

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
RNAV (GPS) 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 (GPS) Y RWY 28L	<u>ORIGINAL/AMENDMENT</u> 5	<u>CITY</u> OAKLAND	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 9	<u>TDZE</u> 9	<u>SUPERSEDED</u> RNAV (GPS) Y RWY 28L	<u>ORIGINAL/AMENDMENT</u> 4A	<u>DATED</u> 09/15/2016
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 12 JUNE 2025	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>MAG VAR</u> 14E
				<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>
MYSHN	IAF	CYMBL		TF	FB	1.00	291.71	4.04	5300
CYMBL		JUPAP		TF	FB	1.00	294.38	6.71	3700
BBUBB	IAF	JUPAP		TF	FB	1.00	237.75	5.80	3700
FFIST	IAF	JUPAP		TF	FB	1.00	262.71	12.82	3700
JUPAP	IF	heder		TF	FB	1.00	278.32	4.37	2800
heder		VODSY		TF	FB	1.00	278.28	2.83	1900
VODSY	FAF	TENIE/3.19 NM TO RW28L		TF	FB	0.30	278.23	2.57	
TENIE/3.19 NM TO RW28L		RW28L	MAP	TF	FO	0.30	278.23	3.19	
RW28L	MAP	259 MSL		CA			278.23		
259 MSL		SOYOK		DF	FB	1.00			
SOYOK		SAU VOR/DME		TF	FO	1.00	285.20	14.06	4000

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW28L

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 4000 DIRECT SOYOK AND ON TRACK 285.20 TO SAU VOR/DME AND HOLD, CONTINUE CLIMB-IN-HOLD TO 4000.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1.	PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF	(IAF)									
2.	PROFILE STARTS AT JUPAP														
3.	FAC:	278.23	FAF:	VODSY	DIST FAF TO MAP:	5.77	DIST FAF TO THLD:	5.77							
4.	MIN ALT: JUPAP 3700, HEDER 2800, VODSY 1900, TENIE/3.19 NM TO RW28L 1080														
5.	DIST TO THLD FROM OM:		MM:		IM:		150 HAT:		250 HAT:	0.61	GS ANT:				
6.	MIN GP INCPT:	1900	GP ALT AT PFAF:	VODSY 1900					OM:		MM:			IM:	
7.	GP ANGLE:	3.00	34:1:	IS NOT CLEAR	20:1:	IS CLEAR	TCH:	55.0							
8.	MSA FROM: RW28L 5100														

PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: RWY 28L HELICOPTER VISIBILITY REDUCTION BELOW RVR 4000 NOT AUTHORIZED.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW 2°C OR ABOVE 54°C.
CHART SPEED ICON IN PLANVIEW AT BBUBB: MAX 200 KIAS.
CHART SPEED ICON IN PLANVIEW AT FFIST: MAX 200 KIAS.

ADDITIONAL FLIGHT DATA:

HOLD NE, RT, 217.21 INBOUND.
CHART FAS OBST: 168 ANTENNA (06-093041) 374225N/1220952W.
CHART 174 ANTENNA (06-109322) 374213N/1220826W.
CHART VDP AT 1.13 NM TO RW28L.
WAAS CHANNEL # 72700
REFERENCE PATH ID: W28A
CHART AT OR ABOVE 6200 AT MYSHN.
CHART AT OR ABOVE 5300 AT CYMBL.
CHART AT OR ABOVE 6000 AT BBUBB.
CHART AT OR BELOW 9000 AND AT OR ABOVE 7000 AT FFIST.
CHART CIRCLING ICON.
LTP HAE: -30 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 1400-3

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
LPV DA	259	4000	250	259	4000	250	259	4000	250	259	4000	250			
LNAV/VNAV DA	387	5500	378	387	5500	378	387	5500	378	387	5500	378			
LNAV MDA	420	5500	411	420	5500	411	420	6000	411	420	6000	411			
CIRCLING	560	1	551	560	1	551	660	1 3/4	651	1400	3	1391			



