

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
ILS STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.29

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or feet RVR.

<u>AIRPORT</u> MOFFETT FEDERAL AFLD	<u>AIRPORT ID</u> KNUQ	<u>PROCEDURE NAME</u> ILS OR LOC RWY 32R	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> MOUNTAIN VIEW	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 37	<u>TDZE</u> 31	<u>SUPERSEDED</u> ILS OR LOC/DME RWY 32R	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>DATED</u> 03/07/2013	<u>MAG VAR</u> 16E
<u>FACILITY</u> I-NUQ	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 20 JUNE 2019	<u>REQUIRED EFFECTIVE DATE</u> 06/20/2019	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 1980

TERMINAL ROUTES

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>LEG TYPE</u>	<u>FO/FB</u>	<u>RNP</u>	<u>COURSE</u>	<u>DISTANCE</u>	<u>ALTITUDE</u>
ZAPEP/I-NUQ 20.53 DME	IAF	AGAPE/I-NUQ 16.89 DME					321.72	3.64 (I-NUQ)	5200
AGAPE/I-NUQ 16.89 DME	IF	RIROC/I-NUQ 13.38 DME					321.72	3.51 (I-NUQ)	4400
RIROC/I-NUQ 13.38 DME		ORZOS/I-NUQ 10.86 DME					321.72	2.52 (I-NUQ)	3600
ORZOS/I-NUQ 10.86 DME		JULUD/I-NUQ 8.98 DME					321.72	1.88 (I-NUQ)	3000
JULUD/I-NUQ 8.98 DME		EBIYI/I-NUQ 6.11 DME	PFAF				321.72	2.87 (I-NUQ)	2100

MISSED APPROACH

MAP:

ILS: DA
LOC: CIKGA/I-NUQ 0.26 DME

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3200 ON NUQ TACAN R-321 TO PEYIC/NUQ 16.00 DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. PROFILE STARTS AT ZAPEP

3. FAC:

321.72

PFAF: EBIYI/I-NUQ 6.11 DME

DIST PFAF TO MAP:

DIST PFAF TO THLD: 6.32

4. MIN ALT:

ZAPEP/I-NUQ 20.53 DME 5500, AGAPE/I-NUQ 16.89 DME 5200, RIROC/I-NUQ 13.38 DME 4400, ORZOS/I-NUQ 10.86 DME 3600, JULUD/I-NUQ 8.98 DME 3000, EBIYI/I-NUQ 6.11 DME 2100, NUNLE/I-NUQ 2.00 DME 780*

5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

GS ANT: 1150

6. MIN GS INCPT:

2100

GS ALT AT PFAF : EBIYI/I-NUQ 6.11 DME 2100

OM:

MM:

IM:

7. GP ANGLE:

3.00

34:1:

20:1:

TCH: 57.1

8. MSA FROM: NUQ TACAN 020-110 5600, 110-200 5100, 200-290 4000, 290-020 5000

EQUIPMENT REQUIREMENTS NOTES:

DME REQUIRED.
RADAR REQUIRED FOR PROCEDURE ENTRY.
TACAN REQUIRED.

NOTES:

CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-ILS 32R CAT E TO 3/4 SM AND S-LOC 32R CAT C/D/E TO 1 3/8 SM.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART VDP AT 1.10 DME*
DISTANCE VDP TO THLD 1.30 NM
* LOC ONLY
CHART FAS OBST: 242 TANK 372243N/1220137W.
453 AAO 371751N/1220000W.
HOLD NW, RT, 140.90 INBOUND

MINIMUMS:

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT

ALTERNATE: NA ☐ ILS: STANDARD - NA WHEN TOWER CLOSED.; LOC: STANDARD - CAT D 800-2 1/2, CAT E 1000-3, NA WHEN TOWER CLOSED.

