOT PASS SIMULTANEOUSLY ON TWY 'E' & TWY 'Z'.

TWYS D1, F2, H, J, F1, P AND F (EAST OF RWY 19R) AND TWY K (EAST OF RWY 19L) CLSD TO ACFT WITH WINGSPAN GREATER THAN 78 FT.

TWY F (WEST OF TWY Z) CLSD TO ACFT WITH WINGSPAN GREATER THAN OR EQUAL TO 118 FT UNLESS PERMISSION FROM ARPT DIR AT 414-747-5325.

RY 19R TODA 8,750 FT FROM INT TWY V.

TWY V BTN TWY D AND RY 7L/25R CLSD TO ACFT WITH WINGSPAN GREATER THAN 170 FT WHEN RY 7L/25R IN USE.

TWY B BTN TWY V AND TWY P CLSD TO ACFT WITH WINGSPAN GREATER THAN 170 FT.

HOLDING BAY AT RY 19R WHEN IN USE, TWY Z ADJACENT TO BAY IS LIMITED TO ACFT WITH WINGSPAN UP TO 170 FT.

RY 07L/25R NO ACFT 65,000 LBS OR GREATER ALLOWED TO TAXI BTN TWY D & RY 13/31 AND EAST OF RY 19R.

RY 01R-19L AVAILABLE TO AIR CARRIERS FOR TAXI ONLY.

TWY S & TWY T BTN TWY R & RY 07R/25L AND RY 07R/25L BTN RY 1R/19L & TWY R CLSD DURG CAT II & III OPNS.

HOLDING BAY AT RY 01L CLSD EXCP ACFT WITH WINGSPAN LESS THAN 118 FT.

ANG: NSTD MRK ON PRK APRON FOR WINGTIP CLNC; SEE AFLD MGT FOR DETAILED MAP.

RUNWAY 7L/25R NOT AVAILABLE FOR SCHEDULED AIR CARRIER OPERATIONS INVOLVING AIRCRAFT DESIGNED FOR 10 OR MORE PASSENGER SEATS & UNSCHEDULED AIR CARRIER OPERATIONS INVOLVING AIRCRAFT DESIGNED FOR 31 OR MORE SEATS.

TWY A CLSD BTN TWY A4 AND TWY A5 TO ACFT WITH WINGSPAN GREATER THAN OR EQUAL TO 214' UNLESS PERMISSION FROM ARPT MGR 414-747-5325

ALL AIRCRAFT PUSHBACKS FROM GATES C20, C21, C22, C23, D39 D41 D43, D45, D48, D51, D53, D54, D55, E65, E66, & E67 REQUIRE CLEARANCE FROM GROUND CONTROL. PUSHBACKS FROM ALL OTHER GATES ARE AT RAMP/ PILOT DISCRETION; CONTACT GROUND CONTROL WHEN READY TO TAXI.

TWY C CLSD BTWN APCH END OF RWY 7L AND TWY D1 TO ACFT WITH WINGSPAN GTR THAN OR EQUAL TO 118 FT UNLESS PMSN FM ARPT MGR 414-747-5325.

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Appendix 1. ATS Routes

MINIMUM ENROUTE IFR ALTITUDES OVER PARTICULAR ROUTES AND INTERSECTIONS

1. This is an annual consolidation of all data in Subparts C and D of Part 95 – Subchapter F, which were in effect January 3, 2019, Amendment 543 included.

2. It is not an amendment to Part 95; therefore, it will not appear in the Federal Register.

For updates to these routes and access to additional data products, please visit <http://nfdc.faa.gov/>.

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FROM	TO	MEA
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95.0040 COLORED FEDERAL AIRWAYS

95.41 GREEN FEDERAL AIRWAY G1

MOUNT MOFFETT, AK NDB/DME	HORTH, AK FIX	8000
HORTH, AK FIX	MORDI, AK FIX	*8000
*2500 - MOCA		
*5000 - GNSS MEA		

MORDI, AK FIX	ELFEE, AK NDB	*8000
*5300 - MOCA		
*7000 - GNSS MEA		

95.42 GREEN FEDERAL AIRWAY G2

BORLAND, AK NDB/DME	WOODY ISLAND, AK NDB	*10000
*6600 - MOCA		

95.44 GREEN FEDERAL AIRWAY G4

WOOD RIVER, AK NDB	ILIAMNA, AK NDB/DME	*4500
*3000 - MOCA		

95.46 GREEN FEDERAL AIRWAY G6

ST MARYS, AK NDB	ANIAK, AK NDB	4000
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95.47 GREEN FEDERAL AIRWAY G7

GAMBELL, AK NDB/DME	FORT DAVIS, AK NDB	3000
FORT DAVIS, AK NDB	NORTON BAY, AK NDB	*5000
*4200 - MOCA		

95.48 GREEN FEDERAL AIRWAY G8

SHEMYA, AK NDB	MOUNT MOFFETT, AK NDB/DME	##8000
*6300 - MOCA		
#HF COMMS REQUIRED.		
MOUNT MOFFETT, AK NDB/DME	DUTCH HARBOR, AK NDB/DME	##9000
*8000 - MOCA		
#HF COMMUNICATIONS REQUIRED		
DUTCH HARBOR, AK NDB/DME	MORDI, AK FIX	*9000
*5700 - MOCA		
*6000 - GNSS MEA		
MORDI, AK FIX	ELFEE, AK NDB	*8000
*5300 - MOCA		
*7000 - GNSS MEA		
ELFEE, AK NDB	CRACK, AK FIX	##5000
*4100 - MOCA		
#HF COMMS ONLY BELOW 5000 MSL		
#VHF COMMS AVBL 5000 MSL AND ABOVE.		

FROM	TO	MEA
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95.48 GREEN FEDERAL AIRWAY G8 - CONTINUED

CRACK, AK FIX	CHINOOK, AK NDB	#*3000
*2300 - MOCA		
#VHF/UHF COMMS AVBL 9000 MSL AND BELOW		
#HF COMMS ONLY BELOW 9000 MSL		
CHINOOK, AK NDB	NOSKY, AK FIX	*6000
*4900 - MOCA		
NOSKY, AK FIX	KACHEMAK, AK NDB	6100

95.49 GREEN FEDERAL AIRWAY G9

OSCARVILLE, AK NDB	ZEKEG, AK FIX	
	NE BND	*6000
	SW BND	*3000
*2100 - MOCA		
ZEKEG, AK FIX	CAIRN MOUNTAIN, AK NDB	6000

95.50 GREEN FEDERAL AIRWAY G10

CAPE NEWENHAM, AK NDB/DME	ST PAUL ISLAND, AK NDB/DME	#4600
#HF COMMS REQUIRED BELOW 8000		
ST PAUL ISLAND, AK NDB/DME	BILBE, AK FIX	3000
BILBE, AK FIX	ELFEE, AK NDB	*6000
*3800 - MOCA		
ELFEE, AK NDB	PORT HEIDEN, AK NDB/DME	*5000
*4100 - MOCA		
PORT HEIDEN, AK NDB/DME	WIDTH, AK FIX	9000
	COP 090 PDN	
WIDTH, AK FIX	WOODY ISLAND, AK NDB	*9000
*6300 - MOCA		
WOODY ISLAND, AK NDB	KACHEMAK, AK NDB	6000

95.51 GREEN FEDERAL AIRWAY G11

CAMPBELL LAKE, AK NDB	GLENNALLEN, AK NDB	10000
GLENNALLEN, AK NDB	NABESNA, AK NDB	10000

95.52 GREEN FEDERAL AIRWAY G12

ELFEE, AK NDB	BORLAND, AK NDB/DME	10000
BORLAND, AK NDB/DME	PORT HEIDEN, AK NDB/DME	10000
PORT HEIDEN, AK NDB/DME	CHINOOK, AK NDB	2500

95.53 GREEN FEDERAL AIRWAY G13

ZOLMN, NC FIX	MANTEO, NC NDB	2000
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95.55 GREEN FEDERAL AIRWAY G15

ST MARYS, AK NDB	ANVIK, AK NDB	4000
ANVIK, AK NDB	TAKOTNA RIVER, AK NDB	*9000
*6000 - MOCA		
*7000 - GNSS MEA		

FROM	TO	MEA
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95.56GREEN FEDERAL AIRWAY G16

POINT LAY, AK NDB *1200 - MOCA	WAINWRIGHT VILLAGE, AK NDB	*1700
WAINWRIGHT VILLAGE, AK NDB *1100 - MOCA	BROWERVILLE, AK NDB	*1600
BROWERVILLE, AK NDB	NUIQSUT VILLAGE, AK NDB COP 050 VIR	1600
NUIQSUT VILLAGE, AK NDB *1200 - MOCA	PUT RIVER, AK NDB	*1700

95.57GREEN FEDERAL AIRWAY G17

WAINWRIGHT VILLAGE, AK NDB *1100 - MOCA	ATQASUK, AK NDB	*1600
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95.58GREEN FEDERAL AIRWAY G18

HOTHAM, AK NDB *6000 - MOCA	POINT LAY, AK NDB	*10000
POINT LAY, AK NDB	COP 096 HHM ATQASUK, AK NDB COP 050 PIZ	2300

95.101 AMBER FEDERAL AIRWAY A1

SANDSPIT, CANADA NDB U.S. CANADIAN BORDER *2300 - MOCA	U.S. CANADIAN BORDER SITKA, AK NDB	5200 *5200
SITKA, AK NDB SPARL, AK FIX *2200 - MOCA	SPARL, AK FIX OCEAN CAPE, AK NDB	5200 *6000
OCEAN CAPE, AK NDB *2000 - MOCA	CAPEM, AK FIX	*6000
CAPEM, AK FIX *4400 - MOCA	CORVA, AK FIX	*6000
CORVA, AK FIX EGGER, AK FIX	EGGER, AK FIX ORCA BAY, AK NDB	2000 5000
ORCA BAY, AK NDB *8300 - MOCA	CAMPBELL LAKE, AK NDB	*9000
CAMPBELL LAKE, AK NDB *9500 - MOCA	TAKOTNA RIVER, AK NDB	*10000
TAKOTNA RIVER, AK NDB *6000 - MOCA	NORTH RIVER, AK NDB	*7000
NORTH RIVER, AK NDB	FORT DAVIS, AK NDB	3000

95.102 AMBER FEDERAL AIRWAY A2

U.S. CANADIAN BORDER *9000 - MOCA	NABESNA, AK NDB	*9600
NABESNA, AK NDB	DELTA JUNCTION, AK NDB	8000

95.103 AMBER FEDERAL AIRWAY A3

EVANSVILLE, AK NDB	PUT RIVER, AK NDB	10000
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FROM	TO	MEA
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95.104 AMBER FEDERAL AIRWAY A4

EVANSVILLE, AK NDB *8300 - MOCA	ANAKTUVUK PASS, AK NDB	*10000
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95.105 AMBER FEDERAL AIRWAY A5

AMBLER, AK NDB/DME *6600 - MOCA	EVANSVILLE, AK NDB	*7500
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95.106 AMBER FEDERAL AIRWAY A6

ST MARYS, AK NDB	NORTH RIVER, AK NDB	5000
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95.107 AMBER FEDERAL AIRWAY A7

CAMPBELL LAKE, AK NDB	MINERAL CREEK, AK NDB COP 069 CMQ	12000
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95.109 AMBER FEDERAL AIRWAY A9

CHENA, AK NDB	EVANSVILLE, AK NDB	5500
EVANSVILLE, AK NDB *9100 - MOCA	BROWERVILLE, AK NDB	*10000

95.115AMBER FEDERAL AIRWAY A15

US CANADIAN BORDER NICHOLS, AK NDB *5100 - MOCA *6000 - GNSS MEA	NICHOLS, AK NDB SUMNER STRAIT, AK NDB	5000 *7000
SUMNER STRAIT, AK NDB COGHLAN ISLAND, AK NDB *8300 - MOCA	COGHLAN ISLAND, AK NDB HAINES, AK NDB	7000 *9000
HAINES, AK NDB #FOR THAT AIRSPACE OVER U.S. TERRITORY.	U.S. CANADIAN BORDER	#11000
U.S. CANADIAN BORDER *9000 - MOCA	NABESNA, AK NDB	*9600
NABESNA, AK NDB	DELTA JUNCTION, AK NDB	8000

95.116AMBER FEDERAL AIRWAY A16

ACTIVE PASS, CANADA NDB *2100 - MOCA #FOR THAT AIRSPACE OVER U.S. TERRITORY.	WHITE ROCK, CANADA NDB	##3000
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95.117AMBER FEDERAL AIRWAY A17

CHENA, AK NDB *CHANDALAR LAKE, AK NDB *10000 - MCA CHANDALAR LAKE, AK NDB , NW BND	CHANDALAR LAKE, AK NDB PUT RIVER, AK NDB	7000 10000
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95.201 RED FEDERAL AIRWAY R1

ST PAUL ISLAND, AK NDB/DME *2700 - MOCA	GARRS, AK FIX	*4600
GARRS, AK FIX	CHINOOK, AK NDB	4600

FROM	TO	MEA
95.202 RED FEDERAL AIRWAY R2		
ELFEE, AK NDB	PORT HEIDEN, AK NDB/DME	6000
95.204 RED FEDERAL AIRWAY R4		
CHENA, AK NDB	BEAR CREEK, AK NDB	5000
95.239 RED FEDERAL AIRWAY R39		
OSCARVILLE, AK NDB	*ANIAK, AK NDB	**2000
*3500 - MCA ANIAK, AK NDB , NE BND		
**1400 - MOCA		
ANIAK, AK NDB	TAKOTNA RIVER, AK NDB	*6000
*5400 - MOCA		
TAKOTNA RIVER, AK NDB	MINCHUMINA, AK NDB	5000
MINCHUMINA, AK NDB	ICE POOL, AK NDB	4000
95.250 RED FEDERAL AIRWAY R50		
NANWAK, AK NDB/DME	OSCARVILLE, AK NDB	3000
OSCARVILLE, AK NDB	ANVIK, AK NDB	4100
95.251 RED FEDERAL AIRWAY R51		
SUMNER STRAIT, AK NDB	SITKA, AK NDB	7000
95.299 RED FEDERAL AIRWAY R99		
ST PAUL ISLAND, AK NDB/DME	DUTCH HARBOR, AK NDB/DME	#4800
#HF COMMS REQUIRED BELOW 8000 MSL.		
DUTCH HARBOR, AK NDB/DME	CHINOOK, AK NDB	*9000
*6300 - MOCA		
CHINOOK, AK NDB	ILIAMNA, AK NDB/DME	*5000
*4400 - MOCA		
ILIAMNA, AK NDB/DME	KACHEMAK, AK NDB	6100
95.602 BLUE FEDERAL AIRWAY B2		
POINT LAY, AK NDB	CAPE LISBURNE, AK NDB/DME	4000
CAPE LISBURNE, AK NDB/DME	HOTHAM, AK NDB	*8000
*4100 - MOCA		
COP 057 LUR		
HOTHAM, AK NDB	TIN CITY, AK NDB/DME	*5000
*4300 - MOCA		
TIN CITY, AK NDB/DME	FORT DAVIS, AK NDB	*7000
*5900 - MOCA		
*6000 - GNSS MEA		
95.603 BLUE FEDERAL AIRWAY B3		
ANIAK, AK NDB	ANVIK, AK NDB	3700
ANVIK, AK NDB	NORTH RIVER, AK NDB	4600
NORTH RIVER, AK NDB	NORTON BAY, AK NDB	3000

FROM	TO	MEA
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95.603 BLUE FEDERAL AIRWAY B3 -CONTINED

NORTON BAY, AK NDB	HOTHAM, AK NDB	4500
HOTHAM, AK NDB	NOATAK, AK NDB/DME	3300

95.604 BLUE FEDERAL AIRWAY B4

UTOPIA CREEK, AK NDB/DME	EVANSVILLE, AK NDB	*8000
*6200 - MOCA		
EVANSVILLE, AK NDB	YUKON RIVER, AK NDB	*8000
*6600 - MOCA		

95.605 BLUE FEDERAL AIRWAY B5

CAPE LISBURNE, AK NDB/DME	POINT HOPE, AK NDB	4000
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95.607 BLUE FEDERAL AIRWAY B7

CAPE NEWENHAM, AK NDB/DME	OSCARVILLE, AK NDB	4600
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95.608 BLUE FEDERAL AIRWAY B8

TIN CITY, AK NDB/DME	SHISHMAREF, AK NDB	4000
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95.609 BLUE FEDERAL AIRWAY B9

*DEEDS, FL FIX	MARATHON, FL NDB	**2000
*4000 - MRA		
**1500 - MOCA		

95.6112 BLUE FEDERAL AIRWAY B12

WOODY ISLAND, AK NDB	ILIAMNA, AK NDB/DME	*10000
*9300 - MOCA		

95.6125 BLUE FEDERAL AIRWAY B25

ORCA BAY, AK NDB	*SHOPE, AK FIX	4900
*6600 - MCA SHOPE, AK FIX , N BND		
SHOPE, AK FIX	GLENNALLEN, AK NDB	10000
GLENNALLEN, AK NDB	*DELTA JUNCTION, AK NDB	**12000
*8000 - MCA DELTA JUNCTION, AK NDB , SE BND		
**11500 - MOCA		

95.6126 BLUE FEDERAL AIRWAY B26

CHENA, AK NDB	YUKON RIVER, AK NDB	7000
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95.6127 BLUE FEDERAL AIRWAY B27

WOODY ISLAND, AK NDB	CHINOOK, AK NDB	10000
CHINOOK, AK NDB	WANIX, AK FIX	*8000
*7500 - MOCA		

FROM	TO	MEA
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95.6127 BLUE FEDERAL AIRWAY B27 - CONTINUED

WANIX, AK FIX	OSCARVILLE, AK NDB	
	NW BND	4000
	SE BND	8000
OSCARVILLE, AK NDB	ST MARYS, AK NDB	3000
ST MARYS, AK NDB	FORT DAVIS, AK NDB	3000
FORT DAVIS, AK NDB	HOTHAM, AK NDB	6000

95.6128 BLUE FEDERAL AIRWAY B28

US CANADIAN BORDER	NICHOLS, AK NDB	5000
NICHOLS, AK NDB	SITKA, AK NDB	*6900
*6000 - MOCA		
*6000 - GNSS MEA		

95.6137 BLUE FEDERAL AIRWAY B37

SUMNER STRAIT, AK NDB	ELEPHANT, AK NDB	*7000
*6400 - MOCA		
ELEPHANT, AK NDB	SPARL, AK FIX	*6000
*5000 - MOCA		
*5000 - GNSS MEA		

95.6138 BLUE FEDERAL AIRWAY B38

ELEPHANT, AK NDB	CHILL, AK FIX	7300
CHILL, AK FIX	HAINES, AK NDB	9000

95.6140 BLUE FEDERAL AIRWAY B40

HAINES, AK NDB	ROBINSON, CANADA NDB	*10000
*9800 - MOCA		
#FOR THAT AIRSPACE OVER U.S. TERRITORY.		

95.6179 BLUE FEDERAL AIRWAY B79

U.S. CANADIAN BORDER	NICHOLS, AK NDB	#5000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.		

FROM	TO	MEA
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95.1001 DIRECT ROUTES-U.S

ABILENE, TX VORTAC *3300 - MOCA	WACO, TX VORTAC	*6500
ABILENE, TX VORTAC	LLANO, TX VORTAC COP 75 ABI	7000
ALEXANDRIA, MN VOR/DME	JAMESTOWN, ND VOR/DME	18000 MAA - 22000
ALLENTOWN, PA VORTAC *2500 - MOCA	POTTSTOWN, PA VORTAC	*2700
ALLENTOWN, PA VORTAC *3000 - MOCA	STILLWATER, NJ VOR/DME	*3300
APPIN, TX FIX *1500 - MOCA	LAKE CHARLES, LA VORTAC	*8000
BATTLE MOUNTAIN, NV VORTAC	CLOVIS, CA VORTAC	24000 MAA - 45000
BATTLE MOUNTAIN, NV VORTAC	TWIN FALLS, ID VORTAC	#18000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
BIG SUR, CA VORTAC VIA BSR VORTAC 85 & AVE VOR/DME 304 *7900 - MOCA	AVENAL, CA VOR/DME	*11000 MAA - 35000
BISMARCK, ND VOR/DME	HUMBOLDT, MN VORTAC	18000
BISMARCK, ND VOR/DME	DICKINSON, ND VORTAC	18000 MAA - 24000
BOZEMAN, MT VOR/DME	BOYSEN RESERVOIR, WY VOR/DME	19000 MAA - 35000
BOZEMAN, MT VOR/DME	DUBOIS, ID VORTAC	18000 MAA - 25000
BRADFORD, IL VORTAC	DES MOINES, IA VORTAC	18000 MAA - 41000
BRILO, CA FIX	YAGER, CA FIX	7000
BROOKLEY, AL VORTAC	SEMMES, AL VORTAC	2000 MAA - 17500
BULLION, NV VOR/DME	BOISE, ID VORTAC	18000
CAJON, CA FIX	HITOP, CA FIX	8000
CALBE, CA FIX VIA PDZ VORTAC 306 & PMD VORTAC 142	PALMDALE, CA VORTAC	10000 MAA - 17500
*CAMARILLO, CA VOR/DME	SANTA MONICA, CA VOR/DME	5000
*3600 - MCA CAMARILLO, CA	VOR/DME , E BND	
*CHARM, CO FIX	**PUEBLO, CO VORTAC	8000
*10000 - MCA CHARM, CO FIX , S BND		
**7200 - MCA PUEBLO, CO VORTAC , S BND		
CHICO, CA VOR/DME	RED BLUFF, CA VORTAC	MAA - 45000 3000
COALDALE, NV VORTAC	SQUAW VALLEY, CA VOR/DME	MAA - 12000 15000
COALDALE, NV VORTAC	WOODSIDE, CA VOR/DME COP 68 OAL	MAA - 39000 *18000
*15100 - MOCA		MAA - 45000
COLLI, CA FIX	SCAGGS ISLAND, CA VORTAC	3500
COLOM, CA FIX	MINA, NV VORTAC	28000
COLOM, CA FIX	FRIANT, CA VORTAC	18000 MAA - 45000
COLUMBIA, SC VORTAC	CHARLESTON, WV VOR/DME	18000 MAA - 45000
CORTEZ, CO VOR/DME	PUEBLO, CO VORTAC COP 80 CEZ	#22000 MAA - 45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		

FROM	TO	MEA
COVEX, LA FIX	APPIN, TX FIX	*8000
*1800 - MOCA		
COVEX, LA FIX	BELCHER, LA VORTAC	*3500
*1900 - MOCA		
CUNEY, TX FIX	NACOGDOCHES, TX NDB	*4000
*3000 - MOCA		
DAGGETT, CA VORTAC	PALMDALE, CA VORTAC	7000
DAYTON, OH VOR/DME	APPLETON, OH VORTAC	18000
		MAA - 45000
DAYTON, OH VOR/DME	GUNNE, OH FIX	18000
		MAA - 39000
DAYTON, OH VOR/DME	FORT WAYNE, IN VORTAC	18000
		MAA - 43000
DELLS, WI VORTAC	EAU CLAIRE, WI VORTAC	18000
		MAA - 29000
DES MOINES, IA VORTAC	IOWA CITY, IA VOR/DME	2700
		MAA - 35000
DETROIT LAKES, MN VOR/DME	THIEF RIVER FALLS, MN VOR/DME	*3300
*2700 - MOCA		
DICKINSON, ND VORTAC	MINOT, ND VORTAC	18000
		MAA - 35000
DICKINSON, ND VORTAC	U.S. CANADIAN BORDER	18000
VIA DIK VORTAC 31		
DILLON, MT VOR/DME	SHERIDAN, WY VOR/DME	#33000
		MAA - 45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
DUBOIS, ID VORTAC	BOZEMAN, MT VOR/DME	18000
		MAA - 35000
DULUTH, MN VORTAC	U.S. CANADIAN BORDER	#*18000
*3100 - MOCA		
#FOR THAT AIRSPACE OVER U.S. TERRITORY.		
DULUTH, MN VORTAC	TRAVERSE CITY, MI VOR/DME	24000
*DUNOIR, WY VOR/DME	WORLAND, WY VOR/DME	**16000
	COP 40 DNW	
*12200 - MCA DUNOIR, WY VOR/DME , E BND		
**15200 - MOCA		
DUNOIR, WY VOR/DME	BILLINGS, MT VORTAC	18000
		MAA - 45000
DUPREE, SD VOR/DME	BISMARCK, ND VOR/DME	18000
		MAA - 35000
EAU CLAIRE, WI VORTAC	DULUTH, MN VORTAC	18000
		MAA - 29000
EEDEN, AK FIX	FRIED, AK FIX	10000
		MAA - 45000
EVELETH, MN VOR/DME	ELY, MN VOR/DME	3400
FARGO, ND VOR/DME	WILLISTON, ND VOR/DME	23000
FELLOWS, CA VOR/DME	SAN MARCUS, CA VORTAC	9000
FELLOWS, CA VOR/DME	GUADALUPE, CA VOR	7000
FELLOWS, CA VOR/DME	GAVIOTA, CA VORTAC	8000
FELLOWS, CA VOR/DME	FILLMORE, CA VORTAC	9500
	COP 42 FLW	
FELLOWS, CA VOR/DME	GORMAN, CA VORTAC	11000
FELLOWS, CA VOR/DME	SHAFTER, CA VORTAC	6400
FILLMORE, CA VORTAC	CLOVIS, CA VORTAC	18000
	COP 60 FIM	
FILLMORE, CA VORTAC	FELLOWS, CA VOR/DME	9500
FLYING CLOUD, MN VOR/DME	SIOUX FALLS, SD VORTAC	17000
		MAA - 25000
FORT DODGE, IA VORTAC	BRADFORD, IL VORTAC	18000
		MAA - 45000
FORT WAYNE, IN VORTAC	KALAMAZOO, MI VOR/DME	18000
		MAA - 43000
GINNA, CA FIX	CAMARILLO, CA VOR/DME	4000
GIPPER, MI VORTAC	LITCHFIELD, MI VOR/DME	#18000
	COP 49 GIJ	
		MAA - 41000
#MAXIMUM CROSSING ALT SBN 075/49 33000.		

FROM	TO	MEA
GLINA, NM FIX	BOLES, NM VOR/DME	#*13000
*9900 - MOCA		MAA - 24000
#RADAR REQUIRED WHEN IN	HOLLOMAN APCH CTL ARSPC.	
GOOCH SPRINGS, TX VORTAC	COLLEGE STATION, TX VORTAC	*4000
*3000 - MOCA		
GOPHER, MN VORTAC	MOLINE, IL VOR/DME	13000
		MAA - 35000
GOPHER, MN VORTAC	CEDAR RAPIDS, IA VOR/DME	14500
		MAA - 35000
GRAND ISLAND, NE VOR/DME	SALINA, KS VORTAC	*7000
*3800 - MOCA		MAA - 17500
GRAND ISLAND, NE VOR/DME	LINCOLN, NE VORTAC	*4000
*2900 - MOCA		MAA - 35000
GROTON, CT VOR/DME	FLIBB, CT FIX	*2000
*1500 - MOCA		MAA - 17500
GUADALUPE, CA VOR	HABUT, CA FIX	5000
GULFPORT, MS VORTAC	*PLUGG, MS FIX	**2000
*5000 - MRA		
**1700 - MOCA		
HOMEE, PA FIX	REVLOC, PA VOR/DME	4000
HOMEE, PA FIX	JOHNSTOWN, PA VOR/DME	4000
HONEZ, CA FIX	MODESTO, CA VOR/DME	2200
HOVEL, ID FIX	ONTARIO, OR NDB	
	SE BND	7000
	NW BND	9000
HUMBLE, TX VORTAC	QUITMAN, TX VOR/DME	*9000
*2200 - MOCA		MAA - 41000
HURON, SD VORTAC	REDWOOD FALLS, MN VOR/DME	31000
	COP 40 HON	
		MAA - 37000
JAMESTOWN, ND VOR/DME	GRAND FORKS, ND VOR/DME	18000
		MAA - 35000
JAMESTOWN, ND VOR/DME	BISMARCK, ND VOR/DME	18000
		MAA - 24000
JULIAN, CA VORTAC	PARADISE, CA VORTAC	8000
		MAA - 41000
KALAMAZOO, MI VOR/DME	VICTORY, MI VOR/DME	18000
		MAA - 43000
KALISPELL, MT VOR/DME	U.S. CANADIAN BORDER	18000
	COP 82 FCA	
		MAA - 45000
KALISPELL, MT VOR/DME	HELENA, MT VORTAC	*15500
	COP 50 FCA	
*11400 - MOCA		
KEARNEY, NE VOR	MANKATO, KS VORTAC	4200
LAFAYETTE, LA VORTAC	ORICH, LA FIX	1600
LAKE CHARLES, LA VORTAC	LUFKIN, TX VORTAC	*3000
*1600 - MOCA		MAA - 1700
LAKE CHARLES, LA VORTAC	APPIN, TX FIX	*8000
*1600 - MOCA		
LAKE HUGHES, CA VORTAC	FILLMORE, CA VORTAC	8000
LAMONI, IA VOR/DME	IOWA CITY, IA VOR/DME	18000
		MAA - 42000
LAUGHLIN, TX VORTAC	SAN ANTONIO, TX VORTAC	*5000
*3000 - MOCA		
LAWTON, OK VOR/DME	MC ALESTER, OK VORTAC	*6000
VIA LAW VOR/DME 71		
& MLC VORTAC 254		
*2700 - MOCA		MAA - 24000
LEONA, TX VORTAC	GREGG COUNTY, TX VORTAC	*2500
*1900 - MOCA		
LINCOLN, NE VORTAC	DES MOINES, IA VORTAC	*5000
*2700 - MOCA		MAA - 45000
LINCOLN, NE VORTAC	OMAHA, IA VORTAC	3700
		MAA - 35000
LONDON, KY VOR/DME	HOLSTON MOUNTAIN, TN VORTAC	18000
		MAA - 43000
LUFKIN, TX VORTAC	MONROE, LA VORTAC	*8000
	COP 82 LFK	
*2000 - MOCA		

FROM	TO	MEA
LUFKIN, TX VORTAC	PALESTINE, TX NDB COP 53 LFK	*3200
*2100 - MOCA		
MADISON, WI VORTAC	DELLS, WI VORTAC	18000
MANKATO, KS VORTAC	SALINA, KS VORTAC	MAA - 29000
*3100 - MOCA		*3400
*MARIC, CA FIX	LAKE HUGHES, CA VORTAC	7800
VIA AVE VOR/DME		
109 & LHS VORTAC		
305		
*3400 - MCA MARIC, CA FIX , E BND		
MARYSVILLE, CA VOR/DME	CHICO, CA VOR/DME	3000
MC ALESTER, OK VORTAC	TULSA, OK VORTAC	MAA - 12000
*2700 - MOCA		*3000
MEEKER, CO VOR/DME	*FUNDS, CO FIX	**24000
*16500 - MRA		
**15500 - MOCA		MAA - 37000
MENDOCINO, CA VORTAC	POINT REYES, CA VOR/DME	5000
		MAA - 39000
MENDOCINO, CA VORTAC	BRILO, CA FIX	*11000
*7500 - MOCA		MAA - 24000
MINA, NV VORTAC	BATTLE MOUNTAIN, NV VORTAC	18000
MINOT, ND VORTAC	U.S. CANADIAN BORDER	18000
		MAA - 45000
MISSOULA, MT VOR/DME	GREAT FALLS, MT VORTAC	18000
		MAA - 24000
MISSOULA, MT VOR/DME	BOZEMAN, MT VOR/DME	20000
		MAA - 35000
MISSOULA, MT VOR/DME	KALISPELL, MT VOR/DME	18000
		MAA - 45000
MISSOULA, MT VOR/DME	DILLON, MT VOR/DME	16500
		MAA - 35000
MORMON MESA, NV VORTAC	WILSON CREEK, NV VORTAC	18000
MORRO BAY, CA VORTAC	FILLMORE, CA VORTAC	9500
MORRO BAY, CA VORTAC	FELLOWS, CA VOR/DME	6400
VIA OTO VOR 168		
MORRO BAY, CA VORTAC	SHAFTER, CA VORTAC	6000
MUDDY MOUNTAIN, WY	DICKINSON, ND VORTAC	18000
VOR/DME		
		MAA - 35000
MUSTANG, NV VORTAC	TROSE, CA FIX	22000
NORTH BEND, OR VOR/DME	NEWPORT, OR VORTAC	18000
		MAA - 45000
NORTH BEND, OR VOR/DME	EUGENE, OR VORTAC	18000
		MAA - 41000
NORTH PLATTE, NE VOR/DME	KEARNEY, NE VOR	*5000
*4200 - MOCA		
NORTHBROOK, IL VOR/DME	DES MOINES, IA VORTAC	18000
		MAA - 41000
O'NEILL, NE VORTAC	MASON CITY, IA VOR/DME	24000
VIA ONL VORTAC 68		
& MCW VOR/DME 257		
		MAA - 41000
OAKLAND, CA VOR/DME	SCAGGS ISLAND, CA VORTAC	4000
OMAHA, IA VORTAC	HILL CITY, KS VORTAC	18000
		MAA - 45000
ONTARIO, OR NDB	PARMO, ID FIX	5000
PACIF, CA FIX	SEAL BEACH, CA VORTAC	3000
PANOCH, CA VORTAC	GORMAN, CA VORTAC	24000
PANOCH, CA VORTAC	*HENCE, CA FIX	**9000
*9000 - MCA HENCE, CA FIX , E BND		
**5800 - MOCA		
PANOCH, CA VORTAC	SUNOL, CA FIX	18000
		MAA - 31000
PARADISE, CA VORTAC	*CALBE, CA FIX	6000
*8500 - MCA CALBE, CA FIX , NW BND		
		MAA - 17500

FROM	TO	MEA
PAWNEE CITY, NE VORTAC VIA PWE VORTAC 81 & IRK VORTAC 266 MAA - 41000	KIRKSVILLE, MO VORTAC	18000
PAWNEE CITY, NE VORTAC	KANSAS CITY, MO VORTAC	18000
PEACH SPRINGS, AZ VOR/DME	DOVE CREEK, CO VORTAC COP 100 PGS	MAA - 45000 18000
VIA PGS VOR/DME 43 & DVC VORTAC 226 MAA - 41000		
PENDLETON, OR VORTAC	DILLON, MT VOR/DME	#24000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
POINT REYES, CA VOR/DME	WOODSIDE, CA VOR/DME	*5000
*4400 - MOCA		MAA - 17000
PUEBLO, CO VORTAC	HAYES CENTER, NE VORTAC	18000
VIA PUB VORTAC 37 & HCT VORTAC 221 MAA - 41000		
PUEBLO, CO VORTAC	HILL CITY, KS VORTAC	18000
		MAA - 45000
PYNON, CO FIX	BLACK FOREST, CO VOR/DME	9400
QUITMAN, TX VOR/DME	TULSA, OK VORTAC	*9000
*3000 - MOCA		
RAPID CITY, SD VORTAC	HURON, SD VORTAC COP 165 RAP	31000
		MAA - 37000
RAPID CITY, SD VORTAC	MINOT, ND VORTAC	#18000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
RAPID CITY, SD VORTAC	DUPREE, SD VOR/DME	18000
		MAA - 35000
RAPID CITY, SD VORTAC	FARGO, ND VOR/DME	24000
RED BLUFF, CA VORTAC	REDDING, CA VOR/DME	3000
RED BLUFF, CA VORTAC	SCAGGS ISLAND, CA VORTAC COP 60 RBL	*6000
*9000 - MOCA		
REDDING, CA VOR/DME	CHICO, CA VOR/DME	5000
		MAA - 12000
*REDDING, CA VOR/DME	**TOMAD, CA FIX NE BND SW BND	6000 9000
**7000 - MRA		
*5000 - MCA REDDING, CA VOR/DME, SW BND		
RICHY, CA FIX	MARRI, CA FIX	13000
RIVERTON, WY VOR/DME	LARAMIE, WY VOR/DME	18000
		MAA - 35000
RIVERTON, WY VOR/DME	GREAT FALLS, MT VORTAC	#*35000
*14800 - MOCA		
#35000 MRA AT COP.		
ROCK SPRINGS, WY VOR/DME	LARAMIE, WY VOR/DME	*18000
*14000 - MOCA		MAA - 45000
ROCK SPRINGS, WY VOR/DME	JACKSON, WY VOR/DME COP 118 OCS	*18000
*13200 - MOCA		
ROGUE VALLEY, OR VORTAC	*ROOTY, OR FIX	MAA - 45000 11000
*11000 - MRA		
ROLLS, OK FIX	INT GAG VORTAC 143 & SYO VORTAC 079	*6000
*3300 - MOCA		
ROME, OR VOR/DME	DUBOIS, ID VORTAC COP 144 REO	MAA - 17500 31000
		MAA - 45000
ROME, OR VOR/DME	DONNELLY, ID VOR/DME	24000
		MAA - 45000
SACRAMENTO, CA VORTAC	KLAMATH FALLS, OR VORTAC COP 130 SAC	18000
SALINAS, CA VORTAC	GILRO, CA FIX	5000
SALINAS, CA VORTAC	LICKE, CA FIX	6000
		MAA - 17500
SALMON, ID VOR/DME	MISSOULA, MT VOR/DME	18000
		MAA - 45000

FROM	TO	MEA
SAN ANGELO, TX VORTAC	GOOCH SPRINGS, TX VORTAC	5000
SAN ANGELO, TX VORTAC	ROCKSPRINGS, TX VORTAC	4200
SAN ANGELO, TX VORTAC	BROWNWOOD, TX VOR/DME	4500
VIA SJT VORTAC 73		
& BWD VOR/DME 224		
SAN ANGELO, TX VORTAC	BROWNWOOD, TX VOR/DME	3500
SAN JOSE, CA VOR/DME	COLLI, CA FIX	4000
SAN MARCUS, CA VORTAC	MORRO BAY, CA VORTAC	6800
SAN MARCUS, CA VORTAC	GUADALUPE, CA VOR	6700
SANTA CATALINA, CA VORTAC	GAVIOTA, CA VORTAC	6400
SANTY, CA FIX	*TAILS, CA FIX	5000
*7000 - MRA		
SCAPA, PR WP	CRSTL, PR FIX	6000
SCOTTSBLUFF, NE VORTAC	ABERDEEN, SD VOR/DME	26000
		MAA - 45000
SCOTTSBLUFF, NE VORTAC	WOLBACH, NE VORTAC	18000
VIA BFF VORTAC 83		
& OBH VORTAC 269		
SEAL BEACH, CA VORTAC	ELMOO, CA FIX	MAA - 45000
*2400 - MOCA		*5000
SEMMES, AL VORTAC	GREENE COUNTY, MS VORTAC	2000
		MAA - 17500
*SHAFTER, CA VORTAC	**WRING, CA FIX	5000
*3300 - MCA SHAFTER, CA VORTAC , NE BND		
**5400 - MCA WRING, CA FIX , SE BND		
SHERIDAN, WY VOR/DME	RAPID CITY, SD VORTAC	18000
		MAA - 45000
SIDNEY, NE VOR/DME	ABERDEEN, SD VOR/DME	29000
		MAA - 45000
SIoux FALLS, SD VORTAC	FARGO, ND VOR/DME	15000
SNOUT, AK FIX	EEDEN, AK FIX	10000
		MAA - 45000
SNOWBIRD, TN VORTAC	LONDON, KY VOR/DME	18000
		MAA - 45000
SPOKANE, WA VORTAC	U.S. CANADIAN BORDER	#18000
		MAA - 45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
SPOKANE, WA VORTAC	MISSOULA, MT VOR/DME	18000
		MAA - 35000
SPOKANE, WA VORTAC	DONNELLY, ID VOR/DME	18000
VIA GEG VORTAC 139		
& DNJ VOR/DME 322		
SQUAW VALLEY, CA VOR/DME	KLAMATH FALLS, OR VORTAC	MAA - 41000
		28000
SQUAW VALLEY, CA VOR/DME	*RICHY, CA FIX	MAA - 45000
*12000 - MCA RICHY, CA FIX , SE BND		11000
TONOPAH, NV VORTAC	BRYCE CANYON, UT VORTAC	23000
VIA TPH VORTAC 77		
& BCE VORTAC 262		
TROSE, CA FIX	MODESTO, CA VOR/DME	MAA - 45000
	SW BND	5000
	NE BND	22000
		MAA - 39000
TUSCOLA, TX VOR/DME	LLANO, TX VORTAC	*4500
*3900 - MOCA		
TWENTYNINE PALMS, CA VORTAC	GOFFS, CA VORTAC	18000
	COP 17 TNP	
VIA TNP VORTAC 28		
& GFS VORTAC 185		
UNBAR, MI FIX	SALEM, MI VORTAC	MAA - 45000
		18000
		MAA - 45000
VAN NUYS, CA VOR/DME	STABO, CA FIX	4000
	COP 18 VNY	

FROM	TO	MEA
*VAN NUYS, CA VOR/DME	**PALMDALE, CA VORTAC	7800
*6000 - MCA VAN NUYS, CA VOR/DME , NE BND		
**5800 - MCA PALMDALE, CA VORTAC , SW BND		
WAKER, CA FIX	FILLMORE, CA VORTAC	MAA - 17500
*WESLA, CA FIX	FILLMORE, CA VORTAC	4800
*4100 - MCA WESLA, CA FIX , N BND		4800
WICHITA FALLS, TX VORTAC	ARDMORE, OK VORTAC	*4000
*2500 - MOCA		
WILKES-BARRE, PA VORTAC	LATTY, NY FIX	4000
WILL ROGERS, OK VORTAC	WICHITA, KS VORTAC	MAA - 10000
*3600 - MOCA		*6000
WILLISTON, ND VOR/DME	U.S. CANADIAN BORDER	MAA - 17500
VIA ISN VOR/DME		*8000
340		
*3400 - MOCA		MAA - 17500
WILSON CREEK, NV VORTAC	BULLION, NV VOR/DME	20000
WOLBACH, NE VORTAC	OMAHA, IA VORTAC	3800
		MAA - 35000
WOLBACH, NE VORTAC	PAWNEE CITY, NE VORTAC	18000
		MAA - 45000
WOLBACH, NE VORTAC	DES MOINES, IA VORTAC	10000
		MAA - 17500
WOODSIDE, CA VOR/DME	*EUGEN, CA FIX	**6000
*7000 - MRA		
**4400 - MOCA		
WRAPS, CA FIX	SACRAMENTO, CA VORTAC	*3000
*2600 - MOCA		

FROM	TO	MEA
PUERTO RICO ROUTES		
ROUTE 1		
UTAHS, PR FIX *1300 - MOCA	BORINQUEN, PR VORTAC	*4000
BORINQUEN, PR VORTAC	MAYAGUEZ, PR VOR/DME	2500
ROUTE 2		
FAJAR, PR FIX	TOURO, PR FIX	2000
TOURO, PR FIX	MALIE, VI FIX	2000
ROUTE 3		
UTAHS, PR FIX *7000 - MRA	*JAAWS, PR FIX	12000
JAAWS, PR FIX	SAN JUAN, PR VORTAC	3000
ROUTE 4		
*IDAHO, PR FIX *15000 - MRA **1800 - MOCA	BORINQUEN, PR VORTAC	**2500
BORINQUEN, PR VORTAC	JOSHE, PR FIX	6000
JOSHE, PR FIX	MIGHT, PR FIX	6000
MIGHT, PR FIX	TUUNA, PR FIX	6000
TUUNA, PR FIX	VEDAS, PR FIX	5000
VEDAS, PR FIX	SNOOZ, VI FIX	4000
SNOOZ, VI FIX	ST CROIX, VI VOR/DME	2400
ROUTE 5		
BORINQUEN, PR VORTAC *1800 - MOCA	ROBLL, PR FIX	*3000
ROBLL, PR FIX *1300 - MOCA	PLING, PR FIX	*6000
ROUTE 6		
*IDAHO, PR FIX *15000 - MRA	ROBLL, PR FIX	15000
ROBLL, PR FIX	BEANO, PR FIX	6000
BEANO, PR FIX *1300 - MOCA	CORAF, PR FIX	*3000
CORAF, PR FIX	SAN JUAN, PR VORTAC	1500
SAN JUAN, PR VORTAC	CHAKA, PR FIX	2500
CHAKA, PR FIX	PALCO, PR FIX	3000
PALCO, PR FIX	ST THOMAS, VI VOR/DME	2700
	MAA -	45000
ROUTE 7		
PLING, PR FIX	SAALR, PR FIX	12000
SAALR, PR FIX	DONKE, PR FIX	3000
DONKE, PR FIX	SAN JUAN, PR VORTAC	3000
SAN JUAN, PR VORTAC	SANLO, PR FIX	4000
SANLO, PR FIX	TUUNA, PR FIX	4000
TUUNA, PR FIX	GESSO, PR FIX	9000

FROM	TO	MEA
ROUTE 9		
BEWIK, PR FIX *8500 - MRA	*WIGUM, PR FIX	6000
WIGUM, PR FIX	CLAYO, PR FIX	MAA - 18000 5500
CLAYO, PR FIX	MIGHT, PR FIX	MAA - 18000 5500
MIGHT, PR FIX	GANBO, PR FIX	MAA - 18000 6000
GANBO, PR FIX	SAN JUAN, PR VORTAC	MAA - 18000 3800
SAN JUAN, PR VORTAC	WALNA, PR FIX	MAA - 18000 1500
WALNA, PR FIX *2500 - MRA	*DEEDY, PR FIX	MAA - 18000 1500
DEEDY, PR FIX	VERMO, PR FIX	MAA - 18000 12000 MAA - 18000

ROUTE 12

MAYAGUEZ, PR VOR/DME JOSHE, PR FIX	JOSHE, PR FIX *VARNA, PR FIX	7000 6000
*5000 - MCA	VARNA, PR FIX , SW BND	
VARNA, PR FIX	SAN JUAN, PR VORTAC	3700
SAN JUAN, PR VORTAC	JETSS, PR FIX	2000
JETSS, PR FIX	ST THOMAS, VI VOR/DME	2800

BAHAMA ROUTES

BR1L

JOLTS, BS FIX *1500 - MOCA	FREEPORT, BS VOR/DME	*2000
FREEPORT, BS VOR/DME *1300 - MOCA	BARTS, BS FIX	*2000
BARTS, BS FIX *1200 - MOCA	MAMML, BS FIX	*2000
MAMML, BS FIX *1200 - MOCA	DIAZZ, OA FIX	*2000
DIAZZ, OA FIX	COBBL, BS FIX	2000
COBBL, BS FIX *1200 - MOCA	LOGVN, OA WP	*2000
LOGVN, OA WP	BRRGO, BS FIX	2000
BRRGO, BS FIX *1200 - MOCA	AVNEY, OA WP	*2000
AVNEY, OA WP *1200 - MOCA	BENIE, IB FIX	*2000
BENIE, IB FIX *1200 - MOCA	OREDE, BS WP	*2000
OREDE, BS WP *1200 - MOCA	RAHAM, IB FIX	*2000
RAHAM, IB FIX *1300 - MOCA	STRUD, OA FIX	*2000
STRUD, OA FIX	BIKIN, IB FIX	2000
BIKIN, IB FIX *1300 - MOCA	GRAND TURK, TC VORTAC	*2000

FROM	TO	MEA
BR9L		
GRAND TURK, TC VORTAC	TOMAZ, IB FIX	
TOMAZ, IB FIX	CARAH, OA FIX	*2000
*1300 - MOCA		
CARAH, OA FIX	SKHOT, OA WP	*2000
*1300 - MOCA		
BR10L		
FREEPORT, BS VOR/DME	HAANA, BS FIX	
HAANA, BS FIX	MRRSH, BS FIX	3000
BR21V		
FREEPORT, BS VOR/DME	ULAMA, BS FIX	2000
WALIK, FL FIX	PALM BEACH, FL VORTAC	2000
BR22V		
FORT LAUDERDALE, FL	DEKAL, OA FIX	6000
VOR/DME		
DEKAL, OA FIX	WIERS, BS FIX	6000
WIERS, BS FIX	OYSTA, BS FIX	10000
OYSTA, BS FIX	CAREY, BS FIX	6000
CAREY, BS FIX	MAJUR, OA FIX	3000
MAJUR, OA FIX	NASSAU, BS VOR/DME	*2000
*1500 - MOCA		
BR49V		
DOLPHIN, FL VORTAC	LUVLY, FL FIX	2000
LUVLY, FL FIX	JUNUR, FL FIX	2000
JUNUR, FL FIX	FOWEE, OA FIX	6000
FOWEE, OA FIX	LUCSS, BS FIX	*7000
*1400 - MOCA		MAA - 45000
LUCSS, BS FIX	JERRE, OA FIX	*4000
*1400 - MOCA		MAA - 45000
JERRE, OA FIX	*TINKY, OA FIX	*4000
*8000 - MRA		
**1400 - MOCA		MAA - 45000
TINKY, OA FIX	NICKO, BS FIX	*4000
*1500 - MOCA		MAA - 45000
NICKO, BS FIX	NASSAU, BS VOR/DME	*2000
*1500 - MOCA		MAA - 45000
BR53V		
VIRGINIA KEY, FL VOR/DME	SKIPS, BS FIX	4000
SKIPS, BS FIX	LEEVI, BS FIX	5000
LEEVI, BS FIX	SWIMM, BS FIX	5000
SWIMM, BS FIX	WOOZE, BS FIX	9000
WOOZE, BS FIX	*RAJAY, BS FIX	11000
*11000 - MRA		
RAJAY, BS FIX	PRUNE, BS FIX	4000
PRUNE, BS FIX	HINZY, BS FIX	2000
HINZY, BS FIX	NASSAU, BS VOR/DME	2000

FROM	TO	MEA
BR53 – CONTINUED		
NASSAU, BS VOR/DME	GUAVA, BS FIX	3000
GUAVA, BS FIX	BNTTZ, BS FIX	3000
BR54V		
PALM BEACH, FL VORTAC	MRLIN, FL FIX	2000
MRLIN, FL FIX	PRED, FL FIX	4000
PRED, FL FIX	ISAAC, BS FIX	6000
ISAAC, BS FIX	OYSTA, BS FIX	8000
OYSTA, BS FIX	CAREY, BS FIX	6000
CAREY, BS FIX	MAJUR, OA FIX	3000
MAJUR, OA FIX	NASSAU, BS VOR/DME	*2000
*1500 - MOCA		
BR55V		
PALM BEACH, FL VORTAC	MRLIN, FL FIX	2000
MRLIN, FL FIX	PRED, FL FIX	4000
PRED, FL FIX	BEECH, BS FIX	4000
BEECH, BS FIX	BIMINI, BS VORTAC	4000
BIMINI, BS VORTAC	*RAJAY, BS FIX	4000
*11000 - MRA		
RAJAY, BS FIX	PRUNE, BS FIX	4000
PRUNE, BS FIX	HINZY, BS FIX	2000
NASSAU, BS VOR/DME	BURRL, BS FIX	*3000
*1500 - MOCA		
BURRL, BS FIX	SEAAN, BS FIX	*3000
*1300 - MOCA		
SEAAN, BS FIX	MUVOD, BS FIX	*10000
*1300 - MOCA		
MUVOD, BS FIX	BRRGO, BS FIX	*16000
*1300 - MOCA		
BR57V		
FORT LAUDERDALE, FL VOR/DME	DEKAL, OA FIX	6000
DEKAL, OA FIX	WIERS, BS FIX	6000
WIERS, BS FIX	BIMINI, BS VORTAC	3000
BIMINI, BS VORTAC	CAREY, BS FIX	*3000
*1300 - MOCA		
CAREY, BS FIX	MAJUR, OA FIX	3000
MAJUR, OA FIX	NASSAU, BS VOR/DME	*2000
*1500 - MOCA		
BR58V		
NASSAU, BS VOR/DME	KURAY, BS FIX	*2000
*1500 - MOCA		
KURAY, BS FIX	*MELON, BS FIX	**2000
*8000 - MRA		
*1300 - MOCA		
MELON, BS FIX	HANKX, BS FIX	*2000
*1300 - MOCA		
HANKX, BS FIX	BARTS, BS FIX	*4000
*1300 - MOCA		
BARTS, BS FIX	ANGLL, BS FIX	10000

FROM	TO	MEA
BR62V		
TREASURE, FL VORTAC	ANGEE, FL FIX	2000
ANGEE, FL FIX	FORNL, FL FIX	2000
FORNL, FL FIX	SURFN, FL FIX	2000
SURFN, FL FIX	BERTH, BS FIX	*4000
*1300 - MOCA		
BERTH, BS FIX	JAKEL, BS FIX	*4000
*1300 - MOCA		
JAKEL, BS FIX	FREEPORT, BS VOR/DME	*4000
*1400 - MOCA		
BR63V		
PALM BEACH, FL VORTAC	TURPS, FL FIX	2000
TURPS, FL FIX	MIXAE, BS FIX	3000
MIXAE, BS FIX	HALBI, BS FIX	4000
HALBI, BS FIX	ULAMA, BS FIX	2000
ULAMA, BS FIX	FREEPORT, BS VOR/DME	2000
FREEPORT, BS VOR/DME	CEGUR, BS FIX	*2000
*1400 - MOCA		
CEGUR, BS FIX	BURBO, BS FIX	*2000
*1300 - MOCA		
BURBO, BS FIX	BAYRU, BS FIX	*10000
*1300 - MOCA		
BAYRU, BS FIX	HANKX, BS FIX	*10000
*1300 - MOCA		
HANKX, BS FIX	*MELON, BS FIX	**2000
*8000 - MRA		
**1300 - MOCA		
MELON, BS FIX	KURAY, BS FIX	*2000
*1300 - MOCA		
KURAY, BS FIX	NASSAU, BS VOR/DME	*2000
*1500 - MOCA		
BR64V		
VIRGINIA KEY, FL VOR/DME	QEPRO, FL FIX	5000
QEPRO, FL FIX	KUCEP, FL WP	5000
KUCEP, FL WP	HEATT, FL FIX	5000
HEATT, FL FIX	MRLIN, FL FIX	5000
MRLIN, FL FIX	MUNRO, BS FIX	5000
MUNRO, BS FIX	FREEPORT, BS VOR/DME	2000
BR65V		
NASSAU, BS VOR/DME	PEACH, BS FIX	*2000
*1500 - MOCA		
PEACH, BS FIX	*SYDNY, BS FIX	**2000
*5000 - MRA		
**1300 - MOCA		
SYDNY, BS FIX	LAUTH, BS FIX	*5000
*1300 - MOCA		
LAUTH, BS FIX	FREEPORT, BS VOR/DME	*2000
*1400 - MOCA		
FREEPORT, BS VOR/DME	RAPPS, BS FIX	3000
RAPPS, BS FIX	STIFF, BS FIX	8000
STIFF, BS FIX	ELDER, FL FIX	8000
ELDER, FL FIX	ADOOR, FL FIX	25000

FROM	TO	MEA
BR66V		
VIRGINIA KEY, FL VOR/DME	JANUS, OA FIX	2000
JANUS, OA FIX	PADUS, BS FIX	4000
PADUS, BS FIX	FREEPORT, BS VOR/DME	2000
BR68V		
FORT LAUDERDALE, FL VOR/DME	MRLIN, FL FIX	6000
MRLIN, FL FIX	MUNRO, BS FIX	5000
MUNRO, BS FIX	FREEPORT, BS VOR/DME	2000
BR69V		
BIMINI, BS VORTAC	BAHMA, BS FIX	3000
BAHMA, BS FIX	MAYKO, OA FIX	3000
MAYKO, OA FIX	FREEPORT, BS VOR/DME	3000
FREEPORT, BS VOR/DME	JAMAX, BS FIX	*2000
*1400 - MOCA		
JAMAX, BS FIX	BENZI, BS FIX	*3000
*1200 - MOCA		
BENZI, BS FIX	JOLTS, BS FIX	4000
JOLTS, BS FIX	BERTH, BS FIX	4000
BERTH, BS FIX	KIXAL, OA FIX	4000
WALIK, FL FIX	PALM BEACH, FL VORTAC	2000
BR70V		
FORT LAUDERDALE, FL VOR/DME	TURBO, OA FIX	2000
TURBO, OA FIX	PADUS, BS FIX	7000
PADUS, BS FIX	FREEPORT, BS VOR/DME	2000
FREEPORT, BS VOR/DME	GRREG, BS FIX	3500
GRREG, BS FIX	MRRSH, BS FIX	3500
MRRSH, BS FIX	NASSAU, BS VOR/DME	6000
BR71V		
FREEPORT, BS VOR/DME	WOPOP, BS FIX	*2000
*1400 - MOCA		
WOPOP, BS FIX	WLKER, BS FIX	*3000
*1200 - MOCA		

FROM	TO	MEA
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ATLANTIC ROUTES

A300

KIKER, OA WP	RAYAS, OA FIX	#6000
#NAVIGATION EQUIPMENT OTHER THAN LF OR VHF REQUIRED		
RAYAS, OA FIX	DORADO, PR NDB	6000
DORADO, PR NDB	*JAAWS, PR FIX	3000
*7000 - MRA		
JAAWS, PR FIX	PLING, PR FIX	3000
PLING, PR FIX	LENNT, OA WP	*3000
*1200 - MOCA		

A301

*URSUS, OA FIX	ZOLLA, OA FIX	10000
*16000 - MRA		
ZOLLA, OA FIX	FOWEE, OA FIX	10000
FOWEE, OA FIX	SKIPS, BS FIX	5000
SKIPS, BS FIX	BIMINI, BS VORTAC	4000

A315

BIMINI, BS VORTAC	SWIMM, BS FIX	5000
SWIMM, BS FIX	*TINKY, OA FIX	8000
*8000 - MRA		
TINKY, OA FIX	*PEKRE, BS FIX	12500
*12500 - MRA		
PEKRE, BS FIX	*JAYEE, BS FIX	14000
*14000 - MRA		
JAYEE, BS FIX	*HODGY, BS FIX	7000
*16500 - MRA		
HODGY, BS FIX	*AMBIS, BS FIX	7000
*16500 - MRA		
AMBIS, BS FIX	JOSES, OA WP	7000

A509

*URSUS, OA FIX	ELLEE, BS FIX	16000
*16000 - MRA		
ELLEE, BS FIX	EONNS, FL FIX	5000
EONNS, FL FIX	JURER, FL FIX	3000
JURER, FL FIX	DOLPHIN, FL VORTAC	3000
DOLPHIN, FL VORTAC	MARCI, FL FIX	8000

A516

MILOK, OA FIX	RAYAS, OA FIX	9000
RAYAS, OA FIX	ANNER, OA FIX	#9000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
NAVIGATION EQUIPMENT OTHER THAN LF OR VHF REQUIRED.		
ANNER, OA FIX	*PORQE, VI FIX	#9000
*8000 - MRA		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATIONAL SIGNAL COVERAGE.		
NAVIGATION EQUIPMENT OTHER THAN LF OR VHF REQUIRED.		
PORQE, VI FIX	*DANDE, VI FIX	6000
*3500 - MRA		
DANDE, VI FIX	RKDIA, OA WP	2500

FROM	TO	MEA
A517		
ZPATA, PR FIX	SAINT MAARTEN, AN VOR/DME	6000 MAA - 45000
A523		
DORADO, PR NDB *1500 - MOCA	CORAF, PR FIX	*2000
CORAF, PR FIX *1500 - MOCA	SAALR, PR FIX	*2000
VERMO, PR FIX *1300 - MOCA	THANK, PR WP	*2000
A555		
ILURI, OA FIX *8000 - MRA	*PORQE, VI FIX	12000
PORQE, VI FIX	DORADO, PR NDB	6000
DORADO, PR NDB *15000 - MRA	*IDAHO, PR FIX	2000
IDAHO, PR FIX *1300 - MOCA	HARDE, PR FIX	*2000
HARDE, PR FIX *1300 - MOCA	GRADI, IB FIX	*2000
GRADI, IB FIX *1300 - MOCA	COCBU, IB FIX	*2000
COCBU, IB FIX *1500 - MOCA	GRAND TURK, TC VORTAC	*2000
GRAND TURK, TC VORTAC	BTLER, OA FIX	2000
BTLER, OA FIX	GUANA, OA FIX	2000
GUANA, OA FIX	INDEE, BS FIX	2000
INDEE, BS FIX	DUKKY, BS FIX	2000
DUKKY, BS FIX	EVETS, BS FIX	3000
EVETS, BS FIX	GEROT, OA FIX	3000
GEROT, OA FIX	DONEZ, OA FIX	3000
DONEZ, OA FIX	BOSAR, BS FIX	3000
BOSAR, BS FIX *1300 - MOCA	LEPAS, BS FIX	*3000
LEPAS, BS FIX *1500 - MOCA	NASSAU, BS VOR/DME	*1500
NASSAU, BS VOR/DME	HINZY, BS FIX	2000
HINZY, BS FIX	PRUNE, BS FIX	2000
PRUNE, BS FIX *11000 - MRA	*RAJAY, BS FIX	4000
RAJAY, BS FIX	BIMINI, BS VORTAC	4000
A636		
BORINQUEN, PR VORTAC	ALBBE, BS FIX	2000 MAA - 45000
ALBBE, BS FIX	GREAT INAGUA, BS NDB	4000

FROM	TO	MEA
A638		
ST THOMAS, VI VOR/DME	GUYRO, VI FIX	4000
GUYRO, VI FIX	SLUGO, VI FIX	4000
SLUGO, VI FIX	SAINT MAARTEN, AN VOR/DME	3000
A699		
NUCAR, BS FIX	STIFF, BS FIX	8000
STIFF, BS FIX	RAMJT, OA WP	8000
PERMT, FL FIX	PALM BEACH, FL VORTAC	6000
A756		
BODLO, OA WP	GREAT INAGUA, BS NDB	3000
GREAT INAGUA, BS NDB	ROSEA, OA WP	3000
ROSEA, OA WP	DUKKY, BS FIX	3000
A770		
LEEVILLE, LA VORTAC	DOLPH, OG FIX	4000
		MAA - 45000
DOLPH, OG FIX	ALGAE, OG WP	4000
		MAA - 45000
ALGAE, OG WP	KEHLI, OG FIX	4000
AR3		
NASSAU, BS VOR/DME	KURAY, BS FIX	*2000
*1500 - MOCA		MAA - 45000
KURAY, BS FIX	*MELON, BS FIX	**2000
*8000 - MRA		
**1400 - MOCA		MAA - 45000
MELON, BS FIX	HANKX, BS FIX	*2000
*1400 - MOCA		MAA - 45000
HANKX, BS FIX	BARTS, BS FIX	*4000
*1400 - MOCA		MAA - 45000
BARTS, BS FIX	ANGLL, BS FIX	*10000
*1400 - MOCA		MAA - 45000
ANGLL, BS FIX	NUCAR, BS FIX	*8000
*1400 - MOCA		MAA - 45000
CARPX, OA WP	PERIE, OA WP	2500
		MAA - 45000
PERIE, OA WP	OLDEY, SC FIX	2500
		MAA - 45000
OLDEY, SC FIX	PANAL, OA FIX	2500
		MAA - 45000
PANAL, OA FIX	CAROLINA BEACH, NC NDB	2500
		MAA - 45000
		MAA - 45000

FROM	TO	MEA
AR5		
DINNS, FL NDB	JAWSS, FL FIX	2500
		MAA - 45000
AR6		
ORLANDO, FL VORTAC	BITHO, FL FIX	2700
		MAA - 45000
BITHO, FL FIX	MALET, FL FIX	2700
		MAA - 45000
MALET, FL FIX	*APOLO, FL FIX	4000
*4000 - MRA		
		MAA - 45000
APOLO, FL FIX	HOBEE, FL FIX	24000
		MAA - 45000
AR7		
CHARLESTON, SC VORTAC	PITRW, SC WP	18000
		MAA - 60000
PITRW, SC WP	SPIKY, OA WP	18000
		MAA - 60000
SPIKY, OA WP	LURKS, OA WP	24000
		MAA - 60000
LURKS, OA WP	PERIE, OA WP	24000
		MAA - 60000
AR8		
ELIZABETH CITY, NC VOR/DME	OHPEA, NC FIX	21000
		MAA - 41000
OHPEA, NC FIX	TOMMZ, OA FIX	21000
		MAA - 41000
TOMMZ, OA FIX	OXANA, OA FIX	21000
		MAA - 41000
AR10		
DOLPHIN, FL VORTAC	TURBO, OA FIX	6000
TURBO, OA FIX	PRED, FL FIX	6000
PRED, FL FIX	ZAPPA, BS FIX	10000
AR11		
VIRGINIA KEY, FL VOR/DME	JANUS, OA FIX	#2000
#VIRGINIA KEY R-058 UNUSABLE	JANUS TO VALLY	
JANUS, OA FIX	VALLY, OA FIX	*5000
*5000 - GNSS MEA		
AR12		
CHARLESTON, SC VORTAC	PITRW, SC WP	18000
		MAA - 60000
PITRW, SC WP	SPIKY, OA WP	18000
		MAA - 60000
SPIKY, OA WP	LURKS, OA WP	24000
		MAA - 60000
LURKS, OA WP	JAINS, OA WP	24000
		MAA - 60000

FROM	TO	MEA
AR15		
WILMINGTON, NC VORTAC	METTA, OA FIX	24000
		MAA - 60000
METTA, OA FIX	SPIKY, OA WP	24000
		MAA - 60000
SPIKY, OA WP	BAHAA, OA WP	24000
		MAA - 60000
BAHAA, OA WP	HIBAC, OA WP	24000
		MAA - 60000
HIBAC, OA WP	PETEE, OA WP	24000
		MAA - 60000
PETEE, OA WP	*APOLO, FL FIX	24000
*4000 - MRA		
		MAA - 60000
APOLO, FL FIX	MALET, FL FIX	4000
		MAA - 60000
MALET, FL FIX	ORLANDO, FL VORTAC	2700
		MAA - 60000
AR17		
WILMINGTON, NC VORTAC	METTA, OA FIX	24000
		MAA - 60000
METTA, OA FIX	SPIKY, OA WP	24000
		MAA - 60000
SPIKY, OA WP	BAHAA, OA WP	24000
		MAA - 60000
BAHAA, OA WP	HIBAC, OA WP	24000
		MAA - 60000
HIBAC, OA WP	VIRGINIA KEY, FL VOR/DME	24000
		MAA - 60000
AR18		
WOLFO, OA WP	RAMJT, OA WP	24000
		MAA - 60000
RAMJT, OA WP	ETECK, OA WP	24000
		MAA - 60000
ETECK, OA WP	OZENA, OA WP	24000
		MAA - 60000
OZENA, OA WP	LANIE, OA WP	24000
		MAA - 60000
LANIE, OA WP	LURKS, OA WP	24000
		MAA - 60000
LURKS, OA WP	MILOE, OA FIX	24000
		MAA - 60000
MILOE, OA FIX	PANAL, OA FIX	24000
		MAA - 60000
PANAL, OA FIX	DIXON, NC NDB/DME	24000
		MAA - 60000
AR21		
WILMINGTON, NC VORTAC	METTA, OA FIX	24000
		MAA - 60000
METTA, OA FIX	SPIKY, OA WP	24000
		MAA - 60000
SPIKY, OA WP	BAHAA, OA WP	24000
		MAA - 60000

FROM	TO	MEA
AR21 CONTINUED		
BAHAA, OA WP	DULEE, OA WP	24000
		MAA - 60000
DULEE, OA WP	HALSS, OA WP	24000
		MAA - 60000
HALSS, OA WP	CRANS, OA WP	24000
		MAA - 60000
AR23		
*URSUS, OA FIX *16000 - MRA	FREEPORT, BS VOR/DME	24000
		MAA - 60000
FREEPORT, BS VOR/DME	CANIT, OA WP	24000
		MAA - 60000
CANIT, OA WP	OZENA, OA WP	24000
		MAA - 60000
OZENA, OA WP	LANIE, OA WP	24000
		MAA - 60000
LANIE, OA WP	LURKS, OA WP	24000
		MAA - 60000
LURKS, OA WP	MILOE, OA FIX	24000
		MAA - 60000
MILOE, OA FIX	PANAL, OA FIX	24000
		MAA - 60000
PANAL, OA FIX	DIXON, NC NDB/DME	24000
		MAA - 60000
AR25		
CHARLESTON, SC VORTAC	PITRW, SC WP	18000
		MAA - 60000
PITRW, SC WP	SPIKY, OA WP	18000
		MAA - 60000
SPIKY, OA WP	LURKS, OA WP	24000
		MAA - 60000
LURKS, OA WP	OTTNG, OA WP	24000
		MAA - 60000
OTTNG, OA WP	EMQUE, OA WP	24000
		MAA - 60000
EMQUE, OA WP	BANNK, OA WP	18000
		MAA - 60000
B24		
SEA ISLE, NJ VORTAC	FISSH, NJ FIX	15000
		MAA - 45000
FISSH, NJ FIX	DASHA, OA WP	15000
		MAA - 45000
B503		
ENAMO, OA FIX	RYDEL, BS FIX	6000
RYDEL, BS FIX *16500 - MRA	*HODGY, BS FIX	6000
HODGY, BS FIX	NASSAU, BS VOR/DME	7000

FROM	TO	MEA
B646		
CANOA, FL WP	FISH HOOK, FL NDB	2000
		MAA - 45000
FISH HOOK, FL NDB	MARATHON, FL NDB	2000
		MAA - 45000
MARATHON, FL NDB	AVION, FL FIX	*6000
*1400 - MOCA		MAA - 45000
AVION, FL FIX	ELLEEE, BS FIX	6000
		MAA - 45000
ELLEEE, BS FIX	FOWEE, OA FIX	*6000
*1400 - MOCA		MAA - 45000
FOWEE, OA FIX	LUCSS, BS FIX	*7000
VIA CHANGE OVER PT FOWEE		
*1400 - MOCA		MAA - 45000
LUCSS, BS FIX	JERRE, OA FIX	*4000
*1400 - MOCA		MAA - 45000
JERRE, OA FIX	*TINKY, OA FIX	**4000
*8000 - MRA		
**1400 - MOCA		MAA - 45000
TINKY, OA FIX	NICKO, BS FIX	*4000
*1500 - MOCA		MAA - 45000
NICKO, BS FIX	NASSAU, BS VOR/DME	*2000
*1500 - MOCA		MAA - 45000
NASSAU, BS VOR/DME	OHBE, BS FIX	*2000
*1500 - MOCA		MAA - 45000
OHBE, BS FIX	MAMML, BS FIX	*4000
*1400 - MOCA		MAA - 45000
MAMML, BS FIX	GRATX, OA WP	*5000
*1400 - MOCA		MAA - 45000
B760		
BIMINI, BS VORTAC	LEEVI, BS FIX	4000
LEEVI, BS FIX	MENDL, BS FIX	8000
MENDL, BS FIX	BORDO, BS FIX	12000
B891		
POKEG, IB FIX	GRADI, IB FIX	4000
GRADI, IB FIX	WATRS, OA FIX	10000
B892		
MAYAGUEZ, PR VOR/DME	ANTEX, PR FIX	4000
G430		
VIRGINIA KEY, FL VOR/DME	EONNS, FL FIX	3000
EONNS, FL FIX	AVION, FL FIX	4000

FROM	TO	MEA
G432		
ARMUR, PR FIX	CRSTL, PR FIX	6000
CRSTL, PR FIX	ALASK, PR WP	6000
ALASK, PR WP	CLAYO, PR FIX	6000
CLAYO, PR FIX	DORADO, PR NDB	6000
DORADO, PR NDB	CORAF, PR FIX	*2000
*1500 - MOCA		
CORAF, PR FIX	SAALR, PR FIX	*2000
*1500 - MOCA		
SAALR, PR FIX	VERMO, PR FIX	*2000
*1500 - MOCA		
VERMO, PR FIX	THANK, PR WP	*2000
*1300 - MOCA		
G437		
*DYNAH, OA FIX	**JAYEE, BS FIX	6000
*14000 - MRA		
**14000 - MRA		
		MAA - 45000
JAYEE, BS FIX	JEFRY, BS FIX	*4000
*1400 - MOCA		MAA - 45000
JEFRY, BS FIX	BRONO, BS FIX	*4000
*1500 - MOCA		MAA - 45000
BRONO, BS FIX	WELKS, BS FIX	*2000
*1500 - MOCA		MAA - 45000
WELKS, BS FIX	NASSAU, BS VOR/DME	*2000
*1500 - MOCA		
NASSAU, BS VOR/DME	INGRA, BS FIX	2000
INGRA, BS FIX	MAPYL, OA WP	8000
G439		
DOLPHIN, FL VORTAC	MNATE, FL FIX	3000
MNATE, FL FIX	TWNNS, FL FIX	5000
TWNNS, FL FIX	DROWN, FL FIX	5000
G446		
OLDEY, SC FIX	PERIE, OA WP	2500
PERIE, OA WP	CARPX, OA WP	2500
CARPX, OA WP	SCOBY, OA WP	2500
SCOBY, OA WP	CASPR, OA FIX	2500
CASPR, OA FIX	NUCAR, BS FIX	2500
NUCAR, BS FIX	OMALY, OA FIX	5500
OMALY, OA FIX	LASEE, OA WP	5500
LASEE, OA WP	ALUTE, OA WP	5500
ALUTE, OA WP	GRAND TURK, TC VORTAC	5500
GRAND TURK, TC VORTAC	PAMMS, IB FIX	2000
PAMMS, IB FIX	BESAS, IB FIX	6000

FROM	TO	MEA
G449		
DORADO, PR NDB	HENLI, PR FIX	#6000
#NAVIGATION EQUIPMENT OTHER THAN LF OR VHF REQUIRED.		
HENLI, PR FIX	ANNER, OA FIX	#6000
#NAVIGATION EQUIPMENT OTHER THAN LF OR VHF REQUIRED.		
ANNER, OA FIX	ANADA, OA WP	#6000
#NAVIGATION EQUIPMENT OTHER THAN LF OF VHF REQUIRED.		
G629		
GREAT INAGUA, BS NDB	RAPPR, OA FIX	3000
CATHI, OA FIX	PROVIDENCIALES, TC VOR/DME	1500
PROVIDENCIALES, TC	EGANN, IB FIX	1500
VOR/DME		
EGANN, IB FIX	RAHAM, IB FIX	2000
RAHAM, IB FIX	LYMIN, OA FIX	2000
G633		
GABAR, VI FIX	*DANDE, VI FIX	3500
*3500 - MRA		
DANDE, VI FIX	TANZY, VI FIX	3100
TANZY, VI FIX	ST CROIX, VI VOR/DME	2400
ST CROIX, VI VOR/DME	SNOOZ, VI FIX	3300
SNOOZ, VI FIX	TUUNA, PR FIX	3300
TUUNA, PR FIX	DORADO, PR NDB	5000
DORADO, PR NDB	MAYAGUEZ, PR VOR/DME	5000
MAYAGUEZ, PR VOR/DME	ZADAV, PR FIX	6000
ZADAV, PR FIX	MELLA, PR WP	6000
G648		
GRAND TURK, TC VORTAC	PROVIDENCIALES, TC VOR/DME	1500
PROVIDENCIALES, TC	MICAS, IB FIX	2000
VOR/DME		
G765		
MAXIM, FL WP	FISH HOOK, FL NDB	*3000
*1300 - MOCA		MAA - 45000
L207		
SCHOLES, TX VOR/DME	MUSYL, OG FIX	4000
		MAA - 45000
MUSYL, OG FIX	CATFS, OG WP	4000
		MAA - 45000
CATFS, OG WP	SEAGL, OG WP	4000
		MAA - 45000
SEAGL, OG WP	IPSEV, OG WP	4000
		MAA - 45000

FROM	TO	MEA
L208		
SABINE PASS, TX VOR/DME	ANKRR, OG WP	4000
		MAA - 45000
ANKRR, OG WP	RUMMM, OG WP	4000
		MAA - 45000
RUMMM, OG WP	PEGLG, OG WP	4000
		MAA - 45000
PEGLG, OG WP	DUTNA, OG WP	4000
		MAA - 45000
L214		
LEEVILLE, LA VORTAC	PLNDR, OG WP	4000
		MAA - 45000
PLNDR, OG WP	DAGGR, OG WP	4000
		MAA - 45000
DAGGR, OG WP	IRDOV, OG WP	4000
		MAA - 45000
L216		
LERED, OA FIX	GRAND TURK, TC VORTAC	2000
		MAA - 45000
L221		
SATOE, OA WP	TAYOG, PR WP	7000
		MAA - 60000
TAYOG, PR WP	JOSHE, PR FIX	7000
		MAA - 60000
L327		
SCAPA, PR WP	SAULT, PR WP	18000
		MAA - 45000
SAULT, PR WP	OPaul, OA WP	18000
		MAA - 45000
L329		
ZPATA, PR FIX	SAINT MAARTEN, AN VORDME	18000
		MAA - 45000
SAINT MAARTEN, TC VORDME	SAULT, PR WP	18000
		MAA - 45000
SAULT, PR WP	KEEKA, OA WP	18000
		MAA - 45000
L333		
HARVEY, LA VORTAC	HOOCK, OG WP	4000
		MAA - 45000
HOOCK, OG WP	TRESR, OG WP	4000
		MAA - 45000
TRESR, OG WP	CCUDA, OG WP	4000
		MAA - 45000
CCUDA, OG WP	PISAD, OG WP	4000
		MAA - 45000

FROM	TO	MEA
L335		
SCAPA, PR WP	TRNKY, OA WP	18000
		MAA - 45000
TRNKY, OA WP	OBIKE , OA WP	18000
		MAA - 45000
L349		
GABAR, VI FIX	GESO, PR FIX	5500
		MAA - 60000
GESO, PR FIX	SATOE, OA WP	5500
		MAA - 60000
L452		
OXANA, OA FIX	ZZTOP, OA WP	5500
		MAA - 60000
ZZTOP, OA WP	OMALA, OA WP	5500
		MAA - 60000
OMALA, OA WP	WILYY, OA WP	5500
		MAA - 60000
WILYY, OA WP	KANUX, OA WP	5500
		MAA - 60000
KANUX, OA WP	GALVN, OA WP	5500
		MAA - 60000
GALVN, OA WP	KASAR, OA WP	5500
		MAA - 60000
KASAR, OA WP	LNHOM, OA WP	5500
		MAA - 60000
LNHOM, OA WP	SLUKA, OA WP	5500
		MAA - 60000
SLUKA, OA WP	JORGG, OA WP	5500
		MAA - 60000
JORGG, OA WP	NELSR, OA WP	5500
		MAA - 60000
NELSR, OA WP	GRAND TURK, TC VORTAC	5500
		MAA - 60000
GRAND TURK, TC VORTAC	RNTRY, OA FIX	5500
		MAA - 60000
RNTRY, OA FIX	MACKI, OA FIX	5500
		MAA - 60000
MACKI, OA FIX	HARBG, OA FIX	5500
		MAA - 60000
HARBG, OA FIX	MUNOZ, OA WP	5500
		MAA - 60000
MUNOZ, OA WP	BORINQUEN, PR VORTAC	5500
		MAA - 60000
BORINQUEN, PR VORTAC	ETEEE, OA WP	5500
		MAA - 60000
ETEEE, OA WP	RAFEE, OA WP	5500
		MAA - 60000
RAFEE, OA WP	ANADA, OA WP	5500
		MAA - 60000

FROM	TO	MEA
L453		
AZEU, OA WP	LEXAD, OA WP	5500
		MAA - 60000
LEXAD, OA WP	PAEPR, OA WP	5500
		MAA - 60000
PAEPR, OA WP	SAUCR, OA WP	5500
		MAA - 60000
SAUCR, OA WP	ONGOT, OA WP	5500
		MAA - 60000
ONGOT, OA WP	LSIER, OA WP	5500
		MAA - 60000
LSIER, OA WP	ALOB, OA WP	5500
		MAA - 60000
ALOB, OA WP	BOREX, OA WP	5500
		MAA - 60000
BOREX, OA WP	LAMER, OA WP	5500
		MAA - 60000
LAMER, OA WP	RODRK, OA WP	5500
		MAA - 60000
RODRK, OA WP	CERDA, OA WP	5500
		MAA - 60000
CERDA, OA WP	FARMN, OA WP	5500
		MAA - 60000
FARMN, OA WP	JSTIN, OA WP	5500
		MAA - 60000
JSTIN, OA WP	ANTOX, OA FIX	5500
		MAA - 60000
ANTOX, OA FIX	KARRN, OA FIX	5500
		MAA - 60000
KARRN, OA FIX	MACKI, OA FIX	5500
		MAA - 60000
MACKI, OA FIX	ASIVO, DO WP	5500
		MAA - 60000
L454		
KENNEDY, NY VOR/DME	BOUNO, NY FIX	6000
BOUNO, NY FIX	GEDIC, NJ FIX	6000
GEDIC, NJ FIX	TAAPS, OA WP	6000
TAAPS, OA WP	GLINN, OA FIX	6000
GLINN, OA FIX	VOGEL, OA WP	6000
VOGEL, OA WP	GEENE, OA WP	6000
GEENE, OA WP	OWENZ, OA FIX	6000
OWENZ, OA FIX	FONDE, OA WP	6000
FONDE, OA WP	ELCAM, OA WP	21000
ELCAM, OA WP	WUZYU, OA WP	21000
WUZYU, OA WP	ANNGO, OA WP	21000
ANNGO, OA WP	BERGH, OA WP	21000
BERGH, OA WP	WEBBB, OA WP	21000
L455		
KENNEDY, NY VOR/DME	BOUNO, NY FIX	6000
BOUNO, NY FIX	GEDIC, NJ FIX	6000
GEDIC, NJ FIX	TAAPS, OA WP	6000
TAAPS, OA WP	GLINN, OA FIX	6000
GLINN, OA FIX	VOGEL, OA WP	6000
VOGEL, OA WP	GEENE, OA WP	6000
GEENE, OA WP	OWENZ, OA FIX	6000

FROM	TO	MEA
L455 - CONTINUED		
OWENZ, OA FIX	FONDE, OA WP	6000
FONDE, OA WP	ELCAM, OA WP	21000
ELCAM, OA WP	WUZYU, OA WP	21000
WUZYU, OA WP	ANNGO, OA WP	21000
ANNGO, OA WP	BERGH, OA WP	21000
BERGH, OA WP	VACHI, OA WP	21000
VACHI, OA WP	KBEZA, OA WP	21000
KBEZA, OA WP	SCAPA, PR WP	21000
L456		
KENNEDY, NY VOR/DME	SHERL, NY FIX	15000
SHERL, NY FIX	FATON, OA WP	15000
FATON, OA WP	THROP, OA WP	15000
THROP, OA WP	GRAPT, OA WP	15000
GRAPT, OA WP	LEOES, OA FIX	15000
LEOES, OA FIX	FINIT, OA WP	15000
L457		
KENNEDY, NY VOR/DME	BOUNO, NY FIX	6000
BOUNO, NY FIX	GEDIC, NJ FIX	6000
GEDIC, NJ FIX	TAAPS, OA WP	6000
TAAPS, OA WP	GLINN, OA FIX	6000
GLINN, OA FIX	VOGEL, OA WP	6000
VOGEL, OA WP	GEENE, OA WP	6000
GEENE, OA WP	OWENZ, OA FIX	6000
OWENZ, OA FIX	FONDE, OA WP	6000
FONDE, OA WP	ELCAM, OA WP	21000
ELCAM, OA WP	WUZYU, OA WP	21000
WUZYU, OA WP	ANNGO, OA WP	21000
ANNGO, OA WP	BERGH, OA WP	21000
BERGH, OA WP	WEBBB, OA WP	21000
L459		
KENNEDY, NY VOR/DME	BOUNO, NY FIX	6000
BOUNO, NY FIX	GEDIC, NJ FIX	6000
GEDIC, NJ FIX	TAAPS, OA WP	6000
TAAPS, OA WP	GLINN, OA FIX	6000
GLINN, OA FIX	VOGEL, OA WP	6000
VOGEL, OA WP	GEENE, OA WP	6000
GEENE, OA WP	OWENZ, OA FIX	6000
OWENZ, OA FIX	FONDE, OA WP	6000
FONDE, OA WP	ELCAM, OA WP	21000
ELCAM, OA WP	WUZYU, OA WP	21000
WUZYU, OA WP	ANNGO, OA WP	21000
ANNGO, OA WP	BERGH, OA WP	21000
BERGH, OA WP	SAVIK, OA WP	21000

FROM	TO	MEA
L461		
KENNEDY, NY VOR/DME	SHERL, NY FIX	15000
SHERL, NY FIX	FATON, OA WP	15000
FATON, OA WP	THROP, OA WP	15000
THROP, OA WP	GRAPT, OA WP	15000
GRAPT, OA WP	LEOES, OA FIX	15000
LEOES, OA FIX	FINIT, OA WP	15000
L576		
BERMUDA, BM VOR/DME	SEAVR, OA WP	5500
		MAA - 60000
SEAVR, OA WP	RKDIA, OA WP	5500
		MAA - 60000
RKDIA, OA WP	CITRS, OA WP	5500
		MAA - 60000
L577		
ELOPO, PR FIX	SAINT MAARTEN, AN VOR/DME	6000
		MAA - 60000
SAINT MAARTEN, AN VOR/DME	ST THOMAS, VI VOR/DME	6000
		MAA - 60000
ST THOMAS, VI VOR/DME	ANTEX, PR FIX	6000
		MAA - 60000
M201		
BAHAA, OA WP	JENKS, OA WP	5500
		MAA - 60000
JENKS, OA WP	EMCEE, OA WP	5500
		MAA - 60000
EMCEE, OA WP	LANIE, OA WP	5500
		MAA - 60000
LANIE, OA WP	PERIE, OA WP	5500
		MAA - 60000
PERIE, OA WP	HANRI, OA WP	5500
		MAA - 60000
HANRI, OA WP	EMQUE, OA WP	5500
		MAA - 60000
EMQUE, OA WP	GALWY, OA WP	5500
		MAA - 60000
GALWY, OA WP	PAEPR, OA WP	5500
		MAA - 60000
PAEPR, OA WP	VEGAA, OA WP	5500
		MAA - 60000
VEGAA, OA WP	ATUGI, OA WP	5500
		MAA - 60000
ATUGI, OA WP	TILED, OA WP	5500
		MAA - 60000
TILED, OA WP	DRYED, OA WP	5500
		MAA - 60000
DRYED, OA WP	NOVOK, OA WP	5500
		MAA - 60000
NOVOK, OA WP	CARAC, OA WP	5500
		MAA - 60000

FROM	TO	MEA
M204		
SUMRS, OA WP	FLUPS, OA WP	5500
		MAA - 60000
FLUPS, OA WP	ALOBI, OA WP	5500
		MAA - 60000
ALOBI, OA WP	BEXUM, OA WP	5500
		MAA - 60000
BEXUM, OA WP	LUNKR, OA WP	5500
		MAA - 60000
LUNKR, OA WP	SOORY, OA WP	5500
		MAA - 60000
M215		
PISAD, OG WP	MINOW, OG FIX	4000
		MAA - 45000
MINOW, OG FIX	SNOMN, OG WP	4000
		MAA - 45000
SNOMN, OG WP	CIGAR, OG WP	4000
		MAA - 45000
CIGAR, OG WP	KNOST, OG WP	4000
		MAA - 45000
M219		
MYDIA, OG WP	SNAKR, OG WP	4000
		MAA - 45000
SNAKR, OG WP	BUUOY, OG WP	4000
		MAA - 45000
BUUOY, OG WP	CULLY, OG WP	4000
		MAA - 45000
CULLY, OG WP	CIGAR, OG WP	4000
		MAA - 45000
CIGAR, OG WP	KNOST, OG WP	4000
		MAA - 45000
M325		
OXANA, OA FIX	NETSS, OA WP	5500
		MAA - 60000
NETSS, OA WP	ONGOT, OA WP	5500
		MAA - 60000
ONGOT, OA WP	PERDO, OA WP	5500
		MAA - 60000
PERDO, OA WP	ENAPI, OA WP	5500
		MAA - 60000
ENAPI, OA WP	AWSOM, OA WP	6000
AWSOM, OA WP	GUICE, OA WP	6000
GUICE, OA WP	BERMUDA, BM VOR/DME	6000

FROM	TO	MEA
M345		
AXEXO, OG WP	SEAGL, OG WP	4000
		MAA - 45000
SEAGL, OG WP	RUMMM, OG WP	4000
		MAA - 45000
RUMMM, OG WP	KENGs, OG WP	4000
		MAA - 45000
KENGs, OG WP	WAHOO, OG FIX	4000
		MAA - 45000
WAHOO, OG FIX	TIBBY, LA VOR/DME	4000
		MAA - 45000
M575		
CLONN, OG FIX	CATFS, OG WP	4000
		MAA - 45000
CATFS, OG WP	ANKRR, OG WP	4000
		MAA - 45000
ANKRR, OG WP	KENGs, OG WP	4000
		MAA - 45000
KENGs, OG WP	WAHOO, OG FIX	4000
		MAA - 45000
WAHOO, OG FIX	TIBBY, LA VOR/DME	4000
		MAA - 45000
M580		
IRDOV, OG WP	CCUDA, OG WP	4000
		MAA - 45000
CCUDA, OG WP	MINOW, OG FIX	4000
		MAA - 45000
MINOW, OG FIX	BUUOY, OG WP	4000
		MAA - 45000
BUUOY, OG WP	NATLE, OG WP	4000
		MAA - 45000
NATLE, OG WP	SHAQQ, FL WP	4000
		MAA - 45000
SHAQQ, FL WP	MARCI, FL FIX	4000
		MAA - 45000
Q100		
LEVILLE, LA VORTAC	REDFN, OG WP	6000
1500 - MOCA		
REDFN, OG WP	NAITE, OG WP	6000
1500 - MOCA		
NAITE, OG WP	ROZZI, OG WP	6000
1500 - MOCA		
ROZZI, OG WP	REMIS, OG WP	6000
1500 - MOCA		
REMIS, OG WP	SARASOTA, FL VOR/DME	6000
1500 - MOCA		
R507		
SAPPO, OA WP	*CONCH, OA FIX	#24000
*24000 - MRA		
#NAVIGATION EQUIPMENT OTHER THAN LF OR VHF REQUIRED.		
CONCH, OA FIX	UTAHs, PR FIX	24000

FROM	TO	MEA
R628		
TANIA, OA FIX	ZOLLA, OA FIX	12000
ZOLLA, OA FIX	MENDL, BS FIX	10000
MENDL, BS FIX	*PEKRE, BS FIX	**6000
*12500 - MRA		
**1400 - MOCA		MAA - 45000
PEKRE, BS FIX	SANNS, BS FIX	*2000
*1500 - MOCA		MAA - 45000
SANNS, BS FIX	NASSAU, BS VOR/DME	*2000
*1500 - MOCA		MAA - 45000
R760		
ST CROIX, VI VOR/DME	GOUDA, VI FIX	5000
GOUDA, VI FIX	SAINT MAARTEN, AN VOR/DME	3000
R763		
GRAND TURK, TC VORTAC	RNTRY, OA FIX	*14000
*1200 - MOCA		MAA - 45000
RNTRY, OA FIX	MACKI, OA FIX	14000
MACKI, OA FIX	HARBG, OA FIX	14000
HARBG, OA FIX	MUNOZ, OA WP	14000
MUNOZ, OA WP	BORINQUEN, PR VORTAC	14000
R888		
ST CROIX, VI VOR/DME	MODUX, VI FIX	14000
Y183		
IKBIX, OA WP	PEAKY, FL WP	6000
		MAA - 45000
Y185		
ILURI, OA FIX	ACONY, OA WP	18000
		MAA - 60000
ACONY, OA WP	DONQU, OA WP	18000
		MAA - 60000
DONQU, OA WP	COUKY, OA FIX	18000
		MAA - 60000
COUKY, OA FIX	RENAH, OA WP	18000
		MAA - 60000
RENAH, OA WP	CVIKK, BS WP	18000
		MAA - 60000
CVIKK, BS WP	VENDS, OA WP	18000
		MAA - 60000
VENDS, OA WP	BEERD, OA WP	18000
		MAA - 60000
BEERD, OA WP	MANLE, FL WP	18000
		MAA - 60000

FROM	TO	MEA
Y196		
CANOA, FL WP	LULLS , FL WP	18000
		MAA – 60000
LULLS , FL WP	TUNSL , FL WP	18000
		MAA – 60000
Y217		
ZEUSS , OA WP	OCTAL , FL WP	18000
		MAA – 60000
Y240		
MYDIA, OG WP	SNAKR, OG WP	4000
		MAA - 45000
SNAKR, OG WP	YENNE, OG WP	4000
		MAA - 45000
YENNE, OG WP	SHAQQ, FL WP	4000
		MAA - 45000
SHAQQ, FL WP	MARCI, FL FIX	4000
		MAA - 45000
Y259		
BORDO , BS FIX	OCTAL , FL WP	18000
		MAA – 60000
Y261		
JUELE, OA FIX	MADIZ , OA WP	18000
		MAA – 60000
MADIZ, OA WP	FOXID , OA WP	18000
		MAA – 60000
FOXID , OA WP	FOWEE , OA FIX	18000
		MAA – 60000
Y262		
MAXIM, FL WP	LULLS, FL WP	18000
		MAA – 60000
LULLS, FL WP	TUNSL, FL WP	18000
		MAA – 60000
TUNSL, FL WP	BRIES, FL WP	18000
		MAA – 60000
BRIES, FL WP	GOPEY , FL WP	18000
		MAA – 60000
GOPEY , FL WP	LINEY, FL WP	18000
		MAA – 60000
LINEY, FL WP	SAXXN, FL WP	18000
		MAA – 60000
SAXXN, FL WP	FREPORT , BS VOR/DME	18000
		MAA – 60000

FROM	TO	MEA
Y280		
LEEVILLE, LA VORTAC	REDFN, OG WP	18000
		MAA – 60000
REDFN, OG WP	NAITE, OG WP	18000
		MAA – 60000
NAITE, OG WP	ROZZI, OG WP	18000
		MAA – 60000
ROZZI, OG WP	REMIS , OG WP	18000
		M AA – 60000
CHRG , OG WP	SARASOTA, FL VOR/DME	18000
		MAA – 60000
SARASOTA, FL VOR/DME	DOLIE, FL WP	18000
		MAA – 60000
DOLIE, FL WP	JAYMC, FL WP	18000
		MAA – 60000
JAYMC, FL WP	LULLS, FL WP	18000
		MAA – 60000
LULLS, FL WP	WOPOK, FL WP	18000
		MAA – 60000
WOPOK, FL WP	OCTAL, FL WP	18000
		MAA – 60000
OCTAL, FL WP	CANVI , OA WP	18000
		MAA – 60000
CANVI , OA WP	PEACH, BS FIX	18000
		MAA – 60000
PEACH, BS FIX	SUMAC, OA WP	18000
		MAA – 60000
SUMAC, OA WP	RUTO , OA WP	18000
		MAA – 60000
RUTO , OA WP	CHASO , OA WP	18000
		MAA – 60000
CHASO , OA WP	SAPPO, OA WP	18000
		MAA – 60000
SAPPO, OA WP	ACONY, OA WP	18000
		MAA – 60000
ACONY, OA WP	DANDE , VI FIX	18000
		MAA – 60000
DANDE , VI FIX	GABAR , VI FIX	18000
3500 - MOCA		MAA – 60000

Y289

DULEE, OA WP	BAHAA, OA WP	18000
		MAA – 60000
BAHAA, OA WP	NRRSE, OA WP	18000
		MAA – 60000
NRRSE, OA WP	OSTNN , OA WP	18000
		MAA – 60000
OSTNN, OA WP	ZILLS, NC WP	18000
		MAA – 60000

Y290

LEEVILLE, LA VORTAC	BLVNS , OG WP	18000
		MAA – 60000
BLVNS , OG WP	BUNNZ, OG WP	18000
		MAA – 60000
BUNNZ, OG WP	BACCA, OG WP	18000
		MAA – 60000
BACCA, OG WP	CIGAR , OA WP	18000
		MAA – 60000
CIGAR , OA WP	GAWKS , OA WP	18000

FROM	TO	MEA
Y290 –CONTINUED		
GAWKS , OA WP	BAGGS, OG WP	MAA – 60000 18000
BAGGS, OG WP	THMPR, FL WP	MAA – 60000 18000
THMPR, FL WP	FEMID , FL WP	MAA – 60000 18000
FEMID , FL WP	SAXXN , FL WP	MAA – 60000 18000
SAXXN, FL WP	UCRAZ, OA WP	MAA – 60000 18000
UCRAZ, OA WP	SKIPS , BS FIX	MAA – 60000 18000
SKIPS , BS FIX	BITAC , OA WP	MAA – 60000 18000
BITAC, OA WP	HAGIT, OA WP	MAA – 60000 18000
HAGIT, OA WP	CALTO , OA WP	MAA – 60000 18000
CALTO , OA WP	ZIBER , OA WP	MAA – 60000 18000
ZIBER , OA, FL WP	BEANO, PR FIX	MAA – 60000 18000
BEANO, PR FIX	JETSS , PR FIX	MAA – 60000 18000
JETSS , PR FIX	SLUGO , VI FIX	MAA – 60000 18000
SLUGO , VI FIX	ELOPO , PR FIX	MAA – 60000 18000
Y291		
HOAGG, OA WP	JENKS , OA WP	18000 MAA – 60000
JENKS, OA WP	RAZZL, OA FIX	18000 MAA – 60000
RAZZL, OA FIX	JRDAN , OA WP	18000 MAA – 60000
JRDAN , OA WP	SAGGY , OA WP	18000 MAA – 60000
Y294		
FIPEK, OA WP	GESSO , PR FIX	18000 MAA – 60000
GESSO, PR FIX	ANADA, OA FIX	18000 MAA – 60000
Y297		
URSUS, OA WP	UCRAZ , OA WP	18000 MAA – 60000
UCRAZ, OA WP	TOVAR, FL WP	18000 MAA – 60000
Y298		
VENDS, OA WP	WISSET , OA WP	18000 MAA – 60000
WISSET, OA WP	GREAT INAGUA, BS NDB	18000 MAA – 60000
GREAT INAGUA, BS NDB	BODLO , OA WP	18000 MAA – 60000

FROM	TO	MEA
Y299		
GRUBR, OA WP	SNABS , OA WP	18000 MAA – 60000
SNABS , OA WP	DUUNK, OA WP	18000 MAA – 60000
DUUNK, OA WP	RBRHD , OA WP	18000 MAA – 60000
RBRHD, OA WP	JRDAN , OA WP	18000 MAA – 60000
Y304		
VENDS, OA WP	RUTOC, OA WP	18000 MAA – 60000
RUTOC , OA WP	SEKAR, OA WP	18000 MAA – 60000
Y306		
VENDS, OA WP	CHASO, OA WP	18000 MAA – 60000
CHASO , OA WP	HAGIT, OA WP	18000 MAA – 60000
HAGIT, OA WP	ASIVO, DO WP	18000 MAA – 60000
Y307		
ENAMO, OA WP	NASSAU, BS VOR/DME	18000 MAA – 60000
NASSAU, BS VOR/DME	HANKX, BS WP	18000 MAA – 60000
HANKX, BS FIX	NUCAR, BS WP	18000 MAA – 60000
NUCAR, BS WP	PAAZZ, OA WP	18000 MAA – 60000
PAAZZ, OA WP	HOVAX, OA WP	18000 MAA – 60000
HOVAX, OA WP	CASPR, OA WP	18000 MAA – 60000
CASPR, OA W	CARPX, OA WP	18000 MAA – 60000
CARPX, OA WP	ADUCI, OA WP	18000 MAA – 60000
ADUCI, OA WP	JAZZI, OA WP	18000 MAA – 60000
JAZZI, OA WP	FRRAM , OA WP	18000 MAA – 60000
FRRAM , OA WP	JRDAN, OA WP	18000 MAA – 60000
JRDAN, OA WP	OSTNN, OA WP	18000 MAA – 60000
OSTNN, OA WP	GARIC , NC WP	18000 MAA – 60000

FROM	TO	MEA
Y308		
FOWEE, OA FIX	FOXID, OA WP	18000 MAA – 60000
FOXID, OA WP	MADIZ, OA WP	18000 MAA – 60000
MADIZ, OA WP	FODED , OA WP	18000 MAA – 60000
FODED , OA WP	HAGIT, OA WP	18000 MAA – 60000
HAGIT, OA WP	FEKKO, OA WP	18000 MAA – 60000
FEKKO, OA WP	ACONY, NC WP	18000 MAA – 60000
Y309		
PELCN, OA WP	OZENA, OA WP	18000 MAA – 60000
OZENA, OA WP	FLRDA, OA WP	18000 MAA – 60000
FLRDA, OA WP	FRRAM , OA WP	18000 MAA – 60000
FRRAM , OA WP	IDOLS, OA WP	18000 MAA – 60000
Y315		
CHUMA, OA WP	GEROA, OA WP	18000 MAA – 60000
GEROA, OA WP	KEEKA, OA WP	18000 MAA – 60000
Y319		
URSUS, OA FIX	FREEPORT, BS VOR/DME	18000 MAA – 60000
FREEPORT, BS VOR/DME	BRATZ, OA WP	18000 MAA – 60000
BRATZ, OA WP	OHLAA , OA WP	18000 MAA – 60000
OHLAA , OA WP	TYCAL, OA WP	18000 MAA – 60000
TYCAL, OA WP	JAZZI, OA WP	18000 MAA – 60000
JAZZI, OA WP	IDOLS, OA WP	18000 MAA – 60000
Y323		
CARPX , OA WP	CARPX, OA WP	18000 MAA – 60000
CARPX, OA WP	PRTHR, OA WP	18000 MAA – 60000
PRTHR, OA WP	IDOLS, OA WP	18000 MAA – 60000

FROM	TO	MEA
Y325		
ZEUSS , OA WP	FOWEE, OA FIX	18000 MAA – 60000
Y329		
ZEUSS , OA WP	FREEPORT, BS VOR/DDME	18000 MAA – 60000
Y331		
GEECE , OA WP	FERNA, OA FIX	18000 MAA – 60000
Y350		
BIMINI, BS VORTAC	SOME E , OA WP	18000 MAA – 60000
SOME E, OA WP	NASSAU, BS VOR/DME	18000 MAA – 60000
NASSAU, BS VOR/DME	CILEX , OA WP	18000 MAA – 60000
CILEX, OA WP	GREAT INAGUA, BS NDB	18000 MAA – 60000
Y352		
NASSAU, BS VOR/DME	HAGIT, OA WP	18000 MAA – 60000
Y353		
ALBBE, BS FIX	GREAT INAGUA, BS NDB	18000 MAA – 60000
GREAT INAGUA, BS NDB	SUMAC, OA WP	18000 MAA – 60000
SUMAC, OA WP	UPOKE, OA WP	18000 MAA – 60000
UPOKE, OA WP	BAHMA, BS FIX	18000 MAA – 60000
Y354		
DONQU , OA WP	GESSO, OA FIX	18000 MAA – 60000
Y355		
ELOPO, OA FIX	SLUGO, OA FIX	18000 MAA – 60000
SLUGO, OA FIX	KOLAO, OA WP	18000 MAA – 60000
KOLAO, OA FIX	PLING, OA WP	18000 MAA – 60000
PLING, OA WP	PUYA, OA WP	18000 MAA – 60000
PUYA, OA WP	FIPEK, OA WP	18000 MAA – 60000
FIPEK OA WP	HELAX , OA WP	18000

FROM	TO	MEA
Y355 – CONTINUED		
HELAX , OA WP	FOSAS, OA FIX	MAA – 60000 18000
FOSAS , OA WP	RENAH, OA WP	MAA – 60000 18000
RENAH , OA WP	NUCAR, OA FIX	MAA – 60000 18000 MAA – 60000
Y356		
DONQU , OA WP	MEEGL, PR WP	18000 MAA – 60000
Y374		
NUCAR , OA FIX	WEDER, OA WP	18000 MAA – 60000
WEDER , BS WP	RUMFO, OA WP	18000 MAA – 60000
RUMFO , OA FIX	ALBBE, OA FIX	18000 MAA – 60000
Y396		
BITAC , OA WP	RUMFO, OA WP	18000 MAA – 60000
RUMFO , BS WP	MALVN, OA FIX	18000 MAA – 60000
Y397		
SEKAR , OA FIX	RENAH, OA WP	18000 MAA – 60000
Y398		
SAXXN , OA FIX	UCRAZ, OA WP	18000 MAA – 60000
UCRAZ , OA WP	SKIPS, BS FIX	18000 MAA – 60000
SKIPS, BS FIX	JAGOR, OA WP	18000 MAA – 60000
JAGOR , OA FIX	GREAT INAUGUA, BS NDB	18000 MAA – 60000
GREAT INAUGUA, BS NDB	JOSES, BS WP	18000 MAA – 60000
Y399		
SAPPO , OA FIX	CADGE, OA WP	18000 MAA – 60000
CADGE , OA WP	NASSAU, BS VOR/DME	18000 MAA – 60000
NASSAU, BS VOR/DME	SOME E, OA WP	18000 MAA – 60000
SOME E, OA WP	BIMINI , BS VORTAC	18000 MAA – 60000

FROM	TO	MEA
Y421		
GEECE, OA WP	MEEGL, PR WP	18000
		MAA - 60000
MEEGL, PR WP	HARBG, OA FIX	18000
		MAA - 60000
HARBG, OA FIX	HARGIT, OA WP	18000
		MAA - 60000
HARGIT, OA WP	WISSET, OA WP	18000
		MAA - 60000
WISSET, OA WP	SUMAC, OA WP	18000
		MAA - 60000
SUMAC, OA WP	PEACH, BS FIX	18000
		MAA - 60000
PEACH, BS FIX	KOUGH, OA WP	18000
		MAA - 60000
KOUGH, OA FIX	CANVI, OA WP	18000
		MAA - 60000
CANVI, OA FIX	OCTAL, FL WP	18000
		MAA - 60000
Y436		
DEDDY, SC WP	PITRW, SC WP	18000
		MAA - 60000
PITRW, SC WP	SPIKY, OA WP	18000
		MAA - 60000
SPIKY, OA WP	LURKS, OA WP	18000
		MAA - 60000
LURKS, OA WP	HARON, OA WP	18000
		MAA - 60000
HARON, OA WP	JAINS, OA WP	18000
		MAA - 60000
Y438		
KOOKK, FL WP	FEMON, FL WP	18000
		MAA - 60000
FEMON, FL WP	JAWSS, FL FIX	18000
		MAA - 60000
JAWSS, FL FIX	BAHAA OA WP	18000
		MAA - 60000
BAHAA OA WP	TROUT, FL WP	18000
		MAA - 60000
Y439		
ARMUR, PR FIX	MEEGL, PR WP	18000
		MAA - 60000
MEEGL, PR WP	FIPEK, OA WP	18000
		MAA - 60000

FROM	TO	MEA
Y441		
JUELE, OA WP	RUMFO, OA WP	18000
		MAA - 60000
RUMFO, OA WP	NASSAU, BS VOR/DME	18000
		MAA - 60000
NASSAU, BS VOR/DME	SOME, OA WP	18000
		MAA - 60000
SOME, OA WP	BIMINI, BS VORTAC	18000
		MAA - 60000
Y442		
FUNDI, OA WP	MCLAW, FL WP	6000
		MAA - 45000
MCLAW, FL WP	TAZER, FL WP	6000
		MAA - 45000
TAZER, FL WP	MNATE, FL FIX	6000
		MAA - 45000
Y443		
RUMFO, OA WP	SUMAC, OA WP	18000
		MAA - 60000
SUMAC, OA WP	UPOKE, OA WP	18000
		MAA - 60000
UPOKE, OA WP	BAHMA, BS FIX	18000
		MAA - 60000
Y585		
ORMOND BEACH, FL VORTAC	ATTIK, OA WP	18000
		MAA - 60000
ATTIK, OA WP	BEERD, OA WP	18000
		MAA - 60000
BEERD, OA WP	CVIKK, BS WP	18000
		MAA - 60000
CVIKK, BS WP	NATHY, OA WP	18000
		MAA - 60000
NATHY, OA WP	DAAST, BS WP	18000
		MAA - 60000
DAAST, BS WP	WITOB, OA WP	18000
		MAA - 60000
WITOB, OA WP	RENAH, OA WP	18000
		MAA - 60000
RENAH, OA WP	COUKY, OA FIX	18000
		MAA - 60000
COUKY, OA FIX	NELSR, OA WP	18000
		MAA - 60000
NELSR, OA WP	EYSEL, OA WP	18000
		MAA - 60000
EYSEL, OA WP	FARMN, OA WP	18000
		MAA - 60000
FARMN, OA WP	FDLEE, OA WP	18000
		MAA - 60000
FDLEE, OA WP	ELMUC, OA WP	18000
		MAA - 60000
ELMUC, OA WP	TILDI, PR WP	18000
		MAA - 60000

FROM	TO	MEA
Y585 – CONTINUED		
TILDI, PR WP	UTAHS, PR FIX	18000
		MAA - 60000
UTAHS, PR FIX	VEDAS, PR FIX	18000
		MAA - 60000
Y586		
FOWEE, OA FIX	FOXID, OA WP	18000
		MAA - 60000
FOXID, OA WP	MADIZ, OA WP	18000
		MAA - 60000
MADIZ, OA WP	BELAC, OA WP	18000
		MAA - 60000
BELAC, OA WP	FORST, BS WP	18000
		MAA - 60000
FORST, BS WP	JOSES, OA WP	18000
		MAA - 60000
Y587		
SKIPS, BS FIX *11000 - MRA	*RAJAY, BS FIX	18000
		MAA - 60000
RAJAY, BS FIX	COZIE, OA WP	18000
		MAA - 60000
COZIE, OA WP	DONEZ, OA FIX	18000
		MAA - 60000
DONEZ, OA FIX	PAARR, OA WP	18000
		MAA - 60000
PAARR, OA WP	RNDLY, OA WP	18000
		MAA - 60000
RNDLY, OA WP	GRAND TURK, TC VORTAC	18000
		MAA - 60000
GRAND TURK, TC VORTAC	COCBU, IB FIX	18000
		MAA - 60000
COCBU, IB FIX	SEBUG, OA FIX	18000
		MAA - 60000
SEBUG, OA FIX	GRADI, IB FIX	18000
		MAA - 60000
GRADI, IB FIX	HARDE, PR FIX	18000
		MAA - 60000
HARDE, PR FIX	GAGDD, OA WP	18000
		MAA - 60000
GAGDD, OA WP	ROBLL, PR FIX	18000
		MAA - 60000
Y588		
BROOM, OA WP	ROTHM, OA WP	18000
		MAA - 60000
ROTHM, OA WP	CLETT, OA WP	18000
		MAA - 60000
CLETT, OA WP	MLSAP, OA FIX	18000
		MAA - 60000
MLSAP, OA FIX	RENAH, OA WP	18000
		MAA - 60000

FROM	TO	MEA
Y589		
ALBBE, BS FIX	MADIZ, OA WP	18000
		MAA - 60000
MADIZ, OA WP	FOXID, OA WP	18000
		MAA - 60000
FOXID, OA WP	FOWEE, OA FIX	18000
		MAA - 60000

PACIFIC ROUTES

A216		
MONPI, OP WP	OATSS, OP WP	18000
		MAA - 60000
OATSS, OP WP	RIDLL, OP WP	18000
		MAA - 60000
RIDLL, OP WP	LOEBB, OP WP	18000
		MAA - 60000
LOEBB, OP WP	HOOVR, OP WP	18000
		MAA - 60000
HOOVR, OP WP	GALEE, OP WP	18000
		MAA - 60000
GALEE, OP WP	FACED, OP WP	18000
		MAA - 60000
A220		
MAEVA, OP FIX	CRONN, OP FIX	5500
CRONN, OP FIX	BINGE, OP FIX	5500
BINGE, OP FIX	AHND0, OP FIX	5500
AHND0, OP FIX	MANEY, OP WP	5500
		MAA - 60000
MANEY, OP WP	MAFIC, OP FIX	5500
		MAA - 60000
MAFIC, OP FIX	CINNY, OP WP	5500
		MAA - 60000
A221		
NIMITZ, GU VORTAC	CULPS, CQ FIX	3000
		MAA - 60000
CULPS, CQ FIX	ERTTS, GU FIX	1500
		MAA - 60000
ERTTS, GU FIX	MONIE, CQ FIX	1500
		MAA - 60000
MONIE, CQ FIX	LULJY, GU FIX	6000
		MAA - 60000
LULJY, GU FIX	HEXUG, OP FIX	6000
		MAA - 60000
HEXUG, OP FIX	WILLE, GU FIX	6000
		MAA - 60000

FROM	TO	MEA
A222		
NIMITZ, GU VORTAC	CLANS, OP WP	20000
		MAA - 60000
CLANS, OP WP	AXIDE, OP WP	20000
		MAA - 60000
AXIDE, OP WP	FIBSS, OP WP	20000
		MAA - 60000
FIBSS, OP WP	KRONK, OP FIX	20000
		MAA - 60000
KRONK, OP FIX	ADUFO, FM FIX	20000
		MAA - 60000
ADUFO, FM FIX	POHNPEI, FM NDB/DME	20000
		MAA - 60000
POHNPEI, FM NDB/DME	AXTEN, FM WP	20000
		MAA - 60000
AXTEN, FM WP	KOSRAE, FM NDB/DME	20000
		MAA - 60000
KOSRAE, FM NDB/DME	STEFF, OP FIX	20000
		MAA - 60000
STEFF, OP FIX	BUCHOLZ, MH NDB	18000
		MAA - 60000
A331		
ZIGIE, OP FIX	ZOULU, OP WP	5500
		MAA - 60000
ZOULU, OP WP	ZEMOM, OP WP	5500
		MAA - 60000
ZEMOM, OP WP	ZINNO, OP WP	5500
		MAA - 60000
ZINNO, OP WP	ZAGER, OP WP	5500
		MAA - 60000
ZAGER, OP WP	ZANNG, OP FIX	5500
		MAA - 60000
ZANNG, OP FIX	SEDAR, OP FIX	5500
		MAA - 60000
A332		
AUNTI, OP WP	HALLI, OP WP	5500
		MAA - 60000
HALLI, OP WP	HELOP, OP WP	5500
		MAA - 60000
HELOP, OP WP	HEKAB, OP WP	5500
		MAA - 60000
HEKAB, OP WP	HEMLO, OP WP	5500
		MAA - 60000
A337		
JUNIE, GU FIX	AXIDE, OP WP	6000
		MAA - 60000
AXIDE, OP WP	FONUG, OP WP	6000
		MAA - 60000
FONUG, OP WP	SNAPP, GU FIX	6000
		MAA - 60000
SNAPP, GU FIX	TEEDE, OP WP	6000
		MAA - 60000
TEEDE, OP WP	TEGOD, OP WP	6000
		MAA - 60000

FROM	TO	MEA
A339		
SHREE, OP FIX	WRNNR, OP FIX	15000
		MAA - 60000
WRNNR, OP FIX	TILLY, OP WP	15000
		MAA - 60000
TILLY, OP WP	KEITH, OP FIX	15000
		MAA - 60000
A342		
OLCOT, AK FIX	PINSO, OP WP	18000
		MAA - 60000
PINSO, OP WP	AMOND, AK FIX	18000
		MAA - 60000
AMOND, AK FIX	DRAPP, AK FIX	18000
		MAA - 60000
DRAPP, AK FIX	CRYPT, AK FIX	18000
		MAA - 60000
CRYPT, AK FIX	COLD BAY, AK VORTAC	18000
		MAA - 60000
A450		
CAHYO, OP WP	TNUGE, OP WP	18000
TNUGE, OP WP	PIGFA, OP WP	18000
PIGFA, OP WP	LOEBB, OP WP	8000
LOEBB, OP WP	BUCAT, OP WP	8000
BUCAT, OP WP	NIMITZ, GU VORTAC	8000
NIMITZ, GU VORTAC	BAGBE, GU FIX	5000
BAGBE, GU FIX	HOPPY, GU FIX	5000
HOPPY, GU FIX	FONUG, OP WP	5000
		MAA - 60000
FONUG, OP WP	STINE, GU FIX	5000
		MAA - 60000
STINE, GU FIX	DEWSS, OP FIX	18000
		MAA - 60000
DEWSS, OP FIX	JIMOS, OP WP	5500
		MAA - 60000
JIMOS, OP WP	NGUEN, OP WP	5500
		MAA - 60000
NGUEN, OP WP	NATIE, OP WP	5500
		MAA - 60000
NATIE, OP WP	RESEE, OP WP	5500
		MAA - 60000
RESEE, OP WP	SYSTA, OP WP	5500
		MAA - 60000
SYSTA, OP WP	BRIUN, OP WP	5500
		MAA - 60000
BRIUN, OP WP	HOOPA, OP FIX	5500
		MAA - 60000
HOOPA, OP FIX	*KATHS, HI FIX	5500
*29000 - MRA		
		MAA - 60000

FROM	TO	MEA
A578		
POHNPEI, FM NDB/DME	AFOYU, FM WP	18000
		MAA - 60000
AFOYU, FM WP	FENSE, OP FIX	18000
		MAA - 60000
A590		
PASRO, OP FIX	POWAL, AK FIX	18000
		MAA - 60000
POWAL, AK FIX	PLADO, AK FIX	18000
		MAA - 60000
PLADO, AK FIX	PINSO, OP WP	18000
		MAA - 60000
PINSO, OP WP	POOFF, OP WP	18000
		MAA - 60000
POOFF, OP WP	PINTT, AK FIX	18000
		MAA - 60000
PINTT, AK FIX	PTZGR, AK WP	18000
		MAA - 60000
PTZGR, AK WP	PUGGY, AK FIX	18000
		MAA - 60000
PUGGY, AK FIX	POETT, OP FIX	18000
		MAA - 60000
POETT, OP FIX	SELDM, AK FIX	18000
		MAA - 60000
SELDM, AK FIX	PORGE, AK FIX	18000
		MAA - 60000
PORGE, AK FIX	HAMND, AK WP	18000
		MAA - 60000
A597		
ADBON, OP FIX	OKOLE, OP WP	18000
OKOLE, OP WP	GALSS, OP FIX	18000
GALSS, OP FIX	JUNIE, GU FIX	18000
JUNIE, GU FIX	OPLAR, GU FIX	5000
OPLAR, GU FIX	GUMGE, GU FIX	5000
GUMGE, GU FIX	NIMITZ, GU VORTAC	5000
NIMITZ, GU VORTAC	WUVEN, GU FIX	5000
WUVEN, GU FIX	REEDE, OP WP	5000
REEDE, OP WP	RICHH, OP WP	5000
RICHH, OP WP	MONPI, OP WP	5000
A598		
MARTI, OP FIX	MAJURO, MH NDB/DME	2300
B200		
BISOX, OP FIX	ANJJE, OP FIX	5500
ANJJE, OP FIX	CARLS, OP FIX	5500
CARLS, OP FIX	BENTS, OP FIX	5500
BENTS, OP FIX	AMATT, OP FIX	5500
AMATT, OP FIX	TONYS, OP FIX	5500
TONYS, OP FIX	FICKY, OP WP	5500

FROM	TO	MEA
B233		
GALENA, AK VOR/DME	SANGL, AK WP	18000
		MAA - 45000
SANGL, AK WP	KUTAL, RU WP	18000
		MAA - 45000
B240		
ERNIK, RU WP	IDROD, AK WP	18000
		MAA - 45000
IDROD, AK WP	AVUBA, AK WP	18000
		MAA - 45000
AVUBA, AK WP	EMMONAK, AK VOR/DME	18000
		MAA - 45000
B241		
EMMONAK, AK VOR/DME	ENEGU, AK WP	18000
		MAA - 45000
ENEGU, AK WP	ROCET, AK WP	18000
		MAA - 45000
ROCET, AK WP	RUSOR, RU WP	18000
		MAA - 45000
B244		
FRENK, OP WP	KOTZEBUE, AK VOR/DME	5000
		MAA - 40000
B452		
ATIGO, OP WP	KERRY, OP FIX	6000
KERRY, OP FIX	KRONK, OP FIX	6000
KRONK, OP FIX	KRASY, OP FIX	6000
KRASY, OP FIX	DOHRT, OP FIX	6000
B453		
BOXER, OP WP	KYLLE, OP FIX	18000
KYLLE, OP FIX	KANUA, OP FIX	18000
KANUA, OP FIX	VIDKU, CANADA FIX	18000
VIDKU, CANADA FIX	TAMRU, CANADA FIX	18000
TAMRU, CANADA FIX	SIMLU, CANADA FIX	18000
SIMLU, CANADA FIX	KURTT, OP FIX	18000
KURTT, OP FIX	PETPA, CANADA FIX	18000
PETPA, CANADA FIX	NAKBI, CANADA FIX	18000
NAKBI, CANADA FIX	METPA, CANADA FIX	18000
METPA, CANADA FIX	KATCH, AK FIX	18000
KATCH, AK FIX	MIDDLETON ISLAND, AK VOR/DME	18000
B454		
UPNAR, OP FIX	COMIR, OP FIX	5500
COMIR, OP FIX	BORIC, OP FIX	5500
BORIC, OP FIX	ARENS, OP FIX	5500
ARENS, OP FIX	TONYS, OP FIX	5500

FROM	TO	MEA
B577		
PASSA, OP FIX	QUIGG, OP FIX	5500
QUIGG, OP FIX	SANTA, OP FIX	5500
SANTA, OP FIX	CANOL, OP FIX	5500
CANOL, OP FIX	BELAN, OP FIX	5500
BELAN, OP FIX	AHND0, OP FIX	5500
AHND0, OP FIX	LENNA, OP FIX	5500
LENNA, OP FIX	FICKY, OP WP	5500
B581		
WOoby, OP FIX	WACOS, OP FIX	5500
WACOS, OP FIX	WOSLU, OP FIX	5500
WOSLU, OP FIX	WAYSE, OP FIX	5500
WAYSE, OP FIX	WINTY, OP FIX	5500
WINTY, OP FIX	CAMOS, OP FIX	5500
CAMOS, OP FIX	BALKS, OP FIX	5500
BALKS, OP FIX	AFONE, OP FIX	5500
AFONE, OP FIX	WEDES, OP FIX	5500
WEDES, OP FIX	FICKY, OP WP	5500
B586		
OMLET, OP FIX	TOESS, OP WP	18000
TOESS, OP WP	WINZR, OP WP	18000
WINZR, OP WP	NIMITZ, GU VORTAC	18000
NIMITZ, GU VORTAC	ASADE, GU FIX	5000
ASADE, GU FIX	KAPOK, GU FIX	5000
KAPOK, GU FIX	HUTEL, OP FIX	18000
HUTEL, OP FIX	NUTTI, OP FIX	18000
NUTTI, OP FIX	PIKOK, OP FIX	18000
B589		
MAJURO, MH NDB/DME	ELNUR, OP FIX	18000
B932		
BAMOK, OP FIX	MORLY, AK WP	18000
		MAA - 45000
MORLY, AK WP	EPLOS, AK WP	18000
		MAA - 45000
EPLOS, AK WP	KIVAK, AK WP	18000
		MAA - 45000
KIVAK, AK WP	LESAD, AK WP	18000
		MAA - 45000
LESAD, AK WP	ST MARYS, AK NDB	18000
		MAA - 45000
ST MARYS, AK NDB	MC GRATH, AK VORTAC	18000
		MAA - 45000

FROM	TO	MEA
B96		
LARSA, RU WP	GAMBELL, AK NDB/DME	5000 MAA - 18000
G205		
RUTUS, OP FIX	KISME, OP FIX	1500
KISME, OP FIX	GOOFI, OP WP	1500
GOOFI, OP WP	JUNIE, GU FIX	1500
JUNIE, GU FIX	OPLAR, GU FIX	5000
OPLAR, GU FIX	GUMGE, GU FIX	5000
GUMGE, GU FIX	NIMITZ, GU VORTAC	5000
NIMITZ, GU VORTAC	GUYES, OP WP	18000
GUYES, OP WP	TERYY, OP WP	18000
TERYY, OP WP	TEGOD, OP WP	18000
G212		
VALDA, OP WP	YUREE, OP WP	5000 MAA - 18000
YUREE, OP WP	FORT DAVIS, AK NDB	5000 MAA - 18000
G215		
OLCOT, AK FIX	PLADO, AK FIX	18000 MAA - 60000
PLADO, AK FIX	SHEMYA, AK VORTAC	18000 MAA - 60000
SHEMYA, AK VORTAC	CURVS, AK FIX	18000 MAA - 60000
CURVS, AK FIX	DUTCH HARBOR, AK NDB/DME	18000 MAA - 60000
G223		
MUBIT, OP FIX	OLGIS, OP FIX	18000
OLGIS, OP FIX	PHILY, OP FIX	18000
PHILY, OP FIX	RISBA, OP WP	6000
G339		
NIMITZ, GU VORTAC	SHAWS, OP WP	6000
SHAWS, OP WP	RIDLL, OP WP	6000
RIDLL, OP WP	NATSS, OP WP	6000
NATSS, OP WP	PAKDO, OP WP	6000
G344		
CUTEE, OP FIX	CARTO, AK FIX	18000 MAA - 60000
CARTO, AK FIX	CHIPT, OP WP	18000 MAA - 60000
CHIPT, OP WP	CHIKI, AK FIX	18000 MAA - 60000
CHIKI, AK FIX	CURVS, AK FIX	18000 MAA - 60000
CURVS, AK FIX	CRYPT, AK FIX	18000 MAA - 60000
CRYPT, AK FIX	CAMBO, AK FIX	18000 MAA - 60000
CAMBO, AK FIX	*CUDDA, AK WP	18000 MAA - 60000
*24000 - MRA		

FROM	TO	MEA
G349		
MARCC, AK WP	KIVAK, AK WP	18000 MAA - 60000
KIVAK, AK WP	PALIN, AK WP	18000 MAA - 60000
PALIN, AK WP	NEONN, AK WP	18000 MAA - 60000
G467		
YELLO, OP FIX	KITSS, OP FIX	18000
KITSS, OP FIX	ACRON, GU FIX	18000
ACRON, GU FIX	PULEE, GU FIX	18000
PULEE, GU FIX	NIMITZ, GU VORTAC	5000
G469		
NYMPH, OP FIX	ONEIL, OP WP	18000 MAA - 60000
ONEIL, OP WP	PINTT, AK FIX	18000 MAA - 60000
PINTT, AK FIX	CREMR, AK FIX	18000 MAA - 60000
CREMR, AK FIX	ST PAUL ISLAND, AK NDB/DME	18000 MAA - 60000
ST PAUL ISLAND, AK NDB/DME	PORT HEIDEN, AK NDB/DME	18000 MAA - 60000
G575		
CINTO, OP FIX	BIGBY, OP FIX	5500
BIGBY, OP FIX	APIDD, OP FIX	5500
APIDD, OP FIX	HILCO, OP FIX	5500
HILCO, OP FIX	FICKY, OP WP	5500
G583		
BESAT, OP FIX	MARCC, AK WP	18000 MAA - 60000
MARCC, AK WP	MUNRI, AK WP	18000 MAA - 45000
MUNRI, AK WP	EMMONAK, AK VOR/DME	18000 MAA - 60000
G7		
OLTON, RU WP	GAMBELL, AK NDB/DME	5000 MAA - 18000
H201		
NOME, AK VOR/DME	SLEDD, AK WP	18000 MAA - 45000
SLEDD, AK WP	AVUBA, AK WP	18000 MAA - 45000
AVUBA, AK WP	ENEGU, AK WP	18000 MAA - 45000
ENEGU, AK WP	MUNRI, AK WP	18000 MAA - 45000
MUNRI, AK WP	KIVAK, AK WP	18000 MAA - 45000
KIVAK, AK WP	NAYLD, AK FIX	18000 MAA - 45000

FROM	TO	MEA
H222		
VALDA, OP WP	ICEEE, AK WP	18000
		MAA - 45000
ICEEE, AK WP	SLEDD, AK WP	18000
		MAA - 45000
SLEDD, AK WP	MC GRATH, AK VORTAC	18000
		MAA - 45000
M756		
OLBIE, OP WP	AIBIE, OP WP	6000
AIBIE, OP WP	KEONE, OP WP	6000
R204		
KYWEE, OP WP	KALIN, OP WP	#18000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
R220		
NODLE, AK WP	NICHO, AK WP	18000
		MAA - 60000
NICHO, AK WP	NOSHO, AK FIX	18000
		MAA - 60000
NOSHO, AK FIX	NEONN, AK WP	18000
		MAA - 60000
NEONN, AK WP	NANZA, AK FIX	18000
		MAA - 60000
NANZA, AK FIX	NOLTI, OP WP	18000
		MAA - 60000
NOLTI, OP WP	NAYLD, AK FIX	18000
		MAA - 60000
NAYLD, AK FIX	NULUK, AK FIX	18000
		MAA - 60000
NULUK, AK FIX	NANDY, AK FIX	18000
		MAA - 60000
NANDY, AK FIX	NATES, OP WP	18000
		MAA - 60000
NATES, OP WP	NIKLL, AK FIX	18000
		MAA - 60000
NIKLL, AK FIX	NYMPH, OP FIX	18000
		MAA - 60000
NYMPH, OP FIX	NUZAN, OP WP	18000
		MAA - 60000
NUZAN, OP WP	NRKEY, OP WP	18000
		MAA - 60000
NRKEY, OP WP	NIPPI, OP FIX	18000
		MAA - 60000
R330		
POWAL, AK FIX	SHEMYA, AK VORTAC	18000
		MAA - 60000

FROM	TO	MEA
R332		
MAJURO, MH NDB/DME	VAVEE, OP FIX	6000
R336		
CARTO, AK FIX	LYYLE, AK FIX	18000
		MAA - 60000
LYYLE, AK FIX	MOUNT MOFFETT, AK NDB/DME	18000
		MAA - 60000
R337		
ISGOG, OP FIX	KOROR, PW NDB/DME	6500
R341		
NATES, OP WP	OFORD, AK FIX	18000
		MAA - 60000
OFORD, AK FIX	HODDY, AK FIX	18000
		MAA - 60000
HODDY, AK FIX	PUGGY, AK FIX	18000
		MAA - 60000
PUGGY, AK FIX	CHUUK, AK FIX	18000
		MAA - 60000
CHUUK, AK FIX	KODIAK, AK VOR/DME	18000
		MAA - 60000
R451		
OGDEN, AK FIX	POWAL, AK FIX	18000
		MAA - 60000
POWAL, AK FIX	AAMYY, AK FIX	18000
		MAA - 60000
AAMYY, AK FIX	WALLT, AK FIX	18000
		MAA - 60000
WALLT, AK FIX	CHIKI, AK FIX	18000
		MAA - 60000
CHIKI, AK FIX	MOUNT MOFFETT, AK NDB/DME	18000
		MAA - 60000
R463		
MAGGI, HI FIX	TOADS, HI FIX	5000
TOADS, HI FIX	APACK, OP FIX	5000
APACK, OP FIX	AUNTI, OP WP	5500
AUNTI, OP WP	ADOPE, OP WP	5500
ADOPE, OP WP	AXELE, OP WP	5500
AXELE, OP WP	ADTIL, OP WP	5500
ADTIL, OP WP	ALLBE, OP WP	5500
ALLBE, OP WP	*ALCOA, OP FIX	5500
*22000 - MRA		

FROM	TO	MEA
R464		
MAGGI, HI FIX	BITTA, OP FIX	5500
BITTA, OP FIX	BOARD, OP WP	21000
BOARD, OP WP	BEKME, OP WP	5500
BEKME, OP WP	BILLO, OP WP	5500
BILLO, OP WP	BARAZ, OP WP	5500
BARAZ, OP WP	BAART, OP WP	5500
BAART, OP WP	BEBOP, OP FIX	5500
R465		
MAGGI, HI FIX	*SHARK, HI FIX	5500
*16000 - MRA		
SHARK, HI FIX	CLUTS, OP FIX	5500
CLUTS, OP FIX	CEBEN, OP WP	5500
CEBEN, OP WP	CIVIT, OP WP	5500
CIVIT, OP WP	CORTT, OP WP	5500
CORTT, OP WP	CUNDU, OP WP	5500
CUNDU, OP WP	CREAN, OP FIX	5500
CREAN, OP FIX	CINNY, OP WP	5500
R576		
MAUI, HI VORTAC	ALAFU, HI FIX	9000
ALAFU, HI FIX	WAPPO, HI FIX	14000
WAPPO, HI FIX	ONOVY, HI FIX	26000
ONOVY, HI FIX	DENNS, OP FIX	26000
DENNS, OP FIX	DRAYK, OP WP	24000
DRAYK, OP WP	DUSAC, OP WP	5500
DUSAC, OP WP	DIALO, OP WP	5500
DIALO, OP WP	DADIE, OP WP	5500
DADIE, OP WP	DUETS, OP WP	5500
DUETS, OP WP	DINTY, OP FIX	5500
R577		
MAUI, HI VORTAC	AWAHI, HI FIX	9000
AWAHI, HI FIX	AZIBA, HI FIX	16000
AZIBA, HI FIX	TANFO, HI FIX	35000
TANFO, HI FIX	ALICA, HI FIX	35000
ALICA, HI FIX	EBBER, HI FIX	35000
EBBER, HI FIX	ELOYI, OP WP	21000
ELOYI, OP WP	ERROT, OP WP	5500
ERROT, OP WP	ETNIC, OP WP	5500
ETNIC, OP WP	ETECO, OP WP	5500
ETECO, OP WP	EDSEL, OP FIX	5500
EDSEL, OP FIX	EDTOO, OP FIX	5500
EDTOO, OP FIX	*ELKEY, CA FIX	5500
*26000 - MRA		
R578		
DEREC, HI FIX	BYROW, HI FIX	14000
BYROW, HI FIX	FITES, HI FIX	14000
FITES, HI FIX	FAPIS, OP WP	21000
FAPIS, OP WP	FOMAS, OP WP	21000
FOMAS, OP WP	FIZEL, OP WP	5500
FIZEL, OP WP	FLITY, OP WP	5500
FLITY, OP WP	FOOTS, OP FIX	5500
FOOTS, OP FIX	FICKY, OP WP	5500

FROM	TO	MEA
R580		
OMOTO, OP FIX	OGDEN, AK FIX	18000
	MAA - 60000	
OGDEN, AK FIX	OPHET, AK FIX	18000
	MAA - 60000	
OPHET, AK FIX	OLCOT, AK FIX	18000
	MAA - 60000	
OLCOT, AK FIX	OPAKE, AK FIX	18000
	MAA - 60000	
OPAKE, AK FIX	ONEIL, OP WP	18000
	MAA - 60000	
ONEIL, OP WP	OBOYD, OP WP	18000
	MAA - 60000	
OBOYD, OP WP	OFORD, AK FIX	18000
	MAA - 60000	
OFORD, AK FIX	OGGOE, AK FIX	18000
	MAA - 60000	
OGGOE, AK FIX	ONEOX, OP WP	18000
	MAA - 60000	
ONEOX, OP WP	ORVIL, AK FIX	18000
	MAA - 60000	
ORVIL, AK FIX	ORCCA, AK FIX	18000
	MAA - 60000	
ORCCA, AK FIX	NICHO, AK WP	18000
	MAA - 60000	
R584		
CHOKO, OP WP	MCFLY, OP WP	5500
MCFLY, OP WP	MANRE, OP WP	5500
MANRE, OP WP	MAZZA, OP FIX	5500
MAZZA, OP FIX	MAJURO, MH NDB/DME	18000
MAJURO, MH NDB/DME	CURCH, OP WP	18000
CURCH, OP WP	BUCHOLZ, MH NDB	18000
BUCHOLZ, MH NDB	LOOIS, OP FIX	18000
LOOIS, OP FIX	HAVNU, FM FIX	18000
HAVNU, FM FIX	TRADD, FM FIX	18000
TRADD, FM FIX	POHNPEI, FM NDB/DME	18000
POHNPEI, FM NDB/DME	BIRUQ, FM FIX	18000
BIRUQ, FM FIX	TRUK, FM NDB/DME	18000
TRUK, FM NDB/DME	GUNSS, OP FIX	18000
GUNSS, OP FIX	JUNIE, GU FIX	18000
JUNIE, GU FIX	OPLAR, GU FIX	5000
OPLAR, GU FIX	GUMGE, GU FIX	5000
GUMGE, GU FIX	NIMITZ, GU VORTAC	5000
NIMITZ, GU VORTAC	OTTRE, OP WP	6000
OTTRE, OP WP	MIKYY, OP WP	18000
MIKYY, OP WP	KEITH, OP FIX	18000

