

**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> IKW	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 24	<u>ORIGINAL/AMENDMENT</u> 2	<u>CITY</u> MIDLAND	<u>STATE</u> MI
<u>AIRPORT ELEVATION</u> 635	<u>TDZE</u> 635	<u>SUPERSEDED</u> RNAV (GPS) RWY 24	<u>DATED</u> 04/22/2021	<u>MAG VAR</u> 6W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>EPOCH YEAR</u> 2000
				<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>
BANJO		DOLTE		TF	FB	1.00	174.55	16.19	3000
MBS VOR/DME		EGOPE		TF	FB	1.00	037.34	9.65	3000
DOLTE	IAF	FAMED	NOPT	TF	FB	1.00	156.14	6.12	3000
EGOPE	IAF	FAMED	NOPT	TF	FB	1.00	336.24	6.12	3000
FAMED	IF/IAF	BIRSE		TF	FB	1.00	246.18	6.03	2300
BIRSE	FAF	EHAIFY/1.80 NM TO RW24		TF	FB	0.30	246.12	3.26	
EHAIFY/1.80 NM TO RW24		RW24	MAP	TF	FO	0.30	246.12	1.80	
RW24	MAP	914 MSL		CA			246.12		
914 MSL		CADOB		DF	FO	1.00			3000

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW24

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT CADOB AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

- PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
- HOLD NE FAMED, RT, 246.18 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 6000.
- FAC: 246.12 FAF: BIRSE DIST FAF TO MAP: 5.06 DIST FAF TO THLD: 5.06
- MIN ALT: FAMED 3000, BIRSE 2300, EHAIFY/1.80 NM TO RW24 1260
- DIST TO THLD FROM OM: MM: IM: 150 HAT: 279 HAT: 0.71 GS ANT: MM: IM:
- MIN GP INCPT: 2300 GP ALT AT PFAF: BIRSE 2300
- GP ANGLE: 3.00 34:1: IS NOT CLEAR 20:1: IS CLEAR TCH: 53.0
- MSA FROM: RW24 2900



PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: BARO-VNAV AND VDP NA WHEN USING MBS ALTIMETER SETTING.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16°C OR ABOVE 54°C.
CHART NOTE: CIRCLING RWY 18, 36 NA AT NIGHT.
CHART NOTE: RWY 24 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON MBS VOR/DME AIRWAY RADIALS 320 CW 016.
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE MBS ALTIMETER SETTING AND INCREASE LPV DA TO 945 FEET; INCREASE LNAV/VNAV DA TO 1099 FEET AND ALL VISIBILITIES 1/8 SM. INCREASE ALL MDAS 40 FEET AND LNAV VISIBILITY CAT C 1/8 SM.

ADDITIONAL FLIGHT DATA:

HOLD SW, LT, 065.86 INBOUND.
CHART FAS OBST: 786 TREE (26-141834) 434103N/0841327W.
CHART 809 TREE (26-142327) 434126N/0841315W.
CHART VDP AT 1.25 NM TO RW24.
WAAS CHANNEL # 72912
REFERENCE PATH ID: W24A
LTP HAE: 159.1 M

MINIMUMS:

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

ALTERNATE: NA STANDARD - 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>	<u>HAT/HAA</u>
LPV DA	914	7/8	279	914	7/8	279	914	7/8	279		NA					
LNAV/VNAV DA	1060	1 1/4	425	1060	1 1/4	425	1060	1 1/4	425		NA					
LNAV MDA	1060	1	425	1060	1	425	1060	1 1/4	425		NA					
CIRCLING	1080	1	445	1100	1	465	1240	1 3/4	605		NA					



