

**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.

<u>AIRPORT ID</u> OAK	<u>PROCEDURE NAME</u> RNAV (RNP) Z RWY 28R	<u>ORIGINAL/AMENDMENT</u> 3	<u>CITY</u> OAKLAND	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 9	<u>TDZE</u> 7	<u>SUPERSEDED</u> RNAV (RNP) Z RWY 28R	<u>DATED</u> 12/10/2015	<u>MAG VAR</u> 14E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 12 JUNE 2025	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>EPOCH YEAR</u> 2015
			<u>CANCEL/SUSPEND</u>	

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>
BBUBB	IAF	NAGVY		TF	FB	1.00	230.50	4.88	4200
NAGVY		SKYLN		TF	FB	1.00	278.36	1.55	3800
SKYLN		GROVE		TF	FB	1.00	278.34	1.55	3400
FFIST	IAF	NAGVY		TF	FB	1.00	261.95	11.69	4200
MYSHN	IAF	CYMBL		TF	FB	1.00	291.71	4.04	5300
CYMBL	IAF	NAGVY		TF	FB	1.00	299.06	5.69	4200
GROVE	IF	URZAF		TF	FB	1.00	278.32	2.31	2700
URZAF		NIXDE		TF	FB	1.00	278.29	2.01	2100
NIXDE		CUVSA		TF	FB	0.60	278.30	2.15	1500
CUVSA	PFAF	RW28R	MAP	TF	FO	0.30	278.23	4.53	
RW28R	MAP	ZERMO		TF	FB	1.00	278.18	7.10	
ZERMO		REBAS		TF	FO	1.00	335.32	10.44	3000

MISSED APPROACH

MAP:

RNP: DA

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 ON 278.18 TRACK TO ZERMO AND ON 335.32 TRACK TO REBAS AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1.	PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF	(IAF)									
2.	PROFILE STARTS AT NAGVY														
3.	FAC:	278.23	PFAF:	CUVSA	DIST FAF TO MAP:	DIST FAF TO THLD:									
4.	MIN ALT:	NAGVY 4200, SKYLN 3800, GROVE 3400, URZAF 2700, NIXDE 2100, CUVSA 1500													
5.	DIST TO THLD FROM PFAF:	4.53	MM:	IM:	150 HAT:	325 HAT:	0.86	GS ANT:							
6.	MIN GP INCPT:	1500	GP ALT AT PFAF:	CUVSA 1500	OM:			MM:						IM:	
7.	GP ANGLE:	3.00	34:1:	IS CLEAR	20:1:	IS CLEAR	TCH:	52.8							
8.	MSA FROM:	RW28R 5100													

PBN REQUIREMENTS NOTE:

RNP AR APCH - GPS. AUTHORIZATION REQUIRED.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW 2°C OR ABOVE 54°C.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE RNP 0.30 ALL CATS VISIBILITY TO RVR 6000
CHART PLANVIEW NOTE AT NIXDE: (RNP 0.60).
CHART SPEED ICON IN PLANVIEW AT BBUBB: MAX 200 KIAS.
CHART SPEED ICON IN PLANVIEW AT FFIST: MAX 200 KIAS.
CHART SPEED ICON IN PLANVIEW AT GROVE: MAX 200 KIAS.

ADDITIONAL FLIGHT DATA:

HOLD S, RT, 343.64 INBOUND.
CHART AT OR ABOVE 4200 AT NAGVY.
CHART AT OR ABOVE 6000 AT BBUBB.
CHART AT OR ABOVE 3800 AT SKYLN.
CHART AT OR ABOVE 3400 AT GROVE.
CHART AT OR BELOW 9000 AND AT OR ABOVE 7000 AT FFIST.
CHART AT OR ABOVE 5300 AT CYMBL.
CHART AT OR ABOVE 6200 AT MYSHN.
CHART AT OR ABOVE 2700 AT URZAF.
CHART AT OR ABOVE 2100 AT NIXDE.

