Federal Aviation Administration

U.S. Terminal Procedures Publication

East Central (EC) Vol 1 of 3

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22 APR 2021

Consult the Change Notice (CN) effective 25 MAR 2021 for revised Instrument Procedure Charts for this volume

Consult NOTAMs for latest information

Consult/Subscribe to FAA Safety Alerts and Charting Notices at:
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CORRECTIONS, COMMENTS AND/OR PROCUREMENT

FOR CHARTING ERRORS, OR FOR CHANGES, ADDITIONS, RECOMMENDATIONS ON PROCEDURAL ASPECTS CONTACT:
FAA, Aeronautical Information Services
1305 East-West Highway
SSMC 4, Room 3424
Silver Spring, MD 20910
Telephone: 1-800-638-8972
https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/

For inquiries regarding military charts, please contact aerohelp@nga.mil

FOR PROCUREMENT:
For digital products, visit our website at:
https://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/

For a list of approved FAA Print Providers, visit our website at:
https://www.faa.gov/air_traffic/flight_info/aeronav/print_providers/

Frequently asked questions (FAQ) are answered on our website at https://www.faa.gov/go/ais
See the FAQs prior to contact via toll free number or email.

Request for the creation or revisions to Airport Diagrams should be in accordance with FAA Order 7910.4.

INOP COMPONENTS 19339

INOPERATIVE COMPONENTS OR VISUAL AIDS TABLE
(For Civil Use Only)

Straight-in and Sidestep landing minimums published on instrument approach procedure charts are based on full operation of all components and visual aids (see exception below for ALSF 1 & 2) associated with the particular approach chart being used. Higher minimums are required with inoperative components or visual aids as indicated below. If more than one component is inoperative, each minimum is raised to the highest minimum required by any single component that is inoperative. ILS glideslope inoperative minimums are published on the instrument approach charts as localizer minimums. This table applies to approach categories A thru D and is to be used unless amended by notes on the approach chart. Such notes apply only to the particular approach category(ies) as stated. Category E inoperative notes will be specified when published on civil charts. The inoperative table does not apply to Circling minimums. See legend page for description of components indicated below.

Full Operation Exception: For ALSF 1 & 2 operated as SSALR, or when the sequenced flashing lights are inoperative, there is no effect on visibility for ILS lines of minima.

(1) ILS, PAR, LPV, GLS minima

Inoperative Component or Visual Aid	Increase Visibility
All ALS types (except ODALS)	¼ mile

(2) ILS, LPV, GLS with visibility minima of RVR 1800†/2000*/2200*

Inoperative Component or Visual Aid	Increase Visibility
ALSF 1 & 2, MALSR, SSALR	To RVR 4000† To RVR 4500*
TDZL or RCLS	To RVR 2400#
RVR	To ½ mile

#For ILS, LPV, GLS procedures with a 200 foot HAT, RVR 1800 authorized with use of FD or AP or HUD to DA.

(3) All Approach Types and all lines of minima other than (1) & (2) above

Inoperative Component or Visual Aid	Increase Visibility
ALSF 1 & 2, MALSR, SSALR	½ mile
MALSF, MALS, SSALF, SSALS, SALSF, SALS	¼ mile

(4) Sidestep minima (CAT C-D)

Inoperative Component or Visual Aid to Sidestep Runway	Increase Visibility
ALSF 1 & 2, MALSR, SSALR	½ mile

(5) All Approach Types, All lines of minima

Inoperative Component or Visual Aid	Increase Visibility
ODALS (CAT A-B)	¼ mile
ODALS (CAT C-D)	⅛ mile

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TERMS/LANDING MINIMA DATA 20142

IFR LANDING MINIMA

The United States Standard for Terminal Instrument Procedures (TERPS) is the approved criteria for formulating instrument approach procedures. Landing minima are established for six aircraft approach categories (ABCDE and COPTER).
In the absence of COPTER MINIMA, helicopters may use the CAT A minimums of other procedures.

LANDING MINIMA FORMAT

In this example airport elevation is 1179, and runway touchdown zone elevation is 1152.

Visibility (RVR 100's of feet) — DA — Aircraft Approach Category — HAT

CATEGORY	A	B	C	D
S-ILS 27	1352/24		200 (200-½)	
S-LOC 27	1440/24	288	(300-½)	1440/50 288 (300-1)
CIRCLING	1540-1 361 (400-1)	1640-1 461 (500-1)	1640-1½ 461 (500-1½)	1740-2 561 (600-2)

Straight-in ILS to Runway 27

Straight-in with Glide Slope Inoperative or not used to Runway 27

All **weather** minimums in parentheses not applicable to Civil Pilots. Military Pilots refer to appropriate regulations.

MDA — HAA — Visibility in Statute Miles

COPTER MINIMA ONLY

CATEGORY	COPTER
H-176°	680-½ 363 (400-½)

Copter Approach Direction — Height of MDA/DA Above Landing Area (HAL) — No circling minimums are provided

NOTE: The W symbol indicates outages of the WAAS vertical guidance may occur daily at this location due to initial system limitations. WAAS NOTAMS for vertical outages are not provided for this approach. Use LNAV minima for flight planning at these locations, whether as a destination or alternate. For flight operations at these locations, when the WAAS avionics indicate that LNAV/VNAV or LPV service is available, then vertical guidance may be used to complete the approach using the displayed level of service. Should an outage occur during the procedure, reversion to LNAV minima may be required. As the WAAS coverage is expanded, the W will be removed.

RNAV minimums are dependent on navigation equipment capability, as stated in the applicable AFM, AFMS, or other FAA approved document. See AIM paragraph 5-4-5, AC 90-105 and AC 90-107 for detailed requirements for each line of minima.

COLD TEMPERATURE AIRPORTS

NOTE: A ❄-12°C symbol indicates a cold temperature altitude correction is required at this airport when reported temperature is at or below the published temperature. See the following Cold Temperature Error Table to make manual corrections. Advise ATC with altitude correction. Advising ATC with altitude corrections is not required in the final segment. See Aeronautical Information Manual (AIM), Chapter 7, for guidance and additional information. For a complete list, see the "Cold Temperature Airports" link under the Additional Resources heading at the bottom of the following page: http://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/dtpp/search/

COLD TEMPERATURE ERROR TABLE

HEIGHT ABOVE AIRPORT IN FEET

REPORTED TEMP °C	200	300	400	500	600	700	800	900	1000	1500	2000	3000	4000	5000
+10	10	10	10	10	20	20	20	20	20	30	40	60	80	90
0	20	20	30	30	40	40	50	50	60	90	120	170	230	280
-10	20	30	40	50	60	70	80	90	100	150	200	290	390	490
-20	30	50	60	70	90	100	120	130	140	210	280	420	570	710
-30	40	60	80	100	120	140	150	170	190	280	380	570	760	950
-40	50	80	100	120	150	170	190	220	240	360	480	720	970	1210
-50	60	90	120	150	180	210	240	270	300	450	590	890	1190	1500

AIRCRAFT APPROACH CATEGORIES

Aircraft approach category indicates a grouping of aircraft based on a speed of VREF, if specified, or if VREF not specified, 1.3 VSO at the maximum certificated landing weight. VREF, VSO, and the maximum certificated landing weight are those values as established for the aircraft by the certification authority of the country of registry. Helicopters are Category A aircraft. An aircraft shall fit in only one category. When necessary to operate the aircraft at an airspeed in excess of the maximum airspeed of its certified aircraft approach category, pilots should use the applicable higher category minima. For additional options and to ensure the aircraft remains within protected airspace, consult the AIM. See following category limits:

MANEUVERING TABLE

Approach Category	A	B	C	D	E
Speed (Knots)	0-90	91-120	121-140	141-165	Abv 165

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CIRCLING APPROACH OBSTACLE PROTECTED AIRSPACE

The circling MDA provides vertical obstacle clearance during a circle-to-land maneuver. The circling MDA protected area extends from the threshold of each runway authorized for landing following a circle-to-land maneuver for a distance as shown in the tables below. The resultant arcs are then connected tangentially to define the protected area.

STANDARD CIRCLING APPROACH MANEUVERING RADIUS

Circling approach protected areas developed prior to late 2012 used the radius distances shown in the following table, expressed in nautical miles (NM), dependent on aircraft approach category. The approaches using standard circling approach areas can be identified by the absence of the C symbol on the circling line of minima.

Circling MDA in feet MSL	Approach Category and Circling Radius (NM)				
	CAT A	CAT B	CAT C	CAT D	CAT E
All Altitudes	1.3	1.5	1.7	2.3	4.5

C EXPANDED CIRCLING APPROACH MANEUVERING AIRSPACE RADIUS

Circling approach protected areas developed after late 2012 use the radius distance shown in the following table, expressed in nautical miles (NM), dependent on aircraft approach category, and the altitude of the circling MDA, which accounts for true airspeed increase with altitude. The approaches using expanded circling approach areas can be identified by the presence of the C symbol on the circling line of minima.

Circling MDA in feet MSL	Approach Category and Circling Radius (NM)				
	CAT A	CAT B	CAT C	CAT D	CAT E
1000 or less	1.3	1.7	2.7	3.6	4.5
1001-3000	1.3	1.8	2.8	3.7	4.6
3001-5000	1.3	1.8	2.9	3.8	4.8
5001-7000	1.3	1.9	3.0	4.0	5.0
7001-9000	1.4	2.0	3.2	4.2	5.3
9001 and above	1.4	2.1	3.3	4.4	5.5

Comparable Values of RVR and Visibility

The following table shall be used for converting RVR to ground or flight visibility. For converting RVR values that fall between listed values, use the next higher RVR value; do not interpolate. For example, when converting 4800 RVR, use 5000 RVR with the resultant visibility of 1 mile.

RVR (feet)	Visibility (SM)	RVR (feet)	Visibility (SM)	RVR (feet)	Visibility (SM)	RVR (feet)	Visibility (SM)
1600	¼	2400	½	3500	⅝	5500	1
1800	½	2600	½	4000	¾	6000	1¼
2000	½	3000	⅝	4500	⅞		
2200	½	3200	⅝	5000	1		

RADAR MINIMA

	RWY	GP/TCH/RPI	CAT	DA/ MDA-VIS	HAT HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT HAA	CEIL-VIS
PAR	10	2.5°/42/1000	ABCDE	**195**/16	100	(100-¼)				
	28	2.5°/48/1068	ABCDE	**187**/16	100	(100-¼)				
ASR	10		ABC	**560**/40	463	(500-¾)	DE	**560**/50	463	(500-1)
	28		AB	**600**/50	513	(600-1)	CDE	**600**/60	513	(600-1¼)
CIR	10		AB	**560-**1¼	463	(500-1¼)	CDE	**560-**1½	463	(500-1½)
	28		AB	**600-**1¼	503	(600-1¼)	CDE	**600-**1½	503	(600-1½)

Visibility (RVR 100's of feet)

Visibility in Statute Miles

All minimums in parentheses not applicable to Civil Pilots. Military Pilots refer to appropriate regulations.

Radar Minima:

1. Minima shown are the lowest permitted by established criteria. Pilots should consult applicable directives for their category of aircraft.
2. The circling MDA and weather minima to be used are those for the runway to which the final approach is flown- not the landing runway. In the above RADAR MINIMA example, a category C aircraft flying a radar approach to runway 10, circling to land on runway 28, must use an MDA of 560 feet with weather minima of 500-1½.

NOTE: Military RADAR MINIMA may be shown with communications symbology that indicates emergency frequency monitoring capability by the radar facility as follows: (E) VHF and UHF emergency frequencies monitored
(V) VHF emergency frequency (121.5) monitored
(U) UHF emergency frequency (243.0) monitored

Additionally, unmonitored frequencies which are available on request from the controlling agency may be annotated with an "x".

A Alternate Minimums not standard. Civil users refer to tabulation. USA/USN/USAF pilots refer to appropriate regulations.

A NA Alternate minimums are Not Authorized due to unmonitored facility or absence of weather reporting service.

T Airport is published in the Takeoff Minimums, (Obstacle) Departure Procedures, and Diverse Vector Area (Radar Vectors) tabulation.

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GENERAL INFORMATION

This publication is issued every 56 days and includes Standard Instrument Approach Procedures (SIAPS), Standard Instrument Departures (SIDs), Standard Terminal Arrivals (STARs), IFR Takeoff Minimums and (Obstacle) Departure Procedures (ODPs), IFR Alternate Minimums, and Radar Instrument Approach Minimums for use by civil and military aviation. The organization responsible for SIAPs, Radar Minimums, SIDs, STARs and graphic ODPs is identified in parentheses in the top margin of the procedure; e.g., (FAA), (FAA-O), (USA), (USAF), (USN). SIAPS with the (FAA) and (FAA-O) designation are regulated under 14 CFR, Part 97. SIAPs with the (FAA-O) designation have been developed under Other Transaction Agreement (OTA) by private providers and have been certified by the FAA. See 14 CFR, Part 91.175 (a) and the AIM for further details. 14 CFR, Part 91.175 (g) and the Special Notices section of the Chart Supplement contain information on civil operations at military airports.

The FAA uses an internal numbering system on all charts in the TPP. This Approach and Landing (AL) number is located on the top center margin of the chart followed by the organization responsible for the procedure in parentheses, e.g., AL-18 (FAA), AL-227 (USAF).

CHART CURRENCY INFORMATION

Date of Latest Revision 09365

The Date of Latest Revision identifies the Julian date the chart was added or last revised for any reason. The first two digits indicate the year, the last three digits indicate the day of the year (001 to 365/6) in which the latest revision of any kind has been made to the chart.

FAA Procedure Amendment Number → Orig 31DEC09 ← Procedure Amendment Effective Date

FAA Procedure Amendment Number → Amdt 2B 12MAR09 ← Procedure Amendment Effective Date

The FAA Procedure Amendment Number represents the most current amendment of a given procedure. The Procedure Amendment Effective Date represents the AIRAC cycle date on which the procedure amendment was incorporated into the chart. Updates to the amendment number & effective date represent procedural/criteria revisions to the charted procedure, e.g., course, fix, altitude, minima, etc. On Departure Procedures and Standard Terminal Arrivals, procedural revisions to the current chart are indicated by an upnumber to the procedure title with the procedure amendment effective date following. On Radar Minima, Takeoff Minimums and (Obstacle) Departure Procedures and Diverse Vector Areas, the FAA Procedure Amendment Number, Procedure Effective Date, and the Julian Date of Last Revision will be shown on the same line, e.g., AMDT 2 10DEC15 (15344).

MISCELLANEOUS

★ Indicates a non-continuously operating facility, see Chart Supplement.

For Civil (FAA) instrument procedures, "RADAR REQUIRED" in the planview of the chart indicates that ATC radar must be available to assist the pilot when transitioning from the en route environment. "Radar required" in the pilot briefing portion of the chart indicates that ATC radar is required on portions of the procedure outside the final approach segment, including the missed approach. Some military procedures also have equipment requirements such as "Radar Required", but do not conform to the same charting application standards used by the FAA.

Distances are in nautical miles (except visibility in statute miles and Runway Visual Range in hundreds of feet). Runway dimensions are in feet. Elevations are in feet, Mean Sea Level (MSL). Ceilings are in feet above airport elevation. Radials/bearings/headings/courses are magnetic. Horizontal Datum: Unless otherwise noted on the chart, all coordinates are referenced to North American Datum 1983 (NAD 83), which for charting purposes is considered equivalent to World Geodetic System 1984 (WGS 84).

Terrain is scaled within the neat lines (planview boundaries) and does not accurately underlie not-to-scale distance depictions or symbols.

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STANDARD TERMINAL ARRIVALS AND DEPARTURE PROCEDURES

The use of the associated codified STAR/DP and transition identifiers are requested of users when filing flight plans via teletype and are required for users filing flight plans via computer interface. It must be noted that when filing a STAR/DP with a transition, the first three coded characters of the STAR and the last three coded characters of the DP are replaced by the transition code. Examples: ACTON SIX ARRIVAL, file (AQN.AQN6); ACTON SIX ARRIVAL, EDNAS TRANSITION, file (EDNAS.AQN6). FREEHOLD THREE DEPARTURE, file (FREH3.RBV), FREEHOLD THREE DEPARTURE, ELWOOD CITY TRANSITION, file (FREH3.EWC).

PROCEDURE PBN/EQUIPMENT REQUIREMENTS

Users will begin to see Performance-Based Navigation (PBN) Requirements and Equipment Requirements on Instrument Approach Procedures (IAPs), RNAV STARS and RNAV DPs prominently displayed in separate, standardized notes boxes. For procedures with PBN elements, the PBN box will contain the procedure's navigation specification(s); and, if required: specific sensors or infrastructure needed for the navigation solution; any additional or advanced functional requirements; the minimum Required Navigation Performance (RNP) value and any amplifying remarks. Items listed in this PBN box are REQUIRED for the procedure's PBN elements. The Equipment Requirements Box will list non-PBN requirements. On charts with both PBN elements and equipment requirements, the PBN requirements box will be listed first. The publication of these notes will continue incrementally until all charts have been amended to comply with the new standard.

IAP PBN/Equipment Requirements Notes Box

PBN Requirements Box →	From WINRZ, LIBGE: RNAV-1 GPS, RNAV-1GPS from MAP to YARKU.
Equipment Requirements Box →	DME required for LOC only.
Standard Procedure Notes Box →	T Circling to Rwy 25 NA at night. #For inop MALSR increase S-ILS 16R all cats visibility to 2½ SM.

RNAV STAR and DP PBN/Equipment Requirements Notes Box

PBN Requirements Box →	RNAV 1 - DME/DME/IRU or GPS
Equipment Requirements Box →	RADAR required

PILOT CONTROLLED AIRPORT LIGHTING SYSTEMS

Available pilot controlled lighting (PCL) systems are indicated as follows:

1. Approach lighting systems that bear a system identification are symbolized using negative symbology, e.g., A1, V, ✿
2. Approach lighting systems that do not bear a system identification are indicated with a negative "L" beside the name.

A star (★) indicates non-standard PCL, consult Chart Supplement, e.g., L★

To activate lights, use frequency indicated in the communication section of the chart with a L or the appropriate lighting system identification e.g., UNICOM 122.8 L, A1, V

KEY MIKE	FUNCTION
7 times within 5 seconds	Highest intensity available
5 times within 5 seconds	Medium or lower intensity (Lower REIL or REIL-off)
3 times within 5 seconds	Lowest intensity available (Lower REIL or REIL-off)

ABBREVIATIONS

AAUP.....Attention All Users Page
ADF..... Automatic Direction Finder
ADIZ..... Air Defense Identification Zone
AFIS.....Automatic Flight Information Service
ALS.....Approach Light System
ALSF..... Approach Light System with Sequenced Flashing Lights
AOB..... At Or Below
AP..... Autopilot System
APCH..... Approach
APP CON..... Approach Control
ARR..... Arrival
ASOS..... Automated Surface Observing System
ASR/PAR..... Published Radar Minimums at this Airport
ASSC..... Airport Surface Surveillance Systems
ATIS.....Automatic Terminal Information Service
AUNICOM.....Automated UNICOM
AWOS.....Automated Weather Observing System
AZ..... Azimuth
BC..... Back Course
BND..... Bound
C..... Circling
CAT..... Category
CCW..... Counter Clockwise
CDI..... Course Deviation Indicator
Chan.....Channel
CIFP..... Coded Instrument Flight Procedures
CIR.....Circling
CLNC DEL..... Clearance Delivery
CNF.....Computer Navigation Fix
CPDLC..... Controller Pilot Data Link Communication
CTAF..... Common Traffic Advisory Frequency
CW.....Clockwise
D-ATIS..... Digital-Automatic Terminal Information Service
DA.....Decision Altitude
DER.....Departure End of Runway
DH.....Decision Height
DME..... Distance Measuring Equipment
DTHR..... Displaced Threshold
DVA..... Diverse Vector Area
ELEV..... Elevation
EMAS..... Engineered Material Arresting System
FAF.....Final Approach Fix
FD.....Flight Director System
FM..... Fan Marker
FMS..... Flight Management System
GBAS..... Ground Based Augmentation System
GCO.....Ground Communications Outlet
GLS..... Ground Based Augmentation System Landing System
GP..... Glidepath
GPI.....Ground Point of Interception
GPS.....Global Positioning System
GS.....Glide Slope
HAA.....Height above Airport
HAL.....Height above Landing
HAT.....Height above Touchdown
HATh.....Height Above Threshold
HCH..... Heliport Crossing Height
HGS.....Head-up Guidance System
HIRL.....High Intensity Runway Lights
HUD.....Head-up Display
IAF.....Initial Approach Fix
ICAO.....International Civil Aviation Organization
IF.....Intermediate Fix
IM..... Inner Marker
INOP..... Inoperative
INT..... Intersection
K..... Knots
KIAS..... Knots Indicated Airspeed
LAAS..... Local Area Augmentation System
LDA..... Localizer Type Directional Aid
Ldg..... Landing
LIRL.....Low Intensity Runway Lights
LNAV.....Lateral Navigation
LOC.....Localizer
LP..... Localizer Performance
LPV..... Localizer Performance with Vertical Guidance
LR..... Lead Radial. Provides at least 2 NM (Copter 1 NM) of lead to assist in turning onto the intermediate/final course.
MAA.....Maximum Authorized Altitude
MALS..... Medium Intensity Approach Light System
MALSF..... Medium Approach Lighting System with Sequenced Flashers
MALSR..... Medium Intensity Approach Light System with RAIL
MAP.....Missed Approach Point
MDA..... Minimum Descent Altitude
MIRL.....Medium Intensity Runway Lights
MM..... Middle Marker
MRA..... Minimum Reception Altitude
N/A..... Not Applicable
NA..... Not Authorized
NDB..... Non-directional Radio Beacon
NM..... Nautical Mile
NoPT..... No Procedure Turn Required (Procedure Turn shall not be executed without ATC clearance)

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ODALS..... Omnidirectional Approach Light System
ODP..... Obstacle Departure Procedure
OM..... Outer Marker
PAR..... Precision Approach Radar
PDC..... Pre-Departure Clearance
PRM..... Precision Runway Monitor
R..... Radial
RA..... Radio Altimeter setting height
RAIL..... Runway Alignment Indicator Lights
RCLS..... Runway Centerline Light System
REIL..... Runway End Identifier Lights
RF..... Radius-to-Fix
RLLS..... Runway Lead-in Light System
RNAV..... Area Navigation
RNP..... Required Navigation Performance
RPI..... Runway Point of Intercept(ion)
RRL..... Runway Remaining Lights
Rwy..... Runway
RVR..... Runway Visual Range
S..... Straight-in
SALS..... Short Approach Light System
SALSF..... Short Approach Lighting System with Sequenced Flashing Lights
SSALF..... Simplified Short Approach Lighting System with Sequenced Flashers
SSALR..... Simplified Short Approach Light System with RAIL
SSALS..... Simplified Short Approach Lighting System
SDF..... Simplified Directional Facility
SM..... Statute Mile
SOIA..... Simultaneous Offset Instrument Approach
SR-SS..... Sunrise-Sunset
TAA..... Terminal Arrival Area
TAC..... TACAN
TCH..... Threshold Crossing Height (height in feet Above Ground level)
TDZ..... Touchdown Zone
TDZE..... Touchdown Zone Elevation
TDZ/CL..... Touchdown Zone and Runway Centerline Lighting
TDZL..... Touchdown Zone Lights
THR..... Threshold
TODA..... Takeoff Distance Available
TORA..... Takeoff Run Available
TR..... Track
VASI..... Visual Approach Slope Indicator
VCOA..... Visual Climb Over Airport
VDP..... Visual Descent Point
VGSI..... Visual Glide Slope Indicator
VNAV..... Vertical Navigation
WAAS..... Wide Area Augmentation System
WP/WPT..... Waypoint (RNAV)

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LEGEND 20086

INSTRUMENT APPROACH PROCEDURES (CHARTS)

PLANVIEW SYMBOLS

TERMINAL ROUTES

Procedure Track

Missed Approach

Visual Flight Path

165°
345°
Procedure Turn
(Type degree and point of turn optional)

3100 NoPT 5.6 NM to GS Intcpt
045°
(14.2 to LOM)
Minimum Route Altitude
2000
155°
Feeder Route
(15.1)
Mileage

HOLDING PATTERNS

Missed Approach
090°
270°

Hold-in-lieu of Procedure Turn
090°
1 min
270°

090°
(IAS)
270°
4 NM

HOLD 8000
Arrival
090°
270°

Holding pattern with max. restricted airspeed:
(175K) applies to all altitudes.
(210K) applies to altitudes above 6000′ to and including 14000′.
Arrival Holding Pattern altitude restrictions will be indicated when they deviate from the adjacent leg.
Timing or distance limits for Hold-in-lieu of Procedure Turn Holding Patterns will be shown.
DME fixes may be shown.

FIXES/ATC REPORTING REQUIREMENTS

Reporting Point
▲ Name (Compulsory)
△ Name (Non-Compulsory)

Intersection

WAYPOINT (Compulsory)

WAYPOINT (Non-Compulsory)

FLYOVER POINT

MAP WP (Flyover)

Computer Navigation Fix (CNF) - No ATC Function
x (NAME) ("x" omitted when it conflicts with runway pattern)

15 DME Distance From Facility

AUSTN INT
ARC/DME/RNAV Fix

R-198 → Radial line and value

LR-198 → Lead Radial

LB-198 → Lead Bearing

ALTITUDES

5500 Mandatory Altitude
2500 Minimum Altitude
4300 Maximum Altitude
3000 Recommended Altitude
5000 Mandatory Block
3000 Altitude

INDICATED AIRSPEED

175K	120K	250K	180K
Mandatory Airspeed	Minimum Airspeed	Maximum Airspeed	Recommended Airspeed

RADIO AIDS TO NAVIGATION

110.1 Underline indicates No Voice transmitted on this frequency

Compulsory:

VOR, VORTAC, DME, VOR/DME, TACAN, NDB, NDB/DME

Non-Compulsory:

VOR, VORTAC, DME, VOR/DME, TACAN, NDB, NDB/DME

LOM/LMM (Compass locator at Outer Marker/Middle Marker)

Marker Beacon

Marker beacons that are not specifically part of the procedure.

Localizer (LOC/LDA) Course
Right side shading- Front course; Left side shading- Back Course

SDF Course

LOC/DME

LOC/LDA/SDF Transmitter
(shown when installation is offset from its normal postion off the end of the runway.)

Primary Navaid with Coordinate Values
LIMA
114.5 LIM
Chan 92
S12°00.80′
W77°07.00′

Secondary Navaid
LMM
LIMA
248 NT

SCOTT
Chan 59
SKE
(112.2)
VHF Paired Frequency

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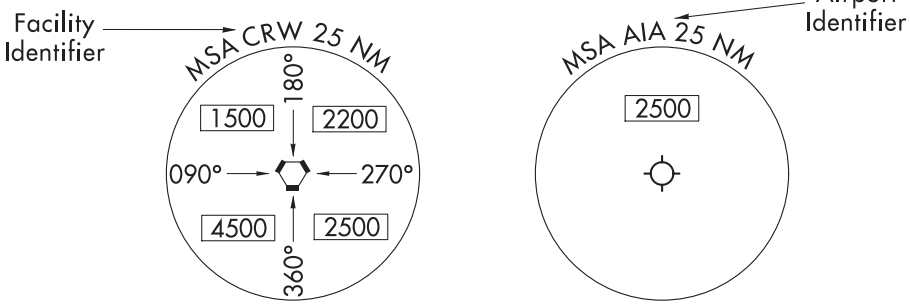
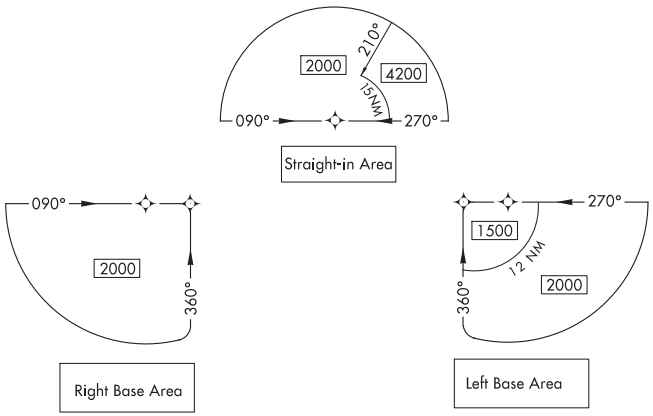
PLANVIEW SYMBOLS

MINIMUM SAFE ALTITUDE (MSA)



(arrows on distance circle identify sectors)

TERMINAL ARRIVAL AREA (TAA)



MISCELLANEOUS

VOR Changeover Point

RWY 15 S12° 00.52′ W77° 06.91′ — End of Rwy Coordinates (DOD only)

Distance not to scale

International Boundary

Air Defense Identification Zone

SPECIAL USE AIRSPACE

R-352

R-Restricted
P-Prohibited
W-Warning
A-Alert

AIRPORTS

Primary and Secondary (named in planview)

Civil

Seaplane Base

Heliport

OBSTACLES

Spot Elevation

Obstacle

Highest Obstacle

Highest Spot Elevation

Group of Obstacles

Doubtful accuracy

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LEGEND 20198

INSTRUMENT APPROACH PROCEDURES (CHARTS)

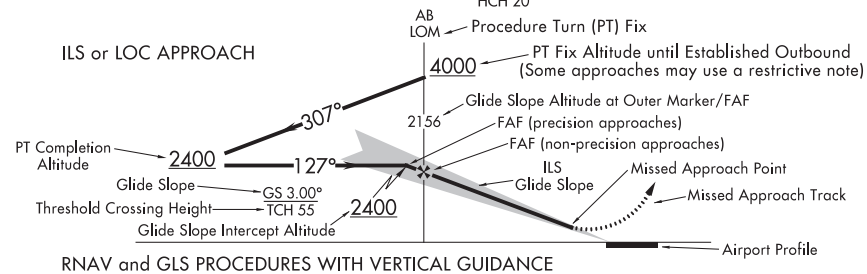
PROFILE VIEW

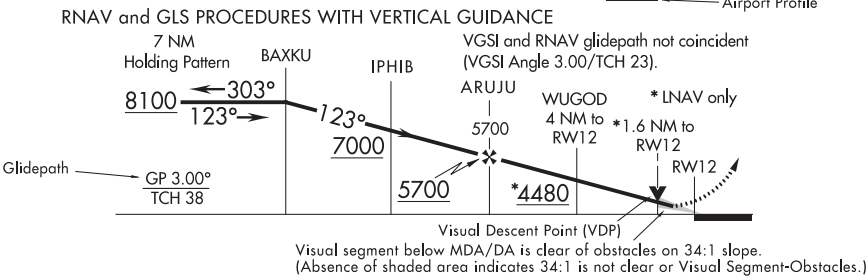
Three different methods are used to depict either electronic or vertical guidance: "GS", "GP", or "VDA".

