

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SUPERSEDED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

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:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF

(IAF)
2. HOLD NW MAMER, LT, 141.96 INBOUND, 3500 FT. IN LIEU OF PT (IAF), MAX 6000.
3. FAC: 142.03

FAF: HOCEY

DIST FAF TO MAP: 5.66

DIST FAF TO THLD: 5.66
4. MIN ALT: MAMER 3500, HOCEY 3000, GUYEG/2.14 NM TO RW14 1880
5. DIST TO THLD FROM OM:

MM:

IM:

150 HAT:

GS ANT:

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: 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.

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	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

Nov 15, 2024

OFFICE

DATE

DEVELOPED BY

CASIMIR L. TABAKA (RONALD K. STROBACH)

Digitally signed by

CASIMIR L TABAKA

Nov 15, 2024

OFFICE

AJV-A432

DATE

07/17/2024

APPROVED BY

CASIMIR L. TABAKA

Digitally signed by

CASIMIR L TABAKA

Nov 15, 2024

OFFICE

AJV-A432

DATE

12/26/2024

TITLE

MANAGER



FEDERAL AVIATION ADMINISTRATION FLIGHT STANDARDS SERVICE STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>AMDT NO.</u>	<u>CITY</u>	<u>STATE</u>	<u>AIRPORT ELEVATION</u>	<u>FACILITY</u>
GOV	RNAV (GPS) RWY 14	1	GRAYLING	MI	1158	RNAV

PART A: OBSTRUCTION DATA SEGMENTS

FEEDER

FROM CARGA TO LUMSE

RNP 1.00 DISTANCE 6.91 PAT MAP HAT HMAS

<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
TOWER (26-000479)	444453.00N/0850408.00W	2470	250	50	4D	1000					3500
TERRAIN	443827.00N/0845851.00W	1351 (1400)								AS1500	2900

COMPUTATIONS

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FEEDER

FROM BARAK TO EGELE

RNP 1.00 DISTANCE 11.22 PAT MAP HAT HMAS

<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
TOWER (26-000409)	444807.39N/0850751.15W	1590	20	3	1A	1000				AT910	3500
TERRAIN	444900.00N/0850239.00W	1312 (1300)								AS1500	2800

COMPUTATIONS

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INITIAL

FROM

LUMSE

TO

MAMER

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>			<u>HAT</u>	<u>HMAS</u>				
1.00	6.50										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
TOWER (26-000479)	444453.00N/0850408.00W	2470	250	50	4D	1000					3500
TERRAIN	445012.00N/0845551.00W	1459 (1500)								AS1500	3000

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL

FROM

EGELE

TO

MAMER

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>			<u>HAT</u>	<u>HMAS</u>				
1.00	5.00										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	445012.00N/0845548.00W	1660	215	8	4B	1000				AT840	3500
TERRAIN	445012.00N/0845551.00W	1459 (1500)								AS1500	3000

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL

FROM

EFFIT

TO

MAMER

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>			<u>HAT</u>	<u>HMAS</u>				
1.00	6.50										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
TOWER (26-002311)	445109.31N/0845131.87W	1750	500	50	5D	1000				AT750	3500
TERRAIN	445300.00N/0844842.00W	1509 (1500)								AS1500	3000

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE

FROM

MAMER (IF/IAF)

TO

HOCEY

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>			<u>HAT</u>	<u>HMAS</u>				
1.00	6.04										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	445012.00N/0845548.00W	1660	215	8	4B	500				AT840	3000
TERRAIN	445012.00N/0845533.00W	1443 (1400)								AS1500	2900

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL: LNAV

FROM

HOCEY

TO

GUYEG/2.14 NM TO RW14

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>		<u>HMAS</u>				
0.30	3.52										
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	444533.00N/0844836.00W	1562	215	8	4B	250				RA60	1880

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL: LNAV STEPDOWN

FROM

GUYEG/2.14 NM TO RW14

TO

RW14

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>		<u>HAT</u>		<u>HMAS</u>				
0.30	2.14		RW14		506						
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
TREE	444151.00N/0844627.00W	1393	215	8	4B	250					1660