FROM	TO	MEA
R591		
AKISU, OP FIX	ASPIN, AK FIX	18000
		MAA - 60000
ASPIN, AK FIX	AAMYY, AK FIX	18000
		MAA - 60000
AAMYY, AK FIX	SHEMYA, AK VORTAC	18000
		MAA - 60000
SHEMYA, AK VORTAC	AMOND, AK FIX	18000
		MAA - 60000
AMOND, AK FIX	ALDOZ, AK FIX	18000
		MAA - 60000
ALDOZ, AK FIX	ALUFF, AK FIX	18000
		MAA - 60000
ALUFF, AK FIX	ST PAUL ISLAND, AK NDB/DME	18000
		MAA - 60000
ST PAUL ISLAND, AK NDB/DME	CHUUK, AK FIX	18000
		MAA - 60000
CHUUK, AK FIX	CAPE NEWENHAM, AK NDB/DME	18000
		MAA - 60000
CAPE NEWENHAM, AK NDB/DME	HAMND, AK WP	18000
		MAA - 60000
R595		
NIMITZ, GU VORTAC	OTTRE, OP WP	6000
OTTRE, OP WP	MIKYY, OP WP	18000
MIKYY, OP WP	KEITH, OP FIX	18000
W21		
NIMITZ, GU VORTAC	KAQTU, CQ FIX	3000
KAQTU, CQ FIX	SANDO, GU FIX	3000
SANDO, GU FIX	NUJCO, MP FIX	9000
NUJCO, MP FIX	KATQO, GU FIX	9000
KATQO, GU FIX	HIRCH, CQ FIX	9000
HIRCH, CQ FIX	ANEVY, GU FIX	9000
ANEVY, GU FIX	SNAPP, GU FIX	9000
SNAPP, GU FIX	BESSS, OP WP	9000

FROM	TO	MEA	MAA
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§95.3000 LOW ALTITUDE RNAV ROUTES

95.3201 RNAV ROUTE T201

MEVAE, SC WP	TRUEX, SC WP	2200	7000
TRUEX, SC WP	FEGNO, NC WP	2400	7000
FEGNO, NC WP	NUROE, NC WP	2700	7000
NUROE, NC WP	BORTZ, NC WP	3900	7000

95.3202 RNAV ROUTE T202

GURSH, SC WP	AWRYT, SC WP	2400	8000
AWRYT, SC WP	RICHE, SC FIX	2400	8000
RICHE, SC FIX	HUSTN, NC FIX	2500	8000
HUSTN, NC FIX	FEGNO, NC WP	2500	8000
FEGNO, NC WP	GANTS, NC FIX	2600	8000
GANTS, NC FIX	ZADEL, NC WP	2700	8000

95.3203 RNAV ROUTE T203

ANDYS, SC FIX	AWRYT, SC WP	2400	17500
AWRYT, SC WP	ROUTH, NC WP	2800	17500
ROUTH, NC WP	FADOS, NC WP	3400	17500
FADOS, NC WP	OREAD, NC WP	3500	17500

95.3204 RNAV ROUTE T204

TAYLOR, FL VORTAC	BRUNSWICK, GA VORTAC	2100	15000
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95.3205 RNAV ROUTE T205

OCALA, FL VORTAC *2500 - MOCA	VALDOSTA, GA VOR/DME	3000	15000
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95.3206 RNAV ROUTE T206

ENADE, NC WP	FADOS, NC WP	3000	17500
FADOS, NC WP	GOTHS, NC WP	3400	17500
GOTHS, NC WP	NUROE, NC WP	3400	17500
NUROE, NC WP	ZADEL, NC WP	3000	17500

95.3207 RNAV ROUTE T207

ORMOND BEACH, FL VORTAC	CARRA, FL FIX	2300	15000
CARRA, FL FIX	CECIL, FL VOR	1900	15000
CECIL, FL VOR	MONIA, GA FIX	1900	15000
MONIA, GA FIX	WAYCROSS, GA VORTAC	2300	15000

95.3208 RNAV ROUTE T208

GATORS, FL VORTAC	CARRA, FL FIX	2100	15000
CARRA, FL FIX	ORMOND BEACH, FL VORTAC	2300	15000

95.3209 RNAV ROUTE T209

EHEJO, GA FIX	NASDE, GA WP	2000	17500
NASDE, GA WP	YASLU, GA WP	2000	17500
YASLU, GA WP	JAMTA, GA WP	2000	17500
JAMTA, GA WP	COLLIERS, SC VORTAC	2500	17500

95.3210 RNAV ROUTE T210

TAYLOR, FL VORTAC	OHLEE, FL WP	1900	9000
OHLEE, FL WP	BRADO, FL FIX	1900	9000

FROM	TO	MEA	MAA
95.3211 RNAV ROUTE T211			
OCALA, FL VORTAC	JUTTS, FL WP	2500	15000
JUTTS, FL WP	CARRA, FL FIX	1900	15000
CARRA, FL FIX	CRAIG, FL VORTAC	2100	15000
95.3212 RNAV ROUTE T212			
RASHE, PA FIX	SELINGSGROVE, PA VOR/DME	4000	17500
SELINGSGROVE, PA VOR/DME	DIANO, PA FIX	3700	17500
DIANO, PA FIX	WILKES-BARRE, PA VORTAC	5000	17500
WILKES-BARRE, PA VORTAC	LAAYK, PA FIX	4000	17500
LAAYK, PA FIX	WEETS, NY FIX	4700	17500
WEETS, NY FIX	NELIE, CT FIX	3500	17500
NELIE, CT FIX	PUTNAM, CT VOR/DME	3000	17500
95.3213 RNAV ROUTE T213			
LOUISVILLE, KY VORTAC	GAMKE, IN WP	3600	8000
#NORTHBOUND EXPECT 7000			
SOUTHBOUND EXPECT 6000			
GAMKE, IN WP	MILAN, IN FIX	2800	8000
#NORTHBOUND EXPECT 7000			
SOUTHBOUND EXPECT 6000			
MILAN, IN FIX	RICHMOND, IN VOR/DME	2800	8000
#NORTHBOUND EXPECT 7000			
SOUTHBOUND EXPECT 6000			
95.3214 RNAV ROUTE T214			
OREAD, NC WP	BORTZ, NC WP	3500	17500
BORTZ, NC WP	THMSN, NC WP	3400	17500
THMSN, NC WP	ZADEL, NC WP	2400	17500
ZADEL, NC WP	ORPEE, NC WP	2700	17500
95.3215 RNAV ROUTE T215			
LEXINGTON, KY VOR/DME	GAMKE, IN WP	3000	8000
#NORTHBOUND EXPECT 6000			
SOUTHBOUND EXPECT 5000			
95.3216 RNAV ROUTE T216			
PHILIPSBURG, PA VORTAC	WILLIAMSPORT, PA VOR/DME	4200	17500
WILLIAMSPORT, PA VOR/DME	ELEXY, PA WP	4500	17500
ELEXY, PA WP	LAAYK, PA FIX	4100	17500
LAAYK, PA FIX	HELON, NY FIX	4000	17500
HELON, NY FIX	KINGSTON, NY VOR/DME	4000	17500
KINGSTON, NY VOR/DME	MOONI, CT FIX	3200	17500
MOONI, CT FIX	HARTFORD, CT VOR/DME	3200	17500
HARTFORD, CT VOR/DME	GROTON, CT VOR/DME	2600	17500
GROTON, CT VOR/DME	SANDY POINT, RI VOR/DME	2000	17500
*1500 - MOCA			
SANDY POINT, RI VOR/DME	NANTUCKET, MA VOR/DME	2000	17500
95.3217 RNAV ROUTE T217			
LEXINGTON, KY VOR/DME	BOSTR, OH FIX	3000	8000
#NORTHBOUND EXPECT 7000			
SOUTHBOUND EXPECT 6000			
BOSTR, OH FIX	HEDEN, OH FIX	2700	8000
#NORTHBOUND EXPECT 7000			
SOUTHBOUND EXPECT 6000			

FROM	TO	MEA	MAA
95.3217 RNAV ROUTE T217 - CONTINUED			
HEDEN, OH FIX #NORTHBOUND EXPECT 7000 SOUTHBOUND EXPECT 6000	PRUDE, OH FIX	2800	8000
PRUDE, OH FIX #NORTHBOUND EXPECT 7000 SOUTHBOUND EXPECT 6000	SPRINGFIELD, OH VOR/DME	2800	8000
SPRINGFIELD, OH VOR/DME #NORTHBOUND EXPECT 7000 SOUTHBOUND EXPECT 6000	BONEE, OH FIX	2900	8000
95.3218 RNAV ROUTE T218			
STONYFORK, PA VOR/DME	LAAYK, PA FIX	4200	17500
LAAYK, PA FIX	SPARTA, NJ VORTAC	4000	17500
95.3219 RNAV ROUTE T219			
NANWAK, AK NDB/DME *1700 - MOCA	RUFVY, AK WP	2300	17500
RUFVY, AK WP *1300 - MOCA	ACATE, AK WP	2000	17500
ACATE, AK WP *5400 - MOCA	NACIP, AK FIX	6000	17500
NACIP, AK FIX *5400 - MOCA	BROUS, AK WP	6000	17500
BROUS, AK WP *5000 - MOCA	DILLINGHAM, AK VOR/DME	6000	17500
95.3221 RNAV ROUTE T221			
MAZIE, PA FIX *2200 - MOCA	ALLENTOWN, PA VORTAC	3000	17500
ALLENTOWN, PA VORTAC	LAAYK, PA FIX	4000	17500
LAAYK, PA FIX	BINGHAMTON, NY VOR/DME	4000	17500
95.3222 RNAV ROUTE T222			
BAERE, AK WP	ST PAUL ISLAND, AK NDB/DME	3600	17500
ST PAUL ISLAND, AK NDB/DME *1800 - MOCA	RUFVY, AK WP	3000	17500
RUFVY, AK WP *1400 - MOCA	BETHEL, AK VORTAC	3000	17500
BETHEL, AK VORTAC	MC GRATH, AK VORTAC	5000	17500
MC GRATH, AK VORTAC	NENANA, AK VORTAC	5000	17500
NENANA, AK VORTAC *3200 - MOCA	FAIRBANKS, AK VORTAC	4000	17500
95.3223 RNAV ROUTE T223			
CAPE NEWENHAM, AK NDB/DME	DILLINGHAM, AK VOR/DME	4400	17500
DILLINGHAM, AK VOR/DME	FAGIN, AK FIX	4400	17500
FAGIN, AK FIX	NONDA, AK FIX	8400	17500
NONDA, AK FIX *10000 - MCA BLUGA, AK FIX , SW BND	BLUGA, AK FIX	12400	17500
BLUGA, AK FIX *7400 - MCA AMOTT, AK FIX , SW BND	AMOTT, AK FIX	3000	17500
AMOTT, AK FIX	ANCHORAGE, AK VOR/DME	3000	17500

FROM	TO	MEA	MAA
95.3225 RNAV ROUTE T225			
HOOPER BAY, AK VOR/DME	AKELT, AK FIX	4600	17500
AKELT, AK FIX	ALMOT, AK FIX	4400	17500
ALMOT, AK FIX	UNALAKLEET, AK VOR/DME	3700	17500
UNALAKLEET, AK VOR/DME	EDMON, AK FIX	5000	17500
EDMON, AK FIX	VENCE, AK FIX	5900	17500
VENCE, AK FIX	GALENA, AK VOR/DME	3400	17500
GALENA, AK VOR/DME	KUHZE, AK FIX	4400	17500
KUHZE, AK FIX	CHOKK, AK FIX	6800	17500
CHOKK, AK FIX	TANANA, AK VOR/DME	4000	17500
TANANA, AK VOR/DME	REEBA, AK FIX	4000	17500
REEBA, AK FIX	FAIRBANKS, AK VORTAC	5000	17500
*4700 - MCA FAIRBANKS, AK VORTAC , W BND			
95.3226 RNAV ROUTE T226			
JOHNSTONE POINT, AK VOR/DME	FIDAL, AK FIX	5000	17500
*7000 - MCA FIDAL, AK FIX , N BND			
FIDAL, AK FIX	ROBES, AK FIX	8000	17500
*8900 - MCA ROBES, AK FIX , N BND			
ROBES, AK FIX	KLUNG, AK FIX	10000	17500
*KLUNG, AK FIX	GULKANA, AK VOR/DME	7000	17500
*7100 - MCA KLUNG, AK FIX , S BND			
GULKANA, AK VOR/DME	DOZEY, AK FIX	5000	17500
DOZEY, AK FIX	PAXON, AK FIX	8000	17500
*9500 - MCA PAXON, AK FIX , N BND			
*7300 - MOCA			
PAXON, AK FIX	DONEL, AK FIX	12000	17500
*11500 - MOCA			
*DONEL, AK FIX	BIG DELTA, AK VORTAC	7000	17500
*10600 - MCA DONEL, AK FIX , S BND			
BIG DELTA, AK VORTAC	HEXAX, AK WP	7000	17500
HEXAX, AK WP	FORT YUKON, AK VORTAC	4000	17500
*3100 - MOCA			
95.3227 RNAV ROUTE T227			
SHEMYA, AK VORTAC	JANNT, AK WP	3400	17500
JANNT, AK WP	BAERE, AK WP	7500	17500
*2900 - MOCA			
BAERE, AK WP	ALEUT, AK WP	7500	17500
*3300 - MOCA			
ALEUT, AK WP	MORDI, AK FIX	2500	17500
MORDI, AK FIX	BINAL, AK FIX	4900	17500
BINAL, AK FIX	PORT HEIDEN, AK NDB/DME	3800	17500
PORT HEIDEN, AK NDB/DME	CULTI, AK WP	3700	17500
*1900 - MOCA			
CULTI, AK WP	BATTY, AK FIX	6100	17500
*5600 - MOCA			
BATTY, AK FIX	AMOTT, AK FIX	13000	17500
*5200 - MCA AMOTT, AK FIX , SW BND			
*12300 - MOCA			
AMOTT, AK FIX	BIG LAKE, AK VORTAC	3400	17500
*2700 - MOCA			
BIG LAKE, AK VORTAC	SURES, AK FIX	7000	17500
SURES, AK FIX	CAWIN, AK FIX	9700	17500
*8600 - MOCA			

FROM	TO	MEA	MAA
95.3228 RNAV ROUTE T227 - CONTINUED			
CAWIN, AK FIX	LIBER, AK FIX	9000	17500
LIBER, AK FIX	GLOWS, AK FIX	7100	17500
*4800 - MCA GLOWS, AK FIX , S BND			
GLOWS, AK FIX	FAIRBANKS, AK VORTAC	3400	17500
FAIRBANKS, AK VORTAC	PESGE, AK WP	5500	17500
PESGE, AK WP	FIPSU, AK WP	8400	17500
FIPSU, AK WP	CUGOB, AK WP	11000	17500
*7000 - MCA CUGOB, AK WP , S BND			
*10300 - MOCA			
CUGOB, AK WP	SIKLV, AK WP	4500	17500
SIKLV, AK WP	DEADHORSE, AK VOR/DME	2200	17500
95.3228 RNAV ROUTE T228			
CAPE NEWENHAM, AK NDB/DME	KUCYE, AK WP	4600	17500
KUCYE, AK WP	RUFVY, AK WP	2000	17500
RUFVY, AK WP	HOOPER BAY, AK VOR/DME	3000	17500
HOOPER BAY, AK VOR/DME	NOME, AK VOR/DME	5000	17500
*4400 - MOCA			
NOME, AK VOR/DME	HIKAX, AK WP	7000	17500
HIKAX, AK WP	SHISHMAREF, AK NDB	4000	17500
SHISHMAREF, AK NDB	ECIPI, AK FIX	10000	17500
*2000 - MOCA			
ECIPI, AK FIX	JAPKI, AK WP	8000	17500
*3800 - MOCA			
JAPKI, AK WP	PODKE, AK WP	13000	17500
*4200 - MOCA			
PODKE, AK WP	CIRSU, AK WP	3800	17500
CIRSU, AK WP	BARROW, AK VOR/DME	2000	17500
BARROW, AK VOR/DME	DEADHORSE, AK VOR/DME	2000	17500
*1500 - MOCA			
DEADHORSE, AK VOR/DME	ROCES, AK WP	2000	17500
*1300 - MOCA			
95.3229 RNAV ROUTE T229			
*FAIRBANKS, AK VORTAC	REEBA, AK FIX	5000	17500
*4700 - MCA FAIRBANKS, AK VORTAC , W BND			
REEBA, AK FIX	TANANA, AK VOR/DME	4000	17500
TANANA, AK VOR/DME	HUSLIA, AK VOR/DME	6000	17500
*5500 - MOCA			
HUSLIA, AK VOR/DME	SELAWIK, AK VOR/DME	4000	17500
SELAWIK, AK VOR/DME	KOTZEBUE, AK VOR/DME	3000	17500
*2500 - MOCA			
KOTZEBUE, AK VOR/DME	POINT HOPE, AK NDB	4000	17500
95.3230 RNAV ROUTE T230			
ST PAUL ISLAND, AK NDB/DME	CHINOOK, AK NDB	3000	17500
*2700 - MOCA			
95.3231 RNAV ROUTE T231			
*FAIRBANKS, AK VORTAC	HOBOM, AK WP	5100	17500
*4300 - MCA FAIRBANKS, AK VORTAC , W BND			
HOBOM, AK WP	MIPMY, AK WP	6300	17500
MIPMY, AK WP	SELAWIK, AK VOR/DME	3300	17500
SELAWIK, AK VOR/DME	KOTZEBUE, AK VOR/DME	3400	17500

FROM	TO	MEA	MAA
95.3232 RNAV ROUTE T232			
NORTHWAY, AK VORTAC	BIG DELTA, AK VORTAC	8000	17500
BIG DELTA, AK VORTAC	FAIRBANKS, AK VORTAC	5000	17500
*4300 - MOCA			
FAIRBANKS, AK VORTAC	BETTLES, AK VOR/DME	6000	17500
*5200 - MOCA			
BETTLES, AK VOR/DME	BRONX, AK FIX	9000	17500
BRONX, AK FIX	BARROW, AK VOR/DME	4000	17500
*1200 - MOCA			
95.3233 RNAV ROUTE T233			
AMBLER, AK NDB/DME	KORKY, AK WP	5000	17500
KORKY, AK WP	ENCOR, AK WP	7000	17500
ENCOR, AK WP	EVANSVILLE, AK NDB	5000	17500
95.3234 RNAV ROUTE T234			
*FAIRBANKS, AK VORTAC	TOLLO, AK FIX	5000	17500
*4300 - MCA FAIRBANKS, AK VORTAC , W BND			
TOLLO, AK FIX	RAMPA, AK FIX	7000	17500
95.3235 RNAV ROUTE T235			
ATQASUK, AK NDB	NUIQSUT VILLAGE, AK NDB	3000	17500
*1300 - MOCA			
95.3236 RNAV ROUTE T236			
NENANA, AK VORTAC	RAMPA, AK FIX	7000	17500
95.3237 RNAV ROUTE T237			
*HOMER, AK VOR/DME	WUXAN, AK WP	9000	17500
*4800 - MCA HOMER, AK VOR/DME , E BND			
*8500 - MOCA			
WUXAN, AK WP	MIDDLETON ISLAND, AK VOR/DME	5000	17500
*4100 - MOCA			
95.3238 RNAV ROUTE T238			
RAMPA, AK FIX	BETTLES, AK VOR/DME	7000	17500
95.3240 RNAV ROUTE T240			
BETTLES, AK VOR/DME	TEGDE, AK FIX	7800	17500
TEGDE, AK FIX	DERIK, AK FIX		17500
*4700 - MCA DERIK, AK FIX , S BND			
DERIK, AK FIX	SHELO, AK FIX	3600	17500
SHELO, AK FIX	DEADHORSE, AK VOR/DME	2000	17500
95.3241 RNAV ROUTE T241			
LATCH, AK FIX	LEVEL ISLAND, AK VOR/DME	5000	17500
95.3242 RNAV ROUTE T242			
*TALKEETNA, AK VOR/DME	JOKAP, AK WP	16000	17500
*12100 - MCA TALKEETNA, AK VOR/DME , N BND			
*15300 - MOCA			
*JOKAP, AK WP	KUTDE, AK WP	6000	17500
*11500 - MCA JOKAP, AK WP , S BND			

FROM	TO	MEA	MAA
95.3242 RNAV ROUTE T242 - CONTINUED			
KUTDE, AK WP *9400 - MOCA	LACIL, AK WP	15000	17500
LACIL, AK WP *1800 - MOCA	BARROW, AK VOR/DME	8000	17500
95.3243 RNAV ROUTE T243			
PUNGO, NC FIX *1500 - MOCA	ZOLMN, NC FIX	4000	17000
95.3244 RNAV ROUTE T244			
NOME, AK VOR/DME	CONFI, AK WP	3000	17500
CONFI, AK WP	CHEFF, AK WP	5300	17500
CHEFF, AK WP *7800 - MCA BETPE, AK WP , SE BND	BETPE, AK WP	6400	17500
BETPE, AK WP	CEXIX, AK WP	10000	17500
CEXIX, AK WP *6400 - MCA CAKAD, AK WP , NW BND	CAKAD, AK WP	6600	17500
CAKAD, AK WP	ANCHORAGE, AK VOR/DME	3000	17500
95.3245 RNAV ROUTE T245			
SEAL BEACH, CA VORTAC	POPPR, CA FIX	2500	17500
POPPR, CA FIX *3200 - MCA SANTA MONICA, CA VOR/DME , NW BND	SANTA MONICA, CA VOR/DME	2500	17500
SANTA MONICA, CA VOR/DME	SILEX, CA FIX	4600	17500
95.3246 RNAV ROUTE T246			
BARROW, AK VOR/DME	GALENA, AK VOR/DME	9200	17500
GALENA, AK VOR/DME	MC GRATH, AK VORTAC	5800	17500
MC GRATH, AK VORTAC *7500 - MCA WINOR, AK FIX , SE BND	WINOR, AK FIX	4900	17500
WINOR, AK FIX	FFITZ, AK FIX	8200	17500
FFITZ, AK FIX *7600 - MCA FRIDA, AK FIX , NW BND	FRIDA, AK FIX	8800	17500
FRIDA, AK FIX *5900 - MCA IVANN, AK FIX , W BND	IVANN, AK FIX	6600	17500
IVANN, AK FIX	ANCHORAGE, AK VOR/DME	2200	17500
95.3247 RNAV ROUTE T247			
SEAL BEACH, CA VORTAC	POPPR, CA FIX	2500	17500
POPPR, CA FIX *3200 - MCA SANTA MONICA, CA VOR/DME , NW BND	SANTA MONICA, CA VOR/DME	2500	17500
SANTA MONICA, CA VOR/DME	CANOG, CA FIX	5000	17500
95.3248 RNAV ROUTE T248			
GAMBELL, AK NDB/DME	QAYAQ, AK WP	3600	17500
QAYAQ, AK WP	EMMONAK, AK VOR/DME	3000	17500
95.3249 RNAV ROUTE T249			
VAN NUYS, CA VOR/DME *3300 - MCA SANTA MONICA, CA VOR/DME , N BND	SANTA MONICA, CA VOR/DME	4700	17500
SANTA MONICA, CA VOR/DME	POPPR, CA FIX	2500	17500
POPPR, CA FIX	SEAL BEACH, CA VORTAC	2500	17500

FROM	TO	MEA	MAA
95.3250 RNAV ROUTE T250			
BETHEL, AK VORTAC	AKELT, AK FIX	3800	17500
AKELT, AK FIX	QAYAQ, AK WP	3000	17500
QAYAQ, AK WP	KUKULIAK, AK VOR/DME	3700	17500
95.3251 RNAV ROUTE T251			
FARMINGTON, MO VORTAC	FORISTELL, MO VORTAC	3000	6000
FORISTELL, MO VORTAC	RIVRS, IL FIX	2700	6000
95.3252 RNAV ROUTE T252			
NOME, AK VOR/DME	KOTZEBUE, AK VOR/DME	5900	17500
KOTZEBUE, AK VOR/DME	PERCI, AK WP	*3000	17500
*3500 - OPPOSITE GNSS MEA, NE BND			
PERCI, AK WP	WARRT, AK WP	7000	17500
WARRT, AK WP	DEADHORSE, AK VOR/DME	3000	17500
95.3254 RNAV ROUTE T254			
COLLEGE STATION, TX VORTAC	HIPPS, TX WP	3000	15000
HIPPS, TX WP	EAKES, TX WP	3000	15000
EAKES, TX WP	CREPO, TX WP	3100	15000
CREPO, TX WP	LAKE CHARLES, LA VORTAC	2200	15000
95.3255 RNAV ROUTE T255			
MARTHAS VINEYARD, MA VOR/DME	FALMA, RI FIX	2000	17500
FALMA, RI FIX	PROVIDENCE, RI VOR/DME	2000	17500
PROVIDENCE, RI VOR/DME	NOXSE, RI WP	2500	17500
NOXSE, RI WP	BLATT, CT FIX	2500	17500
BLATT, CT FIX	NELIE, CT FIX	2800	17500
95.3257 RNAV ROUTE T257			
VENTURA, CA VOR/DME	SAN MARCUS, CA VORTAC	6300	17500
SAN MARCUS, CA VORTAC	MORRO BAY, CA VORTAC	7300	17500
MORRO BAY, CA VORTAC	CALIS, CA FIX	4100	17500
CALIS, CA FIX	BLANC, CA FIX	3400	17500
BLANC, CA FIX	HNNTR, CA WP	6600	17500
HNNTR, CA WP	DUBSS, CA WP	7000	17500
DUBSS, CA WP	CAATE, CA WP	6900	17500
CAATE, CA WP	CHAWZ, CA WP	3900	17500
CHAWZ, CA WP	PORTE, CA FIX	4200	17500
PORTE, CA FIX	THHEO, CA WP	4200	17500
THHEO, CA WP	JAMIN, CA WP	4300	17500
JAMIN, CA WP	POINT REYES, CA VOR/DME	4300	17500
POINT REYES, CA VOR/DME	FREES, CA FIX	3500	17500
FREES, CA FIX	NACKI, CA WP	4900	17500
NACKI, CA WP	MENDOCINO, CA VORTAC	5600	17500
MENDOCINO, CA VORTAC	MERRI, CA FIX	5600	17500
MERRI, CA FIX	FLUEN, CA FIX	5700	17500
FLUEN, CA FIX	PLYAT, CA FIX	6800	17500
PLYAT, CA FIX	CCHUK, CA WP	6700	17500
CCHUK, CA WP	CICRO, CA WP	4800	17500
CICRO, CA WP	SEGVE, CA FIX	3800	17500
SEGVE, CA FIX	SCUPY, CA WP	2400	17500
SCUPY, CA WP	OLJEK, CA FIX	2200	17500
OLJEK, CA FIX	CIGCA, CA WP	1700	17500
CIGCA, CA WP	FURNS, CA WP	2200	17500
FURNS, CA WP	MITUE, OR FIX	4700	17500
MITUE, OR FIX	JANAS, OR FIX	4600	17500

FROM	TO	MEA	MAA
95.3257 RNAV ROUTE T257 – CONTINUED			
JANAS, OR FIX	NEWPORT, OR VORTAC	4300	17500
NEWPORT, OR VORTAC	CUTEL, OR FIX	4100	17500
CUTEL, OR FIX	EYCEH, OR WP	4100	17500
EYCEH, OR WP	ILWAC, WA FIX	2300	17500
ILWAC, WA FIX	ZEDAT, WA FIX	2300	17500
ZEDAT, WA FIX	WAVLU, WA FIX	2900	17500
WAVLU, WA FIX	HOQUIAM, WA VORTAC	2900	17500
HOQUIAM, WA VORTAC	COPLS, WA WP	2600	17500
COPLS, WA WP	WAPTO, WA FIX	2900	17500
WAPTO, WA FIX	OZETT, WA WP	3700	17500
OZETT, WA WP	TATOOSH, WA VORTAC	4300	17500
95.3259 RNAV ROUTE T259			
LAKE HUGHES, CA VORTAC	SHAFTER, CA VORTAC	8800	17500
SHAFTER, CA VORTAC	AVENAL, CA VOR/DME	4300	17500
*3600 - MOCA			
AVENAL, CA VOR/DME	MBARI, CA WP	6600	17500
MBARI, CA WP	LKHRN, CA WP	6200	17500
LKHRN, CA WP	SALINAS, CA VORTAC	6000	17500
SALINAS, CA VORTAC	CAATE, CA WP	4000	17500
CAATE, CA WP	SANTY, CA FIX	4000	17500
*3300 - MOCA			
SANTY, CA FIX	SAPID, CA FIX	5200	17500
SAPID, CA FIX	CRTER, CA WP	5500	17500
CRTER, CA WP	NORCL, CA WP	6000	17500
NORCL, CA WP	MOVDD, CA WP		17500
*5000 - MCA MOVDD, CA WP , SW BND			
MOVDD, CA WP	OOWEN, CA WP	3500	17500
OOWEN, CA WP	OXJEF, CA WP	2300	17500
OXJEF, CA WP	SAAGO, CA WP	7000	17500
*9600 - MCA SAAGO, CA WP , E BND			
SAAGO, CA WP	BNAKI, CA WP		17500
*13200 - MCA BNAKI, CA WP , E BND			
BNAKI, CA WP	WEXIM, CA WP	14700	17500
WEXIM, CA WP	NIKOL, CA FIX	14600	17500
*12200 - MCA NIKOL, CA FIX , W BND			
NIKOL, CA FIX	DAYMN, NV WP	13100	17500
DAYMN, NV WP	ELY, NV VOR/DME	12100	17500
95.3260 RNAV ROUTE T260			
NOME, AK VOR/DME	TIN CITY, AK NDB/DME	6900	17500
TIN CITY, AK NDB/DME	COGNU, AK WP	5300	17500
COGNU, AK WP	POINT HOPE, AK NDB	3000	17500
95.3261 RNAV ROUTE T261			
SANTA CATALINA, CA VORTAC	GAVIOTA, CA VORTAC	6500	17500
GAVIOTA, CA VORTAC	MORRO BAY, CA VORTAC	6200	17500
*5700 - MOCA			
MORRO BAY, CA VORTAC	CLMNS, CA FIX	4100	17500
CLMNS, CA FIX	HRRNG, CA WP	2300	17500
HRRNG, CA WP	HMPBK, CA WP	2300	17500
*4300 - MCA HMPBK, CA WP , N BND			
HMPBK, CA WP	WOZZZ, CA WP	5400	17500
*6600 - MCA WOZZZ, CA WP , N BND			
WOZZZ, CA WP	DUBSS, CA WP	6900	17500

FROM	TO	MEA	MAA
95.3261 RNAV ROUTE T261 - CONTINUED			
DUBSS, CA WP	SALINAS, CA VORTAC	6900	17500
SALINAS, CA VORTAC	KARNN, CA FIX	5500	17500
KARNN, CA FIX	WINDY, CA FIX	4700	17500
WINDY, CA FIX	SMONE, CA WP	5700	17500
SMONE, CA WP	MOVDD, CA WP	5700	17500
*4700 - MCA MOVDD, CA WP , SE BND			
MOVDD, CA WP	RBLEW, CA WP	3600	17500
RBLEW, CA WP	GIFME, CA WP	2500	17500
GIFME, CA WP	HNNRY, CA WP	2500	17500
HNNRY, CA WP	GRIDD, CA FIX	3400	17500
*2600 - MCA GRIDD, CA FIX , S BND			
GRIDD, CA FIX	TALUM, CA FIX	1800	17500
TALUM, CA FIX	JINGO, CA FIX	1900	17500
JINGO, CA FIX	GONGS, CA FIX	1800	17500
GONGS, CA FIX	HOMAN, CA FIX	4800	17500
HOMAN, CA FIX	GARSA, CA FIX	5500	17500
GARSA, CA FIX	CCAPS, CA WP	9000	17500
CCAPS, CA WP	MUREX, CA FIX	9500	17500
MUREX, CA FIX	MIXUP, OR FIX	8600	17500
MIXUP, OR FIX	PIKZ, OR WP	8600	17500
PIKZ, OR WP	TUPSE, OR WP	9400	17500
TUPSE, OR WP	DESCHUTES, OR VORTAC	6800	17500
DESCHUTES, OR VORTAC	HERBS, OR FIX	6300	17500
HERBS, OR FIX	CUPRI, OR FIX	6100	17500
CUPRI, OR FIX	SUPOC, OR WP	5500	17500
SUPOC, OR WP	KUKTE, OR FIX	6000	17500
KUKTE, OR FIX	VECCU, WA FIX	5500	17500
VECCU, WA FIX	SUNSN, WA WP	7000	17500
SUNSN, WA WP	MUDLE, WA FIX	7100	17500
MUDLE, WA FIX	YAKIMA, WA VORTAC	5300	17500
*4800 - MOCA			
YAKIMA, WA VORTAC	SELAH, WA FIX	5400	17500
SELAH, WA FIX	GEBTE, WA FIX	6000	17500
GEBTE, WA FIX	LARDY, WA WP	6000	17500
LARDY, WA WP	QUINT, WA FIX	6400	17500
QUINT, WA FIX	KLSEY, WA WP	5200	17500
KLSEY, WA WP	PAWYO, WA WP	5100	17500
PAWYO, WA WP	HVARD, WA WP	5400	17500
HVARD, WA WP	SOFFE, WA WP	6500	17500
SOFFE, WA WP	JSTEN, WA WP	6900	17500

95.3262 RNAV ROUTE T262

KODIAK, AK VOR/DME	WUXAN, AK WP	6000	17500
*5200 - MCA WUXAN, AK WP , E BND			
*3800 - MOCA			
WUXAN, AK WP	JOHNSTONE POINT, AK VOR/DME	7000	17500

95.3263 RNAV ROUTE T263

FILLMORE, CA VORTAC	DERBB, CA FIX	11000	17500
*7200 - MCA DERBB, CA FIX , SE BND			
DERBB, CA FIX	AVENAL, CA VOR/DME	6600	17500
AVENAL, CA VOR/DME	PANOCH, CA VORTAC	7100	17500
PANOCH, CA VORTAC	WINDY, CA FIX	6400	17500
WINDY, CA FIX	SMONE, CA WP	5700	17500
SMONE, CA WP	MOVDD, CA WP	5700	17500
*4700 - MCA MOVDD, CA WP , SE BND			

FROM	TO	MEA	MAA
95.3263 RNAV ROUTE T263 – CONTINUED			
MOVDD, CA WP	RBLEW, CA WP	3600	17500
RBLEW, CA WP	PITTS, CA FIX	3400	17500
PITTS, CA FIX	SCAGGS ISLAND, CA VORTAC	3400	17500
SCAGGS ISLAND, CA VORTAC	POPES, CA FIX	4800	17500
POPES, CA FIX	NAKPT, CA WP	5400	17500
NAKPT, CA WP	DIBLE, CA FIX	4800	17500
DIBLE, CA FIX	KENDL, CA FIX	4900	17500
*3200 - MOCA			
KENDL, CA FIX	FOLDS, CA FIX	6900	17500
FOLDS, CA FIX	HOMEG, CA WP	10400	17500
HOMEG, CA WP	ZUNAS, CA FIX	9900	17500
ZUNAS, CA FIX	TALEM, OR FIX	9500	17500
*9000 - MCA TALEM, OR FIX , S BND			
TALEM, OR FIX	OREGN, OR WP	7800	17500
*6100 - MCA OREGN, OR WP , SE BND			
OREGN, OR WP	EROWY, OR WP	6000	17500
EROWY, OR WP	NOTTI, OR FIX	5400	17500
NOTTI, OR FIX	CORVALLIS, OR VOR/DME	4200	17500
CORVALLIS, OR VOR/DME	ARTTY, OR FIX	4000	17500
ARTTY, OR FIX	NEWBERG, OR VOR/DME	3900	17500
NEWBERG, OR VOR/DME	LOATH, OR FIX	4400	17500
LOATH, OR FIX	WINLO, WA FIX	5200	17500
WINLO, WA FIX	ULESS, WA FIX	5400	17500
ULESS, WA FIX	MTLOK, WA WP	5800	17500
*5200 - MOCA			
MTLOK, WA WP	QUIIN, WA WP	7200	17500
*8100 - MCA QUIIN, WA WP , N BND			
QUIIN, WA WP	ARRIE, WA FIX	9100	17500
ARRIE, WA FIX	ELWHA, WA WP	8900	17500
95.3264 RNAV ROUTE T264			
KODIAK, AK VOR/DME	ZAXUM, AK WP	6000	17500
*4000 - MOCA			
ZAXUM, AK WP	MIDDLETON ISLAND, AK VOR/DME	3000	17500
*2200 - MOCA			
95.3265 RNAV ROUTE T265			
AHMED, IL FIX	START, IL FIX	4000	8000
*2500 - MOCA			
START, IL FIX	BULLZ, IL FIX	4000	8000
*2500 - MOCA			
BULLZ, IL FIX	VEENA, WI FIX	4000	8000
*2600 - MOCA			
95.3266 RNAV ROUTE T266			
RADKY, AK FIX	XADZY, AK WP	7000	17500
XADZY, AK WP	VULHO, AK WP	6000	17500
VULHO, AK WP	FOGID, AK WP	5200	17500
FOGID, AK WP	YICAX, AK WP	4500	17500
YICAX, AK WP	NEREE, AK WP	5000	17500
NEREE, AK WP	VAZPU, AK WP	5100	17500
VAZPU, AK WP	DOOZI, AK FIX	6200	17500
DOOZI, AK FIX	ANNETTE ISLAND, AK VOR/DME	5400	17500

FROM	TO	MEA	MAA
95.3267 RNAV ROUTE T267			
NOME, AK VOR/DME *6000 - MOCA	JKSA, AK WP	6700	17500
JKSA, AK WP *2700 - MOCA	BALIN, AK FIX	3400	17500
BALIN, AK FIX *2600 - MOCA	KOTZEBUE, AK VOR/DME	3300	17500
95.3269 RNAV ROUTE T269			
ANNETTE ISLAND, AK VOR/DME	TOKEE, AK FIX	5700	17500
TOKEE, AK FIX	FLIPS, AK FIX	6300	17500
FLIPS, AK FIX	BIORKA ISLAND, AK VORTAC	6000	17500
BIORKA ISLAND, AK VORTAC	SALIS, AK FIX	5100	17500
SALIS, AK FIX *2000 - MOCA	CENTA, AK FIX	6200	17500
CENTA, AK FIX	YAKUTAT, AK VOR/DME	2000	17500
YAKUTAT, AK VOR/DME	MALAS, AK FIX	2400	17500
MALAS, AK FIX *5300 - MOCA	KATAT, AK FIX	9000	17500
KATAT, AK FIX *3400 - MOCA	CASEL, AK FIX	7000	17500
CASEL, AK FIX	JOHNSTONE POINT, AK VOR/DME	4800	17500
*4800 - MCA JOHNSTONE POINT, AK VOR/DME , E BND	FIMIB, AK WP	3200	17500
JOHNSTONE POINT, AK VOR/DME *5400 - MCA FIMIB, AK WP , W BND	ANCHORAGE, AK VOR/DME	8800	17500
FIMIB, AK WP *6300 - MCA ANCHORAGE, AK VOR/DME , E BND	YONEK, AK FIX	3000	17500
ANCHORAGE, AK VOR/DME	TORTE, AK FIX	5000	17500
YONEK, AK FIX *8400 - MCA TORTE, AK FIX , W BND	VEILL, AK FIX	10600	17500
TORTE, AK FIX *8000 - MCA VEILL, AK FIX , E BND	SPARREVOHN, AK VOR/DME	6600	17500
VEILL, AK FIX	ACRAN, AK FIX	5200	17500
SPARREVOHN, AK VOR/DME	VIDDA, AK FIX	6000	17500
ACRAN, AK FIX	BETHEL, AK VORTAC	2100	17500
VIDDA, AK FIX			
95.3270 RNAV ROUTE T270			
NORTON BAY, AK NDB *5400 - MOCA	HEXOG, AK WP	6000	17500
HEXOG, AK WP	SHISHMAREF, AK NDB	5000	17500
95.3271 RNAV ROUTE T271			
COLD BAY, AK VORTAC	BINAL, AK FIX	4400	17500
BINAL, AK FIX	KING SALMON, AK VORTAC	2700	17500
KING SALMON, AK VORTAC	JIVCO, AK WP	3000	17500
JIVCO, AK WP	WOLCI, AK WP	4000	17500
WOLCI, AK WP *8000 - MCA WIDVA, AK WP , NE BND	WIDVA, AK WP	7000	17500
WIDVA, AK WP	ZINAM, AK WP	11800	17500
*10700 - MCA ZINAM, AK WP , SW BND	AMOTT, AK FIX	2500	17500
ZINAM, AK WP			

FROM	TO	MEA	MAA
95.3272 RNAV ROUTE T272			
HALLSVILLE, MO VORTAC	VANDALIA, IL VORTAC	2700	6000
95.3273 RNAV ROUTE T273			
FAIRBANKS, AK VORTAC	AYKID, AK FIX	6700	17500
AYKID, AK FIX	TUVVO, AK FIX	6000	17500
TUVVO, AK FIX	SOTGE, AK WP	11300	17500
*8000 - MCA SOTGE, AK WP , S BND			
SOTGE, AK WP	ROCES, AK WP	4000	17500
*2800 - MOCA			
95.3274 RNAV ROUTE T274			
NEWPORT, OR VORTAC	CRAAF, OR FIX	5500	17500
*5000 - MCA CRAAF, OR FIX , SW BND			
95.3275 RNAV ROUTE T275			
BETHEL, AK VORTAC	UNALAKLEET, AK VOR/DME	5900	17500
95.3276 RNAV ROUTE T276			
COUGA, WA FIX	CARBY, WA FIX	6500	17500
95.3277 RNAV ROUTE T277			
BETTLES, AK VOR/DME	JIGTI, AK WP	6000	17500
*4000 - MOCA			
JIGTI, AK WP	NOKFE, AK WP	8000	17500
*7000 - MOCA			
NOKFE, AK WP	VOVUY, AK WP	10300	17500
*9400 - MOCA			
VOVUY, AK WP	EPEHO, AK WP	16000	17500
*9500 - MOCA			
EPEHO, AK WP	POINT LAY, AK NDB	6400	17500
*5500 - MOCA			
95.3278 RNAV ROUTE T278			
HAPIT, AK FIX	CSPER, AK FIX	4000	17500
CSPER, AK FIX	SISTERS ISLAND, AK VORTAC	5300	17500
95.3279 RNAV ROUTE T279			
ALEUT, AK WP	BETHEL, AK VORTAC	3200	17500
95.3280 RNAV ROUTE T280			
FLIPS, AK FIX	LEVEL ISLAND, AK VOR/DME	7000	17500
*6300 - MOCA			
95.3281 RNAV ROUTE T281			
YOZLE, NE FIX	BOKKI, NE FIX	4700	17500
BOKKI, NE FIX	AINSWORTH, NE VOR/DME	4600	17500
AINSWORTH, NE VOR/DME	LKOTA, SD WP	4400	17500
LKOTA, SD WP	PIERRE, SD VORTAC	4300	17500
95.3282 RNAV ROUTE T282			
VENCE, AK FIX	HORSI, AK FIX	5000	17500
HORSI, AK FIX	PERZO, AK WP	4700	17500
PERZO, AK WP	FAIRBANKS, AK VORTAC	4300	17500

FROM	TO	MEA	MAA
95.3283 RNAV ROUTE T283			
SCOTTSBLUFF, NE VORTAC	GORDON, NE NDB	6300	17500
GORDON, NE NDB	WNDED, SD WP	5500	17500
*5000 - MOCA			
WNDED, SD WP	PIERRE, SD VORTAC	5000	17500
95.3285 RNAV ROUTE T285			
NORTH PLATTE, NE VOR/DME	THEDFORD, NE VOR/DME	5000	17500
THEDFORD, NE VOR/DME	MARSS, NE FIX	4900	17500
MARSS, NE FIX	VALENTINE, NE NDB	4800	17500
VALENTINE, NE NDB	LKOTA, SD WP	4500	17500
LKOTA, SD WP	WINNER, SD VOR	4300	17500
WINNER, SD VOR	HURON, SD VORTAC	4000	17500
95.3286 RNAV ROUTE T286			
RAPID CITY, SD VORTAC	GORDON, NE NDB	5700	17500
GORDON, NE NDB	EFFEX, NE FIX	5600	17500
EFFEX, NE FIX	THEDFORD, NE VOR/DME	5400	17500
THEDFORD, NE VOR/DME	BOKKI, NE FIX	4900	17500
BOKKI, NE FIX	GRAND ISLAND, NE VOR/DME	4600	17500
95.3287 RNAV ROUTE T287			
DENNN, VA WP	CAARY, VA WP	5200	10000
*3400 - MOCA			
CAARY, VA WP	WILMY, VA WP	6900	10000
*6100 - MOCA			
WILMY, VA WP	KAIJE, VA WP	5400	10000
*4900 - MOCA			
KAIJE, VA WP	BAMMY, WV WP	5500	10000
BAMMY, WV WP	REEES, PA WP	5000	10000
*4300 - MOCA			
REEES, PA WP	TOMYD, MD WP	5000	10000
*3800 - MOCA			
95.3288 RNAV ROUTE T288			
GILLETTE, WY VOR/DME	TRTTL, WY WP	7000	17500
TRTTL, WY WP	KARAS, WY FIX	9000	17500
KARAS, WY FIX	PACTO, SD FIX	10000	17500
PACTO, SD FIX	RAPID CITY, SD VORTAC	7100	17500
RAPID CITY, SD VORTAC	WNDED, SD WP	5000	17500
WNDED, SD WP	VALENTINE, NE NDB	5000	17500
VALENTINE, NE NDB	AINSWORTH, NE VOR/DME	4700	17500
*4200 - MOCA			
AINSWORTH, NE VOR/DME	FESNT, NE WP	4500	17500
FESNT, NE WP	WOLBACH, NE VORTAC	4300	17500
95.3290 RNAV ROUTE T290			
SCAIL, AL WP	BBAIT, GA WP	4000	17500
BBAIT, GA WP	BBASS, GA WP	3500	17500
BBASS, GA WP	BBOAT, GA WP	2500	17500
BBOAT, GA WP	BOBBR, GA WP	2400	17500
BOBBR, GA WP	JACET, GA WP	2400	17500

FROM	TO	MEA	MAA
95.3291 RNAV ROUTE T291			
LOUIE, MD FIX	BAABS, MD WP	5000	11000
*1800 - MOCA			
BAABS, MD WP	HARRISBURG, PA VORTAC	5000	11000
*3000 - MOCA			
HARRISBURG, PA VORTAC	SELINGSGROVE, PA VOR/DME	3300	17500
SELINGSGROVE, PA VOR/DME	MILTON, PA VORTAC	3200	17500
MILTON, PA VORTAC	MEGSS, PA FIX	3500	17500
MEGSS, PA FIX	LAAYK, PA FIX	4000	17500
LAAYK, PA FIX	DELANCEY, NY VOR/DME	4400	17500
DELANCEY, NY VOR/DME	ALBANY, NY VORTAC	5600	17500
95.3292 RNAV ROUTE T292			
RKMRT, GA WP	POLLL, GA WP	2900	17500
POLLL, GA WP	CCATT, GA WP	3600	17500
CCATT, GA WP	REELL, GA WP	3700	17500
REELL, GA WP	TRREE, GA WP	2600	17500
TRREE, GA WP	JACET, GA WP	2400	17500
95.3293 RNAV ROUTE T293			
CHUTT, AL WP	NFTRY, GA WP	2500	17500
NFTRY, GA WP	RTLRY, GA WP	3200	17500
RTLRY, GA WP	HONRR, GA WP	3300	17500
HONRR, GA WP	POLLL, GA WP	3300	17500
POLLL, GA WP	DAISI, GA WP	4700	17500
95.3294 RNAV ROUTE T294			
HEFIN, AL FIX	BBAIT, GA WP	4000	17500
BBAIT, GA WP	JMPPR, GA WP	3500	17500
JMPPR, GA WP	GRANT, GA FIX	3000	17500
95.3295 RNAV ROUTE T295			
LOUIE, MD FIX	BAABS, MD WP	5000	11000
*1800 - MOCA			
BAABS, MD WP	LANCASTER, PA VOR/DME	5000	11000
*2400 - MOCA			
LANCASTER, PA VOR/DME	WILKES-BARRE, PA VORTAC	4000	17500
WILKES-BARRE, PA VORTAC	LAAYK, PA FIX	4000	17500
LAAYK, PA FIX	SAGES, NY FIX	6400	17500
SAGES, NY FIX	SASHA, MA FIX	6100	17500
SASHA, MA FIX	KEENE, NH VORTAC	3600	17500
KEENE, NH VORTAC	CONCORD, NH VOR/DME	5000	17500
CONCORD, NH VOR/DME	KENNEBUNK, ME VOR/DME	3000	17500
KENNEBUNK, ME VOR/DME	BRNNS, ME FIX	3000	17500
BRNNS, ME FIX	BANGOR, ME VORTAC	3000	17500
95.3296 RNAV ROUTE T296			
JMPPR, GA WP	BBASS, GA WP	3000	17500
BBASS, GA WP	TATRS, GA WP	2500	17500
TATRS, GA WP	TACKL, GA WP	2500	17500
95.3297 RNAV ROUTE T297			
PAIRA, GA WP	NFTRY, GA WP	3400	17500
NFTRY, GA WP	HEFIN, AL FIX	3400	17500
HEFIN, AL FIX	RKMRT, GA WP	3200	17500
RKMRT, GA WP	CHTTE, GA WP	2900	17500

FROM	TO	MEA	MAA
95.3297 RNAV ROUTE T297 - CONTINUED			
CHTTE, GA WP	DAISI, GA WP	4000	17500
DAISI, GA WP	AWSON, GA FIX	5000	17500
AWSON, GA FIX	REELL, GA WP	3300	17500
95.3298 RNAV ROUTE T298			
OAKLAND, CA VOR/DME	SALAD, CA FIX	4300	17500
*4800 - MCA SALAD, CA FIX , E BND			
SALAD, CA FIX	ALTAM, CA FIX	5000	17500
*4600 - MCA ALTAM, CA FIX , W BND			
ALTAM, CA FIX	RBLEW, CA WP	4400	17500
*2700 - MCA RBLEW, CA WP , W BND			
RBLEW, CA WP	ORANG, CA FIX	1800	17500
ORANG, CA FIX	EVETT, CA WP	1800	17500
*2500 - MCA EVETT, CA WP , E BND			
EVETT, CA WP	ELKHN, CA WP	6300	17500
*7500 - MCA ELKHN, CA WP , E BND			
ELKHN, CA WP	SMURA, CA WP	9600	17500
*11700 - MCA SMURA, CA WP , E BND			
SMURA, CA WP	NIKOL, CA FIX	14600	17500
*12200 - MCA NIKOL, CA FIX , W BND			
NIKOL, CA FIX	COALDALE, NV VORTAC	11700	17500
COALDALE, NV VORTAC	KATTS, NV WP	11400	17500
KATTS, NV WP	KITTN, NV WP	13300	17500
KITTN, NV WP	WILSON CREEK, NV VORTAC	11600	17500
WILSON CREEK, NV VORTAC	WOOOP, UT WP	11900	17500
WOOOP, UT WP	MILFORD, UT VORTAC	11700	17500
MILFORD, UT VORTAC	DETAN, UT FIX		17500
*12700 - MCA DETAN, UT FIX , NE BND			
DETAN, UT FIX	EBOVE, UT WP	13400	17500
EBOVE, UT WP	CARBON, UT VOR/DME	13200	17500
CARBON, UT VOR/DME	MYTON, UT VOR/DME	11700	17500
MYTON, UT VOR/DME	ROCK SPRINGS, WY VOR/DME	13700	17500
ROCK SPRINGS, WY VOR/DME	DORTN, WY WP	10500	17500
DORTN, WY WP	CRAZY WOMAN, WY VOR/DME	9300	17500
95.3299 RNAV ROUTE T299			
UCREK, VA WP	KAIJE, VA WP	5000	10000
KAIJE, VA WP	BAMMY, WV WP	5500	10000
BAMMY, WV WP	REEES, PA WP	5000	10000
*4300 - MOCA			
REEES, PA WP	SCAPE, PA FIX	5000	10000
*3800 - MOCA			
95.3300 RNAV ROUTE T300			
ALBANY, NY VORTAC	CANAN, NY FIX	3400	17500
CANAN, NY FIX	SHIGY, MA FIX	3900	17500
SHIGY, MA FIX	STELA, MA FIX	4000	17500
STELA, MA FIX	MOLDS, MA FIX	3900	17500
MOLDS, MA FIX	TOMES, MA FIX	3400	17500
TOMES, MA FIX	COBOL, MA FIX	3400	17500
COBOL, MA FIX	NELIE, CT FIX	3300	17500
NELIE, CT FIX	WIPOR, CT FIX	2600	17500
WIPOR, CT FIX	NORWICH, CT VOR/DME	2400	17500
NORWICH, CT VOR/DME	LAFAY, RI FIX	2300	17500

FROM	TO	MEA	MAA
95.3300 RNAV ROUTE T300 - CONTINUED			
LAFAY, RI FIX	MINNK, RI FIX	2100	17500
MINNK, RI FIX	FALMA, RI FIX	1800	17500
FALMA, RI FIX	MARTHAS VINEYARD, MA VOR/DME	2000	17500
95.3302 RNAV ROUTE T302			
CUKIS, OR WP	JJACE, OR WP	7000	17500
JJACE, OR WP	JJETT, OR WP	8000	17500
JJETT, OR WP	JERMM, OR WP	8000	17500
JERMM, OR WP	CUPRI, OR FIX	7000	17500
*5500 - MOCA			
95.3304 RNAV ROUTE T304			
GLARA, OR FIX	PUTZZ, OR WP	7500	17500
PUTZZ, OR WP	JJETT, OR WP	8000	17500
JJETT, OR WP	WISSL, OR WP	8000	17500
WISSL, OR WP	HERBS, OR FIX	7000	17500
*6000 - MOCA			
95.3306 RNAV ROUTE T306			
LOS ANGELES, CA VORTAC	PRADO, CA FIX	4000	17500
PRADO, CA FIX	PARADISE, CA VORTAC	5000	17500
PARADISE, CA VORTAC	SETER, CA FIX	5500	17500
*12100 - MCA SETER, CA FIX , E BND			
SETER, CA FIX	BANDS, CA FIX	9000	17500
BANDS, CA FIX	PALM SPRINGS, CA VORTAC	13000	17500
*11800 - MCA PALM SPRINGS, CA VORTAC , W BND			
PALM SPRINGS, CA VORTAC	BLYTHE, CA VORTAC	8000	17500
BLYTHE, CA VORTAC	BUCKEYE, AZ VORTAC	6000	17500
BUCKEYE, AZ VORTAC	PERKY, AZ FIX	5000	17500
PERKY, AZ FIX	PHOENIX, AZ VORTAC	4000	17500
PHOENIX, AZ VORTAC	TOTEC, AZ FIX	5000	17500
*5500 - MCA TOTEC, AZ FIX , E BND			
TOTEC, AZ FIX	TUCSON, AZ VORTAC	6500	17500
TUCSON, AZ VORTAC	NOCHI, AZ WP	10700	17500
NOCHI, AZ WP	ANIMA, NM FIX	10700	17500
ANIMA, NM FIX	DARCE, NM FIX	9000	17500
DARCE, NM FIX	COLUMBUS, NM VOR/DME	9000	17500
*8200 - MOCA			
COLUMBUS, NM VOR/DME	EL PASO, TX VORTAC	9000	17500
95.3310 RNAV ROUTE T310			
TUCSON, AZ VORTAC	SULLI, AZ FIX	8000	17500
*9200 - MCA SULLI, AZ FIX , E BND			
*7200 - MOCA			
SULLI, AZ FIX	MESCA, AZ FIX	10000	17500
MESCA, AZ FIX	NOCHI, AZ WP	10000	17500
NOCHI, AZ WP	SAN SIMON, AZ VORTAC	10000	17500
SAN SIMON, AZ VORTAC	SILVER CITY, NM VOR/DME	10300	17500
SILVER CITY, NM VOR/DME	KEAPS, NM FIX	10300	17500
*11600 - MCA KEAPS, NM FIX , NE BND			
KEAPS, NM FIX	TRUTH OR CONSEQUENCES, NM VORTAC	12300	17500

FROM	TO	MEA	MAA
95.3319 RNAV ROUTE T319			
CCLAY, GA WP	DUNCS, GA WP	2700	17500
DUNCS, GA WP	SHURT, GA WP	2700	17500
SHURT, GA WP	KLOWD, GA WP	3100	17500
KLOWD, GA WP	BLEWW, GA WP	3100	17500
95.3321 RNAV ROUTE T321			
BBOAT, GA WP	TACKL, GA WP	2500	17500
TACKL, GA WP	REELL, GA WP	2600	17500
REELL, GA WP	BIGNN, GA WP	3700	17500
95.3323 RNAV ROUTE T323			
CROCS, GA WP	BOBBR, GA WP	2300	17500
BOBBR, GA WP	BIGNN, GA WP	2700	17500
BIGNN, GA WP	ZPLN, NC WP	7000	17500
ZPLN, NC WP	HIGGI, NC WP	7400	17500
95.3325 RNAV ROUTE T325			
BOWLING GREEN, KY VORTAC	RENRO, KY FIX	4500	17500
*2400 - MOCA			
RENRO, KY FIX	LOONE, KY WP	4500	17500
*2100 - MOCA			
LOONE, KY WP	APALO, IN FIX	4500	17500
*2100 - MOCA			
APALO, IN FIX	BUNKA, IN FIX	2500	17500
BUNKA, IN FIX	TERRE HAUTE, IN VORTAC	2400	17500
95.3326 RNAV ROUTE T326			
MISSION BAY, CA VORTAC	HAILE, CA FIX	3800	17500
HAILE, CA FIX	BLLYJ, CA WP	6400	17500
BLLYJ, CA WP	STAXS, CA WP	8000	17500
STAXS, CA WP	GILYY, CA WP	8600	17500
GILYY, CA WP	KUMBA, CA FIX	8600	17500
KUMBA, CA FIX	IMPERIAL, CA VORTAC	4700	17500
95.3329 RNAV ROUTE T329			
MORRO BAY, CA VORTAC	PASO ROBLES, CA VORTAC	5000	17500
PASO ROBLES, CA VORTAC	LKHRN, CA WP	5900	17500
LKHRN, CA WP	PANOCHE, CA VORTAC	6900	17500
PANOCHE, CA VORTAC	MKNNA, CA WP	6400	17500
MKNNA, CA WP	OXJEF, CA WP	6400	17500
*1600 - MOCA			
OXJEF, CA WP	TIPRE, CA WP	2700	17500
TIPRE, CA WP	OLIPH, CA WP	2700	17500
OLIPH, CA WP	HNNRY, CA WP	2400	17500
HNNRY, CA WP	ROWWN, CA WP	1800	17500
*3200 - MCA ROWWN, CA WP, W BND			
ROWWN, CA WP	RAGGS, CA FIX	5100	17500
RAGGS, CA FIX	POPES, CA FIX	4900	17500
POPES, CA FIX	NACKI, CA WP	5900	17500

FROM	TO	MEA	MAA
95.3330 RNAV ROUTE T330			
GRAND FORKS, ND VOR/DME *2500 - MOCA	BYZIN, MN WP	3900	17500
BYZIN, MN WP *3000 - MOCA	TAMMR, MN WP	3900	17500
TAMMR, MN WP *2900 - MOCA	WATAM, MN WP	3900	17500
WATAM, MN WP *2900 - MOCA	MAFLN, MN WP	3900	17500
MAFLN, MN WP *3000 - MOCA	DAYLE, MN FIX	3900	17500
DAYLE, MN FIX *3500 - MOCA	GOPHER, MN VORTAC	4000	17500
95.3331 RNAV ROUTE T331			
NTELL, CA WP	MKNNA, CA WP	2300	17500
MKNNA, CA WP	KARNN, CA FIX	4700	17500
KARNN, CA FIX	VINCO, CA FIX	6600	17500
VINCO, CA FIX	NORCL, CA WP	6300	17500
NORCL, CA WP *5000 - MCA MOVDD, CA WP , SW BND	MOVDD, CA WP	6000	17500
MOVDD, CA WP	EVETT, CA WP	3500	17500
EVETT, CA WP	TIPRE, CA WP	2700	17500
TIPRE, CA WP *7800 - MCA ESSOH, CA WP , NE BND	ESSOH, CA WP	6300	17500
ESSOH, CA WP	SQUAW VALLEY, CA VOR/DME	11200	17500
SQUAW VALLEY, CA VOR/DME	TRUCK, CA FIX	11200	17500
TRUCK, CA FIX	MUSTANG, NV VORTAC	11600	17500
MUSTANG, NV VORTAC	HIXUP, NV WP	10300	17500
HIXUP, NV WP	LOVELOCK, NV VORTAC	9300	17500
LOVELOCK, NV VORTAC *11900 - MCA CUTVA, NV FIX , E BND	CUTVA, NV FIX	10500	17500
CUTVA, NV FIX	BATTLE MOUNTAIN, NV VORTAC	11900	17500
BATTLE MOUNTAIN, NV VORTAC	PARZZ, NV WP	10900	17500
PARZZ, NV WP	DRYAD, ID FIX	10700	17500
DRYAD, ID FIX	TULIE, ID WP	11400	17500
TULIE, ID WP	AMFAL, ID WP	8300	17500
AMFAL, ID WP	POCATELLO, ID VOR/DME	8300	17500
POCATELLO, ID VOR/DME	VIPUC, ID FIX	7700	17500
VIPUC, ID FIX	IDAHO FALLS, ID VOR/DME	7100	17500
IDAHO FALLS, ID VOR/DME	PULTE, ID FIX	7100	17500
PULTE, ID FIX	SABAT, ID FIX	7600	17500
SABAT, ID FIX	WAHNZ, ID WP	9900	17500
WAHNZ, ID WP	BUFVO, WY WP	11700	17500
BUFVO, WY WP *13400 - MCA SPECT, MT WP , SW BND	SPECT, MT WP	14900	17500
SPECT, MT WP	BILLINGS, MT VORTAC	8300	17500
BILLINGS, MT VORTAC	TRUED, MT WP	6100	17500
TRUED, MT WP	EXADE, MT FIX	5900	17500
EXADE, MT FIX	JEKOK, ND WP	4400	17500
JEKOK, ND WP	FONIA, ND FIX	4000	17500

FROM	TO	MEA	MAA
95.3333 RNAV ROUTE T333			
KLIDE, CA FIX	BORED, CA FIX	6200	17500
BORED, CA FIX	SMONE, CA WP	6100	17500
SMONE, CA WP	OOWEN, CA WP	5700	17500
*4200 - MCA OOWEN, CA WP , S BND			
OOWEN, CA WP	EVETT, CA WP	2300	17500
EVETT, CA WP	TIPRE, CA WP	2700	17500
95.3354 RNAV ROUTE T354			
PARK RAPIDS, MN VOR/DME	BRNRD, MN WP	3800	17500
*3200 - MOCA			
BRNRD, MN WP	SIREN, WI VOR/DME	3500	17500
*2700 - MOCA			
95.3383 RNAV ROUTE T383			
GOPHER, MN VORTAC	BRNRD, MN WP	3600	17500
*3100 - MOCA			
BRNRD, MN WP	BLUOX, MN FIX	3900	17500
*3400 - MOCA			
95.3608 RNAV ROUTE T608			
WOZEE, NY WP	U.S. CANADIAN BORDER	3000	17500
*2400 - MOCA			
U.S. CANADIAN BORDER	HOCKE, MI WP	3500	17500
*2900 - MOCA			
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
95.3616 RNAV ROUTE T616			
FLINT, MI VORTAC	URSSA, MI WP	2500	17500
URSSA, MI WP	HOCKE, MI WP	2800	17500
HOCKE, MI WP	U.S. CANADIAN BORDER	6000	17500
*2100 - MOCA			
95.3705 RNAV ROUTE T705			
UTICA, NY VORTAC	USICI, NY FIX	3900	17500
USICI, NY FIX	GACKE, NY FIX	4100	17500
GACKE, NY FIX	BECKS, NY FIX	5200	17500
BECKS, NY FIX	SMAIR, NY FIX	5400	17500
SMAIR, NY FIX	FOSYU, NY FIX	5300	17500
FOSYU, NY FIX	SARANAC LAKE, NY VOR/DME	5400	17500
SARANAC LAKE, NY VOR/DME	RIGID, NY FIX	5400	17500
RIGID, NY FIX	PBERG, NY WP	4800	17500
PBERG, NY WP	LATTS, NY WP	3900	17500
*3700 - MCA LATTS, NY WP , S BND			
LATTS, NY WP	U.S. CANADIAN BORDER	3400	17500
95.3781 RNAV ROUTE T781			
FLINT, MI VORTAC	KATTY, MI FIX	3000	17500
*2300 - MOCA			
KATTY, MI FIX	HANKY, MI WP	4000	17500
*2900 - MOCA			
HANKY, MI WP	ADRIE, MI WP	4000	17500
*2800 - MOCA			
ADRIE, MI WP	MARGN, MI FIX	4000	17500
*2800 - MOCA			

FROM	TO	MEA	MAA
95.3781 RNAV ROUTE T781 –CONTINUED			
MARGN, MI FIX *2800 - MOCA	BLUEZ, MI WP	4000	17500
BLUEZ, MI WP *2800 - MOCA	U.S. CANADIAN BORDER	4000	17500
K502 RNAV ROUTE TK502			
WESTMINSTER, MD VORTAC	TAYLO, MD WP	2700	17500
TAYLO, MD WP *2000 - MOCA	WINGO, PA WP	2500	17500
WINGO, PA WP	SINON, PA WP	2400	17500
SINON, PA WP	GRIBL, PA WP	2400	17500
GRIBL, PA WP	TOLAN, NJ WP	2100	17500
TOLAN, NJ WP *1500 - MOCA	BALDE, NY WP	2100	17500
BALDE, NY WP *1400 - MOCA	SPATE, NY WP	2100	17500
SPATE, NY WP	DECKR, NY WP	2100	17500
K504 RNAV ROUTE TK504			
RUSEY, MD WP *1500 - MOCA	CIDOB, MD WP	1800	17500
CIDOB, MD WP	HAMOR, PA WP	2300	17500
HAMOR, PA WP *2000 - MOCA	ARCUM, PA WP	2300	17500
ARCUM, PA WP	TULLY, PA WP	2600	17500
TULLY, PA WP	BORKE, NJ FIX	2000	17500
BORKE, NJ FIX	BANKA, NJ WP	2000	17500

FROM	TO	MEA	MAA
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§95.4000 HIGH ALTITUDE RNAV ROUTES

95.4001 RNAV ROUTE Q1

POINT REYES, CA VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	ETCHY, CA WP	*24000	45000
ETCHY, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	TOCOS, CA WP	*24000	45000
TOCOS, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ENVIE, CA WP	*24000	45000
ENVIE, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ELENN, CA WP	*24000	45000
ELENN, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	EBINY, OR WP	*24000	45000
EBINY, OR WP *18000 - GNSS MEA *DME/DME/IRU MEA	EASON, OR WP	*24000	45000
EASON, OR WP *18000 - GNSS MEA *DME/DME/IRU MEA	ERAVE, WA WP	*24000	45000
ERAVE, WA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ELMAA, WA FIX	*24000	45000

95.4002 RNAV ROUTE Q2

BOILE, CA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	HEDVI, AZ WP	*24000	45000
HEDVI, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	HOBOL, AZ WP	*24000	45000
HOBOL, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	ITUCO, AZ WP	*24000	45000
ITUCO, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	NEWMAN, TX VORTAC	*26000	45000

FROM	TO	MEA	MAA
95.4003 RNAV ROUTE Q3 FEPOT, WA WP *18000 - GNSS MEA *DME/DME/IRU MEA	POINT REYES, CA VOR/DME	*24000	45000
95.4004 RNAV ROUTE Q4 BOILE, CA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	SKTTR, AZ WP	*24000	45000
SKTTR, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	EL PASO, TX VORTAC	*26000	45000
95.4005 RNAV ROUTE Q5 HAROB, WA WP *18000 - GNSS MEA *DME/DME/IRU MEA	STIKM, CA WP	*26000	45000
95.4006 RNAV ROUTE Q6 TALKEETNA, AK VOR/DME *GNSS REQUIRED	BARROW, AK VOR/DME	*18000	45000
95.4007 RNAV ROUTE Q7 JINMO, WA WP *18000 - GNSS MEA *DME/DME/IRU MEA	JOGEN, OR WP	*24000	45000
JOGEN, OR WP *18000 - GNSS MEA *DME/DME/IRU MEA	JUNEJ, CA WP	*24000	45000
JUNEJ, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	JAGWA, CA WP	*24000	45000
JAGWA, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	AVENAL, CA VOR/DME	*24000	45000
95.4008 RNAV ROUTE Q8 GALENA, AK VOR/DME *GNSS REQUIRED	ANCHORAGE, AK VOR/DME	*18000	45000
95.4009 RNAV ROUTE Q9 SUMMA, WA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	DERBB, CA FIX	*24000	45000
95.4010 RNAV ROUTE Q10 KUKULIAK, AK VOR/DME *GNSS REQUIRED	EMMONAK, AK VOR/DME	*18000	45000
95.4011 RNAV ROUTE Q11 PAAGE, WA WP *18000 - GNSS MEA *DME/DME/IRU MEA	LOS ANGELES, CA VORTAC	*26000	45000

FROM	TO	MEA	MAA
95.4012 RNAV ROUTE Q12 KOTZEBUE, AK VOR/DME *GNSS REQUIRED	DEADHORSE, AK VOR/DME	*18000	45000
95.4013 RNAV ROUTE Q13 PRFUM, AZ FIX *GNSS REQUIRED	PAWLI, OR WP	*18000	45000
95.4014 RNAV ROUTE Q14 KODIAK, AK VOR/DME *GNSS REQUIRED	JOHNSTONE POINT, AK VOR/DME	*18000	45000
95.4015 RNAV ROUTE Q15 CHILY, AZ FIX *GNSS REQUIRED DOVEE, NV FIX *GNSS REQUIRED BIKKR, CA WP *GNSS REQUIRED KENNO, NV WP *GNSS REQUIRED RUSME, NV WP *GNSS REQUIRED	DOVEE, NV FIX BIKKR, CA WP KENNO, NV WP RUSME, NV WP LOMIA, NV WP	*18000 *18000 *18000 *18000 *18000	45000 45000 45000 45000 45000
95.4016 RNAV ROUTE Q16 KODIAK, AK VOR/DME *GNSS REQUIRED MIDDLETON ISLAND, AK VOR/DME *GNSS REQUIRED	MIDDLETON ISLAND, AK VOR/DME YAKUTAT, AK VOR/DME	*18000 *18000	45000 45000
95.4017 RNAV ROUTE Q17 HOMER, AK VOR/DME *GNSS REQUIRED	MIDDLETON ISLAND, AK VOR/DME	*18000	45000
95.4018 RNAV ROUTE Q18 GALENA, AK VOR/DME *GNSS REQUIRED	BARROW, AK VOR/DME	*18000	45000
95.4019 RNAV ROUTE Q19 NASHVILLE, TN VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA PLESS, IL FIX *18000 - GNSS MEA *DME/DME/IRU MEA ST LOUIS, MO VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA DES MOINES, IA VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA SIOUX FALLS, SD VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	PLESS, IL FIX ST LOUIS, MO VORTAC DES MOINES, IA VORTAC SIOUX FALLS, SD VORTAC ABERDEEN, SD VOR/DME	*18000 *18000 *18000 *18000 *18000	45000 45000 45000 45000 45000

FROM	TO	MEA	MAA
95.4020 RNAV ROUTE Q20			
CORONA, NM VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	HONDS, NM FIX	*24000	45000
HONDS, NM FIX *18000 - GNSS MEA *DME/DME/IRU MEA	UNNOS, NM WP	*24000	45000
UNNOS, NM WP *18000 - GNSS MEA *DME/DME/IRU MEA	FUSCO, TX FIX	*24000	45000
FUSCO, TX FIX *18000 - GNSS MEA *DME/DME/IRU MEA	JUNCTION, TX VORTAC	*24000	45000
95.4021 RNAV ROUTE Q21			
JONEZ, OK WP *18000 - GNSS MEA *DME/DME/IRU MEA	RAZORBACK, AR VORTAC	*18000	45000
95.4022 RNAV ROUTE Q22			
GUSTI, LA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	OYSTY, LA FIX	*18000	45000
OYSTY, LA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	ACMES, AL WP	*18000	45000
ACMES, AL WP *18000 - GNSS MEA *DME/DME/IRU MEA	CATLN, AL FIX	*18000	45000
CATLN, AL FIX *18000 - GNSS MEA *DME/DME/IRU MEA	TWOUP, GA WP	*18000	45000
TWOUP, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	SPARTANBURG, SC VORTAC	*18000	45000
SPARTANBURG, SC VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	NYBLK, NC WP	*18000	45000
NYBLK, NC WP *18000 - GNSS MEA *DME/DME/IRU MEA	MASHI, NC WP	*18000	45000

FROM	TO	MEA	MAA
95.4022 RNAV ROUTE Q22 - CONTINUED			
MASHI, NC WP *18000 - GNSS MEA *DME/DME/IRU MEA	KIDDO, NC WP	*18000	45000
KIDDO, NC WP *18000 - GNSS MEA *DME/DME/IRU MEA	OMENS, VA WP	*18000	45000
OMENS, VA WP *18000 - GNSS MEA *DME/DME/IRU MEA	BEARI, VA WP	*18000	45000
95.4023 RNAV ROUTE Q23			
FORT SMITH, AR VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	RAZORBACK, AR VORTAC	*18000	45000
95.4024 RNAV ROUTE Q24			
LAKE CHARLES, LA VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	FIGHTING TIGER, LA VORTAC	*20000	45000
FIGHTING TIGER, LA VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	IRUBE, MS WP	*20000	45000
IRUBE, MS WP *18000 - GNSS MEA *DME/DME/IRU MEA	PAYTN, AL FIX	*20000	45000
95.4025 RNAV ROUTE Q25			
MEEOW, AR FIX *18000 - GNSS MEA *DME/DME/IRU MEA	WALNUT RIDGE, AR VORTAC	*20000	45000
WALNUT RIDGE, AR VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	POCKET CITY, IN VORTAC	*20000	45000
95.4026 RNAV ROUTE Q26			
WALNUT RIDGE, AR VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	DEVAC, AL FIX	*20000	33000
95.4027 RNAV ROUTE Q27			
FORT SMITH, AR VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	ZALDA, AR WP	*18000	45000

FROM	TO	MEA	MAA
95.4028 RNAV ROUTE Q28			
GRAZN, AR WP *18000 - GNSS MEA *DME/DME/IRU MEA	POCKET CITY, IN VORTAC	*20000	45000
95.4029 RNAV ROUTE Q29			
HARES, LA WP *18000 - GNSS MEA *DME/DME/IRU MEA	BAKRE, MS WP	*20000	45000
BAKRE, MS WP *18000 - GNSS MEA *DME/DME/IRU MEA	MEMPHIS, TN VORTAC	*20000	45000
MEMPHIS, TN VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	OMDUE, TN WP	*20000	45000
OMDUE, TN WP *18000 - GNSS MEA *DME/DME/IRU MEA	SIDAE, KY WP	*20000	45000
SIDAE, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	CREEP, OH FIX	*18000	45000
CREEP, OH FIX *18000 - GNSS MEA *DME/DME/IRU MEA	KLYNE, OH WP	*18000	45000
KLYNE, OH WP *18000 - GNSS MEA *DME/DME/IRU MEA	DUTSH, OH WP	*18000	45000
DUTSH, OH WP *18000 - GNSS MEA *DME/DME/IRU MEA	WWSHR, OH WP	*18000	45000
WWSHR, OH WP *18000 - GNSS MEA *DME/DME/IRU MEA	DORET, OH FIX	*18000	45000
DORET, OH FIX *18000 - GNSS MEA *DME/DME/IRU MEA	JAMESTOWN, NY VOR/DME	*18000	45000
JAMESTOWN, NY VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	HANKK, NY FIX	*18000	45000
HANKK, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	GONZZ, NY WP	*18000	45000

FROM	TO	MEA	MAA
GONZZ, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	KRAZZ, NY WP	*18000	45000
KRAZZ, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	NIPPY, NY FIX	*18000	45000
NIPPY, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	CABCI, VT WP	*18000	45000
CABCI, VT WP *18000 - GNSS MEA *DME/DME/IRU MEA	EBONY, ME FIX	*18000	45000
EBONY, ME FIX *18000 - GNSS MEA *DME/DME/IRU MEA	DUNOM, ME WP	*18000	45000
DUNOM, ME WP *18000 - GNSS MEA *DME/DME/IRU MEA	US CANADIAN BORDER	*18000	45000
95.4030 RNAV ROUTE Q30 SIDON, MS VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	VULCAN, AL VORTAC	*18000	45000
95.4031 RNAV ROUTE Q31 DHART, AR FIX *18000 - GNSS MEA *DME/DME/IRU MEA	MARVELL, AR VOR/DME	*18000	45000
MARVELL, AR VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	POCKET CITY, IN VORTAC	*18000	45000
95.4032 RNAV ROUTE Q32 EL DORADO, AR VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	GAGLE, MS WP	*20000	45000
GAGLE, MS WP *18000 - GNSS MEA *DME/DME/IRU MEA	CRAMM, MS FIX	*20000	45000
CRAMM, MS FIX *18000 - GNSS MEA *DME/DME/IRU MEA	NASHVILLE, TN VORTAC	*20000	45000
NASHVILLE, TN VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	SWAPP, TN FIX	*20000	45000

FROM	TO	MEA	MAA
95.4033 RNAV ROUTE Q33			
DHART, AR FIX	LITTLE ROCK, AR VORTAC	*20000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
LITTLE ROCK, AR VORTAC	PROWL, MO WP	*20000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
95.4034 RNAV ROUTE Q34			
TEXARKANA, AR VORTAC	MEMPHIS, TN VORTAC	*24000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
MEMPHIS, TN VORTAC	SWAPP, TN FIX	*24000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
95.4035 RNAV ROUTE Q35			
DRAKE, AZ VORTAC	CORKR, AZ FIX	*22000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
CORKR, AZ FIX	WINEN, UT WP	*29000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
WINEN, UT WP	NEERO, NV WP	*29000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
NEERO, NV WP	KOATA, OR WP	*29000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
KOATA, OR WP	KIMBERLY, OR VOR/DME	*29000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
95.4036 RNAV ROUTE Q36			
RAZORBACK, AR VORTAC	NASHVILLE, TN VORTAC	*20000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
NASHVILLE, TN VORTAC	SWAPP, TN FIX	*20000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
95.4037 RNAV ROUTE Q37			
FORT STOCKTON, TX VORTAC	CAVRN, TX FIX	*25000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			

FROM	TO	MEA	MAA
95.4037 RNAV ROUTE Q37 - CONTINUED			
CAVRN, TX FIX *18000 - GNSS MEA *DME/DME/IRU MEA	YORUB, NM WP	*25000	45000
YORUB, NM WP *18000 - GNSS MEA *DME/DME/IRU MEA	IMMAS, NM WP	*25000	45000
IMMAS, NM WP *18000 - GNSS MEA *DME/DME/IRU MEA	PUEBLO, CO VORTAC	*25000	45000
95.4038 RNAV ROUTE Q38			
ROKIT, TX WP *18000 - GNSS MEA *DME/DME/IRU MEA	BESOM, AL FIX	*18000	45000
95.4039 RNAV ROUTE Q39			
CLAWD, NC WP *18000 - GNSS MEA *DME/DME/IRU MEA	TARCI, WV FIX	*18000	45000
TARCI, WV FIX *18000 - GNSS MEA *DME/DME/IRU MEA	ASERY, WV WP	*18000	45000
95.4040 RNAV ROUTE Q40			
ALEXANDRIA, LA VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	DOOMS, MS WP	*18000	45000
DOOMS, MS WP *18000 - GNSS MEA *DME/DME/IRU MEA	WINAP, MS WP	*18000	45000
WINAP, MS WP *18000 - GNSS MEA *DME/DME/IRU MEA	MISLE, AL WP	*18000	45000
MISLE, AL WP *18000 - GNSS MEA *DME/DME/IRU MEA	BFOLO, AL WP	*18000	45000
BFOLO, AL WP *18000 - GNSS MEA *DME/DME/IRU MEA	NIOLA, GA WP	*18000	45000
NIOLA, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	JAARE, TN WP	*18000	45000
JAARE, TN WP *18000 - GNSS MEA *DME/DME/IRU MEA	OJESS, TN WP	*18000	45000

FROM	TO	MEA	MAA
95.4040 RNAV ROUTE Q40 - CONTINUED			
OJESS, TN WP *18000 - GNSS MEA *DME/DME/IRU MEA	ALEAN, VA WP	*18000	45000
ALEAN, VA WP *18000 - GNSS MEA *DME/DME/IRU MEA	FEEDS, VA WP	*18000	45000
FEEDS, VA WP *18000 - GNSS MEA *DME/DME/IRU MEA	MAULS, VA WP	*18000	45000
MAULS, VA WP *18000 - GNSS MEA *DME/DME/IRU MEA	FANPO, VA WP	*18000	45000
95.4041 RNAV ROUTE Q41			
CAWIN, AK FIX *GNSS REQUIRED	DEADHORSE, AK VOR/DME	*18000	45000
95.4042 RNAV ROUTE Q42			
KIRKSVILLE, MO VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	DANVILLE, IL VORTAC	*34000	45000
DANVILLE, IL VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	MUNCIE, IN VOR/DME	*34000	45000
MUNCIE, IN VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	BRNAN, PA WP	*24000	45000
BRNAN, PA WP *18000 - GNSS MEA *DME/DME/IRU MEA	HOTEE, PA WP	*18000	45000
HOTEE, PA WP *18000 - GNSS MEA *DME/DME/IRU MEA	MIKYG, PA WP	*18000	45000
MIKYG, PA WP *18000 - GNSS MEA *DME/DME/IRU MEA	SPOTZ, PA WP	*18000	45000
SPOTZ, PA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZIMMZ, PA FIX	*18000	45000

FROM	TO	MEA	MAA
95.4043 RNAV ROUTE Q43			
ANCHORAGE, AK VOR/DME	BIG LAKE, AK VORTAC	*18000	45000
*GNSS REQUIRED			
BIG LAKE, AK VORTAC	FAIRBANKS, AK VORTAC	*18000	45000
*GNSS REQUIRED			
95.4044 RNAV ROUTE Q44			
NOME, AK VOR/DME	HLBLY, AK WP	*18000	45000
*GNSS REQUIRED			
HLBLY, AK WP	ANCHORAGE, AK VOR/DME	*18000	45000
*GNSS REQUIRED			
95.4045 RNAV ROUTE Q45			
DILLINGHAM, AK VOR/DME	NONDA, AK FIX	*18000	45000
*GNSS REQUIRED			
NONDA, AK FIX	AMOTT, AK FIX	*18000	45000
*GNSS REQUIRED			
95.4046 RNAV ROUTE Q46			
POINT HOPE, AK NDB	BARROW, AK VOR/DME	*18000	45000
*GNSS REQUIRED			
95.4047 RNAV ROUTE Q47			
KING SALMON, AK VORTAC	AMOTT, AK FIX	*18000	45000
*GNSS REQUIRED			
95.4048 RNAV ROUTE Q48			
BARROW, AK VOR/DME	DEADHORSE, AK VOR/DME	*18000	45000
*GNSS REQUIRED			
DEADHORSE, AK VOR/DME	ROCES, AK WP	*18000	45000
*GNSS REQUIRED			
95.4049 RNAV ROUTE Q49			
KODIAK, AK VOR/DME	AMOTT, AK FIX	*18000	45000
*GNSS REQUIRED			
95.4050 RNAV ROUTE Q50			
LOUISVILLE, KY VORTAC	HELUB, KY WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
HELUB, KY WP	ENGRA, KY WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
ENGRA, KY WP	IBATE, KY WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
IBATE, KY WP	CUBIM, KY WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			

FROM	TO	MEA	MAA
95.4051 RNAV ROUTE Q51			
KING SALMON, AK VORTAC	SLIIM, AK WP	*18000	45000
*GNSS REQUIRED			
SLIIM, AK WP	HLBLY, AK WP	*18000	45000
*GNSS REQUIRED			
HLBLY, AK WP	KOTZEBUE, AK VOR/DME	*18000	45000
*GNSS REQUIRED			
95.4052 RNAV ROUTE Q52			
CHOPZ, GA WP	IPTAY, GA WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
IPTAY, GA WP	AWYAT, SC WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
AWYAT, SC WP	COLZI, NC FIX	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
95.4053 RNAV ROUTE Q53			
KODIAK, AK VOR/DME	ILIAMNA, AK NDB/DME	*18000	45000
*GNSS REQUIRED			
ILIAMNA, AK NDB/DME	KOTZEBUE, AK VOR/DME	*18000	45000
*GNSS REQUIRED			
95.4054 RNAV ROUTE Q54			
GREENWOOD, SC VORTAC	NYLLA, SC WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
NYLLA, SC WP	CHYPS, NC WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
CHYPS, NC WP	AHOEY, NC WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
AHOEY, NC WP	RAANE, NC WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
RAANE, NC WP	NUTZE, NC WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
95.4055 RNAV ROUTE Q55			
KODIAK, AK VOR/DME	SLIIM, AK WP	*18000	45000
*GNSS REQUIRED			
SLIIM, AK WP	NOME, AK VOR/DME	*18000	45000
*GNSS REQUIRED			

FROM	TO	MEA	MAA
95.4056 RNAV ROUTE Q56			
CATLN, AL FIX *18000 - GNSS MEA *DME/DME/IRU MEA	KBLER, GA WP	*18000	45000
KBLER, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	KELLN, SC WP	*18000	45000
KELLN, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	KTOWN, NC WP	*18000	45000
KTOWN, NC WP *18000 - GNSS MEA *DME/DME/IRU MEA	BYSKO, NC WP	*18000	45000
BYSKO, NC WP *18000 - GNSS MEA *DME/DME/IRU MEA	JOOLI, NC WP	*18000	45000
JOOLI, NC WP *18000 - GNSS MEA *DME/DME/IRU MEA	NUUMN, NC WP	*18000	45000
NUUMN, NC WP *18000 - GNSS MEA *DME/DME/IRU MEA	ORACL, NC WP	*18000	45000
ORACL, NC WP *18000 - GNSS MEA *DME/DME/IRU MEA	KIWII, VA WP	*18000	45000
95.4057 RNAV ROUTE Q57			
KING SALMON, AK VORTAC *GNSS REQUIRED	MC GRATH, AK VORTAC	*18000	45000
95.4058 RNAV ROUTE Q58			
KELLN, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	GLOVR, NC FIX	*18000	45000
GLOVR, NC FIX *18000 - GNSS MEA *DME/DME/IRU MEA	LUMAY, NC WP	*18000	45000
LUMAY, NC WP *18000 - GNSS MEA *DME/DME/IRU MEA	STUKI, NC WP	*18000	45000
STUKI, NC WP *18000 - GNSS MEA *DME/DME/IRU MEA	PEETT, NC WP	*18000	45000

FROM	TO	MEA	MAA
95.4059 RNAV ROUTE Q59 COLD BAY, AK VORTAC *GNSS REQUIRED	BETHEL, AK VORTAC	*18000	45000
95.4060 RNAV ROUTE Q60 SPARTANBURG, SC VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	BYJAC, NC FIX	*18000	45000
BYJAC, NC FIX *18000 - GNSS MEA *DME/DME/IRU MEA	EVING, NC WP	*18000	45000
EVING, NC WP *18000 - GNSS MEA *DME/DME/IRU MEA	LOOEY, VA WP	*18000	45000
LOOEY, VA WP *18000 - GNSS MEA *DME/DME/IRU MEA	JAXSN, VA FIX	*18000	45000
95.4061 RNAV ROUTE Q61 FAIRBANKS, AK VORTAC *GNSS REQUIRED	BARROW, AK VOR/DME	*18000	45000
95.4062 RNAV ROUTE Q62 WATSN, IN FIX *18000 - GNSS MEA *DME/DME/IRU MEA	DAIFE, IN WP	*18000	45000
DAIFE, IN WP *18000 - GNSS MEA *DME/DME/IRU MEA	NOLNN, OH WP	*18000	45000
NOLNN, OH WP *18000 - GNSS MEA *DME/DME/IRU MEA	WEEVR, OH WP	*18000	45000
WEEVR, OH WP *18000 - GNSS MEA *DME/DME/IRU MEA	PSKUR, OH WP	*18000	45000
PSKUR, OH WP *18000 - GNSS MEA *DME/DME/IRU MEA	FAALS, OH WP	*18000	45000
FAALS, OH WP *18000 - GNSS MEA *DME/DME/IRU MEA	ALEEE, OH WP	*18000	45000
ALEEE, OH WP *18000 - GNSS MEA *DME/DME/IRU MEA	QUARM, PA WP	*18000	45000

FROM	TO	MEA	MAA
95.4062 RNAV ROUTE Q62 – CONTINUED			
QUARM, PA WP *18000 - GNSS MEA *DME/DME/IRU MEA	BURNI, PA FIX	*18000	45000
BURNI, PA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	MCMAN, PA FIX	*18000	45000
MCMAN, PA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	VALLO, PA FIX	*18000	45000
VALLO, PA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	RAVINE, PA VORTAC	*18000	45000
RAVINE, PA VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	SUZIE, PA FIX	*18000	45000
SUZIE, PA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	SARAA, PA FIX	*18000	45000
95.4063 RNAV ROUTE Q63			
DOOGE, VA WP *18000 - GNSS MEA *DME/DME/IRU MEA	HAPKI, KY WP	*18000	45000
HAPKI, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	TONIO, KY FIX	*18000	45000
TONIO, KY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	OCASE, KY WP	*18000	45000
OCASE, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	HEVAN, IN WP	*18000	45000
95.4064 RNAV ROUTE Q64			
CATLN, AL FIX *18000 - GNSS MEA *DME/DME/IRU MEA	FIGEY, GA WP	*18000	45000
FIGEY, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	GREENWOOD, SC VORTAC	*18000	45000

FROM	TO	MEA	MAA
95.4064 RNAV ROUTE Q64 - CONTINUED			
GREENWOOD, SC VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	DARRL, SC FIX	*18000	45000
DARRL, SC FIX *18000 - GNSS MEA *DME/DME/IRU MEA	IDDA, NC WP	*18000	45000
IDDA, NC WP *18000 - GNSS MEA *DME/DME/IRU MEA	TAR RIVER, NC VORTAC	*18000	45000
95.4065 RNAV ROUTE Q65			
KPASA, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	DOFFY, FL WP	*18000	45000
DOFFY, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	FETAL, FL WP	*18000	45000
FETAL, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	ENEME, GA WP	*18000	45000
ENEME, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	JEFOI, GA WP	*18000	45000
JEFOI, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	TRAS, GA WP	*18000	45000
TRAS, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	CESKI, GA WP	*18000	45000
CESKI, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	DAREE, GA WP	*18000	45000
DAREE, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	LORNN, TN WP	*18000	45000
LORNN, TN WP *18000 - GNSS MEA *DME/DME/IRU MEA	SOGEE, TN WP	*18000	45000
SOGEE, TN WP *18000 - GNSS MEA *DME/DME/IRU MEA	ENGR, KY WP	*18000	45000
ENGR, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	OCASE, KY WP	*18000	45000

FROM	TO	MEA	MAA
95.4064 RNAV ROUTE Q65 – CONTINUED			
OCASE, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	ROSEWOOD, OH VORTAC	*18000	45000
95.4066 RNAV ROUTE Q66			
LITTLE ROCK, AR VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	CIVKI, AR WP	*18000	45000
CIVKI, AR WP *18000 - GNSS MEA *DME/DME/IRU MEA	RICKX, AR WP	*18000	45000
RICKX, AR WP *18000 - GNSS MEA *DME/DME/IRU MEA	TROVE, TN WP	*18000	45000
TROVE, TN WP *18000 - GNSS MEA *DME/DME/IRU MEA	BAZOO, TN WP	*18000	45000
BAZOO, TN WP *18000 - GNSS MEA *DME/DME/IRU MEA	METWO, TN WP	*18000	45000
METWO, TN WP *18000 - GNSS MEA *DME/DME/IRU MEA	MXEEN, TN WP	*18000	45000
MXEEN, TN WP *18000 - GNSS MEA *DME/DME/IRU MEA	ALEAN, VA WP	*18000	45000
95.4067 RNAV ROUTE Q67			
SMTTH, TN WP *18000 - GNSS MEA *DME/DME/IRU MEA	CEMEX, KY WP	*18000	45000
CEMEX, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	IBATE, KY WP	*18000	45000
IBATE, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	TONIO, KY FIX	*18000	45000
TONIO, KY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	JONEN, KY WP	*18000	45000
JONEN, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	DARYN, WV WP	*18000	45000

FROM	TO	MEA	MAA
95.4068 RNAV ROUTE Q68			
CHARLESTON, WV VOR/DME	TOMCA, WV WP	*18000	45000
*18000 - GNSS MEA			
- GNSS MEA			
*DME/DME/IRU MEA			
EMCET, SC WP	RYCKI, NC WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
RYCKI, NC WP	LUNDD, VA WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
LUNDD, VA WP	ILLSA, VA WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
ILLSA, VA WP	EWESS, WV WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
EWESS, WV WP	RICCS, WV WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
95.4070 RNAV ROUTE Q70			
HAILO, CA WP	LAS VEGAS, NV VORTAC	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
LAS VEGAS, NV VORTAC	IFEYE, NV WP	*20000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
IFEYE, NV WP	BLIPP, NV WP	*20000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
BLIPP, NV WP	EEVUN, UT WP	*20000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
EEVUN, UT WP	BLOBB, UT WP	*20000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
BLOBB, UT WP	BAWER, UT WP	*22000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
BAWER, UT WP	SAKES, UT FIX	*22000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			

FROM	TO	MEA	MAA
95.4071 RNAV ROUTE Q71			
BOBBD, TN WP *18000 - GNSS MEA *DME/DME/IRU MEA	ATUME, KY WP	*18000	45000
ATUME, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	HAPKI, KY WP	*18000	45000
HAPKI, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	KONGO, KY FIX	*18000	45000
KONGO, KY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	WISTA, WV WP	*18000	45000
WISTA, WV WP *18000 - GNSS MEA *DME/DME/IRU MEA	GEFFS, WV FIX	*18000	45000
GEFFS, WV FIX *18000 - GNSS MEA *DME/DME/IRU MEA	EMNEM, WV WP	*18000	45000
EMNEM, WV WP *18000 - GNSS MEA *DME/DME/IRU MEA	PSYKO, PA WP	*18000	45000
PSYKO, PA WP *18000 - GNSS MEA *DME/DME/IRU MEA	PHILIPSBURG, PA VORTAC	*18000	45000
95.4072 RNAV ROUTE Q72			
HACKS, WV FIX *18000 - GNSS MEA *DME/DME/IRU MEA	GEQUE, WV WP	*18000	45000
GEQUE, WV WP *18000 - GNSS MEA *DME/DME/IRU MEA	BENSH, WV WP	*18000	45000
BENSH, WV WP *18000 - GNSS MEA *DME/DME/IRU MEA	RAMAY, VA WP	*18000	45000
95.4073 RNAV ROUTE Q73			
MOMAR, CA FIX *GNSS REQUIRED	CABIC, CA WP	*18000	45000
CABIC, CA WP *GNSS REQUIRED	CHADT, CA WP	*18000	45000
CHADT, CA WP *GNSS REQUIRED	LVELL, CA WP	*18000	45000
LVELL, CA WP *GNSS REQUIRED	HAKMN, NV WP	*18000	45000

FROM	TO	MEA	MAA
95.4073 RNAV ROUTE Q73 - CONTINUED			
HAKMN, NV WP *GNSS REQUIRED	ZZYZX, NV WP	*18000	45000
ZZYZX, NV WP *GNSS REQUIRED	LAKRR, NV WP	*18000	45000
LAKRR, NV WP *GNSS REQUIRED	GUNTR, AZ WP	*18000	45000
GUNTR, AZ WP *GNSS REQUIRED	ZAINY, AZ WP	*18000	45000
ZAINY, AZ WP *GNSS REQUIRED	EEVUN, UT WP	*18000	45000
EEVUN, UT WP *GNSS REQUIRED	WINEN, UT WP	*18000	45000
WINEN, UT WP *GNSS REQUIRED	CRITO, NV WP	*18000	45000
CRITO, NV WP *GNSS REQUIRED	BROPH, ID WP	*18000	45000
BROPH, ID WP *GNSS REQUIRED	DERSO, ID FIX	*18000	45000
DERSO, ID FIX *GNSS REQUIRED	SAWTT, ID WP	*18000	45000
SAWTT, ID WP *GNSS REQUIRED	ZATIP, ID FIX	*18000	45000
ZATIP, ID FIX *GNSS REQUIRED	CORDU, ID FIX	*18000	45000
95.4074 RNAV ROUTE Q74			
NATEE, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	BOULDER CITY, NV VORTAC	*18000	45000
BOULDER CITY, NV VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	ZAINY, AZ WP	*20000	45000
ZAINY, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	FIZZL, AZ WP	*20000	45000
FIZZL, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	GARDD, UT WP	*20000	45000
GARDD, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	DEANN, UT WP	*20000	45000
95.4075 RNAV ROUTE Q75			
ENEME, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	TEUFL, GA WP	*18000	45000
TEUFL, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	TEEEM, GA WP	*18000	45000

FROM	TO	MEA	MAA
95.4075 RNAV ROUTE Q75 - CONTINUED			
TEEEM, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	SHRIL, GA WP	*18000	45000
SHRIL, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	FISHO, SC WP	*18000	45000
FISHO, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	ILBEE, SC WP	*18000	45000
ILBEE, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	SLOJO, SC WP	*18000	45000
SLOJO, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	GREENSBORO, NC VORTAC	*18000	45000
95.4077 RNAV ROUTE Q77			
OCTAL, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	MATLK, FL WP	*18000	45000
MATLK, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	STYMY, FL WP	*18000	45000
STYMY, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	WAKKO, FL WP	*18000	45000
WAKKO, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	WASUL, FL WP	*18000	45000
WASUL, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	MJAMS, FL WP	*18000	45000
MJAMS, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	ETORE, FL WP	*18000	45000
ETORE, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	SHRKS, FL WP	*18000	45000

FROM	TO	MEA	MAA
95.4077 RNAV ROUTE Q77 - CONTINUED			
SHRKS, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	TEUFL, GA WP	*18000	45000
TEUFL, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	WIGVO, GA WP	*18000	45000
95.4078 RNAV ROUTE Q78			
MARUE, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	DUGGN, AZ WP	*24000	45000
DUGGN, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	TOADD, AZ WP	*24000	45000
95.4079 RNAV ROUTE Q79			
MCLAW, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	VAULT, FL WP	*18000	45000
VAULT, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	FEMID, FL WP	*18000	45000
FEMID, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	WULFF, FL WP	*18000	45000
WULFF, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	MOLIE, FL WP	*18000	45000
MOLIE, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	DOFFY, FL WP	*18000	45000
DOFFY, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	YUESS, GA WP	*18000	45000
YUESS, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ATLANTA, GA VORTAC	*18000	45000

FROM	TO	MEA	MAA
95.4080 RNAV ROUTE Q80			
FAREV, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	JEDER, KY WP	*18000	45000
JEDER, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	ENGR, KY WP	*18000	45000
ENGR, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	DEWAK, KY WP	*18000	45000
DEWAK, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	CEGMA, KY WP	*18000	45000
CEGMA, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	JONEN, KY WP	*18000	45000
JONEN, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	BULVE, WV WP	*18000	45000
BULVE, WV WP *18000 - GNSS MEA *DME/DME/IRU MEA	WISTA, WV WP	*18000	45000
WISTA, WV WP *18000 - GNSS MEA *DME/DME/IRU MEA	LEVII, WV WP	*18000	45000
LEVII, WV WP *18000 - GNSS MEA *DME/DME/IRU MEA	RONZZ, WV WP	*18000	45000
RONZZ, WV WP *18000 - GNSS MEA *DME/DME/IRU MEA	HHOLZ, WV WP	*18000	45000
HHOLZ, WV WP *18000 - GNSS MEA *DME/DME/IRU MEA	HAMME, WV WP	*18000	45000
HAMME, WV WP *18000 - GNSS MEA *DME/DME/IRU MEA	CAPOE, VA WP	*18000	45000
CAPOE, VA WP *18000 - GNSS MEA *DME/DME/IRU MEA	OTTTO, VA WP	*18000	45000

FROM	TO	MEA	MAA
95.4081 RNAV ROUTE Q81			
TUNSL, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	KARTR, FL FIX	*18000	45000
KARTR, FL FIX *18000 - GNSS MEA *DME/DME/IRU MEA	FIPES, OG WP	*18000	45000
FIPES, OG WP *18000 - GNSS MEA *DME/DME/IRU MEA	THMPR, FL WP	*18000	45000
THMPR, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	LEEHI, FL WP	*18000	45000
LEEHI, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	FARLU, FL WP	*18000	45000
FARLU, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	ENDEW, FL WP	*18000	45000
ENDEW, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	BITNY, OG WP	*18000	45000
BITNY, OG WP *18000 - GNSS MEA *DME/DME/IRU MEA	NICKI, FL WP	*18000	45000
NICKI, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	HONID, GA WP	*18000	45000
95.4082 RNAV ROUTE Q82			
WWSHR, OH WP *18000 - GNSS MEA *DME/DME/IRU MEA	DORET, OH FIX	*18000	45000
DORET, OH FIX *18000 - GNSS MEA *DME/DME/IRU MEA	JAMESTOWN, NY VOR/DME	*18000	45000
JAMESTOWN, NY VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	WAYLA, NY WP	*18000	45000
WAYLA, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	VIEEW, NY FIX	*18000	45000
VIEEW, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	MEMMS, NY FIX	*18000	45000

FROM	TO	MEA	MAA
95.4082 RNAV ROUTE Q82 - CONTINUED			
MEMMS, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	LOXXE, NY FIX	*18000	45000
LOXXE, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	PONCT, NY WP	*18000	45000
95.4083 RNAV ROUTE Q83			
JEVED, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ROYCO, GA WP	*18000	45000
ROYCO, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	TAALN, GA WP	*18000	45000
TAALN, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	KONEY, SC WP	*18000	45000
KONEY, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	WURFL, SC WP	*18000	45000
WURFL, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	EFFAY, SC WP	*18000	45000
EFFAY, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	SLOJO, SC WP	*18000	45000
95.4084 RNAV ROUTE Q84			
JAMESTOWN, NY VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	AUDIL, NY FIX	*18000	45000
AUDIL, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	PUPPY, NY WP	*18000	45000
PUPPY, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	PAYGE, NY FIX	*18000	45000
PAYGE, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	CAMBRIDGE, NY VOR/DME	*18000	45000

FROM	TO	MEA	MAA
95.4085 RNAV ROUTE Q85			
LPERD, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	GIPPL, GA WP	*18000	45000
GIPPL, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ROYCO, GA WP	*18000	45000
ROYCO, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	IGARY, SC WP	*18000	45000
IGARY, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	PELIE, SC WP	*18000	45000
PELIE, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	BUMMA, SC WP	*18000	45000
BUMMA, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	KAATT, NC WP	*18000	45000
KAATT, NC WP *18000 - GNSS MEA *DME/DME/IRU MEA	SMPRR, NC WP	*18000	45000
95.4086 RNAV ROUTE Q86			
TTRUE, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	YORRK, AZ WP	*18000	45000
YORRK, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	SCHLS, AZ WP	*20000	45000
SCHLS, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	CUTRO, AZ WP	*20000	45000
CUTRO, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	VALEQ, AZ WP	*20000	45000
VALEQ, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	PLNDL, AZ WP	*20000	45000

FROM	TO	MEA	MAA
95.4087 RNAV ROUTE Q87			
PEAKY, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	GOPEY, FL WP	*18000	45000
GOPEY, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	GRIDS, FL WP	*18000	45000
GRIDS, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	TIRCO, FL WP	*18000	45000
TIRCO, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	MATLK, FL WP	*18000	45000
MATLK, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	ONEWY, FL WP	*18000	45000
ONEWY, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZERBO, FL WP	*18000	45000
ZERBO, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	DUCEN, FL WP	*18000	45000
DUCEN, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	FEMON, FL WP	*18000	45000
FEMON, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	VIYAP, GA FIX	*18000	45000
VIYAP, GA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	TAALN, GA WP	*18000	45000
TAALN, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	JROSS, SC WP	*18000	45000
JROSS, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	RAYVO, SC WP	*18000	45000
RAYVO, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	HINTZ, SC WP	*18000	45000

FROM	TO	MEA	MAA
95.4087 RNAV ROUTE Q87 - CONTINUED			
HINTZ, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	REDFH, SC WP	*18000	45000
REDFH, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	LCAPE, SC WP	*18000	45000
95.4088 RNAV ROUTE Q88			
HAKMN, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZZYZX, NV WP	*19000	45000
ZZYZX, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	LAKRR, NV WP	*22000	45000
LAKRR, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	NOOTN, AZ FIX	*22000	45000
NOOTN, AZ FIX *18000 - GNSS MEA *DME/DME/IRU MEA	GARDD, UT WP	*22000	45000
GARDD, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	VERKN, UT WP	*22000	45000
VERKN, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	PROMT, UT WP	*22000	45000
PROMT, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	CHESZ, UT WP	*22000	45000
95.4089 RNAV ROUTE Q89			
MANLE, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	WAKUP, FL WP	*18000	45000
WAKUP, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	PRMUS, FL WP	*18000	45000
PRMUS, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	SHRKS, FL WP	*18000	45000
SHRKS, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	YANTI, GA WP	*18000	45000
YANTI, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ATLANTA, GA VORTAC	*18000	45000

FROM	TO	MEA	MAA
95.4090 RNAV ROUTE Q90			
DNERO, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ESGEE, NV WP	*20000	45000
ESGEE, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	AREAF, AZ WP	*20000	45000
AREAF, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	JASSE, AZ WP	*20000	45000
95.4093 RNAV ROUTE Q93			
MCLAW, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	VAULT, FL WP	*18000	45000
VAULT, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	LINEY, FL WP	*18000	45000
LINEY, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	FOBIN, FL WP	*18000	45000
FOBIN, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	EBAYY, FL WP	*18000	45000
EBAYY, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	MALET, FL FIX	*18000	45000
MALET, FL FIX *18000 - GNSS MEA *DME/DME/IRU MEA	DEBRL, FL WP	*18000	45000
DEBRL, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	KENLL, FL WP	*18000	45000
KENLL, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	PRMUS, FL WP	*18000	45000
PRMUS, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	WOPNR, OA WP	*18000	45000
WOPNR, OA WP *18000 - GNSS MEA *DME/DME/IRU MEA #CHS, AMG, OMN, CRG, SAV	GIPPL, GA WP	*18000	45000

FROM	TO	MEA	MAA
95.4093 RNAV ROUTE Q93 - CONTINUED			
GIPPL, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ISUZO, GA WP	*18000	45000
ISUZO, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	FISHO, SC WP	*18000	45000
FISHO, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	QUIWE, SC WP	*18000	45000
95.4094 RNAV ROUTE Q94			
WELUM, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	MNGGO, AZ WP	*22000	45000
MNGGO, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	ROOLL, AZ WP	*22000	45000
95.4096 RNAV ROUTE Q96			
PURSE, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	DODDL, NV WP	*22000	45000
DODDL, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	BFUNE, AZ WP	*22000	45000
BFUNE, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	GUNTR, AZ WP	*18000	45000
GUNTR, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	PIIXR, AZ WP	*22000	45000
PIIXR, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	FIZZL, AZ WP	*22000	45000
FIZZL, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	BAWER, UT WP	*22000	45000
BAWER, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	ROCCY, UT WP	*22000	45000
ROCCY, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	SARAF, UT WP	*22000	45000

FROM	TO	MEA	MAA
95.4096 RNAV ROUTE Q96 – CONTINUED			
SARAF, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	KIMMR, UT WP	*22000	45000
95.4097 RNAV ROUTE Q97			
TOVAR, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	EBAYY, FL WP	*18000	45000
EBAYY, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	MALET, FL FIX	*18000	45000
MALET, FL FIX *18000 - GNSS MEA *DME/DME/IRU MEA	DEBRL, FL WP	*18000	45000
DEBRL, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	KENLL, FL WP	*18000	45000
KENLL, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	PRMUS, FL WP	*18000	45000
PRMUS, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	WOPNR, OA WP	*18000	45000
WOPNR, OA WP *18000 - GNSS MEA *DME/DME/IRU MEA	JEVED, GA WP	*18000	45000
JEVED, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	CAKET, SC WP	*18000	45000
CAKET, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	ELMSZ, SC WP	*18000	45000
ELMSZ, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	YURCK, NC WP	*18000	45000
YURCK, NC WP *18000 - GNSS MEA *DME/DME/IRU MEA	ELLDE, NC WP	*18000	45000
95.4098 RNAV ROUTE Q98			
HAKMN, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZZYZX, NV WP	*18000	45000

FROM	TO	MEA	MAA
95.4098 RNAV ROUTE Q98 - CONTINUED			
ZZYZX, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	LAKRR, NV WP	*18000	45000
LAKRR, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	DUZIT, AZ WP	*20000	45000
DUZIT, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	EEEZY, AZ WP	*24000	45000
EEEZY, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	PEEWE, AZ WP	*24000	45000
95.4099 RNAV ROUTE Q99			
DOFFY, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	CAMJO, FL WP	*18000	45000
CAMJO, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	HEPAR, GA WP	*18000	45000
HEPAR, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	TEEEM, GA WP	*18000	45000
TEEEM, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	BLAAN, SC WP	*18000	45000
BLAAN, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	BWAGS, SC WP	*18000	45000
BWAGS, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	EFFAY, SC WP	*18000	45000
EFFAY, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	WNGUD, SC WP	*18000	45000
WNGUD, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	POLYY, NC WP	*18000	45000

FROM	TO	MEA	MAA
95.4103 RNAV ROUTE Q103			
CYN TA, GA WP *30000 - GNSS MEA *DME/DME/IRU MEA	PUPYY, GA WP	*30000	45000
PUPYY, GA WP *30000 - GNSS MEA *DME/DME/IRU MEA	RIELE, SC WP	*30000	45000
RIELE, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	EMCET, SC WP	*18000	45000
EMCET, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	SLOJO, SC WP	*18000	45000
SLOJO, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	PULASKI, VA VORTAC	*18000	45000
PULASKI, VA VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	ASBUR, WV FIX	*18000	45000
ASBUR, WV FIX *18000 - GNSS MEA *DME/DME/IRU MEA	OAKLE, WV FIX	*18000	45000
OAKLE, WV FIX *18000 - GNSS MEA *DME/DME/IRU MEA	PERRI, WV FIX	*18000	45000
PERRI, WV FIX *18000 - GNSS MEA *DME/DME/IRU MEA	PERKS, WV FIX	*18000	45000
PERKS, WV FIX *18000 - GNSS MEA *DME/DME/IRU MEA	RICCS, WV WP	*18000	45000
RICCS, WV WP *18000 - GNSS MEA *DME/DME/IRU MEA	EMNEM, WV WP	*18000	45000
EMNEM, WV WP *18000 - GNSS MEA *DME/DME/IRU MEA	AIRRA, PA WP	*18000	45000
95.4104 RNAV ROUTE Q104			
ACORI, AL WP *18000 - GNSS MEA *DME/DME/IRU MEA	CABLO, GA WP	*18000	45000
CABLO, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	HEVVN, FL FIX	*18000	45000

FROM	TO	MEA	MAA
95.4104 RNAV ROUTE Q104 - CONTINUED			
HEVVN, FL FIX *18000 - GNSS MEA *DME/DME/IRU MEA	LEGGT, FL FIX	*18000	45000
LEGGT, FL FIX *18000 - GNSS MEA *DME/DME/IRU MEA	PLYER, FL FIX	*18000	45000
PLYER, FL FIX *18000 - GNSS MEA *DME/DME/IRU MEA	SWABE, FL FIX	*18000	45000
SWABE, FL FIX *18000 - GNSS MEA *DME/DME/IRU MEA	ENDEW, FL WP	*18000	45000
ENDEW, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	ST PETERSBURG, FL VORTAC	*18000	45000
95.4106 RNAV ROUTE Q106			
SMELZ, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	GADAY, AL WP	*18000	45000
95.4108 RNAV ROUTE Q108			
GADAY, AL WP *18000 - GNSS MEA *DME/DME/IRU MEA	HKUNA, FL WP	*18000	45000
95.4109 RNAV ROUTE Q109			
DOFFY, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	CAMJO, FL WP	*18000	45000
CAMJO, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	HEPAR, GA WP	*18000	45000
HEPAR, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	TEEEM, GA WP	*18000	45000
TEEEM, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	RIELE, SC WP	*18000	45000
RIELE, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	PANDY, SC WP	*18000	45000

FROM	TO	MEA	MAA
95.4109 RNAV ROUTE Q109 - CONTINUED			
PANDY, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	RAYVO, SC WP	*18000	45000
RAYVO, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	SESUE, SC WP	*18000	45000
SESUE, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	BUMMA, SC WP	*18000	45000
BUMMA, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	YURCK, NC WP	*18000	45000
YURCK, NC WP *18000 - GNSS MEA *DME/DME/IRU MEA	LAANA, NC WP	*18000	45000
95.4110 RNAV ROUTE Q110			
BLANS, IL WP *18000 - GNSS MEA *DME/DME/IRU MEA	BETIE, TN WP	*18000	45000
BETIE, TN WP *18000 - GNSS MEA *DME/DME/IRU MEA	SKIDO, AL WP	*18000	45000
SKIDO, AL WP *18000 - GNSS MEA *DME/DME/IRU MEA	BFOLO, AL WP	*18000	45000
BFOLO, AL WP *18000 - GNSS MEA *DME/DME/IRU MEA	JYROD, AL WP	*18000	45000
JYROD, AL WP *18000 - GNSS MEA *DME/DME/IRU MEA	DAWWN, GA WP	*18000	45000
DAWWN, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	JOKKY, FL WP	*18000	45000
JOKKY, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	AMORY, FL WP	*18000	45000
AMORY, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	SMELZ, FL WP	*18000	45000

FROM	TO	MEA	MAA
95.4104 RNAV ROUTE Q104 - CONTINUED			
SMELZ, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	SHEEK, FL WP	*18000	45000
SHEEK, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	JAYMC, FL WP	*18000	45000
JAYMC, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	OCTAL, FL WP	*18000	45000
95.4112 RNAV ROUTE Q112			
INPIN, FL FIX *18000 - GNSS MEA *DME/DME/IRU MEA	DEFUN, FL FIX	*18000	45000
95.4113 RNAV ROUTE Q113			
RAYVO, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	CEELY, SC WP	*18000	45000
CEELY, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	SARKY, SC WP	*18000	45000
95.4114 RNAV ROUTE Q114			
NATEE, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	BOULDER CITY, NV VORTAC	*18000	45000
BOULDER CITY, NV VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	ZAINY, AZ WP	*20000	45000
ZAINY, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	AHOWW, UT WP	*20000	45000
AHOWW, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	BAWER, UT WP	*24000	45000
BAWER, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	BUGGG, UT WP	*24000	45000
95.4116 RNAV ROUTE Q116			
VULCAN, AL VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	DEEDA, GA WP	*18000	45000

FROM	TO	MEA	MAA
95.4116 RNAV ROUTE Q116 – CONTINUED			
DEEDA, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	JAWJA, FL WP	*18000	45000
JAWJA, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	MICES, FL WP	*18000	45000
MICES, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	PAToy, FL WP	*18000	45000
PAToy, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	SMELZ, FL WP	*18000	45000
SMELZ, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	SHEEK, FL WP	*18000	45000
SHEEK, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	JAYMC, FL WP	*18000	45000
JAYMC, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	OCTAL, FL WP	*18000	45000
95.4118 RNAV ROUTE Q118			
MARION, IN VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	HEVAN, IN WP	*18000	45000
HEVAN, IN WP *18000 - GNSS MEA *DME/DME/IRU MEA	VOSTK, KY WP	*18000	45000
VOSTK, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	HELUB, KY WP	*18000	45000
HELUB, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	JEDER, KY WP	*18000	45000
JEDER, KY WP *18000 - GNSS MEA *DME/DME/IRU MEA	GLAZR, TN WP	*18000	45000

FROM	TO	MEA	MAA
95.4118 RNAV ROUTE Q118 - CONTINUED			
GLAZR, TN WP *18000 - GNSS MEA *DME/DME/IRU MEA	KAILL, GA WP	*18000	45000
KAILL, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ATLANTA, GA VORTAC	*18000	45000
ATLANTA, GA VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	JOHNN, GA FIX	*18000	45000
JOHNN, GA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	JAMIZ, FL WP	*18000	45000
JAMIZ, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	BRUTS, FL WP	*18000	45000
BRUTS, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	JINOS, FL WP	*18000	45000
JINOS, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	KPASA, FL WP	*18000	45000
KPASA, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	SHEEK, FL WP	*18000	45000
SHEEK, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	CHRR, FL FIX	*18000	45000
CHRR, FL FIX *18000 - GNSS MEA *DME/DME/IRU MEA	FEMID, FL WP	*18000	45000
FEMID, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	BRIES, FL WP	*18000	45000
BRIES, FL WP *18000 - GNSS MEA *DME/DME/IRU MEA	PEAKY, FL WP	*18000	45000
95.4120 RNAV ROUTE Q120			
ORRCA, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	BETBE, NV WP	*24000	45000
BETBE, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZORUN, NV WP	*24000	45000

FROM	TO	MEA	MAA
95.4120 RNAV ROUTE Q120 - CONTINUED			
ZORUN, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	GALLI, NV WP	*31000	45000
GALLI, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	JAJAY, NV WP	*31000	45000
JAJAY, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	TRAKY, NV WP	*31000	45000
TRAKY, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	PROXI, UT WP	*29000	45000
PROXI, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	BIG PINEY, WY VOR/DME	*25000	45000
BIG PINEY, WY VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	JUGIV, WY WP	*23000	45000
JUGIV, WY WP *18000 - GNSS MEA *DME/DME/IRU MEA	HIKOX, WY FIX	*23000	45000
HIKOX, WY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	JASTI, SD WP	*23000	45000
JASTI, SD WP *18000 - GNSS MEA *DME/DME/IRU MEA	UFFDA, MN WP	*19000	45000
95.4121 RNAV ROUTE Q121			
PARZZ, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	POCATELLO, ID VOR/DME	*24000	45000
POCATELLO, ID VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	TOUGH, MT WP	*24000	45000
95.4122 RNAV ROUTE Q122			
MOGEE, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	MACUS, NV WP	*18000	45000
MACUS, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	MCORD, NV WP	*28000	45000

FROM	TO	MEA	MAA
95.4122 RNAV ROUTE Q122 - CONTINUED			
MCORD, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	LUCIN, UT VORTAC	*28000	45000
LUCIN, UT VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	BEARR, UT FIX	*28000	45000
BEARR, UT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	KURSE, WY WP	*28000	45000
KURSE, WY WP *18000 - GNSS MEA *DME/DME/IRU MEA	O'NEILL, NE VORTAC	*21000	45000
O'NEILL, NE VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	FORT DODGE, IA VORTAC	*18000	45000
95.4123 RNAV ROUTE Q123			
PARZZ, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	COKEE, MT WP	*24000	45000
95.4124 RNAV ROUTE Q124			
MOGEE, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	MACUS, NV WP	*18000	45000
MACUS, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	MCORD, NV WP	*28000	45000
MCORD, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	SLOWN, NV WP	*28000	45000
SLOWN, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	FASTE, NV WP	*28000	45000
FASTE, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	BONNEVILLE, UT VORTAC	*23000	45000
BONNEVILLE, UT VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	WAATS, UT FIX	*18000	45000

FROM	TO	MEA	MAA
95.4125 RNAV ROUTE Q125			
PARZZ, NV WP	WLLES, MT WP	*24000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
95.4126 RNAV ROUTE Q126			
TIPRE, CA WP	INSLO, NV WP	*21000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
INSLO, NV WP	GAROT, UT WP	*26000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
GAROT, UT WP	MEEKER, CO VOR/DME	*19000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
95.4128 RNAV ROUTE Q128			
SYRAH, CA WP	JSICA, NV WP	*27000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
JSICA, NV WP	TABLL, UT WP	*25000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
#			
TABLL, UT WP	EDLES, UT FIX	*25000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
EDLES, UT FIX	FLOOD, CO FIX	*24000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
FLOOD, CO FIX	ZAROS, CO WP	*22000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
ZAROS, CO WP	VEGUC, OK WP	*20000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
VEGUC, OK WP	VLUST, AR WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
VLUST, AR WP	ECIGE, AR WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
ECIGE, AR WP	MUDHO, MS WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			
MUDHO, MS WP	JILLS, AL WP	*18000	45000
*18000 - GNSS MEA			
*DME/DME/IRU MEA			

FROM	TO	MEA	MAA
95.4130 RNAV ROUTE Q130			
SYRAH, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	JSICA, NV WP	*27000	45000
JSICA, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	REANA, NV WP	*27000	45000
REANA, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	ROCCY, UT WP	*27000	45000
ROCCY, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	HASSL, UT WP	*27000	45000
HASSL, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	TAHIB, CO WP	*22000	45000
TAHIB, CO WP *18000 - GNSS MEA *DME/DME/IRU MEA	DIXAN, NM FIX	*22000	45000
DIXAN, NM FIX *18000 - GNSS MEA *DME/DME/IRU MEA	MIRME, NM WP	*22000	45000
MIRME, NM WP *18000 - GNSS MEA *DME/DME/IRU MEA	PANHANDLE, TX VORTAC	*18000	45000
95.4132 RNAV ROUTE Q132			
WEBGO, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ANAHO, NV FIX	*18000	45000
ANAHO, NV FIX *18000 - GNSS MEA *DME/DME/IRU MEA	MYBAD, NV WP	*18000	45000
MYBAD, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZERAM, NV WP	*18000	45000
ZERAM, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	MAGPY, NV WP	*26000	45000
95.4134 RNAV ROUTE Q134			
DUGLE, CA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	TATOO, NV WP	*20000	45000

FROM	TO	MEA	MAA
95.4134 RNAV ROUTE Q134 - CONTINUED			
TATOO, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	JULIK, UT FIX	*24000	45000
JULIK, UT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	HERSH, UT WP	*21000	45000
HERSH, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	VOAXA, CO FIX	*21000	45000
95.4135 RNAV ROUTE Q135			
JROSS, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	PELIE, SC WP	*18000	45000
PELIE, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	ELMSZ, SC WP	*18000	45000
ELMSZ, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	RAPZZ, NC WP	*18000	45000
95.4136 RNAV ROUTE Q136			
COALDALE, NV VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	RUMPS, NV WP	*24000	45000
RUMPS, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	KATTS, NV WP	*24000	45000
KATTS, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	WEEMN, UT WP	*26000	45000
WEEMN, UT WP *18000 - GNSS MEA *DME/DME/IRU MEA	VOAXA, CO FIX	*21000	45000
95.4138 RNAV ROUTE Q138			
WILLIAMS, CA VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	FIMUV, CA WP	*18000	45000
FIMUV, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	JENSA, NV WP	*22000	45000
JENSA, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	PUHGI, NV WP	*24000	45000

FROM	TO	MEA	MAA
95.4138 RNAV ROUTE Q138 – CONTINUED			
PUHGI, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	ROOHZ, NV WP	*24000	45000
ROOHZ, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	PARZZ, NV WP	*24000	45000
PARZZ, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	UROCO, WY WP	*24000	45000
UROCO, WY WP *18000 - GNSS MEA *DME/DME/IRU MEA	RICCO, WY WP	*24000	45000
RICCO, WY WP *18000 - GNSS MEA *DME/DME/IRU MEA	MOTLY, SD WP	*24000	45000
MOTLY, SD WP *18000 - GNSS MEA *DME/DME/IRU MEA	DKOTA, SD WP	*24000	45000
DKOTA, SD WP *18000 - GNSS MEA *DME/DME/IRU MEA	WELOK, MN WP	*20000	45000
WELOK, MN WP *18000 - GNSS MEA *DME/DME/IRU MEA	CESNA, WI WP	*20000	45000
CESNA, WI WP *18000 - GNSS MEA *DME/DME/IRU MEA	GUUME, WI WP	*20000	45000
GUUME, WI WP *18000 - GNSS MEA *DME/DME/IRU MEA	SNARG, WI WP	*20000	45000
SNARG, WI WP *18000 - GNSS MEA *DME/DME/IRU MEA	SAULT STE MARIE, MI VOR/DME	*20000	45000
95.4140 RNAV ROUTE Q140			
WOBED, WA WP *18000 - GNSS MEA *DME/DME/IRU MEA	GETNG, WA WP	*25000	45000
GETNG, WA WP *18000 - GNSS MEA *DME/DME/IRU MEA	CORDU, ID FIX	*25000	45000
CORDU, ID FIX *18000 - GNSS MEA *DME/DME/IRU MEA	PETIY, MT WP	*30000	45000

FROM	TO	MEA	MAA
95.4140 RNAV ROUTE Q140 – CONTINUED			
PETIY, MT WP *18000 - GNSS MEA *DME/DME/IRU MEA	CHOTE, MT FIX	*32000	45000
CHOTE, MT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	LEWIT, MT WP	*26000	45000
LEWIT, MT WP *18000 - GNSS MEA *DME/DME/IRU MEA	SAYOR, MT FIX	*24000	45000
SAYOR, MT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	WILTN, ND FIX	*18000	45000
WILTN, ND FIX *18000 - GNSS MEA *DME/DME/IRU MEA	TTAIL, MN WP	*18000	45000
TTAIL, MN WP *18000 - GNSS MEA *DME/DME/IRU MEA	CESNA, WI WP	*18000	45000
CESNA, WI WP *18000 - GNSS MEA *DME/DME/IRU MEA	WISCN, WI WP	*19000	45000
WISCN, WI WP *18000 - GNSS MEA *DME/DME/IRU MEA	EEGEE, WI WP	*18000	45000
EEGEE, WI WP *18000 - GNSS MEA *DME/DME/IRU MEA	DAYYY, MI WP	*18000	45000
DAYYY, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA #FOR THAT AIRSPACE OVER U.S. TERRITORY.	US CANADIAN BORDER	#*18000	45000
US CANADIAN BORDER *18000 - GNSS MEA *DME/DME/IRU MEA #	AHPAH, NY WP	*18000	45000
AHPAH, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	HANKK, NY FIX	*18000	45000
HANKK, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	BEEPS, NY FIX	*18000	45000
BEEPS, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	EXTOL, NY FIX	*18000	45000

FROM	TO	MEA	MAA
95.4140 RNAV ROUTE Q140 - CONTINUED			
EXTOL, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	MEMMS, NY FIX	*18000	45000
MEMMS, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	KODEY, NY FIX	*18000	45000
KODEY, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	ARKKK, NY WP	*18000	45000
ARKKK, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	RODYY, NY WP	*18000	45000
RODYY, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	YODAA, NY FIX	*18000	45000
95.4142 RNAV ROUTE Q142			
METOW, WA WP *18000 - GNSS MEA *DME/DME/IRU MEA	MULLAN PASS, ID VOR/DME	*26000	45000
MULLAN PASS, ID VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	KEETA, MT WP	*26000	45000
KEETA, MT WP *18000 - GNSS MEA *DME/DME/IRU MEA	OKVUJ, MT WP	*24000	45000
OKVUJ, MT WP *18000 - GNSS MEA *DME/DME/IRU MEA	KIXCO, MT FIX	*22000	45000
95.4144 RNAV ROUTE Q144			
ZIRAN, WA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZOOMR, WA FIX	*18000	45000
ZOOMR, WA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	BLOWS, MT WP	*21000	45000
BLOWS, MT WP *18000 - GNSS MEA *DME/DME/IRU MEA	KEETA, MT WP	*21000	45000
KEETA, MT WP *18000 - GNSS MEA *DME/DME/IRU MEA	LEWIT, MT WP	*21000	45000

FROM	TO	MEA	MAA
95.4145 RNAV ROUTE Q145			
KONGO, KY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	CHARLESTON, WV VOR/DME	*18000	45000
CHARLESTON, WV VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	CLNTN, OH WP	*18000	45000
CLNTN, OH WP *18000 - GNSS MEA *DME/DME/IRU MEA	FOXEE, PA WP	*18000	45000
95.4146 RNAV ROUTE Q146			
CASHS, WA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	BLUNT, WA FIX	*24000	45000
BLUNT, WA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	DIPHU, MT FIX	*24000	45000
DIPHU, MT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	CUSDA, MT FIX	*24000	45000
CUSDA, MT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	ZERZO, MT FIX	*24000	45000
ZERZO, MT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	KIXCO, MT FIX	*22000	45000
KIXCO, MT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	TIMMR, ND FIX	*20000	45000
TIMMR, ND FIX *18000 - GNSS MEA *DME/DME/IRU MEA	SMERF, SD WP	*20000	45000
SMERF, SD WP *18000 - GNSS MEA *DME/DME/IRU MEA	HUFFR, MN WP	*18000	45000
95.4148 RNAV ROUTE Q148			
STEVs, WA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZAXUL, WA FIX	*18000	45000
ZAXUL, WA FIX *18000 - GNSS MEA *DME/DME/IRU MEA #EPH, MWH, PDT, GEG, MLP, DNJ	FINUT, WA WP	*24000	45000

FROM	TO	MEA	MAA
95.4148 RNAV ROUTE Q148 – CONTINUED			
FINUT, WA WP *18000 - GNSS MEA *DME/DME/IRU MEA	WEDAK, MT FIX	*26000	45000
WEDAK, MT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	WAIDE, MT FIX	*26000	45000
WAIDE, MT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	JUGIV, WY WP	*26000	45000
JUGIV, WY WP *18000 - GNSS MEA *DME/DME/IRU MEA	MEDICINE BOW, WY VOR/DME	*26000	45000
MEDICINE BOW, WY VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	MOCTU, WY FIX	*26000	45000
MOCTU, WY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	LEWOY, CO WP	*26000	45000
LEWOY, CO WP *18000 - GNSS MEA *DME/DME/IRU MEA	CUGGA, KS FIX	*26000	45000
CUGGA, KS FIX *18000 - GNSS MEA *DME/DME/IRU MEA	PENUT, KS WP	*26000	45000
PENUT, KS WP *18000 - GNSS MEA *DME/DME/IRU MEA	KIRKE, KS FIX	*26000	45000
KIRKE, KS FIX *18000 - GNSS MEA *DME/DME/IRU MEA	MORRR, KS WP	*26000	45000
MORRR, KS WP *18000 - GNSS MEA *DME/DME/IRU MEA	BARTLESVILLE, OK VOR/DME	*26000	45000
95.4150 RNAV ROUTE Q150			
STEVs, WA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZAXUL, WA FIX	*18000	45000
ZAXUL, WA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	LEZLE, WA FIX	*24000	45000
LEZLE, WA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	BAXGO, ID FIX	*24000	45000

FROM	TO	MEA	MAA
95.4150 RNAV ROUTE Q150 – CONTINUED			
BAXGO, ID FIX *18000 - GNSS MEA *DME/DME/IRU MEA	LAMON, ID FIX	*24000	45000
LAMON, ID FIX *18000 - GNSS MEA *DME/DME/IRU MEA	GANNE, WY WP	*24000	45000
GANNE, WY WP *18000 - GNSS MEA *DME/DME/IRU MEA	OPPEE, WY WP	*24000	45000
95.4152 RNAV ROUTE Q152			
SUNED, WA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	LEZLE, WA FIX	*24000	45000
LEZLE, WA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	WEDAK, MT FIX	*24000	45000
WEDAK, MT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	IKFOM, WY WP	*24000	45000
IKFOM, WY WP *18000 - GNSS MEA *DME/DME/IRU MEA	WUVUT, WY FIX	*24000	45000
WUVUT, WY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	O'NEILL, NE VORTAC	*24000	45000
95.4154 RNAV ROUTE Q154			
WANTA, WA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	JELTI, OR FIX	*24000	45000
JELTI, OR FIX *18000 - GNSS MEA *DME/DME/IRU MEA	HOVEL, ID FIX	*24000	45000
HOVEL, ID FIX *18000 - GNSS MEA *DME/DME/IRU MEA	VELUY, ID WP	*24000	45000
VELUY, ID WP *18000 - GNSS MEA *DME/DME/IRU MEA	BURLEY, ID VOR/DME	*24000	45000
BURLEY, ID VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	PIMIE, UT FIX	*24000	45000

FROM	TO	MEA	MAA
95.4154 RNAV ROUTE Q154 - CONTINUED			
PIMIE, UT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	NAGNE, UT FIX	*24000	45000
NAGNE, UT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	BONGO, UT FIX	*24000	45000
BONGO, UT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	PITMN, CO FIX	*24000	45000
PITMN, CO FIX *18000 - GNSS MEA *DME/DME/IRU MEA	TAYLR, CO FIX	*24000	45000
TAYLR, CO FIX *18000 - GNSS MEA *DME/DME/IRU MEA	GOSIP, CO FIX	*24000	45000
GOSIP, CO FIX *18000 - GNSS MEA *DME/DME/IRU MEA	KENTO, NM FIX	*24000	45000
KENTO, NM FIX *18000 - GNSS MEA *DME/DME/IRU MEA	NOSEW, TX WP	*24000	45000
NOSEW, TX WP *18000 - GNSS MEA *DME/DME/IRU MEA	BOWIE, TX VORTAC	*24000	45000
95.4156 RNAV ROUTE Q156			
STEVs, WA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZAXUL, WA FIX	*18000	45000
ZAXUL, WA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	FINUT, WA WP	*24000	45000
FINUT, WA WP *18000 - GNSS MEA *DME/DME/IRU MEA	TUFFY, MT FIX	*24000	45000
TUFFY, MT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	UPUGE, MT FIX	*24000	45000
UPUGE, MT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	HEXOL, MT FIX	*24000	45000
HEXOL, MT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	TOUGH, MT WP	*24000	45000

FROM	TO	MEA	MAA
95.4156 RNAV ROUTE Q156 - CONTINUED			
TOUGH, MT WP *18000 - GNSS MEA *DME/DME/IRU MEA	JELRO, SD FIX	*24000	45000
JELRO, SD FIX *18000 - GNSS MEA *DME/DME/IRU MEA	KEKPE, SD WP	*24000	45000
KEKPE, SD WP *18000 - GNSS MEA *DME/DME/IRU MEA	UFFDA, MN WP	*24000	45000
UFFDA, MN WP *18000 - GNSS MEA *DME/DME/IRU MEA	HSTIN, MN WP	*24000	45000
HSTIN, MN WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZZIPR, IA WP	*18000	45000
95.4158 RNAV ROUTE Q158			
NTELL, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	PPARK, CA WP	*24000	45000
PPARK, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	TRTIS, CA WP	*24000	45000
TRTIS, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	BIKKR, CA WP	*24000	45000
BIKKR, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	MYCAL, NV FIX	*24000	45000
MYCAL, NV FIX *18000 - GNSS MEA *DME/DME/IRU MEA	JEDNA, NV WP	*24000	45000
95.4160 RNAV ROUTE Q160			
SHVVR, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	FAANG, CA FIX	*36000	45000
FAANG, CA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	RIVVO, CA WP	*36000	45000
RIVVO, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	BIKKR, CA WP	*25000	45000

FROM	TO	MEA	MAA
95.4162 RNAV ROUTE Q162			
NTELL, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	CABAB, CA WP	*26000	45000
CABAB, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	VIKSN, CA WP	*28000	45000
VIKSN, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	KENNO, NV WP	*28000	45000
KENNO, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	ESSAA, NV WP	*28000	45000
ESSAA, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	TUMBE, NV WP	*28000	45000
TUMBE, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	MYCAL, NV FIX	*28000	45000
95.4164 RNAV ROUTE Q164			
NTELL, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	CABAB, CA WP	*26000	45000
CABAB, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	KICHI, NV WP	*26000	45000
KICHI, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	KATTS, NV WP	*26000	45000
KATTS, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	KITTN, NV WP	*27000	45000
KITTN, NV WP *18000 - GNSS MEA *DME/DME/IRU MEA	ROCCY, UT WP	*27000	45000
95.4166 RNAV ROUTE Q166			
VIKSN, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	UHILL, CA WP	*23000	45000
UHILL, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA #BTY, OAL, PMD, TPH	BIKKR, CA WP	*23000	45000

