

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
RNAV (RNP) STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.33**

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.

AIRPORT ID SNA	PROCEDURE NAME RNAV (RNP) Z RWY 20R	ORIGINAL/AMENDMENT 3	CITY SANTA ANA	STATE CA
AIRPORT ELEVATION 56	TDZE 54	SUPERSEDED RNAV (RNP) Z RWY 20R	DATED 11/10/2016	MAG VAR 12E
FACILITY RNAV	COORDINATES OF FACILITIES	ACTUAL EFFECTIVE DATE 5 SEPTEMBER 2024	REQUIRED EFFECTIVE DATE ROUTINE	EPOCH YEAR 2015
			CANCEL/SUSPEND	

TERMINAL ROUTES

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
JWARD	IAF	BONVY		TF	FB	1.00	280.51	5.45	6300
BONVY		DEKRT		TF	FB	0.50	262.77	2.73	5000
DEKRT		AMELE		TF	FB	0.50	257.96	1.51	4400
AMELE		EHVOX		TF	FB	0.50	257.93	3.06	3300
KLEVR	IAF	MNNIE		TF	FB	1.00	015.87	2.06	4400
MNNIE	IF	KLIPP		TF	FB	1.00	015.56	3.14	3400
KLIPP		CALIT		RF	FB	0.70	(2.01 NM RADIUS CW (CFTTD))	5.69	1600
CALIT		ZETOV	PFAF	RF	FB	0.70	(2.00 NM RADIUS CW (CFSJH))	0.63	1400
EHVOX	IF	FEBTA		TF	FB	0.50	195.95	3.57	2200
FEBTA		WEMDO		TF	FB	0.50	196.02	1.00	1900
WEMDO		ZETOV	PFAF	TF	FB	0.50	195.95	1.58	1400
ZETOV	PFAF	RW20R	MAP	TF	FO	0.30	195.95	4.11	
RW20R	MAP	MINOE		TF	FO	1.00	195.92	12.02	3000

MISSED APPROACH

MAP:

RNP: DA

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 ON TRACK 195.92 TO MINOE AND HOLD, CONTINUE CLIMB-IN-HOLD TO 3000.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

- | | | | | | |
|--------------------------------------|-----------------------------------|-----------------------|--------------------------|---------------------------|----------------|
| 1. PT | SIDE OF COURSE | OUTBOUND | FT WITHIN | MILES OF | (IAF) |
| 2. PROFILE STARTS AT ZETOV | | | | | |
| 3. FAC: 195.95 | PFAF: ZETOV | | DIST PFAF TO MAP: | DIST PFAF TO THLD: | |
| 4. MIN ALT: ZETOV 1400 | | | | | |
| 5. DIST TO THLD FROM OM: 4.11 | MM: | IM: | 150 HAT: | 322 HAT: 0.89 | GS ANT: |
| 6. MIN GP INCPT: 1400 | GP ALT AT PFAF: ZETOV 1400 | | | OM: | MM: |
| 7. GP ANGLE: 3.00 | 34:1: IS CLEAR | 20:1: IS CLEAR | TCH: 50.7 | | IM: |
| 8. MSA FROM: RW20R 6900 | | | | | |

PBN REQUIREMENTS NOTE:

RNP AR APCH - GPS. AUTHORIZATION REQUIRED. FROM JWARD: MIN RNP 0.50. FROM KLEVR: RF, MIN RNP 0.70.

NOTES:

CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS.
 CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
 CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW 5°C OR ABOVE 54°C.
 CHART PLANVIEW NOTE AT JWARD: (RNP 0.50).
 CHART PLANVIEW NOTE AT KLEVR: (RNP 0.70).
 CHART SPEED ICON IN PLANVIEW AT JWARD: MAX 190 KIAS.
 CHART SPEED ICON IN PLANVIEW AT KLEVR: MAX 200 KIAS.

ADDITIONAL FLIGHT DATA:

HOLD S, RT, 015.97 INBOUND.
 CHART MANDATORY 8000 AT JWARD.
 CHART MANDATORY 5000 AT KLEVR.
 CHART MANDATORY 4400 AT MNNIE.