CHANGES - REASONS

1. AIRPORT NAME CHANGED FROM METROPOLITAN OAKLAND INTL TO SAN FRANCISCO BAY OAKLAND INTL - NAME CHANGED PER AIRNAV UPDATE.
2. TERMINAL ROUTES: ADDED INITIAL FFIST TO JUPAP - PER ATC REQUEST.
3. TERMINAL ROUTES: ADDED INITIAL MYSHN TO CYMBL - PER ATC REQUEST.
4. TERMINAL ROUTES: INTERMEDIATE JUPAP TO HEDER RNP CHANGED FROM "0.5" TO "1.0" - PER FAAO 8260.58C, TABLE 1-2-1.
5. TERMINAL ROUTES: INTERMEDIATE STEPDOWN HEDER TO VODSY RNP CHANGED FROM "0.5" TO "1.0" - IAW FAAO 8260.58C, TABLE 1-2-1.
6. TERMINAL ROUTES: HEDER TO VODSY MAG BRG CHANGED FROM "278.27" TO "278.28" - PFAF VODSY RELOCATED TO BE ALIGNED WITH ANGLE/TCH 3.0/55.
7. TERMINAL ROUTES: FINAL VODSY TO TENIE MAG BRG CHANGED FROM "278.24" TO "278.23" - PFAF VODSY RELOCATED TO BE ALIGNED WITH ANGLE/TCH 3.0/55.
8. TERMINAL ROUTES: FINAL STEP-DOWN FIX TENIE TO RW28L MAG BRG CHANGED FROM "278.24" TO "278.23" AND DISTANCE CHANGED FROM "3.20" TO "3.19" - PFAF VODSY RELOCATED TO BE ALIGNED WITH ANGLE/TCH 3.0/55.
9. TERMINAL ROUTES: CHANGED SEGMENT FROM "RW28L TO 209 MSL" TO "RW28L TO 259 MSL" AND COURSE CHANGED FROM "278.24" TO "278.23" - LPV OCS OBSTACLE PENETRATION RAISED HAT TO 250 AND REALIGNMENT WITH RNP TO SAME RUNWAY.
10. TERMINAL ROUTES: CHANGED SEGMENT FROM "209 MSL TO SOYOK" TO "259 MSL TO SOYOK" AND ADDED RNP VALUE 1.00 - NEW CONTROLLING OBSTACLE LPV AND TO CORRECT ARINC CODING.
11. PROFILE LINE 3: CHANGED FROM "278.24" TO "278.23" - FAF VODSY RELOCATED FOR REALIGNMENT WITH RNP TO SAME RUNWAY.
12. PROFILE LINE 4: REMOVED ASTERISK FROM SDF TENIE ALTITUDE AND CHANGED TENIE DISTANCE FROM "3.20" TO "3.19" - SDF TENIE MOVED FOR REALIGNMENT WITH RNP TO SAME RUNWAY.
13. PROFILE LINE 5: CHANGED DISTANCE TO THLD FROM "200 HAT: 0.45 NM" TO "250 HAT: 0.61" - IAW FAAO 8260.19J, PARA 8-6-7.
14. PROFILE LINE 7: ADDED "20:1 IS CLEAR" - IAW FAAO 8260.19J, PARA 8-6-7.
15. PROFILE LINE 7: CHANGED FROM "34:1 IS CLEAR" TO "34:1 IS NOT CLEAR" - IAW FAAO 8260.19J, PARA 8-6-7 AND MITIGATE T-NOTAM 4/8514.
16. ADDED NOTE "CHART SPEED ICON IN PLANVIEW AT FFIST: MAX 200 KIAS" - PER ATC REQUEST.
17. ADDED NOTE "CHART SPEED ICON IN PLANVIEW AT BBUBB: MAX 200 KIAS" - PER ATC REQUEST.
18. MINIMUMS: LPV DA/HAT CHANGED FROM "209/200" TO "259/250" - NEW SURVEY/FINAL CONTROLLING OBSTACLE/OCS PENETRATION AND MITIGATE T-NOTAM 4/8514.
19. MINIMUMS: LNAV/VNAV VIS ALL CATS CHANGED FROM "1 1/4 SM" TO "RVR 5500" - IAW FAAO 8260.3F VISIBILITY TABLES.
20. ADDITIONAL FLIGHT DATA: CHANGED FROM "CHART VDP AT 1.07 NM TO RW28L*" TO "CHART VDP: 1.13 NM TO RW28L"; REMOVED "LNAV ONLY" - TARGETS 7.4.1 CALCULATED DISTANCE AND ASTERISK NO LONGER REQUIRED.
21. DELETED "CHART NOTE: DME/DME RNP-0.3 NA" AND ADDED TO PBN REQUIREMENTS NOTE: "RNP APCH - GPS" - IAW FAAO 8260.19J, PARA 8-6-8.
22. CHANGED FROM "CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW 0°C (32°F) OR ABOVE 54°C (130°F)" TO "CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW 2°C OR ABOVE 54°C" - IAW FAAO 8260.19J, PARA 8-6-10 AND NEW TEMPERATURE STUDY.
23. CHART NOTE: ADDED "RWY 28L HELICOPTER VISIBILITY REDUCTION BELOW RVR 4000 NOT AUTHORIZED" - 34:1 VISUAL AREA IS PENETRATED AND MITIGATE T-NOTAM 4/8514.
24. ADDITIONAL FLIGHT DATA: REMOVED CHART MANDATORY 5300 AT CYMBL - NO LONGER REQUIRED.
25. ADDITIONAL FLIGHT DATA: REMOVED CHART MANDATORY 5000 AT BBUBB - NO LONGER REQUIRED.
26. ADDITIONAL FLIGHT DATA: ADDED "CHART AT OR ABOVE 5300 AT CYMBL" - PER ATC REQUEST.
27. ADDITIONAL FLIGHT DATA: ADDED "CHART AT OR ABOVE 6200 AT MYSHN" - PER ATC REQUEST.
28. ADDITIONAL FLIGHT DATA: ADDED "CHART AT OR ABOVE 6000 AT BBUBB" - PER ATC REQUEST.
29. ADDITIONAL FLIGHT DATA: ADDED "CHART AT OR BELOW 9000 AND AT OR ABOVE 7000 AT FFIST" - PER ATC AND FPT REQUEST.
30. ADDITIONAL FLIGHT DATA: CHANGED FROM LTP HAE: -29.9 M TO LTP HAE: -30 M - SIAP CALCULATED.
31. FAS DATA: CRC REMAINDER CHANGED FROM "2D19683A" TO "B68CB02B" - LTP CHANGED FROM "374320.1780N/1221221.6340W" TO "374320.1855N/1221221.6335W", FPAP CHANGED FROM 374353.8270N/1221405.6455W" TO "374353.8240N/1221405.6500W", LTP/FTP ELLIPSOIDAL HEIGHT CHANGED FROM "-00299" TO "-00300", AND VERTICAL ALERT LIMIT (VAL) CHANGED FROM "35.0" TO "50.00"/NEW CALCULATIONS/NEW LPV HAT.

