

**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.

AIRPORT ID GOV	PROCEDURE NAME RNAV (GPS) RWY 14	ORIGINAL/AMENDMENT 1	CITY GRAYLING	STATE MI
AIRPORT ELEVATION 1158	TDZE 1154	SUPERSEDED RNAV (GPS) RWY 14	DATED 09/09/2021	MAG VAR 6W
FACILITY RNAV	COORDINATES OF FACILITIES	ORIGINAL/AMENDMENT ORIG-D	REQUIRED EFFECTIVE DATE 12/26/2024	EPOCH YEAR 2000
		ACTUAL EFFECTIVE DATE 26 DECEMBER 2024		CANCEL/SUSPEND

TERMINAL ROUTES

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
CARGA		LUMSE		TF	FB	1.00	342.36	6.91	3500
BARAK		EGELE		TF	FB	1.00	085.03	11.22	3500
LUMSE	IAF	MAMER	NOPT	TF	FB	1.00	051.88	6.50	3500
EGELE	IAF	MAMER	NOPT	TF	FB	1.00	085.22	5.00	3500
EFFIT	IAF	MAMER	NOPT	TF	FB	1.00	232.03	6.50	3500
MAMER	IF/IAF	HOCEY		TF	FB	1.00	141.96	6.04	3000
HOCEY	FAF	GUYEG/2.14 NM TO RW14		TF	FB	0.30	142.03	3.52	
GUYEG/2.14 NM TO RW14		RW14	MAP	TF	FO	0.30	142.03	2.14	
RW14	MAP	1558 MSL		CA			142.03		
1558 MSL		MAMER		DF	FO	1.00			3500

MISSED APPROACH

MAP:

LNAV: RW14

MISSED APPROACH INSTRUCTIONS:

CLIMBING RIGHT TURN TO 3500 DIRECT MAMER AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

- PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
- HOLD NW MAMER, LT, 141.96 INBOUND, 3500 FT. IN LIEU OF PT (IAF), MAX 6000.
- FAC: 142.03 FAF: HOCEY DIST FAF TO MAP: 5.66 DIST FAF TO THLD: 5.66
- MIN ALT: MAMER 3500, HOCEY 3000, GUYEG/2.14 NM TO RW14 1880
- DIST TO THLD FROM OM: MM: IM: 150 HAT: GS ANT: MM: IM:
- MIN GP INCPT: GP ALT AT FAF:
- GP ANGLE: 34:1: IS NOT CLEAR 20:1: IS CLEAR TCH:
- MSA FROM: RW14 3500



PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: VDP NA WHEN USING HTL ALTIMETER SETTING.
 CHART NOTE: CIRCLING RWY 5, 23, 32 NA AT NIGHT.
 CHART NOTE: RWY 14 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
 CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
 CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT CARGA ON T265 SOUTHWEST BOUND.
 CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE HTL ALTIMETER SETTING AND INCREASE ALL MDAS 60 FEET AND LNAV VISIBILITY CAT C AND D 1/4 SM, AND CIRCLING VISIBILITY CAT C AND D 1/4 SM.

ADDITIONAL FLIGHT DATA:

CHART FAS OBST: 1393 TREE 444151N/0844627W.
 CHART R-4201 A & B.
 CHART R-4202.
 CHART VDP AT 1.49 NM TO RW14.
 HOCEY TO RW14: 3.00/45.

MINIMUMS:

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

ALTERNATE: NA STANDARD - CAT D 900-2 1/2, NA WHEN LOCAL WEATHER NOT AVAILABLE.