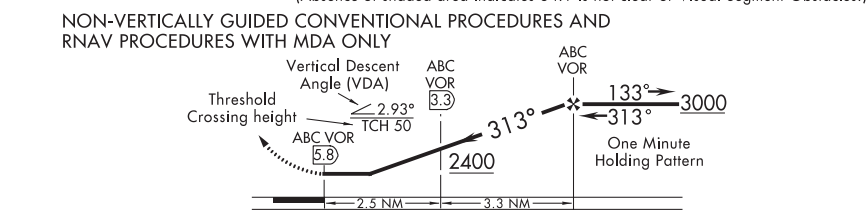
1. "GS" indicates that an Instrument Landing System (ILS) electronic glide slope (a ground antenna) provides vertical guidance. The profile section of ILS procedures depict a GS angle and TCH in the following format: GS 3.00°/TCH 55.

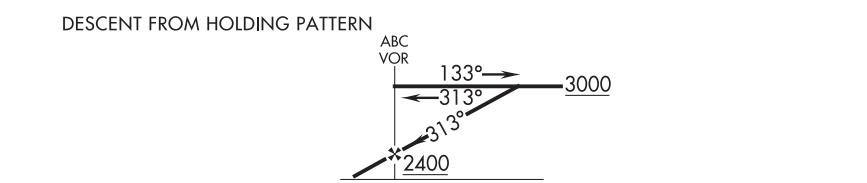
2. "GP" on GLS and RNAV procedures indicates that either electronic vertical guidance (via Wide Area Augmentation System - WAAS or Ground Based Augmentation System - GBAS) or barometric vertical guidance is provided. GLS and RNAV procedures with a published decision altitude (DA/H) depict a GP angle and TCH in the following format: GP 3.00°/TCH 50.

3. An advisory vertical descent angle (VDA) is provided on non-vertically guided conventional procedures and RNAV procedures with only a minimum descent altitude (MDA) to assist in preventing controlled flight into terrain. On Civil (FAA) procedures, this information is placed above or below the procedure track following the fix it is based on. Absence of a VDA or a note that the VDA is not authorized indicates that the prescribed obstacle clearance surface is not clear and the VDA must not be used below MDA. VDA is depicted in the following format: ∠3.00°/TCH 55. On Copter procedures this is depicted in the following format: ∠7.30°/HCH 20.









ALTITUDES

5500	Mandatory Altitude	3000	Recommended Altitude
2500	Minimum Altitude	5000 / 3000	Mandatory Block Altitude
4300	Maximum Altitude		

PROFILE SYMBOLS

- 2400 — Glide Slope/Glidepath Intercept Altitude and final approach fix for vertically guided approach procedures.
- ▼ Visual Descent Point (VDP)
- Visual Flight Path
- Note: Facilities and waypoints are depicted as a solid vertical line while fixes and intersections are depicted as a dashed vertical line.

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LEGEND 19059

LEGEND
STANDARD TERMINAL ARRIVAL (STAR) CHARTS
DEPARTURE PROCEDURE (DP) CHARTS

Applies to both STAR and DP Charts unless otherwise noted.

RADIO AIDS TO NAVIGATION

Compulsory:

VOR, VORTAC, DME, VOR/DME, TACAN, NDB, NDB/DME

Non-Compulsory:

VOR, VORTAC, DME, VOR/DME, TACAN, NDB, NDB/DME

LMM, LOM (Compass locator)

Marker Beacon

LOC, LOC/DME (shown when installation is offset from its normal position off the end of the runway.) (DP)

Localizer Course

SDF Course

(T) indicates frequency protection range (STAR)

(Y) TACAN must be placed in "Y" mode to receive distance information

Identifier

Frequency

ORLANDO
112.25 (T) ORL
Chan 59 (Y)
N28°32.56' - W81°20.10'

Geographic Position

L-19, H-5

DME or TACAN Channel

Underline indicates no voice transmitted on this frequency

Enroute Chart Reference

Coordinates

Waypoint Name

PRAYS
N38°58.30' W89°51.50'
112.7 CAP 187.1°-56.2
590

Frequency

Identifier

Reference Facility Elevation

Radial-Distance (Facility to Waypoint)

FIXES/ATC REPORTING REQUIREMENTS

Reporting Points
N00°00.00'
W00°00.00'

75 → DME Mileage (when not obvious)

▲ Fix-Compulsory and

△ Non-Compulsory Position Report

DME fix

WAYPOINT (Compulsory)

WAYPOINT (Non-Compulsory)

FLYOVER POINT

X Computer Navigation Fix (CNF) - No ATC Function
N00°00.00'
W00°00.00'

ROUTES

4500 MEA-Minimum Enroute Altitude

*3500 MOCA-Minimum Obstruction Clearance Altitude

270° Departure Route - Arrival Route

(65) Mileage between Radio Aids, Reporting Points, and Route Breaks

Transition Route

R-275 Radial line and value

Lost Communications Track

Visual Flight Path (DP)

V12 J80 Airway/Jet Route Identification

DP Holding Pattern (IAS)

STAR Holding Pattern (IAS)

Holding pattern with max. restricted airspeed
(175K) applies to all altitudes
(210K) applies to altitudes above 6000' to and including 14000'

SPECIAL USE AIRSPACE

R-352

R-Restricted W-Warning
P-Prohibited A-Alert
MOA-Military Operations Area

ALTITUDES

5500	2300	4800
Mandatory Altitude (Cross at)	Minimum Altitude (Cross at or above)	Maximum Altitude (Cross at or below)

15000
12000
Block Altitude

Altitude change at other than Radio Aids (STAR)

INDICATED AIRSPEED

175K	120K	250K
Mandatory Airspeed	Minimum Airspeed	Maximum Airspeed

AIRPORTS

(DP)

Heliport

Civil Military Joint Civil-Military

Airports not served by the procedure shown in screened color (STAR)

Civil Military Joint Civil-Military

MISCELLANEOUS

Changeover Point

Distance not to scale (DP)

International Boundary (DP)

Air Defense Identification Zone

T Takeoff Minimums and (Obstacle) Departure Procedures entry published. (DP)

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LEGEND 19059

19339

LEGEND

INSTRUMENT APPROACH PROCEDURES (CHARTS)

AIRPORT DIAGRAM/AIRPORT SKETCH

Runways

Hard Surface | Other Than Hard Surface | Stopways,Taxiways, Parking Areas | Metal Surface

Closed Runway | Closed Surface | Under Construction | Water Runway

ARRESTING GEAR: Specific arresting gear systems; e.g., BAK12, MA-1A etc., shown on airport diagrams, not applicable to Civil Pilots. Military Pilots refer to appropriate DOD publications.

uni-directional | bi-directional | Jet Barrier

ARRESTING SYSTEM (EMAS)

REFERENCE FEATURES

Displaced Threshold.....
Hot Spot .....
Runway Holding Position Markings.....
Buildings.....
24-Hour Self-Serve Fuel ##.....
Tanks.....
Obstructions.....
Airport Beacon #.....
Runway
Radar Reflectors.....
Control Tower #..... TWR

When Control Tower and Rotating Beacon are co-located, Beacon symbol will be used and further identified as TWR.

A fuel symbol is shown to indicate 24-hour self-serve fuel available, see appropriate Chart Supplement for information.

NOTE:
All new and revised airport diagrams are shown referenced to the World Geodetic System (WGS) (noted on appropriate diagram), and may not be compatible with local coordinates published in FLIP. (Foreign Only)

Runway Weight Bearing Capacity/or PCN Pavement Classification Number is shown as a codified expression. Refer to the appropriate Supplement/Directory for applicable codes e.g., RWY 14-32 PCN 80 F/D/X/U S-75, D-185, 2S-175, 2D-325

Helicopter Alighting Areas

Negative Symbols used to identify Copter Procedures landing point.....

NOTE:
Landmark features depicted on Copter Approach insets and sketches are provided for visual reference only.

Runway TDZ elevation.....TDZE 123

Runway Slope.....0.8% UP ⟵ 0.3% DOWN
(shown when runway slope is greater than or equal to 0.3%)

NOTE:
Runway Slope measured to midpoint on runways 8000 feet or longer.

U.S. Navy Optical Landing System (OLS) "OLS" location is shown because of its height of approximately 7 feet and proximity to edge of runway may create an obstruction for some types of aircraft.

Approach light symbols are shown in the Flight Information Handbook.

Airport diagram scales are variable.

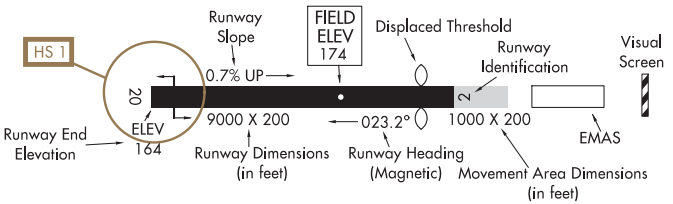
True/magnetic North orientation may vary from diagram to diagram

Coordinate values are shown in 1 or ½ minute increments. They are further broken down into 6 second ticks, within each 1 minute increments.

Positional accuracy within ±600 feet unless otherwise noted on the chart.

Runway length depicted is the physical length of the runway (end-to-end, including displaced thresholds if any) but excluding areas designated as stopways.

A D symbol is shown to indicate runway declared distance information available, see appropriate Chart Supplement for distance information.



SCOPE

Airport diagrams are specifically designed to assist in the movement of ground traffic at locations with complex runway/taxiway configurations. Airport diagrams are not intended to be used for approach and landing or departure operations. For revisions to Airport Diagrams: Consult FAA Order 7910.4.

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LEGEND 15344

INSTRUMENT APPROACH PROCEDURES (CHARTS)

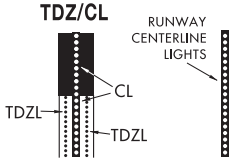
APPROACH LIGHTING SYSTEM - UNITED STATES

Approach lighting and visual glide slope systems are indicated on the airport sketch by an identifier, e.g., A2, V, etc.

A dot " • " portrayed with approach lighting letter identifier indicates sequenced flashing lights (F) installed with the approach lighting system e.g., A1. Negative symbology, e.g., A1, V indicates Pilot Controlled Lighting (PCL).

RUNWAY TOUCHDOWN ZONE AND CENTERLINE LIGHTING SYSTEMS

TDZ/CL

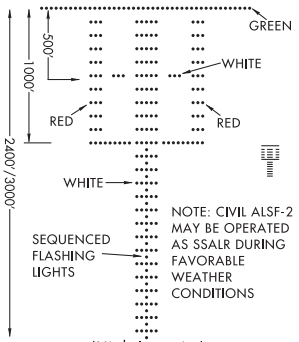


AVAILABILITY of TDZ/CL will be shown by NOTE in SKETCH e.g. "TDZ/CL Rwy 15"

APPROACH LIGHTING SYSTEM

A

ALSF-2



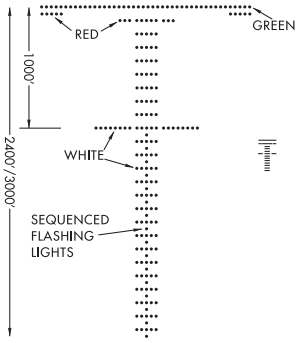
NOTE: CIVIL ALSF-2 MAY BE OPERATED AS SSALR DURING FAVORABLE WEATHER CONDITIONS

(High Intensity)
LENGTH 2400/3000 FEET

APPROACH LIGHTING SYSTEM

A1

ALSF-1



(High Intensity)
LENGTH 2400/3000 FEET

SHORT APPROACH LIGHTING SYSTEM

A2

SALS/SALSF

(High Intensity)

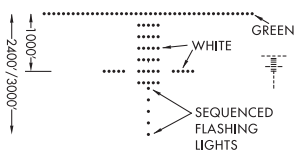
SAME AS INNER 1500' OF ALSF-1

SIMPLIFIED SHORT APPROACH LIGHTING SYSTEM

with Runway Alignment Indicator Lights

A3

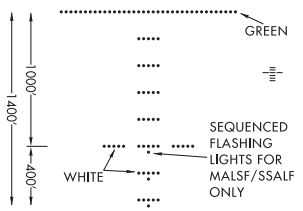
SSALR



(High Intensity)
LENGTH 2400/3000 FEET

MEDIUM INTENSITY (**MALS** and **MALSF**) OR SIMPLIFIED SHORT (**SSALS** and **SSALF**) APPROACH LIGHTING SYSTEMS

A4



LENGTH 1400 FEET

MEDIUM INTENSITY APPROACH LIGHTING SYSTEM

with Runway Alignment Indicator Lights

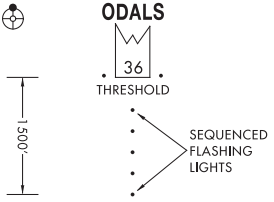
A5

MALSR

SAME LIGHT CONFIGURATION AS SSALR.

OMNIDIRECTIONAL APPROACH LIGHTING SYSTEM

ODALS



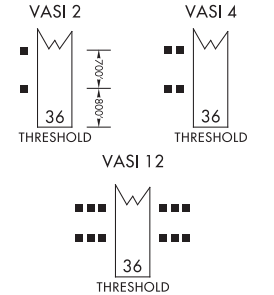
LENGTH 1500 FEET

V VISUAL APPROACH SLOPE INDICATOR

VASI

VISUAL APPROACH SLOPE INDICATOR WITH STANDARD THRESHOLD CLEARANCE PROVIDED.

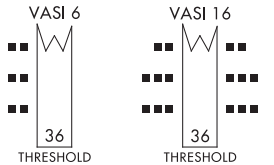
ALL LIGHTS WHITE — TOO HIGH
FAR LIGHTS RED, NEAR LIGHTS WHITE — ON GLIDE SLOPE
ALL LIGHTS RED — TOO LOW



V3 VISUAL APPROACH SLOPE INDICATOR

VASI

3-BAR, 6 OR 16 BOX, VISUAL APPROACH SLOPE INDICATOR THAT PROVIDES 2 GLIDE ANGLES AND 2 THRESHOLD CROSSING HEIGHTS.



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LEGEND 15344

LEGEND 18256

INSTRUMENT APPROACH PROCEDURES (CHARTS)

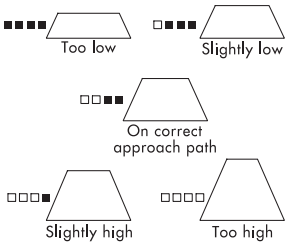
APPROACH LIGHTING SYSTEM - UNITED STATES

Approach lighting and visual glide slope systems are indicated on the airport sketch by an identifier, (A2), (V) etc.

A dot " ● " portrayed with approach lighting letter identifier indicates sequenced flashing lights (F) installed with the approach lighting system e.g., (A1). Negative symbology, e.g., (A1), (V) indicates Pilot Controlled Lighting (PCL).

(P) PRECISION APPROACH PATH INDICATOR

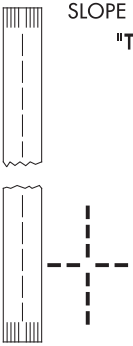
PAPI



Legend: □ White ■ Red

(V1) "T"-VISUAL APPROACH SLOPE INDICATOR

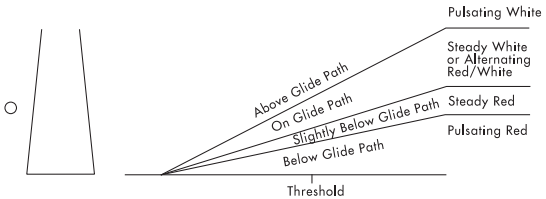
"T"-VASI



"T" ON BOTH SIDES OF RWY ALL LIGHTS VARIABLE WHITE. CORRECT APPROACH SLOPE- ONLY CROSS BAR VISIBLE. UPRIGHT "T"- FLY UP. INVERTED "T"- FLY DOWN. RED "T"- GROSS UNDERSHOOT.

(V2) PULSATING VISUAL APPROACH SLOPE INDICATOR

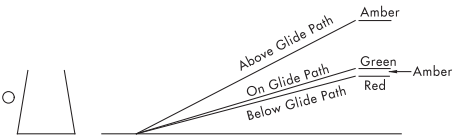
PVASI



CAUTION: When viewing the pulsating visual approach slope indicators in the pulsating white or pulsating red sectors, it is possible to mistake this lighting aid for another aircraft or a ground vehicle. Pilots should exercise caution when using this type of system.

(V4) TRI-COLOR VISUAL APPROACH SLOPE INDICATOR

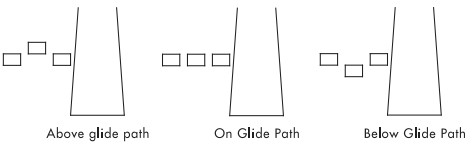
TRCV



CAUTION: When the aircraft descends from green to red, the pilot may see a dark amber color during the transition from green to red.

(V5) ALIGNMENT OF ELEMENTS SYSTEMS

APAP



Painted panels which may be lighted at night. To use the system the pilot positions the aircraft so the elements are in alignment.

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FREQ PAIRING 20198

FREQUENCY PAIRING TABLE

TACAN CHANNEL	VHF FREQUENCY	TACAN CHANNEL	VHF FREQUENCY	TACAN CHANNEL	VHF FREQUENCY
17Y	108.05	40X	110.30	88Y	114.15
18X	108.10	40Y	110.35	89Y	114.25
18Y	108.15	41Y	110.45	90Y	114.35
19Y	108.25	42X	110.50	91Y	114.45
20X	108.30	42Y	110.55	92Y	114.55
20Y	108.35	43Y	110.65	93Y	114.65
21Y	108.45	44X	110.70	94Y	114.75
22X	108.50	44Y	110.75	95Y	114.85
22Y	108.55	45Y	110.85	96Y	114.95
23Y	108.65	46X	110.90	97Y	115.05
24X	108.70	46Y	110.95	98Y	115.15
24Y	108.75	47Y	111.05	99Y	115.25
25Y	108.85	48X	111.10	100Y	115.35
26X	108.90	48Y	111.15	101Y	115.45
26Y	108.95	49Y	111.25	102Y	115.55
27Y	109.05	50X	111.30	103Y	115.65
28X	109.10	50Y	111.35	104Y	115.75
28Y	109.15	51Y	111.45	105Y	115.85
29Y	109.25	52X	111.50	106Y	115.95
30X	109.30	52Y	111.55	107Y	116.05
30Y	109.35	53Y	111.65	108Y	116.15
31Y	109.45	54X	111.70	109Y	116.25
32X	109.50	54Y	111.75	110Y	116.35
32Y	109.55	55Y	111.85	111Y	116.45
33Y	109.65	56X	111.90	112Y	116.55
34X	109.70	56Y	111.95	113Y	116.65
34Y	109.75	80Y	113.35	114Y	116.75
35Y	109.85	81Y	113.45	115Y	116.85
36X	109.90	82Y	113.55	116Y	116.95
36Y	109.95	83Y	113.65	117Y	117.05
37Y	110.05	84Y	113.75	118Y	117.15
38X	110.10	85Y	113.85	119Y	117.25
38Y	110.15	86Y	113.95		
39Y	110.25	87Y	114.05		

See the Chart Supplement for a complete listing.

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FREQ PAIRING 20198

INDEX OF TERMINAL CHARTS AND MINIMUMS

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ABRAMS MUNI
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LENAWEE COUNTY(ADG)
TAKEOFF MINIMUMS L
ALTERNATE MINIMUMS ....M
IAPS ..... RNAV (GPS) RWY 05 1
RNAV (GPS) RWY 23 2

ALLEGAN, MI
PADGHAM FIELD(35D)
TAKEOFF MINIMUMS L
IAPS ..... RNAV (GPS) RWY 11 3
RNAV (GPS) RWY 29 4

ALMA, MI
GRATIOT COMMUNITY(AMN)
TAKEOFF MINIMUMS L
ALTERNATE MINIMUMS ....M
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RNAV (GPS) RWY 18 6
RNAV (GPS) RWY 27 7
VOR RWY 18 8

ALPENA, MI
ALPENA COUNTY RGNL(APN)
TAKEOFF MINIMUMS L
ALTERNATE MINIMUMS ....M
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RNAV (GPS) RWY 01 10
RNAV (GPS) RWY 19 11
VOR RWY 19 12
AIRPORT DIAGRAM 13

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---SEE BERRIEN SPRINGS, MI

ANN ARBOR, MI
ANN ARBOR MUNI(ARB)
TAKEOFF MINIMUMS L
ALTERNATE MINIMUMS ....M
HOT SPOT .... P
STARS ..... FOREY TWO (RNAV) Z6
OKLND ONE (RNAV) Z19
PETTE TWO (RNAV) Z20
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MIGGY TWO (RNAV) 27
PAVYL TWO (RNAV) 28
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BAD AXE, MI
HURON COUNTY MEMORIAL(BAX)
TAKEOFF MINIMUMS L
ALTERNATE MINIMUMS ....M
IAPS ..... RNAV (GPS) RWY 04 32
RNAV (GPS) RWY 17 33
RNAV (GPS) RWY 22 34
RNAV (GPS) RWY 35 35

BALDWIN, MI
BALDWIN MUNI(7D3)
TAKEOFF MINIMUMS L
IAPS ..... RNAV (GPS)-A 36

BATTLE CREEK, MI
BATTLE CREEK EXECUTIVE AT KELLOGG FIELD (BTL)
TAKEOFF MINIMUMS L
ALTERNATE MINIMUMS ....M
LAHSO ....O
IAPS ..... ILS OR LOC RWY 23R 37
RNAV (GPS) RWY 05L 38
RNAV (GPS) RWY 23R 39
RNAV (GPS) RWY 31 40
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BAY CITY, MI
JAMES CLEMENTS MUNI(3CM)
TAKEOFF MINIMUMS L
IAPS ..... RNAV (GPS) RWY 18 42

INDEX OF TERMINAL CHARTS AND MINIMUMS

NAME PROC SECT PG

BEAVER ISLAND, MI
BEAVER ISLAND(SJX)
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IFR TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

Civil Airports and Selected Military Airports

ALL USERS: Airports that have Departure Procedures (DPs) designed specifically to assist pilots in avoiding obstacles during the climb to the minimum enroute altitude, and/or airports that have civil IFR takeoff minimums other than standard, are listed below. Takeoff Minimums and Departure Procedures apply to all runways unless otherwise specified. An entry may also be listed that contains only Takeoff Obstacle Notes. Altitudes, unless otherwise indicated, are minimum altitudes in MSL.

DPs specifically designed for obstacle avoidance are referred to as Obstacle Departure Procedures (ODPs) and are textually described below, or published separately as a graphic procedure. If the ODP is published as a graphic procedure, its name will be listed below, and it can be found in either this volume (civil), or the applicable military volume, as appropriate. Users will recognize graphic obstacle DPs by the term "(OBSTACLE)" included in the procedure title; e.g., TETON TWO (OBSTACLE). If not specifically assigned an ODP, SID, or radar vector as part of an IFR clearance, an ODP may be required to be flown for obstacle clearance, even though not specifically stated in the IFR clearance. When doing so in this manner, ATC should be informed when the ODP being used contains a specified route to be flown, restrictions before turning, and/or altitude restrictions.

Some ODPs, which are established solely for obstacle avoidance, require a climb in visual conditions to cross the airport, a fix, or a NAVAID in a specified direction, at or above a specified altitude. These procedures are called Visual Climb Over Airport (VCOA). To ensure safe and efficient operations, the pilot must verbally request approval from ATC to fly the VCOA when requesting their IFR clearance.

At some locations where an ODP has been established, a diverse vector area (DVA) may be created to allow radar vectors to be used in lieu of an ODP. DVA information will state that headings will be as assigned by ATC and climb gradients, when applicable, will be published immediately following the specified departure procedure.

Graphic DPs designed by ATC to standardize traffic flows, ensure aircraft separation and enhance capacity are referred to as "Standard Instrument Departures (SIDs)". SIDs also provide obstacle clearance and are published under the appropriate airport section. ATC clearance must be received prior to flying a SID.

CIVIL USERS NOTE: Title 14 Code of Federal Regulations Part 91 prescribes standard takeoff rules and establishes takeoff minimums for certain operators as follows: (1) For aircraft, other than helicopters, having two engines or less – one statute mile visibility. (2) For aircraft having more than two engines – one-half statute mile visibility. (3) For helicopters – one-half statute mile visibility. These standard minima apply in the absence of any different minima listed below.

MILITARY USERS NOTE: Civil (nonstandard) takeoff minima are published below. For military takeoff minima, refer to appropriate service directives.

EC-1, 25 FEB 2021 to 22 APR 2021

ADRIAN, MI

LENAWEE COUNTY (ADG)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 10MAY07 (07130) (FAA)

TAKEOFF MINIMUMS:

Rwys 11, 29, NA-ATC.

TAKEOFF OBSTACLE NOTES:

Rwy 5, multiple trees beginning 1837' from DER, 149' left of centerline, up to 75' AGL/873' MSL.
Multiple trees beginning 953' from DER, 146' right of centerline, up to 74' AGL/872' MSL.
Rwy 23, tree 1231' from DER, 633' left of centerline, 55' AGL/849' MSL.

ALLEGAN, MI

PADGHAM FIELD (35D)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2 11FEB10 (10042) (FAA)

TAKEOFF MINIMUMS:

Rwys 15, 33, NA-Environmental.

DEPARTURE PROCEDURE:

Rwy 11, climb heading 103° to 1200 before turning right.

TAKEOFF OBSTACLE NOTES:

Rwy 11, multiple trees beginning 46' from DER, 10' left of centerline, up to 97' AGL/806' MSL.
Multiple trees beginning 1' from DER, 2' right of centerline, up to 100' AGL/794' MSL.
Rwy 29, multiple trees beginning 37' from DER, 4' left of centerline, up to 83' AGL/802' MSL.
Multiple trees beginning 22' from DER, 20' right of centerline, up to 84' AGL/803' MSL.

ALMA, MI

GRATIOT COMMUNITY (AMN)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 11FEB10 (10042) (FAA)

TAKEOFF MINIMUMS:

Rwy 9, 400-3 or std. w/min. climb of 251' per NM to 1400.

TAKEOFF OBSTACLE NOTES:

Rwy 9, multiple trees beginning 841' from DER, 438' right of centerline, up to 58' AGL/817' MSL.
Multiple trees beginning 1383' from DER, 380' left of centerline, up to 71' AGL/820' MSL.
Rwy 18, multiple trees beginning 1067' from DER, 152' right of centerline, up to 70' AGL/829' MSL.
Multiple trees beginning 923' from DER, 374' left of centerline, up to 70' AGL/824' MSL.
Rwy 27, multiple trees beginning 306' from DER, 272' right of centerline, up to 81' AGL/840' MSL.
Multiple trees beginning 1168' from DER, 593' left of centerline, up to 93' AGL/852' MSL.
Rwy 36, multiple trees beginning 239' from DER, 3' right of centerline, up to 86' AGL/845' MSL.
Multiple trees beginning 143' from DER, 38' left of centerline, up to 103' AGL/852' MSL.

ALPENA, MI

ALPENA COUNTY RGNL (APN)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 15JAN09 (09015) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 1, tree 2293' from DER, 525' left of centerline, 100' AGL/749' MSL.
Rwy 7, trees beginning 858' from DER, 567' right of centerline up to 100' AGL/774' MSL.
Trees beginning 1059' from DER, 166' left of centerline up to 100' AGL/769' MSL.
Rwy 19, trees beginning 1789' from DER, 270' left of centerline up to 100' AGL/779' MSL.
Trees beginning 1049' from DER, 777' right of centerline up to 100' AGL/789' MSL.
Vent on cable 44' from DER, 147' left of centerline up to 25' AGL/685' MSL.
Rwy 25, trees beginning 652' from DER, 53' left of centerline up to 100' AGL/755' MSL.
Trees beginning 1021' from DER, 275' right of centerline up to 100' AGL/751' MSL.

ANN ARBOR, MI

ANN ARBOR MUNI (ARB)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 9A 24MAY18 (18144) (FAA)

TAKEOFF MINIMUMS:

Rwys 12, 30, NA - environmental.

