

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
ILS STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.29

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> KTVK	<u>PROCEDURE NAME</u> ILS OR LOC RWY 28	<u>ORIGINAL/AMENDMENT</u> 15	<u>CITY</u> TRAVERSE CITY	<u>STATE</u> MI		
<u>AIRPORT ELEVATION</u> 624	<u>TDZE</u> 616	<u>SUPERSEDED</u> ILS OR LOC RWY 28	<u>ORIGINAL/AMENDMENT</u> 14B	<u>DATED</u> 03/05/2015	<u>MAG VAR</u> 5W	<u>EPOCH YEAR</u> 1985
<u>FACILITY</u> I-TVC	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<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>
TVC VOR/DME		MAVLY		TF	FO	1.00	077.90	12.02	3500
KEXXO	IAF	MAVLY	NOPT	TF	FB	1.00	189.11	6.80	3500
ZIVAX	IAF	MAVLY	NOPT	TF	FB	1.00	008.91	6.80	3500
MAVLY/RADAR	IF/IAF	GWENN LOM/INT					278.72	6.34 (I-TVC)	2600

MISSED APPROACH

MAP:

ILS: DA
LOC: 5.77 NM AFTER GWENN LOM/INT

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1100 THEN CLIMBING LEFT TURN TO 3000 DIRECT TVC VOR/DME AND HOLD, CONTINUE CLIMB-IN-HOLD TO 3000.

ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):

CLIMB TO 1100 THEN CLIMBING LEFT TURN TO 3500 DIRECT GWENN LOM AND HOLD, CONTINUE CLIMB-IN-HOLD TO 3500. (ADF REQUIRED).

PROFILE:

1. PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
2. HOLD E MAVLY, RT, 278.72 INBOUND, 3500 FT. IN LIEU OF PT (IAF), MAX 6000.
3. FAC: 278.72 FAF: GWENN LOM/INT DIST FAF TO MAP: 5.77 DIST FAF TO THLD: 5.77
4. MIN ALT: MAVLY/RADAR 3500, GWENN LOM/INT 2600, AYATA INT 1440
5. DIST TO THLD FROM OM: 5.77 MM: IM: 150 HAT: GS ANT: 940
6. MIN GS INCPT: 2600 GS ALT AT PFAF : OM: 2496 MM: IM:
7. GS ANGLE: 3.00 34:1: 20:1: TCH: 52.0
8. MSA FROM: GWENN LOM 030-120 3500, 120-030 3100



PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

EQUIPMENT REQUIREMENTS NOTE:

AIRCRAFT NOT GPS EQUIPPED - RADAR REQUIRED FOR PROCEDURE ENTRY.

NOTES:

CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: S-LOC 28 MINIMUMS: FOR INOPERATIVE ALS, INCREASE S-LOC 28 CATS C AND D VISIBILITY TO 2 1/2 SM.
CHART NOTE: AYATA FIX MINIMUMS: FOR INOPERATIVE ALS, INCREASE S-LOC 28 CATS C AND D VISIBILITY TO 2 SM.
CHART PLAINVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON TVC VOR/DME AIRWAY RADIALS 035 CW 152.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.
CHART MINNEAPOLIS CENTER FREQUENCY.
1220 AAO 444341N/0852545W.
HOLD S, RT, 340.00 INBOUND.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD E GWENN LOM, LT, 278.72 INBOUND.
CHART FAS OBST: 1059 TANK (26-001738) 444350N/0853004W.

MINIMUMS:

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

ALTERNATE: NA ☐ ILS: STANDARD - NA WHEN LOCAL WEATHER NOT AVAILABLE., NA WHEN CONTROL TOWER CLOSED.; LOC: CAT A, B 900-2, CAT C 900-2 1/2, CAT D 1100-3, NA WHEN LOCAL WEATHER NOT AVAILABLE., NA WHEN CONTROL TOWER CLOSED.