CHANGES - REASONS

1. CHANGES FROM P-NOTAM AMENDMENTS 1A AND 1B INCORPORATED INTO THIS FORM - REQUIRED IAW 8260.19J 8-3-4C(3).
2. TERMINAL ROUTES: CHANGED COURSE AND DISTANCE ON FEEDER SEGMENT FROM BANJO TO DOLTE FROM 173.37/17.26 TO 174.55/16.19 – IAF DOLTE MOVED 6805 FEET NORTHWEST TO SUPPORT ATC VECTORS.
3. TERMINAL ROUTES: REMOVED FEEDER SEGMENT FROM MOP VOR/DME TO DOLTE – MOP VORMON.
4. TERMINAL ROUTES: CHANGED COURSE AND DISTANCE ON FEEDER SEGMENT FROM MBS VOR/DME TO EGOPE FROM 031.85/10.24 TO 037.34/9.65 - IAF EGOPE MOVED 6804 FEET SOUTHEAST TO SUPPORT ATC VECTORS.
5. TERMINAL ROUTES: CHANGED COURSE AND DISTANCE ON INITIAL SEGMENT FROM DOLTE TO FAMED FROM 156.15/5.00 TO 156.14/6.12 – IAF DOLTE MOVED 6379 FEET NORTHWEST TO SUPPORT ATC VECTORS.
6. TERMINAL ROUTES: CHANGED COURSE AND DISTANCE ON INITIAL SEGMENT FROM EGOPE TO FAMED FROM 336.23/5.00 TO 336.24/6.12 – IAF EGOPE MOVED 6804 FEET SOUTHEAST TO SUPPORT ATC VECTORS.
7. TERMINAL ROUTES: CHANGED COURSE AND DISTANCE ON INTERMEDIATE SEGMENT FROM FAMED TO BIRSE FROM 246.19/6.10 TO 246.18/6.03 – FAF MOVED 416 FEET NORTHEAST BASED ON GPA/TCH CALCULATION/STABILIZED DESCENT.
8. TERMINAL ROUTES: ADDED FINAL SEGMENT “BIRSE TO EHAFY/1.80 NM TO RW24” / COURSE: 246.12/ DISTANCE: 3.26 – CURRENT CRITERIA REQUIREMENT.
9. TERMINAL ROUTES: ADDED FINAL STEPDOWN SEGMENT “EHAFY/1.80 NM TO RW24” /COURSE: 246.12 /DISTANCE 1.80 – CURRENT CRITERIA REQUIREMENT.
10. TERMINAL ROUTES: ADDED CA LEG SEGMENT “RW24 TO 914 MSL” /COURSE: 246.12 – CURRENT CRITERIA REQUIREMENT.
11. TERMINAL ROUTES: ADDED DF LEG SEGMENT “914 MSL TO CADOB” – CURRENT CRITERIA REQUIREMENT.
12. PROFILE LINE 2: CHANGED HIL FAMED INBOUND COURSE FROM 246.19 TO 246.18 AND ADDED “MAX 6000” – INTERMEDIATE ALIGNMENT; IAW 8260.19J 8-6-7 B(2).
13. PROFILE LINE 3: CHANGED FAC FROM 246.11 TO 246.12 AND DIST FAF TO MAP/ DIST FAF TO THLD FROM 4.99 TO 5.06 – FAF RELOCATED BASED ON GPA/TCH CALCULATION.
14. PROFILE LINE 5: ADDED “279 HAT: 0.71” AND REMOVED “DISTANCE TO THLD FROM 386 HAT: 1.05 NM” FROM ADDITIONAL FLIGHT DATA – LOWERED LPV DA; IAW 8260.19J 8-6-7 E.
15. PROFILE LINE 7: ADDED “20:1 IS CLEAR” – IAW 8260.19J 8-6-7 G(3)A.
16. REMOVED “CHART NOTE: DME/DME RNP-0.3” FROM NOTES AND ADDED “RNP APCH – GPS” TO PBN REQUIREMENTS NOTES – IAW 8260.19J 8-6-8 D(5)A(1).
17. NOTES: CHANGED NOTE FROM “BARO-VNAV NA WHEN USING MBS INTL ALTIMETER SETTING” TO “BARO-VNAV AND VDP NA WHEN USING MBS ALTIMETER SETTING” – VDP ADDED TO PROCEDURE; APPLICATION OF LOCATION ID IAW 8260.19J.
