

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> ACB	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 2	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> BELLAIRE	<u>STATE</u> MI
<u>AIRPORT ELEVATION</u> 623	<u>TDZE</u> 623	<u>SUPERSEDED</u> RNAV (GPS) RWY 2	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>DATED</u> 12/30/2021
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 26 DECEMBER 2024	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>MAG VAR</u> 5W
				<u>EPOCH YEAR</u> 1990
				<u>CANCEL/SUSPEND</u>

TERMINAL ROUTES

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
TUGGS	IAF	KEENO	NOPT	TF	FB	1.00	292.45	5.00	2700
SKIPR	IAF	KEENO	NOPT	TF	FB	1.00	112.29	5.47	2700
KEENO	IF/IAF	FOVUP		TF	FB	1.00	022.37	4.10	2600
FOVUP		HATTR		TF	FB	1.00	022.42	1.93	2300
HATTR	FAF	MADZA/2.18 NM TO RW02		TF	FB	0.30	022.40	2.95	
MADZA/2.18 NM TO RW02		RW02	MAP	TF	FO	0.30	022.40	2.18	
RW02	MAP	902 MSL		CA			022.40		
902 MSL		POXOE		DF	FB	1.00			
POXOE		IROTO		TF	FO	1.00	029.65	11.04	3000

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW02

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT POXOE AND ON TRACK 029.65 TO IROTO AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
2. HOLD S KEENO, RT, 022.37 INBOUND, 2700 FT. IN LIEU OF PT (IAF), MAX 6000.
3. FAC: 022.40 FAF: HATTR DIST FAF TO MAP: 5.13 DIST FAF TO THLD: 5.13
4. MIN ALT: KEENO 2700, FOVUP 2600, HATTR 2300, MADZA/2.18 NM TO RW02 1360
5. DIST TO THLD FROM OM: MM: IM: 150 HAT: 279 HAT: 0.74 GS ANT: IM:
6. MIN GP INCPT: 2300 GP ALT AT PFAF: HATTR 2300 OM: MM:
7. GP ANGLE: 3.00 34:1: IS NOT CLEAR 20:1: IS CLEAR TCH: 45.0
8. MSA FROM: RW02 3500



PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: RWY 02 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT SKIPR ON V193-320 SOUTHWEST BOUND.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16°C OR ABOVE 54°C.
CHART NOTE: BARO-VNAV AND VDP NA WHEN USING TVC ALTIMETER SETTING.
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE TVC ALTIMETER SETTING: INCREASE LPV DA TO 954 FEET AND ALL VISIBILITIES 1/8 SM; INCREASE LNAV/VNAV DA TO 1187 FEET AND ALL VISIBILITIES 1/4 SM; INCREASE ALL MDAS 60 FEET AND LNAV VISIBILITY CATS C AND D 1/4 SM, AND CIRCLING VISIBILITY CATS B AND C 1/4 SM.
CHART SPEED ICON IN PLANVIEW AT TUGGS: MAX 220 KIAS.
CHART SPEED ICON IN PLANVIEW AT SKIPR: MAX 230 KIAS.

ADDITIONAL FLIGHT DATA:

HOLD NE, RT, 218.39 INBOUND.
CHART FAS OBST: 889 TREE (26-126380) 445839N/0851305W.
CHART VDP AT 1.48 NM TO RW02.
WAAS CHANNEL # 56301
REFERENCE PATH ID: W02A
LTP HAE: 155.1 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT C 1000-2 3/4, CAT D 1100-3, 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
LPV DA	902	1	279	902	1	279	902	1	279	902	1	279			
LNAV/VNAV DA	1135	1 3/8	512	1135	1 3/8	512	1135	1 3/8	512	1135	1 3/8	512			
LNAV MDA	1140	1	517	1140	1	517	1140	1 3/8	517	1140	1 3/8	517			
CIRCLING	1360	1	737	1380	1	757	1560	2 3/4	937	1640	3	1017			