TAKEOFF OBSTACLE NOTES:

Rwy 6, building 98' from DER, 351' left of centerline, 21' AGL/849' MSL.
Building 312' from DER, 478' right of centerline, 17' AGL/838' MSL.
Transmission line 442' from DER, 394' right of centerline, 29' AGL/850' MSL.
Tree, transmission line beginning 538' from DER, 145' right of centerline, up to 878' MSL.
Trees beginning 887' from DER, 662' left of centerline, up to 877' MSL.
Trees beginning 1057' from DER, 183' left of centerline, up to 887' MSL.
Trees beginning 1478' from DER, 46' right of centerline, up to 887' MSL.
Tree 2040' from DER, 181' right of centerline, 888' MSL.
Trees beginning 2122' from DER, 148' right of centerline, up to 899' MSL.
Rwy 24, terrain 137' from DER, 475' right of centerline, 837' MSL.
Trees beginning 461' from DER, 486' right of centerline, up to 879' MSL.
Tree 79' from DER, 580' left of centerline, 867' MSL.
Tree 822' from DER, 559' right of centerline, 885' MSL.
Tree 1679' from DER, 682' left of centerline, 901' MSL.
Tree 2187' from DER, 686' left of centerline, 902' MSL.

BAD AXE, MI

HURON COUNTY MEMORIAL (BAX)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 4 20DEC07 (07354) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 4, vehicle on road 244' from DER, 531' left of centerline, 15' AGL/774' MSL.
Tree 810' from DER, 43' left of centerline, 100' AGL/859' MSL.
Vehicle on road 223' from DER, 470' right of centerline, 15' AGL/774' MSL.
Rwy 17, vehicle on road 164' from DER, on centerline, 15' AGL/784' MSL.
Bush 81' from DER, 497' right of centerline, 4' AGL/757' MSL.
Railroad 695' from DER, 684' right of centerline, 23' AGL/792' MSL.
Terrain beginning 222' from DER, 70' right of centerline, 0' AGL/757' MSL.
Trees beginning 855' from DER, 392' right of centerline, up to 100' AGL/879' MSL.
Pole 1135' from DER, 755' left of centerline, 35' AGL/798' MSL.
Terrain beginning 44' from DER, 9' left of centerline, 0' AGL/765' MSL.
Trees beginning 1693' from DER, 372' left of centerline, up to 100' AGL/859' MSL.
Rwy 22, terrain beginning 3' from DER, 172' left of centerline, 0' AGL/765' MSL.
Tree 2334' from DER, 422' left of centerline, 100' AGL/869' MSL.
Terrain beginning 49' from DER, 165' right of centerline, 0' AGL/762' MSL.
Railroad 41' from DER, 390' right of centerline, 23' AGL/782' MSL.
Rwy 35, antenna on tower 355' from DER, 478' right of centerline, 34' AGL/793' MSL.
Antenna 359' from DER, 477' right of centerline, 30' AGL/793' MSL.
Vehicle on road 575' from DER, 412' right of centerline, 15' AGL/778' MSL.
Trees beginning 1259' from DER, 53' right of centerline, up to 100' AGL/842' MSL.
Trees beginning 1509' from DER, 375' left of centerline, up to 100' AGL/859' MSL.
Tower 1085' from DER, 698' left of centerline, 63' AGL/822' MSL.

BALDWIN, MI

BALDWIN MUNI (7D3)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1 03JAN19 (19003) (FAA)

TAKEOFF MINIMUMS:

Rwys 5, 23, NA-Environmental.

TAKEOFF OBSTACLE NOTES:

Rwy 9, vehicles on road beginning abeam DER, 99’ left of centerline, up to 15’ AGL/844’ MSL.
Trees beginning abeam DER, 392’ left of centerline, up to 60’ AGL/889’ MSL.
Trees beginning abeam DER, 390’ right of centerline, up to 60’ AGL/879’ MSL.
Trees beginning 519’ from DER, 343’ left of centerline, up to 60’ AGL/899’ MSL.
Trees beginning 1187’ from DER, on centerline and left and right of centerline, up to 60’ AGL/899’ MSL.
Rwy 27, vehicles on road beginning 194’ from DER, 372’ left of centerline, up to 15’ AGL/844’ MSL.
Vehicles on road beginning 757’ from DER, 619’ right of centerline, up to 15’ AGL/844’ MSL.
Trees beginning 1569’ from DER, on centerline and left and right of centerline, up to 60’ AGL/879’ MSL.
Trees beginning 3078’ from DER, on centerline, and left and right of centerline, up to 60’ AGL/899’ MSL.

BATTLE CREEK, MI

BATTLE CREEK EXECUTIVE AT KELLOGG FIELD (BTL)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3A 10SEP20 (20254) (FAA)

TAKEOFF MINIMUMS:

Rwys 5R, 23L, NA - Environmental.

TAKEOFF OBSTACLE NOTES:

Rwy 5L, trees beginning 1590' from DER, 484' right of centerline, up to 80' AGL/999' MSL.
Vehicle on road 896' from DER, left and right of centerline, 17' AGL/956' MSL.
Rwy 13, vehicles on road 480' from DER, on centerline, 15' AGL/945' MSL.
Trees beginning 800' from DER, 3' right of centerline, up to 102' AGL/1021' MSL.
Trees and fence beginning 193' from DER, 31' left of centerline, up to 101' AGL/1030' MSL.
Rwy 23R, trees beginning 1995' from DER, 3' right of centerline, up to 103' AGL/1072' MSL.
Trees beginning 2065' from DER, 25' left of centerline, up to 80' AGL/1049' MSL.
Rwy 31, trees and tower beginning 1797' from DER, 2' right of centerline, up to 166' AGL/1 058' MSL.
Trees and railroad beginning 14' from DER, 116' left of centerline, up to 68' AGL/977' MSL.

BAY CITY, MI

JAMES CLEMENTS MUNI (3CM)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 6B 10OCT19 (19283) (FAA)

TAKEOFF MINIMUMS:

Rwys 9W, 13W, 18W, 27W, 31W, 36W, NA – Environmental.

DEPARTURE PROCEDURE:

Rwy 18, climb heading 183° to 2000 before turning left.

Rwy 23, climb heading 232° to 1200 before turning left.

TAKEOFF OBSTACLE NOTES:

Rwy 5, road 260' from DER, left and right of centerline, up to 15' AGL/604' MSL.
Tree 1171' from DER 277' left of centerline, 87' AGL/678' MSL.
Rwy 18, bushes beginning 186' from DER, 151' right of centerline, 6' AGL/596' MSL.
Trees beginning 350' from DER, 200' left of centerline, 10' AGL/597' MSL.
Trees beginning 1368' from DER, 59' right of centerline, up to 80' AGL/673' MSL.
Trees beginning 1768' from DER, 330' left of centerline, up to 95' AGL/699' MSL.
Trees beginning 2353' from DER, 127' left of centerline, up to 110' AGL/680' MSL.
Rwy 23, trees 1120' from DER, 130' right of centerline, 40' AGL/624' MSL.
Rwy 36, trees beginning 103' from DER, 50' left of centerline, up to 27' AGL/621' MSL.
Trees beginning 436' from DER, 162' right of centerline, up to 90' AGL/681' MSL.
Pole 538' from DER, 434' left of centerline, up to 20' AGL/609' MSL.
Trees beginning 1856' from DER, 17' left of centerline, up to 87' AGL/681' MSL.

BEAVER ISLAND, MI

BEAVER ISLAND (SJX)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 01JAN98 (98001) (FAA)

TAKEOFF MINIMUMS:

Rwys 9, 27, 300-1.

Rwys 5,14, 23, 32, NA.

BELLAIRE, MI

ANTRIM COUNTY (ACB)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 6 03AUG06 (06215) (FAA)

TAKEOFF MINIMUMS:

Rwy 2, 700-3 or std. w/ a min. climb of 417' per NM to 1500.

DEPARTURE PROCEDURE:

Rwy 2, climb heading 022° to 1200 before turning right.

Rwy 20, climb heading 202° to 1300 before turning left.

TAKEOFF OBSTACLE NOTES:

Rwy 2, road 385' from DER, 528' right of centerline, 15' AGL/646' MSL.
Multiple trees beginning 2535' from DER, 96' left of centerline, up to 100' AGL/884' MSL.
Multiple trees beginning 406' from DER, 235' right of centerline, up to 100' AGL/1147' MSL.
Tower 2.57 NM from DER, 3271' right of centerline, 168' AGL/1198' MSL.
Rwy 20, multiple trees beginning 64' from DER, 204' right of centerline up to 100' AGL/693' MSL.
Multiple buildings and antenna on tower beginning 2641' from DER, 909' right of centerline, up to 121' AGL/721' MSL.
Multiple trees beginning 125' from DER, 220' left of centerline, up to 100' AGL/720' MSL.

EC-1, 25 FEB 2021 to 22 APR 2021

BENTON HARBOR, MI

SOUTHWEST MICHIGAN RGNL (BEH)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 7 25AUG11 (11237) (FAA)

TAKEOFF MINIMUMS:

Rwy 32, 200-1½ or std. w/min. climb of 283' per NM to 900.

TAKEOFF OBSTACLE NOTES:

Rwy 10, trees beginning 39' from DER, right and left of centerline, up to 100' AGL/760' MSL.
Pole 1036' from DER, 551' right of centerline, 25' AGL/676' MSL.
Towers 4217' from DER, 221' left of centerline, 100' AGL/755' MSL.
Rwy 14, trees, buildings, poles, and vehicles on road beginning 550' from DER, right and left of centerline. up to 100' AGL/748' MSL.
Tower 1979' from DER, 528' left of centerline, 65' AGL/713' MSL.
Stack 2200' from DER, 373' left of centerline, 40' AGL/689' MSL.
Rwy 18, vehicles on road, trees, buildings, and poles beginning 15' from DER, right and left of centerline, up to 100' AGL/732' MSL.
Fence 190' from DER, 263' left of centerline, 8' AGL/632' MSL.
Rwy 28, trees beginning 583' from DER, 590' right of centerline, up to 100' AGL/662' MSL.
Pole and rod 956' from DER, 312' left of centerline, up to 50' AGL/663' MSL. OH,
Trees beginning 1150' from DER, 634' left of centerline, up to 100' AGL/698' MSL.
Rwy 32, trees and towers beginning 77' from DER, right and left of centerline, up to 100' AGL/819' MSL.
Rwy 36, trees beginning 20' from DER, right and left of centerline, up to 100' AGL/732' MSL.
Bush 107' from DER. 54' right of centerline, 15' AGL/634' MSL.
Pole 1626' from DER, 817' right of centerline, 115' AGL/725' MSL.
Pole and tower 2661' from DER, 92' left of centerline, 170' AGL/711' MSL.

BERRIEN SPRINGS, MI

ANDREW UNIVERSITY AIRPARK (C20)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1 08NOV18 (18312) (FAA)

TAKEOFF MINIMUMS:

Rwys 3, 21, NA- environmental, obstacles.
Rwy 13, NA- obstacles.
Rwy 31, 300-1 or std. w/min. climb of 328' per NM to 900. Procedure NA at night.

TAKEOFF OBSTACLE NOTES:

Rwy 31, trees beginning 28' from DER, 49' right of centerline, up to 756' MSL.
Tree, terrain, vehicle on road, sign, pole beginning 53' from DER, 14' left of centerline, up to 747' MSL.
Trees beginning 165' from DER, 24' right of centerline, up to 758' MSL.
Tree, terrain, traverse way, sign, pole beginning 396' from DER, 51' right of centerline, up to 761' MSL.
Tree, pole beginning 1880' from DER, 243' right of centerline, up to 769' MSL.
Pole, tree beginning 1927' from DER, 264' left of centerline, up to 750' MSL.
Pole 2045' from DER, 130' left of centerline, 752' MSL.
Trees beginning 2102' from DER, 258' right of centerline, up to 774' MSL.
Tree, pole beginning 2190' from DER, 6' right of centerline, up to 782' MSL.
Tree 2237' from DER, 29' left of centerline, 769' MSL.
Trees beginning 2413' from DER, 414' right of centerline, up to 806' MSL.
Tree, pole beginning 2519' from DER, 127' left of centerline, up to 775' MSL.
Tree, pole beginning 2598' from DER, 628' right of centerline, up to 807' MSL.
Tree, vehicle on road, pole beginning 2739' from DER, 716' right of centerline, up to 809' MSL.
Tree, pole, building beginning 2919' from DER, 128' left of centerline, up to 780' MSL.
Trees beginning 3132' from DER, 178' left of centerline, up to 801' MSL.
Tree, pole beginning 3210' from DER, 344' left of centerline, up to 809' MSL.
Tree, pole, building beginning 3616' from DER, 962' left of centerline, up to 820' MSL.
Tree, pole beginning 4031' from DER, 1031' left of centerline, up to 834' MSL.
Tree 4636' from DER, 1662' left of centerline, 828' MSL.

BIG RAPIDS, MI

ROBEN-HOOD (RQB)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 6A 21JUN18 (18172) (FAA)

TAKEOFF MINIMUMS:

Rwy 14, 200-1¼ or std. w/ min. climb of 210' per NM to 1200.
Rwy 27, 300-1½ or std. w/ min. climb of 400' per NM to 1200.
Rwy 32, 200-1½ or std. w/ min. climb of 300' per NM to 1200.

TAKEOFF OBSTACLE NOTES:

Rwy 9, lighting 39' from DER, 77' right of centerline, 946' MSL.
Lighting 40' from DER, 77' left of centerline, 5' AGL/946' MSL.
Tree 1880' from DER, 714' left of centerline, 992' MSL..
Tree 4536' from DER, 1640' left of centerline, 1060' MSL.
Tree 4611' from DER, 1567' left of centerline, 1063' MSL.
Tree 4652' from DER, 1724' left of centerline, 1072' MSL.
Tree 4738' from DER, 1523' left of centerline, 1074' MSL.
Tree 4783' from DER, 1636' left of centerline, 120' AGL/1083' MSL.
Trees beginning 4858' from DER, 1497' left of centerline, up to 126' AGL/1090' MSL.
Rwy 14, tree 73' from DER, 202' right of centerline, 958' MSL.
Pole, tree, traverse way beginning 77' from DER, 451' left of centerline, up to 959' MSL.
Trees beginning 94' from DER, 201' right of centerline, up to 74' AGL/992' MSL.
Trees beginning 224' from DER, 425' left of centerline, up to 970' MSL.
Trees, pole beginning 328' from DER, 123' left of centerline, up to 78' AGL/997' MSL.
Trees beginning 1197' from DER, 92' right of centerline, up to 999' MSL.
Trees beginning 1322' from DER, 152' left of centerline, up to 1007' MSL.
Trees beginning 1624' from DER, 718' right of centerline, up to 1002' MSL.
Trees beginning 1734' from DER, 52' right of centerline, up to 1003' MSL.
Tree 2721' from DER, 483' right of centerline, 1013' MSL.
Trees beginning 2727' from DER, 487' right of centerline, up to 1019' MSL.
Antenna 5968' from DER, 2085' left of centerline, 1078' MSL.
Rwy 27, tree, lighting, terrain beginning 2' from DER, 112' right of centerline, up to 5' AGL/1001' MSL.
Lighting 9' from DER, 112' left of centerline, 991' MSL.
Tree 240' from DER, 472' left of centerline, 999' MSL.
Tree 544' from DER, 544' left of centerline, 1012' MSL.
Tree 725' from DER, 659' left of centerline, 1038' MSL.
Tree 745' from DER, 628' right of centerline, 1010' MSL.
Trees beginning 912' from DER, 192' right of centerline, up to 1018' MSL.
Trees beginning 1160' from DER, 460' right of centerline, up to 1059' MSL.
Trees beginning 1275' from DER, 97' right of centerline, up to 1062' MSL.
Tree 1442' from DER, 120' left of centerline, 1050' MSL.
Trees beginning 1858' from DER, 157' left of centerline, up to 1059' MSL.
Tree 1970' from DER, 312' left of centerline, 1072' MSL.
Trees beginning 1976' from DER, 231' right of centerline, up to 1066' MSL.
Tree 2046' from DER, 902' left of centerline, 1084' MSL.
Trees beginning 2054' from DER, 11' left of centerline, up to 1111' MSL.
Tree 2054' from DER, 721' left of centerline, 1095' MSL.
Tree 2063' from DER, 748' right of centerline, 1087' MSL.
Trees, building, pole beginning 2065' from DER, 35' right of centerline, up to 1104' MSL.
Trees beginning 2209' from DER, 14' left of centerline, up to 1118' MSL.
Trees, pole beginning 2605' from DER, 62' left of centerline, up to 1121' MSL.
Tree 2777' from DER, 898' left of centerline, 1124' MSL.
Trees beginning 2816' from DER, 413' left of centerline, up to 1126' MSL.
Trees, pole beginning 2849' from DER, 165' left of centerline, up to 1127' MSL.
Trees beginning 2929' from DER, 994' left of centerline, up to 1136' MSL.
Trees, pole beginning 3029' from DER, 166' left of centerline, up to 1138' MSL.
Trees, pole, sign beginning 3165' from DER, 25' left of centerline, up to 1146' MSL.
Pole, trees beginning 3383' from DER, 53' right of centerline, up to 1108' MSL.
Trees, pole beginning 3645' from DER, 37' right of centerline, up to 1124' MSL.
Sign, trees, pole beginning 3902' from DER, 33' right of centerline, up to 1132' MSL.
Trees beginning 4227' from DER, 408' right of centerline, up to 1137' MSL.
Trees beginning 4558' from DER, 171' right of centerline, up to 1138' MSL.
Trees beginning 4703' from DER, 163' left of centerline, up to 1152' MSL.
Trees beginning 4716' from DER, 164' right of centerline, up to 1153' MSL.
Trees beginning 4761' from DER, 1' left of centerline, up to 1167' MSL.

CON'T

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

BIG RAPIDS, MI (CON'T)

ROBEN-HOOD (RQB) (CON'T)

Rwy 27 (CON'T), trees beginning 4817' from DER, 93' right of centerline, up to 1155' MSL.
Trees beginning 5498' from DER, 42' left of centerline, up to 1171' MSL.
Tree 5546' from DER, 636' right of centerline, 1156' MSL.
Trees beginning 5627' from DER, 202' right of centerline, up to 1162' MSL.
Trees beginning 5716' from DER, 2' left of centerline, up to 1176' MSL.
Trees beginning 5854' from DER, 258' left of centerline, up to 1183' MSL.
Trees beginning 5858' from DER, 13' left of centerline, up to 94' AGL/1185' MSL.
Trees beginning 6036' from DER, 70' right of centerline, up to 1167' MSL.
Trees beginning 1 NM from DER, 162' right of centerline, up to 1168' MSL.
Vertical structure 1.2 NM from DER, 1391' right of centerline, 100' AGL/1196' MSL.
Rwy 32, terrain 20' from DER, 242' right of centerline, 933' MSL.
Trees, terrain beginning 28' from DER, 342' left of centerline, up to 936' MSL.
Tree 196' from DER, 225' left of centerline, 5' AGL/938' MSL.
Tree 347' from DER, 563' left of centerline, 942' MSL.
Lighting 469' from DER, 387' right of centerline, 946' MSL.
Lighting 668' from DER, 6' right of centerline, 950' MSL.
Tree 696' from DER, 676' left of centerline, 951' MSL.
Wind indicator 993' from DER, 519' left of centerline, 11' AGL/958' MSL.
Tree 1965' from DER, 834' right of centerline, 994' MSL.
Tree 2117' from DER, 658' right of centerline, 1002' MSL.
Trees beginning 2244' from DER, 548' right of centerline, up to 1012' MSL.
Trees beginning 2329' from DER, 346' right of centerline, up to 1030' MSL.
Trees beginning 2436' from DER, 409' right of centerline, up to 1031' MSL..
Trees beginning 2529' from DER, 125' right of centerline, up to 1035' MSL.
Pole 2659' from DER, 1104' left of centerline, 1000' MSL..
Trees, pole beginning 2666' from DER, 44' left of centerline, up to 1026' MSL..
Lighting, trees beginning 2979' from DER, 613' left of centerline, up to 59' AGL/1027' MSL.
Trees beginning 3289' from DER, 401' left of centerline, up to 1033' MSL.
Tree 4265' from DER, 756' left of centerline, 1041' MSL.
Trees beginning 4273' from DER, 318' left of centerline, up to 1053' MSL.
Tree 4503' from DER, 703' right of centerline, 1053' MSL.
Trees beginning 4558' from DER, 418' left of centerline, up to 1088' MSL.
Trees beginning 4774' from DER, 372' left of centerline, up to 1092' MSL.
Trees beginning 4825' from DER, 461' left of centerline, up to 1096' MSL.
Tree 4929' from DER, 117' right of centerline, 1067' MSL.
Trees beginning 4930' from DER, 65' left of centerline, up to 91' AGL/1103' MSL.
Trees beginning 5038' from DER, 277' left of centerline, up to 92' AGL/1107' MSL.
Tree 5057' from DER, 367' right of centerline, 1073' MSL.
Tree 5084' from DER, 521' right of centerline, 1075' MSL.
Tree 5096' from DER, 165' left of centerline, 88' AGL/1110' MSL.
Trees beginning 5102' from DER, 15' left of centerline, up to 92' AGL/1118' MSL.
Trees beginning 5103' from DER, 13' right of centerline, up to 1100' MSL.
Tree 5375' from DER, 279' right of centerline, 1111' MSL.
Trees beginning 5393' from DER, 50' right of centerline, up to 99' AGL/1113' MSL.
Trees beginning 5704' from DER, 177' left of centerline, up to 1119' MSL.
Tree 5862' from DER, 142' left of centerline, 1121' MSL.
Trees beginning 5886' from DER, 37' left of centerline, up to 1122' MSL.
Trees beginning 5997' from DER, 126' left of centerline, up to 1127' MSL.
Trees beginning 6045' from DER, 19' left of centerline, up to 104' AGL/1128' MSL.
Tree 1.2 NM from DER, 1914' left of centerline, 1119' MSL.

BOIS BLANC ISLAND, MI

BOIS BLANC ISLAND (6Y1)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 13NOV14 (14317) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 10, trees beginning abeam DER, 144' left of centerline, up to 100' AGL/759' MSL.
Trees beginning abeam DER, 200' right of centerline, up to 100' AGL/759' MSL.
Trees beginning 1738' from DER, left and right of centerline, up to 100' AGL/759' MSL.
Rwy 28, trees beginning abeam DER, 217' left of centerline, up to 100' AGL/769' MSL.
Trees beginning abeam DER, 266' right of centerline, up to 100' AGL/799' MSL.
Vehicles on road beginning abeam DER, 170' left of centerline, up to 15' AGL/684' MSL.
Vehicles on road beginning 440' from DER, crossing centerline from left to right, up to 15' AGL/684' MSL.
Trees beginning 1590' from DER, left and right of centerline up to 100' AGL/799' MSL.

BOYNE CITY, MI

BOYNE CITY MUNI (N98)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1 20JUN19 (19171) (FAA)

TAKEOFF MINIMUMS:

Rwy 9, 600-2¾ or std. w/min. climb of 503' per NM to 1300.

Rwy 27, std. w/min. climb of 238' per NM to 1800 or 1200-2½ for VCOA.

DEPARTURE PROCEDURE:

Rwy 9, climb heading 098° to 1200 before proceeding on course.

Rwy 27, climb heading 278° to 1900 before turning left.

VCOA:

Rwy 27, obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross Boyne City Muni at or above 1700 before proceeding on course.

TAKEOFF OBSTACLE NOTES:

Rwy 9, tree 10' from DER, 180' right of centerline, 681' MSL.
NAVAID 13' from DER, 112' left of centerline, 8' AGL/661' MSL.
Tree 38' from DER, 300' left of centerline, 700' MSL.
Tree, vehicles on road beginning 98' from DER, 246' right of centerline, up to 704' MSL.
Tree 125' from DER, 486' left of centerline, 722' MSL.
Tree, pole, transmission line beginning 143' from DER, 18' left of centerline, up to 739' MSL.
Tree, sign, vehicles on road beginning 175' from DER, 145' right of centerline, up to 709' MSL.
Tree, vehicles on road, transmission line, pole beginning 431' from DER, 176' right of centerline, up to 731' MSL.
Trees beginning 893' from DER, 22' right of centerline, up to 732' MSL.
Trees beginning 2479' from DER, 55' left of centerline, up to 740' MSL.
Tree 2594' from DER, 296' right of centerline, 733' MSL.
Tree 2602' from DER, 124' right of centerline, 745' MSL.
Trees beginning 2612' from DER, 82' right of centerline, up to 755' MSL.
Tree 2618' from DER, 83' left of centerline, 751' MSL.
Trees beginning 2621' from DER, 32' left of centerline, up to 755' MSL.
Tree 2654' from DER, 187' left of centerline, 759' MSL.
Trees beginning 2654' from DER, 58' right of centerline, up to 762' MSL.
Trees beginning 2655' from DER, 128' left of centerline, up to 760' MSL.
Trees beginning 2681' from DER, 53' left of centerline, up to 761' MSL.
Trees beginning 2682' from DER, 35' right of centerline, up to 763' MSL.
Trees beginning 2709' from DER, 158' left of centerline, up to 766' MSL.
Trees beginning 2753' from DER, 4' left of centerline, up to 768' MSL.
Trees beginning 2820' from DER, 2' left of centerline, up to 773' MSL.
Trees beginning 3881' from DER, 1083' left of centerline, up to 823' MSL.
Trees beginning 3974' from DER, 473' left of centerline, up to 846' MSL.
Trees beginning 4075' from DER, 322' left of centerline, up to 861' MSL.
Tree 4481' from DER, 849' left of centerline, 868' MSL.
Trees beginning 4502' from DER, 459' left of centerline, up to 869' MSL.
Trees beginning 4641' from DER, 443' left of centerline, up to 879' MSL.
Trees beginning 4727' from DER, 467' left of centerline, up to 886' MSL.
Trees beginning 4834' from DER, 691' left of centerline, up to 887' MSL.
Trees beginning 4854' from DER, 395' left of centerline, up to 892' MSL.
Trees beginning 4935' from DER, 286' left of centerline, up to 909' MSL.
Trees beginning 5063' from DER, 266' left of centerline, up to 923' MSL.
Trees beginning 5086' from DER, 299' left of centerline, up to 936' MSL.
Trees beginning 5157' from DER, 286' left of centerline, up to 939' MSL.
Tree 5189' from DER, 1178' left of centerline, 940' MSL.
Trees beginning 5197' from DER, 271' left of centerline, up to 962' MSL.
Trees beginning 5292' from DER, 213' left of centerline, up to 988' MSL.
Tree, terrain beginning 5371' from DER, on centerline, up to 997' MSL.
Tree 5605' from DER, 1019' right of centerline, 805' MSL.
Trees beginning 5812' from DER, 11' right of centerline, up to 814' MSL.
Trees beginning 5912' from DER, 227' right of centerline, up to 823' MSL.
Trees beginning 5933' from DER, 307' right of centerline, up to 831' MSL.
Trees beginning 5972' from DER, 14' right of centerline, up to 838' MSL.
Tree, terrain beginning 6023' from DER, 14' left of centerline, up to 1027' MSL.
Trees beginning 6066' from DER, 2' right of centerline, up to 858' MSL.
Tree, terrain beginning 1 NM from DER, 9' left of centerline, up to 1036' MSL.
Trees beginning 1 NM from DER, 133' right of centerline, up to 873' MSL.
Trees beginning 1.1 NM from DER, 151' right of centerline, up to 894' MSL.
Trees beginning 1.1 NM from DER, 360' right of centerline, up to 898' MSL.
Trees beginning 1.1 NM from DER, 1802' left of centerline, up to 1050' MSL.
Tree 1.1 NM from DER, 540' right of centerline, 912' MSL.
Trees beginning 1.1 NM from DER, 336' right of centerline, up to 931' MSL.
Tree, terrain beginning 1.1 NM from DER, 224' left of centerline, up to 1061' MSL.
Trees beginning 1.1 NM from DER, 139' right of centerline, up to 954' MSL.
Tree, terrain beginning 1.1 NM from DER, 495' left of centerline, up to 1074' MSL.
Tree, terrain beginning 1.2 NM from DER, 197' left of centerline, up to 1087' MSL.
Tree 1.2 NM from DER, 339' right of centerline, 972' MSL.
Tree, pole, transmission line, catenary beginning 1.2 NM from DER, 4' right of centerline, up to 1007' MSL.
Tree, terrain, transmission line, pole beginning 1.2 NM from DER, 19' left of centerline, up to 1127' MSL.

CON'T

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

BOYNE CITY, MI (CON'T)

BOYNE CITY MUNI (N98) (CON'T)

Rwy 9 (CON'T), trees beginning 1.3 NM from DER, 320' right of centerline, up to 1011' MSL.
Trees beginning 1.3 NM from DER, 174' right of centerline, up to 1027' MSL.
Trees beginning 1.3 NM from DER, 117' right of centerline, up to 1036' MSL.
Trees beginning 1.3 NM from DER, 280' left of centerline, up to 1130' MSL.
Trees beginning 1.3 NM from DER, 12' left of centerline, up to 1141' MSL.
Trees beginning 1.4 NM from DER, 301' right of centerline, up to 1040' MSL.
Trees beginning 1.4 NM from DER, 361' left of centerline, up to 1146' MSL.
Trees beginning 1.4 NM from DER, 63' right of centerline, up to 1051' MSL.
Trees beginning 1.4 NM from DER, 119' left of centerline, up to 1147' MSL.
Tree 1.4 NM from DER, 289' right of centerline, 1055' MSL.
Trees beginning 1.4 NM from DER, 30' left of centerline, up to 1149' MSL.
Trees beginning 1.4 NM from DER, 2' right of centerline, up to 1080' MSL.
Trees beginning 1.4 NM from DER, 70' right of centerline, up to 1101' MSL.
Trees beginning 1.5 NM from DER, 786' left of centerline, up to 1151' MSL.
Tree, terrain beginning 1.5 NM from DER, 47' left of centerline, up to 1157' MSL.
Trees beginning 1.5 NM from DER, 700' left of centerline, up to 1161' MSL.
Tree, terrain beginning 1.5 NM from DER, 13' left of centerline, up to 1167' MSL.
Trees beginning 1.5 NM from DER, 52' right of centerline, up to 1132' MSL.
Trees beginning 1.5 NM from DER, 8' right of centerline, up to 1142' MSL.
Tree 2.2 NM from DER, 2497' right of centerline, 1025' MSL.
Rwy 27, building 30' from DER, 437' right of centerline, 27' AGL/678' MSL.
Tree 30' from DER, 311' right of centerline, 703' MSL.
Tree, building, pole, transmission line beginning 45' from DER, 1' right of centerline, up to 725' MSL.
Vehicles on road 64' from DER, 203' left of centerline, 672' MSL.
Pole 113' from DER, 515' left of centerline, 31' AGL/690' MSL.
Building, pole, fence beginning 118' from DER, 67' left of centerline, up to 37' AGL/694' MSL.
Tree, pole, building, transmission line beginning 244' from DER, 13' left of centerline, up to 728' MSL.
Tree, pole, transmission line, building beginning 435' from DER, 19' right of centerline, up to 726' MSL.
Trees beginning 649' from DER, 24' right of centerline, up to 739' MSL.
Tree, building, pole, transmission line beginning 719' from DER, 1' right of centerline, up to 743' MSL.
Tree, pole, transmission line beginning 1056' from DER, 7' left of centerline, up to 734' MSL.
Trees beginning 2774' from DER, 58' left of centerline, up to 743' MSL.