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



HOLD-IN-LIEU OF PT

FROM
MAMER

TO
P-5

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u> P-5	<u>MAP</u>		<u>HAT</u>				<u>HMAS</u>		
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
TOWER (26-002311)	445109.31N/0845131.87W	1750	500	50	5D	1000				AT750	3500
TERRAIN	445227.00N/0845157.00W	1473 (1500)								AS1500	3000

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH: LNAV

FROM
RW14

TO
MAMER

<u>RNP</u> 0.30-1.00	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>				<u>HAT</u>	<u>HMAS</u> 1560			
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
							ASC				3000
AAO	443442.00N/0844751.00W	1742	215	8	4B	1000					2800
TERRAIN	443432.00N/0844751.00W	1542 (1500)								AS1500	3000

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

AIRPORT ID
GOV

PROCEDURE NAME
RNAV (GPS) RWY 14

AMDT NO.
1

CITY
GRAYLING

STATE
MI

AIRPORT ELEVATION
1158

FACILITY
RNAV

CIRCLING

☐ ALL CATS

☒ CAT A

☒ CAT B

☒ CAT C

☒ CAT D

☐ CAT E

☐ NOT AUTHORIZED

OBSTRUCTION	COORDINATES	RADIUS	HAA	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
CATEGORY A											
TREE	444118.00N/0844554.00W	1.30	502	1321	215	8	4B	300		SI	1660
CATEGORY B											
TREE	444103.00N/0844624.00W	1.85	562	1403	215	8	4B	300			1720
CATEGORY C											
TOWER (26-024811)	443820.80N/0844158.17W	2.90	582	1439	20	20	1C	300			1740
CATEGORY D											
AAO	443651.00N/0844321.00W	3.80	802	1641	215	8	4B	300			1960

CIRCLING REMARKS:

MSA

CENTER	RADIUS
RW14	25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	TOWER (26-000479)	444453.00N/0850408.00W	292	14.8	2470	250	50	4D	1000			3500

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH

ZMP ARTCC, GOV TOWER, LAN FSS

WX SERVICE	LOCATION	HRS OPERATION	ALTIMETER SOURCE	DISTANCE	SERVICE-A	ADJUSTMENTS
ASOS	GOV	24	GOV	0	Y	0
BACK-UP WX SERVICE	LOCATION	HRS OPERATION	ALTIMETER SOURCE	DISTANCE	SERVICE-A	ADJUSTMENTS
ASOS	HTL	24	HTL	19.42	Y	46

WX REMARKS:

RASS PRESSURE PATTERNS THE SAME
KGOV 1158, KHTL 1149
RA = 46.0.

PRIMARY NAVAID	MONITOR POINT	HRS OPERATION	CAT
APPROACH AND RUNWAY LIGHTING SYSTEM		RUNWAY MARKINGS	RUNWAY VISUAL RANGE
RW05 - MIRL (PCL), REIL (PCL), PAPI-4L (PCL)		NPI-F	
RW14 - MIRL (PCL), REIL (PCL), PAPI-4L (PCL)		NPI-F	
RW23 - MIRL (PCL), REIL (PCL), PAPI-4L (PCL)		NPI-F	
RW32 - MIRL (PCL), REIL (PCL), PAPI-4L (PCL)		NPI-F	

GLIDESLOPE ANGLE	ELEV RWY THRESHOLD	TCH	ELEV GS ANTENNA	DISTANCE FROM RWY	VGSI ANGLE	TCH
					3.00	29.2

FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD	☒	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE
ON CENTERLINE	☒	FT FROM CENTERLINE	

CRITICAL TEMPERATURES

CRITICAL LOW	CRITICAL HIGH	ACT	APT ISA
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CRITICAL TEMPERATURE REMARKS:

"VISUAL PORTION OF FINAL" PENETRATIONS

FINAL TYPE	CIRCLING RWY 23		
20:1			
1215 TREE (26-028941) 444125.5000N/0844301.4000W (7.33)		1216 TREE (26-064723) 444127.3100N/0844301.8900W (3.26)	
FINAL TYPE	CIRLCING RWY 05		
20:1			

