

AIP
AERONAUTICAL INFORMATION PUBLICATION
UNITED STATES OF AMERICA

TWENTY-EIGHTH EDITION

5 SEPTEMBER 2024

CONSULT NOTAM FOR LATEST INFORMATION

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIP Amendment 1
Page Control Chart
5 SEPTEMBER 2024

REMOVE PAGES	DATED	INSERT PAGES	DATED
GEN 0.4-1 through GEN 0.4-3	21 MAR 24	GEN 0.4-1 through GEN 0.4-3	5 SEP 24
GEN 1.7-49 through GEN 1.7-102	21 MAR 24	GEN 1.7-49 through GEN 1.7-106	5 SEP 24
ENR 0.4-1 through ENR 0.4-4	21 MAR 24	ENR 0.4-1 through ENR 0.4-4	5 SEP 24
ENR 1.1-41	21 MAR 24	ENR 1.1-41	21 MAR 24
ENR 1.1-42 through ENR 1.1-102	21 MAR 24	ENR 1.1-42 through ENR 1.1-96	5 SEP 24
ENR 1.5-11	21 MAR 24	ENR 1.5-11	21 MAR 24
ENR 1.5-12 through ENR 1.5-18	21 MAR 24	ENR 1.5-12 through ENR 1.5-18	5 SEP 24
ENR 1.5-27	21 MAR 24	ENR 1.5-27	21 MAR 24
ENR 1.5-28 through ENR 1.5-30	21 MAR 24	ENR 1.5-28 through ENR 1.5-30	5 SEP 24
ENR 1.6-1	21 MAR 24	ENR 1.6-1	5 SEP 24
ENR 1.6-2	21 MAR 24	ENR 1.6-2	21 MAR 24
ENR 1.10-1	21 MAR 24	ENR 1.10-1	5 SEP 24
ENR 1.10-2	21 MAR 24	ENR 1.10-2	21 MAR 24
ENR 1.10-9	21 MAR 24	ENR 1.10-9	21 MAR 24
ENR 1.10-10 through ENR 1.10-12	21 MAR 24	ENR 1.10-10 through ENR 1.10-12	5 SEP 24
ENR 1.17-11	21 MAR 24	ENR 1.17.11	21 MAR 24
ENR 1.17-12 and ENR 1.17-13	21 MAR 24	ENR 1.17.12 and ENR 1.17-13	5 SEP 24
ENR 3.1-1	21 MAR 24	ENR 3.1-1	5 SEP 24
ENR 3.2-1	21 MAR 24	ENR 3.2-1	5 SEP 24
ENR 4.1-19	21 MAR 24	ENR 4.1-19	21 MAR 24
ENR 4.1-20	21 MAR 24	ENR 4.1-20	5 SEP 24
ENR 5.2-1	21 MAR 24	ENR 5.2-1	21 MAR 24
ENR 5.2-2 and ENR 5.2-3	21 MAR 24	ENR 5.2-2 and ENR 5.2-3	5 SEP 24
ENR 7.1-3	21 MAR 24	ENR 7.1-3	21 MAR 24
ENR 7.1-4	21 MAR 24	ENR 7.1-4	5 SEP 24
AD 0.4-1 through AD 0.4-6	21 MAR 24	AD 0.4-1 through AD 0.4-6	5 SEP 24
AD 2-1 through AD 2-653	21 MAR 24	AD 2-1 through AD 2-631	5 SEP 24
Index 1-1 through Index 1-9	21 MAR 24	Index 1-1 through Index 1-9	5 SEP 24
Appendix 1-1 through 438	21 MAR 24	N/A
Appendix 2-1 through 2-23	21 MAR 24	Appendix 1-1 through Appendix 1-23 . . .	5 SEP 24

GEN 0.4 Checklist of Pages

PAGE	DATE
PART 1 – GENERAL (GEN)	
GEN 0	
0.1-1	21 MAR 24
0.1-2	21 MAR 24
0.1-3	21 MAR 24
0.2-1	21 MAR 24
0.4-1	5 SEP 24
0.4-2	5 SEP 24
0.4-3	5 SEP 24
0.6-1	21 MAR 24
GEN 1	
1.1-1	21 MAR 24
1.2-1	21 MAR 24
1.2-2	21 MAR 24
1.2-3	21 MAR 24
1.2-4	21 MAR 24
1.2-5	21 MAR 24
1.3-1	21 MAR 24
1.4-1	21 MAR 24
1.4-2	21 MAR 24
1.4-3	21 MAR 24
1.4-4	21 MAR 24
1.5-1	21 MAR 24
1.6-1	21 MAR 24
1.7-1	21 MAR 24
1.7-2	21 MAR 24
1.7-3	21 MAR 24
1.7-4	21 MAR 24
1.7-5	21 MAR 24
1.7-6	21 MAR 24
1.7-7	21 MAR 24
1.7-8	21 MAR 24
1.7-9	21 MAR 24
1.7-10	21 MAR 24
1.7-11	21 MAR 24
1.7-12	21 MAR 24
1.7-13	21 MAR 24
1.7-14	21 MAR 24
1.7-15	21 MAR 24
1.7-16	21 MAR 24
1.7-17	21 MAR 24
1.7-18	21 MAR 24
1.7-19	21 MAR 24
1.7-20	21 MAR 24
1.7-21	21 MAR 24
1.7-22	21 MAR 24

PAGE	DATE
1.7-23	21 MAR 24
1.7-24	21 MAR 24
1.7-25	21 MAR 24
1.7-26	21 MAR 24
1.7-27	21 MAR 24
1.7-28	21 MAR 24
1.7-29	21 MAR 24
1.7-30	21 MAR 24
1.7-31	21 MAR 24
1.7-32	21 MAR 24
1.7-33	21 MAR 24
1.7-34	21 MAR 24
1.7-35	21 MAR 24
1.7-36	21 MAR 24
1.7-37	21 MAR 24
1.7-38	21 MAR 24
1.7-39	21 MAR 24
1.7-40	21 MAR 24
1.7-41	21 MAR 24
1.7-42	21 MAR 24
1.7-43	21 MAR 24
1.7-44	21 MAR 24
1.7-45	21 MAR 24
1.7-46	21 MAR 24
1.7-47	21 MAR 24
1.7-48	21 MAR 24
1.7-49	5 SEP 24
1.7-50	5 SEP 24
1.7-51	5 SEP 24
1.7-52	5 SEP 24
1.7-53	5 SEP 24
1.7-54	5 SEP 24
1.7-55	5 SEP 24
1.7-56	5 SEP 24
1.7-57	5 SEP 24
1.7-58	5 SEP 24
1.7-59	5 SEP 24
1.7-60	5 SEP 24
1.7-61	5 SEP 24
1.7-62	5 SEP 24
1.7-63	5 SEP 24
1.7-64	5 SEP 24
1.7-65	5 SEP 24
1.7-66	5 SEP 24
1.7-67	5 SEP 24
1.7-68	5 SEP 24
1.7-69	5 SEP 24
1.7-70	5 SEP 24

PAGE	DATE
1.7-71	5 SEP 24
1.7-72	5 SEP 24
1.7-73	5 SEP 24
1.7-74	5 SEP 24
1.7-75	5 SEP 24
1.7-76	5 SEP 24
1.7-77	5 SEP 24
1.7-78	5 SEP 24
1.7-79	5 SEP 24
1.7-80	5 SEP 24
1.7-81	5 SEP 24
1.7-82	5 SEP 24
1.7-83	5 SEP 24
1.7-84	5 SEP 24
1.7-85	5 SEP 24
1.7-86	5 SEP 24
1.7-87	5 SEP 24
1.7-88	5 SEP 24
1.7-89	5 SEP 24
1.7-90	5 SEP 24
1.7-91	5 SEP 24
1.7-92	5 SEP 24
1.7-93	5 SEP 24
1.7-94	5 SEP 24
1.7-95	5 SEP 24
1.7-96	5 SEP 24
1.7-97	5 SEP 24
1.7-98	5 SEP 24
1.7-99	5 SEP 24
1.7-100	5 SEP 24
1.7-101	5 SEP 24
1.7-102	5 SEP 24
1.7-103	5 SEP 24
1.7-104	5 SEP 24
1.7-105	5 SEP 24
1.7-106	5 SEP 24
GEN 2	
2.1-1	21 MAR 24
2.1-2	21 MAR 24
2.2-1	21 MAR 24
2.2-2	21 MAR 24
2.2-3	21 MAR 24
2.2-4	21 MAR 24
2.2-5	21 MAR 24
2.3-1	21 MAR 24
2.4-1	21 MAR 24

PAGE	DATE
2.5-1	21 MAR 24
2.6-1	21 MAR 24
2.6-2	21 MAR 24
2.6-3	21 MAR 24
2.6-4	21 MAR 24
2.6-5	21 MAR 24
2.6-6	21 MAR 24
2.6-7	21 MAR 24
2.7-1	21 MAR 24
GEN 3	
3.1-1	21 MAR 24
3.1-2	21 MAR 24
3.1-3	21 MAR 24
3.1-4	21 MAR 24
3.1-5	21 MAR 24
3.2-1	21 MAR 24
3.2-2	21 MAR 24
3.2-3	21 MAR 24
3.2-4	21 MAR 24
3.2-5	21 MAR 24
3.2-6	21 MAR 24
3.2-7	21 MAR 24
3.2-8	21 MAR 24
3.2-9	21 MAR 24
3.2-10	21 MAR 24
3.2-11	21 MAR 24
3.2-12	21 MAR 24
3.2-13	21 MAR 24
3.2-14	21 MAR 24
3.3-1	21 MAR 24
3.3-2	21 MAR 24
3.3-3	21 MAR 24
3.3-4	21 MAR 24
3.3-5	21 MAR 24
3.3-6	21 MAR 24
3.3-7	21 MAR 24
3.3-8	21 MAR 24
3.3-9	21 MAR 24
3.3-10	21 MAR 24
3.3-11	21 MAR 24
3.3-12	21 MAR 24
3.3-13	21 MAR 24
3.3-14	21 MAR 24
3.3-15	21 MAR 24
3.3-16	21 MAR 24
3.3-17	21 MAR 24
3.3-18	21 MAR 24
3.3-19	21 MAR 24

PAGE	DATE
3.3-20	21 MAR 24
3.3-21	21 MAR 24
3.3-22	21 MAR 24
3.3-23	21 MAR 24
3.3-24	21 MAR 24
3.3-25	21 MAR 24
3.3-26	21 MAR 24
3.3-27	21 MAR 24
3.4-1	21 MAR 24
3.4-2	21 MAR 24
3.4-3	21 MAR 24
3.4-4	21 MAR 24
3.4-5	21 MAR 24
3.4-6	21 MAR 24
3.4-7	21 MAR 24
3.4-8	21 MAR 24
3.4-9	21 MAR 24
3.4-10	21 MAR 24
3.4-11	21 MAR 24
3.4-12	21 MAR 24
3.4-13	21 MAR 24
3.4-14	21 MAR 24
3.4-15	21 MAR 24
3.4-16	21 MAR 24
3.4-17	21 MAR 24
3.4-18	21 MAR 24
3.4-19	21 MAR 24
3.4-20	21 MAR 24
3.4-21	21 MAR 24
3.4-22	21 MAR 24
3.4-23	21 MAR 24
3.5-1	21 MAR 24
3.5-2	21 MAR 24
3.5-3	21 MAR 24
3.5-4	21 MAR 24
3.5-5	21 MAR 24
3.5-6	21 MAR 24
3.5-7	21 MAR 24
3.5-8	21 MAR 24
3.5-9	21 MAR 24
3.5-10	21 MAR 24
3.5-11	21 MAR 24
3.5-12	21 MAR 24
3.5-13	21 MAR 24
3.5-14	21 MAR 24
3.5-15	21 MAR 24
3.5-16	21 MAR 24
3.5-17	21 MAR 24
3.5-18	21 MAR 24

PAGE	DATE
3.5-19	21 MAR 24
3.5-20	21 MAR 24
3.5-21	21 MAR 24
3.5-22	21 MAR 24
3.5-23	21 MAR 24
3.5-24	21 MAR 24
3.5-25	21 MAR 24
3.5-26	21 MAR 24
3.5-27	21 MAR 24
3.5-28	21 MAR 24
3.5-29	21 MAR 24
3.5-30	21 MAR 24
3.5-31	21 MAR 24
3.5-32	21 MAR 24
3.5-33	21 MAR 24
3.5-34	21 MAR 24
3.5-35	21 MAR 24
3.5-36	21 MAR 24
3.5-37	21 MAR 24
3.5-38	21 MAR 24
3.5-39	21 MAR 24
3.5-40	21 MAR 24
3.5-41	21 MAR 24
3.5-42	21 MAR 24
3.5-43	21 MAR 24
3.5-44	21 MAR 24
3.5-45	21 MAR 24
3.5-46	21 MAR 24
3.5-47	21 MAR 24
3.5-48	21 MAR 24
3.5-49	21 MAR 24
3.5-50	21 MAR 24
3.5-51	21 MAR 24
3.5-52	21 MAR 24
3.5-53	21 MAR 24
3.5-54	21 MAR 24
3.5-55	21 MAR 24
3.5-56	21 MAR 24
3.5-57	21 MAR 24
3.5-58	21 MAR 24
3.5-59	21 MAR 24
3.5-60	21 MAR 24
3.5-61	21 MAR 24
3.5-62	21 MAR 24
3.5-63	21 MAR 24
3.5-64	21 MAR 24
3.5-65	21 MAR 24
3.5-66	21 MAR 24
3.5-67	21 MAR 24
3.5-68	21 MAR 24

PAGE	DATE
3.5-69	21 MAR 24
3.5-70	21 MAR 24
3.5-71	21 MAR 24
3.5-72	21 MAR 24
3.5-73	21 MAR 24
3.5-74	21 MAR 24
3.5-75	21 MAR 24
3.5-76	21 MAR 24
3.5-77	21 MAR 24
3.5-78	21 MAR 24
3.5-79	21 MAR 24
3.5-80	21 MAR 24
3.5-81	21 MAR 24
3.5-82	21 MAR 24
3.5-83	21 MAR 24
3.5-84	21 MAR 24
3.5-85	21 MAR 24
3.5-86	21 MAR 24
3.5-87	21 MAR 24
3.5-88	21 MAR 24
3.5-89	21 MAR 24
3.5-90	21 MAR 24
3.5-91	21 MAR 24
3.5-92	21 MAR 24

PAGE	DATE
3.5-93	21 MAR 24
3.5-94	21 MAR 24
3.6-1	21 MAR 24
3.6-2	21 MAR 24
3.6-3	21 MAR 24
3.6-4	21 MAR 24
3.6-5	21 MAR 24
3.6-6	21 MAR 24
3.6-7	21 MAR 24
3.6-8	21 MAR 24
3.6-9	21 MAR 24
3.6-10	21 MAR 24
3.6-11	21 MAR 24
3.6-12	21 MAR 24
3.6-13	21 MAR 24
3.6-14	21 MAR 24
3.6-15	21 MAR 24

PAGE	DATE
3.6-16	21 MAR 24
3.6-17	21 MAR 24
3.6-18	21 MAR 24
3.6-19	21 MAR 24
3.6-20	21 MAR 24
3.6-21	21 MAR 24
3.6-22	21 MAR 24
3.6-23	21 MAR 24
3.6-24	21 MAR 24
3.6-25	21 MAR 24
3.7-1	21 MAR 24
3.7-2	21 MAR 24
GEN 4	
4.1-1	21 MAR 24
4.1-2	21 MAR 24
4.2-1	21 MAR 24

GEN 0.5 List of Hand Amendments to the AIP – Not applicable

ANNEX 6 – OPERATION OF AIRCRAFT	
Part I	
Chapter 3	General
3.3.1	The U.S. Flight Operations Quality Assurance (FOQA) program is a voluntary program.
Chapter 4	Flight Operations
Chapter 4 Reference 4.3.2	For multiengine aeroplanes, commuter and on-demand operators are required to maintain copies of the load manifest for 30 days. Part 121 air carriers are required to keep copies of the load manifest for 90 days
Chapter 4 Reference 4.3.4.1.2	When determining the distance to a take-off alternate, the United States does not require commuter and on demand operations to calculate engine inoperative configurations. However, it is required that the alternate must be within one-hour flying time (at normal cruising speed, in still air) of the aerodrome of departure.
Chapter 4 Reference 4.3.9.2	In the event of a loss of pressurization, the U.S. requires descent within four minutes to 14,000 ft, not the 13,000 ft as required by ICAO.
Chapter 4 Reference 4.9.2	The United States allows turbo-jets that are certificated for single pilot operations.
Chapter 5	Aeroplane performance operating limitations
Chapter 5 Reference 5.2.8.1	The United States does not have specific regulations that require the loss of Runway length be considered due to alignment of the airplane prior to takeoff. However, the United States does within its aircraft certification regulations require aircraft performance be determined by using the point on the runway where takeoff is started when computing takeoff distance. This same criteria is used when computing runway available for accelerate/stop distance. Accounting for runway loss due to alignment is done within each air carrier's approved operations manual.
Chapter 5 Reference 5.4.1	The U.S. does not require turbine engine reliability to have a power loss rate of less than 1 per 100,000 engine hours, a radio altimeter, two attitude indicators, airborne weather radar, a certified navigation system to identify aerodromes as forced landing areas, or an engine fire warning system.
Chapter 5 Reference 5.4.2	The U.S. does not require an automatic trend monitoring system on aeroplanes certificated after 1 January 2005.
Chapter 6	Aeroplane instruments, equipment and flight documents
6.3.2.3.2	The current operational rules require a CVR recording duration of at least the last 2 hours of operation.
Chapter 6 Reference 6.4.1	The U.S. does not require a time piece.
Chapter 6 Reference 6.4.2	The United States does not require aeroplanes on VFR flights, when operated as controlled flights, to be equipped in accordance with the requirements for aeroplanes operated under instrument flight rules.
Chapter 6 Reference 6.5.1	Seaplanes are not required to have equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea. Seaplanes are not required to be equipped with one sea anchor (drogue).
Chapter 6 Reference 6.5.3.1	The United States defines extended over water operations for aircraft other than helicopters as an operation over water at a horizontal distance of more than 50 nautical miles from the nearest shoreline. For 6.5.3.1.c – The United States does not require 8.8.kHz underwater locating devices to be installed on aircraft.
Chapter 6 Reference 6.12	The United States does not require equipment to measure cosmic radiation.

6.15.1	The United States requires all Part 121 turbine aircraft to be equipped with terrain avoidance equipment. However, 14 CFR Part 135 only defines that turbine aircraft with 10 or more passenger seats be equipped and is silent on the 5700 KG weight/take off mass requirement.
Chapter 6 Reference 6.15.5	The U.S. does not require ground proximity systems for piston powered airplanes.
6.17.2	The United States does not require an ELT for scheduled air carrier operations conducted by scheduled operators unless the scheduled operation is operated over water or remote areas. The United States only requires one ELT on flights over water or remote area.
6.17.3	The United States does not require an ELT for scheduled air carrier operations conducted by scheduled operators unless the scheduled operation is operated over water or remote areas. The United States only requires one ELT on flights over water or remote areas.
6.17.4	The United States does not require an ELT for scheduled air carrier operations conducted by scheduled operators unless the scheduled operation is operated over water or remote areas. The United States only requires one ELT on flights over water or remote areas.
6.17.5	The United States does not require an ELT for scheduled air carrier operations conducted by scheduled operators unless the scheduled operation is operated over water or remote areas. The United States only requires one ELT on flights over water or remote areas.
Chapter 6 Reference 6.20.2	The U.S. does not require pressure altitude information with a resolution of 25 feet or better.
Chapter 6 Reference 6.20.3	The U.S. does not require pressure altitude information with a resolution of 25 feet or better.
Chapter 6 Reference 6.21	The United States requires the use of boom (or mask) microphones below 18,000 ft which would be considered transition altitude. However, if the flight is conducted below 18,000 ft and is in the cruise phase of the flight, boom microphones may be removed. Certain 14 CFR part 135 operations that do not have cockpit voice recorder requirements are not required to wear boom microphones.
Chapter 6 Reference 6.23	When operations by a single pilot are authorized the U.S. requires an autopilot for IFR passenger operations, but not for VFR or cargo operations. A) The U.S. does not require a boom microphone. B) The U.S. requires charts be available and used.
Chapter 8	Aeroplane Maintenance
Chapter 8 Reference 8.4.2	The United States requires that records of work be retained until the work is repeated, superseded by other work or for one year after the work is performed, but does not require the records be retained after the unit has been permanently withdrawn from service.
Chapter 9	Aeroplane flight crew
Chapter 9 Reference 9.4.2.1	The cited regulation addresses recency and current requirements. Air operators have the discretion as to the extent the operator may qualify and keep current a cruise relief pilot above the regulatory requirement. In lieu of a pilot qualified and current as only a cruise relief pilot, a fully qualified and current SIC may serve as a cruise relief pilot.
Chapter 9 Reference 9.4.2.2	The U.S prescribes processes for variant cross training for flight crews related to variants. Air operators have the discretion as to what extent the operator may qualify and keep current a cruise relief pilot above the regulatory requirement.
Chapter 9 Reference 9.4.3.2	Operators are required to provide the information as outlined in this Standard and ensure the pilot as adequate knowledge of, and the ability to use this information.

Chapter 9 Reference 9.4.3.5	The U.S. does not restrict operators from using a pilot as a pilot-in-command on a route where the pilot has not, within the preceding 12 months, made at least one trip between the terminal points of that route as a pilot member of the flight crew, as a check pilot, or as an observer on the flight deck, except for special areas and airports. A list of U.S. Special airports may be found at the following link: https://drs.faa.gov/browse/excelExternalWindow/DRSDOCID183887239820230707194018.0001 .
Chapter 9 Reference 9.4.3.6	The U.S. does not have an area/route 12 month currency requirement for pilots in command, except for special areas and airports.
Chapter 9 Reference 9.4.4.1	For PICs, the U.S. requires 1 proficiency checks per 12 months and either proficiency check or an approved simulator training course, for SICs, the U.S. requires 1 proficiency check each 24 months and another proficiency check or an approved simulator training course every 12 months.
PART II	
Section II	General Aviation Operations
Chapter 2.4	Aeroplane instruments, equipment and flight documents.
2.4.8	Airplanes operated under visual flight rules at night are not required to be equipped with: c) to f) a turn and slip indicator; b) an attitude indicator (artificial horizon); c) a heading indicator (directional gyroscope); d) a means of indicating whether the supply of power to the gyroscopic instruments is adequate; e) a sensitive pressure altimeter; f) a means of indicating the outside air temperature; g) a timepiece with a sweep second hand; h) an airspeed indicating system with a means of preventing malfunctioning due to condensation or icing; i) a rate-of-climb and descent indicator; j) a landing light; k) illumination for flight instruments and equipment; l) lights in passenger compartments; and m) a flashlight (electric torch) for each crew member station.
Chapter 2.5	Aeroplane Communication, Navigation and Surveillance Equipment
2.5.1.1	Except when operating under controlled flight, airplanes operated at night are not required to have radio communications equipment capable of conducting two-way communications. United States requirements for radio communications equipment are based upon the type of airspace in which the operation occurs, and not on the time of the day.
2.5.1.2	When more than one radio communications equipment unit is required, the United States has no provision that each unit be independent of any other.
2.5.1.4	Except when operating under controlled flight, airplanes on extended flights over water or on flights over underdeveloped land are not required to have radio communications equipment capable of conducting two-way communications.
2.5.2.1	The United States has no provisions concerning required aircraft navigation instruments enabling a flight to proceed in accordance with a flight plan, prescribed RNP types, or the air traffic services provided. The United States does not specify a minimum distance between landmark references used by flights operating under visual flight rules.
Chapter 2.6	Aeroplane Maintenance
2.6.2.2.	The FAA established Title 14 Code of Federal Regulations section 43.10, which speaks to the disposition of parts, removed from type-certificated products. After April 15, 2002, each person who removes a life-limited part from a type certificated product must ensure that the part is controlled using: a record keeping system; tag or record attached to part; non-permanent marking; permanent marking; or segregation.
Chapter 2.8	Manuals, logs and records
2.8.2.1	The FAA doesn't require a journey logbook for General Aviation operations.

2.8.3	The FAA doesn't require pilots for General Aviation operations to carry a list of emergency equipment. The list of required flying equipment and operating information is available in 14 CFR § 91.503.
Appendix 2.4	General aviation specific approvals
2. SPECIFIC APROVAL TEMPLATE	The FAA monitors RVSM performance on a continual basis via ADS-B.
Section III	Large and Turbojet Aeroplanes
Chapter 3.1	Applicability
3.1.1	Large aircraft means aircraft of more than 12,500 pounds, maximum certificated takeoff weight. Additionally, 14 CFR part 91 requirements for non-commercial general aviation operations apply to large and turbojet airplanes with additional specific requirements established 14 CFR part 91 subparts F and G.
3.1.2	Large aircraft means aircraft of more than 12,500 pounds, maximum certificated takeoff weight. Additionally, 14 CFR part 91 requirements for non-commercial general aviation operations apply to large and turbojet airplanes with additional specific requirements established 14 CFR part 91 subparts F and G.
3.4	Flight operations
3.4.3.5.3	<p>No person may begin a flight in an airplane under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed—</p> <p>(1) During the day, to fly after that for at least 30 minutes; or</p> <p>(2) At night, to fly after that for at least 45 minutes.</p> <p>No person may operate a civil aircraft in IFR conditions unless it carries enough fuel (considering weather reports and forecasts and weather conditions) to—</p> <p>(1) Complete the flight to the first airport of intended landing;</p> <p>(2) Except as provided in paragraph (b) of this section, fly from that airport to the alternate airport; and</p> <p>(3) Fly after that for 45 minutes at normal cruising speed or, for helicopters, fly after that for 30 minutes at normal cruising speed.</p>

3.4.3.5.4	<p>No person may begin a flight in an airplane under VFR conditions unless (considering wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed—</p> <p>(1) During the day, to fly after that for at least 30 minutes; or</p> <p>(2) At night, to fly after that for at least 45 minutes.</p> <p>No person may operate a civil aircraft in IFR conditions unless it carries enough fuel (considering weather reports and forecasts and weather conditions) to—</p> <p>(1) Complete the flight to the first airport of intended landing;</p> <p>(2) Except as provided in paragraph (b) of this section, fly from that airport to the alternate airport; and</p> <p>(3) Fly after that for 45 minutes at normal cruising speed or, for helicopters, fly after that for 30 minutes at normal cruising speed.</p>
3.4.3.6.1	<p>For general aviation operations, the pilot is the operator as noted in the definition for operator in Annex 6, Part II and is not required to develop policies or procedures.</p>
Chapter 3.11	Manuals, logs and records
3.11.2.3	<p>The FAA considers the terms Maintenance Program and Inspection Program to be different. In addition, the FAA recognizes there are significant differences between an air carrier maintenance program and an inspection program used in non-air carrier operations. The FAA requires air carriers that operate certain types of aircraft to have a maintenance program (CAMP). In general, some non air-carrier aircraft, along with aircraft operated under 14 CFR part 91, are not required to have a maintenance program. However, FAA regulations and various Advisory Circulars allow the operator/registered owner to use a maintenance program if they decide to do so. 14 CFR § 91.409 identifies the inspection programs available for selection by a registered owner. Advisory Circular 120–16 may be used as a guide to develop a maintenance program.</p>
PART III	
Section I	General
Chapter 1	Definitions
Section II	International Commercial Air Transport
1.3.1	<p>The U.S. Flight Operations Quality Assurance (FOQA) program is a voluntary program.</p>
Chapter 2 Reference 2.2.4.2	<p>The pilot in command of an aircraft is directly responsible for, and is the final authority as to, the operation of that aircraft.</p>

2.2.8.3	<p>Takeoff and landing under IFR.</p> <p>(a) Instrument approaches to civil airports. Unless otherwise authorized by the FAA, when it is necessary to use an instrument approach to a civil airport, each person operating an aircraft must use a standard instrument approach procedure prescribed in part 97 of this chapter for that airport. This paragraph does not apply to United States military aircraft.</p> <p>(b) Authorized DA/DH or MDA. For the purpose of this section, when the approach procedure being used provides for and requires the use of a DA/DH or MDA, the authorized DA/DH or MDA is the highest of the following:</p> <p>--(1) The DA/DH or MDA prescribed by the approach procedure.</p> <p>--(2) The DA/DH or MDA prescribed for the pilot in command.</p> <p>--(3) The DA/DH or MDA appropriate for the aircraft equipment available and used during the approach.</p> <p>(c) Operation below DA/DH or MDA. Except as provided in § 91.176 of this chapter, where a DA/DH or MDA is applicable, no pilot may operate an aircraft, except a military aircraft of the United States, below the authorized MDA or continue an approach below the authorized DA/DH unless –</p> <p>--(1) The aircraft is continuously in a position from which a descent to a landing on the intended runway can be made at a normal rate of 11descent using normal maneuvers, and for operations conducted under part 121 or part 135 unless that descent rate will allow touchdown to occur within the touchdown zone of the runway of intended landing;</p> <p>--(2) The flight visibility is not less than the visibility prescribed in the standard instrument approach being used; and</p> <p>--(3) Except for a Category II or Category III approach where any necessary visual reference requirements are specified by the Administrator, at least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot:</p> <p>----(i) The approach light system, except that the pilot may not descend below 100 feet above the touchdown zone elevation using the approach lights as a reference unless the red terminating bars or the red side row bars are also distinctly visible and identifiable.</p> <p>----(ii) The threshold.</p> <p>The U.S. has not adopted the 2D and 3D instrument approach operation language.</p>
2.3.3.2	<p>The United States does not require that the operations manual describe the contents and use of the operational flight plan, but does require establishing procedures for locating each flight.</p>
2.3.4.2.1	<p>U.S. regulations allow for isolated aerodrome operations but do not require a point of no return (PNR) calculation.</p>
2.3.4.2.3	<p>U.S. regulations do not require two alternates in marginal weather conditions.</p>
2.3.6.3	<p>The fuel requirements for commuter and on demand operations are expressed in terms of flight time and do not include a specific altitude requirement.</p>
Chapter 2 Reference 2.3.6.3.1	<p>The United States does not require IFR helicopter operations to maintain a specific altitude above a destination.</p>
Chapter 2 Reference 2.3.6.3.2	<p>Fuel reserves for IFR helicopter operations is 30 minutes at normal cruise speed beyond the alternate heliport.</p>
Chapter 2 Reference 2.3.6.3.3	<p>The United States has no provisions addressing when a suitable alternate is unavailable. If the destination weather so requires, an alternate must be specified and 30-minute fuel reserves must be carried.</p>

Chapter 2 Reference 2.3.6.4	The operations manual does not include procedures for loss of pressurization and other contingencies.
Chapter 2 Reference 2.3.6.5	<p>VFR: Fuel Supply No person may begin a flight operation in a helicopter under VFR unless, considering wind and forecast weather conditions, it has enough fuel to fly to the first point of intended landing and, assuming normal cruising fuel consumption, to fly after that for at least 20 minutes.</p> <p>IFR: Alternate airport requirements Except as provided in paragraph (b) of this section, no person may operate an aircraft in IFR conditions unless it carries enough fuel (considering weather reports or forecasts or any combination of them) to—</p> <ol style="list-style-type: none"> (1) Complete the flight to the first airport of intended landing; (2) Fly from that airport to the alternate airport; and (3) Fly after that for 45 minutes at normal cruising speed or, for helicopters, fly after that for 30 minutes at normal cruising speed. <p>(b) Paragraph (a)(2) of this section does not apply if part 97 of this chapter prescribes a standard instrument approach procedure for the first airport of intended landing and, for at least one hour before and after the estimated time of arrival, the appropriate weather reports or forecasts, or any combination of them, indicate that—</p> <ol style="list-style-type: none"> (1) The ceiling will be at least 1,500 feet above the lowest circling approach MDA; or (2) If a circling instrument approach is not authorized for the airport, the ceiling will be at least 1,500 feet above the lowest published minimum or 2,000 feet above the airport elevation, whichever is higher; and (3) Visibility for that airport is forecast to be at least three miles, or two miles more than the lowest applicable visibility minimums, whichever is the greater, for the instrument approach procedure to be used at the destination airport.
Chapter 2 Reference 2.3.7.1	<p>The operator’s manual must include:</p> <p>Procedures for refueling aircraft, eliminating fuel contamination, protecting from fire (including electrostatic protection), and supervising and protecting passengers during refueling;</p>
Chapter 2 Reference 2.3.7.4	<p>The operator’s manual must include:</p> <p>Procedures for refueling aircraft, eliminating fuel contamination, protecting from fire (including electrostatic protection), and supervising and protecting passengers during refueling;</p> <p>Procedures for ensuring compliance with emergency procedures, including a list of the functions assigned each category of required crewmembers in connection with an emergency and emergency evacuation duties under §135.123;</p> <p>AC 150/3230 requires compliance with National Fire Protection Association standards in NPA 407 which provides:</p> <p>Accessibility to aircraft by emergency fire equipment shall be considered in establishing aircraft fuel servicing positions.</p>

Chapter 2 Reference 2.3.7.6	The operator’s manual must include: Procedures for refueling aircraft, eliminating fuel contamination, protecting from fire (including electrostatic protection), and supervising and protecting passengers during refueling;
Chapter 2 Reference 2.3.8.1	The United States requires oxygen at all times for passengers experiencing cabin pressure altitudes above 15,000 ft, not 13,000 ft (620hPa) as per ICAO.
Chapter 2 Reference 2.3.8.2	In the event of a loss of pressurization the U.S. requires descent within four minutes to 14,000 ft, not the 13,000 ft as required by ICAO.
Chapter 2 Reference 2.4.1.3	The United States does not utilize a 1,000 ft minimum for non-precision approaches
Chapter 3 Reference 3.2.7	US does not require the helicopter weight limitations found in 3.2.7 a), c), and d).
3.2.7.2.1	The rotorcraft must be able to maintain any required flight condition and make a smooth transition from any flight condition to any other flight condition without exceptional piloting skill, alertness, or strength, and without danger of exceeding the limit load factor under any operating condition probable for the type, including— (1) Sudden failure of one engine, for multiengine rotorcraft meeting Transport Category A engine isolation requirements; (2) Sudden, complete power failure, and (3) Sudden, complete control system failures. Aircraft operational approval that does not require guaranteed engine out performance (Part 29 Category B or Part 27 Normal Category for single or multi-engine helicopters) shall be operated per the specific approved flight manual procedures that ensure a safe landing following an engine failure or all engine failure.
Chapter 4 Reference 4.2.2	Precaution Kits and First aid equipment are not required on helicopters.
Chapter 4 Reference 4.2.4.1	The US does not require marking of break-in points.
Chapter 4 Reference 4.2.4.2	The U.S. does not require marking of break-in points.
Chapter 4 Reference 4.4.2	The FAA does not specify a requirement for two landing lights.
Chapter 4 Reference 4.5.2.1	B) and C) Life-saving rafts and pyrotechnic devices are only required for extended over-water operations. That is in respect to helicopters in operations over water with a horizontal distance of more than 50 NM from the nearest shoreline and more than 50 NM from an offshore heliport structure.
Chapter 4 Reference 4.6	Helicopters operated over land areas designated as areas in which search and rescue would be especially difficult are not required to be equipped with signaling devices or life-saving equipment. The U.S. does not designate areas in which search and rescue would be especially difficult and therefore does not require additional equipment.
Chapter 5 Reference 5.1.1	Except when operating under controlled flight, helicopters are not required to have radio communications for night operations.
Chapter 5 Reference 5.2.1	The United States does not require a helicopter to be provided with navigation equipment in accordance with RNP types for navigation with the United States. However, the United States does provide information and operations specifications for IFR operating requirements when U.S. operators and aircraft conduct operations in the European Airspace Designated for Basic Area Navigation (RNP-5 and 10).
Chapter 6 Reference 6.4.2	The U.S. requires that records of work be retained until the work is repeated, superseded by other work for one year after the work is performed, but does not require the records be retained after the until has been permanently withdrawn from service.
Chapter 6 Reference 6.8.2	The U.S. requires that records of work must be retained until the work is repeated, superseded by other work, or for one year after the work is performed.

Chapter 7 Reference 7.4.2.2	US CAT helicopter pilots must demonstrate their proficiencies in the provisions of 7.4.2.2 through various means.
Chapter 9 Reference 9.5	The U.S. does not require that an operator keep a list of the emergency and survival equipment carried on board any of their helicopters engaged in international air navigation.
Chapter 11 Reference 11.1	In the United States, certificate holders regulated under Part 135 of the CFR shall prepare and keep current a manual setting forth the certificate holder's procedures and policies. Additionally, the Aircraft Operators Standard Security Program, (required by 49 CFR 1544, Subpart B) mandates crew members (both flight deck and attendants) be trained in the proper conduct of an aircraft cabin search, including likely areas of an aircraft that could conceal a weapon or improvised explosive devices and how to recognize weapons or devices.
Chapter 11 Reference 11.3	Upon receipt of a specific and credible threat, the aircraft operator must immediately notify the appropriate airport operator and the necessary ground and in-flight security operators. Additionally, upon receiving information that an act or suspected act of air piracy has been committed, the aircraft operator must notify the U.S. Transportation Security Administration. If the aircraft is outside U.S. airspace, the aircraft operator must notify the appropriate authorities of the State in which the aircraft is located. Additionally, if different, the operator must also notify the appropriate authorities in which the aircraft is to land.
Section III	International General Aviation
2.18	The pilot in command of an aircraft is directly responsible for, and is the final authority as to, the operation of that aircraft.
2.6.3.2	The United States allows the continuation of an approach regardless of the reported weather.
5.2.1	The U.S. has no provision that visual landmarks used in VFR be located at least every 60 NM (110km).

ANNEX 7 – AIRCRAFT NATIONALITY AND REGISTRATION MARKS	
4.3.1	The marks are not required on wing structure; only tail or fuselage.
4.3.2	14 CFR § 45.25(b)(2) allows the marks to be placed on engine pods or appurtenances if they are located between the trailing edge of the wing and the leading edge of the horizontal stabilizer and are an integral part of the fuselage side surfaces. Annex 7, §4.3.2 does not mention the ability to place markings on the engine pod or appurtenances.
5.2.2	<p>United States regulations use inches rather than centimeters. 14 CFR § 45.29 prescribes minimum heights of marks as 12 inches generally for fixed-wing aircraft, except marks may be 2 inches in some grandfathered cases, and 3 inches on a glider and for certain experimental certificates. Marks must be at least 3 inches high for airships, spherical balloons, nonspherical balloons, powered parachutes and weight-shift-control aircraft. Marks must be at least 12 inches high for rotorcraft except certain grandfathered rotorcraft.</p> <p>The minimum height of marks on small (12,500 lb. or less), fixed-wing aircraft is 3 inches when none of the following exceeds 180 knots true airspeed: (1) design cruising speed; (2) maximum operating limit speed; (3) maximum structural cruising speed; and (4) if none of the foregoing speeds have been determined for the aircraft, the speed shown to be the maximum cruising speed of the aircraft.</p>
10.1	The U.S. identification plate does not include the nationality or registration mark.
10.2	<p>With respect to location of identification plate: for aircraft other than 14 CFR part 121, location must be either adjacent to and aft of the rear-most entrance door or on the fuselage near the tail surfaces.</p> <p>a) There is no explicit U.S. registration requirement for unmanned free balloons and no requirement to carry an identification plate. A centralized registry of unmanned free balloons is not maintained. Operators are required to furnish the nearest ATC facility with a prelaunch notice containing information on the date, time, and location of release, and the type of balloon. This information is not maintained for any specified period of time.</p> <p>b) With respect to RPA/small Unmanned Aircraft, in place of a “plate”, the FAA requires “markings” for the small UAS, which are not required to be fireproof. The FAA only allows markings on external surfaces.</p>

ANNEX 8 – AIRWORTHINESS OF AIRCRAFT	
PART II Procedures for Certification and Continued Airworthiness	
Chapter 1	Type Certification
1.2.5	ICAO requires that the design of an aircraft under ICAO Annex 8, Parts IIIB, IVB, and V use alternative fire extinguishing agents to halon in the lavatories, engines, and auxiliary power units. The United States does not have a similar requirement.
PART III Large Aeroplanes	
Part IIIA	<i>Aeroplanes over 5 700 kg for which application for certification was submitted on or after 13 June 1960, but before 2 March 2004</i>
Chapter 4	Design and Construction
4.1.6 (b), 4.1.6 (f), 4.1.6 (g), 4.1.6 (h), 4.1.6 (i)	<p>The FAA does not have similar requirements relative to paragraphs b) and f). The FAA published a notice to amend the U.S. regulations with the purpose of eventually meeting the intent of these provisions for new designs. However, the amendment will not be retroactive and will apply to airplanes for which application for certification is submitted after the effective dates of the future amendment. For b), the FAA does not have a specific requirement for physical separation of systems. However, physical separation is considered in the means of compliance to various regulations such as 25.1309, 25.901(c) and 25.903(d). The FAA also does not have a requirement for continued safe flight and landing after ANY event resulting in damage to the airplane structure or systems.</p> <p>For g), h) and i), the FAA does not have specific requirements to consider the effects of explosions or incendiary devices.</p>
Chapter 8	Instruments and Equipment
8.4.1	ICAO requires that airplanes operating on the movement area of an airport shall have airplane lights of such intensity, color, fields of coverage and other characteristics to furnish personnel on the ground with as much time as possible for interpretation and for subsequent maneuver necessary to avoid a collision. The FAA has no such requirement.
8.4.2	This provision addresses the lights’ effect on outside observers in reference to “harmful dazzle.” The U.S. regulations do not address the effect of aircraft lights on outside observers. However, visibility to other pilots and the lights’ effect on the flight crew is addressed.
Chapter 9	Operating Limitations and Information
9.3.5	The United States does not have similar requirements. The FAA has begun work in an effort to amend the U.S. regulations with the purpose of eventually meeting the intent of these provisions.
Chapter 11	Security
11.2, 11.3, 11.4	With the exception of the door required by 11.3, the United States does not have similar requirements. The FAA has begun work in an effort to amend the U.S. regulations with the purpose of eventually meeting the intent of these provisions.
Part IIIB	<i>Aeroplanes over 5 700 kg for which application for certification was submitted on or after 2 March 2004</i>
Chapter 3	Structure

3.8.2	14 CFR 25.571 addresses structural durability. The damage–tolerance principles were introduced at amendment 25–45 of 14 CFR 25.571 (effective 12/1/1978), and therefore all applicable products/parts certified on or after 12/1/1978 are required to be damage–tolerant (except as provided by 14 CFR 21.101). It is noted that “Likely structural repairs” is not a consideration under 14 CFR 25.571, and therefore Section 3.8.2 appears to be different in this regard. However, as a post–type certification requirement, 14 CFR part 26 requires TC holders who develop published repair data to perform a damage tolerance evaluation of any repair that affects fatigue critical structure and incorporate any required damage tolerance–based inspections into the published repair data. In addition, the provisions for repairs reside in 14 CFR part 43, not part 21. All structural repairs are required to meet the certification basis of the airplane. 14 CFR 25.571 considers sonic fatigue whereas Section 3.8.1 of Annex 8 does not have a corresponding explicit requirement for sonic fatigue considerations. It is thus observed that 14 CFR 25.571 is more stringent in this regard. Lastly, amendment 25–132 of 14 CFR 25.571 (effective 1/14/2011) introduced the requirement for a Limit of Validity on the airframe of an airplane (on top of the requirement for considering WFD), and therefore 14 CFR is more stringent in this regard.
Chapter 4	Design and Construction
4.1.6	On November 28, 2008, the FAA adopted new regulations that meet the intent of these provisions. However, Part IIIB applies to airplanes with a date of application of March 2, 2004 or later, but the U.S. requirements apply to airplanes with a date of application of November 28, 2008 or later.
4.2 g)4)	The United States has not modified regulations to require manufacturers to include the elements of the aeroplane design associated with cargo compartment fire protection and a summary of the demonstrated standards that were considered in the process of aeroplane certification, in the documentation made available to the operator for those aircraft certificated on or after 1 January 2025.
D.2 (g)	Paragraph D.2.g.1 of the ICAO standard requires a fire suppression system for each cargo compartment accessible to a crewmember in a passenger–carrying airplane. U.S. requirements permit manual fire fighting in an accessible cargo compartment by a crewmember or members for an all–passenger–carrying airplane or a passenger–cargo combination carrying airplane. Additionally, the FAA does not have specific requirements to consider the effects of explosions or incendiary devices.
D.2 (h)	The United States does have provisions to protect against possible instances of cabin depressurization. However, the FAA does not have specific requirements to consider the effects of explosions or incendiary devices.
F.4.1	ICAO requires that airplanes operating on the movement area of an airport shall have airplane lights of such intensity, color, fields of coverage and other characteristics to furnish personnel on the ground with as much time as possible for interpretation and for subsequent maneuver necessary to avoid a collision. The U.S. has no such requirement.
PART IV Helicopters	
<i>Part IVA</i>	<i>Helicopters for which application for certification was submitted on or after 22 March 1991 but before 13 December 2007</i>
Chapter 2	Flight
2.2.3.1, 2.2.3.1.1 – 2.2.3.1.4	These provisions address take–off performance data for all classes of helicopters and require that this performance data include the take–off distance required. However, the United States has adopted the requirements only for Category A helicopters.
Chapter 6	Rotor and Power Transmissions Systems and Powerplant Installation

6.7	This provision requires that there be a means for restarting a helicopter’s engine at altitudes up to a declared maximum altitude. In some cases the FAA does not require demonstration of engine restart capability. Since there is a different level of certitude for transport and normal category helicopters in the United States, the engine restart capability is only required for Category A and B helicopters (14 CFR Part 29) and Category A normal helicopters (14 CFR Part 27).
Chapter 7	Instruments and Equipment
7.4.2	This provision addresses the need to switch off or reduce the intensity of the flashing lights. The United States has minimum acceptable intensities that are prescribed for navigation lights and anti–collision lights. No reduction below these levels is possible.
7.4.2 (b)	This provision addresses the lights’ effect on outside observers in reference to “harmful dazzle.” The U.S. regulations do not address the effect of aircraft lights on outside observers. However, visibility to other pilots and the lights’ effect on the flight crew is addressed.
PART V Small Aeroplanes	
<i>Part VA</i>	<i>Aeroplanes over 750 kg but not exceeding 5 700 kg for which application for certification was submitted on or after 13 December 2007 but before 7 March 2021</i>
Chapter 8	Crashworthiness and Cabin Safety
8.5 (e)	The FAA provides requirements for emergency lighting systems in 14CFR 23.812. These requirements do not address the impact of the fuel spillage on emergency lighting systems. Only commuter category airplanes are required to install emergency lighting systems.

ANNEX 9 – FACILITATION	
*The list of differences include Guam, Puerto Rico, and the U.S. Virgin Islands. The status of implementation of Annex 9 in Guam with respect to public health quarantine is not covered in the list of differences.	
Chapter 2	Entry and Departure of Aircraft
2.3	Written crew baggage declaration is required in certain circumstances, and a special Embarkation/Disembarkation Card is required for most alien crew members.
2.4	A General Declaration for all inbound and for outbound flights with commercial cargo are required. However, the General Declaration outbound flights with commercial cargo shall not be required if the declaratory statement is made on the air cargo manifest. No declaration is required for outbound flights without commercial cargo if Customs clearance is obtained by telephone.
Remarks	19 CFR 122
2.4.1	Each crew member must be listed showing surname, given name, and middle initial.
2.4.4	The signing or stamping of the General Declaration protects the carrier by serving as proof of clearance.
2.5	The crew list is required by statute.
2.7	There is a statutory requirement for the Cargo Manifest.
2.8	In order to combat illicit drug smuggling, the U.S. requires the additional following information: the shipper’s and the consignee’s name and address, the type of air waybills, weight, and number of house air waybills. The manifest submitted in electronic form may become legally acceptable in the future. However, until the compliance rate for the automated manifest is acceptable, the U.S. must be able to require the written form of the manifest.
Remarks	19 CFR 122.48
2.9	Nature of goods information is required.
2.10	Stores list required in all cases but may be recorded on General Declaration in lieu of a separate list.
2.17	A cargo manifest is required except for merchandise, baggage and stores arriving from and departing for a foreign country on the same through flight. “All articles on board which must be licensed by the Secretary of State shall be listed on the cargo manifest.” “Company mail shall be listed on the cargo manifest.”
2.18	Traveling general declaration and manifest, crew purchases and stores list as well as a permit to proceed are required under various conditions when aircraft arrive in the U.S. from a foreign area with cargo shown on the manifest to be traveling to other airports in the U.S. or to foreign areas.
2.21	There is a statutory requirement that such changes can only be made prior to or at the time of formal entry of the aircraft.
2.25	The U.S. does not support the use of insecticides in aircraft with passengers present. Pesticides registered for such use should not be inhaled. In effect, the passenger safety issue has precluded the use of such insecticides in the presence of passengers since 1979.
2.35	Advance notice is required of the number of citizens and aliens on board (non-scheduled flights only).
2.40	A copy of the contract for remuneration or hire is required to be a part of the application in the case of non-common carrier operations.
2.41	Single inspection is accorded certain aircraft not by size of aircraft but rather by type of operation. Loads (cargo) of an agricultural nature require inspection by a plant or animal quarantine inspector.
2.41c	Fees are charged for services provided in connection with the arrival of private aircraft (nonscheduled aircraft).
Chapter 3	Entry and Departure of Persons and Their Baggage
3.3	Medical reports are required in some cases.

Remarks	8 CFR 212.7 and INA 234
3.4	Documents such as visas with certain security devices serve as identity documents.
3.4.1	The U.S. has not standardized the personal identification data included in all national passports to conform with the recommendation in Doc 9303.
3.5.6	U.S. passport fees exceed the cost of the operation.
3.5.7	U.S. allows separate passports for minor dependents under the age of 16 entering the U.S. with a parent or legal guardian.
3.7	The U.S. has a pilot program that allows nationals of certain countries which meet certain criteria to seek admission to the U.S. without a visa for up to 90 days as a visitor for pleasure or business.
Remarks	22 CFR 41.112(d) INA 212(d)(4), INA 238, 8 CFR 214.2(c) INA 217
	The law permits visa waivers for aliens from contiguous countries and adjacent islands or in emergency cases. Visas are also waived for admissible aliens arriving on a carrier which is signatory to an agreement assuring immediate transit of its passengers provided they have a travel document or documents establishing identity, nationality, and ability to enter some country other than the U.S.
3.8	The U.S. charges a fee for visas.
3.8.3	Duration of stay is determined at port of entry.
Remarks	INA 217
3.8.4	A visitor to the U.S. cannot enter without documentation.
Remarks	INA 212(a) (26)
3.8.5	Under U.S. law, the duration of stay is determined by the Immigration Authorities at the port of entry and thus cannot be shown on the visa at the time of issuance.
3.10	Embarkation/Disembarkation Card does not conform to Appendix 4 in some particulars.
3.10.1	The operator is responsible for passengers' presentation of completed embarkation/disembarkation cards.
Remarks	8 CFR 299.3
3.10.2	Embarkation/Disembarkation cards may be purchased from the U.S. Government, Superintendent of Documents.
Remarks	8 CFR 299.3
3.14.2	The U.S. fully supports the electronic Advance Passenger Information (API) systems. However, the WCO/IATA Guideline is too restrictive and does not conform to the advancements in the PAXLIST EDIFACT international standard.
3.15	U.S. Federal Inspection Services' officials see individuals more than once.
3.16	Written baggage declarations by crew members are required in some instances.
3.17.1	The U.S. uses a multiple channel system rather than the dual channel clearance system.
3.23, 3.23.1	Statute requires a valid visa and passport of all foreign crew members.
3.24, 3.24.1, 3.25, 3.25.1, 3.25.2, 3.25.3	Crew members, except those eligible under Visa Waiver Pilot Program guidelines, are required to have valid passports and valid visas to enter the U.S.
Remarks	INA 212(a) (26), INA 252 and 253, 8 CFR 214.1(a), 8 CFR 252.1(c)
3.26, 3.27, 3.28, 3.29	Passports and visas are required for crew and non–U.S. nationals to enter the U.S.
3.33	Does not apply to landing card.
3.35	Law requires that the alien shall be returned to the place whence he/she came. Interpretation of this provision requires that he/she be returned to the place where he/she began his/her journey and not only to the point where he/she boarded the last–used carrier.
3.35.1	Law requires that certain aliens be deported from the U.S. at the expense of the transportation line which brought them to the U.S.
3.36	Statute provides for a fine if a passenger is not in possession of proper documents.

3.39.3	NOTE: The U.S. considers security for individuals in airline custody to be the carrier’s responsibility.
3.40.2	Annex 9 recommends that fines and penalties be mitigated if an alien with a document deficiency is eventually admitted to the country of destination.
3.43	Operator can be held responsible for some detention costs.
Chapter 4	Entry and Departure of Cargo and Other Articles
4.20	The Goods Declaration as defined by the Kyoto Convention serves as the fundamental Customs document rather than the commercial invoice.
4.40	Aircraft equipment and parts, certified for use in civil aircraft, may be entered duty-free by any nation entitled to most-favored nation tariff treatment. Security equipment and parts, unless certified for use in the aircraft, are not included.
4.41	Customs currently penalizes the exporting carrier for late filing of Shipper’s Export Declarations (SEDs) and inaccuracies on bills of lading with respect to the SEDs.
4.42	Regulations require entry of such items, most of which are dutiable by law.
4.44	Certain items in this category are dutiable by law.
4.48	Carriers are required to submit new documentation to explain the circumstances under which cargo manifest is not unladen. No penalty is imposed if the carrier properly reports this condition.
4.50	The procedures for adding, deleting, or correcting manifest items require filing a separate document.
4.55	The U.S. requires a transportation in-bond entry or a special manifest bonded movement for this type of movement.
Chapter 5	Traffic Passing Through the Territory of a Contracting State
5.1	Such traffic must be inspected at airports where passengers are required to disembark from the aircraft and no suitable sterile area is available.
5.2	Passports and visas are waived for admissible aliens arriving on a carrier which is signatory to an agreement assuring immediate transit of its passengers provided they have a travel document or documents establishing identity, nationality, and ability to enter some country other than the U.S.
5.3	Such traffic must be inspected at airports where no suitable sterile area is available.
5.4	Passports and visas are waived for admissible aliens arriving on a carrier which is signatory to an agreement assuring immediate transit of its passengers provided they have a travel document or documents establishing identity, nationality, and ability to enter some country other than the U.S.
5.4.1	Passengers will not be required to obtain and present visas if they will be departing from the U.S. within 8 hours of arrival or on the first flight thereafter departing for their destination.
5.8	Examination of transit traffic is required by law. Transit passengers without visas are allowed one stopover between the port of arrival and their foreign destination.
5.9	Passports and visas are required generally for transit passengers who are remaining in the U.S. beyond 8 hours or beyond the first available flight to their foreign destinations.
Chapter 6	International Airports – Facilities and Services for Traffic
6.3.1	Procedures involving scheduling committees raise a number of anti-trust problems under U.S. law.
6.33	Sterile physical facilities shall be provided, and in-transit passengers within those areas shall be subject to immigration inspection at any time.
Remarks	OI 214.2(c)
6.34	The U.S. inspects crew and passengers in transit.
6.36	The U.S. inspects crew and passengers in transit.

6.56	Operators of aircraft are statutorily required to pay overtime charges for federal inspections conducted outside normal scheduled hours of operation. This requirement places aircraft operators in a less favorable position than operators of highway vehicles and ferries who are statutorily exempt from such charges.
Chapter 8	Other Facilitation Provisions
8.1	Separate bonds are required.
8.3.2	Visas are issued by the Department of State and are not issued at ports of entry.

ANNEX 10 – AERONAUTICAL TELECOMMUNICATIONS	
ANNEX 10 – VOLUME 1 – RADIO NAVIGATION AIDS	
PART I	
Chapter 3	Specifications for Radio Navigation Aids
3.1.3.3.2	Per FAA Order 6050.32B, in the U.S., the ILS Localizer minimum signal strength requirement is -120.5 -123 dBW which is equivalent to -120.0 dBW/m2. ICAO requirement is -114 dBW/m2. However, FAA-E-2970 states in paragraph 3.3.3.4, “The transmitter of any subsystem shall have sufficient power to meet the coverage requirements as defined in paragraph 3.3.2.1
3.1.4.1, 3.1.4.2	The United States does not require such aircraft ILS equipment immunity. Interference from FM broadcast signals will not adversely affect aircraft navigation and communications systems in the United States airspace.
3.3.4.2	The US minimum VOR signal strength is -120 dBW/m2. The ICAO requirement is - 107 dBW/m2.
3.3.8.1, 3.3.8.2	The United States does not require such equipage for aircraft. Interference from FM broadcast signals will not adversely affect aircraft navigation and communications systems in the United States airspace.
3.7.3.5.3.1	Currently, the service volume of GBAS in FAA Order 6050.32B is 23 NM up to 10,000 feet vs. 15 and 20 NM ICAO standard.
3.7.3.5.4.1	In the U.S., the LAAS operates on center frequencies from 112.050 to 117.950 MHz vs. ICAO’s 108.0 to 117.975 MHz with the lowest assignable frequency of 112.05 MHz and the last upper assignable frequency of 117.150 MHz vs. ICAO’s 108.025 MHz and 117.900 MHz respectively.
3.7.3.5.3	Currently, the service volume of GBAS in FAA Order 6050.32B is 23 NM up to 10,000 feet.
Appendix B	TECHNICAL SPECIFICATIONS FOR THE GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS)
3.6.7.2.3.5	A solution has been implemented in the US which does not require protection level bounding for rare anomalous ionospheric storms under extreme conditions. The solution requires denial of the approach service when anomalous ionosphere conditions could cause potentially large residual errors and allows operations when estimated residual errors would be below a threshold. The resulting errors under the threshold were found to be acceptable using specific safety assessments and criteria for this equipment.
3.6.8.2.2.5.3	In the U.S., the LAAS operates above the ILS LOC frequency band on center frequencies from 112.05 to 117.950 MHz; therefore, this standard does not apply.
3.6.8.2.2.6	Currently, the D/U standard for co-channel rejection is the same as the ICAO standard of 26 dB. However, D/U standard for the second adjacent channel rejection is 46 dB, which is 3 dB less than the ICAO standard. In addition, no third adjacent channel rejection standard exists in Order 6050.32B.
3.6.8.2.2.6.1c	In the U.S., the LAAS operates above the ILS LOC frequency band on center frequencies from 112.05 to 117.950 MHz; therefore, this standard does not apply.
3.6.8.2.2.6.2a	In the U.S., the LAAS receiver protection from an undesired LAAS signal offset by +/- 50 kHz is 46 dB vs. ICAOs 43 dB.
3.6.8.2.2.6.2c	In the U.S., the LAAS operates above the ILS LOC frequency band on center frequencies from 112.05 to 117.950 MHz.
3.6.8.2.2.6.3	In the U.S., the LAAS receiver protection from an undesired LAAS, VOR, or ILS signal offset by +/- 75 to +/- 975 kHz is not considered during the frequency assignment process.
3.6.8.2.2.6.3c	In the U.S., the LAAS operates above the ILS LOC frequency band on center frequencies from 112.05 to 117.950 MHz.
3.6.8.2.2.6.4	In the U.S., the LAAS receiver protection from an undesired LAAS, VOR, or ILS signal offset by +/- 1 MHz or more is not considered during the frequency assignment process.
Attachment C	INFORMATION AND MATERIAL FOR GUIDANCE IN THE APPLICATION OF THE STANDARDS AND RECOMMENDED PRACTICES FOR ILS, VOR, PAR, 75 MHz MARKER BEACONS (EN-ROUTE), NDB AND DME

2.6.2.1.1 and 2.6.2.1.2	The US frequency protections for ILS localizers are 3 dB more stringent than the ICAO protections (i.e. 23 dB vs. 20 dB for co-channel, –4 dB vs. –7 dB for interim 1st adjacent channels, –31 dB vs. –34 dB for final 1st adjacent channels, –43 dB vs. –46 dB for 2nd adjacent channels, and –47 dB vs. –50 dB for 3rd adjacent channels).
2.6.2.2.1	The US frequency protections for ILS localizers are 3 dB more stringent than the ICAO protections (i.e. 23 dB vs. 20 dB for co-channel, –4 dB vs. –7 dB for interim 1st adjacent channels, –31 dB vs. –34 dB for final 1st adjacent channels, –43 dB vs. –46 dB for 2nd adjacent channels, and –47 dB vs. –50 dB for 3rd adjacent channels).
3.4.6.1 a),b),c) 3.4.6.2 a),b),c)	The US frequency protections for co-channel, 1st and 2nd adjacent channels for VOR are 3 dB more stringent than the ICAO protections (i.e. 23 dB vs. 20 dB for co-channel, –4 dB vs. –7 dB for interim 1st adjacent channels, –31 dB vs. –34 dB for final 1st adjacent channels, –43 dB vs. –46 dB for 2nd adjacent channels).
3.4.6.1 d) 3.4.6.2 d)	The US does not provide any VOR frequency protection for 3rd adjacent channels. The ICAO protection provides –50 dB for 3rd adjacent channels.
7.1.8.1 7.1.8.2 Table C–6	The US frequency protections for co-channel and 1st adjacent channels for DME are 3 dB more stringent than the ICAO protections (i.e. 11 dB vs. 8 dB for co-channel, –39 dB vs. –42 dB for 1st adjacent channels). The US frequency protection for 2nd adjacent channels for DME is 28 dB more stringent than the ICAO protection (i.e. –47 dB vs. –75 dB).
Attachment D	INFORMATION AND MATERIAL FOR GUIDANCE IN THE APPLICATION OF THE GNSS STANDARDS AND RECOMMENDED PRACTICES
7.2.1.5 and Table D–4	In the U.S., the LAAS/LAAS co-channel geographical separation is 159 nm at 10,000 and 20,000 ft. ICAO separation is 195 nm at 10,000 ft. The first adjacent channel in the U.S. is equivalent to the ICAO second adjacent channel or +/- 50 kHz. The ICAO separation requirement for GBAS/GBAS second adjacent channel separation is 24 NM. In the U.S., geographical separations are not required between LAAS facilities, which differ in frequency by more than 25 kHz.
7.2.1.6 and Table D–5	Distances shown in ICAO Table D–5 are different from the distances in FAA Order 6050.32B figures 203 and 204 since in the U.S. the separation distances are calculated using the same method as for VOR described in FAA Order 6050.32B.
ANNEX 10 – VOLUME II – COMMUNICATION PROCEDURES INCLUDING THOSE WITH PANS STATUS	
Chapter 3	General Procedures for the International Aeronautical Telecommunication Service
3.2.2, 3.2.3	US regulations do not have any specific procedures for closing down international aeronautical stations. All international aeronautical stations in the U.S. operate continuously (24 hours a day and seven days a week)
Chapter 5	Aeronautical Mobile Service – Voice Communications
5.1.5	US regulations do not require pilots to wait 10 seconds before making a second call. US regulations only require “a few seconds” instead of “10 seconds.”
5.2.1.4.1.1	The United States directs that, for air carriers and other civil aircraft having FAA authorized call signs, the call sign should be followed by the flight number in group form; and for air carriers of foreign registry, the flight number should be stated in group form, or using separate digits if that is the format used by the pilot.
5.2.1.4.1.1	The United States issues surface wind using the word “wind” followed by the separate digits of the indicated wind direction to the nearest 10-degree multiple, the word “at” and the separate digits of the indicated velocity in knots, to include any gusts.
5.2.1.4.1.3	The United States issues the separate digits of a frequency, inserting the word “point” where the decimal point occurs.

5.2.2.7.1.2	US regulations do not specifically require pilots to send a message twice preceded with the phrase “TRANSMITTING BLIND”. US regulations provides general procedures which allow pilots to make blind transmissions in case of emergency.
5.2.2.7.1.3.1	US regulations do not specifically require pilots to make a blind transmission preceded by “TRANSMITTING BLIND DUE TO RECEIVER FAILURE” with respect to the continuation of the flight of the aircraft. US regulations provide general procedures which allow pilots to make appropriate blind transmissions.
5.2.2.7.2.1, 5.2.2.7.2.2, 5.2.2.7.2.3	US regulations do not specifically require aeronautical stations to get assistance from other aircraft in case of communications failure. US regulations require aeronautical stations to use “all appropriate means” available to re-establish communications with aircraft.
5.2.2.7.2.4	US regulations do not provide this specific standard. US regulations require aeronautical stations to use “all appropriate means” available to re-establish communications with aircraft.
5.2.2.7.3.1	US regulations do not specifically require pilots to make a blind transmission preceded by “TRANSMITTING BLIND DUE TO RECEIVER FAILURE”. US regulations provide general procedures which allow pilots to make appropriate blind transmissions.
5.3.1.2	The initial communication, and if considered necessary, any subsequent transmissions by an aircraft in distress “should” begin with the signal MAYDAY...
ANNEX 10 – VOLUME III – COMMUNICATION SYSTEMS	
PART I – DIGITAL DATA COMMUNICATION SYSTEMS	
Chapter 7	Aeronautical Mobile Airport Communications System (AeroMACS)
7.4.5.1 (d)	In the U.S., the power spectral density of any frequency removed from the assigned frequency above 150% of the authorized frequency is 50 dB or 55 + log (P) dB, whichever is the lesser attenuation. ICAO requires 50 dB.
PART II – VOICE COMMUNICATION SYSTEMS	
Chapter 2	Aeronautical Mobile Service
2.2.1.2	ICAO recommends a signal-in-space field strength of 75 uv/m (–109dBW/m ²), which translates to –82.5 dBm at the input of the receiver assuming 0 dB system losses. In the U.S., per RTCA DO–186a MOPS, the input power to the aircraft receiver should be –87 dBm.
2.3.3.1 2.3.3.2 2.3.3.3 2.3.3.4	The US does not require aircraft flying within the US airspace to meet the interference immunity performance of paragraphs 2.3.3.1, 2.3.3.2, and 2.3.3.3 and the recommendation of paragraph 2.3.3.4 of Annex 10, Vol 3, Part 2, Chapter 2. The FAA, based on the recommendations of the Aviation Rulemaking Advisory Committee, made a decision, in 1996, not to adopt the FM interference immunity performance standards in the U.S. The U.S. continues to use its own FM immunity standards to avoid FM interference in aircraft.
2.3.3.4	The U.S. does not require airborne VHF communications receiving systems to meet the FM broadcast immunity performance standards recommended by ICAO.
ANNEX 10 – VOLUME IV – SURVEILLANCE AND COLLISION AVOIDANCE SYSTEMS	
Chapter 3	Surveillance Systems
3.1.1.7.13	SPI required to be transmitted for 18 +/- 1 second.
Chapter 4	Airborne Collision Avoidance System
4.2.3.3.4	The TSO–C118 (RTCA DO–197) implements this requirement. However, the requirement of limiting Mode S power to the level of Mode A/C (paragraph 4.2.3.4) is not implemented.
4.3.1.1.1	Specifies a nominal cycle of 1 second

4.3.2.1.2	The US specifies a false track probability of less than 1.2% for Mode A/C and less than 0.1% for Mode S.
4.3.5.3.1	Software versions 6.04A, version 7.0 and version 7.1 are all approved for operations in U.S. airspace.
4.3.5.3.2	No changes planned to the current U.S. guidance. Per Advisory Circular (AC) 120–55C, Change 1, Section 11 (MAINTENANCE), para c., TCAS Software Updates: “when necessary, operators should ensure that appropriate TCAS software updates are incorporated. The latest version of software for TCAS II is version 7.1. To ensure compatibility with international standards, the FAA encourages the installation of this software as practical. Software version 6.04A, version 7.0 and version 7.1 are all approved for operations in U.S. airspace.”
4.3.5.3.3	No changes planned to the current U.S. guidance. Per Advisory Circular (AC) 120–55C, Change 1, Section 11 (MAINTENANCE), para c., TCAS Software Updates: “when necessary, operators should ensure that appropriate TCAS software updates are incorporated. The latest version of software for TCAS II is version 7.1. To ensure compatibility with international standards, the FAA encourages the installation of this software as practical. Software version 6.04A, version 7.0 and version 7.1 are all approved for operations in U.S. airspace.”
ANNEX 10 – VOLUME V – AERONAUTICAL RADIO FREQUENCY SPECTRUM UTILIZATION	
Chapter 2	Distress frequencies
2.1.1	All emergency locator transmitters installed on or after 1 January 2002 and carried in compliance with Standards of Annex 6, Parts I, II and III may operate on both 406 MHz and 121.500 MHz or on 121.5 MHz.
Chapter 4	Utilization of frequencies above 30 MHz
4.1.2.4	FAA has not issued a mandatory carriage of VDL Mode 3 and VDL Mode 4. Participation in CPDLC (VDL Mode 2) “is at the discretion of the flight crew and/or operator” (NAS Data Communications Guide, version 11 dated May 26, 2021).
4.1.2.4.1	FAA has not issued a mandatory carriage of VDL Mode 3 and VDL Mode 4. Participation in CPDLC (VDL Mode 2) “is at the discretion of the flight crew and/or operator” (NAS Data Communications Guide, version 11 dated May 26, 2021).
4.1.4.1	The US does not provide the 20 dB desired-to-undesired signal protection for VHF frequency assignments. The US provides 14 dB.
4.1.4.2	The US does not require aircraft flying within the US airspace to meet one of the characteristics dealing with the FM interference immunity performance. The U.S. Aviation Rulemaking Committee made a decision not to adopt the FM interference immunity performance standards in the U.S. The U.S. continues to use its own FM immunity standards to avoid FM interference in aircraft.
4.1.6.1.2	Assignable frequencies in 25 KHz steps in the US are 121.550 – 123.075 MHz instead of 121.550 – 123.050 MHz, and 123.125 – 136.975 MHz instead of 123.150 – 136.475 MHz.
4.2.3	The US does not follow the VOR assignment priority as defined in Section 4.2.3. Due to severe frequency congestion in the U.S., the ICAO frequency assignment priority order would result in inefficient use of the radio spectrum.

ANNEX 11 – AIR TRAFFIC SERVICES	
Chapter 1	Definitions
Accepting Unit	The term “receiving facility” is used.
Advisory Airspace	Advisory service is provided in terminal radar service areas and the outer area associated with class C airspace areas as well as Class E airspace.
Advisory Route	Advisory service is provided in terminal radar service areas and the outer area associated with class C airspace areas as well as Class E airspace.
ACAS–Airborne Collision Avoidance System	Traffic Alert and Collision Avoidance System (TCAS) – An airborne collision avoidance system based on radar beacon signals which operates independent of ground–based equipment. 14 CFR 1.1 further defines and breaks down TCAS into TCAS 1 – provides traffic advisories 2 – provides traffic advisories and resolution advisories in the vertical plane and 3 – provides traffic advisories and resolution advisories in the vertical and horizontal planes.
AIRMET	FAA Pilot Controller Glossary defines (in part) AIRMET as “A concise description of an occurrence or expected occurrence of specified en route weather phenomena that may affect the safety of aircraft operations, but at intensities lower than those that require the issuance of a SIGMET.” The ICAO definition of AIRMET narrows the purpose of the advisory to “low-level aircraft operations”, where the FAA has a more broad definition to encompass “all aircraft and...aircraft having limited capability...” Also, ICAO uses the term “forecast...for the flight information region” where the FAA uses “area forecast”. Difference in character (terminology) for area forecast. FAA uses AIRMETS for broader purpose.
Air taxiing	The U.S. does not limit this definition to apply only to above the surface of an aerodrome.
Air traffic control service	The U.S. uses “Air Traffic Control” with a definition of “A service operated by appropriate authority to promote the safe, orderly and expeditious flow of air traffic.”
Air traffic flow management (ATFM)	The U.S. does not define air traffic flow management.
Air traffic control unit	The U.S. uses the term “air traffic control facility”. (i.e., En Route, Terminal, or Flight Service)
Air traffic services reporting office	FAA Pilot Control Glossary defines (in part) Flight Service Stations (FSS) as “air traffic facilities which provide pilot briefing, en route communications and VFR search and rescue services, assist lost aircraft in emergency situations, relay ATC clearances, originate Notices to Air Missions, broadcast aviation weather and NAS information, receive and process IFR flight plans....” FSSs are available to receive any reports concerning air traffic services as well as accept and file flight plans.
Air traffic services unit	The U.S. uses “Air Route Traffic Control Center”.
Airway	A Class E airspace area established in the form of a corridor, the centerline of which is defined by radio navigational aids.
Alert Phase	Alert – a notification to a position that there is an aircraft–to–aircraft or aircraft–to–airspace conflict as detected by automated problem detection.
Altitude	Height above ground level (AGL), mean sea level (MSL) or indicate altitude.
Approach Control Service	The U.S. not only includes arriving and departing controlled flights but also includes en route controlled flights. Additionally, as opposed to Annex 2 Amdt 47, the U.S. specifies the control facility that provides the service.
Approach Control Unit	The U.S. uses “Approach Control Facility” and also includes the possibility of providing ATS to en route aircraft.

Appropriate ATS Authority	The U.S. does not define “Appropriate ATS Authority.” The P/CG does contain a definition annotated as [ICAO] that adds “In the United States, the “appropriate ATS authority” is the Program Director for Air Traffic Planning and Procedures, ATP–1.”
Apron	The U.S. adds reference to seaplane operations to the definition.
Apron Management Service	Ground control or ramp control provide the same service. There is no formal definition in the Pilot Controller Glossary.
Area Control Centre	The U.S. uses the terms “Traffic Control Center”, “Radar Approach Control Facility”, and “Tower” to define a facility that provides air traffic control service to aircraft operating on IFR flight plans within controlled airspace and principally during the en route phase of flight. When equipment capabilities and controller workload permit, certain advisory/assistance services may be provided to VFR aircraft.
Area Control Service	Air Traffic Control – A service operated by appropriate authority to promote the safe, orderly and expeditious flow of air traffic.
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.
Data Quality	The U.S. does not define data quality in its ATS operational documents.
Datum	The U.S. does not define datum in its ATS operational documents.
Declared capacity	The U.S. does not define declared capacity in its ATS operational documents.
DETRESFA	The U.S. does not define DETRESFA, although the P/CG does contain DETRESFA [ICAO].
Distress phase	The U.S. does not define distress phase, although the P/CG does contain the Annex 11 Amdt 52 verbiage in the definition of DETRESFA [ICAO].
Downstream Clearance	Same as air traffic control clearance. Authorization for an aircraft to proceed under conditions specified by an air traffic control unit.
Duty	While “duty” is frequently used in ATS documents and Title 14 of the U.S. Code of Federal Regulations, the U.S. does not define duty in its ATS operational documents.
Duty period	While “duty period” is used in ATS documents and Title 14 of the U.S. Code of Federal Regulations, the U.S. does not define duty period in its ATS operational documents.
Emergency phase	The U.S. defines ‘emergency’ but only uses some of the language from the Annex 11 Amdt 52 definition of “emergency phase”.
Final Approach	The U.S. defines the aspects of “Final Approach” separately.
Flight Information Centre	In the US, flight information service and alerting service are often provided by flight service stations.
Flight level	The U.S. uses the measurement of a level of constant atmospheric pressure related to a reference datum of 29.92 inches of mercury instead of 1 013.2 hectopascals (hPa).
Geodetic Datum	The U.S. does not define Geodetic datum in aeronautical publications.
Height	The U.S defines Height as the height above ground level (or AGL) expressed in meters or feet.
INCERFA	The U.S. does not define INCERFA.
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.
Non-duty period	The U.S. uses the term “rest period.”
NOTAM	The U.S. uses NOTICE TO AIR MISSIONS (NOTAM).
Obstacle	The U.S. limits its definition of obstacle to an existing object, object of natural growth, or terrain at a fixed geographical location.
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.
Prohibited area	The U.S. allows flight into prohibited areas with proper permissions. Special use area.
Radio navigation service	The U.S. describes its radio navigation services in AIP GEN 3.4 but does not define it.
Radiotelephony only	The U.S. does not explicitly define radiotelephony.
Traffic avoidance advice	US uses the term “Safety Alert”
Traffic information	US uses the term “Traffic Advisory”
Transferring unit	The U.S. uses the term “TRANSFERRING CONTROLLER.”
Uncertainty phase	The U.S. does not define uncertainty phase.
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 Air Missions, 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 Order 7210.3, Part 4, Flight Service Stations. Specific procedures for accomplishing this objective are contained in FAA Order 7110.10, Flight Services. Also, the FAA Pilot Controller Glossary defines Flight Service Stations as “air traffic facilities which provide pilot briefing, en route communications and VFR search and rescue services, assist lost aircraft and aircraft in emergency situations, relay ATC clearances, originate Notices to Air Missions, broadcast aviation weather and NAS information, receive and process IFR flight plans, and monitor NAVAIDs. In addition, at selected locations, FSSs provide En Route Flight Advisory Service (Flight Watch), take weather observations, issue airport advisories, and advise Customs and Immigration of trans–border flights.”
2.6.1	The U.S. has chosen not to use Class F airspace.
2.11.3.2.2	Class E–5 700/1200–foot airspace areas are used for transitioning aircraft to/from the terminal or en route environment.
2.11.3.3	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.
2.11.5.1	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 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.
2.11.5.3	Refer to Surface Areas. The U.S. 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.
2.26.5	No time is issued prior to taxi for take–off. Time checks are given to the nearest quarter minute.
2.29	Process is described in the FAA Safety Management System Manual and the FAA Order 1100.161.
Chapter 3	Air Traffic Control Service
3.2	Air Route Traffic Control Facilities (ARTCC) are used instead of Area Control Service, and Terminal Control Facilities instead of Approach Control Service.
3.6.2.4	The U.S does not specify notification of 2–way communication. The accepting unit shall not alter the clearance of an aircraft that has not yet reached the transfer of control point without the prior approval of the transferring unit.

3.7.3.1	<p>Air crews are not required to read back clearances, only to acknowledge receipt of clearances.</p> <p>Certain air traffic controller safety–related parts of ATC clearances and instructions which are transmitted by voice and which must be read back according to US requirements.</p> <p>“Ensure pilots acknowledge all Air Traffic Clearances and ATC Instructions. When a pilot reads back an Air Traffic Clearance or ATC Instruction:</p> <p>Ensure that items read back are correct.</p> <p>Ensure the read back of hold short instructions, whether a part of taxi instructions or a LAHSO clearance.</p> <p>Ensure pilots use call signs and/or registration numbers in any read back acknowledging an Air Traffic Clearance or ATC Instruction.”</p>
3.7.3.1.1	Air crews are not required to read back clearances, only to acknowledge receipt of clearances.
3.7.3.3	The U.S. only requires a read back for operations regarding hold short instructions. Controllers may request a read back whenever they feel a read back is necessary.
3.7.4.3	4–3–8. COORDINATION WITH RECEIVING FACILITY Coordinate with the receiving facility before the departure of an aircraft if the departure point is less than 15 minutes flying time from the transferring facility’s boundary unless an automatic transfer of data between automated systems will occur, in which case the flying time requirement may be reduced to 5 minutes or replaced with a mileage from the boundary parameter when mutually agreeable to both facilities.
3.7.4.4	4–4–5. CLASS G AIRSPACE Include routes through Class G airspace only when requested by the pilot. NOTE–1. Flight plans filed for random RNAV routes through Class G airspace are considered a request by the pilot. 2. Flight plans containing MTR segments in/through Class G airspace are considered a request by the pilot. Air Traffic Control Clearance means an authorization by air traffic control within controlled airspace.
Chapter 4	Flight Information Service
4.2.2	No Class F airspace. Collision Hazard information is provided between known traffic to aircraft in Class G airspace.
Chapter 6	Air Traffic Services Requirements for Communications
6.1.1.4 6.2.2.3.8	The US uses a 45 day retention period.
6.2.3.6	The US has a 45 day or longer retention period, with some exceptions. US en route facilities using system analysis recording tapes as their radar retention media shall retain radar data for 15 days. Facilities using a teletype emulator or console printout must be retained for 30 days unless they are related to an accident or incident. A facility using a console typewriter printout take–up device may retain the printout on the spool for 15 days after the last date on the spool. If a request is received to retain data information following an accident or incident, the printout of the relative data will suffice and the tape/disc may then be returned to service through the normal established rotational program.
6.3.1.3	The US has a 45 day or longer retention period except that those facilities utilizing an analog voice recorder system shall retain voice recordings for 15 days.
6.4.1.2	The US retains surveillance data recordings for 45 days or longer when they are pertinent to an accident or incident investigation, except that en route facilities using system analysis recording tapes as their radar retention media (regardless of the type of voice recorder system being used) shall retain voice recordings for 15 days and those facilities using an analog voice recorder system shall retain voice recordings for 15 days. FAA’s Air Traffic Control System Command Center shall retain voice recordings for 15 days.
Chapter 7	Air Traffic Services Requirements for Information
7.1.5	The term “communication station” is not used but the flight information is passed.

7.6	Temporary Flight Restrictions (TFRs) are the mechanism that would be implemented in such cases.
Appendix 2	Principles Governing the Establishment and Identification of Significant Points
3.1	<p>In US, per FAA Order 8260.19D, there are some points not to be named. Fixes used for navigation not to be named include Visual Descent Points (VDPs), radar fixes used on ASR and/or PAR procedures, RNAV missed approach point at threshold, and an ATD fix located between the MAP and the landing area marking the visual segment descent point on COPTER RNAV PinS approach annotated “PROCEED VISUALLY.”</p> <p>Additionally, there are some non-pronounceable points allowed. Order 8260.19 states “Except as noted below, each name must consist of a 5-letter pronounceable word. These non-pronounceable exceptions include; Stepdown fixes between FAF and MAP, Missed Approach Points (MAP), Computer Navigation Fixes (CNFs), and VFR Waypoints.</p>
Appendix 4	ATS Airspace Classifications
	<p>Speed restrictions of 250 knots do not apply to aircraft operating beyond 12 NM from the coast line within the U.S. Flight Information Region, in offshore Class E airspace below 10,000 feet MSL.</p> <p>Paragraph (a) of § 91.117 of Title 14 of the Code of Federal Regulations (CFR) provides that “Unless otherwise authorized by the Administrator, no person may operate an aircraft below 10,000 feet MSL at an indicated airspeed of more than 250 knots.” Within domestic airspace, a pilot operating at or above 10,000 MSL on an assigned speed adjustment greater than 250 knots is expected to comply with § 91.117(a) when cleared below 10,000 feet MSL without notifying Air Traffic Control (ATC).</p> <p>The Federal Aviation Administration has proceeded from an operational perspective that the speed restrictions of § 91.117(a) do not apply to U.S.-registered aircraft, via § 91.703(a)(3), when operating outside the United States (and not within another country’s territorial airspace).</p>
Appendix 6	Fatigue Risk Management System (FRMS) Requirements
1.2 f)	Breaks (“relief periods”) required to be “of reasonable duration” (Section 2-5-4c) and “administered in an equitable manner” (2-6-6a)y. Minimum duration not defined except for a meal break (30 minutes).
1.2 Note	Variation from prescriptive schedule rules must be entered into the Daily Record of Facility Operation at the time of the deviation.
3 b)	FAA does not have <i>specific</i> processes for deviations or variations from prescriptive fatigue management regulations.

ANNEX 12 – SEARCH AND RESCUE

There are no reportable differences between U.S. regulations and the Standards and Recommended Practices contained in this Annex.

ANNEX 13 – AIRCRAFT ACCIDENT INVESTIGATION	
Chapter 5	Investigation
5.1.2	The U.S. is unable to investigate all serious incidents. A decision on whether to investigate a serious incident will consider factors such as the potential consequences of the incident, an assessment of available staff and resources, and the potential benefit to future safety.
5.12	<p>The laws of the United States require the determination and public reporting of the facts, circumstances, and cause(s) or probable cause(s) of every civil aircraft accident. These laws, including the U.S. Freedom of Information Act, do not confine the disclosure of such information to an accident investigation or report. Accordingly, factual information such as statements, records of communications between persons, and air traffic recordings and transcripts are generally made public. United States law prohibits the public disclosure of cockpit voice recordings and visual recordings and limits the public disclosure of cockpit voice recording transcripts or written depictions of visual information to that information which is deemed relevant by the investigative authority. However, U.S. Courts can order the disclosure of the foregoing information for other than accident investigation purposes.</p> <p>Regarding issues related to the competent authority, the U.S. approach is consistent with Annex 13 and ICAO Document 10053 in recognizing limits in a State’s ability to protect investigation records that may be sought for other public purposes, including freedom of information laws. This approach is fully consistent with the balancing test that has been broadly applied in the U.S. in determining whether applicable laws and regulations require the public disclosure of these records or permit their withholding from the public.</p>
5.12.2	The laws of the United States require the determination and public reporting of the facts, circumstances, and cause(s) or probable cause(s) of every civil aircraft accident. These laws, including the U.S. Freedom of Information Act, do not confine the disclosure of such information to an accident investigation or report. United States law prohibits the public disclosure of cockpit voice recordings and visual recordings and limits the public disclosure of cockpit voice recording transcripts or written depictions of visual information to that information which is deemed relevant by the investigative authority. However, U.S. Courts can order the disclosure of the foregoing information for other than accident investigation purposes.
5.12.3	<p>The laws of the United States require the determination and public reporting of the facts, circumstances, and cause(s) or probable cause(s) of every civil aircraft accident. These laws, including the U.S. Freedom of Information Act, do not confine the disclosure of such information to an accident investigation or report.</p> <p>United States law may afford protection of the names of persons involved in accidents or incidents in some cases, though not all cases. U.S. Courts can order the disclosure of the foregoing information. In addition, while it is U. S. practice not to identify names of such persons in accident and incident reports, those names may be revealed in background material made available to the public as required by U.S. law.</p>
5.12.6	The United States supports the principle of not circulating, publishing, or providing access to a draft Report or any part thereof, or any documents obtained during the investigation, unless such a report or document has already been published or released by the State that conducted the investigation. However, the laws of the United States facilitate the public disclosure of information held by government agencies and commercial businesses. The U.S. government may not be able to restrict public access to a draft Report or any part thereof on behalf of the State conducting the investigation. However, regarding “Foreign Investigations”, neither the Board, nor any agency receiving information from the Board, shall release records pertaining to an investigation until the State conducting the investigation issues its Final Report or 2 years following the date of the accident, whichever occurs first. The standard for determining public access to information requested from a U.S. government agency or a commercial business does not consider or require the express consent of the State conducting an investigation.

5.19	The United States may find it necessary to accept a limited number of advisors appointed to assist the accredited representative and will exercise discretion in determining whether the skills and expertise of the advisor(s) are appropriate for the conduct of the aircraft accident or incident investigation.
5.20	The United States may find it necessary to accept a limited number of advisors appointed to assist the accredited representative and will exercise discretion in determining whether the skills and expertise of the advisor(s) are appropriate for the conduct of the aircraft accident or incident investigation.
5.25	Concerning 5.25(h), investigative procedures observed by the United States allow full participation in all progress and investigation planning meetings; however, deliberations related to analysis, findings, probable causes, and safety recommendations are restricted to the investigative authority and its staff. However, contributions to these areas are permitted through timely written submissions, as specified in paragraph 5.25(i).
5.25 h)	Investigative procedures observed by the U.S. allow full participation in all progress and investigation planning meetings; however, deliberations related to analysis, findings, probable causes, and safety recommendations are restricted to the investigative authority and its staff. However, participation in these areas is extended through timely written submissions, as specified in paragraph 5.25 i).
5.26	Concerning 5.26(b): The United States supports, in principle, the privacy of the State conducting the investigation regarding the progress and the findings of that investigation. However, the laws of the United States facilitate the public disclosure of information held by U.S. government agencies and U.S. commercial businesses. Notwithstanding any other provision of law, regarding “Foreign Investigations”, neither the Board, nor any agency receiving information from the Board, shall release records pertaining to an investigation until the State conducting the investigation issues its Final Report or 2 years following the date of the accident, whichever occurs first. The standard for determining public access to information requested from a U.S. government agency or a commercial business does not consider or require the express consent of the State conducting the investigation.
5.26 b)	The U.S. supports, in principle, the privacy of the State conducting the investigation regarding the progress and the findings of that investigation. However, the laws of the U.S. facilitate the public disclosure of information held by U.S. government agencies and U.S. commercial business. The standard for determining public access to information requested from a U.S. government agency or a commercial business does not consider or require the expressed consent of the State conducting the investigation.
Chapter 6	Reporting
6.2	The United States supports the principle of not circulating, publishing, or providing access to a draft Report or any part thereof, or any documents obtained during the investigation, unless such a report or document has already been published or released by the State that conducted the investigation. However, the laws of the United States facilitate the public disclosure of information held by government agencies and commercial businesses. The U.S. government may not be able to restrict public access to a draft Report or any part thereof on behalf of the State conducting the investigation. However, regarding “Foreign Investigations”, neither the Board, nor any agency receiving information from the Board, shall release records pertaining to an investigation until the State conducting the investigation issues its Final Report or 2 years following the date of the accident, whichever occurs first. The standard for determining public access to information requested from a U.S. government agency or a commercial business does not consider or require the express consent of the State conducting an investigation.

6.3	The United States requires that comments on draft final reports be received within 30 days of transmittal unless an extension is provided.
6.13	The U.S. supports the principle of not circulating, publishing, or providing access to a draft report or any part thereof unless such a report or document has already been published or released by the State which conducted the investigation. However, the laws of the U.S. facilitate the public disclosure of information held by government agencies and commercial business. The U.S. government may not be able to restrict public access to a draft report or any part thereof on behalf of the State conducting the investigation. The standard for determining public access to information requested from a U.S. government agency or a commercial business does not consider or require the expressed consent of the State conducting an investigation.

ANNEX 14 – AERODROMES	
VOLUME 1 – AERODROME DESIGN AND OPERATIONS	
Chapter 1	General
1.2.1	<p>Airports in the U.S. are for the most part owned and operated by local governments and quasi–government organizations formed to operate transportation facilities. The Federal Government provides air traffic control, operates and maintains NAVAIDs, provides financial assistance for airport development, certifies major airports, and issues standards and guidance for airport planning, design, and operational safety.</p> <p>There is general conformance with the Standards and Recommended Practices of Annex 14, Volume I. At airports with scheduled passenger service using aircraft having more than nine seats, compliance with standards is enforced through regulation and certification. At other airports, compliance is achieved through the agreements with individual airports under which Federal development funds were granted; or, through voluntary actions.</p>
1.3.1 1.3.2 1.3.3 1.3.4	<p>In the U.S., the Airport Reference Code is a two–component indicator relating the standards used in the airport’s design to a combination of dimensional and operating characteristics of the largest aircraft expected to use the airport. The first element, Aircraft Approach Category, corresponds to the ICAO PANS–OPS approach speed groupings. The second, Airplane Design Group, corresponds to the wingspan groupings of code element 2 of the Annex 14, Aerodrome Reference Code. See below:</p>

TBL GEN 1.7–1
Airport Reference Code (ARC)

Aircraft Approach Category	Approximate Annex 14 Code Number
A	1
B	2
C	3
D	4
E	–
Airplane Design Group	Corresponding Annex 14 Code Letter
I	A
II	B
III	C
IV	D
V	E
VI	F (proposed)

EXAMPLE: AIRPORT DESIGNED FOR B747–400 ARC D–V.

Chapter 2	Aerodrome Data
2.2.1	The airport reference point is recomputed when the ultimate planned development of the airport is changed.
2.9.6 2.9.7	Minimum friction values have not been established to indicate that runways are “slippery when wet.” However, U.S. guidance recommends that pavements be maintained to the same levels indicated in the ICAO Airport Services Manual.
2.11.3	If inoperative fire fighting apparatus cannot be replaced immediately, a NOTAM must be issued. If the apparatus is not restored to service within 48 hours, operations shall be limited to those compatible with the lower index corresponding to operative apparatus.
2.12 e)	Where the original VASI is still installed, the threshold crossing height is reported as the center of the on–course signal, not the top of the red signal from the downwind bar.

Chapter 3	Physical Characteristics
3.1.2*	The crosswind component is based on the ARC: 10.5 kt for AI and BI; 13 kt for AII and BII; 16 kt for AIII, BIII and CI through DIII; 20 kts for AIV through DVI.
3.1.9*	Runway widths (in meters) used in design are shown in the table below:

Width of Runway in Meters

Aircraft Approach Category	Airplane Design Group					
	I	II	III	IV	V	VI
A	18 ¹	23 ¹	—	—	45	60
B	18 ¹	23 ¹	—	—	45	60
C	30	30	30 ²	45	45	60
D	30	30	30 ²	45	45	60

¹The width of a precision (lower than 3/4 statute mile approach visibility minimums) runway is 23 meters for a runway which is to accommodate only small (less than 5,700 kg) airplanes and 30 meters for runways accommodating larger airplanes.

²For airplanes with a maximum certificated take-off mass greater than 68,000 kg, the standard runway width is 45 meters.

3.1.12	FAA allows dual and triple simultaneous independent approaches when runway centerlines are at least 3100 feet apart.
3.1.14*	Longitudinal runway slopes of up to 1.5 percent are permitted for aircraft approach categories C and D except for the first and last quarter of the runway where the maximum slope is 0.8 percent.
3.1.19*	Minimum and maximum transverse runway slopes are based on aircraft approach categories as follows: For categories A and B: 1.0 – 2.0 percent C and D: 1.0 – 1.5 percent
3.2.2	The U.S. does not require that the minimum combined runway and shoulder widths equal 60 meters. The widths of shoulders are determined independently.
3.2.3*	The transverse slope on the innermost portion of the shoulder can be as high as 5 percent.
3.3.3 3.3.4* 3.3.5*	A strip width of 120 meters is used for code 3 and 4 runways for precision, nonprecision, and non-instrumented operations. For code 1 and 2 precision runways, the width is 120 meters. For non-precision/visual runways, widths vary from 37.5 meters up to 120 meters.
3.3.9*	Airports used exclusively by small aircraft (U.S. Airplane Design Group I) may be graded to distances as little as 18 meters from the runway centerline.
3.3.14*	The maximum transverse slope of the graded portion of the strip can be 3 percent for aircraft approach categories C and D and 5 percent for aircraft approach categories A and B.
3.3.15*	The U.S. does not have standards for the maximum transverse grade on portions of the runway strip falling beyond the area that is normally graded.
3.3.17*	Runways designed for use by smaller aircraft under non-instrument conditions may be graded to distances as little as 18 meters from the runway centerline (U.S. Airplane Design Groups I and II).
3.4.2*	For certain code 1 runways, the runway end safety areas may be only 72 meters.
3.7.1* 3.7.2*	The U.S. does not provide Standards or Recommended Practices for radio altimeter operating areas.
3.8.3*	The U.S. specifies a 6 meter clearance for Design Group VI airplanes.
3.8.4*	The taxiway width for Design Group VI airplanes is 30 meters.
3.8.5*	The U.S. also permits designing taxiway turns and intersections using the judgmental oversteering method.

3.8.7*	Minimum separations between runway and taxiway centerlines, and minimum separations between taxiways and taxilanes and between taxiway/taxilanes and fixed/moveable objects are shown in the tables that follow. Generally, U.S. separations are larger for non–instrumented runways, and smaller for instrumented runways, than the Annex. Values are also provided for aircraft with wingspans up to 80 meters.
--------	---

Minimum Separations Between Runway Centerline and Parallel Taxiway/Taxilane Centerline

Operation	Aircraft Approach Category	Airplane Design Group						
		I ¹	I	II	III	IV	V	VI
Visual runways and runways with not lower than 3/4–statute mile (1,200 meters) approach visibility minimums	A and B	150 feet 45 meters	225 feet 67.5 meters	240 feet 72 meters	300 feet 90 meters	400 feet 120 meters	—	—
Runways with lower than 3/4–statute mile (1,200 meters) approach visibility minimums	A and B	200 feet 60 meters	250 feet 75 meters	300 feet 90 meters	350 feet 105 meters	400 feet 120 meters	—	—
Visual runways and runways with not lower than 3/4–statute mile (1,200 meters) approach visibility minimums	C and D	—	300 feet 90 meters	300 feet 90 meters	400 feet 120 meters	400 feet 120 meters	400 ² feet 120 ² meters	600 feet 180 meters
Runways with lower than 3/4–statute mile (1,200 meters) approach visibility minimums	C and D	—	400 feet 120 meters	400 feet 120 meters	400 feet 120 meters	400 feet 120 meters	400 ² feet 120 ² meters	600 feet 180 meters

¹These dimensional standards pertain to facilities for small airplanes exclusively.

²Corrections are made for altitude: 120 meters separation for airports at or below 410 meters; 135 meters for altitudes between 410 meters and 2,000 meters; and, 150 meters for altitudes above 2,000 meters.

Minimum Taxiway and Taxilane Separations:

	Airplane Design Group					
	I	II	III	IV	V	VI
Taxiway centerline to parallel taxiway/taxilane centerline	69 feet 21 meters	105 feet 32 meters	152 feet 46.5 meters	215 feet 65.5 meters	267 feet 81 meters	324 feet 99 meters
Fixed or movable object	44.5 feet 13.5 meters	65.5 feet 20 meters	93 feet 28.5 meters	129.5 feet 39.5 meters	160 feet 48 meters	193 feet 59 meters
Taxilane centerline to parallel taxilane centerline	64 feet 19.5 meters	97 feet 29.5 meters	140 feet 42.5 meters	198 feet 60 meters	245 feet 74.5 meters	298 feet 91 meters
Fixed or movable object	39.5 feet 12 meters	57.5 feet 17.5 meters	81 feet 24.5 meters	112.5 feet 34 meters	138 feet 42 meters	167 feet 51 meters

3.8.10*	Line–of–sight standards for taxiways are not provided in U.S. practice, but there is a requirement that the sight distance along a runway from an intersecting taxiway must be sufficient to allow a taxiing aircraft to safely enter or cross the runway.
3.8.11*	Transverse slopes of taxiways are based on aircraft approach categories. For categories C and D, slopes are 1.0–1.5 percent; for A and B, 1.0–2.0 percent.
3.11.5	The runway centerline to taxi–holding position separation for code 1 is 38 meters for non–precision operations and 53 meters for precision. Code 3 and 4 precision operations require a separation of 75 meters, except for “wide bodies,” which require 85 meters.

Dimensions and Slopes for Protective Areas and Surfaces

	Precision Approach	Non-precision Instrument Approach			Visual Runway	
	All runways	All runways ^a	Runways other than utility ^b	Utility runways ^d	Runways other than utility	Utility runways
Width of inner edge	305 meters	305 meters	152 meters	152 meters	152 meters	76 meters ^c
Divergency (each side)	15 percent	15 percent	15 percent	15 percent	10 percent	10 percent
Final width	4,877 meters	1,219 meters	1,067 meters ^c	610 meters	475 meters ^c	381 meters ^c
Length	15,240 meters	3,048 meters ^c	3,048 meters ^c	1,524 meters ^c	1,524 meters ^c	1,524 meters ^c
Slope: inner 3,049 meters	2 percent	2.94 percent ^c	2.94 percent ^c	5 percent ^c	5 percent ^c	5 percent ^c
Slope: beyond 3,048 meters	2.5 percent ^c					

^aWith visibility minimum as low as 1.2 km; ^bwith visibility minimum greater than 1.2 km; ^ccriteria less demanding than Annex 14 Table 4–1 dimensions and slopes. ^dUtility runways are intended to serve propeller-driven aircraft having a maximum take-off mass of 5,570 kg.

Chapter 4	Obstacle Restriction and Removal
4.1	Obstacle limitation surfaces similar to those described in 4.1–4.20 are found in 14 CFR Part 77.
4.1.21	A balked landing surface is not used.
4.1.25	The U.S. does not establish take-off climb obstacle limitation areas and surface, <i>per se</i> , but does specify protective surfaces for each end of the runway based on the type of approach procedures available or planned. The dimensions and slopes for these surfaces and areas are listed in the table above.
4.2	The dimensions and slopes of U.S. approach areas and surfaces are set forth in the above table. Aviation regulations do not prohibit construction of fixed objects above the surfaces described in these sections.
4.2.1	Primary surface is also used as a civil airport imaginary surface. Primary surface is a surface longitudinally centered on a runway. U.S. uses the width of the primary surface of a runway as prescribed in 14 CFR Part 77.25 for the most precise approach existing or planned for either end of that runway.
4.2.8	The slope and dimensions of the approach surface applied to each end of a runway are determined by the most precise approach existing or planned for that runway end.
4.2.9	Approach surfaces are applied to each end of each runway based upon the type of approach available or planned for that runway end.
4.2.10, 4.2.11	Any proposed construction of or alteration to an existing structure is normally considered to be physically shielded by one or more existing permanent structure(s), natural terrain, or topographic feature(s) of equal or greater height if the structure under consideration is located within the lateral dimensions of any runway approach surface but would not exceed an overall height above the established airport elevation greater than that of the outer extremity of the approach surface, and located within, but would not penetrate, the shadow plane(s) of the shielding structure(s).
4.2.12	The basic principle in applying shielding guidelines is whether the location and height of the structures are such that aircraft, when operating with due regard for the shielding structure, would not collide with that structure.
4.2.16	The size of each imaginary surface is based on the category of each runway according to the type of approach available or planned for that runway. The slope and dimensions of the approach surface applied to each end of a runway are determined by the most precise approach existing or planned for that runway end.
4.2.17	Approach surfaces are applied to each end of each runway based upon the type of approach available or planned for that runway end.

Chapter 5	Visual Aids for Navigation
5.2.1.7*	The U.S. does not require unpaved taxiways to be marked.
5.2.2.2*	The U.S. does not require a runway designator marking for unpaved runways.
5.2.2.4	Zeros are not used to precede single–digit runway markings. An optional configuration of the numeral 1 is available to designate a runway 1 and to prevent confusion with the runway centerline.
5.2.4.2* 5.2.4.3*	Threshold markings are not required, but sometimes provided, for non–instrument runways that do not serve international operations.
5.2.4.5	The current U.S. standard for threshold designation is eight stripes, except that more than eight stripes may be used on runways wider than 45 meters. After 1 January 2008, the U.S. standard will comply with Annex 14.
5.2.4.6	The width and spacing of threshold stripes will comply with Annex 14 after 1 January 2008.
5.2.4.10	When a threshold is temporarily displaced, there is no requirement that runway or taxiway edge markings, prior to the displaced threshold, be obscured. These markings are removed only if the area is unsuitable for the movement of aircraft.
5.2.5.2 5.2.5.3*	Aiming point markings are required on precision instrument runways and code 3 and 4 runways used by jet aircraft.
5.2.5.4	The aiming point marking commences 306 meters from the threshold at all runways.
5.2.6.3	The U.S. pattern for touchdown zone markings, when installed on both runway ends, is only applicable to runways longer than 4,990 feet. On shorter runways, the three pair of markings closest to the runway midpoint are eliminated.
5.2.6.4	The U.S. standard places the aiming point marking 306 meters from the threshold where it replaces one of the pair of three stripe threshold markings. The 306 meters location is used regardless of runway length.
5.2.6.5*	Touchdown zone markings are not required at a non–precision approach runway, though they may be provided.
5.2.7.4*	Runway side stripe markings on a non–instrument runway may have an over–all width of 0.3 meter.
5.2.8.3	Taxiway centerline markings are never installed longitudinally on a runway even if the runway is part of a standard taxi route.
5.2.9.5*	The term “ILS” is used instead of CAT I, CAT II, CAT III.
5.2.11.4 5.2.11.5* 5.2.11.6*	Check–point markings are provided, but the circle is 3 meters in diameter, and the directional line may be of varying width and length. The color is the yellow used for taxiway markings.
5.2.12	Standards for aircraft stand markings are not provided.
5.2.13.1*	Apron safety lines are not required although many airports have installed them.
5.2.14.1	The U.S. does not have standards for holding position markings on roadways that cross runways. Local traffic control practices are used.
5.3.1.1 5.3.1.2*	The U.S. does not have regulations to prevent the establishment of non–aviation ground lights that might interfere with airport operations.
5.3.1.3 5.3.1.4	New approach lighting installations will meet the frangibility requirements. Some existing non–frangible systems may not be replaced before 1 January 2005.
5.3.2.1* 5.3.2.2* 5.3.2.3*	There is no requirement for an airport to have emergency runway lighting available if it does not have a secondary power source. Some airports do have these systems, and there is an FAA specification for these lights.
5.3.3.1 5.3.3.3	Only airports served by aircraft having more than 30 seats are required to have a beacon, though they are available at many others.
5.3.3.6	Although the present U.S. standard for beacons calls for 24–30 flashes per minute, some older beacons may have flash rates as low as 12 flashes per minute.
5.3.3.8	Coded identification beacons are not required and are not commonly installed. Typically, airport beacons conforming to 5.3.3.6 are installed at locations served by aircraft having more than 30 seats.

5.3.4.1	While the U.S. has installed an approach light system conforming to the specifications in 5.3.4.10 through 5.3.4.19, it also provides for a lower cost system consisting of medium intensity approach lighting and sequenced flashing lights (MALSF) at some locations.
5.3.4.2	In addition to the system described in 5.3.4.1, a system consisting of omnidirectional strobe lights (ODALS) located at 90 meters intervals extending out to 450 meters from the runway threshold is used at some locations.
5.3.4.10 through 5.3.4.19	The U.S. standard for a precision approach category I lighting system is a medium intensity approach lighting system with runway alignment indicator lights (MALSR). This system consists of 3 meters barrettes at 60 meters intervals out to 420 meters from the threshold and sequenced flashing lights at 60 meters intervals from 480 meters to 900 meters. A crossbar 20 meters in length is provided 300 meters from the threshold. The total length of this system is dependent upon the ILS glide path angle. For angles 2.75° and higher, the length is 720 meters.
5.3.4.16 5.3.4.31	The capacitor discharge lights can be switched on or off when the steady-burning lights of the approach lighting system are operating. However, they cannot be operated when the other lights are not in operation.
5.3.4.20	The U.S. standard for a precision approach category II and III lighting system has a total length dependent upon the ILS glide path angle. For angles 2.75° and higher, the length is 720 meters.
5.3.5.1 5.3.5.3 5.3.5.4	Visual approach slope indicator systems are not required for all runways used by turbojets except runways involved with land and hold short operations that do not have an electronic glideslope system.
5.3.5.2	In addition to PAPI and APAPI systems, VASI and AVASI type systems remain in service at U.S. airports with commercial service. Smaller general aviation airports may have various other approach slope indicators including tri-color and pulsating visual approach slope indicators.
5.3.5.27	The U.S. standard for PAPI allows for the distance between the edge of the runway and the first light unit to be reduced to 9 meters for code 1 runways used by nonjet aircraft.
5.3.5.42	The PAPI obstacle protection surface used is as follows: The surface begins 90 meters in front of the PAPI system (toward the threshold) and proceeds outward into the approach zone at an angle 1 degree less than the aiming angle of the third light unit from the runway. The surface flares 10 degrees on either side of the extended runway centerline and extends 4 statute miles from its point of origin.
5.3.8.4	The U.S. permits the use of omnidirectional runway threshold identification lights.
5.3.13.2	The U.S. does not require the lateral spacing of touchdown zone lights to be equal to that of touchdown zone marking when runways are less than 45 meters wide. The lateral distance between the markings is 22 meters when installed on runways with a width of 45 meters or greater. The distance is proportionately smaller for narrower runways. The lateral distance between touchdown zone lights is nominally 22 meters but may be reduced to 20 meters to avoid construction problems.
5.3.14	The U.S. has no provision for stopway lights.
5.3.15.1 5.3.15.2*	Taxiway centerline lights are required only below 183 meters RVR on designated taxi routes. However, they are generally recommended whenever a taxiing problem exists.
5.3.15.3 8.2.3	Taxiway centerline lights are not provided on runways forming part of a standard taxi route even for low visibility operations. Under these conditions, the taxi path is coincident with the runway centerline, and the runway lights are illuminated.
5.3.15.5	Taxiway centerline lights on exit taxiways presently are green. However, the new U.S. standard which is scheduled to be published by 1 January 98 will comply with the alternating green/yellow standard of Annex 14.
5.3.15.7*	The U.S. permits an offset of up to 60 cm.
5.3.16.2 8.2.3	Taxiway edge lights are not provided on runways forming part of a standard taxi route.

5.3.17.1 5.3.17.2* 5.3.17.3 5.3.17.4* 5.3.17.5*	Stop bars are required only for runway visual range conditions less than a value of 183 meters at taxiway/runway intersections where the taxiway is lighted during low visibility operations. Once installed, controlled stop bars are operated at RVR conditions less than a value of 350 meters.														
5.3.17.6	Elevated stop bar lights are normally installed longitudinally in line with taxiway edge lights. Where edge lights are not installed, the stop bar lights are installed not more than 3 meters from the taxiway edge.														
5.3.17.9	The beamspread of elevated stop bar lights differs from the in-pavement lights. The inner isocandela curve for the elevated lights is ± 7 horizontal and ± 4 vertical.														
5.3.17.12	The U.S. standard for stop bars, which are switchable in groups, does not require the taxiway centerline lights beyond the stop bars to be extinguished when the stop bars are illuminated. The taxiway centerline lights which extend beyond selectively switchable stop bars are grouped into two segments of approximately 45 meters each. A sensor at the end of the first segment re-illuminates the stop bar and extinguishes the first segment of centerline lights. A sensor at the end of the second segment extinguishes that segment of centerline lights.														
5.3.18.1*	Taxiway intersection lights are also used at other hold locations on taxiways such as low visibility holding points.														
5.3.18.2	Taxiway intersection lights are collocated with the taxiway intersection marking. The marking is located at the following distances from the centerline of the intersecting taxiway: <table border="0" style="margin-left: 40px;"> <thead> <tr> <th style="text-align: left;">Airplane Design Group</th> <th style="text-align: left;">Distance</th> </tr> </thead> <tbody> <tr> <td>I</td> <td>13.5 meters</td> </tr> <tr> <td>II</td> <td>20 meters</td> </tr> <tr> <td>III</td> <td>28.5 meters</td> </tr> <tr> <td>IV</td> <td>39 meters</td> </tr> <tr> <td>V</td> <td>48.5 meters</td> </tr> <tr> <td>VI</td> <td>59 meters</td> </tr> </tbody> </table>	Airplane Design Group	Distance	I	13.5 meters	II	20 meters	III	28.5 meters	IV	39 meters	V	48.5 meters	VI	59 meters
Airplane Design Group	Distance														
I	13.5 meters														
II	20 meters														
III	28.5 meters														
IV	39 meters														
V	48.5 meters														
VI	59 meters														
5.3.19.1 5.3.19.2*	Runway guard lights are required only for runway visual range conditions less than a value of 350 meters.														
5.3.19.4 5.3.19.5	Runway guard lights are placed at the same distance from the runway centerline as the aircraft holding distance, or within a few feet of this location.														
5.3.19.12	The new U.S. standard for in-pavement runway guard lights complies with Annex 14. However, there may be some existing systems that do not flash alternately.														
5.3.20.4*	The U.S. does not set aviation standards for flood lighting aprons.														
5.3.21	The U.S. does not provide standards for visual docking guidance systems. U.S. manufacturers of these devices generally adhere to ICAO SARPS.														
5.3.23.1	The U.S. does not have a requirement for providing roadholding position lights during RVR conditions less than a value of 350 meters.														
5.4.1.2	Signs are often installed a few centimeters taller than specified in Annex 14, Volume 1, Table 5–4.														
5.4.1.5	Sign inscriptions are slightly larger, and margins around the sign slightly smaller, than indicated in Annex 14, Volume 1, Appendix 4.														
5.4.1.6	The sign luminance requirements are not as high as specified in Appendix 4. The U.S. does not specify a nighttime color requirement in terms of chromaticity.														
5.4.2.2 5.4.2.4 5.4.2.9 5.4.2.14 5.4.2.16	All signs used to denote precision approach holding positions have the legend “ILS.”														
5.4.2.6	U.S. practice uses the NO ENTRY sign to prohibit entry by aircraft only.														
5.4.2.8 5.4.2.10	The second mandatory instruction sign is usually not installed unless added guidance is necessary.														

5.4.2.15	Signs for holding aircraft and vehicles from entering areas where they would infringe on obstacle limitation surfaces or interfere with NAVAIDs are inscribed with the <i>designator of the approach</i> , followed by the letters “APCH”; for example, “15–APCH.”
5.4.3.13 5.4.3.15	U.S. practice is to install signs about 3 to 5 meters closer to the taxiway/runway (See Annex 14, Table 5–4).
5.4.3.16	The U.S. does not have standards for the location of runway exit signs.
5.4.3.24	A yellow border is used on all location signs, regardless of whether they are stand-alone or collocated with other signs.
5.4.3.26	U.S. practice is to use Pattern A on runway vacated signs, except that Pattern B is used to indicate that an ILS critical area has been cleared.
5.4.3.30*	The U.S. does not have standards for signs used to indicate a series of taxi-holding positions on the same taxiway.
5.4.4.4*	The inscription, “VOR Check Course,” is placed on the sign in addition to the VOR and DME data.
5.4.5.1*	The U.S. does not have requirements for airport identification signs, though they are usually installed.
5.4.6.1*	Standards are not provided for signs used to identify aircraft stands.
5.4.7.2	The distance from the edge of road to the road-holding position sign conforms to local highway practice.
5.5.2.2* 5.5.7.1*	Boundary markers may be used to denote the edges of an unpaved runway.
5.5.3	There is no provision for stopway edge markers.
Chapter 6	Visual Aids for Denoting Obstacles
6.1	Recommended practices for marking and lighting obstacles are found in FAA Advisory Circular 70/7460–1J, Obstruction Marking and Lighting.
6.1.3	Any temporary or permanent structure, including all appurtenances, that exceeds an overall height of 200 feet (61m) above ground level or exceeds any obstruction standard contained in 14 CFR Part 77, should normally be marked and/or lighted.
6.2.1	This chapter provides recommended guidelines to make certain structures conspicuous to pilots during daylight hours. One way of achieving this conspicuity is by painting and/or marking these structures. Recommendations on marking structures can vary depending on terrain features, weather patterns, geographic location, and in the case of wind turbines, number of structures and overall layout of design.
6.2.3*	The maximum dimension of the rectangles in a checkered pattern is 6 meters on a side.
6.2.7	Markers should be displayed in conspicuous positions on or adjacent to the structure so as to retain the general definition of the structure. They should be recognizable in clear air from a distance of at least 4,000 feet (1219m) and in all directions from which aircraft are likely to approach. Markers should be distinctively shaped, i.e., spherical or cylindrical, so they are not mistaken for items that are used to convey other information. They should be replaced when faded or otherwise deteriorated.
6.2.11	Flag markers should be displayed around, on top, or along the highest edge of the obstruction. When flags are used to mark extensive or closely grouped obstructions, they should be displayed approximately 50 feet (15m) apart. The flag stakes should be of such strength and height that they will support the flags above all surrounding ground, structures, and/or objects of natural growth.
6.2.12	Each side of the flag marker should be at least 2 feet (0.6m) in length. Standard does not specifically address mobile objects.
6.2.14	Color patterns. Flags should be colored as follows: solid, orange and white, and checkerboard. Standard does not specifically address mobile objects.

6.3.1	Obstruction lighting may be displayed on structures as follows: aviation red obstruction lights; medium intensity flashing white obstruction lights, high intensity flashing white obstruction lights, dual lighting, obstruction lights during construction, obstruction lights in urban areas, and temporary construction equipment lighting.
6.3.11	The height of the structure AGL determines the number of light levels. Recommendations on marking structures can vary depending on terrain features, weather patterns, geographic location, and in the case of wind turbines, number of structures and overall layout of design.
6.3.13	When a structure lighted by a high intensity flashing light system is topped with an antenna or similar appurtenance exceeding 40 feet (12m) in height, a medium intensity flashing white light (L-865) should be placed within 40 feet (12m) from the tip of the appurtenance. This light should operate 24 hours a day and flash simultaneously with the rest of the lighting system.
6.3.14	The number of light units recommended depends on the diameter of the structure at the top.
6.3.16	Lights should be installed on the highest point at each end. At intermediate levels, lights should be displayed for each 150 feet (46m) or fraction thereof. The vertical position of these lights should be equidistant between the top lights and the ground level as the shape and type of obstruction will permit. One such light should be displayed at each outside corner on each level with the remaining lights evenly spaced between the corner lights.
6.3.17	Lights should be installed on the highest point at each end. At intermediate levels, lights should be displayed for each 150 feet (46m) or fraction thereof. The vertical position of these lights should be equidistant between the top lights and the ground level as the shape and type of obstruction will permit. One such light should be displayed at each outside corner on each level with the remaining lights evenly spaced between the corner lights.
6.3.18	Lights should be installed on the highest point at each end. At intermediate levels, lights should be displayed for each 150 feet (46m) or fraction thereof. The vertical position of these lights should be equidistant between the top lights and the ground level as the shape and type of obstruction will permit. One such light should be displayed at each outside corner on each level with the remaining lights evenly spaced between the corner lights.
6.3.19, 6.3.20	One or more light units is needed to obtain the desired horizontal coverage. The number of light units recommended per level (except for the supporting structures of catenary wires and buildings) depends upon the average outside diameter of the specific structure, and the horizontal beam width of the light fixture. The light units should be installed in a manner to ensure an unobstructed view of the system by a pilot approaching from any direction. The number of lights recommended is the minimum. The U.S. does not utilize Type A or Type B obstacle lights. Recommendations on marking structures can vary depending on terrain features, weather patterns, geographic location, and in the case of wind turbines, number of structures and overall layout of design.
6.3.21* 6.3.22*	The effective intensity, for daylight–luminance background, of Type A high–intensity obstacle lights is 270,000 cd ± 25 percent. The effective intensity, for daylight–luminance background, of Type B high–intensity obstacle lights is 140,000 cd ± 25 percent.
6.3.22	The height of the structure AGL determines the number of light levels. The light levels may be adjusted slightly, but not to exceed 10 feet (3m) when necessary to accommodate guy wires and personnel who replace or repair light fixtures. If an adjacent object shields any light, horizontal placement of the lights should be adjusted or additional lights should be mounted on that object to retain or contribute to the definition of the obstruction. Recommendations on marking structures can vary depending on terrain features, weather patterns, geographic location, and in the case of wind turbines, number of structures and overall layout of design.

6.3.23, 6.3.24, 6.3.27, 6.3.29	<p>Red obstruction lights are used to increase conspicuity during nighttime. The red obstruction lighting system is composed of flashing omnidirectional beacons (L–864) and/or steady burning (L–810) lights. When one or more levels is comprised of flashing beacon lighting, the lights should flash simultaneously.</p> <p>The U.S. does not utilize Type A, B, C, or D obstacle lights. Recommendations on marking structures can vary depending on terrain features, weather patterns, geographic location, and in</p>
6.3.28	<p>When objects within a group of obstructions are approximately the same overall height above the surface and are located a maximum of 150 feet (46m) apart, the group of obstructions may be considered an extensive obstruction. Install light units on the same horizontal plane at the highest portion or edge of prominent obstructions. Light units should be placed to ensure that the light is visible to a pilot approaching from any direction.</p>
6.3.30, 6.3.31, 6.3.32	<p>The medium intensity flashing white light system is normally composed of flashing omnidirectional lights. Medium intensity flashing white obstruction lights may be used during daytime and twilight with automatically selected reduced intensity for nighttime operation.</p> <p>The U.S. does not utilize Type A, B, or C obstacle lights. Medium intensity flashing white (L–865) obstruction lights may provide conspicuity both day and night. Recommendations on marking structures can vary depending on terrain features, weather patterns, geographic location, and in the case of structures and overall layout of design.</p>
6.3.35	<p>Use high intensity flashing white obstruction lights during daytime with automatically selected reduced intensities for twilight and nighttime operations. When high intensity white lights are operated 24 hours a day, other methods of marking and lighting may be omitted.</p> <p>The U.S. does not utilize Type A obstacle lights. Lighting with high intensity (L–856) flashing white obstruction lights provides the highest degree of conspicuity both day and night. Recommendations on marking structures can vary depending on terrain features, weather patterns, geographic location, and in the case of wind turbines, number of structures and overall layout of design.</p>
Chapter 7	Visual Aids for Denoting Restricted Use Areas
7.1.2*	A “closed” marking is not used with partially closed runways. See 5.2.4.10, above.
7.1.4	<p>Crosses with shapes similar to figure 7.1, illustration b) are used to indicate closed runways and taxiways.</p> <p>The cross for denoting a closed runway is yellow.</p>
7.1.5	In the U.S. when a runway is permanently closed, only the threshold marking, runway designation marking, and touchdown zone marking need be obliterated. Permanently closed taxiways need not have the markings obliterated.
7.1.7	The U.S. does not require unserviceability lights across the entrance to a closed runway or taxiway when it is intersected by a night–use runway or taxiway.
7.4.4	Flashing yellow lights are used as unserviceability lights. The intensity is such as to be adequate to delineate a hazardous area.
Chapter 8	Equipment and Installations
8.1.5* 8.1.6* 8.1.7 8.1.8	<p>A secondary power supply for non–precision instrument and non–instrument approach runways is not required, nor is it required for all precision approach runways.</p> <p>The U.S. does not provide secondary power specifically for take–off operations below 550 meters RVR.</p>
8.2.1	There is no requirement in the U.S. to interleave lights as described in the Aerodrome Design Manual, Part 5.
8.2.3	See 5.3.15.3 and 5.3.16.2
8.7.2* 8.7.3 8.7.4*	Glide slope facilities and certain other installations located within the runway strip, or which penetrate obstacle limitation surfaces, may not be frangibly mounted.

8.9.7*	A surface movement surveillance system is recommended for operations from 350 meters RVR down to 183 meters. Below 183 meters RVR, a surface movement radar or alternative technology is generally required.
Chapter 9	Emergency and Other Services
9.1.1	Emergency plans such as those specified in this section are required only at airports serving scheduled air carriers using aircraft having more than 30 seats. These airports are certificated under 14 CFR Part 139. In practice, other airports also prepare emergency plans.
9.1.12	Full-scale airport emergency exercises are conducted at intervals, not to exceed three years, at airports with scheduled passenger service using aircraft with more than 30 seats.
9.2.1	Rescue and fire fighting equipment and services such as those specified in this section are required only at airports serving scheduled air carriers in aircraft having more than 30 seats. Such airports generally equate to ICAO categories 4 through 9. Other airports have varying degrees of services and equipment.
9.2.3*	There is no plan to eliminate, after 1 January 2005, the current practice of permitting a reduction of one category in the index when the largest aircraft has fewer than an average of five scheduled departures a day.
9.2.4 9.2.5	The level of protection at U.S. airports is derived from the length of the largest aircraft serving the airport similar to the Annex's procedure, except that maximum fuselage width is not used. U.S. indices A–E are close equivalents of the Annex's categories 5–9. The U.S. does not have an equivalent to category 10.

Fire Extinguishing Agents and Equipment

Index	Aircraft length		Total minimum quantities of extinguishing agents		Minimum trucks	Discharge rate ¹
	More than	Not more than	Dry chemical	Water for protein foam		
A		27 meters	225 kg	0	1	See below
B	27 meters	38 meters	225 kg	5,700 L	1	See below
C	38 meters	48 meters	225 kg	5,700 L	2	See below
D	48 meters	60 meters	225 kg	5,700 L	3	See below
E	60 meters		225 kg	11,400 L	3	See below

¹ Truck size	Discharge rate
1,900 L but less than 7,600	at least 1,900 L per minute but not more than 3,800 L per minute
7,600 L or greater	at least 2,280 L per minute but not more than 4,560 L per minute

9.2.10	The required firefighting equipment and agents by index are shown in the table above. The substitution equivalencies between complementary agents and foam meeting performance level A are also used for protein and fluoroprotein foam. Equivalencies for foam meeting performance level B are used only for aqueous film forming foams.
9.2.18*	There is no specific requirement to provide rescue equipment as distinguished from firefighting equipment.
9.2.19*	At least one apparatus must arrive and apply foam within 3 minutes with all other required vehicles arriving within 4 minutes. Response time is measured from the alarm at the equipment's customary assigned post to the commencement of the application of foam at the mid-point of the farthest runway.
9.2.29*	For ICAO category 6 (U.S. index B), the U.S. allows one vehicle.

9.4.4	At the present time, there is no requirement to perform tests using a continuous friction measuring device with self-wetting features. Some U.S. airports own these devices, while others use less formal methods to monitor build-up of rubber deposits and the deterioration of friction characteristics.
9.4.15	The standard grade for temporary ramps is 15 feet longitudinal per 1 inch of height (0.56 percent slope) maximum, regardless of overlay depth.
9.4.19	There is no U.S. standard for declaring a light unserviceable if it is out of alignment or if its intensity is less than 50 percent of its specified value.

*Indicates ICAO Recommended Practice

ANNEX 14 – AERODROMES	
VOLUME II – HELIPORTS	
Chapter 1	Definitions
Declared distances	The U.S. does not use declared distances (take-off distance available, rejected take-off distance available, or landing distance available) in designing heliports.
Final approach and take-off area (FATO)	The U.S. “take-off and landing area” is comparable to the ICAO FATO, and the U.S. “FATO” is more comparable to the ICAO TLOF. The U.S. definition for the FATO stops with “the take-off manoeuvre is commenced.” This difference in definition reflects a variation in concept. The rejected take-off distance is an operational computation and is not required as part of the design.
Helicopter stand	The U.S. does not use the term “helicopter stand.” Instead, the U.S. considers paved or unpaved aprons, helipads, and helidecks, all as helicopter parking areas; i.e., helicopter stands.
Safety area	The U.S. considers the safety area to be part of the take-off and landing area which surrounds the FATO and does not call for or define a separate safety area.
Touchdown and lift-off area (TLOF)	The U.S. differs in the definition by considering helipads and helidecks to be FATO. The U.S. does not define the load bearing area on which the helicopter may touch down or lift-off as a TLOF.
Chapter 2	Heliport Data
2.1 d)	The U.S. does not measure or report a safety area as a separate feature of a heliport.
2.2	The U.S. does not “declare” distances for heliports.
Chapter 3	Physical Characteristics
3.1.2	The U.S. does not distinguish between single-engine and multi-engine helicopters for the purposes of heliport design standards. Neither does the U.S. design or classify heliports on the basis of helicopter performance. The U.S. FATO dimensions are at least equal to the rotor diameter of the design single rotor helicopter and the area must be capable of providing ground effect. The U.S. does not have alternative design standards for water FATOs, elevated heliports, or helidecks.
3.1.3	The U.S. has a single gradient standard; i.e., 5 percent, except in fueling areas where the limit is 2 percent, which is applicable for all portions of heliports.
3.1.6 3.1.7* 3.1.8*	The U.S. does not require or provide criteria for clearways in its design standards. It does encourage ownership and clearing of the land underlying the innermost portion of the approach out to where the approach surface is 10.5 meters above the level of the take-off surface.
3.1.14 to 3.1.21	Safety areas are considered part of the take-off and landing area (or primary surface) in U.S. heliport design. The take-off and landing area of the U.S. design criteria, based on 2 rotor diameters, provides for the ICAO safety area; however, the surface does not have to be continuous with the FATO or be load bearing.
3.1.22	Taxiway widths are twice the undercarriage width of the design helicopter.
3.1.23	The U.S. requires 1.25 rotor diameters plus 2 meters of separation between helicopter ground taxiways.
3.1.24	The U.S. gradient standard for taxiways is a maximum of 5 percent.
3.1.32*	The U.S. sets no gradient standards for air taxiways.
3.1.33	The U.S. requires 1.5 rotor diameters of separation between hover or air taxiways.
3.1.34	The U.S. standards for air taxiways and air transit routes are combined as the standards for hover taxiways noted in paragraphs 3.1.23, 3.1.24 and 3.1.33.
3.1.35	The U.S. sets no maximum turning angle or minimum radius of turn on hover taxiways.
3.1.36	The U.S. gradient standard for aprons is a maximum of 5 percent except in fueling areas where it is 2 percent.
3.1.37	The U.S. criterion for object clearances is 1/3 rotor diameter or 3 meters, whichever is greater.
3.1.38	The U.S. standard for helipads (comparable to helicopter stands) is 1.5 times the undercarriage length or width, whichever is greater.

3.1.39	The U.S. standard for separation between FATO center and the centerline of the runway is 120 meters.
3.2.2	The U.S. does not apply either a performance related or an alternative design standard for elevated heliport facilities.
3.2.5 to 3.2.10	The U.S. does not use safety areas in its heliport design.
3.3 3.4	In the U.S., shipboard and relocatable off–shore helicopter “helideck” facilities are under the purview of the U.S. Coast Guard and utilize the International Maritime Organization (IMO) code. Fixed off–shore helideck facilities are under the purview of the Department of Interior based on their document 351DM2. Coastal water helideck facilities are under the purview of the individual affected States.
Chapter 4	Obstacle Restriction and Removal
4.1.1	The U.S. approach surface starts at the edge of the take–off and landing area.
4.1.2 a)	The U.S. approach surface width adjacent to the heliport take–off and landing area is a minimum of 2 rotor diameters.
4.1.2 b) 2)	The U.S. precision instrument approach surface flares from a width of 2 rotor diameters to a width of 1,800 meters at the 7,500 meters outer end. The U.S. does not use a note similar to the one that follows 4.1.4, as it does not differentiate between helicopter requirements on the basis of operational performance.
4.1.5	The outer limit of the U.S. transitional surfaces adjacent to the take–off and landing area is 76 meters from the centerline of the VFR approach/departure surfaces. The transitional surface width decreases to zero at a point 1,220 meters from the take–off and landing area. It does not terminate at an inner horizontal surface or at a predetermined height.
4.1.6	The U.S. transitional surfaces have a fixed width, 76 meters less the width of the take–off and landing area, from the approach centerline for visual operations and an outwardly flaring width to 450 meters for precision instrument operations. The U.S. does not use an inner horizontal surface nor terminate the transitional surfaces at a fixed/predetermined height.
4.1.7 b)	Since the U.S. includes the safety area in the take–off and landing area, the comparable elevation is at the elevation of the FATO.
4.1.9 through 4.1.20	The U.S. does not use the inner horizontal surface, the conical surface, or take–off climb surface described in these paragraphs or the note following paragraph 4.1.20 for heliport design.
4.1.21 through 4.1.25	The U.S. does not have alternative criteria for floating or fixed–in–place helidecks.
4.2	The U.S. has no requirement for a note similar to the one following the heading “Obstacle limitation requirements.”
4.2.1	The U.S. criteria does not require a take–off climb surface or a conical obstacle limitation surface to establish a precision instrument approach procedure.
4.2.2	The U.S. criteria does not require a take–off climb surface or a conical obstacle limitation surface to establish a non–precision instrument approach procedure.
4.2.3	The U.S. criteria does not require a take–off climb obstacle limitation surface to establish a non–instrument approach procedure.
4.2.4*	The U.S. has no requirement for protective surfaces such as an inner horizontal surface or a conical surface.
4.2.5	The U.S. does not have tables for heliport design comparable to the ICAO Tables 4–1 to 4–4.
4.2.6	The U.S. subscribes to the intent of this paragraph to limit object heights in the heliport protective surfaces but uses fewer surfaces with different dimensions for those surfaces.
4.2.7*	The U.S. subscribes to the intent of this paragraph but uses different dimensional surfaces.
4.2.8	The U.S. criterion requires that a heliport have at least one approach and departure route and encourages multiple approaches separated by arcs of 90 to 180 degrees.
4.2.9*	The U.S. has no requirement that a heliport’s approach surfaces provide 95 percent usability.

4.2.10	Since the U.S. does not differentiate between surface level and elevated heliports, the comments to paragraphs 4.2.1 through 4.2.5 above apply.
4.2.11	The U.S. has no requirement for a take-off climb surface. It does require at least one approach/departure surface and encourages that there be as many approaches as is practical separated by arcs of 90 to 180 degrees.
4.2.12 through 4.2.22	Since the U.S. does not have alternative design criteria for helidecks or shipboard heliports, there are no comparable U.S. protective surface requirements.
Tables 4–1, 4–2, 4–3, 4–4	The U.S. does not have tables comparable to the ICAO Tables 4–1 to 4–4.
Chapter 5	Visual Aids
5.2.1	The U.S. does not have criteria for markings to be used in defining winching areas.
5.2.3.3	The U.S. maximum mass markings are specified in 1,000 pound units rather than tonnes or kilograms.
5.2.4.3	The U.S. criterion requires FATO markers but is not specific on the number or spacing between markers.
5.2.4.4	The U.S. criteria for FATO markers is not dimensionally specific.
5.2.6	The U.S. does not require, or have criteria for, marking an aiming point.
5.2.7.1	The U.S. does not require specific criteria for marking floating or off-shore fixed-in-place helicopter or helideck facilities.
5.2.8	The U.S. does not require marking the touchdown area.
5.2.9	The U.S. does not have criteria for heliport name markings.
5.2.10	The U.S. does not have a requirement to mark helideck obstacle-free sectors.
5.2.12.2	The U.S. criterion places the air taxiway markers along the edges of the routes rather than on the centerline.
5.2.12.3	The U.S. criterion for air taxiway markers does not specify the viewing area or height to width ratio.
5.3.2.3	The U.S. heliport beacon flashes white-green-yellow colors rather than a series of timed flashes.
5.3.2.5*	The U.S. criteria is not specific on the light intensity of the flash.
5.3.3.3	The U.S. criterion specifies a 300 meters approach light system configuration. The light bars are spaced at 30 meters intervals. The first two bars of the configuration are single lights, the next two bars are two lights, then two bars with three lights, then two bars with four lights, and finally two bars with five lights.
5.3.3.4	The U.S. approach light system uses aimed PAR-56 lights.
5.3.3.6	The U.S. heliport approach light system does not contain flashing lights.
5.3.5.2 a)	The U.S. requires an odd number of lights, but not less than three lights per side.
5.3.5.2 b)	The U.S. requires a minimum of eight lights for a circular FATO and does not specify the distance between lights.
5.3.5.4*	The U.S. criteria does not specify light distribution.
5.3.6	The U.S. does not have specific criteria for aiming point lights.
5.3.8	The U.S. does not have standards for winching area lighting.
Chapter 6	Heliport Services
6.1*	The U.S. requirements for rescue and fire fighting services at certificated heliports are found in 14 CFR Part 139. Criteria for other heliports are established by the National Fire Protection Association (NFPA) pamphlets 403 or 418, or in regulations of local fire departments.

*Indicates ICAO Recommended Practice

ANNEX 15 – AERONAUTICAL INFORMATION SERVICES	
Chapter 1	General
ASHTAM	The U.S. doesn't have a series of NOTAM called ASHTAM.
Danger area	Danger Areas do not exist in the U.S. Equivalent/similar areas are defined, designated & charted as Prohibited, Warning, Alert, and Restricted Areas.”
NOTAM	FAA uses Notices to Air Missions instead of Notices to Airmen.
Pre-flight Information Bulletin (PIB)	The US does not use the term PIB.
Prohibited Area	Additional terminology used by the US.
Restricted Area	Additional terminology used by the US.
SNOWTAM	The US presents the information via a NOTAM.
1.1.20	The US does not use the term ASHTAM.
1.2.2.2	The U.S. utilizes Geoid-03 which is a component of the North American Vertical Datum of 1988 (NAVD 88).
Chapter 5	Aeronautical Information Products and Services
5.2.1	Currently, the U.S. does not utilize the ICAO format for domestic NOTAMs. The US NOTAMs that are distributed as International NOTAMs are in ICAO format (excluding the L/L).
5.2.5.1. f)	The US does not produce an Aircraft Parking / Docking Chart.
5.2.6	The U.S. does not use the term SNOWTAM and ASHTAM.
5.3.3.4.1	The United States does not publish the horizontal extent of obstacles.
Chapter 6	Aeronautical Information Updates
6.3.2.1	The U.S. does not routinely publish “trigger” NOTAMs when an AIP amendment is issued.
6.3.2.3	The U.S. does not provide a NOTAM for accidental release of radioactive material, toxic chemicals, pyrotechnic demonstrations, sky lanterns, rocket debris, or volcanic ash deposition.

ANNEX 16 – ENVIRONMENTAL PROTECTION	
VOLUME I – AIRCRAFT NOISE	
Reference: Part 36 of Title 14 of the United States Code of Federal Regulations	
Chapter 1	
1.7	Each person who applies for a type certificate for an airplane covered by 14 CFR Part 36, irrespective of the date of application for the type certificate, must show compliance with Part 36.
Chapter 2	
2.1.1	For type design change applications made after 14 August 1989, if an airplane is a Stage 3 airplane prior to a change in type design, it must remain a Stage 3 airplane after the change in type design regardless of whether Stage 3 compliance was required before the change in type design.
2.3.1 a)	Sideline noise is measured along a line 450 meters from and parallel to the extended runway centerline for two- and three-engine aircraft; for four-engine aircraft, the sideline distance is 0.35 NM.
2.4.2	Noise level limits for Stage 2 derivative aircraft depend upon whether the engine by-pass ratio is less than two. If it is, the Stage 2 limits apply. Otherwise, the limits are the Stage 3 limits plus 3 dB or the Stage 2 value, whichever is lower.
2.4.2.2 b)	Take-off noise limits for three-engine, Stage 2 derivative airplanes with a by-pass ratio equal to or greater than 2 are 107 EPNdB for maximum weights of 385,000 kg (850,000 lb) or more, reduced by 4 dB per halving of the weight down to 92 EPNdB for maximum weights of 28,700 kg (63,177 lb) or less. Aircraft with a by-pass ratio less than 2 only need meet the Stage 2 limits.
2.5.1	Trade-off sum of excesses not greater than 3 EPNdB and no excess greater than 2 EPNdB.
2.6.1.1	For airplanes that do not have turbo-jet engines with a by-pass ratio of 2 or more, the following apply: <ul style="list-style-type: none"> a) four-engine airplanes – 214 meters (700 feet); b) all other airplanes – 305 meters (1,000 feet). For all airplanes that have turbo-jet engines with a by-pass ratio of 2 or more, the following apply: <ul style="list-style-type: none"> a) four-engine airplanes – 210 meters (689 feet); b) three-engine airplanes – 260 meters (853 feet); c) airplanes with fewer than three engines – 305 meters (1,000 feet). The power may not be reduced below that which will provide level flight for an engine inoperative or that will maintain a climb gradient of at least 4 percent, whichever is greater.
Chapter 3	
3.1.1	For type design change applications made after 14 August 1989, if an airplane is a Stage 3 airplane prior to a change in type design, it must remain a Stage 3 airplane after the change in type design regardless of whether Stage 3 compliance was required before the change in type design.
3.3.1 a) 2)	The U.S. has no equivalent provision in 14 CFR Part 36.
3.3.2.2	A minimum of two microphones symmetrically positioned about the test flight track must be used to define the maximum sideline noise. This maximum noise may be assumed to occur where the aircraft reaches 305 meters (1,000 feet). 14 CFR Part 36 does not require symmetrical measurements to be made at each and every point for propeller-driven airplane sideline noise determination.
3.6.2.1 c)	Under 14 CFR Part 36, during each test take-off, simultaneous measurements should be made at the sideline noise measuring stations on each side of the runway and also at the take-off noise measuring station. If test site conditions make it impractical to simultaneously measure take-off and sideline noise, and if each of the other sideline measurement requirements is met, independent measurements may be made of the sideline noise under simulated flight path techniques. If the reference flight path includes a power cutback before the maximum possible sideline noise level is developed, the reduced sideline noise level, which is the maximum value developed by the simulated flight path technique, must be the certificated sideline noise value.

3.6.2.1 d)	14 CFR Part 36 specifies the day speeds and the acoustic reference speed to be the minimum approved value of $V_2 + 10$ kt, or the all–engines operating speed at 35 feet (for turbine–engine powered airplanes) or 50 feet (for reciprocating–engine powered airplanes), whichever speed is greater as determined under the regulations constituting the type certification basis of the airplane. The test must be conducted at the test day speeds ± 3 kt.
3.7.4	If a take–off test series is conducted at weights other than the maximum take–off weight for which noise certification is requested: a) at least one take–off test must be at or above that maximum weight; b) each take–off test weight must be within +5 or –10 percent of the maximum weight. If an approach test series is conducted at weights other than the maximum landing weight for which certification is requested: a) at least one approach test must be conducted at or above that maximum weight; b) each test weight must exceed 90 percent of the maximum landing weight. Total EPNL adjustment for variations in approach flight path from the reference flight path and for any difference between test engine thrust or power and reference engine thrust or power must not exceed 2 EPNdB.
Chapter 5	
5.1.1	Applies to all large transport category aircraft (as they do to all subsonic turbo–jet aircraft regardless of category). Commuter category aircraft, propeller–driven airplanes below 8,640 kg (19,000 lb) are subject to 14 CFR Part 36, Appendix F or to Appendix G, depending upon the date of completion of the noise certification tests.
Chapter 6	
6.1.1	Applies to new, all propeller–driven airplane types below 19,000 lb (8,640 kg.) in the normal, commuter, utility, acrobatic, transport, or restricted categories for which the noise certification tests are completed before 22 December 1988.
Chapter 8	
General	14 CFR Part 36 (Section 36.1 (h)) defines Stage 1 and Stage 2 noise levels and Stage 1 and Stage 2 helicopters. These definitions parallel those used in 14 CFR Part 36 for turbo–jets and are used primarily to simplify the acoustical change provisions in Section 36.11. 14 CFR Part 36 (Section 36.805(c)) provides for certain derived versions of helicopters for which there are no civil prototypes to be certificated above the noise level limits.
8.1.1 a)	Applicable to new helicopter types for which application for an original type certificate was made on or after 6 March 1988.
8.1.1 b)	Applicable only to “acoustical changes” for which application for an amended or supplemental type certificate was made on or after 6 March 1988.
8.4	14 CFR Part 36 Appendix H specifies a slightly different rate of allowable maximum noise levels as a function of helicopter mass. The difference can lead to a difference in the calculated maximum noise limits of 0.1 EPNdB under certain roundoff condition.
8.6.3.1 b)	Does not include the V_{NE} speeds.
8.7	14 CFR Part 36 Appendix H does not permit certain negative corrections. Annex 16 has no equivalent provision.
8.7.4	EPNL correction must be less than 2.0 EPNdB for any combination of lateral deviation, height, approach angle and, in the case of flyover, thrust or power. Corrections to the measured data are required if the tests were conducted below the reference weight. Corrections to the measured data are required if the tests were conducted at other than reference engine power.
8.7.5	The rotor speed must be maintained within one percent of the normal operating RPM during the take–off procedure.
8.7.8	The helicopter shall fly within $\pm 10^\circ$ from the zenith for approach and take–off, but within $\pm 5^\circ$ from the zenith for horizontal flyover.

Chapter 10	
General	Exception from acoustical change rule given for aircraft with flight time prior to 1 January 1955 and land configured aircraft reconfigured with floats or skis.
10.1.1	Applies to new, amended, or supplemental type certificates for propeller-driven airplanes not exceeding 8,640 kg (19,000 lb) for which noise certification tests have not been completed before 22 December 1988.
10.4	The maximum noise level is a constant 73 dBA up to 600 kg (1,320 lb). Above that weight, the limit increases at the rate of 1 dBA/75kg (1 dBA/165 lb) up to 85 dBA at 1,500 kg (3,300 lb) after which it is constant up to and including 8,640 kg (19,000 lb).
10.5.2, second phase, d)	For variable-pitch propellers, the definition of engine power is different in the second segment of the reference path. Maximum continuous installed power instead of maximum power is used.
Chapter 11	
11.1	14 CFR Part 36 Appendix J was effective 11 September 1992 and applies to those helicopters for which application for a type certificate was made on or after 6 March 1986.
11.4	14 CFR Part 36 Appendix J specifies a slightly different rate of allowable maximum noise levels as a function of helicopter mass. The difference can lead to a difference in the calculated maximum noise limits of 0.1 EPNdB under certain roundoff condition.
11.6	14 CFR Part 36 Appendix J prescribes a ±15 meter limitation on the allowed vertical deviation about the reference flight path. Annex 16 has no equivalent provision.
PART V	
General	No comparable provision exists in U.S. Federal Regulations. Any local airport proprietor may propose noise abatement operating procedures to the FAA which reviews them for safety and appropriateness.
Appendix 1	
General	Sections 3, 8, and 9 of Appendix 1 which contain the technical specifications for equipment, measurement and analysis and data correction for Chapter 2 aircraft and their derivatives differ in many important aspects from the corresponding requirements in Appendix 2 which has been updated several times. 14 CFR Part 36 updates have generally paralleled those of Appendix 2 of Annex 16. These updated requirements are applicable in the U.S. to both Stage 2 and Stage 3 aircraft and their derivatives.
2.2.1	A minimum of two microphones symmetrically positioned about the test flight track must be used to define the maximum sideline noise. This maximum noise may be assumed to occur where the aircraft reaches 305 meters (1,000 feet), except for four-engine, Stage 2 aircraft for which 439 meters (1,440 feet) may be used.
2.2.2	No obstructions in the cone defined by the axis normal to the ground and the half-angle 80° from the axis.
2.2.3 c)	Relative humidity and ambient temperature over the sound path between the aircraft and 10 meters above the ground at the noise measuring site is such that the sound attenuation in the 8 kHz one-third octave band is not greater than 12 dB/100 meters and the relative humidity is between 20 and 95 percent. However, if the dew point and dry bulb temperature used for obtaining relative humidity are measured with a device which is accurate to within one-half a degree Celsius, the sound attenuation rate shall not exceed 14 dB/100 meters in the 8 kHz one-third octave band.
2.2.3 d)	Test site average wind not above 12 kt and average cross-wind component not above 7 kt.
2.3.4	The aircraft position along the flight path is related to the recorded noise 10 dB downpoints.
2.3.5	At least one take-off test must be a maximum take-off weight and the test weight must be within +5 or -10 percent of maximum certificated take-off weight.
Appendix 2	
2.2.1	A minimum of two symmetrically placed microphones must be used to define the maximum sideline noise at the point where the aircraft reaches 305 meters.

2.2.2	When a multiple layering calculation is required, the atmosphere between the airplane and the ground shall be divided into layers. These layers are not required to be of equal depth, and the maximum layer depth must be 100 meters.
2.2.2 b)	14 CFR Part 36 specifies that the lower limit of the temperature test window is 36 degrees Fahrenheit (2.2 degrees Celsius). Annex 16 provides 10 degrees Celsius as the lower limit for the temperature test window. 14 CFR Part 36 does not specify that the airport facility used to obtain meteorological condition measurements be within 2,000 meters of the measurement site.
2.2.2 c)	14 CFR Part 36 imposes a limit of 14 dB/100 meters in the 8 kHz one-third octave band when the temperature and dew point are measured with a device which is accurate to within one-half a degree Celsius.
2.2.3	14 CFR Part 36 requires that the limitations on the temperature and relative humidity test window must apply over the whole noise propagation path between a point 10 meters above the ground and the helicopter. Annex 16 specifies that the limitations on the temperature and relative humidity test window apply only at a point 10 meters above the ground. 14 CFR Part 36 requires that corrections for sound attenuation must be based on the average of temperature and relative humidity readings at 10 meters and the helicopter. Annex 16 implies that the corrections for sound absorption are based on the temperature and relative humidity measured at 10 meters only.
3.2.6	No equivalent requirement.
3.4.5	For each detector/integrator the response to a sudden onset or interruption of a constant sinusoidal signal at the respective one-third octave band center frequency must be measured at sampling times 0.5, 1.0, 1.5, and 2.0 seconds after the onset or interruption. The rising responses must be the following amounts before the steady-state level: 0.5 seconds: 4.0 ± 1.0 dB 1.0 seconds: 1.75 ± 0.75 dB 1.5 seconds: 1.0 ± 0.5 dB 2.0 seconds: 0.6 ± 0.5 dB
3.4.5 (Note 1)	No equivalent provision in 14 CFR Part 36.
3.5.2	No equivalent requirement.
5.4	14 CFR Part 36 requires that the difference between airspeed and groundspeed shall not exceed 10 kt between the 10 dB down time period.
8.4.2	14 CFR Part 36 specifies a value of –10 in the adjustment for duration correction. Annex 16 specifies a value of –7.5.
9.1.2, 9.1.3	14 CFR Part 36 always requires use of the integrated procedure if the corrected take-off or approach noise level is within 1.0 dB of the applicable noise limit.
Appendix 6	
4.4.1	The microphone performance, not its dimensions, is specified. The microphone must be mounted 1.2 meters (4 feet) above ground level. A windscreen must be employed when the wind speed is in excess of 9 km/h (5 kt).
5.2.2 a)	Reference conditions are different. Noise data outside the applicable range must be corrected to 77 degrees F and 70 percent humidity.
5.2.2 c)	There is no equivalent provision in 14 CFR Part 36. Fixed-pitch propeller-driven airplanes have a special provision. If the propeller is fixed-pitch and the test power is not within 5 percent of reference power, a helical tip Mach number correction is required.

ANNEX 16 – ENVIRONMENTAL PROTECTION	
VOLUME II – AIRCRAFT ENGINE EMISSIONS	
Chapter 1	
	The U.S. currently has regulations prohibiting intentional fuel venting from turbojet, turbofan and turboprop aircraft, but we do not now have a regulation preventing the intentional fuel venting from helicopter engines.

ANNEX 17 – SECURITY – SAFEGUARDING INTERNATIONAL CIVIL AVIATION AGAINST ACTS OF UNLAWFUL INTERFERENCE

There are no reportable differences between U.S. regulations and the Standards and Recommended Practices contained in this Annex.

ANNEX 18 – THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR
Adopted by the ICAO Council 6/26/81
Effective Date: 1/1/83
Applicability Date: 1/1/84
(Note: Differences are to be filed with ICAO by 6/1/83).

Chapter 1	General
1.2.2.2	The U.S. utilizes Geoid–03 which is a component of the North American Vertical Datum of 1988 (NAVD 88).
1.1 ASHTAM	The U.S. doesn’t have a series of NOTAM called ASHTAM, although notification procedures are written on handling of Volcanic Ash activity.
1.1 Danger area	“Danger area” is not used in reference to areas within the U.S. or in any of its possessions or territories.
1.1 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.
1.1 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.
1.1 Pre-flight Information Bulletin (PIB)	The US does not use the term PIB. However, current NOTAM information is gathered and available through different sources.
1.1 SNOWTAM	The US presents the information in a different manner via a NOTAM.
Chapter 3	Aeronautical Information Management
3.6.1	Current quality management system applies only to the Aeronautical Information Services.
Chapter 5	Aeronautical Information Products and Services
5.2.2	The FAA does not use PIBs, but does provide pertinent NOTAM information in plain language form every 28 days in a document called the Notices to Air Missions Publication (NTAP).
5.2.5.1. f)	The US does not produce an Aircraft Parking / Docking Chart.
5.3.3.4.1	The United States does not publish the horizontal extent of obstacles.
Chapter 6	Aeronautical Information Updates
6.3.2.1	The U.S. does not routinely issue “trigger NOTAMs” referencing published material when an AIP amendment is issued.
6.3.2.3	The U.S. does not provide a NOTAM for accidental release of radioactive material, toxic chemicals, or volcanic ash deposition.

ANNEX 19 – SAFETY MANAGEMENT	
Chapter 3	State Safety Management Responsibilities
3.3.2.1	U.S. does not currently require the implementation of SMS by approved training organizations that are exposed to safety risks related to aircraft operations during the provision of their services; some operators of aeroplanes or helicopters authorized to conduct international commercial air transport; approved maintenance organizations providing services to operators of aeroplanes or helicopters engaged in international commercial air transport; organizations responsible for the type design or manufacture of aircraft, engines or propellers; and operators of certain aerodromes that do not satisfy criteria in 14 CFR § 139.401.
3.3.2.3	The U.S. has not established criteria for international general aviation operators of large or turbojet aeroplanes to implement an SMS.

PANS – OPS – 8168/611	
VOLUME I – Flight Procedures	
PART III	
Table III-1-1 and Table III-1-2	Max speeds for visual maneuvering (Circling)” must not be applied to circling procedures in the U.S. Comply with the airspeeds and circling restrictions in ENR 1.5, paragraphs 11.1 and 11.6, in order to remain within obstacle protection areas.
PART IV	
1.2.1	The airspeeds contained in ENR 1.5 shall be used in U.S. CONTROLLED AIRSPACE .
VOLUME II – Construction of Visual and Instrument Flight Procedures	
In toto	The United States does not construct Visual nor Instrument Flight Procedures per Volume II. The U.S. constructs Visual and Instrument Flight Procedures following the cited FAA Orders 8260.3, 8260.19, 8260.46, 8260.58, and 8260.61.
In toto	See ENR 1.5-6 Approach Clearance. Feeder routes may connect an instrument approach to the en route structure.
PART I	
Section 2 – General Principles	
Chapter 1	
1.1.4d	See ENR 1.5-3.1 Standard Terminal Arrival (STAR) Procedures and 1.5-35 Departure Control. The United States has En Route Transitions promulgated on SIDs and STARs that facilitate transitions between en route and instrument flight procedures.
Section 4 – Arrival and Approach Procedures	
Chapter 5	
5.4.1.5	See ENR 1.5-11 Approach and Landing Minimums. The United States publishes landing minima on instrument approach charts.
5.4.6.1	See ENR 1.5-12.9. Obstacles may penetrate the visual segment surface.
Chapter 7	
7.3	See ENR 1.5-11 Approach and Landing Minimums. The United States uses a minimum obstacle clearance of 300’ instead of 394’ for CAT C and D circling minima.
Appendix (to Chapter 7)	See ENR 1.5-26 Charted Visual Flight Procedures (CVFPs). The United States publishes CVFPs instead of Visual Maneuvering using Prescribed Track and provides no minimum obstacle clearance assurance.
Chapter 10	
10.1.1	See ENR 1.5-10 Side-step Maneuver. The United States may authorize a side-step maneuver to transition from the final approach course aligned to one runway to land on a parallel runway.
Part III	
Section 5 – Publication	
Chapter 1	

1.4.2.3	<p>See ENR 1.5-9.2 for RNP AR APCH, 12.13 for RNP APCH.</p> <p>The United States naming convention for RNP APCH approaches is "RNAV (GPS) RWY ##". The naming convention for RNP AR APCH approaches is "RNAV (RNP) RWY ##".</p>
Part IV	
In toto	<p>See ENR 1.5-12.8 Visual Descent Point (VDP).</p> <p>The United States may publish a VDP on a nonprecision approach where a pilot can make a stabilized descent from the MDA. Volume II, Part IV does not contain an equivalent provision.</p>
VOLUME III – Aircraft Operating Procedures	
Section 10 – Flight Tracking	
1.2.1	<p>The United States has notified differences to the distress tracking standards in Annex 6, Part I, 6.18. Consistent with those differences, the United States does not require U.S. operators to establish training programs and procedures specific to autonomous distress tracking and will not perform surveillance of implementation by U.S. operators.</p>
1.2.2	<p>FAA Order JO 7210.632, Air Traffic Organization Occurrence Reporting, establishes mandatory occurrence reporting (MOR) requirements and format for FAA employees, including reports sourced from operators and missed position reporting. The MOR Report form includes most, but not all, of the template in the Appendix to Ch. 1.</p>
1.2.3	<p>The United States has notified differences to the distress tracking standards in Annex 6, Part I, 6.18. Consistent with those differences, the United States does not require U.S. operators to maintain contact details in the ICAO OPS CTRL.</p>

PAN – ABC – DOC 8400

Differences between abbreviations used in U.S. AIP, International NOTAMs Class I and Class II, and Notices to Air Missions Publication and ICAO PANS – ABC are listed in GEN 2.2. For other U.S. listings of abbreviations (contractions) for general use, air traffic control, and National Weather Service (NWS), which differ in some respects, see U.S. publication Contractions Handbook (FAA Order JO 7340.2). In addition, various U.S. publications contain abbreviations of terms used therein, particularly those unique to that publication.

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

PAGE	DATE
PART 2 – EN ROUTE (ENR)	
ENR 0	
0.4-1	5 SEP 24
0.4-2	5 SEP 24
0.4-3	5 SEP 24
0.4-4	5 SEP 24
0.6-1	21 MAR 24
0.6-2	21 MAR 24
ENR 1	
1.1-1	21 MAR 24
1.1-2	21 MAR 24
1.1-3	21 MAR 24
1.1-4	21 MAR 24
1.1-5	21 MAR 24
1.1-6	21 MAR 24
1.1-7	21 MAR 24
1.1-8	21 MAR 24
1.1-9	21 MAR 24
1.1-10	21 MAR 24
1.1-11	21 MAR 24
1.1-12	21 MAR 24
1.1-13	21 MAR 24
1.1-14	21 MAR 24
1.1-15	21 MAR 24
1.1-16	21 MAR 24
1.1-17	21 MAR 24
1.1-18	21 MAR 24
1.1-19	21 MAR 24
1.1-20	21 MAR 24
1.1-21	21 MAR 24
1.1-22	21 MAR 24
1.1-23	21 MAR 24
1.1-24	21 MAR 24
1.1-25	21 MAR 24
1.1-26	21 MAR 24
1.1-27	21 MAR 24
1.1-28	21 MAR 24
1.1-29	21 MAR 24
1.1-30	21 MAR 24
1.1-31	21 MAR 24

PAGE	DATE
1.1-32	21 MAR 24
1.1-33	21 MAR 24
1.1-34	21 MAR 24
1.1-35	21 MAR 24
1.1-36	21 MAR 24
1.1-37	21 MAR 24
1.1-38	21 MAR 24
1.1-39	21 MAR 24
1.1-40	21 MAR 24
1.1-41	21 MAR 24
1.1-42	5 SEP 24
1.1-43	5 SEP 24
1.1-44	5 SEP 24
1.1-45	5 SEP 24
1.1-46	5 SEP 24
1.1-47	5 SEP 24
1.1-48	5 SEP 24
1.1-49	5 SEP 24
1.1-50	5 SEP 24
1.1-51	5 SEP 24
1.1-52	5 SEP 24
1.1-53	5 SEP 24
1.1-54	5 SEP 24
1.1-55	5 SEP 24
1.1-56	5 SEP 24
1.1-57	5 SEP 24
1.1-58	5 SEP 24
1.1-59	5 SEP 24
1.1-60	5 SEP 24
1.1-61	5 SEP 24
1.1-62	5 SEP 24
1.1-63	5 SEP 24
1.1-64	5 SEP 24
1.1-65	5 SEP 24
1.1-66	5 SEP 24
1.1-67	5 SEP 24
1.1-68	5 SEP 24
1.1-69	5 SEP 24
1.1-70	5 SEP 24
1.1-71	5 SEP 24

PAGE	DATE
1.1-72	5 SEP 24
1.1-73	5 SEP 24
1.1-74	5 SEP 24
1.1-75	5 SEP 24
1.1-76	5 SEP 24
1.1-77	5 SEP 24
1.1-78	5 SEP 24
1.1-79	5 SEP 24
1.1-80	5 SEP 24
1.1-81	5 SEP 24
1.1-82	5 SEP 24
1.1-83	5 SEP 24
1.1-84	5 SEP 24
1.1-85	5 SEP 24
1.1-86	5 SEP 24
1.1-87	5 SEP 24
1.1-88	5 SEP 24
1.1-89	5 SEP 24
1.1-90	5 SEP 24
1.1-91	5 SEP 24
1.1-92	5 SEP 24
1.1-93	5 SEP 24
1.1-94	5 SEP 24
1.1-95	5 SEP 24
1.1-96	5 SEP 24
1.2-1	21 MAR 24
1.3-1	21 MAR 24
1.4-1	21 MAR 24
1.4-2	21 MAR 24
1.4-3	21 MAR 24
1.4-4	21 MAR 24
1.4-5	21 MAR 24
1.4-6	21 MAR 24
1.4-7	21 MAR 24
1.4-8	21 MAR 24
1.4-9	21 MAR 24
1.4-10	21 MAR 24
1.4-11	21 MAR 24
1.4-12	21 MAR 24

PAGE	DATE
1.4-13	21 MAR 24
1.4-14	21 MAR 24
1.4-15	21 MAR 24
1.4-16	21 MAR 24
1.4-17	21 MAR 24
1.4-18	21 MAR 24
1.4-19	21 MAR 24
1.5-1	21 MAR 24
1.5-2	21 MAR 24
1.5-3	21 MAR 24
1.5-4	21 MAR 24
1.5-5	21 MAR 24
1.5-6	21 MAR 24
1.5-7	21 MAR 24
1.5-8	21 MAR 24
1.5-9	21 MAR 24
1.5-10	21 MAR 24
1.5-11	21 MAR 24
1.5-12	5 SEP 24
1.5-13	5 SEP 24
1.5-14	5 SEP 24
1.5-15	5 SEP 24
1.5-16	5 SEP 24
1.5-17	5 SEP 24
1.5-18	5 SEP 24
1.5-19	21 MAR 24
1.5-20	21 MAR 24
1.5-21	21 MAR 24
1.5-22	21 MAR 24
1.5-23	21 MAR 24
1.5-24	21 MAR 24
1.5-25	21 MAR 24
1.5-26	21 MAR 24
1.5-27	21 MAR 24
1.5-28	5 SEP 24
1.5-29	5 SEP 24
1.5-30	5 SEP 24
1.5-31	21 MAR 24
1.5-32	21 MAR 24
1.5-33	21 MAR 24
1.5-34	21 MAR 24
1.5-35	21 MAR 24
1.5-36	21 MAR 24
1.5-37	21 MAR 24
1.5-38	21 MAR 24
1.5-39	21 MAR 24
1.5-40	21 MAR 24
1.5-41	21 MAR 24
1.5-42	21 MAR 24
1.5-43	21 MAR 24
1.5-44	21 MAR 24

PAGE	DATE
1.5-45	21 MAR 24
1.5-46	21 MAR 24
1.5-47	21 MAR 24
1.5-48	21 MAR 24
1.5-49	21 MAR 24
1.5-50	21 MAR 24
1.5-51	21 MAR 24
1.5-52	21 MAR 24
1.5-53	21 MAR 24
1.5-54	21 MAR 24
1.5-55	21 MAR 24
1.5-56	21 MAR 24
1.5-57	21 MAR 24
1.5-58	21 MAR 24
1.5-59	21 MAR 24
1.5-60	21 MAR 24
1.5-61	21 MAR 24
1.5-62	21 MAR 24
1.5-63	21 MAR 24
1.5-64	21 MAR 24
1.5-65	21 MAR 24
1.5-66	21 MAR 24
1.5-67	21 MAR 24
1.5-68	21 MAR 24
1.5-69	21 MAR 24
1.5-70	21 MAR 24
1.5-71	21 MAR 24
1.5-72	21 MAR 24
1.5-73	21 MAR 24
1.5-74	21 MAR 24
1.5-75	21 MAR 24
1.5-76	21 MAR 24
1.5-77	21 MAR 24
1.5-78	21 MAR 24
1.5-79	21 MAR 24
1.5-80	21 MAR 24
1.5-81	21 MAR 24
1.5-82	21 MAR 24
1.5-83	21 MAR 24
1.5-84	21 MAR 24
1.5-85	21 MAR 24
1.5-86	21 MAR 24
1.5-87	21 MAR 24
1.5-88	21 MAR 24
1.5-89	21 MAR 24
1.5-90	21 MAR 24
1.5-91	21 MAR 24
1.6-1	5 SEP 24
1.6-2	21 MAR 24
1.6-3	21 MAR 24
1.6-4	21 MAR 24
1.6-5	21 MAR 24

PAGE	DATE
1.6-6	21 MAR 24
1.6-7	21 MAR 24
1.6-8	21 MAR 24
1.6-9	21 MAR 24
1.6-10	21 MAR 24
1.6-11	21 MAR 24
1.7-1	21 MAR 24
1.7-2	21 MAR 24
1.7-3	21 MAR 24
1.8-1	21 MAR 24
1.8-2	21 MAR 24
1.8-3	21 MAR 24
1.8-4	21 MAR 24
1.8-5	21 MAR 24
1.8-6	21 MAR 24
1.8-7	21 MAR 24
1.8-8	21 MAR 24
1.9-1	21 MAR 24
1.10-1	5 SEP 24
1.10-2	21 MAR 24
1.10-3	21 MAR 24
1.10-4	21 MAR 24
1.10-5	21 MAR 24
1.10-6	21 MAR 24
1.10-7	21 MAR 24
1.10-8	21 MAR 24
1.10-9	21 MAR 24
1.10-10	5 SEP 24
1.10-11	5 SEP 24
1.10-12	5 SEP 24
1.10-13	21 MAR 24
1.10-14	21 MAR 24
1.10-15	21 MAR 24
1.10-16	21 MAR 24
1.10-17	21 MAR 24
1.10-18	21 MAR 24
1.10-19	21 MAR 24
1.11-1	21 MAR 24
1.11-2	21 MAR 24
1.12-1	21 MAR 24
1.12-2	21 MAR 24
1.12-3	21 MAR 24
1.12-4	21 MAR 24
1.12-5	21 MAR 24
1.12-6	21 MAR 24
1.12-7	21 MAR 24
1.12-8	21 MAR 24
1.12-9	21 MAR 24
1.12-10	21 MAR 24
1.12-11	21 MAR 24
1.12-12	21 MAR 24

PAGE	DATE
1.12-13	21 MAR 24
1.12-14	21 MAR 24
1.12-15	21 MAR 24
1.13-1	21 MAR 24
1.14-1	21 MAR 24
1.15-1	21 MAR 24
1.15-2	21 MAR 24
1.15-3	21 MAR 24
1.15-4	21 MAR 24
1.15-5	21 MAR 24
1.15-6	21 MAR 24
1.15-7	21 MAR 24
1.15-8	21 MAR 24
1.15-9	21 MAR 24
1.16-1	21 MAR 24
1.16-2	21 MAR 24
1.16-3	21 MAR 24
1.17-1	21 MAR 24
1.17-2	21 MAR 24
1.17-3	21 MAR 24
1.17-4	21 MAR 24
1.17-5	21 MAR 24
1.17-6	21 MAR 24
1.17-7	21 MAR 24
1.17-8	21 MAR 24
1.17-9	21 MAR 24
1.17-10	21 MAR 24
1.17-11	21 MAR 24
1.17-12	5 SEP 24
1.17-13	5 SEP 24
ENR 2	
2-1	21 MAR 24
ENR 3	
3.1-1	5 SEP 24
3.2-1	5 SEP 24
3.3-1	21 MAR 24
3.4-1	21 MAR 24
3.5-1	21 MAR 24
3.5-2	21 MAR 24
3.5-3	21 MAR 24
3.5-4	21 MAR 24
ENR 4	
4.1-1	21 MAR 24
4.1-2	21 MAR 24
4.1-3	21 MAR 24
4.1-4	21 MAR 24
4.1-5	21 MAR 24
4.1-6	21 MAR 24
4.1-7	21 MAR 24

PAGE	DATE
4.1-8	21 MAR 24
4.1-9	21 MAR 24
4.1-10	21 MAR 24
4.1-11	21 MAR 24
4.1-12	21 MAR 24
4.1-13	21 MAR 24
4.1-14	21 MAR 24
4.1-15	21 MAR 24
4.1-16	21 MAR 24
4.1-17	21 MAR 24
4.1-18	21 MAR 24
4.1-19	21 MAR 24
4.1-20	5 SEP 24
4.1-21	21 MAR 24
4.1-22	21 MAR 24
4.1-23	21 MAR 24
4.1-24	21 MAR 24
4.1-25	21 MAR 24
4.1-26	21 MAR 24
4.1-27	21 MAR 24
4.1-28	21 MAR 24
4.1-29	21 MAR 24
4.1-30	21 MAR 24
4.1-31	21 MAR 24
4.1-32	21 MAR 24
4.1-33	21 MAR 24
4.1-34	21 MAR 24
4.1-35	21 MAR 24
4.1-36	21 MAR 24
4.1-37	21 MAR 24
4.1-38	21 MAR 24
4.1-39	21 MAR 24
4.1-40	21 MAR 24
4.2-1	21 MAR 24
ENR 5	
5.1-1	21 MAR 24
5.1-2	21 MAR 24
5.1-3	21 MAR 24
5.1-4	21 MAR 24
5.1-5	21 MAR 24
5.1-6	21 MAR 24
5.2-1	21 MAR 24
5.2-2	5 SEP 24
5.2-3	5 SEP 24
5.3-1	21 MAR 24
5.4-1	21 MAR 24
5.5-1	21 MAR 24
5.6-1	21 MAR 24
5.6-2	21 MAR 24
5.6-3	21 MAR 24
5.7-1	21 MAR 24

PAGE	DATE
5.7-2	21 MAR 24
5.7-3	21 MAR 24
5.7-4	21 MAR 24
5.7-5	21 MAR 24
5.7-6	21 MAR 24
5.7-7	21 MAR 24
5.7-8	21 MAR 24
5.7-9	21 MAR 24
5.7-10	21 MAR 24
5.7-11	21 MAR 24
5.7-12	21 MAR 24
5.7-13	21 MAR 24
5.7-14	21 MAR 24
5.7-15	21 MAR 24
5.7-16	21 MAR 24
5.7-17	21 MAR 24
5.7-18	21 MAR 24
ENR 6	
6.1-1	21 MAR 24
6.1-2	21 MAR 24
6.1-3	21 MAR 24
6.1-4	21 MAR 24
6.1-5	21 MAR 24
6.1-6	21 MAR 24
6.1-7	21 MAR 24
6.1-8	21 MAR 24
6.2-1	21 MAR 24
6.2-2	21 MAR 24
6.2-3	21 MAR 24
6.2-4	21 MAR 24
6.2-5	21 MAR 24
6.2-6	21 MAR 24
6.2-7	21 MAR 24
6.2-8	21 MAR 24
6.2-9	21 MAR 24
6.2-10	21 MAR 24
6.2-11	21 MAR 24
6.2-12	21 MAR 24
6.2-13	21 MAR 24
6.2-14	21 MAR 24
6.2-15	21 MAR 24
6.2-17	21 MAR 24
6.2-18	21 MAR 24
6.2-19	21 MAR 24
6.2-20	21 MAR 24
ENR 7	
7.1-1	21 MAR 24
7.1-2	21 MAR 24
7.1-3	21 MAR 24

PAGE	DATE
7.1-4	5 SEP 24
7.1-5	21 MAR 24
7.1-6	21 MAR 24
7.1-7	21 MAR 24
7.1-8	21 MAR 24
7.2-1	21 MAR 24
7.2-2	21 MAR 24
7.2-3	21 MAR 24
7.3-1	21 MAR 24
7.3-2	21 MAR 24
7.3-3	21 MAR 24
7.3-4	21 MAR 24
7.3-5	21 MAR 24
7.4-1	21 MAR 24
7.4-2	21 MAR 24
7.4-3	21 MAR 24
7.4-4	21 MAR 24
7.4-5	21 MAR 24
7.5-1	21 MAR 24
7.5-2	21 MAR 24
7.5-3	21 MAR 24
7.6-1	21 MAR 24

PAGE	DATE
7.6-2	21 MAR 24
7.7-1	21 MAR 24
7.8-1	21 MAR 24
7.8-2	21 MAR 24
7.8-3	21 MAR 24
7.9-1	21 MAR 24
7.10-1	21 MAR 24
7.11-1	21 MAR 24
7.11-2	21 MAR 24
7.12-1	21 MAR 24
7.13-1	21 MAR 24
7.14-1	21 MAR 24
ENR 8	
8.1-1	21 MAR 24
8.1-2	21 MAR 24
8.2-1	21 MAR 24
8.2-2	21 MAR 24
8.2-3	21 MAR 24
8.3-1	21 MAR 24
8.3-2	21 MAR 24
8.3-3	21 MAR 24

PAGE	DATE
8.3-4	21 MAR 24
8.3-5	21 MAR 24
8.3-6	21 MAR 24
8.4-1	21 MAR 24
8.4-2	21 MAR 24
8.4-3	21 MAR 24
8.4-4	21 MAR 24
8.4-5	21 MAR 24
8.4-6	21 MAR 24
8.4-7	21 MAR 24
8.4-8	21 MAR 24
8.4-9	21 MAR 24
8.5-1	21 MAR 24
8.5-2	21 MAR 24
8.5-3	21 MAR 24
8.6-1	21 MAR 24
8.7-1	21 MAR 24
8.8-1	21 MAR 24
8.8-2	21 MAR 24
8.8-3	21 MAR 24
8.8-4	21 MAR 24

ENR 0.5 List of Hand Amendments to the AIP – Not applicable

EXAMPLE-

3. “United Four Seventeen, cross Lakeview V-O-R at or above Flight Level two zero zero, descend and maintain six thousand.”

NOTE-

3. The pilot is authorized to conduct descent at pilot’s discretion until reaching Lakeview VOR and must comply with the clearance provision to cross the Lakeview VOR at or above FL 200. After passing Lakeview VOR, the pilot is expected to descend at the suggested rates until reaching the assigned altitude of 6,000 feet.

EXAMPLE-

4. “United Four Seventeen, cross Lakeview V-O-R at six thousand, maintain six thousand.”

NOTE-

4. The pilot is authorized to conduct descent at pilot’s discretion, however, must comply with the clearance provision to cross the Lakeview VOR at 6,000 feet.

EXAMPLE-

5. “United Four Seventeen, descend now to Flight Level two seven zero, cross Lakeview V-O-R at or below one zero thousand, descend and maintain six thousand.”

NOTE-

5. The pilot is expected to promptly execute and complete descent to FL 270 upon receipt of the clearance. After reaching FL 270 the pilot is authorized to descend “at pilot’s discretion” until reaching Lakeview VOR. The pilot must comply with the clearance provision to cross Lakeview VOR at or below 10,000 feet. After Lakeview VOR the pilot is expected to descend at the suggested rates until reaching 6,000 feet.

EXAMPLE-

6. “United Three Ten, descend now and maintain Flight Level two four zero, pilot’s discretion after reaching Flight Level two eight zero.”

NOTE-

6. The pilot is expected to commence descent upon receipt of the clearance and to descend at the suggested rates until reaching FL 280. At that point, the pilot is authorized to continue descent to FL 240 within the context of the term “at pilot’s discretion” as described above.

32.6 In case emergency authority is used to deviate from the provisions of an ATC clearance, the pilot in command must notify ATC as soon as possible and obtain an amended clearance. In an emergency situation which results in no deviation from the rules prescribed in 14 CFR Part 91 but which requires ATC to give priority to an aircraft, the pilot of such aircraft must, when requested by ATC, make a report within 48 hours of such emergency situation to the manager of that ATC facility.

32.7 The guiding principle is that the last ATC clearance has precedence over the previous ATC clearance. When the route or altitude in a previously issued clearance is amended, the controller will restate applicable altitude restrictions. If altitude to maintain is changed or restated, whether prior to departure or while airborne, and previously issued altitude restrictions are omitted, those altitude restrictions are canceled, including Departure Procedures and Standard Terminal Arrival Route (STAR) altitude restrictions.

EXAMPLE-

1. A departure flight receives a clearance to destination airport to maintain FL 290. The clearance incorporates a DP which has certain altitude crossing restrictions. Shortly after takeoff, the flight receives a new clearance changing the maintaining FL from 290 to 250. If the altitude restrictions are still applicable, the controller restates them.

2. A departing aircraft is cleared to cross Fluky Intersection at or above 3,000 feet, Gordonville VOR at or above 12,000 feet, maintain FL 200. Shortly after departure, the altitude to be maintained is changed to FL 240. If the altitude restrictions are still applicable, the controller issues an amended clearance as follows: “cross Fluky Intersection at or above three thousand, cross Gordonville V-O-R at or above one two thousand, maintain Flight Level two four zero.”

3. An arriving aircraft is cleared to the destination airport via V45 Delta VOR direct; the aircraft is cleared to cross Delta VOR at 10,000 feet, and then to maintain 6,000 feet. Prior to Delta VOR, the controller issues an amended clearance as follows: “turn right heading one eight zero for vector to runway three six I-L-S approach, maintain six thousand.”

NOTE-

Because the altitude restriction “cross Delta V-O-R at 10,000 feet” was omitted from the amended clearance, it is no longer in effect.

32.8 Pilots of turbojet aircraft equipped with afterburner engines should advise ATC prior to takeoff if they intend to use afterburning during their climb to the en route altitude. Often, the controller may be able to plan traffic to accommodate a high performance climb and allow the aircraft to climb to the planned altitude without restriction.

32.9 If an “expedite” climb or descent clearance is issued by ATC, and the altitude to maintain is subsequently changed or restated without an expedite instruction, the expedite instruction is canceled. Expedite climb/descent normally indicates to the pilot that the approximate best rate of climb/descent should be used without requiring an exceptional change in aircraft handling characteristics. Normally controllers will inform pilots of the reason for an instruction to expedite.

33. IFR Separation Standards

33.1 ATC effects separation of aircraft vertically by assigning different altitudes; longitudinally by providing an interval expressed in time or distance between aircraft on the same, converging, or crossing courses; and laterally by assigning different flight paths.

33.2 Separation will be provided between all aircraft operating on IFR flight plans except during that part of the flight (outside Class B airspace or a TRSA) being conducted on a VFR-on-top/VFR conditions clearance. Under these conditions, ATC may issue traffic advisories, but it is the sole responsibility of the pilot to be vigilant so as to see and avoid other aircraft.

33.3 When radar is employed in the separation of aircraft at the same altitude, a minimum of 3 miles separation is provided between aircraft operating within 40 miles of the radar antenna site, and 5 miles between aircraft operating beyond 40 miles from the antenna site. These minimums may be increased or decreased in certain specific situations.

34. Speed Adjustments

34.1 ATC will issue speed adjustments to pilots of radar-controlled aircraft to achieve or maintain appropriate spacing. If necessary, ATC will assign a speed when approving deviations or radar vectoring off procedures that include published speed restrictions or a chart note used to transition from Mach to IAS. If no speed is assigned, speed becomes pilot’s discretion. However, when the aircraft reaches the end of the STAR, the last published speed on the STAR must be maintained until ATC deletes it, assigns a new speed, issues a vector, assigns a direct route, or issues an approach clearance.

NOTE-

A chart note identifying a speed to maintain after transitioning from Mach to IAS may be published in lieu of or in addition to other published speed restrictions on a STAR.

REFERENCE-

AIP, ENR 1.5, Para 3, Standard Terminal Arrival (STAR) Procedures

34.2 ATC will express all speed adjustments in terms of knots based on indicated airspeed (IAS) in 5 or 10 knot increments except that at or above FL 240 speeds may be expressed in terms of Mach numbers in 0.01 increments. The use of Mach numbers is restricted to aircraft with Mach meters.

34.3 Pilots of aircraft in U.S. domestic Class A, B, C, D, and E airspace complying with speed adjustments (published or assigned) should maintain a speed within plus or minus 10 knots or 0.02 Mach number, whichever is less, of the assigned speed.

34.4 Pilots of aircraft in offshore controlled airspace or oceanic controlled airspace must adhere to the ATC assigned airspeed and must request ATC approval before making any change thereto. If it is essential to make an immediate temporary change in the Mach number (e.g., due to turbulence), ATC must be notified as soon as possible. If it is not feasible to maintain the last assigned Mach number during an en route climb or descent due to aircraft performance, advise ATC at the time of the request.

34.5 When ATC assigns speed adjustments, it will be in accordance with the following recommended minimums:

34.5.1 To aircraft operating between FL 280 and 10,000 feet, a speed not less than 250 knots or the equivalent Mach number.

NOTE-

1. On a standard day the Mach numbers equivalent to 250 knots CAS (subject to minor variations) are:

FL 240-0.6

FL 250-0.61

FL 260-0.62

FL 270-0.64

FL 280-0.65

FL 290-0.66.

2. When an operational advantage will be realized, speeds lower than the recommended minima may be applied.

34.5.2 To arriving turbojet aircraft operating below 10,000 feet, a speed not less than 210 knots, except within 20 flying miles of the airport of intended landing, a speed not less than 170 knots.

34.5.3 To arriving reciprocating engine or turboprop aircraft within 20 flying miles of the runway threshold of the airport of intended landing, a speed not less than 150 knots.

34.5.4 Departures, for turbojet aircraft, a speed not less than 230 knots; for reciprocating engine aircraft, a speed not less than 150 knots.

34.6 When ATC combines a speed adjustment with a descent clearance, the sequence of delivery with the word “then” between, indicates the expected order of execution; i.e., “DESCEND AND MAINTAIN (altitude); THEN, REDUCE SPEED TO (speed),” or “REDUCE SPEED TO (speed); THEN, DESCEND AND MAINTAIN (altitude).”

NOTE-

The maximum speeds below 10,000 feet as established in 14 CFR Section 91.117 still apply. If there is any doubt concerning the manner in which such a clearance is to be executed, request clarification from ATC.

34.7 If ATC determines (before an approach clearance is issued) that it is no longer necessary to apply speed adjustment procedures, they will:

34.7.1 Advise the pilot to “resume normal speed.” Normal speed is used to terminate ATC assigned speed adjustments on segments where no published speed restrictions apply. It does not cancel published restrictions on upcoming procedures. This does not relieve the pilot of those speed restrictions which are applicable to 14 CFR Section 91.117.

EXAMPLE-

(An aircraft is flying a SID with no published speed restrictions. ATC issues a speed adjustment and instructs the aircraft where the adjustment ends): “Maintain two two zero knots until BALTR then resume normal speed.”

NOTE-

The ATC assigned speed assignment of two two zero knots would apply until BALTR. The aircraft would then resume a normal operating speed while remaining in compliance with 14 CFR Section 91.117.

34.7.2 Instruct pilots to “comply with speed restrictions” when the aircraft is joining or resuming a charted procedure or route with published speed restrictions.

EXAMPLE-

(ATC vectors an aircraft off of a SID to rejoin the procedure at a subsequent waypoint. When instructing the aircraft to resume the procedure, ATC also wants the aircraft to comply with the published procedure speed restrictions): “Resume the SALTY ONE departure. Comply with speed restrictions.”

CAUTION-

The phraseology “Descend via/Climb via SID” requires compliance with all altitude and/or speed restrictions depicted on the procedure.

34.7.3 Instruct the pilot to “resume published speed.” Resume published speed is issued to terminate a speed adjustment where speed restrictions are published on a charted procedure.

NOTE-

When instructed to “comply with speed restrictions” or to “resume published speed,” ATC anticipates pilots will begin adjusting speed the minimum distance necessary prior to a published speed restriction so as to cross the waypoint/fix at the published speed. Once at the published speed, ATC expects pilots will maintain the published speed until additional adjustment is required to comply with further published or ATC assigned speed restrictions or as required to ensure compliance with 14 CFR Section 91.117.

EXAMPLE-

(An aircraft is flying a SID/STAR with published speed restrictions. ATC issues a speed adjustment and instructs the aircraft where the adjustment ends): “Maintain two two zero knots until BALTR then resume published speed.”

NOTE-

The ATC assigned speed assignment of two two zero knots would apply until BALTR. The aircraft would then comply with the published speed restrictions.

34.7.4 Advise the pilot to “delete speed restrictions” when either ATC assigned or published speed restrictions on a charted procedure are no longer required.

EXAMPLE-

(An aircraft is flying a SID with published speed restrictions designed to prevent aircraft overtake on departure. ATC determines there is no conflicting traffic and deletes the speed restriction): “Delete speed restrictions.”

NOTE-

When deleting published restrictions, ATC must ensure obstacle clearance until aircraft are established on a route where no published restrictions apply. This does not relieve the pilot of those speed restrictions which are applicable to 14 CFR Section 91.117.

34.7.5 Instruct the pilot to “climb via” or “descend via.” A climb via or descend via clearance cancels any previously issued speed restrictions and, once established on the depicted departure or arrival, to climb or descend, and to meet all published or assigned altitude and/or speed restrictions.

EXAMPLE-

1. (An aircraft is flying a SID with published speed restrictions. ATC has issued a speed restriction of 250 knots for spacing. ATC determines that spacing between aircraft is adequate and desires the aircraft to comply with published restrictions): “United 436, Climb via SID.”

2. (An aircraft is established on a STAR. ATC must slow an aircraft for the purposes of spacing and assigns it a speed of 280 knots. When spacing is adequate, ATC deletes the speed restriction and desires that the aircraft comply with all published restrictions on the STAR): “Gulfstream two three papa echo, descend via the TYLER One arrival.”

NOTE-

1. In example 1, when ATC issues a “Climb via SID” clearance, it deletes any previously issued speed and/or altitude restrictions. The pilot should then vertically navigate to comply with all speed and/or altitude restrictions published on the SID.

2. In example 2, when ATC issues a “Descend via <STAR name> arrival,” ATC has canceled any previously issued speed and/or altitude restrictions. The pilot should vertically navigate to comply with all speed and/or altitude restrictions published on the STAR.

CAUTION-

When descending on a STAR, pilots should not speed up excessively beyond the previously issued speed. Otherwise, adequate spacing between aircraft descending on the STAR that was established by ATC with the previous restriction may be lost.

34.8 Approach clearances supersede any prior speed adjustment assignments, and pilots are expected to make their own speed adjustments as necessary to complete the approach. However, under certain circumstances, it may be necessary for ATC to issue further speed adjustments after approach clearance is issued to maintain separation between successive arrivals. Under such circumstances, previously issued speed adjustments will be restated if that speed is to be maintained or additional speed adjustments are requested. Speed adjustments should not be assigned inside the final approach fix on final or a point 5 miles from the runway, whichever is closer to the runway.

34.9 The pilots retain the prerogative of rejecting the application of speed adjustment by ATC if the minimum safe airspeed for any particular operation is greater than the speed adjustment. IN SUCH CASES, PILOTS ARE EXPECTED TO ADVISE ATC OF THE SPEED THAT WILL BE USED.

34.10 Pilots are reminded that they are responsible for rejecting the application of speed adjustment by ATC if, in their opinion, it will cause them to exceed the maximum indicated airspeed prescribed by 14 CFR Section 91.117(a), (c) and (d). IN SUCH CASES, THE PILOT IS EXPECTED TO SO INFORM ATC. Pilots operating at or above 10,000 feet MSL who are issued speed adjustments which exceed 250 knots IAS and are subsequently cleared below 10,000 feet MSL are expected to comply with 14 CFR Section 91.117(a).

34.11 Speed restrictions of 250 knots do not apply to U.S. registered aircraft operating beyond 12 nautical miles from the coastline within the U.S. Flight Information Region, in Class E airspace below 10,000 feet MSL. However, in airspace underlying a Class B airspace area designated for an airport, or in a VFR corridor designated through such as a Class B airspace area, pilots are expected to comply with the 200 knot speed limit specified in 14 CFR Section 91.117(c).

34.12 For operations in a Class C and Class D surface area, ATC is authorized to request or approve a speed greater than the maximum indicated airspeeds prescribed for operation within that airspace (14 CFR Section 91.117(b)).

NOTE-

Pilots are expected to comply with the maximum speed of 200 knots when operating beneath Class B airspace or in a Class B VFR corridor (14 CFR Section 91.117(c) and (d)).

34.13 When in communication with the ARTCC or approach control facility, pilots should, as a good operating practice, state any ATC assigned speed restriction on initial radio contact associated with an ATC communications frequency change.