FROM	TO	MEA	MAA
95.4168 RNAV ROUTE Q168			
FNNDA, CA WP *18000 - GNSS MEA *DME/DME/IRU MEA	SHIVA, AZ WP	*21000	45000
SHIVA, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	KRINA, AZ WP	*21000	45000
KRINA, AZ WP *18000 - GNSS MEA *DME/DME/IRU MEA	JASSE, AZ WP	*21000	45000
95.4172 RNAV ROUTE Q172			
YUTEE, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	BWAGS, SC WP	*18000	45000
BWAGS, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	HINTZ, SC WP	*18000	45000
HINTZ, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	CEELY, SC WP	*18000	45000
CEELY, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	OKNEE, SC WP	*18000	45000
OKNEE, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	KAATT, NC WP	*18000	45000
KAATT, NC WP *18000 - GNSS MEA *DME/DME/IRU MEA	RAPZZ, NC WP	*18000	45000
95.4406 RNAV ROUTE Q406			
BROADWAY, NJ VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	DBABE, NY WP	*18000	45000
DBABE, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	BASYE, NY FIX	*18000	45000
BASYE, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	TRIBS, CT WP	*18000	45000
TRIBS, CT WP *18000 - GNSS MEA *DME/DME/IRU MEA	BIGGO, CT FIX	*18000	45000

FROM	TO	MEA	MAA
95.4140 RNAV ROUTE Q406 - CONTINUED			
BIGGO, CT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	BARNES, MA VORTAC	*18000	45000
95.4409 RNAV ROUTE Q409			
ENEME, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	PUPYY, GA WP	*18000	45000
PUPYY, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ISUZO, GA WP	*18000	45000
ISUZO, GA WP *18000 - GNSS MEA *DME/DME/IRU MEA	KONEY, SC WP	*18000	45000
KONEY, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	JROSS, SC WP	*18000	45000
JROSS, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	SESUE, SC WP	*18000	45000
SESUE, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	OKNEE, SC WP	*18000	45000
OKNEE, SC WP *18000 - GNSS MEA *DME/DME/IRU MEA	MRPIT, NC WP	*18000	45000
95.4436 RNAV ROUTE Q436			
EMMMA, MI FIX *18000 - GNSS MEA *DME/DME/IRU MEA	DIXSN, MI WP	*18000	45000
DIXSN, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	BOOTT, MI WP	*18000	45000
BOOTT, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	RRONS, MI WP	*18000	45000
RRONS, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	YARRK, CANADA WP	*18000	45000

FROM	TO	MEA	MAA
95.4140 RNAV ROUTE Q436 - CONTINUED			
YARRK, CANADA WP *18000 - GNSS MEA *DME/DME/IRU MEA	CHAAP, CANADA WP	*18000	45000
CHAAP, CANADA WP *18000 - GNSS MEA *DME/DME/IRU MEA	RAAKK, NY WP	*18000	45000
RAAKK, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	HERBA, NY WP	*18000	45000
HERBA, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	REXXY, NY WP	*18000	45000
REXXY, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	REBBL, PA FIX	*18000	45000
REBBL, PA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	MTCAF, PA WP	*18000	45000
MTCAF, PA WP *18000 - GNSS MEA *DME/DME/IRU MEA	DGRAF, PA FIX	*18000	45000
DGRAF, PA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	YYOST, PA WP	*18000	45000
YYOST, PA WP *18000 - GNSS MEA *DME/DME/IRU MEA	LAAYK, PA FIX	*18000	45000
LAAYK, PA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	COATE, NJ FIX	*18000	45000
95.4438 RNAV ROUTE Q438			
RUBY, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	BERYS, MI WP	*18000	45000
BERYS, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	TWIGS, MI WP	*18000	45000
TWIGS, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	JAAJA, CANADA WP	*18000	45000

FROM	TO	MEA	MAA
95.4438 RNAV ROUTE Q438 - CONTINUED			
JAAJA, CANADA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ICHOL, CANADA WP	*18000	45000
ICHOL, CANADA WP *18000 - GNSS MEA *DME/DME/IRU MEA	FARGN, CANADA WP	*18000	45000
FARGN, CANADA WP *18000 - GNSS MEA *DME/DME/IRU MEA	RAAKK, NY WP	*18000	45000
95.4440 RNAV ROUTE Q440			
HUFFR, MN WP *18000 - GNSS MEA *DME/DME/IRU MEA	IDIOM, WI WP	*18000	45000
IDIOM, WI WP *18000 - GNSS MEA *DME/DME/IRU MEA	DEANI, MI FIX	*18000	45000
DEANI, MI FIX *18000 - GNSS MEA *DME/DME/IRU MEA	SLLAP, MI WP	*18000	45000
SLLAP, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	BERYS, MI WP	*18000	45000
BERYS, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	TWIGS, MI WP	*18000	45000
TWIGS, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	JAAJA, CANADA WP	*18000	45000
JAAJA, CANADA WP *18000 - GNSS MEA *DME/DME/IRU MEA	ICHOL, CANADA WP	*18000	45000
ICHOL, CANADA WP *18000 - GNSS MEA *DME/DME/IRU MEA	FARGN, CANADA WP	*18000	45000
FARGN, CANADA WP *18000 - GNSS MEA *DME/DME/IRU MEA	RAAKK, NY WP	*18000	45000
95.4448 RNAV ROUTE Q448			
POTTSTOWN, PA VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	LANNA, NJ FIX	*18000	45000

FROM	TO	MEA	MAA
95.4448 RNAV ROUTE Q448 – CONTINUED			
LANNA, NJ FIX *18000 - GNSS MEA *DME/DME/IRU MEA	DBABE, NY WP	*18000	45000
DBABE, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	BASYE, NY FIX	*18000	45000
BASYE, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	TRIBS, CT WP	*18000	45000
TRIBS, CT WP *18000 - GNSS MEA *DME/DME/IRU MEA	BIGGO, CT FIX	*18000	45000
BIGGO, CT FIX *18000 - GNSS MEA *DME/DME/IRU MEA	BARNES, MA VORTAC	*18000	45000
95.4480 RNAV ROUTE Q480			
ZANDR, OH FIX *18000 - GNSS MEA *DME/DME/IRU MEA	BELLAIRE, OH VOR/DME	*18000	45000
BELLAIRE, OH VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	LEJOY, PA FIX	*18000	45000
LEJOY, PA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	VINSE, PA FIX	*18000	45000
VINSE, PA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	BEETS, PA FIX	*18000	45000
BEETS, PA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	HOTEE, PA WP	*18000	45000
HOTEE, PA WP *18000 - GNSS MEA *DME/DME/IRU MEA	MIKYG, PA WP	*18000	45000
MIKYG, PA WP *18000 - GNSS MEA *DME/DME/IRU MEA	SPOTZ, PA WP	*18000	45000

FROM	TO	MEA	MAA
95.4480 RNAV ROUTE Q480 - CONTINUED			
SPOTZ, PA WP *18000 - GNSS MEA *DME/DME/IRU MEA	CANDR, NJ FIX	*18000	45000
CANDR, NJ FIX *18000 - GNSS MEA *DME/DME/IRU MEA	JEFFF, NJ FIX	*18000	45000
JEFFF, NJ FIX *18000 - GNSS MEA *DME/DME/IRU MEA	KINGSTON, NY VOR/DME	*18000	45000
KINGSTON, NY VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	LESWL, CT WP	*18000	45000
LESWL, CT WP *18000 - GNSS MEA *DME/DME/IRU MEA	BARNES, MA VORTAC	*18000	45000
BARNES, MA VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	KENNEBUNK, ME VOR/DME	*18000	45000
95.4806 RNAV ROUTE Q806			
U.S. CANADIAN BORDER *18000 - GNSS MEA *DME/DME/IRU MEA	MILLINOCKET, ME VOR/DME	*18000	45000
MILLINOCKET, ME VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	CANME, ME WP	*18000	45000
CANME, ME WP *18000 - GNSS MEA *DME/DME/IRU MEA	U.S. CANADIAN BORDER	*18000	45000
95.4812 RNAV ROUTE Q812			
TIMMR, ND FIX *18000 - GNSS MEA *DME/DME/IRU MEA	WELOK, MN WP	*20000	45000
WELOK, MN WP *18000 - GNSS MEA *DME/DME/IRU MEA	CEWDA, WI WP	*20000	45000
CEWDA, WI WP *18000 - GNSS MEA *DME/DME/IRU MEA	ZOHAN, MI WP	*20000	45000
ZOHAN, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	U.S. CANADIAN BORDER	*20000	45000

FROM	TO	MEA	MAA
95.4812 RNAV ROUTE Q812 - CONTINUED			
U.S. CANADIAN BORDER *18000 - GNSS MEA *DME/DME/IRU MEA	KELTI, NY WP	*20000	45000
KELTI, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	AHPAH, NY WP	*20000	45000
AHPAH, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	GOATR, NY WP	*20000	45000
GOATR, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	SYRACUSE, NY VORTAC	*18000	45000
SYRACUSE, NY VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	FABEN, NY WP	*18000	45000
FABEN, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	LOXXE, NY FIX	*18000	45000
LOXXE, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	ARKKK, NY WP	*18000	45000
ARKKK, NY WP *18000 - GNSS MEA	STOMP, NY FIX	*18000	45000
STOMP, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	MSLIN, NY FIX	*18000	45000
MSLIN, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	GAYEL, NY FIX	*18000	45000
95.4816 RNAV ROUTE Q816			
HOCKE, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	US CANADIAN BORDER	*18000	45000
US CANADIAN BORDER *18000 - GNSS MEA *DME/DME/IRU MEA	KELTI, NY WP	*18000	45000
KELTI, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	AHPAH, NY WP	*18000	45000
AHPAH, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	GOATR, NY WP	*18000	45000

FROM	TO	MEA	MAA
95.4816 RNAV ROUTE Q816 – CONTINUED			
GOATR, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	ARNII, NY FIX	*18000	45000
ARNII, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	HANAA, NY WP	*18000	45000
95.4818 RNAV ROUTE Q818			
FLINT, MI VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	U.S. CANADIAN BORDER	*18000	45000
US CANADIAN BORDER *18000 - GNSS MEA *DME/DME/IRU MEA	WOZEE, NY WP	*18000	45000
WOZEE, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	KELIE, NY FIX	*18000	45000
KELIE, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	VIEEW, NY FIX	*18000	45000
VIEEW, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	BINGHAMTON, NY VOR/DME	*18000	45000
BINGHAMTON, NY VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	BUFFY, PA FIX	*18000	45000
BUFFY, PA FIX *18000 - GNSS MEA *DME/DME/IRU MEA	STOMP, NY FIX	*18000	45000
STOMP, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	MSLIN, NY FIX	*18000	45000
MSLIN, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	GAYEL, NY FIX	*18000	45000
95.4822 RNAV ROUTE Q822			
FLINT, MI VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	U.S. CANADIAN BORDER	*18000	45000
U.S. CANADIAN BORDER *18000 - GNSS MEA *DME/DME/IRU MEA	HOZIR, NY WP	*18000	45000

FROM	TO	MEA	MAA
95.4822 RNAV ROUTE Q822 - CONTINUED			
HOZIR, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	GONZZ, NY WP	*18000	45000
GONZZ, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	PUPPY, NY WP	*18000	45000
PUPPY, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	PAYGE, NY FIX	*18000	45000
PAYGE, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	CAMBRIDGE, NY VOR/DME	*18000	45000
CAMBRIDGE, NY VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	KENNEBUNK, ME VOR/DME	*18000	45000
KENNEBUNK, ME VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	AJJAY, ME WP	*18000	45000
AJJAY, ME WP *18000 - GNSS MEA *DME/DME/IRU MEA	ALLEX, OA FIX	*18000	45000
95.4824 RNAV ROUTE Q824			
FLINT, MI VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	HOCKE, MI WP	*18000	45000
HOCKE, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA #ASP, CRL, DXO, FNT	US CANADIAN BORDER	*18000	45000
95.4842 RNAV ROUTE Q842			
BEALE, NV FIX *GNSS REQUIRED	BLIPP, NV WP	*18000	45000
BLIPP, NV WP *GNSS REQUIRED	WINEN, UT WP	*18000	45000
WINEN, UT WP *GNSS REQUIRED	TABLL, UT WP	*18000	45000
TABLL, UT WP *GNSS REQUIRED	PICHO, UT WP	*18000	45000
PICHO, UT WP *GNSS REQUIRED	PATIO, UT WP	*18000	45000
PATIO, UT WP *GNSS REQUIRED	PROXI, UT WP	*18000	45000
PROXI, UT WP *GNSS REQUIRED	VAANE, MT WP	*18000	45000

FROM	TO	MEA	MAA
95.4842 RNAV ROUTE Q842 – CONTINUED			
VAANE, MT WP *GNSS REQUIRED	KEETA, MT WP	*18000	45000
KEETA, MT WP *GNSS REQUIRED	US CANADIAN BORDER	*18000	45000
95.4844 RNAV ROUTE Q844			
SYRACUSE, NY VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	US CANADIAN BORDER	*18000	45000
95.4848 RNAV ROUTE Q848			
SLLAP, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	HHIPP, MI WP	*18000	45000
HHIPP, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	KARIT, MI WP	*18000	45000
KARIT, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	U.S. CANADIAN BORDER	*18000	45000
95.4905 RNAV ROUTE Q905			
HOCKE, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	U.S. CANADIAN BORDER	*18000	45000
95.4907 RNAV ROUTE Q907			
POSTS, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	PADDE, MI WP	*18000	45000
PADDE, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	SALEM, MI VORTAC	*18000	45000
SALEM, MI VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	US CANADIAN BORDER	*18000	45000
US CANADIAN BORDER *18000 - GNSS MEA *DME/DME/IRU MEA *GNSS REQUIRED	US CANADIAN BORDER	#*18000	45000

FROM	TO	MEA	MAA
95.4913 RNAV ROUTE Q913			
U.S. CANADIAN BORDER *18000 - GNSS MEA *DME/DME/IRU MEA	CABCI, VT WP	*18000	45000
CABCI, VT WP *18000 - GNSS MEA *DME/DME/IRU MEA	TOPPS, ME FIX	*18000	45000
95.4917 RNAV ROUTE Q917			
SAULT STE MARIE, MI VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA	U.S. CANADIAN BORDER	*18000	45000
U.S. CANADIAN BORDER *18000 - GNSS MEA *DME/DME/IRU MEA	HOZIR, NY WP	*18000	45000
HOZIR, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	WOZEE, NY WP	*18000	45000
95.4923 RNAV ROUTE Q923			
HOCKE, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	KARIT, MI WP	*18000	45000
KARIT, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	US CANADIAN BORDER	*18000	45000
95.4935 RNAV ROUTE Q935			
MONEE, MI FIX *18000 - GNSS MEA *DME/DME/IRU MEA	HOCKE, MI WP	*18000	45000
HOCKE, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	U.S. CANADIAN BORDER	*18000	45000
U.S. CANADIAN BORDER *18000 - GNSS MEA *DME/DME/IRU MEA	WOZEE, NY WP	*18000	45000
WOZEE, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	HANKK, NY FIX	*18000	45000
HANKK, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	JOSSY, NY WP	*18000	45000

FROM	TO	MEA	MAA
95.4935 RNAV ROUTE Q935 - CONTINUED			
JOSSY, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	AUDIL, NY FIX	*18000	45000
AUDIL, NY FIX *18000 - GNSS MEA *DME/DME/IRU MEA	FABEN, NY WP	*18000	45000
FABEN, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	PONCT, NY WP	*18000	45000
PONCT, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	GARDNER, MA VOR/DME	*18000	45000
GARDNER, MA VOR/DME *18000 - GNSS MEA *DME/DME/IRU MEA #FOR THAT AIRSPACE OVER U.S. TERRITORY.	BOSTON, MA VOR/DME	#*18000	45000
95.4937 RNAV ROUTE Q937			
U.S. CANADIAN BORDER *18000 - GNSS MEA *DME/DME/IRU MEA	WAYGO, NY WP	*18000	45000
WAYGO, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	KRAZZ, NY WP	*18000	45000
95.4947 RNAV ROUTE Q947			
US CANADIAN BORDER *18000 - GNSS MEA *DME/DME/IRU MEA	REVEN, CANADA WP	*18000	45000
REVEN, CANADA WP *18000 - GNSS MEA *DME/DME/IRU MEA	TOPPS, ME FIX	*18000	45000
TOPPS, ME FIX *18000 - GNSS MEA *DME/DME/IRU MEA	CUZWA, ME WP	*18000	45000
CUZWA, ME WP *18000 - GNSS MEA *DME/DME/IRU MEA	US CANADIAN BORDER	*18000	45000

FROM	TO	MEA	MAA
95.4951 RNAV ROUTE Q951			
POSTS, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	PADDE, MI WP	*18000	45000
PADDE, MI WP *18000 - GNSS MEA *DME/DME/IRU MEA	SALEM, MI VORTAC	*18000	45000
SALEM, MI VORTAC *18000 - GNSS MEA *DME/DME/IRU MEA	U.S. CANADIAN BORDER	*18000	45000
U.S. CANADIAN BORDER *18000 - GNSS MEA *DME/DME/IRU MEA	DAVDA, NY WP	*18000	45000
DAVDA, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	SAVAL, NY WP	*18000	45000
SAVAL, NY WP *18000 - GNSS MEA *DME/DME/IRU MEA	TALNO, CANADA WP	*18000	45000
TALNO, CANADA WP *18000 - GNSS MEA *DME/DME/IRU MEA #FOR THAT AIRSPACE OVER U.S. TERRITORY.	U.S. CANADIAN BORDER	#*18000	45000

§95.5000 GROUND-BASED HIGH ALTITUDE RNAV ROUTES

FROM/TO	TOTAL DISTANCE	CHANGEOVER DISTANCE	POINT FROM	TRACK ANGLE	MEA	MAA
J804R						
ANCHORAGE, AK VOR/DME	60.0				18000	45000
NOWEL, AK RP				133/314 TO NOWEL		
NOWEL, AK RP	90.5				18000	45000
MIDDLETON ISLAND, AK VOR/DME				134/316 TO MIDDLETON ISLAND		
MIDDLETON ISLAND, AK VOR/DME	170.9	121	MIDDLETON ISLAND	095/275 TO COP	24000	45000
SNOUT, AK RP				120/300 TO SNOUT		
SNOUT, AK RP	196.9	197	SNOUT	096/276 TO COP	24000	45000
EEDEN, AK RP				125/305 TO EEDEN		
EEDEN, AK RP	153.9	112	EEDEN	102/282 TO COP	24000	45000
FRIED, AK RP				129/309 TO FRIED		
J889R						
NOWEL, AK RP	75.0	10	NOWEL	112/294 TO COP	18000	45000
ARISE, AK RP				112/294 TO ARISE		
ARISE, AK RP	71.0			112/293 TO KONKS	18000	45000
KONKS, AK WP				293/113 TO KONKS		
KONKS, AK WP	116.0	40	KONKS	111/294 TO COP	18000	45000
LAIRE, AK RP				294/114 TO LAIRE		

FROM	TO	MEA
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§95.6001 VOR FEDERAL AIRWAYS

95.6001 VOR FEDERAL AIRWAY V1

CRAIG, FL VORTAC *2100 - MOCA	STARY, GA FIX	*4000
STARY, GA FIX *1200 - MOCA	RUBYS, SC FIX	*11000
RUBYS, SC FIX *3000 - MRA **2300 - MOCA	*BASSO, SC FIX	**11000
BASSO, SC FIX	CHARLESTON, SC VORTAC	2000
CHARLESTON, SC VORTAC	KIMMY, SC FIX	2000
KIMMY, SC FIX	GRAND STRAND, SC VORTAC	2100
GRAND STRAND, SC VORTAC	ASHES, NC FIX	2000
ASHES, NC FIX *2100 - MOCA	YOAST, NC FIX	*5000
YOAST, NC FIX *1600 - MOCA	WALLO, NC FIX	*7000
WALLO, NC FIX	KINSTON, NC VORTAC	
	NE BND	2000
	SW BND	7000
KINSTON, NC VORTAC *7000 - MRA	*ZAGGY, NC FIX	2000
ZAGGY, NC FIX *1500 - MOCA	COFIELD, NC VORTAC	*3000
COFIELD, NC VORTAC	DRONE, NC FIX	2000
DRONE, NC FIX *1600 - MOCA	NORFOLK, VA VORTAC	*2500
NORFOLK, VA VORTAC *1800 - MOCA	CAPE CHARLES, VA VORTAC	*2500
CAPE CHARLES, VA VORTAC	SALISBURY, MD VORTAC	2000
SALISBURY, MD VORTAC *1500 - MOCA	WATERLOO, DE VOR/DME	#*2000
#SALISBURY R-039 UNUSABLE BELOW 5000 MSL		
WATERLOO, DE VOR/DME	COYLE, NJ VORTAC	1800
COYLE, NJ VORTAC *1600 - MOCA	DIXIE, NJ FIX	*2500
DIXIE, NJ FIX *1600 - MOCA	KENNEDY, NY VOR/DME	*2500
KENNEDY, NY VOR/DME	DEER PARK, NY VOR/DME	1800
DEER PARK, NY VOR/DME	MADISON, CT VOR/DME	2000
MADISON, CT VOR/DME	HARTFORD, CT VOR/DME	2500
HARTFORD, CT VOR/DME	DVANY, CT FIX	3000
DVANY, CT FIX *2500 - MOCA	GRAYM, MA FIX	*4000
GRAYM, MA FIX *2500 - MOCA *3000 - GNSS MEA	BOSTON, MA VOR/DME	*4000

95.6002 VOR FEDERAL AIRWAY V2

*SEATTLE, WA VORTAC	VAMPS, WA FIX	
	E BND	**8400
	W BND	**4000
*4300 - MCA SEATTLE, WA VORTAC, E BND		
**3100 - MOCA		
**5300 - GNSS MEA		

FROM	TO	MEA
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95.6002 VOR FEDERAL AIRWAY V2 – CONTINUED

VAMPS, WA FIX	BANDR, WA FIX	
	E BND	*8400
	W BND	*7700
*7700 - GNSS MEA		
BANDR, WA FIX	*BEEZR, WA FIX	8400
*9000 - MRA		
BEEZR, WA FIX	ELLENSBURG, WA VOR/DME	*8000
*7200 - MOCA		
ELLENSBURG, WA VOR/DME	PLUSS, WA FIX	7000
PLUSS, WA FIX	MOSES LAKE, WA VOR/DME	4000
MOSES LAKE, WA VOR/DME	BATUM, WA FIX	4000
BATUM, WA FIX	SUBDY, WA FIX	5000
SUBDY, WA FIX	*SPOKANE, WA VORTAC	5000
*5200 - MCA SPOKANE, WA VORTAC, E BND		
SPOKANE, WA VORTAC	ROPES, WA FIX	7100
ROPES, WA FIX	MULLAN PASS, ID VOR/DME	9100
MULLAN PASS, ID VOR/DME	ALTON, MT FIX	9600
ALTON, MT FIX	MISSOULA, MT VOR/DME	
	SE BND	*9000
	NW BND	*9600
*8500 - MOCA		
MISSOULA, MT VOR/DME	HELENA, MT VORTAC	*13000
*10300 - MOCA		
HELENA, MT VORTAC	SWEDD, MT FIX	10000
SWEDD, MT FIX	CONNS, MT FIX	10800
CONNS, MT FIX	LIVINGSTON, MT VOR/DME	10000
LIVINGSTON, MT VOR/DME	REEPO, MT FIX	9700
REEPO, MT FIX	COLUS, MT FIX	
	W BND	9700
	E BND	7000
COLUS, MT FIX	BILLINGS, MT VORTAC	
	W BND	9700
	E BND	6400
BILLINGS, MT VORTAC	MILES CITY, MT VOR/DME	6000
MILES CITY, MT VOR/DME	DICKINSON, ND VORTAC	6000
DICKINSON, ND VORTAC	BISMARCK, ND VOR/DME	4600
BISMARCK, ND VOR/DME	JAMESTOWN, ND VOR/DME	4000
JAMESTOWN, ND VOR/DME	*CHAFE, ND FIX	3300
*6000 - MRA		
CHAFE, ND FIX	FARGO, ND VOR/DME	
	W BND	3300
	E BND	2700
FARGO, ND VOR/DME	ALEXANDRIA, MN VOR/DME	*3500
*3000 - MOCA		
ALEXANDRIA, MN VOR/DME	GOPHER, MN VORTAC	3400
GOPHER, MN VORTAC	PEGGS, MN FIX	3400
PEGGS, MN FIX	NODINE, MN VORTAC	3000
NODINE, MN VORTAC	WEBYE, WI FIX	3100
BUFFALO, NY VOR/DME	ROCHESTER, NY VOR/DME	#2800
#BUFFALO R-083 UNUSABLE BELOW 11000 USE ROCHESTER R-268		
ROCHESTER, NY VOR/DME	MAGEN, NY FIX	2300
MAGEN, NY FIX	*KONDO, NY FIX	2300
*4800 - MRA		
KONDO, NY FIX	*WIFFY, NY FIX	2300
*3000 - MRA		
WIFFY, NY FIX	SYRACUSE, NY VORTAC	2300
SYRACUSE, NY VORTAC	STODA, NY FIX	2400
STODA, NY FIX	VASTS, NY FIX	3000
VASTS, NY FIX	UTICA, NY VORTAC	3400
UTICA, NY VORTAC	MARIA, NY FIX	3500
MARIA, NY FIX	ALBANY, NY VORTAC	3000
ALBANY, NY VORTAC	WARIC, MA FIX	5000
WARIC, MA FIX	GARDNER, MA VOR/DME	*4000
*3500 - MOCA		

FROM	TO	MEA
95.6003 VOR FEDERAL AIRWAY V3		
KEY WEST, FL VORTAC *14500 - MCA BIPIN, FL FIX , W BND #GNSS MEA KEY WEST R-082 UNUSABLE	*BIPIN, FL FIX	#15000
BIPIN, FL FIX #GNSS MEA	DROWN, FL FIX	#3000
DROWN, FL FIX MNATE, FL FIX *2800 - MOCA	MNATE, FL FIX DOLPHIN, FL VORTAC	5000 *5000
DOLPHIN, FL VORTAC FORT LAUDERDALE, FL VOR/DME PALM BEACH, FL VORTAC *2100 - MOCA	FORT LAUDERDALE, FL VOR/DME PALM BEACH, FL VORTAC TREASURE, FL VORTAC	2100 2000 *3000
TREASURE, FL VORTAC MELBOURNE, FL VOR/DME MALET, FL FIX *1600 - MOCA	MELBOURNE, FL VOR/DME MALET, FL FIX ORMOND BEACH, FL VORTAC	2000 2000 *4000
ORMOND BEACH, FL VORTAC *3000 - MRA **1400 - MOCA	*SEBAG, FL FIX	**2000
SEBAG, FL FIX *1400 - MOCA	BRUNSWICK, GA VORTAC	*2000
BRUNSWICK, GA VORTAC *11000 - MRA **2200 - MOCA	*BROUN, GA FIX	**3000
BROUN, GA FIX *3800 - MRA **2200 - MOCA	*HARPS, GA FIX	**3000
HARPS, GA FIX *2200 - MOCA	KELER, GA FIX	*3000
KELER, GA FIX *1900 - MOCA	SAVANNAH, GA VORTAC	*3000
SAVANNAH, GA VORTAC *1500 - MOCA	OWENS, SC FIX	*3000
OWENS, SC FIX VANCE, SC VORTAC *2000 - GNSS MEA #VANCE R-047 TO COP UNUSABLE BLO FL180 EXCEPT FOR AIRCRAFT EQUIPPED WITH SUITABLE RNAV.	VANCE, SC VORTAC FLORENCE, SC VORTAC	2000 #*2000
FLORENCE, SC VORTAC TOWEY, SC FIX *1900 - MOCA	TOWEY, SC FIX SANDHILLS, NC VORTAC	2000 *8000
SANDHILLS, NC VORTAC RALEIGH/DURHAM, NC VORTAC HARVY, VA FIX *9000 - MRA **4000 - GNSS MEA	RALEIGH/DURHAM, NC VORTAC HARVY, VA FIX *NUTTS, VA FIX	2500 3000 **6000
NUTTS, VA FIX *4000 - GNSS MEA	FLAT ROCK, VA VORTAC	*6000
FLAT ROCK, VA VORTAC GORDONSVILLE, VA VORTAC LURAY, VA FIX *7000 - MRA **5000 - MOCA	GORDONSVILLE, VA VORTAC LURAY, VA FIX *KERRE, VA FIX	2500 6100 **6000
KERRE, VA FIX *5000 - MOCA	MARTINSBURG, WV VORTAC	*6000
MARTINSBURG, WV VORTAC *3300 - MOCA	WESTMINSTER, MD VORTAC	*4000
WESTMINSTER, MD VORTAC VINNY, PA FIX MODENA, PA VORTAC *5000 - MRA	VINNY, PA FIX MODENA, PA VORTAC *MAZIE, PA FIX	3000 3500 3000

FROM	TO	MEA
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95.6003 VOR FEDERAL AIRWAY V3 - CONTINUED

MAZIE, PA FIX *5000 - MRA	*HARRS, PA FIX	2500
HARRS, PA FIX *5000 - MRA	*BIGGY, NJ FIX	2500
BIGGY, NJ FIX	SOLBERG, NJ VOR/DME	2500
SOLBERG, NJ VOR/DME *2500 - MOCA	CARMEL, NY VOR/DME	*3000
CARMEL, NY VOR/DME	RACEY, CT FIX	2100
RACEY, CT FIX	HARTFORD, CT VOR/DME	3000
HARTFORD, CT VOR/DME *2100 - MOCA	JEWIT, CT FIX	*2600
JEWIT, CT FIX	WOONS, RI FIX	2500
WOONS, RI FIX	BOSTON, MA VOR/DME	2000
BOSTON, MA VOR/DME	PEASE, NH VOR/DME	3000
PEASE, NH VOR/DME *5500 - MRA **2400 - MOCA	*YUKES, NH FIX	**3500
YUKES, NH FIX *2400 - MOCA	PARSO, ME FIX	*3500
PARSO, ME FIX	AUGUSTA, ME VOR/DME	3500
AUGUSTA, ME VOR/DME	BANGOR, ME VORTAC	3000
BANGOR, ME VORTAC *2300 - MOCA	HOULTON, ME VOR/DME	*2800
HOULTON, ME VOR/DME *2700 - MOCA	PRESQUE ISLE, ME VOR/DME	*3400
PRESQUE ISLE, ME VOR/DME *3500 - MOCA	U.S. CANADIAN BORDER	*6000

95.6004 VOR FEDERAL AIRWAY V4

TATOOSH, WA VORTAC #MTA V495 SE TO V4 W 8000	JAWBN, WA FIX	#5800
JAWBN, WA FIX *4300 - MOCA	LOFAL, WA FIX	*5400
LOFAL, WA FIX *6200 - MCA SEATTLE, WA VORTAC, E BND **2800 - MOCA	*SEATTLE, WA VORTAC	**4000
SEATTLE, WA VORTAC	BLAKO, WA FIX E BND W BND	*10000 *4000
*3100 - MOCA	HUMPP, WA FIX E BND W BND	*10000 *6600
BLAKO, WA FIX	CHINS, WA FIX	*10000
*6600 - MOCA	TITON, WA FIX E BND W BND	*7000 *10000
HUMPP, WA FIX *9000 - MOCA	GLEED, WA FIX W BND E BND	*7000 *5500
CHINS, WA FIX	YAKIMA, WA VORTAC E BND W BND	5000 5500
*7000 - MOCA	AMPLE, WA FIX	5000
TITON, WA FIX	PENDLETON, OR VORTAC	4000
*5000 - MOCA		
GLEED, WA FIX		
YAKIMA, WA VORTAC		
AMPLE, WA FIX		

FROM	TO	MEA
95.6004 VOR FEDERAL AIRWAY V4 - CONTINUED		
PENDLETON, OR VORTAC	PIANO, OR FIX SE BND NW BND	7000 6000
PIANO, OR FIX	LACED, OR FIX NW BND SE BND	7000 10000
LACED, OR FIX BAKER CITY, OR VOR/DME PAYET, ID FIX	BAKER CITY, OR VOR/DME PAYET, ID FIX *EMETT, ID FIX SE BND NW BND	10000 9000 5600 9000
*9400 - MRA EMETT, ID FIX BOISE, ID VORTAC CANEK, ID FIX *8500 - MOCA ALKAL, ID FIX	BOISE, ID VORTAC CANEK, ID FIX ALKAL, ID FIX GOODE, ID FIX E BND W BND	5600 7000 *9500 *8000 *9500
*6200 - MOCA GOODE, ID FIX *6500 - MOCA JEROT, ID FIX BURLEY, ID VOR/DME *7800 - MOCA MEDEA, ID FIX MALAD CITY, ID VOR/DME FILOB, ID FIX *10800 - MOCA *10800 - GNSS MEA	JEROT, ID FIX BURLEY, ID VOR/DME MEDEA, ID FIX MALAD CITY, ID VOR/DME FILOB, ID FIX HODNI, ID FIX	*8000 6500 *8400 9400 10900 *12000
HODNI, ID FIX *11700 - MOCA *11700 - GNSS MEA	GRIPS, WY FIX	*16000
GRIPS, WY FIX *10000 - MOCA *10000 - GNSS MEA	ROCK SPRINGS, WY VOR/DME	*11000
ROCK SPRINGS, WY VOR/DME CHEROKEE, WY VOR/DME KLASH, WY FIX E BND W BND	CHEROKEE, WY VOR/DME KLASH, WY FIX E BND W BND *LARAMIE, WY VOR/DME VOR/DME, W BND	10000 13000 11000 13000
KLASH, WY FIX *10600 - MCA LARAMIE, WY LARAMIE, WY VOR/DME FLEMS, WY FIX *10000 - MOCA BARGR, CO FIX WISER, CO FIX GILL, CO VOR/DME THURMAN, CO VORTAC *6300 - MOCA GOODLAND, KS VORTAC HILL CITY, KS VORTAC *4500 - MRA **4100 - MOCA WESAL, KS FIX	FLEMS, WY FIX BARGR, CO FIX WISER, CO FIX GILL, CO VOR/DME THURMAN, CO VORTAC GOODLAND, KS VORTAC HILL CITY, KS VORTAC *WESAL, KS FIX SALINA, KS VORTAC E BND W BND	11000 *11000 8400 8000 7000 *7000 5500 **5500 *4000 *4500
*2900 - MOCA		

FROM	TO	MEA
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95.6004 VOR FEDERAL AIRWAY V4 - CONTINUED

SALINA, KS VORTAC	*VASCO, KS FIX	3000
*5000 - MRA		
VASCO, KS FIX	ALMAS, KS FIX	3000
ALMAS, KS FIX	TOPEKA, KS VORTAC	3600
TOPEKA, KS VORTAC	KANSAS CITY, MO VORTAC	2700
KANSAS CITY, MO VORTAC	LEXIN, MO FIX	2600
LEXIN, MO FIX	HALLSVILLE, MO VORTAC	*6000
*3000 - GNSS MEA		
HALLSVILLE, MO VORTAC	SADEN, MO FIX	2600
SADEN, MO FIX	ST LOUIS, MO VORTAC	*2400
*1700 - MOCA		
ST LOUIS, MO VORTAC	TROY, IL VORTAC	2400
TROY, IL VORTAC	CENTRALIA, IL VORTAC	2300
CENTRALIA, IL VORTAC	POCKET CITY, IN VORTAC	3000
POCKET CITY, IN VORTAC	LAMBS, IN FIX	2500
LAMBS, IN FIX	*APALO, IN FIX	**3000
*4500 - MRA		
**2400 - MOCA		
APALO, IN FIX	DOWNS, IN FIX	*3000
*2400 - MOCA		
DOWNS, IN FIX	LOUISVILLE, KY VORTAC	*2600
*2300 - MOCA		
LOUISVILLE, KY VORTAC	LEXINGTON, KY VOR/DME	2800
LEXINGTON, KY VOR/DME	CICKE, KY FIX	3000
CICKE, KY FIX	NEWCOMBE, KY VORTAC	3100
NEWCOMBE, KY VORTAC	CHARLESTON, WV VOR/DME	3000
CHARLESTON, WV VOR/DME	*ITALY, WV FIX	3000
*4000 - MRA		
ITALY, WV FIX	REACH, WV FIX	4000
REACH, WV FIX	ELKINS, WV VORTAC	4400
ELKINS, WV VORTAC	KESSEL, WV VOR/DME	6400
KESSEL, WV VOR/DME	ARMEL, VA VOR/DME	5000

95.6005 VOR FEDERAL AIRWAY V5

PECAN, GA VOR/DME	VIENNA, GA VORTAC	*2000
*1900 - MOCA		
VIENNA, GA VORTAC	DUBLIN, GA VORTAC	2100
DUBLIN, GA VORTAC	ATHENS, GA VOR/DME	*3000
*2200 - MOCA		
ATHENS, GA VOR/DME	IRMOS, GA FIX	3100
IRMOS, GA FIX	CORCE, GA FIX	3800
CORCE, GA FIX	*AWSON, GA FIX	4600
*5000 - MRA		
AWSON, GA FIX	NELLO, GA FIX	*7000
*5500 - MOCA		
NELLO, GA FIX	*HOICHE, GA FIX	5400
*4000 - MCA HOICHE, GA FIX , SE BND		
HOICHE, GA FIX	CHOO CHOO, TN VORTAC	3000
CHOO CHOO, TN VORTAC	MCMIN, TN FIX	4000
MCMIN, TN FIX	HARME, TN FIX	*6000
*3700 - MOCA		
HARME, TN FIX	BOWLING GREEN, KY VORTAC	*2800
*2300 - MOCA		
BOWLING GREEN, KY VORTAC	NEW HOPE, KY VOR/DME	#2900
#BOWLING GREEN R-039 UNUSABLE USE NEW HOPE R-220		
NEW HOPE, KY VOR/DME	*LOUISVILLE, KY VORTAC	2700
*10000 - MCA LOUISVILLE, KY VORTAC , NE BND		

FROM	TO	MEA
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95.6005 VOR FEDERAL AIRWAY V5 - CONTINUED

LOUISVILLE, KY VORTAC	*NERVE, KY FIX	##*10000
*10000 - MCA NERVE, KY FIX , SW BND		
**2700 - GNSS MEA		
#LOUISVILLE R-036 UNUSABLE BELOW 10000		
NERVE, KY FIX	CINCINNATI, KY VORTAC	2700
CINCINNATI, KY VORTAC	PRUDE, OH FIX	3000
PRUDE, OH FIX	SHIRT, OH FIX	*4000
*2500 - MOCA		
SHIRT, OH FIX	*GLOOM, OH FIX	3000
*4000 - MRA		
GLOOM, OH FIX	APPLETON, OH VORTAC	3000

95.6006 VOR FEDERAL AIRWAY V6

OAKLAND, CA VOR/DME	COLLI, CA FIX	4000
COLLI, CA FIX	*PITTS, CA FIX	5000
*3800 - MCA PITTS, CA FIX , S BND		
PITTS, CA FIX	REJOY, CA FIX	*4000
*2400 - MOCA		
REJOY, CA FIX	SACRAMENTO, CA VORTAC	2000
SACRAMENTO, CA VORTAC	FOLLY, CA FIX	3000
FOLLY, CA FIX	*COLOM, CA FIX	5000
*9500 - MCA COLOM, CA FIX , NE BND		
COLOM, CA FIX	SQUAW VALLEY, CA VOR/DME	11000
SQUAW VALLEY, CA VOR/DME	*MUSTANG, NV VORTAC	13000
*12000 - MCA MUSTANG, NV VORTAC , SW BND		
MUSTANG, NV VORTAC	WADDS, NV FIX	10300
WADDS, NV FIX	*LOVELOCK, NV VORTAC	**10000
*8500 - MCA LOVELOCK, NV VORTAC , NE BND		
**9500 - MOCA		
LOVELOCK, NV VORTAC	BATTLE MOUNTAIN, NV VORTAC	12000
BATTLE MOUNTAIN, NV VORTAC	WELLS, NV VOR	*11000
*10100 - MOCA		
WELLS, NV VOR	LUCIN, UT VORTAC	10300
LUCIN, UT VORTAC	OGDEN, UT VORTAC	9000
*OGDEN, UT VORTAC	EVIEW, UT FIX	
	E BND	12000
	W BND	7000
*10700 - MCA OGDEN, UT VORTAC , E BND		
EVIEW, UT FIX	FORT BRIDGER, WY VOR/DME	12000
FORT BRIDGER, WY VOR/DME	ROCK SPRINGS, WY VOR/DME	10000
ROCK SPRINGS, WY VOR/DME	CHEROKEE, WY VOR/DME	10000
CHEROKEE, WY VOR/DME	MEDICINE BOW, WY VOR/DME	10000
MEDICINE BOW, WY VOR/DME	MOIST, WY FIX	9500
MOIST, WY FIX	*LITER, WY FIX	**10500
*10500 - MCA LITER, WY FIX , W BND		
**9500 - MOCA		
LITER, WY FIX	SIDNEY, NE VOR/DME	*9500
*7600 - MOCA		
SIDNEY, NE VOR/DME	NORTH PLATTE, NE VOR/DME	*6000
*5700 - MOCA		
NORTH PLATTE, NE VOR/DME	RAGAR, NE FIX	*5000
*4300 - MOCA		
RAGAR, NE FIX	GRAND ISLAND, NE VOR/DME	*5000
*3600 - MOCA		
GRAND ISLAND, NE VOR/DME	HUSKR, NE FIX	*4000
*3200 - MOCA		
HUSKR, NE FIX	OMAHA, IA VORTAC	4000
OMAHA, IA VORTAC	DES MOINES, IA VORTAC	3000
DES MOINES, IA VORTAC	IOWA CITY, IA VOR/DME	2700
IOWA CITY, IA VOR/DME	DAVENPORT, IA VORTAC	2700

FROM	TO	MEA
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95.6006 VOR FEDERAL AIRWAY V6 - CONTINUED

DAVENPORT, IA VORTAC	LEECES, IL FIX	2500
LEECES, IL FIX	DUPAGE, IL VOR/DME	*4000
*2700 - GNSS MEA		
NILES, IL FIX	CHETT, MI FIX	*3500
*2500 - MOCA		
CHETT, MI FIX	GIPPER, MI VORTAC	*3000
*2200 - MOCA		
GIPPER, MI VORTAC	MODEM, IN FIX	*4000
*2600 - MOCA		
CLARION, PA VOR/DME	PHILIPSBURG, PA VORTAC	4000
PHILIPSBURG, PA VORTAC	SELINGSGROVE, PA VOR/DME	4100
SELINGSGROVE, PA VOR/DME	SNOWY, PA FIX	*5000
*4000 - GNSS MEA		
SNOWY, PA FIX	ALLENTOWN, PA VORTAC	*4000
*3300 - MOCA		
ALLENTOWN, PA VORTAC	SOLBERG, NJ VOR/DME	#*3000
*2200 - MOCA		
#ALLENTOWN R-115 UNUSABLE. USE SOLBERG R-295.		
SOLBERG, NJ VOR/DME	EMPYR, NY FIX	2300
EMPYR, NY FIX	NANCI, NY FIX	2700
NANCI, NY FIX	LA GUARDIA, NY VOR/DME	2900

95.6007 VOR FEDERAL AIRWAY V7

DOLPHIN, FL VORTAC	LEE COUNTY, FL VORTAC	2300
LEE COUNTY, FL VORTAC	JOCKS, FL FIX	2600
JOCKS, FL FIX	*CROWD, FL FIX	*2300
*5000 - MRA		
**1600 - MOCA		
CROWD, FL FIX	LAKELAND, FL VORTAC	2300
LAKELAND, FL VORTAC	*DADES, FL FIX	**2300
*5000 - MRA		
**1800 - MOCA		
DADES, FL FIX	NITTS, FL FIX	*2300
*1800 - MOCA		
NITTS, FL FIX	*ORATE, FL FIX	**3000
*3000 - MRA		
**1700 - MOCA		
ORATE, FL FIX	CROSS CITY, FL VORTAC	*2000
*1500 - MOCA		
CROSS CITY, FL VORTAC	SEMINOLE, FL VORTAC	2000
SEMINOLE, FL VORTAC	OALDY, AL FIX	2000
OALDY, AL FIX	WIREGRASS, AL VORTAC	2500
WIREGRASS, AL VORTAC	CLIOS, AL FIX	*2300
*1900 - MOCA		
CLIOS, AL FIX	MONTGOMERY, AL VORTAC	2400
MONTGOMERY, AL VORTAC	VULCAN, AL VORTAC	3000
VULCAN, AL VORTAC	MUSCLE SHOALS, AL VORTAC	*2800
*2200 - MOCA		
CENTRAL CITY, KY VORTAC	POCKET CITY, IN VORTAC	2300
POCKET CITY, IN VORTAC	PRINC, IN FIX	2300
PRINC, IN FIX	LISLE, IN FIX	4500
LISLE, IN FIX	TERRE HAUTE, IN VORTAC	3000
TERRE HAUTE, IN VORTAC	*POTES, IN FIX	2500
*4000 - MRA		
POTES, IN FIX	BOILER, IN VORTAC	2500
BOILER, IN VORTAC	CHICAGO HEIGHTS, IL VORTAC	2700
CHICAGO HEIGHTS, IL	*LAIRD, IL FIX	3500
VORTAC		
*2700 - MCA LAIRD, IL FIX , S BND		
LAIRD, IL FIX	*THORR, IL FIX	2500
*2600 - MCA THORR, IL FIX , S BND		

FROM	TO	MEA
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95.6007 VOR FEDERAL AIRWAY V7 - CONTINUED

THORR, IL FIX *1800 - MOCA	PAPPI, IL FIX	*2500
PAPPI, IL FIX *1800 - MOCA	TALOR, WI FIX	*4000
TALOR, WI FIX *1900 - MOCA	PETTY, WI FIX	*6000
PETTY, WI FIX #UNUSABLE	PROOT, WI FIX	#
PROOT, WI FIX #UNUSABLE	FALLS, WI VOR/DME	#
FALLS, WI VOR/DME	GREEN BAY, WI VORTAC	3000
GREEN BAY, WI VORTAC	MENOMINEE, MI VOR/DME	2600
MENOMINEE, MI VOR/DME	SAWYER, MI VOR/DME	2900

95.6008 VOR FEDERAL AIRWAY V8

DOYLE, CA FIX	LIMBO, CA FIX	3000
LIMBO, CA FIX *2800 - MCA WILMA, CA FIX , W BND	*WILMA, CA FIX	3200
WILMA, CA FIX	SEAL BEACH, CA VORTAC	2300
SEAL BEACH, CA VORTAC *2200 - MOCA	AHEIM, CA FIX	*3000
AHEIM, CA FIX *3000 - MRA *4100 - MCA OLLIE, CA FIX , NE BND	*OLLIE, CA FIX	3000
OLLIE, CA FIX	PARADISE, CA VORTAC	5000
PARADISE, CA VORTAC *8800 - MCA RAVON, CA FIX , NE BND	*RAVON, CA FIX	4500
RAVON, CA FIX	GAREY, CA FIX SW BND NE BND	8000 10500
GAREY, CA FIX *9300 - MCA LUCER, CA FIX , SW BND	*LUCER, CA FIX	10500
LUCER, CA FIX *8000 - MOCA	BULGY, CA FIX	*9000
BULGY, CA FIX *7000 - MOCA	HECTOR, CA VORTAC	*9000
HECTOR, CA VORTAC *8200 - MOCA	GOFFS, CA VORTAC	*9000
GOFFS, CA VORTAC	LYNSY, NV FIX	7600
LYNSY, NV FIX	MEADS, NV FIX	7500
MEADS, NV FIX	MORMON MESA, NV VORTAC	6000
MORMON MESA, NV VORTAC	MATZO, UT FIX NE BND SW BND	12000 9000
MATZO, UT FIX	BRYCE CANYON, UT VORTAC	12300
BRYCE CANYON, UT VORTAC	HANKSVILLE, UT VORTAC	13300
HANKSVILLE, UT VORTAC	GRAND JUNCTION, CO VOR/DME	10000
GRAND JUNCTION, CO VOR/DME *12000 - MCA SQUAT, CO FIX , NE BND **9600 - MOCA	*SQUAT, CO FIX	**10500
SQUAT, CO FIX	RIFLE, CO VOR/DME	13200
RIFLE, CO VOR/DME	KREMMLING, CO VOR/DME	13400
KREMMLING, CO VOR/DME *10300 - MCA MILE HIGH, CO VORTAC , W BND	*MILE HIGH, CO VORTAC	15500
MILE HIGH, CO VORTAC	HOYTT, CO FIX	7600
HOYTT, CO FIX	AKRON, CO VOR/DME	7000
AKRON, CO VOR/DME	HAYES CENTER, NE VORTAC	6500
HAYES CENTER, NE VORTAC *4900 - MOCA	GRAND ISLAND, NE VOR/DME	*5500

FROM	TO	MEA
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95.6008 VOR FEDERAL AIRWAY V8 - CONTINUED

GRAND ISLAND, NE VOR/DME *3200 - MOCA	HUSKR, NE FIX	*4000
HUSKR, NE FIX	OMAHA, IA VORTAC	4000
OMAHA, IA VORTAC	DES MOINES, IA VORTAC	3000
DES MOINES, IA VORTAC	IOWA CITY, IA VOR/DME	2700
IOWA CITY, IA VOR/DME	MOLINE, IL VOR/DME	2700
MOLINE, IL VOR/DME	TRIDE, IL FIX	3300
TRIDE, IL FIX	JOLIET, IL VOR/DME	2600
JOLIET, IL VOR/DME	CHICAGO HEIGHTS, IL VORTAC	2500
CHICAGO HEIGHTS, IL VORTAC	HALIE, IN FIX	2600
HALIE, IN FIX	INKEN, IN FIX	*4000
*2300 - MOCA		
INKEN, IN FIX	GOSHEN, IN VORTAC	2600
GOSHEN, IN VORTAC	GAREN, IN FIX	3000
GAREN, IN FIX	*GRABI, IN FIX	**4000
*4000 - MRA		
**2200 - MOCA		
GRABI, IN FIX	TWERP, OH FIX	*4000
*2200 - MOCA		
TWERP, OH FIX	FLAG CITY, OH VORTAC	2600
BRIGGS, OH VOR/DME	ATWOO, OH FIX	*4000
*3100 - MOCA		
*3100 - GNSS MEA		
ATWOO, OH FIX	BELLAIRE, OH VOR/DME	*6000
*3000 - MOCA		
BELLAIRE, OH VOR/DME	*GALLS, PA FIX	3600
*5000 - MCA GALLS, PA FIX , E BND		
GALLS, PA FIX	GRANTSVILLE, MD VOR/DME	5500
GRANTSVILLE, MD VOR/DME	MARTINSBURG, WV VORTAC	5500
MARTINSBURG, WV VORTAC	WASHINGTON, DC VOR/DME	3300

95.6009 VOR FEDERAL AIRWAY V9

LEEVILLE, LA VORTAC *1400 - MOCA	SAFES, LA FIX	*2000
SAFES, LA FIX	WAVEZ, LA FIX	*4000
*1600 - MOCA		
WAVEZ, LA FIX	OYSTY, LA FIX	*3000
*1800 - MOCA		
OYSTY, LA FIX	MC COMB, MS VORTAC	2000
MC COMB, MS VORTAC	*ROMAR, MS FIX	**3000
*4000 - MRA		
**1900 - MOCA		
ROMAR, MS FIX	MAGNOLIA, MS VORTAC	*3000
*1900 - MOCA		
MAGNOLIA, MS VORTAC	SIDON, MS VORTAC	2000
SIDON, MS VORTAC	MARVELL, AR VOR/DME	2100
MARVELL, AR VOR/DME	GILMORE, AR VOR/DME	1900
GILMORE, AR VOR/DME	MALDEN, MO VORTAC	*3000
*2300 - MOCA		
MALDEN, MO VORTAC	FARMINGTON, MO VORTAC	*3000
*2300 - MOCA		
FARMINGTON, MO VORTAC	ARNOL, IL FIX	*3000
*2500 - MOCA		
ARNOL, IL FIX	ST LOUIS, MO VORTAC	2800
ST LOUIS, MO VORTAC	SPINNER, IL VORTAC	*2700
*2100 - MOCA		
SPINNER, IL VORTAC	PONTIAC, IL VOR/DME	*3000
*2300 - MOCA		
PONTIAC, IL VOR/DME	KELSI, IL FIX	3000

FROM	TO	MEA
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95.6009 VOR FEDERAL AIRWAY V9 - CONTINUED

KELSI, IL FIX	ROCKFORD, IL VOR/DME	2700
ROCKFORD, IL VOR/DME	JANESVILLE, WI VOR/DME	2700
JANESVILLE, WI VOR/DME	MADISON, WI VORTAC	3000
MADISON, WI VORTAC	OSHKOSH, WI VORTAC	3000
OSHKOSH, WI VORTAC	GREEN BAY, WI VORTAC	*3000
*2300 - MOCA		
GREEN BAY, WI VORTAC	IRON MOUNTAIN, MI VOR/DME	2900
IRON MOUNTAIN, MI VOR/DME	HOUGHTON, MI VOR/DME	*3800
*3300 - MOCA		

95.6010 VOR FEDERAL AIRWAY V10

PUEBLO, CO VORTAC	LAMAR, CO VOR/DME	7000
LAMAR, CO VOR/DME	ADEER, KS FIX	*5700
*5200 - MOCA		
ADEER, KS FIX	GARDEN CITY, KS VORTAC	*5000
*4400 - MOCA		
GARDEN CITY, KS VORTAC	DODGE CITY, KS VORTAC	4600
DODGE CITY, KS VORTAC	*STAFF, KS FIX	4300
*4200 - MRA		
STAFF, KS FIX	HUTCHINSON, KS VOR/DME	3700
HUTCHINSON, KS VOR/DME	WAIVE, KS FIX	4000
WAIVE, KS FIX	*FLOSS, KS FIX	3300
*5000 - MRA		
FLOSS, KS FIX	EMPORIA, KS VORTAC	3300
EMPORIA, KS VORTAC	WETZL, KS FIX	*5000
*2600 - MOCA		
*3000 - GNSS MEA		
WETZL, KS FIX	NAPOLEON, MO VORTAC	3100
NAPOLEON, MO VORTAC	KIRKSVILLE, MO VORTAC	3000
KIRKSVILLE, MO VORTAC	LOAMY, MO FIX	3000
LOAMY, MO FIX	BURLINGTON, IA VOR/DME	*2700
*2200 - MOCA		
BURLINGTON, IA VOR/DME	BRADFORD, IL VORTAC	2600
BRADFORD, IL VORTAC	PLANO, IL FIX	3000
NILES, IL FIX	CHETT, MI FIX	*3500
*2500 - MOCA		
CHETT, MI FIX	GIPPER, MI VORTAC	*3000
*2200 - MOCA		
GIPPER, MI VORTAC	LITCHFIELD, MI VOR/DME	2800
YOUNGSTOWN, OH VORTAC	VOLAN, PA FIX	*5000
*3000 - MOCA		
*3000 - GNSS MEA		
VOLAN, PA FIX	TALLS, PA FIX	*5000
*3200 - MOCA		
*3300 - GNSS MEA		
TALLS, PA FIX	REVLOC, PA VOR/DME	4100
REVLOC, PA VOR/DME	JUNEY, PA FIX	*5000
		MAA - 12000
*5000 - GNSS MEA		
JUNEY, PA FIX	LANCASTER, PA VOR/DME	*5000
*3600 - MOCA		

FROM	TO	MEA
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95.6011 VOR FEDERAL AIRWAY V11

BROOKLEY, AL VORTAC	GREENE COUNTY, MS VORTAC	2000
GREENE COUNTY, MS VORTAC	MIZZE, MS FIX	*4000
*1900 - MOCA		
*3000 - GNSS MEA		
MIZZE, MS FIX	MAGNOLIA, MS VORTAC	*3000
*2400 - MOCA		
MAGNOLIA, MS VORTAC	SIDON, MS VORTAC	2000
SIDON, MS VORTAC	HOLLY SPRINGS, MS VORTAC	3000
HOLLY SPRINGS, MS VORTAC	DYERSBURG, TN VORTAC	*2500
*2000 - MOCA		
DYERSBURG, TN VORTAC	CUNNINGHAM, KY VOR/DME	2400
CUNNINGHAM, KY VOR/DME	WESON, KY FIX	2600
WESON, KY FIX	POCKET CITY, IN VORTAC	2200
POCKET CITY, IN VORTAC	MACKY, IN FIX	2300
MACKY, IN FIX	CLOWN, IN FIX	*3000
*2100 - MOCA		
CLOWN, IN FIX	SCOTO, IN FIX	*6000
*2100 - MOCA		
SCOTO, IN FIX	BRICKYARD, IN VORTAC	*2900
*2200 - MOCA		
BRICKYARD, IN VORTAC	WELDO, IN FIX	2900
WELDO, IN FIX	MARION, IN VOR/DME	2800
MARION, IN VOR/DME	FORT WAYNE, IN VORTAC	2600
FORT WAYNE, IN VORTAC	EDGE, OH FIX	3000

95.6012 VOR FEDERAL AIRWAY V12

GAVIOTA, CA VORTAC	SAN MARCUS, CA VORTAC	6400
SAN MARCUS, CA VORTAC	PALMDALE, CA VORTAC	9300
PALMDALE, CA VORTAC	HELDE, CA FIX	6000
HELDE, CA FIX	HECTOR, CA VORTAC	7900
HECTOR, CA VORTAC	CLIPP, CA FIX	9000
CLIPP, CA FIX	NEEDLES, CA VORTAC	*8000
*5900 - MOCA		
NEEDLES, CA VORTAC	DRAKE, AZ VORTAC	10000
DRAKE, AZ VORTAC	OATES, AZ FIX	10100
OATES, AZ FIX	WINSLOW, AZ VORTAC	10800
WINSLOW, AZ VORTAC	ZUNI, NM VORTAC	9000
ZUNI, NM VORTAC	*CARTY, NM FIX	11000
*10000 - MCA CARTY, NM FIX , W BND		
CARTY, NM FIX	*ALBUQUERQUE, NM VORTAC	9000
*10700 - MCA ALBUQUERQUE, NM VORTAC		
ALBUQUERQUE, NM VORTAC	OTTO, NM VOR	12000
OTTO, NM VOR	ANTON CHICO, NM VORTAC	*10000
*9400 - MOCA		
ANTON CHICO, NM VORTAC	TUCUMCARI, NM VORTAC	7700
TUCUMCARI, NM VORTAC	PANHANDLE, TX VORTAC	6000
PANHANDLE, TX VORTAC	MITBEE, OK VORTAC	5500
MITBEE, OK VORTAC	CARON, OK FIX	
	SW BND	*5000
	NE BND	*8000
*3700 - MOCA		
CARON, OK FIX	ANTHONY, KS VORTAC	
	NE BND	3000
	SW BND	5000
ANTHONY, KS VORTAC	WICHITA, KS VORTAC	3600
WICHITA, KS VORTAC	EMPORIA, KS VORTAC	3600
EMPORIA, KS VORTAC	WETZL, KS FIX	*5000
*2600 - MOCA		
*3000 - GNSS MEA		

FROM	TO	MEA
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95.6012 VOR FEDERAL AIRWAY V12 - CONTINUED

WETZL, KS FIX	NAPOLEON, MO VORTAC	3100
NAPOLEON, MO VORTAC	FRANC, MO FIX	3000
FRANC, MO FIX	COLUMBIA, MO VOR/DME	2600
COLUMBIA, MO VOR/DME	STITH, MO FIX	*2600
*2100 - MOCA		
STITH, MO FIX	FORISTELL, MO VORTAC	2600
FORISTELL, MO VORTAC	TROY, IL VORTAC	2500
TROY, IL VORTAC	BIBLE GROVE, IL VORTAC	2300
BIBLE GROVE, IL VORTAC	WORKE, IL FIX	
	SW BND	2300
	NE BND	6000
WORKE, IL FIX	OZMOE, IN FIX	*6000
*2600 - MOCA		
OZMOE, IN FIX	SHELBYVILLE, IN VOR/DME	*2500
*2300 - MOCA		
ALLEGHENY, PA VOR/DME	*JOHNSTOWN, PA VOR/DME	#10000
*10000 - MCA JOHNSTOWN, PA VOR/DME , W BND		
#ALLEGHENY R-096 UNUSABLE USE JOHNSTOWN R-274		
JOHNSTOWN, PA VOR/DME	HARRISBURG, PA VORTAC	5400
HARRISBURG, PA VORTAC	KUPPS, PA FIX	#
#UNUSABLE		
KUPPS, PA FIX	BOYER, PA FIX	#
#UNUSABLE		
BOYER, PA FIX	POTTSTOWN, PA VORTAC	*3000
*2400 - MOCA		

95.6013 VOR FEDERAL AIRWAY V13

MC ALLEN, TX VOR/DME	MANNY, TX FIX	*5000
*1700 - MOCA		
MANNY, TX FIX	ASCOT, TX FIX	*5000
*1500 - MOCA		
ASCOT, TX FIX	SOLON, TX FIX	
	N BND	*4000
	S BND	*5000
*1600 - MOCA		
SOLON, TX FIX	CORPUS CHRISTI, TX VORTAC	1600
CORPUS CHRISTI, TX VORTAC	*WORRY, TX FIX	1700
*2100 - MRA		
WORRY, TX FIX	*AUSTS, TX FIX	1700
*2300 - MRA		
AUSTS, TX FIX	PALACIOS, TX VORTAC	1700
PALACIOS, TX VORTAC	HUMBLE, TX VORTAC	2000
HUMBLE, TX VORTAC	CLEEP, TX FIX	3000
CLEEP, TX FIX	*LEGGE, TX FIX	3100
*3000 - MRA		
LEGGE, TX FIX	LUFKIN, TX VORTAC	2100
LUFKIN, TX VORTAC	CARTH, TX FIX	*3800
*2400 - MOCA		
CARTH, TX FIX	BELCHER, LA VORTAC	3100
BELCHER, LA VORTAC	*IDDAS, LA FIX	2000
*3000 - MRA		
IDDAS, LA FIX	*DUBOW, AR FIX	2000
*4000 - MRA		
DUBOW, AR FIX	TEXARKANA, AR VORTAC	2000
TEXARKANA, AR VORTAC	DEENS, AR FIX	
	SE BND	2300
	NW BND	4600
DEENS, AR FIX	RICH MOUNTAIN, OK VORTAC	*4600
*4000 - MOCA		

FROM	TO	MEA
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95.6013 VOR FEDERAL AIRWAY V13 - CONTINUED

RICH MOUNTAIN, OK VORTAC *5000 - MRA **3900 - MOCA	*HADES, AR FIX	**4600
HADES, AR FIX	FORT SMITH, AR VORTAC	2000
FORT SMITH, AR VORTAC *5000 - MRA	*CHESO, AR FIX	3400
CHESO, AR FIX	RAZORBACK, AR VORTAC	3700
RAZORBACK, AR VORTAC *4500 - MRA	*PINNE, MO FIX	3000
PINNE, MO FIX	NEOSHO, MO VOR/DME	3000
NEOSHO, MO VOR/DME	NASHE, MO FIX	2900
NASHE, MO FIX *3000 - MRA	*DIZZI, MO FIX	2700
DIZZI, MO FIX *2000 - MOCA	BUTLER, MO VORTAC	*2600
BUTLER, MO VORTAC	NAPOLEON, MO VORTAC	2900
NAPOLEON, MO VORTAC	LAMONI, IA VOR/DME	2900
LAMONI, IA VOR/DME *4300 - MRA	*WIVEY, IA FIX	3000
WIVEY, IA FIX	DES MOINES, IA VORTAC	3000
DES MOINES, IA VORTAC *3500 - MCA ANKEN, IA FIX , N BND	*ANKEN, IA FIX	2700
ANKEN, IA FIX	NEVAD, IA FIX	4000
NEVAD, IA FIX *2700 - MOCA	ALOCK, IA FIX	*3300
ALOCK, IA FIX	MASON CITY, IA VOR/DME	3000
MASON CITY, IA VOR/DME	FARMINGTON, MN VORTAC	3000
FARMINGTON, MN VORTAC *5500 - MRA **3400 - MOCA	*WAGNR, MN FIX	**5500
WAGNR, MN FIX *3400 - MOCA	CINCI, MN FIX	*5500
CINCI, MN FIX *2700 - MOCA	SIREN, WI VOR/DME	*3400
SIREN, WI VOR/DME	DULUTH, MN VORTAC	4000
DULUTH, MN VORTAC	WEMAN, MN FIX	4000
WEMAN, MN FIX	BYPOR, MN FIX	5000
BYPOR, MN FIX	THUNDER BAY, CANADA VORTAC	#4000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.		

95.6014 VOR FEDERAL AIRWAY V14

CHISUM, NM VORTAC	ONSOM, NM FIX E BND W BND	*7000 *7500
*6000 - MOCA		
ONSOM, NM FIX *6300 - MOCA	WINNS, TX FIX	*8000
WINNS, TX FIX *8000 - MRA **5200 - MOCA	*FLATT, TX FIX	**8000
FLATT, TX FIX	SHALO, TX FIX	5200
SHALO, TX FIX *5000 - GNSS MEA	LUBBOCK, TX VORTAC	*5100
LUBBOCK, TX VORTAC	CHILDRESS, TX VORTAC	5000
CHILDRESS, TX VORTAC	HOBART, OK VORTAC	3700
HOBART, OK VORTAC	CARFF, OK FIX	3700
CARFF, OK FIX *3500 - MRA	*DATTA, OK FIX	3000
DATTA, OK FIX	WILL ROGERS, OK VORTAC	3000
WILL ROGERS, OK VORTAC	TOTES, OK FIX	3700
TOTES, OK FIX *2500 - MOCA	DROPS, OK FIX	*3700

FROM	TO	MEA
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95.6014 VOR FEDERAL AIRWAY V14 - CONTINUED

DROPS, OK FIX	TULSA, OK VORTAC	
	NE BND	2800
	SW BND	3800
TULSA, OK VORTAC	ADAIR, OK FIX	2500
ADAIR, OK FIX	NEOSHO, MO VOR/DME	3000
NEOSHO, MO VOR/DME	SPRINGFIELD, MO VORTAC	3000
SPRINGFIELD, MO VORTAC	VICHY, MO VOR/DME	3100
VICHY, MO VOR/DME	STEER, MO FIX	*3000
*2300 - MOCA		
STEER, MO FIX	ST LOUIS, MO VORTAC	2600
ST LOUIS, MO VORTAC	VANDALIA, IL VORTAC	2500
VANDALIA, IL VORTAC	TERRE HAUTE, IN VORTAC	2400
TERRE HAUTE, IN VORTAC	BRICKYARD, IN VORTAC	2700
BRICKYARD, IN VORTAC	MUNCIE, IN VOR/DME	2900
MUNCIE, IN VOR/DME	FLAG CITY, OH VORTAC	3000
BUFFALO, NY VOR/DME	GENESEO, NY VOR/DME	#4000
#BUFFALO R-106 UNUSABLE		
GENESEO, NY VOR/DME	BEEPS, NY FIX	*4000
*3300 - MOCA		
BEEPS, NY FIX	SCIPO, NY FIX	*4000
*3400 - MOCA		
SCIPO, NY FIX	VESPE, NY FIX	4000
VESPE, NY FIX	GEORGETOWN, NY VORTAC	4000
GEORGETOWN, NY VORTAC	SHERB, NY FIX	4000
SHERB, NY FIX	COBIA, NY FIX	5000
COBIA, NY FIX	CASIL, NY FIX	*5000
*3800 - MOCA		
CASIL, NY FIX	ALBANY, NY VORTAC	3600
ALBANY, NY VORTAC	WARIC, MA FIX	5000
WARIC, MA FIX	GARDNER, MA VOR/DME	*4000
*3500 - MOCA		
GARDNER, MA VOR/DME	GRAYM, MA FIX	3000
GRAYM, MA FIX	NORWICH, CT VOR/DME	*3000
*2200 - MOCA		

95.6015 VOR FEDERAL AIRWAY V15

HOBBY, TX VOR/DME	NAVASOTA, TX VOR/DME	2100
NAVASOTA, TX VOR/DME	COLLEGE STATION, TX VORTAC	2000
COLLEGE STATION, TX VORTAC	SATTY, TX FIX	2200
SATTY, TX FIX	WACO, TX VORTAC	2400
WACO, TX VORTAC	CEDAR CREEK, TX VORTAC	2500
CEDAR CREEK, TX VORTAC	BONHAM, TX VORTAC	*3500
*2200 - MOCA		
BONHAM, TX VORTAC	*PRIZZ, OK FIX	**3600
*7000 - MRA		
**2100 - MOCA		
PRIZZ, OK FIX	MC ALESTER, OK VORTAC	*3000
*2500 - MOCA		
MC ALESTER, OK VORTAC	*HOFFE, OK FIX	2700
*4700 - MRA		
HOFFE, OK FIX	OKMULGEE, OK VOR/DME	2600
OKMULGEE, OK VOR/DME	MALTS, OK FIX	3500
MALTS, OK FIX	*PRYOR, OK FIX	**2900
*2900 - MRA		
**2200 - MOCA		
PRYOR, OK FIX	NEOSHO, MO VOR/DME	3000
SIoux CITY, IA VORTAC	SIoux FALLS, SD VORTAC	3400
SIoux FALLS, SD VORTAC	HURON, SD VORTAC	3700
HURON, SD VORTAC	ABERDEEN, SD VOR/DME	3000

FROM	TO	MEA
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95.6015 VOR FEDERAL AIRWAY V15 - CONTINUED

ABERDEEN, SD VOR/DME *3500 - MOCA	BISMARCK, ND VOR/DME	*4700
BISMARCK, ND VOR/DME	MINOT, ND VORTAC	4100

95.6016 VOR FEDERAL AIRWAY V16

LOS ANGELES, CA VORTAC	PRADO, CA FIX	4000
PRADO, CA FIX	PARADISE, CA VORTAC	5000
PARADISE, CA VORTAC	*SETER, CA FIX	5500
*12000 - MCA SETER, CA FIX, E BND		
SETER, CA FIX	BANDS, CA FIX	
	E BND	13000
	W BND	9000
BANDS, CA FIX	*PALM SPRINGS, CA VORTAC	13000
*11800 - MCA PALM SPRINGS, CA VORTAC, W BND		
PALM SPRINGS, CA VORTAC	BLYTHE, CA VORTAC	8000
BLYTHE, CA VORTAC	BUCKEYE, AZ VORTAC	6000
BUCKEYE, AZ VORTAC	PERKY, AZ FIX	5000
PERKY, AZ FIX	PHOENIX, AZ VORTAC	4000
PHOENIX, AZ VORTAC	*TOTE, AZ FIX	5000
*5500 - MCA TOTE, AZ FIX, E BND		
TOTE, AZ FIX	TUCSON, AZ VORTAC	6500
TUCSON, AZ VORTAC	SAN SIMON, AZ VORTAC	11500
SAN SIMON, AZ VORTAC	ANIMA, NM FIX	8000
ANIMA, NM FIX	DARCE, NM FIX	9000
DARCE, NM FIX	COLUMBUS, NM VOR/DME	*9000
*8200 - MOCA		
COLUMBUS, NM VOR/DME	EL PASO, TX VORTAC	9000
EL PASO, TX VORTAC	SALT FLAT, TX VORTAC	*8000
*7400 - MOCA		
SALT FLAT, TX VORTAC	DILLI, TX FIX	8000
DILLI, TX FIX	CAVRN, TX FIX	*10000
*7500 - MOCA		
CAVRN, TX FIX	WINK, TX VORTAC	*10000
*5300 - MOCA		
WINK, TX VORTAC	GOMIT, TX FIX	5500
GOMIT, TX FIX	PIZON, TX FIX	5000
PIZON, TX FIX	MERGE, TX FIX	*7000
*4400 - MOCA		
MERGE, TX FIX	BIG SPRING, TX VORTAC	4400
BIG SPRING, TX VORTAC	WEEPE, TX FIX	4200
WEEPE, TX FIX	*LORAN, TX FIX	4500
*6500 - MRA		
LORAN, TX FIX	MERKE, TX FIX	4500
MERKE, TX FIX	ABILENE, TX VORTAC	*4000
*3200 - MOCA		
ABILENE, TX VORTAC	*ROGEE, TX FIX	3600
*5000 - MRA		
ROGEE, TX FIX	BOWIE, TX VORTAC	*4500
*2900 - MOCA		
BOWIE, TX VORTAC	BONHAM, TX VORTAC	4000
BONHAM, TX VORTAC	PARIS, TX VOR/DME	2400
PARIS, TX VOR/DME	TEXARKANA, AR VORTAC	2000
TEXARKANA, AR VORTAC	*HOSES, AR FIX	2000
*3000 - MRA		
HOSES, AR FIX	SPARO, AR FIX	*4000
*2300 - MOCA		
SPARO, AR FIX	BUNNS, AR FIX	*6000
*1900 - MOCA		
BUNNS, AR FIX	PINE BLUFF, AR VOR/DME	2000
PINE BLUFF, AR VOR/DME	MARVELL, AR VOR/DME	1900
MARVELL, AR VOR/DME	HOLLY SPRINGS, MS VORTAC	2200
SHELBYVILLE, TN VOR/DME	HINCH MOUNTAIN, TN VOR/DME	5000

FROM	TO	MEA
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95.6016 VOR FEDERAL AIRWAY V16 - CONTINUED

HINCH MOUNTAIN, TN VOR/DME	BUCKY, TN FIX	5000
BUCKY, TN FIX	VOLUNTEER, TN VORTAC	3500
VOLUNTEER, TN VORTAC	*PENGE, TN FIX	3000
*4000 - MCA PENCE, TN FIX , NE BND		
PENCE, TN FIX	TAKEN, TN FIX	4000
TAKEN, TN FIX	HOLSTON MOUNTAIN, TN VORTAC	6000
HOLSTON MOUNTAIN, TN VORTAC	DAMAS, TN FIX	6000
DAMAS, TN FIX	*STOVE, VA FIX	7500
*7500 - MCA STOVE, VA FIX , SW BND		
STOVE, VA FIX	SPEEL, VA FIX	6000
SPEEL, VA FIX	PULASKI, VA VORTAC	5400
PULASKI, VA VORTAC	ROANOKE, VA VOR/DME	5300
ROANOKE, VA VOR/DME	GOOZE, VA FIX	5000
GOOZE, VA FIX	LYNCHBURG, VA VORTAC	
	W BND	*5000
	E BND	*3000
*2900 - MOCA		
LYNCHBURG, VA VORTAC	FLAT ROCK, VA VORTAC	3000
FLAT ROCK, VA VORTAC	RICHMOND, VA VORTAC	2600
RICHMOND, VA VORTAC	*TAPPA, VA FIX	2000
*5000 - MCA TAPPA, VA FIX , NE BND		
TAPPA, VA FIX	PATUXENT, MD VORTAC	*5000
*1500 - MOCA		
*2000 - GNSS MEA		
PATUXENT, MD VORTAC	*GARED, MD FIX	**4500
*8000 - MRA		
**1500 - MOCA		
**4000 - GNSS MEA		
GARED, MD FIX	CHOPS, MD FIX	*4500
*1500 - MOCA		
*4000 - GNSS MEA		
CHOPS, MD FIX	SMYRNA, DE VORTAC	*2000
*1500 - MOCA		
SMYRNA, DE VORTAC	CEDAR LAKE, NJ VOR/DME	1800
CEDAR LAKE, NJ VOR/DME	COYLE, NJ VORTAC	1900
COYLE, NJ VORTAC	DIXIE, NJ FIX	*2500
*1600 - MOCA		
DIXIE, NJ FIX	KENNEDY, NY VOR/DME	*2500
*1600 - MOCA		
KENNEDY, NY VOR/DME	CALVERTON, NY VOR/DME	2000
CALVERTON, NY VOR/DME	CREAM, NY FIX	2000
CREAM, NY FIX	NORWICH, CT VOR/DME	2500
NORWICH, CT VOR/DME	WOONS, RI FIX	2500
WOONS, RI FIX	BOSTON, MA VOR/DME	2000

95.6017 VOR FEDERAL AIRWAY V17

BROWNSVILLE, TX VORTAC	HARLINGEN, TX VOR/DME	1600
HARLINGEN, TX VOR/DME	MC ALLEN, TX VOR/DME	2400
MC ALLEN, TX VOR/DME	FATOR, TX FIX	*2500
*1700 - MOCA		
FATOR, TX FIX	*NELEE, TX FIX	**4000
*5500 - MRA		
**2800 - MOCA		
NELEE, TX FIX	LAREDO, TX VORTAC	2500
LAREDO, TX VORTAC	*KAHAN, TX FIX	2400
*5000 - MRA		
KAHAN, TX FIX	COTULLA, TX VORTAC	*2400
*1800 - MOCA		
COTULLA, TX VORTAC	MILET, TX FIX	2500

FROM	TO	MEA
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95.6017 VOR FEDERAL AIRWAY V17 - CONTINUED

MILET, TX FIX *2500 - MOCA	SOMER, TX FIX	*4000
SOMER, TX FIX *2400 - MOCA	SAN ANTONIO, TX VORTAC	*3000
SAN ANTONIO, TX VORTAC	CENTEX, TX VORTAC	3500
CENTEX, TX VORTAC	WACO, TX VORTAC	3600
WACO, TX VORTAC *4000 - MRA **2500 - MOCA	*GAINS, TX FIX	**3000
GAINS, TX FIX *5000 - MRA	*BRIAN, TX FIX	3000
BRIAN, TX FIX	GLEN ROSE, TX VORTAC	3000
GLEN ROSE, TX VORTAC	MILLSAP, TX VORTAC	3000
MILLSAP, TX VORTAC	BOWIE, TX VORTAC	3000
BOWIE, TX VORTAC	ARDMORE, OK VORTAC	3000
ARDMORE, OK VORTAC	WILL ROGERS, OK VORTAC	3100
WILL ROGERS, OK VORTAC	ODINS, OK FIX	3300
ODINS, OK FIX *3600 - MOCA	CAMAR, OK FIX	*4900
CAMAR, OK FIX	MITBEE, OK VORTAC	
	W BND	4300
	E BND	4900
MITBEE, OK VORTAC *3900 - MOCA	FLACK, KS FIX	*4400
FLACK, KS FIX	GARDEN CITY, KS VORTAC	4700
GARDEN CITY, KS VORTAC *9000 - MRA **4600 - MOCA	*COFFE, KS FIX	**5500
COFFE, KS FIX	GOODLAND, KS VORTAC	5500

95.6018 VOR FEDERAL AIRWAY V18

GUTHRIE, TX VORTAC	BEKLE, TX FIX NW BND SE BND	*6000 *8000
*3400 - MOCA		
BEKLE, TX FIX *3500 - MOCA	MILLSAP, TX VORTAC	*8000
MILLSAP, TX VORTAC	GLEN ROSE, TX VORTAC	3000
GLEN ROSE, TX VORTAC *2200 - MOCA	CEDAR CREEK, TX VORTAC	*3000
CEDAR CREEK, TX VORTAC	QUITMAN, TX VOR/DME	2500
QUITMAN, TX VOR/DME	CADOZ, TX FIX	2400
CADOZ, TX FIX	BELCHER, LA VORTAC	2500
BELCHER, LA VORTAC	MONROE, LA VORTAC	2000
MONROE, LA VORTAC	MAGNOLIA, MS VORTAC	2500
MAGNOLIA, MS VORTAC	MERIDIAN, MS VORTAC	2500
MERIDIAN, MS VORTAC	CRIMSON, AL VORTAC	2000
CRIMSON, AL VORTAC	VULCAN, AL VORTAC	2400
VULCAN, AL VORTAC	TRUST, AL FIX	3500
TRUST, AL FIX	TALLADEGA, AL VOR/DME	3700
TALLADEGA, AL VOR/DME	ATLANTA, GA VORTAC	4000
ATLANTA, GA VORTAC *2500 - MOCA	CONNI, GA FIX	*3000
CONNI, GA FIX *2300 - MOCA	MADDI, GA FIX	*4000
MADDI, GA FIX *2000 - MOCA	CORVI, GA FIX	*5000
CORVI, GA FIX *2200 - MOCA	RAFFE, GA FIX	*6000
RAFFE, GA FIX *2000 - MOCA	COLLIERS, SC VORTAC	*2500

FROM	TO	MEA
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95.6018 VOR FEDERAL AIRWAY V18 - CONTINUED

COLLIERS, SC VORTAC	LASHE, SC FIX	2400
LASHE, SC FIX	NORMS, SC FIX	*3000
*2200 - MOCA		
NORMS, SC FIX	SACKS, SC FIX	*4000
*1700 - MOCA		
SACKS, SC FIX	CHARLESTON, SC VORTAC	2100

95.6019 VOR FEDERAL AIRWAY V19

CINCINNATI, KY VORTAC	APPLETON, OH VORTAC	*4000
*2800 - MOCA		

95.6020 VOR FEDERAL AIRWAY V20

MC ALLEN, TX VOR/DME	LATEX, TX FIX	1700
LATEX, TX FIX	ASCOT, TX FIX	*4000
*1900 - MOCA		
ASCOT, TX FIX	SOLON, TX FIX	
	N BND	*4000
	S BND	*5000
*1600 - MOCA		
SOLON, TX FIX	CORPUS CHRISTI, TX VORTAC	1600
CORPUS CHRISTI, TX VORTAC	COPAN, TX FIX	1800
COPAN, TX FIX	BETZY, TX FIX	1700
BETZY, TX FIX	PALACIOS, TX VORTAC	2000
PALACIOS, TX VORTAC	*MAGUS, TX FIX	1800
*3000 - MRA		
MAGUS, TX FIX	KEEDS, TX FIX	1700
KEEDS, TX FIX	HOBBY, TX VOR/DME	2500
HOBBY, TX VOR/DME	BEAUMONT, TX VOR/DME	2100
BEAUMONT, TX VOR/DME	LAKE CHARLES, LA VORTAC	2000
LAKE CHARLES, LA VORTAC	LAFAYETTE, LA VORTAC	1800
LAFAYETTE, LA VORTAC	RESERVE, LA VOR/DME	2000
RESERVE, LA VOR/DME	GULFPORT, MS VORTAC	2000
GULFPORT, MS VORTAC	SEMMES, AL VORTAC	2000
SEMMES, AL VORTAC	MONROEVILLE, AL VORTAC	2000
MONROEVILLE, AL VORTAC	*PICKS, AL FIX	2300
*3500 - MRA		
PICKS, AL FIX	MONTGOMERY, AL VORTAC	2300
MONTGOMERY, AL VORTAC	TUSKEGEE, AL VOR/DME	2000
TUSKEGEE, AL VOR/DME	MARVO, AL FIX	2100
MARVO, AL FIX	COLUMBUS, GA VORTAC	*2600
*2000 - MOCA		
COLUMBUS, GA VORTAC	GRANT, GA FIX	2800
GRANT, GA FIX	SMARR, GA FIX	*4000
*2500 - MOCA		
*2500 - GNSS MEA		
SMARR, GA FIX	SINCA, GA FIX	*4500
*2500 - MOCA		
*2500 - GNSS MEA		
SINCA, GA FIX	*GLOSS, GA FIX	**3000
*3500 - MRA		
**2000 - MOCA		
GLOSS, GA FIX	MADDI, GA FIX	*3000
*2200 - MOCA		
MADDI, GA FIX	ATHENS, GA VOR/DME	*3000
*2200 - MOCA		
ATHENS, GA VOR/DME	ELECTRIC CITY, SC VORTAC	*2800
*2300 - MOCA		

FROM	TO	MEA
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95.6020 VOR FEDERAL AIRWAY V20 - CONTINUED

ELECTRIC CITY, SC VORTAC	ELLID, SC FIX	3000
ELLID, SC FIX	CLEVA, SC FIX	3400
CLEVA, SC FIX	TUXDO, SC FIX	5000
TUXDO, SC FIX	SUGARLOAF MOUNTAIN, NC VORTAC	6000
SUGARLOAF MOUNTAIN, NC VORTAC	VAESE, NC FIX	6000
VAESE, NC FIX	BARRETTS MOUNTAIN, NC VOR/DME	*5000
*3600 - MOCA		
BARRETTS MOUNTAIN, NC VOR/DME	PROVE, NC FIX	3500
PROVE, NC FIX	LEAKS, NC FIX	3500
LEAKS, NC FIX	SOUTH BOSTON, VA VORTAC	3000
SOUTH BOSTON, VA VORTAC	*NUTTS, VA FIX	**3000
*9000 - MRA		
**2000 - MOCA		
NUTTS, VA FIX	MELIA, VA FIX	*3000
*2400 - MOCA		
MELIA, VA FIX	RICHMOND, VA VORTAC	2000
RICHMOND, VA VORTAC	*TAPPA, VA FIX	2000
*5000 - MCA TAPPA, VA FIX , NE BND		
TAPPA, VA FIX	*COLIN, VA FIX	**5000
*10000 - MCA COLIN, VA FIX , N BND		
**1500 - MOCA		
**2000 - GNSS MEA		
COLIN, VA FIX	NOTTINGHAM, MD VORTAC	*10000
*1800 - MOCA		
*2000 - GNSS MEA		

95.6021 VOR FEDERAL AIRWAY V21

SANTA CATALINA, CA VORTAC	SEAL BEACH, CA VORTAC	4000
SEAL BEACH, CA VORTAC	AHEIM, CA FIX	*3000
*2200 - MOCA		
AHEIM, CA FIX	*OLLIE, CA FIX	3000
*3000 - MRA		
*4100 - MCA OLLIE, CA FIX , NE BND		
OLLIE, CA FIX	PARADISE, CA VORTAC	5000
PARADISE, CA VORTAC	*RAVON, CA FIX	4500
*8800 - MCA RAVON, CA FIX , NE BND		
RAVON, CA FIX	GAREY, CA FIX	10500
	NE BND	8000
	SW BND	10500
GAREY, CA FIX	*LUCER, CA FIX	10500
*9300 - MCA LUCER, CA FIX , SW BND		
LUCER, CA FIX	BULGY, CA FIX	*9000
*8000 - MOCA		
BULGY, CA FIX	HECTOR, CA VORTAC	*9000
*7000 - MOCA		
HECTOR, CA VORTAC	*WHIGG, CA FIX	10000
*12000 - MRA		
WHIGG, CA FIX	BOULDER CITY, NV VORTAC	10000
BOULDER CITY, NV VORTAC	MORMON MESA, NV VORTAC	7500
MORMON MESA, NV VORTAC	BERYL, UT FIX	9800
BERYL, UT FIX	MILFORD, UT VORTAC	10000
MILFORD, UT VORTAC	DELTA, UT VORTAC	9600
DELTA, UT VORTAC	FAIRFIELD, UT VORTAC	10300
FAIRFIELD, UT VORTAC	*WASATCH, UT VORTAC	9600
*8000 - MCA WASATCH, UT VORTAC , S BND		
WASATCH, UT VORTAC	OGDEN, UT VORTAC	7000

FROM	TO	MEA
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95.6021 VOR FEDERAL AIRWAY V21 - CONTINUED

OGDEN, UT VORTAC	*CORIN, UT FIX	
	N BND	10000
	S BND	7600
*13000 - MRA		
CORIN, UT FIX	MALAD CITY, ID VOR/DME	10000
MALAD CITY, ID VOR/DME	BANNO, ID FIX	10000
BANNO, ID FIX	*POCATELLO, ID VOR/DME	9000
*8000 - MCA POCATELLO, ID VOR/DME , SE BND		
POCATELLO, ID VOR/DME	IDAHO FALLS, ID VOR/DME	7000
IDAHO FALLS, ID VOR/DME	*DUBOIS, ID VORTAC	7600
*8600 - MCA DUBOIS, ID VORTAC , N BND		
DUBOIS, ID VORTAC	DILLON, MT VOR/DME	*12000
*11200 - MOCA		
DILLON, MT VOR/DME	*WHITEHALL, MT VOR/DME	10000
*9300 - MCA WHITEHALL, MT VOR/DME , N BND		
WHITEHALL, MT VOR/DME	*HELENA, MT VORTAC	10600
*10000 - MCA HELENA, MT VORTAC , SE BND		
HELENA, MT VORTAC	GREAT FALLS, MT VORTAC	10000
GREAT FALLS, MT VORTAC	CUT BANK, MT VOR/DME	6000
CUT BANK, MT VOR/DME	U.S. CANADIAN BORDER	6300

95.6023 VOR FEDERAL AIRWAY V23

MISSION BAY, CA VORTAC	OCEANSIDE, CA VORTAC	3000
OCEANSIDE, CA VORTAC	BALBO, CA FIX	4000
BALBO, CA FIX	SEAL BEACH, CA VORTAC	
	NW BND	3000
	SE BND	4000
SEAL BEACH, CA VORTAC	LOS ANGELES, CA VORTAC	2500
LOS ANGELES, CA VORTAC	*CHATY, CA FIX	4000
*5400 - MCA CHATY, CA FIX , NW BND		
CHATY, CA FIX	*CASTA, CA FIX	6000
*8300 - MCA CASTA, CA FIX , NW BND		
CASTA, CA FIX	GORMAN, CA VORTAC	9500
GORMAN, CA VORTAC	*GRAPE, CA FIX	9500
*9500 - MCA GRAPE, CA FIX , S BND		
GRAPE, CA FIX	*LAMPE, CA FIX	
	NW BND	5000
	SE BND	9500
*7800 - MCA LAMPE, CA FIX , SE BND		
LAMPE, CA FIX	SHAFTER, CA VORTAC	
	NW BND	3000
	SE BND	6000
SHAFTER, CA VORTAC	DELNO, CA FIX	3000
DELNO, CA FIX	LATON, CA FIX	*3000
*2000 - MOCA		
LATON, CA FIX	CLOVIS, CA VORTAC	2000
CLOVIS, CA VORTAC	BEREN, CA FIX	2100
BEREN, CA FIX	WRAPS, CA FIX	*4000
*3000 - MOCA		
WRAPS, CA FIX	LINDEN, CA VOR/DME	3000
LINDEN, CA VOR/DME	SACRAMENTO, CA VORTAC	2300
SACRAMENTO, CA VORTAC	GRIME, CA FIX	*2000
*1600 - MOCA		
GRIME, CA FIX	YUBBA, CA FIX	*4000
*2000 - MOCA		
YUBBA, CA FIX	*GRIDD, CA FIX	**4000
*4000 - MRA		
**3400 - MOCA		

FROM	TO	MEA
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95.6023 VOR FEDERAL AIRWAY V23 - CONTINUED

GRIDD, CA FIX *1700 - MOCA	RED BLUFF, CA VORTAC	*3000
RED BLUFF, CA VORTAC	BEIRA, CA FIX NW BND SE BND	8000 3000
BEIRA, CA FIX	*SHATA, CA FIX NW BND SE BND	**8000 **6500
*8000 - MCA SHATA, CA FIX , NW BND		
**5500 - MOCA		
SHATA, CA FIX FORT JONES, CA VOR/DME *9400 - MOCA	FORT JONES, CA VOR/DME TALEM, OR FIX	10000 *10000
TALEM, OR FIX	*ROGUE VALLEY, OR VORTAC NW BND SE BND	8000 10000
*7000 - MCA ROGUE VALLEY, OR VORTAC , SE BND		
ROGUE VALLEY, OR VORTAC MOURN, OR FIX *7000 - MRA **6500 - MOCA	MOURN, OR FIX *CURTI, OR FIX	7000 **8000
CURTI, OR FIX	EUGENE, OR VORTAC SE BND NW BND	*6000 *4000
*4000 - MOCA		
EUGENE, OR VORTAC TURNO, OR FIX RAWER, OR FIX BATTLE GROUND, WA VORTAC	TURNO, OR FIX RAWER, OR FIX BATTLE GROUND, WA VORTAC *MALAY, WA FIX NW BND SE BND	3000 5000 4100 6000 5000
*9500 - MRA		
MALAY, WA FIX	*MCKEN, WA FIX S BND N BND	6000 5000
*4100 - MCA MCKEN, WA FIX , S BND		
MCKEN, WA FIX SEATTLE, WA VORTAC PAINE, WA VOR/DME EGRET, WA FIX ACORD, WA FIX *2200 - MOCA	SEATTLE, WA VORTAC PAINE, WA VOR/DME EGRET, WA FIX ACORD, WA FIX WHATCOM, WA VORTAC	3000 3000 4500 3500 *3000
WHATCOM, WA VORTAC	U.S. CANADIAN BORDER	3000

95.6024 VOR FEDERAL AIRWAY V24

ABERDEEN, SD VOR/DME WATERTOWN, SD VORTAC REDWOOD FALLS, MN VOR/DME *5000 - MRA **2700 - MOCA	WATERTOWN, SD VORTAC REDWOOD FALLS, MN VOR/DME *ALMAY, MN FIX	3600 3800 **3400
ALMAY, MN FIX *2700 - MOCA	KASPR, MN FIX	*3400
KASPR, MN FIX ROCHESTER, MN VOR/DME LONE ROCK, WI VOR/DME *2800 - MOCA	ROCHESTER, MN VOR/DME LONE ROCK, WI VOR/DME GLARS, WI FIX	3000 3000 *3400
GLARS, WI FIX *2300 - MOCA	JANESVILLE, WI VOR/DME	*2800

FROM	TO	MEA
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95.6024 VOR FEDERAL AIRWAY V24 - CONTINUED

JANESVILLE, WI VOR/DME	FARMM, IL FIX	2900
FARMM, IL FIX	NORTHBROOK, IL VOR/DME	2700
PEOTONE, IL VORTAC	KENLA, IL FIX	2400
KENLA, IL FIX	VAGES, IN FIX	2600
VAGES, IN FIX	*POTES, IN FIX	**4000
*4000 - MRA		
**2300 - MOCA		
POTES, IN FIX	JAKKS, IN FIX	*4000
*2300 - MOCA		
JAKKS, IN FIX	BRICKYARD, IN VORTAC	2700

95.6025 VOR FEDERAL AIRWAY V25

MISSION BAY, CA VORTAC	REDIN, CA FIX	3000
REDIN, CA FIX	PACIF, CA FIX	*6000
*2000 - MOCA		
PACIF, CA FIX	ALBAS, CA FIX	*3000
*2000 - MOCA		
ALBAS, CA FIX	*FERMY, CA FIX	2100
*2700 - MCA FERMY, CA FIX , NW BND		
FERMY, CA FIX	*HERMO, CA FIX	3200
*2700 - MCA HERMO, CA FIX , SE BND		
HERMO, CA FIX	LOS ANGELES, CA VORTAC	2500
LOS ANGELES, CA VORTAC	*MERMA, CA FIX	2000
*3000 - MRA		
MERMA, CA FIX	EXERT, CA FIX	2000
EXERT, CA FIX	VENTURA, CA VOR/DME	5000
VENTURA, CA VOR/DME	DEANO, CA FIX	6000
DEANO, CA FIX	*SAN MARCUS, CA VORTAC	6200
*7600 - MCA SAN MARCUS, CA VORTAC , NW BND		
SAN MARCUS, CA VORTAC	POZOE, CA FIX	8600
POZOE, CA FIX	PASO ROBLES, CA VORTAC	
	NW BND	6000
	SE BND	7000
PASO ROBLES, CA VORTAC	SALINAS, CA VORTAC	5500
SALINAS, CA VORTAC	SANTY, CA FIX	*5000
*4000 - MOCA		
SANTY, CA FIX	WOODSIDE, CA VOR/DME	5100
WOODSIDE, CA VOR/DME	SAN FRANCISCO, CA VOR/DME	4700
SAN FRANCISCO, CA VOR/DME	SUTRO, CA FIX	3500
SUTRO, CA FIX	GOBBS, CA FIX	3000
GOBBS, CA FIX	POINT REYES, CA VOR/DME	3500
POINT REYES, CA VOR/DME	FREES, CA FIX	3500
FREES, CA FIX	*GETER, CA FIX	6000
*12000 - MCA GETER, CA FIX , N BND		
GETER, CA FIX	*LAPED, CA FIX	**12000
*9000 - MRA		
*11000 - MCA LAPED, CA FIX , S BND		
**6300 - MOCA		
LAPED, CA FIX	*GRENY, CA FIX	9000
*5500 - MCA GRENY, CA FIX , S BND		
GRENY, CA FIX	RED BLUFF, CA VORTAC	3000
RED BLUFF, CA VORTAC	HOMAN, CA FIX	*4000
*4000 - MOCA		
HOMAN, CA FIX	*ITMOR, CA FIX	**5000
*7000 - MCA ITMOR, CA FIX , N BND		
**4000 - MOCA		
**4000 - GNSS MEA		
ITMOR, CA FIX	MUREX, CA FIX	*11000
*9600 - MOCA		
*10000 - GNSS MEA		

FROM	TO	MEA
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95.6025 VOR FEDERAL AIRWAY V25 - CONTINUED

MUREX, CA FIX	KLAMATH FALLS, OR VORTAC N BND S BND	*8500 *11000
*8500 - MOCA		
KLAMATH FALLS, OR VORTAC	SPRAG, OR FIX	*12000
*9500 - MOCA		
*10000 - GNSS MEA		
SPRAG, OR FIX	OCTAD, OR FIX	*12000
*9500 - MOCA		
*10000 - GNSS MEA		
OCTAD, OR FIX	DESCHUTES, OR VORTAC N BND S BND	*7000 *12000
*7000 - GNSS MEA		
DESCHUTES, OR VORTAC	*GASHE, OR FIX	*7000
*10000 - MRA		
**6500 - MOCA		
GASHE, OR FIX	*KLIKITAT, OR VOR/DME	**7000
*5400 - MCA KLIKITAT, OR VOR/DME , N BND		
**6500 - MOCA		
KLIKITAT, OR VOR/DME	GUBSE, WA FIX	7800
GUBSE, WA FIX	YAKIMA, WA VORTAC N BND S BND	*5000 *7800
*4500 - MOCA		
YAKIMA, WA VORTAC	*ELLENSBURG, WA VOR/DME	5900
*6800 - MCA ELLENSBURG, WA VOR/DME , N BND		
ELLENSBURG, WA VOR/DME	*WENATCHEE, WA VOR/DME	8900
*7400 - MCA WENATCHEE, WA VOR/DME , S BND		

95.6026 VOR FEDERAL AIRWAY V26

BLUE MESA, CO VOR/DME	MONTROSE, CO VOR/DME	12500
MONTROSE, CO VOR/DME	GRAND JUNCTION, CO VOR/DME	11000
GRAND JUNCTION, CO VOR/DME	RAYMN, CO FIX	
	NE BND	11000
	SW BND	10000
RAYMN, CO FIX	MEEKER, CO VOR/DME	11000
MEEKER, CO VOR/DME	STRIM, CO FIX	11000
STRIM, CO FIX	CHEROKEE, WY VOR/DME	10000
CHEROKEE, WY VOR/DME	ALCOS, WY FIX	11700
ALCOS, WY FIX	MUDDY MOUNTAIN, WY VOR/DME	*10000
*9400 - MOCA		
MUDDY MOUNTAIN, WY VOR/DME	SALON, WY FIX	8000
SALON, WY FIX	*RULER, SD FIX	**13000
*9000 - MRA		
**9200 - MOCA		
RULER, SD FIX	*RAPID CITY, SD VORTAC E BND W BND	8000 13000
*6500 - MCA RAPID CITY, SD VORTAC , W BND		
RAPID CITY, SD VORTAC	PHILIP, SD VOR/DME	5000
PHILIP, SD VOR/DME	PIERRE, SD VORTAC	*4400
*3700 - MOCA		
PIERRE, SD VORTAC	HURON, SD VORTAC	4000
HURON, SD VORTAC	*OBITT, SD FIX	**5000
*5000 - MRA		
**4000 - GNSS MEA		

FROM	TO	MEA
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95.6026 VOR FEDERAL AIRWAY V26 - CONTINUED

OBITT, SD FIX *3400 - MOCA *4000 - GNSS MEA	GHENT, MN FIX	*6000
GHENT, MN FIX *4000 - GNSS MEA	REDWOOD FALLS, MN VOR/DME	*5000
REDWOOD FALLS, MN VOR/DME *2500 - MOCA	BEEGR, MN FIX	*3000
BEEGR, MN FIX *2400 - MOCA	LYDIA, MN FIX	*5500
LYDIA, MN FIX *2500 - MOCA	FARMINGTON, MN VORTAC	*3500
FARMINGTON, MN VORTAC *2800 - MOCA	PRESS, WI FIX	*3500
PRESS, WI FIX *2600 - MOCA	ELPAS, WI FIX	*5500
ELPAS, WI FIX *2800 - MOCA	EAU CLAIRE, WI VORTAC	*3500
EAU CLAIRE, WI VORTAC *2900 - MOCA	EDGRR, WI FIX	*4500
EDGRR, WI FIX *7100 - MCA WAUSAU, WI VORTAC , E BND **3600 - MOCA **3600 - GNSS MEA	*WAUSAU, WI VORTAC	**6000
WAUSAU, WI VORTAC *3000 - GNSS MEA	CHURP, WI FIX	*8000
CHURP, WI FIX *2400 - MOCA	GREEN BAY, WI VORTAC	*7000
GREEN BAY, WI VORTAC	NEROE, WI FIX	3000
NEROE, WI FIX *2400 - MOCA	WELKO, MI FIX	*5000
WELKO, MI FIX	WHITE CLOUD, MI VOR/DME	4000

95.6027 VOR FEDERAL AIRWAY V27

MISSION BAY, CA VORTAC	REDIN, CA FIX	3000
REDIN, CA FIX *2000 - MOCA	PACIF, CA FIX	*6000
PACIF, CA FIX *2000 - MOCA	AVOLS, CA FIX	*3000
AVOLS, CA FIX	SANTA CATALINA, CA VORTAC	4000
SANTA CATALINA, CA VORTAC	EXERT, CA FIX	4000
EXERT, CA FIX	VENTURA, CA VOR/DME	5000
VENTURA, CA VOR/DME	KWANG, CA FIX	5000
KWANG, CA FIX *5000 - MCA GOLET, CA FIX , NW BND **2300 - MOCA	*GOLET, CA FIX	**4000
GOLET, CA FIX	GAVIOTA, CA VORTAC	6400
GAVIOTA, CA VORTAC *6000 - MCA ORCUT, CA FIX , S BND	*ORCUT, CA FIX	6000
ORCUT, CA FIX	MORRO BAY, CA VORTAC	4000
MORRO BAY, CA VORTAC	BLANC, CA FIX	4000
BLANC, CA FIX	BIG SUR, CA VORTAC	7000
BIG SUR, CA VORTAC	CARME, CA FIX	7000
CARME, CA FIX *5200 - MOCA	SHOEY, CA FIX	*6000
SHOEY, CA FIX *7000 - MRA **3000 - MOCA	*EUGEN, CA FIX	**6000

FROM	TO	MEA
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95.6027 VOR FEDERAL AIRWAY V27 - CONTINUED

EUGEN, CA FIX *7000 - MRA **3000 - MOCA	*TAILS, CA FIX	**6000
TAILS, CA FIX *3000 - MOCA	HADLY, CA FIX	*6000
HADLY, CA FIX *3000 - MOCA	SEEMS, CA FIX	*4000
SEEMS, CA FIX *3000 - MOCA	STINS, CA FIX	*3500
STINS, CA FIX	POINT REYES, CA VOR/DME	3500
POINT REYES, CA VOR/DME	FREES, CA FIX	3500
FREES, CA FIX	MENDOCINO, CA VORTAC	6000
MENDOCINO, CA VORTAC	OLRIO, CA FIX	6700
OLRIO, CA FIX	FORTUNA, CA VORTAC	
	NW BND	4000
	SE BND	6700
FORTUNA, CA VORTAC	CRESCENT CITY, CA VORTAC	3000
CRESCENT CITY, CA VORTAC	*ROOTY, OR FIX	6400
*11000 - MRA		
ROOTY, OR FIX	LEDGE, OR FIX	6400
LEDGE, OR FIX	NORTH BEND, OR VOR/DME	
	S BND	6400
	N BND	4000
NORTH BEND, OR VOR/DME	*GAMMA, OR FIX	
	S BND	4000
	N BND	4500
*6200 - MRA		
GAMMA, OR FIX	NEWPORT, OR VORTAC	4500
NEWPORT, OR VORTAC	CUTEL, OR FIX	
	S BND	3300
	N BND	8000
CUTEL, OR FIX	DANES, OR FIX	
	N BND	*8000
	S BND	*5000
*3600 - MOCA		
*4000 - GNSS MEA		
DANES, OR FIX	ASTORIA, OR VOR/DME	*8000
*5000 - MOCA		
*5000 - GNSS MEA		
ASTORIA, OR VOR/DME	HOQUIAM, WA VORTAC	3700
HOQUIAM, WA VORTAC	*CARRO, WA FIX	3200
*4000 - MRA		
CARRO, WA FIX	SEATTLE, WA VORTAC	3000

95.6028 VOR FEDERAL AIRWAY V28

OAKLAND, CA VOR/DME *4700 - MCA SALAD, CA FIX , NE BND	*SALAD, CA FIX	4000
SALAD, CA FIX	ALTAM, CA FIX	5000
ALTAM, CA FIX	HAIRE, CA FIX	4500
HAIRE, CA FIX	*LINDEN, CA VOR/DME	**3000
*4000 - MCA LINDEN, CA VOR/DME , NE BND		
**2100 - MOCA		
LINDEN, CA VOR/DME	*KATSO, CA FIX	5000
*12400 - MCA KATSO, CA FIX , NE BND		
KATSO, CA FIX	*SPOOK, CA FIX	**13000
*15000 - MCA SPOOK, CA FIX , N BND		
**12100 - MOCA		
SPOOK, CA FIX	RICHY, CA FIX	*15000
*12000 - MOCA		
RICHY, CA FIX	*MUSTANG, NV VORTAC	13000
*10500 - MCA MUSTANG, NV VORTAC , S BND		

FROM	TO	MEA
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95.6029 VOR FEDERAL AIRWAY V29

SNOW HILL, MD VORTAC	*SALISBURY, MD VORTAC	**2000
*5000 - MCA SALISBURY, MD VORTAC , N BND		
**1500 - MOCA		
SALISBURY, MD VORTAC	*EZIZI, DE FIX	5000
*7000 - MCA EZIZI, DE FIX , N BND		
EZIZI, DE FIX	*LAFLN, DE FIX	**7000
*7000 - MCA LAFLN, DE FIX , S BND		
**5000 - GNSS MEA		
LAFLN, DE FIX	SMYRNA, DE VORTAC	1800
SMYRNA, DE VORTAC	DUPONT, DE VORTAC	#1800
#DUPONT R-181 UNUSABLE BELOW 10000 USE SMYRNA R-360		
DUPONT, DE VORTAC	MODENA, PA VORTAC	*3000
*1800 - MOCA		
*2000 - GNSS MEA		
MODENA, PA VORTAC	POTTSTOWN, PA VORTAC	2400
POTTSTOWN, PA VORTAC	*HIKES, PA FIX	2900
*4000 - MRA		
HIKES, PA FIX	EAST TEXAS, PA VOR/DME	2900
EAST TEXAS, PA VOR/DME	SLATT, PA FIX	4000
SLATT, PA FIX	WILKES-BARRE, PA VORTAC	4000
WILKES-BARRE, PA VORTAC	SCOFF, PA FIX	4000
SCOFF, PA FIX	BINGHAMTON, NY VOR/DME	3600
BINGHAMTON, NY VOR/DME	CORTA, NY FIX	*4000
*3600 - MOCA		
CORTA, NY FIX	VESPE, NY FIX	4500
VESPE, NY FIX	SYRACUSE, NY VORTAC	*4000
*3600 - MOCA		
SYRACUSE, NY VORTAC	PAGER, NY FIX	*2400
*1800 - MOCA		
PAGER, NY FIX	WATERTOWN, NY VORTAC	*2600
*2000 - MOCA		
WATERTOWN, NY VORTAC	*LETUS, NY FIX	**3000
*4000 - MRA		
**1900 - MOCA		
LETUS, NY FIX	MASSENA, NY VORTAC	#3000
#GNSS MEA ONLY		
MASSENA R-255 UNUSABLE. GNSS REQUIRED		

95.6030 VOR FEDERAL AIRWAY V30

BADGER, WI VOR/DME	SQUIB, MI FIX	2900
SQUIB, MI FIX	PULLMAN, MI VOR/DME	3500
PULLMAN, MI VOR/DME	LITCHFIELD, MI VOR/DME	2800
CLARION, PA VOR/DME	PHILIPSBURG, PA VORTAC	4000
PHILIPSBURG, PA VORTAC	SELINGSGROVE, PA VOR/DME	4100
SELINGSGROVE, PA VOR/DME	EAST TEXAS, PA VOR/DME	4000
EAST TEXAS, PA VOR/DME	SOLBERG, NJ VOR/DME	2700

95.6031 VOR FEDERAL AIRWAY V31

PATUXENT, MD VORTAC	*ARUYE, MD FIX	2500
*6000 - MRA		
ARUYE, MD FIX	NOTTINGHAM, MD VORTAC	#*6000
*3000 - GNSS MEA		
#NOTTINGHAM R-138 UNUSABLE BELOW 6000'.		
BALTIMORE, MD VORTAC	VINNY, PA FIX	3000

FROM	TO	MEA
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95.6031 VOR FEDERAL AIRWAY V31 - CONTINUED

VINNY, PA FIX	GRAMO, PA FIX	*7000
*5000 - GNSS MEA		
GRAMO, PA FIX	HARRISBURG, PA VORTAC	*7000
*5000 - GNSS MEA		
HARRISBURG, PA VORTAC	*MORTO, PA FIX	3000
*5000 - MRA		
MORTO, PA FIX	SELINSGROVE, PA VOR/DME	5000
SELINSGROVE, PA VOR/DME	WATSO, PA FIX	*3500
*3100 - MOCA		
WATSO, PA FIX	WILLIAMSPORT, PA VOR/DME	3800
WILLIAMSPORT, PA VOR/DME	ELMIRA, NY VOR/DME	4000
ELMIRA, NY VOR/DME	GIBBE, NY FIX	3800
GIBBE, NY FIX	BEEPS, NY FIX	3500
BEEPS, NY FIX	ROCHESTER, NY VOR/DME	4000
ROCHESTER, NY VOR/DME	*AIRCO, NY FIX	4000
*6000 - MRA		

95.6032 VOR FEDERAL AIRWAY V32

MUSTANG, NV VORTAC	HAZEN, NV VORTAC	*10000
*9200 - MOCA		
HAZEN, NV VORTAC	LOVELOCK, NV VORTAC	8000
LOVELOCK, NV VORTAC	BATTLE MOUNTAIN, NV VORTAC	11000
BATTLE MOUNTAIN, NV VORTAC	*BULLION, NV VOR/DME	**10000
*10800 - MCA BULLION, NV VOR/DME , E BND		
**9400 - MOCA		
BULLION, NV VOR/DME	SPATS, NV FIX	13000
SPATS, NV FIX	BONNEVILLE, UT VORTAC	*11000
*10000 - MOCA		
BONNEVILLE, UT VORTAC	*WASATCH, UT VORTAC	9000
*10400 - MCA WASATCH, UT VORTAC , NE BND		
WASATCH, UT VORTAC	FORT BRIDGER, WY VOR/DME	12000

95.6033 VOR FEDERAL AIRWAY V33

HARCUM, VA VORTAC	*COLIN, VA FIX	**4000
*10000 - MCA COLIN, VA FIX , N BND		
**1600 - MOCA		
**2000 - GNSS MEA		
COLIN, VA FIX	NOTTINGHAM, MD VORTAC	*10000
*1800 - MOCA		
*2000 - GNSS MEA		
BALTIMORE, MD VORTAC	VINNY, PA FIX	3000
VINNY, PA FIX	GRAMO, PA FIX	*7000
*5000 - GNSS MEA		
GRAMO, PA FIX	HARRISBURG, PA VORTAC	*7000
*5000 - GNSS MEA		
HARRISBURG, PA VORTAC	PHILIPSBURG, PA VORTAC	4000
PHILIPSBURG, PA VORTAC	KEATING, PA VORTAC	4000
KEATING, PA VORTAC	BRADFORD, PA VOR/DME	4000
BRADFORD, PA VOR/DME	BUFFALO, NY VOR/DME	#*11000
*5000 - GNSS MEA		
#BRADFORD R-006 UNUSABLE USE BUF R-187		

FROM	TO	MEA
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95.6034 VOR FEDERAL AIRWAY V34

ROCHESTER, NY VOR/DME	HANCOCK, NY VOR/DME	4000
HANCOCK, NY VOR/DME	WEETS, NY FIX	6400
WEETS, NY FIX	PAWLING, NY VOR/DME	
	W BND	6000
	E BND	4000
PAWLING, NY VOR/DME	MADISON, CT VOR/DME	3000
MADISON, CT VOR/DME	SANDY POINT, RI VOR/DME	*2000
*1400 - MOCA		
SANDY POINT, RI VOR/DME	NANTUCKET, MA VOR/DME	2000

95.6035 VOR FEDERAL AIRWAY V35

DOLPHIN, FL VORTAC	CURVE, FL FIX	*2000
*1500 - MOCA		
CURVE, FL FIX	*DEEDS, FL FIX	**5000
*4000 - MRA		
**1300 - MOCA		
DEEDS, FL FIX	LEE COUNTY, FL VORTAC	2200
LEE COUNTY, FL VORTAC	ST PETERSBURG, FL VORTAC	2000
ST PETERSBURG, FL VORTAC	ENDED, FL FIX	2500
ENDED, FL FIX	CROSS CITY, FL VORTAC	*3000
*1500 - MOCA		
CROSS CITY, FL VORTAC	GREENVILLE, FL VORTAC	2000
GREENVILLE, FL VORTAC	*SALER, GA FIX	2500
*3000 - MRA		
SALER, GA FIX	PECAN, GA VOR/DME	*2000
*1700 - MOCA		
PECAN, GA VOR/DME	MACON, GA VORTAC	2000
MACON, GA VORTAC	SINCA, GA FIX	2500
SINCA, GA FIX	*GLOSS, GA FIX	**3000
*3500 - MRA		
**2000 - MOCA		
GLOSS, GA FIX	MADDI, GA FIX	*3000
*2200 - MOCA		
MADDI, GA FIX	ATHENS, GA VOR/DME	*3000
*2200 - MOCA		
ATHENS, GA VOR/DME	ELECTRIC CITY, SC VORTAC	*2800
*2300 - MOCA		
ELECTRIC CITY, SC VORTAC	ELLID, SC FIX	3000
ELLID, SC FIX	CLEVA, SC FIX	3400
CLEVA, SC FIX	TUXDO, SC FIX	5000
TUXDO, SC FIX	SUGARLOAF MOUNTAIN, NC VORTAC	6000
SUGARLOAF MOUNTAIN, NC VORTAC	*BUSIC, NC FIX	8000
*9000 - MCA BUSIC, NC FIX , N BND		
BUSIC, NC FIX	*ROANS, TN FIX	**9000
*9000 - MCA ROANS, TN FIX , S BND		
**8200 - MOCA		
ROANS, TN FIX	HOLSTON MOUNTAIN, TN VORTAC	7000
HOLSTON MOUNTAIN, TN VORTAC	GLADE SPRING, VA VOR/DME	6700
GLADE SPRING, VA VOR/DME	STACY, VA FIX	6000
STACY, VA FIX	CHARLESTON, WV VOR/DME	*4500
*4000 - MOCA		
CHARLESTON, WV VOR/DME	BENZO, WV FIX	*4000
*3000 - MOCA		
BENZO, WV FIX	CLARKSBURG, WV VOR/DME	3200
CLARKSBURG, WV VOR/DME	MORGANTOWN, WV VOR/DME	4000
PHILIPSBURG, PA VORTAC	STONYFORK, PA VOR/DME	4500
STONYFORK, PA VOR/DME	ELMIRA, NY VOR/DME	*4500
*3900 - MOCA		
ELMIRA, NY VOR/DME	SCIPO, NY FIX	3700
SCIPO, NY FIX	SYRACUSE, NY VORTAC	3500

FROM	TO	MEA
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95.6036 VOR FEDERAL AIRWAY V36

U.S. CANADIAN BORDER *3100 - MOCA	SAULT STE MARIE, MI VOR/DME	*4600
SAULT STE MARIE, MI VOR/DME *2800 - MOCA	U.S. CANADIAN BORDER	*5000
U.S. CANADIAN BORDER BURST, NY FIX THINK, NY FIX ELMIRA, NY VOR/DME #GNSS MEA.	BUFFALO, NY VOR/DME THINK, NY FIX ELMIRA, NY VOR/DME HAWLY, PA FIX	000 4000 3500 #4500
ELMIRA R-122 UNUSABLE BELOW FL180 BEYOND 40 NM. HAWLY, PA FIX *3600 - MOCA *4000 - GNSS MEA	HOPCE, NJ FIX	*15500
HOPCE, NJ FIX *3600 - MOCA *4000 - GNSS MEA	NEION, NJ FIX	*13500

95.6037 VOR FEDERAL AIRWAY V37

CRAIG, FL VORTAC CARVL, FL FIX BRUNSWICK, GA VORTAC *11000 - MRA **2200 - MOCA	CARVL, FL FIX BRUNSWICK, GA VORTAC *BROUN, GA FIX	2100 2000 **3000
BROUN, GA FIX *3800 - MRA **2200 - MOCA	*HARPS, GA FIX	**3000
HARPS, GA FIX *2200 - MOCA	SAVANNAH, GA VORTAC	*3000
SAVANNAH, GA VORTAC *1600 - MOCA *4000 - GNSS MEA	ALLENDAL, SC VOR	*6000
ALLENDAL, SC VOR *2000 - GNSS MEA	COLUMBIA, SC VORTAC	*3000
COLUMBIA, SC VORTAC *2400 - MOCA *2400 - GNSS MEA	RICHE, SC FIX	*4000
RICHE, SC FIX CHARLOTTE, NC VOR/DME OWALT, NC FIX *3500 - MOCA	CHARLOTTE, NC VOR/DME OWALT, NC FIX JOTTA, NC FIX	2500 3000 *6000
JOTTA, NC FIX *5100 - MOCA	DOILY, VA FIX	*7000
DOILY, VA FIX *5000 - MOCA	PULASKI, VA VORTAC	*6000
PULASKI, VA VORTAC HAWKI, WV FIX ELKINS, WV VORTAC *3900 - MOCA	HAWKI, WV FIX ELKINS, WV VORTAC CLARKSBURG, WV VOR/DME	8000 6000 *5000
CLARKSBURG, WV VOR/DME *3400 - MOCA	TEDDS, WV FIX	*4000
TEDDS, WV FIX *3400 - MOCA *4000 - GNSS MEA	CETPU, PA FIX	*5000
CETPU, PA FIX *3200 - MOCA	ELLWOOD CITY, PA VOR/DME	*4000
ELLWOOD CITY, PA VOR/DME ERIE, PA VORTAC	ERIE, PA VORTAC U.S. CANADIAN BORDER	3000 3000

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95.6038 VOR FEDERAL AIRWAY V38

MOLINE, IL VOR/DME	TRIDE, IL FIX	3300
TRIDE, IL FIX	MEDAN, IL FIX	*4000
*2200 - MOCA		
MEDAN, IL FIX	PEOTONE, IL VORTAC	2400
PEOTONE, IL VORTAC	LUCIT, IN FIX	2500
LUCIT, IN FIX	CLEFT, IN FIX	*4000
*2400 - MOCA		
CLEFT, IN FIX	FORT WAYNE, IN VORTAC	2800
FORT WAYNE, IN VORTAC	WINES, OH FIX	2500
APPLETON, OH VORTAC	ZANESVILLE, OH VOR/DME	3000
ZANESVILLE, OH VOR/DME	PARKERSBURG, WV VOR/DME	3000
PARKERSBURG, WV VOR/DME	SACKY, WV FIX	3000
SACKY, WV FIX	*JULEA, WV FIX	3000
*5000 - MRA		
JULEA, WV FIX	BENZO, WV FIX	3300
BENZO, WV FIX	ELKINS, WV VORTAC	4000
ELKINS, WV VORTAC	*DEKAY, WV FIX	9000
*9500 - MRA		
DEKAY, WV FIX	CEROL, VA FIX	9000
CEROL, VA FIX	GORDONSVILLE, VA VORTAC	6000
GORDONSVILLE, VA VORTAC	*ROOKY, VA FIX	2500
*2500 - MRA		
ROOKY, VA FIX	RICHMOND, VA VORTAC	2100
RICHMOND, VA VORTAC	HARCUM, VA VORTAC	2000
HARCUM, VA VORTAC	CAPE CHARLES, VA VORTAC	2000

95.6039 VOR FEDERAL AIRWAY V39

SANDHILLS, NC VORTAC	SOUTH BOSTON, VA VORTAC	2500
SOUTH BOSTON, VA VORTAC	SHEPS, VA FIX	*3000
*2000 - MOCA		
SHEPS, VA FIX	GORDONSVILLE, VA VORTAC	3000
GORDONSVILLE, VA VORTAC	LURAY, VA FIX	6100
LURAY, VA FIX	*KERRE, VA FIX	**6000
*7000 - MRA		
**5000 - MOCA		
KERRE, VA FIX	MARTINSBURG, WV VORTAC	*6000
*5000 - MOCA		
MARTINSBURG, WV VORTAC	HYPER, MD FIX	*5000
*3900 - MOCA		
HYPER, MD FIX	BINNS, PA FIX	*9000
*2600 - MOCA		
*4000 - GNSS MEA		
BINNS, PA FIX	*DELRO, PA FIX	**9000
*10000 - MRA		
**4500 - GNSS MEA		
DELRO, PA FIX	LANCASTER, PA VOR/DME	3000
LANCASTER, PA VOR/DME	BOYER, PA FIX	2900
BOYER, PA FIX	EAST TEXAS, PA VOR/DME	*3000
*2400 - MOCA		
EAST TEXAS, PA VOR/DME	SPARTA, NJ VORTAC	2700
SPARTA, NJ VORTAC	CARMEL, NY VOR/DME	2600
CARMEL, NY VOR/DME	SOARS, CT FIX	3000
SOARS, CT FIX	STUBY, CT FIX	*6000
*4100 - MOCA		
STUBY, CT FIX	CHESTER, MA VOR/DME	4000
CHESTER, MA VOR/DME	VAPER, MA FIX	*3700
*3200 - MOCA		
VAPER, MA FIX	GARDNER, MA VOR/DME	*3500
*2900 - MOCA		
GARDNER, MA VOR/DME	CONCORD, NH VOR/DME	4000
CONCORD, NH VOR/DME	AUGUSTA, ME VOR/DME	3500

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95.6039 VOR FEDERAL AIRWAY V39 - CONTINUED

AUGUSTA, ME VOR/DME *2000 - MOCA	RINTH, ME FIX	*3000
RINTH, ME FIX *2400 - MOCA	MILLINOCKET, ME VOR/DME	*3000
MILLINOCKET, ME VOR/DME *2500 - MOCA	PRESQUE ISLE, ME VOR/DME	*3000
PRESQUE ISLE, ME VOR/DME *3000 - MOCA	GRINS, ME FIX	*5000
GRINS, ME FIX	U.S. CANADIAN BORDER	3000

95.6041 VOR FEDERAL AIRWAY V41

CUTTA, OH FIX *3600 - GNSS MEA	YOUNGSTOWN, OH VORTAC	*5000
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95.6043 VOR FEDERAL AIRWAY V43

YOUNGSTOWN, OH VORTAC *3000 - GNSS MEA	ERIE, PA VORTAC	*5000
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95.6044 VOR FEDERAL AIRWAY V44

COLUMBIA, MO VOR/DME HODGS, MO FIX *2200 - MOCA	HODGS, MO FIX FORISTELL, MO VORTAC	2800 *2800
FORISTELL, MO VORTAC MOODS, IL FIX CENTRALIA, IL VORTAC FALMOUTH, KY VOR/DME YORK, KY VORTAC PARKERSBURG, WV VOR/DME BENDS, WV FIX MORGANTOWN, WV VOR/DME KEYER, WV FIX *4100 - MOCA	MOODS, IL FIX CENTRALIA, IL VORTAC SAMSVILLE, IL VOR/DME YORK, KY VORTAC PARKERSBURG, WV VOR/DME BENDS, WV FIX MORGANTOWN, WV VOR/DME KEYER, WV FIX MARTINSBURG, WV VORTAC	2600 2300 2400 3300 3300 3000 4000 5000 *5000
MARTINSBURG, WV VORTAC WOOLY, MD FIX BALTIMORE, MD VORTAC *1700 - MOCA	WOOLY, MD FIX BALTIMORE, MD VORTAC PALEO, MD FIX	3200 2600 *2200
PALEO, MD FIX *2000 - GNSS MEA	SPEAK, MD FIX	*13500
SPEAK, MD FIX *1500 - MOCA *2000 - GNSS MEA	SEA ISLE, NJ VORTAC	*7000
SEA ISLE, NJ VORTAC *7000 - MRA **1500 - MOCA **2000 - GNSS MEA	*KARRS, NJ FIX	**6000
KARRS, NJ FIX *6000 - MRA **1300 - MOCA **2000 - GNSS MEA	*GAMBY, NJ FIX	**7000
GAMBY, NJ FIX *6000 - MRA **1300 - MOCA **2000 - GNSS MEA	*SATES, NJ FIX	**5000

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95.6044 VOR FEDERAL AIRWAY V44 - CONTINUED

SATES, NJ FIX *1600 - MOCA *2000 - GNSS MEA	DEER PARK, NY VOR/DME	*5000
DEER PARK, NY VOR/DME *4000 - MRA	*NESSI, CT FIX	2000
NESSI, CT FIX	BRIDGEPORT, CT VOR/DME	2000
BRIDGEPORT, CT VOR/DME	PAWLING, NY VOR/DME	3000
PAWLING, NY VOR/DME *8000 - MCA ATHOS, NY FIX , N BND	*ATHOS, NY FIX	3100
ATHOS, NY FIX *3000 - GNSS MEA	GROUP, NY FIX	*8000
GROUP, NY FIX *6000 - MCA ALBANY, NY VORTAC , S BND **2800 - GNSS MEA	*ALBANY, NY VORTAC	**6000

95.6045 VOR FEDERAL AIRWAY V45

NEW BERN, NC VOR/DME	KINSTON, NC VORTAC	2500
KINSTON, NC VORTAC	WENDI, NC FIX	2000
WENDI, NC FIX	RALEIGH/DURHAM, NC VORTAC	2600
RALEIGH/DURHAM, NC VORTAC *2800 - MCA CHAPL, NC FIX , W BND **1900 - MOCA	*CHAPL, NC FIX	**2400
CHAPL, NC FIX	GREENSBORO, NC VORTAC	3100
GREENSBORO, NC VORTAC *3500 - MCA PROVE, NC FIX , NW BND	*PROVE, NC FIX	2700
PROVE, NC FIX *4800 - MCA FREON, NC FIX , NW BND	*FREON, NC FIX	4300
FREON, NC FIX	PULASKI, VA VORTAC	6200
PULASKI, VA VORTAC	BLUEFIELD, WV VOR/DME	6000
BLUEFIELD, WV VOR/DME *5500 - MOCA	CHARLESTON, WV VOR/DME	*6000
CHARLESTON, WV VOR/DME	HENDERSON, WV VORTAC	3100
HENDERSON, WV VORTAC *10000 - MCA BREMN, OH FIX , S BND **3000 - GNSS MEA	*BREMN, OH FIX	**10000
BREMN, OH FIX	APPLETON, OH VORTAC	3000
SAGINAW, MI VOR/DME	SEEKS, MI FIX	2200
SEEKS, MI FIX *2600 - MOCA	ALPENA, MI VORTAC	*3500
ALPENA, MI VORTAC	SAULT STE MARIE, MI VOR/DME	2900

95.6046 VOR FEDERAL AIRWAY V46

DEER PARK, NY VOR/DME	CALVERTON, NY VOR/DME	1900
CALVERTON, NY VOR/DME	HAMPTON, NY VORTAC	1900
HAMPTON, NY VORTAC #UNUSABLE	LIBBE, NY FIX	#
LIBBE, NY FIX *2000 - MOCA	CLAMY, MA FIX	*3000
CLAMY, MA FIX	NANTUCKET, MA VOR/DME	2000

95.6047 VOR FEDERAL AIRWAY V47

PINE BLUFF, AR VOR/DME *1800 - MOCA	GILMORE, AR VOR/DME	*4000
GILMORE, AR VOR/DME	DYERSBURG, TN VORTAC	2500
DYERSBURG, TN VORTAC	CUNNINGHAM, KY VOR/DME	2400
CUNNINGHAM, KY VOR/DME	WESON, KY FIX	2600
WESON, KY FIX	POCKET CITY, IN VORTAC	2200

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95.6047 VOR FEDERAL AIRWAY V47 - CONTINUED

CINCINNATI, KY VORTAC	MIZZA, OH FIX	2800
MIZZA, OH FIX	ROSEWOOD, OH VORTAC	3000
ROSEWOOD, OH VORTAC	FLAG CITY, OH VORTAC	3000

95.6048 VOR FEDERAL AIRWAY V48

OTTUMWA, IA VOR/DME	BURLINGTON, IA VOR/DME	2500
BURLINGTON, IA VOR/DME	PEORIA, IL VORTAC	2500
PEORIA, IL VORTAC	MAROC, IL FIX	*3000
*2400 - MOCA		
MAROC, IL FIX	PONTIAC, IL VOR/DME	2500

95.6049 VOR FEDERAL AIRWAY V49

VULCAN, AL VORTAC	*FOLSO, AL FIX	3100
*7000 - MRA		
FOLSO, AL FIX	MASHA, AL FIX	*3000
*2400 - MOCA		
MASHA, AL FIX	DECATUR, AL VOR/DME	*3000
*2200 - MOCA		
DECATUR, AL VOR/DME	ELKED, AL FIX	2500
ELKED, AL FIX	NASHVILLE, TN VORTAC	*3500
*2700 - MOCA		
NASHVILLE, TN VORTAC	TANDS, TN FIX	#*4000
*2300 - MOCA		
#BOWLING GREEN R-192 UNUSABLE USE NASHVILLE R-016		
TANDS, TN FIX	BOWLING GREEN, KY VORTAC	*4000
*2300 - MOCA		
BOWLING GREEN, KY VORTAC	MYSTIC, KY VOR	#2700
#BOWLING GREEN R-007 UNUSABLE USE MYSTIC R-190		

95.6050 VOR FEDERAL AIRWAY V50

HASTINGS, NE VOR/DME	PAWNEE CITY, NE VORTAC	4000
PAWNEE CITY, NE VORTAC	ST JOSEPH, MO VORTAC	4000
ST JOSEPH, MO VORTAC	KIRKSVILLE, MO VORTAC	3000
KIRKSVILLE, MO VORTAC	QUINCY, IL VORTAC	2700
QUINCY, IL VORTAC	SPINNER, IL VORTAC	*3000
*2100 - MOCA		
SPINNER, IL VORTAC	ADDERS, IL VORTAC	3000
ADDERS, IL VORTAC	TERRE HAUTE, IN VORTAC	2500
TERRE HAUTE, IN VORTAC	BRICKYARD, IN VORTAC	2700
BRICKYARD, IN VORTAC	DAYTON, OH VOR/DME	3000

95.6051 VOR FEDERAL AIRWAY V51

PAHOKEE, FL VOR/DME	*SHEDS, FL FIX	2000
*3000 - MRA		
SHEDS, FL FIX	TREASURE, FL VORTAC	*2000
*1400 - MOCA		
TREASURE, FL VORTAC	OVIDO, FL FIX	*4000
*2800 - MOCA		
OVIDO, FL FIX	ORMOND BEACH, FL VORTAC	3000
ORMOND BEACH, FL VORTAC	*BULLI, FL FIX	**2000
*3000 - MRA		
**1400 - MOCA		

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95.6051 VOR FEDERAL AIRWAY V51 - CONTINUED

BULLI, FL FIX	*ASTOR, FL FIX	**2000
*3000 - MRA		
**1400 - MOCA		
ASTOR, FL FIX	CRAIG, FL VORTAC	2100
CRAIG, FL VORTAC	ALMA, GA VORTAC	#*5000
*1700 - MOCA		
*4000 - GNSS MEA		
#ALMA R-144 NA BELOW 10000		
ALMA, GA VORTAC	DUBLIN, GA VORTAC	#*3000
*2000 - GNSS MEA		
#ALMA R-345 UNUSABLE, USE DUBLIN R-170		
DUBLIN, GA VORTAC	ATHENS, GA VOR/DME	*3000
*2200 - MOCA		
ATHENS, GA VOR/DME	IRMOS, GA FIX	3100
IRMOS, GA FIX	CORCE, GA FIX	3800
CORCE, GA FIX	TALLE, GA FIX	5300
TALLE, GA FIX	HARRIS, GA VORTAC	7000
HARRIS, GA VORTAC	ETOWA, TN FIX	7000
ETOWA, TN FIX	HINCH MOUNTAIN, TN VOR/DME	5000
HINCH MOUNTAIN, TN VOR/DME	LIVINGSTON, TN VOR/DME	5000
LIVINGSTON, TN VOR/DME	LOUISVILLE, KY VORTAC	3200
SHELBYVILLE, IN VOR/DME	OCKEL, IN FIX	*3000
*2900 - MOCA		
OCKEL, IN FIX	BOILER, IN VORTAC	*2500
*2100 - MOCA		
BOILER, IN VORTAC	CHICAGO HEIGHTS, IL VORTAC	2700

95.6052 VOR FEDERAL AIRWAY V52

DES MOINES, IA VORTAC	BUSSY, IA FIX	#*4500
*2400 - MOCA		
*2700 - GNSS MEA		
#DES MOINES R-105 UNUSABLE, USE OTTUMWA R-287		
BUSSY, IA FIX	OTTUMWA, IA VOR/DME	2700
OTTUMWA, IA VOR/DME	QUINCY, IL VORTAC	2600
QUINCY, IL VORTAC	*RIVRS, IL FIX	2600
*6000 - MRA		
RIVRS, IL FIX	ST LOUIS, MO VORTAC	2600
ST LOUIS, MO VORTAC	TROY, IL VORTAC	2400
TROY, IL VORTAC	CRATS, IL FIX	2600
CRATS, IL FIX	POCKET CITY, IN VORTAC	*4500
*2100 - MOCA		
POCKET CITY, IN VORTAC	*CENTRAL CITY, KY VORTAC	2300
*6900 - MCA CENTRAL CITY, KY VORTAC , SE BND		
CENTRAL CITY, KY VORTAC	*BOWLING GREEN, KY VORTAC	#**3000
*11000 - MCA BOWLING GREEN, KY VORTAC , SE BND		
**2400 - MOCA		
#BOWLING GREEN R-303 UNUSABLE USE CENTRAL CITY R-125		
BOWLING GREEN, KY VORTAC	LIVINGSTON, TN VOR/DME	11000

95.6053 VOR FEDERAL AIRWAY V53

CHARLESTON, SC VORTAC	COLUMBIA, SC VORTAC	2000
COLUMBIA, SC VORTAC	WILLS, SC FIX	4000
WILLS, SC FIX	SPARTANBURG, SC VORTAC	2700
SPARTANBURG, SC VORTAC	CARTT, SC FIX	*3000
*2300 - MOCA		
CARTT, SC FIX	SUGARLOAF MOUNTAIN, NC VORTAC	6000

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95.6053 VOR FEDERAL AIRWAY V53 - CONTINUED

SUGARLOAF MOUNTAIN, NC VORTAC	*BUSIC, NC FIX	8000
*9000 - MCA BUSIC, NC FIX , N BND		
BUSIC, NC FIX	*ROANS, TN FIX	**9000
*9000 - MCA ROANS, TN FIX , S BND		
**8200 - MOCA		
ROANS, TN FIX	HOLSTON MOUNTAIN, TN VORTAC	7000
HOLSTON MOUNTAIN, TN VORTAC	HAZARD, KY VOR/DME	6400
HAZARD, KY VOR/DME	LEXINGTON, KY VOR/DME	4000
LEXINGTON, KY VOR/DME	LOUISVILLE, KY VORTAC	2800
LOUISVILLE, KY VORTAC	HOUSE, IN FIX	*10000
*3000 - MOCA		
HOUSE, IN FIX	MOUTH, IN FIX	*2800
*2300 - MOCA		
MOUTH, IN FIX	BRICKYARD, IN VORTAC	2700