MINIMUMS:

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

ALTERNATE: NA STANDARD

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
AUTHORIZATION REQUIRED																
RNP 0.11 DA	376	2600	322	376	2600	322	376	2600	322	376	2600	322				
RNP 0.15 DA	562	5500	508	562	5500	508	562	5500	508	562	5500	508				
RNP 0.30 DA	618	1 1/4	564	618	1 1/4	564	618	1 1/4	564	618	1 1/4	564				



CHANGES - REASONS

1. TDZE ELEVATION CHANGED FROM "55" TO "54" - NEW AIRNAV DATA AVAILABLE.
2. TERMINAL ROUTES: CHANGED "DSNEE TO BONVY" TO "JWARD TO BONVY" – PER FPT REQUEST.
3. TERMINAL ROUTES: BONVY TO DEKRT: CHANGED RNP FROM "0.30" TO "0.50" – PER FPT REQUEST.
4. TERMINAL ROUTES: BONVY TO DEKRT: CHANGED COURSE FROM "258.01" TO "262.77" AND DISTANCE FROM "4.53" TO "2.73" – BONVY FIX COORDINATES MOVED AND PER FPT REQUEST.
5. TERMINAL ROUTES: BONVY TO DEKRT: CHANGED ALTITUDE FROM "4600" TO "5000" – PER FPT REQUEST.
6. TERMINAL ROUTES: DEKRT TO AMELE: CHANGED RNP FROM "0.30" TO "0.50" – PER FPT REQUEST.
7. TERMINAL ROUTES: DEKRT TO AMELE: CHANGED ALTITUDE FROM "4200" TO "4400" – PER FPT REQUEST.
8. TERMINAL ROUTES: AMELE TO EHVOX: CHANGED RNP FROM "0.30" TO "0.50" – PER FPT REQUEST.
9. TERMINAL ROUTES: KLIPP TO CALIT: CHANGED RNP FROM "1.00" TO "0.70" – PER FPT REQUEST.
10. TERMINAL ROUTES: KLIPP TO CALIT: CHANGED DISTANCE FROM "5.70" TO "5.69" – ROUNDING CHANGE.
11. TERMINAL ROUTES: CALIT TO ZETOV: CHANGED RNP FROM "0.90" TO "0.70" – PER FPT REQUEST.
12. TERMINAL ROUTES: EHVOX TO FEBTA: CHANGED RNP FROM "0.30" TO "0.50" – PER FPT REQUEST.
13. TERMINAL ROUTES: FEBTA TO WEMDO: CHANGED RNP FROM "0.30" TO "0.50" – PER FPT REQUEST.
14. TERMINAL ROUTES: WEMDO TO ZETOV: CHANGED RNP FROM "0.30" TO "0.50" – PER FPT REQUEST.
15. TERMINAL ROUTES: ZETOV TO RW20R: CHANGED COURSE FROM "195.94" TO "195.95" – NEW TARGETS CALCULATION.
16. TERMINAL ROUTES: RW20R TO MINOE: CHANGED COURSE FROM "195.93" TO "195.92" – NEW TARGETS CALCULATION.
17. MISSED APPROACH INSTRUCTIONS: CHANGED FROM "CLIMB TO 3000 ON TRACK 195.93 TO MINOE" TO "CLIMB TO 3000 ON TRACK 195.92 TO MINOE AND HOLD, CONTINUE TO CLIMB-IN-HOLD TO 3000" – PER FPT REQUEST.
18. PROFILE LINE 3: FAC CHANGED FROM "195.94" TO "195.95" – IAW 8260.19I PARA 8-6-7.C.(1).
19. PROFILE LINE 4: MIN ALT: DELETED "DSNEE 8000", "KLEVR 5000", "AMELE 4200", "FEBTA 2200" AND "WEMDO 1900" – IAW 8260.19I PARA 8-6-7.D.
20. PROFILE LINE 7: TCH CHANGED FROM "50.7#" TO "50.7" – IAW 8260.19I PARA 8-6-7.G.(2).
21. PROFILE LINE 8: MSA CHANGED FROM "RW20R 7000" TO "RW20R 6900" – NEW TARGETS CALCULATION.
22. PBN REQUIREMENTS NOTE: ADDED "RNP AR APCH – GPS. AUTHORIZATION REQUIRED. FROM JWARD: MIN RNP 0.50. FROM KLEVR: RF, MIN RNP 0.70." – IAW 8260.19I PARA 8-6-8.B.(1).
23. NOTES: UPDATED NOTE FROM "CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW 5°/41°F OR ABOVE 54°C/130°F" TO "CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, NA BELOW 5°C OR ABOVE 54°C - NEW NOTE FORMATTING.