18. NOTES: CHANGED CHART NOTE FROM “FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16C (4F) OR ABOVE 54C (130F)” TO “FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16°C OR ABOVE 54°C” – FAHRENHEIT VALUES REMOVED IAW 8260.19J 8-6-10 R.
19. NOTES: CHANGED CHART NOTE FROM “VISIBILITY REDUCTION BY HELICOPTERS NA” TO “RWY 24 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED” – IAW 8260.19J 8-6-12 K(2).
20. NOTES: CHANGED CHART PLANVIEW NOTE FROM “PROCEDURE NA FOR ARRIVALS AT MBS VOR/DME VIA V45 SOUTHBOUND” TO “PROCEDURE NA FOR ARRIVAL ON MBS VOR/DME AIRWAY RADIALS 320 CW 016” – IAW 8260.19J 8-2-5 E.
21. NOTES: CHANGED CHART PROFILE NOTE FROM “VGS1 AND RNAV GLIDEPATH NOT COINCIDENT” TO “VGS1 AND RNAV GLIDEPATH NOT COINCIDENT (VGS1 ANGLE {ANGLE}/TCH {FEET})” – IAW 82060.19J 8-6-10 M(2).
22. NOTES: CHANGED CHART NOTE FROM “WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE MBS INTL ALTIMETER SETTING AND INCREASE ALL DA 31 FEET AND ALL MDA 40 FEET AND ALL LPV VISIBILITY 1/4 MILE” TO “WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE MBS ALTIMETER SETTING AND INCREASE LPV DA TO 945 FEET; INCREASE LNAV/VNAV DA TO 1099 FEET AND ALL VISIBILITIES 1/8 SM. INCREASE ALL MDAS 40 FEET AND LNAV VISIBILITY CAT C 1/8 SM” - APPLICATION OF LOCATION ID IAW 8260.19J AND VISIBILITIES IAW 8260.3F; BACKUP ALTIMETER NOTES TO REMAIN CHARTED PER ATC.
23. NOTES: DELETED “*LNAV ONLY” AND ASTERISK (*) FROM PROFILE LINE 4 - NO LONGER REQUIRED IAW 8260.19J 8-6-11 M(2).
24. ADDITIONAL FLIGHT DATA: CHANGED MISSED APPROACH HOLDING INBOUND COURSE FROM 065.88 TO 065.86 – PROCEDURE REDESIGN.
25. ADDITIONAL FLIGHT DATA: CHANGED CHART FAS OBST FROM “764 TREE 434007N/0841346W” TO “786 TREE (26-141834) 434103N/0841327W” – NEW FINAL CONTROLLING OBSTACLE.
26. ADDITIONAL FLIGHT DATA: CHANGED 7:1 OBSTACLE FROM “CHART FAS OBST: 804 TREE 434058N/0841249W” TO “CHART 809 TREE (26-142327) 434126N/0841315W” – NEW 7:1 EXCLUDED OBSTACLE.
27. ADDITIONAL FLIGHT DATA: DELETED “CHART TDZE 635” AND “CHART APT ELEV 635” – NO LONGER REQUIRED IAW 8260.19J.
28. ADDITIONAL FLIGHT DATA: ADDED “CHART VDP AT 1.25 NM TO RW24” – 20:1 SURFACE IS CLEAR.
29. MINIMUMS: LOWERED LPV DA/DAT ALL CATS FROM 1021/386 TO 914/279 AND VISIBILITY FROM 1 1/4 TO 7/8 – NEW OBSTACLE EVALUATION; VISIBILITIES IAW 8260.3F TABLE 3-3-1
30. MINIMUMS: LOWERED LNAV/VNAV DA/HAT FROM 1068/433 TO 1060/425 AND VISIBILITY ALL CATS FROM 1 1/2 TO 1 1/4 - TO MATCH LNAV MINIMUMS; VISIBILITIES IAW 8260.3F TABLE 3-3-1.
31. FAS DATA: CRC REMAINDER CHANGED FROM “7A0BCBF0” TO “6EE0290D” – LTP LAT/LONG CHANGED FROM “433955.5150N/0841510.4145W” TO “433955.5035N/0841510.4070W”, FPAP LAT/LONG CHANGED FROM “433911.0000N/0841656.7400W” TO “433911.0065N/0841656.7500W”.