95.6054 VOR FEDERAL AIRWAY V54

WACO, TX VORTAC	CEDAR CREEK, TX VORTAC	2500
CEDAR CREEK, TX VORTAC	QUITMAN, TX VOR/DME	2500
QUITMAN, TX VOR/DME	TEXARKANA, AR VORTAC	2300
TEXARKANA, AR VORTAC	*WASHO, AR FIX	2200
*4000 - MRA		
WASHO, AR FIX	CANEY, AR FIX	*3500
*1800 - MOCA		
CANEY, AR FIX	MALVE, AR FIX	*3500
*1900 - MOCA		
MALVE, AR FIX	LITTLE ROCK, AR VORTAC	2000
LITTLE ROCK, AR VORTAC	MARVELL, AR VOR/DME	1900
MARVELL, AR VOR/DME	HOLLY SPRINGS, MS VORTAC	2200
HOLLY SPRINGS, MS VORTAC	MUSCLE SHOALS, AL VORTAC	3000
MUSCLE SHOALS, AL VORTAC	TANNE, AL FIX	2400
TANNE, AL FIX	ROCKET, AL VORTAC	2900
ROCKET, AL VORTAC	CHOO CHOO, TN VORTAC	4000
CHOO CHOO, TN VORTAC	*CRAND, GA FIX	3000
*4500 - MCA CRAND, GA FIX , E BND		
CRAND, GA FIX	MELLS, GA FIX	6000
MELLS, GA FIX	HARRIS, GA VORTAC	*6000
*5200 - MOCA		
HARRIS, GA VORTAC	DILLA, GA FIX	7500
DILLA, GA FIX	RESTS, SC FIX	*8000
*6800 - MOCA		
RESTS, SC FIX	CLEVA, SC FIX	5000
CLEVA, SC FIX	SPARTANBURG, SC VORTAC	*4000
*3300 - GNSS MEA		
SPARTANBURG, SC VORTAC	CHARLOTTE, NC VOR/DME	#4000
#CHARLOTTE R-081 UNUSABLE BELOW 15000		
CHARLOTTE, NC VOR/DME	LOCAS, NC FIX	3100
LOCAS, NC FIX	SANDHILLS, NC VORTAC	2500
SANDHILLS, NC VORTAC	*RAEFO, NC FIX	**6000
*6000 - MRA		
**2000 - MOCA		
**3000 - GNSS MEA		
RAEFO, NC FIX	FAYETTEVILLE, NC VOR/DME	*2800
*1900 - MOCA		
FAYETTEVILLE, NC VOR/DME	KINSTON, NC VORTAC	*2000
*1900 - MOCA		

FROM	TO	MEA
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95.6055 VOR FEDERAL AIRWAY V55

DAYTON, OH VOR/DME	FORT WAYNE, IN VORTAC	2800
FORT WAYNE, IN VORTAC	GOSHEN, IN VORTAC	2700
GOSHEN, IN VORTAC	GIPPER, MI VORTAC	3000
GIPPER, MI VORTAC	KEELER, MI VOR/DME	*4000
*2300 - MOCA		
KEELER, MI VOR/DME	PULLMAN, MI VOR/DME	4000
PULLMAN, MI VOR/DME	MUSKEGON, MI VORTAC	2500
MUSKEGON, MI VORTAC	WHALL, MI FIX	2400
WHALL, MI FIX	NEROE, WI FIX	*5000
*2400 - MOCA		
NEROE, WI FIX	GREEN BAY, WI VORTAC	3000
GREEN BAY, WI VORTAC	BIPID, WI FIX	3000
EAU CLAIRE, WI VORTAC	SIREN, WI VOR/DME	*5000
*2800 - MOCA		
*3000 - GNSS MEA		
PARK RAPIDS, MN VOR/DME	BETRA, MN FIX	*4500
*3200 - MOCA		
*3600 - GNSS MEA		
BETRA, MN FIX	GRAND FORKS, ND VOR/DME	*3300
*2400 - MOCA		
GRAND FORKS, ND VOR/DME	*BEHQY, ND FIX	**8000
*12000 - MRA		
**3600 - MOCA		
BEHQY, ND FIX	BISMARCK, ND VOR/DME	3900

95.6056 VOR FEDERAL AIRWAY V56

MERIDIAN, MS VORTAC	KEWANEE, MS VORTAC	2000
KEWANEE, MS VORTAC	MONTGOMERY, AL VORTAC	*5500
*2300 - MOCA		
MONTGOMERY, AL VORTAC	TUSKEGEE, AL VOR/DME	2000
TUSKEGEE, AL VOR/DME	MARVO, AL FIX	2100
MARVO, AL FIX	COLUMBUS, GA VORTAC	*2600
*2000 - MOCA		
COLUMBUS, GA VORTAC	*PRATZ, GA FIX	2500
*3000 - MRA		
PRATZ, GA FIX	MACON, GA VORTAC	#2500
#GNSS MEA		
MACON R-265 UNUSABLE GNSS REQUIRED		
MACON, GA VORTAC	MISTY, GA FIX	*6000
*2200 - MOCA		
MISTY, GA FIX	COLLIERS, SC VORTAC	2300
COLLIERS, SC VORTAC	COLUMBIA, SC VORTAC	3000
COLUMBIA, SC VORTAC	FLORENCE, SC VORTAC	2000
FLORENCE, SC VORTAC	FAYETTEVILLE, NC VOR/DME	2300
FAYETTEVILLE, NC VOR/DME	*ROZBO, NC FIX	2000
*5000 - MRA		
ROZBO, NC FIX	WALLO, NC FIX	2000
WALLO, NC FIX	KROVE, NC FIX	*3000
*2400 - MOCA		
KROVE, NC FIX	NEW BERN, NC VOR/DME	*2400
*1800 - MOCA		

95.6057 VOR FEDERAL AIRWAY V57

LEXINGTON, KY VOR/DME	FALMOUTH, KY VOR/DME	3000
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FROM	TO	MEA
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95.6058 VOR FEDERAL AIRWAY V58

GRACE, PA FIX *4000 - MRA	*EARED, PA FIX	3400
EARED, PA FIX *4100 - MOCA *5000 - GNSS MEA	PHILIPSBURG, PA VORTAC	*6000
PHILIPSBURG, PA VORTAC	WILLIAMSPORT, PA VOR/DME	4000
HELON, NY FIX	KINGSTON, NY VOR/DME	4000
KINGSTON, NY VOR/DME	HARTFORD, CT VOR/DME	3200
HARTFORD, CT VOR/DME	GROTON, CT VOR/DME	2500
GROTON, CT VOR/DME *1500 - MOCA	SANDY POINT, RI VOR/DME	*2000
SANDY POINT, RI VOR/DME	NANTUCKET, MA VOR/DME	2000

95.6059 VOR FEDERAL AIRWAY V59

PULASKI, VA VORTAC	BECKLEY, WV VOR/DME	6000
BECKLEY, WV VOR/DME *4000 - MRA **4300 - MOCA	*ITALY, WV FIX	**5000
ITALY, WV FIX *4300 - MOCA	WARDO, WV FIX	*5000
WARDO, WV FIX *3500 - MRA	*EDSOE, WV FIX	3000
EDSOE, WV FIX	PARKERSBURG, WV VOR/DME	3000
PARKERSBURG, WV VOR/DME	NEWCOMERSTOWN, OH VOR/DME	3000

95.6060 VOR FEDERAL AIRWAY V60

GALLUP, NM VORTAC *10000 - MCA CUBBA, NM FIX , W BND	*CUBBA, NM FIX	11000
CUBBA, NM FIX	ALBUQUERQUE, NM VORTAC	8600
ALBUQUERQUE, NM VORTAC	OTTO, NM VOR	10000
OTTO, NM VOR	FORT UNION, NM VORTAC	10000

95.6061 VOR FEDERAL AIRWAY V61

GRAND ISLAND, NE VOR/DME *3200 - MOCA	PAWNEE CITY, NE VORTAC	*4000
PAWNEE CITY, NE VORTAC	ROBINSON, KS VOR/DME	2800
ROBINSON, KS VOR/DME	BOWLRL, KS FIX	2600

95.6062 VOR FEDERAL AIRWAY V62

GALLUP, NM VORTAC	CABZO, NM FIX	11000
CABZO, NM FIX	ZIASE, NM FIX	10000
ZIASE, NM FIX	SANTA FE, NM VORTAC	9000
SANTA FE, NM VORTAC	ANTON CHICO, NM VORTAC	10000
ANTON CHICO, NM VORTAC	FLUTY, NM FIX	8000
FLUTY, NM FIX	TEXICO, TX VORTAC	6500
TEXICO, TX VORTAC	SPADE, TX FIX	5900
SPADE, TX FIX	LUBBOCK, TX VORTAC	5000
LUBBOCK, TX VORTAC *5000 - MOCA	ROTAN, TX FIX	*6000
ROTAN, TX FIX	ABILENE, TX VORTAC	
	SE BND	3700
	NW BND	6000

FROM	TO	MEA
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95.6062 VOR FEDERAL AIRWAY V62 - CONTINUED

ABILENE, TX VORTAC	FLECK, TX FIX	3300
FLECK, TX FIX	GEENI, TX FIX	*4000
*3500 - MOCA		
GEENI, TX FIX	GLEN ROSE, TX VORTAC	*3500
*3000 - MOCA		

95.6063 VOR FEDERAL AIRWAY V63

BOWIE, TX VORTAC	TEXOMA, OK VOR/DME	3000
TEXOMA, OK VOR/DME	MC ALESTER, OK VORTAC	2800
MC ALESTER, OK VORTAC	RAZORBACK, AR VORTAC	*4000
*3000 - MOCA		
RAZORBACK, AR VORTAC	GAMPS, AR FIX	3500
GAMPS, AR FIX	BILIE, MO FIX	*4000
*3200 - MOCA		
BILIE, MO FIX	SPRINGFIELD, MO VORTAC	3000
SPRINGFIELD, MO VORTAC	PLADD, MO FIX	3000
PLADD, MO FIX	BARTI, MO FIX	*6000
*2600 - MOCA		
BARTI, MO FIX	HALLSVILLE, MO VORTAC	3100
HALLSVILLE, MO VORTAC	QUINCY, IL VORTAC	2900
QUINCY, IL VORTAC	BURLINGTON, IA VOR/DME	2600
BURLINGTON, IA VOR/DME	MOLINE, IL VOR/DME	2600
MOLINE, IL VOR/DME	DAVENPORT, IA VORTAC	3000
DAVENPORT, IA VORTAC	*MIHAL, IL FIX	2700
*4000 - MRA		
MIHAL, IL FIX	ROCKFORD, IL VOR/DME	2700
ROCKFORD, IL VOR/DME	JANESVILLE, WI VOR/DME	2700
JANESVILLE, WI VOR/DME	*DEBOW, WI FIX	##*4000
*10000 - MRA		
**3000 - GNSS MEA		
#JANESVILLE R-044 UNUSABLE, USE BADGER R-226		
DEBOW, WI FIX	RASTT, WI FIX	*4000
*4000 - GNSS MEA		
RASTT, WI FIX	BADGER, WI VOR/DME	*3000
*3000 - GNSS MEA		
BADGER, WI VOR/DME	OSHKOSH, WI VORTAC	3000
WAUSAU, WI VORTAC	RHINELANDER, WI VOR/DME	##*4000
*4000 - GNSS MEA		
#WAUSAU R-005 UNUSABLE BYD 10NM		
RHINELANDER R185 UNUSABLE BYD 10NM		
#UNUSABLE		
RHINELANDER, WI VOR/DME	HOUGHTON, MI VOR/DME	3600

95.6064 VOR FEDERAL AIRWAY V64

LOS ANGELES, CA VORTAC	LIMBO, CA FIX	3000
LIMBO, CA FIX	*WILMA, CA FIX	3200
*2800 - MCA WILMA, CA FIX , W BND		
WILMA, CA FIX	SEAL BEACH, CA VORTAC	2300
SEAL BEACH, CA VORTAC	*TUSTI, CA FIX	3000
*6200 - MCA TUSTI, CA FIX , E BND		
TUSTI, CA FIX	COREL, CA FIX	
	W BND	6200
	E BND	8000
COREL, CA FIX	PERIS, CA FIX	
	W BND	8000
	E BND	11000
PERIS, CA FIX	HEMET, CA FIX	*11000

FROM	TO	MEA
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95.6064 VOR FEDERAL AIRWAY V64 - CONTINUED

*6700 - MOCA		
HEMET, CA FIX	HAPPE, CA FIX	*11000
*10200 - MOCA		
HAPPE, CA FIX	BALDI, CA FIX	10500
BALDI, CA FIX	CORLA, CA FIX	
	W BND	9700
	E BND	8000
CORLA, CA FIX	*THERMAL, CA VORTAC	
	W BND	8400
	E BND	6000
*7700 - MCA THERMAL, CA VORTAC , W BND		
THERMAL, CA VORTAC	BLYTHE, CA VORTAC	7000

95.6066 VOR FEDERAL AIRWAY V66

MISSION BAY, CA VORTAC	*RYAHH, CA FIX	
	E BND	7000
	W BND	4000
*6400 - MCA RYAHH, CA FIX , E BND		
RYAHH, CA FIX	BARET, CA FIX	
	E BND	*8400
	W BND	*7000
*6100 - MOCA		
BARET, CA FIX	*KUMBA, CA FIX	8400
*6700 - MCA KUMBA, CA FIX , W BND		
KUMBA, CA FIX	IMPERIAL, CA VORTAC	4300
IMPERIAL, CA VORTAC	BARD, CA VORTAC	3600
BARD, CA VORTAC	*MOHAK, AZ FIX	
	W BND	4000
	E BND	6000
*6000 - MCA MOHAK, AZ FIX , E BND		
MOHAK, AZ FIX	*JUDTH, AZ FIX	**6000
*6000 - MCA JUDTH, AZ FIX , W BND		
**4000 - MOCA		
JUDTH, AZ FIX	GILA BEND, AZ VORTAC	
	W BND	6000
	E BND	4000
GILA BEND, AZ VORTAC	FLIER, AZ FIX	6500
FLIER, AZ FIX	TUCSON, AZ VORTAC	*8000
*6700 - MOCA		
TUCSON, AZ VORTAC	*SULLI, AZ FIX	**8000
*9200 - MCA SULLI, AZ FIX , E BND		
**7200 - MOCA		
SULLI, AZ FIX	DOUGLAS, AZ VORTAC	10000
DOUGLAS, AZ VORTAC	ANIMA, NM FIX	*11000
*8700 - MOCA		
ANIMA, NM FIX	DARCE, NM FIX	9000
DARCE, NM FIX	COLUMBUS, NM VOR/DME	*9000
*8200 - MOCA		
COLUMBUS, NM VOR/DME	EL PASO, TX VORTAC	9000
EL PASO, TX VORTAC	HUDSPETH, TX VORTAC	7500
HUDSPETH, TX VORTAC	PECOS, TX VOR/DME	*9000
*8000 - MOCA		
PECOS, TX VOR/DME	MIDLAND, TX VORTAC	5000
MIDLAND, TX VORTAC	BYPAS, TX FIX	*5000
*4400 - MOCA		
BYPAS, TX FIX	*HYMAN, TX FIX	**6000
*5000 - MRA		
**4400 - MOCA		
HYMAN, TX FIX	TYEES, TX FIX	*7000
*4500 - MOCA		

FROM	TO	MEA
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95.6066 VOR FEDERAL AIRWAY V66 - CONTINUED

TYEES, TX FIX *4300 - MOCA	ABILENE, TX VORTAC	*7000
ABILENE, TX VORTAC	TRUSS, TX FIX	3500
TRUSS, TX FIX	MILLSAP, TX VORTAC	3700
CRIMSON, AL VORTAC *2000 - MOCA	BROOKWOOD, AL VORTAC	*2500
BROOKWOOD, AL VORTAC	LAGRANGE, GA VORTAC	3400
LAGRANGE, GA VORTAC	CANER, GA FIX	3500
CANER, GA FIX	GRANT, GA FIX	2800
GRANT, GA FIX *2500 - MOCA	SMARR, GA FIX	*4000
*2500 - GNSS MEA		
SMARR, GA FIX *2500 - MOCA	SINCA, GA FIX	*4500
*2500 - GNSS MEA		
SINCA, GA FIX *3500 - MRA **2000 - MOCA	*GLOSS, GA FIX	**3000
GLOSS, GA FIX *2200 - MOCA	MADDI, GA FIX	*3000
MADDI, GA FIX *2200 - MOCA	ATHENS, GA VOR/DME	*3000
ATHENS, GA VOR/DME *2200 - MOCA	GREENWOOD, SC VORTAC	*2500
GREENWOOD, SC VORTAC *2100 - MOCA	RICHE, SC FIX	*4000
*2500 - GNSS MEA		
RICHE, SC FIX *2300 - MOCA	SANDHILLS, NC VORTAC	*8000
*2500 - GNSS MEA		
SANDHILLS, NC VORTAC	RALEIGH/DURHAM, NC VORTAC	2500
RALEIGH/DURHAM, NC VORTAC	FRANKLIN, VA VORTAC	2600

95.6067 VOR FEDERAL AIRWAY V67

CHOO CHOO, TN VORTAC	SHELBYVILLE, TN VOR/DME	4000
CUNNINGHAM, KY VOR/DME	MARION, IL VOR/DME	2600
MARION, IL VOR/DME	CENTRALIA, IL VORTAC	2300
CENTRALIA, IL VORTAC	VANDALIA, IL VORTAC	2500
VANDALIA, IL VORTAC	SPINNER, IL VORTAC	2500
SPINNER, IL VORTAC *2200 - MOCA	BURLINGTON, IA VOR/DME	*2500
BURLINGTON, IA VOR/DME *2100 - MOCA	IOWA CITY, IA VOR/DME	*2600
IOWA CITY, IA VOR/DME	CEDAR RAPIDS, IA VOR/DME	2700
CEDAR RAPIDS, IA VOR/DME *3200 - MRA	*LYERS, IA FIX	2900
LYERS, IA FIX	WATERLOO, IA VOR/DME	2900
WATERLOO, IA VOR/DME	FOYDE, IA FIX	3000
FOYDE, IA FIX	ROCHESTER, MN VOR/DME	3500

95.6068 VOR FEDERAL AIRWAY V68

MONTROSE, CO VOR/DME	CONES, CO VOR/DME	12000
CONES, CO VOR/DME	DOVE CREEK, CO VORTAC	12000
DOVE CREEK, CO VORTAC	CORTEZ, CO VOR/DME	9800
CORTEZ, CO VOR/DME	PLATA, NM FIX	10600
PLATA, NM FIX	RATTLESNAKE, NM VORTAC	10000
RATTLESNAKE, NM VORTAC	OTINS, NM FIX	9000

FROM	TO	MEA
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95.6068 VOR FEDERAL AIRWAY V68 - CONTINUED

OTINS, NM FIX *10000 - MOCA	PEDRA, NM FIX	*11500
PEDRA, NM FIX *ALBUQUERQUE, NM VORTAC *10000 - MCA ALBUQUERQUE, NM VORTAC , SE BND	ALBUQUERQUE, NM VORTAC CORONA, NM VORTAC	9000 12000
CORONA, NM VORTAC HONDS, NM FIX	HONDS, NM FIX CHISUM, NM VORTAC NW BND SE BND	9000 9000 6500
CHISUM, NM VORTAC HAGER, NM FIX HOBBS, NM VORTAC ANEEL, TX FIX MIDLAND, TX VORTAC JOKES, TX FIX *4200 - MOCA	HAGER, NM FIX HOBBS, NM VORTAC ANEEL, TX FIX MIDLAND, TX VORTAC JOKES, TX FIX STEEP, TX FIX	6000 6500 5200 5000 4500 *5000
STEEP, TX FIX TANKR, TX FIX SAN ANGELO, TX VORTAC JUNCTION, TX VORTAC CENTER POINT, TX VORTAC SAN ANTONIO, TX VORTAC *5500 - MRA BRAUN, TX FIX MARCS, TX FIX *2000 - MOCA	TANKR, TX FIX SAN ANGELO, TX VORTAC JUNCTION, TX VORTAC CENTER POINT, TX VORTAC SAN ANTONIO, TX VORTAC *BRAUN, TX FIX MARCS, TX FIX CRAYS, TX FIX	4400 3700 4000 4000 4100 3100
CRAYS, TX FIX INDUSTRY, TX VORTAC SEALY, TX FIX	INDUSTRY, TX VORTAC SEALY, TX FIX HOBBY, TX VOR/DME	2600 2100 2000

95.6069 VOR FEDERAL AIRWAY V69

EL DORADO, AR VOR/DME PINE BLUFF, AR VOR/DME BILLI, AR FIX *6000 - MRA **1500 - MOCA	PINE BLUFF, AR VOR/DME BILLI, AR FIX *HILLE, AR FIX	2000 2000 **6000
HILLE, AR FIX *3000 - MOCA	WALNUT RIDGE, AR VORTAC	*4000
WALNUT RIDGE, AR VORTAC FARMINGTON, MO VORTAC *2500 - MOCA	FARMINGTON, MO VORTAC TROY, IL VORTAC	3000 *3000
TROY, IL VORTAC SPINNER, IL VORTAC *2300 - MOCA	SPINNER, IL VORTAC PONTIAC, IL VOR/DME	2500 *3000
PONTIAC, IL VOR/DME *2200 - MOCA	JOLIET, IL VOR/DME	*3000

95.6070 VOR FEDERAL AIRWAY V70

U.S./MEXICO BORDER *1600 - MOCA	BROWNSVILLE, TX VORTAC	*5000
BROWNSVILLE, TX VORTAC	RAYMO, TX FIX N BND S BND	*3800 *1600
*1600 - GNSS MEA RAYMO, TX FIX	JIMIE, TX FIX N BND S BND	*6000 *4000
*1600 - MOCA *2000 - GNSS MEA		

FROM	TO	MEA
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95.6070 VOR FEDERAL AIRWAY V70 - CONTINUED

JIMIE, TX FIX *1800 - MOCA *2000 - GNSS MEA	JETTY, TX FIX	*6000
JETTY, TX FIX	CORPUS CHRISTI, TX VORTAC N BND S BND	*2100 *3800
*2100 - GNSS MEA		
CORPUS CHRISTI, TX VORTAC	COPAN, TX FIX	1800
COPAN, TX FIX	BETZY, TX FIX	1700
BETZY, TX FIX	PALACIOS, TX VORTAC	2000
PALACIOS, TX VORTAC	SCHOLES, TX VOR/DME	2600
SCHOLES, TX VOR/DME	SABINE PASS, TX VOR/DME	2000
SABINE PASS, TX VOR/DME	LAKE CHARLES, LA VORTAC	1700
LAKE CHARLES, LA VORTAC	LAFAYETTE, LA VORTAC	1800
LAFAYETTE, LA VORTAC	*ROSEY, LA FIX	2100
*5000 - MRA		
ROSEY, LA FIX	FIGHTING TIGER, LA VORTAC	2100
FIGHTING TIGER, LA VORTAC	PICAYUNE, MS VOR/DME	2000
PICAYUNE, MS VOR/DME	GREENE COUNTY, MS VORTAC	2000
GREENE COUNTY, MS VORTAC	MONROEVILLE, AL VORTAC	2000
MONROEVILLE, AL VORTAC	CHAFF, AL FIX	2000
CHAFF, AL FIX	RUTEL, AL FIX	*2500
*1800 - MOCA		
RUTEL, AL FIX	CRENS, AL FIX	*4500
*1800 - MOCA		
CRENS, AL FIX	EUFULA, AL VORTAC	2400
EUFULA, AL VORTAC	VIENNA, GA VORTAC	2400
VIENNA, GA VORTAC	OCONE, GA FIX	*3000
*2100 - MOCA		
OCONE, GA FIX	MILEN, GA FIX	*3000
*1900 - MOCA		MAA - 9000
MILEN, GA FIX	ALLENDALE, SC VOR	*3000
*1800 - MOCA		
GRAND STRAND, SC VORTAC	WILMINGTON, NC VORTAC	#*3100
*3100 - GNSS MEA		
#WILMINGTON R-240 UNUSABLE		
WILMINGTON, NC VORTAC	BEULA, NC FIX	*8000
*1600 - MOCA		
*2000 - GNSS MEA		
BEULA, NC FIX	KINSTON, NC VORTAC	2000
KINSTON, NC VORTAC	PEARS, NC FIX	2500
PEARS, NC FIX	COFIELD, NC VORTAC	*3000
*2000 - MOCA		

95.6071 VOR FEDERAL AIRWAY V71

FIGHTING TIGER, LA VORTAC *1800 - MOCA	WRACK, LA FIX	*2200
WRACK, LA FIX *2200 - MOCA	NATCHEZ, MS VOR/DME	*3500
*2200 - GNSS MEA		
NATCHEZ, MS VOR/DME	MONROE, LA VORTAC	2000
MONROE, LA VORTAC	EL DORADO, AR VOR/DME	2200
EL DORADO, AR VOR/DME	SPARO, AR FIX	
	S BND	*2500
	N BND	*4000
*1800 - MOCA		
SPARO, AR FIX	CANEY, AR FIX	*4000
*1700 - MOCA		

FROM	TO	MEA
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95.6071 VOR FEDERAL AIRWAY V71 – CONTINUED

CANEY, AR FIX	HOT SPRINGS, AR VOR/DME	
	N BND	3000
	S BND	3500
HOT SPRINGS, AR VOR/DME	OLLAS, AR FIX	*3600
*3100 - MOCA		
OLLAS, AR FIX	*HAAWK, AR FIX	**4500
*10000 - MCA HAAWK, AR FIX , N BND		
**2500 - MOCA		
HAAWK, AR FIX	HARRISON, AR VOR/DME	*10000
*3700 - MOCA		
*4000 - GNSS MEA		
HARRISON, AR VOR/DME	REEDS, MO FIX	3300
REEDS, MO FIX	SPRINGFIELD, MO VORTAC	3000
SPRINGFIELD, MO VORTAC	*SHIRE, MO FIX	**3000
*4000 - MRA		
**2500 - MOCA		
SHIRE, MO FIX	BUTLER, MO VORTAC	*3000
*2500 - MOCA		
BUTLER, MO VORTAC	TOPEKA, KS VORTAC	3100
TOPEKA, KS VORTAC	PAWNEE CITY, NE VORTAC	*4000
*2800 - MOCA		
PAWNEE CITY, NE VORTAC	LINCOLN, NE VORTAC	3000
LINCOLN, NE VORTAC	DWELL, NE FIX	*3300
*2600 - MOCA		
DWELL, NE FIX	COLUMBUS, NE VOR/DME	*3500
*3000 - MOCA		
COLUMBUS, NE VOR/DME	O'NEILL, NE VORTAC	4000
O'NEILL, NE VORTAC	WINNER, SD VOR	4000
WINNER, SD VOR	PIERRE, SD VORTAC	4100
PIERRE, SD VORTAC	LINTN, ND FIX	*5500
*3600 - MOCA		
LINTN, ND FIX	BISMARCK, ND VOR/DME	
	S BND	5500
	N BND	3600
BISMARCK, ND VOR/DME	CENTR, ND FIX	
	W BND	5600
	E BND	4000
CENTR, ND FIX	WILLISTON, ND VOR/DME	*5600
*3900 - MOCA		

95.6072 VOR FEDERAL AIRWAY V72

RAZORBACK, AR VORTAC	EDUGE, AR FIX	3500
EDUGE, AR FIX	REEDS, MO FIX	*4000
*2900 - MOCA		
REEDS, MO FIX	DOGWOOD, MO VORTAC	*3400
*2900 - MOCA		
DOGWOOD, MO VORTAC	GOBEY, MO FIX	3400
GOBEY, MO FIX	MAPLES, MO VORTAC	3400
MAPLES, MO VORTAC	BUNKS, MO FIX	3000
BUNKS, MO FIX	FARMINGTON, MO VORTAC	3500
FARMINGTON, MO VORTAC	NIKEL, IL FIX	*3000
*2500 - MOCA		
NIKEL, IL FIX	CENTRALIA, IL VORTAC	2300
CENTRALIA, IL VORTAC	BIBLE GROVE, IL VORTAC	2600

FROM	TO	MEA
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95.6073 VOR FEDERAL AIRWAY V73

TULSA, OK VORTAC	FRAKS, OK FIX	3000
FRAKS, OK FIX	WICHITA, KS VORTAC	4000
WICHITA, KS VORTAC	HUTCHINSON, KS VOR/DME	3600
HUTCHINSON, KS VOR/DME	SALINA, KS VORTAC	3400

95.6074 VOR FEDERAL AIRWAY V74

GARDEN CITY, KS VORTAC	DODGE CITY, KS VORTAC	4600
DODGE CITY, KS VORTAC	*SAFER, KS FIX	4300
*4500 - MRA		
SAFER, KS FIX	ANTHONY, KS VORTAC	
	NW BND	4300
	SE BND	3600
ANTHONY, KS VORTAC	PIONEER, OK VORTAC	3000
PIONEER, OK VORTAC	MANON, OK FIX	2700
MANON, OK FIX	TULSA, OK VORTAC	2500
TULSA, OK VORTAC	OWETA, OK FIX	3200
OWETA, OK FIX	MALTS, OK FIX	*2800
*1900 - MOCA		
MALTS, OK FIX	FORT SMITH, AR VORTAC	3000
FORT SMITH, AR VORTAC	MAGGA, AR FIX	
	E BND	4500
	W BND	4000
MAGGA, AR FIX	DANIL, AR FIX	*4500
*4000 - MOCA		
DANIL, AR FIX	OLLAS, AR FIX	*4500
*2600 - MOCA		
OLLAS, AR FIX	MAUME, AR FIX	*4500
*2700 - MOCA		
MAUME, AR FIX	LITTLE ROCK, AR VORTAC	3500
LITTLE ROCK, AR VORTAC	PINE BLUFF, AR VOR/DME	2500
PINE BLUFF, AR VOR/DME	GREENVILLE, MS VOR/DME	2000
GREENVILLE, MS VOR/DME	MAGNOLIA, MS VORTAC	2000

95.6075 VOR FEDERAL AIRWAY V75

MORGANTOWN, WV VOR/DME	BELLAIRE, OH VOR/DME	4000
BELLAIRE, OH VOR/DME	ATWOO, OH FIX	*6000
*3000 - MOCA		
ATWOO, OH FIX	BRIGGS, OH VOR/DME	*4000
*3100 - MOCA		
*3100 - GNSS MEA		

95.6076 VOR FEDERAL AIRWAY V76

LUBBOCK, TX VORTAC	*WELCH, TX FIX	5200
*7000 - MRA		
WELCH, TX FIX	PATTS, TX FIX	*6100
*5200 - MOCA		
PATTS, TX FIX	BIG SPRING, TX VORTAC	4700
BIG SPRING, TX VORTAC	*HYMAN, TX FIX	4500
*5000 - MRA		
HYMAN, TX FIX	*WATOR, TX FIX	4500
*7000 - MRA		
WATOR, TX FIX	SAN ANGELO, TX VORTAC	4500
SAN ANGELO, TX VORTAC	EVILE, TX FIX	3700
EVILE, TX FIX	BREDY, TX FIX	3800
BREDY, TX FIX	LLANO, TX VORTAC	3500
LLANO, TX VORTAC	CENTEX, TX VORTAC	3200
CENTEX, TX VORTAC	MOUZE, TX FIX	2200
MOUZE, TX FIX	INDUSTRY, TX VORTAC	2100
INDUSTRY, TX VORTAC	SEALY, TX FIX	2100
SEALY, TX FIX	HOBBY, TX VOR/DME	2000

FROM	TO	MEA
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95.6077 VOR FEDERAL AIRWAY V77

SAN ANGELO, TX VORTAC	ABILENE, TX VORTAC	4000
ABILENE, TX VORTAC	WICHITA FALLS, TX VORTAC	*3900
*3400 - MOCA		
WICHITA FALLS, TX VORTAC	FOYER, OK FIX	2900
FOYER, OK FIX	*FLECH, OK FIX	3000
*4900 - MRA		
FLECH, OK FIX	*NEADS, OK FIX	**3800
*5400 - MRA		
**2800 - MOCA		
NEADS, OK FIX	WILL ROGERS, OK VORTAC	3000
WILL ROGERS, OK VORTAC	CASTN, OK FIX	3500
CASTN, OK FIX	WENDY, OK FIX	4000
WENDY, OK FIX	PIONEER, OK VORTAC	2900
PIONEER, OK VORTAC	WICHITA, KS VORTAC	3600
WICHITA, KS VORTAC	*FLOSS, KS FIX	3600
*5000 - MRA		
FLOSS, KS FIX	HEYDN, KS FIX	*5000
*2900 - MOCA		
HEYDN, KS FIX	TOPEKA, KS VORTAC	3700
TOPEKA, KS VORTAC	ST JOSEPH, MO VORTAC	3000
ST JOSEPH, MO VORTAC	LAMONI, IA VOR/DME	2900
LAMONI, IA VOR/DME	*WIVEY, IA FIX	3000
*4300 - MRA		
WIVEY, IA FIX	DES MOINES, IA VORTAC	3000
DES MOINES, IA VORTAC	*MIXIN, IA FIX	3100
*5000 - MRA		
MIXIN, IA FIX	NEWTON, IA VOR/DME	3000
NEWTON, IA VOR/DME	WATERLOO, IA VOR/DME	2800
WATERLOO, IA VOR/DME	WAUKON, IA VOR/DME	*3000
*2800 - MOCA		

95.6078 VOR FEDERAL AIRWAY V78

HURON, SD VORTAC	WATERTOWN, SD VORTAC	*3700
*3100 - MOCA		
WATERTOWN, SD VORTAC	CLAPS, MN FIX	*5500
*3300 - MOCA		
CLAPS, MN FIX	DARWIN, MN VORTAC	3000
DARWIN, MN VORTAC	GOPHER, MN VORTAC	3000
GOPHER, MN VORTAC	EAU CLAIRE, WI VORTAC	3400
EAU CLAIRE, WI VORTAC	RHINELANDER, WI VOR/DME	3700
RHINELANDER, WI VOR/DME	IRON MOUNTAIN, MI VOR/DME	4400
IRON MOUNTAIN, MI VOR/DME	VUKFI, MI FIX	3100
VUKFI, MI FIX	ESCANABA, MI VOR/DME	*3000
*2200 - MOCA		
ESCANABA, MI VOR/DME	SCHOOLCRAFT COUNTY, MI	2500
	VOR/DME	
SCHOOLCRAFT COUNTY, MI	PELLSTON, MI VORTAC	2600
VOR/DME		
PELLSTON, MI VORTAC	ALPENA, MI VORTAC	2700
ALPENA, MI VORTAC	*ZABLE, MI FIX	3000
*5000 - MCA ZABLE, MI FIX, S BND		
ZABLE, MI FIX	BANJO, MI FIX	*5000
*2900 - MOCA		
BANJO, MI FIX	BENNY, MI FIX	*3000
*2300 - MOCA		
BENNY, MI FIX	SAGINAW, MI VOR/DME	2400

FROM	TO	MEA
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95.6079 VOR FEDERAL AIRWAY V79

HASTINGS, NE VOR/DME	LINCOLN, NE VORTAC	4000
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95.6080 VOR FEDERAL AIRWAY V80

AKRON, CO VOR/DME	HOLYO, CO FIX	6400
HOLYO, CO FIX	NORTH PLATTE, NE VOR/DME	*6500
*5000 - MOCA		
NORTH PLATTE, NE VOR/DME	O'NEILL, NE VORTAC	*5400
*4400 - MOCA		
O'NEILL, NE VORTAC	TYNDA, SD FIX	*4000
*3500 - MOCA		
TYNDA, SD FIX	DOLTS, SD FIX	*4000
*3200 - MOCA		
DOLTS, SD FIX	SIOUX FALLS, SD VORTAC	3400

95.6081 VOR FEDERAL AIRWAY V81

U.S. MEXICAN BORDER	MARFA, TX VOR/DME	10000
MARFA, TX VOR/DME	FORT STOCKTON, TX VORTAC	9000
FORT STOCKTON, TX VORTAC	MIDLAND, TX VORTAC	4500
MIDLAND, TX VORTAC	PATTS, TX FIX	4500
PATTS, TX FIX	*WELCH, TX FIX	**6100
*7000 - MRA		
**5200 - MOCA		
WELCH, TX FIX	LUBBOCK, TX VORTAC	5200
LUBBOCK, TX VORTAC	PLAINVIEW, TX VOR/DME	5000
PLAINVIEW, TX VOR/DME	*YOCAN, TX FIX	*5400
*6500 - MRA		
**4900 - MOCA		
YOCAN, TX FIX	PANHANDLE, TX VORTAC	5400
PANHANDLE, TX VORTAC	LANTT, TX FIX	6100
LANTT, TX FIX	EXELL, TX FIX	5400
EXELL, TX FIX	DALHART, TX VORTAC	5900
DALHART, TX VORTAC	TOBE, CO VOR/DME	8800
TOBE, CO VOR/DME	PUEBLO, CO VORTAC	7700
PUEBLO, CO VORTAC	*BLACK FOREST, CO VOR/DME	9500
*10000 - MCA BLACK FOREST, CO VOR/DME, N BND		
BLACK FOREST, CO VOR/DME	HOHUM, CO FIX	#*10000
*10000 - GNSS MEA		
#BLACK FOREST R-330 UNUSABLE		
HOHUM, CO FIX	SIGNE, CO FIX	9200
SIGNE, CO FIX	JEFFCO, CO VOR/DME	*9200
*8600 - MOCA		
JEFFCO, CO VOR/DME	WISER, CO FIX	8000
WISER, CO FIX	CHEYENNE, WY VORTAC	9000
CHEYENNE, WY VORTAC	SCOTTSBLUFF, NE VORTAC	8000
SCOTTSBLUFF, NE VORTAC	TOADSTOOL, NE VOR/DME	7000

95.6082 VOR FEDERAL AIRWAY V82

BAUDETTE, MN VOR/DME	BLUOX, MN FIX	*7000
*3400 - MOCA		
*3500 - GNSS MEA		
GOPHER, MN VORTAC	FARMINGTON, MN VORTAC	*3500
*2700 - MOCA		
FARMINGTON, MN VORTAC	*CORDY, MN FIX	3000
*4000 - MRA		

FROM	TO	MEA
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95.6082 VOR FEDERAL AIRWAY V82 - CONTINUED

CORDY, MN FIX	ROCHESTER, MN VOR/DME	3000
ROCHESTER, MN VOR/DME	NODINE, MN VORTAC	3000
NODINE, MN VORTAC	DELLS, WI VORTAC	3000

95.6083 VOR FEDERAL AIRWAY V83

CARLSBAD, NM VORTAC	*NELON, NM FIX	5900
*7000 - MRA		
NELON, NM FIX	CHISUM, NM VORTAC	5900
CHISUM, NM VORTAC	HONDS, NM FIX	
	NW BND	9000
	SE BND	6500
HONDS, NM FIX	CORONA, NM VORTAC	9000
CORONA, NM VORTAC	OTTO, NM VOR	9000
OTTO, NM VOR	*LACRO, NM FIX	9000
*9000 - MRA		
LACRO, NM FIX	SANTA FE, NM VORTAC	9000
SANTA FE, NM VORTAC	NAMBE, NM FIX	
	N BND	11000
	S BND	9000
NAMBE, NM FIX	TAOS, NM VORTAC	11000
TAOS, NM VORTAC	*ALAMOSA, CO VORTAC	11600
*10400 - MCA ALAMOSA, CO VORTAC	S BND	
ALAMOSA, CO VORTAC	BLOKE, CO FIX	
	E BND	14000
	W BND	10400
BLOKE, CO FIX	*GOSIP, CO FIX	14000
*14000 - MCA GOSIP, CO FIX	SW BND	
GOSIP, CO FIX	PUEBLO, CO VORTAC	8700
PUEBLO, CO VORTAC	DRAKE, CO FIX	7600
DRAKE, CO FIX	BLACK FOREST, CO VOR/DME	9000

95.6084 VOR FEDERAL AIRWAY V84

NORTHBROOK, IL VOR/DME	*KUBBS, IL FIX	**2500
*4000 - MRA		
**1900 - MOCA		
KUBBS, IL FIX	*STORY, IL FIX	**2500
*3500 - MRA		
**1900 - MOCA		
STORY, IL FIX	PIVOT, MI FIX	*2500
*1900 - MOCA		
PIVOT, MI FIX	*JYBEE, MI FIX	**4000
*4000 - MRA		
**1900 - MOCA		
JYBEE, MI FIX	PULLMAN, MI VOR/DME	*4000
*2200 - MOCA		
BUFFALO, NY VOR/DME	GENESEO, NY VOR/DME	#4000
#BUF R-106 UNUSABLE.		
GENESEO, NY VOR/DME	BEEPS, NY FIX	*4000
*3300 - MOCA		
BEEPS, NY FIX	SYRACUSE, NY VORTAC	*3500
*2600 - MOCA		

FROM	TO	MEA
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95.6085 VOR FEDERAL AIRWAY V85

FALCON, CO VORTAC	*HYGEN, CO FIX	8000
*11500 - MCA HYGEN, CO FIX , NW BND		
HYGEN, CO FIX	*ALLAN, CO FIX	***1350
0		
*16000 - MRA		
*15400 - MCA ALLAN, CO FIX , NW BND		
**12900 - MOCA		
#MTA V85 NW TO V361 SW 15800		
MTA V85 SE TO V361 SW 16500		
MTA V85 NW TO V361 NE 15800		
ALLAN, CO FIX	LARAMIE, WY VOR/DME	16000
LARAMIE, WY VOR/DME	MEDICINE BOW, WY VOR/DME	9400
MEDICINE BOW, WY VOR/DME	MULTI, WY FIX	10800
MULTI, WY FIX	MUDDY MOUNTAIN, WY VOR/DME	
	N BND	8000
	S BND	10800
MUDDY MOUNTAIN, WY VOR/DME	RIVERTON, WY VOR/DME	8500
RIVERTON, WY VOR/DME	BOYSEN RESERVOIR, WY VOR/DME	9600
BOYSEN RESERVOIR, WY VOR/DME	CODY, WY VOR/DME	9600
CODY, WY VOR/DME	EDDAR, MT FIX	8400
EDDAR, MT FIX	BILLINGS, MT VORTAC	
	S BND	8400
	N BND	7000

95.6086 VOR FEDERAL AIRWAY V86

MISSOULA, MT VOR/DME	COPPERTOWN, MT VOR/DME	*13000
*11300 - MOCA		
*12000 - GNSS MEA		
COPPERTOWN, MT VOR/DME	*WHITEHALL, MT VOR/DME	10500
*9100 - MCA WHITEHALL, MT VOR/DME , W BND		
WHITEHALL, MT VOR/DME	*BOZEMAN, MT VOR/DME	8500
*10200 - MCA BOZEMAN, MT VOR/DME , SE BND		
BOZEMAN, MT VOR/DME	LIVINGSTON, MT VOR/DME	10900
LIVINGSTON, MT VOR/DME	REEPO, MT FIX	9700
REEPO, MT FIX	COLUS, MT FIX	
	W BND	9700
	E BND	7000
COLUS, MT FIX	BILLINGS, MT VORTAC	
	W BND	9700
	E BND	6400
BILLINGS, MT VORTAC	KRONA, MT FIX	
	NW BND	6200
	SE BND	8000
KRONA, MT FIX	SHERIDAN, WY VOR/DME	8000
SHERIDAN, WY VOR/DME	WETON, WY FIX	***10900
*7000 - MOCA		
*7000 - GNSS MEA		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
WETON, WY FIX	*KOCYE, WY FIX	**13000
*15000 - MRA		
**7000 - MOCA		
**7000 - GNSS MEA		
KOCYE, WY FIX	KARAS, WY FIX	*13000
*8600 - MOCA		
*9000 - GNSS MEA		
KARAS, WY FIX	*PACTO, SD FIX	**11100
*9700 - MRA		
**9400 - MOCA		
**10000 - GNSS MEA		

FROM	TO	MEA
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95.6086 VOR FEDERAL AIRWAY V86 - CONTINUED

PACTO, SD FIX	RAPID CITY, SD VORTAC	
	E BND	*8000
	W BND	*9700
*7100 - MOCA		

95.6087 VOR FEDERAL AIRWAY V87

PANOCHE, CA VORTAC	SALINAS, CA VORTAC	6200
SALINAS, CA VORTAC	SANTY, CA FIX	*5000
*4000 - MOCA		
SANTY, CA FIX	WOODSIDE, CA VOR/DME	5100
WOODSIDE, CA VOR/DME	SAN FRANCISCO, CA VOR/DME	4700
SAN FRANCISCO, CA VOR/DME	SCAGGS ISLAND, CA VORTAC	4000

95.6088 VOR FEDERAL AIRWAY V88

TULSA, OK VORTAC	VINTA, OK FIX	2700
VINTA, OK FIX	NARCI, OK FIX	*4500
*2300 - MOCA		
*4000 - GNSS MEA		
NARCI, OK FIX	*WACCO, MO FIX	**6200
*6200 - MCA WACCO, MO FIX , SW BND		
**3100 - MOCA		
**4000 - GNSS MEA		
WACCO, MO FIX	*QUALM, MO FIX	**3700
*3700 - MCA QUALM, MO FIX , W BND		
**3000 - MOCA		
QUALM, MO FIX	SPRINGFIELD, MO VORTAC	3000
SPRINGFIELD, MO VORTAC	VICHY, MO VOR/DME	3100
VICHY, MO VOR/DME	STEER, MO FIX	*3000
*2300 - MOCA		
STEER, MO FIX	TROY, IL VORTAC	2700

95.6089 VOR FEDERAL AIRWAY V89

GILL, CO VOR/DME	HAMER, WY FIX	8000
HAMER, WY FIX	CHEYENNE, WY VORTAC	8500
CHEYENNE, WY VORTAC	LITER, WY FIX	8300
LITER, WY FIX	TOADSTOOL, NE VOR/DME	7800

95.6091 VOR FEDERAL AIRWAY V91

SARDI, NY FIX	CALVERTON, NY VOR/DME	*2500
*1900 - MOCA		
CALVERTON, NY VOR/DME	*NESSI, CT FIX	2000
*4000 - MRA		
NESSI, CT FIX	BRIDGEPORT, CT VOR/DME	2000
BRIDGEPORT, CT VOR/DME	ALBANY, NY VORTAC	*6000
*4100 - MOCA		
ALBANY, NY VORTAC	GLENS FALLS, NY VORTAC	*7000
*5000 - GNSS MEA		
GLENS FALLS, NY VORTAC	*ENSON, VT FIX	**10000
*10000 - MCA ENSON, VT FIX , SW BND		
**5000 - GNSS MEA		

FROM	TO	MEA
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95.6091 VOR FEDERAL AIRWAY V91 - CONTINUED

ENSON, VT FIX *2800 - MOCA	WEIGH, VT FIX	*4000
WEIGH, VT FIX	BURLINGTON, VT VOR/DME N BND S BND	3000 4000

95.6092 VOR FEDERAL AIRWAY V92

CHICAGO HEIGHTS, IL VORTAC	HALIE, IN FIX	2600
HALIE, IN FIX *2300 - MOCA	INKEN, IN FIX	*4000
INKEN, IN FIX	GOSHEN, IN VORTAC	2600
NEWCOMERSTOWN, OH VOR/DME	BELLAIRE, OH VOR/DME	3000
BELLAIRE, OH VOR/DME *5000 - MCA GALLS, PA FIX , E BND	*GALLS, PA FIX	3600
GALLS, PA FIX	GRANTSVILLE, MD VOR/DME	5500
GRANTSVILLE, MD VOR/DME	KEYER, WV FIX	5500
KEYER, WV FIX	ARMEL, VA VOR/DME	5000

95.6093 VOR FEDERAL AIRWAY V93

PATUXENT, MD VORTAC *10000 - MRA **1700 - MOCA	*GRACO, MD FIX	**2500
GRACO, MD FIX *1600 - MOCA	PALEO, MD FIX	*10000
PALEO, MD FIX *1700 - MOCA	BALTIMORE, MD VORTAC	*2200
BALTIMORE, MD VORTAC	VINNY, PA FIX	3000
VINNY, PA FIX *10000 - MRA **4500 - GNSS MEA	*ROAST, PA FIX	**9000
ROAST, PA FIX	LANCASTER, PA VOR/DME SW BND NE BND	*9000 *4500
*2600 - MOCA *4500 - GNSS MEA		
LANCASTER, PA VOR/DME	HAILS, PA FIX	3400
HAILS, PA FIX	SNOWY, PA FIX	4000
SNOWY, PA FIX	LYTEL, PA FIX	4000
LYTEL, PA FIX	WILKES-BARRE, PA VORTAC	4000
WILKES-BARRE, PA VORTAC	LAAYK, PA FIX NE BND SW BND	*5000 *4000
*4000 - MOCA		
HELON, NY FIX	KINGSTON, NY VOR/DME	4000
KINGSTON, NY VOR/DME	PAWLING, NY VOR/DME	3000
PAWLING, NY VOR/DME	CHESTER, MA VOR/DME	4000
CHESTER, MA VOR/DME *3500 - GNSS MEA	KEENE, NH VORTAC	*4000
KEENE, NH VORTAC	CONCORD, NH VOR/DME	5000
CONCORD, NH VOR/DME	KENNEBUNK, ME VOR/DME	3000
KENNEBUNK, ME VOR/DME *1600 - MOCA	BRNNS, ME FIX	*3000
BRNNS, ME FIX	BANGOR, ME VORTAC	3000

FROM	TO	MEA
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95.6094 VOR FEDERAL AIRWAY V94

BLYTHE, CA VORTAC *9000 - MRA	*VICKO, AZ FIX	6000
VICKO, AZ FIX *5200 - MOCA	GILA BEND, AZ VORTAC	*9000
GILA BEND, AZ VORTAC *8000 - MRA	*POTER, AZ FIX	5000
POTER, AZ FIX	STANFIELD, AZ VORTAC	5000
STANFIELD, AZ VORTAC *5500 - MCA TOTEC, AZ FIX , E BND **4300 - MOCA	*TOTEC, AZ FIX	**5000
TOTEC, AZ FIX	CROME, AZ FIX E BND W BND	8000 6500
CROME, AZ FIX	SAN SIMON, AZ VORTAC	10000
SAN SIMON, AZ VORTAC *8100 - MOCA	DEMING, NM VORTAC	*9000
DEMING, NM VORTAC *10000 - MRA **7700 - MOCA	*MOLLY, NM FIX	**9000
MOLLY, NM FIX	NEWMAN, TX VORTAC	9000
NEWMAN, TX VORTAC	SALT FLAT, TX VORTAC	8800
SALT FLAT, TX VORTAC	DILLI, TX FIX	8000
DILLI, TX FIX *7500 - MOCA	CAVRN, TX FIX	*10000
CAVRN, TX FIX *5300 - MOCA	WINK, TX VORTAC	*10000
WINK, TX VORTAC	YOGSU, TX FIX	5500
YOGSU, TX FIX	MIDLAND, TX VORTAC	5000
MIDLAND, TX VORTAC *4400 - MOCA	BYPAS, TX FIX	*5000
BYPAS, TX FIX *5000 - MRA **4400 - MOCA	*HYMAN, TX FIX	**6000
HYMAN, TX FIX *4200 - MOCA	TUSCOLA, TX VOR/DME	*7500
TUSCOLA, TX VOR/DME	GEENI, TX FIX	4000
GEENI, TX FIX *3000 - MOCA	GLEN ROSE, TX VORTAC	*3500
GLEN ROSE, TX VORTAC *2200 - MOCA	CEDAR CREEK, TX VORTAC	*3000
CEDAR CREEK, TX VORTAC	GREGG COUNTY, TX VORTAC	2500
GREGG COUNTY, TX VORTAC	ELM GROVE, LA VORTAC	2000
ELM GROVE, LA VORTAC *3000 - MRA	*WETER, LA FIX	2400
WETER, LA FIX *1800 - MOCA	MONROE, LA VORTAC	*2400
MONROE, LA VORTAC	GREENVILLE, MS VOR/DME	2100
GREENVILLE, MS VOR/DME *2100 - MOCA	HOLLY SPRINGS, MS VORTAC	*3000

95.6095 VOR FEDERAL AIRWAY V95

GILA BEND, AZ VORTAC *8000 - MRA	*POTER, AZ FIX	5000
POTER, AZ FIX	PHOENIX, AZ VORTAC	8000
PHOENIX, AZ VORTAC	WINSLOW, AZ VORTAC	10000
WINSLOW, AZ VORTAC	*BUTTE, AZ FIX NE BND SW BND	11000 8700
*9600 - MRA		

FROM	TO	MEA
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95.6095 VOR FEDERAL AIRWAY V95 - CONTINUED

BUTTE, AZ FIX	CASTI, AZ FIX	
	NE BND	11000
	SW BND	8700
CASTI, AZ FIX	DERMA, NM FIX	*13000
*11400 - MOCA		
DERMA, NM FIX	RATTLESNAKE, NM VORTAC	
	E BND	8300
	W BND	13000
RATTLESNAKE, NM VORTAC	*DURANGO, CO VOR/DME	9700
*13200 - MCA DURANGO, CO VOR/DME, N BND		
DURANGO, CO VOR/DME	ZEANS, CO FIX	
	S BND	12300
	N BND	16500
ZEANS, CO FIX	LAZON, CO FIX	16500
LAZON, CO FIX	POWES, CO FIX	
	N BND	15000
	S BND	16500
POWES, CO FIX	BLUE MESA, CO VOR/DME	
	S BND	16500
	N BND	12800
BLUE MESA, CO VOR/DME	ROMLY, CO FIX	
	E BND	17000
	W BND	12000
ROMLY, CO FIX	*HOHUM, CO FIX	**17000
*13100 - MCA HOHUM, CO FIX, S BND		
**16200 - MOCA		
HOHUM, CO FIX	FALCON, CO VORTAC	9000

95.6096 VOR FEDERAL AIRWAY V96

BRICKYARD, IN VORTAC	KOKOMO, IN VORTAC	2700
KOKOMO, IN VORTAC	FORT WAYNE, IN VORTAC	2600
FORT WAYNE, IN VORTAC	TWERP, OH FIX	*5000
*2300 - MOCA		

95.6097 VOR FEDERAL AIRWAY V97

DOLPHIN, FL VORTAC	LA BELLE, FL VORTAC	*3000
*1500 - MOCA		
LA BELLE, FL VORTAC	ST PETERSBURG, FL VORTAC	2000
ST PETERSBURG, FL VORTAC	DARBS, FL FIX	2000
DARBS, FL FIX	PLYER, FL FIX	*6000
*4000 - GNSS MEA		
PLYER, FL FIX	CLAMP, FL FIX	*7000
*1400 - MOCA		
*4000 - GNSS MEA		
CLAMP, FL FIX	HEVVN, FL FIX	*6000
*1400 - MOCA		
*4000 - GNSS MEA		
HEVVN, FL FIX	ADDAX, FL FIX	*3000
*1400 - MOCA		
*2000 - GNSS MEA		
ADDAX, FL FIX	SEMINOLE, FL VORTAC	2000
SEMINOLE, FL VORTAC	PECAN, GA VOR/DME	2100
PECAN, GA VOR/DME	AMAPO, GA FIX	*2300
*1900 - MOCA		

FROM	TO	MEA
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95.6097 VOR FEDERAL AIRWAY V97 - CONTINUED

AMAPO, GA FIX *3000 - MRA *4000 - MCA PRATZ, GA FIX , N BND **2300 - MOCA	*PRATZ, GA FIX	**3000
PRATZ, GA FIX *2700 - MOCA *3000 - GNSS MEA	OLISY, GA FIX	*4000
OLISY, GA FIX *2400 - MOCA	ATLANTA, GA VORTAC	*3000
ATLANTA, GA VORTAC *3300 - MOCA	BAPPY, GA FIX	*4000
BAPPY, GA FIX NELLO, GA FIX *5800 - GNSS MEA	NELLO, GA FIX MELLS, GA FIX	5000 *10000
MELLS, GA FIX *6600 - MCA HINDE, TN FIX , S BND	*HINDE, TN FIX	7400
HINDE, TN FIX TALLA, TN FIX VOLUNTEER, TN VORTAC NOISE, TN FIX *4200 - MOCA	TALLA, TN FIX VOLUNTEER, TN VORTAC NOISE, TN FIX LONDON, KY VOR/DME	6600 4200 3800 *5000
LONDON, KY VOR/DME *2900 - MOCA	REBEL, KY FIX	*3400
REBEL, KY FIX LEXINGTON, KY VOR/DME DARKS, KY FIX CINCINNATI, KY VORTAC *2400 - MOCA	LEXINGTON, KY VOR/DME DARKS, KY FIX CINCINNATI, KY VORTAC SHELBYVILLE, IN VOR/DME	2800 3000 2700 *2800
SHELBYVILLE, IN VOR/DME *2900 - MOCA	OCKEL, IN FIX	*3000
OCKEL, IN FIX *2100 - MOCA	BOILER, IN VORTAC	*2500
BOILER, IN VORTAC CHICAGO HEIGHTS, IL VORTAC KRENA, IL FIX JANESVILLE, WI VOR/DME THEBO, WI FIX *2800 - MOCA	CHICAGO HEIGHTS, IL VORTAC NILES, IL FIX JANESVILLE, WI VOR/DME THEBO, WI FIX LONE ROCK, WI VOR/DME	2700 3500 2900 3000 *3400
LONE ROCK, WI VOR/DME WEBYE, WI FIX NODINE, MN VORTAC PEGGS, MN FIX	WEBYE, WI FIX NODINE, MN VORTAC PEGGS, MN FIX GOPHER, MN VORTAC	3000 3100 3000 3400

95.6099 VOR FEDERAL AIRWAY V99

LA GUARDIA, NY VOR/DME *1700 - MOCA	OUTTE, CT FIX	*4000
OUTTE, CT FIX *2600 - MOCA	SORRY, CT FIX	*4000
SORRY, CT FIX	HARTFORD, CT VOR/DME	3000

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95.6100 VOR FEDERAL AIRWAY V100

MEDICINE BOW, WY VOR/DME	SCOTTSBLUFF, NE VORTAC	9500
SCOTTSBLUFF, NE VORTAC	ALLIANCE, NE VOR/DME	6300
ALLIANCE, NE VOR/DME	AINSWORTH, NE VOR/DME	*7500
*5600 - MOCA		
AINSWORTH, NE VOR/DME	O'NEILL, NE VORTAC	4500
O'NEILL, NE VORTAC	SIoux CITY, IA VORTAC	3700
SIoux CITY, IA VORTAC	FORT DODGE, IA VORTAC	3000
FORT DODGE, IA VORTAC	WATERLOO, IA VOR/DME	3000
WATERLOO, IA VOR/DME	DUBUQUE, IA VORTAC	2900
DUBUQUE, IA VORTAC	ROCKFORD, IL VOR/DME	2900
ROCKFORD, IL VOR/DME	KRENA, IL FIX	2800
KRENA, IL FIX	FARMM, IL FIX	2900
FARMM, IL FIX	NORTHBROOK, IL VOR/DME	2700
NORTHBROOK, IL VOR/DME	*MINCE, MI FIX	2500
*3500 - MRA		
MINCE, MI FIX	MUSKY, MI FIX	2500
MUSKY, MI FIX	KEELER, MI VOR/DME	2400
KEELER, MI VOR/DME	LITCHFIELD, MI VOR/DME	2600

95.6101 VOR FEDERAL AIRWAY V101

GILL, CO VOR/DME	*LIBEL, CO FIX	**10000
*13500 - MCA LIBEL, CO FIX , W BND		
**8900 - MOCA		
LIBEL, CO FIX	BROCC, CO FIX	16000
BROCC, CO FIX	ECHOA, CO FIX	13200
ECHOA, CO FIX	*HAYDEN, CO VOR/DME	
	E BND	13200
	W BND	11500
*11500 - MCA HAYDEN, CO VOR/DME , E BND		
HAYDEN, CO VOR/DME	STRIM, CO FIX	10000
STRIM, CO FIX	*RENAE, CO FIX	11000
*13000 - MRA		
RENAE, CO FIX	VERNAL, UT VOR/DME	11000
VERNAL, UT VOR/DME	*NEOLA, UT FIX	10000
*12000 - MCA NEOLA, UT FIX , W BND		
NEOLA, UT FIX	*WASATCH, UT VORTAC	15000
*11000 - MCA WASATCH, UT VORTAC , E BND		
WASATCH, UT VORTAC	OGDEN, UT VORTAC	7000
OGDEN, UT VORTAC	*KREBS, UT FIX	9400
*13000 - MRA		
KREBS, UT FIX	BLIDA, UT FIX	9400
BLIDA, UT FIX	MALTT, ID FIX	11400
MALTT, ID FIX	*BURLEY, ID VOR/DME	
	NW BND	**8000
	SE BND	**11400
*9300 - MCA BURLEY, ID VOR/DME , SE BND		
**7400 - MOCA		
BURLEY, ID VOR/DME	REAPS, ID FIX	
	S BND	7000
	N BND	9500
REAPS, ID FIX	HAILEY, ID NDB/DME	*9500
*8900 - MOCA		
HAILEY, ID NDB/DME	SOLDE, ID FIX	
	NE BND	9000
	SW BND	17000

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95.6102 VOR FEDERAL AIRWAY V102

*SALT FLAT, TX VORTAC *10000 - MCA SALT FLAT, TX VORTAC , NE BND	CARLSBAD, NM VORTAC	10800
*CARLSBAD, NM VORTAC *7000 - MCA CARLSBAD, NM VORTAC , SW BND	HOBBS, NM VORTAC	5600
HOBBS, NM VORTAC *5400 - MOCA	LUBBOCK, TX VORTAC	*6000
LUBBOCK, TX VORTAC GUTHRIE, TX VORTAC *4000 - MRA **3000 - MOCA	GUTHRIE, TX VORTAC *SNEED, TX FIX	5000 **3700
SNEED, TX FIX *3500 - MRA	*ELECT, TX FIX	2700
ELECT, TX FIX	WICHITA FALLS, TX VORTAC	2700

95.6103 VOR FEDERAL AIRWAY V103

CHESTERFIELD, SC VOR/DME GREENSBORO, NC VORTAC HENBY, VA FIX TABER, VA FIX ROANOKE, VA VOR/DME NATTS, WV FIX VELLI, WV FIX *6400 - MOCA	GREENSBORO, NC VORTAC HENBY, VA FIX TABER, VA FIX ROANOKE, VA VOR/DME NATTS, WV FIX VELLI, WV FIX ELKINS, WV VORTAC	2500 3500 5100 5600 6000 7000 *7000
ELKINS, WV VORTAC *3900 - MOCA	CLARKSBURG, WV VOR/DME	*5000
CLARKSBURG, WV VOR/DME #CKB R-335 UNUSABLE BELOW 9000, USE AIR R-158.	BELLAIRE, OH VOR/DME	#3400
BELLAIRE, OH VOR/DME *3000 - MOCA	ATWOO, OH FIX	*6000
ATWOO, OH FIX	AKRON, OH VOR/DME	3000

95.6104 VOR FEDERAL AIRWAY V104

BURLINGTON, VT VOR/DME MONTPELIER, VT VOR/DME AYZOO, NH FIX *6400 - MOCA	MONTPELIER, VT VOR/DME AYZOO, NH FIX BERLIN, NH VOR/DME	6300 5400 *7000
BERLIN, NH VOR/DME ANSYN, ME FIX	ANSYN, ME FIX BANGOR, ME VORTAC	6500 4000

95.6105 VOR FEDERAL AIRWAY V105

TUCSON, AZ VORTAC *6700 - MOCA	STANFIELD, AZ VORTAC	*8000
STANFIELD, AZ VORTAC PHOENIX, AZ VORTAC KARLO, AZ FIX *10000 - MOCA *10000 - GNSS MEA	PHOENIX, AZ VORTAC KARLO, AZ FIX DRAKE, AZ VORTAC	5000 10000 *12000
DRAKE, AZ VORTAC WINDS, AZ FIX *6000 - MOCA	WINDS, AZ FIX BOULDER CITY, NV VORTAC	10000 *7000
BOULDER CITY, NV VORTAC *10500 - MCA LAS VEGAS, NV VORTAC , W BND	*LAS VEGAS, NV VORTAC	6000

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95.60105 VOR FEDERAL AIRWAY V105 - CONTINUED

LAS VEGAS, NV VORTAC	HARLS, NV FIX E BND W BND	7000 14000
HARLS, NV FIX	LUCKY, NV FIX E BND W BND	11000 14000
LUCKY, NV FIX *14000 - MRA *14000 - MCA HIDDEN, CA FIX , E BND	*HIDDEN, CA FIX	14000
HIDDEN, CA FIX *8600 - MOCA	BEATTY, NV VORTAC	*12000
BEATTY, NV VORTAC *9600 - MOCA	COALDALE, NV VORTAC	*11000
COALDALE, NV VORTAC *12500 - MCA YERIN, NV FIX , SE BND **11200 - MOCA	*YERIN, NV FIX	**14000
YERIN, NV FIX	CHIME, NV FIX NW BND SE BND	10000 11500
CHIME, NV FIX	MUSTANG, NV VORTAC	10000

95.6106 VOR FEDERAL AIRWAY V106

JOHNSTOWN, PA VOR/DME HUDON, PA FIX *14000 - MCA RASHE, PA FIX , E BND **4000 - MOCA **4000 - GNSS MEA	HUDON, PA FIX *RASHE, PA FIX	5000 **7000
RASHE, PA FIX SELINGSGROVE, PA VOR/DME DIANO, PA FIX WILKES-BARRE, PA VORTAC	SELINGSGROVE, PA VOR/DME DIANO, PA FIX WILKES-BARRE, PA VORTAC LAAYK, PA FIX NE BND SW BND	14000 3700 4000 *5000 *4000
*4000 - MOCA BARNES, MA VORTAC *3000 - MOCA	GARDNER, MA VOR/DME	*3500
GARDNER, MA VOR/DME MANCHESTER, NH VOR/DME *2100 - MOCA	MANCHESTER, NH VOR/DME RAYMY, NH FIX	4000 *2600
RAYMY, NH FIX *2200 - MOCA *3000 - GNSS MEA	KENNEBUNK, ME VOR/DME	*5500

95.6107 VOR FEDERAL AIRWAY V107

LOS ANGELES, CA VORTAC STABO, CA FIX *3700 - MCA SANTA MONICA, CA VOR/DME , W BND	STABO, CA FIX *SANTA MONICA, CA VOR/DME	2500 3000
SANTA MONICA, CA VOR/DME *7500 - MCA FILLMORE, CA VORTAC , NW BND	*FILLMORE, CA VORTAC	5000
FILLMORE, CA VORTAC	PIRUE, CA FIX SE BND NW BND	*8000 *9000
*7200 - MOCA PIRUE, CA FIX *9200 - MOCA	REYES, CA FIX	*11000
REYES, CA FIX	DERBB, CA FIX	11000

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95.60107 VOR FEDERAL AIRWAY V107 - CONTINUED

DERBB, CA FIX *6500 - MOCA	AVENAL, CA VOR/DME	*7000
AVENAL, CA VOR/DME PANOCH, CA VORTAC *7000 - MCA CATHE, CA FIX , NW BND **5700 - MOCA	PANOCH, CA VORTAC *CATHE, CA FIX	8000 **7000
CATHE, CA FIX *6400 - MOCA	VINCO, CA FIX	*7000
VINCO, CA FIX	MABRY, CA FIX S BND N BND	7000 6000
MABRY, CA FIX	MISON, CA FIX N BND S BND	5500 7000
MISON, CA FIX	OAKLAND, CA VOR/DME SE BND NW BND	7000 4500
OAKLAND, CA VOR/DME *4000 - MOCA	COMMO, CA FIX	*5000
COMMO, CA FIX POINT REYES, CA VOR/DME	POINT REYES, CA VOR/DME BOARS, CA FIX	5000 5000

95.6108 VOR FEDERAL AIRWAY V108

SANTA ROSA, CA VOR/DME SCAGGS ISLAND, CA VORTAC CONCORD, CA VOR/DME OAKLEY, CA FIX MEEKER, CO VOR/DME *12800 - MOCA	SCAGGS ISLAND, CA VORTAC CONCORD, CA VOR/DME OAKLEY, CA FIX LINDEN, CA VOR/DME RED TABLE, CO VOR/DME	4500 3000 3500 2300 *14000
RED TABLE, CO VOR/DME *12300 - MCA STAMY, CO FIX , W BND	*STAMY, CO FIX	16400
STAMY, CO FIX *10700 - MCA BLACK FOREST, CO VOR/DME , W BND	*BLACK FOREST, CO VOR/DME	12000
BLACK FOREST, CO VOR/DME ADANE, CO FIX HUGO, CO VOR/DME *6300 - MOCA	ADANE, CO FIX HUGO, CO VOR/DME GOODLAND, KS VORTAC	9500 9000 *7000
GOODLAND, KS VORTAC	HILL CITY, KS VORTAC	5500

95.6110 VOR FEDERAL AIRWAY V110

DEMING, NM VORTAC	TRUTH OR CONSEQUENCES, NM VORTAC	8000
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95.6111 VOR FEDERAL AIRWAY V111

BIG SUR, CA VORTAC SALINAS, CA VORTAC CATHE, CA FIX KARNN, CA FIX PATYY, CA FIX *1500 - MOCA	SALINAS, CA VORTAC CATHE, CA FIX KARNN, CA FIX PATYY, CA FIX MODESTO, CA VOR/DME	7000 5500 5500 5000 *3000
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95.6112 VOR FEDERAL AIRWAY V112

HOQUIAM, WA VORTAC	ILWAC, WA FIX	2500
ILWAC, WA FIX	ASTORIA, OR VOR/DME	3000
ASTORIA, OR VOR/DME	PITER, OR FIX	5000
PITER, OR FIX	*BATTLE GROUND, WA VORTAC	4400
*5000 - MCA BATTLE GROUND, WA VORTAC , E BND		
BATTLE GROUND, WA VORTAC	KLICKITAT, OR VOR/DME	*7000
*6500 - MOCA		
KLICKITAT, OR VOR/DME	*OGPAY, OR FIX	5400
*6000 - MRA		
OGPAY, OR FIX	*LOAMS, OR FIX	5400
*6000 - MRA		
LOAMS, OR FIX	*ECHOD, OR FIX	4100
*6000 - MRA		
ECHOD, OR FIX	PENDLETON, OR VORTAC	4100
PENDLETON, OR VORTAC	LYLES, WA FIX	4000
LYLES, WA FIX	*RODNA, WA FIX	**5000
*6000 - MRA		
**4400 - MOCA		
RODNA, WA FIX	SPOKANE, WA VORTAC	5000
SPOKANE, WA VORTAC	DIANN, WA FIX	
	SW BND	*7000
	NE BND	*11000
*5500 - MOCA		
DIANN, WA FIX	CRANBROOK, CANADA VOR/DME	#*11000
*9700 - MOCA		
#FOR THAT AIRSPACE OVER U.S. TERRITORY.		

95.6113 VOR FEDERAL AIRWAY V113

MORRO BAY, CA VORTAC	PASO ROBLES, CA VORTAC	5000
PASO ROBLES, CA VORTAC	PRIEST, CA VOR	6000
PRIEST, CA VOR	*PANOCHE, CA VORTAC	7500
*5500 - MCA PANOCHE, CA VORTAC , S BND		
PANOCHE, CA VORTAC	*PATYY, CA FIX	5000
*5000 - MCA PATYY, CA FIX , SE BND		
PATYY, CA FIX	MODESTO, CA VOR/DME	*3000
*1500 - MOCA		
MODESTO, CA VOR/DME	*LINDEN, CA VOR/DME	2000
*4000 - MCA LINDEN, CA VOR/DME , NE BND		
LINDEN, CA VOR/DME	*KATSO, CA FIX	5000
*12400 - MCA KATSO, CA FIX , NE BND		
KATSO, CA FIX	*SPOOK, CA FIX	**13000
*15000 - MCA SPOOK, CA FIX , N BND		
**12100 - MOCA		
SPOOK, CA FIX	RICHY, CA FIX	*15000
*12000 - MOCA		
RICHY, CA FIX	*MUSTANG, NV VORTAC	13000
*10500 - MCA MUSTANG, NV VORTAC , S BND		
MUSTANG, NV VORTAC	NICER, NV FIX	10300
NICER, NV FIX	ROBUD, NV FIX	*12000
*10600 - MOCA		
ROBUD, NV FIX	SOD HOUSE, NV VORTAC	*10000
*9000 - MOCA		
SOD HOUSE, NV VORTAC	ROME, OR VOR/DME	10000
ROME, OR VOR/DME	*RENOL, ID FIX	9400
*7300 - MCA RENOL, ID FIX , SW BND		
RENOL, ID FIX	*BOISE, ID VORTAC	6000
*8200 - MCA BOISE, ID VORTAC , NE BND		
BOISE, ID VORTAC	SALMON, ID VOR/DME	16500
SALMON, ID VOR/DME	SLIPP, MT FIX	13000

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95.6113 VOR FEDERAL AIRWAY V113 - CONTINUED

SLIPP, MT FIX	*COPPERTOWN, MT VOR/DME	
	SW BND	13000
	NE BND	11000
*10200 - MCA COPPERTOWN, MT VOR/DME , SW BND		
COPPERTOWN, MT VOR/DME	HELENA, MT VORTAC	*13000
*10800 - MOCA		
HELENA, MT VORTAC	LEWISTOWN, MT VOR/DME	11100

95.6114 VOR FEDERAL AIRWAY V114

PANHANDLE, TX VORTAC	CAUDE, TX FIX	*5400
*4900 - MOCA		
CAUDE, TX FIX	*DOGIN, TX FIX	5000
*6500 - MRA		
DOGIN, TX FIX	CHILDRESS, TX VORTAC	5000
CHILDRESS, TX VORTAC	VASTY, TX FIX	3700
VASTY, TX FIX	WICHITA FALLS, TX VORTAC	3200
WICHITA FALLS, TX VORTAC	BONHAM, TX VORTAC	3000
BONHAM, TX VORTAC	QUITMAN, TX VOR/DME	2500
QUITMAN, TX VOR/DME	GREGG COUNTY, TX VORTAC	2400
GREGG COUNTY, TX VORTAC	CARTH, TX FIX	*2300
*1900 - MOCA		
CARTH, TX FIX	EXITE, LA FIX	*3000
*1700 - MOCA		
EXITE, LA FIX	COVEX, LA FIX	*3500
*1700 - MOCA		
COVEX, LA FIX	NUBOY, LA FIX	*5000
*1900 - MOCA		
NUBOY, LA FIX	ALEXANDRIA, LA VORTAC	
	W BND	5000
	E BND	2000
ALEXANDRIA, LA VORTAC	*MIKLE, LA FIX	2000
*3000 - MRA		
MIKLE, LA FIX	FIGHTING TIGER, LA VORTAC	2000
FIGHTING TIGER, LA VORTAC	VEILS, LA FIX	2800
VEILS, LA FIX	RESERVE, LA VOR/DME	2000
RESERVE, LA VOR/DME	GULFPORT, MS VORTAC	2000
GULFPORT, MS VORTAC	*MINDO, MS FIX	**6000
*6000 - MRA		
**2000 - GNSS MEA		
MINDO, MS FIX	EATON, MS VORTAC	*6000
*2000 - GNSS MEA		

95.6115 VOR FEDERAL AIRWAY V115

CRESTVIEW, FL VORTAC	PIGON, AL FIX	2500
PIGON, AL FIX	*REDDI, AL FIX	2500
*5500 - MRA		
REDDI, AL FIX	MONTGOMERY, AL VORTAC	2500
MONTGOMERY, AL VORTAC	VULCAN, AL VORTAC	3000
VULCAN, AL VORTAC	WILED, AL FIX	3500
WILED, AL FIX	CHOO CHOO, TN VORTAC	4000
CHOO CHOO, TN VORTAC	ETOWA, TN FIX	3000
ETOWA, TN FIX	GROSS, TN FIX	3100
GROSS, TN FIX	VOLUNTEER, TN VORTAC	3000
VOLUNTEER, TN VORTAC	MALIN, TN FIX	4500
MALIN, TN FIX	ROSAR, KY FIX	5000
ROSAR, KY FIX	HAZARD, KY VOR/DME	5200
HAZARD, KY VOR/DME	WHIRL, WV FIX	4000
WHIRL, WV FIX	CHARLESTON, WV VOR/DME	3000
CHARLESTON, WV VOR/DME	PARKERSBURG, WV VOR/DME	3000
PARKERSBURG, WV VOR/DME	NEWCOMERSTOWN, OH VOR/DME	3000
NEWCOMERSTOWN, OH VOR/DME	ATWOO, OH FIX	3000

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95.6115 VOR FEDERAL AIRWAY V115 - CONTINUED

ATWOO, OH FIX *3500 - MOCA	CAPEL, OH FIX	*6000
CAPEL, OH FIX	FRANKLIN, PA VOR	3500
FRANKLIN, PA VOR	TIDIOUTE, PA VORTAC	3800
TIDIOUTE, PA VORTAC	JAMESTOWN, NY VOR/DME	4000
JAMESTOWN, NY VOR/DME	BUFFALO, NY VOR/DME	#4000
#BUFFALO R-214 UNUSABLE BELOW 11000 USE JAMESTOWN R-032		

95.6116 VOR FEDERAL AIRWAY V116

ERIE, PA VORTAC *3900 - MOCA	BRADFORD, PA VOR/DME	*5000
BRADFORD, PA VOR/DME	STONYFORK, PA VOR/DME	4500
STONYFORK, PA VOR/DME	WILKES-BARRE, PA VORTAC	4000
WILKES-BARRE, PA VORTAC	SPARTA, NJ VORTAC	4000

95.6117 VOR FEDERAL AIRWAY V117

PARKERSBURG, WV VOR/DME	BELLAIRE, OH VOR/DME	3000
BELLAIRE, OH VOR/DME	WISKE, WV FIX	3300

95.6118 VOR FEDERAL AIRWAY V118

MEDICINE BOW, WY VOR/DME	LARAMIE, WY VOR/DME	9400
LARAMIE, WY VOR/DME	*SENSE, WY FIX	11000
*9900 - MCA SENSE, WY FIX , W BND		
SENSE, WY FIX	CHEYENNE, WY VORTAC	8800

95.6119 VOR FEDERAL AIRWAY V119

NEWCOMBE, KY VORTAC *5500 - MCA CROUP, OH FIX , NE BND	*CROUP, OH FIX	2800
CROUP, OH FIX	HENDERSON, WV VORTAC	5500
HENDERSON, WV VORTAC *3800 - MRA	*JACEE, WV FIX	2700
JACEE, WV FIX	PARKERSBURG, WV VOR/DME	2700
PARKERSBURG, WV VOR/DME	ANTIO, OH FIX	3000
ANTIO, OH FIX	INDIAN HEAD, PA VORTAC	5000
INDIAN HEAD, PA VORTAC *4500 - MOCA	QUARY, PA FIX	*5000
QUARY, PA FIX	TALLS, PA FIX	4000
TALLS, PA FIX *3200 - MOCA	CLARION, PA VOR/DME	*3700
CLARION, PA VOR/DME	BRADFORD, PA VOR/DME	#4200
#BRADFORD R-232 UNUSABLE. USE CLARION R-050.		
BRADFORD, PA VOR/DME *4000 - MOCA	WELLSVILLE, NY VORTAC	*4500
WELLSVILLE, NY VORTAC	BURST, NY FIX	4500
BURST, NY FIX	GENESEO, NY VOR/DME	4000
GENESEO, NY VOR/DME	ROCHESTER, NY VOR/DME	2800

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95.6120 VOR FEDERAL AIRWAY V120

*SEATTLE, WA VORTAC	TAGOR, WA FIX E BND W BND	**8500 **5000
*6300 - MCA SEATTLE, WA VORTAC , E BND		
**5000 - MOCA		
TAGOR, WA FIX	CASHS, WA FIX	*12000
*11400 - MOCA		
CASHS, WA FIX	*WENATCHEE, WA VOR/DME E BND W BND	**7500 **12000
*8200 - MCA WENATCHEE, WA VOR/DME , W BND		
**6700 - MOCA		
WENATCHEE, WA VOR/DME	EPHRATA, WA VORTAC	5500
EPHRATA, WA VORTAC	WIPES, WA FIX	4000
WIPES, WA FIX	*SPOKANE, WA VORTAC	5000
*5200 - MCA SPOKANE, WA VORTAC , E BND		
SPOKANE, WA VORTAC	KARPS, ID FIX	*9000
*7600 - MOCA		
KARPS, ID FIX	MULLAN PASS, ID VOR/DME	9100
MULLAN PASS, ID VOR/DME	CHARL, MT FIX	*13000
*9600 - MOCA		
CHARL, MT FIX	*SHIMY, MT FIX	**13000
*7000 - MRA		
*7900 - MCA SHIMY, MT FIX , W BND		
**12100 - MOCA		
SHIMY, MT FIX	GREAT FALLS, MT VORTAC	6800
GREAT FALLS, MT VORTAC	LEWISTOWN, MT VOR/DME	8400
LEWISTOWN, MT VOR/DME	ESTRO, MT FIX	7700
ESTRO, MT FIX	MILES CITY, MT VOR/DME	*9000
*7500 - MOCA		
MILES CITY, MT VOR/DME	DUPREE, SD VOR/DME	*10000
*6600 - MOCA		
DUPREE, SD VOR/DME	PIERRE, SD VORTAC	*4300
*3700 - MOCA		
PIERRE, SD VORTAC	MITCHELL, SD VOR/DME	*3900
*3400 - MOCA		
MITCHELL, SD VOR/DME	FRYRE, SD FIX	3700
FRYRE, SD FIX	SIOUX FALLS, SD VORTAC	3700
SIOUX FALLS, SD VORTAC	BILOO, IA FIX	3600
BILOO, IA FIX	*GRUVE, IA FIX	**6800
*8000 - MRA		
**3100 - MOCA		
GRUVE, IA FIX	BANCO, IA FIX	*6800
*3100 - MOCA		
BANCO, IA FIX	MASON CITY, IA VOR/DME	3000
MASON CITY, IA VOR/DME	*AREDA, IA FIX	3000
*4500 - MRA		
AREDA, IA FIX	*SEATS, IA FIX	3000
*4500 - MRA		
SEATS, IA FIX	WATERLOO, IA VOR/DME	3000

95.6121 VOR FEDERAL AIRWAY V121

FORT JONES, CA VOR/DME	*BAYTS, OR FIX	**10000
*10000 - MRA		
*9000 - MCA BAYTS, OR FIX , S BND		
**9400 - MOCA		
BAYTS, OR FIX	ROGUE VALLEY, OR VORTAC	*8000
*7500 - MOCA		
ROGUE VALLEY, OR VORTAC	MOURN, OR FIX	7000

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95.6121 VOR FEDERAL AIRWAY V121 - CONTINUED

MOURN, OR FIX	*ROSEBURG, OR VOR/DME	
	W BND	5500
	E BND	7000
*5700 - MCA ROSEBURG, OR VOR/DME , E BND		
ROSEBURG, OR VOR/DME	NORTH BEND, OR VOR/DME	5300
NORTH BEND, OR VOR/DME	*SCOTY, OR FIX	
	NE BND	5000
	SW BND	4200
*5500 - MRA		
SCOTY, OR FIX	*VAUGN, OR FIX	**5000
*7000 - MRA		
**4500 - MOCA		
VAUGN, OR FIX	*EUGENE, OR VORTAC	
	NE BND	4000
	SW BND	5000
*3700 - MCA EUGENE, OR VORTAC , NE BND		
EUGENE, OR VORTAC	DOSEE, OR FIX	
	NE BND	6000
	SW BND	5200
DOSEE, OR FIX	*VIDAS, OR FIX	
	NE BND	8000
	SW BND	6000
*9300 - MCA VIDAS, OR FIX , NE BND		
VIDAS, OR FIX	*WHIFF, OR FIX	
	NE BND	**13000
	SW BND	**9000
*12000 - MCA WHIFF, OR FIX , NE BND		
**7500 - MOCA		
**8000 - GNSS MEA		
WHIFF, OR FIX	SNOKY, OR FIX	*13000
*12300 - MOCA		
SNOKY, OR FIX	*DESCHUTES, OR VORTAC	
	NE BND	8000
	SW BND	13000
*10000 - MCA DESCHUTES, OR VORTAC , SW BND		
DESCHUTES, OR VORTAC	JABOT, OR FIX	
	NE BND	9000
	SW BND	7000
JABOT, OR FIX	KIMBERLY, OR VOR/DME	9000
KIMBERLY, OR VOR/DME	*BAKER CITY, OR VOR/DME	12000
*10000 - MCA BAKER CITY, OR VOR/DME , SW BND		
BAKER CITY, OR VOR/DME	DONNELLY, ID VOR/DME	11000
DONNELLY, ID VOR/DME	SALMON, ID VOR/DME	12000
SALMON, ID VOR/DME	NOSEY, MT FIX	12000
NOSEY, MT FIX	DILLON, MT VOR/DME	
	E BND	*10000
	W BND	*12000
*9100 - MOCA		

95.6122 VOR FEDERAL AIRWAY V122

CRESCENT CITY, CA VORTAC	REFIX, CA FIX	
	SW BND	4000
	NE BND	8000
REFIX, CA FIX	OBRIN, CA FIX	
	NE BND	8000
	SW BND	6000
OBRIN, CA FIX	*PAPLE, OR FIX	8000
*10100 - MRA		
PAPLE, OR FIX	GNATS, OR FIX	8000

FROM	TO	MEA
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95.6122 VOR FEDERAL AIRWAY V122 - CONTINUED

GNATS, OR FIX	ROGUE VALLEY, OR VORTAC	
	SW BND	8000
	NE BND	5500
ROGUE VALLEY, OR VORTAC	BRUTE, OR FIX	
	E BND	9000
	W BND	5000
BRUTE, OR FIX	LANKS, OR FIX	
	W BND	*6500
	E BND	*9000
*5800 - MOCA		
LANKS, OR FIX	KLAMATH FALLS, OR VORTAC	*9000
*8500 - MOCA		
KLAMATH FALLS, OR VORTAC	LAKEVIEW, OR VORTAC	9600
LAKEVIEW, OR VORTAC	ROME, OR VOR/DME	12000

95.6123 VOR FEDERAL AIRWAY V123

MITCH, MD FIX	SWANN, MD FIX	*7000
*3000 - GNSS MEA		
SWANN, MD FIX	*TACKS, MD FIX	**7000
*7000 - MCA TACKS, MD FIX , W BND		
**4000 - GNSS MEA		
TACKS, MD FIX	WOODSTOWN, NJ VORTAC	*2000
*1500 - MOCA		
WOODSTOWN, NJ VORTAC	ROBBINSVILLE, NJ VORTAC	*3000
*2000 - MOCA		
ROBBINSVILLE, NJ VORTAC	MINKS, NJ FIX	2000
MINKS, NJ FIX	LA GUARDIA, NY VOR/DME	2900
LA GUARDIA, NY VOR/DME	FAMMA, NY FIX	2000
FAMMA, NY FIX	HAARP, CT FIX	3000
HAARP, CT FIX	*RYMES, CT FIX	**5000
*5000 - MRA		
**2000 - MOCA		
**3000 - GNSS MEA		
RYMES, CT FIX	CARMEL, NY VOR/DME	2500
CARMEL, NY VOR/DME	CASSH, NY FIX	3000
CASSH, NY FIX	*WIGAN, NY FIX	3100
*8000 - MCA WIGAN, NY FIX , N BND		
WIGAN, NY FIX	GROUP, NY FIX	*8000
*3000 - GNSS MEA		
GROUP, NY FIX	*ALBANY, NY VORTAC	**6000
*6000 - MCA ALBANY, NY VORTAC , S BND		
**2800 - GNSS MEA		
ALBANY, NY VORTAC	*CAMBRIDGE, NY VOR/DME	***4000
*4500 - MCA CAMBRIDGE, NY VOR/DME , N BND		
**3000 - MOCA		
#ALBANY R-067 UNUSABLE.		
CAMBRIDGE, NY VOR/DME	GLENS FALLS, NY VORTAC	4500

95.6124 VOR FEDERAL AIRWAY V124

BONHAM, TX VORTAC	PARIS, TX VOR/DME	2400
PARIS, TX VOR/DME	DEENS, AR FIX	*4000
*2000 - MOCA		
DEENS, AR FIX	HOT SPRINGS, AR VOR/DME	*5000
*2700 - MOCA		
HOT SPRINGS, AR VOR/DME	LITTLE ROCK, AR VORTAC	3000
LITTLE ROCK, AR VORTAC	TAFTE, AR FIX	*4000
*1700 - MOCA		

FROM	TO	MEA
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95.6124 VOR FEDERAL AIRWAY V124 - CONTINUED

TAFTE, AR FIX *6000 - MRA **1600 - MOCA	*HILLE, AR FIX	**6000
HILLE, AR FIX *1700 - MOCA	GILMORE, AR VOR/DME	*4000

95.6125 VOR FEDERAL AIRWAY V125

CAPE GIRARDEAU, MO VOR/DME	NIKEL, IL FIX	3500
NIKEL, IL FIX *2300 - MOCA	BURCK, IL FIX	*4500
BURCK, IL FIX *2600 - MOCA	ST LOUIS, MO VORTAC	*3500

95.6126 VOR FEDERAL AIRWAY V126

BEARZ, IN FIX HALIE, IN FIX *2300 - MOCA	HALIE, IN FIX INKEN, IN FIX	3000 *4000
INKEN, IN FIX GOSHEN, IN VORTAC *2400 - MOCA	GOSHEN, IN VORTAC ILTON, IN FIX	2600 *3000
ERIE, PA VORTAC *3900 - MOCA	BRADFORD, PA VOR/DME	*5000
BRADFORD, PA VOR/DME	STONYFORK, PA VOR/DME	4500

95.6127 VOR FEDERAL AIRWAY V127

BRADFORD, IL VORTAC *3300 - MRA	*WYNET, IL FIX	2700
WYNET, IL FIX POLO, IL VOR/DME	POLO, IL VOR/DME ROCKFORD, IL VOR/DME	2600 2700

95.6128 VOR FEDERAL AIRWAY V128

JANESVILLE, WI VOR/DME	ROCKFORD, IL VOR/DME	2700
ROCKFORD, IL VOR/DME	KELSI, IL FIX	2700
KELSI, IL FIX	SMARS, IL FIX	3000
SMARS, IL FIX	KANKAKEE, IL VOR/DME	2700
KANKAKEE, IL VOR/DME	KENLA, IL FIX	2400
KENLA, IL FIX	VAGES, IN FIX	2600
VAGES, IN FIX *4000 - MRA **2300 - MOCA	*POTES, IN FIX	**4000
POTES, IN FIX *2300 - MOCA	JAKKS, IN FIX	*4000
JAKKS, IN FIX	BRICKYARD, IN VORTAC	2700
BRICKYARD, IN VORTAC	DECEE, IN FIX	2600
DECEE, IN FIX	CINCINNATI, KY VORTAC	2800
CINCINNATI, KY VORTAC	CALIF, KY FIX	2600
CALIF, KY FIX	YORK, KY VORTAC	4000
YORK, KY VORTAC *2300 - MOCA	CROUP, OH FIX	*3300
CROUP, OH FIX	RULEY, WV FIX	3200
RULEY, WV FIX	CHARLESTON, WV VOR/DME	3600

FROM	TO	MEA
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95.6128 VOR FEDERAL AIRWAY V128 - CONTINUED

CHARLESTON, WV VOR/DME	SWIFT, WV FIX	3400
SWIFT, WV FIX	BITES, WV FIX	
	W BND	5000
	E BND	7000
BITES, WV FIX	VELLI, WV FIX	7000
VELLI, WV FIX	BOIER, WV FIX	*8000
*7100 - MOCA		
*7100 - GNSS MEA		
BOIER, WV FIX	LURAY, VA FIX	*10000
*6900 - MOCA		
*6900 - GNSS MEA		
LURAY, VA FIX	CASANOVA, VA VORTAC	6300

95.6129 VOR FEDERAL AIRWAY V129

SPINNER, IL VORTAC	PEORIA, IL VORTAC	2500
PEORIA, IL VORTAC	GENSO, IL FIX	2600
GENSO, IL FIX	DAVENPORT, IA VORTAC	3000
DAVENPORT, IA VORTAC	DUBUQUE, IA VORTAC	2900
DUBUQUE, IA VORTAC	QUEST, WI FIX	*3100
*2600 - MOCA		
QUEST, WI FIX	NODINE, MN VORTAC	3100
NODINE, MN VORTAC	EAU CLAIRE, WI VORTAC	3000
EAU CLAIRE, WI VORTAC	DULUTH, MN VORTAC	*4000
*3100 - MOCA		
DULUTH, MN VORTAC	HIBBING, MN VOR/DME	3300
HIBBING, MN VOR/DME	INTERNATIONAL FALLS, MN VOR/DME	*3600
*3100 - MOCA		
INTERNATIONAL FALLS, MN VOR/DME	U.S. CANADIAN BORDER	2500

95.6130 VOR FEDERAL AIRWAY V130

NORWICH, CT VOR/DME	MINNK, RI FIX	2300
MINNK, RI FIX	FALMA, RI FIX	*3000
*1600 - MOCA		
FALMA, RI FIX	MARTHAS VINEYARD, MA VOR/DME	3000

95.6131 VOR FEDERAL AIRWAY V131

OKMULGEE, OK VOR/DME	TULSA, OK VORTAC	3200
TULSA, OK VORTAC	TYROE, KS FIX	3000
TYROE, KS FIX	CHANUTE, KS VOR/DME	2800
CHANUTE, KS VOR/DME	TOPEKA, KS VORTAC	2900

95.6132 VOR FEDERAL AIRWAY V132

MEDICINE BOW, WY VOR/DME	MOIST, WY FIX	9500
MOIST, WY FIX	CHEYENNE, WY VORTAC	9000
CHEYENNE, WY VORTAC	RAYME, CO FIX	8500
RAYME, CO FIX	AKRON, CO VOR/DME	6800
AKRON, CO VOR/DME	GOODLAND, KS VORTAC	6400
GOODLAND, KS VORTAC	ORION, KS FIX	5700
ORION, KS FIX	*RANSO, KS FIX	**10000
*10000 - MRA		
**4200 - MOCA		

FROM	TO	MEA
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95.6132 VOR FEDERAL AIRWAY V132 - CONTINUED

RANSO, KS FIX *4400 - MOCA	DISKS, KS FIX	*10000
DISKS, KS FIX *5000 - MRA **3300 - MOCA	*SPELT, KS FIX	**5000
SPELT, KS FIX	HUTCHINSON, KS VOR/DME	3200
HUTCHINSON, KS VOR/DME	WAIVE, KS FIX	4000
WAIVE, KS FIX *5000 - MRA *5000 - MCA FLOSS, KS FIX , SE BND	*FLOSS, KS FIX	3300
FLOSS, KS FIX *2800 - MOCA	CHANUTE, KS VOR/DME	*5000
CHANUTE, KS VOR/DME	NALLY, KS FIX	2800
NALLY, KS FIX	NASHE, MO FIX	2700
NASHE, MO FIX	SPRINGFIELD, MO VORTAC	3000
SPRINGFIELD, MO VORTAC	FORNEY, MO VOR	3100
FORNEY, MO VOR	LENOX, MO FIX	3000

95.6133 VOR FEDERAL AIRWAY V133

LINCO, NC FIX	BARRETTS MOUNTAIN, NC VOR/DME	4000
BARRETTS MOUNTAIN, NC VOR/DME	MULBE, NC FIX	
	S BND	5400
	N BND	7200
MULBE, NC FIX	*STOVE, VA FIX	7200
*11000 - MCA STOVE, VA FIX , N BND		
STOVE, VA FIX	*PINEE, WV FIX	**13000
*11400 - MCA PINEE, WV FIX , S BND **7000 - MOCA		
PINEE, WV FIX *5000 - MOCA *5000 - GNSS MEA	CHARLESTON, WV VOR/DME	*7000
CHARLESTON, WV VOR/DME	ZANESVILLE, OH VOR/DME	3000
SAGINAW, MI VOR/DME	WHIPP, MI FIX	2400
WHIPP, MI FIX *5000 - MRA **2800 - MOCA	*LADIN, MI FIX	*5000
LADIN, MI FIX *2800 - MOCA	TRAVERSE CITY, MI VOR/DME	*5000
TRAVERSE CITY, MI VOR/DME	ESCANABA, MI VOR/DME	5000
ESCANABA, MI VOR/DME	SAWYER, MI VOR/DME	2800
SAWYER, MI VOR/DME *3400 - MOCA	HOUGHTON, MI VOR/DME	*4500
HOUGHTON, MI VOR/DME *2500 - MOCA	U.S. CANADIAN BORDER	*3100
U.S. CANADIAN BORDER	INTERNATIONAL FALLS, MN VOR/DME	*3000
*2500 - MOCA		
INTERNATIONAL FALLS, MN VOR/DME *2800 - MOCA #FOR THAT AIRSPACE OVER U.S. TERRITORY.	RED LAKE, CANADA VOR/DME	**6500

FROM	TO	MEA
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95.6134 VOR FEDERAL AIRWAY V134

*FAIRFIELD, UT VORTAC	CARBON, UT VOR/DME	#13000
*10800 - MCA FAIRFIELD, UT VORTAC , E BND		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
*CARBON, UT VOR/DME	GRAND JUNCTION, CO VOR/DME	11900
*10200 - MCA CARBON, UT VOR/DME , W BND		
GRAND JUNCTION, CO VOR/DME	*PACES, CO FIX	11500
*13000 - MRA		
PACES, CO FIX	SLOLM, CO FIX	#13000
#MTA V134 NE TO V220 NW 12900		
SLOLM, CO FIX	*GLENO, CO FIX	14000
*16000 - MRA		
GLENO, CO FIX	RED TABLE, CO VOR/DME	14000
RED TABLE, CO VOR/DME	HERLS, CO FIX	
	E BND	16000
	W BND	14000
HERLS, CO FIX	*FUNDS, CO FIX	16000
*16500 - MRA		
FUNDS, CO FIX	BREWS, CO FIX	16500
BREWS, CO FIX	*FALCON, CO VORTAC	
	W BND	16500
	E BND	10000
*11600 - MCA FALCON, CO VORTAC , W BND		

95.6135 VOR FEDERAL AIRWAY V135

SAYUL, CA FIX	BARD, CA VORTAC	*4000
*2700 - MOCA		
BARD, CA VORTAC	BLYTHE, CA VORTAC	*5000
*3900 - MOCA		
BLYTHE, CA VORTAC	PARKER, CA VORTAC	5400
PARKER, CA VORTAC	NEEDLES, CA VORTAC	6000
NEEDLES, CA VORTAC	*GOFFS, CA VORTAC	**8000
*9600 - MCA GOFFS, CA VORTAC , NW BND		
**7100 - MOCA		
GOFFS, CA VORTAC	*WHIGG, CA FIX	**12000
*12000 - MRA		
**10000 - MOCA		
WHIGG, CA FIX	CLARR, CA FIX	*12000
*10500 - MOCA		
CLARR, CA FIX	*HIDEN, CA FIX	**12000
*14000 - MRA		
**9100 - MOCA		
HIDEN, CA FIX	BEATTY, NV VORTAC	*12000
*8600 - MOCA		
BEATTY, NV VORTAC	TEZUM, NV FIX	*11000
*9600 - MOCA		
TEZUM, NV FIX	TONOPAH, NV VORTAC	11000

95.6136 VOR FEDERAL AIRWAY V136

HINCH MOUNTAIN, TN VOR/DME	SWELL, TN FIX	5000
SWELL, TN FIX	VOLUNTEER, TN VORTAC	3000
VOLUNTEER, TN VORTAC	AUBRY, TN FIX	5000
AUBRY, TN FIX	*PITTE, TN FIX	6000
*7000 - MCA PITTE, TN FIX , E BND		
PITTE, TN FIX	SNOWBIRD, TN VORTAC	7000
SNOWBIRD, TN VORTAC	AFTEN, TN FIX	7000
AFTEN, TN FIX	HOLSTON MOUNTAIN, TN VORTAC	6000

FROM	TO	MEA
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95.6136 VOR FEDERAL AIRWAY V136 - CONTINUED

HOLSTON MOUNTAIN, TN VORTAC	DAMAS, TN FIX	6000
DAMAS, TN FIX	STOVE, VA FIX	7500
STOVE, VA FIX	SPEEL, VA FIX	6000
SPEEL, VA FIX	PULASKI, VA VORTAC	5400
PULASKI, VA VORTAC	PIGGS, VA FIX	5500
PIGGS, VA FIX	DUNCE, VA FIX	3500
DUNCE, VA FIX	SOUTH BOSTON, VA VORTAC	2800
SOUTH BOSTON, VA VORTAC	*ALDAN, NC FIX	2600
*3000 - MRA		
ALDAN, NC FIX	RALEIGH/DURHAM, NC VORTAC	2600
RALEIGH/DURHAM, NC VORTAC	LANHO, NC FIX	3000
LANHO, NC FIX	FAYETTEVILLE, NC VOR/DME	2000
FAYETTEVILLE, NC VOR/DME	GRAND STRAND, SC VORTAC	*3000
*2100 - MOCA		

95.6137 VOR FEDERAL AIRWAY V137

NOVOS, CA FIX	IMPERIAL, CA VORTAC	*3000
*1900 - MOCA		
IMPERIAL, CA VORTAC	*BRAWL, CA FIX	**3700
*4500 - MRA		
**2300 - MOCA		
BRAWL, CA FIX	HENOM, CA FIX	3700
HENOM, CA FIX	THERMAL, CA VORTAC	3900
THERMAL, CA VORTAC	*PALM SPRINGS, CA VORTAC	4000
*11200 - MCA PALM SPRINGS, CA VORTAC , NW BND		
PALM SPRINGS, CA VORTAC	*WHETO, CA FIX	
	NW BND	**12000
	SE BND	**7000
*12400 - MCA WHETO, CA FIX , NW BND		
**6000 - MOCA		
WHETO, CA FIX	MORON, CA FIX	
	SE BND	12000
	NW BND	13500
MORON, CA FIX	*ARRAN, CA FIX	13500
*12000 - MCA ARRAN, CA FIX , E BND		
ARRAN, CA FIX	*PALMDALE, CA VORTAC	10700
*7000 - MCA PALMDALE, CA VORTAC , E BND		
PALMDALE, CA VORTAC	VICKY, CA FIX	*8000
*5800 - MOCA		
VICKY, CA FIX	JEFFY, CA FIX	
	E BND	8000
	W BND	9000
JEFFY, CA FIX	GORMAN, CA VORTAC	
	E BND	8000
	W BND	10100
GORMAN, CA VORTAC	*TAFTO, CA FIX	10000
*9000 - MCA TAFTO, CA FIX , SE BND		
TAFTO, CA FIX	AVENAL, CA VOR/DME	
	SE BND	5500
	NW BND	4500
AVENAL, CA VOR/DME	PRIEST, CA VOR	6500
PRIEST, CA VOR	SALINAS, CA VORTAC	6000

95.6138 VOR FEDERAL AIRWAY V138

RIVERTON, WY VOR/DME	HUNTZ, WY FIX	9000
HUNTZ, WY FIX	MEDICINE BOW, WY VOR/DME	11200
MEDICINE BOW, WY VOR/DME	MILKY, WY FIX	10600
MILKY, WY FIX	CHEYENNE, WY VORTAC	9200
CHEYENNE, WY VORTAC	PIETY, WY FIX	8000

FROM	TO	MEA
95.6138 VOR FEDERAL AIRWAY V138 - CONTINUED		
PIETY, WY FIX *7000 - MOCA	SIDNEY, NE VOR/DME	*7600
GRAND ISLAND, NE VOR/DME *3200 - MOCA	BRADY, NE FIX	*3600
BRADY, NE FIX	GAMBL, NE FIX	4100
GAMBL, NE FIX	LINCOLN, NE VORTAC	3300
LINCOLN, NE VORTAC	OMAHA, IA VORTAC	4000
OMAHA, IA VORTAC *5500 - MRA **3000 - MOCA **3000 - GNSS MEA	*MADUP, IA FIX	**4500
MADUP, IA FIX *2900 - MOCA *3000 - GNSS MEA	FORT DODGE, IA VORTAC	*3900
FORT DODGE, IA VORTAC	MASON CITY, IA VOR/DME	3000
MASON CITY, IA VOR/DME	WAUKON, IA VOR/DME	3000

95.6139 VOR FEDERAL AIRWAY V139

FLORENCE, SC VORTAC	MOKKA, NC FIX	2000
MOKKA, NC FIX *2100 - MOCA *2100 - GNSS MEA #WILMINGTON R-273 UNUSABLE. USE FLORENCE R-088	WILMINGTON, NC VORTAC	#*8000
WILMINGTON, NC VORTAC *1800 - MOCA *2000 - GNSS MEA #WILMINGTON R-050 UNUSABLE. USE NEW BERN R-232	NEW BERN, NC VOR/DME	#*6000
NEW BERN, NC VOR/DME	PEARS, NC FIX S BND N BND	*4000 *6000
*1800 - MOCA *2000 - GNSS MEA		
PEARS, NC FIX *2100 - MOCA *2100 - GNSS MEA	SUNNS, NC FIX	*6000
SUNNS, NC FIX	NORFOLK, VA VORTAC NE BND SW BND	*2500 *4800
*1600 - MOCA *2000 - GNSS MEA		
NORFOLK, VA VORTAC *1800 - MOCA	CAPE CHARLES, VA VORTAC	*2500
CAPE CHARLES, VA VORTAC	DUNFE, VA FIX NE BND SSW BND	*4000 *2000
*1600 - MOCA		
DUNFE, VA FIX *1600 - MOCA	SNOW HILL, MD VORTAC	*4000
SNOW HILL, MD VORTAC	CBEAV, MD FIX	2000
CBEAV, MD FIX *1700 - MOCA	SEA ISLE, NJ VORTAC	*2500
SEA ISLE, NJ VORTAC *4000 - GNSS MEA	AVALO, NJ FIX	*4500
AVALO, NJ FIX *4000 - GNSS MEA	HARBO, NJ FIX	*6000
HARBO, NJ FIX *6000 - MRA **3000 - GNSS MEA	*DRIFT, NJ FIX	**7500

FROM	TO	MEA
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95.6139 VOR FEDERAL AIRWAY V139 - CONTINUED

DRIFT, NJ FIX	MANTA, NJ FIX	*12000
*3000 - GNSS MEA		
MANTA, NJ FIX	PLUME, NJ FIX	*7000
*2000 - MOCA		
*3000 - GNSS MEA		
PLUME, NJ FIX	*KOPPY, NY FIX	**4000
*5000 - MRA		
**3000 - MOCA		
**3000 - GNSS MEA		
KOPPY, NY FIX	BEADS, NY FIX	*4000
*3000 - MOCA		
*3000 - GNSS MEA		
BEADS, NY FIX	HAMPTON, NY VORTAC	*2500
*1600 - MOCA		
HAMPTON, NY VORTAC	PROVIDENCE, RI VOR/DME	2000
PROVIDENCE, RI VOR/DME	INNDY, MA FIX	*3000
*2000 - GNSS MEA		
INNDY, MA FIX	*TONNI, MA FIX	6000
*6000 - MRA		
TONNI, MA FIX	SEEDY, NH FIX	*5000
*4000 - GNSS MEA		
SEEDY, NH FIX	KENNEBUNK, ME VOR/DME	*2500
*1800 - MOCA		

95.6140 VOR FEDERAL AIRWAY V140

PANHANDLE, TX VORTAC	BURNS FLAT, OK VORTAC	5300
BURNS FLAT, OK VORTAC	*HISLA, OK FIX	3600
*4000 - MRA		
HISLA, OK FIX	KINGFISHER, OK VORTAC	*3600
*3000 - MOCA		
KINGFISHER, OK VORTAC	LASTS, OK FIX	3000
LASTS, OK FIX	IBAAH, OK FIX	*4500
*3100 - MOCA		
IBAAH, OK FIX	TULSA, OK VORTAC	3300
TULSA, OK VORTAC	*PRYOR, OK FIX	2700
*2900 - MRA		
PRYOR, OK FIX	RAZORBACK, AR VORTAC	*3400
*2800 - MOCA		
RAZORBACK, AR VORTAC	SPRAY, AR FIX	*3400
*2900 - MOCA		
SPRAY, AR FIX	HARRISON, AR VOR/DME	*4000
*3500 - MOCA		
HARRISON, AR VOR/DME	VILLO, AR FIX	3000
VILLO, AR FIX	WALNUT RIDGE, AR VORTAC	
	W BND	3000
	E BND	2500
WALNUT RIDGE, AR VORTAC	HELMS, MO FIX	2400
HELMS, MO FIX	DYERSBURG, TN VORTAC	2000
DYERSBURG, TN VORTAC	NASHVILLE, TN VORTAC	3500
NASHVILLE, TN VORTAC	HARME, TN FIX	
	W BND	*3000
	E BND	*6000
*2400 - MOCA		
HARME, TN FIX	LIVINGSTON, TN VOR/DME	*6000
*2900 - MOCA		
LIVINGSTON, TN VOR/DME	LONDON, KY VOR/DME	3900
LONDON, KY VOR/DME	HAZARD, KY VOR/DME	4000

FROM	TO	MEA
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95.6140 VOR FEDERAL AIRWAY V140 - CONTINUED

HAZARD, KY VOR/DME *4200 - MOCA *4200 - GNSS MEA	STACY, VA FIX	*5000
STACY, VA FIX	*KENYA, WV FIX W BND E BND	5000 5400
*13000 - MRA KENYA, WV FIX	*BLUEFIELD, WV VOR/DME	5400
*7000 - MCA BLUEFIELD, WV BLUEFIELD, WV VOR/DME	VOR/DME , E BND SOFTY, WV FIX	*7000
*5600 - MOCA SOFTY, WV FIX #UNUSABLE	CASTE, VA FIX	#
CASTE, VA FIX MONTEBELLO, VA VOR/DME	MONTEBELLO, VA VOR/DME HOODE, VA FIX	6000 6100
HOODE, VA FIX	CASANOVA, VA VORTAC	3200

95.6141 VOR FEDERAL AIRWAY V141

NANTUCKET, MA VOR/DME GAILS, MA FIX *2500 - MRA **2000 - MOCA	GAILS, MA FIX *CELTS, MA FIX	1700 **3000
CELTS, MA FIX MANCHESTER, NH VOR/DME *2100 - MOCA	BOSTON, MA VOR/DME CONCORD, NH VOR/DME	2000 *2900
CONCORD, NH VOR/DME KELLI, NH FIX *3600 - MOCA	KELLI, NH FIX LEBANON, NH VOR/DME	5000 *4000
LEBANON, NH VOR/DME *4000 - MOCA	RUCKY, VT FIX	*6000
RUCKY, VT FIX *4000 - MCA BURLINGTON, VT BURLINGTON, VT VOR/DME	*BURLINGTON, VT VOR/DME VOR/DME , SE BND BUGSY, NY FIX	6300 **9000
*5100 - MOCA *5500 - GNSS MEA #MASSENA R-129 UNSABLE USE BURLINGTON R-311		
BUGSY, NY FIX *4000 - MOCA *4000 - GNSS MEA #MASSENA R-129 UNUSABLE USE BURLINGTON R-311	MASSENA, NY VORTAC	#*9000

95.6142 VOR FEDERAL AIRWAY V142

*TWIN FALLS, ID VORTAC	MURTH, ID FIX E BND W BND	13000 7800
*12000 - MCA TWIN FALLS, ID MURTH, ID FIX	VORTAC , E BND OCLEY, ID FIX E BND W BND	15000 9500
OCLEY, ID FIX *16500 - MCA SHEAR, UT FIX , W BND **12400 - MOCA	*SHEAR, UT FIX	**16500
SHEAR, UT FIX	*MALAD CITY, ID VOR/DME SW BND NE BND	11000 10000
*13500 - MCA MALAD CITY, ID	VOR/DME , SW BND	

FROM	TO	MEA
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95.6142 VOR FEDERAL AIRWAY V142 - CONTINUED

MALAD CITY, ID VOR/DME	*ORNEY, UT FIX	10400
*11200 - MCA ORNEY, UT FIX , E BND		
ORNEY, UT FIX	FORT BRIDGER, WY VOR/DME	12200
FORT BRIDGER, WY VOR/DME	ROCK SPRINGS, WY VOR/DME	10000

95.6143 VOR FEDERAL AIRWAY V143

GIZMO, NC FIX	GREENSBORO, NC VORTAC	3000
GREENSBORO, NC VORTAC	LEAKS, NC FIX	3000
LEAKS, NC FIX	LYNCHBURG, VA VORTAC	3000
LYNCHBURG, VA VORTAC	ELLON, VA FIX	
	N BND	5700
	S BND	3200
ELLON, VA FIX	*CLYFF, VA FIX	5700
*6300 - MCA CLYFF, VA FIX , N BND		
CLYFF, VA FIX	MONTEBELLO, VA VOR/DME	6400
MONTEBELLO, VA VOR/DME	LURAY, VA FIX	6000
LURAY, VA FIX	*KERRE, VA FIX	**6000
*7000 - MRA		
**5000 - MOCA		
KERRE, VA FIX	MARTINSBURG, WV VORTAC	*6000
*5000 - MOCA		
MARTINSBURG, WV VORTAC	HYPER, MD FIX	*5000
*3900 - MOCA		
HYPER, MD FIX	BINNS, PA FIX	*9000
*2600 - MOCA		
*4000 - GNSS MEA		
BINNS, PA FIX	*DELRO, PA FIX	**9000
*10000 - MRA		
**4500 - GNSS MEA		
DELRO, PA FIX	LANCASTER, PA VOR/DME	3000
LANCASTER, PA VOR/DME	POTTSTOWN, PA VORTAC	4500
POTTSTOWN, PA VORTAC	YARDLEY, PA VOR/DME	*6900
*4000 - GNSS MEA		

95.6144 VOR FEDERAL AIRWAY V144

BRADFORD, IL VORTAC	KANKAKEE, IL VOR/DME	2700
KANKAKEE, IL VOR/DME	RODNY, IN FIX	2400
RODNY, IN FIX	MAPPS, IN FIX	*3000
*2200 - MOCA		
MAPPS, IN FIX	CLEFT, IN FIX	*4000
*2400 - MOCA		
CLEFT, IN FIX	FORT WAYNE, IN VORTAC	2800
FORT WAYNE, IN VORTAC	BUZZI, OH FIX	*6000
*3000 - MOCA		
BUZZI, OH FIX	APPLETON, OH VORTAC	*4000
*2600 - MOCA		
APPLETON, OH VORTAC	ZANESVILLE, OH VOR/DME	3000
ZANESVILLE, OH VOR/DME	BEALL, OH FIX	3000
BEALL, OH FIX	*MORGANTOWN, WV VOR/DME	4000
*4600 - MCA MORGANTOWN, WV VOR/DME , SE BND		
MORGANTOWN, WV VOR/DME	KESSEL, WV VOR/DME	5700
KESSEL, WV VOR/DME	LINDEN, VA VORTAC	5500

FROM	TO	MEA
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95.6145 VOR FEDERAL AIRWAY V145

UTICA, NY VORTAC	WEEPY, NY FIX	3400
WEEPY, NY FIX	FLOOR, NY FIX	*3000
*2200 - MOCA		
FLOOR, NY FIX	WATERTOWN, NY VORTAC	3000
WATERTOWN, NY VORTAC	U.S. CANADIAN BORDER	*3000
*1800 - MOCA		

95.6146 VOR FEDERAL AIRWAY V146

ALBANY, NY VORTAC	CHESTER, MA VOR/DME	4100
CHESTER, MA VOR/DME	BARNES, MA VORTAC	*4000
*3200 - MOCA		
BARNES, MA VORTAC	PUTNAM, CT VOR/DME	*3000
*2500 - MOCA		
PUTNAM, CT VOR/DME	PROVIDENCE, RI VOR/DME	*3000
*2100 - MOCA		
PROVIDENCE, RI VOR/DME	MARTHAS VINEYARD, MA VOR/DME	2100
MARTHAS VINEYARD, MA VOR/DME	NANTUCKET, MA VOR/DME	2000

95.6147 VOR FEDERAL AIRWAY V147

YARDLEY, PA VOR/DME	*SPUDS, PA FIX	5000
*6000 - MRA		
SPUDS, PA FIX	EAST TEXAS, PA VOR/DME	*4100
*2500 - MOCA		
EAST TEXAS, PA VOR/DME	SLATT, PA FIX	4000
SLATT, PA FIX	WILKES-BARRE, PA VORTAC	4000
WILKES-BARRE, PA VORTAC	ELMIRA, NY VOR/DME	4000
ELMIRA, NY VOR/DME	GENESEO, NY VOR/DME	4000
GENESEO, NY VOR/DME	ROCHESTER, NY VOR/DME	2800

95.6148 VOR FEDERAL AIRWAY V148

FALCON, CO VORTAC	*LIMEX, CO FIX	8500
*10000 - MRA		
LIMEX, CO FIX	THURMAN, CO VORTAC	7500
THURMAN, CO VORTAC	MCJEF, NE FIX	*7000
*6500 - MOCA		
MCJEF, NE FIX	HAYES CENTER, NE VORTAC	*7000
*5600 - MOCA		
HAYES CENTER, NE VORTAC	NORTH PLATTE, NE VOR/DME	*4900
*4500 - MOCA		
NORTH PLATTE, NE VOR/DME	O'NEILL, NE VORTAC	*5400
*4400 - MOCA		
O'NEILL, NE VORTAC	TYNDA, SD FIX	*4000
*3500 - MOCA		
TYNDA, SD FIX	DOLTS, SD FIX	*4000
*3200 - MOCA		
DOLTS, SD FIX	SIOUX FALLS, SD VORTAC	3400
SIOUX FALLS, SD VORTAC	REDWOOD FALLS, MN VOR/DME	3700
REDWOOD FALLS, MN VOR/DME	MAYER, MN FIX	2800
MAYER, MN FIX	GOPHER, MN VORTAC	3000
GOPHER, MN VORTAC	ALEEN, WI FIX	*5000
*2700 - MOCA		

FROM	TO	MEA
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95.6148 VOR FEDERAL AIRWAY V148 - CONTINUED

ALEEN, WI FIX #UNUSABLE	HAYWARD, WI VOR/DME	#
HAYWARD, WI VOR/DME *5200 - MCA IRONWOOD, MI VOR/DME , SW BND	*IRONWOOD, MI VOR/DME	10000
IRONWOOD, MI VOR/DME *3100 - MOCA	HOUGHTON, MI VOR/DME	*3700

95.6149 VOR FEDERAL AIRWAY V149

ALLENTOWN, PA VORTAC *4000 - MOCA	BINGHAMTON, NY VOR/DME	*5000
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95.6150 VOR FEDERAL AIRWAY V150

SAN FRANCISCO, CA VOR/DME	SUTRO, CA FIX	3500
SUTRO, CA FIX	GOBBS, CA FIX	3000
GOBBS, CA FIX	SAUSALITO, CA VOR/DME	4000
SAUSALITO, CA VOR/DME	COMMO, CA FIX	4000
COMMO, CA FIX	REBAS, CA FIX	
	SW BND	4000
	NE BND	3000
REBAS, CA FIX	EMBER, CA FIX	3000
EMBER, CA FIX	SACRAMENTO, CA VORTAC	
	NE BND	2000
	SW BND	3000

95.6151 VOR FEDERAL AIRWAY V151

GAILES, MA FIX *2000 - GNSS MEA	PROVIDENCE, RI VOR/DME	*3000
PROVIDENCE, RI VOR/DME *2100 - MOCA	PUTNAM, CT VOR/DME	*3000
PUTNAM, CT VOR/DME	GARDNER, MA VOR/DME	3000
GARDNER, MA VOR/DME	KEENE, NH VORTAC	3600
KEENE, NH VORTAC	STRUM, NH FIX	3600
STRUM, NH FIX *6000 - MRA	*UNKER, NH FIX	6000
UNKER, NH FIX	MCADM, NH FIX	4500
MCADM, NH FIX *3500 - MOCA	LEBANON, NH VOR/DME	*4000
LEBANON, NH VOR/DME *3600 - MOCA	ZIECH, VT FIX	*4000
ZIECH, VT FIX *3900 - MOCA	MONTPELIER, VT VOR/DME	*4400
MONTPELIER, VT VOR/DME	*BURLINGTON, VT VOR/DME	6300
*5000 - MCA BURLINGTON, VT VOR/DME , SE BND		

95.6152 VOR FEDERAL AIRWAY V152

ST PETERSBURG, FL VORTAC *2500 - MOCA *2500 - GNSS MEA	JENSN, FL FIX	*4000
KIZER, FL FIX	ORMOND BEACH, FL VORTAC	
	NE BND	*3600
	SW BND	*5000
*2800 - MOCA		

FROM	TO	MEA
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95.6154 VOR FEDERAL AIRWAY V154

ROME, GA VORTAC *3400 - MOCA	MACON, GA VORTAC	*4000 MAA - 7000
MACON, GA VORTAC #MACON R-099 UNUSABLE USE DUBLIN R-286	DUBLIN, GA VORTAC	#2300
DUBLIN, GA VORTAC #UNUSABLE	OCONE, GA FIX	#
OCONE, GA FIX *9000 - MRA #UNUSABLE	*LOTTTS, GA FIX	#
LOTTTS, GA FIX *1800 - MOCA	SAVANNAH, GA VORTAC	*3000

95.6155 VOR FEDERAL AIRWAY V155

COLUMBUS, GA VORTAC GRANT, GA FIX *2500 - MOCA *2500 - GNSS MEA	GRANT, GA FIX SMARR, GA FIX	2800 *4000
SMARR, GA FIX *2500 - MOCA *2500 - GNSS MEA	SINCA, GA FIX	*4500
SINCA, GA FIX *2400 - MOCA *2400 - GNSS MEA	BEYLO, GA FIX	*5000
BEYLO, GA FIX *2100 - MOCA	COLLIERS, SC VORTAC	*3000
COLLIERS, SC VORTAC *4000 - MRA	*WIDER, SC FIX	2500
WIDER, SC FIX *4000 - MRA	*BLOTS, SC FIX	2500
BLOTS, SC FIX CHESTERFIELD, SC VOR/DME	CHESTERFIELD, SC VOR/DME	2300
LILLS, NC FIX *2000 - MOCA *2400 - GNSS MEA	LILLS, NC FIX SANDHILLS, NC VORTAC	2300 *8000
SANDHILLS, NC VORTAC RALEIGH/DURHAM, NC VORTAC	RALEIGH/DURHAM, NC VORTAC	2500
WIPER, NC FIX *2000 - MOCA *2300 - GNSS MEA #LAWRENCEVILLE R-042 UNUSABLE	WIPER, NC FIX LAWRENCEVILLE, VA VORTAC	2300 #*9000
LAWRENCEVILLE, VA VORTAC *5000 - MRA **2000 - GNSS MEA #LAWRENCEVILLE R-042 UNUSABLE USE RICHMOND R-223	*MANGE, VA FIX	#**4000
MANGE, VA FIX *1800 - MOCA *2000 - GNSS MEA	FLAT ROCK, VA VORTAC	*5000
FLAT ROCK, VA VORTAC FALKO, VA FIX *1700 - MOCA *2000 - GNSS MEA	FALKO, VA FIX BROOKE, VA VORTAC	2000 *6000

FROM	TO	MEA
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95.6156 VOR FEDERAL AIRWAY V156

CEDAR RAPIDS, IA VOR/DME	MOSCO, IA FIX	3200
MOSCO, IA FIX	MOLINE, IL VOR/DME	2600
MOLINE, IL VOR/DME	BRADFORD, IL VORTAC	2800
BRADFORD, IL VORTAC	PEOTONE, IL VORTAC	2700
PEOTONE, IL VORTAC	LUCIT, IN FIX	2500
LUCIT, IN FIX	MAPPS, IN FIX	*4000
*2400 - MOCA		
MAPPS, IN FIX	KNOX, IN VOR/DME	*3000
*2200 - MOCA		
KNOX, IN VOR/DME	GIPPER, MI VORTAC	2600
GIPPER, MI VORTAC	KALAMAZOO, MI VOR/DME	3000

95.6157 VOR FEDERAL AIRWAY V157

KEY WEST, FL VORTAC	DVALL, FL FIX	*5000
*1400 - MOCA		
*3000 - GNSS MEA		
DVALL, FL FIX	*FAMIN, FL FIX	**5000
*5700 - MRA		
**1300 - MOCA		
**3000 - GNSS MEA		
FAMIN, FL FIX	DOLPHIN, FL VORTAC	*5000
*1600 - MOCA		
*3000 - GNSS MEADOLPHIN, FL VORTAC	THNDR, FL FIX	*3000
*1500 - MOCA		
THNDR, FL FIX	LA BELLE, FL VORTAC	*3000
*1600 - MOCA		
LA BELLE, FL VORTAC	RINSE, FL FIX	*2000
*1500 - MOCA		
RINSE, FL FIX	LAKELAND, FL VORTAC	2300
LAKELAND, FL VORTAC	OCALA, FL VORTAC	2000
OCALA, FL VORTAC	TAYLOR, FL VORTAC	2000
TAYLOR, FL VORTAC	WAYCROSS, GA VORTAC	2300
WAYCROSS, GA VORTAC	ALMA, GA VORTAC	#2000
#ALMA R-189 UNUSABLE USE WAYCROSS R-009.		
ALMA, GA VORTAC	*LOTTTS, GA FIX	**10000
*9000 - MRA		
*10000 - MCA LOTTS, GA FIX , SW BND		
**2000 - GNSS MEA		
LOTTTS, GA FIX	ALLENDALE, SC VOR	*9000
*1800 - MOCA		
*2000 - GNSS MEA		
ALLENDALE, SC VOR	VANCE, SC VORTAC	*6000
*2000 - GNSS MEA		
VANCE, SC VORTAC	FLORENCE, SC VORTAC	#*2000
*2000 - GNSS MEA		
#VANCE R-047 TO COP UNUSABLE BLO FL180 EXCEPT FOR AIRCRAFT EQUIPPED WITH SUITABLE RNAV.		
FLORENCE, SC VORTAC	FAYETTEVILLE, NC VOR/DME	2300
FAYETTEVILLE, NC VOR/DME	KINSTON, NC VORTAC	*2000
*1900 - MOCA		
KINSTON, NC VORTAC	TAR RIVER, NC VORTAC	2200
TAR RIVER, NC VORTAC	LAWRENCEVILLE, VA VORTAC	#*4500
*2500 - MOCA		
#LAWRENCEVILLE R-177 UNUSABLE BELOW 6000, USE TAR RIVER R-354.		
LAWRENCEVILLE, VA VORTAC	DALTO, VA FIX	#*4000
*2000 - GNSS MEA		
#LAWRENCEVILLE R-042 UNUSABLE.		
DALTO, VA FIX	RICHMOND, VA VORTAC	2000

FROM	TO	MEA
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95.6157 VOR FEDERAL AIRWAY V157 - CONTINUED

RICHMOND, VA VORTAC	*TAPPA, VA FIX	2000
*5000 - MCA TAPPA, VA FIX , NE BND		
TAPPA, VA FIX	PATUXENT, MD VORTAC	*5000
*1500 - MOCA		
*2000 - GNSS MEA		
PATUXENT, MD VORTAC	*GARED, MD FIX	**4500
*8000 - MRA		
**1500 - MOCA		
**4000 - GNSS MEA		
GARED, MD FIX	CHOPS, MD FIX	*4500
*1500 - MOCA		
*4000 - GNSS MEA		
CHOPS, MD FIX	SMYRNA, DE VORTAC	*2000
*1500 - MOCA		
SMYRNA, DE VORTAC	WOODSTOWN, NJ VORTAC	*1900
*1500 - MOCA		
WOODSTOWN, NJ VORTAC	ROBBINSVILLE, NJ VORTAC	*3000
*2000 - MOCA		
ROBBINSVILLE, NJ VORTAC	MINKS, NJ FIX	2000
MINKS, NJ FIX	LA GUARDIA, NY VOR/DME	2900
LA GUARDIA, NY VOR/DME	FAMMA, NY FIX	2000
FAMMA, NY FIX	HAARP, CT FIX	3000
HAARP, CT FIX	KINGSTON, NY VOR/DME	*7000
*2800 - MOCA		
*4000 - GNSS MEA		
KINGSTON, NY VOR/DME	*WIGAN, NY FIX	3100
*8000 - MCA WIGAN, NY FIX , N BND		
WIGAN, NY FIX	GROUP, NY FIX	*8000
*3000 - GNSS MEA		
GROUP, NY FIX	*ALBANY, NY VORTAC	**6000
*6000 - MCA ALBANY, NY VORTAC , S BND		
**2800 - GNSS MEA		

95.6158 VOR FEDERAL AIRWAY V158

MASON CITY, IA VOR/DME	POUND, IA FIX	3000
POUND, IA FIX	DUBUQUE, IA VORTAC	*6000
*3100 - MOCA		
DUBUQUE, IA VORTAC	POLO, IL VOR/DME	2800
POLO, IL VOR/DME	SHOOF, IL FIX	2700

95.6159 VOR FEDERAL AIRWAY V159

VIRGINIA KEY, FL VOR/DME	*NITNY, FL FIX	2100
*3000 - MCA NITNY, FL FIX , N BND		
NITNY, FL FIX	JUPEM, FL FIX	3000
JUPEM, FL FIX	TREASURE, FL VORTAC	2600
TREASURE, FL VORTAC	*PRESK, FL FIX	3000
*2500 - MRA		
PRESK, FL FIX	ORLANDO, FL VORTAC	2000
ORLANDO, FL VORTAC	*SHIMM, FL FIX	2000
*3000 - MRA		
SHIMM, FL FIX	OCALA, FL VORTAC	2000
OCALA, FL VORTAC	CROSS CITY, FL VORTAC	2000
CROSS CITY, FL VORTAC	GREENVILLE, FL VORTAC	2000
GREENVILLE, FL VORTAC	*SALER, GA FIX	2500
*3000 - MRA		
SALER, GA FIX	PECAN, GA VOR/DME	*2000
*1700 - MOCA		
PECAN, GA VOR/DME	*SHANY, GA FIX	**2000
*2800 - MRA		
**1800 - MOCA		
SHANY, GA FIX	EUFAULA, AL VORTAC	2100

FROM	TO	MEA
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95.6159 VOR FEDERAL AIRWAY V159 - CONTINUED

EUFAULA, AL VORTAC	TUSKEGEE, AL VOR/DME	2000
TUSKEGEE, AL VOR/DME	KENTT, AL FIX	*2600
*1900 - MOCA		
KENTT, AL FIX	KYLEE, AL FIX	3800
KYLEE, AL FIX	VULCAN, AL VORTAC	3800
VULCAN, AL VORTAC	HAMILTON, AL VORTAC	*2600
*2200 - MOCA		
HAMILTON, AL VORTAC	HOLLY SPRINGS, MS VORTAC	2300
HOLLY SPRINGS, MS VORTAC	GILMORE, AR VOR/DME	2500
GILMORE, AR VOR/DME	WALNUT RIDGE, AR VORTAC	2800
WALNUT RIDGE, AR VORTAC	DOGWOOD, MO VORTAC	*3400
*3000 - MOCA		
DOGWOOD, MO VORTAC	SPRINGFIELD, MO VORTAC	4300
SPRINGFIELD, MO VORTAC	*OLIVA, MO FIX	**3000
*6000 - MRA		
**2500 - MOCA		
OLIVA, MO FIX	TRALE, MO FIX	*3000
*2500 - MOCA		
TRALE, MO FIX	AUGIE, MO FIX	*3000
*2500 - MOCA		
AUGIE, MO FIX	HODEN, MO FIX	2700
HODEN, MO FIX	NAPOLEON, MO VORTAC	*3000
*2400 - MOCA		
NAPOLEON, MO VORTAC	ST JOSEPH, MO VORTAC	2900
ST JOSEPH, MO VORTAC	VIKKI, IA FIX	3000
VIKKI, IA FIX	OMAHA, IA VORTAC	3400
OMAHA, IA VORTAC	SIOUX CITY, IA VORTAC	3000
SIOUX CITY, IA VORTAC	OBERT, NE FIX	*4500
*2700 - MOCA		
OBERT, NE FIX	YANKTON, SD VOR/DME	3400
YANKTON, SD VOR/DME	MITCHELL, SD VOR/DME	3300
MITCHELL, SD VOR/DME	HURON, SD VORTAC	3000

95.6160 VOR FEDERAL AIRWAY V160

*BLUE MESA, CO VOR/DME	**MURFE, CO FIX	16200
**15600 - MRA		
*12900 - MCA BLUE MESA, CO VOR/DME , NE BND		
MURFE, CO FIX	*LARKS, CO FIX	**15000
*15600 - MRA		
**14400 - MOCA		
LARKS, CO FIX	*SIGNE, CO FIX	**14400
*11500 - MCA SIGNE, CO FIX , SW BND		
**13800 - MOCA		
SIGNE, CO FIX	FALCON, CO VORTAC	8800
FALCON, CO VORTAC	WITNE, CO FIX	8000
WITNE, CO FIX	SAYGE, CO FIX	*8000
*7200 - MOCA		
SAYGE, CO FIX	TUMBL, CO FIX	*8000
*6800 - MOCA		
TUMBL, CO FIX	SIDNEY, NE VOR/DME	*8000
*6800 - MOCA		

95.6161 VOR FEDERAL AIRWAY V161

THREE RIVERS, TX VORTAC	LEMIG, TX FIX	2000
LEMIG, TX FIX	CENTER POINT, TX VORTAC	4000
CENTER POINT, TX VORTAC	LLANO, TX VORTAC	4000

FROM	TO	MEA
95.6161 VOR FEDERAL AIRWAY V161 - CONTINUED		
LLANO, TX VORTAC *6000 - MRA **3200 - MOCA	*BUILT, TX FIX	**6000
BUILT, TX FIX *2900 - MOCA	DUFFA, TX FIX	*6000
DUFFA, TX FIX	MILLSAP, TX VORTAC	3000
MILLSAP, TX VORTAC	BOWIE, TX VORTAC	3000
BOWIE, TX VORTAC	ARDMORE, OK VORTAC	3000
ARDMORE, OK VORTAC	PHARA, OK FIX	3000
PHARA, OK FIX *2300 - MOCA	OKMULGEE, OK VOR/DME	*3000
OKMULGEE, OK VOR/DME	TULSA, OK VORTAC	3200
TULSA, OK VORTAC	NOVEL, OK FIX	3100
NOVEL, OK FIX	OSWEGO, KS VOR/DME	2800
OSWEGO, KS VOR/DME *2400 - MOCA	NALLY, KS FIX	*3000
NALLY, KS FIX *2500 - MOCA	BUTLER, MO VORTAC	*3000
BUTLER, MO VORTAC	NAPOLEON, MO VORTAC	2900
NAPOLEON, MO VORTAC	LAMONI, IA VOR/DME	2900
LAMONI, IA VOR/DME *4300 - MRA	*WIVEY, IA FIX	3000
WIVEY, IA FIX	DES MOINES, IA VORTAC	3000
DES MOINES, IA VORTAC *3500 - MCA ANKEN, IA FIX , N BND	*ANKEN, IA FIX	2700
ANKEN, IA FIX	NEVAD, IA FIX	4000
NEVAD, IA FIX *2700 - MOCA	ALOCK, IA FIX	*3300
ALOCK, IA FIX	MASON CITY, IA VOR/DME	3000
MASON CITY, IA VOR/DME	ROCHESTER, MN VOR/DME	3000
ROCHESTER, MN VOR/DME *4000 - MRA	*CORDY, MN FIX	3000
CORDY, MN FIX	FARMINGTON, MN VORTAC	3000
FARMINGTON, MN VORTAC *2700 - MOCA	GOPHER, MN VORTAC	*3500
INTERNATIONAL FALLS, MN VOR/DME	U.S. CANADIAN BORDER	3000

95.6162 VOR FEDERAL AIRWAY V162

HARRISBURG, PA VORTAC #UNUSABLE	BOBSS, PA FIX	#
BOBSS, PA FIX	EAST TEXAS, PA VOR/DME	3000
EAST TEXAS, PA VOR/DME #ALLENTOWN R-240 UNUSABLE BELOW 9000 USE EAST TEXAS R-059	ALLENTOWN, PA VORTAC	#3000
ALLENTOWN, PA VORTAC	HUGUENOT, NY VOR/DME	3500