CHANGES - REASONS

1. TERMINAL ROUTES: REMOVED GLR VOR/DME FEEDER – GLR VOR/DME REMOVED DUE TO VOR MON PROGRAM.
2. TERMINAL ROUTES: CHANGED FOVUP TO HATTR COURSE/DISTANCE FROM “22.37/2.00” TO “22.42/1.93” – MOVED PFAF HATTR 418 FEET SW TO ESTABLISH 3.00 GP/TCH 45.
3. TERMINAL ROUTES: ADDED “HATTR TO MADZA/2.18 NM TO RW02”, AND “MADZA/2.18 NM TO RW02 TO RW02” AND ALL ASSOCIATED DATA – ADDED SDF PER FPT TO REDUCE LNAV MINIMUMS.
4. MISSED APPROACH INSTRUCTIONS: CHANGED FROM “CLIMB TO 3000 DIRECT POXOE AND VIA 029.68 TRACK TO IROTO AND HOLD” TO “CLIMB TO 3000 DIRECT POXOE AND ON TRACK 029.65 TO IROTO AND HOLD.” – IAW 8260.19J, 8-6-6D(11).
5. PROFILE LINE 2: ADDED “MAX 6000” – IAW 8260.19J, 8-6-7B(2).
6. PROFILE LINE 3: UPDATED FAC/DIST FAF TO MAP/DIST FAF TO THLD FROM “022.41/5.06/5.06” TO “22.40/5.13/5.13” – PFAF POSITION REALIGNED 418 FEET SW BASED ON ANGLE AND TCH.
7. PROFILE LINE 4: ADDED MIN ALT “MADZA/2.18 NM TO RW02 1300” – NEW SDF ESTABLISHED FOR LOWER MINIMUMS.
8. PROFILE LINE 5: UPDATED DISTANCE TO THLD FROM “285 HAT: 0.76NM” TO “279 HAT 0.74”, MOVED FROM ADDITIONAL FLIGHT DATA – UPDATED LPV CONTROLLING OBSTACLE IAW 8260.19J, 8-6-7E.
9. PROFILE LINE 6: ADDED “GP ALT AT PFAF: HATTR 2300” - IAW 8260.19J, 8-6-7F(1).
10. PROFILE LINE 7: CHANGED TCH FROM “42.9” TO “45” AND ADDED “20:1: IS CLEAR”. – NO 20:1 PENETRATIONS EXIST IAW 8260-19J, 8-6-7 G(1)-(3)A.
11. NOTES: ADDED “CHART NOTE: RWY 02 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED” – 34:1 PENETRATIONS EXIST IAW 8260.19J, 8-6-12K(2).
12. NOTES: CHANGED “CHART NOTE: VDP NA WHEN USING CHERRY CAPITAL ALTIMETER SETTING.” TO “CHART NOTE: BARO-VNAV AND VDP NA WHEN USING TVC ALTIMETER SETTING.” - IAW 8260.19J 8-6-10.A(3) AND E(8-9).
13. NOTES: ADDED CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16°C OR ABOVE 54°C. - IAW 8260.19J 8-6-10.R.
14. NOTES: CHANGED “PROCEDURE NA FOR ARRIVALS AT SKIPR VIA V193-320 SOUTHWEST BOUND TO V193-320 SOUTHWEST BOUND.” TO “PROCEDURE NA FOR ARRIVALS AT SKIPR ON V193-320 SOUTHWEST BOUND.” – IAW 8260.19J, 8-2-5.G(2).
15. NOTES: CHANGED “CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE CHERRY CAPITAL ALTIMETER SETTING AND INCREASE ALL DAS/MDAS 60 FEET AND CIRCLING VISIBILITIES CAT B AND C ¼ SM.” TO “CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE TVC ALTIMETER SETTING: INCREASE LPV DA TO 954 FEET AND ALL VISIBILITIES 1/8 SM; INCREASE LNAV/VNAV DA TO 1187 FEET AND ALL VISIBILITIES 1/4 SM; INCREASE ALL MDAS 60 FEET AND LNAV VISIBILITY CATS C AND D 1/4 SM, AND CIRCLING VISIBILITY CATS B AND C 1/4 SM.” – NEW EVALUATION COMPLETED, IAW 8260.19J 8-6-10 F(4) AND IAW 8260.3E TABLE 3-3-1, AND TABLE 3-3-7.
16. NOTES: REMOVED “CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT GLR VOR/DME VIA V215-233 AND V420 NORTHEAST BOUND.” – GLR VOR/DME REMOVED PER VOR MON.
17. NOTES: ADDED “CHART SPEED ICON IN PLANVIEW AT TUGGS: MAX 220 KIAS.” AND “CHART SPEED ICON IN PLANVIEW AT SKIPR: MAX 230 KIAS.” – SPEED RESTRICTIONS ADDED TO IAFS IN ORDER TO MEET SEGMENT LEG LENGTH, IAW 8260.19J, 4-6-10G.
18. ADDITIONAL FLIGHT DATA: CHANGED CHART FAS OBSTACLE, FROM “1116 ANT 445701N/0851109W” TO “889 TREE (26-126380) 445839N/0851305W.”- UPDATED CONTROLLING OBSTACLE.
19. ADDITIONAL FLIGHT DATA: REMOVED “ROUTE TYPE: A, R”, “ROUTE TYPE QUALIFIER 1: J”, “ROUTE TYPE QUALIFIER 2: S, AND REMOVED “* *LNAV ONLY” – NO LONGER REQUIRED.
20. ADDITIONAL FLIGHT DATA: CHANGED VDP FROM “CHART VDP AT 1.74 MILES TO RW02” TO “CHART VDP AT 1.48 NM TO RW02.” – MOVED FAF HATTR 418 FT SW PER FPT, NEW VDP CALCULATED IAW 8260.19J, 8-6-11.M(2).
21. MINIMUMS: LPV DA/HAT ALL CATS CHANGED FROM “908/285” TO “902/279” –UPDATED LPV CONTROLLING OBSTACLE.
22. MINIMUMS: ADDED LNAV/VNAV MINIMUMS - PER FPT DIRECTION.
23. MINIMUMS: LNAV MDA/HAT ALL CATS CHANGED FROM “1220/597” TO “1140/517” - UPDATED OBSTACLE EVALUATION.
24. MINIMUMS: LNAV CAT C VIS FROM “1 1/2” TO “1 3/8” – UPDATED OBSTACLE EVALUATION AND IAW 8260.3E CH-1 VIS TABLE 3-3-1 APPLIED.
25. MINIMUMS: LNAV CAT D VIS FROM “1 3/4” TO “1 3/8” – UPDATED OBSTACLE EVALUATION AND IAW 8260.3E CH-1 VIS TABLE 3-3-1 APPLIED.
26. FAS DATA BLOCK: UPDATED CRC REMAINDER FROM “C04CA65F” TO “B3FB7388” - LTP/FTP LAT/LONG CHANGED FROM “445855.3200N/0851204.5000W” TO 445855.3155N/0851204.4685W”, FPAP LAT/LONG CHANGED FROM “450020.3200N/0851126.8800W” TO “450020.3165N/0851126.8640W”, AND TCH CHANGED FROM “42.9” TO “45.0”.

