

AERONAUTICAL CHARTING MEETING

Charting Group

Meeting 23-01 – April 25-27, 2023

RECOMMENDATION DOCUMENT

FAA Control #24-01-388

Subject: Removal of 67:1 Slope Obstacles on Instrument Approach Procedure (IAP) Charts

Background/Discussion:

Interagency Air Committee (IAC) 4, Flight Information Publication for Instrument Approach Procedures and Airport Diagrams is the official US Government specification that governs charting. It states:

Any obstacle which penetrates a slope of 67:1 emanating from any point along the centerline of any runway shall be considered for charting within the area shown to scale.

Terminal Charting has researched this specification and has been unable to identify its origin or reasoning, other than the generic “situational awareness” they may provide, but the specification has been in place since at least the 1970s. However, a Volpe study (DOT/FAA/AAR-95/2) published in 1995 determined that, according to pilots, obstacles were among the least important elements on the IAP chart for pre-approach, approach and missed approach phases of flight.

The number of obstacles has increased greatly over time, and the reporting mechanisms for and databases to document obstacles have improved. This has resulted in many more obstacles on IAP charts. With the added factor of increasing complexity in procedure design, there has been a notable increase in chart clutter in recent years.

For IAP charts, ICAO Annex 4 states:

11.10.2 Obstacles

11.10.2.1 Obstacles shall be shown on the plan view of the chart.

Note.— Appropriate obstacles are those provided by the procedures specialist.

11.10.2.2 **Recommendation.**— *If one or more obstacles are the determining factor of an obstacle clearance altitude/height, those obstacles should be identified.*

Note that the “appropriate” and “recommendation” obstacles appear to be those necessary to execute the procedure. There are no other pertinent references to obstacles for IAPs.

Additionally, NGA does not chart any obstacles other than the highest terrain spot elevation on the chart and any obstacles requested by the flight procedure designer.

Benefits:

- 1) Would adoption of the recommendation prevent or reduce the likelihood of occurrence of accidents or incidents? No
- 2) Would adoption of the recommendation mitigate a known or potential safety hazard? No
- 3) Would adoption of the recommendation resolve a known or potential issue creating operator or Air Traffic Control system errors? No
- 4) Would adoption of the recommendation increase operational or system efficiencies? No
- 5) Would any additional benefits be recognized by adoption of the recommendation? Reduction of chart clutter on IAPs, making more critical procedural features more visible to users. Also, it would provide cost savings to Aeronautical Information Services.

Comments:

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Date: 2/28/24

Please send completed form and any attachments to:
9-AMC-AVS-ACM-Info@faa.gov

LOC/DME I-LGA	APP CRS	Rwy Idg	7001
110.5	044°	TDZE	21
Chan 42		Apt Elev	21

ILS or LOC RWY 4
LAGUARDIA (LGA)

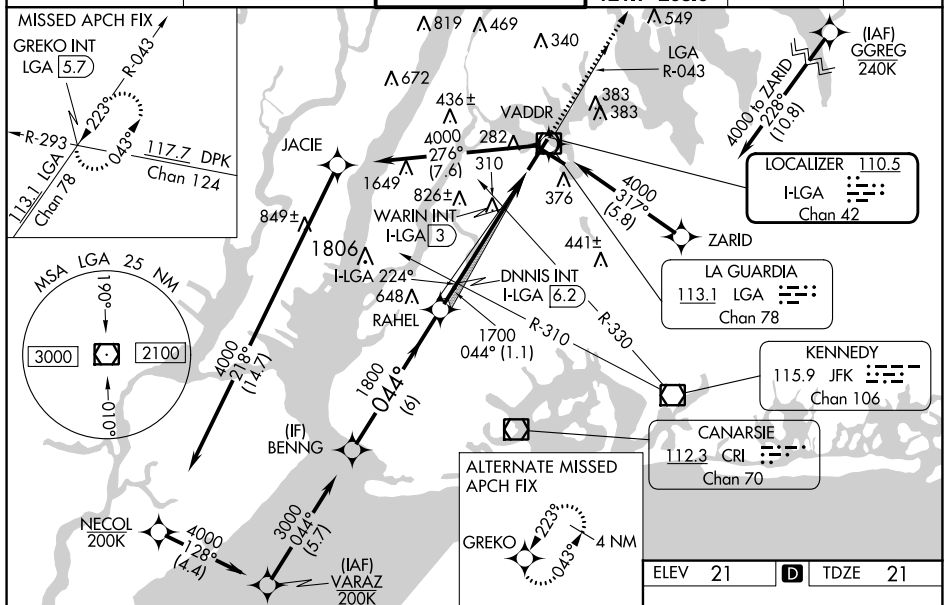
RNP APCH - GPS.

