

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
VOR STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.23**

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> VOR-A	<u>ORIGINAL/AMENDMENT</u> 8	<u>CITY</u> MIDLAND	<u>STATE</u> MI
<u>AIRPORT ELEVATION</u> 635	<u>TDZE</u>	<u>SUPERSEDED</u> VOR-A	<u>ORIGINAL/AMENDMENT</u> 7B	<u>DATED</u> 04/22/2021
<u>FACILITY</u> MBS	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>MAG VAR</u> 3W
				<u>EPOCH YEAR</u> 1965
				<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>
MBS VOR/DME		HARPY/MBS 17.00 DME					317.49	17.00	2400

MISSED APPROACH

MAP:

Ovjos/MBS 11.51 DME

MISSED APPROACH INSTRUCTIONS:

CLIMBING LEFT TURN TO 2500 ON HEADING 272 AND MBS VOR/DME R-317 TO HARPY/MBS 17.00 DME AND HOLD, CONTINUE CLIMB-IN-HOLD TO 2500.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

- PT R SIDE OF COURSE 317.49 OUTBOUND 2400 FT WITHIN 10 MILES OF HARPY (IAF)
-
- FAC: 137.49 FAF: HARPY/MBS 17.00 DME DIST FAF TO MAP: DIST FAF TO THLD:
- MIN ALT: HARPY/MBS 17.00 DME 2400
- MSA FROM: MBS VOR/DME 3100

EQUIPMENT REQUIREMENTS NOTES:

DME REQUIRED.

NOTES:

CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE MBS ALTIMETER SETTING AND INCREASE ALL MDAS 40 FEET.
CHART NOTE: RWY 18, 36 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.
CHART NOTE: CIRCLING RWY 18/36 NA AT NIGHT.

ADDITIONAL FLIGHT DATA:

HOLD NW, LT, 137.49 INBOUND.
FAS OBST: 883 AAO 434454N/0842048W.
FAC CROSSES MIDPOINT OF RWY 18-36.



MINIMUMS:

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

ALTERNATE: NA STANDARD - NA WHEN LOCAL WEATHER NOT AVAILABLE.

CATEGORY:	A			B			C			D			E		
FINAL TYPE	DA/MDA	VIS	HAT/HAA												
CIRCLING	1140	1	505	1140	1	505	1240	1 3/4	605		NA				

CHANGES - REASONS

1. CHANGES FROM P-NOTAM AMENDMENTS 7A AND 7B INCORPORATED INTO THIS FORM - REQUIRED IAW 8260.19K 8-3-4C(3).
2. MAP: CHANGED MAP DESCRIPTION FROM "5.49 MILES AFTER HARPY INT/17.00 DME OR AT MBS 11.51 DME FIX" TO "OVJOS/MBS 11.51 DME" - IAW 8260.19K 2-10-4 A(3).
3. MISSED APPROACH INSTRUCTIONS: CHANGED FROM "CLIMBING LEFT TURN TO 2400 VIA HEADING 272.49 AND MBS VOR/DME R-317.49 TO HARPY INT/17.00 DME AND HOLD" TO "CLIMBING LEFT TURN TO 2500 ON HEADING 272.49 AND MBS VOR/DME R-317 TO HARPY/MBS 17.00 DME AND HOLD, CONTINUE CLIMB-IN-HOLD TO 2500" - REPLACED VIA WITH ON IAW 8260.19K 8-6-6.D(11); PROCEDURE REQUIRES CLIMB-IN-HOLD EVALUATION IAW 8260.3G 16-7-1; MIN HOLDING ALT AT HARPY RAISED FOR AIRSPACE CONTAINMENT.
4. PROFILE LINE 3: CHANGED FAF DESCRIPTION FROM "HARPY INT/17.00 DME" TO "HARPY/MBS 17.00 DME" AND REMOVED "DIST FAF TO MAP 5.49" - HARPY IS NO LONGER AN INTERSECTION; ADDED MBS IDENTIFIER; TIME/DIST TABLE NA.
5. EQUIPMENT REQUIREMENTS NOTES: ADDED "DME REQUIRED" - IAW 8260.19K 8-6-9 A(2).
6. NOTES: CHANGED BACKUP ALTIMETER NOTE FROM "CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE MBS INTL ALTIMETER SETTING AND INCREASE ALL MDA 40 FEET" TO "CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE MBS ALTIMETER SETTING AND INCREASE ALL MDAS 40 FEET" - IAW 8260.19K 8-6-10 F(4).
7. NOTES: ADDED "CHART NOTE: CIRCLING RWY 18/36 NA AT NIGHT" - 20:1 PENETRATIONS IDENTIFIED FOR RWYS 18/36.
8. ADDITIONAL FLIGHT DATA: CHANGED FAS OBST FROM "884 AAO 434410N/0841938W" TO "883 AAO 434454N/0842048W" - NEW FINAL CONTROLLING OBSTACLE.
9. ADDITIONAL FLIGHT DATA: CHANGED NOTE FROM "FAC CROSSES RWY 18, 899 FT SOUTH OF THLD" TO "FAC CROSSES MIDPOINT OF RWY 18-36" - IAW 8260.19K 8-6-11 G(3).
10. ADDITIONAL FLIGHT DATA: REMOVED "CHART APT ELEV 635" - NO LONGER REQUIRED IAW 8260.19K.