35. Runway Separation

35.1 Tower controllers establish the sequence of arriving and departing aircraft by requiring them to adjust flight or ground operation as necessary to achieve proper spacing. They may “HOLD” an aircraft short of the runway to achieve spacing between it and another arriving aircraft; the controller may instruct a pilot to “EXTEND DOWNWIND” in order to establish spacing from another arriving or departing aircraft. At times a clearance may include the word “IMMEDIATE.” For example: “CLEARED FOR IMMEDIATE TAKEOFF.” In such cases “IMMEDIATE” is used for purposes of air traffic separation. It is up to the pilot to refuse the clearance if, in the pilot’s opinion, compliance would adversely affect the operation.

36. Visual Separation

36.1 Visual separation is a means employed by ATC to separate aircraft in terminal areas and en route airspace. There are two methods employed to effect this separation:

36.1.1 The tower controller sees the aircraft involved and issues instructions, as necessary, to ensure that the aircraft avoid each other.

36.1.2 A pilot sees the other aircraft involved and upon instructions from the controller provides separation by maneuvering the aircraft to avoid it. When pilots accept responsibility to maintain visual separation, they must maintain constant visual surveillance and not pass the other aircraft until it is no longer a factor.

NOTE-

Traffic is no longer a factor when during approach phase the other aircraft is in the landing phase of flight or executes a missed approach; and during departure or en route, when the other aircraft turns away or is on a diverging course.

36.2 A pilot’s acceptance of instructions to follow another aircraft or provide visual separation from it is an acknowledgment that the pilot will maneuver the aircraft as necessary to avoid the other aircraft or to maintain in-trail separation. In operations conducted behind heavy aircraft, or a small aircraft behind a B757 or other large aircraft, it is also an acknowledgment that the pilot accepts the responsibility for wake turbulence separation. Visual separation is prohibited behind super aircraft.

NOTE-

When a pilot has been told to follow another aircraft or to provide visual separation from it, the pilot should promptly notify the controller if visual contact with the other aircraft is lost or cannot be maintained or if the pilot cannot accept the responsibility for the separation for any reason.

36.3 Scanning the sky for other aircraft is a key factor in collision avoidance. Pilots and copilots (or the right seat passenger) should continuously scan to cover all areas of the sky visible from the cockpit. Pilots must develop an effective scanning technique which maximizes one's visual capabilities. Spotting a potential collision threat increases directly as more time is spent looking outside the aircraft. One must use timesharing techniques to effectively scan the surrounding airspace while monitoring instruments as well.

36.4 Since the eye can focus only on a narrow viewing area, effective scanning is accomplished with a series of short, regularly spaced eye movements that bring successive areas of the sky into the central visual field. Each movement should not exceed ten degrees, and each area should be observed for at least one second to enable collision detection. Although many pilots seem to prefer the method of horizontal back-and-forth scanning every pilot should develop a scanning pattern that is not only comfortable but assures optimum effectiveness. Pilots should remember, however, that they have a regulatory responsibility (14 CFR Section 91.113) to see and avoid other aircraft when weather conditions permit.

37. Use of Visual Clearing Procedures and Scanning Techniques

37.1 Before Takeoff. Prior to taxiing onto a runway or landing area in preparation for takeoff, pilots should scan the approach areas for possible landing traffic, executing appropriate clearing maneuvers to provide them a clear view of the approach areas.

37.2 Climbs and Descents. During climbs and descents in flight conditions which permit visual detection of other traffic, pilots should execute gentle banks, left and right at a frequency which permits continuous visual scanning of the airspace about them.

37.3 Straight and Level. Sustained periods of straight and level flight in conditions which permit visual detection of other traffic should be broken at intervals with appropriate clearing procedures to provide effective visual scanning.

37.4 Traffic Patterns. Entries into traffic patterns while descending create specific collision hazards and should be avoided.

37.5 Traffic at VOR Sites. All operators should emphasize the need for sustained vigilance in the vicinity of VORs and airway intersections due to the convergence of traffic.

37.6 Training Operations. Operators of pilot training programs are urged to adopt the following practices:

37.6.1 Pilots undergoing flight instruction at all levels should be requested to verbalize clearing procedures (call out, "Clear" left, right, above, or below) to instill and sustain the habit of vigilance during maneuvering.

37.6.2 High-wing Airplane. Momentarily raise the wing in the direction of the intended turn and look.

37.6.3 Low-wing Airplane. Momentarily lower the wing in the direction of the intended turn and look.

37.6.4 Appropriate clearing procedures should precede the execution of all turns including chandelles, lazy eights, stalls, slow flight, climbs, straight and level, spins, and other combination maneuvers.

37.7 Scanning Techniques for Traffic Avoidance.

37.7.1 Pilots must be aware of the limitations inherent in the visual scanning process. These limitations may include:

37.7.1.1 Reduced scan frequency due to concentration on flight instruments or tablets and distraction with passengers.

37.7.1.2 Blind spots related to high-wing and low-wing aircraft in addition to windshield posts and sun visors.

37.7.1.3 Prevailing weather conditions including reduced visibility and the position of the sun.

37.7.1.4 The attitude of the aircraft will create additional blind spots.

37.7.1.5 The physical limitations of the human eye, including the time required to (re)focus on near and far objects, from the instruments to the horizon for example; empty field myopia, narrow field of vision and atmospheric lighting all affect our ability to detect another aircraft.

37.7.2 Best practices to see and avoid:

37.7.2.1 ADS-B In is an effective system to help pilots see and avoid other aircraft. If your aircraft is equipped with ADS-B In, it is important to understand its features and how to use it properly. Many units provide visual and/or audio alerts to supplement the system's traffic display. Pilots should incorporate the traffic display in their normal traffic scan to provide awareness of nearby aircraft. Prior to taxiing onto an airport movement area, ADS-B In can provide advance indication of arriving aircraft and aircraft in the traffic pattern. Systems that incorporate a traffic-alerting feature can help minimize the pilot's inclination to fixate on the display. Refer to ENR 1.1–46.5, ADS-B Limitations.

37.7.2.2 Understand the limitations of ADS-B In. In certain airspace, not all aircraft will be equipped with ADS-B Out or transponders and will not be visible on your ADS-B In display.

37.7.2.3 Limit the amount of time that you focus on flight instruments or tablets.

37.7.2.4 Develop a strategic approach to scanning for traffic. Scan the entire sky and try not to focus straight ahead.

38. Surveillance Systems

38.1 Radar

38.1.1 Capabilities

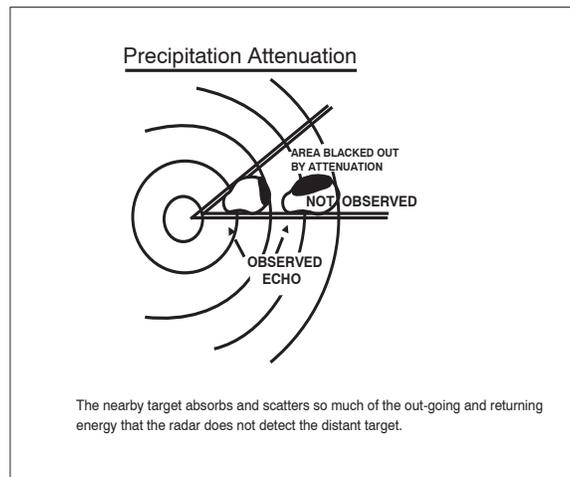
38.1.1.1 Radar is a method whereby radio waves are transmitted into the air and are then received when they have been reflected by an object in the path of the beam. Range is determined by measuring the time it takes (at the speed of light) for the radio wave to go out to the object and then return to the receiving antenna. The direction of a detected object from a radar site is determined by the position of the rotating antenna when the reflected portion of the radio wave is received.

38.1.1.2 More reliable maintenance and improved equipment have reduced radar system failures to a negligible factor. Most facilities actually have some components duplicated – one operating and another which immediately takes over when a malfunction occurs to the primary component.

38.1.2 Limitations

38.1.2.1 It is very important for the aviation community to recognize the fact that there are limitations to radar service and that ATC controllers may not always be able to issue traffic advisories concerning aircraft which are not under ATC control and cannot be seen on radar. (See FIG ENR 1.1–25).

FIG ENR 1.1-25
Limitations to Radar Service



a) The characteristics of radio waves are such that they normally travel in a continuous straight line unless they are:

- 1) “Bent” by abnormal atmospheric phenomena such as temperature inversions.
- 2) Reflected or attenuated by dense objects such as heavy clouds, precipitation, ground obstacles, mountains, etc.
- 3) Screened by high terrain features.

b) The bending of radar pulses, often called anomalous propagation or ducting, may cause many extraneous blips to appear on the radar operator’s display if the beam has been bent toward the ground, or may decrease the detection range if the wave is bent upward. It is difficult to solve the effects of anomalous propagation, but using beacon radar and electronically eliminating stationary and slow moving targets by a method called moving target indicator (MTI) usually negate the problem.

c) Radar energy that strikes dense objects will be reflected and displayed on the operator’s scope, thereby blocking out aircraft at the same range and greatly weakening or completely eliminating the display of targets at a greater range. Again, radar beacon and MTI are effectively used to combat ground clutter and weather phenomena, and a method of circularly polarizing the radar beam will eliminate some weather returns. A negative characteristic of MTI is that an aircraft flying a speed that coincides with the canceling signal of the MTI (tangential or “blind” speed) may not be displayed to the radar controller.

d) Relatively low altitude aircraft will not be seen if they are screened by mountains or are below the radar beam due to earth curvature. The historical solution to screening has been the installation of strategically placed multiple radars, which has been done in some areas, but ADS-B now provides ATC surveillance in some areas with challenging terrain where multiple radar installations would be impractical.

e) There are several other factors which affect radar control. The amount of reflective surface of an aircraft will determine the size of the radar return. Therefore, a small light airplane or a sleek jet fighter will be more difficult to see on primary radar than a large commercial jet or military bomber. Here again, the use of transponder or ADS-B equipment is invaluable. In addition, all FAA ATC facilities display automatically reported altitude information to the controller from appropriately equipped aircraft.

f) At some locations within the ATC en route environment, secondary-radar-only (no primary radar) gap filler radar systems are used to give lower altitude radar coverage between two larger radar systems, each of which provides both primary and secondary radar coverage. ADS-B serves this same role, supplementing both primary and secondary radar. In those geographical areas served by secondary radar only or ADS-B, aircraft without either transponders or ADS-B equipment cannot be provided with radar service. Additionally, transponder or

ADS-B equipped aircraft cannot be provided with radar advisories concerning primary targets and ATC radar-derived weather.

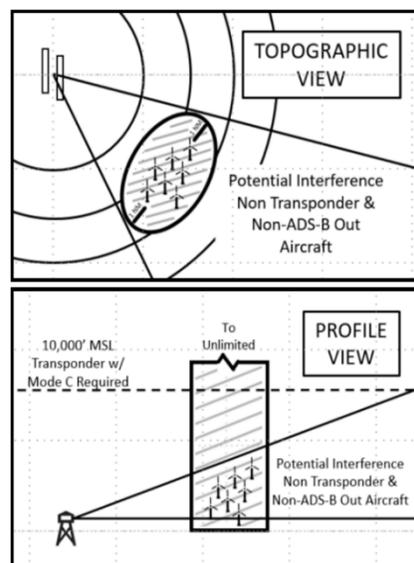
g) With regard to air traffic radar reception, wind turbines generally do not affect the quality of air traffic surveillance radar returns for transponder and ADS-B Out equipped aircraft. Air traffic interference issues apply to the search radar and Non-Transponder/Non-ADS-B Out-equipped aircraft.

NOTE-

Generally, one or two wind turbines don't present a significant radar reception loss. A rule of thumb is three (3) or more turbines constitute a wind turbine farm and thus negatively affect the search radar product.

1) Detection loss in the area of a wind turbine farm is substantial. In extreme circumstances, this can extend for more than 1.0 nautical mile (NM) horizontally around the nearest turbine and at all altitudes above the wind turbine farm. (See FIG ENR 1.1-26.)

FIG ENR 1.1-26
Wind Turbine Farm Area of Potential Interference



NOTE-

All aircraft should comply with 14 CFR §91.119(c) "...aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure."

2) To avoid interference, Non-Transponder/Non-ADS-B Out equipped aircraft should avoid flight within 1.0 NM horizontally, at all altitudes, from the wind turbine farms.

3) Because detection loss near and above wind turbine farms for search-only targets causes dropped tracks, erroneous tracks, and can result in loss of separation, it is imperative that Non-Transponder/Non-ADS-B Out equipped aircraft operate at the proper VFR altitudes per the hemispheric rule and utilize see-and-avoid techniques.

4) Pilots should be aware that air traffic controllers cannot provide separation from Non-Transponder/Non-ADS-B Out equipped aircraft in the vicinity of wind turbine farms. See-and-avoid is the pilot's responsibility, as these non-equipped aircraft may not appear on radar and will not appear on Traffic Information Service-Broadcast (TIS-B).

h) The controller's ability to advise a pilot flying on instruments or in visual conditions of the aircraft's proximity to another aircraft will be limited if the unknown aircraft is not observed on radar, if no flight plan information is available, or if the volume of traffic and workload prevent issuing traffic information. First priority is given to establishing vertical, lateral, or longitudinal separation between aircraft flying IFR under the control of ATC.

38.2 Air Traffic Control Radar Beacon System (ATCRBS)

38.2.1 The ATCRBS, sometimes referred to as a secondary surveillance radar, consists of three main components:

38.2.1.1 Interrogator. Primary radar relies on a signal being transmitted from the radar antenna site and for this signal to be reflected or “bounced back” from an object (such as an aircraft). This reflected signal is then displayed as a “target” on the controller’s radar scope. In the ATCRBS, the Interrogator, a ground-based radar beacon transmitter–receiver, scans in synchronism with the primary radar and transmits discrete radio signals which repetitiously requests all transponders, on the mode being used, to reply. The replies received are then mixed with the primary returns and both are displayed on the same radar scope.

38.2.1.2 Transponder. This airborne radar beacon transmitter–receiver automatically receives the signals from the interrogator and selectively replies with a specific pulse group (code) only to those interrogations being received on the mode to which it is set. These replies are independent of, and much stronger than a primary radar return.

38.2.1.3 Radar scope. The radar scope used by the controller displays returns from both the primary radar system and the ATCRBS. These returns, called targets, are what the controller refers to in the control and separation of traffic.

38.2.2 The job of identifying and maintaining identification of primary radar targets is a long and tedious task for the controller. Some of the advantages of ATCRBS over primary radar are:

38.2.2.1 Reinforcement of radar targets.

38.2.2.2 Rapid target identification.

38.2.2.3 Unique display of selected codes.

38.2.3 A part of the ATCRBS ground equipment is the decoder. This equipment enables the controller to assign discrete transponder codes to each aircraft under his/her control. Normally only one code will be assigned for the entire flight. Assignments are made by the ARTCC computer on the basis of the National Beacon Code Allocation Plan. The equipment is also designed to receive Mode C altitude information from the aircraft.

38.3 Surveillance Radar

38.3.1 Surveillance radars are divided into two general categories: Airport Surveillance Radar (ASR) and Air Route Surveillance Radar (ARSR).

38.3.1.1 ASR is designed to provide relatively short range coverage in the general vicinity of an airport and to serve as an expeditious means of handling terminal area traffic through observation of precise aircraft locations on a radar scope. The ASR can also be used as an instrument approach aid.

38.3.1.2 ARSR is a long-range radar system designed primarily to provide a display of aircraft locations over large areas.

38.3.2 Surveillance radars scan through 360 degrees of azimuth and present target information on a radar display located in a tower or center. This information is used independently or in conjunction with other navigational aids in the control of air traffic.

38.4 Precision Approach Radar (PAR)

38.4.1 PAR is designed for use as a landing aid rather than an aid for sequencing and spacing aircraft. PAR equipment may be used as a primary landing aid (See ENR 1.5 for additional information), or it may be used to monitor other types of approaches. It is designed to display range, azimuth, and elevation information.

38.4.2 Two antennas are used in the PAR array, one scanning a vertical plane, and the other scanning horizontally. Since the range is limited to 10 miles, azimuth to 20 degrees, and elevation to 7 degrees, only the final approach area is covered. Each scope is divided into two parts. The upper half presents altitude and distance information, and the lower half presents azimuth and distance.

38.5 Airport Surface Detection Equipment (ASDE-X)/Airport Surface Surveillance Capability (ASSC)

38.5.1 ASDE-X/ASSC is a multi-sensor surface surveillance system the FAA is acquiring for airports in the United States. This system provides high resolution, short-range, clutter free surveillance information about aircraft and vehicles, both moving and fixed, located on or near the surface of the airport’s runways and taxiways under all weather and visibility conditions. The system consists of:

38.5.1.1 A Primary Radar System. ASDE-X/ASSC system coverage includes the airport surface and the airspace 5 miles from the arrival and departure ends of the runway and up to 200 feet above the surface. Typically located on the control tower or other strategic location on the airport, the Primary Radar antenna is able to detect and display aircraft that are not equipped with or have malfunctioning transponders or ADS-B.

38.5.1.2 Interfaces. ASDE-X/ASSC contains an automation interface for flight identification via all automation platforms and interfaces with the terminal radar for position information.

38.5.1.3 ASDE-X/ASSC Automation. A Multi-sensor Data Processor (MSDP) combines all sensor reports into a single target which is displayed to the air traffic controller.

38.5.1.4 Air Traffic Control Tower Display. A high resolution, color monitor in the control tower cab provides controllers with a seamless picture of airport operations on the airport surface.

38.5.2 The combination of data collected from the multiple sensors ensures that the most accurate information about aircraft location is received in the tower, thereby increasing surface safety and efficiency.

38.5.3 The following facilities are operational with ASDE-X:

TBL ENR 1.1-2

BWI	Baltimore Washington International
BOS	Boston Logan International
BDL	Bradley International
MDW	Chicago Midway
ORD	Chicago O’Hare International
CLT	Charlotte Douglas International
DFW	Dallas/Fort Worth International
DEN	Denver International
DTW	Detroit Metro Wayne County
FLL	Fort Lauderdale/Hollywood Intl
MKE	General Mitchell International
IAH	George Bush International
ATL	Hartsfield–Jackson Atlanta Intl
HNL	Honolulu International
JFK	John F. Kennedy International
SNA	John Wayne–Orange County
LGA	LaGuardia
STL	Lambert St. Louis International

LAS	Las Vegas Harry Reid International
LAX	Los Angeles International
SDF	Louisville International
MEM	Memphis International
MIA	Miami International
MSP	Minneapolis St. Paul International
EWR	Newark International
MCO	Orlando International
PHL	Philadelphia International
PHX	Phoenix Sky Harbor International
DCA	Ronald Reagan Washington National
SAN	San Diego International
SLC	Salt Lake City International
SEA	Seattle–Tacoma International
PVD	Theodore Francis Green State
IAD	Washington Dulles International
HOU	William P. Hobby International

38.5.4 The following facilities have been projected to receive ASSC:

TBL ENR 1.1-3

SFO	San Francisco International
CLE	Cleveland–Hopkins International

MCI	Kansas City International
-----	---------------------------

CVG	Cincinnati/Northern Kentucky Intl
PDX	Portland International
MSY	Louis Armstrong New Orleans Intl

PIT	Pittsburgh International
ANC	Ted Stevens Anchorage International
ADW	Joint Base Andrews AFB

38.6 Radar Availability

38.6.1 FAA radar units operate continuously at the locations shown in the Chart Supplement, and their services are available to all pilots, both civil and military. Contact the associated FAA control tower or ARTCC on any frequency guarded for initial instructions, or in an emergency, any FAA facility for information on the nearest radar service.

38.7 Transponder and ADS-B Out Operation

38.7.1 General

38.7.1.1 Pilots should be aware that proper application of transponder and ADS-B operating procedures will provide both VFR and IFR aircraft with a higher degree of safety while operating on the ground and airborne. Transponder/ADS-B panel designs differ; therefore, a pilot should be thoroughly familiar with the operation of their particular equipment to maximize its full potential. ADS-B Out, and transponders with altitude reporting mode turned ON (Mode C or S), substantially increase the capability of surveillance systems to see an aircraft. This provides air traffic controllers, as well as pilots of suitably equipped aircraft (TCAS and ADS-B In), increased situational awareness and the ability to identify potential traffic conflicts. Even VFR pilots who are not in contact with ATC will be afforded greater protection from IFR aircraft and VFR aircraft that are receiving traffic advisories. Nevertheless, pilots should never relax their visual scanning for other aircraft, and should include the ADS-B In display (if equipped) in their normal traffic scan.

38.7.1.2 ATCRBS is similar to and compatible with military coded radar beacon equipment. Civil Mode A is identical to military Mode 3.

38.7.1.3 Transponder and ADS-B operations on the ground. Civil and military aircraft should operate with the transponder in the altitude reporting mode (consult the aircraft's flight manual to determine the specific transponder position to enable altitude reporting) and ADS-B Out transmissions enabled at all airports, any time the aircraft is positioned on any portion of the airport movement area. This includes all defined taxiways and runways. Pilots must pay particular attention to ATIS and airport diagram notations, General Notes (included on airport charts), and comply with directions pertaining to transponder and ADS-B usage. Generally, these directions are:

a) Departures. Select the transponder mode which allows altitude reporting and enable ADS-B during pushback or taxi-out from parking spot. Select TA or TA/RA (if equipped with TCAS) when taking the active runway.

b) Arrivals. If TCAS equipped, deselect TA or TA/RA upon leaving the active runway, but continue transponder and ADS-B transmissions in the altitude reporting mode. Select STBY or OFF for transponder and ADS-B upon arriving at the aircraft's parking spot or gate.

38.7.1.4 Transponder and ADS-B Operations While Airborne.

a) Unless otherwise requested by ATC, aircraft equipped with an ATC transponder maintained in accordance with 14 CFR Section 91.413 MUST operate with this equipment on the appropriate Mode 3/A code, or other code as assigned by ATC, and with altitude reporting enabled whenever in controlled airspace. If practicable, aircraft SHOULD operate with the transponder enabled in uncontrolled airspace.

b) Aircraft equipped with ADS-B Out MUST operate with this equipment in the transmit mode at all times, unless otherwise requested by ATC.

38.7.1.5 Transponder and ADS-B Operation Under Visual Flight Rules (VFR)

a) Unless otherwise instructed by an ATC facility, adjust transponder/ADS-B to reply on Mode 3/A Code 1200 regardless of altitude.

b) When required to operate their transponder/ADS–B, pilots must always operate that equipment with altitude reporting enabled unless otherwise instructed by ATC or unless the installed equipment has not been tested and calibrated as required by 14 CFR Section 91.217. If deactivation is required, turn off altitude reporting.

c) When participating in a VFR standard formation flight that is not receiving ATC services, only the lead aircraft should operate its transponder and ADS–B Out and squawk code 1203. Once established in formation, all other aircraft should squawk standby and disable ADS–B transmissions.

NOTE–

1. If the formation flight is receiving ATC services, pilots can expect ATC to direct all non-lead aircraft to STOP Squawk, and should not do so until instructed.
2. Firefighting aircraft not in contact with ATC may squawk 1255 in lieu of 1200 while en route to, from , or within the designated firefighting area(s).
3. VFR aircraft flying authorized SAR missions for the USAF or USCG may be advised to squawk 1277 in lieu of 1200 while en route to, from, or within the designated search area.
4. VFR gliders should squawk 1202 in lieu of 1200.

REFERENCE–

FAA Order JO 7110.66, National Beacon Code Allocation Plan (NBCAP).

38.7.1.6 A pilot on an IFR flight who elects to cancel the IFR flight plan prior to reaching their destination, should adjust the transponder/ADS–B according to VFR operations.

38.7.1.7 If entering a U.S. OFFSHORE AIRSPACE AREA from outside the U.S., the pilot should advise on first radio contact with a U.S. radar ATC facility that such equipment is available by adding “transponder” or “ADS–B” (if equipped) to the aircraft identification.

38.7.1.8 It should be noted by all users of ATC transponders and ADS–B Out systems that the surveillance coverage they can expect is limited to “line of sight” with ground radar and ADS–B radio sites. Low altitude or aircraft antenna shielding by the aircraft itself may result in reduced range or loss of aircraft contact. Though ADS–B often provides superior reception at low altitudes, poor coverage from any surveillance system can be improved by climbing to a higher altitude.

NOTE–

Pilots should refer to AIP, ENR 1.1, paragraph 46., Automatic Dependent Surveillance – Broadcast Services (ADS–B) Services, for a complete description of operating limitations and procedures.

38.7.2 Transponder/ADS–B Code Designation

38.7.2.1 For ATC to utilize one of the 4096 discrete codes, a four–digit code designation will be used; for example, code 2102 will be expressed as “TWO ONE ZERO TWO.”

NOTE–

Circumstances may occasionally require ATC to assign a non–discrete code; i.e., a code ending in “00.”

REFERENCE–

FAA Order JO 7110.66, National Beacon Code Allocation Plan (NBCAP).

38.7.3 Automatic Altitude Reporting

38.7.3.1 Most transponders (Modes C and S) and all ADS–B Out systems are capable of automatic altitude reporting. This system converts aircraft altitude in 100–foot increments to coded digital information that is transmitted to the appropriate surveillance facility as well as to ADS–B In and TCAS systems.

38.7.3.2 Adjust the transponder/ADS–B to reply on the Mode 3/A code specified by ATC and with altitude reporting enabled, unless otherwise directed by ATC or unless the altitude reporting equipment has not been tested and calibrated as required by 14 CFR Section 91.217. If deactivation is required by ATC, turn off the altitude reporting feature of your transponder/ADS–B. An instruction by ATC to “STOP ALTITUDE SQUAWK, ALTITUDE DIFFERS BY (number of feet) FEET,” may be an indication that the transmitted altitude information is incorrect, or that the aircraft’s altimeter setting is incorrect. While an incorrect altimeter setting has no effect on the transmitted altitude information, it will cause the aircraft to fly at a true altitude different from

the assigned altitude. When a controller indicates that an altitude readout is invalid, the pilot should verify that the aircraft altimeter is set correctly.

NOTE–

Altitude encoders are preset at standard atmospheric pressure. Local altimeter correction is applied by the surveillance facility before the altitude information is presented to ATC.

38.7.3.3 Pilots should report exact altitude or flight level to the nearest hundred foot increment when establishing initial contact with an ATC facility. Exact altitude or flight level reports on initial contact provide ATC with information that is required prior to using automatically reported altitude information for separation purposes. This will significantly reduce altitude verification requests.

38.7.4 IDENT Feature

38.7.4.1 Transponder/ADS–B Out equipment must be operated only as specified by ATC. Activate the “IDENT” feature only when requested by ATC.

38.7.5 Code Changes

38.7.5.1 When making routine code changes, pilots should avoid inadvertent selection of Codes 7500, 7600, or 7700 thereby causing momentary false alarms at automated ground facilities. For example when switching from Code 2700 to Code 7200, switch first to 2200 then 7200, NOT to 7700 and then 7200. This procedure applies to nondiscrete Code 7500 and all discrete codes in the 7600 and 7700 series (i.e., 7600–7677, 7700–7777) which will trigger special indicators in automated facilities. Only nondiscrete Code 7500 will be decoded as the hijack code.

38.7.5.2 Under no circumstances should a pilot of a civil aircraft operate the transponder on Code 7777. This code is reserved for military interceptor operations.

38.7.5.3 Military pilots operating VFR or IFR within restricted/warning areas should adjust their transponders to Code 4000, unless another code has been assigned by ATC.

38.7.6 Mode C Transponder and ADS–B Out Requirements

38.7.6.1 Specific details concerning requirements to carry and operate Mode C transponders and ADS–B Out, as well as exceptions and ATC authorized deviations from those requirements, are found in 14 CFR Sections 91.215, 91.225, and 99.13.

38.7.6.2 In general, the CFRs require aircraft to be equipped with an operable Mode C transponder and ADS–B Out when operating:

- a) In Class A, Class B, or Class C airspace areas;
- b) Above the ceiling and within the lateral boundaries of Class B or Class C airspace up to 10,000 feet MSL;
- c) Class E airspace at and above 10,000 feet MSL within the 48 contiguous states and the District of Columbia, excluding the airspace at and below 2,500 feet AGL;
- d) Within 30 miles of a Class B airspace primary airport, below 10,000 feet MSL (commonly referred to as the “Mode C Veil”);
- e) For ADS–B Out: Class E airspace at and above 3,000 feet MSL over the Gulf of Mexico from the coastline of the United States out to 12 nautical miles.

NOTE–

The airspace described in (e) above is specified in 14 CFR § 91.225 for ADS–B Out requirements. However, 14 CFR § 91.215 does not include this airspace for ATC transponder requirements.

f) Transponder and ADS–B Out requirements do not apply to any aircraft that was not originally certificated with an electrical system, or that has not subsequently been certified with such a system installed, including balloons and gliders. These aircraft may conduct operations without a transponder or ADS–B Out when operating:

- 1) Outside any Class B or Class C airspace area; and
- 2) Below the altitude of the ceiling of a Class B or Class C airspace area designated for an airport, or 10,000 feet MSL, whichever is lower.

38.7.6.3 14 CFR Section 99.13 requires all aircraft flying into, within, or across the contiguous U.S. ADIZ be equipped with a Mode C or Mode S transponder. Balloons, gliders, and aircraft not equipped with an engine-driven electrical system are excepted from this requirement.

REFERENCE–

AIP, ENR 1.12, *National Security and Interception Procedures.*

38.7.6.4 Pilots must ensure that their aircraft transponder/ADS–B is operating on an appropriate ATC–assigned VFR/IFR code with altitude reporting enabled when operating in such airspace. If in doubt about the operational status of either feature of your transponder while airborne, contact the nearest ATC facility or FSS and they will advise you what facility you should contact for determining the status of your equipment.

38.7.6.5 In–flight requests for “immediate” deviation from the transponder requirements may be approved by controllers only for failed equipment, and only when the flight will continue IFR or when weather conditions prevent VFR descent and continued VFR flight in airspace not affected by the CFRs. All other requests for deviation should be made at least 1 hour before the proposed operation by contacting the nearest Flight Service or Air Traffic facility in person or by telephone. The nearest ARTCC will normally be the controlling agency and is responsible for coordinating requests involving deviations in other ARTCC areas.

38.7.6.6 In–flight requests for “immediate” deviation from the ADS–B Out requirements may be approved by ATC only for failed equipment, and may be accommodated based on workload, alternate surveillance availability, or other factors. All other requests for deviation must be made at least 1 hour before the proposed operation, following the procedures contained in Advisory Circular (AC) 90–114, Automatic Dependent Surveillance–Broadcast Operations.

38.7.7 Cooperative Surveillance Phraseology. Air traffic controllers, both civil and military, will use the following phraseology when referring to operation of cooperative ATC surveillance equipment. Except as noted, the following ATC instructions do not apply to military transponders operating in other than Mode 3/A/C/S.

38.7.7.1 SQUAWK (number). Operate radar beacon transponder/ADS–B on designated code with altitude reporting enabled.

38.7.7.2 IDENT. Engage the “IDENT” feature (military I/P) of the transponder/ADS–B.

38.7.7.3 SQUAWK (number) AND IDENT. Operate transponder/ADS–B on specified code with altitude reporting enabled, and engage the “IDENT” (military I/P) feature.

38.7.7.4 SQUAWK STANDBY. Switch transponder/ADS–B to standby position.

38.7.7.5 SQUAWK NORMAL. Resume normal transponder/ADS–B operation on previously assigned code. (Used after “SQUAWK STANDBY,” or by military after specific transponder tests).

38.7.7.6 SQUAWK ALTITUDE. Activate Mode C with automatic altitude reporting.

38.7.7.7 STOP ALTITUDE SQUAWK. Turn off automatic altitude reporting.

38.7.7.8 STOP SQUAWK (Mode in use). Stop transponder and ADS–B Out transmissions, or switch off only specified mode of the aircraft transponder (military).

38.7.7.9 SQUAWK MAYDAY. Operate transponder/ADS–B in the emergency position (Mode A Code 7700 for civil transponder. Mode 3 Code 7700 and emergency feature for military transponder.)

38.7.7.10 SQUAWK VFR. Operate radar beacon transponder/ADS–B on Code 1200 in the Mode A/3, or other appropriate VFR code, with altitude reporting enabled.

38.8 Emergency Operation

38.8.1 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.

38.8.2 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.

38.9 Radio Failure Operation

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

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

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

38.9.2 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.

38.10 Radar Services

38.10.1 Safety Alert

38.10.1.1 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.

38.10.2 Terrain/Obstruction Alert

38.10.2.1 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 Juliett, 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.

38.10.2.2 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.

NOTE–

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

EXAMPLE–

Apache Three Three Papa requests MSAW monitoring.

38.10.2.3 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.

38.10.3 Aircraft Conflict Alert

38.10.3.1 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.

38.10.4 Radar Traffic Information Service (RTIS)

38.10.4.1 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 as well as ADS–B, except that secondary radar or ADS–B 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 and/or ADS–B is available). Secondary radar and/or ADS–B 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 or ADS–B aircraft only.” This means simply that only aircraft that have transponders and ADS–B installed and in use will be depicted on ATC displays when the primary and/or secondary 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.

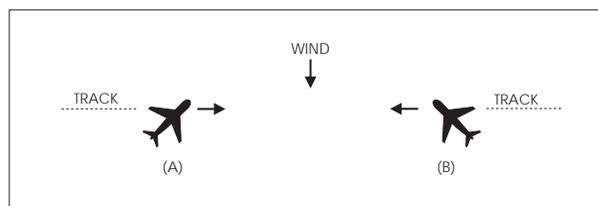
(c) Type of aircraft and altitude if known.

EXAMPLE–

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

(d) The examples depicted in FIG ENR 1.1–27 and FIG ENR 1.1–28 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.

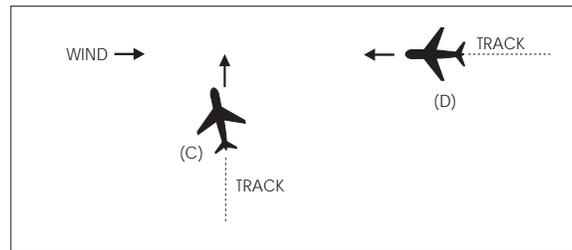
**FIG ENR 1.1–27
Induced Error in Position of Traffic**



EXAMPLE–

In FIG ENR 1.1–27, 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 1.1–28
Induced Error in Position of Traffic



EXAMPLE–

In FIG ENR 1.1–28, 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.

38.11 Radar Assistance to VFR Aircraft

38.11.1 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.

38.11.2 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.

38.11.3 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.

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

38.11.4.1 The controller suggests the vector and the pilot concurs.

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

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

38.11.5 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.

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

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

39.1.1 Applicability. The policies, guidance and direction in this section are consistent with the policies and procedures used in Domestic U.S. RVSM Airspace, as specified in the Aeronautical Information Manual, Chapter 4, Section 6. For any oceanic area specific items, see Part II, ENR 7, Oceanic Procedures.

39.1.2 Requirement. 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. RVSM has been implemented worldwide and may be applied in all ICAO Flight Information Regions (FIR).

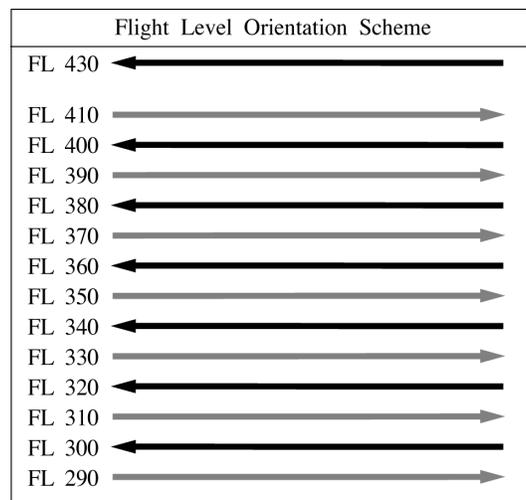
39.1.3 In accordance with 14 CFR Section 91.706, with only limited exceptions, prior to operating in RVSM airspace, operators must comply with the standards of Part 91, Appendix G, and be authorized by the Administrator. If the operator has not been authorized for RVSM operations, or the aircraft is not RVSM compliant, the aircraft will be referred to as “non-RVSM” aircraft. Paragraph 39.10 discusses ATC policies for accommodation of non-RVSM aircraft flown by the Department of Defense, Air Ambulance (MEDEVAC) operators, foreign State governments and aircraft flown for certification and development. Paragraph 39.11, Non-RVSM Aircraft Requesting Climb to and Descent from Flight Levels Above RVSM Airspace Without Intermediate Level Off, contains policies for non-RVSM aircraft climbing and descending through RVSM airspace to/from flight levels above RVSM airspace.

39.1.4 Benefits. RVSM enhances ATC flexibility, mitigates conflict points, enhances sector throughput, reduces controller workload and enables crossing traffic. Operators gain fuel savings and operating efficiency benefits by flying at more fuel efficient flight levels and on more user preferred routings.

39.2 Flight Level Orientation Scheme

Altitude assignments for direction of flight follow a scheme of odd altitude assignment for magnetic courses 000–179 degrees and even altitudes for magnetic courses 180–359 degrees for flights up to and including FL 410, as indicated in FIG ENR 1.1–29.

FIG ENR 1.1–29
Flight Level Orientation Scheme



NOTE–
Odd Flight Levels: Magnetic Course 000–179 Degrees Even Flight Levels: Magnetic Course 180–359 Degrees.

39.3 Aircraft and Operator Approval Policy/Procedures, RVSM Monitoring and Databases for Aircraft and Operator Approval

39.3.1 RVSM Authority. 14 CFR Section 91.180 applies to RVSM operations within the U.S. 14 CFR Section 91.706 applies to RVSM operations outside the U.S. Both sections require that the operator obtain authorization prior to operating in RVSM airspace.

39.3.2 Sources of Information. Advisory Circular (AC) 91–85, Authorization of Aircraft and Operators for Flight in Reduced Vertical Separation Minimum (RVSM) Airspace, and the FAA RVSM Website.

39.3.3 TCAS Equipage. TCAS equipage requirements are contained in 14 CFR Sections 121.356, 125.224, 129.18 and 135.189. Part 91 Appendix G does not contain TCAS equipage requirements specific to RVSM, however, Appendix G does require that aircraft equipped with TCAS II and flown in RVSM airspace be modified to incorporate TCAS II Version 7.0 or a later version.

39.3.4 Aircraft Monitoring. Operators are required to participate in the RVSM altitude-keeping performance monitoring program that is appropriate for the type of operation being conducted. The monitoring programs are described in FAA AC 91-85, Authorization of Aircraft and Operators for Flight in Reduced Vertical Separation Minimum Airspace. Monitoring is a quality control program that enables the FAA and other civil aviation authorities to assess the in-service altitude-keeping performance of aircraft and operators.

39.3.5 RVSM Approvals Databases for U.S. operators can be found on the RVSM Documentation Webpage in the “RVSM Approvals” section.

39.4 Flight Planning into RVSM Airspace

39.4.1 Operators that do not file the correct aircraft equipment suffix on the FAA or ICAO Flight Plan may be denied clearance into RVSM airspace. Policies for the FAA Flight Plan are detailed in subparagraph 39.4.3 below. Policies for the ICAO Flight Plan are detailed in subparagraph 39.4.4.

39.4.2 The operator will annotate the equipment block of the FAA or ICAO Flight Plan with an aircraft equipment suffix indicating RVSM capability only after the responsible civil aviation authority has determined that both the operator and its aircraft are RVSM-compliant and has issued RVSM authorization to the operator.

39.4.3 General Policies for FAA Flight Plan Equipment Suffix. Appendix 1, TBL 1-2, allows operators to indicate that the aircraft has both RVSM and Advanced Area Navigation (RNAV) capabilities or has only RVSM capability.

39.4.3.1 The operator will annotate the equipment block of the FAA Flight Plan with the appropriate aircraft equipment suffix from Appendix 1, TBL 1-2 and/or TBL 1-3.

39.4.3.2 Operators can only file one equipment suffix in block 3 of the FAA Flight Plan. Only this equipment suffix is displayed directly to the controller.

39.4.3.3 Aircraft with RNAV Capability. For flight in RVSM airspace, aircraft with RNAV capability, but not Advanced RNAV capability, will file “/W”. Filing “/W” will not preclude such aircraft from filing and flying direct routes in en route airspace.

39.4.4 Policy for ICAO Flight Plan Equipment Suffixes.

39.4.4.1 Operators/aircraft that are RVSM-compliant and that file ICAO flight plans will file “/W” in block 10 (Equipment) to indicate RVSM authorization and will also file the appropriate ICAO Flight Plan suffixes to indicate navigation and communication capabilities.

39.4.4.2 Operators/aircraft that file ICAO flight plans that include flight in Domestic U.S. RVSM airspace must file “/W” in block 10 to indicate RVSM authorization.

39.4.5 Importance of Flight Plan Equipment Suffixes. Military users, and civilians who file stereo route flight plans, must file the appropriate equipment suffix in the equipment block of the FAA Form 7233-1, Flight Plan, or DD Form 175, Military Flight Plan, or FAA Form 7233-4, International Flight Plan, or DD Form 1801, DOD International Flight Plan. All other users must file the appropriate equipment suffix in the equipment block of FAA Form 7233-4, International Flight Plan. The equipment suffix informs ATC:

39.4.5.1 Whether or not the operator and aircraft are authorized to fly in RVSM airspace.

39.4.5.2 The navigation and/or transponder capability of the aircraft (e.g., advanced RNAV, Transponder with Mode C).

39.4.6 Significant ATC uses of the flight plan equipment suffix information are:

39.4.6.1 To issue or deny clearance into RVSM airspace.

39.4.6.2 To apply a 2,000 foot vertical separation minimum in RVSM airspace to aircraft that are not authorized for RVSM, but are in one of the limited categories that the FAA has agreed to accommodate. (See paragraphs 39.10, Procedures for Accommodation of Non-RVSM Aircraft, and 39.11, Non-RVSM Aircraft Requesting Climb to and Descent from Flight Levels Above RVSM Airspace Without Intermediate Level Off, for policy on limited operation of unapproved aircraft in RVSM airspace).

39.4.7 Improperly changing an aircraft equipment suffix and/or adding “NON-RVSM” in the NOTES or REMARKS section (Field 18) while not removing the “W” from Field 10, will not provide air traffic control with the proper visual indicator necessary to detect Non-RVSM aircraft. To ensure information processes correctly for Non-RVSM aircraft, the “W” in Field 10 must be removed. Entry of information in the NOTES or REMARKS section (Field 18) will not affect the determination of RVSM capability and must not be used to indicate a flight is Non-RVSM.

39.5 Pilot RVSM Operating Practices and Procedures

39.5.1 RVSM Requirement. If either the operator is not authorized for RVSM operations, or the aircraft is not RVSM compliant, the pilot will neither request nor accept a clearance into RVSM airspace unless:

39.5.1.1 The flight is conducted by a non-RVSM DOD, MEDEVAC, certification/development or foreign State (government) aircraft in accordance with Paragraph 39.10, Procedures for Accommodation of Non-RVSM Aircraft.

39.5.1.2 The pilot intends to climb to or descend from FL 430 or above in accordance with Paragraph 39.11, Non-RVSM Aircraft Requesting Climb to and Descent from Flight Levels Above RVSM Airspace Without Intermediate Level Off.

39.5.1.3 An emergency situation exists.

39.5.2 Basic RVSM Operating Practices and Procedures. FAA AC 91-85 contains pilot practices and procedures for RVSM. Operators must incorporate RVSM practices and procedures, as supplemented by the applicable paragraphs of this section, into operator training or pilot knowledge programs and operator documents containing RVSM operational policies.

39.5.3 FAA AC 91-85 contains practices and procedures for flight planning, preflight procedures at the aircraft, procedures prior to RVSM airspace entry, inflight (en route) procedures, contingency procedures and post flight.

39.5.4 The following paragraphs either clarify or supplement FAA AC 91-85 practices and procedures.

39.6 Guidance on Severe Turbulence and Mountain Wave Activity (MWA)

39.6.1 Introduction/Explanation

39.6.1.1 The information and practices in this paragraph are provided to emphasize to pilots and controllers the importance of taking appropriate action in RVSM airspace when aircraft experience severe turbulence and/or MWA that is of sufficient magnitude to significantly affect altitude-keeping.

39.6.1.2 Severe Turbulence. Severe turbulence causes large, abrupt changes in altitude and/or attitude usually accompanied by large variations in indicated airspeed. Aircraft may be momentarily out of control. Encounters with severe turbulence must be remedied immediately in any phase of flight. Severe turbulence may be associated with MWA.

39.6.1.3 Mountain Wave Activity (MWA)

a) Significant MWA occurs both below and above the floor of RVSM airspace, FL 290. MWA often occurs in western states in the vicinity of mountain ranges. It may occur when strong winds blow perpendicular to mountain ranges resulting in up and down or wave motions in the atmosphere. Wave action can produce altitude excursions and airspeed fluctuations accompanied by only light turbulence. With sufficient amplitude, however, wave action can induce altitude and airspeed fluctuations accompanied by severe turbulence. MWA is difficult to forecast and can be highly localized and short lived.

b) Wave activity is not necessarily limited to the vicinity of mountain ranges. Pilots experiencing wave activity anywhere that significantly affects altitude-keeping can follow the guidance provided below.

c) Inflight MWA Indicators (Including Turbulence). Indicators that the aircraft is being subjected to MWA are:

- 1) Altitude excursions and/or airspeed fluctuations with or without associated turbulence.

- 2) Pitch and trim changes required to maintain altitude with accompanying airspeed fluctuations.
- 3) Light to severe turbulence depending on the magnitude of the MWA.

39.6.1.4 Priority for Controller Application of Merging Target Procedures

a) **Explanation of Merging Target Procedures.** As described in subparagraph 39.6.3.3 below, ATC will use “merging target procedures” to mitigate the effects of both severe turbulence and MWA. The procedures in subparagraph 39.6.3.3 have been adapted from existing procedures published in FAA Order JO 7110.65, Air Traffic Control, paragraph 5–1–4, Merging Target Procedures. paragraph 5–1–4 calls for en route controllers to advise pilots of potential traffic that they perceive may fly directly above or below his/her aircraft at minimum vertical separation. In response, pilots are given the option of requesting a radar vector to ensure their radar target will not merge or overlap with the traffic’s radar target.

b) The provision of “merging target procedures” to mitigate the effects of severe turbulence and/or MWA is not optional for the controller, but rather is a priority responsibility. Pilot requests for vectors for traffic avoidance when encountering MWA or pilot reports of “Unable RVSM due turbulence or MWA” are considered first priority aircraft separation and sequencing responsibilities. (FAA Order JO 7110.65, paragraph 2–1–2, Duty Priority, states that the controller’s first priority is to separate aircraft and issue safety alerts).

c) **Explanation of the term “traffic permitting.”** The contingency actions for MWA and severe turbulence detailed in paragraph 39.9, Contingency Actions: Weather Encounters and Aircraft System Failures that Occur After Entry into RVSM Airspace, state that the controller will “vector aircraft to avoid merging targets with traffic at adjacent flight levels, traffic permitting.” The term “traffic permitting” is not intended to imply that merging target procedures are not a priority duty. The term is intended to recognize that, as stated in FAA Order JO 7110.65, paragraph 2–1–2, Duty Priority, there are circumstances when the controller is required to perform more than one action and must “exercise their best judgment based on the facts and circumstances known to them” to prioritize their actions. Further direction given is: “That action which is most critical from a safety standpoint is performed first.”

39.6.1.5 TCAS Sensitivity. For both MWA and severe turbulence encounters in RVSM airspace, an additional concern is the sensitivity of collision avoidance systems when one or both aircraft operating in close proximity receive TCAS advisories in response to disruptions in altitude hold capability.

39.6.2 Pre-flight tools. Sources of observed and forecast information that can help the pilot ascertain the possibility of MWA or severe turbulence are: Forecast Winds and Temperatures Aloft (FD), Area Forecast (FA), Graphical Turbulence Guidance (GTG), SIGMETs and PIREPs.

39.6.3 Pilot Actions When Encountering Weather (for example, Severe Turbulence or MWA)

39.6.3.1 Weather Encounters Inducing Altitude Deviations of Approximately 200 feet. When the pilot experiences weather induced altitude deviations of approximately 200 feet, the pilot will contact ATC and state “Unable RVSM Due (state reason)” (e.g., turbulence, mountain wave). See contingency actions in paragraph 39.9.

39.6.3.2 Severe Turbulence (including that associated with MWA). When pilots encounter severe turbulence, they should contact ATC and report the situation. Until the pilot reports clear of severe turbulence, the controller will apply merging target vectors to one or both passing aircraft to prevent their targets from merging:

EXAMPLE–

“Yankee 123, FL 310, unable RVSM due severe turbulence.”

“Yankee 123, fly heading 290; traffic twelve o’clock, 10 miles, opposite direction; eastbound MD–80 at FL 320” (or the controller may issue a vector to the MD–80 traffic to avoid Yankee 123).

39.6.3.3 MWA. When pilots encounter MWA, they should contact ATC and report the magnitude and location of the wave activity. When a controller makes a merging targets traffic call, the pilot may request a vector to avoid flying directly over or under the traffic. In situations where the pilot is experiencing altitude deviations of 200

feet or greater, the pilot will request a vector to avoid traffic. Until the pilot reports clear of MWA, the controller will apply merging target vectors to one or both passing aircraft to prevent their targets from merging:

EXAMPLE–

“Yankee 123, FL 310, unable RVSM due mountain wave.”

“Yankee 123, fly heading 290; traffic twelve o’clock, 10 miles, opposite direction; eastbound MD–80 at FL 320” (or the controller may issue a vector to the MD–80 traffic to avoid Yankee 123).

39.6.3.4 FL Change or Re–route. To leave airspace where MWA or severe turbulence is being encountered, the pilot may request a FL change and/or re–route, if necessary.

39.7 Guidance on Wake Turbulence

39.7.1 Pilots should be aware of the potential for wake turbulence encounters in RVSM airspace. Experience gained since 1997 has shown that such encounters in RVSM airspace are generally moderate or less in magnitude.

39.7.2 Prior to DRVSM implementation, the FAA established provisions for pilots to report wake turbulence events in RVSM airspace using the NASA Aviation Safety Reporting System (ASRS). A “Safety Reporting” section established on the FAA RVSM Documentation webpage provides contacts, forms, and reporting procedures.

39.7.3 To date, wake turbulence has not been reported as a significant factor in DRVSM operations. European authorities also found that reports of wake turbulence encounters did not increase significantly after RVSM implementation (eight versus seven reports in a ten–month period). In addition, they found that reported wake turbulence was generally similar to moderate clear air turbulence.

39.7.4 Pilot Action to Mitigate Wake Turbulence Encounters

39.7.4.1 Pilots should be alert for wake turbulence when operating:

- a) In the vicinity of aircraft climbing or descending through their altitude.
- b) Approximately 10–30 miles after passing 1,000 feet below opposite–direction traffic.
- c) Approximately 10–30 miles behind and 1,000 feet below same–direction traffic.

39.7.4.2 Pilots encountering or anticipating wake turbulence in DRVSM airspace have the option of requesting a vector, FL change, or if capable, a lateral offset.

NOTE–

1. *Offsets of approximately a wing span upwind generally can move the aircraft out of the immediate vicinity of another aircraft’s wake vortex.*
2. *In domestic U.S. airspace, pilots must request clearance to fly a lateral offset. Strategic lateral offsets flown in oceanic airspace do not apply.*

39.8 Pilot/Controller Phraseology

TBL ENR 1.1–4 shows standard phraseology that pilots and controllers will use to communicate in DRVSM operations.

**TBL ENR 1.1–4
Pilot/Controller Phraseology**

Message	Phraseology
For a controller to ascertain the RVSM approval status of an aircraft:	(call sign) confirm RVSM approved
Pilot indication that flight is RVSM approved	Affirm RVSM
Pilot report of lack of RVSM approval (non-RVSM status). Pilot will report non-RVSM status, as follows: a. On the initial call on any frequency in the RVSM airspace and . . . b. In all requests for flight level changes pertaining to flight levels within the RVSM airspace and . . . c. In all read backs to flight level clearances pertaining to flight levels within the RVSM airspace and . . . d. In read back of flight level clearances involving climb and descent through RVSM airspace (FL 290 – 410)	Negative RVSM, (supplementary information, e.g., “Certification flight”).
Pilot report of one of the following after entry into RVSM airspace: all primary altimeters, automatic altitude control systems or altitude alerters have failed. (See Paragraph 39.9, Contingency Actions: Weather Encounters and Aircraft System Failures that Occur After Entry into RVSM Airspace). NOTE– <i>This phrase is to be used to convey both the initial indication of RVSM aircraft system failure and on initial contact on all frequencies in RVSM airspace until the problem ceases to exist or the aircraft has exited RVSM airspace.</i>	Unable RVSM Due Equipment
ATC denial of clearance into RVSM airspace	Unable issue clearance into RVSM airspace, maintain FL
*Pilot reporting inability to maintain cleared flight level due to weather encounter. (See Paragraph 39.9, Contingency Actions: Weather Encounters and Aircraft System Failures that Occur after Entry into RVSM Airspace).	*Unable RVSM due (state reason) (e.g., turbulence, mountain wave)
ATC requesting pilot to confirm that an aircraft has regained RVSM–approved status or a pilot is ready to resume RVSM	Confirm able to resume RVSM
Pilot ready to resume RVSM after aircraft system or weather contingency	Ready to resume RVSM

39.9 Contingency Actions: Weather Encounters and Aircraft System Failures that Occur After Entry into RVSM Airspace

TBL ENR 1.1–5 provides pilot guidance on actions to take under certain conditions of aircraft system failure that occur after entry into RVSM airspace and weather encounters. It also describes the expected ATC controller actions in these situations. It is recognized that the pilot and controller will use judgment to determine the action most appropriate to any given situation.

TBL ENR 1.1-5

Contingency Actions: Weather Encounters and Aircraft System Failures that Occur After Entry into RVSM Airspace

Initial Pilot Actions in Contingency Situations	
<p>Initial pilot actions when unable to maintain flight level (FL) or unsure of aircraft altitude—keeping capability:</p> <ul style="list-style-type: none"> •Notify ATC and request assistance as detailed below. •Maintain cleared flight level, to the extent possible, while evaluating the situation. •Watch for conflicting traffic both visually and by reference to TCAS, if equipped. •Alert nearby aircraft by illuminating exterior lights (commensurate with aircraft limitations). 	
Severe Turbulence and/or Mountain Wave Activity (MWA) Induced Altitude Deviations of Approximately 200 feet	
<p>Pilot will:</p> <ul style="list-style-type: none"> •When experiencing severe turbulence and/or MWA induced altitude deviations of approximately 200 feet or greater, pilot will contact ATC and state “Unable RVSM Due (state reason)” (e.g., turbulence, mountain wave) •If not issued by the controller, request vector clear of traffic at adjacent FLs •If desired, request FL change or re-route •Report location and magnitude of turbulence or MWA to ATC <p>See Paragraph 39.6, Guidance on Severe Turbulence and Mountain Wave Activity (MWA), for detailed guidance.</p>	<p>Controller will:</p> <ul style="list-style-type: none"> •Vector aircraft to avoid merging target with traffic at adjacent flight levels, traffic permitting •Advise pilot of conflicting traffic •Issue FL change or re-route, traffic permitting •Issue PIREP to other aircraft <p>Paragraph 39.6 explains “traffic permitting.”</p>
Mountain Wave Activity (MWA) Encounters – General	
<p>Pilot actions:</p> <ul style="list-style-type: none"> •Contact ATC and report experiencing MWA •If so desired, pilot may request a FL change or re-route •Report location and magnitude of MWA to ATC <p>See paragraph 39.6 for guidance on MWA.</p>	<p>Controller actions:</p> <ul style="list-style-type: none"> •Advise pilot of conflicting traffic at adjacent FL •If pilot requests, vector aircraft to avoid merging target with traffic at adjacent RVSM flight levels, traffic permitting •Issue FL change or re-route, traffic permitting •Issue PIREP to other aircraft <p>Paragraph 39.6 explains “traffic permitting.”</p>
<p><i>NOTE— MWA encounters do not necessarily result in altitude deviations on the order of 200 feet. The guidance below is intended to address less significant MWA encounters.</i></p>	

Wake Turbulence Encounters	
<p>Pilot should:</p> <ul style="list-style-type: none"> •Contact ATC and request vector, FL change or, if capable, a lateral offset <p>See Paragraph 39.7, Guidance on Wake Turbulence.</p>	<p>Controller should:</p> <ul style="list-style-type: none"> •Issue vector, FL change or lateral offset clearance, traffic permitting <p>Paragraph 39.6 explains “traffic permitting.”</p>
“Unable RVSM Due Equipment” Failure of Automatic Altitude Control System, Altitude Alerter or All Primary Altimeters	
<p>Pilot will:</p> <ul style="list-style-type: none"> •Contact ATC and state “Unable RVSM Due Equipment” •Request clearance out of RVSM airspace unless operational situation dictates otherwise 	<p>Controller will:</p> <ul style="list-style-type: none"> •Provide 2,000 feet vertical separation or appropriate horizontal separation •Clear aircraft out of RVSM airspace unless operational situation dictates otherwise
One Primary Altimeter Remains Operational	
<p>Pilot will:</p> <ul style="list-style-type: none"> •Cross check stand-by altimeter •Notify ATC of operation with single primary altimeter •If unable to confirm primary altimeter accuracy, follow actions for failure of all primary altimeters 	<p>Controller will:</p> <ul style="list-style-type: none"> •Acknowledge operation with single primary altimeter
Transponder Failure	
<p>Pilot will:</p> <ul style="list-style-type: none"> •Contact ATC and request authority to continue to operate at cleared flight level •Comply with revised ATC clearance, if issued 	<p>Controller will:</p> <ul style="list-style-type: none"> •Consider request to continue to operate at cleared flight level •Issue revised clearance, if necessary
<p>NOTE- 14 CFR Section 91.215 (ATC transponder and altitude reporting equipment and use) regulates operation with the transponder inoperative.</p>	

39.10 Procedures for Accommodation of Non-RVSM Aircraft

39.10.1 General Policies for Accommodation of Non-RVSM Aircraft

39.10.1.1 The RVSM mandate calls for only RVSM authorized aircraft/operators to fly in designated RVSM airspace with limited exceptions. The policies detailed below are intended exclusively for use by aircraft that the FAA has agreed to accommodate. They are not intended to provide other operators a means to circumvent the normal RVSM approval process.

39.10.1.2 If either the operator is not authorized or the aircraft is not RVSM-compliant, the aircraft will be referred to as a “non-RVSM” aircraft. 14 CFR Section 91.180 and Part 91 Appendix G enable the FAA to authorize a deviation to operate a non-RVSM aircraft in RVSM airspace.

39.10.1.3 Non-RVSM aircraft flights will be handled on a workload permitting basis. The vertical separation standard applied between aircraft not approved for RVSM and all other aircraft must be 2,000 feet.

39.10.1.4 Required Pilot Calls. The pilot of non-RVSM aircraft will inform the controller of the lack of RVSM approval in accordance with the direction provided in Paragraph 39.8, Pilot/Controller Phraseology.

39.10.2 Categories of Non-RVSM Aircraft that may be Accommodated

Subject to FAA approval and clearance, the following categories of non-RVSM aircraft may operate in domestic U.S. RVSM airspace provided they have an operational transponder.

39.10.2.1 Department of Defense (DOD) aircraft.

39.10.2.2 Flights conducted for aircraft certification and development purposes.

39.10.2.3 Active air ambulance flights utilizing a “MEDEVAC” call sign.

39.10.2.4 Aircraft climbing/descending through RVSM flight levels (without intermediate level off) to/from FLs above RVSM airspace (Policies for these flights are detailed in paragraph 39.11, Non-RVSM Aircraft Requesting Climb to and Descent from Flight Levels Above RVSM Airspace Without Intermediate Level Off.

39.10.2.5 Foreign State (government) aircraft.

39.10.3 Methods for operators of non-RVSM aircraft to request access to RVSM Airspace. Operators may:

39.10.3.1 LOA/MOU. Enter into a Letter of Agreement (LOA)/Memorandum of Understanding (MOU) with the RVSM facility (the Air Traffic facility that provides air traffic services in RVSM airspace). Operators must comply with LOA/MOU.

39.10.3.2 File-and-Fly. File a flight plan to notify the FAA of their intention to request access to RVSM airspace.

NOTE-

Priority for access to RVSM airspace will be afforded to RVSM compliant aircraft, then File-and-Fly flights.

39.11 Non-RVSM Aircraft Requesting Climb to and Descent from Flight Levels Above RVSM Airspace Without Intermediate Level Off

39.11.1 File-and-Fly. Operators of Non-RVSM aircraft climbing to and descending from RVSM flight levels should just file a flight plan.

39.11.2 Non-RVSM aircraft climbing to and descending from flight levels above RVSM airspace will be handled on a workload permitting basis. The vertical separation standard applied in RVSM airspace between non-RVSM aircraft and all other aircraft must be 2,000 feet.

39.11.3 Non-RVSM aircraft climbing to/descending from RVSM airspace can only be considered for accommodation provided:

39.11.3.1 Aircraft is capable of a continuous climb/descent and does not need to level off at an intermediate altitude for any operational considerations and

39.11.3.2 Aircraft is capable of climb/descent at the normal rate for the aircraft.

39.11.4 Required Pilot Calls. The pilot of non-RVSM aircraft will inform the controller of the lack of RVSM approval in accordance with the direction provided in paragraph 39.8, Pilot/Controller Phraseology.

40. Terminal Radar Services for VFR Aircraft

40.1 Basic Radar Service

40.1.1 In addition to the use of radar for the control of IFR aircraft, all commissioned radar facilities provide the following basic radar services for VFR aircraft:

40.1.1.1 Safety alerts.

40.1.1.2 Traffic advisories.

40.1.1.3 Limited radar vectoring (on a workload permitting basis).

40.1.1.4 Sequencing at locations where procedures have been established for this purpose and/or when covered by a letter of agreement.

NOTE–

When the stage services were developed, two basic radar services (traffic advisories and limited vectoring) were identified as “Stage I.” This definition became unnecessary and the term “Stage I” was eliminated from use. The term “Stage II” has been eliminated in conjunction with the airspace reclassification, and sequencing services to locations with local procedures and/or letters of agreement to provide this service have been included in basic services to VFR aircraft. These basic services will still be provided by all terminal radar facilities whether they include Class B, C, D, or E airspace. “Stage III” services have been replaced with “Class B” and “Terminal Radar Service Area” service where applicable.

40.1.2 Vectoring service may be provided when requested by the pilot or with pilot concurrence when suggested by ATC.

40.1.3 Pilots of arriving aircraft should contact approach control on the publicized frequency and give their position, altitude, aircraft call sign, type aircraft, radar beacon code (if transponder equipped), destination, and should request traffic information.

40.1.4 Approach control will issue wind and runway, except when the pilot states “have numbers” or this information is contained in the ATIS broadcast and the pilot states that the current ATIS information has been received. Traffic information is provided on a workload permitting basis. Approach control will specify the time or place at which the pilot is to contact the tower on local control frequency for further landing information. Radar service is automatically terminated and the aircraft need not be advised of termination when an arriving VFR aircraft receiving radar services to a tower–controlled airport where basic radar service is provided has landed, or to all other airports, is instructed to change to tower or advisory frequency.

40.1.5 Sequencing for VFR aircraft is available at certain terminal locations (see locations listed in the Chart Supplement). The purpose of the service is to adjust the flow of arriving VFR and IFR aircraft into the traffic pattern in a safe and orderly manner and to provide radar traffic information to departing VFR aircraft. Pilot participation is urged but is not mandatory. Traffic information is provided on a workload permitting basis. Standard radar separation between VFR or between VFR and IFR aircraft is not provided.

40.1.5.1 Pilots of arriving VFR aircraft should initiate radio contact on the publicized frequency with approach control when approximately 25 miles from the airport at which sequencing services are being provided. On initial contact by VFR aircraft, approach control will assume that sequencing service is requested. After radar contact is established, the pilot may use pilot navigation to enter the traffic pattern or, depending on traffic conditions, approach control may provide the pilot with routings or vectors necessary for proper sequencing with other participating VFR and IFR traffic en route to the airport. When a flight is positioned behind a preceding aircraft and the pilot reports having that aircraft in sight, the pilot will be instructed to follow the preceding aircraft. **THE ATC INSTRUCTION TO FOLLOW THE PRECEDING AIRCRAFT DOES NOT AUTHORIZE THE PILOT TO COMPLY WITH ANY ATC CLEARANCE OR INSTRUCTION ISSUED TO THE PRECEDING AIRCRAFT.** If other “nonparticipating” or “local” aircraft are in the traffic pattern, the tower will issue a landing sequence. If an arriving aircraft does not want radar service, the pilot should state “NEGATIVE RADAR SERVICE” or make a similar comment, on initial contact with approach control.

40.1.5.2 Pilots of departing VFR aircraft are encouraged to request radar traffic information by notifying ground control, or where applicable, clearance delivery, on initial contact with their request and proposed direction of flight.

EXAMPLE–

Xray ground control, November One Eight Six, Cessna One Seventy Two, ready to taxi, VFR southbound at 2,500, have information bravo and request radar traffic information.

NOTE–

Following takeoff, the tower will advise when to contact departure control.

40.1.5.3 Pilots of aircraft transiting the area and in radar contact/communication with approach control will receive traffic information on a controller workload permitting basis. Pilots of such aircraft should give their position, altitude, aircraft call sign, aircraft type, radar beacon code (if transponder equipped), destination, and/or route of flight.

40.2 Terminal Radar Service Area (TRSA) Service (Radar Sequencing and Separation Service for VFR Aircraft in a TRSA).

40.2.1 This service has been implemented at certain terminal locations. The service is advertised in the Chart Supplement. The purpose of this service is to provide separation between all participating VFR aircraft and all IFR aircraft operating within the airspace defined as the TRSA. Pilot participation is urged but is not mandatory.

40.2.2 If any aircraft does not want the service, the pilot should state “NEGATIVE TRSA SERVICE” or make a similar comment, on initial contact with approach control or ground control, as appropriate.

40.2.3 TRSAs are depicted on sectional aeronautical charts and listed in the Chart Supplement.

40.2.4 While operating within a TRSA, pilots are provided TRSA service and separation as prescribed in this paragraph. In the event of a radar outage, separation and sequencing of VFR aircraft will be suspended as this service is dependent on radar. The pilot will be advised that the service is not available and will be issued wind, runway information, and the time or place to contact the tower. Traffic information will be provided on a workload permitting basis.

40.2.5 Visual separation is used when prevailing conditions permit and it will be applied as follows:

40.2.5.1 When a VFR flight is positioned behind a preceding aircraft and the pilot reports having that aircraft in sight, the pilot will be instructed by ATC to follow the preceding aircraft. THE ATC INSTRUCTION TO FOLLOW THE PRECEDING AIRCRAFT DOES NOT AUTHORIZE THE PILOT TO COMPLY WITH ANY ATC CLEARANCE OR INSTRUCTION ISSUED TO THE PRECEDING AIRCRAFT. Radar service will be continued to the runway.

40.2.5.2 If other “nonparticipating” or “local” aircraft are in the traffic pattern, the tower will issue a landing sequence.

40.2.5.3 Departing VFR aircraft may be asked if they can visually follow a preceding departure out of the TRSA. The pilot will be instructed to follow the other aircraft provided that the pilot can maintain visual contact with that aircraft.

40.2.6 Participating VFR aircraft will be separated from IFR and other participating VFR aircraft by one of the following:

40.2.6.1 500 feet vertical separation.

40.2.6.2 Visual separation.

40.2.6.3 Target resolution (a process to ensure that correlated radar targets do not touch).

40.2.7 Participating pilots operating VFR in a TRSA:

40.2.7.1 Must maintain an altitude when assigned by ATC unless the altitude assignment is to maintain at or below a specified altitude. ATC may assign altitudes for separation that do not conform to 14 CFR Section 91.159. When the altitude assignment is no longer needed for separation or when leaving the TRSA, the instruction will be broadcast, “RESUME APPROPRIATE VFR ALTITUDES.” Pilots must then return to an altitude that conforms to 14 CFR Section 91.159 as soon as practicable.

40.2.7.2 When not assigned an altitude, the pilot should coordinate with ATC prior to any altitude change.

40.2.8 Within the TRSA, traffic information on observed but unidentified targets will, to the extent possible, be provided to all IFR and participating VFR aircraft. The pilot will be vectored upon request to avoid the observed traffic, provided the aircraft to be vectored is within the airspace under the jurisdiction of the controller.

40.2.9 Departing aircraft should inform ATC of their intended destination and/or route of flight and proposed cruising altitude.

40.2.10 ATC will normally advise participating VFR aircraft when leaving the geographical limits of the TRSA. Radar service is not automatically terminated with this advisory unless specifically stated by the controller.

40.3 Class C Service. This service provides, in addition to basic radar service, approved separation between IFR and VFR aircraft, and sequencing of VFR arrivals to the primary airport.

40.4 Class B Service. This service provides, in addition to basic radar service, approved separation of aircraft based on IFR, VFR, and/or weight, and sequencing of VFR arrivals to the primary airport(s).

40.5 PILOT RESPONSIBILITY. THESE SERVICES ARE NOT TO BE INTERPRETED AS RELIEVING PILOTS OF THEIR RESPONSIBILITIES TO SEE AND AVOID OTHER TRAFFIC OPERATING IN BASIC VFR WEATHER CONDITIONS, TO ADJUST THEIR OPERATIONS AND FLIGHT PATH AS NECESSARY TO PRECLUDE SERIOUS WAKE ENCOUNTERS, TO MAINTAIN APPROPRIATE TERRAIN AND OBSTRUCTION CLEARANCE, OR TO REMAIN IN WEATHER CONDITIONS EQUAL TO OR BETTER THAN THE MINIMUMS REQUIRED BY 14 CFR SECTION 91.155. WHENEVER COMPLIANCE WITH AN ASSIGNED ROUTE, HEADING AND/OR ALTITUDE IS LIKELY TO COMPROMISE PILOT RESPONSIBILITY RESPECTING TERRAIN AND OBSTRUCTION CLEARANCE, VORTEX EXPOSURE, AND WEATHER MINIMUMS, APPROACH CONTROL SHOULD BE SO ADVISED AND A REVISED CLEARANCE OR INSTRUCTION OBTAINED.

40.6 ATC services for VFR aircraft participating in terminal radar services are dependent on ATC radar. Services for VFR aircraft are not available during periods of radar outages. The pilot will be advised when VFR services are limited or not available.

NOTE-

Class B and Class C airspace are areas of regulated airspace. The absence of ATC radar does not negate the requirement of an ATC clearance to enter Class B airspace or two-way radio contact with ATC to enter Class C airspace.

41. Tower En Route Control (TEC)

41.1 TEC is an ATC program to provide a service to aircraft proceeding to and from metropolitan areas. It links designated approach control areas by a network of identified routes made up of the existing airway structure of the National Airspace System. The FAA has initiated an expanded TEC program to include as many facilities as possible. The program's intent is to provide an overflow resource in the low altitude system which would enhance ATC services. A few facilities have historically allowed turbojets to proceed between certain city pairs, such as Milwaukee and Chicago, via tower en route and these locations may continue this service. However, the expanded TEC program will be applied, generally, for nonturbojet aircraft operating at and below 10,000 feet. The program is entirely within the approach control airspace of multiple terminal facilities. Essentially, it is for relatively short flights. Participating pilots are encouraged to use TEC for flights of 2 hours duration or less. If longer flights are planned, extensive coordination may be required with the multiple complex which could result in unanticipated delays.

41.2 There are no unique requirements upon pilots to use the TEC program. Normal flight plan filing procedures will ensure proper flight plan processing. Pilots should include the acronym "TEC" in the remarks selection of the flight plan when requesting tower en route.

41.3 All approach controls in the system may not operate up to the maximum TEC altitude of 10,000 feet. IFR flight may be planned to any satellite airport in proximity to the major primary airport via the same routing.

42. Services in Offshore Controlled Airspace

42.1 Pilots requesting TEC are subject to the same delay factor at the destination airport as other aircraft in the ATC system. In addition, departure and en route delays may occur depending upon individual facility workload. When a major metropolitan airport is incurring significant delays, pilots in the TEC program may want to consider an alternative airport experiencing no delay.

42.2 Flights which operate between the U.S. 3-mile territorial limit and the adjoining oceanic controlled airspace/flight information region (CTA/FIR) boundaries generally operate in airspace designated by federal regulation as "controlled airspace," or "offshore controlled airspace."

42.3 Within the designated areas ATC radar surveillance, ground based navigational signal coverage, and air/ground communications are capable of supporting air traffic services comparable to those provided over U.S. domestic controlled airspace.

42.4 Pilots should be aware that domestic procedures will be applied in offshore controlled airspace to both VFR and IFR aircraft using ATC services.

43. Pilot/Controller Roles/Responsibilities

43.1 General

43.1.1 The roles and responsibilities of the pilot and controller for effective participation in the ATC system are contained in several documents. Pilot responsibilities are in the Federal Aviation Regulations (Title 14 of the U.S. Code of Federal Regulations) and the air traffic controller's are in FAA Order JO 7110.65, Air Traffic Control, and supplemental FAA directives. Additional and supplemental information for pilots can be found in the current Aeronautical Information Manual, Notices to Air Missions, advisory circulars, and aeronautical charts. Since there are many other excellent publications produced by nongovernment organizations as well as other Government organizations with various updating cycles, questions concerning the latest or most current material can be resolved by cross-checking with the above mentioned documents.

43.1.2 The pilot in command of an aircraft is directly responsible for and is the final authority as to the safe operation of that aircraft. In an emergency requiring immediate action, the pilot in command may deviate from any rule in the General, Subpart A, and Flight Rules, Subpart B, in accordance with 14 CFR Section 91.3.

43.1.3 The air traffic controller is responsible to give first priority to the separation of aircraft and to the issuance of radar safety alerts; second priority to other services that are required, but do not involve separation of aircraft; and third priority to additional services to the extent possible.

43.1.4 In order to maintain a safe and efficient air traffic system, it is necessary that every party fulfill their responsibilities to the fullest.

43.1.5 The responsibilities of the pilot and the controller intentionally overlap in many areas providing a degree of redundancy. Should one or the other fail in any manner, this overlapping responsibility is expected to compensate, in many cases, for failures that may affect safety.

43.1.6 The following, while not intended to be all inclusive, is a brief listing of pilot and controller responsibilities for some commonly used procedures or phases of flight. More detailed explanations are contained in the appropriate Federal Aviation Regulations, Advisory Circulars, and similar publications. The information provided here is an overview of the principles involved and is not meant as an interpretation of the rules nor is it intended to extend or diminish responsibilities.

43.2 Air Traffic Clearance

43.2.1 Pilot

43.2.1.1 Acknowledges receipt and understanding of an ATC clearance.

43.2.1.2 Reads back any hold short of runway instructions issued by ATC.

43.2.1.3 Requests clarification or amendment, as appropriate, any time a clearance is not fully understood, or considered unacceptable from a safety standpoint.

43.2.1.4 Promptly complies with an air traffic clearance upon receipt, except as necessary to cope with an emergency. Advises ATC as soon as possible and obtains an amended clearance if deviation is necessary.

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 altitude crossing restriction.

43.2.2 Controller

43.2.2.1 Issues appropriate clearances for the operation being, or to be, conducted in accordance with established criteria.

43.2.2.2 Assigns altitudes in IFR clearances that are at or above the minimum IFR altitudes in Classes A, B, C, D, and E airspace.

43.2.2.3 Ensures acknowledgements by the pilot for issued information, clearance, or instructions.

43.2.2.4 Ensures that readbacks by the pilot of altitude, heading, or other items are correct. If incorrect, distorted, or incomplete, makes corrections as appropriate.

43.3 Contact Approach

43.3.1 Pilot

43.3.1.1 This approach must be requested by the pilot and is made in lieu of a standard or special instrument approach.

43.3.1.2 By requesting the contact approach, the pilot indicates that the flight is operating clear of clouds, has at least 1 mile flight visibility, and can reasonably expect to continue to the destination airport in those conditions.

43.3.1.3 Be aware that while conducting a contact approach, the pilot assumes responsibility for obstruction clearance.

43.3.1.4 Advises ATC immediately if you are unable to continue the contact approach or if you encounter less than 1 mile flight visibility.

43.3.1.5 Be aware that, if radar service is being received, it may automatically terminate when the pilot is told to contact the tower. “Radar service terminated” is used by ATC to inform a pilot that he/she will no longer be provided any of the services that could be received while in radar contact.

REFERENCE-

The Pilot/Controller Glossary is published in the Aeronautical Information Manual (AIM) and FAA Orders JO 7110.10, Flight Services, and JO 7110.65, Air Traffic Control.

43.3.2 Controller

43.3.2.1 Issues clearance for contact approach only when requested by the pilot. Does not solicit the use of this procedure.

43.3.2.2 Before issuing clearance, ascertains that reported ground visibility at destination airport is at least 1 mile.

43.3.2.3 Provides approved separation between aircraft cleared for contact approach and other IFR or special VFR aircraft. When using vertical separation, does not assign a fixed altitude but clears the aircraft at or below an altitude which is at least 1,000 feet below any IFR traffic but not below minimum safe altitudes prescribed in 14 CFR Section 91.119.

43.3.2.4 Issues alternative instructions if, in the controller’s judgment, weather conditions may make completion of the approach impractical.

43.4 Instrument Approach

43.4.1 Pilot

43.4.1.1 Be aware that the controller issues clearance for approach based only on known traffic.

43.4.1.2 Follows the procedures as shown on the instrument approach chart including all restrictive notations, such as:

- a) Procedure not authorized at night.
- b) Approach not authorized when local area altimeter not available.
- c) Procedure not authorized when control tower not in operation.
- d) Procedure not authorized when glide slope not used.
- e) Straight-in minimums not authorized at night.

f) Radar required.

g) The circling minimums published on the instrument approach chart provide adequate obstruction clearance. The pilot should not descend below the circling altitude until the aircraft is in a position to make final descent for landing. Sound judgment and knowledge of the pilot's and the aircraft's capabilities are the criteria for a pilot to determine the exact maneuver in each instance since airport design and the aircraft position, altitude, and airspeed must all be considered. (See ENR 1.5, paragraph 11.6, Circling Minimums.)

43.4.1.3 Upon receipt of an approach clearance while on an unpublished route or being radar vectored:

a) Complies with the minimum altitude for IFR.

b) Maintains last assigned altitude until established on a segment of a published route or Instrument Approach Procedure (IAP), at which time published altitudes apply.

43.4.1.4 There are currently two temperature limitations that may be published in the notes box of the middle briefing strip on an instrument approach procedure (IAP). The two published temperature limitations are:

a) A temperature range limitation associated with the use of Baro-VNAV that may be published on an United States PBN IAP titled RNAV (GPS) or RNAV (RNP); and/or

b) A Cold Temperature Airport (CTA) limitation designated by a snowflake ICON and temperature in Celsius (C) that is published on every IAP for the airfield.

43.4.1.5 Any planned altitude correction for the intermediate and/or missed approach holding segments must be coordinated with ATC. Pilots do not have to advise ATC of a correction in the final segment.

REFERENCE–

AIP, Section ENR 1.8, Cold Temperature Barometric Altimeter Errors, Setting Procedures, and Cold Temperature Airports (CTA).

43.4.2 Controller

43.4.2.1 Issues an approach clearance based on known traffic.

43.4.2.2 Issues an IFR approach clearance only after aircraft is established on a segment of published route or IAP; or assigns an appropriate altitude for the aircraft to maintain until so established.

43.5 Missed Approach

43.5.1 Pilot

43.5.1.1 Executes a missed approach when one of the following conditions exist:

a) Arrival at the missed approach point (MAP) or the decision height (DH) and visual reference to the runway environment is insufficient to complete the landing.

b) Determines that a safe approach or landing is not possible (see ENR 1.5, paragraph 27.8).

c) Instructed to do so by ATC.

43.5.1.2 Advises ATC that a missed approach will be made. Include the reason for the missed approach unless initiated by ATC.

43.5.1.3 Complies with the missed approach instructions for the IAP being executed from the MAP, unless other missed approach instructions are specified by ATC.

43.5.1.4 If executing a missed approach prior to reaching the MAP, fly the lateral navigation path of the instrument procedure to the MAP. Climb to the altitude specified in the missed approach procedure, except when a maximum altitude is specified between the final approach fix (FAF) and the MAP. In that case, comply with the maximum altitude restriction. Note, this may require a continued descent on the final approach.

43.5.1.5 Cold Temperature Airports (CTA) are designated by a snowflake ICON and temperature in Celsius (C) that are published in the notes box of the middle briefing strip on an instrument approach procedure (IAP). Pilots should apply a cold temperature correction to the final missed approach holding altitude when the reported

temperature is at or below the CTA temperature limitation, if applicable. Pilots must inform ATC of the correction.

REFERENCE–

AIP, Section ENR 1.8, Cold Temperature Barometric Altimeter Errors, Setting Procedures, and Cold Temperature Airports (CTA).

43.5.1.6 Following a missed approach, requests clearance for specific action; i.e., another approach, hold for improved conditions, proceed to an alternate airport, etc.

43.5.2 Controller

43.5.2.1 Issues an approved alternate missed approach procedure if it is desired that the pilot execute a procedure other than as depicted on the instrument approach chart.

43.5.2.2 May vector a radar identified aircraft executing a missed approach when operationally advantageous to the pilot or the controller.

43.5.2.3 In response to the pilot's stated intentions, issues a clearance to an alternate airport, to a holding fix, or for reentry into the approach sequence, as traffic conditions permit.

43.6 Vectors

43.6.1 Pilot

43.6.1.1 Promptly complies with headings and altitudes assigned to you by the controller.

43.6.1.2 Questions any assigned heading or altitude believed to be incorrect.

43.6.1.3 If operating VFR and compliance with any radar vector or altitude would cause a violation of any Federal Aviation Regulation, advises ATC and obtain a revised clearance or instruction.

43.6.2 Controller

43.6.2.1 Vectors aircraft in Class A, B, C, D, and E airspace:

- a) For separation.
- b) For noise abatement.
- c) To obtain an operational advantage for the pilot or the controller.

43.6.2.2 Vectors aircraft in Class A, B, C, D, E, and G airspace when requested by the pilot.

43.6.2.3 Except where authorized for radar approaches, radar departures, special VFR, or when operating in accordance with vectors below minimum altitude procedures, vector IFR aircraft at or above minimum vectoring altitudes.

43.6.2.4 May vector aircraft off assigned procedures. When published altitude or speed restrictions are included, controllers must assign an altitude, or if necessary, a speed.

43.6.2.5 May vector VFR aircraft, not at an ATC assigned altitude, at any altitude. In these cases, terrain separation is the pilot's responsibility.

43.7 Speed Adjustments

43.7.1 Pilot (In U.S. Domestic Class A, B, C, D, and E airspace)

43.7.2 Except as stated in paragraphs 43.7.5 and 43.7.6, advises ATC anytime the true airspeed at cruising level varies or is expected to vary by plus or minus 10 knots or 0.02 Mach number, whichever is less, of the filed true airspeed.

43.7.3 Complies with speed adjustments from ATC unless:

43.7.3.1 Except as stated in paragraphs 43.7.5 and 43.7.6, advises ATC anytime the true airspeed at cruising level varies or is expected to vary by plus or minus 10 knots or 0.02 Mach number, whichever is less, of the filed true airspeed.

43.7.3.2 Complies with speed adjustments from ATC unless:

a) The minimum or maximum safe airspeed for any particular operation is greater or less than the requested airspeed. In such cases, advises ATC.

b) Operating at or above 10,000 feet MSL on an ATC assigned SPEED ADJUSTMENT of more than 250 knots IAS and subsequent clearance is received for descent below 10,000 feet MSL. In such cases, pilots are expected to comply with 14 CFR Section 97.117(a).

43.7.4 Controller (In U.S. Domestic Class A, B, C, D, and E Airspaces)

43.7.4.1 Assigns aircraft to speed adjustments when necessary, but not as a substitute for good vectoring technique.

43.7.4.2 Adheres to the restrictions of FAA Order JO 7110.65, Air Traffic Control, as to when speed adjustment procedures may be applied.

43.7.4.3 Avoids speed adjustments requiring alternate decreases and increases.

43.7.4.4 Assigns speed adjustments to a specified IAS knots/Mach number or to increase or decrease speed utilizing increments of 5 knots or multiples thereof.

43.7.4.5 Terminates ATC-assigned speed adjustments when no longer required by issuing further instructions to pilots in the following manner:

a) Advises pilots to “resume normal speed” when the aircraft is on a heading, random routing, charted procedure, or route without published speed restrictions.

b) Instructs pilots to “comply with speed restrictions” when the aircraft is joining or resuming a charted procedure or route with published speed restrictions.

CAUTION-

The phraseology “Climb via SID” requires compliance with all altitude and/or speed restrictions depicted on the procedure.

c) Instructs pilots to “resume published speed” when aircraft are cleared via a charted instrument flight procedure that contains published speed restrictions.

d) Advises aircraft to “delete speed restrictions” when ATC assigned or published speed restrictions on a charted procedure are no longer required.

e) Clears pilots for approach without restating previously issued speed adjustments.

43.7.4.6 Gives due consideration to aircraft capabilities to reduce speed while descending.

43.7.5 Pilot (In Oceanic Class A and E Airspace)

43.7.5.1 If ATC has not assigned an airspeed, advises ATC anytime the true airspeed at cruising level varies or is expected to vary by ± 10 knots or 0.02 Mach number, whichever is less, of the filed true airspeed.

43.7.5.2 If ATC has assigned an airspeed, aircraft must adhere to the ATC assigned airspeed and must request ATC approval before making any change thereto. If it is essential to make an immediate temporary change in the Mach number (e.g., due to turbulence), ATC must be notified as soon as possible. If it is not feasible, due to aircraft performance, to maintain the last assigned Mach number during an en route climb or descent, advises ATC at the time of the request.

43.7.6 Controller (In Oceanic Class A and E Airspace)

43.7.6.1 Assigns airspeed when necessary for separation of aircraft to comply with 14 CFR, ICAO regulations and procedures, or letters of agreement.

43.8 Traffic Advisories (Traffic Information)

43.8.1 Pilot

43.8.1.1 Acknowledges receipt of traffic advisories.

43.8.1.2 Informs controller if traffic is in sight.

43.8.1.3 Advises ATC if a vector to avoid traffic is desired.

43.8.1.4 Does not expect to receive radar traffic advisories on all traffic. Some aircraft may not appear on the radar display. Be aware that the controller may be occupied with high priority duties and unable to issue traffic information for a variety of reasons.

43.8.1.5 Advises controller if service is not desired.

43.8.2 Controller

43.8.2.1 Issues radar traffic to the maximum extent consistent with higher priority duties except in Class A airspace.

43.8.2.2 Provides vectors to assist aircraft to avoid observed traffic when requested by the pilot.

43.8.2.3 Issues traffic information to aircraft in Class D airspace for sequencing purposes.

43.8.2.4 Controllers are required to issue traffic advisories to each aircraft operating on intersecting or nonintersecting converging runways where projected flight paths will cross.

43.9 Safety Alert

43.9.1 Pilot

43.9.1.1 Initiates appropriate action if a safety alert is received from ATC.

43.9.1.2 Be aware that this service is not always available and that many factors affect the ability of the controller to be aware of a situation in which unsafe proximity to terrain, obstructions, or another aircraft may be developing.

43.9.2 Controller

43.9.2.1 Issues a safety alert if aware an aircraft under their control is at an altitude which, in the controller's judgment, places the aircraft in unsafe proximity to terrain, obstructions, or another aircraft. Types of safety alerts are:

a) **Terrain/Obstruction Alerts.** Immediately issued to an aircraft under their control if aware the aircraft is at an altitude believed to place the aircraft in unsafe proximity to terrain/obstruction.

b) **Aircraft Conflict Alerts.** Immediately issued to an aircraft under their control if aware of an aircraft not under their control at an altitude believed to place the aircraft in unsafe proximity to each other. With the alert, they offer the pilot an alternative if feasible.

43.9.2.2 Discontinues further alerts if informed by the pilot action is being taken to correct the situation or that the other aircraft is in sight.

43.10 See and Avoid

43.10.1 Pilot

43.10.1.1 When meteorological conditions permit, regardless of type of flight plan or whether or not under control of a radar facility, the pilot is responsible to see and avoid other traffic, terrain, or obstacles.

43.10.2 Controller

43.10.2.1 Provides radar traffic information to radar identified aircraft operating outside positive control airspace on a workload permitting basis.

43.10.2.2 Issues a safety advisory to an aircraft under their control if aware the aircraft is at an altitude believed to place the aircraft in unsafe proximity to terrain, obstructions or other aircraft.

43.11 Visual Approach

43.11.1 Pilot

43.11.1.1 If a visual approach is not desired, advises ATC.

43.11.1.2 Complies with controller's instructions for vectors toward the airport of intended landing or to a visual position behind a preceding aircraft.

43.11.1.3 The pilot must, at all times, have either the airport or the preceding aircraft in sight. After being cleared for a visual approach, proceed to the airport in a normal manner or follow the preceding aircraft. Remain clear of clouds while conducting a visual approach.

43.11.1.4 If the pilot accepts a visual approach clearance to visually follow a preceding aircraft, you are required to establish a safe landing interval behind the aircraft you were instructed to follow. You are responsible for wake turbulence separation.

43.11.1.5 Advise ATC immediately if the pilot is unable to continue following the preceding aircraft, cannot remain clear of clouds, needs to climb, or loses sight of the airport.

43.11.1.6 In the event of a go-around, the pilot is responsible to maintain terrain and obstruction avoidance until reaching an ATC assigned altitude if issued.

43.11.1.7 Be aware that radar service is automatically terminated, without being advised by ATC, when the pilot is instructed to change to advisory frequency.

43.11.1.8 Be aware that there may be other traffic in the traffic pattern and the landing sequence may differ from the traffic sequence assigned by the approach control or ARTCC.

43.11.2 Controller

43.11.2.1 Does not clear an aircraft for a visual approach unless reported weather at the airport is ceiling at or above 1,000 feet and visibility is 3 miles or greater. When weather is not available for the destination airport, informs the pilot and does not initiate a visual approach to that airport unless there is reasonable assurance that descent and flight to the airport can be made visually.

43.11.2.2 Issues visual approach clearance when the pilot reports sighting either the airport or a preceding aircraft which is to be followed.

43.11.2.3 Provides separation except when visual separation is being applied by the pilot.

43.11.2.4 Continues flight following and traffic information until the aircraft has landed or has been instructed to change to advisory frequency.

43.11.2.5 For all aircraft, inform the pilot when the preceding aircraft is a heavy. Inform the pilot of a small aircraft when the preceding aircraft is a B757. Visual separation is prohibited behind super aircraft.

43.11.2.6 When weather is available for the destination airport, does not initiate a vector for a visual approach unless the reported ceiling at the airport is 500 feet or more above the MVA and visibility is 3 miles or more. If vectoring weather minima are not available but weather at the airport is ceiling at or above 1,000 feet and visibility of 3 miles or greater, visual approaches may still be conducted.

43.11.2.7 Informs the pilot conducting the visual approach of the aircraft class when pertinent traffic is known to be a heavy aircraft.

43.12 Visual Separation

43.12.1 Pilot

43.12.1.1 Acceptance of instructions to follow another aircraft or to provide visual separation from it is an acknowledgment that the pilot will maneuver the aircraft as necessary to avoid the other aircraft or to maintain in-trail separation. Pilots are responsible to maintain visual separation until flight paths (altitudes and/or courses) diverge.

43.12.1.2 If instructed by ATC to follow another aircraft or to provide visual separation from it, promptly notify the controller if you lose sight of that aircraft, are unable to maintain continued visual contact with it, or cannot accept the responsibility for your own separation for any reason.

43.12.1.3 The pilot also accepts responsibility for wake turbulence separation under these conditions.

43.12.2 Controller Applies Visual Separation Only:

43.12.2.1 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.

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

43.12.2.3 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.

43.13 VFR–on–top

43.13.1 Pilot

43.13.1.1 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 33. of this section, IFR Separation Standards; GEN 3.3, paragraph 6, Position Reporting; and GEN 3.3, paragraph 7, Additional Reports.*

43.13.1.2 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.

43.13.2 Controller

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

43.13.2.2 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.

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

43.14 Instrument Departures

43.14.1 Pilot

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

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

43.14.1.3 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.

43.14.1.4 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.

43.14.2 Controller

43.14.2.1 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.

43.14.2.2 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.

43.14.2.3 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.

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

43.14.2.5 At locations with both SIDs and DVAs, ATC will provide an amended departure clearance to cancel a previously assigned SID and subsequently utilize a DVA or vice versa. The amended clearance will be provided to the pilot in a timely manner so that the pilot may confirm adequate climb performance exists to determine if the amended clearance is acceptable, and brief the changes in advance of entering the runway.

43.14.2.6 At locations with a DVA, ATC is not permitted to utilize a SID and DVA concurrently.

43.15 Minimum Fuel Advisory

43.15.1 Pilot

43.15.1.1 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.

43.15.1.2 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.

43.15.1.3 On initial contact the term "minimum fuel" should be used after stating call sign.

EXAMPLE–

Salt Lake Approach, United 621, "minimum fuel."

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

43.15.1.5 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.

43.15.2 Controller

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

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

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

44.1 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.

44.2 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.

44.2.1 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.

44.2.2 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.

44.2.3 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.

44.3 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.

44.4 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:

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

44.4.2 Alternate ATC instructions have been issued.

44.4.3 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.

45. Traffic Information Service (TIS)

45.1 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 1.1–30, 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).

45.2 Requirements

45.2.1 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 1.1–31, 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 1.1-30
TIS Proximity Coverage Volume

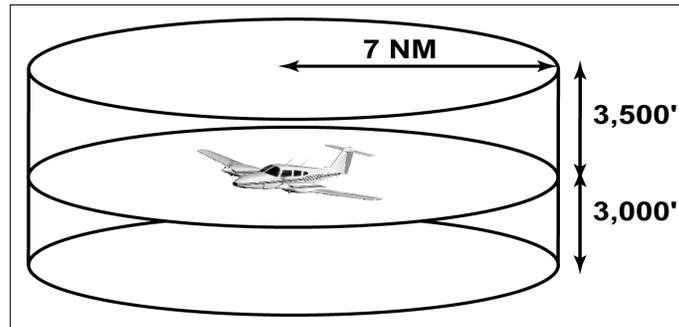


FIG ENR 1.1-31
Terminal Mode S Radar Sites

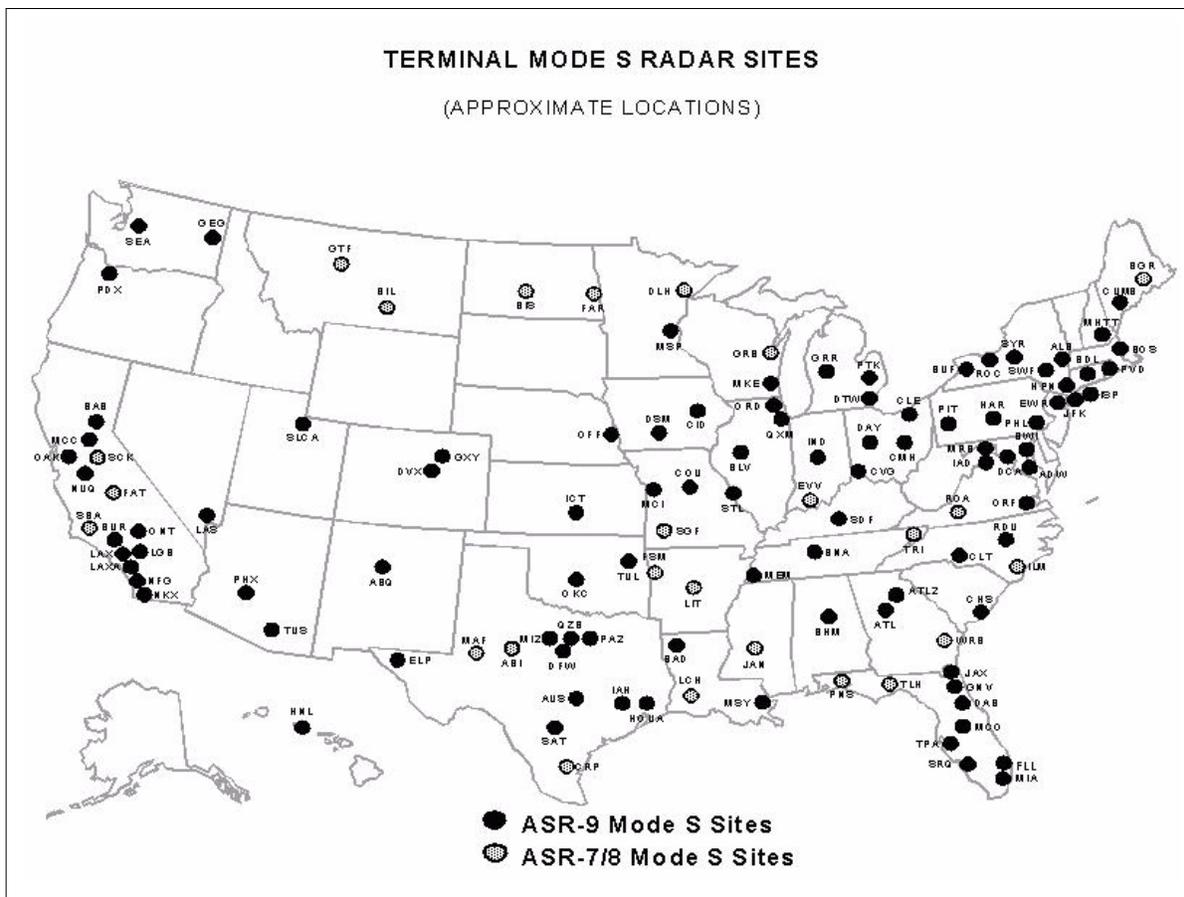
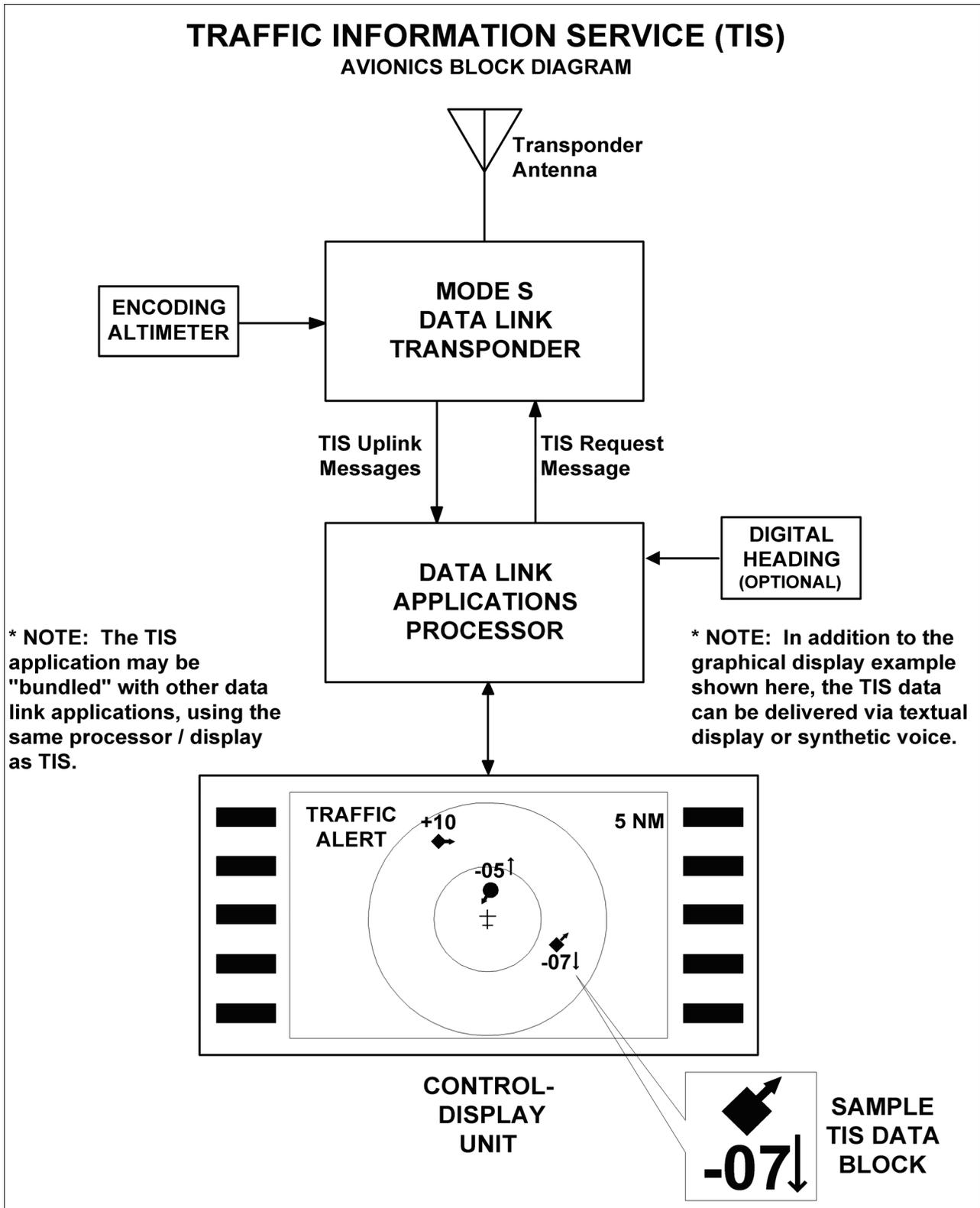


FIG ENR 1.1-32
Traffic Information Service (TIS)
Avionics Block Diagram



45.2.2 The cockpit equipment functionality required by a TIS client aircraft to receive the service consists of the following (refer to FIG ENR 1.1–32):

45.2.2.1 Mode S data link transponder with altitude encoder.

45.2.2.2 Data link applications processor with TIS software installed.

45.2.2.3 Control–display unit.

45.2.2.4 Optional equipment includes a digital heading source to correct display errors caused by “crab angle” and turning maneuvers.

NOTE–

Some of the above functions will likely be combined into single pieces of avionics, such as subparagraphs 45.2.2.1 and 45.2.2.2.

45.2.3 To be visible to the TIS client, the intruder aircraft must, at a minimum, have an operating transponder (Mode A, C or S). All altitude information provided by TIS from intruder aircraft is derived from Mode C reports, if appropriately equipped.

45.2.4 TIS will initially be provided by the terminal Mode S systems that are paired with ASR–9 digital primary radars. These systems are in locations with the greatest traffic densities, thus will provide the greatest initial benefit. The remaining terminal Mode S sensors, which are paired with ASR–7 or ASR–8 analog primary radars, will provide TIS pending modification or relocation of these sites. See FIG ENR 1.1–31, Terminal Mode S Radar Sites, for site locations. There is no mechanism in place, such as NOTAMs, to provide status update on individual radar sites since TIS is a nonessential, supplemental information service.

The FAA also operates en route Mode S radars (not illustrated) that rotate once every 12 seconds. These sites will require additional development of TIS before any possible implementation. There are no plans to implement TIS in the en route Mode S radars at the present time.

45.3 Capabilities

45.3.1 TIS provides ground–based surveillance information over the Mode S data link to properly equipped client aircraft to aid in visual acquisition of proximate air traffic. The actual avionics capability of each installation will vary and the supplemental handbook material must be consulted prior to using TIS. A maximum of eight (8) intruder aircraft may be displayed; if more than eight aircraft match intruder parameters, the eight “most significant” intruders are uplinked. These “most significant” intruders are usually the ones in closest proximity and/or the greatest threat to the TIS client.

45.3.2 TIS, through the Mode S ground sensor, provides the following data on each intruder aircraft:

45.3.2.1 Relative bearing information in 6–degree increments.

45.3.2.2 Relative range information in 1/8 NM to 1 NM increments (depending on range).

45.3.2.3 Relative altitude in 100–foot increments (within 1,000 feet) or 500–foot increments (from 1,000–3,500 feet) if the intruder aircraft has operating altitude reporting capability.

45.3.2.4 Estimated intruder ground track in 45–degree increments.

45.3.2.5 Altitude trend data (level within 500 fpm or climbing/descending >500 fpm) if the intruder aircraft has operating altitude reporting capability.

45.3.2.6 Intruder priority as either a “traffic advisory” or “proximate” intruder.

45.3.3 When flying from surveillance coverage of one Mode S sensor to another, the transfer of TIS is an automatic function of the avionics system and requires no action from the pilot.

45.3.4 There are a variety of status messages that are provided by either the airborne system or ground equipment to alert the pilot of high priority intruders and data link system status. These messages include the following:

45.3.4.1 Alert. Identifies a potential collision hazard within 34 seconds. This alert may be visual and/or audible, such as a flashing display symbol or a headset tone. A target is a threat if the time to the closest approach

in vertical and horizontal coordinates is less than 30 seconds and the closest approach is expected to be within 500 feet vertically and 0.5 nautical miles laterally.

45.3.4.2 TIS Traffic. TIS traffic data is displayed.

45.3.4.3 Coasting. The TIS display is more than 6 seconds old. This indicates a missing uplink from the ground system. When the TIS display information is more than 12 seconds old, the “No Traffic” status will be indicated.

45.3.4.4 No Traffic. No intruders meet proximate or alert criteria. This condition may exist when the TIS system is fully functional or may indicate “coasting” between 12 and 59 seconds old (see paragraph 45.3.4.3 above).

45.3.4.5 TIS Unavailable. The pilot has requested TIS, but no ground system is available. This condition will also be displayed when TIS uplinks are missing for 60 seconds or more.

45.3.4.6 TIS Disabled. The pilot has not requested TIS or has disconnected from TIS.

45.3.4.7 Good-bye. The client aircraft has flown outside of TIS coverage.

NOTE–

Depending on the avionics manufacturer implementation, it is possible that some of these messages will not be directly available to the pilot.

45.3.5 Depending on avionics system design, TIS may be presented to the pilot in a variety of different displays, including text and/or graphics. Voice annunciation may also be used, either alone or in combination with a visual display. FIG ENR 1.1–32, Traffic Information Service (TIS), Avionics Block Diagram, shows an example of a TIS display using symbology similar to the Traffic Alert and Collision Avoidance System (TCAS) installed on most passenger air carrier/commuter aircraft in the U.S. The small symbol in the center represents the client aircraft and the display is oriented “track up,” with the 12 o’clock position at the top. The range rings indicate 2 and 5 NM. Each intruder is depicted by a symbol positioned at the approximate relative bearing and range from the client aircraft. The circular symbol near the center indicates an “alert” intruder and the diamond symbols indicate “proximate” intruders.

45.3.6 The inset in the lower right corner of FIG ENR 1.1–32, Traffic Information Service (TIS), Avionics Block Diagram, shows a possible TIS data block display. The following information is contained in this data block:

45.3.6.1 The intruder, located approximately four o’clock, three miles, is a “proximate” aircraft and currently not a collision threat to the client aircraft. This is indicated by the diamond symbol used in this example.

45.3.6.2 The intruder ground track diverges to the right of the client aircraft, indicated by the small arrow.

45.3.6.3 The intruder altitude is 700 feet less than or below the client aircraft, indicated by the “–07” located under the symbol.

45.3.6.4 The intruder is descending >500 fpm, indicated by the downward arrow next to the “–07” relative altitude information. The absence of this arrow when an altitude tag is present indicates level flight or a climb/descent rate less than 500 fpm.

NOTE–

If the intruder did not have an operating altitude encoder (Mode C), the altitude and altitude trend “tags” would have been omitted.

45.4 Limitations

45.4.1 TIS 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 43.10, See and Avoid). TIS must not be used for avoidance maneuvers during IMC or other times when there is no visual contact with the intruder aircraft. TIS provides proximity warning only, to assist the pilot in the visual acquisition of intruder aircraft. It is intended for use by aircraft in which TCAS is not required. Avoidance maneuvers are neither provided nor authorized, as a direct result of a TIS intruder display or TIS alert.

45.4.2 TIS does not alter or diminish the pilot’s basic authority and responsibility to ensure safe flight. Since TIS does not respond to aircraft which are not transponder equipped, aircraft with a transponder failure, or aircraft out of radar coverage, TIS alone does not ensure safe separation in every case.

45.4.3 At this time, no air traffic service nor handling is predicated on the availability of TIS equipment in the aircraft.

45.4.4 While TIS is a useful aid to visual traffic avoidance, it has some system limitations that must be fully understood to ensure proper use. Many of these limitations are inherent in secondary radar surveillance. In other words, the information provided by TIS will be no better than that provided to ATC. Other limitations and anomalies are associated with the TIS predictive algorithm.

45.4.4.1 Intruder Display Limitations. TIS will only display aircraft with operating transponders installed. TIS relies on surveillance of the Mode S radar, which is a “secondary surveillance” radar similar to the ATCRBS described in paragraph 38.2, Air Traffic Control Radar Beacon System (ATCRBS).

45.4.4.2 TIS Client Altitude Reporting Requirement. Altitude reporting is required by the TIS client aircraft in order to receive TIS. If the altitude encoder is inoperative or disabled, TIS will be unavailable, as TIS requests will not be honored by the ground system. As such, TIS requires altitude reporting to determine the Proximity Coverage Volume as indicated in FIG ENR 1.1–30. TIS users must be alert to altitude encoder malfunctions, as TIS has no mechanism to determine if client altitude reporting is correct. A failure of this nature will cause erroneous and possibly unpredictable TIS operation. If this malfunction is suspected, confirmation of altitude reporting with ATC is suggested.

45.4.4.3 Intruder Altitude Reporting. Intruders without altitude reporting capability will be displayed without the accompanying altitude tag. Additionally, nonaltitude reporting intruders are assumed to be at the same altitude as the TIS client for alert computations. This helps to ensure that the pilot will be alerted to all traffic under radar coverage, but the actual altitude difference may be substantial. Therefore, visual acquisition may be difficult in this instance.

45.4.4.4 Coverage Limitations. Since TIS is provided by ground–based, secondary surveillance radar, it is subject to all limitations of that radar. If an aircraft is not detected by the radar, it cannot be displayed on TIS. Examples of these limitations are as follows:

a) TIS will typically be provided within 55 NM of the radars depicted in FIG ENR 1.1–31, Terminal Mode S Radar Sites. This maximum range can vary by radar site and is always subject to “line of sight” limitations; the radar and data link signals will be blocked by obstructions, terrain, and curvature of the earth.

b) TIS will be unavailable at low altitudes in many areas of the country, particularly in mountainous regions. Also, when flying near the “floor” of radar coverage in a particular area, intruders below the client aircraft may not be detected by TIS.

c) TIS will be temporarily disrupted when flying directly over the radar site providing coverage if no adjacent site assumes the service. A ground–based radar, similar to a VOR or NDB, has a zenith cone, sometimes referred to as the cone of confusion or cone of silence. This is the area of ambiguity directly above the station where bearing information is unreliable. The zenith cone setting for TIS is 34 degrees: any aircraft above that angle with respect to the radar horizon will lose TIS coverage from that radar until it is below this 34 degree angle. The aircraft may not actually lose service in areas of multiple radar coverage since an adjacent radar will provide TIS. If no other TIS–capable radar is available, the “Good–bye” message will be received and TIS terminated until coverage is resumed.

45.4.4.5 Intermittent Operations. TIS operation may be intermittent during turns or other maneuvering, particularly if the transponder system does not include antenna diversity (antenna mounted on the top and bottom of the aircraft). As in subparagraph 45.4.4.4 above, TIS is dependent on two–way, “line of sight” communications between the aircraft and the Mode S radar. Whenever the structure of the client aircraft comes between the transponder antenna (usually located on the underside of the aircraft) and the ground–based radar antenna, the signal may be temporarily interrupted.

45.4.4.6 TIS Predictive Algorithm. TIS information is collected one radar scan prior to the scan during which the uplink occurs. Therefore, the surveillance information is approximately 5 seconds old. In order to present the intruders in a “real time” position, TIS uses a “predictive algorithm” in its tracking software. This algorithm uses track history data to extrapolate intruders to their expected positions consistent with the time of display in the cockpit. Occasionally, aircraft maneuvering will cause this algorithm to induce errors in the TIS display. These errors primarily affect relative bearing information; intruder distance and altitude will remain relatively accurate and may be used to assist in “see and avoid.” Some of the more common examples of these errors are as follows:

a) When client or intruder aircraft maneuver excessively or abruptly, the tracking algorithm will report incorrect horizontal position until the maneuvering aircraft stabilizes.

b) When a rapidly closing intruder is on a course that crosses the client at a shallow angle (either overtaking or head on) and either aircraft abruptly changes course within ¼ NM, TIS will display the intruder on the opposite side of the client than it actually is.

These are relatively rare occurrences and will be corrected in a few radar scans once the course has stabilized.

45.4.4.7 Heading/Course Reference. Not all TIS aircraft installations will have onboard heading reference information. In these installations, aircraft course reference to the TIS display is provided by the Mode S radar. The radar only determines ground track information and has no indication of the client aircraft heading. In these installations, all intruder bearing information is referenced to ground track and does not account for wind correction. Additionally, since ground-based radar will require several scans to determine aircraft course following a course change, a lag in TIS display orientation (intruder aircraft bearing) will occur. As in subparagraph 45.4.4.6 above, intruder distance and altitude are still usable.

45.4.4.8 Closely-Spaced Intruder Errors. When operating more than 30 NM from the Mode S sensor, TIS forces any intruder within 3/8 NM of the TIS client to appear at the same horizontal position as the client aircraft. Without this feature, TIS could display intruders in a manner confusing to the pilot in critical situations (for example, a closely-spaced intruder that is actually to the right of the client may appear on the TIS display to the left). At longer distances from the radar, TIS cannot accurately determine relative bearing/distance information on intruder aircraft that are in close proximity to the client.

Because TIS uses a ground-based, rotating radar for surveillance information, the accuracy of TIS data is dependent on the distance from the sensor (radar) providing the service. This is much the same phenomenon as experienced with ground-based navigational aids, such as a VOR. As distance from the radar increases, the accuracy of surveillance decreases. Since TIS does not inform the pilot of distance from the Mode S radar, the pilot must assume that any intruder appearing at the same position as the client aircraft may actually be up to 3/8 NM away in any direction. Consistent with the operation of TIS, an alert on the display (regardless of distance from the radar) should stimulate an outside visual scan, intruder acquisition, and traffic avoidance based on outside reference.

45.5 Reports of TIS Malfunctions

45.5.1 Users of TIS can render valuable assistance in the early correction of malfunctions by reporting their observations of undesirable performance. Reporters should identify the time of observation, location, type and identity of aircraft, and describe the condition observed; the type of transponder processor, and software in use can also be useful information. Since TIS performance is monitored by maintenance personnel rather than ATC, it is suggested that malfunctions be reported by radio or telephone to the nearest Flight Service Station (FSS) facility.

NOTE–

TIS operates at only those terminal Mode S radar sites depicted in FIG ENR 1.1–31. Though similar in some ways, TIS is not related to TIS–B (Traffic Information Service–Broadcast).

46. Automatic Dependent Surveillance–Broadcast (ADS–B) Services

46.1 Introduction

46.1.1 Automatic Dependent Surveillance–Broadcast (ADS–B) is a surveillance technology deployed throughout the NAS (see FIG ENR 1.1–33). The ADS–B system is composed of aircraft avionics and a ground infrastructure. Onboard avionics determine the position of the aircraft by using the GNSS and transmit its position along with additional information about the aircraft to ground stations for use by ATC and other ADS–B services. This information is transmitted at a rate of approximately once per second. (See FIG ENR 1.1–34 and FIG ENR 1.1–35.)

46.1.2 In the United States, ADS–B equipped aircraft exchange information on one of two frequencies: 978 or 1090 MHz. The 1090 MHz frequency is also associated with Mode A, C, and S transponder operations. 1090 MHz transponders with integrated ADS–B functionality extend the transponder message sets with additional ADS–B information. This additional information is known as an “extended squitter” message and is referred to as 1090ES. ADS–B equipment operating on 978 MHz is known as the Universal Access Transceiver (UAT).

46.1.3 ADS–B avionics can have the ability to both transmit and receive information. The transmission of ADS–B information from an aircraft is known as ADS–B Out. The receipt of ADS–B information by an aircraft is known as ADS–B In. All aircraft operating within the airspace defined in 14 CFR § 91.225 are required to transmit the information defined in § 91.227 using ADS–B Out avionics.

46.1.4 In general, operators flying at 18,000 feet and above (Class A airspace) are required to have 1090ES equipment. Those that do not fly above 18,000 may use either UAT or 1090ES equipment. (Refer to 14 CFR §§ 91.225 and 91.227.) While the regulations do not require it, operators equipped with ADS–B In will realize additional benefits from ADS–B broadcast services: Traffic Information Service – Broadcast (TIS–B) (paragraph 47.) and Flight Information Service – Broadcast (FIS–B) (paragraph 48.).

FIG ENR 1.1–33
ADS–B, TIS–B, and FIS–B:
Broadcast Services Architecture

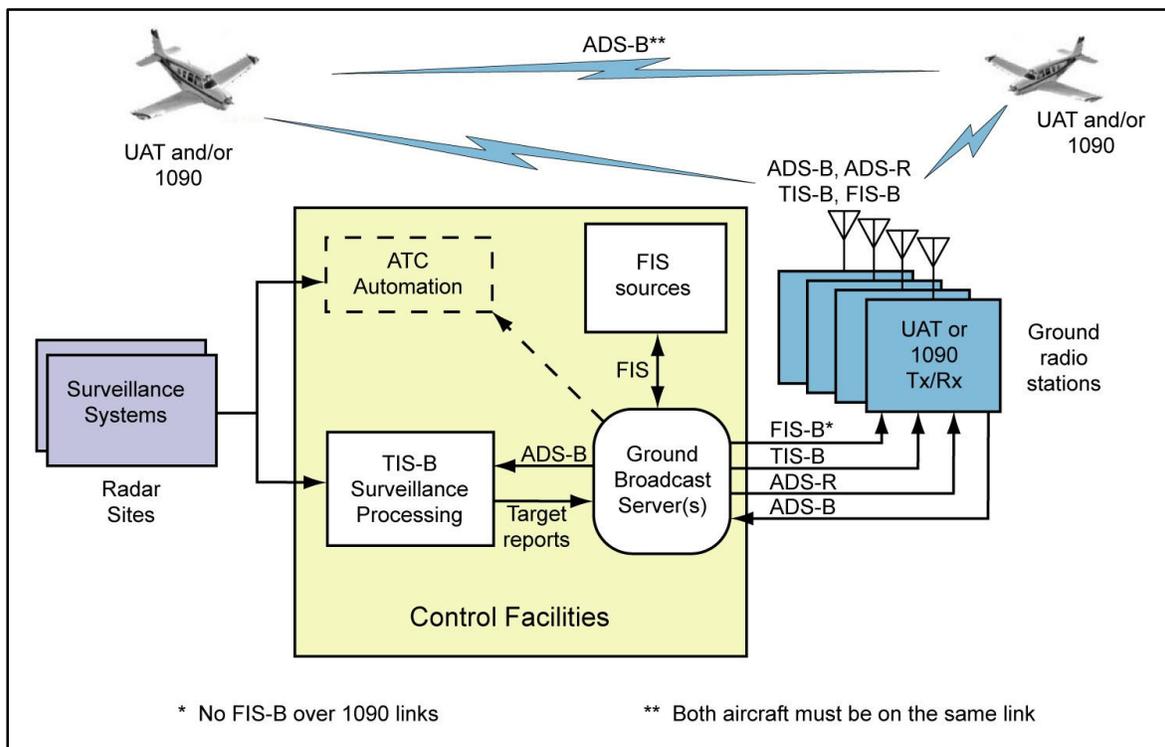


FIG ENR 1.1-34
En Route – ADS-B/ADS-R/TIS-B/FIS-B Service Ceilings/Floors

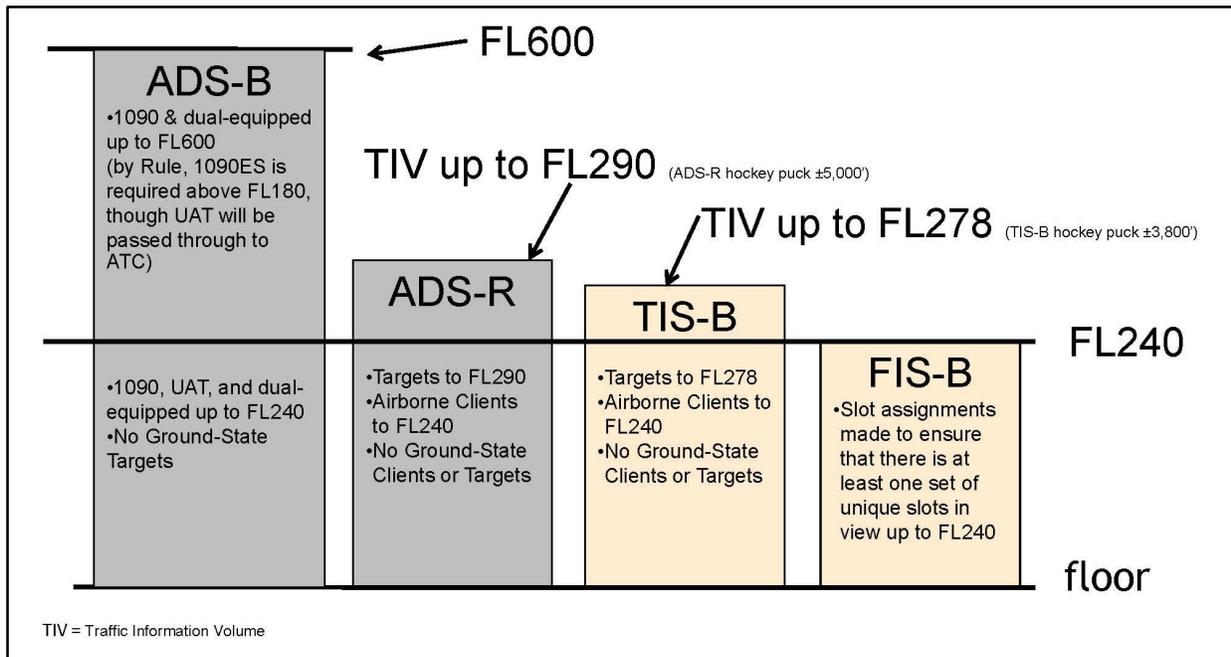
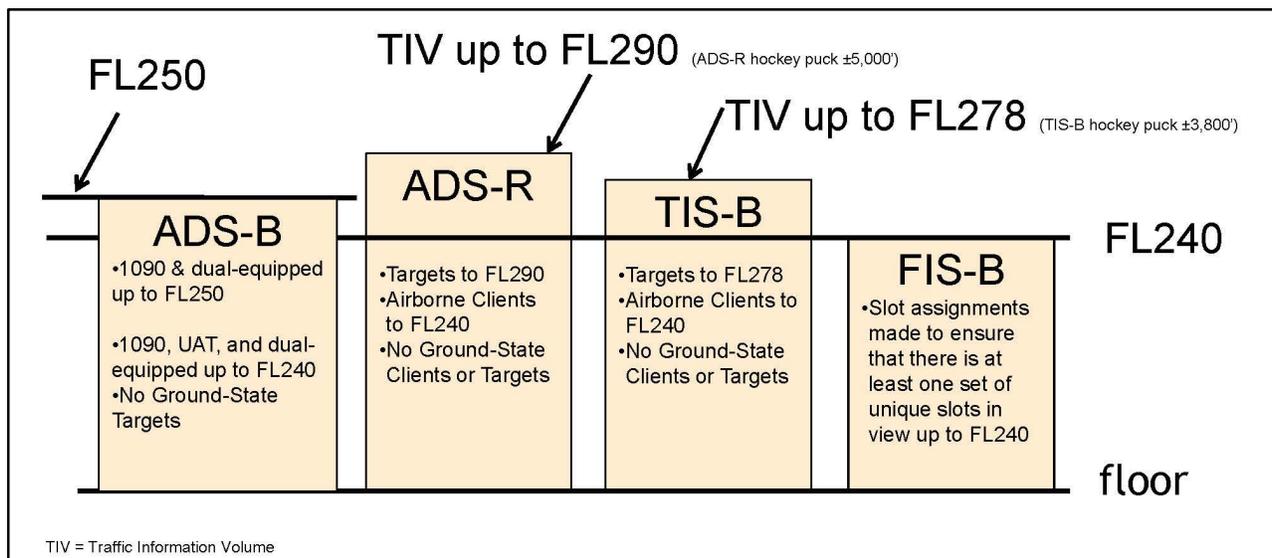


FIG ENR 1.1-35
Terminal – ADS-B/ADS-R/TIS-B/FIS-B Service Ceilings/Floors



46.2 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.

46.3 ADS-B Capabilities and Procedures

46.3.1 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.

46.3.2 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.

46.3.3 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.

46.3.4 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. The UAT anonymous 24-bit address feature may only be used when the operator has not filed an IFR 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. Pilots should be aware that while in UAT anonymity mode, they will not be eligible to receive ATC separation and flight following services, and may not benefit from enhanced ADS-B search and rescue capabilities.

46.3.5 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. Unless otherwise directed by ATC, transponder/ADS-B systems should be turned “on” and remain “on” whenever operating in the air or on the airport surface movement area.

46.4 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.

46.4.1 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 46.3.2.

46.4.2 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.

46.4.3 Aircraft with an Inoperative/Malfunctioning ADS–B Transmitter:

46.4.3.1 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.

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

PHRASEOLOGY–

STOP ADS–B TRANSMISSIONS.

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

46.4.4 Procedures for Accommodation of Non–ADS–B Equipped Aircraft:

46.4.4.1 Pilots of aircraft not equipped with ADS–B may only operate outside airspace designated as ADS–B airspace in 14 CFR §91.225. Pilots of unequipped aircraft wishing to fly any portion of a flight in ADS–B airspace may seek a deviation from the regulation to conduct operations without the required equipment. Direction for obtaining this deviation are available in Advisory Circular 90–114.

46.4.4.2 While air traffic controllers can identify which aircraft are ADS–B equipped and which are not, there is no indication if a non–equipped pilot has obtained a preflight authorization to enter ADS–B airspace. Situations may occur when the pilot of a non–equipped aircraft, without an authorization to operate in ADS–B airspace receives an ATC–initiated in–flight clearance to fly a heading, route, or altitude that would penetrate ADS–B airspace. Such clearances may be for traffic, weather, or simply to shorten the aircraft’s route of flight. When this occurs, the pilot should acknowledge and execute the clearance, but must advise the controller that they are not ADS–B equipped and have not received prior authorization to operate in ADS–B airspace. The controller, at their discretion, will either acknowledge and proceed with the new clearance, or modify the clearance to avoid ADS–B airspace. In either case, the FAA will normally not take enforcement action for non–equipped aircraft in these circumstances.

NOTE–

Pilots operating without ADS–B equipment must not request route or altitude changes that will result in an incursion into ADS–B airspace except for safety of flight; for example, weather avoidance. Unequipped aircraft that have not received a pre–flight deviation authorization will only be considered in compliance with regulation if the amendment to flight is initiated by ATC.

EXAMPLE–

1. ATC: “November Two Three Quebec, turn fifteen degrees left, proceed direct Bradford when able, rest of route unchanged.”

Aircraft: “November Two Three Quebec, turning fifteen degrees left, direct Bradford when able, rest of route unchanged. Be advised, we are negative ADS–B equipment and have not received authorization to operate in ADS–B airspace.”

ATC: “November Two Three Quebec, roger”

or

“November Two Three Quebec, roger, turn twenty degrees right, rejoin Victor Ten, rest of route unchanged.”

2. ATC: “November Four Alpha Tango, climb and maintain one zero thousand for traffic.”

Aircraft: “November Four Alpha Tango, leaving eight thousand for one zero thousand. Be advised, we are negative ADS–B equipment and have not received authorization to operate in ADS–B airspace.”

ATC: “November Four Alpha Tango, roger”

or

“November Four Alpha Tango, roger, cancel climb clearance, maintain eight thousand.”

REFERENCE–

Federal Register Notice, Volume 84, Number 62, dated April 1, 2019

46.5 ADS–B Limitations

46.5.1 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 43.10, 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. No avoidance maneuvers are provided or authorized, as a direct result of an ADS-B display or an ADS-B alert.

46.5.2 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.

46.5.3 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.

46.6 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, or by sending an email to the ADS-B help desk at adsb@faa.gov. Reports should include:

46.6.1 Condition observed;

46.6.2 Date and time of observation;

46.6.3 Altitude and location of observation;

46.6.4 Type and call sign of the aircraft; and

46.6.5 Type and software version of avionics system.

47. Traffic Information Service-Broadcast (TIS-B)

47.1 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 1.1-34 and FIG ENR 1.1-35.)

47.2 TIS-B Requirements

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

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

47.2.2 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).

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

47.3 TIS-B Capabilities

47.3.1 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.

47.3.2 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.

47.4 TIS–B Limitations

47.4.1 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 14 CFR §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.

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

47.4.2.1 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.

47.4.2.2 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.

47.4.2.3 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.

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

47.4.2.5 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.

47.4.3 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.

47.5 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, or by sending an email to the ADS–B help desk at adsb@faa.gov. Reports should include:

47.5.1 Condition observed;

47.5.2 Date and time of observation;

47.5.3 Altitude and location of observation;

47.5.4 Type and call sign of the aircraft; and

47.5.5 Type and software version of avionics system.

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

48.1 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 1.1-34 and FIG ENR 1.1-35.)

48.2 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 Air Missions (NOTAM)/temporary flight restrictions (TFR).

REFERENCE-

AIP, ENR 3.5, Para 7, *Flight Information Services (FIS)*.
Advisory Circular AC 00-63, *Use of Cockpit Displays of Digital Weather and Aeronautical Information*.

48.3 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, or by sending an email to the ADS-B help desk at adsb@faa.gov. Reports should include:

- 48.3.1** Condition observed;
- 48.3.2** Date and time of observation;
- 48.3.3** Altitude and location of observation;
- 48.3.4** Type and call sign of the aircraft; and
- 48.3.5** Type and software version of avionics system.

**TBL ENR 1.1–6
FIS–B Over UAT Product Update and Transmission Intervals**

Product	Update Interval¹	Transmission Interval (95%)²	Basic Product
AIRMET	As Available	5 minutes	Yes
AWW/WW	As Available, then at 15 minute intervals for 1 hour	5 minutes	No
Ceiling	As Available	10 minutes	No
Convective SIGMET	As Available, then at 15 minute intervals for 1 hour	5 minutes	Yes
D–ATIS	As Available	1 minute	No
Echo Top	5 minutes	5 minutes	No
METAR/SPECI	1 minute (where available), As Available otherwise	5 minutes	Yes
MRMS NEXRAD (CONUS)	2 minutes	15 minutes	Yes
MRMS NEXRAD (Regional)	2 minutes	2.5 minutes	Yes
NOTAMs–D/FDC	As Available	10 minutes	Yes
NOTAMs–TFR	As Available	10 minutes	Yes
PIREP	As Available	10 minutes	Yes
SIGMET	As Available, then at 15 minute intervals for 1 hour	5 minutes	Yes
SUA Status	As Available	10 minutes	Yes
TAF/AMEND	6 Hours (±15 minutes)	10 minutes	Yes
Temperature Aloft	12 Hours (±15 minutes)	10 minutes	Yes
TWIP	As Available	1 minute	No
Winds aloft	12 Hours (±15 minutes)	10 minutes	Yes
Lightning strikes ³	5 minutes	5 minutes	Yes
Turbulence ³	1 minute	15 minutes	Yes
Icing, Forecast Potential (FIP) ³	60 minutes	15 minutes	Yes
Cloud tops ³	30 minutes	15 minutes	Yes
1 Minute AWOS ³	1 minute	10 minutes	No
Graphical–AIRMET ³	As Available	5 minutes	Yes
Center Weather Advisory (CWA) ³	As Available	10 minutes	Yes
Temporary Restricted Areas (TRA)	As Available	10 minutes	Yes
Temporary Military Operations Areas (TMOA)	As Available	10 minutes	Yes

¹ The Update Interval is the rate at which the product data is available from the source.

² The Transmission Interval is the amount of time within which a new or updated product transmission must be completed (95%) and the rate or repetition interval at which the product is rebroadcast (95%).

³ The transmission and update intervals for the expanded set of basic meteorological products may be adjusted based on FAA and vendor agreement on the final product formats and performance requirements.

NOTE-

1. Details concerning the content, format, and symbols of the various data link products provided should be obtained from the specific avionics manufacturer.
2. NOTAM-D and NOTAM-FDC products broadcast via FIS-B are limited to those issued or effective within the past 30 days.

49. Automatic Dependent Surveillance-Rebroadcast (ADS-R)

49.1 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 1.1-34 and FIG ENR 1.1-35.)

49.2 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, or by sending an email to the ADS-B help desk at adsb@faa.gov. Reports should include:

- 49.2.1 Condition observed;
- 49.2.2 Date and time of observation;
- 49.2.3 Altitude and location of observation;
- 49.2.4 Type and call sign of the aircraft; and
- 49.2.5 Type and software version of avionics system.

50. Heavy Traffic Around Military Fields

50.1 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.

1.10.4 ATC is responsible for traffic and obstruction separation when they have assigned holding that is not associated with a published (charted) holding pattern. Altitudes assigned will be at or above the minimum vectoring or minimum IFR altitude.

2. Approach Procedures

2.1 Approach Control

2.1.1 Approach control is responsible for controlling all instrument flight operating within its area of responsibility. Approach control may serve one or more airfields, and control is exercised primarily by direct pilot/controller communications. Prior to arriving at the destination radio facility, instructions will be received from ARTCC to contact approach control on a specified frequency.

2.2 Radar Approach Control

2.2.1 Where radar is approved for approach control service, it is used not only for radar approaches (Airport Surveillance Radar (ASR) and Precision Approach Radar (PAR)) but is also used to provide vectors in conjunction with published nonradar approaches based on radio NAVAIDs (ILS, VOR, NDB, TACAN). Radar vectors can provide course guidance and expedite traffic to the final approach course of any established instrument approach procedure or to the traffic pattern for a visual approach. Approach control facilities that provide this radar service will operate in the following manner:

2.2.1.1 Arriving aircraft are either cleared to an outer fix most appropriate to the route being flown with vertical separation and, if required, given holding information or, when radar handoffs are effected between the ARTCC and approach control, or between two approach control facilities, aircraft are cleared to the airport or to a fix so located that the handoff will be completed prior to the time the aircraft reaches the fix. When radar handoffs are utilized, successive arriving flights may be handed off to approach control with radar separation in lieu of vertical separation.

2.2.1.2 After release to approach control, aircraft are vectored to the appropriate final approach course (ILS, RNAV, GLS, VOR, ADF, etc.). Radar vectors and altitude or flight levels will be issued as required for spacing and separating aircraft. *Therefore, pilots must not deviate from the headings issued by approach control.* Aircraft will normally be informed when it is necessary to vector across the final approach course for spacing or other reasons. If approach course crossing is imminent and the pilot has not been informed that the aircraft will be vectored across the final approach course, the pilot should query the controller.

2.2.1.3 The pilot is not expected to turn inbound on the final approach course unless an approach clearance has been issued. This clearance will normally be issued with the final vector for interception of the final approach course, and the vector will be such as to enable the pilot to establish the aircraft on the final approach course prior to reaching the final approach fix.

2.2.1.4 In the case of aircraft already inbound on the final approach course, approach clearance will be issued prior to the aircraft reaching the final approach fix. When established inbound on the final approach course, radar separation will be maintained, and the pilot will be expected to complete the approach utilizing the approach aid designated in the clearance (ILS, RNAV, GLS, VOR, radio beacons, etc.) as the primary means of navigation. Therefore, once established on the final approach course, pilots must not deviate from it unless a clearance to do so is received from ATC.

2.2.1.5 After passing the final approach fix on final approach, aircraft are expected to continue inbound on the final approach course and complete the approach or effect the missed approach procedure published for that airport.

2.2.2 ARTCCs are approved for and may provide approach control services to specific airports. The radar systems used by these centers do not provide the same precision as an ASR/PAR used by approach control facilities and towers, and the update rate is not as fast. Therefore, pilots may be requested to report established on the final approach course.

2.2.3 Whether aircraft are vectored to the appropriate final approach course or provide their own navigation on published routes to it, radar service is automatically terminated when the landing is completed or when instructed to change to advisory frequency at uncontrolled airports, whichever occurs first.

3. Standard Terminal Arrival (STAR) Procedures

3.1 STAR procedures may have mandatory speeds and/or crossing altitudes published. Other STARs may have planning information depicted to inform pilots what clearances or restrictions to **“expect.”** **“Expect”** altitudes/speeds are not considered STAR procedures crossing restrictions unless verbally issued by ATC. Published speed restrictions are independent of altitude restrictions and are mandatory unless modified by ATC. Pilots should plan to cross waypoints with a published speed restriction, at the published speed, and should not exceed this speed past the associated waypoint unless authorized by ATC or a published note to do so. A chart note used to transition from Mach to IAS may also be published. Pilots should maintain their cruise Mach number during the descent until reaching the published transition speed in knots, then continue the descent at that speed until the next published speed restriction on the STAR, or until it is necessary to comply with the speed limits published in 14 CFR §91.117.

3.1.1 STAR procedures may have mandatory speeds and/or crossing altitudes published. Other STARs may have planning information depicted to inform pilots what clearances or restrictions to **“expect.”** **“Expect”** altitudes/speeds are not considered STAR procedures crossing restrictions unless verbally issued by ATC. Published speed restrictions are independent of altitude restrictions and are mandatory unless modified by ATC. Pilots should plan to cross waypoints with a published speed restriction, at the published speed, and should not exceed this speed past the associated waypoint unless authorized by ATC or a published note to do so.

NOTE–

The “expect” altitudes/speeds are published so that pilots may have the information for planning purposes. These altitudes/speeds must not be used in the event of lost communications unless ATC has specifically advised the pilot to expect these altitudes/speeds as part of a further clearance.

REFERENCE–

14 CFR Section 91.185c(2)(iii).

3.1.2 When an IFR cleared route includes a STAR, pilots must maintain the last assigned altitude until receiving authorization to descend so as to comply with all published/issued altitude restrictions. This authorization may contain the phraseology “DESCEND VIA.” If vectored or cleared to deviate off a STAR, pilots must consider the STAR canceled. If the STAR contains published altitude restrictions, speed restrictions, or a chart note used to transition from Mach to IAS, those restrictions are also canceled and pilots will receive an altitude to maintain and, if necessary, a speed. If ATC intends to clear the aircraft back onto the STAR, controllers will advise pilots where to expect to resume the procedure. Pilots should then be prepared to rejoin the STAR at the subsequent fix or procedure leg.

3.1.2.1 Clearance to “descend via” authorizes pilots to:

- a) Descend at pilot’s discretion to meet published restrictions and laterally navigate on a STAR.
- b) When cleared to a waypoint depicted on a STAR, to descend from a previously assigned altitude at pilot’s discretion to the altitude depicted at that waypoint.
- c) Once established on the depicted arrival, to descend and to meet all published or assigned altitude and/or speed restrictions.

NOTE–

1. *When otherwise cleared along a route or procedure that contains published speed restrictions, the pilot must comply with those speed restrictions independent of any descend via clearance.*

2. *ATC anticipates pilots will begin adjusting speed the minimum distance necessary prior to a published speed restriction so as to cross the waypoint/fix at the published speed. Once at the published speed, ATC expects pilots will maintain the published speed until additional adjustment is required to comply with further published or ATC assigned speed restrictions or as required to ensure compliance with 14 CFR Section 91.117.*

3. The “descend via” is used in conjunction with STARs to reduce phraseology by not requiring the controller to restate the altitude at the next waypoint/fix to which the pilot has been cleared.
4. Air traffic will assign an altitude to cross the waypoint/ fix, if no altitude is depicted at the waypoint/fix, for aircraft on a direct routing to a STAR. Air traffic must ensure obstacle clearance when issuing a “descend via” instruction to the pilot.
5. Minimum en route altitudes (MEA) are not considered restrictions; however, pilots must remain above all MEAs, unless receiving an ATC instruction to descend below the MEA.

EXAMPLE–

1. Lateral/routing clearance only.

“Cleared Tyler One arrival.”

NOTE–

In Example 1, pilots are cleared to fly the lateral path of the procedure. Compliance with any published speed restrictions is required. No descent is authorized.

2. Routing with assigned altitude:

“Cleared Tyler One arrival, descend and maintain flight level two four zero.”

“Cleared Tyler One arrival, descend at pilot’s discretion, maintain flight level two four zero.”

NOTE–

In Example 2, the first clearance requires the pilot to descend to FL 240 as directed, comply with any published speed restrictions, and maintain FL 240 until cleared for further vertical navigation with a newly assigned altitude or a “descend via” clearance.

The second clearance authorizes the pilot to descend to FL 240 at his discretion, to comply with any published speed restrictions, and then maintain FL 240 until issued further instructions.

3. Lateral/routing and vertical navigation clearance.

“Descend via the Eagul Five arrival.”

“Descend via the Eagul Five arrival, except, cross Vnnom at or above one two thousand.”

NOTE–

In Example 3, the first clearance authorized the aircraft to descend at pilot’s discretion on the Eagul Five arrival; the pilot must descend so as to comply with all published altitude and speed restrictions.

The second clearance authorizes the same, but requires the pilot to descend so as to cross at Vnnom at or above 12,000.

4. Lateral/routing and vertical navigation clearance when assigning altitude not published on procedure.

“Descend via the Eagul Five arrival, except after Geeno, maintain one zero thousand.”

“Descend via the Eagul Five arrival, except cross Geeno at one one thousand then maintain seven thousand.”

NOTE–

In Example 4, the first clearance authorized the aircraft to track laterally on the Eagul Five Arrival and to descend at pilot’s discretion so as to comply with all altitude and speed restrictions until reaching Geeno and then maintain 10,000. Upon reaching 10,000, aircraft should maintain 10,000 until cleared by ATC to continue to descend.

The second clearance requires the same, except the aircraft must cross Geeno at 11,000 and is then authorized to continue descent to and maintain 7,000.

5. Direct routing to intercept a STAR and vertical navigation clearance.

“Proceed direct Leoni, descend via the Leoni One arrival.”

“Proceed direct Denis, cross Denis at or above flight level two zero zero, then descend via the Mmell One arrival.”

NOTE–

In Example 5, in the first clearance an altitude is published at Leoni; the aircraft proceeds to Leoni, crosses Leoni at the published altitude and then descends via the arrival. If a speed restrictions is published at Leoni, the aircraft will slow to comply with the published speed.

In the second clearance, there is no altitude published at Denis; the aircraft must cross Denis at or above FL200, and then descends via the arrival.

3.1.2.2 Pilots cleared for vertical navigation using the phraseology “descend via” must inform ATC upon initial contact with a new frequency, of the altitude leaving, “descending via (procedure name),” the runway transition or landing direction if assigned, and any assigned restrictions not published on the procedure.

EXAMPLE–

1. Delta 121 is cleared to descend via the Eagul Five arrival, runway 26 transition: “Delta One Twenty One leaving flight level one niner zero, descending via the Eagul Five arrival runway two-six transition.”

2. Delta 121 is cleared to descend via the Eagul Five arrival, but ATC has changed the bottom altitude to 12,000: “Delta One Twenty One leaving flight level one niner zero for one two thousand, descending via the Eagul Five arrival, runway two-six transition.”

3. (JetBlue 602 is cleared to descend via the Ivane Two arrival, landing south): “JetBlue six zero two leaving flight level two one zero descending via the Ivane Two arrival landing south.”

NOTE–

In reference to published altitude restrictions on a STAR or STAR runway transition, the “bottom altitude” is the lowest altitude authorized.

3.1.2.3 Pilots of IFR aircraft destined to locations for which STARs have been published may be issued a clearance containing a STAR whenever ATC deems it appropriate.

3.2 Use of STARs requires pilot possession of at least the approved chart. RNAV STARs must be retrievable by the procedure name from the aircraft database and conform to charted procedure. As with any ATC clearance or portion thereof, it is the responsibility of each pilot to accept or refuse an issued STAR. Pilots should notify ATC if they do not wish to use a STAR by placing “NO STAR” in the remarks section of the flight plan or by the less desirable method of verbally stating the same to ATC.

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 16.2.5.10, *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/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/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 Arrival Holding. Some approach charts have an arrival holding pattern depicted at an IAF or at a feeder fix located along an airway. The arrival hold is depicted using a “thin line” since it is not always a mandatory part of the instrument procedure.

6.7.1 Arrival holding is charted where holding is frequently required prior to starting the approach procedure so that detailed holding instructions are not required. The arrival holding pattern is not authorized unless assigned by ATC. Holding at the same fix may also be depicted on the en route chart.

6.7.2 Arrival holding is also charted where it is necessary to use a holding pattern to align the aircraft for procedure entry from an airway due to turn angle limitations imposed by procedure design standards. When the turn angle from an airway into the approach procedure exceeds the permissible limits, an arrival holding pattern may be published along with a note on the procedure specifying the fix, the airway, and arrival direction where use of the arrival hold is required for procedure entry. Unlike a hold-in-lieu of procedure turn, use of the arrival holding pattern is not authorized until assigned by ATC. If ATC does not assign the arrival hold before reaching the holding fix, the pilot should request the hold for procedure entry. Once established on the inbound holding course and an approach clearance has been received, the published procedure can commence. Alternatively, if using the holding pattern for procedure entry is not desired, the pilot may ask ATC for maneuvering airspace to align the aircraft with the feeder course.

EXAMPLE–

Planview Chart Note: “Proc NA via V343 northeast bound without holding at JOXIT. ATC CLNC REQD.”

6.8 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:

6.8.1 Via published transitions, or

6.8.2 In accordance with paragraph 6.5.6 above, and

6.8.3 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.)*

6.9 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.

rate of descent using normal maneuvers. Circling may require maneuvers at low altitude, at low airspeed, and in marginal weather conditions. Pilots must use sound judgment, have an in-depth knowledge of their capabilities, and fully understand the aircraft performance to determine the exact circling maneuver since weather, unique airport design, and the aircraft position, altitude, and airspeed must all be considered. The following basic rules apply:

11.6.1 Maneuver the shortest path to the base or downwind leg, as appropriate, considering existing weather conditions. There is no restriction from passing over the airport or other runways.

11.6.2 It should be recognized that circling maneuvers may be made while VFR or other flying is in progress at the airport. Standard left turns or specific instruction from the controller for maneuvering must be considered when circling to land.

11.6.3 At airports without a control tower, it may be desirable to fly over the airport to observe wind and turn indicators and other traffic which may be on the runway or flying in the vicinity of the airport.

REFERENCE–

AC 90–66A, Recommended Standards Traffic patterns for Aeronautical Operations at Airports without Operating Control Towers.

11.6.4 The missed approach point (MAP) varies depending upon the approach flown. For vertically guided approaches, the MAP is at the decision altitude/decision height. Non-vertically guided and circling procedures share the same MAP and the pilot determines this MAP by timing from the final approach fix, by a fix, a NAVAID, or a waypoint. Circling from a GLS, an ILS without a localizer line of minima or an RNAV (GPS) approach without an LNAV line of minima is prohibited.

11.7 Instrument Approaches at a Military Field. When instrument approaches are conducted by civil aircraft at military airports, they must be conducted in accordance with the procedures and minimums approved by the military agency having jurisdiction over the airport.

12. Instrument Approach Procedure (IAP) Charts

12.1 14 CFR Section 91.175(a), Instrument approaches to civil airports, requires the use of SIAPs prescribed for the airport in 14 CFR Part 97 unless otherwise authorized by the Administrator (including ATC). If there are military procedures published at a civil airport, aircraft operating under 14 CFR Part 91 must use the civil procedure(s). Civil procedures are defined with “FAA” in parenthesis; e.g., (FAA), at the top, center of the procedure chart. DOD procedures are defined using the abbreviation of the applicable military service in parenthesis; for example, (USAF), (USN), (USA). 14 CFR Section 91.175(g), Military airports, requires civil pilots flying into or out of military airports to comply with the IAP’s and takeoff and landing minimums prescribed by the authority having jurisdiction at those airports. Unless an emergency exists, civil aircraft operating at military airports normally require advance authorization, commonly referred to as “Prior Permission Required” or “PPR.” Information on obtaining a PPR for a particular military airport can be found in the Chart Supplement.

NOTE–

Civil aircraft may conduct practice VFR approaches using DOD instrument approach procedures when approved by the air traffic controller.

12.1.1 IAPs (standard and special, civil and military) are based on joint civil and military criteria contained in the U.S. Standard for TERPS. The design of IAPs based on criteria contained in TERPS, takes into account the interrelationship between airports, facilities, and the surrounding environment, terrain, obstacles, noise sensitivity, etc. Appropriate altitudes, courses, headings, distances, and other limitations are specified and, once approved, the procedures are published and distributed by government and commercial cartographers as instrument approach charts.

12.1.2 Not all IAPs are published in chart form. Radar IAPs are established where requirements and facilities exist but they are printed in tabular form in appropriate U.S. Government Flight Information Publications.

12.1.3 The navigation equipment required to join and fly an instrument approach procedure is indicated by the title of the procedure and notes on the chart.

12.1.3.1 Straight-in IAPs are identified by the navigational system providing the final approach guidance and the runway to which the approach is aligned (e.g., VOR RWY 13). Circling only approaches are identified by the navigational system providing final approach guidance and a letter (e.g., VOR A). More than one navigational system separated by a slash indicates that more than one type of equipment must be used to execute the final approach (e.g., VOR/DME RWY 31). More than one navigational system separated by the word “or” indicates either type of equipment may be used to execute the final approach (for example, VOR or GPS RWY 15).

NOTE–

This procedure identification method has changed and these procedures will be revised in the course of the normal procedure amendment process. The slash and equipment (e.g., /DME) information will be removed with future amendments. Pilots should review the procedure’s notes, planview annotations, and PBN/equipment requirements boxes to determine the capability needed to accomplish the procedure.

12.1.3.2 In some cases, other types of navigation systems including radar may be required to execute other portions of the approach or to navigate to the IAF (e.g., an NDB procedure turn to an ILS, an NDB in the missed approach, or radar required to join the procedure or identify a fix). When radar or other equipment is required for procedure entry from the en route environment, a note will be charted in the planview of the approach procedure chart (for example, RADAR REQUIRED or ADF REQUIRED). When radar or other equipment is required on portions of the procedure outside the final approach segment, including the missed approach, a note will be charted in the notes box of the pilot briefing portion of the approach chart (for example, RADAR REQUIRED or DME REQUIRED). Notes are not charted when VOR is required outside the final approach segment. Pilots should ensure that the aircraft is equipped with the required NAVAID(s) in order to execute the approach, including the missed approach.

NOTE–

Some military (i.e., U.S. Air Force and U.S. Navy) IAPs have these “additional equipment required” notes charted only in the planview of the approach procedure and do not conform to the same application standards used by the FAA.

12.1.3.3 The FAA has initiated a program to provide a new notation for LOC approaches when charted on an ILS approach requiring other navigational aids to fly the final approach course. The LOC minimums will be annotated with the NAVAID required (for example, “DME Required” or “RADAR Required”). During the transition period, ILS approaches will still exist without the annotation.

12.1.3.4 Many ILS approaches having minima based on RVR are eligible for a landing minimum of RVR 1800. Some of these approaches are to runways that have touchdown zone and centerline lights. For many runways that do not have touchdown and centerline lights, it is still possible to allow a landing minimum of RVR 1800. For these runways, the 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).

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 an MDA. These altitude restrictions may be annotated with a note "LOC only" or "LNAV only." 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 is 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 1.5–17).

ENR 1.6 ATS Surveillance Services and Procedures

1. General

1.1 The FAA maintains a Keyhole Markup Language (KML) file with information on estimated ATS surveillance coverage on the following website: https://www.faa.gov/air_traffic/technology/equipadsb.

1.2 The full URL to download the file is located at: https://www.faa.gov/air_traffic/technology/equipadsb/research/airspace#interactiveMap. The file contains selectable data on the Continental United States (CONUS), Alaska, Hawaii, Puerto Rico and Guam.

1.3 Geospatial software (such as Google Earth) can be used to open the KML file and view graphical portrayals of ADS-B rule airspace and estimated ADS-B and secondary surveillance radar (SSR) surveillance coverage at selectable altitudes of 500 feet; 1,500 feet; 3,000 feet; 5,000 feet; and 10,000 feet AGL.

1.4 Additionally, for Alaska, selectable altitudes of 20,000 feet and 33,000 feet MSL are available.

2. Secondary Surveillance Radar (SSR)

2.1 The following graphics are static portrayals of SSR coverage at various locations and altitudes.

FIG ENR 1.6-1
CONUS with SSR Coverage at 1,500' AGL

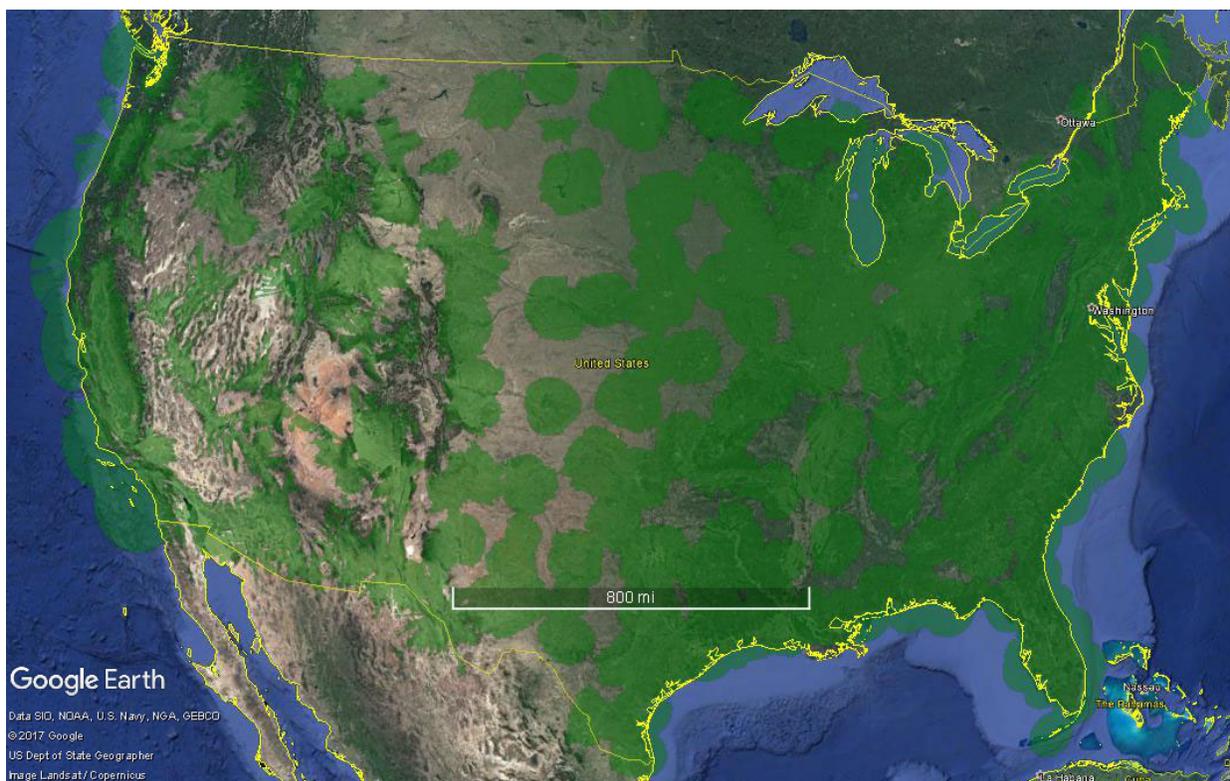
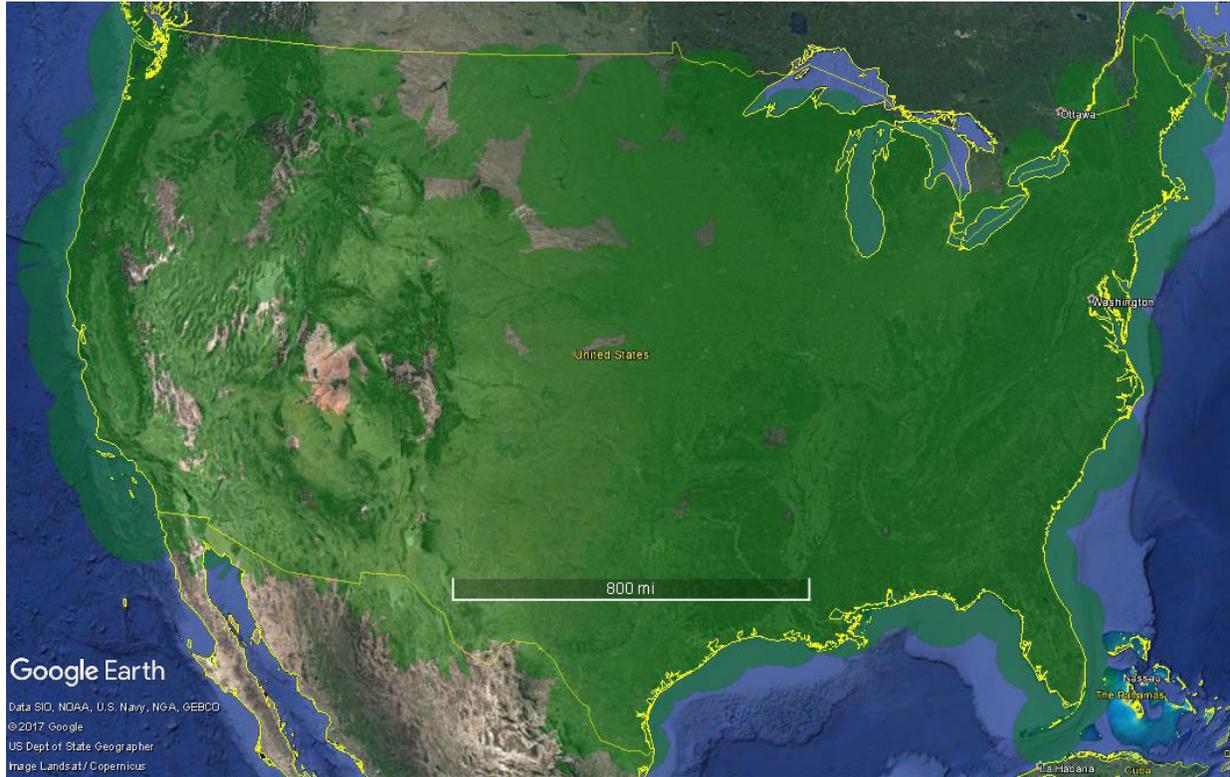


FIG ENR 1.6-2
CONUS with SSR Coverage at 5,000' AGL



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

1. Preflight Preparation

1.1 Prior to every flight, pilots should gather all information vital to the nature of the flight, assess whether the flight would be safe, and then file a flight plan. Pilots can receive a regulatory compliant briefing without contacting Flight Service. Pilots are encouraged to use automated resources and review Advisory Circular AC 91-92, Pilot's Guide to a Preflight Briefing, for more information. Pilots who prefer to contact Flight Service are encouraged to conduct a self-brief prior to calling. Conducting a self-brief before contacting Flight Service provides familiarity of meteorological and aeronautical conditions applicable to the route of flight and promotes a better understanding of weather information. Pilots may access Flight Service through www.1800wxbrief.com or by calling 1-800-WX-BRIEF. Flight planning applications are also available for conducting a self-briefing and filing flight plans.

NOTE-

Alaska only: 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 obtained from FAA Form 7233-4, International Flight Plan. Only DOD users, and civilians who file stereo route flight plans, may use FAA Form 7233-1, Flight Plan.

NOTE-

FAA and DOD Flight Plan Forms are equivalent. Where the FAA specifies Form 7233-1, Domestic Flight Plan, and FAA Form 7233-4, International Flight Plan, the DOD may substitute their Form DD 175, Military Flight Plan and Form DD-1801, DOD International Flight Plan as necessary. NAS automation systems process and convert data in the same manner, although for computer acceptance, input fields may be adjusted to follow FAA format.

1.3 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. Additionally, 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.

NOTE-

Domestic Notices and International Notices 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 Federal NOTAM System (FNS) NOTAM Search External links or Air Traffic Plans and Publications website 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 these notices if you have not already reviewed this information, and to request all pertinent NOTAMs specific to your flight.

1.4 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 every 56 days, 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.

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

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

1.5.2 Aircraft number or pilot's name.

1.5.3 Aircraft type.

1.5.4 Departure airport.

1.5.5 Route of flight.

1.5.6 Destination.

1.5.7 Flight altitude(s).

1.5.8 ETD and ETE.

1.6 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. Pilots who have briefed themselves before calling Flight Service should advise the briefer what information has been obtained from other sources.

REFERENCE-

See AIP, GEN 3.5 for meteorological services.

1.7 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.

1.8 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.

1.9 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.

1.10 Cold Temperature Operations

1.10.1 Pilots should begin planning for cold temperature operations during the preflight planning phase. Cold temperatures produce barometric altimetry errors, which affect instrument flight procedures. There are currently two temperature limitations that may be published in the notes box of the middle briefing strip on an instrument approach procedure (IAP). The two published temperature limitations are:

1.10.1.1 A temperature range limitation associated with the use of baro-VNAV that may be published on a United States PBN IAP titled RNAV (GPS) or RNAV (RNP); and/or

1.10.1.2 A Cold Temperature Airport (CTA) limitation designated by a snowflake ICON and temperature in Celsius (C) that is published on every IAP for the airfield.

1.10.2 Pilots should request the lowest forecast temperature +/- 1 hour for arrival and departure operations. If the temperature is forecast to be outside of the baro-VNAV or at or below the CTA temperature limitation, consider the following:

1.10.2.1 When using baro-VNAV with an aircraft that does not have an automated temperature compensating function, pilots should plan to use the appropriate minima and/or IAP.

1.10.2.2 The RNAV (RNP) procedure may not be accomplished without an approved automated temperature compensating function if the temperature is outside of the baro-VNAV temperature range limitation.

MIN	Minutes
MNT	Monitor <i>or</i> monitoring <i>or</i> monitored
MON	Monday
MOV	Move <i>or</i> moving <i>or</i> movement
N	
N	North
NAVAID	Navigational aid
NB	Northbound
NDB	Nondirectional Radio Beacon
NE	Northeast
NEB	Northeast bound
NM	Nautical Mile/s
NNE	North-northeast
NNW	North-northwest
NOV	November
NW	Northwest
NWB	Northwest bound
O	
OBSC	Obscure <i>or</i> obscured <i>or</i> obscuring
OBST	Obstacle
OPN	Open <i>or</i> opening <i>or</i> opened
OPS	Operations
P	
PAPI	Precision Approach Path Indicator
PARL	Parallel
PAX	Passenger/s
PCL	Pilot Controlled Lighting
PCT	Percent
PERM	Permanent
PJE	Parachute Jumping Activities
PLA	Practice Low Approach
PPR	Prior Permission Required
PRN	Pseudo-random Navigation
PT	Procedure Turn
R	
R	Red
R	Right (<i>preceded by runway designator number to identify a parallel runway</i>)
RAI	Runway Alignment Indicator
RCL	Runway Centerline
RCLL	Runway Centerline Light
REDL	Runway Edge Light
RLLS	Runway Lead-in Light System
RMK	Remark
RTS	Return to Service
RTZL	Runway Touchdown Zone Light(s)
RVR	Runway Visual Range
RWY	Runway
RX	Receive/Receiver
S	
S	South <i>or</i> southern latitude
SA	Sand

SAT	Saturday
SB	Southbound
SE	Southeast
SEC	Seconds
SFC	Surface
SN	Snow
SR	Sunrise
SS	Sunset
SSR	Secondary surveillance radar
SSW	South-southwest
STD	Standard
SUN	Sunday
SW	Southwest
SWB	Southwest bound
T	
TAR	Terminal area surveillance radar
TAX	Taxing <i>or</i> taxiing
TDZ	Touchdown Zone
TEMPO	Temporary <i>or</i> temporarily
TFC	Traffic
THR	Threshold
THU	Thursday
TKOF	Takeoff
TODA	Take-off Distance Available
TORA	Take-off Run Available
TRG	Training
TUE	Tuesday
TWR	Aerodrome Control Tower
TWY	Taxiway
TX	Taxilane
U	
U/S	Unserviceable
UAS	Unmanned Aircraft System
UNL	Unlimited
UNREL	Unreliable
V	
VIS	Visibility
VOR	VHF Omni-Directional Radio Range
VORTAC	VOR and TACAN (collocated)
VOT	VOR Test Facility
W	
W	West <i>or</i> western longitude
WB	Westbound
WDI	Wind Direction Indicator
WED	Wednesday
WI	Within
WID	Width <i>or</i> wide
WIP	Work in progress
WNW	West-northwest
WS	Wind shear
WSW	West-southwest

4. Operational Information System (OIS)

4.1 The FAA’s Air Traffic Control System Command Center (ATCSCC) maintains a website with near real–time National Airspace System (NAS) status information. NAS operators are encouraged to access the website at www.fly.faa.gov prior to filing their flight plan.

4.1.1 The website consolidates information from advisories. An advisory is a message that is disseminated electronically by the ATCSCC that contains information pertinent to the NAS.

4.1.1.1 Advisories are normally issued for the following items:

- a) Ground Stops.
- b) Ground Delay Programs.
- c) Route Information.
- d) Plan of Operations.
- e) Facility Outages and Scheduled Facility Outages.
- f) Volcanic Ash Activity Bulletins.
- g) Special Traffic Management Programs.

4.1.1.2 This list is not all–inclusive. Any time there is information that may be beneficial to a large number of people, an advisory may be sent. Additionally, there may be times when an advisory is not sent due to workload or the short length of time of the activity.

4.1.1.3 Route information is available on the website and in specific advisories. Some route information, subject to the 56–day publishing cycle, is located on the “OIS” under “Products,” Route Management Tool (RMT), and “What’s New” Playbook. The RMT and Playbook contain routings for use by Air Traffic and NAS operators when they are coordinated “real–time” and are then published in an ATCSCC advisory.

4.1.1.4 Route advisories are identified by the word “Route” in the header; the associated action is required (RQD), recommended (RMD), planned (PLN), or for your information (FYI). Operators are expected to file flight plans consistent with the Route RQD advisories.

4.1.1.5 Electronic System Impact Reports are on the intranet at <http://www.atcsc.faa.gov/ois/> under “System Impact Reports.” This page lists scheduled outages/events/projects that significantly impact the NAS; for example, runway closures, air shows, and construction projects. Information includes anticipated delays and traffic management initiatives (TMI) that may be implemented.

5. Flight Plan – VFR Flights

■ (See Appendix 1, FAA Form 7233–4 – International Flight Plan)

5.1 The requirements for the filing and activation of VFR flight plans can vary depending in which airspace the flight is operating. Pilots are responsible for activating flight plans with a Flight Service Station. Control tower personnel do not automatically activate VFR flight plans.

5.1.1 Within the continental U.S., a VFR flight plan is not normally required.

5.1.2 VFR flights (except for DOD and law enforcement flights) into an Air Defense Identification Zone (ADIZ) are required to file DVFR flight plans.

NOTE–

Detailed ADIZ procedures are found in Section 6, National Security and Interception Procedures, of this chapter. (See 14 CFR Part 99).

5.1.3 Flights within the Washington, DC Special Flight Rules Area have additional requirements that must be met. Visit <http://www.faa.safety.gov> for the required Special Awareness Training that must be completed before flight within this area.

5.1.4 VFR flight to an international destination requires a filed and activated flight plan.

NOTE-

ICAO flight plan guidance is published in ICAO Document 4444 PANS-ATM Appendix 2.

5.2 It is strongly recommended that a VFR flight plan be filed with a Flight Service Station or equivalent flight plan filing service. When filing, pilots must use FAA Form 7233-4, International Flight Plan or DD Form 1801. Only DOD users, and civilians who file stereo route flight plans, may use FAA Form 7233-1, Flight Plan. Pilots may take advantage of advances in technology by filing their flight plans using any available electronic means. Activating the flight plan will ensure that you receive VFR Search and Rescue services.

5.3 When a stopover flight is anticipated, it is recommended that a separate flight plan be filed for each leg of the flight.

5.4 Pilots are encouraged to activate their VFR flight plans with Flight Service by the most expeditious means possible. This may be via radio or other electronic means. VFR flight plan proposals are normally retained for two hours following the proposed time of departure.

5.5 Pilots may also activate a VFR flight plan by using an assumed departure time. This assumed departure time will cause the flight plan to become active at the designated time. This may negate the need for communication with a flight service station or flight plan filing service upon departure. It is the pilot's responsibility to revise his actual departure time, time en route, or ETA with flight service.

NOTE-

Pilots are strongly advised to remain mindful when using an assumed departure time. If not updated, search and rescue activities will be based on the assumed departure time.

5.6 U.S. air traffic control towers do not routinely activate VFR flight plans. Foreign pilots especially must be mindful of the need to communicate directly with a flight service station, or use an assumed departure time procedure clearly communicated with the flight plan filing service.

5.7 Although position reports are not required for VFR flight plans, periodic reports to FSSs along the route are good practice. Such contacts permit significant information to be passed to the transiting aircraft and also serve to check the progress of the flight should it be necessary for any reason to locate the aircraft.

5.8 Pilots flying VFR should fly an appropriate cruising altitude for their direction of flight.

5.9 When filing a VFR Flight plan, indicate the appropriate aircraft equipment capability as prescribed for an IFR flight plan.

5.10 ATC radar history data can be useful in finding a downed or missing aircraft; therefore, surveillance equipment should be listed in Item 18. Pilots using commercial GPS tracking services are encouraged to note the specific service in Item 19 N/ (survival equip remarks) of FAA Form 7233-4 or DD Form 1801.

6. Flight Plan – IFR Flights

(See Appendix 1, FAA Form 7233-4 – International Flight Plan)

6.1 General

6.1.1 Use of FAA Form 7233-4 or DD Form 1801 is mandatory for:

6.1.1.1 Assignment of RNAV SIDs and STARs or other PBN routing,

6.1.1.2 All IFR flights that will depart U.S. domestic airspace, and

6.1.1.3 Domestic IFR flights except military/DOD and civilians who file stereo route flight plans.

6.1.1.4 All military/DOD IFR flights that will depart U.S. controlled airspace.

6.1.2 Military/DOD flights using FAA Form 7233-1 or DD Form 175, may not be eligible for assignment of RNAV SIDs or STARs. Military flights desiring assignment of these procedures should file using FAA Form 7233-4 or DD 1801, as described in this section.

6.1.3 When filing an IFR flight plan using FAA Form 7233–4 or DD Form 1801, it is recommended that filers include all operable navigation, communication, and surveillance equipment capabilities by adding appropriate equipment qualifiers as shown in Appendix 1, FAA Form 7233–4, International Flight Plan.

6.1.4 ATC issues clearances based on aircraft capabilities filed in Items 10 and 18 of FAA Form 7233–4. Operators should file all capabilities for which the aircraft and crew is certified, capable, and authorized. PBN/capability must be filed in Item 18, Other Information. When filing a capability, ATC expects filers to use that capability for example; answer a SATVOICE call from ATC if code M1 or M3 is filed in Item 10.

6.1.5 Prior to departure from within, or prior to entering controlled airspace, a pilot must submit a complete flight plan and receive an air traffic clearance, if weather conditions are below VFR minimums. IFR flight plans may be submitted to an FSS or flight plan filing service.

6.1.6 Pilots should file IFR flight plans at least 30 minutes prior to estimated time of departure to preclude possible delay in receiving a departure clearance from ATC.

6.1.7 In order to provide FAA traffic management units strategic route planning capabilities, nonscheduled operators conducting IFR operations above FL 230 are requested to voluntarily file IFR flight plans at least 4 hours prior to estimated time of departure (ETD).

6.1.8 To minimize your delay in entering Class B, Class C, Class D, and Class E surface areas at destination when IFR weather conditions exist or are forecast at that airport, an IFR flight plan should be filed before departure. Otherwise, a 30 minute delay is not unusual in receiving an ATC clearance because of time spent in processing flight plan data.

6.1.9 Traffic saturation frequently prevents control personnel from accepting flight plans by radio. In such cases, the pilot is advised to contact a flight plan filing service for the purpose of filing the flight plan.

6.1.10 When requesting an IFR clearance, it is highly recommended that the departure airport be identified by 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.

6.1.11 Multiple versions of flight plans for the same flight may lead to unsafe conditions and errors within the air traffic system. Pilots must not file more than one flight plan for the same flight without ensuring that the previous flight plan has been successfully removed.

6.1.12 When a pilot is aware that the possibility for multiple flight plans on the same aircraft may exist, ensuring receipt of a full route clearance will help mitigate chances of error.

6.2 Airways and Jet Routes Depiction on Flight Plan

6.2.1 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 ATC, pilots are requested to file via airways or jet routes established for use at the altitude or flight level planned.

6.2.2 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 may 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.

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, navaids, 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 conventional 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. Recognizing, Mitigating and Adapting to GNSS Jamming and/or Spoofing

4.1 The low-strength data transmission signals from GNSS satellites are vulnerable to various anomalies that can significantly reduce the reliability of the navigation signal. The GPS signal is vulnerable and has many uses in aviation (e.g., communication, navigation, surveillance, safety systems and automation); therefore, pilots must place additional emphasis on closely monitoring aircraft equipment performance for any anomalies and promptly inform Air Traffic Control (ATC) of any apparent GPS degradation. Pilots should also be prepared to operate without GNSS navigation systems.

4.2 GNSS signals are vulnerable to intentional and unintentional interference from a wide variety of sources, including radars, microwave links, ionosphere effects, solar activity, multi-path error, satellite communications GNSS repeaters, and even some systems onboard the aircraft. In general, these types of unintentional interference are localized and intermittent. Of greater and growing concern is the intentional and unauthorized interference of GNSS signals by persons using “jammers” or “spoofers” to disrupt air navigation by interfering with the reception of valid satellite signals.

NOTE-

The U.S. government regularly conducts GNSS tests, training activities, and exercises that interfere with GNSS signals. These events are geographically limited, coordinated, scheduled, and advertised via GNSS and/or WAAS NOTAMS. Operators of GNSS aircraft should always check for GNSS and/or WAAS NOTAMS for their route of flight.

4.3 Manufacturers, operators, and air traffic controllers should be aware of the general impacts of GNSS jamming and/or spoofing which include, but are not limited to:

4.3.1 Inability to use GNSS for navigation.

4.3.2 Inability to use hybrid GNSS inertial systems for navigation.

4.3.3 Loss of, or degraded, performance-based navigation (PBN) capability (e.g., inability to fly required navigation performance (RNP) procedures).

4.3.4 Unreliable triggering of Terrain Awareness and Warning Systems (TAWS).

4.3.5 Inaccurate aircraft position on navigation display (e.g., moving map and electronic flight bag).

4.3.6 Loss of, or erroneous, Automatic Dependent Surveillance-Broadcast (ADS-B) outputs.

4.3.7 Unexpected effects when navigating with conventional NAVAIDS (e.g., if the aircraft is spoofed from the intended flight path, autotuning will not select the nearby NAVAID).

4.3.8 Unanticipated position-dependent flight management system effects (e.g., erroneous insufficient fuel indication).

4.3.9 Failure or degradation of Air Traffic Management (ATM) infrastructure and its associated systems reliant on GNSS, resulting in potential airspace infringements and/or route deviations.

4.3.10 Failure of, or erroneous aircraft clocks (resulting in inability to log on to Controller–Pilot Data Link Communications (CPDLC).

4.3.11 Erroneous wind and ground speed indications.

4.4 When flying IFR, pilots should have additional navigation equipment for their intended route to crosscheck their position. Routine checks of position against VOR or DME information, for example, could help detect a compromised GNSS signal. Pilots transitioning to VOR navigation in response to GNSS anomalies should refer to the Chart Supplement U.S. to identify airports with available conventional approaches associated with the VOR Minimum Operational Network (MON) program. (Reference Aeronautical Information Publication AIP ENR 4.1–2.6.3).

REFERENCE–
AIP, ENR 4.1, Subpara 2.6.3, Using the VOR MON.

4.5 Prior to departure, the FAA recommends operators to:

4.5.1 Be aware of potential risk locations.

4.5.2 Check for any relevant Notices to Air Missions (NOTAMs).

4.5.3 Plan fuel contingencies.

4.5.4 Plan to use conventional NAVAIDs and appropriate arrival/approach procedures at the destination.

4.5.5 Follow the detailed guidance from the respective Original Equipment Manufacturer (OEM).

4.6 During flight, the FAA recommends operators do the following:

4.6.1 Be vigilant for any indication that the aircraft’s GNSS is disrupted by reviewing the manufacturer’s guidance for that specific aircraft type and avionics equipment. Verify the aircraft position by means of conventional NAVAIDs, when available. Indications of jamming and/or spoofing may include:

4.6.1.1 Changes in actual navigation performance.

4.6.1.2 Aircraft clock changes (e.g., incorrect time).

4.6.1.3 Incorrect Flight Management System (FMS) position.

4.6.1.4 Large shift in displayed GNSS position.

4.6.1.5 Primary Flight Display (PFD)/Navigation Display (ND) warnings about position error.

4.6.1.6 Other aircraft reporting clock issues, position errors, or requesting vectors.

4.6.2 Assess operational risks and limitations linked to the loss of GNSS capability, including any on–board systems requiring inputs from a GNSS signal.

4.6.3 Ensure NAVAIDs critical to the operation for the intended route/approach are available.

4.6.4 Remain prepared to revert to conventional instrument flight procedures.

4.6.5 Promptly notify ATC if they experience GNSS anomalies. Pilots should NOT normally inform ATC of GNSS jamming and/or spoofing when flying through a known NOTAMed testing area, unless they require ATC assistance. (See AIP ENR 4.1–22.)

4.7 Post flight, the FAA recommends operators to:

4.7.1 Document any GNSS jamming and/or spoofing in the maintenance log to ensure all faults are cleared.

4.7.2 File a detailed report at the reporting site: *Report a GPS Anomaly Federal Aviation Administration*, www.faa.gov/air_traffic/nas/gps_reports.

ENR 3. ATS ROUTES

ENR 3.1 Lower ATS Routes

See also ENR 1.10, ENR 1.17, ENR 3.3, and ENR 3.5. These routes are available at the following website: https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/Part_95_Consolidation/.

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 3.2 Upper ATS Routes

See also ENR 1.10, ENR 1.17, ENR 3.3, and ENR 3.5. These routes are available at the following website: https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/Part_95_Consolidation/.

1. High Altitude ATS Route Structure

1.1 The U.S. does not use the term “Upper ATS Routes.” The published high altitude route structure in the U.S. consists of jet routes and high altitude RNAV routes (Q-routes). The high altitude route structure is for use at and above 18,000 feet MSL.

1.1.1 Jet route and Q-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 En Route High Altitude – U.S. chart series.

1.1.3 The high altitude route structure is contained within Class A airspace.

location on the chart. Latitude/longitude data for all established VFR waypoints may be found in FAA Order JO 7350.9, Location Identifiers.

c) VFR waypoints may not be used on IFR flight plans. VFR waypoints are not recognized by the IFR system and will be rejected for IFR routing purposes.

d) Pilots may use the five–letter identifier as a waypoint in the route of flight section on a VFR flight plan. Pilots may use the VFR waypoints only when operating under VFR conditions. The point may represent an intended course change or describe the planned route of flight. This VFR filing would be similar to how a VOR would be used in a route of flight.

e) VFR waypoints intended for use during flight should be loaded into the receiver while on the ground. Once airborne, pilots should avoid programming routes or VFR waypoint chains into their receivers.

f) Pilots should be vigilant to see and avoid other traffic when near VFR waypoints. With the increased use of GPS navigation and accuracy, expect increased traffic near VFR waypoints. Regardless of the class of airspace, monitor the available ATC frequency for traffic information on other aircraft operating in the vicinity. See ENR 1.17, paragraph 3. VFR in Congested Areas, for more information.

g) Mountain pass entry points are marked for convenience to assist pilots with flight planning and visual navigation. Do not attempt to fly a mountain pass directly from VFR waypoint to VFR waypoint—they do not create a path through the mountain pass. Alternative routes are always available. It is the pilot in command's responsibility to choose a suitable route for the intended flight and known conditions.

REFERENCE–

AIP, Para ENR 5.7–7., Mountain Flying.

16.2.2 IFR Use of GPS

16.2.2.1 General Requirements. Authorization to conduct any GPS operation under IFR requires:

a) GPS navigation equipment used for IFR operations must be approved in accordance with the requirements specified in Technical Standard Order (TSO) TSO–C129(), TSO–C196(), TSO–C145(), or TSO–C146(), and the installation must be done in accordance with Advisory Circular AC 20–138(), *Airworthiness Approval of Positioning and Navigation Systems*. Equipment approved in accordance with TSO–C115a does not meet the requirements of TSO–C129. Visual flight rules (VFR) and hand–held GPS systems are not authorized for IFR navigation, instrument approaches, or as a principal instrument flight reference.

b) Aircraft using un-augmented GPS (TSO–C129() or TSO–C196()) for navigation under IFR must be equipped with an alternate approved and operational means of navigation suitable for navigating the proposed route of flight. (Examples of alternate navigation equipment include VOR or DME/DME/IRU capability). Active monitoring of alternative navigation equipment is not required when RAIM is available for integrity monitoring. Active monitoring of an alternate means of navigation is required when the GPS RAIM capability is lost.

c) Procedures must be established for use in the event that the loss of RAIM capability is predicted to occur. In situations where RAIM is predicted to be unavailable, the flight must rely on other approved navigation equipment, re-route to where RAIM is available, delay departure, or cancel the flight.

d) The GPS operation must be conducted in accordance with the FAA–approved aircraft flight manual (AFM) or flight manual supplement. Flight crew members must be thoroughly familiar with the particular GPS equipment installed in the aircraft, the receiver operation manual, and the AFM or flight manual supplement. Operation, receiver presentation and capabilities of GPS equipment vary. Due to these differences, operation of GPS receivers of different brands, or even models of the same brand, under IFR should not be attempted without thorough operational knowledge. Most receivers have a built–in simulator mode, which allows the pilot to become familiar with operation prior to attempting operation in the aircraft.

e) Aircraft navigating by IFR–approved GPS are considered to be performance–based navigation (PBN) aircraft and have special equipment suffixes. File the appropriate equipment suffix in accordance with Appendix

1, TBL 1–2, on the ATC flight plan. If GPS avionics become inoperative, the pilot should advise ATC and amend the equipment suffix.

f) Prior to any GPS IFR operation, the pilot must review appropriate NOTAMs and aeronautical information. (See GPS NOTAMs/Aeronautical Information).

16.2.2.2 Database Requirements. The onboard navigation data must be current and appropriate for the region of intended operation and should include the navigation aids, waypoints, and relevant coded terminal airspace procedures for the departure, arrival, and alternate airfields.

a) Further database guidance for terminal and en route requirements may be found in AC 90-100, U.S. Terminal and En Route Area Navigation (RNAV) Operations.

b) Further database guidance on Required Navigation Performance (RNP) instrument approach operations, RNP terminal, and RNP en route requirements may be found in AC 90-105, Approval Guidance for RNP Operations and Barometric Vertical Navigation in the U.S. National Airspace System.

c) All approach procedures to be flown must be retrievable from the current airborne navigation database supplied by the equipment manufacturer or other FAA–approved source. 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. Manual entry of waypoints using latitude/longitude or place/bearing is not permitted for approach procedures.

d) Prior to using a procedure or waypoint retrieved from the airborne navigation database, the pilot should verify the validity of the database. This verification should include the following preflight and inflight steps:

1) Preflight:

(a) Determine the date of database issuance, and verify that the date/time of proposed use is before the expiration date/time.

(b) Verify that the database provider has not published a notice limiting the use of the specific waypoint or procedure.

2) Inflight:

(a) Determine that the waypoints and transition names coincide with names found on the procedure chart. Do not use waypoints which do not exactly match the spelling shown on published procedure charts.

(b) Determine that the waypoints are logical in location, in the correct order, and their orientation to each other is as found on the procedure chart, both laterally and vertically.

NOTE–

There is no specific requirement to check each waypoint latitude and longitude, type of waypoint and/or altitude constraint, only the general relationship of waypoints in the procedure, or the logic of an individual waypoint’s location.

(c) If the cursory check of procedure logic or individual waypoint location, specified in [b] above, indicates a potential error, do not use the retrieved procedure or waypoint until a verification of latitude and longitude, waypoint type, and altitude constraints indicate full conformity with the published data.

e) Air carrier and commercial operators must meet the appropriate provisions of their approved operations specifications.

1) During domestic operations for commerce or for hire, operators must have a second navigation system capable of reversion or contingency operations.

2) Operators must have two independent navigation systems appropriate to the route to be flown, or one system that is suitable and a second, independent backup system that allows the operator to proceed safely to a suitable airport and complete an instrument approach, and the aircraft must have sufficient fuel (reference 14 CFR 121.349, 125.203, 129.17, and 135.165). These rules ensure the safety of the operation by preventing a single point of failure.

NOTE–

An aircraft approved for multi–sensor navigation and equipped with a single navigation system must maintain an ability

ENR 5.2 Military Exercise and Training Areas

1. Military Operations Area (MOA)

1.1 MOAs consist of airspace of defined vertical and lateral limits established for the purpose of separating certain military training activities from IFR traffic. Whenever a MOA is being used, nonparticipating IFR traffic may be cleared through a MOA if IFR separation can be provided by ATC. Otherwise, ATC will reroute or restrict nonparticipating IFR traffic.

1.2 Examples of activities conducted in MOAs include, but are not limited to: air combat tactics, air intercepts, aerobatics, formation training, and low-altitude tactics. Military pilots flying in an active MOA are exempted from the provisions of 14 CFR Section 91.303(c) and (d) which prohibits aerobatic flight within Class D and Class E surface areas, and within Federal airways. Additionally, the Department of Defense has been issued an authorization to operate aircraft at indicated airspeeds in excess of 250 knots below 10,000 feet MSL within active MOAs.

1.3 Pilots operating under VFR should exercise extreme caution while flying within a MOA when military activity is being conducted. The activity status (active/inactive) of MOAs may change frequently. Therefore, pilots should contact any FSS within 100 miles of the area to obtain accurate real-time information concerning the MOA hours of operation. Prior to entering an active MOA, pilots should contact the controlling agency for traffic advisories.

1.4 Permanent MOAs are charted on Sectional Aeronautical, VFR Terminal Area, and the appropriate En Route Low Altitude charts.