CATEGORY:	A			B			C			D			E		
FINAL TYPE	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA
S-ILS 32R	231	1/2	200	231	1/2	200	231	1/2	200	231	1/2	200	231	1/2	200
S-LOC 32R	500	1/2	469	500	1/2	469	500	1	469	500	1	469	500	1	469
CIRCLING	540	1	503	600	1	563	620	1 1/2	583	780	2 1/2	743	940	3	903



CHANGES - REASONS

1. UPDATED TERMINAL ROUTES REPLACED HOOKS/NUQ 20.00 DME WITH ZAPEP/I-NUQ 20.53 DME. - FIX WAS REQUIRED TO MOVE DUE TO ATC VECTOR LENGTH FOR RNAV PROCEDURE BUT TIED TO OTHER PROCEDURES SO IT WAS REPLACED IN THIS PROCEDURE.
2. UPDATED TERMINAL ROUTES FIX AGAPE FROM AGAPE/NUQ 16.49 DME TO AGAPE/I-NUQ 16.89 DME. - FIX MOVED 2.33 NM SE AND NEW DME SOURCE.
3. UPDATED TERMINAL ROUTES FIX RIROC FROM RIROC/NUQ 14.28 DME TO RIROC/I-NUQ 13.38 DME.- FIX MOVED 1.03 NM SE AND NEW DME SOURCE.
4. UPDATED TERMINAL ROUTES FIX JULUD FROM JULUD/NUQ 10.82 DME TO JULUD/I-NUQ 8.98 DME.- FIX MOVED 0.09 NM SE AND NEW DME SOURCE.
5. UPDATED TERMINAL ROUTES FIX EBIYI FROM EBIYI/NUQ 7.98 DME TO EBIYI/I-NUQ 6.11 DME.- FIX MOVED 0.07 NM SE AND NEW DME SOURCE.
6. UPDATED TERMINAL ROUTES FROM HOOKS TO AGAPE DISTANCE 3.51 AND 4800 TO ZAPEP TO AGAPE DISTANCE 3.64 AND 5200. - NEW CONTROLLING OBSTACLES.
7. UPDATED TERMINAL ROUTES FROM AGAPE TO RIROC DISTANCE 2.21 AND 4100 TO AGAPE TO RIROC DISTANCE 3.51 AND 4400. - NEW CONTROLLING OBSTACLES.
8. UPDATED TERMINAL ROUTES FROM RIROC TO JULUD DISTANCE 3.46 AND 3000 TO RIROC TO ORZOS/I-NUQ 10.86 DME DISTANCE 2.52 AND 3600.- ADDED NEW STEPDOWN IN INTERMEDIATE FOR DESCENT GRADIENT.
9. ADDED TERMINAL ROUTE FROM ORZOS TO JULUD DISTANCE 1.88 AND 3000. - NEW STEPDOWN FIX IN INTERMEDIATE AND FPT REQUEST.
10. UPDATED PROFILE LINE 2 FROM FROM PROFILE STARTS AT HOOKS TO PROFILE STARTS AT ZAPEP. - ZAPEP REPLACED HOOKS IN PROCEDURE.
11. UPDATED LINE 4 FROM HOOKS 5500, AGAPE 4800, RIROC 4100, JULUD 3000, EBIYI 2100 TO ZAPEP 5500, AGAPE 5200, RIROC 4400, ORZOS 3600, JULUD 3000, EBIYI 2100, NUNLE/I-NUQ 2.00 DME 780". - UPDATED ALTITUDES DUE TO NEW OBSTACLES AND NEW STEPDOWN FIXES IN INTERMEDIATE AND LOC FINAL.
12. UPDATED LINE 5 FROM GS ANT 1131 TO 1341.- NEW DATA.
13. REPLACED ADDITIONAL FLIGHT DATA NOTE CHART PLANVIEW NOTE: DME AND RADAR REQUIRED WITH EQUIPMENT REQUIREMENTS NOTES RADAR REQUIRED FOR PROCEDURE ENTRY AND TACAN REQUIRED. -IAW 8260.19H 8-6-8A(1).
14. UPDATED NOTE FROM VGSI AND ILS GLIDEPATH NOT COINCIDENT TO VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE{ANGLE}/TCH{FEET}).-IAW 8260.19H 8-6-9M(1).
15. ADDED VDP INFORMATION TO ADDITIONAL FLIGHT DATA. - IAW 8260.19H.
16. UPDATED INOP NOTE FROM FOR INOPERATIVE ALSF, INCREASE S-LOC 32R CATS A/B VISIBILITY TO RVR 5000 AND CAT E TO 2 TO FOR INOPERATIVE ALS, INCREASE S-ILS 32R CAT E TO 3/4 SM AND S-LOC 32R CAT C/D/E TO 1 3/8 SM. - NEW INOP TABLE AND UPDATED MINIMUMS.