24. NOTES: DELETED "CHART NOTE: GPS REQUIRED" – NO LONGER REQUIRED DUE TO THE PBN REQUIREMENTS NOTE BEING ADDED.
25. NOTES: DELETED "CHART SPEED ICON IN PLANVIEW AT DSNEE: MAX 220 KIAS" – PER FPT REQUEST.
26. NOTES: ADDED "CHART SPEED ICON IN PLANVIEW AT JWARD: MAX 190 KIAS" – PER FPT REQUEST.
27. NOTES: ADDED "CHART SPEED ICON IN PLANVIEW AT KLEVR: MAX 200 KIAS" – PER FPT REQUEST.
28. NOTES: DELETED NOTE "CHART SPEED ICON IN PLANVIEW AT MNNIE: MAX 210 KIAS" – PER FPT REQUEST.
29. NOTES: REMOVED NOTE "CHART SPEED ICON IN PLANVIEW AT KLIPP: MAX 210 KIAS" – PER FPT REQUEST.
30. NOTES: DELETED "CHART SPEED ICON IN PLANVIEW AT EHVOX: MAX 210 KIAS" – PER FPT REQUEST.
31. NOTES: DELETED "CHART PLANVIEW NOTE: ADJACENT TO KLEVR IAF: RF REQUIRED" - NO LONGER REQUIRED.
32. NOTES: CHANGED FROM "CHART PLANVIEW NOTE AT DSNEE: (RNP 0.30)" TO "CHART PLANVIEW NOTE AT JWARD: (RNP 0.50)." - PER FPT REQUEST.
33. NOTES: CHANGED FROM "CHART PLANVIEW NOTE AT KLEVR: (RNP 0.90)" TO "CHART PLANVIEW NOTE AT KLEVR: (RNP 0.70)." - PER FPT REQUEST.
34. ADDITIONAL FLIGHT DATA NOTES: DELETED "ROUTE TYPE: A, H" – OLD NOTES NO LONGER REQUIRED.
35. ADDITIONAL FLIGHT DATA NOTES: DELETED "ROUTE TYPE QUALIFIER 1: F" – OLD NOTES NO LONGER REQUIRED.
36. ADDITIONAL FLIGHT DATA NOTES: DELETED "ROUTE TYPE QUALIFIER 2:S" – OLD NOTES NO LONGER REQUIRED.
37. ADDITIONAL FLIGHT DATA NOTES: DELETED "#TCH 92.2 MSL (DO NOT CHART) – UPDATED TO REFLECT CURRENT AIRNAV DATA AND TARGETS CALCULATIONS.
38. ADDITIONAL FLIGHT DATA NOTES: DELETED "CHART MANDATORY 6000 AT BONVY" – PER FPT REQUEST.
39. ADDITIONAL FLIGHT DATA NOTES: UPDATED NOTE FROM "CHART MANDATORY 8000 AT DSNEE" TO "CHART MANDATORY 8000 AT JWARD" – PER FPT REQUEST.
40. ADDITIONAL FLIGHT DATA NOTES: DELETED "CHART PLANVIEW NOTE: RADAR REQUIRED" - NO LONGER REQUIRED.
41. ADDITIONAL FLIGHT DATA NOTES: ADDED "HOLD S, RT, 015.97 INBOUND" - PER FPT REQUEST.
42. MINIMUMS: RNP 0.11: ALL CATS CHANGED FROM "377 DA/VIS 3000" TO "376 DA/VIS 2600" - DUE TO UPDATED TDZE IN AIRNAV.
43. MINIMUMS: RNP 0.15: ALL CATS CHANGED FROM "563 DA/VIS 1 1/4" TO "562 DA/VIS 5500" - DUE TO UPDATED TDZE IN AIRNAV.
44. MINIMUMS: RNP 0.30: ALL CATS CHANGED FORM "619 DA/VIS 1 1/2" TO "618 DA/VIS 1 1/4" - DUE TO UPDATED TDZE IN AIRNAV.



COORDINATED WITH:

A4A **ALPA** **AOPA** **APA** **HAI** **NBAA**

OTHER: ZLA, SOCAL APP CON, CA AERO, AMGR, SNA ATCT

FLIGHT CHECKED BY

KEVIN Y CHENG

Digitally signed by

BEV L BORDY

Jun 24, 2024

OFFICE

FPO

DATE

06/20/2024

DEVELOPED BY

WESTLEY OWENS

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BEV L BORDY

May 10, 2024

OFFICE

AJV-A431

DATE

03/01/2024

APPROVED BY

ERIC N SUSKI

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May 10, 2024

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DATE

TITLE
MANAGER