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 **DATE**
AJV-A432 01/27/2026

APPROVED BY

CASIMIR L. TABAKA

OFFICE **DATE** **TITLE**
AJV-A432 **MANAGER**



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

<u>AIRPORT ID</u> IKW	<u>PROCEDURE NAME</u> VOR-A	<u>AMDT NO.</u> 8	<u>CITY</u> MIDLAND	<u>STATE</u> MI	<u>AIRPORT ELEVATION</u> 635	<u>FACILITY</u> MBS
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PART A: OBSTRUCTION DATA SEGMENTS

FEEDER
FROM MBS VOR/DME **TO** HARPY/MBS 17.00 DME

<u>RNP</u>	<u>DISTANCE</u> 17.00	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
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<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 (26-111650)	433557.39N/0841321.72W	1030	250	50	4D	1000				AT370	2400
TERRAIN	433809.00N/0841030.00W	728 (700)								AS1500	2200

COMPUTATIONS

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

SEGMENT REMARKS:

INTERMEDIATE: PT

FROM 10 NM **TO** HARPY/MBS 17.00 DME

<u>RNP</u>	<u>DISTANCE</u> 10.00	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>
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<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 (26-001617)	434841.00N/0842751.00W	1118	100	20	3C	500				AT782	2400
TERRAIN	434745.00N/0843442.00W	761 (800)								AS1500	2300

COMPUTATIONS

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

SEGMENT REMARKS:



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MISSED APPROACH

FROM
OVJOS/MBS 11.51 DME

TO
HARPY/MBS 17.00 DME

RNP **DISTANCE** **PAT** **MAP** **HAT** **HMAS**
890

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
							ASC				2500
TOWER (26-167066)	434409.80N/0841436.80W	947	20	3	1A	1000					2000
TERRAIN	434051.00N/0841224.00W	702 (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	505	774	20	3	1A	300		SI	1140
CATEGORY B											
TREE (26-142038)	433951.97N/0841240.18W	1.83	505	795	20	10	1B	300		SI	1140
CATEGORY C											
TOWER (26-001461)	433810.00N/0841754.00W	2.87	605	921	100	3	3A	300			1240

CIRCLING REMARKS:

MSA

CENTER **RADIUS**
MBS VOR/DME 25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	TWR (26-000558)	431301.00N/0834317.00W	143	24.5	2013	250	50	4D	1000			3100

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

PART B: SUPPLEMENTAL DATA



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COMMUNICATIONS WITH

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

WX SERVICE
AWOS-3P

LOCATION
IKW

HRS OPERATION
24

ALTIMETER SOURCE
IKW

DISTANCE

WMSCR
Y

ADJUSTMENTS
0

BACK-UP WX SERVICE
ASOS

LOCATION
MBS

HRS OPERATION
24

ALTIMETER SOURCE
MBS

DISTANCE
11.12

WMSCR
Y

ADJUSTMENTS
30

WX REMARKS:

RASS PRESSURE PATTERNS THE SAME
IKW 635, MBS 659
RA = 29.4.

PRIMARY NAVAID
MBS VOR/DME

MONITOR POINT
MOCC

HRS OPERATION
24

CAT
1

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 - MIRL (PCL), REIL (PCL), PAPI-2L (PCL)	NPI-F	
RW36 - MIRL (PCL), REIL (PCL)	NPI-F	

GLIDESLOPE ANGLE

ELEV RWY THRESHOLD

TCH

ELEV GS ANTENNA

DISTANCE FROM RWY

VGSI ANGLE

TCH

FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD
ON CENTERLINE

FT FROM THRESHOLD
FT FROM CENTERLINE

DISPLACED THRESHOLD DISTANCE

CRITICAL TEMPERATURES

CRITICAL LOW

CRITICAL HIGH

ACT

APT ISA

CRITICAL TEMPERATURE REMARKS:

"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)
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

QUALITY
37
CHECKED

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)

PENETRATIONS REMARKS:

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or

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

PENETRATIONS REMARKS:

PART C: GENERAL REMARKS:

VDP NOT ESTABLISHED - FINAL IS CIRCLING ONLY.

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

100 FT VEGETATION HEIGHT USED PER FPT.

VDA N/A: FINAL ALIGNED FOR CIRCLING ONLY.

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	MAP	TO 1000FT POINT	3.16
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	3.46
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	134.49
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	700
DISTANCE FROM	MAP	TO 1500FT POINT	4.82
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	3.64
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	134.49
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	700

THRESHOLD COORDINATES (IF STR-IN)

ARP COORDINATES 433946.53N/0841540.73W

RUNWAY APCH END AND DIST FURTHEST FROM ARP RUNWAY 24 DISTANCE 0.40 NM

FAF COORDINATES 434347.66N/0842121.88W

FIX NAME COORDINATES MAP OVJOS 433957.45N/0841557.07W

REMARKS



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PART E: PREPARED BY

NAME
CASIMIR L. TABAKA (HOPE N. DENTON)

OFFICE
AJV-A432

DATE
01/27/2026

TITLE
AERONAUTICAL INFORMATION SPECIALIST