95.6163 VOR FEDERAL AIRWAY V163

U.S. MEXICAN BORDER *1400 - MOCA	BROWNSVILLE, TX VORTAC	*2000
BROWNSVILLE, TX VORTAC	RELAX, TX FIX	1800
RELAX, TX FIX *1800 - MOCA *1800 - GNSS MEA	MANNY, TX FIX	*5000
MANNY, TX FIX *1500 - MOCA	ASCOT, TX FIX	*5000

FROM	TO	MEA
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95.6163 VOR FEDERAL AIRWAY V163 - CONTINUED

ASCOT, TX FIX	SOLON, TX FIX	
	N BND	*4000
	S BND	*5000
*1600 - MOCA		
SOLON, TX FIX	CORPUS CHRISTI, TX VORTAC	1600
CORPUS CHRISTI, TX VORTAC	SINTO, TX FIX	1700
SINTO, TX FIX	THREE RIVERS, TX VORTAC	1900
THREE RIVERS, TX VORTAC	*YENNS, TX FIX	2000
*3000 - MRA		
YENNS, TX FIX	SAN ANTONIO, TX VORTAC	*3000
*2500 - MOCA		
SAN ANTONIO, TX VORTAC	SLIMM, TX FIX	*3500
*2900 - MOCA		
SLIMM, TX FIX	GOOCH SPRINGS, TX VORTAC	*3500
*3000 - MOCA		
GOOCH SPRINGS, TX VORTAC	*TENAT, TX FIX	**3500
*4000 - MRA		
**2700 - MOCA		
TENAT, TX FIX	GLEN ROSE, TX VORTAC	*3500
*2700 - MOCA		

95.6164 VOR FEDERAL AIRWAY V164

BUFFALO, NY VOR/DME	*BENEE, NY FIX	**11000
*11000 - MRA		
**4400 - MOCA		
**5000 - GNSS MEA		
BENEE, NY FIX	WELLSVILLE, NY VORTAC	*6000
*4500 - MOCA		
*5000 - GNSS MEA		
WELLSVILLE, NY VORTAC	STONYFORK, PA VOR/DME	4500
STONYFORK, PA VOR/DME	WILLIAMSPORT, PA VOR/DME	4000
WILLIAMSPORT, PA VOR/DME	DIANO, PA FIX	4000
DIANO, PA FIX	EAST TEXAS, PA VOR/DME	*4000
*3500 - MOCA		

95.6165 VOR FEDERAL AIRWAY V165

MISSION BAY, CA VORTAC	SARGS, CA FIX	3000
SARGS, CA FIX	OCEANSIDE, CA VORTAC	2500
OCEANSIDE, CA VORTAC	BALBO, CA FIX	4000
BALBO, CA FIX	SEAL BEACH, CA VORTAC	
	NW BND	3000
	SE BND	4000
SEAL BEACH, CA VORTAC	LOS ANGELES, CA VORTAC	2500
LOS ANGELES, CA VORTAC	*VALEY, CA FIX	4000
*5600 - MCA VALEY, CA FIX , N BND		
VALEY, CA FIX	*SAUGS, CA FIX	6000
*6600 - MCA SAUGS, CA FIX , NW BND		
SAUGS, CA FIX	LAKE HUGHES, CA VORTAC	8000
LAKE HUGHES, CA VORTAC	JEFFY, CA FIX	8000
JEFFY, CA FIX	*LOPES, CA FIX	9000
*8600 - MCA LOPES, CA FIX , S BND		
LOPES, CA FIX	*ARVIN, CA FIX	8500
*7300 - MCA ARVIN, CA FIX , SE BND		
ARVIN, CA FIX	SHAFTER, CA VORTAC	3000
SHAFTER, CA VORTAC	TULE, CA VOR/DME	3000
TULE, CA VOR/DME	DINUB, CA FIX	3500

FROM	TO	MEA
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95.6165 VOR FEDERAL AIRWAY V165 - CONTINUED

DINUB, CA FIX	SELMA, CA FIX	
	NW BND	2500
	SE BND	3500
SELMA, CA FIX	*CLOVIS, CA VORTAC	2000
*4000 - MCA CLOVIS, CA VORTAC , N BND		
CLOVIS, CA VORTAC	*COGOL, CA FIX	
	N BND	6500
	S BND	5000
*8500 - MCA COGOL, CA FIX , N BND		
COGOL, CA FIX	MARRI, CA FIX	#*16000
*13600 - MOCA		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
MARRI, CA FIX	*MUSTANG, NV VORTAC	**13000
*10000 - MCA MUSTANG, NV VORTAC , S BND		
**11000 - MOCA		
MUSTANG, NV VORTAC	PYRAM, NV FIX	*11000
*9700 - MOCA		
*10000 - GNSS MEA		
PYRAM, NV FIX	BINNZ, NV FIX	
	NW BND	*14000
	SE BND	*12000
*11000 - MOCA		
*11000 - GNSS MEA		
BINNZ, NV FIX	CHOIR, CA FIX	*14000
*12200 - MOCA		
CHOIR, CA FIX	LAKEVIEW, OR VORTAC	
	SE BND	*14000
	NW BND	*11000
*10500 - MOCA		
LAKEVIEW, OR VORTAC	URBIA, OR FIX	9500
URBIA, OR FIX	*DESCHUTES, OR VORTAC	
	SE BND	9500
	NW BND	7000
*9300 - MCA DESCHUTES, OR VORTAC , NW BND		
DESCHUTES, OR VORTAC	BOTTL, OR FIX	
	NW BND	12500
	SE BND	7000
BOTTL, OR FIX	WALDO, OR FIX	12500
WALDO, OR FIX	ELKES, OR FIX	
	NW BND	7800
	SE BND	12500
ELKES, OR FIX	*MAVER, OR FIX	
	SE BND	12500
	NW BND	7000
*9400 - MCA MAVER, OR FIX , SE BND		
MAVER, OR FIX	RAWER, OR FIX	*5000
*3600 - MOCA		
RAWER, OR FIX	NEWBERG, OR VOR/DME	4000
NEWBERG, OR VOR/DME	PITER, OR FIX	4000
PITER, OR FIX	CETRA, WA FIX	6000
CETRA, WA FIX	OLYMPIA, WA VORTAC	
	N BND	4000
	S BND	6000
OLYMPIA, WA VORTAC	*CARRO, WA FIX	**4000
*4000 - MRA		
**2000 - MOCA		
CARRO, WA FIX	DIGGN, WA FIX	*6000
*5000 - MOCA		
DIGGN, WA FIX	PENN COVE, WA VOR/DME	*5000
*2600 - MOCA		
PENN COVE, WA VOR/DME	ISLND, WA FIX	*5000
*1500 - MOCA		

FROM	TO	MEA
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95.6165 VOR FEDERAL AIRWAY V165 - CONTINUED

ISLND, WA FIX *2800 - MOCA	CANDL, WA FIX	*5000
CANDL, WA FIX *1900 - MOCA	WHATCOM, WA VORTAC	*4000

95.6166 VOR FEDERAL AIRWAY V166

PARKERSBURG, WV VOR/DME	MOSIC, WV FIX	3000
MOSIC, WV FIX *3100 - MOCA	CLARKSBURG, WV VOR/DME	*3600
CLARKSBURG, WV VOR/DME	TYGAR, WV FIX	3600
TYGAR, WV FIX	UGJOB, WV FIX	4700
UGJOB, WV FIX	KESSEL, WV VOR/DME	6300
KESSEL, WV VOR/DME *4500 - MOCA	CAPON, WV FIX	*5000
CAPON, WV FIX *3500 - MOCA	MARTINSBURG, WV VORTAC	*5000
MARTINSBURG, WV VORTAC *3300 - MOCA	WESTMINSTER, MD VORTAC	*4000
WESTMINSTER, MD VORTAC *2500 - MOCA	BELAY, MD FIX	*3000
BELAY, MD FIX *6000 - MRA	*BAINS, MD FIX	2000
BAINS, MD FIX	DUPONT, DE VORTAC	2000
DUPONT, DE VORTAC	WOODSTOWN, NJ VORTAC	2000
WOODSTOWN, NJ VORTAC	BRIEF, NJ FIX	1900
BRIEF, NJ FIX	SEA ISLE, NJ VORTAC	3000

MAA - 8000

95.6167 VOR FEDERAL AIRWAY V167

HANCOCK, NY VOR/DME	HELON, NY FIX	4100
HELON, NY FIX	KINGSTON, NY VOR/DME	4000
KINGSTON, NY VOR/DME	HARTFORD, CT VOR/DME	3200
HARTFORD, CT VOR/DME *2100 - MOCA	JEWIT, CT FIX	*2600
JEWIT, CT FIX	PROVIDENCE, RI VOR/DME	2500
PROVIDENCE, RI VOR/DME *1800 - MOCA	PEAKE, MA FIX	*2500
PEAKE, MA FIX #UNUSABLE	MARCONI, MA VOR/DME	#
MARCONI, MA VOR/DME *1600 - MOCA	KENNEBUNK, ME VOR/DME	*6000
*4000 - GNSS MEA		

95.6168 VOR FEDERAL AIRWAY V168

VULCAN, AL VORTAC	LAGRANGE, GA VORTAC	4000
LAGRANGE, GA VORTAC	*MILER, AL FIX	2600
*6000 - MCA MILER, AL FIX , S BND		
*2600 - MCA MILER, AL FIX , N BND		
MILER, AL FIX	*WIREGRASS, AL VORTAC	**6000
*6000 - MCA WIREGRASS, AL VORTAC , N BND		
**3000 - GNSS MEA		

FROM	TO	MEA
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95.6169 VOR FEDERAL AIRWAY V169

TOBE, CO VOR/DME	HUGO, CO VOR/DME	8100
HUGO, CO VOR/DME	THURMAN, CO VORTAC	7300
THURMAN, CO VORTAC	AKRON, CO VOR/DME	*7000
*6200 - MOCA		
AKRON, CO VOR/DME	SIDNEY, NE VOR/DME	*6400
*6200 - MOCA		
SIDNEY, NE VOR/DME	SCOTTSBLUFF, NE VORTAC	*7000
*6000 - MOCA		
SCOTTSBLUFF, NE VORTAC	TOADSTOOL, NE VOR/DME	7000
TOADSTOOL, NE VOR/DME	WAXER, NE FIX	7000
WAXER, NE FIX	RAPID CITY, SD VORTAC	6000
RAPID CITY, SD VORTAC	DUPREE, SD VOR/DME	5000
DUPREE, SD VOR/DME	BISMARCK, ND VOR/DME	4700
BISMARCK, ND VOR/DME	DEVILS LAKE, ND VOR/DME	4000

95.6170 VOR FEDERAL AIRWAY V170

DEVILS LAKE, ND VOR/DME	JAMESTOWN, ND VOR/DME	3500
JAMESTOWN, ND VOR/DME	ABERDEEN, SD VOR/DME	3300
ABERDEEN, SD VOR/DME	SIOUX FALLS, SD VORTAC	*5000
*3400 - MOCA		
SIOUX FALLS, SD VORTAC	WORTHINGTON, MN VOR/DME	3400
WORTHINGTON, MN VOR/DME	FAIRMONT, MN VOR/DME	3300
FAIRMONT, MN VOR/DME	ROCHESTER, MN VOR/DME	3000
ROCHESTER, MN VOR/DME	NODINE, MN VORTAC	3000
NODINE, MN VORTAC	DELLS, WI VORTAC	3000
DELLS, WI VORTAC	BADGER, WI VOR/DME	3000
BADGER, WI VOR/DME	PETTY, WI FIX	2700
PETTY, WI FIX	RAINE, MI FIX	4000
RAINE, MI FIX	PULLMAN, MI VOR/DME	2400
PULLMAN, MI VOR/DME	HEBEL, MI FIX	3000
HEBEL, MI FIX	LESSY, MI FIX	*4500
*3000 - MOCA		
LESSY, MI FIX	SALEM, MI VORTAC	3000
BRADFORD, PA VOR/DME	SLATE RUN, PA VORTAC	4000
SLATE RUN, PA VORTAC	SELINGSGROVE, PA VOR/DME	4000
SELINGSGROVE, PA VOR/DME	RAVINE, PA VORTAC	*4000
*3400 - MOCA		
RAVINE, PA VORTAC	BOYER, PA FIX	3500
BOYER, PA FIX	MODENA, PA VORTAC	*3000
*2400 - MOCA		
MODENA, PA VORTAC	DUPONT, DE VORTAC	*3000
*1800 - MOCA		
*2000 - GNSS MEA		
DUPONT, DE VORTAC	ODESA, MD FIX	*2000
*2000 - GNSS MEA		
#DUPONT R 233 UNUSABLE BEYOND 22 NM.		
ODESA, MD FIX	SWANN, MD FIX	*2500
*1500 - MOCA		
*2000 - GNSS MEA		
#UNUSABLE		
SWANN, MD FIX	PALEO, MD FIX	*2500
*1700 - MOCA		
#UNUSABLE		
PALEO, MD FIX	POLLA, MD FIX	2200
		MAA - 13000

FROM	TO	MEA
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95.6171 VOR FEDERAL AIRWAY V171

LEXINGTON, KY VOR/DME	MCREE, KY FIX	3000
MCREE, KY FIX	LOUISVILLE, KY VORTAC	2600
LOUISVILLE, KY VORTAC	SCOTO, IN FIX	*10000
*3000 - MOCA		
SCOTO, IN FIX	TERRE HAUTE, IN VORTAC	*4000
*3000 - MOCA		
TERRE HAUTE, IN VORTAC	DANVILLE, IL VORTAC	2500
DANVILLE, IL VORTAC	PEOTONE, IL VORTAC	2500
PEOTONE, IL VORTAC	MEDAN, IL FIX	2400
MEDAN, IL FIX	JOLIET, IL VOR/DME	2400
JOLIET, IL VOR/DME	ROCKFORD, IL VOR/DME	2700
ROCKFORD, IL VOR/DME	GLARS, WI FIX	2900
GLARS, WI FIX	LONE ROCK, WI VOR/DME	*3400
*2800 - MOCA		
LONE ROCK, WI VOR/DME	WEBBYE, WI FIX	3000
WEBBYE, WI FIX	NODINE, MN VORTAC	3100
NODINE, MN VORTAC	EMILS, MN FIX	3000
EMILS, MN FIX	FARMINGTON, MN VORTAC	*5500
*3000 - GNSS MEA		
FARMINGTON, MN VORTAC	JONNA, MN FIX	*3500
*2500 - MOCA		
*3000 - GNSS MEA		
JONNA, MN FIX	DARWIN, MN VORTAC	2900
DARWIN, MN VORTAC	ALEXANDRIA, MN VOR/DME	3000
ALEXANDRIA, MN VOR/DME	STARR, MN FIX	*3500
*3000 - MOCA		
STARR, MN FIX	*SHELS, MN FIX	**6000
*4000 - MRA		
**3500 - MOCA		
SHELS, MN FIX	GRAND FORKS, ND VOR/DME	3000
GRAND FORKS, ND VOR/DME	ROSEAU, MN VOR/DME	2900

95.6172 VOR FEDERAL AIRWAY V172

NORTH PLATTE, NE VOR/DME	WOLBACH, NE VORTAC	*5400
*4500 - MOCA		
WOLBACH, NE VORTAC	COLUMBUS, NE VOR/DME	3800
COLUMBUS, NE VOR/DME	OMAHA, IA VORTAC	3700
OMAHA, IA VORTAC	WUNOT, IA FIX	
	NE BND	5500
	SW BND	4000
WUNOT, IA FIX	*LINDE, IA FIX	**5500
*5500 - MRA		
**3800 - MOCA		
LINDE, IA FIX	GUMBO, IA FIX	3500
GUMBO, IA FIX	NEWTON, IA VOR/DME	3300
NEWTON, IA VOR/DME	CEDAR RAPIDS, IA VOR/DME	2800
CEDAR RAPIDS, IA VOR/DME	LISBO, IA FIX	2700
LISBO, IA FIX	LOTTE, IA FIX	3300
LOTTE, IA FIX	*MIHAL, IL FIX	2700
*4000 - MRA		
MIHAL, IL FIX	POLO, IL VOR/DME	2700
POLO, IL VOR/DME	DUPAGE, IL VOR/DME	2600

95.6173 VOR FEDERAL AIRWAY V173

SPINNER, IL VORTAC	PEOTONE, IL VORTAC	*4500
*2300 - MOCA		

FROM	TO	MEA
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95.6174 VOR FEDERAL AIRWAY V174

YORK, KY VORTAC	HENDERSON, WV VORTAC	3300
HENDERSON, WV VORTAC	GAYED, WV FIX	*4000
*2700 - MOCA		
GAYED, WV FIX	*CARLA, WV FIX	5500
*5500 - MRA		
CARLA, WV FIX	ELKINS, WV VORTAC	5500

95.6175 VOR FEDERAL AIRWAY V175

MALDEN, MO VORTAC	BUNKS, MO FIX	*4000
*2600 - MOCA		
BUNKS, MO FIX	VICHY, MO VOR/DME	3000
VICHY, MO VOR/DME	ZIPUR, MO FIX	3000
ZIPUR, MO FIX	HALLSVILLE, MO VORTAC	2600
HALLSVILLE, MO VORTAC	MACON, MO VOR/DME	2600
MACON, MO VOR/DME	KIRKSVILLE, MO VORTAC	2700
KIRKSVILLE, MO VORTAC	OHGEE, IA FIX	2800
OHGEE, IA FIX	DES MOINES, IA VORTAC	#*7000
*2500 - MOCA		
#DES MOINES R-141 UNUSABLE, USE KIRKSVILLE R-323		
DES MOINES, IA VORTAC	*LINDE, IA FIX	3500
*5500 - MRA		
LINDE, IA FIX	*MADUP, IA FIX	**5500
*5500 - MRA		
**2900 - MOCA		
MADUP, IA FIX	*WELTE, IA FIX	5500
*3900 - MRA		
WELTE, IA FIX	SIOUX CITY, IA VORTAC	3000
SIOUX CITY, IA VORTAC	OYENS, IA FIX	4400
OYENS, IA FIX	WORTHINGTON, MN VOR/DME	3600
WORTHINGTON, MN VOR/DME	REDWOOD FALLS, MN VOR/DME	3400
REDWOOD FALLS, MN VOR/DME	ALEXANDRIA, MN VOR/DME	3500
ALEXANDRIA, MN VOR/DME	PARK RAPIDS, MN VOR/DME	3000
PARK RAPIDS, MN VOR/DME	BLUOX, MN FIX	
	S BND	3500
	NW BND	7000
BLUOX, MN FIX	ROSEAU, MN VOR/DME	*7000
*2800 - MOCA		
*3300 - GNSS MEA		
ROSEAU, MN VOR/DME	U.S. CANADIAN BORDER	*3600
*2500 - MOCA		

95.6177 VOR FEDERAL AIRWAY V177

JOLIET, IL VOR/DME	NUELG, IL FIX	2700
NUELG, IL FIX	JANESVILLE, WI VOR/DME	*4000
*2300 - MOCA		
JANESVILLE, WI VOR/DME	MADISON, WI VORTAC	3000
WAUSAU, WI VORTAC	BAITS, WI FIX	#
#UNUSABLE		
BAITS, WI FIX	HAYWARD, WI VOR/DME	#
#UNUSABLE		
HAYWARD, WI VOR/DME	DULUTH, MN VORTAC	#
#USUABLE		
DULUTH, MN VORTAC	ELY, MN VOR/DME	3600

FROM	TO	MEA
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95.6178 VOR FEDERAL AIRWAY V178

HALLSVILLE, MO VORTAC	BNTON, MO FIX	2800
BNTON, MO FIX	VICHY, MO VOR/DME	*2800
*2200 - MOCA		
VICHY, MO VOR/DME	FARMINGTON, MO VORTAC	3300
FARMINGTON, MO VORTAC	CAPE GIRARDEAU, MO VOR/DME	3000
CAPE GIRARDEAU, MO VOR/DME	CUNNINGHAM, KY VOR/DME	2400
CUNNINGHAM, KY VOR/DME	CENTRAL CITY, KY VORTAC	2600
CENTRAL CITY, KY VORTAC	NEW HOPE, KY VOR/DME	2700
NEW HOPE, KY VOR/DME	MAUDD, KY FIX	2700
MAUDD, KY FIX	MCREE, KY FIX	5000
MCREE, KY FIX	LEXINGTON, KY VOR/DME	3000
LEXINGTON, KY VOR/DME	TRENT, KY FIX	3400
TRENT, KY FIX	SLINK, WV FIX	*8000
*4200 - GNSS MEA		
SLINK, WV FIX	BLUEFIELD, WV VOR/DME	*6000
*5400 - GNSS MEA		

95.6179 VOR FEDERAL AIRWAY V179

BRUNSWICK, GA VORTAC	DUBLIN, GA VORTAC	2000
DUBLIN, GA VORTAC	HUSKY, GA FIX	*3000
*2200 - MOCA		

95.6180 VOR FEDERAL AIRWAY V180

INTERNATIONAL FALLS, MN VOR/DME	U.S. CANADIAN BORDER	2900
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95.6181 VOR FEDERAL AIRWAY V181

KIRKSVILLE, MO VORTAC	LAMONI, IA VOR/DME	2900
LAMONI, IA VOR/DME	OMAHA, IA VORTAC	3000
OMAHA, IA VORTAC	NORFOLK, NE VOR/DME	3600
NORFOLK, NE VOR/DME	YANKTON, SD VOR/DME	3700
YANKTON, SD VOR/DME	SIOUX FALLS, SD VORTAC	#3400
#SIOUX FALLS R-340 UNUSABLE BELOW 4000		
SIOUX FALLS, SD VORTAC	*OBITT, SD FIX	*4000
*5000 - MRA		
**3500 - MOCA		
OBITT, SD FIX	WATERTOWN, SD VORTAC	*4000
*3200 - MOCA		
WATERTOWN, SD VORTAC	BANEY, ND FIX	4500
BANEY, ND FIX	FARGO, ND VOR/DME	
	N BND	2800
	S BND	3900
FARGO, ND VOR/DME	GRAND FORKS, ND VOR/DME	2600
GRAND FORKS, ND VOR/DME	HUMBOLDT, MN VORTAC	2600
HUMBOLDT, MN VORTAC	ZOMTA, ND FIX	2800
ZOMTA, ND FIX	U.S. CANADIAN BORDER	2800

FROM	TO	MEA
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95.6182 VOR FEDERAL AIRWAY V182

NORTH BEND, OR VOR/DME	*GAMMA, OR FIX	
	S BND	4000
	N BND	4500
*6200 - MRA		
GAMMA, OR FIX	NEWPORT, OR VORTAC	4500
NEWPORT, OR VORTAC	NEWBERG, OR VOR/DME	6000
NEWBERG, OR VOR/DME	*BATTLE GROUND, WA VORTAC	4100
*5000 - MCA BATTLE GROUND, WA VORTAC , E BND		
BATTLE GROUND, WA VORTAC	KLICKITAT, OR VOR/DME	*7000
*6500 - MOCA		
KLICKITAT, OR VOR/DME	*BREED, OR FIX	5300
*5700 - MRA		
BREED, OR FIX	*UKIAH, OR FIX	8000
*9400 - MCA UKIAH, OR FIX , E BND		
UKIAH, OR FIX	*BAKER CITY, OR VOR/DME	**13000
*10000 - MCA BAKER CITY, OR VOR/DME , W BND		
**11000 - MOCA		
BAKER CITY, OR VOR/DME	*IBEAM, OR FIX	9000
*12000 - MCA IBEAM, OR FIX , NE BND		
IBEAM, OR FIX	LEZLE, WA FIX	*12000
*8100 - MOCA		
LEZLE, WA FIX	NEZ PERCE, ID VOR/DME	*7000
*6200 - MOCA		

95.6183 VOR FEDERAL AIRWAY V183

*SAN MARCUS, CA VORTAC	TAFTO, CA FIX	9000
*7500 - MCA SAN MARCUS, CA VORTAC , N BND		
*TAFTO, CA FIX	MARIC, CA FIX	**6000
*6000 - MCA TAFTO, CA FIX , S BND		
**4500 - MOCA		
*MARIC, CA FIX	SHAFTER, CA VORTAC	3000
*5000 - MCA MARIC, CA FIX , S BND		

95.6184 VOR FEDERAL AIRWAY V184

ERIE, PA VORTAC	TIDIOUTE, PA VORTAC	3500
TIDIOUTE, PA VORTAC	PHILIPSBURG, PA VORTAC	*5000
*4000 - MOCA		
PHILIPSBURG, PA VORTAC	HARRISBURG, PA VORTAC	4000
HARRISBURG, PA VORTAC	*DELRO, PA FIX	3000
*10000 - MRA		
DELRO, PA FIX	MODENA, PA VORTAC	*10000
*3900 - MOCA		
*4000 - GNSS MEA		
MODENA, PA VORTAC	WOODSTOWN, NJ VORTAC	2000
WOODSTOWN, NJ VORTAC	CEDAR LAKE, NJ VOR/DME	1900
CEDAR LAKE, NJ VOR/DME	ATLANTIC CITY, NJ VORTAC	1800
ATLANTIC CITY, NJ VORTAC	PANZE, NJ FIX	2100
PANZE, NJ FIX	FALON, NJ FIX	*5000
*1500 - MOCA		
*2000 - GNSS MEA		
FALON, NJ FIX	ZIGGI, NJ FIX	*2500
*1600 - MOCA		

FROM	TO	MEA
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95.6185 VOR FEDERAL AIRWAY V185

SAVANNAH, GA VORTAC	*SPONG, GA FIX	**3000
*5000 - MRA		
**2200 - MOCA		
SPONG, GA FIX	COLLIERS, SC VORTAC	*3000
*2200 - MOCA		
COLLIERS, SC VORTAC	GREENWOOD, SC VORTAC	2400
GREENWOOD, SC VORTAC	*UNMAN, SC FIX	3000
*4000 - MCA UNMAN, SC FIX , N BND		
UNMAN, SC FIX	SUGARLOAF MOUNTAIN, NC VORTAC	6000
SUGARLOAF MOUNTAIN, NC VORTAC	MUMMI, NC FIX	7000
MUMMI, NC FIX	SNOWBIRD, TN VORTAC	8000
SNOWBIRD, TN VORTAC	*PENCE, TN FIX	7000
*4000 - MCA PENCE, TN FIX , SE BND		
PENCE, TN FIX	VOLUNTEER, TN VORTAC	3000

95.6186 VOR FEDERAL AIRWAY V186

SAN MARCUS, CA VORTAC	DEANO, CA FIX	6200
DEANO, CA FIX	*HENER, CA FIX	5000
*5100 - MCA HENER, CA FIX , E BND		
HENER, CA FIX	FILLMORE, CA VORTAC	6300
FILLMORE, CA VORTAC	VAN NUYS, CA VOR/DME	6000
VAN NUYS, CA VOR/DME	TIFNI, CA FIX	5500
TIFNI, CA FIX	PARADISE, CA VORTAC	4000
PARADISE, CA VORTAC	TANNR, CA FIX	6000
TANNR, CA FIX	POGGI, CA VORTAC	5000

95.6187 VOR FEDERAL AIRWAY V187

SOCORRO, NM VORTAC	ALBUQUERQUE, NM VORTAC	8000
ALBUQUERQUE, NM VORTAC	*CURLY, NM FIX	9000
*9500 - MCA CURLY, NM FIX , NW BND		
CURLY, NM FIX	*MISSY, NM FIX	11000
*9000 - MRA		
MISSY, NM FIX	RATTLESNAKE, NM VORTAC	8700
RATTLESNAKE, NM VORTAC	RIZAL, CO FIX	9200
RIZAL, CO FIX	*MANCA, CO FIX	10900
*11200 - MCA MANCA, CO FIX , N BND		
MANCA, CO FIX	HERRM, CO FIX	#*15000
*12800 - MOCA		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
HERRM, CO FIX	*GRAND JUNCTION, CO VOR/DME	**15000
*10700 - MCA GRAND JUNCTION, CO VOR/DME , S BND		
**12100 - MOCA		
GRAND JUNCTION, CO VOR/DME	*TESSY, CO FIX	10000
*10500 - MRA		
*10700 - MCA TESSY, CO FIX , N BND		
TESSY, CO FIX	*RACER, CO FIX	**12000
*12000 - MRA		
**11000 - MOCA		
RACER, CO FIX	*RENAE, CO FIX	**13000
*13000 - MRA		
**10700 - MOCA		
RENAE, CO FIX	ROCK SPRINGS, WY VOR/DME	*13000
*11700 - MOCA		
ROCK SPRINGS, WY VOR/DME	RIVERTON, WY VOR/DME	*12000
*10000 - MOCA		
*10000 - GNSS MEA		

FROM	TO	MEA
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95.6187 VOR FEDERAL AIRWAY V187 - CONTINUED

RIVERTON, WY VOR/DME	BOYSEN RESERVOIR, WY VOR/DME	9600
BOYSEN RESERVOIR, WY VOR/DME	PRYER, MT FIX	11000
PRYER, MT FIX	*BILLINGS, MT VORTAC	
	SE BND	11000
	NW BND	7000
*6500 - MCA BILLINGS, MT VORTAC , S BND		
BILLINGS, MT VORTAC	TASSE, MT FIX	
	SE BND	6000
	NW BND	8000
TASSE, MT FIX	*JUGAP, MT FIX	8000
*9500 - MCA JUGAP, MT FIX , NW BND		
JUGAP, MT FIX	GREAT FALLS, MT VORTAC	*11000
*10300 - MOCA		
GREAT FALLS, MT VORTAC	ROSOE, MT FIX	
	NE BND	8000
	SW BND	10000
ROSOE, MT FIX	MISSOULA, MT VOR/DME	*13000
*11400 - MOCA		
MISSOULA, MT VOR/DME	LOLLO, MT FIX	
	NE BND	*10000
	SW BND	*13000
*9300 - MOCA		
LOLLO, MT FIX	RIVAL, MT FIX	
	NE BND	*12000
	SW BND	*13000
*9000 - MOCA		
RIVAL, MT FIX	OFINO, ID FIX	*13000
*9900 - MOCA		
OFINO, ID FIX	NEZ PERCE, ID VOR/DME	
	SW BND	5500
	NE BND	10000
NEZ PERCE, ID VOR/DME	POTOR, WA FIX	*6000
*5400 - MOCA		
POTOR, WA FIX	*DATES, WA FIX	7200
*4500 - MCA DATES, WA FIX , E BND		
DATES, WA FIX	PASCO, WA VOR/DME	4000
PASCO, WA VOR/DME	NIALS, WA FIX	2900
NIALS, WA FIX	FEBUS, WA FIX	4400
FEBUS, WA FIX	*ELLENSBURG, WA VOR/DME	6000
*6700 - MCA ELLENSBURG, WA VOR/DME , W BND		
ELLENSBURG, WA VOR/DME	THICK, WA FIX	
	E BND	7700
	W BND	10000
THICK, WA FIX	MOUNT, WA FIX	10000
MOUNT, WA FIX	ORTIN, WA FIX	
	W BND	8000
	E BND	10000
ORTIN, WA FIX	MCCHORD, WA VORTAC	6000
MCCHORD, WA VORTAC	OLYMPIA, WA VORTAC	6000
OLYMPIA, WA VORTAC	RINDS, WA FIX	4000
RINDS, WA FIX	ASTORIA, OR VOR/DME	5000

95.6188 VOR FEDERAL AIRWAY V188

TIDIOUTE, PA VORTAC	SLATE RUN, PA VORTAC	4000
SLATE RUN, PA VORTAC	WILLIAMSPORT, PA VOR/DME	4000
WILLIAMSPORT, PA VOR/DME	SWANK, PA FIX	4500

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95.6188 VOR FEDERAL AIRWAY V188 - CONTINUED

SWANK, PA FIX	WILKES-BARRE, PA VORTAC E BND W BND	*4000 *4500
*3700 - MOCA		
WILKES-BARRE, PA VORTAC	SPARTA, NJ VORTAC	4000
SPARTA, NJ VORTAC	CARMEL, NY VOR/DME	*3000
*2500 - MOCA		
CARMEL, NY VOR/DME	GROTON, CT VOR/DME	3000

95.6189 VOR FEDERAL AIRWAY V189

WRIGHT BROTHERS, NC VOR/DME	*DAREZ, NC FIX	**8000
*8000 - MCA DAREZ, NC FIX , E BND		
**3000 - GNSS MEA		
DAREZ, NC FIX	TAR RIVER, NC VORTAC	*6000
*3000 - MOCA		
*4000 - GNSS MEA		
TAR RIVER, NC VORTAC	FRANKLIN, VA VORTAC	2000
FRANKLIN, VA VORTAC	HOPEWELL, VA VORTAC	3000

95.6190 VOR FEDERAL AIRWAY V190

PHOENIX, AZ VORTAC	*LAKEY, AZ FIX	5000
*7800 - MCA LAKEY, AZ FIX , NE BND		
LAKEY, AZ FIX	GRINE, AZ FIX NE BND SW BND	*9000 *6000
*5300 - MOCA		
GRINE, AZ FIX	PEAKS, AZ FIX	*10000
*6700 - MOCA		
PEAKS, AZ FIX	TEDDI, AZ FIX NE BND SW BND	13000 10000
TEDDI, AZ FIX	ST JOHNS, AZ VORTAC	*13000
*11000 - MOCA		
*11000 - GNSS MEA		
ST JOHNS, AZ VORTAC	ACOMA, NM FIX	11500
ACOMA, NM FIX	*ALBUQUERQUE, NM VORTAC	9000
*11500 - MCA ALBUQUERQUE, NM VORTAC , NE BND		
ALBUQUERQUE, NM VORTAC	RENCO, NM FIX	13000
RENCO, NM FIX	*FORT UNION, NM VORTAC	12000
*11300 - MCA FORT UNION, NM VORTAC , SW BND		
FORT UNION, NM VORTAC	DALHART, TX VORTAC	*10000
*9200 - MOCA		
DALHART, TX VORTAC	MITBEE, OK VORTAC	*7000
*5400 - MOCA		
MITBEE, OK VORTAC	CARON, OK FIX SW BND NE BND	*5000 *8000
*3700 - MOCA		
CARON, OK FIX	FIRET, OK FIX	*8000
*2800 - MOCA		
FIRET, OK FIX	PIONEER, OK VORTAC E BND W BND	3000 8000
PIONEER, OK VORTAC	BARTLESVILLE, OK VOR/DME	3000
BARTLESVILLE, OK VOR/DME	OSWEGO, KS VOR/DME	2700

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95.6190 VOR FEDERAL AIRWAY V190 - CONTINUED

OSWEGO, KS VOR/DME	*WACCO, MO FIX	3100
*3700 - MCA WACCO, MO FIX , E BND		
WACCO, MO FIX	*QUALM, MO FIX	**3700
*3700 - MCA QUALM, MO FIX , W BND		
**3000 - MOCA		
QUALM, MO FIX	SPRINGFIELD, MO VORTAC	3000
SPRINGFIELD, MO VORTAC	MAPLES, MO VORTAC	3000
MAPLES, MO VORTAC	BUNKS, MO FIX	3000
BUNKS, MO FIX	FARMINGTON, MO VORTAC	3500
FARMINGTON, MO VORTAC	MARION, IL VOR/DME	3000
MARION, IL VOR/DME	POCKET CITY, IN VORTAC	*5000
*2000 - MOCA		
*2300 - GNSS MEA		

95.6191 VOR FEDERAL AIRWAY V191

TROY, IL VORTAC	ADDERS, IL VORTAC	2500
ADDERS, IL VORTAC	ROBERTS, IL VOR/DME	2800
ROBERTS, IL VOR/DME	NEWT, IL FIX	2500
NEWT, IL FIX	*BOJAK, IL FIX	**5000
*5000 - MRA		
**2100 - MOCA		
BOJAK, IL FIX	NORTHBROOK, IL VOR/DME	2500
NORTHBROOK, IL VOR/DME	BADGER, WI VOR/DME	2900
BADGER, WI VOR/DME	OSHKOSH, WI VORTAC	3000
OSHKOSH, WI VORTAC	RHINELANDER, WI VOR/DME	*4500
*3100 - MOCA		
RHINELANDER, WI VOR/DME	IRONWOOD, MI VOR/DME	*8000
*3200 - MOCA		
IRONWOOD, MI VOR/DME	DULUTH, MN VORTAC	*3500
*3100 - MOCA		
DULUTH, MN VORTAC	HIBBING, MN VOR/DME	3300
HIBBING, MN VOR/DME	GRAND RAPIDS, MN VOR/DME	3000

95.6192 VOR FEDERAL AIRWAY V192

CHAMPAIGN, IL VORTAC	TERRE HAUTE, IN VORTAC	2500
TERRE HAUTE, IN VORTAC	BRICKYARD, IN VORTAC	2700
BRICKYARD, IN VORTAC	MUNCIE, IN VOR/DME	2900
MUNCIE, IN VOR/DME	DAYTON, OH VOR/DME	2800

95.6193 VOR FEDERAL AIRWAY V193

MUSKY, MI FIX	PULLMAN, MI VOR/DME	*3000
*2000 - MOCA		
PULLMAN, MI VOR/DME	CLOCK, MI FIX	*3000
*2400 - MOCA		
CLOCK, MI FIX	WHITE CLOUD, MI VOR/DME	2800
WHITE CLOUD, MI VOR/DME	TRAVERSE CITY, MI VOR/DME	4000
TRAVERSE CITY, MI VOR/DME	PELLSTON, MI VORTAC	3000
PELLSTON, MI VORTAC	SAULT STE MARIE, MI VOR/DME	3000

95.6194 VOR FEDERAL AIRWAY V194

CEDAR CREEK, TX VORTAC	KISER, TX FIX	2300
KISER, TX FIX	COLLEGE STATION, TX VORTAC	4000

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95.6194 VOR FEDERAL AIRWAY V194 - CONTINUED

COLLEGE STATION, TX VORTAC *2000 - MOCA *2000 - GNSS MEA	PRARI, TX FIX	*7000
PRARI, TX FIX *7000 - MCA SEALY, TX FIX , NW BND **3500 - MOCA **3500 - GNSS MEA	*SEALY, TX FIX	**7000
SEALY, TX FIX HOBBY, TX VOR/DME SABINE PASS, TX VOR/DME *1600 - MOCA	HOBBY, TX VOR/DME SABINE PASS, TX VOR/DME GUSTI, LA FIX	2000 3000 *4000
GUSTI, LA FIX LAFAYETTE, LA VORTAC *5000 - MRA	LAFAYETTE, LA VORTAC *ROSEY, LA FIX	2800 2100
ROSEY, LA FIX FIGHTING TIGER, LA VORTAC MC COMB, MS VORTAC *2000 - MOCA	FIGHTING TIGER, LA VORTAC MC COMB, MS VORTAC MIZZE, MS FIX	2100 2300 *3000
MIZZE, MS FIX *5000 - MRA *3000 - MCA PAULD, MS FIX , SW BND	*PAULD, MS FIX	3000
PAULD, MS FIX LIBERTY, NC VORTAC RALEIGH/DURHAM, NC VORTAC TAR RIVER, NC VORTAC COFIELD, NC VORTAC *1600 - MOCA	MERIDIAN, MS VORTAC RALEIGH/DURHAM, NC VORTAC TAR RIVER, NC VORTAC COFIELD, NC VORTAC SUNNS, NC FIX	2100 3100 2600 1800 *2000

95.6195 VOR FEDERAL AIRWAY V195

OAKLAND, CA VOR/DME CROIT, CA FIX *7200 - MCA CORDD, CA FIX , N BND **3400 - MOCA	CROIT, CA FIX *CORDD, CA FIX	4000 **5000
CORDD, CA FIX *8500 - MRA **5000 - MOCA	*RAGGS, CA FIX	**8500
RAGGS, CA FIX *8500 - MCA BESSA, CA FIX , S BND **4800 - MOCA	*BESSA, CA FIX	**8500
BESSA, CA FIX WILLIAMS, CA VORTAC *1700 - MOCA	WILLIAMS, CA VORTAC RED BLUFF, CA VORTAC	5300 *3000
RED BLUFF, CA VORTAC BURRS, CA FIX *7000 - MRA *7300 - MCA TOMAD, CA FIX , W BND **4600 - MOCA	BURRS, CA FIX *TOMAD, CA FIX	3000 **6000
TOMAD, CA FIX *7700 - MCA YAGER, CA FIX , E BND **8300 - MOCA	*YAGER, CA FIX	**11000
YAGER, CA FIX	FORTUNA, CA VORTAC	6000

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95.6196 VOR FEDERAL AIRWAY V196

UTICA, NY VORTAC	*SARANAC LAKE, NY VOR/DME	5400
*6500 - MCA SARANAC LAKE, NY VOR/DME , E BND		
SARANAC LAKE, NY VOR/DME	RIGID, NY FIX	
	E BND	9000
	W BND	5000

95.6197 VOR FEDERAL AIRWAY V197

PARADISE, CA VORTAC	*POMONA, CA VORTAC	4500
*5800 - MCA POMONA, CA VORTAC , NW BND		
POMONA, CA VORTAC	*HASSA, CA FIX	6500
*10000 - MCA HASSA, CA FIX , NW BND		
HASSA, CA FIX	*PALMDALE, CA VORTAC	10500
*8700 - MCA PALMDALE, CA VORTAC , SE BND		
PALMDALE, CA VORTAC	*FISCH, CA FIX	5000
*8300 - MCA FISCH, CA FIX , NW BND		
FISCH, CA FIX	*KELEN, CA FIX	**10200
*9300 - MCA KELEN, CA FIX , SE BND		
**10200 - MOCA		
KELEN, CA FIX	*ARVIN, CA FIX	8500
*7300 - MCA ARVIN, CA FIX , SE BND		
ARVIN, CA FIX	SHAFTER, CA VORTAC	3000

95.6198 VOR FEDERAL AIRWAY V198

SAN SIMON, AZ VORTAC	COLUMBUS, NM VOR/DME	8700
COLUMBUS, NM VOR/DME	EL PASO, TX VORTAC	9000
EL PASO, TX VORTAC	HUDSPETH, TX VORTAC	7500
HUDSPETH, TX VORTAC	AGAZY, TX FIX	*11000
*8900 - MOCA		
AGAZY, TX FIX	DOWES, TX FIX	*8000
*6400 - MOCA		
DOWES, TX FIX	FORT STOCKTON, TX VORTAC	5000
FORT STOCKTON, TX VORTAC	KEMPL, TX FIX	*8000
*5500 - MOCA		
KEMPL, TX FIX	JUNCTION, TX VORTAC	*6000
*4000 - MOCA		
JUNCTION, TX VORTAC	SAN ANTONIO, TX VORTAC	4100
SAN ANTONIO, TX VORTAC	SEEDS, TX FIX	2900
SEEDS, TX FIX	WEMAR, TX FIX	*2500
*2000 - MOCA		
WEMAR, TX FIX	EAGLE LAKE, TX VOR/DME	2000
EAGLE LAKE, TX VOR/DME	BLUMS, TX FIX	2000
BLUMS, TX FIX	HOBBY, TX VOR/DME	2400
HOBBY, TX VOR/DME	SABINE PASS, TX VOR/DME	3000
SABINE PASS, TX VOR/DME	WHITE LAKE, LA VOR/DME	*4000
*1700 - MOCA		
*2000 - GNSS MEA		
WHITE LAKE, LA VOR/DME	TIBBY, LA VOR/DME	2000
TIBBY, LA VOR/DME	HARVEY, LA VORTAC	2100
HARVEY, LA VORTAC	PEARL, LA FIX	2000
PEARL, LA FIX	MINNI, MS FIX	*2300
*1300 - MOCA		
MINNI, MS FIX	ELSIE, MS FIX	*3500
*1300 - MOCA		
ELSIE, MS FIX	*ROMMY, MS FIX	**2800
*4000 - MRA		
**1300 - MOCA		
ROMMY, MS FIX	BROOKLEY, AL VORTAC	2000
BROOKLEY, AL VORTAC	CRESTVIEW, FL VORTAC	3000

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95.6198 VOR FEDERAL AIRWAY V198 - CONTINUED

CRESTVIEW, FL VORTAC	DEFUN, FL FIX	2000
DEFUN, FL FIX	CHEWS, FL FIX	*3000
*1600 - MOCA		
CHEWS, FL FIX	MARIANNA, FL VORTAC	2000
MARIANNA, FL VORTAC	*SNEAD, FL FIX	2000
*3000 - MRA		
SNEAD, FL FIX	SEMINOLE, FL VORTAC	2000
SEMINOLE, FL VORTAC	GREENVILLE, FL VORTAC	2100
GREENVILLE, FL VORTAC	TAYLOR, FL VORTAC	2000
TAYLOR, FL VORTAC	CRAIG, FL VORTAC	*3000
*2100 - MOCA		

95.6199 VOR FEDERAL AIRWAY V199

SAN FRANCISCO, CA VOR/DME	SUTRO, CA FIX	3500
SUTRO, CA FIX	GOBBS, CA FIX	3000
GOBBS, CA FIX	STINS, CA FIX	3500
STINS, CA FIX	DUBRY, CA FIX	4500
DUBRY, CA FIX	MENDOCINO, CA VORTAC	6000
MENDOCINO, CA VORTAC	*HENLE, CA FIX	9000
*5800 - MCA HENLE, CA FIX , S BND		
HENLE, CA FIX	RED BLUFF, CA VORTAC	3000

95.6200 VOR FEDERAL AIRWAY V200

MENDOCINO, CA VORTAC	WILLIAMS, CA VORTAC	6200
WILLIAMS, CA VORTAC	YUBBA, CA FIX	4000
YUBBA, CA FIX	*RANGO, CA FIX	5000
*8500 - MCA RANGO, CA FIX , E BND		
RANGO, CA FIX	SIGNA, CA FIX	*11000
*10000 - MOCA		
SIGNA, CA FIX	MUSTANG, NV VORTAC	11500
BONNEVILLE, UT VORTAC	*STACO, UT FIX	9000
*11000 - MCA STACO, UT FIX , SE BND		
STACO, UT FIX	*FAIRFIELD, UT VORTAC	12100
*10700 - MCA FAIRFIELD, UT VORTAC , NW BND		
*12500 - MCA FAIRFIELD, UT VORTAC , E BND		
FAIRFIELD, UT VORTAC	PANEL, UT FIX	
	W BND	*11000
	E BND	*13300
*9900 - MOCA		
PANEL, UT FIX	MYTON, UT VOR/DME	13300
MYTON, UT VOR/DME	*RACER, CO FIX	
	W BND	**10000
	E BND	**10500
*12000 - MRA		
**8700 - MOCA		
RACER, CO FIX	*MEEKER, CO VOR/DME	10500
*11300 - MCA MEEKER, CO VOR/DME , E BND		
MEEKER, CO VOR/DME	*KREMMLING, CO VOR/DME	14600
*12500 - MCA KREMMLING, CO VOR/DME , W BND		

95.6201 VOR FEDERAL AIRWAY V201

LOS ANGELES, CA VORTAC	*BERRI, CA FIX	5000
*7600 - MCA BERRI, CA FIX , N BND		
BERRI, CA FIX	*SOLED, CA FIX	8800
*8400 - MCA SOLED, CA FIX , S BND		
SOLED, CA FIX	PALMDALE, CA VORTAC	7500

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95.6202 VOR FEDERAL AIRWAY V202

SAN SIMON, AZ VORTAC	SILVER CITY, NM VOR/DME	10300
SILVER CITY, NM VOR/DME	*KEAPS, NM FIX	10300
*11600 - MCA KEAPS, NM FIX , NE BND		
KEAPS, NM FIX	TRUTH OR CONSEQUENCES, NM VORTAC	12300

95.6203 VOR FEDERAL AIRWAY V203

STELA, MA FIX	ALBANY, NY VORTAC	*6000
*4000 - GNSS MEA		
ALBANY, NY VORTAC	OTOLE, NY FIX	*6000
*2200 - MOCA		
*3000 - GNSS MEA		
OTOLE, NY FIX	DINNY, NY FIX	*10000
*6900 - MOCA		
*7000 - GNSS MEA		
DINNY, NY FIX	SARANAC LAKE, NY VOR/DME	7000
SARANAC LAKE, NY VOR/DME	MASSENA, NY VORTAC	#*10000
*5100 - MOCA		
*6000 - GNSS MEA		
#MASSENA R-159 UNUSABLE, USE SARANAC LAKE R-339		

95.6204 VOR FEDERAL AIRWAY V204

HOQUIAM, WA VORTAC	*OLYMPIA, WA VORTAC	4500
*3200 - MCA OLYMPIA, WA VORTAC , W BND		
OLYMPIA, WA VORTAC	*MCKEN, WA FIX	4000
*5000 - MCA MCKEN, WA FIX , E BND		
MCKEN, WA FIX	*ALDER, WA FIX	5800
*5800 - MCA ALDER, WA FIX , E BND		
ALDER, WA FIX	TAMPO, WA FIX	10000
TAMPO, WA FIX	*YAKIMA, WA VORTAC	
W BND		
E BND		
*5300 - MCA YAKIMA, WA VORTAC , W BND		
YAKIMA, WA VORTAC	*PAIDS, WA FIX	6000
*5300 - MCA PAIDS, WA FIX , W BND		
PAIDS, WA FIX	PASCO, WA VOR/DME	4000
PASCO, WA VOR/DME	WATSY, WA FIX	3500
WATSY, WA FIX	SPOKANE, WA VORTAC	5000

95.6206 VOR FEDERAL AIRWAY V206

NAPOLEON, MO VORTAC	KIRKSVILLE, MO VORTAC	3000
KIRKSVILLE, MO VORTAC	OTTUMWA, IA VOR/DME	3000

95.6207 VOR FEDERAL AIRWAY V207

GILL, CO VOR/DME	SCOTTSBLUFF, NE VORTAC	7500
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95.6208 VOR FEDERAL AIRWAY V208

VENTURA, CA VOR/DME	WEEZL, CA FIX	5000
WEEZL, CA FIX	SANTA CATALINA, CA VORTAC	4000
SANTA CATALINA, CA VORTAC	AVOLS, CA FIX	4000

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95.6208 VOR FEDERAL AIRWAY V208 - CONTINUED

AVOLS, CA FIX *2000 - MOCA	PACIF, CA FIX	*3000
PACIF, CA FIX	OCEANSIDE, CA VORTAC	3000
OCEANSIDE, CA VORTAC *5000 - MCA VISTA, CA FIX , E BND	*VISTA, CA FIX	3000
VISTA, CA FIX	JULIAN, CA VORTAC	7700
JULIAN, CA VORTAC	THERMAL, CA VORTAC	9000
THERMAL, CA VORTAC	TWENTYNINE PALMS, CA VORTAC	7000
TWENTYNINE PALMS, CA VORTAC	NEEDLES, CA VORTAC	7800
NEEDLES, CA VORTAC	PEACH SPRINGS, AZ VOR/DME	9000
PEACH SPRINGS, AZ VOR/DME	GRAND CANYON, AZ VOR/DME	10000
GRAND CANYON, AZ VOR/DME	TUBA CITY, AZ VORTAC	9500
TUBA CITY, AZ VORTAC	PAGE, AZ VOR/DME	9000
PAGE, AZ VOR/DME *11500 - MCA HANKSVILLE, UT VORTAC , S BND	*HANKSVILLE, UT VORTAC	14000
HANKSVILLE, UT VORTAC	CARBON, UT VOR/DME	10000
CARBON, UT VOR/DME	MYTON, UT VOR/DME	11300
MYTON, UT VOR/DME	VERNAL, UT VOR/DME	8400
VERNAL, UT VOR/DME	CHEROKEE, WY VOR/DME	11700

95.6209 VOR FEDERAL AIRWAY V209

SEMMES, AL VORTAC *1800 - MOCA *2000 - GNSS MEA	JANES, AL FIX	*2300
JANES, AL FIX	KEWANEE, MS VORTAC	2300
KEWANEE, MS VORTAC *2300 - MOCA	BROOKWOOD, AL VORTAC	*5000
BROOKWOOD, AL VORTAC	VULCAN, AL VORTAC	2500
VULCAN, AL VORTAC	TRUST, AL FIX	3500
TRUST, AL FIX	GADSDEN, AL VOR/DME	3600
GADSDEN, AL VOR/DME *5000 - MCA MENLA, AL FIX , SW BND **3700 - MOCA	*MENLA, AL FIX	**5000
MENLA, AL FIX	CHOO CHOO, TN VORTAC	4000

95.6210 VOR FEDERAL AIRWAY V210

LOS ANGELES, CA VORTAC	PIRRO, CA FIX	3500
PIRRO, CA FIX *10400 - MCA POMONA, CA VORTAC , NE BND	*POMONA, CA VORTAC	4500
POMONA, CA VORTAC	CALBE, CA FIX	
	SW BND	5700
	NE BND	10800
CALBE, CA FIX	MEANT, CA FIX	
	SW BND	10700
	NE BND	11500
MEANT, CA FIX *9200 - MCA APLES, CA FIX , SW BND	*APLES, CA FIX	11800
APLES, CA FIX	HECTOR, CA VORTAC	7900
HECTOR, CA VORTAC *8200 - MOCA	GOFFS, CA VORTAC	*9000
GOFFS, CA VORTAC	UNPAS, NV FIX	8000
UNPAS, NV FIX	PEACH SPRINGS, AZ VOR/DME	9000
PEACH SPRINGS, AZ VOR/DME *14500 - MCA GRAND CANYON, AZ VOR/DME , E BND	*GRAND CANYON, AZ VOR/DME	10000
GRAND CANYON, AZ VOR/DME *14500 - MCA TUBA CITY, AZ VORTAC , W BND **9600 - MOCA	*TUBA CITY, AZ VORTAC	**14500

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95.6210 VOR FEDERAL AIRWAY V210 - CONTINUED

TUBA CITY, AZ VORTAC	FULLY, NM FIX	12000
FULLY, NM FIX	RATTLESNAKE, NM VORTAC	
	NE BND	9000
	SW BND	12000
RATTLESNAKE, NM VORTAC	RESER, NM FIX	9000
RESER, NM FIX	MRKKO, CO FIX	15000
MRKKO, CO FIX	*ALAMOSA, CO VORTAC	
	W BND	14800
	E BND	10000
*11200 - MCA ALAMOSA, CO VORTAC , W BND		
ALAMOSA, CO VORTAC	BLOKE, CO FIX	
	E BND	14000
	W BND	10400
BLOKE, CO FIX	*GOSIP, CO FIX	14000
*14000 - MCA GOSIP, CO FIX , SW BND		
GOSIP, CO FIX	*RADIO, CO FIX	**12000
*10900 - MCA RADIO, CO FIX , SW BND		
**8500 - MOCA		
RADIO, CO FIX	BLOOM, CO FIX	*9400
*8000 - MOCA		
BLOOM, CO FIX	LAMAR, CO VOR/DME	7000
LAMAR, CO VOR/DME	LIBERAL, KS VORTAC	*6000
*5300 - MOCA		
LIBERAL, KS VORTAC	ROLLS, OK FIX	*12000
*4400 - MOCA		
*5000 - GNSS MEA		
ROLLS, OK FIX	WAXEY, OK FIX	
	W BND	*11000
	E BND	*9300
*3800 - MOCA		
*4000 - GNSS MEA		
WAXEY, OK FIX	WILL ROGERS, OK VORTAC	
	W BND	*9300
	E BND	*5000
*3300 - MOCA		
*4000 - GNSS MEA		
WILL ROGERS, OK VORTAC	MINGG, OK FIX	*4000
*3100 - MOCA		
MINGG, OK FIX	OKMULGEE, OK VOR/DME	*4000
*2600 - MOCA		
BRICKYARD, IN VORTAC	MUNCIE, IN VOR/DME	2900
MUNCIE, IN VOR/DME	ROSEWOOD, OH VORTAC	2800
REVLOC, PA VOR/DME	BLINK, PA FIX	4500
BLINK, PA FIX	HARRISBURG, PA VORTAC	4000
HARRISBURG, PA VORTAC	LANCASTER, PA VOR/DME	3000
LANCASTER, PA VOR/DME	SPERY, PA FIX	2800
SPERY, PA FIX	YARDLEY, PA VOR/DME	*3000
*2200 - MOCA		

95.6211 VOR FEDERAL AIRWAY V211

BRAZO, NM FIX	DURANGO, CO VOR/DME	
	W BND	11300
	E BND	13000
DURANGO, CO VOR/DME	CORTEZ, CO VOR/DME	11300

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95.6212 VOR FEDERAL AIRWAY V212

SAN ANTONIO, TX VORTAC	SEEDS, TX FIX	2900
SEEDS, TX FIX	WEMAR, TX FIX	*2500
*2000 - MOCA		
WEMAR, TX FIX	INDUSTRY, TX VORTAC	2000
INDUSTRY, TX VORTAC	NAVASOTA, TX VOR/DME	2200
NAVASOTA, TX VOR/DME	OSKER, TX FIX	3000
OSKER, TX FIX	LUFKIN, TX VORTAC	*4000
*2000 - MOCA		
LUFKIN, TX VORTAC	COSGO, LA FIX	*4000
*1900 - MOCA		
COSGO, LA FIX	COCOS, LA FIX	*4000
*1800 - MOCA		
COCOS, LA FIX	ALEXANDRIA, LA VORTAC	*3000
*1900 - MOCA		
ALEXANDRIA, LA VORTAC	JOHON, LA FIX	2000
JOHON, LA FIX	SETTA, MS FIX	*4000
*2000 - MOCA		
SETTA, MS FIX	MC COMB, MS VORTAC	*3000
*2000 - MOCA		

95.6213 VOR FEDERAL AIRWAY V213

GRAND STRAND, SC VORTAC	WILMINGTON, NC VORTAC	#*3100
*3100 - GNSS MEA		
#WILMINGTON R-240 UNUSABLE		
WILMINGTON, NC VORTAC	WALLO, NC FIX	*8000
*1600 - MOCA		
*5000 - GNSS MEA		
WALLO, NC FIX	JOSCH, NC FIX	
	S BND	*8000
	N BND	*6000
*1700 - MOCA		
*2000 - GNSS MEA		
JOSCH, NC FIX	ESTER, NC FIX	
	S BND	*6000
	N BND	*3000
*1700 - MOCA		
*2000 - GNSS MEA		
ESTER, NC FIX	TAR RIVER, NC VORTAC	2000
TAR RIVER, NC VORTAC	GUMBE, NC FIX	2000
GUMBE, NC FIX	HOPEWELL, VA VORTAC	*2000
*1500 - MOCA		
HOPEWELL, VA VORTAC	*TAPPA, VA FIX	2000
*5000 - MCA TAPPA, VA FIX , NE BND		
TAPPA, VA FIX	PATUXENT, MD VORTAC	*5000
*1500 - MOCA		
*2000 - GNSS MEA		
PATUXENT, MD VORTAC	*GARED, MD FIX	**4500
*8000 - MRA		
**1500 - MOCA		
**4000 - GNSS MEA		
GARED, MD FIX	CHOPS, MD FIX	*4500
*1500 - MOCA		
*4000 - GNSS MEA		
CHOPS, MD FIX	SMYRNA, DE VORTAC	*2000
*1500 - MOCA		
SMYRNA, DE VORTAC	HOLEY, NJ FIX	*3000
*1600 - MOCA		
HOLEY, NJ FIX	ROBBINSVILLE, NJ VORTAC	*3000
*2000 - MOCA		

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95.6213 VOR FEDERAL AIRWAY V213 - CONTINUED

ROBBINSVILLE, NJ VORTAC *1900 - MOCA	WARRD, NJ FIX	*3000 MAA - 10000
WARRD, NJ FIX *2500 - MOCA	SHOTT, NJ FIX	*3000 MAA - 10000
SHOTT, NJ FIX *2600 - MOCA	SPARTA, NJ VORTAC	*3500 MAA - 10000
SPARTA, NJ VORTAC *3200 - MOCA	FLOSI, NY FIX	*4000
FLOSI, NY FIX *4000 - MOCA	WEETS, NY FIX	*5500
WEETS, NY FIX *6100 - MOCA *8000 - GNSS MEA	ALBANY, NY VORTAC	*10000

95.6214 VOR FEDERAL AIRWAY V214

KOKOMO, IN VORTAC MARION, IN VOR/DME GLOOM, OH FIX *2600 - MOCA *3000 - GNSS MEA	MARION, IN VOR/DME MUNCIE, IN VOR/DME ZANESVILLE, OH VOR/DME	2600 2800 *4000
ZANESVILLE, OH VOR/DME BELLAIRE, OH VOR/DME *5000 - MCA GALLS, PA FIX , E BND	BELLAIRE, OH VOR/DME *GALLS, PA FIX	3000 3600
GALLS, PA FIX GRANTSVILLE, MD VOR/DME MARTINSBURG, WV VORTAC WOOLY, MD FIX BALTIMORE, MD VORTAC SWANN, MD FIX *1500 - MOCA *2000 - GNSS MEA #UNUSABLE	GRANTSVILLE, MD VOR/DME MARTINSBURG, WV VORTAC WOOLY, MD FIX BALTIMORE, MD VORTAC SWANN, MD FIX ODESA, MD FIX	5500 5500 3200 2600 2000 #*2500
ODESA, MD FIX *2000 - GNSS MEA #DUPONT R-233 UNUSABLE BEYOND 22 NM.	DUPONT, DE VORTAC	#*2000
DUPONT, DE VORTAC *3000 - GNSS MEA	YARDLEY, PA VOR/DME	*6000
YARDLEY, PA VOR/DME *2000 - MOCA	TETERBORO, NJ VOR/DME	*3000 MAA - 10000

95.6215 VOR FEDERAL AIRWAY V215

*JYBEE, MI FIX *4000 - MRA **1700 - MOCA	SALES, MI FIX	**3500
SALES, MI FIX *2300 - MOCA	MUSKEGON, MI VORTAC	*3000
MUSKEGON, MI VORTAC WHITE CLOUD, MI VOR/DME	WHITE CLOUD, MI VOR/DME GAYLORD, MI VOR/DME	2800 4000

95.6216 VOR FEDERAL AIRWAY V216

LAMAR, CO VOR/DME *5200 - MOCA	ORION, KS FIX	*6300
ORION, KS FIX *4300 - MOCA	HILL CITY, KS VORTAC	*5000

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95.6216 VOR FEDERAL AIRWAY V216 - CONTINUED

HILL CITY, KS VORTAC *3900 - MOCA	MANKATO, KS VORTAC	*4500
MANKATO, KS VORTAC	PAWNEE CITY, NE VORTAC	3600
PAWNEE CITY, NE VORTAC	LAMONI, IA VOR/DME	3400
LAMONI, IA VOR/DME	OTTUMWA, IA VOR/DME	2900
OTTUMWA, IA VOR/DME	IOWA CITY, IA VOR/DME	3000
IOWA CITY, IA VOR/DME *2600 - MOCA	LOTTE, IA FIX	*3500
LOTTE, IA FIX *2200 - MOCA	WACKS, IL FIX	*4000
WACKS, IL FIX	JANESVILLE, WI VOR/DME	2800

95.6217 VOR FEDERAL AIRWAY V217

*BESIE, IL FIX *10000 - MRA	BADGER, WI VOR/DME	2900
BADGER, WI VOR/DME	CHING, WI FIX	3000
CHING, WI FIX	SHOOD, WI FIX	2700
SHOOD, WI FIX	GREEN BAY, WI VORTAC	2500
GREEN BAY, WI VORTAC *2200 - MOCA	CECIL, WI FIX	*2700
CECIL, WI FIX	RHINELANDER, WI VOR/DME	3600
RHINELANDER, WI VOR/DME *4100 - MOCA	DULUTH, MN VORTAC	*6000
DULUTH, MN VORTAC	HIBBING, MN VOR/DME	3300
HIBBING, MN VOR/DME *3100 - MOCA	BAUDETTE, MN VOR/DME	*5000
BAUDETTE, MN VOR/DME	U.S. CANADIAN BORDER	2800

95.6218 VOR FEDERAL AIRWAY V218

INTERNATIONAL FALLS, MN VOR/DME	BEBEL, MN FIX	3000
BEBEL, MN FIX	SQEA, MN FIX	5000
SQEA, MN FIX *3100 - MOCA	GRAND RAPIDS, MN VOR/DME	*5000
GRAND RAPIDS, MN VOR/DME *3000 - MOCA	GOPHER, MN VORTAC	*5500
GOPHER, MN VORTAC *3200 - MOCA	DLANY, MN FIX	*4800
DLANY, MN FIX	WAUKON, IA VOR/DME	3000

95.6219 VOR FEDERAL AIRWAY V219

HAYES CENTER, NE VORTAC *4500 - MOCA	WOLBACH, NE VORTAC	*5000
WOLBACH, NE VORTAC	NORFOLK, NE VOR/DME	4000
NORFOLK, NE VOR/DME	SIoux CITY, IA VORTAC	3600
SIoux CITY, IA VORTAC	RITTA, IA FIX	
	NE BND	*9000
	SW BND	*4500
*3300 - MOCA		
RITTA, IA FIX	MILSS, IA FIX	9000
MILSS, IA FIX	FAIRMONT, MN VOR/DME	8000
FAIRMONT, MN VOR/DME *2500 - MOCA	MANKATO, MN VOR/DME	*3000

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95.6220 VOR FEDERAL AIRWAY V220

GRAND JUNCTION, CO VOR/DME *13000 - MRA	*PACES, CO FIX	11500
PACES, CO FIX #MTA V220 NE TO V220 NW 12900	SLOLM, CO FIX	#13000
SLOLM, CO FIX	RIFLE, CO VOR/DME	12400
RIFLE, CO VOR/DME	MEEKER, CO VOR/DME	12400
MEEKER, CO VOR/DME	AXIAL, CO FIX	11000
AXIAL, CO FIX	HAYDEN, CO VOR/DME	
	SW BND	11000
	NE BND	10000
HAYDEN, CO VOR/DME	HABRO, CO FIX	10000
HABRO, CO FIX	KREMMLING, CO VOR/DME	13000
KREMMLING, CO VOR/DME	*HYGEN, CO FIX	**17000
*17000 - MCA HYGEN, CO FIX , SW BND		
**15600 - MOCA		
HYGEN, CO FIX	NIWOT, CO FIX	
	NE BND	9000
	SW BND	12500
NIWOT, CO FIX	GILL, CO VOR/DME	
	NE BND	7400
	SW BND	10000
GILL, CO VOR/DME	AKRON, CO VOR/DME	7000
AKRON, CO VOR/DME	MCJEF, NE FIX	*7000
*6000 - MOCA		
MCJEF, NE FIX	MC COOK, NE VOR/DME	*7500
*5000 - MOCA		
MC COOK, NE VOR/DME	SPRIT, NE FIX	*5000
*4100 - MOCA		
SPRIT, NE FIX	KEARNEY, NE VOR	*5000
*3700 - MOCA		
KEARNEY, NE VOR	HASTINGS, NE VOR/DME	4300
HASTINGS, NE VOR/DME	COLUMBUS, NE VOR/DME	4000

95.6221 VOR FEDERAL AIRWAY V221

BIBLE GROVE, IL VORTAC	HOOSIER, IN VORTAC	3000
HOOSIER, IN VORTAC	SHELBYVILLE, IN VOR/DME	#*6000
*3100 - MOCA		
*4000 - GNSS MEA		
#HOOSIER R-053 UNUSABLE		
SHELBYVILLE, IN VOR/DME	MUNCIE, IN VOR/DME	*2800
*2600 - MOCA		
MUNCIE, IN VOR/DME	FORT WAYNE, IN VORTAC	2700
FORT WAYNE, IN VORTAC	ILTON, IN FIX	3000

95.6222 VOR FEDERAL AIRWAY V222

EL PASO, TX VORTAC	SALT FLAT, TX VORTAC	*8000
*7400 - MOCA		
SALT FLAT, TX VORTAC	HOBAN, TX FIX	8000
HOBAN, TX FIX	FORT STOCKTON, TX VORTAC	5000
FORT STOCKTON, TX VORTAC	KEMPL, TX FIX	*8000
*5500 - MOCA		
KEMPL, TX FIX	JUNCTION, TX VORTAC	*6000
*4000 - MOCA		
JUNCTION, TX VORTAC	STONEWALL, TX VORTAC	4000
STONEWALL, TX VORTAC	MARCS, TX FIX	4500

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95.6222 VOR FEDERAL AIRWAY V222 - CONTINUED		
MARCS, TX FIX *2000 - MOCA	CRAYS, TX FIX	*2900
CRAYS, TX FIX	INDUSTRY, TX VORTAC	2600
INDUSTRY, TX VORTAC	SEALY, TX FIX	2100
SEALY, TX FIX	HUMBLE, TX VORTAC	2000
HUMBLE, TX VORTAC	BEAUMONT, TX VOR/DME	3100
BEAUMONT, TX VOR/DME	LAKE CHARLES, LA VORTAC	2000
LAKE CHARLES, LA VORTAC	MAXON, LA FIX	2000
MAXON, LA FIX	WRACK, LA FIX	*6000
*1800 - MOCA		
*2000 - GNSS MEA		
WRACK, LA FIX	MC COMB, MS VORTAC	*4000
*2000 - MOCA		
*2000 - GNSS MEA		
MC COMB, MS VORTAC	EATON, MS VORTAC	2000
EATON, MS VORTAC	PICAN, MS FIX	2300
PICAN, MS FIX	MONROEVILLE, AL VORTAC	*3000
*1900 - MOCA		
MONROEVILLE, AL VORTAC	MONTGOMERY, AL VORTAC	2300
MONTGOMERY, AL VORTAC	*MARST, AL FIX	2300
*3500 - MRA		
MARST, AL FIX	KENTT, AL FIX	2100
KENTT, AL FIX	LAGRANGE, GA VORTAC	2500
LAGRANGE, GA VORTAC	*TIROE, GA FIX	2600
*4000 - MRA		
LOGEN, GA FIX	CORCE, GA FIX	*4600
*3700 - MOCA		
CORCE, GA FIX	FOOTHILLS, SC VORTAC	3400
FOOTHILLS, SC VORTAC	SUNET, SC FIX	6100
SUNET, SC FIX	SUGARLOAF MOUNTAIN, NC VORTAC	6100
SUGARLOAF MOUNTAIN, NC VORTAC	VAESE, NC FIX	6000
VAESE, NC FIX	BARRETTS MOUNTAIN, NC VOR/DME	*5000
*3600 - MOCA		
BARRETTS MOUNTAIN, NC VOR/DME	HENBY, VA FIX	5000
HENBY, VA FIX	LYNCHBURG, VA VORTAC	4000

95.6223 VOR FEDERAL AIRWAY V223

FLAT ROCK, VA VORTAC	*HANEY, VA FIX	2800
*7000 - MRA		
HANEY, VA FIX	FLUKY, VA FIX	2600

95.6224 VOR FEDERAL AIRWAY V224

SAWYER, MI VOR/DME	SCHOOLCRAFT COUNTY, MI VOR/DME	*3500
*2600 - MOCA		

95.6225 VOR FEDERAL AIRWAY V225

KEY WEST, FL VORTAC	RIGOR, FL FIX	1700
RIGOR, FL FIX	MARCI, FL FIX	*4000
*1400 - MOCA		
*1700 - GNSS MEA		
MARCI, FL FIX	LEE COUNTY, FL VORTAC	2100
LEE COUNTY, FL VORTAC	LA BELLE, FL VORTAC	*2000
*1500 - MOCA		

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95.6225 VOR FEDERAL AIRWAY V225 - CONTINUED

LA BELLE, FL VORTAC *1500 - MOCA	DIDDY, FL FIX	*2000
DIDDY, FL FIX	TREASURE, FL VORTAC	2000

95.6226 VOR FEDERAL AIRWAY V226

GRACE, PA FIX	CLARION, PA VOR/DME	3400
CLARION, PA VOR/DME	KEATING, PA VORTAC	4000
KEATING, PA VORTAC *3900 - MOCA	WILLIAMSPORT, PA VOR/DME	*4500
WILLIAMSPORT, PA VOR/DME	SWANK, PA FIX	4500
SWANK, PA FIX	WILKES-BARRE, PA VORTAC	
	E BND	*4000
	W BND	*4500
*3700 - MOCA		
WILKES-BARRE, PA VORTAC	STILLWATER, NJ VOR/DME	4000

95.6227 VOR FEDERAL AIRWAY V227

BOILER, IN VORTAC	ROBERTS, IL VOR/DME	2600
ROBERTS, IL VOR/DME	PONTIAC, IL VOR/DME	3000
PONTIAC, IL VOR/DME	PLANO, IL FIX	3000

95.6228 VOR FEDERAL AIRWAY V228

DELLS, WI VORTAC	MADISON, WI VORTAC	3300
MADISON, WI VORTAC *10000 - MRA	*DEBOW, WI FIX	10000
DEBOW, WI FIX *10000 - MRA	*BESIE, IL FIX	10000
FARMM, IL FIX	NORTHBROOK, IL VOR/DME	2700
NORTHBROOK, IL VOR/DME *3000 - MRA	*NEPTS, MI FIX	2500
NEPTS, MI FIX	GIPPER, MI VORTAC	2600

95.6229 VOR FEDERAL AIRWAY V229

PATUXENT, MD VORTAC *8000 - MRA **1500 - MOCA **4000 - GNSS MEA	*GARED, MD FIX	**4500
GARED, MD FIX *1600 - MOCA *4000 - GNSS MEA	DONIL, DE FIX	*8000
DONIL, DE FIX *1500 - MOCA	ATLANTIC CITY, NJ VORTAC	*2000
ATLANTIC CITY, NJ VORTAC	PANZE, NJ FIX	2100
PANZE, NJ FIX	DIXIE, NJ FIX	2500
DIXIE, NJ FIX *1600 - MOCA	KENNEDY, NY VOR/DME	*2500
KENNEDY, NY VOR/DME	KEEPM, NY FIX	2000
KEEPM, NY FIX	TRANZ, NY FIX	2000
TRANZ, NY FIX *2000 - GNSS MEA	PUGGS, NY FIX	*2500

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95.6229 VOR FEDERAL AIRWAY V229 - CONTINUED

PUGGS, NY FIX	BRIDGEPORT, CT VOR/DME	*2500
*2000 - GNSS MEA		
BRIDGEPORT, CT VOR/DME	HARTFORD, CT VOR/DME	2000
HARTFORD, CT VOR/DME	GARDNER, MA VOR/DME	3000
GARDNER, MA VOR/DME	KEENE, NH VORTAC	3600
KEENE, NH VORTAC	JAMMA, VT FIX	4000
JAMMA, VT FIX	EBERT, VT FIX	5500
EBERT, VT FIX	MUDDI, VT FIX	5900
MUDDI, VT FIX	*BURLINGTON, VT VOR/DME	6000
*3100 - MCA BURLINGTON, VT VOR/DME , SE BND		

95.6230 VOR FEDERAL AIRWAY V230

SHOEY, CA FIX	*SALINAS, CA VORTAC	**5000
*6000 - MCA SALINAS, CA VORTAC , E BND		
**4100 - MOCA		
SALINAS, CA VORTAC	*PANOS, CA FIX	**6500
*8000 - MCA PANOS, CA FIX , E BND		
**5500 - MOCA		
PANOS, CA FIX	*FIDDO, CA FIX	**9000
*9000 - MCA FIDDO, CA FIX , W BND		
**5700 - MOCA		
FIDDO, CA FIX	PANOCHE, CA VORTAC	*7000
*5700 - MOCA		
PANOCHE, CA VORTAC	*MENDO, CA FIX	4500
*3000 - MCA MENDO, CA FIX , SW BND		
MENDO, CA FIX	*CLOVIS, CA VORTAC	2000
*4000 - MCA CLOVIS, CA VORTAC , NE BND		
CLOVIS, CA VORTAC	*FRIANT, CA VORTAC	5000
*10400 - MCA FRIANT, CA VORTAC , NE BND		
FRIANT, CA VORTAC	CAINS, CA FIX	
	NE BND	14300
	SW BND	11000
CAINS, CA FIX	NIKOL, CA FIX	14300
NIKOL, CA FIX	MINA, NV VORTAC	
	NE BND	11000
	SW BND	13000

95.6231 VOR FEDERAL AIRWAY V231

BURLEY, ID VOR/DME	*MENIN, ID FIX	
	S BND	**7000
	N BND	**9500
*10600 - MCA MENIN, ID FIX , N BND		
**7000 - MOCA		
MENIN, ID FIX	SALMON, ID VOR/DME	14000
SALMON, ID VOR/DME	TUFFY, MT FIX	*12000
*11300 - MOCA		
TUFFY, MT FIX	*MISSOULA, MT VOR/DME	
	S BND	12000
	N BND	9000
*10000 - MCA MISSOULA, MT VOR/DME , S BND		
MISSOULA, MT VOR/DME	ARLEE, MT FIX	9200
ARLEE, MT FIX	*JESSY, MT FIX	**11000
*13000 - MCA JESSY, MT FIX , N BND		
**9200 - MOCA		

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95.6231 VOR FEDERAL AIRWAY V231 - CONTINUED

JESSY, MT FIX *12000 - MRA **8700 - MOCA	*SKOTT, MT FIX	**13000
SKOTT, MT FIX	KALISPELL, MT VOR/DME N BND S BND	8600 10000

95.6232 VOR FEDERAL AIRWAY V232

KEATING, PA VORTAC WATSO, PA FIX *2900 - MOCA	WATSO, PA FIX MILTON, PA VORTAC	4700 *4000
MILTON, PA VORTAC SOLBERG, NJ VOR/DME TYKES, NJ FIX	SOLBERG, NJ VOR/DME TYKES, NJ FIX COLTS NECK, NJ VOR/DME	4000 2300 2000

95.6233 VOR FEDERAL AIRWAY V233

SPINNER, IL VORTAC ROBERTS, IL VOR/DME *2200 - MOCA	ROBERTS, IL VOR/DME KNOX, IN VOR/DME	2600 *3000
KNOX, IN VOR/DME GOSHEN, IN VORTAC MOUNT PLEASANT, MI VOR/DME CARGA, MI FIX GAYLORD, MI VOR/DME	GOSHEN, IN VORTAC LITCHFIELD, MI VOR/DME CARGA, MI FIX GAYLORD, MI VOR/DME PELLSTON, MI VORTAC	2600 3000 5500 4000 3200

95.6234 VOR FEDERAL AIRWAY V234

ST JOHNS, AZ VORTAC *9500 - MCA STONY, NM FIX, SW BND **10500 - MOCA	*STONY, NM FIX	**12000
STONY, NM FIX ALBUQUERQUE, NM VORTAC ANTON CHICO, NM VORTAC *7500 - MOCA	ALBUQUERQUE, NM VORTAC ANTON CHICO, NM VORTAC DALHART, TX VORTAC	9000 10000 *8500
DALHART, TX VORTAC BRAKR, OK FIX *4700 - MOCA	BRAKR, OK FIX LIBERAL, KS VORTAC	5700 *5700
LIBERAL, KS VORTAC FLACK, KS FIX *4000 - MOCA	FLACK, KS FIX KRIER, KS FIX	4600 *5000
KRIER, KS FIX *4000 - MOCA	BYWAY, KS FIX	*7100
BYWAY, KS FIX *3800 - MOCA	GABIE, KS FIX	*4500
GABIE, KS FIX HUTCHINSON, KS VOR/DME WAIVE, KS FIX *5000 - MRA	HUTCHINSON, KS VOR/DME WAIVE, KS FIX *FLOSS, KS FIX	3800 4000 3300
FLOSS, KS FIX EMPORIA, KS VORTAC BUTLER, MO VORTAC AUGIE, MO FIX *2400 - MOCA	EMPORIA, KS VORTAC BUTLER, MO VORTAC AUGIE, MO FIX VICHY, MO VOR/DME	3300 3000 2700 *3200
VICHY, MO VOR/DME	DELMA, MO FIX	3000

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95.6234 VOR FEDERAL AIRWAY V234 - CONTINUED

DELMA, MO FIX *4500 - MRA **2800 - MOCA	*GLASS, MO FIX	**3500
GLASS, MO FIX *2200 - MOCA	CENTRALIA, IL VORTAC	*3000

95.6235 VOR FEDERAL AIRWAY V235

PEACH SPRINGS, AZ VOR/DME	MORMON MESA, NV VORTAC	10000
MORMON MESA, NV VORTAC	MATZO, UT FIX	
	NE BND	12000
	SW BND	9000
MATZO, UT FIX	*ENOCH, UT VOR/DME	12400
*11400 - MCA ENOCH, UT VOR/DME		
ENOCH, UT VOR/DME	MILFORD, UT VORTAC	10000
MILFORD, UT VORTAC	DELTA, UT VORTAC	9600
DELTA, UT VORTAC	FAIRFIELD, UT VORTAC	10300
*FAIRFIELD, UT VORTAC	GRODI, WY FIX	14000
*12500 - MCA FAIRFIELD, UT VORTAC	VORTAC, NE BND	
GRODI, WY FIX	FORT BRIDGER, WY VOR/DME	11000
ROCK SPRINGS, WY VOR/DME	BORGG, WY FIX	9500
BORGG, WY FIX	OILLY, WY FIX	11200
OILLY, WY FIX	MUDDY MOUNTAIN, WY VOR/DME	9000
MUDDY MOUNTAIN, WY VOR/DME	NEWCASTLE, WY VOR	8300

95.6236 VOR FEDERAL AIRWAY V236

CEVAR, UT FIX	EMONT, UT FIX	9000
EMONT, UT FIX	OGDEN, UT VORTAC	**8000
*7000 - MOCA		
#MTA V236 NE TO V21-101 SE 12000		

95.6237 VOR FEDERAL AIRWAY V237

NEEDLES, CA VORTAC	BOULDER CITY, NV VORTAC	7600
BOULDER CITY, NV VORTAC	LAS VEGAS, NV VORTAC	6000

95.6238 VOR FEDERAL AIRWAY V238

MAPLES, MO VORTAC	IMPER, MO FIX	3000
IMPER, MO FIX	TROY, IL VORTAC	2600

95.6239 VOR FEDERAL AIRWAY V239

FORNEY, MO VOR	BNTON, MO FIX	2900
BNTON, MO FIX	HALLSVILLE, MO VORTAC	2800

95.6240 VOR FEDERAL AIRWAY V240

HARVEY, LA VORTAC	PEARL, LA FIX	2000
PEARL, LA FIX	MINNI, MS FIX	*2300
*1300 - MOCA		
MINNI, MS FIX	ELSIE, MS FIX	*3500
*1300 - MOCA		

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95.6240 VOR FEDERAL AIRWAY V240 - CONTINUED

ELSIE, MS FIX *4000 - MRA **1300 - MOCA	*ROMMY, MS FIX	**2800
ROMMY, MS FIX	SEMMES, AL VORTAC	2000

95.6241 VOR FEDERAL AIRWAY V241

SEMMES, AL VORTAC	CRESTVIEW, FL VORTAC	3000
CRESTVIEW, FL VORTAC	*WIREGRASS, AL VORTAC	2000
*3000 - MCA WIREGRASS, AL	VORTAC , N BND	
WIREGRASS, AL VORTAC	EUFULA, AL VORTAC	#*3000
*2000 - MOCA		
#WIREGRASS R-019 UNSABLE BELOW 6000 USE EUFAULA R-199		
EUFULA, AL VORTAC	COLUMBUS, GA VORTAC	2400
COLUMBUS, GA VORTAC	*TIROE, GA FIX	3000
*4000 - MRA		

95.6242 VOR FEDERAL AIRWAY V242

INTERNATIONAL FALLS, MN VOR/DME	U.S. CANADIAN BORDER	3000
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95.6243 VOR FEDERAL AIRWAY V243

CRAIG, FL VORTAC	WAYCROSS, GA VORTAC	*3000
*2300 - MOCA		
WAYCROSS, GA VORTAC	VIENNA, GA VORTAC	2300
VIENNA, GA VORTAC	*PRATZ, GA FIX	**3000
*3000 - MRA		
**2000 - MOCA		
PRATZ, GA FIX	LAGRANGE, GA VORTAC	3500
LAGRANGE, GA VORTAC	HEFIN, AL FIX	*4000
*3400 - MOCA		
HEFIN, AL FIX	FELTO, GA FIX	*6000
*3400 - MOCA		
FELTO, GA FIX	GORG, GA FIX	*5000
*4000 - MOCA		
GORG, GA FIX	CHOO CHOO, TN VORTAC	4000
CHOO CHOO, TN VORTAC	MCMIN, TN FIX	4000
MCMIN, TN FIX	HARME, TN FIX	*6000
*3700 - MOCA		
HARME, TN FIX	BOWLING GREEN, KY VORTAC	*2800
*2300 - MOCA		

95.6244 VOR FEDERAL AIRWAY V244

OAKLAND, CA VOR/DME	*SALAD, CA FIX	4000
*4700 - MCA SALAD, CA FIX , NE BND		
SALAD, CA FIX	ALTAM, CA FIX	5000
ALTAM, CA FIX	HAIRE, CA FIX	4500
HAIRE, CA FIX	*LINDEN, CA VOR/DME	**3000
*3300 - MCA LINDEN, CA VOR/DME , E BND		
**2100 - MOCA		

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95.6244 VOR FEDERAL AIRWAY V244 - CONTINUED

LINDEN, CA VOR/DME	*MERPH, CA FIX	
	W BND	6400
	E BND	15300
*9800 - MCA MERPH, CA FIX , E BND		
MERPH, CA FIX	*NIKOL, CA FIX	15300
*13100 - MCA NIKOL, CA FIX , W BND		
NIKOL, CA FIX	COALDALE, NV VORTAC	12500
COALDALE, NV VORTAC	TONOPAH, NV VORTAC	11000
TONOPAH, NV VORTAC	WILSON CREEK, NV VORTAC	12200
WILSON CREEK, NV VORTAC	*MILFORD, UT VORTAC	12000
*12000 - MCA MILFORD, UT VORTAC , E BND		
MILFORD, UT VORTAC	DETAN, UT FIX	14000
DETAN, UT FIX	HANKSVILLE, UT VORTAC	*16000
*14200 - MOCA		
HANKSVILLE, UT VORTAC	*ANIUM, UT FIX	**10500
*12300 - MCA ANIUM, UT FIX , E BND		
**8500 - MOCA		
ANIUM, UT FIX	*PAROX, CO FIX	**15500
*13300 - MCA PAROX, CO FIX , W BND		
**14800 - MOCA		
PAROX, CO FIX	*NADIN, CO FIX	**13000
*12000 - MCA NADIN, CO FIX , W BND		
**12000 - MOCA		
NADIN, CO FIX	MONTROSE, CO VOR/DME	11000
MONTROSE, CO VOR/DME	BLUE MESA, CO VOR/DME	12500
BLUE MESA, CO VOR/DME	DUFEL, CO FIX	
	E BND	16000
	W BND	12000
DUFEL, CO FIX	*FLOOD, CO FIX	16000
*10000 - MRA		
FLOOD, CO FIX	STANO, CO FIX	
	W BND	12000
	E BND	9000
STANO, CO FIX	PUEBLO, CO VORTAC	7800
PUEBLO, CO VORTAC	LAMAR, CO VOR/DME	7000
LAMAR, CO VOR/DME	*COFFE, KS FIX	**9000
*9000 - MRA		
**5400 - MOCA		
COFFE, KS FIX	*RANSO, KS FIX	**10000
*10000 - MRA		
**4400 - MOCA		
RANSO, KS FIX	HAYS, KS VORTAC	*5000
*3900 - MOCA		
HAYS, KS VORTAC	*GLIDE, KS FIX	3900
*4500 - MRA		
GLIDE, KS FIX	SALINA, KS VORTAC	*3900
*3200 - MOCA		

95.6245 VOR FEDERAL AIRWAY V245

ALEXANDRIA, LA VORTAC	NATCHEZ, MS VOR/DME	2000
NATCHEZ, MS VOR/DME	MAGNOLIA, MS VORTAC	3500
MAGNOLIA, MS VORTAC	BIGBEE, MS VORTAC	*5000
*2000 - MOCA		MAA - 17500
*3000 - GNSS MEA		
BIGBEE, MS VORTAC	MINIM, AL FIX	2000
MINIM, AL FIX	CRIMSON, AL VORTAC	2400

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95.6246 VOR FEDERAL AIRWAY V246

JANESVILLE, WI VOR/DME	DUBUQUE, IA VORTAC	3000
DUBUQUE, IA VORTAC	WAUKON, IA VOR/DME	3000
WAUKON, IA VOR/DME	NODINE, MN VORTAC	3000
NODINE, MN VORTAC	MILTO, WI FIX	3000

95.6247 VOR FEDERAL AIRWAY V247

SCOTTSBLUFF, NE VORTAC	HIPSHER, WY VOR/DME	8100
HIPSHER, WY VOR/DME	CRAZY WOMAN, WY VOR/DME	8000
CRAZY WOMAN, WY VOR/DME	SHERIDAN, WY VOR/DME	7000
SHERIDAN, WY VOR/DME	ARDMO, MT FIX	8000
ARDMO, MT FIX	BILLINGS, MT VORTAC	
	E BND	8000
	W BND	6000
BILLINGS, MT VORTAC	PELJE, MT FIX	
	W BND	10500
	E BND	6400
PELJE, MT FIX	BAXTA, MT FIX	
	E BND	7000
	W BND	10500
BAXTA, MT FIX	*WAUTS, MT FIX	**13000
*10700 - MCA WAUTS, MT FIX , E BND		
**10900 - MOCA		
WAUTS, MT FIX	HELENA, MT VORTAC	9400

95.6248 VOR FEDERAL AIRWAY V248

SALINAS, CA VORTAC	*SARDO, CA FIX	**6000
*7000 - MRA		
**5500 - MOCA		
SARDO, CA FIX	FIKDU, CA FIX	*6000
*5500 - MOCA		
FIKDU, CA FIX	PASO ROBLES, CA VORTAC	
	SE BND	5000
	NW BND	6000
PASO ROBLES, CA VORTAC	AVENAL, CA VOR/DME	4500
AVENAL, CA VOR/DME	SCRAP, CA FIX	4000
SCRAP, CA FIX	SHAFTER, CA VORTAC	
	W BND	*4000
	E BND	*3000
*3000 - MOCA		

95.6249 VOR FEDERAL AIRWAY V249

ROBBINSVILLE, NJ VORTAC	JERYY, NJ FIX	4000
JERYY, NJ FIX	SOLBERG, NJ VOR/DME	*3000
*2000 - MOCA		
SOLBERG, NJ VOR/DME	SPARTA, NJ VORTAC	3000
SPARTA, NJ VORTAC	FLOSI, NY FIX	*4000
*3200 - MOCA		
FLOSI, NY FIX	WEETS, NY FIX	*5500
*4000 - MOCA		
WEETS, NY FIX	RIMBA, NY FIX	6400
RIMBA, NY FIX	DELANCEY, NY VOR/DME	5500
DELANCEY, NY VOR/DME	MILID, NY FIX	4300
MILID, NY FIX	UTICA, NY VORTAC	3700

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95.6250 VOR FEDERAL AIRWAY V250

O'NEILL, NE VORTAC	YANKTON, SD VOR/DME	3700
YANKTON, SD VOR/DME	WORTHINGTON, MN VOR/DME	3400
WORTHINGTON, MN VOR/DME	MANKATO, MN VOR/DME	3400

95.6251 VOR FEDERAL AIRWAY V251

ADDERS, IL VORTAC	CHAMPAIGN, IL VORTAC	2500
CHAMPAIGN, IL VORTAC	DANVILLE, IL VORTAC	2500
DANVILLE, IL VORTAC	BOILER, IN VORTAC	2500

95.6252 VOR FEDERAL AIRWAY V252

*AIRCO, NY FIX	GENESEO, NY VOR/DME	**4000
*6000 - MRA		
**2800 - MOCA		
GENESEO, NY VOR/DME	GIBBE, NY FIX	4000
GIBBE, NY FIX	BINGHAMTON, NY VOR/DME	3800
BINGHAMTON, NY VOR/DME	HUGIE, PA FIX	4000
HUGIE, PA FIX	RAGER, NY FIX	4400
RAGER, NY FIX	HUGUENOT, NY VOR/DME	4000
HUGUENOT, NY VOR/DME	COATE, NJ FIX	*4000
*3300 - MOCA		
COATE, NJ FIX	SLYNG, NJ FIX	*5000
*2700 - MOCA		
SLYNG, NJ FIX	ROBBINSVILLE, NJ VORTAC	2600
ROBBINSVILLE, NJ VORTAC	DUPONT, DE VORTAC	2000

95.6253 VOR FEDERAL AIRWAY V253

LUCIN, UT VORTAC	ROGET, ID FIX	11000
ROGET, ID FIX	*TWIN FALLS, ID VORTAC	
	NW BND	9000
	SE BND	11000
*9000 - MCA TWIN FALLS, ID VORTAC , SE BND		
TWIN FALLS, ID VORTAC	LITKE, ID FIX	6200
LITKE, ID FIX	ALKAL, ID FIX	
	SE BND	6000
	NW BND	9500
ALKAL, ID FIX	CANEK, ID FIX	*9500
*8500 - MOCA		
CANEK, ID FIX	*BOISE, ID VORTAC	7000
*7400 - MCA BOISE, ID VORTAC , N BND		
BOISE, ID VORTAC	BANGS, ID FIX	9000
BANGS, ID FIX	DONNELLY, ID VOR/DME	10400
DONNELLY, ID VOR/DME	OXLEY, ID FIX	12000
OXLEY, ID FIX	*NEZ PERCE, ID VOR/DME	
	SE BND	12000
	NW BND	7400
*6400 - MCA NEZ PERCE, ID VOR/DME , SE BND		
NEZ PERCE, ID VOR/DME	PULLMAN, WA VOR/DME	6000
PULLMAN, WA VOR/DME	SPOKANE, WA VORTAC	*6000
*5600 - MOCA		

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95.6254 VOR FEDERAL AIRWAY V254

HIPSHER, WY VOR/DME *7500 - MOCA	TOOKE, WY FIX	*10000
TOOKE, WY FIX	GILLETTE, WY VOR/DME	7000
GILLETTE, WY VOR/DME *6900 - MOCA	MILES CITY, MT VOR/DME	*9000
MILES CITY, MT VOR/DME	GLASGOW, MT VOR/DME	6000

95.6255 VOR FEDERAL AIRWAY V255

GARDEN CITY, KS VORTAC	HAYS, KS VORTAC	4600
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95.6256 VOR FEDERAL AIRWAY V256

TULSA, OK VORTAC	PIIONEER, OK VORTAC	3000
PIIONEER, OK VORTAC	HUTCHINSON, KS VOR/DME	3300

95.6257 VOR FEDERAL AIRWAY V257

PHOENIX, AZ VORTAC	*AVENT, AZ FIX NW BND SE BND	7000 5000
*8000 - MRA AVENT, AZ FIX	*BANYO, AZ FIX NW BND SE BND	7000 5000
*6000 - MRA BANYO, AZ FIX *8100 - MOCA	COYOT, AZ FIX	*9000
COYOT, AZ FIX *9000 - GNSS MEA MAIER, AZ FIX DRAKE, AZ VORTAC *11000 - MRA **8400 - MOCA **9000 - GNSS MEA	MAIER, AZ FIX DRAKE, AZ VORTAC *BISOP, AZ FIX	*10000 10000 **10000
BISOP, AZ FIX *14500 - MCA GRAND CANYON, AZ VOR/DME , N BND GRAND CANYON, AZ VOR/DME *14500 - MCA DOZIT, AZ FIX , S BND **11200 - MOCA	*GRAND CANYON, AZ VOR/DME *DOZIT, AZ FIX	10000 **14500
DOZIT, AZ FIX *11200 - MOCA	JALMA, AZ FIX	*14500
JALMA, AZ FIX *11000 - MOCA	KACIR, AZ FIX	*13000
KACIR, AZ FIX BRYCE CANYON, UT VORTAC DELTA, UT VORTAC *12200 - MCA VERNE, UT FIX , N BND VERNE, UT FIX *10500 - MCA STACO, UT FIX , S BND STACO, UT FIX *8900 - MOCA	BRYCE CANYON, UT VORTAC DELTA, UT VORTAC *VERNE, UT FIX *STACO, UT FIX MOINT, UT FIX	11600 12000 11500 13000 *13000
MOINT, UT FIX *13000 - MRA **9600 - MOCA	*KREBS, UT FIX	**13000
KREBS, UT FIX *10000 - MOCA	MALAD CITY, ID VOR/DME	*11000
MALAD CITY, ID VOR/DME	BANNO, ID FIX	10000

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95.6257 VOR FEDERAL AIRWAY V257 - CONTINUED

BANNO, ID FIX	*POCATELLO, ID VOR/DME	9000
*8000 - MCA POCATELLO, ID VOR/DME , SE BND		
POCATELLO, ID VOR/DME	ROCCA, ID FIX	7000
ROCCA, ID FIX	*DUBOIS, ID VORTAC	7500
*8600 - MCA DUBOIS, ID VORTAC , N BND		
DUBOIS, ID VORTAC	DILLON, MT VOR/DME	*12000
*11200 - MOCA		
DILLON, MT VOR/DME	DIVID, MT FIX	11000
DIVID, MT FIX	*COPPERTOWN, MT VOR/DME	10000
*10000 - MCA COPPERTOWN, MT VOR/DME , SE BND		
COPPERTOWN, MT VOR/DME	GLUES, MT FIX	9200
GLUES, MT FIX	SCAAT, MT FIX	*16000
*9200 - MOCA		
SCAAT, MT FIX	SIEBE, MT FIX	*13000
*9800 - MOCA		
*9800 - GNSS MEA		
SIEBE, MT FIX	WOKEN, MT FIX	9000
WOKEN, MT FIX	GREAT FALLS, MT VORTAC	8800
GREAT FALLS, MT VORTAC	SHONK, MT FIX	6200
SHONK, MT FIX	HAVRE, MT VOR/DME	6000

95.6258 VOR FEDERAL AIRWAY V258

CHARLESTON, WV VOR/DME	BECKLEY, WV VOR/DME	#*5000
*4900 - MOCA		
#CHARLESTON UNUSABLE 140-142 BYD 20 BLO 9000		
BECKLEY, WV VOR/DME	ZOOMS, WV FIX	*10000
*6300 - MOCA		
*6300 - GNSS MEA		
ZOOMS, WV FIX	ROANOKE, VA VOR/DME	6400
ROANOKE, VA VOR/DME	PIGGS, VA FIX	5000
PIGGS, VA FIX	ENTUK, VA FIX	*4000
*3400 - MOCA		
ENTUK, VA FIX	DANVILLE, VA VOR	3000

95.6259 VOR FEDERAL AIRWAY V259

GRAND STRAND, SC VORTAC	*CLETA, SC FIX	2000
*3000 - MRA		
CLETA, SC FIX	FLORENCE, SC VORTAC	2000
FLORENCE, SC VORTAC	CHESTERFIELD, SC VOR/DME	2000
CHESTERFIELD, SC VOR/DME	HUSTN, NC FIX	2500
MOPED, NC FIX	BARRETT'S MOUNTAIN, NC VOR/DME	4000
BARRETT'S MOUNTAIN, NC VOR/DME	GOWBE, NC FIX	
SE BND		
NW BND		
GOWBE, NC FIX	*HOLSTON MOUNTAIN, TN VORTAC	7500
*6600 - MCA HOLSTON MOUNTAIN, TN VORTAC , SE BND		

95.6260 VOR FEDERAL AIRWAY V260

CHARLESTON, WV VOR/DME	MONT'S, WV FIX	3400
MONT'S, WV FIX	RAINELLE, WV VOR	5100
RAINELLE, WV VOR	ROANOKE, VA VOR/DME	*6000
*5400 - MOCA		
ROANOKE, VA VOR/DME	GOOZE, VA FIX	5000

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95.6260 VOR FEDERAL AIRWAY V260 - CONTINUED

GOOZE, VA FIX	LYNCHBURG, VA VORTAC	
	W BND	*5000
	E BND	*3000
*2900 - MOCA		
LYNCHBURG, VA VORTAC	FLAT ROCK, VA VORTAC	3000
FLAT ROCK, VA VORTAC	RICHMOND, VA VORTAC	2600
RICHMOND, VA VORTAC	HOPEWELL, VA VORTAC	1900
HOPEWELL, VA VORTAC	WAIKS, VA FIX	3000
WAIKS, VA FIX	FRANKLIN, VA VORTAC	3000
FRANKLIN, VA VORTAC	COFIELD, NC VORTAC	1800

95.6261 VOR FEDERAL AIRWAY V261

WICHITA, KS VORTAC	CEKIS, KS FIX	3600
CEKIS, KS FIX	MANHATTAN, KS VOR/DME	3000

95.6262 VOR FEDERAL AIRWAY V262

PEORIA, IL VORTAC	*DULAP, IL FIX	2700
*3000 - MRA		
DULAP, IL FIX	BRADFORD, IL VORTAC	2700
BRADFORD, IL VORTAC	MOTIF, IL FIX	2700
MOTIF, IL FIX	JOLIET, IL VOR/DME	*3000
*2200 - MOCA		

95.6263 VOR FEDERAL AIRWAY V263

CORONA, NM VORTAC	ENCIA, NM FIX	9700
ENCIA, NM FIX	ALBUQUERQUE, NM VORTAC	8000
ALBUQUERQUE, NM VORTAC	*SANTA FE, NM VORTAC	9000
*11600 - MCA SANTA FE, NM VORTAC , E BND		
SANTA FE, NM VORTAC	*FORT UNION, NM VORTAC	12500
*10900 - MCA FORT UNION, NM VORTAC , N BND		
*11300 - MCA FORT UNION, NM VORTAC , W BND		
FORT UNION, NM VORTAC	CIMARRON, NM VORTAC	*12000
*11100 - MOCA		
CIMARRON, NM VORTAC	TOBE, CO VOR/DME	*11600
*10700 - MOCA		
TOBE, CO VOR/DME	LAMAR, CO VOR/DME	*7400
*6700 - MOCA		
LAMAR, CO VOR/DME	HUGO, CO VOR/DME	*6900
*6200 - MOCA		
HUGO, CO VOR/DME	*LIMEX, CO FIX	**10000
*10000 - MRA		
**8500 - MOCA		
**9000 - GNSS MEA		
LIMEX, CO FIX	AKRON, CO VOR/DME	*8500
*7200 - MOCA		
PIERRE, SD VORTAC	ABERDEEN, SD VOR/DME	4000

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95.6264 VOR FEDERAL AIRWAY V264

LOS ANGELES, CA VORTAC	STABO, CA FIX	2500
STABO, CA FIX	AMTRA, CA FIX	3000
AMTRA, CA FIX	*POMONA, CA VORTAC	4500
*5600 - MCA POMONA, CA VORTAC , E BND		
POMONA, CA VORTAC	*RAVON, CA FIX	6000
*11400 - MCA RAVON, CA FIX , E BND		
RAVON, CA FIX	REANS, CA FIX	
	E BND	12800
	W BND	9000
REANS, CA FIX	*YUCCA, CA FIX	13500
*12000 - MCA YUCCA, CA FIX , W BND		
YUCCA, CA FIX	TWENTYNINE PALMS, CA VORTAC	*8500
*7700 - MOCA		
TWENTYNINE PALMS, CA VORTAC	PARKER, CA VORTAC	6000
DRAKE, AZ VORTAC	OATES, AZ FIX	10100
OATES, AZ FIX	WINSLOW, AZ VORTAC	10800
WINSLOW, AZ VORTAC	ST JOHNS, AZ VORTAC	8900
ST JOHNS, AZ VORTAC	*SOCORRO, NM VORTAC	**12000
*10000 - MCA SOCORRO, NM VORTAC , W BND		
**11100 - MOCA		
SOCORRO, NM VORTAC	CORONA, NM VORTAC	9500
CORONA, NM VORTAC	TUCUMCARI, NM VORTAC	*11000
*9000 - MOCA		

95.6265 VOR FEDERAL AIRWAY V265

KRANT, MD FIX	WESTMINSTER, MD VORTAC	2600
WESTMINSTER, MD VORTAC	HARRISBURG, PA VORTAC	3400
HARRISBURG, PA VORTAC	PHILIPSBURG, PA VORTAC	4000
PHILIPSBURG, PA VORTAC	KEATING, PA VORTAC	4000
KEATING, PA VORTAC	BRADFORD, PA VOR/DME	4000
BRADFORD, PA VOR/DME	JAMESTOWN, NY VOR/DME	4000

95.6266 VOR FEDERAL AIRWAY V266

ELECTRIC CITY, SC VORTAC	PELZE, SC FIX	2800
PELZE, SC FIX	SPARTANBURG, SC VORTAC	2900
GREENSBORO, NC VORTAC	SOUTH BOSTON, VA VORTAC	2700
SOUTH BOSTON, VA VORTAC	LAWRENCEVILLE, VA VORTAC	*3000
*2000 - MOCA		
*2300 - GNSS MEA		
LAWRENCEVILLE, VA VORTAC	FRANKLIN, VA VORTAC	2000
FRANKLIN, VA VORTAC	SUNNS, NC FIX	*2000
*1500 - MOCA		
SUNNS, NC FIX	ELIZABETH CITY, NC VOR/DME	*5000
*4000 - MOCA		
ELIZABETH CITY, NC VOR/DME	WRIGHT BROTHERS, NC VOR/DME	4000

95.6267 VOR FEDERAL AIRWAY V267

DOLPHIN, FL VORTAC	PAHOKEE, FL VOR/DME	*2000
*1500 - MOCA		
PAHOKEE, FL VOR/DME	DIDDY, FL FIX	*2000
*1500 - MOCA		

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95.6267 VOR FEDERAL AIRWAY V267 - CONTINUED

DIDDY, FL FIX	ORLANDO, FL VORTAC	2700
ORLANDO, FL VORTAC	PAOLA, FL FIX	
	N BND	*2800
	S BND	*1900
*1600 - MOCA		
PAOLA, FL FIX	WORMS, FL FIX	2800
WORMS, FL FIX	CRAIG, FL VORTAC	*3000
*2100 - MOCA		
CRAIG, FL VORTAC	*BAXLY, GA FIX	**5000
*10000 - MRA		
**3000 - GNSS MEA		
BAXLY, GA FIX	DUBLIN, GA VORTAC	
	N BND	*3000
	S BND	*5000
*2300 - MOCA		
*2500 - GNSS MEA		
DUBLIN, GA VORTAC	ATHENS, GA VOR/DME	*3000
*2200 - MOCA		
ATHENS, GA VOR/DME	IRMOS, GA FIX	3100
		MAA - 17500
IRMOS, GA FIX	CORCE, GA FIX	3800
CORCE, GA FIX	TALLE, GA FIX	5300
TALLE, GA FIX	HARRIS, GA VORTAC	7000
HARRIS, GA VORTAC	FORMS, NC FIX	7800
FORMS, NC FIX	*KNITS, TN FIX	7500
*6200 - MCA KNITS, TN FIX, S BND		
KNITS, TN FIX	VOLUNTEER, TN VORTAC	4200

95.6268 VOR FEDERAL AIRWAY V268

NESTO, PA FIX	PLEEZ, PA FIX	*4000
*3100 - MOCA		
PLEEZ, PA FIX	INDIAN HEAD, PA VORTAC	*5000
*4500 - MOCA		
INDIAN HEAD, PA VORTAC	HAGERSTOWN, MD VOR	*12000
*4600 - MOCA		
*4700 - GNSS MEA		
HAGERSTOWN, MD VOR	KEMAR, MD FIX	5000
KEMAR, MD FIX	WESTMINSTER, MD VORTAC	*4000
*2600 - MOCA		
*2700 - GNSS MEA		
WESTMINSTER, MD VORTAC	BALTIMORE, MD VORTAC	2500
BALTIMORE, MD VORTAC	SMYRNA, DE VORTAC	2000
SMYRNA, DE VORTAC	LEEAH, NJ FIX	*1800
*1300 - MOCA		
LEEAH, NJ FIX	AVALO, NJ FIX	2000
AVALO, NJ FIX	HARBO, NJ FIX	*6000
*4000 - GNSS MEA		
HARBO, NJ FIX	*DRIFT, NJ FIX	**7500
*6000 - MRA		
**3000 - GNSS MEADRIFT, NJ FIX	MANTA, NJ FIX	*12000
*3000 - GNSS MEAMANTA, NJ FIX	PLUME, NJ FIX	*7000
*2000 - MOCA		
*3000 - GNSS MEA		
PLUME, NJ FIX	*KOPPY, NY FIX	**4000
*5000 - MRA		
**3000 - MOCA		
**3000 - GNSS MEA		

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95.6268 VOR FEDERAL AIRWAY V268 - CONTINUED

KOPPY, NY FIX *3000 - MOCA *3000 - GNSS MEA	BEADS, NY FIX	*4000
BEADS, NY FIX *1600 - MOCA	HAMPTON, NY VORTAC	*2500
HAMPTON, NY VORTAC	SANDY POINT, RI VOR/DME	2000
SANDY POINT, RI VOR/DME	INNDY, MA FIX	2000
INNDY, MA FIX *6000 - MRA	*TONNI, MA FIX	6000
TONNI, MA FIX *5000 - MRA **4000 - GNSS MEA	*MESHL, ME FIX	**5000
MESHL, ME FIX	SAPPE, ME FIX	3000
SAPPE, ME FIX *1800 - MOCA	AUGUSTA, ME VOR/DME	*3000

95.6269 VOR FEDERAL AIRWAY V269

ELY, NV VOR/DME *13000 - MCA SPATS, NV FIX , S BND **12200 - MOCA	*SPATS, NV FIX	**13000
SPATS, NV FIX	WELLS, NV VOR	11000
WELLS, NV VOR *7700 - MCA TWIN FALLS, ID VORTAC , S BND **11000 - MOCA **11000 - GNSS MEA	*TWIN FALLS, ID VORTAC	**13000
TWIN FALLS, ID VORTAC	BURLEY, ID VOR/DME	7000
BURLEY, ID VOR/DME	POCATELLO, ID VOR/DME	7000
POCATELLO, ID VOR/DME *9700 - MCA JATTS, ID FIX , NW BND	*JATTS, ID FIX	8000
JATTS, ID FIX *13300 - MOCA *13300 - GNSS MEA	YOYYU, ID FIX	*16000
YOYYU, ID FIX *13500 - MOCA *13500 - GNSS MEA	SALMON, ID VOR/DME	*14000
SALMON, ID VOR/DME	DONNELLY, ID VOR/DME	12000
DONNELLY, ID VOR/DME	HOVEL, ID FIX	12000
HOVEL, ID FIX *8700 - MOCA *9000 - GNSS MEA	FONNA, OR FIX	*12000
FONNA, OR FIX	WILDHORSE, OR VOR/DME	9000
WILDHORSE, OR VOR/DME	DESCHUTES, OR VORTAC	9500
DESCHUTES, OR VORTAC	MANTE, OR FIX	10000
MANTE, OR FIX *7600 - MOCA *8000 - GNSS MEA	MOBIL, OR FIX	*10000
MOBIL, OR FIX	COBUR, OR FIX NE BND SW BND	7000 5200
COBUR, OR FIX	*EUGENE, OR VORTAC NE BND SW BND	5000 4400
*3800 - MCA EUGENE, OR VORTAC , NE BND		

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95.6270 VOR FEDERAL AIRWAY V270

ERIE, PA VORTAC	JAMESTOWN, NY VOR/DME	4000
JAMESTOWN, NY VOR/DME	*VAIRS, NY FIX	4000
*11000 - MRA		
VAIRS, NY FIX	WELLSVILLE, NY VORTAC	*4500
*4000 - MOCA		
WELLSVILLE, NY VORTAC	WOMAN, NY FIX	*4500
*4000 - MOCA		
WOMAN, NY FIX	ELMIRA, NY VOR/DME	*4000
*3400 - MOCA		
ELMIRA, NY VOR/DME	BINGHAMTON, NY VOR/DME	3500
BINGHAMTON, NY VOR/DME	DELANCEY, NY VOR/DME	4500
DELANCEY, NY VOR/DME	ATHOS, NY FIX	6300
ATHOS, NY FIX	CHESTER, MA VOR/DME	*4500
*4000 - MOCA		
CHESTER, MA VOR/DME	GLYDE, MA FIX	4000
GLYDE, MA FIX	BOSTON, MA VOR/DME	*4000
*3000 - MOCA		

95.6271 VOR FEDERAL AIRWAY V271

MUSKEGON, MI VORTAC	WELKO, MI FIX	*3000
*2500 - MOCA		
WELKO, MI FIX	MANISTEE, MI VOR/DME	*4000
*2400 - MOCA		
MANISTEE, MI VOR/DME	ESCANABA, MI VOR/DME	*3000
*2100 - MOCA		

95.6272 VOR FEDERAL AIRWAY V272

DALHART, TX VORTAC	BORGER, TX VORTAC	5700
BORGER, TX VORTAC	BRISC, TX FIX	5000
BRISC, TX FIX	BURNS FLAT, OK VORTAC	*5000
*4500 - MOCA		
BURNS FLAT, OK VORTAC	WILL ROGERS, OK VORTAC	4500
WILL ROGERS, OK VORTAC	MINGG, OK FIX	*4000
*3100 - MOCA		
MINGG, OK FIX	HOLLE, OK FIX	*4000
*2600 - MOCA		
HOLLE, OK FIX	MC ALESTER, OK VORTAC	3000
MC ALESTER, OK VORTAC	FORT SMITH, AR VORTAC	*3500
*2900 - MOCA		

95.6273 VOR FEDERAL AIRWAY V273

FALLZ, NJ FIX	HAAYS, NY FIX	3000
HAAYS, NY FIX	HUGUENOT, NY VOR/DME	3600
HUGUENOT, NY VOR/DME	HANCOCK, NY VOR/DME	4000
HANCOCK, NY VOR/DME	GEORGETOWN, NY VORTAC	4000
GEORGETOWN, NY VORTAC	SYRACUSE, NY VORTAC	4000

95.6274 VOR FEDERAL AIRWAY V274

PULLMAN, MI VOR/DME	VICTORY, MI VOR/DME	3000
VICTORY, MI VOR/DME	SAGINAW, MI VOR/DME	2600

FROM	TO	MEA
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95.6275 VOR FEDERAL AIRWAY V275

CINCINNATI, KY VORTAC	DAYTON, OH VOR/DME	2900
DAYTON, OH VOR/DME	KLOEE, OH FIX	*6000
*2500 - MOCA		

95.6276 VOR FEDERAL AIRWAY V276

RASHE, PA FIX	*MORTO, PA FIX	4000
*5000 - MRA		
MORTO, PA FIX	RAVINE, PA VORTAC	4000
RAVINE, PA VORTAC	*HIKES, PA FIX	**4000
*4000 - MRA		
**3500 - MOCA		
HIKES, PA FIX	YARDLEY, PA VOR/DME	*4000
*2400 - MOCA		
YARDLEY, PA VOR/DME	ROBBINSVILLE, NJ VORTAC	2100
ROBBINSVILLE, NJ VORTAC	CASVI, NJ FIX	1900
CASVI, NJ FIX	*GAMBY, NJ FIX	**3000
*6000 - MRA		
**1400 - MOCA		
GAMBY, NJ FIX	MANTA, NJ FIX	*6000
*2000 - MOCA		
*2000 - GNSS MEA		
MANTA, NJ FIX	*PREPI, OA FIX	**6000
*8000 - MRA		
**2000 - MOCA		
**3000 - GNSS MEA		

95.6277 VOR FEDERAL AIRWAY V277

ROSEWOOD, OH VORTAC	FORT WAYNE, IN VORTAC	3000
FORT WAYNE, IN VORTAC	BAGEL, IN FIX	2800
BAGEL, IN FIX	KEELER, MI VOR/DME	4000

95.6278 VOR FEDERAL AIRWAY V278

TEXICO, TX VORTAC	PLAINVIEW, TX VOR/DME	5800
PLAINVIEW, TX VOR/DME	GUTHRIE, TX VORTAC	*5100
*4600 - MOCA		
GUTHRIE, TX VORTAC	*NIFDE, TX FIX	**4500
*6500 - MRA		
**3300 - MOCA		
NIFDE, TX FIX	BOWIE, TX VORTAC	*4500
*2600 - MOCA		
*3300 - GNSS MEA		
BOWIE, TX VORTAC	BONHAM, TX VORTAC	4000
BONHAM, TX VORTAC	PARIS, TX VOR/DME	2400
PARIS, TX VOR/DME	TEXARKANA, AR VORTAC	2000
TEXARKANA, AR VORTAC	WARLO, AR FIX	2200
WARLO, AR FIX	LOCUS, AR FIX	*3000
*1700 - MOCA		
LOCUS, AR FIX	MONTICELLO, AR VOR/DME	*2500
*1600 - MOCA		
MONTICELLO, AR VOR/DME	GREENVILLE, MS VOR/DME	*2000
*1500 - MOCA		
GREENVILLE, MS VOR/DME	SIDON, MS VORTAC	2000
SIDON, MS VORTAC	BIGBEE, MS VORTAC	2400
BIGBEE, MS VORTAC	MINIM, AL FIX	2000
MINIM, AL FIX	VULCAN, AL VORTAC	2600

FROM	TO	MEA
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95.6279 VOR FEDERAL AIRWAY V279

GUNNE, OH FIX	FLAG CITY, OH VORTAC	3000
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95.6280 VOR FEDERAL AIRWAY V280

U.S. MEXICAN BORDER *6300 - MOCA	EL PASO, TX VORTAC	*8000
EL PASO, TX VORTAC	PINON, NM VOR/DME	8800
PINON, NM VOR/DME	*HOPET, NM FIX	8800
*7400 - MCA HOPET, NM FIX ,	SW BND	
HOPET, NM FIX	CHISUM, NM VORTAC	7000
CHISUM, NM VORTAC	FRAIZ, NM FIX	
	NE BND	7500
	SW BND	6500
FRAIZ, NM FIX	DEBRA, NM FIX	*7500
*6000 - MOCA		
DEBRA, NM FIX	TEXICO, TX VORTAC	
	NE BND	*6500
	SW BND	*7500
*6000 - MOCA		
TEXICO, TX VORTAC	PANHANDLE, TX VORTAC	*5900
*5600 - MOCA		
PANHANDLE, TX VORTAC	MITBEE, OK VORTAC	5500
MITBEE, OK VORTAC	*CARKO, KS FIX	4000
*5000 - MCA CARKO, KS FIX ,	NE BND	
CARKO, KS FIX	WIPET, KS FIX	*8000
*3500 - MOCA		
WIPET, KS FIX	HUTCHINSON, KS VOR/DME	3300
HUTCHINSON, KS VOR/DME	BUHLS, KS FIX	4000
BUHLS, KS FIX	STONS, KS FIX	*4500
*2900 - MOCA		
STONS, KS FIX	HEYDN, KS FIX	*5000
*2900 - MOCA		
HEYDN, KS FIX	TOPEKA, KS VORTAC	3700

95.6281 VOR FEDERAL AIRWAY V281

PASCO, WA VOR/DME	MOSES LAKE, WA VOR/DME	4000
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95.6282 VOR FEDERAL AIRWAY V282

SARANAC LAKE, NY VOR/DME	*FAWNS, NY FIX	5000
*5000 - MCA FAWNS, NY FIX ,	S BND	
FAWNS, NY FIX	U.S. CANADIAN BORDER	#5000
#FIX OVERLIES U.S. CANADIAN BORDER.		