BOYNE FALLS, MI

BOYNE MOUNTAIN (BFA)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 4 29MAY14 (14149) (FAA)

TAKEOFF MINIMUMS:

Rwy 17, std w/min. climb of 490' per NM to 1400 or 1300-2½ for climb in visual conditions.
Rwy 35, std w/min. climb of 310' per NM to 1400 or 1300-2½ for climb in visual conditions.

DEPARTURE PROCEDURE:

Rwy 17, climb heading 175° to 1400 before proceeding on course, or for climb in visual conditions cross Boyne Mountain airport at or above 1900 before proceeding on course. When executing VCOA, notify ATC prior to departure.
Rwy 35, climb heading 355° to 1400 before proceeding on course, or for climb in visual conditions cross Boyne Mountain airport at or above 1900 before proceeding on course. When executing VCOA, notify ATC prior to departure.

TAKEOFF OBSTACLE NOTES:

Rwy 17, vehicles on road beginning 10' from DER, 93' right of centerline, up to 15' AGL/753' MSL.
Trees beginning 13' from DER, 170' left of centerline, up to 100' AGL/854' MSL.
Vehicles on road beginning 402' from DER, 16' left of centerline, up to 15' AGL/736' MSL.
Trees beginning 529' from DER, 143' right of centerline, up to 100' AGL/838' MSL.
Trees beginning 2915' from DER, 1028' right of centerline, up to 100' AGL/903' MSL.
Trees beginning 2.4 NM from DER, left and right of centerline, up to 100' AGL/1231' MSL.
Rwy 35, vehicles on road beginning 28' from DER, left and right of centerline, up to 15' AGL/720' MSL.
Trees beginning 613' from DER, 599' left of centerline, up to 100' AGL/805' MSL.
Trees beginning 1355' from DER, left and right of centerline, up to 100' AGL/805' MSL.
Trees beginning 2319' from DER, 465' right of centerline, up to 100' AGL/797' MSL.
Multiple trees beginning 1.6 NM from DER, left and right of centerline, up to 100' AGL/1069' MSL.
Trees beginning 1.7 NM from DER, left and right of centerline, up to 100' AGL/1091' MSL.
Trees beginning 1.8 NM from DER, left and right of centerline, up to 100' AGL/1124' MSL.
Multiple trees beginning 1.9 NM from DER, left and right of centerline, up to 100' AGL/1127' MSL.
Multiple trees beginning 2.1 NM from DER, left and right of centerline, up to 100' AGL/1161' MSL.

CADILLAC, MI
WEXFORD COUNTY (CAD)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 7 02JUL09 (09183) (FAA)
TAKEOFF MINIMUMS: **Rwys 18, 36,** NA-Environmental.
DEPARTURE PROCEDURE:
Rwy 25, climb heading 250° to 1800 before turning left.
TAKEOFF OBSTACLE NOTES:
Rwy 7, trees beginning 783' from DER, 129' right of centerline, up to 53' AGL/1348' MSL.
Trees beginning 849' from DER, 348' left of centerline, up to 74' AGL/1378' MSL.
Poles beginning 1221' from DER, 596' left of centerline, up to 30' AGL/1336' MSL.
Poles beginning 1228' from DER, 366' right of centerline, up to 38' AGL/1333' MSL.
Train and tracks 1386' from DER, 819' left of centerline, 23' AGL/1335' MSL.
Rwy 25, bush 14' from DER, 275' right of centerline, 10' AGL/1317' MSL.
Vehicle and road 660' from DER, 623' left of centerline, 15' AGL/1327' MSL.

CARO, MI
TUSCOLA AREA (CFS)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 2 26MAY16 (16147) (FAA)
TAKEOFF MINIMUMS:
Rwys 13, 31 NA-Environmental.
TAKEOFF OBSTACLE NOTES:
Rwy 6, NAVAID 41' from DER, 83' left of centerline, 702' MSL.
Bush, tree, pole beginning 152' from DER, 238' left of centerline, up to 715' MSL.
Trees beginning 665' from DER, 224' left of centerline, up to 727' MSL.
Tree 697' from DER, 674' right of centerline, 753' MSL.
Trees beginning 819' from DER, 11' right of centerline, up to 759' MSL.
Tree 944' from DER, 419' left of centerline, 766' MSL.
Trees beginning 990' from DER, 97' left of centerline, up to 775' MSL.
Tree, building, pole, t-l tower beginning 1278' from DER, 204' right of centerline, up to 778' MSL.
Trees, t-l tower, pole, tank, beginning 1615' from DER, 471' right of centerline, up to 793' MSL.
Tree 3612' from DER, 797' right of centerline, 800' MSL.
Rwy 24, pole 21' from DER, 330' left of centerline, up to 6' AGL/687' MSL.
Tree, NAVAID, pole beginning 35' from DER, 76' left of centerline, up to 703' MSL.
Trees beginning 178' from DER, 472' left of centerline, up to 714' MSL.
Trees beginning 723' from DER, 565' left of centerline, up to 730' MSL.
Tree, pole, t-l tower, catenary beginning 948' from DER, 167' left of centerline, up to 737' MSL.
Tree, catenary, pole, t-l tower beginning 1243' from DER, 46' left of centerline, up to 741' MSL.
Trees beginning 1369' from DER, 25' right of centerline, up to 770' MSL.
Tree, t-l tower, pole beginning 2360' from DER, 108' right of centerline, up to 808' MSL.

CHARLEVOIX, MI
CHARLEVOIX MUNI (CVX)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 4 20JAN05 (05020) (FAA)
TAKEOFF MINIMUMS:
Rwys 4, 22, N/A.
TAKEOFF OBSTACLE NOTES:
Rwy 9, terrain beginning at DER, left and right of centerline up to 660' MSL.
Rwy 27, terrain beginning at DER, left and right of centerline up to 693' MSL.

CHARLOTTE, MI
FITCH H BEACH (FPK)
TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 3 22JUN17 (17173) (FAA)
TAKEOFF MINIMUMS:
Rwys 15, 33, NA - Environmental.
TAKEOFF OBSTACLE NOTES:
Rwy 3, tree 21' from DER, 482' left of centerline, 14' AGL/899' MSL.
REILs and electrical system 35' from DER, 77' left and right of centerline, 4' AGL/894 MSL.
Tree and vehicles on road 248' from DER, 337' left of centerline, 909' MSL.
Vehicles on road 367' from DER, 516' left of centerline, 911' MSL.
Vehicles on road 457' from DER, 461' left of centerline, 912' MSL.
Power lines, pole and vehicles on road beginning 520' from DER, 298' left of centerline, up to 40' AGL/936' MSL.
Trees, vehicles on road, building, pole, beginning 746' from DER, 101' left of centerline, up to 970' MSL.
Tree and OL pole 1108' from DER, 10' left of centerline, 973' MSL.
Trees, pole, OL pole, vehicles on road, building, and power lines beginning 1223' from DER, 14' left of centerline, up to 74' AGL/1000' MSL.
Trees beginning 2366' from DER, 58' left of centerline, up to 1008' MSL.
Tree 4540' from DER, 23' left of centerline, 87' AGL/1021' MSL.
Tree 298' from DER, 328' right of centerline, 911' MSL.
CON'T

CHARLOTTE, MI (CON'T)

FITCH H BEACH (FPK) (CON'T)

Rwy 3 (CON'T), pole and tree 465' from DER, 264' right of centerline, 935' MSL.
Pole 637' from DER, 546' right of centerline, 936' MSL.
Pole and trees beginning 676' from DER, 137' right of centerline, up to 38' AGL/938' MSL.
Pole and tree 841' from DER, 79' right of centerline, 36' AGL/939' MSL.
Poles and tree, beginning 969' from DER, 476' right of centerline, up to 35' AGL/940' MSL.
Pole 1003' from DER, 436' right of centerline, 35' AGL/941' MSL.
Pole, building and vehicles on road beginning 1135' from DER, 108' right of centerline, up to 944' MSL.
Pole, tree and vehicles on road beginning 1235' from DER, 16' right of centerline, up to 35' AGL/945' MSL.
Sign and pole 1332' from DER, 119' right of centerline, 949' MSL.
Pole, building, power lines and vehicles on road beginning 1430' from DER, 13' right of centerline, up to 35' AGL/953' MSL.
Sign, vehicles on road and building beginning 1642' from DER, 105' right of centerline, up to 37' AGL/958' MSL.
Building, pole, power lines and vehicles on road beginning 1721' from DER, 72' right of centerline, up to 35' AGL/959' MSL.
Pole and building 1814' from DER, 500' right of centerline, 43' AGL/968' MSL.
Sign, vehicles on road, pole, tree and power lines beginning 1842' from DER, 185' right of centerline, up to 971' MSL.
Tree and pole 2181' from DER, 119' right of centerline, 991' MSL.
Tree and pole 2292' from DER, 105' right of centerline, 993' MSL.
Trees beginning 2426' from DER, 88' right of centerline, up to 1000' MSL.
Trees beginning 2487' from DER, 836' right of centerline, up to 1008' MSL.
Tree, power lines and pole beginning 2542' from DER, 25' right of centerline, up to 1010' MSL.
Trees, antenna and tower beginning 2663' from DER, 35' right of centerline, up to 94' AGL/1026' MSL.
Rwy 21, trees beginning 17' from DER, 427' right of centerline, up to 53' AGL/929' MSL.
REILs and electrical system 33' from DER, 77' left and right of centerline, 5' AGL/884' MSL.
Trees beginning 941' from DER, 182' right of centerline, up to 935' MSL.
Trees beginning 1042' from DER, 414' right of centerline, up to 944' MSL.
Tree, powerlines and pole beginning 1046' from DER, 536' right of centerline, up to 950' MSL.
Trees beginning 2319' from DER, 269' right of centerline, up to 952' MSL.
Trees beginning 2453' from DER, 682' right of centerline, up to 976' MSL.
Trees beginning 2554' from DER, 53' right of centerline, up to 982' MSL.
Tree 34' from DER, 284' left of centerline, 889' MSL.
Tower, airport beacon, pole, powerlines and tree beginning 489' from DER, 553' left of centerline, up to 80' AGL/964' MSL

CHEBOYGAN, MI

CHEBOYGAN COUNTY (SLH)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3A 13SEP18 (18256) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 10, tree 96' from DER, 379' left of centerline, 643' MSL.
Trees beginning 409' from DER, 429' left of centerline, up to 662' MSL.
Tree 961' from DER, 598' right of centerline, 670' MSL.
Tree 1180' from DER, 503' left of centerline, 663' MSL.
Tree 1221' from DER, 431' left of centerline, 667' MSL.
Tree 1268' from DER, 357' left of centerline, 669' MSL.
Trees beginning 1282' from DER, 189' left of centerline, up to 670' MSL.
Trees beginning 1300' from DER, 288' right of centerline, up to 673' MSL.
Tree 1451' from DER, 295' left of centerline, 675' MSL.
Rwy 17, trees beginning 77' from DER, 47' right of centerline, up to 100' AGL/750' MSL.
Trees beginning 187' from DER, 31' left of centerline, up to 100' AGL/747' MSL.
Trees beginning 1417' from DER, 1' left of centerline, up to 100' AGL/750' MSL.
Trees beginning 1838' from DER, 28' right of centerline, up to 100' AGL/753' MSL.
Trees beginning 3306' from DER, 10' right of centerline, up to 100' AGL/757' MSL.
Rwy 28, tree, vehicles on traverse way beginning 74' from DER, 407' left of centerline, up to 670' MSL.
Tree 443' from DER, 429' right of centerline, 680' MSL.
Tree 479' from DER, 389' left of centerline, 702' MSL.
Tree 548' from DER, 400' right of centerline, 693' MSL.
Trees beginning 1212' from DER, 570' left of centerline, up to 711' MSL.
Trees beginning 1534' from DER, 184' left of centerline, up to 724' MSL.
Trees beginning 1561' from DER, 93' right of centerline, up to 718' MSL.
Trees beginning 2059' from DER, 354' right of centerline, up to 727' MSL.
Tree 2826' from DER, 769' right of centerline, 732' MSL.
Trees beginning 2980' from DER, 22' left of centerline, up to 734' MSL.
Tree 3901' from DER, 506' right of centerline, 745' MSL.
Rwy 35, tree 47' from DER, 454' right of centerline, 100' AGL/704' MSL.
Tree 103' from DER, 249' right of centerline, 100' AGL/707' MSL.
Trees beginning 158' from DER, 24' right of centerline, up to 100' AGL/711' MSL.
Tree 213' from DER, 162' left of centerline, 100' AGL/714' MSL.
Trees beginning 268' from DER, 5' left of centerline, up to 100' AGL/717' MSL.

CLARE, MI

CLARE MUNI (48D)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2 19SEP13 (13262) (FAA)

TAKEOFF MINIMUMS:

Rwy 9, 300-1 or std. w/min. climb of 371' per NM to 1100.

TAKEOFF OBSTACLE NOTES:

Rwy 4, bush 24' from DER, 131' left of centerline, 8' AGL/859' MSL.
Trees beginning 495' from DER, 431' right of centerline, up to 56' AGL/897' MSL.
Pole and trees beginning 728' from DER, 629' left of centerline, up to 55' AGL/906' MSL.
Tree 1158' from DER, 166' left of centerline, 48' AGL/889' MSL.
Trees beginning 1693' from DER, 607' right of centerline, up to 67' AGL/908' MSL.
Trees beginning 1668' from DER, 111' left of centerline, up to 114' AGL/955' MSL.
Rwy 9, vehicle on road 7' from DER, 92' left of centerline, 15' AGL/834' MSL.
Vehicle on road 229' from DER, crossing centerline, 15' AGL/834' MSL.
Buildings beginning 394' from DER, 275' right of centerline, up to 30' AGL/849' MSL.
Trees beginning 81' from DER, 417' right of centerline, up to 45' AGL/864' MSL.
Trees beginning 1894' from DER, crossing centerline, up to 130' AGL/989' MSL.
Rwy 22, terrain 38' from DER, 486' right of centerline, 828' MSL.
Light 39' from DER, 111' right of centerline, 4' AGL/829' MSL.
Light 40' from DER, 111' left of centerline, 4' AGL/828' MSL.
Windsock 373' from DER, 559' right of centerline, 34' AGL/855' MSL.
Trees beginning 1033' from DER, crossing centerline, up to 129' AGL/934' MSL.
Rwy 27, building 290' from DER, 574' right of centerline, 20' AGL/851' MSL.
Antenna 329' from DER, 399' right of centerline, 32' AGL/863' MSL.
Building 434' from DER, 552' right of centerline, 21' AGL/852' MSL.
Vehicle on road 532' from DER, 516' right of centerline, 15' AGL/854' MSL.
Trees beginning 566' from DER, 238' right of centerline, up to 98' AGL/918' MSL.
Trees beginning 411' from DER, 212' left of centerline, up to 95' AGL/906' MSL.
Trees beginning 1261' from DER, 462' right of centerline, up to 124' AGL/932' MSL.
Trees beginning 2372' from DER, 230' left of centerline, up to 109' AGL/930' MSL.

COLDWATER, MI

BRANCH COUNTY MEMORIAL (OEB)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 4 10APR08 (08101) (FAA)

TAKEOFF MINIMUMS:

Rwys 16, 34, NA -Environmental.

TAKEOFF OBSTACLE NOTES:

Rwy 4, vehicles on road and trees beginning 5' from DER, 92' right of centerline, up to 100' AGL/1059' MSL.
Vehicles on road and trees beginning 347' from DER, 317' left of centerline, up to 100' AGL/1,059' MSL.
Rwy 7, trees beginning 1246' from DER, 430' left of centerline, up to 100' AGL/1059' MSL.
Vehicles on road and trees beginning 154' from DER, 315' right of centerline, up to 100' AGL/1039' MSL.
Pole 336' from DER, 274' right of centerline, 18' AGL/977' MSL.
Rwy 22, trains on railroad and trees beginning 769' from DER, 986' left to 945' right of centerline, up to 100' AGL/1099' MSL.
Rwy 25, vehicles on road and trees beginning 1171' from DER, 394' left of centerline, up to 100' AGL/1,059' MSL.
Trees beginning 732' from DER, 95' right of centerline, up to 100' AGL/1034' MSL.

DETROIT, MI

COLEMAN A YOUNG MUNI (DET)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 7A 24MAY18 (18144) (FAA)

TAKEOFF MINIMUMS:

Rwy 25, std. w/ min. climb of 210' per NM to 1000, or alternatively, with std. takeoff minimums and a 200' per NM climb gradient, takeoff must occur no later than 1400' prior to DER.

DEPARTURE PROCEDURE:

Rwy 33, climb heading 328° to 1800 before turning left.

TAKEOFF OBSTACLE NOTES:

Rwy 7, building, pole, tree, transmission line, stack beginning 290' from DER, 65' right of centerline, up to 77' AGL/695' MSL.
Pole 459' from DER, 138' left of centerline, 31' AGL/654' MSL.
Tree, lighting beginning 909' from DER, 96' left of centerline, up to 680' MSL.
Rwy 15, building 449' from DER, 317' left of centerline, 16' AGL/637' MSL.
Building, trees beginning 662' from DER, 220' left of centerline, up to 77' AGL/695' MSL.
Building 803' from DER, 521' right of centerline, 656' MSL.
Tree 1058' from DER, 367' right of centerline, 659' MSL.
Tree 1527' from DER, 445' right of centerline, 669' MSL.
Tree 1990' from DER, 492' right of centerline, 679' MSL.
Pole 3401' from DER, 1110' right of centerline, 106' AGL/722' MSL.
Rwy 25, vehicle on road 1' from DER, 125' left of centerline, 650' MSL.
Building, vehicles on road, stack, beginning 48' from DER, 39' left of centerline, up to 36' AGL/662' MSL.
Tree, pole beginning 456' from DER, 132' right of centerline, up to 658' MSL.

CON'T

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MI (CON'T)

COLEMAN A YOUNG MUNI (DET) (CON'T)

Rwy 25 (CON'T), tree, stack beginning 908' from DER, 11' left of centerline, up to 683' MSL.
Tree 1109' from DER, 325' right of centerline, 685' MSL.
Trees beginning 1294' from DER, 132' left of centerline, up to 703' MSL.
Tower 2828' from DER, 1224' left of centerline, 141' AGL/770' MSL.
Stack 1.5 NM from DER, 2412' left of centerline, 241' AGL/871' MSL.
Rwy 33, tree 113' from DER, 414' left of centerline, 666' MSL.
Tree 233' from DER, 512' left of centerline, 677' MSL.
Tree, pole beginning 449' from DER, 118' left of centerline, up to 681' MSL.
Tree 743' from DER, 505' right of centerline, 661' MSL.
Trees beginning 1707' from DER, 366' left of centerline, up to 694' MSL.
Trees beginning 1753' from DER, 83' right of centerline, up to 709' MSL.

DETROIT METROPOLITAN/WAYNE COUNTY (DTW)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 1A 24MAY18 (18144) (FAA)

TAKEOFF OBSTACLE NOTES:
Rwy 3R, terrain 14' from DER, 332' left of centerline, 633' MSL.
Vehicle on road 358' from DER, 522' right of centerline, 651' MSL.
Vehicle on road, wall, fence beginning 361' from DER, 387' right of centerline, up to 652' MSL.
Vehicle on roads beginning 421' from DER, 394' left of centerline, up to 653' MSL.
Rwy 4L, terrain 179' from DER, 78' left of centerline, 647' MSL.
Vehicle on roads beginning 302' from DER, 514' right of centerline, up to 655' MSL.
Vehicle on roads beginning 403' from DER, 546' left of centerline, up to 656' MSL.
Tree 996' from DER, 743' right of centerline, 29' AGL/668' MSL.
Tree, pole beginning 1183' from DER, 765' left of centerline, up to 43' AGL/682' MSL.
Tree 1345' from DER, 787' right of centerline, 42' AGL/682' MSL.
Transmission line 1515' from DER, 826' left of centerline, 47' AGL/685' MSL.
Transmission line 1599' from DER, 876' left of centerline, 52' AGL/690' MSL.
Tree 1971' from DER, 852' left of centerline, 56' AGL/694' MSL.
Tower, antenna beginning 2694' from DER, 757' right of centerline, up to 78' AGL/716' MSL.
Tower, antenna beginning 2858' from DER, 852' right of centerline, up to 79' AGL/717' MSL.
Rwy 4R, lighting, NAVAID beginning 9' from DER, 10' right of centerline, up to 3' AGL/638' MSL.
Vehicle on roads beginning 941' from DER, 618' left of centerline, up to 664' MSL.
Building beginning 3347' from DER, 1302' left of centerline, up to 98' AGL/736' MSL.
Rwy 9L, vehicle on roads beginning 292' from DER, 342' left of centerline, up to 652' MSL.
Vehicle on roads beginning 601' from DER, 354' right of centerline, up to 652' MSL.
Tree 1699' from DER, 882' right of centerline, 59' AGL/687' MSL.
Tree 1804' from DER, 913' right of centerline, 63' AGL/690' MSL.
Trees beginning 2043' from DER, 936' right of centerline, up to 73' AGL/699' MSL.
Trees beginning 2242' from DER, 970' right of centerline, up to 74' AGL/701' MSL.
Trees beginning 2424' from DER, 937' left of centerline, up to 77' AGL/704' MSL.
Tree 2461' from DER, 1056' right of centerline, 77' AGL/705' MSL.
Tree 2519' from DER, 1168' right of centerline, 84' AGL/710' MSL.
Tree 2632' from DER, 1163' left of centerline, 81' AGL/708' MSL.
Tree 2788' from DER, 1050' left of centerline, 85' AGL/711' MSL.
Tree 2891' from DER, 1065' left of centerline, 90' AGL/716' MSL.
Rwy 9R, sign 60' from DER, 288' left of centerline, 5' AGL/631' MSL.
Tree 538' from DER, 618' right of centerline, 19' AGL/645' MSL.
Tree 1836' from DER, 940' right of centerline, 71' AGL/695' MSL.
Rwy 21L, vehicle on road 586' from DER, 617' right of centerline, 648' MSL.
Tree 1121' from DER, 738' left of centerline, 39' AGL/674' MSL.
Tree 1763' from DER, 906' right of centerline, 59' AGL/687' MSL.
Tree 2160' from DER, 982' left of centerline, 68' AGL/693' MSL.
Tree 2256' from DER, 1040' left of centerline, 67' AGL/696' MSL.
Tree 2408' from DER, 1050' left of centerline, 76' AGL/707' MSL.
Tree 2548' from DER, 1077' left of centerline, 84' AGL/715' MSL.
Trees beginning 2619' from DER, 867' left of centerline, up to 90' AGL/723' MSL.
Trees beginning 2726' from DER, 1172' right of centerline, up to 83' AGL/714' MSL.
Tree 2809' from DER, 1245' right of centerline, 85' AGL/716' MSL.
Tree 2907' from DER, 1174' right of centerline, 86' AGL/718' MSL.
Trees beginning 2933' from DER, 1133' right of centerline, up to 95' AGL/728' MSL.
Tree 3275' from DER, 1222' left of centerline, 99' AGL/727' MSL.
Trees beginning 3412' from DER, 1161' left of centerline, up to 107' AGL/735' MSL.
Trees beginning 3687' from DER, 1169' right of centerline, up to 100' AGL/733' MSL.
Tree 3921' from DER, 1229' right of centerline, 103' AGL/734' MSL.
Trees beginning 3926' from DER, 1351' right of centerline, up to 109' AGL/739' MSL.
Rwy 21R, pole 322' from DER, 570' right of centerline, 28' AGL/655' MSL.
Pole, fence, sign, vehicle on roads beginning 450' from DER, 570' right of centerline, up to 29' AGL/657' MSL.
Pole beginning 533' from DER, 571' right of centerline, up to 29' AGL/658' MSL.
Building 1092' from DER, 773' right of centerline, 58' AGL/670' MSL.
Building 1237' from DER, 773' right of centerline, 58' AGL/671' MSL.
Building beginning 1311' from DER, 829' right of centerline, up to 71' AGL/677' MSL.
CON'T

DETROIT, MI (CON'T)

DETROIT METROPOLITAN/WAYNE COUNTY (DTW) (CON'T)

Rwy 22L, lighting 10' from DER, 5' left of centerline, 1' AGL/638' MSL.
NAVAID 79' from DER, 412' left of centerline, 4' AGL/640' MSL.
Tree 3681' from DER, 1384' left of centerline, 103' AGL/738' MSL.
Rwy 22R, terrain 19' from DER, 438' left of centerline, 649' MSL.
Terrain 150' from DER, 86' left of centerline,650' MSL.
Tree 1102' from DER, 734' right of centerline, 37' AGL/681' MSL.
Tree 1859' from DER, 854' right of centerline, 60' AGL/702' MSL.
Tree 1979' from DER, 942' right of centerline, 66' AGL/706' MSL.
Tree 2386' from DER, 892' left of centerline, 75' AGL/715' MSL.
Tree 3343' from DER, 1361' left of centerline, 97' AGL/735' MSL.
Tree 3727' from DER, 1351' left of centerline, 103' AGL/741' MSL.
Rwy 27L, vehicle on road 491' from DER, 600' left of centerline, 650' MSL.
Pole 1011' from DER, 698' left of centerline, 27' AGL/662' MSL.
Rwy 27R, NAVAID 11' from DER, 55' right of centerline, 2' AGL/639' MSL.
NAVAID 11' from DER, 54' left of centerline, 2' AGL/639' MSL.
Pole 14' from DER, 441' left of centerline, 19' AGL/656' MSL.
Tower 4460' from DER, 462' left of centerline, 106' AGL/756' MSL.

WILLOW RUN (YIP)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 10B 24MAY18 (18144) (FAA)

TAKEOFF MINIMUMS:
Rwy 27, 300-1½ or std. w/ min. climb of 209' per NM to 1000, or alternatively, with std. takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1300' prior to DER.

TAKEOFF OBSTACLE NOTES:
Rwy 5R, electrical system beginning 5' from DER, 56' right of centerline, up to 3' AGL/703' MSL.
Electrical system 5' from DER, 56' left of centerline, 3' AGL/703' MSL.
Transmission line 1070' from DER, 593' left of centerline, 34' AGL/731' MSL.
Transmission line 1180' from DER, 492' left of centerline, 36' AGL/732' MSL.
Tree 1406' from DER, 799' left of centerline, 42' AGL/741' MSL.
Tree 1591' from DER, 902' left of centerline, 50' AGL/750' MSL.
Trees beginning 2193' from DER, 1037' right of centerline, up to 69' AGL/762' MSL.
Tree 2344' from DER, 1076' left of centerline, 68' AGL/769' MSL.
Rwy 5L, transmission line beginning 1390' from DER, 817' left of centerline, up to 39' AGL/744' MSL.
Tree 1603' from DER, 802' left of centerline, 75' AGL/780' MSL.
Trees beginning 1668' from DER, 394' left of centerline, up to 80' AGL/786' MSL.
Trees beginning 2745' from DER, 1010' left of centerline, up to 89' AGL/791' MSL.
Tree 3407' from DER, 967' left of centerline, 95' AGL/796' MSL.
Rwy 9, electrical system 10' from DER, 88' left of centerline, 2' AGL/700' MSL.
Building, NAVAID beginning 150' from DER, 487' left of centerline, up to 18' AGL/715' MSL.
Traverse way beginning 720' from DER, 641' right of centerline, up to 35' AGL/736' MSL.
Tree 1036' from DER, 550' left of centerline, 35' AGL/729' MSL.
Trees beginning 1113' from DER, 763' right of centerline, up to 52' AGL/752' MSL.
Tree 1347' from DER, 856' left of centerline, 59' AGL/754' MSL.
Trees beginning 1477' from DER, 791' left of centerline, up to 69' AGL/762' MSL.
Tree 1692' from DER, 774' left of centerline, 77' AGL/773' MSL.
Stack 1778' from DER, 892' right of centerline, 70' AGL/770' MSL.
Tree 1889' from DER, 775' left of centerline, 78' AGL/774' MSL.
Trees beginning 2104' from DER, 776' left of centerline, up to 81' AGL/776' MSL.
Trees beginning 2883' from DER, 787' left of centerline, up to 84' AGL/780' MSL.
Tree 3773' from DER, 737' left of centerline, 100' AGL/796' MSL.
Tree 3929' from DER, 516' left of centerline, 104' AGL/799' MSL.
Rwy 23L, electrical system 4' from DER, 69' left of centerline, 3' AGL/716' MSL.
Electrical system 5' from DER, 89' right of centerline, 2' AGL/716' MSL.
Sign, tree, pole beginning 21' from DER, 49' left of centerline, up to 100' AGL/816' MSL.
Sign 33' from DER, 501' right of centerline, 3' AGL/717' MSL.
Trees, electrical system beginning 141' from DER, 3' right of centerline, up to 100' AGL/816' MSL.
Trees beginning 886' from DER, 39' right of centerline, up to 100' AGL/819' MSL.
Trees beginning 1095' from DER, 4' left of centerline, up to 100' AGL/819' MSL.
Tree 1708' from DER, 879' right of centerline, 100' AGL/822' MSL.
Trees beginning 1752' from DER, 127' right of centerline, up to 100' AGL/826' MSL.
Trees beginning 1916' from DER, 61' right of centerline, up to 100' AGL/829' MSL.
Trees beginning 2245' from DER, 17' right of centerline, up to 100' AGL/832' MSL.
Trees beginning 2837' from DER, 70' left of centerline, up to 100' AGL/822' MSL.
Trees beginning 3001' from DER, 291' left of centerline, up to 100' AGL/832' MSL.
Trees beginning 3166' from DER, 48' left of centerline, up to 100' AGL/835' MSL.
Rwy 23R, sign 61' from DER, 252' left of centerline, 3' AGL/717' MSL.
Trees, pole, building beginning 82' from DER, 14' right of centerline, up to 100' AGL/819' MSL.
Tree 126' from DER, 140' left of centerline, 100' AGL/812' MSL.
Trees beginning 170' from DER, 51' left of centerline, up to 100' AGL/816' MSL.
Trees, building beginning 783' from DER, 9' right of centerline, up to 100' AGL/822' MSL.
Trees beginning 915' from DER, 29' left of centerline, up to 100' AGL/819' MSL.
Trees beginning 1780' from DER, 250' left of centerline, up to 100' AGL/826' MSL.