NOTE-

Temporary MOAs are not charted. For temporary restricted areas, pilots should review the Domestic Notices found in the External Links section of the Federal NOTAM System (FNS) NOTAM Search or Air Traffic Plans and Publications website, the FAA SUA website, and/or contact the appropriate overlying ATC facility to determine the effect of non-depicted SUA areas along their routes of flight.

2. Alert Areas

2.1 Alert Areas are depicted on aeronautical charts to inform nonparticipating pilots of areas that may contain a high volume of pilot training or an unusual type of aerial activity. Pilots should be particularly alert when flying in these areas. All activity within an Alert Area must be conducted in accordance with FAA regulations, without waiver, and pilots of participating aircraft as well as pilots transiting the area must be equally responsible for collision avoidance.

3. Controlled Firing Area (CFA)

3.1 CFAs contain activities which, if not conducted in a controlled environment, could be hazardous to nonparticipating aircraft. The distinguishing feature of the CFA, as compared to other special use airspace, is that its activities are suspended immediately when spotter aircraft, radar, or ground lookout positions indicate an aircraft might be approaching the area. There is no need to chart CFAs since they do not cause a nonparticipating aircraft to change its flight path.

4. Military Training Route (MTR)

4.1 National security depends largely on the deterrent effect of our airborne military forces. To be proficient, the military services must train in a wide range of airborne tactics. One phase of this training involves “low level” combat tactics. The required maneuvers and high speeds are such that they may occasionally make the see-and-avoid aspect of VFR flight more difficult without increased vigilance in areas containing such operations. In an effort to ensure the greatest practical level of safety for all flight operations, the MTR program was conceived.

4.2 The MTR program is a joint venture by the FAA and the DOD. MTRs are mutually developed for use by the military for the purpose of conducting low–altitude, high–speed training. The routes above 1,500 feet above ground level (AGL) are developed to be flown, to the maximum extent possible, under IFR. The routes at 1,500 feet AGL and below are generally developed to be flown under VFR.

4.3 Generally, MTRs are established below 10,000 feet MSL for operations at speeds in excess of 250 knots. However, route segments may be defined at higher altitudes for purposes of route continuity. For example, route segments may be defined for descent, climbout, and mountainous terrain. There are IFR and VFR routes as follows:

4.3.1 IFR Military Training Routes–IR. Operations on these routes are conducted in accordance with IFR regardless of weather conditions.

4.3.2 VFR Military Training Routes–VR. Operations on these routes are conducted in accordance with VFR except flight visibility must be 5 miles or more; and flights must not be conducted below a ceiling of less than 3,000 feet AGL.

4.4 MTRs will be identified and charted as follows:

4.4.1 Route Identification

4.4.1.1 MTRs with no segment above 1,500 feet AGL must be identified by four number characters; e.g., IR1206, VR1207.

4.4.1.2 MTRs that include one or more segments above 1,500 feet AGL must be identified by three number characters; e.g., IR206, VR207.

4.4.1.3 Alternate IR/VR routes or route segments are identified by using the basic/principal route designation followed by a letter suffix, e.g., IR008A, VR1007B, etc.

4.4.2 Route Charting

4.4.2.1 IFR Enroute Low Altitude Chart. This chart will depict all IR routes and all VR routes that accommodate operations above 1,500 feet AGL.

4.4.2.2 VFR Sectional Aeronautical Charts. These charts will depict military training activities such as IR and VR information. Special Military Activity Routes (SMARs) may also be charted on the VFR Sectional Chart, showing the extent of the airspace allocated to the associated IFR Military Training Routes within which the Department of Defense conducts periodic operations involving Unmanned Aircraft Systems. These aircraft may be accompanied by military or other aircraft that provide the pilots of the Unmanned Aircraft Systems visual observation information about other aircraft operations near them. Further information on SMAR charting can be found on the border of the printed VFR Sectional Chart and in the FAA Aeronautical Chart Users' Guide available online at: https://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/aero_guide/.

4.4.2.3 Area Planning (AP/1B) Chart (DOD Flight Information Publication–FLIP). This chart is published by the National Geospatial–Intelligence Agency (NGA) primarily for military users and contains detailed information on both IR and VR routes.

4.5 DoD FLIP– Department of Defense Flight Information Publications describe IR/VR routes through charts and narratives, and the FAA provides information regarding these routes to all users via IFR and VFR charts.

NOTE–

DoD users that require copies of FLIP, should contact:

*Defense Logistics Agency for Aviation
Mapping Customer Operations (DLA AVN/QAM)
8000 Jefferson Davis Highway
Richmond, VA 23297–5339
Toll free phone: 1–800–826–0342
Commercial: 804–279–6500*

MTR information from the FLIP is available for pilot briefings through Flight Service. (See subparagraph 4.6.1 below.)

4.6 Availability of MTR information.

4.6.1 Pilots may obtain preflight MTR information through Flight Service. (See paragraph ENR 1.10-1., Preflight Preparation.)

4.6.2 MTR routes are depicted on IFR En Route Low Altitude Charts and VFR Sectional Aeronautical Charts, which are downloaded free and available on the FAA website at https://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/.

4.7 Nonparticipating aircraft are not prohibited from flying within an MTR or SMAR; however, extreme vigilance should be exercised when conducting flight through or near these routes. Pilots, while inflight, should contact the FSS within 100 NM of a particular MTR to obtain current information or route usage in their vicinity. Information available includes times of scheduled activity, altitudes in use on each route segment, and actual route width. Route width varies for each MTR and can extend several miles on either side of the charted MTR centerline. Route width information for IFR Military Training Route (IR) and VFR Military Training Route (VR) MTRs is also available in the FLIP AP/1B along with additional MTR (slow routes/air refueling routes) information. When requesting MTR information, pilots should give the FSS the MTR designation of interest, their position, route of flight, and destination in order to reduce frequency congestion and permit the FSS specialist to identify the MTR or SMAR that could be a factor.

3.1.1 If the filer sends an FPL to an FAA En Route facility in addition to the air traffic service unit (ATSU) responsible for the departure aerodrome, the filer must ensure that the flight plan filed is the same as the flight plan entered by the ATS unit having authority for the departure aerodrome. Note that per ICAO Doc. 4444, an operator may request that movement messages distributed by the responsible ATS unit be routed to the operator.

3.1.2 Changes to IFR flight plans must be submitted as soon as possible, but no more than 24 hours prior to the flight, to ensure proper processing and distribution before departure.

3.1.3 The FAA expects changes to be transmitted using the DLA and CHG messages as outlined in ICAO Doc. 4444. Transmitting changes to the FAA by canceling (CNL) and refileing an FPL creates the potential for multiple FPLs in the computer system.

3.1.4 If Cancel and Refile is used, it is imperative that the cancellation of the original FPL in the FAA system be verified by computer response or verbal coordination before submitting another FPL.

3.1.5 Changes to an IFR flight plan less than 30 minutes prior to departure must be accomplished via verbal coordination with the ATSU having authority for the departure aerodrome.

NOTE-

These references are contained in ICAO DOC 4444 and FAA Order JO 7210.3, Facility Operation and Administration. Operators should be aware that failure to adhere to these procedures could result in an operational delay or pilot deviation.

3.2 Oakland Oceanic FIR

3.2.1 All flights that will enter the Oakland Oceanic CTA/FIR must address flight plans to KZAKZQZX.

3.3 New York FIR

3.3.1 All flights entering the New York Oceanic CTA/FIR must address flight plans to KZWYZOZX.

3.3.2 All flights entering the New York Oceanic CTA/FIR and a U.S. ARTCC (except Boston) and/or Bermuda airspace must address flight plans to both KZWYZOZX and the appropriate U.S. ARTCC. (See TBL ENR 7.1-1).

TBL ENR 7.1-1

Airspace to be Entered: New York Oceanic CTA/ FIR and U.S. ARTCCs	Required AFTN Addresses
New York (NY) Oceanic CTA/FIR	KZWYZOZX
Boston ARTCC & NY Oceanic	KZWYZOZX only
NY domestic and/or Bermuda & NY Oceanic	KZNYZQZX & KZWYZOZX
Washington (KZDC) & NY Oceanic	KZDCZQZX & KZWYZOZX
Jacksonville (KZJX) & NY Oceanic	KZJXZQZX & KZWYZOZX
Miami (KZMA) & NY Oceanic	KZMAZQZX & KZWYZOZX
San Juan & NY Oceanic	TZSUZQZX & KZWYZOZX
Houston (KZHU)	KZHURZRX

3.4 Anchorage Oceanic FIRs

3.4.1 Anchorage Arctic FIR

3.4.1.1 Flight plans must be filed with PAZAZQZX.

3.4.2 Anchorage Oceanic FIR

3.4.2.1 Flight plans must be filed with both PAZAZQZX and PAZLNZQZX.

3.5 San Juan CTA/FIR

3.5.1 All aircraft transitioning through San Juan FIR/CTA from a foreign facility that will operate in North Atlantic (NAT) High Level Airspace (HLA) must forward the full route of flight for flight plan verification.

3.5.2 This must be accomplished prior to exiting the San Juan FIR/CTA by one of the following means:

3.5.2.1 Via Direct pilot-controller communication; or

3.5.2.2 Via New York Radio, when requested by ATC.

NOTE-

This requirement does not apply to aircraft operating outside of NAT HLA.

4. Beacon Code Requirements

4.1 Oakland Oceanic FIR. Upon entering the Oakland Oceanic CTA and after radar service is terminated, all aircraft should adjust their transponder to squawk code 2000. Aircraft should maintain code 2000 thereafter until otherwise directed by Air Traffic Control (ATC).

4.2 New York Oceanic FIR

4.2.1 New York – East Oceanic CTA. All aircraft should squawk code 2000 30 minutes after entry.

4.2.2 New York – West Oceanic CTA.

4.2.2.1 Aircraft transitioning to New York – East Oceanic CTA should squawk code 2000 30 minutes after entry. Exception: aircraft transiting Bermuda RADAR airspace should remain on the last assigned code until clear of that airspace, then squawk 2000.

4.2.2.2 All others should remain on the last assigned code.

4.3 Anchorage Oceanic FIR. Unless otherwise directed by ATC, all aircraft should remain on the last assigned code, even after radar service is terminated.

4.4 Houston Oceanic FIR. All aircraft entering the Houston Oceanic CTA/FIR should remain on the last assigned code.

4.5 Miami CTA/FIR

4.5.1 There is no primary radar or weather returns available from the Grand Turk, Georgetown, and Nassau radar systems. Since radar separation is dependent upon the receipt of transponder returns, all aircraft within antenna coverage of either system are required to squawk transponder codes as assigned by ATC, or, if none assigned, squawk the appropriate stratum code.

4.5.2 Aircraft departing and overflying the Santo Domingo and Port Au Prince FIRs can expect ATC assigned codes from those ATS providers. If a code is not assigned by either Santo Domingo or Port Au Prince, pilots should request a code. The assigned code should be squawked prior to entering the Miami CTA/FIR.

5. Position Reporting in the Oceanic Environment

5.1 Pilots must report over each point used in the flight plan to define the route of flight, even if the point is depicted on aeronautical charts as an “on request” (non-compulsory) reporting point. For aircraft providing

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

PAGE	DATE
PART 3 – AERODROMES (AD)	
AD 0	
0.4-1	5 SEP 24
0.4-2	5 SEP 24
0.4-3	5 SEP 24
0.4-4	5 SEP 24
0.4-5	5 SEP 24
0.4-6	5 SEP 24
0.6-1	21 MAR 24
AD 1	
1.1-1	21 MAR 24
1.1-2	21 MAR 24
1.1-3	21 MAR 24
1.1-4	21 MAR 24
1.1-5	21 MAR 24
1.1-6	21 MAR 24
1.1-7	21 MAR 24
1.1-8	21 MAR 24
1.1-9	21 MAR 24
1.1-10	21 MAR 24
1.1-11	21 MAR 24
1.1-12	21 MAR 24
1.1-13	21 MAR 24
1.1-14	21 MAR 24
1.1-15	21 MAR 24
1.1-16	21 MAR 24
1.1-17	21 MAR 24
1.1-18	21 MAR 24
1.1-19	21 MAR 24
1.1-20	21 MAR 24
1.1-21	21 MAR 24
1.1-22	21 MAR 24
1.1-23	21 MAR 24
1.1-24	21 MAR 24
1.1-25	21 MAR 24
1.1-26	21 MAR 24
1.1-27	21 MAR 24
1.1-28	21 MAR 24

PAGE	DATE
1.1-29	21 MAR 24
1.1-30	21 MAR 24
1.1-31	21 MAR 24
1.1-32	21 MAR 24
1.1-33	21 MAR 24
1.1-34	21 MAR 24
1.1-35	21 MAR 24
1.1-36	21 MAR 24
1.1-37	21 MAR 24
1.1-38	21 MAR 24
1.1-39	21 MAR 24
1.1-40	21 MAR 24
1.1-41	21 MAR 24
1.1-42	21 MAR 24
1.1-43	21 MAR 24
1.1-44	21 MAR 24
1.1-45	21 MAR 24
1.1-46	21 MAR 24
1.1-47	21 MAR 24
1.1-48	21 MAR 24
1.1-49	21 MAR 24
1.1-50	21 MAR 24
1.1-51	21 MAR 24
1.1-52	21 MAR 24
1.1-53	21 MAR 24
AD 2	
2-1	5 SEP 24
2-2	5 SEP 24
2-3	5 SEP 24
2-4	5 SEP 24
2-5	5 SEP 24
2-6	5 SEP 24
2-7	5 SEP 24
2-8	5 SEP 24
2-9	5 SEP 24
2-10	5 SEP 24
2-11	5 SEP 24
2-12	5 SEP 24
2-13	5 SEP 24
2-14	5 SEP 24

PAGE	DATE
2-15	5 SEP 24
2-16	5 SEP 24
2-17	5 SEP 24
2-18	5 SEP 24
2-19	5 SEP 24
2-20	5 SEP 24
2-21	5 SEP 24
2-22	5 SEP 24
2-23	5 SEP 24
2-24	5 SEP 24
2-25	5 SEP 24
2-26	5 SEP 24
2-27	5 SEP 24
2-28	5 SEP 24
2-29	5 SEP 24
2-30	5 SEP 24
2-31	5 SEP 24
2-32	5 SEP 24
2-33	5 SEP 24
2-34	5 SEP 24
2-35	5 SEP 24
2-36	5 SEP 24
2-37	5 SEP 24
2-38	5 SEP 24
2-39	5 SEP 24
2-40	5 SEP 24
2-41	5 SEP 24
2-42	5 SEP 24
2-43	5 SEP 24
2-44	5 SEP 24
2-45	5 SEP 24
2-46	5 SEP 24
2-47	5 SEP 24
2-48	5 SEP 24
2-49	5 SEP 24
2-50	5 SEP 24
2-51	5 SEP 24
2-52	5 SEP 24
2-53	5 SEP 24
2-54	5 SEP 24

PAGE	DATE
2-55	5 SEP 24
2-56	5 SEP 24
2-57	5 SEP 24
2-58	5 SEP 24
2-59	5 SEP 24
2-60	5 SEP 24
2-61	5 SEP 24
2-62	5 SEP 24
2-63	5 SEP 24
2-64	5 SEP 24
2-65	5 SEP 24
2-66	5 SEP 24
2-67	5 SEP 24
2-68	5 SEP 24
2-69	5 SEP 24
2-70	5 SEP 24
2-71	5 SEP 24
2-72	5 SEP 24
2-73	5 SEP 24
2-74	5 SEP 24
2-75	5 SEP 24
2-76	5 SEP 24
2-77	5 SEP 24
2-78	5 SEP 24
2-79	5 SEP 24
2-80	5 SEP 24
2-81	5 SEP 24
2-82	5 SEP 24
2-83	5 SEP 24
2-84	5 SEP 24
2-85	5 SEP 24
2-86	5 SEP 24
2-87	5 SEP 24
2-88	5 SEP 24
2-89	5 SEP 24
2-90	5 SEP 24
2-91	5 SEP 24
2-92	5 SEP 24
2-93	5 SEP 24
2-94	5 SEP 24
2-95	5 SEP 24
2-96	5 SEP 24
2-97	5 SEP 24
2-98	5 SEP 24
2-99	5 SEP 24
2-100	5 SEP 24
2-101	5 SEP 24
2-102	5 SEP 24
2-103	5 SEP 24
2-104	5 SEP 24
2-105	5 SEP 24
2-106	5 SEP 24

PAGE	DATE
2-107	5 SEP 24
2-108	5 SEP 24
2-109	5 SEP 24
2-110	5 SEP 24
2-111	5 SEP 24
2-112	5 SEP 24
2-113	5 SEP 24
2-114	5 SEP 24
2-115	5 SEP 24
2-116	5 SEP 24
2-117	5 SEP 24
2-118	5 SEP 24
2-119	5 SEP 24
2-120	5 SEP 24
2-121	5 SEP 24
2-122	5 SEP 24
2-123	5 SEP 24
2-124	5 SEP 24
2-125	5 SEP 24
2-126	5 SEP 24
2-127	5 SEP 24
2-128	5 SEP 24
2-129	5 SEP 24
2-130	5 SEP 24
2-131	5 SEP 24
2-132	5 SEP 24
2-133	5 SEP 24
2-134	5 SEP 24
2-135	5 SEP 24
2-136	5 SEP 24
2-137	5 SEP 24
2-138	5 SEP 24
2-139	5 SEP 24
2-140	5 SEP 24
2-141	5 SEP 24
2-142	5 SEP 24
2-143	5 SEP 24
2-144	5 SEP 24
2-145	5 SEP 24
2-146	5 SEP 24
2-147	5 SEP 24
2-148	5 SEP 24
2-149	5 SEP 24
2-150	5 SEP 24
2-151	5 SEP 24
2-152	5 SEP 24
2-153	5 SEP 24
2-154	5 SEP 24
2-155	5 SEP 24
2-156	5 SEP 24
2-157	5 SEP 24
2-158	5 SEP 24

PAGE	DATE
2-159	5 SEP 24
2-160	5 SEP 24
2-161	5 SEP 24
2-162	5 SEP 24
2-163	5 SEP 24
2-164	5 SEP 24
2-165	5 SEP 24
2-166	5 SEP 24
2-167	5 SEP 24
2-168	5 SEP 24
2-169	5 SEP 24
2-170	5 SEP 24
2-171	5 SEP 24
2-172	5 SEP 24
2-173	5 SEP 24
2-174	5 SEP 24
2-175	5 SEP 24
2-176	5 SEP 24
2-177	5 SEP 24
2-178	5 SEP 24
2-179	5 SEP 24
2-180	5 SEP 24
2-181	5 SEP 24
2-182	5 SEP 24
2-183	5 SEP 24
2-184	5 SEP 24
2-185	5 SEP 24
2-186	5 SEP 24
2-187	5 SEP 24
2-188	5 SEP 24
2-189	5 SEP 24
2-190	5 SEP 24
2-191	5 SEP 24
2-192	5 SEP 24
2-193	5 SEP 24
2-194	5 SEP 24
2-195	5 SEP 24
2-196	5 SEP 24
2-197	5 SEP 24
2-198	5 SEP 24
2-199	5 SEP 24
2-200	5 SEP 24
2-201	5 SEP 24
2-202	5 SEP 24
2-203	5 SEP 24
2-204	5 SEP 24
2-205	5 SEP 24
2-206	5 SEP 24
2-207	5 SEP 24
2-208	5 SEP 24
2-209	5 SEP 24
2-210	5 SEP 24

PAGE	DATE
2-211	5 SEP 24
2-212	5 SEP 24
2-213	5 SEP 24
2-214	5 SEP 24
2-215	5 SEP 24
2-216	5 SEP 24
2-217	5 SEP 24
2-218	5 SEP 24
2-219	5 SEP 24
2-220	5 SEP 24
2-221	5 SEP 24
2-222	5 SEP 24
2-223	5 SEP 24
2-224	5 SEP 24
2-225	5 SEP 24
2-226	5 SEP 24
2-227	5 SEP 24
2-228	5 SEP 24
2-229	5 SEP 24
2-230	5 SEP 24
2-231	5 SEP 24
2-232	5 SEP 24
2-233	5 SEP 24
2-234	5 SEP 24
2-235	5 SEP 24
2-236	5 SEP 24
2-237	5 SEP 24
2-238	5 SEP 24
2-239	5 SEP 24
2-240	5 SEP 24
2-241	5 SEP 24
2-242	5 SEP 24
2-243	5 SEP 24
2-244	5 SEP 24
2-245	5 SEP 24
2-246	5 SEP 24
2-247	5 SEP 24
2-248	5 SEP 24
2-249	5 SEP 24
2-250	5 SEP 24
2-251	5 SEP 24
2-252	5 SEP 24
2-253	5 SEP 24
2-254	5 SEP 24
2-255	5 SEP 24
2-256	5 SEP 24
2-257	5 SEP 24
2-258	5 SEP 24
2-259	5 SEP 24
2-260	5 SEP 24
2-261	5 SEP 24
2-262	5 SEP 24

PAGE	DATE
2-263	5 SEP 24
2-264	5 SEP 24
2-265	5 SEP 24
2-266	5 SEP 24
2-267	5 SEP 24
2-268	5 SEP 24
2-269	5 SEP 24
2-270	5 SEP 24
2-271	5 SEP 24
2-272	5 SEP 24
2-273	5 SEP 24
2-274	5 SEP 24
2-275	5 SEP 24
2-276	5 SEP 24
2-277	5 SEP 24
2-278	5 SEP 24
2-279	5 SEP 24
2-280	5 SEP 24
2-281	5 SEP 24
2-282	5 SEP 24
2-283	5 SEP 24
2-284	5 SEP 24
2-285	5 SEP 24
2-286	5 SEP 24
2-287	5 SEP 24
2-288	5 SEP 24
2-289	5 SEP 24
2-290	5 SEP 24
2-291	5 SEP 24
2-292	5 SEP 24
2-293	5 SEP 24
2-294	5 SEP 24
2-295	5 SEP 24
2-296	5 SEP 24
2-297	5 SEP 24
2-298	5 SEP 24
2-299	5 SEP 24
2-300	5 SEP 24
2-301	5 SEP 24
2-302	5 SEP 24
2-303	5 SEP 24
2-304	5 SEP 24
2-305	5 SEP 24
2-306	5 SEP 24
2-307	5 SEP 24
2-308	5 SEP 24
2-309	5 SEP 24
2-310	5 SEP 24
2-311	5 SEP 24
2-312	5 SEP 24
2-313	5 SEP 24
2-314	5 SEP 24

PAGE	DATE
2-315	5 SEP 24
2-316	5 SEP 24
2-317	5 SEP 24
2-318	5 SEP 24
2-319	5 SEP 24
2-320	5 SEP 24
2-321	5 SEP 24
2-322	5 SEP 24
2-323	5 SEP 24
2-324	5 SEP 24
2-325	5 SEP 24
2-326	5 SEP 24
2-327	5 SEP 24
2-328	5 SEP 24
2-329	5 SEP 24
2-330	5 SEP 24
2-331	5 SEP 24
2-332	5 SEP 24
2-333	5 SEP 24
2-334	5 SEP 24
2-335	5 SEP 24
2-336	5 SEP 24
2-337	5 SEP 24
2-338	5 SEP 24
2-339	5 SEP 24
2-340	5 SEP 24
2-341	5 SEP 24
2-342	5 SEP 24
2-343	5 SEP 24
2-344	5 SEP 24
2-345	5 SEP 24
2-346	5 SEP 24
2-347	5 SEP 24
2-348	5 SEP 24
2-349	5 SEP 24
2-350	5 SEP 24
2-351	5 SEP 24
2-352	5 SEP 24
2-353	5 SEP 24
2-354	5 SEP 24
2-355	5 SEP 24
2-356	5 SEP 24
2-357	5 SEP 24
2-358	5 SEP 24
2-359	5 SEP 24
2-360	5 SEP 24
2-361	5 SEP 24
2-362	5 SEP 24
2-363	5 SEP 24
2-364	5 SEP 24
2-365	5 SEP 24
2-366	5 SEP 24

PAGE	DATE
2-367	5 SEP 24
2-368	5 SEP 24
2-369	5 SEP 24
2-370	5 SEP 24
2-371	5 SEP 24
2-372	5 SEP 24
2-373	5 SEP 24
2-374	5 SEP 24
2-375	5 SEP 24
2-376	5 SEP 24
2-377	5 SEP 24
2-378	5 SEP 24
2-379	5 SEP 24
2-380	5 SEP 24
2-381	5 SEP 24
2-382	5 SEP 24
2-383	5 SEP 24
2-384	5 SEP 24
2-385	5 SEP 24
2-386	5 SEP 24
2-387	5 SEP 24
2-388	5 SEP 24
2-389	5 SEP 24
2-390	5 SEP 24
2-391	5 SEP 24
2-392	5 SEP 24
2-393	5 SEP 24
2-394	5 SEP 24
2-395	5 SEP 24
2-396	5 SEP 24
2-397	5 SEP 24
2-398	5 SEP 24
2-399	5 SEP 24
2-400	5 SEP 24
2-401	5 SEP 24
2-402	5 SEP 24
2-403	5 SEP 24
2-404	5 SEP 24
2-405	5 SEP 24
2-406	5 SEP 24
2-407	5 SEP 24
2-408	5 SEP 24
2-409	5 SEP 24
2-410	5 SEP 24
2-411	5 SEP 24
2-412	5 SEP 24
2-413	5 SEP 24
2-414	5 SEP 24
2-415	5 SEP 24
2-416	5 SEP 24
2-417	5 SEP 24
2-418	5 SEP 24

PAGE	DATE
2-419	5 SEP 24
2-420	5 SEP 24
2-421	5 SEP 24
2-422	5 SEP 24
2-423	5 SEP 24
2-424	5 SEP 24
2-425	5 SEP 24
2-426	5 SEP 24
2-427	5 SEP 24
2-428	5 SEP 24
2-429	5 SEP 24
2-430	5 SEP 24
2-431	5 SEP 24
2-432	5 SEP 24
2-433	5 SEP 24
2-434	5 SEP 24
2-435	5 SEP 24
2-436	5 SEP 24
2-437	5 SEP 24
2-438	5 SEP 24
2-439	5 SEP 24
2-440	5 SEP 24
2-441	5 SEP 24
2-442	5 SEP 24
2-443	5 SEP 24
2-444	5 SEP 24
2-445	5 SEP 24
2-446	5 SEP 24
2-447	5 SEP 24
2-448	5 SEP 24
2-449	5 SEP 24
2-450	5 SEP 24
2-451	5 SEP 24
2-452	5 SEP 24
2-453	5 SEP 24
2-454	5 SEP 24
2-455	5 SEP 24
2-456	5 SEP 24
2-457	5 SEP 24
2-458	5 SEP 24
2-459	5 SEP 24
2-460	5 SEP 24
2-461	5 SEP 24
2-462	5 SEP 24
2-463	5 SEP 24
2-464	5 SEP 24
2-465	5 SEP 24
2-466	5 SEP 24
2-467	5 SEP 24
2-468	5 SEP 24
2-469	5 SEP 24
2-470	5 SEP 24

PAGE	DATE
2-471	5 SEP 24
2-472	5 SEP 24
2-472	5 SEP 24
2-473	5 SEP 24
2-474	5 SEP 24
2-475	5 SEP 24
2-476	5 SEP 24
2-477	5 SEP 24
2-478	5 SEP 24
2-479	5 SEP 24
2-480	5 SEP 24
2-481	5 SEP 24
2-482	5 SEP 24
2-483	5 SEP 24
2-484	5 SEP 24
2-485	5 SEP 24
2-486	5 SEP 24
2-487	5 SEP 24
2-488	5 SEP 24
2-489	5 SEP 24
2-490	5 SEP 24
2-491	5 SEP 24
2-492	5 SEP 24
2-493	5 SEP 24
2-494	5 SEP 24
2-495	5 SEP 24
2-496	5 SEP 24
2-497	5 SEP 24
2-498	5 SEP 24
2-499	5 SEP 24
2-500	5 SEP 24
2-501	5 SEP 24
2-502	5 SEP 24
2-503	5 SEP 24
2-504	5 SEP 24
2-505	5 SEP 24
2-506	5 SEP 24
2-507	5 SEP 24
2-508	5 SEP 24
2-509	5 SEP 24
2-510	5 SEP 24
2-511	5 SEP 24
2-512	5 SEP 24
2-513	5 SEP 24
2-514	5 SEP 24
2-515	5 SEP 24
2-516	5 SEP 24
2-517	5 SEP 24
2-518	5 SEP 24
2-519	5 SEP 24
2-520	5 SEP 24
2-521	5 SEP 24

PAGE	DATE
2-522	5 SEP 24
2-523	5 SEP 24
2-524	5 SEP 24
2-525	5 SEP 24
2-526	5 SEP 24
2-527	5 SEP 24
2-528	5 SEP 24
2-529	5 SEP 24
2-530	5 SEP 24
2-531	5 SEP 24
2-532	5 SEP 24
2-533	5 SEP 24
2-534	5 SEP 24
2-535	5 SEP 24
2-536	5 SEP 24
2-537	5 SEP 24
2-538	5 SEP 24
2-539	5 SEP 24
2-540	5 SEP 24
2-541	5 SEP 24
2-542	5 SEP 24
2-543	5 SEP 24
2-544	5 SEP 24
2-545	5 SEP 24
2-546	5 SEP 24
2-547	5 SEP 24
2-548	5 SEP 24
2-549	5 SEP 24
2-550	5 SEP 24
2-551	5 SEP 24
2-552	5 SEP 24
2-553	5 SEP 24
2-554	5 SEP 24
2-555	5 SEP 24
2-556	5 SEP 24
2-557	5 SEP 24
2-558	5 SEP 24
2-559	5 SEP 24
2-560	5 SEP 24
2-561	5 SEP 24
2-562	5 SEP 24
2-563	5 SEP 24
2-564	5 SEP 24
2-565	5 SEP 24

PAGE	DATE
2-566	5 SEP 24
2-567	5 SEP 24
2-568	5 SEP 24
2-569	5 SEP 24
2-570	5 SEP 24
2-571	5 SEP 24
2-572	5 SEP 24
2-572	5 SEP 24
2-573	5 SEP 24
2-574	5 SEP 24
2-575	5 SEP 24
2-576	5 SEP 24
2-577	5 SEP 24
2-578	5 SEP 24
2-579	5 SEP 24
2-580	5 SEP 24
2-581	5 SEP 24
2-582	5 SEP 24
2-583	5 SEP 24
2-584	5 SEP 24
2-585	5 SEP 24
2-586	5 SEP 24
2-587	5 SEP 24
2-588	5 SEP 24
2-589	5 SEP 24
2-590	5 SEP 24
2-591	5 SEP 24
2-592	5 SEP 24
2-593	5 SEP 24
2-594	5 SEP 24
2-595	5 SEP 24
2-596	5 SEP 24
2-597	5 SEP 24
2-598	5 SEP 24
2-599	5 SEP 24
2-601	5 SEP 24
2-602	5 SEP 24
2-603	5 SEP 24
2-604	5 SEP 24
2-605	5 SEP 24
2-606	5 SEP 24
2-607	5 SEP 24
2-608	5 SEP 24
2-609	5 SEP 24

PAGE	DATE
2-610	5 SEP 24
2-611	5 SEP 24
2-612	5 SEP 24
2-613	5 SEP 24
2-614	5 SEP 24
2-615	5 SEP 24
2-616	5 SEP 24
2-617	5 SEP 24
2-618	5 SEP 24
2-619	5 SEP 24
2-620	5 SEP 24
2-621	5 SEP 24
2-622	5 SEP 24
2-623	5 SEP 24
2-624	5 SEP 24
2-625	5 SEP 24
2-626	5 SEP 24
2-627	5 SEP 24
2-628	5 SEP 24
2-629	5 SEP 24
2-630	5 SEP 24
2-631	5 SEP 24
INDEX	
I-1	5 SEP 24
I-2	5 SEP 24
I-3	5 SEP 24
I-4	5 SEP 24
I-5	5 SEP 24
I-6	5 SEP 24
I-7	5 SEP 24
I-8	5 SEP 24
I-9	5 SEP 24
APPENDIX	
Appendix 1-1	5 SEP 24
Appendix 1-2	5 SEP 24
Appendix 1-3	5 SEP 24
Appendix 1-4	5 SEP 24
Appendix 1-5	5 SEP 24
Appendix 1-6	5 SEP 24

PAGE	DATE
Appendix 1-7	5 SEP 24
Appendix 1-8	5 SEP 24
Appendix 1-9	5 SEP 24
Appendix 1-10	5 SEP 24
Appendix 1-11	5 SEP 24
Appendix 1-12	5 SEP 24

PAGE	DATE
Appendix 1-13	5 SEP 24
Appendix 1-14	5 SEP 24
Appendix 1-15	5 SEP 24
Appendix 1-16	5 SEP 24
Appendix 1-17	5 SEP 24
Appendix 1-18	5 SEP 24

PAGE	DATE
Appendix 1-19	5 SEP 24
Appendix 1-20	5 SEP 24
Appendix 1-21	5 SEP 24
Appendix 1-22	5 SEP 24
Appendix 1-23	5 SEP 24

AD 0.5 List of Hand Amendments to the AIP – Not applicable

AIP
AERONAUTICAL INFORMATION PUBLICATION
UNITED STATES OF AMERICA

PART 3
AERODROMES (AD)

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

PAGE	DATE
PART 3 – AERODROMES (AD)	
AD 0	
0.4-1	5 SEP 24
0.4-2	5 SEP 24
0.4-3	5 SEP 24
0.4-4	5 SEP 24
0.4-5	5 SEP 24
0.4-6	5 SEP 24
0.6-1	21 MAR 24
AD 1	
1.1-1	21 MAR 24
1.1-2	21 MAR 24
1.1-3	21 MAR 24
1.1-4	21 MAR 24
1.1-5	21 MAR 24
1.1-6	21 MAR 24
1.1-7	21 MAR 24
1.1-8	21 MAR 24
1.1-9	21 MAR 24
1.1-10	21 MAR 24
1.1-11	21 MAR 24
1.1-12	21 MAR 24
1.1-13	21 MAR 24
1.1-14	21 MAR 24
1.1-15	21 MAR 24
1.1-16	21 MAR 24
1.1-17	21 MAR 24
1.1-18	21 MAR 24
1.1-19	21 MAR 24
1.1-20	21 MAR 24
1.1-21	21 MAR 24
1.1-22	21 MAR 24
1.1-23	21 MAR 24
1.1-24	21 MAR 24
1.1-25	21 MAR 24
1.1-26	21 MAR 24
1.1-27	21 MAR 24
1.1-28	21 MAR 24

PAGE	DATE
1.1-29	21 MAR 24
1.1-30	21 MAR 24
1.1-31	21 MAR 24
1.1-32	21 MAR 24
1.1-33	21 MAR 24
1.1-34	21 MAR 24
1.1-35	21 MAR 24
1.1-36	21 MAR 24
1.1-37	21 MAR 24
1.1-38	21 MAR 24
1.1-39	21 MAR 24
1.1-40	21 MAR 24
1.1-41	21 MAR 24
1.1-42	21 MAR 24
1.1-43	21 MAR 24
1.1-44	21 MAR 24
1.1-45	21 MAR 24
1.1-46	21 MAR 24
1.1-47	21 MAR 24
1.1-48	21 MAR 24
1.1-49	21 MAR 24
1.1-50	21 MAR 24
1.1-51	21 MAR 24
1.1-52	21 MAR 24
1.1-53	21 MAR 24
AD 2	
2-1	5 SEP 24
2-2	5 SEP 24
2-3	5 SEP 24
2-4	5 SEP 24
2-5	5 SEP 24
2-6	5 SEP 24
2-7	5 SEP 24
2-8	5 SEP 24
2-9	5 SEP 24
2-10	5 SEP 24
2-11	5 SEP 24
2-12	5 SEP 24
2-13	5 SEP 24
2-14	5 SEP 24

PAGE	DATE
2-15	5 SEP 24
2-16	5 SEP 24
2-17	5 SEP 24
2-18	5 SEP 24
2-19	5 SEP 24
2-20	5 SEP 24
2-21	5 SEP 24
2-22	5 SEP 24
2-23	5 SEP 24
2-24	5 SEP 24
2-25	5 SEP 24
2-26	5 SEP 24
2-27	5 SEP 24
2-28	5 SEP 24
2-29	5 SEP 24
2-30	5 SEP 24
2-31	5 SEP 24
2-32	5 SEP 24
2-33	5 SEP 24
2-34	5 SEP 24
2-35	5 SEP 24
2-36	5 SEP 24
2-37	5 SEP 24
2-38	5 SEP 24
2-39	5 SEP 24
2-40	5 SEP 24
2-41	5 SEP 24
2-42	5 SEP 24
2-43	5 SEP 24
2-44	5 SEP 24
2-45	5 SEP 24
2-46	5 SEP 24
2-47	5 SEP 24
2-48	5 SEP 24
2-49	5 SEP 24
2-50	5 SEP 24
2-51	5 SEP 24
2-52	5 SEP 24
2-53	5 SEP 24
2-54	5 SEP 24

PAGE	DATE
2-55	5 SEP 24
2-56	5 SEP 24
2-57	5 SEP 24
2-58	5 SEP 24
2-59	5 SEP 24
2-60	5 SEP 24
2-61	5 SEP 24
2-62	5 SEP 24
2-63	5 SEP 24
2-64	5 SEP 24
2-65	5 SEP 24
2-66	5 SEP 24
2-67	5 SEP 24
2-68	5 SEP 24
2-69	5 SEP 24
2-70	5 SEP 24
2-71	5 SEP 24
2-72	5 SEP 24
2-73	5 SEP 24
2-74	5 SEP 24
2-75	5 SEP 24
2-76	5 SEP 24
2-77	5 SEP 24
2-78	5 SEP 24
2-79	5 SEP 24
2-80	5 SEP 24
2-81	5 SEP 24
2-82	5 SEP 24
2-83	5 SEP 24
2-84	5 SEP 24
2-85	5 SEP 24
2-86	5 SEP 24
2-87	5 SEP 24
2-88	5 SEP 24
2-89	5 SEP 24
2-90	5 SEP 24
2-91	5 SEP 24
2-92	5 SEP 24
2-93	5 SEP 24
2-94	5 SEP 24
2-95	5 SEP 24
2-96	5 SEP 24
2-97	5 SEP 24
2-98	5 SEP 24
2-99	5 SEP 24
2-100	5 SEP 24
2-101	5 SEP 24
2-102	5 SEP 24
2-103	5 SEP 24
2-104	5 SEP 24
2-105	5 SEP 24
2-106	5 SEP 24

PAGE	DATE
2-107	5 SEP 24
2-108	5 SEP 24
2-109	5 SEP 24
2-110	5 SEP 24
2-111	5 SEP 24
2-112	5 SEP 24
2-113	5 SEP 24
2-114	5 SEP 24
2-115	5 SEP 24
2-116	5 SEP 24
2-117	5 SEP 24
2-118	5 SEP 24
2-119	5 SEP 24
2-120	5 SEP 24
2-121	5 SEP 24
2-122	5 SEP 24
2-123	5 SEP 24
2-124	5 SEP 24
2-125	5 SEP 24
2-126	5 SEP 24
2-127	5 SEP 24
2-128	5 SEP 24
2-129	5 SEP 24
2-130	5 SEP 24
2-131	5 SEP 24
2-132	5 SEP 24
2-133	5 SEP 24
2-134	5 SEP 24
2-135	5 SEP 24
2-136	5 SEP 24
2-137	5 SEP 24
2-138	5 SEP 24
2-139	5 SEP 24
2-140	5 SEP 24
2-141	5 SEP 24
2-142	5 SEP 24
2-143	5 SEP 24
2-144	5 SEP 24
2-145	5 SEP 24
2-146	5 SEP 24
2-147	5 SEP 24
2-148	5 SEP 24
2-149	5 SEP 24
2-150	5 SEP 24
2-151	5 SEP 24
2-152	5 SEP 24
2-153	5 SEP 24
2-154	5 SEP 24
2-155	5 SEP 24
2-156	5 SEP 24
2-157	5 SEP 24
2-158	5 SEP 24

PAGE	DATE
2-159	5 SEP 24
2-160	5 SEP 24
2-161	5 SEP 24
2-162	5 SEP 24
2-163	5 SEP 24
2-164	5 SEP 24
2-165	5 SEP 24
2-166	5 SEP 24
2-167	5 SEP 24
2-168	5 SEP 24
2-169	5 SEP 24
2-170	5 SEP 24
2-171	5 SEP 24
2-172	5 SEP 24
2-173	5 SEP 24
2-174	5 SEP 24
2-175	5 SEP 24
2-176	5 SEP 24
2-177	5 SEP 24
2-178	5 SEP 24
2-179	5 SEP 24
2-180	5 SEP 24
2-181	5 SEP 24
2-182	5 SEP 24
2-183	5 SEP 24
2-184	5 SEP 24
2-185	5 SEP 24
2-186	5 SEP 24
2-187	5 SEP 24
2-188	5 SEP 24
2-189	5 SEP 24
2-190	5 SEP 24
2-191	5 SEP 24
2-192	5 SEP 24
2-193	5 SEP 24
2-194	5 SEP 24
2-195	5 SEP 24
2-196	5 SEP 24
2-197	5 SEP 24
2-198	5 SEP 24
2-199	5 SEP 24
2-200	5 SEP 24
2-201	5 SEP 24
2-202	5 SEP 24
2-203	5 SEP 24
2-204	5 SEP 24
2-205	5 SEP 24
2-206	5 SEP 24
2-207	5 SEP 24
2-208	5 SEP 24
2-209	5 SEP 24
2-210	5 SEP 24

PAGE	DATE
2-211	5 SEP 24
2-212	5 SEP 24
2-213	5 SEP 24
2-214	5 SEP 24
2-215	5 SEP 24
2-216	5 SEP 24
2-217	5 SEP 24
2-218	5 SEP 24
2-219	5 SEP 24
2-220	5 SEP 24
2-221	5 SEP 24
2-222	5 SEP 24
2-223	5 SEP 24
2-224	5 SEP 24
2-225	5 SEP 24
2-226	5 SEP 24
2-227	5 SEP 24
2-228	5 SEP 24
2-229	5 SEP 24
2-230	5 SEP 24
2-231	5 SEP 24
2-232	5 SEP 24
2-233	5 SEP 24
2-234	5 SEP 24
2-235	5 SEP 24
2-236	5 SEP 24
2-237	5 SEP 24
2-238	5 SEP 24
2-239	5 SEP 24
2-240	5 SEP 24
2-241	5 SEP 24
2-242	5 SEP 24
2-243	5 SEP 24
2-244	5 SEP 24
2-245	5 SEP 24
2-246	5 SEP 24
2-247	5 SEP 24
2-248	5 SEP 24
2-249	5 SEP 24
2-250	5 SEP 24
2-251	5 SEP 24
2-252	5 SEP 24
2-253	5 SEP 24
2-254	5 SEP 24
2-255	5 SEP 24
2-256	5 SEP 24
2-257	5 SEP 24
2-258	5 SEP 24
2-259	5 SEP 24
2-260	5 SEP 24
2-261	5 SEP 24
2-262	5 SEP 24

PAGE	DATE
2-263	5 SEP 24
2-264	5 SEP 24
2-265	5 SEP 24
2-266	5 SEP 24
2-267	5 SEP 24
2-268	5 SEP 24
2-269	5 SEP 24
2-270	5 SEP 24
2-271	5 SEP 24
2-272	5 SEP 24
2-273	5 SEP 24
2-274	5 SEP 24
2-275	5 SEP 24
2-276	5 SEP 24
2-277	5 SEP 24
2-278	5 SEP 24
2-279	5 SEP 24
2-280	5 SEP 24
2-281	5 SEP 24
2-282	5 SEP 24
2-283	5 SEP 24
2-284	5 SEP 24
2-285	5 SEP 24
2-286	5 SEP 24
2-287	5 SEP 24
2-288	5 SEP 24
2-289	5 SEP 24
2-290	5 SEP 24
2-291	5 SEP 24
2-292	5 SEP 24
2-293	5 SEP 24
2-294	5 SEP 24
2-295	5 SEP 24
2-296	5 SEP 24
2-297	5 SEP 24
2-298	5 SEP 24
2-299	5 SEP 24
2-300	5 SEP 24
2-301	5 SEP 24
2-302	5 SEP 24
2-303	5 SEP 24
2-304	5 SEP 24
2-305	5 SEP 24
2-306	5 SEP 24
2-307	5 SEP 24
2-308	5 SEP 24
2-309	5 SEP 24
2-310	5 SEP 24
2-311	5 SEP 24
2-312	5 SEP 24
2-313	5 SEP 24
2-314	5 SEP 24

PAGE	DATE
2-315	5 SEP 24
2-316	5 SEP 24
2-317	5 SEP 24
2-318	5 SEP 24
2-319	5 SEP 24
2-320	5 SEP 24
2-321	5 SEP 24
2-322	5 SEP 24
2-323	5 SEP 24
2-324	5 SEP 24
2-325	5 SEP 24
2-326	5 SEP 24
2-327	5 SEP 24
2-328	5 SEP 24
2-329	5 SEP 24
2-330	5 SEP 24
2-331	5 SEP 24
2-332	5 SEP 24
2-333	5 SEP 24
2-334	5 SEP 24
2-335	5 SEP 24
2-336	5 SEP 24
2-337	5 SEP 24
2-338	5 SEP 24
2-339	5 SEP 24
2-340	5 SEP 24
2-341	5 SEP 24
2-342	5 SEP 24
2-343	5 SEP 24
2-344	5 SEP 24
2-345	5 SEP 24
2-346	5 SEP 24
2-347	5 SEP 24
2-348	5 SEP 24
2-349	5 SEP 24
2-350	5 SEP 24
2-351	5 SEP 24
2-352	5 SEP 24
2-353	5 SEP 24
2-354	5 SEP 24
2-355	5 SEP 24
2-356	5 SEP 24
2-357	5 SEP 24
2-358	5 SEP 24
2-359	5 SEP 24
2-360	5 SEP 24
2-361	5 SEP 24
2-362	5 SEP 24
2-363	5 SEP 24
2-364	5 SEP 24
2-365	5 SEP 24
2-366	5 SEP 24

PAGE	DATE
2-367	5 SEP 24
2-368	5 SEP 24
2-369	5 SEP 24
2-370	5 SEP 24
2-371	5 SEP 24
2-372	5 SEP 24
2-373	5 SEP 24
2-374	5 SEP 24
2-375	5 SEP 24
2-376	5 SEP 24
2-377	5 SEP 24
2-378	5 SEP 24
2-379	5 SEP 24
2-380	5 SEP 24
2-381	5 SEP 24
2-382	5 SEP 24
2-383	5 SEP 24
2-384	5 SEP 24
2-385	5 SEP 24
2-386	5 SEP 24
2-387	5 SEP 24
2-388	5 SEP 24
2-389	5 SEP 24
2-390	5 SEP 24
2-391	5 SEP 24
2-392	5 SEP 24
2-393	5 SEP 24
2-394	5 SEP 24
2-395	5 SEP 24
2-396	5 SEP 24
2-397	5 SEP 24
2-398	5 SEP 24
2-399	5 SEP 24
2-400	5 SEP 24
2-401	5 SEP 24
2-402	5 SEP 24
2-403	5 SEP 24
2-404	5 SEP 24
2-405	5 SEP 24
2-406	5 SEP 24
2-407	5 SEP 24
2-408	5 SEP 24
2-409	5 SEP 24
2-410	5 SEP 24
2-411	5 SEP 24
2-412	5 SEP 24
2-413	5 SEP 24
2-414	5 SEP 24
2-415	5 SEP 24
2-416	5 SEP 24
2-417	5 SEP 24
2-418	5 SEP 24

PAGE	DATE
2-419	5 SEP 24
2-420	5 SEP 24
2-421	5 SEP 24
2-422	5 SEP 24
2-423	5 SEP 24
2-424	5 SEP 24
2-425	5 SEP 24
2-426	5 SEP 24
2-427	5 SEP 24
2-428	5 SEP 24
2-429	5 SEP 24
2-430	5 SEP 24
2-431	5 SEP 24
2-432	5 SEP 24
2-433	5 SEP 24
2-434	5 SEP 24
2-435	5 SEP 24
2-436	5 SEP 24
2-437	5 SEP 24
2-438	5 SEP 24
2-439	5 SEP 24
2-440	5 SEP 24
2-441	5 SEP 24
2-442	5 SEP 24
2-443	5 SEP 24
2-444	5 SEP 24
2-445	5 SEP 24
2-446	5 SEP 24
2-447	5 SEP 24
2-448	5 SEP 24
2-449	5 SEP 24
2-450	5 SEP 24
2-451	5 SEP 24
2-452	5 SEP 24
2-453	5 SEP 24
2-454	5 SEP 24
2-455	5 SEP 24
2-456	5 SEP 24
2-457	5 SEP 24
2-458	5 SEP 24
2-459	5 SEP 24
2-460	5 SEP 24
2-461	5 SEP 24
2-462	5 SEP 24
2-463	5 SEP 24
2-464	5 SEP 24
2-465	5 SEP 24
2-466	5 SEP 24
2-467	5 SEP 24
2-468	5 SEP 24
2-469	5 SEP 24
2-470	5 SEP 24

PAGE	DATE
2-471	5 SEP 24
2-472	5 SEP 24
2-472	5 SEP 24
2-473	5 SEP 24
2-474	5 SEP 24
2-475	5 SEP 24
2-476	5 SEP 24
2-477	5 SEP 24
2-478	5 SEP 24
2-479	5 SEP 24
2-480	5 SEP 24
2-481	5 SEP 24
2-482	5 SEP 24
2-483	5 SEP 24
2-484	5 SEP 24
2-485	5 SEP 24
2-486	5 SEP 24
2-487	5 SEP 24
2-488	5 SEP 24
2-489	5 SEP 24
2-490	5 SEP 24
2-491	5 SEP 24
2-492	5 SEP 24
2-493	5 SEP 24
2-494	5 SEP 24
2-495	5 SEP 24
2-496	5 SEP 24
2-497	5 SEP 24
2-498	5 SEP 24
2-499	5 SEP 24
2-500	5 SEP 24
2-501	5 SEP 24
2-502	5 SEP 24
2-503	5 SEP 24
2-504	5 SEP 24
2-505	5 SEP 24
2-506	5 SEP 24
2-507	5 SEP 24
2-508	5 SEP 24
2-509	5 SEP 24
2-510	5 SEP 24
2-511	5 SEP 24
2-512	5 SEP 24
2-513	5 SEP 24
2-514	5 SEP 24
2-515	5 SEP 24
2-516	5 SEP 24
2-517	5 SEP 24
2-518	5 SEP 24
2-519	5 SEP 24
2-520	5 SEP 24
2-521	5 SEP 24

PAGE	DATE
2-522	5 SEP 24
2-523	5 SEP 24
2-524	5 SEP 24
2-525	5 SEP 24
2-526	5 SEP 24
2-527	5 SEP 24
2-528	5 SEP 24
2-529	5 SEP 24
2-530	5 SEP 24
2-531	5 SEP 24
2-532	5 SEP 24
2-533	5 SEP 24
2-534	5 SEP 24
2-535	5 SEP 24
2-536	5 SEP 24
2-537	5 SEP 24
2-538	5 SEP 24
2-539	5 SEP 24
2-540	5 SEP 24
2-541	5 SEP 24
2-542	5 SEP 24
2-543	5 SEP 24
2-544	5 SEP 24
2-545	5 SEP 24
2-546	5 SEP 24
2-547	5 SEP 24
2-548	5 SEP 24
2-549	5 SEP 24
2-550	5 SEP 24
2-551	5 SEP 24
2-552	5 SEP 24
2-553	5 SEP 24
2-554	5 SEP 24
2-555	5 SEP 24
2-556	5 SEP 24
2-557	5 SEP 24
2-558	5 SEP 24
2-559	5 SEP 24
2-560	5 SEP 24
2-561	5 SEP 24
2-562	5 SEP 24
2-563	5 SEP 24
2-564	5 SEP 24
2-565	5 SEP 24

PAGE	DATE
2-566	5 SEP 24
2-567	5 SEP 24
2-568	5 SEP 24
2-569	5 SEP 24
2-570	5 SEP 24
2-571	5 SEP 24
2-572	5 SEP 24
2-572	5 SEP 24
2-573	5 SEP 24
2-574	5 SEP 24
2-575	5 SEP 24
2-576	5 SEP 24
2-577	5 SEP 24
2-578	5 SEP 24
2-579	5 SEP 24
2-580	5 SEP 24
2-581	5 SEP 24
2-582	5 SEP 24
2-583	5 SEP 24
2-584	5 SEP 24
2-585	5 SEP 24
2-586	5 SEP 24
2-587	5 SEP 24
2-588	5 SEP 24
2-589	5 SEP 24
2-590	5 SEP 24
2-591	5 SEP 24
2-592	5 SEP 24
2-593	5 SEP 24
2-594	5 SEP 24
2-595	5 SEP 24
2-596	5 SEP 24
2-597	5 SEP 24
2-598	5 SEP 24
2-599	5 SEP 24
2-601	5 SEP 24
2-602	5 SEP 24
2-603	5 SEP 24
2-604	5 SEP 24
2-605	5 SEP 24
2-606	5 SEP 24
2-607	5 SEP 24
2-608	5 SEP 24
2-609	5 SEP 24

PAGE	DATE
2-610	5 SEP 24
2-611	5 SEP 24
2-612	5 SEP 24
2-613	5 SEP 24
2-614	5 SEP 24
2-615	5 SEP 24
2-616	5 SEP 24
2-617	5 SEP 24
2-618	5 SEP 24
2-619	5 SEP 24
2-620	5 SEP 24
2-621	5 SEP 24
2-622	5 SEP 24
2-623	5 SEP 24
2-624	5 SEP 24
2-625	5 SEP 24
2-626	5 SEP 24
2-627	5 SEP 24
2-628	5 SEP 24
2-629	5 SEP 24
2-630	5 SEP 24
2-631	5 SEP 24
INDEX	
I-1	5 SEP 24
I-2	5 SEP 24
I-3	5 SEP 24
I-4	5 SEP 24
I-5	5 SEP 24
I-6	5 SEP 24
I-7	5 SEP 24
I-8	5 SEP 24
I-9	5 SEP 24
APPENDIX	
Appendix 1-1	5 SEP 24
Appendix 1-2	5 SEP 24
Appendix 1-3	5 SEP 24
Appendix 1-4	5 SEP 24
Appendix 1-5	5 SEP 24
Appendix 1-6	5 SEP 24

PAGE	DATE
Appendix 1-7	5 SEP 24
Appendix 1-8	5 SEP 24
Appendix 1-9	5 SEP 24
Appendix 1-10	5 SEP 24
Appendix 1-11	5 SEP 24
Appendix 1-12	5 SEP 24

PAGE	DATE
Appendix 1-13	5 SEP 24
Appendix 1-14	5 SEP 24
Appendix 1-15	5 SEP 24
Appendix 1-16	5 SEP 24
Appendix 1-17	5 SEP 24
Appendix 1-18	5 SEP 24

PAGE	DATE
Appendix 1-19	5 SEP 24
Appendix 1-20	5 SEP 24
Appendix 1-21	5 SEP 24
Appendix 1-22	5 SEP 24
Appendix 1-23	5 SEP 24

AD 0.5 List of Hand Amendments to the AIP – Not applicable

AD 0.5 List of Hand Amendments to the AIP – Not applicable

AD 0.6 Table of Contents to Part 3

AD 1. AERODROMES - INTRODUCTION

AD 1.1 Aerodrome Availability AD 1.1-1

AD 2. AERODROMES AD 2-1

AD 1. AERODROMES – INTRODUCTION

AD 1.1 Aerodrome Availability

1. General Regulations Concerning Airport Use

1.1 International arrivals with scheduled passenger service are not permitted to land at any aerodrome not listed in this AIP except in cases of real emergency or where special permission has been granted.

1.2 The conditions under which aircraft may land, be parked, housed or otherwise dealt with at U.S. aerodromes is under the control of the aerodrome owner/operator. Conditions and fees pertaining to landing, parking, or storing are variable from aerodrome to aerodrome and are not published in the U.S. AIP.

1.3 In the United States, some telecommunication companies launched 5G services on January 19, 2022, using frequencies in a portion of the radio spectrum called the C-band. These frequencies can be close to those used by radio altimeters, an important piece of safety equipment in aircraft. The 5G deployment involves a new combination of power levels, frequencies, proximity to flight operations, and other factors. The FAA requires that radio altimeters are accurate and reliable, and therefore imposes restrictions on flight operations using certain types of radio altimeter equipment. These safety restrictions are posted in a 5G C-Band Domestic Notice, and could affect flight schedules and operations. All operators (domestic and international) must comply with the guidance and restrictions provided in this Domestic Notice.

2. Landings Made Elsewhere Than at International Aerodromes

2.1 Permission to land at airports other than “international” and “landing rights” airports may be obtained in some limited cases; however, advance arrangements (preferably in writing) must be made with the U.S. Customs office nearest the airport of intended arrival (see GEN 1). Advance notice of arrival is required as usual. Pilots should be aware that mileage and per diem costs may be accrued in addition to any overtime charges if applicable.

2.2 If an emergency landing is made elsewhere than at an international aerodrome or a designated alternate aerodrome, the pilot in command must report the landing as promptly as possible by telephone or the most convenient means to the nearest Customs office. He/she should keep all merchandise or baggage in a segregated place and should not permit any passenger or crewmember to depart the place of arrival or mingle with the public without official permission, unless it is necessary for preservation of life, health, or property.

3. Traffic of Persons and Vehicles on Aerodromes

3.1 The grounds of each aerodrome are divided into two zones:

3.1.1 A public zone comprising the part of the aerodrome open to the public; and

3.1.2 A restricted zone comprising the rest of the aerodrome.

3.2 Movement of Persons

3.2.1 Access to the restricted zone is authorized only under conditions prescribed by the rules governing the aerodrome as established by the officials responsible for aerodrome security.

3.2.2 The customs, security, immigration and health inspection offices and areas, and the premises assigned to transit traffic are normally accessible only to passengers, to staff members of the responsible authorities or airlines, and to authorized persons in pursuit of their duties.

3.2.3 The movement of persons having access to the restricted zone of the aerodrome is subject to the conditions prescribed by applicable air traffic and by the security regulations laid down by the person responsible for the management of the aerodrome.

3.3 Movement of Vehicles

3.3.1 The movement of vehicles in the restricted zone is strictly limited to vehicles driven or used by persons having official permission.

3.3.2 Drivers of vehicles, of whatever type, driving within the confines of the aerodrome, must respect the direction of traffic, the traffic signs, and the posted speed limits and generally comply with the provisions of the highway code and with instructions given by the competent authorities.

4. General Information and Aerodrome Lighting and Marking

4.1 Aerodrome lighting information is contained in paragraphs 12. through 16. Information on aerodrome marking aids and signs is contained in paragraph 17.

4.2 Designated international U.S. aerodromes with scheduled passenger service in large aircraft and certain airports designated as alternate service aerodromes are listed in , Aerodromes.

5. Aerodrome Administration

5.1 The administration of all airports is the responsibility of the aerodrome owner.

5.2 Ownership of aerodromes in the U.S. is vested in three different groups: the Federal Government, non-Federal governments, and private organizations or individuals. It is the policy of the U.S. Federal Government to have its aerodromes comply with ICAO Standards and Recommended Practices. Exceptions are noted as differences below and in GEN 1.7. Aerodromes owned by non-Federal governments and private organizations or individuals are encouraged to comply with International Standards and Recommended Practices in part through the regulation of aircraft operations into the aerodromes and in part through agreements under which Federal aid is made available for aerodrome development or improvement. Further compliance is by voluntary action on the part of the aerodrome owner.

6. Conditions of Availability

6.1 An aerodrome which is open for public use may be used by a particular aircraft upon consideration of the meteorological conditions existing at the time and provided that the aircraft's performance and load classification (runway weight-bearing classification) is consistent with the physical characteristics of the aerodrome.

6.2 Civil Use of Military Fields

6.2.1 Except at joint-use airfields, U.S. Army, Air Force, Navy, Marine Corps, and Coast Guard airfields are available for use by civil aircraft only with prior permission or in an emergency. An approved civil aircraft landing permit is required for use at all except Coast Guard airfields. With minor exceptions, authority to use military airfields is granted only to aircraft on official government business.

6.2.2 An application for a permit must be submitted to the appropriate military department a minimum of 30 days prior to the first intended landing. A permit application consists of Department of Defense Forms DD Form 2400, Civil Aircraft Certificate of Insurance; DD Form 2401, Civil Aircraft Landing Permit; and DD Form 2402, Hold Harmless Agreement.

6.2.3 Forms and instructions can be obtained from the following addresses.

Army: Director, USAASA
ATTN: MOAS-AS
Building 1466
9325 Gunston Road, Suite N319
Ft. Belvoir, VA 22060-5582
Telephone: (703) 806-4864

Air Force: HQ USAF/XOO-CA
1480 Air Force Pentagon,
Room 4D1010
Washington DC 20330-1480
Telephone: (703) 697-5967

Navy/
Marine Corps: Commander
Naval Facilities Engineering Command,
Code 141JB
200 Stovall Street, Room 10N45
Alexandria, VA 22332-2300
Telephone: (703) 325-0475

At Coast Guard airfields, prior permission must be requested from the commanding officer of the airfield to be used.

7. Applicable ICAO Documents

ICAO Standards and Recommended Practices contained in Annex 14 are applied with the exceptions noted in GEN 1.7, Differences from ICAO Standards, Recommended Practices and Procedures.

8. Maintenance of Aerodrome Movement Areas

8.1 It is the responsibility of the relevant aerodrome authority to maintain the aerodrome in a satisfactory condition.

8.2 Clearance of snow and measurement of snow, ice, standing water, braking action, etc., and the reporting of such pavement conditions is within the responsibility of the aerodrome authority.

9. Dissemination of Information on the Condition of Paved Surface

9.1 Information on surface condition of runways, taxiways and aprons will be published, when available and when necessary.

9.2 At aerodromes where an ATS unit is established, if a runway is affected by standing water, snow, slush or ice during the approach of an aircraft for landing, and such conditions are notified by the aerodrome management to the ATS unit, such conditions will be made available to the aircraft.

10. Rescue and Fire Fighting Facilities

10.1 Adequate rescue and fire-fighting vehicles, equipment and personnel are provided at aerodromes available for international commercial air transport.

10.2 Temporary interruptions to rescue and fire-fighting service, or non-availability of such services, are made known by NOTAM.

10.3 Certificated Aerodromes (14 CFR Part 139)

Aerodromes serving certain air carriers under 14 CFR Part 139 are indicated by a CFR Index which relates to the availability of crash, fire, and rescue equipment. (See TBL AD 1.1-1.)

11. Bird Concentrations in the Vicinity of Aerodromes

11.1 Animal and bird notices are not normally published in aerodrome remarks. Pilots should be aware that animals and birds are frequently found in the vicinity of aerodromes and should exercise due caution. However, selected bird notices may be published, but only after approval by the appropriate Regional Bird Hazard Group.

TBLAD 1.1-1

14 CFR PART 139 CERTIFICATED AIRPORTS

Indexes and Fire Fighting and Rescue Equipment Requirements

Airport Index	Required Number of Vehicles	Aircraft Length	Agent & Water for Foam
A	1	< 90'	500# DC or 450# DC + 100 gal H ₂ O
B	1 or 2	≥ 90' & < 126'	Index A + 1500 gal H ₂ O
C	2 or 3	≥ 126' & < 159'	Index A + 3000 gal H ₂ O
D	3	≥ 159' & < 200'	Index A + 4000 gal H ₂ O
E	3	≥ 200'	Index A + 6000 gal H ₂ O
> Greater Than; < Less Than; ≥ Equal To or Greater Than; H ₂ O Water; DC Dry Chemical			
NOTE- Vehicle and capacity requirements for airports holding limited operating certificates are determined on a case-by-case basis.			

12. Airport Lighting Aids

12.1 Approach Light Systems (ALS)

12.1.1 Approach light systems provide the basic means for transition from instrument flight to visual flight for landing. Operational requirements dictate the sophistication and configuration of the approach light system for a particular runway.

12.1.2 Approach light systems are a configuration of signal lights starting at the landing threshold and extending into the approach area a distance of 2400–3000 feet for precision instrument runways and 1400–1500 feet for nonprecision instrument runways. Some systems include sequenced flashing lights which appear to the pilot as a ball of light traveling towards the runway at high speed (twice each second).

12.2 Visual Glideslope Indicators

12.2.1 Visual Approach Slope Indicator (VASI)

12.2.1.1 The VASI is a system of lights so arranged to provide visual descent guidance information during the approach to a runway. These lights are visible from 3–5 miles during the day and up to 20 miles or more at night. The visual glide path of the VASI provides safe obstruction clearance within plus or minus 10 degrees of the extended runway centerline and to 4 NM from the runway threshold. Descent, using the VASI, should not be initiated until the aircraft is visually aligned with the runway. Lateral course guidance is provided by the runway or runway lights. In certain circumstances, the safe obstruction clearance area may be reduced by narrowing the beam width or shortening the usable distance due to local limitations, or the VASI may be offset from the extended runway centerline. This will be noted in the Chart Supplement and/or applicable Notices to Air Missions (NOTAM).

12.2.1.2 VASI installations may consist of either 2, 4, 6, 12, or 16 light units arranged in bars referred to as near, middle, and far bars. Most VASI installations consist of 2 bars, near and far, and may consist of 2, 4, or 12 light

units. Some airports have VASIs consisting of three bars, near, middle, and far, which provide an additional visual glide path to accommodate high cockpit aircraft. This installation may consist of either 6 or 16 light units. VASI installations consisting of 2, 4, or 6 light units are located on one side of the runway, usually the left. Where the installation consists of 12 or 16 light units, the light units are located on both sides of the runway.

12.2.1.3 Two–bar VASI installations provide one visual glide path which is normally set at 3 degrees. Three–bar VASI installations provide two visual glide paths. The lower glide path is provided by the near and middle bars and is normally set at 3 degrees while the upper glide path, provided by the middle and far bars, is normally $\frac{1}{4}$ degree higher. This higher glide path is intended for use only by high cockpit aircraft to provide a sufficient threshold crossing height. Although normal glide path angles are three degrees, angles at some locations may be as high as 4.5 degrees to give proper obstacle clearance. Pilots of high performance aircraft are cautioned that use of VASI angles in excess of 3.5 degrees may cause an increase in runway length required for landing and rollout.

12.2.1.4 The basic principle of the VASI is that of color differentiation between red and white. Each light unit projects a beam of light having a white segment in the upper part of the beam and red segment in the lower part of the beam. The light units are arranged so that the pilot using the VASIs during an approach will see the combination of lights shown below.

12.2.1.5 For 2–BAR VASI (4 light units), see FIG AD 1.1–2.

12.2.1.6 For 3–BAR VASI (6 light units), see FIG AD 1.1–3.

12.2.1.7 For other VASI configurations, see FIG AD 1.1–4.

12.2.2 Precision Approach Path Indicator (PAPI). The precision approach path indicator (PAPI) uses light units similar to the VASI but are installed in a single row of either two or four light units. These lights are visible from about 5 miles during the day and up to 20 miles at night. The visual glide path of the PAPI typically provides safe obstruction clearance within plus or minus 10 degrees of the extended runway centerline and to 3.4 NM from the runway threshold. Descent, using the PAPI, should not be initiated until the aircraft is visually aligned with the runway. The row of light units is normally installed on the left side of the runway and the glide path indications are as depicted. Lateral course guidance is provided by the runway or runway lights. In certain circumstances, the safe obstruction clearance area may be reduced by narrowing the 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 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.

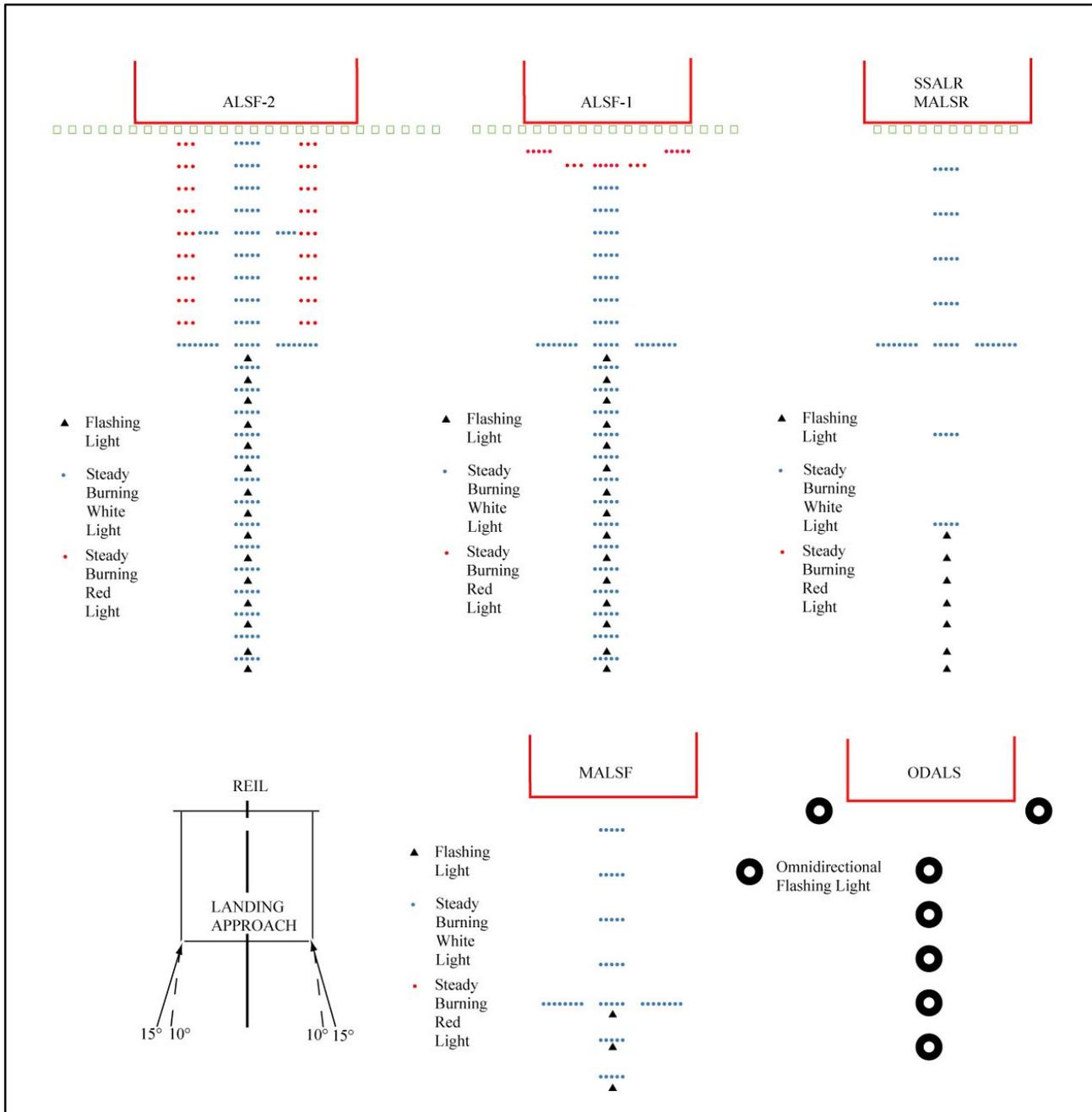
12.4.3 The lights marking the ends of the runway emit red light toward the runway to indicate the end of the runway to a departing aircraft and emit green outward from the runway end to indicate the threshold to landing aircraft.

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 1.1-2
2-Bar VASI

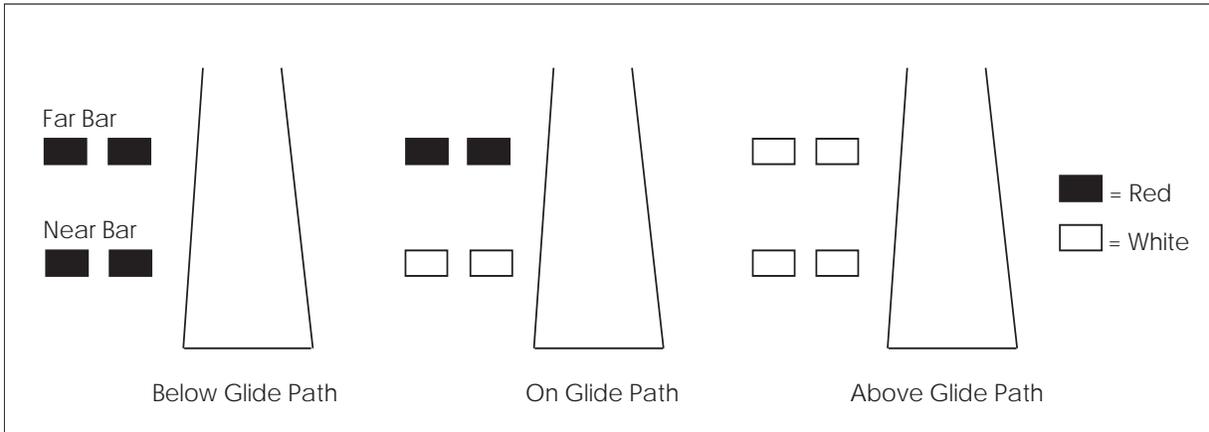


FIG AD 1.1-3
3-Bar VASI

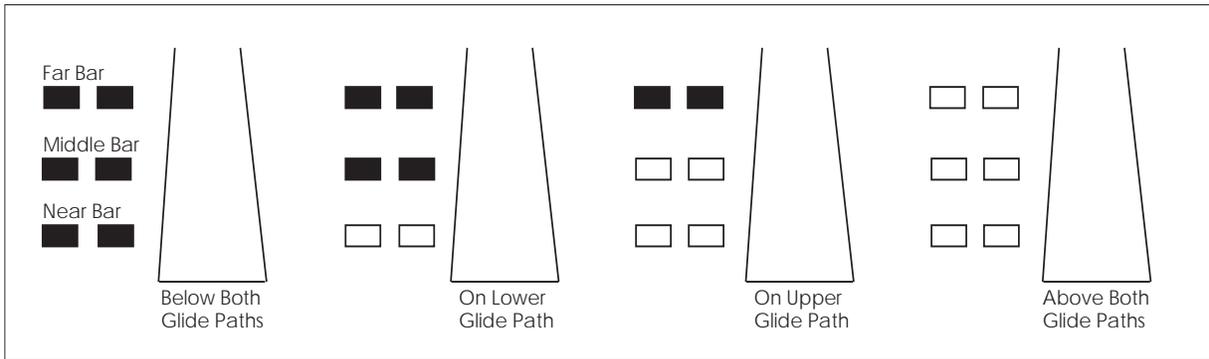


FIG AD 1.1-4
VASI Variations

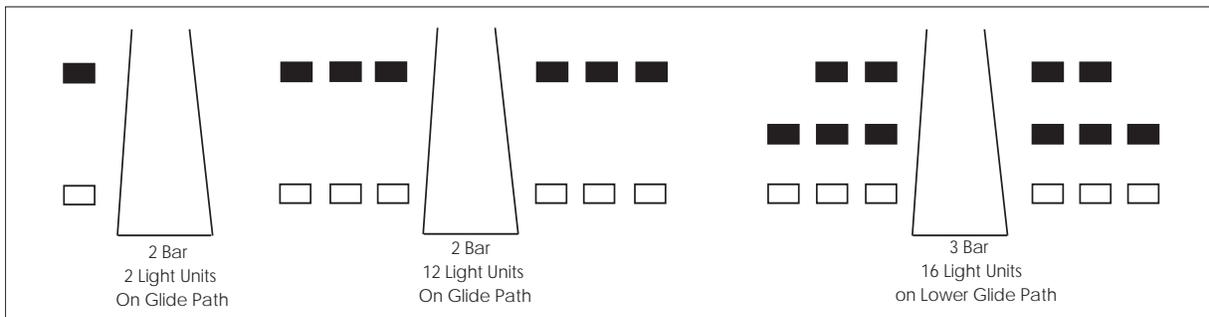


FIG AD 1.1-5
Precision Approach Path Indicator (PAPI)

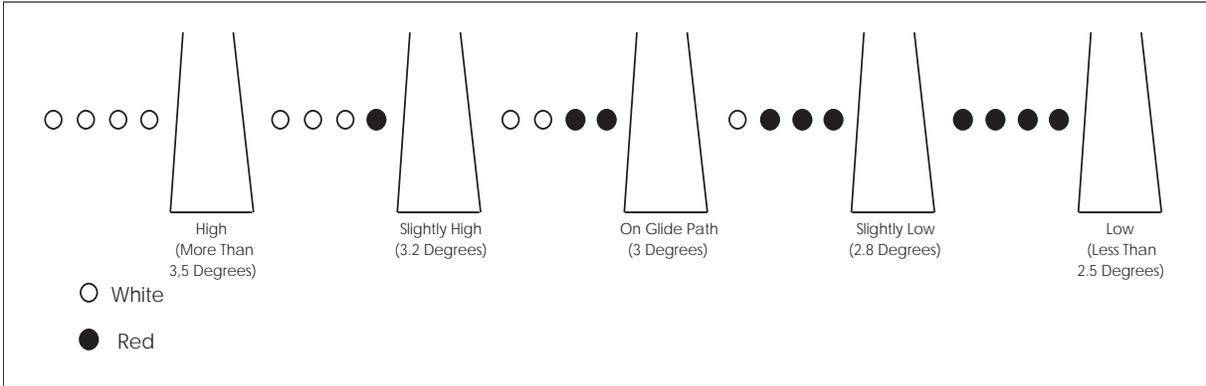
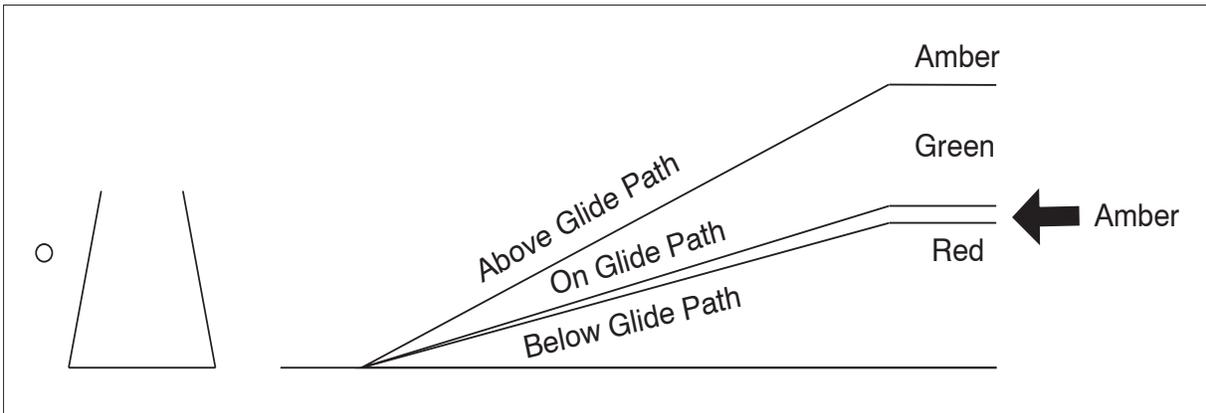


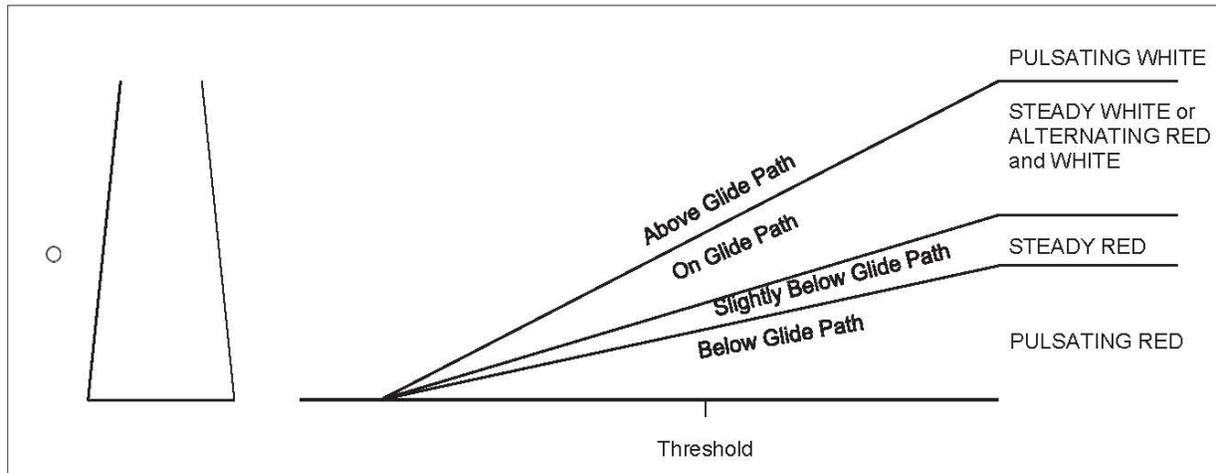
FIG AD 1.1-6
Tri-Color Visual Approach Slope Indicator



NOTE-

1. Since the tri-color VASI 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.
2. When the aircraft descends from green to red, the pilot may see a dark amber color during the transition from green to red.

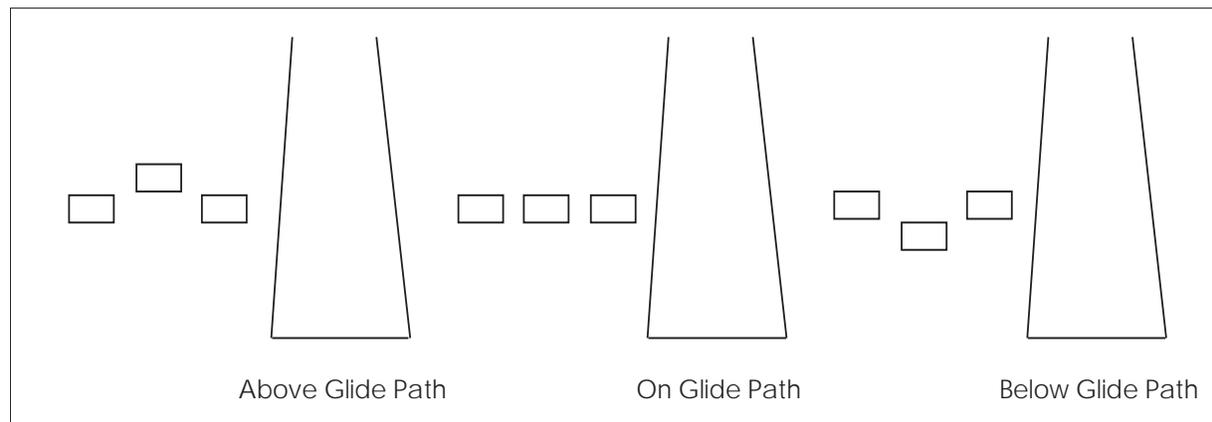
FIG AD 1.1-7
Pulsating Visual Approach Slope Indicator



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 1.1-12.)

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–

AIP, ENR 1.1, Para 23, Pilot Responsibilities When Conducting Land and Hold Short Operations (LAHSO).

12.6 Runway Status Light (RWSL) System

12.6.1 Introduction: 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, or takeoff from a runway. The RWSL system processes information from surveillance systems and activates Runway Entrance Lights (REL) and Takeoff Hold Lights (THL) in accordance with the position and velocity of the detected surface traffic and approach traffic. REL and THL are in-pavement light fixtures that are directly visible to pilots and surface vehicle operators. RWSL is an independent safety enhancement that does not substitute for or convey an ATC clearance. Clearance to enter, cross, takeoff from, 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 1.1–10). 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: When an aircraft on final approach is approximately 1 mile from the runway threshold, all sets of taxiway REL light arrays that intersect the runway illuminate. The distance is adjustable and can be configured for specific operations at particular airports. Lights extinguish at each equipped taxiway intersection approximately 3 to 4 seconds before the aircraft reaches it to apply anticipated separation until the aircraft has slowed to approximately 80 knots (site adjustable parameter). Below 80 knots, all arrays that are not within 30 seconds of the aircraft’s forward path are extinguished. Once the arriving aircraft slows to approximately 34 knots (site adjustable parameter), it is declared to be in a taxi state, and all lights extinguish.

12.6.2.3 What a pilot would observe: A pilot at or approaching the hold line to a runway will observe RELs illuminate and extinguish in reaction to an aircraft or vehicle operating on the runway, or an arriving aircraft operating less than 1 mile from the runway threshold.

12.6.2.4 When a pilot observes the red lights of the REL, that pilot will stop at the hold line or remain stopped. The pilot will then contact ATC for resolution if the clearance is in conflict with the lights. Should pilots note illuminated lights under circumstances when remaining clear of the runway is impractical for safety reasons (for example, aircraft is already on the runway), the crew should proceed according to their best judgment while understanding the illuminated lights indicate the runway is unsafe to enter or cross. Contact ATC at the earliest possible opportunity.

12.6.3 Takeoff Hold Lights (THL) : The THL system is composed of flush mounted, in-pavement, unidirectional light fixtures in a double longitudinal row aligned either side of the runway centerline lighting. Fixtures are focused toward the arrival end of the runway at the “line up and wait” point. THLs extend for 1,500 feet in front of the holding aircraft starting at a point 375 feet from the departure threshold (see FIG AD 1.1–11).

Illuminated red lights provide a signal, to an aircraft in position for takeoff or rolling, that it is unsafe to takeoff because the runway is occupied or about to be occupied by another aircraft or ground vehicle. Two aircraft, or a surface vehicle and an aircraft, are required for the lights to illuminate. The departing aircraft must be in position for takeoff or beginning takeoff roll. Another aircraft or a surface vehicle must be on or about to cross the runway.

12.6.3.1 THL Operating Characteristics – Departing Aircraft:

THLs will illuminate for an aircraft in position for departure or departing when there is another aircraft or vehicle on the runway or about to enter the runway (see FIG AD 1.1-9.) Once that aircraft or vehicle exits the runway, the THLs extinguish. A pilot may notice lights extinguish prior to the downfield aircraft or vehicle being completely clear of the runway but still moving. Like RELs, THLs have an “anticipated separation” feature.

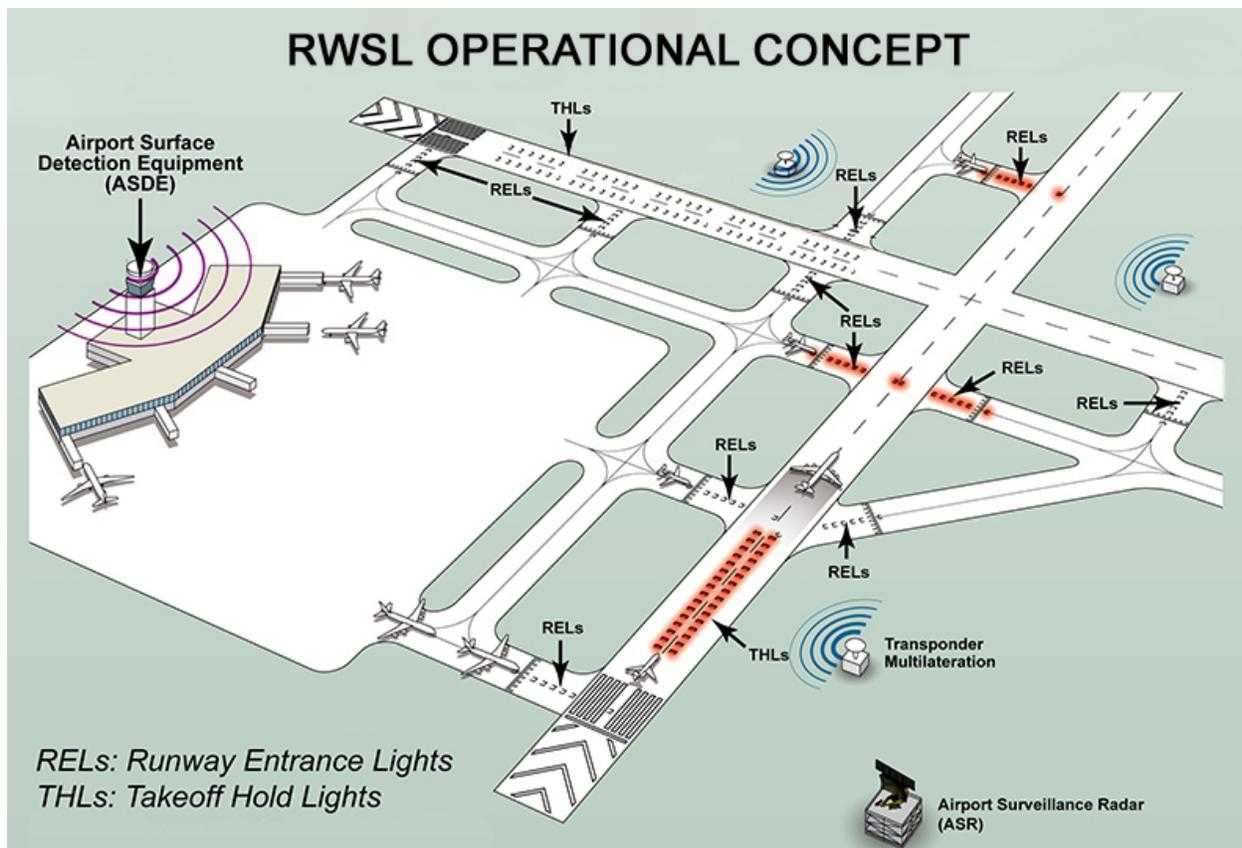
NOTE–

When the THLs extinguish, this is not clearance to begin a takeoff roll. All takeoff clearances will be issued by ATC.

12.6.3.2 What a pilot would observe: A pilot in position to depart from a runway, or has begun takeoff roll, will observe THLs illuminate in reaction to an aircraft or vehicle on the runway or entering or crossing it. Lights will extinguish when the runway is clear. A pilot may observe several cycles of illumination and extinguishing depending on the amount of crossing traffic.

12.6.3.3 When a pilot observes the red light of the THLs, the pilot should safely stop if it’s feasible or remain stopped. The pilot must contact ATC for resolution if any clearance is in conflict with the lights. Should pilots note illuminated lights while in takeoff roll and under circumstances when stopping is impractical for safety reasons, the crew should proceed according to their best judgment while understanding the illuminated lights indicate that continuing the takeoff is unsafe. Contact ATC at the earliest possible opportunity.

FIG AD 1.1-9
Runway Status Light System



12.6.4 Pilot Actions

12.6.4.1 When operating at airports with RWSL, pilots will operate with the transponder/ADS-B “On” when departing the gate or parking area until it is shut down upon arrival at the gate or parking area. This ensures interaction with the FAA surveillance systems such as ASDE-X/Airport Surface Surveillance Capability (ASSC) which provide information to the RWSL system.

12.6.4.2 Pilots must always inform the ATCT when they have stopped due to an RWSL indication that is in conflict with ATC instructions. Pilots must request clarification of the taxi or takeoff clearance.

12.6.4.3 Never cross over illuminated red lights. Under normal circumstances, RWSL will confirm the pilot’s taxi or takeoff clearance previously issued by ATC. If RWSL indicates that it is unsafe to takeoff from, land on, cross, or enter a runway, immediately notify ATC of the conflict and re-confirm the clearance.

12.6.4.4 Do not proceed when lights have extinguished without an ATC clearance. RWSL verifies an ATC clearance, it does not substitute for an ATC clearance.

12.6.5 ATC Control of RWSL System:

12.6.5.1 Controllers can set in-pavement lights to one of five (5) brightness levels to assure maximum conspicuity under all visibility and lighting conditions. REL and THL subsystems may be independently set.

12.6.5.2 System lights can be disabled should RWSL operations impact the efficient movement of air traffic or contribute, in the opinion of the ATC Manager, to unsafe operations. Whenever the system or a component is disabled, a NOTAM must be issued, and the Automatic Terminal Information System (ATIS) must be updated.

12.7 Control of Lighting Systems

12.7.1 Operation of approach light systems and runway lighting is controlled by the control tower (ATCT). At some locations the FSS may control the lights where there is no control tower in operation.

12.7.2 Pilots may request that lights be turned on or off. Runway edge lights, in-pavement lights and approach lights also have intensity controls which may be varied to meet the pilot’s request. Sequenced flashing lights may be turned on and off. Some sequenced flashing system also have intensity control.

12.8 Pilot Control of Airport Lighting

12.8.1 Radio control of lighting is available at selected airports to provide airborne control of lights by keying the aircraft’s microphone. Control of lighting system is often available at locations without specified hours for lighting or where there is no control tower or FSS, or when the control tower or FSS is closed (locations with a part-time tower or FSS). All lighting systems which are radio controlled at an airport, whether on a single runway or multiple runways, operate on the same radio frequency. (See TBL AD 1.1–2 and TBL AD 1.1–3.)

12.8.2 With FAA approved systems, various combinations of medium intensity approach lights, runway lights, taxiways lights, VASI and/or REIL may be activated by radio control. On runways with both approach lighting and runway lighting (runway edge lights, taxiway lights, etc.) systems, the approach lighting system takes precedence for air-to-ground radio control over the runway lighting system which is set at a predetermined intensity step, based on expected visibility conditions. Runways without approach lighting may provide radio controlled intensity adjustments of runway edge lights. Other lighting systems, including VASI, REIL, and taxiway lights, may be either controlled with the runway edge lights or controlled independently of the runway edge lights.

12.8.3 The control system consists of a 3-step control responsive to 7, 5, and/or 3 microphone clicks. This 3-step control will turn on lighting facilities capable of either 3-step, 2-step or 1-step operation. The 3-step and 2-step lighting facilities can be altered in intensity, while the 1-step cannot. All lighting is illuminated for a period of 15 minutes from the most recent time of activation and may not be extinguished prior to end of the 15-minute period (except for 1-step and 2-step REILs which may be turned off when desired by keying the mike 5 or 3 times, respectively).

FIGAD 1.1-10
Runway Entrance Lights



FIGAD 1.1-11
Takeoff Hold Lights

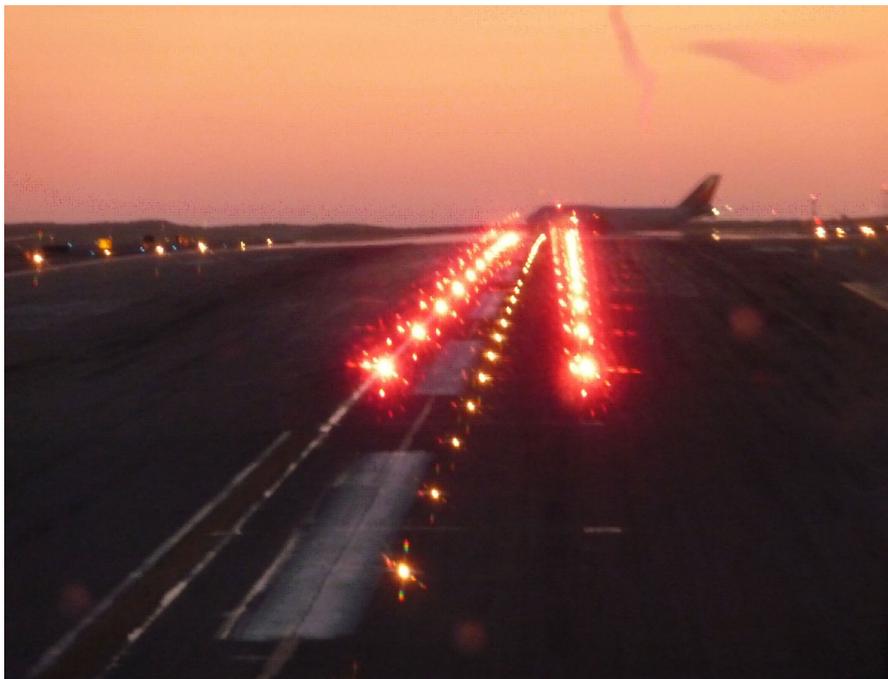


FIG AD 1.1-12
Taxiway Lead-On Light Configuration



TBLAD 1.1-2
Runways With Approach Lights

Lighting System	Number of Intensity Steps	Status During Nonuse Period	Intensity Step Selected Per Number of Mike Clicks		
			3 Clicks	5 Clicks	7 Clicks
Approach Lights (Med. Int.)	2	Off	Low	Low	High
Approach Lights (Med. Int.)	3	Off	Low	Med	High
MIRL	3	Off or Low	◆	◆	◆
HIRL	5	Off or Low	◆	◆	◆
VASI	2	Off	☆	☆	☆

NOTES: ◆Predetermined intensity step.
☆Low intensity for night use. High intensity for day use as determined by photocell control.

TBLAD 1.1-3
Runways Without Approach Lights

Lighting System	Number of Intensity Steps	Status During Nonuse Period	Intensity Step Selected Per Number of Mike Clicks		
			3 Clicks	5 Clicks	7 Clicks
MIRL	3	Off or Low	Low	Med.	High
HIRL	5	Off or Low	Step 1 or 2	Step 3	Step 5
LIRL	1	Off	On	On	On
VASI★	2	Off	◆	◆	◆
REIL★	1	Off	Off	On / Off	On
REIL★	3	Off	Low	Med.	High

NOTES: ◆Low intensity for night use. High intensity for day use as determined by photocell control.
★The control of VASI and/or REIL may be independent of other lighting systems.

12.8.4 Suggested use is to always initially key the mike 7 times; this assures that all controlled lights are turned on to the maximum available intensity. If desired, adjustment can then be made, where the capability is provided, to a lower intensity (or the REIL turned off) by keying 5 and/or 3 times. Due to the close proximity of airports using the same frequency, radio controlled lighting receivers may be set at a low sensitivity requiring the aircraft to be relatively close to activate the system. Consequently, even when lights are on, always key mike as directed when overflying an airport of intended landing or just prior to entering the final segment of an approach. This will assure the aircraft is close enough to activate the system and a full 15 minutes lighting duration is available. Approved lighting systems may be activated by keying the mike (within 5 seconds) as indicated in TBLAD 1.1-4.

TBLAD 1.1-4
Radio Control System

Key Mike	Function
7 times within 5 seconds	Highest intensity available
5 times within 5 seconds	Medium or lower intensity (Lower REIL or REIL-off)
3 times within 5 seconds	Lowest intensity available (Lower REIL or REIL-off)

12.8.5 The Chart Supplement contains the types of lighting, runway, and the frequency that is used to activate the system for all public use airports with FAA standard systems. Airports with instrument approach procedures include data on the approach chart identifying the light system(s), the runway on which they are installed, and the frequency that is used to activate the system(s).

NOTE-

Although the CTAF is used to activate the lights at many airports, other frequencies may also be used. The appropriate frequency for activating the lights on the airport is provided in the Chart Supplement and the standard instrument approach procedures publications. It is not identified on the sectional charts.

12.8.6 Where the airport is not served by an instrument approach procedure, it may have either the standard FAA approach control system or an independent type system of different specification installed by the airport sponsor. The Chart Supplement contains descriptions of pilot-controlled lighting systems for each airport having other than FAA approved systems, and explains the type lights, method of control, and operating frequency in clear text.

13. Airport/Heliport Beacons

13.1 Airport and heliport beacons have a vertical light distribution to make them most effective from one to ten degrees above the horizon; however, they can be seen well above and below this peak spread. The beacon may be an omnidirectional capacitor-discharge device, or it may rotate at a constant speed which produces the visual effect of flashes at regular intervals. Flashes may be one or two colors alternately. The total number of flashes are:

13.1.1 24 to 30 per minute for beacons marking airports, landmarks, and points on Federal airways.

13.1.2 30 to 45 per minute for beacons marking heliports.

13.2 The colors and color combinations of beacons are:

13.2.1 White and Green—Lighted land airport.

13.2.2 *Green alone—Lighted land airport.

13.2.3 White and Yellow—Lighted water airport.

13.2.4 *Yellow alone—Lighted water airport.

13.2.5 Green, Yellow, and White—Lighted heliport.

NOTE—

**Green alone or yellow alone is used only in connection with a white-and-green or white-and-yellow beacon display, respectively.*

13.3 Military airport beacons flash alternately white and green, but are differentiated from civil beacons by dual-peaked (two quick) white flashes between the green flashes.

13.4 In Class B, C, D, and E surface areas, operation of the airport beacon during the hours of daylight indicates that the ground visibility is less than 3 miles and/or the ceiling is less than 1,000 feet. An ATC clearance in accordance with 14 CFR Part 91 is required for landing, takeoff and flight in the traffic pattern. Pilots should not rely solely on the operation of the airport beacon to indicate if weather conditions are IFR or VFR. At locations with control towers, when controls are in the tower, ATC personnel turn the beacon on. At many airports, the airport beacon is turned on by a photoelectric cell or time clocks and ATC personnel cannot control it. There is no regulatory requirement for daylight operation, and it is the pilot's responsibility to comply with proper pre-flight planning in accordance with 14 CFR Section 91.103.

14. Taxiway Lights

14.1 Taxiway Edge Lights. Taxiway edge lights are used to outline the edges of taxiways during periods of darkness or restricted visibility conditions. These fixtures emit blue light.

NOTE—

At most major airports these lights have variable intensity settings and may be adjusted at pilot request or when deemed necessary by the controller.

14.2 Taxiway Centerline Lights. Taxiway centerline lights are used to facilitate ground traffic under low visibility conditions. They are located along the taxiway centerline in a straight line on straight portions, on the centerline of curved portions, and along designated taxiing paths in portions of runways, ramps, and apron areas. Taxiway centerline lights are steady burning and emit green light.

14.3 Clearance Bar Lights. Clearance bar lights are installed at holding positions on taxiways in order to increase the conspicuity of the holding position in low visibility conditions. They may also be installed to indicate the location of an intersecting taxiway during periods of darkness. Clearance bars consist of three in-pavement, steady-burning yellow lights.

14.4 Runway Guard Lights. Runway guard lights are installed at taxiway/runway intersections. They are primarily used to enhance the conspicuity of taxiway/runway intersections during low visibility conditions, but

may be used in all weather conditions. Runway guard lights consist of either a pair of elevated flashing yellow lights installed on either side of the taxiway, or a row of in-pavement yellow lights installed across the entire taxiway, at the runway holding position marking.

NOTE-

Some airports may have a row of three or five in-pavement yellow lights installed at taxiway/runway intersections. They should not be confused with clearance bar lights described in paragraph 14.3 above.

14.5 Stop Bar Lights. Stop bar lights, when installed, are used to confirm the ATC clearance to enter or cross the active runway in low visibility conditions (below 1,200 feet Runway Visual Range). A stop bar consists of a row of red, unidirectional, steady-burning in-pavement lights installed across the entire taxiway at the runway holding position, and elevated steady-burning red lights on each side. A controlled stop bar is operated in conjunction with the taxiway centerline lead-on lights which extend from the stop bar toward the runway. Following the ATC clearance to proceed, the stop bar is turned off and the lead-on lights are turned on. The stop bar and lead-on lights are automatically reset by a sensor or backup timer.

CAUTION-

Pilots should never cross a red illuminated stop bar, even if an ATC clearance has been given to proceed onto or across the runway.

NOTE-

If after crossing a stop bar, the taxiway centerline lead-on lights inadvertently extinguish, pilots should hold their position and contact ATC for further instructions.

15. Air Navigation and Obstruction Lighting

15.1 Aeronautical Light Beacons

15.1.1 An aeronautical light beacon is a visual NAVAID displaying flashes of white and/or colored light to indicate the location of an airport, a heliport, a landmark, a certain point of a Federal airway in mountainous terrain, or an obstruction. The light used may be a rotating beacon or one or more flashing lights. The flashing lights may be supplemented by steady burning lights of lesser intensity.

15.1.2 The color or color combination display by a particular beacon and/or its auxiliary lights tell whether the beacon is indicating a landing place, landmark, point of the Federal airways, or an obstruction. Coded flashes of the auxiliary lights, if employed, further identify the beacon site.

15.2 Code Beacons and Course Lights

15.2.1 Code Beacons. The code beacon, which can be seen from all directions, is used to identify airports and landmarks. The code beacon flashes the three- or four-character airport identifier in International Morse Code six to eight times per minute. Green flashes are displayed for land airports while yellow flashes indicate water airports.

15.2.2 Course Lights. The course light, which can be seen clearly from only one direction, is used only with rotating beacons of the Federal Airway System; two course lights, back to back, direct coded flashing beams of light in either direction along the course of airway.

NOTE-

Airway beacons are remnants of the "lighted" airways which antedated the present electronically equipped federal airways system. Only a few of those beacons exist today to mark airway segments in remote mountain areas. Flashes in Morse code identify the beacon site.

15.3 Obstruction Lights

15.3.1 Obstructions are marked/lighted to warn airmen of their presence during daytime and nighttime conditions. They may be marked/lighted in any of the following combinations:

15.3.1.1 Aviation Red Obstruction Lights. Flashing aviation red beacons (20 to 40 flashes per minute) and steady burning aviation red lights during nighttime operation. Aviation orange and white paint is used for daytime marking.

15.3.1.2 Medium Intensity Flashing White Obstruction Lights. Medium intensity flashing white obstruction lights may be used during daytime and twilight with automatically selected reduced intensity for nighttime operation. When this system is used on structures 500 feet (153 m) AGL or less in height, other methods of marking and lighting the structure may be omitted. Aviation orange and white paint is always required for daytime marking on structures exceeding 500 feet (153 m) AGL. This system is not normally installed on structures less than 200 feet (61 m) AGL.

15.3.1.3 High Intensity White Obstruction Lights. Flashing high intensity white lights during daytime with reduced intensity for twilight and nighttime operation. When this type system is used, the marking of structures with red obstruction lights and aviation orange and white paint may be omitted.

15.3.1.4 Dual Lighting. A combination of flashing aviation red beacons and steady burning aviation red lights for nighttime operation and flashing high intensity white lights for daytime operation. Aviation orange and white paint may be omitted.

15.3.1.5 Catenary Lighting. Lighted markers are available for increased night conspicuity of high-voltage (69KV or higher) transmission line catenary wires. Lighted markers provide conspicuity both day and night.

15.3.2 Medium intensity omnidirectional flashing white lighting system provides conspicuity both day and night on catenary support structures. The unique sequential/simultaneous flashing light system alerts pilots of the associated catenary wires.

15.3.3 High intensity flashing white lights are being used to identify some supporting structures of overhead transmission lines located across rivers, chasms, gorges, etc. These lights flash in a middle, top, lower light sequence at approximately 60 flashes per minute. The top light is normally installed near the top of the supporting structure, while the lower light indicates the approximate lower portion of the wire span. The lights are beamed towards the companion structure and identify the area of the wire span.

15.3.4 High intensity flashing white lights are also employed to identify tall structures, such as chimneys and towers, and obstructions to air navigation. The lights provide a 360 degree coverage about the structure at 40 flashes per minute and consist of from one to seven levels of lights depending upon the height of the structure. Where more than one level is used, the vertical banks flash simultaneously.

15.4 LED Lighting Systems

15.4.1 Certain light-emitting diode (LED) lighting systems fall outside the combined visible and near-infrared spectrum of night vision goggles (NVGs) and thus will not be visible to a flightcrew using NVGs.

15.4.2 The FAA changed specifications for LED-based red obstruction lights to make them visible to pilots using certain NVG systems, however, other colors may not be visible.

15.4.3 It is recommended that air carriers/operators—including Part 91 operators—who utilize NVGs incorporate procedures into manuals and/or standard operating procedures (SOPs) requiring periodic, unaided scanning when operating at low altitudes and when performing a reconnaissance of landing areas.

16. Runway Lead-in Light System (RLLS)

16.1 The lead-in lighting system consists of a series of flashing lights installed at or near ground level to describe the desired course to a runway or final approach. Each group of lights is positioned and aimed so as to be conveniently sighted and followed from the approaching aircraft under conditions at or above approach minimums under consideration. The system may be curved, straight, or combination thereof, as required. The lead-in lighting system may be terminated at any approved approach lighting system, or it may be terminated at a distance from the landing threshold which is compatible with authorized visibility minimums permitting visual reference to the runway environment.

16.2 The outer portion uses groups of lights to mark segments of the approach path beginning at a point within easy visual range of a final approach fix. These groups are spaced close enough together (approximately one mile) to give continuous lead-in guidance. A group consists of at least three flashing lights in a linear or cluster

configuration and may be augmented by steady burning lights where required. When practicable, groups flash in sequence toward runways. Each system is designed to suit local conditions and to provide the visual guidance intended. The design of all RLLS is compatible with the requirements of U.S. Standards for Terminal Instrument Procedures (TERPS) where such procedures are applied for establishing instrument minimums.

17. Airport Marking Aids and Signs

17.1 General

17.1.1 Airport pavement markings and signs provide information that is useful to a pilot during takeoff, landing, and taxiing.

17.1.2 Uniformity in airport markings and signs from one airport to another enhances safety and improves efficiency. Pilots are encouraged to work with the operators of the airports they use to achieve the marking and sign standards described in this section.

17.1.3 Pilots who encounter ineffective, incorrect, or confusing markings or signs on an airport should make the operator of the airport aware of the problem. These situations may also be reported under the Aviation Safety Reporting Program as described in ENR 1.16. Pilots may also report these situations to the FAA regional airports division.

17.1.4 The markings and signs described in this section reflect the current FAA recommended standards.

REFERENCE–

AC 150/5340–1, Standards for Airport Markings.

AC 150/5340–18, Standards for Airport Sign Systems.

17.2 Airport Pavement Markings

17.2.1 General. For the purpose of this section, the airport pavement markings have been grouped into the four areas:

17.2.1.1 Runway Markings.

17.2.1.2 Taxiway Markings.

17.2.1.3 Holding Position Markings.

17.2.1.4 Other Markings.

17.2.2 Marking Colors. Markings for runways are white. Markings defining the landing area on a heliport are also white except for hospital heliports which use a red “H” on a white cross. Markings for taxiways, areas not intended for use by aircraft (closed and hazardous areas), and holding positions (even if they are on a runway) are yellow.

17.3 Runway Markings

17.3.1 General. There are three types of markings for runways: visual, nonprecision instrument, and precision instrument. TBL AD 1.1–5 identifies the marking elements for each type of runway, and TBL AD 1.1–6 identifies runway threshold markings.

17.3.2 Runway Designators. Runway numbers and letters are determined from the approach direction. The runway number is the whole number nearest one–tenth the magnetic azimuth of the centerline of the runway, measured clockwise from the magnetic north. The letters differentiate between left (L), right (R), or center (C) parallel runways, as applicable:

17.3.2.1 For two parallel runways “L” “R.”

17.3.2.2 For three parallel runways “L” “C” “R.”

17.3.3 Runway Centerline Marking. The runway centerline identifies the center of the runway and provides alignment guidance during takeoff and landing. The centerline consists of a line of uniformly spaced stripes and gaps.

17.3.4 Runway Aiming Point Marking. The aiming point marking serves as a visual aiming point for a landing aircraft. These two rectangular markings consist of a broad white stripe located on each side of the runway centerline and approximately 1,000 feet from the landing threshold, as shown in FIG AD 1.1–13, Precision Instrument Runway Markings.

17.3.5 Runway Touchdown Zone Markers. The touchdown zone markings identify the touchdown zone for landing operations and are coded to provide distance information in 500 feet (150 m) increments. These markings consist of groups of one, two, and three rectangular bars symmetrically arranged in pairs about the runway centerline as shown in FIG AD 1.1–13. For runways having touchdown zone markings on both ends, those pairs of markings which extend to within 900 feet (270 m) of the midpoint between the thresholds are eliminated.

TBLAD 1.1–5
Runway Marking Elements

Marking Element	Visual Runway	Nonprecision Instrument Runway	Precision Instrument Runway
Designation	X	X	X
Centerline	X	X	X
Threshold	X ¹	X	X
Aiming Point	X ²	X	X
Touchdown Zone			X
Side Stripes			X

¹On runways used, or intended to be used, by international commercial transports.
²On runways 4,000 feet (1200 m) or longer used by jet aircraft.

TBLAD 1.1–6
Number of Runway Threshold Stripes

Runway Width	Number of Stripes
60 feet (18 m)	4
75 feet (23 m)	6
100 feet (30 m)	8
150 feet (45 m)	12
200 feet (60 m)	16

17.3.6 Runway Side Stripe Marking. Runway side stripes delineate the edges of the runway. They provide a visual contrast between the runway and the abutting terrain or shoulders. Side stripes consist of continuous white stripes located on each side of the runway. (See FIG AD 1.1–17.)

17.3.7 Runway Shoulder Markings. Runway shoulder stripes may be used to supplement runway side stripes to identify pavement areas contiguous to the runway sides that are not intended for use by aircraft. Runway shoulder stripes are yellow. (See FIG AD 1.1–15.)

17.3.8 Runway Threshold Markings. Runway threshold markings come in two configurations. They consist of either eight longitudinal stripes of uniform dimensions disposed symmetrically about the runway centerline (as shown in FIG AD 1.1–13) or the number of stripes is related to the runway width as indicated in TBLAD 1.1–6. A threshold marking helps identify the beginning of the runway that is available for landing. In some instances, the landing threshold may be relocated or displaced.

17.3.8.1 Relocation of a Threshold. Sometimes construction, maintenance, or other activities require the threshold to be relocated towards the rollout end of the runway. (See FIG AD 1.1–16.) When a threshold is relocated, it closes not only a set portion of the approach end of a runway, but also shortens the length of the opposite direction runway. In these cases, a NOTAM should be issued by the airport operator identifying the

portion of the runway that is closed (for example, 10/28 W 900 CLSD). Because the duration of the relocation can vary from a few hours to several months, methods identifying the new threshold may vary. One common practice is to use a ten-foot wide white threshold bar across the width of the runway. Although the runway lights in the area between the old threshold and new threshold will not be illuminated, the runway markings in this area may or may not be obliterated, removed, or covered.

17.3.8.2 Displaced Threshold. A displaced threshold is a threshold located at a point on the runway other than the designated beginning of the runway. Displacement of a threshold reduces the length of runway available for landings. The portion of runway behind a displaced threshold is available for takeoffs in either direction and landings from the opposite direction. A ten-foot wide white threshold bar is located across the width of the runway at the displaced threshold. White arrows are located along the centerline in the area between the beginning of the runway and displaced threshold. White arrowheads are located across the width of the runway just prior to the threshold bar, as shown in FIG AD 1.1–17.

NOTE–

Airport operator. When reporting the relocation or displacement of a threshold, the airport operator should avoid language which confuses the two.

17.3.9 Demarcation Bar. A demarcation bar delineates a runway with a displaced threshold from a blast pad, stopway, or taxiway that precedes the runway. A demarcation bar is 3 feet (1 m) wide and yellow, since it is not located on the runway. (See FIG AD 1.1–18.)

17.3.10 Chevrons. These markings are used to show pavement areas aligned with the runway that are unusable for landing, takeoff, and taxiing. Chevrons are yellow. (See FIG AD 1.1–19.)

17.3.11 Runway Threshold Bar. A threshold bar delineates the beginning of the runway that is available for landing when the threshold has been relocated or displaced. A threshold bar is 10 feet (3 m) in width and extends across the width of the runway, as shown in FIG AD 1.1–17.

18. Taxiway Markings

18.1 General. All taxiways should have centerline markings and runway holding position markings whenever they intersect a runway. Taxiway edge markings are present whenever there is a need to separate the taxiway from a pavement that is not intended for aircraft use or to delineate the edge of the taxiway. Taxiways may also have shoulder markings and holding position markings for Instrument Landing System (ILS) critical areas and taxiway/taxiway intersection markings.

REFERENCE–

AD 1.1, Paragraph 19. Holding Position Markings.

18.2 Taxiway Centerline.

18.2.1 Normal Centerline. The taxiway centerline is a single continuous yellow line, 6 inches (15 cm) to 12 inches (30 cm) in width. This provides a visual cue to permit taxiing along a designated path. Ideally, the aircraft should be kept centered over this line during taxi. However, being centered on the taxiway centerline does not guarantee wingtip clearance with other aircraft or other objects.

18.2.2 Enhanced Centerline. At some airports, mostly the larger commercial service airports, an enhanced taxiway centerline will be used. The enhanced taxiway centerline marking consists of a parallel line of yellow dashes on either side of the normal taxiway centerline. The taxiway centerlines are enhanced for a maximum of 150 feet prior to a runway holding position marking. The purpose of this enhancement is to warn the pilot that he/she is approaching a runway holding position marking and should prepare to stop unless he/she has been cleared onto or across the runway by ATC. (See FIG AD 1.1–20.)

18.3 Taxiway Edge Markings. Taxiway edge markings are used to define the edge of the taxiway. They are primarily used when the taxiway edge does not correspond with the edge of the pavement. There are two types of markings depending upon whether the aircraft is supposed to cross the taxiway edge:

18.3.1 Continuous Markings. These consist of a continuous double yellow line, with each line being at least 6 inches (15 cm) in width spaced 6 inches (15 cm) apart. They are used to define the taxiway edge from the shoulder or some other abutting paved surface not intended for use by aircraft.

18.3.2 Dashed Markings. These markings are used when there is an operational need to define the edge of a taxiway or taxilane on a paved surface where the adjoining pavement to the taxiway edge is intended for use by aircraft (for example, an apron). Dashed taxiway edge markings consist of a broken double yellow line, with each line being at least 6 inches (15 cm) in width, spaced 6 inches (15 cm) apart (edge to edge). These lines are 15 feet (4.5 m) in length with 25-foot (7.5 m) gaps. (See FIG AD 1.1–21.)

18.4 Taxi Shoulder Markings. Taxiways, holding bays, and aprons are sometimes provided with paved shoulders to prevent blast and water erosion. Although shoulders may have the appearance of full strength pavement, they are not intended for use by aircraft and may be unable to support an aircraft. Usually the taxiway edge marking will define this area. Where conditions exist such as islands or taxiway curves that may cause confusion as to which side of the edge stripe is for use by aircraft, taxiway shoulder markings may be used to indicate the pavement is unusable. Taxiway shoulder markings are yellow. (See FIG AD 1.1–22.)

18.5 Surface Painted Taxiway Direction Signs. Surface painted taxiway direction signs have a yellow background with a black inscription. These signs are provided when it is not possible to provide taxiway direction signs at intersections or when it is necessary to supplement such signs. These markings are located adjacent to the centerline with signs indicating turns to the left being on the left side of the taxiway centerline, and signs indicating turns to the right being on the right side of the centerline. (See FIG AD 1.1–23.)

18.6 Surface Painted Location Signs. Surface painted location signs have a black background with a yellow inscription. When necessary, these markings are used to supplement location signs located along side the taxiway and assist the pilot in confirming the designation of the taxiway on which the aircraft is located. These markings are located on the right side of the centerline. (See FIG AD 1.1–23.)

18.7 Geographic Position Markings. These markings are located at points along low visibility taxi routes designated in the airport’s Surface Movement Guidance Control System (SMGCS) plan. They are used to identify the location of taxiing aircraft during low visibility operations. Low visibility operations are those that occur when the runway visible range (RVR) is below 1,200 feet (360 m). They are positioned to the left of the taxiway centerline in the direction of taxiing. (See FIG AD 1.1–24.) The geographic position marking is a circle comprised of an outer black ring contiguous to a white ring with a pink circle in the middle. When installed on asphalt or other dark-colored pavements, the white ring and the black ring are reversed (i.e., the white ring becomes the outer ring and the black ring becomes the inner ring). It is designated with either a number or a number and letter. The number corresponds to the consecutive position of the marking on the route.

19. Holding Position Markings

19.1 Runway Holding Position Markings. For runways, these markings indicate where aircraft **MUST STOP** when approaching a runway. They consist of four yellow lines, two solid and two dashed, spaced six or twelve inches apart, and extending across the width of the taxiway or runway. The solid lines are always on the side where the aircraft must hold. There are three locations where runway holding position markings are encountered.

19.1.1 Runway Holding Position Markings on Taxiways. These markings identify the locations on a taxiway where aircraft **MUST STOP** when a clearance has not been issued to proceed onto the runway. Generally, runway holding position markings also identify the boundary of the runway safety area (RSA) for aircraft exiting the runway. Runway holding position markings are shown in FIG AD 1.1–25 and FIG AD 1.1–28. When instructed by ATC, “*Hold short of Runway XX,*” the pilot **MUST STOP** so that no part of the aircraft extends beyond the runway holding position marking. When approaching runways at airports with an operating control tower, pilots must not cross the runway holding position marking without ATC clearance. Pilots approaching runways at airports without an operating control tower must ensure adequate separation from other aircraft, vehicles, and pedestrians prior to crossing the holding position markings. An aircraft exiting a runway is not clear of the runway until all parts of the aircraft have crossed the applicable holding position marking.

NOTE–

*Runway holding position markings identify the beginning of an RSA, and a pilot **MUST STOP** to get clearance before crossing (at airports with operating control towers).*

REFERENCE–

■ AIP, ENR 1.1, Para 24, *Exiting the Runway After Landing.*

19.1.2 Runway Holding Position Markings on Runways. These markings identify the locations on runways where aircraft MUST STOP. These markings are located on runways used by ATC for Land And Hold Short Operations (for example, see FIG ENR 1.1–8) and Taxiing operations. For taxiing operations, the pilot MUST STOP prior to the holding position markings unless explicitly authorized to cross by ATC. A sign with a white inscription on a red background is located adjacent to these holding position markings. (See FIG AD 1.1–26.) The holding position markings are placed on runways prior to the intersection with another runway, or some designated point. Pilots receiving and accepting instructions “*Cleared to land Runway XX, hold short of Runway YY*” from ATC must either exit Runway XX prior to the holding position markings, or stop at the holding position markings prior to Runway YY. Otherwise, pilots are authorized to use the entire landing length of the runway and disregard the holding position markings.

19.1.3 Holding Position Markings on Taxiways Located in Runway Approach Areas. These markings are used at some airports where it is necessary to hold an aircraft on a taxiway located in the approach or departure area of a runway so that the aircraft does not interfere with the operations on that runway. This marking is collocated with the runway approach/departure area holding position sign. When specifically instructed by ATC, “*Hold short of Runway XX approach or Runway XX departure area,*” the pilot MUST STOP so that no part of the aircraft extends beyond the holding position marking. (See Paragraph 21.2.2, Runway Approach Area Holding Position Sign, and FIG AD 1.1–27, Taxiways Located in Runway Approach Area.)

19.2 Holding Position Markings for Instrument Landing System (ILS). Holding position markings for ILS critical areas consist of two yellow solid lines spaced two feet apart connected by pairs of solid lines spaced ten feet apart extending across the width of the taxiway as shown in FIG AD 1.1–28. A sign with an inscription in white on a red background is located adjacent to these hold position markings. When instructed by ATC to hold short of the ILS critical area, pilots MUST STOP so that no part of the aircraft extends beyond the holding position marking. When approaching the holding position marking, pilots must not cross the marking without ATC clearance. The ILS critical area is not clear until all parts of the aircraft have crossed the applicable holding position marking.

REFERENCE–

■ AIP ENR 4.1, Para 6, *Instrument Landing System (ILS).*

19.3 Holding Position Markings for Intersecting Taxiways Holding position markings for intersecting taxiways consist of a single dashed line extending across the width of the taxiway as shown in FIG AD 1.1–29. They are located on taxiways where ATC holds aircraft short of a taxiway intersection. When instructed by ATC, “*Hold short of Taxiway XX,*” the pilot MUST STOP so that no part of the aircraft extends beyond the holding position marking. When the marking is not present, the pilot MUST STOP the aircraft at a point which provides adequate clearance from an aircraft on the intersecting taxiway.

19.4 Surface Painted Holding Position Signs. Surface painted holding position signs have a red background with a white inscription and supplement the signs located at the holding position. This type of marking is normally used where the width of the holding position on the taxiway is greater than 200 feet (60 m). It is located to the left side of the taxiway centerline on the holding side and prior to the holding position marking. (See FIG AD 1.1–23.)

20. Other Markings

20.1 Vehicle Roadway Markings. The vehicle roadway markings are used when necessary to define a pathway for vehicle operations on or crossing areas that are also intended for aircraft. These markings consist of a white solid line to delineate each edge of the roadway and a dashed line to separate lanes within the edges of the roadway. In lieu of the solid lines, zipper markings may be used to delineate the edges of the vehicle roadway. (See FIG AD 1.1–30.) Details of the zipper markings are shown in FIG AD 1.1–31.

20.2 VOR Receiver Checkpoint Markings. The VOR receiver checkpoint marking allows the pilot to check aircraft instruments with navigational aid signals. It consists of a painted circle with an arrow in the middle; the

arrow is aligned in the direction of the checkpoint azimuth. This marking, and an associated sign, is located on the airport apron or taxiway at a point selected for easy access by aircraft but where other airport traffic is not to be unduly obstructed. (See FIG AD 1.1–32.)

NOTE–

The associated sign contains the VOR station identification letter and course selected (published) for the check, the words “VOR check course,” and DME data (when applicable). The color of the letters and numerals are black on a yellow background.

EXAMPLE–

VOR SIGN

DCA 176–356

VOR check course

DME XXX

20.3 Nonmovement Area Boundary Markings.

These markings delineate the movement area; i.e., area under ATC. These markings are yellow and located on the boundary between the movement and nonmovement area. The nonmovement area boundary markings consist of two yellow lines (one solid and one dashed) 6 inches (15 cm) in width. The solid line is located on the nonmovement area side, while the dashed yellow line is located on the movement area side. The nonmovement boundary marking area is shown in FIG AD 1.1–33.

20.4 Marking and Lighting of Permanently Closed Runways and Taxiways. For runways and taxiways which are permanently closed, the lighting circuits will be disconnected. The runway threshold, runway designation, and touchdown markings are obliterated and yellow crosses are placed at each end of the runway and at 1,000 foot intervals. (See FIG AD 1.1–34.)

20.5 Temporarily Closed Runways and Taxiways. To provide a visual indication to pilots that a runway is temporarily closed, crosses are placed on the runway only at each end of the runway. The crosses are yellow in color. (See FIG AD 1.1–34.)

20.5.1 A raised lighted yellow cross may be placed on each runway end in lieu of the markings described in paragraph 20.5 to indicate the runway is closed.

20.5.2 A visual indication may not be present depending on the reason for the closure, duration of the closure, airfield configuration, and the existence and the hours of operation of an airport traffic control tower. Pilots should check NOTAMs and the Automated Terminal Information System (ATIS) for local runway and taxiway closure information.

20.5.3 Temporarily closed taxiways are usually treated as hazardous areas, in which no part of an aircraft may enter, and are blocked with barricades. However, as an alternative, a yellow cross may be installed at each entrance to the taxiway.

20.6 Helicopter Landing Areas. The markings illustrated in FIG AD 1.1–35 are used to identify the landing and takeoff area at a public use heliport and hospital heliport. The letter “H” in the markings is oriented to align with the intended direction of approach. FIG AD 1.1–35 also depicts the markings for a closed airport.

20.7 Airport Signs. There are six types of signs installed on airfields: mandatory instruction signs, location signs, direction signs, destination signs, information signs, and runway distance remaining signs. The characteristics and use of these signs are discussed below.

REFERENCE–

Advisory Circular 150/5340–18, Standards for Airport Sign Systems.

21. Mandatory Instruction Signs

21.1 These signs have a red background with a white inscription and are used to denote:

21.1.1 An entrance to a runway or critical area.

21.1.2 Areas where an aircraft is prohibited from entering.

21.2 Typical mandatory signs and applications are:

21.2.1 Runway Holding Position Sign. This sign is located at the holding position on taxiways that intersect a runway or on runways that intersect other runways. The inscription on the sign contains the designation of the intersecting runway, as shown in FIG AD 1.1–36. The runway numbers on the sign are arranged to correspond to the respective runway threshold. For example, “15–33” indicates that the threshold for Runway 15 is to the left and the threshold for Runway 33 is to the right.

21.2.1.1 On taxiways that intersect the beginning of the takeoff runway, only the designation of the takeoff runway may appear on the sign (as shown in FIG AD 1.1–37) while all other signs will have the designation of both runway directions.

21.2.1.2 If the sign is located on a taxiway that intersects the intersection of two runways, the designations for both runways will be shown on the sign along with arrows showing the approximate alignment of each runway, as shown in FIG AD 1.1–38. In addition to showing the approximate runway alignment, the arrow indicates the direction to the threshold of the runway whose designation is immediately next to the arrow.

21.2.2 Runway Approach Area Holding Position Sign. At some airports, it is necessary to hold an aircraft on a taxiway located in the approach or departure area for a runway so that the aircraft does not interfere with operations on that runway. FIG AD 1.1–27 depicts common situations. A sign with the runway designation(s) and the protected area(s) will be located at applicable holding positions on the taxiway. For locations protecting only the approach area, the holding position on the taxiway includes a sign identifying the approach end runway designation (e.g., 15) followed by a dash (–) and the letters “APCH.” For locations protecting both the approach and departure areas, the holding position on the taxiway includes a sign with the approach end runway designation and the letters “APCH” followed by a dash (–), the departure end runway designation and the letters “DEP.” The arrangement of the runway designations and protected areas legends on the sign reflect the orientation of the runway as viewed from the holding position. Holding position markings in accordance with paragraph 19.. Holding Position Markings, are co-located on the taxiway pavement in line with the sign. Examples of these signs are shown in FIG AD 1.1–39.

21.2.3 ILS Critical Area Holding Position Sign. At some airports, when the instrument landing system is being used, it is necessary to hold an aircraft on a taxiway at a location other than the holding position described in Paragraph 19. Holding Position Markings. In these situations, the holding position sign for these operations will have the inscription “ILS” and be located adjacent to the holding position marking on the taxiway described in paragraph 19. An example of this sign is shown in FIG AD 1.1–40.

21.2.4 No Entry Sign. This sign, shown in FIG AD 1.1–41, prohibits an aircraft from entering an area. Typically, this sign would be located on a taxiway intended to be used in only one direction or at the intersection of vehicle roadways with runways, taxiways or aprons where the roadway may be mistaken as a taxiway or other aircraft movement surface.

NOTE–

Holding position signs provide the pilot with a visual cue as to the location of the holding position marking.

REFERENCE–

AIP, AD 1.1, Para 19., Holding Position Markings.

22. Location Signs

Location signs are used to identify either a taxiway or runway on which the aircraft is located. Other location signs provide a visual cue to pilots to assist them in determining when they have exited an area. The various location signs are described below.

22.1 Taxiway Location Sign. This sign has a black background with a yellow inscription and yellow border, as shown in FIG AD 1.1–42. The inscription is the designation of the taxiway on which the aircraft is located. These signs are installed along taxiways either by themselves or in conjunction with direction signs or runway holding position signs. (See FIG AD 1.1–43 and FIG AD 1.1–47.)

22.2 Runway Location Sign. This sign has a black background with a yellow inscription and yellow border, as shown in FIG AD 1.1–44. The inscription is the designation of the runway on which the aircraft is located. These signs are intended to complement the information available to pilots through their magnetic compass and typically are installed where the proximity of two or more runways to one another could cause pilots to be confused as to which runway they are on.

22.3 Runway Boundary Sign. This sign has a yellow background with a black inscription with a graphic depicting the pavement holding position marking, as shown in FIG AD 1.1–45. This sign, which faces the runway and is visible to the pilot exiting the runway, is located adjacent to the holding position marking on the pavement. The sign is intended to provide pilots with another visual cue which they can use as a guide in deciding when they are “clear of the runway.”

22.4 ILS Critical Area Boundary Sign. This sign has a yellow background with a black inscription with a graphic depicting the ILS pavement holding position marking, as shown in FIG AD 1.1–46. This sign is located adjacent to the ILS holding position marking on the pavement and can be seen by pilots leaving the critical area. The sign is intended to provide pilots with another visual cue which they can use as a guide in deciding when they are “clear of the ILS critical area.”

23. Direction Signs

23.1 Direction signs have a yellow background with a black inscription. The inscription identifies the designation(s) of the intersecting taxiway(s) leading out of intersection that a pilot would normally be expected to turn onto or hold short of. Each designation is accompanied by an arrow indicating the direction of the turn.

23.2 Except as noted in subparagraph 23.5, each taxiway designation shown on the sign is accompanied by only one arrow. When more than one taxiway designation is shown on the sign, each designation and its associated arrow is separated from the other taxiway designations by either a vertical message divider or a taxiway location sign as shown in FIG AD 1.1–47.

23.3 Direction signs are normally located on the left prior to the intersection. When used on a runway to indicate an exit, the sign is located on the same side of the runway as the exit. FIG AD 1.1–48 shows a direction sign used to indicate a runway exit.

23.4 The taxiway designations and their associated arrows on the sign are arranged clockwise starting from the first taxiway on the pilot’s left. (See FIG AD 1.1–47.)

23.5 If a location sign is located with the direction signs, it is placed so that the designations for all turns to the left will be to the left of the location sign; the designations for continuing straight ahead or for all turns to the right would be located to the right of the location sign. (See FIG AD 1.1–47.)

23.6 When the intersection is comprised of only one crossing taxiway, it is permissible to have two arrows associated with the crossing taxiway, as shown in FIG AD 1.1–49. In this case, the location sign is located to the left of the direction sign.

24. Destination Signs

24.1 Destination signs also have a yellow background with a black inscription indicating a destination on the airport. These signs always have an arrow showing the direction of the taxiing route to that destination. FIG AD 1.1–50 is an example of a typical destination sign. When the arrow on the destination sign indicates a turn, the sign is located prior to the intersection.

24.2 Destinations commonly shown on these types of signs include runways, aprons, terminals, military areas, civil aviation areas, cargo areas, international areas, and fixed base operators. An abbreviation may be used as the inscription on the sign for some of these destinations.

24.3 When the inscription for two or more destinations having a common taxiing route are placed on a sign, the destinations are separated by a “dot” (●) and one arrow would be used, as shown in FIG AD 1.1–51. When the

inscription on a sign contains two or more destinations having different taxiing routes, each destination will be accompanied by an arrow and will be separated from the other destinations on the sign with a vertical black message divider as shown in FIG AD 1.1–52.

25. Information Signs

25.1 Information signs have a yellow background with a black inscription. They are used to provide the pilot with information on such things as areas that cannot be seen from the control tower, applicable radio frequencies, and noise abatement procedures. The airport operator determines the need, size, and location for these signs.

26. Runway Distance Remaining Signs

26.1 Runway distance remaining signs have a black background with a white numeral inscription and may be installed along one or both side(s) of the runway. The number on the signs indicates the distance (in thousands of feet) of landing runway remaining. The last sign (i.e., the sign with the numeral “1”) will be located at least 950 feet from the runway end. FIG AD 1.1–53 shows an example of a runway distance remaining sign.

27. Aircraft Arresting Systems

27.1 Certain airports are equipped with a means of rapidly stopping military aircraft on a runway. This equipment, normally referred to as EMERGENCY ARRESTING GEAR, generally consists of pendant cables supported over the runway surface by rubber “donuts.” Although most devices are located in the overrun areas, a few of these arresting systems have cables stretched over the operational areas near the ends of a runway.

27.2 Arresting cables which cross over a runway require special markings on the runway to identify the cable location. These markings consist of 10 feet diameter solid circles painted “identification yellow,” 30 feet on center, perpendicular to the runway centerline across the entire runway width. Additional details are contained in AC 150/5220–9, Aircraft Arresting Systems for Joint Civil/Military Airports.

NOTE–

Aircraft operations on the runway are not restricted by the installation of aircraft arresting devices.

27.3 Engineered Materials Arresting Systems (EMAS). EMAS, which is constructed of high energy–absorbing materials of selected strength, is located in the safety area beyond the end of the runway. EMAS will be marked with yellow chevrons. EMAS is designed to crush under the weight of commercial aircraft and will exert deceleration forces on the landing gear. These systems do not affect the normal landing and takeoff of airplanes. More information concerning EMAS is in FAA Advisory Circular AC 150/5220–22, Engineered Materials Arresting Systems (EMAS) for Aircraft Overruns. (See FIG AD 1.1–54.)

NOTE–

EMAS may be located as close as 35 feet beyond the end of the runway. Aircraft and ground vehicles should never taxi or drive across the EMAS or beyond the end of the runway if EMAS is present.

28. Security Identification Display Area (SIDA)

28.1 Security Identification Display Areas (SIDA) are limited access areas that require a badge issued in accordance with procedures in 49 CFR Part 1542. A SIDA can include the Air Operations Area (AOA), e.g., aircraft movement area or parking area, or a Secured Area, such as where commercial passengers enplane. The AOA may not be a SIDA, but a Secured Area is always a SIDA. Movement through or into a SIDA is prohibited without authorization and proper identification being displayed. If you are unsure of the location of a SIDA, contact the airport authority for additional information. Airports that have a SIDA will have a description and map detailing boundaries and pertinent features available. (See FIG AD 1.1–55.)

28.2 Pilots or passengers without proper identification that are observed entering a SIDA may be reported to the Transportation Security Administration (TSA) or airport security and may be subject to civil and criminal fines and prosecution. Pilots are advised to brief passengers accordingly. Report suspicious activity to the TSA

by calling AOPA's Airport Watch Program, 866-427-3287. 49 CFR 1540 requires each individual who holds an airman certificate, medical certificate, authorization, or license issued by the FAA to present it for inspection upon a request from TSA.

FIG AD 1.1-13
Precision Instrument Runway Markings

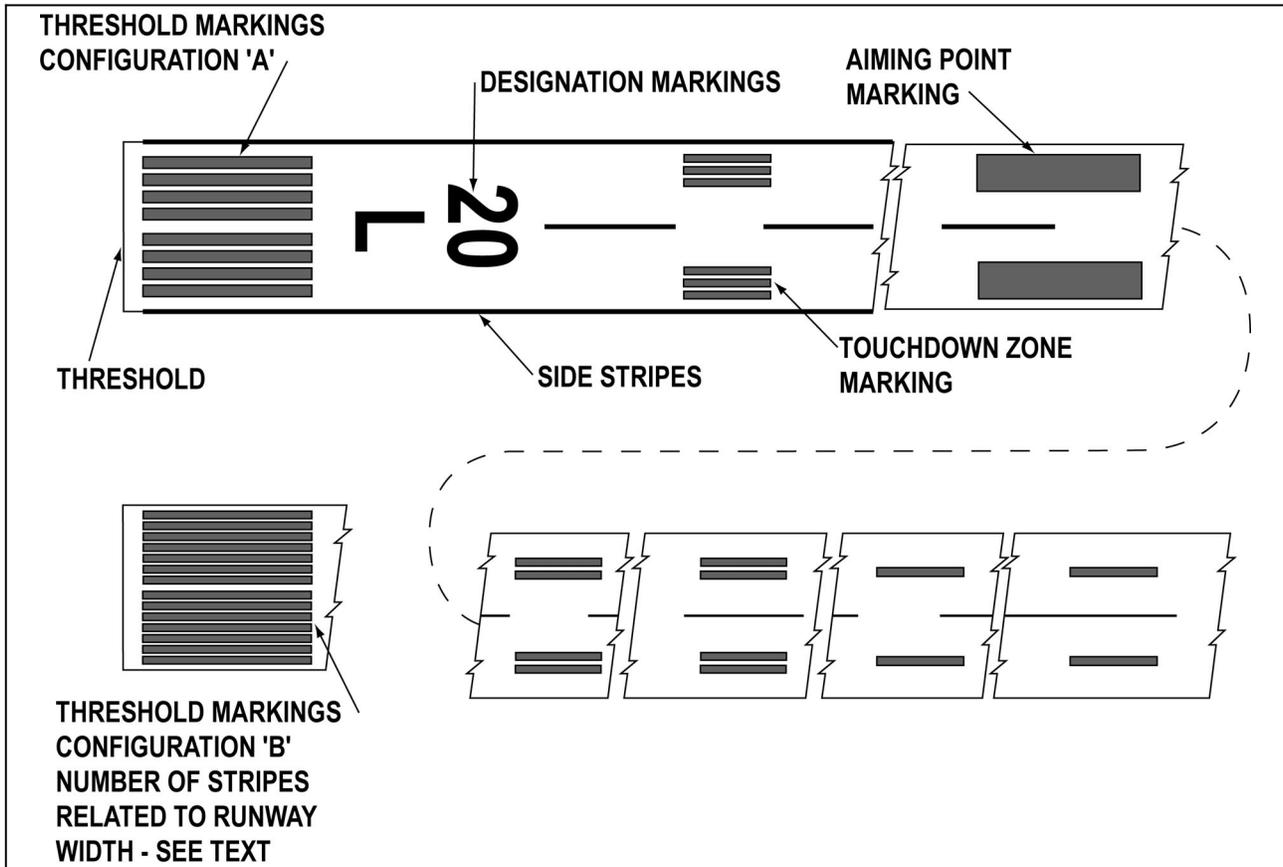


FIG AD 1.1-14
Nonprecision Instrument Runway and Visual Runway Markings

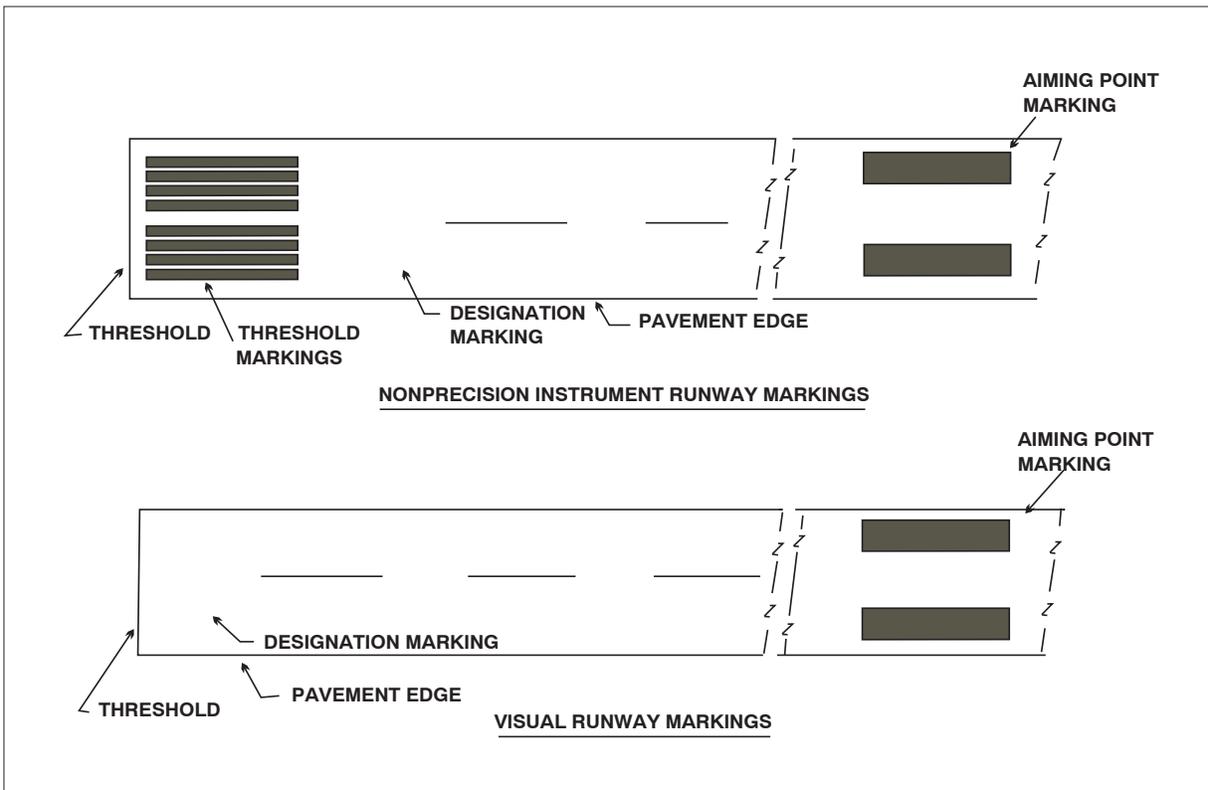


FIG AD 1.1-15
Runway Shoulder Markings

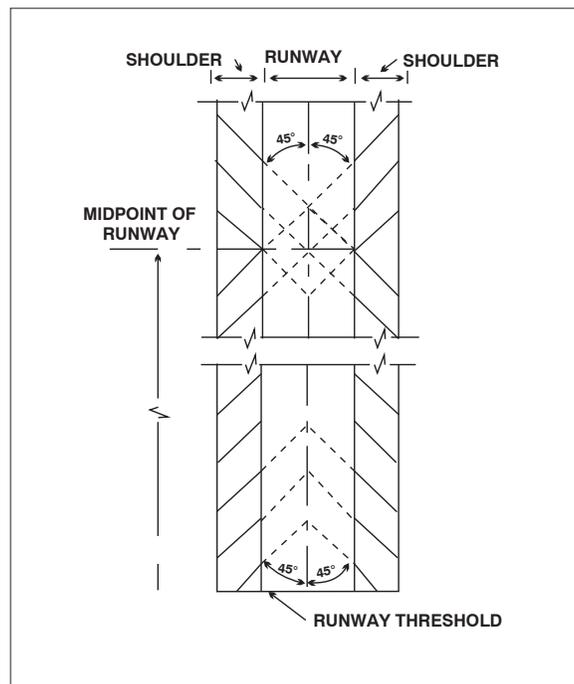


FIG AD 1.1-16
Relocation of a Threshold with Markings for Taxiway Aligned with Runway

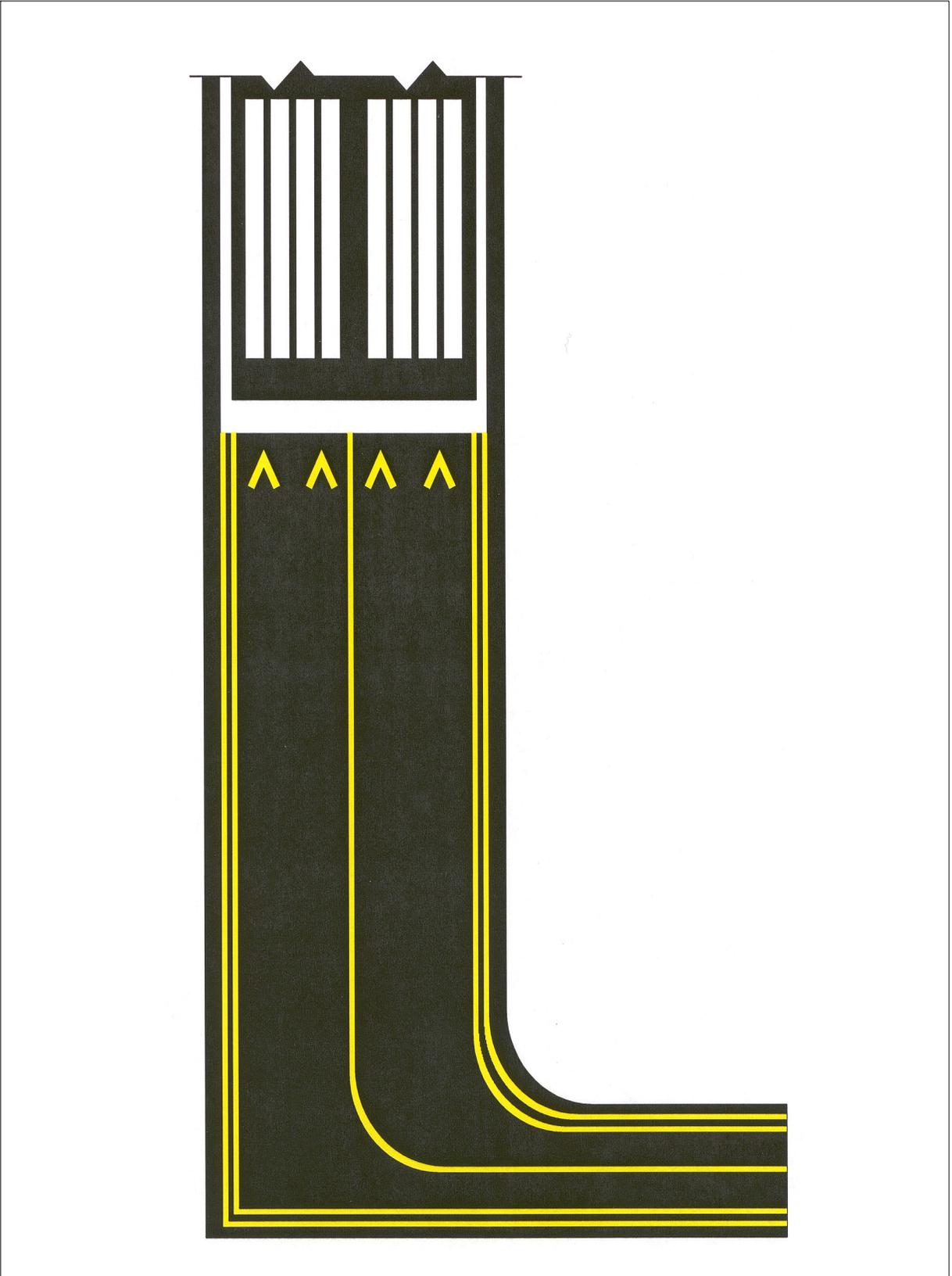


FIG AD 1.1-17
Displaced Threshold Markings

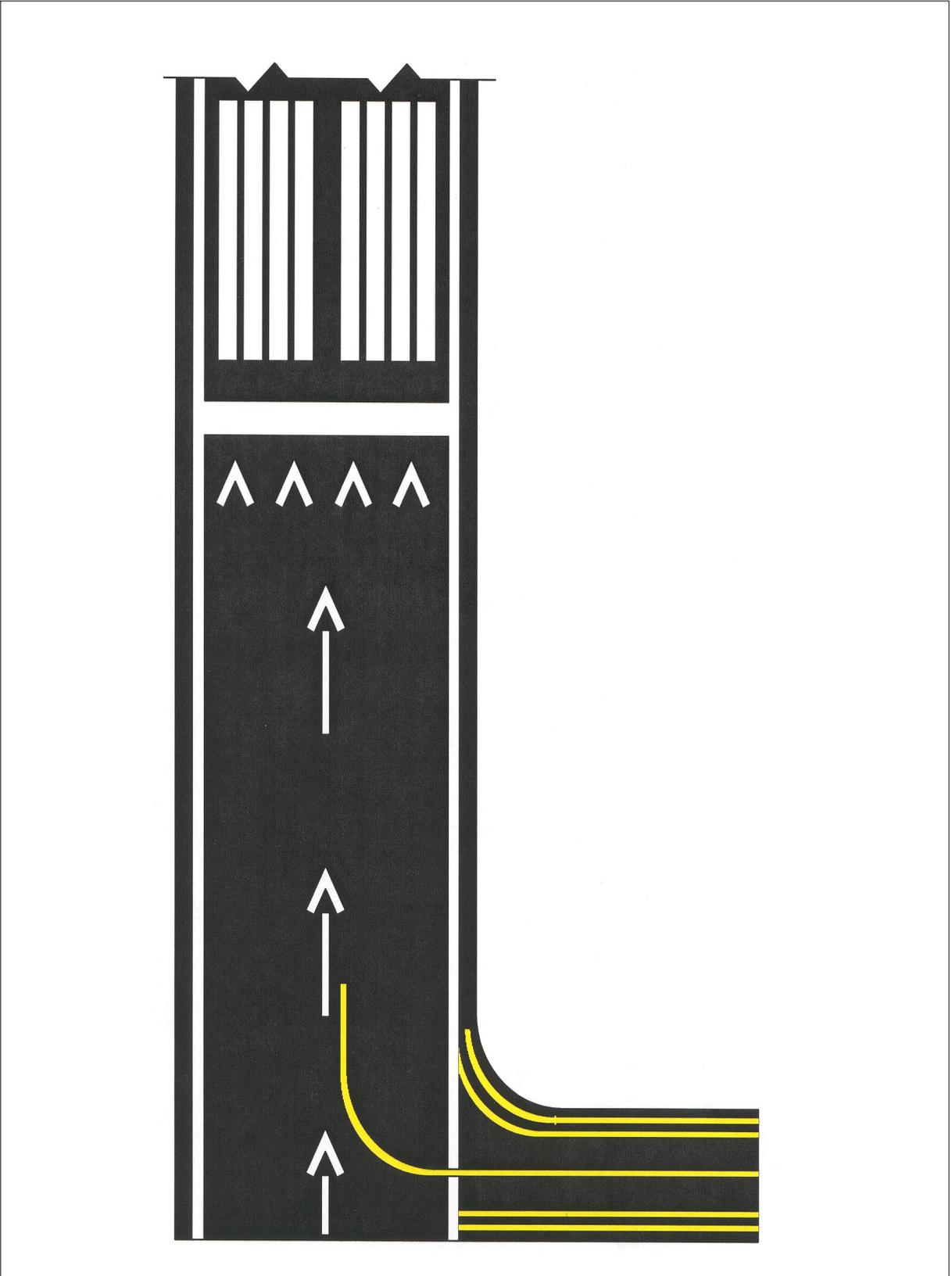


FIG AD 1.1-18
Markings for Blast Pad or Stopway or Taxiway Preceding a Displaced Threshold

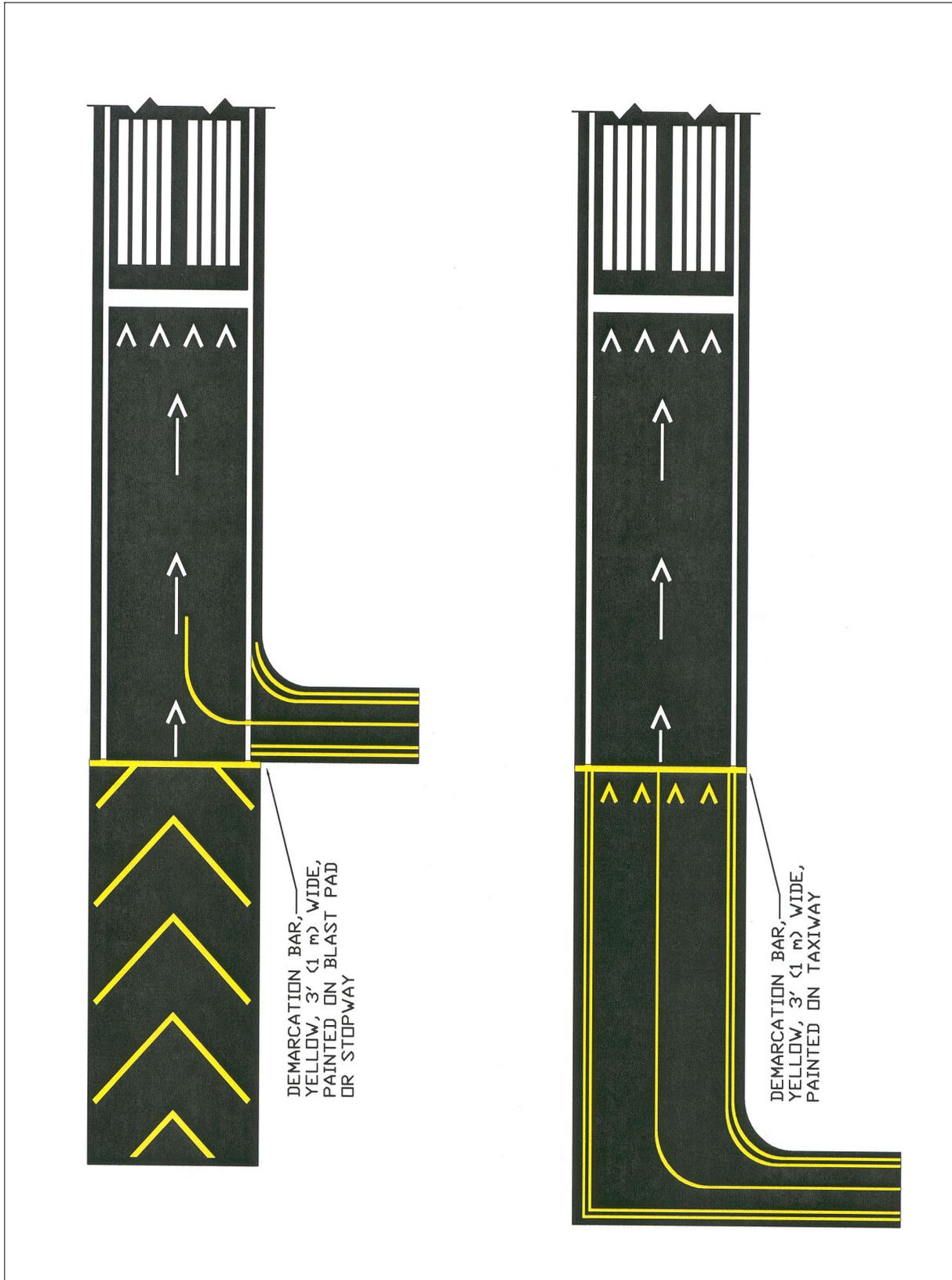


FIG AD 1.1-19
Markings for Blast Pads and Stopways

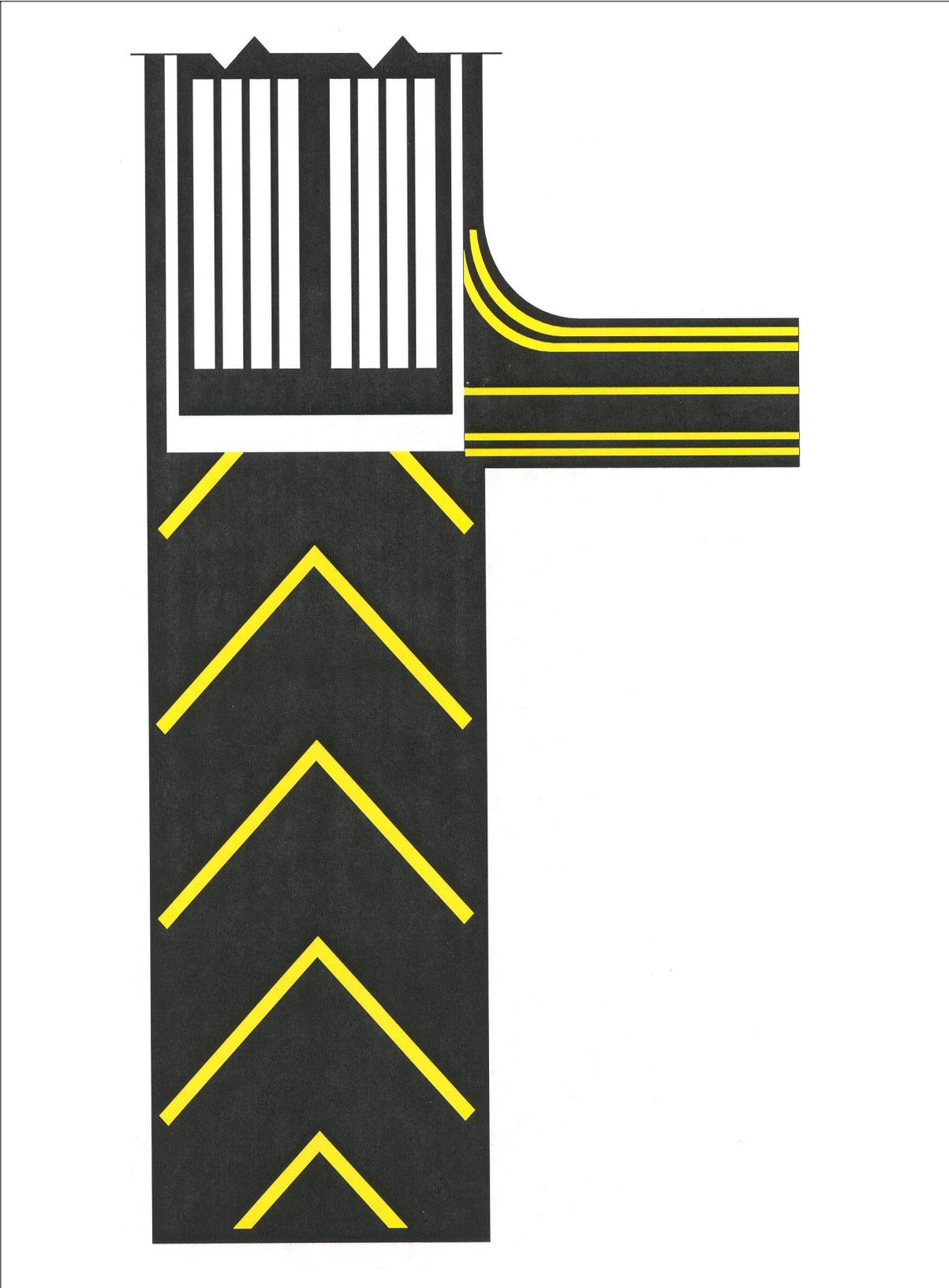


FIG AD 1.1-20
Enhanced Taxiway Centerline

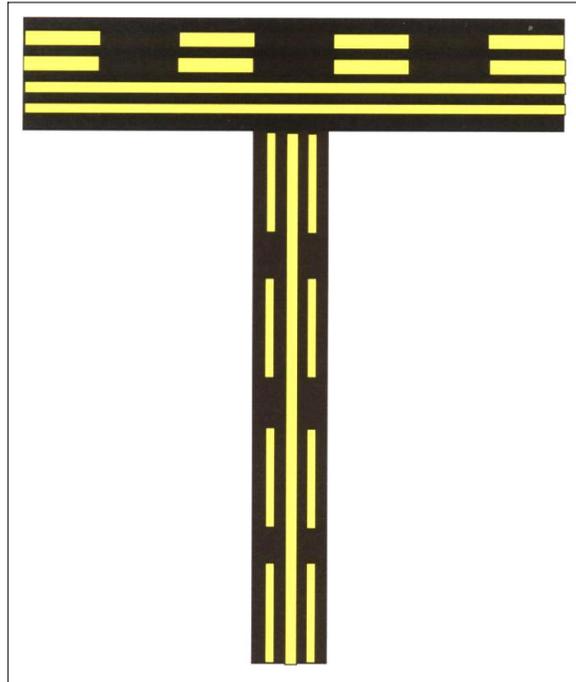


FIG AD 1.1-21
Dashed Markings

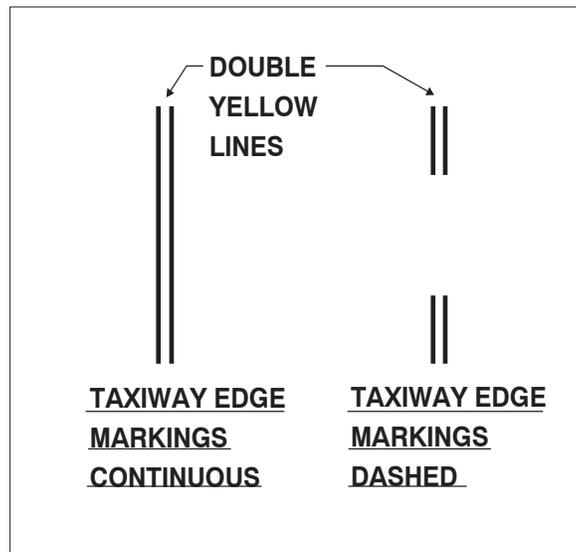


FIG AD 1.1-22
Taxi Shoulder Markings

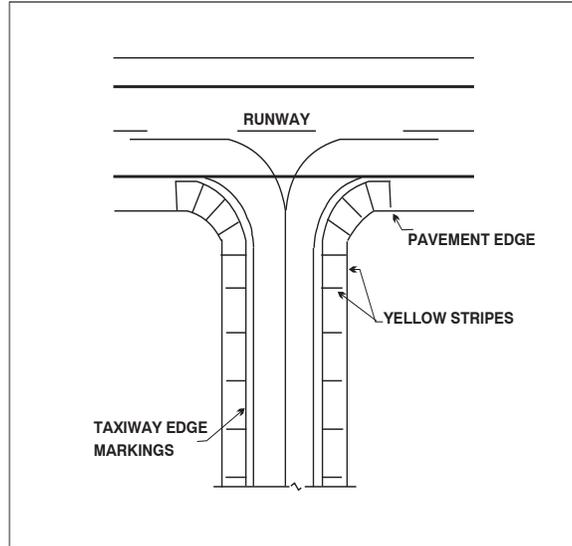


FIG AD 1.1-23
Surface Painted Signs

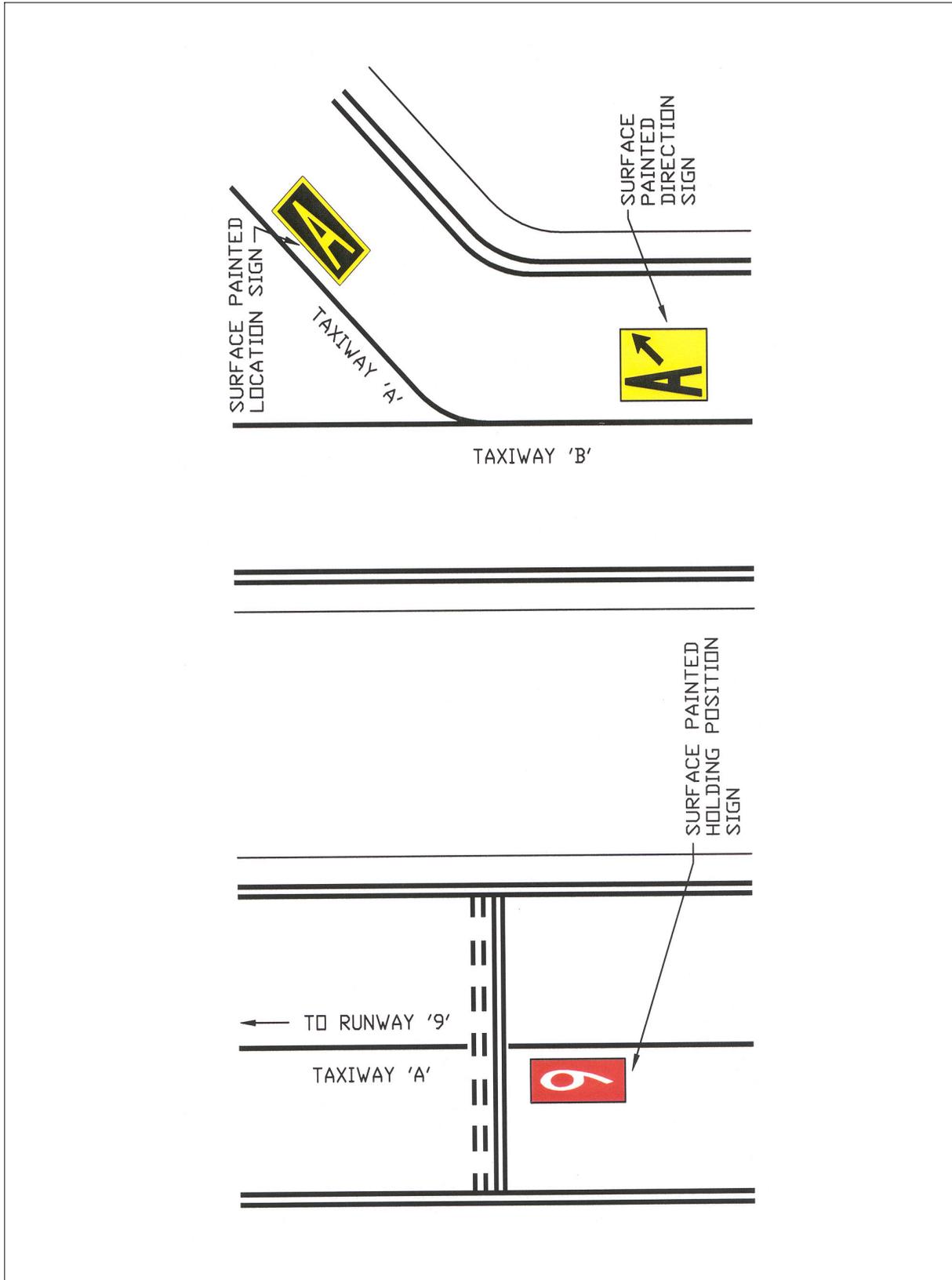


FIG AD 1.1-24
Geographic Position Markings

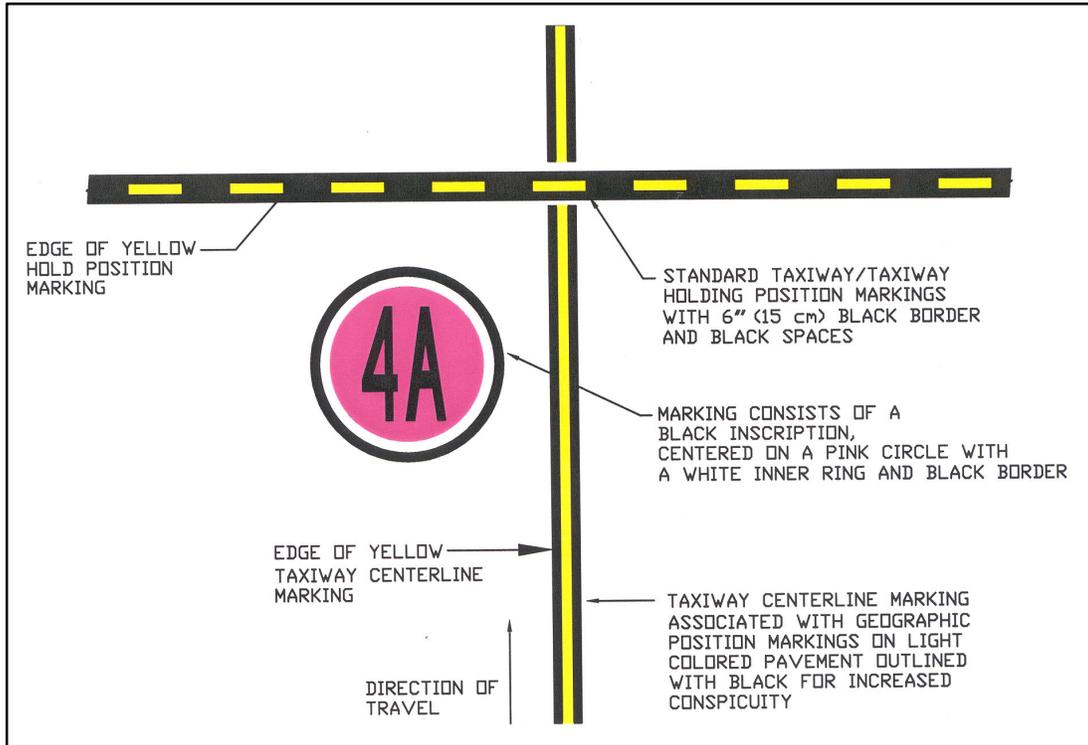


FIG AD 1.1-25
Runway Holding Position Markings on Taxiway

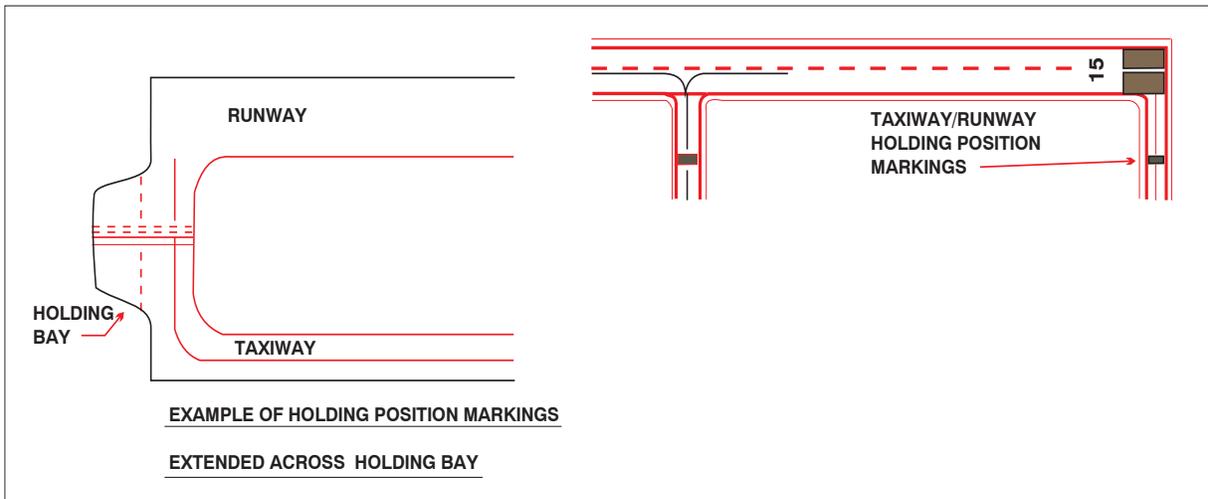
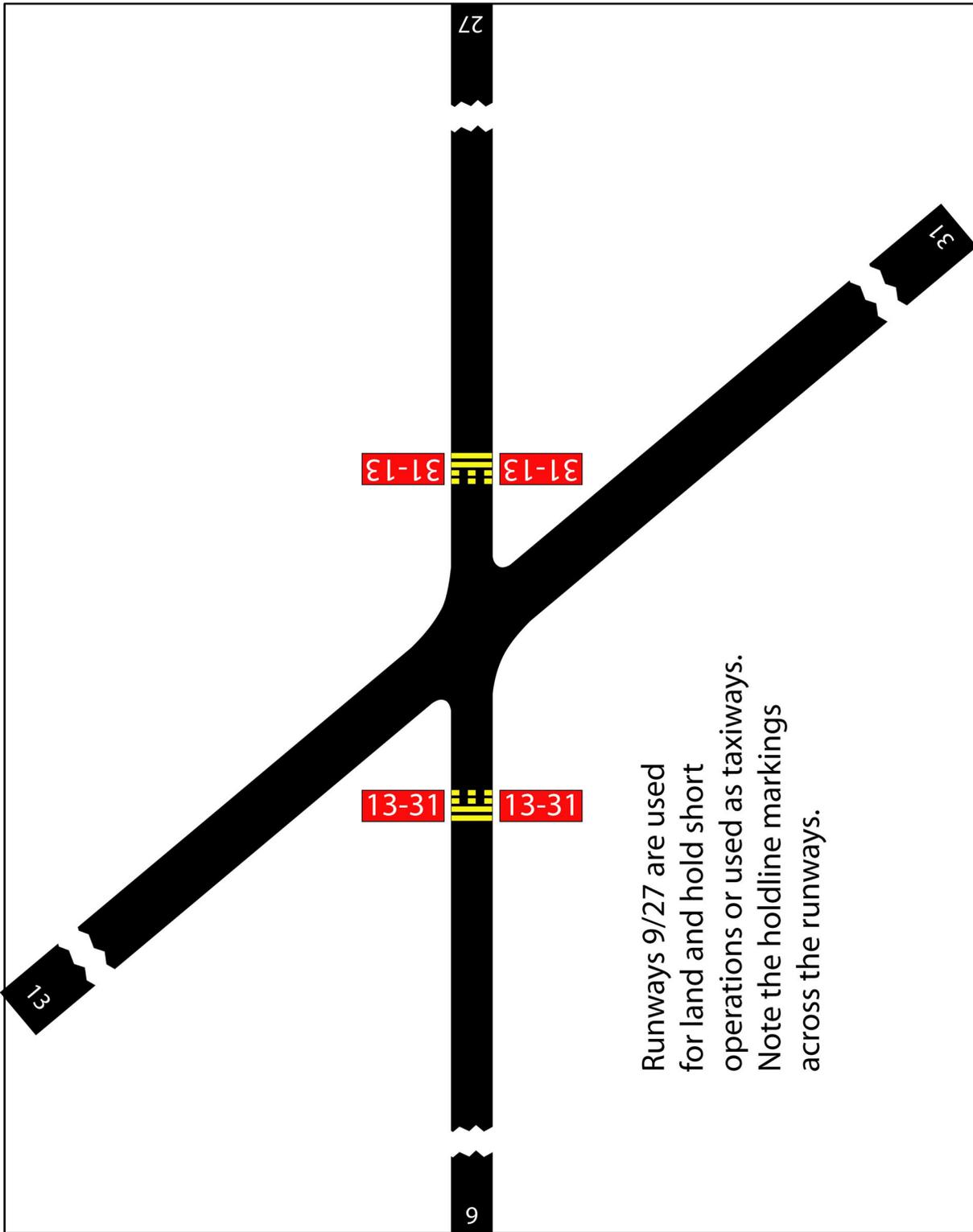


FIG AD 1.1-26
Runway Holding Position Markings on Runways



NOTE-

1. Refer to Advisory Circular 150/5300-13 for additional information on obstruction surfaces.
2. Because Taxiway C does not enter the departure area of Runway 33, the sign on Taxiway C does not include the "33 DEP" legend.
3. The location of a holding position is relative to the point on the aircraft that infringes the surface; for inclining surfaces such as an approach surface, the location of the holdline position may differ from the location of the infringement point.