COORDINATED WITH:

A4A

ALPA

☒

AOPA

☒

APA

HAI

NBAA

☒

OTHER: ZMP, AMGR

Digitally signed by

FLIGHT CHECKED BY

SCOTT WIEBE

DAVID DANNER

Sep 30, 2024

OFFICE

FPO

DATE

09/25/2024

DEVELOPED BY

DAVID DANNER (WALKER R. MILLIGAN)

Digitally signed by

DAVID DANNER

Sep 30, 2024

OFFICE

AJV-A421

DATE

06/13/2024

APPROVED BY

DAVID DANNER

Digitally signed by

DAVID DANNER

Sep 30, 2024

OFFICE

AJV-A421

DATE

12/26/2024

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

DATA FIELD	DATA
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KACB
RUNWAY	RW02
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W02A
LTP/FTP LATITUDE	445855.3155N
LTP/FTP LONGITUDE	0851204.4685W
LTP/FTP ELLIPSOIDAL HEIGHT	+01551
FPAP LATITUDE	450020.3165N
FPAP LONGITUDE	0851126.8640W
THRESHOLD CROSSING HEIGHT (TCH)	00045.0
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)	50.0
CRC REMAINDER	B3FB7388

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K5
LTP ORTHOMETRIC HEIGHT	+01895
FPAP ORTHOMETRIC HEIGHT	+01895