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 0.10 DA	332	2600	325	332	2600	325	332	2600	325	332	2600	325			
RNP 0.30 DA	418	4000	411	418	4000	411	418	4000	411	418	4000	411			



CHANGES - REASONS

1. TERMINAL ROUTES BBUBB TO NAVGY LENGTH CHANGED FROM 4.87 NM TO 4.88 NM – FIX NAGVY RELCOATED
2. TERMINAL ROUTES ADDED INITIAL STEPDOWN NAGVY TO SKYLN – PER ATC REQUEST
3. TERMINAL ROUTES ADDED INITIAL STEPDOWN SKYLN TO GROVE – PER ATC REQUEST
4. TERMINAL ROUTES REMOVED INTERMEDIATE NAGVY TO GROVE – PER ATC REQUEST
5. TERMINAL ROUTES ADDED INITIAL FFIST TO NAGVY – PER ATC REQUEST
6. TERMINAL ROUTES ADDED INITIAL MYSHN TO CYMBL – PER ATC REQUEST
7. TERMINAL ROUTES INITIAL CYMBL TO NAGVY COURSE CHANGED FROM 299.10 TO 299.06 – FIX NAGVY RELOCATED TO BE COINCIDENT WITH LOCALIZER.
8. TERMINAL ROUTES INTERMEDIATE GROVE TO URZAF COURSE CHANGED FROM 278.31 TO 278.32 – FIX GROVE AND URZAF RELOCATED TO BE COINCIDENT WITH LOCALIZER.
9. TERMINAL ROUTES INTERMEDIATE STEPDOWN URZAF TO NIXDE COURSE CHANGED FROM 278.28 TO 278.29 – FIX NIXDE AND FIX URZAF RELOCATED TO BE COINCIDENT WITH LOCALIZER.
10. TERMINAL ROUSE INTERMEDIATE STEPDOWN NIXDE TO CUVSA COURSE CHANGED FROM 278.26 TO 278.30 – FIX NIXDE AND FIX CUVSA RELOCATED TO BE COINCIDENT WITH LOCALIZER AND GPA/TCH.
11. TERMINAL ROUTES INTERMEDIATE STEPDOWN NIXDE TO CUVSA RNP CHANGED FROM 0.70 TO 0.60 – PER ATC REQUEST.
12. MINIMUMS REMOVED RNP 0.11 MINIMA – PER ATC REQUEST
13. MINIMUMS ADDED RNP 0.10 MINIMA – PER ATC REQUEST
14. MINIMUMS RNP 0.30 MINIMA DA/HAT CHANGED FROM 414/407 TO 418/411 – NEW MISSED CONTROLLING OBSTACLE
15. MINIMUMS RNP 0.30 MINIMA VIS CHANGED FROM RVR 4500 ALL CATS TO RVR 4000 ALL CATS – PER 8260.3F TABLE 3-3-1
16. ADDITIONAL FLIGHT DATA REMOVED “#TCH 58.6 MSL (DO NOT CHART)” – NO LONGER REQUIRED
17. ADDITIONAL FLIGHT DATA REMOVED “ROUTE TYPE: A, H” – NO LONGER REQUIRED
18. ADDITIONAL FLIGHT DATA REMOVED “ROUTE TYPE QUALIFIER 1: F” – NO LONGER REQUIRED
19. ADDITIONAL FLIGHT DATA REMOVED “ROUTE TYPE QUALIFIER 1: S” – NO LONGER REQUIRED
20. ADDITIONAL FLIGHT DATA REMOVED “CHART MANDATORY 5300 AT CYMBL” – NO LONGER REQUIRED
21. ADDITIONAL FLIGHT DATA REMOVED “CHART MANDATORY 5000 AT BBUBB” – NO LONGER REQUIRED
22. ADDITIONAL FLIGHT DATA ADDED “CHART AT OR ABOVE 5200 AT NAGVY” – PER ATC REQUEST
23. ADDITIONAL FLIGHT DATA ADDED “CHART AT OR ABOVE 6000 AT BBUBB” – PER ATC REQUEST
24. ADDITIONAL FLIGHT DATA ADDED “CHART AT OR ABOVE 3800 AT SKYLN” – PER ATC REQUEST
25. ADDITIONAL FLIGHT DATA ADDED “CHART AT OR ABOVE 3400 AT GROVE” – PER ATC REQUEST
26. ADDITIONAL FLIGHT DATA ADDED “CHART AT OR BELOW 9000 AND AT OR ABOVE 7000 AT FFIST” – PER ATC REQUEST
27. ADDITIONAL FLIGHT DATA ADDED “CHART AT OR ABOVE 5300 AT CYMBL” – PER ATC REQUEST
28. ADDITIONAL FLIGHT DATA ADDED “CHART AT OR ABOVE 6200 AT MYSHN” – PER ATC REQUEST
29. ADDITIONAL FLIGHT DATA ADDED “CHART AT OR ABOVE 2700 AT URZAF” – PER ATC REQUEST
30. ADDITIONAL FLIGHT DATA ADDED “CHART AT OR ABOVE 2100 AT NIXDE” – PER ATC REQUEST
31. NOTES CHANGED FROM “CHART PLANVIEW NOTE AT BBUBB AND CYMBL: (RNP 0.70) TO “CHART PLANVIEW NOTE AT NIXDE: (RNP 0.60) – IAW 8260.19J 4-6-10 AND ATC REQUEST FOR ADDITIONAL INITIAL LEG AND REVISED NONSTANDARD RNP VALUE IN INTERMEDIATE
32. NOTES CHANGED FROM “CHART NOTE: FOR INOPERATIVE MALSR, INCREASE RNP 0.11 ALL CATS VISIBILITY TO RVR 4500.” TO “CHART NOTE: FOR INOPERATIVE ALS, INCREASE RNP 0.30 ALL CATS VISIBILITY TO RVR 6000” – IAW 8260.19J 8-6-12 AND 8260.3F TABLE 3-3-1
33. PBN REQUIREMENTS NOTES CHANGED “CHART NOTE: GPS” TO “RNP AR APCH – GPS. AUTHORIZATION REQUIRED.” AND MOVED TO PBN REQUIREMENTS NOTES FROM NOTES – IAW 8260.19J 8-6-8
34. NOTES ADDED “CHART SPEED ICON IN PLANVIEW AT BBUBB: MAX 200 KIAS” – PER ATC REQUEST AND IAW 8260.19J 4-6-10
35. NOTES ADDED “CHART SPEED ICON IN PLANVIEW AT FFIST: MAX 200 KIAS” – PER ATC REQUEST AND IAW 8260.19J 4-6-10
36. NOTES ADDED “CHART SPEED ICON IN PLANVIEW AT MYSHN: MAX 200 KIAS” – PER ATC REQUEST AND IAW 8260.19J 4-6-10
37. NOTES CHANGED FROM “FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW 1°C (34°F) OR ABOVE 54°C (130°F)” TO “FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW 2°C OR ABOVE 54°C.” – IAW 8260.19J 8-6-10 AND NEW TEMPERATURE STUDY
38. PROFILE LINE 4 CHANGED FROM “NAGVY 4200, GROVE 3400, URZAF 2700, NIXDE 2100, CUVSA 1500” TO “SKYLN 3800, GROVE 3400, URZAF 2700, NIXDE 2100, CUVSA 1500” – IAW 8260.19J 8-6-7
39. PROFILE LINE 5 CHANGED FROM “DIST TO THLD FROM OM” TO “DIST TO THLD FROM PFAF” – PER 8260.19J 8-6-7
40. PROFILE LINE 5 ADDED “325 HAT: 0.86” -IAW 8260.19J 8-6-7
41. PROFILE LINE 7 CHANGED FROM “TCH: #52.8” TO “TCH: 52.8” - # NO LONGER REQUIRED
42. PROFILE LINE 7 ADDED “20:1 IS CLEAR” – IAW 8260.19J 8-6-7

