

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</u> METROPOLITAN OAKLAND INTL	<u>AIRPORT ID</u> KOAK	<u>PROCEDURE NAME</u> RNAV (RNP) Z RWY 12	<u>ORIGINAL/AMENDMENT</u> 2	<u>CITY</u> OAKLAND	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 9	<u>TDZE</u> 9	<u>SUPERSEDED</u> RNAV (RNP) Z RWY 12	<u>ORIGINAL/AMENDMENT</u> 1C	<u>DATED</u> 09/18/2014	<u>MAG VAR</u> 14E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 13 SEPTEMBER 2018	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL SUSPEND</u>	<u>EPOCH YEAR</u> 2015

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>
HIRMO	IAF	FREEM		TF	FB	1.00	252.57	7.01	4000
FREEM		JENAY		RF	FB	1.00	(2.24 NM RADIUS CCW (CFDTX))	3.04	3700
JENAY		BEEJ		TF	FB	1.00	174.65	1.41	3200
BEEJ	IF	MNNTY		TF	FB	1.00	174.58	3.00	2400
MNNTY		PLAZA		RF	FB	1.00	(2.11 NM RADIUS CCW (CFDTZ))	2.16	1800
NRTHM	IAF	ALCAT		TF	FB	1.00	138.40	4.26	3600
ALCAT		SHNGL		TF	FB	1.00	115.87	3.10	2600
SHNGL	IF	PLAZA	PFAF	TF	FB	1.00	115.90	3.00	1800
PLAZA	PFAF	RW12	MAP	TF	FO	0.30	115.93	5.95	
RW12	MAP	289 MSL		CA			115.93		
289 MSL		HISIS		DF	FB	1.00			
HISIS		YICPU		TF	FB	1.00	116.02	5.43	
YICPU		DECOT		TF	FO	1.00	102.69	3.01	5400

MISSED APPROACH

MAP:

RNP: DA

MISSED APPROACH INSTRUCTIONS:

CLIMB DIRECT HISIS TO CROSS HISIS AT OR BELOW 1600 THEN CLIMB TO 5400 ON TRACK 116.02 TO YICPU AND ON TRACK 102.69 TO DECOT AND HOLD, CONTINUE CLIMB-IN-HOLD 5400.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. PROFILE STARTS AT PLAZA

3. FAC: 115.93

PFAF:

DIST PFAF TO MAP:

DIST PFAF TO THLD:

4. MIN ALT: PLAZA 1800

5. DIST TO THLD FROM OM: 5.95

MM:

IM:

150 HAT:

HAT: 0.77

6. MIN GP INCPT: 1800

GP ALT AT PFAF : PLAZA 1800

OM:

MM:

IM:

7. GP ANGLE: 2.75

34:1: IS CLEAR

20:1: IS CLEAR

TCH: 55.1

8. MSA FROM: RW12 5100

PBN REQUIREMENTS NOTES

RNP AR APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW 0C OR ABOVE 54C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART PLANVIEW NOTE ADJACENT TO HIRMO IAF: RF REQUIRED.
CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS.
CHART NOTE: FOR INOPERATIVE ALS INCREASE RNP 0.15 VISIBILITY ALL CATS TO RVR 4500, RNP 0.30 VISIBILITY ALL CATS TO RVR 5500.
CHART PLANVIEW NOTE AT FREEM: MAX 210 KIAS UNTIL PLAZA.

ADDITIONAL FLIGHT DATA:

ROUTE TYPE: A, H
ROUTE TYPE QUALIFIER 1: F
ROUTE TYPE QUALIFIER 2: S
CHART AT OR BELOW 1600 AT HISIS
CHART MANDATORY 4000 AT HIRMO AND FREEM.
CHART MANDATORY 5000 AT NRTHM.
CHART MANDATORY 1800 AT PLAZA.
HOLD SE, LT, 295.73 INBOUND

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 0.15 DA	289	2400	280	289	2400	280	289	2400	280	289	2400	280			
RNP 0.30 DA	386	3500	377	386	3500	377	386	3500	377	386	3500	377			



CHANGES - REASONS

- 1. DELETED IAF RADIR AND ADDED NEW IAF NRTHM - AMENDED FOR STANDARD TERMINAL ARRIVAL CONNECTIVITY.
- 2. ADDED NEW IF SHNGL 3 NM NORTH OF PLAZA, WITH A CROSSING RESTRICTION OF AT OR ABOVE 2600 AND REMOVED 210 KIAS SPEED RESTRICTION AT ALCOT - IAW ATC OPERATIONAL REQUEST.
- 3. DELETED WP CEXUR AND FOLVU FROM BETWEEN IAF HIRMO AND PFAF PLAZA AND ADDED WP FREEM, JENAY, MNNTY AND NEW IF BEEJ - IAW WITH ATC OPERATIONAL REQUEST.
- 4. CHANGE MA PROCEDURE FROM RNP TO RNAV - RNP MA DID NOT COMPLY WITH CRITERIA.
- 5. CHANGED CHART NOTE: FOR INOPERATIVE MALSR INCREASE RNP 0.15 VISIBILITY ALL CATS TO RVR 4500, RNP 0.30 VISIBILITY ALL CATS TO RVR 1 1/2 MILE TO FOR INOPERATIVE ALS INCREASE RNP 0.15 VISIBILITY ALL CATS TO RVR 4500, RNP 0.30 VISIBILITY ALL CATS TO RVR 5500. - MINIMUMS CHANGED.
- 6. CHANGED RNP 0.15 DA/HAT FROM 299/290 TO 289/280, RNP 0.30 DA/HAT FROM 435/426 TO 386/377. - NEW EVALUATION RESULTS.
- 7. DELETED NOTE: GPS REQUIRED - ADDED PBN REQUIREMENTS NOTE: RNP AR APCH.
- 8. CHANGED 34:1 NOT CLEAR TO 34:1 IS CLEAR AND ADDED 20:1 IS CLEAR - NO VISUAL SFC PENETRATIONS.
- 9. DELETED PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT - ADDED VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
- 10. CHANGED CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW 1C OR ABOVE 54C TO FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW 0C OR ABOVE 54C. - UPDATED 5-YEAR TEMP HISTORY.



COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZOA, AMGR

FLIGHT CHECKED BY

CHARLES D CUNNINGHAM

Digitally signed by
ADOLFO D URRUTIA
May 03, 2018

OFFICE

FICO

DATE

04/30/2018

DEVELOPED BY

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APPROVED BY

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TITLE
MANAGER