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
S-ILS 28	816	1/2	200	816	1/2	200	816	1/2	200	816	1/2	200			
S-LOC 28	1440	1/2	824	1440	3/4	824	1440	1 7/8	824	1440	1 7/8	824			
CIRCLING	1440	1 1/4	816	1440	1 1/4	816	1440	2 1/2	816	1720	3	1096			
AYATA FIX MINIMUMS (Dual VOR Receivers required)															
S-LOC 28	1320	1/2	704	1320	1/2	704	1320	1 5/8	704	1320	1 5/8	704			
CIRCLING	1320	1	696	1320	1	696	1420	2 1/4	796	1720	3	1096			

CHANGES - REASONS

1. REMOVED "CIRCLING TO RWY 18 NA AT NIGHT" - NEW TARGETS EVALUATION, NO CIRCLING RESTRICTIONS/FPT REQUEST.
2. ADDED INTERMEDIATE SEGMENT AT MAVLY, RNAV INITIAL SEGMENTS AT KEXXO AND ZIVAX - ATC/FPT REQUEST.
3. CHANGED LINE 2 "HOLD E GWENN LOM, LT, 278.72 INBOUND 2600 FT IN LIEU OF PT (IAF)" TO "HOLD E MAVLY, LT, 278.72 INBOUND, 3500 FT. IN LIEU OF PT (IAF) MAX 6000 - PER ATC/FPT REQUEST AND IAW 8260.19I PARA 8-6-7B(2)(B).
4. ADDED PBN REQUIREMENTS NOTE "RNP APCH - GPS" - IAW 8260.19I PARA 8-6-8.C MEMO.
5. ADDED PBN REQUIREMENTS NOTE "AIRCRAFT NOT GPS EQUIPPED - RADAR REQUIRED FOR PROCEDURE ENTRY" - NOTE ADDED IAW 8260.19 PARA 8-6-8C(3). MEMO.
6. AMENDED S-LOC 28 MINIMUMS FROM "MDA/HAT 1480/864" TO "MDA/HAT 1440/824", VISIBILITIES CHANGED FROM "CAT A 3/4" TO "CAT A 1/2", FROM "CAT C/D 2" TO "CAT C/D 1 7/8" - MDA/HAT CHANGE REFERENCE REVISED EVALUATION AND VISIBILITIES IAW 8260.3E TABLES 3-3-1. 3-3-3 AND 3-3-4.
7. AMENDED CIRCLING CAT A/B FROM "MDA 1480/HAA 856" TO "MDA 1440/HAA 816", CAT C FROM "MDA 1500/HAA 876" TO "MDA 1440/HAA 816" - MDA/HAA CHANGE REFERENCE REVISED EVALUATION AND IAW 8260.3E TABLE 3-3-7.
8. AMENDED S-LOC 28 (AYATA MINS) MINIMUMS FROM "MDA 1360 HAT/744" TO "MDA 1320 HAT/704", VISIBILITIES CHANGED FROM "CAT B 3/4" TO "CAT B 1/2", FROM "CAT C/D 1 3/4" TO "CAT C/D 1 5/8" - MDA/HAT CHANGE REFERENCE REVISED EVALUATION AND VISIBILITIES IAW 8260.3 TABLES 3-3-1 AND 3-3-4.
9. AMENDED AYATA CIRCLING MINIMUMS FROM "CAT A MDA 1360/HAA 736" TO "CAT A MDA 1320/HAA 696", FROM "CAT B MDA 1360/HAA 736" TO "CAT B MDA 1320/HAA 696", FROM "CAT C MDA 1500/HAA 876" TO "CAT C MDA 1420/HAA 796", VISIBILITIES FROM "CAT B 1 1/4 TO CAT B 1" AND FROM "CAT C 2 1/2" TO "CAT C 2 1/4" - MDA/HAA CHANGE REFERENCE REVISED EVALUATION AND IAW 8260.3E TABLE 3-3-7.
10. CHANGED FEEDER FROM "TVC VOR/DME TO GWENN/LOM" TO "TVC VOR/DME TO FIX MAVLY", CHANGED FEEDER TYPE FROM CONVENTIONAL TO RNAV, ADDED LEG TYPE, FO, RNP VALUES AND CHANGE COURSE/DISTANCE/ALTITUDE FROM "054.60/6.50/3000" TO "077.90/12.02/3500" - PER FPT REQUEST AND TVC FLIGHT CHECK RESTRICTIONS.