COORDINATED WITH:

A4A

X

ALPA

X

AOPA

X

APA

X

HAI

NBAA

X

OTHER: ZOA ARTCC, NORCAL APP CON, ST AERO, OAK ATCT, AMGR.

FLIGHT CHECKED BY

WENDI S GIMA

Digitally signed by
CASIMIR L TABAKA
Apr 24, 2025

OFFICE

AJF

DATE

04/22/2025

DEVELOPED BY

WILLIAM HANBY

Digitally signed by
WILLIAM HANBY
Feb 26, 2025

OFFICE

AJV-A432

DATE

01/30/2025

APPROVED BY

CASIMIR L. TABAKA

Digitally signed by
CASIMIR L TABAKA
Apr 24, 2025

OFFICE

AJV-A432

DATE

05/08/2025

TITLE

MANAGER



AIRPORT ID
OAK

PROCEDURE NAME
RNAV (GPS) Y RWY 28L

ORIGINAL/AMENDMENT
5

CITY
OAKLAND

STATE
CA

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KOAK
RUNWAY	RW28L
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Y
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W28A
LTP/FTP LATITUDE	374320.1855N
LTP/FTP LONGITUDE	1221221.6335W
LTP/FTP ELLIPSOIDAL HEIGHT	-00300
FPAP LATITUDE	374353.8240N
FPAP LONGITUDE	1221405.6500W
THRESHOLD CROSSING HEIGHT (TCH)	00055.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0856
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0

CRC REMAINDER	B68CB02B
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ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K2
LTP ORTHOMETRIC HEIGHT	+00025
FPAP ORTHOMETRIC HEIGHT	+00025