CON'T

DETROIT, MI (CON'T)

WILLOW RUN (YIP) (CON'T)

Rwy 23R (CON'T), trees beginning 1857' from DER, 58' right of centerline, up to 100' AGL/829' MSL.
Trees beginning 1944' from DER, 7' left of centerline, up to 100' AGL/829' MSL.
Trees, stack beginning 2273' from DER, 14' right of centerline, up to 100' AGL/832' MSL.
Trees beginning 3358' from DER, 51' left of centerline, up to 100' AGL/835' MSL.
Rwy 27, fence beginning 110' from DER, 353' right of centerline, up to 6' AGL/722' MSL.
Tree 118' from DER, 481' right of centerline, 25' AGL/742' MSL.
Tree, fence beginning 181' from DER, 353' right of centerline, up to 26' AGL/745' MSL.
Tree, fence beginning 200' from DER, 353' right of centerline, up to 52' AGL/769' MSL.
Terrain, fence beginning 468' from DER, 93' left of centerline, up to 729' MSL.
Tree, pole beginning 503' from DER, 212' right of centerline, up to 51' AGL/771' MSL.
Pole 768' from DER, 102' left of centerline, 26' AGL/742' MSL.
Pole 841' from DER, 174' left of centerline, 27' AGL/744' MSL.
Pole beginning 985' from DER, 42' left of centerline, up to 35' AGL/752' MSL.
Pole 1222' from DER, 423' left of centerline, 43' AGL/760' MSL.
Pole 1243' from DER, 38' left of centerline, 44' AGL/761' MSL.
Pole, building beginning 1559' from DER, 43' left of centerline, up to 54' AGL/772' MSL.
Building 1786' from DER, 865' left of centerline, 55' AGL/773' MSL.
Building beginning 1816' from DER, 789' left of centerline, up to 58' AGL/777' MSL.
Building, pole beginning 1843' from DER, 45' left of centerline, up to 59' AGL/778' MSL.
Tree 2836' from DER, 833' right of centerline, 68' AGL/789' MSL.
Tree 2869' from DER, 985' right of centerline, 75' AGL/794' MSL.
Trees beginning 2910' from DER, 1007' right of centerline, up to 76' AGL/795' MSL.
Building 2931' from DER, 784' left of centerline, 68' AGL/789' MSL.
Transmission line 3710' from DER, 390' right of centerline, 90' AGL/812' MSL.
Transmission line, catenary beginning 3961' from DER, 775' left of centerline, up to 101' AGL/825' MSL.
Tree 4002' from DER, 1392' right of centerline, 85' AGL/817' MSL.
Transmission line 4076' from DER, 119' left of centerline, 104' AGL/830' MSL.
Tree 4482' from DER, 471' right of centerline, 104' AGL/834' MSL.
Tower 1.1 NM from DER, 468' left of centerline, 165' AGL/903' MSL.

DETROIT/GROSSE ILE, MI

GROSSE ILE MUNI (ONZ)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 5A 24MAY18 (18144) (FAA)

TAKEOFF MINIMUMS:
Rwy 35, 800 -1½ or std. w/ min. climb of 500' per NM to 1100.

DEPARTURE PROCEDURE:
Rwy 4, climb heading 037° to 1200 before turning left.
Rwy 35, climb heading 006° to 1800 before turning left.

TAKEOFF OBSTACLE NOTES:
Rwy 4, tree 12' from DER, 390' left of centerline, 615' MSL.
Tree, vegetation beginning 94' from DER, 192' right of centerline, up to 620' MSL.
Tree 106' from DER, 497' left of centerline, 629' MSL.
Tree, transmission line, pole beginning 137' from DER, 350' right of centerline, up to 655' MSL.
Tree 191' from DER, 422' left of centerline, 642' MSL.
Trees beginning 256' from DER, 376' left of centerline, up to 653' MSL.
Tree, building beginning 410' from DER, 164' left of centerline, up to 672' MSL.
Trees beginning 720' from DER, 279' right of centerline, up to 660' MSL.
Trees beginning 903' from DER, 20' right of centerline, up to 661' MSL.
Trees beginning 974' from DER, 148' left of centerline, up to 673' MSL.
Trees beginning 1189' from DER, 55' right of centerline, up to 667' MSL.
Trees beginning 1490' from DER, 38' right of centerline, up to 676' MSL.
Trees beginning 1492' from DER, 37' left of centerline, up to 679' MSL.
Trees beginning 2083' from DER, 155' left of centerline, up to 697' MSL.
Trees beginning 2088' from DER, 179' right of centerline, up to 685' MSL.
Tree 3459' from DER, 210' right of centerline, 687' MSL.
Trees beginning 3492' from DER, 255' left of centerline, up to 698' MSL.
Trees beginning 4123' from DER, 611' left of centerline, up to 700' MSL.
Tree 4453' from DER, 411' left of centerline, 702' MSL.
Tree 4610' from DER, 877' left of centerline, 713' MSL.
Rwy 17, tree 44' from DER, 378' right of centerline, 621' MSL.
Tree, fence beginning 64' from DER, 218' right of centerline, up to 622' MSL.
Tree 148' from DER, 485' left of centerline, 583' MSL.
Tree 164' from DER, 540' left of centerline, 595' MSL.
Trees beginning 275' from DER, 395' right of centerline, up to 643' MSL.
Tree 2311' from DER, 991' left of centerline, 651' MSL.
Tree 2497' from DER, 1103' left of centerline, 671' MSL.
Trees beginning 2515' from DER, 740' left of centerline, up to 672' MSL.
Rwy 22, trees beginning 14' from DER, 350' left of centerline, up to 583' MSL.
Tree, fence beginning 369' from DER, 517' right of centerline, up to 607' MSL.
Trees beginning 516' from DER, 385' right of centerline, up to 621' MSL.
Tree 548' from DER, 485' right of centerline, 622' MSL.

CON'T

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT/GROSSE ILE, MI (CON'T)

GROSSE ILE MUNI (ONZ) (CON'T)

Rwy 22 (CON'T), tree 765' from DER, 407' right of centerline, 643' MSL.
Trees beginning 787' from DER, 180' right of centerline, up to 653' MSL.
Trees beginning 903' from DER, 563' right of centerline, up to 662' MSL.
Trees beginning 1083' from DER, 413' right of centerline, up to 665' MSL.
Tree 1382' from DER, 614' right of centerline, 667' MSL.
Trees beginning 1545' from DER, 624' right of centerline, up to 683' MSL.
Trees beginning 1907' from DER, 763' right of centerline, up to 691' MSL.
Rwy 35, terrain 1' from DER, 101' right of centerline, 583' MSL.
Tree, building, fence beginning 26' from DER, 165' left of centerline, up to 663' MSL.
Terrain 158' from DER, 227' right of centerline, 586' MSL.
Building 450' from DER, 515' right of centerline, 9' AGL/595' MSL.
Tree 519' from DER, 591' right of centerline, 612' MSL.
Tree, road, building beginning 663' from DER, 144' right of centerline, up to 615' MSL.
Tree, building beginning 684' from DER, 224' left of centerline, up to 668' MSL.
Tree, pole, transmission line, building beginning 823' from DER, 15' left of centerline, up to 675' MSL.
Transmission line, pole beginning 934' from DER, 508' right of centerline, up to 38' AGL/627' MSL.
Pole, transmission line beginning 1004' from DER, 379' right of centerline, up to 628' MSL.
Tree, transmission line, pole beginning 1073' from DER, 135' right of centerline, up to 635' MSL.
Tree, pole, transmission line beginning 1083' from DER, 14' right of centerline, up to 636' MSL.
Trees beginning 1149' from DER, 127' right of centerline, up to 641' MSL.
Trees beginning 1215' from DER, 35' right of centerline, up to 658' MSL.
Trees beginning 1362' from DER, 236' right of centerline, up to 663' MSL.
Trees beginning 2148' from DER, 62' right of centerline, up to 668' MSL.
Trees beginning 3337' from DER, 467' right of centerline, up to 678' MSL.

DOWAGIAC, MI

DOWAGIAC MUNI (C91)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 5A 26MAR20 (20086) (FAA)

TAKEOFF MINIMUMS:
Rwys 4, 22, NA-Environmental.

TAKEOFF OBSTACLE NOTES:
Rwy 9, building, 258' from DER, 549' right of centerline, 26' AGL/778' MSL.
Multiple poles beginning 372' from DER, 432' right of centerline, up to 42' AGL/795' MSL.
Antenna, 459' from DER, 367' right of centerline, 35' AGL/787' MSL.
Antenna, 615' from DER, 341' right of centerline, 35' AGL/775' MSL.
Multiple poles beginning 654' from DER, 341' left of centerline, up to 48' AGL/779' MSL.
Trees beginning 667' from DER, 21' left of centerline, up to 77' AGL/839' MSL.
Trees beginning 864' from DER, 7' right of centerline, up to 121' AGL/879' MSL.
Rwy 27, trees beginning 21' from DER, 33' right of centerline, up to 93' AGL/828' MSL.
Trees beginning 154' from DER, 112' left of centerline, up to 111' AGL/837' MSL.

DRUMMOND ISLAND, MI

DRUMMOND ISLAND (DRM)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1 31MAY12 (12152) (FAA)

TAKEOFF MINIMUMS:
Rwys 1,19, NA - environmental.
Rwy 8, 300-1 or std. w/min. climb of 449'per NM to 1000.

TAKEOFF OBSTACLE NOTES:
Rwy 8, fence beginning 72' from DER, left and right of centerline, up to 5' AGL/664' MSL.
Vehicle on road beginning 199' from DER, left and right of centerline, up to 15' AGL/675' MSL.
Buildings beginning 11' from DER, left and right of centerline, up to 20' AGL/679' MSL.
Poles 123' from DER, 182' left of centerline, up to 30' AGL/689' MSL.
Trees beginning 91' from DER, left and right of centerline, up to 100' AGL/860' MSL.
Rwy 26, trees beginning 42' from DER, left and right of centerline, up to 100' AGL/809' MSL.
Buildings beginning 102' from DER, 87' left of centerline, up to 20' AGL/669' MSL.

EAST TAWAS, MI

IOSCO COUNTY (6D9)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1 25JUL13 (13206) (FAA)

TAKEOFF OBSTACLE NOTES:
Rwy 8, trees beginning at DER, 400' left and right of centerline, up to 100' AGL/704' MSL.
Vehicles on roadway 17' from DER, 306' left of centerline, up to 15' AGL/619' MSL.
Train 113' from DER, 510' right of centerline, up to 23' AGL/627' MSL.
Rwy 26, trees beginning at DER, 100' left and right of centerline, up to 100' AGL/714' MSL.

ESCANABA, MI

DELTA COUNTY (ESC)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1 13SEP18 (18256) (FAA)

TAKEOFF MINIMUMS:

Rwy 1, 400-2¼ or std. w/min. climb gradient of 265 feet per NM to 1100.

TAKEOFF OBSTACLE NOTES:

Rwy 1, vehicles on road beginning 40’ from DER, 40’ right of centerline, up to 15’ AGL/621’ MSL.
Tower 1.7 NM from DER, 2363’ left of centerline, 293’ AGL/965’ MSL.
Rwy 9, vehicles on road beginning 1’ from DER, 272’ right of centerline, up to 607’ MSL.
Trees beginning 1753’ from DER, 417’ right of centerline, up to 648’ MSL.
Tree 1859’ from DER, 561’ right of centerline, 654’ MSL.
Trees beginning 1869’ from DER, 54’ right of centerline, up to 656’ MSL.
Tree 2024’ from DER, 444’ left of centerline, 646’ MSL.
Rwy 19, fence beginning 131’ from DER, 402’ right of centerline, up to 9’ AGL/599’ MSL.
Pole 247’ from DER, 562’ right of centerline, 28’ AGL/618’ MSL.
Tree 321’ from DER, 350’ left of centerline, 606’ MSL.
Trees beginning 367’ from DER, 524’ right of centerline, up to 646’ MSL.
Tree 374’ from DER, 454’ left of centerline, 643’ MSL.
Trees beginning 447’ from DER, 383’ left of centerline, up to 650’ MSL.
Trees beginning 463’ from DER, 383’ left of centerline, up to 660’ MSL.
Trees beginning 543’ from DER, 500’ right of centerline, up to 652’ MSL.
Trees beginning 640’ from DER, 19’ left of centerline, up to 664’ MSL.
Trees beginning 671’ from DER, 19’ right of centerline, up to 673’ MSL.

FLINT, MI

BISHOP INTL (FNT)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 5 21FEB02 (02052) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 18, trees 1200' from DER, 500' right of centerline, 65' AGL/863' MSL.

FRANKFORT, MI

FRANKFORT DOW MEMORIAL FIELD (FKS)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3 10MAR11 (11069) (FAA)

TAKEOFF MINIMUMS:

Rwy 15, 400-2¾ or std. w/min. climb of 300' per NM to 1100.
Rwy 33, 500-2¼ or 300-1 w/ min. climb of 600' per NM to 1200.

DEPARTURE PROCEDURE:

Rwy 15, climb heading 143° to 1500 before turning left.
Rwy 33, climb heading 323° to 1200 before turning.

TAKEOFF OBSTACLE NOTES:

Rwy 15, vehicles on roadway, beginning 13' from DER, right and left of centerline, up to 15' AGL/654' MSL.
Trees beginning 33' from DER, 507' right of centerline, 100' AGL/706' MSL.
Trees beginning 345' from DER, 293' left of centerline, 100' AGL/756' MSL.
Trees beginning 1.2 NM from DER, 1030' left of centerline, 100' AGL/969' MSL.
Tree 1.9 NM from DER, 903' right of centerline, 100' AGL/936' MSL.
Tree 2.2 NM from DER, 15' left of centerline, 100' AGL/953' MSL.
Rwy 33, vehicles on roadway, beginning 6' from DER, right and left of centerline, up to 15' AGL/687' MSL.
Trees beginning 316' from DER, 323' right of centerline, 100' AGL/805' MSL.
Trees beginning 470' from DER, 256' left of centerline, 100' AGL/838' MSL.
Trees beginning 2759' from DER, 1219' right of centerline, 100' AGL/1035' MSL.
Tree 1.3 NM from DER, 379' left of centerline, 100' AGL/1002' MSL.

FREMONT, MI

FREMONT MUNI (FFX)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG-A 08NOV18 (18312) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 1, lighting 40' from DER, 90' right of centerline, 4' AGL/772' MSL.
Lighting 40' from DER, 89' left of centerline, 4' AGL/772' MSL.
Terrain 78' from DER, 483' left of centerline, 774' MSL.
Transmission line 1154' from DER, 727' left of centerline, 49' AGL/817' MSL.
Tree, catenary, pole, transmission line beginning 1157' from DER, 41' right of centerline, up to 843' MSL.
Tree 1247' from DER, 659' left of centerline, 830' MSL.
Trees beginning 1358' from DER, 493' left of centerline, up to 842' MSL.
Tree 2047' from DER, 970' left of centerline, 843' MSL.
Tree 2632' from DER, 412' right of centerline, 844' MSL.
Rwy 10, lighting 6' from DER, 19' right of centerline, 2' AGL/771' MSL.
Lighting 7' from DER, 19' left of centerline, 2' AGL/771' MSL.
Trees beginning 910' from DER, 399' right of centerline, up to 839' MSL.
Tree 1458' from DER, 485' right of centerline, 841' MSL.
Pole 1486' from DER, 380' right of centerline, 48' AGL/812' MSL.
Trees beginning 2254' from DER, 16' left of centerline, up to 855' MSL.
Tree 2850' from DER, 326' right of centerline, 863' MSL.
Tree 3040' from DER, 225' right of centerline, 867' MSL.
Rwy 19, lighting 39' from DER, 124' right of centerline, 4' AGL/755' MSL.
Lighting 40' from DER, 125' left of centerline, 4' AGL/755' MSL.
Transmission line 1139' from DER, 616' right of centerline, 30' AGL/784' MSL.
Trees beginning 1759' from DER, 878' left of centerline, up to 810' MSL.
Tree 2038' from DER, 318' right of centerline, 806' MSL.
Trees beginning 2107' from DER, 239' right of centerline, up to 813' MSL.
Trees beginning 2175' from DER, 395' right of centerline, up to 814' MSL.
Trees beginning 2184' from DER, 464' right of centerline, up to 822' MSL.
Trees beginning 2399' from DER, 1131' left of centerline, up to 824' MSL.
Rwy 28, tree 742' from DER, 657' left of centerline, 829' MSL.
Trees beginning 951' from DER, 652' left of centerline, up to 838' MSL.
Tree 1798' from DER, 498' right of centerline, 863' MSL.

GAYLORD, MI

GAYLORD RGNL (GLR)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 07MAY09 (09127) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 9, trees beginning 917' from DER, 318' right of centerline, up to 57' AGL/1387' MSL.
Trees beginning 918' from DER, 357' left of centerline, up to 79' AGL/1407' MSL.
Ceilometer 166' from DER, 258' left of centerline, 4' AGL/1334' MSL.
Rwy 18, power line pylon 2125' from DER, 917' right of centerline, 79' AGL/1398' MSL.
Bushes beginning 18' from DER, 255' left of centerline, up to 21' AGL/1338' MSL.
Rwy 27, trees beginning 2870' from DER, 345' right of centerline, up to 83' AGL/1403' MSL.
Tree 2906' from DER, 234' left of centerline, 75' AGL/1395' MSL.
Rwy 36, trees and bush beginning 79' from DER, 191' left of centerline, up to 54' AGL/1374' MSL.

GLADWIN, MI

CHARLES ZETTEL MEMORIAL (GDW)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3 20OCT11 (11293) (FAA)

TAKEOFF MINIMUMS:

Rwy 27, 400-2 or std. w/min. climb of 341' per NM to 1300.
Rwys 15, 33, NA - Environmental.

DEPARTURE PROCEDURE:

Rwy 27, climb heading 272° to 1500 before turning left.

TAKEOFF OBSTACLE NOTES:

Rwy 9, trees beginning 42' from DER left and right of centerline, up to 82' AGL/850' MSL.
Rwy 27, vehicle on road 108' from DER, across centerline, 15' AGL/789' MSL.
Trees beginning 736' from DER, left and right of centerline, up to 111' AGL/991' MSL.
Tank 5787' from DER, 1118' right of centerline, 170' AGL/996' MSL.
Tower 1.5 NM from DER, 1250' right of centerline, 187' AGL/1080' MSL.
Tower 1.6 NM from DER, 1390' right of centerline, 199' AGL/1118' MSL.

GRAND HAVEN, MI

GRAND HAVEN MEMORIAL AIRPARK (3GM)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 5 09FEB12 (12040) (FAA)

TAKEOFF MINIMUMS:

Rwy 27, 300-1¼ or std. w/min. climb of 231' per NM to 900.

TAKEOFF OBSTACLE NOTES:

Rwy 9, trees beginning 23' from DER, left and right of centerline, up to 96' AGL/705' MSL.
Terrain beginning 47' from DER, 322' left of centerline, up to 594' MSL.
Wire 22' from DER, 1064' left of centerline, 22' AGL/620' MSL.
Rwy 18, tree 204' from DER, 553' right of centerline, 69' AGL/678' MSL.
Rwy 27, building 7' from DER, 472' left of centerline, 18' AGL/619' MSL.
Trees beginning 25' from DER, 604' right and left of centerline, up to 112' AGL/746' MSL.
Rwy 36, stack 2732' from DER, 430' left of centerline, 128' AGL/735' MSL.

GRAND LEDGE, MI

ABRAMS MUNI (4D0)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3 05APR12 (12096) (FAA)

TAKEOFF MINIMUMS:

Rwys 18, 36, NA, - ATC.
Rwy 27, 300-1 or std. w/min. climb of 306' per NM to 1100.

TAKEOFF OBSTACLE NOTES:

Rwy 9, trees beginning 75' from DER, left and right of centerline, up to 114' AGL/954' MSL.
Terrain beginning 82' from DER, 242' right of centerline, up to 852' MSL.
Pole 1433' from DER, 61' left of centerline, 45' AGL/877' MSL.
Navaids beginning 30' from DER, left and right of centerline, up to 2' AGL/841' MSL.
Rwy 27, vehicle on road 59' from DER, 359' right of centerline, 15' AGL/846' MSL.
Fence 70' from DER, 405' left of centerline, 4' AGL/836' MSL.
Navaid 587' from DER, 490' left of centerline, 15' AGL/852' MSL.
Buildings beginning 740' from DER, 326' right of centerline, up to 34' AGL/878' MSL.
Buildings beginning 771' from DER, 555' left of centerline, up to 21' AGL/859' MSL.
Flagpole 819' from DER, 601' right of centerline, 25' AGL/869' MSL.
Trees beginning 827' from DER, left and right of centerline, up to 88' AGL/932' MSL.
Power poles beginning 868' from DER, left and right of centerline, up to 24' AGL/871' MSL.
Tank 4595' from DER, 478' left of centerline, 169' AGL/1004' MSL.
Vertical structure, 4597' from DER, 470' left of centerline, 171' AGL/1006' MSL.
Elevator 4646' from DER, 555' left of centerline, 162' AGL/997' MSL.

GRAND RAPIDS, MI

GERALD R FORD INTL (GRR)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2 02JUL09 (09183) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 8L, vehicle on road 20' from DER, 156' left of centerline, 15' AGL/794' MSL.
Trees beginning 1419' from DER, 740' left of centerline, up to 100' AGL/859' MSL.
Rwy 17, trees beginning 1382' from DER, 134' left of centerline, up to 100' AGL/929' MSL.
Trees beginning 1389' from DER, 819' right of centerline, up to 100' AGL/899' MSL.
Rwy 26R, terrain beginning 102' from DER, 381' right of centerline, up to 808' MSL.
Rwy 35, vehicle on road 742' from DER, 675' left of centerline, up to 15' AGL/804' MSL.
Trees beginning 2002' from DER, 715' left of centerline, up to 100' AGL/869' MSL.
Trees beginning 1339' from DER, 7' right of centerline, up to 100' AGL/879' MSL.

GRAYLING, MI

GRAYLING AAF (GOV)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3 03JUN10 (10154) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 5, tree 1192' from DER, 275' right of centerline, 56' AGL/1215' MSL.
Tree 1684' from DER, 600' left of centerline, 56' AGL/1225' MSL.
Rwy 14, tree 435' from DER, 402' right of centerline, 57' AGL/1216' MSL.
Antenna 3937' from DER, 1179' right of centerline, 136' AGL/1279' MSL.
Rwy 23, trees beginning 1438' from DER, 29' right of centerline, up to 100' AGL/1269' MSL.
Rwy 32, trees beginning 1611' from DER, 50' left of centerline, up to 66' AGL/1216' MSL.

GREENVILLE, MI

GREENVILLE MUNI (6D6)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2B 13SEP18 (18256) (FAA)

TAKEOFF MINIMUMS:

Rwys 18, 36, NA - environmental.

TAKEOFF OBSTACLE NOTES:

Rwy 10, trees 5' from DER, 389' right of centerline, 845' MSL.
Trees beginning 42' from DER, 141' right of centerline, up to 858' MSL.
Trees beginning 128' from DER, 423' left of centerline, up to 870' MSL.
Trees 359' from DER, 588' left of centerline, 895' MSL.
Trees, transmission line and poles beginning 474' from DER, 25' left of centerline, up to 911' MSL.
Trees beginning 760' from DER, 242' right of centerline, up to 907' MSL.
Trees, transmission line and poles beginning 1946' from DER, 5' right of centerline, up to 923' MSL.
Trees beginning 2688' from DER, 93' left of centerline, up to 925' MSL.
Rwy 28, building 34' from DER, 309' right of centerline, 22' AGL/872' MSL.
Trees beginning 87' from DER, 254' left of centerline, up to 897' MSL.
Tree 282' from DER, 534' left of centerline, 907' MSL.
Tree 326' from DER, 507' right of centerline, 879' MSL.
Trees beginning 460' from DER, 392' left of centerline, up to 929' MSL.
Tree 563' from DER, 535' right of centerline, 905' MSL.
Trees beginning 616' from DER, 474' right of centerline, up to 906' MSL.
Trees beginning 621' from DER, 459' left of centerline, up to 937' MSL.
Trees beginning 730' from DER, 456' right of centerline, up to 909' MSL.
Trees beginning 789' from DER, 411' left of centerline, up to 948' MSL.
Tree 995' from DER, 464' right of centerline, 910' MSL.
Trees beginning 1033' from DER, 462' right of centerline, up to 922' MSL.
Trees beginning 1112' from DER, 6' left of centerline, up to 952' MSL.
Trees beginning 1273' from DER, 558' right of centerline, up to 929' MSL.
Trees beginning 1399' from DER, 435' right of centerline, up to 931' MSL.
Tree 1532' from DER, 460' right of centerline, 932' MSL.
Trees beginning 1555' from DER, 400' right of centerline, up to 939' MSL.
Trees beginning 1706' from DER, 26' right of centerline, up to 942' MSL.
Tree 3416' from DER, 249' left of centerline, 954' MSL.
Trees beginning 3552' from DER, 176' left of centerline, up to 958' MSL.

HANCOCK, MI

HOUGHTON COUNTY MEML (CMX)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3A 08NOV18 (21056) (FAA)

TAKEOFF MINIMUMS:

Rwy 25, 400-2½ or std. w/min. climb of 215' per NM to 1600 or alternatively, with std. takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1500' prior to DER.
Rwy 31, 300-1½ or std. w min. climb of 245' per NM to 1400 or alternatively, with std. takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 2200' prior to DER.

TAKEOFF OBSTACLE NOTES:

Rwy 7, vehicles on roadway beginning 27' from DER, left and right of centerline, up to 15' AGL/1094' MSL.
Trees beginning 445' from DER, 236' left of centerline, up to 59' AGL/1120' MSL.
Trees beginning 1491' from DER, 240' right of centerline, up to 61' AGL/1122' MSL.
Rwy 13, trees beginning 133' from DER, 513' left of centerline, up to 80' AGL/1139' MSL.
Rwy 25, vehicles on roadway beginning 27' from DER, left and right of centerline, up to 15' AGL/1094' MSL.
Trees beginning 386' from DER, 397' left of centerline, up to 84' AGL/1145' MSL.
Trees beginning 1769' from DER, 405' right of centerline, up to 77' AGL/1178' MSL.
Rwy 31, trees beginning 1625' from DER, 77' right of centerline, up to 100' AGL/1299' MSL.
Trees beginning 1814' from DER, 496' left of centerline, up to 81' AGL/1202' MSL.

HARBOR SPRINGS, MI

HARBOR SPRINGS (MGN)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3 11OCT18 (18284) (FAA)

TAKEOFF MINIMUMS:

Rwy 28, 300-2 or std. w/ min. climb of 305 feet per NM to 1000, or alternatively, with std. takeoff minimums and a normal 200 feet per NM climb gradient, takeoff must occur no later than 2100 feet prior to DER.

DEPARTURE PROCEDURE:

Rwy 10, climb heading 101° to 1400 before proceeding on course.

Rwy 28, climb heading 281° to 2000 before turning right.

TAKEOFF OBSTACLE NOTES:

Rwy 10, terrain 20' from DER, 43' left of centerline, 687' MSL.
Tree 39' from DER, 299' right of centerline, 755' MSL.
Tree 69' from DER, 324' left of centerline, 752' MSL.
Tree 78' from DER, 498' right of centerline, 762' MSL.
Trees and pole beginning 108' from DER, 33' right of centerline, up to 83' AGL/766' MSL.
Trees, vehicles on roads, pole, terrain, buildings, and elevator beginning 164' from DER, 5' left of centerline, up to 74' AGL/782' MSL.
Trees, buildings and poles beginning 251' from DER, 34' right of centerline, up to 89' AGL/769' MSL.
Trees and pole beginning 1344' from DER, 37' right of centerline, up to 770' MSL.
Trees beginning 1596' from DER, 21' right of centerline, up to 772' MSL.
Trees beginning 1679' from DER, 10' right of centerline, up to 76' AGL/779' MSL.