17. UPDATED ADDITIONAL FLIGHT DATA HOLDING PATTERN INBOUND COURSE FROM 140.89 TO 140.90.- TO MATCH INBOUND COURSE IN INBOUND PROCEDURE.
18. ADDED IN ADDITIONAL FLIGHT DATA CHART CIRCLING ICON. - IAW 8260.19H 8-6-10T.
19. UPDATES CHART FAS OBSTACLE IN ADDITIONAL FLIGHT DATA FROM 319 TREE 371851N/1220039W. TO 242 TANK 372243N/1220137W.- NEW CONTROLLING OBSTACLE.
20. UPDATED 7:1 OBSTACLE IN ADDITIONAL FLIGHT DATA FROM 349 TREE 371800N/1220000W TO 453 AAO 371751N/12200000W.- NEW CONTROLLING OBSTACLES.
21. REMOVED NOTE CIRCLING TO RWY 32L NA AT NIGHT. - 20:1 PENETRATION HAS BEEN REMOVED.
22. UPDATED S-ILS MINIMUMS FROM ALL CATS DA/HAT 281/250 TO 231/200 AND VISIBILITY FROM 4000 RVR TO 1/2 SM. - THRESHOLD NOW DISPLACED/REMOVED OCS AND 34:1 PENETRATIONS AND RVR HAS BEEN REMOVED.
23. UPDATED S-LOC MINIMUMS FROM ALL CATS MDA/HAT 580/549 TO 500/469 AND VISIBILITY FROM CAT A/B 4000 RVR TO 1/2 SM, CAT C FROM 5000 RVR TO 1 SM, CAT D FROM 6000 RVR TO 1 SM AND CAT E FROM 1 1/2 SM TO 1 SM. - THRESHOLD NOW DISPLACED/NEW CONTROLLING OBSTACLES AND STEPDOWN FIX AND RVR HAS BEEN REMOVED.
24. UPDATED CIRCLING MDA/HAA CAT A FROM 580/543 TO 540/503, CAT B FROM 580/543 TO 600/563, CAT C FROM 600/563 TO 620/583, CAT D FROM 620/583 AND VIS 2 TO 780/743 AND VIS 2 1/2, CAT E FROM 840/803 VIS 2 3/4 TO 940/903 VIS 3. - NEW CIRCLING CRITERIA APPLIED.
25. UPDATED PROCEDURE NAME FROM ILS OR LOC/DME RWY 32R TO ILS OR LOC RWY 32R. - IAW 8260.19H.
26. UPDATED ALTERNATE MINIMUMS FROM NA TO "ILS: STANDARD- NA WHEN TOWER CLOSED; LOC: STANDARD - CAT D 800-2 1/2, CAT E 1000-3, NA WHEN TOWER CLOSED. - IAW 8260.19H.
27. REMOVED NOTE "DME FROM NUQ TACAN. SIMULTANEOUS RECEPTION OF I-NUQ AND NUQ DME REQUIRED." - DME IS OFF OF MNQ LOC.
28. REMOVED NOTE "INOPERATIVE TABLE DOES NOT APPLY TO S-ILS 32R". - NEW INOP TABLE APPLIES AND 34:1 PENETRATIONS REMOVED.
29. REMOVED "CHART NUQ TACAN IN PROFILE" FROM ADDITIONAL FLIGHT DATA. - DME IS OFF OF MNQ LOC.
30. ADDED DME REQUIRED TO EQUIPMENT REQUIREMENTS NOTES. - IAW 8260.19H 8-6-8A(1).

04/03/19: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 03/28/19.
1. CHANGED REQUIRED EFFECTIVE DATE FROM ROUTINE TO 06/20/2019 ON PAGE 1 OF THE 8260-3.

COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ARPT MGR, ZOA NORCAL APP CON, NUQ ATCT

FLIGHT CHECKED BY

PENDING

Digitally signed by
LONNIE EVERHART

Apr 11, 2019

OFFICE

FIOG

DATE

DEVELOPED BY

CHRISTINE BAYSE

Digitally signed by

WARDELL HENNING

Apr 04, 2019

OFFICE

AJV-A432

DATE

02/25/2019

APPROVED BY

PATRICK MULQUEEN

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WARDELL HENNING

Apr 04, 2019

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AJV-A430

DATE

TITLE
MANAGER

QUALITY
18
CHECKED