95.6283 VOR FEDERAL AIRWAY V283

SEAL BEACH, CA VORTAC	*JOGIT, CA FIX	4000
*6000 - MCA JOGIT, CA FIX ,	E BND	
JOGIT, CA FIX	*KAYOH, CA FIX	6000
*7400 - MCA KAYOH, CA FIX ,	E BND	
KAYOH, CA FIX	HOMELAND, CA VOR	8000
HOMELAND, CA VOR	*LUCER, CA FIX	10500
*9300 - MCA LUCER, CA FIX ,	SW BND	
LUCER, CA FIX	BULGY, CA FIX	*9000
*8000 - MOCA		

FROM	TO	MEA
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95.6283 VOR FEDERAL AIRWAY V283 - CONTINUED

BULGY, CA FIX *7000 - MOCA	HECTOR, CA VORTAC	*9000
HECTOR, CA VORTAC *12000 - MRA	*WHIGG, CA FIX	10000
WHIGG, CA FIX	BOULDER CITY, NV VORTAC	10000

95.6284 VOR FEDERAL AIRWAY V284

SEA ISLE, NJ VORTAC *1800 - MOCA	CEDAR LAKE, NJ VOR/DME	*2500
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95.6285 VOR FEDERAL AIRWAY V285

BRICKYARD, IN VORTAC	KOKOMO, IN VORTAC	2700
KOKOMO, IN VORTAC	GOSHEN, IN VORTAC	2600
GOSHEN, IN VORTAC	KALAMAZOO, MI VOR/DME	2600
KALAMAZOO, MI VOR/DME	VICTORY, MI VOR/DME	3000
VICTORY, MI VOR/DME	CLOCK, MI FIX	2800
CLOCK, MI FIX	WHITE CLOUD, MI VOR/DME	2800
WHITE CLOUD, MI VOR/DME *2400 - MOCA	MANISTEE, MI VOR/DME	*4000
MANISTEE, MI VOR/DME	TRAVERSE CITY, MI VOR/DME	2800

95.6286 VOR FEDERAL AIRWAY V286

ELKINS, WV VORTAC	DERIN, WV FIX W BND E BND	5700 6200
DERIN, WV FIX	TEAKK, VA FIX	6900
TEAKK, VA FIX	CASANOVA, VA VORTAC W BND E BND	*6900 *6500
*5800 - MOCA		
CASANOVA, VA VORTAC *2300 - MOCA	FLUKY, VA FIX	*3000
FLUKY, VA FIX	BROOKE, VA VORTAC	2000
BROOKE, VA VORTAC	*ZUNAR, VA FIX	**3000
*5000 - MCA ZUNAR, VA FIX , SE BND		
**2000 - GNSS MEA		
ZUNAR, VA FIX	FAGED, VA FIX	*5000
*2000 - GNSS MEA		
FAGED, VA FIX	GWYNN, VA FIX	2000
GWYNN, VA FIX *1500 - MOCA	CAPE CHARLES, VA VORTAC	*2000

95.6287 VOR FEDERAL AIRWAY V287

FORT JONES, CA VOR/DME *9800 - MOCA	KLAMA, OR FIX	*12000
KLAMA, OR FIX	*ROGUE VALLEY, OR VORTAC SE BND NW BND	12000 8000
*7000 - MCA ROGUE VALLEY, OR VORTAC , SE BND		
ROGUE VALLEY, OR VORTAC	KOLER, OR FIX	*8000
*7400 - MOCA		

FROM	TO	MEA
95.6287 VOR FEDERAL AIRWAY V287 - CONTINUED		
KOLER, OR FIX *6000 - MOCA	CAMAS, OR FIX	*8500
CAMAS, OR FIX	DEROY, OR FIX NW BND SE BND	5500 8000
DEROY, OR FIX	NORTH BEND, OR VOR/DME NW BND SE BND	4000 8000
NORTH BEND, OR VOR/DME	*RARES, OR FIX N BND S BND	6000 3700
*5500 - MRA RARES, OR FIX CRAAF, OR FIX *3400 - MOCA	CRAAF, OR FIX MCCOY, OR FIX	6000 *4000
MCCOY, OR FIX NEWBERG, OR VOR/DME BATTLE GROUND, WA VORTAC	NEWBERG, OR VOR/DME BATTLE GROUND, WA VORTAC *MALAY, WA FIX NW BND SE BND	3600 4000 6000 5000
*9500 - MRA MALAY, WA FIX *5000 - MRA TONNO, WA FIX OLYMPIA, WA VORTAC *4000 - MRA **2000 - MOCA	*TONNO, WA FIX OLYMPIA, WA VORTAC *CARRO, WA FIX	6000 4000 **4000
CARRO, WA FIX *5000 - MCA LOFAL, WA FIX , SW BND **5000 - MOCA	*LOFAL, WA FIX	**6000
LOFAL, WA FIX *1900 - MOCA	PAINE, WA VOR/DME	*3000
PAINE, WA VOR/DME *1800 - MOCA	PENN COVE, WA VOR/DME	*3000

95.6288 VOR FEDERAL AIRWAY V288

LUCIN, UT VORTAC *13000 - MRA *16000 - MCA CORIN, UT FIX , E BND **9400 - MOCA	*CORIN, UT FIX	**13000
CORIN, UT FIX *11600 - MOCA *12000 - GNSS MEA	FORT BRIDGER, WY VOR/DME	*16000

95.6289 VOR FEDERAL AIRWAY V289

BEAUMONT, TX VOR/DME HONEE, TX FIX *1900 - MOCA	HONEE, TX FIX LUFKIN, TX VORTAC	2000 *3000
LUFKIN, TX VORTAC *2400 - MRA PIPES, TX FIX GREGG COUNTY, TX VORTAC TEXARKANA, AR VORTAC *4500 - MRA **1700 - MOCA	*PIPES, TX FIX GREGG COUNTY, TX VORTAC TEXARKANA, AR VORTAC *PROVO, AR FIX	2400 2000 2000 **2200
PROVO, AR FIX *3400 - MOCA	UMPIR, AR FIX	*3900

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95.6289 VOR FEDERAL AIRWAY V289 - CONTINUED

UMPIR, AR FIX	BATEZ, AR FIX	*4300
*3800 - MOCA		
BATEZ, AR FIX	FORT SMITH, AR VORTAC	*4100
*3600 - MOCA		
FORT SMITH, AR VORTAC	MULBY, AR FIX	
	SW BND	3300
	NE BND	4000
MULBY, AR FIX	HARRISON, AR VOR/DME	4000
HARRISON, AR VOR/DME	DOGWOOD, MO VORTAC	3400
DOGWOOD, MO VORTAC	GOBEY, MO FIX	3400
GOBEY, MO FIX	PEKLE, MO FIX	3400
PEKLE, MO FIX	VICHY, MO VOR/DME	3000

95.6290 VOR FEDERAL AIRWAY V290

RAINELLE, WV VOR	MONTEBELLO, VA VOR/DME	6500
*MONTEBELLO, VA VOR/DME	ROMAN, VA FIX	6300
*6000 - MCA MONTEBELLO, VA VOR/DME , SE BND		
ROMAN, VA FIX	ARVON, VA FIX	4000
ARVON, VA FIX	FLAT ROCK, VA VORTAC	#*5000
*2200 - GNSS MEA		
#FLAT ROCK R-297 UNUSABLE.		
TAR RIVER, NC VORTAC	KENIR, NC FIX	*4000
*1600 - MOCA		
*2000 - GNSS MEA		
KENIR, NC FIX	PUNGO, NC FIX	*5000
*1500 - MOCA		
*2000 - GNSS MEA		

95.6291 VOR FEDERAL AIRWAY V291

HOBBS, NM VORTAC	CHISUM, NM VORTAC	*6000
*5500 - MOCA		
CHISUM, NM VORTAC	DUPAL, NM FIX	
	NW BND	9000
	SE BND	6000
DUPAL, NM FIX	CORONA, NM VORTAC	9000
CORONA, NM VORTAC	ALBUQUERQUE, NM VORTAC	10000
ALBUQUERQUE, NM VORTAC	AROYO, NM FIX	8300
AROYO, NM FIX	*LORAT, NM FIX	9500
*12400 - MCA LORAT, NM FIX , W BND		
LORAT, NM FIX	BLINI, NM FIX	13300
BLINI, NM FIX	GALLUP, NM VORTAC	11000
GALLUP, NM VORTAC	FORAN, AZ FIX	9400
FORAN, AZ FIX	WINSLOW, AZ VORTAC	9000
WINSLOW, AZ VORTAC	*FLAGSTAFF, AZ VOR/DME	#10100
*11000 - MCA FLAGSTAFF, AZ VOR/DME , NE BND		
#MTA V327 N TO V291 E 11000		
FLAGSTAFF, AZ VOR/DME	KACEE, AZ FIX	11000
KACEE, AZ FIX	PEACH SPRINGS, AZ VOR/DME	*11000
*10000 - MOCA		

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95.6292 VOR FEDERAL AIRWAY V292

HANCOCK, NY VOR/DME	SAGES, NY FIX	6400
SAGES, NY FIX	WIGAN, NY FIX	#
#UNUSABLE		
WIGAN, NY FIX	BARNES, MA VORTAC	#*10000
*4900 - MOCA		
#BARNES R-279 UNUSABLE BYD 50 NM		
BARNES, MA VORTAC	GLYDE, MA FIX	*7000
*2700 - MOCA		
*4000 - GNSS MEA		
GLYDE, MA FIX	BOSTON, MA VOR/DME	*4000
*3000 - MOCA		

95.6293 VOR FEDERAL AIRWAY V293

*GRAND CANYON, AZ VOR/DME	KLIFF, AZ FIX	**14500
*14500 - MCA GRAND CANYON, AZ VOR/DME , N BND		
**10900 - MOCA		
*KLIFF, AZ FIX	PAGE, AZ VOR/DME	8700
*14500 - MCA KLIFF, AZ FIX , S BND		
PAGE, AZ VOR/DME	CABER, UT FIX	8500
CABER, UT FIX	BRYCE CANYON, UT VORTAC	11000
BRYCE CANYON, UT VORTAC	*ENOCH, UT VOR/DME	13300
*12100 - MCA ENOCH, UT VOR/DME , E BND		
ENOCH, UT VOR/DME	BERYL, UT FIX	9000
BERYL, UT FIX	WILSON CREEK, NV VORTAC	11600
WILSON CREEK, NV VORTAC	ELY, NV VOR/DME	12000
ELY, NV VOR/DME	*BULLION, NV VOR/DME	***14000
*12000 - MCA BULLION, NV VOR/DME , S BND		
**13100 - MOCA		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
BULLION, NV VOR/DME	SAMAN, ID FIX	10600
SAMAN, ID FIX	*TWIN FALLS, ID VORTAC	
	N BND	7500
	S BND	8600
*6500 - MCA TWIN FALLS, ID VORTAC , S BND		
TWIN FALLS, ID VORTAC	GOODE, ID FIX	6000
GOODE, ID FIX	*TORIN, ID FIX	6600
*8700 - MCA TORIN, ID FIX , NW BND		
TORIN, ID FIX	DERSO, ID FIX	
	NW BND	11500
	SE BND	9200
DERSO, ID FIX	DONNELLY, ID VOR/DME	11700

95.6294 VOR FEDERAL AIRWAY V294

DES MOINES, IA VORTAC	CEDAR RAPIDS, IA VOR/DME	2700
CEDAR RAPIDS, IA VOR/DME	DAVENPORT, IA VORTAC	2600

95.6295 VOR FEDERAL AIRWAY V295

VIRGINIA KEY, FL VOR/DME	STOOP, FL FIX	*5000
*2000 - MOCA		
STOOP, FL FIX	TREASURE, FL VORTAC	2000
TREASURE, FL VORTAC	BAIRN, FL FIX	2600
BAIRN, FL FIX	ORLANDO, FL VORTAC	2700
ORLANDO, FL VORTAC	*SHIMM, FL FIX	2000
*3000 - MRA		
SHIMM, FL FIX	OCALA, FL VORTAC	2000

FROM	TO	MEA
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95.6295 VOR FEDERAL AIRWAY V295 - CONTINUED

OCALA, FL VORTAC	CROSS CITY, FL VORTAC	2000
CROSS CITY, FL VORTAC	SEMINOLE, FL VORTAC	2000

95.6296 VOR FEDERAL AIRWAY V296

HUSTN, NC FIX	*RAEFO, NC FIX	**5000
*6000 - MRA		
**2300 - MOCA		
*2400 - GNSS MEA		
RAEFO, NC FIX	FAYETTEVILLE, NC VOR/DME	*2800
*1900 - MOCA		
FAYETTEVILLE, NC VOR/DME	WILMINGTON, NC VORTAC	#*3000
*2100 - MOCA		
#WILMNINGTON R-315 UNUSABLE, USE FAYETTEVILLE R-131		

95.6298 VOR FEDERAL AIRWAY V298

*SEATTLE, WA VORTAC	VAMPS, WA FIX	
	W BND	**4000
	E BND	**8400
*4300 - MCA SEATTLE, WA VORTAC , E BND		
**3100 - MOCA		
**5300 - GNSS MEA		
VAMPS, WA FIX	BANDR, WA FIX	
	E BND	*8400
	W BND	*7700
*7700 - GNSS MEA		
BANDR, WA FIX	*BEEZR, WA FIX	8400
*9000 - MRA		
BEEZR, WA FIX	PERTT, WA FIX	*9000
*7500 - MOCA		
PERTT, WA FIX	YAKIMA, WA VORTAC	6600
YAKIMA, WA VORTAC	*SUNED, WA FIX	**5000
*5500 - MRA		
**4300 - MOCA		
SUNED, WA FIX	BENTY, WA FIX	*5000
*4300 - MOCA		
BENTY, WA FIX	PASCO, WA VOR/DME	*4000
*3500 - MOCA		
PASCO, WA VOR/DME	PENDLETON, OR VORTAC	4000
PENDLETON, OR VORTAC	CABAN, OR FIX	6000
CABAN, OR FIX	IBEAM, OR FIX	8300
IBEAM, OR FIX	DONNELLY, ID VOR/DME	12000
DONNELLY, ID VOR/DME	*DUBOIS, ID VORTAC	**16000
*9800 - MCA DUBOIS, ID VORTAC , W BND		
**13600 - MOCA		
DUBOIS, ID VORTAC	*SABAT, ID FIX	
	W BND	**9000
	E BND	**13000
*10000 - MRA		
*11100 - MCA SABAT, ID FIX , E BND		
**8100 - MOCA		
SABAT, ID FIX	LAMON, ID FIX	
	W BND	*10000
	E BND	*13000
*8100 - MOCA		
LAMON, ID FIX	*QUIRT, WY FIX	15000
*14100 - MCA QUIRT, WY FIX , W BND		

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95.6298 VOR FEDERAL AIRWAY V298 - CONTINUED

QUIRT, WY FIX *10800 - MOCA	DUNOIR, WY VOR/DME	*12000
DUNOIR, WY VOR/DME *11000 - MCA BOYSEN RESERVOIR, WY VOR/DME , W BND	*BOYSEN RESERVOIR, WY VOR/DME	14000
BOYSEN RESERVOIR, WY VOR/DME *10300 - MOCA	MUDDY MOUNTAIN, WY VOR/DME	*11000
MUDDY MOUNTAIN, WY VOR/DME	CHANG, WY FIX	8500
CHANG, WY FIX	GILLETTE, WY VOR/DME	7200

95.6299 VOR FEDERAL AIRWAY V299

*LOS ANGELES, CA VORTAC *3200 - MCA LOS ANGELES, CA VORTAC , W BND	VENTURA, CA VOR/DME	5000
VENTURA, CA VOR/DME *7200 - MCA FILLMORE, CA VORTAC , N BND	*FILLMORE, CA VORTAC	5000
FILLMORE, CA VORTAC	GORMAN, CA VORTAC	9500

95.6300 VOR FEDERAL AIRWAY V300

U.S. CANADIAN BORDER *2400 - MOCA	AVALE, MI FIX	#*9000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
AVALE, MI FIX *2400 - MOCA	SAULT STE MARIE, MI VOR/DME	#*3000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.		
SAULT STE MARIE, MI VOR/DME *2500 - MOCA	U.S. CANADIAN BORDER	*3000
U.S. CANADIAN BORDER *2500 - MOCA	NAASH, MI FIX	*3000
NAASH, MI FIX *2500 - MOCA	U.S. CANADIAN BORDER	*6000
U.S. CANADIAN BORDER *5900 - MOCA *5900 - GNSS MEA	CAMPO, ME FIX	*9000
CAMPO, ME FIX *6000 - MOCA *6000 - GNSS MEA	WRAPT, ME FIX	*9000
WRAPT, ME FIX *5900 - MOCA *5900 - GNSS MEA	MILLINOCKET, ME VOR/DME	*7000
MILLINOCKET, ME VOR/DME *2200 - MOCA	U.S. CANADIAN BORDER	*3000

FROM	TO	MEA
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95.6301 VOR FEDERAL AIRWAY V301

PANOCHE, CA VORTAC	*SUNOL, CA FIX	6500
*6500 - MCA SUNOL, CA FIX , SE BND		
SUNOL, CA FIX	OAKLAND, CA VOR/DME	4000
OAKLAND, CA VOR/DME	COMMO, CA FIX	*5000
*4000 - MOCA		
COMMO, CA FIX	POINT REYES, CA VOR/DME	5000
POINT REYES, CA VOR/DME	SANTA ROSA, CA VOR/DME	3500
SANTA ROSA, CA VOR/DME	*KLOGE, CA FIX	5000
*6400 - MCA KLOGE, CA FIX , NE BND		
KLOGE, CA FIX	RUMSY, CA FIX	7000
RUMSY, CA FIX	WILLIAMS, CA VORTAC	
	SW BND	7000
	NE BND	5300

95.6302 VOR FEDERAL AIRWAY V302

AUGUSTA, ME VOR/DME	ANCOR, ME FIX	*5000
*3000 - GNSS MEA		

95.6303 VOR FEDERAL AIRWAY V303

HOT SPRINGS, AR VOR/DME	BLURB, AR FIX	*3500
*3000 - MOCA		
BLURB, AR FIX	BLIMP, AR FIX	*4100
*3600 - MOCA		
BLIMP, AR FIX	FORT SMITH, AR VORTAC	*2900
*2400 - MOCA		

95.6304 VOR FEDERAL AIRWAY V304

PANHANDLE, TX VORTAC	BORGER, TX VORTAC	5000
BORGER, TX VORTAC	LIBERAL, KS VORTAC	4800
LIBERAL, KS VORTAC	LAMAR, CO VOR/DME	*6000
*5300 - MOCA		

95.6305 VOR FEDERAL AIRWAY V305

EL DORADO, AR VOR/DME	LITTLE ROCK, AR VORTAC	3300
LITTLE ROCK, AR VORTAC	DUMPI, AR FIX	
	S BND	2000
	N BND	4000
DUMPI, AR FIX	WALNUT RIDGE, AR VORTAC	*4000
*2200 - MOCA		
WALNUT RIDGE, AR VORTAC	MALDEN, MO VORTAC	2300
MALDEN, MO VORTAC	CUNNINGHAM, KY VOR/DME	2500
CUNNINGHAM, KY VOR/DME	WESON, KY FIX	2600
WESON, KY FIX	POCKET CITY, IN VORTAC	2200
POCKET CITY, IN VORTAC	*AUGUS, IN FIX	2400
*2600 - MRA		
AUGUS, IN FIX	*WEGEE, IN FIX	**3500
*3500 - MRA		
**1900 - MOCA		
WEGEE, IN FIX	HOOSIER, IN VORTAC	2700

FROM	TO	MEA
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95.6305 VOR FEDERAL AIRWAY V305 - CONTINUED

HOOSIER, IN VORTAC *2700 - GNSS MEA #HOOSIER R-027 UNUSABLE.	BRICKYARD, IN VORTAC	#*2700
BRICKYARD, IN VORTAC WELDO, IN FIX	WELDO, IN FIX KOKOMO, IN VORTAC	2900 2700

95.6306 VOR FEDERAL AIRWAY V306

JUNCTION, TX VORTAC AMUSE, TX FIX CENTEX, TX VORTAC NAVASOTA, TX VOR/DME ZMSKL, TX FIX *2300 - MOCA	AMUSE, TX FIX CENTEX, TX VORTAC NAVASOTA, TX VOR/DME ZMSKL, TX FIX CLEEP, TX FIX	3800 3100 2300 2000 *5000
CLEEP, TX FIX DAISETTA, TX VORTAC *2800 - MRA KUUPR, TX FIX OFERS, LA FIX	DAISETTA, TX VORTAC *KUUPR, TX FIX OFERS, LA FIX LAKE CHARLES, LA VORTAC	3000 2300 2300 2000

95.6307 VOR FEDERAL AIRWAY V307

HARRISON, AR VOR/DME *2800 - MOCA	NEOSHO, MO VOR/DME	*3400
NEOSHO, MO VOR/DME OSWEGO, KS VOR/DME *2500 - MOCA	OSWEGO, KS VOR/DME CHANUTE, KS VOR/DME	3000 *3000
CHANUTE, KS VOR/DME EMPORIA, KS VORTAC *5000 - MCA ALMAS, KS FIX , N BND	EMPORIA, KS VORTAC *ALMAS, KS FIX	3000 3300
ALMAS, KS FIX *3000 - MOCA	PAWNEE CITY, NE VORTAC	*5000
PAWNEE CITY, NE VORTAC OMAHA, IA VORTAC *3500 - MRA	OMAHA, IA VORTAC *DECKA, NE FIX	3000 3000
DECKA, NE FIX	SIoux CITY, IA VORTAC	3000

95.6308 VOR FEDERAL AIRWAY V308

NOTTINGHAM, MD VORTAC *6000 - MCA BILIT, MD FIX , W BND **1600 - MOCA **2000 - GNSS MEA	*BILIT, MD FIX	**6000
BILIT, MD FIX *1500 - MOCA	WATERLOO, DE VOR/DME	*2000
WATERLOO, DE VOR/DME *1500 - MOCA	SEA ISLE, NJ VORTAC	*2000
SEA ISLE, NJ VORTAC *4000 - GNSS MEA	AVALO, NJ FIX	*4500
AVALO, NJ FIX *4000 - GNSS MEA	HARBO, NJ FIX	*6000
HARBO, NJ FIX *6000 - MRA **3000 - GNSS MEA	*DRIFT, NJ FIX	**7500
DRIFT, NJ FIX *3000 - GNSS MEA	MANTA, NJ FIX	*12000

FROM	TO	MEA
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95.6308 VOR FEDERAL AIRWAY V308 - CONTINUED

MANTA, NJ FIX *2000 - MOCA *3000 - GNSS MEA	PLUME, NJ FIX	*7000
PLUME, NJ FIX *5000 - MRA **3000 - MOCA **3000 - GNSS MEA	*KOPPY, NY FIX	**4000
KOPPY, NY FIX *3000 - MOCA *3000 - GNSS MEA	BEADS, NY FIX	*4000
BEADS, NY FIX *1600 - MOCA	HAMPTON, NY VORTAC	*2500
HAMPTON, NY VORTAC GROTON, CT VOR/DME	GROTON, CT VOR/DME NORWICH, CT VOR/DME	2000 2000

95.6309 VOR FEDERAL AIRWAY V309

CHARLESTON, WV VOR/DME *3200 - MOCA *3200 - GNSS MEA	RANDE, WV FIX	*5000
RANDE, WV FIX *3300 - MOCA *3400 - GNSS MEA	BURGS, WV FIX	*7000
BURGS, WV FIX	BELLAIRE, OH VOR/DME	3400

95.6310 VOR FEDERAL AIRWAY V310

LOUISVILLE, KY VORTAC *5000 - MRA **2900 - MOCA	*DARBY, KY FIX	**3300
DARBY, KY FIX *3000 - MOCA	LONDON, KY VOR/DME	*3300
LONDON, KY VOR/DME *3800 - MOCA	ROSAR, KY FIX	*5500
ROSAR, KY FIX *6900 - MCA HOLSTON MOUNTAIN, TN VORTAC , E BND	*HOLSTON MOUNTAIN, TN VORTAC	6900
HOLSTON MOUNTAIN, TN VORTAC	STAIN, TN FIX	6900
STAIN, TN FIX *8500 - MCA BURCH, NC FIX , W BND	*BURCH, NC FIX	8500
BURCH, NC FIX GREENSBORO, NC VORTAC *2800 - MCA CHAPL, NC FIX , W BND	GREENSBORO, NC VORTAC *CHAPL, NC FIX	3500 3100
CHAPL, NC FIX *1900 - MOCA	RALEIGH/DURHAM, NC VORTAC	*2400
RALEIGH/DURHAM, NC VORTAC TAR RIVER, NC VORTAC *1600 - MOCA *2000 - GNSS MEA	TAR RIVER, NC VORTAC ELIZABETH CITY, NC VOR/DME	2600 *4000

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95.6311 VOR FEDERAL AIRWAY V311

HINCH MOUNTAIN, TN VOR/DME	DUBBS, TN FIX	5000
DUBBS, TN FIX *6400 - MOCA	NELLO, GA FIX	*7000
NELLO, GA FIX *5000 - MRA **5500 - MOCA	*AWSON, GA FIX	**7000
AWSON, GA FIX	CORCE, GA FIX	4600
CORCE, GA FIX	ELECTRIC CITY, SC VORTAC	3800
ELECTRIC CITY, SC VORTAC	GREENWOOD, SC VORTAC	2500
GREENWOOD, SC VORTAC	COLUMBIA, SC VORTAC	2300
COLUMBIA, SC VORTAC *2500 - MRA	*ERNIE, SC FIX	2000
ERNIE, SC FIX	SACKS, SC FIX	2000
SACKS, SC FIX	CHARLESTON, SC VORTAC	2100

95.6312 VOR FEDERAL AIRWAY V312

POLLA, MD FIX	TACKS, MD FIX	2200
		MAA - 13000
TACKS, MD FIX *1500 - MOCA	WOODSTOWN, NJ VORTAC	*2000
WOODSTOWN, NJ VORTAC	COYLE, NJ VORTAC	2100
COYLE, NJ VORTAC *6000 - MRA	*DRIFT, NJ FIX	2000
DRIFT, NJ FIX *8000 - MRA **2000 - GNSS MEA	*PREPI, OA FIX	**4800

95.6313 VOR FEDERAL AIRWAY V313

MALDEN, MO VORTAC	CAPE GIRARDEAU, MO VOR/DME	2300
CAPE GIRARDEAU, MO VOR/DME	GENTS, IL FIX	3500
GENTS, IL FIX *2400 - MOCA	CENTRALIA, IL VORTAC	*3000
CENTRALIA, IL VORTAC	ADDERS, IL VORTAC	2500
ADDERS, IL VORTAC	PONTIAC, IL VOR/DME	3000

95.6314 VOR FEDERAL AIRWAY V314

U.S. CANADIAN BORDER *8000 - MRA **3900 - MOCA	*PATTA, ME FIX	**6000
PATTA, ME FIX *3900 - MOCA	MILLINOCKET, ME VOR/DME	*6000

95.6315 VOR FEDERAL AIRWAY V315

PARIS, TX VOR/DME	RICH MOUNTAIN, OK VORTAC	4200
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95.6316 VOR FEDERAL AIRWAY V316

IRONWOOD, MI VOR/DME *3700 - MOCA	SAWYER, MI VOR/DME	*6000
SAULT STE MARIE, MI VOR/DME *2800 - MOCA	U.S. CANADIAN BORDER	*5000

95.6317 VOR FEDERAL AIRWAY V317

MISSION BAY, CA VORTAC	POGGI, CA VORTAC	4500
POGGI, CA VORTAC	IMPERIAL, CA VORTAC	7000

95.6318 VOR FEDERAL AIRWAY V318

U.S. CANADIAN BORDER *3900 - MOCA	HOULTON, ME VOR/DME	*9000
HOULTON, ME VOR/DME	U.S. CANADIAN BORDER	1900

95.6319 VOR FEDERAL AIRWAY V319

BOYSEN RESERVOIR, WY VOR/DME	WORLAND, WY VOR/DME	9600
WORLAND, WY VOR/DME	ALVIL, WY FIX	7000
ALVIL, WY FIX	CODY, WY VOR/DME	8500

95.6320 VOR FEDERAL AIRWAY V320

PELLSTON, MI VORTAC	TRAVERSE CITY, MI VOR/DME	3000
TRAVERSE CITY, MI VOR/DME	MOUNT PLEASANT, MI VOR/DME	5000
MOUNT PLEASANT, MI VOR/DME	SAGINAW, MI VOR/DME	2600

95.6321 VOR FEDERAL AIRWAY V321

PECAN, GA VOR/DME	KUTVE, GA FIX	2000
KUTVE, GA FIX	*PREST, GA FIX	2600
*5000 - MCA PREST, GA FIX , NW BND		
PREST, GA FIX	*COLUMBUS, GA VORTAC	**5000
*5000 - MCA COLUMBUS, GA VORTAC , SE BND		
**3300 - MOCA		
COLUMBUS, GA VORTAC	LAGRANGE, GA VORTAC	2500
LAGRANGE, GA VORTAC	HEFIN, AL FIX	*4000
*3400 - MOCA		
HEFIN, AL FIX	GADSDEN, AL VOR/DME	4000
GADSDEN, AL VOR/DME	OWENT, AL FIX	3000
OWENT, AL FIX	ROCKET, AL VORTAC	3700
ROCKET, AL VORTAC	SHELBYVILLE, TN VOR/DME	3000
SHELBYVILLE, TN VOR/DME	LIVINGSTON, TN VOR/DME	3800

95.6322 VOR FEDERAL AIRWAY V322

CONCORD, NH VOR/DME	GRUMP, NH FIX	4000
GRUMP, NH FIX	*NOTTY, NH FIX	5000
*6000 - MCA NOTTY, NH FIX , N BND		
NOTTY, NH FIX	WYLIE, ME FIX	*7000
*5600 - MOCA		

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95.6322 VOR FEDERAL AIRWAY V322 - CONTINUED

WYLIE, ME FIX *6000 - MOCA	BUKER, NH FIX	*7000
BUKER, NH FIX *5100 - MOCA	BERLIN, NH VOR/DME	*6000
BERLIN, NH VOR/DME #FOR THAT AIRSPACE OVER U.S. TERRITORY.	U.S. CANADIAN BORDER	#6500

95.6323 VOR FEDERAL AIRWAY V323

MONTGOMERY, AL VORTAC EUFAULA, AL VORTAC *2100 - MOCA	EUFAULA, AL VORTAC BYROE, GA FIX	2400 *3000
BYROE, GA FIX MACON, GA VORTAC *2500 - MOCA	MACON, GA VORTAC NALIZ, GA FIX	2300 *3000
NALIZ, GA FIX *2100 - MOCA	WEMOB, GA FIX	*3000
WEMOB, GA FIX *2200 - MOCA	HUSKY, GA FIX	*3000

95.6324 VOR FEDERAL AIRWAY V324

GILLETTE, WY VOR/DME *9500 - MCA	*CRAZY WOMAN, WY VOR/DME CRAZY WOMAN, WY VOR/DME	7500 12000
CHAPY, WY FIX	CHAPY, WY FIX WORLAND, WY VOR/DME E BND W BND	12000 12000 8000

95.6325 VOR FEDERAL AIRWAY V325

COLUMBIA, SC VORTAC *8000 - MCA	*VESTO, GA FIX VESTO, GA FIX	8000
ATHENS, GA VOR/DME WOMAC, GA FIX *3700 - MOCA	ATHENS, GA VOR/DME W BND E BND WOMAC, GA FIX LOGEN, GA FIX	2500 8000 3700 *4600
DALAS, GA FIX *3700 - MOCA #GNSS MEA	CARAN, GA FIX	#*5000
#GADSDEN R-089 UNUSABLE BYD 47NM EXCEPT FOR ACFT EQUIPPED WITH SUITABLE RNAV SYSTEM WITH GPS		
CARAN, GA FIX *4200 - MOCA	GADSDEN, AL VOR/DME	#*5000
GADSDEN, AL VOR/DME MASHA, AL FIX	MASHA, AL FIX MUSCLE SHOALS, AL VORTAC	3500 2500

FROM	TO	MEA
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95.6326 VOR FEDERAL AIRWAY V326

FILLMORE, CA VORTAC	VAN NUYS, CA VOR/DME	5000
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95.6327 VOR FEDERAL AIRWAY V327

PHOENIX, AZ VORTAC	KNOBB, AZ FIX	8000
KNOBB, AZ FIX	RADOM, AZ FIX	
	S BND	8000
	N BND	11000
RADOM, AZ FIX	*FERER, AZ FIX	
	N BND	**12000
	S BND	**11000
*12000 - MRA		
*11000 - MCA FERER, AZ FIX , S BND		
**8400 - MOCA		
**9000 - GNSS MEA		
FERER, AZ FIX	OATES, AZ FIX	**12000
**9400 - MOCA		
**10000 - GNSS MEA		
OATES, AZ FIX	*FLAGSTAFF, AZ VOR/DME	#10500
*11000 - MCA FLAGSTAFF, AZ VOR/DME , NE BND		
#MTA V327 N TO V291 E 11000		

95.6328 VOR FEDERAL AIRWAY V328

JACKSON, WY VOR/DME	BIG PINEY, WY VOR/DME	#13500
#MTA V328 NW TO V465 SW 15100		
BIG PINEY, WY VOR/DME	ROCK SPRINGS, WY VOR/DME	*10000
*9700 - MOCA		
ROCK SPRINGS, WY VOR/DME	SNAKY, WY FIX	11000
SNAKY, WY FIX	CELIA, CO FIX	*12000
*10000 - GNSS MEA		
CELIA, CO FIX	HAYDEN, CO VOR/DME	10000
HAYDEN, CO VOR/DME	HABRO, CO FIX	10000
HABRO, CO FIX	KREMMLING, CO VOR/DME	13000
KREMMLING, CO VOR/DME	*SKEED, CO FIX	**16500
*16500 - MRA		
**15800 - MOCA		
SKEED, CO FIX	*POWDR, CO FIX	14500
*15600 - MRA		
POWDR, CO FIX	MILE HIGH, CO VORTAC	14000

95.6330 VOR FEDERAL AIRWAY V330

WILDHORSE, OR VOR/DME	BOISE, ID VORTAC	8000
BOISE, ID VORTAC	CANEK, ID FIX	7000
CANEK, ID FIX	ALKAL, ID FIX	*9500
*8500 - MOCA		
ALKAL, ID FIX	TORIN, ID FIX	
	E BND	*8000
	W BND	*9500
*6700 - MOCA		

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95.6330 VOR FEDERAL AIRWAY V330 - CONTINUED

TORIN, ID FIX	*KINZE, ID FIX	8000
*8000 - MCA KINZE, ID FIX , W BND		
IDAHO FALLS, ID VOR/DME	*OSITY, ID FIX	8000
*9500 - MCA OSITY, ID FIX , E BND		
OSITY, ID FIX	*JACKSON, WY VOR/DME	#14000
*13400 - MCA JACKSON, WY VOR/DME , W BND		
#MTA V330 E TO V520 W 16000		
JACKSON, WY VOR/DME	DUNOIR, WY VOR/DME	13000
DUNOIR, WY VOR/DME	*ROWEY, WY FIX	**14000
*11000 - MCA ROWEY, WY FIX , W BND		
**13500 - MOCA		
ROWEY, WY FIX	RIVERTON, WY VOR/DME	8800
RIVERTON, WY VOR/DME	MUDDY MOUNTAIN, WY VOR/DME	8500

95.6331 VOR FEDERAL AIRWAY V331

HAZARD, KY VOR/DME	NEWCOMBE, KY VORTAC	*4000
*3500 - MOCA		

95.6332 VOR FEDERAL AIRWAY V332

FRIANT, CA VORTAC	HANGTOWN, CA VOR/DME	8500
HANGTOWN, CA VOR/DME	RED BLUFF, CA VORTAC	6000

95.6333 VOR FEDERAL AIRWAY V333

DALAS, GA FIX	ROME, GA VORTAC	*4000
*3200 - MOCA		
ROME, GA VORTAC	CHOO CHOO, TN VORTAC	4000
CHOO CHOO, TN VORTAC	*BOOPS, TN FIX	3500
*4500 - MRA		
BOOPS, TN FIX	HINCH MOUNTAIN, TN VOR/DME	5000
HINCH MOUNTAIN, TN VOR/DME	JELLO, TN FIX	5000
JELLO, TN FIX	DOLLY, KY FIX	4000
DOLLY, KY FIX	LEXINGTON, KY VOR/DME	3800

95.6334 VOR FEDERAL AIRWAY V334

SAN JOSE, CA VOR/DME	*OAKKEY, CA FIX	5000
*3000 - MCA OAKKEY, CA FIX , S BND		
OAKKEY, CA FIX	SACRAMENTO, CA VORTAC	2500

95.6335 VOR FEDERAL AIRWAY V335

ST LOUIS, MO VORTAC	ARNOL, IL FIX	2800
ARNOL, IL FIX	*GLASS, MO FIX	**3000
*4500 - MRA		
**2100 - MOCA		
GLASS, MO FIX	NIKEL, IL FIX	*4500
*2200 - MOCA		
*3500 - GNSS MEA		

FROM	TO	MEA
NIKEL, IL FIX	MARION, IL VOR/DME	2400
95.6336 VOR FEDERAL AIRWAY V336		
ELLENSBURG, WA VOR/DME	*QUINT, WA FIX	7100
*6500 - MCA QUINT, WA FIX , SW BND		
QUINT, WA FIX	EPHRATA, WA VORTAC	5000
95.6338 VOR FEDERAL AIRWAY V338		
LINDEN, CA VOR/DME	*HANGTOWN, CA VOR/DME	5000
*7000 - MCA HANGTOWN, CA VOR/DME , NE BND		
HANGTOWN, CA VOR/DME	SQUAW VALLEY, CA VOR/DME	11000
95.6339 VOR FEDERAL AIRWAY V339		
HAZARD, KY VOR/DME	TRENT, KY FIX	4000
TRENT, KY FIX	FALMOUTH, KY VOR/DME	3500
95.6340 VOR FEDERAL AIRWAY V340		
BEARZ, IN FIX	KNOX, IN VOR/DME	3000
KNOX, IN VOR/DME	FORT WAYNE, IN VORTAC	3000
95.6341 VOR FEDERAL AIRWAY V341		
CEDAR RAPIDS, IA VOR/DME	DUBUQUE, IA VORTAC	2900
DUBUQUE, IA VORTAC	*BAULK, WI FIX	3600
*4000 - MRA		
BAULK, WI FIX	MADISON, WI VORTAC	3600
MADISON, WI VORTAC	OSHKOSH, WI VORTAC	3000
OSHKOSH, WI VORTAC	GREEN BAY, WI VORTAC	*3000
*2300 - MOCA		
GREEN BAY, WI VORTAC	MENOMINEE, MI VOR/DME	2600
MENOMINEE, MI VOR/DME	HAVEL, MI FIX	2500
HAVEL, MI FIX	IRON MOUNTAIN, MI VOR/DME	3300
IRON MOUNTAIN, MI VOR/DME	SAWYER, MI VOR/DME	3100
SAWYER, MI VOR/DME	HOUGHTON, MI VOR/DME	*4500
*3400 - MOCA		
95.6343 VOR FEDERAL AIRWAY V343		
*DUBOIS, ID VORTAC	RANEY, MT FIX	**15000
*8500 - MCA DUBOIS, ID VORTAC , N BND		
**13200 - MOCA		
RANEY, MT FIX	*GATEY, MT FIX	
	S BND	14000
	N BND	10200
*11500 - MCA GATEY, MT FIX , S BND		
GATEY, MT FIX	*BOZEMAN, MT VOR/DME	
	S BND	11500
	N BND	8000
*10500 - MCA BOZEMAN, MT VOR/DME , S BND		
BOZEMAN, MT VOR/DME	THESE, MT FIX	8000
THESE, MT FIX	SUZZY, MT FIX	
	E BND	8300
	W BND	10800

FROM	TO	MEA
SUZZY, MT FIX	EVVER, MT FIX	11000
 95.6344 VOR FEDERAL AIRWAY V344		
DUPREE, SD VOR/DME *4100 - MOCA	ABERDEEN, SD VOR/DME	*6500
ABERDEEN, SD VOR/DME *3000 - MOCA	FARGO, ND VOR/DME	*3900
 95.6345 VOR FEDERAL AIRWAY V345		
DELLS, WI VORTAC *2800 - MOCA	MILTO, WI FIX	*3500
MILTO, WI FIX	EAU CLAIRE, WI VORTAC	3500
EAU CLAIRE, WI VORTAC *3100 - MOCA	HAYWARD, WI VOR/DME	#*5200
*4000 - GNSS MEA		
#HAYWARD R-178 UNUSABLE USE EAU CLAIRE R-357		
 95.6346 VOR FEDERAL AIRWAY V346		
U.S. CANADIAN BORDER *5100 - MOCA	MILLINOCKET, ME VOR/DME	*6000
 95.6347 VOR FEDERAL AIRWAY V347		
LONDON, KY VOR/DME *4600 - MOCA	HINCH MOUNTAIN, TN VOR/DME	*4700
 95.6348 VOR FEDERAL AIRWAY V348		
THUNDER BAY, CANADA VORTAC *2800 - MOCA	U.S. CANADIAN BORDER	#*15000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.		
U.S. CANADIAN BORDER *2800 - MOCA	U.S. CANADIAN BORDER	*15000
U.S. CANADIAN BORDER *2800 - MOCA	SAULT STE MARIE, MI VOR/DME	*15000
SAULT STE MARIE, MI VOR/DME *3000 - MOCA	U.S. CANADIAN BORDER	*7000
 95.6349 VOR FEDERAL AIRWAY V349		
WHATCOM, WA VORTAC *2600 - MOCA	U.S. CANADIAN BORDER	*3000

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95.6350 VOR FEDERAL AIRWAY V350

LIBERAL, KS VORTAC *4500 - MOCA	WICHITA, KS VORTAC	*8000
WICHITA, KS VORTAC	CHANUTE, KS VOR/DME	3600

95.6352 VOR FEDERAL AIRWAY V352

U.S. CANADIAN BORDER *8000 - MRA	*PATTA, ME FIX	6300
PATTA, ME FIX	HOULTON, ME VOR/DME	6300
HOULTON, ME VOR/DME	U.S. CANADIAN BORDER	2000

95.6354 VOR FEDERAL AIRWAY V354

WILL ROGERS, OK VORTAC	PIIONEER, OK VORTAC	4000
PIIONEER, OK VORTAC	EMPORIA, KS VORTAC	3500

95.6355 VOR FEDERAL AIRWAY V355

BOWIE, TX VORTAC	WICHITA FALLS, TX VORTAC	3100
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95.6356 VOR FEDERAL AIRWAY V356

RED TABLE, CO VOR/DME	FISTR, CO FIX NE BND SW BND	15200 14200
FISTR, CO FIX	FIDLE, CO FIX	15200
FIDLE, CO FIX *12400 - MCA ELORE, CO FIX , W BND **15600 - MOCA	*ELORE, CO FIX	**16500
ELORE, CO FIX	MILE HIGH, CO VORTAC	7800

95.6357 VOR FEDERAL AIRWAY V357

LAKEVIEW, OR VORTAC *9500 - MOCA	WILDHORSE, OR VOR/DME	*10000
WILDHORSE, OR VOR/DME	POTSY, OR FIX	10000
POTSY, OR FIX	BAKER CITY, OR VOR/DME	12000
BAKER CITY, OR VOR/DME *7000 - MCA TOLGA, OR FIX , SE BND	*TOLGA, OR FIX	9000
TOLGA, OR FIX *5300 - MCA WALLA WALLA, WA VOR/DME , SE BND	*WALLA WALLA, WA VOR/DME	6700
WALLA WALLA, WA VOR/DME	MOSES LAKE, WA VOR/DME	4000
MOSES LAKE, WA VOR/DME	QUINT, WA FIX	4000
QUINT, WA FIX	WENATCHEE, WA VOR/DME	5500

95.6358 VOR FEDERAL AIRWAY V358

SAN ANTONIO, TX VORTAC *2800 - MOCA	GUADA, TX FIX	*4000
GUADA, TX FIX	STONEWALL, TX VORTAC	4000
STONEWALL, TX VORTAC *3200 - MOCA	GOOCH SPRINGS, TX VORTAC	*3800
GOOCH SPRINGS, TX VORTAC	SONET, TX FIX	3000
SONET, TX FIX	WACO, TX VORTAC	2700

FROM	TO	MEA
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95.6359 VOR FEDERAL AIRWAY V359

U.S. MEXICAN BORDER *2500 - MOCA	LAREDO, TX VORTAC	*3000
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95.6360 VOR FEDERAL AIRWAY V360

SAULT STE MARIE, MI VOR/DME *2600 - MOCA	U.S. CANADIAN BORDER	*6000
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95.6361 VOR FEDERAL AIRWAY V361

RATTLESNAKE, NM VORTAC	MARKE, CO FIX NE BND SW BND	16300 9500
MARKE, CO FIX	UNLAP, CO FIX NE BND SW BND	*16300 *11000
*10400 - MOCA		
UNLAP, CO FIX SCRUB, CO FIX	SCRUB, CO FIX LYZZA, CO FIX SW BND NE BND	16300 16300 12400
LYZZA, CO FIX	MONTROSE, CO VOR/DME SW BND NE BND	16300 9600
MONTROSE, CO VOR/DME	ICIES, CO FIX S BND N BND	10600 15000
ICIES, CO FIX RED TABLE, CO VOR/DME KREMMLING, CO VOR/DME	RED TABLE, CO VOR/DME KREMMLING, CO VOR/DME *ALLAN, CO FIX	15000 14000 ***16000
*16000 - MRA **15400 - MOCA		
#MTA V361 SW TO V85 SE 14700 MTA V361 SW TO V85 NW 16500		
ALLAN, CO FIX *11800 - MCA BARGR, CO FIX , SW BND	*BARGR, CO FIX	15000
BARGR, CO FIX	CHEYENNE, WY VORTAC	9000

95.6362 VOR FEDERAL AIRWAY V362

BRUNSWICK, GA VORTAC *10000 - MCA HABLE, GA FIX , NW BND **1700 - MOCA	*HABLE, GA FIX	**3000
HABLE, GA FIX *1700 - MOCA *3000 - GNSS MEA	ALMA, GA VORTAC	*10000
ALMA, GA VORTAC *1800 - MOCA *2000 - GNSS MEA #ALMA R-309 UNUSABLE, USE VIENNA R-127.	SEYBO, GA FIX	#*5000
SEYBO, GA FIX VIENNA, GA VORTAC	VIENNA, GA VORTAC MACON, GA VORTAC	2000 2000

FROM	TO	MEA
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95.6363 VOR FEDERAL AIRWAY V363

MISSION BAY, CA VORTAC	HURSI, CA FIX	3000
HURSI, CA FIX	OORAH, CA FIX	*4000
*2600 - MOCA		
OORAH, CA FIX	OFREE, CA FIX	*4000
*2300 - MOCA		
OFREE, CA FIX	EL TORO, CA VOR/DME	4000
EL TORO, CA VOR/DME	POMONA, CA VORTAC	4000

95.6364 VOR FEDERAL AIRWAY V364

LINCO, NC FIX	SUGARLOAF MOUNTAIN, NC VORTAC	6000
SUGARLOAF MOUNTAIN, NC VORTAC	WEAKS, NC FIX	8000
WEAKS, NC FIX	UNICO, TN FIX	*9000
*7700 - MOCA		
*7700 - GNSS MEA		
UNICO, TN FIX	HOLSTON MOUNTAIN, TN VORTAC	7000

95.6365 VOR FEDERAL AIRWAY V365

BURLEY, ID VOR/DME	IDAHO FALLS, ID VOR/DME	8000
IDAHO FALLS, ID VOR/DME	RIGBY, ID FIX	7600
RIGBY, ID FIX	*SABAT, ID FIX	8000
*10000 - MRA		
LIVINGSTON, MT VOR/DME	*BOZEMAN, MT VOR/DME	10900
*10200 - MCA BOZEMAN, MT VOR/DME , E BND		
BOZEMAN, MT VOR/DME	*MENAR, MT FIX	8700
*9200 - MCA MENAR, MT FIX , NW BND		
MENAR, MT FIX	SWEDD, MT FIX	*10000
*9400 - MOCA		
SWEDD, MT FIX	HELENA, MT VORTAC	10000
HELENA, MT VORTAC	WOKEN, MT FIX	9000
WOKEN, MT FIX	*SHIMY, MT FIX	**9500
*7000 - MRA		
**7500 - MOCA		
SHIMY, MT FIX	CHOTE, MT FIX	*9500
*7000 - MOCA		
CHOTE, MT FIX	CUT BANK, MT VOR/DME	7000

95.6366 VOR FEDERAL AIRWAY V366

HUGO, CO VOR/DME	FALCON, CO VORTAC	8500
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95.6367 VOR FEDERAL AIRWAY V367

INTERNATIONAL FALLS, MN VOR/DME	U.S. CANADIAN BORDER	3000
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FROM	TO	MEA
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95.6368 VOR FEDERAL AIRWAY V368

ALAMOSA, CO VORTAC	RODDS, CO FIX	
	W BND	13000
	E BND	10000
RODDS, CO FIX	*WAPRE, CO FIX	13000
*14000 - MRA		
WAPRE, CO FIX	MANUL, NM FIX	13000
MANUL, NM FIX	TURLY, NM FIX	
	E BND	11000
	W BND	9700
TURLY, NM FIX	RATTLESNAKE, NM VORTAC	9000

95.6369 VOR FEDERAL AIRWAY V369

NAVASOTA, TX VOR/DME	GROESBECK, TX VOR/DME	2300
GROESBECK, TX VOR/DME	MAVERICK, TX VOR/DME	3600

95.6370 VOR FEDERAL AIRWAY V370

LOS ANGELES, CA VORTAC	PRADO, CA FIX	4000
PRADO, CA FIX	PARADISE, CA VORTAC	5000
PARADISE, CA VORTAC	*SETER, CA FIX	5500
*12000 - MCA SETER, CA FIX , E BND		
SETER, CA FIX	BANDS, CA FIX	
	E BND	13000
	W BND	9000
BANDS, CA FIX	*PALM SPRINGS, CA VORTAC	13000
*11800 - MCA PALM SPRINGS, CA VORTAC , W BND		
*6200 - MCA PALM SPRINGS, CA VORTAC , N BND		
PALM SPRINGS, CA VORTAC	TWENTYNINE PALMS, CA VORTAC	7600

95.6371 VOR FEDERAL AIRWAY V371

BOILER, IN VORTAC	KNOX, IN VOR/DME	2500
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95.6372 VOR FEDERAL AIRWAY V372

SEAL BEACH, CA VORTAC	*JOGIT, CA FIX	4000
*6000 - MCA JOGIT, CA FIX , E BND		
JOGIT, CA FIX	*KAYOH, CA FIX	6000
*7400 - MCA KAYOH, CA FIX , E BND		
KAYOH, CA FIX	*HOMELAND, CA VOR	8000
*11200 - MCA HOMELAND, CA VOR , NE BND		
HOMELAND, CA VOR	BANDS, CA FIX	
	E BND	13000
	W BND	8000
BANDS, CA FIX	*PALM SPRINGS, CA VORTAC	13000
*11800 - MCA PALM SPRINGS, CA VORTAC , W BND		
PALM SPRINGS, CA VORTAC	BLYTHE, CA VORTAC	8000

95.6373 VOR FEDERAL AIRWAY V373

GREENSBORO, NC VORTAC	SANDHILLS, NC VORTAC	3600
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FROM	TO	MEA
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95.6374 VOR FEDERAL AIRWAY V374

BINGHAMTON, NY VOR/DME	*GAYEL, NY FIX	**10000
*10000 - MCA GAYEL, NY FIX , NW BND		
**4400 - MOCA		
**4400 - GNSS MEA		
GAYEL, NY FIX	VOLLU, NY FIX	*5000
*3200 - MOCA		
VOLLU, NY FIX	CARMEL, NY VOR/DME	2600
CARMEL, NY VOR/DME	*BETHA, CT FIX	2500
*8000 - MRA		
BETHA, CT FIX	CREAM, NY FIX	2500
CREAM, NY FIX	KURTY, CT FIX	2500
KURTY, CT FIX	GROTON, CT VOR/DME	3000
GROTON, CT VOR/DME	MINNK, RI FIX	*3000
*1500 - MOCA		
MINNK, RI FIX	MARTHAS VINEYARD, MA VOR/DME	*3000
*1600 - MOCA		

95.6375 VOR FEDERAL AIRWAY V375

ROANOKE, VA VOR/DME	PROSE, VA FIX	5000
PROSE, VA FIX	ROMAN, VA FIX	6500
ROMAN, VA FIX	GORDONSVILLE, VA VORTAC	4000
GORDONSVILLE, VA VORTAC	*HANEY, VA FIX	2800
*7000 - MRA		
HANEY, VA FIX	FLUKY, VA FIX	2600

95.6376 VOR FEDERAL AIRWAY V376

RICHMOND, VA VORTAC	GRUBY, VA FIX	2000
GRUBY, VA FIX	IRONS, MD FIX	*2500
*1700 - MOCA		

95.6377 VOR FEDERAL AIRWAY V377

MONTEBELLO, VA VOR/DME	KESSEL, WV VOR/DME	*6000
*5500 - MOCA		
KESSEL, WV VOR/DME	*TOMAC, WV FIX	4900
*4300 - MCA TOMAC, WV FIX , SW BND		
TOMAC, WV FIX	HAGERSTOWN, MD VOR	4000
HAGERSTOWN, MD VOR	HARRISBURG, PA VORTAC	*5000
*3800 - MOCA		
*4000 - GNSS MEA		

95.6378 VOR FEDERAL AIRWAY V378

BALTIMORE, MD VORTAC	BELAY, MD FIX	2300
BELAY, MD FIX	TROYZ, MD FIX	*9500
*4000 - GNSS MEA		
TROYZ, MD FIX	NUGGY, PA FIX	*7500
*4000 - GNSS MEA		
NUGGY, PA FIX	MODENA, PA VORTAC	*6000
*2000 - MOCA		
*4000 - GNSS MEA		

FROM	TO	MEA
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95.6379 VOR FEDERAL AIRWAY V379

NOTTINGHAM, MD VORTAC	JETTA, MD FIX	1900
JETTA, MD FIX	*GRACO, MD FIX	**3000
*10000 - MRA		
**1600 - MOCA		
GRACO, MD FIX	SMYRNA, DE VORTAC	1800

95.6380 VOR FEDERAL AIRWAY V380

O'NEILL, NE VORTAC	WOLBACH, NE VORTAC	*4000
*3500 - MOCA		
WOLBACH, NE VORTAC	GRAND ISLAND, NE VOR/DME	*4000
*3300 - MOCA		
GRAND ISLAND, NE VOR/DME	HASTINGS, NE VOR/DME	4000
HASTINGS, NE VOR/DME	MANKATO, KS VORTAC	3900

95.6381 VOR FEDERAL AIRWAY V381

BISHOP, CA VOR/DME	*NIKOL, CA FIX	**13000
*13000 - MCA NIKOL, CA FIX , SE BND		
**12300 - MOCA		

95.6382 VOR FEDERAL AIRWAY V382

GRAND JUNCTION, CO	*CONES, CO VOR/DME	12000
VOR/DME		
*14000 - MCA CONES, CO VOR/DME , SE BND		
CONES, CO VOR/DME	*DURANGO, CO VOR/DME	15300
*12000 - MCA DURANGO, CO VOR/DME , NW BND		

95.6384 VOR FEDERAL AIRWAY V384

LIVINGSTON, TN VOR/DME	VOLUNTEER, TN VORTAC	6100
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95.6385 VOR FEDERAL AIRWAY V385

LUBBOCK, TX VORTAC	WAGUN, TX FIX	*8000
*4700 - MOCA		
WAGUN, TX FIX	ABILENE, TX VORTAC	*8000
*3900 - MOCA		

95.6386 VOR FEDERAL AIRWAY V386

SAN MARCUS, CA VORTAC	*OHIGH, CA FIX	8000
*9000 - MRA		
OHIGH, CA FIX	*FILLMORE, CA VORTAC	8000
*6100 - MCA FILLMORE, CA VORTAC , W BND		
FILLMORE, CA VORTAC	*SAUGS, CA FIX	6000
*6300 - MCA SAUGS, CA FIX , NE BND		
SAUGS, CA FIX	PALMDALE, CA VORTAC	7000
PALMDALE, CA VORTAC	APLES, CA FIX	7000
APLES, CA FIX	SOGGI, CA FIX	
	E BND	11000
	W BND	9000
SOGGI, CA FIX	YUCCA, CA FIX	*11000
*9400 - MOCA		
YUCCA, CA FIX	*PALM SPRINGS, CA VORTAC	**9000
*7600 - MCA PALM SPRINGS, CA VORTAC , NW BND		
**8200 - MOCA		

FROM	TO	MEA
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95.6387 VOR FEDERAL AIRWAY V387

MC ALLEN, TX VOR/DME	U.S. MEXICAN BORDER	2000
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95.6388 VOR FEDERAL AIRWAY V388

PARADISE, CA VORTAC	ACINS, CA FIX	
	E BND	7000
	W BND	5000
ACINS, CA FIX	DEWAY, CA FIX	9500
DEWAY, CA FIX	*PALM SPRINGS, CA VORTAC	9500
*6300 - MCA PALM SPRINGS, CA VORTAC , W BND		

95.6389 VOR FEDERAL AIRWAY V389

CIMARRON, NM VORTAC	*FOGLE, NM FIX	**11600
*15600 - MRA		
**10700 - MOCA		
FOGLE, NM FIX	*EARLS, CO FIX	**15600
*11600 - MRA		
**12000 - MOCA		
EARLS, CO FIX	RADIO, CO FIX	*11600
*8500 - MOCA		
RADIO, CO FIX	PUEBLO, CO VORTAC	8200
PUEBLO, CO VORTAC	DRAKE, CO FIX	7600
DRAKE, CO FIX	FALCON, CO VORTAC	9000

95.6390 VOR FEDERAL AIRWAY V390

TUCUMCARI, NM VORTAC	BORGER, TX VORTAC	6500
BORGER, TX VORTAC	MITBEE, OK VORTAC	4800

95.6391 VOR FEDERAL AIRWAY V391

RATTLESNAKE, NM VORTAC	PLATA, NM FIX	10000
PLATA, NM FIX	CORTEZ, CO VOR/DME	10600
CORTEZ, CO VOR/DME	DOVE CREEK, CO VORTAC	9800
DOVE CREEK, CO VORTAC	PAROX, CO FIX	*12000
*10500 - MOCA		
PAROX, CO FIX	*GRAND JUNCTION, CO VOR/DME	12000
*10700 - MCA GRAND JUNCTION, CO VOR/DME , S BND		
GRAND JUNCTION, CO	BONGO, UT FIX	10800
VOR/DME		
BONGO, UT FIX	*VERNAL, UT VOR/DME	8400
*9500 - MCA VERNAL, UT VOR/DME , N BND		
VERNAL, UT VOR/DME	ROCK SPRINGS, WY VOR/DME	11800

95.6392 VOR FEDERAL AIRWAY V392

OAKLAND, CA VOR/DME	*SALAD, CA FIX	4000
*4700 - MCA SALAD, CA FIX , NE BND		
SALAD, CA FIX	*OAKEY, CA FIX	5000
*3000 - MCA OAKEY, CA FIX , S BND		

FROM	TO	MEA
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95.6392 VOR FEDERAL AIRWAY V392 - CONTINUED

Oakey, CA FIX	SACRAMENTO, CA VORTAC	2500
SACRAMENTO, CA VORTAC	ROZZY, CA FIX	*3500
*2300 - MOCA		
ROZZY, CA FIX	HAGAN, CA FIX	4000
HAGAN, CA FIX	*AUDIO, CA FIX	**6000
*9000 - MCA AUDIO, CA FIX , NE BND		
**4500 - MOCA		
AUDIO, CA FIX	CONYO, CA FIX	
	N BND	10000
	S BND	8000
CONYO, CA FIX	SIGNA, CA FIX	11000
SIGNA, CA FIX	MUSTANG, NV VORTAC	11500

95.6393 VOR FEDERAL AIRWAY V393

*TUCSON, AZ VORTAC	NOGALES, AZ VOR/DME	11500
*9000 - MCA TUCSON, AZ VORTAC , S BND		
NOGALES, AZ VOR/DME	U.S. MEXICAN BORDER	*13000
*8800 - MOCA		
U.S. MEXICAN BORDER	HERMOSILLO, MX VOR/DME	000

95.6394 VOR FEDERAL AIRWAY V394

SEAL BEACH, CA VORTAC	AHEIM, CA FIX	*3000
*2200 - MOCA		
AHEIM, CA FIX	*POMONA, CA VORTAC	4000
*10400 - MCA POMONA, CA VORTAC , NE BND		
POMONA, CA VORTAC	CALBE, CA FIX	
	SW BND	5700
	NE BND	10800
CALBE, CA FIX	MEANT, CA FIX	
	SW BND	10700
	NE BND	11500
MEANT, CA FIX	*APLES, CA FIX	11800
*9200 - MCA APLES, CA FIX , SW BND		
APLES, CA FIX	BASAL, CA FIX	7900
BASAL, CA FIX	DAGGETT, CA VORTAC	7500
DAGGETT, CA VORTAC	*OASYS, NV FIX	**12000
*10400 - MCA OASYS, NV FIX , SW BND		
**9500 - MOCA		
**10000 - GNSS MEA		
OASYS, NV FIX	LAS VEGAS, NV VORTAC	9000
LAS VEGAS, NV VORTAC	MORMON MESA, NV VORTAC	*7500
*6500 - MOCA		

95.6395 VOR FEDERAL AIRWAY V395

*TUCSON, AZ VORTAC	NOGALES, AZ VOR/DME	10000
*9000 - MCA TUCSON, AZ VORTAC , S BND		
NOGALES, AZ VOR/DME	U.S. MEXICAN BORDER	*10000
*6500 - MOCA		

FROM	TO	MEA
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95.6397 VOR FEDERAL AIRWAY V397

MONROE, LA VORTAC *1600 - MOCA	RUTTS, AR FIX	*6000
RUTTS, AR FIX	GREENVILLE, MS VOR/DME	2000
GREENVILLE, MS VOR/DME	MARVELL, AR VOR/DME	1900

95.6398 VOR FEDERAL AIRWAY V398

ABERDEEN, SD VOR/DME	WATERTOWN, SD VORTAC	3600
WATERTOWN, SD VORTAC	REDWOOD FALLS, MN VOR/DME	3800
REDWOOD FALLS, MN VOR/DME	*ALMAY, MN FIX	**3400
*5000 - MRA		
**2700 - MOCA		
ALMAY, MN FIX	KASPR, MN FIX	*3400
*2700 - MOCA		
KASPR, MN FIX	ROCHESTER, MN VOR/DME	3000
ROCHESTER, MN VOR/DME	WAUKON, IA VOR/DME	3000
WAUKON, IA VOR/DME	LONE ROCK, WI VOR/DME	3000

95.6399 VOR FEDERAL AIRWAY V399

BRICKYARD, IN VORTAC	JAKKS, IN FIX	2700
JAKKS, IN FIX	BOILER, IN VORTAC	2500
BOILER, IN VORTAC	KENLA, IL FIX	2600
KENLA, IL FIX	PEOTONE, IL VORTAC	2400

95.6400 VOR FEDERAL AIRWAY V400

PRESQUE ISLE, ME VOR/DME *4000 - MOCA	U.S. CANADIAN BORDER	*6000
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95.6401 VOR FEDERAL AIRWAY V401

WORLAND, WY VOR/DME	RANKK, WY FIX	
	SE BND	11000
	NW BND	7000
RANKK, WY FIX	MUDDY MOUNTAIN, WY VOR/DME	11000

95.6402 VOR FEDERAL AIRWAY V402

TUCUMCARI, NM VORTAC	MOSER, TX FIX	6300
MOSER, TX FIX	PANHANDLE, TX VORTAC	*6000
*5500 - MOCA		
PANHANDLE, TX VORTAC	*BRISC, TX FIX	**7000
*8000 - MCA BRISC, TX FIX , NE BND		
**5000 - MOCA		
BRISC, TX FIX	*MITBEE, OK VORTAC	**8000
*8000 - MCA MITBEE, OK VORTAC , SW BND		
**4500 - MOCA		

FROM	TO	MEA
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95.6403 VOR FEDERAL AIRWAY V403

BELAY, MD FIX	SPERY, PA FIX	*10000
*2100 - MOCA		
*3000 - GNSS MEA		
SPERY, PA FIX	POTTSTOWN, PA VORTAC	*3000
*2100 - MOCA		
POTTSTOWN, PA VORTAC	SOLBERG, NJ VOR/DME	*6000
*2200 - MOCA		

95.6404 VOR FEDERAL AIRWAY V404

CHILDRESS, TX VORTAC	*SNEED, TX FIX	4000
*4000 - MRA		
SNEED, TX FIX	*ELECT, TX FIX	2700
*3500 - MRA		
ELECT, TX FIX	WICHITA FALLS, TX VORTAC	2700

95.6405 VOR FEDERAL AIRWAY V405

BELAY, MD FIX	SPERY, PA FIX	*10000
*2100 - MOCA		
*3000 - GNSS MEA		
SPERY, PA FIX	POTTSTOWN, PA VORTAC	*3000
*2100 - MOCA		
POTTSTOWN, PA VORTAC	*LANNA, NJ FIX	6000
*5000 - MRA		
*6000 - MCA LANNA, NJ FIX , SW BND		
LANNA, NJ FIX	SOLBERG, NJ VOR/DME	2700
SOLBERG, NJ VOR/DME	CARMEL, NY VOR/DME	*3000
*2500 - MOCA		
CARMEL, NY VOR/DME	CASSH, NY FIX	3000
CASSH, NY FIX	PAWLING, NY VOR/DME	3100
PAWLING, NY VOR/DME	COBOL, MA FIX	*4000
*3500 - MOCA		
COBOL, MA FIX	BARNES, MA VORTAC	3500
BARNES, MA VORTAC	PUTNAM, CT VOR/DME	*3000
*2500 - MOCA		
PUTNAM, CT VOR/DME	PROVIDENCE, RI VOR/DME	*3000
*2100 - MOCA		
PROVIDENCE, RI VOR/DME	FALMA, RI FIX	*3000
*1400 - MOCA		
FALMA, RI FIX	MARTHAS VINEYARD, MA VOR/DME	*3000
*1600 - MOCA		

95.6407 VOR FEDERAL AIRWAY V407

BROWNSVILLE, TX VORTAC	HARLINGEN, TX VOR/DME	1600
HARLINGEN, TX VOR/DME	JIMIE, TX FIX	
	N BND	*6000
	S BND	*1700
*1700 - GNSS MEA		
JIMIE, TX FIX	JETTY, TX FIX	*6000
*1800 - MOCA		
*2000 - GNSS MEA		
JETTY, TX FIX	CORPUS CHRISTI, TX VORTAC	
	N BND	*2100
	S BND	*3800
*2100 - GNSS MEA		

FROM	TO	MEA
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95.6407 VOR FEDERAL AIRWAY V407 - CONTINUED

CORPUS CHRISTI, TX VORTAC	*WORRY, TX FIX	1700
*2100 - MRA		
WORRY, TX FIX	*AUSTS, TX FIX	1700
*2300 - MRA		
AUSTS, TX FIX	PALACIOS, TX VORTAC	1700
PALACIOS, TX VORTAC	GLAND, TX FIX	*4000
*1600 - MOCA		
GLAND, TX FIX	HUMBLE, TX VORTAC	*2500
*1900 - MOCA		
HUMBLE, TX VORTAC	DAISETTA, TX VORTAC	2000
DAISETTA, TX VORTAC	LUFKIN, TX VORTAC	2000
LUFKIN, TX VORTAC	ELM GROVE, LA VORTAC	*4000
*2000 - MOCA		
ELM GROVE, LA VORTAC	EL DORADO, AR VOR/DME	2000

95.6408 VOR FEDERAL AIRWAY V408

ROBRT, MD FIX	VINNY, PA FIX	5000
VINNY, PA FIX	MODENA, PA VORTAC	3500
MODENA, PA VORTAC	POTTSTOWN, PA VORTAC	2400
POTTSTOWN, PA VORTAC	*HIKES, PA FIX	2900
*4000 - MRA		
HIKES, PA FIX	EAST TEXAS, PA VOR/DME	2900
EAST TEXAS, PA VOR/DME	ALLENTOWN, PA VORTAC	#3000
#ALLENTOWN R-240 UNUSABLE BELOW 9000 USE EAST TEXAS R-059		

95.6409 VOR FEDERAL AIRWAY V409

CHARLOTTE, NC VOR/DME	LOCAS, NC FIX	3100
LOCAS, NC FIX	LIBERTY, NC VORTAC	*3000
*2400 - MOCA		
LIBERTY, NC VORTAC	RALEIGH/DURHAM, NC VORTAC	3100

95.6411 VOR FEDERAL AIRWAY V411

LONE ROCK, WI VOR/DME	WAUKON, IA VOR/DME	3000
WAUKON, IA VOR/DME	ROCHESTER, MN VOR/DME	3000
ROCHESTER, MN VOR/DME	FARMINGTON, MN VORTAC	3000

95.6412 VOR FEDERAL AIRWAY V412

REDWOOD FALLS, MN VOR/DME	FLYING CLOUD, MN VOR/DME	2800
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95.6413 VOR FEDERAL AIRWAY V413

GOPHER, MN VORTAC	BITLR, WI FIX	3400
BITLR, WI FIX	EAU CLAIRE, WI VORTAC	*3500
*2800 - MOCA		
EAU CLAIRE, WI VORTAC	RUSSH, WI FIX	
	SW BND	*6000
	NE BND	*8000
*2900 - MOCA		MAA - 17500
RUSSH, WI FIX	IRONWOOD, MI VOR/DME	8000

FROM	TO	MEA
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95.6415 VOR FEDERAL AIRWAY V415

MONTGOMERY, AL VORTAC	SEMAN, AL FIX	2300
SEMAN, AL FIX	GIFFY, AL FIX	*4000
*3300 - MOCA		
GIFFY, AL FIX	FELTO, GA FIX	*6000
*3400 - MOCA		
FELTO, GA FIX	GORG0, GA FIX	*5000
*4000 - MOCA		
GORG0, GA FIX	ROME, GA VORTAC	4000
ROME, GA VORTAC	NELLO, GA FIX	5600
NELLO, GA FIX	ANNYE, GA FIX	6000
ANNYE, GA FIX	FOOTHILLS, SC VORTAC	5000
FOOTHILLS, SC VORTAC	PELAM, SC FIX	4000
PELAM, SC FIX	SPARTANBURG, SC VORTAC	*3000
*2400 - MOCA		
SPARTANBURG, SC VORTAC	LOCKS, SC FIX	2300

95.6417 VOR FEDERAL AIRWAY V417

MERIDIAN, MS VORTAC	CRIMSON, AL VORTAC	2000
CRIMSON, AL VORTAC	VULCAN, AL VORTAC	2400
VULCAN, AL VORTAC	ROME, GA VORTAC	4000
ROME, GA VORTAC	NELLO, GA FIX	5600
NELLO, GA FIX	*AWS0N, GA FIX	**7000
*5000 - MRA		
**5500 - MOCA		
AWS0N, GA FIX	CORCE, GA FIX	4600
CORCE, GA FIX	IRMOS, GA FIX	3800
IRMOS, GA FIX	ATHENS, GA VOR/DME	3100
ATHENS, GA VOR/DME	COLLIERS, SC VORTAC	2500
COLLIERS, SC VORTAC	ALLENDAL0, SC VOR	3000
ALLENDAL0, SC VOR	*STOAS, SC FIX	**6000
*6000 - MCA STOAS, SC FIX , W BND		
**2000 - GNSS MEA		
STOAS, SC FIX	CHARLESTON, SC VORTAC	2000

95.6419 VOR FEDERAL AIRWAY V419

WESTMINSTER, MD VORTAC	MODENA, PA VORTAC	*3000
*2400 - MOCA		
MODENA, PA VORTAC	*MAZIE, PA FIX	3000
*5000 - MRA		
MAZIE, PA FIX	*HARRS, PA FIX	2500
*5000 - MRA		
HARRS, PA FIX	*BIGGY, NJ FIX	2500
*5000 - MRA		
BIGGY, NJ FIX	SOLBERG, NJ VOR/DME	2500
SOLBERG, NJ VOR/DME	CARMEL, NY VOR/DME	*3000
*2500 - MOCA		
CARMEL, NY VOR/DME	BRISS, CT FIX	3000

95.6420 VOR FEDERAL AIRWAY V420

GREEN BAY, WI VORTAC	TRAVERSE CITY, MI VOR/DME	3500
TRAVERSE CITY, MI VOR/DME	GAYLORD, MI VOR/DME	#3000
#TRAVERSE CITY R-062 UNUSABLE USE GAYLORD R-247		
GAYLORD, MI VOR/DME	ALPENA, MI VORTAC	3200

FROM	TO	MEA
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95.6421 VOR FEDERAL AIRWAY V421

ZUNI, NM VORTAC	GALLUP, NM VORTAC	9000
GALLUP, NM VORTAC	RATTLESNAKE, NM VORTAC	10000
RATTLESNAKE, NM VORTAC	*DURANGO, CO VOR/DME	9700
*13200 - MCA DURANGO, CO	VOR/DME, N BND	
DURANGO, CO VOR/DME	ZEANS, CO FIX	
	N BND	16500
	S BND	12300
ZEANS, CO FIX	LAZON, CO FIX	16500
LAZON, CO FIX	POWES, CO FIX	
	S BND	16500
	N BND	15000
POWES, CO FIX	BLUE MESA, CO VOR/DME	
	S BND	16500
	N BND	12800
BLUE MESA, CO VOR/DME	WENDT, CO FIX	
	N BND	16300
	S BND	13000
WENDT, CO FIX	CAZUU, CO FIX	*16300
*14600 - MOCA		
CAZUU, CO FIX	SKIER, CO FIX	16300
SKIER, CO FIX	RED TABLE, CO VOR/DME	*16300
*14900 - MOCA		
RED TABLE, CO VOR/DME	KREMMLING, CO VOR/DME	14000
KREMMLING, CO VOR/DME	ROBERT, CO VOR/DME	12900
ROBERT, CO VOR/DME	HAHNS, CO FIX	*13000
*12300 - MOCA		

95.6422 VOR FEDERAL AIRWAY V422

NILES, IL FIX	CHICAGO HEIGHTS, IL VORTAC	3500
CHICAGO HEIGHTS, IL	KNOX, IN VOR/DME	2800
VORTAC		
KNOX, IN VOR/DME	WEBSTER LAKE, IN VOR	2700
WEBSTER LAKE, IN VOR	TWERP, OH FIX	2700
TWERP, OH FIX	FLAG CITY, OH VORTAC	2600

95.6423 VOR FEDERAL AIRWAY V423

WILLIAMSPORT, PA VOR/DME	BINGHAMTON, NY VOR/DME	*4300
*3800 - MOCA		
BINGHAMTON, NY VOR/DME	ITHACA, NY VOR/DME	3700
ITHACA, NY VOR/DME	SYRACUSE, NY VORTAC	*4000
*3100 - MOCA		

95.6424 VOR FEDERAL AIRWAY V424

NAPOLEON, MO VORTAC	MACON, MO VOR/DME	2900
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95.6425 VOR FEDERAL AIRWAY V425

BROOKLEY, AL VORTAC	AXSIS, AL FIX	2000
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FROM	TO	MEA
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95.6428 VOR FEDERAL AIRWAY V428

ELMIRA, NY VOR/DME	ITHACA, NY VOR/DME	3800
ITHACA, NY VOR/DME	CORTA, NY FIX	3600
CORTA, NY FIX	GEORGETOWN, NY VORTAC	*5000
*3600 - MOCA		
GEORGETOWN, NY VORTAC	EATEN, NY FIX	4000
EATEN, NY FIX	UTICA, NY VORTAC	3500

95.6429 VOR FEDERAL AIRWAY V429

CAPE GIRARDEAU, MO VOR/DME	MARION, IL VOR/DME	3000
MARION, IL VOR/DME	BIBLE GROVE, IL VORTAC	*5000
*2100 - MOCA		
*2300 - GNSS MEA		
CHAMPAIGN, IL VORTAC	ROBERTS, IL VOR/DME	2600
ROBERTS, IL VOR/DME	MEDAN, IL FIX	2500
MEDAN, IL FIX	JOLIET, IL VOR/DME	2400

95.6430 VOR FEDERAL AIRWAY V430

CUT BANK, MT VOR/DME	HAVRE, MT VOR/DME	6800
HAVRE, MT VOR/DME	GLASGOW, MT VOR/DME	*6500
*5500 - MOCA		
GLASGOW, MT VOR/DME	WILLISTON, ND VOR/DME	*6000
*5000 - MOCA		
WILLISTON, ND VOR/DME	MINOT, ND VORTAC	*5000
*3900 - MOCA		
MINOT, ND VORTAC	DEVILS LAKE, ND VOR/DME	3600
DEVILS LAKE, ND VOR/DME	GRAND FORKS, ND VOR/DME	3300
GRAND FORKS, ND VOR/DME	THIEF RIVER FALLS, MN VOR/DME	2900
THIEF RIVER FALLS, MN VOR/DME	GRAND RAPIDS, MN VOR/DME	*7000
*3400 - GNSS MEA		
GRAND RAPIDS, MN VOR/DME	DULUTH, MN VORTAC	3000
DULUTH, MN VORTAC	IRONWOOD, MI VOR/DME	3500
IRONWOOD, MI VOR/DME	DINER, MI FIX	*3500
*3400 - MOCA		
DINER, MI FIX	IRON MOUNTAIN, MI VOR/DME	*5000
*3500 - MOCA		
*4000 - GNSS MEA		
IRON MOUNTAIN, MI VOR/DME	VUKFI, MI FIX	3100
VUKFI, MI FIX	ESCANABA, MI VOR/DME	*3000
*2200 - MOCA		

95.6431 VOR FEDERAL AIRWAY V431

REVER, MA FIX	LOBBY, MA FIX	2000
LOBBY, MA FIX	GARDNER, MA VOR/DME	3500
GARDNER, MA VOR/DME	KEENE, NH VORTAC	3600
KEENE, NH VORTAC	BRATS, VT FIX	*4400
*3600 - MOCA		
BRATS, VT FIX	GLENS FALLS, NY VORTAC	7000
GLENS FALLS, NY VORTAC	GASSY, NY FIX	*10000
*6000 - GNSS MEA		

FROM	TO	MEA
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95.6432 VOR FEDERAL AIRWAY V432

*THERMAL, CA VORTAC	PARKER, CA VORTAC	**9000
*4500 - MCA THERMAL, CA VORTAC , NE BND		
**7300 - MOCA		

95.6433 VOR FEDERAL AIRWAY V433

NOTTINGHAM, MD VORTAC	SWANN, MD FIX	**2500
*1700 - MOCA		
#UNUSABLE		
SWANN, MD FIX	ODESA, MD FIX	**2500
*1500 - MOCA		
*2000 - GNSS MEA		
#UNUSABLE		
ODESA, MD FIX	DUPONT, DE VORTAC	**2000
*2000 - GNSS MEA		
#DUPONT R-233 UNUSABLE BEYOND 22NM.		
DUPONT, DE VORTAC	YARDLEY, PA VOR/DME	*6000
*3000 - GNSS MEA		
YARDLEY, PA VOR/DME	METRO, NJ FIX	*3000
*2000 - MOCA		
METRO, NJ FIX	GRITY, NJ FIX	*4000
*1700 - MOCA		
GRITY, NJ FIX	TICKL, NY FIX	4000
TICKL, NY FIX	LA GUARDIA, NY VOR/DME	2900
LA GUARDIA, NY VOR/DME	DUNBO, NY FIX	2000
DUNBO, NY FIX	BRIDGEPORT, CT VOR/DME	*2000
*1500 - MOCA		
BRIDGEPORT, CT VOR/DME	PAWLING, NY VOR/DME	3000
PAWLING, NY VOR/DME	*CYPER, NY FIX	6100
*10000 - MRA		
CYPER, NY FIX	ROCKDALE, NY VOR/DME	**10000
*6100 - GNSS MEA		
#ROCKDALE R-127 UNUSABLE BELOW 10000'.		
ROCKDALE, NY VOR/DME	STODA, NY FIX	4000
STODA, NY FIX	SYRACUSE, NY VORTAC	2400

95.6434 VOR FEDERAL AIRWAY V434

OTTUMWA, IA VOR/DME	MOLINE, IL VOR/DME	*3000
*2500 - MOCA		
MOLINE, IL VOR/DME	PEORIA, IL VORTAC	2600
PEORIA, IL VORTAC	CHAMPAIGN, IL VORTAC	2800
CHAMPAIGN, IL VORTAC	BRICKYARD, IN VORTAC	2700

95.6436 VOR FEDERAL AIRWAY V436

HOBART, OK VORTAC	*NEADS, OK FIX	**5400
*5400 - MRA		
**3500 - MOCA		
NEADS, OK FIX	WILL ROGERS, OK VORTAC	3000
WILL ROGERS, OK VORTAC	BARNES, OK FIX	*4500
*3000 - MOCA		
BARNES, OK FIX	SAPPA, OK FIX	*4000
*2400 - MOCA		
SAPPA, OK FIX	TULSA, OK VORTAC	2500

FROM	TO	MEA
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95.6437 VOR FEDERAL AIRWAY V437

DOLPHIN, FL VORTAC *1500 - MOCA	PAHOKEE, FL VOR/DME	*2000
PAHOKEE, FL VOR/DME *1600 - MOCA	MELBOURNE, FL VOR/DME	*2100
MELBOURNE, FL VOR/DME *1600 - MOCA	AWINY, FL FIX	*3000
AWINY, FL FIX	OVIDO, FL FIX NW BND SE BND	5000 3000
OVIDO, FL FIX *2800 - MOCA	KIZER, FL FIX	*5000
KIZER, FL FIX	ORMOND BEACH, FL VORTAC SW BND NE BND	*5000 *3600
*2800 - MOCA		
ORMOND BEACH, FL VORTAC *1300 - MOCA	JETSO, FL FIX	*3000
JETSO, FL FIX *1200 - MOCA	HOTAR, FL FIX	*5000
HOTAR, FL FIX *1200 - MOCA	STARY, GA FIX	*8000
STARY, GA FIX *1900 - MOCA	SAVANNAH, GA VORTAC	*3000
SAVANNAH, GA VORTAC	CHARLESTON, SC VORTAC	2000
CHARLESTON, SC VORTAC	WESEL, SC FIX	1800
WESEL, SC FIX *1900 - MOCA	FLORENCE, SC VORTAC	*4000

95.6438 VOR FEDERAL AIRWAY V438

GRANTSVILLE, MD VOR/DME	FLINT, MD FIX	6000
FLINT, MD FIX	TOMAC, WV FIX E BND W BND	4000 6000
TOMAC, WV FIX	HAGERSTOWN, MD VOR	4000
HAGERSTOWN, MD VOR *3300 - MOCA	LUCKE, VA FIX	*3800

95.6439 VOR FEDERAL AIRWAY V439

DICKINSON, ND VORTAC	WILLISTON, ND VOR/DME	4500
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95.6440 VOR FEDERAL AIRWAY V440

PANHANDLE, TX VORTAC *7000 - MCA BRISC, TX FIX , SW BND **5000 - MOCA	*BRISC, TX FIX	**7000
BRISC, TX FIX *4500 - MOCA	BURNS FLAT, OK VORTAC	*5000
BURNS FLAT, OK VORTAC	CARFF, OK FIX	3600
CARFF, OK FIX *3500 - MRA	*DATTA, OK FIX	3000
DATTA, OK FIX	WILL ROGERS, OK VORTAC	3000

FROM	TO	MEA
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95.6441 VOR FEDERAL AIRWAY V441

MELBOURNE, FL VOR/DME	LAKELAND, FL VORTAC	2600
LAKELAND, FL VORTAC	ST PETERSBURG, FL VORTAC	2000
ST PETERSBURG, FL VORTAC	BAYPO, FL FIX	2000
BAYPO, FL FIX	NITTS, FL FIX	*4000
*1700 - MOCA		
NITTS, FL FIX	OCALA, FL VORTAC	2000
OCALA, FL VORTAC	*LEJKO, FL FIX	2000
*3000 - MRA		
LEJKO, FL FIX	GATORS, FL VORTAC	2000
GATORS, FL VORTAC	BRUNSWICK, GA VORTAC	3000
BRUNSWICK, GA VORTAC	STARY, GA FIX	*3000
*1500 - MOCA		
STARY, GA FIX	SAVANNAH, GA VORTAC	*3000
*1900 - MOCA		

95.6442 VOR FEDERAL AIRWAY V442

PARADISE, CA VORTAC	APLES, CA FIX	*9000
*8000 - MOCA		
APLES, CA FIX	HECTOR, CA VORTAC	*10000
*8300 - MOCA		
HECTOR, CA VORTAC	CLIPP, CA FIX	9000
CLIPP, CA FIX	PARKER, CA VORTAC	8000

95.6444 VOR FEDERAL AIRWAY V444

SPOKANE, WA VORTAC	DATES, WA FIX	5000
DATES, WA FIX	WALLA WALLA, WA VOR/DME	4000
BAKER CITY, OR VOR/DME	PAYET, ID FIX	9000
PAYET, ID FIX	*EMETT, ID FIX	
	SE BND	5600
	NW BND	9000
*9400 - MRA		
EMETT, ID FIX	*BOISE, ID VORTAC	5600
*7400 - MCA BOISE, ID VORTAC , E BND		
BOISE, ID VORTAC	AROWS, ID FIX	
	W BND	8000
	E BND	9000
AROWS, ID FIX	*DERSO, ID FIX	**12500
*15200 - MCA DERSO, ID FIX , E BND		
**10000 - MOCA		
DERSO, ID FIX	SOLDE, ID FIX	*17000
*10400 - MOCA		
SOLDE, ID FIX	*KINZE, ID FIX	
	SE BND	8000
	NW BND	17000
*15900 - MCA KINZE, ID FIX , NW BND		
KINZE, ID FIX	BURLEY, ID VOR/DME	*8000
*7000 - MOCA		

FROM	TO	MEA
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95.6445 VOR FEDERAL AIRWAY V445

MITCH, MD FIX	SWANN, MD FIX	*7000
*3000 - GNSS MEA		
SWANN, MD FIX	ODESA, MD FIX	#*2500
*1500 - MOCA		
*2000 - GNSS MEA		
#UNUSABLE		
ODESA, MD FIX	DUPONT, DE VORTAC	#*2000
*2000 - GNSS MEA		
#DUPONT R-233 UNUSABLE BEYOND 22NM.		
DUPONT, DE VORTAC	YARDLEY, PA VOR/DME	*6000
*3000 - GNSS MEA		
YARDLEY, PA VOR/DME	EMPYR, NY FIX	2100
EMPYR, NY FIX	NANCI, NY FIX	2700
NANCI, NY FIX	LA GUARDIA, NY VOR/DME	2900

95.6446 VOR FEDERAL AIRWAY V446

TROY, IL VORTAC	SAMSVILLE, IL VOR/DME	2600
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95.6447 VOR FEDERAL AIRWAY V447

CAMBRIDGE, NY VOR/DME	KERST, VT FIX	*5900
*5400 - MOCA		
KERST, VT FIX	MUDDI, VT FIX	*6000
*5500 - MOCA		
MUDDI, VT FIX	RUCKY, VT FIX	*6000
*5500 - MOCA		
RUCKY, VT FIX	MONTPELIER, VT VOR/DME	*4500
*4000 - MOCA		
MONTPELIER, VT VOR/DME	*PLOTT, VT FIX	4800
*8000 - MRA		
PLOTT, VT FIX	*HURDS, VT FIX	5000
*6500 - MRA		
HURDS, VT FIX	U.S. CANADIAN BORDER	5000

95.6448 VOR FEDERAL AIRWAY V448

ROGUE VALLEY, OR VORTAC	ROSEBURG, OR VOR/DME	7000
ROSEBURG, OR VOR/DME	*DRAIN, OR FIX	5000
*6000 - MRA		
DRAIN, OR FIX	EUGENE, OR VORTAC	
	N BND	*4000
	S BND	*5000
*3900 - MOCA		
EUGENE, OR VORTAC	GLORR, OR FIX	4000
GLORR, OR FIX	MAVER, OR FIX	6000
MAVER, OR FIX	*BATTLE GROUND, WA VORTAC	5000
*9400 - MCA BATTLE GROUND, WA VORTAC , NE BND		
BATTLE GROUND, WA VORTAC	LEARN, WA FIX	
	SW BND	*10500
	NE BND	*14500
*8000 - MOCA		
LEARN, WA FIX	ANGOO, WA FIX	14500
ANGOO, WA FIX	SIMCO, WA FIX	
	SW BND	*14500
	NE BND	*8500
*7500 - MOCA		

FROM	TO	MEA
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95.6448 VOR FEDERAL AIRWAY V448 - CONTINUED

SIMCO, WA FIX	*YAKIMA, WA VORTAC	
	SW BND	12000
	NE BND	6300
*9500 - MCA YAKIMA, WA VORTAC , SW BND		
YAKIMA, WA VORTAC	RUBEL, WA FIX	6000
RUBEL, WA FIX	MOSES LAKE, WA VOR/DME	
	SW BND	6000
	NE BND	4000
MOSES LAKE, WA VOR/DME	BATUM, WA FIX	4000
BATUM, WA FIX	*SPOKANE, WA VORTAC	5000
*5200 - MCA SPOKANE, WA VORTAC , NE BND		
SPOKANE, WA VORTAC	CLASS, ID FIX	*9000
*7600 - MOCA		
CLASS, ID FIX	KILLY, MT FIX	*13000
*9900 - MOCA		
*10000 - GNSS MEA		
KILLY, MT FIX	KALISPELL, MT VOR/DME	*12000
*8600 - MOCA		
*8600 - GNSS MEA		

95.6450 VOR FEDERAL AIRWAY V450

ESCANABA, MI VOR/DME	MENOMINEE, MI VOR/DME	2500
MENOMINEE, MI VOR/DME	GREEN BAY, WI VORTAC	2600
GREEN BAY, WI VORTAC	MUSKEGON, MI VORTAC	3000
MUSKEGON, MI VORTAC	GIBER, MI FIX	*3000
*2400 - MOCA		
GIBER, MI FIX	LUGGS, MI FIX	*4000
*2400 - MOCA		
LUGGS, MI FIX	FLINT, MI VORTAC	*3000
*2400 - MOCA		

95.6451 VOR FEDERAL AIRWAY V451

LA GUARDIA, NY VOR/DME	*NESSI, CT FIX	**4000
*4000 - MRA		
**1700 - MOCA		
**2000 - GNSS MEA		
NESSI, CT FIX	KEYED, NY FIX	2500
KEYED, NY FIX	CREAM, NY FIX	2000
CREAM, NY FIX	GROTON, CT VOR/DME	*6000
*4000 - GNSS MEA		

95.6452 VOR FEDERAL AIRWAY V452

NEWPORT, OR VORTAC	*HORTE, OR FIX	6000
*4300 - MCA HORTE, OR FIX , W BND		
HORTE, OR FIX	EUGENE, OR VORTAC	4000
EUGENE, OR VORTAC	CHEEZ, OR FIX	
	SE BND	7000
	NW BND	5200
CHEEZ, OR FIX	MANSN, OR FIX	
	SE BND	*11000
	NW BND	*8000
*7400 - MOCA		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
MANSN, OR FIX	MIXUP, OR FIX	*11000
*9800 - MOCA		

FROM	TO	MEA
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95.6452 VOR FEDERAL AIRWAY V452 - CONTINUED

MIXUP, OR FIX	KLAMATH FALLS, OR VORTAC	
	NW BND	11000
	SE BND	9100
KLAMATH FALLS, OR VORTAC	TULIP, CA FIX	9000
TULIP, CA FIX	BACHS, CA FIX	
	S BND	*14000
	N BND	*9000
*11000 - GNSS MEA		
BACHS, CA FIX	HALLE, NV FIX	*14000
*10200 - MOCA		
*11000 - GNSS MEA		
HALLE, NV FIX	MUSTANG, NV VORTAC	*11000
*9600 - MOCA		

95.6453 VOR FEDERAL AIRWAY V453

GORDONSVILLE, VA VORTAC	CASANOVA, VA VORTAC	4500
CASANOVA, VA VORTAC	LINDEN, VA VORTAC	5000

95.6454 VOR FEDERAL AIRWAY V454

BROOKLEY, AL VORTAC	MONROEVILLE, AL VORTAC	2000
MONROEVILLE, AL VORTAC	CHAFF, AL FIX	2000
CHAFF, AL FIX	RUTEL, AL FIX	*2500
*1800 - MOCA		
RUTEL, AL FIX	CRENS, AL FIX	*4500
*1800 - MOCA		
CRENS, AL FIX	BANBI, AL FIX	2400
BANBI, AL FIX	COLUMBUS, GA VORTAC	*2400
*2000 - MOCA		
COLUMBUS, GA VORTAC	GRANT, GA FIX	2800
GRANT, GA FIX	SMARR, GA FIX	*4000
*2500 - MOCA		
*2500 - GNSS MEA		
SMARR, GA FIX	SINCA, GA FIX	*4500
*2500 - MOCA		
*2500 - GNSS MEA		
SINCA, GA FIX	*GLOSS, GA FIX	**3000
*3500 - MRA		
**2000 - MOCA		
GLOSS, GA FIX	MADDI, GA FIX	*3000
*2200 - MOCA		
MADDI, GA FIX	VESTO, GA FIX	*4000
*2100 - MOCA		
VESTO, GA FIX	GREENWOOD, SC VORTAC	2500
GREENWOOD, SC VORTAC	LOCKS, SC FIX	2300
GIZMO, NC FIX	LIBERTY, NC VORTAC	3000
LIBERTY, NC VORTAC	*NOKIY, VA FIX	**6000
*9000 - MCA NOKIY, VA FIX , NE BND		
**3000 - GNSS MEA		
NOKIY, VA FIX	LAWRENCEVILLE, VA VORTAC	*9000
*3000 - GNSS MEA		
LAWRENCEVILLE, VA VORTAC	JUNKI, VA FIX	#*6000
*1900 - MOCA		
*2000 - GNSS MEA		
#LAWRENCEVILLE R-059 UNUSABLE, USE HOPEWELL R-237.		
JUNKI, VA FIX	HOPEWELL, VA VORTAC	2000

FROM	TO	MEA
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95.6455 VOR FEDERAL AIRWAY V455

RESERVE, LA VOR/DME	PICAYUNE, MS VOR/DME	2000
PICAYUNE, MS VOR/DME	*PLUGG, MS FIX	2000
*5000 - MRA		
PLUGG, MS FIX	EATON, MS VORTAC	2000
EATON, MS VORTAC	MERIDIAN, MS VORTAC	2300

95.6456 VOR FEDERAL AIRWAY V456

FORT DODGE, IA VORTAC	MANKATO, MN VOR/DME	3000
MANKATO, MN VOR/DME	FLYING CLOUD, MN VOR/DME	*2900
*2400 - MOCA		

95.6457 VOR FEDERAL AIRWAY V457

BROADWAY, NJ VOR/DME	LANCASTER, PA VOR/DME	3000
LANCASTER, PA VOR/DME	*ROAST, PA FIX	
	SW BND	**9000
	NE BND	**4500
*10000 - MRA		
**2600 - MOCA		
**4500 - GNSS MEA		
ROAST, PA FIX	VINNY, PA FIX	*9000
*4500 - GNSS MEA		
VINNY, PA FIX	WESTMINSTER, MD VORTAC	3000
WESTMINSTER, MD VORTAC	MARTINSBURG, WV VORTAC	*4000
*3300 - MOCA		

95.6458 VOR FEDERAL AIRWAY V458

SANTA CATALINA, CA VORTAC	AVOLS, CA FIX	4000
AVOLS, CA FIX	PACIF, CA FIX	*3000
*2000 - MOCA		
PACIF, CA FIX	OCEANSIDE, CA VORTAC	3000
OCEANSIDE, CA VORTAC	*VISTA, CA FIX	3000
*5000 - MCA VISTA, CA FIX, E BND		
VISTA, CA FIX	JULIAN, CA VORTAC	7700
JULIAN, CA VORTAC	*KUMBA, CA FIX	7900
*5600 - MCA KUMBA, CA FIX, NW BND		
KUMBA, CA FIX	IMPERIAL, CA VORTAC	4300
IMPERIAL, CA VORTAC	BARD, CA VORTAC	3600

95.6459 VOR FEDERAL AIRWAY V459

SEAL BEACH, CA VORTAC	DARTS, CA FIX	
	SE BND	4000
	NW BND	6000
DARTS, CA FIX	*SAUGS, CA FIX	7000
*6600 - MCA SAUGS, CA FIX, NW BND		
SAUGS, CA FIX	LAKE HUGHES, CA VORTAC	8000
LAKE HUGHES, CA VORTAC	JEFFY, CA FIX	8000
JEFFY, CA FIX	*LOPES, CA FIX	9000
*8600 - MCA LOPES, CA FIX, S BND		
LOPES, CA FIX	*WRING, CA FIX	8500
*5800 - MCA WRING, CA FIX, SE BND		
WRING, CA FIX	TULE, CA VOR/DME	5000

FROM	TO	MEA
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95.6459 VOR FEDERAL AIRWAY V459 - CONTINUED

TULE, CA VOR/DME	EXTRA, CA FIX	3500
EXTRA, CA FIX	FRIANT, CA VORTAC	5000
FRIANT, CA VORTAC	BAGBY, CA FIX	*8500
*6600 - MOCA		
BAGBY, CA FIX	LINDEN, CA VOR/DME	7000

95.6460 VOR FEDERAL AIRWAY V460

MISSION BAY, CA VORTAC	*RYAHH, CA FIX	
	E BND	7000
	W BND	4000
*6400 - MCA RYAHH, CA FIX ,	E BND	
RYAHH, CA FIX	BARET, CA FIX	
	E BND	*8400
	W BND	*7000
*6100 - MOCA		
BARET, CA FIX	CANNO, CA FIX	8400
CANNO, CA FIX	JULIAN, CA VORTAC	8800
JULIAN, CA VORTAC	*MOMAR, CA FIX	8500
*7300 - MCA MOMAR, CA FIX ,	SW BND	
MOMAR, CA FIX	BLYTHE, CA VORTAC	7000

95.6461 VOR FEDERAL AIRWAY V461

GILA BEND, AZ VORTAC	BUCKEYE, AZ VORTAC	4000
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95.6462 VOR FEDERAL AIRWAY V462

FORT DODGE, IA VORTAC	SIOUX FALLS, SD VORTAC	4400
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95.6463 VOR FEDERAL AIRWAY V463

WOMAC, GA FIX	*ANNYE, GA FIX	**5000
*5900 - MCA ANNYE, GA FIX ,	N BND	
**4100 - MOCA		
ANNYE, GA FIX	HARRIS, GA VORTAC	7000

95.6465 VOR FEDERAL AIRWAY V465

BULLION, NV VOR/DME	*WELLS, NV VOR	13000
*11800 - MCA WELLS, NV VOR ,	SW BND	
WELLS, NV VOR	SHEAR, UT FIX	12000
SHEAR, UT FIX	*MALAD CITY, ID VOR/DME	
	SW BND	11000
	NE BND	10000
*10700 - MCA MALAD CITY, ID	VOR/DME , NE BND	
MALAD CITY, ID VOR/DME	LUNDI, ID FIX	#11500
#MTA V465 SW TO V21-257 NW	11000	
LUNDI, ID FIX	JACKSON, WY VOR/DME	*15000
*13300 - MOCA		
*13300 - GNSS MEA		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
#MTA V465 NE TO V330 W OR V520 W	16000	

FROM	TO	MEA
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95.6465 VOR FEDERAL AIRWAY V465 - CONTINUED

JACKSON, WY VOR/DME	DUNOIR, WY VOR/DME	13000
DUNOIR, WY VOR/DME	REDLO, MT FIX	*17000
*14500 - MOCA		
REDLO, MT FIX	LAREI, MT FIX	
	N BND	7200
	S BND	17000
LAREI, MT FIX	*BILLINGS, MT VORTAC	
	S BND	17000
	N BND	6000
*7000 - MCA BILLINGS, MT VORTAC , S BND		
BILLINGS, MT VORTAC	MILES CITY, MT VOR/DME	6000
MILES CITY, MT VOR/DME	WILLISTON, ND VOR/DME	*7000
*5200 - MOCA		
*6000 - GNSS MEA		

95.6466 VOR FEDERAL AIRWAY V466

VOLUNTEER, TN VORTAC	TAMPI, TN FIX	3500
TAMPI, TN FIX	YUMMY, VA FIX	4500
YUMMY, VA FIX	GLADE SPRING, VA VOR/DME	6000
GLADE SPRING, VA VOR/DME	*DORFF, VA FIX	6600
*7000 - MRA		
DORFF, VA FIX	PULASKI, VA VORTAC	6000

95.6468 VOR FEDERAL AIRWAY V468

*BATTLE GROUND, WA VORTAC	TROTS, WA FIX	**10000
*5300 - MCA BATTLE GROUND, WA VORTAC , NE BND		
**7200 - MOCA		
**8000 - GNSS MEA		
*TROTS, WA FIX	SWANY, WA FIX	**11500
*11500 - MCA TROTS, WA FIX , NE BND		
**6800 - MOCA		
**7000 - GNSS MEA*SWANY, WA FIX HITCH, WA FIX	**8500	
*11500 - MCA SWANY, WA FIX , SW BND		
**6800 - MOCA		
**7000 - GNSS MEA		

HITCH, WA FIX	YAKIMA, WA VORTAC	
	SW BND	*8500
	NE BND	*5000
*4400 - MOCA		
*5000 - GNSS MEA		
YAKIMA, WA VORTAC	GLEED, WA FIX	
	NW BND	5500
	SE BND	5000
GLEED, WA FIX	ELLENSBURG, WA VOR/DME	6000

95.6469 VOR FEDERAL AIRWAY V469

DANVILLE, VA VOR	LYNCHBURG, VA VORTAC	3000
LYNCHBURG, VA VORTAC	RADIA, VA FIX	4600
RADIA, VA FIX	RELEE, VA FIX	6000
RELEE, VA FIX	EXRAS, VA FIX	*8000
*5100 - MOCA		
*5200 - GNSS MEA		

FROM	TO	MEA
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95.6469 VOR FEDERAL AIRWAY V469 - CONTINUED

EXRAS, VA FIX *6900 - MOCA *6900 - GNSS MEA	BOIER, WV FIX	*10000
BOIER, WV FIX ELKINS, WV VORTAC *4400 - MOCA	ELKINS, WV VORTAC TYGAR, WV FIX	6800 *5000
TYGAR, WV FIX MORGANTOWN, WV VOR/DME *10000 - MCA NESTO, PA FIX , E BND **4300 - MOCA	MORGANTOWN, WV VOR/DME *NESTO, PA FIX	4000 **5000
NESTO, PA FIX *10000 - MCA JOHNSTOWN, PA VOR/DME , W BND	*JOHNSTOWN, PA VOR/DME	10000
JOHNSTOWN, PA VOR/DME #JOHNSTOWN R-125 UNUSABLE USE ST THOMAS R-307	ST THOMAS, PA VORTAC	#5000
ST THOMAS, PA VORTAC *4000 - MOCA	BADDI, PA FIX	*5000
BADDI, PA FIX HARRISBURG, PA VORTAC JOANE, PA FIX DUPONT, DE VORTAC	HARRISBURG, PA VORTAC JOANE, PA FIX DUPONT, DE VORTAC WOODSTOWN, NJ VORTAC	4000 4000 3000 2000 MAA - 8000

95.6470 VOR FEDERAL AIRWAY V470

PULASKI, VA VORTAC TABER, VA FIX *4000 - MRA **5100 - MOCA	TABER, VA FIX *MONAT, VA FIX	5500 **5600
MONAT, VA FIX	LYNCHBURG, VA VORTAC W BND E BND	*4000 *3000
*2900 - MOCA		

95.6471 VOR FEDERAL AIRWAY V471

BANGOR, ME VORTAC *2100 - MOCA	MILLINOCKET, ME VOR/DME	*2500
MILLINOCKET, ME VOR/DME *2000 - MOCA	HOULTON, ME VOR/DME	*2600
HOULTON, ME VOR/DME *2100 - MOCA	U.S. CANADIAN BORDER	*2600

95.6472 VOR FEDERAL AIRWAY V472

ELIZABETH CITY, NC VOR/DME *1600 - MOCA	BERTI, NC FIX	*4000
BERTI, NC FIX *7000 - MRA **2100 - MOCA **2100 - GNSS MEA	*ZAGGY, NC FIX	**7000
ZAGGY, NC FIX *1600 - MOCA	KINSTON, NC VORTAC	*2000

FROM	TO	MEA
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95.6473 VOR FEDERAL AIRWAY V473

ROANOKE, VA VOR/DME *5100 - MOCA	HOBOS, VA FIX	*6000
HOBOS, VA FIX MONTEBELLO, VA VOR/DME *5500 - MOCA	MONTEBELLO, VA VOR/DME GORDONSVILLE, VA VORTAC	6000 *6000

95.6474 VOR FEDERAL AIRWAY V474

NESTO, PA FIX *3100 - MOCA	PLEEZ, PA FIX	*4000
PLEEZ, PA FIX *4500 - MOCA	INDIAN HEAD, PA VORTAC	*5000
INDIAN HEAD, PA VORTAC *4500 - MOCA	ST THOMAS, PA VORTAC	*5000
ST THOMAS, PA VORTAC *4000 - MOCA	NOENO, PA FIX	*5000
NOENO, PA FIX *10000 - MRA **3400 - MOCA **3400 - GNSS MEA	*DELRO, PA FIX	**5000
DELRO, PA FIX *3900 - MOCA *4000 - GNSS MEA	MODENA, PA VORTAC	*10000

95.6475 VOR FEDERAL AIRWAY V475

LA GUARDIA, NY VOR/DME DUNBO, NY FIX *1500 - MOCA	DUNBO, NY FIX BRIDGEPORT, CT VOR/DME	2000 *2000
BRIDGEPORT, CT VOR/DME *1500 - MOCA	MADISON, CT VOR/DME	*2000
MADISON, CT VOR/DME #MADISON R-078 UNUSABLE	NORWICH, CT VOR/DME BYD 16 NM USE NORWICH R-259	#2600
NORWICH, CT VOR/DME *1900 - MOCA	PROVIDENCE, RI VOR/DME	*2400

95.6476 VOR FEDERAL AIRWAY V476

LYNCHBURG, VA VORTAC	GORDONSVILLE, VA VORTAC	3300
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95.6477 VOR FEDERAL AIRWAY V477

HUMBLE, TX VORTAC *2000 - MOCA	LEONA, TX VORTAC	*3000
LEONA, TX VORTAC	CEDAR CREEK, TX VORTAC	2100

95.6478 VOR FEDERAL AIRWAY V478

FALMOUTH, KY VOR/DME NEWCOMBE, KY VORTAC	NEWCOMBE, KY VORTAC BECKLEY, WV VOR/DME	3100 5900
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FROM	TO	MEA
95.6479 VOR FEDERAL AIRWAY V479		
DUPONT, DE VORTAC	WILJR, NJ FIX	2100
WILJR, NJ FIX	MENGE, NJ FIX	*4000
*1600 - MOCA		
*2000 - GNSS MEA		
MENGE, NJ FIX	YARDLEY, PA VOR/DME	2000
95.6481 VOR FEDERAL AIRWAY V481		
EUGENE, OR VORTAC	CORVALLIS, OR VOR/DME	3500
CORVALLIS, OR VOR/DME	CRAAF, OR FIX	4000
95.6483 VOR FEDERAL AIRWAY V483		
DEER PARK, NY VOR/DME	*RYMES, CT FIX	**2500
*5000 - MRA		
**2000 - MOCA		
RYMES, CT FIX	CARMEL, NY VOR/DME	2500
CARMEL, NY VOR/DME	KINGSTON, NY VOR/DME	3000
KINGSTON, NY VOR/DME	WEETS, NY FIX	
	NW BND	*6000
	SE BND	*4000
*3200 - MOCA		
WEETS, NY FIX	RIMBA, NY FIX	6400
RIMBA, NY FIX	DELANCEY, NY VOR/DME	5500
DELANCEY, NY VOR/DME	ROCKDALE, NY VOR/DME	4200
ROCKDALE, NY VOR/DME	STODA, NY FIX	4000
STODA, NY FIX	SYRACUSE, NY VORTAC	2400
SYRACUSE, NY VORTAC	*LYSAN, NY FIX	2300
*3000 - MRA		
LYSAN, NY FIX	ROCHESTER, NY VOR/DME	2300
95.6484 VOR FEDERAL AIRWAY V484		
HAILEY, ID NDB/DME	KINZE, ID FIX	9300
KINZE, ID FIX	*TWIN FALLS, ID VORTAC	7000
*8000 - MCA TWIN FALLS, ID	VORTAC , E BND	
TWIN FALLS, ID VORTAC	WODEN, ID FIX	8800
WODEN, ID FIX	*DRYAD, ID FIX	**12000
*13000 - MCA DRYAD, ID FIX , SE BND		
**9500 - MOCA		
DRYAD, ID FIX	SWITZ, UT FIX	#*16000
*11900 - MOCA		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
SWITZ, UT FIX	CAUSE, UT FIX	*11500
*8600 - MOCA		
CAUSE, UT FIX	*WASATCH, UT VORTAC	8600
*11000 - MCA WASATCH, UT	VORTAC , E BND	
WASATCH, UT VORTAC	PARLE, UT FIX	11500
PARLE, UT FIX	MYTON, UT VOR/DME	13000
MYTON, UT VOR/DME	*WINDO, UT FIX	**10500
*13000 - MRA		
**9000 - MOCA		
WINDO, UT FIX	GRAND JUNCTION, CO VOR/DME	10500
GRAND JUNCTION, CO	BATTZ, CO FIX	12300
VOR/DME		
BATTZ, CO FIX	BLUE MESA, CO VOR/DME	14000
BLUE MESA, CO VOR/DME	HOMME, CO FIX	14600
HOMME, CO FIX	ALAMOSA, CO VORTAC	
	S BND	10000
	N BND	14600

FROM	TO	MEA
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95.6485 VOR FEDERAL AIRWAY V485

VENTURA, CA VOR/DME	*HENER, CA FIX	5000
*6500 - MCA HENER, CA FIX , NW BND		
HENER, CA FIX	FELLOWS, CA VOR/DME	9000
FELLOWS, CA VOR/DME	*REDDE, CA FIX	**7000
*7000 - MCA REDDE, CA FIX , SE BND		
**6100 - MOCA		
REDDE, CA FIX	PRIEST, CA VOR	6000
PRIEST, CA VOR	PANOS, CA FIX	6500
PANOS, CA FIX	HENCE, CA FIX	*6500
*5600 - MOCA		
HENCE, CA FIX	SAN JOSE, CA VOR/DME	4600

95.6487 VOR FEDERAL AIRWAY V487

LA GUARDIA, NY VOR/DME	DUNBO, NY FIX	2000
DUNBO, NY FIX	BRIDGEPORT, CT VOR/DME	*2000
*1500 - MOCA		
BRIDGEPORT, CT VOR/DME	BOWAN, NY FIX	*6000
*4100 - MOCA		
BOWAN, NY FIX	CAMBRIDGE, NY VOR/DME	*5000
*4300 - MOCA		
CAMBRIDGE, NY VOR/DME	*GRISS, NY FIX	4000
*10000 - MRA		
GRISS, NY FIX	ENSON, VT FIX	*4000
*2700 - MOCA		
ENSON, VT FIX	WEIGH, VT FIX	*4000
*2800 - MOCA		
WEIGH, VT FIX	BURLINGTON, VT VOR/DME	
	N BND	3000
	S BND	4000
BURLINGTON, VT VOR/DME	U.S. CANADIAN BORDER	2800

95.6489 VOR FEDERAL AIRWAY V489

COATE, NJ FIX	HUGUENOT, NY VOR/DME	*4000
*3300 - MOCA		
HUGUENOT, NY VOR/DME	WEARD, NY FIX	*4000
*3500 - MOCA		
WEARD, NY FIX	SAGES, NY FIX	*7000
*5700 - MOCA		
SAGES, NY FIX	ALBANY, NY VORTAC	6000
ALBANY, NY VORTAC	GLENS FALLS, NY VORTAC	*7000
*5000 - GNSS MEA		

95.6490 VOR FEDERAL AIRWAY V490

UTICA, NY VORTAC	*GALWA, NY FIX	**4000
*6000 - MRA		
**3300 - MOCA		
GALWA, NY FIX	CAMBRIDGE, NY VOR/DME	*4000
*3300 - MOCA		
CAMBRIDGE, NY VOR/DME	STRUM, NH FIX	*6000
*5300 - MOCA		
STRUM, NH FIX	DUBIN, NH FIX	5000
DUBIN, NH FIX	LURCH, NH FIX	4000
LURCH, NH FIX	*MUGGY, NH FIX	4000
*4000 - MCA MUGGY, NH FIX , W BND		
MUGGY, NH FIX	MANCHESTER, NH VOR/DME	3000

FROM	TO	MEA
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95.6491 VOR FEDERAL AIRWAY V491

RAPID CITY, SD VORTAC	BFFLO, SD FIX	5000
BFFLO, SD FIX	HAYNI, ND FIX	*9000
*5000 - MOCA		
HAYNI, ND FIX	DICKINSON, ND VORTAC	*5000
*4500 - MOCA		
DICKINSON, ND VORTAC	MINOT, ND VORTAC	*6000
*4300 - MOCA		

95.6492 VOR FEDERAL AIRWAY V492

ST PETERSBURG, FL VORTAC	LA BELLE, FL VORTAC	2000
LA BELLE, FL VORTAC	PAHOKEE, FL VOR/DME	*2000
*1500 - MOCA		
PAHOKEE, FL VOR/DME	PALM BEACH, FL VORTAC	*2000
*1500 - MOCA		
PALM BEACH, FL VORTAC	STOOP, FL FIX	*3000
*2000 - MOCA		
STOOP, FL FIX	MELBOURNE, FL VOR/DME	3000

95.6493 VOR FEDERAL AIRWAY V493

LIVINGSTON, TN VOR/DME	LEXINGTON, KY VOR/DME	3600
LEXINGTON, KY VOR/DME	BEAER, KY FIX	3000
BEAER, KY FIX	YORK, KY VORTAC	3300
YORK, KY VORTAC	TARTO, OH FIX	3300
TARTO, OH FIX	APPLETON, OH VORTAC	3000
MENOMINEE, MI VOR/DME	RHINELANDER, WI VOR/DME	3500

95.6494 VOR FEDERAL AIRWAY V494

CRESCENT CITY, CA VORTAC	FORTUNA, CA VORTAC	*6000
*3500 - MOCA		
FORTUNA, CA VORTAC	MENDOCINO, CA VORTAC	*13000
*6100 - MOCA		
MENDOCINO, CA VORTAC	SANTA ROSA, CA VOR/DME	6000
SANTA ROSA, CA VOR/DME	POPES, CA FIX	5000
POPES, CA FIX	*RAGGS, CA FIX	5100
*8500 - MRA		
RAGGS, CA FIX	SACRAMENTO, CA VORTAC	5100
SACRAMENTO, CA VORTAC	ROZZY, CA FIX	*3500
*2300 - MOCA		
ROZZY, CA FIX	HAGAN, CA FIX	4000
HAGAN, CA FIX	*AUDIO, CA FIX	**6000
*9000 - MCA AUDIO, CA FIX , NE BND		
**4500 - MOCA		
AUDIO, CA FIX	SQUAW VALLEY, CA VOR/DME	11000
SQUAW VALLEY, CA VOR/DME	*VIKES, NV FIX	12000
*11000 - MCA VIKES, NV FIX , SW BND		
VIKES, NV FIX	*HAZEN, NV VORTAC	**10000
*9000 - MCA HAZEN, NV VORTAC , SW BND		
**9300 - MOCA		

FROM	TO	MEA
95.6495 VOR FEDERAL AIRWAY V495		
U.S. CANADIAN BORDER *1900 - MOCA	WHATCOM, WA VORTAC	*3000
WHATCOM, WA VORTAC	U.S. CANADIAN BORDER	3000
U.S. CANADIAN BORDER *2800 - MOCA	VICTORIA, CANADA VOR/DME	*3000
VICTORIA, CANADA VOR/DME	CONDI, CANADA FIX	4500
CONDI, CANADA FIX	DISCO, CANADA FIX	4000
DISCO, CANADA FIX *4300 - MOCA	U.S. CANADIAN BORDER	*5400
U.S. CANADIAN BORDER *4300 - MOCA #V495 SE TO V4 W 8000	JAWBN, WA FIX	#*5400
JAWBN, WA FIX *4300 - MOCA	LOFAL, WA FIX	*5400
LOFAL, WA FIX *2800 - MOCA	SEATTLE, WA VORTAC	*4000
SEATTLE, WA VORTAC *3000 - MOCA *3000 - GNSS MEA	CIDUG, WA FIX	*5000
CIDUG, WA FIX	ALDER, WA FIX S BND N BND	*9000 *5000
*4000 - MOCA *4000 - GNSS ME		
ALDER, WA FIX *9000 - MCA TOUTL, WA FIX , N BND **6800 - MOCA **7000 - GNSS MEA	*TOUTL, WA FIX	**9000
TOUTL, WA FIX	BATTLE GROUND, WA VORTAC N BND S BND	*9000 *5300
*5300 - GNSS MEA		
BATTLE GROUND, WA VORTAC	NEWBERG, OR VOR/DME	4000
NEWBERG, OR VOR/DME *3400 - MOCA	CORVALLIS, OR VOR/DME	*4000
CORVALLIS, OR VOR/DME	HORTE, OR FIX	4000
HORTE, OR FIX	*VAUGN, OR FIX S BND N BND	7000 4000
*7000 - MRA		
VAUGN, OR FIX *4400 - MOCA	ROSEBURG, OR VOR/DME	*7000
ROSEBURG, OR VOR/DME *7500 - MOCA	MERLI, OR FIX	*8000
MERLI, OR FIX *10100 - MRA **6500 - MOCA	*PAPLE, OR FIX	**9000
PAPLE, OR FIX *10000 - MRA **7300 - MOCA	*BAYTS, OR FIX	**10100
BAYTS, OR FIX *9400 - MOCA	FORT JONES, CA VOR/DME	*10000

FROM	TO	MEA
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95.6496 VOR FEDERAL AIRWAY V496

UTICA, NY VORTAC	MALLO, NY FIX	4500
MALLO, NY FIX	GLENS FALLS, NY VORTAC	*7000
*6000 - GNSS MEA		
GLENS FALLS, NY VORTAC	KERST, VT FIX	*10000
*6000 - GNSS MEA		
KERST, VT FIX	LEBANON, NH VOR/DME	5900
LEBANON, NH VOR/DME	GRUMP, NH FIX	5000
GRUMP, NH FIX	NEETS, NH FIX	4000
NEETS, NH FIX	KENNEBUNK, ME VOR/DME	3600

95.6497 VOR FEDERAL AIRWAY V497

ROME, OR VOR/DME	WILDHORSE, OR VOR/DME	9000
WILDHORSE, OR VOR/DME	KIMBERLY, OR VOR/DME	9000
KIMBERLY, OR VOR/DME	KLICKITAT, OR VOR/DME	7300
KLICKITAT, OR VOR/DME	*SUNED, WA FIX	7000
*5500 - MRA		
SUNED, WA FIX	MOSES LAKE, WA VOR/DME	6000
MOSES LAKE, WA VOR/DME	EPHRATA, WA VORTAC	4000

95.6499 VOR FEDERAL AIRWAY V499

BALTIMORE, MD VORTAC	BELAY, MD FIX	2300
BELAY, MD FIX	LANCASTER, PA VOR/DME	2500
LANCASTER, PA VOR/DME	BINGHAMTON, NY VOR/DME	4500

95.6500 VOR FEDERAL AIRWAY V500

BATTLE GROUND, WA VORTAC	NEWBERG, OR VOR/DME	4000
NEWBERG, OR VOR/DME	GLARA, OR FIX	4000
GLARA, OR FIX	HARZL, OR FIX	
	W BND	*7200
	E BND	*10000
*6700 - MOCA		
*7000 - GNSS MEA		
HARZL, OR FIX	RATZZ, OR FIX	
	E BND	*10000
	W BND	*8000
*7400 - MOCA		
*8000 - GNSS MEA		
RATZZ, OR FIX	*GASHE, OR FIX	**10000
*10000 - MRA		
**8000 - MOCA		
**8000 - GNSS MEA		
GASHE, OR FIX	KIMBERLY, OR VOR/DME	*9200
*8200 - MOCA		
KIMBERLY, OR VOR/DME	*HOSTS, OR FIX	11000
*11700 - MRA		
HOSTS, OR FIX	PARMO, ID FIX	
	E BND	6000
	W BND	11000
PARMO, ID FIX	*BOISE, ID VORTAC	5000
*7400 - MCA BOISE, ID VORTAC , E BND		
BOISE, ID VORTAC	AROWS, ID FIX	
	E BND	9000
	W BND	8000

FROM	TO	MEA
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95.64500 VOR FEDERAL AIRWAY V500 - CONTINUED

AROWS, ID FIX	*DERSO, ID FIX	**12500
*15200 - MCA DERSO, ID FIX , E BND		
**10000 - MOCA		
DERSO, ID FIX	SOLDE, ID FIX	*17000
*10400 - MOCA		
SOLDE, ID FIX	*REAPS, ID FIX	
	E BND	**14000
	W BND	**17000
*15400 - MCA REAPS, ID FIX , W BND		
**8200 - MOCA		
REAPS, ID FIX	BETRE, ID FIX	*9500
*7000 - MOCA		
BETRE, ID FIX	POCATELLO, ID VOR/DME	7500

95.6501 VOR FEDERAL AIRWAY V501

MARTINSBURG, WV VORTAC	HAGERSTOWN, MD VOR	3500
HAGERSTOWN, MD VOR	ST THOMAS, PA VORTAC	4000
ST THOMAS, PA VORTAC	PHILIPSBURG, PA VORTAC	*4500
*4000 - MOCA		
WELLSVILLE, NY VORTAC	BEEPS, NY FIX	*4500
*4000 - MOCA		

95.6502 VOR FEDERAL AIRWAY V502

DODGE CITY, KS VORTAC	*DISKS, KS FIX	**4500
*5000 - MCA DISKS, KS FIX , E BND		
**4000 - MOCA		
DISKS, KS FIX	*SPELT, KS FIX	**5000
*5000 - MRA		
**3300 - MOCA		
SPELT, KS FIX	HUTCHINSON, KS VOR/DME	3200
HUTCHINSON, KS VOR/DME	WAIVE, KS FIX	4000
WAIVE, KS FIX	*FLOSS, KS FIX	3300
*5000 - MRA		
FLOSS, KS FIX	EMPORIA, KS VORTAC	3300
EMPORIA, KS VORTAC	KANSAS CITY, MO VORTAC	3100
KANSAS CITY, MO VORTAC	BRAYMER, MO VOR/DME	2600
BRAYMER, MO VOR/DME	KIRKSVILLE, MO VORTAC	2900

95.6503 VOR FEDERAL AIRWAY V503

ROCHESTER, MN VOR/DME	CEDAR RAPIDS, IA VOR/DME	*4500
*3600 - MOCA		

95.6505 VOR FEDERAL AIRWAY V505

DES MOINES, IA VORTAC	GUMBO, IA FIX	2700
GUMBO, IA FIX	FORT DODGE, IA VORTAC	3000
FORT DODGE, IA VORTAC	MASON CITY, IA VOR/DME	3000
MASON CITY, IA VOR/DME	FREED, MN FIX	3000
FREED, MN FIX	*ALMAY, MN FIX	**4600
*5000 - MRA		
**2800 - MOCA		
ALMAY, MN FIX	PRAGS, MN FIX	*5000
*2500 - MOCA		

FROM	TO	MEA
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95.6505 VOR FEDERAL AIRWAY V505 - CONTINUED

PRAGS, MN FIX	GOPHER, MN VORTAC	3000
GOPHER, MN VORTAC	SIREN, WI VOR/DME	3000
SIREN, WI VOR/DME	DULUTH, MN VORTAC	4000
DULUTH, MN VORTAC	HIBBING, MN VOR/DME	3300
HIBBING, MN VOR/DME	SQEAKE, MN FIX	*5000
*3100 - MOCA		
SQEAKE, MN FIX	BEBEL, MN FIX	5000
BEBEL, MN FIX	INTERNATIONAL FALLS, MN VOR/DME	3000

95.6506 VOR FEDERAL AIRWAY V506

TULSA, OK VORTAC	VINTA, OK FIX	2700
VINTA, OK FIX	NEOSHO, MO VOR/DME	3000
NEOSHO, MO VOR/DME	BILIE, MO FIX	3000
BILIE, MO FIX	SPRINGFIELD, MO VORTAC	3000

95.6507 VOR FEDERAL AIRWAY V507

ARDMORE, OK VORTAC	WILL ROGERS, OK VORTAC	3100
WILL ROGERS, OK VORTAC	WAXEY, OK FIX	
	N BND	*9300
	S BND	*5000
*3300 - MOCA		
*4000 - GNSS MEA		
WAXEY, OK FIX	ROLLS, OK FIX	
	N BND	*11000
	S BND	*9300
*3800 - MOCA		
*4000 - GNSS MEA		
ROLLS, OK FIX	MITBEE, OK VORTAC	
	N BND	*4000
	S BND	*9300
*4000 - GNSS MEA		
MITBEE, OK VORTAC	LIBERAL, KS VORTAC	4700
LIBERAL, KS VORTAC	GARDEN CITY, KS VORTAC	4700

95.6508 VOR FEDERAL AIRWAY V508

HILL CITY, KS VORTAC	HAYS, KS VORTAC	*4500
*3900 - MOCA		
HAYS, KS VORTAC	*GLIDE, KS FIX	3900
*4500 - MRA		
GLIDE, KS FIX	SALINA, KS VORTAC	*3900
*3200 - MOCA		
SALINA, KS VORTAC	*VASCO, KS FIX	3000
*5000 - MRA		
VASCO, KS FIX	MANHATTAN, KS VOR/DME	3000
MANHATTAN, KS VOR/DME	TOPEKA, KS VORTAC	3000
TOPEKA, KS VORTAC	RUGBB, KS FIX	2800

95.6509 VOR FEDERAL AIRWAY V509

ST PETERSBURG, FL VORTAC	*CROWD, FL FIX	**5000
*5000 - MRA		
**2700 - MOCA		
CROWD, FL FIX	HALLR, FL FIX	*6000
*1800 - MOCA		

FROM	TO	MEA
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95.6510 VOR FEDERAL AIRWAY V510

DICKINSON, ND VORTAC	BISMARCK, ND VOR/DME	4600
BISMARCK, ND VOR/DME	*BEHQY, ND FIX	3900
*12000 - MRA		
BEHQY, ND FIX	JAMESTOWN, ND VOR/DME	3900
JAMESTOWN, ND VOR/DME	*CHAFE, ND FIX	3300
*6000 - MRA		
CHAFE, ND FIX	FARGO, ND VOR/DME	
	W BND	3300
	E BND	2700
FARGO, ND VOR/DME	STARR, MN FIX	3600
STARR, MN FIX	ALEXANDRIA, MN VOR/DME	*3500
*3000 - MOCA		
ALEXANDRIA, MN VOR/DME	*DAYLE, MN FIX	5000
*5000 - MCA DAYLE, MN FIX, NW BND		
DAYLE, MN FIX	GOPHER, MN VORTAC	4000
GOPHER, MN VORTAC	*BITLR, WI FIX	3400
*5500 - MCA BITLR, WI FIX, SE BND		
BITLR, WI FIX	NODINE, MN VORTAC	5500
NODINE, MN VORTAC	DELLS, WI VORTAC	3000
BUFFALO, NY VOR/DME	*EHMAN, NY FIX	***11000
*11000 - MCA EHMAN, NY FIX, SW BND		
**3000 - GNSS MEA		
#BUFFALO R-053 UNUSABLE BELOW 11000.		
EHMAN, NY FIX	ROCHESTER, NY VOR/DME	2400

95.6511 VOR FEDERAL AIRWAY V511

LAKELAND, FL VORTAC	HALLR, FL FIX	*4000
*2300 - MOCA		
HALLR, FL FIX	THNDR, FL FIX	*7000
*1700 - MOCA		
*5000 - GNSS MEA		
THNDR, FL FIX	DOLPHIN, FL VORTAC	*3000
*1500 - MOCA		

95.6512 VOR FEDERAL AIRWAY V512

POCKET CITY, IN VORTAC	HOLAN, IN FIX	2600
HOLAN, IN FIX	*SACKO, IN FIX	**3500
*10000 - MCA SACKO, IN FIX, E BND		
**2100 - MOCA		
**3000 - GNSS MEA		
SACKO, IN FIX	LOUISVILLE, KY VORTAC	10000
LOUISVILLE, KY VORTAC	*CLEGG, KY FIX	10000
*10000 - MCA CLEGG, KY FIX, W BND		
CLEGG, KY FIX	LEXINGTON, KY VOR/DME	2800

95.6513 VOR FEDERAL AIRWAY V513

LIVINGSTON, TN VOR/DME	NEW HOPE, KY VOR/DME	4000
NEW HOPE, KY VOR/DME	LOUISVILLE, KY VORTAC	2700

FROM	TO	MEA
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95.6514 VOR FEDERAL AIRWAY V514

MISSION BAY, CA VORTAC	*RYAHH, CA FIX	
	E BND	7000
	W BND	4000
*6400 - MCA RYAHH, CA FIX , E BND		
RYAHH, CA FIX	BARET, CA FIX	
	E BND	*8400
	W BND	*7000
*6100 - MOCA		
BARET, CA FIX	CANNO, CA FIX	8400
CANNO, CA FIX	JULIAN, CA VORTAC	8800
JULIAN, CA VORTAC	THERMAL, CA VORTAC	9000
THERMAL, CA VORTAC	*TWENTYNINE PALMS, CA VORTAC	7000
*10200 - MCA TWENTYNINE PALMS, CA VORTAC , NE BND		
*TWENTYNINE PALMS, CA VORTAC	GOFFS, CA VORTAC	**12000
*10200 - MCA TWENTYNINE PALMS, CA VORTAC , NE BND		
**7900 - MOCA		
**8000 - GNSS MEA		
GOFFS, CA VORTAC	BOULDER CITY, NV VORTAC	7600

95.6516 VOR FEDERAL AIRWAY V516

LIBERAL, KS VORTAC	ANTHONY, KS VORTAC	*6000
*4500 - MOCA		
ANTHONY, KS VORTAC	PIONEER, OK VORTAC	3000
PIONEER, OK VORTAC	TYROE, KS FIX	*3100
*2600 - MOCA		
TYROE, KS FIX	OSWEGO, KS VOR/DME	2700

95.6517 VOR FEDERAL AIRWAY V517

SNOWBIRD, TN VORTAC	MIAMI, TN FIX	6900
MIAMI, TN FIX	*LONDON, KY VOR/DME	5500
*6000 - MCA LONDON, KY VOR/DME , N BND		
LONDON, KY VOR/DME	*LOGIC, KY FIX	**6000
*6000 - MCA LOGIC, KY FIX , S BND		
**3700 - MOCA		
LOGIC, KY FIX	FALMOUTH, KY VOR/DME	2800
FALMOUTH, KY VOR/DME	CINCINNATI, KY VORTAC	2700

95.6518 VOR FEDERAL AIRWAY V518

FILLMORE, CA VORTAC	TWINE, CA FIX	5500
TWINE, CA FIX	*LANGE, CA FIX	7000
*7000 - MCA LANGE, CA FIX , NE BND		
LANGE, CA FIX	*PALMDALE, CA VORTAC	7000
*6300 - MCA PALMDALE, CA VORTAC , SW BND		

95.6519 VOR FEDERAL AIRWAY V519

VOLUNTEER, TN VORTAC	TAMPI, TN FIX	3500
TAMPI, TN FIX	YUMMY, VA FIX	4500
YUMMY, VA FIX	GLADE SPRING, VA VOR/DME	6000
GLADE SPRING, VA VOR/DME	*TELOC, VA FIX	6900
*13000 - MRA		

FROM	TO	MEA
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95.6519 VOR FEDERAL AIRWAY V519 - CONTINUED

TELOC, VA FIX	BLUEFIELD, WV VOR/DME	
	NE BND	6100
	SW BND	6900
BLUEFIELD, WV VOR/DME	BECKLEY, WV VOR/DME	#*9000
*5900 - MOCA		
*5900 - GNSS MEA		
#BECKLEY R-193 UNUSABLE USE BLUEFIELD R-010		

95.6520 VOR FEDERAL AIRWAY V520

*BATTLE GROUND, WA VORTAC	KLICKITAT, OR VOR/DME	7000
*4700 - MCA BATTLE GROUND, WA VORTAC , E BND		
KLICKITAT, OR VOR/DME	AMPLE, WA FIX	6000
AMPLE, WA FIX	VIRTU, WA FIX	
	NE BND	4000
	SW BND	5000
VIRTU, WA FIX	PASCO, WA VOR/DME	4000
PASCO, WA VOR/DME	*WALLA WALLA, WA VOR/DME	3200
*5800 - MCA WALLA WALLA, WA VOR/DME , NE BND		
WALLA WALLA, WA VOR/DME	CLOVA, WA FIX	8000
CLOVA, WA FIX	NEZ PERCE, ID VOR/DME	
	NE BND	5500
	SW BND	8000
NEZ PERCE, ID VOR/DME	FERDI, ID FIX	
	W BND	6700
	E BND	12000
FERDI, ID FIX	SALMON, ID VOR/DME	12000
SALMON, ID VOR/DME	*DUBOIS, ID VORTAC	13600
*9000 - MCA DUBOIS, ID VORTAC , E BND		
*10600 - MCA DUBOIS, ID VORTAC , W BND		
DUBOIS, ID VORTAC	*JACKSON, WY VOR/DME	#15300
*15200 - MCA JACKSON, WY VOR/DME , W BND		
#MTA V520 E TO V330 W 14200		

95.6521 VOR FEDERAL AIRWAY V521

DOLPHIN, FL VORTAC	RUTHY, FL FIX	*3000
*1500 - MOCA		
RUTHY, FL FIX	LEE COUNTY, FL VORTAC	2300
LEE COUNTY, FL VORTAC	QUNCY, FL FIX	2600
QUNCY, FL FIX	LAKELAND, FL VORTAC	2300
LAKELAND, FL VORTAC	*DADES, FL FIX	**2300
*5000 - MRA		
**1800 - MOCA		
DADES, FL FIX	NITTS, FL FIX	*2300
*1800 - MOCA		
NITTS, FL FIX	*ORATE, FL FIX	**3000
*3000 - MRA		
**1700 - MOCA		
ORATE, FL FIX	CROSS CITY, FL VORTAC	*2000
*1500 - MOCA		
CROSS CITY, FL VORTAC	HEVVN, FL FIX	#*5000
*1400 - MOCA		
*2000 - GNSS MEA		
#CROSS CITY R-289 UNUSABLE BEYOND 60 NM.		