Rwy 28, trees and vehicles on roads beginning abeam DER, 2' left of centerline, up to 718' MSL.
Tree and vehicles on road beginning 104' from DER, 52' right of centerline, up to 766' MSL.
Trees and pole beginning 164' from DER, 11' right of centerline, up to 99' AGL/791' MSL.
Trees beginning 600' from DER, 25' left of centerline, up to 113' AGL/727' MSL.
Trees and stack beginning 693' from DER, 26' right of centerline, up to 794' MSL.
Trees beginning 3761' from DER, 1159' right of centerline, up to 800' MSL.
Trees beginning 4723' from DER, 1577' right of centerline, up to 817' MSL.
Trees beginning 4971' from DER, 1545' right of centerline, up to 100' AGL/849' MSL.
Trees beginning 5106' from DER, 1546' right of centerline, up to 870' MSL.
Trees beginning 5854' from DER, 1788' right of centerline, up to 100' AGL/871' MSL.
Tree 1 NM from DER, 2007' right of centerline, 880' MSL.
Trees and buildings beginning 1 NM from DER, 1975' right of centerline, up to 100' AGL/898' MSL.
Trees beginning 1.2 NM from DER, 2286' right of centerline, up to 100' AGL/917' MSL.
Trees beginning 1.4 NM from DER, 2734' right of centerline, up to 917' MSL.
Trees beginning 1.5 NM from DER, 2843' right of centerline, up to 918' MSL.
Trees beginning 1.5 NM from DER, 2904' right of centerline, up to 923' MSL.
Tree 1.5 NM from DER, 3021' right of centerline, 920' MSL.

HART/SHELBY, MI

OCEANA COUNTY (C04)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 10DEC15 (15344) (FAA)

TAKEOFF MINIMUMS:

Rwy 15, 33, NA-Environmental.

Rwy 9, 300-1 or std. w/min. climb of 265' per NM to 1200.

DEPARTURE PROCEDURE:

Rwy 27, climb heading 268° to 1500 before turning right.

TAKEOFF OBSTACLE NOTES:

Rwy 9, terrain beginning 74' from DER, 196' right of centerline, up to 908' MSL.
Terrain beginning 54' from DER, 314' left of centerline, up to 904' MSL.
Trees beginning 257' from DER, 41' right of centerline, up to 114' AGL/1056' MSL.
Vehicle on road 787' from DER, 654' left of centerline, 15' AGL/926' MSL.
Trees beginning 895' from DER, 10' left of centerline, up to 100' AGL/1017' MSL.
Transmission line tower 1809' from DER, 400' left of centerline, 41' AGL/958' MSL.

Rwy 27, terrain beginning 10' from DER, 181' right of centerline, up to 970' MSL.
Trees beginning 115' from DER, 455' left of centerline, up to 61' AGL/976' MSL.
Trees beginning 468' from DER, 467' right of centerline, up to 56' AGL/971' MSL.
Vehicles on road beginning 446' from DER, left and right of centerline, up to 15' AGL/939' MSL.
Building 677' from DER, 595' left of centerline, 21' AGL/941' MSL.
Irrigation equipment 1163' from DER, 657' right of centerline, 13' AGL/947' MSL.
Terrain beginning 1876' from DER, 335' left of centerline, up to 974' MSL.
Trees beginning 1992' from DER, 12' left of centerline, up to 93' AGL/1067' MSL.
Trees beginning 2033' from DER, 9' right of centerline, up to 64' AGL/1048' MSL.
Poles and transmission line towers beginning 2323' from DER, 480' right of centerline, up to 60' AGL/1034' MSL.
Trees beginning 4343' from DER, 589' left of centerline, up to 84' AGL/1063' MSL.

HASTINGS, MI

HASTINGS (9D9)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 6 29MAR18 (18088) (FAA)

TAKEOFF MINIMUMS:

Rwys 9, 18, 27, 36 NA-Environmental.

TAKEOFF OBSTACLE NOTES:

Rwy 12, tree 18' from DER, 225' right of centerline, 826' MSL.
Trees 57' from DER, 419' right of centerline, up to 868' MSL.
Trees beginning 2086' from DER, 288' right of centerline, up to 884' MSL.
Trees, and terrain 80' from DER, 269' left of centerline, up to 851' MSL.
Trees, terrain, vegetation beginning 280' from DER, 210' left of centerline, up to 885' MSL.
Rwy 30, trees 170' from DER, 452' left of centerline, up to 829' MSL.
Trees 602' from DER, 365' left of centerline, up to 848' MSL.
Trees beginning 712' from DER, 12' left of centerline, up to 867' MSL.
Traverse way 191' from DER, 491' right of centerline, 810' MSL.
Trees 245' from DER, 484' right of centerline, 851' MSL.
Trees beginning 1477' from DER, 90' right of centerline, up to 869' MSL.

HILLSDALE, MI

HILLSDALE MUNI (JYM)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1 25JUL13 (13206) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 10, trees beginning 73' from DER 25' right of centerline, up to 110' AGL/1277' MSL.
Tree 1188' from DER, 413' left of centerline, 82' AGL/1261' MSL.
Vehicles on road beginning 1125' from DER, 722' right of centerline, up to 15' AGL/1214' MSL.
Rwy 28, trees beginning 147' from DER, 38' right of centerline, up to 117' AGL/1216' MSL.
Trees beginning 1052' from DER, 575' left of centerline, up to 116' AGL/1275' MSL.

HOLLAND, MI

WEST MICHIGAN RGNL (BIV)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1 02JUL09 (09183) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 8, vehicles on road beginning 48' from DER, 500' right of centerline, up to 15' AGL/694' MSL.
Trees beginning 1828' from DER, 829' left of centerline, up to 72' AGL/741' MSL.
Rwy 26, vehicles on road beginning 86' from DER, 517' left of centerline, up to 15' AGL/714' MSL.
Pole 805' from DER, 475' left of centerline, 35' AGL/734' MSL.
Trees 1056' from DER, 468' left of centerline, up to 41' AGL/740' MSL.

HOUGHTON LAKE, MI

ROSCOMMON COUNTY-BLODGETT MEMORIAL (HTL)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1 25OCT07 (07298) (FAA)

TAKEOFF MINIMUMS:

Rwy 9, 200-1¼, or std. w/min. climb of 237' per NM to 1400.
Rwys 18, 36, NA-ATC.

DEPARTURE PROCEDURE:

Rwy 27, climb heading 274° to 2600 before turning south.

TAKEOFF OBSTACLE NOTES:

Rwy 9, multiple trees beginning 2330' from DER, on centerline, up to 71' AGL/1216' MSL.
Multiple trees beginning 5927' from DER 275' left of centerline, up to 100' AGL/1299' MSL.
Terrain beginning 31' from DER, 215' right of centerline, up to 0' AGL/1165' MSL.
Terrain beginning 43' from DER, 84' left of centerline, up to 0' AGL/1162' MSL.
Rwy 27, multiple trees beginning 791' from DER, on centerline, up to 90' AGL/1239' MSL.
Fence and road beginning 323' from DER, on centerline, up to 15' AGL/1164' MSL.
Terrain beginning 100' from DER, 171' right of centerline, up to 0' AGL/1165' MSL.
Terrain beginning 112' from DER, 128' left of centerline, up to 0' AGL/1162' MSL.

HOWELL, MI

LIVINGSTON COUNTY SPENCER J HARDY (OZW)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3A 24MAY18 (18144) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 13, tree 1776' from DER, 695' right of centerline, 1009' MSL.
Rwy 31, pole 138' from DER, 407' right of centerline, 1004' MSL.
Trees beginning 914' from DER, 725' left of centerline, up to 1006' MSL.
Tree 1234' from DER, 582' left of centerline, 1010' MSL.
Trees beginning 1321' from DER, 647' left of centerline, up to 1012' MSL.

IONIA, MI

IONIA COUNTY (Y70)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG-A 08NOV18 (18312) (FAA)

TAKEOFF MINIMUMS:

Rwy 18, 36, NA - Environmental.

DEPARTURE PROCEDURE:

Rwys 9, 27, climb runway heading to 1400 before turning.

TAKEOFF OBSTACLE NOTES:

Rwy 9, trees beginning 11' from DER, 320' left of centerline, up to 825' MSL.
NAVAID 39' from DER, 77' right of centerline, 804' MSL.
Ground beginning 60' from DER, 276' right of centerline, up to 810' MSL.
Trees beginning 101' from DER, 344' left of centerline, up to 836' MSL.
Ground 258' from DER, 333' right of centerline, 811' MSL.
Trees beginning 664' from DER, 521' right of centerline, up to 872' MSL.
Trees beginning 1011' from DER, 77' right of centerline, up to 881' MSL.
Tree 1530' from DER, 834' left of centerline, 845' MSL.
Trees beginning 1538' from DER, 289' left of centerline, up to 848' MSL.
Tree 1882' from DER, 845' left of centerline, 860' MSL.
Tree 2507' from DER, 302' left of centerline, 870' MSL.
Tree 2509' from DER, 259' left of centerline, 875' MSL.
Trees beginning 2513' from DER, 202' left of centerline, up to 886' MSL.
Trees beginning 2639' from DER, 220' left of centerline, up to 895' MSL.
Tree 3036' from DER, 691' left of centerline, 898' MSL.
Rwy 27, NAVAID 41' from DER, 77' right of centerline, 2' AGL/815' MSL.
Building 473' from DER, 547' right of centerline, 25' AGL/837' MSL.
Poles, building beginning 596' from DER, 513' left of centerline, up to 26' AGL/839' MSL.
Building 780' from DER, 574' right of centerline, 30' AGL/841' MSL.
Pole, transmission line beginning 816' from DER, 680' right of centerline, up to 845' MSL.
Tree, pole, building, transmission line beginning 890' from DER, 137' left of centerline, up to 888' MSL.
Tree 1025' from DER, 197' right of centerline, 849' MSL.
Tree, pole, transmission line beginning 1027' from DER, 82' right of centerline, up to 851' MSL.
Tree 1608' from DER, 698' right of centerline, 859' MSL.
Trees beginning 1614' from DER, 466' right of centerline, up to 877' MSL.
Trees beginning 1635' from DER, 439' left of centerline, up to 892' MSL.
Tree 3031' from DER, 1294' right of centerline, 891' MSL.

IRON MOUNTAIN-KINGSFORD, MI

FORD (IMT)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 5 12MAR09 (09071) (FAA)

TAKEOFF MINIMUMS:

Rwy 13, 300-1 or std. w/ min. climb of 590' per NM to 1400.
Rwy 31, 300-1¼ or std. w/ min. climb of 260' per NM to 1400.

DEPARTURE PROCEDURE:

Rwy 1, climb heading 010° to 1700 before turning right.
Rwy 13, climb heading 134° to 1900 before turning left.

TAKEOFF OBSTACLE NOTES:

Rwy 1, trees and bushes beginning 526' from DER, 292' right of centerline, up to 79' AGL/1259' MSL.
Antenna, trees and bushes beginning 378' from DER, 192' left of centerline, up to 76' AGL/1276' MSL.
Rwy 13, tree 1276' from DER, 312' right of centerline, 88' AGL/1188' MSL.
Trees and poles beginning 547' from DER, 100' left of centerline, up to 86' AGL/1306' MSL.
Rwy 19, trees beginning 992' from DER, 245' right of centerline, up to 56' AGL/1192' MSL.
Trees beginning 1229' from DER, 376' left of centerline, up to 48' AGL/1183' MSL.
Rwy 31, trees 1711' from DER, 113' right of centerline, 66' AGL/1186' MSL.
Bush 165' from DER, 161' right of centerline, 11' AGL/1131' MSL.
Trees beginning 66' from DER, 182' left of centerline, up to 95' AGL/1315' MSL.

IRONWOOD, MI

GOGEBIC-IRON COUNTY (IWD)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 6 07MAY09 (09127) (FAA)

DEPARTURE PROCEDURE:

Rwy 9, climb heading 090° to 2300 before turning right.
Rwy 27, climb heading 270° to 1700 before turning left.

TAKEOFF OBSTACLE NOTES:

Rwy 9, trees beginning 61' from DER, 544' left of centerline, up to 31' AGL/1244' MSL.
Tree 1853' from DER, 972' left of centerline, 100' AGL/1346' MSL.
Rwy 27, vehicle on road 287' from DER, 2' right of centerline, 15' AGL/1237' MSL.
Tree 1946' from DER, 952' right of centerline, 69' AGL/1283' MSL.
Tree 2817' from DER, 588' left of centerline, 74' AGL/1304' MSL.

JACKSON, MI

JACKSON COUNTY-REYNOLDS FIELD (JXN)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 6 01FEB18 (18032) (FAA)

DEPARTURE PROCEDURE:

Rwy 14, climb on heading 140° to 1500 before proceeding on course.

TAKEOFF OBSTACLE NOTES:

Rwy 7, tree 3384' from DER, 723' right of centerline, 16' AGL/1094' MSL.

Rwy 14, building, vertical point, fence, pole, vehicle, light standard beginning 12' from DER, 101' right of centerline, up to 29' AGL/1032' MSL.

Sign 15' from DER, 124' left of centerline, 3' AGL/1001' MSL.

Tree 963' from DER, 102' right of centerline, 1036' MSL.

Tree 1136' from DER, 8' left of centerline, 1034' MSL.

Trees beginning 1436' from DER, 13' right of centerline, up to 1073' MSL.

Trees beginning 1469' from DER, 122' left of centerline, up to 1065' MSL.

Tree 1877' from DER, 143' left of centerline, 1067' MSL.

Tree 1936' from DER, 2' left of centerline, 1082' MSL.

Trees beginning 1972' from DER, 81' left of centerline, up to 1083' MSL.

Tree 1987' from DER, 566' right of centerline, 1075' MSL.

Trees beginning 2109' from DER, 208' left of centerline, up to 1094' MSL.

Trees beginning 2114' from DER, 28' right of centerline, up to 1083' MSL.

Trees beginning 2366' from DER, 477' right of centerline, up to 1088' MSL.

Tree 2522' from DER, 947' right of centerline, 1097' MSL.

Trees beginning 2617' from DER, 472' right of centerline, up to 1099' MSL.

Trees beginning 2656' from DER, 6' right of centerline, up to 1108' MSL.

Tank 2665' from DER, 359' left of centerline, 107' AGL/1107' MSL.

Trees beginning 3009' from DER, 233' right of centerline, up to 1111' MSL.

Antenna, tower beginning 3101' from DER, 596' left of centerline, up to 1111' MSL.

Trees beginning 3368' from DER, 57' right of centerline, up to 1113' MSL.

Trees beginning 3383' from DER, 233' right of centerline, up to 1121' MSL.

Rwy 25, tree, pole beginning 952' from DER, 710' left of centerline, up to 1046' MSL.

Tree 1400' from DER, 814' right of centerline, 1041' MSL.

Pole, tree beginning 1612' from DER, 103' left of centerline, up to 79' AGL/1057' MSL.

Tree 2870' from DER, 312' right of centerline, 1057' MSL.

Rwy 32, ground 3' from DER, 483' left of centerline, 977' MSL.

Bush 8' from DER, 144' right of centerline, 975' MSL.

Bush beginning 44' from DER, 145' right of centerline, up to 978' MSL.

Tree, bush beginning 73' from DER, 172' right of centerline, up to 991' MSL.

Tree, fence beginning 168' from DER, 148' left of centerline, up to 1022' MSL.

Fence beginning 278' from DER, 367' right of centerline, up to 10' AGL/999' MSL.

Trees beginning 818' from DER, 231' left of centerline, up to 1062' MSL.

Tree 1117' from DER, 233' right of centerline, 1005' MSL.

Trees beginning 1214' from DER, 651' right of centerline, up to 1050' MSL.

Tree, t-l twr, pole beginning 1413' from DER, 23' right of centerline, up to 1058' MSL.

Trees beginning 1671' from DER, 863' left of centerline, up to 1068' MSL.

Trees beginning 1841' from DER, 224' left of centerline, up to 1071' MSL.

Tree 2875' from DER, 1128' left of centerline, 1081' MSL.

Trees beginning 2876' from DER, 829' left of centerline, up to 1094' MSL.

Tree 3126' from DER, 207' right of centerline, 1061' MSL.

Tree 3274' from DER, 1241' left of centerline, 1098' MSL.

Trees beginning 3285' from DER, 37' left of centerline, up to 1104' MSL.

Tree 3628' from DER, 58' right of centerline, 1065' MSL.

Trees beginning 3777' from DER, 78' right of centerline, up to 1085' MSL.

Tree 3900' from DER, 45' right of centerline, 1087' MSL.

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

KALAMAZOO, MI

KALAMAZOO/BATTLE CREEK INTL (AZO)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 9 30AUG07 (07242) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 5, light pole 906' from DER, 511' left of centerline, 25' AGL/879' MSL.
Multiple trees beginning 1433' from DER, 90' left of centerline, up to 65' AGL/914' MSL.
Multiple towers beginning 2399' from DER, 331' right of centerline, up to 119' AGL/970' MSL.
Multiple trees beginning 156' from DER, 163' right of centerline, up to 78' AGL/917' MSL.
Rwy 9, multiple trees beginning 588' from DER, on centerline, up to 104' AGL/958' MSL.
Antenna 2187' from DER, 222' right of centerline, 69' AGL/928' MSL.
Tree 677' from DER, 214' right of centerline, 45' AGL/899' MSL.
Rwy 17, railroad 587' from DER, 613' left of centerline, 17' AGL/885' MSL.
Tree 691' from DER, 583' right of centerline, 57' AGL/894' MSL.
Rwy 23, multiple trees beginning 937' from DER, 50' left of centerline, up to 72' AGL/956' MSL.
Multiple poles and hangar beginning 22' from DER, 331' right of centerline, up to 24' AGL/905' MSL.
Multiple trees beginning 943' from DER, 144' right of centerline, up to 107' AGL/986' MSL.
Rwy 27, road 543' from DER, on centerline, 15' AGL/890' MSL.
Multiple trees beginning 414' from DER, 292' left of centerline, up to 23' AGL/972' MSL.
Multiple light poles and towers beginning 521' from DER, 18' right of centerline, up to 180' AGL/1015' MSL.
Multiple trees beginning 1012' from DER, 23' right of centerline, up to 75' AGL/969' MSL.
Rwy 35, multiple trees beginning 2319' from DER, 163' left of centerline, up to 75' AGL/934' MSL.
Multiple trees beginning 1961' from DER, 753' right of centerline, up to 77' AGL/936' MSL.

LAKEVIEW, MI

LAKEVIEW-GRIFFITH FIELD (13C)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 08OCT98 (98281) (FAA)

TAKEOFF MINIMUMS:

Rwy 28, 300-1 or std. w/min. climb of 400' per NM to 1200.

TAKEOFF OBSTACLE NOTES:

Rwy 10, 1018' tree 50' from DER, 490' right of centerline.

LAMBERTVILLE, MI

TOLEDO SUBURBAN (DUH)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1 25DEC80 (80360) (FAA)

TAKEOFF MINIMUMS:

Rwys 9, 27, 300-1.

LANSING, MI

CAPITAL REGION INTL (LAN)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 14 13NOV14 (14317) (FAA)

DEPARTURE PROCEDURE:

Rwys 10L,10R, climb runway heading to 2000 before turning south.
Rwys 6, 24, 28L, 28R, climb runway heading to 1500 before turning southeast.

TAKEOFF OBSTACLE NOTES:

Rwy 6, trees beginning 1441' from DER, 321' left of centerline, up to 102' AGL/942' MSL.
Trees beginning 2536' from DER, 7' right of centerline, up to 107' AGL/947' MSL.
Trees beginning 2711' from DER, 126' left of centerline, up to 107' AGL/956' MSL.
Rwy 10L, tree 350' from DER, 394' left of centerline, 86' AGL/916' MSL.
Fence 525' from DER, 148' right of centerline, 17' AGL/864' MSL.
Trees beginning 883' from DER, 198' left of centerline, up to 90' AGL/920' MSL.
Trees beginning 1698' from DER, 368' right of centerline, up to 104' AGL/934' MSL.
Rwy 10R, pole 111' from DER, 290' right of centerline, 41' AGL/871' MSL.
MALSR 155' from DER, 4' right of centerline, 18' AGL/866' MSL.
Pole 575' from DER, 290' right of centerline, 35' AGL/865' MSL.
Trees beginning 700' from DER, 551' right centerline, up to 84' AGL/924' MSL.
Trees beginning 1077' from DER, 599' left of centerline, up to 98' AGL/928' MSL.
Trees beginning 1831' from DER, left and right of centerline, up to 93' AGL/956' MSL.
Rwy 24, trees beginning 549' from DER, 114' left of centerline, up to 68' AGL/918' MSL.
Poles beginning 830' from DER, 358' left of centerline, up to 41' AGL/893' MSL.
Trees beginning 1107' from DER, 81' right of centerline, up to 89' AGL/919' MSL.
Trees beginning 1271' from DER, 386' left of centerline, up to 104' AGL/937' MSL.
Rwy 28L, trees beginning 1690' from DER, 862' right of centerline, up to 83' AGL/923' MSL.
Trees beginning 1782' from DER, 786' left of centerline, up to 100' AGL/959' MSL.
Rwy 28R, rod on ASR 987' from DER, 516' right of centerline, 104' AGL/954' MSL.
Trees beginning 1853' from DER, 902' right of centerline, up to 100' AGL/939' MSL.
Tree 2209' from DER, 221' left of centerline, 79' AGL/919' MSL.

LAPEER, MI

DUPONT-LAPEER (D95)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3A 26APR18 (18116) (FAA)

TAKEOFF MINIMUMS:

Rwys 9, 27, NA – Environmental.

LINDEN, MI

PRICES (9G2)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 5 12DEC13 (13346) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 9, trees beginning 446' from DER, left and right of centerline, up to 100' AGL/1009' MSL.
Rwy 27, trees beginning 18' from DER, 103' left of centerline, up to 100' AGL/1019' MSL.
Trees beginning 30' from DER, 204' right of centerline, up to 100' AGL/1009' MSL.

LUDINGTON, MI

MASON COUNTY (LDM)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 6 20AUG92 (92233) (FAA)

TAKEOFF MINIMUMS:

Rwys 1, 19, 26, 300-1.

MACKINAC ISLAND, MI

MACKINAC ISLAND (MCD)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2 23AUG12 (12236) (FAA)

TAKEOFF MINIMUMS:

Rwy 8, 300-1 or std. w/min. climb of 608' per NM to 1000.

TAKEOFF OBSTACLE NOTES:

Rwy 8, trees and building beginning 69' from DER. 16' left of centerline, up to 100' AGL/841' MSL.
Trees beginning 34' from DER, 34' right of centerline, up to 100' AGL/896' MSL.
Fence 49' from DER, 295' right of centerline, 8' AGL/741' MSL.
Vehicle on road 525' from DER, 610' right of centerline, 15' AGL/774' MSL.
Rwy 26, trees beginning 8' from DER, 193' left of centerline, up to 100' AGL/829' MSL.
Vehicle on road 36' from DER, 334' left of centerline, 15' AGL/744' MSL.
Trees beginning at DER, 196' right of centerline, up to 100' AGL/829' MSL.
Fence 53' from DER, 202' right of centerline, 8' AGL/727' MSL.
Building 129' from DER, 498' right of centerline, 28' AGL/747' MSL.
Vehicle on road 354' from DER, 20' right of centerline, 15' AGL/734'MSL.

MANISTEE, MI

MANISTEE CO-BLACKER (MBL)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 7 29MAY14 (14149) (FAA)

TAKEOFF MINIMUMS:

Rwy 1, 300-1 or std. w/min. climb of 380' per NM to 900.

DEPARTURE PROCEDURE:

Rwy 1, climb heading 007° to 1400 before turning right.

TAKEOFF OBSTACLE NOTES:

Rwy 1, vehicle on road 484' from DER, 158' right of centerline, 15' AGL/632' MSL.
Building 3301' from DER, 1095' right of centerline, 33' AGL/727' MSL.
Trees beginning 1076' from DER, 127' left of centerline, up to 110' AGL/808' MSL.
Rwy 10, vehicle on road, 101' from DER, 393' left of centerline, 15' AGL/636' MSL.
Trees beginning 3326' from DER, 1146' left of centerline, 85' AGL/712' MSL.
Rwy 19, trees beginning 79' from DER, 50' left of centerline, up to 100' AGL/678 MSL.
Trees beginning 1005' from DER, 365' right of centerline, up to 85' AGL/675' MSL.
Trees 5393' from DER, 1185' left of centerline, up to 100' AGL/758' MSL.
Rwy 28, trees beginning 21' from DER, 58' left of centerline, up to 93' AGL/687' MSL.
Vehicle on road 146' from DER, 356' right of centerline, up to 15' AGL/630' MSL.
Trees beginning 2195' from DER, 57' right of centerline, up to 93' AGL/678' MSL.

EC-1, 25 FEB 2021 to 22 APR 2021

MANISTIQUE, MI

SCHOOLCRAFT COUNTY (ISQ)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 15DEC11 (11349) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 1, trees beginning 511' from DER, 54' left of centerline, up to 100' AGL/779' MSL.
Trees beginning 753' from DER, 372' right of centerline, up to 100' AGL/779' MSL.
Vehicle on road beginning 360' from DER, 587' right of centerline, up to 15' AGL/694' MSL.
Power line beginning 446' from DER, 611' right of centerline, up to 30' AGL/709' MSL.
Transmission lines beginning 4758' from DER, left and right of centerline, up to 114'AGL/803' MSL.
Rwy 10, trees beginning 92' from DER, 263' right of centerline, up to 100' AGL/769' MSL.
Trees beginning 30' from DER, 165' left of centerline, up to 100' AGL/769' MSL.
Trees beginning 1131' from DER, left and right of centerline, up to 100' AGL/769' MSL.
Rwy 19, trees beginning 50' from DER, left and right of centerline, up to 100' AGL/779' MSL.
Vehicle on road beginning abeam DER, 506' left of centerline, up to 15' AGL/694' MSL.
Aircraft tail on taxiway abeam DER, 127' right of centerline, up to 19' AGL/698' MSL.
Hangar 380' from DER, 540' right of centerline, 20' AGL/699' MSL.
Buildings beginning 474' from DER, 220' left of centerline, up to 20' AGL/699' MSL.
Vehicle on road 658' from DER, left and right of centerline, up to 15' AGL/694' MSL.
Power lines 707' from DER, left and right of centerline, up to 30' AGL/709' MSL.
Billboards and buildings beginning 744' from DER, left and right of centerline, up to 20' AGL/699' MSL.
Drive-in theater beginning 857' from DER, 510' right of centerline, up to 100' AGL/779' MSL.
Rwy 28, trees beginning 41' from DER, 376' right of centerline, up to 100' AGL/784' MSL.
Poles beginning 1174' from DER, 488' left of centerline, up to 82' AGL/761' MSL.
Trees beginning 1254' from DER, 159' left of centerline. up to 100' AGL/779' MSL.
Transmission lines beginning 4321' from DER, left and right of centerline, up to 112' AGL/796' MSL.

MARLETTE, MI

MARLETTE TOWNSHIP (77G)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG-B 15AUG19 (19227) (FAA)

TAKEOFF MINIMUMS:

Rwys 9, 27, NA – Environmental.

TAKEOFF OBSTACLE NOTES:

Rwy 1, trees beginning 21' from DER, right and left of centerline, up to 100' AGL/950' MSL.
Rising terrain beginning 112' from DER, 432' left of centerline, up to 907' MSL.
Rwy 19, trees beginning abeam DER, 149' left of centerline, up to 100' AGL/979' MSL.
Vehicles on road 882' from DER, 730' right of centerline, up to 17' AGL/906' MSL.
Building 1035' from DER, 588' right of centerline, 30' AGL/919' MSL.

MARQUETTE, MI

SAWYER INTL (SAW)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1 11OCT18 (18284) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 1, sign 15' from DER, 100' right of centerline, 3' AGL/1206' MSL.
Sign 113' from DER, 125' left of centerline, 4' AGL/1208' MSL.
Tree 4078' from DER, 1540' left of centerline, 1326' MSL.
Trees beginning 4347' from DER, 1598' left of centerline, up to 1339' MSL.
Rwy 19, lighting 9' from DER, 55' right of centerline, 2' AGL/1180' MSL.
Lighting 10' from DER, 55' left of centerline, 2' AGL/1180' MSL.

MARSHALL, MI

BROOKS FIELD (RMY)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 02MAY13 (13122) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 10, trees beginning 31' from DER, 37' right of centerline, up to 100' AGL/1012' MSL.
Trees beginning 168' from DER, 15' left of centerline, up to 100' AGL/1035' MSL.
Fence beginning 211' from DER, 457' right of centerline, up to 13' AGL/953' MSL.
Rwy 28, vehicles on roadway 535' from DER, left and right of centerline, up to 15' AGL/954' MSL.
Trees beginning 1222' from DER, 572' right of centerline, up to 100' AGL/1039' MSL.
Trees beginning 1665' from DER, 408' left of centerline, up to 100' AGL/1039' MSL.

MASON, MI

MASON JEWETT FIELD (TEW)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2A 03JUN10 (10154) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 10, trees, pole, and vehicle on road beginning 109' from DER, 57' right of centerline, up to 100' AGL/1023' MSL.
Poles and vehicles on road 276' from DER, 245' left of centerline, up to 35' AGL/944' MSL.