11. ALTERNATE MISSED APPROACH CHANGED FROM "CLIMB TO 1100 THEN CLIMBING LEFT TURN TO 2600 DIRECT GWENN LOM AND HOLD. (ADF REQUIRED)" TO "CLIMB TO 1100 THEN CLIMBING LEFT TURN TO 3500 DIRECT GWENN LOM AND HOLD, CONTINUE CLIMB-IN-HOLD TO 3500. (ADF REQUIRED) - AIRCRAFT ALTITUDE AT GWENN LOM BELOW 3500, C-I-H REQUIRED.
12. LINE 4 ADDED MAVLY/RADAR 3500 AND CHANGED AYATA ALTITUDE FROM 1480* TO 1440 -REVISED PROCEDURE DESIGN AND REVISED EVALUATION.
13. CHANGED MSA NAVAID FROM TV LOM TO GWENN LOM - IAW 8260.3E IMPLEMENTATION LETTER, ATTACHMENT 4.
14. REMOVED NOTES *LOC ONLY AND *1540 WHEN USING BELLAIRE ALTIMETER SETTING - NO LONGER NEEDED, BACKUP ALTIMETER NOTE MOVED TO -9 - APPROVED BY FPT.
15. CHANGED "AYATA FIX MINIMUMS" NOTE FROM "FOR INOPERATIVE MALSR, INCREASE S-LOC 28 CAT C, D VISIBILITY TO 2 MILES" TO "S-LOC 28 MINIMUMS: FOR INOPERATIVE ALS, INCREASE S-LOC 28 CATS C AND D VISIBILITY TO 2 SM" - UPDATED MINIMUMS AND FORMAT IAW 8260-19I
16. REMOVED NOTE "AYATA FIX MINIMUMS: FOR INOPERATIVE MALSR WHEN USING BELLAIRE ALTIMETER SETTING, INCREASE S-LOC 28 CAT C, D VISIBILITY TO 2 ½ MILES." - NOTE MOVED TO BACK OF-9 APPROVED BY FPT.
17. REMOVED CHART IN PLANVIEW: (CFBTW) AT 444344.02N/0851942.15W - NOT REQUIRED.
18. REMOVED CHART TVC R-029 AT AYATA - NOT REQUIRED.
19. ADDED PLANVIEW NOTE "PROCEDURE NA FOR ARRIVAL ON TVC VOR/DME AIRWAY RADIALS 035 CW 152 " - IAW 8260.19I PARA 8-2-5.E.(2) & 8260.58B PARA 1-2-5.A.(3).
20. ADDITIONAL FLIGHT DATA ENTRY CHART MINNEAPOLIS CENTER FREQUENCY - IAW 8260.19I 8-2-4B(1).
21. ADDITIONAL FLIGHT DATA ENTRY CHART FAS OBST ELEVATION CHANGED FROM 1050 TO 1059 AND ADDED OBSTACLE ID (26-001738) - IAW 8260.19I 8-6-10C.
22. ADDITIONAL FLIGHT DATA ADDED 7:1 OBSTACLE 1220 AAO 444341N/0852545W - IAW 8260.19I 8-6-10E(2) AND 8-6-10CNOTE.
23. ALTERNATE MINIMUMS ILS ONLY CHANGED FROM CAT A/B 900-2, CAT C 900 2 1/2, CAT D 1100-3, NA WHEN CONTROL TOWER CLOSED, NA WHEN LOCAL WEATHER NOT AVAILABLE TO STANDARD, NA WHEN CONTROL TOWER CLOSED, NA WHEN LOCAL WEATHER NOT AVAILABLE - IAW 8260-3E 3-4-1.
24. LINE 5 GS ANT DISTANCE CHANGE FROM 938 TO 940 - REVISED AIRNAV DATA.
25. LINE 6 OM ALTITUDE CHANGED FROM 2525 TO 2496 - TARGETS DERIVED ALTITUDE.
26. REMOVED NOTE WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, BELLAIRE ALTIMETER SETTING AND INCREASE ALL DA 51 FEET AND ALL MDA 60 FEET, INCREASE S-LOC 28 CAT A AND CIRCLING CAT C VISIBILITY 1/4 MILE; INCREASE AYATA FIX MINIMUMS S-LOC 28 CATS C, D VISIBILITY 1/8 MILE AND CIRCLING CAT C VISIBILITY 1/4 MILE - NOTE MOVED TO BACK OF -9 APPROVED BY FPT.
27. UPDATED MINIMUMS BOX FROM AYATA FIX MINIMUMS TO AYATA FIX MINIMUMS (DUAL VOR RECEIVERS REQUIRED) - IAW 8260.19I 8-6-11N(3)(E)(F).
28. ADDED NOTE S-LOC 28 MINIMUMS: FOR INOPERATIVE ALS, INCREASE S-LOC 28 CATS C AND D VISIBILITY TO 2 1/2 SM - IAW 8260.13E TABLE 3-3-1.

