

**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</u> PORTLAND-HILLSBORO	<u>AIRPORT ID</u> KHIO	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 31L	<u>ORIGINAL/AMENDMENT</u> 1A	<u>CITY</u> PORTLAND	<u>STATE</u> OR
<u>AIRPORT ELEVATION</u> 208	<u>TDZE</u> 204	<u>SUPERSEDED</u> RNAV (GPS) RWY 31L	<u>ORIGINAL/AMENDMENT</u> 1	<u>DATED</u> 04/30/2015	<u>MAG VAR</u> 16E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 26 MARCH 2020	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2010

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>
VANTZ		FLOWR		TF	FB	1.00	348.11	17.00	5000
ELKES		HOBGU		TF	FB	1.00	308.04	14.79	7100
HOBGU		FLOWR		TF	FB	1.00	307.90	10.00	5000
BONVL		CUKIS		TF	FB	1.00	227.37	21.76	7000
CUKIS		FLOWR		TF	FB	1.00	227.04	13.28	5000
MULES	IAF	NNIKE		TF	FB	1.00	222.92	8.87	4000
FLOWR	IAF	NNIKE		TF	FB	1.00	307.16	9.55	4000
NNIKE	IF	INTLL		TF	FB	1.00	307.70	6.40	2000
INTLL	FAF	ZABAX/2.00 NM TO RW31L		TF	FB	0.30	307.63	3.41	
ZABAX/2.00 NM TO RW31L		RW31L	MAP	TF	FO	0.30	307.63	2.00	
RW31L	MAP	608 MSL		CA			307.63		
608 MSL		DUCKA		DF	FO	1.00			3900

MISSED APPROACH

MAP:

LNAV: RW31L

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3900 DIRECT DUCKA AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

QUALITY
7
CHECKED

PROFILE:

1. PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)

2. PROFILE STARTS AT NNIKE

3. FAC: 307.63 FAF: INTLL DIST FAF TO MAP: 5.41 DIST FAF TO THLD: 5.41

4. MIN ALT: NNIKE 4000, INTLL 2000, ZABAX/2.00 NM TO RW31L 880

5. DIST TO THLD FROM OM: MM: IM: 150 HAT: GS ANT: OM: MM: IM:

6. MIN GP INCPT: GP ALT AT FAF :

7. GP ANGLE: 34:1: IS NOT CLEAR 20:1: IS CLEAR TCH:

8. MSA FROM: RW31L 5000

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING TO RWY 13L, 31R NA AT NIGHT.
CHART NOTE: RWY 31L HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT MULES ON V448 NORTHBOUND.
CHART PLANVIEW NOTE PROCEDURE NA FOR ARRIVALS AT ELKES ON V165 EASTBOUND .

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
INTLL TO RW31L: 3.05/52
CHART VDP AT 1.29 NM TO RW31L
CHART FAS OBST: 359 TREE 453102N/1225505W.
FAS OBST: 450 AAO 452836N/1225228W.
CHART: 285 TOWER 452953N/1225545W.
970 AAO 452718N/1225215W.
HOLD NW, RT, 127.38 INBOUND

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 1/2, NA WHEN LOCAL WEATHER NOT AVAILABLE.

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
LNAV MDA	660	1	456	660	1	456	660	1 3/8	456	660	1 3/8	456			
CIRCLING	680	1	472	720	1	512	720	1 1/2	512	980	2 1/2	772			



CHANGES - REASONS

- 1. DELETE LPV AND LNAV/VNAV MINIMUMS AND ALL ASSOCIATED NOTES. - VGS PENETRATIONS EXIST WITH NO FUTURE PLANS TO REMOVE THEM.
- 2. REMOVED BACKUP ALTIMETER NOTE. - BACKUP ALTIMETER NOTE MOVED TO BACK OF 8260-9 AS A CONTINGENCY NOTE.
- 3. ADDED CHART NOTE: CIRCLING RWY 13L, 31R NA AT NIGHT. - MINOR AMENDMENT REQUESTED TO UPDATE PROCEDURE NOTES PROJECT.
- 4. DELETED NOTE: DME/DME RNP -0.3 NA NOTE. - MINOR AMENDMENT REQUESTED TO UPDATE PROCEDURE NOTES PROJECT.
- 5. CHARTED NOTE: RNP APCH. - MINOR AMENDMENT REQUESTED TO UPDATE PROCEDURE NOTES PROJECT.
- 6. CHANGED MISSED APPROACH CLIMB TO ALTITUDE FROM 3700 TO 3900 PENDING FLIGHT CHECK APPROVAL ON RNAV (GPS) RWY 13R HOLD IN LIEU AT KHIO. - APPLICATION OF NEW PRECIPITOUS TERRAIN ADJUSTMENT CALCULATION.
- 7. ADDED 20:1 IS CLEAR TO LINE 7. - IAW 8260.19H 8-6-7G(3).
- 8. FAS OBST CHANGED FROM 357 TREE TO 359 TREE - NEW SURVEYED OBSTACLE.
- 9. ADDED "RWY 31L" TO HELICOPTER VISIBILITY REDUCTION NOTE - 34:1 PENETRATIONS EXIST.
- 10. ADDED "CHART 285 TOWER" IN ADDITIONAL FLIGHT DATA - IAW 8260.19H 8-6-10 D.
- 11. ADDED VDA TO ADDITIONAL FLIGHT DATA - IAW 8260.19H 8-6-10 P(1).

THIS PROJECT INCORPORATED FDC NOTAM 8/5655.

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZSE, PDX APP CON, AMGR

FLIGHT CHECKED BY

PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJW-33) MEMO, OCTOBER 3, 2018, SUBJECT:
FLIGHT INSPECTION REVIEW NOT REQUIRED

OFFICE

Digitally signed by

DATE

HEIDI SNIDER

Oct 21, 2019

DEVELOPED BY

AUSTIN GOTCHER

Digitally signed by

AUSTIN GOTCHER

Oct 17, 2019

OFFICE

AJV-A422

DATE

07/30/2019

APPROVED BY

MARLON ROBINSON

Digitally signed by

HEIDI SNIDER

Oct 21, 2019

OFFICE

AJV-A420

DATE

TITLE

MANAGER