MENOMINEE, MI

MENOMINEE RGNL (MNM)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3A 19JUL18 (18200) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 3, tree and bushes beginning 155' from DER, 488' left of centerline, up to 634' MSL.
Trees beginning 714' from DER, 459' left of centerline, up to 641' MSL.
Trees beginning 1064' from DER, 226' right of centerline, up to 651' MSL.
Rwy 14, vehicle on road, tree, power lines, and building beginning 379' from DER, 156' right of centerline, up to 619' MSL.
Power lines, vehicle on road, and trees beginning 403' from DER, 3' left of centerline, up to 33' AGL/635' MSL.
Trees, building, and power lines beginning 879' from DER, 4' right of centerline, up to 665' MSL.
Trees and power lines beginning 1061' from DER, 24' left of centerline, up to 654' MSL.
Trees beginning 1874' from DER, 86' left of centerline, up to 687' MSL.
Buildings beginning 5170' from DER, 1006' left of centerline, up to 135' AGL/735' MSL.
Rwy 21, NAVAID 15' from DER, 59' right of centerline, 1 foot AGL/615' MSL.
Trees beginning 581' from DER, 596' left of centerline, up to 645' MSL.
Tree 944' from DER, 751' right of centerline, 648' MSL.
Trees beginning 1403' from DER, 599' left of centerline, up to 666' MSL.
Trees beginning 1456' from DER, 700' right of centerline, up to 672' MSL.
Trees beginning 2007' from DER, 497' left of centerline, up to 677' MSL.
Rwy 32, trees and building beginning 1 foot from DER, 305' left of centerline, up to 683' MSL.
Fence and utilities beginning 178' from DER, 498' right of centerline, up to 6' AGL/626' MSL.
Trees beginning 354' from DER, 276' left of centerline, up to 691' MSL.
Trees beginning 615' from DER, 8' right of centerline, up to 682' MSL.
Trees and power lines beginning 702' from DER, 11' left of centerline, up to 694' MSL.
Trees beginning 1800' from DER, 58' right of centerline, up to 695' MSL.
Trees beginning 3194' from DER, 92' left of centerline, up to 711' MSL.
Trees beginning 3544' from DER, 154' right of centerline, up to 712' MSL.

MIDLAND, MI

JACK BARSTOW (IKW)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 02JUL09 (09183) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 6, trees beginning 56' from DER, 493' right of centerline, up to 25' AGL/655' MSL.
Trees beginning 920' from DER, 47' left of centerline, up to 20' AGL/660' MSL.
Trees beginning 1144' from DER, from right to left of centerline, up to 100' AGL/754' MSL.
Pole 1495' from DER, 331' right of centerline, 37' AGL/672' MSL.
Rwy 18, trees beginning 339' from DER, 279' left of centerline, up to 100' AGL/729' MSL.
Trees beginning 358' from DER, 306' right of centerline, up to 100' AGL/724' MSL.
Rwy 24, vehicles on road beginning 225' from DER, from right to left of centerline, up to 15' AGL/634' MSL.
Trees beginning 510' from DER, 103' right of centerline, up to 100' AGL/710' MSL.
Trees beginning 787' from DER, 152' left of centerline, up to 100' AGL/709' MSL.
Rwy 36, trees beginning 105' from DER, 200' right of centerline, up to 100' AGL/744' MSL.
Trees beginning 147' from DER, 242' left of centerline, up to 100' AGL/729' MSL.

MONROE, MI

CUSTER (TTF)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 6A 24MAY18 (18144)

TAKEOFF OBSTACLE NOTES:

Rwy 21, tree 80' from DER, 229' right of centerline, 627' MSL.
Pole 242' from DER, 379' left of centerline, 25' AGL/634' MSL.
Trees beginning 385' from DER, 193' right of centerline, up to 641' MSL.
Pole, transmission lines beginning 405' from DER, 505' left of centerline, up to 647' MSL.
Tree 418' from DER, 391' left of centerline, 652' MSL.
Pole 980' from DER, 703' left of centerline, 64' AGL/673' MSL.
Pole, trees beginning 982' from DER, 217' left of centerline, up to 64' AGL/674' MSL.
Trees beginning 1811' from DER, 9' right of centerline, up to 700' MSL.
Tree 2299' from DER, 798' left of centerline, 704' MSL.
Trees beginning 2359' from DER, 536' left of centerline, up to 707' MSL.
Tree 2747' from DER, 969' right of centerline, 733' MSL.
Trees beginning 2765' from DER, 440' right of centerline, up to 736' MSL.

MOUNT PLEASANT, MI

MOUNT PLEASANT MUNI (MOP)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 5 27AUG09 (09239) (FAA)

TAKEOFF MINIMUMS:

Rwys 5, 23, NA-Environmental.

TAKEOFF OBSTACLE NOTES:

Rwy 9, trees beginning 420' from DER, 512' right of centerline, up to 86' AGL/845' MSL.
Trees beginning 420' from DER, 266' left of centerline, up to 23' AGL/836' MSL.
Rwy 27, trees beginning 1115' from DER, 39' right of centerline, up to 99' AGL/858' MSL.
Trees beginning 1025' from DER, 3' left of centerline, up to 108' AGL/867' MSL..

MUSKEGON, MI

MUSKEGON COUNTY (MKG)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 10 15JAN09 (09015) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 6, tree 1700' from DER, 600' right of centerline, 25' AGL/672' MSL.
Multiple trees beginning 1980' from DER, 300' left of centerline, up to 75' AGL/709' MSL.
Rwy 14, pole 1040' from DER, 700' left of centerline, 25' AGL/655' MSL.
Multiple poles beginning 1500' from DER, 880' right of centerline, up to 50' AGL/677' MSL.
Tree 1900' from DER, 940' left of centerline, 79' AGL/709' MSL.
Rwy 24, bush 124' from DER, 480' left of centerline, 19' AGL/630' MSL.
Tree 500' from DER, 300' right of centerline, 42' AGL/649' MSL.
Tree 1210' from DER, 450' left of centerline, 42' AGL/653' MSL.
Antenna 1220' from DER, 500' right of centerline, 43' AGL/654' MSL.
Multiple trees beginning 2200' from DER, 50' left of centerline, up to 86' AGL/697' MSL.
Rwy 32, tree 1040' from DER, 740' right of centerline, 65' AGL/659' MSL.
Tree 1190' from DER, 500' left of centerline, 65' AGL/663' MSL.
Tree 1270' from DER, 800' left of centerline, 89' AGL/690' MSL.

NEW HUDSON, MI

OAKLAND SOUTHWEST (Y47)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2A 13SEP18 (18256) (FAA)

TAKEOFF MINIMUMS:

Rwy 8, 300-2¼ or std. w/min. climb of 230' per NM to 1300.

TAKEOFF OBSTACLE NOTES:

Rwy 8, trees 27' from DER, 183' left of centerline, 100' AGL/1019' MSL.
Trees beginning 45' from DER, 32' right of centerline, up to 100' AGL/1022' MSL.
Trees beginning 124' from DER, 39' left of centerline, up to 100' AGL/1022' MSL.
Trees beginning 1207' from DER, 248' right of centerline, up to 100' AGL/1026' MSL.
Trees beginning 1420' from DER, 32' right of centerline, up to 100' AGL/1029' MSL.
Trees beginning 1846' from DER, 32' right of centerline, up to 100' AGL/1032' MSL.
Trees beginning 2216' from DER, 39' left of centerline, up to 100' AGL/1026' MSL.
Trees beginning 3706' from DER, 183' left of centerline, up to 100' AGL/1029' MSL.
Tree 4229' from DER, 687' left of centerline, 100' AGL/1032' MSL.
Rwy 26, trees 1' from DER, 32' left of centerline, 100' AGL/1013' MSL.
Trees beginning 98' from DER, 103' left of centerline, up to 100' AGL/1016' MSL.
Trees beginning 116' from DER, 39' right of centerline, up to 100' AGL/1016' MSL.
Trees 455' from DER, 40' right of centerline, up to 100' AGL/1039' MSL.
Trees beginning 931' from DER, 31' left of centerline, up to 100' AGL/1022' MSL.
Trees beginning 1976' from DER, 40' right of centerline, up to 100' AGL/1049' MSL.

NEWBERRY, MI

LUCE COUNTY (ERY)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 29JUL10 (10210) (FAA)

TAKEOFF MINIMUMS:

Rwys 4, 22, NA-Environmental.

TAKEOFF OBSTACLE NOTES:

Rwy 11, trees beginning 15' from DER, 112' right of centerline, up to 79' AGL/919' MSL.
Trees beginning 1207' from DER, 10' left of centerline, up to 119' AGL, 969' MSL.
Rwy 29, ground 1' from DER, 221' right of centerline, 0' AGL/872' MSL.
Tree 1' from DER, 431' right of centerline, 12' AGL/872' MSL.
Trees and antenna on building beginning 88' from DER, 13' left of centerline, up to 84' AGL/954' MSL.
Trees, vehicle on road, and antenna on building beginning 561' from DER, 28' right of centerline, up to 89' AGL/959' MSL.

NILES, MI

JERRY TYLER MEMORIAL (3TR)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 6 05MAY11 (11125) (FAA)

TAKEOFF MINIMUMS:

Rwy 22, NA-obstacles.

TAKEOFF OBSTACLE NOTES:

Rwy 4, vehicles on road beginning 192' from DER, crossing left to right of centerline, up to 15' AGL/754' MSL.
Trees beginning 360' from DER, 276' right of centerline, up to 100' AGL/849' MSL.
Building 410' from DER, 225' left of centerline, 30' AGL/759' MSL.
Rwy 15, trees beginning 470' from DER, 461' left of centerline, up to 100' AGL/869' MSL.
Trees beginning 568' from DER, 187' right of centerline, up to 100' AGL/869' MSL.
Rwy 33, vehicles on road beginning 198' from DER, crossing right to left of centerline, up to 15' AGL/764' MSL.
Building 705' from DER, 604' left of centerline, 30' AGL/779' MSL.

ONTONAGON, MI

ONTONAGON COUNTY-SCHUSTER FIELD (OGM)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2 31MAY12 (12152) (FAA)

TAKEOFF MINIMUMS:

Rwy 17, 300-1¾ or std. w/ a climb gradient of 390' per NM to 1000.

TAKEOFF OBSTACLE NOTES:

Rwy 35, hanger 70' from DER, 467' right of centerline up to 50' AGL/689' MSL.
Vehicle on road 225' from DER, 367' right of centerline up to 17' AGL/664' MSL.
Trees beginning abeam DER, 537' right of centerline, up to 100' AGL/756' MSL.
Trees 80' from DER, 179' left of centerline, up to 100' AGL/756' MSL.
Sailing boat 3128' from DER, on centerline, up to 100' AGL/719' MSL.
Rwy 17, trees beginning 439' from DER, 423' left of centerline up to 100' AGL/ 901' MSL.
Trees beginning 354' from DER, 243' right of centerline, up to 100' AGL /851' MSL.

OSCODA, MI

OSCODA-WURTHSMITH (OSC)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG-A 08NOV18 (18312) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 7, trees beginning 3205’ from DER, 37’ left of centerline, up to 100’ AGL/719’ MSL.
Trees beginning 3292’ from DER, 43’ right of centerline, up to 100’ AGL/719’ MSL.
Rwy 25, tree 1439’ from DER, 558’ left of centerline, 676’ MSL.
Trees beginning 1453’ from DER, 331’ left of centerline, up to 699’ MSL.
Trees beginning 2076’ from DER, 445’ right of centerline, up to 698’ MSL.
Trees beginning 2396’ from DER, 631’ left of centerline, up to 703’ MSL.
Tree 2657’ from DER, 664’ left of centerline, 708’ MSL.

OWOSSO, MI

OWOSSO COMMUNITY (RNP)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 4 31JUL08 (08213) (FAA)

TAKEOFF MINIMUMS:

Rwys 6, 18, 24, 36, NA - Environmental.

TAKEOFF OBSTACLE NOTES:

Rwy 11, bush 187' from DER, 158' right of centerline, 3' AGL/742' MSL.
Trees beginning 1136' from DER, 630' left of centerline, up to 75' AGL/814' MSL.
Trees and pole beginning 1111' from DER, 596' right of centerline, up to 90' AGL/829' MSL.
Power line with towers beginning 2029' from DER, left and right of centerline, 90' AGL/829' MSL.
Rwy 29, bush 212' from DER, 436' right of centerline, 11' AGL/741' MSL.
Vent, trees, and a building beginning 266' from DER, 46' left of centerline, up to 100' AGL/836' MSL.
Trees and a pole beginning 1184' from DER, 244' right of centerline, up to 60' AGL/815' MSL.

PELLSTON, MI

PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 4 02JUL09 (09183) (FAA)

TAKEOFF MINIMUMS:

Rwy 23, std. w/ a min. climb of 260' per NM to 1800, or 1000-2½ for climb in visual conditions.

Rwy 32, std. w/ a min. climb of 290' per NM to 1100, or 1000-2½ for climb in visual conditions.

DEPARTURE PROCEDURE:

Rwys 23, 32, for climb in visual conditions: cross Pellston Rgnl airport of Emmet County at or above 1600.

TAKEOFF OBSTACLE NOTES:

Rwy 5, vehicle on road 411' from DER, 588' left of centerline, 15' AGL/738' MSL.
Trees beginning 1070' from DER, 12' left of centerline, up to 100' AGL/838' MSL.
Railroad 810' from DER, 672' right of centerline, 23' AGL/744' MSL.
Trees beginning 1001' from DER, 288' right of centerline, up to 100' AGL/821' MSL.
Rwy 14, trees beginning 1290' from DER, 814' left of centerline, up to 100' AGL/805' MSL.
Rwy 23, vehicle on road 14' from DER, 463' left of centerline, 15' AGL/720' MSL.
Trees beginning 476' from DER, 53' left of centerline, up to 100' AGL/805' MSL.
Trees beginning 953' from DER, 240' right of centerline, up to 100' AGL/820' MSL.
Tree 2.97 NM from DER, 2771' right of centerline, 100' AGL/1297' MSL.
Rwy 32, bush 107' from DER, 309' right of centerline, 4' AGL/722' MSL.
Vehicle on road 1213' from DER, 809' right of centerline, 15' AGL/752' MSL.
Terrain 2127' from DER, 715' right of centerline, 775' MSL.
Trees beginning 4336' from DER, 315' right of centerline, up to 100' AGL/872' MSL.
Trees beginning 1932' from DER, 20' left of centerline, up to 100' AGL/996' MSL.

PLYMOUTH, MI

CANTON-PLYMOUTH-METTETAL (1D2)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

TAKEOFF MINIMUMS:

Rwys 18, 36, 300-1.

PONTIAC, MI

OAKLAND COUNTY INTL (PTK)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 6A 24MAY18 (18144) (FAA)

TAKEOFF MINIMUMS: **Rwy 18, 36,** NA - environmental.

TAKEOFF OBSTACLE NOTES:

Rwy 9R, building 868' from DER, 732' right of centerline, 36' AGL/1006' MSL.
Tree 1381' from DER, 645' left of centerline, 1009' MSL.
Tree 1554' from DER, 687' left of centerline, 1011' MSL.
Rwy 27L, vehicle on road 401' from DER, 537' left of centerline, 991' MSL.
Tree 450' from DER, 553' right of centerline, 994' MSL.
Tree 564' from DER, 587' left of centerline, 1003' MSL.
Tree 747' from DER, 614' left of centerline, 1012' MSL.
Tree 823' from DER, 588' right of centerline, 1002' MSL.
Tree 836' from DER, 628' left of centerline, 1013' MSL.
Trees beginning 854' from DER, 539' left of centerline, up to 1016' MSL.
Tree 1586' from DER, 827' left of centerline, 1024' MSL.
Tree 2200' from DER, 958' left of centerline, 1046' MSL.
Rwy 27R, tree 450' from DER, 1' right of centerline, 994' MSL.
Tree 823' from DER, 35' right of centerline, 1002' MSL.
Tree 1014' from DER, 10' right of centerline, 1003' MSL.
Tree 1024' from DER, 112' right of centerline, 1004' MSL.
Tree 1233' from DER, 19' left of centerline, 1009' MSL.
Tree 1454' from DER, 234' left of centerline, 1011' MSL.
Tree 1479' from DER, 361' left of centerline, 1014' MSL.
Tree 1619' from DER, 192' right of centerline, 1017' MSL.

PORT HURON, MI

ST. CLAIR COUNTY INTL (PHN)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 6 25AUG11 (11237) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 4, trees beginning 1196 ' from DER, 140' right of centerline, up to 115' AGL/764' MSL.
Trees and bush beginning 13' from DER, 80' left of centerline, up to 115' AGL/779' MSL.
Rwy 10, trees and building beginning 150' from DER, 2' right of centerline, up to 115' AGL/769' MSL.
Trees beginning 329' from DER, 161' left of centerline, up to 115' AGL/769' MSL.
Rwy 22, trees beginning 2376' from DER, 171' right of centerline, up to 103' AGL/738' MSL.
Trees beginning 2138' from DER, 612' left of centerline, up to 101' AGL/737' MSL.
Rwy 28, trees beginning 192' from DER, 361' right of centerline, up to 115' AGL/759' MSL.
Trees beginning 667' from DER, 112' left of centerline, up to 114' AGL/749' MSL.

RAY, MI

RAY COMMUNITY (57D)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG-A 20JUN19 (19171) (FAA)

TAKEOFF MINIMUMS:

Rwys 18, 36, NA - ATC.

TAKEOFF OBSTACLE NOTES:

Rwy 10, road 60' from DER, left to right of centerline, 15' AGL/645' MSL.
Tree 119' from DER, 181' right of centerline, 25' AGL/655' MSL.
Trees beginning 353' from DER, 204' left of centerline, up to 100' AGL/729' MSL.
Trees beginning 2067' from DER, 137' left of centerline, up to 100' AGL/729' MSL.
Rwy 28, trees beginning 158' from DER, 232' right of centerline, up to 100' AGL/729' MSL.
Trees 184' from DER, 131' left of centerline, up to 100' AGL/729' MSL.
Trees 920' from DER, 233' right of centerline, up to 100' AGL/729' MSL.

ROGERS CITY, MI

PRESQUE ISLE COUNTY (PZQ)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2 03MAY12 (12124) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 9, trees beginning 348' from DER, 378' left of centerline, up to 100' AGL/759' MSL.
Pole 730' from DER, 620' right of centerline, 43' AGL/723' MSL.
Trees beginning 899' from DER, 708' right of centerline, up to 100' AGL/789' MSL.
Tower 1021' from DER, 68' right of centerline, 44' AGL/716' MSL.
Rwy 27, trees beginning 940' from DER, 289' left of centerline, up to 100' AGL/799' MSL.
Trees beginning 977' from DER, 11' right of centerline, up to 56' AGL/739' MSL.

ROMEO, MI

ROMEO STATE (D98)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 5 02MAY13 (13122) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 18, pole 239' from DER, 395' right of centerline, 30' AGL/760' MSL.
Trees along and vehicles on road 342' from DER, left and right of centerline, up to 15' AGL/741' MSL.
Line of trees beginning 401' from DER, 498' right of centerline, up to 65' AGL/770' MSL.
Trees beginning 420' from DER, 228' left of centerline, up to 75' AGL/793' MSL.
Pole 500' from DER, 337' left of centerline, 45' AGL/759' MSL.
Rwy 36, pole on building 118' from DER, 444' left of centerline, 37' AGL/772' MSL.
Buildings beginning 228' from DER, 322' right of centerline, up to 25' AGL/754' MSL.
Building 303' from DER, 454' left of centerline, 23' AGL/758' MSL.
Vehicles on road beginning 410' from DER, 159' left of centerline, up to 15' AGL/760' MSL.
Trees beginning 639' from DER, 654' left of centerline, up to 70' AGL/809' MSL.
Catenary beginning 774' from DER, left and right of centerline, up to 43' AGL/782' MSL.
Poles 887' from DER, 170' right of centerline, up to 35' AGL/770' MSL.
Trees beginning 2747' from DER, left and right of centerline, up to 100' AGL/841' MSL.

SAGINAW, MI

MBS INTL (MBS)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1 01FEB18 (18032) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 5, vegetation 85' from DER, 269' right of centerline, 654' MSL.
Rwy 23, transmission line, pole beginning 1259' from DER, 785' left of centerline, up to 29' AGL/698' MSL.
Tree 2169' from DER, 1071' right of centerline, 725' MSL.
Rwy 32, tree 1447' from DER, 706' left of centerline, 734' MSL.
Tree 3628' from DER, 650' left of centerline, 767' MSL.

SAGINAW, MI (CON'T)

SAGINAW COUNTY H W BROWNE (HYX)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 9 07DEC17 (17341) (FAA)

DEPARTURE PROCEDURE:

Rwy 5, climb heading 052° to 1900 before turning left.
Rwy 10, climb heading 097° to 1600 before turning left.
Rwy 23, climb heading 232° to 1300 before proceeding on course.
Rwy 28, climb heading 277° to 1300 before proceeding on course.

TAKEOFF OBSTACLE NOTES:

Rwy 5, lighting 10' from DER, 20' right of centerline, 2' AGL/600' MSL.
Traverse way 18' from DER, 349' left of centerline,606' MSL.
Antenna, tree, pole, beginning 285' from DER, 173' right of centerline, up to 46' AGL/642' MSL.
Traverse way 345' from DER, 17' left of centerline, 607' MSL.
Tree 983' from DER, 365' right of centerline, 657' MSL.
Rwy 10, lighting 6' from DER, 9' right of centerline, 2' AGL/599' MSL.
Lighting 6' from DER, 9' left of centerline, 2' AGL/599' MSL.
Transmission line 1037' from DER, 641' left of centerline, 34' AGL/628' MSL.
Transmission line 1261' from DER, 632' left of centerline, 38' AGL/632' MSL.
Rwy 23, lighting 10' from DER, 19' right of centerline, 3' AGL/603' MSL.
Tree, traverse way beginning 54' from DER, 162' left of centerline, up to 652' MSL.
Tree 959' from DER, 414' right of centerline, 664' MSL.
Rwy 28, lighting 9' from DER, 30' left of centerline, 3' AGL/601' MSL.
Lighting 10' from DER, 30' right of centerline, 3' AGL/601' MSL.
Transmission line 3519' from DER, 239' right of centerline, 92' AGL/691' MSL.

ST IGNACE

MACKINAC COUNTY (83D)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 05MAY11 (11125) (FAA)

TAKEOFF MINIMUMS:

Rwy 25, 300-1 or std. w/min. climb of 430' per NM to 900.

TAKEOFF OBSTACLE NOTES:

Rwy 7, vehicles on road beginning 10' from DER, 322' right of centerline, up to 15' AGL/627' MSL.
Trees beginning 70' from DER, 363' right of centerline, up to 85' AGL/686' MSL.
Poles beginning 117' from DER, 381' left of centerline, up to 54' AGL/629' MSL.
Vehicles on road beginning 310' from DER, left and right of centerline, up to 15' AGL/631' MSL.
Poles beginning 602' from DER, 328' right of centerline, up to 54' AGL/644' MSL.
Ships beginning 3099' from DER, left and right of centerline, up to 155' AGL/735' MSL.
Rwy 25, trees beginning 20' from DER, left and right of centerline, up to 85' AGL/809' MSL.
Vehicles on road 366' from DER, left and right of centerline, up to 17' AGL/663' MSL.
Poles beginning 919' from DER, left and right of centerline, up to 62' AGL/682' MSL.

SAULT STE MARIE, MI

CHIPPEWA COUNTY INTL (CIU)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG-A 05MAR15 (15064) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 10, poles beginning 156' from DER, 518' left and 439' right of centerline up to 45' AGL/839' MSL.
Buildings beginning 379' from DER, 532' right of centerline, up to 55' AGL/848' MSL.
Building 416' from DER, 503' left of centerline, 31' AGL/823' MSL.
Trees beginning 348' from DER, 456' right of centerline, up to 100' AGL/899' MSL.
Tank 1475' from DER, 75' right of centerline, 49' AGL/842' MSL.
Rwy 16, trees beginning 3645' from DER, extending from 1018' right of centerline to 1221' left of centerline, up to 100' AGL/899' MSL.
Rwy 28, vertical structure, 11' from DER, 4' right of centerline, 2' AGL/794' MSL.
Natural high point, 33' from DER, 355' left of centerline, 0' AGL/793' MSL.
Vehicle on road, 412' from DER, 510' left of centerline, up to 15' AGL/804' MSL.
Trees beginning 520' from DER, extending from 581' left of centerline to 827' right of centerline, up to 100' AGL/879' MSL.

SAULT STE MARIE MUNI/SANDERSON FIELD (ANJ)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 25AUG11 (11237) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 14, trees, poles, and road beginning 25' from DER, 56' left of centerline, up to 54' AGL/763' MSL.
Trees and poles beginning 5' from DER, 49' right of centerline, up to 65' AGL/774' MSL.
Rwy 32, tree 200' from DER, 330' left of centerline, 24' AGL/723' MSL.
Trees beginning 91' from DER, 300' left of centerline, up to 24' AGL/723' MSL.

SELFRIDGE ANGB (KMTC)

MT. CLEMENS, MI

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3A, 29MAY14 (14149)

TAKEOFF MINIMUMS:

Rwy 1, std.

Rwy 19, std. w/min. climb of 234' per NM to 1500.

TAKEOFF OBSTACLE NOTES:

Rwy 19, Numerous trees beginning 1872' from DER, 269' left of centerline, up to 100' AGL/693' MSL.
Numerous trees beginning 3007' from DER, 57' right of centerline, up to 100' AGL/704' MSL.
Rwy 1, Numerous trees beginning 2290' from DER, 800' left of centerline, up to 100' AGL/689' MSL.
Numerous trees beginning 2308' from DER, 539' right of centerline, up to 100' AGL/683' MSL.

SOUTH HAVEN, MI

SOUTH HAVEN AREA RGNL (LWA)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 4 27JUN13 (13178) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 5, trees beginning 1440' from DER, 94' left of centerline, up to 93' AGL/773' MSL.
Poles beginning 1272' from DER, 122' right of centerline, up to 43' AGL/713' MSL.
Trees beginning 1812' from DER, 137' right of centerline, up to 81' AGL/771' MSL.
Rwy 23, pole 520' from DER, 582' left of centerline, 53' AGL/703' MSL.
Building 185' from DER, 334' left of centerline, 20' AGL/670' MSL.
Trees beginning 436' from DER, 428' left of centerline, up to 81' AGL/731' MSL.
Trees beginning 1172' from DER, 133' right of centerline, up to 89' AGL/739' MSL.

SPARTA, MI

PAUL C MILLER-SPARTA (8D4)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2 06MAY10 (10126) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 7, multiple trees beginning 564' from DER, 105' right of centerline, up to 97' AGL/827' MSL.
Tree 782' from DER, 379' left of centerline, 47' AGL/784' MSL.
Rwy 25, multiple trees beginning 507' from DER, 47' right of centerline, up to 81' AGL/841' MSL.
Tree 117' from DER, 218' left of centerline, 47' AGL/817' MSL.
Tree 656' from DER, 464' left of centerline, 67' AGL/822' MSL.

STURGIS, MI

KIRSCH MUNI (IRS)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 3A 26JUN14 (14177) (FAA)

TAKEOFF MINIMUMS:

Rwy 6, 300-2 or std. w/min. climb of 243' per NM to 1200.

DEPARTURE PROCEDURE:

Rwy 18, climb heading 184° to 1400 before turning left.

TAKEOFF OBSTACLE NOTES:

Rwy 6, trees beginning 1476' from DER, 137' left of centerline, up to 60' AGL/1102' MSL.
Trees beginning 1945' from DER, 155' right of centerline, up to 60' AGL/984' MSL.
Obstruction light on pole 1120' from DER, 401' right of centerline, 50' AGL/957' MSL.
Obstruction light on pole 1193' from DER, 236' right of centerline, 50' AGL/957' MSL.
Vehicle on road 504' from DER, 289' right of centerline, up to 15' AGL/953' MSL.
Rwy 18, trees beginning 1687' from DER, 149' right of centerline, up to 60' AGL/971' MSL.
Pole 1495' from DER, 842' left of centerline, 70' AGL/979' MSL.
Rwy 24, vehicles on road beginning 81' from DER, 74' right of centerline, up to 15' AGL/926' MSL.
Trees beginning 123' from DER, 136' right of centerline, up to 13' AGL/926' MSL.
Trees beginning 798' from DER, 251' right of centerline, up to 78' AGL/991' MSL.
Trees beginning 1981' from DER, 112' left of centerline, up to 71' AGL/984' MSL.
Transmission line tower with power lines, 915' from DER, 291' right of centerline, 29' AGL/938' MSL.
Rwy 36, trees beginning 99' from DER, left and right of centerline, up to 60' AGL/1014' MSL.

THREE RIVERS, MI

THREE RIVERS MUNI DR. HAINES (HAI)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 15DEC11 (11349) (FAA)

TAKEOFF OBSTACLE NOTES:

Rwy 5, vehicles on road beginning 1' from DER, 221' left of centerline, up to 15' AGL/839' MSL.
Trees beginning 1' from DER, left and right of centerline, up to 100' AGL/929' MSL.
Airplane on tarmac 2' from DER, 394' right of centerline, 40' AGL/864' MSL.
Building 1094' from DER, 537' right of centerline, 25' AGL/849' MSL.
Rwy 9, vehicles on road 484' from DER, 624' left of centerline, up to 15' AGL/839' MSL.
Trees beginning 104' from DER, left and right of centerline, up to 100' AGL/934' MSL.
Buildings beginning 1258' from DER, left and right of centerline, up to 25' AGL/859' MSL.
Rwy 23, rising terrain beginning 25' from DER, 497' left of centerline, 826' MSL.
Vehicles on roads beginning 258' from DER, right and left of centerline, up to 15' AGL/844' MSL.
Trees beginning 128' from DER, 125' right of centerline, up to 100' AGL/924' MSL.
Buildings beginning 256' from DER, 144' right of centerline, up to 25' AGL/849' MSL.
Rwy 27, vehicles on road 369' from DER, 595' right of centerline, up to 15' AGL/834' MSL.
Building 892' from DER, 678' right of centerline, 25' AGL/844' MSL.
Trees beginning 544' from DER, left and right of centerline, up to 100' AGL/924' MSL.