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZMP, TVC TWR, AMGR

FLIGHT CHECKED BY

BRIAN P CARSON

Digitally signed by
JASON KRETSCHMER
Apr 05, 2023

OFFICE

FPO

DATE

03/30/2023

DEVELOPED BY

JASON KRETSCHMER (CHRISTOPHER MENDENHALL)

Digitally signed by
JASON KRETSCHMER
Mar 06, 2023

OFFICE

AJV-A421

DATE

02/14/2023

APPROVED BY

MARLON ROBINSON

Digitally signed by
JASON KRETSCHMER
Mar 06, 2023

OFFICE

AJV-A420

DATE

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>
KTVC	ILS OR LOC RWY 28	15	TRAVERSE CITY	MI	624	I-TVC

PART A: OBSTRUCTION DATA SEGMENTS

FEEDER

FROM TVC VOR/DME **TO** MAVLY

<u>RNP</u>	<u>DISTANCE</u> 12.02	<u>PAT</u>	<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>
												AAO	444512.00N/0851830.00W	1263	164	98	4E	1000				AT1237	3500
												TERRAIN	444512.00N/0851830.00W	1062 (1100)								AS1500	2600

COMPUTATIONS

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

SEGMENT REMARKS:

RNAV FEEDER DEVELOPED VERSUS CONVENTIONAL FEEDER SEGMENT DUE TO TVC VOR/DME FLIGHT CHECK RESTRICTIONS DATED 10/24/2013 R-061 - R-120 UNUSABLE. TVC VOR/DME TO MAVLY WOULD BE R-075.

INITIAL

FROM KEXXO **TO** MAVLY

<u>RNP</u>	<u>DISTANCE</u> 6.80	<u>PAT</u>	<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 (26-001188)	444728.47N/0851420.85W	1546	250	50	4D	1000				AT954	3500
												TERRAIN	444806.00N/0851342.00W	1072 (1100)								AS1500	2600

COMPUTATIONS

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

SEGMENT REMARKS:



INITIAL

FROM
ZIVAX

TO
MAVLY

RNP	DISTANCE 6.80	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
TOWER (26-002080)	443727.00N/0851449.00W		1420	500	50	5D	1000				AT1080	3500
TERRAIN	443754.00N/0851839.00W		1122 (1100)								AS1500	2600

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE

FROM
MAVLY/RADAR (IF/IAF)

TO
GWENN LOM/INT

<u>RNP</u>	<u>DISTANCE</u> 6.34	<u>PAT</u>	<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 (26-003139)	444002.91N/0851750.95W		1295	250	50	4D	500					1800
TERRAIN	444512.00N/0851830.00W		1062 (1100)								AS1500	2600

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



FINAL: ILS

FROM
GP INTCP

TO
RW28

RNP	DISTANCE 6.10	PAT	MAP DA	HAT 200	HMAS							
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				816

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

SEGMENT REMARKS:

FINAL: LOC

FROM
GWENN LOM/INT

TO
AYATA INT

RNP	DISTANCE 3.03	PAT	MAP	HAT 824	HMAS							
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	444340.96N/0852711.55W		1190	50	20	2C	250					1440

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

SEGMENT REMARKS:



FINAL: LOC STEPDOWN

FROM

AYATA INT

TO

5.77 NM AFTER GWENN LOM/INT

RNP	DISTANCE	PAT	MAP	HAT	HMAS						
	2.73		5.77 NM AFTER GWENN LOM/INT	704							
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
TANK (26-001738)	444349.89N/0853004.22W	1059	20	3	1A	250					1320

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

MAVLY

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 (26-000479)	444453.00N/0850408.00W	2470	250	50	4D	1000					3500
TERRAIN	443936.00N/0850906.00W	1269 (1300)								AS1500	2800

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

SEGMENT REMARKS:



MISSED APPROACH : ILS

FROM
DA

TO
TVC VOR/DME

RNP	DISTANCE	PAT	MAP	HAT			HMAS 646					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				3000
AAO	443642.00N/0853542.00W		1250	164	98	4E	1000					2300
TERRAIN	443642.00N/0853542.00W		1049 (1000)								AS1500	2500

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

SEGMENT REMARKS:

MISSED APPROACH : LOC

FROM
5.77 NM AFTER GWENN LOM/INT

TO
TVC VOR/DME

RNP	DISTANCE	PAT	MAP	HAT			HMAS 1070					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				3000
AAO	443642.00N/0853542.00W		1250	164	98	4E	1000					2300
TERRAIN	443642.00N/0853542.00W		1049 (1000)								AS1500	2500

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

SEGMENT REMARKS:



MISSED APPROACH ALTERNATE : ILS

FROM

DA

TO

GWENN LOM

RNP	DISTANCE	PAT	MAP	HAT			HMAS 646					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				3500
TOWER (26-002685)	444038.00N/0852352.00W		1244	250	50	4D	1000					2300
TERRAIN	444342.00N/0852712.00W		1003 (1000)								AS1500	2500

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

SEGMENT REMARKS:

GWENN LOM/INT IS NO LONGER AN IAF. AS SUCH PER .19I PARA 8-6-6.G.(2) WHERE A MA HOLDING ALTITUDE HAS BEEN ESTABLISHED THAT DOES NOT PERMIT A RETURN TO THE IAF OR ALLOW FOR EN ROUTE FLIGHT, INCLUDE IN THE MA INSTRUCTIONS THE ALTITUDE THAT CAN BE CLIMBED TO IN THE HOLDING PATTERN TO REACH THE EN ROUTE STRUCTURE. SINCE MINNEAPOLIS CENTER IS THE APP CON THEN THE MEA FOR THE AREA AROUND TVC IS 2700. AT THE END OF THE MISSED APPROACH THE AIRCRAFT IS AT 2066.12 SO C-I-H REQUIRED. WITH A C-I-H THERE IS A PENETRATION REF 26-000479 2470 MSL TOWER IN THE PRIMARY C-I-H PATTERN SO MIN HOLDING RAISED TO 3500 TO RESOLVE THE PENETRATION.

MISSED APPROACH ALTERNATE : LOC

FROM

5.77 NM AFTER GWENN LOM/INT

TO

GWENN LOM

RNP	DISTANCE	PAT	MAP	HAT			HMAS 1070					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				3500
TOWER (26-002685)	444038.00N/0852352.00W		1244	250	50	4D	1000					2300
TERRAIN	444342.00N/0852712.00W		1003 (1000)								AS1500	2500

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

SEGMENT REMARKS:

GWENN LOM/INT IS NO LONGER AN IAF. AS SUCH PER .19I PARA 8-6-6.G.(2) WHERE A MA HOLDING ALTITUDE HAS BEEN ESTABLISHED THAT DOES NOT PERMIT A RETURN TO THE IAF OR ALLOW FOR EN ROUTE FLIGHT, INCLUDE IN THE MA INSTRUCTIONS THE ALTITUDE THAT CAN BE CLIMBED TO IN THE HOLDING PATTERN TO REACH THE EN ROUTE STRUCTURE. SINCE MINNEAPOLIS CENTER IS THE APP CON THEN THE MEA FOR THE AREA AROUND TVC IS 2700. AT THE END OF THE MISSED APPROACH THE AIRCRAFT IS AT 2066.12 SO C-I-H REQUIRED. WITH A C-I-H THERE IS A PENETRATION REF 26-000479 2470 MSL TOWER IN THE PRIMARY C-I-H PATTERN SO MIN HOLDING RAISED TO 3500 TO RESOLVE THE PENETRATION.



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 (26-088520)	444321.34N/0853636.14W	1.30	816/696	810	20	10	1B	300		SI/SI	1440/1320
CATEGORY B											
TREE (26-088202)	444343.46N/0853142.97W	1.83	816/696	959	20	3	1A	300		SI/SI	1440/1320
CATEGORY C											
TANK (26-105835)	444257.15N/0853028.69W	2.87	816/796	1108	20	3	1A	300		SI	1440/1420
CATEGORY D											
TOWER (26-000182)	444636.53N/0853942.88W	3.76	1096/1096	1358	250	50	4D	300		AC50	1720/1720

CIRCLING REMARKS:

MSA

CENTER
GWENN LOM

RADIUS
25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
030-120	TWR (26-000479)	444453.00N/0850408.00W	092	15.4	2470	250	50	4D	1000			3500
120-030	TWR (26-000988)	442733.00N/0854202.00W	220	20.2	2064	250	50	4D	1000			3100

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:



PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH
ZMP ARTCC, TVC TOWER

<u>WX SERVICE</u> ASOS	<u>LOCATION</u> KTVC	<u>HRS OPERATION</u> 24	<u>ALTIMETER SOURCE</u> KTVC	<u>DISTANCE</u> 0	<u>SERVICE-A</u> Y	<u>ADJUSTMENTS</u> 0
<u>BACK-UP WX SERVICE</u> AWOS-3	<u>LOCATION</u> KACB	<u>HRS OPERATION</u> 24	<u>ALTIMETER SOURCE</u> KACB	<u>DISTANCE</u> 22.08	<u>SERVICE-A</u> Y	<u>ADJUSTMENTS</u> 51

WX REMARKS:
RASS PRESSURE PATTERNS THE SAME
KTVC 623.9, KACB 622.9
RA = 50.91.