AIRPORT ID
IKW

PROCEDURE NAME
RNAV (GPS) RWY 24

ORIGINAL/AMENDMENT
2

CITY
MIDLAND

STATE
MI

COORDINATED WITH:

A4A ALPA AOPA APA HAI NBAA

OTHER: ZMP, ZOB, MBS APP CON, AMGR

FLIGHT CHECKED BY

OFFICE

DATE

DEVELOPED BY

CASIMIR L. TABAKA (HOPE N. DENTON)

OFFICE

AJV-A432

DATE

10/24/2024

APPROVED BY

CASIMIR L. TABAKA

OFFICE

AJV-A432

DATE

TITLE
MANAGER

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KIKW
RUNWAY	RW24
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W24A
LTP/FTP LATITUDE	433955.5035N
LTP/FTP LONGITUDE	0841510.4070W
LTP/FTP ELLIPSOIDAL HEIGHT	+01591
FPAP LATITUDE	433911.0065N
FPAP LONGITUDE	0841656.7500W
THRESHOLD CROSSING HEIGHT (TCH)	00053.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1592
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	6EE0290D

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K5
LTP ORTHOMETRIC HEIGHT	+01935
FPAP ORTHOMETRIC HEIGHT	+01935



**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>
IKW	RNAV (GPS) RWY 24	2	MIDLAND	MI	635	RNAV

PART A: OBSTRUCTION DATA SEGMENTS

FEEDER

FROM BANJO **TO** DOLTE

RNP DISTANCE PAT MAP HAT HMAS

1.00 16.19

<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 (26-001374)	435046.00N/0840532.00W	1248	500	50	5D	1000				AT752	3000
TERRAIN	435830.00N/0840918.00W	843 (800)								AS1500	2300

COMPUTATIONS

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

SEGMENT REMARKS:

FEEDER

FROM MBS VOR/DME **TO** EGOPE

RNP DISTANCE PAT MAP HAT HMAS

1.00 9.65

<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 (26-002326)	433616.02N/0840324.62W	867	50	20	2C	1000				AT1133	3000
TERRAIN	433245.00N/0840630.00W	672 (700)								AS1500	2200

COMPUTATIONS

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

SEGMENT REMARKS:



AIRPORT ID
IKW

PROCEDURE NAME
RNAV (GPS) RWY 24

AMDT NO.
2

CITY
MIDLAND

STATE
MI

AIRPORT ELEVATION
635

FACILITY
RNAV

INITIAL

FROM
DOLTE

TO
FAMED

RNP
1.00

DISTANCE
6.12

PAT

MAP

HAT

HMAS

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
TOWER (26-001374)	435046.00N/0840532.00W	1248	500	50	5D	1000				AT752	3000
TERRAIN	435003.00N/0840833.00W	685 (700)								AS1500	2200

COMPUTATIONS

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

SEGMENT REMARKS:

INITIAL

FROM
EGOPE

TO
FAMED

RNP
1.00

DISTANCE
6.12

PAT

MAP

HAT

HMAS

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
TOWER (26-001171)	434218.00N/0840038.00W	1019	500	50	5D	1000				AT981	3000
TERRAIN	434127.00N/0840315.00W	636 (600)								AS1500	2100

COMPUTATIONS

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

SEGMENT REMARKS:



AIRPORT ID
IKW

PROCEDURE NAME
RNAV (GPS) RWY 24

AMDT NO.
2

CITY
MIDLAND

STATE
MI

AIRPORT ELEVATION
635

FACILITY
RNAV

INTERMEDIATE

FROM
FAMED (IF/IAF)

TO
BIRSE

RNP
1.00

DISTANCE
6.03

PAT

MAP

HAT

HMAS

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
TOWER (26-000990)	434140.00N/0840503.00W	1035	250	50	4D	500				AT765	2300
TERRAIN	434436.00N/0840900.00W	662 (700)								AS1500	2200

COMPUTATIONS

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

SEGMENT REMARKS:

FINAL: LPV

FROM
BIRSE

TO
RW24

RNP
0.30

DISTANCE
5.06

PAT

MAP
DA

HAT
279

HMAS

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
TREE (26-142030)	433959.67N/0841448.65W	724	20	3	1A		34.00:1			MA29	914