<u>CATEGORY:</u>	<u>A</u>			<u>B</u>			<u>C</u>			<u>D</u>			<u>E</u>		
	<u>FINAL TYPE</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>
LNAV MDA	1660	1	506	1660	1	506	1660	1 3/8	506	1660	1 3/8	506			
CIRCLING	1660	1	502	1720	1	562	1740	1 1/2	582	1960	2 1/2	802			



CHANGES - REASONS

1. TERMINAL ROUTES: DELETED FEEDER SEGMENT "GLR VOR/DME TO EFFIT" – GLR VOR MON.
2. TERMINAL ROUTES: UPDATED CARGA TO LUMSE COURSE/DISTANCE FROM "353.07/7.56" TO "342.36/6.91" – LUMSE MOVED 1.5NM SW TO SUPPORT ATC VECTORS.
3. TERMINAL ROUTES: UPDATED LUMSE TO MAMER COURSE, DISTANCE AND ALTITUDE FROM "051.90/5.00/3000" TO "051.88/6.50/3500" - LUMSE MOVED 1.5NM SW TO SUPPORT ATC VECTORS, NEW OBSTACLE EVALUATION.
4. TERMINAL ROUTES: UPDATED EFFIT TO MAMER COURSE, DISTANCE AND ALTITUDE FROM "232.02/5.00/3000" TO "232.03/6.50/3500" - MOVED 1.5NM NE TO SUPPORT ATC VECTORS, NEW OBSTACLE EVALUATION.
5. TERMINAL ROUTES: UPDATED EGELE TO MAMER ALTITUDE FROM "3000" TO "3500" – UPDATED OBSTACLE EVALUATION.
6. TERMINAL ROUTES: UPDATED MAMER TO HOCEY DISTANCE FROM "6.12" TO "6.04" – HOCEY MOVED 468 FEET NW TO PERMIT A 3.00/45.0 VDA/TCH.
7. TERMINAL ROUTES: HOCEY TO GUYEG/2.14 NM TO RWY 14 DISTANCE CHANGED FROM 3.38 TO 3.52 - HOCEY MOVED 468 FEET NW TO PERMIT A 3.00/45.0 VDA/TCH.
8. TERMINAL ROUTES: GUYEG/2.14 NM TO RWY 14 DISTANCE CHANGED FROM "2.20" TO "2.14" - HOCEY MOVED 468 FEET NW TO PERMIT A 3.00/45.0 VDA/TCH.
9. TERMINAL ROUTES: ADDED CA LEG RW14 TO 1558 MSL – IAW 8260.58C, 3-5-2.
10. TERMINAL ROUTES: ADDED DF LEG 1558 MSL TO MAMER – IAW 8260.58C, 3-5-2.
11. MISSED APPROACH INSTRUCTIONS: CHANGED FROM "CLIMBING RIGHT TURN TO 3000 DIRECT MAMER AND HOLD" TO "CLIMBING RIGHT TURN TO 3500 DIRECT MAMER AND HOLD" – INCREASED TO MATCH LUMSE TO MAMER HIL INITIAL OBSTACLE.
12. PROFILE LINE 2: CHANGED FROM "HOLD NW MAMER, LT, 141.96 INBOUND, 3000 FT IN LIEU OF PT (IAF)" TO "HOLD NW MAMER, LT, 141.96 INBOUND, 3500 FT. IN LIEU OF PT (IAF), MAX 6000 – IAW 8260.19J, 8-6-7B(2)(B), NEW OBSTACLE IDENTIFIED.
13. PROFILE LINE 3: DIST FAF TO MAP AND DIST FAF TO THLD CHANGED FROM "5.58" TO "5.66" - HOCEY MOVED 468 FEET NW TO PERMIT A 3.00/45.0 VDA/TCH.
14. PROFILE LINE 4: CHANGED FROM "MAMER 3000, HOCEY 3000, GUYEG/2.20 NM TO RW14 1880" TO "MAMER 3500, HOCEY 3000, GUYEG/2.14 NM TO RW14 1880" – NEW OBSTACLE IN INITIAL LUMSE TO MAMER SEGMENT AND HOCEY MOVED 468 FEET NW TO PERMIT A 3.00/45.0 VDA/TCH.
15. PROFILE LINE 7: ADDED "20:1 IS CLEAR" - IAW 8260.19J, 8-7-6.G (3).