V Rwy 4 helicopter visibility reduction below RVR 5000 NA. Inop table does not apply to
A S-ILS 4 cat Cts, S-LOC 4 Cts A and B and WARIN fix minimums Cts A and B.
 For inop ALS increase S-ILS 4 cat Cts visibility to RVR 4500. Going below glidepath
 may not provide obstacle clearance inside DA. Crossing Rwy threshold below charted
 TCH may not provide required visual area obstacle clearance. DME from LGA VOR/DME.
 Autopilot couple approach NA. Circling NA northwest of Rwy 4 and southwest of Rwy 13.
 * RVR 2400 authorized with use of FD or HUD to DA.

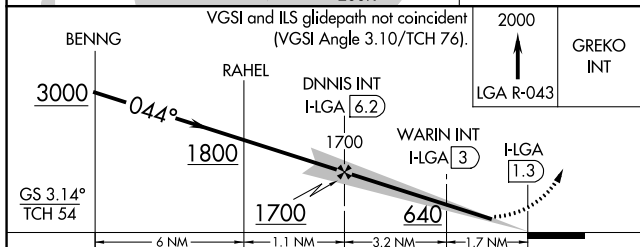
MALSR

MISSED APPROACH:
Climb to 2000 on LGA
VOR/DME R-043 to
GREKO INT/LGA 5.7
DME and hold, continue

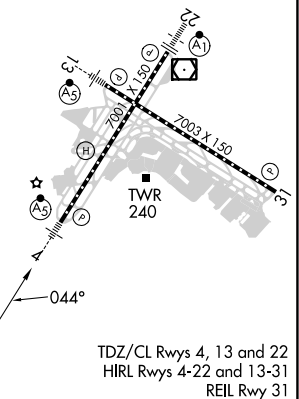
D-ATIS ARR	125.95	NEW YORK APP CON		LAGUARDIA TOWER		GND CON		CLNC DEL		CPDLC
D-ATIS DEP	127.05	120.8 263.0		118.7 263.0		121.7 263.0		135.2		



ELEV	21	D	TDZE	21
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CATEGORY	A	B	C	D
S-ILS 4 *	283/40 262 (300-3/4)			
S-LOC 4	640/50	619 (700-1)	640-13/8	619 (700-13/8)
C CIRCLING	680-1	659 (700-1)	700-2 679 (700-2)	760-2 1/4 739 (800-2 1/4)
WARIN FIX MINIMUMS (DUAL VOR RECEIVERS OR DME REQUIRED)				
S-LOC 4	560/50	539 (600-1)	560/55	539 (600-1)
C CIRCLING	680-1	659 (700-1)	700-2 679 (700-2)	760-2 1/4 739 (800-2 1/4)