<u>PRIMARY NAVAID</u> I-TVC	<u>MONITOR POINT</u> ATCT	<u>HRS OPERATION</u> TWR OPEN TWR CLOSED	<u>CAT</u> 1 3
--------------------------------	------------------------------	--	----------------------

<u>APPROACH AND RUNWAY LIGHTING SYSTEM</u>	<u>RUNWAY MARKINGS</u>	<u>RUNWAY VISUAL RANGE</u>
RW18 - MIRL (PCL), VASI-4L	NPI-G	
RW36 - MIRL (PCL), REIL (PCL), VASI-4L	NPI-G	
RW10 - MALSR (PCL), HIRL (PCL), PAPI-4L	PIR-G	
RW28 - MALSR (PCL), HIRL (PCL), PAPI-4L	PIR-G	

<u>GLIDESLOPE ANGLE</u> 3.00	<u>ELEV RWY THRESHOLD</u> 606.9	<u>TCH</u> 52.0	<u>ELEV GS ANTENNA</u> 607.8	<u>DISTANCE FROM RWY</u> 940	<u>VGSI ANGLE</u> 3.00	<u>TCH</u> 45.0
---------------------------------	------------------------------------	--------------------	---------------------------------	---------------------------------	---------------------------	--------------------

FINAL APPROACH COURSE AIMING

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

CRITICAL TEMPERATURES

<u>CRITICAL LOW</u>	<u>CRITICAL HIGH</u>	<u>ACT</u>	<u>APT ISA</u>
---------------------	----------------------	------------	----------------

CRITICAL TEMPERATURE REMARKS:



"VISUAL PORTION OF FINAL" PENETRATIONS

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 FACILITY DOES NOT HAVE DME.

FOR CONTINGENCY PURPOSE: NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE BELLAIRE ALTIMETER SETTING: INCREASE S-ILS 28 DA TO 867 FEET; INCREASE ALL MDAS 60 FEET, INCREASE VISIBILITY S-LOC 28 CAT A/C/D AND CIRCLING CATS C 1/4 SM, INCREASE AYATA FIX MINIMUMS S-LOC 28 CATS B/C/D AND CIRCLING B/C VISIBILITY 1/4 SM.

AYATA FIX MINIMUMS: NOTE: FOR INOPERATIVE ALS WHEN USING BELLAIRE ALTIMETER SETTING, INCREASE S-LOC 28 CATS C AND D VISIBILITY TO 2 1/2 SM.

AYATA INT *1500 WHEN USING BELLAIRE ALTIMETER SETTING, *LOC ONLY.

ORDER 8260.3 CHAPTER 3 APPLIED TO 1220 AAO 444341.33N/0852544.60W.

ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.



<u>AIRPORT ID</u> KTVC	<u>PROCEDURE NAME</u> ILS OR LOC RWY 28	<u>AMDT NO.</u> 15	<u>CITY</u> TRAVERSE CITY	<u>STATE</u> MI	<u>AIRPORT ELEVATION</u> 624	<u>FACILITY</u> I-TVC
---------------------------	--	-----------------------	------------------------------	--------------------	---------------------------------	--------------------------

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	4.21
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.13
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	273.72
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	1000
DISTANCE FROM	THLD	TO 1500FT POINT	5.78
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	1.47
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	273.72
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	1000

THRESHOLD
COORDINATES
(IF STR-IN)

444423.77N/0853350.10W

ARP COORDINATES

444429.68N/0853454.73W

RUNWAY APCH END
AND DIST FURTHEST
FROM ARP

RUNWAY 28 DISTANCE 0.77 NM

FAF
COORDINATES

444401.02N/0852545.61W

FIX NAME
COORDINATES

REMARKS

NO ADDITIONAL AIRSPACE REQUIRED.

QUALITY
29
CHECKED

FAA Form 8260-9 / (11/16) Supersedes Previous Edition

Electronic Version

Page 10 of 11

PART E: PREPARED BY

<u>NAME</u> JASON KRETSCHMER (CHRISTOPHER MENDENHALL)	<u>OFFICE</u> AJV-A421	<u>DATE</u> 02/14/2023	<u>TITLE</u> AERONAUTICAL INFORMATION SPECIALIST
---	---------------------------	---------------------------	---