FIG AD 1.1-28
Holding Position Markings: ILS Critical Area

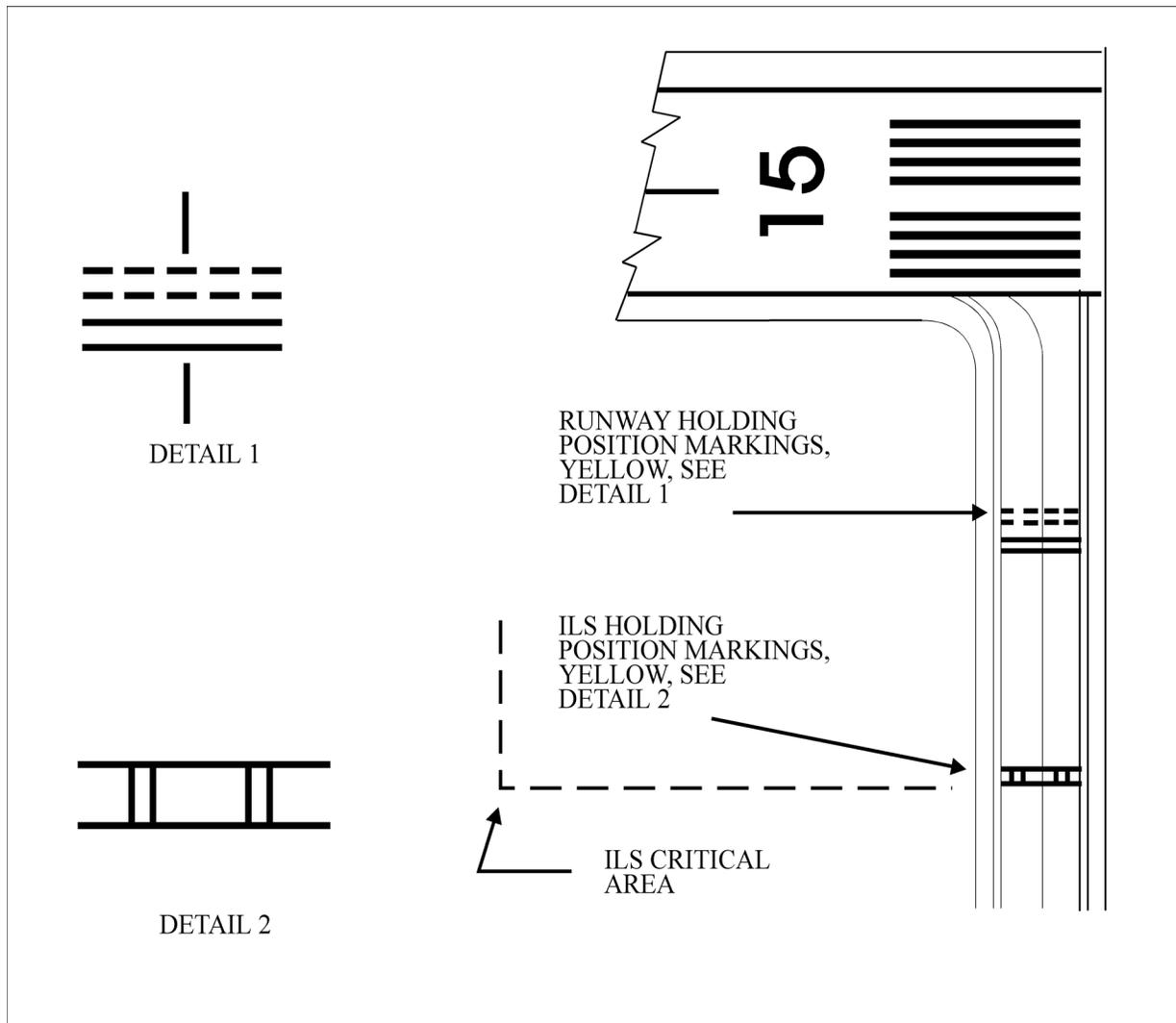


FIG AD 1.1-29
Holding Position Markings: Taxiway/Taxiway Intersections

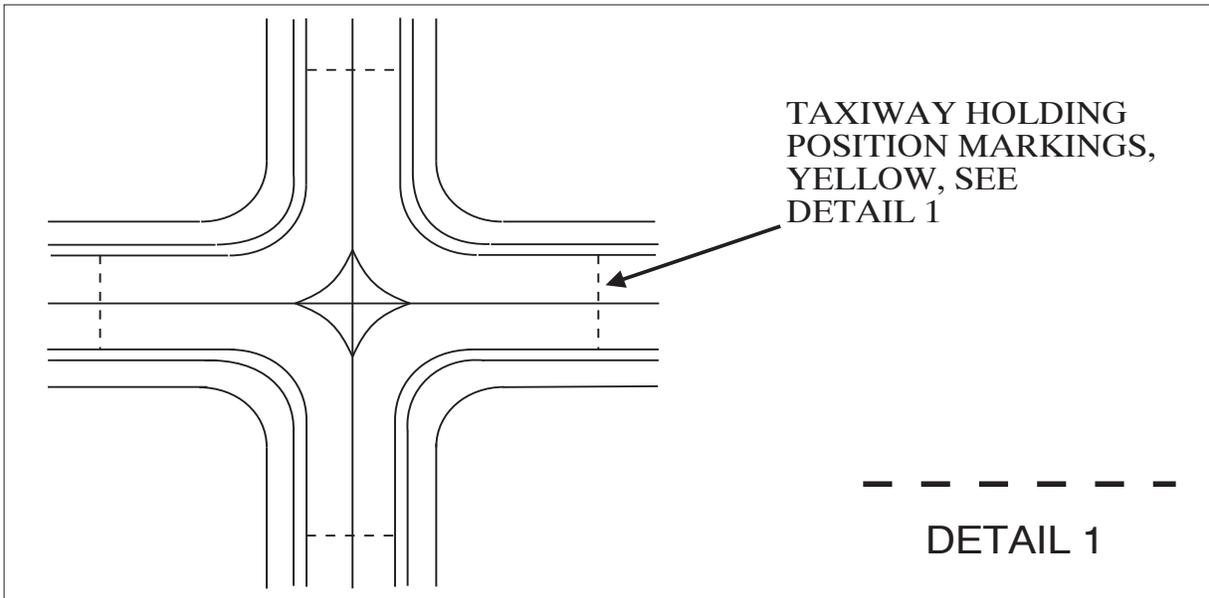


FIG AD 1.1-30
Vehicle Roadway Markings

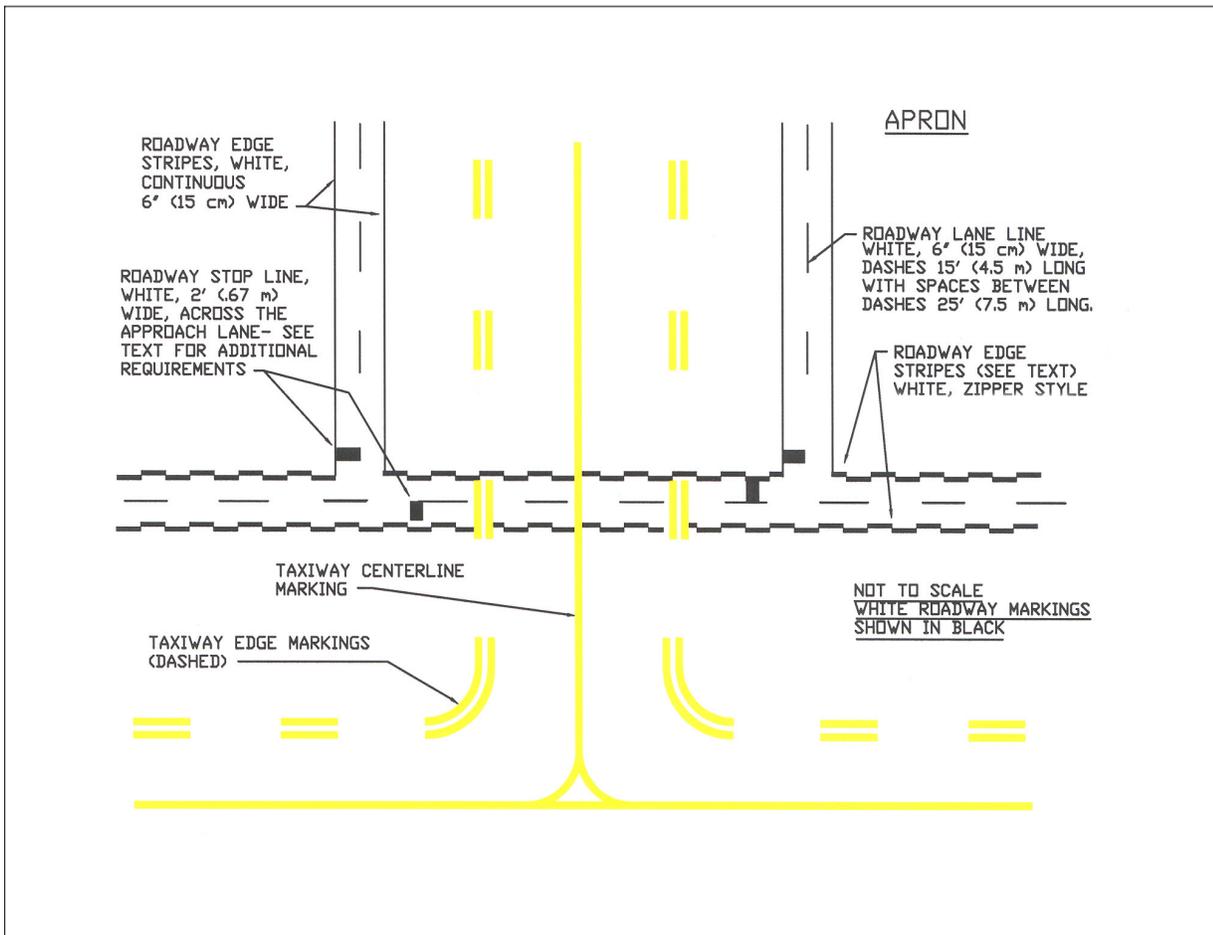


FIG AD 1.1-31
Roadway Edge Stripes, White, Zipper Style

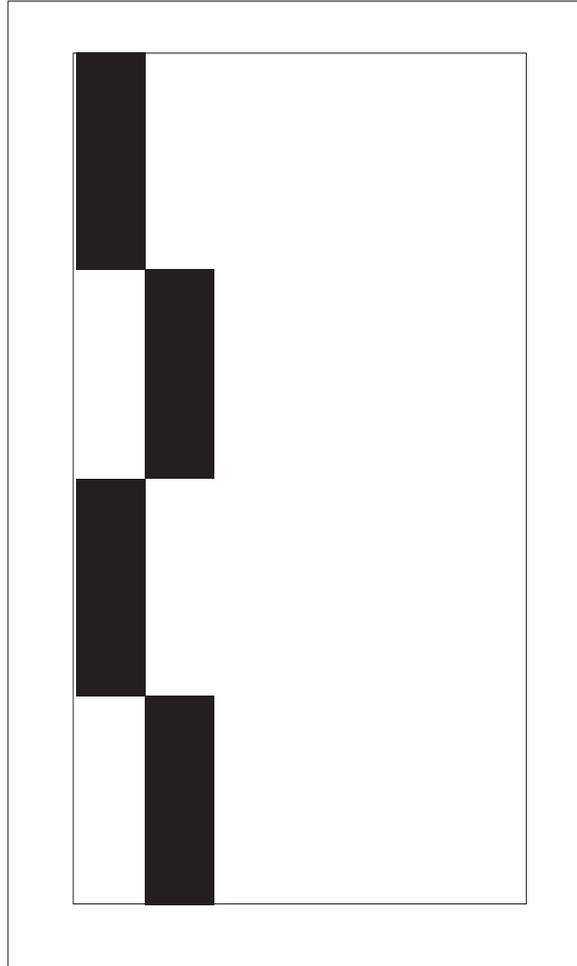


FIG AD 1.1-32
Ground Receiver Checkpoint Markings

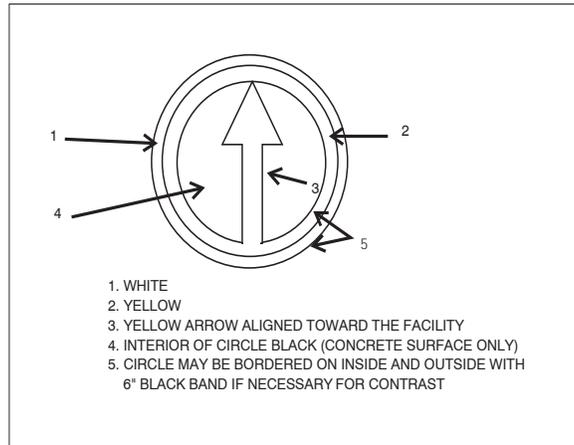


FIG AD 1.1-33
Nonmovement Area Boundary Markings

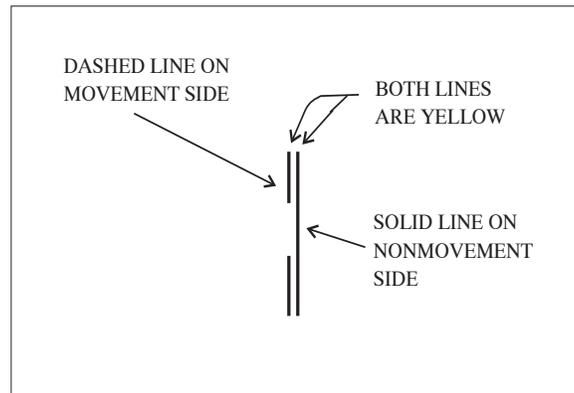


FIG AD 1.1-34
Closed or Temporarily Closed Runway and Taxiway Markings

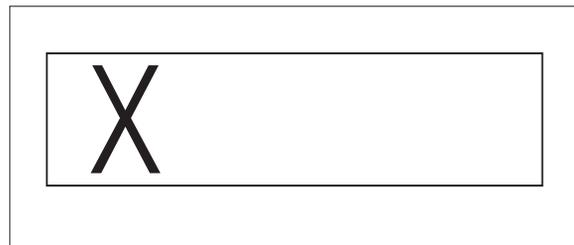


FIG AD 1.1-35
Helicopter Landing Areas

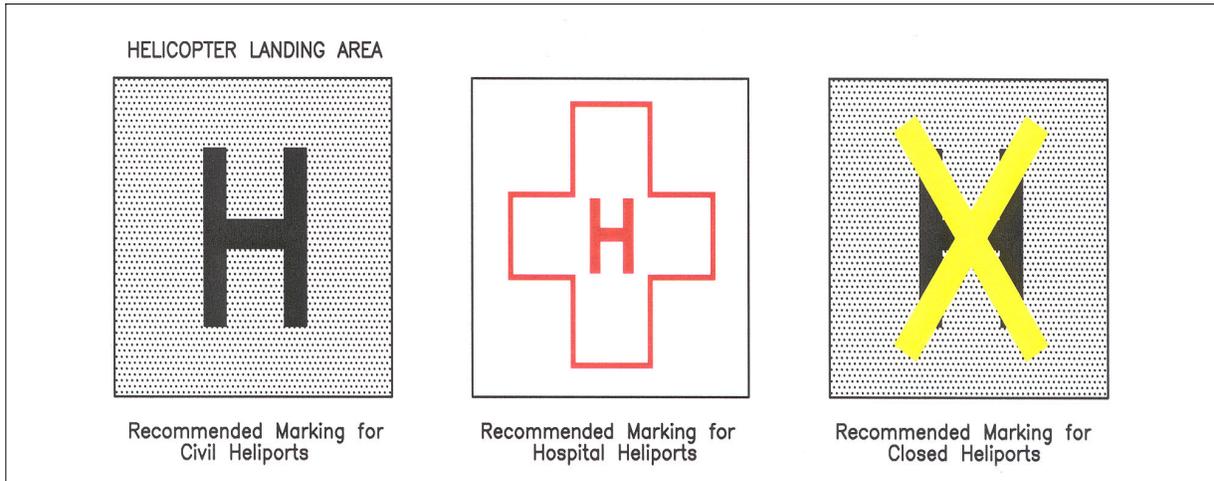


FIG AD 1.1-36
Runway Holding Position Sign



FIG AD 1.1-37
Holding Position Sign at Beginning of Takeoff Runway

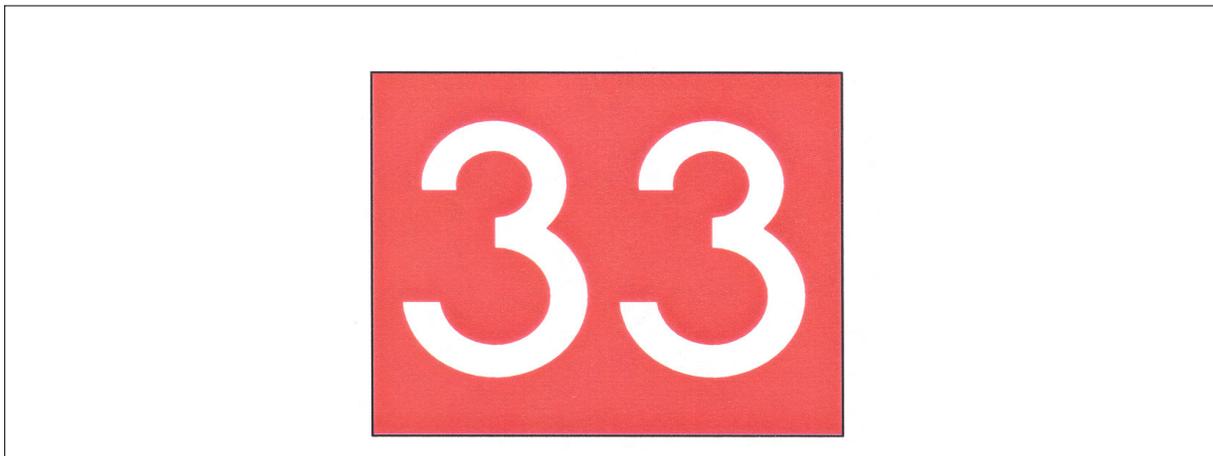


FIG AD 1.1-38
Holding Position Sign for a Taxiway that Intersects the Intersection of Two Runways

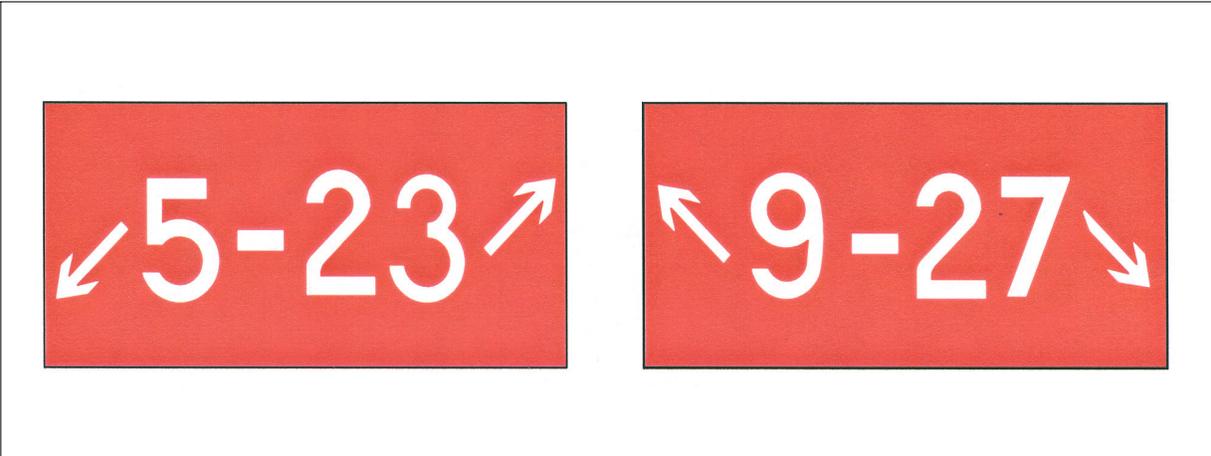


FIG AD 1.1-39
Holding Position Signs for Runway Approach and Departure Areas



FIG AD 1.1-40
Holding Position Sign for ILS Critical Area



FIG AD 1.1-41
Sign Prohibiting Aircraft Entry into an Area

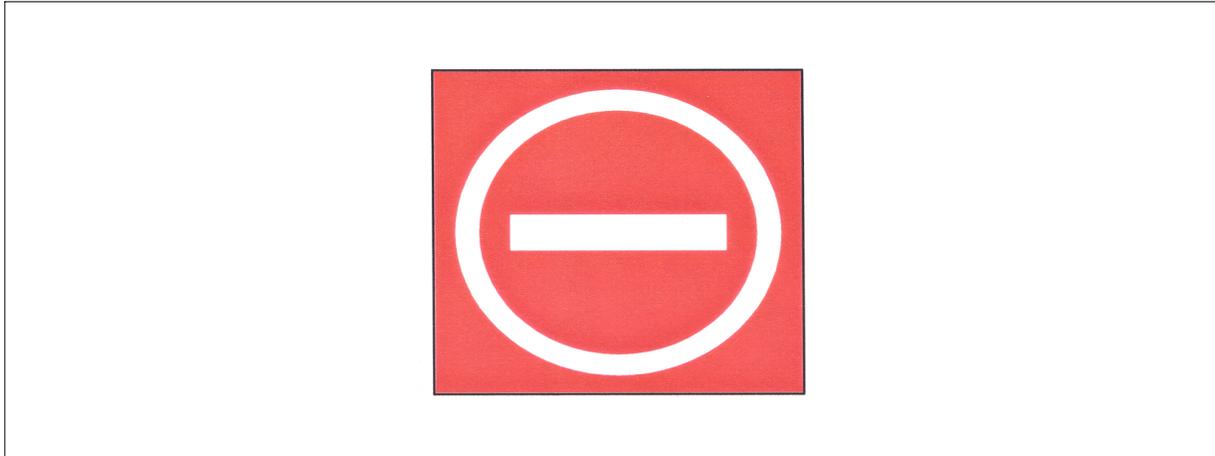


FIG AD 1.1-42
Taxiway Location Sign

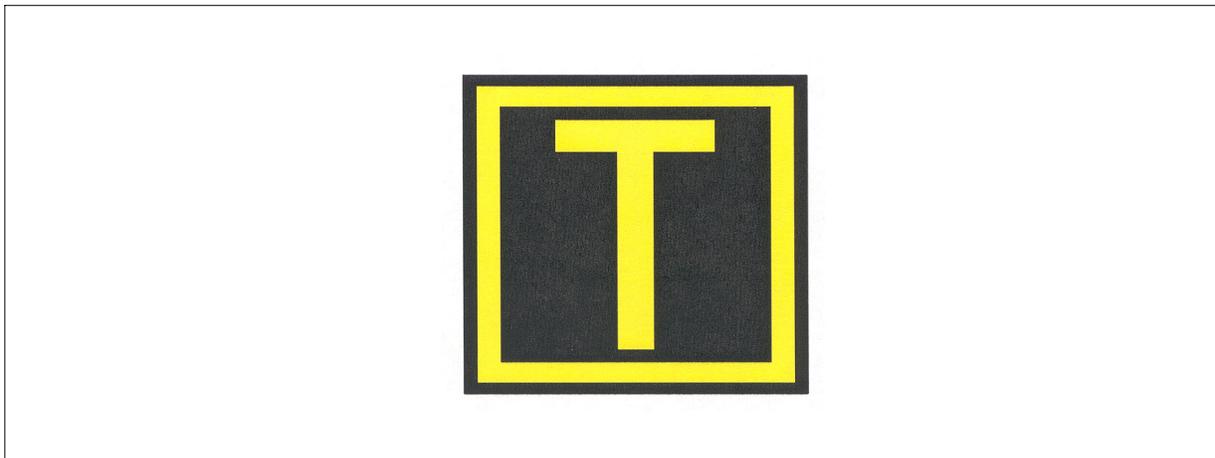


FIG AD 1.1-43
Taxiway Location Sign Collocated with Runway Holding Position Sign

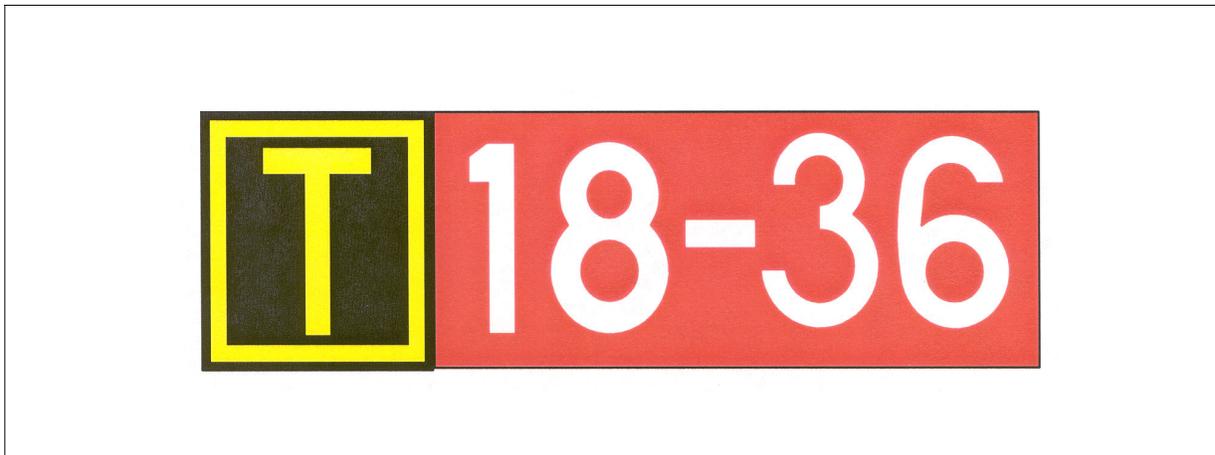


FIG AD 1.1-44
Runway Location Sign



FIG AD 1.1-45
Runway Boundary Sign

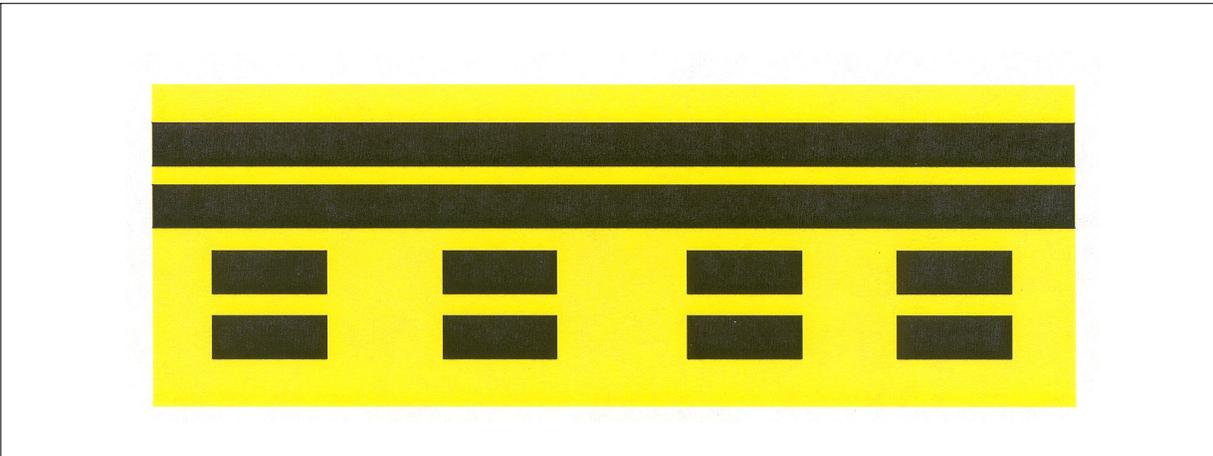


FIG AD 1.1-46
ILS Critical Area Boundary Sign

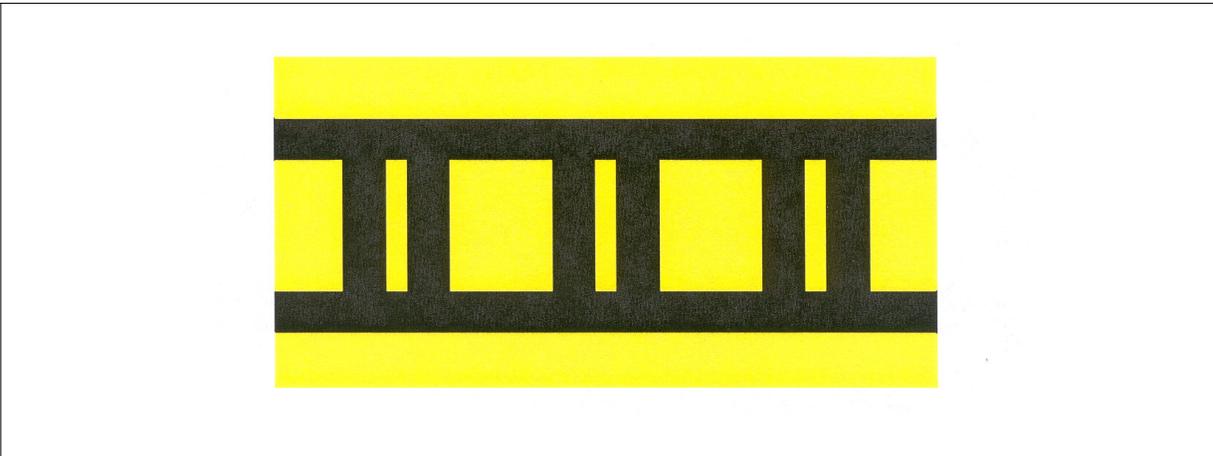


FIG AD 1.1-47
Direction Sign Array with Location Sign on Far Side of Intersection

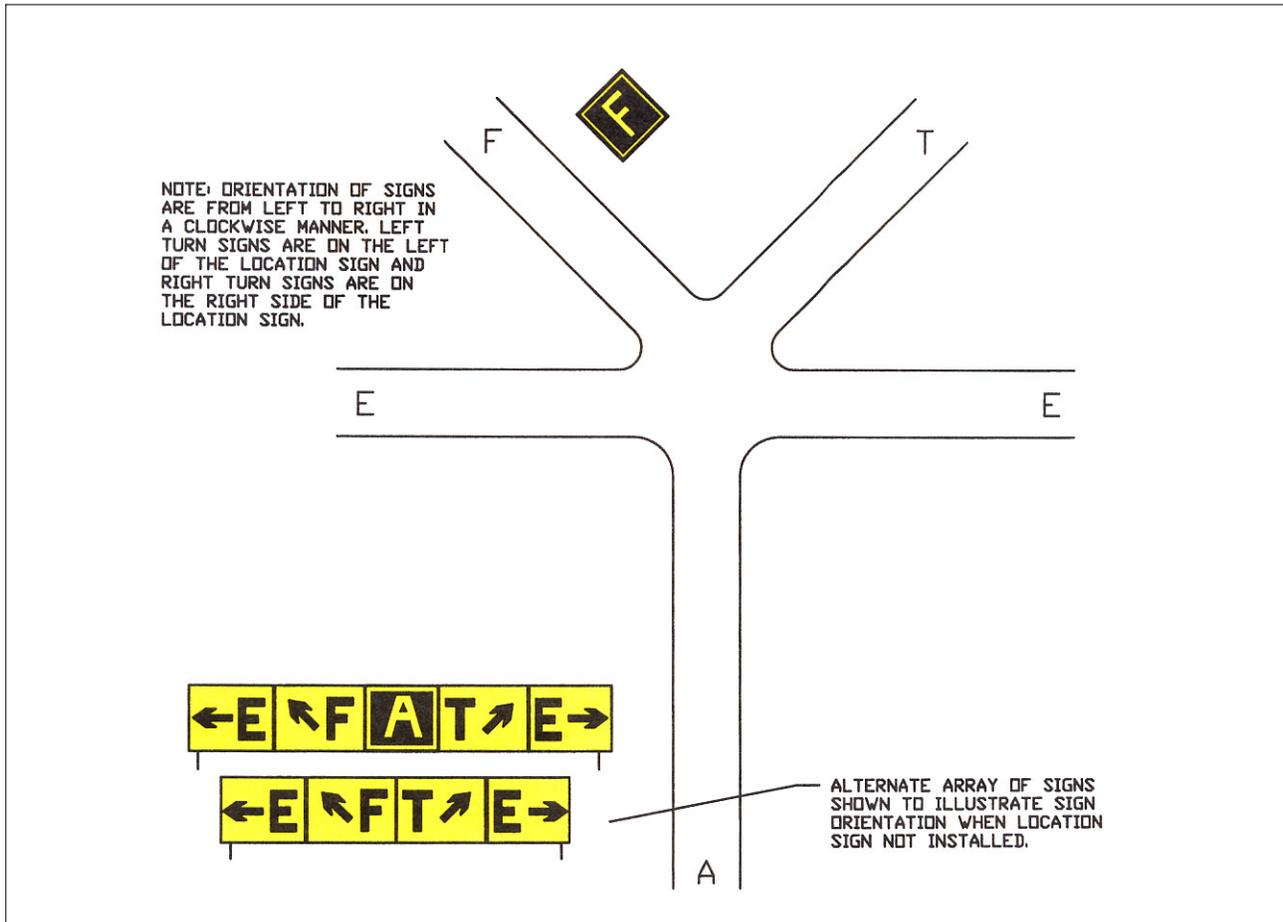


FIG AD 1.1-48
Direction Sign for Runway Exit



FIG AD 1.1-49
Direction Sign Array for Simple Intersection

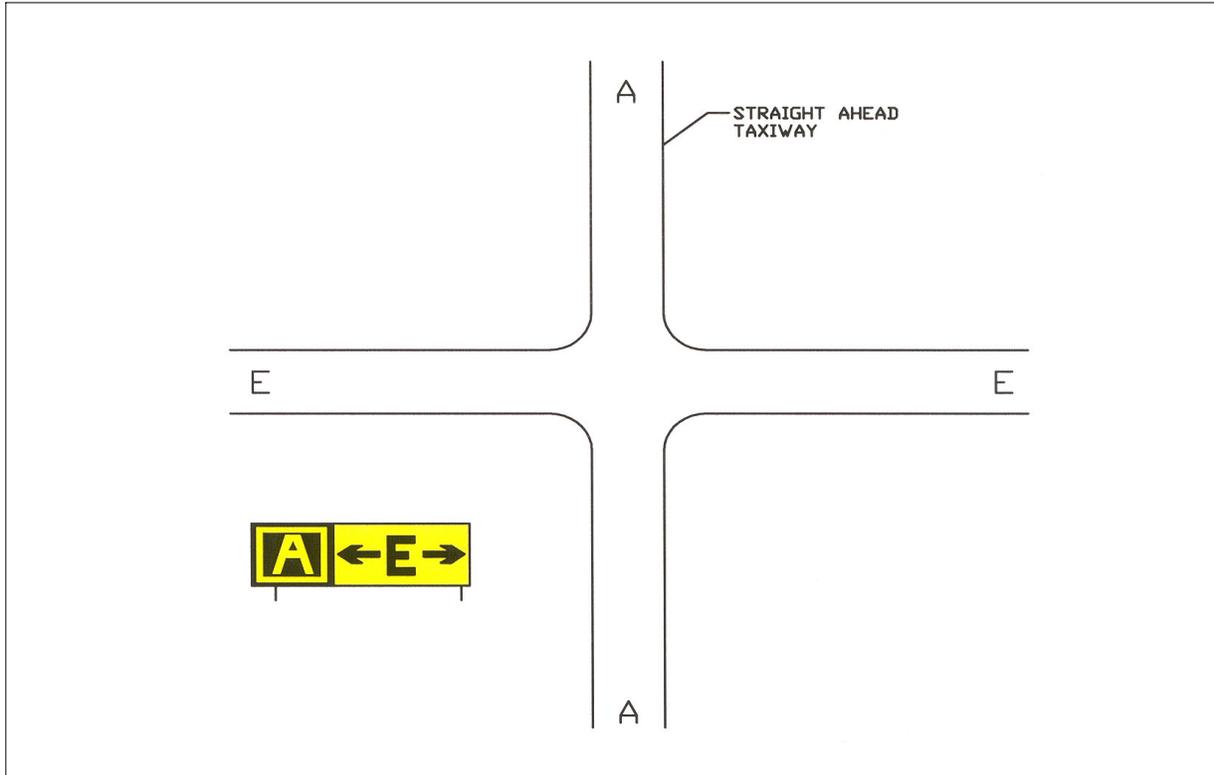


FIG AD 1.1-50
Destination Sign for Military Area



FIG AD 1.1-51
Destination Sign for Common Taxiing Route to Two Runways

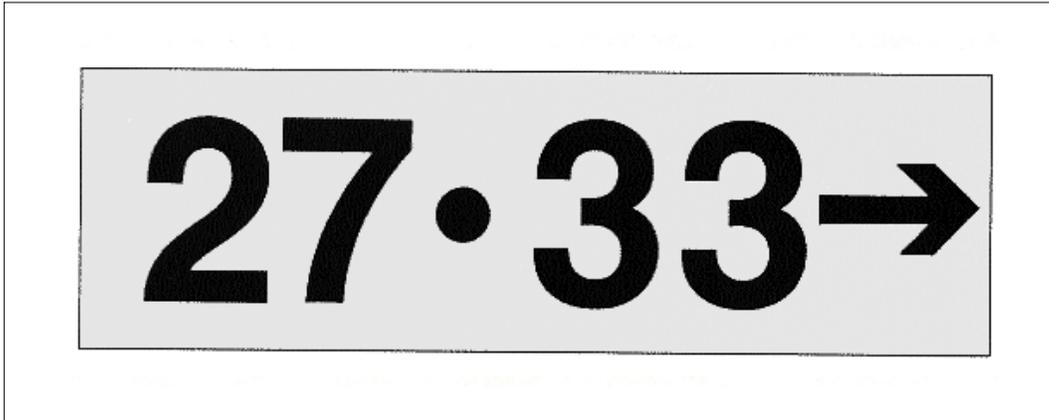


FIG AD 1.1-52
Destination Sign for Different Taxiing Routes to Two Runways

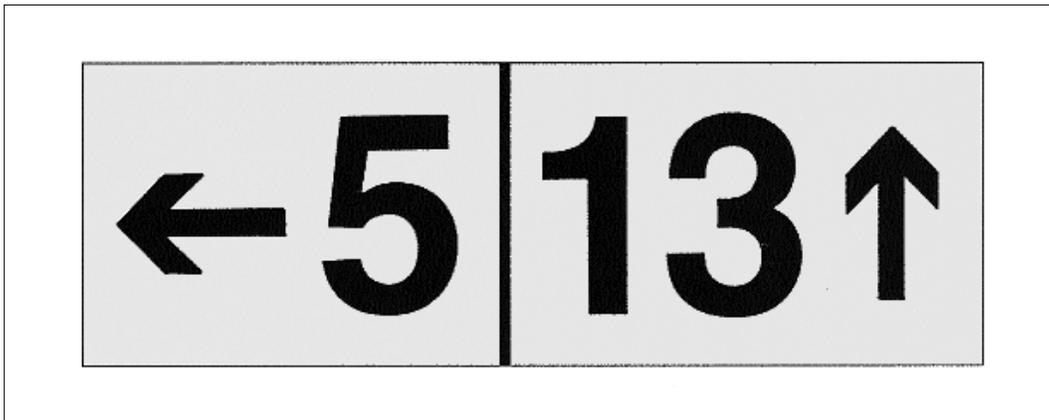


FIG AD 1.1-53
Runway Distance Remaining Sign Indicating 3,000 feet of Runway Remaining



FIG AD 1.1-54
Engineered Materials Arresting System (EMAS)



FIG AD 1.1-55
Sample SIDA Warning Sign



AD 2. AERODROMES

NOTE-

The aerodrome information published in this section will be removed effective February 20, 2025. Instead, users will be directed towards the data published online. For more information, please refer to the relevant notices published on the Domestic Notices website at https://www.faa.gov/air_traffic/publications/domesticnotices/ and the International Notices website at https://www.faa.gov/air_traffic/publications/internationalnotices/.

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
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
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	Harry Reid International	Regular
KRNO	Reno	Reno/Tahoe International	Regular
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			
KPDX	Portland	Portland International	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
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

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.

1.2 Public sales of the Chart Supplement 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.

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

PAGE	DATE
PART 3 – AERODROMES (AD)	
AD 0	
0.4-1	5 SEP 24
0.4-2	5 SEP 24
0.4-3	5 SEP 24
0.4-4	5 SEP 24
0.4-5	5 SEP 24
0.4-6	5 SEP 24
0.6-1	21 MAR 24
AD 1	
1.1-1	21 MAR 24
1.1-2	21 MAR 24
1.1-3	21 MAR 24
1.1-4	21 MAR 24
1.1-5	21 MAR 24
1.1-6	21 MAR 24
1.1-7	21 MAR 24
1.1-8	21 MAR 24
1.1-9	21 MAR 24
1.1-10	21 MAR 24
1.1-11	21 MAR 24
1.1-12	21 MAR 24
1.1-13	21 MAR 24
1.1-14	21 MAR 24
1.1-15	21 MAR 24
1.1-16	21 MAR 24
1.1-17	21 MAR 24
1.1-18	21 MAR 24
1.1-19	21 MAR 24
1.1-20	21 MAR 24
1.1-21	21 MAR 24
1.1-22	21 MAR 24
1.1-23	21 MAR 24
1.1-24	21 MAR 24
1.1-25	21 MAR 24
1.1-26	21 MAR 24
1.1-27	21 MAR 24
1.1-28	21 MAR 24

PAGE	DATE
1.1-29	21 MAR 24
1.1-30	21 MAR 24
1.1-31	21 MAR 24
1.1-32	21 MAR 24
1.1-33	21 MAR 24
1.1-34	21 MAR 24
1.1-35	21 MAR 24
1.1-36	21 MAR 24
1.1-37	21 MAR 24
1.1-38	21 MAR 24
1.1-39	21 MAR 24
1.1-40	21 MAR 24
1.1-41	21 MAR 24
1.1-42	21 MAR 24
1.1-43	21 MAR 24
1.1-44	21 MAR 24
1.1-45	21 MAR 24
1.1-46	21 MAR 24
1.1-47	21 MAR 24
1.1-48	21 MAR 24
1.1-49	21 MAR 24
1.1-50	21 MAR 24
1.1-51	21 MAR 24
1.1-52	21 MAR 24
1.1-53	21 MAR 24
AD 2	
2-1	5 SEP 24
2-2	5 SEP 24
2-3	5 SEP 24
2-4	5 SEP 24
2-5	5 SEP 24
2-6	5 SEP 24
2-7	5 SEP 24
2-8	5 SEP 24
2-9	5 SEP 24
2-10	5 SEP 24
2-11	5 SEP 24
2-12	5 SEP 24
2-13	5 SEP 24
2-14	5 SEP 24

PAGE	DATE
2-15	5 SEP 24
2-16	5 SEP 24
2-17	5 SEP 24
2-18	5 SEP 24
2-19	5 SEP 24
2-20	5 SEP 24
2-21	5 SEP 24
2-22	5 SEP 24
2-23	5 SEP 24
2-24	5 SEP 24
2-25	5 SEP 24
2-26	5 SEP 24
2-27	5 SEP 24
2-28	5 SEP 24
2-29	5 SEP 24
2-30	5 SEP 24
2-31	5 SEP 24
2-32	5 SEP 24
2-33	5 SEP 24
2-34	5 SEP 24
2-35	5 SEP 24
2-36	5 SEP 24
2-37	5 SEP 24
2-38	5 SEP 24
2-39	5 SEP 24
2-40	5 SEP 24
2-41	5 SEP 24
2-42	5 SEP 24
2-43	5 SEP 24
2-44	5 SEP 24
2-45	5 SEP 24
2-46	5 SEP 24
2-47	5 SEP 24
2-48	5 SEP 24
2-49	5 SEP 24
2-50	5 SEP 24
2-51	5 SEP 24
2-52	5 SEP 24
2-53	5 SEP 24
2-54	5 SEP 24

PAGE	DATE
2-55	5 SEP 24
2-56	5 SEP 24
2-57	5 SEP 24
2-58	5 SEP 24
2-59	5 SEP 24
2-60	5 SEP 24
2-61	5 SEP 24
2-62	5 SEP 24
2-63	5 SEP 24
2-64	5 SEP 24
2-65	5 SEP 24
2-66	5 SEP 24
2-67	5 SEP 24
2-68	5 SEP 24
2-69	5 SEP 24
2-70	5 SEP 24
2-71	5 SEP 24
2-72	5 SEP 24
2-73	5 SEP 24
2-74	5 SEP 24
2-75	5 SEP 24
2-76	5 SEP 24
2-77	5 SEP 24
2-78	5 SEP 24
2-79	5 SEP 24
2-80	5 SEP 24
2-81	5 SEP 24
2-82	5 SEP 24
2-83	5 SEP 24
2-84	5 SEP 24
2-85	5 SEP 24
2-86	5 SEP 24
2-87	5 SEP 24
2-88	5 SEP 24
2-89	5 SEP 24
2-90	5 SEP 24
2-91	5 SEP 24
2-92	5 SEP 24
2-93	5 SEP 24
2-94	5 SEP 24
2-95	5 SEP 24
2-96	5 SEP 24
2-97	5 SEP 24
2-98	5 SEP 24
2-99	5 SEP 24
2-100	5 SEP 24
2-101	5 SEP 24
2-102	5 SEP 24
2-103	5 SEP 24
2-104	5 SEP 24
2-105	5 SEP 24
2-106	5 SEP 24

PAGE	DATE
2-107	5 SEP 24
2-108	5 SEP 24
2-109	5 SEP 24
2-110	5 SEP 24
2-111	5 SEP 24
2-112	5 SEP 24
2-113	5 SEP 24
2-114	5 SEP 24
2-115	5 SEP 24
2-116	5 SEP 24
2-117	5 SEP 24
2-118	5 SEP 24
2-119	5 SEP 24
2-120	5 SEP 24
2-121	5 SEP 24
2-122	5 SEP 24
2-123	5 SEP 24
2-124	5 SEP 24
2-125	5 SEP 24
2-126	5 SEP 24
2-127	5 SEP 24
2-128	5 SEP 24
2-129	5 SEP 24
2-130	5 SEP 24
2-131	5 SEP 24
2-132	5 SEP 24
2-133	5 SEP 24
2-134	5 SEP 24
2-135	5 SEP 24
2-136	5 SEP 24
2-137	5 SEP 24
2-138	5 SEP 24
2-139	5 SEP 24
2-140	5 SEP 24
2-141	5 SEP 24
2-142	5 SEP 24
2-143	5 SEP 24
2-144	5 SEP 24
2-145	5 SEP 24
2-146	5 SEP 24
2-147	5 SEP 24
2-148	5 SEP 24
2-149	5 SEP 24
2-150	5 SEP 24
2-151	5 SEP 24
2-152	5 SEP 24
2-153	5 SEP 24
2-154	5 SEP 24
2-155	5 SEP 24
2-156	5 SEP 24
2-157	5 SEP 24
2-158	5 SEP 24

PAGE	DATE
2-159	5 SEP 24
2-160	5 SEP 24
2-161	5 SEP 24
2-162	5 SEP 24
2-163	5 SEP 24
2-164	5 SEP 24
2-165	5 SEP 24
2-166	5 SEP 24
2-167	5 SEP 24
2-168	5 SEP 24
2-169	5 SEP 24
2-170	5 SEP 24
2-171	5 SEP 24
2-172	5 SEP 24
2-173	5 SEP 24
2-174	5 SEP 24
2-175	5 SEP 24
2-176	5 SEP 24
2-177	5 SEP 24
2-178	5 SEP 24
2-179	5 SEP 24
2-180	5 SEP 24
2-181	5 SEP 24
2-182	5 SEP 24
2-183	5 SEP 24
2-184	5 SEP 24
2-185	5 SEP 24
2-186	5 SEP 24
2-187	5 SEP 24
2-188	5 SEP 24
2-189	5 SEP 24
2-190	5 SEP 24
2-191	5 SEP 24
2-192	5 SEP 24
2-193	5 SEP 24
2-194	5 SEP 24
2-195	5 SEP 24
2-196	5 SEP 24
2-197	5 SEP 24
2-198	5 SEP 24
2-199	5 SEP 24
2-200	5 SEP 24
2-201	5 SEP 24
2-202	5 SEP 24
2-203	5 SEP 24
2-204	5 SEP 24
2-205	5 SEP 24
2-206	5 SEP 24
2-207	5 SEP 24
2-208	5 SEP 24
2-209	5 SEP 24
2-210	5 SEP 24

PAGE	DATE
2-211	5 SEP 24
2-212	5 SEP 24
2-213	5 SEP 24
2-214	5 SEP 24
2-215	5 SEP 24
2-216	5 SEP 24
2-217	5 SEP 24
2-218	5 SEP 24
2-219	5 SEP 24
2-220	5 SEP 24
2-221	5 SEP 24
2-222	5 SEP 24
2-223	5 SEP 24
2-224	5 SEP 24
2-225	5 SEP 24
2-226	5 SEP 24
2-227	5 SEP 24
2-228	5 SEP 24
2-229	5 SEP 24
2-230	5 SEP 24
2-231	5 SEP 24
2-232	5 SEP 24
2-233	5 SEP 24
2-234	5 SEP 24
2-235	5 SEP 24
2-236	5 SEP 24
2-237	5 SEP 24
2-238	5 SEP 24
2-239	5 SEP 24
2-240	5 SEP 24
2-241	5 SEP 24
2-242	5 SEP 24
2-243	5 SEP 24
2-244	5 SEP 24
2-245	5 SEP 24
2-246	5 SEP 24
2-247	5 SEP 24
2-248	5 SEP 24
2-249	5 SEP 24
2-250	5 SEP 24
2-251	5 SEP 24
2-252	5 SEP 24
2-253	5 SEP 24
2-254	5 SEP 24
2-255	5 SEP 24
2-256	5 SEP 24
2-257	5 SEP 24
2-258	5 SEP 24
2-259	5 SEP 24
2-260	5 SEP 24
2-261	5 SEP 24
2-262	5 SEP 24

PAGE	DATE
2-263	5 SEP 24
2-264	5 SEP 24
2-265	5 SEP 24
2-266	5 SEP 24
2-267	5 SEP 24
2-268	5 SEP 24
2-269	5 SEP 24
2-270	5 SEP 24
2-271	5 SEP 24
2-272	5 SEP 24
2-273	5 SEP 24
2-274	5 SEP 24
2-275	5 SEP 24
2-276	5 SEP 24
2-277	5 SEP 24
2-278	5 SEP 24
2-279	5 SEP 24
2-280	5 SEP 24
2-281	5 SEP 24
2-282	5 SEP 24
2-283	5 SEP 24
2-284	5 SEP 24
2-285	5 SEP 24
2-286	5 SEP 24
2-287	5 SEP 24
2-288	5 SEP 24
2-289	5 SEP 24
2-290	5 SEP 24
2-291	5 SEP 24
2-292	5 SEP 24
2-293	5 SEP 24
2-294	5 SEP 24
2-295	5 SEP 24
2-296	5 SEP 24
2-297	5 SEP 24
2-298	5 SEP 24
2-299	5 SEP 24
2-300	5 SEP 24
2-301	5 SEP 24
2-302	5 SEP 24
2-303	5 SEP 24
2-304	5 SEP 24
2-305	5 SEP 24
2-306	5 SEP 24
2-307	5 SEP 24
2-308	5 SEP 24
2-309	5 SEP 24
2-310	5 SEP 24
2-311	5 SEP 24
2-312	5 SEP 24
2-313	5 SEP 24
2-314	5 SEP 24

PAGE	DATE
2-315	5 SEP 24
2-316	5 SEP 24
2-317	5 SEP 24
2-318	5 SEP 24
2-319	5 SEP 24
2-320	5 SEP 24
2-321	5 SEP 24
2-322	5 SEP 24
2-323	5 SEP 24
2-324	5 SEP 24
2-325	5 SEP 24
2-326	5 SEP 24
2-327	5 SEP 24
2-328	5 SEP 24
2-329	5 SEP 24
2-330	5 SEP 24
2-331	5 SEP 24
2-332	5 SEP 24
2-333	5 SEP 24
2-334	5 SEP 24
2-335	5 SEP 24
2-336	5 SEP 24
2-337	5 SEP 24
2-338	5 SEP 24
2-339	5 SEP 24
2-340	5 SEP 24
2-341	5 SEP 24
2-342	5 SEP 24
2-343	5 SEP 24
2-344	5 SEP 24
2-345	5 SEP 24
2-346	5 SEP 24
2-347	5 SEP 24
2-348	5 SEP 24
2-349	5 SEP 24
2-350	5 SEP 24
2-351	5 SEP 24
2-352	5 SEP 24
2-353	5 SEP 24
2-354	5 SEP 24
2-355	5 SEP 24
2-356	5 SEP 24
2-357	5 SEP 24
2-358	5 SEP 24
2-359	5 SEP 24
2-360	5 SEP 24
2-361	5 SEP 24
2-362	5 SEP 24
2-363	5 SEP 24
2-364	5 SEP 24
2-365	5 SEP 24
2-366	5 SEP 24

PAGE	DATE
2-367	5 SEP 24
2-368	5 SEP 24
2-369	5 SEP 24
2-370	5 SEP 24
2-371	5 SEP 24
2-372	5 SEP 24
2-373	5 SEP 24
2-374	5 SEP 24
2-375	5 SEP 24
2-376	5 SEP 24
2-377	5 SEP 24
2-378	5 SEP 24
2-379	5 SEP 24
2-380	5 SEP 24
2-381	5 SEP 24
2-382	5 SEP 24
2-383	5 SEP 24
2-384	5 SEP 24
2-385	5 SEP 24
2-386	5 SEP 24
2-387	5 SEP 24
2-388	5 SEP 24
2-389	5 SEP 24
2-390	5 SEP 24
2-391	5 SEP 24
2-392	5 SEP 24
2-393	5 SEP 24
2-394	5 SEP 24
2-395	5 SEP 24
2-396	5 SEP 24
2-397	5 SEP 24
2-398	5 SEP 24
2-399	5 SEP 24
2-400	5 SEP 24
2-401	5 SEP 24
2-402	5 SEP 24
2-403	5 SEP 24
2-404	5 SEP 24
2-405	5 SEP 24
2-406	5 SEP 24
2-407	5 SEP 24
2-408	5 SEP 24
2-409	5 SEP 24
2-410	5 SEP 24
2-411	5 SEP 24
2-412	5 SEP 24
2-413	5 SEP 24
2-414	5 SEP 24
2-415	5 SEP 24
2-416	5 SEP 24
2-417	5 SEP 24
2-418	5 SEP 24

PAGE	DATE
2-419	5 SEP 24
2-420	5 SEP 24
2-421	5 SEP 24
2-422	5 SEP 24
2-423	5 SEP 24
2-424	5 SEP 24
2-425	5 SEP 24
2-426	5 SEP 24
2-427	5 SEP 24
2-428	5 SEP 24
2-429	5 SEP 24
2-430	5 SEP 24
2-431	5 SEP 24
2-432	5 SEP 24
2-433	5 SEP 24
2-434	5 SEP 24
2-435	5 SEP 24
2-436	5 SEP 24
2-437	5 SEP 24
2-438	5 SEP 24
2-439	5 SEP 24
2-440	5 SEP 24
2-441	5 SEP 24
2-442	5 SEP 24
2-443	5 SEP 24
2-444	5 SEP 24
2-445	5 SEP 24
2-446	5 SEP 24
2-447	5 SEP 24
2-448	5 SEP 24
2-449	5 SEP 24
2-450	5 SEP 24
2-451	5 SEP 24
2-452	5 SEP 24
2-453	5 SEP 24
2-454	5 SEP 24
2-455	5 SEP 24
2-456	5 SEP 24
2-457	5 SEP 24
2-458	5 SEP 24
2-459	5 SEP 24
2-460	5 SEP 24
2-461	5 SEP 24
2-462	5 SEP 24
2-463	5 SEP 24
2-464	5 SEP 24
2-465	5 SEP 24
2-466	5 SEP 24
2-467	5 SEP 24
2-468	5 SEP 24
2-469	5 SEP 24
2-470	5 SEP 24

PAGE	DATE
2-471	5 SEP 24
2-472	5 SEP 24
2-472	5 SEP 24
2-473	5 SEP 24
2-474	5 SEP 24
2-475	5 SEP 24
2-476	5 SEP 24
2-477	5 SEP 24
2-478	5 SEP 24
2-479	5 SEP 24
2-480	5 SEP 24
2-481	5 SEP 24
2-482	5 SEP 24
2-483	5 SEP 24
2-484	5 SEP 24
2-485	5 SEP 24
2-486	5 SEP 24
2-487	5 SEP 24
2-488	5 SEP 24
2-489	5 SEP 24
2-490	5 SEP 24
2-491	5 SEP 24
2-492	5 SEP 24
2-493	5 SEP 24
2-494	5 SEP 24
2-495	5 SEP 24
2-496	5 SEP 24
2-497	5 SEP 24
2-498	5 SEP 24
2-499	5 SEP 24
2-500	5 SEP 24
2-501	5 SEP 24
2-502	5 SEP 24
2-503	5 SEP 24
2-504	5 SEP 24
2-505	5 SEP 24
2-506	5 SEP 24
2-507	5 SEP 24
2-508	5 SEP 24
2-509	5 SEP 24
2-510	5 SEP 24
2-511	5 SEP 24
2-512	5 SEP 24
2-513	5 SEP 24
2-514	5 SEP 24
2-515	5 SEP 24
2-516	5 SEP 24
2-517	5 SEP 24
2-518	5 SEP 24
2-519	5 SEP 24
2-520	5 SEP 24
2-521	5 SEP 24

PAGE	DATE
2-522	5 SEP 24
2-523	5 SEP 24
2-524	5 SEP 24
2-525	5 SEP 24
2-526	5 SEP 24
2-527	5 SEP 24
2-528	5 SEP 24
2-529	5 SEP 24
2-530	5 SEP 24
2-531	5 SEP 24
2-532	5 SEP 24
2-533	5 SEP 24
2-534	5 SEP 24
2-535	5 SEP 24
2-536	5 SEP 24
2-537	5 SEP 24
2-538	5 SEP 24
2-539	5 SEP 24
2-540	5 SEP 24
2-541	5 SEP 24
2-542	5 SEP 24
2-543	5 SEP 24
2-544	5 SEP 24
2-545	5 SEP 24
2-546	5 SEP 24
2-547	5 SEP 24
2-548	5 SEP 24
2-549	5 SEP 24
2-550	5 SEP 24
2-551	5 SEP 24
2-552	5 SEP 24
2-553	5 SEP 24
2-554	5 SEP 24
2-555	5 SEP 24
2-556	5 SEP 24
2-557	5 SEP 24
2-558	5 SEP 24
2-559	5 SEP 24
2-560	5 SEP 24
2-561	5 SEP 24
2-562	5 SEP 24
2-563	5 SEP 24
2-564	5 SEP 24
2-565	5 SEP 24

PAGE	DATE
2-566	5 SEP 24
2-567	5 SEP 24
2-568	5 SEP 24
2-569	5 SEP 24
2-570	5 SEP 24
2-571	5 SEP 24
2-572	5 SEP 24
2-572	5 SEP 24
2-573	5 SEP 24
2-574	5 SEP 24
2-575	5 SEP 24
2-576	5 SEP 24
2-577	5 SEP 24
2-578	5 SEP 24
2-579	5 SEP 24
2-580	5 SEP 24
2-581	5 SEP 24
2-582	5 SEP 24
2-583	5 SEP 24
2-584	5 SEP 24
2-585	5 SEP 24
2-586	5 SEP 24
2-587	5 SEP 24
2-588	5 SEP 24
2-589	5 SEP 24
2-590	5 SEP 24
2-591	5 SEP 24
2-592	5 SEP 24
2-593	5 SEP 24
2-594	5 SEP 24
2-595	5 SEP 24
2-596	5 SEP 24
2-597	5 SEP 24
2-598	5 SEP 24
2-599	5 SEP 24
2-601	5 SEP 24
2-602	5 SEP 24
2-603	5 SEP 24
2-604	5 SEP 24
2-605	5 SEP 24
2-606	5 SEP 24
2-607	5 SEP 24
2-608	5 SEP 24
2-609	5 SEP 24

PAGE	DATE
2-610	5 SEP 24
2-611	5 SEP 24
2-612	5 SEP 24
2-613	5 SEP 24
2-614	5 SEP 24
2-615	5 SEP 24
2-616	5 SEP 24
2-617	5 SEP 24
2-618	5 SEP 24
2-619	5 SEP 24
2-620	5 SEP 24
2-621	5 SEP 24
2-622	5 SEP 24
2-623	5 SEP 24
2-624	5 SEP 24
2-625	5 SEP 24
2-626	5 SEP 24
2-627	5 SEP 24
2-628	5 SEP 24
2-629	5 SEP 24
2-630	5 SEP 24
2-631	5 SEP 24
INDEX	
I-1	5 SEP 24
I-2	5 SEP 24
I-3	5 SEP 24
I-4	5 SEP 24
I-5	5 SEP 24
I-6	5 SEP 24
I-7	5 SEP 24
I-8	5 SEP 24
I-9	5 SEP 24
APPENDIX	
Appendix 1-1	5 SEP 24
Appendix 1-2	5 SEP 24
Appendix 1-3	5 SEP 24
Appendix 1-4	5 SEP 24
Appendix 1-5	5 SEP 24
Appendix 1-6	5 SEP 24

PAGE	DATE
Appendix 1-7	5 SEP 24
Appendix 1-8	5 SEP 24
Appendix 1-9	5 SEP 24
Appendix 1-10	5 SEP 24
Appendix 1-11	5 SEP 24
Appendix 1-12	5 SEP 24

PAGE	DATE
Appendix 1-13	5 SEP 24
Appendix 1-14	5 SEP 24
Appendix 1-15	5 SEP 24
Appendix 1-16	5 SEP 24
Appendix 1-17	5 SEP 24
Appendix 1-18	5 SEP 24

PAGE	DATE
Appendix 1-19	5 SEP 24
Appendix 1-20	5 SEP 24
Appendix 1-21	5 SEP 24
Appendix 1-22	5 SEP 24
Appendix 1-23	5 SEP 24

AD 0.5 List of Hand Amendments to the AIP – Not applicable

AD 0.5 List of Hand Amendments to the AIP – Not applicable

Instrument Approach Procedures (Charts) Airport Diagram/Airport Sketch

19339

LEGEND

INSTRUMENT APPROACH PROCEDURES (CHARTS)

AIRPORT DIAGRAM/AIRPORT SKETCH

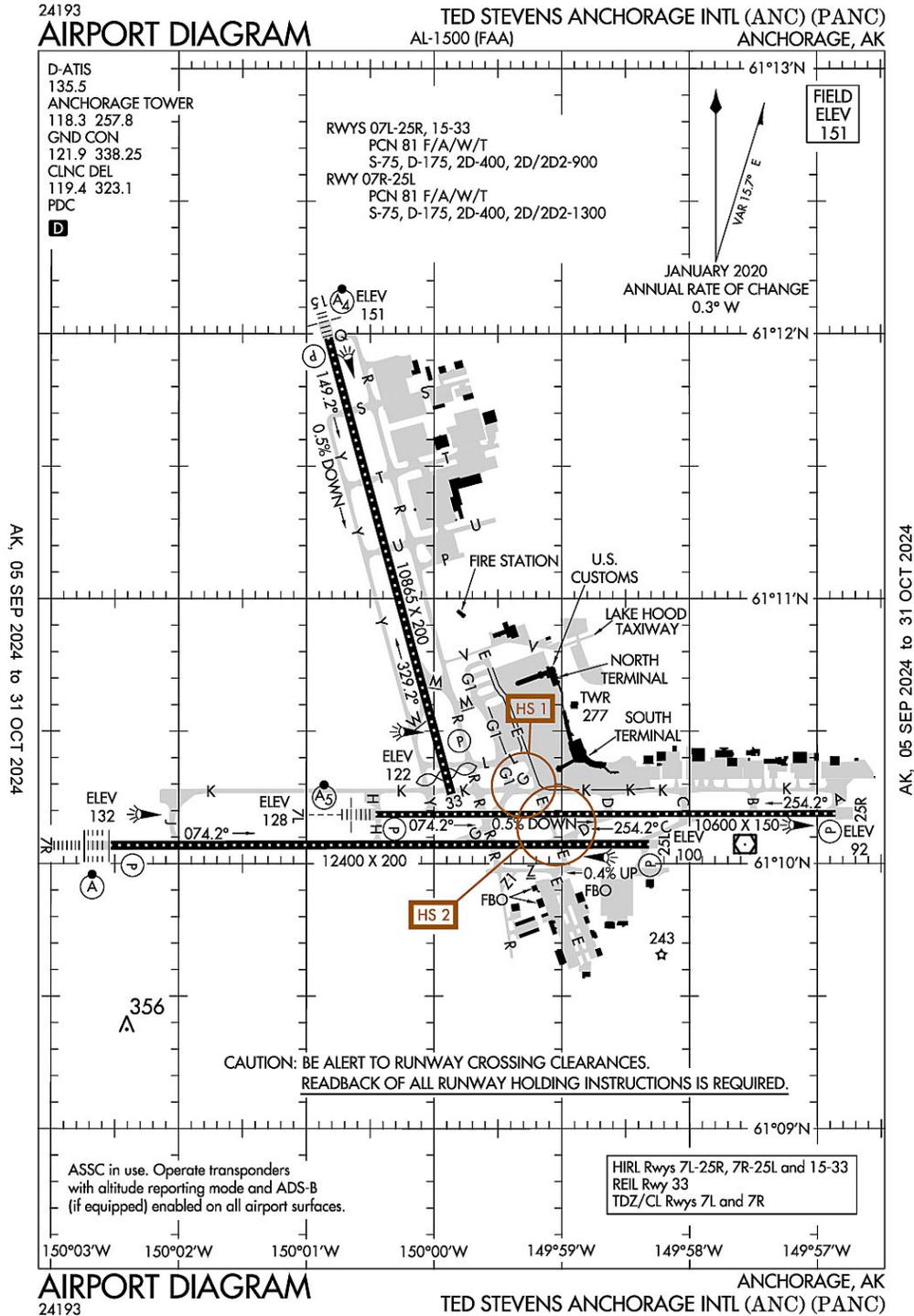
<p>Runways</p> <table border="0" style="width: 100%;"> <tr> <td style="text-align: center;"> Hard Surface </td> <td style="text-align: center;"> Other Than Hard Surface </td> <td style="text-align: center;"> Stopways, Taxiways, Parking Areas </td> <td style="text-align: center;"> Metal Surface </td> </tr> <tr> <td style="text-align: center;"> Closed Runway </td> <td style="text-align: center;"> Closed Surface </td> <td style="text-align: center;"> Under Construction </td> <td style="text-align: center;"> Water Runway </td> </tr> </table> <p>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.</p> <p> uni-directional bi-directional Jet Barrier </p> <p>ARRESTING SYSTEM (EMAS)</p> <p>REFERENCE FEATURES</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 80%;">Displaced Threshold.....</td> <td style="text-align: center;"></td> </tr> <tr> <td>Hot Spot</td> <td style="text-align: center;"></td> </tr> <tr> <td>Runway Holding Position Markings.....</td> <td style="text-align: center;"></td> </tr> <tr> <td>Buildings.....</td> <td style="text-align: center;"></td> </tr> <tr> <td>24-Hour Self-Serve Fuel ##.....</td> <td style="text-align: center;"></td> </tr> <tr> <td>Tanks.....</td> <td style="text-align: center;"></td> </tr> <tr> <td>Obstructions.....</td> <td style="text-align: center;"></td> </tr> <tr> <td>Airport Beacon #.....</td> <td style="text-align: center;"></td> </tr> <tr> <td>Runway Radar Reflectors.....</td> <td style="text-align: center;"></td> </tr> <tr> <td>Control Tower #.....</td> <td style="text-align: center;">TWR </td> </tr> </table> <p># When Control Tower and Rotating Beacon are co-located, Beacon symbol will be used and further identified as TWR.</p> <p>## A fuel symbol is shown to indicate 24-hour self-serve fuel available, see appropriate Chart Supplement for information.</p> <p>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)</p> <p>Runway Weight Bearing Capacity/or 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</p>	 Hard Surface	 Other Than Hard Surface	 Stopways, Taxiways, Parking Areas	 Metal Surface	 Closed Runway	 Closed Surface	 Under Construction	 Water Runway	Displaced Threshold.....		Hot Spot		Runway Holding Position Markings.....		Buildings.....		24-Hour Self-Serve Fuel ##.....		Tanks.....		Obstructions.....		Airport Beacon #.....		Runway Radar Reflectors.....		Control Tower #.....	TWR	<p>Helicopter Alighting Areas </p> <p>Negative Symbols used to identify Copter Procedures landing point..... </p> <p>NOTE: Landmark features depicted on Copter Approach insets and sketches are provided for visual reference only.</p> <p>Runway TDZE elevation.....TDZE 123</p> <p style="text-align: right;">← 0.3% DOWN</p> <p>Runway Slope.....0.8% UP</p> <p style="text-align: right;">(shown when runway slope is greater than or equal to 0.3%)</p> <p>NOTE: Runway Slope measured to midpoint on runways 8000 feet or longer.</p> <p> 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.</p> <p>Approach light symbols are shown in the Flight Information Handbook.</p> <p>Airport diagram scales are variable.</p> <p>True/magnetic North orientation may vary from diagram to diagram</p> <p>Coordinate values are shown in 1 or ½ minute increments. They are further broken down into 6 second ticks, within each 1 minute increments.</p> <p>Positional accuracy within ±600 feet unless otherwise noted on the chart.</p> <p>Runway length depicted is the physical length of the runway (end-to-end, including displaced thresholds if any) but excluding areas designated as stopways.</p> <p>A symbol is shown to indicate runway declared distance information available, see appropriate Chart Supplement for distance information.</p>
 Hard Surface	 Other Than Hard Surface	 Stopways, Taxiways, Parking Areas	 Metal Surface																										
 Closed Runway	 Closed Surface	 Under Construction	 Water Runway																										
Displaced Threshold.....																													
Hot Spot																													
Runway Holding Position Markings.....																													
Buildings.....																													
24-Hour Self-Serve Fuel ##.....																													
Tanks.....																													
Obstructions.....																													
Airport Beacon #.....																													
Runway Radar Reflectors.....																													
Control Tower #.....	TWR																												

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

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: 61-10-26.705N / 149-59-53.295W
- 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: ANGIE SPEAR
BOX 196960
ANCHORAGE, AK 99519 (907-266-2600)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 100LL A A1
- 2.4.5 Hangar Space: YES
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 4/1/2005
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 07L
- 2.12.2 True Bearing: 90
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 128.2

- 2.12.1 Designation: 25R
- 2.12.2 True Bearing: 270
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 91.8

- 2.12.1 Designation: 07R
- 2.12.2 True Bearing: 90
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 131.7

2.12.1 Designation: 25L
2.12.2 True Bearing: 270
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 114.6

2.12.1 Designation: 15
2.12.2 True Bearing: 165
2.12.3 True Dimensions: 10865 ft x 200 ft
2.12.4 PCN: 81 F/A/W/T
2.12.5 Coordinates: 61-11-59.03N / 150-00-52.31W
2.12.6 Threshold Elevation: 151.3
2.12.6 Touchdown Zone Elevation: 151.4

2.12.1 Designation: 33
2.12.2 True Bearing: 345
2.12.3 True Dimensions: 10865 ft x 200 ft
2.12.4 PCN: 81 F/A/W/T
2.12.5 Coordinates: 61-10-15.75N / 149-59-54.49W
2.12.6 Threshold Elevation: 121.7
2.12.6 Touchdown Zone Elevation: 120.8

AD 2.13 Declared Distances

2.13.1 Designation: 07L
2.13.2 Take-off Run Available: 10600
2.13.3 Take-off 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 Take-off Run Available: 10600
2.13.3 Take-off 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 Take-off Run Available: 10900
2.13.3 Take-off 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 Take-off Run Available: 12400
2.13.3 Take-off 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 Take-off Run Available: 10865
2.13.3 Take-off Distance Available: 10865
2.13.4 Accelerate-Stop Distance Available: 10000
2.13.5 Landing Distance Available: 10000

2.13.1 Designation: 33
2.13.2 Take-off Run Available: 10865
2.13.3 Take-off Distance Available: 11965
2.13.4 Accelerate-Stop Distance Available: 10865
2.13.5 Landing Distance Available: 10400

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
2.14.2 Approach Lighting System:
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
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 15
2.14.2 Approach Lighting System: MALSF
2.14.4 Visual Approach Slope Indicator System: P4R

2.14.1 Designation: 33
2.14.2 Approach Lighting System:
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 Channel: 119.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 323.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/S
2.18.3 Channel: 128.65
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS
2.18.3 Channel: 135.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 338.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 118.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 257.8

2.18.5 Hours of Operation: 24

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 Slop for runway 07L. Magnetic variation: 16E

2.19.2 ILS Identification: TGN

2.19.5 Coordinates: 61-10-13.93N / 150-00-09.62W

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: 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 Slop 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: 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 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: Glide Slope for runway 15. Magnetic variation: 16E
2.19.2 ILS Identification: BSC
2.19.5 Coordinates: 61-11-46.76N / 150-00-54.42W
2.19.6 Site Elevation: 151.3 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

General Remarks

NON-RADIO NIGHT OPS NA; NON-PARROT OPS 1 HR PPR; NON-RADIO OPS PPR; MUST PRVD ETA & REMAIN WI 15 MIN - ATCT 907-271-2700 WKDAYS 0730-1600; AFT HR & HOL - FAA 907-271-5936.

NOISE SENSITIVE AREA S & E; RWY 07R, 07L, 15 TBJT/TURBOFAN DEP EMPLOY FAA CLOSE IN NADP OR ICAO PROC B NADP WHEN SAFETY PERMITS; INFO - AMGR.

R TURN OUT OF RAMP PRKG R-2 THRU R-4 NA.

COMPASS CLBR PAD N/A.

BIRDS INVOF ARPT SPRING - FALL.

TWY V, SCTY GATE E OF TWY E - PCL 121.75 5 TIMES; TWY H-2, LAKESHORE TWY GATES - PCL 121.75 3 TIMES; IF INOP ALLOW 30 SEC RESET & NOTIFY LHD OPS - 907-266-2600.

PTNS OF TWY K BTN TWY H & J NOT VIS FM ATCT.

PPR FOR GND TIME GTR THAN 4 HR AT ARPT CTL SPOTS; APVL REQ 48 HR PRIOR TO DEP FOR ANC - GATE MGMT 907 266-2633 OR EMAIL: DOT.AIA.OPS.GATEMANAGEMENT@ALASKA.GOV.

TSNT MIL PPR.

TWY V RSTRD TO 12500 LB OR LESS; SUBJECT TO JET BLAST W OF TWY E.

489 FT UNLGTD TWR 2.5 MI NE.

ANCHORAGE WX CAMERA AVBL ON INTERNET AT [HTTPS://WEATHERCAMS.FAA.GOV](https://weathercams.faa.gov).

FLT PLANNING IN ANCHORAGE BOWL AREA - RCO 122.55.

FAA RAMP PPR WITH ANC FIFO MON-FRI 0600-1430 – 135.85 OR 907-271-2414 OR AVN 405-954-9780.

COLD TEMPERATURE AIRPORT. ALTITUDE CORRECTION REQUIRED AT OR BELOW -21C.

WSO – 907-266-5105.

P RAMP PRKG SPOTS P1/2/3 JET BLAST HAZ; EXIT USING MIN THRUST REQ.

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)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: J8
- 2.4.5 Hangar Space:
- 2.4.6 Repair Facilities: None

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: None
- 2.6.2 Rescue and Firefighting Services: None

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 06
- 2.12.2 True Bearing: 80
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 174.5

- 2.12.1 Designation: 24
- 2.12.2 True Bearing: 260
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 201.3

- 2.12.1 Designation: 16
- 2.12.2 True Bearing: 180
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 212.4

- 2.12.1 Designation: 34
- 2.12.2 True Bearing: 360
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 194.1

AD 2.13 Declared Distances

- 2.13.1 Designation: 06
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

- 2.13.1 Designation: 24
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

- 2.13.1 Designation: 16
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

- 2.13.1 Designation: 34
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

AD 2.14 Approach and Runway Lighting

- 2.14.1 Designation: 06
- 2.14.2 Approach Lighting System: ALSF1
- 2.14.4 Visual Approach Slope Indicator System: P4L

- 2.14.1 Designation: 24
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System: P4L

- 2.14.1 Designation: 16
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System: P4L

- 2.14.1 Designation: 34
- 2.14.2 Approach Lighting System:
- 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 Channel: 124.3

2.18.5 Hours of Operation: 0700–2300

2.18.1 Service Designation: ATIS

2.18.3 Channel: 273.5

2.18.5 Hours of Operation: 0700–2300

2.18.1 Service Designation: CD/P

2.18.3 Channel: 128.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 306.925

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 275.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 127.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 352.05

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: OPS (11AF RESCUE COORD CNTR)

2.18.3 Channel: 123.1

2.18.5 Hours of Operation:

2.18.1 Service Designation: OPS (11AF RESCUE COORD CNTR)

2.18.3 Channel: 282.8

2.18.5 Hours of Operation:

2.18.1 Service Designation: OPS (11AF COMD CEN)

2.18.3 Channel: 381

2.18.5 Hours of Operation:

2.18.1 Service Designation: OPS (ARTIC WARRIOR OPS)

2.18.3 Channel: 381

2.18.5 Hours of Operation:

2.18.1 Service Designation: PMSV METRO

2.18.3 Channel: 346.6

2.18.5 Hours of Operation:

2.18.1 Service Designation: PTD

2.18.3 Channel: 134.8

2.18.5 Hours of Operation:

2.18.1 Service Designation: PTD

2.18.3 Channel: 372.2

2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: Glide Slop for runway 06. Magnetic variation: 18E

2.19.2 ILS Identification: EDF

2.19.5 Coordinates: 61-15-01.2N / 149-50-17W

2.19.6 Site Elevation: 169.2 ft

2.19.1 ILS Type: Localizer for runway 06. Magnetic variation: 18E

2.19.2 ILS Identification: EDF

2.19.5 Coordinates: 61-15-14.33N / 149-46-52.29W

2.19.6 Site Elevation: 212.3 ft

2.19.1 Navigation Aid Type TACAN. Magnetic variation: 18E

2.19.2 Navigation Aid Identification: EDF

2.19.5 Coordinates: 61-15-18.03N / 149-46-09.03W

2.19.6 Site Elevation: 226.2 ft

General Remarks

H24 WX - D317-552-4903/4397/C907-552-4903/4397.

LMTD WKEND MAINT SVC.

CHANGE JET ACFT 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.

LCL SORTIES OR DEPLOYING TO OR OUT OF ELMENDORF AFB MUST HAVE MAINT PSNL REQ TO
CMPLT OPS; INCLG DE-ICE PSNL DURG COLD WX. DEPLOYED ACFT TRANS ALERT SUPPORT NA BYD
INITIAL BLOCK IN.

SUBMIT PPR FORM IN THE PAED GIANT REPORT STIF TO BASEOPS3@US.AF.MIL NO EARLIER THAN 30
DAYS & NO LATER THAN 48 HR PRIOR TO ARR. PPR ISSUED NO EARLIER THAN 7 DAYS PRIOR TO ARR.

DURG VMC DEP/MISSED APCHS/GO AROUNDS; ACFT SHALL MNTN AT OR BLW 1200 FT MLS UNTIL
DEP END OF RWY 06.

NON-AMC RQRG 732 AMS MAINT SVC EXP PSBL DELAY.

RCR/RSC & FLD RCR - ATCT. RWY COND CODE & FICON NOT RPTD.

OIL: O-123, O-128, O-133, O-148, O-156, JOAP.

NORMAL BARRIER CONFIGURATION DURG FTR FLY WINDOW LEAVES 5675 FT BTW CABLES ON RWY 06/24, OUTSIDE OF FTR FLY WINDOWS THERE IS 7658 FT BTW CABLES.

ACFT REQ CABLES DE-RIGGED CTC BASE OPS 24 HR PRIOR TO ARR OR REQ PRIOR TO PPR ISSUED.

AIRFIELD MGMT COMSEC STORAGE NA; COMSEC STORAGE – COMMAND POST D317-552-3000.

PREVENTIVE MAINT: TACAN WED & FRI 1600-1700Z; ILS TUE & THU 1500-1700Z; PAR SAT-SUN 1800-2000Z; ASR SAT-SUN 2000-2200.

FQT ACT IN R2203; WHEN UNA TO AVOID CTC ATCT.

JOAP, JOINT OIL ANALYSIS PROGRAM AVBL. LHNIT, LOW & HIGH PRES NITROGEN SVCG AVBL. JOAP & LOW & HIGH PRES NITROGEN SVC DURG DUTY HOURS; AFT HR ON REQ. DE-ICE, TYPE 1 DE-ICE LIFTOFF P-88; TYPE 4 ANTI-ICE CLARIANT SAFEWING MP-LAUNCH.

CTN: UNLGT TRRN 0 FT AGL/341 FT MSL 1909 FT PRIOR TO THR 1914 FT R OF COURSE.

CUST & AG INSP RQR TO CTC BASE OPS AT LEAST 90 MIN PRIOR TO ARR.

TRAN ALERT SVC LMTD TO POL SVC, INTAKE, MAGNETIC CHIP DETECTOR & EOR INSP.

HOLD SHORT LINE SIGNS NA ON INTERSECTING RWYS.

CTN: RIDGE EXT DG FM 260-020 DEG 1-2 MI FM TWR PREVENTS FOG OBS OVR KNIK ARM. VIS MAY DROP RAPIDLY AS FOG POURS OVR RIDGE.

TWY N2 & N5 CLSD.

UNA TO MEET R2203 DEP RSTRNS ADVISE ATC PRIOR; CSDR RWY 24 DEP. SEE ATC NOTES IN GIANT RPRT.

QUIET HR 0630-1400Z WKDAY; 0630-1600Z WKEND & HOL; AMC ACFT EXEMPT.

HGR SPACE & WARM STORAGE LMTD OCT-MAY.

IFF SVC AVBL.

CTN: IFR OPS BTW 1500-2000 MSL FM BGQ 092/10 INTO R2203-EDF 320/07 INVOF BIG LAKE, PALMER, BIRCHWOOD, GOOSEBAY & WASILLA AK; MON-SAT 0300-0800Z++ & TUES & THU 1800-2200Z++.

EXC ELMENDORF MAJCOM EXER, DEPLOYED OR STAGED UNITS CTC 3 WG SKED D317-552-2406 OR C907-552-2406 ASAP FOR LCL AREA BRIEFING, MAINT SPONSORSHIP & VISITING UNIT SMTN REQ FORM FOR 3 OG/CC APVL PRIOR TO LCL OPS.

FTR ARR EXP RDCD SEPN; SAME TYPE ACFT & DALGT 3000 FT; DISSIMILAR ACFT &/OR NGT 6000 FT; AHD/BHND FRMN LDG 6000 FT.

NVD OPS RWY 06/24 MON-FRI 0400-1000Z++.

SPEC ATC RULES FAR PART 93; SEE REG NOTICES IN SUPPL.

DV SPOTS 1 & 3 LMTD TO WINGSPANS 136 FT OR LESS.

PPR NON JBER ASGND ACFT EXC LCL TRNG NON-EXPLOSIVE LADEN AMCC ACFT. NON-FUNDED USTRANSCOM, AMC, 18AF OR MOV PRIORITY 3A1 OR BLW PPR BFR ARR - AMGR.

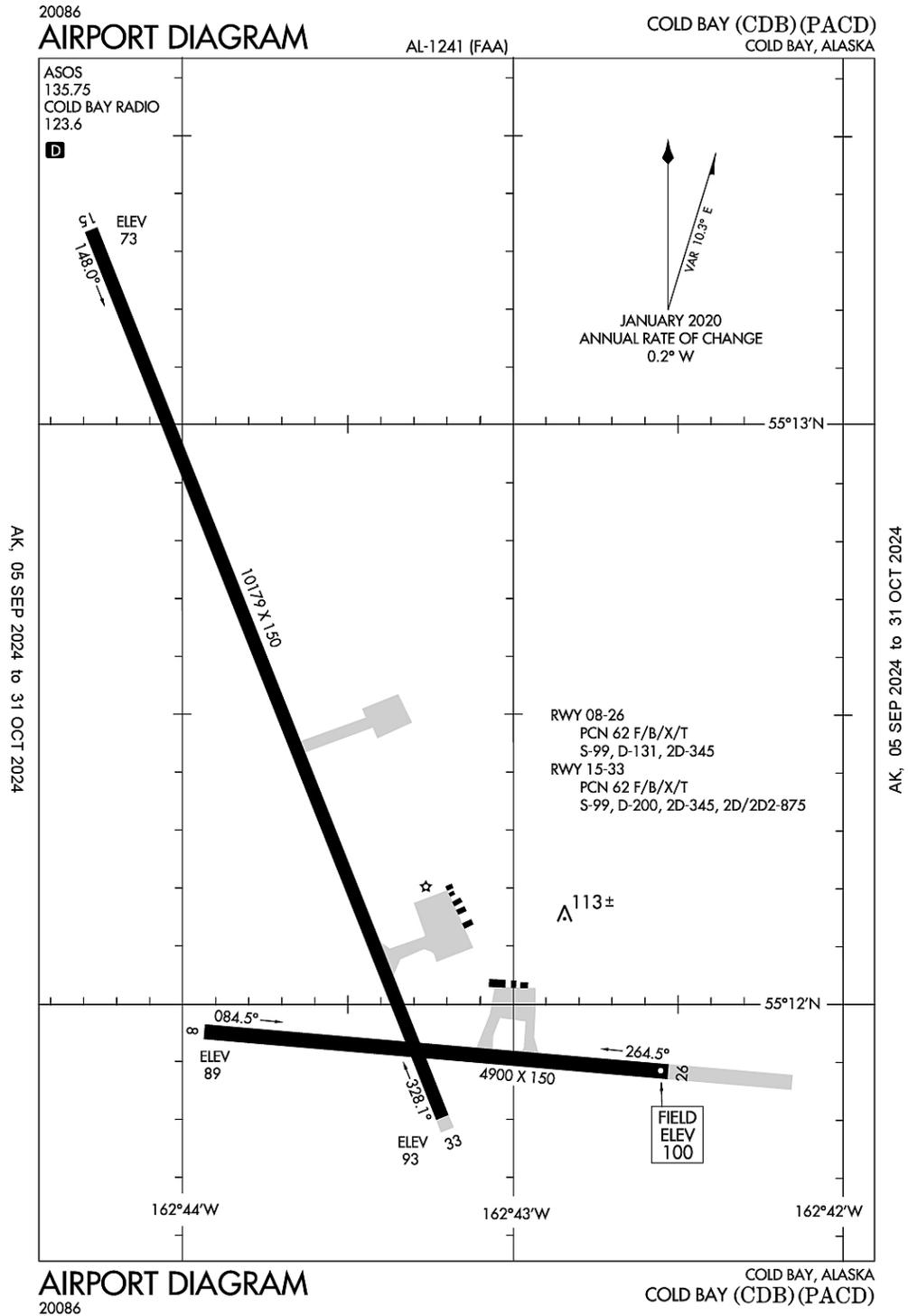
AMC ASGND MSN ACFT EXP MAINT SVC BY 732 AMS.

MNTN IDLE PWR ON OUTBOARD ENG DURG TAX.

FLUID: PRESAIR & NITROGEN-LHNIT.

ELBOW END OF RWY & TWY R RSTRD TO FIGHTERS ONLY WHEN FIGHTERS STAGED ON ELBOW END OF RWY.

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)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 All Months, MON – SAT Days, 0700 – 1800 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: None

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 4/1/2005
- 2.6.2 Rescue and Firefighting Services: ARFF Index-B

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 08
- 2.12.2 True Bearing: 95
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 95.2

- 2.12.1 Designation: 26
- 2.12.2 True Bearing: 275
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 99.5

- 2.12.1 Designation: 15
- 2.12.2 True Bearing: 158
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 75

- 2.12.1 Designation: 33
- 2.12.2 True Bearing: 338
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 93.4

AD 2.13 Declared Distances

- 2.13.1 Designation: 08
- 2.13.2 Take-off Run Available: 4900
- 2.13.3 Take-off 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 Take-off Run Available: 4900
- 2.13.3 Take-off Distance Available: 4900
- 2.13.4 Accelerate-Stop Distance Available: 4900
- 2.13.5 Landing Distance Available: 4900

- 2.13.1 Designation: 15
- 2.13.2 Take-off Run Available: 10179
- 2.13.3 Take-off Distance Available: 10179
- 2.13.4 Accelerate-Stop Distance Available: 10179
- 2.13.5 Landing Distance Available: 10179

- 2.13.1 Designation: 33
- 2.13.2 Take-off Run Available: 10179
- 2.13.3 Take-off Distance Available: 10179
- 2.13.4 Accelerate-Stop Distance Available: 10179
- 2.13.5 Landing Distance Available: 10179

AD 2.14 Approach and Runway Lighting

- 2.14.1 Designation: 08
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System: P4L

- 2.14.1 Designation: 26
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System: P4L

- 2.14.1 Designation: 15
- 2.14.2 Approach Lighting System: MALSR
- 2.14.4 Visual Approach Slope Indicator System:

- 2.14.1 Designation: 33
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System: P4L

AD 2.18 Air Traffic Services Communication Facilities

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

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 10E

2.19.2 Navigation Aid Identification: CDB

2.19.5 Coordinates: 55-16-02.2606N / 162-46-26.3866W

2.19.6 Site Elevation: 98.5 ft

General Remarks

PERSONNEL & EQUIP ON RWY.

SNOW, ICE REMOVAL & ARPT HAZ RPTG DURG DUTY HR UNLESS PRIOR ARNGMT IN WRITING - AMGR.

ARPT SAND LRGR GRADE THAN FAA RCMDD/SEE AC150/5200-30.

NWS BALLOON LAUNCH FAC LCTD ON ARPT; SEE INSIDE BACK COVER FOR DETAILS.

WX CAMERA AVBL - [HTTPS://WEATHERCAMS.FAA.GOV](https://weathercams.faa.gov)

NO CUSTOMS AVBL; 24-48 HR WRITTEN PPR FOR FOREIGN ARR RFLG STOPS - FAX 907-271-2684 OR 907-271-2686.

UNLGTD TWR 0.4 NM N; UNLGTD TWR 0.9 NM S; UNLGTD TWR 4.8 NM NW.

BRAKELOCK TURNS NA.

ROTG BCN UNMON WHEN FSS UNMANNED.

CFR INDEX B; MAY BE REDUCED FOR ACFT LESS THAN 90 FT.

BIRDS INVOF ALL RWY APCH ENDS.

Fairbanks, AK
Eielson AFB
ICAO Identifier PAEI

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 64-39-56.303N / 147-06-05.149W
- 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)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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:
- 2.4.5 Hangar Space: YES
- 2.4.6 Repair Facilities: None

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: None
- 2.6.2 Rescue and Firefighting Services: None

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 32
- 2.12.2 True Bearing: 339
- 2.12.3 True Dimensions: 14530 ft x 150 ft
- 2.12.4 PCN: 61 R/C/W/T
- 2.12.5 Coordinates: 64-38-49.47N / 147-05-05.86W
- 2.12.6 Threshold Elevation: 547.5
- 2.12.6 Touchdown Zone Elevation: 547.5

- 2.12.1 Designation: 14
- 2.12.2 True Bearing: 159
- 2.12.3 True Dimensions: 14530 ft x 150 ft
- 2.12.4 PCN: 61 R/C/W/T
- 2.12.5 Coordinates: 64-41-03.13N / 147-07-04.52W
- 2.12.6 Threshold Elevation: 533.8
- 2.12.6 Touchdown Zone Elevation: 536.7

AD 2.13 Declared Distances

- 2.13.1 Designation: 32
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

- 2.13.1 Designation: 14
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

AD 2.14 Approach and Runway Lighting

- 2.14.1 Designation: 32
- 2.14.2 Approach Lighting System: ALSF1
- 2.14.4 Visual Approach Slope Indicator System: P4L

- 2.14.1 Designation: 14
- 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 Channel: 119.9
- 2.18.5 Hours of Operation: 1600-0800Z++

- 2.18.1 Service Designation: ATIS
- 2.18.3 Channel: 273.5
- 2.18.5 Hours of Operation: 1600-0800Z++

- 2.18.1 Service Designation: CD/P
- 2.18.3 Channel: 343.7
- 2.18.5 Hours of Operation: 1600-0800Z++

- 2.18.1 Service Designation: COMD POST (IGLOO OPS)
- 2.18.3 Channel: 259.5
- 2.18.5 Hours of Operation:

- 2.18.1 Service Designation: COMD POST (IGLOO OPS, HAVE QUICK)
- 2.18.3 Channel: 289.4
- 2.18.5 Hours of Operation:

- 2.18.1 Service Designation: GND/P
- 2.18.3 Channel: 121.8
- 2.18.5 Hours of Operation: 1600-0800Z++

- 2.18.1 Service Designation: GND/P
- 2.18.3 Channel: 275.8
- 2.18.5 Hours of Operation: 1600-0800Z++

- 2.18.1 Service Designation: LCL/P
- 2.18.3 Channel: 127.2
- 2.18.5 Hours of Operation: 1600-0800Z++

- 2.18.1 Service Designation: LCL/P
- 2.18.3 Channel: 352.05
- 2.18.5 Hours of Operation: 1600-0800Z++

2.18.1 Service Designation: OPS (SOURDOUGH)
2.18.3 Channel: 139.6
2.18.5 Hours of Operation:

2.18.1 Service Designation: OPS (168 ANG OPS)
2.18.3 Channel: 238.3
2.18.5 Hours of Operation:

2.18.1 Service Designation: OPS (168 ANG OPS)
2.18.3 Channel: 293.6
2.18.5 Hours of Operation:

2.18.1 Service Designation: OPS (SOURDOUGH)
2.18.3 Channel: 359.15
2.18.5 Hours of Operation:

2.18.1 Service Designation: PTD
2.18.3 Channel: 139.3
2.18.5 Hours of Operation:

2.18.1 Service Designation: PTD
2.18.3 Channel: 372.2
2.18.5 Hours of Operation:

2.18.1 Service Designation: RANGE CTL (SUAIS RADIO)
2.18.3 Channel: 125.3
2.18.5 Hours of Operation:

2.18.1 Service Designation: SFA
2.18.3 Channel: 118.6
2.18.5 Hours of Operation:

2.18.1 Service Designation: SFA
2.18.3 Channel: 259.1
2.18.5 Hours of Operation:

2.18.1 Service Designation: SFA
2.18.3 Channel: 318.2
2.18.5 Hours of Operation:

2.18.1 Service Designation: SFA
2.18.3 Channel: 320.1
2.18.5 Hours of Operation:

2.18.1 Service Designation: SFA
2.18.3 Channel: 324.3
2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: Glide Slope for runway 14. Magnetic variation: 19E

2.19.2 ILS Identification: EIL
2.19.5 Coordinates: 64-40-51.57N / 147-07-06.54W
2.19.6 Site Elevation: 532.6 ft

2.19.1 ILS Type: Localizer for runway 14. Magnetic variation: 19E
2.19.2 ILS Identification: EIL
2.19.5 Coordinates: 64-38-33.06N / 147-04-51.3W
2.19.6 Site Elevation: 548.9 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: 64-41-22.09N / 147-07-21.39W
2.19.6 Site Elevation: 528.9 ft

2.19.1 Navigation Aid Type TACAN. Magnetic variation: 19E
2.19.2 Navigation Aid Identification: EIL
2.19.5 Coordinates: 64-39-13.66N / 147-05-38.32W
2.19.6 Site Elevation: 542.4 ft

General Remarks

SEE AP1 SUP RMKS: BASE OPS COMSEC RESPONSIBILITY NA; LTD SECRET & COMSEC STORAGE
AVBL. TOP SECRET & COMSEC INFO – COMMAND POST D317-377-1500.

ALASKA ANG 168TH AREFS OPS – D317-377-8800/C907-377-8800. ANG OPS H24 – D317-377-1861/3201.

AIR TERM & GND HANDLING SVC 1630-0030Z++ WKDAY; PPR OR EXP DELAY – AFLD MGMT.

EXTSV FUEL DELAYS DURG RED FLAG ALASKA EXER APR-OCT.

CARGO & ACR CTC COMMAND POST 3 HR PRIOR & 30 MIN PROIR TO LNDG.

MAINT OPS CNTR PPR 48 HR FM ETA – D317-377-1205. UHF PREF PAT FREQ.

FAIRBANKS FSS – 474-0137. FLT ADZY OR RSTRD & MIL OPRG AREA STATUS – EIELSON RANGE CTL
SUAIS RADIO 125.3 OR 1-800-758-8723.

AVOID SMALL ARMS RANGE 2.5 NM E OF RWY 32 END; WKEND 1700-0100Z++; SFC – 3500 FT AGL.

CRYPTO MTRL TSNT CREW NOT AVBL. VIP 30 MIN PPR WITH CHOCK TIME – AFLD MGMT. LTD FLEET
SVC. NO POTABLE WATER.

PRIME KNIGHT NOT AVBL.

CTN: NSTD LGT; 2000 FT RWY EDGE LGT BTN D – C TWY; 12 FT FM RWY EDGE.

PTNS OF APRON O ROW & S RAMP NOT VIS FROM TWR.

FICON & RWY COND CODE NOT RPRTD.

BASH PHASE II APR, MAY, AUG & SEP. GULLS, DUCKS & GEESE POSE HAZARD WHEN STANDING WATER ON FLD. RPT BIRD & ANIMAL STRIKES INVOF ARPT TO AFLD MGMT - D317-377-186, PTD OR 354 FW/SE D317-377-4110.

N & S BARRIER RUNOUT REDUCED TO 950 FT.

ARFF STATUS CRITICAL LVL OF SVC (CLS) 62% FOR USAF CAT 10; REDUCED LVL OF SVC (RLS) 81% FOR USAF CAT 9.

BIRD WATCH COND MOD LCL PAT LTD TO MIN RQR WITH OG/CC APVL; TGL, FORMATION TKOF/LNDG NA; LOW APCH LTD TO 300 FT AGL. BIRD WATCH COND SVR; TKOF, PAT & LNDG NA EXC EMERG.

PPR 5 DAYS - 24 HR PRIOR TO ARR - ARFLD MGMT D317-377-1861/C907-377-1861. PPR GOOD +/- 30 MIN ARR TIME; COORD PPR AFT TIME BY FONE OR PPR CNLD. EXP ARR TIME RSTRN EXC AIR EVAC & DV CODE 7 & UP.

MOOSE ON & INVOF RWY.

CONTINGENCY OPS - AMGR.

NO PALLET TRAINS LONGER THAN T3 WITH OVERHANG WILL BE ACPTD DUE TO 25K LOADER SUPPORT.

LOOP TWY E OF CORROSION HANGAR 1348 THRU 4/8 BAY AREA RSTRD TO WINGSPAN 45 FT OR LESS.

TSNT CTC PTD AT LEAST 30 MIN PRIOR TO ARR. EIELSON AFB IS A 1 MOG STATION.

TSNT WX BRIEF WHEN AFLD CLSD; 3 HR PN - 15 OWS D576-9755/C618-256-9755.

TRAN ALERT: TSNT MAINT LTD TO F16 SVCG UPON AIRCREW REQ. F16 THRU FLIGHT/BPO/PREFLIGHT INSP NA.

PACAF FTR ARR EXP RDCD RWY SEP; SIMILAR TYPE/DAY - 3000 FT; DISSIMILAR TYPE, NGT, WET RWY, BHND FRMN OR RCR LESS THAN 17 - 6000 FT; FTR LDG BHND NON FTR - 9000 FT; RCR VALIDATED AS COND WARRANT.

TRANS ALERT SVC AVBL H24.

CTN: FIRE HYDRANTS 64 FT NE OF TWY H CNTLN.

QUIET HR 0800-1500Z; UNCTLD TKOF/LDG NA; EXCEPTIONS RQR OG/CC APVL.

RADIO/NAV/WX RMRKS - (F) 1500-0700Z ++ DAILY.

PAEW ON RWY WHEN TWR UNMANNED.

LOAD/OFF LOAD ENG RUN NA. ERO SVC AVBL FOR AMC ACFT.

VHF PTD FREQ UNMNT.

DE-ICE TYPE 1 AVBL, ANTI-ICE TYPE 4 UNAVBL.

LCL OR DEPLOYING ACFT RQR MAINT PSNL TO COMPLETE OPS; INCL DE-ICE PSNL DURG COLD WX.
TRANS ALERT NA BYD INITIAL BLOCK IN.

WX SVC H24 EXC AFLD/TWR CLOSURE – D377-1160/3140/C907-377-1160/3140; AN/FMQ-19 AUTOMATED
OBS SYS AUGMENTED BY HUMAN OBSN. FMQ19 907-377-5846.

FILE FLT PLAN 2 HR BFR DEP. ARR RQR CUSTOMS 1.5 HR PPR – COMMAND POST. U.S. IMMIGRATION
SVC NOT AVBL.

OVHD TFC PAT ALT 2000 FT MSL; RECTANGULAR TFC PAT ALT 1500 FT MSL.

RWY 14/32 BAK-12 DEP END CABLES IN RAISED POSITION; BAK-12 AER 14/32 AVBL WITH 20 MIN PRI-
OR NOTICE. NORTH BARRIER RUNOUT REDUCED TO 950 FT, HOOK EQUIPPED ACFT BE ALERT.

ATTENDED CONTINUOUSLY. AFLD MGMT OPR H24; OBO 0800-1600Z. EXP DELAYS FOR AFLD SVCS
DUR FED HOL.

Fairbanks, AK
Fairbanks Intl
ICAO Identifier PAFA

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 64-39-56.303N / 147-06-05.149W
- 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)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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:
- 2.4.5 Hangar Space: YES
- 2.4.6 Repair Facilities: None

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: None
- 2.6.2 Rescue and Firefighting Services: None

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 32
- 2.12.2 True Bearing: 339
- 2.12.3 True Dimensions: 14530 ft x 150 ft
- 2.12.4 PCN: 61 R/C/W/T
- 2.12.5 Coordinates: 64-38-49.47N / 147-05-05.86W
- 2.12.6 Threshold Elevation: 547.5
- 2.12.6 Touchdown Zone Elevation: 547.5

- 2.12.1 Designation: 14
- 2.12.2 True Bearing: 159
- 2.12.3 True Dimensions: 14530 ft x 150 ft
- 2.12.4 PCN: 61 R/C/W/T
- 2.12.5 Coordinates: 64-41-03.13N / 147-07-04.52W
- 2.12.6 Threshold Elevation: 533.8
- 2.12.6 Touchdown Zone Elevation: 536.7

AD 2.13 Declared Distances

- 2.13.1 Designation: 32
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

- 2.13.1 Designation: 14
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

AD 2.14 Approach and Runway Lighting

- 2.14.1 Designation: 32
- 2.14.2 Approach Lighting System: ALSF1
- 2.14.4 Visual Approach Slope Indicator System: P4L

- 2.14.1 Designation: 14
- 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 Channel: 119.9
- 2.18.5 Hours of Operation: 1600-0800Z++

- 2.18.1 Service Designation: ATIS
- 2.18.3 Channel: 273.5
- 2.18.5 Hours of Operation: 1600-0800Z++

- 2.18.1 Service Designation: CD/P
- 2.18.3 Channel: 343.7
- 2.18.5 Hours of Operation: 1600-0800Z++

- 2.18.1 Service Designation: COMD POST (IGLOO OPS)
- 2.18.3 Channel: 259.5
- 2.18.5 Hours of Operation:

- 2.18.1 Service Designation: COMD POST (IGLOO OPS, HAVE QUICK)
- 2.18.3 Channel: 289.4
- 2.18.5 Hours of Operation:

- 2.18.1 Service Designation: GND/P
- 2.18.3 Channel: 121.8
- 2.18.5 Hours of Operation: 1600-0800Z++

- 2.18.1 Service Designation: GND/P
- 2.18.3 Channel: 275.8
- 2.18.5 Hours of Operation: 1600-0800Z++

- 2.18.1 Service Designation: LCL/P
- 2.18.3 Channel: 127.2
- 2.18.5 Hours of Operation: 1600-0800Z++

- 2.18.1 Service Designation: LCL/P
- 2.18.3 Channel: 352. 05
- 2.18.5 Hours of Operation: 1600-0800Z++

2.18.1 Service Designation: OPS (SOURDOUGH)
2.18.3 Channel: 139.6
2.18.5 Hours of Operation:

2.18.1 Service Designation: OPS (168 ANG OPS)
2.18.3 Channel: 238.3
2.18.5 Hours of Operation:

2.18.1 Service Designation: OPS (168 ANG OPS)
2.18.3 Channel: 293.6
2.18.5 Hours of Operation:

2.18.1 Service Designation: OPS (SOURDOUGH)
2.18.3 Channel: 359.15
2.18.5 Hours of Operation:

2.18.1 Service Designation: PTD
2.18.3 Channel: 139.3
2.18.5 Hours of Operation:

2.18.1 Service Designation: PTD
2.18.3 Channel: 372.2
2.18.5 Hours of Operation:

2.18.1 Service Designation: RANGE CTL (SUAIS RADIO)
2.18.3 Channel: 125.3
2.18.5 Hours of Operation:

2.18.1 Service Designation: SFA
2.18.3 Channel: 118.6
2.18.5 Hours of Operation:

2.18.1 Service Designation: SFA
2.18.3 Channel: 259.1
2.18.5 Hours of Operation:

2.18.1 Service Designation: SFA
2.18.3 Channel: 318.2
2.18.5 Hours of Operation:

2.18.1 Service Designation: SFA
2.18.3 Channel: 320.1
2.18.5 Hours of Operation:

2.18.1 Service Designation: SFA
2.18.3 Channel: 324.3
2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: Glide Slop for runway 14. Magnetic variation: 19E

2.19.2 ILS Identification: EIL
2.19.5 Coordinates: 64-40-51.57N / 147-07-06.54W
2.19.6 Site Elevation: 532.6 ft

2.19.1 ILS Type: Localizer for runway 14. Magnetic variation: 19E
2.19.2 ILS Identification: EIL
2.19.5 Coordinates: 64-38-33.06N / 147-04-51.3W
2.19.6 Site Elevation: 548.9 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: 64-41-22.09N / 147-07-21.39W
2.19.6 Site Elevation: 528.9 ft

2.19.1 Navigation Aid Type TACAN. Magnetic variation: 19E
2.19.2 Navigation Aid Identification: EIL
2.19.5 Coordinates: 64-39-13.66N / 147-05-38.32W
2.19.6 Site Elevation: 542.4 ft

General Remarks

WATERLANE IS CONTROLLED; CTC ATCT ON FREQ 118.3 FOR APPROVAL. WATERLANE THRESHOLD BUOYS ARE 500 FROM N AND S SHORES AND MARK WATERLANE. STEP TAXI PROHIBITED OUTSIDE OF WATERLANE. EAST OF WATERLANE IS UNCONTROLLED; AIRCRAFT MAY TAXI IN THIS AREA AT PILOT DISCRETION. RECOMMEND CTC CLNC DEL AS SOON AS PRACTICAL AFTER ENG START. SFC FROZEN IN WINTER, NOT MONITORED. LIMITED TRANSIENT FLOAT PLANE PARKING AVBL CTC 907-455-4571. MIGRATORY BIRDS IN THE VICINITY OF ARPT DURING SPRING THRU FALL.

ALL RWY HOLD LINES OBSCURED OCTOBER 1 THRU APRIL 1.

WX CAMERA AVBL ON INTERNET AT [HTTPS://WEATHERCAMS.FAA.GOV](https://weathercams.faa.gov).

NWS WEATHER BALLOON LAUNCH SITE 2000 FEET WEST OF MIDFIELD RUNWAY 02L/20R. LAUNCHES ARE TWICE DAILY AT 1100 AND 2300 HOURS UTC.

MILITARY CONTRACT FUEL AVBL.

FOR AVBLTY OF SUMMER GRAVEL STRIP RWY 02/20 AND WINTER SKI STRIP RWY 02/20 CONSULT LOCAL NOTAMS AND CTC TWR PRIOR TO ARRIVAL /DEPARTURE.

TWY B SECURITY GATE BETWEEN RWY 02L/20R AND TWY CHARLIE KEY 121.75 5 TIMES TO ACTIVATE. IF TWY B GATE INOPERATIVE, WAIT 30 SECONDS TO RESET AND TRY AGAIN. IF UNSUCCESSFUL, NOTIFY FAI OPS, 907-451-2300

COMPASS ROSE NOT CALIBRATED.

FOR TRANSIENT HELICOPTER PARKING CALL ARPT OPS 907-451-2300.

RWY 02R/20L & RWY GRVL/SKI 02/20 NOT AVBL FOR SCHEDULED OR UNSCHEDULED ACR OPNS WITH MORE THAN 30 PSGR SEATS.

FOR FLIGHTS IN MOAS EAST OF FAIRBANKS RECOMMEND CONTACTING EIELSON RANGR CONTROL ON 125.3/126.3 OR CALL 1-800-758-8723 FOR INFORMATION ON MILITARY ACTIVITIES.

COLD TEMPERATURE AIRPORT. ALTITUDE CORRECTION REQUIRED AT OR BELOW -29C.

ATCT LOCATED AT 64-48-39.438N 147-50-55.722W, ELEVATION 538 FT MSL.

BE ALERT FOR SNOW REMOVAL EQUIPMENT OPNS FM 1 OCT TO 15 MAY.

TRANSIENT PARKING EAST RAMP FOR ACFT WITH WINGSPAN LESS THAN 79 FT. NO TRANSIENT ACFT PARKING ON WEST RAMP, CTC APT OPS 907-451-2300 FOR INFO & MEDIVAC PARKING.

PPR FOR MIL ACFT UTILIZING HEAVY CARGO OR TRML APN, CTC APRT OPS

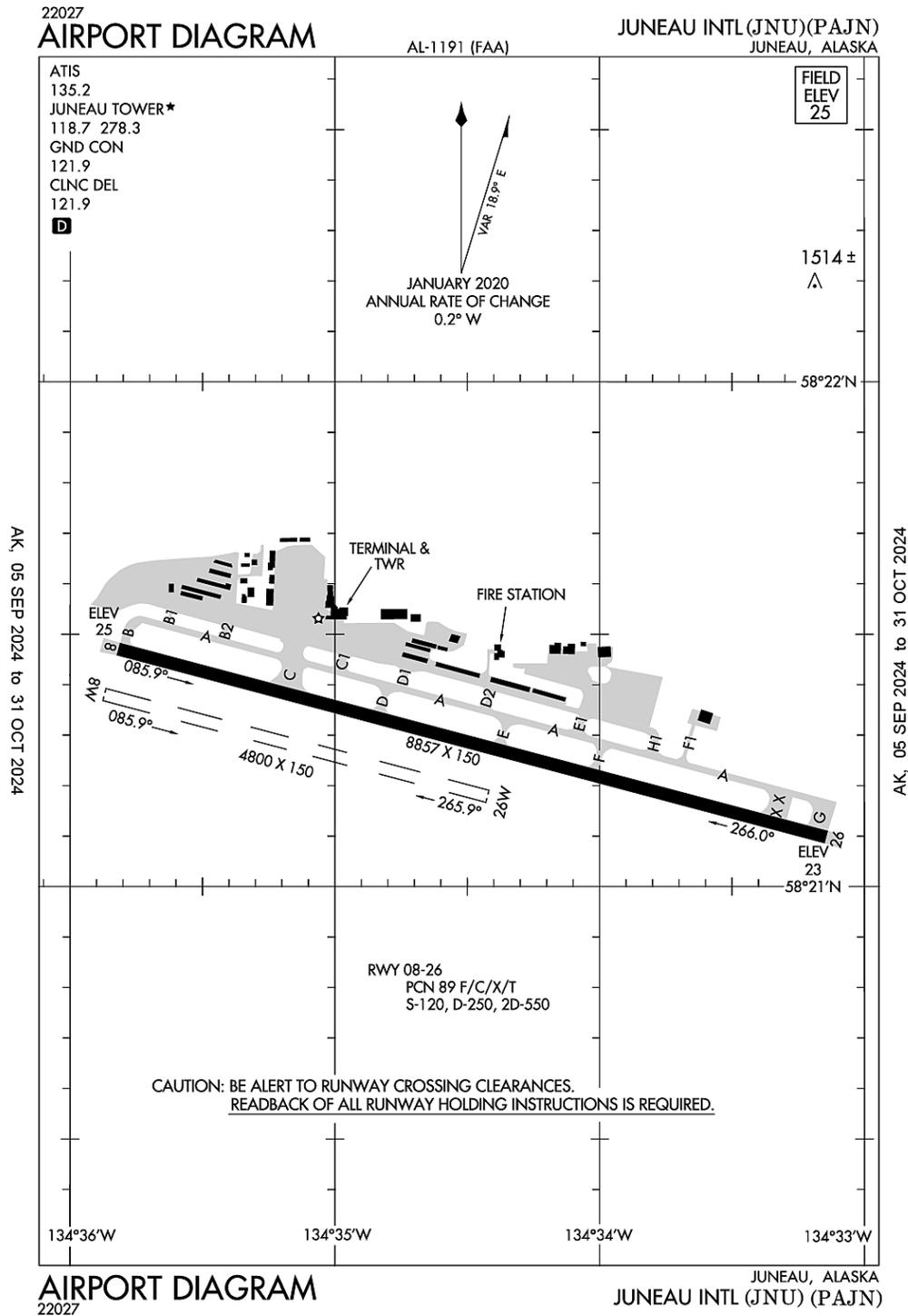
NOISE ABATEMENT PROCEDURES IN EFECT FM 2200-0800 ALL LARGE ACFT, TURBINE ENGINE, AND HEAVY ACFT UTILIZE RWY 02L FOR ARRS AND RWY 20R FOR DEPS WHEN WIND IS NOT AN OPERATIONAL FACTOR. CTC APRT OPNS FOR ENGINE RUN-UP LOCATIONS.

N/S TAXIWAY (TWY A) IS WEST AND PARALLEL TO RWY 02L/20R. BE ALERT TO AVOID LANDING ON TAXIWAY.

SEE ADDITIONAL PAGES UNDER NOTICES FOR TRSA AND FAIRBANKS AREA INFORMATION.

RWY 02R/20L IS LIMITED FOR USE BY ACFT DESIGN GROUP B II, ACFT OR SMALLER.

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)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 A1+
- 2.4.5 Hangar Space: YES
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 4/1/2005
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 08
- 2.12.2 True Bearing: 105
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 25

- 2.12.1 Designation: 26
- 2.12.2 True Bearing: 285
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 23.4

- 2.12.1 Designation: 08W
- 2.12.2 True Bearing:
- 2.12.3 True Dimensions: 4800 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 58-21-22.82N / 134-35-52.23W
- 2.12.6 Threshold Elevation:
- 2.12.6 Touchdown Zone Elevation:

- 2.12.1 Designation: 26W
- 2.12.2 True Bearing:
- 2.12.3 True Dimensions: 4800 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 58-21-10.71N / 134-34-25.26W
- 2.12.6 Threshold Elevation:
- 2.12.6 Touchdown Zone Elevation:

AD 2.13 Declared Distances

- 2.13.1 Designation: 08
- 2.13.2 Take-off Run Available: 8857
- 2.13.3 Take-off 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 Take-off Run Available: 8857
- 2.13.3 Take-off Distance Available: 8857
- 2.13.4 Accelerate-Stop Distance Available: 8457
- 2.13.5 Landing Distance Available: 8457

- 2.13.1 Designation: 08W
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

- 2.13.1 Designation: 26W
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

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

- 2.14.1 Designation: 26
- 2.14.2 Approach Lighting System: MALS
- 2.14.4 Visual Approach Slope Indicator System: P4L

- 2.14.1 Designation: 08W
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System:

- 2.14.1 Designation: 26W
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: ATIS

2.18.3 Channel: 135.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 1 APR – SEP 30 0600 – 2300, 1 OCT – MAR 31, 0700 – 2000.

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 1 APR – SEP 30 0600 – 2300, 1 OCT – MAR 31, 0700 – 2000.

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 118.7

2.18.5 Hours of Operation: 1 APR – SEP 30 0600 – 2300, 1 OCT – MAR 31, 0700 – 2000.

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 278.3

2.18.5 Hours of Operation: 1 APR – SEP 30 0600 – 2300, 1 OCT – MAR 31, 0700 – 2000.

2.18.1 Service Designation: LCL/S (SEASONAL USE ONLY)

2.18.3 Channel: 120.7

2.18.5 Hours of Operation: 1 APR – SEP 30 0600 – 2300, 1 OCT – MAR 31, 0700 – 2000.

2.18.1 Service Designation: NG OPS

2.18.3 Channel: 64.7

2.18.5 Hours of Operation:

2.18.1 Service Designation: NG OPS

2.18.3 Channel: 124.65

2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

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

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

General Remarks

FOR LCL CALL TO JUNEAU FSS CALL 907-789-7380.

TRANSIENT DOCK AVBL FOR PUBLIC USE FOR UP TO SIX ACFT, SW CORNER.

COLD TEMPERATURE AIRPORT. ALTITUDE CORRECTION REQUIRED AT OR BELOW 0C.

RY 08/26 SAND USED TO ENHANCE RY FRICTION MAY NOT MEET FAA SPECS.

TPA 1500 AGL FOR LARGE TURBINE ACFT; 1000 FT AGL FOR FIXED WING ACFT; 500 FT AGL FOR HELICOPTERS.

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).

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.

LENA POINT, PEDERSON HILL AND SISTERS ISLAND WX CAMERAS AVBL ON INTERNET AT [HTTPS://WEATHERCAMS.FAA.GOV](https://weathercams.faa.gov)

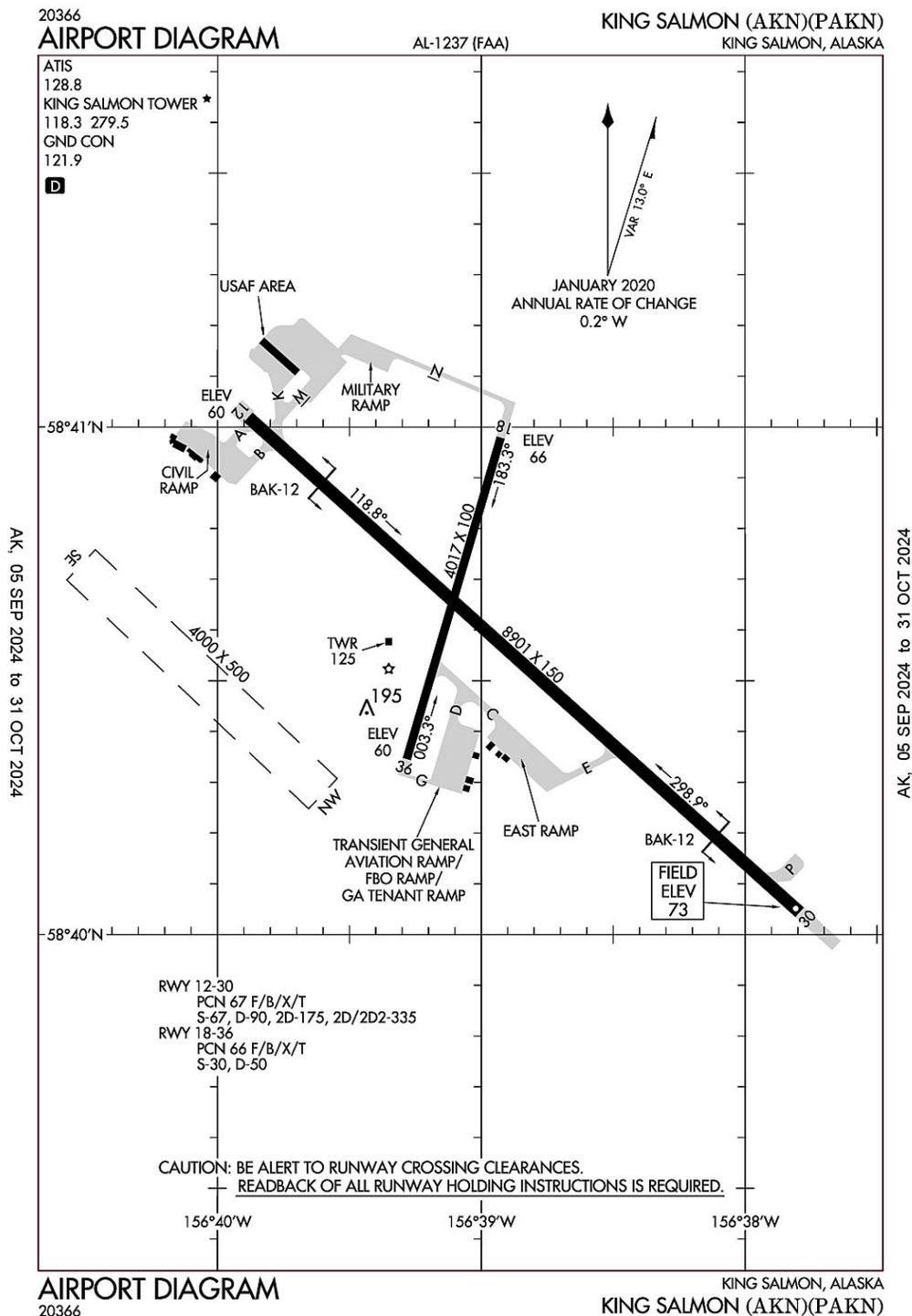
PARAGLIDING ACTIVITY 3 MILES N OF ARPT INVOF THUNDER MOUNTAIN & OVER GASTINEAU CHANNEL NEARS DOWNTOWN APR 15-OCT 1 6000 FT & BLO.

INCREASED HELICOPTER/LIGH ACFT ACTIVITY APR 15-OCT 1 ENTIRE LENGTH ON GASTINEAU CHANNEL & WITHIN 5 MILES OF ARPT.

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.

SEE SPECIAL NOTICES AND GENERAL NOTICES FOR ADDITIONAL INFORMATION ON OPNS IN JUNEAU AREA.

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: 11E (2025)
- 2.2.6 Airport Contact: FLOYD WILSON
PO BOX 65
KING SALMON, AK 99613 (907-246-3325)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 All Months, All Days, 0700-1700 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:
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 3/21/2005
- 2.6.2 Rescue and Firefighting Services: ARFF Index-B

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 30
- 2.12.2 True Bearing: 312
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 73.4

- 2.12.1 Designation: 12
- 2.12.2 True Bearing: 132
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 61.8

- 2.12.1 Designation: 18
- 2.12.2 True Bearing: 196
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 66.1

2.12.1 Designation: 36
2.12.2 True Bearing: 16
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 65.2

2.12.1 Designation: NW
2.12.2 True Bearing:
2.12.3 True Dimensions: 4000 ft x 500 ft
2.12.4 PCN:
2.12.5 Coordinates:
2.12.6 Threshold Elevation:
2.12.6 Touchdown Zone Elevation:

2.12.1 Designation: SE
2.12.2 True Bearing:
2.12.3 True Dimensions: 4000 ft x 500 ft
2.12.4 PCN:
2.12.5 Coordinates:
2.12.6 Threshold Elevation:
2.12.6 Touchdown Zone Elevation:

AD 2.13 Declared Distances

2.13.1 Designation: 30
2.13.2 Take-off Run Available: 8901
2.13.3 Take-off Distance Available: 8901
2.13.4 Accelerate-Stop Distance Available: 8501
2.13.5 Landing Distance Available: 8501

2.13.1 Designation: 12
2.13.2 Take-off Run Available: 8901
2.13.3 Take-off Distance Available: 8901
2.13.4 Accelerate-Stop Distance Available: 8501
2.13.5 Landing Distance Available: 8501

2.13.1 Designation: 18
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: 36
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: NW

2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: SE
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 30
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

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: 18
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 36
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: NW
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: SE
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: ATIS
2.18.3 Channel: 128.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 0800-2000 1 AUG-14 JUN. 0800-2200 15 JUN- 31 JUL.

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 118.3
2.18.5 Hours of Operation: 0800-2000 1 AUG-14 JUN. 0800-2200 15 JUN- 31 JUL.

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 279.5

2.18.5 Hours of Operation: 0800-2000 1 AUG-14 JUN. 0800-2200 15 JUN- 31 JUL.

2.18.1 Service Designation: PTD

2.18.3 Channel: 372.2

2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 12. Magnetic variation: 11E

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: 11E

2.19.2 ILS Identification: AKN

2.19.5 Coordinates: 58-40-57.3435N / 156-39-29.887W

2.19.6 Site Elevation: 63.5 ft

2.19.1 ILS Type: Localizer for runway 12. Magnetic variation: 11E

2.19.2 ILS Identification: AKN

2.19.5 Coordinates: 58-39-56.5549N / 156-37-32.3734W

2.19.6 Site Elevation: 77.7 ft

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 16E

2.19.2 Navigation Aid Identification: AKN

2.19.5 Coordinates: 58-43-28.9653N / 156-45-08.4483W

2.19.6 Site Elevation: 94.6 ft

General Remarks

USAF FAC CIV OPRD WITH LTD SUPPORT; CALL 24 HR PRIOR TO ARR FOR OPS HR; MIL CONFIRM FUEL RQMNTS 24-48 HR PRIOR.

FIGHTER ARR EXP RDCD SEP; SIMILAR APCH CHARCS & DALGT 3000 FT; DISSIMILAR APCH CHARCS & NGT 6000 FT; AHD/BHND FRMN LNDG 6000 FT.

FLOCKS OF LRG BIRDS INVOF DURG SEASON.

TWY P CLSD. APRON SPOTS 4 - 7 N OF MIL HANGAR CLSD EXC PROP ACFT.

RCR DURG 11TH AF FIGHTER FLYING WINDOW; COORD RCR WITH KING SALMON OPS 907-439-3001/907-439-6000. OPS RSTRD TO LOW APCH/FSL ONLY.

600 FT SAFETY AREA AER 12.

BUSINESS JET PRKG GTR THAN 1 HR 48 HR PPR.

FLIGHT ORIG OUTSIDE AK REFER TO USAF FCG; CSTMS NOT AVBL.

CIV TSNT PRKG ON SE RAMP ONLY; OTR PRKG GTR THAN 48 HR RQRS PERMIT.

LOCKED WHEEL TURN NA ALL SFCS.

MIL FIGHTER/EMERG DVRSN CTC WARRIOR/ELMENDORF SOF 395.15; NON FIGHTER/EMERG CTC KING SALMON OPS. 24 HR POINT MNTS CTAFF DURG OPS HR.

GA APRON PAVEMENT CRUMBLING; PSBL FOD HAZ. JET ACFT BE ALERT DURG RUN UP TO AVOID JET WASH DMG.

SNOW/ICE REMOVAL & ARPT HAZ COND RPRTD DURG ATND HR.

OFF PAVEMENT OPS BY ACFT & HEL NA AT ACR APRON. LNDG, TKOF OR PRKG FM DIRT OR GRASS NA.

TSA REG ARPT; SEE 49 CFR 1542. ALL GATES & DOORS RMN SECURE ALL TIMES. TSNT OR UNFAMILIAR PILOTS – AMGR FOR INFO.

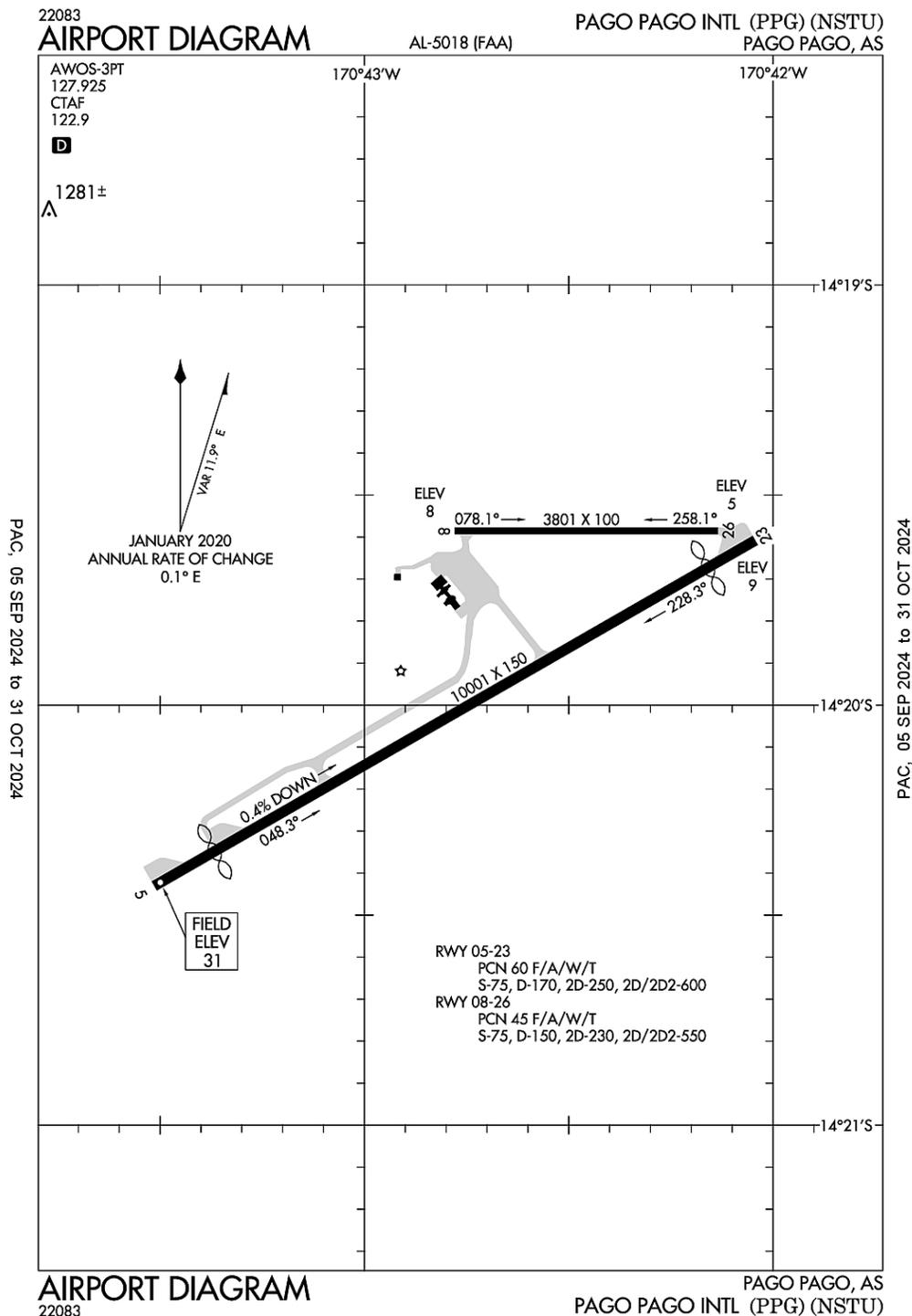
PVT JET PRKG SE SECTION OF E RAMP – AMGR FOR INFO.

WX CAMERA AVBL ON INTERNET AT [HTTPS://WEATHERCAMS.FAA.GOV](https://weathercams.faa.gov)

ARFF AVBL FOR PART 121 ACR INVOLVED IN ETOPS WITH 30 MIN NOTICE.

NWS BLN LAUNCH FAC ON ARPT; SEE INSIDE BACK COVER FOR OPS DETAIL.

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: 14-19-53.984S / 170-42-41.411W
- 2.2.2 From City: 3 miles SW of PAGO PAGO, AS
- 2.2.3 Elevation: 31.2 ft
- 2.2.5 Magnetic Variation: 12E (1990)
- 2.2.6 Airport Contact: TAVITA S FUIMAONO
1539 AIRPORT WAY P.O. BOX 1539
PAGO PAGO, AS 96799 (684-733-3154)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 A1+
- 2.4.5 Hangar Space:
- 2.4.6 Repair Facilities: NONE

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 05
- 2.12.2 True Bearing: 60
- 2.12.3 True Dimensions: 10001 ft x 150 ft
- 2.12.4 PCN: 60 F/A/W/T
- 2.12.5 Coordinates: 14-20-25.8311S / 170-43-30.8448W
- 2.12.6 Threshold Elevation: 31.2
- 2.12.6 Touchdown Zone Elevation: 29.3

- 2.12.1 Designation: 23
- 2.12.2 True Bearing: 240
- 2.12.3 True Dimensions: 10001 ft x 150 ft
- 2.12.4 PCN: 60 F/A/W/T
- 2.12.5 Coordinates: 14-19-36.4755S / 170-42-02.6116W
- 2.12.6 Threshold Elevation: 8.7
- 2.12.6 Touchdown Zone Elevation: 8.7

- 2.12.1 Designation: 08
- 2.12.2 True Bearing: 90
- 2.12.3 True Dimensions: 3801 ft x 100 ft
- 2.12.4 PCN: 45 F/A/W/T
- 2.12.5 Coordinates: 14-19-35.126S / 170-42-46.7563W
- 2.12.6 Threshold Elevation: 8.1
- 2.12.6 Touchdown Zone Elevation: 8.1

- 2.12.1 Designation: 26
- 2.12.2 True Bearing: 270
- 2.12.3 True Dimensions: 3801 ft x 100 ft
- 2.12.4 PCN: 45 F/A/W/T
- 2.12.5 Coordinates: 14-19-35.1106S / 170-42-08.096W
- 2.12.6 Threshold Elevation: 4.8
- 2.12.6 Touchdown Zone Elevation: 5.7

AD 2.13 Declared Distances

- 2.13.1 Designation: 05
- 2.13.2 Take-off Run Available: 9200
- 2.13.3 Take-off Distance Available: 10000
- 2.13.4 Accelerate-Stop Distance Available: 9200
- 2.13.5 Landing Distance Available: 8200

- 2.13.1 Designation: 23
- 2.13.2 Take-off Run Available: 10000
- 2.13.3 Take-off Distance Available: 10000
- 2.13.4 Accelerate-Stop Distance Available: 10000
- 2.13.5 Landing Distance Available: 9200

- 2.13.1 Designation: 08
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

- 2.13.1 Designation: 26
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

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
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System: P4L

- 2.14.1 Designation: 08
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System:

- 2.14.1 Designation: 26
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 05. Magnetic variation: 12E

2.19.2 ILS Identification: TUT

2.19.5 Coordinates: 14-19-37.6403S / 170-42-14.7077W

2.19.6 Site Elevation: 19.1 ft

2.19.1 ILS Type: Glide Slope for runway 05. Magnetic variation: 12E

2.19.2 ILS Identification: TUT

2.19.5 Coordinates: 14-20-13.069S / 170-43-15.1842W

2.19.6 Site Elevation: 24.5 ft

2.19.1 ILS Type: Localizer for runway 05. Magnetic variation: 12E

2.19.2 ILS Identification: TUT

2.19.5 Coordinates: 14-19-38.7728S / 170-42-12.8837W

2.19.6 Site Elevation: 5.1 ft

General Remarks:

OLOTELE MT 1617 FT MSL 3.5 MILES WEST OF THLD RY 08.

ALL ACFT TRANSITING PAGO PAGO (EXCP COMMERCIAL CARRIERS) MUST MAKE FUEL ARRANGEMENTS WITH PPG AT 684-733-3158.

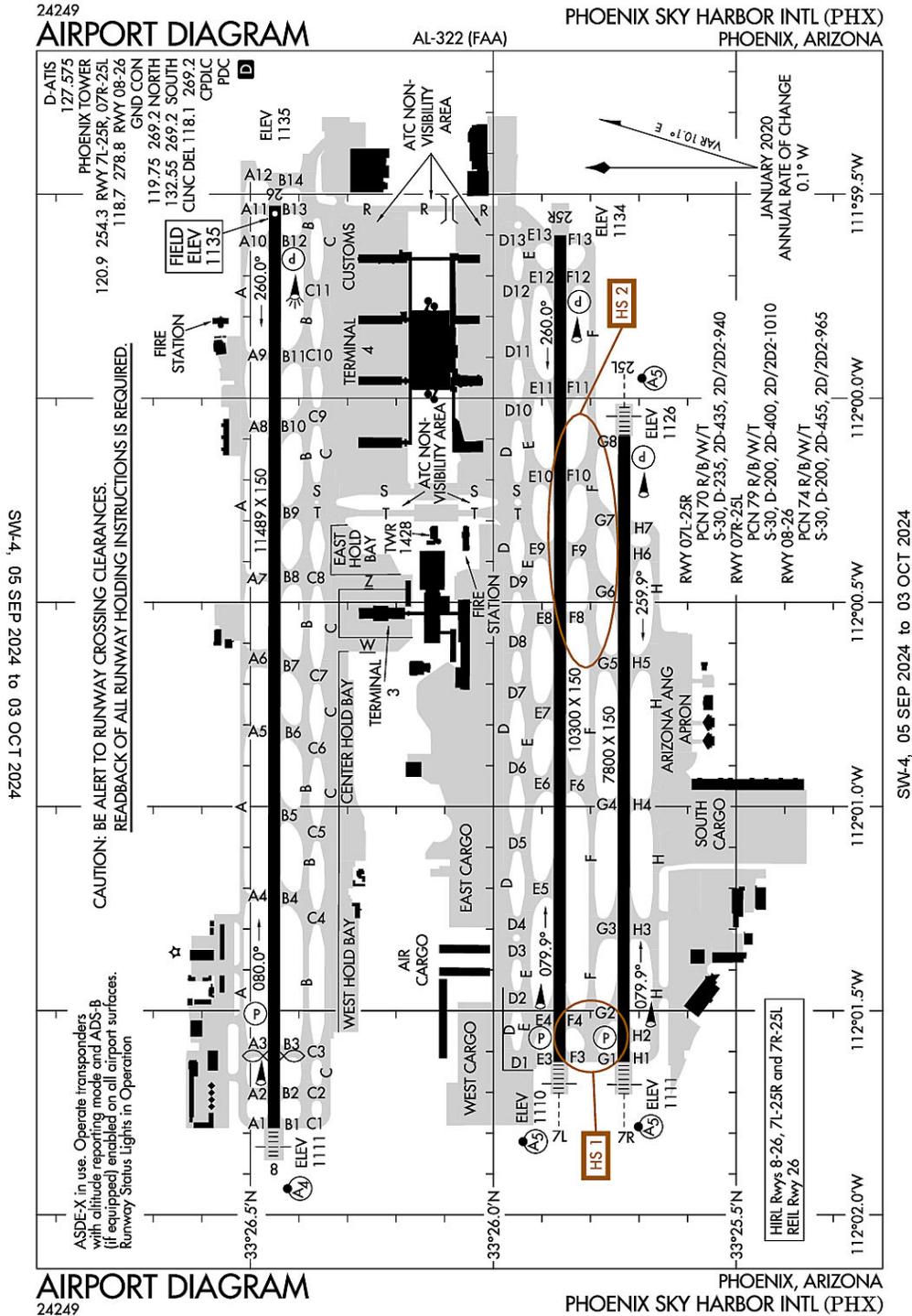
<ALL FLTS (EXCP SKED) PRIOR PMSN FROM AMGR WITH 24 HRS PRIOR NOTICE.

FOR NOTAM CONTACT NEW ZEALAND (643) 358-1688FSS: NEW ZEALAND

SEA SPRAY FM SURF & BLOW HOLES MAY DRIFT ACRS RWY 05/23 UNDER ROUGH SEA CONDS.

PERMLY LGTD & MKD 226' TWR ATOP MT ALAVA 4.3SM NNE ARPT.

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: CHAD R. MAKOVSKY
2485 E BUCKEYE RD
PHOENIX, AZ 85034 (602-273-3302)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-D

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 07L
- 2.12.2 True Bearing: 90
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 1116.5

- 2.12.1 Designation: 25R
- 2.12.2 True Bearing: 270
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 1134.1

- 2.12.1 Designation: 25L
- 2.12.2 True Bearing: 270
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 1126.4

2.12.1 Designation: 07R
2.12.2 True Bearing: 90
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 1115.9

2.12.1 Designation: 26
2.12.2 True Bearing: 270
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 1134.8

2.12.1 Designation: 08
2.12.2 True Bearing: 90
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 1118

AD 2.13 Declared Distances

2.13.1 Designation: 07L
2.13.2 Take-off Run Available: 10300
2.13.3 Take-off 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 Take-off Run Available: 10300
2.13.3 Take-off Distance Available: 10300
2.13.4 Accelerate-Stop Distance Available: 10300
2.13.5 Landing Distance Available: 10300

2.13.1 Designation: 25L
2.13.2 Take-off Run Available: 7800
2.13.3 Take-off Distance Available: 7800
2.13.4 Accelerate-Stop Distance Available: 7800
2.13.5 Landing Distance Available: 7800

2.13.1 Designation: 07R
2.13.2 Take-off Run Available: 7800
2.13.3 Take-off Distance Available: 7800
2.13.4 Accelerate-Stop Distance Available: 7800
2.13.5 Landing Distance Available: 7800

2.13.1 Designation: 26

2.13.2 Take-off Run Available: 11489
2.13.3 Take-off Distance Available: 11489
2.13.4 Accelerate-Stop Distance Available: 11489
2.13.5 Landing Distance Available: 11489

2.13.1 Designation: 08
2.13.2 Take-off Run Available: 11489
2.13.3 Take-off Distance Available: 11489
2.13.4 Accelerate-Stop Distance Available: 11489
2.13.5 Landing Distance Available: 10591

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:
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

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: 26
2.14.2 Approach Lighting System:
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

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: CD/P
2.18.3 Channel: 118.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 269.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS
2.18.3 Channel: 127.575
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P (NORTH)

2.18.3 Channel: 119.75

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (SOUTH)

2.18.3 Channel: 132.55

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 269.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 08/26)

2.18.3 Channel: 118.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 07L/25R, 07R/25L)

2.18.3 Channel: 120.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 07L/25R, 07R/25L)

2.18.3 Channel: 254.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 08/26)

2.18.3 Channel: 278.8

2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

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: 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 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 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 25L. Magnetic variation: 12E
2.19.2 ILS Identification: RJG
2.19.5 Coordinates: 33-25-41.1847N / 111-59-52.1833W
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: 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 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: 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 26. Magnetic variation: 12E
2.19.2 ILS Identification: CWJ
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: 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

General Remarks

TWY F BTW TWY INT G2 & G3 CLSD TO WINGSPAN GTR THAN 135 FT.

TWY D BTN S & D13, D10, D11, D12 CLSD TO WINGSPAN GTR THAN 118 FT.

RWY STATUS LGTS IN OPN.

INTL LNDG RIGHTS RQR US CUST & BDR PROTECTION NOTIFICATION 48 HR PRIOR TO LNDG.

EXPERIMENTAL OR GND DMSTN NA WO PRIOR APVL – AIRSIDE OPS.

FEE FOR CHARTERS, TRAVEL CLUB & REVENUE PRODUCING ACFT.

TWYS A BTN A3 & A10, A4, A5, A6, A7, A8, A9, A12, F BTN G2 & G3, D13 CLSD TO WINGSPAN GTR THAN 135 FT.

TWY R & PTNS OF TWY S & T BLW ATCT ARE NON VSB FM ATCT.

WINGSPAN 215 FT OR GTR GROUP VI PPR – 602-272-2008 FOR FOLLOW-ME SVC TAX TO & FM RAMP & RWY.

PRAC APCH, STOP & GO, TAXI BACK & TGL NA. OTR TRNG OPS NA WO PRIOR WRITTEN APVL – 602-272-2008.

REVIEW HOT SPOT INFO ON ARPT DIAGRAM.

TWYS C BTN S & R, D BTN D2 & D6, D3, D4, D5, D BTN D8 & T, D9, H BTN TWY H4 & TWY H7, H5, H6, H7 CLSD TO WINGSPAN GTR THAN 171 FT.

ENG RUNS NA WO PRIOR COORD WITH AIRSIDE OPS.

GEN INFO – 602-273-3302.

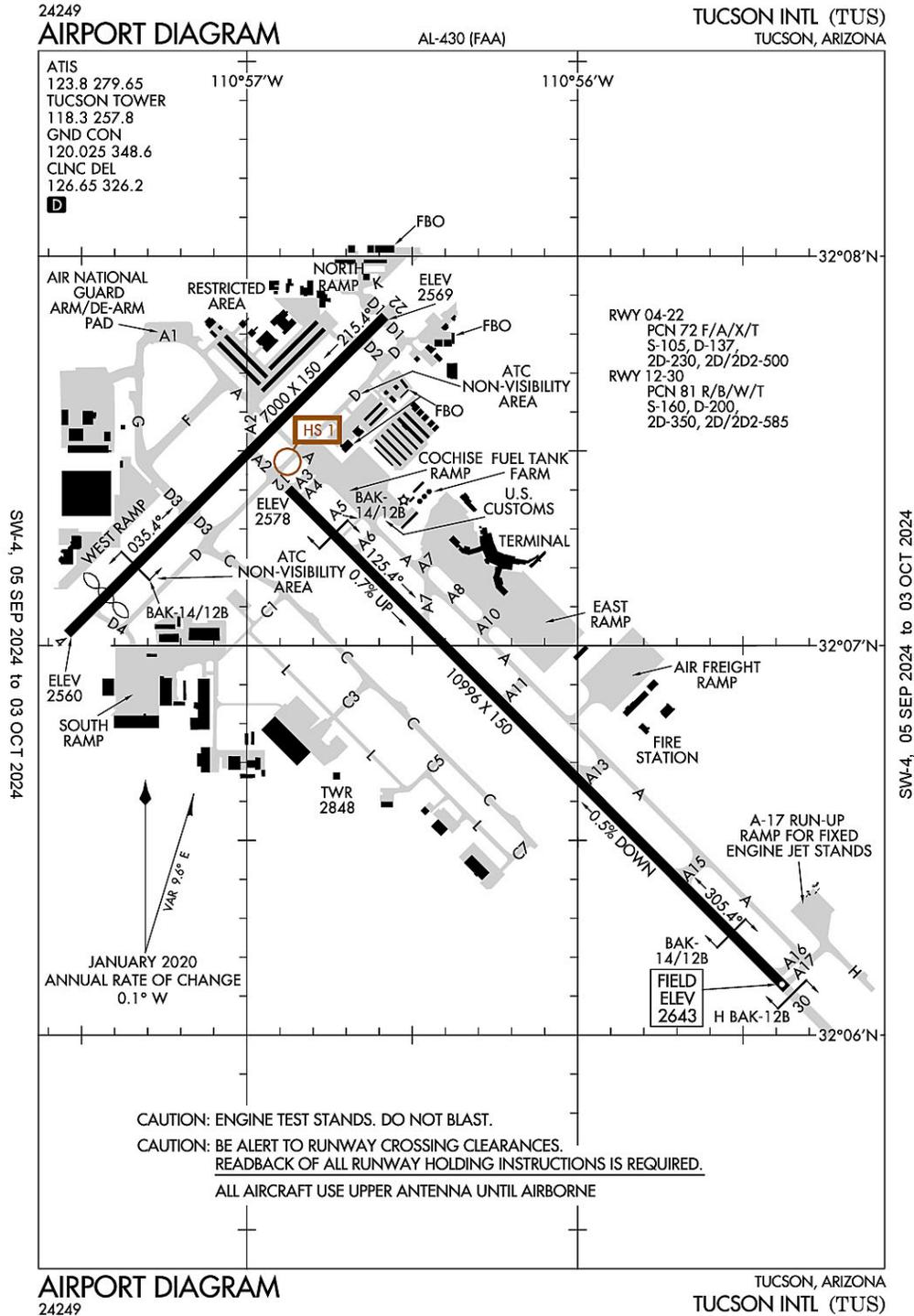
NOISE ABATEMENT PROC IN EFCT.

TWY R MIDPT OVHD TRAIN BRIDGE PRVDS 82 FT 4 IN CLNC.

MILITARY: ANG: OFFL BUS ONLY; BASH PHASE II IN EFF 1 MAR THRU 31 MAY & 1 AUG THRU 31 OCT; LTD RAMP SPACE AVBL; FBO – 602-273-3770.

INTL GATE USE RQR CDN WITH ARPT OPS 48 HR PRIOR TO ARR.

Tucson, Arizona Tucson International ICAO Identifier KTUS



Tucson, AZ
Tucson Intl
ICAO Identifier KTUS

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 32-07-01.4455N / 110-56-29.2661W
- 2.2.2 From City: 6 miles S of TUCSON, AZ
- 2.2.3 Elevation: 2643 ft
- 2.2.5 Magnetic Variation: 9E (2025)
- 2.2.6 Airport Contact: DANETTE BEWLEY
TUCSON APT AUTH 7250 S TUCSON BLVD
TUCSON, AZ 85756 (520-573-8190)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 A++
- 2.4.5 Hangar Space:
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 04
- 2.12.2 True Bearing: 45
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 2572.1

- 2.12.1 Designation: 22
- 2.12.2 True Bearing: 225
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 2572.4

- 2.12.1 Designation: 12
- 2.12.2 True Bearing: 135
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 2598.5

- 2.12.1 Designation: 30
- 2.12.2 True Bearing: 315
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 2643

AD 2.13 Declared Distances

- 2.13.1 Designation: 04
- 2.13.2 Take-off Run Available: 7000
- 2.13.3 Take-off Distance Available: 7000
- 2.13.4 Accelerate-Stop Distance Available: 7000
- 2.13.5 Landing Distance Available: 6150

- 2.13.1 Designation: 22
- 2.13.2 Take-off Run Available: 6000
- 2.13.3 Take-off Distance Available: 7000
- 2.13.4 Accelerate-Stop Distance Available: 6000
- 2.13.5 Landing Distance Available: 6000

- 2.13.1 Designation: 12
- 2.13.2 Take-off Run Available: 10996
- 2.13.3 Take-off Distance Available: 10996
- 2.13.4 Accelerate-Stop Distance Available: 10996
- 2.13.5 Landing Distance Available: 10996

- 2.13.1 Designation: 30
- 2.13.2 Take-off Run Available: 10996
- 2.13.3 Take-off 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: 04
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System:

- 2.14.1 Designation: 22
- 2.14.2 Approach Lighting System:
- 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: P4L

- 2.14.1 Designation: 30
- 2.14.2 Approach Lighting System:
- 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 Channel: 138.525

2.18.5 Hours of Operation:

2.18.1 Service Designation: ATIS

2.18.3 Channel: 123.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ATIS

2.18.3 Channel: 279.65

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 126.65

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 326.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 120.025

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 348.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 118.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 257.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/S

2.18.3 Channel: 119

2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 12. Magnetic variation: 9E

2.19.2 ILS Identification: TUS
2.19.5 Coordinates: 32-05-54.9712N / 110-55-03.2284W
2.19.6 Site Elevation: 2676.1 ft

2.19.1 ILS Type: Glide Slope for runway 12. Magnetic variation: 9E
2.19.2 ILS Identification: TUS
2.19.5 Coordinates: 32-07-14.7604N / 110-56-48.0571W
2.19.6 Site Elevation: 2580.1 ft

2.19.1 ILS Type: Localizer for runway 12. Magnetic variation: 9E
2.19.2 ILS Identification: TUS
2.19.5 Coordinates: 32-05-53.16N / 110-55-05.69W
2.19.6 Site Elevation: 2660.2 ft

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 12E
2.19.2 Navigation Aid Identification: TUS
2.19.5 Coordinates: 32-05-42.7296N / 110-54-53.4781W
2.19.6 Site Elevation: 2670.5 ft

General Remarks

GEN INFO – 520-573-8182.

CTN: REVIEW ARPT DIAGRAM HOT SPOT INFO.

MIL: ANG OFFL BUS ONLY; 72 HR PPR – D844-6731/C520-295-6731; FAX EXTN 6732. BASE OPS
1300Z-2300Z MON-FRI & DRILL WKEND 1300Z-2130Z; CLSD OTR WKENDS, HOL & SKED OFF DAYS.
TRAN ALERT MAINT NA. TSNT SI FSL ONLY. CONTR FUEL NA.

TWY A5 LTD 70000 LB OR LESS.

CHARTER, SPORT TEAM, CARGO & MIL PPR – FBO. LNDG & PRKG FEE 12500 LBS & UP.

FLT TRNG 2200-0600 NA EXC PPR – 520-573-8190.

ACR USE RWY 04/22 & 12/30.

CTN: NW ARR & DEP DO NOT MISTAKE TWY A FOR LNDG SFC; TWY A N & PARL TO RWY 30.

MIL/COMM/BASE OPS ARR CTC TITAN OR PUMA – ANG BASE OPS/COMD POST FREQ.

PTNS TWY D NOT VIS FM ATCT.

USE UPPER ANT UNTIL AIRBORNE.

TXL K CLSD TO WINGSPAN GTR THAN 104 FT.

GROUP V TAX WITH INBOARD ENG ONLY. TRML RAMP CLSD TO ADG IV & ABV WO PPR.

A-GEAR BAK-14/BAK-12B APCH END RWY 12 & BAK-14/BAK-12B APCH END RWY 30 AVBL DURG
ANG DUTY HR; 5 MIN PN.

OPR PARROT ALL SFCS, PUSHBACK & GATE ARR.

MIL: BIRD ACT PHASE II IN EFCT 1 JUL-31 AUG.

USCBP INSP RAMP RFLG NA EXC MED EMERG.

N RAMP CLSD TO WINGSPAN GTR THAN 79 FT.

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: HENRY L. THOMPSON
4995 E CLINTON WAY
FRESNO, CA 93722 (559-621-4600)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 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: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 11L
- 2.12.2 True Bearing: 125
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 335.5

- 2.12.1 Designation: 29R
- 2.12.2 True Bearing: 305
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 332.6

- 2.12.1 Designation: 29L
- 2.12.2 True Bearing: 305
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 330.7

- 2.12.1 Designation: 11R
- 2.12.2 True Bearing: 125
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 332.9

AD 2.13 Declared Distances

- 2.13.1 Designation: 11L
- 2.13.2 Take-off Run Available: 9539
- 2.13.3 Take-off 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 Take-off Run Available: 9539
- 2.13.3 Take-off Distance Available: 9539
- 2.13.4 Accelerate-Stop Distance Available: 9539
- 2.13.5 Landing Distance Available: 9227

- 2.13.1 Designation: 29L
- 2.13.2 Take-off Run Available: 8008
- 2.13.3 Take-off Distance Available: 8008
- 2.13.4 Accelerate-Stop Distance Available: 8008
- 2.13.5 Landing Distance Available: 8008

- 2.13.1 Designation: 11R
- 2.13.2 Take-off Run Available: 8008
- 2.13.3 Take-off 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
- 2.14.2 Approach Lighting System:
- 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
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System: P4L

- 2.14.1 Designation: 11R
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: ANG OPS

2.18.3 Channel: 140

2.18.5 Hours of Operation:

2.18.1 Service Designation: ANG OPS

2.18.3 Channel: 298.3

2.18.5 Hours of Operation:

2.18.1 Service Designation: APCH/P DEP/P (091-239)

2.18.3 Channel: 132.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (091-239)

2.18.3 Channel: 323.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (240-090)

2.18.3 Channel: 119.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (240-090)

2.18.3 Channel: 351.95

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/S DEP/S (S/SE VISALIA AREA)

2.18.3 Channel: 118.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/S DEP/S (S/SE VISALIA AREA)

2.18.3 Channel: 268.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ATIS

2.18.3 Channel: 121.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ATIS

2.18.3 Channel: 273.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 124.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 348.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (240-090)

2.18.3 Channel: 119.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (091-239)

2.18.3 Channel: 132.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (091-239)

2.18.3 Channel: 323.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (240-090)

2.18.3 Channel: 351.95

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 348.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 118.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 251.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: NG OPS

2.18.3 Channel: 40.95

2.18.5 Hours of Operation:

2.18.1 Service Designation: NG OPS

2.18.3 Channel: 132

2.18.5 Hours of Operation:

2.18.1 Service Designation: NG OPS

2.18.3 Channel: 255.8

2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 11L. Magnetic variation: 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: 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 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: 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

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

General Remarks

MILITARY: SVC: RWY 29R AND 11L A-GEAR CABLE AVBL UPON REQ ONLY; DEFAULT POSN DOWN.

MILITARY: ANG: CTC ANG OPS FOR LCL BIRD WATCH COND (BWC).

FRESNO YOSEMITE INTL IS NOISE SENSITIVE; NOISE ABATEMENT PROCEDURES IN EFFECT.

SERVICE - FUEL: ROSS AVIATION, C559-251-1555

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.

TWY B3 CLSD BTN RWY 11L/29R AND RWY 11R/29L.

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.

TWY A LTD TO ACFT DESIGN GROUP II.

SERVICE-FUEL: SIGNATURE FLIGHT SUPPORT, C559-981-2490

ATCT CLNC RQRD TO PUSH ON MOV AREA.

PPR FOR ENG START AT ACR TRML GATES & ENG RUN-UP.

NO MULT APCHS AND LNDGS MON-SAT 2200-0700 AND SUN 1800-1000.

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.

NUMEROUS BIRDS INVOF ARPT.

Los Angeles, CA
Los Angeles Intl
ICAO Identifier KLAX

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 33-56-32.987N / 118-24-28.975W
- 2.2.2 From City: 9 miles SW of LOS ANGELES, CA
- 2.2.3 Elevation: 127.8 ft
- 2.2.5 Magnetic Variation: 12E (2020)
- 2.2.6 Airport Contact: DOUGLAS WEBSTER
ONE WORLD WAY
LOS ANGELES, CA 90009 (424-646-8829)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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:
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 06L
- 2.12.2 True Bearing: 83
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 118.8

- 2.12.1 Designation: 24R
- 2.12.2 True Bearing: 263
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 122.4

- 2.12.1 Designation: 24L
- 2.12.2 True Bearing: 263
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 122.5

2.12.1 Designation: 06R
2.12.2 True Bearing: 83
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 116.2

2.12.1 Designation: 25R
2.12.2 True Bearing: 263
2.12.3 True Dimensions: 12923 ft x 150 ft
2.12.4 PCN: 70 R/A/W/T
2.12.5 Coordinates: 33-56-23.5604N / 118-22-47.2005W
2.12.6 Threshold Elevation: 94.3
2.12.6 Touchdown Zone Elevation: 103.8

2.12.1 Designation: 07L
2.12.2 True Bearing: 83
2.12.3 True Dimensions: 12923 ft x 150 ft
2.12.4 PCN: 70 R/A/W/T
2.12.5 Coordinates: 33-56-07.9864N / 118-25-19.4335W
2.12.6 Threshold Elevation: 114.8
2.12.6 Touchdown Zone Elevation: 127.8

2.12.1 Designation: 07R
2.12.2 True Bearing: 83
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 127.6

2.12.1 Designation: 25L
2.12.2 True Bearing: 263
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 103.7

AD 2.13 Declared Distances

2.13.1 Designation: 06L
2.13.2 Take-off Run Available: 8926
2.13.3 Take-off Distance Available: 8926
2.13.4 Accelerate-Stop Distance Available: 8566
2.13.5 Landing Distance Available: 8566

2.13.1 Designation: 24R
2.13.2 Take-off Run Available: 8926
2.13.3 Take-off Distance Available: 8926

2.13.4 Accelerate-Stop Distance Available: 8926
2.13.5 Landing Distance Available: 8926

2.13.1 Designation: 24L
2.13.2 Take-off Run Available: 10285
2.13.3 Take-off Distance Available: 10285
2.13.4 Accelerate-Stop Distance Available: 10285
2.13.5 Landing Distance Available: 9483

2.13.1 Designation: 06R
2.13.2 Take-off Run Available: 10285
2.13.3 Take-off Distance Available: 10285
2.13.4 Accelerate-Stop Distance Available: 10285
2.13.5 Landing Distance Available: 9748

2.13.1 Designation: 25R
2.13.2 Take-off Run Available: 12091
2.13.3 Take-off Distance Available: 12091
2.13.4 Accelerate-Stop Distance Available: 12091
2.13.5 Landing Distance Available: 11134

2.13.1 Designation: 07L
2.13.2 Take-off Run Available: 12091
2.13.3 Take-off Distance Available: 12091
2.13.4 Accelerate-Stop Distance Available: 12091
2.13.5 Landing Distance Available: 11259

2.13.1 Designation: 07R
2.13.2 Take-off Run Available: 11095
2.13.3 Take-off 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 Take-off Run Available: 11095
2.13.3 Take-off Distance Available: 11095
2.13.4 Accelerate-Stop Distance Available: 11095
2.13.5 Landing Distance Available: 11095

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
2.14.2 Approach Lighting System: ALSF2
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: 06R
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: 07L
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

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: CD/P
2.18.3 Channel: 120.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 327
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (ARR)
2.18.3 Channel: 133.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (DEP)
2.18.3 Channel: 135.65
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P (WEST)
2.18.3 Channel: 121.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (NORTH-CMPLX)

2.18.3 Channel: 121.65
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (SOUTH CMPLX)
2.18.3 Channel: 121.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 327
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (HELICOPTERS)
2.18.3 Channel: 119.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P IC (SOUTH CMPLX)
2.18.3 Channel: 120.95
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P IC (NORTH CMPLX)
2.18.3 Channel: 133.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P IC (NORTH CMPLX & HELI)
2.18.3 Channel: 239.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P IC (SOUTH CMPLX)
2.18.3 Channel: 379.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: OPS (SAMSO FLT OPS)
2.18.3 Channel: 372.2
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (TXL C10 0630L-2330L)
2.18.3 Channel: 129.325
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (TXL C7 0600L-2300L)
2.18.3 Channel: 129.4
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (TXL C6 0600L-2300L)
2.18.3 Channel: 129.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (TXL C9 0530L-2230L)
2.18.3 Channel: 130.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (TXL C8 0500L-2359L)
2.18.3 Channel: 130.85
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (TXL D9)
2.18.3 Channel: 131.45
2.18.5 Hours of Operation:

2.18.1 Service Designation: SFRA
2.18.3 Channel: 128.55
2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

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: 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: 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: 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: 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 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: 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: 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: 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: 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: 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: 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 07L. Magnetic variation: 12E

2.19.2 ILS Identification: IAS

2.19.5 Coordinates: 33-56-04.8698N / 118-25-24.8206W

2.19.6 Site Elevation: 104.3 ft

2.19.1 ILS Type: Glide Slope for runway 07L. Magnetic variation: 12E

2.19.2 ILS Identification: IAS

2.19.5 Coordinates: 33-56-07.743N / 118-24-56.7237W

2.19.6 Site Elevation: 119.8 ft

2.19.1 ILS Type: Localizer for runway 07L. Magnetic variation: 12E

2.19.2 ILS Identification: IAS

2.19.5 Coordinates: 33-56-24.7529N / 118-22-35.5432W

2.19.6 Site Elevation: 90 ft

2.19.1 ILS Type: DME for runway 25R. Magnetic variation: 12E

2.19.2 ILS Identification: CFN

2.19.5 Coordinates: 33-56-04.8698N / 118-25-24.8206W

2.19.6 Site Elevation: 104.3 ft

2.19.1 ILS Type: Glide Slope for runway 25R. Magnetic variation: 12E

2.19.2 ILS Identification: CFN

2.19.5 Coordinates: 33-56-17.8773N / 118-23-10.1796W

2.19.6 Site Elevation: 97.5 ft

2.19.1 ILS Type: Localizer for runway 25R. Magnetic variation: 12E

2.19.2 ILS Identification: CFN

2.19.5 Coordinates: 33-56-07.2503N / 118-25-26.6262W

2.19.6 Site Elevation: 119.3 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: 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: 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 Navigation Aid Type VORTAC. Magnetic variation: 15E
2.19.2 Navigation Aid Identification: LAX
2.19.5 Coordinates: 33-55-59.3368N / 118-25-55.246W
2.19.6 Site Elevation: 185 ft

General Remarks

TWY D BTN TWY D7 AND D8 (N OF TRML ONE) CLSD TO ACFT WITH WINGSPAN GTR THAN 157 FT.

SIMUL ACFT OPNS PROHIBITED ON TWYS L AND H9 BTWN RWYS 07L/25R AND 07R/25L.

SBND TURN NOT AVBL FROM WEST REMOTE GATE 408 AND WEST REMOTE GATE 409

RWY STATUS LGTS IN OPN.

RWY 7R/25L PREFERRED EMERG RWY.

AMERICAN EAGLE TRML SOUTHBOUND TAXING ACFT USE MNM PWR DUE TO BLAST HAZ.

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.

LAX SVC TXL M LAWA RAMP TWR OPN CTC LAWA RAMP TWR 131.975.

TURB MAY BE DEFLECTED UPWARD FM THE BLAST FENCE 180 FT E OF RWY 25R.

PRACTICE INSTRUMENT APPROACHES & TOUCH AND GO LANDINGS ARE PROHIBITED.

NMRS BIRDS ON AND IN VCNTY OF ARPT.

WEST REMOTE GATES: ACFT USE OF OPEN GATES AS TAXI PATH IS PROHIBITED (GATES 406, 407, 408, 409).

NOISE SENS ARPT ON WESTERLY TAKEOFFS NO TURNS BEFORE CROSSING SHORELINE OVER-OCEAN APCHS UTILIZED 0000-0630.

ACFT USE MINIMAL PWR WHEN TXG VCNTY TRMLS DUE BLAST HAZ.

PILOTS SHOULD USE CTN FOR POSS LASER ACT IN THE LAX AREA.

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.

ACFT WITH LEN GTR THAN 240 FT ARE PROHIBITED ON TXLS C7, C8 AND C9 BTN TXL C AND TWY B.

ACFT WITH WINGSPAN GTR THAN 198 FT OBND FM TXL D8 MAY NOT TURN WBND ONTO TXL D.

MILITARY AF: ALL MIL AIRCREWS MUST CTC 61 ABW/CP FLT OPS FOR PRKG LCTN/INSTRNS. NO GOVT TRNSPN, QTRS OR SECURITY AVBL. VIP NOTIFICATION PROCS APPLY. USER FEES ASSESSED USING AVCARD CREDIT. CTC SIGNATURE FLIGHT SUPPORT FBO 130.6 INBD. INBD RELAY ETA, VIP CODE, SVC REQ 30 MIN PRIOR TO ARR.

ACFT WITH WINGSPAN GTR THAN 155 FT WB ON TXL C ARE NOT AUTHD TO MAKE LEFT TURN ON TWY C10 UNDER PWR.

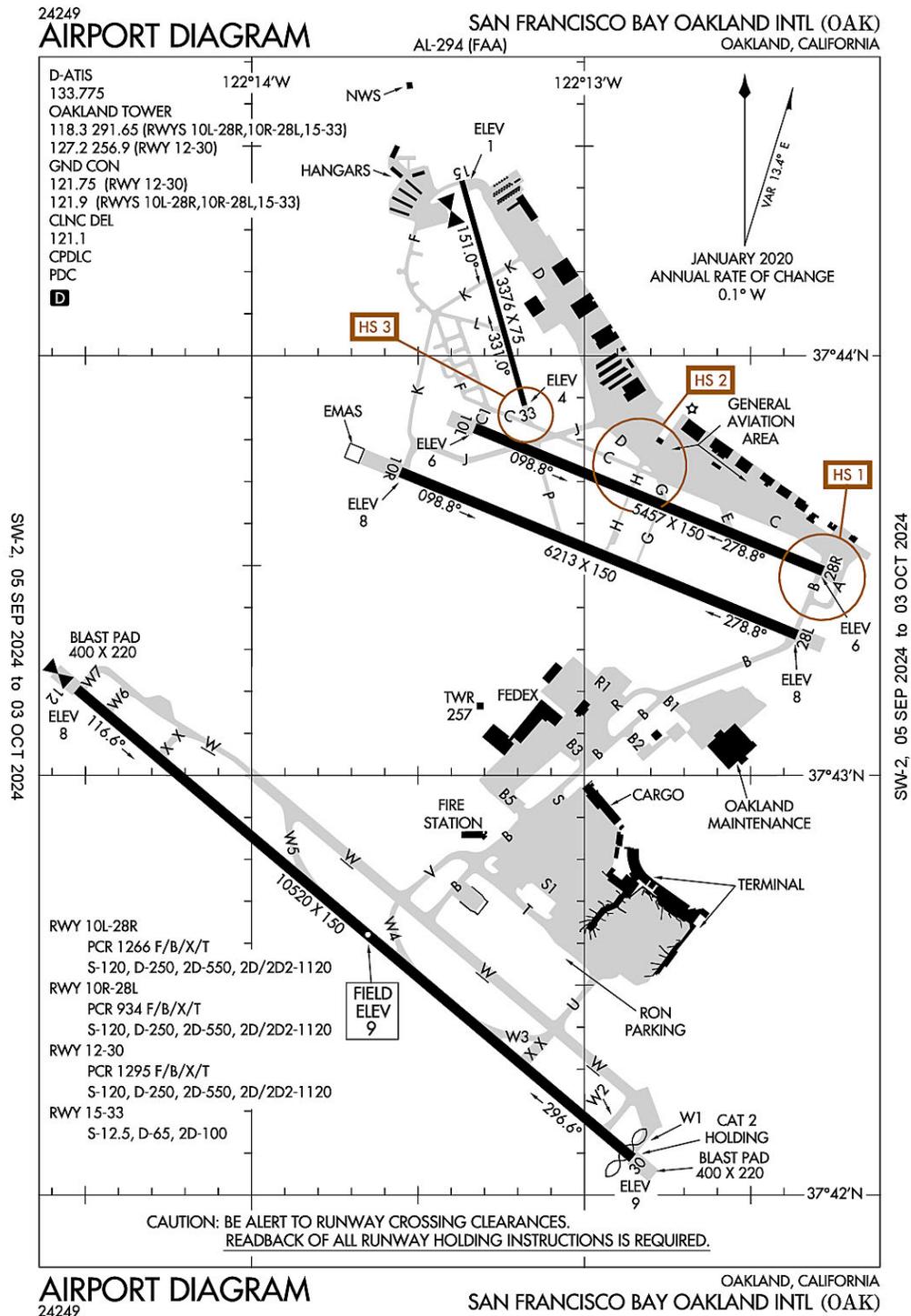
FOR ACFT WITH WINGSPAN GTR THAN 214 FT CTC LAX AIRSIDE OPS (424)-646-5292 FOR ARPT RESTRICTIONS.

MAJOR CONSTRUCTION ON AIRPORT, DAILY.

LAX SVC TXL K AND TXL L LAWA RAMP TWR OPN CTC LAWA RAMP TWR 131.075.

SIMUL ACFT OPNS PROHIBITED ON TWY H2 AND G BTN RWYS 07L/25R AND 07R/25L.

Oakland, California
Metropolitan Oakland International
ICAO Identifier KOAK



Oakland, CA
Metropolitan Oakland Intl
ICAO Identifier KOAK

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 37-43-16.541N / 122-13-16.142W
- 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
SAN FRANCISCO BAY OAKLAND INTL ARPT
OAKLAND, CA 94621 (510-563-6436)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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:
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-D

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 28R
- 2.12.2 True Bearing: 292
- 2.12.3 True Dimensions: 5457 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 37-43-29.3324N / 122-12-16.9514W
- 2.12.6 Threshold Elevation: 5.8
- 2.12.6 Touchdown Zone Elevation: 6.8

- 2.12.1 Designation: 10L
- 2.12.2 True Bearing: 112
- 2.12.3 True Dimensions: 5457 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 37-43-49.6892N / 122-13-19.8482W
- 2.12.6 Threshold Elevation: 5.5
- 2.12.6 Touchdown Zone Elevation: 6.3

- 2.12.1 Designation: 10R
- 2.12.2 True Bearing: 112
- 2.12.3 True Dimensions: 6213 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 37-43-43.3496N / 122-13-33.2487W
- 2.12.6 Threshold Elevation: 8
- 2.12.6 Touchdown Zone Elevation: 8.9

2.12.1 Designation: 28L
2.12.2 True Bearing: 292
2.12.3 True Dimensions: 6213 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 37-43-20.1859N / 122-12-21.6335W
2.12.6 Threshold Elevation: 8.2
2.12.6 Touchdown Zone Elevation: 8.6

2.12.1 Designation: 30
2.12.2 True Bearing: 310
2.12.3 True Dimensions: 10520 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 37-42-05.3755N / 122-12-51.3287W
2.12.6 Threshold Elevation: 9
2.12.6 Touchdown Zone Elevation: 9

2.12.1 Designation: 12
2.12.2 True Bearing: 130
2.12.3 True Dimensions: 10520 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 37-43-12.2254N / 122-14-31.6144W
2.12.6 Threshold Elevation: 8.3
2.12.6 Touchdown Zone Elevation: 8.6

2.12.1 Designation: 15
2.12.2 True Bearing: 164
2.12.3 True Dimensions: 3376 ft x 75 ft
2.12.4 PCN:
2.12.5 Coordinates: 37-44-25.0534N / 122-13-22.1141W
2.12.6 Threshold Elevation: 1.4
2.12.6 Touchdown Zone Elevation: 4.6

2.12.1 Designation: 33
2.12.2 True Bearing: 344
2.12.3 True Dimensions: 3376 ft x 75 ft
2.12.4 PCN:
2.12.5 Coordinates: 37-43-52.9059N / 122-13-10.8261W
2.12.6 Threshold Elevation: 3.9
2.12.6 Touchdown Zone Elevation: 4.6

AD 2.13 Declared Distances

2.13.1 Designation: 28R
2.13.2 Take-off Run Available: 5457
2.13.3 Take-off Distance Available: 5457
2.13.4 Accelerate-Stop Distance Available: 5457
2.13.5 Landing Distance Available: 5457

2.13.1 Designation: 10L
2.13.2 Take-off Run Available: 5457
2.13.3 Take-off Distance Available: 5457

2.13.4 Accelerate-Stop Distance Available: 5336
2.13.5 Landing Distance Available: 5336

2.13.1 Designation: 10R
2.13.2 Take-off Run Available: 6213
2.13.3 Take-off 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 Take-off Run Available: 6213
2.13.3 Take-off Distance Available: 6213
2.13.4 Accelerate-Stop Distance Available: 6213
2.13.5 Landing Distance Available: 6213

2.13.1 Designation: 30
2.13.2 Take-off Run Available: 10000
2.13.3 Take-off Distance Available: 10000
2.13.4 Accelerate-Stop Distance Available: 10000
2.13.5 Landing Distance Available: 10000

2.13.1 Designation: 12
2.13.2 Take-off Run Available: 10000
2.13.3 Take-off Distance Available: 10000
2.13.4 Accelerate-Stop Distance Available: 10000
2.13.5 Landing Distance Available: 10000

2.13.1 Designation: 15
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: 33
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

AD 2.14 Approach and Runway Lighting

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: 10L
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4R

2.14.1 Designation: 10R
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 28L
2.14.2 Approach Lighting System:
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: 12
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System: P4R

2.14.1 Designation: 15
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 33
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: CD/P
2.18.3 Channel: 121.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS
2.18.3 Channel: 133.775
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P (RWY 12/30)
2.18.3 Channel: 121.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (RWY 10L/28R, 10R/28L, 15/33)
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 10L/28R, 10R/28L, 15/33)
2.18.3 Channel: 118.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 12/30)
2.18.3 Channel: 127.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 12/30)

2.18.3 Channel: 256.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 10L/28R, 10R/28L, 15/33)
2.18.3 Channel: 291.65
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/S
2.18.3 Channel: 124.9
2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: Glide Slope for runway 28R. Magnetic variation: 14E
2.19.2 ILS Identification: OAK
2.19.5 Coordinates: 37-43-28.5969N / 122-12-30.6109W
2.19.6 Site Elevation: 3.5 ft

2.19.1 ILS Type: Localizer for runway 28R. Magnetic variation: 14E
2.19.2 ILS Identification: OAK
2.19.5 Coordinates: 37-43-54.5477N / 122-13-34.872W
2.19.6 Site Elevation: 3.2 ft

2.19.1 ILS Type: Glide Slope for runway 12. Magnetic variation: 14E
2.19.2 ILS Identification: AAZ
2.19.5 Coordinates: 37-43-02.9271N / 122-14-22.8372W
2.19.6 Site Elevation: 3.2 ft

2.19.1 ILS Type: Localizer for runway 12. Magnetic variation: 14E
2.19.2 ILS Identification: AAZ
2.19.5 Coordinates: 37-42-02.2566N / 122-12-46.6504W
2.19.6 Site Elevation: 7.2 ft

2.19.1 ILS Type: DME for runway 30. Magnetic variation: 14E
2.19.2 ILS Identification: INB
2.19.5 Coordinates: 37-43-33.0786N / 122-14-59.0097W
2.19.6 Site Elevation: 22.7 ft

2.19.1 ILS Type: Glide Slope for runway 30. Magnetic variation: 14E
2.19.2 ILS Identification: INB
2.19.5 Coordinates: 37-42-09.7498N / 122-13-05.6377W
2.19.6 Site Elevation: 4.1 ft

2.19.1 ILS Type: Localizer for runway 30. Magnetic variation: 14E
2.19.2 ILS Identification: INB
2.19.5 Coordinates: 37-43-29.8615N / 122-14-58.0858W
2.19.6 Site Elevation: 9.3 ft

2.19.1 Navigation Aid Type VOR/DME. Magnetic variation: 17E
2.19.2 Navigation Aid Identification: OAK
2.19.5 Coordinates: 37-43-33.332N / 122-13-24.9305W
2.19.6 Site Elevation: 13.2 ft

General Remarks

100 FT LGTD MICROWAVE ANT TWR LCTD 1320 FT WSW OF OAK VORTAC; S OF UPWIND END OF RWY 28L.

TWY A, E, G, H BTN RWY 28R AND TWY C MAX ACFT WT 150,000 LBS.

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.

UNDERLIES CLASS B ASP, BE AWARE OF SPEEDS ON ARR AND DEP.

TWY C BTN TWY G & J MAX ACFT WEIGHT 90,000 LBS SINGLE; 144,000 LBS DUAL; 257,000 LBS TANDEM.

400 FT BY 220 FT BLAST PAD RWY 12 AND RWY 30.

TWY P MAX ACFT WT 116,000 LBS SINGLE; 190,000 LBS DUAL; 305,000 LBS DUAL TANDEM; 735,000 LBS DOUBLE DUAL TANDEM.

NOISE ABATEMENT PROCS N/A IN EMERGS OR WHENEVER RWY 12/30 IS CLSD DUE TO MAINT, SAFETY, WINDS OR WX.

RWY 15/33 CLSD TO ACR ACFT.

FOR NOISE ABATEMENT INFO CTC NOISE ABATEMENT OFC AT (510) 563-6463.

TWY C BTN RWY 28R & TWY G AND TWYS B, J, AND D MAX ACFT WT 861,000 LBS.

TWY K BTN TWY J AND INT TWYS F, L, K MAX ACFT WT 33000 LBS SINGLE; 45000 LBS DUAL; TANDEM NA.

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 C BTN TWY J & F MAX ACFT WEIGHT 76,000 LBS SINGLE; 115,000 LBS DUAL; 257,000 LBS TANDEM (DUAL TANDEM NA).

RWYS 30, 28R AND RWY 28L DIST RMNG SIGNS L SIDE.

ACFT WITH EXPERIMENTAL OR LTD CERTIF HAVING OVER 1000 HORSEPOWER OR 4000 LBS ARE RSTRD TO RWY 12/30.

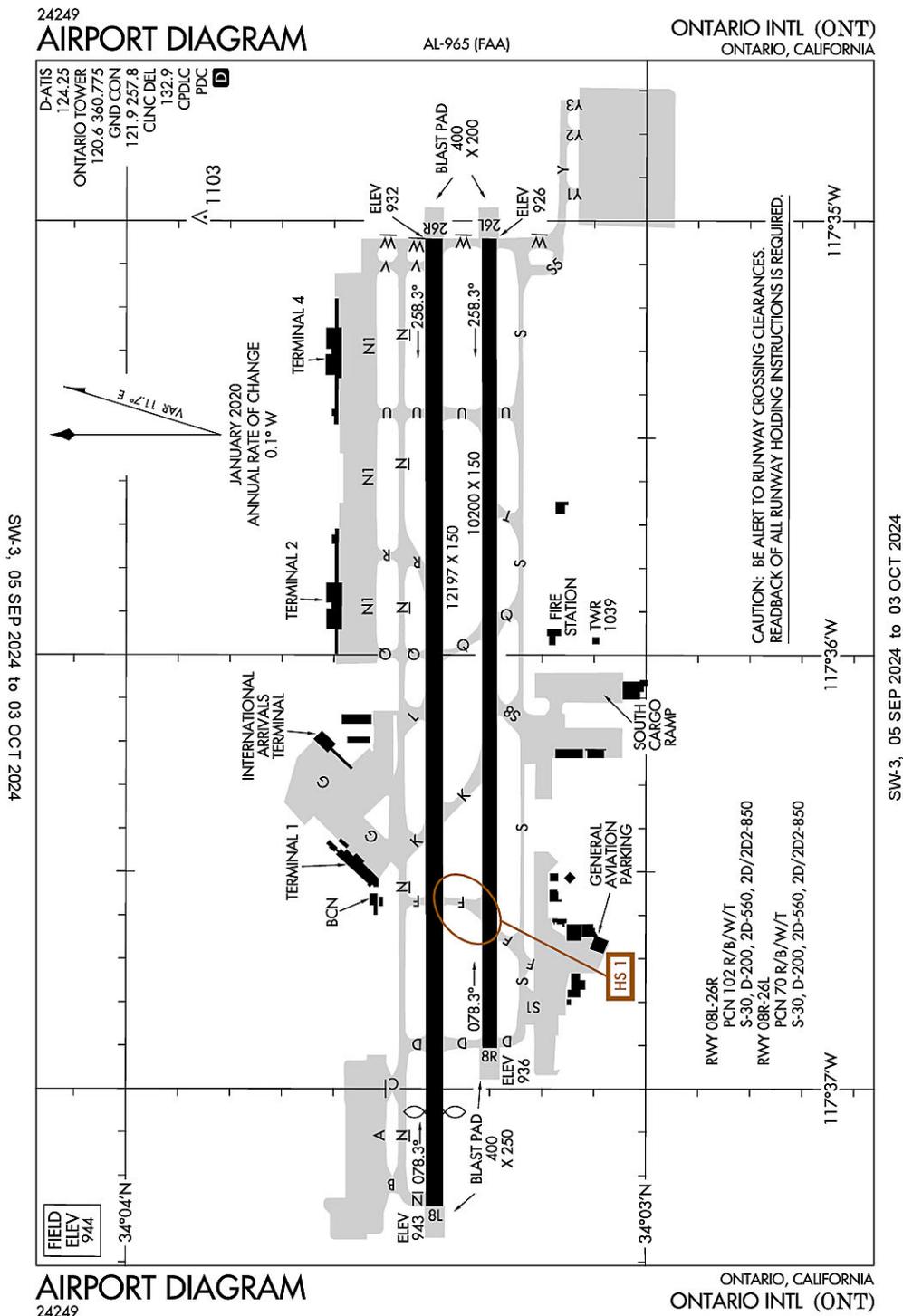
BIRDS ON & INVOF ARPT.

TWY G & H BTN RWY 28L & 28R: MAX ACFT WT 12,500 LBS.

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.

Ontario, California
Ontario International
ICAO Identifier KONT



Ontario, CA
Ontario Intl
ICAO Identifier KONT

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 34-03-21.651N / 117-36-04.275W
- 2.2.2 From City: 2 miles E of ONTARIO, CA
- 2.2.3 Elevation: 944.1 ft
- 2.2.5 Magnetic Variation: 12E (2020)
- 2.2.6 Airport Contact: ATIF ELKADI
1923 EAST AVION STREET
ONTARIO, CA 91761 (909-544-5300)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 J
- 2.4.5 Hangar Space:
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-D

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 08L
- 2.12.2 True Bearing: 90
- 2.12.3 True Dimensions: 12197 ft x 150 ft
- 2.12.4 PCN: 102 R/B/W/T
- 2.12.5 Coordinates: 34-03-24.7651N / 117-37-22.1586W
- 2.12.6 Threshold Elevation: 943.2
- 2.12.6 Touchdown Zone Elevation: 944.1

- 2.12.1 Designation: 26R
- 2.12.2 True Bearing: 270
- 2.12.3 True Dimensions: 12197 ft x 150 ft
- 2.12.4 PCN: 102 R/B/W/T
- 2.12.5 Coordinates: 34-03-24.8259N / 117-34-57.2057W
- 2.12.6 Threshold Elevation: 931.8
- 2.12.6 Touchdown Zone Elevation: 931.8

- 2.12.1 Designation: 08R
- 2.12.2 True Bearing: 90
- 2.12.3 True Dimensions: 10200 ft x 150 ft
- 2.12.4 PCN: 70 R/B/W/T
- 2.12.5 Coordinates: 34-03-17.8579N / 117-36-58.4219W
- 2.12.6 Threshold Elevation: 936
- 2.12.6 Touchdown Zone Elevation: 936

- 2.12.1 Designation: 26L
- 2.12.2 True Bearing: 270
- 2.12.3 True Dimensions: 10200 ft x 150 ft
- 2.12.4 PCN: 70 R/B/W/T
- 2.12.5 Coordinates: 34-03-17.9013N / 117-34-57.1985W
- 2.12.6 Threshold Elevation: 926.2
- 2.12.6 Touchdown Zone Elevation: 926.2

AD 2.13 Declared Distances

- 2.13.1 Designation: 08L
- 2.13.2 Take-off Run Available: 12197
- 2.13.3 Take-off 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 Take-off Run Available: 12197
- 2.13.3 Take-off 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 Take-off Run Available: 10200
- 2.13.3 Take-off 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 Take-off Run Available: 10200
- 2.13.3 Take-off 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: ALSF2
- 2.14.4 Visual Approach Slope Indicator System: P4L

- 2.14.1 Designation: 08R
- 2.14.2 Approach Lighting System:
- 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 Channel: 132.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 124.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 257.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 120.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 360.775

2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: Glide Slope for runway 08L. Magnetic variation: 12E

2.19.2 ILS Identification: AOD

2.19.5 Coordinates: 34-03-21.2425N / 117-36-59.9428W

2.19.6 Site Elevation: 935.9 ft

2.19.1 ILS Type: Localizer for runway 08L. Magnetic variation: 12E

2.19.2 ILS Identification: AOD

2.19.5 Coordinates: 34-03-24.8274N / 117-34-45.0837W

2.19.6 Site Elevation: 929.1 ft

2.19.1 ILS Type: DME for runway 26R. Magnetic variation: 12E

2.19.2 ILS Identification: ONT

2.19.5 Coordinates: 34-03-22.0428N / 117-37-33.7049W

2.19.6 Site Elevation: 955 ft

2.19.1 ILS Type: Glide Slope for runway 26R. Magnetic variation: 12E

2.19.2 ILS Identification: ONT

2.19.5 Coordinates: 34-03-22.0256N / 117-35-11.0293W

2.19.6 Site Elevation: 925.2 ft

2.19.1 ILS Type: Localizer for runway 26R. Magnetic variation: 12E

2.19.2 ILS Identification: ONT

2.19.5 Coordinates: 34-03-24.7616N / 117-37-34.6764W

2.19.6 Site Elevation: 946.2 ft

2.19.1 ILS Type: DME for runway 26L. Magnetic variation: 12E

2.19.2 ILS Identification: TWO

2.19.5 Coordinates: 34-03-20.4777N / 117-37-08.8646W

2.19.6 Site Elevation: 947.7 ft

2.19.1 ILS Type: Glide Slop for runway 26L. Magnetic variation: 12E

2.19.2 ILS Identification: TWO

2.19.5 Coordinates: 34-03-21.9048N / 117-35-11.0216W

2.19.6 Site Elevation: 925.2 ft

2.19.1 ILS Type: Inner Marker for runway 26L. Magnetic variation: 12E

2.19.2 ILS Identification: TWO

2.19.5 Coordinates: 34-03-17.924N / 117-34-47.8618W

2.19.6 Site Elevation: 923.6 ft

2.19.1 ILS Type: Localizer for runway 26L. Magnetic variation: 12E

2.19.2 ILS Identification: TWO

2.19.5 Coordinates: 34-03-17.8524N / 117-37-10.2711W

2.19.6 Site Elevation: 931.1 ft

General Remarks:

ALL MILITARY AND GENERAL AVIATION (FIXED OR ROTOR WING) ACFT OPS ARE RESTRICTED TO FBO FACILITIES WITH ADVANCE COORDINATION; OVERNIGHT TIEDOWN AND PARKING FEE.

ACFT PRKG AND CONTR GND SVCS ARE LTD FOR UNSKED OPS. FOR SKED INFO CALL AIRFIELD OPS (909) 214-7682/7683.

FBO ON FREQ 130.75.

NOISE ABATEMENT PROCEDURES IN EFFECT; FULL-LENGTH TURBOJET DEP ENCOURAGED, NIGHTLY PREFERENTIAL RWY USAGE, 2200-0700.

TWY Y EAST OF TWY W IS A NON-MOVEMENT AREA; ALL ACFT CTC RAMP CTL 131.325 FOR ACCESS.

PTNS OF TWY S IN THE VCY OF TWY F ARE NOT VSB FM ATCT; PILOTS USE CTN ENTERING TWY F SOUTH OF TWY S.

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 RWY 26L AND RWY 26R, HAWKS, EAGLES, FALCONS AND OWLS SPOTTED ON OCCASION.

ACFT ACCESS TO TWY R FROM RWY 26R PROHIBITED

TWY F SOUTH OF TWY S RSTRD TO ACFT WITH 117 FT WINGSPAN AND SMALLER. TWY F SOUTH OF RWY 26L RSTRD TO ACFT WITH 180 FT WINGSPAN.

Palmdale, CA
Palmdale Rgnl/USAF Plant 42
ICAO Identifier KPMDF

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: MATT FISHER
2503 E AVE P
PALMDALE, CA 93550 (661-275-9342)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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:
- 2.4.5 Hangar Space:
- 2.4.6 Repair Facilities: None

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: None
- 2.6.2 Rescue and Firefighting Services: None

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 04
- 2.12.2 True Bearing: 52
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 2542.5

- 2.12.1 Designation: 22
- 2.12.2 True Bearing: 232
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 2497.9

- 2.12.1 Designation: 25
- 2.12.2 True Bearing: 266
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 2503.4

2.12.1 Designation: 07
2.12.2 True Bearing: 86
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 2540.2

2.12.1 Designation: 252
2.12.2 True Bearing:
2.12.3 True Dimensions: 6000 ft x 75 ft
2.12.4 PCN: 97 R/B/W/T
2.12.5 Coordinates:
2.12.6 Threshold Elevation:
2.12.6 Touchdown Zone Elevation:

2.12.1 Designation: 072
2.12.2 True Bearing:
2.12.3 True Dimensions: 6000 ft x 75 ft
2.12.4 PCN: 97 R/B/W/T
2.12.5 Coordinates:
2.12.6 Threshold Elevation:
2.12.6 Touchdown Zone Elevation:

AD 2.13 Declared Distances

2.13.1 Designation: 04
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: 22
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: 25
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: 07
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: 252

2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: 072
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 04
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 22
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 25
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 07
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 252
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 072
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: ATIS
2.18.3 Channel: 118.275
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.9

2.18.5 Hours of Operation: OPR 1330-0600Z++.

2.18.1 Service Designation: GND/P

2.18.3 Channel: 317.6

2.18.5 Hours of Operation: OPR 1330-0600Z++.

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 123.7

2.18.5 Hours of Operation: OPR 1330-0600Z++.

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 317.6

2.18.5 Hours of Operation: OPR 1330-0600Z++.

2.18.1 Service Designation: LCL/S

2.18.3 Channel: 236.6

2.18.5 Hours of Operation: OPR 1330-0600Z++.

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

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 15E

2.19.2 Navigation Aid Identification: PMD

2.19.5 Coordinates: 34-37-53.0341N / 118-03-49.7607W

2.19.6 Site Elevation: 2498 ft

General Remarks:

PRKG RAMP LCTD S OF RWY 22 & TWY V NOT VSB FM ATCT.

MISC: COMSEC STORAGE UNAVBL.

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.

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.

ALL DEPT ACFT MUST FILE FPL WITH P42 AFLD MGMT OPS.

MISC: BASE OPS OPR 1330-0600Z++, CLSD FEDERAL HOL.

CAUTION: USE EXTREME CAUTION FOR UNMANNED AERIAL SYSTEMS (UAS) OPS IN VCNTY.

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.

RSTD: OVERNIGHT PRK UNAUTHD ON C-RAMP.

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.

CAUTION: CONTRACTOR LEASED SITES ARE INTENDED FOR ACFT BASED THEREIN; ENTRY GATES AND APRONS MAY NOT MEET AF OBST STDS.

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.

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 C661-275-9342.

SERVICE-JASU: POWER CARS UNAVBL.

DRAINAGE DITCHES PARL RWY 22 FM TWY S TO TWY U.

MISC: FLT PLANS MUST BE FILED AND ACTIVATED WITH P42 AFLD MGMT. USE FLT SVC WHEN P42 AFLD MGMT CLSD.

CAUTION: VARIOUS ACFT TEST OPS MARKINGS PAINTED IN WHITE ON TAXIWAY UNIFORM.

CAUTION: CIV ACFT MAY NOT BE GRANTED ACCESS TO KPMD CLASS D FOR PRACTICE APCH OR TRSN OVER ARPT BDRYS.

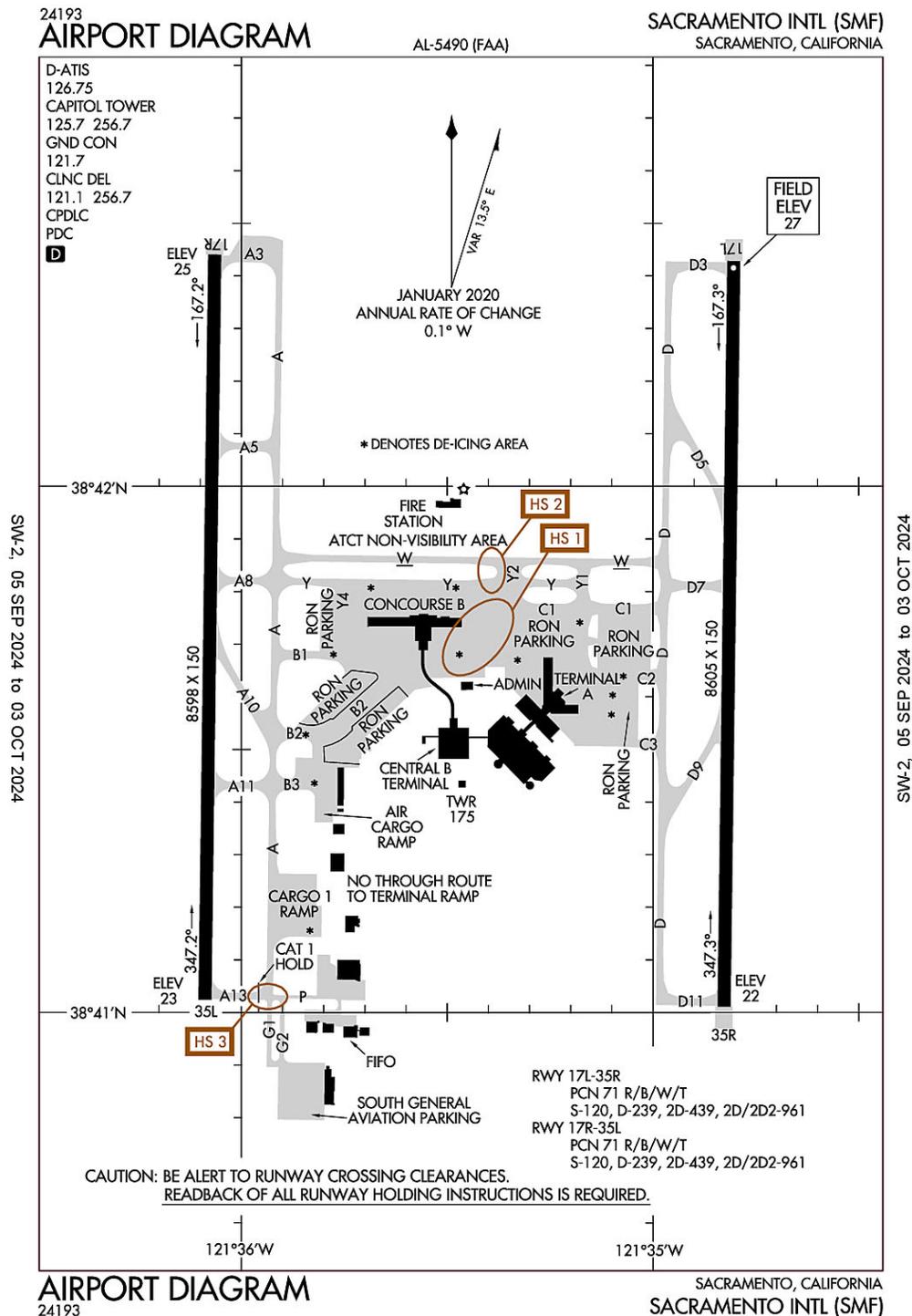
TRAN ALERT (1 OF 2): NO FLEET SVC AVBL. NO FLW ME SVC AVBL. EXP PROGRESSIVE TAXI TO PRK. AIRCREW RESPONSIBLE FOR ACFT PINNING/SAFING.

