

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> LIVINGSTON COUNTY SPENCER J HARDY	<u>AIRPORT ID</u> KOZW	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 31	<u>ORIGINAL/AMENDMENT</u> 1B	<u>CITY</u> HOWELL	<u>STATE</u> MI	
<u>AIRPORT ELEVATION</u> 962	<u>TDZE</u> 943	<u>SUPERSEDED</u> RNAV (GPS) RWY 31	<u>ORIGINAL/AMENDMENT</u> 1A	<u>DATED</u> 04/02/2015	<u>MAG VAR</u> 5W	<u>EPOCH YEAR</u> 1990
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 19 JULY 2018	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<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>
JEKAV	IAF	BROVI	NOPT	TF	FB	1.00	229.43	8.31	2800
POVCI	IAF	BROVI	NOPT	TF	FB	1.00	034.61	7.31	2800
BROVI	IF/IAF	PODEE		TF	FB	1.00	312.48	6.50	2100
PODEE	FAF	RW31	MAP	TF	FO	0.30	312.40	3.51	
RW31	MAP	1143 MSL		CA			312.40		
1143 MSL		HUCCY		DF	FO	1.00			3000

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW31

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT HUCCY AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
2. HOLD SE BROVI, RT, 312.48 INBOUND, 2800 FT. IN LIEU OF PT (IAF), MAX 6000.
3. FAC: 312.40 FAF: PODEE DIST FAF TO MAP: 3.51 DIST FAF TO THLD: 3.51
4. MIN ALT: BROVI 2800, PODEE 2100
5. DIST TO THLD FROM OM: MM: IM: 150 HAT: 200 HAT: 0.50
6. MIN GP INCPT: 2100 GP ALT AT FAF : PODEE 2100 OM: MM: IM:
7. GP ANGLE: 3.00 34:1: IS CLEAR 20:1: IS CLEAR TCH: 40.0
8. MSA FROM: RW31 3100

PBN REQUIREMENTS NOTE

RNP APCH

NOTES:

CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16C OR ABOVE 54C.

ADDITIONAL FLIGHT DATA:

CHART VDP AT 1.34 NM TO RW31*
*LNAV ONLY
WAAS CHANNEL #99722
REFERENCE PATH ID: W31A
CHART FAS OBST: 1143 POLE 423509N/0835546W.
HOLD NW, RT, 132.22 INBOUND
LTP HAE: 254.3 M

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
LPV DA	1143	3/4	200	1143	3/4	200	1143	3/4	200	1143	3/4	200			
LNAV/VNAV DA	1410	1 5/8	467	1410	1 5/8	467	1410	1 5/8	467	1410	1 5/8	467			
LNAV MDA	1400	1	457	1400	1	457	1400	1 3/8	457	1400	1 3/8	457			
CIRCLING	1400	1	438	1420	1	458	1420	1 1/2	458	1520	2	558			



CHANGES - REASONS

- 1. ADDED PBN REQUIREMENT NOTE "RNP APCH" - PER 8260.19H, PARA. 8-6-8A(1)(E).
- 2. REMOVED NOTE "DME/DME RNP-0.3 NA - PER 8260.19H, PARA. 1-1-5F(14), REPLACED BY PBN REQUIREMENTS NOTES.
- 3. REMOVED NOTES "BARO-VNAV NA WHEN USING FLINT ALTIMETER SETTING," "VDP NA WITH FLINT ALTIMETER SETTING" AND BACK-UP ALTIMETER NOTE - PER 8260-19H, PARA. 8-6-9F(3): MOVED TO 8260-9 PART C REMARKS BLOCK AND LISTED AS CONTINGENCY NOTES.
- 4. REMOVED FAHRENHEIT TEMPS FROM "FOR UNCOMPENSATED BARO-VNAV SYSTEMS..." NOTE - PER 8260.19H, PARA. 8-6-9S.
- 5. REMOVED IAF SEGMENT FROM SVM VORTAC TO IF/IAF BROVI AND ASSOCIATED AIRWAY ENTRY NOTE - PER CLE/DET METROPLEX SATELLITE AIRPORT CLEAN-UP AND AIRWAY CANCELLATION REQUIREMENTS.
- 6. MOVED VDP FROM 1.2 NM TO 1.3 NM TO RW31 - DUE TO RAISING OF LNAV MDA/HAT.
- 7. RAISED LNAV/VNAV DA/HAT FROM 1408/465 TO 1410/467 - CONTROLLING OBS RESURVEYED FROM 1098 FT TO 1100 FT.
- 8. RAISED LNAV MDA/HAT FROM 1360/417 TO 1400/457 - NEW CONTROLLING OBS 1143 POLE ADDED TO DATABASE SINCE LAST AMENDMENT.
- 9. RAISED LNAV CAT C AND D VISIBILITY FROM 1 1/8 SM TO 1 3/8 SM - PER 8260.3C TABLE 3-3-1 AND DUE TO 40 FT INCREASE IN HAT.
- 10. FAS DATA: CHANGED FPAP COORDINATES FROM 423825.0200N/0840005.2500W TO 423825.0230N/0840005.2520W - PER 8260.19H APPENDIX K.
- 11. FAS DATA: CRC REMAINDER CHANGED FROM AB7C626B TO F4C84BAD - RESULT FROM CHANGE IN FPAP LAT/LONG.



COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: DET APP CON, ZOB, ARPT MGR

FLIGHT CHECKED BY

JOHN R CLOUGH

DEVELOPED BY

RALPH DUMAR

APPROVED BY

JULIE MORGAN

Digitally signed by
RALPH DUMAR
Mar 26, 2018

OFFICE

FICO

OFFICE

AJV-5422

OFFICE

AJV-5420

DATE

05/07/2018

DATE

03/13/2018

DATE

Digitally signed by
ROBERT G HAMILTON
May 10, 2018

Digitally signed by
ROBERT G HAMILTON
May 10, 2018

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KOZW
RUNWAY	RW31
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W31A
LTP/FTP LATITUDE	423730.9500N
LTP/FTP LONGITUDE	0835829.3000W
LTP/FTP ELLIPSOIDAL HEIGHT	+02543
FPAP LATITUDE	423825.0230N
FPAP LONGITUDE	0840005.2520W
THRESHOLD CROSSING HEIGHT (TCH)	00040.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1224
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0
CRC REMAINDER	F4C84BAD

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K5
LTP ORTHOMETRIC HEIGHT	+02875
FPAP ORTHOMETRIC HEIGHT	+02875