QUALITY



<u>AIRPORT ID</u> GOV		<u>PROCEDURE NAME</u> RNAV (GPS) RWY 14	<u>AMDT NO.</u> 1	<u>CITY</u> GRAYLING	<u>STATE</u> MI	<u>AIRPORT ELEVATION</u> 1158	<u>FACILITY</u> RNAV
1231 TREE (26-057360) 444037.4200N/0844421.7900W (21.17)				1224 TREE (26-068748) 444036.7700N/0844420.6700W (14.81)			
1228 TREE (26-067837) 444034.1300N/0844420.4700W (10.06)				1232 TREE (26-064737) 444032.5400N/0844420.1800W (9.23)			
FINAL TYPE	CIRLCING RWY 32						
20:1							
1164 VEHICLE ON ROAD (26-057353) 444019.3900N/0844321.5200W (9.11)				1206 TREE (26-063668) 444013.0900N/0844311.7100W (3.54)			
FINAL TYPE	LNAV						
34:1							
1216 TREE (26-028942) 444105.2000N/0844427.0000W (21.44)				1226 TREE (26-057301) 444107.0600N/0844431.1000W (21.40)			
1210 TREE (26-057466) 444105.1100N/0844430.3100W (10.75)				1230 TREE (26-057909) 444113.5800N/0844431.6200W (10.64)			
1220 TREE (26-063963) 444107.3400N/0844434.3500W (10.01)				1199 TREE (26-066890) 444101.7300N/0844428.6200W (9.49)			
1235 TREE (26-056957) 444117.6100N/0844432.0300W (6.39)				1191 TREE (26-100597) 444105.9000N/0844420.3000W (4.81)			
1220 TREE (26-062614) 444109.3800N/0844435.3200W (4.20)				1209 TREE (26-057302) 444106.3400N/0844432.3400W (4.12)			
1198 TREE (26-098346) 444106.5400N/0844424.6700W (3.99)				1220 TREE (26-057907) 444108.0400N/0844438.0400W (3.07)			
1206 TREE (26-057262) 444109.7900N/0844426.2900W (2.63)				1226 TREE (26-067916) 444109.1700N/0844440.7800W (2.61)			
1192 TREE (26-057432) 444106.7700N/0844421.6600W (1.94)				1224 TREE (26-066482) 444110.1200N/0844438.5200W (1.90)			
1196 TREE (26-057440) 444103.1900N/0844430.1900W (1.05)							
<u>PENETRATIONS REMARKS:</u>							

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or

5280-FT "PROCEED VFR" SEGMENT LEVEL SURFACE AREA PENETRATIONS

PENETRATIONS REMARKS:

PART C: GENERAL REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.
100' VEGETATION USED PER CEN FPT.

TAA, LPV, LNAV/VNAV NOT DEVELOPED PER FPT REQUEST.
ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.



PART D: AIRSPACE

DOCKET #

ALL DISTANCES TO 1/100NM; ELEVATION TO NEAREST 100 FEET; COORDINATES TO 1/100 SECOND; DEG TO 1/100 DEGREE

DISTANCE FROM	THLD	TO 1000FT POINT	3.66
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	136.03
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	1400
DISTANCE FROM	THLD	TO 1500FT POINT	5.46
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	1.95
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	136.03
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	1400

THRESHOLD COORDINATES (IF STR-IN)	444054.03N/0844411.00W
ARP COORDINATES	444049.20N/0844343.90W
RUNWAY APCH END AND DIST FURTHEST FROM ARP	RUNWAY 23 DISTANCE 0.60 NM
FAF COORDINATES	444458.49N/0844941.41W
FIX NAME COORDINATES	

REMARKS

PART E: PREPARED BY

NAME	OFFICE	DATE	TITLE
CASIMIR L. TABAKA (RONALD K. STROBACH)	AJV-A432	07/17/2024	AERONAUTICAL INFORMATION SPECIALIST