TDZ/CL Rwy 4, 13 and 22
HIRL Rwy 4-22 and 13-31
REIL Rwy 31

FAF to MAP 4.9 NM					
Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

LOC/DME I-LGA	APP CRS	Rwy Idg	7001
110.5	044°	TDZE	21
Chan 42		Apt Elev	21

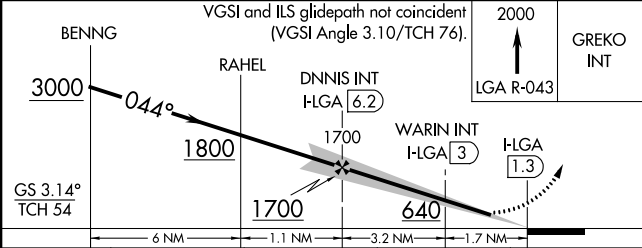
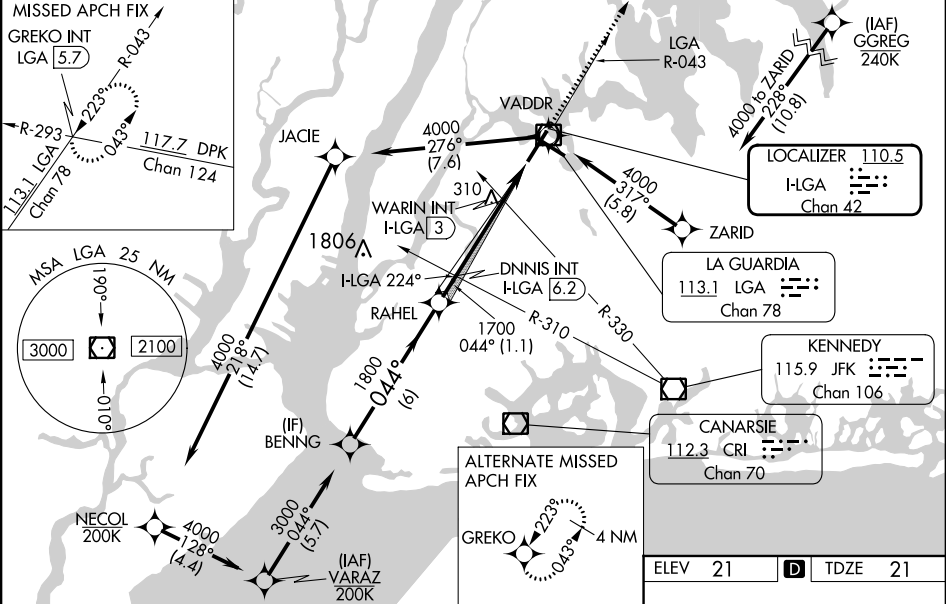
ILS or LOC RWY 4
LAGUARDIA (LGA)

RNP APCH - GPS.

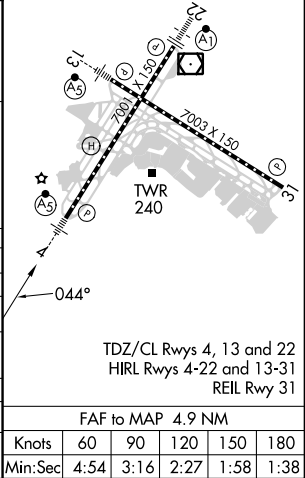
▼ Rwy 4 helicopter visibility reduction below RVR 5000 NA. Inop table does not apply to S-ILS 4 all Cats, S-LOC 4 Cats A and B and WARIN fix minimums Cats A and B.
▲ For inop ALS increase S-ILS 4 all Cats visibility to RVR 4500. Going below glidepath may not provide obstacle clearance inside DA. Crossing Rwy threshold below charted TCH may not provide required visual area obstacle clearance. DME from LGA VOR/DME. Autopilot couple approach NA. Circling NA northwest of Rwy 4 and southwest of Rwy 13.
* RVR 2400 authorized with use of FD or HUD to DA.

MALSR
MISSED APPROACH:
Climb to 2000 on LGA VOR/DME R-043 to GREKO INT/LGA 5.7 DME and hold, continue climb-in-hold to 2000.

D-ATIS ARR	125.95	NEW YORK APP CON		LAGUARDIA TOWER		GND CON		CLNC DEL		CPDLC
D-ATIS DEP	127.05	120.8 263.0		118.7 263.0		121.7 263.0		135.2		



CATEGORY	A	B	C	D
S-ILS 4 *	283/40 262 (300-¾)			
S-LOC 4	640/50	619 (700-1)	640-1⅜	619 (700-1⅜)
 CIRCLING	680-1	659 (700-1)	700-2 679 (700-2)	760-2¼ 739 (800-2¼)
WARIN FIX MINIMUMS (DUAL VOR RECEIVERS OR DME REQUIRED)				
S-LOC 4	560/50	539 (600-1)	560/55	539 (600-1)
 CIRCLING	680-1	659 (700-1)	700-2 679 (700-2)	760-2¼ 739 (800-2¼)