FROM	TO	MEA
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95.6521 VOR FEDERAL AIRWAY V521 - CONTINUED

HEVVN, FL FIX *7000 - MRA **1300 - MOCA 2000 - GNSS MEA	*TERES, FL FIX	***2000
TERES, FL FIX *1400 - MOCA *2000 - GNSS MEA	CRESS, FL FIX	*4000
CRESS, FL FIX MARIANNA, FL VORTAC WIREGRASS, AL VORTAC *1900 - MOCA	MARIANNA, FL VORTAC WIREGRASS, AL VORTAC CLIOS, AL FIX	2000 2000 *2300
CLIOS, AL FIX MONTGOMERY, AL VORTAC KYLEE, AL FIX	MONTGOMERY, AL VORTAC KYLEE, AL FIX VULCAN, AL VORTAC	2400 3000 3800

95.6524 VOR FEDERAL AIRWAY V524

HAYDEN, CO VOR/DME LARAMIE, WY VOR/DME *10900 - MOCA *11000 - GNSS MEA	LARAMIE, WY VOR/DME SCOTTSBLUFF, NE VORTAC	14200 *12000
SCOTTSBLUFF, NE VORTAC	NORTH PLATTE, NE VOR/DME	7000

95.6526 VOR FEDERAL AIRWAY V526

NORTHBROOK, IL VOR/DME *3500 - MRA	*MINCE, MI FIX	2500
MINCE, MI FIX MUSKY, MI FIX *1700 - MOCA *2600 - GNSS MEA	MUSKY, MI FIX MAPER, MI FIX	2500 *3500
MAPER, MI FIX	GIPPER, MI VORTAC	2600

95.6527 VOR FEDERAL AIRWAY V527

*HOT SPRINGS, AR VOR/DME	HIDER, AR FIX SE BND NW BND	3200 9500
*5700 - MCA HOT SPRINGS, AR VOR/DME , NW BND		
HIDER, AR FIX	ROVER, AR FIX SE BND NW BND	*5500 *9500
*3200 - MOCA		
ROVER, AR FIX *9500 - MCA SCRAN, AR FIX , SE BND **3600 - MOCA	*SCRAN, AR FIX	**9500
SCRAN, AR FIX *3700 - MOCA	CASKS, AR FIX	*6500
CASKS, AR FIX RAZORBACK, AR VORTAC GAMPS, AR FIX *3200 - MOCA	RAZORBACK, AR VORTAC GAMPS, AR FIX BILIE, MO FIX	4000 3500 *4000
BILIE, MO FIX	SPRINGFIELD, MO VORTAC	3000

FROM	TO	MEA
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95.6528 VOR FEDERAL AIRWAY V528

*PHOENIX, AZ VORTAC	EAGUL, AZ FIX	**14500
*8000 - MCA PHOENIX, AZ VORTAC , NE BND		
**9400 - MOCA		
**10000 - GNSS MEA		
EAGUL, AZ FIX	*PAYSO, AZ FIX	**16000
*16000 - MCA PAYSO, AZ FIX , SW BND		
**10000 - MOCA		
PAYSO, AZ FIX	ST JOHNS, AZ VORTAC	*13000
*9800 - MOCA		

95.6529 VOR FEDERAL AIRWAY V529

*FAMIN, FL FIX	SWAGS, FL FIX	**5700
*5700 - MRA		
**1500 - MOCA		
SWAGS, FL FIX	LA BELLE, FL VORTAC	*2000
*1400 - MOCA		

95.6530 VOR FEDERAL AIRWAY V530

TEXICO, TX VORTAC	CHILDRESS, TX VORTAC	6000
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95.6531 VOR FEDERAL AIRWAY V531

PALM BEACH, FL VORTAC	*SHEDS, FL FIX	**3000
*3000 - MRA		
**2500 - MOCA		
SHEDS, FL FIX	*BAIRN, FL FIX	**6000
*6000 - MCA BAIRN, FL FIX , SE BND		
**2000 - MOCA		
BAIRN, FL FIX	ORLANDO, FL VORTAC	2700

95.6532 VOR FEDERAL AIRWAY V532

LITTLE ROCK, AR VORTAC	*PARON, AR FIX	2600
*3500 - MRA		
PARON, AR FIX	GATZY, AR FIX	*3700
*3100 - MOCA		
GATZY, AR FIX	BLURB, AR FIX	*5500
*3200 - MOCA		
BLURB, AR FIX	BLIMP, AR FIX	*4100
*3600 - MOCA		
BLIMP, AR FIX	FORT SMITH, AR VORTAC	*2900
*2400 - MOCA		
FORT SMITH, AR VORTAC	*AKINS, OK FIX	2500
*3000 - MRA		
AKINS, OK FIX	OKMULGEE, OK VOR/DME	*3000
*2200 - MOCA		
OKMULGEE, OK VOR/DME	PIONEER, OK VORTAC	3000
PIONEER, OK VORTAC	WICHITA, KS VORTAC	3600
WICHITA, KS VORTAC	SALINA, KS VORTAC	3600
SALINA, KS VORTAC	LINCOLN, NE VORTAC	*5000
*3000 - MOCA		

FROM	TO	MEA
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95.6533 VOR FEDERAL AIRWAY V533

ST PETERSBURG, FL VORTAC	LAKELAND, FL VORTAC	2000
LAKELAND, FL VORTAC	*CAMBE, FL FIX	2000
*4000 - MRA		
CAMBE, FL FIX	ORLANDO, FL VORTAC	2000
ORLANDO, FL VORTAC	OAKIE, FL FIX	2000
OAKIE, FL FIX	ORMOND BEACH, FL VORTAC	*4000
*1600 - MOCA		

95.6534 VOR FEDERAL AIRWAY V534

LITTLE ROCK, AR VORTAC	BIBBS, AR FIX	3500
BIBBS, AR FIX	HAAWK, AR FIX	*4500
*2500 - MOCA		
HAAWK, AR FIX	SCRAN, AR FIX	*4500
*3100 - MOCA		
SCRAN, AR FIX	FORT SMITH, AR VORTAC	
	W BND	*3500
	E BND	*4500
*3000 - MOCA		

95.6535 VOR FEDERAL AIRWAY V535

SIDON, MS VORTAC	HOLLY SPRINGS, MS VORTAC	*3000
*2100 - MOCA		

95.6536 VOR FEDERAL AIRWAY V536

NORTH BEND, OR VOR/DME	*RARES, OR FIX	
	N BND	6000
	S BND	3700
*5500 - MRA		
RARES, OR FIX	CORVALLIS, OR VOR/DME	6000
CORVALLIS, OR VOR/DME	SHEDD, OR FIX	3000
SHEDD, OR FIX	LATHE, OR FIX	4000
LATHE, OR FIX	*JAIME, OR FIX	6000
*8300 - MCA JAIME, OR FIX, E BND		
JAIME, OR FIX	MANTE, OR FIX	*10000
*7800 - MOCA		
MANTE, OR FIX	DESCHUTES, OR VORTAC	10000
DESCHUTES, OR VORTAC	ZORNS, OR FIX	
	NE BND	10000
	SW BND	7000
ZORNS, OR FIX	*RENCE, OR FIX	**10000
*10000 - MRA		
**7700 - MOCA		
RENCE, OR FIX	HEPPE, OR FIX	*10000
*7700 - MOCA		
HEPPE, OR FIX	PENDLETON, OR VORTAC	
	NE BND	6000
	SW BND	10000
PENDLETON, OR VORTAC	WALLA WALLA, WA VOR/DME	4100
WALLA WALLA, WA VOR/DME	PULLMAN, WA VOR/DME	*6000
*5700 - MOCA		
PULLMAN, WA VOR/DME	MULLAN PASS, ID VOR/DME	9100

FROM	TO	MEA
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95.6536 VOR FEDERAL AIRWAY V536 - CONTINUED

MULLAN PASS, ID VOR/DME *9700 - MOCA *10000 - GNSS MEA	KALISPELL, MT VOR/DME	*11500
KALISPELL, MT VOR/DME *10900 - MOCA	GAPAR, MT FIX	*13000
GAPAR, MT FIX *10600 - MCA PIKUN, MT FIX , W BND **11400 - MOCA	*PIKUN, MT FIX	**12000
PIKUN, MT FIX	*CHOTE, MT FIX W BND E BND	**10000 **9000
*9200 - MCA CHOTE, MT FIX , W BND **6900 - MOCA		
CHOTE, MT FIX GREAT FALLS, MT VORTAC *9700 - MOCA	GREAT FALLS, MT VORTAC SWEDD, MT FIX	7000 *12000
SWEDD, MT FIX *9200 - MCA MENAR, MT FIX , NW BND **9400 - MOCA	*MENAR, MT FIX	**10000
MENAR, MT FIX *9300 - MCA BOZEMAN, MT VOR/DME , SE BND	*BOZEMAN, MT VOR/DME	8700
SHERIDAN, WY VOR/DME GILLETTE, WY VOR/DME NEWCASTLE, WY VOR *9300 - MRA	GILLETTE, WY VOR/DME NEWCASTLE, WY VOR *ZAMBI, SD FIX	7000 7500 9300
ZAMBI, SD FIX	*RAPID CITY, SD VORTAC E BND W BND	8000 9300
*6500 - MCA RAPID CITY, SD VORTAC , W BND		

95.6537 VOR FEDERAL AIRWAY V537

PALM BEACH, FL VORTAC *2000 - MOCA	STOOP, FL FIX	*3000
STOOP, FL FIX TREASURE, FL VORTAC *2500 - MRA	TREASURE, FL VORTAC *PRESK, FL FIX	2000 3000
PRESK, FL FIX *2000 - MOCA	CERMO, FL FIX	*8000
CERMO, FL FIX	OCALA, FL VORTAC NW BND SE BND	2000 8000
OCALA, FL VORTAC *3000 - MRA	*LEJKO, FL FIX	2000
LEJKO, FL FIX GATORS, FL VORTAC *2000 - MOCA	GATORS, FL VORTAC ALVIN, FL FIX	2000 *3000
ALVIN, FL FIX	GREENVILLE, FL VORTAC	2000

95.6538 VOR FEDERAL AIRWAY V538

*TWENTYNINE PALMS, CA VORTAC *10200 - MCA TWENTYNINE PALMS, CA VORTAC , NE BND **7900 - MOCA **8000 - GNSS MEA	GOFFS, CA VORTAC	**12000
GOFFS, CA VORTAC	LAS VEGAS, NV VORTAC	9000

FROM	TO	MEA
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95.6539 VOR FEDERAL AIRWAY V539

KEY WEST, FL VORTAC	CORGI, FL FIX	1500
CORGI, FL FIX	GOODY, FL FIX	*4000
*1200 - MOCA		
GOODY, FL FIX	LEE COUNTY, FL VORTAC	2000

95.6540 VOR FEDERAL AIRWAY V540

CUNNINGHAM, KY VOR/DME	TAMMS, IL FIX	2800
TAMMS, IL FIX	FARMINGTON, MO VORTAC	3500

95.6541 VOR FEDERAL AIRWAY V541

GADSDEN, AL VOR/DME	HOBBI, AL FIX	*3600
*2800 - MOCA		
HOBBI, AL FIX	DECATUR, AL VOR/DME	3000
DECATUR, AL VOR/DME	MUSCLE SHOALS, AL VORTAC	2500

95.6542 VOR FEDERAL AIRWAY V542

TIDIOUTE, PA VORTAC	BRADFORD, PA VOR/DME	*4000
*3500 - MOCA		
BRADFORD, PA VOR/DME	EXALL, PA FIX	4500
EXALL, PA FIX	ELMIRA, NY VOR/DME	4000
ELMIRA, NY VOR/DME	BINGHAMTON, NY VOR/DME	3500
BINGHAMTON, NY VOR/DME	OXFOR, NY FIX	3500
OXFOR, NY FIX	ROCKDALE, NY VOR/DME	4000
ROCKDALE, NY VOR/DME	ALBANY, NY VORTAC	4000
ALBANY, NY VORTAC	CAMBRIDGE, NY VOR/DME	#*4000
*3000 - MOCA		
#ALB R-067 UNUSABLE.		
CAMBRIDGE, NY VOR/DME	*JAMMA, VT FIX	6200
*5000 - MCA JAMMA, VT FIX , W BND		
JAMMA, VT FIX	LEBANON, NH VOR/DME	5000

95.6543 VOR FEDERAL AIRWAY V543

LEEVILLE, LA VORTAC	SAFES, LA FIX	*2000
*1400 - MOCA		
SAFES, LA FIX	WAVEZ, LA FIX	*4000
*1600 - MOCA		
WAVEZ, LA FIX	OYSTY, LA FIX	*3000
*1800 - MOCA		
OYSTY, LA FIX	RYTHM, LA FIX	2000
RYTHM, LA FIX	EATON, MS VORTAC	*4200
*2000 - MOCA		
EATON, MS VORTAC	BAING, MS FIX	*3000
*2000 - MOCA		
BAING, MS FIX	*PAULD, MS FIX	3000
*5000 - MRA		
*3000 - MCA PAULD, MS FIX , SW BND		
PAULD, MS FIX	MERIDIAN, MS VORTAC	2100

FROM	TO	MEA
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95.6545 VOR FEDERAL AIRWAY V545

MILES CITY, MT VOR/DME	WILLISTON, ND VOR/DME	*7000
*5300 - MOCA		
*6000 - GNSS MEA		

95.6546 VOR FEDERAL AIRWAY V546

WINK, TX VORTAC	YOGSU, TX FIX	5500
YOGSU, TX FIX	MIDLAND, TX VORTAC	5000
MIDLAND, TX VORTAC	BIG SPRING, TX VORTAC	4400

95.6547 VOR FEDERAL AIRWAY V547

CHEYENNE, WY VORTAC	HIPSHER, WY VOR/DME	9000
HIPSHER, WY VOR/DME	MUDDY MOUNTAIN, WY VOR/DME	7900

95.6548 VOR FEDERAL AIRWAY V548

HOBBY, TX VOR/DME	*SEALY, TX FIX	2000
*7000 - MCA SEALY, TX FIX , NW BND		
SEALY, TX FIX	PRARI, TX FIX	*7000
*3500 - MOCA		
*3500 - GNSS MEA		
PRARI, TX FIX	COLLEGE STATION, TX VORTAC	*7000
*2000 - MOCA		
*2000 - GNSS MEA		
COLLEGE STATION, TX VORTAC	BARBA, TX FIX	2500
BARBA, TX FIX	BOSEL, TX FIX	3600
BOSEL, TX FIX	WACO, TX VORTAC	2800

95.6549 VOR FEDERAL AIRWAY V549

HAYS, KS VORTAC	MANKATO, KS VORTAC	4100
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95.6550 VOR FEDERAL AIRWAY V550

COTULLA, TX VORTAC	LEMIG, TX FIX	2500
LEMIG, TX FIX	SAN ANTONIO, TX VORTAC	3000
SAN ANTONIO, TX VORTAC	CENTEX, TX VORTAC	3300

95.6551 VOR FEDERAL AIRWAY V551

SALINA, KS VORTAC	MANKATO, KS VORTAC	*4500
*3100 - MOCA		

95.6552 VOR FEDERAL AIRWAY V552

BEAUMONT, TX VOR/DME	LAKE CHARLES, LA VORTAC	2000
LAKE CHARLES, LA VORTAC	HATHA, LA FIX	2000
HATHA, LA FIX	LAFAYETTE, LA VORTAC	2800

FROM	TO	MEA
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95.6552 VOR FEDERAL AIRWAY V552 - CONTINUED

LAFAYETTE, LA VORTAC	*GRICE, LA FIX	**2000
*4000 - MRA		
**1500 - MOCA		
GRICE, LA FIX	TIBBY, LA VOR/DME	2000
TIBBY, LA VOR/DME	HARVEY, LA VORTAC	2100
HARVEY, LA VORTAC	PICAYUNE, MS VOR/DME	2000
PICAYUNE, MS VOR/DME	*MINDO, MS FIX	2000
*6000 - MRA		
MINDO, MS FIX	SEMMES, AL VORTAC	2000
SEMMES, AL VORTAC	MONROEVILLE, AL VORTAC	2000

95.6553 VOR FEDERAL AIRWAY V553

SALINA, KS VORTAC	PAWNEE CITY, NE VORTAC	3400
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95.6554 VOR FEDERAL AIRWAY V554

NATCHEZ, MS VOR/DME	*TULLO, LA FIX	**6000
*6000 - MCA TULLO, LA FIX , SE BND		
**1800 - MOCA		
TULLO, LA FIX	MONROE, LA VORTAC	2000

95.6555 VOR FEDERAL AIRWAY V555

PICAYUNE, MS VOR/DME	MC COMB, MS VORTAC	2000
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95.6556 VOR FEDERAL AIRWAY V556

SAN ANGELO, TX VORTAC	CHILD, TX FIX	4000
CHILD, TX FIX	JUNCTION, TX VORTAC	*5000
*4000 - MOCA		
JUNCTION, TX VORTAC	STONEWALL, TX VORTAC	4000
STONEWALL, TX VORTAC	MARCS, TX FIX	4500
MARCS, TX FIX	SEEDS, TX FIX	*7500
*2000 - MOCA		
SEEDS, TX FIX	WEMAR, TX FIX	*2500
*2000 - MOCA		
WEMAR, TX FIX	EAGLE LAKE, TX VOR/DME	2000
EAGLE LAKE, TX VOR/DME	KEEDS, TX FIX	2500
KEEDS, TX FIX	SCHOLES, TX VOR/DME	3100
SCHOLES, TX VOR/DME	SABINE PASS, TX VOR/DME	2000

95.6558 VOR FEDERAL AIRWAY V558

LLANO, TX VORTAC	SLIMM, TX FIX	3100
SLIMM, TX FIX	CENTEX, TX VORTAC	4100
CENTEX, TX VORTAC	MOUZE, TX FIX	2200
MOUZE, TX FIX	INDUSTRY, TX VORTAC	2100
INDUSTRY, TX VORTAC	EAGLE LAKE, TX VOR/DME	2000
EAGLE LAKE, TX VOR/DME	BLUMS, TX FIX	2000

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95.6558 VOR FEDERAL AIRWAY V558 - CONTINUED

BLUMS, TX FIX	HOBBY, TX VOR/DME	2400
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95.6559 VOR FEDERAL AIRWAY V559

LAFAYETTE, LA VORTAC	FIGHTING TIGER, LA VORTAC	2100
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95.6560 VOR FEDERAL AIRWAY V560

NEWMAN, TX VORTAC	MAYFY, TX FIX	9000
MAYFY, TX FIX	*CONNE, TX FIX	**10500
*10500 - MRA		
**9000 - MOCA		
CONNE, TX FIX	SALT FLAT, TX VORTAC	9000
SALT FLAT, TX VORTAC	CARLSBAD, NM VORTAC	8000

95.6561 VOR FEDERAL AIRWAY V561

GRAND FORKS, ND VOR/DME	JAMESTOWN, ND VOR/DME	*4000
*3000 - MOCA		
JAMESTOWN, ND VOR/DME	PIERRE, SD VORTAC	*10000
*3400 - MOCA		

95.6562 VOR FEDERAL AIRWAY V562

PHOENIX, AZ VORTAC	KNOBB, AZ FIX	8000
KNOBB, AZ FIX	RADOM, AZ FIX	
	S BND	8000
	N BND	11000
RADOM, AZ FIX	*FERER, AZ FIX	
	N BND	**12000
	S BND	**11000
*12000 - MRA		
*11000 - MCA FERER, AZ FIX, S BND		
**8400 - MOCA		
**9000 - GNSS MEA		
FERER, AZ FIX	DRAKE, AZ VORTAC	*10000
*9200 - MOCA		
DRAKE, AZ VORTAC	PEACH SPRINGS, AZ VOR/DME	9200
PEACH SPRINGS, AZ VOR/DME	*MEADS, NV FIX	9000
*9000 - MCA MEADS, NV FIX, SE BND		
MEADS, NV FIX	LAS VEGAS, NV VORTAC	6000

95.6563 VOR FEDERAL AIRWAY V563

LUBBOCK, TX VORTAC	BIG SPRING, TX VORTAC	5200
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95.6564 VOR FEDERAL AIRWAY V564

COALDALE, NV VORTAC	MINA, NV VORTAC	11500
MINA, NV VORTAC	YERIN, NV FIX	11500
YERIN, NV FIX	CHIME, NV FIX	
	NW BND	10000
	SE BND	11500
CHIME, NV FIX	MUSTANG, NV VORTAC	10000

FROM	TO	MEA
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95.6565 VOR FEDERAL AIRWAY V565

LLANO, TX VORTAC	AMUSE, TX FIX	3300
AMUSE, TX FIX	CENTEX, TX VORTAC	3100
CENTEX, TX VORTAC	COLLEGE STATION, TX VORTAC	2200
COLLEGE STATION, TX VORTAC	LUFKIN, TX VORTAC	*4000
*2000 - MOCA		

95.6566 VOR FEDERAL AIRWAY V566

GREGG COUNTY, TX VORTAC	*WORKS, TX FIX	2300
*3000 - MRA		
WORKS, TX FIX	BELCHER, LA VORTAC	3100
BELCHER, LA VORTAC	KNELT, LA FIX	2300
KNELT, LA FIX	COVEX, LA FIX	*3500
*1800 - MOCA		
COVEX, LA FIX	NUBOY, LA FIX	*5000
*1900 - MOCA		
NUBOY, LA FIX	ALEXANDRIA, LA VORTAC	
	W BND	5000
	E BND	2000
ALEXANDRIA, LA VORTAC	MUSHE, LA FIX	#*3000
*1700 - MOCA		
#ALEXANDRIA R-106 UNUSABLE BEYOND 48 NM		
MUSHE, LA FIX	FISTY, LA FIX	*4000
*1700 - MOCA		
FISTY, LA FIX	WRACK, LA FIX	#
#UNUSABLE		
WRACK, LA FIX	VEILS, LA FIX	*3000
*2100 - MOCA		
VEILS, LA FIX	RESERVE, LA VOR/DME	2000

95.6567 VOR FEDERAL AIRWAY V567

PHOENIX, AZ VORTAC	KNOBB, AZ FIX	8000
KNOBB, AZ FIX	RADOM, AZ FIX	
	S BND	8000
	N BND	11000
RADOM, AZ FIX	*FERER, AZ FIX	
	N BND	**12000
	S BND	**11000
*12000 - MRA		
*14000 - MCA FERER, AZ FIX , NE BND		
*11000 - MCA FERER, AZ FIX , S BND		
**8400 - MOCA		
**9000 - GNSS MEA		
FERER, AZ FIX	WINSLOW, AZ VORTAC	*14000
*10000 - GNSS MEA		

95.6568 VOR FEDERAL AIRWAY V568

CORPUS CHRISTI, TX VORTAC	THREE RIVERS, TX VORTAC	1800
THREE RIVERS, TX VORTAC	LEMIG, TX FIX	2000
LEMIG, TX FIX	SAN ANTONIO, TX VORTAC	3000
SAN ANTONIO, TX VORTAC	GUADA, TX FIX	*4000
*2800 - MOCA		
GUADA, TX FIX	STONEWALL, TX VORTAC	4000
STONEWALL, TX VORTAC	LLANO, TX VORTAC	3700

FROM	TO	MEA
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95.6568 VOR FEDERAL AIRWAY V568 - CONTINUED

LLANO, TX VORTAC	*BUILT, TX FIX	**6000
*6000 - MRA		
**3200 - MOCA		
BUILT, TX FIX	GLEN ROSE, TX VORTAC	*3500
*3000 - MOCA		
GLEN ROSE, TX VORTAC	MILLSAP, TX VORTAC	3000
MILLSAP, TX VORTAC	KARYN, TX FIX	3000
KARYN, TX FIX	WICHITA FALLS, TX VORTAC	3100

95.6569 VOR FEDERAL AIRWAY V569

BEAUMONT, TX VOR/DME	SILBE, TX FIX	2000
SILBE, TX FIX	LUFKIN, TX VORTAC	2500
LUFKIN, TX VORTAC	FRANKSTON, TX VOR/DME	2300
FRANKSTON, TX VOR/DME	CEDAR CREEK, TX VORTAC	2500

95.6570 VOR FEDERAL AIRWAY V570

ALEXANDRIA, LA VORTAC	NATCHEZ, MS VOR/DME	2000
NATCHEZ, MS VOR/DME	MC COMB, MS VORTAC	2000

95.6571 VOR FEDERAL AIRWAY V571

HUMBLE, TX VORTAC	NAVASOTA, TX VOR/DME	2000
NAVASOTA, TX VOR/DME	LEONA, TX VORTAC	3000
LEONA, TX VORTAC	CEDAR CREEK, TX VORTAC	2300

95.6572 VOR FEDERAL AIRWAY V572

WINSLOW, AZ VORTAC	*FRISY, AZ FIX	10000
*10500 - MCA FRISY, AZ FIX , W BND		
FRISY, AZ FIX	FLAGSTAFF, AZ VOR/DME	11500

95.6573 VOR FEDERAL AIRWAY V573

WILL ROGERS, OK VORTAC	*ALEXX, OK FIX	3100
*7000 - MRA		
ALEXX, OK FIX	ARDMORE, OK VORTAC	#
#UNUSABLE		
ARDMORE, OK VORTAC	BONHAM, TX VORTAC	3600
BONHAM, TX VORTAC	SULPHUR SPRINGS, TX VOR/DME	2500
SULPHUR SPRINGS, TX VOR/DME	TEXARKANA, AR VORTAC	2000
TEXARKANA, AR VORTAC	ELMMO, AR FIX	
	SW BND	*3500
	NE BND	*5500
*2600 - MOCA		
ELMMO, AR FIX	MARKI, AR FIX	*5500
*2600 - MOCA		
MARKI, AR FIX	HOT SPRINGS, AR VOR/DME	
	NE BND	*3500
	SW BND	*5500
*2700 - MOCA		
HOT SPRINGS, AR VOR/DME	LITTLE ROCK, AR VORTAC	3000

FROM	TO	MEA
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95.6574 VOR FEDERAL AIRWAY V574

CENTEX, TX VORTAC	MOUZE, TX FIX	2200
MOUZE, TX FIX	NAVASOTA, TX VOR/DME	2100
NAVASOTA, TX VOR/DME	HUMBLE, TX VORTAC	2000
HUMBLE, TX VORTAC	DAISETTA, TX VORTAC	2000
DAISETTA, TX VORTAC	BEAUMONT, TX VOR/DME	2300
BEAUMONT, TX VOR/DME	LAKE CHARLES, LA VORTAC	2000

95.6575 VOR FEDERAL AIRWAY V575

LARAMIE, WY VOR/DME	*NIWOT, CO FIX	11300
*9500 - MCA NIWOT, CO FIX , NW BND		
NIWOT, CO FIX	MILE HIGH, CO VORTAC	8000

95.6576 VOR FEDERAL AIRWAY V576

PHILIPSBURG, PA VORTAC	WILLIAMSPORT, PA VOR/DME	4000
WILLIAMSPORT, PA VOR/DME	HANCOCK, NY VOR/DME	4000
HANCOCK, NY VOR/DME	DELANCEY, NY VOR/DME	4000

95.6577 VOR FEDERAL AIRWAY V577

CEDAR LAKE, NJ VOR/DME	BRIGS, NJ FIX	
	E BND	6000
	W BND	1700

95.6578 VOR FEDERAL AIRWAY V578

PECAN, GA VOR/DME	TIFT MYERS, GA VOR	*2500
*2300 - MOCA		
TIFT MYERS, GA VOR	ALMA, GA VORTAC	##3000
*2100 - MOCA		
*2100 - GNSS MEA		
#ALMA R-263 UNUSABLE USE TIFT MYERS R-083.		
ALMA, GA VORTAC	SAVANNAH, GA VORTAC	*10000
*2600 - MOCA		
*3000 - GNSS MEA		

95.6579 VOR FEDERAL AIRWAY V579

LEE COUNTY, FL VORTAC	VIOLA, FL FIX	2000
VIOLA, FL FIX	SARASOTA, FL VOR/DME	*3000
*1600 - MOCA		
SARASOTA, FL VOR/DME	ST PETERSBURG, FL VORTAC	2000
ST PETERSBURG, FL VORTAC	BAYPO, FL FIX	2000
BAYPO, FL FIX	NITTS, FL FIX	*4000
*1700 - MOCA		
NITTS, FL FIX	GATORS, FL VORTAC	*3000
*2000 - MOCA		
GATORS, FL VORTAC	CROSS CITY, FL VORTAC	2000
CROSS CITY, FL VORTAC	VALDOSTA, GA VOR/DME	2000
VALDOSTA, GA VOR/DME	TIFT MYERS, GA VOR	2200
TIFT MYERS, GA VOR	VIENNA, GA VORTAC	2100

FROM	TO	MEA
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95.6580 VOR FEDERAL AIRWAY V580

ST LOUIS, MO VORTAC *2200 - MOCA	LEBOY, IL FIX	*3000
LEBOY, IL FIX SEXTN, IL FIX *2200 - MOCA	SEXTN, IL FIX BURLINGTON, IA VOR/DME	4500 *3000

95.6581 VOR FEDERAL AIRWAY V581

ST PETERSBURG, FL VORTAC TUMPY, FL FIX *5000 - MRA **2000 - GNSS MEA	TUMPY, FL FIX *DADES, FL FIX	2000 **5000
DADES, FL FIX	OCALA, FL VORTAC	2000

95.6582 VOR FEDERAL AIRWAY V582

ST LOUIS, MO VORTAC *2200 - MOCA	LEBOY, IL FIX	*3000
LEBOY, IL FIX	QUINCY, IL VORTAC	3000

95.6583 VOR FEDERAL AIRWAY V583

CENTEX, TX VORTAC COLLEGE STATION, TX VORTAC	COLLEGE STATION, TX VORTAC LEONA, TX VORTAC	2200 2000
LEONA, TX VORTAC FRANKSTON, TX VOR/DME QUITMAN, TX VOR/DME PARIS, TX VOR/DME *2500 - MOCA	FRANKSTON, TX VOR/DME QUITMAN, TX VOR/DME PARIS, TX VOR/DME MC ALESTER, OK VORTAC	2300 2300 2100 *3000

95.6586 VOR FEDERAL AIRWAY V586

EXCEL, MO FIX *2300 - MOCA	MACON, MO VOR/DME	*3000
MACON, MO VOR/DME QUINCY, IL VORTAC PEORIA, IL VORTAC *2400 - MOCA	QUINCY, IL VORTAC PEORIA, IL VORTAC MAROC, IL FIX	2700 2500 *3000
MAROC, IL FIX PONTIAC, IL VOR/DME *2200 - MOCA	PONTIAC, IL VOR/DME JOLIET, IL VOR/DME	2500 *3000

95.6587 VOR FEDERAL AIRWAY V587

HOMELAND, CA VOR *9300 - MCA LUCER, CA FIX , SW BND	*LUCER, CA FIX	10500
LUCER, CA FIX *8000 - MOCA	BULGY, CA FIX	*9000
BULGY, CA FIX DAGGETT, CA VORTAC *12000 - MRA	DAGGETT, CA VORTAC *WHIGG, CA FIX	8000 10000
WHIGG, CA FIX	BOULDER CITY, NV VORTAC	10000

FROM	TO	MEA
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95.6589 VOR FEDERAL AIRWAY V589

MEDICINE BOW, WY VOR/DME	ALCOS, WY FIX	10100
ALCOS, WY FIX	MUDDY MOUNTAIN, WY VOR/DME	*10000
*9400 - MOCA		

95.6591 VOR FEDERAL AIRWAY V591

GRAND JUNCTION, CO VOR/DME	*PACES, CO FIX	11500
*13000 - MRA		
PACES, CO FIX	SLOLM, CO FIX	#13000
#MTA V591 NE TO V220 NW 12900		
SLOLM, CO FIX	*GLENO, CO FIX	14000
*16000 - MRA		
GLENO, CO FIX	SNOW, CO VOR/DME	14000
SNOW, CO VOR/DME	*KREMMLING, CO VOR/DME	14600
*12500 - MCA KREMMLING, CO VOR/DME , W BND		

95.6595 VOR FEDERAL AIRWAY V595

*ROGUE VALLEY, OR VORTAC	CUTTR, OR FIX	
	NE BND	10500
	SW BND	6100
*5100 - MCA ROGUE VALLEY, OR VORTAC , NE BND		
CUTTR, OR FIX	COPPR, OR FIX	10500
COPPR, OR FIX	DRACK, OR FIX	
	NE BND	9900
	SW BND	10500
DRACK, OR FIX	*DESCHUTES, OR VORTAC	
	NE BND	6200
	SW BND	10500
*7900 - MCA DESCHUTES, OR VORTAC , SW BND		

95.6597 VOR FEDERAL AIRWAY V597

SAN MARCUS, CA VORTAC	*OHIGH, CA FIX	8000
*9000 - MRA		
OHIGH, CA FIX	*FILLMORE, CA VORTAC	8000
*6100 - MCA FILLMORE, CA VORTAC , W BND		
FILLMORE, CA VORTAC	VAN NUYS, CA VOR/DME	6000
VAN NUYS, CA VOR/DME	DARTS, CA FIX	5500
DARTS, CA FIX	SEAL BEACH, CA VORTAC	
	NW BND	6000
	SE BND	4000
SEAL BEACH, CA VORTAC	BALBO, CA FIX	
	NW BND	3000
	SE BND	4000
BALBO, CA FIX	OCEANSIDE, CA VORTAC	4000
OCEANSIDE, CA VORTAC	MISSION BAY, CA VORTAC	3000

95.6599 VOR FEDERAL AIRWAY V599

LEE COUNTY, FL VORTAC	THNDR, FL FIX	*3000
*1500 - MOCA		
THNDR, FL FIX	DOLPHIN, FL VORTAC	*3000
*1500 - MOCA		

FROM	TO	MEA
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95.6601 VOR FEDERAL AIRWAY V601

PAHOKEE, FL VOR/DME *4000 - MRA *7000 - MCA DEEDS, FL FIX , S BND **1600 - MOCA **2000 - GNSS MEA	*DEEDS, FL FIX	**4000
DEEDS, FL FIX *1400 - MOCA *2000 - GNSS MEA	KEY WEST, FL VORTAC	*7000

95.6605 VOR FEDERAL AIRWAY V605

SPARTANBURG, SC VORTAC *15000 - MRA **4600 - MOCA **5000 - GNSS MEA	*GENOD, NC FIX	**15000
GENOD, NC FIX *6600 - MCA HOLSTON MOUNTAIN, TN VORTAC , S BND	*HOLSTON MOUNTAIN, TN VORTAC	8500

95.6607 VOR FEDERAL AIRWAY V607

MENDOCINO, CA VORTAC YAGER, CA FIX	YAGER, CA FIX ARCATA, CA VOR/DME	9000 8000
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95.6609 VOR FEDERAL AIRWAY V609

SAGINAW, MI VOR/DME BENNY, MI FIX *2300 - MOCA	BENNY, MI FIX BANJO, MI FIX	2400 *3000
BANJO, MI FIX *5000 - MCA ZABLE, MI FIX , S BND **2900 - MOCA	*ZABLE, MI FIX	**5000
ZABLE, MI FIX *5000 - MRA	*RONDO, MI FIX	3200
RONDO, MI FIX *2500 - MOCA	PELLSTON, MI VORTAC	*3200

95.6611 VOR FEDERAL AIRWAY V611

NEWMAN, TX VORTAC *10000 - MRA	*MOLLY, NM FIX	9000
MOLLY, NM FIX	TRUTH OR CONSEQUENCES, NM VORTAC	10000
TRUTH OR CONSEQUENCES, NM VORTAC	SOCORRO, NM VORTAC	9000
SOCORRO, NM VORTAC	ALBUQUERQUE, NM VORTAC	8000
ALBUQUERQUE, NM VORTAC *11600 - MCA SANTA FE, NM VORTAC , E BND	*SANTA FE, NM VORTAC	9000
SANTA FE, NM VORTAC *10900 - MCA FORT UNION, NM VORTAC , N BND *11300 - MCA FORT UNION, NM VORTAC , W BND	*FORT UNION, NM VORTAC	12500
FORT UNION, NM VORTAC *11100 - MOCA	CIMARRON, NM VORTAC	*12000
CIMARRON, NM VORTAC *10200 - MOCA	GOSIP, CO FIX	*11000
GOSIP, CO FIX	PUEBLO, CO VORTAC	8700
PUEBLO, CO VORTAC *10000 - MCA BLACK FOREST, CO VOR/DME , NE BND	*BLACK FOREST, CO VOR/DME	9500

FROM	TO	MEA
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95.6611 VOR FEDERAL AIRWAY V611 - CONTINUED

BLACK FOREST, CO VOR/DME	LUFSE, CO FIX	#*10000
*10000 - GNSS MEA		
#BLACK FOREST R-028 UNUSABLE		
LUFSE, CO FIX	JEFEL, CO FIX	#10500
#GNSS MEA		
JEFEL, CO FIX	*LIMEX, CO FIX	#8500
*10000 - MRA		
#GNSS MEA		
LIMEX, CO FIX	GILL, CO VOR/DME	7900
GILL, CO VOR/DME	CHEYENNE, WY VORTAC	8500
CHEYENNE, WY VORTAC	MOIST, WY FIX	9000
MOIST, WY FIX	DEALT, WY FIX	11500
DEALT, WY FIX	MUDDY MOUNTAIN, WY VOR/DME	
	NW BND	9000
	SE BND	10000
MUDDY MOUNTAIN, WY VOR/DME	CRAZY WOMAN, WY VOR/DME	7600
CRAZY WOMAN, WY VOR/DME	SHERIDAN, WY VOR/DME	9000
SHERIDAN, WY VOR/DME	KRONA, MT FIX	8000
KRONA, MT FIX	BILLINGS, MT VORTAC	
	SE BND	8000
	NW BND	6200
BILLINGS, MT VORTAC	SHELA, MT FIX	
	S BND	*6100
	N BND	*7700
*6000 - MOCA		
SHELA, MT FIX	LEWISTOWN, MT VOR/DME	7700
LEWISTOWN, MT VOR/DME	SHONK, MT FIX	7700
SHONK, MT FIX	HAVRE, MT VOR/DME	6000

95.6613 VOR FEDERAL AIRWAY V613

ALLENTOWN, PA VORTAC	WILKES-BARRE, PA VORTAC	4000
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95.6615 VOR FEDERAL AIRWAY V615

RALEIGH/DURHAM, NC VORTAC	DUFFI, NC FIX	2600
DUFFI, NC FIX	HOPEWELL, VA VORTAC	*5000
*2500 - MOCA		
*2500 - GNSS MEA		

95.6623 VOR FEDERAL AIRWAY V623

SPARTA, NJ VORTAC	CARMEL, NY VOR/DME	3000
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95.6625 VOR FEDERAL AIRWAY V625

U.S. MEXICAN BORDER	NOGALES, AZ VOR/DME	*10000
*9500 - MOCA		

FROM	TO	MEA
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95.6626 VOR FEDERAL AIRWAY V626

YMONT, UT FIX *12600 - MOCA *12600 - GNSS MEA	MYTON, UT VOR/DME	*15000
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95.6629 VOR FEDERAL AIRWAY V629

SHUSS, NV FIX	BOULDER CITY, NV VORTAC	7600
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§95.6301 ALASKA VOR FEDERAL AIRWAYS

95.6301 ALASKA VOR FEDERAL AIRWAY V301

FAIRBANKS, AK VORTAC *7300 - MOCA	DIFER, AK FIX	*8000
DIFER, AK FIX	FORT YUKON, AK VORTAC SE BND NW BND	8000 2300

95.6302 ALASKA VOR FEDERAL AIRWAY V302

FAIRBANKS, AK VORTAC MAYPO, AK FIX	MAYPO, AK FIX FORT YUKON, AK VORTAC SW BND NE BND	7000 7000 2300
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95.6308 ALASKA VOR FEDERAL AIRWAY V308

BETHEL, AK VORTAC	FISHH, AK FIX E BND W BND	*8000 *2000
*1400 - MOCA FISHH, AK FIX *6000 - MOCA *6000 - GNSS MEA	SPARREVOHN, AK VOR/DME	*8000

95.6309 ALASKA VOR FEDERAL AIRWAY V309

U.S. CANADIAN BORDER *4900 - MOCA	ANNETTE ISLAND, AK VOR/DME	*5000
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FROM	TO	MEA
95.6311 ALASKA VOR FEDERAL AIRWAY V311		
ANNETTE ISLAND, AK VOR/DME	*TOKEE, AK FIX	6000
*9000 - MCA TOKEE, AK FIX , NW BND		
TOKEE, AK FIX	WIBTA, AK FIX	*9000
*4700 - MOCA		
WIBTA, AK FIX	FLIPS, AK FIX	
	W BND	*7500
	E BND	*9000
*6300 - MOCA		
FLIPS, AK FIX	BIORKA ISLAND, AK VORTAC	
	W BND	6100
	E BND	7500

95.6317 ALASKA VOR FEDERAL AIRWAY V317

U.S. CANADIAN BORDER	ANNETTE ISLAND, AK VOR/DME	5000
ANNETTE ISLAND, AK VOR/DME	GESTI, AK FIX	
	SE BND	5000
	NW BND	7000
GESTI, AK FIX	LEVEL ISLAND, AK VOR/DME	*7000
*5300 - MOCA		
LEVEL ISLAND, AK VOR/DME	HOODS, AK FIX	*9000
*6000 - MOCA		
HOODS, AK FIX	*SISTERS ISLAND, AK VORTAC	
	SE BND	**9000
	NW BND	**7000
*7900 - MCA SISTERS ISLAND, AK VORTAC , W BND		
**5500 - MOCA		
SISTERS ISLAND, AK VORTAC	CSPER, AK FIX	
	NE BND	*7000
	SW BND	*15000
*5300 - MOCA		
CSPER, AK FIX	*HAPIT, AK FIX	**15000
*15000 - MRA		
**4000 - MOCA		

95.6318 ALASKA VOR FEDERAL AIRWAY V318

ANNETTE ISLAND, AK VOR/DME	LEVEL ISLAND, AK VOR/DME	6000
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95.6319 ALASKA VOR FEDERAL AIRWAY V319

YAKUTAT, AK VOR/DME	MALAS, AK FIX	
	E BND	2400
	W BND	10000
MALAS, AK FIX	KATAT, AK FIX	#*10000
*5600 - MOCA		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
KATAT, AK FIX	CASEL, AK FIX	*7000
*3400 - MOCA		
CASEL, AK FIX	*JOHNSTONE POINT, AK VOR/DME	4800
*4800 - MCA JOHNSTONE POINT, AK VOR/DME , E BND		

FROM	TO	MEA
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95.6319 ALASKA VOR FEDERAL AIRWAY V319 – CONTINUED

JOHNSTONE POINT, AK VOR/DME	EDELE, AK FIX E BND W BND	 4400 10000
EDELE, AK FIX SNRIS, AK FIX	SNRIS, AK FIX *ANCHORAGE, AK VOR/DME W BND E BND	10000 8200 10000
*8000 - MCA ANCHORAGE, AK ANCHORAGE, AK VOR/DME YONEK, AK FIX	VOR/DME , E BND YONEK, AK FIX *TORTE, AK FIX W BND E BND	 3000 12000 7000
*11400 - MCA TORTE, AK FIX , W BND TORTE, AK FIX	*VEILL, AK FIX	12000
*8000 - MCA VEILL, AK FIX , E BND VEILL, AK FIX	SPARREVOHN, AK VOR/DME E BND W BND	 12000 6600
SPARREVOHN, AK VOR/DME	ACRAN, AK FIX W BND E BND	 *6000 *5200
*5200 - MOCA ACRAN, AK FIX VIDDA, AK FIX	VIDDA, AK FIX WEEKE, AK FIX SW BND NE BND	 6000 *3000 *6000
*2100 - MOCA WEEKE, AK FIX BETHEL, AK VORTAC ARSEN, AK FIX *2000 - MOCA *2000 - GNSS MEA	BETHEL, AK VORTAC ARSEN, AK FIX FANCI, AK FIX	2000 2000 *4000
FANCI, AK FIX HOOPER BAY, AK VOR/DME	HOOPER BAY, AK VOR/DME NANWAK, AK NDB/DME	2000 2300

95.6320 ALASKA VOR FEDERAL AIRWAY V320

MC GRATH, AK VORTAC	ERLAN, AK FIX E BND W BND	 10000 5000
ERLAN, AK FIX	WINOR, AK FIX E BND W BND	 10000 8000
WINOR, AK FIX *9500 - MRA *7600 - MCA FRIDA, AK FIX , W BND	*FRIDA, AK FIX	#10000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
FRIDA, AK FIX RUNTL, AK FIX KAYTI, AK FIX *6000 - MCA ANCHORAGE, AK ANCHORAGE, AK VOR/DME	RUNTL, AK FIX KAYTI, AK FIX *ANCHORAGE, AK VOR/DME VOR/DME , SE BND HOPER, AK FIX SE BND NW BND	8500 6400 3700 10000 6500
HOPER, AK FIX NELLI, AK FIX	NELLI, AK FIX KEBAB, AK FIX NW BND SE BND	10000 10000 5000
KEBAB, AK FIX	JOHNSTONE POINT, AK VOR/DME	5000

FROM	TO	MEA
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95.6321 ALASKA VOR FEDERAL AIRWAY V321

CAPE NEWENHAM, AK NDB/DME	KING SALMON, AK VORTAC	*5000
*4300 - MOCA		
KING SALMON, AK VORTAC	BATTY, AK FIX	
	NE BND	7000
	SW BND	6000
BATTY, AK FIX	AUGEY, AK FIX	7000
AUGEY, AK FIX	HOMER, AK VOR/DME	*4000
*3000 - MOCA		

95.6322 ALASKA VOR FEDERAL AIRWAY V322

KING SALMON, AK VORTAC	KONIC, AK FIX	
	W BND	5000
	E BND	9000
KONIC, AK FIX	WORRI, AK FIX	*9000
*7700 - MOCA		
*7700 - GNSS MEA		
WORRI, AK FIX	MALLT, AK FIX	*9000
*8500 - MOCA		
MALLT, AK FIX	HOMER, AK VOR/DME	
	SW BND	9000
	NE BND	4000

95.6333 ALASKA VOR FEDERAL AIRWAY V333

HOOPER BAY, AK VOR/DME	HALEM, AK FIX	4500
HALEM, AK FIX	FAIRE, AK FIX	*8000
*2300 - MOCA		
FAIRE, AK FIX	NOME, AK VOR/DME	3000
NOME, AK VOR/DME	GAITS, AK FIX	
	N BND	10000
	S BND	4000
GAITS, AK FIX	SHISHMAREF, AK NDB	*10000
*6700 - MOCA		

95.6334 ALASKA VOR FEDERAL AIRWAY V334

AUGEY, AK FIX	CLAMS, AK FIX	*7000
*2000 - MOCA		
*2000 - GNSS MEA		
CLAMS, AK FIX	KENAI, AK VOR/DME	2000
KENAI, AK VOR/DME	ANCHORAGE, AK VOR/DME	2000

95.6350 ALASKA VOR FEDERAL AIRWAY V350

DILLINGHAM, AK VOR/DME	TOGIAK, AK NDB/DME	5000
TOGIAK, AK NDB/DME	BAFIN, AK FIX	5400
BAFIN, AK FIX	BETHEL, AK VORTAC	
	SE BND	5400
	NW BND	2000
BETHEL, AK VORTAC	DAHLS, AK FIX	
	W BND	3600
	E BND	2000

FROM	TO	MEA
95.6350 ALASKA VOR FEDERAL AIRWAY V350 – CONTINUED		
DAHLS, AK FIX *3000 - MOCA *3000 - GNSS MEA	EMMONAK, AK VOR/DME NOME, AK VOR/DME	*3600 3000
95.6351 ALASKA VOR FEDERAL AIRWAY V351		
DILLINGHAM, AK VOR/DME	PORT HEIDEN, AK NDB/DME	3000
95.6357 ALASKA VOR FEDERAL AIRWAY V357		
KODIAK, AK VOR/DME INNOL, AK FIX *3000 - MOCA MOCHO, AK FIX *2300 - MOCA *7000 - GNSS MEA GERKS, AK FIX *3700 - MOCA *7000 - GNSS MEA SANER, AK FIX	INNOL, AK FIX MOCHO, AK FIX GERKS, AK FIX SANER, AK FIX HOMER, AK VOR/DME	3500 *4000 *7500 *9000 6000
95.6385 ALASKA VOR FEDERAL AIRWAY V385		
HOOPER BAY, AK VOR/DME EMMONAK, AK VOR/DME *2800 - MOCA *3000 - GNSS MEA	EMMONAK, AK VOR/DME UNALAKLEET, AK VOR/DME	4500 *3500
95.6388 ALASKA VOR FEDERAL AIRWAY V388		
ANCHORAGE, AK VOR/DME NAPTO, AK FIX	NAPTO, AK FIX KENAI, AK VOR/DME	2300 2400
95.6401 ALASKA VOR FEDERAL AIRWAY V401		
AMBLER, AK NDB/DME *4700 - MOCA FARME, AK FIX KOTZEBUE, AK VOR/DME *2000 - MOCA	FARME, AK FIX KOTZEBUE, AK VOR/DME SHISHMAREF, AK NDB	*5500 2000 *2500
95.6414 ALASKA VOR FEDERAL AIRWAY V414		
GAMBELL, AK NDB/DME	KUKULIAK, AK VOR/DME	3000

FROM	TO	MEA
95.6427 ALASKA VOR FEDERAL AIRWAY V427		
KING SALMON, AK VORTAC	TOMMY, AK FIX	3000
TOMMY, AK FIX	RINGO, AK FIX	*7000
*5300 - MOCA		
*6000 - GNSS MEA		
RINGO, AK FIX	NONDA, AK FIX	*14000
*9000 - MOCA		
*9000 - GNSS MEA		

95.6428 ALASKA VOR FEDERAL AIRWAY V428

BIORKA ISLAND, AK VORTAC	SISTERS ISLAND, AK VORTAC	*7000
*6000 - MOCA		
*6000 - GNSS MEA		
SISTERS ISLAND, AK VORTAC	HAINES, AK NDB	*10000
*8500 - MOCA		
*8500 - GNSS MEA		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
HAINES, AK NDB	U.S. CANADIAN BORDER	*10000
*9600 - MOCA		

95.6435 ALASKA VOR FEDERAL AIRWAY V435

HOMER, AK VOR/DME	KASSI, AK FIX	4400
KASSI, AK FIX	KENAI, AK VOR/DME	
	S BND	*4400
	N BND	*2000
*1700 - MOCA		
*2000 - GNSS MEA		

95.6436 ALASKA VOR FEDERAL AIRWAY V436

ANCHORAGE, AK VOR/DME	TAGER, AK FIX	2200
TAGER, AK FIX	*TALKEETNA, AK VOR/DME	3000
*3800 - MCA TALKEETNA, AK VOR/DME, N BND		
TALKEETNA, AK VOR/DME	*EGRAM, AK FIX	6000
*7600 - MCA EGRAM, AK FIX, N BND		
EGRAM, AK FIX	NENANA, AK VORTAC	10000
NENANA, AK VORTAC	GOLLY, AK FIX	4000
GOLLY, AK FIX	TOLLO, AK FIX	*4000
*3400 - MOCA		
TOLLO, AK FIX	LIVEN, AK FIX	5000
LIVEN, AK FIX	BEETE, AK FIX	*10000
*5500 - MOCA		
BEETE, AK FIX	CHANDALAR LAKE, AK NDB	*10000
*6900 - MOCA		
CHANDALAR LAKE, AK NDB	*ARTIC, AK FIX	10000
*7000 - MCA ARTIC, AK FIX, SE BND		
ARTIC, AK FIX	PIPET, AK FIX	
	SE BND	*10000
	NW BND	*6000
*4500 - MOCA		
*5000 - GNSS MEA		

FROM	TO	MEA
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95.6436 ALASKA VOR FEDERAL AIRWAY V436 - CONTINUED

PIPET, AK FIX	BIXER, AK FIX	
	SE BND	*10000
	NW BND	*5000
*3900 - MOCA		
*4000 - GNSS MEA		
BIXER, AK FIX	ARCON, AK FIX	
	SE BND	10000
	NW BND	3000
ARCON, AK FIX	DEADHORSE, AK VOR/DME	
	SE BND	10000
	NW BND	2000

95.6438 ALASKA VOR FEDERAL AIRWAY V438

KODIAK, AK VOR/DME	SHUYA, AK FIX	4000
SHUYA, AK FIX	HOMER, AK VOR/DME	*6000
*5900 - MOCA		
HOMER, AK VOR/DME	SKILA, AK FIX	5000
SKILA, AK FIX	NAPTO, AK FIX	2400
NAPTO, AK FIX	ANCHORAGE, AK VOR/DME	2300
ANCHORAGE, AK VOR/DME	*BIG LAKE, AK VORTAC	2000
*2600 - MCA BIG LAKE, AK VORTAC , N BND		
BIG LAKE, AK VORTAC	*SURES, AK FIX	7500
*10000 - MRA		
SURES, AK FIX	LIBER, AK FIX	*#11000
*8900 - MOCA		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
LIBER, AK FIX	*GLOWS, AK FIX	7500
*4800 - MCA GLOWS, AK FIX , S BND		
GLOWS, AK FIX	FAIRBANKS, AK VORTAC	3400
FAIRBANKS, AK VORTAC	CHATA, AK FIX	
	N BND	*8000
	S BND	*7000
*5000 - MOCA		
CHATA, AK FIX	BURMA, AK FIX	*8000
*7200 - MOCA		
BURMA, AK FIX	BIJOU, AK FIX	5000
BIJOU, AK FIX	FORT YUKON, AK VORTAC	2300
FORT YUKON, AK VORTAC	RIGGS, AK FIX	*#10000
*9500 - MOCA		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
RIGGS, AK FIX	OILEE, AK FIX	
	SE BND	10000
	NW BND	8000
OILEE, AK FIX	WIMAN, AK FIX	
	SE BND	10000
	NW BND	5000
WIMAN, AK FIX	UVALL, AK FIX	
	SE BND	*10000
	NW BND	*4000
*3200 - MOCA		
UVALL, AK FIX	DEADHORSE, AK VOR/DME	
	SE BND	10000
	NW BND	2000
DEADHORSE, AK VOR/DME	OOSIK, AK FIX	
	W BND	*6000
	E BND	*2000
*1300 - MOCA		
OOSIK, AK FIX	TUNDA, AK FIX	*6000
*1300 - MOCA		

FROM	TO	MEA
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95.6438 ALASKA VOR FEDERAL AIRWAY V438 – CONTINUED

TUNDA, AK FIX	BARROW, AK VOR/DME	
	E BND	*6000
	W BND	*3000
*1500 - MOCA		

95.6439 ALASKA VOR FEDERAL AIRWAY V439

KODIAK, AK VOR/DME	BAREL, AK FIX	*6000
*4200 - MOCA		
BAREL, AK FIX	HOMER, AK VOR/DME	*6000
*5300 - MOCA		

95.6440 ALASKA VOR FEDERAL AIRWAY V440

NOME, AK VOR/DME	*GOLOS, AK FIX	3000
*4500 - MRA		
GOLOS, AK FIX	UNALAKLEET, AK VOR/DME	3000
UNALAKLEET, AK VOR/DME	YUCON, AK FIX	
	W BND	4600
	E BND	8000
YUCON, AK FIX	GANES, AK FIX	*8000
*5600 - MOCA		
*7000 - GNSS MEA		
GANES, AK FIX	MC GRATH, AK VORTAC	
	E BND	6000
	W BND	8000
MC GRATH, AK VORTAC	ERLAN, AK FIX	
	E BND	10000
	W BND	5000
ERLAN, AK FIX	WINOR, AK FIX	
	E BND	10000
	W BND	8000
WINOR, AK FIX	*FRIDA, AK FIX	#10000
*9500 - MRA		
*7600 - MCA FRIDA, AK FIX , W BND		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
FRIDA, AK FIX	*IVANN, AK FIX	6600
*5900 - MCA IVANN, AK FIX , W BND		
IVANN, AK FIX	*ANCHORAGE, AK VOR/DME	2200
*6000 - MCA ANCHORAGE, AK VOR/DME , SE BND		
ANCHORAGE, AK VOR/DME	HOPER, AK FIX	
	SE BND	10000
	NW BND	6500
HOPER, AK FIX	MODDS, AK FIX	10000
MODDS, AK FIX	MIDDLETON ISLAND, AK VOR/DME	
	SE BND	6000
	NW BND	10000
MIDDLETON ISLAND, AK VOR/DME	OCULT, AK FIX	*8000
*2000 - MOCA		
*7000 - GNSS MEA		
OCULT, AK FIX	YAKUTAT, AK VOR/DME	2000
YAKUTAT, AK VOR/DME	CENTA, AK FIX	
	SE BND	9000
	NW BND	2000
CENTA, AK FIX	SALIS, AK FIX	#*9000
*2000 - MOCA		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		

FROM	TO	MEA
95.6440 ALASKA VOR FEDERAL AIRWAY V440 - CONTINUED		
SALIS, AK FIX	BIORKA ISLAND, AK VORTAC	
	NW BND	9000
	SE BND	5100
BIORKA ISLAND, AK VORTAC	LATCH, AK FIX	
	NW BND	4500
	SE BND	12000
LATCH, AK FIX	U.S. CANADIAN BORDER	*12000
*4200 - MOCA		

95.6441 ALASKA VOR FEDERAL AIRWAY V441

MIDDLETON ISLAND, AK	DEALS, AK FIX	6000
VOR/DME		
DEALS, AK FIX	*SEWAR, AK FIX	**9000
*10000 - MRA		
**8400 - MOCA		
SEWAR, AK FIX	BROIL, AK FIX	*10000
*7700 - MOCA		
*7700 - GNSS MEA		
BROIL, AK FIX	*HATUL, AK FIX	7100
*5600 - MCA HATUL, AK FIX , SE BND		
HATUL, AK FIX	*ANCHORAGE, AK VOR/DME	4600
*4200 - MCA ANCHORAGE, AK VOR/DME , SE BND		

95.6444 ALASKA VOR FEDERAL AIRWAY V444

BARROW, AK VOR/DME	CHIPS, AK FIX	*2000
*1200 - MOCA		
CHIPS, AK FIX	BRONX, AK FIX	*5000
*1200 - MOCA		
BRONX, AK FIX	EVANSVILLE, AK NDB	*10000
*9100 - MOCA		
EVANSVILLE, AK NDB	BETTLES, AK VOR/DME	3500
BETTLES, AK VOR/DME	*CYCLE, AK FIX	3500
*4400 - MCA CYCLE, AK FIX , SE BND		
CYCLE, AK FIX	BRION, AK FIX	*6000
*5200 - MOCA		
BRION, AK FIX	LIVEN, AK FIX	*9000
*5200 - MOCA		
LIVEN, AK FIX	HESSE, AK FIX	*5000
*4400 - MOCA		
HESSE, AK FIX	FAIRBANKS, AK VORTAC	*5000
*4900 - MOCA		
FAIRBANKS, AK VORTAC	BIG DELTA, AK VORTAC	*5000
*4200 - MOCA		
BIG DELTA, AK VORTAC	NORTHWAY, AK VORTAC	*8000
*7800 - MOCA		
NORTHWAY, AK VORTAC	U. S. CANADIAN BORDER	#*9600
*8900 - MOCA		
#FOR THAT AIRSPACE OVER U.S. TERRITORY.		

FROM	TO	MEA
95.6445 ALASKA VOR FEDERAL AIRWAY V445		
*FAIRBANKS, AK VORTAC	WILTS, AK FIX	5000
*4000 - MCA FAIRBANKS, AK VORTAC , W BND		
WILTS, AK FIX	TOLLO, AK FIX	*5000
*4200 - MOCA		
TOLLO, AK FIX	KANUT, AK FIX	7000
KANUT, AK FIX	BETTLES, AK VOR/DME	
	SE BND	7000
	NW BND	3500

95.6447 ALASKA VOR FEDERAL AIRWAY V447

FAIRBANKS, AK VORTAC	*DOMEY, AK FIX	**5000
*7000 - MRA		
**4400 - MOCA		
DOMEY, AK FIX	TATTA, AK FIX	
	NW BND	*11000
	SE BND	*7000
*5400 - MOCA		
TATTA, AK FIX	CHANDALAR LAKE, AK NDB	#*11000
*8000 - MOCA		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		

95.6452 ALASKA VOR FEDERAL AIRWAY V452

KUKULIAK, AK VOR/DME	NOME, AK VOR/DME	3000
NOME, AK VOR/DME	MOSES POINT, AK VOR/DME	*5000
*4200 - MOCA		
MOSES POINT, AK VOR/DME	*DIBVY, AK FIX	**6000
*6000 - MRA		
**5200 - MOCA		
DIBVY, AK FIX	GALENA, AK VOR/DME	3000
GALENA, AK VOR/DME	HORSI, AK FIX	
	E BND	*8000
	W BND	*4000
*4000 - GNSS MEA		
HORSI, AK FIX	BONET, AK FIX	*8000
*4000 - MOCA		
*4000 - GNSS MEA		
BONET, AK FIX	NENANA, AK VORTAC	*7000
*4400 - MOCA		
*4400 - GNSS MEA		

95.6453 ALASKA VOR FEDERAL AIRWAY V453

KING SALMON, AK VORTAC	DILLINGHAM, AK VOR/DME	2100
DILLINGHAM, AK VOR/DME	EDUCE, AK FIX	*7000
*6500 - MOCA		
EDUCE, AK FIX	BETHEL, AK VORTAC	
	S BND	*7000
	N BND	*4000
*2500 - MOCA		
*3000 - GNSS MEA		
BETHEL, AK VORTAC	WAPRO, AK FIX	*9000
*4300 - MOCA		
WAPRO, AK FIX	UNALAKLEET, AK VOR/DME	*11000
*5100 - MOCA		

FROM	TO	MEA
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95.6454 ALASKA VOR FEDERAL AIRWAY V454

KING SALMON, AK VORTAC *4300 - MOCA	DILLINGHAM, AK VOR/DME	*5000
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95.6456 ALASKA VOR FEDERAL AIRWAY V456

COLD BAY, AK VORTAC	BINAL, AK FIX SW BND NE BND	*4000 *14000
*3400 - MOCA		
BINAL, AK FIX *3400 - MOCA	TANIE, AK FIX	#*14000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
TANIE, AK FIX *1600 - MOCA	KING SALMON, AK VORTAC	#*3000
#MEA 14000 SW WHEN DLG FSS SHUT DOWN		
KING SALMON, AK VORTAC	STREW, AK FIX W BND E BND	*3000 *9000
*2300 - MOCA		
STREW, AK FIX	BITOP, AK FIX E BND W BND	*9000 *5000
*5000 - MOCA		
*5000 - GNSS MEA		
BITOP, AK FIX	*NOSKY, AK FIX	**9000
*8200 - MCA NOSKY, AK FIX , NE BND		
**5200 - MOCA		
**6000 - GNSS MEA		
NOSKY, AK FIX	*TUCKS, AK FIX	**13000
*10300 - MCA TUCKS, AK FIX , SW BND		
**12300 - MOCA		
TUCKS, AK FIX *3300 - MOCA	KENAI, AK VOR/DME	*5000
KENAI, AK VOR/DME	ANCHORAGE, AK VOR/DME	2000
ANCHORAGE, AK VOR/DME	*BIG LAKE, AK VORTAC	2000
*5000 - MCA BIG LAKE, AK VORTAC , NE BND		
BIG LAKE, AK VORTAC	MATTA, AK FIX	7000
MATTA, AK FIX	*UREKA, AK FIX	**10000
*7200 - MCA UREKA, AK FIX , SW BND		
**9400 - MOCA		
UREKA, AK FIX	SMOKY, AK FIX NE BND SW BND	*7000 *10000
*6300 - MOCA		
*7000 - GNSS MEA		
SMOKY, AK FIX	GULKANA, AK VOR/DME NE BND SW BND	*5000 *10000
*5000 - GNSS MEA		
GULKANA, AK VOR/DME	*SANKA, AK FIX NE BND SW BND	11000 6000
*8000 - MCA SANKA, AK FIX , NE BND		
SANKA, AK FIX	NORTHWAY, AK VORTAC	*11000
*10500 - MOCA		

FROM	TO	MEA
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95.6457 ALASKA VOR FEDERAL AIRWAY V457

ILIAMNA, AK NDB/DME	*AWOMY, AK FIX	
	W BND	5700
	E BND	9000
*7000 - MCA AWOMY, AK FIX , E BND		
AWOMY, AK FIX	*MOFOF, AK FIX	9000
*7000 - MCA MOFOF, AK FIX , W BND		
MOFOF, AK FIX	KENAI, AK VOR/DME	
	W BND	9000
	E BND	3000

95.6459 ALASKA VOR FEDERAL AIRWAY V459

EMMONAK, AK VOR/DME	ST MARYS, AK NDB	3000
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95.6462 ALASKA VOR FEDERAL AIRWAY V462

CAPE NEWENHAM, AK NDB/DME	DILLINGHAM, AK VOR/DME	*5000
*4300 - MOCA		
DILLINGHAM, AK VOR/DME	KOWOK, AK FIX	*3000
*2500 - MOCA		
KOWOK, AK FIX	SAHOK, AK FIX	*5000
*3800 - MOCA		
SAHOK, AK FIX	NONDA, AK FIX	#*14000
*8800 - MOCA		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
NONDA, AK FIX	*BLUGA, AK FIX	**14000
*10000 - MCA BLUGA, AK FIX , SW BND		
**12400 - MOCA		
BLUGA, AK FIX	*AMOTT, AK FIX	7000
*7400 - MCA AMOTT, AK FIX , SW BND		
AMOTT, AK FIX	ANCHORAGE, AK VOR/DME	4000

95.6473 ALASKA VOR FEDERAL AIRWAY V473

LEVEL ISLAND, AK VOR/DME	FLIPS, AK FIX	*7000
*6300 - MOCA		
FLIPS, AK FIX	BIORKA ISLAND, AK VORTAC	
	W BND	6100
	E BND	7500

95.6477 ALASKA VOR FEDERAL AIRWAY V477

GALENA, AK VOR/DME	HUSLIA, AK VOR/DME	3000
HUSLIA, AK VOR/DME	ATAGO, AK FIX	
	W BND	*4000
	E BND	*3500
*2500 - MOCA		
ATAGO, AK FIX	DESOY, AK FIX	4000
DESOY, AK FIX	SELAWIK, AK VOR/DME	
	W BND	2500
	E BND	4000
SELAWIK, AK VOR/DME	JELLE, AK FIX	3500
JELLE, AK FIX	AMBLER, AK NDB/DME	
	NE BND	5000
	SW BND	4000

FROM	TO	MEA
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95.6480 ALASKA VOR FEDERAL AIRWAY V480

MOUNT MOFFETT, AK NDB/DME	ST PAUL ISLAND, AK NDB/DME	6000
ST PAUL ISLAND, AK NDB/DME	ZESKA, AK FIX	*10000
*1800 - MOCA		
ZESKA, AK FIX	BETHEL, AK VORTAC	
	SW BND	*10000
	NE BND	*2000
*1400 - MOCA		
BETHEL, AK VORTAC	CABOT, AK FIX	
	W BND	*2000
	E BND	*4000
*1400 - MOCA		
CABOT, AK FIX	ANIAK, AK FIX	*4000
*2300 - MOCA		
ANIAK, AK FIX	JOANY, AK FIX	#*8000
*5600 - MOCA		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
#CONTINUOUS NAV SIGNAL COVERAGE DOES NOT EXIST BETWEEN		
BETHEL 110 NM & MCGRATH 60 NM		
JOANY, AK FIX	MC GRATH, AK VORTAC	
	W BND	*8000
	E BND	*6000
*5200 - MOCA		
MC GRATH, AK VORTAC	MEFRA, AK FIX	
	W BND	4000
	E BND	8000
MEFRA, AK FIX	NENANA, AK VORTAC	*8000
*5000 - MOCA		
NENANA, AK VORTAC	FAIRBANKS, AK VORTAC	*4000
*2700 - MOCA		

95.6481 ALASKA VOR FEDERAL AIRWAY V481

JOHNSTONE POINT, AK VOR/DME	FIDAL, AK FIX	
	S BND	5000
	N BND	10000
FIDAL, AK FIX	ROBES, AK FIX	
	S BND	8000
	N BND	10000
ROBES, AK FIX	KLUNG, AK FIX	10000
KLUNG, AK FIX	GULKANA, AK VOR/DME	
	N BND	6500
	S BND	10000
GULKANA, AK VOR/DME	DOZEY, AK FIX	
	N BND	12000
	S BND	4000
DOZEY, AK FIX	PAXON, AK FIX	
	S BND	7000
	N BND	12000
PAXON, AK FIX	*DONEL, AK FIX	**12000
*10500 - MCA DONEL, AK FIX , S BND		
**11500 - MOCA		
DONEL, AK FIX	*BIG DELTA, AK VORTAC	
	N BND	7000
	S BND	12000
*7800 - MCA BIG DELTA, AK VORTAC , S BND		

FROM	TO	MEA
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95.6481 ALASKA VOR FEDERAL AIRWAY V481 - CONTINUED

BIG DELTA, AK VORTAC	FORT YUKON, AK VORTAC	#7000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		

95.6482 ALASKA VOR FEDERAL AIRWAY V482

JOHNSTONE POINT, AK VOR/DME	TOSIN, AK FIX	*10000
*9300 - MOCA		
TOSIN, AK FIX	RIVVA, AK FIX	6000
RIVVA, AK FIX	GULKANA, AK VOR/DME	*5000
*4500 - MOCA		

95.6488 ALASKA VOR FEDERAL AIRWAY V488

HOOPER BAY, AK VOR/DME	AKELT, AK FIX	
	NE BND	10000
	SW BND	4000
AKELT, AK FIX	ALMOT, AK FIX	*10000
*4000 - MOCA		
ALMOT, AK FIX	UNALAKLEET, AK VOR/DME	
	SW BND	10000
	NE BND	3000
UNALAKLEET, AK VOR/DME	EDMON, AK FIX	
	NE BND	*5500
	SW BND	*4000
*4000 - MOCA		
EDMON, AK FIX	VENCE, AK FIX	*5500
*4900 - MOCA		
VENCE, AK FIX	GALENA, AK VOR/DME	
	SW BND	*5500
	NE BND	*3000
*2500 - MOCA		
GALENA, AK VOR/DME	KUHZE, AK FIX	*5000
*4400 - MOCA		
KUHZE, AK FIX	CHOKK, AK FIX	6000
CHOKK, AK FIX	TANANA, AK VOR/DME	
	SW BND	6000
	NE BND	3000
TANANA, AK VOR/DME	*REEBA, AK FIX	
	E BND	**7000
	W BND	**4000
*7000 - MRA		
**4000 - MOCA		
REEBA, AK FIX	GOLLY, AK FIX	*7000
*5000 - MOCA		
GOLLY, AK FIX	*FAIRBANKS, AK VORTAC	5000
*4700 - MCA FAIRBANKS, AK VORTAC, W BND		

95.6489 ALASKA VOR FEDERAL AIRWAY V489

GALENA, AK VOR/DME	HORSI, AK FIX	
	E BND	*8000
	W BND	*4000
*4000 - GNSS MEA		

FROM	TO	MEA
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95.6489 ALASKA VOR FEDERAL AIRWAY V489 - CONTINUED

HORSI, AK FIX	ROSII, AK FIX	
	NE BND	*6000
	SW BND	*8000
*4000 - MOCA		
ROSII, AK FIX	TANANA, AK VOR/DME	
	NE BND	3400
	SW BND	6000

95.6491 ALASKA VOR FEDERAL AIRWAY V491

BIG LAKE, AK VORTAC	TALKEETNA, AK VOR/DME	3000
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95.6496 ALASKA VOR FEDERAL AIRWAY V496

HOOVER BAY, AK VOR/DME	ST MARYS, AK NDB	3500
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95.6498 ALASKA VOR FEDERAL AIRWAY V498

MC GRATH, AK VORTAC	NIXON, AK FIX	
	NW BND	*6000
	SE BND	*4500
*4500 - MOCA		
NIXON, AK FIX	AHVUH, AK FIX	*6000
*5500 - MOCA		
AHVUH, AK FIX	GALENA, AK VOR/DME	
	SE BND	*6000
	NW BND	*4000
*4000 - MOCA		
GALENA, AK VOR/DME	EBIKY, AK FIX	*3000
*2500 - MOCA		
EBIKY, AK FIX	*KATEL, AK FIX	
	NW BND	**8000
	SE BND	**4000
*8000 - MRA		
**4000 - MOCA		
KATEL, AK FIX	BALIN, AK FIX	*8000
*5300 - MOCA		
BALIN, AK FIX	KOTZEBUE, AK VOR/DME	
	SE BND	*8000
	NW BND	*2000
*2000 - MOCA		

95.6504 ALASKA VOR FEDERAL AIRWAY V504

NENANA, AK VORTAC	KANUT, AK FIX	7000
KANUT, AK FIX	BETTLES, AK VOR/DME	
	NW BND	3500
	SE BND	7000
BETTLES, AK VOR/DME	EVANSVILLE, AK NDB	3500
EVANSVILLE, AK NDB	DERIK, AK FIX	*10000
*9500 - MOCA		

FROM	TO	MEA
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95.6504 ALASKA VOR FEDERAL AIRWAY V504 - CONTINUED

DERIK, AK FIX	MUKTU, AK FIX	
	S BND	*10000
	N BND	*7000
*3800 - MOCA		
MUKTU, AK FIX	SHELO, AK FIX	
	S BND	*10000
	N BND	*5000
*3000 - MOCA		
SHELO, AK FIX	DEADHORSE, AK VOR/DME	
	S BND	10000
	N BND	2000

95.6506 ALASKA VOR FEDERAL AIRWAY V506

CJAYY, AK FIX	KODIAK, AK VOR/DME	4000
KODIAK, AK VOR/DME	BREMI, AK FIX	#*12000
*9900 - MOCA		
*10000 - GNSS MEA		
#KODIAK R-280 UNUSABLE BYD 20NM BLO 12000		
BREMI, AK FIX	KING SALMON, AK VORTAC	
	E BND	12000
	W BND	5000
KING SALMON, AK VORTAC	KOWOK, AK FIX	*3000
*2400 - MOCA		
KOWOK, AK FIX	CAYON, AK FIX	*8000
*7000 - MOCA		
*7000 - GNSS MEA		
CAYON, AK FIX	BETHEL, AK VORTAC	
	E BND	8000
	W BND	4000
BETHEL, AK VORTAC	MARSI, AK FIX	
	W BND	16000
	E BND	2000
MARSI, AK FIX	JOHNI, AK FIX	#*16000
*3200 - MOCA		
*4000 - GNSS MEA		
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.		
JOHNI, AK FIX	DACIA, AK FIX	*8000
*3200 - MOCA		
*4000 - GNSS MEA		
DACIA, AK FIX	NOME, AK VOR/DME	
	S BND	*8000
	N BND	*4000
*3200 - MOCA		
NOME, AK VOR/DME	BAIME, AK FIX	
	N BND	7000
	S BND	6000
BAIME, AK FIX	SETUP, AK FIX	*7000
*5700 - MOCA		
*6000 - GNSS MEA		
SETUP, AK FIX	KOTZEBUE, AK VOR/DME	
	S BND	7000
	N BND	2000
KOTZEBUE, AK VOR/DME	HOTHAM, AK NDB	2000
HOTHAM, AK NDB	SHOKK, AK FIX	*6000
*5000 - MOCA		
*5000 - GNSS MEA		
SHOKK, AK FIX	MEADE, AK FIX	*10000
*7000 - MOCA		
*8000 - GNSS MEA		

FROM	TO	MEA
95.6506 ALASKA VOR FEDERAL AIRWAY V506 - CONTINUED		
MEADE, AK FIX	BARROW, AK VOR/DME	
	S BND	*10000
	N BND	*2000
*1100 - MOCA		
95.6507 ALASKA VOR FEDERAL AIRWAY V507		
NOME, AK VOR/DME	PHOTO, AK FIX	
	NW BND	*13000
	SE BND	*6000
*5700 - MOCA		
PHOTO, AK FIX	ESKAR, AK FIX	*13000
*6000 - MOCA		
*6000 - GNSS MEA		
ESKAR, AK FIX	KOTZEBUE, AK VOR/DME	
	SW BND	*13000
	NE BND	*2100
*2100 - MOCA		
95.6508 ALASKA VOR FEDERAL AIRWAY V508		
MIDDLETON ISLAND, AK	DEALS, AK FIX	6000
VOR/DME		
DEALS, AK FIX	*SEWAR, AK FIX	**9000
*10000 - MRA		
**8400 - MOCA		
SEWAR, AK FIX	*SKILA, AK FIX	**9000
*5100 - MCA SKILA, AK FIX , E BND		
**7800 - MOCA		
**8000 - GNSS MEA		
SKILA, AK FIX	ROJAR, AK FIX	2400
ROJAR, AK FIX	KENAI, AK VOR/DME	2000
KENAI, AK VOR/DME	*NEARR, AK FIX	**3000
*7600 - MCA NEARR, AK FIX , W BND		
**2500 - MOCA		
NEARR, AK FIX	AKGAS, AK FIX	12000
AKGAS, AK FIX	SPARREVOHN, AK VOR/DME	
	W BND	6000
	E BND	12000
SPARREVOHN, AK VOR/DME	ANIAK, AK NDB	6000
95.6510 ALASKA VOR FEDERAL AIRWAY V510		
EMMONAK, AK VOR/DME	ANVIK, AK NDB	3900
ANVIK, AK NDB	SABOC, AK FIX	
	E BND	*10000
	W BND	*9000
*6200 - MOCA		
*7000 - GNSS MEA	SABOC, AK FIX MC GRATH, AK VORTAC	*10000
*6200 - MOCA		
*7000 - GNSS MEA		
MC GRATH, AK VORTAC	ERLAN, AK FIX	
	E BND	10000
	W BND	5000

FROM	TO	MEA
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95.6510 ALASKA VOR FEDERAL AIRWAY V510 - CONTINUED

ERLAN, AK FIX	WINOR, AK FIX	
	E BND	10000
	W BND	8000
WINOR, AK FIX	FFITZ, AK FIX	10000
FFITZ, AK FIX	ROHHN, AK FIX	*10000
*8800 - MOCA		
*9000 - GNSS MEA		
ROHHN, AK FIX	BIG LAKE, AK VORTAC	*4000
*3400 - MOCA		

95.6515 ALASKA VOR FEDERAL AIRWAY V515

GULKANA, AK VOR/DME	MERIE, AK FIX	5000
MERIE, AK FIX	*BIG DELTA, AK VORTAC	12000
*8100 - MCA	BIG DELTA, AK VORTAC , S BND	

95.6531 ALASKA VOR FEDERAL AIRWAY V531

*FAIRBANKS, AK VORTAC	GOLLY, AK FIX	5000
*4700 - MCA FAIRBANKS, AK VORTAC , W BND		
GOLLY, AK FIX	*REEBA, AK FIX	**7000
*7000 - MRA		
**5000 - MOCA		
REEBA, AK FIX	TANANA, AK VOR/DME	
	E BND	*7000
	W BND	*4000
*4000 - MOCA		
TANANA, AK VOR/DME	ELCON, AK FIX	
	W BND	*6500
	E BND	*5400
*5400 - MOCA		
ELCON, AK FIX	CENSE, AK FIX	*6500
*5700 - MOCA		
CENSE, AK FIX	HUSLIA, AK VOR/DME	
	W BND	*3500
	E BND	*6500
*3000 - MOCA		
HUSLIA, AK VOR/DME	ATAGO, AK FIX	
	W BND	*4000
	E BND	*3500
*2500 - MOCA		
ATAGO, AK FIX	DESOY, AK FIX	*4000
*3900 - MOCA		
DESOY, AK FIX	SELAWIK, AK VOR/DME	
	W BND	*2500
	E BND	*4000
*2500 - MOCA		
SELAWIK, AK VOR/DME	KOTZEBUE, AK VOR/DME	2500
KOTZEBUE, AK VOR/DME	BERJO, AK FIX	
	SE BND	*2500
	NW BND	*8000
*2500 - MOCA		
BERJO, AK FIX	POINT HOPE, AK NDB	*8000
*4000 - MOCA		

FROM	TO	MEA
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95.6593 ALASKA VOR FEDERAL AIRWAY V593

BIORKA ISLAND, AK VORTAC	LYRIC, AK FIX	
	SE BND	*6000
	NW BND	*8000
*4800 - MOCA		
LYRIC, AK FIX	SISTERS ISLAND, AK VORTAC	*8000
*5800 - MOCA		
*5800 - GNSS MEA		

95.6603 ALASKA VOR FEDERAL AIRWAY V603

ELFEE, AK NDB	DILLINGHAM, AK VOR/DME	2700
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95.6617 ALASKA VOR FEDERAL AIRWAY V617

HOMER, AK VOR/DME	JOHNSTONE POINT, AK VOR/DME	*12000
*8600 - MOCA		
*9000 - GNSS MEA		

95.6619 ALASKA VOR FEDERAL AIRWAY V619

PORT HEIDEN, AK NDB/DME	CHINOOK, AK NDB	4000
CHINOOK, AK NDB	DILLINGHAM, AK VOR/DME	3000

95.6621 ALASKA VOR FEDERAL AIRWAY V621

BARROW, AK VOR/DME	ATQASUK, AK NDB	2000
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FROM

TO

MEA

§95.6401 HAWAII VOR FEDERAL AIRWAYS**95.6401 HAWAII VOR FEDERAL AIRWAY V1**

KONA, HI VORTAC	*REEFS, HI FIX	5000
*4100 - MCA REEFS, HI FIX , SE BND		
REEFS, HI FIX	MOANA, HI FIX	*2000
*1300 - MOCA		
MOANA, HI FIX	ROWIN, HI FIX	*4000
*1300 - MOCA		
ROWIN, HI FIX	*LAVAS, HI FIX	**8000
*7000 - MRA		
**1300 - MOCA		
LAVAS, HI FIX	MAKEN, HI FIX	*7000
*5000 - MOCA		
MAKEN, HI FIX	HARPO, HI FIX	6300
HARPO, HI FIX	MAUI, HI VORTAC	6000

95.6402 HAWAII VOR FEDERAL AIRWAY V2

HONOLULU, HI VORTAC	PALAY, HI FIX	3500
PALAY, HI FIX	LANAI, HI VORTAC	4000
LANAI, HI VORTAC	KEIKI, HI FIX	5000
KEIKI, HI FIX	*HARPO, HI FIX	**5000
*5600 - MCA HARPO, HI FIX , SE BND		
**2500 - MOCA		
HARPO, HI FIX	UPOLU POINT, HI VORTAC	6300
UPOLU POINT, HI VORTAC	WAPIO, HI FIX	*7000
*6000 - MOCA		
WAPIO, HI FIX	PARIS, HI FIX	
	E BND	*4500
	W BND	*6000
*4000 - MOCA		
PARIS, HI FIX	*ARBOR, HI FIX	**4000
*8000 - MRA		
**3000 - MOCA		
ARBOR, HI FIX	HILO, HI VORTAC	3000

95.6403 HAWAII VOR FEDERAL AIRWAY V3

MYNAH, HI FIX	*JASON, HI FIX	3500
*5400 - MCA JASON, HI FIX , NE BND		
JASON, HI FIX	KAMUELA, HI VOR/DME	6700
KAMUELA, HI VOR/DME	TIGAH, HI FIX	6500
TIGAH, HI FIX	PARIS, HI FIX	5000

95.6404 HAWAII VOR FEDERAL AIRWAY V4

HONOLULU, HI VORTAC	*GECKO, HI FIX	**4000
*10000 - MRA		
**2800 - MOCA		

FROM	TO	MEA
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95.6404 HAWAII VOR FEDERAL AIRWAY V4 -CONTINUED

GECKO, HI FIX	*ZUKEY, HI FIX	
	W BND	16000
	E BND	4000
*16000 - MRA		
ZUKEY, HI FIX	BINJO, HI FIX	
	W BND	29000
	E BND	16000

95.6405 HAWAII VOR FEDERAL AIRWAY V5

KONA, HI VORTAC	*MYNAH, HI FIX	5200
*4400 - MCA MYNAH, HI FIX , SE BND		
MYNAH, HI FIX	*HEFTI, HI FIX	**2000
*4100 - MCA HEFTI, HI FIX , NW BND		
**1300 - MOCA		
HEFTI, HI FIX	MAKEN, HI FIX	7600

95.6406 HAWAII VOR FEDERAL AIRWAY V6

BLUSH, HI FIX	PLUMB, HI FIX	*5000
*1200 - MOCA		
PLUMB, HI FIX	MAUI, HI VORTAC	6300

95.6407 HAWAII VOR FEDERAL AIRWAY V7

KONA, HI VORTAC	*REEFS, HI FIX	5000
*4100 - MCA REEFS, HI FIX , SE BND		
REEFS, HI FIX	MOANA, HI FIX	*2000
*1300 - MOCA		
MOANA, HI FIX	ROWIN, HI FIX	*4000
*1300 - MOCA		
ROWIN, HI FIX	LANAI, HI VORTAC	4000
LANAI, HI VORTAC	MOLOKAI, HI VORTAC	4000
JOELE, OP FIX	ATINE, HI FIX	4000
ATINE, HI FIX	BERLE, HI FIX	7000
BERLE, HI FIX	ZIGIE, OP FIX	22000

95.6408 HAWAII VOR FEDERAL AIRWAY V8

HONOLULU, HI VORTAC	*ALANA, HI FIX	3000
*5000 - MRA		
ALANA, HI FIX	HAUNA, HI FIX	3000
HAUNA, HI FIX	LOKIE, HI FIX	2000
LOKIE, HI FIX	MOLOKAI, HI VORTAC	3500
MOLOKAI, HI VORTAC	BLUSH, HI FIX	5000
BLUSH, HI FIX	FISHE, HI FIX	*4000
*1200 - MOCA		

FROM	TO	MEA
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95.6411 HAWAII VOR FEDERAL AIRWAY V11

REEFS, HI FIX	*FLITT, HI FIX	**3000
*4600 - MCA FLITT, HI FIX , N BND		
**2000 - MOCA		
**2000 - GNSS MEA		
FLITT, HI FIX	UPOLU POINT, HI VORTAC	5700
UPOLU POINT, HI VORTAC	BARBY, HI FIX	5400
BARBY, HI FIX	*SWEEP, HI FIX	**5400
*5400 - MCA SWEEP, HI FIX , S BND		
**3000 - MOCA		
SWEEP, HI FIX	MAUI, HI VORTAC	5000

95.6412 HAWAII VOR FEDERAL AIRWAY V12

*KATHS, HI FIX	**NONNI, HI FIX	29000
*29000 - MRA		
**29000 - MRA		
NONNI, HI FIX	*LEANE, HI FIX	
	W BND	29000
	E BND	16000
*16000 - MRA		
LEANE, HI FIX	*KEOLA, HI FIX	
	W BND	16000
	E BND	5000
*10000 - MRA		
KEOLA, HI FIX	*SHIGI, HI FIX	4000
*5000 - MRA		
SHIGI, HI FIX	HONOLULU, HI VORTAC	4000
HONOLULU, HI VORTAC	*KOKO HEAD, HI VORTAC	5000
*4500 - MCA KOKO HEAD, HI VORTAC , W BND		
KOKO HEAD, HI VORTAC	BAMBO, OP FIX	4500
BAMBO, OP FIX	MAGGI, HI FIX	5000
MAGGI, HI FIX	*SHARK, HI FIX	
	NE BND	**16000
	SW BND	**5000
*16000 - MRA		
**1200 - MOCA		

95.6413 HAWAII VOR FEDERAL AIRWAY V13

KOKO HEAD, HI VORTAC	BAMBO, OP FIX	4500
BAMBO, OP FIX	TOADS, HI FIX	5000

95.6415 HAWAII VOR FEDERAL AIRWAY V15

*CANON, HI FIX	LILIA, HI FIX	
	W BND	32000
	E BND	8000
*32000 - MRA		
LILIA, HI FIX	SOUTH KAUALI, HI VORTAC	*8000
*4800 - MOCA		
SOUTH KAUALI, HI VORTAC	LIHUE, HI VORTAC	5000
LIHUE, HI VORTAC	BOOKE, HI FIX	4000

FROM TO MEA

95.6415 HAWAII VOR FEDERAL AIRWAY V15

BOOKE, HI FIX	*SHIGI, HI FIX	5000
*5000 - MRA		
SHIGI, HI FIX	HONOLULU, HI VORTAC	4000
HONOLULU, HI VORTAC	*KOKO HEAD, HI VORTAC	5000
*4500 - MCA KOKO HEAD, HI VORTAC , W BND		
KOKO HEAD, HI VORTAC	MABBL, HI FIX	
	E BND	3500
	W BND	4500
MABBL, HI FIX	*MOLOKAI, HI VORTAC	
	E BND	3500
	W BND	4500
*5000 - MCA MOLOKAI, HI VORTAC , E BND		
MOLOKAI, HI VORTAC	*LORET, HI FIX	7000
*7800 - MCA LORET, HI FIX , E BND		
LORET, HI FIX	*MAUI, HI VORTAC	8000
*6800 - MCA MAUI, HI VORTAC , W BND		
MAUI, HI VORTAC	*BARBY, HI FIX	8400
*9800 - MCA BARBY, HI FIX , E BND		
BARBY, HI FIX	*RABAT, HI FIX	**10000
*10000 - MCA RABAT, HI FIX , W BND		
**2700 - MOCA		
RABAT, HI FIX	*PUMIC, HI FIX	6000
*10000 - MRA		
PUMIC, HI FIX	PARIS, HI FIX	4000
PARIS, HI FIX	*ARBOR, HI FIX	**4000
*8000 - MRA		
**3000 - MOCA		
ARBOR, HI FIX	HILO, HI VORTAC	3000
HILO, HI VORTAC	HODAY, HI FIX	2000
HODAY, HI FIX	EELIC, HI FIX	10000
EELIC, HI FIX	KUMME, HI FIX	
	W BND	10000
	E BND	31000
KUMME, HI FIX	MAITI, HI FIX	31000

95.6416 HAWAII VOR FEDERAL AIRWAY V16

*SYVAD, HI FIX	**PUPPI, HI FIX	
	W BND	32000
	E BND	14000
*32000 - MRA		
**14000 - MRA		
PUPPI, HI FIX	*OHANA, HI FIX	
	W BND	14000
	E BND	5000
*5000 - MRA		
OHANA, HI FIX	SOUTH KAUAI, HI VORTAC	
	W BND	14000
	SE BND	5000
SOUTH KAUAI, HI VORTAC	MORKE, HI FIX	
	NW BND	5000
	SE BND	3000
MORKE, HI FIX	*NAPUA, HI FIX	3000
*6000 - MRA		
NAPUA, HI FIX	*GRAIL, HI FIX	6000
*9000 - MRA		

FROM	TO	MEA
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95.6416 HAWAII VOR FEDERAL AIRWAY V16 - CONTINUED

GRAIL, HI FIX	*KEOLA, HI FIX	9000
*10000 - MRA		
KEOLA, HI FIX	*GECKO, HI FIX	10000
*10000 - MRA		
GECKO, HI FIX	*ALANA, HI FIX	7000
*5000 - MRA		
ALANA, HI FIX	JULLE, HI FIX	5000
JULLE, HI FIX	GRAMY, HI FIX	2000
GRAMY, HI FIX	LANAI, HI VORTAC	4000
LANAI, HI VORTAC	*LAVAS, HI FIX	4300
*7000 - MRA		
LAVAS, HI FIX	*UPOLU POINT, HI VORTAC	6000
*5800 - MCA UPOLU POINT, HI VORTAC , E BND		
UPOLU POINT, HI VORTAC	TIGAH, HI FIX	7000
TIGAH, HI FIX	*OKALA, HI FIX	**8000
*6500 - MCA OKALA, HI FIX , W BND		
**5500 - MOCA		
OKALA, HI FIX	*ARBOR, HI FIX	**8000
*8000 - MRA		
**5500 - MOCA		
ARBOR, HI FIX	HILO, HI VORTAC	3000

95.6417 HAWAII VOR FEDERAL AIRWAY V17

HARPO, HI FIX	MAUI, HI VORTAC	6000
STAIT, HI FIX	FREDI, HI FIX	*17000
*1200 - MOCA		
FREDI, HI FIX	REXIE, HI FIX	*28000
*1200 - MOCA		

95.6420 HAWAII VOR FEDERAL AIRWAY V20

HONOLULU, HI VORTAC	HAUNA, HI FIX	3000
HAUNA, HI FIX	JULLE, HI FIX	4000
JULLE, HI FIX	JORDA, HI FIX	5000
JORDA, HI FIX	*FIRES, HI FIX	
	NW BND	**10000
	SE BND	**13000
*13000 - MRA		
**1300 - MOCA		
FIRES, HI FIX	*HOKLA, HI FIX	**13000
*13000 - MRA		
**1300 - MOCA		
HOKLA, HI FIX	TYPHO, HI FIX	*8000
*1300 - MOCA		
TYPHO, HI FIX	*ROBYN, HI FIX	
	SE BND	**3000
	NW BND	**8000
*3900 - MCA ROBYN, HI FIX , SE BND		
**1300 - MOCA		
ROBYN, HI FIX	KONA, HI VORTAC	5000

FROM	TO	MEA
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95.6421 HAWAII VOR FEDERAL AIRWAY V21

HONOLULU, HI VORTAC	*ALANA, HI FIX	3000
*5000 - MRA		
ALANA, HI FIX	JULLE, HI FIX	5000
JULLE, HI FIX	GRAMY, HI FIX	2000
GRAMY, HI FIX	LANAI, HI VORTAC	4000
LANAI, HI VORTAC	KEIKI, HI FIX	5000
KEIKI, HI FIX	*HARPO, HI FIX	**5000
*8200 - MCA HARPO, HI FIX , E BND		
**2500 - MOCA		
HARPO, HI FIX	FUNKI, HI FIX	*10000
*9000 - MOCA		
FUNKI, HI FIX	*PUMIC, HI FIX	10000
*10000 - MRA		
PUMIC, HI FIX	BISEN, HI FIX	14000
BISEN, HI FIX	CUTLE, HI FIX	21000
CUTLE, HI FIX	OSTAH, HI FIX	24000
OSTAH, HI FIX	SCOON, HI FIX	22000

95.6422 HAWAII VOR FEDERAL AIRWAY V22

*MOLOKAI, HI VORTAC	PLUMB, HI FIX	7000
*5000 - MCA MOLOKAI, HI VORTAC , E BND		
PLUMB, HI FIX	MAUI, HI VORTAC	6300
MAUI, HI VORTAC	*BARBY, HI FIX	8400
*12000 - MCA BARBY, HI FIX , SE BND		
BARBY, HI FIX	SARDS, HI FIX	12000
SARDS, HI FIX	BONUS, HI FIX	8000
BONUS, HI FIX	HILO, HI VORTAC	6000
HILO, HI VORTAC	SESAW, HI FIX	2000
SESAW, HI FIX	BATES, HI FIX	8000
BATES, HI FIX	OSTAH, HI FIX	10000
OSTAH, HI FIX	SCOON, HI FIX	22000

95.6423 HAWAII VOR FEDERAL AIRWAY V23

UPOLU POINT, HI VORTAC	JESSI, HI FIX	*6000
*5000 - MOCA		
JESSI, HI FIX	*FIRES, HI FIX	8000
*13000 - MRA		

95.6424 HAWAII VOR FEDERAL AIRWAY V24

*LANAI, HI VORTAC	MAUI, HI VORTAC	**9000
*5100 - MCA LANAI, HI VORTAC , NE BND		
**7800 - MOCA		

95.6425 HAWAII VOR FEDERAL AIRWAY V25

HILO, HI VORTAC	COOKE, HI FIX	3000
COOKE, HI FIX	BASSY, HI FIX	6000
BASSY, HI FIX	CODDY, HI FIX	9000
CODDY, HI FIX	ARROW, HI FIX	26000
ARROW, HI FIX	CLUTS, OP FIX	*26000
*1200 - MOCA		

FROM	TO	MEA	MAA
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§95.7001 JET ROUTES

95.7001 JET ROUTE J1

U.S. MEXICAN BORDER	MISSION BAY, CA VORTAC	18000	45000
MISSION BAY, CA VORTAC	OCEANSIDE, CA VORTAC	18000	45000
OCEANSIDE, CA VORTAC	LOS ANGELES, CA VORTAC	18000	45000
LOS ANGELES, CA VORTAC	FILLMORE, CA VORTAC	18000	45000
FILLMORE, CA VORTAC	AVENAL, CA VOR/DME	18000	45000
AVENAL, CA VOR/DME	OAKLAND, CA VOR/DME	18000	45000
OAKLAND, CA VOR/DME	RED BLUFF, CA VORTAC	18000	45000
RED BLUFF, CA VORTAC	ROGUE VALLEY, OR VORTAC	18000	45000
ROGUE VALLEY, OR VORTAC	BATTLE GROUND, WA VORTAC	18000	45000
BATTLE GROUND, WA VORTAC	SEATTLE, WA VORTAC	18000	45000

95.7002 JET ROUTE J2

MISSION BAY, CA VORTAC	IMPERIAL, CA VORTAC	18000	45000
IMPERIAL, CA VORTAC	BARD, CA VORTAC	18000	45000
BARD, CA VORTAC	GILA BEND, AZ VORTAC	18000	45000
GILA BEND, AZ VORTAC	TUCSON, AZ VORTAC	18000	45000
TUCSON, AZ VORTAC	EL PASO, TX VORTAC	#25000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
EL PASO, TX VORTAC	FORT STOCKTON, TX VORTAC	18000	45000
FORT STOCKTON, TX VORTAC	JUNCTION, TX VORTAC	18000	45000
JUNCTION, TX VORTAC	SAN ANTONIO, TX VORTAC	18000	45000
SAN ANTONIO, TX VORTAC	HUMBLE, TX VORTAC	18000	45000
HUMBLE, TX VORTAC	LAKE CHARLES, LA VORTAC	18000	45000
LAKE CHARLES, LA VORTAC	FIGHTING TIGER, LA VORTAC	18000	45000
FIGHTING TIGER, LA VORTAC	SEMMES, AL VORTAC	18000	45000
SEMMES, AL VORTAC	CRESTVIEW, FL VORTAC	18000	45000
CRESTVIEW, FL VORTAC	SEMINOLE, FL VORTAC	18000	45000
SEMINOLE, FL VORTAC	TAYLOR, FL VORTAC	18000	45000

95.7003 JET ROUTE J3

OAKLAND, CA VOR/DME	RED BLUFF, CA VORTAC	18000	45000
RED BLUFF, CA VORTAC	LAKEVIEW, OR VORTAC	18000	45000
LAKEVIEW, OR VORTAC	KIMBERLY, OR VOR/DME	18000	45000
KIMBERLY, OR VOR/DME	SPOKANE, WA VORTAC	18000	45000

95.7004 JET ROUTE J4

LOS ANGELES, CA VORTAC	TWENTYNINE PALMS, CA VORTAC	18000	45000
TWENTYNINE PALMS, CA VORTAC	PARKER, CA VORTAC	18000	45000
PARKER, CA VORTAC	BUCKEYE, AZ VORTAC	18000	45000
BUCKEYE, AZ VORTAC	SAN SIMON, AZ VORTAC	18000	45000
SAN SIMON, AZ VORTAC	NEWMAN, TX VORTAC	18000	45000
NEWMAN, TX VORTAC	WINK, TX VORTAC	18000	45000
WINK, TX VORTAC	ABILENE, TX VORTAC	18000	45000
ABILENE, TX VORTAC	RANGER, TX VORTAC	18000	45000
RANGER, TX VORTAC	BELCHER, LA VORTAC	18000	45000
BELCHER, LA VORTAC	MAGNOLIA, MS VORTAC	18000	45000
MAGNOLIA, MS VORTAC	MERIDIAN, MS VORTAC	18000	45000
MERIDIAN, MS VORTAC	MONTGOMERY, AL VORTAC	18000	45000

FROM	TO	MEA	MAA
95.7005 JET ROUTE J4 – CONTINUED			
MONTGOMERY, AL VORTAC	COLLIERS, SC VORTAC	18000	45000
COLLIERS, SC VORTAC	COLUMBIA, SC VORTAC	18000	45000
COLUMBIA, SC VORTAC	FLORENCE, SC VORTAC	18000	45000
FLORENCE, SC VORTAC	WILMINGTON, NC VORTAC	18000	45000
95.7005 JET ROUTE J5			
LOS ANGELES, CA VORTAC	SHAFTER, CA VORTAC	18000	45000
SHAFTER, CA VORTAC	MUSTANG, NV VORTAC	#18000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
MUSTANG, NV VORTAC	LAKEVIEW, OR VORTAC	18000	45000
LAKEVIEW, OR VORTAC	POWEL, OR FIX	18000	45000
POWEL, OR FIX	SUMMA, WA FIX	24000	45000
SUMMA, WA FIX	SEATTLE, WA VORTAC	18000	45000
SEATTLE, WA VORTAC	U.S. CANADIAN BORDER	18000	45000
U.S. CANADIAN BORDER	VANCOUVER, CANADA VOR/DME	#18000	
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
95.7006 JET ROUTE J6			
SALINAS, CA VORTAC	AVENAL, CA VOR/DME	18000	45000
AVENAL, CA VOR/DME	PALMDALE, CA VORTAC	18000	45000
PALMDALE, CA VORTAC	HECTOR, CA VORTAC	18000	45000
HECTOR, CA VORTAC	NEEDLES, CA VORTAC	18000	45000
NEEDLES, CA VORTAC	DRAKE, AZ VORTAC	18000	45000
DRAKE, AZ VORTAC	PYRIT, AZ FIX	22000	45000
PYRIT, AZ FIX	ZUNI, NM VORTAC	18000	45000
ZUNI, NM VORTAC	ALBUQUERQUE, NM VORTAC	18000	45000
ALBUQUERQUE, NM VORTAC	TUCUMCARI, NM VORTAC	18000	45000
TUCUMCARI, NM VORTAC	PANHANDLE, TX VORTAC	18000	45000
PANHANDLE, TX VORTAC	WILL ROGERS, OK VORTAC	18000	45000
WILL ROGERS, OK VORTAC	LITTLE ROCK, AR VORTAC	18000	45000
LITTLE ROCK, AR VORTAC	BOWLING GREEN, KY VORTAC	#18000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
BOWLING GREEN, KY VORTAC	CHARLESTON, WV VOR/DME	18000	45000
CHARLESTON, WV VOR/DME	MARTINSBURG, WV VORTAC	18000	45000
MARTINSBURG, WV VORTAC	LANCASTER, PA VOR/DME	18000	32000
LANCASTER, PA VOR/DME	BROADWAY, NJ VOR/DME	18000	45000
BROADWAY, NJ VOR/DME	SPARTA, NJ VORTAC	18000	45000
SPARTA, NJ VORTAC	ALBANY, NY VORTAC	18000	45000
95.7007 JET ROUTE J7			
LOS ANGELES, CA VORTAC	FILLMORE, CA VORTAC	18000	45000
FILLMORE, CA VORTAC	FRIANT, CA VORTAC	18000	45000
FRIANT, CA VORTAC	MUSTANG, NV VORTAC	18000	45000
MUSTANG, NV VORTAC	ROME, OR VOR/DME	#19000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
ROME, OR VOR/DME	BOISE, ID VORTAC	18000	45000
BOISE, ID VORTAC	SALMON, ID VOR/DME	18000	45000
SALMON, ID VOR/DME	GREAT FALLS, MT VORTAC	18000	45000
GREAT FALLS, MT VORTAC	U.S. CANADIAN BORDER	18000	45000

FROM	TO	MEA	MAA
95.7008 JET ROUTE J8			
NEEDLES, CA VORTAC	FLAGSTAFF, AZ VOR/DME	18000	45000
FLAGSTAFF, AZ VOR/DME	GALLUP, NM VORTAC	18000	45000
GALLUP, NM VORTAC	FORT UNION, NM VORTAC	18000	45000
FORT UNION, NM VORTAC	BORGER, TX VORTAC	18000	45000
BORGER, TX VORTAC	KINGFISHER, OK VORTAC	18000	45000
KINGFISHER, OK VORTAC	SPRINGFIELD, MO VORTAC	18000	45000
SPRINGFIELD, MO VORTAC	ST LOUIS, MO VORTAC	18000	45000
ST LOUIS, MO VORTAC	LOUISVILLE, KY VORTAC	18000	45000
LOUISVILLE, KY VORTAC	CHARLESTON, WV VOR/DME	18000	45000
CHARLESTON, WV VOR/DME	CASANOVA, VA VORTAC	18000	45000
95.7009 JET ROUTE J9			
LOS ANGELES, CA VORTAC	DAGGETT, CA VORTAC	18000	45000
DAGGETT, CA VORTAC	LAS VEGAS, NV VORTAC	18000	45000
LAS VEGAS, NV VORTAC	MILFORD, UT VORTAC	18000	45000
MILFORD, UT VORTAC	FAIRFIELD, UT VORTAC	18000	45000
FAIRFIELD, UT VORTAC	WASATCH, UT VORTAC	18000	45000
WASATCH, UT VORTAC	DUBOIS, ID VORTAC	18000	45000
DUBOIS, ID VORTAC	DILLON, MT VOR/DME	18000	45000
DILLON, MT VOR/DME	GREAT FALLS, MT VORTAC	18000	45000
95.7010 JET ROUTE J10			
LOS ANGELES, CA VORTAC	TWENTYNINE PALMS, CA VORTAC	18000	45000
TWENTYNINE PALMS, CA VORTAC	HIPPI, AZ FIX	23000	40000
HIPPI, AZ FIX	FLAGSTAFF, AZ VOR/DME	23000	40000
FLAGSTAFF, AZ VOR/DME	RATTLESNAKE, NM VORTAC	18000	40000
RATTLESNAKE, NM VORTAC	BLUE MESA, CO VOR/DME	18000	45000
BLUE MESA, CO VOR/DME	FALCON, CO VORTAC	18000	45000
FALCON, CO VORTAC	NORTH PLATTE, NE VOR/DME	18000	45000
NORTH PLATTE, NE VOR/DME	WOLBACH, NE VORTAC	18000	41000
WOLBACH, NE VORTAC	DES MOINES, IA VORTAC	18000	45000
DES MOINES, IA VORTAC	IOWA CITY, IA VOR/DME	18000	45000
95.7011 JET ROUTE J11			
TUCSON, AZ VORTAC	PHOENIX, AZ VORTAC	18000	45000
PHOENIX, AZ VORTAC	DRAKE, AZ VORTAC	18000	45000
DRAKE, AZ VORTAC	BRYCE CANYON, UT VORTAC	18000	45000
BRYCE CANYON, UT VORTAC	FAIRFIELD, UT VORTAC	18000	45000
FAIRFIELD, UT VORTAC	WASATCH, UT VORTAC	18000	45000
95.7012 JET ROUTE J12			
SEATTLE, WA VORTAC	EPHRATA, WA VORTAC	18000	45000
EPHRATA, WA VORTAC	DONNELLY, ID VOR/DME	18000	45000
DONNELLY, ID VOR/DME	TWIN FALLS, ID VORTAC	18000	45000
TWIN FALLS, ID VORTAC	WASATCH, UT VORTAC	22000	45000
WASATCH, UT VORTAC	FAIRFIELD, UT VORTAC	18000	45000
FAIRFIELD, UT VORTAC	GRAND JUNCTION, CO VOR/DME	18000	45000

FROM	TO	MEA	MAA
95.7013 JET ROUTE J13			
U.S. MEXICAN BORDER	TRUTH OR CONSEQUENCES, NM VORTAC	18000	45000
TRUTH OR CONSEQUENCES, NM VORTAC	ALBUQUERQUE, NM VORTAC	18000	45000
ALBUQUERQUE, NM VORTAC	ALAMOSA, CO VORTAC	18000	45000
ALAMOSA, CO VORTAC	FALCON, CO VORTAC	23000	45000
FALCON, CO VORTAC	CHEYENNE, WY VORTAC	18000	45000
CHEYENNE, WY VORTAC	MUDDY MOUNTAIN, WY VOR/DME	18000	45000
MUDDY MOUNTAIN, WY VOR/DME	BILLINGS, MT VORTAC	18000	45000
BILLINGS, MT VORTAC	GREAT FALLS, MT VORTAC	18000	45000
GREAT FALLS, MT VORTAC	U.S. CANADIAN BORDER	#18000	45000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
95.7014 JET ROUTE J14			
PANHANDLE, TX VORTAC	WILL ROGERS, OK VORTAC	18000	45000
WILL ROGERS, OK VORTAC	LITTLE ROCK, AR VORTAC	18000	45000
LITTLE ROCK, AR VORTAC	VULCAN, AL VORTAC	18000	45000
VULCAN, AL VORTAC	ATLANTA, GA VORTAC	18000	45000
ATLANTA, GA VORTAC	SPARTANBURG, SC VORTAC	18000	45000
SPARTANBURG, SC VORTAC	GREENSBORO, NC VORTAC	18000	45000
GREENSBORO, NC VORTAC	RICHMOND, VA VORTAC	18000	45000
RICHMOND, VA VORTAC	PATUXENT, MD VORTAC	18000	45000
95.7015 JET ROUTE J15			
HUMBLE, TX VORTAC	MARCS, TX FIX	19000	45000
MARCS, TX FIX	JUNCTION, TX VORTAC	18000	45000
JUNCTION, TX VORTAC	WINK, TX VORTAC	18000	45000
WINK, TX VORTAC	CHISUM, NM VORTAC	18000	45000
CHISUM, NM VORTAC	CORONA, NM VORTAC	18000	45000
CORONA, NM VORTAC	ALBUQUERQUE, NM VORTAC	18000	45000
ALBUQUERQUE, NM VORTAC	RATTLESNAKE, NM VORTAC	18000	45000
RATTLESNAKE, NM VORTAC	GRAND JUNCTION, CO VOR/DME	18000	45000
GRAND JUNCTION, CO VOR/DME	WASATCH, UT VORTAC	#18000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
WASATCH, UT VORTAC	TWIN FALLS, ID VORTAC	22000	45000
TWIN FALLS, ID VORTAC	BOISE, ID VORTAC	18000	45000
BOISE, ID VORTAC	KIMBERLY, OR VOR/DME	18000	45000
KIMBERLY, OR VOR/DME	BATTLE GROUND, WA VORTAC	18000	45000
95.7016 JET ROUTE J16			
BATTLE GROUND, WA VORTAC	PENDLETON, OR VORTAC	18000	45000
PENDLETON, OR VORTAC	WHITEHALL, MT VOR/DME	#29000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
WHITEHALL, MT VOR/DME	BILLINGS, MT VORTAC	18000	45000
BILLINGS, MT VORTAC	DUPREE, SD VOR/DME	#20000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
DUPREE, SD VOR/DME	SIOUX FALLS, SD VORTAC	18000	45000
SIOUX FALLS, SD VORTAC	MASON CITY, IA VOR/DME	18000	45000
MASON CITY, IA VOR/DME	BADGER, WI VOR/DME	18000	45000

FROM	TO	MEA	MAA
95.7017 JET ROUTE J17			
SAN ANTONIO, TX VORTAC	ABILENE, TX VORTAC	18000	45000
ABILENE, TX VORTAC	PANHANDLE, TX VORTAC	18000	45000
PANHANDLE, TX VORTAC	TOBE, CO VOR/DME	18000	45000
TOBE, CO VOR/DME	PUEBLO, CO VORTAC	18000	45000
PUEBLO, CO VORTAC	FALCON, CO VORTAC	18000	45000
FALCON, CO VORTAC	CHEYENNE, WY VORTAC	18000	45000
CHEYENNE, WY VORTAC	RAPID CITY, SD VORTAC	18000	45000
95.7018 JET ROUTE J18			
MISSION BAY, CA VORTAC	IMPERIAL, CA VORTAC	18000	45000
IMPERIAL, CA VORTAC	BARD, CA VORTAC	18000	45000
BARD, CA VORTAC	GILA BEND, AZ VORTAC	18000	45000
GILA BEND, AZ VORTAC	PHOENIX, AZ VORTAC	18000	45000
PHOENIX, AZ VORTAC	ST JOHNS, AZ VORTAC	18000	45000
ST JOHNS, AZ VORTAC	ALBUQUERQUE, NM VORTAC	18000	45000
ALBUQUERQUE, NM VORTAC	FORT UNION, NM VORTAC	18000	45000
FORT UNION, NM VORTAC	GARDEN CITY, KS VORTAC	18000	45000
GARDEN CITY, KS VORTAC	SALINA, KS VORTAC	18000	45000
SALINA, KS VORTAC	ST JOSEPH, MO VORTAC	18000	45000
ST JOSEPH, MO VORTAC	MOLINE, IL VOR/DME	18000	35000
MOLINE, IL VOR/DME	JOLIET, IL VOR/DME	18000	35000
95.7019 JET ROUTE J19			
PHOENIX, AZ VORTAC	ZUNI, NM VORTAC	19000	45000
ZUNI, NM VORTAC	BUKKO, NM FIX	#18000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
BUKKO, NM FIX	FORT UNION, NM VORTAC	18000	45000
FORT UNION, NM VORTAC	LIBERAL, KS VORTAC	18000	45000
LIBERAL, KS VORTAC	WICHITA, KS VORTAC	18000	45000
WICHITA, KS VORTAC	BUTLER, MO VORTAC	18000	45000
BUTLER, MO VORTAC	ST LOUIS, MO VORTAC	18000	45000
ST LOUIS, MO VORTAC	ROBERTS, IL VOR/DME	18000	35000
ROBERTS, IL VOR/DME	NORTHBROOK, IL VOR/DME	18000	35000
95.7020 JET ROUTE J20			
SEATTLE, WA VORTAC	YAKIMA, WA VORTAC	18000	45000
YAKIMA, WA VORTAC	PENDLETON, OR VORTAC	18000	45000
PENDLETON, OR VORTAC	DONNELLY, ID VOR/DME	18000	45000
DONNELLY, ID VOR/DME	POCATELLO, ID VOR/DME	18000	45000
POCATELLO, ID VOR/DME	ROCK SPRINGS, WY VOR/DME	21000	45000
ROCK SPRINGS, WY VOR/DME	FALCON, CO VORTAC	#22000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
FALCON, CO VORTAC	HUGO, CO VOR/DME	18000	45000
HUGO, CO VOR/DME	LAMAR, CO VOR/DME	18000	45000
LAMAR, CO VOR/DME	LIBERAL, KS VORTAC	18000	45000
LIBERAL, KS VORTAC	WILL ROGERS, OK VORTAC	18000	45000
WILL ROGERS, OK VORTAC	BELCHER, LA VORTAC	18000	45000
BELCHER, LA VORTAC	MAGNOLIA, MS VORTAC	18000	45000
MAGNOLIA, MS VORTAC	MERIDIAN, MS VORTAC	18000	45000
MERIDIAN, MS VORTAC	MONTGOMERY, AL VORTAC	18000	45000
MONTGOMERY, AL VORTAC	SEMINOLE, FL VORTAC	18000	45000
SEMINOLE, FL VORTAC	ORLANDO, FL VORTAC	18000	45000

FROM	TO	MEA	MAA
95.7021 JET ROUTE J21			
U.S. MEXICAN BORDER	LAREDO, TX VORTAC	18000	45000
LAREDO, TX VORTAC	SAN ANTONIO, TX VORTAC	18000	45000
SAN ANTONIO, TX VORTAC	CENTEX, TX VORTAC	18000	45000
CENTEX, TX VORTAC	WACO, TX VORTAC	18000	45000
WACO, TX VORTAC	RANGER, TX VORTAC	18000	45000
RANGER, TX VORTAC	ARDMORE, OK VORTAC	18000	45000
ARDMORE, OK VORTAC	WILL ROGERS, OK VORTAC	18000	45000
WILL ROGERS, OK VORTAC	WICHITA, KS VORTAC	18000	45000
WICHITA, KS VORTAC	OMAHA, IA VORTAC	18000	45000
OMAHA, IA VORTAC	GOPHER, MN VORTAC	18000	45000
GOPHER, MN VORTAC	DULUTH, MN VORTAC	18000	45000
95.7022 JET ROUTE J22			
U.S. MEXICAN BORDER	LAREDO, TX VORTAC	18000	45000
LAREDO, TX VORTAC	CORPUS CHRISTI, TX VORTAC	18000	45000
CORPUS CHRISTI, TX VORTAC	PALACIOS, TX VORTAC	18000	45000
PALACIOS, TX VORTAC	LAKE CHARLES, LA VORTAC	18000	45000
LAKE CHARLES, LA VORTAC	MC COMB, MS VORTAC	18000	45000
MC COMB, MS VORTAC	MERIDIAN, MS VORTAC	18000	45000
MERIDIAN, MS VORTAC	VULCAN, AL VORTAC	18000	45000
VULCAN, AL VORTAC	VOLUNTEER, TN VORTAC	18000	45000
VOLUNTEER, TN VORTAC	PULASKI, VA VORTAC	18000	45000
PULASKI, VA VORTAC	MONTEBELLO, VA VOR/DME	18000	45000
95.7023 JET ROUTE J23			
SAN ANTONIO, TX VORTAC	MILLSAP, TX VORTAC	18000	45000
MILLSAP, TX VORTAC	WILL ROGERS, OK VORTAC	18000	45000
WILL ROGERS, OK VORTAC	PIONEER, OK VORTAC	18000	45000
PIONEER, OK VORTAC	WICHITA, KS VORTAC	18000	45000
95.7024 JET ROUTE J24			
MYTON, UT VOR/DME	HAYDEN, CO VOR/DME	18000	45000
HUGO, CO VOR/DME	HAYS, KS VORTAC	18000	45000
HAYS, KS VORTAC	SALINA, KS VORTAC	18000	45000
SALINA, KS VORTAC	KANSAS CITY, MO VORTAC	18000	45000
KANSAS CITY, MO VORTAC	ST LOUIS, MO VORTAC	18000	45000
ST LOUIS, MO VORTAC	BRICKYARD, IN VORTAC	18000	45000
BRICKYARD, IN VORTAC	FALMOUTH, KY VOR/DME	18000	45000
FALMOUTH, KY VOR/DME	CHARLESTON, WV VOR/DME	18000	45000
CHARLESTON, WV VOR/DME	MONTEBELLO, VA VOR/DME	18000	41000
MONTEBELLO, VA VOR/DME	FLAT ROCK, VA VORTAC	18000	41000
FLAT ROCK, VA VORTAC	HARCUM, VA VORTAC	18000	29000
95.7025 JET ROUTE J25			
U.S. MEXICAN BORDER	BROWNSVILLE, TX VORTAC	18000	45000
BROWNSVILLE, TX VORTAC	CORPUS CHRISTI, TX VORTAC	18000	45000
CORPUS CHRISTI, TX VORTAC	SAN ANTONIO, TX VORTAC	18000	45000
SAN ANTONIO, TX VORTAC	CENTEX, TX VORTAC	18000	45000
CENTEX, TX VORTAC	WACO, TX VORTAC	18000	45000

FROM	TO	MEA	MAA
95.725 JET ROUTE J25 – CONTINUED			
WACO, TX VORTAC	RANGER, TX VORTAC	18000	45000
RANGER, TX VORTAC	TULSA, OK VORTAC	18000	45000
TULSA, OK VORTAC	KANSAS CITY, MO VORTAC	18000	45000
KANSAS CITY, MO VORTAC	DES MOINES, IA VORTAC	18000	45000
DES MOINES, IA VORTAC	MASON CITY, IA VOR/DME	18000	45000
MASON CITY, IA VOR/DME	GOPHER, MN VORTAC	18000	45000
95.7026 JET ROUTE J26			
U.S. MEXICAN BORDER	EL PASO, TX VORTAC	18000	45000
EL PASO, TX VORTAC	CHISUM, NM VORTAC	18000	45000
CHISUM, NM VORTAC	PANHANDLE, TX VORTAC	18000	45000
PANHANDLE, TX VORTAC	MITBEE, OK VORTAC	18000	45000
MITBEE, OK VORTAC	WICHITA, KS VORTAC	18000	45000
WICHITA, KS VORTAC	KANSAS CITY, MO VORTAC	18000	45000
KANSAS CITY, MO VORTAC	KIRKSVILLE, MO VORTAC	18000	45000
KIRKSVILLE, MO VORTAC	BRADFORD, IL VORTAC	18000	45000
BRADFORD, IL VORTAC	JOLIET, IL VOR/DME	18000	45000
95.7027 JET ROUTE J27			
SAN ANTONIO, TX VORTAC	LUFKIN, TX VORTAC	18000	45000
95.7028 JET ROUTE J28			
MILFORD, UT VORTAC	HANKSVILLE, UT VORTAC	18000	45000
HANKSVILLE, UT VORTAC	BLUE MESA, CO VOR/DME	18000	45000
BLUE MESA, CO VOR/DME	PUEBLO, CO VORTAC	18000	45000
PUEBLO, CO VORTAC	GARDEN CITY, KS VORTAC	18000	45000
GARDEN CITY, KS VORTAC	WICHITA, KS VORTAC	18000	45000
95.7029 JET ROUTE J29			
U.S. MEXICAN BORDER	CORPUS CHRISTI, TX VORTAC	24000	45000
CORPUS CHRISTI, TX VORTAC	PALACIOS, TX VORTAC	18000	45000
PALACIOS, TX VORTAC	HUMBLE, TX VORTAC	18000	45000
HUMBLE, TX VORTAC	EL DORADO, AR VOR/DME	18000	45000
EL DORADO, AR VOR/DME	MEMPHIS, TN VORTAC	18000	45000
MEMPHIS, TN VORTAC	POCKET CITY, IN VORTAC	18000	45000
95.7030 JET ROUTE J30			
NODINE, MN VORTAC	JOLIET, IL VOR/DME	18000	45000
JOLIET, IL VOR/DME	APPLETON, OH VORTAC	18000	45000
APPLETON, OH VORTAC	BUCKO, WV FIX	20000	39000
BUCKO, WV FIX	KESSEL, WV VOR/DME	18000	45000
KESSEL, WV VOR/DME	TRIXY, VA FIX	19000	29000

FROM	TO	MEA	MAA
95.7031 JET ROUTE J31			
LEEVILLE, LA VORTAC	HARVEY, LA VORTAC	18000	45000
HARVEY, LA VORTAC	MERIDIAN, MS VORTAC	18000	45000
MERIDIAN, MS VORTAC	VULCAN, AL VORTAC	18000	45000
95.7032 JET ROUTE J32			
OAKLAND, CA VOR/DME	SACRAMENTO, CA VORTAC	18000	45000
SACRAMENTO, CA VORTAC	MUSTANG, NV VORTAC	18000	45000
MUSTANG, NV VORTAC	LOVELOCK, NV VORTAC	18000	45000
LOVELOCK, NV VORTAC	BATTLE MOUNTAIN, NV VORTAC	18000	45000
BATTLE MOUNTAIN, NV VORTAC	MALAD CITY, ID VOR/DME	#18000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
MALAD CITY, ID VOR/DME	BOYSEN RESERVOIR, WY VOR/DME	18000	45000
BOYSEN RESERVOIR, WY VOR/DME	CRAZY WOMAN, WY VOR/DME	18000	45000
CRAZY WOMAN, WY VOR/DME	DUPREE, SD VOR/DME	18000	45000
DUPREE, SD VOR/DME	ABERDEEN, SD VOR/DME	18000	45000
ABERDEEN, SD VOR/DME	DULUTH, MN VORTAC	18000	45000
95.7033 JET ROUTE J33			
HUMBLE, TX VORTAC	DONIE, TX FIX	18000	45000
DONIE, TX FIX	RANGER, TX VORTAC	18000	45000
95.7034 JET ROUTE J34			
HOQUIAM, WA VORTAC	OLYMPIA, WA VORTAC	18000	45000
OLYMPIA, WA VORTAC	MOSES LAKE, WA VOR/DME	18000	45000
MOSES LAKE, WA VOR/DME	HELENA, MT VORTAC	#28000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
HELENA, MT VORTAC	BILLINGS, MT VORTAC	18000	45000
BILLINGS, MT VORTAC	DUPREE, SD VOR/DME	#20000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
DUPREE, SD VOR/DME	REDWOOD FALLS, MN VOR/DME	18000	45000
REDWOOD FALLS, MN VOR/DME	NODINE, MN VORTAC	18000	45000
NODINE, MN VORTAC	DELLS, WI VORTAC	18000	45000
DELLS, WI VORTAC	BADGER, WI VOR/DME	18000	45000
BADGER, WI VOR/DME	VICTORY, MI VOR/DME	18000	45000
VICTORY, MI VOR/DME	CARLETON, MI VOR/DME	18000	45000
CARLETON, MI VOR/DME	DRYER, OH VOR/DME	18000	45000
DRYER, OH VOR/DME	BELLAIRE, OH VOR/DME	18000	45000
BELLAIRE, OH VOR/DME	BUCKO, WV FIX	18000	45000
BUCKO, WV FIX	KESSEL, WV VOR/DME	18000	45000
KESSEL, WV VOR/DME	TRIXY, VA FIX	19000	29000
95.7035 JET ROUTE J35			
LEEVILLE, LA VORTAC	MC COMB, MS VORTAC	18000	45000
MC COMB, MS VORTAC	SIDON, MS VORTAC	18000	45000
SIDON, MS VORTAC	MEMPHIS, TN VORTAC	18000	45000
MEMPHIS, TN VORTAC	FARMINGTON, MO VORTAC	18000	45000
FARMINGTON, MO VORTAC	ST LOUIS, MO VORTAC	18000	45000
ST LOUIS, MO VORTAC	SPINNER, IL VORTAC	18000	45000
SPINNER, IL VORTAC	PONTIAC, IL VOR/DME	18000	31000

FROM	TO	MEA	MAA
95.7035 JET ROUTE J35 – CONTINUED			
PONTIAC, IL VOR/DME	JOLIET, IL VOR/DME	18000	35000
JOLIET, IL VOR/DME	NORTHBROOK, IL VOR/DME	18000	45000
95.7036 JET ROUTE J36			
MULLAN PASS, ID VOR/DME	GREAT FALLS, MT VORTAC	18000	45000
GREAT FALLS, MT VORTAC	HILGR, MT FIX	18000	45000
HILGR, MT FIX	DICKINSON, ND VORTAC	#28000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
DICKINSON, ND VORTAC	FARGO, ND VOR/DME	18000	45000
FARGO, ND VOR/DME	GOPHER, MN VORTAC	18000	45000
GOPHER, MN VORTAC	NODINE, MN VORTAC	18000	45000
NODINE, MN VORTAC	BADGER, WI VOR/DME	18000	45000
BADGER, WI VOR/DME	FLINT, MI VORTAC	18000	45000
95.7037 JET ROUTE J37			
HOBBY, TX VOR/DME	HARVEY, LA VORTAC	18000	45000
HARVEY, LA VORTAC	SEMMES, AL VORTAC	18000	45000
SEMMES, AL VORTAC	MONTGOMERY, AL VORTAC	18000	45000
MONTGOMERY, AL VORTAC	SPARTANBURG, SC VORTAC	18000	45000
SPARTANBURG, SC VORTAC	LYNCHBURG, VA VORTAC	#	
#UNUSABLE			
LYNCHBURG, VA VORTAC	GORDONSVILLE, VA VORTAC	18000	45000
GORDONSVILLE, VA VORTAC	BROOKE, VA VORTAC	18000	45000
BROOKE, VA VORTAC	NALES, DE FIX	18000	31000
NALES, DE FIX	COYLE, NJ VORTAC	18000	45000
KENNEDY, NY VOR/DME	KINGSTON, NY VOR/DME	18000	45000
KINGSTON, NY VOR/DME	ALBANY, NY VORTAC	18000	45000
ALBANY, NY VORTAC	MASSENA, NY VORTAC	23000	45000
#MASSENA R-177 UNUSABLE USE ALBANY R-356			
95.7039 JET ROUTE J39			
CRESTVIEW, FL VORTAC	MONTGOMERY, AL VORTAC	18000	45000
MONTGOMERY, AL VORTAC	VULCAN, AL VORTAC	18000	45000
VULCAN, AL VORTAC	NASHVILLE, TN VORTAC	18000	45000
NASHVILLE, TN VORTAC	LOUISVILLE, KY VORTAC	18000	45000
LOUISVILLE, KY VORTAC	ROSEWOOD, OH VORTAC	18000	45000
95.7040 JET ROUTE J40			
MONTGOMERY, AL VORTAC	MACON, GA VORTAC	18000	45000
#MACON R-258 UNUSABLE USE MONTGOMERY R-075			
MACON, GA VORTAC	CHARLESTON, SC VORTAC	18000	45000
CHARLESTON, SC VORTAC	WILMINGTON, NC VORTAC	18000	45000
WILMINGTON, NC VORTAC	TAR RIVER, NC VORTAC	18000	45000
TAR RIVER, NC VORTAC	RICHMOND, VA VORTAC	18000	45000

FROM	TO	MEA	MAA
95.7041 JET ROUTE J41			
KEY WEST, FL VORTAC	LEE COUNTY, FL VORTAC	18000	45000
LEE COUNTY, FL VORTAC	ST PETERSBURG, FL VORTAC	18000	45000
ST PETERSBURG, FL VORTAC	SEMINOLE, FL VORTAC	#*25000	45000
*18000 - GNSS MEA			
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
SEMINOLE, FL VORTAC	MONTGOMERY, AL VORTAC	18000	45000
MONTGOMERY, AL VORTAC	VULCAN, AL VORTAC	18000	45000
VULCAN, AL VORTAC	MEMPHIS, TN VORTAC	18000	45000
MEMPHIS, TN VORTAC	SPRINGFIELD, MO VORTAC	18000	45000
SPRINGFIELD, MO VORTAC	KANSAS CITY, MO VORTAC	18000	45000
KANSAS CITY, MO VORTAC	OMAHA, IA VORTAC	18000	45000
95.7042 JET ROUTE J42			
U.S. MEXICAN BORDER	FORT STOCKTON, TX VORTAC	18000	45000
FORT STOCKTON, TX VORTAC	ABILENE, TX VORTAC	18000	45000
ABILENE, TX VORTAC	RANGER, TX VORTAC	18000	45000
RANGER, TX VORTAC	TEXARKANA, AR VORTAC	18000	45000
TEXARKANA, AR VORTAC	MEMPHIS, TN VORTAC	18000	45000
MEMPHIS, TN VORTAC	NASHVILLE, TN VORTAC	18000	45000
NASHVILLE, TN VORTAC	FOUNT, KY FIX	18000	45000
FOUNT, KY FIX	TONIO, KY FIX	#*20000	35000
*18000 - GNSS MEA			
TONIO, KY FIX	BECKLEY, WV VOR/DME	18000	35000
BECKLEY, WV VOR/DME	MONTEBELLO, VA VOR/DME	18000	41000
MONTEBELLO, VA VOR/DME	GORDONSVILLE, VA VORTAC	18000	41000
GORDONSVILLE, VA VORTAC	NOTTINGHAM, MD VORTAC	18000	45000
NOTTINGHAM, MD VORTAC	*GRACO, MD FIX	18000	35000
*10000 - MRA			
GRACO, MD FIX	WOODSTOWN, NJ VORTAC	18000	45000
WOODSTOWN, NJ VORTAC	ROBBINSVILLE, NJ VORTAC	18000	45000
ROBBINSVILLE, NJ VORTAC	HARTFORD, CT VOR/DME	18000	45000
HARTFORD, CT VOR/DME	PUTNAM, CT VOR/DME	18000	45000
PUTNAM, CT VOR/DME	BOSTON, MA VOR/DME	18000	45000
95.7043 JET ROUTE J43			
DOLPHIN, FL VORTAC	LA BELLE, FL VORTAC	18000	45000
LA BELLE, FL VORTAC	ST PETERSBURG, FL VORTAC	18000	45000
ST PETERSBURG, FL VORTAC	SEMINOLE, FL VORTAC	#*25000	45000
*18000 - GNSS MEA			
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
SEMINOLE, FL VORTAC	ATLANTA, GA VORTAC	18000	45000
ATLANTA, GA VORTAC	VOLUNTEER, TN VORTAC	18000	45000
VOLUNTEER, TN VORTAC	FALMOUTH, KY VOR/DME	18000	45000
FALMOUTH, KY VOR/DME	ROSEWOOD, OH VORTAC	18000	45000
ROSEWOOD, OH VORTAC	CARLETON, MI VOR/DME	18000	45000

FROM	TO	MEA	MAA
95.7044 JET ROUTE J44			
PHOENIX, AZ VORTAC	WINSLOW, AZ VORTAC	18000	45000
WINSLOW, AZ VORTAC	RATTLESNAKE, NM VORTAC	18000	45000
RATTLESNAKE, NM VORTAC	ALAMOSA, CO VORTAC	18000	45000
ALAMOSA, CO VORTAC	FALCON, CO VORTAC	23000	45000
FALCON, CO VORTAC	MC COOK, NE VOR/DME	18000	45000
MC COOK, NE VOR/DME	LINCOLN, NE VORTAC	18000	41000
95.7045 JET ROUTE J45			
VIRGINIA KEY, FL VOR/DME	TREASURE, FL VORTAC	18000	45000
TREASURE, FL VORTAC	ORMOND BEACH, FL VORTAC	18000	45000
ORMOND BEACH, FL VORTAC	CRAIG, FL VORTAC	18000	45000
CRAIG, FL VORTAC	ALMA, GA VORTAC	18000	45000
ALMA, GA VORTAC	MACON, GA VORTAC	18000	45000
#ALMA R-320 UNUSABLE USE MACON R-139			
MACON, GA VORTAC	ATLANTA, GA VORTAC	18000	45000
ATLANTA, GA VORTAC	NASHVILLE, TN VORTAC	18000	45000
NASHVILLE, TN VORTAC	ST LOUIS, MO VORTAC	18000	45000
ST LOUIS, MO VORTAC	KIRKSVILLE, MO VORTAC	18000	45000
KIRKSVILLE, MO VORTAC	DES MOINES, IA VORTAC	18000	45000
#DES MOINES R-141 UNUSABLE, USE KIRKSVILLE R-323			
DES MOINES, IA VORTAC	SIOUX FALLS, SD VORTAC	18000	45000
SIOUX FALLS, SD VORTAC	ABERDEEN, SD VOR/DME	18000	45000
95.7046 JET ROUTE J46			
TULSA, OK VORTAC	WALNUT RIDGE, AR VORTAC	18000	45000
WALNUT RIDGE, AR VORTAC	NASHVILLE, TN VORTAC	18000	45000
NASHVILLE, TN VORTAC	VOLUNTEER, TN VORTAC	18000	45000
VOLUNTEER, TN VORTAC	ATHENS, GA VOR/DME	18000	45000
ATHENS, GA VOR/DME	ALMA, GA VORTAC	18000	45000
95.7047 JET ROUTE J47			
CHARLESTON, SC VORTAC	COLUMBIA, SC VORTAC	18000	45000
COLUMBIA, SC VORTAC	SPARTANBURG, SC VORTAC	18000	45000
95.7048 JET ROUTE J48			
*LANNA, NJ FIX	POTTSTOWN, PA VORTAC	18000	45000
*5000 - MRA			
POTTSTOWN, PA VORTAC	WESTMINSTER, MD VORTAC	18000	45000
WESTMINSTER, MD VORTAC	CASANOVA, VA VORTAC	18000	45000
CASANOVA, VA VORTAC	MONTEBELLO, VA VOR/DME	18000	41000
MONTEBELLO, VA VOR/DME	FOOTHILLS, SC VORTAC	18000	41000

FROM	TO	MEA	MAA
95.7049 JET ROUTE J49			
PHILIPSBURG, PA VORTAC	HANCOCK, NY VOR/DME	18000	45000
HANCOCK, NY VOR/DME	ALBANY, NY VORTAC	18000	45000
ALBANY, NY VORTAC	BANGOR, ME VORTAC	18000	45000
BANGOR, ME VORTAC	PRESQUE ISLE, ME VOR/DME	18000	45000
95.7050 JET ROUTE J50			
SHAFTER, CA VORTAC	PARADISE, CA VORTAC	18000	45000
PARADISE, CA VORTAC	BLYTHE, CA VORTAC	18000	45000
BLYTHE, CA VORTAC	GILA BEND, AZ VORTAC	18000	45000
GILA BEND, AZ VORTAC	STANFIELD, AZ VORTAC	18000	45000
STANFIELD, AZ VORTAC	SAN SIMON, AZ VORTAC	18000	45000
SAN SIMON, AZ VORTAC	EL PASO, TX VORTAC	18000	45000
EL PASO, TX VORTAC	WINK, TX VORTAC	18000	45000
WINK, TX VORTAC	ABILENE, TX VORTAC	18000	45000
ABILENE, TX VORTAC	WACO, TX VORTAC	18000	45000
WACO, TX VORTAC	LUFKIN, TX VORTAC	18000	45000
LUFKIN, TX VORTAC	ALEXANDRIA, LA VORTAC	18000	45000
ALEXANDRIA, LA VORTAC	MC COMB, MS VORTAC	18000	45000
MC COMB, MS VORTAC	CRESTVIEW, FL VORTAC	18000	45000
95.7051 JET ROUTE J51			
CRAIG, FL VORTAC	SAVANNAH, GA VORTAC	18000	45000
SAVANNAH, GA VORTAC	COLUMBIA, SC VORTAC	18000	45000
COLUMBIA, SC VORTAC	TUBAS, NC FIX	18000	45000
TUBAS, NC FIX	FLAT ROCK, VA VORTAC	#*26000	45000
*18000 - GNSS MEA			
#FLAT ROCK R-218 UNUSABLE			
FLAT ROCK, VA VORTAC	NOTTINGHAM, MD VORTAC	18000	45000
NOTTINGHAM, MD VORTAC	PALEO, MD FIX	18000	29000
#UNUSABLE			
PALEO, MD FIX	DUPONT, DE VORTAC	18000	29000
#UNUSABLE			
DUPONT, DE VORTAC	YARDLEY, PA VOR/DME	18000	29000
95.7052 JET ROUTE J52			
U.S. CANADIAN BORDER	SPOKANE, WA VORTAC	18000	45000
SPOKANE, WA VORTAC	SALMON, ID VOR/DME	18000	45000
SALMON, ID VOR/DME	DUBOIS, ID VORTAC	18000	45000
DUBOIS, ID VORTAC	ROCK SPRINGS, WY VOR/DME	18000	45000
ROCK SPRINGS, WY VOR/DME	FALCON, CO VORTAC	#22000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
FALCON, CO VORTAC	HUGO, CO VOR/DME	18000	45000
HUGO, CO VOR/DME	LAMAR, CO VOR/DME	18000	45000
LAMAR, CO VOR/DME	LIBERAL, KS VORTAC	18000	45000
LIBERAL, KS VORTAC	ARDMORE, OK VORTAC	18000	45000
ARDMORE, OK VORTAC	TEXARKANA, AR VORTAC	18000	45000
TEXARKANA, AR VORTAC	SIDON, MS VORTAC	18000	45000
SIDON, MS VORTAC	BIGBEE, MS VORTAC	18000	45000
BIGBEE, MS VORTAC	VULCAN, AL VORTAC	18000	45000
VULCAN, AL VORTAC	ATLANTA, GA VORTAC	18000	45000
ATLANTA, GA VORTAC	COLLIERS, SC VORTAC	18000	45000

FROM	TO	MEA	MAA
95.7052 JET ROUTE J52 – CONTINUED			
COLLIERS, SC VORTAC	COLUMBIA, SC VORTAC	18000	45000
COLUMBIA, SC VORTAC	TUBAS, NC FIX	18000	45000
TUBAS, NC FIX	RALEIGH/DURHAM, NC VORTAC	18000	45000
RALEIGH/DURHAM, NC VORTAC	RICHMOND, VA VORTAC	18000	45000
95.7053 JET ROUTE J53			
DOLPHIN, FL VORTAC	PAHOKEE, FL VOR/DME	18000	45000
PAHOKEE, FL VOR/DME	ORLANDO, FL VORTAC	18000	45000
ORLANDO, FL VORTAC	CRAIG, FL VORTAC	18000	45000
CRAIG, FL VORTAC	COLLIERS, SC VORTAC	18000	45000
COLLIERS, SC VORTAC	SPARTANBURG, SC VORTAC	18000	45000
SPARTANBURG, SC VORTAC	PULASKI, VA VORTAC	18000	45000
95.7054 JET ROUTE J54			
TATOOSH, WA VORTAC	OLYMPIA, WA VORTAC	18000	45000
OLYMPIA, WA VORTAC	BAKER CITY, OR VOR/DME	#24000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
BAKER CITY, OR VOR/DME	BOISE, ID VORTAC	18000	45000
BOISE, ID VORTAC	POCATELLO, ID VOR/DME	18000	45000
POCATELLO, ID VOR/DME	CHEROKEE, WY VOR/DME	25000	45000
CHEROKEE, WY VOR/DME	LARAMIE, WY VOR/DME	18000	45000
95.7055 JET ROUTE J55			
DOLPHIN, FL VORTAC	LLAKE, FL FIX	18000	45000
LLAKE, FL FIX	INPIN, FL FIX	23000	45000
INPIN, FL FIX	LOULO, FL FIX	18000	45000
LOULO, FL FIX	CRAIG, FL VORTAC	18000	45000
CRAIG, FL VORTAC	SAVANNAH, GA VORTAC	18000	45000
SAVANNAH, GA VORTAC	CHARLESTON, SC VORTAC	18000	45000
CHARLESTON, SC VORTAC	FLORENCE, SC VORTAC	18000	45000
FLORENCE, SC VORTAC	TUBAS, NC FIX	18000	45000
TUBAS, NC FIX	RALEIGH/DURHAM, NC VORTAC	18000	45000
RALEIGH/DURHAM, NC VORTAC	HOPEWELL, VA VORTAC	18000	45000
HOPEWELL, VA VORTAC	HUBBS, VA FIX	18000	20000
SEA ISLE, NJ VORTAC	HAMPTON, NY VORTAC	18000	45000
HAMPTON, NY VORTAC	PROVIDENCE, RI VOR/DME	18000	45000
PROVIDENCE, RI VOR/DME	BOSTON, MA VOR/DME	18000	45000
BOSTON, MA VOR/DME	KENNEBUNK, ME VOR/DME	18000	45000
KENNEBUNK, ME VOR/DME	PRESQUE ISLE, ME VOR/DME	19000	45000
95.7056 JET ROUTE J56			
MINA, NV VORTAC	WASATCH, UT VORTAC	#33000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
WASATCH, UT VORTAC	HAYDEN, CO VOR/DME	25000	45000
HAYDEN, CO VOR/DME	FALCON, CO VORTAC	18000	45000

FROM	TO	MEA	MAA
95.7057 JET ROUTE J57			
TRUTH OR CONSEQUENCES, NM VORTAC	SOCORRO, NM VORTAC	18000	45000
SOCORRO, NM VORTAC	ALBUQUERQUE, NM VORTAC	18000	45000
95.7058 JET ROUTE J58			
COALDALE, NV VORTAC	WILSON CREEK, NV VORTAC	18000	45000
WILSON CREEK, NV VORTAC	MILFORD, UT VORTAC	18000	45000
MILFORD, UT VORTAC	RATTLESNAKE, NM VORTAC	33000	45000
RATTLESNAKE, NM VORTAC	FORT UNION, NM VORTAC	18000	45000
FORT UNION, NM VORTAC	PANHANDLE, TX VORTAC	18000	45000
PANHANDLE, TX VORTAC	WICHITA FALLS, TX VORTAC	18000	45000
WICHITA FALLS, TX VORTAC	RANGER, TX VORTAC	18000	45000
RANGER, TX VORTAC	ALEXANDRIA, LA VORTAC	18000	45000
ALEXANDRIA, LA VORTAC	HARVEY, LA VORTAC	18000	45000
95.7059 JET ROUTE J59			
PHILIPSBURG, PA VORTAC	SYRACUSE, NY VORTAC	18000	45000
95.7060 JET ROUTE J60			
LOS ANGELES, CA VORTAC	PARADISE, CA VORTAC	18000	45000
PARADISE, CA VORTAC	HECTOR, CA VORTAC	18000	45000
HECTOR, CA VORTAC	BOULDER CITY, NV VORTAC	18000	45000
BOULDER CITY, NV VORTAC	BRYCE CANYON, UT VORTAC	18000	45000
BRYCE CANYON, UT VORTAC	HANKSVILLE, UT VORTAC	18000	45000
HANKSVILLE, UT VORTAC	RED TABLE, CO VOR/DME	18000	45000
RED TABLE, CO VOR/DME	MILE HIGH, CO VORTAC	18000	45000
MILE HIGH, CO VORTAC	HAYES CENTER, NE VORTAC	18000	45000
HAYES CENTER, NE VORTAC	LINCOLN, NE VORTAC	18000	45000
LINCOLN, NE VORTAC	IOWA CITY, IA VOR/DME	18000	45000
IOWA CITY, IA VOR/DME	JOLIET, IL VOR/DME	18000	45000
JOLIET, IL VOR/DME	GOSHEN, IN VORTAC	18000	45000
GOSHEN, IN VORTAC	DRYER, OH VOR/DME	18000	45000
DRYER, OH VOR/DME	PHILIPSBURG, PA VORTAC	18000	45000
PHILIPSBURG, PA VORTAC	SPARTA, NJ VORTAC	18000	45000
95.7061 JET ROUTE J61			
EDDYS, NC FIX	FORTS, VA FIX	31000	45000
FORTS, VA FIX	NOTTINGHAM, MD VORTAC	18000	45000
NOTTINGHAM, MD VORTAC	WESTMINSTER, MD VORTAC	18000	45000
WESTMINSTER, MD VORTAC	PHILIPSBURG, PA VORTAC	18000	45000
95.7062 JET ROUTE J62			
ROBBINSVILLE, NJ VORTAC	NANTUCKET, MA VOR/DME	18000	45000

FROM	TO	MEA	MAA
95.7064 JET ROUTE J64			
LOS ANGELES, CA VORTAC	HECTOR, CA VORTAC	18000	45000
HECTOR, CA VORTAC	PEACH SPRINGS, AZ VOR/DME	18000	45000
PEACH SPRINGS, AZ VOR/DME	TUBA CITY, AZ VORTAC	18000	45000
TUBA CITY, AZ VORTAC	RATTLESNAKE, NM VORTAC	18000	45000
RATTLESNAKE, NM VORTAC	PUEBLO, CO VORTAC	20000	45000
PUEBLO, CO VORTAC	HILL CITY, KS VORTAC	18000	45000
HILL CITY, KS VORTAC	PAWNEE CITY, NE VORTAC	18000	45000
PAWNEE CITY, NE VORTAC	LAMONI, IA VOR/DME	18000	45000
LAMONI, IA VOR/DME	BRADFORD, IL VORTAC	18000	45000
BRADFORD, IL VORTAC	FORT WAYNE, IN VORTAC	18000	45000
FORT WAYNE, IN VORTAC	ELLWOOD CITY, PA VOR/DME	18000	45000
ELLWOOD CITY, PA VOR/DME	RAVINE, PA VORTAC	18000	45000
RAVINE, PA VORTAC	SARAA, PA FIX	18000	45000
95.7065 JET ROUTE J65			
SAN ANTONIO, TX VORTAC	ABILENE, TX VORTAC	18000	45000
ABILENE, TX VORTAC	CHISUM, NM VORTAC	25000	45000
CHISUM, NM VORTAC	TRUTH OR CONSEQUENCES, NM VORTAC	24000	45000
TRUTH OR CONSEQUENCES, NM VORTAC	PHOENIX, AZ VORTAC	#23000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
PHOENIX, AZ VORTAC	BLYTHE, CA VORTAC	18000	45000
BLYTHE, CA VORTAC	PALMDALE, CA VORTAC	18000	45000
PALMDALE, CA VORTAC	SHAFTER, CA VORTAC	18000	45000
SHAFTER, CA VORTAC	CLOVIS, CA VORTAC	18000	45000
CLOVIS, CA VORTAC	SACRAMENTO, CA VORTAC	18000	45000
SACRAMENTO, CA VORTAC	RED BLUFF, CA VORTAC	18000	45000
RED BLUFF, CA VORTAC	KLAMATH FALLS, OR VORTAC	18000	45000
KLAMATH FALLS, OR VORTAC	SEATTLE, WA VORTAC	#31000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
95.7066 JET ROUTE J66			
NEWMAN, TX VORTAC	BIG SPRING, TX VORTAC	#19000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
BIG SPRING, TX VORTAC	ABILENE, TX VORTAC	18000	45000
ABILENE, TX VORTAC	RANGER, TX VORTAC	18000	45000
RANGER, TX VORTAC	BONHAM, TX VORTAC	18000	45000
BONHAM, TX VORTAC	LITTLE ROCK, AR VORTAC	18000	45000
LITTLE ROCK, AR VORTAC	MEMPHIS, TN VORTAC	18000	45000
MEMPHIS, TN VORTAC	ROME, GA VORTAC	18000	45000
95.7067 JET ROUTE J67			
LINDEN, CA VOR/DME	LAKEVIEW, OR VORTAC	18000	45000
LAKEVIEW, OR VORTAC	BATTLE GROUND, WA VORTAC	18000	45000

FROM	TO	MEA	MAA
95.7068 JET ROUTE J68			
GOPHER, MN VORTAC	DELLS, WI VORTAC	18000	45000
DELLS, WI VORTAC	BADGER, WI VOR/DME	18000	45000
BADGER, WI VOR/DME	FLINT, MI VORTAC	18000	45000
HANCOCK, NY VOR/DME	PUTNAM, CT VOR/DME	18000	45000
PUTNAM, CT VOR/DME	PROVIDENCE, RI VOR/DME	18000	45000
PROVIDENCE, RI VOR/DME	NANTUCKET, MA VOR/DME	18000	45000
95.7069 JET ROUTE J69			
SEMMES, AL VORTAC	DELBE, AL FIX	22000	45000
DELBE, AL FIX	VULCAN, AL VORTAC	18000	45000
95.7070 JET ROUTE J70			
HOQUIAM, WA VORTAC	SEATTLE, WA VORTAC	18000	45000
SEATTLE, WA VORTAC	EPHRATA, WA VORTAC	18000	45000
EPHRATA, WA VORTAC	MULLAN PASS, ID VOR/DME	18000	45000
MULLAN PASS, ID VOR/DME	LEWISTOWN, MT VOR/DME	18000	45000
LEWISTOWN, MT VOR/DME	DICKINSON, ND VORTAC	18000	45000
DICKINSON, ND VORTAC	ABERDEEN, SD VOR/DME	24000	45000
ABERDEEN, SD VOR/DME	GOPHER, MN VORTAC	18000	45000
GOPHER, MN VORTAC	NICKL, WI FIX	18000	45000
NICKL, WI FIX	AUGER, WI FIX	25000	45000
*25000 - MCA AUGER, WI FIX, W BND			
AUGER, WI FIX	BADGER, WI VOR/DME	18000	45000
BADGER, WI VOR/DME	PULLMAN, MI VOR/DME	18000	45000
PULLMAN, MI VOR/DME	SALEM, MI VORTAC	18000	45000
SALEM, MI VORTAC	U.S. CANADIAN BORDER	18000	45000
U.S. CANADIAN BORDER	JAMESTOWN, NY VOR/DME	18000	45000
JAMESTOWN, NY VOR/DME	WILKES-BARRE, PA VORTAC	18000	45000
WILKES-BARRE, PA VORTAC	STILLWATER, NJ VOR/DME	18000	45000
STILLWATER, NJ VOR/DME	LA GUARDIA, NY VOR/DME	18000	24000
LA GUARDIA, NY VOR/DME	KENNEDY, NY VOR/DME	18000	45000
95.7071 JET ROUTE J71			
MEMPHIS, TN VORTAC	CENTRALIA, IL VORTAC	18000	45000
CENTRALIA, IL VORTAC	ROBERTS, IL VOR/DME	18000	35000
ROBERTS, IL VOR/DME	NORTHBROOK, IL VOR/DME	18000	35000
95.7072 JET ROUTE J72			
BOULDER CITY, NV VORTAC	PEACH SPRINGS, AZ VOR/DME	18000	45000
PEACH SPRINGS, AZ VOR/DME	GALLUP, NM VORTAC	#18000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
GALLUP, NM VORTAC	ALBUQUERQUE, NM VORTAC	18000	45000
ALBUQUERQUE, NM VORTAC	TEXICO, TX VORTAC	18000	45000
TEXICO, TX VORTAC	WICHITA FALLS, TX VORTAC	18000	45000

FROM	TO	MEA	MAA
95.7073 JET ROUTE J73			
DOLPHIN, FL VORTAC	LA BELLE, FL VORTAC	18000	45000
LA BELLE, FL VORTAC	LAKELAND, FL VORTAC	18000	45000
LAKELAND, FL VORTAC	SEMINOLE, FL VORTAC	18000	45000
SEMINOLE, FL VORTAC	LAGRANGE, GA VORTAC	18000	45000
LAGRANGE, GA VORTAC	NASHVILLE, TN VORTAC	18000	45000
NASHVILLE, TN VORTAC	POCKET CITY, IN VORTAC	18000	45000
POCKET CITY, IN VORTAC	NORTHBROOK, IL VOR/DME	18000	45000
95.7074 JET ROUTE J74			
LOS ANGELES, CA VORTAC	PARADISE, CA VORTAC	18000	45000
PARADISE, CA VORTAC	PARKER, CA VORTAC	18000	45000
PARKER, CA VORTAC	NABOB, AZ FIX	21000	45000
NABOB, AZ FIX	ST JOHNS, AZ VORTAC	18000	45000
ST JOHNS, AZ VORTAC	CORONA, NM VORTAC	18000	45000
CORONA, NM VORTAC	TEXICO, TX VORTAC	18000	45000
TEXICO, TX VORTAC	WILL ROGERS, OK VORTAC	18000	45000
95.7075 JET ROUTE J75			
DOLPHIN, FL VORTAC	LEE COUNTY, FL VORTAC	18000	45000
LEE COUNTY, FL VORTAC	TAYLOR, FL VORTAC	18000	45000
TAYLOR, FL VORTAC	COLUMBIA, SC VORTAC	18000	45000
COLUMBIA, SC VORTAC	GREENSBORO, NC VORTAC	18000	45000
GREENSBORO, NC VORTAC	GORDONSVILLE, VA VORTAC	18000	45000
GORDONSVILLE, VA VORTAC	MODENA, PA VORTAC	18000	45000
MODENA, PA VORTAC	SOLBERG, NJ VOR/DME	18000	23000
SOLBERG, NJ VOR/DME	CARMEL, NY VOR/DME	18000	32000
CARMEL, NY VOR/DME	NELIE, CT FIX	18000	45000
#RADAR REQUIRED BETWEEN CARMEL AND NELIE			
NELIE, CT FIX	BOSTON, MA VOR/DME	18000	45000
95.7076 JET ROUTE J76			
LAS VEGAS, NV VORTAC	TUBA CITY, AZ VORTAC	18000	45000
TUBA CITY, AZ VORTAC	FORT UNION, NM VORTAC	#27000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
#MEA GAP			
FORT UNION, NM VORTAC	TUCUMCARI, NM VORTAC	18000	45000
TUCUMCARI, NM VORTAC	WICHITA FALLS, TX VORTAC	18000	45000
95.7078 JET ROUTE J78			
LOS ANGELES, CA VORTAC	SEAL BEACH, CA VORTAC	18000	45000
SEAL BEACH, CA VORTAC	THERMAL, CA VORTAC	18000	45000
THERMAL, CA VORTAC	PARKER, CA VORTAC	18000	45000
PARKER, CA VORTAC	DRAKE, AZ VORTAC	18000	45000
DRAKE, AZ VORTAC	PYRIT, AZ FIX	22000	45000
PYRIT, AZ FIX	ZUNI, NM VORTAC	18000	45000
ZUNI, NM VORTAC	ALBUQUERQUE, NM VORTAC	18000	45000
ALBUQUERQUE, NM VORTAC	TUCUMCARI, NM VORTAC	18000	45000
TUCUMCARI, NM VORTAC	PANHANDLE, TX VORTAC	18000	45000
PANHANDLE, TX VORTAC	WILL ROGERS, OK VORTAC	18000	45000