UNLGT OBSTN SURROUND AFLD.

MISC: INDUS INSTLN – NO TRNSPN, LODGING OR NML SVC AVBL ON SITE.

RSTD: TWY L BTN RWY 04/22 AND PAX TRML UNLGTD AND USABLE FOR DAYLT VFR ONLY.

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: REID SMITH
6900 AIRPORT BLVD
SACRAMENTO, CA 95837 (916-874-0713)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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:
- 2.4.6 Repair Facilities: MINOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 17L
- 2.12.2 True Bearing: 181
- 2.12.3 True Dimensions: 8605 ft x 150 ft
- 2.12.4 PCN: 71 R/B/W/T
- 2.12.5 Coordinates: 38-42-25.6973N / 121-34-48.2125W
- 2.12.6 Threshold Elevation: 26.9
- 2.12.6 Touchdown Zone Elevation: 26.9

- 2.12.1 Designation: 35R
- 2.12.2 True Bearing: 1
- 2.12.3 True Dimensions: 8605 ft x 150 ft
- 2.12.4 PCN: 71 R/B/W/T
- 2.12.5 Coordinates: 38-41-00.6506N / 121-34-49.642W
- 2.12.6 Threshold Elevation: 22.1
- 2.12.6 Touchdown Zone Elevation: 23.8

- 2.12.1 Designation: 17R
- 2.12.2 True Bearing: 181
- 2.12.3 True Dimensions: 8598 ft x 150 ft
- 2.12.4 PCN: 71 R/B/W/T
- 2.12.5 Coordinates: 38-42-26.4236N / 121-36-03.8961W
- 2.12.6 Threshold Elevation: 24.8
- 2.12.6 Touchdown Zone Elevation: 25.3

- 2.12.1 Designation: 35L
- 2.12.2 True Bearing: 1
- 2.12.3 True Dimensions: 8598 ft x 150 ft
- 2.12.4 PCN: 71 R/B/W/T
- 2.12.5 Coordinates: 38-41-01.439N / 121-36-05.3075W
- 2.12.6 Threshold Elevation: 22.5
- 2.12.6 Touchdown Zone Elevation: 23.9

AD 2.13 Declared Distances

- 2.13.1 Designation: 17L
- 2.13.2 Take-off Run Available: 8605
- 2.13.3 Take-off Distance Available: 8605
- 2.13.4 Accelerate-Stop Distance Available: 8605
- 2.13.5 Landing Distance Available: 8605

- 2.13.1 Designation: 35R
- 2.13.2 Take-off Run Available: 8605
- 2.13.3 Take-off Distance Available: 8605
- 2.13.4 Accelerate-Stop Distance Available: 8605
- 2.13.5 Landing Distance Available: 8605

- 2.13.1 Designation: 17R
- 2.13.2 Take-off Run Available: 8598
- 2.13.3 Take-off Distance Available: 8598
- 2.13.4 Accelerate-Stop Distance Available: 8598
- 2.13.5 Landing Distance Available: 8598

- 2.13.1 Designation: 35L
- 2.13.2 Take-off Run Available: 8598
- 2.13.3 Take-off Distance Available: 8598
- 2.13.4 Accelerate-Stop Distance Available: 8598
- 2.13.5 Landing Distance Available: 8598

AD 2.14 Approach and Runway Lighting

- 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:
- 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: P4R

- 2.14.1 Designation: 35L
- 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 Channel: 121.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 256.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 126.75

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 256.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 125.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 256.7

2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 17L. 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: Glide Slope for runway 17L. 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 17L. 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: DME for runway 17R. 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: Glide Slope for runway 17R. 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: Inner Marker for runway 17R. 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: Localizer for runway 17R. Magnetic 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 35L. 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

2.19.1 ILS Type: Glide Slope for runway 35L. 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: Localizer for runway 35L. 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

General Remarks:

WEST RAMP SPOTS 56-60 & F1 RSTRD TO TOW IN AND TOW OUT ONLY FROM TXL B2. WHEN PUSHING BACK FOR DEP FROM WEST RAMP SPOTS 56-60 & F1 EACH ACFT IS TO PUSH BACK ON TO TXL B2 AND PULL FWD TO THE "ENGINE START LINE" PRIOR TO STARTING ENGS.

CROP DUSTERS OPER INVOF ARPT AT OR BELOW 200 FT AGL.

MILITARY AIRCRAFT PARKING LIMITED. CONTACT ARPT OPNS IF PARKING IS REQUIRED (916) 806-5309.

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.

UNPAVED SFC NORTH OF TWY P AND EAST OF TWY A AND SOUTH OF CARGO 1 RAMP CLSD TO HEL.

TWY B1 CLSD TO CARGO ACFT.

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).

GND VEHICLE SURVEILLANCE SYS IN USE. OPR TRANSPONDERS WITH ALT RPRTG MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL ARPT SFCS.

ALL ACFT CTC ATC GND CTL PRIOR TO MOVEMENT ON RAMP.

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.

ACFT MUST PUSH BACK TAIL TO THE NORTH FROM TRML GATES A1, A3 AND A5.

BIRDS ON AND IN VICINITY OF ARPT.

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.

San Diego, CA
San Diego Intl
ICAO Identifier KSAN

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 32-44-00.826N / 117-11-22.788W
- 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 (619-400-2718)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-D

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 27
- 2.12.2 True Bearing: 286
- 2.12.3 True Dimensions: 9401 ft x 200 ft
- 2.12.4 PCN: 75 F/A/W/T
- 2.12.5 Coordinates: 32-43-48.0054N / 117-10-29.8979W
- 2.12.6 Threshold Elevation: 16.4
- 2.12.6 Touchdown Zone Elevation: 16.8

- 2.12.1 Designation: 09
- 2.12.2 True Bearing: 106
- 2.12.3 True Dimensions: 9401 ft x 200 ft
- 2.12.4 PCN: 75 F/A/W/T
- 2.12.5 Coordinates: 32-44-13.6407N / 117-12-15.6832W
- 2.12.6 Threshold Elevation: 13.9
- 2.12.6 Touchdown Zone Elevation: 16.7

AD 2.13 Declared Distances

- 2.13.1 Designation: 27
- 2.13.2 Take-off Run Available: 9401
- 2.13.3 Take-off Distance Available: 9401
- 2.13.4 Accelerate-Stop Distance Available: 9401
- 2.13.5 Landing Distance Available: 7591

- 2.13.1 Designation: 09
- 2.13.2 Take-off Run Available: 8280
- 2.13.3 Take-off Distance Available: 9401
- 2.13.4 Accelerate-Stop Distance Available: 8280
- 2.13.5 Landing Distance Available: 7280

AD 2.14 Approach and Runway Lighting

- 2.14.1 Designation: 27
- 2.14.2 Approach Lighting System: MALS
- 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

AD 2.18 Air Traffic Services Communication Facilities

- 2.18.1 Service Designation: CD/P
- 2.18.3 Channel: 125.9
- 2.18.5 Hours of Operation: 24

- 2.18.1 Service Designation: D-ATIS
- 2.18.3 Channel: 134.8
- 2.18.5 Hours of Operation: 24

- 2.18.1 Service Designation: GND/P
- 2.18.3 Channel: 123.9
- 2.18.5 Hours of Operation: 24

- 2.18.1 Service Designation: LCL/P
- 2.18.3 Channel: 118.3
- 2.18.5 Hours of Operation: 24

- 2.18.1 Service Designation: LCL/P
- 2.18.3 Channel: 338.225
- 2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

- 2.19.1 ILS Type: DME for runway 09. Magnetic variation: 11E
- 2.19.2 ILS Identification: SAN
- 2.19.5 Coordinates: 32-43-46.8256N / 117-10-28.5519W
- 2.19.6 Site Elevation: 34 ft

- 2.19.1 ILS Type: Glide Slope for runway 09. Magnetic variation: 11E
- 2.19.2 ILS Identification: SAN
- 2.19.5 Coordinates: 32-44-10.7741N / 117-11-52.1594W
- 2.19.6 Site Elevation: 13.1 ft

- 2.19.1 ILS Type: Localizer for runway 09. Magnetic variation: 11E
- 2.19.2 ILS Identification: SAN
- 2.19.5 Coordinates: 32-43-47.605N / 117-10-28.2382W
- 2.19.6 Site Elevation: 26.4 ft

2.19.1 ILS Type: DME for runway 27. Magnetic variation: 11E
2.19.2 ILS Identification: UBR
2.19.5 Coordinates: 32-44-11.4186N / 117-12-19.9319W
2.19.6 Site Elevation: 25.9 ft

2.19.1 ILS Type: Localizer for runway 27. Magnetic variation: 11E
2.19.2 ILS Identification: UBR
2.19.5 Coordinates: 32-44-14.7918N / 117-12-20.4335W
2.19.6 Site Elevation: 10.9 ft

General Remarks:

CROSS-BLEED ENGINE STARTS PERMITTED ONLY ON PARALLEL TWY WITH ACFT ALIGNED ON TWY CNTRLN.

RWY STATUS LGTS IN OPN.

DEP CURFEW IN EFCT. DEPS PROHIBITED 2330-0630. SGFNT FINES. MED FLTS EXEMPT WITH FORM. NOISE OFC 619-400-2660.

747 AND LARGER ACFT ARE PROHIBITED FM MAKING INTERSECTION TKOFS.

INTERMITTENT PRESENCE OF BIRDS ON AND INVOF OF ARPT.

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.

DUE TO PAEW ON RY 09-27, 30 MINUTE PPR 0830-1230Z FOR ALL LANDINGS AND DEPARTURES CALL 619-400-2710.

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.

MILITARY ACFT ON OFFICIAL BUSINESS ONLY CONTACT ARPT OPS AT 619-400-2710 FOR PPR.

TERRAIN & BLDGS TO 500' MSL N & E WITHIN 1 1/2 MI.

PILOTS REQUIRED TO CTC ATCT GROUND CONTROLLER PRIOR TO PUSHBACK, TOW OUT AND TAXI FOR TRAFFIC ADVISORIES.

30 MIN PPR (619-400-2710) FOR ACFT WITH OVER 171 FT WINGSPAN.

ACFT CROSSING RY 09/27 ON TWY C6, HOLD SHORT OF TWY C6 FACING WEST ON TWY C, PARALLEL TO RY.

ULTRALIGHT ACFT PROHIBITED ON AP.

TAXIING ACFT ARE PROHIBITED FROM PASSING TO THE SOUTH OF ACFT LCTD ON TWY B INTO ALLEY LCTD BTWN GATES 7 AND 14.

TAXILANE A RSTRD TO ACFT WITH WINGSPANS OF 135 FT OR LESS.

TWY C EDGE LGTS OTS INDEFLY.

OUTBOARD ENGINES OF FOUR-ENGINE ACFT ARE TO BE KEPT AT IDLE POWER FOR ALL GND MANEUVERING.

TAXIING ACFT SHALL FOLLOW LEAD-IN LINES UNTIL THE NOSE WHEEL OF THE ACFT HAS ENTERED THE NON-MOVEMENT AREA OF THE ALLEY.

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.

PRACTICE APPROACHES AND TGL PROHIBITED.

FOR ACCESS TO/FR TERMINAL 2: GATES 23, 25, 27, 29, 31, 33-51 AND THE ISLAND AND WEST RON PRKG RAMPS, CTC RAMP CTL ON 129.775 SRY 131.975 FR 0600-2400. FR 0000-0600 CTC GROUND CTL ON 123.9.

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 (650-821-5000)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 A++
- 2.4.5 Hangar Space: YES
- 2.4.6 Repair Facilities: NONE

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 01L
- 2.12.2 True Bearing: 28
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 10.9

- 2.12.1 Designation: 19R
- 2.12.2 True Bearing: 208
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 11.2

- 2.12.1 Designation: 01R
- 2.12.2 True Bearing: 28
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 11.2

2.12.1 Designation: 19L
2.12.2 True Bearing: 208
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 11

2.12.1 Designation: 10L
2.12.2 True Bearing: 118
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 7

2.12.1 Designation: 28R
2.12.2 True Bearing: 298
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 12.9

2.12.1 Designation: 10R
2.12.2 True Bearing: 118
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 8

2.12.1 Designation: 28L
2.12.2 True Bearing: 298
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 12.6

AD 2.13 Declared Distances

2.13.1 Designation: 01L
2.13.2 Take-off Run Available: 7650
2.13.3 Take-off 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 Take-off Run Available: 7650
2.13.3 Take-off 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 Take-off Run Available: 8650
2.13.3 Take-off 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 Take-off Run Available: 8650
2.13.3 Take-off Distance Available: 8650
2.13.4 Accelerate-Stop Distance Available: 8650
2.13.5 Landing Distance Available: 8650

2.13.1 Designation: 10L
2.13.2 Take-off Run Available: 11870
2.13.3 Take-off 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 Take-off Run Available: 11870
2.13.3 Take-off Distance Available: 11870
2.13.4 Accelerate-Stop Distance Available: 11870
2.13.5 Landing Distance Available: 11236

2.13.1 Designation: 10R
2.13.2 Take-off Run Available: 11381
2.13.3 Take-off 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 Take-off Run Available: 11381
2.13.3 Take-off 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: 01L
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 19R
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 01R
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 19L
2.14.2 Approach Lighting System: MALSF
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 10L
2.14.2 Approach Lighting System:
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: 10R
2.14.2 Approach Lighting System:
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: CD PRE TAXI CLNC
2.18.3 Channel: 118.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS
2.18.3 Channel: 113.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS
2.18.3 Channel: 115.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS
2.18.3 Channel: 118.85
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 120.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 269.1
2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 19L. Magnetic variation: 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: 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 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: DME for runway 28R. Magnetic variation: 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: 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: DME for runway 28L. Magnetic variation: 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 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 Navigation Aid Type VOR/DME. Magnetic variation: 17E
2.19.2 Navigation Aid Identification: SFO

2.19.5 Coordinates: 37-37-10.1465N / 122-22-26.0165W

2.19.6 Site Elevation: 6 ft

General Remarks:

SEVERAL RY HOLD POSITION SIGNS ARE ON THE RIGHT RATHER THAN THE LEFT SIDE OF THE TWYS.

NOISE SENSITIVE ARPT; FOR NOISE ABATEMENT PROCEDURES CTC ARPT NOISE OFFICE MON-FRI 0800-1700 BY CALLING 650-821-5100.

RWY STATUS LGTS IN OPN.

PAEW APCH END RYS 28L, 28R, 19L INDEFLY.

TWY S BTN TWY Z AND TWY S2 CLSD TO ACFT WITH WINGSPAN OVER 215 FT.

ALL OUBD TWY ZULU 2 HVY ACFT WITH A WINGSPAN OF 171 FT OR GTR UNDER PWR PROHIBITED FROM ENTERING WB TWY ZULU.

RWY 1L CLSD TO DEPARTING TRIJET ACFT WITH WINGSPAN GREATER THAN 155 FT.

AIRLINE PILOTS SHALL STRICTLY FOLLOW THE PAINTED NOSE GEAR LINES AND NO OVERSTEERING ADJUSTMENT IS PERMITTED.

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.

DUE TO OBSTD VISION, SFO TWR IS ABLE TO PRVD ONLY LTD ARPT TFC CTL SVC ON TWY A BTN GATES F20 AND F21.

RY 10 PREFERRED RY BTWN 0100-0600 WEATHER AND FLIGHT CONDITIONS PERMITTING.

SIMULTANEOUS OPERATIONS IN EFFECT ALL RYS.

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: MUKESH (MOOKIE) PATEL
1701 AIRPORT BLVD., SUITE B-1130
SAN JOSE, CA 95110 ((408) 277-5100)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-D

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 12L
- 2.12.2 True Bearing: 139
- 2.12.3 True Dimensions: 11000 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 37-22-29.9801N / 121-56-24.6377W
- 2.12.6 Threshold Elevation: 37.7
- 2.12.6 Touchdown Zone Elevation: 43.8

- 2.12.1 Designation: 30R
- 2.12.2 True Bearing: 319
- 2.12.3 True Dimensions: 11000 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 37-21-08.1324N / 121-54-54.9212W
- 2.12.6 Threshold Elevation: 61.1
- 2.12.6 Touchdown Zone Elevation: 55.2

- 2.12.1 Designation: 12R
- 2.12.2 True Bearing: 139
- 2.12.3 True Dimensions: 11000 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 37-22-25.4266N / 121-56-31.1597W
- 2.12.6 Threshold Elevation: 38.2
- 2.12.6 Touchdown Zone Elevation: 45.6

- 2.12.1 Designation: 30L
- 2.12.2 True Bearing: 319
- 2.12.3 True Dimensions: 11000 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 37-21-03.5766N / 121-55-01.4432W
- 2.12.6 Threshold Elevation: 62.1
- 2.12.6 Touchdown Zone Elevation: 57

AD 2.13 Declared Distances

- 2.13.1 Designation: 12L
- 2.13.2 Take-off Run Available: 10139
- 2.13.3 Take-off Distance Available: 11000
- 2.13.4 Accelerate-Stop Distance Available: 10139
- 2.13.5 Landing Distance Available: 8831

- 2.13.1 Designation: 30R
- 2.13.2 Take-off Run Available: 10134
- 2.13.3 Take-off Distance Available: 11000
- 2.13.4 Accelerate-Stop Distance Available: 10134
- 2.13.5 Landing Distance Available: 7597

- 2.13.1 Designation: 12R
- 2.13.2 Take-off Run Available: 9883
- 2.13.3 Take-off 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 Take-off Run Available: 10152
- 2.13.3 Take-off Distance Available: 11000
- 2.13.4 Accelerate-Stop Distance Available: 10152
- 2.13.5 Landing Distance Available: 7614

AD 2.14 Approach and Runway Lighting

- 2.14.1 Designation: 12L
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System: P4R

- 2.14.1 Designation: 30R
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System: P4L

- 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

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: CD PRE TAXI CLNC

2.18.3 Channel: 118

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 126.95

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.7

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 124

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: LCL/P IC

2.18.3 Channel: 257.6

2.18.5 Hours of Operation: 0600-0000

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: 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

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 Navigation Aid Type VOR/DME. Magnetic variation: 16E
2.19.2 Navigation Aid Identification: SJC
2.19.5 Coordinates: 37-22-28.9638N / 121-56-40.8069W
2.19.6 Site Elevation: 34.5 ft

General Remarks:

UNSCHEDULED OPNS BY GROUP 5 ACFT (B747) AND LARGER NOT AUTH EXCEPT WITH PRIOR ARPT APPROVAL CTC AMGR (408) 392-3500.

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.

TWY V LTD TO ACFT WITH WINGSPAN OF LESS THAN 118 FT (B-737-900 OR SMALLER).

TWY W BETWEEN TWY J AND TWY L CAN SUPPORT GROUP IV ACFT.

RRP RQRD FM FBO FOR TSNT HEL OPS.

FOR CD WHEN ATCT IS CLSD CTC NORCAL APCH AT 916-361-3748.

TWY Y WILL BE PERIODICALLY RSTRD TO ACFT WITH A WINGSPAN OF LESS THAN 171 FT (MD-11 OR SMALLER) DRG B-787 AND B-747 OPNS ON RWY 12L/30R.

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 Z WILL BE PERIODICALLY RSTRD TO ACFT WITH A WINGSPAN OF LESS THAN 118 FT (B-737-900 OR SMALLER) DRG B-787 AND B-747 OPNS. TWY Z BTN 200 FT NW OF TWY H AND 200 FT NW OF TWY K LTD TO ACFT WITH WINGSPAN OF LESS THAN 135 FT (B-757-300 OR SMALLER).

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.

BIRDS FREQUENTLY ON OR IN VICINITY OF AIRPORT.

ALL TURBINE ENGINE RUN-UPS REQUIRE PRIOR AIRPORT APPROVAL, CONTACT MGR ON DUTY (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.

Stockton, CA
Stockton Metropolitan
ICAO Identifier KSCK

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 37-53-39.877N / 121-14-19.464W
- 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: RICHARD SOKOL
5000 S. AIRPORT WAY ROOM 202
STOCKTON, CA 95206 (209-468-4700)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 All Months, All Days, 0500-2100 Hours

AD 2.4 Handling Services and Facilities

- 2.4.1 Cargo Handling Facilities: NO
- 2.4.2 Fuel Types: 100 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: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-B

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 29R
- 2.12.2 True Bearing: 308
- 2.12.3 True Dimensions: 10249 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 37-53-06.64N / 121-13-21.88W
- 2.12.6 Threshold Elevation: 33.2
- 2.12.6 Touchdown Zone Elevation: 32.3

- 2.12.1 Designation: 11L
- 2.12.2 True Bearing: 128
- 2.12.3 True Dimensions: 10249 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 37-54-08.4321N / 121-15-03.2005W
- 2.12.6 Threshold Elevation: 26.5
- 2.12.6 Touchdown Zone Elevation: 29.1

- 2.12.1 Designation: 29L
- 2.12.2 True Bearing: 308
- 2.12.3 True Dimensions: 4448 ft x 75 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 37-53-31.8561N / 121-14-13.4466W
- 2.12.6 Threshold Elevation: 25.9
- 2.12.6 Touchdown Zone Elevation: 26.6

2.12.1 Designation: 11R
2.12.2 True Bearing: 128
2.12.3 True Dimensions: 4448 ft x 75 ft
2.12.4 PCN:
2.12.5 Coordinates: 37–53–58.6715N / 121–14–57.4211W
2.12.6 Threshold Elevation: 26.2
2.12.6 Touchdown Zone Elevation: 26.4

2.12.1 Designation: H1
2.12.2 True Bearing:
2.12.3 True Dimensions: 70 ft x 70 ft
2.12.4 PCN:
2.12.5 Coordinates: 37–53–45.27N / 121–14–47.57W
2.12.6 Threshold Elevation: 26
2.12.6 Touchdown Zone Elevation:

AD 2.13 Declared Distances

2.13.1 Designation: 29R
2.13.2 Take-off Run Available: 8856
2.13.3 Take-off Distance Available: 9856
2.13.4 Accelerate-Stop Distance Available: 9210
2.13.5 Landing Distance Available: 8650

2.13.1 Designation: 11L
2.13.2 Take-off Run Available: 8474
2.13.3 Take-off Distance Available: 9474
2.13.4 Accelerate-Stop Distance Available: 8604
2.13.5 Landing Distance Available: 8650

2.13.1 Designation: 29L
2.13.2 Take-off Run Available: 4448
2.13.3 Take-off Distance Available: 4448
2.13.4 Accelerate-Stop Distance Available: 4448
2.13.5 Landing Distance Available: 3386

2.13.1 Designation: 11R
2.13.2 Take-off Run Available: 4448
2.13.3 Take-off Distance Available: 4448
2.13.4 Accelerate-Stop Distance Available: 4448
2.13.5 Landing Distance Available: 4448

2.13.1 Designation: H1
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 29R
2.14.2 Approach Lighting System: MALSR

2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 11L

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 29L

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 11R

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: H1

2.14.2 Approach Lighting System: ODALS

2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: ANG OPS

2.18.3 Channel: 49

2.18.5 Hours of Operation:

2.18.1 Service Designation: ATIS

2.18.3 Channel: 118.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 0700-2100

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 120.3

2.18.5 Hours of Operation: 0700-2100

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 239

2.18.5 Hours of Operation: 0700-2100

2.18.1 Service Designation: NG OPS

2.18.3 Channel: 139.4

2.18.5 Hours of Operation:

2.18.1 Service Designation: NG OPS

2.18.3 Channel: 356.9

2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

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: 37-53-19.8816N / 121-13-35.2049W

2.19.6 Site Elevation: 29.3 ft

2.19.1 ILS Type: Localizer for runway 29R. Magnetic variation: 14E

2.19.2 ILS Identification: SCK

2.19.5 Coordinates: 37-54-14.48N / 121-15-13.13W

2.19.6 Site Elevation: 23.5 ft

General Remarks:

PRACTICE CIRCLING APPROACHES TO RWYS 11L/11R NA FOR ANY TURBINE POWERED ACFT/PROP DRIVEN ACFT EXCEEDING 12500 LBS EXCP BY PPR FM AMGR.

TSNT PILOTS USE CTN; DO NOT ENTER THE TSA RSTRD AREA ADJ TO THE TSNT PRKG AREA.

BE ALERT TO ELEVD MALSR APCH END RWY 29R LCTD ON BLAST PAD.

PAVEMENT PRIOR TO THLD OF RWY 11L NOT AVBL FOR TAXI BACK OPS.

ARPT CLSD TO TGL & PLANNED LOW APCHS FOR TURBOJET ACFT 2200-0700 EXCEPT BY PPR FM AMGR PART 36 STAGE 3 ACFT.

TRANSIENT PARKING AVBL AT FBO.

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; NON MOVEMENT AREA S OF TWY B FROM TRML APN TO 200 FT W OF TWY H; SE HALF OF TRML APN; TSNT PRKG APN.

AVOID OVERFLYING SAN JOAQUIN GENERAL HOSPITAL & THE CITY OF MANTECA.

TWY F RSTRD TO ACFT WINGSPAN LESS THAN 118 FT.

FOR CD WHEN ATCT CLSD CTC NORCAL APCH AT 916-361-0516.

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.

SEAGULLS ON AND IN VCNTY OF ARPT MOSTLY DURING RAINY WEATHER.

TRML APN, CARGO APN, TWYS B, B2, B3, F, D, D7, D9, AND H FOR ACFT OVER 12500 LBS. ALL OTR TWYS RSTRD TO ACFT LESS THAN 12500 LBS.

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: PHIL WASHINGTON
ADMIN BLDG, 8500 PENA BLVD
DENVER, CO 80249 ((303) 342-2206)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: YES
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 2/1/1995
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 25
- 2.12.2 True Bearing: 271
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 5355

- 2.12.1 Designation: 07
- 2.12.2 True Bearing: 90
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 5351.6

- 2.12.1 Designation: 26
- 2.12.2 True Bearing: 271
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 5309.4

2.12.1 Designation: 08
2.12.2 True Bearing: 91
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 5354.3

2.12.1 Designation: 16L
2.12.2 True Bearing: 181
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 5357.1

2.12.1 Designation: 34R
2.12.2 True Bearing: 1
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 5353.7

2.12.1 Designation: 16R
2.12.2 True Bearing: 181
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 5326.3

2.12.1 Designation: 34L
2.12.2 True Bearing: 1
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 5327

2.12.1 Designation: 35R
2.12.2 True Bearing: 1
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 5370

2.12.1 Designation: 17L
2.12.2 True Bearing: 181

2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 5338.5

2.12.1 Designation: 17R
2.12.2 True Bearing: 181
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 5391.9

2.12.1 Designation: 35L
2.12.2 True Bearing: 1
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 5433.8

AD 2.13 Declared Distances

2.13.1 Designation: 25
2.13.2 Take-off Run Available: 12000
2.13.3 Take-off 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 Take-off Run Available: 12000
2.13.3 Take-off Distance Available: 12000
2.13.4 Accelerate-Stop Distance Available: 12000
2.13.5 Landing Distance Available: 12000

2.13.1 Designation: 26
2.13.2 Take-off Run Available: 12000
2.13.3 Take-off Distance Available: 12000
2.13.4 Accelerate-Stop Distance Available: 12000
2.13.5 Landing Distance Available: 12000

2.13.1 Designation: 08
2.13.2 Take-off Run Available: 12000
2.13.3 Take-off Distance Available: 13000
2.13.4 Accelerate-Stop Distance Available: 12000
2.13.5 Landing Distance Available: 12000

2.13.1 Designation: 16L
2.13.2 Take-off Run Available: 12000
2.13.3 Take-off 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 Take-off Run Available: 12000

2.13.3 Take-off Distance Available: 13000

2.13.4 Accelerate-Stop Distance Available: 12000

2.13.5 Landing Distance Available: 12000

2.13.1 Designation: 16R

2.13.2 Take-off Run Available: 16000

2.13.3 Take-off 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 Take-off Run Available: 16000

2.13.3 Take-off Distance Available: 16000

2.13.4 Accelerate-Stop Distance Available: 16000

2.13.5 Landing Distance Available: 16000

2.13.1 Designation: 35R

2.13.2 Take-off Run Available: 12000

2.13.3 Take-off 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 Take-off Run Available: 12000

2.13.3 Take-off 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 Take-off Run Available: 12000

2.13.3 Take-off 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 Take-off Run Available: 12000

2.13.3 Take-off Distance Available: 12000

2.13.4 Accelerate-Stop Distance Available: 12000

2.13.5 Landing Distance Available: 12000

AD 2.14 Approach and Runway Lighting

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: 07

2.14.2 Approach Lighting System: MALSR

2.14.4 Visual Approach Slope Indicator System: P4R

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: 08

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: 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: 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

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: 17L

2.14.2 Approach Lighting System: MALSR

2.14.4 Visual Approach Slope Indicator System: P4L

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

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: CD/P

2.18.3 Channel: 118.75

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (ARR)

2.18.3 Channel: 125.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (DEP)
2.18.3 Channel: 134.025
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (ARR)
2.18.3 Channel: 379.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P (WEST)
2.18.3 Channel: 121.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (EAST)
2.18.3 Channel: 121.85
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (EAST)
2.18.3 Channel: 377.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (WEST)
2.18.3 Channel: 379.175
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 17R/35L)
2.18.3 Channel: 124.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 07/25)
2.18.3 Channel: 128.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 08/26, 17L/35R)
2.18.3 Channel: 132.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 16L/34R, 16R/34L)
2.18.3 Channel: 135.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 08/26, 17L/35R)
2.18.3 Channel: 239.275
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 07/25)
2.18.3 Channel: 273.55
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 17R/35L)
2.18.3 Channel: 322.45
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 16L/34R, 16R/34L)
2.18.3 Channel: 351.95
2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

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: 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: 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: 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 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 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: 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 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: 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: 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 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: 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: 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: 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: 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: 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: Glide Slop 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 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: Glide Slop 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 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: 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 Slop 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: 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: 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: Glide Slop 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: 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

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: 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: Glide Slop 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: 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: 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 Slop 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 Navigation Aid Type VOR/DME. Magnetic variation: 8E
2.19.2 Navigation Aid Identification: DEN
2.19.5 Coordinates: 39-48-45.0506N / 104-39-38.6643W
2.19.6 Site Elevation: 5452.1 ft

General Remarks:

TWY F7 CLSD TO ACFT WINGSPAN MORE THAN 118 FT.

INFORMAL RWY USE PROGRAM IN EFCT H24; NOISE ABATEMENT INFO – ARPT MGMT 303-342-4200.

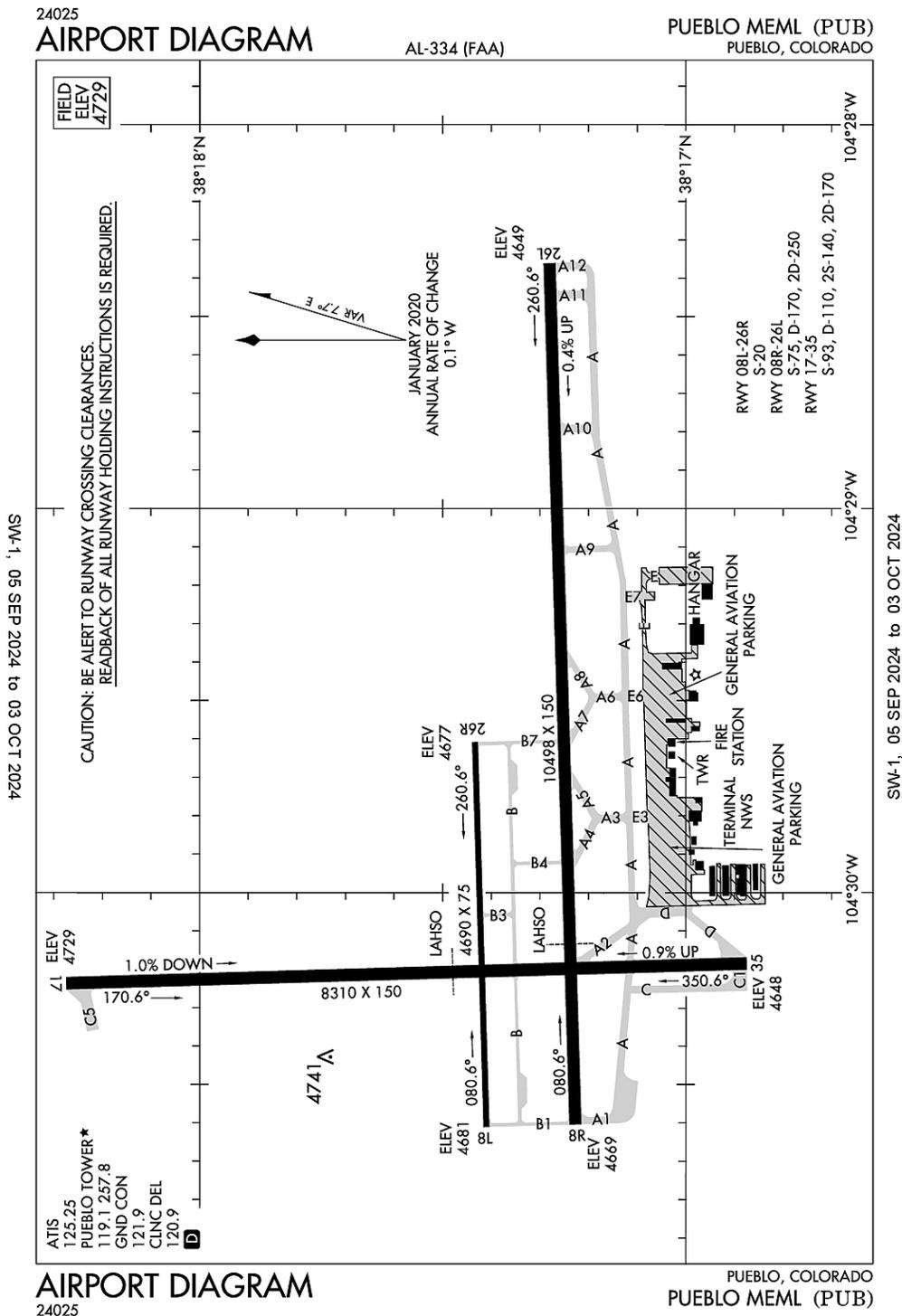
OVHD PAX BRIDGE S SIDE OF CONCOURSE-A PRVDS 42 FT TAIL & 118 FT WINGSPAN CLNC WHEN ON TWY CNTRLN.

WATERFOWL & BIRDS INVOF ARPT.

CUSTOMS AVBL PPR.

DEP RWY 08, 25 & 34R HAS MNTND CWY 500 X 1000 FT 1.25 SLOPE.

**Pueblo, Colorado
Pueblo Memorial
ICAO Identifier KPUB**



Pueblo, CO
Pueblo Memorial
ICAO Identifier KPUB

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 38-17-23.811N / 104-29-52.901W
- 2.2.2 From City: 5 miles E of PUEBLO, CO
- 2.2.3 Elevation: 4729.3 ft
- 2.2.5 Magnetic Variation: 8E (2015)
- 2.2.6 Airport Contact: GREG PEDROZA
31201 BRYAN CIRCLE
PUEBLO, CO 81001 (719-553-2760)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: 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: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-A

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 08L
- 2.12.2 True Bearing: 88
- 2.12.3 True Dimensions: 4690 ft x 75 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 38-17-24.3081N / 104-30-36.6451W
- 2.12.6 Threshold Elevation: 4681.2
- 2.12.6 Touchdown Zone Elevation: 4681.2

- 2.12.1 Designation: 26R
- 2.12.2 True Bearing: 268
- 2.12.3 True Dimensions: 4690 ft x 75 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 38-17-25.7014N / 104-29-37.865W
- 2.12.6 Threshold Elevation: 4677
- 2.12.6 Touchdown Zone Elevation: 4678.1

- 2.12.1 Designation: 08R
- 2.12.2 True Bearing: 88
- 2.12.3 True Dimensions: 10498 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 38-17-13.6348N / 104-30-36.2409W
- 2.12.6 Threshold Elevation: 4669.4
- 2.12.6 Touchdown Zone Elevation: 4671.4

2.12.1 Designation: 26L
2.12.2 True Bearing: 268
2.12.3 True Dimensions: 10498 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 38-17-16.7526N / 104-28-24.6616W
2.12.6 Threshold Elevation: 4648.8
2.12.6 Touchdown Zone Elevation: 4658.9

2.12.1 Designation: 17
2.12.2 True Bearing: 178
2.12.3 True Dimensions: 8310 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 38-18-15.0609N / 104-30-14.6942W
2.12.6 Threshold Elevation: 4729.3
2.12.6 Touchdown Zone Elevation: 4729.3

2.12.1 Designation: 35
2.12.2 True Bearing: 358
2.12.3 True Dimensions: 8310 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 38-16-52.9717N / 104-30-11.6348W
2.12.6 Threshold Elevation: 4648.1
2.12.6 Touchdown Zone Elevation: 4676.9

AD 2.13 Declared Distances

2.13.1 Designation: 08L
2.13.2 Take-off Run Available: 4690
2.13.3 Take-off 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 Take-off Run Available: 4690
2.13.3 Take-off Distance Available: 4690
2.13.4 Accelerate-Stop Distance Available: 4690
2.13.5 Landing Distance Available: 4690

2.13.1 Designation: 08R
2.13.2 Take-off Run Available: 10496
2.13.3 Take-off 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 Take-off Run Available: 10496
2.13.3 Take-off Distance Available: 10496
2.13.4 Accelerate-Stop Distance Available: 10496
2.13.5 Landing Distance Available: 10496

2.13.1 Designation: 17

2.13.2 Take-off Run Available: 8308
2.13.3 Take-off 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 Take-off Run Available: 8308
2.13.3 Take-off Distance Available: 8308
2.13.4 Accelerate-Stop Distance Available: 8308
2.13.5 Landing Distance Available: 8308

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 08L
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 26R
2.14.2 Approach Lighting System:
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:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 17
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 35
2.14.2 Approach Lighting System:
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 Channel: 125.25
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 120.9
2.18.5 Hours of Operation: 0600-2200

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 0600-2200

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 119.1
2.18.5 Hours of Operation: 0600-2200

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 257.8
2.18.5 Hours of Operation: 0600-2200

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: Glide Slope for runway 08R. Magnetic variation: 8E
2.19.2 ILS Identification: PUB
2.19.5 Coordinates: 38-17-18.9334N / 104-30-21.5794W
2.19.6 Site Elevation: 4672.8 ft

2.19.1 ILS Type: Localizer for runway 08R. Magnetic variation: 8E
2.19.2 ILS Identification: PUB
2.19.5 Coordinates: 38-17-17.2016N / 104-28-06.1097W
2.19.6 Site Elevation: 4653.1 ft

2.19.1 ILS Type: Glide Slope for runway 26L. Magnetic variation: 8E
2.19.2 ILS Identification: TFR
2.19.5 Coordinates: 38-17-21.3596N / 104-28-39.1966W
2.19.6 Site Elevation: 4649.4 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 / 104-30-52.5582W
2.19.6 Site Elevation: 4668 ft

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 8E
2.19.2 Navigation Aid Identification: PUB
2.19.5 Coordinates: 38-17-39.3132N / 104-25-46.0107W
2.19.6 Site Elevation: 4755.5 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.

CONDITIONS NOT MONITORED 2200L-0500L.

TWY A2 CLSD PERMLY/REMOVED.

SEE FLIP AP/1 SUPPLEMENTARY ARPT INFO.

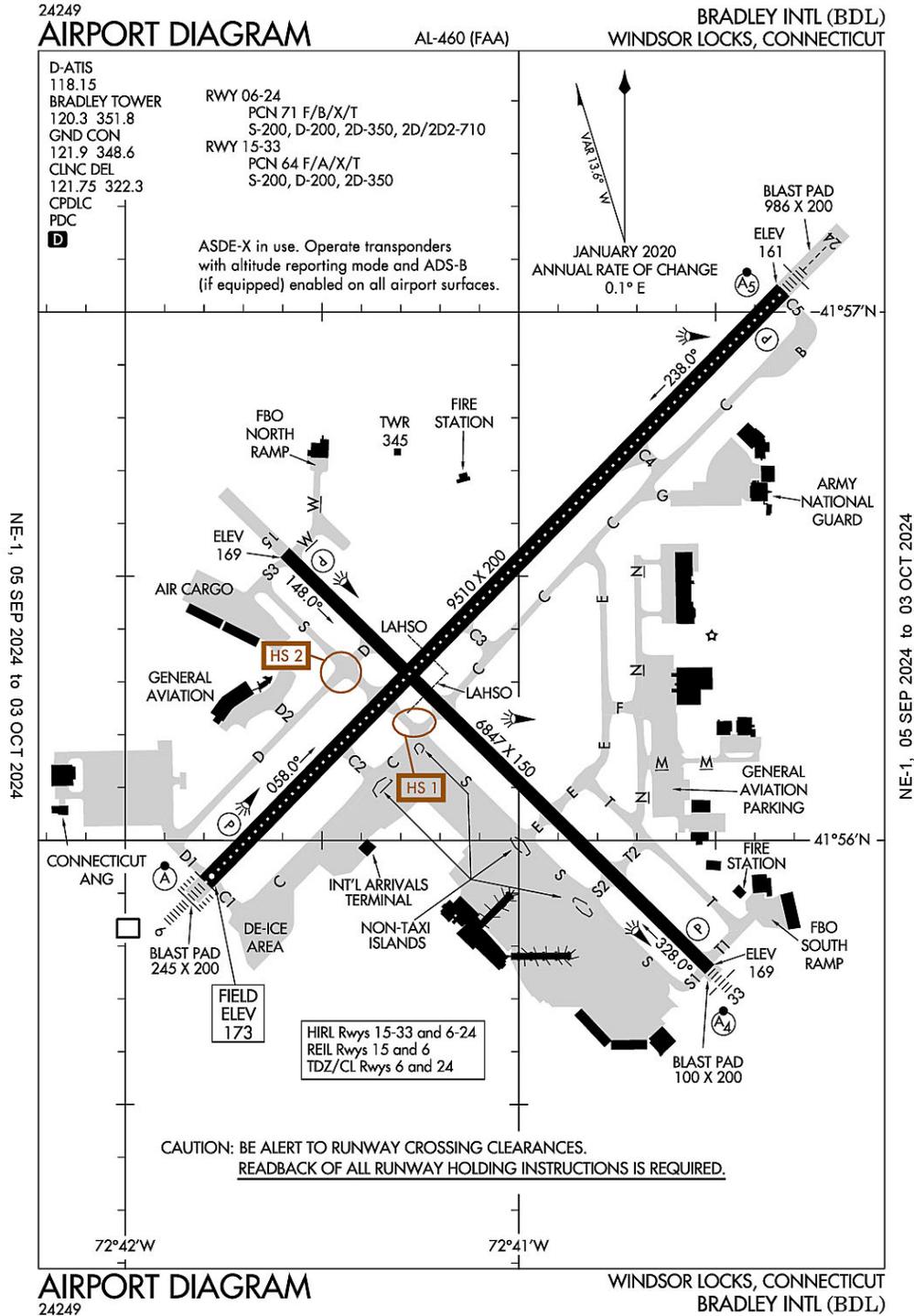
RAPID RFL AVBL F/W, R/W DUR FBO HR 0700L-2200L. CTC FBO 719-948-1310 24 HR PN & FREQ 122.95 PRIOR TO LNDG. ADZ ATC FOR RAPID RFL OPS & PROCD TO WEST RAMP.

RAMP-TAXI LANE E EXTD 30 FT WIDE FM EAST RAMP TO TWY E7.

TWY A BTN TWY A2 AND A6 50 FT WID.

FOR CD CTC PUEBLO APCH AT 303-342-1916, WHEN APCH CLSD CTC DENVER ARTCC AT 303-651-4257.

**Windsor Locks, Connecticut
Bradley International
ICAO Identifier KBDL**



Windsor Locks, CT
Bradley Intl
ICAO Identifier KBDL

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 41-56-20.516N / 72-41-03.537W
- 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 (860-292-2000)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 06
- 2.12.2 True Bearing: 44
- 2.12.3 True Dimensions: 9510 ft x 200 ft
- 2.12.4 PCN: 71 F/B/X/T
- 2.12.5 Coordinates: 41-55-55.25N / 72-41-47.6885W
- 2.12.6 Threshold Elevation: 173
- 2.12.6 Touchdown Zone Elevation: 173.3

- 2.12.1 Designation: 24
- 2.12.2 True Bearing: 224
- 2.12.3 True Dimensions: 9510 ft x 200 ft
- 2.12.4 PCN: 71 F/B/X/T
- 2.12.5 Coordinates: 41-57-02.3952N / 72-40-19.6697W
- 2.12.6 Threshold Elevation: 160.9
- 2.12.6 Touchdown Zone Elevation: 170

- 2.12.1 Designation: 15
- 2.12.2 True Bearing: 134
- 2.12.3 True Dimensions: 6847 ft x 150 ft
- 2.12.4 PCN: 64 F/A/X/T
- 2.12.5 Coordinates: 41-56-32.6254N / 72-41-35.7104W
- 2.12.6 Threshold Elevation: 168.8
- 2.12.6 Touchdown Zone Elevation: 170.8

- 2.12.1 Designation: 33
- 2.12.2 True Bearing: 314
- 2.12.3 True Dimensions: 6847 ft x 150 ft
- 2.12.4 PCN: 64 F/A/X/T
- 2.12.5 Coordinates: 41-55-45.3238N / 72-40-30.9557W
- 2.12.6 Threshold Elevation: 168.5
- 2.12.6 Touchdown Zone Elevation: 171.4

AD 2.13 Declared Distances

- 2.13.1 Designation: 06
- 2.13.2 Take-off Run Available: 9509
- 2.13.3 Take-off 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 Take-off Run Available: 9509
- 2.13.3 Take-off 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 Take-off Run Available: 6847
- 2.13.3 Take-off 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 Take-off Run Available: 6847
- 2.13.3 Take-off Distance Available: 6847
- 2.13.4 Accelerate-Stop Distance Available: 6847
- 2.13.5 Landing Distance Available: 6847

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

- 2.14.1 Designation: 24
- 2.14.2 Approach Lighting System: MALSR
- 2.14.4 Visual Approach Slope Indicator System: P4L

- 2.14.1 Designation: 15
- 2.14.2 Approach Lighting System:
- 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

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: ANG OPS

2.18.3 Channel: 138.55

2.18.5 Hours of Operation:

2.18.1 Service Designation: ANG OPS

2.18.3 Channel: 349.7

2.18.5 Hours of Operation:

2.18.1 Service Designation: CD/P

2.18.3 Channel: 121.75

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 322.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 118.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 348.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 120.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 351.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: NG OPS

2.18.3 Channel: 41.9

2.18.5 Hours of Operation:

2.18.1 Service Designation: NG OPS

2.18.3 Channel: 123.45

2.18.5 Hours of Operation:

2.18.1 Service Designation: NG OPS

2.18.3 Channel: 243.9

2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 06. Magnetic variation: 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: 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 variation: 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: DME for runway 24. Magnetic variation: 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: 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: Localizer for runway 24. Magnetic variation: 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 variation: 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 variation: 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:

TWY D CLSD BTN S & D1 TO ACFT WITH WING SPANS IN EXCESS OF 170 FT.

TWY C BTN TWY B & TWY C4 ACFT TAX SPD RSTRN OF 8 KTS/10 MPH MAX FOR ACFT WITH WING-SPAN 214 FT OR GTR.

LGTD OBST ANT 36 FT AGL/205 FT MSL (RWY 24 ILS/GS ANT) 162 FT NW OF TWY C CNTRLN MARKING BTN TWY B & TWY C4.

CAUTION: ANG RAMP MRK MAY NOT BE APPROPRIATE FOR LARGE ACFT: FLW MARSHALLERS IN-STR.

OPS CTC AUTOVON 636-8385; COML 860-627-3001.

NMRS BIRDS FQTLY ON OR INVOF ARPT.

MILITARY: ANG: WHEN CKG ATIS, BIRDS IN VCY MAY INDC HEIGHTENED BIRD WATCH CONDITION (BWC). USAF ACFT CTC ANG AIRFIELD OPS ON UHF FOR CURRENT BWC & ANY ASSOCD RSTRNS.

MILITARY: ARNG - DSN 636-7519/7520. C860-292-4519/4520.

MILITARY: ANG: OG/CC WAIVER ON FILE FOR C-130H/J WITH OPR WT UP TO 155000 LB. ALL OTHER ACFT OVR ANG RAMP PCN RQR WAIVER FR OG/CC THRU AFLD MGMT.

MILITARY: ANG: AFLD MGR DOES NOT ISSUE OR STORE COMSEC FOR TRAN CREWS.

MILITARY: ANG: PPR V220-2356.

FUEL: A++ (MIL).

NON-BASED DVRSN ACRS CTC ARPT OPS 860-627-3001 PRIOR TO DIVG & PRVD CO FLT OPS CTC INFO, ACFT TYPE, POB, INTL OR DOM FLT & GND OPS AGRMTS. ONLY 1 INTL ACR JETBRIDGE AVBL FOR PAX.

MILITARY: ARNG: OPR 1200-2030Z++ MON, TUE, FRI; 1200-0400++ WED, THU. 41.9 149.825 335.775 (HAV-OC OPS).

NO DE-ICING AVBL AT ANG.

RWY 6 DE-ICE PAD CLSD TO ACFT WITH WINGSPAN 171 FT OR GTR EXC WITH FOLLOW-ME ESCORT BY ARPT OPS.

NO TRNG FLTS, NO PLAS, NO TGLS BTN: 2300 - 0700 MON THRU SAT & 2300 - 1200 SUN.

FIXED WING ACFT USE LOW IDLE FOR TAXI, NO ENGINE CHECKS OR POWER RUNS ALLOWED ON THE ARNG RAMP DUE TO POSSIBLE FOD HAZARD.

MILITARY: ANG: OPR 1200-2030Z++ MON-FRI (SAT, SUN UNIT TRNG ASSEMBLY), CLSD HOL.

BASH PHASE II INCRD BIRD ACTVITY SEP-OCT AND MAR-APR.

PARL TWY OPS ON TWY C & TWY B RSTRD TO ACFT WITH WINGSPANS OF 171 FT OR LESS.

(E117) CT ANG AND U.S. ARMY NG.

MILITARY: ANG: NSTD WHITE GND EQPT BOXES PAINTED ON ANG RAMP.

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.

Washington, DC
Washington Dulles Intl
ICAO Identifier KIAD

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 38-56-50.843N / 77-27-35.743W
- 2.2.2 From City: 20 miles W of WASHINGTON, VA
- 2.2.3 Elevation: 312.3 ft
- 2.2.5 Magnetic Variation: 10W (2000)
- 2.2.6 Airport Contact: RICHARD GOLINOWSKI
1 SAARINEN CIRCLE
DULLES, VA 20166 (703-572-2730)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 19C
- 2.12.2 True Bearing: 181
- 2.12.3 True Dimensions: 11500 ft x 150 ft
- 2.12.4 PCN: 81 R/C/W/T
- 2.12.5 Coordinates: 38-58-14.3073N / 77-27-33.5451W
- 2.12.6 Threshold Elevation: 268.6
- 2.12.6 Touchdown Zone Elevation: 271.8

- 2.12.1 Designation: 01C
- 2.12.2 True Bearing: 1
- 2.12.3 True Dimensions: 11500 ft x 150 ft
- 2.12.4 PCN: 81 R/C/W/T
- 2.12.5 Coordinates: 38-56-20.6385N / 77-27-35.199W
- 2.12.6 Threshold Elevation: 286.1
- 2.12.6 Touchdown Zone Elevation: 286.1

- 2.12.1 Designation: 01L
- 2.12.2 True Bearing: 1
- 2.12.3 True Dimensions: 9400 ft x 150 ft
- 2.12.4 PCN: 81 R/C/W/T
- 2.12.5 Coordinates: 38-56-41.8795N / 77-28-29.3169W
- 2.12.6 Threshold Elevation: 296
- 2.12.6 Touchdown Zone Elevation: 296

2.12.1 Designation: 19R
2.12.2 True Bearing: 181
2.12.3 True Dimensions: 9400 ft x 150 ft
2.12.4 PCN: 81 R/C/W/T
2.12.5 Coordinates: 38-58-14.784N / 77-28-27.984W
2.12.6 Threshold Elevation: 277
2.12.6 Touchdown Zone Elevation: 278.3

2.12.1 Designation: 19L
2.12.2 True Bearing: 181
2.12.3 True Dimensions: 11500 ft x 150 ft
2.12.4 PCN: 81 R/C/W/T
2.12.5 Coordinates: 38-57-19.1867N / 77-26-09.5086W
2.12.6 Threshold Elevation: 293
2.12.6 Touchdown Zone Elevation: 302

2.12.1 Designation: 01R
2.12.2 True Bearing: 1
2.12.3 True Dimensions: 11500 ft x 150 ft
2.12.4 PCN: 81 R/C/W/T
2.12.5 Coordinates: 38-55-25.5244N / 77-26-11.2132W
2.12.6 Threshold Elevation: 311.7
2.12.6 Touchdown Zone Elevation: 312.3

2.12.1 Designation: 30
2.12.2 True Bearing: 291
2.12.3 True Dimensions: 10501 ft x 150 ft
2.12.4 PCN: 81 R/C/W/T
2.12.5 Coordinates: 38-56-00.9996N / 77-27-21.2257W
2.12.6 Threshold Elevation: 287.6
2.12.6 Touchdown Zone Elevation: 287.7

2.12.1 Designation: 12
2.12.2 True Bearing: 111
2.12.3 True Dimensions: 10501 ft x 150 ft
2.12.4 PCN: 81 R/C/W/T
2.12.5 Coordinates: 38-56-37.5897N / 77-29-25.5882W
2.12.6 Threshold Elevation: 309.9
2.12.6 Touchdown Zone Elevation: 309.9

AD 2.13 Declared Distances

2.13.1 Designation: 19C
2.13.2 Take-off Run Available: 11500
2.13.3 Take-off Distance Available: 11500
2.13.4 Accelerate-Stop Distance Available: 11500
2.13.5 Landing Distance Available: 11089

2.13.1 Designation: 01C
2.13.2 Take-off Run Available: 11500
2.13.3 Take-off 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 Take-off Run Available: 9400
2.13.3 Take-off 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 Take-off Run Available: 9400
2.13.3 Take-off Distance Available: 9400
2.13.4 Accelerate-Stop Distance Available: 9400
2.13.5 Landing Distance Available: 9400

2.13.1 Designation: 19L
2.13.2 Take-off Run Available: 11500
2.13.3 Take-off Distance Available: 11500
2.13.4 Accelerate-Stop Distance Available: 11500
2.13.5 Landing Distance Available: 11500

2.13.1 Designation: 01R
2.13.2 Take-off Run Available: 11500
2.13.3 Take-off Distance Available: 11500
2.13.4 Accelerate-Stop Distance Available: 11500
2.13.5 Landing Distance Available: 11500

2.13.1 Designation: 30
2.13.2 Take-off Run Available: 10501
2.13.3 Take-off Distance Available: 10501
2.13.4 Accelerate-Stop Distance Available: 10501
2.13.5 Landing Distance Available: 10501

2.13.1 Designation: 12
2.13.2 Take-off Run Available: 10501
2.13.3 Take-off Distance Available: 10501
2.13.4 Accelerate-Stop Distance Available: 10501
2.13.5 Landing Distance Available: 10501

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 19C
2.14.2 Approach Lighting System: ALSF2
2.14.4 Visual Approach Slope Indicator System: P4R

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: 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: 19L
2.14.2 Approach Lighting System: ALSF2
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: 30
2.14.2 Approach Lighting System:
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

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: CD/P
2.18.3 Channel: 135.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 317.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS
2.18.3 Channel: 134.85
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P (WEST)
2.18.3 Channel: 121.625
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (EAST)
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (EAST)

2.18.3 Channel: 317.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (WEST)
2.18.3 Channel: 348.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 01R/19L)
2.18.3 Channel: 120.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 01C/19C)
2.18.3 Channel: 120.25
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 01L/19R, RWY 12/30)
2.18.3 Channel: 134.425
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 01R/19L)
2.18.3 Channel: 317.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 01C/19C)
2.18.3 Channel: 348.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 01L/19R, RWY 12/30)
2.18.3 Channel: 348.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RAMP CTL (MIDFLD)
2.18.3 Channel: 129.55
2.18.5 Hours of Operation:

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: 38-56-31.0626N / 77-27-40.739W

2.19.6 Site Elevation: 281.7 ft

2.19.1 ILS Type: Localizer for runway 01C. Magnetic variation: 10W

2.19.2 ILS Identification: OSZ

2.19.5 Coordinates: 38-58-24.6804N / 77-27-33.3938W

2.19.6 Site Elevation: 263.3 ft

2.19.1 ILS Type: Glide Slope for runway 19C. Magnetic variation: 10W

2.19.2 ILS Identification: DLX

2.19.5 Coordinates: 38-58-04.1642N / 77-27-37.9988W

2.19.6 Site Elevation: 264.9 ft

2.19.1 ILS Type: Inner Marker for runway 19C. Magnetic variation: 10W
2.19.2 ILS Identification: DLX
2.19.5 Coordinates: 38-58-22.945N / 77-27-33.4229W
2.19.6 Site Elevation: 263.5 ft

2.19.1 ILS Type: Localizer for runway 19C. Magnetic variation: 10W
2.19.2 ILS Identification: DLX
2.19.5 Coordinates: 38-56-14.5833N / 77-27-35.2871W
2.19.6 Site Elevation: 283.8 ft

2.19.1 ILS Type: DME for runway 01L. Magnetic variation: 10W
2.19.2 ILS Identification: OIU
2.19.5 Coordinates: 38-58-25.077N / 77-28-31.1445W
2.19.6 Site Elevation: 288.2 ft

2.19.1 ILS Type: Glide Slop for runway 01L. Magnetic variation: 10W
2.19.2 ILS Identification: OIU
2.19.5 Coordinates: 38-56-52.8758N / 77-28-34.3489W
2.19.6 Site Elevation: 288.1 ft

2.19.1 ILS Type: Inner Marker for runway 01L. Magnetic variation: 10W
2.19.2 ILS Identification: OIU
2.19.5 Coordinates: 38-56-33.3882N / 77-28-29.4318W
2.19.6 Site Elevation: 298.4 ft

2.19.1 ILS Type: Localizer for runway 01L. Magnetic variation: 10W
2.19.2 ILS Identification: OIU
2.19.5 Coordinates: 38-58-24.7952N / 77-28-27.8419W
2.19.6 Site Elevation: 276.9 ft

2.19.1 ILS Type: DME for runway 19R. Magnetic variation: 10W
2.19.2 ILS Identification: ISU
2.19.5 Coordinates: 38-58-25.077N / 77-28-31.1445W
2.19.6 Site Elevation: 288.2 ft

2.19.1 ILS Type: Glide Slop for runway 19R. Magnetic variation: 10W
2.19.2 ILS Identification: ISU
2.19.5 Coordinates: 38-58-04.4532N / 77-28-33.3236W
2.19.6 Site Elevation: 272 ft

2.19.1 ILS Type: Inner Marker for runway 19R. Magnetic variation: 10W
2.19.2 ILS Identification: ISU
2.19.5 Coordinates: 38-58-23.5162N / 77-28-27.8521W
2.19.6 Site Elevation: 275 ft

2.19.1 ILS Type: Localizer for runway 19R. Magnetic variation: 10W
2.19.2 ILS Identification: ISU
2.19.5 Coordinates: 38-56-31.869N / 77-28-29.461W
2.19.6 Site Elevation: 298.3 ft

2.19.1 ILS Type: DME for runway 01R. Magnetic variation: 10W

2.19.2 ILS Identification: IAD
2.19.5 Coordinates: 38-55-11.037N / 77-26-08.2071W
2.19.6 Site Elevation: 326.3 ft

2.19.1 ILS Type: Glide Slope for runway 01R. Magnetic variation: 10W
2.19.2 ILS Identification: IAD
2.19.5 Coordinates: 38-55-35.8487N / 77-26-04.7355W
2.19.6 Site Elevation: 306.4 ft

2.19.1 ILS Type: Localizer for runway 01R. Magnetic variation: 10W
2.19.2 ILS Identification: IAD
2.19.5 Coordinates: 38-57-30.8651N / 77-26-09.3346W
2.19.6 Site Elevation: 301.5 ft

2.19.1 ILS Type: DME for runway 19L. Magnetic variation: 10W
2.19.2 ILS Identification: SGC
2.19.5 Coordinates: 38-55-11.037N / 77-26-08.2071W
2.19.6 Site Elevation: 326.3 ft

2.19.1 ILS Type: Glide Slope for runway 19L. Magnetic variation: 10W
2.19.2 ILS Identification: SGC
2.19.5 Coordinates: 38-57-09.2652N / 77-26-04.5983W
2.19.6 Site Elevation: 290.9 ft

2.19.1 ILS Type: Localizer for runway 19L. Magnetic variation: 10W
2.19.2 ILS Identification: SGC
2.19.5 Coordinates: 38-55-11.8054N / 77-26-11.4157W
2.19.6 Site Elevation: 315.1 ft

2.19.1 ILS Type: Glide Slope for runway 12. Magnetic variation: 10W
2.19.2 ILS Identification: AJU
2.19.5 Coordinates: 38-56-30.4069N / 77-29-15.5183W
2.19.6 Site Elevation: 303.4 ft

2.19.1 ILS Type: Localizer for runway 12. Magnetic variation: 10W
2.19.2 ILS Identification: AJU
2.19.5 Coordinates: 38-55-57.2399N / 77-27-08.4716W
2.19.6 Site Elevation: 281 ft

General Remarks:

TAXILANE 'C' ACTIVE; PUSHBACK CLNCS ON NORTH SIDE OF MIDFIELD TERMINAL ARE ONTO TAXILANE 'D' ONLY UNLESS OTHERWISE AUTH.

RWY STATUS LGTS ARE IN OPN.

ENGINE RUN-UPS BTW 2200L & 0700L REQUIRE PRIOR APPROVAL FM ARPT OPS.

LARGE FLOCKS OF BIRDS ON & INVOF ARPT/DEER INVOF ARPT.

B747-8 RESTRICTED TO MAXIMUM TAXI SPEED 17 KTS (20 MPH) ON TWY J.

RUNUP BLX FOR RWY 30 DSGND AS NON-MOVEMENT AREA.

RWY 30 DEPARTURES USE UPPER ANTENNA FOR ATC COMMUNICATIONS.

ACR PUSH BACKS & PWR FM ALL APRON PSNS REQUIRE CLNC FM MWAA RAMP TWR.

ALL AIRCRAFT WITH WINGSPAN EXCEEDING 118 FT ARE RESTRICTED FROM USING TAXILANE A BTN A1 & A5.

ALL 180 DEG TURNS OUT OF APRON POSITIONS SHALL BE MADE USING MINIMUM POWER.

TWY E1 RESTRICTED TO ACFT WITH A WINGSPAN LESS THAN 79 FT.

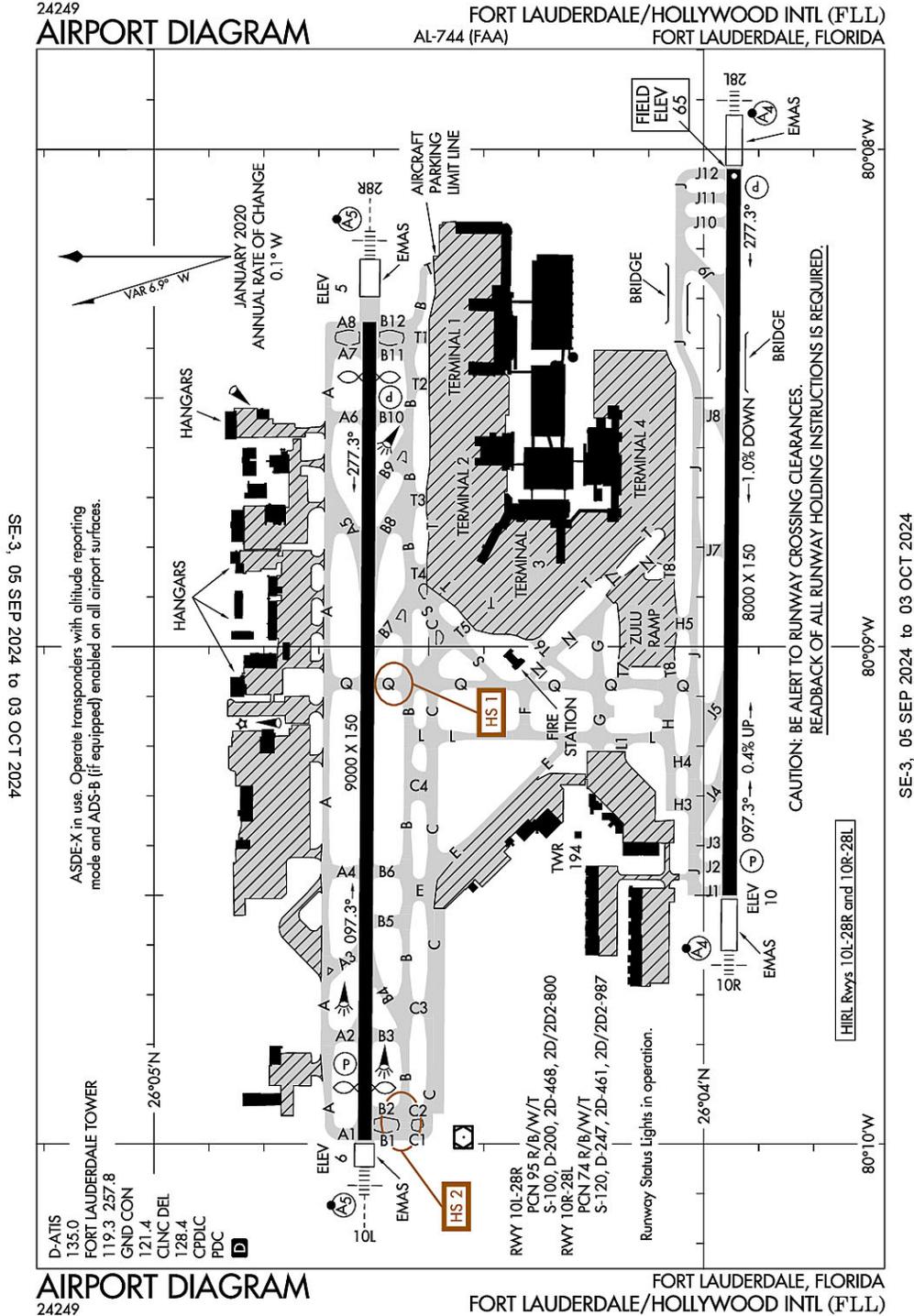
FLIGHT TRAINING BETWEEN 2200-0700 IS PROHIBITED.

DURING PERIODS OF ACFT SATURATION LONG TERM PARKING MAY NOT BE AVAILABLE. SERVICES FOR FUEL AND GO ONLY WILL BE AVAILABLE.

ITNRNT ACFT CTC FBO ON 122.95 OR 129.77 FOR SVCS.

LDG FEE. FLIGHT NOTIFICATION SERVICE (ADCUS) AVBL. NOTE: SEE SPECIAL NOTICES --CONTINUOUS POWER FACILITIES.

Fort Lauderdale, Florida
Fort Lauderdale-Hollywood International
ICAO Identifier KFLI



SE-3, 05 SEP 2024 to 03 OCT 2024

SE-3, 05 SEP 2024 to 03 OCT 2024

Fort Lauderdale, FL
Fort Lauderdale/Hollywood Intl
ICAO Identifier KFLL

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
320 TERMINAL DRIVE SUITE 200
FORT LAUDERDALE, FL 33315 (954-359-6100)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/21/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 10L
- 2.12.2 True Bearing: 90
- 2.12.3 True Dimensions: 9000 ft x 150 ft
- 2.12.4 PCN: 95 R/B/W/T
- 2.12.5 Coordinates: 26-04-37.0166N / 80-09-59.5381W
- 2.12.6 Threshold Elevation: 5.6
- 2.12.6 Touchdown Zone Elevation: 7.1

- 2.12.1 Designation: 28R
- 2.12.2 True Bearing: 270
- 2.12.3 True Dimensions: 9000 ft x 150 ft
- 2.12.4 PCN: 95 R/B/W/T
- 2.12.5 Coordinates: 26-04-36.4507N / 80-08-20.835W
- 2.12.6 Threshold Elevation: 5.3
- 2.12.6 Touchdown Zone Elevation: 6.7

- 2.12.1 Designation: 10R
- 2.12.2 True Bearing: 90
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 14.3

- 2.12.1 Designation: 28L
- 2.12.2 True Bearing: 270
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 65

AD 2.13 Declared Distances

- 2.13.1 Designation: 10L
- 2.13.2 Take-off Run Available: 9000
- 2.13.3 Take-off 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 Take-off Run Available: 9000
- 2.13.3 Take-off 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 Take-off Run Available: 8000
- 2.13.3 Take-off 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 Take-off Run Available: 8000
- 2.13.3 Take-off 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

- 2.14.1 Designation: 28L
- 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: CD PRE TAXI CLNC

2.18.3 Channel: 128.4

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 135

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.4

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/S

2.18.3 Channel: 121.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 119.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 257.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/S

2.18.3 Channel: 120.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RAMP CTL (NORTH)

2.18.3 Channel: 118.175

2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (SOUTH)

2.18.3 Channel: 129.875

2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 10L. Magnetic variation: 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: 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: 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: 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: 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: 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

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 Navigation Aid Type VOR/DME. Magnetic variation: 6W
2.19.2 Navigation Aid Identification: FLL
2.19.5 Coordinates: 26-04-26.1833N / 80-09-59.1921W
2.19.6 Site Elevation: 5.6 ft

General Remarks:

PPR FOR ACFT WITH EXPLOSIVES.

TWY E BTN TWY C & TWY L CLSD TO ACFT WINGSPAN MORE THAN 118 FT EXC 10 MIN PPR 954-816-3179.

ARR FM N & W MNTN 6000 FT UNTIL ABM RWY 28R ON DOWNWIND; ARR FM N MNTN 6000 FT UNTIL ABM RWY 10L ON DOWNWIND.

EAST SIDE OF CONCOURSE B AVBL TO ACFT WITH WINGSPAN LESS THAN 124.9 FT.

DO NOT MISTAKE TAXIWAY B FOR LANDING/TAKEOFF SURFACE.

ARFF INDEX C AVBL UPON REQ.

ALL RWYS NOISE SENSITIVE; NOISE ABATEMENT IN EFCT - 954-359-6181.

RWY 10L/28R NRS UNGROOVED AREAS.

RWY STATUS LIGHTS IN OPRN.

NO VFR APCHS OR BASE LEGS UNTIL OFFSHORE.

TURB BLW 1000 FT OVR LANDFILL LCTD 2 NM W.

JET RUNUPS NA 2300-0700.

ACFT OPRG FROM TRML 1, 2, 3, 4 MUST CTC RAMP CTL. RAMP CTL EFF - CTC ARPT OPS FOR HRS.

DO NOT MISTAKE TWY B FOR LNDG/TKOF SFC.

IR CARRIER ACFT USE RAMP PUSH BACK PROCS PRESCRIBED BY ARPT OPS.

TWY J BGN TO ELEV 900 FT EAST OF TWY Q. DUE TO ELEV ALL ACFT REMAIN ON CNTRLN; TWY T8 & TAXILANE T NOT ACCESSIBLE FM TWY J.

ACFT LDG RWY 10R & EXITING J9 FOLLOW TWY LEAD OFF LINE ONTO J9.

NMRS TREES SW QUADRANT OF ARPT.

BIRDS ON & INVOF ARPT; CONCENTRATION OF BIRDS BLW 500 FT 2.0 NM W OF 10L & 10R AER.

TWY B E OF TWY B12 & TXL T E OF TWY T1 CLSD TO ACFT WITH WINGSPAN GTR THAN 118 FT & TAIL HGT GTR THAN 45 FT EXC PPR 954-816-3179.

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.

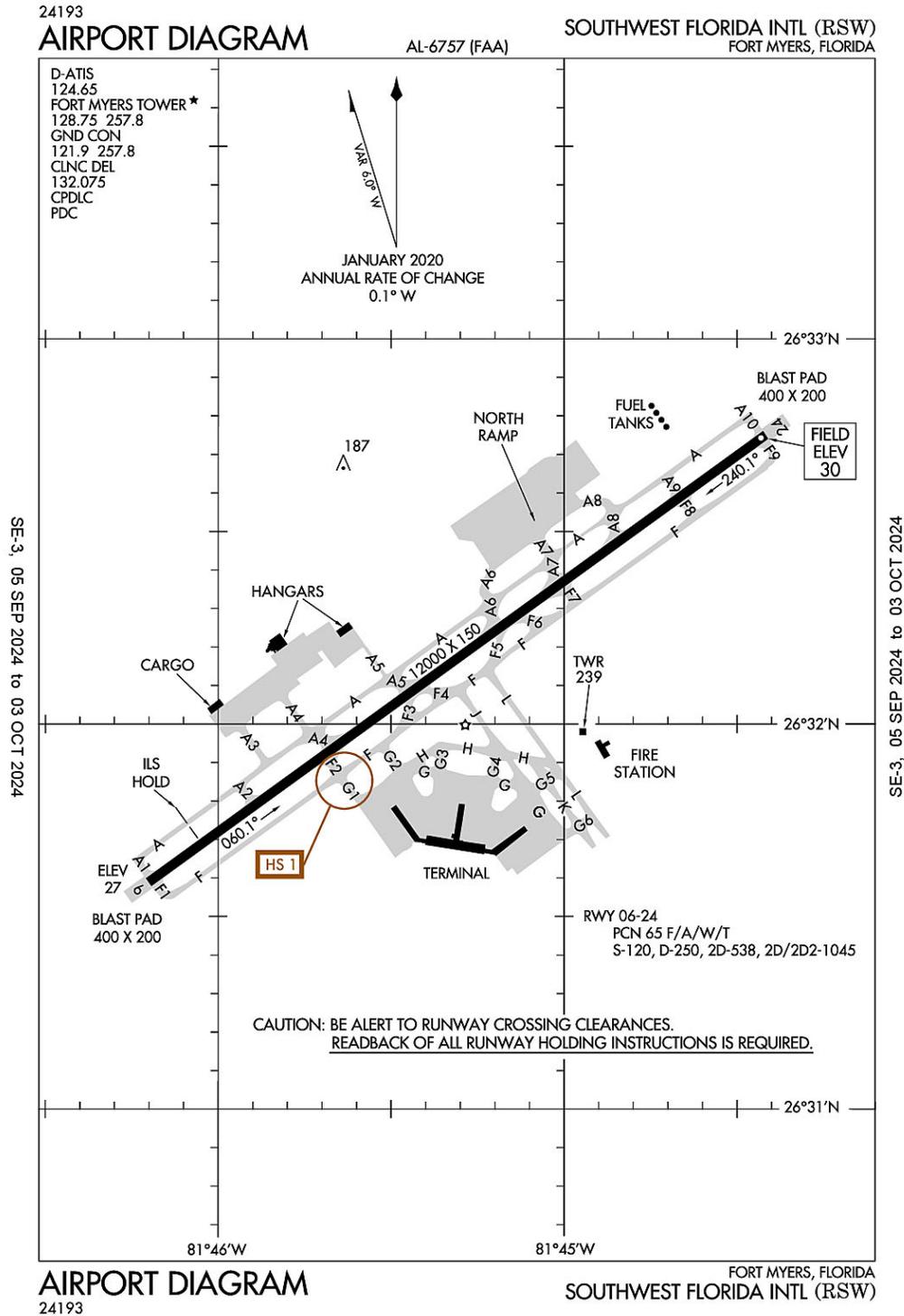
CLSD TO ACR TRAINING; LRG ACFT TRNG OVER 58000 LBS MAX CERTD GROSS TKOF WEIGHT; ALL TRNG 2300-0700.

PREFERENTIAL RWY USE PROGRAM IN EFCT; CTC NOISE ABATEMENT OFFICE.

TWY A BTN TWY A2 & TWY A3 CLSD TO ACFT WINGSPAN MORE THAN 171 FT & TAIL HGT MORE THAN 60 FT EXC PPR 954-816-3179.

TXL T BTN T7 AND T8 CLSD TO ACFT WINGSPAN MORE THAN 171 FT.
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: 26-32-10.19N / 81-45-18.558W
- 2.2.2 From City: 10 miles SE of FORT MYERS, FL
- 2.2.3 Elevation: 29.9 ft
- 2.2.5 Magnetic Variation: 4W (2000)
- 2.2.6 Airport Contact: STEVEN HENNIGAN
11000 TERMINAL ACCESS RD.
FORT MYERS, FL 33913 (239-590-4400)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 All Months, All Days, 0700-0100 Hours

AD 2.4 Handling Services and Facilities

- 2.4.1 Cargo Handling Facilities: YES
- 2.4.2 Fuel Types: 100LL 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: Class-I certified on 5/1/1983
- 2.6.2 Rescue and Firefighting Services: ARFF Index-D

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 24
- 2.12.2 True Bearing: 234
- 2.12.3 True Dimensions: 12000 ft x 150 ft
- 2.12.4 PCN: 65 F/A/W/T
- 2.12.5 Coordinates: 26-32-45.0262N / 81-44-25.0374W
- 2.12.6 Threshold Elevation: 29.8
- 2.12.6 Touchdown Zone Elevation: 29.9

- 2.12.1 Designation: 06
- 2.12.2 True Bearing: 54
- 2.12.3 True Dimensions: 12000 ft x 150 ft
- 2.12.4 PCN: 65 F/A/W/T
- 2.12.5 Coordinates: 26-31-35.3489N / 81-46-12.0692W
- 2.12.6 Threshold Elevation: 26.6
- 2.12.6 Touchdown Zone Elevation: 27

AD 2.13 Declared Distances

- 2.13.1 Designation: 24
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

- 2.13.1 Designation: 06
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

AD 2.14 Approach and Runway Lighting

- 2.14.1 Designation: 24
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System: P4L

- 2.14.1 Designation: 06
- 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: ALICO DP (RWY 06)
- 2.18.3 Channel: 126.8
- 2.18.5 Hours of Operation: 0600-0000

- 2.18.1 Service Designation: ALICO DP (RWY 24)
- 2.18.3 Channel: 134.425
- 2.18.5 Hours of Operation: 0600-0000

- 2.18.1 Service Designation: ALICO DP (RWY 06/24)
- 2.18.3 Channel: 306.2
- 2.18.5 Hours of Operation: 0600-0000

- 2.18.1 Service Designation: APCH/P DEP/P (121-240)
- 2.18.3 Channel: 124.125
- 2.18.5 Hours of Operation: 0600-0000

- 2.18.1 Service Designation: APCH/P DEP/P (001-120)
- 2.18.3 Channel: 126.8
- 2.18.5 Hours of Operation: 0600-0000

- 2.18.1 Service Designation: APCH/P DEP/P (301-360)
- 2.18.3 Channel: 127.05
- 2.18.5 Hours of Operation: 0600-0000

- 2.18.1 Service Designation: APCH/P DEP/P (241-300)
- 2.18.3 Channel: 134.425
- 2.18.5 Hours of Operation: 0600-0000

- 2.18.1 Service Designation: APCH/P DEP/P (241-120)
- 2.18.3 Channel: 306.2
- 2.18.5 Hours of Operation: 0600-0000

- 2.18.1 Service Designation: APCH/P DEP/P (121-240)
- 2.18.3 Channel: 371.85
- 2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: APCH/P DEP/P IC
2.18.3 Channel: 306.2
2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: APCH/P IC (RWY 06)
2.18.3 Channel: 125.15
2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: APCH/P IC (RWY 24)
2.18.3 Channel: 126.8
2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: CD/P
2.18.3 Channel: 132.075
2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: CLASS C (121-240)
2.18.3 Channel: 124.125
2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: CLASS C (001-120)
2.18.3 Channel: 126.8
2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: CLASS C (301-360)
2.18.3 Channel: 127.05
2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: CLASS C (241-300)
2.18.3 Channel: 134.425
2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: CLASS C (241-120)
2.18.3 Channel: 306.2
2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: CLASS C (121-240)
2.18.3 Channel: 371.85
2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: CSHEL DP (RWY 06)
2.18.3 Channel: 126.8
2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: CSHEL DP (RWY 24)
2.18.3 Channel: 134.425
2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: CSHEL DP (RWY 06/24)
2.18.3 Channel: 306.2

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 124.65

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: GND/P

2.18.3 Channel: 257.8

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: JOSFF STAR

2.18.3 Channel: 134.425

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: JOSFF STAR

2.18.3 Channel: 306.2

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 128.75

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 257.8

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: MOOKY DP (RWY 06)

2.18.3 Channel: 124.125

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: MOOKY DP (RWY 24)

2.18.3 Channel: 134.425

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: MOOKY DP (RWY 24)

2.18.3 Channel: 306.2

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: MOOKY DP (RWY 06)

2.18.3 Channel: 371.85

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: PUMPP STAR

2.18.3 Channel: 134.425

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: PUMPP STAR

2.18.3 Channel: 306.2

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: SCUBY DP

2.18.3 Channel: 124.125

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: SCUBY DP

2.18.3 Channel: 371.85

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: SHFTY STAR

2.18.3 Channel: 126.8

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: TYNEE STAR

2.18.3 Channel: 134.425

2.18.5 Hours of Operation: 0600-0000

2.18.1 Service Designation: TYNEE STAR

2.18.3 Channel: 306.2

2.18.5 Hours of Operation: 0600-0000

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 06. Magnetic variation: 4W

2.19.2 ILS Identification: RSW

2.19.5 Coordinates: 26-32-53.339N / 81-44-17.5144W

2.19.6 Site Elevation: 38 ft

2.19.1 ILS Type: Glide Slop for runway 06. Magnetic variation: 4W

2.19.2 ILS Identification: RSW

2.19.5 Coordinates: 26-31-43.5444N / 81-46-04.4222W

2.19.6 Site Elevation: 25.2 ft

2.19.1 ILS Type: Localizer for runway 06. Magnetic variation: 4W

2.19.2 ILS Identification: RSW

2.19.5 Coordinates: 26-32-51.1355N / 81-44-15.6428W

2.19.6 Site Elevation: 27.6 ft

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 2W

2.19.2 Navigation Aid Identification: RSW

2.19.5 Coordinates: 26-31-47.5921N / 81-46-32.7666W

2.19.6 Site Elevation: 24.8 ft

General Remarks:

ACR USE RAMP PROC PRESCRIBED BY ARPT OPS.

CAUTION: OPEN BAGGAGE BAYS & CONST WITHIN TERMINAL RAMP AREA. AIRCREWS USE MINIMUM THRUST SETTINGS IN THESE AREAS, SPCLY DURG SINGLE ENG TAXI. CROSS-BLEED STARTS ONLY ALLOWED AFT REACHING THE TUG RELEASE POINT.

TWY A5 BTN FBO RAMP AND TWY A CLSD TO ACFT WINGSPAN MORE THAN 118 FT.

FOR CD IFUN TO CTC ON MIAMI CTR FREQ, CTC MIAMI ARTCC AT 305-716-1731 (0100-0700).

GND CLNC RQRD PRIOR TO ENTERING TWY G.

OPERATE TRANSPONDERS WITH ALTITUDE REPORTING MODE AND ADS-B (IF EQUIPPED) ENABLED ON ALL AIRPORT SURFACES.

GATES B7 & B9 EXP CALL SPOT #7. GATES C8 & C9 EXP CALL SPOT #4. GATE D10A EXP CALL SPOT #2.

LGTS ON PARALLEL ROAD & PARKING LOT NW OF RWY 06/24 CAN BE MISTAKEN FOR RWY & APCH ENVIRONMENT.

ALL ACFT ON RAMP EXP CLOCKWISE FLOW. OUTBOUND TRAFFIC FROM GATES D2, D4, D6, D8 & 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.

DEP - ACFT MUST OBTAIN APVL FM GND CTL PRIOR TO PUSHBACK FM GATES B7, B9, C8 & C9. PILOTS ADZ TUG OPRS THAT YOU HAVE OBTAINED CLNC FM GND CTL PRIOR TO ENTERING TWY G.

NO HELI OPS PERMITTED ON TRML APRON.

TFC PROCD DRCTLY TO GATE UNLESS DRCTD BY ATC; ADVISE ATC IF GATE IS NOT AVBL.

CAUTION: GS ANT 130 FT SW OF TWY A CNTRLN BTN TWY A1 & TWY A2.

RWY USE PROGRAM IN EFFECT; USE DISTANT NOISE ABATEMENT DEP PROFILE. VISUAL APCH TO RWY 06 W OF FORT MYERS BEACH MAINTAIN 3000 FT UNTIL CROSSING SHORELINE 12 NM SW OF ARPT. RWY 24 PREFERRED BTN 2200-0600. FOR NOISE ABATEMENT PROC CTC AMGR.

Miami, FL
Miami Intl
ICAO Identifier KMIA

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 25-47-43.3N / 80-17-24.417W
- 2.2.2 From City: 8 miles NW of MIAMI, FL
- 2.2.3 Elevation: 9.3 ft
- 2.2.5 Magnetic Variation: 5W (2000)
- 2.2.6 Airport Contact: RALPH CUTIE
MIAMI-DADE AVIATION DEPARTMENT
MIAMI, FL 33102 (305-876-7038)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 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: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 26R
- 2.12.2 True Bearing: 267
- 2.12.3 True Dimensions: 8600 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 25-48-14.3204N / 80-16-31.5499W
- 2.12.6 Threshold Elevation: 8.8
- 2.12.6 Touchdown Zone Elevation: 9

- 2.12.1 Designation: 08L
- 2.12.2 True Bearing: 87
- 2.12.3 True Dimensions: 8600 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 25-48-10.432N / 80-18-05.5508W
- 2.12.6 Threshold Elevation: 8.9
- 2.12.6 Touchdown Zone Elevation: 9.1

- 2.12.1 Designation: 08R
- 2.12.2 True Bearing: 87
- 2.12.3 True Dimensions: 10506 ft x 200 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 25-48-02.5177N / 80-18-05.1588W
- 2.12.6 Threshold Elevation: 8.5
- 2.12.6 Touchdown Zone Elevation: 9.1

2.12.1 Designation: 26L
2.12.2 True Bearing: 267
2.12.3 True Dimensions: 10506 ft x 200 ft
2.12.4 PCN:
2.12.5 Coordinates: 25-48-07.2652N / 80-16-10.3282W
2.12.6 Threshold Elevation: 8.9
2.12.6 Touchdown Zone Elevation: 9

2.12.1 Designation: 09
2.12.2 True Bearing: 87
2.12.3 True Dimensions: 13016 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 25-47-09.9421N / 80-18-53.4173W
2.12.6 Threshold Elevation: 8.1
2.12.6 Touchdown Zone Elevation: 8.2

2.12.1 Designation: 27
2.12.2 True Bearing: 267
2.12.3 True Dimensions: 13016 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 25-47-15.8328N / 80-16-31.1711W
2.12.6 Threshold Elevation: 9
2.12.6 Touchdown Zone Elevation: 9.1

2.12.1 Designation: 30
2.12.2 True Bearing: 299
2.12.3 True Dimensions: 9360 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 25-47-11.8224N / 80-16-39.0805W
2.12.6 Threshold Elevation: 8.7
2.12.6 Touchdown Zone Elevation: 9.3

2.12.1 Designation: 12
2.12.2 True Bearing: 119
2.12.3 True Dimensions: 9360 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 25-47-57.4262N / 80-18-08.2439W
2.12.6 Threshold Elevation: 9.1
2.12.6 Touchdown Zone Elevation: 9.2

AD 2.13 Declared Distances

2.13.1 Designation: 26R
2.13.2 Take-off Run Available: 8600
2.13.3 Take-off Distance Available: 8600
2.13.4 Accelerate-Stop Distance Available: 8600
2.13.5 Landing Distance Available: 8600

2.13.1 Designation: 08L
2.13.2 Take-off Run Available: 8600
2.13.3 Take-off Distance Available: 8600

2.13.4 Accelerate-Stop Distance Available: 8600
2.13.5 Landing Distance Available: 8600

2.13.1 Designation: 08R
2.13.2 Take-off Run Available: 10506
2.13.3 Take-off 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 Take-off Run Available: 10506
2.13.3 Take-off 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 Take-off Run Available: 13016
2.13.3 Take-off 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 Take-off Run Available: 13016
2.13.3 Take-off Distance Available: 13016
2.13.4 Accelerate-Stop Distance Available: 13016
2.13.5 Landing Distance Available: 12755

2.13.1 Designation: 30
2.13.2 Take-off Run Available: 9355
2.13.3 Take-off Distance Available: 9355
2.13.4 Accelerate-Stop Distance Available: 8853
2.13.5 Landing Distance Available: 7913

2.13.1 Designation: 12
2.13.2 Take-off Run Available: 9355
2.13.3 Take-off Distance Available: 9355
2.13.4 Accelerate-Stop Distance Available: 8579
2.13.5 Landing Distance Available: 8579

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 26R
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 08L
2.14.2 Approach Lighting System:
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: 30
2.14.2 Approach Lighting System: MALS
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

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: ALTNN DP
2.18.3 Channel: 119.45
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ALTNN DP
2.18.3 Channel: 290.325
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ANNEY STAR
2.18.3 Channel: 125.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ANNEY STAR
2.18.3 Channel: 322.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (090-269)
2.18.3 Channel: 120.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (270-089)
2.18.3 Channel: 125.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (090-269)
2.18.3 Channel: 379.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P IC (270-089)

2.18.3 Channel: 124.85
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P IC (270-089)
2.18.3 Channel: 322.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/S
2.18.3 Channel: 125.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/S (270-089)
2.18.3 Channel: 263.025
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BLUFI STAR
2.18.3 Channel: 125.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BLUFI STAR
2.18.3 Channel: 322.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BNFSH STAR
2.18.3 Channel: 124.85
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BNFSH STAR
2.18.3 Channel: 263.025
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BNGOS DP
2.18.3 Channel: 119.45
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BNGOS DP
2.18.3 Channel: 290.325
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 135.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (090-269)
2.18.3 Channel: 120.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (270-089)
2.18.3 Channel: 125.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (270-089)
2.18.3 Channel: 322.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (090-269)
2.18.3 Channel: 379.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CSTAL STAR
2.18.3 Channel: 124.85
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CSTAL STAR
2.18.3 Channel: 263.025
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (ARRIVAL)
2.18.3 Channel: 119.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (DEPART)
2.18.3 Channel: 133.675
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (090-269)
2.18.3 Channel: 125.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (270-089)
2.18.3 Channel: 290.325
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (090-269)
2.18.3 Channel: 354.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P IC (270-089)
2.18.3 Channel: 119.45
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DORRL DP
2.18.3 Channel: 119.45
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DORRL DP
2.18.3 Channel: 290.325
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DVALL STAR
2.18.3 Channel: 120.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DVALL STAR
2.18.3 Channel: 350.225
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: FLMGO DP
2.18.3 Channel: 119.45
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: FLMGO DP
2.18.3 Channel: 290.325
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: FOLZZ DP
2.18.3 Channel: 119.45
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: FOLZZ DP
2.18.3 Channel: 290.325
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: FOWEE STAR
2.18.3 Channel: 120.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: FOWEE STAR
2.18.3 Channel: 124.85
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: FOWEE STAR
2.18.3 Channel: 350.225
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: FROGZ STAR
2.18.3 Channel: 120.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: FROGZ STAR
2.18.3 Channel: 350.225
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GLADZ DP (DEPARTING EAST)
2.18.3 Channel: 119.45
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GLADZ DP (DEPARTING WEST)
2.18.3 Channel: 125.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GLADZ DP (DEPARTING EAST)

2.18.3 Channel: 290.325

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GLADZ DP (DEPARTING WEST)

2.18.3 Channel: 354.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P IC (RWY 08L/26R, 08R/26L, 12)

2.18.3 Channel: 121.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P IC (RWY 09/27, 30)

2.18.3 Channel: 127.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P IC

2.18.3 Channel: 348.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GWAVA DP

2.18.3 Channel: 125.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GWAVA DP

2.18.3 Channel: 354.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: HURCN DP

2.18.3 Channel: 119.45

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: HURCN DP

2.18.3 Channel: 290.325

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: HUSIL DP

2.18.3 Channel: 119.45

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: HUSIL DP

2.18.3 Channel: 290.325

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KLADA DP

2.18.3 Channel: 125.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KLADA DP

2.18.3 Channel: 354.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (090-269)

2.18.3 Channel: 123.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P IC (270-089)

2.18.3 Channel: 118.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P IC

2.18.3 Channel: 256.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LIFRR DP

2.18.3 Channel: 119.45

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LIFRR DP

2.18.3 Channel: 290.325

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LUUCE STAR (9000 FT)

2.18.3 Channel: 126.05

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LUUCE STAR (7000 FT)

2.18.3 Channel: 133.775

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LUUCE STAR (9000 FT)

2.18.3 Channel: 251.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LUUCE STAR (7000 FT)

2.18.3 Channel: 371.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MAYNR DP

2.18.3 Channel: 125.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MAYNR DP

2.18.3 Channel: 354.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MIAMI DP (ALTNN,BEECH,BNGOS,DORRL,FLMGO,HURCN,FOLZZ,ZFP)

2.18.3 Channel: 119.45

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MIAMI DP (GWAVA, KETLL, MAYNR TRANSITIONS)
2.18.3 Channel: 125.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MIAMI DP (ALTNN,BEECH,BNGOS,DORRL,FLMGO,HURCN,FOLZZ,ZFP)
2.18.3 Channel: 290.325
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MIAMI DP (GWAVA, KETLL, MAYNR TRANSITIONS)
2.18.3 Channel: 354.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: NNOCE DP
2.18.3 Channel: 125.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: NNOCE DP
2.18.3 Channel: 354.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PALMZ STAR
2.18.3 Channel: 120.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PALMZ STAR
2.18.3 Channel: 350.225
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RAMP CTL
2.18.3 Channel: 120.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RTIS (120-300 WITHIN 25 NM)
2.18.3 Channel: 125.25
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SNDBR STAR
2.18.3 Channel: 120.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SNDBR STAR
2.18.3 Channel: 350.225
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TARPEN STAR (9000 FT)
2.18.3 Channel: 126.05
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TARPEN STAR (7000 FT)
2.18.3 Channel: 133.775
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TARPN STAR (9000 FT)
2.18.3 Channel: 251.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TARPN STAR (7000 FT)
2.18.3 Channel: 371.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: VIICE STAR
2.18.3 Channel: 120.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: VIICE STAR
2.18.3 Channel: 350.225
2.18.5 Hours of Operation: 24

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: ROY
2.19.5 Coordinates: 25-48-16.3597N / 80-16-18.3104W
2.19.6 Site Elevation: 20.1 ft

2.19.1 ILS Type: Localizer for runway 08L. Magnetic variation: 5W
2.19.2 ILS Identification: ROY
2.19.5 Coordinates: 25-48-14.865N / 80-16-18.3941W
2.19.6 Site Elevation: 6.8 ft

2.19.1 ILS Type: DME for runway 26R. Magnetic variation: 5W
2.19.2 ILS Identification: CNV
2.19.5 Coordinates: 25-48-07.1241N / 80-18-16.4684W
2.19.6 Site Elevation: 20.3 ft

2.19.1 ILS Type: Localizer for runway 26R. Magnetic variation: 5W
2.19.2 ILS Identification: CNV
2.19.5 Coordinates: 25-48-09.969N / 80-18-16.6983W
2.19.6 Site Elevation: 7.4 ft

2.19.1 ILS Type: DME for runway 08R. Magnetic variation: 5W
2.19.2 ILS Identification: MFA
2.19.5 Coordinates: 25-48-05.0878N / 80-16-00.575W
2.19.6 Site Elevation: 15.6 ft

2.19.1 ILS Type: Glide Slope for runway 08R. Magnetic variation: 5W
2.19.2 ILS Identification: MFA
2.19.5 Coordinates: 25-48-06.1715N / 80-17-54.807W
2.19.6 Site Elevation: 5 ft

2.19.1 ILS Type: Localizer for runway 08R. Magnetic variation: 5W
2.19.2 ILS Identification: MFA
2.19.5 Coordinates: 25-48-07.688N / 80-16-00.0426W

2.19.6 Site Elevation: 6.3 ft

2.19.1 ILS Type: DME for runway 26L. Magnetic variation: 5W
2.19.2 ILS Identification: VIN
2.19.5 Coordinates: 25-48-05.8074N / 80-18-14.9415W
2.19.6 Site Elevation: 14.3 ft

2.19.1 ILS Type: Glide Slope for runway 26L. Magnetic variation: 5W
2.19.2 ILS Identification: VIN
2.19.5 Coordinates: 25-48-09.7347N / 80-16-22.5043W
2.19.6 Site Elevation: 5.9 ft

2.19.1 ILS Type: Localizer for runway 26L. Magnetic variation: 5W
2.19.2 ILS Identification: VIN
2.19.5 Coordinates: 25-48-02.1576N / 80-18-13.7966W
2.19.6 Site Elevation: 7.6 ft

2.19.1 ILS Type: DME for runway 09. Magnetic variation: 5W
2.19.2 ILS Identification: BUL
2.19.5 Coordinates: 25-47-15.8249N / 80-16-17.2451W
2.19.6 Site Elevation: 20.1 ft

2.19.1 ILS Type: Glide Slope for runway 09. Magnetic variation: 5W
2.19.2 ILS Identification: BUL
2.19.5 Coordinates: 25-47-07.8388N / 80-18-26.7053W
2.19.6 Site Elevation: 7.5 ft

2.19.1 ILS Type: Localizer for runway 09. Magnetic variation: 5W
2.19.2 ILS Identification: BUL
2.19.5 Coordinates: 25-47-16.4165N / 80-16-17.1006W
2.19.6 Site Elevation: 18.4 ft

2.19.1 ILS Type: Glide Slope for runway 27. Magnetic variation: 5W
2.19.2 ILS Identification: MIA
2.19.5 Coordinates: 25-47-11.7269N / 80-16-45.3981W
2.19.6 Site Elevation: 4.7 ft

2.19.1 ILS Type: Localizer for runway 27. Magnetic variation: 5W
2.19.2 ILS Identification: MIA
2.19.5 Coordinates: 25-47-09.3891N / 80-19-06.6406W
2.19.6 Site Elevation: 7.1 ft

2.19.1 ILS Type: DME for runway 12. Magnetic variation: 5W
2.19.2 ILS Identification: GEM
2.19.5 Coordinates: 25-47-11.2767N / 80-16-32.4152W
2.19.6 Site Elevation: 15.9 ft

2.19.1 ILS Type: Glide Slope for runway 12. Magnetic variation: 5W
2.19.2 ILS Identification: GEM
2.19.5 Coordinates: 25-47-50.78N / 80-17-58.58W
2.19.6 Site Elevation: 7 ft

2.19.1 ILS Type: Localizer for runway 12. Magnetic variation: 5W
2.19.2 ILS Identification: GEM
2.19.5 Coordinates: 25-47-09.6403N / 80-16-34.8108W
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: 25-47-57.7789N / 80-18-14.5127W
2.19.6 Site Elevation: 14.7 ft

2.19.1 ILS Type: Glide Slope for runway 30. Magnetic variation: 5W
2.19.2 ILS Identification: DCX
2.19.5 Coordinates: 25-47-17.643N / 80-16-59.572W
2.19.6 Site Elevation: 7.1 ft

2.19.1 ILS Type: Localizer for runway 30. Magnetic variation: 5W
2.19.2 ILS Identification: DCX
2.19.5 Coordinates: 25-47-59.8764N / 80-18-13.0372W
2.19.6 Site Elevation: 8.9 ft

General Remarks:

ACFT WITH A WINGSPAN GTR THAN 171 FT ARE PROHIBITED FM TXG ON TWY P E OF TWY U, EXCEPT ADG VI ACFT COMPLYING WITH MIA ADG VI OPERATIONAL PLAN WHEN ADJ AIRSIDE SVC ROAD IS CLSD TO TRAFFIC.

ALL MEDICAL EMERGENCIES ARRIVALS, WITH THE EXCEPTION OF AIR AMBULANCE FLIGHTS, MUST SECURE DOORS UNTIL ARFF IS ON SCENE.

ACFT WITH A WINGSPAN GTR THAN 171 FT ARE PROHIBITED FM TXG ON TWY P E OF TWY U, EXCEPT ADG VI ACFT COMPLYING WITH MIA ADG VI OPERATIONAL PLAN WHEN ADJ AIRSIDE SVC ROAD IS CLSD TO TFC.

ALL TBJT ACFT ARE REQD TO USE DSNT NOISE ABATEMENT DEP PROFILE (NADP-2) FROM ALL RWYS.

AIRPORT MANAGER: 305-876-7038.

US CBP AND EAPIS AVBL.

ALL DIVERSION CTC FREQ 130.5 UPON ARR.

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.

AIRPORT OPS 305-876-7550.

CLSD NON ENG ACFT.

RWY 08L-26R CLSD 0300-1200Z++ WHEN RWY 08R-26L AND RWY 09-27 ARE IN USE.

CLOSE-IN NOISE ABATEMENT DEP PROFILE TO BE USED BY A319/320/321, A330-200/300, B727-200, B737-800/900, B767-200/300/400/700, B747-800, B777-300/77L/77W, AND MD-11. DSNT NOISE ABATEMENT

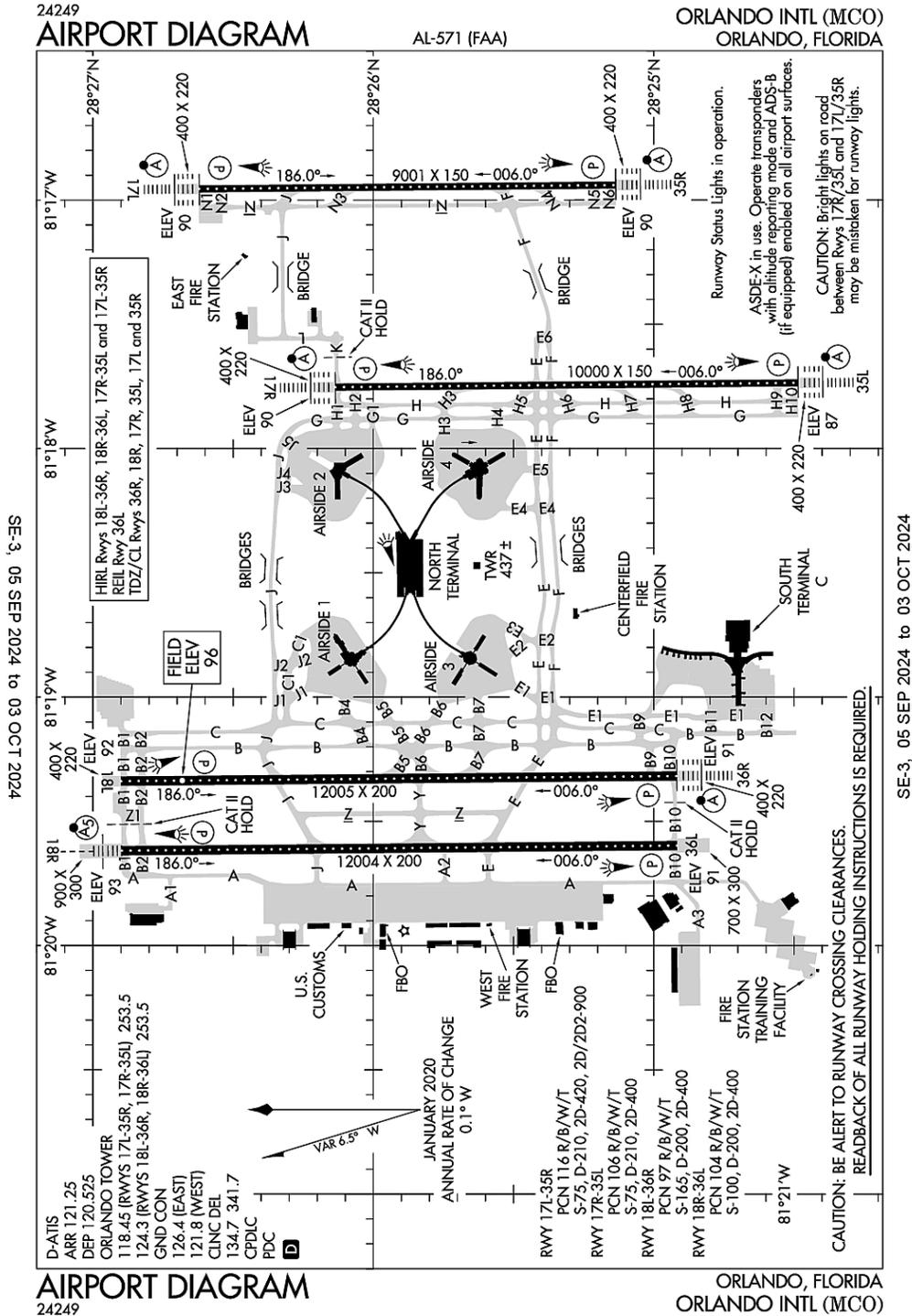
DEP PROFILE TO BE USED BY ALL OTHER TURBOJET ACFT.

RWY 12-30 CLSD 0300-1200Z++ WHEN RWY 08R-26L AND RWY 09-27 ARE IN USE.

BIRDS ON & INVOF ARPT.

PPR FOR INBOUND MILITARY FLIGHTS 100 NM ON FREQ 130.5.

Orlando, Florida
Orlando International
ICAO Identifier KMCO



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: KEVIN J. THIBAUT, P.E.
1 JEFF FUQUA BLVD
ORLANDO, FL 32827 (407-825-7445)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: Class-I certified on 5/21/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 35R
- 2.12.2 True Bearing: 359
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 89.8

- 2.12.1 Designation: 17L
- 2.12.2 True Bearing: 179
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 89.9

- 2.12.1 Designation: 17R
- 2.12.2 True Bearing: 179
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 90.2

2.12.1 Designation: 35L
2.12.2 True Bearing: 359
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 88.3

2.12.1 Designation: 36R
2.12.2 True Bearing: 359
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 92.3

2.12.1 Designation: 18L
2.12.2 True Bearing: 179
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 96.4

2.12.1 Designation: 18R
2.12.2 True Bearing: 179
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 93.5

2.12.1 Designation: 36L
2.12.2 True Bearing: 359
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 92.6

AD 2.13 Declared Distances

2.13.1 Designation: 35R
2.13.2 Take-off Run Available: 9001
2.13.3 Take-off Distance Available: 9001
2.13.4 Accelerate-Stop Distance Available: 9001
2.13.5 Landing Distance Available: 9001

2.13.1 Designation: 17L
2.13.2 Take-off Run Available: 9001
2.13.3 Take-off Distance Available: 9001

2.13.4 Accelerate-Stop Distance Available: 9001
2.13.5 Landing Distance Available: 9001

2.13.1 Designation: 17R
2.13.2 Take-off Run Available: 10000
2.13.3 Take-off 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 Take-off Run Available: 10000
2.13.3 Take-off 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 Take-off Run Available: 12005
2.13.3 Take-off Distance Available: 12005
2.13.4 Accelerate-Stop Distance Available: 11601
2.13.5 Landing Distance Available: 11601

2.13.1 Designation: 18L
2.13.2 Take-off Run Available: 12005
2.13.3 Take-off Distance Available: 12005
2.13.4 Accelerate-Stop Distance Available: 12005
2.13.5 Landing Distance Available: 12005

2.13.1 Designation: 18R
2.13.2 Take-off Run Available: 12004
2.13.3 Take-off 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 Take-off Run Available: 12004
2.13.3 Take-off Distance Available: 12004
2.13.4 Accelerate-Stop Distance Available: 11621
2.13.5 Landing Distance Available: 11621

AD 2.14 Approach and Runway Lighting

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: 17L
2.14.2 Approach Lighting System: ALSF2
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: 36R
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:
2.14.4 Visual Approach Slope Indicator System: P4L

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
2.14.2 Approach Lighting System:
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 Channel: 41.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: AR OPS
2.18.3 Channel: 148.8
2.18.5 Hours of Operation:

2.18.1 Service Designation: CD/P
2.18.3 Channel: 134.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 341.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (DEP)
2.18.3 Channel: 120.525
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (ARR)
2.18.3 Channel: 121.25
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P (WEST)
2.18.3 Channel: 121.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (EAST)
2.18.3 Channel: 126.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 17L/35R, 17R/35L)
2.18.3 Channel: 118.45
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 18L/36R, 18R/36L)
2.18.3 Channel: 124.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 253.5
2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 17L. Magnetic variation: 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 Slop 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: 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 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: Glide Slop 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: 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: DME for runway 17R. Magnetic variation: 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: 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: 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: 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: 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 36R. Magnetic variation: 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: 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: 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: DME for runway 18R. Magnetic variation: 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: 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

General Remarks:

WHEN ORL ILS RY 7 AND MCO ILS RYS 17 & 18R SIMULTANEOUS OPERATIONS ARE CONDUCTED, ATC RADAR REQUIRED.

WEST RAMP CUSTOMS INSPECTION PRKG AREA RSTD TO ACFT WINGSPAN LESS THAN 118'

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 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.

TWY J3 AND TWY J4 RSTD TO WINGSPAN OF LESS THAN 118 FT.

RUNWAY STATUS LIGHTS ARE IN OPERATION.

BRIGHT LGTS ON ROAD BTN RY 17R/35L AND RY 17L/35R MAY BE MISTAKEN FOR RY LGTS.

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.

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.

USE CAUTION IN VCNTY OF TWY "A" ALONG WEST RAMP.

BIRDS & DEER ON & INVOF ARPT.

ACFT WITH WINGSPAN GREATER THAN 214 FT MUST ADHERE TO SPECIFIC RY AND TAXI ROUTES. CONTACT AIRFIELD OPS AT 407-825-2036 FOR DETAILS.

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)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-D

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 19R
- 2.12.2 True Bearing: 182
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 21

- 2.12.1 Designation: 01L
- 2.12.2 True Bearing: 2
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 10.8

- 2.12.1 Designation: 19L
- 2.12.2 True Bearing: 182
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 26.1

2.12.1 Designation: 01R
2.12.2 True Bearing: 2
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 20.5

2.12.1 Designation: 10
2.12.2 True Bearing: 92
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 21.8

2.12.1 Designation: 28
2.12.2 True Bearing: 272
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 26.4

AD 2.13 Declared Distances

2.13.1 Designation: 19R
2.13.2 Take-off Run Available: 11002
2.13.3 Take-off Distance Available: 11002
2.13.4 Accelerate-Stop Distance Available: 11002
2.13.5 Landing Distance Available: 11002

2.13.1 Designation: 01L
2.13.2 Take-off Run Available: 11002
2.13.3 Take-off Distance Available: 11002
2.13.4 Accelerate-Stop Distance Available: 10800
2.13.5 Landing Distance Available: 10800

2.13.1 Designation: 19L
2.13.2 Take-off Run Available: 8300
2.13.3 Take-off Distance Available: 8300
2.13.4 Accelerate-Stop Distance Available: 8300
2.13.5 Landing Distance Available: 8300

2.13.1 Designation: 01R
2.13.2 Take-off Run Available: 8300
2.13.3 Take-off Distance Available: 8300
2.13.4 Accelerate-Stop Distance Available: 8300
2.13.5 Landing Distance Available: 8300

2.13.1 Designation: 10

2.13.2 Take-off Run Available: 6999
2.13.3 Take-off 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 Take-off Run Available: 6999
2.13.3 Take-off Distance Available: 6999
2.13.4 Accelerate-Stop Distance Available: 6501
2.13.5 Landing Distance Available: 6501

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 19R
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: 19L
2.14.2 Approach Lighting System: ALSF2
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 01R
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 10
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 28
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: APCH/DEP/P (151-219)
2.18.3 Channel: 134.25
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (001-150)
2.18.3 Channel: 118.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (220-360)
2.18.3 Channel: 239.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (001-150)
2.18.3 Channel: 279.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (151-219)

2.18.3 Channel: 353.575

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC

2.18.3 Channel: 307.175

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P IC

2.18.3 Channel: 118.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/S DEP/S

2.18.3 Channel: 353.75

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BAYPO DP

2.18.3 Channel: 118.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BAYPO DP

2.18.3 Channel: 239.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BLFRG STAR

2.18.3 Channel: 119.65

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BLFRG STAR

2.18.3 Channel: 353.575

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BRDGE STAR

2.18.3 Channel: 119.65

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BRDGE STAR

2.18.3 Channel: 353.575

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 133.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (151-219)

2.18.3 Channel: 119.65

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (001-150)

2.18.3 Channel: 119.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (220-360)

2.18.3 Channel: 125.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (001-150)

2.18.3 Channel: 290.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (220-360)

2.18.3 Channel: 316.05

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (151-219)

2.18.3 Channel: 353.575

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CROWD DP

2.18.3 Channel: 135.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CROWD DP

2.18.3 Channel: 279.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (ARR)

2.18.3 Channel: 126.45

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (DEP)

2.18.3 Channel: 128.475

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DADES STAR

2.18.3 Channel: 135.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DADES STAR

2.18.3 Channel: 279.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P IC (220-360)

2.18.3 Channel: 118.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DORMR DP

2.18.3 Channel: 118.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DORMR DP
2.18.3 Channel: 239.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: ENDED DP
2.18.3 Channel: 118.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ENDED DP
2.18.3 Channel: 239.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GANDY DP
2.18.3 Channel: 119.65
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GANDY DP
2.18.3 Channel: 353.575
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 269.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/S
2.18.3 Channel: 121.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KNOST DP
2.18.3 Channel: 118.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KNOST DP
2.18.3 Channel: 239.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 119.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 269.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/S
2.18.3 Channel: 119.05
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LGTNG DP
2.18.3 Channel: 118.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LGTNG DP
2.18.3 Channel: 239.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MAATY STAR
2.18.3 Channel: 118.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MAATY STAR
2.18.3 Channel: 239.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RAYZZ STAR
2.18.3 Channel: 118.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RAYZZ STAR
2.18.3 Channel: 239.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TAMPA DP
2.18.3 Channel: 134.25
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TAMPA DP
2.18.3 Channel: 279.6
2.18.5 Hours of Operation: 24

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: 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: 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

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: 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 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 19L. Magnetic variation: 5W
2.19.2 ILS Identification: TPA
2.19.5 Coordinates: 27-57-40.42N / 82-31-40.5W
2.19.6 Site Elevation: 10 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: 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

General Remarks:

TAXILANE G WEST OF TWY B1 CLSD TO WINGSPAN GTR THAN 118 FT – PPR APT OPS.

TXL K1 AND TXL K2 CLSD TO WINGSPANS GTR THAN 171 FT, TXL K1 AND TXL K2 CLSD WHILE WIDE BODY TXL K1W IS IN USE.

TXL F AND TXL R ARE NON-MOVEMENT AREAS. BOTH LCTNS ARE UNAVBL FOR GROUP IV ACFT WITH A WINGSPAN GTR THAN 117 FT WO PPR FROM ARPT OPS. TXL T PPR FROM ARPT OPS RQRD FOR ACFT WITH A WINGSPAN GTR THAN 90 FT.

RWY 19L IS NOISE SENSITIVE TO TBJT DEPARTURES. RWY 01R IS NOISE SENSITIVE TO TBJT ARRIVALS. PUBLD NOISE ABATEMENT PROCS IN EFCT.

BIRD ACT ON AND INVOF ARPT.

TWY J BTN TWY J1 AND TWY J2; TWY N W OF TWY L; TWY E N OF TWY J; TXL Z; TXL V BTN TWY V2 AND TWY V3 ARE UNAVBL FOR GROUP V ACFT WITH A WINGSPAN GTR THAN 171 FT WO PPR FROM ARPT OPS.

ONLY ACFT WITH PRIOR PMSN MAY USE TRML APN; ALL OTRS USE GA APN.

RSTRS TO ADG IV OR LGR: TWY E1.

West Palm Beach, FL
Palm Beach Intl
ICAO Identifier KPBI

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 26-40-59.382N / 80-05-44.131W
- 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: LAURA BEEBE
846 PALM BEACH INTL AIRPORT
WEST PALM BEACH, FL 33406 (561-471-7420)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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:
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/21/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 10L
- 2.12.2 True Bearing: 93
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 16.3

- 2.12.1 Designation: 28R
- 2.12.2 True Bearing: 273
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 18.3

- 2.12.1 Designation: 10R
- 2.12.2 True Bearing: 93
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 17.2

2.12.1 Designation: 28L
2.12.2 True Bearing: 273
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 16.9

2.12.1 Designation: 14
2.12.2 True Bearing: 135
2.12.3 True Dimensions: 6931 ft x 150 ft
2.12.4 PCN: 67 F/A/W/T
2.12.5 Coordinates: 26-41-30.596N / 80-06-14.482W
2.12.6 Threshold Elevation: 17
2.12.6 Touchdown Zone Elevation: 17.3

2.12.1 Designation: 32
2.12.2 True Bearing: 315
2.12.3 True Dimensions: 6931 ft x 150 ft
2.12.4 PCN: 67 F/A/W/T
2.12.5 Coordinates: 26-40-41.913N / 80-05-20.622W
2.12.6 Threshold Elevation: 15.8
2.12.6 Touchdown Zone Elevation: 15.9

AD 2.13 Declared Distances

2.13.1 Designation: 10L
2.13.2 Take-off Run Available: 10001
2.13.3 Take-off Distance Available: 10001
2.13.4 Accelerate-Stop Distance Available: 9351
2.13.5 Landing Distance Available: 8151

2.13.1 Designation: 28R
2.13.2 Take-off Run Available: 10001
2.13.3 Take-off Distance Available: 10001
2.13.4 Accelerate-Stop Distance Available: 9051
2.13.5 Landing Distance Available: 8240

2.13.1 Designation: 10R
2.13.2 Take-off Run Available: 3214
2.13.3 Take-off Distance Available: 3214
2.13.4 Accelerate-Stop Distance Available: 3214
2.13.5 Landing Distance Available: 3214

2.13.1 Designation: 28L
2.13.2 Take-off Run Available: 3214
2.13.3 Take-off Distance Available: 3214
2.13.4 Accelerate-Stop Distance Available: 3214
2.13.5 Landing Distance Available: 3214

2.13.1 Designation: 14

2.13.2 Take-off Run Available: 6926
2.13.3 Take-off Distance Available: 6926
2.13.4 Accelerate-Stop Distance Available: 6000
2.13.5 Landing Distance Available: 6000

2.13.1 Designation: 32
2.13.2 Take-off Run Available: 6926
2.13.3 Take-off Distance Available: 6926
2.13.4 Accelerate-Stop Distance Available: 6926
2.13.5 Landing Distance Available: 6513

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: P4R

2.14.1 Designation: 28R
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 10R
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 28L
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 14
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4R

2.14.1 Designation: 32
2.14.2 Approach Lighting System:
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 (SOUTH)
2.18.3 Channel: 125.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (SOUTH)
2.18.3 Channel: 343.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC
2.18.3 Channel: 128.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC
2.18.3 Channel: 317.4

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 121.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 284.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (SOUTH)

2.18.3 Channel: 125.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (NORTH)

2.18.3 Channel: 128.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (NORTH)

2.18.3 Channel: 317.4

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (SOUTH)

2.18.3 Channel: 343.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLMNT STAR

2.18.3 Channel: 124.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLMNT STAR

2.18.3 Channel: 317.4

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CPTAN STAR

2.18.3 Channel: 124.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CPTAN STAR

2.18.3 Channel: 317.4

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 123.75

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 284.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: JESTR STAR
2.18.3 Channel: 124.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: JESTR STAR
2.18.3 Channel: 317.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 119.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 257.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/S
2.18.3 Channel: 118.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/S
2.18.3 Channel: 384.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MAHHI STAR
2.18.3 Channel: 127.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MAHHI STAR
2.18.3 Channel: 343.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MELBOURNE STAR
2.18.3 Channel: 124.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MELBOURNE STAR
2.18.3 Channel: 317.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MIXAE DP (RWY 10L, 14)
2.18.3 Channel: 127.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MIXAE DP (RWY 28R, 32)
2.18.3 Channel: 128.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MIXAE DP (RWY 28R, 32)
2.18.3 Channel: 317.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MIXAE DP (RWY 10L, 14)
2.18.3 Channel: 343.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: OLAKE DP
2.18.3 Channel: 128.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: OLAKE DP
2.18.3 Channel: 317.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PALM BEACH DP (SOUTH)
2.18.3 Channel: 127.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PALM BEACH DP (NORTH)
2.18.3 Channel: 128.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PALM BEACH DP (NORTH)
2.18.3 Channel: 317.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PALM BEACH DP (SOUTH)
2.18.3 Channel: 343.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SLIDZ DP
2.18.3 Channel: 128.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SLIDZ DP
2.18.3 Channel: 317.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: STOOP STAR
2.18.3 Channel: 124.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: STOOP STAR
2.18.3 Channel: 317.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TBIRD DP
2.18.3 Channel: 128.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TBIRD DP
2.18.3 Channel: 317.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TTYLR STAR
2.18.3 Channel: 125.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TTYLR STAR
2.18.3 Channel: 317.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: VUUDU STAR
2.18.3 Channel: 127.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: VUUDU STAR
2.18.3 Channel: 317.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: WELLY DP
2.18.3 Channel: 127.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: WELLY DP
2.18.3 Channel: 343.6
2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 10L. Magnetic variation: 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

2.19.1 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 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

2.19.1 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

2.19.1 ILS Type: Localizer for runway 28R. Magnetic variation: 6W

2.19.2 ILS Identification: PWB

2.19.5 Coordinates: 26-40-59.9773N / 80-06-39.9822W

2.19.6 Site Elevation: 18.5 ft

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 3W

2.19.2 Navigation Aid Identification: PBI

2.19.5 Coordinates: 26-40-48.198N / 80-05-11.3635W

2.19.6 Site Elevation: 15.7 ft

General Remarks:

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.

ACFT WITH WINGSPANS GTR THAN 118 FT MAY NOT OPR ON TWY E, TWY W, TWY Y AND TWY F NW OF TWY A.

ACFT WITH WINGSPANS GTR THAN 49 MAY NOT OPER SIMUL ON RWY 10R/28L AND TWY R.

24 HR PPR FOR ACFT WITH WINGSPANS GTR THAN 171 FT.

RWY 10R/28L NOT AVBL FOR SKED ACR OPS WITH MORE THAN 9 PAX SEATS OR UNSKED ACR AT LEAST 31 PAX SEATS.

RWY 14 LAHSO SIGNAGE NOT STD.

RWY 10L/28R SAFETY AREA NOT STD SFC VARNS.

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.

RWY 14/32 SAFETY AREA NOT STD SFC VARNS.

MIGRATORY BIRDS ON AND INVOF ARPT.

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: JAN LENNON
PO BOX 20509
ATLANTA, GA 30320 (404-530-6600)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 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: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 26R
- 2.12.2 True Bearing: 270
- 2.12.3 True Dimensions: 9000 ft x 150 ft
- 2.12.4 PCN: 105 R/B/W/T
- 2.12.5 Coordinates: 33-38-58.3515N / 84-24-34.0341W
- 2.12.6 Threshold Elevation: 990
- 2.12.6 Touchdown Zone Elevation: 990

- 2.12.1 Designation: 08L
- 2.12.2 True Bearing: 90
- 2.12.3 True Dimensions: 9000 ft x 150 ft
- 2.12.4 PCN: 105 R/B/W/T
- 2.12.5 Coordinates: 33-38-58.3238N / 84-26-20.4923W
- 2.12.6 Threshold Elevation: 1014.6
- 2.12.6 Touchdown Zone Elevation: 1014.6

- 2.12.1 Designation: 26L
- 2.12.2 True Bearing: 270
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 995.5

2.12.1 Designation: 08R
2.12.2 True Bearing: 90
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 1023.8

2.12.1 Designation: 09L
2.12.2 True Bearing: 90
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 1018.7

2.12.1 Designation: 27R
2.12.2 True Bearing: 270
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 984.6

2.12.1 Designation: 27L
2.12.2 True Bearing: 270
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 998.9

2.12.1 Designation: 09R
2.12.2 True Bearing: 90
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 1026.2

2.12.1 Designation: 10
2.12.2 True Bearing: 90
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 1000.3

2.12.1 Designation: 28
2.12.2 True Bearing: 270

- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 997.5

AD 2.13 Declared Distances

- 2.13.1 Designation: 26R
- 2.13.2 Take-off Run Available: 9000
- 2.13.3 Take-off Distance Available: 9000
- 2.13.4 Accelerate-Stop Distance Available: 8500
- 2.13.5 Landing Distance Available: 8500

- 2.13.1 Designation: 08L
- 2.13.2 Take-off Run Available: 9000
- 2.13.3 Take-off Distance Available: 9000
- 2.13.4 Accelerate-Stop Distance Available: 8800
- 2.13.5 Landing Distance Available: 8800

- 2.13.1 Designation: 26L
- 2.13.2 Take-off Run Available: 9999
- 2.13.3 Take-off 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 Take-off Run Available: 9999
- 2.13.3 Take-off Distance Available: 10999
- 2.13.4 Accelerate-Stop Distance Available: 9999
- 2.13.5 Landing Distance Available: 9999

- 2.13.1 Designation: 09L
- 2.13.2 Take-off Run Available: 12390
- 2.13.3 Take-off 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 Take-off Run Available: 12390
- 2.13.3 Take-off Distance Available: 12390
- 2.13.4 Accelerate-Stop Distance Available: 12390
- 2.13.5 Landing Distance Available: 11890

- 2.13.1 Designation: 27L
- 2.13.2 Take-off Run Available: 9000
- 2.13.3 Take-off Distance Available: 9000
- 2.13.4 Accelerate-Stop Distance Available: 8865
- 2.13.5 Landing Distance Available: 8865

- 2.13.1 Designation: 09R
- 2.13.2 Take-off Run Available: 9000

2.13.3 Take-off Distance Available: 9000
2.13.4 Accelerate-Stop Distance Available: 9000
2.13.5 Landing Distance Available: 9000

2.13.1 Designation: 10
2.13.2 Take-off Run Available: 9000
2.13.3 Take-off 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 Take-off Run Available: 9000
2.13.3 Take-off 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: 26R
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System: P4L

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: 26L
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 08R
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 09L
2.14.2 Approach Lighting System:
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: 27L
2.14.2 Approach Lighting System: ALSF2
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: 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 Channel: 118.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (ARR)

2.18.3 Channel: 119.65

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (DEP)

2.18.3 Channel: 125.55

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P (RWY 10/28)

2.18.3 Channel: 121.65

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (RWY 09L/27R, 09R/27L)

2.18.3 Channel: 121.75

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (RWY 08L/26R, 08R/26L)

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 254.4

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 08L/26R)

2.18.3 Channel: 119.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 09R/27L)

2.18.3 Channel: 119.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 10/28)
2.18.3 Channel: 119.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 09L/27R)
2.18.3 Channel: 123.85
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 08R/26L)
2.18.3 Channel: 125.325
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 254.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PRM (RWY 09L/27R, 09R/27L)
2.18.3 Channel: 132.55
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PRM (RWY 10/28)
2.18.3 Channel: 133.425
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RAMP CTL (RAMP 8)
2.18.3 Channel: 128.975
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (RAMP 6N SNOW AND ICE)
2.18.3 Channel: 129.25
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (RAMP 7 SNOW AND ICE)
2.18.3 Channel: 129.25
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (RAMP 3)
2.18.3 Channel: 129.275
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (RAMP 5)
2.18.3 Channel: 129.375
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (RAMP 33 SNOW AND ICE)
2.18.3 Channel: 129.4
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (RAMP 4)
2.18.3 Channel: 130.075
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (RAMP 20 SNOW AND ICE)
2.18.3 Channel: 130.775
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (NON MOVEMENT AREA)
2.18.3 Channel: 131.375
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (RAMP 6)
2.18.3 Channel: 131.375
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (RAMP 6S SNOW AND ICE)
2.18.3 Channel: 131.375
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (RAMP 1)
2.18.3 Channel: 131.45
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (RAMP 2)
2.18.3 Channel: 131.85
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (RAMP 9)
2.18.3 Channel: 131.875
2.18.5 Hours of Operation:

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: Glide Slop 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: 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: DME for runway 26R. Magnetic variation: 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 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 08R. Magnetic variation: 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: 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: 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: DME for runway 26L. Magnetic variation: 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: 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: 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: DME for runway 09L. Magnetic variation: 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: Glide Slope for runway 09L. Magnetic variation: 5W
2.19.2 ILS Identification: HZK

2.19.5 Coordinates: 33-38-02.42N / 84-26-39.67W
2.19.6 Site Elevation: 1014.6 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. Magnetic 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: 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: Localizer for runway 27R. Magnetic variation: 5W
2.19.2 ILS Identification: AFA
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: DME for runway 09R. Magnetic variation: 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: 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 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: 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: 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: 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: DME for runway 10. Magnetic variation: 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 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: 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 variation: 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: 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

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: 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: 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

General Remarks:

ALL RWYS, TOUCH AND GO OPERATIONS, LOW APPROACHES, AND PRACTICE INSTRUMENT APPROACHES NOT PERMITTED.

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.

RUNUPS ARE PERMITTED AT VARIOUS SITES; COORD USE OF CITY FACS, MOVEMENT AREAS, ALLOWABLE NON-MOVEMENT AREAS WITH DEPT OF AVN OPNS, 404-787-6095; AND COORD THE USE OF THE AIRLINES FACS WITH THEM.

NOISE & OPNS MONITORING SYSTEM (NOMS) PROGRAM IN EFFECT; CALL THE ATLANTA DEPT OF AVIATION 770-43-NOISE OR 770-436-6473 FOR MORE INFO.

NO ACFT WITH WINGSPAN GTR THAN 225 FT MAY TAXI ON TWY M BTN L14 AND L16, TWY N BTN P AND SC, AND TWY N BTN U AND K.

BE ALERT TO RWY CROSSING CLEARANCES. READBACK OF ALL RWY HOLDING INSTRUCTIONS IS REQUIRED.

ACFT WITH WINGSPAN GTR THAN 171 FT AND/OR TAIL HGT GTR THAN 45 FT ARE RSTD FROM USING TWY W. DURG TWY W OPNS RWY 27R INTXN DEPS FROM TWY LB OR TWY LC CAN EXPC THE FLWG DSTCS WITH RWY RMNG: FROM TWY LB 11,040 FT (TORA/TODA) AND 12,140 FT (ASDA); FROM TWY LC 10,810 FT (TODA/TODA) AND 11,910 FT (ASDA). ACFT MAY REQ THE FULL LEN OF RWY 27R FOR DEP UPON INITIAL CTC WITH ATC.

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 D.

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.

BIRD ACT ON AND INVOF ARPT.

RWY 9L DEPARTURES CAN EXPECT INTERSECTION DEPARTURE FM M2 WITH RWY REMAINING 11,440 FT (TORA/TODA) AND 10,780 (ASDA).

ACFT SHOULD NOT EXCT THE ACUTE ANGLED TWY TURN EBND TO NBND FROM TWY N TO TWY J.

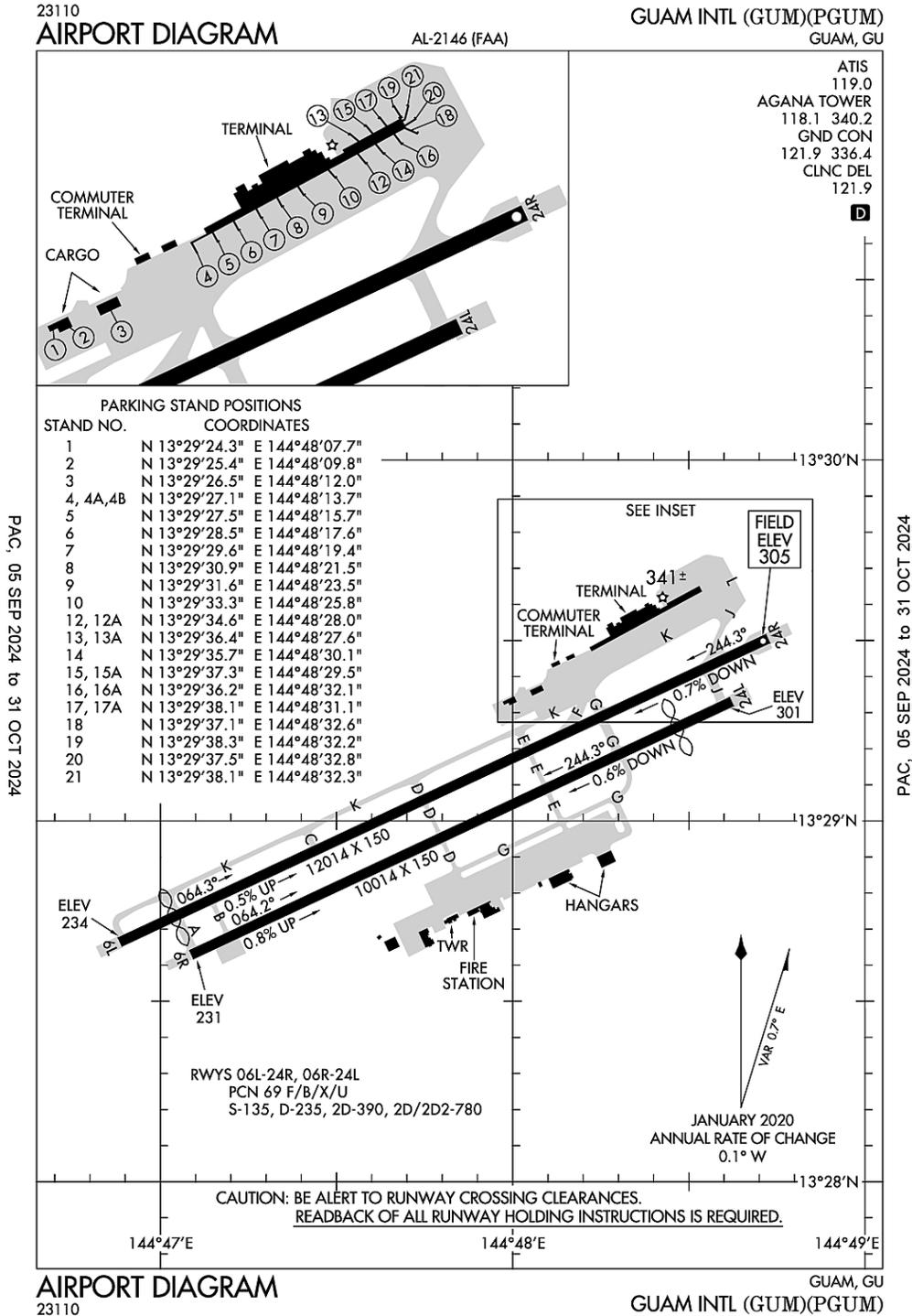
TWO ACFT WITH WINGSPANS GTR THAN 225 FT MAY NOT TAXI SIMUL ON ADJ PARL TWYS L/M EXCP WEST OF L7 AT SPEEDS LESS THAN 15 MPH.

PREFERENTIAL RWY USE IN EFFECT, EXPECT TO USE RWYS 08R/26L, 09L/27R FOR DEPS; RWYS 08L/26R, 09R/27L ARE USED PRIMARILY FOR ARRIVALS.

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.

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).

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: 13-29-02.227N / 144-47-49.666E
- 2.2.2 From City: 3 miles NE of GUAM, GU
- 2.2.3 Elevation: 305 ft
- 2.2.5 Magnetic Variation: 2E (2000)
- 2.2.6 Airport Contact: JOHN QUINATA
P.O. BOX 8770
TAMUNING, GU 96931 (671-646-0300)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 A1
- 2.4.5 Hangar Space: YES
- 2.4.6 Repair Facilities: MINOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 4/1/1995
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 06L
- 2.12.2 True Bearing: 65
- 2.12.3 True Dimensions: 12014 ft x 150 ft
- 2.12.4 PCN: 69 F/B/X/U
- 2.12.5 Coordinates: 13-28-39.8644N / 144-46-53.1529E
- 2.12.6 Threshold Elevation: 233.7
- 2.12.6 Touchdown Zone Elevation: 256.1

- 2.12.1 Designation: 24R
- 2.12.2 True Bearing: 245
- 2.12.3 True Dimensions: 12014 ft x 150 ft
- 2.12.4 PCN: 69 F/B/X/U
- 2.12.5 Coordinates: 13-29-30.3045N / 144-48-43.4542E
- 2.12.6 Threshold Elevation: 305
- 2.12.6 Touchdown Zone Elevation: 305

- 2.12.1 Designation: 06R
- 2.12.2 True Bearing: 65
- 2.12.3 True Dimensions: 10014 ft x 150 ft
- 2.12.4 PCN: 69 F/B/X/U
- 2.12.5 Coordinates: 13-28-37.7705N / 144-47-05.333E
- 2.12.6 Threshold Elevation: 231
- 2.12.6 Touchdown Zone Elevation: 257.9

- 2.12.1 Designation: 24L
- 2.12.2 True Bearing: 245
- 2.12.3 True Dimensions: 10014 ft x 150 ft
- 2.12.4 PCN: 69 F/B/X/U
- 2.12.5 Coordinates: 13-29-19.8209N / 144-48-37.2751E
- 2.12.6 Threshold Elevation: 301
- 2.12.6 Touchdown Zone Elevation: 293

AD 2.13 Declared Distances

- 2.13.1 Designation: 06L
- 2.13.2 Take-off Run Available: 12014
- 2.13.3 Take-off Distance Available: 12014
- 2.13.4 Accelerate-Stop Distance Available: 12014
- 2.13.5 Landing Distance Available: 11014

- 2.13.1 Designation: 24R
- 2.13.2 Take-off Run Available: 12014
- 2.13.3 Take-off Distance Available: 12014
- 2.13.4 Accelerate-Stop Distance Available: 12014
- 2.13.5 Landing Distance Available: 12014

- 2.13.1 Designation: 06R
- 2.13.2 Take-off Run Available: 10014
- 2.13.3 Take-off 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 Take-off Run Available: 9714
- 2.13.3 Take-off Distance Available: 9714
- 2.13.4 Accelerate-Stop Distance Available: 9714
- 2.13.5 Landing Distance Available: 8710

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
- 2.14.2 Approach Lighting System:
- 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
- 2.14.2 Approach Lighting System:
- 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 Channel: 119

2.18.5 Hours of Operation:

2.18.1 Service Designation: CD/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 336.4

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 118.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 340.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RAMP CTL

2.18.3 Channel: 121.6

2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 06L. Magnetic variation: 2E

2.19.2 ILS Identification: GUM

2.19.5 Coordinates: 13-29-38.0751N / 144-48-51.492E

2.19.6 Site Elevation: 345.6 ft

2.19.1 ILS Type: Glide Slope for runway 06L. Magnetic variation: 2E

2.19.2 ILS Identification: GUM

2.19.5 Coordinates: 13-28-53.074N / 144-47-08.5127E

2.19.6 Site Elevation: 245.8 ft

2.19.1 ILS Type: Localizer for runway 06L. Magnetic variation: 2E

2.19.2 ILS Identification: GUM

2.19.5 Coordinates: 13-29-34.711N / 144-48-53.0959E

2.19.6 Site Elevation: 312.4 ft

2.19.1 ILS Type: DME for runway 06R. Magnetic variation: 2E
2.19.2 ILS Identification: AWD
2.19.5 Coordinates: 13-29-21.7429N / 144-48-48.0979E
2.19.6 Site Elevation: 329.8 ft

2.19.1 ILS Type: Glide Slope for runway 06R. Magnetic variation: 2E
2.19.2 ILS Identification: AWD
2.19.5 Coordinates: 13-28-37.9922N / 144-47-15.3932E
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: 13-29-24.2258N / 144-48-46.9153E
2.19.6 Site Elevation: 310.5 ft

General Remarks:

TSNT ACFT PRVD 24 HRS ADVN INFO TO EXEC MGR GUAM INTL ARPT AUTHORITY; 1-671-642-4455
MON-FRI 0800-1700 OR FAX 1-671-646-8567.

<1000' OVRN S END & 450' OVRN N END RWY 6L-24R.

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 PARKING INFORMATION ALL ACFT CTC RAMP CTL. ALL ACFT DEP TERMINAL PARKING CTC RAMP CTL FOR ENGINE START AND PUSHBACK.

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.

FOR TAXI B747-8 ACFT ON TWY K FRONTING THE ACFT PRKG APN FROM GATES 5 - 16 AT THE MAIN TRML, MAX TAXI SPEED SHALL BE NO MORE THAN 15 MPH.

DRG TAXI 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.

RWY 06 AND RWY 24 WIND CONE NSTD.

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.

RISING TERRAIN 75 FT FM RY 24L THLD 140 FT EAST OF CNTRLN EXTENDED +8 FT.

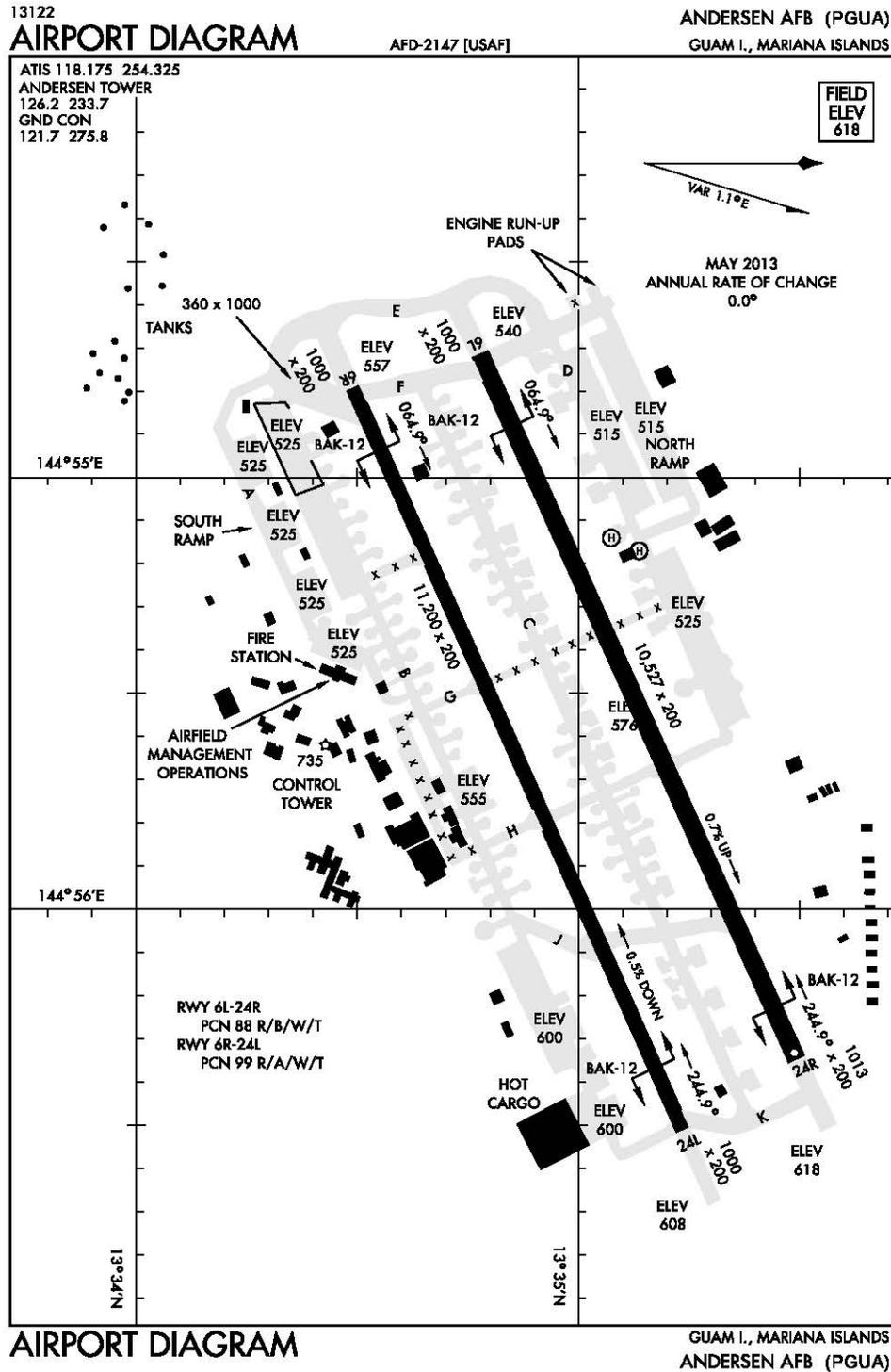
DEP VFR ACFT MAINT RY HDG TIL PAST DEP END OF RY AND REACHING 1000 FT AGL; RGT PAT 24L/R DO NOT EXCEED 1500 FT AGL IN TFC PAT.

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.

LGTD TWR 780 FT 1.3 NM ENE OF RY 24L THLD .

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.

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: 13-35-1.99N / 144-55-48.2E
- 2.2.2 From City: 0 miles N of YIGO, GU
- 2.2.3 Elevation: 617.4 ft
- 2.2.5 Magnetic Variation: 2E (1980)
- 2.2.6 Airport Contact: MAJOR BILLY G TOWLES
3 AD
ANDERSEN AFB, GUAM, 69912 ()
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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:
- 2.4.5 Hangar Space: YES
- 2.4.6 Repair Facilities: NONE

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: None
- 2.6.2 Rescue and Firefighting Services: None

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 06L
- 2.12.2 True Bearing:
- 2.12.3 Dimensions: 10528 ft x 200 ft
- 2.12.4 PCN: 98 R/A/W/T
- 2.12.5 Coordinates: 13-34-49.281N / 144-54-56.32E
- 2.12.6 Threshold Elevation: 539.1 ft
- 2.12.6 Touchdown Zone Elevation: 539.3 ft

- 2.12.1 Designation: 24R
- 2.12.2 True Bearing:
- 2.12.3 Dimensions: 10528 ft x 200 ft
- 2.12.4 PCN: 98 R/A/W/T
- 2.12.5 Coordinates: 13-35-31.93N / 144-56-33.74E
- 2.12.6 Threshold Elevation: 617.4 ft
- 2.12.6 Touchdown Zone Elevation: 617.4 ft

- 2.12.1 Designation: 06R
- 2.12.2 True Bearing:
- 2.12.3 Dimensions: 11200 ft x 200 ft
- 2.12.4 PCN: 98 R/A/W/T
- 2.12.5 Coordinates: 13-34-31.18N / 144-54-59.38E
- 2.12.6 Threshold Elevation: 556.8 ft
- 2.12.6 Touchdown Zone Elevation: 556.8 ft

- 2.12.1 Designation: 24L
- 2.12.2 True Bearing:
- 2.12.3 Dimensions: 11200 ft x 200 ft
- 2.12.4 PCN: 98 R/A/W/T
- 2.12.5 Coordinates: 13-35-16.59N / 144-56-43E
- 2.12.6 Threshold Elevation: 607.2 ft
- 2.12.6 Touchdown Zone Elevation: 607.2 ft

AD 2.13 Declared Distances

- 2.13.1 Designation: 06L
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

- 2.13.1 Designation: 24R
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

- 2.13.1 Designation: 06R
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

- 2.13.1 Designation: 24L
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

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

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: ATIS

2.18.3 Channel: 118.175

2.18.5 Hours of Operation:

2.18.1 Service Designation: ATIS

2.18.3 Channel: 254.325

2.18.5 Hours of Operation:

2.18.1 Service Designation: CD/P

2.18.3 Channel: 126.725

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 256.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: COMD POST (36 WG BOONIE OPS)

2.18.3 Channel: 321

2.18.5 Hours of Operation:

2.18.1 Service Designation: COMD POST (36 WG BOONIE OPS)

2.18.3 Channel: 349.4

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 275.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 126.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 233.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PMSV METRO
2.18.3 Channel: 346.6
2.18.5 Hours of Operation:

2.18.1 Service Designation: PTD
2.18.3 Channel: 372.2
2.18.5 Hours of Operation:

2.18.1 Service Designation: SFA
2.18.3 Channel: 281.4
2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: Glide Slope for runway 24R. Magnetic variation: 2E
2.19.2 ILS Identification: YIG
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: Localizer for runway 24R. Magnetic variation: 2E
2.19.2 ILS Identification: YIG
2.19.5 Coordinates: 13-34-43.23N / 144-54-42.5E
2.19.6 Site Elevation: 533.6 ft

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 / 144-55-7.21E
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: 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 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 Navigation Aid Type: TACAN. Magnetic variation: 2E
2.19.2 Navigation Aid Identification: UAM
2.19.5 Coordinates: 13-35-28.39N / 144-56-47.68E
2.19.6 Site Elevation: 614.8 ft

General Remarks:

FREQUENT RAIN SHOWERS OF SHORT DURATION, EXPECT WET RWY BRAKEING ACTION.

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.

RSTD: ACFT MUST ADHERE TO PPR ARR +/- 30 MIN. ACFT WITH WINGSPANS GREATER THAN 261' NOT AUTHORIZED.

HAZUS AIR TURB FINAL APCH RWYS 24L/24R. NO VSBY REF AVBL ON NGT TKOF BYD END RWY 6.

MISC: RWY 06L/24R CLSD SECOND WED EACH MONTH 2000-2300Z(0600-0900L THU). RWY 06R/24L CLSD FOURTH WED EACH MONTH 2000-2300Z (0600-0900L THU).

ILS/RADAR-ILS: ILS CRITICAL AREAS NOT PROTECTED.

RSTD: 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.

RSTD: ALL OPR MUST OBTAIN APVL FR GND AND AMOPS PRIOR TO ENG RUNUP.

MISC: ANDERSEN AFB DOES NOT HAVE CAPABILITY TO STORE REFRIGERATED CARGO.

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.

SERVICE-LGT: ARPT BCN 763 FT MSL LCTD 1.4 NM SSW OF AFLD.

MISC: "NO VHF CAPABILITIES WITH AFLD MGMT."

ALL INBD ACFT TO INCL TACC/GDSS MSNS MUST COORD PPR REQ WITH AFLD MGMT AND HAVE VALID PPR NUMBER APV PRIOR TO ARR. PPR REQ MUST BE MADE MORE THAN 24 HR IN ADVANCE AND NO EARLIER THAN 14 DAYS PRIOR TO ARR/DEP. PPR REQ GIVEN WITHIN 24 HR WILL NOT BE APV.

A-GEAR BAK-12 RWYS 06L & 06R 30 MIN NTC RQR.

TWY B AND C BTN TWY J AND K CLSD DUE TO CONSTRUCTION.

SERVICE-A-GEAR: CONTACT CONTROL TOWER 30 MIN PRIOR FOR DEPARTURE END BAK12 CABLE CONFIGURATION. 60 MIN PN FOR CHG IN 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.

MISC: RWY 06L AND 06R UNDERRUNS 1000' AVBL FOR TWY/TKOF. RWY 24R UNDERRUN AVBL 500' FOR TAXI/TKOF.

BASE OPS V366-4188; FAX V366-6217.

CAUTION: USE EXTREME CAUTION FOR EXTV UAS OPS IN VCNTY OF ANDERSEN AFB.

SERVICE-FLUID: C-5 NITROGEN SVC CAPABILITY UNAVBL.

MAINT AVBL 0100-0400 WEEKDAY ONLY; CLOSED WEEKEND & HOL.

RSTD: PPR REQ DSN: AFLD MGMT 315-366-4188.

NO ARRESTING GEAR MARKERS LOCATED ON THE LEFT SIDE OF ALL APPROACH END BARRIERS.

MISC: ALL AIRCREWS TO RON MUST CK INTO AFLD MGT OPS AND PROVIDE POC INFO UPON ARR.

MISC: PAVEMENT PRIOR TO RY 06R AND RY 06L THLDS AVBL FOR TKOF RUN WHEN NECESSARY FOR MSN ACCOMPLISHMENT.

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.

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.

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: WX OPR H24, DSN 315-366-5230. AUTOMATED SENSOR PRVDS OBSN; AUGMENTED DUR HAZ WX & SENSOR OUTAGES. HUMAN WX OBSN VIEW OBSTD BY BLDG N-SSE. WX STN PRVDS LTD WX BRIEF SUPPORT. REMOTE WX BRIEF AVBL H24 FR 17 OWS AT DSN 315-449-8333/7950, C808-448-3809; 2 HR NTC RQRD FOR TIMELY BRIEF.

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.

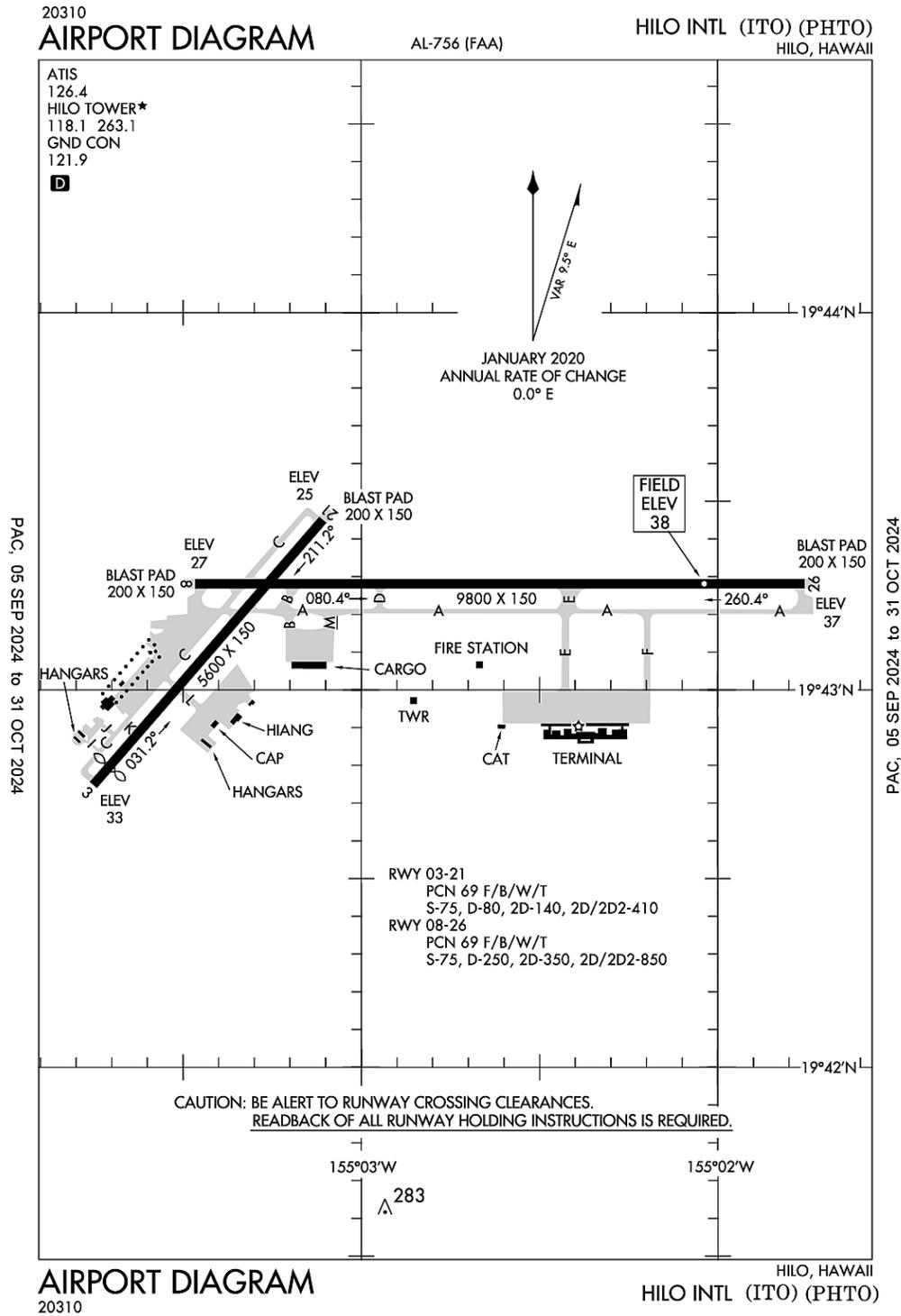
AREA BTN 1000' ROLL BAR AND THU LGT RWY 06R AND 06L UNLGTD. LAST 642' PRIOR TO THU LGT 24R UNLGTD.

ANY CREW RQRG ASSISTANCE FR AGENCIES OUTSIDE OF AFLD SUPPORT, CTC WING RECEPTIONS DSN 315-366-3464, C671-366-3464.

SERVICE-LGT: RAMP LGT UNAVBL FOR NGT TIME OPS, AND UNSAFE ACFT MVMT COND EXIST ON NORTH RAMP 3; ACFT TAXI AT THEIR OWN RISK. ALL AFLD ILS STOP LGT UNSVC. VEGETATION OBST RWY 06R AND RWY 24R APCH LGT SYS.

RSTD: BA ON BOTH RWYS MAY BE LESS THAN EXP DUE TO RUBBER BUILD-UP; PROBABILITY OF HYDROPLANING EXISTS.

Hilo, Hawaii
Hilo International
ICAO Identifier 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: TIFFINIE C SMITH
HAWAII AIRPORTS DISTRICT MANAGER
HILO, HI 96720 (808-961-9300)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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:
- 2.4.6 Repair Facilities: MINOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 03
- 2.12.2 True Bearing: 41
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 33.7

- 2.12.1 Designation: 21
- 2.12.2 True Bearing: 221
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 31.4

- 2.12.1 Designation: 08
- 2.12.2 True Bearing: 90
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 30.1

- 2.12.1 Designation: 26
- 2.12.2 True Bearing: 270
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 37.6

AD 2.13 Declared Distances

- 2.13.1 Designation: 03
- 2.13.2 Take-off Run Available: 5600
- 2.13.3 Take-off 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 Take-off Run Available: 5251
- 2.13.3 Take-off Distance Available: 5251
- 2.13.4 Accelerate-Stop Distance Available: 5510
- 2.13.5 Landing Distance Available: 5510

- 2.13.1 Designation: 08
- 2.13.2 Take-off Run Available: 9800
- 2.13.3 Take-off 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 Take-off Run Available: 9800
- 2.13.3 Take-off Distance Available: 9800
- 2.13.4 Accelerate-Stop Distance Available: 9800
- 2.13.5 Landing Distance Available: 9800

AD 2.14 Approach and Runway Lighting

- 2.14.1 Designation: 03
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System: V4L

- 2.14.1 Designation: 21
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System:

- 2.14.1 Designation: 08
- 2.14.2 Approach Lighting System: ODALS
- 2.14.4 Visual Approach Slope Indicator System: P4R

- 2.14.1 Designation: 26
- 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

2.18.3 Channel: 119.7

2.18.5 Hours of Operation: 0600-2200

2.18.1 Service Designation: APCH/P DEP/P

2.18.3 Channel: 269.2

2.18.5 Hours of Operation: 0600-2200

2.18.1 Service Designation: APCH/S DEP/S

2.18.3 Channel: 120.25

2.18.5 Hours of Operation: 0600-2200

2.18.1 Service Designation: APCH/S DEP/S

2.18.3 Channel: 323

2.18.5 Hours of Operation: 0600-2200

2.18.1 Service Designation: ATIS

2.18.3 Channel: 126.4

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 0600-2200

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 118.1

2.18.5 Hours of Operation: 0600-2200

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 263.1

2.18.5 Hours of Operation: 0600-2200

AD 2.19 Radio Navigation and Landing Aids

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

2.19.1 ILS Type: Glide Slop 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: 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 Navigation Aid Type VORTAC. Magnetic variation: 11E
2.19.2 Navigation Aid Identification: ITO
2.19.5 Coordinates: 19-43-16.862N / 155-00-39.435W
2.19.6 Site Elevation: 23 ft

General Remarks:

ATCT CTLS ENTRY/EXIT TFC ON TWYS F&E TO EAST TRML RAMP.

BE ALERT OCNL BIRD FLOCKS ON ARPT AND IN FLT ACROSS RWY 08/26 AND 03/21.

PPR FROM ARPT MGR FOR TRANSIENT PARKING.

FOR CD WHEN ATCT IS CLSD CTC HONOLULU CONTROL FACILITY AT 808-840-6262.

181' LGTD SMOKE STACK 1/2 SM SOUTH OF FLD.

RY 08/26 SINGLE-BELLY TWIN TANDEM (SBTT) GWT 450,000 LBS.

RY 03/21 SINGLE-BELLY TWIN TANDEM (SBTT) GWT 230,000 LBS.

NOISE ABATEMENT: AVOID OVERFLIGHT OF NOISE SENSITIVE RESIDENTIAL AREAS N, W AND SW OF AIRPORT.

RY 3/21 CLSD TO TURBINE ACFT 1800-0600.

TWY E BTN TWY A AND RWY 08/26 PONDING DRG HVY RAINS.

RWY 08 PVD 1325' MKD BY CHEVRONS, UNUSBL FOR LNDG/TKOF/OVRN/STY; CANNOT BE USED IN COMPUTING TKOF DATA.

DIVISION 1.1, 1.2, 1.3 EXPLOSIVES PROHIBITED.

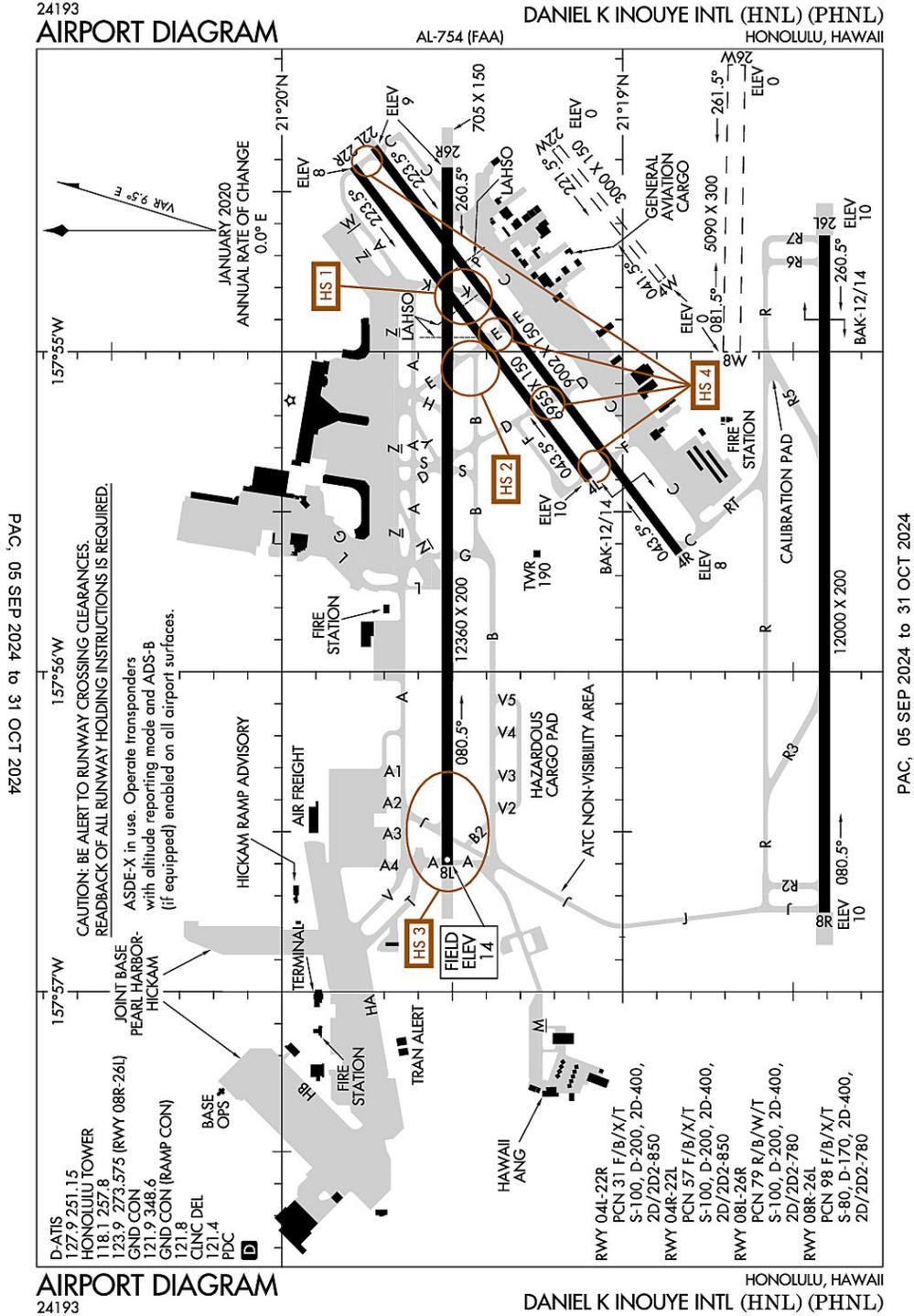
RWYS 8, 21 AND 26 WIND CONES ARE LCTD IN THE ROFA.

(A70A) JET FUEL AVBL MON-SAT 0800-1700 CALL (808) 935-6881/6122 OR 961-6601.

(E93) NO MKD PAD, HEL OPER FM FBO HANGER AREA.

PPR FROM AIRPORT MANAGER FOR TRANSPORTATION OF DIVISION 1.4 EXPLOSIVES AND HAZARDOUS MATERIAL IN OR OUT OF AIRPORT.

Honolulu, Hawaii
Honolulu International
ICAO Identifier PHNL



Honolulu, HI
Honolulu Intl
ICAO Identifier PHNL

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 21-19-04.169N / 157-55-12.901W
- 2.2.2 From City: 3 miles NW of HONOLULU, HI
- 2.2.3 Elevation: 13.5 ft
- 2.2.5 Magnetic Variation: 11E (1990)
- 2.2.6 Airport Contact: MALCOM SMITH
300 RODGERS BLVD. #12
HONOLULU, HI 96819 (808-836-6533)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 A A1+
- 2.4.5 Hangar Space:
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 22R
- 2.12.2 True Bearing: 233
- 2.12.3 True Dimensions: 6955 ft x 150 ft
- 2.12.4 PCN: 31 F/B/X/T
- 2.12.5 Coordinates: 21-19-47.4694N / 157-54-25.1972W
- 2.12.6 Threshold Elevation: 7.5
- 2.12.6 Touchdown Zone Elevation: 9.6

- 2.12.1 Designation: 04L
- 2.12.2 True Bearing: 53
- 2.12.3 True Dimensions: 6955 ft x 150 ft
- 2.12.4 PCN: 31 F/B/X/T
- 2.12.5 Coordinates: 21-19-05.9954N / 157-55-23.9541W
- 2.12.6 Threshold Elevation: 9.8
- 2.12.6 Touchdown Zone Elevation: 10.2

- 2.12.1 Designation: 04R
- 2.12.2 True Bearing: 53
- 2.12.3 True Dimensions: 9002 ft x 150 ft
- 2.12.4 PCN: 57 F/B/X/T
- 2.12.5 Coordinates: 21-18-50.1044N / 157-55-37.685W
- 2.12.6 Threshold Elevation: 8.1
- 2.12.6 Touchdown Zone Elevation: 8.4

2.12.1 Designation: 22L
2.12.2 True Bearing: 233
2.12.3 True Dimensions: 9002 ft x 150 ft
2.12.4 PCN: 57 F/B/X/T
2.12.5 Coordinates: 21-19-43.7762N / 157-54-21.6299W
2.12.6 Threshold Elevation: 8.5
2.12.6 Touchdown Zone Elevation: 8.6

2.12.1 Designation: 22W
2.12.2 True Bearing: 231
2.12.3 True Dimensions: 3000 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 21-19-11.7999N / 157-54-21.78W
2.12.6 Threshold Elevation: 0
2.12.6 Touchdown Zone Elevation:

2.12.1 Designation: 04W
2.12.2 True Bearing: 51
2.12.3 True Dimensions: 3000 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 21-18-53.09N / 157-54-46.44W
2.12.6 Threshold Elevation: 0
2.12.6 Touchdown Zone Elevation:

2.12.1 Designation: 08L
2.12.2 True Bearing: 89
2.12.3 True Dimensions: 12360 ft x 200 ft
2.12.4 PCN: 79 R/B/W/T
2.12.5 Coordinates: 21-19-30.8831N / 157-56-36.1608W
2.12.6 Threshold Elevation: 13.5
2.12.6 Touchdown Zone Elevation: 13.5

2.12.1 Designation: 26R
2.12.2 True Bearing: 270
2.12.3 True Dimensions: 12360 ft x 200 ft
2.12.4 PCN: 79 R/B/W/T
2.12.5 Coordinates: 21-19-30.8839N / 157-54-25.4312W
2.12.6 Threshold Elevation: 8.7
2.12.6 Touchdown Zone Elevation: 8.7

2.12.1 Designation: 08R
2.12.2 True Bearing: 90
2.12.3 True Dimensions: 12000 ft x 200 ft
2.12.4 PCN: 98 F/B/X/T
2.12.5 Coordinates: 21-18-24.4938N / 157-56-45.061W
2.12.6 Threshold Elevation: 9.9
2.12.6 Touchdown Zone Elevation: 10

2.12.1 Designation: 26L
2.12.2 True Bearing: 270

2.12.3 True Dimensions: 12000 ft x 200 ft
2.12.4 PCN: 98 F/B/X/T
2.12.5 Coordinates: 21-18-24.4867N / 157-54-38.152W
2.12.6 Threshold Elevation: 9.8
2.12.6 Touchdown Zone Elevation: 9.8

2.12.1 Designation: 08W
2.12.2 True Bearing: 91
2.12.3 True Dimensions: 5090 ft x 300 ft
2.12.4 PCN:
2.12.5 Coordinates: 21-18-40.85N / 157-55-00W
2.12.6 Threshold Elevation: 0
2.12.6 Touchdown Zone Elevation:

2.12.1 Designation: 26W
2.12.2 True Bearing: 271
2.12.3 True Dimensions: 5090 ft x 300 ft
2.12.4 PCN:
2.12.5 Coordinates: 21-18-39.9794N / 157-54-06.1782W
2.12.6 Threshold Elevation: 0
2.12.6 Touchdown Zone Elevation:

AD 2.13 Declared Distances

2.13.1 Designation: 22R
2.13.2 Take-off Run Available: 6952
2.13.3 Take-off Distance Available: 6952
2.13.4 Accelerate-Stop Distance Available: 6952
2.13.5 Landing Distance Available: 6952

2.13.1 Designation: 04L
2.13.2 Take-off Run Available: 6952
2.13.3 Take-off Distance Available: 6952
2.13.4 Accelerate-Stop Distance Available: 6952
2.13.5 Landing Distance Available: 6952

2.13.1 Designation: 04R
2.13.2 Take-off Run Available: 9000
2.13.3 Take-off 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 Take-off Run Available: 9000
2.13.3 Take-off Distance Available: 9000
2.13.4 Accelerate-Stop Distance Available: 8937
2.13.5 Landing Distance Available: 8937

2.13.1 Designation: 22W
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:

2.13.5 Landing Distance Available:

2.13.1 Designation: 04W

2.13.2 Take-off Run Available:

2.13.3 Take-off Distance Available:

2.13.4 Accelerate-Stop Distance Available:

2.13.5 Landing Distance Available:

2.13.1 Designation: 08L

2.13.2 Take-off Run Available: 12312

2.13.3 Take-off Distance Available: 12312

2.13.4 Accelerate-Stop Distance Available: 12312

2.13.5 Landing Distance Available: 12312

2.13.1 Designation: 26R

2.13.2 Take-off Run Available: 12300

2.13.3 Take-off 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 Take-off Run Available: 12000

2.13.3 Take-off 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 Take-off Run Available: 12000

2.13.3 Take-off Distance Available: 12000

2.13.4 Accelerate-Stop Distance Available: 12000

2.13.5 Landing Distance Available: 12000

2.13.1 Designation: 08W

2.13.2 Take-off Run Available:

2.13.3 Take-off Distance Available:

2.13.4 Accelerate-Stop Distance Available:

2.13.5 Landing Distance Available:

2.13.1 Designation: 26W

2.13.2 Take-off Run Available:

2.13.3 Take-off Distance Available:

2.13.4 Accelerate-Stop Distance Available:

2.13.5 Landing Distance Available:

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 22R

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 04L

2.14.2 Approach Lighting System:

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: P4L

2.14.1 Designation: 22L

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 22W

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 04W

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System:

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:

2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 08R

2.14.2 Approach Lighting System:

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: 08W

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 26W

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: ADZY (HONOLULU RAMP ADZY)

2.18.3 Channel: 121.8

2.18.5 Hours of Operation:

2.18.1 Service Designation: ADZY (HICKAM RAMP ADZY)

2.18.3 Channel: 133.6

2.18.5 Hours of Operation:

2.18.1 Service Designation: ADZY (HICKAM RAMP ADZY)
2.18.3 Channel: 254.4
2.18.5 Hours of Operation:

2.18.1 Service Designation: ANG OPS
2.18.3 Channel: 293.7
2.18.5 Hours of Operation:

2.18.1 Service Designation: APCH/P
2.18.3 Channel: 317.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (WEST)
2.18.3 Channel: 118.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (WEST)
2.18.3 Channel: 269
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BANZI RNAV DP
2.18.3 Channel: 118.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BANZI RNAV DP
2.18.3 Channel: 269
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 121.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 281.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (ARR E/NW DEP NW)
2.18.3 Channel: 119.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (EAST)
2.18.3 Channel: 124.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (ARR E/NW DEP NW)
2.18.3 Channel: 239.05
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: COMD POST
2.18.3 Channel: 141.8
2.18.5 Hours of Operation:

2.18.1 Service Designation: COMD POST (15 AW COMD POST)
2.18.3 Channel: 168
2.18.5 Hours of Operation:

2.18.1 Service Designation: COMD POST
2.18.3 Channel: 292.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: COMD POST (15 AW COMD POST)
2.18.3 Channel: 295.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: D–ATIS
2.18.3 Channel: 127.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D–ATIS
2.18.3 Channel: 251.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (EAST)
2.18.3 Channel: 124.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P CLASS B (EAST)
2.18.3 Channel: 317.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 348.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KEAHI DP (JORDA, LANAI, UPOLU TRNS.)
2.18.3 Channel: 124.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KEAHI DP (JORDA, LANAI, UPOLU TRNS.)
2.18.3 Channel: 317.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KEOLA DP (KATHS,LIHUE,LILIA,NONNI,PUPPI, SOUTH KAUAI TRNS.)

2.18.3 Channel: 118.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KEOLA DP (KATHS,LIHUE,LILIA,PUPPI,SOUTH KAUAI TRNS.)

2.18.3 Channel: 269

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 118.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 08R/26L)

2.18.3 Channel: 123.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 257.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 08R/26L)

2.18.3 Channel: 273.575

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MOLOKAI DP (APACK, CLUTS ,EBBER, FITES, PULPS, ZIGIE TRNS.)

2.18.3 Channel: 124.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MOLOKAI DP (APACK, CLUTS, EBBER, FITIES, PULPS, ZIGIE TRNS.)

2.18.3 Channel: 317.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: OPS (SHAKA OPS)

2.18.3 Channel: 125.3

2.18.5 Hours of Operation:

2.18.1 Service Designation: OPS (SAC OPS)

2.18.3 Channel: 311

2.18.5 Hours of Operation:

2.18.1 Service Designation: OPS (SHAKA OPS)

2.18.3 Channel: 349.4

2.18.5 Hours of Operation:

2.18.1 Service Designation: PALAY DP (LANAI, MOLOKAI TRNS.)

2.18.3 Channel: 124.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PALAY DP (LANAI, MOLOKAI TRNS.)

2.18.3 Channel: 317.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PIPLN RNAV DP
2.18.3 Channel: 124.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PIPLN RNAV DP
2.18.3 Channel: 317.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PTD (HICKAM)
2.18.3 Channel: 133.6
2.18.5 Hours of Operation:

2.18.1 Service Designation: PTD
2.18.3 Channel: 372.2
2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 04R. Magnetic variation: 11E
2.19.2 ILS Identification: IUM
2.19.5 Coordinates: 21-19-47.9018N / 157-54-10.9794W
2.19.6 Site Elevation: 19.5 ft

2.19.1 ILS Type: Glide Slope for runway 04R. Magnetic variation: 11E
2.19.2 ILS Identification: IUM
2.19.5 Coordinates: 21-18-53.9933N / 157-55-26.9028W
2.19.6 Site Elevation: 5.6 ft

2.19.1 ILS Type: Localizer for runway 04R. Magnetic variation: 11E
2.19.2 ILS Identification: IUM
2.19.5 Coordinates: 21-19-49.8152N / 157-54-13.0662W
2.19.6 Site Elevation: 5.1 ft

2.19.1 ILS Type: DME for runway 08L. Magnetic variation: 11E
2.19.2 ILS Identification: HNL
2.19.5 Coordinates: 21-19-27.8674N / 157-54-17.1566W
2.19.6 Site Elevation: 21.2 ft

2.19.1 ILS Type: Glide Slope for runway 08L. Magnetic variation: 11E
2.19.2 ILS Identification: HNL
2.19.5 Coordinates: 21-19-26.67N / 157-56-24.53W
2.19.6 Site Elevation: 6.7 ft

2.19.1 ILS Type: Localizer for runway 08L. Magnetic variation: 11E
2.19.2 ILS Identification: HNL
2.19.5 Coordinates: 21-19-30.8788N / 157-54-14.7214W
2.19.6 Site Elevation: 5.4 ft

2.19.1 ILS Type: Outer Marker for runway 08L. Magnetic variation: 11E

2.19.2 ILS Identification: HNL
2.19.5 Coordinates: 21-19-28.9934N / 158-02-56.1122W
2.19.6 Site Elevation: 43.5 ft

2.19.1 ILS Type: DME for runway 26L. Magnetic variation: 11E
2.19.2 ILS Identification: EPC
2.19.5 Coordinates: 21-19-37.0011N / 157-54-25.9888W
2.19.6 Site Elevation: 24 ft

2.19.1 ILS Type: Localizer for runway 26L. Magnetic variation: 11E
2.19.2 ILS Identification: EPC
2.19.5 Coordinates: 21-19-35.0845N / 157-54-28.3182W
2.19.6 Site Elevation: 6.5 ft

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 11E
2.19.2 Navigation Aid Identification: HNL
2.19.5 Coordinates: 21-18-29.9581N / 157-55-49.4801W
2.19.6 Site Elevation: 5.1 ft

General Remarks:

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, TSNT ACFT, AND OTR MSN MUST CTC 15 OSS/OSA (AMOPS) AT DSN (315) 449-0046/0048 FOR PPR COORD. ALL PPR WILL BE APVD NO EARLIER THAN 72 HR BUT NO LATER THAN 24 HR PRIOR.

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 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.*

ALL JET ACFT CTC RAMP CONTROL PRIOR TO ENGINE START AT GATE OR HARD STAND.

MILITARY MISC: ALL FPL MUST BE FILED WITH PHNL AS DESTN. IF MIL SIDE OF ARPT IS FINAL DESTN, PLACE "DESTINATION HIK" IN RMKS OF FPL. FOR NOTAM USE PHNL IDENT.

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.

CAUTION: HICKAM RAMP TAXI INSTRNS NOT VALID WI PHNL AIRPORT OPERATING AREA (AOA) WHICH INCLS TWYS A, B, PTNS OF TWYS V (SOUTH OF TWY A) AND T, AND ALL RWYS. AIRCREWS MUST CTC HNL TWR OR HNL GND AS DRCTD PRIOR TO ENTERING OR WHILE WI THE PHNL AOA. HICKAM RAMP WILL INSTR ALL ACFT AT THE HAZ CARGO PAD ADJ TO TWY B, TWYS A1-A4, V2-V5 AND PHIK RAMP SIDE PTNS OF TWY T AND V (NORTH OF TWY A).

BIRD STRIKE HAZARD ALL RUNWAYS.

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).

MILITARY MISC: WX OPR H24, DSN 449-2251, C808-658-9961.

PPR FM AMGR FOR TRANSPORTATION OF CLASS A OR B EXPLOS IN AND/OR OUT OF HNL.

TFC PAT OVHD ALT 2000 FT, RESTRICTED TO HIANG AND SENTRY ALOHA ACFT.

APRON TAXILANE 2 EAST END 360 FT CLSD.

MILITARY MISC: ANG - HI ANG AFLD OPS OPR 1500-0300Z MON-FRI AND UTA WKENDS; CLSD SAT, SUN AND HOL.

MILITARY CAUTION: FOD HAZARD EXISTS ON ALL MOVEMENT AREAS E OF TWY S. FIGHTER AIRCRAFT EXERCISE EXTREME CTN WHEN TAXIING.

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 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.

MILITARY A-GEAR: HOOK MB100(B) LCTD 200 FT FM THLD RY 26R.

MILITARY TRAN ALERT: 15 WG CAN PROVIDE EQPT BUT CREWS MUST PROVIDE OWN PERS WHEN NEEDED.

TWYS G ADG V AND BELOW POWER IN W/PPR.

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 RSTD: UPON ARR, CREWS WILL PRVD CREW ORDER/EAL TO 647 SFS PATROL AND PROCD DRCTLY TO COMMAND POST (BLDG 2050) AND CMPLT AN OUBD SETUP SHEET TO FACILITATE DEP RQMNTS.

DUE TO NON-VISIBILITY TWR UNA TO DTRM IF THE FLWG AREAS ARE CLEAR OF OBSTNS AND/OR TFC: PTNS OF TWY J BTN TWY B & RWY 08R; PTNS OF INTER-ISLAND ACFT PRKG RAMP.

MILITARY MISC: AFLD OPS DSN 449-0046/0048 FAX DSN 449-7624.

RYS 04W/22W AND 08W/26W RECREATIONAL BOATING ACTIVITIES ON AND INVOF WATERWAYS.

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: NO COMSEC MATERIAL AVBL THRU HICKAM AIRFIELD OPS.

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.

MILITARY RSTD: ALL TRAN ACFT NOT ON AN AMC/TWCF MSN AND HOME STN ACFT TERMINATING AT JBPB-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).

DUE TO LOCATION OF ATCT, CONTROLLERS UNABLE TO DETERMINE WHETHER ACFT ARE ON CORRECT FINAL APCH TO RYS 04L-04R AND 22L-22R.

MILITARY RSTD: IF ACFT IS CARRYING HAZ CARGO, CARGO MANIFEST IS ALSO RQRD. AVBL TIMES TO ACCEPT HAZ CARGO ARE 0400-1600Z; ALL HAZ CARGO MUST COORDINATE WITH AMOPS 449-0046/48 48 HRS PRIOR TO MSN.

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 SERVICE-FUEL: A++ (MIL; AVBL H24).

WIDE BODY AND 4 ENGINE TBJTS LDG ON RY 04R ROLL TO END OF RY, NO LEFT TURN AT TWY K WO APVL.

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.

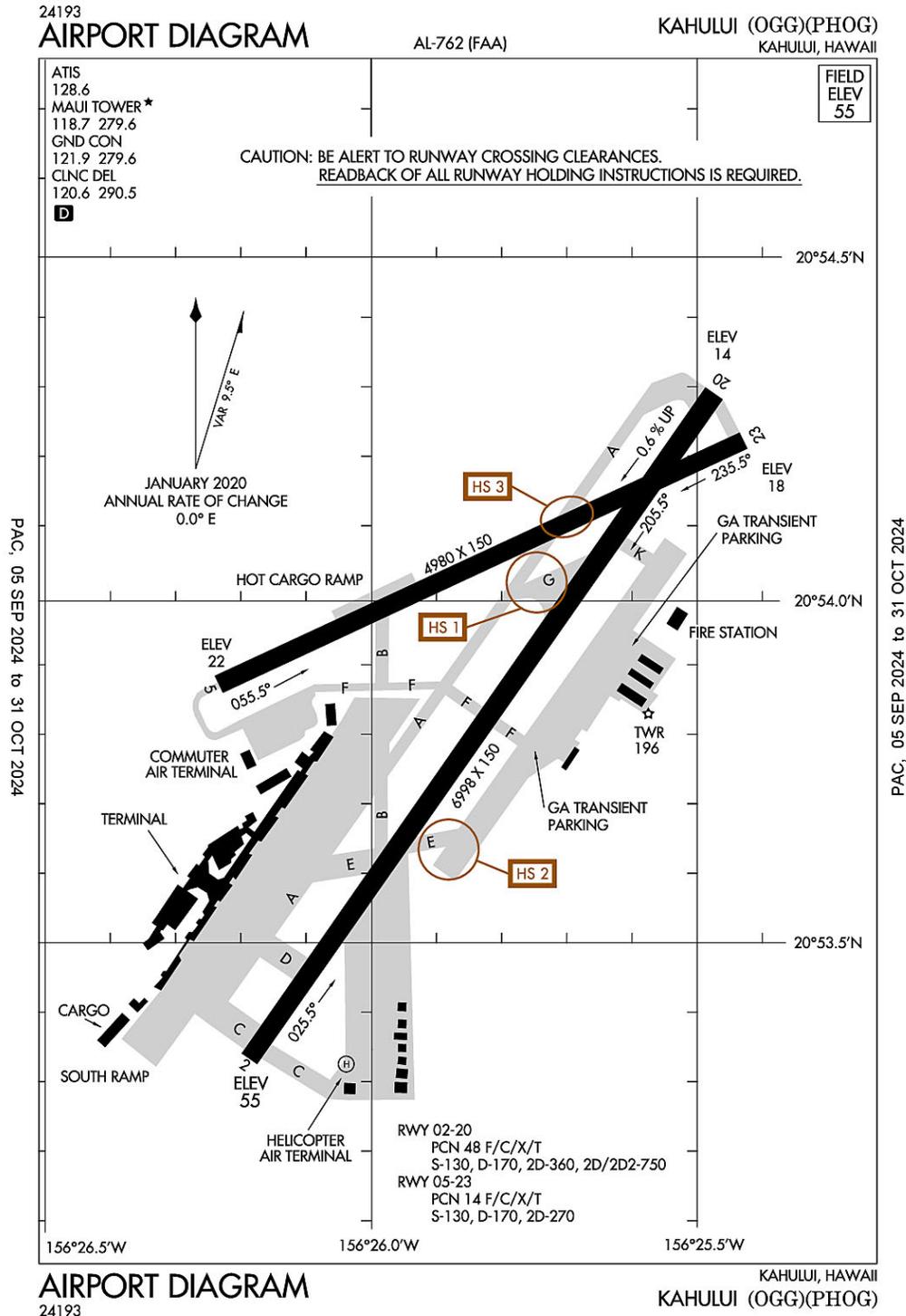
MILITARY REMARKS: SEE FLIP AP/3 SUPPLEMENTARY APRT INFO, RTE AND AREA RSTD, AND OAKLAND FIR FLT HAZ.

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 RSTD: TWR APVL RQRD TO USE TWY KILO FROM RWY 4R. HOLD LINE IN EFCT FOR TWY R7 BTN PTN OF TWY XNG APCH ZONE FOR RWY 04L/R. TWY P CLSD TO ACFT OVER 12500 LBS.