WAAS CH 77743 W04A	APP CRS 029°	Rwy Idg 4747 TDZE 2780 Apt Elev 2801
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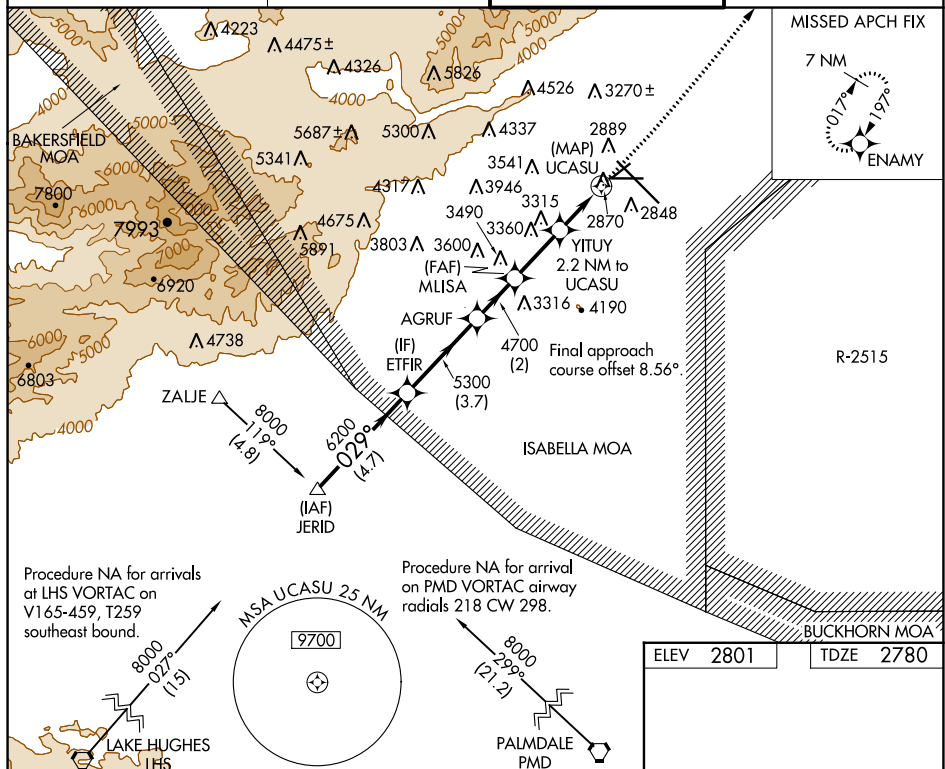
RNAV (GPS) RWY 4

MOJAVE AIR & SPACE PORT/RUTAN FLD (MHV)

RNP APCH.

MISSED APPROACH: Climb to 3300 then climbing left turn to 7000 direct ENAMY and hold, continue climb-in-hold to 7000.

AWOS-3 132.225	JOSHUA APP CON 133.65 348.7	MOJAVE TOWER★ 127.6 (CTAF) 0 288.35	GND CON 123.9
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VGSI and descent angles not coincident
(VGSI Angle 4.00/TCH 39).

JERID

ETFR

AGRUF

MUSA

YITUY

UCASU

3300

7000

ENAMY

8000

029°

6200

5300

4700

3.50° TCH 50

2.2 NM to UCASU

3820

4.7 NM

3.7 NM

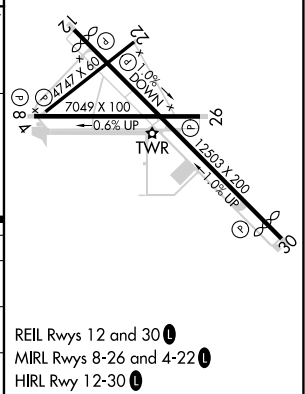
2 NM

2.4 NM

2.2 NM

0.5 NM

CATEGORY	A	B	C	D
LP MDA	3180-1	400 (400-1)	3180-1½	400 (400-1½)
LNAV MDA	3180-1	400 (400-1)	3180-1½	400 (400-1½)
C CIRCLING	3300-1 499 (500-1)	3480-1 679 (700-1)	4140-3 1339 (1400-3)	4500-3 1699 (1700-3)



APP CRS	Rwy Idg	4747
218°	TDZE	2780
	Apt Elev	2801

RNAV (GPS) RWY 22

MOJAVE AIR & SPACE PORT/RUTAN FLD (MHV)

RNP APCH.