COMPUTATIONS

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

SEGMENT REMARKS:



AIRPORT ID
IKW

PROCEDURE NAME
RNAV (GPS) RWY 24

AMDT NO.
2

CITY
MIDLAND

STATE
MI

AIRPORT ELEVATION
635

FACILITY
RNAV

FINAL: LNAV/VNAV

FROM
BIRSE **TO**
RW24

RNP 0.30 **DISTANCE** 5.06 **PAT** **MAP** DA **HAT** 425 **HMAS**

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
TREE	434000.00N/0841336.00W	757 (765)	215	8	4B		23.41:1			AC8 XP16	1060

COMPUTATIONS

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

SEGMENT REMARKS:

XP: TO MATCH LNAV MINIMUMS.

FINAL: LNAV

FROM
BIRSE **TO**
EHAFY/1.80 NM TO RW24

RNP 0.30 **DISTANCE** 3.26 **PAT** **MAP** **HAT** **HMAS**

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	434203.00N/0841136.00W	876	215	8	4B	250				RA40 DG94	1260

COMPUTATIONS

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

SEGMENT REMARKS:



AIRPORT ID
IKW

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2

CITY
MIDLAND

STATE
MI

AIRPORT ELEVATION
635

FACILITY
RNAV

FINAL: LNAV STEPDOWN

FROM
EHAFY/1.80 NM TO RW24

TO
RW24

RNP
0.30

DISTANCE
1.80

PAT

MAP
RW24

HAT
425

HMAS

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
TREE (26-141834)	434103.43N/0841326.90W	786	20	3	1A	250				XP24	1060

COMPUTATIONS

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

SEGMENT REMARKS:

XP: TO MAINTAIN CURRENT PUBLISHED MINIMUMS.

HOLD-IN-LIEU OF PT

FROM
FAMED

TO
P-5

RNP

DISTANCE

PAT
P-5

MAP

HAT

HMAS

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
TOWER (26-001171)	434218.00N/0840038.00W	1019	500	50	5D	1000				AT981	3000
TERRAIN	434851.00N/0840718.00W	679 (700)								AS1500	2200

COMPUTATIONS

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

SEGMENT REMARKS:



AIRPORT ID
IKW

PROCEDURE NAME
RNAV (GPS) RWY 24

AMDT NO.
2

CITY
MIDLAND

STATE
MI

AIRPORT ELEVATION
635

FACILITY
RNAV

MISSED APPROACH: LPV

FROM DA **TO** CADOB

RNP 0.30 **DISTANCE** **PAT** **MAP** **HAT** **HMAS** 712

<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 (26-141949)	434012.36N/0841442.79W	721	20	3	1A		ASC				721
TOWER (26-001504)	433846.87N/0842305.95W	981	250	50	4D	1000				SA-43	2000
TERRAIN	433412.00N/0842839.00W	675 (700)								AS1500	2200

COMPUTATIONS

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

SEGMENT REMARKS:

MISSED APPROACH: LNAV/VNAV

FROM DA **TO** CADOB

RNP 0.30 **DISTANCE** **PAT** **MAP** **HAT** **HMAS** 910

<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
TOWER (26-001504)	433846.87N/0842305.95W	981	250	50	4D	1000				SA-43	2000
TERRAIN	433412.00N/0842839.00W	675 (700)								AS1500	2200

COMPUTATIONS

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

SEGMENT REMARKS:



AIRPORT ID
IKW

PROCEDURE NAME
RNAV (GPS) RWY 24

AMDT NO.
2

CITY
MIDLAND

STATE
MI

AIRPORT ELEVATION
635

FACILITY
RNAV

MISSED APPROACH: LNAV

FROM
RW24 **TO**
CADOB

RNP
0.30-1.00

DISTANCE

PAT

MAP

HAT

HMAS
960

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
							ASC				3000
TOWER (26-001504)	433846.87N/0842305.95W	981	250	50	4D	1000				SA-43	2000
TERRAIN	433412.00N/0842839.00W	675 (700)								AS1500	2200

COMPUTATIONS

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

SEGMENT REMARKS:

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											
TOWER (26-142002)	433925.12N/0841343.57W	1.30	445	774	20	3	1A	300			1080
CATEGORY B											
TREE (26-142038)	433951.97N/0841240.18W	1.83	465	795	20	10	1B	300			1100
CATEGORY C											
TOWER (26-001461)	433810.00N/0841754.00W	2.87	605	921	100	3	3A	300			1240

CIRCLING REMARKS:

MSA

CENTER **RADIUS**
RW24 25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	TOWER (26-003264)	431331.10N/0840432.90W	170	27.5	1850	50	50	2D	1000			2900

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:



AIRPORT ID
IKW

PROCEDURE NAME
RNAV (GPS) RWY 24

AMDT NO.
2

CITY
MIDLAND

STATE
MI

AIRPORT ELEVATION
635

FACILITY
RNAV

PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH

LAN FSS, ZMP ARTCC, ZOB ARTCC, MBS APP CON

WX SERVICE
AWOS-3

LOCATION
IKW

HRS OPERATION
24

ALTIMETER SOURCE
IKW

DISTANCE
0.08

WMSCR
Y

ADJUSTMENTS
0

BACK-UP WX SERVICE
ASOS

LOCATION
MBS

HRS OPERATION
24

ALTIMETER SOURCE
MBS

DISTANCE
11.12

WMSCR
Y

ADJUSTMENTS
31

WX REMARKS:

RASS PRESSURE PATTERNS THE SAME
IKW 635, MBS 668
RA = 30.3.

PRIMARY NAVAID

MONITOR POINT

HRS OPERATION

CAT

APPROACH AND RUNWAY LIGHTING SYSTEM	RUNWAY MARKINGS	RUNWAY VISUAL RANGE
RW06 - MIRL (PCL), REIL (PCL), PAPI-2L (PCL)	NPI-F	
RW18 - REIL (PCL), MIRL (PCL)	NPI-F	
RW24 - REIL (PCL), MIRL (PCL), PAPI-2L (PCL)	NPI-F	
RW36 - REIL (PCL), MIRL (PCL)	NPI-F	

GLIDESLOPE ANGLE
3.00

ELEV RWY THRESHOLD
634.7

TCH
53.0

ELEV GS ANTENNA

DISTANCE FROM RWY

VGSI ANGLE
3.00

TCH
24.4

FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD
ON CENTERLINE

FT FROM THRESHOLD
FT FROM CENTERLINE

DISPLACED THRESHOLD DISTANCE

CRITICAL TEMPERATURES

CRITICAL LOW
-16C

CRITICAL HIGH
+54C

ACT
-16C

APT ISA
+13.74C

CRITICAL TEMPERATURE REMARKS:

AVERAGE COLD TEMPERATURE DERIVED FROM STANDARD -30C ISA DEVIATION.
CRITICAL LOW TEMPERATURE BASED ON ACT.
DESCENT RATE (FPM): STANDARD TEMP 825 HIGH TEMP 1173.

"VISUAL PORTION OF FINAL" PENETRATIONS

FINAL TYPE	CIRCLING RWY 18
20:1	
700 TREE (26-142024) 434014.3400N/0841555.5100W (19)	703 TREE (26-142660) 434015.1400N/0841546.2900W (17.91)
708 TREE (26-142499) 434017.7100N/0841555.8300W (9.94)	701 TREE (26-141897) 434016.3900N/0841547.5700W (9.58)