APRON TAXILANE 6 BTWN TWY C AND SOUTH RAMP CLSD EXCEPT GA/FIXED WING LOADING/UNLOADING ONLY.

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: 20-53-55.135N / 156-25-49.651W
- 2.2.2 From City: 3 miles E of KAHULUI, HI
- 2.2.3 Elevation: 55.4 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)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 A
- 2.4.5 Hangar Space:
- 2.4.6 Repair Facilities: MINOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-D

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 02
- 2.12.2 True Bearing: 35
- 2.12.3 True Dimensions: 6998 ft x 150 ft
- 2.12.4 PCN: 48 F/C/X/T
- 2.12.5 Coordinates: 20-53-20.9058N / 156-26-10.7497W
- 2.12.6 Threshold Elevation: 55.3
- 2.12.6 Touchdown Zone Elevation: 55.4

- 2.12.1 Designation: 20
- 2.12.2 True Bearing: 215
- 2.12.3 True Dimensions: 6998 ft x 150 ft
- 2.12.4 PCN: 48 F/C/X/T
- 2.12.5 Coordinates: 20-54-17.7389N / 156-25-28.4443W
- 2.12.6 Threshold Elevation: 14.3
- 2.12.6 Touchdown Zone Elevation: 27

- 2.12.1 Designation: 05
- 2.12.2 True Bearing: 65
- 2.12.3 True Dimensions: 4980 ft x 150 ft
- 2.12.4 PCN: 14 F/C/X/T
- 2.12.5 Coordinates: 20-53-52.8965N / 156-26-13.521W
- 2.12.6 Threshold Elevation: 22.1
- 2.12.6 Touchdown Zone Elevation: 22.2

2.12.1 Designation: 23
2.12.2 True Bearing: 245
2.12.3 True Dimensions: 4980 ft x 150 ft
2.12.4 PCN: 14 F/C/X/T
2.12.5 Coordinates: 20-54-13.7155N / 156-25-25.928W
2.12.6 Threshold Elevation: 17.6
2.12.6 Touchdown Zone Elevation: 18.9

2.12.1 Designation: H1
2.12.2 True Bearing:
2.12.3 True Dimensions: 125 ft x 125 ft
2.12.4 PCN:
2.12.5 Coordinates: 20-53-20.45N / 156-26-01.94W
2.12.6 Threshold Elevation: 49
2.12.6 Touchdown Zone Elevation:

AD 2.13 Declared Distances

2.13.1 Designation: 02
2.13.2 Take-off Run Available: 6995
2.13.3 Take-off 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 Take-off Run Available: 6995
2.13.3 Take-off 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 Take-off Run Available: 4990
2.13.3 Take-off 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 Take-off Run Available: 4990
2.13.3 Take-off Distance Available: 4990
2.13.4 Accelerate-Stop Distance Available: 4990
2.13.5 Landing Distance Available: 4990

2.13.1 Designation: H1
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

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

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 05

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 23

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: H1

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: APCH/P DEP/P IC (SOUTH)

2.18.3 Channel: 119.5

2.18.5 Hours of Operation: 0600–2300 (MAR–NOV)
0600–2400 (NOV–MAR)

2.18.1 Service Designation: APCH/P DEP/P IC (NORTH)

2.18.3 Channel: 120.2

2.18.5 Hours of Operation: 0600–2300 (MAR–NOV)
0600–2400 (NOV–MAR)

2.18.1 Service Designation: APCH/P DEP/P IC (SOUTH)

2.18.3 Channel: 225.4

2.18.5 Hours of Operation: 0600–2300 (MAR–NOV)
0600–2400 (NOV–MAR)

2.18.1 Service Designation: APCH/P DEP/P IC (NORTH)

2.18.3 Channel: 322.4

2.18.5 Hours of Operation: 0600–2300 (MAR–NOV)
0600–2400 (NOV–MAR)

2.18.1 Service Designation: ATIS

2.18.3 Channel: 128.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 120.6

2.18.5 Hours of Operation: 0600–2300 (MAR–NOV)
0600–2400 (NOV–MAR)

2.18.1 Service Designation: CD/P

2.18.3 Channel: 290.5

2.18.5 Hours of Operation: 0600–2300 (MAR–NOV)

0600-2400 (NOV-MAR)

2.18.1 Service Designation: CLASS C (SOUTH)
2.18.3 Channel: 119.5
2.18.5 Hours of Operation: 0600-2300 (MAR-NOV)
0600-2400 (NOV-MAR)

2.18.1 Service Designation: CLASS C (NORTH)
2.18.3 Channel: 120.2
2.18.5 Hours of Operation: 0600-2300 (MAR-NOV)
0600-2400 (NOV-MAR)

2.18.1 Service Designation: CLASS C (SOUTH)
2.18.3 Channel: 225.4
2.18.5 Hours of Operation: 0600-2300 (MAR-NOV)
0600-2400 (NOV-MAR)

2.18.1 Service Designation: CLASS C (NORTH)
2.18.3 Channel: 322.4
2.18.5 Hours of Operation: 0600-2300 (MAR-NOV)
0600-2400 (NOV-MAR)

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 0600-2300 (MAR-NOV)
0600-2400 (NOV-MAR)

2.18.1 Service Designation: GND/P
2.18.3 Channel: 279.6
2.18.5 Hours of Operation: 0600-2300 (MAR-NOV)
0600-2400 (NOV-MAR)

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 118.7
2.18.5 Hours of Operation: 0600-2300 (MAR-NOV)
0600-2400 (NOV-MAR)

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 279.6
2.18.5 Hours of Operation: 0600-2300 (MAR-NOV)
0600-2400 (NOV-MAR)

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 02. Magnetic variation: 11E
2.19.2 ILS Identification: OGG
2.19.5 Coordinates: 20-54-27.3859N / 156-25-23.7568W
2.19.6 Site Elevation: 22 ft

2.19.1 ILS Type: Glide Slope for runway 02. Magnetic variation: 11E
2.19.2 ILS Identification: OGG
2.19.5 Coordinates: 20-53-29.5489N / 156-25-59.2238W
2.19.6 Site Elevation: 49.5 ft

2.19.1 ILS Type: Localizer for runway 02. Magnetic variation: 11E
2.19.2 ILS Identification: OGG
2.19.5 Coordinates: 20-54-25.9395N / 156-25-22.344W
2.19.6 Site Elevation: 11.1 ft

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 11E
2.19.2 Navigation Aid Identification: OGG
2.19.5 Coordinates: 20-54-23.2995N / 156-25-15.4249W
2.19.6 Site Elevation: 24.3 ft

General Remarks:

ACCESS TO HELIPAD FM TWY C ONLY.

ACFT OVR 30,000 LB LDG ON RY 02/20 UNA TO TURN OFF ONTO RY 05/23 DUE TO PAVEMENT COND.

MIGRATORY BIRD ACTIVITY BLO 1500 FT WI 5 NM RADIUS OF ARPT DURG AUG-MAY.

570' LGTD TWR APRX 3 MI. W.

COMMUTER AIR TRML RSTRD TO PART 121 AND PART 135 OPRS ONLY. ACFT AT THE TRML SHALL CALL THE TWR ON 121.9 PRIOR TO PUSHBACK.

FOR CD WHEN ATCT IS CLSD CTC HONOLULU CONTROL FACILITY AT 808-840-6262.

RY 02/20 SINGLE-BELLY TWIN TANDEM (SBTT) GWT 460,000 LBS.

TSNT PARKING LCTD ON NE SECTION OF E RAMP.

PPR FOR FIXED WING ACFT OPNS ON HELIPAD DURG NON-OPERATIONAL HRS CALL (808) 872-3880 5:15A-10:00P.

COMMUTER TERMINAL RAMP RESTRICTED TO ACFT 140000 LBS OR LESS.

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.

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.

RAMP AREA E SIDE RY 02 UNDER STATE AUTHORITY. FAA NOT RESPONSIBLE FOR DIRECTION & CTL

GND TFC IN AREA.

MIL HEL OPS WITH PPR RSTRD TO THE SW CORNER OF HOT CARGO APRON (HAZMAT) N OF RWY 05/23.

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.

Chicago, IL
Chicago O'Hare Intl
ICAO Identifier KORD

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 41-58-36.985N / 87-54-29.339W
- 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: JAMIE RHEE
10510 WEST ZEMKE RO
CHICAGO, IL 60666 (773-686-8060)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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:
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 04L
- 2.12.2 True Bearing: 39
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 658.2

- 2.12.1 Designation: 22R
- 2.12.2 True Bearing: 219
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 651.5

- 2.12.1 Designation: 22L
- 2.12.2 True Bearing: 222
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 654.4

2.12.1 Designation: 04R
2.12.2 True Bearing: 42
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 661.4

2.12.1 Designation: 27C
2.12.2 True Bearing: 270
2.12.3 True Dimensions: 11245 ft x 200 ft
2.12.4 PCN: 131 R/C/W/T
2.12.5 Coordinates: 41-59-17.9172N / 87-53-24.7562W
2.12.6 Threshold Elevation: 652.4
2.12.6 Touchdown Zone Elevation: 652.8

2.12.1 Designation: 09C
2.12.2 True Bearing: 90
2.12.3 True Dimensions: 11245 ft x 200 ft
2.12.4 PCN: 131 R/C/W/T
2.12.5 Coordinates: 41-59-17.8916N / 87-55-53.6564W
2.12.6 Threshold Elevation: 673.3
2.12.6 Touchdown Zone Elevation: 673.3

2.12.1 Designation: 09L
2.12.2 True Bearing: 90
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 668

2.12.1 Designation: 27R
2.12.2 True Bearing: 270
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 663.6

2.12.1 Designation: 09R
2.12.2 True Bearing: 90
2.12.3 True Dimensions: 11260 ft x 150 ft
2.12.4 PCN: 105 R/C/W/T
2.12.5 Coordinates: 41-59-02.0171N / 87-55-53.6481W
2.12.6 Threshold Elevation: 668.2
2.12.6 Touchdown Zone Elevation: 668.2

2.12.1 Designation: 27L
2.12.2 True Bearing: 270

2.12.3 True Dimensions: 11260 ft x 150 ft
2.12.4 PCN: 105 R/C/W/T
2.12.5 Coordinates: 41-59-02.0417N / 87-53-24.5558W
2.12.6 Threshold Elevation: 650.3
2.12.6 Touchdown Zone Elevation: 653.9

2.12.1 Designation: 28C
2.12.2 True Bearing: 270
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 651.1

2.12.1 Designation: 10C
2.12.2 True Bearing: 90
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 669.4

2.12.1 Designation: 10L
2.12.2 True Bearing: 90
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 672.1

2.12.1 Designation: 28R
2.12.2 True Bearing: 270
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 651.4

2.12.1 Designation: 28L
2.12.2 True Bearing: 270
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 666.8

2.12.1 Designation: 10R
2.12.2 True Bearing: 90
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 680

2.12.1 Designation: 10X
2.12.2 True Bearing:
2.12.3 True Dimensions: 0 ft x 0 ft
2.12.4 PCN:
2.12.5 Coordinates:
2.12.6 Threshold Elevation:
2.12.6 Touchdown Zone Elevation:

2.12.1 Designation: H1
2.12.2 True Bearing:
2.12.3 True Dimensions: 200 ft x 100 ft
2.12.4 PCN:
2.12.5 Coordinates: 41-58-39.0644N / 87-53-04.0081W
2.12.6 Threshold Elevation: 649.7
2.12.6 Touchdown Zone Elevation:

AD 2.13 Declared Distances

2.13.1 Designation: 04L
2.13.2 Take-off Run Available: 7500
2.13.3 Take-off Distance Available: 7500
2.13.4 Accelerate-Stop Distance Available: 7500
2.13.5 Landing Distance Available:

2.13.1 Designation: 22R
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available: 7300

2.13.1 Designation: 22L
2.13.2 Take-off Run Available: 8075
2.13.3 Take-off Distance Available: 8075
2.13.4 Accelerate-Stop Distance Available: 8075
2.13.5 Landing Distance Available: 8075

2.13.1 Designation: 04R
2.13.2 Take-off Run Available: 8075
2.13.3 Take-off Distance Available: 8075
2.13.4 Accelerate-Stop Distance Available: 8075
2.13.5 Landing Distance Available: 8075

2.13.1 Designation: 27C
2.13.2 Take-off Run Available: 11245
2.13.3 Take-off Distance Available: 11245
2.13.4 Accelerate-Stop Distance Available: 11245
2.13.5 Landing Distance Available: 11245

2.13.1 Designation: 09C

2.13.2 Take-off Run Available: 11245
2.13.3 Take-off Distance Available: 11245
2.13.4 Accelerate-Stop Distance Available: 11245
2.13.5 Landing Distance Available: 11245

2.13.1 Designation: 09L
2.13.2 Take-off Run Available: 7500
2.13.3 Take-off 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 Take-off Run Available: 7500
2.13.3 Take-off 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 Take-off Run Available: 11260
2.13.3 Take-off Distance Available: 11260
2.13.4 Accelerate-Stop Distance Available: 11260
2.13.5 Landing Distance Available: 11260

2.13.1 Designation: 27L
2.13.2 Take-off Run Available: 11260
2.13.3 Take-off Distance Available: 11260
2.13.4 Accelerate-Stop Distance Available: 11260
2.13.5 Landing Distance Available: 11260

2.13.1 Designation: 28C
2.13.2 Take-off Run Available: 10800
2.13.3 Take-off Distance Available: 10800
2.13.4 Accelerate-Stop Distance Available: 10800
2.13.5 Landing Distance Available: 10800

2.13.1 Designation: 10C
2.13.2 Take-off Run Available: 10800
2.13.3 Take-off Distance Available: 10800
2.13.4 Accelerate-Stop Distance Available: 10540
2.13.5 Landing Distance Available: 10540

2.13.1 Designation: 10L
2.13.2 Take-off Run Available: 13000
2.13.3 Take-off 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 Take-off Run Available: 13000
2.13.3 Take-off Distance Available: 13000
2.13.4 Accelerate-Stop Distance Available: 13000

2.13.5 Landing Distance Available: 13000

2.13.1 Designation: 28L

2.13.2 Take-off Run Available: 7500

2.13.3 Take-off Distance Available: 7500

2.13.4 Accelerate-Stop Distance Available: 7500

2.13.5 Landing Distance Available: 7500

2.13.1 Designation: 10R

2.13.2 Take-off Run Available: 7500

2.13.3 Take-off Distance Available: 7500

2.13.4 Accelerate-Stop Distance Available: 7500

2.13.5 Landing Distance Available: 7500

2.13.1 Designation: 10X

2.13.2 Take-off Run Available:

2.13.3 Take-off Distance Available:

2.13.4 Accelerate-Stop Distance Available:

2.13.5 Landing Distance Available:

2.13.1 Designation: H1

2.13.2 Take-off Run Available:

2.13.3 Take-off Distance Available:

2.13.4 Accelerate-Stop Distance Available:

2.13.5 Landing Distance Available:

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 04L

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System:

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: 22L

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: 27C

2.14.2 Approach Lighting System: ALSF2

2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 09C

2.14.2 Approach Lighting System: ALSF2

2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 09L
2.14.2 Approach Lighting System: ALSF2
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 27R
2.14.2 Approach Lighting System: ALSF2
2.14.4 Visual Approach Slope Indicator System:

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: 28C
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: 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: 28L
2.14.2 Approach Lighting System: ALSF2
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 10R
2.14.2 Approach Lighting System: ALSF2
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 10X
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: H1
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: ALCP
2.18.3 Channel: 252.1

2.18.5 Hours of Operation:

2.18.1 Service Designation: CD PRE TAXI CLNC

2.18.3 Channel: 121.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 121.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/S

2.18.3 Channel: 119.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 135.4

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 282.225

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND METERING

2.18.3 Channel: 121.675

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (TWR SOUTH)

2.18.3 Channel: 118.05

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (TWR CENTER OUTBOUND)

2.18.3 Channel: 121.75

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (TWR CENTER INBOUND)

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (TWR NORTH)

2.18.3 Channel: 124.125

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 226.675
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/S (TWR CENTER)
2.18.3 Channel: 134.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 04R/22L)
2.18.3 Channel: 120.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 10C/28C)
2.18.3 Channel: 120.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 09C/27C)
2.18.3 Channel: 121.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 09R/27L)
2.18.3 Channel: 126.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 22R)
2.18.3 Channel: 126.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 09L/27R)
2.18.3 Channel: 128.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 10L/28R)
2.18.3 Channel: 132.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 10R/28L)
2.18.3 Channel: 133
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 348
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PRM (RWY 10C/28C)
2.18.3 Channel: 119.625
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PRM (RWY 10R/28L)
2.18.3 Channel: 128.05
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: VFR ADZY
2.18.3 Channel: 126.8
2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

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: Localizer for runway 22R. Magnetic variation: 3W
2.19.2 ILS Identification: RXZ
2.19.5 Coordinates: 41-58-47.729N / 87-54-56.987W
2.19.6 Site Elevation: 656.5 ft

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: 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: 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: DME for runway 09C. Magnetic variation: 3W
2.19.2 ILS Identification: OYG
2.19.5 Coordinates: 41-59-22.1969N / 87-56-07.1574W
2.19.6 Site Elevation: 688.1 ft

2.19.1 ILS Type: Glide Slope for runway 09C. Magnetic variation: 3W
2.19.2 ILS Identification: OYG
2.19.5 Coordinates: 41-59-21.8824N / 87-55-38.9074W
2.19.6 Site Elevation: 667.2 ft

2.19.1 ILS Type: Inner Marker for runway 09C. Magnetic variation: 3W
2.19.2 ILS Identification: OYG
2.19.5 Coordinates: 41-59-17.8812N / 87-56-05.0452W
2.19.6 Site Elevation: 680.4 ft

2.19.1 ILS Type: Localizer for runway 09C. Magnetic variation: 3W

2.19.2 ILS Identification: OYG
2.19.5 Coordinates: 41-59-17.9161N / 87-53-10.9443W
2.19.6 Site Elevation: 656.3 ft

2.19.1 ILS Type: DME for runway 27C. Magnetic variation: 3W
2.19.2 ILS Identification: UYJ
2.19.5 Coordinates: 41-59-22.1969N / 87-56-07.1574W
2.19.6 Site Elevation: 688.1 ft

2.19.1 ILS Type: Glide Slope for runway 27C. Magnetic variation: 3W
2.19.2 ILS Identification: UYJ
2.19.5 Coordinates: 41-59-21.9024N / 87-53-38.9227W
2.19.6 Site Elevation: 646.1 ft

2.19.1 ILS Type: Inner Marker for runway 27C. Magnetic variation: 3W
2.19.2 ILS Identification: UYJ
2.19.5 Coordinates: 41-59-17.9169N / 87-53-13.3671W
2.19.6 Site Elevation: 656.3 ft

2.19.1 ILS Type: Localizer for runway 27C. Magnetic variation: 3W
2.19.2 ILS Identification: UYJ
2.19.5 Coordinates: 41-59-17.8863N / 87-56-07.0691W
2.19.6 Site Elevation: 681.9 ft

2.19.1 ILS Type: DME for runway 09L. Magnetic variation: 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: 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: 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: 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: 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: 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: 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: 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: DME for runway 09R. Magnetic variation: 3W

2.19.2 ILS Identification: JAV

2.19.5 Coordinates: 41-58-57.74N / 87-53-13.65W

2.19.6 Site Elevation: 673 ft

2.19.1 ILS Type: Glide Slope for runway 09R. Magnetic variation: 3W

2.19.2 ILS Identification: JAV

2.19.5 Coordinates: 41-59-06.96N / 87-55-38.39W

2.19.6 Site Elevation: 661.9 ft

2.19.1 ILS Type: Inner Marker for runway 09R. Magnetic variation: 3W

2.19.2 ILS Identification: JAV

2.19.5 Coordinates: 41-59-02.01N / 87-56-04.01W

2.19.6 Site Elevation: 669.1 ft

2.19.1 ILS Type: Localizer for runway 09R. Magnetic variation: 3W

2.19.2 ILS Identification: JAV

2.19.5 Coordinates: 41-59-02.04N / 87-53-10.79W

2.19.6 Site Elevation: 642 ft

2.19.1 ILS Type: DME for runway 27L. Magnetic variation: 3W

2.19.2 ILS Identification: IAC

2.19.5 Coordinates: 41-58-57.74N / 87-53-13.65W

2.19.6 Site Elevation: 673 ft

2.19.1 ILS Type: Glide Slope for runway 27L. Magnetic variation: 3W

2.19.2 ILS Identification: IAC

2.19.5 Coordinates: 41-59-06.98N / 87-53-38.67W

2.19.6 Site Elevation: 647.3 ft

2.19.1 ILS Type: Inner Marker for runway 27L. Magnetic variation: 3W

2.19.2 ILS Identification: IAC

2.19.5 Coordinates: 41-59-02.04N / 87-53-13.53W

2.19.6 Site Elevation: 645 ft

2.19.1 ILS Type: Localizer for runway 27L. Magnetic variation: 3W

2.19.2 ILS Identification: IAC

2.19.5 Coordinates: 41-59-02.01N / 87-56-07.22W

2.19.6 Site Elevation: 673 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: 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: 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: 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: 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 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: 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 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: 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: 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: 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 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

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: 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: DME for runway 10R. Magnetic variation: 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: 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
2.19.6 Site Elevation: 656.1 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: 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: 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 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: 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

General Remarks:

A380-800 OPR CONSTRAINTS EXIST ON RWYS, TWYS, & RAMPS – CTC ARPT OPS FOR INFO 773-686-2255.

BIRDS ON & INVOF ARPT; PYROTECHNICS & BIRD CANNONS IN USE.

BE ALERT: THE NORTHEAST/SOUTHWEST PORTION OF TWY YY IS NOT VSBL FM THE CENTER ATCT.

RWY STATUS LGTS ARE IN OPN.

MAG DEVIATION PSBL IMT W OF TWY Y & RWY 22L APCH ON TWY N.

EAST AND WEST GATES ARE MANNED 24 HRS A DAY.

ACFT ARE NOT PMTD TO STOP ON EITHER TWY A OR B BRIDGES.

BE ALERT: TWY S1 OBND OR EB ONLY, TWY S2 INBD OR WB ONLY, TWY P1, P2, P3, P5, AND P6 NB ONLY, TWY E1, E2, E3 & E4 SB ONLY. TWY E3 WB ONLY FM RWY 09C/27C.

ALERT: DUPE ALPHA-NUMERIC TWY DESIGNATORS & TRML GATE DESIGNATIONS INVOLVING THE LTRS B, C, G, H, K, L & M.

SEE LND & HOLD SHORT OPS SECTION.

PAEW NEAR VARIOUS TWYS.

ACFT WITH WINGSPAN GREATER THAN 214 FT RQR 48 HRS PPR – 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 AND TWY SS; RWY 27C AT TWY TT; RWY 9C AT TWY FF; RWY 27L AT TWY TT; RWY 9R AT TWY SS AND FF. THESE RWYS WILL BE USED FOR DEPS ONLY WHEN EXERCISING THE PROVISIONS OF THIS AUTHORIZATION.

ATCT IS AUTH TO CONDUCT SIMUL DEPS FM RWY 04L/04R, RWY 22L/22R, RWY 09R WITH RWY 09L OR RWY 10L, RWY 09C WITH RWY 09L OR RWY 10L, RWY 10C WITH RWY 09R OR RWY 09C, RWY 27L WITH RWY 27R OR RWY 28R, RWY 27C WITH RWY 27R OR RWY 28R, RWY 28C WITH RWY 27L OR RWY 27C WITH CRS DIVERGENCE BEGINNING NO LATER THAN 4 MILES FM RWY END.

B747-8 OPS NOT AUTHORIZED ON RWY 09R/27L, 09L/27R & 10R/28L.

PERIODIC FIRE DEPT TRNG AT N SECTOR OF THE ARPT.

NOISE ABATEMENT PROC IN EFFECT FM 2200 TO 0700; CTC AMGR – 773-686-2255.

TWY NN1 INBD/EB ONLY; TWY NN2 OUBD/WB ONLY.

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.

PRIM RUN-UP LOCATION GROUND RUN UP ENCLOSURE; SECONDARY RUN UP LOCATIONS AVBL UPON REQ – CTC CITY OPS 773-686-2255.

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.

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)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 A1+
- 2.4.5 Hangar Space:
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-D

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 05L
- 2.12.2 True Bearing: 45
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 747.3

- 2.12.1 Designation: 23R
- 2.12.2 True Bearing: 225
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 782.9

- 2.12.1 Designation: 05R
- 2.12.2 True Bearing: 45
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 790.7

2.12.1 Designation: 23L
2.12.2 True Bearing: 225
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 790.1

2.12.1 Designation: 14
2.12.2 True Bearing: 135
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 796.2

2.12.1 Designation: 32
2.12.2 True Bearing: 315
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 792.9

AD 2.13 Declared Distances

2.13.1 Designation: 05L
2.13.2 Take-off Run Available: 11200
2.13.3 Take-off 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 Take-off Run Available: 11200
2.13.3 Take-off Distance Available: 11200
2.13.4 Accelerate-Stop Distance Available: 11200
2.13.5 Landing Distance Available: 11200

2.13.1 Designation: 05R
2.13.2 Take-off Run Available: 10000
2.13.3 Take-off 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 Take-off Run Available: 10000
2.13.3 Take-off Distance Available: 10000
2.13.4 Accelerate-Stop Distance Available: 10000
2.13.5 Landing Distance Available: 10000

2.13.1 Designation: 14

2.13.2 Take-off Run Available: 7278
2.13.3 Take-off 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 Take-off Run Available: 7278
2.13.3 Take-off 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: 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: 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: P4L

2.14.1 Designation: 14
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 32
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 (WEST OF ACTIVE RWY)
2.18.3 Channel: 124.65
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (EAST OF ACTIVE RWY)
2.18.3 Channel: 127.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P
2.18.3 Channel: 317.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P IC
2.18.3 Channel: 128.175

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD PRE TAXI CLNC

2.18.3 Channel: 128.75

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 257.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLANG STAR

2.18.3 Channel: 128.175

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLANG STAR

2.18.3 Channel: 317.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (WEST OF ACTIVE RWY)

2.18.3 Channel: 124.65

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (EAST)

2.18.3 Channel: 124.95

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (EAST OF ACTIVE RWY)

2.18.3 Channel: 127.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C

2.18.3 Channel: 317.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 134.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (WEST)

2.18.3 Channel: 119.05

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (EAST)

2.18.3 Channel: 124.95

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/S
2.18.3 Channel: 121.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 120.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 257.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RACYR STAR
2.18.3 Channel: 128.175
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RACYR STAR
2.18.3 Channel: 317.8
2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

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: 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 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: 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: DME for runway 23R. Magnetic variation: 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: 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 / 86-19-23.9666W
2.19.6 Site Elevation: 736.6 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: Inner Marker for runway 05R. Magnetic variation: 5W
2.19.2 ILS Identification: OQV
2.19.5 Coordinates: 39-41-52.07N / 86-18-27.12W
2.19.6 Site Elevation: 784.4 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: 795.5 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: 39-43-01.17N / 86-16-51.66W
2.19.6 Site Elevation: 782 ft

2.19.1 ILS Type: Localizer for runway 23L. Magnetic variation: 5W
2.19.2 ILS Identification: FVJ
2.19.5 Coordinates: 39-41-53.48N / 86-18-25.33W
2.19.6 Site Elevation: 787.3 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: Localizer for runway 14. Magnetic variation: 5W
2.19.2 ILS Identification: BJP
2.19.5 Coordinates: 39-43-05.64N / 86-16-04.06W
2.19.6 Site Elevation: 768.5 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

2.19.1 ILS Type: Localizer for runway 32. Magnetic variation: 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

General Remarks:

TWY V IS NOT AVBL FOR ACR OPS.

TWY H RUNS CONTIGUOUS AT NORTHEAST RAMP.

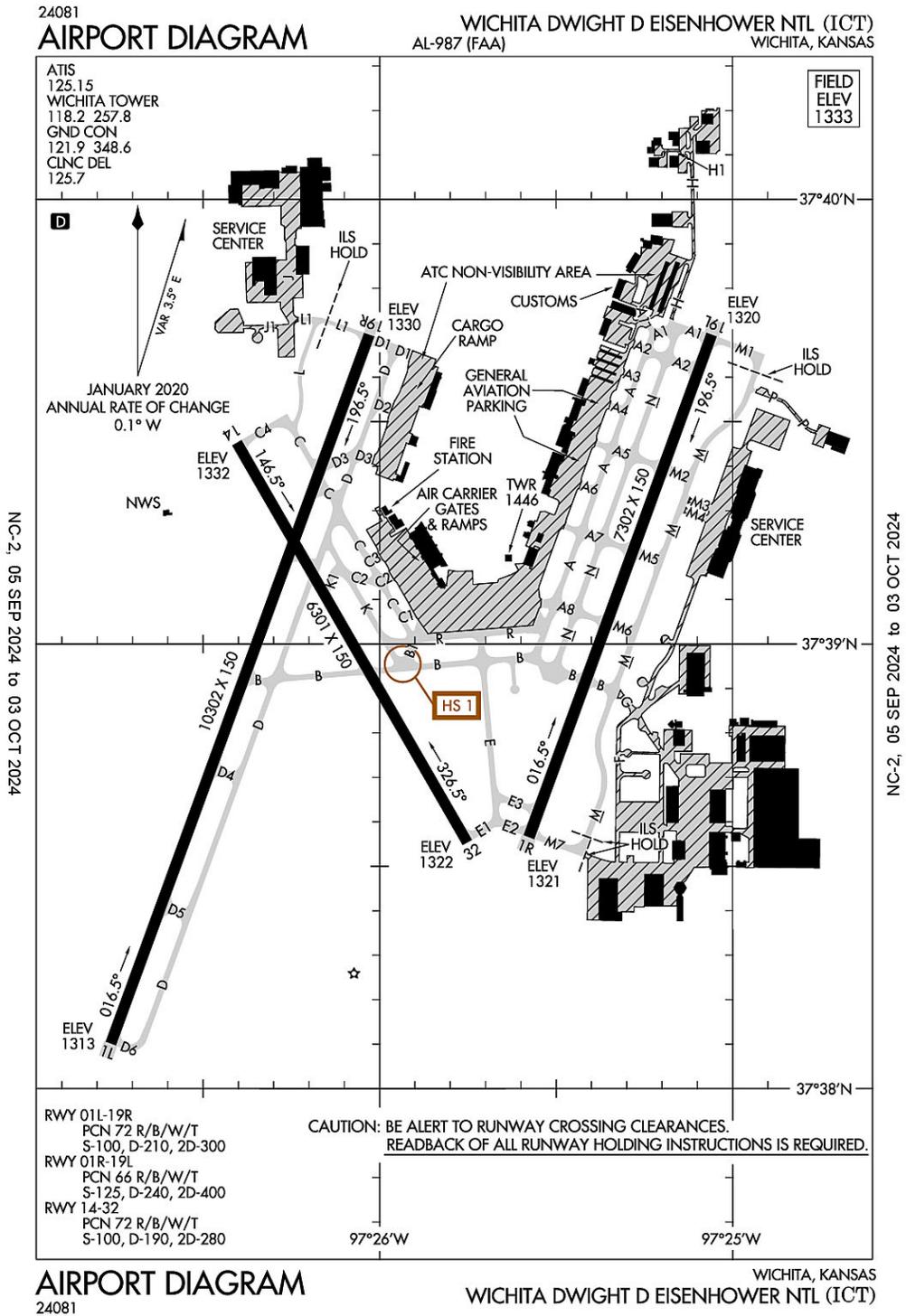
LARGE FLOCKS OF BIRDS ON & INVOF ARPT.

NOISE ABATEMENT PROCEDURES IN EFFECT CTC ARPT MGR.

PRIM STUDENT TGL NOT PMTD.

BE ALERT TO CLOSE PROXIMITY OF RWY 14/32 TO NORTHEAST RAMP.

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: 37-38-59.829N / 97-25-58.954W
- 2.2.2 From City: 5 miles SW of WICHITA, KS
- 2.2.3 Elevation: 1332.6 ft
- 2.2.5 Magnetic Variation: 4E (2015)
- 2.2.6 Airport Contact: MR. JESSE ROMO, A.A.E.
2173 AIR CARGO ROAD
WICHITA, KS 67209 (316-946-4700)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 01L
- 2.12.2 True Bearing: 20
- 2.12.3 True Dimensions: 10302 ft x 150 ft
- 2.12.4 PCN: 72 R/B/W/T
- 2.12.5 Coordinates: 37-38-06.0645N / 97-26-45.5906W
- 2.12.6 Threshold Elevation: 1312.5
- 2.12.6 Touchdown Zone Elevation: 1314.1

- 2.12.1 Designation: 19R
- 2.12.2 True Bearing: 200
- 2.12.3 True Dimensions: 10302 ft x 150 ft
- 2.12.4 PCN: 72 R/B/W/T
- 2.12.5 Coordinates: 37-39-41.7663N / 97-26-01.7916W
- 2.12.6 Threshold Elevation: 1329.6
- 2.12.6 Touchdown Zone Elevation: 1329.7

- 2.12.1 Designation: 01R
- 2.12.2 True Bearing: 20
- 2.12.3 True Dimensions: 7302 ft x 150 ft
- 2.12.4 PCN: 66 R/B/W/T
- 2.12.5 Coordinates: 37-38-33.9441N / 97-25-34.6296W
- 2.12.6 Threshold Elevation: 1321
- 2.12.6 Touchdown Zone Elevation: 1321.1

2.12.1 Designation: 19L
2.12.2 True Bearing: 200
2.12.3 True Dimensions: 7302 ft x 150 ft
2.12.4 PCN: 66 R/B/W/T
2.12.5 Coordinates: 37-39-41.7709N / 97-25-03.5648W
2.12.6 Threshold Elevation: 1319.8
2.12.6 Touchdown Zone Elevation: 1320.1

2.12.1 Designation: 32
2.12.2 True Bearing: 330
2.12.3 True Dimensions: 6301 ft x 150 ft
2.12.4 PCN: 72 R/B/W/T
2.12.5 Coordinates: 37-38-33.2136N / 97-25-45.1001W
2.12.6 Threshold Elevation: 1321.6
2.12.6 Touchdown Zone Elevation: 1321.8

2.12.1 Designation: 14
2.12.2 True Bearing: 150
2.12.3 True Dimensions: 6301 ft x 150 ft
2.12.4 PCN: 72 R/B/W/T
2.12.5 Coordinates: 37-39-27.162N / 97-26-24.273W
2.12.6 Threshold Elevation: 1332.1
2.12.6 Touchdown Zone Elevation: 1332.6

AD 2.13 Declared Distances

2.13.1 Designation: 01L
2.13.2 Take-off Run Available: 10301
2.13.3 Take-off 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 Take-off Run Available: 10301
2.13.3 Take-off 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 Take-off Run Available: 7302
2.13.3 Take-off Distance Available: 7302
2.13.4 Accelerate-Stop Distance Available: 7302
2.13.5 Landing Distance Available: 7302

2.13.1 Designation: 19L
2.13.2 Take-off Run Available: 7302
2.13.3 Take-off Distance Available: 7302
2.13.4 Accelerate-Stop Distance Available: 7302
2.13.5 Landing Distance Available: 7302

2.13.1 Designation: 32

2.13.2 Take-off Run Available: 6301
2.13.3 Take-off Distance Available: 6301
2.13.4 Accelerate-Stop Distance Available: 6301
2.13.5 Landing Distance Available: 6301

2.13.1 Designation: 14
2.13.2 Take-off Run Available: 6301
2.13.3 Take-off 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
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 19R
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 01R
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System:

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: 32
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 14
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: APCH/P (270-009 BLW 5000 FT & BYD 20 NM)
2.18.3 Channel: 125.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (E IAB BLW 5000 FT)
2.18.3 Channel: 269.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (270-009 BLW 5000 FT & BYD 20 NM)
2.18.3 Channel: 325.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (010-190)
2.18.3 Channel: 134.85

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (010-190)

2.18.3 Channel: 290.275

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (191-009)

2.18.3 Channel: 126.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (191-009)

2.18.3 Channel: 353.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/S DEP/S

2.18.3 Channel: 327.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ATIS

2.18.3 Channel: 125.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 125.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (191-009)

2.18.3 Channel: 126.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (010-190 4000 FT & BLW)

2.18.3 Channel: 134.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (010-190 ABV 4000 FT)

2.18.3 Channel: 134.85

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (010-190 ABV 4000 FT)

2.18.3 Channel: 290.275

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (191-009)

2.18.3 Channel: 353.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 348.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 118.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 257.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RDR
2.18.3 Channel: 317.425
2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

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 / 97-26-46.0091W
2.19.6 Site Elevation: 1310.5 ft

2.19.1 ILS Type: Inner Marker for runway 01L. Magnetic variation: 4E
2.19.2 ILS Identification: TWI
2.19.5 Coordinates: 37-37-57.139N / 97-26-49.6801W
2.19.6 Site Elevation: 1317.9 ft

2.19.1 ILS Type: Localizer for runway 01L. Magnetic variation: 4E
2.19.2 ILS Identification: TWI
2.19.5 Coordinates: 37-39-51.3411N / 97-25-57.406W
2.19.6 Site Elevation: 1319.7 ft

2.19.1 ILS Type: Outer Marker for runway 01L. Magnetic variation: 4E
2.19.2 ILS Identification: TWI
2.19.5 Coordinates: 37-33-33.9381N / 97-28-51.7772W
2.19.6 Site Elevation: 1311.2 ft

2.19.1 ILS Type: Glide Slope for runway 19R. Magnetic variation: 4E
2.19.2 ILS Identification: HOV
2.19.5 Coordinates: 37-39-33.8636N / 97-26-10.8356W
2.19.6 Site Elevation: 1327.4 ft

2.19.1 ILS Type: Localizer for runway 19R. Magnetic variation: 4E
2.19.2 ILS Identification: HOV

2.19.5 Coordinates: 37-37-54.7075N / 97-26-50.7862W

2.19.6 Site Elevation: 1320.8 ft

2.19.1 ILS Type: Outer Marker for runway 19R. Magnetic variation: 4E

2.19.2 ILS Identification: HOV

2.19.5 Coordinates: 37-44-16.6003N / 97-24-00.9982W

2.19.6 Site Elevation: 1325.3 ft

2.19.1 ILS Type: DME for runway 01R. Magnetic variation: 4E

2.19.2 ILS Identification: ICT

2.19.5 Coordinates: 37-39-52.0431N / 97-25-02.8236W

2.19.6 Site Elevation: 1327.1 ft

2.19.1 ILS Type: Glide Slop for runway 01R. Magnetic variation: 4E

2.19.2 ILS Identification: ICT

2.19.5 Coordinates: 37-38-42.6366N / 97-25-24.6949W

2.19.6 Site Elevation: 1314.7 ft

2.19.1 ILS Type: Localizer for runway 01R. Magnetic variation: 4E

2.19.2 ILS Identification: ICT

2.19.5 Coordinates: 37-39-52.0134N / 97-24-58.8717W

2.19.6 Site Elevation: 1309.6 ft

2.19.1 ILS Type: Outer Marker for runway 01R. Magnetic variation: 4E

2.19.2 ILS Identification: ICT

2.19.5 Coordinates: 37-34-41.4784N / 97-27-21.1454W

2.19.6 Site Elevation: 1315.2 ft

2.19.1 ILS Type: DME for runway 19L. Magnetic variation: 4E

2.19.2 ILS Identification: MVP

2.19.5 Coordinates: 37-38-21.5439N / 97-25-43.3444W

2.19.6 Site Elevation: 1320 ft

2.19.1 ILS Type: Glide Slop for runway 19L. Magnetic variation: 4E

2.19.2 ILS Identification: MVP

2.19.5 Coordinates: 37-39-30.7714N / 97-25-03.1731W

2.19.6 Site Elevation: 1313.6 ft

2.19.1 ILS Type: Localizer for runway 19L. Magnetic variation: 4E

2.19.2 ILS Identification: MVP

2.19.5 Coordinates: 37-38-21.2844N / 97-25-40.4224W

2.19.6 Site Elevation: 1319.3 ft

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 7E

2.19.2 Navigation Aid Identification: ICT

2.19.5 Coordinates: 37-44-42.9259N / 97-35-01.782W

2.19.6 Site Elevation: 1472 ft

General Remarks:

TWY L AND L1 CLSD TO ACFT WITH WINGSPAN MORE THAN 118.

AIR CARGO RAMP CLSD TO ACFT WINGSPAN MORE THAN 148 FT.

AIRCRAFT ENGINE RUNS ABOVE IDLE NOT APPROVED ON AIRCRAFT PARKING RAMPS.

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.

ACFT PARKING BAS CONTACT 132.00 FOR PARKING INSTRUCTIONS PRIOR TO EXITING TWY L1.

TWYS F, G, H, J, P AND ALL ACFT PARKING RAMPS ARE NONMOVEMENT AREAS.

ATCT HAS LTD VIS OF TRML GATES 1 THRU 8, TWY H, AND CUSTOMS PRKG RAMP.

ATTENDED CONTINUOUSLY.

CALL FOR GATE PUSHBACK NOT REQUIRED.

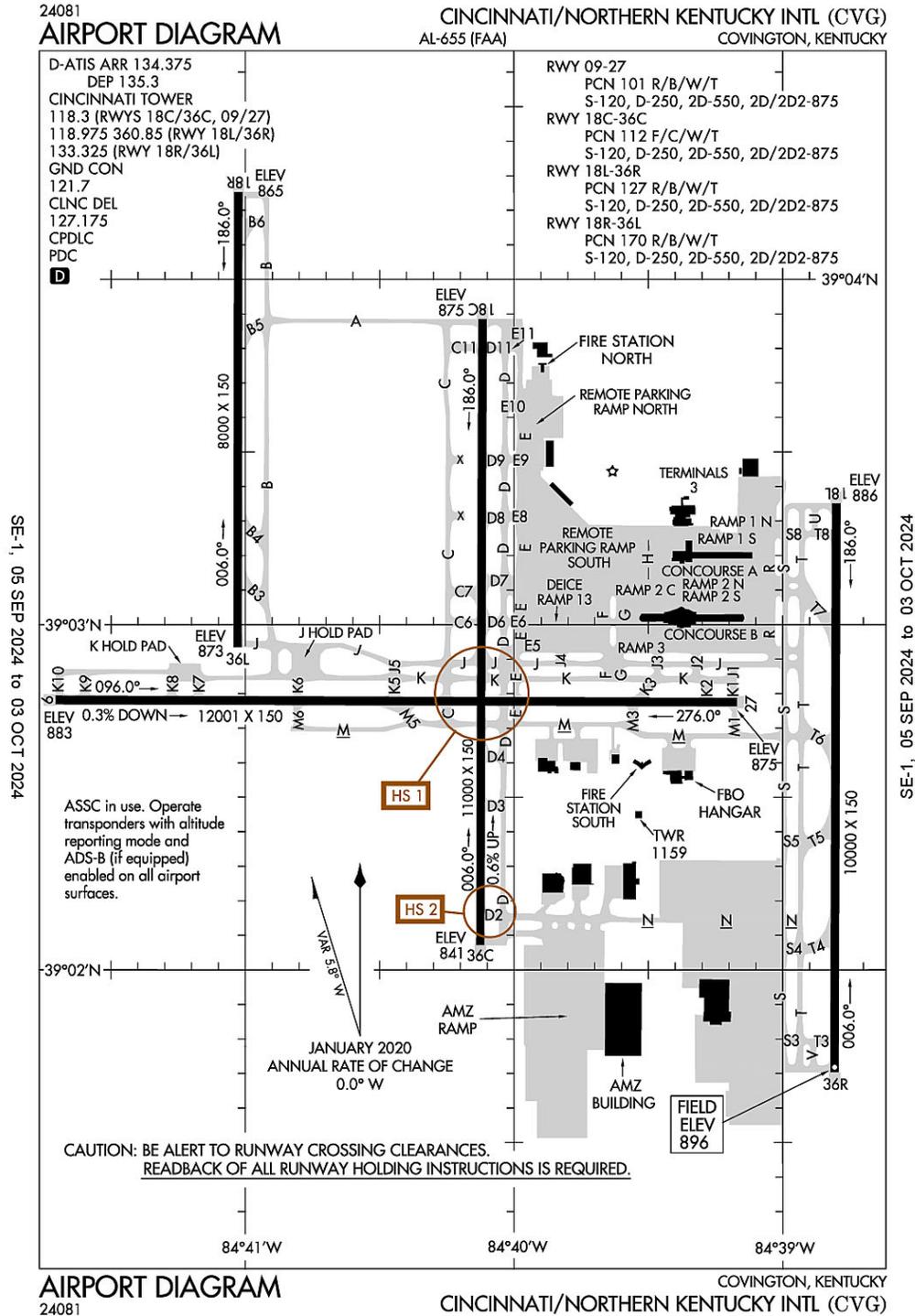
TWY P CLSD TO ACFT WITH WINGSPAN MORE THAN 79.

TWY H CLSD TO ACFT WITH WINGSPAN MORE THAN 79.

MIGRATORY BIRDS ON AND IN VICINITY OF ARPT, ALL QUADS.

FLIGHT NOTIFICATION SERVICE (ADCUS) AVBL.

Covington, Kentucky Cincinnati/Northern Kentucky International ICAO Identifier KCVG



Covington, KY
Cincinnati/Northern Kentucky Intl
ICAO Identifier KCVG

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 39-02-55.815N / 84-40-04.155W
- 2.2.2 From City: 8 miles SW of COVINGTON, KY
- 2.2.3 Elevation: 896.1 ft
- 2.2.5 Magnetic Variation: 6W (2025)
- 2.2.6 Airport Contact: CANDACE MCGRAW
PO BOX 752000
CINCINNATI, OH 45275 (859-767-3151)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 09
- 2.12.2 True Bearing: 90
- 2.12.3 True Dimensions: 12001 ft x 150 ft
- 2.12.4 PCN: 101 R/B/W/T
- 2.12.5 Coordinates: 39-02-46.9049N / 84-41-42.3534W
- 2.12.6 Threshold Elevation: 883.3
- 2.12.6 Touchdown Zone Elevation: 883.3

- 2.12.1 Designation: 27
- 2.12.2 True Bearing: 270
- 2.12.3 True Dimensions: 12001 ft x 150 ft
- 2.12.4 PCN: 101 R/B/W/T
- 2.12.5 Coordinates: 39-02-46.541N / 84-39-10.2439W
- 2.12.6 Threshold Elevation: 875
- 2.12.6 Touchdown Zone Elevation: 875

- 2.12.1 Designation: 36C
- 2.12.2 True Bearing: 0
- 2.12.3 True Dimensions: 11000 ft x 150 ft
- 2.12.4 PCN: 112 F/C/W/T
- 2.12.5 Coordinates: 39-02-04.3552N / 84-40-07.4709W
- 2.12.6 Threshold Elevation: 840.7
- 2.12.6 Touchdown Zone Elevation: 850.3

2.12.1 Designation: 18C
2.12.2 True Bearing: 180
2.12.3 True Dimensions: 11000 ft x 150 ft
2.12.4 PCN: 112 F/C/W/T
2.12.5 Coordinates: 39-03-53.0734N / 84-40-07.0233W
2.12.6 Threshold Elevation: 874.6
2.12.6 Touchdown Zone Elevation: 874.6

2.12.1 Designation: 18L
2.12.2 True Bearing: 180
2.12.3 True Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 127 R/B/W/T
2.12.5 Coordinates: 39-03-21.0781N / 84-38-48.0048W
2.12.6 Threshold Elevation: 886.3
2.12.6 Touchdown Zone Elevation: 889.1

2.12.1 Designation: 36R
2.12.2 True Bearing: 0
2.12.3 True Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 127 R/B/W/T
2.12.5 Coordinates: 39-01-42.2406N / 84-38-48.4562W
2.12.6 Threshold Elevation: 896.1
2.12.6 Touchdown Zone Elevation: 896.1

2.12.1 Designation: 18R
2.12.2 True Bearing: 180
2.12.3 True Dimensions: 8000 ft x 150 ft
2.12.4 PCN: 170 R/B/W/T
2.12.5 Coordinates: 39-04-15.1736N / 84-41-01.4552W
2.12.6 Threshold Elevation: 864.7
2.12.6 Touchdown Zone Elevation: 867.8

2.12.1 Designation: 36L
2.12.2 True Bearing: 0
2.12.3 True Dimensions: 8000 ft x 150 ft
2.12.4 PCN: 170 R/B/W/T
2.12.5 Coordinates: 39-02-56.1037N / 84-41-01.7608W
2.12.6 Threshold Elevation: 872.6
2.12.6 Touchdown Zone Elevation: 872.7

AD 2.13 Declared Distances

2.13.1 Designation: 09
2.13.2 Take-off Run Available: 12000
2.13.3 Take-off 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 Take-off Run Available: 12000
2.13.3 Take-off Distance Available: 12000

2.13.4 Accelerate-Stop Distance Available: 12000
2.13.5 Landing Distance Available: 12000

2.13.1 Designation: 36C
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: 18C
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: 18L
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: 36R
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: 18R
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: 36L
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

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: MALSR
2.14.4 Visual Approach Slope Indicator System: P4L

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: 18C
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System: P4R

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: 18R
2.14.2 Approach Lighting System: ALSF2
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 36L
2.14.2 Approach Lighting System: ALSF2
2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: APCH/P (090-269)
2.18.3 Channel: 119.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (270-089)
2.18.3 Channel: 123.875
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P
2.18.3 Channel: 363.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 127.175
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CINCE STAR
2.18.3 Channel: 254.25
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (001-180)
2.18.3 Channel: 121
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (181-360)
2.18.3 Channel: 128.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B

2.18.3 Channel: 254.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (ARR)

2.18.3 Channel: 134.375

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (DEP)

2.18.3 Channel: 135.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (001-180)

2.18.3 Channel: 126.65

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (181-360)

2.18.3 Channel: 128.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P

2.18.3 Channel: 254.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: JAKIE STAR

2.18.3 Channel: 119.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: JAKIE STAR

2.18.3 Channel: 254.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 09/27, 18C/36C)

2.18.3 Channel: 118.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 18L/36R)

2.18.3 Channel: 118.975

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 18R/36L)
2.18.3 Channel: 133.325
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 18L/36R)
2.18.3 Channel: 360.85
2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 09. Magnetic variation: 6W
2.19.2 ILS Identification: URN
2.19.5 Coordinates: 39-02-42.9147N / 84-39-02.0835W
2.19.6 Site Elevation: 886.8 ft

2.19.1 ILS Type: Glide Slope for runway 09. Magnetic variation: 6W
2.19.2 ILS Identification: URN
2.19.5 Coordinates: 39-02-42.9226N / 84-41-28.2646W
2.19.6 Site Elevation: 873.4 ft

2.19.1 ILS Type: Localizer for runway 09. Magnetic variation: 6W
2.19.2 ILS Identification: URN
2.19.5 Coordinates: 39-02-46.5213N / 84-39-02.0181W
2.19.6 Site Elevation: 877.4 ft

2.19.1 ILS Type: Glide Slope for runway 27. Magnetic variation: 6W
2.19.2 ILS Identification: JDP
2.19.5 Coordinates: 39-02-42.6295N / 84-39-25.1643W
2.19.6 Site Elevation: 866.4 ft

2.19.1 ILS Type: Localizer for runway 27. Magnetic variation: 6W
2.19.2 ILS Identification: JDP
2.19.5 Coordinates: 39-02-46.9321N / 84-41-55.3805W
2.19.6 Site Elevation: 883.3 ft

2.19.1 ILS Type: DME for runway 18C. Magnetic variation: 6W
2.19.2 ILS Identification: SIC
2.19.5 Coordinates: 39-01-54.1461N / 84-40-08.213W
2.19.6 Site Elevation: 843.6 ft

2.19.1 ILS Type: Glide Slope for runway 18C. Magnetic variation: 6W
2.19.2 ILS Identification: SIC
2.19.5 Coordinates: 39-03-42.6496N / 84-40-12.1363W
2.19.6 Site Elevation: 868 ft

2.19.1 ILS Type: Localizer for runway 18C. Magnetic variation: 6W
2.19.2 ILS Identification: SIC
2.19.5 Coordinates: 39-01-54.1433N / 84-40-07.5139W
2.19.6 Site Elevation: 838.2 ft

2.19.1 ILS Type: DME for runway 36C. Magnetic variation: 6W
2.19.2 ILS Identification: CVG

2.19.5 Coordinates: 39-04-03.9117N / 84-40-10.1702W

2.19.6 Site Elevation: 883 ft

2.19.1 ILS Type: Glide Slope for runway 36C. Magnetic variation: 6W

2.19.2 ILS Identification: CVG

2.19.5 Coordinates: 39-02-15.4827N / 84-40-12.493W

2.19.6 Site Elevation: 834.2 ft

2.19.1 ILS Type: Inner Marker for runway 36C. Magnetic variation: 6W

2.19.2 ILS Identification: CVG

2.19.5 Coordinates: 39-01-53.9241N / 84-40-07.5094W

2.19.6 Site Elevation: 818.2 ft

2.19.1 ILS Type: Localizer for runway 36C. Magnetic variation: 6W

2.19.2 ILS Identification: CVG

2.19.5 Coordinates: 39-04-03.6949N / 84-40-06.9785W

2.19.6 Site Elevation: 882.1 ft

2.19.1 ILS Type: DME for runway 18L. Magnetic variation: 6W

2.19.2 ILS Identification: CIZ

2.19.5 Coordinates: 39-01-31.5713N / 84-38-45.4036W

2.19.6 Site Elevation: 910.4 ft

2.19.1 ILS Type: Glide Slope for runway 18L. Magnetic variation: 6W

2.19.2 ILS Identification: CIZ

2.19.5 Coordinates: 39-03-10.8831N / 84-38-42.976W

2.19.6 Site Elevation: 881.2 ft

2.19.1 ILS Type: Localizer for runway 18L. Magnetic variation: 6W

2.19.2 ILS Identification: CIZ

2.19.5 Coordinates: 39-01-31.787N / 84-38-48.5019W

2.19.6 Site Elevation: 899 ft

2.19.1 ILS Type: DME for runway 36R. Magnetic variation: 6W

2.19.2 ILS Identification: EEI

2.19.5 Coordinates: 39-03-30.8826N / 84-38-51.18W

2.19.6 Site Elevation: 900.1 ft

2.19.1 ILS Type: Glide Slope for runway 36R. Magnetic variation: 6W

2.19.2 ILS Identification: EEI

2.19.5 Coordinates: 39-01-52.8044N / 84-38-43.3385W

2.19.6 Site Elevation: 889.9 ft

2.19.1 ILS Type: Inner Marker for runway 36R. Magnetic variation: 6W

2.19.2 ILS Identification: EEI

2.19.5 Coordinates: 39-01-33.5681N / 84-38-48.5005W

2.19.6 Site Elevation: 898.7 ft

2.19.1 ILS Type: Localizer for runway 36R. Magnetic variation: 6W

2.19.2 ILS Identification: EEI

2.19.5 Coordinates: 39-03-31.4843N / 84-38-47.9544W

2.19.6 Site Elevation: 892.1 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: 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: 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: DME for runway 36L. Magnetic variation: 6W

2.19.2 ILS Identification: VAC

2.19.5 Coordinates: 39-04-25.0237N / 84-41-04.7924W

2.19.6 Site Elevation: 854.5 ft

2.19.1 ILS Type: Glide Slope for runway 36L. Magnetic variation: 6W

2.19.2 ILS Identification: VAC

2.19.5 Coordinates: 39-03-06.5542N / 84-41-06.7898W

2.19.6 Site Elevation: 865.8 ft

2.19.1 ILS Type: Inner Marker for runway 36L. Magnetic variation: 6W

2.19.2 ILS Identification: VAC

2.19.5 Coordinates: 39-02-44.323N / 84-41-01.8019W

2.19.6 Site Elevation: 868.2 ft

2.19.1 ILS Type: Localizer for runway 36L. Magnetic variation: 6W

2.19.2 ILS Identification: VAC

2.19.5 Coordinates: 39-04-25.5032N / 84-41-01.4165W

2.19.6 Site Elevation: 860.3 ft

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 4W

2.19.2 Navigation Aid Identification: CVG

2.19.5 Coordinates: 39-00-57.5308N / 84-42-12.0468W

2.19.6 Site Elevation: 878 ft

General Remarks:

SUCCESSIVE OR SIMUL DEP FM RWY 18L, 18C, 36L, 36C & 36R APVD WITH COURSE DVRG BGN NO FURTHER THAN 2 MI FM EOR DUE TO NOISE ABATEMENT.

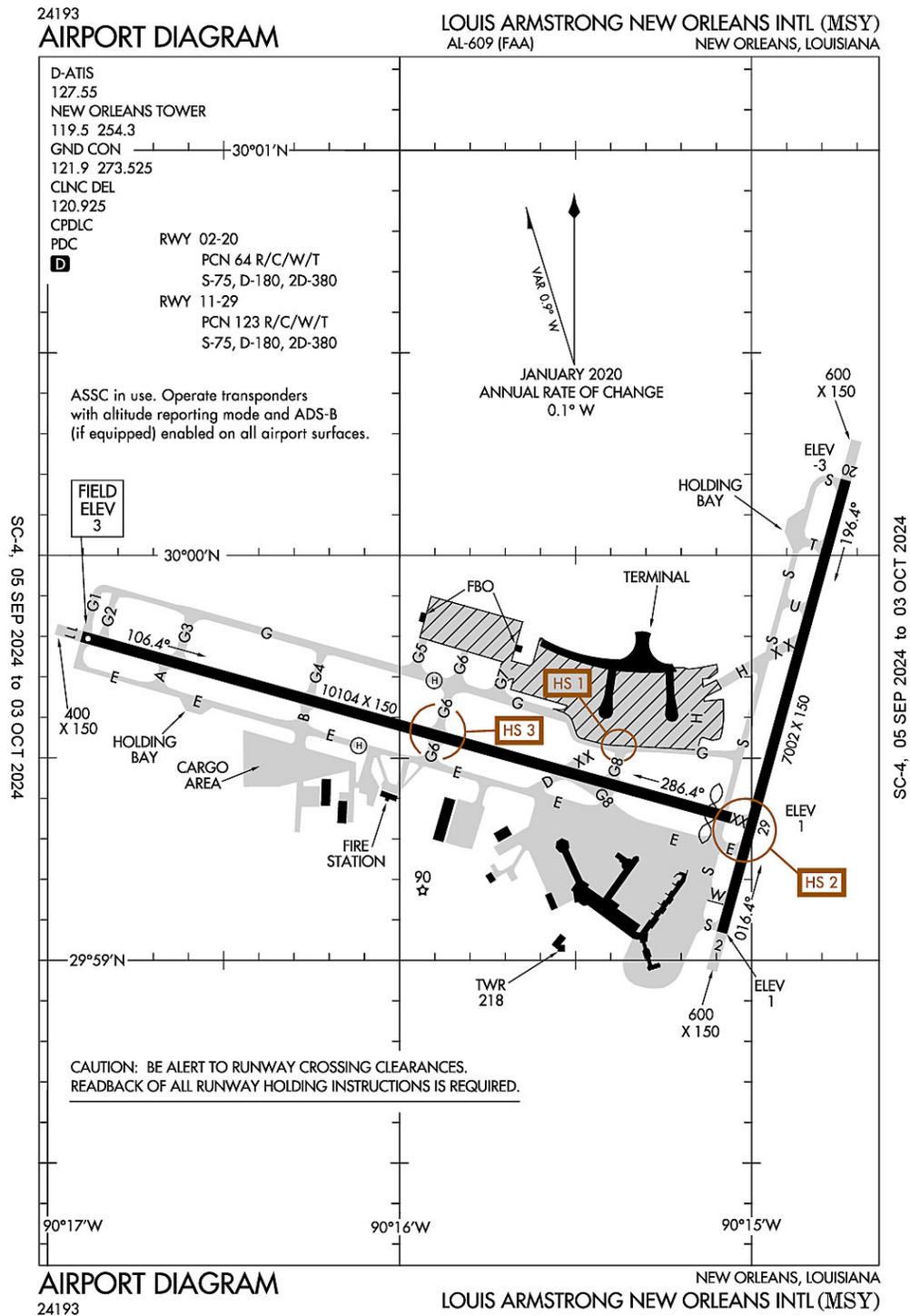
TWYS RSTRD TO 15 MPH OR LESS WITH WINGSPAN 214 FT OR MORE.

NOISE SENS AREA N & S OF ARPT; RWY ASGN 2200-0700 BASED ON NOISE ABATEMENT.

BIRDS ON & INVOF THE ARPT.

RAMP CTL: RAMP 1N / 1S TXL & RAMP 2N / 2S TXL - 130.90, RAMP 3 TXL & N TXL - 130.375; DHL RAMP CTL: 129.475; AMZ RAMP CTL: 130.5.

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: 29-59-35.78N / 90-15-32.499W
- 2.2.2 From City: 10 miles W of NEW ORLEANS, LA
- 2.2.3 Elevation: 3 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)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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:
- 2.4.6 Repair Facilities: NONE

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-D

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 02
- 2.12.2 True Bearing: 15
- 2.12.3 True Dimensions: 7002 ft x 150 ft
- 2.12.4 PCN: 64 R/C/W/T
- 2.12.5 Coordinates: 29-59-04.2046N / 90-15-05.0949W
- 2.12.6 Threshold Elevation: 1.3
- 2.12.6 Touchdown Zone Elevation: 1.6

- 2.12.1 Designation: 20
- 2.12.2 True Bearing: 195
- 2.12.3 True Dimensions: 7002 ft x 150 ft
- 2.12.4 PCN: 64 R/C/W/T
- 2.12.5 Coordinates: 30-00-10.9937N / 90-14-43.837W
- 2.12.6 Threshold Elevation: -2.9
- 2.12.6 Touchdown Zone Elevation: -1.1

- 2.12.1 Designation: 11
- 2.12.2 True Bearing: 105
- 2.12.3 True Dimensions: 10104 ft x 150 ft
- 2.12.4 PCN: 123 R/C/W/T
- 2.12.5 Coordinates: 29-59-47.857N / 90-16-54.2234W
- 2.12.6 Threshold Elevation: 3
- 2.12.6 Touchdown Zone Elevation: 3

2.12.1 Designation: 29
2.12.2 True Bearing: 285
2.12.3 True Dimensions: 10104 ft x 150 ft
2.12.4 PCN: 123 R/C/W/T
2.12.5 Coordinates: 29-59-21.1717N / 90-15-03.4851W
2.12.6 Threshold Elevation: 0.5
2.12.6 Touchdown Zone Elevation: 1.5

2.12.1 Designation: H1
2.12.2 True Bearing:
2.12.3 True Dimensions: 50 ft x 50 ft
2.12.4 PCN:
2.12.5 Coordinates: 29-59-31.9N / 90-16-06.84W
2.12.6 Threshold Elevation: 0
2.12.6 Touchdown Zone Elevation:

2.12.1 Designation: H2
2.12.2 True Bearing:
2.12.3 True Dimensions: 50 ft x 50 ft
2.12.4 PCN:
2.12.5 Coordinates: 29-59-41.5N / 90-15-54.01W
2.12.6 Threshold Elevation: 0
2.12.6 Touchdown Zone Elevation:

AD 2.13 Declared Distances

2.13.1 Designation: 02
2.13.2 Take-off Run Available: 7002
2.13.3 Take-off Distance Available: 7002
2.13.4 Accelerate-Stop Distance Available: 7002
2.13.5 Landing Distance Available: 7002

2.13.1 Designation: 20
2.13.2 Take-off Run Available: 7002
2.13.3 Take-off Distance Available: 7002
2.13.4 Accelerate-Stop Distance Available: 6948
2.13.5 Landing Distance Available: 6948

2.13.1 Designation: 11
2.13.2 Take-off Run Available: 10104
2.13.3 Take-off Distance Available: 10104
2.13.4 Accelerate-Stop Distance Available: 9800
2.13.5 Landing Distance Available: 9800

2.13.1 Designation: 29
2.13.2 Take-off Run Available: 10104
2.13.3 Take-off Distance Available: 10104
2.13.4 Accelerate-Stop Distance Available: 10104
2.13.5 Landing Distance Available: 9800

2.13.1 Designation: H1

2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: H2
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

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

2.14.1 Designation: H1
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: H2
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: APCH/P DEP/P (WEST)
2.18.3 Channel: 125.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (EAST)
2.18.3 Channel: 133.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (EAST)
2.18.3 Channel: 290.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (WEST)
2.18.3 Channel: 350.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/S

2.18.3 Channel: 269.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: AWDAD STAR (WEST)

2.18.3 Channel: 125.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: AWDAD STAR (WEST)

2.18.3 Channel: 350.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD PRE TAXI CLNC

2.18.3 Channel: 120.925

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 120.925

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (SE & SOUTH)

2.18.3 Channel: 123.85

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (WEST)

2.18.3 Channel: 125.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (NORTH & EAST)

2.18.3 Channel: 133.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (SE & SOUTH)

2.18.3 Channel: 256.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (NORTH & EAST)

2.18.3 Channel: 290.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (WEST)

2.18.3 Channel: 350.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 127.55

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 273.525
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 119.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 254.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MNSTR STAR (EAST)
2.18.3 Channel: 133.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MNSTR STAR (EAST)
2.18.3 Channel: 290.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: OLEDD STAR (WEST)
2.18.3 Channel: 125.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: OLEDD STAR (WEST)
2.18.3 Channel: 350.35
2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 02. Magnetic variation: 1W
2.19.2 ILS Identification: JFI
2.19.5 Coordinates: 30-00-21.6556N / 90-14-43.2405W
2.19.6 Site Elevation: 9.1 ft

2.19.1 ILS Type: Glide Slop for runway 02. Magnetic variation: 1W
2.19.2 ILS Identification: JFI
2.19.5 Coordinates: 29-59-13.6243N / 90-14-58.6631W
2.19.6 Site Elevation: -2 ft

2.19.1 ILS Type: Localizer for runway 02. Magnetic variation: 1W

2.19.2 ILS Identification: JFI
2.19.5 Coordinates: 30-00-20.6664N / 90-14-40.8693W
2.19.6 Site Elevation: -6 ft

2.19.1 ILS Type: DME for runway 20. Magnetic variation: 1W
2.19.2 ILS Identification: ONW
2.19.5 Coordinates: 30-00-21.6556N / 90-14-43.2405W
2.19.6 Site Elevation: 9.1 ft

2.19.1 ILS Type: Localizer for runway 20. Magnetic variation: 1W
2.19.2 ILS Identification: ONW
2.19.5 Coordinates: 29-58-55.1159N / 90-15-07.984W
2.19.6 Site Elevation: 0.8 ft

2.19.1 ILS Type: DME for runway 11. Magnetic variation: 1W
2.19.2 ILS Identification: MSY
2.19.5 Coordinates: 29-59-17.2296N / 90-14-55.6762W
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: 29-59-48.6156N / 90-16-39.2463W
2.19.6 Site Elevation: -3.8 ft

2.19.1 ILS Type: Inner Marker for runway 11. Magnetic variation: 1W
2.19.2 ILS Identification: MSY
2.19.5 Coordinates: 29-59-50.2618N / 90-17-04.1774W
2.19.6 Site Elevation: 3.1 ft

2.19.1 ILS Type: Localizer for runway 11. Magnetic variation: 1W
2.19.2 ILS Identification: MSY
2.19.5 Coordinates: 29-59-19.3208N / 90-14-55.8537W
2.19.6 Site Elevation: -1.1 ft

2.19.1 ILS Type: DME for runway 29. Magnetic variation: 1W
2.19.2 ILS Identification: HOX
2.19.5 Coordinates: 29-59-17.2296N / 90-14-55.6762W
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: 29-59-27.9678N / 90-15-16.788W
2.19.6 Site Elevation: -0.3 ft

2.19.1 ILS Type: Localizer for runway 29. Magnetic variation: 1W
2.19.2 ILS Identification: HOX
2.19.5 Coordinates: 29-59-50.5146N / 90-17-05.2664W
2.19.6 Site Elevation: 3.4 ft

General Remarks:

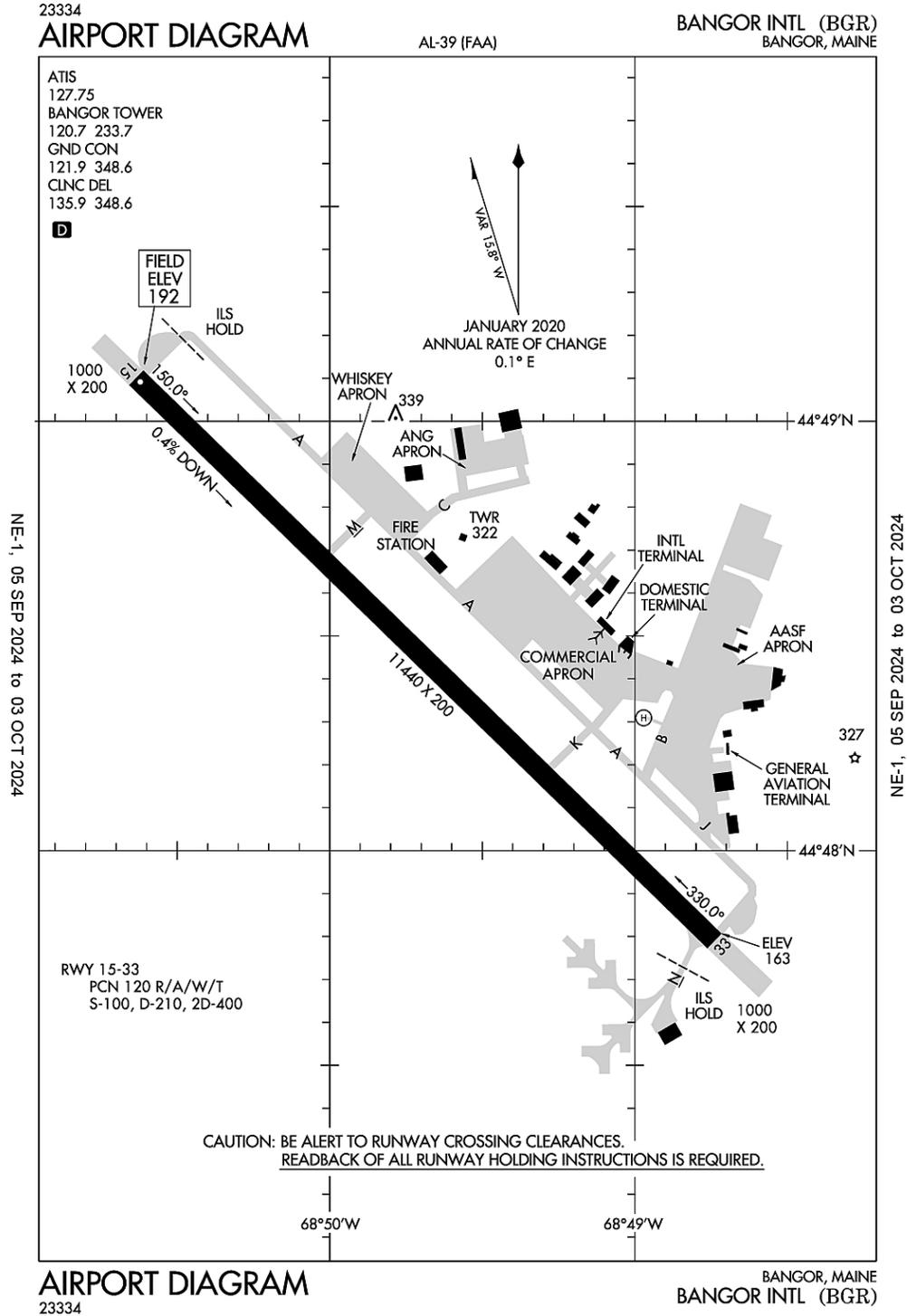
180 DEG & LOCKED WHEEL TURNS PROHIBITED ON ASPH SFC ACFT 12500 LBS & OVER.

FLOCKS OF BIRDS ON & IN VICINITY OF ARPT.

TWY G BTN RWY 11/29 AND TWY S SFC MOV GUIDANCE AND CTL SYSTEM U/S PERM

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.

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: JOSE F SAAVEDRA
BANGOR INTERNATIONAL ARPT
BANGOR, ME 4401 (207-992-4600)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-B

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 15
- 2.12.2 True Bearing: 134
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 192.1

- 2.12.1 Designation: 33
- 2.12.2 True Bearing: 314
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 162.9

- 2.12.1 Designation: H1
- 2.12.2 True Bearing:
- 2.12.3 True Dimensions: 100 ft x 100 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 44-48-18.61N / 68-48-58.78W
- 2.12.6 Threshold Elevation: 148
- 2.12.6 Touchdown Zone Elevation:

AD 2.13 Declared Distances

- 2.13.1 Designation: 15
- 2.13.2 Take-off Run Available: 11440
- 2.13.3 Take-off Distance Available: 11440
- 2.13.4 Accelerate-Stop Distance Available: 11440
- 2.13.5 Landing Distance Available: 11440

- 2.13.1 Designation: 33
- 2.13.2 Take-off Run Available: 11440
- 2.13.3 Take-off Distance Available: 11440
- 2.13.4 Accelerate-Stop Distance Available: 11440
- 2.13.5 Landing Distance Available: 11440

- 2.13.1 Designation: H1
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

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

- 2.14.1 Designation: H1
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

- 2.18.1 Service Designation: APCH/P DEP/P IC
- 2.18.3 Channel: 118.925
- 2.18.5 Hours of Operation: 24

- 2.18.1 Service Designation: APCH/P DEP/P IC
- 2.18.3 Channel: 239.3
- 2.18.5 Hours of Operation: 24

- 2.18.1 Service Designation: APCH/S DEP/S
- 2.18.3 Channel: 124.5
- 2.18.5 Hours of Operation: 24

- 2.18.1 Service Designation: ATIS
- 2.18.3 Channel: 127.75
- 2.18.5 Hours of Operation: 24

- 2.18.1 Service Designation: CD/P

2.18.3 Channel: 135.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 348.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C

2.18.3 Channel: 118.925

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C

2.18.3 Channel: 239.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C/S

2.18.3 Channel: 124.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 348.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 120.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 233.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: NG OPS

2.18.3 Channel: 41.2

2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

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

2.19.1 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: Inner Marker for runway 15. Magnetic variation: 16W
2.19.2 ILS Identification: JVH
2.19.5 Coordinates: 44-49-12.0633N / 68-50-46.7197W
2.19.6 Site Elevation: 184 ft

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: 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

2.19.1 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

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: 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

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 19W
2.19.2 Navigation Aid Identification: BGR
2.19.5 Coordinates: 44-50-30.4619N / 68-52-26.2752W
2.19.6 Site Elevation: 360.1 ft

General Remarks:

ANG: PPR VALID +/- 1 HR UNLESS PRIOR CDN. 3 HR OUT CALL, 30 MIN OUT CALL 311.0 TO CFM CSTMS/AG AND TRAN SVC. COMMAND POST C207-404-7788 H24.

FUEL: A++ (MIL).

ANG: CAUTION: BASH PHASE II PERIOD SEP-NOV, APR-MAY. EXPECT INCREASED BIRD ACTIVITY. CONTACT BASE OPS/COMMAND POST/SOF FOR CURRENT BIRDWATCH COND.

ANG: OPR 1100-1930Z++ MON-FRI, CLSD WKEND AND HOL. PPR RQRD FOR ANG RAMP. CTC AFLD MGMT DSN 698-7232, C207-404-7232 FOR PPR DURG OPR HRS. PRE-COORD ALL TRNSPN RQMNTS AND HAZ CARGO WITH PPR REQ.

ARNG: OPR 1230-2100Z++ MON-FRI EXC HOL. LTD MAINT. J8. PPR MAY-OCT SVC DSN 626-1100.

MISC: RWY 15-33 GROOVED.

SVC MIL-FLUID: OFF-BASE CONTRACTED LOX AVBL H24-RQR 24 HR NOTICE.

ANG: 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.

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: GREGORY SOLEK
PO BOX 8766
BWI AIRPORT, MD 21240 (410-859-7024)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-D

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 10
- 2.12.2 True Bearing: 94
- 2.12.3 True Dimensions: 10503 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 39-10-29.0895N / 76-41-22.6248W
- 2.12.6 Threshold Elevation: 139
- 2.12.6 Touchdown Zone Elevation: 143.4

- 2.12.1 Designation: 28
- 2.12.2 True Bearing: 274
- 2.12.3 True Dimensions: 10503 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 39-10-21.4754N / 76-39-09.6234W
- 2.12.6 Threshold Elevation: 126.4
- 2.12.6 Touchdown Zone Elevation: 142.7

- 2.12.1 Designation: 33R
- 2.12.2 True Bearing: 324
- 2.12.3 True Dimensions: 5000 ft x 100 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 39-10-34.4468N / 76-39-11.6307W
- 2.12.6 Threshold Elevation: 114
- 2.12.6 Touchdown Zone Elevation: 124.4

2.12.1 Designation: 15L
2.12.2 True Bearing: 144
2.12.3 True Dimensions: 5000 ft x 100 ft
2.12.4 PCN:
2.12.5 Coordinates: 39-11-14.5431N / 76-39-48.7441W
2.12.6 Threshold Elevation: 141.4
2.12.6 Touchdown Zone Elevation: 141.5

2.12.1 Designation: 33L
2.12.2 True Bearing: 324
2.12.3 True Dimensions: 9501 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 39-09-51.1311N / 76-39-44.6134W
2.12.6 Threshold Elevation: 129.6
2.12.6 Touchdown Zone Elevation: 142.7

2.12.1 Designation: 15R
2.12.2 True Bearing: 144
2.12.3 True Dimensions: 9501 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 39-11-07.3007N / 76-40-55.1704W
2.12.6 Threshold Elevation: 139
2.12.6 Touchdown Zone Elevation: 138.3

AD 2.13 Declared Distances

2.13.1 Designation: 10
2.13.2 Take-off Run Available: 10503
2.13.3 Take-off Distance Available: 10503
2.13.4 Accelerate-Stop Distance Available: 10503
2.13.5 Landing Distance Available: 9953

2.13.1 Designation: 28
2.13.2 Take-off Run Available: 10503
2.13.3 Take-off Distance Available: 10503
2.13.4 Accelerate-Stop Distance Available: 10503
2.13.5 Landing Distance Available: 9803

2.13.1 Designation: 33R
2.13.2 Take-off Run Available: 5000
2.13.3 Take-off 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 Take-off Run Available: 5000
2.13.3 Take-off Distance Available: 5000
2.13.4 Accelerate-Stop Distance Available: 5000
2.13.5 Landing Distance Available: 5000

2.13.1 Designation: 33L

- 2.13.2 Take-off Run Available: 9501
- 2.13.3 Take-off Distance Available: 9501
- 2.13.4 Accelerate-Stop Distance Available: 8801
- 2.13.5 Landing Distance Available: 8301

- 2.13.1 Designation: 15R
- 2.13.2 Take-off Run Available: 9501
- 2.13.3 Take-off Distance Available: 9501
- 2.13.4 Accelerate-Stop Distance Available: 8601
- 2.13.5 Landing Distance Available: 8301

AD 2.14 Approach and Runway Lighting

- 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

- 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: 15L
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System: P4L

- 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: 15R
- 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 Channel: 118.05
- 2.18.5 Hours of Operation: 24

- 2.18.1 Service Designation: D-ATIS
- 2.18.3 Channel: 115.1
- 2.18.5 Hours of Operation: 24

- 2.18.1 Service Designation: D-ATIS
- 2.18.3 Channel: 127.8
- 2.18.5 Hours of Operation: 24

- 2.18.1 Service Designation: EMERG
- 2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 119.4

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 257.8

2.18.5 Hours of Operation: 24

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 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: 39-10-29.8183N / 76-41-35.4222W

2.19.6 Site Elevation: 134 ft

2.19.1 ILS Type: Glide Slope for runway 15L. Magnetic variation: 11W

2.19.2 ILS Identification: UQC

2.19.5 Coordinates: 39-11-03.67N / 76-39-44.24W

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 33R. Magnetic variation: 11W

2.19.2 ILS Identification: BWI

2.19.5 Coordinates: 39-10-40.05N / 76-39-21.19W

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

2.19.1 ILS Type: Glide Slope for runway 15R. Magnetic variation: 11W

2.19.2 ILS Identification: FND

2.19.5 Coordinates: 39-10-53.6029N / 76-40-48.8976W

2.19.6 Site Elevation: 130.2 ft

2.19.1 ILS Type: Localizer for runway 15R. Magnetic variation: 11W

2.19.2 ILS Identification: FND

2.19.5 Coordinates: 39-09-39.0861N / 76-39-33.4607W

2.19.6 Site Elevation: 115.9 ft

2.19.1 ILS Type: Glide Slope for runway 33L. Magnetic variation: 11W

2.19.2 ILS Identification: RUX

2.19.5 Coordinates: 39-10-00.5283N / 76-39-59.734W

2.19.6 Site Elevation: 125.6 ft

2.19.1 ILS Type: Localizer for runway 33L. Magnetic variation: 11W

2.19.2 ILS Identification: RUX

2.19.5 Coordinates: 39-11-12.2145N / 76-40-59.7239W

2.19.6 Site Elevation: 133 ft

General Remarks:

NO APRON PARKING FOR UNSKED ACR.

GA ACFT CTC 129.0 PRIOR TO ARR AT GA RAMP FOR SCTY PURPOSES.

TWY 'A' IS RSTRD TO GROUP IV ACFT WINGSPAN 171 FT OR LESS.

RWY STATUS LGTS IN OPN.

DISTRACTING LGTS (GOLF DRIVING RANGE) RIGHT SIDE EXTDD CNTRLN RWY 33L FM AER TO 1/4 MI FINAL.

ACFT DEPARTING RWY 28 EXP DEP FM TWY U1.

DURING ATC ZERO EVENTS, UNICOM 119.4.

ACFT ON VISUAL APCHS EXPECT TO MAINTAIN 3000 FT UNTIL 10 DME FM BAL VORTAC; DEP ACFT SHOULD EXPECT TURNS BASED ON BALTIMORE DME.

DEER & BIRDS OCNNLY ON & INVOF ARPT.

PRACTICE LNDG & APCH BY TURBO-PWRD ACFT PROHIBITED 2200-0600; PRACTICE LNDG & TKOF BY B-747 ACFT PROHIBITED RWY 15R/33L.

RWY 28 DE-ICE PAD LANE 1 RSTRD TO ACFT WITH WINGSPAN 171 FT OR LESS, LANE 2 RSTRD 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 RSTRD TO ACFT WINGSPAN 135 FT OR LESS.

RWY 15R DEICE PAD, POSITION # 1, RSTRD 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 RSTRD TO ACFT WITH A WINGSPAN OF 156 FT 1 INCH OR LESS & LENGTH OF 180 FT 3 INCHES OR LESS; POSITION 4 RSTRD TO ACFT WITH WINGSPAN OF 213 FT OR LESS & LENGTH OF 229 FT 2 INCHES OR LESS.

RWY LEN AVBL FOR RWY 28 DEPS FM TWY U1 IS 9802 FT.

MAJOR CONSTR ON ARPT DLY; ACFT MOV & PRKG AREAS SUBJECT TO SHORT NOTICE CHANGE/CLOSURE. FOR CURRENT INFO PHONE BWI OPNS CNTR 410-859-7018.

CONCOURSE A ALT DEICING AREA IS RSTRD TO B737-800 SIZE ACFT WITH WINGLETS OR SMLR ON SPOTS 6, 7 AND 8.

TAXIING PROHIBITED BTN CONCOURSE C & ADJ BLDG STRUCTURE SW OF CONCOURSE C. ACCESS TO GATE C12 MUST BE VIA TWY A.

TWY T BTN TWY H AND TWY E RSTD TO GROUP IV ACFT WITH WINGSPAN LESS THAN 171 FT. TWY T BTN TWY E AND TWY B RSTRD TO GROUP V ACFT WITH WINGSPAN LESS THAN 214 FT; WHEN GROUP V ACFT ARE ON TWY T, TWY A IS RSTRD TO MAX WINGSPANS OF 110 FT.

TWY "S", SOUTH OF TWY "P", RSTRD TO ACFT 60000 LBS & LESS.

TAXILANES 'T-1' & "H" RSTRD TO GROUP III ACFT WITH MAX WINGSPAN OF 118 FEET.

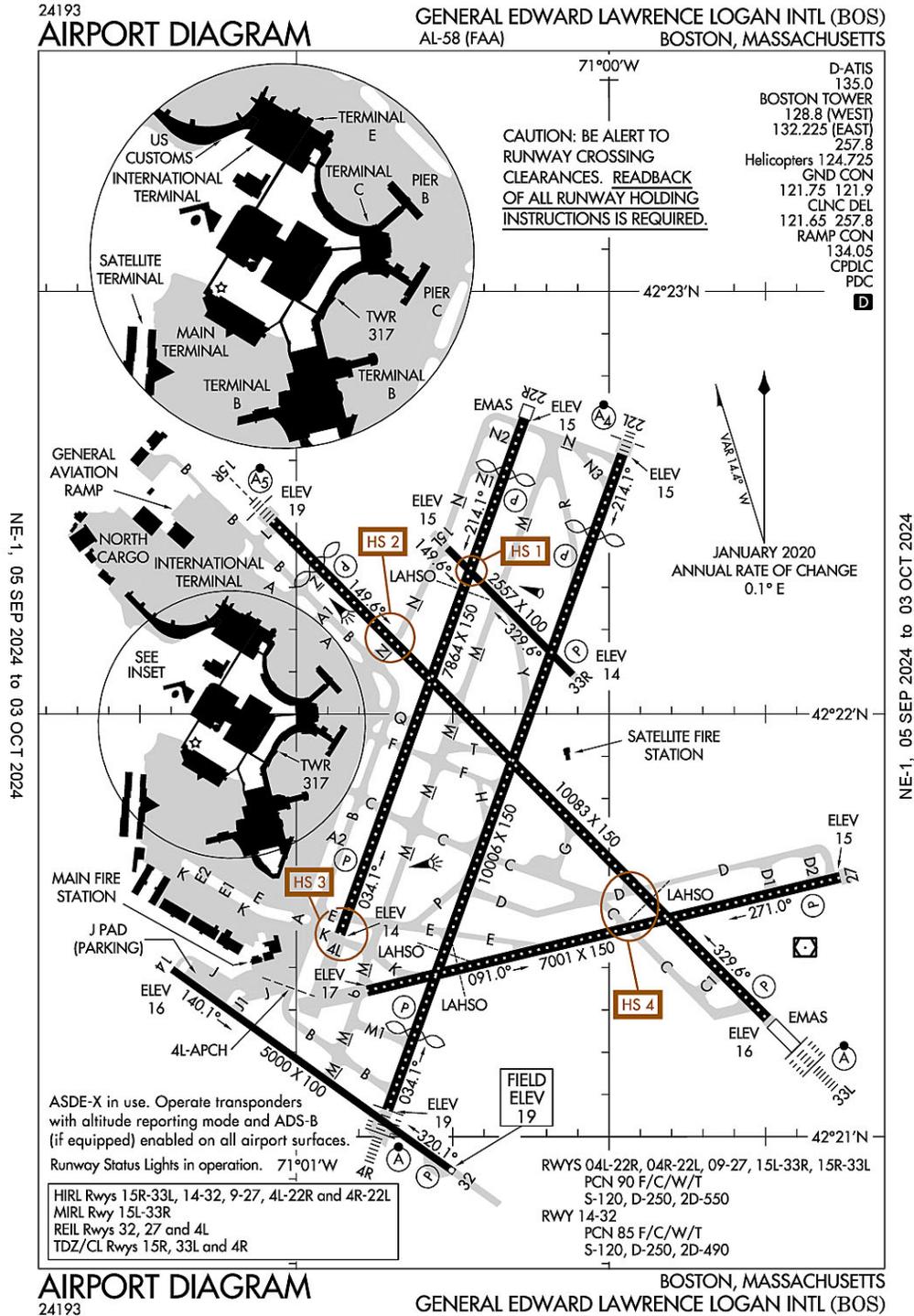
NOISE ABATEMENT PROCEDURES IN EFFECT - RSTRN FOR RWY 15L/33R EXCEPT FOR EMERG OR MERCY FLIGHTS CTC AMGR FOR INFO.

CONT MOWING OPERATIONS ADJ ALL RWYS & TWYS - APR THRU NOV.

UNICOM 119.4.

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.

Boston, Massachusetts
General Edward Lawrence Logan International
ICAO Identifier KBOS



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)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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:
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 9/1/1972
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 04L
- 2.12.2 True Bearing: 20
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 13.9

- 2.12.1 Designation: 22R
- 2.12.2 True Bearing: 200
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 15.2

- 2.12.1 Designation: 04R
- 2.12.2 True Bearing: 20
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 17.6

2.12.1 Designation: 22L
2.12.2 True Bearing: 200
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 15.6

2.12.1 Designation: 09
2.12.2 True Bearing: 77
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 16.8

2.12.1 Designation: 27
2.12.2 True Bearing: 257
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 17.2

2.12.1 Designation: 32
2.12.2 True Bearing: 305
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 19.1

2.12.1 Designation: 14
2.12.2 True Bearing: 125
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 19.1

2.12.1 Designation: 15L
2.12.2 True Bearing: 135
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 15.8

2.12.1 Designation: 33R
2.12.2 True Bearing: 315

2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 15.8

2.12.1 Designation: 15R
2.12.2 True Bearing: 135
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 17

2.12.1 Designation: 33L
2.12.2 True Bearing: 315
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 16.2

AD 2.13 Declared Distances

2.13.1 Designation: 04L
2.13.2 Take-off Run Available: 7864
2.13.3 Take-off Distance Available: 7864
2.13.4 Accelerate-Stop Distance Available: 7864
2.13.5 Landing Distance Available: 7864

2.13.1 Designation: 22R
2.13.2 Take-off Run Available: 7864
2.13.3 Take-off Distance Available: 7864
2.13.4 Accelerate-Stop Distance Available: 7864
2.13.5 Landing Distance Available: 7046

2.13.1 Designation: 04R
2.13.2 Take-off Run Available: 10006
2.13.3 Take-off Distance Available: 10006
2.13.4 Accelerate-Stop Distance Available: 10006
2.13.5 Landing Distance Available: 8851

2.13.1 Designation: 22L
2.13.2 Take-off Run Available: 10006
2.13.3 Take-off Distance Available: 10006
2.13.4 Accelerate-Stop Distance Available: 10006
2.13.5 Landing Distance Available: 8806

2.13.1 Designation: 09
2.13.2 Take-off Run Available: 7001
2.13.3 Take-off Distance Available: 7001
2.13.4 Accelerate-Stop Distance Available: 7001

2.13.5 Landing Distance Available: 7001

2.13.1 Designation: 27

2.13.2 Take-off Run Available: 7001

2.13.3 Take-off Distance Available: 7001

2.13.4 Accelerate-Stop Distance Available: 7001

2.13.5 Landing Distance Available: 7001

2.13.1 Designation: 32

2.13.2 Take-off Run Available: 5000

2.13.3 Take-off Distance Available: 5000

2.13.4 Accelerate-Stop Distance Available: 5000

2.13.5 Landing Distance Available: 5000

2.13.1 Designation: 14

2.13.2 Take-off Run Available: 5000

2.13.3 Take-off 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 Take-off Run Available: 2557

2.13.3 Take-off 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 Take-off Run Available: 2557

2.13.3 Take-off Distance Available: 2557

2.13.4 Accelerate-Stop Distance Available: 2557

2.13.5 Landing Distance Available: 2557

2.13.1 Designation: 15R

2.13.2 Take-off Run Available: 10083

2.13.3 Take-off 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 Take-off Run Available: 10083

2.13.3 Take-off Distance Available: 10083

2.13.4 Accelerate-Stop Distance Available: 10083

2.13.5 Landing Distance Available: 10083

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 04L

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 22R

2.14.2 Approach Lighting System:

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

2.14.1 Designation: 09

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 27

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 32

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 14

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 15L

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 33R

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System: P4R

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

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: CD PRE TAXI CLNC

2.18.3 Channel: 121.65

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 257.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (ARR)
2.18.3 Channel: 135
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (DEP)
2.18.3 Channel: 135
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (HELICOPTERS)
2.18.3 Channel: 124.725
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (WEST)
2.18.3 Channel: 128.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (EAST)
2.18.3 Channel: 132.225
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 257.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RAMP CTL
2.18.3 Channel: 134.05
2.18.5 Hours of Operation:

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: 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: 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: 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 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 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: 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: 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: 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: 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 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: 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

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: 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 Navigation Aid Type VOR/DME. Magnetic variation: 16W

2.19.2 Navigation Aid Identification: BOS

2.19.5 Coordinates: 42-21-26.8197N / 70-59-22.3742W

2.19.6 Site Elevation: 18.4 ft

General Remarks:

RWY STATUS LGTS IN OPN.

NOISE SENSITIVE AREA; HOP WI CTZL ARE REQD TO MAINT THE HIGHEST PSBL ALT.

NOISE ABATEMENT PROC MON-FRI 0900-1700 - 617-561-1636.

NO RON PARKING FOR NON-TENANT CHARTER AIRCRAFT WITHOUT PRIOR MASSPORT PERMISSION.

PILOTS SHOULD COMPLETE ALL CALCULATIONS PRIOR TO PUSHBACK FROM GATE.

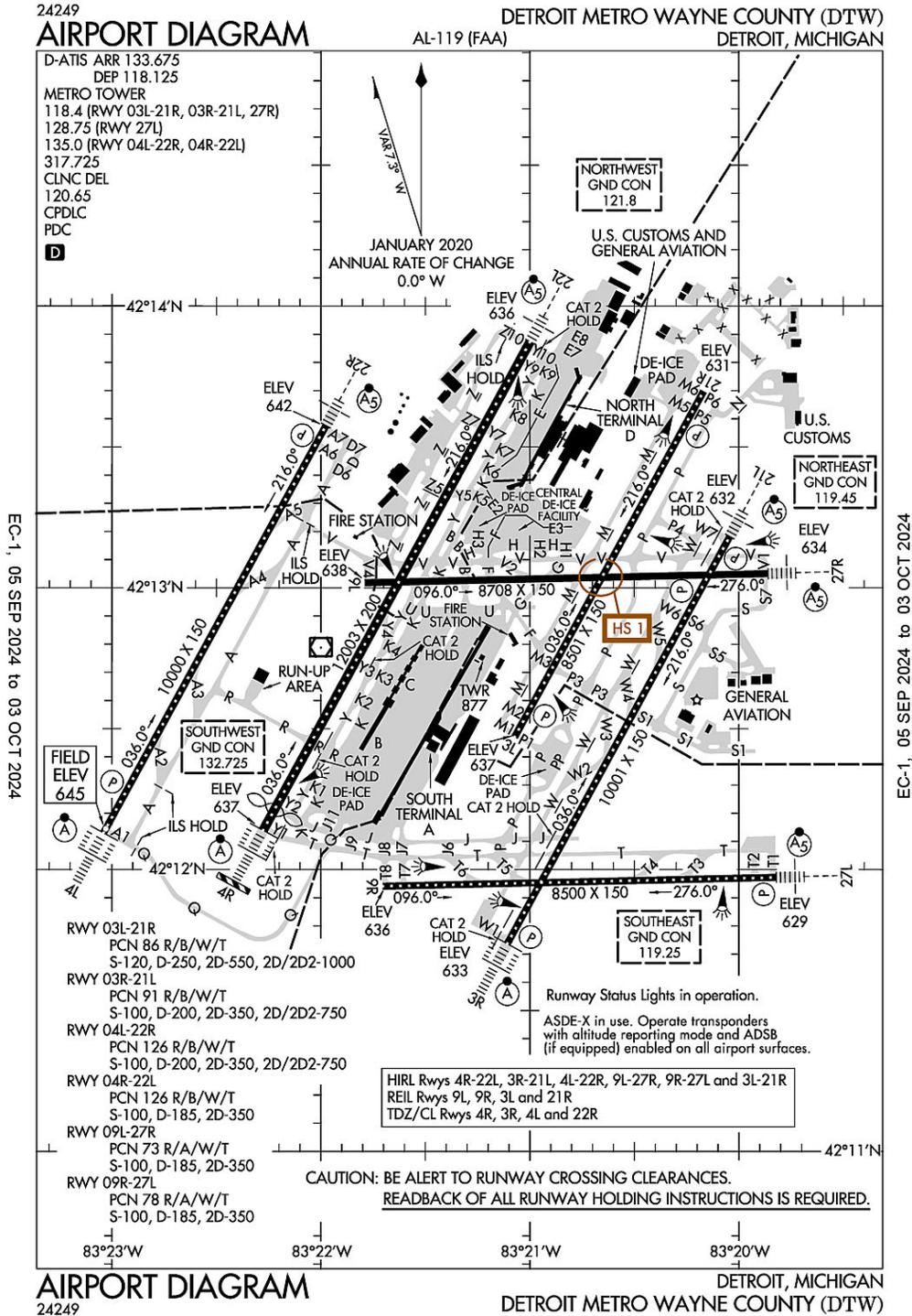
RWY 14/32 UNIDIRECTIONAL; NO LDGS RWY 14; NO TKOFS RWY 32.

NMRS CRANES ON AND INVOF ARPT.

TERMINAL E; NORTH & SOUTH CARGO ARRIVALS CTC MASSPORT GATE CONTROL ON FREQ 131.1 BEFORE ENTERING/DEPARTING RAMP AREA.

BIRDS ON & INVOF ARPT.

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: 42-12-44.752N / 83-21-12.216W
- 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
11050 ROGELL DR #602
DETROIT, MI 48242 (734-942-3685)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: NONE

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 21R
- 2.12.2 True Bearing: 209
- 2.12.3 True Dimensions: 8501 ft x 150 ft
- 2.12.4 PCN: 86 R/B/W/T
- 2.12.5 Coordinates: 42-13-41.8586N / 83-20-10.107W
- 2.12.6 Threshold Elevation: 631.4
- 2.12.6 Touchdown Zone Elevation: 634.5

- 2.12.1 Designation: 03L
- 2.12.2 True Bearing: 29
- 2.12.3 True Dimensions: 8501 ft x 150 ft
- 2.12.4 PCN: 86 R/B/W/T
- 2.12.5 Coordinates: 42-12-28.2081N / 83-21-04.3881W
- 2.12.6 Threshold Elevation: 636.5
- 2.12.6 Touchdown Zone Elevation: 636.9

- 2.12.1 Designation: 03R
- 2.12.2 True Bearing: 29
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 633.1

2.12.1 Designation: 21L
2.12.2 True Bearing: 209
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 632.3

2.12.1 Designation: 22R
2.12.2 True Bearing: 209
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 642.1

2.12.1 Designation: 04L
2.12.2 True Bearing: 29
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 645.2

2.12.1 Designation: 22L
2.12.2 True Bearing: 209
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 637.4

2.12.1 Designation: 04R
2.12.2 True Bearing: 29
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 639.5

2.12.1 Designation: 04X
2.12.2 True Bearing: 29
2.12.3 True Dimensions: 0 ft x 0 ft
2.12.4 PCN:
2.12.5 Coordinates:
2.12.6 Threshold Elevation:
2.12.6 Touchdown Zone Elevation:

2.12.1 Designation: 22X
2.12.2 True Bearing: 209

2.12.3 True Dimensions: 0 ft x 0 ft

2.12.4 PCN:

2.12.5 Coordinates:

2.12.6 Threshold Elevation:

2.12.6 Touchdown Zone Elevation:

2.12.1 Designation: 27R

2.12.2 True Bearing: 269

2.12.3 True 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

2.12.6 Touchdown Zone Elevation: 634.7

2.12.1 Designation: 09L

2.12.2 True Bearing: 89

2.12.3 True 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

2.12.6 Touchdown Zone Elevation: 639.6

2.12.1 Designation: 27L

2.12.2 True Bearing: 269

2.12.3 True 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

2.12.6 Touchdown Zone Elevation: 630.1

2.12.1 Designation: 09R

2.12.2 True Bearing: 89

2.12.3 True 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

2.12.6 Touchdown Zone Elevation: 636.1

AD 2.13 Declared Distances

2.13.1 Designation: 21R

2.13.2 Take-off Run Available: 8501

2.13.3 Take-off Distance Available: 8501

2.13.4 Accelerate-Stop Distance Available: 8501

2.13.5 Landing Distance Available: 8501

2.13.1 Designation: 03L

2.13.2 Take-off Run Available: 8501

2.13.3 Take-off Distance Available: 8501

2.13.4 Accelerate-Stop Distance Available: 8501

2.13.5 Landing Distance Available: 8501

2.13.1 Designation: 03R
2.13.2 Take-off Run Available: 10001
2.13.3 Take-off 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 Take-off Run Available: 10001
2.13.3 Take-off Distance Available: 10001
2.13.4 Accelerate-Stop Distance Available: 10001
2.13.5 Landing Distance Available: 10001

2.13.1 Designation: 22R
2.13.2 Take-off Run Available: 10000
2.13.3 Take-off Distance Available: 10000
2.13.4 Accelerate-Stop Distance Available: 10000
2.13.5 Landing Distance Available: 10000

2.13.1 Designation: 04L
2.13.2 Take-off Run Available: 10000
2.13.3 Take-off Distance Available: 10000
2.13.4 Accelerate-Stop Distance Available: 10000
2.13.5 Landing Distance Available: 10000

2.13.1 Designation: 22L
2.13.2 Take-off Run Available: 12003
2.13.3 Take-off Distance Available: 12003
2.13.4 Accelerate-Stop Distance Available: 12003
2.13.5 Landing Distance Available: 12003

2.13.1 Designation: 04R
2.13.2 Take-off Run Available: 12003
2.13.3 Take-off Distance Available: 12003
2.13.4 Accelerate-Stop Distance Available: 12003
2.13.5 Landing Distance Available: 11494

2.13.1 Designation: 04X
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: 22X
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: 27R
2.13.2 Take-off Run Available: 8708
2.13.3 Take-off Distance Available: 8708

2.13.4 Accelerate-Stop Distance Available: 8708
2.13.5 Landing Distance Available: 8708

2.13.1 Designation: 09L
2.13.2 Take-off Run Available: 8708
2.13.3 Take-off Distance Available: 8708
2.13.4 Accelerate-Stop Distance Available: 8618
2.13.5 Landing Distance Available: 8618

2.13.1 Designation: 27L
2.13.2 Take-off Run Available: 8500
2.13.3 Take-off Distance Available: 8500
2.13.4 Accelerate-Stop Distance Available: 8500
2.13.5 Landing Distance Available: 8500

2.13.1 Designation: 09R
2.13.2 Take-off Run Available: 8500
2.13.3 Take-off 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: 21R
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 03L
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4R

2.14.1 Designation: 03R
2.14.2 Approach Lighting System: ALSF2
2.14.4 Visual Approach Slope Indicator System: P4R

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: 22R
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System: P4R

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: 22L
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 04R

2.14.2 Approach Lighting System: ALSF2
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 04X
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 22X
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

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: 09L
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 27L
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 09R
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: CD PRE TAXI CLNC
2.18.3 Channel: 120.65
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (DEP)
2.18.3 Channel: 118.125
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (ARR)
2.18.3 Channel: 133.675
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P (SOUTHEAST)
2.18.3 Channel: 119.25
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (NORTHEAST)
2.18.3 Channel: 119.45
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (NORTHWEST)
2.18.3 Channel: 121.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (SOUTHWEST)
2.18.3 Channel: 132.725
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (ARRIVAL RWY 03R/21L, 27R)
2.18.3 Channel: 118.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (DEP, ARPT DIAG RWY 03L/21R, 03R/21L, 27R)
2.18.3 Channel: 118.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (ARRIVAL RWY 04R/22L)
2.18.3 Channel: 128.125
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (ARRIVAL RWY 03L/21R, 27L)
2.18.3 Channel: 128.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (DEP, ARPT DIAG RWY 27L)
2.18.3 Channel: 128.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (ARRIVAL RWY 04L/22R)
2.18.3 Channel: 135
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (DEP, ARPT DIAG RWY 04L/22R, 04R/22L)
2.18.3 Channel: 135
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 317.725
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MEDEVAC
2.18.3 Channel: 259.6
2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

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: 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: 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: 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: 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: 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: 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: 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 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 656.6 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: 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 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: 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: 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 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

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 27L. Magnetic variation: 7W
2.19.2 ILS Identification: EPA
2.19.5 Coordinates: 42-11-53.6723N / 83-21-55.0763W
2.19.6 Site Elevation: 645.8 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

General Remarks:

BRIGHTLY LIGHTED PARKING LOT 2.6 NM SW OF ARPT.

RWY VISUAL SCREEN 20 FT AGL 1150 FT S. AER 04R

TURNING RESTRICTION TWY B TO TWY K RESTRICTED TO AIRCRAFT WITH WINGSPAN 171 FT OR LESS.

PPR FOR B747-8 OPRS DUE TO CONSTRAINTS ON RWYS, TWYS AND RAMPS CTC AIRFIELD OPRS AT 734-942-3685.

TAXI ON RWY 09L/27R LTD TO: EXITING FM RWY 04R/22L, 03L/21R, & 03R/21L EXC NO TAXI BTN RWY 03L/21R & TWY W; TWO-WAY TAXI BTN TWY Y & TWY M WHEN RED STOP BAR LGTS ARE LGTD AT RWY 04R/22L & 03L/21R OR WHEN BARRICADES ARE USED INSTEAD AT THE RESPECTIVE INTS. TAXI BTN SS-SR OR IN CONDS WITH VIS LESS THAN 1 SM RQRS GREEN CNTRLN LGT TO BE OPR.

BE ALERT BIRDS, WATERFOWL, ON & INVOF ARPT.

RY STATUS LGTS ARE IN OPN.

ACFT WITH WINGSPAN GTR THAN 171 FT ARE RSTRD FM USING TWY P BTN TWY J & TWY P3.

TURNING RSTRD TO WINGSPAN 135 FT OR LESS TWY G NORTH TO TWY V EAST.

ACFT WITH WINGSPAN GTR THAN 171 FT ARE RSTRD FM USING TWY H BTN TWY B & TWY F.

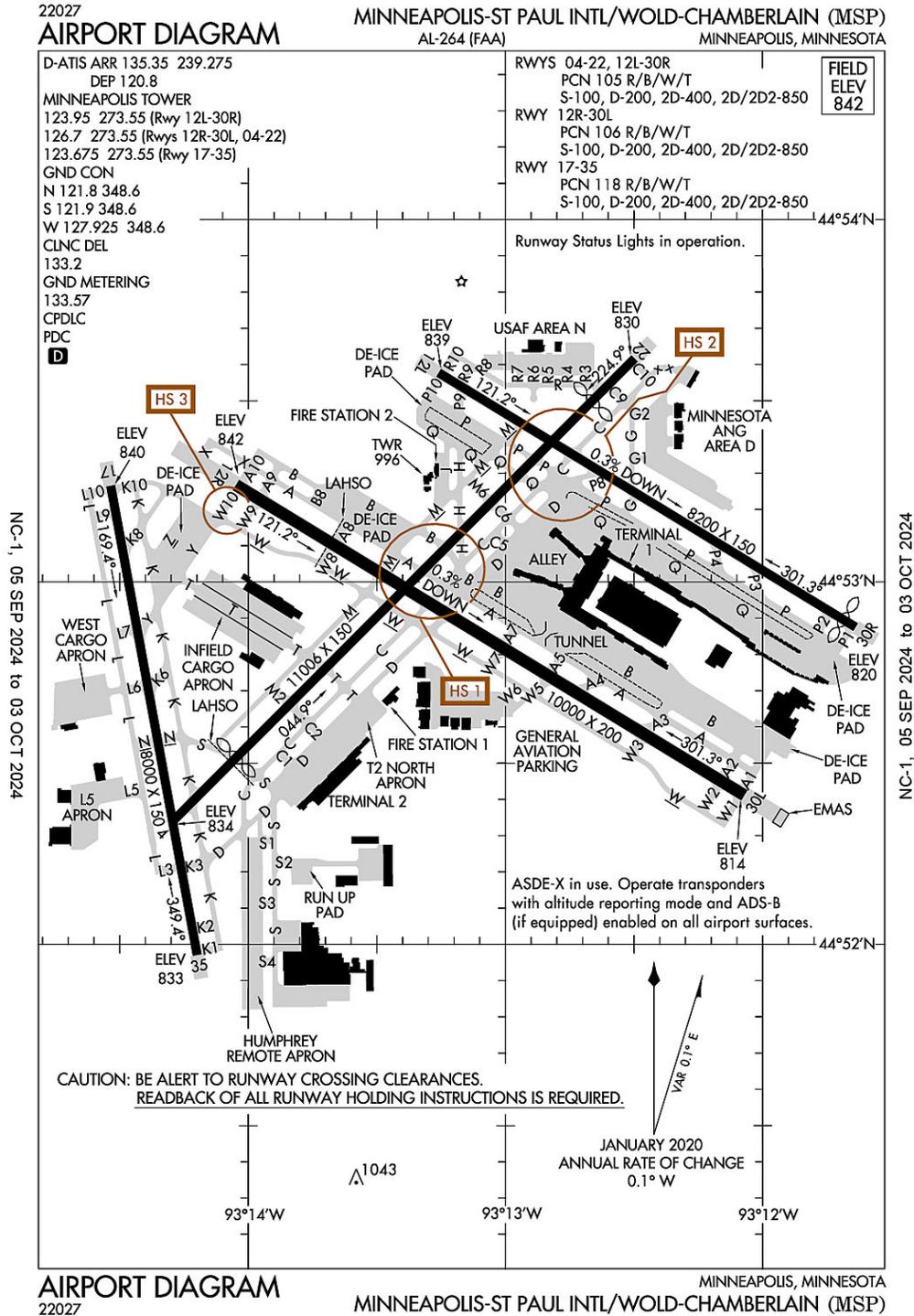
AIRCRAFT WITH WINGSPAN GREATER THAN 171 FT CANNOT PASS EACH OTHER ON TWYS Y AND K BETWEEN TWYS U AND K6 INSUFFICIENT WINGTIP CLEARANCE.

ACFT ON TWY 'F' AND TWY 'V' DO NOT BLOCK FIRE STATION EXITS.

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 AGREEMENTS IN PLACE.

AUTH TO CONDUCT SIMUL INDEPENDENT INSTR APCHS TO PARL RWY 04L/22R & 03R/21L WO FINAL MONITORS, RWY CNTRLNS SEPARATED BY 8800 FT.

Minneapolis, Minnesota
Minneapolis-St. Paul International (Wold-Chamberlain)
ICAO Identifier K MSP



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 S of MINNEAPOLIS, MN
- 2.2.3 Elevation: 841.8 ft
- 2.2.5 Magnetic Variation: 0E (2015)
- 2.2.6 Airport Contact: BRIAN RYKS
6040 28TH AVE S
MINNEAPOLIS, MN 55450 (612–726–8100)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 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: Class–I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index–E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 04
- 2.12.2 True Bearing: 45
- 2.12.3 True Dimensions: 11006 ft x 150 ft
- 2.12.4 PCN: 105 R/B/W/T
- 2.12.5 Coordinates: 44–52–20.158N / 93–14–17.9427W
- 2.12.6 Threshold Elevation: 833.5
- 2.12.6 Touchdown Zone Elevation: 831.7

- 2.12.1 Designation: 22
- 2.12.2 True Bearing: 225
- 2.12.3 True Dimensions: 11006 ft x 150 ft
- 2.12.4 PCN: 105 R/B/W/T
- 2.12.5 Coordinates: 44–53–36.9917N / 93–12–29.8434W
- 2.12.6 Threshold Elevation: 830.3
- 2.12.6 Touchdown Zone Elevation: 828.3

- 2.12.1 Designation: 30R
- 2.12.2 True Bearing: 301
- 2.12.3 True Dimensions: 8200 ft x 150 ft
- 2.12.4 PCN: 105 R/B/W/T
- 2.12.5 Coordinates: 44–52–52.5152N / 93–11–38.296W
- 2.12.6 Threshold Elevation: 819.5
- 2.12.6 Touchdown Zone Elevation: 822.4

2.12.1 Designation: 12L
2.12.2 True Bearing: 121
2.12.3 True Dimensions: 8200 ft x 150 ft
2.12.4 PCN: 105 R/B/W/T
2.12.5 Coordinates: 44-53-34.6287N / 93-13-15.5666W
2.12.6 Threshold Elevation: 838.6
2.12.6 Touchdown Zone Elevation: 840.7

2.12.1 Designation: 12R
2.12.2 True Bearing: 121
2.12.3 True Dimensions: 10000 ft x 200 ft
2.12.4 PCN: 106 R/B/W/T
2.12.5 Coordinates: 44-53-16.0438N / 93-14-02.8731W
2.12.6 Threshold Elevation: 841.8
2.12.6 Touchdown Zone Elevation: 841.8

2.12.1 Designation: 30L
2.12.2 True Bearing: 301
2.12.3 True Dimensions: 10000 ft x 200 ft
2.12.4 PCN: 106 R/B/W/T
2.12.5 Coordinates: 44-52-24.68N / 93-12-04.2689W
2.12.6 Threshold Elevation: 814.4
2.12.6 Touchdown Zone Elevation: 823

2.12.1 Designation: 35
2.12.2 True Bearing: 350
2.12.3 True Dimensions: 8000 ft x 150 ft
2.12.4 PCN: 118 R/B/W/T
2.12.5 Coordinates: 44-51-58.2366N / 93-14-11.9205W
2.12.6 Threshold Elevation: 833.3
2.12.6 Touchdown Zone Elevation: 834.4

2.12.1 Designation: 17
2.12.2 True Bearing: 170
2.12.3 True Dimensions: 8000 ft x 150 ft
2.12.4 PCN: 118 R/B/W/T
2.12.5 Coordinates: 44-53-15.9127N / 93-14-32.1137W
2.12.6 Threshold Elevation: 840.4
2.12.6 Touchdown Zone Elevation: 840.4

AD 2.13 Declared Distances

2.13.1 Designation: 04
2.13.2 Take-off Run Available: 11006
2.13.3 Take-off 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 Take-off Run Available: 11006
2.13.3 Take-off Distance Available: 11006

2.13.4 Accelerate-Stop Distance Available: 11006
2.13.5 Landing Distance Available: 10006

2.13.1 Designation: 30R
2.13.2 Take-off Run Available: 8200
2.13.3 Take-off Distance Available: 8200
2.13.4 Accelerate-Stop Distance Available: 8200
2.13.5 Landing Distance Available: 8000

2.13.1 Designation: 12L
2.13.2 Take-off Run Available: 8200
2.13.3 Take-off Distance Available: 8200
2.13.4 Accelerate-Stop Distance Available: 7620
2.13.5 Landing Distance Available: 7620

2.13.1 Designation: 12R
2.13.2 Take-off Run Available: 10000
2.13.3 Take-off 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 Take-off Run Available: 10000
2.13.3 Take-off Distance Available: 10000
2.13.4 Accelerate-Stop Distance Available: 10000
2.13.5 Landing Distance Available: 10000

2.13.1 Designation: 35
2.13.2 Take-off Run Available: 8000
2.13.3 Take-off Distance Available: 8000
2.13.4 Accelerate-Stop Distance Available: 8000
2.13.5 Landing Distance Available: 8000

2.13.1 Designation: 17
2.13.2 Take-off Run Available: 8000
2.13.3 Take-off 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: 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: 30R
2.14.2 Approach Lighting System: MALSF
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: 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: 35
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:
2.14.4 Visual Approach Slope Indicator System: P4R

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: CD PRE TAXI CLNC
2.18.3 Channel: 133.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D–ATIS (DEP)
2.18.3 Channel: 120.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D–ATIS (ARR)
2.18.3 Channel: 135.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D–ATIS (ARR)
2.18.3 Channel: 239.275
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND METERING
2.18.3 Channel: 133.575
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (N)

2.18.3 Channel: 121.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (S)
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (W)
2.18.3 Channel: 127.925
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 348.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 17/35)
2.18.3 Channel: 123.675
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 12L/30R)
2.18.3 Channel: 123.95
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 04/22, 12R/30L)
2.18.3 Channel: 126.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 273.55
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PTD
2.18.3 Channel: 282.675
2.18.5 Hours of Operation:

2.18.1 Service Designation: PTD
2.18.3 Channel: 324.1
2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: Localizer for runway 04. Magnetic variation: 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: 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: DME for runway 12L. Magnetic variation: 0E

2.19.2 ILS Identification: PJJ
2.19.5 Coordinates: 44-53-03.674N / 93-11-48.8687W
2.19.6 Site Elevation: 824 ft

2.19.1 ILS Type: Glide Slope for runway 12L. Magnetic variation: 0E
2.19.2 ILS Identification: PJJ
2.19.5 Coordinates: 44-53-31.1153N / 93-12-56.6941W
2.19.6 Site Elevation: 831 ft

2.19.1 ILS Type: Inner Marker for runway 12L. Magnetic variation: 0E
2.19.2 ILS Identification: PJJ
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: Localizer for runway 12L. Magnetic variation: 0E
2.19.2 ILS Identification: PJJ
2.19.5 Coordinates: 44-52-50.3312N / 93-11-33.2418W
2.19.6 Site Elevation: 813 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: 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 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: 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: 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 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: 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 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: 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

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

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 / 93-14-34.6512W

2.19.6 Site Elevation: 845.3 ft

2.19.1 Navigation Aid Type VOR/DME. Magnetic variation: 2E

2.19.2 Navigation Aid Identification: MSP

2.19.5 Coordinates: 44-53-47.3958N / 93-14-11.5137W

2.19.6 Site Elevation: 831.6 ft

General Remarks:

NOISE ABATEMENT PROCEDURES – 612-726-9411. NO STAGE 1 CAT CIVIL ACFT. NIGHT HR 2230-0600.

TRNG FLTS PROHIBITED. GA FLTS MUST TRMT AT THE FBO OR US CUSTOMS UNLESS APVD BY AMGR.

MILITARY RSTD: NO HAZ CL/DIV 1.1 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.

RWY STATUS LGTS IN OPRN.

133 AW AFLD MGMT – 324.1 REMARKS: CALL LIGHTHOUSE.

REMARKS: ALL ACFT MUST CTC NORTHSTAR ON FREQ 252.1 20 MIN PRIOR ARR.

UNSKED ACFT AT TRML 2-HUMPHREY REQ TO CTC TRML 2 GATE CONTROL ON 122.95 OR CALL 612-726-5742 PRIOR TO ARR.

SIGNATURE FLIGHT SUPPORT 128.95

MILITARY: ARFC 934 AW OPS 1300-0400Z++ MON-THUR, 1300-2200Z++ FRI, CLSD WKEND AND FEDERAL HOL. UNIT TRNG ASSEMBLY (UTA) WKEND 1330-2200Z++. ALL TRANS ACFT MUST RECEIVE PPR 48 HR PRIOR TO ETA – CTC AIRFIELD MGMT.

COMMUNICATIONS: MINNEAPOLIS AIR RESERVE STATION JOINT COMD POST – 252.1 REMARKS: CALL NORTHSTAR.

ALL GROUP VI ACFT WITH WINGSPAN GREATER THAN 214 FT PPR REQ PRIOR TO ARR – CTC AIRSIDE OPS 612-726-5111.

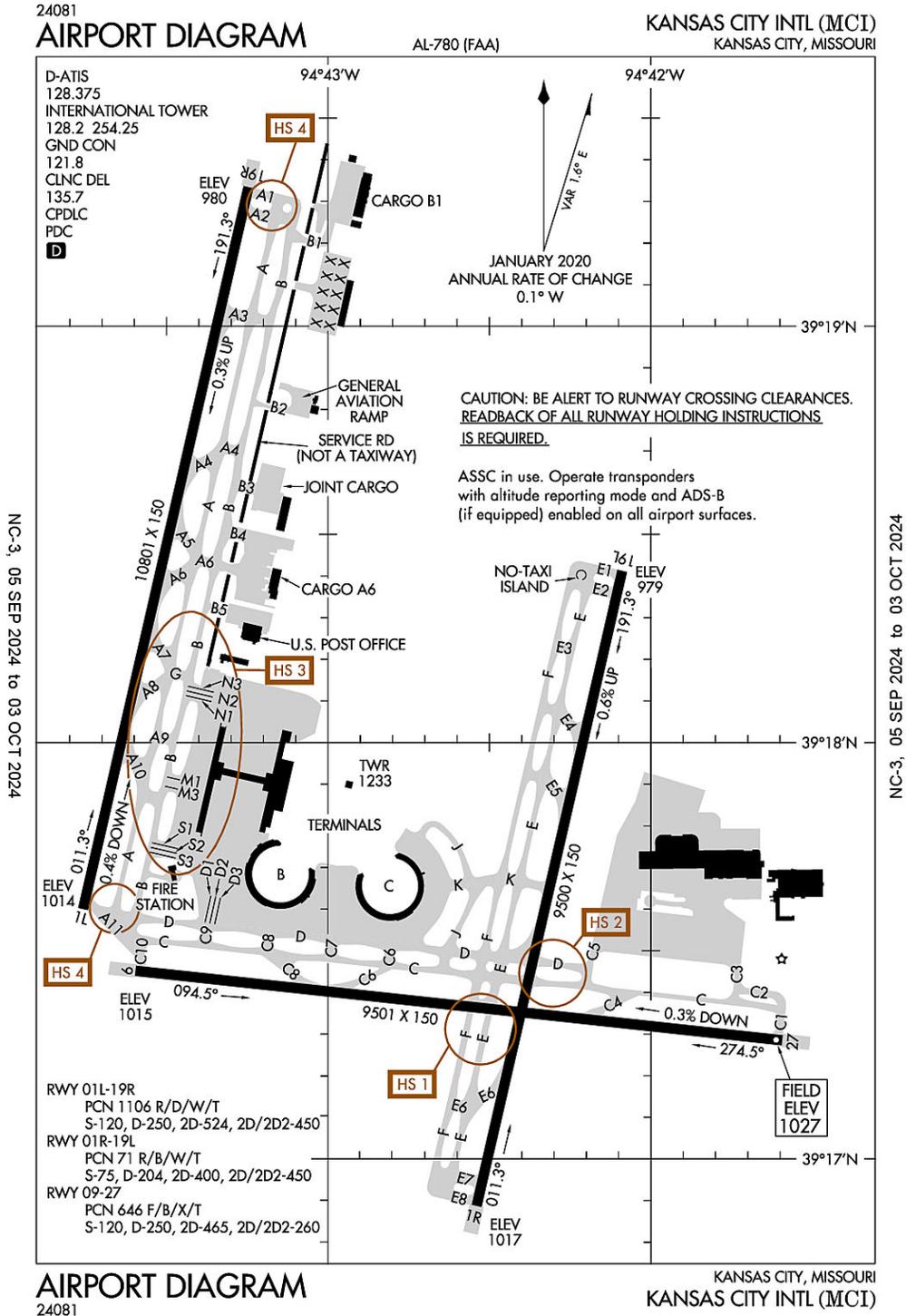
934 AW AFLD MGMT – PTD 282.675 REMARKS: CALL VIKING OPS.

BIRDS ON & INVOF ARPT.

ALL GROUP IV AND LRGR ACFT OPRG ON THE PTN OF TWY S ADJ TO DELTA BLDG C RQR THE USE OF WINGWALKERS AND THAT THE VEHICLE SVC ROAD BE CLEAR OF VEHICLES.

ALL GA ACFT WITH LESS THAN 20 PAX THAT NEED TO CLEAR US CUSTOMS SHOULD CTC SIGNATURE FLT SUPPORT 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. LUKE MAWHIRTER
P.O. BOX 20047
KANSAS CITY, MO 64195 (816-243-5248)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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:
- 2.4.6 Repair Facilities: NONE

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 01L
- 2.12.2 True Bearing: 13
- 2.12.3 True Dimensions: 10801 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 39-17-36.0029N / 94-43-45.5433W
- 2.12.6 Threshold Elevation: 1014.4
- 2.12.6 Touchdown Zone Elevation: 1014.4

- 2.12.1 Designation: 19R
- 2.12.2 True Bearing: 193
- 2.12.3 True Dimensions: 10801 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 39-19-20.0396N / 94-43-14.7835W
- 2.12.6 Threshold Elevation: 979.6
- 2.12.6 Touchdown Zone Elevation: 990.5

- 2.12.1 Designation: 01R
- 2.12.2 True Bearing: 13
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 1017.4

2.12.1 Designation: 19L
2.12.2 True Bearing: 193
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 995.2

2.12.1 Designation: 27
2.12.2 True Bearing: 276
2.12.3 True Dimensions: 9501 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 39-17-17.0716N / 94-41-35.5978W
2.12.6 Threshold Elevation: 1026.9
2.12.6 Touchdown Zone Elevation: 1026.9

2.12.1 Designation: 09
2.12.2 True Bearing: 96
2.12.3 True Dimensions: 9501 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 39-17-27.099N / 94-43-35.7371W
2.12.6 Threshold Elevation: 1015.3
2.12.6 Touchdown Zone Elevation: 1015.7

AD 2.13 Declared Distances

2.13.1 Designation: 01L
2.13.2 Take-off Run Available: 10801
2.13.3 Take-off 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 Take-off Run Available: 10801
2.13.3 Take-off Distance Available: 10801
2.13.4 Accelerate-Stop Distance Available: 10801
2.13.5 Landing Distance Available: 10801

2.13.1 Designation: 01R
2.13.2 Take-off Run Available: 9500
2.13.3 Take-off 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 Take-off Run Available: 9500
2.13.3 Take-off Distance Available: 9500
2.13.4 Accelerate-Stop Distance Available: 9500
2.13.5 Landing Distance Available: 9500

2.13.1 Designation: 27

2.13.2 Take-off Run Available: 9501
2.13.3 Take-off Distance Available: 9501
2.13.4 Accelerate-Stop Distance Available: 9501
2.13.5 Landing Distance Available: 9501

2.13.1 Designation: 09
2.13.2 Take-off Run Available: 9501
2.13.3 Take-off Distance Available: 9501
2.13.4 Accelerate-Stop Distance Available: 9501
2.13.5 Landing Distance Available: 9501

AD 2.14 Approach and Runway Lighting

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

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:

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: 09
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: APCH/P
2.18.3 Channel: 120.95
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P
2.18.3 Channel: 318.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BRAYMER STAR
2.18.3 Channel: 120.95
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BRAYMER STAR
2.18.3 Channel: 318.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 135.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CHIEF DP

2.18.3 Channel: 124.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CHIEF DP

2.18.3 Channel: 284.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (EAST OF RWY 01/19)

2.18.3 Channel: 118.4

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (S OF A LINE FROM LWC ARPT TO 3GV ARPT)

2.18.3 Channel: 118.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (WEST OF RWY 01/19)

2.18.3 Channel: 124.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (EAST OF RWY 01-19)

2.18.3 Channel: 294.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (S OF A LINE FROM LWC ARPT TO 3GV ARPT)

2.18.3 Channel: 294.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (WEST OF RWY 01/19)

2.18.3 Channel: 318.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 128.375

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (010-190)

2.18.3 Channel: 123.95

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (191-009)

2.18.3 Channel: 124.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (191-009)

2.18.3 Channel: 284.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (010-190)

2.18.3 Channel: 318.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/S

2.18.3 Channel: 121.65

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: JHAWK STAR

2.18.3 Channel: 120.95

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: JHAWK STAR

2.18.3 Channel: 318.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LAKES DP

2.18.3 Channel: 123.95

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LAKES DP

2.18.3 Channel: 318.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 128.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 254.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/S

2.18.3 Channel: 125.75

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RACER DP (BUTLER/SPRINGFIELD TRANSITION)
2.18.3 Channel: 123.95
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RACER DP (DOSOA TRANSITION)
2.18.3 Channel: 124.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RACER DP (DOSOA TRANSITION)
2.18.3 Channel: 284.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RACER DP (BUTLER/SPRINGFIELD TRANSITION)
2.18.3 Channel: 318.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ROYAL DP (ARENZ/BODYN TRANSITION)
2.18.3 Channel: 123.95
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ROYAL DP (TONCE TRANSITION)
2.18.3 Channel: 124.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ROYAL DP (TONCE TRANSITION)
2.18.3 Channel: 284.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ROYAL DP (ARENZ/BODYN TRANSITION)
2.18.3 Channel: 318.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TIFTO DP
2.18.3 Channel: 124.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TIFTO DP
2.18.3 Channel: 284.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TYGER STAR
2.18.3 Channel: 120.95
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TYGER STAR
2.18.3 Channel: 318.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: WILDCAT DP
2.18.3 Channel: 124.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: WILDCAT DP
2.18.3 Channel: 284.7
2.18.5 Hours of Operation: 24

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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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: 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

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: 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 Navigation Aid Type VORTAC. Magnetic variation: 5E
2.19.2 Navigation Aid Identification: MCI
2.19.5 Coordinates: 39-17-07.02N / 94-44-13.42W
2.19.6 Site Elevation: 1017 ft

General Remarks:

S RAMP CTL FREQ: 130.825

WHEN USING HIGH-SPEED EXITS C4 & C6 CONT TIL FIRST PARL TWY, THEN USE EXTREME CARE WHEN TURNING IN EXCESS OF 90 DEGREES.

PPR TO PARK AT TRML GATES CTC ARPT OPN 816-835-4315

NOISE ABATEMENT PROCEDURES IN EFFECT 2200-0600 WITH LANDING ON RYS 01L & 19L; TAKEOFFS ON RYS 01R & 19R.

TWY B2 CLSD TO ACFT WINGSPAN MORE THAN 135FT.

TXL W, N1, N3, M1, M3, S1, S3, D1, & D3 WINGSPAN RESTRICTION OF 118 FT.

NO ACFT PARKING ON POSTAL APRON.

MIL ACFT MAY BE CHARGED RAMP/PARKING FEES.

TWY B1 BTN TWY B AND FEDEX APN COCKPIT OVER CNTRLN STEERING RQRD

N RAMP CTL FREQ: 128.975

TWY C2 BTN TWY C3 AND TWY C1 WINGSPAN RESTRICTION OF 118 FT.

WINDSHEAR ALERT SYSTEM ON ARPT.

WATERFOWL ON AND INVOF ARPT.

DESIGN GROUP V AND VI ACFT RQR AN ARPT ESCORT ON TWY DELTA BTWN TWYS JULIET & C9.

St Louis, MO
Lambert–St Louis Intl
ICAO Identifier KSTL

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 38-44-55.3136N / 90-22-12.0926W
- 2.2.2 From City: 10 miles NW of ST LOUIS, MO
- 2.2.3 Elevation: 617.3 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)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-D

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 06
- 2.12.2 True Bearing: 63
- 2.12.3 True Dimensions: 7603 ft x 150 ft
- 2.12.4 PCN: 85 R/B/W/T
- 2.12.5 Coordinates: 38-44-48.0621N / 90-22-52.3834W
- 2.12.6 Threshold Elevation: 550.6
- 2.12.6 Touchdown Zone Elevation: 550.9

- 2.12.1 Designation: 24
- 2.12.2 True Bearing: 243
- 2.12.3 True Dimensions: 7603 ft x 150 ft
- 2.12.4 PCN: 85 R/B/W/T
- 2.12.5 Coordinates: 38-45-22.3829N / 90-21-27.014W
- 2.12.6 Threshold Elevation: 533.2
- 2.12.6 Touchdown Zone Elevation: 533.7

- 2.12.1 Designation: 11
- 2.12.2 True Bearing: 122
- 2.12.3 True Dimensions: 9000 ft x 150 ft
- 2.12.4 PCN: 85 R/B/W/T
- 2.12.5 Coordinates: 38-45-35.8282N / 90-24-35.5403W
- 2.12.6 Threshold Elevation: 616.8
- 2.12.6 Touchdown Zone Elevation: 617.3

2.12.1 Designation: 29
2.12.2 True Bearing: 302
2.12.3 True Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 85 R/B/W/T
2.12.5 Coordinates: 38-44-48.4521N / 90-22-59.3854W
2.12.6 Threshold Elevation: 555.2
2.12.6 Touchdown Zone Elevation: 579.6

2.12.1 Designation: 30R
2.12.2 True Bearing: 302
2.12.3 True Dimensions: 9013 ft x 150 ft
2.12.4 PCN: 85 R/B/W/T
2.12.5 Coordinates: 38-44-18.9859N / 90-20-22.5077W
2.12.6 Threshold Elevation: 604.3
2.12.6 Touchdown Zone Elevation: 604.5

2.12.1 Designation: 12L
2.12.2 True Bearing: 122
2.12.3 True Dimensions: 9013 ft x 150 ft
2.12.4 PCN: 85 R/B/W/T
2.12.5 Coordinates: 38-45-06.4559N / 90-21-58.7582W
2.12.6 Threshold Elevation: 527.7
2.12.6 Touchdown Zone Elevation: 540.6

2.12.1 Designation: 30L
2.12.2 True Bearing: 302
2.12.3 True Dimensions: 11020 ft x 150 ft
2.12.4 PCN: 85 R/B/W/T
2.12.5 Coordinates: 38-44-16.0145N / 90-20-47.272W
2.12.6 Threshold Elevation: 585.3
2.12.6 Touchdown Zone Elevation: 582.5

2.12.1 Designation: 12R
2.12.2 True Bearing: 122
2.12.3 True Dimensions: 11020 ft x 150 ft
2.12.4 PCN: 85 R/B/W/T
2.12.5 Coordinates: 38-45-14.0539N / 90-22-44.9719W
2.12.6 Threshold Elevation: 541.3
2.12.6 Touchdown Zone Elevation: 539.7

AD 2.13 Declared Distances

2.13.1 Designation: 06
2.13.2 Take-off Run Available: 7603
2.13.3 Take-off Distance Available: 7603
2.13.4 Accelerate-Stop Distance Available: 7323
2.13.5 Landing Distance Available: 7323

2.13.1 Designation: 24
2.13.2 Take-off Run Available: 7603
2.13.3 Take-off Distance Available: 7603

2.13.4 Accelerate-Stop Distance Available: 7603
2.13.5 Landing Distance Available: 7603

2.13.1 Designation: 11
2.13.2 Take-off Run Available: 9000
2.13.3 Take-off Distance Available: 9000
2.13.4 Accelerate-Stop Distance Available: 9000
2.13.5 Landing Distance Available: 9000

2.13.1 Designation: 29
2.13.2 Take-off Run Available: 9000
2.13.3 Take-off Distance Available: 9000
2.13.4 Accelerate-Stop Distance Available: 9000
2.13.5 Landing Distance Available: 9000

2.13.1 Designation: 30R
2.13.2 Take-off Run Available: 9013
2.13.3 Take-off Distance Available: 9013
2.13.4 Accelerate-Stop Distance Available: 9013
2.13.5 Landing Distance Available: 9013

2.13.1 Designation: 12L
2.13.2 Take-off Run Available: 9013
2.13.3 Take-off Distance Available: 9013
2.13.4 Accelerate-Stop Distance Available: 8956
2.13.5 Landing Distance Available: 8956

2.13.1 Designation: 30L
2.13.2 Take-off Run Available: 11020
2.13.3 Take-off Distance Available: 11020
2.13.4 Accelerate-Stop Distance Available: 10880
2.13.5 Landing Distance Available: 10679

2.13.1 Designation: 12R
2.13.2 Take-off Run Available: 11020
2.13.3 Take-off Distance Available: 11020
2.13.4 Accelerate-Stop Distance Available: 11020
2.13.5 Landing Distance Available: 10553

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: 30R
2.14.2 Approach Lighting System: ALSF2
2.14.4 Visual Approach Slope Indicator System: P4R

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: 30L
2.14.2 Approach Lighting System: MALSR
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

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: CD/P
2.18.3 Channel: 119.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 363.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS
2.18.3 Channel: 125.025
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS
2.18.3 Channel: 379.925
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND METERING (WEST)
2.18.3 Channel: 121.075
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND METERING (EAST)

2.18.3 Channel: 127.55

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND METERING (WEST)

2.18.3 Channel: 346.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND METERING (EAST)

2.18.3 Channel: 360.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (RWY 11/29)

2.18.3 Channel: 118.925

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (OUTBOUND)

2.18.3 Channel: 121.65

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (INBOUND)

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (RWY 11/29)

2.18.3 Channel: 227.125

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (INBOUND)

2.18.3 Channel: 348.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (OUTBOUND)

2.18.3 Channel: 377.175

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 12R/30L)

2.18.3 Channel: 118.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 12L/30R, 24)

2.18.3 Channel: 120.05

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 06, 11/29)

2.18.3 Channel: 132.475

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 06, 11/29)

2.18.3 Channel: 239.275

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 12R/30L)
2.18.3 Channel: 257.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 12L/30R, 24)
2.18.3 Channel: 284.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PRM (RWY 30R)
2.18.3 Channel: 278.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PRM (RWY 30L)
2.18.3 Channel: 351.9
2.18.5 Hours of Operation: 24

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: 38-44-40.533N / 90-22-58.4278W
2.19.6 Site Elevation: 555.1 ft

2.19.1 ILS Type: Glide Slope for runway 06. Magnetic variation: 1W
2.19.2 ILS Identification: JAK
2.19.5 Coordinates: 38-44-54.582N / 90-22-40.1291W
2.19.6 Site Elevation: 537.6 ft

2.19.1 ILS Type: Localizer for runway 06. Magnetic variation: 1W
2.19.2 ILS Identification: JAK
2.19.5 Coordinates: 38-45-27.2803N / 90-21-14.821W
2.19.6 Site Elevation: 547.5 ft

2.19.1 ILS Type: DME for runway 24. Magnetic variation: 1W
2.19.2 ILS Identification: STL
2.19.5 Coordinates: 38-44-40.533N / 90-22-58.4278W
2.19.6 Site Elevation: 555.1 ft

2.19.1 ILS Type: Glide Slope for runway 24. Magnetic variation: 1W
2.19.2 ILS Identification: STL
2.19.5 Coordinates: 38-45-13.5951N / 90-21-37.573W
2.19.6 Site Elevation: 528.6 ft

2.19.1 ILS Type: Localizer for runway 24. Magnetic variation: 1W
2.19.2 ILS Identification: STL
2.19.5 Coordinates: 38-44-43.5036N / 90-23-03.7184W
2.19.6 Site Elevation: 545.7 ft

2.19.1 ILS Type: DME for runway 11. Magnetic variation: 1W
2.19.2 ILS Identification: OGZ
2.19.5 Coordinates: 38-44-36.5929N / 90-22-41.4734W
2.19.6 Site Elevation: 562.6 ft

2.19.1 ILS Type: Glide Slope for runway 11. Magnetic variation: 1W
2.19.2 ILS Identification: OGZ
2.19.5 Coordinates: 38-45-26.0348N / 90-24-25.3788W
2.19.6 Site Elevation: 598.2 ft

2.19.1 ILS Type: Inner Marker for runway 11. Magnetic variation: 1W
2.19.2 ILS Identification: OGZ
2.19.5 Coordinates: 38-45-40.3474N / 90-24-44.7374W
2.19.6 Site Elevation: 613.3 ft

2.19.1 ILS Type: Localizer for runway 11. Magnetic variation: 1W
2.19.2 ILS Identification: OGZ
2.19.5 Coordinates: 38-44-38.7168N / 90-22-39.6283W
2.19.6 Site Elevation: 544.8 ft

2.19.1 ILS Type: DME for runway 29. Magnetic variation: 1W
2.19.2 ILS Identification: RQN
2.19.5 Coordinates: 38-45-43.8773N / 90-24-45.2373W
2.19.6 Site Elevation: 628 ft

2.19.1 ILS Type: Glide Slope for runway 29. Magnetic variation: 1W
2.19.2 ILS Identification: RQN
2.19.5 Coordinates: 38-44-49.8126N / 90-23-11.853W
2.19.6 Site Elevation: 555.6 ft

2.19.1 ILS Type: Localizer for runway 29. Magnetic variation: 1W
2.19.2 ILS Identification: RQN
2.19.5 Coordinates: 38-45-41.3528N / 90-24-46.7635W
2.19.6 Site Elevation: 612.3 ft

2.19.1 ILS Type: DME for runway 12L. Magnetic variation: 1W
2.19.2 ILS Identification: LDZ
2.19.5 Coordinates: 38-44-10.3827N / 90-20-12.0493W
2.19.6 Site Elevation: 614.1 ft

2.19.1 ILS Type: Glide Slope for runway 12L. Magnetic variation: 1W
2.19.2 ILS Identification: LDZ
2.19.5 Coordinates: 38-44-58.2183N / 90-21-50.3412W
2.19.6 Site Elevation: 533.8 ft

2.19.1 ILS Type: Inner Marker for runway 12L. Magnetic variation: 1W
2.19.2 ILS Identification: LDZ
2.19.5 Coordinates: 38-45-11.9417N / 90-22-09.8845W
2.19.6 Site Elevation: 531.1 ft

2.19.1 ILS Type: Localizer for runway 12L. Magnetic variation: 1W
2.19.2 ILS Identification: LDZ
2.19.5 Coordinates: 38-44-13.6664N / 90-20-11.7277W
2.19.6 Site Elevation: 601.7 ft

2.19.1 ILS Type: DME for runway 30R. Magnetic variation: 1W
2.19.2 ILS Identification: SJW
2.19.5 Coordinates: 38-45-14.1233N / 90-22-07.9077W
2.19.6 Site Elevation: 541 ft

2.19.1 ILS Type: Glide Slope for runway 30R. Magnetic variation: 1W
2.19.2 ILS Identification: SJW
2.19.5 Coordinates: 38-44-21.9637N / 90-20-38.0149W
2.19.6 Site Elevation: 592.5 ft

2.19.1 ILS Type: Inner Marker for runway 30R. Magnetic variation: 1W
2.19.2 ILS Identification: SJW
2.19.5 Coordinates: 38-44-14.6573N / 90-20-13.7268W
2.19.6 Site Elevation: 600.9 ft

2.19.1 ILS Type: Localizer for runway 30R. Magnetic variation: 1W
2.19.2 ILS Identification: SJW
2.19.5 Coordinates: 38-45-12.1188N / 90-22-10.2369W
2.19.6 Site Elevation: 531.7 ft

2.19.1 ILS Type: DME for runway 12R. Magnetic variation: 1W
2.19.2 ILS Identification: LMR
2.19.5 Coordinates: 38-44-07.6656N / 90-20-39.8597W
2.19.6 Site Elevation: 606.5 ft

2.19.1 ILS Type: Glide Slope for runway 12R. Magnetic variation: 1W
2.19.2 ILS Identification: LMR
2.19.5 Coordinates: 38-45-08.9361N / 90-22-24.8753W
2.19.6 Site Elevation: 532 ft

2.19.1 ILS Type: Localizer for runway 12R. Magnetic variation: 1W
2.19.2 ILS Identification: LMR
2.19.5 Coordinates: 38-44-10.2182N / 90-20-35.5392W
2.19.6 Site Elevation: 595.6 ft

2.19.1 ILS Type: Glide Slope for runway 30L. Magnetic variation: 1W
2.19.2 ILS Identification: BKY
2.19.5 Coordinates: 38-44-28.0656N / 90-21-01.7914W
2.19.6 Site Elevation: 564.5 ft

2.19.1 ILS Type: Localizer for runway 30L. Magnetic variation: 1W
2.19.2 ILS Identification: BKY
2.19.5 Coordinates: 38-45-19.3841N / 90-22-55.7958W
2.19.6 Site Elevation: 550.8 ft

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 1E
2.19.2 Navigation Aid Identification: STL
2.19.5 Coordinates: 38-51-38.6039N / 90-28-56.456W
2.19.6 Site Elevation: 445.5 ft

General Remarks:

TWY DELTA OR TAXILANE CHARLIE FM TWY SIERRA TO TWY GOLF, B-747S ARE NOT AUTH TO PASS OR BE PASSED BY B767 OR OTR LRGR ACFT OPRG ON THE PARL TWY/TAXILANE.

TWY CHARLIE, FROM TWY CHARLIE SIX TO TWY DELTA FOUR, RSTRD TO B757-300 SERIES OR SMLR WHEN PASSING BHND ACFT THAT HAVE MADE THE INITIAL 10 FT PUSHBACK.

TWY ALPHA EAST OF TWY TANGO, TWY SIERRA AND RWY 6/24 SOUTH OF TWY BRAVO, NO ACFT OR VEHICLE OPNS WHEN ARRIVING OR DEPG RWY 11 OR ARRIVING RWY 29.

TWY LIMA, NORTH OF RWY 12L/30R, ACFT LRGR THAN A GULFSTREAM VI TAX NBND ARE PROHIBITED FM MAKING A RIGHT TURN EBND ON TWY FOXTROT.

TWY KILO 1 IS UNAVBL TO B-767 OR LRGR ACFT (WINGSPAN 118 FT OR GTR).

TWY ECHO, BTN TWY NOVEMBER AND TWY LIMA RSTRD TO B-767 OR SMLR ACFT (WINGSPAN LESS THAN 171 FT) WHEN ACFT ARE PARKED ON THE ECHO PAD.

TWY CHARLIE, FROM TWY CHARLIE SEVEN TO TWY CHARLIE SIX, RSTRD TO A B757-300 SERIES OR SMLR.

TWY VICTOR 2 IS UNAVBL TO B-767 OR LRGR ACFT (WINGSPAN 118 FT OR GTR).

WAIVER TO CONDUCT SIMUL APCHS TO PARL RYS SEPARATED BY 1,300 FT IN EFCT.

WG TIP CLNC WITH GND VEH NOT ADQT ALG N SIDE OF MAIN TRML APN.

TWY NOVEMBER BTN RWY 24 AND FOXTROT, RSTRD TO ACFT WITH A WINGSPAN OF LESS THAN 79 FT (CRJ-900 OR SMLR) WHEN ACFT ARE PARKED ON THE NOVEMBER PAD. THIS AREA IS RSTRD TO ALL OPNS WHEN ACFT ARE PERFORMING END RUN-UPS IN THE NOVEMBER PAD.

TWY VICTOR, UNDERLYING THE RWY 12L FNA CRS, IS RSTRD TO ACFT WITH A TAIL HGT OF 25 FT OR LESS (CRJ-700 OR SMLR) WHEN ACFT ARE LNDG ON RWY 12L.

TWY CHARLIE, FM TWY SIERRA TO TWY CHARLIE SEVEN, RSTRD TO B-767 OR SMLR ACFT (156 FT AVBL) WHEN ACFT ARE PARKED IN THE CHARLIE PAD. RSTRN IS FOR TAX ACFT, LRGR ACFT MAY BE TOWED THRU AREA.

TWY CHARLIE, EAST OF TWY DELTA ONE TO THE AER 30L, RSTRD TO B-737 OR SMLR ACFT (WINGSPAN LESS THAN 118 FT) WHEN ACFT ARE PARKED ON THE HOTEL PAD.

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 VICTOR 2, B-737 (WINGSPAN GTR THAN 79 FT BUT LESS THAN 118 FT) MUST PERFORM JUDGMENTAL OVERSTEERING INSTEAD OF COCKPIT OVR CNTRLN STEERING WHEN TAX.

Las Vegas, NV
Mc Carran Intl
ICAO Identifier KLAS

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 36-04-48.158N / 115-09-08.045W
- 2.2.2 From City: 5 miles S of LAS VEGAS, NV
- 2.2.3 Elevation: 2181.2 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)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 100LL A1+
- 2.4.5 Hangar Space: YES
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 01L
- 2.12.2 True Bearing: 25
- 2.12.3 True Dimensions: 8988 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 36-04-31.1684N / 115-10-13.3148W
- 2.12.6 Threshold Elevation: 2181.2
- 2.12.6 Touchdown Zone Elevation: 2176.1

- 2.12.1 Designation: 19R
- 2.12.2 True Bearing: 205
- 2.12.3 True Dimensions: 8988 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 36-05-51.7658N / 115-09-27.1851W
- 2.12.6 Threshold Elevation: 2088.5
- 2.12.6 Touchdown Zone Elevation: 2116.6

- 2.12.1 Designation: 01R
- 2.12.2 True Bearing: 25
- 2.12.3 True Dimensions: 9771 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 36-04-27.264N / 115-10-02.9581W
- 2.12.6 Threshold Elevation: 2175.1
- 2.12.6 Touchdown Zone Elevation: 2169.8

2.12.1 Designation: 19L
2.12.2 True Bearing: 205
2.12.3 True Dimensions: 9771 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 36-05-54.8814N / 115-09-12.8055W
2.12.6 Threshold Elevation: 2077.6
2.12.6 Touchdown Zone Elevation: 2112.1

2.12.1 Designation: 08L
2.12.2 True Bearing: 90
2.12.3 True Dimensions: 14515 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 36-04-34.9211N / 115-10-12.6889W
2.12.6 Threshold Elevation: 2179.2
2.12.6 Touchdown Zone Elevation: 2154.9

2.12.1 Designation: 26R
2.12.2 True Bearing: 270
2.12.3 True Dimensions: 14515 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 36-04-35.0633N / 115-07-15.8989W
2.12.6 Threshold Elevation: 2033
2.12.6 Touchdown Zone Elevation: 2067.1

2.12.1 Designation: 26L
2.12.2 True Bearing: 270
2.12.3 True Dimensions: 10526 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 36-04-25.1671N / 115-07-32.9665W
2.12.6 Threshold Elevation: 2048.4
2.12.6 Touchdown Zone Elevation: 2069

2.12.1 Designation: 08R
2.12.2 True Bearing: 90
2.12.3 True Dimensions: 10526 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 36-04-25.0637N / 115-09-41.1617W
2.12.6 Threshold Elevation: 2156.9
2.12.6 Touchdown Zone Elevation: 2156.9

AD 2.13 Declared Distances

2.13.1 Designation: 01L
2.13.2 Take-off Run Available: 8988
2.13.3 Take-off 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 Take-off Run Available: 8988
2.13.3 Take-off Distance Available: 9400

2.13.4 Accelerate–Stop Distance Available: 8417
2.13.5 Landing Distance Available: 8417

2.13.1 Designation: 01R
2.13.2 Take–off Run Available: 9771
2.13.3 Take–off Distance Available: 10168
2.13.4 Accelerate–Stop Distance Available: 9276
2.13.5 Landing Distance Available: 8785

2.13.1 Designation: 19L
2.13.2 Take–off Run Available: 9771
2.13.3 Take–off Distance Available: 10171
2.13.4 Accelerate–Stop Distance Available: 9686
2.13.5 Landing Distance Available: 8808

2.13.1 Designation: 08L
2.13.2 Take–off Run Available: 14515
2.13.3 Take–off Distance Available: 15099
2.13.4 Accelerate–Stop Distance Available: 14099
2.13.5 Landing Distance Available: 11960

2.13.1 Designation: 26R
2.13.2 Take–off Run Available: 14515
2.13.3 Take–off Distance Available: 15037
2.13.4 Accelerate–Stop Distance Available: 14037
2.13.5 Landing Distance Available: 12638

2.13.1 Designation: 26L
2.13.2 Take–off Run Available: 10526
2.13.3 Take–off Distance Available: 10526
2.13.4 Accelerate–Stop Distance Available: 10526
2.13.5 Landing Distance Available: 10526

2.13.1 Designation: 08R
2.13.2 Take–off Run Available: 10526
2.13.3 Take–off Distance Available: 10526
2.13.4 Accelerate–Stop Distance Available: 10526
2.13.5 Landing Distance Available: 10526

AD 2.14 Approach and Runway Lighting

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
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 01R
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 19L
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 08L
2.14.2 Approach Lighting System:
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: 26L
2.14.2 Approach Lighting System: MALSF
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 08R
2.14.2 Approach Lighting System:
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 Channel: 118
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (ARR/DEP)
2.18.3 Channel: 132.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P (E OF RWY 01R/19L)
2.18.3 Channel: 121.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (W OF RWY 01L/19R)
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (W OF RWY 01L/19R)
2.18.3 Channel: 254.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (E OF RWY 01R/19L)

2.18.3 Channel: 270.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 01L/19R, 01R/19L)
2.18.3 Channel: 118.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 08L/26R, 08R/26L)
2.18.3 Channel: 119.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 257.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RAMP CTL (A, B, C GATES & GA, CUSTOMS.)
2.18.3 Channel: 124.4
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (D, E GATES & CARGO.)
2.18.3 Channel: 127.9
2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (RAMP ALTERNATE FREQUENCY)
2.18.3 Channel: 130
2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 01L. Magnetic variation: 11E
2.19.2 ILS Identification: CUA
2.19.5 Coordinates: 36–06–01.7244N / 115–09–25.0625W
2.19.6 Site Elevation: 2089.4 ft

2.19.1 ILS Type: Glide Slope for runway 01L. Magnetic variation: 11E
2.19.2 ILS Identification: CUA
2.19.5 Coordinates: 36–04–49.142N / 115–10–06.5151W
2.19.6 Site Elevation: 2158.4 ft

2.19.1 ILS Type: Localizer for runway 01L. Magnetic variation: 11E
2.19.2 ILS Identification: CUA
2.19.5 Coordinates: 36–06–00.8259N / 115–09–22W
2.19.6 Site Elevation: 2078.9 ft

2.19.1 ILS Type: DME for runway 26R. Magnetic variation: 11E
2.19.2 ILS Identification: LAS
2.19.5 Coordinates: 36–04–30.5228N / 115–10–19.1659W
2.19.6 Site Elevation: 2201.5 ft

2.19.1 ILS Type: Glide Slope for runway 26R. Magnetic variation: 11E
2.19.2 ILS Identification: LAS
2.19.5 Coordinates: 36–04–32.0826N / 115–07–46.6759W

2.19.6 Site Elevation: 2046.5 ft

2.19.1 ILS Type: Localizer for runway 26R. Magnetic variation: 11E
2.19.2 ILS Identification: LAS
2.19.5 Coordinates: 36-04-34.9114N / 115-10-19.1797W
2.19.6 Site Elevation: 2186.3 ft

2.19.1 ILS Type: DME for runway 26L. Magnetic variation: 11E
2.19.2 ILS Identification: RLE
2.19.5 Coordinates: 36-04-22.2517N / 115-09-53.2672W
2.19.6 Site Elevation: 2182.2 ft

2.19.1 ILS Type: Glide Slop for runway 26L. Magnetic variation: 11E
2.19.2 ILS Identification: RLE
2.19.5 Coordinates: 36-04-21.996N / 115-07-46.6672W
2.19.6 Site Elevation: 2050.4 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 / 115-09-53.3413W
2.19.6 Site Elevation: 2168.2 ft

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 15E
2.19.2 Navigation Aid Identification: LAS
2.19.5 Coordinates: 36-04-46.9253N / 115-09-35.2725W
2.19.6 Site Elevation: 2136 ft

General Remarks:

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 WITH WINGSPAN GTR THAN 135 FT PPR FM DEPT OF AVN TO USE TWY H.

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.

WHEN SPL EVENT PRKG PPR PROGRAM NOTAM IS ACTV, TSNT ACFT OPERS NOT PERM BASED NEED TO OBTAIN A PPR NR FM AN FBO FOR EA LDG. PPR APPVL & CONFIRMATION NRS CAN BE OBTAINED FM THE SEL FBO AT 702-261-7775. PPR CONFIRMATION NRS SHOULD BE ENTERED IN THE RMKS SECTION OF EACH FLT PLAN.

GA CUST AND IMG LCTD WEST SIDE OF AFLD BTWN FBO'S.

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.

ACFT MAY EXPERIENCE REFLECTION OF SUN FM GLASS HOTELS LCTD NW OF ARPT. REFLECTION MAY OCCUR AT VARIOUS ALTS, HDGS, & DSTCS FM ARPT.

ALL NON-STD RWY OPNS PPR FM DEPT OF AVN.

RWY STS LGTS ARE IN OPN.

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.

PLA AUZD BTN 0200 & 0600.

LGTD GOLF RANGE 1400 FT S OF RWYS 01L/19R AND 01R/19L.

RWY 08L 589 FT CWY; RWY 26R 645 FT CWY.

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.

LRG NR OF BIRDS AND BATS INVOF OF ARPT BTWN SS AND SR.

TBJT DEPS NOT PMTD ON RWY 01R/19L OR RWY 01L/19R 2000-0800. XCPNS FOR WX OR OPNL NECESSITY.

EXTSV GLDR/SOARING OPNS WKENDS & HOLS; 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.

(E98) PLUS 64 SHELTERS & 24 SHEDS.

TIEDOWN FEE.

GA PRKG VERY LTD. FOR PRKG AVAILABILITY CTC EITHER FBO (702) 736-1830 OR (702) 739-1100.

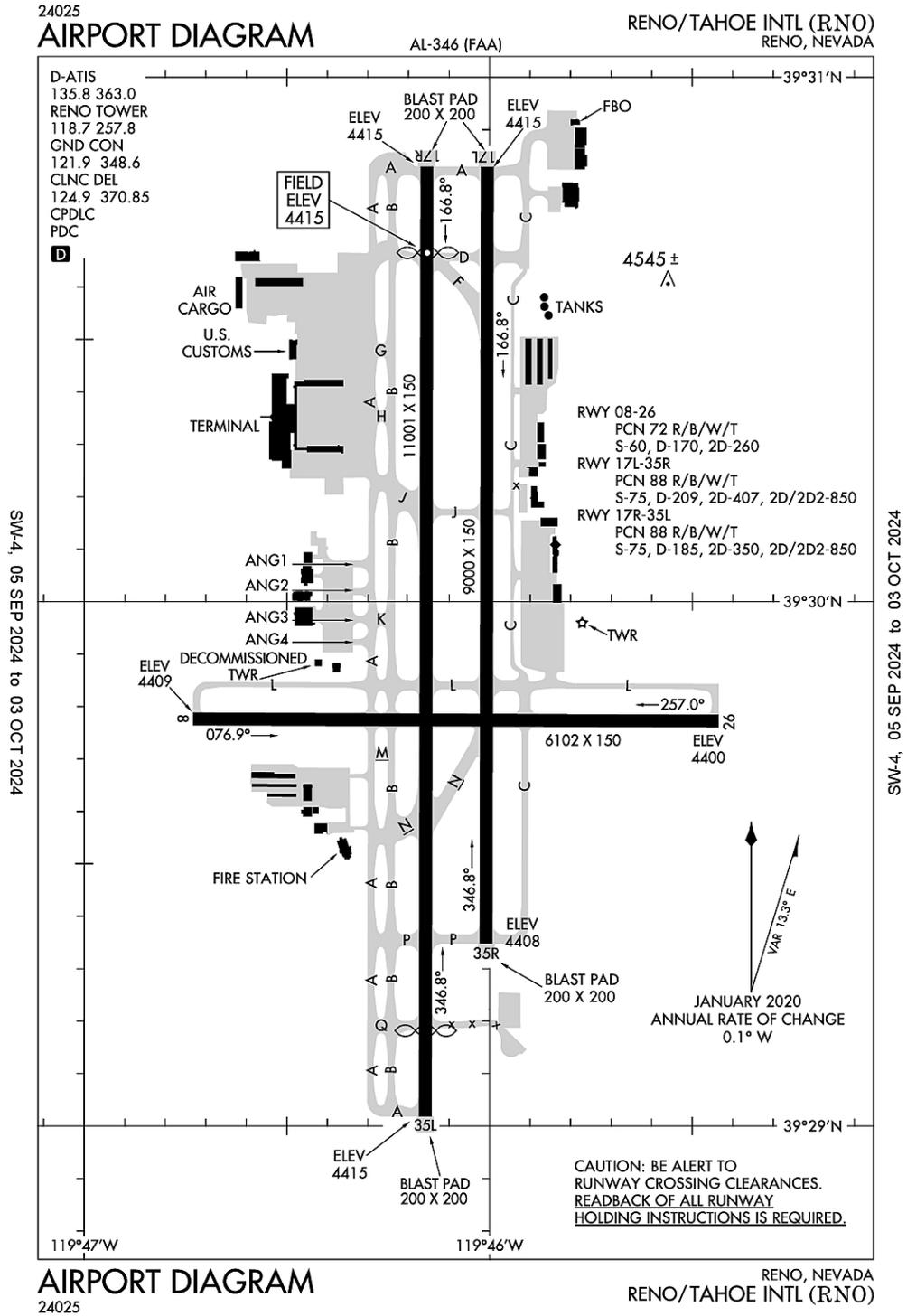
ALL ACFT CTC RAMP CTL ON FREQ 124.4 FOR OPS AT A, B, C GATES, AND GA, CUSTOMS; CTC RAMP CTL FREQ 127.9 FOR OPNS AT D AND E GATES AND CARGO RAMP PRIOR TO ENTERING RAMP OR PUSHING BACK FM GATE OR PRKG SPOT. RAMP CTL OPR HRS 0500-0100L. WHEN RAMP IS CLSD (0100-0500L) BROADCAST ALL NON-MOVEMENT AREA OPNS ON UNICOM 122.95.

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.

NMRS HOP ON WEST SIDE OF ARPT.

CTN PAJA INVOF ARPT.

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: 13E (2020)
- 2.2.6 Airport Contact: DAREN GRIFFIN, A.A.E.
P O BOX 12490
RENO, NV 89510 (775-328-6550)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 A1+
- 2.4.5 Hangar Space:
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 08
- 2.12.2 True Bearing: 90
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 4409.3

- 2.12.1 Designation: 26
- 2.12.2 True Bearing: 270
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 4401.8

- 2.12.1 Designation: 17L
- 2.12.2 True Bearing: 180
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 4414.8

2.12.1 Designation: 35R
2.12.2 True Bearing: 0
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 4408.3

2.12.1 Designation: 17R
2.12.2 True Bearing: 180
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 4414.8

2.12.1 Designation: 35L
2.12.2 True Bearing: 0
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 4410.2

AD 2.13 Declared Distances

2.13.1 Designation: 08
2.13.2 Take-off Run Available: 5854
2.13.3 Take-off Distance Available: 5854
2.13.4 Accelerate-Stop Distance Available: 6102
2.13.5 Landing Distance Available: 5854

2.13.1 Designation: 26
2.13.2 Take-off Run Available: 6102
2.13.3 Take-off Distance Available: 6102
2.13.4 Accelerate-Stop Distance Available: 6102
2.13.5 Landing Distance Available: 6102

2.13.1 Designation: 17L
2.13.2 Take-off Run Available: 9000
2.13.3 Take-off 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 Take-off Run Available: 9000
2.13.3 Take-off Distance Available: 9000
2.13.4 Accelerate-Stop Distance Available: 9000
2.13.5 Landing Distance Available: 9000

2.13.1 Designation: 17R

2.13.2 Take-off Run Available: 11001
2.13.3 Take-off Distance Available: 11001
2.13.4 Accelerate-Stop Distance Available: 11001
2.13.5 Landing Distance Available: 10001

2.13.1 Designation: 35L
2.13.2 Take-off Run Available: 11001
2.13.3 Take-off Distance Available: 11001
2.13.4 Accelerate-Stop Distance Available: 11001
2.13.5 Landing Distance Available: 10011

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 08
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 26
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 17L
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 35R
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

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: ANG COMD POST (CALLSIGN-ROLLER OPS.)
2.18.3 Channel: 378.4
2.18.5 Hours of Operation:

2.18.1 Service Designation: ANG COMD POST (CALLSIGN-ROLLER OPS.)
2.18.3 Channel: 8780
2.18.5 Hours of Operation:

2.18.1 Service Designation: ANG OPS
2.18.3 Channel: 280
2.18.5 Hours of Operation:

2.18.1 Service Designation: ANG OPS (CALLSIGN-ROLLER OPS.)
2.18.3 Channel: 378.4

2.18.5 Hours of Operation:

2.18.1 Service Designation: ANG OPS (CALLSIGN-ROLLER OPS.)

2.18.3 Channel: 8780

2.18.5 Hours of Operation:

2.18.1 Service Designation: CD/P

2.18.3 Channel: 124.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 370.85

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 135.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 363

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 348.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 118.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 257.8

2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 17R. Magnetic variation: 13E

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 17R. Magnetic variation: 13E
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 17R. Magnetic variation: 13E
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 35L. Magnetic variation: 13E
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 35L. Magnetic variation: 13E
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

2.19.1 ILS Type: Localizer for runway 35L. Magnetic variation: 13E
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

General Remarks:

ANG: APN HAS 22 FT X 6 FT ACFT GND EQUIP (AGE) BOXES LCTD TO THE EAST OF EA PKG SPOT.

INTENSIVE GLIDER ACTIVITY INVOF ARPT AND SURROUNDING AREAS UP TO 18000 FT.

ACFT OVR 12500 LBS: WRITTEN PPR FOR TRNG FLIGHTS; FOR MORE INFO CTC ARPT OPS 1-775-328-6490.

COLD TEMPERATURE AIRPORT. ALTITUDE CORRECTION REQUIRED AT OR BELOW -13C.

MIL ACFT: TSNT ACFT EXECUTE STRAIGHT-IN FULL STOP APCH. OVERHEAD PAT NOT AUTH FOR TSNT ACFT.

ANG: PPR 24 HR PN RQRD.

NOISE SENSITIVE AREA ALL QUADS. PILOTS OF TBJT ACFT USE RCMDD NOISE ABATEMENT PROCS; AVBL ON REQ.

TWY C BTN TWY L & TWY D RSTRD TO ACFT 100000 LBS OR LESS.

PRESIDENT / CEO OF RENO-TAHOE ARPT AUTHORITY-DARREN GRIFFIN, CARRIE GUEDEA, AMGR (775) 328-6446.

TWY A BETWEEN NORTH TWY B AND TWY D CLSD TO ACFT WITH WINGSPAN GREATER THAN 149 FT.

MIL ACFT: NOISE ABTMT CRITICAL TERMINATE AFTERBURNER ASAP THEN CLIMB TO 6500 FT MSL ASAP.

TWY M CLSD TO AIR CARRIER ACFT.

ALL COMMERCIAL AIRCRAFT CONTACT GROUND CONTROL FOR ADVISORIES PRIOR TO PUSH BACK ON THE TERMINAL RAMP.

NOISE NOTE CONT: PILOTS OF NON-TBJT ACFT USE BEST ABATEMENT PROCS AND SETTINGS. AVOID AS MUCH AS FEASIBLE FLYING OVER POPULATED AREAS.

TWY J EAST OF RY 16L/34R CLSD TO AIR CARRIER ACFT.

ANG: COMSEC MTRL STORAGE AVBL WITH PRIOR CDN AT 152 CF/SCXS, DSN 830-4798.

24 HRS PPR FOR TSNT ACFT PARKING WITH WINGSPANS GREATER THAN 75 FT.

WATERFOWL ALL QUADRANTS ALL SEASONS. CONCENTRATED NW OF RWY 17R AND EAST OF RWY 17L.

GLIDER/SOARING OPER 30-50 MILES SOUTH OF ARPT DURING VFR WEATHER & MOUNTAIN WAVE WIND CONDITIONS 1100 TO SS.

ANG: ANG OPS 1430-2359Z++ MON-FRI EXC HOL AND SKED DAYS OFF; OTR TIMES BY NOTAM; DSN 830-4709 OR C775-788-4709.

TWY C BTN TWY L AND TWY D CLSD TO AIR CARRIER ACFT.

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: SARAH K. MCKEON
BUILDING #1- CONRAD ROAD
NEWARK, NJ 7114 (973-961-6161)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 04L
- 2.12.2 True Bearing: 26
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 10.4

- 2.12.1 Designation: 22R
- 2.12.2 True Bearing: 206
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 10.4

- 2.12.1 Designation: 22L
- 2.12.2 True Bearing: 206
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 10.7

2.12.1 Designation: 04R
2.12.2 True Bearing: 26
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 11.3

2.12.1 Designation: 29
2.12.2 True Bearing: 275
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 9.8

2.12.1 Designation: 11
2.12.2 True Bearing: 95
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 17.4

2.12.1 Designation: H1
2.12.2 True Bearing:
2.12.3 True Dimensions: 54 ft x 54 ft
2.12.4 PCN:
2.12.5 Coordinates: 40-42-15.85N / 74-10-05W
2.12.6 Threshold Elevation: 8
2.12.6 Touchdown Zone Elevation:

AD 2.13 Declared Distances

2.13.1 Designation: 04L
2.13.2 Take-off Run Available: 11000
2.13.3 Take-off 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 Take-off Run Available: 11000
2.13.3 Take-off Distance Available: 11000
2.13.4 Accelerate-Stop Distance Available: 11000
2.13.5 Landing Distance Available: 9560

2.13.1 Designation: 22L
2.13.2 Take-off Run Available: 10000
2.13.3 Take-off Distance Available: 10000
2.13.4 Accelerate-Stop Distance Available: 10000
2.13.5 Landing Distance Available: 8207

2.13.1 Designation: 04R
2.13.2 Take-off Run Available: 10000
2.13.3 Take-off Distance Available: 10000
2.13.4 Accelerate-Stop Distance Available: 10000
2.13.5 Landing Distance Available: 8810

2.13.1 Designation: 29
2.13.2 Take-off Run Available: 6726
2.13.3 Take-off Distance Available: 6726
2.13.4 Accelerate-Stop Distance Available: 6726
2.13.5 Landing Distance Available: 6502

2.13.1 Designation: 11
2.13.2 Take-off Run Available: 6726
2.13.3 Take-off Distance Available: 6726
2.13.4 Accelerate-Stop Distance Available: 6726
2.13.5 Landing Distance Available: 6726

2.13.1 Designation: H1
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

AD 2.14 Approach and Runway Lighting

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: 22L
2.14.2 Approach Lighting System: ALSF2
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: 29
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4R

2.14.1 Designation: 11
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4R

2.14.1 Designation: H1

- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: CD PRE TAXI CLNC

2.18.3 Channel: 118.85

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (WITHIN 6.5 NM ARE TWR CONTROLLED FREQS)

2.18.3 Channel: 127.85

2.18.5 Hours of Operation:

2.18.1 Service Designation: CLASS B (WITHIN 6.5 NM ARE TWR CONTROLLED FREQS)

2.18.3 Channel: 257.6

2.18.5 Hours of Operation:

2.18.1 Service Designation: D-ATIS (ARR)

2.18.3 Channel: 115.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 134.825

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/S

2.18.3 Channel: 126.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 118.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (WITHIN 6.5 NM ARE TWR CONTROLLED FREQS)

2.18.3 Channel: 257.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/S

2.18.3 Channel: 134.05

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RAMP CTL
2.18.3 Channel: 132.45
2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 04L. Magnetic variation: 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: 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: 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: 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

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 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 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: 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 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: 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: 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: 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 Navigation Aid Type DME. Magnetic variation:
2.19.2 Navigation Aid Identification: EWR
2.19.5 Coordinates: 40-40-27.64N / 74-10-40.68W
2.19.6 Site Elevation: 9 ft

2.19.1 Navigation Aid Type FAN MARKER. Magnetic variation: 11W
2.19.2 Navigation Aid Identification: EWR
2.19.5 Coordinates: 40-42-12.1824N / 74-11-14.7211W
2.19.6 Site Elevation: 9.5 ft

General Remarks:

DURING ATC ZERO EVENTS; ARPT OPS WILL MNT 118.3 AND PROVIDE EMERG NOTIFICATIONS TO ARFF

HIGH VOLUME OF LOW LEVEL HEL TFC ARR AND DEP HELO KEARNY HELI (65NJ) LCTD 3.5 MILES NE OF ARPT.

WHEN RWY 22L/R IN USE, ACFT PRKG AT TRML A CAN EXP TO ENTER RAMP VIA TWY A10 OR A12, UNLESS ADZD BY ATC.

TWY Z5 CLSD TO ACFT WITH WINGSPANS IN EXCESS OF 118 FT.

TWY Z BTN TWY Z2 & Z4 CLSD TO ACFT WITH WINGSPANS IN EXCESS OF 171 FT.

TWY A11 W OF TWY A ACFT SPD RSTR OF 17 KTS/20 MPH MAX FOR ALL ACFT WITH WINGSPANS IN EXCESS OF 171 FT.

ADG IV ACFT RSTR FM PSG TWY Z3 ON Z

TWY EE BTN RWY 4R-22L AND RWY 11-29 CLSD TO AFCT WITH WINGSPANS IN EXCESS OF 171 FT.

NOISE RSTR CALL 212-435-3784 DRG NML BUS HRS.

FLOCKS OF BIRDS ON & INVOF ARPT.

TWY A BTN TWY AA AND RAMP CLSD TO ACFT WITH WINGSPANS IN EXCESS OF 171 FT.

RWY STATUS LIGHTS IN OPR

TWY Y BTN RM AND TWY U, SPEED RESTRICTION OF 17KT (20MPH).

PARA-SAIL & BANNER TOWING OPS 1000 FT & BLO IN UPPER & LOWER NY BAYS INCLUDING ROCKAWAY INLET INDEF.

WHEN RWY 04R/L IN USE, ACFT PRKG AT TRML A CAN EXP TO ENTER RAMP VIA TWY A8, UNLESS ADZD BY ATC.

CPDLC DEPARTURE CLEARANCE SERVICE AVAILABLE.

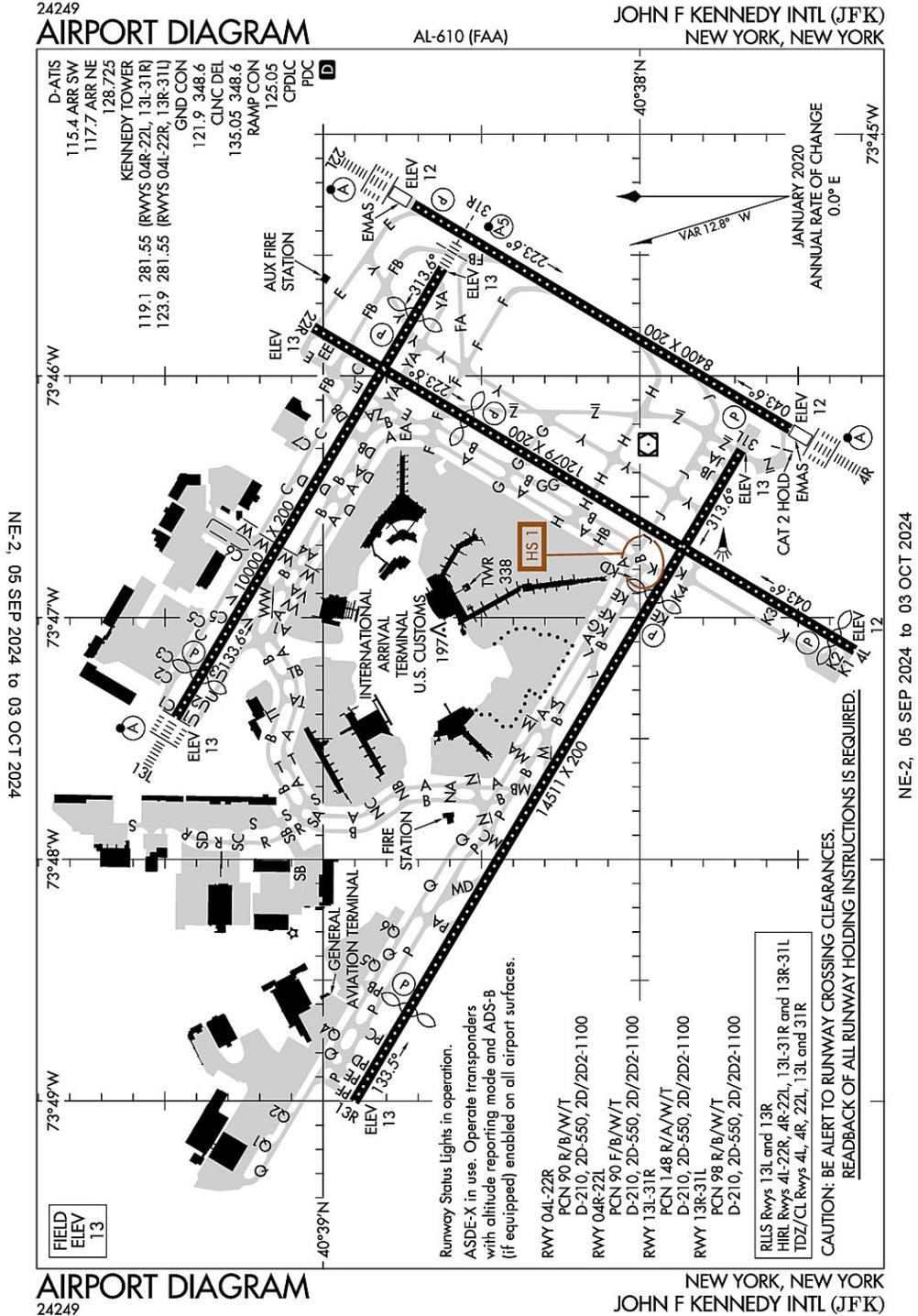
ACFT WITH WINGSPANS IN EXCESS OF 118 FEET PROHIBITED FROM TURNING S ON TWY R FROM TWY B1.

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.

RWY 4R & 4L DEP USE UPPER ANT FOR ATC COM.

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.

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: 40-38-23.741N / 73-46-43.292W
- 2.2.2 From City: 13 miles SE of NEW YORK, NY
- 2.2.3 Elevation: 13 ft
- 2.2.5 Magnetic Variation: 13W (2020)
- 2.2.6 Airport Contact: TERESA RIZZUTO
BLDG 14
JAMAICA, NY 11430 ((718) 244-3501)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 04L
- 2.12.2 True Bearing: 31
- 2.12.3 True Dimensions: 12079 ft x 200 ft
- 2.12.4 PCN: 90 R/B/W/T
- 2.12.5 Coordinates: 40-37-19.2754N / 73-47-08.1029W
- 2.12.6 Threshold Elevation: 11.9
- 2.12.6 Touchdown Zone Elevation: 12.7

- 2.12.1 Designation: 22R
- 2.12.2 True Bearing: 211
- 2.12.3 True Dimensions: 12079 ft x 200 ft
- 2.12.4 PCN: 90 R/B/W/T
- 2.12.5 Coordinates: 40-39-01.8338N / 73-45-47.9596W
- 2.12.6 Threshold Elevation: 12.5
- 2.12.6 Touchdown Zone Elevation: 12.7

- 2.12.1 Designation: 04R
- 2.12.2 True Bearing: 31
- 2.12.3 True Dimensions: 8400 ft x 200 ft
- 2.12.4 PCN: 90 F/B/W/T
- 2.12.5 Coordinates: 40-37-31.5418N / 73-46-13.2441W
- 2.12.6 Threshold Elevation: 11.9
- 2.12.6 Touchdown Zone Elevation: 12

2.12.1 Designation: 22L
2.12.2 True Bearing: 211
2.12.3 True Dimensions: 8400 ft x 200 ft
2.12.4 PCN: 90 F/B/W/T
2.12.5 Coordinates: 40-38-42.8531N / 73-45-17.5027W
2.12.6 Threshold Elevation: 11.9
2.12.6 Touchdown Zone Elevation: 12

2.12.1 Designation: 13L
2.12.2 True Bearing: 121
2.12.3 True Dimensions: 10000 ft x 200 ft
2.12.4 PCN: 148 R/A/W/T
2.12.5 Coordinates: 40-39-27.952N / 73-47-24.8606W
2.12.6 Threshold Elevation: 12.9
2.12.6 Touchdown Zone Elevation: 13

2.12.1 Designation: 31R
2.12.2 True Bearing: 301
2.12.3 True Dimensions: 10000 ft x 200 ft
2.12.4 PCN: 148 R/A/W/T
2.12.5 Coordinates: 40-38-37.4085N / 73-45-33.3818W
2.12.6 Threshold Elevation: 12.6
2.12.6 Touchdown Zone Elevation: 13

2.12.1 Designation: 31L
2.12.2 True Bearing: 301
2.12.3 True Dimensions: 14511 ft x 200 ft
2.12.4 PCN: 98 R/B/W/T
2.12.5 Coordinates: 40-37-40.7799N / 73-46-18.4107W
2.12.6 Threshold Elevation: 12.6
2.12.6 Touchdown Zone Elevation: 12.7

2.12.1 Designation: 13R
2.12.2 True Bearing: 121
2.12.3 True Dimensions: 14511 ft x 200 ft
2.12.4 PCN: 98 R/B/W/T
2.12.5 Coordinates: 40-38-54.1008N / 73-49-00.173W
2.12.6 Threshold Elevation: 12.5
2.12.6 Touchdown Zone Elevation: 12.6

AD 2.13 Declared Distances

2.13.1 Designation: 04L
2.13.2 Take-off Run Available: 11351
2.13.3 Take-off 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 Take-off Run Available: 12079
2.13.3 Take-off Distance Available: 12079

2.13.4 Accelerate-Stop Distance Available: 11219
2.13.5 Landing Distance Available: 7795

2.13.1 Designation: 04R
2.13.2 Take-off Run Available: 8400
2.13.3 Take-off 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 Take-off Run Available: 8400
2.13.3 Take-off Distance Available: 8400
2.13.4 Accelerate-Stop Distance Available: 8400
2.13.5 Landing Distance Available: 8400

2.13.1 Designation: 13L
2.13.2 Take-off Run Available: 10000
2.13.3 Take-off 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 Take-off Run Available: 10000
2.13.3 Take-off Distance Available: 10000
2.13.4 Accelerate-Stop Distance Available: 9513
2.13.5 Landing Distance Available: 8486

2.13.1 Designation: 31L
2.13.2 Take-off Run Available: 14511
2.13.3 Take-off Distance Available: 14511
2.13.4 Accelerate-Stop Distance Available: 14511
2.13.5 Landing Distance Available: 11247

2.13.1 Designation: 13R
2.13.2 Take-off Run Available: 14511
2.13.3 Take-off Distance Available: 14511
2.13.4 Accelerate-Stop Distance Available: 14511
2.13.5 Landing Distance Available: 12467

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 04L
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 22R
2.14.2 Approach Lighting System:
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

2.14.1 Designation: 13L
2.14.2 Approach Lighting System: ALSF2
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: P4R

2.14.1 Designation: 31L
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 13R
2.14.2 Approach Lighting System: RLLS
2.14.4 Visual Approach Slope Indicator System: P4L

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: APCH/P
2.18.3 Channel: 125.7
2.18.5 Hours of Operation:

2.18.1 Service Designation: CD PRE TAXI CLNC
2.18.3 Channel: 135.05
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD PRE TAXI CLNC (NORTH & SOUTH)
2.18.3 Channel: 348.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (FREQS 2000 FT & BLW W/N 8 NM ARE TWR CNTRLD FREQS)
2.18.3 Channel: 125.25
2.18.5 Hours of Operation:

2.18.1 Service Designation: CLASS B (FREQS 2000 FT & BLW W/N 8 NM ARE TWR CNTRLD FREQS)
2.18.3 Channel: 281.55
2.18.5 Hours of Operation:

2.18.1 Service Designation: D-ATIS (ARR-SW)
2.18.3 Channel: 115.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (ARR-NE)
2.18.3 Channel: 117.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (ARR/DEP)

2.18.3 Channel: 128.725

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 348.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/S

2.18.3 Channel: 121.65

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 04R/22L, 13L/31R)

2.18.3 Channel: 119.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 04L/22R, 13R/31L)

2.18.3 Channel: 123.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 04L/22R, 13R/31L)

2.18.3 Channel: 281.55

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 04R/22L, 13L/31R)

2.18.3 Channel: 281.55

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PARCH STAR

2.18.3 Channel: 125.7

2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL

2.18.3 Channel: 125.05

2.18.5 Hours of Operation:

2.18.1 Service Designation: ROBER STAR

2.18.3 Channel: 125.7

2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 04L. Magnetic variation: 13W

2.19.2 ILS Identification: HIQ

2.19.5 Coordinates: 40-37-43.8179N / 73-46-40.579W

2.19.6 Site Elevation: 22.6 ft

2.19.1 ILS Type: Glide Slope for runway 04L. Magnetic variation: 13W

2.19.2 ILS Identification: HIQ

2.19.5 Coordinates: 40-37-31.0909N / 73-46-54.8905W

2.19.6 Site Elevation: 9.9 ft

2.19.1 ILS Type: Localizer for runway 04L. Magnetic variation: 13W

2.19.2 ILS Identification: HIQ

2.19.5 Coordinates: 40-39-06.9661N / 73-45-43.9445W

2.19.6 Site Elevation: 10.9 ft

2.19.1 ILS Type: DME for runway 22R. Magnetic variation: 13W

2.19.2 ILS Identification: JOC

2.19.5 Coordinates: 40-38-53.285N / 73-45-13.1901W

2.19.6 Site Elevation: 27.4 ft

2.19.1 ILS Type: Glide Slope for runway 22R. Magnetic variation: 13W

2.19.2 ILS Identification: JOC

2.19.5 Coordinates: 40-38-21.2838N / 73-46-13.9271W

2.19.6 Site Elevation: 8.7 ft

2.19.1 ILS Type: Localizer for runway 22R. Magnetic variation: 13W

2.19.2 ILS Identification: JOC

2.19.5 Coordinates: 40-37-44.4774N / 73-46-43.1068W

2.19.6 Site Elevation: 8.3 ft

2.19.1 ILS Type: DME for runway 04R. Magnetic variation: 13W

2.19.2 ILS Identification: JFK

2.19.5 Coordinates: 40-38-53.285N / 73-45-13.1901W

2.19.6 Site Elevation: 27.4 ft

2.19.1 ILS Type: Glide Slope for runway 04R. Magnetic variation: 13W

2.19.2 ILS Identification: JFK

2.19.5 Coordinates: 40-37-42.101N / 73-46-11.0314W

2.19.6 Site Elevation: 12.6 ft

2.19.1 ILS Type: Inner Marker for runway 04R. Magnetic variation: 13W

2.19.2 ILS Identification: JFK

2.19.5 Coordinates: 40-37-23.8334N / 73-46-19.1548W

2.19.6 Site Elevation: 11.9 ft

2.19.1 ILS Type: Localizer for runway 04R. Magnetic variation: 13W

2.19.2 ILS Identification: JFK

2.19.5 Coordinates: 40-38-51.5906N / 73-45-10.6721W

2.19.6 Site Elevation: 11.3 ft

2.19.1 ILS Type: DME for runway 22L. Magnetic variation: 13W
2.19.2 ILS Identification: IWY
2.19.5 Coordinates: 40-37-43.8179N / 73-46-40.579W
2.19.6 Site Elevation: 22.6 ft

2.19.1 ILS Type: Glide Slope for runway 22L. Magnetic variation: 13W
2.19.2 ILS Identification: IWY
2.19.5 Coordinates: 40-38-32.9341N / 73-45-19.9803W
2.19.6 Site Elevation: 13 ft

2.19.1 ILS Type: Inner Marker for runway 22L. Magnetic variation: 13W
2.19.2 ILS Identification: IWY
2.19.5 Coordinates: 40-38-51.125N / 73-45-11.0314W
2.19.6 Site Elevation: 9.4 ft

2.19.1 ILS Type: Localizer for runway 22L. Magnetic variation: 13W
2.19.2 ILS Identification: IWY
2.19.5 Coordinates: 40-37-27.4935N / 73-46-16.4069W
2.19.6 Site Elevation: 9.4 ft

2.19.1 ILS Type: DME for runway 13L. Magnetic variation: 13W
2.19.2 ILS Identification: TLK
2.19.5 Coordinates: 40-38-33.5365N / 73-45-18.2409W
2.19.6 Site Elevation: 29.5 ft

2.19.1 ILS Type: Glide Slope for runway 13L. Magnetic variation: 13W
2.19.2 ILS Identification: TLK
2.19.5 Coordinates: 40-39-14.7492N / 73-47-04.86W
2.19.6 Site Elevation: 10 ft

2.19.1 ILS Type: Localizer for runway 13L. Magnetic variation: 13W
2.19.2 ILS Identification: TLK
2.19.5 Coordinates: 40-38-30.6889N / 73-45-18.5787W
2.19.6 Site Elevation: 13.4 ft

2.19.1 ILS Type: DME for runway 31R. Magnetic variation: 13W
2.19.2 ILS Identification: RTH
2.19.5 Coordinates: 40-38-33.5365N / 73-45-18.2409W
2.19.6 Site Elevation: 29.5 ft

2.19.1 ILS Type: Glide Slope for runway 31R. Magnetic variation: 13W
2.19.2 ILS Identification: RTH
2.19.5 Coordinates: 40-38-50.3296N / 73-45-51.0221W
2.19.6 Site Elevation: 9.6 ft

2.19.1 ILS Type: Localizer for runway 31R. Magnetic variation: 13W
2.19.2 ILS Identification: RTH
2.19.5 Coordinates: 40-39-30.7866N / 73-47-31.1174W
2.19.6 Site Elevation: 11.5 ft

2.19.1 ILS Type: Glide Slope for runway 31L. Magnetic variation: 13W

2.19.2 ILS Identification: MOH
2.19.5 Coordinates: 40-37-59.8724N / 73-47-09.4083W
2.19.6 Site Elevation: 8.6 ft

2.19.1 ILS Type: Localizer for runway 31L. Magnetic variation: 13W
2.19.2 ILS Identification: MOH
2.19.5 Coordinates: 40-38-59.6562N / 73-49-12.4887W
2.19.6 Site Elevation: 12.4 ft

2.19.1 Navigation Aid Type VOR/DME. Magnetic variation: 12W
2.19.2 Navigation Aid Identification: JFK
2.19.5 Coordinates: 40-37-58.3816N / 73-46-17.0103W
2.19.6 Site Elevation: 9.5 ft

General Remarks:

TWY Z BTN RWY 04L & 22R AND TWY Y CLSD UFN.