Circling NA southeast of runway 4 and south of Rwy 26.

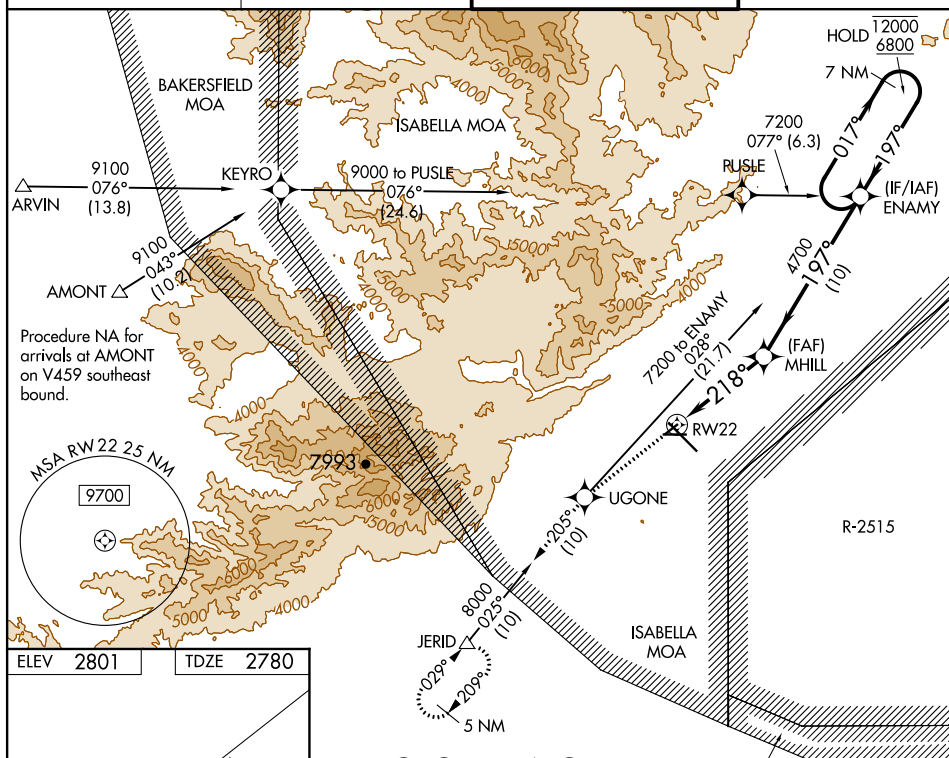
MISSED APPROACH: Climb to 6000 direct UGONE and on track 205° to JERID and hold.

AWOS-3
132.225

JOSHUA APP CON
133 65 348 7

MOJAVE TOWER ★
127.6 (CTAF) 288.35

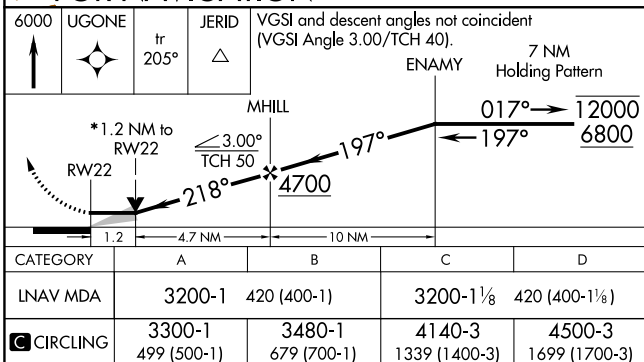
GND CON
123.9



ELEV 2801

TDZE 2780

PROTOTYPE-NOT
FOR NAVIGATION



REIL Rwy 12 and 30 **L**
MIRL Rwy 8-26 and 4-22 **L**
HIRL Rwy 12-30 **L**

MOJAVE, CALIFORNIA
Amdt 1 26MAR20

MOJAVE AIR & SPACE PORT/RUTAN FLD (MHV)

35°04'N-118°09'W

RNAV (GPS) RWY 22