QUALITY
37
CHECKED

AIRPORT ID
IKW

PROCEDURE NAME
RNAV (GPS) RWY 24

AMDT NO.
2

CITY
MIDLAND

STATE
MI

AIRPORT ELEVATION
635

FACILITY
RNAV

709 TREE (26-141904) 434018.3100N/0841546.7800W (7.86)	689 TREE (26-142633) 434014.5800N/0841548.4700W (6.75)
FINAL TYPE	CIRCLING RWY 36
20:1	
700 TREE (26-142008) 433918.9400N/0841545.8200W (21.72)	692 TREE (26-142049) 433920.2800N/0841547.0600W (20.49)
710 TREE (26-142457) 433914.8900N/0841555.2200W (11.17)	703 TREE (26-142243) 433915.2700N/0841552.7800W (6.1)
682 TREE (26-141858) 433918.8500N/0841553.9700W (3.22)	703 TREE (26-142172) 433914.6300N/0841547.4100W (2.89)
683 TREE (26-142451) 433918.5700N/0841552.4800W (2.81)	695 TREE (26-142796) 433915.8200N/0841554.3700W (0.88)
FINAL TYPE	LPV, LNAV/VNAV, LNAV
34:1	
716 TREE (26-030157) 434008.0500N/0841451.2700W (32.68)	720 TREE (26-142770) 434011.3600N/0841445.7300W (21.39)
690 TREE (26-095001) 434001.1500N/0841451.0500W (16.53)	692 TREE (26-030154) 434002.6000N/0841451.0600W (16.39)
721 TREE (26-141949) 434012.3600N/0841442.7900W (15.39)	684 TREE (26-142487) 434003.0400N/0841454.2900W (13.79)
678 TREE (26-142423) 434000.6600N/0841455.3800W (13.37)	714 TREE (26-030158) 434011.5500N/0841444.6500W (13.08)
683 TREE (26-141815) 434006.0800N/0841455.2900W (10.14)	684 TREE (26-142785) 434003.5500N/0841452.6600W (9.98)
692 TREE (26-142535) 434007.7900N/0841451.3200W (9.16)	694 TREE (26-141940) 434004.0600N/0841447.1800W (8.95)
704 TREE (26-142538) 434007.0000N/0841443.7200W (8.1)	706 TREE (26-142039) 434007.8200N/0841441.4800W (4.69)
707 TREE (26-142302) 434011.5300N/0841443.6500W (4.24)	660 TREE (26-030196) 434000.4600N/0841459.8800W (4.09)
652 VEGETATION (26-141908) 433956.8300N/0841501.0400W (3.66)	701 TREE (26-142200) 434009.4900N/0841444.4800W (2.82)
679 TREE (26-142500) 434005.9100N/0841453.2700W (2.61)	712 TREE (26-142458) 434009.4800N/0841438.3500W (2.36)
653 VEGETATION (26-142016) 433958.5700N/0841501.1200W (2.23)	648 VEGETATION (26-142659) 433956.3300N/0841501.9300W (2.07)
674 TREE (26-142574) 434001.9200N/0841452.0200W (1.2)	639 TERRAIN (26-030124) 433958.5600N/0841507.9900W (1.11)
684 TREE (26-142606) 434003.8900N/0841448.1600W (1.04)	645 VEGETATION (26-141850) 433956.1800N/0841502.6600W (0.66)
702 TREE (26-142150) 434008.1000N/0841441.6000W (0.49)	703 TREE (26-142286) 434008.3000N/0841441.1500W (0.35)
650 VEGETATION (26-142055) 433958.1100N/0841501.2400W (0.14)	

PENETRATIONS REMARKS:

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or

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

PENETRATIONS REMARKS:

QUALITY
37
CHECKED

PART C: GENERAL REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

100 FOOT VEGETATION HEIGHT USED PER FPT.

TAA NOT DEVELOPED PER FPT.

TCH: 53 USED TO MITIGATE VGS PENETRATIONS.

ORDER 8260.3 CHAPTER 2 APPLIED TO 809 TREE (26-142327) 434126.11N/0841315.07W.

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	3.18
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	240.12
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	700
DISTANCE FROM	THLD	TO 1500FT POINT	4.86
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	1.95
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	240.12
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	700

THRESHOLD COORDINATES (IF STR-IN)

433955.50N/0841510.41W

ARP COORDINATES

433946.53N/0841540.73W

RUNWAY APCH END AND DIST FURTHEST FROM ARP

RUNWAY 24 DISTANCE 0.40 NM

FAF COORDINATES

434227.00N/0840907.52W

FIX NAME COORDINATES

REMARKS

PART E: PREPARED BY

NAME

CASIMIR L. TABAKA (HOPE N. DENTON)

OFFICE

AJV-A432

DATE

10/24/2024

TITLE

AERONAUTICAL INFORMATION SPECIALIST