PERIODIC FIRE DEPT TRNG ADJACENT APCH END OF RWYS 22L & 22R.

CONTINUOUS TAXIWAY MAINTENANCE ACTIVITIES AT NUMEROUS LOCATIONS

JFK APN BLDG 73 RAMP CLSD TO ACFT WINGSPAN MORE THAN 171FT EXC UNDER TOW.

RY 13R HAS TWO (2) PAPI - P4L SYSTEMS. (RY 13R) OFFSET PAPI SUPPORTS VOR OR GPS RWY 13R & PARKWAY VISUAL RY 13R.

METERING PROCEDURES IN EFFECT- CONTACT RAMP CONTROL PRIOR TO PUSHBACK 1200Z-1500Z DAILY/1900Z-0300Z DAILY.

NON-STD MARKINGS IN GA APN, CTC FBO ON UNICOM OR 347-566-6620 FOR WING WALKERS.

TWY 'H' CL LGTS BTN TWY 'A' & RY 4L/22R OTS.

ACFT ARE NOT PMTD TO STOP ON EITHER TWY A OR B BRIDGES.

CONVERGING OPNS ON RYS 13R AND 22L CONDUCTED VIA ARRIVAL DISTANCE WINDOW.

PARA-SAIL & BANNER TOWING OPNS 1000 FT & BLO IN UPPER & LOWER NEW YORK BAYS INCLUDING ROCKAWAY INLET INDEFLY.

FLOCKS OF BIRDS ON & INVOF ARPT.

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.

A380 AND B747-800 ACFT TAX SPD RESTRICTED TO MAX 17KTS/20MPH ON ALL TWYS.

GAT HELIPAD NON-STANDARD MARKINGS & LIGHTING.

HIGH VOLUME OF LOW LEVEL VFR TRAFFIC, 500 FT AND BLO, ALONG SHORELINE SOUTH OF JFK.

SPECIAL AIR TFC RULES-PART 93 HIGH DENSITY ARPT. PROR RESERVATION REQUIRED. SEE AERONAUTICAL INFORMATION MANUAL.

TWY 'H' CL LGTS BTN TERMINAL 4 RAMP AND TWY A OTS.

RY 31R HOLDING POSITION MARKINGS AT RY 4L/22R 'SE' SIDE OBSC.

TWY NB CLSD TO SB TURNS AT TWY A.

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).

FOR NOISE ABATEMENT RSTRNS CALL 212-435-3782 DURG NML BUS HRS.

OBST PARKED ACFT (ASN 2020-AEA-1302-NRA) 403933 N0734749W (1.4NM NW JFK) 74 (64FT AGL) U/S 1200-0100 DLY.

RWY 31R 1000 FT DIST REMAINING SIGN MISG.

RWY STATUS LGTS IN OPS.

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 APROXLY 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.

ACFT OPS & TWY RESTRICTIONS EXIST FOR A380, B747-800, B777-300ER, A340-600 AND A350-1000. PLEASE CTC JFK ARPT OPS FOR MORE INFO.

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, AND A350

RY 13L HOLDING POSITION MARKINGS AT RY 4L/22R 'NW' SIDE OBSC.

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)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 A+
- 2.4.5 Hangar Space:
- 2.4.6 Repair Facilities: MINOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 7/1/1974
- 2.6.2 Rescue and Firefighting Services: ARFF Index-B

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 06
- 2.12.2 True Bearing: 50
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 585.8

- 2.12.1 Designation: 24
- 2.12.2 True Bearing: 230
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 592.3

- 2.12.1 Designation: 10L
- 2.12.2 True Bearing: 90
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 588.8

2.12.1 Designation: 28R
2.12.2 True Bearing: 270
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 588.3

2.12.1 Designation: 10R
2.12.2 True Bearing: 90
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 584.1

2.12.1 Designation: 28L
2.12.2 True Bearing: 270
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 584.8

AD 2.13 Declared Distances

2.13.1 Designation: 06
2.13.2 Take-off Run Available: 5188
2.13.3 Take-off 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 Take-off Run Available: 5188
2.13.3 Take-off Distance Available: 5188
2.13.4 Accelerate-Stop Distance Available: 5108
2.13.5 Landing Distance Available: 5108

2.13.1 Designation: 10L
2.13.2 Take-off Run Available: 9829
2.13.3 Take-off 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 Take-off Run Available: 9829
2.13.3 Take-off Distance Available: 10529
2.13.4 Accelerate-Stop Distance Available: 9129
2.13.5 Landing Distance Available: 9129

2.13.1 Designation: 10R

2.13.2 Take-off Run Available: 3973
2.13.3 Take-off 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 Take-off Run Available: 3973
2.13.3 Take-off Distance Available: 3973
2.13.4 Accelerate-Stop Distance Available: 3973
2.13.5 Landing Distance Available: 3973

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 06
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 24
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 10L
2.14.2 Approach Lighting System:
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

2.14.1 Designation: 10R
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P2L

2.14.1 Designation: 28L
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P2L

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: AFRC OPS
2.18.3 Channel: 340.24
2.18.5 Hours of Operation:

2.18.1 Service Designation: ATIS
2.18.3 Channel: 120.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ATIS
2.18.3 Channel: 269.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 119.25

2.18.5 Hours of Operation: 0700-2300

2.18.1 Service Designation: CD/P

2.18.3 Channel: 251.1

2.18.5 Hours of Operation: 0700-2300

2.18.1 Service Designation: COMD POST (914 AW COMD POST/AFLD MGMT)

2.18.3 Channel: 340.025

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 125.3

2.18.5 Hours of Operation: 0700-2300

2.18.1 Service Designation: GND/P

2.18.3 Channel: 275.8

2.18.5 Hours of Operation: 0700-2300

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 118.5

2.18.5 Hours of Operation: 0700-2300

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 349

2.18.5 Hours of Operation: 0700-2300

2.18.1 Service Designation: NG OPS

2.18.3 Channel: 41

2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

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: 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: 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

2.19.1 Navigation Aid Type TACAN. Magnetic variation: 10W

2.19.2 Navigation Aid Identification: IAG

2.19.5 Coordinates: 43-06-45.1638N / 78-57-36.8623W

2.19.6 Site Elevation: 591.5 ft

General Remarks:

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.

FLUID: SP.

JASU: 2(A/M32A-86) 1(AM32A-60) 1(MA-1A).

FUEL: J8, A++ (MIL).

MISC: LOCAL MISSION AIRCRAFT HAVE PRIORITY FOR DEICING; FULL AIRCRAFT DEICING FOR C-17 AND C-5 AIRCRAFT NOT AVAILABLE.

INTXN DEPS RWY 24 AT TWY D1 ARE NA.

ALL MIL ACFT ONLY MINIMAL CLASSIFIED MATERIALS AVBL; AIRCREWS SHOULD ARRIVE WITH APPROPRIATE AMOUNT TO COMPLETE THEIR MISSION.

EXTSV ACFT ACTIVITY OPERATING INVOF US/CANADIAN FALLS ALL ALTS.

RWY 28R 1000 FT BY 150 FT BLAST PAD

AFLD MGMT DOES NOT ISSUE OR STORE COMSEC, FOR COMSEC STORAGE CTC COMMAND POST DSN 238-2150, C716-236-2150.

OIL: O-148(MIL).

BEARING STRENGTH RWY 06/24: ST110 TT145 SBTT281TDT415 TRT252.

PILOTS ARE REMINDED TO REVIEW ARPT HOTSPOT INFO BFR TXG FOR DEP & BFR LNDG. SEE TPP ARPT DIAGRAM AND CHART SUPPL SXN ON HOTSPOTS FOR ADDNL INFO.

REMARKS: SEE FLIP AP/1 SUPPLEMENTARY ARPT RMK.

AFRC/ANG: CSTMS/AG/IMG SVC NOT LCTD ON NIAGARA FALLS ARS. SVC AVBL H24.

AFRC/ANG: NSTD OPS APN MRKS IDENTIFYING PRKG ROW AND PRKG LCTN. NSTD MAIN APN MRKS PRKG STOP BAR AND ACFT GND EQPT (AGE) BOX.

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 PHOHIBITED WO OG/CC APPROVAL; CTC COMMAND POST FOR CURRENT BIRD WATCH CONDITIONS.

TWY D3 RSTRD TO 12500 LBS OR LESS.

MILITARY: MISC: FOR CURRENT MIL RWY CONDITION READING (RCR) CALL OR CTC 914 ARW COMD POST OR 914TH ARW AFLD MANAGEMENT.

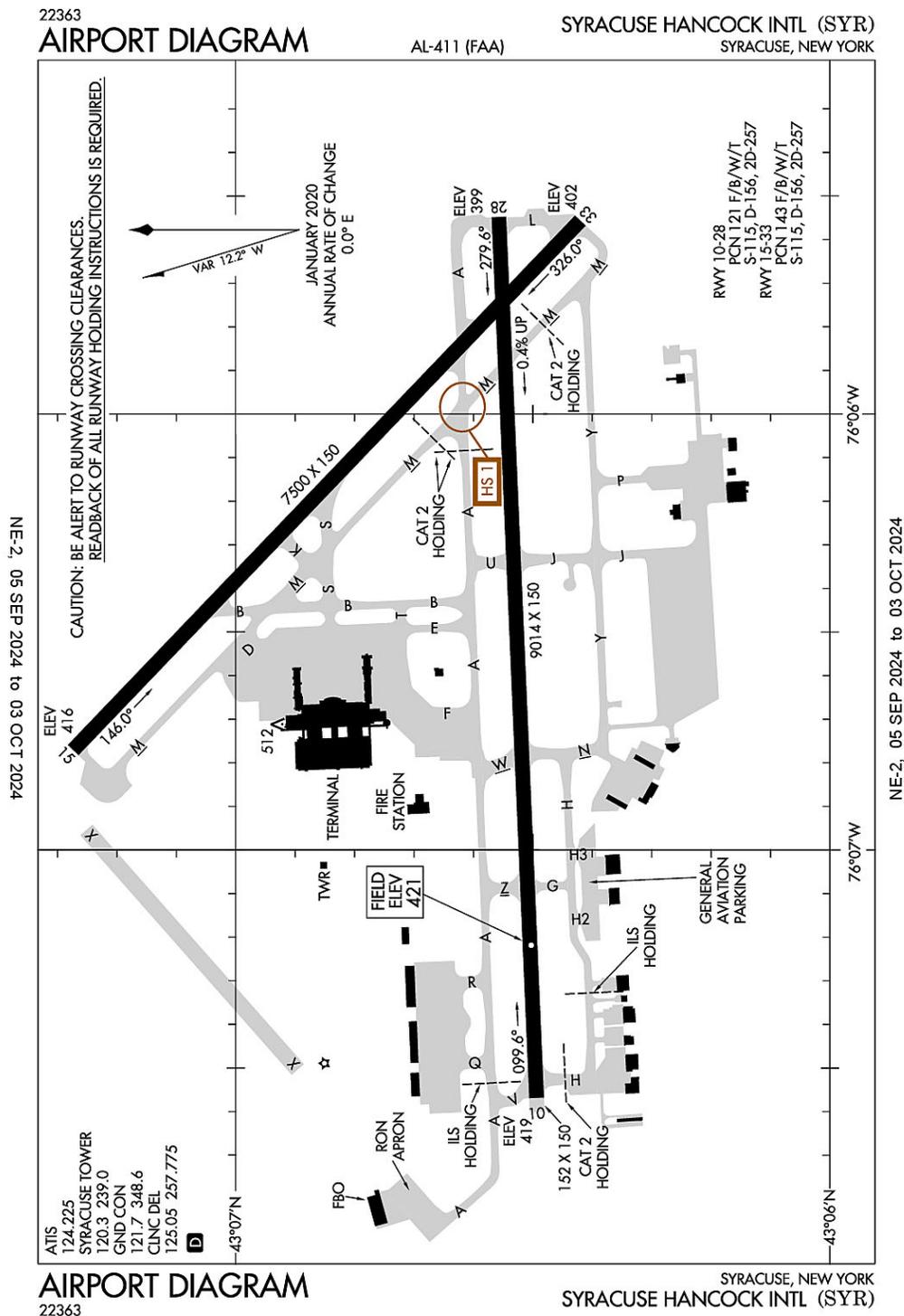
PPR CTC AFLD MGT DSN: 238-2176, C716-236-2176. AFLD MGMT RQR 48 HR ADVANCE NOTICE FOR PPR AND WILL ARRANGE U.S. CUSTOMS IF NEEDED. U.S. CUSTOMS NOT ON STATION.

MILITARY: AFRC/ANG: AIRFIELD OPS SVC 1200-0400Z++ MON-FRI EXC HOL. TWYS A, A1, A2, AND A3 PAINTED MRK FADED AND RETRO-REFLECTIVITY INEFFECTIVE.

TWY A, A1, A2, A3, M & L NON-MOV AREAS.

FOR CD WHEN ATCT CLSD CTC BUFFALO ATCT ON FREQ OR 716-626-6920.

Syracuse, New York Syracuse Hancock International ICAO Identifier KSYR



Syracuse, NY
Syracuse Hancock Intl
ICAO Identifier KSYR

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 43-06-40.252N / 76-06-22.753W
- 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: JASON TERRERI
1000 COL EILEEN COLLINS BLVD
SYRACUSE, NY 13212 (315-454-3263)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 10
- 2.12.2 True Bearing: 87
- 2.12.3 True Dimensions: 9014 ft x 150 ft
- 2.12.4 PCN: 121 F/B/W/T
- 2.12.5 Coordinates: 43-06-29.5015N / 76-07-34.2763W
- 2.12.6 Threshold Elevation: 418.5
- 2.12.6 Touchdown Zone Elevation: 421.4

- 2.12.1 Designation: 28
- 2.12.2 True Bearing: 267
- 2.12.3 True Dimensions: 9014 ft x 150 ft
- 2.12.4 PCN: 121 F/B/W/T
- 2.12.5 Coordinates: 43-06-33.4984N / 76-05-32.8925W
- 2.12.6 Threshold Elevation: 399
- 2.12.6 Touchdown Zone Elevation: 412.3

- 2.12.1 Designation: 15
- 2.12.2 True Bearing: 134
- 2.12.3 True Dimensions: 7500 ft x 150 ft
- 2.12.4 PCN: 143 F/B/W/T
- 2.12.5 Coordinates: 43-07-16.4185N / 76-06-46.2005W
- 2.12.6 Threshold Elevation: 415.5
- 2.12.6 Touchdown Zone Elevation: 416.8

- 2.12.1 Designation: 33
- 2.12.2 True Bearing: 314
- 2.12.3 True Dimensions: 7500 ft x 150 ft
- 2.12.4 PCN: 143 F/B/W/T
- 2.12.5 Coordinates: 43-06-25.1095N / 76-05-33.2753W
- 2.12.6 Threshold Elevation: 401.7
- 2.12.6 Touchdown Zone Elevation: 409.4

AD 2.13 Declared Distances

- 2.13.1 Designation: 10
- 2.13.2 Take-off Run Available: 9014
- 2.13.3 Take-off Distance Available: 9014
- 2.13.4 Accelerate-Stop Distance Available: 9014
- 2.13.5 Landing Distance Available: 9014

- 2.13.1 Designation: 28
- 2.13.2 Take-off Run Available: 9014
- 2.13.3 Take-off Distance Available: 9014
- 2.13.4 Accelerate-Stop Distance Available: 9014
- 2.13.5 Landing Distance Available: 9014

- 2.13.1 Designation: 15
- 2.13.2 Take-off Run Available: 7500
- 2.13.3 Take-off 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 Take-off Run Available: 7500
- 2.13.3 Take-off 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: 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

- 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
- 2.14.2 Approach Lighting System:
- 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 Channel: 379.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: APCH/P DEP/P

2.18.3 Channel: 134.275

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P

2.18.3 Channel: 279.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC

2.18.3 Channel: 126.125

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC

2.18.3 Channel: 269.125

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: AR OPS

2.18.3 Channel: 245.3

2.18.5 Hours of Operation:

2.18.1 Service Designation: ATIS

2.18.3 Channel: 124.225

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 125.05

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 257.775

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C

2.18.3 Channel: 126.125

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C

2.18.3 Channel: 269.125

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 348.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 120.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 239

2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

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: 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 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: 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: 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: 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

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 11W
2.19.2 Navigation Aid Identification: SYR
2.19.5 Coordinates: 43-09-37.8684N / 76-12-16.4106W
2.19.6 Site Elevation: 453.2 ft

General Remarks:

DEER/COYOTE/BIRDS ON INVOF ARPT.

NON-STD MKG ON MIL RAMP.

ANG: HVY ACFT CTC ARPT COMMISSIONER FOR PRK AVBL AT C315-455-3666. ALL TRAN ACFT RQR NS ABTMT BRIEFING.

UAS OPS IN SYRACUSE APCH/DEP AIRSPACE WILL BE CONTROLLED BY SYR ATC AT ALL TIMES.

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.

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.

NO CHARTER OPER THRU PASSENGER TERMINAL BLDG WITHOUT PRIOR PERMISSION.

RSTD: TWY J AND P SOUTH OF TWY Y CLSD TO CIV OPS.

NOISE ABATEMENT PROCEDURES IN EFFECT.

MILITARY: COMMUNICATIONS - ANG - OPS - 140.425 379.5 REMARKS: (COBRA OPS) CTC ANG OPS 15 MIN PRIOR TO ARR.

NO JET ENGINE MAINT RUNS ABOVE IDLE BTWN 2300-0600.

CAUTION: TWY J AND P SOUTH OF TWY Y AND ANG RAMP HAVE UNCTL VEH AND EQPT TFC.

UAS OPERATE WITHIN THE CONFINES OF THE SYRACUSE CLASS C, TIMES VARY.

MILITARY: ANG: OPR 1030-2100Z++ MON-THUR EXC HOL. PPR TRANS ACFT OFFL BUS ONLY. AFLD MGR DSN 243-2399, C315-233-2399, AFT DUTY HR CTC C315-233-2399. PPR REQ FOR ALL TRAN ACFT DUE LTD TRANS SVC. NTFY AFLD MGR OF ETA DELAY OVER 30 MIN OR MSN CNL IS RQR.

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: 5 miles W of CHARLOTTE, NC
- 2.2.3 Elevation: 747.9 ft
- 2.2.5 Magnetic Variation: 7W (2000)
- 2.2.6 Airport Contact: HALEY GENTRY
5601 WILKINSON BLVD.
CHARLOTTE, NC 28208 (704-359-4000)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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:
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 23
- 2.12.2 True Bearing: 228
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 746.7

- 2.12.1 Designation: 05
- 2.12.2 True Bearing: 48
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 715.6

- 2.12.1 Designation: 18C
- 2.12.2 True Bearing: 176
- 2.12.3 True Dimensions: 10000 ft x 150 ft
- 2.12.4 PCN: 82 R/B/W/T
- 2.12.5 Coordinates: 35-13-38.6269N / 80-57-11.4094W
- 2.12.6 Threshold Elevation: 742
- 2.12.6 Touchdown Zone Elevation: 742

2.12.1 Designation: 36C
2.12.2 True Bearing: 356
2.12.3 True Dimensions: 10000 ft x 150 ft
2.12.4 PCN: 82 R/B/W/T
2.12.5 Coordinates: 35-11-59.9721N / 80-57-02.9217W
2.12.6 Threshold Elevation: 692.2
2.12.6 Touchdown Zone Elevation: 706.7

2.12.1 Designation: 18L
2.12.2 True Bearing: 176
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 747.9

2.12.1 Designation: 36R
2.12.2 True Bearing: 356
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 726.9

2.12.1 Designation: 36L
2.12.2 True Bearing: 356
2.12.3 True Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 63 R/B/W/T
2.12.5 Coordinates: 35-12-02.2277N / 80-57-55.0671W
2.12.6 Threshold Elevation: 743.9
2.12.6 Touchdown Zone Elevation: 743.9

2.12.1 Designation: 18R
2.12.2 True Bearing: 176
2.12.3 True Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 63 R/B/W/T
2.12.5 Coordinates: 35-13-31.0182N / 80-58-02.707W
2.12.6 Threshold Elevation: 744
2.12.6 Touchdown Zone Elevation: 744

AD 2.13 Declared Distances

2.13.1 Designation: 23
2.13.2 Take-off Run Available: 7502
2.13.3 Take-off Distance Available: 7502
2.13.4 Accelerate-Stop Distance Available: 7502
2.13.5 Landing Distance Available: 7502

2.13.1 Designation: 05
2.13.2 Take-off Run Available: 7502
2.13.3 Take-off Distance Available: 7502

2.13.4 Accelerate-Stop Distance Available: 7092
2.13.5 Landing Distance Available: 7092

2.13.1 Designation: 18C
2.13.2 Take-off Run Available: 10000
2.13.3 Take-off 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 Take-off Run Available: 10000
2.13.3 Take-off 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 Take-off Run Available: 8676
2.13.3 Take-off 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 Take-off Run Available: 8676
2.13.3 Take-off Distance Available: 8676
2.13.4 Accelerate-Stop Distance Available: 8390
2.13.5 Landing Distance Available: 8390

2.13.1 Designation: 36L
2.13.2 Take-off Run Available: 9000
2.13.3 Take-off 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 Take-off Run Available: 9000
2.13.3 Take-off 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: 23
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4R

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: 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:
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: 36L
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

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: ALCP
2.18.3 Channel: 292.25
2.18.5 Hours of Operation:

2.18.1 Service Designation: APCH/P
2.18.3 Channel: 126.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (120-295 8000 FT & BLW)
2.18.3 Channel: 120.05
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (246-074 ABV 8000 FT)
2.18.3 Channel: 120.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (075-245 ABV 8000 FT)
2.18.3 Channel: 124
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (001-119 8000 FT & BLW)
2.18.3 Channel: 128.325
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (296-360 8000 FT & BLW)
2.18.3 Channel: 134.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (180-359)

2.18.3 Channel: 257.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (360-179)

2.18.3 Channel: 307.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BANKR STAR

2.18.3 Channel: 135.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BANKR STAR

2.18.3 Channel: 377.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BARMY DP

2.18.3 Channel: 124

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BARMY DP

2.18.3 Channel: 307.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BEAVY DP (RWY 36L, 36C)

2.18.3 Channel: 120.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BEAVY DP (RWY 18L, 18R, 18C, 36R)

2.18.3 Channel: 124

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BEAVY DP (RWY 36L, 36C)

2.18.3 Channel: 257.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BEAVY DP (RWY 18R, 18L, 18C, 36R)

2.18.3 Channel: 307.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BOBZY DP

2.18.3 Channel: 120.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BOBZY DP

2.18.3 Channel: 257.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BTSEY STAR

2.18.3 Channel: 125.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 127.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 348.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CHARLOTTE DP (BUCKL TRANSITION, RWY 18L, 18R, 18C, 36R)
2.18.3 Channel: 307.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CHARLOTTE DP (HARAY & PITY TRANSITIONS. RWY 36L, 36C)
2.18.3 Channel: 120.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CHARLOTTE DP (BUCKL, GANTS, LILLS & RUNIE TRANSITIONS.)
2.18.3 Channel: 124
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CHARLOTTE DP (RWY 18L, 18R, 18C, 36R)
2.18.3 Channel: 124
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CHARLOTTE DP (HARAY & PITY TRANSITION. RWY 36L, 36C)
2.18.3 Channel: 257.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CHARLOTTE DP (GANTS, LILLS & RUNIE TRANSITIONS)
2.18.3 Channel: 307.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CHSLY STAR
2.18.3 Channel: 126.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CHSLY STAR
2.18.3 Channel: 282.325
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (120-295 8000 FT & BLW)
2.18.3 Channel: 120.05
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (246-074 ABV 8000 FT)
2.18.3 Channel: 120.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (075-245 ABV 8000 FT)
2.18.3 Channel: 124
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (001-119 8000 FT & BLW)
2.18.3 Channel: 128.325
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (296-360 8000 FT & BLW)
2.18.3 Channel: 134.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (180-359)
2.18.3 Channel: 257.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (360-179)
2.18.3 Channel: 307.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (ARR)
2.18.3 Channel: 121.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (DEP)
2.18.3 Channel: 132.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: ESTRR DP
2.18.3 Channel: 120.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ESTRR DP
2.18.3 Channel: 257.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: FILPZ STAR
2.18.3 Channel: 125.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: FILPZ STAR
2.18.3 Channel: 257.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (WEST)
2.18.3 Channel: 121.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (EAST)

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 348.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ICONS DP (RWY 36L, 36C)

2.18.3 Channel: 120.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ICONS DP (RWY 18L, 18R, 18C, 36R)

2.18.3 Channel: 124

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ICONS DP (RWY 36L, 36C)

2.18.3 Channel: 257.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ICONS DP (RWY 18R, 18L, 18C, 36R)

2.18.3 Channel: 307.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: JOJJO DP

2.18.3 Channel: 120.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: JOJJO DP

2.18.3 Channel: 257.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: JONZE STAR

2.18.3 Channel: 135.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: JONZE STAR

2.18.3 Channel: 377.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: JOOLS STAR

2.18.3 Channel: 135.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: JOOLS STAR

2.18.3 Channel: 377.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KERMIT DP (235-055)

2.18.3 Channel: 120.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KERMIT DP (055-235)

2.18.3 Channel: 124

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KERMIT DP (235-055)

2.18.3 Channel: 257.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KERMIT DP (055-235)

2.18.3 Channel: 307.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KILNS DP

2.18.3 Channel: 124

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KILNS DP

2.18.3 Channel: 307.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KNIGHTS DP (DEBIE, NEANO TRANSITIONS)

2.18.3 Channel: 120.05

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KNIGHTS DP (FLYYN, CEGAL TRANSITIONS, 18L, 18C, 18R)

2.18.3 Channel: 120.05

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KNIGHTS DP (FLYYN, CEGAL TRANSITIONS RWY 36L, 36C, 36R)

2.18.3 Channel: 120.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KNIGHTS DP (055-235)

2.18.3 Channel: 128.325

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KNIGHTS DP (PEKNN, LILLS, HAMLN, ANDYS TRANSITIONS)

2.18.3 Channel: 128.325

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KNIGHTS DP (235-055)

2.18.3 Channel: 257.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KNIGHTS DP (055-235)

2.18.3 Channel: 307.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KRITR DP
2.18.3 Channel: 120.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KRITR DP
2.18.3 Channel: 257.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KWEEN DP (RWY 36L, 36C)
2.18.3 Channel: 120.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KWEEN DP (RWY 18L, 18R, 18C, 36R)
2.18.3 Channel: 124
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KWEEN DP (RWY 36L, 36C)
2.18.3 Channel: 257.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KWEEN DP (RWY 18R, 18L, 18C, 36R)
2.18.3 Channel: 307.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 18L/36R)
2.18.3 Channel: 118.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 18C/36C)
2.18.3 Channel: 126.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 18R/36L)
2.18.3 Channel: 133.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 257.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LIINN STAR
2.18.3 Channel: 125.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LIINN STAR
2.18.3 Channel: 257.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LILLS DP
2.18.3 Channel: 124
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LILLS DP
2.18.3 Channel: 307.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MAJIC STAR
2.18.3 Channel: 126.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MAJIC STAR
2.18.3 Channel: 282.325
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MLEET STAR
2.18.3 Channel: 126.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MLEET STAR
2.18.3 Channel: 282.325
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PARQR STAR
2.18.3 Channel: 125.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PARQR STAR
2.18.3 Channel: 257.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RASLN STAR
2.18.3 Channel: 126.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RASLN STAR
2.18.3 Channel: 282.325
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: STOCR STAR
2.18.3 Channel: 126.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: STOCR STAR
2.18.3 Channel: 282.325
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: UNARM STAR
2.18.3 Channel: 135.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: UNARM STAR
2.18.3 Channel: 377.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: WEAZL DP

2.18.3 Channel: 120.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: WEAZL DP

2.18.3 Channel: 257.2

2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

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: 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: 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: 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 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: 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: 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 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: 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: Localizer for runway 36C. Magnetic variation: 7W
2.19.2 ILS Identification: DQG
2.19.5 Coordinates: 35-13-49.83N / 80-57-12.38W
2.19.6 Site Elevation: 748.3 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: 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: 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: 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: 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: 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

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: DME for runway 36L. Magnetic variation: 7W
2.19.2 ILS Identification: XUU
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: Glide Slope for runway 36L. Magnetic variation: 7W
2.19.2 ILS Identification: XUU
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: Inner Marker for runway 36L. Magnetic variation: 7W
2.19.2 ILS Identification: XUU
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: Localizer for runway 36L. Magnetic variation: 7W
2.19.2 ILS Identification: XUU
2.19.5 Coordinates: 35-13-41.4048N / 80-58-03.6016W
2.19.6 Site Elevation: 737.3 ft

2.19.1 Navigation Aid Type VOR/DME. Magnetic variation: 5W
2.19.2 Navigation Aid Identification: CLT
2.19.5 Coordinates: 35-11-25.0392N / 80-57-06.3124W
2.19.6 Site Elevation: 731.7 ft

General Remarks:

TWY C10 RSTRD TO ACFT WITH WINGSPAN LESS THAN 171 FT WHEN EXITING RWY.

GROUP VI ACFT WITH A WINGSPAN GTR THAN 214 FT (65M) ARE PROHIBITED ON TWY M BETWEEN THE TRML RAMP AND TWY C, AS WELL AS TWY C NORTH OF TWY M.

CLT RAMP, NON-MOVMT AREA, IS CTLD RAMP; CTC RAMP CTL PRIOR TO ENTERING.

TWY C10 UNUSBL FOR TXG ONTO RWY 18L/36R.

MILITARY: ANG: CTC COMD POST 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.

TRML RAMP ORANGE TXL AT SPOT 28N BETWEEN CONCOURSE D & E ALLEY MAX WINGSPAN 94 FT.

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.

RWY SFC COND INFO DURG DUTY HRS PHONE ANG OPS V583-9177/9144 OR AIRBORNE 292.2.

TRML RAMP BLUE TXL AT SPOT 28S BTN CONCOURSE D & E ALLEY MAX WINGSPAN 118 FT.

DUAL TAXI BTN DEP CALL SPOTS 22/23 AND 24N/24S RSTRD TO ACFT WITH WINGSPANS LESS THAN 118 FT.

TRML RAMP BLUE TXL FROM SPOT 29W TO SPOT 34S MAX WINGSPAN 82 FT.

ALL ACFT ARE PROHIBITED FM EXITING RWY 36R SEBD AT TWY R.

RWY STATUS LGTS IN OPR.

TWY C4 AND C6: WHEN TAXIING AIRCRAFT WITH COCKPIT TO MAIN GEAR DISTANCE GREATER THAN 90 FT, PILOT MUST PERFORM JUDGEMENTAL OVERSTEERING INSTEAD OF COCKPIT OVER CENTERLINE STEERING.

TWY D, RESTRICTED TO 15 MPH OR LESS WITH WINGSPAN 171 FT AND GREATER.

AIRPLANE DESIGN GROUP-V AND ABV ACFT ARE PROHIBITED FM DEP RWY 18L.

TRML RAMP ORANGE TXL FROM SPOT 26S TO SPOT 27E MAX WINGSPAN 118 FT.

GROUP IV ACFT WITH A WINGSPAN GTR THAN 118 FT ARE PROHIBITED FM EXITING RWY 18L/36R AT TWY C10.

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.

TRML RAMP BLUE TXL FROM SPOT 26N TO SPOT 27W MAX WINGSPAN 118 FT.

BE ALERT FOR FLOCKS OF MIGRATORY BIRDS ON & INVOF ARPT.

GROUP III ACFT WITH A WINGSPAN GTR THAN 79 FT ARE PROHIBITED FM MAKING A SBND TURN ONTO TWY C WHEN TAXIING NWBND ON TWY R.

TWY C FROM THE APCH OF RWY 18L TO RWY 05/23, AND TWY M FROM THE APRON TO RWY 18L/36R RSTRD TO 15 MPH OR LESS WITH WINGSPAN 171 FT AND GTR.

TRML RAMP YELLOW TXL FROM SPOT 29C TO SPOT 33C MAX WINGSPAN 118 FT.

TRML RAMP ORANGE TXL FROM SPOT 29E TO SPOT 34N MAX WINGSPAN 82 FT.

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
RALEIGH-DURHAM ARPT AUTH
RDU AIRPORT, NC 27623 ((919) 840-7701)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-D

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 05L
- 2.12.2 True Bearing: 45
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 384.3

- 2.12.1 Designation: 23R
- 2.12.2 True Bearing: 225
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 408.6

- 2.12.1 Designation: 05R
- 2.12.2 True Bearing: 45
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 419.8

2.12.1 Designation: 23L
2.12.2 True Bearing: 225
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 435.2

2.12.1 Designation: 14
2.12.2 True Bearing: 135
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 432.1

2.12.1 Designation: 32
2.12.2 True Bearing: 315
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 428.7

AD 2.13 Declared Distances

2.13.1 Designation: 05L
2.13.2 Take-off Run Available: 10000
2.13.3 Take-off 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 Take-off Run Available: 10000
2.13.3 Take-off 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 Take-off Run Available: 7500
2.13.3 Take-off 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 Take-off Run Available: 7500
2.13.3 Take-off Distance Available: 7500
2.13.4 Accelerate-Stop Distance Available: 7500
2.13.5 Landing Distance Available: 7500

2.13.1 Designation: 14

2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: 32
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

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: 14
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 32
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: APCH/P (055-229)
2.18.3 Channel: 124.95
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (055-229)
2.18.3 Channel: 318.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P IC (230-054)
2.18.3 Channel: 127.675
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P IC (230-054)
2.18.3 Channel: 307.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BEXGO DP

2.18.3 Channel: 132.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BEXGO DP

2.18.3 Channel: 256.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BLOGS STAR

2.18.3 Channel: 124.95

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BLOGS STAR

2.18.3 Channel: 318.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BRADE STAR

2.18.3 Channel: 124.95

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BRADE STAR

2.18.3 Channel: 318.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BUZZY STAR

2.18.3 Channel: 127.675

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BUZZY STAR

2.18.3 Channel: 307.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 120.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (055-229)

2.18.3 Channel: 125.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (230-054)

2.18.3 Channel: 132.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (230-054)

2.18.3 Channel: 256.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (055-229)

2.18.3 Channel: 353.675

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 123.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (055-229)

2.18.3 Channel: 125.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (230-054)

2.18.3 Channel: 132.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (230-054)

2.18.3 Channel: 256.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (055-229)

2.18.3 Channel: 353.675

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (SOUTH)

2.18.3 Channel: 353.675

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DMSTR STAR

2.18.3 Channel: 127.675

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DMSTR STAR

2.18.3 Channel: 307.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: FINAL (EAST)

2.18.3 Channel: 285.425

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: FINAL CTL

2.18.3 Channel: 124.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (WEST, RWY 05L/23R)

2.18.3 Channel: 121.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (EAST, RWY 05R/23L, 14/32)
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 348.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: HOOKZ DP
2.18.3 Channel: 125.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: HOOKZ DP
2.18.3 Channel: 353.675
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: HURIC DP
2.18.3 Channel: 125.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: HURIC DP
2.18.3 Channel: 353.675
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (WEST, RWY 05L/23R)
2.18.3 Channel: 119.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (EAST, RWY 05R/23L, 14/32)
2.18.3 Channel: 127.45
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 257.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LWOOD DP
2.18.3 Channel: 132.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LWOOD DP
2.18.3 Channel: 256.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: OXFRD DP
2.18.3 Channel: 132.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: OXFRD DP
2.18.3 Channel: 256.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PACKK DP (055-229)
2.18.3 Channel: 125.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PACKK DP (230-054)
2.18.3 Channel: 132.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PACKK DP (230-054)
2.18.3 Channel: 256.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PACKK DP (055-229)
2.18.3 Channel: 353.675
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RALEIGH DP (055-229)
2.18.3 Channel: 125.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RALEIGH DP (230-054)
2.18.3 Channel: 132.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RALEIGH DP (230-054)
2.18.3 Channel: 256.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RALEIGH DP (055-229)
2.18.3 Channel: 353.675
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ROZBO DP
2.18.3 Channel: 125.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ROZBO DP
2.18.3 Channel: 353.675
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SHPRD DP
2.18.3 Channel: 132.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SHPRD DP
2.18.3 Channel: 256.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TAQLE STAR
2.18.3 Channel: 124.95

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TAQLE STAR

2.18.3 Channel: 318.2

2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

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: 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: 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: 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

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 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 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: 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: 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: 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 Navigation Aid Type VORTAC. Magnetic variation: 9W
2.19.2 Navigation Aid Identification: RDU
2.19.5 Coordinates: 35-52-21.0761N / 78-47-00.0316W
2.19.6 Site Elevation: 429.2 ft

General Remarks:

NG 24 HR PPR FOR JET ACFT & TRANS MIL ACFT - 919-840-7510.

TWY E BEHIND SOUTH CARGO 4 & TWY J BEHIND CORPORATE HANGARS NOT VSBL FM ATCT.

TWY F5 IS CLSD UFN.

TWY C BTN TWY F AND G IS RSTRD TO ACFT LESS THAN A MAX GROSS TKOF WEIGHT OF 490000 LBS.

NO JET ENGINE MAINTENANCE RUNS BETWEEN 0000-0600.

ARPT CLSD TO AIRSHIPS.

NG PPR FOR LDG CTC V582-9181 C(919)664-9181.

ARNG: LTD PRK. ARNG OPS C984-661-6200. 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. OSACOM FLT DET C984-661-6202.

TWY D CLSD TO ACFT WITH WINGSPAN MORE THAN 171 FT WHEN TWY G AND H ARE OCCUPIED.

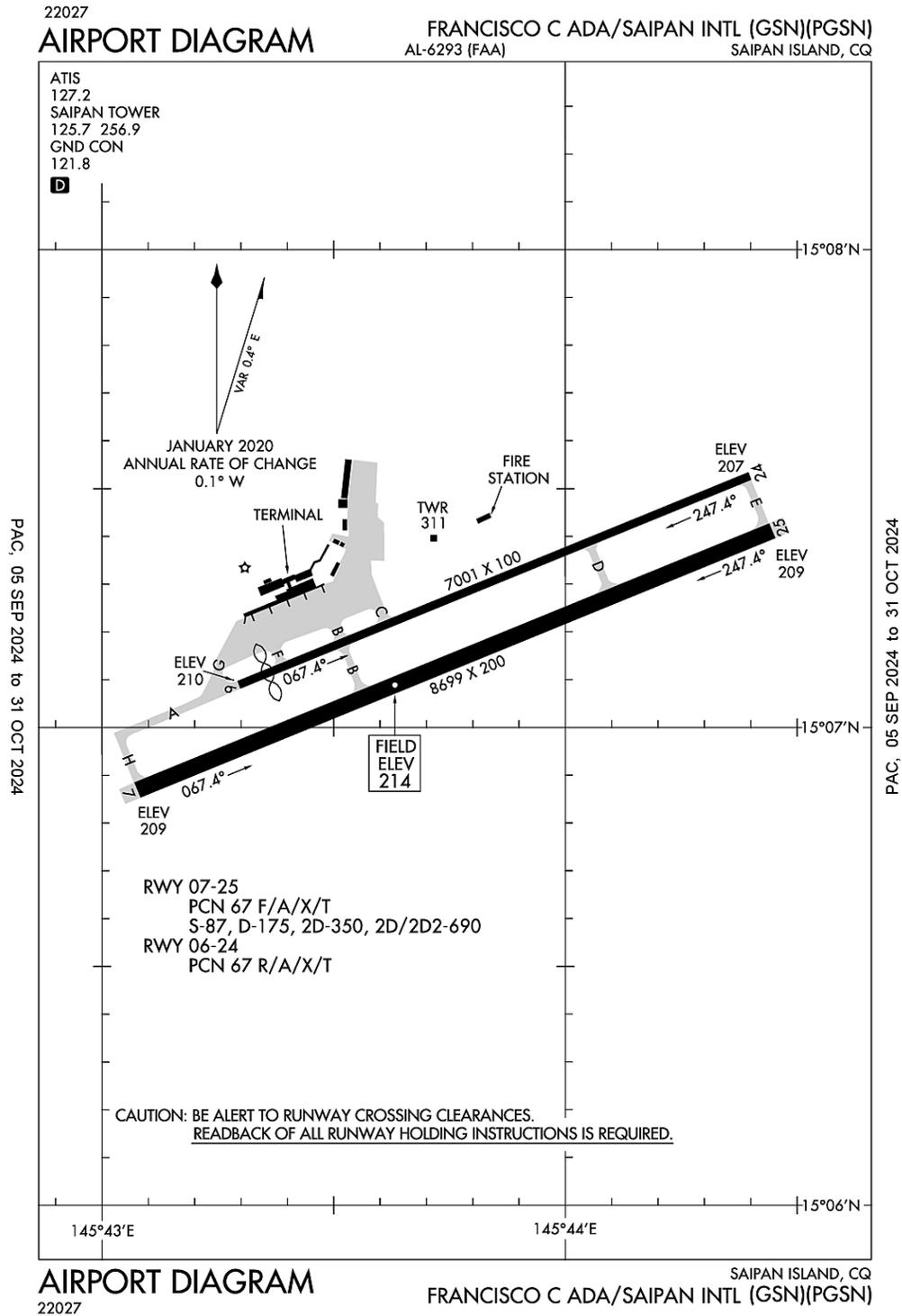
TRML 1 ACFT MUST CTC ATC ON 121.9 PRIOR TO PUSH ONTO TWY A. TRML 2 ACFT MUST CTC RAMP TWR ON 130.175 PRIOR TO PUSH. NORTH CARGO APRON ADG IV OR V ACFT MUST CTC ATC ON 121.9 PRIOR TO PUSH.

APN TXL F BTN TWY T1 AND TWY T7 CLSD TO ACFT WITH WINGSPAN MORE THAN 171 FT.

ALL TDG V AIRCRAFT TXG ON TWY A ARE RSTD TO TAXI SPD OF 15 MPH.

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 PN RQR FOR PPR FOR ALL F/W AND R/W MIL ACFT GOING TO ARNG RAMP, POC C984-661-6200. OSACOM FLT DET C984-661-6202.

**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: 15-07-12.895N / 145-43-47.951E
- 2.2.2 From City: 4 miles SW of SAIPAN ISLAND, MP
- 2.2.3 Elevation: 214 ft
- 2.2.5 Magnetic Variation: 2E (1985)
- 2.2.6 Airport Contact: LEO B. TUDELA
PO BOX 501055
SAIPAN, MP 96950 (670-237-6500)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 100LL A1+
- 2.4.5 Hangar Space:
- 2.4.6 Repair Facilities: NONE

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 1/1/1978
- 2.6.2 Rescue and Firefighting Services: ARFF Index-D

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 06
- 2.12.2 True Bearing: 68
- 2.12.3 True Dimensions: 7001 ft x 100 ft
- 2.12.4 PCN: 67 R/A/X/T
- 2.12.5 Coordinates: 15-07-05.3655N / 145-43-17.7212E
- 2.12.6 Threshold Elevation: 209.8
- 2.12.6 Touchdown Zone Elevation: 212.7

- 2.12.1 Designation: 24
- 2.12.2 True Bearing: 248
- 2.12.3 True Dimensions: 7001 ft x 100 ft
- 2.12.4 PCN: 67 R/A/X/T
- 2.12.5 Coordinates: 15-07-31.5859N / 145-44-23.8908E
- 2.12.6 Threshold Elevation: 206.5
- 2.12.6 Touchdown Zone Elevation: 206.8

- 2.12.1 Designation: 07
- 2.12.2 True Bearing: 68
- 2.12.3 True Dimensions: 8699 ft x 200 ft
- 2.12.4 PCN: 67 F/A/X/T
- 2.12.5 Coordinates: 15-06-52.1086N / 145-43-04.5454E
- 2.12.6 Threshold Elevation: 209
- 2.12.6 Touchdown Zone Elevation: 214

- 2.12.1 Designation: 25
- 2.12.2 True Bearing: 248
- 2.12.3 True Dimensions: 8699 ft x 200 ft
- 2.12.4 PCN: 67 F/A/X/T
- 2.12.5 Coordinates: 15-07-24.6959N / 145-44-26.7638E
- 2.12.6 Threshold Elevation: 209
- 2.12.6 Touchdown Zone Elevation: 209

AD 2.13 Declared Distances

- 2.13.1 Designation: 06
- 2.13.2 Take-off Run Available: 7001
- 2.13.3 Take-off Distance Available: 6800
- 2.13.4 Accelerate-Stop Distance Available: 6645
- 2.13.5 Landing Distance Available: 6600

- 2.13.1 Designation: 24
- 2.13.2 Take-off Run Available: 6400
- 2.13.3 Take-off Distance Available: 7001
- 2.13.4 Accelerate-Stop Distance Available: 6302
- 2.13.5 Landing Distance Available: 7000

- 2.13.1 Designation: 07
- 2.13.2 Take-off Run Available: 8699
- 2.13.3 Take-off Distance Available: 8669
- 2.13.4 Accelerate-Stop Distance Available: 8664
- 2.13.5 Landing Distance Available: 8010

- 2.13.1 Designation: 25
- 2.13.2 Take-off Run Available: 8699
- 2.13.3 Take-off Distance Available: 8699
- 2.13.4 Accelerate-Stop Distance Available: 8045
- 2.13.5 Landing Distance Available: 8010

AD 2.14 Approach and Runway Lighting

- 2.14.1 Designation: 06
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System:

- 2.14.1 Designation: 24
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System:

- 2.14.1 Designation: 07
- 2.14.2 Approach Lighting System: MALSR
- 2.14.4 Visual Approach Slope Indicator System:

- 2.14.1 Designation: 25
- 2.14.2 Approach Lighting System:
- 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 Channel: 127.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 125.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 256.9
2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 07. Magnetic variation: 2E
2.19.2 ILS Identification: GSN
2.19.5 Coordinates: 15-07-30.4581N / 145-44-34.0368E
2.19.6 Site Elevation: 211.1 ft

2.19.1 ILS Type: Glide Slope for runway 07. Magnetic variation: 2E
2.19.2 ILS Identification: GSN
2.19.5 Coordinates: 15-06-58.6872N / 145-43-13.0288E
2.19.6 Site Elevation: 206.5 ft

2.19.1 ILS Type: Localizer for runway 07. Magnetic variation: 2E
2.19.2 ILS Identification: GSN
2.19.5 Coordinates: 15-07-28.4649N / 145-44-36.3028E
2.19.6 Site Elevation: 205.8 ft

General Remarks:

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.

IMMIGRATION & CUSTOMS AVBL DURG SCHEDULED OPNS. OTHER TIMES PRIOR ARRANGEMENTS MUST BE MADE WITH CBP PORT DIRECTOR CALL (670)288-0025/26.

Cleveland, OH
Cleveland–Hopkins Intl
ICAO Identifier KCLE

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 41–24–33.865N / 81–51–16.888W
- 2.2.2 From City: 9 miles SW of CLEVELAND, OH
- 2.2.3 Elevation: 799.5 ft
- 2.2.5 Magnetic Variation: 8W (2020)
- 2.2.6 Airport Contact: DINA WILSON
PO BOX 81009
CLEVELAND, OH 44181 (216–265–6963)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 A1+
- 2.4.5 Hangar Space: YES
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class–I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index–C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 06L
- 2.12.2 True Bearing: 50
- 2.12.3 True Dimensions: 9000 ft x 150 ft
- 2.12.4 PCN: 78 R/B/W/T
- 2.12.5 Coordinates: 41–23–59.5393N / 81–52–24.5622W
- 2.12.6 Threshold Elevation: 770.1
- 2.12.6 Touchdown Zone Elevation: 772.6

- 2.12.1 Designation: 24R
- 2.12.2 True Bearing: 230
- 2.12.3 True Dimensions: 9000 ft x 150 ft
- 2.12.4 PCN: 78 R/B/W/T
- 2.12.5 Coordinates: 41–24–56.7503N / 81–50–54.1515W
- 2.12.6 Threshold Elevation: 781.1
- 2.12.6 Touchdown Zone Elevation: 781.1

- 2.12.1 Designation: 06R
- 2.12.2 True Bearing: 50
- 2.12.3 True Dimensions: 9953 ft x 150 ft
- 2.12.4 PCN: 63 R/B/W/T
- 2.12.5 Coordinates: 41–23–51.8742N / 81–52–11.3519W
- 2.12.6 Threshold Elevation: 775.5
- 2.12.6 Touchdown Zone Elevation: 776.5

2.12.1 Designation: 24L
2.12.2 True Bearing: 230
2.12.3 True Dimensions: 9953 ft x 150 ft
2.12.4 PCN: 63 R/B/W/T
2.12.5 Coordinates: 41-24-55.141N / 81-50-31.3701W
2.12.6 Threshold Elevation: 785.7
2.12.6 Touchdown Zone Elevation: 785.8

2.12.1 Designation: 10
2.12.2 True Bearing: 93
2.12.3 True Dimensions: 6018 ft x 150 ft
2.12.4 PCN: 80 R/B/W/T
2.12.5 Coordinates: 41-25-01.2562N / 81-51-15.2842W
2.12.6 Threshold Elevation: 767.1
2.12.6 Touchdown Zone Elevation: 782.8

2.12.1 Designation: 28
2.12.2 True Bearing: 273
2.12.3 True Dimensions: 6018 ft x 150 ft
2.12.4 PCN: 80 R/B/W/T
2.12.5 Coordinates: 41-24-57.8208N / 81-49-56.4392W
2.12.6 Threshold Elevation: 799.5
2.12.6 Touchdown Zone Elevation: 799.5

AD 2.13 Declared Distances

2.13.1 Designation: 06L
2.13.2 Take-off Run Available: 9000
2.13.3 Take-off 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 Take-off Run Available: 9000
2.13.3 Take-off Distance Available: 9000
2.13.4 Accelerate-Stop Distance Available: 9000
2.13.5 Landing Distance Available: 9000

2.13.1 Designation: 06R
2.13.2 Take-off Run Available: 9956
2.13.3 Take-off 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 Take-off Run Available: 9956
2.13.3 Take-off Distance Available: 9956
2.13.4 Accelerate-Stop Distance Available: 9956
2.13.5 Landing Distance Available: 9956

2.13.1 Designation: 10

2.13.2 Take-off Run Available: 6018
2.13.3 Take-off 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 Take-off Run Available: 6018
2.13.3 Take-off Distance Available: 6018
2.13.4 Accelerate-Stop Distance Available: 6018
2.13.5 Landing Distance Available: 6018

AD 2.14 Approach and Runway Lighting

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

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: 10
2.14.2 Approach Lighting System:
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

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: APCH/P
2.18.3 Channel: 126.55
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P
2.18.3 Channel: 346.325
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CAVVS DP
2.18.3 Channel: 135.875
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 125.05

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 273.45

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (340-200)

2.18.3 Channel: 125.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (201-339)

2.18.3 Channel: 126.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (ARR)

2.18.3 Channel: 127.85

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (DEP)

2.18.3 Channel: 132.375

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P

2.18.3 Channel: 128.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P

2.18.3 Channel: 135.875

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 273.45

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GTLKE DP

2.18.3 Channel: 128.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: KKIDS DP

2.18.3 Channel: 135.875
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 124.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 273.45
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PFLYD DP
2.18.3 Channel: 128.25
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ZAAPA DP
2.18.3 Channel: 128.25
2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 06L. Magnetic variation: 8W
2.19.2 ILS Identification: LIZ
2.19.5 Coordinates: 41-25-11.9443N / 81-50-35.682W
2.19.6 Site Elevation: 783.4 ft

2.19.1 ILS Type: Glide Slope for runway 06L. Magnetic variation: 8W
2.19.2 ILS Identification: LIZ
2.19.5 Coordinates: 41-24-09.1461N / 81-52-17.5279W
2.19.6 Site Elevation: 764.3 ft

2.19.1 ILS Type: Inner Marker for runway 06L. Magnetic variation: 8W
2.19.2 ILS Identification: LIZ
2.19.5 Coordinates: 41-23-53.9363N / 81-52-33.3994W
2.19.6 Site Elevation: 761.5 ft

2.19.1 ILS Type: Localizer for runway 06L. Magnetic variation: 8W
2.19.2 ILS Identification: LIZ
2.19.5 Coordinates: 41-25-10.1943N / 81-50-32.8939W
2.19.6 Site Elevation: 778.7 ft

2.19.1 ILS Type: DME for runway 24R. Magnetic variation: 8W
2.19.2 ILS Identification: PVY
2.19.5 Coordinates: 41-25-11.9443N / 81-50-35.682W
2.19.6 Site Elevation: 783.4 ft

2.19.1 ILS Type: Glide Slope for runway 24R. Magnetic variation: 8W
2.19.2 ILS Identification: PVY
2.19.5 Coordinates: 41-24-53.0116N / 81-51-08.214W
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: 41-25-03.7844N / 81-50-47.3046W
2.19.6 Site Elevation: 777.9 ft

2.19.1 ILS Type: Localizer for runway 24R. Magnetic variation: 8W
2.19.2 ILS Identification: PVY
2.19.5 Coordinates: 41-23-53.0789N / 81-52-34.7494W
2.19.6 Site Elevation: 760.6 ft

2.19.1 ILS Type: DME for runway 06R. Magnetic variation: 8W
2.19.2 ILS Identification: CLE
2.19.5 Coordinates: 41-25-04.0601N / 81-50-11.0982W
2.19.6 Site Elevation: 794.1 ft

2.19.1 ILS Type: Glide Slope for runway 06R. Magnetic variation: 8W
2.19.2 ILS Identification: CLE
2.19.5 Coordinates: 41-24-13.6551N / 81-51-45.2101W
2.19.6 Site Elevation: 766 ft

2.19.1 ILS Type: Localizer for runway 06R. Magnetic variation: 8W
2.19.2 ILS Identification: CLE
2.19.5 Coordinates: 41-25-05.1773N / 81-50-15.5025W
2.19.6 Site Elevation: 785.5 ft

2.19.1 ILS Type: DME for runway 24L. Magnetic variation: 8W
2.19.2 ILS Identification: HPI
2.19.5 Coordinates: 41-23-44.3404N / 81-52-18.0729W
2.19.6 Site Elevation: 778.9 ft

2.19.1 ILS Type: Glide Slope for runway 24L. Magnetic variation: 8W
2.19.2 ILS Identification: HPI
2.19.5 Coordinates: 41-24-51.9504N / 81-50-45.3186W
2.19.6 Site Elevation: 782.2 ft

2.19.1 ILS Type: Localizer for runway 24L. Magnetic variation: 8W
2.19.2 ILS Identification: HPI
2.19.5 Coordinates: 41-23-45.4329N / 81-52-21.5252W
2.19.6 Site Elevation: 771.7 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 / 81-51-23.8351W
2.19.6 Site Elevation: 766.3 ft

2.19.1 ILS Type: Glide Slope for runway 28. Magnetic variation: 8W
2.19.2 ILS Identification: PXP
2.19.5 Coordinates: 41-25-03.4337N / 81-50-09.415W
2.19.6 Site Elevation: 786.3 ft

2.19.1 ILS Type: Localizer for runway 28. Magnetic variation: 8W
2.19.2 ILS Identification: PXP

2.19.5 Coordinates: 41-25-01.5177N / 81-51-21.2475W

2.19.6 Site Elevation: 756.3 ft

General Remarks:

NASA GLENN RESEARCH CENTER; NASA RAMP PPR CALL 216-433-2031; 0800-1730 MON-FRI. CONTACT NASA OPNS ON FREQ 122.925 WITHIN 50 NM.

RAMP AREA CONCOURSE D BTN GATES D1, D28 CLSD EXC ACFT WINGSPAN LESS THAN 86 FT.

TXL H CLSD TO ACFT WITH WINGSPAN OVR 171 FT.

PAD 3 BAYS 1-5 CLOSED TO ACFT WITH WINGSPAN OVER 134 FT.

PAD 2 AND TAXILANE Y1 RSTRD TO GROUP II ACFT LESS THAN 79 FT WINGSPAN.

DEER, COYOTES, & BIRDS INCLG WATERFOWL ON & INVOF ARPT.

ADCUS AVBL DLY 0700-1900, LTD AVBLTY DURG OFF HRS; ALL REQS FOR SVC MUST BE MADE WITH THE US CUST SVC OFC LCTD AT GATE A-14, CALL 216-267-3600 DURG LISTED HRS.

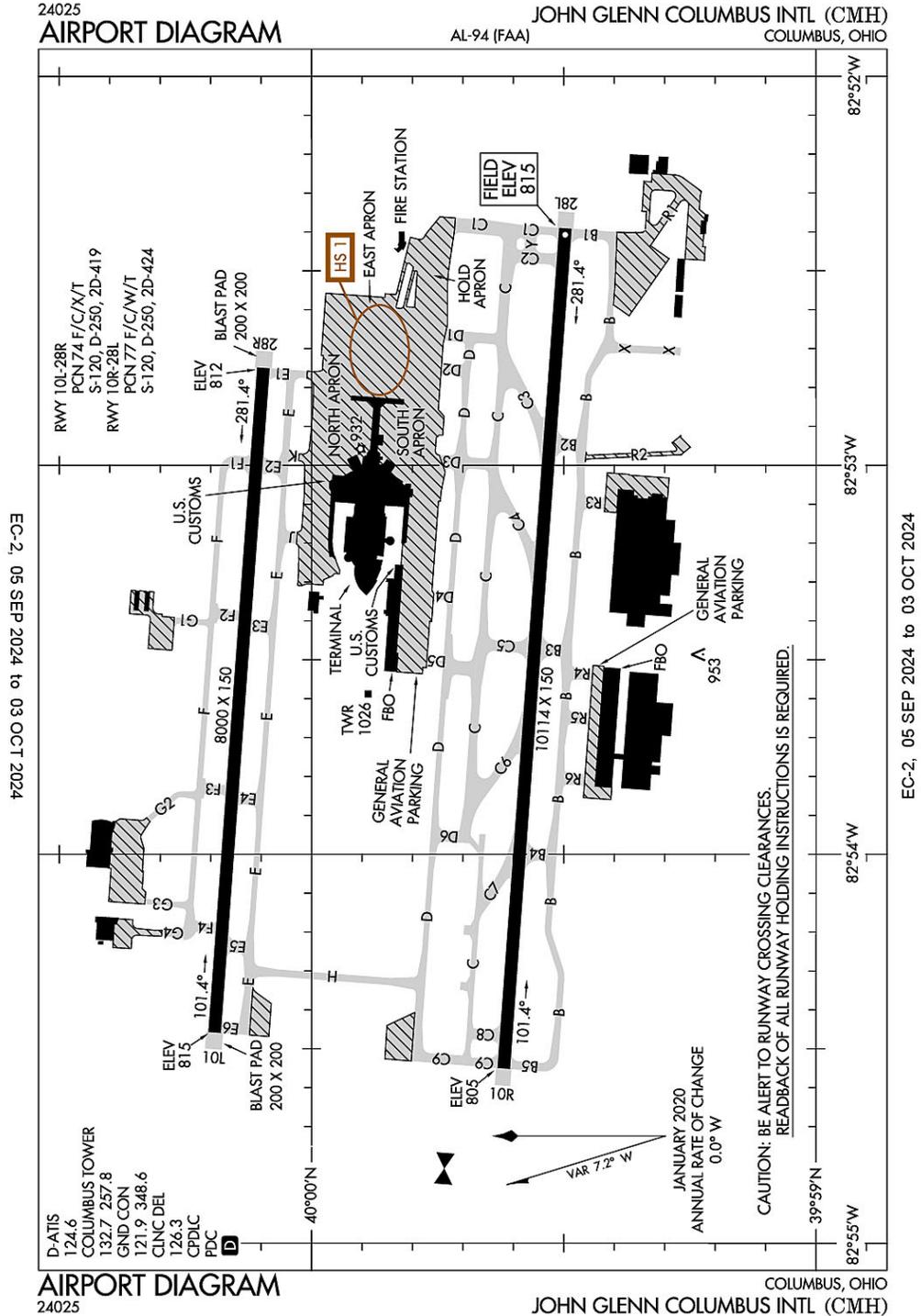
PAD 3 BAY 6 CLOSED TO ACFT WITH WINGSPAN OVER 94 FT.

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.

TWY F CLSD TO ACFT WITH WINGSPAN OVR 118 FT.

TWYS CLSD OCT-APR TO SUPPORT DEICING OPS: TWY M; TWY J2; TWY M1 BTN TWY L & TWY J1; TWY M2 BTN TWY L & TWY J1.

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: 39-59-49.008N / 82-53-31.773W
- 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 (614-239-4004)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 A1+
- 2.4.5 Hangar Space: YES
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 10L
 - 2.12.2 True Bearing: 94
 - 2.12.3 True Dimensions: 8000 ft x 150 ft
 - 2.12.4 PCN: 74 F/C/X/T
 - 2.12.5 Coordinates: 40-00-11.5307N / 82-54-27.4941W
 - 2.12.6 Threshold Elevation: 814.7
 - 2.12.6 Touchdown Zone Elevation: 814.8
-
- 2.12.1 Designation: 28R
 - 2.12.2 True Bearing: 274
 - 2.12.3 True Dimensions: 8000 ft x 150 ft
 - 2.12.4 PCN: 74 F/C/X/T
 - 2.12.5 Coordinates: 40-00-05.7308N / 82-52-44.9692W
 - 2.12.6 Threshold Elevation: 812.3
 - 2.12.6 Touchdown Zone Elevation: 813.1
-
- 2.12.1 Designation: 10R
 - 2.12.2 True Bearing: 94
 - 2.12.3 True Dimensions: 10114 ft x 150 ft
 - 2.12.4 PCN: 77 F/C/W/T
 - 2.12.5 Coordinates: 39-59-37.1453N / 82-54-33.0422W
 - 2.12.6 Threshold Elevation: 804.9
 - 2.12.6 Touchdown Zone Elevation: 809.2

- 2.12.1 Designation: 28L
- 2.12.2 True Bearing: 274
- 2.12.3 True Dimensions: 10114 ft x 150 ft
- 2.12.4 PCN: 77 F/C/W/T
- 2.12.5 Coordinates: 39-59-29.8102N / 82-52-23.4543W
- 2.12.6 Threshold Elevation: 815
- 2.12.6 Touchdown Zone Elevation: 815

AD 2.13 Declared Distances

- 2.13.1 Designation: 10L
- 2.13.2 Take-off Run Available: 8000
- 2.13.3 Take-off 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 Take-off Run Available: 8000
- 2.13.3 Take-off Distance Available: 8000
- 2.13.4 Accelerate-Stop Distance Available: 8000
- 2.13.5 Landing Distance Available: 8000

- 2.13.1 Designation: 10R
- 2.13.2 Take-off Run Available: 10113
- 2.13.3 Take-off 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 Take-off Run Available: 10113
- 2.13.3 Take-off Distance Available: 10113
- 2.13.4 Accelerate-Stop Distance Available: 10113
- 2.13.5 Landing Distance Available: 10113

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: P4R

- 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

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: APCH/P DEP/P (100-279)

2.18.3 Channel: 134

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (100-279)

2.18.3 Channel: 279.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (280-099)

2.18.3 Channel: 317.775

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (280-099)

2.18.3 Channel: 125.95

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (280-099)

2.18.3 Channel: 371.975

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CBUSS STAR

2.18.3 Channel: 125.95

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CBUSS STAR

2.18.3 Channel: 371.975

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 126.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (280-099)

2.18.3 Channel: 125.95

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (100-279)

2.18.3 Channel: 134

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (100-279)

2.18.3 Channel: 279.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (280-099)

2.18.3 Channel: 317.775

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLPRR STAR

2.18.3 Channel: 134

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 124.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DUBLN STAR

2.18.3 Channel: 125.95

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DUBLN STAR

2.18.3 Channel: 371.975

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 348.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: JAKTZ STAR

2.18.3 Channel: 134

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 132.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 257.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: OPS (DEICE PAD CONTROL)

2.18.3 Channel: 122.775

2.18.5 Hours of Operation:

2.18.1 Service Designation: SCRLT STAR

2.18.3 Channel: 134

2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 10L. Magnetic variation: 7W
2.19.2 ILS Identification: CBP
2.19.5 Coordinates: 40-00-09.9835N / 82-54-41.0961W
2.19.6 Site Elevation: 802 ft

2.19.1 ILS Type: Glide Slop for runway 10L. Magnetic variation: 7W
2.19.2 ILS Identification: CBP
2.19.5 Coordinates: 40-00-14.2837N / 82-54-14.862W
2.19.6 Site Elevation: 809.9 ft

2.19.1 ILS Type: Localizer for runway 10L. Magnetic variation: 7W
2.19.2 ILS Identification: CBP
2.19.5 Coordinates: 40-00-04.9978N / 82-52-32.0266W
2.19.6 Site Elevation: 799.2 ft

2.19.1 ILS Type: DME for runway 28R. Magnetic variation: 7W
2.19.2 ILS Identification: ONB
2.19.5 Coordinates: 40-00-09.9835N / 82-54-41.0961W
2.19.6 Site Elevation: 802 ft

2.19.1 ILS Type: Glide Slop for runway 28R. Magnetic variation: 7W
2.19.2 ILS Identification: ONB
2.19.5 Coordinates: 40-00-09.1363N / 82-52-56.9903W
2.19.6 Site Elevation: 808.4 ft

2.19.1 ILS Type: Localizer for runway 28R. Magnetic variation: 7W
2.19.2 ILS Identification: ONB
2.19.5 Coordinates: 40-00-12.2661N / 82-54-40.558W
2.19.6 Site Elevation: 811.7 ft

2.19.1 ILS Type: DME for runway 10R. Magnetic variation: 7W
2.19.2 ILS Identification: AQI
2.19.5 Coordinates: 39-59-33.7337N / 82-54-45.9278W
2.19.6 Site Elevation: 814.8 ft

2.19.1 ILS Type: Glide Slop for runway 10R. Magnetic variation: 7W
2.19.2 ILS Identification: AQI
2.19.5 Coordinates: 39-59-32.3813N / 82-54-20.6176W
2.19.6 Site Elevation: 802.7 ft

2.19.1 ILS Type: Localizer for runway 10R. Magnetic variation: 7W
2.19.2 ILS Identification: AQI
2.19.5 Coordinates: 39-59-29.072N / 82-52-10.4143W
2.19.6 Site Elevation: 814.1 ft

2.19.1 ILS Type: DME for runway 28L. Magnetic variation: 7W
2.19.2 ILS Identification: CMH
2.19.5 Coordinates: 39-59-33.7337N / 82-54-45.9278W
2.19.6 Site Elevation: 814.8 ft

2.19.1 ILS Type: Glide Slop for runway 28L. Magnetic variation: 7W

2.19.2 ILS Identification: CMH
2.19.5 Coordinates: 39-59-26.4974N / 82-52-36.6536W
2.19.6 Site Elevation: 810.7 ft

2.19.1 ILS Type: Localizer for runway 28L. Magnetic variation: 7W
2.19.2 ILS Identification: CMH
2.19.5 Coordinates: 39-59-37.8812N / 82-54-46.0853W
2.19.6 Site Elevation: 806 ft

General Remarks:

TWY D-5 PAVEMENT (NORTH OF TWY D) IS 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.

ALL SURFACES AROUND TERMINAL; NORTH OF TWY 'D' & SOUTH OF TWY 'E' ARE NON-MOVEMENT AREAS.

TO REQ LDG RIGHTS CTC US CUSTOMS BETWEEN 1230-0300Z, MON-FRI AT 614-497-1865.

BIRDS INVOF ARPT.

TWYS R2, R3, R4, R5 AND R6 RSTRD TO WINGSPAN LESS THAN 118 FT.

TWY F1 RSTRD TO AIRCRAFT WITH WINGSPAN LESS THAN 120 FT.

HOLD PAD FOR RWY 28L RSTRD TO ACFT WITH WINGSPAN LESS THAN 118 FT.

NOISE BARRIER LOCATED AT SE SIDE OF AIRFIELD RESTRICTED 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.

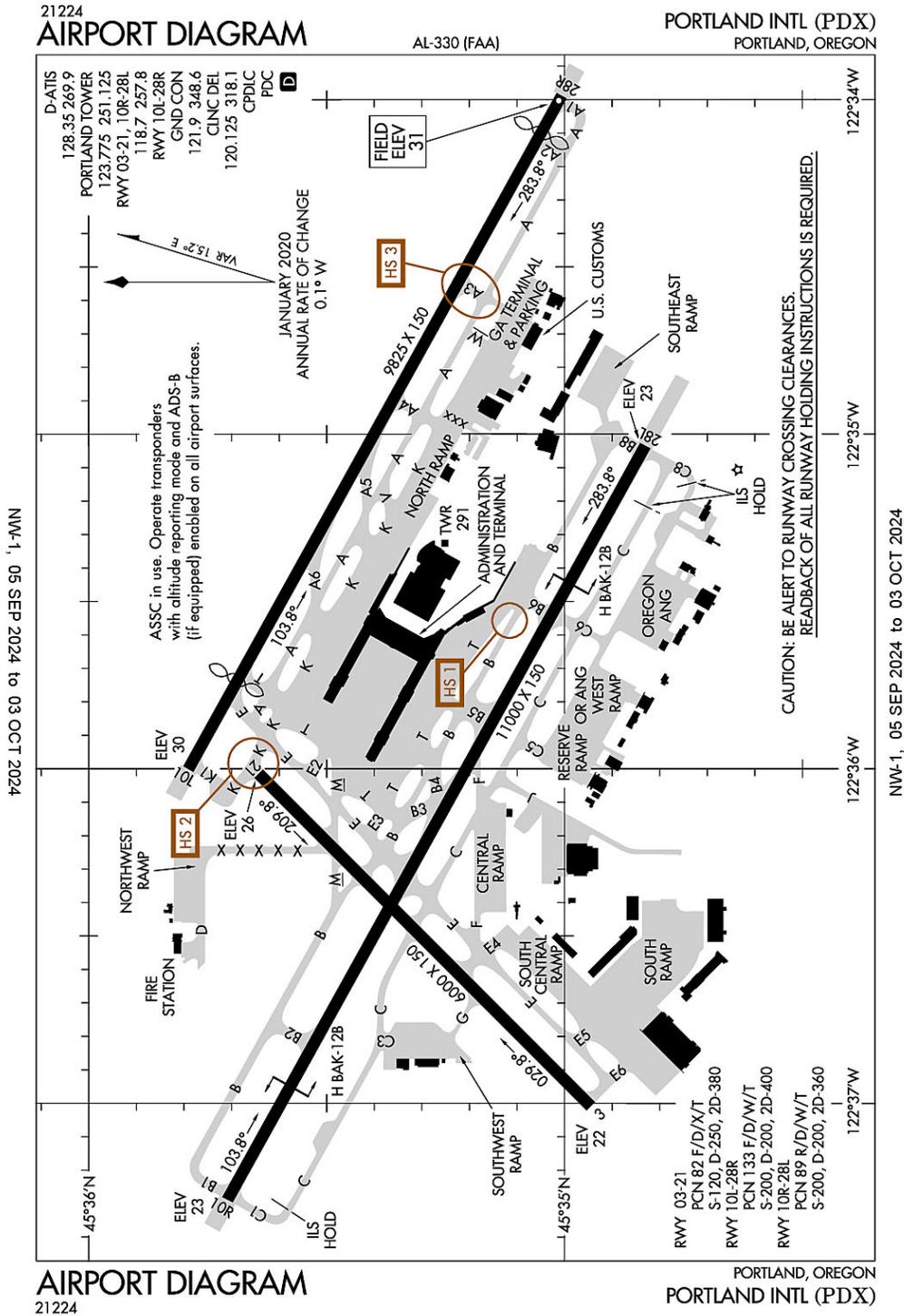
MODEL ACFT TFC WITHIN A 1 NM RDS OF A POINT 8 NM ON A 010 DEG BRG FM THE ARPT; SFC - 5000 FT AGL; SR-SS DLY.

TAXILANE CONCOURSE C BTN TWY J AND TWY K CLSD TO ACFT WINGSPAN MORE THAN 135 FT.

FLIGHT NOTIFICATION SERVICE (ADCUS) AVBL.

TWY R1 RSTRD TO ACFT WITH WINGSPAN LESS THAN 79 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: STEPHEN NAGY
7200 NE AIRPORT WAY
PORTLAND, OR 97218 (503-415-6195)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 03
- 2.12.2 True Bearing: 45
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 22.9

- 2.12.1 Designation: 21
- 2.12.2 True Bearing: 225
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 26.4

- 2.12.1 Designation: 10L
- 2.12.2 True Bearing: 119
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 30.2

2.12.1 Designation: 28R
2.12.2 True Bearing: 299
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 30.8

2.12.1 Designation: 10R
2.12.2 True Bearing: 119
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 23.7

2.12.1 Designation: 28L
2.12.2 True Bearing: 299
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 22.7

AD 2.13 Declared Distances

2.13.1 Designation: 03
2.13.2 Take-off Run Available: 6000
2.13.3 Take-off 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 Take-off Run Available: 6000
2.13.3 Take-off Distance Available: 6000
2.13.4 Accelerate-Stop Distance Available: 6000
2.13.5 Landing Distance Available: 6000

2.13.1 Designation: 10L
2.13.2 Take-off Run Available: 9825
2.13.3 Take-off 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 Take-off Run Available: 9825
2.13.3 Take-off Distance Available: 9825
2.13.4 Accelerate-Stop Distance Available: 9825
2.13.5 Landing Distance Available: 9290

2.13.1 Designation: 10R

2.13.2 Take-off Run Available: 11000
2.13.3 Take-off 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 Take-off Run Available: 11000
2.13.3 Take-off Distance Available: 11000
2.13.4 Accelerate-Stop Distance Available: 11000
2.13.5 Landing Distance Available: 11000

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 03
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 21
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4R

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

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

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: AFRC OPS
2.18.3 Channel: 138.45
2.18.5 Hours of Operation:

2.18.1 Service Designation: AFRC OPS
2.18.3 Channel: 252.8
2.18.5 Hours of Operation:

2.18.1 Service Designation: ANG COMD POST (CALL STUMP TOWN)
2.18.3 Channel: 288.9
2.18.5 Hours of Operation:

2.18.1 Service Designation: ANG OPS
2.18.3 Channel: 280.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: ANG OPS

2.18.3 Channel: 281.2

2.18.5 Hours of Operation:

2.18.1 Service Designation: CD/P

2.18.3 Channel: 120.125

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 318.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 128.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 269.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 348.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/S

2.18.3 Channel: 132.275

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 10L/28R)

2.18.3 Channel: 118.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 03/21, 10R/28L)

2.18.3 Channel: 123.775

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 03/21, 10R/28L)

2.18.3 Channel: 251.125
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 10L/28R)
2.18.3 Channel: 257.8
2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

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 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 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: 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 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: 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

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: 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: 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 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: 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

General Remarks:

FUEL - A (AIR BP - ATLANTIC AVIATION SVCS. C503-331-4220) J8(MIL) (NC-100LL, A)

BEARING STRENGTH: RWY 03-21 ST 175, RY 10L-28R ST175, RY 10R-28L ST175.

ACFT WITH WINGSPAN GREATER THAN 118 FEET ARE PROHIBITED FROM TURNING EASTBOUND ON TWY C FROM SOUTHWESTBOUND ON TWY F UNLESS UNDER TOW.

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.

TWY T BTN EXITS B5 & B6 CLSD TO ACFT WITH WINGSPAN GTR THAN 118 FT.

OIL - O-128-133-148(MIL).

MISC: FLT NOTIFICATION SVC, ADCUS, AVBL.

AREA OF TWY T BTN M & E3 NOT VSB FM TWR.

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.

ANG: SEE FLIP AP/1 FOR SUPPLEMENTARY ARPT INFO. HAZARDOUS BIRD COND EXIST. PHASE I MAY-OCT, PHASE II NOV-APR. CURRENT BIRD WATCH CONDITIONS ARE NOT REPORTED ON ATIS.

ACFT AUTHORIZED TO UTILIZE THE NORTHWEST RAMP WILL BE TOWED TO/FROM THIS RAMP.

TWY K BTN TWY V & TWY A4 CLSD TO ACFT WINGSPAN MORE THAN 118 FT.

180 DEGREE TURNS BY ACFT WEIGHING IN EXCESS OF 12500 LBS PROHIBITED ON RY 10L/28R, RY 03/21 AND ALL TWYS.

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 K BTN TWY A5 & TWY V CLSD TO ACFT WINGSPAN MORE THAN 168 FT.

JASU - 4(A/M32A-86) (MC-11) 1(MA-1A).

FLUID - LHOXRB.

(E94) WSFO/WSO/FW/RFC.

TWY V CLSD TO ACFT WITH WINGSPAN GREATER THAN 168 FT. ACFT WITH WINGSPAN GREATER THAN 118 FT PROHIBITED FM TURNING WB ONTO TWY A FM TWY V UNLESS UNDER TOW.

TWY C BTN TWY C6 AND TWY C8 CLSD TO ACFT WITH WINGSPAN GTR THAN 200 FT.

TWY A3 BTN TWY A & THE GA RAMP CLSD TO ACFT WITH WINGSPAN GTR THAN 135 FEET UNLESS UNDER TOW.

UNCONTROLLED TFC AT PEARSON FIELD VANCOUVER WA 3 NM W OF RY 10L THLD ON EXTDD CNTRLN.

ARPT CLSD TO NON-POWERED ACFT EXCP IN EMERG.

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.

TWY C3 CLSD TO ACFT WITH WINGSPAN EQUAL TO OR GTR THAN 79 FT.

TWY W CLSD TO ACFT WITH WINGSPAN GTR THAN 118 FT UNLESS UNDER TOW.

PDX HAS FAC CONSTRAINTS THAT LMT ITS ABILITY TO ACCOMMODATE DIVD FLTS & MNTN THE ARPT SAFE OPN DUR IREG OPS. ACFT OPRS SHUD CTC THE ARPT DUTY MGR AT (503) 460-4236 TO COORD DIVD FLTS EXC IN THE CASE OF A DECLARED IN-FLT EMERG.

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.

MILITARY: ANG: OREGON ANG E RAMP SUN SHADE OBST LGTS O/S.

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: ATIF SAEED
DIV OF AVIATION TERMINAL E
PHILADELPHIA, PA 19153 (215-937-6914)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 08
- 2.12.2 True Bearing: 75
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 20.3

- 2.12.1 Designation: 26
- 2.12.2 True Bearing: 256
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 35.9

- 2.12.1 Designation: 27R
- 2.12.2 True Bearing: 255
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 10.5

2.12.1 Designation: 09L
2.12.2 True Bearing: 75
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 13.3

2.12.1 Designation: 09R
2.12.2 True Bearing: 75
2.12.3 True Dimensions: 12000 ft x 200 ft
2.12.4 PCN: 60 F/A/X/T
2.12.5 Coordinates: 39-51-38.9137N / 75-16-30.7056W
2.12.6 Threshold Elevation: 20.1
2.12.6 Touchdown Zone Elevation: 20.5

2.12.1 Designation: 27L
2.12.2 True Bearing: 255
2.12.3 True Dimensions: 12000 ft x 200 ft
2.12.4 PCN: 60 F/A/X/T
2.12.5 Coordinates: 39-52-08.651N / 75-14-01.719W
2.12.6 Threshold Elevation: 10.2
2.12.6 Touchdown Zone Elevation: 10.1

2.12.1 Designation: 17
2.12.2 True Bearing: 159
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 10.5

2.12.1 Designation: 35
2.12.2 True Bearing: 339
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 12.9

AD 2.13 Declared Distances

2.13.1 Designation: 08
2.13.2 Take-off Run Available: 5001
2.13.3 Take-off 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 Take-off Run Available: 5001
2.13.3 Take-off Distance Available: 5001

2.13.4 Accelerate-Stop Distance Available: 5001
2.13.5 Landing Distance Available: 5001

2.13.1 Designation: 27R
2.13.2 Take-off Run Available: 9500
2.13.3 Take-off Distance Available: 9500
2.13.4 Accelerate-Stop Distance Available: 9500
2.13.5 Landing Distance Available: 8864

2.13.1 Designation: 09L
2.13.2 Take-off Run Available: 9500
2.13.3 Take-off Distance Available: 9500
2.13.4 Accelerate-Stop Distance Available: 9500
2.13.5 Landing Distance Available: 9500

2.13.1 Designation: 09R
2.13.2 Take-off Run Available: 12000
2.13.3 Take-off 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 Take-off Run Available: 12000
2.13.3 Take-off Distance Available: 12000
2.13.4 Accelerate-Stop Distance Available: 11825
2.13.5 Landing Distance Available: 9912

2.13.1 Designation: 17
2.13.2 Take-off Run Available: 6500
2.13.3 Take-off 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 Take-off Run Available: 6500
2.13.3 Take-off Distance Available: 6500
2.13.4 Accelerate-Stop Distance Available: 6500
2.13.5 Landing Distance Available: 6500

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 08
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 26
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: MALSR
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 09L
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System:

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

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: 35
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: 5500 & BLO (NORTH)
2.18.3 Channel: 123.8
2.18.5 Hours of Operation:

2.18.1 Service Designation: 5500 & BLO (NORTH)
2.18.3 Channel: 291.7
2.18.5 Hours of Operation:

2.18.1 Service Designation: APCH/P (001-089, 5000 FT & BLW)
2.18.3 Channel: 123.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (270-360, 5000 FT & BLW)
2.18.3 Channel: 126.85
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (090-269, 5000 FT & BLW)
2.18.3 Channel: 127.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (270-089, ABV 5000 FT)
2.18.3 Channel: 128.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (090-269, 6000-8000 FT)
2.18.3 Channel: 133.875
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (270-360, 5000 FT & BLW)

2.18.3 Channel: 263.125
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (270-089, ABV 5000 FT)
2.18.3 Channel: 272.575
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (270-089, ABV 5000 FT)
2.18.3 Channel: 273.575
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (001-089, 5000 FT & BLW)
2.18.3 Channel: 291.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (090-269 6000-8000 FT)
2.18.3 Channel: 317.55
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (090-269, 5000 FT & BLW)
2.18.3 Channel: 317.55
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC
2.18.3 Channel: 124.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC
2.18.3 Channel: 319.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BUNTS STAR
2.18.3 Channel: 128.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BUNTS STAR
2.18.3 Channel: 272.575
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 118.85
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 348.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CEDAR LAKE STAR
2.18.3 Channel: 133.875
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CEDAR LAKE STAR
2.18.3 Channel: 317.55
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (SW 6000 FT & BLW)
2.18.3 Channel: 118.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (SE RWY 09 ACTIVE 10000 FT & BLW)
2.18.3 Channel: 119.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (SE RWY 27 ACTIVE 8500-10000 FT)
2.18.3 Channel: 119.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (SOUTH/SOUTHWEST RWY 27 8500-10000 FT)
2.18.3 Channel: 119.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (NE 6500 FT & BLW)
2.18.3 Channel: 123.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (NE 7000-10000 FT)
2.18.3 Channel: 124.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (NW 8000-10000 FT)
2.18.3 Channel: 124.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (W RWY 09 ACTIVE 8500-10000 FT)
2.18.3 Channel: 124.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (W RWY 27 ACTIVE 10000 FT & BLW)
2.18.3 Channel: 124.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (5500 FT & BLW)
2.18.3 Channel: 126.85
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (SE-SW 5000 FT & BLW)
2.18.3 Channel: 127.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (NORTH 6500-7500)
2.18.3 Channel: 128.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (WEST RWY 09 ACTIVE 8000 FT & BLW)
2.18.3 Channel: 128.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (6000-8000 FT)
2.18.3 Channel: 133.875
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (SOUTHEAST RWY 27 5500-7500)
2.18.3 Channel: 133.875
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (5500 FT & BLW)
2.18.3 Channel: 263.125
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (SE RWY 09 ACTIVE 10000 FT & BLW)
2.18.3 Channel: 269.25
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (SE RWY 27 ACTIVE 8500-10000 FT)
2.18.3 Channel: 269.25
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (SOUTH/SOUTHWEST RWY 27 8500-10000 FT)
2.18.3 Channel: 269.25
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (NORTH 6500-7500)
2.18.3 Channel: 272.575
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (WEST RWY 09 ACTIVE 8000 FT & BLW)
2.18.3 Channel: 272.575
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (N NE 6500-7500)
2.18.3 Channel: 273.575
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (W RWY 09 ACTIVE 8000 FT & BLW)
2.18.3 Channel: 273.575
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (NE RWY 27 ACTIVE 5000 FT & BLW)
2.18.3 Channel: 291.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (6000-8000 FT)
2.18.3 Channel: 317.55

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (RWY 27, 5500–7500 FT)

2.18.3 Channel: 317.55

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (SE–SW 5000 FT & BLW)

2.18.3 Channel: 317.55

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (NE 7000–10000 FT)

2.18.3 Channel: 319.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (NW 8000–10000 FT)

2.18.3 Channel: 319.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (WEST RWY 09 ACTIVE 8500–10000 FT)

2.18.3 Channel: 319.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (SW 6000 FT & BLW)

2.18.3 Channel: 323.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D–ATIS (ARR)

2.18.3 Channel: 133.4

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D–ATIS (DEP)

2.18.3 Channel: 135.925

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (090–269)

2.18.3 Channel: 119.75

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (270–089)

2.18.3 Channel: 124.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (090–269)

2.18.3 Channel: 269.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (270–089)

2.18.3 Channel: 319.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: FINAL APCH

2.18.3 Channel: 125.4

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 348.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/S

2.18.3 Channel: 121.65

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: JIIMS STAR

2.18.3 Channel: 133.875

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: JIIMS STAR

2.18.3 Channel: 317.55

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 08/26, 09L/27R, 17/35)

2.18.3 Channel: 118.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 09R/27L)

2.18.3 Channel: 135.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 327.05

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PAATS STAR

2.18.3 Channel: 133.875

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PAATS STAR

2.18.3 Channel: 317.55

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PHL ONE DP
2.18.3 Channel: 124.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PHL ONE DP
2.18.3 Channel: 319.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PRM (RWY 27L)
2.18.3 Channel: 120.425
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: PRM (RWY 26)
2.18.3 Channel: 123.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SLATT STAR
2.18.3 Channel: 128.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SLATT STAR
2.18.3 Channel: 273.575
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SPUDS STAR
2.18.3 Channel: 128.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SPUDS STAR
2.18.3 Channel: 272.575
2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 26. Magnetic variation: 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: 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: Localizer for runway 26. Magnetic variation: 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: DME for runway 09L. Magnetic variation: 12W
2.19.2 ILS Identification: VII
2.19.5 Coordinates: 39-52-37.1712N / 75-13-11.1396W

2.19.6 Site Elevation: 20 ft

2.19.1 ILS Type: Glide Slope for runway 09L. Magnetic variation: 12W

2.19.2 ILS Identification: VII

2.19.5 Coordinates: 39-52-06.03N / 75-15-06.06W

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: 39-52-33.52N / 75-13-08.777W

2.19.6 Site Elevation: 7.2 ft

2.19.1 ILS Type: DME for runway 27R. Magnetic variation: 12W

2.19.2 ILS Identification: PDP

2.19.5 Coordinates: 39-52-37.1712N / 75-13-11.1396W

2.19.6 Site Elevation: 20 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

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: DME for runway 09R. Magnetic variation: 12W

2.19.2 ILS Identification: PHL

2.19.5 Coordinates: 39-52-07.3002N / 75-13-47.0459W

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: Localizer for runway 09R. Magnetic variation: 12W

2.19.2 ILS Identification: PHL

2.19.5 Coordinates: 39-52-11.1577N / 75-13-49.1415W

2.19.6 Site Elevation: 9.1 ft

2.19.1 ILS Type: DME for runway 27L. Magnetic variation: 12W

2.19.2 ILS Identification: GLC

2.19.5 Coordinates: 39-52-07.3002N / 75-13-47.0459W

2.19.6 Site Elevation: 23.5 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: 8.5 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 17. Magnetic variation: 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: 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: Localizer for runway 17. Magnetic variation: 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

General Remarks:

ARPT IS LCTD IN A NOISE SENSITIVE AREA. AIRPORT NOISE ABATEMENT TAKEOFF PROCEDURES ARE TO BE USED.

ONLY NOSE-IN PRKG PERMITTED ON NORTH REMOTE APNS. PPR FM ARPT OPS FOR ALL ACFT PRKG ON REMOTE APNS; CTC 215-937-6914/6800.

RY 09R ROLLOUT RVR USED FOR RY 09L MIDPOINT RVR.

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.

ALL ACFT TRAVELING ON TWY J MUST USE MINIMUM POWER WHEN TURNING SOUTH DUE TO JETBLAST CONCERNS.

UNLGTD STACK 288 FT MSL (271 FT AGL) 2.3 NM SW OF ARPT.

TCAS EQUIPPED ACFT-TCAS ALERT MAY BE CAUSED BY TRANSPONDER EQUIPPED SHIPS LCTD PHL NAVAL BASE 3 NM E.

TWY J BTN TWYS K3 AND Q RESTRICTED TO ACFT WITH WINGSPANS 171 FT AND LESS.

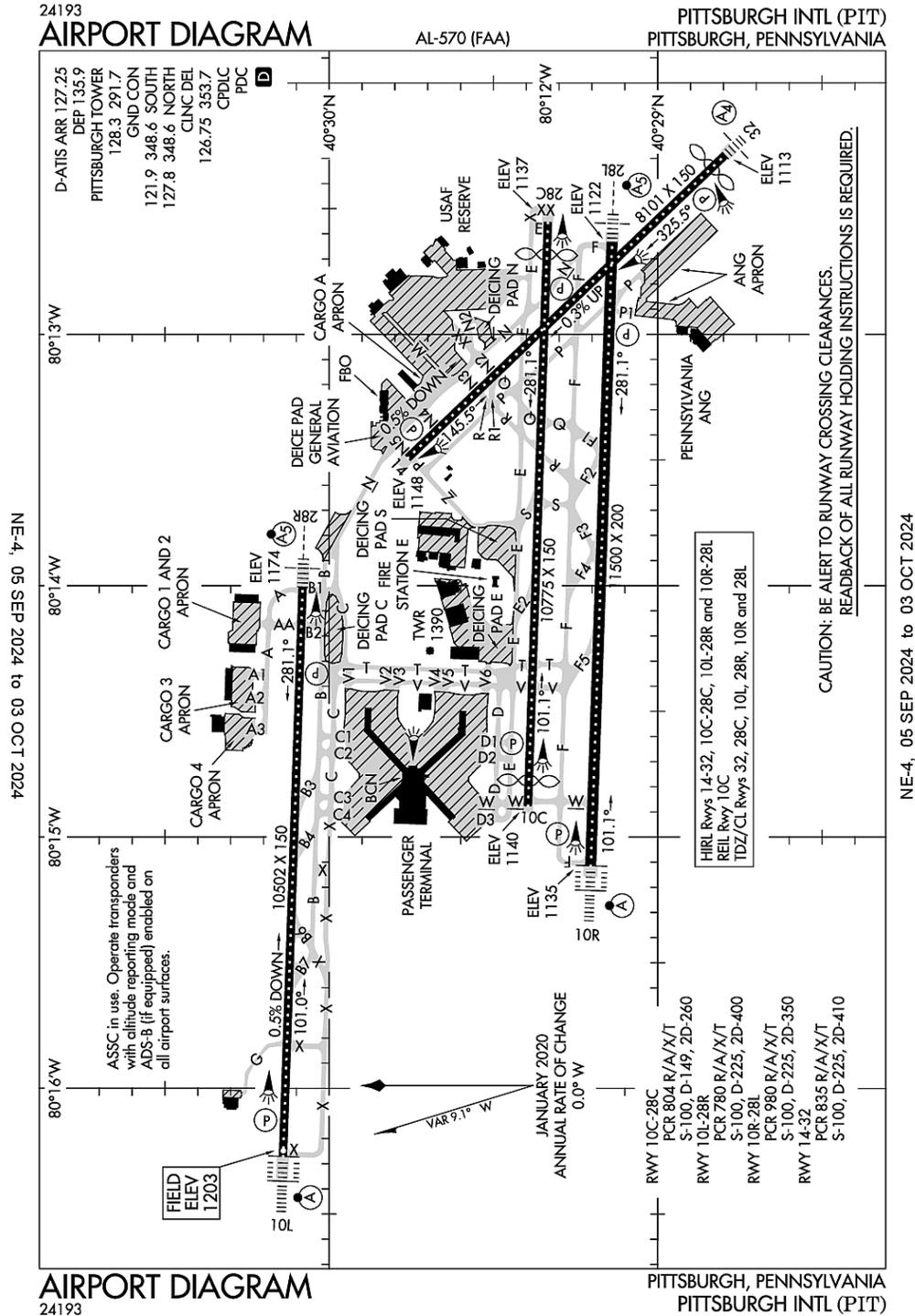
ALL ENGINE RUNUPS REQUIRE PPR FM DUTY OPNS OFFICER AT 937-6914/6800; RUNUPS 20 MIN MAXIMUM.

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.

BIRDS ON & INVOF ARPT.

**Pittsburgh, Pennsylvania
Pittsburgh International
ICAO Identifier KPIT**



Pittsburgh, PA
Pittsburgh Intl
ICAO Identifier KPIT

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)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-D

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 28C
 - 2.12.2 True Bearing: 272
 - 2.12.3 True Dimensions: 10775 ft x 150 ft
 - 2.12.4 PCN:
 - 2.12.5 Coordinates: 40-29-20.0419N / 80-12-33.1754W
 - 2.12.6 Threshold Elevation: 1136.6
 - 2.12.6 Touchdown Zone Elevation: 1133.5
-
- 2.12.1 Designation: 10C
 - 2.12.2 True Bearing: 92
 - 2.12.3 True Dimensions: 10775 ft x 150 ft
 - 2.12.4 PCN:
 - 2.12.5 Coordinates: 40-29-23.6989N / 80-14-52.5475W
 - 2.12.6 Threshold Elevation: 1140.2
 - 2.12.6 Touchdown Zone Elevation: 1141.4
-
- 2.12.1 Designation: 10L
 - 2.12.2 True Bearing: 92
 - 2.12.3 True Dimensions: 10502 ft x 150 ft
 - 2.12.4 PCN:
 - 2.12.5 Coordinates: 40-30-08.4012N / 80-16-16.2687W
 - 2.12.6 Threshold Elevation: 1202.9
 - 2.12.6 Touchdown Zone Elevation: 1202.9

2.12.1 Designation: 28R
2.12.2 True Bearing: 272
2.12.3 True Dimensions: 10502 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 40-30-04.8667N / 80-14-00.4048W
2.12.6 Threshold Elevation: 1174.1
2.12.6 Touchdown Zone Elevation: 1174.1

2.12.1 Designation: 10R
2.12.2 True Bearing: 92
2.12.3 True Dimensions: 11500 ft x 200 ft
2.12.4 PCN:
2.12.5 Coordinates: 40-29-12.2249N / 80-15-06.8568W
2.12.6 Threshold Elevation: 1134.8
2.12.6 Touchdown Zone Elevation: 1134.8

2.12.1 Designation: 28L
2.12.2 True Bearing: 272
2.12.3 True Dimensions: 11500 ft x 200 ft
2.12.4 PCN:
2.12.5 Coordinates: 40-29-08.3238N / 80-12-38.1249W
2.12.6 Threshold Elevation: 1121.9
2.12.6 Touchdown Zone Elevation: 1125

2.12.1 Designation: 32
2.12.2 True Bearing: 316
2.12.3 True Dimensions: 8101 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 40-28-47.69N / 80-12-17.2183W
2.12.6 Threshold Elevation: 1113.4
2.12.6 Touchdown Zone Elevation: 1123.6

2.12.1 Designation: 14
2.12.2 True Bearing: 136
2.12.3 True Dimensions: 8101 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 40-29-45.6544N / 80-13-29.5187W
2.12.6 Threshold Elevation: 1147.6
2.12.6 Touchdown Zone Elevation: 1147.6

AD 2.13 Declared Distances

2.13.1 Designation: 28C
2.13.2 Take-off Run Available: 10775
2.13.3 Take-off Distance Available: 10775
2.13.4 Accelerate-Stop Distance Available: 10310
2.13.5 Landing Distance Available: 9708

2.13.1 Designation: 10C
2.13.2 Take-off Run Available: 10775
2.13.3 Take-off Distance Available: 10775

2.13.4 Accelerate-Stop Distance Available: 10173
2.13.5 Landing Distance Available: 9708

2.13.1 Designation: 10L
2.13.2 Take-off Run Available: 10502
2.13.3 Take-off 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 Take-off Run Available: 10502
2.13.3 Take-off 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 Take-off Run Available: 11500
2.13.3 Take-off 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 Take-off Run Available: 11500
2.13.3 Take-off Distance Available: 11500
2.13.4 Accelerate-Stop Distance Available: 11500
2.13.5 Landing Distance Available: 11500

2.13.1 Designation: 32
2.13.2 Take-off Run Available: 8101
2.13.3 Take-off Distance Available: 8101
2.13.4 Accelerate-Stop Distance Available: 7801
2.13.5 Landing Distance Available: 7466

2.13.1 Designation: 14
2.13.2 Take-off Run Available: 8101
2.13.3 Take-off Distance Available: 8101
2.13.4 Accelerate-Stop Distance Available: 7366
2.13.5 Landing Distance Available: 7366

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 28C
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 10C
2.14.2 Approach Lighting System:
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

2.14.1 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

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: 14
2.14.2 Approach Lighting System:
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 Channel: 311
2.18.5 Hours of Operation:

2.18.1 Service Designation: APCH/P (271-360)
2.18.3 Channel: 121.25
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (001-090)
2.18.3 Channel: 124.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (181-270)
2.18.3 Channel: 133.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (270-089)
2.18.3 Channel: 279.625
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (090-269)
2.18.3 Channel: 360.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P
2.18.3 Channel: 336.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P IC (091-180)

2.18.3 Channel: 123.95
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD PRE TAXI CLNC
2.18.3 Channel: 126.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 353.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (271-360)
2.18.3 Channel: 121.25
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (091-180)
2.18.3 Channel: 123.95
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (001-090)
2.18.3 Channel: 124.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (181-270)
2.18.3 Channel: 133.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (270-089)
2.18.3 Channel: 279.625
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (090-269)
2.18.3 Channel: 360.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: COMD POST
2.18.3 Channel: 252.1
2.18.5 Hours of Operation:

2.18.1 Service Designation: D-ATIS (ARR)
2.18.3 Channel: 127.25
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (DEP)
2.18.3 Channel: 135.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (SOUTH)
2.18.3 Channel: 119.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (NORTH)
2.18.3 Channel: 124.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (090-269)
2.18.3 Channel: 285.575
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (NORTH)
2.18.3 Channel: 338.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/S
2.18.3 Channel: 125.275
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P (SOUTH)
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (NORTH)
2.18.3 Channel: 127.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 348.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 128.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 291.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: OPS
2.18.3 Channel: 36.35
2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: Glide Slope for runway 10L. Magnetic variation: 9W
2.19.2 ILS Identification: LXB

2.19.5 Coordinates: 40-30-11.9236N / 80-15-59.9044W
2.19.6 Site Elevation: 1195 ft

2.19.1 ILS Type: Inner Marker for runway 10L. Magnetic variation: 9W
2.19.2 ILS Identification: LXB
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 10L. Magnetic variation: 9W
2.19.2 ILS Identification: LXB
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: Glide Slope for runway 28R. Magnetic variation: 9W
2.19.2 ILS Identification: HFE
2.19.5 Coordinates: 40-30-08.7192N / 80-14-14.6252W
2.19.6 Site Elevation: 1170.6 ft

2.19.1 ILS Type: Localizer for runway 28R. Magnetic variation: 9W
2.19.2 ILS Identification: HFE
2.19.5 Coordinates: 40-30-08.7888N / 80-16-31.3335W
2.19.6 Site Elevation: 1214.2 ft

2.19.1 ILS Type: Glide Slope for runway 10R. Magnetic variation: 9W
2.19.2 ILS Identification: GUT
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: Inner Marker for runway 10R. Magnetic variation: 9W
2.19.2 ILS Identification: GUT
2.19.5 Coordinates: 40-29-12.5381N / 80-15-18.8824W
2.19.6 Site Elevation: 1144.8 ft

2.19.1 ILS Type: Localizer for runway 10R. Magnetic variation: 9W
2.19.2 ILS Identification: GUT
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 28L. Magnetic variation: 9W
2.19.2 ILS Identification: PFS
2.19.5 Coordinates: 40-29-04.7301N / 80-12-51.2688W
2.19.6 Site Elevation: 1120.3 ft

2.19.1 ILS Type: Localizer for runway 28L. Magnetic variation: 9W
2.19.2 ILS Identification: PFS
2.19.5 Coordinates: 40-29-12.6437N / 80-15-23.0275W
2.19.6 Site Elevation: 1141.2 ft

2.19.1 ILS Type: DME for runway 32. Magnetic variation: 9W
2.19.2 ILS Identification: TQW
2.19.5 Coordinates: 40-29-48.847N / 80-13-37.583W

2.19.6 Site Elevation: 1134 ft

2.19.1 ILS Type: Glide Slope for runway 32. Magnetic variation: 9W

2.19.2 ILS Identification: TQW

2.19.5 Coordinates: 40-28-52.663N / 80-12-29.1403W

2.19.6 Site Elevation: 1112.2 ft

2.19.1 ILS Type: Localizer for runway 32. Magnetic variation: 9W

2.19.2 ILS Identification: TQW

2.19.5 Coordinates: 40-29-50.4118N / 80-13-35.4629W

2.19.6 Site Elevation: 1139.1 ft

General Remarks:

TWY AA NO TURN-OFF ONTO TWY A FOR ACFT WINGSPAN 171 FT OR GREATER EXC PPR (412) 472-5630.

[MILITARY]: CAUTION: BASH PHASE II OPS IN EFFECT 1 JUL - 31 AUG ANNUALLY. UNLESS MSN REQUIREMENTS DIRECT OTHERWISE, FLIGHTS SHOULD NOT BE SKED WITHIN +/-1HR OF SS/SR. TRAN AIRCREW SHOULD REQ BIRD WATCH COND FR AFRC (PITT OPS) ON 252.1 OR ANG OPS (STEEL CTL) ON 311.0. AIRCREW WILL BE INFORMED BY STEEL CONTROL OR PITT OPS (AS APPLICABLE) IF CURRENT BWC IS OTHER THAN LOW REGARDLESS OF BASH PHASE.

SERVICE-OIL: O-156.

TERML TAXILANES E OF CONCOURSES A & B RESTRD TO GROUP 3 ACFT & SMALLER.

ACFT USING TWY 'N' PROHIBITED TO STOP ON OVERPASS AREA DUE TO POSSIBLE EMERGENCY EVACUATION HAZARD.

DEER & BIRDS ON & INVOF ARPT.

ANG: OPR 1130-2030Z++MON-FRI EXCP HOL. (CLSD EV OTH MON.)

PPR/OFFL BUS MIN 48 HR CTC AFLD MGMT DSN 277 8163, C412 474 8163. LTD TRAN SVC. AFLD MGT NML DUTY HRS 1300 0100++ MON, WED, FRI, 1300-0500++ TUE, THU, EXC HOL. UNIT TRAINING ASSEMBLY 1300 2100Z++SAT. TRAN ACFT MUST HAVE APPVL OF 9110G/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 15 MIN PRIOR TO ARRIVAL. ALFD MGMT DOES NOT ISSUE OR STOR COMSEC. COMSEC STOR CTC COMD POST DSN 277 8146.

ANG ACFT MUST CTC TANKER 303.0/FTR OPNS 293.7 BEFORE CROSSING RWY 28L TO OBTAIN CLNC TO ENTER.

SERVICE-TRAN ALERT: NO PRIORITY BASIS.

FUEL: A++ PROVIDED BY ANG AND AFRC.(MIL).

LDG FEE.

TRML APN UNCONTROLLED. PUSHBACK PILOT DESCRETION. DO NOT EXIT TRML APN AT TWY C1, C4, V3, V4, D1, W. CTC GC WHEN HLDG AT TWY C2, C3, V1, V2, V5, V6, D2, D3.

PUSHBACK CLNC REQUIRED FR GATES A100 AND A101 AT CARGO A. CTC GC. PUSHBACK FM THESE GATES ENTERS TWY N.

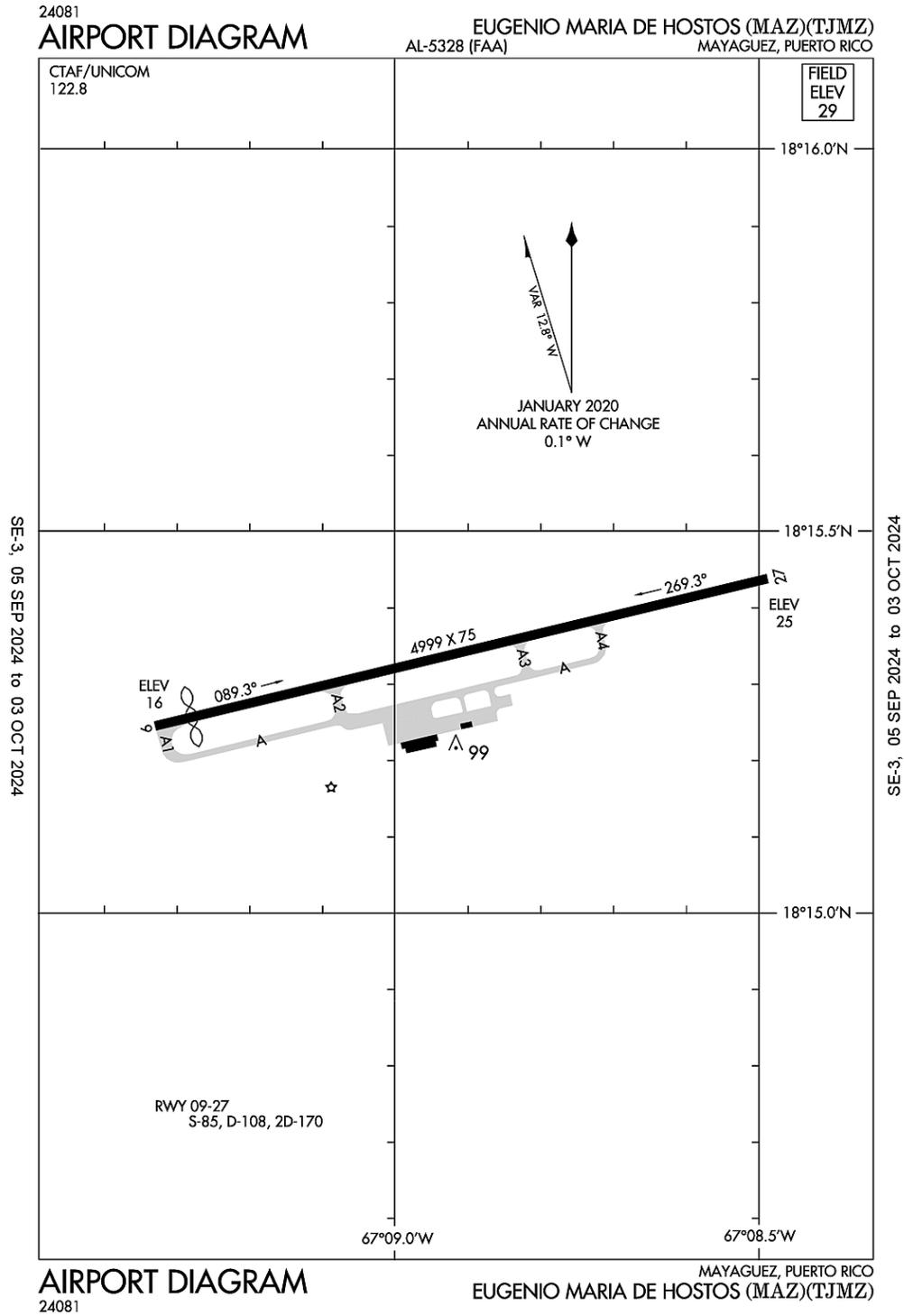
SERVICE-JASU: (ANG) (A/M32A-86) (AM 32-95; (AFRC - 2(A/M32-86 (AM32-95).

SERVICE-FLUID: LPOX LHNT.

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.

TWY G INTXN AT RY 10L/28R RIGHT TURN NA.

Mayaguez, Puerto Rico
Eugenio Maria De Hostos
ICAO Identifier TJMZ



Mayaguez, PR
Eugenio Maria De Hostos
ICAO Identifier TJMZ

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 18-15-20.47N / 67-08-54.498W
- 2.2.2 From City: 3 miles N of MAYAGUEZ, PR
- 2.2.3 Elevation: 28.7 ft
- 2.2.5 Magnetic Variation: 10W (1985)
- 2.2.6 Airport Contact: WILLIAM FEBLES
BOX 710
MAYAGUEZ, PR 681 (787-833-0148)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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:
- 2.4.5 Hangar Space: NO
- 2.4.6 Repair Facilities: NONE

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: None
- 2.6.2 Rescue and Firefighting Services: None

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 27
- 2.12.2 True Bearing: 256
- 2.12.3 True Dimensions: 4999 ft x 75 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 18-15-26.2563N / 67-08-29.2895W
- 2.12.6 Threshold Elevation: 24.6
- 2.12.6 Touchdown Zone Elevation: 28.6

- 2.12.1 Designation: 09
- 2.12.2 True Bearing: 76
- 2.12.3 True Dimensions: 4999 ft x 75 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 18-15-14.6859N / 67-09-19.7212W
- 2.12.6 Threshold Elevation: 16.2
- 2.12.6 Touchdown Zone Elevation: 28.6

AD 2.13 Declared Distances

- 2.13.1 Designation: 27
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

- 2.13.1 Designation: 09
- 2.13.2 Take-off Run Available:
- 2.13.3 Take-off Distance Available:
- 2.13.4 Accelerate-Stop Distance Available:
- 2.13.5 Landing Distance Available:

AD 2.14 Approach and Runway Lighting

- 2.14.1 Designation: 27
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System: P4L

- 2.14.1 Designation: 09
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System: P4L

AD 2.18 Air Traffic Services Communication Facilities

AD 2.19 Radio Navigation and Landing Aids

- 2.19.1 Navigation Aid Type NDB. Magnetic variation: 10W
- 2.19.2 Navigation Aid Identification: MAZ
- 2.19.5 Coordinates: 18-15-13.529N / 67-09-08.947W
- 2.19.6 Site Elevation: ft

- 2.19.1 Navigation Aid Type VOR/DME. Magnetic variation: 10W
- 2.19.2 Navigation Aid Identification: MAZ
- 2.19.5 Coordinates: 18-15-23.2293N / 67-09-03.7215W
- 2.19.6 Site Elevation: 18 ft

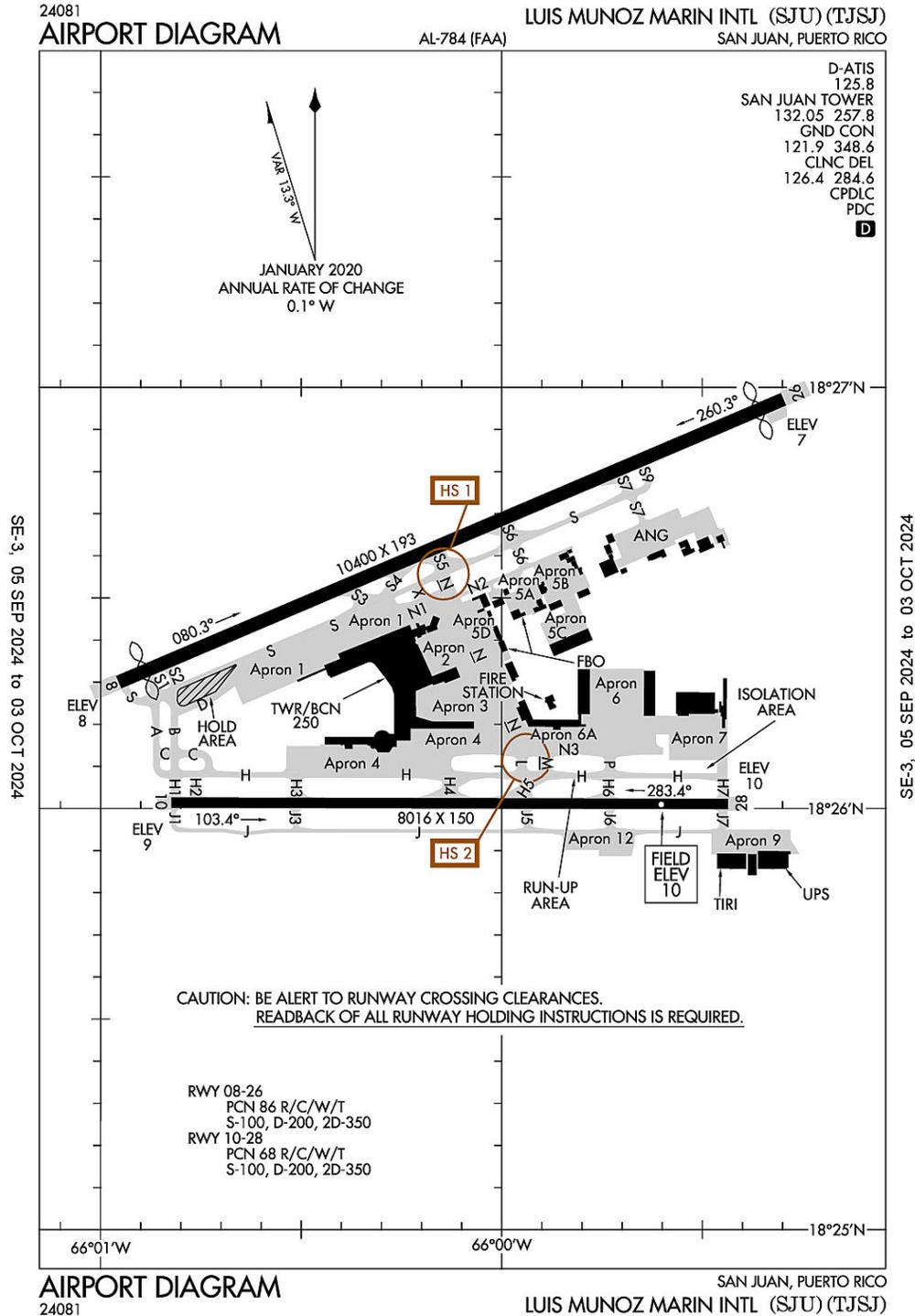
General Remarks:

FOR CD IF FREQ ARE OTS CTC SAN JUAN CERAP AT 787-253-8664/8667

ULTRALIGHT ACTIVITY.

BIRDS ON AND INVOF ARPT.

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: 18-26-21.837N / 66-00-07.68W
- 2.2.2 From City: 3 miles SE of SAN JUAN, PR
- 2.2.3 Elevation: 9.6 ft
- 2.2.5 Magnetic Variation: 11W (1985)
- 2.2.6 Airport Contact: MR. JORGE HERNANDEZ
P. O. BOX 38085
SAN JUAN, PR 937 ((787) 289-7240)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 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: Class-I certified on 5/1/2005
- 2.6.2 Rescue and Firefighting Services: ARFF Index-D

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 08
- 2.12.2 True Bearing: 67
- 2.12.3 True Dimensions: 10400 ft x 193 ft
- 2.12.4 PCN: 86 R/C/W/T
- 2.12.5 Coordinates: 18-26-17.9673N / 66-00-57.3115W
- 2.12.6 Threshold Elevation: 8.2
- 2.12.6 Touchdown Zone Elevation: 9.3

- 2.12.1 Designation: 26
- 2.12.2 True Bearing: 247
- 2.12.3 True Dimensions: 10400 ft x 193 ft
- 2.12.4 PCN: 86 R/C/W/T
- 2.12.5 Coordinates: 18-26-58.2684N / 65-59-17.8783W
- 2.12.6 Threshold Elevation: 6.9
- 2.12.6 Touchdown Zone Elevation: 7.4

- 2.12.1 Designation: 10
- 2.12.2 True Bearing: 90
- 2.12.3 True Dimensions: 8016 ft x 150 ft
- 2.12.4 PCN: 68 R/C/W/T
- 2.12.5 Coordinates: 18-26-00.8092N / 66-00-49.4179W
- 2.12.6 Threshold Elevation: 9.3
- 2.12.6 Touchdown Zone Elevation: 9.3

- 2.12.1 Designation: 28
- 2.12.2 True Bearing: 270
- 2.12.3 True Dimensions: 8016 ft x 150 ft
- 2.12.4 PCN: 68 R/C/W/T
- 2.12.5 Coordinates: 18-26-00.6107N / 65-59-26.159W
- 2.12.6 Threshold Elevation: 9.5
- 2.12.6 Touchdown Zone Elevation: 9.6

AD 2.13 Declared Distances

- 2.13.1 Designation: 08
- 2.13.2 Take-off Run Available: 10400
- 2.13.3 Take-off 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 Take-off Run Available: 10400
- 2.13.3 Take-off Distance Available: 10400
- 2.13.4 Accelerate-Stop Distance Available: 10308
- 2.13.5 Landing Distance Available: 9908

- 2.13.1 Designation: 10
- 2.13.2 Take-off Run Available: 8016
- 2.13.3 Take-off 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 Take-off Run Available: 8016
- 2.13.3 Take-off 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
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System:

- 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
- 2.14.2 Approach Lighting System:
- 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 Channel: 119.4

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (NORTH & EAST)

2.18.3 Channel: 120.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (WEST & SW)

2.18.3 Channel: 269.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (NORTH & EAST)

2.18.3 Channel: 290.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD PRE TAXI CLNC

2.18.3 Channel: 126.4

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 284.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (WEST & SW)

2.18.3 Channel: 119.4

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (NORTH & EAST)

2.18.3 Channel: 120.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (WEST & SW)

2.18.3 Channel: 269.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (NORTH & EAST)

2.18.3 Channel: 290.2

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: COMD POST (PRANG COMD POST)

2.18.3 Channel: 235

2.18.5 Hours of Operation:

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 125.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 348.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 132.05

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 257.8

2.18.5 Hours of Operation: 24

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: 18-26-27.0397N / 66-00-45.5699W

2.19.6 Site Elevation: 4.2 ft

2.19.1 ILS Type: Localizer for runway 08. Magnetic variation: 11W

2.19.2 ILS Identification: SJU

2.19.5 Coordinates: 18-26-59.7947N / 65-59-14.1228W

2.19.6 Site Elevation: 5.6 ft

2.19.1 ILS Type: Outer Marker for runway 08. Magnetic variation: 11W

2.19.2 ILS Identification: SJU

2.19.5 Coordinates: 18-24-31.8227N / 66-05-21.8301W

2.19.6 Site Elevation: 66.5 ft

2.19.1 ILS Type: DME for runway 10. Magnetic variation: 11W

2.19.2 ILS Identification: CLA

2.19.5 Coordinates: 18-26-02.5352N / 65-59-15.6282W

2.19.6 Site Elevation: 18.2 ft

2.19.1 ILS Type: Glide Slope for runway 10. Magnetic variation: 11W

2.19.2 ILS Identification: CLA

2.19.5 Coordinates: 18-25-57.5628N / 66-00-39.041W

2.19.6 Site Elevation: 4.5 ft

2.19.1 ILS Type: Localizer for runway 10. Magnetic variation: 11W

2.19.2 ILS Identification: CLA

2.19.5 Coordinates: 18-26-00.5899N / 65-59-15.5192W

2.19.6 Site Elevation: 9 ft

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 11W

2.19.2 Navigation Aid Identification: SJU

2.19.5 Coordinates: 18-26-46.6101N / 65-59-22.2272W

2.19.6 Site Elevation: 5.7 ft

General Remarks:

TWY J BTN J1 AND J5 (NOT INCLUDING J5) CLSD TO ACFT WITH GREATER THAN 118 FT WINGSPAN.

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

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.

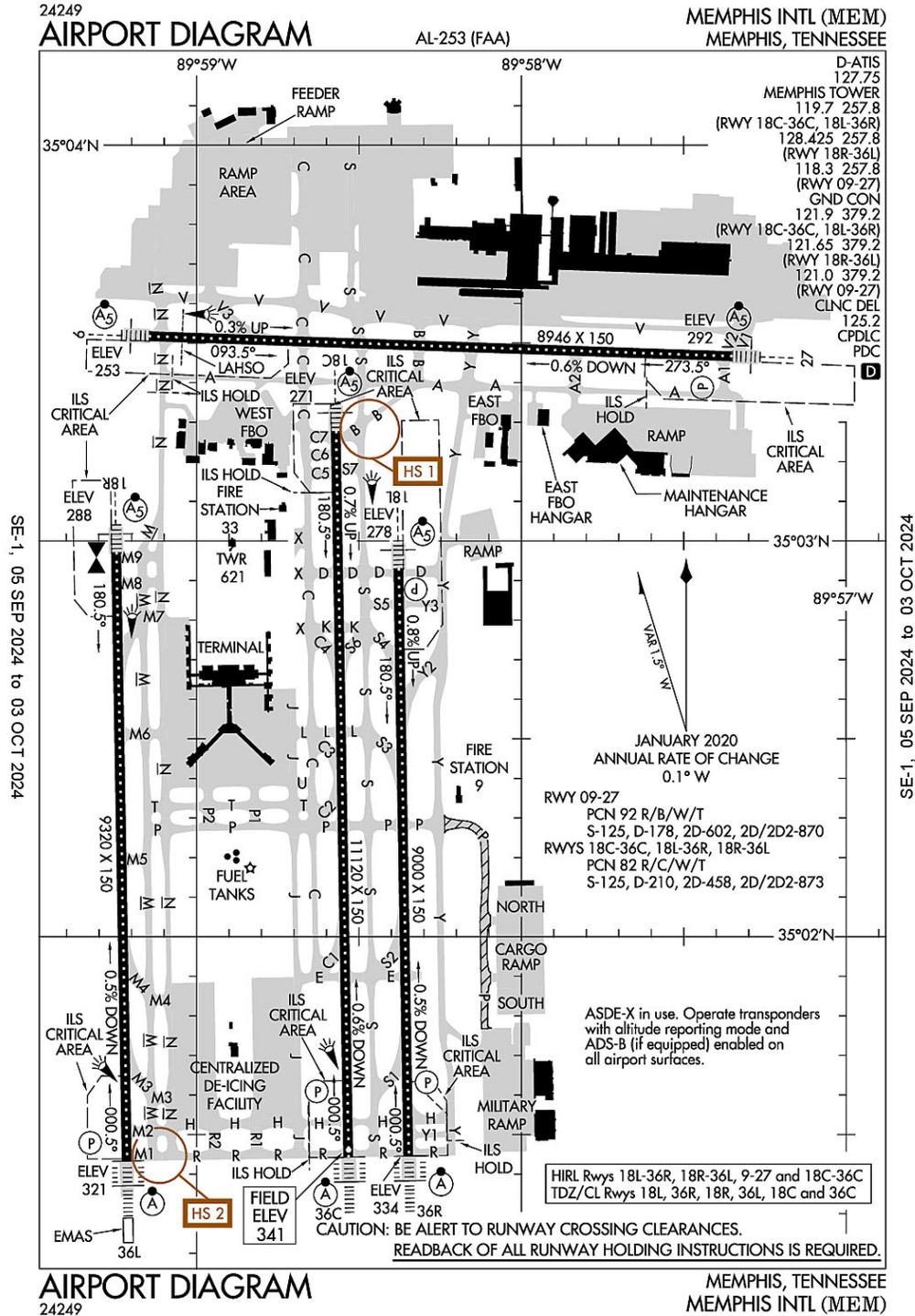
ALL PVT AND CORPORATE AIRCRAFT MUST CONTACT ARPT OPS, BEFORE ARRIVAL, FOR FBOS & GROUND HANDLING INFO AT 787-253-0979.

ENGINE RUNUPS PROHIBITED ON GATES AREA.

APRON 12 AVBL FOR GA ACFT ONLY.

BASE OPS 1130-2000Z MON-FRI, CLSD WKEND AND HOL.

Memphis, Tennessee Memphis International ICAO Identifier KMEM



Memphis, TN
Memphis Intl
ICAO Identifier KMEM

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 35-02-32.681N / 89-58-36.045W
- 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: TERRY BLUE
2491 WINCHESTER RD.
MEMPHIS, TN 38116 (901-922-8000)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 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: Class-I certified on 5/21/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 27
- 2.12.2 True Bearing: 272
- 2.12.3 True Dimensions: 8946 ft x 150 ft
- 2.12.4 PCN: 92 R/B/W/T
- 2.12.5 Coordinates: 35-03-28.0128N / 89-57-21.0816W
- 2.12.6 Threshold Elevation: 292
- 2.12.6 Touchdown Zone Elevation: 292

- 2.12.1 Designation: 09
- 2.12.2 True Bearing: 92
- 2.12.3 True Dimensions: 8946 ft x 150 ft
- 2.12.4 PCN: 92 R/B/W/T
- 2.12.5 Coordinates: 35-03-31.046N / 89-59-08.6536W
- 2.12.6 Threshold Elevation: 253.2
- 2.12.6 Touchdown Zone Elevation: 258.7

- 2.12.1 Designation: 18C
- 2.12.2 True Bearing: 179
- 2.12.3 True Dimensions: 11120 ft x 150 ft
- 2.12.4 PCN: 82 R/C/W/T
- 2.12.5 Coordinates: 35-03-16.5411N / 89-58-34.2156W
- 2.12.6 Threshold Elevation: 270.6
- 2.12.6 Touchdown Zone Elevation: 290.1

2.12.1 Designation: 36C
2.12.2 True Bearing: 359
2.12.3 True Dimensions: 11120 ft x 150 ft
2.12.4 PCN: 82 R/C/W/T
2.12.5 Coordinates: 35-01-26.5803N / 89-58-31.8977W
2.12.6 Threshold Elevation: 340.9
2.12.6 Touchdown Zone Elevation: 340.9

2.12.1 Designation: 18L
2.12.2 True Bearing: 179
2.12.3 True Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 82 R/C/W/T
2.12.5 Coordinates: 35-02-55.7402N / 89-58-22.6229W
2.12.6 Threshold Elevation: 277.6
2.12.6 Touchdown Zone Elevation: 300.9

2.12.1 Designation: 36R
2.12.2 True Bearing: 359
2.12.3 True Dimensions: 9000 ft x 150 ft
2.12.4 PCN: 82 R/C/W/T
2.12.5 Coordinates: 35-01-26.7376N / 89-58-20.7544W
2.12.6 Threshold Elevation: 334.3
2.12.6 Touchdown Zone Elevation: 334.7

2.12.1 Designation: 36L
2.12.2 True Bearing: 359
2.12.3 True Dimensions: 9320 ft x 150 ft
2.12.4 PCN: 82 R/C/W/T
2.12.5 Coordinates: 35-01-25.9852N / 89-59-12.8121W
2.12.6 Threshold Elevation: 320.8
2.12.6 Touchdown Zone Elevation: 320.8

2.12.1 Designation: 18R
2.12.2 True Bearing: 179
2.12.3 True Dimensions: 9320 ft x 150 ft
2.12.4 PCN: 82 R/C/W/T
2.12.5 Coordinates: 35-02-58.1489N / 89-59-14.7913W
2.12.6 Threshold Elevation: 288.4
2.12.6 Touchdown Zone Elevation: 294.7

AD 2.13 Declared Distances

2.13.1 Designation: 27
2.13.2 Take-off Run Available: 8946
2.13.3 Take-off Distance Available: 8946
2.13.4 Accelerate-Stop Distance Available: 8946
2.13.5 Landing Distance Available: 8946

2.13.1 Designation: 09
2.13.2 Take-off Run Available: 8946
2.13.3 Take-off Distance Available: 8946

2.13.4 Accelerate-Stop Distance Available: 8946
2.13.5 Landing Distance Available: 8946

2.13.1 Designation: 18C
2.13.2 Take-off Run Available: 11120
2.13.3 Take-off 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 Take-off Run Available: 11120
2.13.3 Take-off Distance Available: 11120
2.13.4 Accelerate-Stop Distance Available: 10715
2.13.5 Landing Distance Available: 10715

2.13.1 Designation: 18L
2.13.2 Take-off Run Available: 9000
2.13.3 Take-off 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 Take-off Run Available: 9000
2.13.3 Take-off 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 Take-off Run Available: 9320
2.13.3 Take-off Distance Available: 9320
2.13.4 Accelerate-Stop Distance Available: 9320
2.13.5 Landing Distance Available: 9320

2.13.1 Designation: 18R
2.13.2 Take-off Run Available: 9320
2.13.3 Take-off Distance Available: 9320
2.13.4 Accelerate-Stop Distance Available: 9320
2.13.5 Landing Distance Available: 9320

AD 2.14 Approach and Runway Lighting

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: 09
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 18C
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System:

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: 36L
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: MALSR
2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: ANG COMD POST
2.18.3 Channel: 138.1
2.18.5 Hours of Operation:

2.18.1 Service Designation: ANG COMD POST
2.18.3 Channel: 353.45
2.18.5 Hours of Operation:

2.18.1 Service Designation: CD PRE TAXI CLNC
2.18.3 Channel: 125.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS
2.18.3 Channel: 127.75
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P (RWY 09/27)
2.18.3 Channel: 121
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (RWY 18R/36L)

2.18.3 Channel: 121.65
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (RWY 18L/36R, 18C/36C)
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 379.2
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 09/27)
2.18.3 Channel: 118.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 18L/36R, 18C/36C)
2.18.3 Channel: 119.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 18R/36L)
2.18.3 Channel: 128.425
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 257.8
2.18.5 Hours of Operation: 24

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: 35-03-27.2174N / 89-58-56.2128W
2.19.6 Site Elevation: 252.5 ft

2.19.1 ILS Type: Localizer for runway 09. Magnetic variation: 1W
2.19.2 ILS Identification: MEM
2.19.5 Coordinates: 35-03-27.6511N / 89-57-07.9461W
2.19.6 Site Elevation: 296.5 ft

2.19.1 ILS Type: Glide Slope for runway 27. Magnetic variation: 1W
2.19.2 ILS Identification: JIM
2.19.5 Coordinates: 35-03-24.4908N / 89-57-36.2529W
2.19.6 Site Elevation: 277.2 ft

2.19.1 ILS Type: Localizer for runway 27. Magnetic variation: 1W
2.19.2 ILS Identification: JIM
2.19.5 Coordinates: 35-03-31.3982N / 89-59-20.811W
2.19.6 Site Elevation: 252.2 ft

2.19.1 ILS Type: Glide Slope for runway 18C. Magnetic variation: 1W
2.19.2 ILS Identification: SDU
2.19.5 Coordinates: 35-03-07.6024N / 89-58-37.5142W

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: 35-01-10.2462N / 89-58-31.5613W
2.19.6 Site Elevation: 345.5 ft

2.19.1 ILS Type: DME for runway 36C. Magnetic variation: 1W
2.19.2 ILS Identification: TSE
2.19.5 Coordinates: 35-03-22.0479N / 89-58-37.3452W
2.19.6 Site Elevation: 268.9 ft

2.19.1 ILS Type: Glide Slope for runway 36C. Magnetic variation: 1W
2.19.2 ILS Identification: TSE
2.19.5 Coordinates: 35-01-38.095N / 89-58-36.9423W
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: 35-03-22.514N / 89-58-34.3391W
2.19.6 Site Elevation: 261.2 ft

2.19.1 ILS Type: DME for runway 18L. Magnetic variation: 1W
2.19.2 ILS Identification: EXS
2.19.5 Coordinates: 35-01-16.8761N / 89-58-19.3033W
2.19.6 Site Elevation: 328.2 ft

2.19.1 ILS Type: Glide Slope for runway 18L. Magnetic variation: 1W
2.19.2 ILS Identification: EXS
2.19.5 Coordinates: 35-02-46.7849N / 89-58-17.6254W
2.19.6 Site Elevation: 278.6 ft

2.19.1 ILS Type: Localizer for runway 18L. Magnetic variation: 1W
2.19.2 ILS Identification: EXS
2.19.5 Coordinates: 35-01-16.6952N / 89-58-20.5424W
2.19.6 Site Elevation: 344.5 ft

2.19.1 ILS Type: DME for runway 36R. Magnetic variation: 1W
2.19.2 ILS Identification: MYO
2.19.5 Coordinates: 35-03-05.9229N / 89-58-19.6804W
2.19.6 Site Elevation: 282.5 ft

2.19.1 ILS Type: Glide Slope for runway 36R. Magnetic variation: 1W
2.19.2 ILS Identification: MYO
2.19.5 Coordinates: 35-01-38.0016N / 89-58-16.1795W
2.19.6 Site Elevation: 324.2 ft

2.19.1 ILS Type: Localizer for runway 36R. Magnetic variation: 1W
2.19.2 ILS Identification: MYO
2.19.5 Coordinates: 35-03-06.1649N / 89-58-22.8431W
2.19.6 Site Elevation: 278.7 ft

2.19.1 ILS Type: Glide Slope for runway 18R. Magnetic variation: 1W
2.19.2 ILS Identification: OOI
2.19.5 Coordinates: 35-02-48.6497N / 89-59-18.4713W
2.19.6 Site Elevation: 287.1 ft

2.19.1 ILS Type: Localizer for runway 18R. Magnetic variation: 1W
2.19.2 ILS Identification: OOI
2.19.5 Coordinates: 35-01-17.2969N / 89-59-12.6028W
2.19.6 Site Elevation: 321.4 ft

2.19.1 ILS Type: DME for runway 36L. Magnetic variation: 1W
2.19.2 ILS Identification: OHN
2.19.5 Coordinates: 35-03-06.901N / 89-59-10.0928W
2.19.6 Site Elevation: 285.7 ft

2.19.1 ILS Type: Glide Slope for runway 36L. Magnetic variation: 1W
2.19.2 ILS Identification: OHN
2.19.5 Coordinates: 35-01-38.7288N / 89-59-17.8741W
2.19.6 Site Elevation: 308.9 ft

2.19.1 ILS Type: Localizer for runway 36L. Magnetic variation: 1W
2.19.2 ILS Identification: OHN
2.19.5 Coordinates: 35-03-08.5885N / 89-59-14.9936W
2.19.6 Site Elevation: 277.6 ft

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 1E
2.19.2 Navigation Aid Identification: MEM
2.19.5 Coordinates: 35-00-54.3808N / 89-58-59.5258W
2.19.6 Site Elevation: 363.4 ft

General Remarks:

ANG RAMP OFFL BUS ONLY; PPR - V966-8131. TSNT ACFT RQR FOLLOW ME ASSIST ENTERING ANG RAMP.

MEM AD AP ALL SAFETY AREA NOT STD GRADING.

ANG: PPR 24 HR PN RQR; OFFL BUS ONLY.

HOLD SHORT INSTRN READ BACK RQR.

COMMUNICATIONS-ANG COMD POST: RADIO CALL GRACELAND OPS.

TWY N BTN TWY M & TWY M7 CLSD TO WINGSPAN MORE THAN 171.5 FT EXC TAX SPEED LESS THAN 15 MPH.

ANG-PPR DSN 726-7131/7505, C901-291-7131/7505. MIL RAMP OPS 1230-0430Z++ MON-FRI; CLSD ALTN MON & HOL. MIL RAMP CLSD OUTSIDE OF PUB HR WITHOUT OG/CC APVL DSN 726-7557, C901-291-7557. 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.

AIRCRAFT WITH WINGSPANS GREATER THAN 118 FEET RESTRICTED FROM TAXIING ON TWY J NORTH OF TWY U.

HELI OPS TO/FM TRML BLDG NA.

BASH PHASE II APR-MAY & AUG-OCT; CURRENT BIRD WATCH COND NOT ON ATIS.

NOISE ABATEMENT PROC IN EFCT. SUCCESSIVE AND/OR SIMUL DEP APVD ON RWY 36L-18R & RWY 36C-18C OR RWY 36L-18R & RWY 36R-18L WITH COURSE DVRGNC NO LATER THAN 2.27 NM FROM RWY END.

BIRDS INVOF ARPT.

MIL: MIL RAMP OPS AT REDUCED ARFF, DOWNGRADED TO YELLOW.

TWY V BTN TWY S & Y RSTR TO ACFT WITH TAIL HEIGHT 65 FT 10 IN OR LESS.

LRG & HVY EBND ACFT ON TWY V FOR RWY 27 HOLD SHORT AT MNM THRUST AREA SIGN.

PPR FOR TAXI CLNC ON TWY N NORTH OF TWY V, TWY S NORTH TWY V & TWY C NORTH OF TWY V - FEDEX RAMP ATCT 131.5.

TWY N NORTH OF TWY V, TWY C NORTH OF TWY V, TWY S NORTH OF TWY V AND TWY V WEST OF TWY N DESIGNATED AS NON-MOVEMENT AREAS.

TWY V BTN SPOT 7W & RWY 27 RSTR TO ACFT WITH WINGSPAN OF 171 FT 6 IN OR LESS.

CTC RAMP CONTROL 121.8 FOR ENTRY ON ANG RAMP. ANG FREQS 138.95 353.45. AFT HR CTC COMMAND POST - DSN 726-7148; C901-291-7311/7312 OR SECURITY FORCES - DSN 726-7101; C901-291-7101/7133.

PPR FOR TAXI CLNC FM N & S CARGO RAMP PRKG - 121.9.

ANG-ATIS INFO RPRTS BIRD ACT H24.

Nashville, TN
Nashville Intl
ICAO Identifier KBNA

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 36-07-28.11N / 86-40-41.45W
- 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: ADAM FLOYD
140 BNA PARK DR. SUITE 520
NASHVILLE, TN 37214 (615-275-1825)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-D

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 02C
- 2.12.2 True Bearing: 18
- 2.12.3 True Dimensions: 8001 ft x 150 ft
- 2.12.4 PCN: 52 R/B/W/T
- 2.12.5 Coordinates: 36-06-11.9899N / 86-41-16.6591W
- 2.12.6 Threshold Elevation: 569.1
- 2.12.6 Touchdown Zone Elevation: 586.7

- 2.12.1 Designation: 20C
- 2.12.2 True Bearing: 198
- 2.12.3 True Dimensions: 8001 ft x 150 ft
- 2.12.4 PCN: 52 R/B/W/T
- 2.12.5 Coordinates: 36-07-27.2406N / 86-40-46.55W
- 2.12.6 Threshold Elevation: 571.8
- 2.12.6 Touchdown Zone Elevation: 587.7

- 2.12.1 Designation: 02L
- 2.12.2 True Bearing: 18
- 2.12.3 True Dimensions: 7704 ft x 150 ft
- 2.12.4 PCN: 71 R/B/W/T
- 2.12.5 Coordinates: 36-07-03.6342N / 86-41-11.3105W
- 2.12.6 Threshold Elevation: 598.7
- 2.12.6 Touchdown Zone Elevation: 599

2.12.1 Designation: 20R
2.12.2 True Bearing: 198
2.12.3 True Dimensions: 7704 ft x 150 ft
2.12.4 PCN: 71 R/B/W/T
2.12.5 Coordinates: 36-08-16.2324N / 86-40-42.8335W
2.12.6 Threshold Elevation: 555.6
2.12.6 Touchdown Zone Elevation: 578

2.12.1 Designation: 02R
2.12.2 True Bearing: 18
2.12.3 True Dimensions: 8001 ft x 150 ft
2.12.4 PCN: 59 R/B/W/T
2.12.5 Coordinates: 36-06-45.767N / 86-40-03.5138W
2.12.6 Threshold Elevation: 589.8
2.12.6 Touchdown Zone Elevation: 589.8

2.12.1 Designation: 20L
2.12.2 True Bearing: 198
2.12.3 True Dimensions: 8001 ft x 150 ft
2.12.4 PCN: 59 R/B/W/T
2.12.5 Coordinates: 36-08-01.0116N / 86-39-33.3955W
2.12.6 Threshold Elevation: 540
2.12.6 Touchdown Zone Elevation: 550.6

2.12.1 Designation: 13
2.12.2 True Bearing: 133
2.12.3 True Dimensions: 11030 ft x 150 ft
2.12.4 PCN: 70 R/C/W/T
2.12.5 Coordinates: 36-08-28.5991N / 86-41-43.2788W
2.12.6 Threshold Elevation: 535.9
2.12.6 Touchdown Zone Elevation: 567.5

2.12.1 Designation: 31
2.12.2 True Bearing: 313
2.12.3 True Dimensions: 11030 ft x 150 ft
2.12.4 PCN: 70 R/C/W/T
2.12.5 Coordinates: 36-07-13.7852N / 86-40-05.4384W
2.12.6 Threshold Elevation: 582.3
2.12.6 Touchdown Zone Elevation: 577.5

AD 2.13 Declared Distances

2.13.1 Designation: 02C
2.13.2 Take-off Run Available: 8001
2.13.3 Take-off 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 Take-off Run Available: 8001
2.13.3 Take-off 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 Take-off Run Available: 7702
2.13.3 Take-off 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 Take-off Run Available: 7702
2.13.3 Take-off Distance Available: 7702
2.13.4 Accelerate-Stop Distance Available: 7702
2.13.5 Landing Distance Available: 7702

2.13.1 Designation: 02R
2.13.2 Take-off Run Available: 8000
2.13.3 Take-off 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 Take-off Run Available: 8000
2.13.3 Take-off Distance Available: 8000
2.13.4 Accelerate-Stop Distance Available: 8000
2.13.5 Landing Distance Available: 8000

2.13.1 Designation: 13
2.13.2 Take-off Run Available: 10288
2.13.3 Take-off 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 Take-off Run Available: 10228
2.13.3 Take-off Distance Available: 11029
2.13.4 Accelerate-Stop Distance Available: 10228
2.13.5 Landing Distance Available: 9487

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 02C
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 20C
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 02L
2.14.2 Approach Lighting System: ALSF2
2.14.4 Visual Approach Slope Indicator System: P4R

2.14.1 Designation: 20R
2.14.2 Approach Lighting System: MALSF
2.14.4 Visual Approach Slope Indicator System: P4R

2.14.1 Designation: 02R
2.14.2 Approach Lighting System: ALSF2
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 20L
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 13
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 31
2.14.2 Approach Lighting System:
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 Channel: 314.4
2.18.5 Hours of Operation:

2.18.1 Service Designation: APCH/P (WEST)
2.18.3 Channel: 372
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P IC (EAST)
2.18.3 Channel: 118.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P IC (EAST)
2.18.3 Channel: 360.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD PRE TAXI CLNC
2.18.3 Channel: 126.05
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (EAST)
2.18.3 Channel: 118.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (WEST)
2.18.3 Channel: 119.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (EAST)

2.18.3 Channel: 360.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (WEST)
2.18.3 Channel: 372
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS
2.18.3 Channel: 135.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (EAST)
2.18.3 Channel: 118.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (WEST)
2.18.3 Channel: 119.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (EAST)
2.18.3 Channel: 360.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (WEST)
2.18.3 Channel: 372
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 348.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 118.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 257.8
2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: Glide Slope for runway 02C. Magnetic variation: 3W

2.19.2 ILS Identification: EZN

2.19.5 Coordinates: 36-06-22.6382N / 86-41-16.8861W

2.19.6 Site Elevation: 570.5 ft

2.19.1 ILS Type: Localizer for runway 02C. Magnetic variation: 3W

2.19.2 ILS Identification: EZN

2.19.5 Coordinates: 36-07-32.9571N / 86-40-44.2611W

2.19.6 Site Elevation: 574.3 ft

2.19.1 ILS Type: DME for runway 02L. Magnetic variation: 3W

2.19.2 ILS Identification: BNA

2.19.5 Coordinates: 36-08-26.4864N / 86-40-42.3692W

2.19.6 Site Elevation: 554 ft

2.19.1 ILS Type: Glide Slope for runway 02L. Magnetic variation: 3W

2.19.2 ILS Identification: BNA

2.19.5 Coordinates: 36-07-12.9535N / 86-41-02.539W

2.19.6 Site Elevation: 589.7 ft

2.19.1 ILS Type: Inner Marker for runway 02L. Magnetic variation: 3W

2.19.2 ILS Identification: BNA

2.19.5 Coordinates: 36-06-54.829N / 86-41-14.7612W

2.19.6 Site Elevation: 594.5 ft

2.19.1 ILS Type: Localizer for runway 02L. Magnetic variation: 3W

2.19.2 ILS Identification: BNA

2.19.5 Coordinates: 36-08-25.7779N / 86-40-39.0927W

2.19.6 Site Elevation: 545.4 ft

2.19.1 ILS Type: Glide Slope for runway 20R. Magnetic variation: 3W

2.19.2 ILS Identification: VIY

2.19.5 Coordinates: 36-08-05.8196N / 86-40-42.7621W

2.19.6 Site Elevation: 554.9 ft

2.19.1 ILS Type: Localizer for runway 20R. Magnetic variation: 3W

2.19.2 ILS Identification: VIY

2.19.5 Coordinates: 36-06-49.6756N / 86-41-16.7814W

2.19.6 Site Elevation: 598.1 ft

2.19.1 ILS Type: DME for runway 02R. Magnetic variation: 3W

2.19.2 ILS Identification: UQU

2.19.5 Coordinates: 36-08-09.8916N / 86-39-35.7867W

2.19.6 Site Elevation: 537.1 ft

2.19.1 ILS Type: Glide Slope for runway 02R. Magnetic variation: 3W

2.19.2 ILS Identification: UQU

2.19.5 Coordinates: 36-06-56.0152N / 86-39-54.7364W

2.19.6 Site Elevation: 576.7 ft

2.19.1 ILS Type: Inner Marker for runway 02R. Magnetic variation: 3W
2.19.2 ILS Identification: UQU
2.19.5 Coordinates: 36-06-37.6961N / 86-40-06.7484W
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: 36-08-10.5404N / 86-39-29.5803W
2.19.6 Site Elevation: 531 ft

2.19.1 ILS Type: DME for runway 20L. Magnetic variation: 3W
2.19.2 ILS Identification: SSX
2.19.5 Coordinates: 36-06-30.9674N / 86-40-12.8854W
2.19.6 Site Elevation: 622.2 ft

2.19.1 ILS Type: Glide Slope for runway 20L. Magnetic variation: 3W
2.19.2 ILS Identification: SSX
2.19.5 Coordinates: 36-07-50.0286N / 86-39-33.1134W
2.19.6 Site Elevation: 534.5 ft

2.19.1 ILS Type: Localizer for runway 20L. Magnetic variation: 3W
2.19.2 ILS Identification: SSX
2.19.5 Coordinates: 36-06-30.0253N / 86-40-09.8136W
2.19.6 Site Elevation: 613.4 ft

2.19.1 ILS Type: Glide Slope for runway 31. Magnetic variation: 3W
2.19.2 ILS Identification: PNO
2.19.5 Coordinates: 36-07-28.2722N / 86-40-18.5978W
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: 36-08-30.6518N / 86-41-45.9626W
2.19.6 Site Elevation: 539.6 ft

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 2W
2.19.2 Navigation Aid Identification: BNA
2.19.5 Coordinates: 36-08-13.0573N / 86-41-05.1762W
2.19.6 Site Elevation: 566.4 ft

General Remarks:

RWY 2L-20R, 2C-20C, 2R-20L, 13-31 CTL MRKGS AND LEAD OFF/ON MRKGS IN TDZ OBSC DUE TO RUBBER BUILD-UP

PAVEMENT ON W SIDE OF RWY 2R/20L BTN TXY H3 & H4 MKD AS A VEHICLE ACES ROAD ONLY.

TBJT RWY NOISE ABATEMENT PROC; MIL TBJT USE RWY 13/31 FOR ARR & DEP.

CTN: READ BACK & COMPLIANCE OF RWY HLDG INSTRN RQR; SPCLY TWY K & RWY 20C, TWY L AT RWY 13 & TWY H AT RWY 31.

TRML RAMP OPS TRML B GATE B6, B8, B10, TRML C GATE C13-C15 & TRML T GATE T1-T6 PPR BFR RAMP ENTRY OR PUSHBACK 0500-2300 - 131.375.

MIL & ACFT MORE THAN 12500 LB PRAC APCH NA; PRAC APCH BTN 2300-0700 NA.

DO NOT CONFUSE TWY S FOR RWY 20C.

BIRD ACT ON & INVOF ARPT.

TRML APRON TXL Z, Y1, Y2 & TXL Y BTN TXL Y3 & Y4 CLSD TO WINGSPAN MORE THAN 118 FT.

TRML APRON TAX BTN ACR PUSHBACK OPS & GATES NA.

ANG: PPR - MUSIC CITY OPS 615-367-5579.

180 DEG TURNS OVR 12500 LBS NA ON ASPH SFC.

TRML RAMP OPS TRML D GATE D1-D6 & TRML C GATE C1-C11 & GATE C16-C27 PPR BFR RAMP ENTRY OR PUSHBACK 0500-2300 - 129.95.

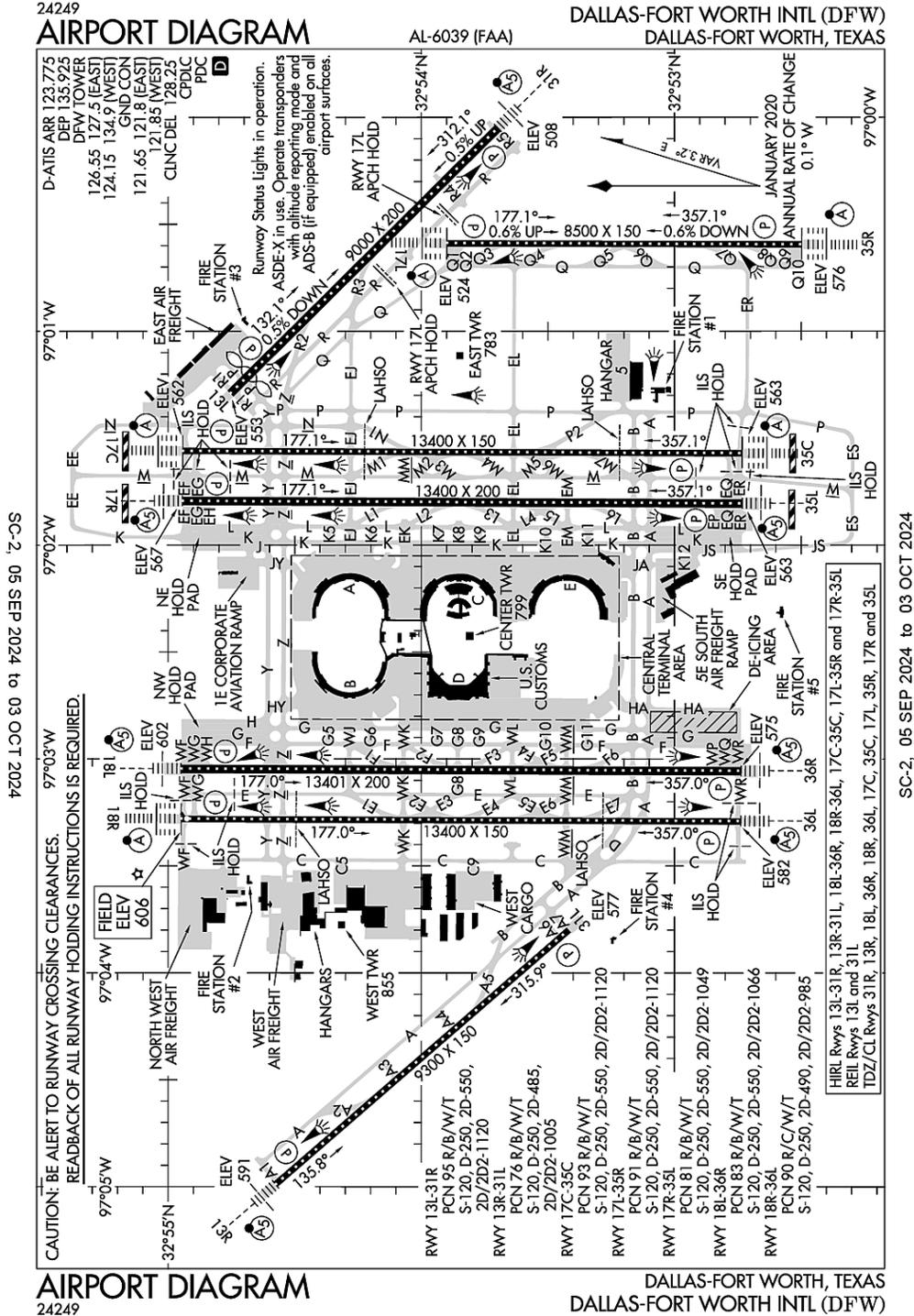
FLT NOTIFICATION SVC (ADCUS) AVBL.

TRML RAMP, N TRML RAMP & NON-MOVMT AREA UNCTLD; BFR USE - 122.95.

FLT OVR MAIN TRML NA.

ADHERE TO TWY & TXL CNTRLN WI TRML APRON.

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: 32-53-50.039N / 97-02-15.701W
- 2.2.2 From City: 12 miles NW of DALLAS-FORT WORTH, TX
- 2.2.3 Elevation: 606.4 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)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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:
- 2.4.6 Repair Facilities: None

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 7/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 13L
- 2.12.2 True Bearing: 135
- 2.12.3 True Dimensions: 9000 ft x 200 ft
- 2.12.4 PCN: 95 R/B/W/T
- 2.12.5 Coordinates: 32-54-45.197N / 97-01-17.3221W
- 2.12.6 Threshold Elevation: 553.1
- 2.12.6 Touchdown Zone Elevation: 550

- 2.12.1 Designation: 31R
- 2.12.2 True Bearing: 315
- 2.12.3 True Dimensions: 9000 ft x 200 ft
- 2.12.4 PCN: 95 R/B/W/T
- 2.12.5 Coordinates: 32-53-41.932N / 97-00-03.0376W
- 2.12.6 Threshold Elevation: 508.4
- 2.12.6 Touchdown Zone Elevation: 523.4

- 2.12.1 Designation: 13R
- 2.12.2 True Bearing: 139
- 2.12.3 True Dimensions: 9300 ft x 150 ft
- 2.12.4 PCN: 76 R/B/W/T
- 2.12.5 Coordinates: 32-54-34.4723N / 97-04-59.276W
- 2.12.6 Threshold Elevation: 591
- 2.12.6 Touchdown Zone Elevation: 591

2.12.1 Designation: 31L
2.12.2 True Bearing: 319
2.12.3 True Dimensions: 9300 ft x 150 ft
2.12.4 PCN: 76 R/B/W/T
2.12.5 Coordinates: 32-53-24.9716N / 97-03-47.7953W
2.12.6 Threshold Elevation: 577.2
2.12.6 Touchdown Zone Elevation: 581.4

2.12.1 Designation: 17C
2.12.2 True Bearing: 180
2.12.3 True Dimensions: 13400 ft x 150 ft
2.12.4 PCN: 93 R/B/W/T
2.12.5 Coordinates: 32-54-56.5441N / 97-01-33.5097W
2.12.6 Threshold Elevation: 562.2
2.12.6 Touchdown Zone Elevation: 563.2

2.12.1 Designation: 35C
2.12.2 True Bearing: 0
2.12.3 True Dimensions: 13400 ft x 150 ft
2.12.4 PCN: 93 R/B/W/T
2.12.5 Coordinates: 32-52-43.9636N / 97-01-34.218W
2.12.6 Threshold Elevation: 563.1
2.12.6 Touchdown Zone Elevation: 563.2

2.12.1 Designation: 35R
2.12.2 True Bearing: 0
2.12.3 True Dimensions: 8500 ft x 150 ft
2.12.4 PCN: 91 R/B/W/T
2.12.5 Coordinates: 32-52-29.8535N / 97-00-35.6686W
2.12.6 Threshold Elevation: 575.6
2.12.6 Touchdown Zone Elevation: 575.6

2.12.1 Designation: 17L
2.12.2 True Bearing: 180
2.12.3 True Dimensions: 8500 ft x 150 ft
2.12.4 PCN: 91 R/B/W/T
2.12.5 Coordinates: 32-53-53.9534N / 97-00-35.203W
2.12.6 Threshold Elevation: 524.3
2.12.6 Touchdown Zone Elevation: 545.2

2.12.1 Designation: 17R
2.12.2 True Bearing: 180
2.12.3 True Dimensions: 13400 ft x 200 ft
2.12.4 PCN: 81 R/B/W/T
2.12.5 Coordinates: 32-54-56.5996N / 97-01-47.5806W
2.12.6 Threshold Elevation: 566.6
2.12.6 Touchdown Zone Elevation: 566.7

2.12.1 Designation: 35L
2.12.2 True Bearing: 0

2.12.3 True Dimensions: 13400 ft x 200 ft
2.12.4 PCN: 81 R/B/W/T
2.12.5 Coordinates: 32-52-44.0203N / 97-01-48.2888W
2.12.6 Threshold Elevation: 563.4
2.12.6 Touchdown Zone Elevation: 564

2.12.1 Designation: 36R
2.12.2 True Bearing: 0
2.12.3 True Dimensions: 13401 ft x 200 ft
2.12.4 PCN: 83 R/B/W/T
2.12.5 Coordinates: 32-52-44.2972N / 97-03-03.3332W
2.12.6 Threshold Elevation: 575.3
2.12.6 Touchdown Zone Elevation: 580.7

2.12.1 Designation: 18L
2.12.2 True Bearing: 180
2.12.3 True Dimensions: 13401 ft x 200 ft
2.12.4 PCN: 83 R/B/W/T
2.12.5 Coordinates: 32-54-56.8785N / 97-03-02.6511W
2.12.6 Threshold Elevation: 601.5
2.12.6 Touchdown Zone Elevation: 601.6

2.12.1 Designation: 18R
2.12.2 True Bearing: 180
2.12.3 True Dimensions: 13400 ft x 150 ft
2.12.4 PCN: 90 R/C/W/T
2.12.5 Coordinates: 32-54-56.9275N / 97-03-16.7239W
2.12.6 Threshold Elevation: 606.4
2.12.6 Touchdown Zone Elevation: 606.4

2.12.1 Designation: 36L
2.12.2 True Bearing: 0
2.12.3 True Dimensions: 13400 ft x 150 ft
2.12.4 PCN: 90 R/C/W/T
2.12.5 Coordinates: 32-52-44.3493N / 97-03-17.4003W
2.12.6 Threshold Elevation: 582.2
2.12.6 Touchdown Zone Elevation: 587.6

AD 2.13 Declared Distances

2.13.1 Designation: 13L
2.13.2 Take-off Run Available: 9000
2.13.3 Take-off Distance Available: 9000
2.13.4 Accelerate-Stop Distance Available: 9000
2.13.5 Landing Distance Available: 8373

2.13.1 Designation: 31R
2.13.2 Take-off Run Available: 8373
2.13.3 Take-off Distance Available: 8373
2.13.4 Accelerate-Stop Distance Available: 8373
2.13.5 Landing Distance Available: 8373

2.13.1 Designation: 13R
2.13.2 Take-off Run Available: 9300
2.13.3 Take-off Distance Available: 9300
2.13.4 Accelerate-Stop Distance Available: 9300
2.13.5 Landing Distance Available: 9300

2.13.1 Designation: 31L
2.13.2 Take-off Run Available: 9300
2.13.3 Take-off Distance Available: 9300
2.13.4 Accelerate-Stop Distance Available: 9300
2.13.5 Landing Distance Available: 9300

2.13.1 Designation: 17C
2.13.2 Take-off Run Available: 13400
2.13.3 Take-off Distance Available: 13400
2.13.4 Accelerate-Stop Distance Available: 13400
2.13.5 Landing Distance Available: 13400

2.13.1 Designation: 35C
2.13.2 Take-off Run Available: 13400
2.13.3 Take-off Distance Available: 13400
2.13.4 Accelerate-Stop Distance Available: 13400
2.13.5 Landing Distance Available: 13400

2.13.1 Designation: 35R
2.13.2 Take-off Run Available: 8500
2.13.3 Take-off Distance Available: 8500
2.13.4 Accelerate-Stop Distance Available: 8500
2.13.5 Landing Distance Available: 8500

2.13.1 Designation: 17L
2.13.2 Take-off Run Available: 8500
2.13.3 Take-off 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 Take-off Run Available: 13400
2.13.3 Take-off Distance Available: 13400
2.13.4 Accelerate-Stop Distance Available: 13400
2.13.5 Landing Distance Available: 13400

2.13.1 Designation: 35L
2.13.2 Take-off Run Available: 13400
2.13.3 Take-off 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 Take-off Run Available: 13401
2.13.3 Take-off Distance Available: 13401

2.13.4 Accelerate-Stop Distance Available: 13401
2.13.5 Landing Distance Available: 13401

2.13.1 Designation: 18L
2.13.2 Take-off Run Available: 13401
2.13.3 Take-off Distance Available: 13401
2.13.4 Accelerate-Stop Distance Available: 13401
2.13.5 Landing Distance Available: 13401

2.13.1 Designation: 18R
2.13.2 Take-off Run Available: 13400
2.13.3 Take-off 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 Take-off Run Available: 13400
2.13.3 Take-off Distance Available: 13400
2.13.4 Accelerate-Stop Distance Available: 13400
2.13.5 Landing Distance Available: 13400

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 13L
2.14.2 Approach Lighting System:
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
2.14.2 Approach Lighting System:
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

2.14.1 Designation: 35R
2.14.2 Approach Lighting System: ALSF2
2.14.4 Visual Approach Slope Indicator System: P4R

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: 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

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: 18L
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

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: CD/P
2.18.3 Channel: 128.25
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS B (NW)
2.18.3 Channel: 118.1
2.18.5 Hours of Operation:

2.18.1 Service Designation: CLASS B (NE)
2.18.3 Channel: 124.3
2.18.5 Hours of Operation:

2.18.1 Service Designation: CLASS B (SE)
2.18.3 Channel: 125.2
2.18.5 Hours of Operation:

2.18.1 Service Designation: CLASS B (SW)
2.18.3 Channel: 135.975
2.18.5 Hours of Operation:

2.18.1 Service Designation: CLASS B (NE)
2.18.3 Channel: 282.275
2.18.5 Hours of Operation:

2.18.1 Service Designation: CLASS B (NW)
2.18.3 Channel: 306.95
2.18.5 Hours of Operation:

2.18.1 Service Designation: CLASS B (SE)
2.18.3 Channel: 343.65
2.18.5 Hours of Operation:

2.18.1 Service Designation: CLASS B (SW)
2.18.3 Channel: 379.9
2.18.5 Hours of Operation:

2.18.1 Service Designation: D-ATIS (ARR)
2.18.3 Channel: 123.775
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS (DEP)
2.18.3 Channel: 135.925
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P (EAST)
2.18.3 Channel: 121.65
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (EAST)
2.18.3 Channel: 121.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (WEST)
2.18.3 Channel: 121.85
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: JACKY DP (RY 31L/R, 36L/R, 35L/R)
2.18.3 Channel: 118.1
2.18.5 Hours of Operation:

2.18.1 Service Designation: JACKY DP (RWYS 13L/R, 17L/C/R, 18L/R)
2.18.3 Channel: 135.975
2.18.5 Hours of Operation:

2.18.1 Service Designation: JACKY DP (RWYS 31L/R, 36L/R, 35L/C/R)
2.18.3 Channel: 306.95
2.18.5 Hours of Operation:

2.18.1 Service Designation: JACKY DP (RWYS 13L/R, 17 L/C/R, 18L/R)
2.18.3 Channel: 379.9

2.18.5 Hours of Operation:

2.18.1 Service Designation: LCL/P (WEST)

2.18.3 Channel: 124.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (EAST)

2.18.3 Channel: 126.55

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (EAST)

2.18.3 Channel: 127.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (WEST)

2.18.3 Channel: 134.9

2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 31R. Magnetic variation: 4E

2.19.2 ILS Identification: RRA

2.19.5 Coordinates: 32-54-49.6375N / 97-01-18.3123W

2.19.6 Site Elevation: 558.1 ft

2.19.1 ILS Type: Glide Slope for runway 31R. Magnetic variation: 4E

2.19.2 ILS Identification: RRA

2.19.5 Coordinates: 32-53-51.7482N / 97-00-07.9558W

2.19.6 Site Elevation: 509 ft

2.19.1 ILS Type: Localizer for runway 31R. Magnetic variation: 4E

2.19.2 ILS Identification: RRA

2.19.5 Coordinates: 32-54-48.1182N / 97-01-20.7551W

2.19.6 Site Elevation: 551.5 ft

2.19.1 ILS Type: DME for runway 13R. Magnetic variation: 4E

2.19.2 ILS Identification: LWN

2.19.5 Coordinates: 32-53-16.0647N / 97-03-42.7672W

2.19.6 Site Elevation: 588.7 ft

2.19.1 ILS Type: Glide Slope for runway 13R. Magnetic variation: 4E

2.19.2 ILS Identification: LWN

2.19.5 Coordinates: 32-54-24.1329N / 97-04-54.0746W

2.19.6 Site Elevation: 587.6 ft

2.19.1 ILS Type: Localizer for runway 13R. Magnetic variation: 4E

2.19.2 ILS Identification: LWN

2.19.5 Coordinates: 32-53-17.4371N / 97-03-40.0471W

2.19.6 Site Elevation: 575 ft

2.19.1 ILS Type: DME for runway 17C. Magnetic variation: 4E

2.19.2 ILS Identification: FLQ

2.19.5 Coordinates: 32-52-34.123N / 97-01-39.6491W
2.19.6 Site Elevation: 573.6 ft

2.19.1 ILS Type: Glide Slope for runway 17C. Magnetic variation: 4E
2.19.2 ILS Identification: FLQ
2.19.5 Coordinates: 32-54-45.6425N / 97-01-28.781W
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: 32-52-33.1505N / 97-01-34.2781W
2.19.6 Site Elevation: 562.7 ft

2.19.1 ILS Type: DME for runway 35C. Magnetic variation: 4E
2.19.2 ILS Identification: PKQ
2.19.5 Coordinates: 32-52-34.123N / 97-01-39.6491W
2.19.6 Site Elevation: 573.6 ft

2.19.1 ILS Type: Glide Slope for runway 35C. Magnetic variation: 4E
2.19.2 ILS Identification: PKQ
2.19.5 Coordinates: 32-52-54.3357N / 97-01-29.4713W
2.19.6 Site Elevation: 557.2 ft

2.19.1 ILS Type: Inner Marker for runway 35C. Magnetic variation: 4E
2.19.2 ILS Identification: PKQ
2.19.5 Coordinates: 32-52-35.3015N / 97-01-34.258W
2.19.6 Site Elevation: 562.5 ft

2.19.1 ILS Type: Localizer for runway 35C. Magnetic variation: 4E
2.19.2 ILS Identification: PKQ
2.19.5 Coordinates: 32-55-07.0371N / 97-01-33.452W
2.19.6 Site Elevation: 561.2 ft

2.19.1 ILS Type: DME for runway 17L. Magnetic variation: 4E
2.19.2 ILS Identification: PPZ
2.19.5 Coordinates: 32-52-18.7175N / 97-00-40.2982W
2.19.6 Site Elevation: 591.2 ft

2.19.1 ILS Type: Glide Slope for runway 17L. Magnetic variation: 4E
2.19.2 ILS Identification: PPZ
2.19.5 Coordinates: 32-53-45.2247N / 97-00-31.1329W
2.19.6 Site Elevation: 526.4 ft

2.19.1 ILS Type: Inner Marker for runway 17L. Magnetic variation: 4E
2.19.2 ILS Identification: PPZ
2.19.5 Coordinates: 32-54-05.3333N / 97-00-35.2536W

2.19.6 Site Elevation: 521.7 ft

2.19.1 ILS Type: Localizer for runway 17L. Magnetic variation: 4E
2.19.2 ILS Identification: PPZ
2.19.5 Coordinates: 32-52-19.4359N / 97-00-35.7267W
2.19.6 Site Elevation: 584.2 ft

2.19.1 ILS Type: DME for runway 35R. Magnetic variation: 4E
2.19.2 ILS Identification: AJQ
2.19.5 Coordinates: 32-52-18.7175N / 97-00-40.2982W
2.19.6 Site Elevation: 591.2 ft

2.19.1 ILS Type: Glide Slope for runway 35R. Magnetic variation: 4E
2.19.2 ILS Identification: AJQ
2.19.5 Coordinates: 32-52-43.4402N / 97-00-30.9032W
2.19.6 Site Elevation: 559.2 ft

2.19.1 ILS Type: Inner Marker for runway 35R. Magnetic variation: 4E
2.19.2 ILS Identification: AJQ
2.19.5 Coordinates: 32-52-22.6082N / 97-00-35.7029W
2.19.6 Site Elevation: 581.2 ft

2.19.1 ILS Type: Localizer for runway 35R. Magnetic variation: 4E
2.19.2 ILS Identification: AJQ
2.19.5 Coordinates: 32-54-04.1916N / 97-00-35.1492W
2.19.6 Site Elevation: 519.5 ft

2.19.1 ILS Type: DME for runway 17R. Magnetic variation: 4E
2.19.2 ILS Identification: JHZ
2.19.5 Coordinates: 32-52-33.6523N / 97-01-53.6029W
2.19.6 Site Elevation: 556.9 ft

2.19.1 ILS Type: Glide Slope for runway 17R. Magnetic variation: 4E
2.19.2 ILS Identification: JHZ
2.19.5 Coordinates: 32-54-45.8213N / 97-01-43.0635W
2.19.6 Site Elevation: 561.3 ft

2.19.1 ILS Type: Localizer for runway 17R. Magnetic variation: 4E
2.19.2 ILS Identification: JHZ
2.19.5 Coordinates: 32-52-33.207N / 97-01-48.3488W
2.19.6 Site Elevation: 558.2 ft

2.19.1 ILS Type: DME for runway 35L. Magnetic variation: 4E
2.19.2 ILS Identification: UWX
2.19.5 Coordinates: 32-52-33.6523N / 97-01-53.6029W
2.19.6 Site Elevation: 556.9 ft

2.19.1 ILS Type: Glide Slope for runway 35L. Magnetic variation: 4E
2.19.2 ILS Identification: UWX
2.19.5 Coordinates: 32-52-54.9854N / 97-01-43.5413W
2.19.6 Site Elevation: 559 ft

2.19.1 ILS Type: Localizer for runway 35L. Magnetic variation: 4E
2.19.2 ILS Identification: UWX
2.19.5 Coordinates: 32-55-07.3142N / 97-01-47.5225W
2.19.6 Site Elevation: 567.6 ft

2.19.1 ILS Type: DME for runway 18L. Magnetic variation: 4E
2.19.2 ILS Identification: CIX
2.19.5 Coordinates: 32-55-08.6708N / 97-03-07.2741W
2.19.6 Site Elevation: 594.7 ft

2.19.1 ILS Type: Glide Slope for runway 18L. Magnetic variation: 4E
2.19.2 ILS Identification: CIX
2.19.5 Coordinates: 32-54-45.2198N / 97-03-06.8173W
2.19.6 Site Elevation: 594.3 ft

2.19.1 ILS Type: Localizer for runway 18L. Magnetic variation: 4E
2.19.2 ILS Identification: CIX
2.19.5 Coordinates: 32-52-33.5835N / 97-03-03.3873W
2.19.6 Site Elevation: 570.1 ft

2.19.1 ILS Type: DME for runway 36R. Magnetic variation: 4E
2.19.2 ILS Identification: FJN
2.19.5 Coordinates: 32-55-08.6708N / 97-03-07.2741W
2.19.6 Site Elevation: 594.7 ft

2.19.1 ILS Type: Glide Slope for runway 36R. Magnetic variation: 4E
2.19.2 ILS Identification: FJN
2.19.5 Coordinates: 32-52-54.8518N / 97-03-07.9662W
2.19.6 Site Elevation: 577.2 ft

2.19.1 ILS Type: Localizer for runway 36R. Magnetic variation: 4E
2.19.2 ILS Identification: FJN
2.19.5 Coordinates: 32-55-06.8486N / 97-03-02.5997W
2.19.6 Site Elevation: 597.2 ft

2.19.1 ILS Type: DME for runway 18R. Magnetic variation: 4E
2.19.2 ILS Identification: VYN
2.19.5 Coordinates: 32-52-34.0875N / 97-03-12.5854W
2.19.6 Site Elevation: 582.3 ft

2.19.1 ILS Type: Glide Slope for runway 18R. Magnetic variation: 4E
2.19.2 ILS Identification: VYN
2.19.5 Coordinates: 32-54-45.4683N / 97-03-21.5693W
2.19.6 Site Elevation: 598.5 ft

2.19.1 ILS Type: Inner Marker for runway 18R. Magnetic variation: 4E
2.19.2 ILS Identification: VYN
2.19.5 Coordinates: 32-55-04.5483N / 97-03-16.6916W
2.19.6 Site Elevation: 602.6 ft

2.19.1 ILS Type: Localizer for runway 18R. Magnetic variation: 4E
2.19.2 ILS Identification: VYN
2.19.5 Coordinates: 32-52-33.9326N / 97-03-17.4526W
2.19.6 Site Elevation: 580.4 ft

2.19.1 ILS Type: DME for runway 36L. Magnetic variation: 4E
2.19.2 ILS Identification: BXN
2.19.5 Coordinates: 32-52-34.0875N / 97-03-12.5854W
2.19.6 Site Elevation: 582.3 ft

2.19.1 ILS Type: Glide Slope for runway 36L. Magnetic variation: 4E
2.19.2 ILS Identification: BXN
2.19.5 Coordinates: 32-52-54.4087N / 97-03-22.0405W
2.19.6 Site Elevation: 579.9 ft

2.19.1 ILS Type: Localizer for runway 36L. Magnetic variation: 4E
2.19.2 ILS Identification: BXN
2.19.5 Coordinates: 32-55-06.9002N / 97-03-16.6717W
2.19.6 Site Elevation: 601.9 ft

General Remarks:

TKOF DSTC FOR RY 35L FM TWY EQ IS 13084 FT & FM TWY EP IS 12811 FT.

ARPT UNDER CONSTRUCTION; PAEW IN MOVEMENT AREAS.

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.

TWY A6 CLSD TO ACFT WITH WINGSPAN 171 FT AND GREATER.

TKOF DSTC FOR RY 18R FM TWY WG IS 13,082 FT.

RY VISUAL SCREEN 20 FT AGL 1180 FT S AER 35C.

APRON ENTRANCE/EXIT POINT 3 CLSD TO ACFT WITH WINGSPAN GREATER THAN 214 FT EXCEPT PPR.

APRON ENTRANCE/EXIT POINTS 22, 24, 105, AND 107 CLSD TO ACFT WITH WINGSPAN GREATER THAN 125 FT.

ACFT USING TERMINAL A GATES A8-A39 AND TERMINAL C GATES C2-C12 MUST OBTAIN APPROVAL FROM RAMP 131.275 PRIOR TO ENTERING RAMP AND PRIOR TO PUSHBACK.

TKOF DSTC FOR RY 17L FM TWY Q2 IS 8196 FT.

ACFT USING TERMINAL C GATES C14-C39 MUST OBTAIN APPROVAL FROM RAMP 131.80 PRIOR TO ENTERING RAMP AND PRIOR TO PUSHBACK.

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.

RY STATUS LGTS IN OPN.

TKOF DSTC FOR RY 35R FM TWY Q9 IS 8196 FT.

ACFT USING TERMINAL B GATES B1-B17, ALL TERMINAL D GATES, AND APRON ENTRY POINTS 117-150 MUST OBTAIN APPROVAL FROM RAMP 129.825 PRIOR TO ENTERING RAMP AND PRIOR TO PUSHBACK.

TKOF DSTC FOR RY 17C FM TWY EG IS 13,082 FT.

TKOF DSTC FOR RY 18L FM TWY WG IS 13,082; FM TWY WH IS 12,815.

TERMINAL B APRON TAXILANE BTN APRON ENTRANCE/EXIT POINT TAXILANES 103 & 116 CLSD TO ACFT WITH WINGSPAN 95 FT AND GREATER.

UNLESS OTHERWISE SPECIFIED, ALL APRON ENTRANCE/EXIT POINTS CLSD TO ACFT WITH WINGSPAN GREATER THAN 214 FT EXCEPT PPR.

PPR FROM ARPT OPNS FOR GEN AVN ACFT TO PROCD TO AIRLINE TRML GATE EXCP GEN AVN FAC.

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.

TWY EDGE REFLECTORS ALONG ALL TWYS.

APRON ENTRANCE/EXIT POINTS 1 AND 2 CLSD TO ACFT WITH WINGSPAN GREATER THAN 89' EXCEPT PPR.

TKOF DSTC FOR RY 36R FM TWY WP IS 12,815 FT; FM TWY WQ IS 13,082 FT.

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.

ACFT USING TWY HA NORTH OF TWY B MUST OBTAIN APPROVAL FROM RAMP 129.825 PRIOR TO ENTERING RAMP.

APRON ENTRANCE/EXIT POINTS 9, 32, 33, 34, 35, 36, 37, 38, & 53 CLSD TO ACFT WITH WINGSPAN GREATER THAN 135 FT.

APRON ENTRANCE/EXIT POINTS 5, 7, 42, 44, 48, 49, 51, 52, 117, 118 AND 122 CLSD TO ACFT WITH WINGSPAN GREATER THAN 118 FT.

APRON ENTRANCE/EXIT POINTS 31 AND 39 CLSD TO ACFT WITH WINGSPAN GREATER THAN 167 FT.

TERMINAL B APRON TAXILANE BTN APRON ENTRANCE/EXIT POINT TAXILANES 117 & 118 CLSD TO ACFT WITH WINGSPAN 119 FT AND GREATER.

ACFT USING TERMINAL B GATES B18-B49 MUST OBTAIN APPROVAL FROM RAMP 130.10 PRIOR TO ENTERING RAMP AND PRIOR TO PUSHBACK.

TWYS MAY REQUIRE JUDGMENTAL OVERSTEERING FOR LARGE ACFT.

STD SAWED GROOVING 160 FT WIDE FULL LENGTH RYS 13L/31R; 18L/36R & 17R/35L. STD GROOVING 130 FT WIDE FULL LENGTH RYS 17L/35R; 18R/36L; 13R/31L & 17C/35C.

BIRDS ON & INVOF ARPT.

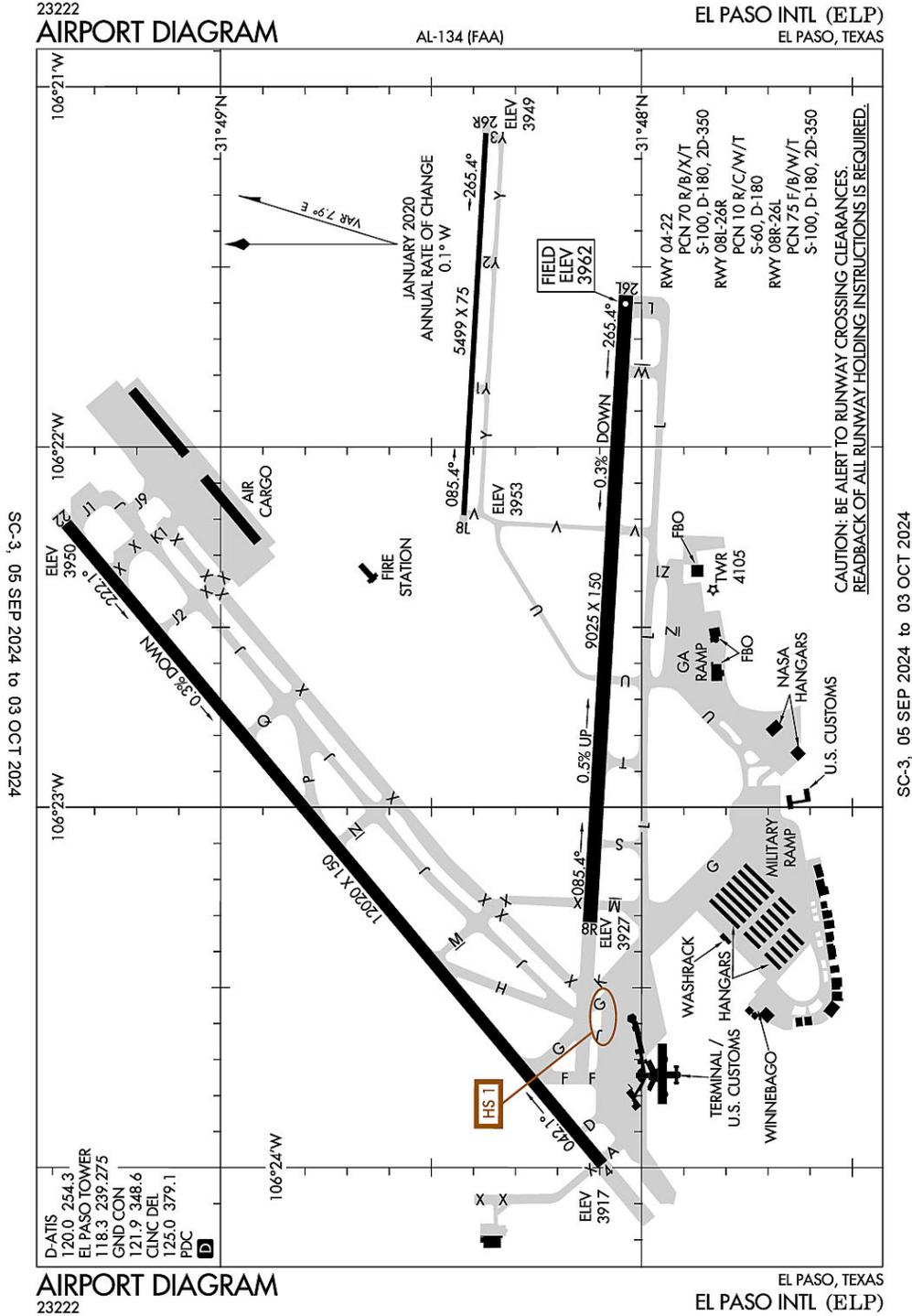
RY VISUAL SCREEN 22 FT AGL 1179 FT S AER 35L.

ACFT USING TERMINAL E GATES E2-E17 MUST OBTAIN APPROVAL FROM RAMP 131.0 PRIOR TO ENTERING RAMP AND PRIOR TO PUSHBACK. ACFT USING TERMINAL E GATES E-18-E38 MUST OBTAIN APPROVAL FROM RAMP 128.825 PRIOR TO ENTERING RAMP AND PRIOR TO PUSHBACK.

A380 OPNS ONLY AUZD ON RWYS 18R/36L AND 18L/36R. B747-8 OPNS ONLY AUZD ON RWYS 18R/36L, 18L/36R AND 17R/35L. CTC ARPT OPNS FOR ADDNL INFO.

ACFT USING TERMINAL F HARDSTAND SPOTS T83 THROUGH T86 MUST CONTACT GROUND CONTROL ON 121.85 PRIOR TO TAXI.

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: SAM RODRIGUEZ
6701 CONVAIR RD
EL PASO, TX 79925 (915-212-0333)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 A1+
- 2.4.5 Hangar Space: YES
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 04
- 2.12.2 True Bearing: 50
- 2.12.3 True Dimensions: 12020 ft x 150 ft
- 2.12.4 PCN: 70 R/B/X/T
- 2.12.5 Coordinates: 31-48-05.5605N / 106-23-59.4625W
- 2.12.6 Threshold Elevation: 3916.9
- 2.12.6 Touchdown Zone Elevation: 3923.2

- 2.12.1 Designation: 22
- 2.12.2 True Bearing: 230
- 2.12.3 True Dimensions: 12020 ft x 150 ft
- 2.12.4 PCN: 70 R/B/X/T
- 2.12.5 Coordinates: 31-49-22.0112N / 106-22-12.7821W
- 2.12.6 Threshold Elevation: 3949.5
- 2.12.6 Touchdown Zone Elevation: 3949.5

- 2.12.1 Designation: 08L
- 2.12.2 True Bearing: 93
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 3952.7

2.12.1 Designation: 26R
2.12.2 True Bearing: 273
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 3949.5

2.12.1 Designation: 26L
2.12.2 True Bearing: 273
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 3961.6

2.12.1 Designation: 08R
2.12.2 True Bearing: 93
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 3940.3

AD 2.13 Declared Distances

2.13.1 Designation: 04
2.13.2 Take-off Run Available: 12020
2.13.3 Take-off 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 Take-off Run Available: 12020
2.13.3 Take-off 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 Take-off Run Available: 5499
2.13.3 Take-off 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 Take-off Run Available: 5499
2.13.3 Take-off Distance Available: 5499
2.13.4 Accelerate-Stop Distance Available: 5499
2.13.5 Landing Distance Available: 5499

2.13.1 Designation: 26L

2.13.2 Take-off Run Available: 9025
2.13.3 Take-off Distance Available: 9025
2.13.4 Accelerate-Stop Distance Available: 9025
2.13.5 Landing Distance Available: 9025

2.13.1 Designation: 08R
2.13.2 Take-off Run Available: 9025
2.13.3 Take-off 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
2.14.2 Approach Lighting System:
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: 08L
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 26R
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 26L
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System: P4R

2.14.1 Designation: 08R
2.14.2 Approach Lighting System:
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-V16)
2.18.3 Channel: 119.15
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (SOUTH-V16)
2.18.3 Channel: 353.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P IC (NORTH-V16)
2.18.3 Channel: 124.25
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P IC (NORTH-V16)
2.18.3 Channel: 298.85

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD PRE TAXI CLNC

2.18.3 Channel: 125

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 379.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (SOUTH-V16)

2.18.3 Channel: 119.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C

2.18.3 Channel: 119.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (NORTH-V16)

2.18.3 Channel: 124.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (NORTH-V16)

2.18.3 Channel: 298.85

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (SOUTH-V16)

2.18.3 Channel: 353.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 120

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 254.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P

2.18.3 Channel: 119.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P

2.18.3 Channel: 263

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 348.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 118.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 239.275
2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

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: 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

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

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 12E
2.19.2 Navigation Aid Identification: ELP
2.19.5 Coordinates: 31-48-57.277N / 106-16-54.7782W
2.19.6 Site Elevation: 4023 ft

General Remarks:

TWY A SOUTH OF APCH END OF RWY 4; 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.