FROM	TO	MEA	MAA
95.7078 JET ROUTE J78 – CONTINUED			
WILL ROGERS, OK VORTAC	TULSA, OK VORTAC	18000	45000
TULSA, OK VORTAC	FARMINGTON, MO VORTAC	18000	45000
FARMINGTON, MO VORTAC	POCKET CITY, IN VORTAC	18000	45000
POCKET CITY, IN VORTAC	LOUISVILLE, KY VORTAC	18000	45000
LOUISVILLE, KY VORTAC	CHARLESTON, WV VOR/DME	18000	45000
95.7079 JET ROUTE J79			
KEY WEST, FL VORTAC	DOLPHIN, FL VORTAC	18000	45000
DOLPHIN, FL VORTAC	PALM BEACH, FL VORTAC	18000	45000
PALM BEACH, FL VORTAC	TREASURE, FL VORTAC	18000	45000
TREASURE, FL VORTAC	ORMOND BEACH, FL VORTAC	18000	45000
ORMOND BEACH, FL VORTAC	CHARLESTON, SC VORTAC	18000	45000
CHARLESTON, SC VORTAC	TAR RIVER, NC VORTAC	18000	45000
TAR RIVER, NC VORTAC	FRANKLIN, VA VORTAC	18000	45000
FRANKLIN, VA VORTAC	SALISBURY, MD VORTAC	18000	45000
SALISBURY, MD VORTAC	KENNEDY, NY VOR/DME	18000	45000
KENNEDY, NY VOR/DME	CUJKE, MA FIX	18000	45000
CUJKE, MA FIX	MARCONI, MA VOR/DME	#	
#UNUSABLE			
MARCONI, MA VOR/DME	BANGOR, ME VORTAC	18000	45000
95.7080 JET ROUTE J80			
COALDALE, NV VORTAC	WILSON CREEK, NV VORTAC	18000	45000
WILSON CREEK, NV VORTAC	MILFORD, UT VORTAC	18000	45000
MILFORD, UT VORTAC	GRAND JUNCTION, CO VOR/DME	18000	45000
GRAND JUNCTION, CO VOR/DME	RED TABLE, CO VOR/DME	18000	45000
RED TABLE, CO VOR/DME	FALCON, CO VORTAC	18000	45000
FALCON, CO VORTAC	GOODLAND, KS VORTAC	18000	45000
GOODLAND, KS VORTAC	HILL CITY, KS VORTAC	18000	45000
HILL CITY, KS VORTAC	KANSAS CITY, MO VORTAC	18000	45000
KANSAS CITY, MO VORTAC	SPINNER, IL VORTAC	18000	45000
SPINNER, IL VORTAC	BRICKYARD, IN VORTAC	18000	45000
BRICKYARD, IN VORTAC	BELLAIRE, OH VOR/DME	18000	45000
95.7081 JET ROUTE J81			
DOLPHIN, FL VORTAC	PAHOKEE, FL VOR/DME	18000	45000
PAHOKEE, FL VOR/DME	ORLANDO, FL VORTAC	18000	45000
ORLANDO, FL VORTAC	CECIL, FL VOR	18000	45000
CECIL, FL VOR	COLLIERS, SC VORTAC	18000	45000
95.7082 JET ROUTE J82			
BATTLE GROUND, WA VORTAC	DONNELLY, ID VOR/DME	22000	45000
DONNELLY, ID VOR/DME	DUBOIS, ID VORTAC	18000	45000
DUBOIS, ID VORTAC	CRAZY WOMAN, WY VOR/DME	#25000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
CRAZY WOMAN, WY VOR/DME	RAPID CITY, SD VORTAC	18000	45000
RAPID CITY, SD VORTAC	SIOUX FALLS, SD VORTAC	18000	45000
SIOUX FALLS, SD VORTAC	FORT DODGE, IA VORTAC	18000	45000

FROM	TO	MEA	MAA
95.7082 JET ROUTE J82 –CONTINUED			
FORT DODGE, IA VORTAC	DUBUQUE, IA VORTAC	18000	45000
DUBUQUE, IA VORTAC	JOLIET, IL VOR/DME	18000	45000
JOLIET, IL VOR/DME	GOSHEN, IN VORTAC	18000	45000
95.7083 JET ROUTE J83			
SPARTANBURG, SC VORTAC	APPLETON, OH VORTAC	23000	45000
APPLETON, OH VORTAC	DRYER, OH VOR/DME	18000	45000
#APPLETON R-021 UNUSABLE.			
95.7084 JET ROUTE J84			
OAKLAND, CA VOR/DME	LINDEN, CA VOR/DME	18000	45000
LINDEN, CA VOR/DME	MINA, NV VORTAC	18000	45000
MINA, NV VORTAC	DELTA, UT VORTAC	#20000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
DELTA, UT VORTAC	MEEKER, CO VOR/DME	#20000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
MEEKER, CO VOR/DME	SIDNEY, NE VOR/DME	#22000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
SIDNEY, NE VOR/DME	WOLBACH, NE VORTAC	18000	45000
WOLBACH, NE VORTAC	DUBUQUE, IA VORTAC	#21000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
DUBUQUE, IA VORTAC	NORTHBROOK, IL VOR/DME	18000	45000
NORTHBROOK, IL VOR/DME	DANVILLE, IL VORTAC	18000	35000
95.7085 JET ROUTE J85			
DOLPHIN, FL VORTAC	LLAKE, FL FIX	18000	45000
LLAKE, FL FIX	INPIN, FL FIX	23000	45000
INPIN, FL FIX	GATORS, FL VORTAC	18000	45000
GATORS, FL VORTAC	TAYLOR, FL VORTAC	18000	45000
TAYLOR, FL VORTAC	ALMA, GA VORTAC	18000	45000
ALMA, GA VORTAC	COLLIERS, SC VORTAC	18000	45000
COLLIERS, SC VORTAC	SPARTANBURG, SC VORTAC	18000	45000
SPARTANBURG, SC VORTAC	CHARLESTON, WV VOR/DME	18000	45000
CHARLESTON, WV VOR/DME	DRYER, OH VOR/DME	18000	45000
95.7086 JET ROUTE J86			
BEATTY, NV VORTAC	FUZZY, NV FIX	18000	45000
FUZZY, NV FIX	BOULDER CITY, NV VORTAC	29000	45000
BOULDER CITY, NV VORTAC	PEACH SPRINGS, AZ VOR/DME	18000	45000
PEACH SPRINGS, AZ VOR/DME	BAVPE, AZ FIX	18000	45000
BAVPE, AZ FIX	WINSLOW, AZ VORTAC	18000	45000
WINSLOW, AZ VORTAC	EL PASO, TX VORTAC	#27000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
EL PASO, TX VORTAC	FORT STOCKTON, TX VORTAC	18000	45000
FORT STOCKTON, TX VORTAC	JUNCTION, TX VORTAC	18000	45000
JUNCTION, TX VORTAC	HUMBLE, TX VORTAC	18000	45000
HUMBLE, TX VORTAC	LEEVILLE, LA VORTAC	18000	45000

FROM	TO	MEA	MAA
95.7087 JET ROUTE J87			
HUMBLE, TX VORTAC	NAVASOTA, TX VOR/DME	18000	45000
NAVASOTA, TX VOR/DME	TORNN, TX FIX	18000	45000
TORNN, TX FIX	COWBOY, TX VOR/DME	18000	45000
COWBOY, TX VOR/DME	TULSA, OK VORTAC	18000	45000
TULSA, OK VORTAC	BUTLER, MO VORTAC	18000	45000
BUTLER, MO VORTAC	KIRKSVILLE, MO VORTAC	18000	45000
KIRKSVILLE, MO VORTAC	MOLINE, IL VOR/DME	18000	35000
MOLINE, IL VOR/DME	JOLIET, IL VOR/DME	18000	35000
JOLIET, IL VOR/DME	NORTHBROOK, IL VOR/DME	18000	45000
95.7088 JET ROUTE J88			
LOS ANGELES, CA VORTAC	SAN MARCUS, CA VORTAC	18000	45000
SAN MARCUS, CA VORTAC	SALINAS, CA VORTAC	18000	45000
SALINAS, CA VORTAC	POINT REYES, CA VOR/DME	18000	45000
95.7089 JET ROUTE J89			
HITTR, FL FIX	VALDOSTA, GA VOR/DME	18000	45000
VALDOSTA, GA VOR/DME	ATLANTA, GA VORTAC	18000	45000
ATLANTA, GA VORTAC	LOUISVILLE, KY VORTAC	18000	45000
LOUISVILLE, KY VORTAC	BOILER, IN VORTAC	18000	45000
BOILER, IN VORTAC	NORTHBROOK, IL VOR/DME	18000	45000
NORTHBROOK, IL VOR/DME	BADGER, WI VOR/DME	18000	45000
BADGER, WI VOR/DME	DULUTH, MN VORTAC	18000	45000
DULUTH, MN VORTAC	WINNIPEG, CANADA VORTAC	18000	45000
95.7090 JET ROUTE J90			
SEATTLE, WA VORTAC	MOSES LAKE, WA VOR/DME	18000	45000
MOSES LAKE, WA VOR/DME	HELENA, MT VORTAC	#28000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
HELENA, MT VORTAC	MILES CITY, MT VOR/DME	28000	45000
MILES CITY, MT VOR/DME	ABERDEEN, SD VOR/DME	#20000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
ABERDEEN, SD VOR/DME	REDWOOD FALLS, MN VOR/DME	18000	45000
REDWOOD FALLS, MN VOR/DME	MASON CITY, IA VOR/DME	18000	45000
MASON CITY, IA VOR/DME	NORTHBROOK, IL VOR/DME	18000	45000
95.7091 JET ROUTE J91			
INPIN, FL FIX	CROSS CITY, FL VORTAC	18000	45000
CROSS CITY, FL VORTAC	ATLANTA, GA VORTAC	24000	45000
#ATLANTA R-169 DME UNUSABLE			
ATLANTA, GA VORTAC	VOLUNTEER, TN VORTAC	18000	45000
VOLUNTEER, TN VORTAC	HENDERSON, WV VORTAC	18000	45000

FROM	TO	MEA	MAA
95.7092 JET ROUTE J92			
KLAMATH FALLS, OR VORTAC	MUSTANG, NV VORTAC	18000	45000
MUSTANG, NV VORTAC	COALDALE, NV VORTAC	18000	45000
COALDALE, NV VORTAC	BEATTY, NV VORTAC	18000	45000
BEATTY, NV VORTAC	BOULDER CITY, NV VORTAC	24000	45000
BOULDER CITY, NV VORTAC	DRAKE, AZ VORTAC	18000	45000
DRAKE, AZ VORTAC	PHOENIX, AZ VORTAC	18000	45000
PHOENIX, AZ VORTAC	STANFIELD, AZ VORTAC	18000	45000
STANFIELD, AZ VORTAC	TUCSON, AZ VORTAC	18000	45000
TUCSON, AZ VORTAC	U.S. MEXICAN BORDER	18000	45000
95.7093 JET ROUTE J93			
U.S. MEXICAN BORDER	JULIAN, CA VORTAC	18000	45000
JULIAN, CA VORTAC	PARADISE, CA VORTAC	18000	45000
PARADISE, CA VORTAC	LOS ANGELES, CA VORTAC	18000	45000
95.7094 JET ROUTE J94			
MUSTANG, NV VORTAC	LOVELOCK, NV VORTAC	18000	45000
LOVELOCK, NV VORTAC	BATTLE MOUNTAIN, NV VORTAC	18000	45000
BATTLE MOUNTAIN, NV VORTAC	LUCIN, UT VORTAC	18000	45000
LUCIN, UT VORTAC	ROCK SPRINGS, WY VOR/DME	#18000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
ROCK SPRINGS, WY VOR/DME	SCOTTSBLUFF, NE VORTAC	18000	45000
SCOTTSBLUFF, NE VORTAC	O'NEILL, NE VORTAC	18000	45000
O'NEILL, NE VORTAC	FORT DODGE, IA VORTAC	18000	45000
FORT DODGE, IA VORTAC	DUBUQUE, IA VORTAC	18000	45000
DUBUQUE, IA VORTAC	NORTHBROOK, IL VOR/DME	18000	45000
NORTHBROOK, IL VOR/DME	PULLMAN, MI VOR/DME	18000	45000
PULLMAN, MI VOR/DME	FLINT, MI VORTAC	18000	45000
95.7095 JET ROUTE J95			
DEER PARK, NY VOR/DME	GAYEL, NY FIX	18000	45000
GAYEL, NY FIX	BINGHAMTON, NY VOR/DME	18000	45000
95.7096 JET ROUTE J96			
LOS ANGELES, CA VORTAC	PARADISE, CA VORTAC	18000	45000
PARADISE, CA VORTAC	PARKER, CA VORTAC	18000	45000
PARKER, CA VORTAC	DRAKE, AZ VORTAC	18000	45000
DRAKE, AZ VORTAC	GALLUP, NM VORTAC	18000	45000
GALLUP, NM VORTAC	CIMARRON, NM VORTAC	#23000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
CIMARRON, NM VORTAC	GARDEN CITY, KS VORTAC	18000	45000
GARDEN CITY, KS VORTAC	SALINA, KS VORTAC	18000	45000
SALINA, KS VORTAC	KIRKSVILLE, MO VORTAC	18000	45000
KIRKSVILLE, MO VORTAC	PEORIA, IL VORTAC	18000	35000
PEORIA, IL VORTAC	JOLIET, IL VOR/DME	18000	35000

FROM	TO	MEA	MAA
95.7097 JET ROUTE J97			
SLATN, OA FIX	NANTUCKET, MA VOR/DME	25000	45000
NANTUCKET, MA VOR/DME	BOSTON, MA VOR/DME	18000	45000
95.7098 JET ROUTE J98			
LIBERAL, KS VORTAC	MITBEE, OK VORTAC	18000	45000
MITBEE, OK VORTAC	WILL ROGERS, OK VORTAC	18000	45000
WILL ROGERS, OK VORTAC	TULSA, OK VORTAC	18000	45000
TULSA, OK VORTAC	SPRINGFIELD, MO VORTAC	18000	45000
SPRINGFIELD, MO VORTAC	FARMINGTON, MO VORTAC	18000	45000
95.7099 JET ROUTE J99			
COLLIERS, SC VORTAC	VOLUNTEER, TN VORTAC	18000	45000
VOLUNTEER, TN VORTAC	LOUISVILLE, KY VORTAC	18000	45000
95.7100 JET ROUTE J100			
LOS ANGELES, CA VORTAC	DAGGETT, CA VORTAC	18000	45000
DAGGETT, CA VORTAC	LAS VEGAS, NV VORTAC	18000	45000
LAS VEGAS, NV VORTAC	BRYCE CANYON, UT VORTAC	18000	45000
BRYCE CANYON, UT VORTAC	MEEKER, CO VOR/DME	#20000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
MEEKER, CO VOR/DME	SIDNEY, NE VOR/DME	#22000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
SIDNEY, NE VOR/DME	WOLBACH, NE VORTAC	18000	45000
WOLBACH, NE VORTAC	DUBUQUE, IA VORTAC	#21000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
DUBUQUE, IA VORTAC	NORTHBROOK, IL VOR/DME	18000	45000
95.7101 JET ROUTE J101			
HUMBLE, TX VORTAC	LUFKIN, TX VORTAC	18000	45000
LUFKIN, TX VORTAC	LITTLE ROCK, AR VORTAC	18300	45000
LITTLE ROCK, AR VORTAC	ST LOUIS, MO VORTAC	18000	45000
ST LOUIS, MO VORTAC	SPINNER, IL VORTAC	18000	45000
SPINNER, IL VORTAC	PONTIAC, IL VOR/DME	18000	31000
PONTIAC, IL VOR/DME	JOLIET, IL VOR/DME	18000	35000
JOLIET, IL VOR/DME	NORTHBROOK, IL VOR/DME	18000	45000
NORTHBROOK, IL VOR/DME	BADGER, WI VOR/DME	18000	45000
BADGER, WI VOR/DME	GREEN BAY, WI VORTAC	18000	45000
GREEN BAY, WI VORTAC	SAULT STE MARIE, MI VOR/DME	18000	45000
95.7102 JET ROUTE J102			
PHOENIX, AZ VORTAC	ZUNI, NM VORTAC	18000	45000
ZUNI, NM VORTAC	GALLUP, NM VORTAC	18000	45000
GALLUP, NM VORTAC	ALAMOSA, CO VORTAC	18000	45000
ALAMOSA, CO VORTAC	LAMAR, CO VOR/DME	18000	45000
LAMAR, CO VOR/DME	SALINA, KS VORTAC	18000	45000

FROM	TO	MEA	MAA
95.7103 JET ROUTE J103			
ORMOND BEACH, FL VORTAC	SAVANNAH, GA VORTAC	18000	45000
95.7104 JET ROUTE J104			
LOS ANGELES, CA VORTAC	TWENTYNINE PALMS, CA VORTAC	18000	45000
TWENTYNINE PALMS, CA VORTAC	PARKER, CA VORTAC	18000	45000
PARKER, CA VORTAC	GILA BEND, AZ VORTAC	18000	45000
GILA BEND, AZ VORTAC	TUCSON, AZ VORTAC	18000	45000
TUCSON, AZ VORTAC	SAN SIMON, AZ VORTAC	18000	45000
SAN SIMON, AZ VORTAC	SOCORRO, NM VORTAC	20000	45000
SOCORRO, NM VORTAC	FORT UNION, NM VORTAC	18000	45000
FORT UNION, NM VORTAC	PUEBLO, CO VORTAC	18000	45000
95.7105 JET ROUTE J105			
RANGER, TX VORTAC	MC ALESTER, OK VORTAC	18000	45000
MC ALESTER, OK VORTAC	RAZORBACK, AR VORTAC	18000	45000
RAZORBACK, AR VORTAC	SPRINGFIELD, MO VORTAC	18000	45000
SPRINGFIELD, MO VORTAC	BRADFORD, IL VORTAC	18000	45000
BRADFORD, IL VORTAC	BADGER, WI VOR/DME	18000	45000
95.7106 JET ROUTE J106			
JAMESTOWN, NY VOR/DME	WILKES-BARRE, PA VORTAC	18000	45000
WILKES-BARRE, PA VORTAC	STILLWATER, NJ VOR/DME	18000	45000
STILLWATER, NJ VOR/DME	LA GUARDIA, NY VOR/DME	18000	24000
95.7107 JET ROUTE J107			
LOS ANGELES, CA VORTAC	HECTOR, CA VORTAC	18000	45000
HECTOR, CA VORTAC	BOULDER CITY, NV VORTAC	18000	45000
BOULDER CITY, NV VORTAC	MILFORD, UT VORTAC	18000	45000
MILFORD, UT VORTAC	ROCK SPRINGS, WY VOR/DME	#33000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
ROCK SPRINGS, WY VOR/DME	MUDDY MOUNTAIN, WY VOR/DME	18000	45000
MUDDY MOUNTAIN, WY VOR/DME	DUPREE, SD VOR/DME	18000	45000
DUPREE, SD VOR/DME	HUMBOLDT, MN VORTAC	21000	45000
HUMBOLDT, MN VORTAC	U.S. CANADIAN BORDER	18000	45000
95.7108 JET ROUTE J108			
WINSLOW, AZ VORTAC	ST JOHNS, AZ VORTAC	18000	45000
ST JOHNS, AZ VORTAC	TRUTH OR CONSEQUENCES, NM VORTAC	18000	45000
TRUTH OR CONSEQUENCES, NM VORTAC	WINK, TX VORTAC	24000	45000
95.7109 JET ROUTE J109			
WILMINGTON, NC VORTAC	FLAT ROCK, VA VORTAC	18000	45000
FLAT ROCK, VA VORTAC	LINDEN, VA VORTAC	18000	45000

FROM	TO	MEA	MAA
95.7110 JET ROUTE J110			
OAKLAND, CA VOR/DME	SALINAS, CA VORTAC	18000	45000
SALINAS, CA VORTAC	CLOVIS, CA VORTAC	18000	45000
CLOVIS, CA VORTAC	BOULDER CITY, NV VORTAC	#29000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
BOULDER CITY, NV VORTAC	RATTLESNAKE, NM VORTAC	#28000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
RATTLESNAKE, NM VORTAC	ALAMOSA, CO VORTAC	18000	45000
ALAMOSA, CO VORTAC	GARDEN CITY, KS VORTAC	#19000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
GARDEN CITY, KS VORTAC	BUTLER, MO VORTAC	#22000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
BUTLER, MO VORTAC	ST LOUIS, MO VORTAC	18000	45000
ST LOUIS, MO VORTAC	BRICKYARD, IN VORTAC	18000	45000
BRICKYARD, IN VORTAC	BELLAIRE, OH VOR/DME	18000	45000
BELLAIRE, OH VOR/DME	VINSE, PA FIX	18000	45000
VINSE, PA FIX	KIPPI, PA FIX	26000	45000
KIPPI, PA FIX	COYLE, NJ VORTAC	22000	45000
95.7111 JET ROUTE J111			
NOME, AK VOR/DME	UNALAKLEET, AK VOR/DME	18000	45000
UNALAKLEET, AK VOR/DME	MC GRATH, AK VORTAC	18000	45000
MC GRATH, AK VORTAC	ANCHORAGE, AK VOR/DME	18000	45000
95.7112 JET ROUTE J112			
BUTLER, MO VORTAC	FARMINGTON, MO VORTAC	18000	45000
FARMINGTON, MO VORTAC	POCKET CITY, IN VORTAC	18000	45000
POCKET CITY, IN VORTAC	LOUISVILLE, KY VORTAC	18000	45000
95.7113 JET ROUTE J113			
VIRGINIA KEY, FL VOR/DME	CRAIG, FL VORTAC	18000	45000
95.7114 JET ROUTE J114			
MILE HIGH, CO VORTAC	SIDNEY, NE VOR/DME	18000	45000
SIDNEY, NE VOR/DME	O'NEILL, NE VORTAC	23000	45000
O'NEILL, NE VORTAC	SIOUX FALLS, SD VORTAC	18000	45000
SIOUX FALLS, SD VORTAC	GOPHER, MN VORTAC	18000	45000
95.7115 JET ROUTE J115			
SHEMYA, AK NDB	MOUNT MOFFETT, AK NDB/DME	18000	45000
MOUNT MOFFETT, AK NDB/DME	DUTCH HARBOR, AK NDB/DME	18000	45000
DUTCH HARBOR, AK NDB/DME	COLD BAY, AK VORTAC	18000	45000
COLD BAY, AK VORTAC	KING SALMON, AK VORTAC	#18000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
KING SALMON, AK VORTAC	KENAI, AK VOR/DME	18000	45000
KENAI, AK VOR/DME	ANCHORAGE, AK VOR/DME	18000	45000
ANCHORAGE, AK VOR/DME	BIG LAKE, AK VORTAC	18000	45000
BIG LAKE, AK VORTAC	FAIRBANKS, AK VORTAC	18000	45000

FROM	TO	MEA	MAA
95.7115 JET ROUTE J115 CONTINUED			
FAIRBANKS, AK VORTAC	CHANDALAR LAKE, AK NDB	18000	45000
CHANDALAR LAKE, AK NDB	DEADHORSE, AK VOR/DME	18000	45000
95.7116 JET ROUTE J116			
WASATCH, UT VORTAC	FAIRFIELD, UT VORTAC	18000	45000
FAIRFIELD, UT VORTAC	MEEKER, CO VOR/DME	18000	45000
MEEKER, CO VOR/DME	FALCON, CO VORTAC	20000	45000
95.7117 JET ROUTE J117			
MC GRATH, AK VORTAC	GALENA, AK VOR/DME	18000	45000
GALENA, AK VOR/DME	KOTZEBUE, AK VOR/DME	18000	45000
95.7118 JET ROUTE J118			
MEMPHIS, TN VORTAC	CHOO CHOO, TN VORTAC	18000	45000
CHOO CHOO, TN VORTAC	SPARTANBURG, SC VORTAC	18000	45000
95.7119 JET ROUTE J119			
ST PETERSBURG, FL VORTAC	TAYLOR, FL VORTAC	18000	45000
95.7120 JET ROUTE J120			
MOUNT MOFFETT, AK NDB/DME	ST PAUL ISLAND, AK NDB/DME	18000	45000
ST PAUL ISLAND, AK NDB/DME	BETHEL, AK VORTAC	28000	45000
BETHEL, AK VORTAC	MC GRATH, AK VORTAC	18000	45000
MC GRATH, AK VORTAC	FAIRBANKS, AK VORTAC	18000	45000
FAIRBANKS, AK VORTAC	FORT YUKON, AK VORTAC	18000	45000
95.7121 JET ROUTE J121			
CRAIG, FL VORTAC	CHARLESTON, SC VORTAC	18000	45000
CHARLESTON, SC VORTAC	KINSTON, NC VORTAC	18000	45000
KINSTON, NC VORTAC	NORFOLK, VA VORTAC	18000	45000
NORFOLK, VA VORTAC	SNOW HILL, MD VORTAC	18000	45000
SNOW HILL, MD VORTAC	SEA ISLE, NJ VORTAC	18000	45000
SEA ISLE, NJ VORTAC	HAMPTON, NY VORTAC	18000	45000
HAMPTON, NY VORTAC	SANDY POINT, RI VOR/DME	18000	45000
SANDY POINT, RI VOR/DME	KENNEBUNK, ME VOR/DME	18000	45000
95.7122 JET ROUTE J122			
FAIRBANKS, AK VORTAC	GALENA, AK VOR/DME	18000	45000
GALENA, AK VOR/DME	NOME, AK VOR/DME	18000	45000

FROM	TO	MEA	MAA
95.7123 JET ROUTE J123			
CJAYY, AK FIX	KODIAK, AK VOR/DME	18000	45000
KODIAK, AK VOR/DME	KING SALMON, AK VORTAC	18000	45000
KING SALMON, AK VORTAC	BETHEL, AK VORTAC	18000	45000
BETHEL, AK VORTAC	NOME, AK VOR/DME	18000	45000
NOME, AK VOR/DME	KOTZEBUE, AK VOR/DME	18000	45000
KOTZEBUE, AK VOR/DME	BARROW, AK VOR/DME	#21000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
95.7124 JET ROUTE J124			
BIG LAKE, AK VORTAC	GULKANA, AK VOR/DME	18000	45000
GULKANA, AK VOR/DME	NORTHWAY, AK VORTAC	18000	45000
95.7125 JET ROUTE J125			
KODIAK, AK VOR/DME	ANCHORAGE, AK VOR/DME	18000	45000
ANCHORAGE, AK VOR/DME	TALKEETNA, AK VOR/DME	18000	45000
TALKEETNA, AK VOR/DME	NENANA, AK VORTAC	18000	45000
95.7126 JET ROUTE J126			
LOS ANGELES, CA VORTAC	SAN MARCUS, CA VORTAC	18000	45000
SAN MARCUS, CA VORTAC	SALINAS, CA VORTAC	18000	45000
SALINAS, CA VORTAC	SACRAMENTO, CA VORTAC	18000	45000
SACRAMENTO, CA VORTAC	RED BLUFF, CA VORTAC	18000	45000
RED BLUFF, CA VORTAC	ROGUE VALLEY, OR VORTAC	18000	45000
ROGUE VALLEY, OR VORTAC	EUGENE, OR VORTAC	18000	45000
EUGENE, OR VORTAC	NEWBERG, OR VOR/DME	18000	45000
NEWBERG, OR VOR/DME	OLYMPIA, WA VORTAC	18000	45000
OLYMPIA, WA VORTAC	U.S. CANADIAN BORDER	18000	45000
95.7127 JET ROUTE J127			
KING SALMON, AK VORTAC	RINGO, AK FIX	18000	45000
RINGO, AK FIX	NONDA, AK FIX	18000	45000
95.7128 JET ROUTE J128			
LOS ANGELES, CA VORTAC	RUSTT, CA FIX	18000	45000
RUSTT, CA FIX	PEACH SPRINGS, AZ VOR/DME	25000	45000
PEACH SPRINGS, AZ VOR/DME	TUBA CITY, AZ VORTAC	18000	45000
TUBA CITY, AZ VORTAC	BLUE MESA, CO VOR/DME	#20000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
BLUE MESA, CO VOR/DME	FALCON, CO VORTAC	18000	45000
FALCON, CO VORTAC	HAYES CENTER, NE VORTAC	18000	45000
HAYES CENTER, NE VORTAC	WOLBACH, NE VORTAC	18000	45000
WOLBACH, NE VORTAC	DUBUQUE, IA VORTAC	#21000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
DUBUQUE, IA VORTAC	NORTHBROOK, IL VOR/DME	18000	45000

FROM	TO	MEA	MAA
95.7129 JET ROUTE J129			
NOME, AK VOR/DME	KOTZEBUE, AK VOR/DME	18000	45000
95.7130 JET ROUTE J130			
MC COOK, NE VOR/DME	PAWNEE CITY, NE VORTAC	18000	41000
95.7131 JET ROUTE J131			
SAN ANTONIO, TX VORTAC	EDNAS, TX FIX	18000	45000
EDNAS, TX FIX	RANGER, TX VORTAC	18000	45000
RANGER, TX VORTAC	TEXARKANA, AR VORTAC	18000	45000
TEXARKANA, AR VORTAC	LITTLE ROCK, AR VORTAC	18000	45000
LITTLE ROCK, AR VORTAC	POCKET CITY, IN VORTAC	#18000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
95.7132 JET ROUTE J132			
ELMIRA, NY VOR/DME	HUGUENOT, NY VOR/DME	18000	45000
95.7133 JET ROUTE J133			
SITKA, AK NDB	ORCA BAY, AK NDB	18000	45000
ORCA BAY, AK NDB	JOHNSTONE POINT, AK VOR/DME	18000	
JOHNSTONE POINT, AK VOR/DME	ANCHORAGE, AK VOR/DME	18000	45000
ANCHORAGE, AK VOR/DME	GALENA, AK VOR/DME	18000	45000
95.7134 JET ROUTE J134			
LOS ANGELES, CA VORTAC	SEAL BEACH, CA VORTAC	18000	45000
SEAL BEACH, CA VORTAC	THERMAL, CA VORTAC	18000	45000
THERMAL, CA VORTAC	PARKER, CA VORTAC	18000	45000
PARKER, CA VORTAC	DRAKE, AZ VORTAC	18000	45000
DRAKE, AZ VORTAC	GALLUP, NM VORTAC	18000	45000
GALLUP, NM VORTAC	CIMARRON, NM VORTAC	#23000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
CIMARRON, NM VORTAC	LIBERAL, KS VORTAC	18000	45000
LIBERAL, KS VORTAC	WICHITA, KS VORTAC	18000	45000
WICHITA, KS VORTAC	BUTLER, MO VORTAC	18000	45000
BUTLER, MO VORTAC	ST LOUIS, MO VORTAC	18000	45000
ST LOUIS, MO VORTAC	FALMOUTH, KY VOR/DME	18000	45000
FALMOUTH, KY VOR/DME	HENDERSON, WV VORTAC	18000	45000
HENDERSON, WV VORTAC	LINDEN, VA VORTAC	18000	45000
95.7135 JET ROUTE J135			
BETHEL, AK VORTAC	UNALAKLEET, AK VOR/DME	18000	45000

FROM	TO	MEA	MAA
95.7136 JET ROUTE J136			
NEWPORT, OR VORTAC	BATTLE GROUND, WA VORTAC	18000	45000
BATTLE GROUND, WA VORTAC	YAKIMA, WA VORTAC	18000	45000
YAKIMA, WA VORTAC	SPOKANE, WA VORTAC	18000	45000
SPOKANE, WA VORTAC	MULLAN PASS, ID VOR/DME	18000	45000
MULLAN PASS, ID VOR/DME	HELENA, MT VORTAC	18000	45000
HELENA, MT VORTAC	BILLINGS, MT VORTAC	18000	45000
BILLINGS, MT VORTAC	MEDICINE BOW, WY VOR/DME	28000	45000
95.7137 JET ROUTE J137			
SPINNER, IL VORTAC	FARMINGTON, MO VORTAC	18000	45000
FARMINGTON, MO VORTAC	WALNUT RIDGE, AR VORTAC	18000	45000
WALNUT RIDGE, AR VORTAC	LITTLE ROCK, AR VORTAC	18000	45000
95.7138 JET ROUTE J138			
FORT STOCKTON, TX VORTAC	CENTER POINT, TX VORTAC	18000	45000
CENTER POINT, TX VORTAC	SAN ANTONIO, TX VORTAC	18000	45000
SAN ANTONIO, TX VORTAC	HOBBY, TX VOR/DME	18000	45000
HOBBY, TX VOR/DME	LAKE CHARLES, LA VORTAC	18000	45000
LAKE CHARLES, LA VORTAC	FIGHTING TIGER, LA VORTAC	18000	45000
FIGHTING TIGER, LA VORTAC	SEMMES, AL VORTAC	18000	45000
95.7139 JET ROUTE J139			
BETTLES, AK VOR/DME	DEADHORSE, AK VOR/DME	18000	45000
95.7140 JET ROUTE J140			
FARGO, ND VOR/DME	DULUTH, MN VORTAC	18000	45000
DULUTH, MN VORTAC	SAULT STE MARIE, MI VOR/DME	18000	45000
95.7141 JET ROUTE J141			
EL PASO, TX VORTAC	U.S. MEXICAN BORDER	18000	45000
95.7142 JET ROUTE J142			
SOCORRO, NM VORTAC	ANTON CHICO, NM VORTAC	18000	45000
ANTON CHICO, NM VORTAC	BORGER, TX VORTAC	18000	45000
95.7143 JET ROUTE J143			
POINT REYES, CA VOR/DME	MENDOCINO, CA VORTAC	18000	45000
MENDOCINO, CA VORTAC	ROSEBURG, OR VOR/DME	18000	45000
ROSEBURG, OR VOR/DME	EUGENE, OR VORTAC	18000	45000
EUGENE, OR VORTAC	KLICKITAT, OR VOR/DME	18000	45000
KLICKITAT, OR VOR/DME	SPOKANE, WA VORTAC	18000	45000

FROM	TO	MEA	MAA
95.7144 JET ROUTE J144			
WOLBACH, NE VORTAC	DES MOINES, IA VORTAC	18000	45000
DES MOINES, IA VORTAC	DUBUQUE, IA VORTAC	18000	45000
95.7145 JET ROUTE J145			
FOOTHILLS, SC VORTAC	CHARLESTON, WV VOR/DME	18000	45000
95.7146 JET ROUTE J146			
LOS ANGELES, CA VORTAC	DAGGETT, CA VORTAC	18000	45000
DAGGETT, CA VORTAC	LAS VEGAS, NV VORTAC	18000	45000
LAS VEGAS, NV VORTAC	NOOTN, AZ FIX	18000	45000
NOOTN, AZ FIX	DOVE CREEK, CO VORTAC	#25000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
DOVE CREEK, CO VORTAC	BLUE MESA, CO VOR/DME	18000	45000
BLUE MESA, CO VOR/DME	GOODLAND, KS VORTAC	#23000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
GOODLAND, KS VORTAC	LINCOLN, NE VORTAC	18000	45000
LINCOLN, NE VORTAC	IOWA CITY, IA VOR/DME	18000	45000
IOWA CITY, IA VOR/DME	JOLIET, IL VOR/DME	18000	45000
JOLIET, IL VOR/DME	GIPPER, MI VORTAC	18000	45000
GIPPER, MI VORTAC	CHARDON, OH VOR/DME	18000	45000
CHARDON, OH VOR/DME	KEATING, PA VORTAC	18000	45000
KEATING, PA VORTAC	MILTON, PA VORTAC	18000	45000
MILTON, PA VORTAC	ALLENTOWN, PA VORTAC	18000	45000
ALLENTOWN, PA VORTAC	KENNEDY, NY VOR/DME	18000	45000
#ALLENTOWN R-104 UNUSABLE. USE KENNEDY R-287.			
95.7147 JET ROUTE J147			
BECKLEY, WV VOR/DME	GREENBRIER, WV VOR/DME	18000	45000
GREENBRIER, WV VOR/DME	CASANOVA, VA VORTAC	18000	45000
95.7148 JET ROUTE J148			
COALDALE, NV VORTAC	DELTA, UT VORTAC	27000	45000
DELTA, UT VORTAC	MYTON, UT VOR/DME	18000	45000
MYTON, UT VOR/DME	CHEYENNE, WY VORTAC	#21000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
CHEYENNE, WY VORTAC	O'NEILL, NE VORTAC	#21000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
O'NEILL, NE VORTAC	MASON CITY, IA VOR/DME	18000	45000

FROM	TO	MEA	MAA
95.7149 JET ROUTE J149			
ARMEL, VA VOR/DME *18000 - GNSS MEA #ARMEL R-281 UNUSABLE BYD 119 NM. NA EXCEPT FOR AIRCRAFT EQUIPPED WITH SUITABLE RNAV SYSTEM WITH GPS. GNSS REQUIRED.	EYTEE, WV FIX	#*31000	41000
EYTEE, WV FIX *18000 - GNSS MEA #GNSS REQUIRED	GEFFS, WV FIX	#*31000	41000
GEFFS, WV FIX *18000 - GNSS MEA	HACKS, WV FIX	#*29000	41000
HACKS, WV FIX *18000 - GNSS MEA	ROSEWOOD, OH VORTAC	#*23000	45000
ROSEWOOD, OH VORTAC	FORT WAYNE, IN VORTAC	18000	45000
95.7150 JET ROUTE J150			
GORDONSVILLE, VA VORTAC NOTTINGHAM, MD VORTAC *10000 - MRA	NOTTINGHAM, MD VORTAC *GRACO, MD FIX	18000 18000	45000 35000
GRACO, MD FIX WOODSTOWN, NJ VORTAC COYLE, NJ VORTAC HAMPTON, NY VORTAC #UNUSABLE	WOODSTOWN, NJ VORTAC COYLE, NJ VORTAC HAMPTON, NY VORTAC MARCONI, MA VOR/DME	18000 18000 18000 #	45000 45000 45000
MARCONI, MA VOR/DME #UNUSABLE	STOOL, MA FIX	#	
95.7151 JET ROUTE J151			
CROSS CITY, FL VORTAC VULCAN, AL VORTAC FARMINGTON, MO VORTAC ST LOUIS, MO VORTAC KIRKSVILLE, MO VORTAC OMAHA, IA VORTAC O'NEILL, NE VORTAC RAPID CITY, SD VORTAC #MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.	VULCAN, AL VORTAC FARMINGTON, MO VORTAC ST LOUIS, MO VORTAC KIRKSVILLE, MO VORTAC OMAHA, IA VORTAC O'NEILL, NE VORTAC RAPID CITY, SD VORTAC BILLINGS, MT VORTAC WHITEHALL, MT VOR/DME	26000 25000 18000 18000 18000 18000 18000 #22000 18000	45000 41000 45000 45000 45000 45000 45000 45000
95.7152 JET ROUTE J152			
ROSEWOOD, OH VORTAC JOHNSTOWN, PA VOR/DME	JOHNSTOWN, PA VOR/DME HARRISBURG, PA VORTAC	18000 18000	45000 40000
95.7153 JET ROUTE J153			
ROME, OR VOR/DME BAKER CITY, OR VOR/DME	BAKER CITY, OR VOR/DME SPOKANE, WA VORTAC	18000 18000	45000 45000

FROM	TO	MEA	MAA
95.7154 JET ROUTE J154			
BATTLE MOUNTAIN, NV VORTAC	BONNEVILLE, UT VORTAC	18000	45000
BONNEVILLE, UT VORTAC	WASATCH, UT VORTAC	18000	45000
WASATCH, UT VORTAC	ROCK SPRINGS, WY VOR/DME	18000	45000
ROCK SPRINGS, WY VOR/DME	MILE HIGH, CO VORTAC	#21000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
MILE HIGH, CO VORTAC	GARDEN CITY, KS VORTAC	21000	45000
95.7155 JET ROUTE J155			
CHANDALAR LAKE, AK NDB	NENANA, AK VORTAC	18000	45000
95.7156 JET ROUTE J156			
WILSON CREEK, NV VORTAC	MEEKER, CO VOR/DME	#18000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
95.7157 JET ROUTE J157			
MYTON, UT VOR/DME	LARAMIE, WY VOR/DME	#23000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
LARAMIE, WY VOR/DME	SCOTTSBLUFF, NE VORTAC	18000	45000
SCOTTSBLUFF, NE VORTAC	RAPID CITY, SD VORTAC	18000	45000
95.7158 JET ROUTE J158			
MINA, NV VORTAC	LUCIN, UT VORTAC	#23000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
LUCIN, UT VORTAC	MALAD CITY, ID VOR/DME	18000	45000
MALAD CITY, ID VOR/DME	BIG PINEY, WY VOR/DME	18000	45000
BIG PINEY, WY VOR/DME	MUDDY MOUNTAIN, WY VOR/DME	18000	45000
MUDDY MOUNTAIN, WY VOR/DME	RAPID CITY, SD VORTAC	18000	45000
RAPID CITY, SD VORTAC	ABERDEEN, SD VOR/DME	18000	45000
95.7159 JET ROUTE J159			
BATTLE GROUND, WA VORTAC	DESCHUTES, OR VORTAC	18000	45000
95.7160 JET ROUTE J160			
FAIRBANKS, AK VORTAC	FORT YUKON, AK VORTAC	18000	45000
FORT YUKON, AK VORTAC	ADREW, AK FIX	18000	45000
95.7161 JET ROUTE J161			
ZUNI, NM VORTAC	RATTLESNAKE, NM VORTAC	18000	45000

FROM	TO	MEA	MAA
95.7162 JET ROUTE J162			
DRYER, OH VOR/DME	BELLAIRE, OH VOR/DME	18000	45000
BELLAIRE, OH VOR/DME	MORGANTOWN, WV VOR/DME	18000	45000
MORGANTOWN, WV VOR/DME	MARTINSBURG, WV VORTAC	18000	29000
95.7163 JET ROUTE J163			
BAKER CITY, OR VOR/DME	BOISE, ID VORTAC	18000	45000
BOISE, ID VORTAC	POCATELLO, ID VOR/DME	18000	45000
POCATELLO, ID VOR/DME	ROCK SPRINGS, WY VOR/DME	21000	45000
ROCK SPRINGS, WY VOR/DME	HAYDEN, CO VOR/DME	18000	45000
95.7165 JET ROUTE J165			
CHARLESTON, SC VORTAC	RICHMOND, VA VORTAC	#18000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
95.7166 JET ROUTE J166			
SAN SIMON, AZ VORTAC	TRUTH OR CONSEQUENCES, NM VORTAC	18000	45000
TRUTH OR CONSEQUENCES, NM VORTAC	CHISUM, NM VORTAC	24000	45000
CHISUM, NM VORTAC	WICHITA FALLS, TX VORTAC	#18000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
95.7167 JET ROUTE J167			
JOHNSTONE POINT, AK VOR/DME	GULKANA, AK VOR/DME	18000	45000
GULKANA, AK VOR/DME	BIG DELTA, AK VORTAC	18000	45000
BIG DELTA, AK VORTAC	FORT YUKON, AK VORTAC	18000	45000
FORT YUKON, AK VORTAC	U.S. CANADIAN BORDER	18000	45000
95.7168 JET ROUTE J168			
WICHITA FALLS, TX VORTAC	LAMAR, CO VOR/DME	#22000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
95.7169 JET ROUTE J169			
LOS ANGELES, CA VORTAC	SEAL BEACH, CA VORTAC	18000	45000
SEAL BEACH, CA VORTAC	THERMAL, CA VORTAC	18000	45000
THERMAL, CA VORTAC	BLYTHE, CA VORTAC	18000	45000
BLYTHE, CA VORTAC	STANFIELD, AZ VORTAC	18000	45000
95.7170 JET ROUTE J170			
CRAZY WOMAN, WY VOR/DME	MUDDY MOUNTAIN, WY VOR/DME	18000	45000
MUDDY MOUNTAIN, WY VOR/DME	MEDICINE BOW, WY VOR/DME	18000	45000

FROM	TO	MEA	MAA
95.7171 JET ROUTE J171			
TOBE, CO VOR/DME	HUGO, CO VOR/DME	18000	45000
95.7173 JET ROUTE J173			
WASATCH, UT VORTAC	MEEKER, CO VOR/DME	18000	45000
95.7174 JET ROUTE J174			
CRAIG, FL VORTAC	CHARLESTON, SC VORTAC	18000	45000
CHARLESTON, SC VORTAC	WILMINGTON, NC VORTAC	18000	45000
WILMINGTON, NC VORTAC	DIXON, NC NDB/DME	18000	45000
DIXON, NC NDB/DME	NORFOLK, VA VORTAC	18000	45000
NORFOLK, VA VORTAC	SNOW HILL, MD VORTAC	18000	45000
SNOW HILL, MD VORTAC	HAMPTON, NY VORTAC	18000	45000
HAMPTON, NY VORTAC	MARCONI, MA VOR/DME	#	
#UNUSABLE			
MARCONI, MA VOR/DME	HERIN, MA FIX	#	
#UNUSABLE			
95.7175 JET ROUTE J175			
CHEYENNE, WY VORTAC	LARAMIE, WY VOR/DME	18000	45000
LARAMIE, WY VOR/DME	DUBOIS, ID VORTAC	#29000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
95.7177 JET ROUTE J177			
HUMBLE, TX VORTAC	HOBBY, TX VOR/DME	18000	45000
HOBBY, TX VOR/DME	PALACIOS, TX VORTAC	18000	45000
PALACIOS, TX VORTAC	U.S. MEXICAN BORDER	31000	45000
95.7178 JET ROUTE J178			
FORT WAYNE, IN VORTAC	APPLETON, OH VORTAC	18000	45000
95.7179 JET ROUTE J179			
MIDDLETON ISLAND, AK VOR/DME	KENAI, AK VOR/DME	18000	45000
KENAI, AK VOR/DME	SPARREVOHN, AK VOR/DME	18000	45000
SPARREVOHN, AK VOR/DME	ANIAK, AK NDB	18000	45000
ANIAK, AK NDB	ST MARYS, AK NDB	18000	45000
ST MARYS, AK NDB	EMMONAK, AK VOR/DME	18000	45000
95.7180 JET ROUTE J180			
HUMBLE, TX VORTAC	DAISETTA, TX VORTAC	18000	45000
DAISETTA, TX VORTAC	CIDOR, LA FIX	18000	45000
CIDOR, LA FIX	FOSIN, LA FIX	19000	45000
FOSIN, LA FIX	SAWMILL, LA VOR/DME	18000	45000

FROM	TO	MEA	MAA
95.7180 JET ROUTE J180 – CONTINUED			
SAWMILL, LA VOR/DME	LITTLE ROCK, AR VORTAC	18000	45000
LITTLE ROCK, AR VORTAC	FORISTELL, MO VORTAC	18000	45000
95.7181 JET ROUTE J181			
RANGER, TX VORTAC	OKMULGEE, OK VOR/DME	18000	45000
OKMULGEE, OK VOR/DME	NEOSHO, MO VOR/DME	18000	45000
NEOSHO, MO VOR/DME	HALLSVILLE, MO VORTAC	18000	45000
HALLSVILLE, MO VORTAC	BAYLI, IL FIX	18000	23000
BAYLI, IL FIX	BRADFORD, IL VORTAC	18000	45000
95.7182 JET ROUTE J182			
GOODLAND, KS VORTAC	WICHITA, KS VORTAC	18000	45000
WICHITA, KS VORTAC	RAZORBACK, AR VORTAC	18000	45000
95.7183 JET ROUTE J183			
EL PASO, TX VORTAC	PECOS, TX VOR/DME	18000	45000
PECOS, TX VOR/DME	LLANO, TX VORTAC	20000	45000
LLANO, TX VORTAC	COLLEGE STATION, TX VORTAC	18000	45000
95.7184 JET ROUTE J184			
BUCKEYE, AZ VORTAC	DEMING, NM VORTAC	23000	45000
DEMING, NM VORTAC	NEWMAN, TX VORTAC	18000	45000
95.7186 JET ROUTE J186			
FOOTHILLS, SC VORTAC	SNOWBIRD, TN VORTAC	18000	45000
SNOWBIRD, TN VORTAC	APPLETON, OH VORTAC	18000	45000
95.7187 JET ROUTE J187			
MEMPHIS, TN VORTAC	FORISTELL, MO VORTAC	18000	45000
95.7188 JET ROUTE J188			
BETHEL, AK VORTAC	SPARREVOHN, AK VOR/DME	18000	45000
95.7189 JET ROUTE J189			
AVENAL, CA VOR/DME	LINDEN, CA VOR/DME	18000	45000
LINDEN, CA VOR/DME	KLAMATH FALLS, OR VORTAC	#18000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
KLAMATH FALLS, OR VORTAC	BATTLE GROUND, WA VORTAC	#19000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
BATTLE GROUND, WA VORTAC	SEATTLE, WA VORTAC	18000	45000

FROM	TO	MEA	MAA
95.7190 JET ROUTE J190			
CARLETON, MI VOR/DME	SLATE RUN, PA VORTAC	#18000	45000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
SLATE RUN, PA VORTAC	BINGHAMTON, NY VOR/DME	#18000	45000
#USE SLATE RUN R-072 TO BINGHAMTON			
BINGHAMTON, NY VOR/DME	ROCKDALE, NY VOR/DME	18000	45000
ROCKDALE, NY VOR/DME	ALBANY, NY VORTAC	18000	45000
95.7191 JET ROUTE J191			
ROBBINSVILLE, NJ VORTAC	DAVYS, NJ FIX	18000	45000
DAVYS, NJ FIX	SMYRNA, DE VORTAC	18000	33000
SMYRNA, DE VORTAC	PATUXENT, MD VORTAC	18000	45000
PATUXENT, MD VORTAC	HUBBS, VA FIX	18000	45000
HUBBS, VA FIX	HOPEWELL, VA VORTAC	18000	22000
HOPEWELL, VA VORTAC	WILMINGTON, NC VORTAC	18000	45000
95.7192 JET ROUTE J192			
GOODLAND, KS VORTAC	PAWNEE CITY, NE VORTAC	18000	45000
PAWNEE CITY, NE VORTAC	IOWA CITY, IA VOR/DME	18000	45000
95.7193 JET ROUTE J193			
WILMINGTON, NC VORTAC	COFIELD, NC VORTAC	18000	45000
COFIELD, NC VORTAC	HARCUM, VA VORTAC	18000	29000
HARCUM, VA VORTAC	HUBBS, VA FIX	18000	28000
95.7195 JET ROUTE J195			
ANNETTE ISLAND, AK VOR/DME	BIORKA ISLAND, AK VORTAC	18000	45000
95.7196 JET ROUTE J196			
BRYCE CANYON, UT VORTAC	MEEKER, CO VOR/DME	33000	45000
95.7197 JET ROUTE J197			
DOVE CREEK, CO VORTAC	HUGO, CO VOR/DME	33000	45000
HUGO, CO VOR/DME	GOODLAND, KS VORTAC	18000	45000
GOODLAND, KS VORTAC	WOLBACH, NE VORTAC	18000	45000
WOLBACH, NE VORTAC	SIOUX FALLS, SD VORTAC	18000	45000
95.7198 JET ROUTE J198			
MINA, NV VORTAC	WILSON CREEK, NV VORTAC	18000	45000
WILSON CREEK, NV VORTAC	MEEKER, CO VOR/DME	33000	45000

FROM	TO	MEA	MAA
95.7199 JET ROUTE J199			
WILSON CREEK, NV VORTAC	DELTA, UT VORTAC	18000	45000
DELTA, UT VORTAC	MEEKER, CO VOR/DME	33000	45000
95.7202 JET ROUTE J202			
FAIRFIELD, UT VORTAC	ROCK SPRINGS, WY VOR/DME	20000	45000
ROCK SPRINGS, WY VOR/DME	MUDDY MOUNTAIN, WY VOR/DME	18000	45000
95.7203 JET ROUTE J203			
BILLINGS, MT VORTAC	GREAT FALLS, MT VORTAC	18000	45000
95.7204 JET ROUTE J204			
DUPREE, SD VOR/DME	MILES CITY, MT VOR/DME	18000	45000
MILES CITY, MT VOR/DME	HILGR, MT FIX	19000	45000
HILGR, MT FIX	GREAT FALLS, MT VORTAC	18000	45000
95.7206 JET ROUTE J206			
ALAMOSA, CO VORTAC	BLUE MESA, CO VOR/DME	18000	45000
BLUE MESA, CO VOR/DME	RED TABLE, CO VOR/DME	18000	45000
RED TABLE, CO VOR/DME	ROCK SPRINGS, WY VOR/DME	18000	45000
95.7207 JET ROUTE J207			
SAVANNAH, GA VORTAC	FLORENCE, SC VORTAC	24000	45000
FLORENCE, SC VORTAC	RALEIGH/DURHAM, NC VORTAC	31000	45000
RALEIGH/DURHAM, NC VORTAC	FRANKLIN, VA VORTAC	18000	45000
95.7208 JET ROUTE J208			
ATHENS, GA VOR/DME	LIBERTY, NC VORTAC	#	
#UNUSABLE			
LIBERTY, NC VORTAC	HOPEWELL, VA VORTAC	18000	45000
95.7209 JET ROUTE J209			
GREENWOOD, SC VORTAC	RALEIGH/DURHAM, NC VORTAC	18000	45000
RALEIGH/DURHAM, NC VORTAC	TAR RIVER, NC VORTAC	18000	45000
TAR RIVER, NC VORTAC	NORFOLK, VA VORTAC	18000	45000
NORFOLK, VA VORTAC	SALISBURY, MD VORTAC	18000	45000
SALISBURY, MD VORTAC	COYLE, NJ VORTAC	18000	45000
COYLE, NJ VORTAC	WHITE, NJ FIX	18000	45000

FROM	TO	MEA	MAA
95.7210 JET ROUTE J210			
DUNKN, GA FIX	VANCE, SC VORTAC	18000	45000
VANCE, SC VORTAC	WILMINGTON, NC VORTAC	18000	45000
95.7211 JET ROUTE J211			
YOUNGSTOWN, OH VORTAC	JOHNSTOWN, PA VOR/DME	18000	45000
#YOUNGSTOWN R-130 UNUSABLE ABOVE 24000.			
JOHNSTOWN, PA VOR/DME	WESTMINSTER, MD VORTAC	18000	45000
95.7212 JET ROUTE J212			
STANFIELD, AZ VORTAC	BUCKEYE, AZ VORTAC	18000	45000
BUCKEYE, AZ VORTAC	PALM SPRINGS, CA VORTAC	26000	45000
95.7213 JET ROUTE J213			
BECKLEY, WV VOR/DME	ARMEL, VA VOR/DME	*18000	45000
*18000 - GNSS MEA			
95.7217 JET ROUTE J217			
HANCOCK, NY VOR/DME	KEATING, PA VORTAC	18000	45000
95.7220 JET ROUTE J220			
ARMEL, VA VOR/DME	STONYFORK, PA VOR/DME	18000	23000
95.7222 JET ROUTE J222			
ROBBINSVILLE, NJ VORTAC	KENNEDY, NY VOR/DME	18000	45000
KENNEDY, NY VOR/DME	CAMBRIDGE, NY VOR/DME	18000	31000
95.7223 JET ROUTE J223			
LA GUARDIA, NY VOR/DME	CORDS, PA FIX	18000	25000
95.7225 JET ROUTE J225			
CEDAR LAKE, NJ VOR/DME	KENNEDY, NY VOR/DME	18000	45000
KENNEDY, NY VOR/DME	PROVIDENCE, RI VOR/DME	18000	45000
95.7227 JET ROUTE J227			
ARMEL, VA VOR/DME	ELMIRA, NY VOR/DME	18000	23000

FROM	TO	MEA	MAA
95.7230 JET ROUTE J230			
ROBBINSVILLE, NJ VORTAC	LARRI, PA FIX	18000	45000
LARRI, PA FIX	VINSE, PA FIX	26000	45000
VINSE, PA FIX	BELLAIRE, OH VOR/DME	18000	45000
95.7231 JET ROUTE J231			
TWENTYNINE PALMS, CA VORTAC	HIPPI, AZ FIX	23000	40000
HIPPI, AZ FIX	DRAKE, AZ VORTAC	18000	45000
DRAKE, AZ VORTAC	ST JOHNS, AZ VORTAC	18000	45000
ST JOHNS, AZ VORTAC	ANTON CHICO, NM VORTAC	18000	45000
ANTON CHICO, NM VORTAC	LIBERAL, KS VORTAC	18000	45000
95.7232 JET ROUTE J232			
MOLINE, IL VOR/DME	KIRKSVILLE, MO VORTAC	18000	35000
95.7233 JET ROUTE J233			
ST LOUIS, MO VORTAC	KIRKSVILLE, MO VORTAC	18000	45000
KIRKSVILLE, MO VORTAC	WATERLOO, IA VOR/DME	18000	45000
95.7236 JET ROUTE J236			
THERMAL, CA VORTAC	NEEDLES, CA VORTAC	18000	45000
NEEDLES, CA VORTAC	TUBA CITY, AZ VORTAC	18000	45000
95.7239 JET ROUTE J239			
ATLANTA, GA VORTAC	MERIDIAN, MS VORTAC	24000	45000
95.7240 JET ROUTE J240			
MYTON, UT VOR/DME	BLUE MESA, CO VOR/DME	19000	45000
95.7244 JET ROUTE J244			
FORT UNION, NM VORTAC	ZUNI, NM VORTAC	21000	45000
ZUNI, NM VORTAC	PHOENIX, AZ VORTAC	19000	45000
95.7478 JET ROUTE J478			
GLASGOW, MT VOR/DME	U.S. CANADIAN BORDER	18000	45000

FROM	TO	MEA	MAA
95.7483 JET ROUTE J483			
MINOT, ND VORTAC	U.S. CANADIAN BORDER	18000	45000
95.7501 JET ROUTE J501			
SAN MARCUS, CA VORTAC	BIG SUR, CA VORTAC	18000	45000
BIG SUR, CA VORTAC	POINT REYES, CA VOR/DME	18000	45000
POINT REYES, CA VOR/DME	ROGUE VALLEY, OR VORTAC	#22000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
ROGUE VALLEY, OR VORTAC	HOQUIAM, WA VORTAC	#22000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
HOQUIAM, WA VORTAC	TATOOSH, WA VORTAC	18000	45000
TATOOSH, WA VORTAC	U.S. CANADIAN BORDER	18000	45000
U.S. CANADIAN BORDER	BIORKA ISLAND, AK VORTAC	18000	45000
BIORKA ISLAND, AK VORTAC	YAKUTAT, AK VOR/DME	18000	45000
YAKUTAT, AK VOR/DME	JOHNSTONE POINT, AK VOR/DME	18000	45000
JOHNSTONE POINT, AK VOR/DME	ANCHORAGE, AK VOR/DME	18000	45000
ANCHORAGE, AK VOR/DME	SPARREVOHN, AK VOR/DME	18000	45000
SPARREVOHN, AK VOR/DME	BETHEL, AK VORTAC	18000	45000
95.7502 JET ROUTE J502			
SEATTLE, WA VORTAC	U.S. CANADIAN BORDER	18000	45000
U.S. CANADIAN BORDER	ANNETTE ISLAND, AK VOR/DME	22000	45000
ANNETTE ISLAND, AK VOR/DME	LEVEL ISLAND, AK VOR/DME	18000	45000
LEVEL ISLAND, AK VOR/DME	SISTERS ISLAND, AK VORTAC	18000	45000
SISTERS ISLAND, AK VORTAC	U.S. CANADIAN BORDER	#18000	45000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
BURWASH, CANADA NDB	U.S. CANADIAN BORDER	#18000	45000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
NORTHWAY, AK VORTAC	FAIRBANKS, AK VORTAC	18000	45000
FAIRBANKS, AK VORTAC	KOTZEBUE, AK VOR/DME	#27000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
95.7503 JET ROUTE J503			
SEATTLE, WA VORTAC	U.S. CANADIAN BORDER	18000	45000
95.7505 JET ROUTE J505			
SEATTLE, WA VORTAC	U.S. CANADIAN BORDER	#24000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
95.7506 JET ROUTE J506			
MILLINOCKET, ME VOR/DME	U.S. CANADIAN BORDER	18000	45000

FROM	TO	MEA	MAA
95.7507 JET ROUTE J507			
BARROW, AK VOR/DME	DEADHORSE, AK VOR/DME	18000	45000
DEADHORSE, AK VOR/DME	FORT YUKON, AK VORTAC	18000	45000
FORT YUKON, AK VORTAC	NORTHWAY, AK VORTAC	18000	45000
NORTHWAY, AK VORTAC	U.S. CANADIAN BORDER	#21000	45000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
U.S. CANADIAN BORDER	YAKUTAT, AK VOR/DME	22000	45000
95.7511 JET ROUTE J511			
DILLINGHAM, AK VOR/DME	ANCHORAGE, AK VOR/DME	21000	45000
ANCHORAGE, AK VOR/DME	GULKANA, AK VOR/DME	18000	45000
GULKANA, AK VOR/DME	U.S. CANADIAN BORDER	#18000	45000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
95.7512 JET ROUTE J512			
EMMONAK, AK VOR/DME	UNALAKLEET, AK VOR/DME	18000	45000
UNALAKLEET, AK VOR/DME	GALENA, AK VOR/DME	18000	45000
95.7515 JET ROUTE J515			
FARGO, ND VOR/DME	HUMBOLDT, MN VORTAC	18000	45000
HUMBOLDT, MN VORTAC	U.S. CANADIAN BORDER	18000	45000
WHITEHORSE, CANADA VOR/DME	U.S. CANADIAN BORDER	#18000	45000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
#MEA IS ESTABLISHED WITH GAP 110 NM FROM NORTHWAY, 100 NM FROM WHITEHORSE.			
U.S. CANADIAN BORDER	NORTHWAY, AK VORTAC	18000	45000
NORTHWAY, AK VORTAC	FAIRBANKS, AK VORTAC	18000	45000
FAIRBANKS, AK VORTAC	BETTLES, AK VOR/DME	18000	45000
BETTLES, AK VOR/DME	BARROW, AK VOR/DME	#20000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
95.7516 JET ROUTE J516			
GREAT FALLS, MT VORTAC	U.S. CANADIAN BORDER	#18000	45000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
95.7517 JET ROUTE J517			
BOISE, ID VORTAC	SPOKANE, WA VORTAC	18000	45000
SPOKANE, WA VORTAC	U.S. CANADIAN BORDER	18000	45000
95.7518 JET ROUTE J518			
DRYER, OH VOR/DME	INDIAN HEAD, PA VORTAC	18000	45000
INDIAN HEAD, PA VORTAC	BALTIMORE, MD VORTAC	18000	35000

FROM	TO	MEA	MAA
95.7523 JET ROUTE J523			
BRYCE CANYON, UT VORTAC	ELY, NV VOR/DME	18000	45000
ELY, NV VOR/DME	ROME, OR VOR/DME	29000	45000
ROME, OR VOR/DME	KIMBERLY, OR VOR/DME	18000	45000
KIMBERLY, OR VOR/DME	KLICKITAT, OR VOR/DME	18000	45000
KLICKITAT, OR VOR/DME	SEATTLE, WA VORTAC	18000	45000
SEATTLE, WA VORTAC	TATOOSH, WA VORTAC	18000	45000
TATOOSH, WA VORTAC	U.S. CANADIAN BORDER	18000	45000
U.S. CANADIAN BORDER	ANNETTE ISLAND, AK VOR/DME	18000	45000
95.7526 JET ROUTE J526			
BECKLEY, WV VOR/DME	LOUISVILLE, KY VORTAC	18000	45000
95.7530 JET ROUTE J530			
GREAT FALLS, MT VORTAC	U.S. CANADIAN BORDER	18000	45000
95.7533 JET ROUTE J533			
DULUTH, MN VORTAC	U.S. CANADIAN BORDER	18000	45000
95.7534 JET ROUTE J534			
IWACK, WA FIX	WHATCOM, WA VORTAC	18000	45000
WHATCOM, WA VORTAC	U.S. CANADIAN BORDER	18000	45000
95.7536 JET ROUTE J536			
SISTERS ISLAND, AK VORTAC	U.S. CANADIAN BORDER	#21000	45000
#MEA IS ESTABLISHED WITH A GAP IN NAVIGATION SIGNAL COVERAGE.			
95.7537 JET ROUTE J537			
ROME, OR VOR/DME	MULLAN PASS, ID VOR/DME	22000	45000
MULLAN PASS, ID VOR/DME	U.S. CANADIAN BORDER	18000	45000
#GNSS MEA, GNSS REQUIRED			
MULLAN PASS R-357 UNUSABLE			

FROM	TO	MEA	MAA
95.7538 JET ROUTE J538			
U.S. CANADIAN BORDER	DULUTH, MN VORTAC	18000	45000
DULUTH, MN VORTAC	DELLS, WI VORTAC	18000	45000
DELLS, WI VORTAC	BADGER, WI VOR/DME	18000	45000
95.7539 JET ROUTE J539			
GLASGOW, MT VOR/DME	U.S. CANADIAN BORDER	18000	45000
95.7540 JET ROUTE J540			
MULLAN PASS, ID VOR/DME	U.S. CANADIAN BORDER	18000	45000
95.7541 JET ROUTE J541			
YAKUTAT, AK VOR/DME	SISTERS ISLAND, AK VORTAC	18000	45000
95.7547 JET ROUTE J547			
NORTHBROOK, IL VOR/DME	PULLMAN, MI VOR/DME	18000	45000
PULLMAN, MI VOR/DME	FLINT, MI VORTAC	18000	45000
95.7548 JET ROUTE J548			
PULLMAN, MI VOR/DME	TRAVERSE CITY, MI VOR/DME	18000	45000
95.7549 JET ROUTE J549			
WILLISTON, ND VOR/DME	U.S. CANADIAN BORDER	18000	45000
95.7554 JET ROUTE J554			
GIPPER, MI VORTAC	CARLETON, MI VOR/DME	18000	45000
CARLETON, MI VOR/DME	U.S. CANADIAN BORDER	18000	45000
U.S. CANADIAN BORDER	JAMESTOWN, NY VOR/DME	18000	45000
95.7561 JET ROUTE J561			
PRESQUE ISLE, ME VOR/DME	U.S. CANADIAN BORDER	18000	45000
U.S. CANADIAN BORDER	MONT JOLI, CANADA VOR/DME	#18000	45000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
95.7562 JET ROUTE J562			
DICKINSON, ND VORTAC	U.S. CANADIAN BORDER	18000	45000

FROM	TO	MEA	MAA
95.7563 JET ROUTE J563			
ALBANY, NY VORTAC	SHERBROOKE, CANADA VOR/DME	18000	45000
95.7569 JET ROUTE J569			
GREAT FALLS, MT VORTAC	CRANBROOK, CANADA VOR/DME	#18000	45000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
95.7570 JET ROUTE J570			
ALBANY, NY VORTAC	MIRABEL, CANADA VOR/DME	#18000	45000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
95.7573 JET ROUTE J573			
KENNEBUNK, ME VOR/DME	SAINT JOHN, CANADA VOR/DME	#18000	45000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
95.7575 JET ROUTE J575			
BOSTON, MA VOR/DME	YARMOUTH, CANADA VOR/DME	18000	45000
95.7582 JET ROUTE J582			
PRESQUE ISLE, ME VOR/DME	SEPT-ILES, CANADA VOR/DME	#18000	45000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
95.7584 JET ROUTE J584			
NORTHBROOK, IL VOR/DME	CARLETON, MI VOR/DME	18000	45000
CARLETON, MI VOR/DME	SLATE RUN, PA VORTAC	#18000	45000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
SLATE RUN, PA VORTAC	WILLIAMSPORT, PA VOR/DME	18000	33000
WILLIAMSPORT, PA VOR/DME	BROADWAY, NJ VOR/DME	18000	31000
95.7585 JET ROUTE J585			
NANTUCKET, MA VOR/DME	YARMOUTH, CANADA VOR/DME	#18000	45000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
95.7589 JET ROUTE J589			
ROSEBURG, OR VOR/DME	CORVALLIS, OR VOR/DME	18000	45000
CORVALLIS, OR VOR/DME	VICTORIA, CANADA VOR/DME	#28000	45000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			

FROM	TO	MEA	MAA
95.7590 JET ROUTE J590			
LAKE CHARLES, LA VORTAC	FIGHTING TIGER, LA VORTAC	18000	45000
FIGHTING TIGER, LA VORTAC	GREENE COUNTY, MS VORTAC	18000	45000
GREENE COUNTY, MS VORTAC	MONTGOMERY, AL VORTAC	18000	45000
95.7591 JET ROUTE J591			
WHATCOM, WA VORTAC	U.S. CANADIAN BORDER	18000	45000
95.7599 JET ROUTE J599			
MULLAN PASS, ID VOR/DME	CRANBROOK, CANADA VOR/DME	#18000	45000
#FOR THAT AIRSPACE OVER U.S. TERRITORY.			
95.7603 JET ROUTE J603			
ELFEE, AK NDB	DILLINGHAM, AK VOR/DME	18000	45000
95.7604 JET ROUTE J604			
BORLAND, AK NDB/DME	WOODY ISLAND, AK NDB	18000	45000
95.7605 JET ROUTE J605			
BIORKA ISLAND, AK VORTAC	MIDDLETON ISLAND, AK VOR/DME	23000	45000
95.7606 JET ROUTE J606			
ST PAUL ISLAND, AK NDB/DME	CHINOOK, AK NDB	18000	45000
95.7614 JET ROUTE J614			
SARASOTA, FL VOR/DME	LEE COUNTY, FL VORTAC	18000	45000
LEE COUNTY, FL VORTAC	DOLPHIN, FL VORTAC	18000	45000
95.7616 JET ROUTE J616			
SARASOTA, FL VOR/DME	LA BELLE, FL VORTAC	18000	45000
LA BELLE, FL VORTAC	DOLPHIN, FL VORTAC	18000	45000
95.7617 JET ROUTE J617			
HOMER, AK VOR/DME	JOHNSTONE POINT, AK VOR/DME	18000	45000

FROM	TO	MEA	MAA
95.7618 JET ROUTE J618			
MOUNT MOFFETT, AK NDB/DME	ELFEE, AK NDB	18000	45000
95.7619 JET ROUTE J619			
CAPE NEWENHAM, AK NDB/DME	ST PAUL ISLAND, AK NDB/DME	18000	45000
95.7623 JET ROUTE J623			
PORT HEIDEN, AK NDB/DME	COLD BAY, AK VORTAC	18000	45000
COLD BAY, AK VORTAC	ST PAUL ISLAND, AK NDB/DME	18000	45000
95.7713 JET ROUTE J713			
BILLINGS, MT VORTAC	BOYSEN RESERVOIR, WY VOR/DME	18000	45000
BOYSEN RESERVOIR, WY VOR/DME	BIG PINEY, WY VOR/DME	18000	45000
BIG PINEY, WY VOR/DME	WASATCH, UT VORTAC	26000	45000

AIRWAY SEGMENT

CHANGEOVER POINTS

FROM TO DISTANCE FROM

§95.8003 VOR FEDERAL AIRWAYS CHANGEOVER POINTS

V1

CRAIG, FL VORTAC	CHARLESTON, SC VORTAC	96	CRAIG
CHARLESTON, SC VORTAC	GRAND STRAND, SC VORTAC	46	CHARLESTON

V2

SEATTLE, WA VORTAC	ELLENSBURG, WA VOR/DME	47	SEATTLE
ELLENSBURG, WA VOR/DME	MOSES LAKE, WA VOR/DME	28	ELLENSBURG
SPOKANE, WA VORTAC	MULLAN PASS, ID VOR/DME	32	SPOKANE
MISSOULA, MT VOR/DME	HELENA, MT VORTAC	35	MISSOULA
MILES CITY, MT VOR/DME	DICKINSON, ND VORTAC	60	MILES CITY
GOPHER, MN VORTAC	NODINE, MN VORTAC	50	GOPHER
BUFFALO, NY VOR/DME	ROCHESTER, NY VOR/DME	45	BUFFALO

V3

VANCE, SC VORTAC	FLORENCE, SC VORTAC	21	VANCE
FLORENCE, SC VORTAC	SANDHILLS, NC VORTAC	20	FLORENCE
SANDHILLS, NC VORTAC	RALEIGH/DURHAM, NC VORTAC	10	SANDHILLS
MODENA, PA VORTAC	SOLBERG, NJ VOR/DME	10	MODENA

V4

YAKIMA, WA VORTAC	PENDLETON, OR VORTAC	26	YAKIMA
BAKER CITY, OR VOR/DME	BOISE, ID VORTAC	25	BAKER CITY
CHARLESTON, WV VOR/DME	ELKINS, WV VORTAC	27	CHARLESTON

V5

DUBLIN, GA VORTAC	ATHENS, GA VOR/DME	47	DUBLIN
LOUISVILLE, KY VORTAC	CINCINNATI, KY VORTAC	38	LOUISVILLE
CINCINNATI, KY VORTAC	APPLETON, OH VORTAC	64	CINCINNATI

V6

OAKLAND, CA VOR/DME	SACRAMENTO, CA VORTAC	34	OAKLAND
SACRAMENTO, CA VORTAC	SQUAW VALLEY, CA VOR/DME	40	SACRAMENTO
OGDEN, UT VORTAC	FORT BRIDGER, WY VOR/DME	25	OGDEN
GRAND ISLAND, NE VOR/DME	OMAHA, IA VORTAC	52	GRAND ISLAND

AIRWAY SEGMENT

CHANGEOVER POINTS

FROM	TO	DISTANCE	FROM
V7			
SEMINOLE, FL VORTAC	WIREGRASS, AL VORTAC	53	SEMINOLE
V8			
SEAL BEACH, CA VORTAC	PARADISE, CA VORTAC	13	SEAL BEACH
PARADISE, CA VORTAC	HECTOR, CA VORTAC	44	PARADISE
HECTOR, CA VORTAC	GOFFS, CA VORTAC	38	HECTOR
HANKSVILLE, UT VORTAC	GRAND JUNCTION, CO VOR/DME	40	HANKSVILLE
GRAND JUNCTION, CO VOR/DME	RIFLE, CO VOR/DME	37	GRAND JUNCTION
RIFLE, CO VOR/DME	KREMMLING, CO VOR/DME	20	RIFLE
GRAND ISLAND, NE VOR/DME	OMAHA, IA VORTAC	52	GRAND ISLAND
MARTINSBURG, WV VORTAC	WASHINGTON, DC VOR/DME	29	MARTINSBURG
V12			
PALMDALE, CA VORTAC	HECTOR, CA VORTAC	60	PALMDALE
HECTOR, CA VORTAC	NEEDLES, CA VORTAC	41	HECTOR
DRAKE, AZ VORTAC	WINSLOW, AZ VORTAC	39	DRAKE
ALBUQUERQUE, NM VORTAC	OTTO, NM VOR	23	ALBUQUERQUE
ANTON CHICO, NM VORTAC	TUCUMCARI, NM VORTAC	30	ANTON CHICO
PANHANDLE, TX VORTAC	MITBEE, OK VORTAC	46	PANHANDLE
BIBLE GROVE, IL VORTAC	SHELBYVILLE, IN VOR/DME	70	BIBLE GROVE
JOHNSTOWN, PA VOR/DME	HARRISBURG, PA VORTAC	62	JOHNSTOWN
V13			
CORPUS CHRISTI, TX VORTAC	BROWNSVILLE, TX VORTAC	47	CORPUS CHRISTI
LUFKIN, TX VORTAC	BELCHER, LA VORTAC	64	LUFKIN
NAPOLEON, MO VORTAC	LAMONI, IA VOR/DME	40	NAPOLEON
V14			
MUNCIE, IN VOR/DME	FLAG CITY, OH VORTAC	44	MUNCIE
V15			
HOBBY, TX VOR/DME	NAVASOTA, TX VOR/DME	38	HOBBY
CEDAR CREEK, TX VORTAC	BONHAM, TX VORTAC	20	CEDAR CREEK
V16			
LOS ANGELES, CA VORTAC	PARADISE, CA VORTAC	25	LOS ANGELES
PARADISE, CA VORTAC	PALM SPRINGS, CA VORTAC	34	PARADISE
BLYTHE, CA VORTAC	BUCKEYE, AZ VORTAC	44	BLYTHE
SALT FLAT, TX VORTAC	WINK, TX VORTAC	42	SALT FLAT
TEXARKANA, AR VORTAC	PINE BLUFF, AR VOR/DME	62	TEXARKANA
VOLUNTEER, TN VORTAC	HOLSTON MOUNTAIN, TN VORTAC	38	VOLUNTEER

AIRWAY SEGMENT

CHANGEOVER POINTS

FROM	TO	DISTANCE	FROM
V20			
PALACIOS, TX VORTAC	HOBBY, TX VOR/DME	41	PALACIOS
MONTGOMERY, AL VORTAC	TUSKEGEE, AL VOR/DME	30	MONTGOMERY
ATHENS, GA VOR/DME	ELECTRIC CITY, SC VORTAC	20	ATHENS
V21			
SEAL BEACH, CA VORTAC	PARADISE, CA VORTAC	13	SEAL BEACH
PARADISE, CA VORTAC	HECTOR, CA VORTAC	44	PARADISE
HECTOR, CA VORTAC	BOULDER CITY, NV VORTAC	23	HECTOR
DUBOIS, ID VORTAC	DILLON, MT VOR/DME	46	DUBOIS
V23			
LOS ANGELES, CA VORTAC	GORMAN, CA VORTAC	36	LOS ANGELES
GORMAN, CA VORTAC	SHAFTER, CA VORTAC	10	GORMAN
SHAFTER, CA VORTAC	CLOVIS, CA VORTAC	49	SHAFTER
CLOVIS, CA VORTAC	LINDEN, CA VOR/DME	42	CLOVIS
RED BLUFF, CA VORTAC	FORT JONES, CA VOR/DME	53	RED BLUFF
ROGUE VALLEY, OR VORTAC	EUGENE, OR VORTAC	40	ROGUE VALLEY
EUGENE, OR VORTAC	BATTLE GROUND, WA VORTAC	57	EUGENE
WHATCOM, WA VORTAC	VANCOUVER, CA VOR/DME	10	WHATCOM
V25			
MISSION BAY, CA VORTAC	LOS ANGELES, CA VORTAC	40	MISSION BAY
KLAMATH FALLS, OR VORTAC	DESCHUTES, OR VORTAC	23	KLAMATH FALLS
V26			
MONTROSE, CO VOR/DME	GRAND JUNCTION, CO VOR/DME	23	MONTROSE
MEEKER, CO VOR/DME	CHEROKEE, WY VOR/DME	35	MEEKER
MUDDY MOUNTAIN, WY VOR/DME	RAPID CITY, SD VORTAC	92	MUDDY MOUNTAIN
EAU CLAIRE, WI VORTAC	WAUSAU, WI VORTAC	71	EAU CLAIRE
WAUSAU, WI VORTAC	GREEN BAY, WI VORTAC	8	WAUSAU
V27			
SANTA CATALINA, CA VORTAC	OCEANSIDE, CA VORTAC	31	SANTA CATALINA
GAVIOTA, CA VORTAC	MORRO BAY, CA VORTAC	20	GAVIOTA
MENDOCINO, CA VORTAC	FORTUNA, CA VORTAC	67	MENDOCINO
NEWPORT, OR VORTAC	ASTORIA, OR VOR/DME	66	NEWPORT
V30			
SELINGSGROVE, PA VOR/DME	EAST TEXAS, PA VOR/DME	20	SELINGSGROVE

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
V31			
HARRISBURG, PA VORTAC	SELINSGROVE, PA VOR/DME	19	HARRISBURG
V32			
BATTLE MOUNTAIN, NV VORTAC	BULLION, NV VOR/DME	24	BATTLE MOUNTAIN
BULLION, NV VOR/DME	BONNEVILLE, UT VORTAC	40	BULLION
WASATCH, UT VORTAC	FORT BRIDGER, WY VOR/DME	17	WASATCH
V33			
HARRISBURG, PA VORTAC	PHILIPSBURG, PA VORTAC	35	HARRISBURG
KEATING, PA VORTAC	BRADFORD, PA VOR/DME	30	KEATING
V34			
ROCHESTER, NY VOR/DME	HANCOCK, NY VOR/DME	60	ROCHESTER
V35			
PHILIPSBURG, PA VORTAC	STONYFORK, PA VOR/DME	25	PHILIPSBURG
V37			
SAVANNAH, GA VORTAC	ALLENDALE, SC VOR	36	SAVANNAH
CHARLOTTE, NC VOR/DME	PULASKI, VA VORTAC	74	CHARLOTTE
V38			
ELKINS, WV VORTAC	GORDONSVILLE, VA VORTAC	46	ELKINS
V39			
MARTINSBURG, WV VORTAC	LANCASTER, PA VOR/DME	34	MARTINSBURG
V44			
MORGANTOWN, WV VOR/DME	MARTINSBURG, WV VORTAC	53	MORGANTOWN
V45			
HENDERSON, WV VORTAC	APPLETON, OH VORTAC	59	HENDERSON

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
V47			
PINE BLUFF, AR VOR/DME	GILMORE, AR VOR/DME	41	PINE BLUFF
V49			
VULCAN, AL VORTAC	DECATUR, AL VOR/DME	35	VULCAN
V51			
CRAIG, FL VORTAC	ALMA, GA VORTAC	48	CRAIG
DUBLIN, GA VORTAC	ATHENS, GA VOR/DME	47	DUBLIN
V54			
CHOO CHOO, TN VORTAC	HARRIS, GA VORTAC	36	CHOO CHOO
HARRIS, GA VORTAC	SPARTANBURG, SC VORTAC	52	HARRIS
V55			
PARK RAPIDS, MN VOR/DME	GRAND FORKS, ND VOR/DME	64	PARK RAPIDS
V56			
MONTGOMERY, AL VORTAC	TUSKEGEE, AL VOR/DME	30	MONTGOMERY
V59			
BECKLEY, WV VOR/DME	PARKERSBURG, WV VOR/DME	46	BECKLEY
V62			
SANTA FE, NM VORTAC	ANTON CHICO, NM VORTAC	30	SANTA FE
ANTON CHICO, NM VORTAC	TEXICO, TX VORTAC	61	ANTON CHICO
V64			
SEAL BEACH, CA VORTAC	THERMAL, CA VORTAC	59	SEAL BEACH
THERMAL, CA VORTAC	BLYTHE, CA VORTAC	29	THERMAL

AIRWAY SEGMENT

CHANGEOVER POINTS

FROM	TO	DISTANCE	FROM
V66			
MISSION BAY, CA VORTAC	IMPERIAL, CA VORTAC	39	MISSION BAY
GILA BEND, AZ VORTAC	TUCSON, AZ VORTAC	48	GILA BEND
DOUGLAS, AZ VORTAC	COLUMBUS, NM VOR/DME	#44	DOUGLAS
#UTILIZE DEMING VORTAC 233 M RAD FROM COP TO ANIMA FIX			
MIDLAND, TX VORTAC	ABILENE, TX VORTAC	51	MIDLAND
GREENWOOD, SC VORTAC	SANDHILLS, NC VORTAC	64	GREENWOOD
SANDHILLS, NC VORTAC	RALEIGH/DURHAM, NC VORTAC	10	SANDHILLS
V68			
CORONA, NM VORTAC	CHISUM, NM VORTAC	33	CORONA
SAN ANGELO, TX VORTAC	JUNCTION, TX VORTAC	25	SAN ANGELO
V71			
EL DORADO, AR VOR/DME	HOT SPRINGS, AR VOR/DME	49	EL DORADO
HOT SPRINGS, AR VOR/DME	HARRISON, AR VOR/DME	47	HOT SPRINGS
V74			
TULSA, OK VORTAC	FORT SMITH, AR VORTAC	48	TULSA
V77			
ABILENE, TX VORTAC	WICHITA FALLS, TX VORTAC	56	ABILENE
V83			
CARLSBAD, NM VORTAC	CHISUM, NM VORTAC	31	CARLSBAD
CHISUM, NM VORTAC	CORONA, NM VORTAC	48	CHISUM
CORONA, NM VORTAC	OTTO, NM VOR	20	CORONA
V86			
MISSOULA, MT VOR/DME	COPPERTOWN, MT VOR/DME	35	MISSOULA
SHERIDAN, WY VOR/DME	RAPID CITY, SD VORTAC	100	SHERIDAN
V87			
SAN FRANCISCO, CA VOR/DME	SCAGGS ISLAND, CA VORTAC	19	SAN FRANCISCO

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
V94			
STANFIELD, AZ VORTAC	SAN SIMON, AZ VORTAC	82	STANFIELD
DEMING, NM VORTAC	NEWMAN, TX VORTAC	35	DEMING
SALT FLAT, TX VORTAC	WINK, TX VORTAC	42	SALT FLAT
MIDLAND, TX VORTAC	TUSCOLA, TX VOR/DME	51	MIDLAND
V95			
WINSLOW, AZ VORTAC	RATTLESNAKE, NM VORTAC	91	WINSLOW
BLUE MESA, CO VOR/DME	FALCON, CO VORTAC	#77	BLUE MESA
#USE THE HUGO (HGO) VORTAC FROM THE COP TO THE GORJE INT			
V97			
ST PETERSBURG, FL VORTAC	SEMINOLE, FL VORTAC	97	ST PETERSBURG
SHELBYVILLE, IN VOR/DME	BOILER, IN VORTAC	50	SHELBYVILLE
NODINE, MN VORTAC	GOPHER, MN VORTAC	60	NODINE
V101			
GILL, CO VOR/DME	HAYDEN, CO VOR/DME	71	GILL
HAYDEN, CO VOR/DME	VERNAL, UT VOR/DME	56	HAYDEN
VERNAL, UT VOR/DME	WASATCH, UT VORTAC	75	VERNAL
OGDEN, UT VORTAC	BURLEY, ID VOR/DME	61	OGDEN
V102			
SALT FLAT, TX VORTAC	CARLSBAD, NM VORTAC	24	SALT FLAT
V103			
GREENSBORO, NC VORTAC	ROANOKE, VA VOR/DME	28	GREENSBORO
V104			
MONTPELIER, VT VOR/DME	BERLIN, NH VOR/DME	39	MONTPELIER
BERLIN, NH VOR/DME	BANGOR, ME VORTAC	25	BERLIN
V105			
DRAKE, AZ VORTAC	BOULDER CITY, NV VORTAC	55	DRAKE
BEATTY, NV VORTAC	COALDALE, NV VORTAC	34	BEATTY
COALDALE, NV VORTAC	MUSTANG, NV VORTAC	55	COALDALE

AIRWAY SEGMENT

CHANGEOVER POINTS

FROM	TO	DISTANCE	FROM
V107			
FILLMORE, CA VORTAC	AVENAL, CA VOR/DME	31	FILLMORE
AVENAL, CA VOR/DME	PANOCHÉ, CA VORTAC	45	AVENAL
V111			
BIG SUR, CA VORTAC	SALINAS, CA VORTAC	21	BIG SUR
SALINAS, CA VORTAC	MODESTO, CA VOR/DME	22	SALINAS
V112			
PENDLETON, OR VORTAC	SPOKANE, WA VORTAC	57	PENDLETON
V113			
MORRO BAY, CA VORTAC	PASO ROBLES, CA VORTAC	7	MORRO BAY
MUSTANG, NV VORTAC	SOD HOUSE, NV VORTAC	48	MUSTANG
BOISE, ID VORTAC	SALMON, ID VOR/DME	45	BOISE
SALMON, ID VOR/DME	COPPERTOWN, MT VOR/DME	60	SALMON
HELENA, MT VORTAC	LEWISTOWN, MT VOR/DME	40	HELENA
V115			
VULCAN, AL VORTAC	CHOO CHOO, TN VORTAC	59	VULCAN
HAZARD, KY VOR/DME	CHARLESTON, WV VOR/DME	40	HAZARD
V119			
NEWCOMBE, KY VORTAC	HENDERSON, WV VORTAC	32	NEWCOMBE
V120			
SEATTLE, WA VORTAC	WENATCHEE, WA VOR/DME	51	SEATTLE
WENATCHEE, WA VOR/DME	EPHRATA, WA VORTAC	10	WENATCHEE
MULLAN PASS, ID VOR/DME	GREAT FALLS, MT VORTAC	80	MULLAN PASS
LEWISTOWN, MT VOR/DME	MILES CITY, MT VOR/DME	74	LEWISTOWN
MILES CITY, MT VOR/DME	DUPREE, SD VOR/DME	90	MILES CITY
SIOUX FALLS, SD VORTAC	MASON CITY, IA VOR/DME	82	SIOUX FALLS
V121			
KIMBERLY, OR VOR/DME	BAKER CITY, OR VOR/DME	67	KIMBERLY
V123			
WOODSTOWN, NJ VORTAC	ROBBINSVILLE, NJ VORTAC	19	WOODSTOWN

AIRWAY SEGMENT

CHANGEOVER POINTS

FROM	TO	DISTANCE	FROM
V124			
PARIS, TX VOR/DME	HOT SPRINGS, AR VOR/DME	75	PARIS
HOT SPRINGS, AR VOR/DME	LITTLE ROCK, AR VORTAC	14	HOT SPRINGS
V128			
SMARS, IL FIX	KANKAKEE, IL VOR/DME	#44	SMARS
#COP MEASURED FROM BDF VORTAC.			
CINCINNATI, KY VORTAC	YORK, KY VORTAC	38	CINCINNATI
YORK, KY VORTAC	CHARLESTON, WV VOR/DME	29	YORK
CHARLESTON, WV VOR/DME	CASANOVA, VA VORTAC	114	CHARLESTON
V133			
BARRETTS MOUNTAIN, NC	CHARLESTON, WV VOR/DME	77	BARRETTS MOUNTAIN
VOR/DME			
CHARLESTON, WV VOR/DME	ZANESVILLE, OH VOR/DME	52	CHARLESTON
V134			
FAIRFIELD, UT VORTAC	CARBON, UT VOR/DME	20	FAIRFIELD
CARBON, UT VOR/DME	GRAND JUNCTION, CO VOR/DME	25	CARBON
GRAND JUNCTION, CO VOR/DME	RED TABLE, CO VOR/DME	#56	GRAND JUNCTION
#THE COP IS AT THE SLOLM INT.			
V135			
GOFFS, CA VORTAC	BEATTY, NV VORTAC	31	GOFFS
BEATTY, NV VORTAC	COALDALE, NV VORTAC	#34	BEATTY
#COP 53 NM FROM AND UTILIZES COALDALE, NV VORTAC ON THE 129 M RAD.			
V136			
VOLUNTEER, TN VORTAC	SNOWBIRD, TN VORTAC	25	VOLUNTEER
V137			
PALM SPRINGS, CA VORTAC	PALMDALE, CA VORTAC	30	PALM SPRINGS
GORMAN, CA VORTAC	AVENAL, CA VOR/DME	31	GORMAN
V139			
CAPE CHARLES, VA VORTAC	SNOW HILL, MD VORTAC	38	CAPE CHARLES
SNOW HILL, MD VORTAC	SEA ISLE, NJ VORTAC	25	SNOW HILL
V140			
PANHANDLE, TX VORTAC	BURNS FLAT, OK VORTAC	56	PANHANDLE

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
V142			
MALAD CITY, ID VOR/DME	FORT BRIDGER, WY VOR/DME	32	MALAD CITY
V143			
MARTINSBURG, WV VORTAC	LANCASTER, PA VOR/DME	34	MARTINSBURG
V144			
BRADFORD, IL VORTAC	KANKAKEE, IL VOR/DME	44	BRADFORD
V146			
ALBANY, NY VORTAC	CHESTER, MA VOR/DME	8	ALBANY
V148			
THURMAN, CO VORTAC	HAYES CENTER, NE VORTAC	65	THURMAN
GOPHER, MN VORTAC	HAYWARD, WI VOR/DME	65	GOPHER
HAYWARD, WI VOR/DME	IRONWOOD, MI VOR/DME	20	HAYWARD
V155			
SANDHILLS, NC VORTAC	RALEIGH/DURHAM, NC VORTAC	10	SANDHILLS
FLAT ROCK, VA VORTAC	BROOKE, VA VORTAC	43	FLAT ROCK
V157			
VANCE, SC VORTAC	FLORENCE, SC VORTAC	21	VANCE
WOODSTOWN, NJ VORTAC	ROBBINSVILLE, NJ VORTAC	19	WOODSTOWN
V161			
NAPOLEON, MO VORTAC	LAMONI, IA VOR/DME	40	NAPOLEON
INTERNATIONAL FALLS, MN VOR/DME	WINNIPEG, CA VORTAC	77	INTERNATIONAL FALLS
V162			
ALLENTOWN, PA VORTAC	HUGUENOT, NY VOR/DME	10	ALLENTOWN
V163			
BROWNSVILLE, TX VORTAC	CORPUS CHRISTI, TX VORTAC	71	BROWNSVILLE

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
V165			
CLOVIS, CA VORTAC	MUSTANG, NV VORTAC	94	CLOVIS
MUSTANG, NV VORTAC	LAKEVIEW, OR VORTAC	70	MUSTANG
LAKEVIEW, OR VORTAC	DESCHUTES, OR VORTAC	73	LAKEVIEW
DESCHUTES, OR VORTAC	NEWBERG, OR VOR/DME	43	DESCHUTES
V166			
WESTMINSTER, MD VORTAC	DUPONT, DE VORTAC	40	WESTMINSTER
WOODSTOWN, NJ VORTAC	SEA ISLE, NJ VORTAC	28	WOODSTOWN
V168			
LAGRANGE, GA VORTAC	VULCAN, AL VORTAC	45	LAGRANGE
V170			
PULLMAN, MI VOR/DME	SALEM, MI VORTAC	61	PULLMAN
V177			
JOLIET, IL VOR/DME	JANESVILLE, WI VOR/DME	40	JOLIET
V181			
OMAHA, IA VORTAC	NORFOLK, NE VOR/DME	51	OMAHA
V182			
NEWPORT, OR VORTAC	NEWBERG, OR VOR/DME	29	NEWPORT
KLICKITAT, OR VOR/DME	BAKER CITY, OR VOR/DME	119	KLICKITAT
V183			
SAN MARCUS, CA VORTAC	SHAFTER, CA VORTAC	20	SAN MARCUS
V184			
PHILIPSBURG, PA VORTAC	HARRISBURG, PA VORTAC	21	PHILIPSBURG
V186			
VAN NUYS, CA VOR/DME	PARADISE, CA VORTAC	39	VAN NUYS

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
V187			
ALBUQUERQUE, NM VORTAC	RATTLESNAKE, NM VORTAC	58	ALBUQUERQUE
RATTLESNAKE, NM VORTAC	GRAND JUNCTION, CO VOR/DME	90	RATTLESNAKE
GRAND JUNCTION, CO VOR/DME	ROCK SPRINGS, WY VOR/DME	86	GRAND JUNCTION
BOYSEN RESERVOIR, WY VOR/DME	BILLINGS, MT VORTAC	97	BOYSEN RESERVOIR
GREAT FALLS, MT VORTAC	MISSOULA, MT VOR/DME	84	GREAT FALLS
MISSOULA, MT VOR/DME	NEZ PERCE, ID VOR/DME	30	MISSOULA
V189			
WRIGHT BROTHERS, NC VOR/DME	TAR RIVER, NC VORTAC	25	WRIGHT BROTHERS
V190			
PHOENIX, AZ VORTAC	ST JOHNS, AZ VORTAC	67	PHOENIX
ALBUQUERQUE, NM VORTAC	FORT UNION, NM VORTAC	38	ALBUQUERQUE
V191			
IRONWOOD, MI VOR/DME	DULUTH, MN VORTAC	32	IRONWOOD
V194			
SABINE PASS, TX VOR/DME	LAFAYETTE, LA VORTAC	50	SABINE PASS
V198			
SAN ANTONIO, TX VORTAC	EAGLE LAKE, TX VOR/DME	63	SAN ANTONIO
HARVEY, LA VORTAC	BROOKLEY, AL VORTAC	61	HARVEY
V200			
WILLIAMS, CA VORTAC	MUSTANG, NV VORTAC	84	WILLIAMS
FAIRFIELD, UT VORTAC	MYTON, UT VOR/DME	32	FAIRFIELD
V201			
LOS ANGELES, CA VORTAC	PALMDALE, CA VORTAC	19	LOS ANGELES
V203			
ALBANY, NY VORTAC	SARANAC LAKE, NY VOR/DME	60	ALBANY
V204			
HOQUIAM, WA VORTAC	OLYMPIA, WA VORTAC	31	HOQUIAM

AIRWAY SEGMENT

CHANGEOVER POINTS

FROM	TO	DISTANCE	FROM
V208			
SANTA CATALINA, CA VORTAC	OCEANSIDE, CA VORTAC	31	SANTA CATALINA
THERMAL, CA VORTAC	TWENTYNINE PALMS, CA VORTAC	20	THERMAL
NEEDLES, CA VORTAC	PEACH SPRINGS, AZ VOR/DME	39	NEEDLES
PEACH SPRINGS, AZ VOR/DME	GRAND CANYON, AZ VOR/DME	57	PEACH SPRINGS
PAGE, AZ VOR/DME	HANKSVILLE, UT VORTAC	61	PAGE
CARBON, UT VOR/DME	MYTON, UT VOR/DME	17	CARBON
VERNAL, UT VOR/DME	CHEROKEE, WY VOR/DME	54	VERNAL
V209			
SEMMES, AL VORTAC	KEWANEE, MS VORTAC	50	SEMMES
V210			
POMONA, CA VORTAC	HECTOR, CA VORTAC	16	POMONA
HECTOR, CA VORTAC	GOFFS, CA VORTAC	38	HECTOR
GOFFS, CA VORTAC	PEACH SPRINGS, AZ VOR/DME	42	GOFFS
PEACH SPRINGS, AZ VOR/DME	GRAND CANYON, AZ VOR/DME	57	PEACH SPRINGS
V212			
SAN ANTONIO, TX VORTAC	EAGLE LAKE, TX VOR/DME	63	SAN ANTONIO
LUFKIN, TX VORTAC	ALEXANDRIA, LA VORTAC	65	LUFKIN
V213			
TAR RIVER, NC VORTAC	HOPEWELL, VA VORTAC	43	TAR RIVER
V217			
RHINELANDER, WI VOR/DME	DULUTH, MN VORTAC	49	RHINELANDER
V218			
GRAND RAPIDS, MN VOR/DME	GOPHER, MN VORTAC	46	GRAND RAPIDS
V219			
SIOUX CITY, IA VORTAC	FAIRMONT, MN VOR/DME	74	SIOUX CITY
V220			
GRAND JUNCTION, CO VOR/DME	RIFLE, CO VOR/DME	#56	GRAND JUNCTION
#COP - THE COP IS AT THE SLOLM INT			

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
V222			
SALT FLAT, TX VORTAC	FORT STOCKTON, TX VORTAC	52	SALT FLAT
BARRETT'S MOUNTAIN, NC VOR/DME	LYNCHBURG, VA VORTAC	62	BARRETT'S MOUNTAIN
V229			
BRIDGEPORT, CT VOR/DME	HARTFORD, CT VOR/DME	19	BRIDGEPORT
V230			
SALINAS, CA VORTAC	PANOCHÉ, CA VORTAC	30	SALINAS
FRIANT, CA VORTAC	MINA, NV VORTAC	40	FRIANT
V231			
MISSOULA, MT VOR/DME	KALISPELL, MT VOR/DME	29	MISSOULA
V234			
DALHART, TX VORTAC	LIBERAL, KS VORTAC	45	DALHART
V235			
FAIRFIELD, UT VORTAC	FORT BRIDGER, WY VOR/DME	32	FAIRFIELD
ROCK SPRINGS, WY VOR/DME	MUDDY MOUNTAIN, WY VOR/DME	65	ROCK SPRINGS
V237			
NEEDLES, CA VORTAC	BOULDER CITY, NV VORTAC	60	NEEDLES
V240			
HARVEY, LA VORTAC	BROOKLEY, AL VORTAC	61	HARVEY
V243			
WAYCROSS, GA VORTAC	VIENNA, GA VORTAC	30	WAYCROSS
V244			
COALDALE, NV VORTAC	TONOPAH, NV VORTAC	14	COALDALE
TONOPAH, NV VORTAC	WILSON CREEK, NV VORTAC	50	TONOPAH
WILSON CREEK, NV VORTAC	MILFORD, UT VORTAC	40	WILSON CREEK
MILFORD, UT VORTAC	HANKSVILLE, UT VORTAC	40	MILFORD
BLUE MESA, CO VOR/DME	PUEBLO, CO VORTAC	53	BLUE MESA

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
V245			
NATCHEZ, MS VOR/DME	MAGNOLIA, MS VORTAC	25	NATCHEZ
V252			
GENESEO, NY VOR/DME	BINGHAMTON, NY VOR/DME	34	GENESEO
V253			
LUCIN, UT VORTAC	TWIN FALLS, ID VORTAC	40	LUCIN
TWIN FALLS, ID VORTAC	BOISE, ID VORTAC	48	TWIN FALLS
NEZ PERCE, ID VOR/DME	PULLMAN, WA VOR/DME	13	NEZ PERCE
V257			
GRAND CANYON, AZ VOR/DME	BRYCE CANYON, UT VORTAC	36	GRAND CANYON
DELTA, UT VORTAC	MALAD CITY, ID VOR/DME	63	DELTA
DUBOIS, ID VORTAC	DILLON, MT VOR/DME	46	DUBOIS
DILLON, MT VOR/DME	COPPERTOWN, MT VOR/DME	27	DILLON
V259			
GRAND STRAND, SC VORTAC	FLORENCE, SC VORTAC	25	GRAND STRAND
V263			
SANTA FE, NM VORTAC	FORT UNION, NM VORTAC	21	SANTA FE
FORT UNION, NM VORTAC	CIMARRON, NM VORTAC	28	FORT UNION
V264			
POMONA, CA VORTAC	TWENTYNINE PALMS, CA VORTAC	37	POMONA
DRAKE, AZ VORTAC	WINSLOW, AZ VORTAC	39	DRAKE
V265			
HARRISBURG, PA VORTAC	PHILIPSBURG, PA VORTAC	35	HARRISBURG
KEATING, PA VORTAC	BRADFORD, PA VOR/DME	30	KEATING
V266			
SOUTH BOSTON, VA VORTAC	LAWRENCEVILLE, VA VORTAC	38	SOUTH BOSTON
V267			
DUBLIN, GA VORTAC	ATHENS, GA VOR/DME	47	DUBLIN

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
V268			
WESTMINSTER, MD VORTAC	BALTIMORE, MD VORTAC	12	WESTMINSTER
V269			
WELLS, NV VOR	TWIN FALLS, ID VORTAC	33	WELLS
V270			
JAMESTOWN, NY VOR/DME	WELLSVILLE, NY VORTAC	22	JAMESTOWN
V271			
MUSKEGON, MI VORTAC	MANISTEE, MI VOR/DME	37	MUSKEGON
V272			
BORGER, TX VORTAC	BURNS FLAT, OK VORTAC	51	BORGER
V273			
HANCOCK, NY VOR/DME	GEORGETOWN, NY VORTAC	31	HANCOCK
V277			
FORT WAYNE, IN VORTAC	KEELER, MI VOR/DME	38	FORT WAYNE
V278			
GUTHRIE, TX VORTAC	BOWIE, TX VORTAC	64	GUTHRIE
V280			
PANHANDLE, TX VORTAC	MITBEE, OK VORTAC	46	PANHANDLE
V282			
SARANAC LAKE, NY VOR/DME	MONTREAL, CA VOR/DME	37	SARANAC LAKE
V283			
SEAL BEACH, CA VORTAC	HOMELAND, CA VOR	24	SEAL BEACH
HECTOR, CA VORTAC	BOULDER CITY, NV VORTAC	23	HECTOR

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
V285			
WHITE CLOUD, MI VOR/DME	MANISTEE, MI VOR/DME	28	WHITE CLOUD
V286			
ELKINS, WV VORTAC	CASANOVA, VA VORTAC	43	ELKINS
BROOKE, VA VORTAC	CAPE CHARLES, VA VORTAC	22	BROOKE
V287			
BATTLE GROUND, WA VORTAC	OLYMPIA, WA VORTAC	41	BATTLE GROUND
V291			
ALBUQUERQUE, NM VORTAC	GALLUP, NM VORTAC	44	ALBUQUERQUE
FLAGSTAFF, AZ VOR/DME	PEACH SPRINGS, AZ VOR/DME	39	FLAGSTAFF
V293			
ELY, NV VOR/DME	BULLION, NV VOR/DME	26	ELY
BULLION, NV VOR/DME	TWIN FALLS, ID VORTAC	66	BULLION
V298			
SEATTLE, WA VORTAC	ELLENSBURG, WA VOR/DME	47	SEATTLE
DONNELLY, ID VOR/DME	DUBOIS, ID VORTAC	109	DONNELLY
DUBOIS, ID VORTAC	DUNOIR, WY VOR/DME	68	DUBOIS
DUNOIR, WY VOR/DME	BOYSEN RESERVOIR, WY VOR/DME	15	DUNOIR
V299			
LOS ANGELES, CA VORTAC	VENTURA, CA VOR/DME	18	LOS ANGELES
V300			
THUNDER BAY, CANADA VORTAC	SAULT STE MARIE, MI VOR/DME	142	THUNDER BAY
V306			
DAISETTA, TX VORTAC	LAKE CHARLES, LA VORTAC	30	DAISETTA
V316			
IRONWOOD, MI VOR/DME	SAWYER, MI VOR/DME	94	IRONWOOD
V317			
POGGI, CA VORTAC	IMPERIAL, CA VORTAC	25	POGGI

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
V319			
WORLAND, WY VOR/DME	CODY, WY VOR/DME	39	WORLAND
V321			
SHELBYVILLE, TN VOR/DME	LIVINGSTON, TN VOR/DME	40	SHELBYVILLE
V323			
MONTGOMERY, AL VORTAC	EUFAULA, AL VORTAC	32	MONTGOMERY
V324			
CRAZY WOMAN, WY VOR/DME	WORLAND, WY VOR/DME	15	CRAZY WOMAN
V325			
ATHENS, GA VOR/DME	COLUMBIA, SC VORTAC	24	ATHENS
V328			
JACKSON, WY VOR/DME	BIG PINEY, WY VOR/DME	20	JACKSON
V330			
IDAHO FALLS, ID VOR/DME	JACKSON, WY VOR/DME	48	IDAHO FALLS
DUNOIR, WY VOR/DME	RIVERTON, WY VOR/DME	15	DUNOIR
V336			
ELLENSBURG, WA VOR/DME	EPHRATA, WA VORTAC	19	ELLENSBURG
V343			
DUBOIS, ID VORTAC	BOZEMAN, MT VOR/DME	60	DUBOIS
V361			
RATTLESNAKE, NM VORTAC	MONTROSE, CO VOR/DME	61	RATTLESNAKE
V365			
HELENA, MT VORTAC	CUT BANK, MT VOR/DME	51	HELENA

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
V370			
LOS ANGELES, CA VORTAC	PARADISE, CA VORTAC	25	LOS ANGELES
PARADISE, CA VORTAC	PALM SPRINGS, CA VORTAC	34	PARADISE
V372			
SEAL BEACH, CA VORTAC	HOMELAND, CA VOR	24	SEAL BEACH
V373			
GREENSBORO, NC VORTAC	SANDHILLS, NC VORTAC	43	GREENSBORO
V375			
ROANOKE, VA VOR/DME	GORDONSVILLE, VA VORTAC	48	ROANOKE
V382			
CONES, CO VOR/DME	DURANGO, CO VOR/DME	25	CONES
V392			
MUSTANG, NV VORTAC	WILLIAMS, CA VORTAC	30	MUSTANG
V393			
NOGALES, AZ VOR/DME	HERMOSILLO, MX VOR/DME	64	NOGALES
V394			
POMONA, CA VORTAC	DAGGETT, CA VORTAC	16	POMONA
DAGGETT, CA VORTAC	LAS VEGAS, NV VORTAC	59	DAGGETT
V401			
WORLAND, WY VOR/DME	MUDDY MOUNTAIN, WY VOR/DME	35	WORLAND
V413			
EAU CLAIRE, WI VORTAC	IRONWOOD, MI VOR/DME	45	EAU CLAIRE
V417			
ATHENS, GA VOR/DME	COLLIERS, SC VORTAC	24	ATHENS
V419			
MODENA, PA VORTAC	SOLBERG, NJ VOR/DME	10	MODENA

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
V428			
ITHACA, NY VOR/DME	GEORGETOWN, NY VORTAC	20	ITHACA
V430			
DEVILS LAKE, ND VOR/DME	MINOT, ND VORTAC	40	DEVILS LAKE
DULUTH, MN VORTAC	IRONWOOD, MI VOR/DME	55	DULUTH
IRONWOOD, MI VOR/DME	IRON MOUNTAIN, MI VOR/DME	44	IRONWOOD
V432			
THERMAL, CA VORTAC	PARKER, CA VORTAC	30	THERMAL
V433			
LA GUARDIA, NY VOR/DME	BRIDGEPORT, CT VOR/DME	9	LA GUARDIA
V437			
ORMOND BEACH, FL VORTAC	SAVANNAH, GA VORTAC	80	ORMOND BEACH
V442			
HECTOR, CA VORTAC	PARKER, CA VORTAC	#41	HECTOR
#USE THE NEEDLES (EED) VORTAC FROM THE COP TO THE CLIPP INT.			
V444			
BAKER CITY, OR VOR/DME	BOISE, ID VORTAC	25	BAKER CITY
BOISE, ID VORTAC	POCATELLO, ID VOR/DME	66	BOISE
V448			
YAKIMA, WA VORTAC	MOSES LAKE, WA VOR/DME	15	YAKIMA
SPOKANE, WA VORTAC	KALISPELL, MT VOR/DME	105	SPOKANE
V452			
EUGENE, OR VORTAC	KLAMATH FALLS, OR VORTAC	67	EUGENE
V454			
LIBERTY, NC VORTAC	LAWRENCEVILLE, VA VORTAC	82	LIBERTY

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
V458			
SANTA CATALINA, CA VORTAC	OCEANSIDE, CA VORTAC	31	SANTA CATALINA
V465			
BULLION, NV VOR/DME	WELLS, NV VOR	25	BULLION
WELLS, NV VOR	MALAD CITY, ID VOR/DME	40	WELLS
MALAD CITY, ID VOR/DME	JACKSON, WY VOR/DME	#63	MALAD CITY
#MEA GAP AT COP			
DUNOIR, WY VOR/DME	BILLINGS, MT VORTAC	45	DUNOIR
V469			
HARRISBURG, PA VORTAC	DUPONT, DE VORTAC	32	HARRISBURG
V475			
LA GUARDIA, NY VOR/DME	BRIDGEPORT, CT VOR/DME	9	LA GUARDIA
MADISON, CT VOR/DME	NORWICH, CT VOR/DME	16	MADISON
V484			
TWIN FALLS, ID VORTAC	WASATCH, UT VORTAC	59	TWIN FALLS
WASATCH, UT VORTAC	MYTON, UT VOR/DME	28	WASATCH
V487			
LA GUARDIA, NY VOR/DME	BRIDGEPORT, CT VOR/DME	9	LA GUARDIA
V490			
CAMBRIDGE, NY VOR/DME	MANCHESTER, NH VOR/DME	37	CAMBRIDGE
V493			
LEXINGTON, KY VOR/DME	YORK, KY VORTAC	41	LEXINGTON
V494			
MENDOCINO, CA VORTAC	SANTA ROSA, CA VOR/DME	25	MENDOCINO
SANTA ROSA, CA VOR/DME	SACRAMENTO, CA VORTAC	25	SANTA ROSA

AIRWAY SEGMENT

CHANGEOVER POINTS

FROM	TO	DISTANCE	FROM
V495			
WHATCOM, WA VORTAC	VICTORIA, CA VOR/DME	10	WHATCOM
VICTORIA, CANADA VOR/DME	SEATTLE, WA VORTAC	41	VICTORIA
SEATTLE, WA VORTAC	BATTLE GROUND, WA VORTAC	20	SEATTLE
V500			
NEWBERG, OR VOR/DME	KIMBERLY, OR VOR/DME	79	NEWBERG
BOISE, ID VORTAC	POCATELLO, ID VOR/DME	66	BOISE
V501			
ST THOMAS, PA VORTAC	PHILIPSBURG, PA VORTAC	22	ST THOMAS
V502			
EMPORIA, KS VORTAC	KANSAS CITY, MO VORTAC	40	EMPORIA
V505			
GOPHER, MN VORTAC	SIREN, WI VOR/DME	38	GOPHER
V514			
THERMAL, CA VORTAC	TWENTYNINE PALMS, CA VORTAC	20	THERMAL
GOFFS, CA VORTAC	BOULDER CITY, NV VORTAC	#60	GOFFS
#COP MEASURED FROM NEEDLES VORTAC.			
V520			
NEZ PERCE, ID VOR/DME	SALMON, ID VOR/DME	53	NEZ PERCE
DUBOIS, ID VORTAC	JACKSON, WY VOR/DME	60	DUBOIS
V527			
HOT SPRINGS, AR VOR/DME	RAZORBACK, AR VORTAC	42	HOT SPRINGS
V532			
SALINA, KS VORTAC	LINCOLN, NE VORTAC	51	SALINA
V536			
MULLAN PASS, ID VOR/DME	KALISPELL, MT VOR/DME	45	MULLAN PASS
KALISPELL, MT VOR/DME	GREAT FALLS, MT VORTAC	35	KALISPELL

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
V569			
FRANKSTON, TX VOR/DME	CEDAR CREEK, TX VORTAC	5	FRANKSTON
V571			
HUMBLE, TX VORTAC	NAVASOTA, TX VOR/DME	24	HUMBLE
V573			
HOT SPRINGS, AR VOR/DME	LITTLE ROCK, AR VORTAC	14	HOT SPRINGS
V574			
NAVASOTA, TX VOR/DME	HUMBLE, TX VORTAC	18	NAVASOTA
V591			
GRAND JUNCTION, CO VOR/DME #THE COP IS AT THE SLOLM INT	RED TABLE, CO VOR/DME	#56	GRAND JUNCTION
V611			
SANTA FE, NM VORTAC	FORT UNION, NM VORTAC	21	SANTA FE
FORT UNION, NM VORTAC	CIMARRON, NM VORTAC	28	FORT UNION
CIMARRON, NM VORTAC	PUEBLO, CO VORTAC	30	CIMARRON
ALASKA V309			
PRINCE RUPERT, CANADA NDB	ANNETTE ISLAND, AK VOR/DME	26	PRINCE RUPERT
ALASKA V311			
ANNETTE ISLAND, AK VOR/DME	BIORKA ISLAND, AK VORTAC	103	ANNETTE ISLAND
ALASKA V317			
ANNETTE ISLAND, AK VOR/DME	LEVEL ISLAND, AK VOR/DME	64	ANNETTE ISLAND
LEVEL ISLAND, AK VOR/DME	SISTERS ISLAND, AK VORTAC	74	LEVEL ISLAND
ALASKA V319			
YAKUTAT, AK VOR/DME	JOHNSTONE POINT, AK VOR/DME	119	YAKUTAT
SPARREVOHN, AK VOR/DME	BETHEL, AK VORTAC	92	SPARREVOHN
ALASKA V320			
MC GRATH, AK VORTAC	ANCHORAGE, AK VOR/DME	95	MC GRATH

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
ALASKA V321			
KING SALMON, AK VORTAC	HOMER, AK VOR/DME	70	KING SALMON
ALASKA V333			
HOOPER BAY, AK VOR/DME	NOME, AK VOR/DME	70	HOOPER BAY
NOME, AK VOR/DME	SHISHMAREF, AK NDB	65	NOME
ALASKA V401			
AMBLER, AK NDB/DME	KOTZEBUE, AK VOR/DME	40	AMBLER
KOTZEBUE, AK VOR/DME	SHISHMAREF, AK NDB	60	KOTZEBUE
ALASKA V428			
BIORKA ISLAND, AK VORTAC	SISTERS ISLAND, AK VORTAC	55	BIORKA ISLAND
SISTERS ISLAND, AK VORTAC	HAINES, AK NDB	21	SISTERS ISLAND
HAINES, AK NDB	WHITEHORSE, CA VOR/DME	30	HAINES
ALASKA V436			
TALKEETNA, AK VOR/DME	NENANA, AK VORTAC	50	TALKEETNA
NENANA, AK VORTAC	CHANDALAR LAKE, AK NDB	120	NENANA
CHANDALAR LAKE, AK NDB	DEADHORSE, AK VOR/DME	63	CHANDALAR LAKE
ALASKA V438			
KODIAK, AK VOR/DME	HOMER, AK VOR/DME	66	KODIAK
HOMER, AK VOR/DME	ANCHORAGE, AK VOR/DME	53	HOMER
ALASKA V440			
NOME, AK VOR/DME	UNALAKLEET, AK VOR/DME	45	NOME
MC GRATH, AK VORTAC	ANCHORAGE, AK VOR/DME	95	MC GRATH
YAKUTAT, AK VOR/DME	BIORKA ISLAND, AK VORTAC	108	YAKUTAT
BIORKA ISLAND, AK VORTAC	SANDSPIT, CA VOR/DME	134	BIORKA ISLAND
ALASKA V441			
MIDDLETON ISLAND, AK VOR/DME	KENAI, AK VOR/DME	84	MIDDLETON ISLAND
ALASKA V444			
BARROW, AK VOR/DME	EVANSVILLE, AK NDB	105	BARROW
BETTLES, AK VOR/DME	FAIRBANKS, AK VORTAC	89	BETTLES
NORTHWAY, AK VORTAC	BURWASH, CA NDB	97	NORTHWAY

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
ALASKA V445			
BETTLES, AK VOR/DME	NENANA, AK VORTAC	67	BETTLES
ALASKA V447			
FAIRBANKS, AK VORTAC	CHANDALAR LAKE, AK NDB	103	FAIRBANKS
ALASKA V452			
KUKULIAK, AK VOR/DME	NOME, AK VOR/DME	67	KUKULIAK
MOSES POINT, AK VOR/DME	GALENA, AK VOR/DME	70	MOSES POINT
GALENA, AK VOR/DME	NENANA, AK VORTAC	75	GALENA
ALASKA V453			
BETHEL, AK VORTAC	UNALAKLEET, AK VOR/DME	109	BETHEL
ALASKA V457			
ILIAMNA, AK NDB/DME	KENAI, AK VOR/DME	47	ILIAMNA
ALASKA V459			
EMMONAK, AK VOR/DME	ST MARYS, AK NDB	40	EMMONAK
ALASKA V480			
ST PAUL ISLAND, AK NDB/DME	BETHEL, AK VORTAC	223	ST PAUL ISLAND
BETHEL, AK VORTAC	MC GRATH, AK VORTAC	128	BETHEL
MC GRATH, AK VORTAC	NENANA, AK VORTAC	70	MC GRATH
ALASKA V481			
GULKANA, AK VOR/DME	BIG DELTA, AK VORTAC	63	GULKANA
BIG DELTA, AK VORTAC	FORT YUKON, AK VORTAC	69	BIG DELTA
ALASKA V488			
HOOPER BAY, AK VOR/DME	HOOPER BAY, AK VOR/DME	91	HOOPER BAY
TANANA, AK VOR/DME	FAIRBANKS, AK VORTAC	40	TANANA
ALASKA V496			
HOOPER BAY, AK VOR/DME	ST MARYS, AK NDB	40	HOOPER BAY

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
ALASKA V498			
GALENA, AK VOR/DME	KOTZEBUE, AK VOR/DME	85	GALENA
ALASKA V504			
NENANA, AK VORTAC	BETTLES, AK VOR/DME	67	NENANA
BETTLES, AK VOR/DME	DEADHORSE, AK VOR/DME	116	BETTLES
ALASKA V506			
KODIAK, AK VOR/DME	KING SALMON, AK VORTAC	55	KODIAK
KING SALMON, AK VORTAC	BETHEL, AK VORTAC	102	KING SALMON
NOME, AK VOR/DME	KOTZEBUE, AK VOR/DME	64	NOME
HOTHAM, AK NDB	BARROW, AK VOR/DME	186	HOTHAM
ALASKA V508			
MIDDLETON ISLAND, AK VOR/DME	KENAI, AK VOR/DME	85	MIDDLETON ISLAND
KENAI, AK VOR/DME	SPARREVOHN, AK VOR/DME	67	KENAI
SPARREVOHN, AK VOR/DME	ANIAK, AK NDB	68	SPARREVOHN
ALASKA V510			
EMMONAK, AK VOR/DME	ANVIK, AK NDB	69	EMMONAK
ANVIK, AK NDB	MC GRATH, AK VORTAC	87	ANVIK
ALASKA V531			
FAIRBANKS, AK VORTAC	TANANA, AK VOR/DME	69	FAIRBANKS
TANANA, AK VOR/DME	HUSLIA, AK VOR/DME	40	TANANA
SELAWIK, AK VOR/DME	KOTZEBUE, AK VOR/DME	30	SELAWIK
KOTZEBUE, AK VOR/DME	POINT HOPE, AK NDB	116	KOTZEBUE
ALASKA V603			
ELFEE, AK NDB	DILLINGHAM, AK VOR/DME	55	ELFEE
ALASKA V617			
HOMER, AK VOR/DME	JOHNSTONE POINT, AK VOR/DME	63	HOMER
HAWAII V15			
MOLOKAI, HI VORTAC	MAUI, HI VORTAC	31	MOLOKAI
HAWAII V16			
LANAI, HI VORTAC	UPOLU POINT, HI VORTAC	47	LANAI

	AIRWAY SEGMENT		CHANGEOVER POINTS
FROM		TO	DISTANCE FROM

95.8005 JET ROUTES CHANGEOVER POINTS

J1

ROGUE VALLEY, OR VORTAC	BATTLE GROUND, WA VORTAC	90	ROGUE VALLEY
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J2

BARD, CA VORTAC	GILA BEND, AZ VORTAC	32	BARD
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J5

LAKEVIEW, OR VORTAC	SEATTLE, WA VORTAC	156	LAKEVIEW
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J6

DRAKE, AZ VORTAC	ZUNI, NM VORTAC	76	DRAKE
MARTINSBURG, WV VORTAC	LANCASTER, PA VOR/DME	24	MARTINSBURG

J8

GALLUP, NM VORTAC	FORT UNION, NM VORTAC	101	GALLUP
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J10

BLUE MESA, CO VOR/DME	FALCON, CO VORTAC	50	BLUE MESA
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J15

RATTLESNAKE, NM VORTAC	GRAND JUNCTION, CO VOR/DME	90	RATTLESNAKE
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J16

BATTLE GROUND, WA VORTAC	PENDLETON, OR VORTAC	60	BATTLE GROUND
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J17

CHEYENNE, WY VORTAC	RAPID CITY, SD VORTAC	90	CHEYENNE
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J18

PHOENIX, AZ VORTAC	ST JOHNS, AZ VORTAC	88	PHOENIX
MOLINE, IL VOR/DME	JOLIET, IL VOR/DME	45	MOLINE

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
J19			
BUKKO, NM FIX	FORT UNION, NM VORTAC	82	BUKKO
ROBERTS, IL VOR/DME	NORTHBROOK, IL VOR/DME	40	ROBERTS
J20			
POCATELLO, ID VOR/DME	ROCK SPRINGS, WY VOR/DME	82	POCATELLO
J21			
GOPHER, MN VORTAC	DULUTH, MN VORTAC	81	GOPHER
J24			
HUGO, CO VOR/DME	HAYS, KS VORTAC	80	HUGO
CHARLESTON, WV VOR/DME	MONTEBELLO, VA VOR/DME	104	CHARLESTON
J32			
ABERDEEN, SD VOR/DME	DULUTH, MN VORTAC	130	ABERDEEN
J37			
KENNEDY, NY VOR/DME	KINGSTON, NY VOR/DME	37	KENNEDY
J40			
MONTGOMERY, AL VORTAC	MACON, GA VORTAC	139	MONTGOMERY
J42			
MEMPHIS, TN VORTAC	NASHVILLE, TN VORTAC	119	MEMPHIS
J44			
FALCON, CO VORTAC	MC COOK, NE VOR/DME	90	FALCON
MC COOK, NE VOR/DME	LINCOLN, NE VORTAC	51	MC COOK
J47			
COLUMBIA, SC VORTAC	SPARTANBURG, SC VORTAC	10	COLUMBIA

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
J48			
CASANOVA, VA VORTAC	MONTEBELLO, VA VOR/DME	58	CASANOVA
J52			
BIGBEE, MS VORTAC	VULCAN, AL VORTAC	25	BIGBEE
J54			
OLYMPIA, WA VORTAC	BAKER CITY, OR VOR/DME	143	OLYMPIA
J55			
BOSTON, MA VOR/DME	KENNEBUNK, ME VOR/DME	38	BOSTON
J56			
WASATCH, UT VORTAC	HAYDEN, CO VOR/DME	66	WASATCH
HAYDEN, CO VOR/DME	GILL, CO VOR/DME	#55	HAYDEN
#USE THE GILL (GLL) VORTAC FROM THE COP TO THE RIDGE INT			
J58			
COALDALE, NV VORTAC	WILSON CREEK, NV VORTAC	44	COALDALE
MILFORD, UT VORTAC	RATTLESNAKE, NM VORTAC	92	MILFORD
J60			
HANKSVILLE, UT VORTAC	RED TABLE, CO VOR/DME	75	HANKSVILLE
RED TABLE, CO VOR/DME	MILE HIGH, CO VORTAC	39	RED TABLE
GOSHEN, IN VORTAC	DRYER, OH VOR/DME	90	GOSHEN
J64			
RATTLESNAKE, NM VORTAC	PUEBLO, CO VORTAC	93	RATTLESNAKE
PUEBLO, CO VORTAC	HILL CITY, KS VORTAC	80	PUEBLO
FORT WAYNE, IN VORTAC	ELLWOOD CITY, PA VOR/DME	112	FORT WAYNE
J68			
DELLS, WI VORTAC	GOPHER, MN VORTAC	115	DELLS
J70			
DICKINSON, ND VORTAC	ABERDEEN, SD VOR/DME	60	DICKINSON

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
J71			
CENTRALIA, IL VORTAC	ROBERTS, IL VOR/DME	98	CENTRALIA
ROBERTS, IL VOR/DME	NORTHBROOK, IL VOR/DME	40	ROBERTS
J75			
MODENA, PA VORTAC	SOLBERG, NJ VOR/DME	10	MODENA
J78			
DRAKE, AZ VORTAC	ZUNI, NM VORTAC	76	DRAKE
J79			
FRANKLIN, VA VORTAC	SALISBURY, MD VORTAC	20	FRANKLIN
J80			
COALDALE, NV VORTAC	WILSON CREEK, NV VORTAC	44	COALDALE
MILFORD, UT VORTAC	GRAND JUNCTION, CO VOR/DME	50	MILFORD
J82			
BATTLE GROUND, WA VORTAC	DONNELLY, ID VOR/DME	90	BATTLE GROUND
RAPID CITY, SD VORTAC	SIOUX FALLS, SD VORTAC	125	RAPID CITY
J83			
APPLETON, OH VORTAC	DRYER, OH VOR/DME	75	APPLETON
J84			
NORTHBROOK, IL VOR/DME	DANVILLE, IL VORTAC	67	NORTHBROOK
J86			
HUMBLE, TX VORTAC	LEEVILLE, LA VORTAC	135	HUMBLE
J87			
MOLINE, IL VOR/DME	JOLIET, IL VOR/DME	45	MOLINE

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
J88			
SAN MARCUS, CA VORTAC	SALINAS, CA VORTAC	71	SAN MARCUS
J89			
ATLANTA, GA VORTAC	LOUISVILLE, KY VORTAC	126	ATLANTA
J90			
HELENA, MT VORTAC	MILES CITY, MT VOR/DME	115	HELENA
J91			
VOLUNTEER, TN VORTAC	HENDERSON, WV VORTAC	135	VOLUNTEER
J92			
BEATTY, NV VORTAC	BOULDER CITY, NV VORTAC	12	BEATTY
J94			
ROCK SPRINGS, WY VOR/DME	SCOTTSBLUFF, NE VORTAC	105	ROCK SPRINGS
J96			
DRAKE, AZ VORTAC	GALLUP, NM VORTAC	77	DRAKE
GALLUP, NM VORTAC	CIMARRON, NM VORTAC	146	GALLUP
J107			
MILFORD, UT VORTAC	ROCK SPRINGS, WY VOR/DME	120	MILFORD
J110			
BELLAIRE, OH VOR/DME	COYLE, NJ VORTAC	132	BELLAIRE
J115			
CHANDALAR LAKE, AK NDB	DEADHORSE, AK VOR/DME	15	CHANDALAR LAKE

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
J116			
MEEKER, CO VOR/DME	FALCON, CO VORTAC	60	MEEKER
J118			
MEMPHIS, TN VORTAC	CHOO CHOO, TN VORTAC	130	MEMPHIS
J120			
ST PAUL ISLAND, AK NDB/DME	BETHEL, AK VORTAC	190	ST PAUL ISLAND
J121			
CHARLESTON, SC VORTAC	KINSTON, NC VORTAC	128	CHARLESTON
SNOW HILL, MD VORTAC	SEA ISLE, NJ VORTAC	20	SNOW HILL
J123			
KODIAK, AK VOR/DME	KING SALMON, AK VORTAC	60	KODIAK
J125			
KODIAK, AK VOR/DME	ANCHORAGE, AK VOR/DME	103	KODIAK
J126			
SAN MARCUS, CA VORTAC	SALINAS, CA VORTAC	71	SAN MARCUS
J128			
BLUE MESA, CO VOR/DME	FALCON, CO VORTAC	50	BLUE MESA
J130			
MC COOK, NE VOR/DME	PAWNEE CITY, NE VORTAC	72	MC COOK
J134			
DRAKE, AZ VORTAC	GALLUP, NM VORTAC	77	DRAKE
GALLUP, NM VORTAC	CIMARRON, NM VORTAC	146	GALLUP
HENDERSON, WV VORTAC	LINDEN, VA VORTAC	133	HENDERSON

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
J136			
YAKIMA, WA VORTAC	SPOKANE, WA VORTAC	50	YAKIMA
MULLAN PASS, ID VOR/DME	HELENA, MT VORTAC	100	MULLAN PASS
BILLINGS, MT VORTAC	MEDICINE BOW, WY VOR/DME	149	BILLINGS
J139			
BETTLES, AK VOR/DME	DEADHORSE, AK VOR/DME	83	BETTLES
J140			
DULUTH, MN VORTAC	SAULT STE MARIE, MI VOR/DME	171	DULUTH
J143			
MENDOCINO, CA VORTAC	ROSEBURG, OR VOR/DME	150	MENDOCINO
J152			
JOHNSTOWN, PA VOR/DME	HARRISBURG, PA VORTAC	62	JOHNSTOWN
J153			
BAKER CITY, OR VOR/DME	SPOKANE, WA VORTAC	60	BAKER CITY
J154			
WASATCH, UT VORTAC	ROCK SPRINGS, WY VOR/DME	35	WASATCH
ROCK SPRINGS, WY VOR/DME	GILL, CO VOR/DME	104	ROCK SPRINGS
J157			
MYTON, UT VOR/DME	LARAMIE, WY VOR/DME	112	MYTON
J163			
POCATELLO, ID VOR/DME	ROCK SPRINGS, WY VOR/DME	82	POCATELLO
J173			
WASATCH, UT VORTAC	MEEKER, CO VOR/DME	47	WASATCH

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
J180			
SAWMILL, LA VOR/DME	LITTLE ROCK, AR VORTAC	105	SAWMILL
LITTLE ROCK, AR VORTAC	FORISTELL, MO VORTAC	118	LITTLE ROCK
J181			
RANGER, TX VORTAC	OKMULGEE, OK VOR/DME	139	RANGER
OKMULGEE, OK VOR/DME	NEOSHO, MO VOR/DME	58	OKMULGEE
NEOSHO, MO VOR/DME	HALLSVILLE, MO VORTAC	45	NEOSHO
J183			
LLANO, TX VORTAC	COLLEGE STATION, TX VORTAC	93	LLANO
J187			
MEMPHIS, TN VORTAC	FORISTELL, MO VORTAC	96	MEMPHIS
J189			
KLAMATH FALLS, OR VORTAC	BATTLE GROUND, WA VORTAC	78	KLAMATH FALLS
J193			
COFIELD, NC VORTAC	HARCUM, VA VORTAC	36	COFIELD
J197			
DOVE CREEK, CO VORTAC	HUGO, CO VOR/DME	105	DOVE CREEK
J209			
NORFOLK, VA VORTAC	SALISBURY, MD VORTAC	42	NORFOLK
J220			
ARMEL, VA VOR/DME	STONYFORK, PA VOR/DME	122	ARMEL
J230			
LARRI, PA FIX	BELLAIRE, OH VOR/DME	#163	LARRI
#COP MEASURED FROM COYLE, NJ VORTAC.			

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
J233			
KIRKSVILLE, MO VORTAC	WATERLOO, IA VOR/DME	78	KIRKSVILLE
J236			
THERMAL, CA VORTAC	NEEDLES, CA VORTAC	53	THERMAL
NEEDLES, CA VORTAC	TUBA CITY, AZ VORTAC	72	NEEDLES
J240			
MYTON, UT VOR/DME	BLUE MESA, CO VOR/DME	60	MYTON
J244			
FORT UNION, NM VORTAC	ZUNI, NM VORTAC	86	FORT UNION
J501			
SANDSPIT, CANADA VOR/DME	BIORKA ISLAND, AK VORTAC	99	SANDSPIT
BIORKA ISLAND, AK VORTAC	YAKUTAT, AK VOR/DME	98	BIORKA ISLAND
YAKUTAT, AK VOR/DME	JOHNSTONE POINT, AK VOR/DME	117	YAKUTAT
J502			
SEATTLE, WA VORTAC	VICTORIA, CA VOR/DME	50	SEATTLE
SISTERS ISLAND, AK VORTAC	BURWASH, CA NDB	80	SISTERS ISLAND
J505			
SEATTLE, WA VORTAC	CRANBROOK, CA VOR/DME	108	SEATTLE
J507			
NORTHWAY, AK VORTAC	YAKUTAT, AK VOR/DME	135	NORTHWAY
J511			
GULKANA, AK VOR/DME	BURWASH, CA NDB	55	GULKANA
J515			
BETTLES, AK VOR/DME	BARROW, AK VOR/DME	130	BETTLES

AIRWAY SEGMENT		CHANGEOVER POINTS	
FROM	TO	DISTANCE	FROM
J517			
BOISE, ID VORTAC	SPOKANE, WA VORTAC	100	BOISE
J518			
INDIAN HEAD, PA VORTAC	BALTIMORE, MD VORTAC	20	INDIAN HEAD
J523			
ELY, NV VOR/DME	BRYCE CANYON, UT VORTAC	20	ELY
J589			
CORVALLIS, OR VOR/DME	VICTORIA, CA VOR/DME	100	CORVALLIS
J617			
HOMER, AK VOR/DME	JOHNSTONE POINT, AK VOR/DME	63	HOMER
J713			
BIG PINEY, WY VOR/DME	WASATCH, UT VORTAC	94	BIG PINEY