2/27/2025: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 1/17/2025.

1. PROFILE LINE 2 CHANGED FROM SKYLN TO NAGVY - UPDATING TO MATCH OTHER 28R IAPS PER FPT REQUEST.
2. PROFILE LINE 4 CHANGED FROM "SKYLN 3800, GROVE 3400, URZAF 2700, NIXDE 2100, CUVSA 1500" TO "NAGVY 4200, SKYLN 3800, GROVE 3400, URZAF 2700, NIXDE 2100, CUVSA 1500" - UPDATING TO MATCH OTHER 28R IAPS PER FPT REQUEST.
3. NOTES CHANGED FROM "CHART SPEED ICON IN PLANVIEW AT MYSHN: MAX 200 KIAS" TO "CHART SPEED ICON IN PLANVIEW AT GROVE: MAX 200 KIAS" - UPDATING TO MATCH IFP CHECKLIST.



COORDINATED WITH:

A4A

X

ALPA

X

AOPA

X

APA

X

HAI

NBAA

X

OTHER: ZOA, NORCAL, OAK ATCT, AMGR, ATA

FLIGHT CHECKED BY

WENDI S GIMA

Digitally signed by

ROBERT G HAMILTON

Apr 24, 2025

OFFICE

AJF

DATE

04/22/2025

DEVELOPED BY

CHARLES HIRST

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Mar 04, 2025

OFFICE

AJV-A431

DATE

01/17/2025

APPROVED BY

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ROBERT G HAMILTON

Apr 24, 2025

OFFICE

AJV-A431

DATE

TITLE

MANAGER