16. PBN REQUIREMENTS NOTE: CHANGED FROM "RNP APCH" TO "RNP APCH – GPS" – IAW 8260.19J.8-6-8.D.(5)(A).
17. NOTES: UPDATED CHART NOTE "VDP NA WHEN USING HOUGHTON LAKE ALTIMETER SETTING" TO "VDP NA WHEN USING HTL ALTIMETER SETTING" – IAW 8260-19J, 8-6-10E(9).
18. CHANGED CHART PROFILE NOTE: FROM "VGSI AND DECENT ANGLES NOT COINCIDENT" TO "VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET})" - 8260.19J, 8-6-10.M(2).
19. NOTES: UPDATED "WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USED HOUGHTON LAKE ALTIMETER SETTING AND INCREASE ALL MDAS 60 FEET AND LNAV CAT C VISIBILITY 1/8 SM AND CIRCLING CAT D VISIBILITY 1/4 SM" TO "WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE HTL ALTIMETER SETTING AND INCREASE ALL MDAS 60 FEET AND LNAV VISIBILITY CAT C AND D 1/4 SM, AND CIRCLING VISIBILITY CAT C AND D 1/4 SM" – IAW 8260.19J, 8-6-12.N.(1)(A)(1).
20. NOTES: ADDED "CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT CARGA ON T265 SOUTHWEST BOUND" – IAW 8260.19J, 8-2-5, E(2).
21. ADDITIONAL FLIGHT DATA: UPDATED FAS OBSTACLE FROM "1391 TREE 444152N/0844827W" TO "1393 TREE 444151N/0844627W – UPDATED OBSTACLE EVALUATION.
22. ADDITIONAL FLIGHT DATA: UPDATED "CHART VDP AT 1.63 MILES TO RW14" TO "CHART VDP AT 1.49 NM TO RW14" – FAF MOVED 468 FEET NW AND ADJUSTMENT TO VDA.
23. ADDITIONAL FLIGHT DATA: UPDATED "HOCEY TO RW14: 3.05/45" TO "HOCEY TO RW14: 3.00/45" - FAF MOVED 468 FEET NW AND ADJUSTMENT TO VDA.
24. MINIMUMS: REDUCED LNAV MDA AND HAT FROM "1700 / 546" TO "1660 / 506" AND CAT C, D VISIBILITY FROM "1 5/8 AND 1 3/4" TO "1 3/8 AND 1 3/8" – UPDATED OBSTACLE EVALUATION AND IAW 8260.19J TABLE 3-3-1.
25. MINIMUMS: REDUCED CIRCLING CAT A CMDA / HAA FROM "1720 / 562" TO "1660 / 502"; CIRCLING CAT C CMDA / HAA FROM "1760 / 602" TO "1740 / 582" AND VISIBILITY FROM "1 3/4" TO "1 1/2" - UPDATED OBSTACLE EVALUATION AND IAW 8260.19J TABLE 3-3-7.

THIS IS AN UPDATE COPY OF THE FORM DEVELOPED ON 7/17/2024.
ADDED 12/26/2024 TO REQUIRED EFFECTIVE DATE.

COORDINATED WITH:

A4A ALPA AOPA APA HAI NBAA

OTHER: ZMP, AMGR, GOV ATCT

FLIGHT CHECKED BY

PENDING

Digitally signed by
CASIMIR L TABAKA **OFFICE** **DATE**
Nov 15, 2024

DEVELOPED BY

CASIMIR L. TABAKA (RONALD K. STROBACH)

Digitally signed by
CASIMIR L TABAKA **OFFICE** **DATE**
Nov 15, 2024 AJV-A432 07/17/2024

APPROVED BY

CASIMIR L. TABAKA

Digitally signed by
CASIMIR L TABAKA **OFFICE** **DATE** **TITLE**
Nov 15, 2024 AJV-A432 12/26/2024 MANAGER