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 RQRMT NEEDING LONGER OR HIGHER POWER CTC TWR FOR DIRECTIONS TO DESIGNATED RUNUP AREAS.

CTN: BIGGS AAF 2NM NW RWY 22 CAN BE MISTAKEN FOR ELP RWY 22.

COMPASS ROSE CLSD PERMLY.

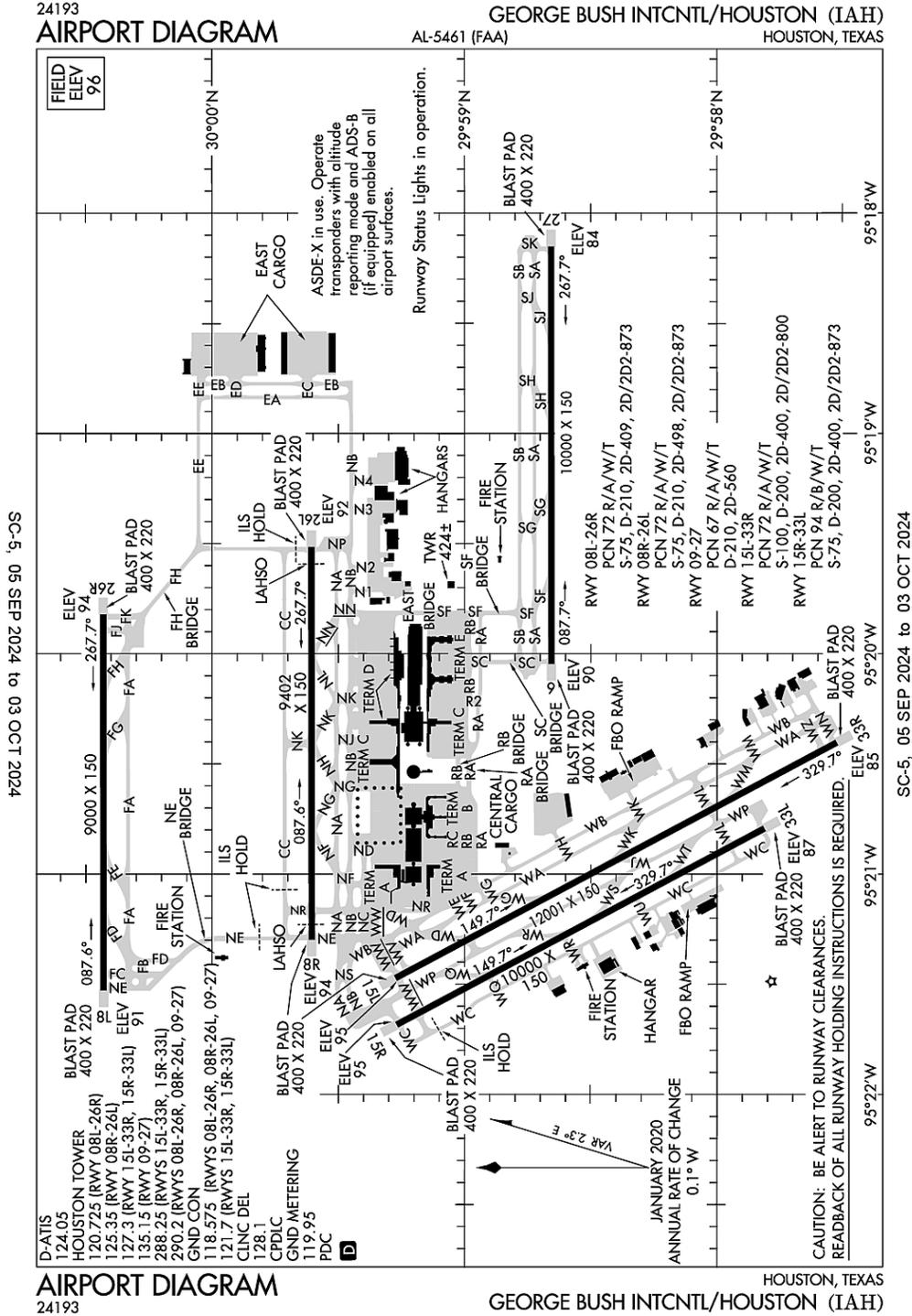
NOISE ABATEMENT PROCEDURES IN EFFECT, CTC ATCT FOR DETAILS.

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.

NORTH BOUND TFC PROHIBITED ON TWY F SOUTH OF APCH END RWY 08R.

Houston, Texas
George Bush Intercontinental/Houston
ICAO Identifier KIAH



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: STEVEN RUNGE
PO BOX 60106
HOUSTON, TX 77205 (281-233-1131)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 08L
- 2.12.2 True Bearing: 90
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 94

- 2.12.1 Designation: 26R
- 2.12.2 True Bearing: 270
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 95.3

- 2.12.1 Designation: 08R
- 2.12.2 True Bearing: 90
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 95.3

2.12.1 Designation: 26L
2.12.2 True Bearing: 270
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 94.6

2.12.1 Designation: 27
2.12.2 True Bearing: 270
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 86.2

2.12.1 Designation: 09
2.12.2 True Bearing: 90
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 90.1

2.12.1 Designation: 33R
2.12.2 True Bearing: 332
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 88

2.12.1 Designation: 15L
2.12.2 True Bearing: 152
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 95.2

2.12.1 Designation: 33L
2.12.2 True Bearing: 332
2.12.3 True 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
2.12.6 Touchdown Zone Elevation: 89.3

2.12.1 Designation: 15R
2.12.2 True Bearing: 152

- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 94.8

AD 2.13 Declared Distances

- 2.13.1 Designation: 08L
- 2.13.2 Take-off Run Available: 9000
- 2.13.3 Take-off 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 Take-off Run Available: 9000
- 2.13.3 Take-off Distance Available: 9000
- 2.13.4 Accelerate-Stop Distance Available: 9000
- 2.13.5 Landing Distance Available: 9000

- 2.13.1 Designation: 08R
- 2.13.2 Take-off Run Available: 9402
- 2.13.3 Take-off 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 Take-off Run Available: 9402
- 2.13.3 Take-off Distance Available: 9402
- 2.13.4 Accelerate-Stop Distance Available: 9402
- 2.13.5 Landing Distance Available: 9402

- 2.13.1 Designation: 27
- 2.13.2 Take-off Run Available: 10000
- 2.13.3 Take-off 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 Take-off Run Available: 10000
- 2.13.3 Take-off Distance Available: 10000
- 2.13.4 Accelerate-Stop Distance Available: 10000
- 2.13.5 Landing Distance Available: 10000

- 2.13.1 Designation: 33R
- 2.13.2 Take-off Run Available: 12001
- 2.13.3 Take-off Distance Available: 12001
- 2.13.4 Accelerate-Stop Distance Available: 12001
- 2.13.5 Landing Distance Available: 12001

- 2.13.1 Designation: 15L
- 2.13.2 Take-off Run Available: 12001

2.13.3 Take-off Distance Available: 12001
2.13.4 Accelerate-Stop Distance Available: 12001
2.13.5 Landing Distance Available: 12001

2.13.1 Designation: 33L
2.13.2 Take-off Run Available: 10000
2.13.3 Take-off Distance Available: 10000
2.13.4 Accelerate-Stop Distance Available: 10000
2.13.5 Landing Distance Available: 10000

2.13.1 Designation: 15R
2.13.2 Take-off Run Available: 10000
2.13.3 Take-off Distance Available: 10000
2.13.4 Accelerate-Stop Distance Available: 10000
2.13.5 Landing Distance Available: 10000

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 08L
2.14.2 Approach Lighting System: ALSF2
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 26R
2.14.2 Approach Lighting System: ALSF2
2.14.4 Visual Approach Slope Indicator System:

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: 27
2.14.2 Approach Lighting System: ALSF2
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: P4R

2.14.1 Designation: 33R
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 15L
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4R

2.14.1 Designation: 33L
2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System: P4R

2.14.1 Designation: 15R

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 Channel: 128.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 124.05

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND METERING

2.18.3 Channel: 119.95

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (RWY 08L/26R, 08R/26L, 09/27)

2.18.3 Channel: 118.575

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (RWY 15L/33R, 15R/33L)

2.18.3 Channel: 121.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 08L/26R)

2.18.3 Channel: 120.725

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 08R/26L)

2.18.3 Channel: 125.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 15L/33R, 15R/33L)

2.18.3 Channel: 127.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 09/27)

2.18.3 Channel: 135.15

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 15L/33R, 15R/33L)

2.18.3 Channel: 288.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 08L/26R, 08R/26L, 09/27)
2.18.3 Channel: 290.2
2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

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: Glide Slop 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: 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 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: 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: Glide Slop 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: 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: 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: 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: Glide Slop 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: 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: 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: Glide Slop 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: 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: 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: Glide Slop 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 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: 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 Slop 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 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: 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

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 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: 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 Navigation Aid Type VORTAC. Magnetic variation: 5E

2.19.2 Navigation Aid Identification: IAH

2.19.5 Coordinates: 29-57-24.9013N / 95-20-44.5885W

2.19.6 Site Elevation: 80.6 ft

General Remarks:

THE FLWG MOV 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 RWY 15L TO TWY 'WB' & TWY 'WM'.

TWY RC CLSD TO ACFT WITH WINGSPAN GTR THAN 118 FT.

TXLN 'RA', 'RB', 'RC', 'R2', AND TWY 'SC' NORTH OF TWY 'SB' ARE DSGND NON-MOVEMENT AREAS OPERD BY UAL RAMP CTL.

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.

APRON TERMINAL ALPHA NORTH RAMP NORTH-SOUTH TXL CLSD TO ACFT WINGSPAN MORE THAN 125 FT.

RWY STATUS LGTS ARE IN OPN.

TWY WW BTN TWY NR AND TWY WB CLSD TO ACFT WINGSPAN MORE THAN 214 FT.

APRON TERMINAL ALPHA NORTH RAMP EAST-WEST TXL CLSD TO ACFT WINGSPAN MORE THAN 118 FT.

TWY 'SF' BTN TWY 'NB' AND TXL 'RA' IS DSGND NON-MOV AREA.

9 FT AGL UNMKD SECURITY FENCE ADJ TO FBO & CORPORATE BASE OPR RAMPS AND NONMOV AREA TXLS.

TWY SF BTN RWY 09/27 UP TO AND INCLUDING THE EAST BRIDGE CLSD TO ACFT WITH WINGSPAN 215 FT & OVER.

HEL HOVER/TAXI RSTRD TO HARD SFC MOV AREAS ONLY.

APRON TERMINAL ALPHA NORTH RAMP SPOT 5 CLSD TO ACFT WINGSPAN MORE THAN 118 FT.

TWY 'NR' CLSD TO ACFT WITH WING SPANS GREATER THAN 125 FT BTN TWY 'WD' & TWY 'WB'.

TWY WC WEST OF RWY 15R/33L RSTRD TO ACFT WITH 118 FT WING SPAN AND BLW.

TWY NR BTN TWY NC AND TWY WW CLSD TO ACFT WINGSPAN MORE THAN 214 FT.

TWY NR BTN WW AND TWY WB DSGND NON-MOVEMENT AREA.

TWY NA LGT ALL BTN TWY WP AND TWY NP NOT STD

APRON TERMINAL ALPHA NORTH RAMP SPOT 6 CLSD TO ACFT WINGSPAN MORE THAN 125 FT.

PILOTS & CREWS SHOULD BE AWARE OF DEP TURNS ON CRS IN EXCESS OF 180 DEGS. PILOT READ BACK OF DRCTN OF TURN IS HIGHLY ENCOURAGED.

TWYS WA & WB MAGNETIC ANOMALIES MAY AFFECT COMPASS HDG.

RWY 15L/33R MAGNETIC ANOMALIES MAY AFFECT COMPASS HDG FOR TKOF.

GBAS APCH SVC VOL 20NM FR THR, ALL GLS APCHS.

TWY WD BTN TWY NR AND TWY WB CLSD TO ACFT WINGSPAN MORE THAN 171 FT.

RWY 09/27 CLSD TO ACFT WITH WINGSPAN 215 FT & ABOVE.

TWY NJ BTN TWY NB AND TERMINAL C RAMP SIMULTANEOUS ACFT OPS PROHIBITED WHEN MIDDLE TAXILANE IN USE, MIDDLE TAXILANE CLSD TO ACFT WINGSPAN MORE THAN 214FT.

DUAL TWY OPNS TWY NJ BTN TWY NB & TERMINAL C RAMP; WEST CNTRLN RSTRD TO ACFT MAX WING SPANS 118 FT & EAST CNTRLN MAX WING SPANS 118 FT.

BIRDS ON & INVOF ARPT.

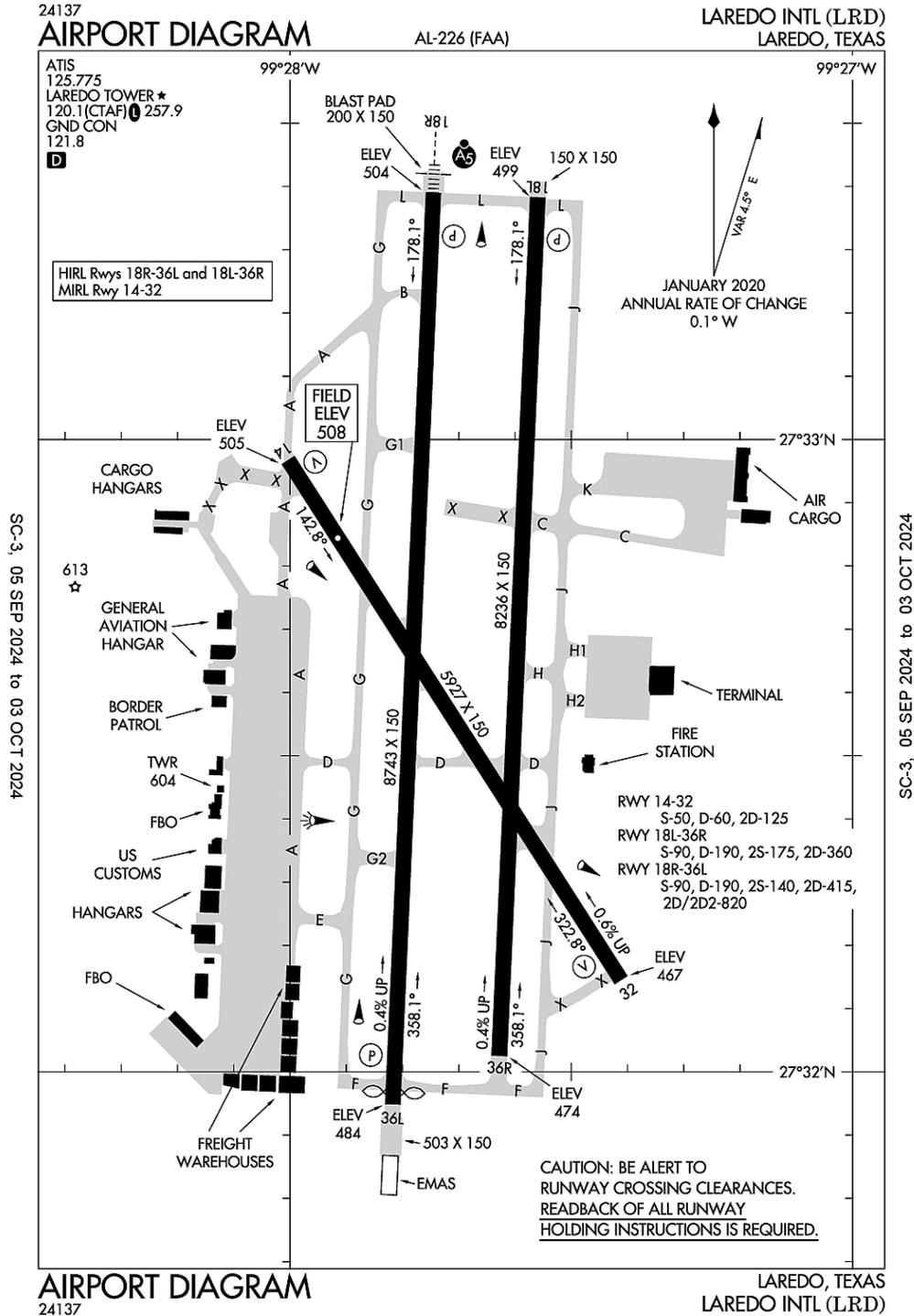
NOISE SENSITIVE AREA N, E AND W OF ARPT.

TWY WW RUN UP PAD FOR RWY 15L CLSD TO ACFT WITH WINGSPAN 135 FT & OVER.

WILDLIFE HAZ BATS INVOF IAH.

TWY NK BTN TWY NB AND TERMINAL D RAMP SIMULTANEOUS ACFT OPS PROHIBITED WHEN MIDDLE TAXILANE IN USE.

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: GILBERTO SANCHEZ
5210 BOB BULLOCK LOOP
LAREDO, TX 78041 (956-795-2000)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: None

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 7/1/1975
- 2.6.2 Rescue and Firefighting Services: ARFF Index-B

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 32
 - 2.12.2 True Bearing: 327
 - 2.12.3 True Dimensions: 5927 ft x 150 ft
 - 2.12.4 PCN:
 - 2.12.5 Coordinates: 27-32-08.635N / 99-27-24.668W
 - 2.12.6 Threshold Elevation: 467.4
 - 2.12.6 Touchdown Zone Elevation: 493.6
-
- 2.12.1 Designation: 14
 - 2.12.2 True Bearing: 147
 - 2.12.3 True Dimensions: 5927 ft x 150 ft
 - 2.12.4 PCN:
 - 2.12.5 Coordinates: 27-32-58.0248N / 99-28-00.2242W
 - 2.12.6 Threshold Elevation: 505.4
 - 2.12.6 Touchdown Zone Elevation: 508
-
- 2.12.1 Designation: 18L
 - 2.12.2 True Bearing: 183
 - 2.12.3 True Dimensions: 8236 ft x 150 ft
 - 2.12.4 PCN:
 - 2.12.5 Coordinates: 27-33-22.9267N / 99-27-33.5988W
 - 2.12.6 Threshold Elevation: 499.2
 - 2.12.6 Touchdown Zone Elevation: 499.2

2.12.1 Designation: 36R
2.12.2 True Bearing: 3
2.12.3 True Dimensions: 8236 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 27-32-01.4547N / 99-27-37.6934W
2.12.6 Threshold Elevation: 474.2
2.12.6 Touchdown Zone Elevation: 486.7

2.12.1 Designation: 36L
2.12.2 True Bearing: 3
2.12.3 True Dimensions: 8743 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 27-31-56.8817N / 99-27-49.0449W
2.12.6 Threshold Elevation: 483.7
2.12.6 Touchdown Zone Elevation: 497

2.12.1 Designation: 18R
2.12.2 True Bearing: 183
2.12.3 True Dimensions: 8743 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 27-33-23.3681N / 99-27-44.7128W
2.12.6 Threshold Elevation: 503.7
2.12.6 Touchdown Zone Elevation: 503.7

AD 2.13 Declared Distances

2.13.1 Designation: 32
2.13.2 Take-off Run Available: 5927
2.13.3 Take-off Distance Available: 5927
2.13.4 Accelerate-Stop Distance Available: 5927
2.13.5 Landing Distance Available: 5927

2.13.1 Designation: 14
2.13.2 Take-off Run Available: 5927
2.13.3 Take-off Distance Available: 5927
2.13.4 Accelerate-Stop Distance Available: 5927
2.13.5 Landing Distance Available: 5927

2.13.1 Designation: 18L
2.13.2 Take-off Run Available: 8236
2.13.3 Take-off 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 Take-off Run Available: 8236
2.13.3 Take-off Distance Available: 8236
2.13.4 Accelerate-Stop Distance Available: 8236
2.13.5 Landing Distance Available: 8236

2.13.1 Designation: 36L

2.13.2 Take-off Run Available: 8743
2.13.3 Take-off Distance Available: 8743
2.13.4 Accelerate-Stop Distance Available: 8743
2.13.5 Landing Distance Available: 8623

2.13.1 Designation: 18R
2.13.2 Take-off Run Available: 8743
2.13.3 Take-off Distance Available: 8743
2.13.4 Accelerate-Stop Distance Available: 8743
2.13.5 Landing Distance Available: 8743

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 32
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: V4L

2.14.1 Designation: 14
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: V4L

2.14.1 Designation: 18L
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 36R
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 36L
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 18R
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: ATIS
2.18.3 Channel: 125.775
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.8
2.18.5 Hours of Operation: 0600-2400

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 120.1

2.18.5 Hours of Operation: 0600-2400

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 257.9

2.18.5 Hours of Operation: 0600-2400

AD 2.19 Radio Navigation and Landing Aids

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

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 Navigation Aid Type VORTAC. Magnetic variation: 9E

2.19.2 Navigation Aid Identification: LRD

2.19.5 Coordinates: 27-28-43.4544N / 99-25-03.6441W

2.19.6 Site Elevation: 583 ft

General Remarks:

RWY 14/32 RSTRD TO ACFT LESS THAN 60000 LBS DTW.

BIRDS ON AND INVOF ARPT.

FEDERAL INSPECTION STATION FEE.

FOR CD IF UNA TO CTC ON FSS FREQ, CTC HOUSTON ARTCC AT 281-230-5622.

TWY C CLSD BTN RWY 18L/36R & RWY 18R INDEFINELY.

FEDERAL INSPECTION STATION IS LCTD ON THE WEST GENERAL AVIATION/CARGO APRON.

LNDG FEE ASSESSED FOR ALL ACFT EXC FEDERAL, MIL AND BASED ACFT.

San Antonio, TX
San Antonio Intl
ICAO Identifier KSAT

AD 2.2 Aerodrome Geographical and Administrative Data

- 2.2.1 Reference Point: 29-32-02.25N / 98-28-08.605W
- 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: JESUS H. SAENZ, JR.
9800 AIRPORT BLVD
SAN ANTONIO, TX 78216 (210-207-3444)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 04
- 2.12.2 True Bearing: 41
- 2.12.3 True Dimensions: 8505 ft x 150 ft
- 2.12.4 PCN: 91 R/B/W/T
- 2.12.5 Coordinates: 29-31-23.6409N / 98-28-11.6562W
- 2.12.6 Threshold Elevation: 786
- 2.12.6 Touchdown Zone Elevation: 786

- 2.12.1 Designation: 22
- 2.12.2 True Bearing: 221
- 2.12.3 True Dimensions: 8505 ft x 150 ft
- 2.12.4 PCN: 91 R/B/W/T
- 2.12.5 Coordinates: 29-32-27.3928N / 98-27-08.7715W
- 2.12.6 Threshold Elevation: 754.5
- 2.12.6 Touchdown Zone Elevation: 770

- 2.12.1 Designation: 31R
- 2.12.2 True Bearing: 312
- 2.12.3 True Dimensions: 5519 ft x 100 ft
- 2.12.4 PCN: 61 F/C/W/T
- 2.12.5 Coordinates: 29-31-48.7812N / 98-27-53.0202W
- 2.12.6 Threshold Elevation: 779.2
- 2.12.6 Touchdown Zone Elevation: 788.1

2.12.1 Designation: 13L
2.12.2 True Bearing: 132
2.12.3 True Dimensions: 5519 ft x 100 ft
2.12.4 PCN: 61 F/C/W/T
2.12.5 Coordinates: 29-32-25.0764N / 98-28-39.714W
2.12.6 Threshold Elevation: 797.3
2.12.6 Touchdown Zone Elevation: 797.3

2.12.1 Designation: 31L
2.12.2 True Bearing: 312
2.12.3 True Dimensions: 8502 ft x 150 ft
2.12.4 PCN: 86 R/B/W/T
2.12.5 Coordinates: 29-31-38.0038N / 98-27-55.9932W
2.12.6 Threshold Elevation: 778.5
2.12.6 Touchdown Zone Elevation: 790

2.12.1 Designation: 13R
2.12.2 True Bearing: 132
2.12.3 True Dimensions: 8502 ft x 150 ft
2.12.4 PCN: 86 R/B/W/T
2.12.5 Coordinates: 29-32-33.8853N / 98-29-07.9481W
2.12.6 Threshold Elevation: 809.1
2.12.6 Touchdown Zone Elevation: 809.1

AD 2.13 Declared Distances

2.13.1 Designation: 04
2.13.2 Take-off Run Available: 8505
2.13.3 Take-off 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 Take-off Run Available: 8505
2.13.3 Take-off Distance Available: 8505
2.13.4 Accelerate-Stop Distance Available: 8505
2.13.5 Landing Distance Available: 8505

2.13.1 Designation: 31R
2.13.2 Take-off Run Available: 5519
2.13.3 Take-off Distance Available: 5519
2.13.4 Accelerate-Stop Distance Available: 5519
2.13.5 Landing Distance Available: 5519

2.13.1 Designation: 13L
2.13.2 Take-off Run Available: 5519
2.13.3 Take-off Distance Available: 5519
2.13.4 Accelerate-Stop Distance Available: 5519
2.13.5 Landing Distance Available: 5519

2.13.1 Designation: 31L

2.13.2 Take-off Run Available: 8502
2.13.3 Take-off Distance Available: 8502
2.13.4 Accelerate-Stop Distance Available: 8502
2.13.5 Landing Distance Available: 8502

2.13.1 Designation: 13R
2.13.2 Take-off Run Available: 8502
2.13.3 Take-off Distance Available: 8502
2.13.4 Accelerate-Stop Distance Available: 8502
2.13.5 Landing Distance Available: 8502

AD 2.14 Approach and Runway Lighting

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
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 31R
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 13L
2.14.2 Approach Lighting System:
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: 13R
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: ALAMO DP (RWY 04, 22, 31)
2.18.3 Channel: 125.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ALAMO DP (RWY 13)
2.18.3 Channel: 127.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ALAMO DP (RWY 13)
2.18.3 Channel: 269.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ALAMO DP (RWY 04, 22, 31)
2.18.3 Channel: 307

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ALISS DP (RY 31L/R)

2.18.3 Channel: 125.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ALISS DP (RY 13L/R, 22)

2.18.3 Channel: 125.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ALISS DP (RWY 4)

2.18.3 Channel: 127.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ALISS DP (RY 4)

2.18.3 Channel: 269.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ALISS DP (RY 13L/R, 22)

2.18.3 Channel: 290.225

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ALISS DP (RY 31L/R)

2.18.3 Channel: 307

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P

2.18.3 Channel: 121.375

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P (115-154 SAT/035-056 SAT)

2.18.3 Channel: 257.625

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (141-270 SAT)

2.18.3 Channel: 118.05

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (360-090 SAT)

2.18.3 Channel: 124.45

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (091-140 SAT)

2.18.3 Channel: 128.05

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (091-149 SAT)

2.18.3 Channel: 318.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (360-090 SAT)

2.18.3 Channel: 335.625
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (141-270 SAT)
2.18.3 Channel: 353.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (271-359 SAT)
2.18.3 Channel: 125.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (271-359 SAT)
2.18.3 Channel: 307
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/S DEP/S
2.18.3 Channel: 125.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/S DEP/S
2.18.3 Channel: 127.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/S DEP/S
2.18.3 Channel: 251.125
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/S DEP/S
2.18.3 Channel: 290.225
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BOWIE DP (RWY 04 LRD TRANSITION)
2.18.3 Channel: 125.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BOWIE DP (RWY 13, 22, 31)
2.18.3 Channel: 125.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BOWIE DP (RWY 04 CRP TRANSITION)
2.18.3 Channel: 127.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BOWIE DP (RWY 04 CRP TRANSITION)
2.18.3 Channel: 269.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BOWIE DP (RWY 04, 13, 31)
2.18.3 Channel: 290.225
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: BOWIE DP (RWY 04 LRD TRANSITION)
2.18.3 Channel: 307
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P
2.18.3 Channel: 126.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CENTERPOINT STAR (RWY 13R, 22)
2.18.3 Channel: 125.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CENTERPOINT STAR (RWY 04, 31L)
2.18.3 Channel: 125.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CENTERPOINT STAR (RWY 04, 31L)
2.18.3 Channel: 290.225
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CENTERPOINT STAR (RWY 13R, 22)
2.18.3 Channel: 307
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (141-270 SAT)
2.18.3 Channel: 118.05
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (360-090 SAT)
2.18.3 Channel: 124.45
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (271-359 SAT)
2.18.3 Channel: 125.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (091-140 SAT)
2.18.3 Channel: 128.05
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (271-359 SAT)
2.18.3 Channel: 307
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (091-140 SAT)
2.18.3 Channel: 318.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (360-090 SAT)
2.18.3 Channel: 335.625
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (141-270 SAT)
2.18.3 Channel: 353.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CRVZA RNAV STAR
2.18.3 Channel: 125.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CRVZA RNAV STAR
2.18.3 Channel: 290.225
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS
2.18.3 Channel: 118.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DNKIN RNAV STAR
2.18.3 Channel: 125.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DNKIN RNAV STAR
2.18.3 Channel: 307
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.9
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 348.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 119.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 257.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LEJON DP (RWY 04, 22, 31)
2.18.3 Channel: 125.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LEJON DP (RWY 13)

2.18.3 Channel: 125.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LEJON DP (RWY 13)

2.18.3 Channel: 290.225

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LEJON DP (RWY 04, 22, 31)

2.18.3 Channel: 307

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LEMIG STAR

2.18.3 Channel: 125.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LEMIG STAR

2.18.3 Channel: 290.225

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MARCS STAR

2.18.3 Channel: 127.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: MARCS STAR

2.18.3 Channel: 269.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: POPPO RNAV STAR

2.18.3 Channel: 125.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: POPPO RNAV STAR

2.18.3 Channel: 307

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: QERVO RNAV STAR

2.18.3 Channel: 127.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: QERVO RNAV STAR

2.18.3 Channel: 269.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SLENA DP (RY 13R/L 31L/R, 22)

2.18.3 Channel: 125.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SLENA DP (RY 4)

2.18.3 Channel: 127.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SLENA DP (RY 4)

2.18.3 Channel: 269.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SLENA DP (RY 13R/L, 31L/R, 22)

2.18.3 Channel: 290.225

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SNIDR DP (RY 22)

2.18.3 Channel: 125.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SNIDR DP (RY 13R/L, 31L/R, 4)

2.18.3 Channel: 127.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SNIDR DP (RY 13R/L, 31L/R, 4)

2.18.3 Channel: 269.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: SNIDR DP (RY 22)

2.18.3 Channel: 290.225

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: STONEWALL STAR

2.18.3 Channel: 125.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: STONEWALL STAR

2.18.3 Channel: 307

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TJANO DP (RY 13R/L, 31L/R, 22)

2.18.3 Channel: 125.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TJANO DP (RY 4)

2.18.3 Channel: 127.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TJANO DP (RY 4)

2.18.3 Channel: 269.1

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: TJANO DP (RY 13R/L,31L/R, 22)

2.18.3 Channel: 290.225

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: YODUH DP (RY 31L/R)
2.18.3 Channel: 125.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: YODUH DP (RY 22)
2.18.3 Channel: 125.7
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: YODUH DP (RY 13R/L, 4)
2.18.3 Channel: 127.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: YODUH DP (RY 13R/L, 4)
2.18.3 Channel: 269.1
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: YODUH DP (RY 22)
2.18.3 Channel: 290.225
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: YODUH DP (RY 31L/R)
2.18.3 Channel: 307
2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 04. Magnetic variation: 4E
2.19.2 ILS Identification: SAT
2.19.5 Coordinates: 29-32-32.9486N / 98-26-58.6881W
2.19.6 Site Elevation: 746.3 ft

2.19.1 ILS Type: Glide Slop for runway 04. Magnetic variation: 4E
2.19.2 ILS Identification: SAT
2.19.5 Coordinates: 29-31-30.2202N / 98-27-58.0715W
2.19.6 Site Elevation: 774.8 ft

2.19.1 ILS Type: Localizer for runway 04. Magnetic variation: 4E
2.19.2 ILS Identification: SAT
2.19.5 Coordinates: 29-32-35.0937N / 98-27-01.1714W
2.19.6 Site Elevation: 748.9 ft

2.19.1 ILS Type: DME for runway 13R. Magnetic variation: 4E
2.19.2 ILS Identification: ANT
2.19.5 Coordinates: 29-31-29.0932N / 98-27-49.9584W
2.19.6 Site Elevation: 790.7 ft

2.19.1 ILS Type: Glide Slop for runway 13R. Magnetic variation: 4E
2.19.2 ILS Identification: ANT
2.19.5 Coordinates: 29-32-29.1973N / 98-28-54.6095W
2.19.6 Site Elevation: 801.3 ft

2.19.1 ILS Type: Inner Marker for runway 13R. Magnetic variation: 4E

2.19.2 ILS Identification: ANT
2.19.5 Coordinates: 29-32-39.0383N / 98-29-14.595W
2.19.6 Site Elevation: 807.6 ft

2.19.1 ILS Type: Localizer for runway 13R. Magnetic variation: 4E
2.19.2 ILS Identification: ANT
2.19.5 Coordinates: 29-31-31.3122N / 98-27-47.3799W
2.19.6 Site Elevation: 771 ft

2.19.1 ILS Type: DME for runway 31L. Magnetic variation: 4E
2.19.2 ILS Identification: IZR
2.19.5 Coordinates: 29-31-29.0932N / 98-27-49.9584W
2.19.6 Site Elevation: 790.7 ft

2.19.1 ILS Type: Glide Slop for runway 31L. Magnetic variation: 4E
2.19.2 ILS Identification: IZR
2.19.5 Coordinates: 29-31-47.9039N / 98-28-01.9173W
2.19.6 Site Elevation: 777.5 ft

2.19.1 ILS Type: Localizer for runway 31L. Magnetic variation: 4E
2.19.2 ILS Identification: IZR
2.19.5 Coordinates: 29-32-43.1182N / 98-29-19.835W
2.19.6 Site Elevation: 813.4 ft

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 8E
2.19.2 Navigation Aid Identification: SAT
2.19.5 Coordinates: 29-38-38.508N / 98-27-40.7369W
2.19.6 Site Elevation: 1158.8 ft

General Remarks:

TWY L CLSD NORTHBOUND.

GLIDER/SOARING OPNS APRXLY 17 MILES NW OF ARPT DURG VFR.

ARPT RSTD TO ACFT WITH WINGSPAN GTR THAN 171 FT, PPR WITH 24HR OPS 210-207-3433. RQRD FOR AUTH.

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.

TWY S BTN APCH END RWY 13L AND RWY 13R/31L CLSD TO ACFT WITH WINGSPAN MORE THAN 100 FT.
TWY R BTN APCH END RWY 13L AND TWY D CLSD TO ACFT WINGSPAN MORE THAN 100 FT.

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.

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.

GROUND RUN-UP ENCLOSURE AVBL 24 HRS.

NUMEROUS FLOCKS OF BIRDS INVOF ARPT.

FOREIGN MIL ACFT WITH WINGSPAN LESS THAN 100 FT MUST REP TO GA RAMP FED INSPECTION STATION FOR CUST PROCESSING, CTC AP MANAGEMENT AT 210-207-3433.

RY 13L/31R NOT AVBL FOR PART 121 ACR OPNS.

TERMINAL GATES A1, A2, A6, A7, A8, A15 & A17 USE ONLY WITH PPR CALL OPNS 210-207-3433.

C130 AND C17 TYPE ACFT MUST PARK ON WEST RAMP TO CLR CUST.

ACFT TAXIING ON TWY N SW BOUND LOOK FOR HOLD SHORT TO RY 31R.

TWY Z CLSD TO ACFT WITH WINGSPAN GREATER THAN 118 FT.

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.

THE FLWG TWYS ARE NOT AVBL FOR ACFT 59000 LBS OR OVR: TWY A, TWY M, TWY H NORTHWEST OF TWY Z AND TWY E EAST OF RWY 04/22.

TWYS L & B CLSD TO ACFT WITH WINGSPANS GREATER THAN 118 FT EXITING RY 31L.

ACFT AT TERMINAL A & B ADVISE GND CTL PRIOR TO PUSH.

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: MATTHEW BROWN
P.O. BOX 145550
SALT LAKE CITY, UT 84114 (801-575-2244)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 A1+
- 2.4.5 Hangar Space: YES
- 2.4.6 Repair Facilities: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 14
- 2.12.2 True Bearing: 153
- 2.12.3 True Dimensions: 4893 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 40-47-08.5848N / 111-58-16.4661W
- 2.12.6 Threshold Elevation: 4224.7
- 2.12.6 Touchdown Zone Elevation: 4224.8

- 2.12.1 Designation: 32
- 2.12.2 True Bearing: 333
- 2.12.3 True Dimensions: 4893 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 40-46-25.5192N / 111-57-47.5915W
- 2.12.6 Threshold Elevation: 4226.8
- 2.12.6 Touchdown Zone Elevation: 4226.8

- 2.12.1 Designation: 34R
- 2.12.2 True Bearing: 355
- 2.12.3 True Dimensions: 12002 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 40-46-28.7185N / 111-58-23.2566W
- 2.12.6 Threshold Elevation: 4224.3
- 2.12.6 Touchdown Zone Elevation: 4224.7

2.12.1 Designation: 16L
2.12.2 True Bearing: 175
2.12.3 True Dimensions: 12002 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 40-48-26.8298N / 111-58-36.9557W
2.12.6 Threshold Elevation: 4229.1
2.12.6 Touchdown Zone Elevation: 4230.9

2.12.1 Designation: 16R
2.12.2 True Bearing: 175
2.12.3 True Dimensions: 12000 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 40-48-28.0035N / 111-59-57.4282W
2.12.6 Threshold Elevation: 4223.4
2.12.6 Touchdown Zone Elevation: 4225.8

2.12.1 Designation: 34L
2.12.2 True Bearing: 355
2.12.3 True Dimensions: 12000 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 40-46-29.9171N / 111-59-43.6913W
2.12.6 Threshold Elevation: 4228.8
2.12.6 Touchdown Zone Elevation: 4228.8

2.12.1 Designation: 35
2.12.2 True Bearing: 360
2.12.3 True Dimensions: 9596 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 40-46-21.3022N / 111-57-43.4496W
2.12.6 Threshold Elevation: 4226.8
2.12.6 Touchdown Zone Elevation: 4226.9

2.12.1 Designation: 17
2.12.2 True Bearing: 180
2.12.3 True Dimensions: 9596 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 40-47-56.1043N / 111-57-43.4552W
2.12.6 Threshold Elevation: 4221.7
2.12.6 Touchdown Zone Elevation: 4222.2

2.12.1 Designation: HB
2.12.2 True Bearing:
2.12.3 True Dimensions: 60 ft x 60 ft
2.12.4 PCN:
2.12.5 Coordinates: 40-46-27.0827N / 111-57-24.0562W
2.12.6 Threshold Elevation: 4220.4
2.12.6 Touchdown Zone Elevation:

2.12.1 Designation: HF
2.12.2 True Bearing:

- 2.12.3 True Dimensions: 60 ft x 60 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 40-46-56.68N / 111-57-33.81W
- 2.12.6 Threshold Elevation: 4220
- 2.12.6 Touchdown Zone Elevation:

AD 2.13 Declared Distances

- 2.13.1 Designation: 14
- 2.13.2 Take-off Run Available: 4893
- 2.13.3 Take-off Distance Available: 4893
- 2.13.4 Accelerate-Stop Distance Available: 4893
- 2.13.5 Landing Distance Available: 4893

- 2.13.1 Designation: 32
- 2.13.2 Take-off Run Available: 4893
- 2.13.3 Take-off Distance Available: 4893
- 2.13.4 Accelerate-Stop Distance Available: 4893
- 2.13.5 Landing Distance Available: 4893

- 2.13.1 Designation: 34R
- 2.13.2 Take-off Run Available: 12002
- 2.13.3 Take-off Distance Available: 12002
- 2.13.4 Accelerate-Stop Distance Available: 12002
- 2.13.5 Landing Distance Available: 12002

- 2.13.1 Designation: 16L
- 2.13.2 Take-off Run Available: 12002
- 2.13.3 Take-off 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 Take-off Run Available: 12000
- 2.13.3 Take-off 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 Take-off Run Available: 12000
- 2.13.3 Take-off Distance Available: 12000
- 2.13.4 Accelerate-Stop Distance Available: 12000
- 2.13.5 Landing Distance Available: 12000

- 2.13.1 Designation: 35
- 2.13.2 Take-off Run Available: 9596
- 2.13.3 Take-off Distance Available: 9596
- 2.13.4 Accelerate-Stop Distance Available: 9596
- 2.13.5 Landing Distance Available: 9272

- 2.13.1 Designation: 17
- 2.13.2 Take-off Run Available: 9596

2.13.3 Take-off Distance Available: 9596
2.13.4 Accelerate-Stop Distance Available: 9596
2.13.5 Landing Distance Available: 9596

2.13.1 Designation: HB
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

2.13.1 Designation: HF
2.13.2 Take-off Run Available:
2.13.3 Take-off Distance Available:
2.13.4 Accelerate-Stop Distance Available:
2.13.5 Landing Distance Available:

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 14
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 32
2.14.2 Approach Lighting System:
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: 16L
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: 35
2.14.2 Approach Lighting System: MALSR
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: HB
2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: HF

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System:

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: ANG COMD POST

2.18.3 Channel: 303.15

2.18.5 Hours of Operation:

2.18.1 Service Designation: ANG COMD POST

2.18.3 Channel: 311

2.18.5 Hours of Operation:

2.18.1 Service Designation: CD PRE DEP CLNC

2.18.3 Channel: 127.3

2.18.5 Hours of Operation:

2.18.1 Service Designation: CD PRE TAXI CLNC

2.18.3 Channel: 127.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 379.975

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 124.75

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS

2.18.3 Channel: 125.625

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P (RWY 14/32, 17/35)

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P (RWY 16L/34R, 16R/34L)

2.18.3 Channel: 123.775

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 348.6
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 14/32, 17/35)
2.18.3 Channel: 118.3
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 16L/34R)
2.18.3 Channel: 119.05
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 16R/34L)
2.18.3 Channel: 132.65
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 14/32, 16L/34R, 17/35)
2.18.3 Channel: 257.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 16R/34L)
2.18.3 Channel: 336.4
2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

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: 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: 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: DME for runway 34R. Magnetic variation: 11E
2.19.2 ILS Identification: SLC
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 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: 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: 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: 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: 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: 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: 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: 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: 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: 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

2.19.1 ILS Type: Glide Slop 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: 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

General Remarks:

SEE CURRENT NOTAMS FOR DATES AND ADDITIONAL INFO.

MILITARY: ANG RAMP: NSTD PAVEMENT MARK ON RAMP.

SVFR IS NOT RCMD AT THE ARPT, IF REQD, EXPT DLAS.

TWY Y RSTD TO WINGSPANS LESS THAN 171 FT BTWN TWY H3 AND H4.

MILITARY: 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.

SURFACE MOVEMENT GUIDANCE CONTROL SYSTEM & LOW VISIBILITY TAXI PROCEDURES.

HELIPADS B AND F LOCATED ON GENERAL AVIATION APRONS.

USE CAUTION FOR EXTENSIVE PARAGLIDING OPS INVOF POINT OF THE MOUNTAIN.

SEE FLIP AP/1 SUPPLEMENTARY ARPT INFO.

MILITARY: COMMUNICATIONS: ANG COMD POST - CALL UTAH CONTROL.

USE MINIMUM THRUST IN CONSTRUCTION AREAS.

CONTACT GROUND ON 123.775 BEFORE TAXIING OUT OF NORTH CARGO.

DUE TO TFC VOL, LCL DEPARTURE AND ARR OPNS ARE DISCOURAGED AND DLAS CAN BE EXPCD BTN 1500-1730Z++ AND 0130-0300Z++.

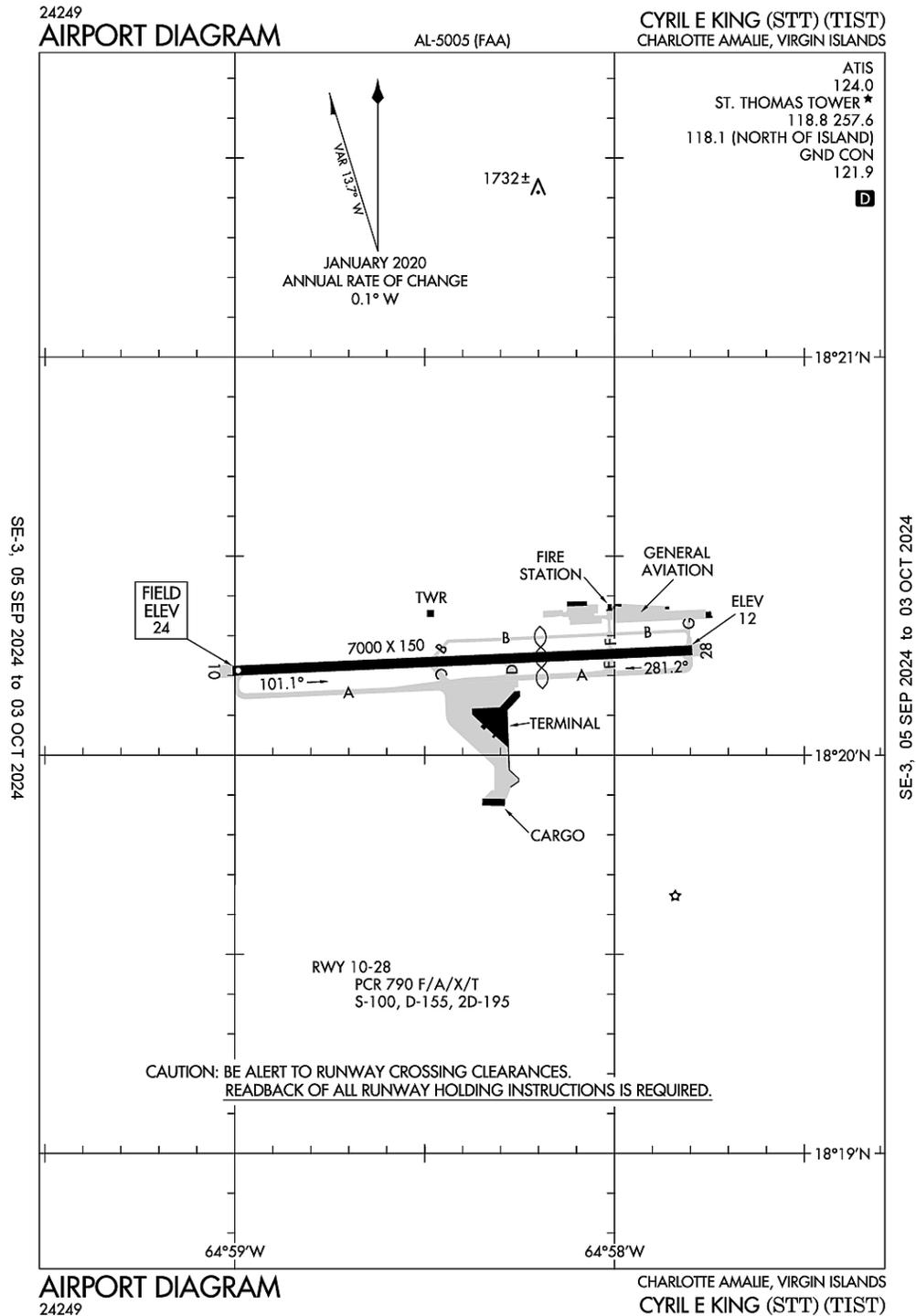
MILITARY: SVC: FUEL A++.

TWY K RSTRD TO ACFT WITH WINGSPAN LESS THAN 171 FT.

FLOCK OF BIRDS ON AND IN VICINITY OF ARPT.

MILITARY: 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.

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: JEROME SHERIDAN
CYRIL E. KING AIRPORT
ST THOMAS, VI 802 ((340) 714-6667)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: 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: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 28
- 2.12.2 True Bearing: 267
- 2.12.3 True Dimensions: 7000 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 18-20-15.8124N / 64-57-47.7382W
- 2.12.6 Threshold Elevation: 11.7
- 2.12.6 Touchdown Zone Elevation: 16.5

- 2.12.1 Designation: 10
- 2.12.2 True Bearing: 87
- 2.12.3 True Dimensions: 7000 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 18-20-12.7247N / 64-59-00.3371W
- 2.12.6 Threshold Elevation: 23.5
- 2.12.6 Touchdown Zone Elevation: 23.6

AD 2.13 Declared Distances

- 2.13.1 Designation: 28
- 2.13.2 Take-off Run Available: 7000
- 2.13.3 Take-off Distance Available: 7000
- 2.13.4 Accelerate-Stop Distance Available: 6170
- 2.13.5 Landing Distance Available: 3870

- 2.13.1 Designation: 10
- 2.13.2 Take-off Run Available: 7000
- 2.13.3 Take-off Distance Available: 7000
- 2.13.4 Accelerate-Stop Distance Available: 6892
- 2.13.5 Landing Distance Available: 6892

AD 2.14 Approach and Runway Lighting

- 2.14.1 Designation: 28
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System:

- 2.14.1 Designation: 10
- 2.14.2 Approach Lighting System:
- 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 Channel: 124
- 2.18.5 Hours of Operation: 24

- 2.18.1 Service Designation: EMERG
- 2.18.3 Channel: 121.5
- 2.18.5 Hours of Operation:

- 2.18.1 Service Designation: EMERG
- 2.18.3 Channel: 243
- 2.18.5 Hours of Operation:

- 2.18.1 Service Designation: GND/P
- 2.18.3 Channel: 121.9
- 2.18.5 Hours of Operation: 0700-2230, ATCT CLOSERS 1 HR EARLIER DRG DALGT SAVINGS TIME.

- 2.18.1 Service Designation: LCL/P (NORTH OF ISLAND)
- 2.18.3 Channel: 118.1
- 2.18.5 Hours of Operation: 0700-2230, ATCT CLOSERS 1 HR EARLIER DRG DALGT SAVINGS TIME.

- 2.18.1 Service Designation: LCL/P
- 2.18.3 Channel: 118.8
- 2.18.5 Hours of Operation: 0700-2230, ATCT CLOSERS 1 HR EARLIER DRG DALGT SAVINGS TIME.

- 2.18.1 Service Designation: LCL/P
- 2.18.3 Channel: 257.6
- 2.18.5 Hours of Operation: 0700-2230, ATCT CLOSERS 1 HR EARLIER DRG DALGT SAVINGS TIME.

AD 2.19 Radio Navigation and Landing Aids

- 2.19.1 ILS Type: DME for runway 10. Magnetic variation: 13W
- 2.19.2 ILS Identification: TMN
- 2.19.5 Coordinates: 18-20-18.78N / 64-57-39.88W
- 2.19.6 Site Elevation: 22.6 ft

- 2.19.1 ILS Type: Glide Slope for runway 10. Magnetic variation: 13W

2.19.2 ILS Identification: TMN
2.19.5 Coordinates: 18-20-10.62N / 64-58-48.29W
2.19.6 Site Elevation: 15.1 ft

2.19.1 ILS Type: Localizer for runway 10. Magnetic variation: 13W
2.19.2 ILS Identification: TMN
2.19.5 Coordinates: 18-20-16.26N / 64-57-37.22W
2.19.6 Site Elevation: 17 ft

2.19.1 Navigation Aid Type VOR/DME. Magnetic variation: 10W
2.19.2 Navigation Aid Identification: STT
2.19.5 Coordinates: 18-21-20.9431N / 65-01-28.3968W
2.19.6 Site Elevation: 679.2 ft

General Remarks:

LGTS ON HILL 4 NM SE OF ARPT MAY BE MISTAKEN FOR RY 10/28 WHEN MAKING A VISUAL APCH FROM THE SOUTH.

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.

RY 10 DEPS MAINTAIN RY HDG UNTIL REACHING DEP END OF RY BFR TURNING ON COURSE OR ASSIGNED HDG UNLESS OTRW AUZD BY ATCT.

WHEN TWR CLSD CTC SAN JUAN CERAP AT 787-253-8664/8665

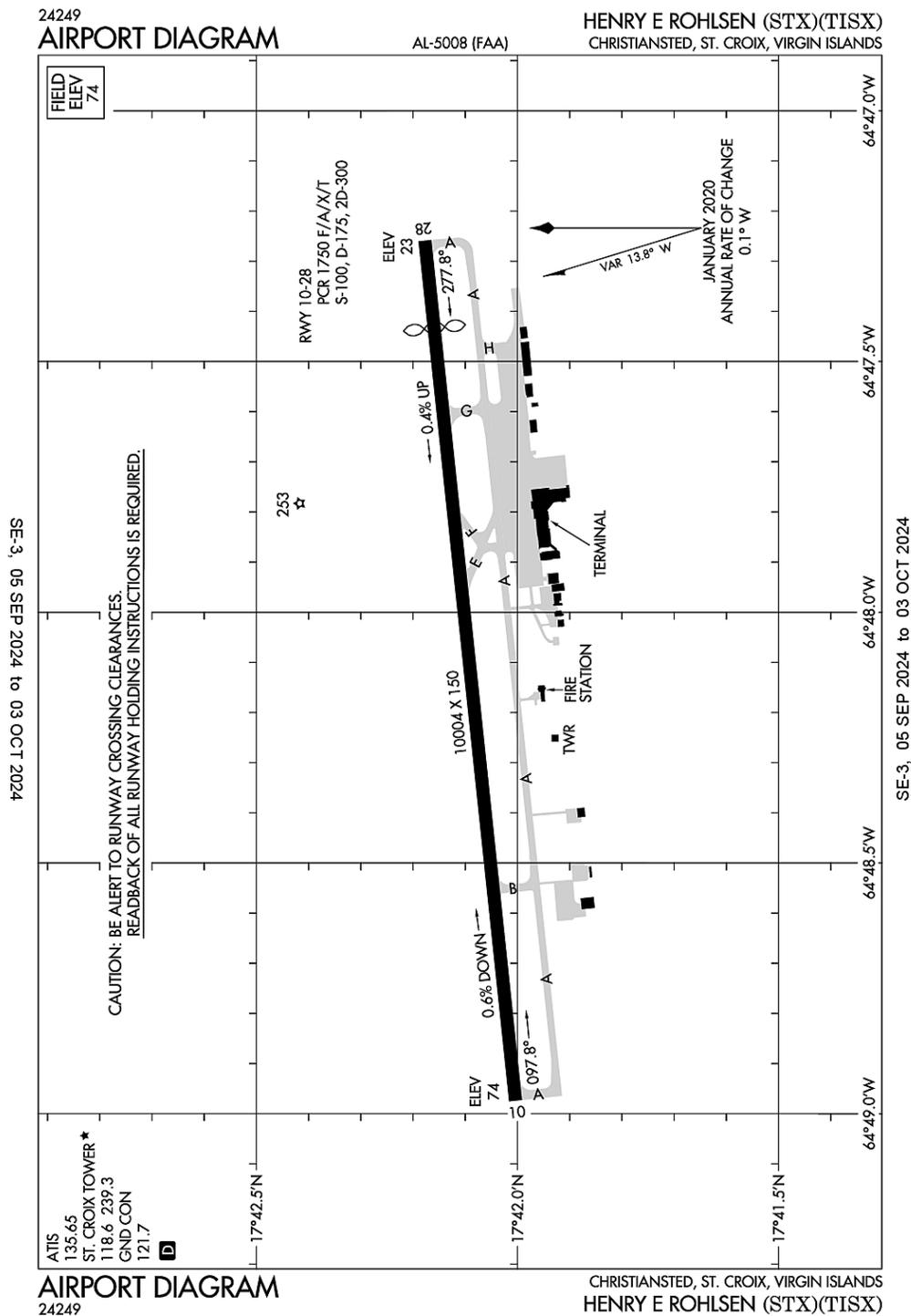
PILOTS CTC GND CTL PRIOR TO PUSHBACK.

ARFF UNAVBL 2300-0600.

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.

OBSTRUCTION SAILBOAT MAST 100FT WEST OF APPROACH END OF RWY 10 50FT AGL

**Christiansted St. Croix
Henry E Rohlsen
ICAO Identifier 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: JEROME SHERIDAN
P.O. BOX 1134
ST CROIX, VI 821 (340-714-6662)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: 100LL A1+
- 2.4.5 Hangar Space: YES
- 2.4.6 Repair Facilities: NONE

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 28
- 2.12.2 True Bearing: 264
- 2.12.3 True Dimensions: 10004 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 17-42-10.62N / 64-47-15.544W
- 2.12.6 Threshold Elevation: 22.5
- 2.12.6 Touchdown Zone Elevation: 40

- 2.12.1 Designation: 10
- 2.12.2 True Bearing: 84
- 2.12.3 True Dimensions: 10004 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 17-42-00.212N / 64-48-58.445W
- 2.12.6 Threshold Elevation: 73.7
- 2.12.6 Touchdown Zone Elevation: 74.1

AD 2.13 Declared Distances

- 2.13.1 Designation: 28
- 2.13.2 Take-off Run Available: 10004
- 2.13.3 Take-off Distance Available: 10004
- 2.13.4 Accelerate-Stop Distance Available: 10004
- 2.13.5 Landing Distance Available: 8998

- 2.13.1 Designation: 10
- 2.13.2 Take-off Run Available: 10004
- 2.13.3 Take-off Distance Available: 10004
- 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: 28
- 2.14.2 Approach Lighting System:
- 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

AD 2.18 Air Traffic Services Communication Facilities

- 2.18.1 Service Designation: ATIS
- 2.18.3 Channel: 135.65
- 2.18.5 Hours of Operation: 24

- 2.18.1 Service Designation: EMERG
- 2.18.3 Channel: 121.5
- 2.18.5 Hours of Operation:

- 2.18.1 Service Designation: EMERG
- 2.18.3 Channel: 243
- 2.18.5 Hours of Operation:

- 2.18.1 Service Designation: GND/P
- 2.18.3 Channel: 121.7
- 2.18.5 Hours of Operation: 0700-2200

- 2.18.1 Service Designation: LCL/P
- 2.18.3 Channel: 118.6
- 2.18.5 Hours of Operation: 0700-2200

- 2.18.1 Service Designation: LCL/P
- 2.18.3 Channel: 239.3
- 2.18.5 Hours of Operation: 0700-2200

AD 2.19 Radio Navigation and Landing Aids

- 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

- 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

General Remarks:

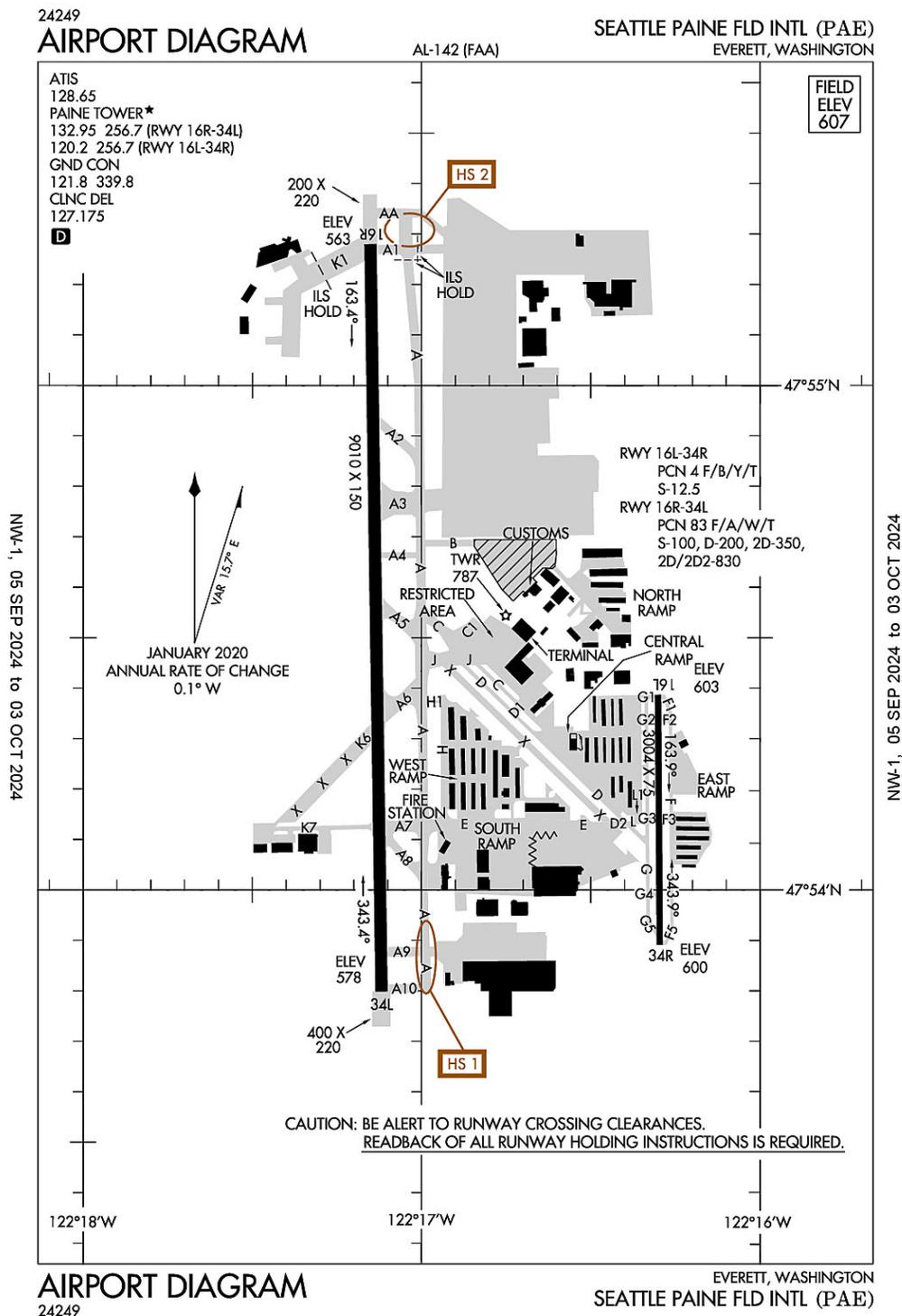
APCH TO RY 28 SMTMS OBSCD BY SMOKE FM LANDFILL LCTD E OF ARPT.

BIRDS & WILDLIFE ON & INVOF ARPT.

AP SFC COND UNMON DLY 2300 - 0600 AST.

WHEN TWR CLSD CTC SAN JUAN CERAP AT 787-253-8664/8665

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: 47-54-26.345N / 122-16-55.538W
- 2.2.2 From City: 6 miles SW of EVERETT, WA
- 2.2.3 Elevation: 606.9 ft
- 2.2.5 Magnetic Variation: 16E (2020)
- 2.2.6 Airport Contact: JOSHUA MARCY
3220 100TH ST SW
EVERETT, WA 98204 (425-308-2347)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: 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: Class-I certified on 11/1/1974
- 2.6.2 Rescue and Firefighting Services: ARFF Index-B

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 16L
- 2.12.2 True Bearing: 180
- 2.12.3 True Dimensions: 3004 ft x 75 ft
- 2.12.4 PCN: 4 F/B/Y/T
- 2.12.5 Coordinates: 47-54-23.129N / 122-16-18.0936W
- 2.12.6 Threshold Elevation: 602.9
- 2.12.6 Touchdown Zone Elevation: 606.9

- 2.12.1 Designation: 34R
- 2.12.2 True Bearing: 360
- 2.12.3 True Dimensions: 3004 ft x 75 ft
- 2.12.4 PCN: 4 F/B/Y/T
- 2.12.5 Coordinates: 47-53-53.4898N / 122-16-17.7647W
- 2.12.6 Threshold Elevation: 599.8
- 2.12.6 Touchdown Zone Elevation: 606.9

- 2.12.1 Designation: 16R
- 2.12.2 True Bearing: 179
- 2.12.3 True Dimensions: 9010 ft x 150 ft
- 2.12.4 PCN: 83 F/A/W/T
- 2.12.5 Coordinates: 47-55-16.8088N / 122-17-09.0632W
- 2.12.6 Threshold Elevation: 562.7
- 2.12.6 Touchdown Zone Elevation: 569.8

- 2.12.1 Designation: 34L
- 2.12.2 True Bearing: 359
- 2.12.3 True Dimensions: 9010 ft x 150 ft
- 2.12.4 PCN: 83 F/A/W/T
- 2.12.5 Coordinates: 47-53-47.904N / 122-17-07.0916W
- 2.12.6 Threshold Elevation: 577.6
- 2.12.6 Touchdown Zone Elevation: 583.4

AD 2.13 Declared Distances

- 2.13.1 Designation: 16L
- 2.13.2 Take-off Run Available: 3004
- 2.13.3 Take-off 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 Take-off Run Available: 3004
- 2.13.3 Take-off Distance Available: 3004
- 2.13.4 Accelerate-Stop Distance Available: 3004
- 2.13.5 Landing Distance Available: 3004

- 2.13.1 Designation: 16R
- 2.13.2 Take-off Run Available: 9010
- 2.13.3 Take-off 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 Take-off Run Available: 9010
- 2.13.3 Take-off Distance Available: 9010
- 2.13.4 Accelerate-Stop Distance Available: 9010
- 2.13.5 Landing Distance Available: 9010

AD 2.14 Approach and Runway Lighting

- 2.14.1 Designation: 16L
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System: P2L

- 2.14.1 Designation: 34R
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System: P2L

- 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 Channel: 34.1

2.18.5 Hours of Operation:

2.18.1 Service Designation: ATIS

2.18.3 Channel: 128.65

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 127.175

2.18.5 Hours of Operation: 0700-2100

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.8

2.18.5 Hours of Operation: 0700-2100

2.18.1 Service Designation: GND/P

2.18.3 Channel: 339.8

2.18.5 Hours of Operation: 0700-2100

2.18.1 Service Designation: LCL/P (RWY 16L/34R)

2.18.3 Channel: 120.2

2.18.5 Hours of Operation: 0700-2100

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 256.7

2.18.5 Hours of Operation: 0700-2100

2.18.1 Service Designation: LCL/P IC (RWY 16R/34L)

2.18.3 Channel: 132.95

2.18.5 Hours of Operation: 0700-2100

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: Glide Slope for runway 16R. Magnetic variation: 16E

2.19.2 ILS Identification: PAE

2.19.5 Coordinates: 47-55-07.3456N / 122-17-13.6246W

2.19.6 Site Elevation: 566.4 ft

2.19.1 ILS Type: Localizer for runway 16R. Magnetic variation: 16E

2.19.2 ILS Identification: PAE

2.19.5 Coordinates: 47-53-34.031N / 122-17-06.7829W

2.19.6 Site Elevation: 569.7 ft

2.19.1 Navigation Aid Type VOR/DME. Magnetic variation: 20E

2.19.2 Navigation Aid Identification: PAE

2.19.5 Coordinates: 47-55-11.3996N / 122-16-40.0864W

2.19.6 Site Elevation: 669.2 ft

General Remarks:

IT IS REQ THAT PILOTS ADHERE TO THE FLW NOISE ABATEMENT PROC UNLESS OTRW INSTRD BY ATCT, ITNRNT ARR AND LOW APCH OF SML ACFT OVER 250 HORSEPOWER AUZ ON RWYS 16L AND 34R.

NOISE SENSITIVE ARPT; FOR NOISE ABATEMENT PROC & TFC PROC CALL ARPT OPS 425-388-5125.

AIRFIELD CONDS NOT MNTD BTN 0000-0600.

TSNT HEL EXP LNDG/TKOF ON TWY B.

ITNRNT DEP OF SML ACFT OVER 250 HORSEPOWER ON RWY 34R.

TRNG FLTS DISCOURAGED AFT 2200.

FOR NOISE ABATEMENT FROM 0500-1500Z++ IF ACFT PERFORMANCE/WIND ALLOWS, USE RY 16R FOR ARRIVALS AND RY 34L FOR DEPARTURES.

TWY C BTN TRML RAMP AND CNTRL RAMP RSTRD TO WINGSPAN OF 68 FT OR LESS. TWY D, F, G AND L RSTRD TO WINGSPAN LESS THAN 49 FT. TWY A4, A5, K7 & B RSTRD TO WINGSPAN LESS THAN 118 FT. TAXILANE H RSTRD TO WINGSPAN LESS THAN 49 FT.

LRG ACFT FLY W PAT OVR WTR; SML ACFT FLY E PAT OVR ARPT.

AVOID LOW LVL OVRFLT OF BOEING RAMP; NE CORNER OF ARPT DUE TO JET BLAST.

FLOCKS OF LRG & SML BIRDS INVOF ARPT.

BE ALERT TO CNVG TFC ON BASE TO FINAL LEGS RWY 16R/34L 2100-0700.

FOR CD WHEN ATCT IS CLSD CTC SEATTLE APCH AT 206-214-4722.

PAE HAS FAC CONSTRAINTS THAT LMT ITS ABILITY TO ACCOMMODATE DIVD FLTS AND MNTN THE ARPTS SAFE OPN DUR IREG OPS. ACFT OPR SHOULD CTCT THE ON-DUTY ARPT OPS PSNL (425-388-5125) TO COORD DIVD FLTS EXC IN THE CASE OF A DECLARED IN-FLT EMERG.

PPR RQRD FOR ACES ON BOEING RAMP. CTC BOEING FLT DISPATCH 206-544-5900 FOR APVL. PRIOR TO TAXI ONTO BOEING RAMP CTC BOEING RADIO TWR 123.475 OR CALL 425-342-5900.

TWY K1 CLSD TO ACFT UNDER 30000 LBS.

TKOF CLNC RWY 16R FULL LEN; ENT RWY VIA TWY A1 UNLESS TWY AA SPECIFIED.

USE CTN FOR 80 FT AGL LGT POLES SW EDGE OF BRAVO RAMP.

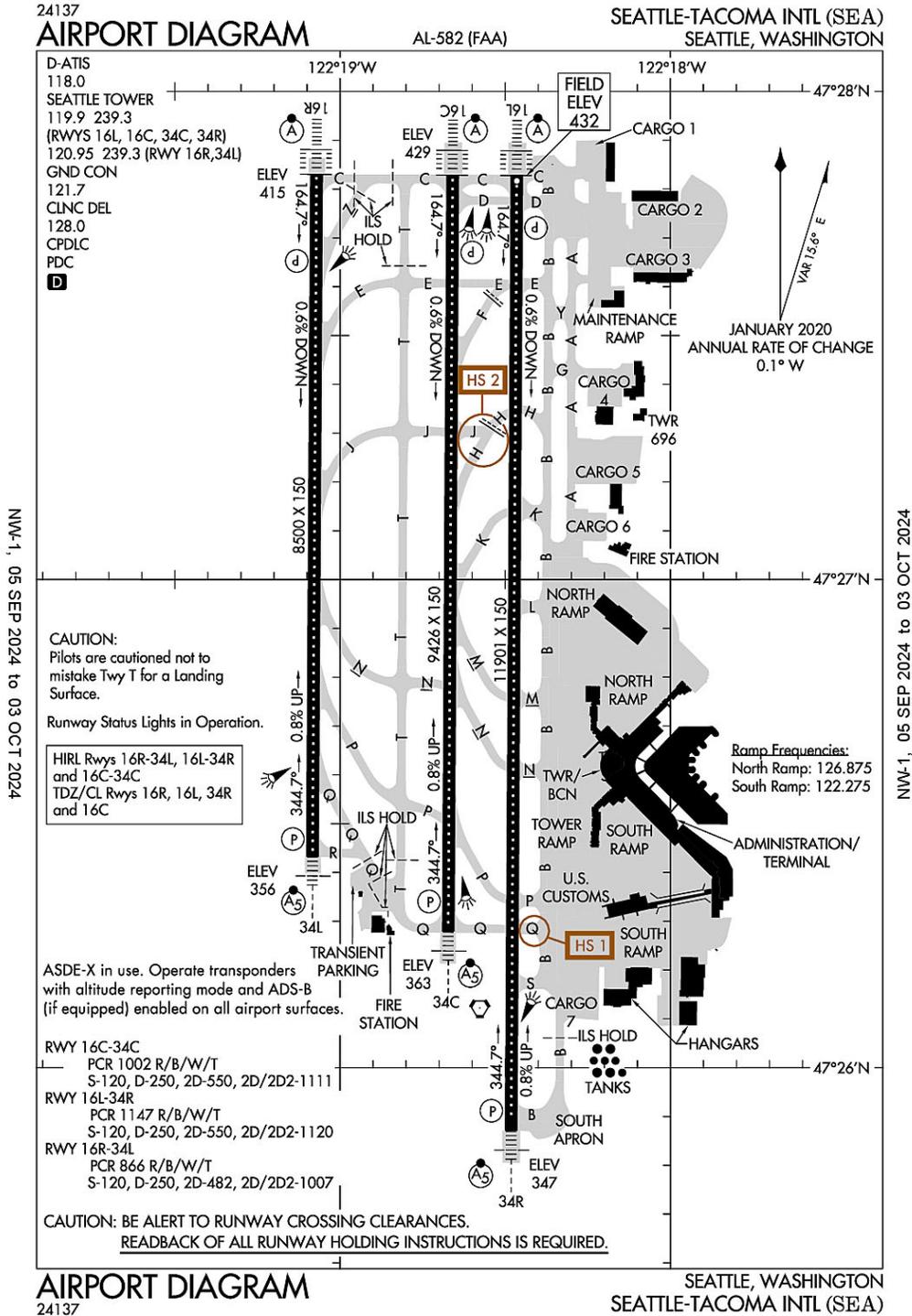
TWY A-2 RSTRD TO 30000 LBS.

EMERG FREQ 121.5 NOT MNT AT TWR. SEATTLE APP CON-TRACON MNT 121.5 FOR EVERETT (PAE).

AREAS NOT VSB FM ATCT INCL E EDGE OF S 1200 FT OF TWY A, TAXILANE E FM SE CORNER OF W HNGRS TO TWY A, TAXILANE H FROM NW EDGE OF W HNGRS TO TAXILANE E.

TAXILANE E RSTD TO WINGSPAN LESS THAN 171 FT. ACFT WINGSPAN OF 171 FT OR GREATER ON TAXILANE E, TUG OPS ONLY. EAST 500 FT OF TAXILANE E RSTD TO WINGSPAN LESS THAN 49 FT.

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)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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:
- 2.4.6 Repair Facilities: NONE

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-E

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 16C
- 2.12.2 True Bearing: 180
- 2.12.3 True Dimensions: 9426 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 47-27-49.7155N / 122-18-39.5415W
- 2.12.6 Threshold Elevation: 429.4
- 2.12.6 Touchdown Zone Elevation: 429.5

- 2.12.1 Designation: 34C
- 2.12.2 True Bearing: 0
- 2.12.3 True Dimensions: 9426 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 47-26-16.6966N / 122-18-40.3554W
- 2.12.6 Threshold Elevation: 362.9
- 2.12.6 Touchdown Zone Elevation: 387

- 2.12.1 Designation: 16L
- 2.12.2 True Bearing: 180
- 2.12.3 True Dimensions: 11901 ft x 150 ft
- 2.12.4 PCN:
- 2.12.5 Coordinates: 47-27-49.6628N / 122-18-27.9008W
- 2.12.6 Threshold Elevation: 432.3
- 2.12.6 Touchdown Zone Elevation: 432.3

2.12.1 Designation: 34R
2.12.2 True Bearing: 0
2.12.3 True Dimensions: 11901 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 47-25-52.2202N / 122-18-28.9377W
2.12.6 Threshold Elevation: 346.7
2.12.6 Touchdown Zone Elevation: 371.5

2.12.1 Designation: 16R
2.12.2 True Bearing: 180
2.12.3 True Dimensions: 8500 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 47-27-49.8109N / 122-19-04.2846W
2.12.6 Threshold Elevation: 414.8
2.12.6 Touchdown Zone Elevation: 414.8

2.12.1 Designation: 34L
2.12.2 True Bearing: 0
2.12.3 True Dimensions: 8500 ft x 150 ft
2.12.4 PCN:
2.12.5 Coordinates: 47-26-25.9217N / 122-19-05.009W
2.12.6 Threshold Elevation: 356.2
2.12.6 Touchdown Zone Elevation: 379.3

AD 2.13 Declared Distances

2.13.1 Designation: 16C
2.13.2 Take-off Run Available: 9426
2.13.3 Take-off 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 Take-off Run Available: 9426
2.13.3 Take-off Distance Available: 9426
2.13.4 Accelerate-Stop Distance Available: 9426
2.13.5 Landing Distance Available: 9426

2.13.1 Designation: 16L
2.13.2 Take-off Run Available: 11901
2.13.3 Take-off 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 Take-off Run Available: 11901
2.13.3 Take-off Distance Available: 11901
2.13.4 Accelerate-Stop Distance Available: 11901
2.13.5 Landing Distance Available: 11901

2.13.1 Designation: 16R

2.13.2 Take-off Run Available: 8500
2.13.3 Take-off 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 Take-off Run Available: 8500
2.13.3 Take-off 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: 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

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: 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

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: CD/P
2.18.3 Channel: 128
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: D-ATIS
2.18.3 Channel: 118
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.7

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 16L/34R, 16C/34C)

2.18.3 Channel: 119.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 16R/34L)

2.18.3 Channel: 120.95

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 16L/34R, 16C/34C)

2.18.3 Channel: 239.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P (RWY 16R/34L)

2.18.3 Channel: 239.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: RAMP CTL (SOUTH RAMP)

2.18.3 Channel: 122.275

2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (GATE HOLD)

2.18.3 Channel: 126.25

2.18.5 Hours of Operation:

2.18.1 Service Designation: RAMP CTL (NORTH RAMP)

2.18.3 Channel: 126.875

2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

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: 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: 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 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: 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: 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: 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: 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: 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: 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

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: 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: 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 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: 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: 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 Navigation Aid Type VORTAC. Magnetic variation: 19E
2.19.2 Navigation Aid Identification: SEA
2.19.5 Coordinates: 47-26-07.3434N / 122-18-34.618W
2.19.6 Site Elevation: 348.4 ft

General Remarks:
(E94) WSO/WSFO.

RWY 16L/34R RSTD TO ACFT WITH WINGSPAN 260 FT OR LESS.

TAXILANE W RSTD TO ACFT WITH WINGSPAN 135 FT OR LESS N OF TWY N AND 167 FT OR LESS SOUTH OF TWY N. SEATTLE RAMP TWR PRVDS ADZY CTL ONLY.

AIR CARGO 5 RAMP DUAL ENG TAXI ONLY

TWYS J & H E OF TWY T RSTD TO ACFT WITH WINGSPAN 167 FT OR LESS.

TO MINIMIZE NOISE AND FUEL BURN SEA ENCOURAGES AIRLINES TO SNGL ENG TAXI WHEN SAFE AND CONDS PMT.

RPRT BIRD STRIKES TO 206-787-7233

TWY H E OF RWY 16L/34R RSTD TO ACFT WITH WINGSPAN 118 FT OR LESS WHEN EXITING RWY 16L/34R.

HELICOPTERS LANDING & DEPARTING AVOID OVERFLYING FUEL FARM LCTD AT THE SE CORNER OF THE ARPT.

DO NOT MISTAKE TWY T FOR LNDG SFC.

ACES TO AIR CARGO 4 PRKG AND CARGO AREAS RSTD TO ACFT WITH WINGSPAN 170 FT OR LESS.

(E110) CONTINUOUS POWER ARPT.

PPR FOR ALL GA PRKG & SVCS, CTC 206-433-5481. OP HRS 0530L – 2100L, WITH A CALL OUT AVBL UPON REQ.

TWY B SOUTH OF AIR CARGO 7 RAMP RSTD TO ACFT WITH WINGSPAN 260 FT OR LESS.

TWY FOR CORPORATE HNGR RAMP RSTD TO ACFT WITH WINGSPAN 62 FT OR LESS FOR TAXI OPS. GA CUST PKNG IS VERY LTD.

RY STATUS LGTS ARE IN OPN.

TWY A SOUTH OF TWY G RSTD TO ACFT WITH WINGSPAN 225 FT OR LESS.

100LL FUEL NOT AVBL.

TWY B S OF TWY Q RSTD TO ACFT WITH WINGSPAN 260 FT OR LESS.

BIRD FLOCKS WITHIN ARPT VCNTY – CHECK LCL ADZYS.

THE USE OF REVERSE THRUST BYD WHAT IS NEC FOR OPNL OR SAFETY RSNS IS DISCOURAGED AT ALL TIMES. NOISE ABATEMENT FLT PROCS IN EFCT BTN 2200-0600. FOR FURTHER INFO CTC SEA NOISE ABATEMENT OFC AT 206-787-5393.

TAXILANE ON N SIDE OF N STLT RSTD TO ACFT WITH WINGSPAN 118 FT OR LESS. TRI-TAXILANES AT N STLT: CNTR (GREEN) TAXILANE RSTD TO ACFT WITH WINGSPAN 135 FT OR LESS. WHEN AN ACFT IS ON THE CNTR (GREEN) OR OTR (ORANGE/BLUE) TAXILANES, NO OTR ACFT CAN SIMUL USE THE ADJ TAXILANE(S). ORANGE & BLUE TAXILANES ARE RSTD TO ACFT WITH WINGSPAN 118 FT OR LESS. TWO ACFT CAN SIMUL USE THE OUTER TAXILANES.

GA LANDING FEES PAYABLE BY MAJOR CREDIT CARDS ONLY.

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

CONS TAXI TO TKOFS AT SEA. WHEN PRACTICAL, SAFE AND AVBL, CONS TAXI TO TKOFS ARE ENCOURAGED. CONS TAXI TO TKOFS MAY RDC ACFT NOISE WI NEARBY COMMUNITIES.

FLIGHT NOTIFICATION SERVICE (ADCUS) AVBL.

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)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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 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: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 03
- 2.12.2 True Bearing: 45
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 2385

- 2.12.1 Designation: 21
- 2.12.2 True Bearing: 225
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 2346.1

- 2.12.1 Designation: 08
- 2.12.2 True Bearing: 90
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 2376.2

- 2.12.1 Designation: 26
- 2.12.2 True Bearing: 270
- 2.12.3 True 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
- 2.12.6 Touchdown Zone Elevation: 2371.5

AD 2.13 Declared Distances

- 2.13.1 Designation: 03
- 2.13.2 Take-off Run Available: 11002
- 2.13.3 Take-off 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 Take-off Run Available: 11002
- 2.13.3 Take-off Distance Available: 11002
- 2.13.4 Accelerate-Stop Distance Available: 11002
- 2.13.5 Landing Distance Available: 11002

- 2.13.1 Designation: 08
- 2.13.2 Take-off Run Available: 8199
- 2.13.3 Take-off 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 Take-off Run Available: 8199
- 2.13.3 Take-off Distance Available: 8199
- 2.13.4 Accelerate-Stop Distance Available: 8199
- 2.13.5 Landing Distance Available: 8199

AD 2.14 Approach and Runway Lighting

- 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

- 2.14.1 Designation: 08
- 2.14.2 Approach Lighting System:
- 2.14.4 Visual Approach Slope Indicator System: P4R

- 2.14.1 Designation: 26
- 2.14.2 Approach Lighting System:
- 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 (205-025)

2.18.3 Channel: 123.75

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (026-204)

2.18.3 Channel: 133.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (026-204)

2.18.3 Channel: 263

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (205-025)

2.18.3 Channel: 282.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/S DEP/S

2.18.3 Channel: 372.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ATIS

2.18.3 Channel: 124.325

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ATIS

2.18.3 Channel: 254.375

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 127.55

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (205-025)

2.18.3 Channel: 123.75

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (026-204)

2.18.3 Channel: 133.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (026-204)

2.18.3 Channel: 263

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (205-025)

2.18.3 Channel: 282.25

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG

2.18.3 Channel: 121.5

2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG

2.18.3 Channel: 243

2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P

2.18.3 Channel: 121.9

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P

2.18.3 Channel: 348.6

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: HILIE STAR

2.18.3 Channel: 133.35

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: HILIE STAR

2.18.3 Channel: 263

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 118.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P

2.18.3 Channel: 278.3

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ZOOMR STAR

2.18.3 Channel: 123.75

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: ZOOMR STAR

2.18.3 Channel: 282.25

2.18.5 Hours of Operation: 24

AD 2.19 Radio Navigation and Landing Aids

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: 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 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: 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: 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

2.19.1 Navigation Aid Type VORTAC. Magnetic variation: 14E
2.19.2 Navigation Aid Identification: GEG
2.19.5 Coordinates: 47-33-53.805N / 117-37-36.789W
2.19.6 Site Elevation: 2756.3 ft

General Remarks:

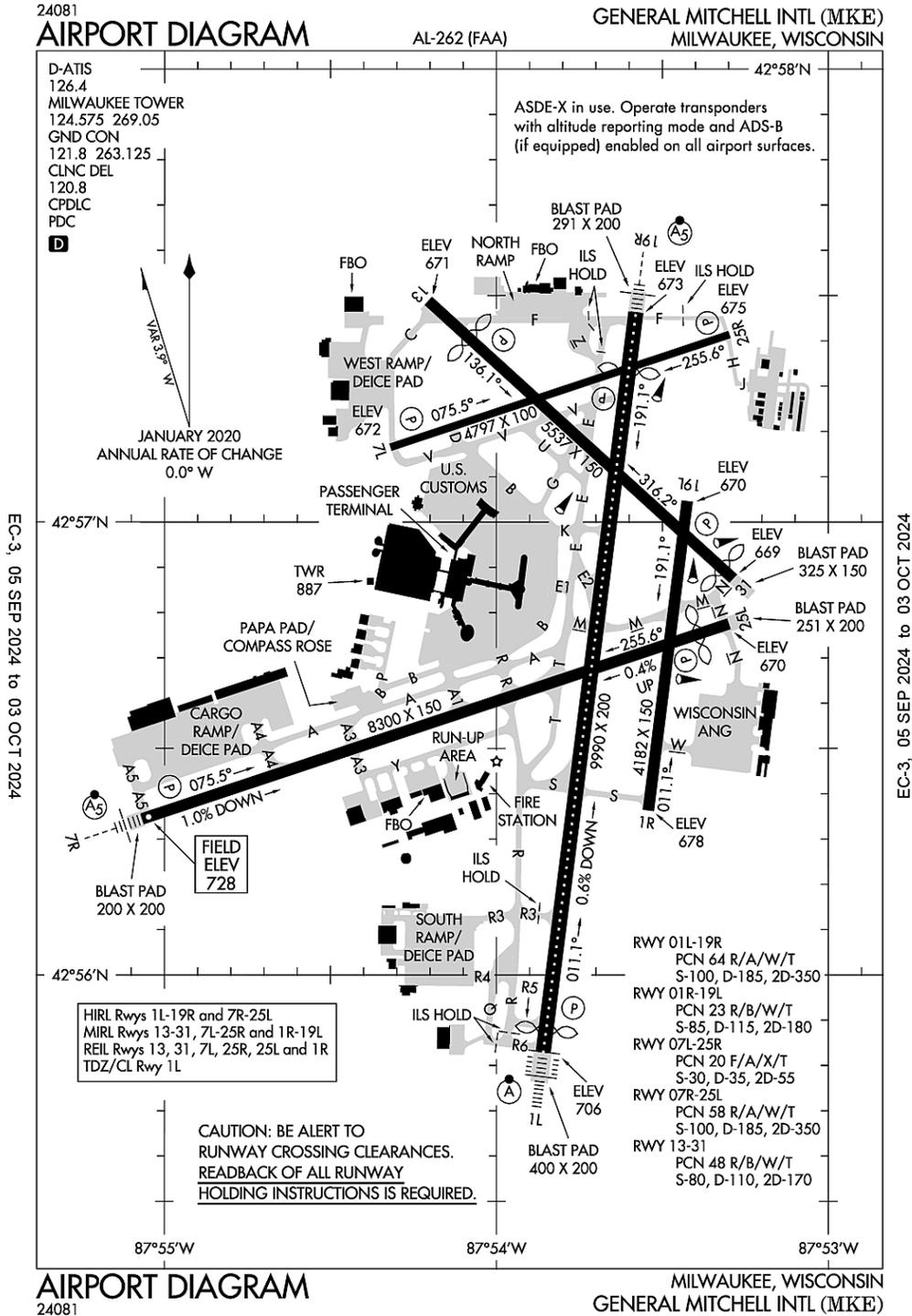
PORTIONS OF TWY K NOT VISIBLE FM ATCT.

TWY K UNLGTD ON RAMP SIDE ALONG MAINTENANCE RAMP AND IS UNAVBL BELOW 1200 RVR UNLESS UNDER ESCORT BY "FOLLOW ME".

BE ALERT TO TURBULENCE OVER SMOKE STACKS 1 MILE EAST OF ARPT.

WATERFOWL & BIRDS ON & INVOF ARPT.

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: 42-56-48.955N / 87-53-49.432W
- 2.2.2 From City: 5 miles S of MILWAUKEE, WI
- 2.2.3 Elevation: 728.4 ft
- 2.2.5 Magnetic Variation: 4W (2020)
- 2.2.6 Airport Contact: BRIAN DRANZIK
5300 S HOWELL AVE
MILWAUKEE, WI 53207 (414-747-5775)
- 2.2.7 Traffic: IFR/VFR

AD 2.3 Attendance Schedule

- 2.3.1 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: MAJOR

AD 2.6 Rescue and Firefighting Services

- 2.6.1 Aerodrome Category: Class-I certified on 5/1/1973
- 2.6.2 Rescue and Firefighting Services: ARFF Index-C

AD 2.12 Runway Physical Characteristics

- 2.12.1 Designation: 19R
- 2.12.2 True Bearing: 187
- 2.12.3 True Dimensions: 9990 ft x 200 ft
- 2.12.4 PCN: 64 R/A/W/T
- 2.12.5 Coordinates: 42-57-27.699N / 87-53-34.7753W
- 2.12.6 Threshold Elevation: 672.7
- 2.12.6 Touchdown Zone Elevation: 671.9

- 2.12.1 Designation: 01L
- 2.12.2 True Bearing: 7
- 2.12.3 True Dimensions: 9990 ft x 200 ft
- 2.12.4 PCN: 64 R/A/W/T
- 2.12.5 Coordinates: 42-55-49.7963N / 87-53-51.516W
- 2.12.6 Threshold Elevation: 705.8
- 2.12.6 Touchdown Zone Elevation: 703.5

- 2.12.1 Designation: 19L
- 2.12.2 True Bearing: 187
- 2.12.3 True Dimensions: 4182 ft x 150 ft
- 2.12.4 PCN: 23 R/B/W/T
- 2.12.5 Coordinates: 42-57-02.7448N / 87-53-25.4878W
- 2.12.6 Threshold Elevation: 669.6
- 2.12.6 Touchdown Zone Elevation: 674.2

2.12.1 Designation: 01R
2.12.2 True Bearing: 7
2.12.3 True Dimensions: 4182 ft x 150 ft
2.12.4 PCN: 23 R/B/W/T
2.12.5 Coordinates: 42-56-21.766N / 87-53-32.5016W
2.12.6 Threshold Elevation: 677.7
2.12.6 Touchdown Zone Elevation: 677.7

2.12.1 Designation: 07L
2.12.2 True Bearing: 72
2.12.3 True Dimensions: 4797 ft x 100 ft
2.12.4 PCN: 20 F/A/X/T
2.12.5 Coordinates: 42-57-09.8896N / 87-54-19.1101W
2.12.6 Threshold Elevation: 671.5
2.12.6 Touchdown Zone Elevation: 672

2.12.1 Designation: 25R
2.12.2 True Bearing: 252
2.12.3 True Dimensions: 4797 ft x 100 ft
2.12.4 PCN: 20 F/A/X/T
2.12.5 Coordinates: 42-57-24.8031N / 87-53-17.893W
2.12.6 Threshold Elevation: 674.6
2.12.6 Touchdown Zone Elevation: 674.6

2.12.1 Designation: 07R
2.12.2 True Bearing: 72
2.12.3 True Dimensions: 8300 ft x 150 ft
2.12.4 PCN: 58 R/A/W/T
2.12.5 Coordinates: 42-56-20.6652N / 87-55-03.9117W
2.12.6 Threshold Elevation: 728.4
2.12.6 Touchdown Zone Elevation: 728.4

2.12.1 Designation: 25L
2.12.2 True Bearing: 252
2.12.3 True Dimensions: 8300 ft x 150 ft
2.12.4 PCN: 58 R/A/W/T
2.12.5 Coordinates: 42-56-46.473N / 87-53-18.0003W
2.12.6 Threshold Elevation: 669.9
2.12.6 Touchdown Zone Elevation: 683.1

2.12.1 Designation: 31
2.12.2 True Bearing: 312
2.12.3 True Dimensions: 5537 ft x 150 ft
2.12.4 PCN: 48 R/B/W/T
2.12.5 Coordinates: 42-56-52.5074N / 87-53-17.1839W
2.12.6 Threshold Elevation: 668.6
2.12.6 Touchdown Zone Elevation: 670.1

2.12.1 Designation: 13
2.12.2 True Bearing: 132

- 2.12.3 True Dimensions: 5537 ft x 150 ft
- 2.12.4 PCN: 48 R/B/W/T
- 2.12.5 Coordinates: 42-57-29.2767N / 87-54-12.2946W
- 2.12.6 Threshold Elevation: 671.4
- 2.12.6 Touchdown Zone Elevation: 670.5

AD 2.13 Declared Distances

- 2.13.1 Designation: 19R
- 2.13.2 Take-off Run Available: 9990
- 2.13.3 Take-off Distance Available: 9990
- 2.13.4 Accelerate-Stop Distance Available: 9990
- 2.13.5 Landing Distance Available: 9205

- 2.13.1 Designation: 01L
- 2.13.2 Take-off Run Available: 9990
- 2.13.3 Take-off Distance Available: 9990
- 2.13.4 Accelerate-Stop Distance Available: 9380
- 2.13.5 Landing Distance Available: 9080

- 2.13.1 Designation: 19L
- 2.13.2 Take-off Run Available: 4182
- 2.13.3 Take-off Distance Available: 4182
- 2.13.4 Accelerate-Stop Distance Available: 4182
- 2.13.5 Landing Distance Available: 4182

- 2.13.1 Designation: 01R
- 2.13.2 Take-off Run Available: 4182
- 2.13.3 Take-off Distance Available: 4182
- 2.13.4 Accelerate-Stop Distance Available: 4182
- 2.13.5 Landing Distance Available: 4182

- 2.13.1 Designation: 07L
- 2.13.2 Take-off Run Available: 4797
- 2.13.3 Take-off Distance Available: 4797
- 2.13.4 Accelerate-Stop Distance Available: 4797
- 2.13.5 Landing Distance Available: 4797

- 2.13.1 Designation: 25R
- 2.13.2 Take-off Run Available: 4797
- 2.13.3 Take-off Distance Available: 4797
- 2.13.4 Accelerate-Stop Distance Available: 4797
- 2.13.5 Landing Distance Available: 4797

- 2.13.1 Designation: 07R
- 2.13.2 Take-off Run Available: 8300
- 2.13.3 Take-off 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 Take-off Run Available: 8300

2.13.3 Take-off Distance Available: 8300
2.13.4 Accelerate-Stop Distance Available: 8300
2.13.5 Landing Distance Available: 7867

2.13.1 Designation: 31
2.13.2 Take-off Run Available: 5537
2.13.3 Take-off Distance Available: 5537
2.13.4 Accelerate-Stop Distance Available: 5537
2.13.5 Landing Distance Available: 5152

2.13.1 Designation: 13
2.13.2 Take-off Run Available: 5537
2.13.3 Take-off Distance Available: 5537
2.13.4 Accelerate-Stop Distance Available: 5537
2.13.5 Landing Distance Available: 4797

AD 2.14 Approach and Runway Lighting

2.14.1 Designation: 19R
2.14.2 Approach Lighting System: MALSR
2.14.4 Visual Approach Slope Indicator System: P4R

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: 19L
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 01R
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System:

2.14.1 Designation: 07L
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 25R
2.14.2 Approach Lighting System:
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
2.14.2 Approach Lighting System:
2.14.4 Visual Approach Slope Indicator System: P4L

2.14.1 Designation: 31
2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System: P4R

2.14.1 Designation: 13

2.14.2 Approach Lighting System:

2.14.4 Visual Approach Slope Indicator System: P4L

AD 2.18 Air Traffic Services Communication Facilities

2.18.1 Service Designation: APCH/P (B SE)

2.18.3 Channel: 118

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P (B SE)

2.18.3 Channel: 317.725

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P DEP/P IC (A NW)

2.18.3 Channel: 307

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: APCH/P IC (A NW)

2.18.3 Channel: 126.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CD/P

2.18.3 Channel: 120.8

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (B SE)

2.18.3 Channel: 118

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (A NW)

2.18.3 Channel: 126.5

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (A NW)

2.18.3 Channel: 307

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: CLASS C (B SE)

2.18.3 Channel: 317.725

2.18.5 Hours of Operation: 24

2.18.1 Service Designation: COMD POST (128 ARW ANG UPSET CTL)

2.18.3 Channel: 321

2.18.5 Hours of Operation:

2.18.1 Service Designation: COMD POST (28 ARW ANG UPSET CON)

2.18.3 Channel: 6761

2.18.5 Hours of Operation:

2.18.1 Service Designation: D-ATIS
2.18.3 Channel: 126.4
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (A NW)
2.18.3 Channel: 125.35
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: DEP/P (B SE)
2.18.3 Channel: 135.875
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: EMERG
2.18.3 Channel: 121.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: EMERG
2.18.3 Channel: 243
2.18.5 Hours of Operation:

2.18.1 Service Designation: GND/P
2.18.3 Channel: 121.8
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GND/P
2.18.3 Channel: 263.125
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GOPAC STAR
2.18.3 Channel: 126.5
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: GOPAC STAR
2.18.3 Channel: 307
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 124.575
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: LCL/P
2.18.3 Channel: 269.05
2.18.5 Hours of Operation: 24

2.18.1 Service Designation: OPS
2.18.3 Channel: 139.5
2.18.5 Hours of Operation:

2.18.1 Service Designation: OPS
2.18.3 Channel: 311
2.18.5 Hours of Operation:

AD 2.19 Radio Navigation and Landing Aids

2.19.1 ILS Type: DME for runway 01L. Magnetic variation: 4W

2.19.2 ILS Identification: MKE

2.19.5 Coordinates: 42-57-50.9407N / 87-53-27.4465W

2.19.6 Site Elevation: 725 ft

2.19.1 ILS Type: Glide Slope for runway 01L. Magnetic variation: 4W

2.19.2 ILS Identification: MKE

2.19.5 Coordinates: 42-56-04.4522N / 87-53-43.0463W

2.19.6 Site Elevation: 691.4 ft

2.19.1 ILS Type: Inner Marker for runway 01L. Magnetic variation: 4W

2.19.2 ILS Identification: MKE

2.19.5 Coordinates: 42-55-44.6539N / 87-53-52.3948W

2.19.6 Site Elevation: 706 ft

2.19.1 ILS Type: Localizer for runway 01L. Magnetic variation: 4W

2.19.2 ILS Identification: MKE

2.19.5 Coordinates: 42-57-49.9549N / 87-53-30.968W

2.19.6 Site Elevation: 713 ft

2.19.1 ILS Type: DME for runway 19R. Magnetic variation: 4W

2.19.2 ILS Identification: BLY

2.19.5 Coordinates: 42-57-50.9407N / 87-53-27.4465W

2.19.6 Site Elevation: 725 ft

2.19.1 ILS Type: Glide Slope for runway 19R. Magnetic variation: 4W

2.19.2 ILS Identification: BLY

2.19.5 Coordinates: 42-57-09.1784N / 87-53-32.5226W

2.19.6 Site Elevation: 666.4 ft

2.19.1 ILS Type: Localizer for runway 19R. Magnetic variation: 4W

2.19.2 ILS Identification: BLY

2.19.5 Coordinates: 42-55-38.3041N / 87-53-53.4819W

2.19.6 Site Elevation: 709.2 ft

2.19.1 ILS Type: DME for runway 07R. Magnetic variation: 4W

2.19.2 ILS Identification: GMF

2.19.5 Coordinates: 42-56-18.5074N / 87-55-23.6562W

2.19.6 Site Elevation: 743.1 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: Localizer for runway 07R. Magnetic variation: 4W

2.19.2 ILS Identification: GMF

2.19.5 Coordinates: 42-56-49.0824N / 87-53-07.2728W

2.19.6 Site Elevation: 669.1 ft

2.19.1 ILS Type: DME for runway 25L. Magnetic variation: 4W
2.19.2 ILS Identification: PXY
2.19.5 Coordinates: 42-56-18.5074N / 87-55-23.6562W
2.19.6 Site Elevation: 743.1 ft

2.19.1 ILS Type: Localizer for runway 25L. Magnetic variation: 4W
2.19.2 ILS Identification: PXY
2.19.5 Coordinates: 42-56-16.0665N / 87-55-22.7833W
2.19.6 Site Elevation: 728 ft

General Remarks:

TWY B BTN TWY V AND TWY P CLSD TO ACFT WITH WINGSPAN GREATER THAN 170 FT.

RY 19R TODA 8,750 FT FROM INT TWY V.

RY 07L/25R NO ACFT 65,000 LBS OR GREATER ALLOWED TO TAXI BTN TWY D & RY 13/31 AND EAST OF RY 19R.

TWY A CLSD FM TWY R TO TWY E AND TWY E CLSD FM TWY T TO TWY E1 AND TWY T CLSD N OF RWY 07R/25L, AND TWY M CLSD FM TWY E TO RWY 01R/19L TO ACFT WITH TAIL HGT GTR THAN 54.5 FT DURG CAT II AND CAT III OPS.

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.

ACFT ARE NOT PERMITTED TO MAKE LEFT TURN ONTO TWY E WHEN EXITING TWY E2.

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.

TWY A BTN TWY R AND TWY A1 CLSD TO ACFT WINGSPAN MORE THAN 171 FT EXC PPR 414-747-5325.

TWY F (E OF RWY 19R), TWY H, TWY J, AND TWY P CLSD TO ACFT WITH WINGSPAN GTR THAN 78 FT UNLESS PMSN FM AMGR AT 414-747-5325.

PREFERRED USAGE BY ACFT BTN 2200-0600 IS TKOF RY 19R & LNDG RY 01L.

RY 07L/25R CLSD TO ALL JET ACFT.

DEICE PAD FOR RWY 07R NOT AUTH FOR THRU TAXI.

TWY C CLSD BTWN APCH END OF RWY 7L AND WEST RAMP NORTH TXL TO ACFT WITH WINGSPAN GTR THAN OR EQUAL TO 118 FT UNLESS PMSN FM ARPT MGR 414-747-5325.

TRNG FLGTS INVOLVING SUCCESSIVE USE OF ANY RY PROHIBITED 2200-0600.

ACFT WITH WINGSPAN GREATER THAN 175 FT CANNOT PASS SIMULTANEOUSLY ON TWY 'E' & TWY 'Z'.

HOLDING BAY AT RY 19R WHEN IN USE, TWY Z ADJACENT TO BAY IS LIMITED TO ACFT WITH WINGSPAN UP TO 170 FT.

RY 13/31 CLSD JET ACFT, UNLESS PMSN FROM TWR OR AMGR 414-747-5325.

RY 01R-19L AVAILABLE TO AIR CARRIERS FOR TAXI ONLY.

ANG: PPR ALL ACFT 48HR PN, CTC AFLD MGMT DSN 580-8241, C414-944-8241. AFLD MGMT HR 1200Z-2230Z++ TUE-FRI, CLSD HOL, SAT-SUN EXC UNIT TMG. MAINT OPS (MOCC) FREQ - 379.85. ANY MDS (OTHER THAN KC-135) IS LTD TO STD TRAN MARSHALLING AND PRK. NO TECH DATA AVBL FOR TRAN MAINT. FUEL AND AGE SUPPORT EQUIP AVBL FOR SELF-SVC. NO ADNL CONFIGN ITEMS SUPPORTED SUCH AS LANTIRN PODS, EDM PODS, ETC. ANG: EOR, ACFT SHELTERS/REVENEMENTS, AND ALERT FAC UNAVBL. APRON HAS LTD STATIC GND POINTS AND TIE DOWN POINTS. FLEET SVC/HOT CARGO PRKG UNAVBL. CTC UPSET CTL ON 321.0 30 MIN PRIOR TO LDG AND DEP. NSTD MRK ON APRON FOR WINGTIP CLNC USED BY BASE ASGND ACFT.

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.

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.

BIRDS ON & INVOF ARPT.

RYS 13/31 & 01R/19L & 07L/25R CLSD EXCP LGT WT SINGLE ENG ACFT 0400-1200Z DLY.

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 R AND TWY A1 CLSD TO ACFT WINGSPAN MORE THAN 118 FT EXC PPR 414-747-5325.

INDEX

[References are to page numbers]

A

- Abbreviations, GEN 2.2–1
- Accident and Incident Reporting , ENR 1.16–1
 - Items To Be Reported, ENR 1.16–2
- Actual Navigation Performance (ANP), ENR 4.1–37
- ADS–R. *See* Automatic Dependent Surveillance–Rebroadcast
- Aerodrome Forecast (TAF), GEN 3.5–81
- Aeronautical Charts, GEN 3.2–1
- Aeronautical Fixed Telecommunications Network (AFTN), GEN 3.4–8
- Aeronautical Information Publication (AIP)
 - Publication Schedule, GEN 0.1–2
 - Structure, GEN 0.1–1
 - Subscription Information, GEN 0.1–3
- Aeronautical Publications, Distribution of, GEN 3.1–2
- AFTN. *See* Aeronautical Fixed Telecommunications Network (AFTN)
- AHRS. *See* Attitude Heading Reference System
- Air Route Traffic Control Center (ARTCC), GEN 3.3–2
 - ARTCC Communications, GEN 3.3–2
 - ARTCC Radio Frequency Outage, GEN 3.3–13
- Air Traffic Control, Pilot/Controller Roles and Responsibilities, ENR 1.1–27
- Aircraft
 - Lights, Use of, ENR 1.1–34
 - Unmanned, ENR 5.7–4
- Airport
 - Aircraft Arresting Devices, AD 1.1–28
 - Airport Advisory/Information Services, ENR 1.4–15
 - Fees and Charges, GEN 4.1–1
 - Fire Fighting Requirements, AD 1.1–3
 - Local Airport Advisory (LAA), GEN 3.3–19
 - Operations, ENR 1.1–1
 - Exiting the Runway after Landing, ENR 1.1–27
 - VFR Flights in Terminal Areas, ENR 1.1–22
 - Low Level Wind Shear/Microburst Detection Systems, ENR 1.1–14
 - Signals, Hand, ENR 1.1–28
 - Taxiing, ENR 1.1–18
 - Traffic Pattern, ENR 1.1–1, ENR 1.1–2, ENR 1.1–7
 - With Operating Control Tower, ENR 1.1–1
 - Without Operating Control Tower, ENR 1.1–7
 - Operations, Without Operating Control Tower, GEN 3.3–18, GEN 3.3–27
 - Remote Airport Information Service (RAIS), ENR 1.4–16
 - Remote Airport Information Service (RAIS), GEN 3.3–19
 - Reservations Procedures, GEN 3.3–26
 - Airport Lighting, AD 1.1–4
 - Airport Beacons, AD 1.1–17, AD 1.1–18
 - Approach Light Systems, AD 1.1–4
 - LED Lighting Systems, AD 1.1–19
 - Obstruction Lighting, AD 1.1–18
 - Pilot–controlled Lighting, AD 1.1–13
 - Precision Approach Path Indicator (PAPI), AD 1.1–5
 - Runway Lighting, AD 1.1–5, AD 1.1–6
 - Taxiway Lighting, AD 1.1–17
 - Visual Approach Slope Indicator (VASI), AD 1.1–4
 - Airport Markings, AD 1.1–20
 - Colors, AD 1.1–20
 - Holding Position Markings, AD 1.1–23
 - Other Markings, AD 1.1–24
 - Nonmovement Area Boundary Markings, AD 1.1–25
 - Temporarily Closed Runways and Taxiways, AD 1.1–25
 - VOR Checkpoint Markings, AD 1.1–24
 - Runway Markings, AD 1.1–20
 - Taxiway Markings, AD 1.1–22
 - Airport Operations, Land and Hold Short , ENR 1.1–24
 - Airport Signs, AD 1.1–25
 - Destination Signs, AD 1.1–27
 - Direction Signs, AD 1.1–27
 - Information Signs, AD 1.1–28
 - Location Signs, AD 1.1–26
 - ILS Critical Area Boundary Sign, AD 1.1–27
 - Runway Boundary Sign, AD 1.1–27
 - Runway Location Sign, AD 1.1–27
 - Taxiway Location Sign, AD 1.1–26
 - Mandatory Instruction Signs, AD 1.1–25
 - ILS Critical Area Holding Position Sign, AD 1.1–26
 - No Entry Sign, AD 1.1–26
 - Runway Holding Position Sign, AD 1.1–26

- Runway Distance Remaining Signs, AD 1.1–28
- Airport Surface Detection Equipment – Model X (ASDE–X), ENR 1.1–51
- Airport Surface Surveillance Capability, ENR 1.1–51
- Airport Use, AD 1.1–1 *See also* Airport, Reservations Procedures
- Airports, Designated To Serve International Operations, AD 2–1
Diagrams of, AD 2–3
- Airspace, ENR 1.4–1
Classes, ENR 1.4–1, ENR 1.4–4, ENR 1.4–5
Controlled, ENR 1.4–4
IFR Requirements, ENR 1.4–4
VFR Requirements, ENR 1.4–4
Operating Rules and Requirements, ENR 1.4–5, ENR 1.4–8, ENR 1.4–12, ENR 1.4–13
Radar Vectors in, ENR 3.5–2
Speed Adjustments in, ENR 1.1–75
Vectors, ENR 1.1–75
VFR Corridors, ENR 1.4–16
VFR Transition Routes, ENR 1.4–17
Flights Over Charted U.S. Wildlife Refuges, Parks and Forest Service Areas, ENR 5.6–2
National Security Area, ENR 5.1–2
Obstructions to Flight. *See* Flight Hazards, Potential
- Parachute Jump Aircraft Operations, ENR 5.1–5
Special Use, ENR 5.1–1
Alert Areas, ENR 5.2–1
Controlled Firing Areas, ENR 5.2–1
Military Operations Area (MOA), ENR 5.2–1
Military Training Routes, ENR 5.2–1
Prohibited Areas, ENR 5.1–1
Restricted Areas, ENR 5.1–1
Warning Areas, ENR 5.1–2
Temporary Flight Restriction, ENR 5.1–2
Terminal Radar Service Area, ENR 1.1–70
Terminal Radar Service Area (TRSA), ENR 1.4–17
VFR Flyways, ENR 1.4–16
VFR Routes, Published, ENR 1.4–16
VFR Weather Minimums, ENR 1.4–3
- Airways and Route Systems. *See* Navigation
- Altimeter Setting Procedures, ENR 1.7–1
- Altitude
High Altitude Destinations, ENR 1.10–18
Mandatory, ENR 1.5–30
Maximum, ENR 1.5–30
Minimum, ENR 1.5–30
- ANP. *See* Actual Navigation Performance
- Approaches, ENR 1.5–11, ENR 1.5–49
Approach and Landing Minimums, ENR 1.5–22
Approach Clearance, ENR 1.5–15
Contact Approach, ENR 1.1–73
ILS Approaches to Parallel Runways, ENR 1.5–56
ILS Minimums, ENR 4.1–10
Instrument Approach, ENR 1.1–73
Instrument Approach Procedure Charts, ENR 1.5–27 *See also* Aeronautical Charts
Minimum Vectoring Altitudes, ENR 1.5–40
Missed Approach, ENR 1.1–74, ENR 1.5–73
Monitoring of Instrument Approaches, ENR 1.5–50
No–Gyro Approach, ENR 1.5–50
Overhead Approach Maneuver, ENR 1.5–76
Practice Instrument Approaches, ENR 1.1–23
Precision Approach, ENR 1.5–49
Side–step Maneuver, ENR 1.5–22
Simultaneous Approaches to Parallel Runways, ENR 1.5–52
Simultaneous Close Parallel ILS PRM Approaches, ENR 1.5–58
Simultaneous Converging Instrument Approaches, ENR 1.5–65
Surveillance Approach, ENR 1.5–50
Timed Approaches From a Holding Fix, ENR 1.5–65
Vertical Descent Angle (VDA), ENR 1.5–42
Visual, ENR 1.1–78
Visual Descent Points, ENR 1.5–42, ENR 1.5–72
- Approach Control Service for VFR Arriving Aircraft, GEN 3.3–17
- Area Navigation (RNAV), ENR 4.1–35, ENR 4.1–37 *See also* Area Navigation
- Area Navigation (RNAV) Routes, ENR 3.3–1
- ARFF (Aircraft Rescue and Fire Fighting)
Discrete Emergency Frequency, GEN 3.7–1
Emergency Hand Signals, GEN 3.7–1
Radio Call Sign, GEN 3.7–1
- ARTCC. *See* Air Route Traffic Control Center (ARTCC)
- ATS Routes, ENR 3.1–1
Lower ATS Routes, ENR 3.1–1
Upper ATS Routes, ENR 3.2–1
- Attitude Heading Reference System (AHRS), ENR 4.1–16
- Automated Terminal Information Service (ATIS). *See* Meteorological Services
- Automated Weather Observation System (AWOS). *See* AWOS
- Automatic Dependent Surveillance – Contract (ADS–C), Climb Descend Procedure (CDP), ENR 7.12–1

Automatic Dependent Surveillance (ADS-B), In-Trail Procedure (ITP), ENR 7.12-1
Automatic Dependent Surveillance-Rebroadcast, ENR 1.1-96
Automatic Flight Information Service (AFIS) – Alaska FSSs Only. *See* AFIS
Aviation Safety Reporting Program, ENR 1.16-1

B

Barometric Altimeter Errors and Setting Procedures, ENR 1.7-1
Barometric Pressure Altimeter Errors, ENR 1.7-1
Bird Activity, ENR 5.6-1
Reporting Bird and Other Wildlife Activities, ENR 5.6-1
Reporting Bird Strikes, ENR 5.6-1

C

Call Signs
Aircraft, GEN 3.4-9
Ground Station, GEN 3.4-11
Chart Supplement, GEN 3.2-9
Chart Supplement Alaska, GEN 3.2-10
Chart Supplement Pacific, GEN 3.2-10
Chart Supplement U.S., GEN 3.2-9
Charts. *See* Aeronautical Charts
Class C Airspace, Outer Area, ENR 1.4-8
Clearance
Adherence to, ENR 1.1-40
Air Traffic Control, ENR 1.1-35
Amended, ENR 1.1-37
Clearance Items, ENR 1.1-36
Pilot Responsibilities, ENR 1.1-38
Special VFR, ENR 1.1-37
VFR-On-Top, ENR 1.1-39
VFR/IFR Flights, ENR 1.1-39
Cold Temperature
Airports, ENR 1.8-2
Barometric Altimeter Errors, ENR 1.8-1
Calculating Altitude Corrections on CTAs, ENR 1.8-6
Cold Temperature Airports (CTA), ENR 1.8-1
Effects of Cold Temperature on Baro-vertical Navigation (VNAV) Vertical Guidance, ENR 1.8-1
Planning for Cold Temperature Altimeter Errors, ENR 1.8-1

Cold Temperature Airports (CTA), ENR 1.8-2
Cold Temperature Operations, ENR 1.10-2
Pilot Responsibilities, ENR 1.1-73
Collision Avoidance, ENR 1.15-8
Common Traffic Advisory Frequency (CTAF). *See* Radio Communications
Communications. *See* Radio Communications
Controlled Airspace. *See* Airspace, Controlled
Controller, Responsibility, ENR 1.5-1
Conversion Tables, GEN 2.6-1
Cruising Altitudes, ENR 1.4-3, ENR 1.4-16

D

Data Link Procedures, ENR 7.2-1
Declared Distances, ENR 1.1-10
Defense VFR (DVFR) Flights, ENR 1.10-16
Density Altitude. *See* Flight Hazards, Potential
Departure Control, ENR 1.5-81
Abbreviated IFR Departure Clearance Procedures, ENR 1.5-81
Departure Procedures, ENR 1.5-77
Clearance Void Times, ENR 1.5-80
Departure Restrictions, ENR 1.5-78, ENR 1.5-80
Hold for Release, ENR 1.5-80
Instrument Departure Procedures (DP), ENR 1.5-83
Pre-Taxi Clearance Procedures, ENR 1.5-77
Release Times, ENR 1.5-80
Taxi Clearance, ENR 1.5-78
Departure, Instrument, ENR 1.1-79
Differences From ICAO Standards, Recommended Practices and Procedures, GEN 1.7-1
Diverse Vector Areas (DVA), ENR 1.5-83
DVFR Flights, ENR 1.10-16

E

EFVS. *See* Enhanced Flight Vision Systems
ELT. *See* Emergency Locator Transmitters
Emergency
Aircraft Rescue and Fire Fighting Communications, GEN 3.7-1
Aircraft, Overdue, GEN 3.6-5
Body Signals, GEN 3.6-6

Distress and Urgency Communications, GEN 3.6-15
 Ditching Procedures, GEN 3.6-18
 Fuel Dumping, GEN 3.6-23
 Obtaining Assistance, GEN 3.6-16
 VFR Search and Rescue Protection, GEN 3.6-6

Emergency Autoland System, GEN 3.6-15
 Emergency Descent System, GEN 3.6-15
 Emergency Locator Transmitters, GEN 3.6-2
 Enhanced Flight Vision Systems, ENR 1.5-68
 EPE. *See* Estimate of Position Error
 Estimate of Position Error (EPE), ENR 4.1-37

F

FAA Form 7233-4, Appendix 1-1
 FDC NOTAMs, ENR 1.10-5
 Fees and Charges. *See* Airport
 Final Guard, ENR 1.4-15
 FIS-B. *See* Flight Information Service-Broadcast
 Flight Hazards, Potential, ENR 5.7-1
 Density Altitude, ENR 5.7-6
 Laser Operations, ENR 5.7-13
 Mountain Flying, ENR 5.7-5
 Mountain Wave, ENR 5.7-8
 Obstructions, ENR 5.7-2
 VFR in Congested Area, ENR 5.7-2
 Flight Information Service-Broadcast, ENR 1.1-93
 Flight Level Allocation, New York OCA, ENR 7.13-1
 Flight Management System (FMS), ENR 1.17-5
 Flight Plan, ENR 1.10-1, ENR 1.11-1
 Canceling, ENR 1.10-17
 Defense VFR (DVFR) Flights, ENR 1.10-16
 IFR Flights, ENR 1.10-11
 Preflight Preparation, ENR 1.10-1
 VFR Flights, ENR 1.10-10
 Flight Service Station (FSS), GEN 3.1-5
 Forms, Bird Strike Incident/Ingestion Report, ENR 5.6-3
 Frequencies. *See* Radio Communications
 FSS. *See* Flight Service Station (FSS)
 Fuel Advisory, Minimum, ENR 1.1-80

G

GBAS Landing System (GLS), ENR 4.1-34
 Global Navigation Satellite System (GNSS), ENR 1.10-14
 Global Positioning System (GPS), ENR 4.1-16
 GLS. *See* GBAS Landing System
 GPS IFR Equipment Classes/Categories, ENR 4.1-28
 Graphical Forecasts for Aviation (GFA), GEN 3.5-9
 Gulf of Mexico Grid System, ENR 6.1-6
 Gulf of Mexico RNAV Routes Q100, Q102, AND Q105, ENR 7.14-1

H

Half-Way Signs, ENR 5.7-7
 Hazard
 Flight, Reporting Radio/Radar Altimeter Anomalies, ENR 5.7-1
 Thermal Plumes, ENR 5.7-17
 HDTA. *See* High Density Traffic Airports
 Helicopter
 IFR Operations, ENR 6.1-1, ENR 7.1-1
 Departure Procedures, ENR 6.1-7
 Special Operations, ENR 6.2-1, ENR 7.2-1
 High Density Traffic Airports, GEN 3.3-26
 Holding Pattern
 Airspeeds, ENR 1.5-2
 Distance Measuring Equipment (DME), ENR 1.5-6
 Entry Procedures, ENR 1.5-5
 Timing, ENR 1.5-5
 Holding Position Markings
 for Instrument Landing Systems, AD 1.1-24
 for Intersecting Taxiways, AD 1.1-24
 Holding Procedures, ENR 1.5-1

I

ICAO Standards, Recommended Practices and Procedures. *See* Differences From ICAO Standards, Recommended Practices and Procedures
 Ident Feature, ENR 1.1-54
 IFR, Operations, To High Altitude Destinations, ENR 1.10-18
 IFR Flights, ENR 1.10-11

Inertial Navigation System, ENR 4.1-16
Inertial Reference Unit (IRU), ENR 4.1-16
INS. *See* Internal Navigation System
Instrument Departure. *See* Departure, Instrument
Instrument Departure Procedures (DP), ENR 1.5-83
Instrument Landing System (ILS), ENR 4.1-5 *See also* Approaches
 Course and Glideslope Distortion, ENR 4.1-11
 Frequency Table, ENR 4.1-10
 Inoperative Components, ENR 4.1-11
Instrument Landing System (ILS), Holding Position Markings, AD 1.1-24
Instrument Meteorological Conditions (IMC), ENR 1.5-83
Integrated Terminal Weather System, ENR 1.1-14
International Airports. *See* Airports, Designated To Serve International Operations
International Flight Plan, Appendix 1-1
International NOTAMs, ENR 1.10-5
IRU. *See* Inertial Reference Unit
ITWS. *See* Integrated Terminal Weather System

J

Jet Route System. *See* Navigation

L

Land and Hold Short Operations. *See* Airport Operations
Light Amplification by Stimulated Emission of Radiation (Laser) Operations. *See* Flight Hazards, Potential
Lighting. *See* Airport Lighting
Line Up and Wait, ENR 1.5-78
LLWAS. *See* Low Level Wind Shear Alert System
Local Airport Advisory (LAA), ENR 1.4-15
Local Airport Advisory (LAA), GEN 3.3-19
LORAN, ENR 4.1-16
Low Level Wind Shear Alert System (LLWAS), ENR 1.1-14
Low Level Wind Shear/Microburst Detection Systems, ENR 1.1-14

Lower ATS Routes, ENR 3.1-1
 Low Altitude ATS Route Structure, ENR 3.1-1
LUAW, ENR 1.5-78

M

Medical Facts for Pilots, ENR 1.15-1
 Carbon Monoxide Poisoning in Flight, ENR 1.15-5
 Certification, ENR 1.15-1
 Decompression Sickness after Scuba Diving, ENR 1.15-5
 Effects of Altitude, ENR 1.15-3
 Ear Block, ENR 1.15-4
 Hypoxia, ENR 1.15-3
 Sinus Block, ENR 1.15-4
 Hyperventilation in Flight, ENR 1.15-5
 Illusions, ENR 1.15-5
 Personal Checklist, ENR 1.15-3
 Scanning for Other Aircraft, ENR 1.15-7
 Vision in Flight, ENR 1.15-7
Meteorological Services, Automatic Terminal Information Service (ATIS), GEN 3.3-25
Meteorology, National Weather Service, Aviation Weather Service, GEN 3.5-3
Military NOTAMs, ENR 1.10-6
Military Training Routes. *See* Airspace, Special Use
Minimum Safe Altitudes, ENR 1.5-31
Minimum Turning Altitude (MTA), ENR 3.5-3
Mountain Flying. *See* Flight Hazards, Potential
Mountain Wave. *See* Flight Hazards, Potential
MSA. *See* Minimum Safe Altitudes
MTA. *See* Minimum Turning Altitude (MTA)

N

National Security, ENR 1.12-1
 ADIZ, ENR 1.12-1
 ADIZ Requirements, ENR 1.12-2
 Airspace Waivers, ENR 1.12-8
 Civil Aircraft Operations, ENR 1.12-4
 Defense Area, ENR 1.12-1
 ESCAT, ENR 1.12-8
 Foreign State Aircraft Operations, ENR 1.12-6
 Territorial Airspace, ENR 1.12-1
 TSA Aviation Security Programs, ENR 1.12-8
National Security, Requirements, ENR 1.12-1
National Security and Interception Procedures, ENR 1.12-12

National Security Area. *See* Airspace

NAVAID Identifier Removal During Maintenance, ENR 4.1-39

NAVAID User Reports, ENR 4.1-39

Navigation *See also* Global Positioning System (GPS)

- Adhering to Airways or Routes, ENR 3.5-3
- Airway or Route Course Changes, ENR 3.5-2
- Airways and Route Systems, ENR 3.5-1
- Changeover Points, ENR 3.5-2
- LORAN, ENR 4.1-16

Navigation Aids, ENR 4.1-1

Navigation, Radio, GEN 3.4-1

- Nondirectional Radio Beacon, GEN 3.4-6

Navigation Specifications (Nav Specs), ENR 1.17-5

Navigational, Inertial Navigation System, ENR 4.1-16

Near Midair Collision Reporting, ENR 1.16-3

- Investigation, ENR 1.16-3

NOTAM (D), ENR 1.10-5

Notice to Air Missions

- FDC NOTAMs, ENR 1.10-5
- Temporary Flight Restrictions (TFRs), ENR 1.10-5
- International NOTAMs, ENR 1.10-5
- Military NOTAMs, ENR 1.10-6
- NOTAM D, ENR 1.10-5
- Pointer NOTAMs, ENR 1.10-5
- Security NOTAMs, ENR 1.10-6

Notices To Air Missions (NOTAM) Service, ENR 1.10-3

Notices To Air Missions (NOTAM) Service, GEN 3.1-2

O

Oceanic Airspace, In-flight Contingencies, ENR 7.3-1

Oceanic Operations, ENR 7.1-1

- Air-to-Air Frequency, ENR 7.1-7
- Beacon Code Requirements, ENR 7.1-4
- Flight Plan Filing Requirements, ENR 7.1-1
- Flight Plans, ENR 7.1-2
- IFR/VFR Operations, ENR 7.1-1
- NAT Clearance Procedures, ENR 7.6-1
- NAT Safety, ENR 7.8-1
- NAT Timekeeping Procedures, ENR 7.7-1
- Offshore Routes, ENR 7.11-1
- Operational Policy

- Lateral Separation, ENR 7.4-1
- Performance-Based Communication and Surveillance (PBCS), ENR 7.5-1
- Performance-Based Navigation (PBN), ENR 7.5-1
- Position Reporting, ENR 7.1-4
- San Juan FIR Customs, ENR 7.9-1
- SATVOICE, ENR 7.1-6
- SLOP, ENR 7.1-7
- Y Routes, ENR 7.10-1

Operational Information System (OIS), ENR 1.10-10

Overhead Approach Maneuver. *See* Approaches

P

Parachute Jump Aircraft Operations. *See* Airspace

PBCS. *See* Performance-Based Communication and Surveillance (PBCS)

PBN. *See* Performance-Based Navigation (PBN)

Performance-Based Navigation (PBN), ENR 1.17-1

Phonetic Alphabet. *See* Radio Communications, Phonetic Alphabet

Pilot Visits to Air Traffic Facilities, GEN 3.3-2

Pointer NOTAMs, ENR 1.10-5

Position Reporting, GEN 3.3-14

Position Reporting Requirements, GEN 3.3-15

Pre-departure Clearance Procedures, ENR 1.5-77

Precipitation Static, ENR 5.7-12

Precision Approach Systems, ENR 4.1-35

Procedure Turns, ENR 1.5-17

R

Radar, ENR 1.1-47

- Air Traffic Control Radar Beacon System, ENR 1.1-50
- Capabilities, ENR 1.1-47
- Precision Approach, ENR 1.1-50
- Surveillance, ENR 1.1-50

Radar Services Provided by ATC, ENR 1.1-56

- Aircraft Conflict Alert, ENR 1.1-57
- Offshore Controlled Airspace, ENR 1.1-71
- Radar Assistance to VFR Aircraft, ENR 1.1-59
- Radar Traffic Information Service, ENR 1.1-57
- Terrain/Obstruction Alert, ENR 1.1-56

Radio Communications, GEN 3.4-8

Common Traffic Advisory Frequency (CTAF), GEN 3.3-18
Contact Procedures, GEN 3.4-15
Directions, GEN 3.4-13
Failure, GEN 3.4-14, GEN 3.4-21
For Aircraft on International or Overseas Flights, GEN 3.4-17, GEN 3.4-20
Phonetic Alphabet, GEN 3.4-11
Phraseology, GEN 3.4-11
Radio Technique, GEN 3.4-8
Speed, GEN 3.4-13
UNICOM/MULTICOM, GEN 3.3-23, GEN 3.3-24
Radio Navigation Aids
Distance Measuring Equipment, ENR 4.1-4, ENR 4.1-9
Nondirectional Radio Beacon, ENR 4.1-1
Tactical Air Navigation, ENR 4.1-5
VHF Omni-directional Radio Range, ENR 4.1-1
Reduced Separation, Climb/Descent Procedures, ENR 7.12-1
REL. *See* Runway Entrance Lights
Remote Airport Advisory (RAA), ENR 1.4-15
Remote Airport Information Service (RAIS), ENR 1.4-16
Remote Airport Information Service (RAIS), GEN 3.3-19
Reporting Radio/Radar Altimeter Anomalies, ENR 5.7-1
Required Navigation Performance (RNP), ENR 4.1-36
Required Navigation Performance (RNP) Operations, ENR 1.10-17, ENR 4.1-37
Reservations. *See* Airport, Reservations Procedures
Responsibility, Controller, ENR 1.5-1
RNAV, ENR 1.10-14
RNAV Routes, Gulf of Mexico, ENR 7.14-1
RNP. *See* Required Navigation Performance (RNP)
RNP AR (Authorization Required) Instrument Procedures, ENR 1.5-21
Runway
Entrance Lights, AD 1.1-11
Holding Position Markings, AD 1.1-23
Status Light (RWSL) System, AD 1.1-11
RWSL System, Runway Status Light (RWSL) System. *See* Runway Status Light (RWSL) System

S

Seaplane Safety, ENR 5.7-8
Search and Rescue, GEN 3.6-1
Security Identification Display Area, AD 1.1-28
Security NOTAMS, ENR 1.10-6
Separation
IFR, Standards, ENR 1.1-42
Runway, ENR 1.1-45
Visual, ENR 1.1-45, ENR 1.1-78
SIDA. *See* Security Identifications Display Area
Signs, Half-Way, ENR 5.7-7
Single Flights Conducted With Both VFR and IFR Flight Plans, ENR 1.10-16
Slot Controlled Airports, GEN 3.3-26
Small Unmanned Aircraft System (sUAS), ENR 8.2-1
Space Launch and Reentry Area, ENR 5.7-18
Special Air Traffic Rules (SATR), ENR 5.1-5
Special Flight Rules Area (SFRA), ENR 5.1-5
Special Instrument Approach Procedures, ENR 1.5-49
Special Traffic Management Programs (STMP), GEN 3.3-27
Standard Taxi Routes (STR), ENR 1.1-20
Standard Terminal Arrival, ENR 1.5-12
STAR. *See* Standard Terminal Arrival
STMP. *See* Special Traffic Management Programs (STMP)
sUAS. *See* Small Unmanned Aircraft System (sUAS)
Surveillance Services, ENR 1.6-1

T

Takeoff Hold Lights (THL), AD 1.1-11
Taxiway, Holding Position Markings, AD 1.1-24
TDWR. *See* Terminal Doppler Weather Radar
Temporary Flight Restrictions. *See* Airspace
Temporary Flight Restrictions (TFRs), ENR 1.10-5
Terminal Arrival Area (TAA), ENR 1.5-31
Terminal Doppler Weather Radar, ENR 1.1-14
TFRs, ENR 1.10-5
THL. *See* Takeoff Hold Lights
Time, Conversion from UTC to Standard Time, GEN 3.4-13

Tower En Route Control (TEC), ENR 1.1-71
 Traffic Advisories, At Airports Without Operating Control Towers, GEN 3.3-18
 Traffic Advisories, ENR 1.1-76
 Traffic Alert and Collision Avoidance System (TCAS I & II), ENR 1.1-80
 Traffic Information Service (TIS), ENR 1.1-81, ENR 1.1-87
 Traffic Pattern. *See* Airport, Operations
 Transponder Operation, ENR 1.1-52
 Automatic Altitude Reporting, ENR 1.1-53
 Code Changes, ENR 1.1-54
 Emergency, ENR 1.1-55
 Mode C Requirements, ENR 1.1-54
 TRSA. *See* Airspace, Terminal Radar Service Area

U

U.S. Customs Requirements, Entry, Transit, and Departure of Cargo, GEN 1.4-1
 U.S. Differences From ICAO Standards. *See* Differences From ICAO Standards, Recommended Practices and Procedures
 U.S. Territorial Airspace, GEN 1.2-1
 UAS. *See* Unmanned Aircraft Systems (UAS)
 Unidentified Flying Objects (UFO), ENR 1.16-3
 Units of Measurement, GEN 2.1-1
 Unmanned Aircraft, ENR 5.7-4
 Unmanned Aircraft System (UAS)
 Large UAS, ENR 8.3-1
 Emerging Large UAS Civil Operations, ENR 8.3-5
 Exemptions under 49 USC 44807, ENR 8.3-4
 Large Public UAS Operations, ENR 8.3-1
 Small Unmanned Aircraft System (sUAS), ENR 8.2-1
 Part 107 sUAS, ENR 8.2-1
 Recreational Flyers, ENR 8.2-1
 Registration Requirements, ENR 8.2-1
 Unmanned Aircraft Systems (UAS), ENR 8.1-1
 Accidents and Incidents, ENR 8.8-2
 Advanced Air Mobility, ENR 8.6-1
 Air Traffic Control (ATC), ENR 8.8-1
 Airspace Access, ENR 8.4-1
 14 CFR Part 107, ENR 8.4-1
 14 CFR Part 135, ENR 8.4-4
 14 CFR Part 137, ENR 8.4-4
 14 CFR Part 89, ENR 8.4-3
 Airspace Restrictions To Flight, ENR 8.4-6
 FAA-Recognized Identification Area, ENR 8.4-3
 FRIAs, ENR 8.4-3
 PAOs, ENR 8.4-2
 Public Aircraft Operations (PAOs), ENR 8.4-2
 Recreational Flyers, ENR 8.4-1
 Remote Identification, ENR 8.4-3
 UAS Traffic Management (UTM), ENR 8.4-8
 Waivers to 14 CFR Part 107, ENR 8.4-1
 Best Practices, ENR 8.8-1
 Environmental, ENR 8.8-3
 Emergency UAS Authorizations, ENR 8.8-3
 General, ENR 8.1-1
 Access to the National Airspace System (NAS), ENR 8.1-1
 Operations on Airports, ENR 8.7-1
 Pilot Testing, Certification and Responsibilities, ENR 8.5-1
 14 CFR Part 135, ENR 8.5-3
 14 CFR Part 137, ENR 8.5-3
 Foreign Pilot Certification, ENR 8.5-3
 Large Civil UAS, ENR 8.5-3
 PAOs, ENR 8.5-3
 Part 107 Pilots and Recreational Flyers, ENR 8.5-1
 Public Aircraft Operations (PAOs), ENR 8.5-3
 Precautions, ENR 8.8-1
 Flight Near Manned Aircraft, ENR 8.8-1
 Flight Over or Near People, ENR 8.8-1
 Flight Over or Near Vehicles, ENR 8.8-1
 Night Operations, ENR 8.8-1
 Resources, ENR 8.8-3
 Special Government Interest (SGI) Airspace Waivers, ENR 8.8-3
 Upper ATS Routes, ENR 3.2-1
 High Altitude ATS Route Structure, ENR 3.2-1

V

VFR Flights, ENR 1.10-10
 VFR Flyways. *See* Airspace
 VFR-on-top, ENR 1.1-79
 VHF Omni-directional Range, Minimum Operational Network (MON), ENR 4.1-2
 Visual Approach. *See* Approaches
 Visual Climb Over Airport, ENR 1.5-86
 Visual Meteorological Conditions (VMC), ENR 1.5-83
 Visual Separation, ENR 1.1-78
 VOCA. *See* Visual Climb Over Airport
 Volcanic Ash, Flight Operations in, ENR 5.7-10

VOR Receiver Check, ENR 4.1-3

W

Weather Minimums. *See* Airspace, VFR Weather Minimums

Weather Reconnaissance Area (WRA), ENR 5.1-6

Weather System Processor, ENR 1.1-14

Wide Area Augmentation System (WAAS), ENR 4.1-29

Wildlife Refuges, Parks, and Forest Service Areas.
See Airspace

WSP, ENR 1.1-14

Appendix 1. FAA Form 7233-4 – International Flight Plan

a. The FAA will accept a flight plan in international format for IFR, VFR, SFRA, and DVFR flights. File the flight plan electronically via a Flight Service Station (FSS), FAA contracted flight plan filing service, or other commercial flight plan filing service. Depending on the filing service chosen, the method of entering data may be different but the information required is generally the same.

b. The international flight plan format is mandatory for:

1. Any flight plan filed through a FSS or FAA contracted flight plan filing service; with the exception of Department of Defense flight plans and civilian stereo route flight plans, which can still be filed using the format prescribed in FAA Form 7233-1.

NOTE-

DOD Form DD-175 and FAA Form 7233-1 are considered to follow the same format.

2. Any flight that will depart U.S. domestic airspace. For DOD flight plan purposes, offshore Warning Areas may use FAA Form 7233-1 or military equivalent.

3. Any flight requesting routing that requires Performance Based Navigation.

4. Any flight requesting services that require filing of capabilities only supported in the international flight plan format.

c. Flight Plan Contents

1. A flight plan will include information shown below:

(a) Flight Specific Information (TBL 1-1)

(b) Aircraft Specific Information (TBL 1-19)

(c) Flight Routing Information (TBL 1-20)

(d) Flight Specific Supplementary Information (Item 19)

2. The tables indicate where the information is located in the international flight plan format, the information required for U.S. domestic flights, and the location of equivalent information in the domestic flight plan format.

3. International flights, including those that temporarily leave domestic U.S. airspace and return, require all applicable information in the international flight plan. Additional information can be found in ICAO Doc. 4444 (Procedures for Air Navigation Services, Air Traffic Management), and ICAO Doc. 7030 (Regional Supplemental Procedures) as well as the Aeronautical Information Publications (AIPs), Aeronautical Information Circulars (AICs), and NOTAMs of applicable other countries.

TBL 1-1
Flight Specific Information

Item	International Flight Plan (FAA Form 7233-4)	Domestic U.S. Requirements	Equivalent Item on Domestic Flight Plan (FAA Form 7233-1)
Aircraft Identification	Item 7	Required	Item 2
Flight Rules	Item 8	Required	Item 1
Type of Flight	Item 8	No need to file for domestic U.S. flight	N/A
Equipment and Capabilities	Item 10 Item 18 PBN;/ NAV;/ COM;/ DAT;/ SUR/	Required	Item 3
Date of Flight	Item 18 DOF/	Include when date of flight is not today	N/A
Reasons for Special Handling	Item 18 STS;/ RMK/	Include when special category is applicable	Item 11
Remarks	Item 18 RMK/	Include when necessary	Item 11
Operator	Item 18 OPR/	No need to file for domestic U.S. flight	N/A
Flight Plan Originator	Item 18 ORGN/	No need to file for domestic U.S. flight	N/A

d. Instructions for Flight-Specific Information Items

1. Aircraft Identification (Item 7) Aircraft Identification is always required. Aircraft identification must not exceed seven alphanumeric characters and be either:

(a) The ICAO designator for the aircraft operating agency, followed by the flight identification (for example, KLM511, NGA213, JTR25). When in radiotelephony the call sign to be used by the aircraft will consist of the ICAO telephony designator for the operating agency followed by the flight identification (for example, KLM511, NIGERIA213, JESTER25);

(b) The nationality or common mark and registration of the aircraft (for example, EIAKO, 4XBCD, N2567GA), when:

(1) In radiotelephony, the call sign to be used by the aircraft will consist of this identification alone (for example, CGAJS) or preceded by the ICAO telephony designator for the aircraft operating agency (for example, BLIZZARD CGAJS); or

(2) The aircraft is not equipped with radio.

NOTE-

1. Standards for nationality, common and registration marks to be used are contained in Annex 7, Chapter 2.

2. Provisions for using radiotelephony call signs are contained in Annex 10, Volume II, Chapter 5. ICAO designators and telephony designators for aircraft operating agencies are contained in Doc 8585—Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services.

NOTE-

Some countries' aircraft identifications begin with a number, which cannot be processed by U.S. ATC automation. The FAA will add a leading letter temporarily to gain automation acceptance for aircraft identifications that begin with a numeral. For flight-processing systems (e.g., ERAM or STARS) which will not accept a call sign that begins with a number, if the call sign is 6 characters or less, add a Q at the beginning of the call sign. If the call sign is 7 characters, delete the first character and replace it with a Q. Put the original call sign in the remarks section of the flight plan.

EXAMPLE-

9HRA becomes Q9HRA
5744233 becomes Q744233

2. Flight Rules (Item 8a)

(a) Flight rules are always required.

(b) Flight rules must indicate IFR (I) or VFR (V).

(c) For composite flight plans, submit separate flight plans for the IFR and VFR portions of the flight. Specify in Item 15 the point or points where change of flight rules is planned. The IFR plan will be routed to ATC, and the VFR plan will be routed to a Flight Service for Search and Rescue services.

NOTE–

The pilot is responsible for opening and closing the VFR flight plan. ATC does not have knowledge of a VFR flight plan's status.

3. Type of Flight (Item 8b)

(a) The type of flight is optional for flights remaining wholly within U.S. domestic airspace.

(b) Indicate the type of flight as follows:

- G – General Aviation
- S – Scheduled Air Service
- N – Non–Scheduled Air Transport Operation
- M – Military
- X – other than any of the defined categories above

4. Equipment and Capabilities (Item 10, Item 18 NAV/, COM/, DAT/, SUR/)

(a) Equipment and capabilities that can be filed in a flight plan include:

- Navigation capabilities in Item 10a, Item 18 PBN/, and Item 18 NAV/
- Voice communication capabilities in Item 10a and Item 18 COM/
- Data communication capabilities in Item 10a and Item 18 DAT/
- Approach capabilities in Item 10a and Item 18 NAV/
- Surveillance capabilities in Item 10b and Item 18 SUR/

(b) Codes allowed in Item 10a are shown in Table 1–2. Codes allowed in Item 10b are shown in TBL 1–3. Codes recognized in Item 18 NAV/, COM/, DAT/, and SUR/ are shown in TBL 1–4. Note that other service providers may define additional allowable (and required) codes for use in Item 18 NAV/, COM/, DAT/, or SUR/. Codes to designate PBN capability are described in TBL 1–5.

Radio communication, navigation and approach aid equipment and capabilities

ENTER 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

ENTER one or more of the following letters from TBL 1–2 to indicate the serviceable COM/NAV/ approach aid equipment and capabilities available.

TBL 1-2

Item 10a Navigation, Communication, and Approach Aid Capabilities

A	GBAS Landing System	J7	CPDLC FANS 1/A SATCOM (Iridium)
B	LPV (APV with SBAS)	K	MLS
C	LORAN C	L	ILS
D	DME	M1	ATC SATVOICE (INMARSAT)
E1	FMC WPR ACARS	M2	Reserved
E2	D-FIS ACARS	M3	ATC RTF (Iridium)
E3	PDC ACARS	O	VOR
F	ADF	P1	CPDLC RCP 400 (See Note 7)
G	GNSS (See Note 2)	P2	CPDLC RCP 240 (See Note 7)
H	HF RTF	P3	SATVOICE RCP 400 (See Note 7)
I	Inertial Navigation	P4-P9	Reserved for RCP
J1	CPDLC ATN VDL Mode 2 (See Note 3)	R	PBN Approved (See Note 4)
J2	CPDLC FANS 1/A HFDL	T	TACAN
J3	CPDLC FANS 1/A VDL Mode A	U	UHF RTF
J4	CPDLC FANS 1/A Mode 2	V	VHF RTF
J5	CPDLC FANS 1/A SATCOM (INMARSAT)	W	RVSM Approved
J6	Reserved	X	MNPS Approved /North Atlantic (NAT) High Level Airspace (HLA) approved
		Y	VHF with 8.33 kHz Channel Spacing Capability
		Z	Other equipment carried or other capabilities (See Note 5)

Any alphanumeric characters not indicated above are reserved.

NOTE-

1. If the letter "S" is used, standard equipment is considered to be VHF RTF, VOR, and ILS, unless another combination is prescribed by the appropriate ATS authority.
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.

EXAMPLE-

NAV/SBAS

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 can be met are specific in Item 18 following the indicator PBN/. Guidance material on the application of performance-based navigation to a specific route segment, route, or area is contained in the Performance-based Navigation (PBN) Manual (Doc 9613)
5. If the letter "Z" is used, specify in Item 18 the other equipment carried or other capabilities, preceded by COM/, NAV/, and/or DAT, 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).

TBL 1-3
Item 10b Surveillance Capabilities

ENTER "N" if no surveillance equipment for the route to be flown is carried, or the equipment is unserviceable,
or
ENTER One or more of the following descriptors, to a maximum of 20 characters, to describe the serviceable surveillance equipment and/or capabilities on board.

ENTER no more than one transponder code (Modes A, C, or S)

SSR Modes A and C:

A	Transponder	Mode A (4 digits – 4096 codes)
C	Transponder	Mode A (4 digits – 4096 codes) and Mode C

SSR Mode S:

E	Transponder	Mode S, including aircraft identification, pressure–altitude, and extended squitter (ADS–B) capability
H	Transponder	Mode S, including aircraft identification, pressure–altitude, and enhanced surveillance capability
I	Transponder	Mode S, including aircraft identification, but no pressure–altitude capability
L	Transponder	Mode S, including aircraft identification, pressure–altitude, extended squitter (ADS–B),

and enhanced surveillance capability

P	Transponder	Mode S, including pressure–altitude, but no aircraft identification capability
S	Transponder	Mode S, including both pressure–altitude and aircraft identification capability
X	Transponder	Mode S, with neither aircraft identification nor pressure–altitude

NOTE–

Enhanced surveillance capability is the ability of the aircraft to down–link aircraft derived data via Mode S transponder.

ADS–B:

B1	ADS–B with dedicated 1090 MHz ADS–B “out” capability
B2	ADS–B with dedicated 1090 MHz ADS–B “out” and “in” capability
U1	ADS–B with “out” capability using UAT
U2	ADS–B with “out” and “in” capability using UAT
V1	ADS–B with “out” capability using VDL Mode 4
V2	ADS–B with “out” and “in” capability using VDL Mode 4

NOTE–

File no more than one code for each type of capability, e.g., file B1 or B2 and not both

ADS–C:

D1	ADS–C with FANS 1/A capabilities
G1	ADS–C with ATN capabilities

Alphanumeric characters not included above are reserved.

EXAMPLE–

ADE3RV/HB2U2V2G1

NOTE–

- 1. The RSP specification(s), if applicable, will be listed in Item 18 following the indicator SUR/, using the characters “RSP” followed by the specifications value. Currently RSP180 and RSP400 are in use.*
- 2. List additional surveillance equipment or capabilities in Item 18 following the indicator SUR/.*

TBL 1–4
Item 18 NAV/, COM/, DAT/, and SUR/ capabilities used by FAA

Item	Purpose	Entry	Explanation
NAV/ entries used by FAA	Radius-to-Fix (RF) capability	Z1	RNP-capable flight is authorized for Radius to Fix operations.
	Fixed Radius Transitions (FRT)	Z2	RNP-capable flight is authorized for Fixed Radius Transitions.
	Time of Arrival Control (TOAC)	Z5	RNP-capable flight is authorized for Time of Arrival Control.
	Advanced RNP (A-RNP)	P1	Flight is authorized for A-RNP operations.
	Helicopter RNP 0.3	R1	Flight is authorized for RNP 0.3 operations (pertains to helicopters only).
	RNP 2 Continental	M1	Flight is authorized for RNP 2 continental operations.
	RNP 2 Oceanic/Remote	M2	Flight is authorized for RNP 2 oceanic/remote operations.
COM/ entries used by FAA	N/A	N/A	The FAA currently does not use any entries in COM/.
DAT/ entries used by FAA	Capability and preference for delivery of pre-departure clearance	Priority number followed by: <ul style="list-style-type: none"> • FANS • FANSP • PDC • VOICE 	Entries are combined with a priority number, for example; 1FANS2PDC means a preference for departure clearance delivered via FANS 1/A; with capability to also receive the clearance via ACARS PDC. FANS = FANS 1/A DCL FANSP = FANS 1/A+ DCL PDC = ACARS PDC VOICE = PDC via voice (no automated delivery)
SUR/ entries used by FAA	Req. Surveillance Performance	RSP180	Aircraft is authorized for Required Surveillance Performance RSP180
		RSP400	Aircraft is authorized for Required Surveillance Performance RSP400
	ADS-B	A2	Aircraft has 1090 MHz Extended Squitter ADS-B compliant with RTCA DO-260B (complies with FAA requirements)
		A2	Aircraft has 978 MHz UAT ADS-B compliant with RTCA DO-282B (complies with FAA requirements)

NOTE–

1. Other entries in NAV/, COM/, DAT/, and SUR/ are permitted for international flights when instructed by other service providers. Direction on use of these capabilities by the FAA is detailed in the following sections.

2. In NAV/, descriptors for advanced capabilities (Z1, P1, R1, M1, and M2) should be entered as a single character string with no intervening spaces, and separated from any other entries in NAV/ by a space.

EXAMPLE–

NAV/Z1P1M2 SBAS

TBL 1–5

Item 18. PBN/ Specifications

(Include as many of the applicable descriptors, up to a maximum of 8 entries (not more than 16 characters).

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
PBN/ 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)

NOTE–

1. PBN Codes B1–B6 indicates RNAV 5 capability. The FAA considers these B codes to be synonymous and qualifying for point-to-point routing but not for assignment to the PBN routes shown in the table.
2. Combinations of alphanumeric characters not included above are reserved.
3. The PBN/ specifications are allowed per ICAO Doc. 4444. The FAA makes use of a subset of these codes as described in the section on filing navigation capability.

(c) The following sections detail what capabilities need to be provided to obtain services from the FAA for:

- IFR flights (general).
- Assignment of Performance–Based Navigation (PBN) routes.
- Automated Departure clearance (via Datacom DCL or PDC).
- Reduced Vertical Separation Minima (if requesting FL 290 or above).
- Reduced Separation in Oceanic Airspace.

(d) Capabilities such as voice communications, required communications performance, approach aids, and ADS–C, are not required in a flight plan that remains entirely within domestic airspace.

(e) Flights that leave domestic United States airspace may be required to include additional capabilities, per requirements for the FIRs being overflown. Consult the appropriate State Aeronautical Information Publications for requirements.

(f) Include the capability only if:

- The requisite equipment is installed and operational;
- The crew is trained as required; and
- Any required Operations Specification, Letter of Authorization, or other approvals are in hand.

NOTE–

Do not include a capability solely based on the installed equipment if an operational approval is required. For example, all U.S. civil operators require either Operations Specification, Management Specification, or Letter of Authorization B036, as applicable, in order to include NAV/M2 (RNP 2 (oceanic/remote)), PBN/AI (RNAV 10 (RNP 10)), or PBN/LI (RNP 4) in Item 18.

5. Filing equipment and capability in an IFR Flight Plan. This section details the minimum requirements to identify capabilities in an IFR flight plan for flights in the domestic United States. Other requirements to file a capability are associated with obtaining specific services as described in subsequent sections. The basic capabilities that must be addressed include Navigation, Transponder, Voice, and ADS–B Out as described below. A designator for “Standard” capability is also allowed to cover a suite of commonly carried voice, navigation, and approach equipment with one code.

(a) Standard Capability and No Capability (Item 10a)

- Use “S” if VHF radio, VOR, and ILS equipment for the route to be flown are carried and serviceable. Use of the ‘S’ removes the need to list these three capabilities separately.
- Use “N” if no communications, navigation, or approach aid equipment for the route to be flown are carried or the equipment is unserviceable.
- When there is no transponder, ADS–B, or ADS–C capability then file only the letter ‘N’ in Item 10b.

(b) Navigation Capabilities (Item 10a, Item 18 NAV/)

- Indicate radio navigation capability by filing one or more of the codes in TBL 1–6.
- Indicate Area Navigation (RNAV) capability by filing one or more of the codes in TBL 1–7.

**TBL 1–6
Radio Navigation Capabilities**

Capability	Item 10a	Item 18 NAV/
VOR	O	
DME	D	
TACAN	T	

**TBL 1–7
Area Navigation Capabilities**

Capability	Item 10a	Item 18 NAV/
GNSS	G	SBAS (if WAAS equipped) GBAS (if LAAS equipped)
INS	I	
DME / DME	DR	
VOR / DME	DOR	

NOTE–

1. SBAS – Space–Based Augmentation System
GBAS – Ground–Based Augmentation System

2. No PBN/ code needs to be filed to indicate the ability to fly point–to–point routes using GNSS or INS.
3. Filing one of these four area navigation capabilities as shown does not indicate performance based navigation sufficient for flying Q–Routes, T–Routes, or RNAV SIDs or STARs. To qualify for these routes, see the section on Performance Based Navigation Routes.

(c) Transponder Capabilities (Item 10b)

- For domestic flights, it is not necessary to indicate Mode S capability. It is acceptable to simply file one of the following codes in TBL 1–8.

**TBL 1–8
Mode C**

Capability	Item 10b
Transponder with no Mode C	A
Transponder with Mode C	C

- International flights must file in accordance with relevant AIPs and regional supplements. Include one of the Mode S codes in TBL 1–9, if appropriate.

NOTE–

File only one transponder code.

**TBL 1–9
Mode S**

Capability	Aircraft ID	Altitude Encoding	Item 10b
Mode S Transponder	No	No	X
Mode S Transponder	No	Yes	P
Mode S Transponder	Yes	No	I
Mode S Transponder	Yes	Yes	S
Mode S Transponder with Extended Squitter	Yes	Yes	E
Enhanced Mode S Transponder	Yes	Yes	H
Enhanced Mode S Transponder with Extended Squitter	Yes	Yes	L

(d) ADS–B Capabilities (Item 10b, Item 18 SUR/ and Item 18 CODE/)

- Indicate ADS–B capability as shown in TBL 1–10. The accompanying entry in Item 18 indicates that the equipment is compliant with 14 CFR §91.227. Some ADS–B equipment used in other countries is based on an earlier standard and does not meet U.S. requirements.

- Do not file an ADS–B code for “in” capability only. There is currently no way to indicate that an aircraft has “in” capability but no “out” capability.

- For aircraft with ADS–B “out” on one frequency and “in” on another, include only the ADS–B “out” code. For example, B1 or U1, (See TBL 1–10).

**TBL 1–10
ADS–B Capabilities**

Capability	Item 10b	Item 18 SUR/
1090 ES Out Capability	B1	A2
1090 ES Out and In Capability	B2	A2
UAT Out Capability	U1	A2
UAT Out and In Capability	U2	A2

(e) Voice Communication Capabilities (Item 10a)

The FAA does not require indication of voice communication capabilities in a flight plan for domestic flights, but it is permissible. For flights outside the domestic United States, all relevant capabilities must be indicated as follows (See TBL 1-11):

**TBL 1-11
Voice Communication Capabilities**

Capability	Item 10a
VHF Radio	V
UHF Radio	U
HF Radio	H
VHF Radio (8.33 kHz Spacing)	Y
ATC SATVOICE (INMARSAT)	M1
ATC SATVOICE (Iridium)	M3

(f) Approach Aid Capabilities (Item 10a).

The FAA does not require filing of approach aid capability in order to request a specific type of approach, however any of the codes indicated in TBL 1-12 in 10a are permissible.

- International flights may be required to indicate approach capability, based on instructions from relevant service providers.

**TBL 1-12
Approach Aid Capabilities**

Capability	Item 10a
ILS	L
MLS	K
LPV Approach (APV with SBAS) (WAAS)	B
GBAS Landing System (LAAS)	A

6. Performance-Based Navigation Routes (Item 10a, Item 18 PBN/, Item 18 NAV/)– When planning to fly routes that require PBN capability, file the appropriate capability as shown in TBL 1-13.

TBL 1–13
Filing for Performance Based Navigation (PBN) Routes

Type of Routing	Capability Required	Item 10a	Item 18 PBN/ See NOTE 2	Item 18 NAV/ See NOTE 3	Notes
RNAV SID or STAR (See NOTE 1)	RNAV 1	GR	D2		If GNSS
		DIR	D4		If DME/DME/IRU
RNP SID or STAR (See NOTE 2)	RNP 1 GNSS	GR	O2		If GNSS only
	RNP 1 GNSS	DGIR	O1		If GNSS primary and DME/DME/IRU backup
RNP SID or STAR with RF required (See NOTE 2)	RNP 1 GNSS	GRZ	O2	Z1	If GNSS only
	RNP 1 GNSS	DGIRZ	O1	Z1	If GNSS primary and DME/DME/IRU backup
Domestic Q–Route (see separate requirements for Gulf of Mexico Q–Routes)	RNAV 2	GR	C2		If GNSS
		DIR	C4		If DME/DME/IRU
T–Route	RNAV 2	GR	C2		GNSS is required for T–Routes
RNAV (GPS) Approach	RNP Approach, GPS	GR	S1		<i>Domestic arrivals do not need to file PBN approach capabilities to request the approach.</i>
RNAV (GPS) Approach	RNP Approach, GPS Baro–VNAV	GR	S2		
RNAV (GPS) Approach with RF required	RNP Approach, GPS RF Capability	GRZ	S2	Z1	
RNP AR Approach with RF	RNP (Special Autho- rization Required) RF Leg Capability	GR	T1		
RNP AR Approach with- out RF	RNP (Special Autho- rization Required)	GR	T2		

NOTE–

1. If the flight is requesting an RNAV SID only (no RNAV STAR) or RNAV STAR only (no RNAV SID) then consult guidance on the FAA website at

https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/air_traffic_services/flight_plan_filing.

2. PBN descriptor D1 includes the capabilities of D2, D3, and D4. PBN descriptor B1 includes the capabilities of B2, B3, B4, and B5. PBN descriptor C1 includes the capabilities of C2, C3, and C4.

3. In NAV/, descriptors for advanced capabilities (Z1, P1, R1, M1, and M2) should be entered as a single character string with no intervening spaces, and separated from any other entries in NAV/ by a space.

EXAMPLE–

NAV/Z1P1M2 SBAS

7. Automated Departure Clearance Delivery (DCL or PDC). When planning to use automated pre–departure clearance delivery capability, file as indicated below.

(a) PDC provides pre–departure clearances from the FAA to the operator’s designated flight operations center, which then delivers the clearance to the pilot by various means. Use of PDC does not require any special flight plan entry.

(b) DCL provides pre–departure clearances from the FAA directly to the cockpit/FMS via Controller Pilot Datalink Communications (CPDLC). Use of DCL requires flight plan entries as follows:

- Include CPDLC codes in Item 10a only if the flight is capable of en route/oceanic CPDLC, the codes are not required for DCL.
- Include Z in Item 10a to indicate there is information provided in Item 18 DAT/.
- Include the clearance delivery methods of which the flight is capable, and order of preference in Item 18 DAT/. (See AIM 5–2–2)
 - VOICE – deliver clearance via Voice
 - PDC – deliver clearance via PDC
 - FANS – deliver clearance via FANS 1/A
 - FANSP – deliver clearance via FANS 1/A+

EXAMPLE–
DAT/1FANS2PDC
DAT/1FANSP2VOICE

8. Operating in Reduced Vertical Separation Minima (RVSM) Airspace (Item 10a). When planning to fly in RVSM airspace (FL 290 up to and including FL 410) then file as indicated below.

(a) If capable and approved for RVSM operations, per AIM 4–6–1, Applicability and RVSM Mandate (Date/Time and Area), file a W in Item 10a. Include the aircraft registration mark in Item 18 REG/, which is used to post–operationally monitor the safety of RVSM operations.

- Do not file a “W” in Item 10a if the aircraft is capable of RVSM operations, but is not approved to operate in RVSM airspace.
- If RVSM capability is lost after the flight plan is filed, request that ATC remove the ‘W’ from Item 10a.

(b) When requesting to operate non–RVSM in RVSM airspace, using one of the exceptions identified in AIM 4–6–10, do not include a “W” in Item 10a. Include STS/NONRVSM in Item 18. STS/NONRVSM is used only as part of a request to operate non–RVSM in RVSM airspace.

9. Eligibility for Reduced Oceanic Separation. Indicate eligibility for the listed reduced separation minima as indicated in the tables below. Full Operational Requirements for these services are found in the U.S. Aeronautical Information Publication (AIP) ENR 7, Oceanic Operations, available at http://www.faa.gov/air_traffic/publications/atpubs/aip_html/index.html.

TBL 1–14
Filing for Gulf of Mexico CTA

Dimension of Separation	Separation Minima	ADS–C Surveillance Requirements	Comm. Requirement	PBN Requirement	Flight Plan Entries			
					ADS–C in Item 10b	CPDLC in Item 10a	PBN in Item 18 PBN/ (also File ‘R’ in Item 10a)	PBN in Item 18 NAV/
Lateral	50 NM	N/A (ADS–C not required)	Voice comm–HF or VHF as required to maintain contact over the entire route to be flown.	RNP10 or RNP4	N/A	N/A	A1 or L1	N/A

NOTE–
If not RNAV10/RNP10 capable and planning to operate in the Gulf of Mexico CTA, then put the notation NONRNP10 in Item 18 RMK/, preferably first.

TBL 1-15
Filing for 50 NM Lateral Separation in Anchorage Arctic FIR

Dimension of Separation	Separation Minima	ADS-C Surveillance Requirements	Comm. Requirement	PBN Requirement	Flight Plan Entries			
					ADS-C in Item 10b	CPDLC in Item 10a	PBN in Item 18 PBN/ (also File 'R' in Item 10a)	PBN in Item 18 NAV/
Lateral	50 NM	N/A (ADS-C not required)	None beyond normal requirements for the airspace	RNP10 or RNP4	N/A	N/A	A1 or L1	N/A

TBL 1-16
Filing for 30 NM Lateral, 30 NM Longitudinal, and 50 NM Longitudinal Oceanic Separation in Anchorage, Oakland, and New York Oceanic CTAs

Dimension of Separation	Separation Minima	ADS-C Surveillance Requirements	Comm. Requirement	PBN Requirement	Flight Plan Entries			
					ADS-C in Item 10b	CPDLC in Item 10a	PBN in Item 18 PBN/ (also File 'R' in Item 10a)	PBN in Item 18 NAV/
Longitudinal	50 NM	Position report at least every 27 minutes (at least every 32 minutes if both aircraft are approved for RNP-4 operations)	CPDLC	RNP10	D1	J5 and/or J7	A1	N/A
Longitudinal	30 NM	ADS-C position report at least every 10 minutes	CPDLC	RNP4	D1	J5 and/or J7	L1	N/A
Lateral	30 NM	ADS-C-based lateral deviation event contract with 5NM lateral deviation from planned routing set as threshold for triggering ADS report of lateral deviation event	CPDLC	RNP4	D1	J5 and/or J7	L1	N/A

TBL 1-17

Filing for Reduced Oceanic Separation when RSP/RCP Required on March 29, 2018

Dimension of Separation	Separation Minima	RSP Re-requirement	RCP Re-requirement	PBN Requirement	Flight Plan Entries				
					RSP in Item 18 SUR/	RCP in Item 10a	CDPLC in Item 10a	PBN in Item 18 PBN/ (also File 'R' in Item 10a)	PBN in Item 18 NAV/
Lateral	55.5 km 30 NM	180	240	RNP 2 or RNP 4	RSP180	P2	J5, and/or J6, and/or J7	L1	
Performance-based Longitudinal	5 Minutes	180	240	RNAV 10 (RNP 10) RNP 4, or RNP 2 oceanic/ remote	RSP180	P2	J5, and/or J6, and/or J7	A1 or L1	M2
Performance-based Longitudinal	55.5 km 30 NM	180	240	RNP 4 or RNP 2 oceanic/ remote	RSP180	P2	J5, and/or J6, and/or J7	L1	M2
Performance-based Longitudinal	93 km 50 NM	180	240	RNAV 10 (RNP 10) or RNP 4	RSP180	P2	J5, and/or J6, and/or J7	A1 or L1	

NOTE-

1. Filing of RNP 2 alone is not supported in FAA controlled airspace; PBN/L1 (for RNP 4) or PBN/A1 (for RNP 10) must be filed to obtain the indicated separation.
2. Use of "RNP 2" in NAV/ signifies continental RNP 2 (and means the same as M1). Continental RNP 2 is not adequate for reduced oceanic separation. Descriptor M2 indicates RNP 2 global/oceanic RNP 2 capability.

10. Date of Flight (Item 18 DOF/)

Flights planned more than 23 hours after the time the flight plan is filed, must include the date of flight in DOF/ expressed in a six-digit format YYMMDD, where YY equals the year (Y), MM equals the month, and DD equals the day.

NOTE-

FAA ATC systems will not accept flight plans more than 23 hours prior to their proposed departure time. FAA Flight Service and commercial flight planning services generally accept flight plans earlier and forward to ATC at an appropriate time, typically 2 to 4 hours before the flight.

EXAMPLE-

DOF/171130

11. Reasons for Special Handling (Item 18 STS/)

- (a) Indicate the applicable Special Handling in Item 18 STS/ as shown in TBL 1-18.

NOTE-

Priority for a flight is not automatically granted based on filing one of these codes but is based on documented procedures. In some cases, additional information may also be required in remarks; follow all such instructions as well.

TBL 1–18
Special Handling

Special Handling	Item 18 STS/
Flight operating in accordance with an altitude reservation	ALTRV
Flight approved for exemption from ATFM measures by the appropriate ATS authority	ATFMX
Fire Fighting	FFR
Flight check for calibration of NAVAIDS	FLTCK
Flight carrying hazardous material(s)	HAZMAT
Flight with Head of State status	HEAD
Medical flight declared by medical authorities	HOSP
Flight operating on a humanitarian mission	HUM
Flight for which a military entity assumes responsibility for separation of military aircraft	MARSA
Life critical medical emergency evacuation	MEDEVAC
Non–RVSM capable flight intending to operate in RVSM airspace	NONRVSM
Flight engaged in a search and rescue mission	SAR
Flight engaged in military, customs, or police services	STATE

(b) Any other requests for special handling must be made in Item 18 RMK/.

(c) Include plain–language remarks when required by ATC or deemed necessary. Do not use special characters, for example; / * – = +.

EXAMPLE–
RMK/NRP
RMK/DVRSN

12. Remarks

Include when necessary.

13. Operator (Item 18 OPR/)

When the operator is not obvious from the aircraft identification, the operator may be indicated.

EXAMPLE–
OPR/NETJETS

14. Flight Plan Originator (Item 18 ORGN/)

(a) VFR flight plans originating outside of FAA FSS or FAA contracted flight plan filing services must enter the 8–letter AFTN address of the service where the flight plan was originally filed. Alternately, enter the name of the service where the FPL was originally filed. This information is critical to locating the FPL originator in the event additional information is needed.

(b) For IFR flight plans, the original filers AFTN address may be indicated, which is helpful in cases where a flight plan has been forwarded.

EXAMPLE–
ORGN/Acme Flight Plans
ORGN/KDENXLDS

TBL 1–19
Aircraft Specific Information

Item	International Flight Plan (FAA Form 7233–4)	Domestic U.S. Requirements	Equivalent Item on Domestic Flight Plan (FAA Form 7233–1)
Number of Aircraft	Item 9	Included when more than one a/c in flight	Item 3
Type of Aircraft	Item 9	Required	Item 3
Wake Turbulence Category	Item 9	Required	N/A
Aircraft Registration	Item 18 REG/	Include when planning to operate in RVSM airspace	N/A
Mode S Address	Item 18 CODE/	Not required within U.S. controlled airspace	N/A
SELCAL Codes	Item 18 SEL/	Include when SELCAL equipped	N/A
Performance Category	Item 18 PER/	Not required for domestic flights	N/A

e. Instructions for Aircraft–Specific Information.

1. Number of Aircraft (Item 9) when there is more than one aircraft in the flight; indicate the number of aircraft up to 99.

2. Type of Aircraft (Item 9)

(a) Provide the appropriate 2–4 character aircraft type designator listed in FAA Order JO 7360.1, Aircraft Type Designators. FAA Order JO 7360.1 may be located at: Orders & Notices (faa.gov), then enter 7360.1 in the Search box.

(b) When there is no designator for the aircraft type use 'ZZZZ', and provide a description in Item 18 TYP/.

3. Wake Turbulence Category (Item 9)

A Wake Turbulence Category is required for all aircraft types. Provide the appropriate wake turbulence category for the aircraft type as listed in FAA Order 7360.1. The categories include:

(a) **J – SUPER**, aircraft types specified as such in FAA Order JO 7360.1, Aircraft Type Designators.

(b) **H – HEAVY**, to indicate an aircraft type with a maximum certificated take–off mass of 300,000 lbs. or more, with the exception of aircraft types listed in FAA Order JO 7360.1 in the SUPER (J) category.

(c) **M – MEDIUM**, to indicate an aircraft type with a maximum certificated take–off mass of less than 300,000 lbs. but more than 15,500 lbs.

(d) **L – LIGHT**, to indicate an aircraft type with a maximum certificated take–off mass of 15,500 lbs. or less.

4. Aircraft Registration (Item 18 REG/)

The aircraft registration must be provided here if different from the Item 7 entry. The registration mark must not include any spaces or hyphens. Additionally, the actual aircraft registration must also be included if Item 7 would have contained a leading numeric and was modified to be prefixed with the appropriate alphabetic character for U.S. ATC acceptance.

EXAMPLE–

U.S. aircraft with registration N789AK

REG/N789AK

Belgian aircraft with registration OO–FAH

REG/OOFAH

5. Mode S Address (Item 18 CODE/)

There is no U.S. requirement to file the aircraft Mode S Code in Item 18.

6. SELCAL code (Item 18 SEL/)

(a) Flights with HF radio and Selective Calling capability should include their 4–letter SELCAL code. Per the U.S. AIP, GEN 3.4, Paragraph 9, Selective Calling System (SELCAL) Facilities Available.

(b) The SELCAL is a communication system that permits the selective calling of individual aircraft over radio–telephone channels from the ground station to properly equipped aircraft, to eliminate the need for the flight crew to constantly monitor the frequency in use.

EXAMPLE–
SEL/CLEF

7. Performance Category (Item 18 PER/)

Include the appropriate single–letter Aircraft Approach Category as defined in the Pilot/Controller Glossary.

EXAMPLE–
PER/A

TBL 1–20

Flight Routing Information

Item	International Flight Plan (FAA Form 7233–4)	Domestic U.S. Requirements	Equivalent Item on Domestic Flight Plan (FAA Form 7233–1)
Departure Airport	Item 13	Required	Item 2
Departure Time	Item 13	Required	Item 1
Cruise Speed	Item 15	Required	N/A
Requested Altitude	Item 15	Required	Item 3
Route	Item 15	Required	N/A
Delay En Route	Item 15, Item 18 DLE/	Required	N/A
Destination Airport	Item 16	Required	Item 11
Total Estimated Elapsed Time	Item 16	Required	Item
Alternate Airport	Item 16 Item 18 ALTN/ (Destination Alternate).	If necessary	N/A
	RALT/ (En route Alternate); TALT/ (Take–off Alternate)	No need to file for domestic U.S. flight	
Estimated Elapsed Times	Item 18 EET/	Include when filing flight plan with center other than departure center	N/A

f. Instructions for Flight Routing Items

1. Departure Airport (Item 13, Item 18 DEP/)

(a) Enter the departure airport. The airport should be identified using the four–letter location identifier from FAA Order JO 7350.9, Location Identifiers, or from ICAO Document 7910. FSS and FAA contracted flight plan filing services will allow up to 11 characters in the departure field. This will permit entry of non–ICAO identifier airports, and other fixes such as an intersection, fix/radial/distance, and latitude/longitude coordinates. Other electronic filing services may require a different format.

NOTE–

While user interfaces for flight plan filing are not specified, all flight plan filing services must adhere to the appropriate Interface Control Document upon transmission of the flight plan to the control facility.

(b) When the intended departure airport (Item 13) is outside of domestic U.S. airspace, or if using the paper version of FAA Form 7233–4, or DOD equivalent, if the chosen flight plan filing service does not allow

non-ICAO airport identifiers in Item 13 or Item 16, use the following ICAO procedure. Enter four Z's (ZZZZ) in Item 13 and include the non-ICAO airport location identifier, fix, or waypoint location in Item 18 DEP/. A text description following the location identifier is permissible in Item 18 DEP/.

NOTE–

Use of non-ICAO identifiers in Item 13 and Item 16 is only permissible when flight destination is within U.S. airspace. If the destination is outside of the U.S., then both Item 13 and Item 16 must contain either a valid ICAO airport identifier or ZZZZ. Use of non-ICAO departure point is not permitted in Item 13 if destination in Item 16 is outside of U.S.

EXAMPLE–

DEP/MD21

DEP/W29 BAY BRIDGE AIRPORT

DEP/EMI211017

DEP/3925N07722W

2. Departure Time (Item 13)

Indicate the expected departure time using 4 digits, 2 digits for hours and 2 digits for minutes. Time is to be entered as Coordinated Universal Time (UTC).

3. Requested Cruising Speed (Item 15)

(a) Include the requested cruising speed as True Airspeed in knots using an N followed by four digits.

EXAMPLE–

N0450

(b) Indicate the requested cruising speed in Mach using an M followed by three digits.

EXAMPLE–

M081

4. Requested Cruising Altitude or Flight Level (Item 15)

(a) Indicate a Requested Flight Level using the letter F followed by 3 digits.

EXAMPLE–

F350

(b) Indicate a Requested Altitude in hundreds of feet using the letter A followed by 3 digits.

EXAMPLE–

A080

5. Route (Item 15)

Provide the requested route of flight using a combination of published routes, latitude/longitude, and/or fixes in the following formats.

(a) Consecutive fixes, lat/long points, NAVAIDs, and waypoints should be separated by the characters “DCT”, meaning direct.

EXAMPLE–

FLACK DCT IRW DCT IRW12503

4020N07205W DCT MONEY

(b) A published route should be preceded by a fix that is published on the route, indicating where the route will be joined. The published route should be followed by a fix that is published as part of the route, indicating where the route will be exited.

EXAMPLE–

DALL3 EIC V18 MEI LGC4

(c) It is acceptable to specify intended speed and altitude changes along the route by appending an oblique stroke followed by the next speed and altitude. However, note that FAA ATC systems will neither process this information nor display it to ATC personnel. Pilots are expected to maintain the last assigned altitude and request revised altitude clearances from ATC.

EXAMPLE–

DCT APN J177 LEXOR/N0467F380 J177 TAM/N0464F390 J177

6. Delay En Route (Item 15, Item 18 DLE/)

(a) ICAO defines Item 18 DLE/ to provide information about a delay en route. International flights with a delay outside U.S. domestic airspace should indicate the place and duration of the delay in Item 18 DLE/. The delay is expressed by a fix identifier followed by the duration in hours (H) and minutes (M), HHMM.

EXAMPLE–

DLE/EMI0140

(b) U.S. ATC systems will accept but not process information in DLE/. Therefore, for flights in the lower 48 states, it is preferable to include the delay as part of the route (Item 15). Delay in this format is specified by an oblique stroke (/) followed by the letter D, followed by 2 digits for hours (H) of delay, followed by a plus sign (+), followed by 2 digits for minutes (M) of delay: /DHH+MM.

EXAMPLE–

DCT EMI/D01+40 DCT MAPEL/D00+30 V143 DELRO DCT

7. Destination Airport (Item 16, Item 18 DEST/)

(a) Enter the destination airport. The airport should be identified using the four–letter location identifier from FAA Order JO 7350.9, Location Identifiers, or from ICAO Document 7910. FSS and FAA contracted flight plan filing services will allow up to 11 characters in the destination field. This will permit entry of non–ICAO identifier airports, and other fixes such as an intersection, fix/radial/distance, and latitude/longitude coordinates. Other electronic filing services may require a different format.

NOTE–

While user interfaces for flight plan filing are not specified, all flight plan filing services must adhere to the appropriate Interface Control Document upon transmission of the flight plan to the control facility.

(b) When the intended destination (Item 16) is outside of domestic U.S. airspace, or if using the paper version of FAA Form 7233–4, or if the chosen flight plan filing service does not allow non–ICAO airport identifiers in Item 13 or Item 16, use the following ICAO procedure. Enter four Z's (ZZZZ) in Item 13 and include the non–ICAO airport location identifier, fix, or waypoint location in Item 18 DEP/. A text description following the location identifier is permissible in Item 18 DEP/.

EXAMPLE–

DEST/06A MOTON FIELD

DEST/4AK6

DEST/MONTK

DEST /3925N07722W

8. Total Estimated Elapsed Time (Item 16)

All flight plans must include the total estimated elapsed time from departure to destination in hours (H) and minutes (M), format HHMM.

9. Alternate Airport (Item 16, Item 18 ALTN/)

(a) When necessary, specify an alternate airport in Item 16 using the four–letter location identifier from FAA Order 7350.9 or ICAO Document 7910. When the airport does not have a four–letter location identifier, include ZZZZ in Item 16c and file the non–standard identifier in Item 18 ALTN/.

(b) While the FAA does not require filing of alternate airports in the flight plan provided to ATC, rules for establishing alternate airports must be followed.

(c) Adding an alternate may assist during Search and Rescue by identifying additional areas to search.

(d) Although alternate airport information filed in a flight plan will be accepted by air traffic computer systems, it will not be presented to controllers. If diversion to an alternate airport becomes necessary, pilots are expected to notify ATC and request an amended clearance.

EXAMPLE–

ALTN/W50 2W2

10. Estimated Elapsed Times (EET) at boundaries or reporting points (Item 18 EET/)

EETs are required for international or oceanic flights when crossing a Flight Information Region (FIR) boundary. The EET will include the ICAO four–letter location identifier for the FIR followed by the elapsed time to the FIR boundary (e.g., KZNY0245 indicates 2 hours, 45 minutes from departure until the New York FIR boundary).

EXAMPLE–

EET/MMFR0011 MMTY0039 KZAB0105

11. Remarks (Item 18 RMK/)

Enter only those remarks pertinent to ATC or to the clarification of other flight plan information. Items of a personal nature are not accepted.

NOTE–

1. “DVRSN” should be placed in Item 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.
2. 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.

g. Flight Specific Supplemental Information (Item 19)

1. Item 19 data must be included when completing FAA Form 7233–4. This information will be retained by the facility/organization that transmits the flight plan to Air Traffic Control (ATC), for Search and Rescue purposes, but it will not be transmitted to ATC as part of the flight plan.

2. Do not include Supplemental Information as part of Item 18. The information in Item 19 is retained with the flight plan filing service for retrieval only if necessary.

NOTE–

Supplemental Information within Item 19 will be transmitted as a separate message to the destination FSS for VFR flight plans filed with a FSS or FAA contracted flight plan filing service. This will reduce the time necessary to conduct SAR actions should the flight become overdue, as this information will be readily available to the destination Flight Service Station.

3. Minimum required Item 19 entries for a domestic flight are Endurance, Persons on Board, Pilot Name and Contact Information, and Color of Aircraft. Additional entries may be required by foreign air traffic services, or at pilot discretion.

(a) After E/ Enter fuel endurance time in hours and minutes.

(b) After P/ Enter total number of persons on board using up to 30 alphanumeric characters. Enter TBN (to be notified) if the total number of persons is not known at the time of filing.

EXAMPLE–

P/005

P/TBN

P/ON FILE CAPEAIR OPERATIONS

(c) R/ (Radio) Cross out items not carried

(d) S/ (Survival Equipment) Cross out items not carried.

(e) J/ (Jackets) Cross out items not carried.

(f) D/ (Life Raft/Dinghies) Enter number carried and total capacity. Indicate if covered and color.

(g) A/ (Aircraft Color and Markings) Enter aircraft color(s).

EXAMPLE–

White Yellow Blue

4. N/ (Remarks. Not for ATC) select N if no remarks. Enter comments concerning survival equipment and information concerning personal GPS locating service, if utilized. Enter name and contact information for responsible party to verify VFR arrival/closure, if desired. Ensure party will be available for contact at ETA. (for example; FBO is open at ETA)

5. C/ (Pilot) Enter name and contact information, including telephone number, of pilot-in-command. Ensure contact information will be valid at ETA in case SAR is necessary.

FIG 1-1
FAA Form 7233-4, Pre-Flight Pilot Checklist and International Flight Plan

PRIVACY ACT STATEMENT: This statement is provided pursuant to the Privacy Act of 1974, 5 USC § 552a: The authority for collecting this information is contained in 49 U.S.C. §§ 40113, 44702, 44703, 44709, and 14 C.F.R. Part 6 - [Part 61, 63, 65, or 67]. The principal purpose for which the information is intended to be used is to allow you to submit your flight plan. Submission of the data is voluntary. Failure to provide all required information may result in you not being able to submit your flight plan. The information collected on this form will be included in a Privacy Act System of Records known as DOT/FAA 847, titled "Aviation Records on Individuals" and will be subject to the routine uses published in the System of Records Notice (SORN) for DOT/FAA 847 (see www.dot.gov/privacy/privacyactnotices).

Paperwork Reduction Act Statement: A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120-0026. Public reporting for this collection of information is estimated to be approximately 2.5 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, completing and reviewing the collection of information. All responses to this collection of information are required to obtain or retain a benefit per 14 CFR Part 91. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to the FAA at: 800 Independence Ave. SW, Washington, DC 20591, Attn: Information Collection Clearance Officer, ASP-110.

Pre-Flight Pilot Checklist

Aircraft Identification		Time of Briefing				
Weather (Destination) (Alternate)	<input type="checkbox"/> Present	Remarks	Report Weather Conditions Aloft <i>Report immediately weather conditions encountered--particularly cloud tops, upper cloud layers, thunderstorms, ice, turbulence, winds and temperature</i>			
	<input type="checkbox"/> Forecast					
			Position	Altitude	Time	Weather Conditions
Weather (En Route)	<input type="checkbox"/> Present					
	<input type="checkbox"/> Forecast					
	<input type="checkbox"/> Pireps					
Winds Aloft	Best Crzg. Alt.					
Nav. Aid & Comm. Status.	<input type="checkbox"/> Destination					
	<input type="checkbox"/> En Route					
Airport Conditions	<input type="checkbox"/> Destination					
	<input type="checkbox"/> Alternate					
ADIZ	<input type="checkbox"/> Airspace Restrictions					

Civil Aircraft Pilots

FAR Part 91 states that each person operating a civil aircraft of U.S. registry over the high seas shall comply with Annex 2 to the Convention of International Civil Aviation, International Standards - Rules of the Air. Annex 2 requires the submission of a flight plan containing Items 1-1 9 prior to operating any flight across international waters. Failure to file could result in a civil penalty not to exceed \$1,000 for each violation (Section 901 of the Federal Aviation Act of 1958, as amended).

International briefing information may not be current or complete. Data should be secured, at the first opportunity, from the country in whose airspace the flight will be conducted.

 <h2 style="margin: 0;">International Flight Plan</h2>		
PRIORITY <=FF	ADDRESSEE(S) <input style="width: 100%;" type="text"/> <input style="width: 100%;" type="text"/> <input style="width: 100%;" type="text"/>	
FILING TIME <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/>	ORIGINATOR <input style="width: 100%;" type="text"/>	<=
SPECIFIC IDENTIFICATION OF ADDRESSEE(S) AND / OR ORIGINATOR <input style="width: 100%;" type="text"/>		
3 MESSAGE TYPE <=(FPL	7 AIRCRAFT IDENTIFICATION <input style="width: 100%;" type="text"/>	8 FLIGHT RULES <input type="checkbox"/>
		TYPE OF FLIGHT <input type="checkbox"/>
9 NUMBER <input style="width: 20px;" type="text"/>	TYPE OF AIRCRAFT <input style="width: 100%;" type="text"/>	WAKE TURBULENCE CAT. <input type="checkbox"/>
		10 EQUIPMENT <input style="width: 20px;" type="text"/> / <input style="width: 20px;" type="text"/>
13 DEPARTURE AERODROME <input style="width: 100%;" type="text"/>		TIME <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/>
		<=
15 CRUISING SPEED <input style="width: 20px;" type="text"/>	LEVEL <input style="width: 20px;" type="text"/>	ROUTE <input style="width: 100%;" type="text"/>
<=		
16 DESTINATION AERODROME <input style="width: 100%;" type="text"/>	TOTAL EET HR MIN <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/>	ALTN AERODROME <input style="width: 100%;" type="text"/>
		2ND ALTN AERODROME <input style="width: 100%;" type="text"/>
<=		
18 OTHER INFORMATION <input style="width: 100%;" type="text"/>		
<=		
SUPPLEMENTARY INFORMATION (NOT TO BE TRANSMITTED IN FPL MESSAGES)		
19 ENDURANCE HR MIN E/ <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/>	PERSONS ON BOARD P/ <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/>	EMERGENCY RADIO UHF VHF ELT R/ <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
SURVIVAL EQUIPMENT POLAR DESERT MARITIME JUNGLE <input type="checkbox"/> / <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		JACKETS LIGHT FLUORES UHF VHF <input type="checkbox"/> / <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
DINGHIES NUMBER CAPACITY COVER COLOR D/ <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input type="checkbox"/> <input type="checkbox"/> <input style="width: 100%;" type="text"/>		
<=		
AIRCRAFT COLOR AND MARKINGS A/ <input style="width: 100%;" type="text"/>		
REMARKS N/ <input style="width: 100%;" type="text"/>		
<=		
PILOT-IN-COMMAND C/ <input style="width: 100%;" type="text"/>		
)<=		
FILED BY <input style="width: 100%;" type="text"/>	ACCEPTED BY <input style="width: 100%;" type="text"/>	ADDITIONAL INFORMATION <input style="width: 100%;" type="text"/>

FAA Form 7233-4 (7/15)