TRAVERSE CITY, MI

CHERRY CAPITAL (TVC)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 12 07DEC17 (17341) (FAA)

TAKEOFF MINIMUMS:

Rwy 10, 400-3 w/min. climb of 220' per NM to 1200 or std. w/min. climb of 280' per NM to 1100, or 1300-3 for VCOA.
Rwy 18, 400-2¾ w/min. climb of 205' per NM to 1400 or std. w/min. climb of 222' per NM to 1100, or alternatively, with std. takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 2000' prior to DER, or 1300-3 for VCOA.
Rwy 28, std. w/ min. climb of 340' per NM to 2000, or 1300-3 for VCOA.
Rwy 36, 400-2½ or std. w/ min. climb of 203' per NM to 1000 or alternatively, with std. takeoff minimums and normal 200' per NM climb gradient, takeoff must occur no later than 1200' prior to DER.

DEPARTURE PROCEDURE:

Rwy 10, climb heading 099° to 1100' before turning right.
Rwy 18, climb heading 185° to 1100' before turning.
Rwy 36, climb heading 005° to 1300' before turning left.

VCOA:

Obtain ATC approval for VCOA when requesting IFR clearance. Climb in visual conditions to cross Cherry Capital Airport at or above 1800 before proceeding on course.

TAKEOFF OBSTACLE NOTES:

Rwy 10, tree 1284' from DER, 739' left of centerline, 662' MSL.
Trees beginning 1524' from DER, 821' left of centerline, up to 663' MSL.
Trees beginning 1822' from DER, 916' right of centerline, up to 669' MSL.
Tree 2242' from DER, 963' right of centerline, 671' MSL.
Trees beginning 2341' from DER, 941' right of centerline, up to 672' MSL.
Tree 2570' from DER, 1169' right of centerline, 679' MSL.
Tree 2996' from DER, 1213' right of centerline, 694' MSL.
Trees beginning 3091' from DER, 1241' right of centerline, up to 700' MSL.
Tree 3773' from DER, 1270' right of centerline, 705' MSL.
Trees beginning 1.3 NM from DER, 2444' right of centerline, up to 822' MSL.
Trees beginning 1.4 from DER, 1356' right of centerline, up to 922' MSL.
Trees beginning 1.5 NM from DER, 1795' right of centerline, up to 930' MSL.
Tree 2.4 NM from DER, 3984' right of centerline, 981' MSL.
Tree 2.5 NM from DER, 3987' right of centerline, 1007' MSL.
Rwy 18, fence, building beginning 228' from DER, 231' left of centerline, up to 636' MSL.
Transmission line 856' from DER, 695' right of centerline, 34' AGL/660' MSL.
Transmission lines beginning 859' from DER, 372' right of centerline, up to 38' AGL/664' MSL.
Transmission line 966' from DER, 654' left of centerline, 34' AGL/655' MSL.
Transmission line beginning 1086' from DER, 414' right of centerline, up to 41' AGL/667' MSL.
Tree 1930' from DER, 410' right of centerline, 677' MSL.
Transmission lines, trees beginning 1.8 NM from DER, 2679' left of centerline, up to 942' MSL.
Trees beginning 2 NM from DER, 3609' left of centerline, up to 951' MSL.
Transmission line 2.2 NM from DER, 2697' left of centerline, 122' AGL/980' MSL.
Rwy 28, poles, building beginning 963' from DER, 584' right of centerline, up to 28' AGL/651' MSL.
Transmission line 1150' from DER, 576' right of centerline, 30' AGL/654' MSL.
Transmission line 1160' from DER, 633' right of centerline, 32' AGL/656' MSL.
Pole, transmission line beginning 1162' from DER, 726' left of centerline, up to 663' MSL.
Tree 1181' from DER, 755' left of centerline, 688' MSL.
Tree, transmission line beginning 1226' from DER, 734' left of centerline, up to 695' MSL.
Transmission line beginning 1251' from DER, 625' right of centerline, up to 35' AGL/658' MSL.
Trees beginning 1325' from DER, 763' left of centerline, up to 78' AGL/703' MSL.
Trees, transmission line beginning 1421' from DER, 7' left of centerline, up to 80' AGL/705' MSL.
Tree 1456' from DER, 611' right of centerline, 675' MSL.
Trees beginning 1495' from DER, 604' right of centerline, up to 694' MSL.

CON'T

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TRAVERSE CITY, MI (CON'T)

CHERRY CAPITAL (TVC) (CON'T)

Rwy 28 (CON'T), trees beginning 1664' from DER, 617' right of centerline, up to 699' MSL.
Trees beginning 1708' from DER, 603' right of centerline, up to 701' MSL.
Trees beginning 2275' from DER, 3' right of centerline, up to 708' MSL.
Trees beginning 2960' from DER, 82' left of centerline, up to 80' AGL/706' MSL.
Trees beginning 3033' from DER, 69' left of centerline, up to 707' MSL.
Tree 3596' from DER, 278' left of centerline, 88' AGL/714' MSL.
Rwy 36, poles, trees, transmission line beginning 734' from DER, 62' left of centerline, up to 37' AGL/655' MSL.
Trees, buildings, transmission line, sign beginning 803' from DER, 247' right of centerline, up to 657' MSL.
Trees, pole, transmission line beginning 936' from DER, 107' right of centerline, up to 664' MSL.
Trees beginning 974' from DER, 488' right of centerline, up to 684' MSL.
Trees, transmission line beginning 1028' from DER, 16' right of centerline, up to 685' MSL.
Trees beginning 1234' from DER, 34' left of centerline, up to 671' MSL.
Trees beginning 1322' from DER, 91' left of centerline, up to 673' MSL.
Trees beginning 1350' from DER, 12' left of centerline, up to 682' MSL.
Trees beginning 1405' from DER, 115' right of centerline, up to 688' MSL.
Trees beginning 1420' from DER, 71' right of centerline, up to 689' MSL.
Trees beginning 1460' from DER, 120' left of centerline, up to 685' MSL.
Trees beginning 1511' from DER, 355' right of centerline, up to 690' MSL.
Trees beginning 1514' from DER, 52' right of centerline, up to 691' MSL.
Trees, transmission line, beginning 1517' from DER, 23' left of centerline, up to 692' MSL.
Trees beginning 1754' from DER, 87' right of centerline, up to 704' MSL.
Trees beginning 1809' from DER, 7' right of centerline, up to 706' MSL.
Trees, transmission line beginning 1866' from DER, 59' left of centerline, up to 693' MSL.
Trees, transmission line beginning 2246' from DER, 141' left of centerline, up to 695' MSL.
Tree 2407' from DER, 310' left of centerline, 696' MSL.
Trees beginning 2425' from DER, 48' left of centerline, up to 697' MSL.
Trees beginning 2956' from DER, 102' left of centerline, up to 714' MSL.
Trees beginning 1.5 NM from DER, 2547' right of centerline, up to 859' MSL.
Tree 1.6 NM from DER, 2939' right of centerline, 862' MSL.
Trees beginning 2 NM from DER, 1898' right of centerline, up to 937' MSL.

TROY, MI

OAKLAND/TROY (VLL)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 4A 06FEB14 (14037) (FAA)

TAKEOFF MINIMUMS:
Rwy 27, std. w/min. climb of 476' per NM to 1500.

DEPARTURE PROCEDURE:
Rwy 9, climb heading 096° to 1400 before turning right.
Rwy 27, climb heading 276° to 1500 before turning left.

TAKEOFF OBSTACLE NOTES:
Rwy 9, building 78' from DER, 370' left of centerline, 30' AGL/729' MSL.
Buildings and air con on building beginning 314' from DER, 64' right of centerline, up to 47' AGL/745' MSL.
Trees beginning 1495' from DER, left and right of centerline, up to 100' AGL/799' MSL.
Rwy 27, trees beginning 21' from DER, 8' right of centerline, up to 103' AGL//843' MSL.
Buildings beginning 1422' from DER, 19' right of centerline, up to 59' AGL/799' MSL.
Vehicles on road beginning 3' from DER, 41' left of centerline, up to 17' AGL/746' MSL.
Trees beginning 176' from DER, 20' left of centerline, up to 105' AGL/845' MSL.
Buildings beginning 72' from DER, 468' left of centerline, up to 158' AGL/784' MSL.
Poles beginning 426' from DER, 11' right of centerline, up to 111' AGL/851' MSL.
Poles beginning 146' from DER, 19' left of centerline, up to 91' AGL/831' MSL.
Railroad 1682' from DER, 428' left of centerline, up to 30' AGL/770' MSL.
Power line with catenary balls, 1888' from DER, left and right of centerline, up to 80' AGL/820' MSL.
Tower 2456' from DER, 867' right of centerline, up to 132' AGL/872' MSL.
Buildings beginning 1.08 NM from DER, 3' left of centerline, up to 178' AGL/940' MSL.

WEST BRANCH, MI

WEST BRANCH COMMUNITY (Y31)

TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES
AMDT 3 10MAR11 (11069) (FAA)

TAKEOFF MINIMUMS:
Rwy 27, std. w/min. climb of 313' per NM to 1600 or 1000-2½ for climb in visual conditions.

DEPARTURE PROCEDURE:
Rwy 27, for climb in visual conditions cross West Branch Community Airport at or above 1700 before proceeding on course.

TAKEOFF OBSTACLE NOTES:
Rwy 27, trees beginning 42' from DER, 7' right of centerline, up to 100' AGL/ 984' MSL.
Trees beginning 538' from DER, 194' left of centerline, up to 100' AGL/ 1094' MSL.
Rwy 9, trees beginning 24' from DER, 181' left of centerline, up to 100' AGL/959' MSL.
Trees beginning 30' from DER, 208' right of centerline, up to 100' AGL/ 959' MSL.

INSTRUMENT APPROACH PROCEDURE CHARTS

IFR ALTERNATE AIRPORT MINIMUMS

Standard alternate minimums for non-precision approaches and approaches with vertical guidance [NDB, VOR, LOC, TACAN, LDA, SDF, VOR/DME, ASR, RNAV (GPS) or RNAV (RNP)] are 800-2. Standard alternate minimums for precision approaches (ILS, PAR, or GLS) are 600-2. Airports within this geographical area that require alternate minimums other than standard or alternate minimums with restrictions are listed below. NA - means alternate minimums are not authorized due to unmonitored facility, absence of weather reporting service, or lack of adequate navigation coverage. Civil pilots see FAR 91. IFR Alternate Minimums: Ceiling and Visibility Minimums not applicable to USA/USN/USAF. Pilots must review the IFR Alternate Minimums Notes for alternate airfield suitability.

NAME — ALTERNATE MINIMUMS

ADRIAN, MI
LENAWEE
COUNTY (ADG)……..……..**RNAV (GPS) Rwy 5**
RNAV (GPS) Rwy 23
NA when local weather not available.

ALMA, MI
GRATIOT
COMMUNITY (AMN)……..…...**RNAV (GPS) Rwy 9**
RNAV (GPS) Rwy 27
NA when local weather not available.

ALPENA, MI
ALPENA COUNTY
RGNL (APN)……..…**ILS or LOC Rwy 1[1]**
RNAV (GPS) Rwy 1[2]
[1]NA when control tower closed.
[2]NA when local weather not available.

ANN ARBOR, MI
ANN ARBOR
MUNI (ARB)……..…..**RNAV (GPS) Rwy 6**
RNAV (GPS) Rwy 24
VOR Rwy 6
VOR Rwy 24
NA when local weather not available.

BAD AXE, MI
HURON COUNTY
MEMORIAL (BAX)……...……..**RNAV (GPS) Rwy 4**
RNAV (GPS) Rwy 17
RNAV (GPS) Rwy 22
RNAV (GPS) Rwy 35
NA when local weather not available.

BATTLE CREEK, MI
BATTLE CREEK EXECUTIVE AT KELLOGG
FIELD (BTL)…….....**ILS or LOC Rwy 23R[1]**
RNAV (GPS) Rwy 5L
RNAV (GPS) Rwy 23R
NA when local weather not available.
[1]NA when control tower closed.

NAME — ALTERNATE MINIMUMS

BEAVER ISLAND, MI
BEAVER
ISLAND (SJX)……**RNAV (GPS) Rwy 27**
NA when local weather not available.

BELLAIRE, MI
ANTRIM
COUNTY (ACB)……..**RNAV (GPS) Rwy 2**
NA when local weather not available.
Category D, 900-2¾.

BENTON HARBOR, MI
SOUTHWEST MICHIGAN
RGNL (BEH)……..**RNAV (GPS) Rwy 10**
VOR Rwy 28
Category D, 800-2¼.

BIG RAPIDS, MI
ROBEN-HOOD (RQB)……..…**RNAV (GPS) Rwy 27**
NA when local weather not available.
Category D, 900-2¾.

CADILLAC, MI
WEXFORD
COUNTY (CAD)……...……...**RNAV (GPS) Rwy 7**
RNAV (GPS) Rwy 25
NA when local weather not available.

CHARLEVOIX, MI
CHARLEVOIX
MUNI (CVX)……..……..**RNAV (GPS) Rwy 9**
NA when local weather not available.

CHEBOYGAN, MI
CHEBOYGAN
COUNTY (SLH)……...…....**RNAV (GPS) Rwy 10**
RNAV (GPS) Rwy 28
VOR Rwy 10
NA when local weather not available.

NAME ALTERNATE MINIMUMS

COLDWATER, MI
BRANCH COUNTY
MEMORIAL (OEB)…….....**RNAV (GPS) Rwy 7**
RNAV (GPS) Rwy 25
VOR Rwy 7
VOR/DME Rwy 25
NA when local weather not available.

DETROIT, MI
COLEMAN A YOUNG
MUNI (DET)…….….....**ILS or LOC Rwy 15[1]**
ILS or LOC Rwy 33[1]
RNAV (GPS) Rwy 15[2]
RNAV (GPS) Rwy 33[2]
[1]LOC, Category D, 900-2¾.
[2]Category D, 900-2¾.

WILLOW
RUN (YIP)…….....….**ILS or LOC Rwy 5R[1]**
ILS or LOC Rwy 23L[2]
RNAV (GPS) Rwy 5L[34]
RNAV (GPS) Rwy 5R[4]
RNAV (GPS) Rwy 9[34]
RNAV (GPS) Rwy 23L[4]
VOR-A[4]
[1]ILS Category D, 700-2¼; LOC, Category D, 800-2¼.
[2]ILS, Category D, 700-2¼.
[3]NA when local weather not available.
[4]Category D, 800-2¼.

DETROIT/GROSSE ILE, MI
GROSSE ILE
MUNI (ONZ)…….....**NDB Rwy 4[1]**
RNAV (GPS) Rwy 4[2]
RNAV (GPS) Rwy 22[2]
VOR-A[2]
NA when local weather not available.
[1]Categories A, B, 1000-2; Category C, 1000-2¾; Category D, 1000-3.
[2]Categories A, B, 900-2; Category C, 900-2½; Category D, 900-2¾.

ESCANABA, MI
DELTA COUNTY (ESC)……....**ILS or LOC Rwy 9[13]**
LOC/DME BC Rwy 27[2]
RNAV (GPS) Rwy 1[23]
RNAV (GPS) Rwy 9[2]
RNAV (GPS) Rwy 27[2]
VOR Rwy 1[23]
[1]ILS, Category C, 700-2; Category D, 900-2¾. LOC, Category D, 900-2¾.
[2]Category D, 900-2¾.
[3]NA when local weather not available.

NAME ALTERNATE MINIMUMS

FLINT, MI
BISHOP
INTL (FNT)…….....….....…**ILS or LOC Rwy 9[12]**
ILS or LOC Rwy 27[12]
RNAV (GPS) Rwy 9[3]
RNAV (GPS) Rwy 27[3]
RNAV (GPS) Rwy 36[3]
VOR Rwy 18[3]
VOR Rwy 36[3]
[1]NA when control tower closed.
[2]LOC, Category D, 800-2¼.
[3]Category D, 800-2¼.

FRANKFORT, MI
FRANKFORT DOW MEMORIAL
FIELD (FKS)……..…**RNAV (GPS) Rwy 15**
RNAV (GPS) Rwy 33
NA when local weather not available.
Category C, 900-2¾.

FREMONT, MI
FREMONT
MUNI (FFX)…….....**RNAV (GPS) Rwy 1**
RNAV (GPS) Rwy 19
NA when local weather not available.

GAYLORD, MI
GAYLORD RGNL (GLR)…….**RNAV (GPS) Rwy 27**
VOR Rwy 27
Category D, 800-2½.
NA when local weather not available.

GRAND RAPIDS, MI
GERALD R FORD
INTL (GRR)……..…**ILS or LOC Rwy 26L[1]**
ILS or LOC Rwy 35[1]
RADAR-1[1]
RNAV (GPS) Rwy 8L[2]
RNAV (GPS) Rwy 17[2]
VOR Rwy 17[2]
[1]NA when control tower closed.
[2]NA when local weather not available.

GRAYLING, MI
GRAYLING AAF (GOV)…....…**RNAV (GPS) Rwy 14**
NA when local weather not available.

HANCOCK, MI
HOUGHTON COUNTY
MEML (CMX)…….....….**ILS or LOC Rwy 31[1]**
LOC BC Rwy 13[3]
RNAV (GPS) Rwy 7[23]
RNAV (GPS) Rwy 13[24]
RNAV (GPS) Rwy 25[24]
VOR Rwy 25[23]
[1]LOC, Category D, 800-2¼.
[2]NA when local weather not available.
[3]Category D, 800-2¼.
[4]Category D, 900-2½.

NAME ALTERNATE MINIMUMS

HARBOR SPRINGS, MI
HARBOR
SPRINGS (MGN)……..……..**RNAV (GPS) Rwy 10**
RNAV (GPS) Rwy 28
NA when local weather not available.
Category B, 900-2.

HOLLAND, MI
WEST MICHIGAN
RGNL (BIV)……..……..**RNAV (GPS) Rwy 8**
RNAV (GPS) Rwy 26
NA when local weather not available.

HOUGHTON LAKE, MI
ROSCOMMON COUNTY-BLODGETT
MEMORIAL (HTL)……..**RNAV (GPS) Rwy 9**
RNAV (GPS) Rwy 27
NA when local weather not available.

IRON MOUNTAIN-KINGSFORD, MI
FORD (IMT)……**RNAV (GPS) Rwy 1**
RNAV (GPS) Rwy 19
VOR Rwy 31
NA when local weather not available.

IRONWOOD, MI
GOGEBIC-IRON
COUNTY (IWD)……..**RNAV (GPS) Rwy 9**
RNAV (GPS) Rwy 27
VOR Rwy 9
NA when local weather not available.
Categories A, B, 900-2; Category C, 900-2½;
Category D, 1000-3.

JACKSON, MI
JACKSON COUNTY-REYNOLDS
FIELD (JXN)……..……..**ILS or LOC Rwy 25[1]**
RNAV (GPS) Rwy 7
NA when local weather not available.
[1]NA when tower closed.

KALAMAZOO, MI
KALAMAZOO/BATTLE CREEK
INTL (AZO)……..…**ILS or LOC Rwy 35[13]**
RADAR-1[1]
RNAV (GPS) Rwy 17[2]
[1]NA when control tower closed.
[2]NA when local weather not available.
[3]Category C, D, 700-2.

NAME ALTERNATE MINIMUMS

LANSING, MI
CAPITAL REGION
INTL (LAN)……..**ILS or LOC Rwy 10R[1]**
ILS or LOC Rwy 28L[2]
RNAV (GPS) Rwy 6[3]
RNAV (GPS) Rwy 10R[3]
RNAV (GPS) Rwy 24[3]
RNAV (GPS) Rwy 28L[3]
[1]ILS, Category C, 800-2; Category D, 900-3;
LOC, Category D, 900-3.
[2]LOC, Category D, 900-3.
[3]Category D, 900-3.

LAPEER, MI
DUPONT-LAPEER (D95)…....**RNAV (GPS) Rwy 18**
RNAV (GPS) Rwy 36
NA when local weather not available.

LUDINGTON, MI
MASON COUNTY (LDM)……**RNAV (GPS) Rwy 26**
NA when local weather not available.

MACKINAC ISLAND, MI
MACKINAC
ISLAND (MCD)……..…**RNAV (GPS) Rwy 8**
RNAV (GPS) Rwy 26
VOR/DME-A
NA when local weather not available.

MANISTEE, MI
MANISTEE CO-
BLACKER (MBL)……....**RNAV (GPS) Rwy 10**
RNAV (GPS) Rwy 28
VOR Rwy 10
NA when local weather not available
Category D, 800-2¼.

MANISTIQUE, MI
SCHOOLCRAFT
COUNTY (ISQ)……....**RNAV (GPS) Rwy 10**
RNAV (GPS) Rwy 28
NA when local weather not available.

MARSHALL, MI
BROOKS
FIELD (RMY)….....……**RNAV (GPS) Rwy 28**
VOR/DME-A
NA when local weather not available.

MASON, MI
MASON JEWETT
FIELD (TEW)……..**RNAV (GPS) Rwy 10**
RNAV (GPS) Rwy 28
NA when local weather not available.

NAME ALTERNATE MINIMUMS

MENOMINEE, MI
MENOMINEE
RGNL (MNM)……..**RNAV (GPS) Rwy 3**
RNAV (GPS) Rwy 21
RNAV (GPS) Rwy 32
VOR-A
NA when local weather not available.
Category D, 800-2½.

MIDLAND, MI
JACK BARSTOW (IKW)……..**RNAV (GPS) Rwy 6**
RNAV (GPS) Rwy 24
VOR-A
NA when local weather not available.

MONROE, MI
CUSTER (TTF)……..**RNAV (GPS) Rwy 3**
RNAV (GPS) Rwy 21
NA when local weather not available.

MOUNT PLEASANT, MI
MOUNT PLEASANT
MUNI (MOP)……..**RNAV (GPS) Rwy 9**
RNAV (GPS) Rwy 27
VOR Rwy 27
NA when local weather not available.

MUSKEGON, MI
MUSKEGON
COUNTY (MKG)……**ILS or LOC Rwy 24[1]**
ILS or LOC Rwy 32[1]
RNAV (GPS) Rwy 6[2]
RNAV (GPS) Rwy 14[2]
RNAV (GPS) Rwy 24[2]
RNAV (GPS) Rwy 32[2]
[1]NA when control tower closed.
[2]NA when local weather not available.

NEWBERRY, MI
LUCE
COUNTY (ERY)……..**RNAV (GPS) Rwy 11**
RNAV (GPS) Rwy 29
NA when local weather not available.

OWOSSO, MI
OWOSSO
COMMUNITY (RNP)……..**RNAV (GPS) Rwy 29**
VOR/DME Rwy 29
NA when local weather not available.

NAME ALTERNATE MINIMUMS

PELLSTON, MI
PELLSTON RGNL AIRPORT OF
EMMET COUNTY (PLN)……**ILS or LOC Rwy 32[1]**
RNAV (GPS) Rwy 5[2]
RNAV (GPS) Rwy 23[3]
RNAV (GPS) Rwy 32[3]
VOR Rwy 23[3]
NA when local weather not available.
[1]ILS, Category D, 700-2¼. LOC, Category D, 800-2¼.
[2]Categories A,B, 900-2; Category C, 900-2½; Category D, 900-2¾.
[3]Category D, 800-2¼.

PONTIAC, MI
OAKLAND COUNTY
INTL (PTK)……..**ILS or LOC Rwy 9R[1]**
LOC BC Rwy 27L[1]
RNAV (GPS) Rwy 9R
RNAV (GPS) Rwy 27L
NA when local weather not available.
[1]NA when tower closed.

PORT HURON, MI
ST CLAIR COUNTY
INTL (PHN)……..**RNAV (GPS) Rwy 4**
RNAV (GPS) Rwy 22
NA when local weather not available.

SAGINAW, MI
MBS INTL (MBS)……..**ILS or LOC Rwy 5[1]**
ILS or LOC Rwy 23[1]
VOR Rwy 14[2]
[1]NA when control tower closed.
[2]NA for NON-DME equipped aircraft when control tower closed.

SAGINAW COUNTY H W
BROWNE (HYX)……..**ILS or LOC Rwy 28[1]**
RNAV (GPS) Rwy 10[23]
RNAV (GPS) Rwy 28[2]
VOR/DME-A[23]
[1]ILS, LOC, Category C, 900-2½.
[2]Category C, 900-2½.
[3]NA when local weather not available.

SAULT STE MARIE, MI
CHIPPEWA COUNTY
INTL (CIU)……..**RNAV (GPS) Rwy 10**
RNAV (GPS) Rwy 28
RNAV (GPS) Rwy 34
NA when local weather not available.

SAULT STE MARIE MUNI/SANDERSON
FIELD (ANJ)……..**RNAV (GPS) Rwy 14**
RNAV (GPS) Rwy 32
VOR Rwy 32
NA when local weather not available.

NAME ALTERNATE MINIMUMS

SOUTH HAVEN, MI

SOUTH HAVEN
AREA RGNL (LWA)……....**RNAV (GPS) Rwy 5**
RNAV (GPS) Rwy 23
NA when local weather not available.
Category C, 800-2¼; Category D, 800-2½.

STURGIS, MI

KIRSCH MUNI (IRS)……....**RNAV (GPS) Rwy 18**
RNAV (GPS) Rwy 36
NA when local weather not available.
Category D, 800-2¼.

THREE RIVERS, MI

THREE RIVERS MUNI DR
HAINES (HAI)……..…...**RNAV (GPS) Rwy 27**
VOR-A
NA when local weather not available.

TRAVERSE CITY, MI

CHERRY
CAPITAL (TVC)……..**ILS or LOC Rwy 28**[123]
RNAV (GPS) Rwy 10[4]
RNAV (GPS) Rwy 18[15]
RNAV (GPS) Rwy 28[15]
RNAV (GPS) Rwy 36[15]
VOR-A[16]
[1]NA when local weather not available.
[2]NA when control tower closed.
[3]ILS, LOC, Categories A, B, 900-2; Category C, 900-2½; Category D, 1100-3.
[4]Categories A, B, 1200-2; Categories C, D, 1200-3.
[5]Category C, 900-2½; Category D, 1100-3.
[6]Categories A, B, 900-2; Category C, 900-2½; Category D, 1100-3.

WEST BRANCH, MI

WEST BRANCH
COMMUNITY (Y31)……..…...**RNAV (GPS) Rwy 9**[12]
RNAV (GPS) Rwy 27[3]
[1]NA when local weather not available.
[2]Category C, 800-2¼; Category D, 800-2½.
[3]Category D, 900-2¾.

GRAND RAPIDS, MI

Amdt 10C, 26AUG10 (16147) (FAA) ELEV **794**

GERALD R FORD INTL (GRR)

RADAR-1 128.4 257.6 T A

	RWY	GP/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HAA	CEIL-VIS
ASR	26L		ABC	**1100**/24	310	(400-½)	D	**1100**/50	310	(400-1)
	26R		AB	**1280**-1	493	(500-1)	C	**1280**-1¼	493	(500-1¼)
			D	**1280**-1½	493	(500-1½)				
	8R		AB	**1200**-½	406	(500-½)	C	**1200**-¾	406	(500-¾)
			D	**1200**-1	406	(500-1)				
	8L		AB	**1220**-1	433	(500-1)	C	**1220**-1¼	433	(500-1¼)
			D	**1220**-1½	433	(500-1½)				
CIRCLING			AB	**1280**-1	486	(500-1)	C	**1280**-1½	486	(500-1½)
			D	**1360**-2	566	(600-2)				

When control tower closed, ASR not authorized.

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

KALAMAZOO, MI

Amdt 9B, 03APR14 (16147) (FAA) ELEV **874**

KALAMAZOO/BATTLE CREEK INTL (AZO)

RADAR-1 121.2 239.25 T A

	RWY	GP/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HAA	CEIL-VIS
ASR	35		AB	**1320**/24	452	(500-½)	C	**1320**/40	452	(500-¾)
			D	**1320**/50	452	(500-1)				
	17		AB	**1320**-1	453	(500-1)	C	**1320**-1¼	453	(500-1¼)
			D	**1320**-1½	453	(500-1½)				
CIRCLING			AB	**1380**-1	506	(600-1)	C	**1380**-1½	506	(600-1½)
			D	**1440**-2	566	(600-2)				

When control tower closed, ASR NA.
Night Landing: Rwy 5, 9, 23, 27 NA

20198

LAND AND HOLD-SHORT OPERATIONS (LAHSO)

LAHSO is an acronym for "Land and Hold-Short Operations." These operations include landing and holding short of an intersection runway, an intersecting taxiway, or other predetermined points on the runway other than a runway or taxiway. Measured distance represents the available landing distance on the landing runway, in feet.

Specific questions regarding these distances should be referred to the air traffic manager of the facility concerned. The Aeronautical Information Manual contains specific details on hold-short operations and markings.

CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	AVBL LDG DIST
BATTLE CREEK, MI			
BATTLE CREEK EXECUTIVE AT KELLOGG FIELD (BTL)	05L	13-31	7,000 feet
DETROIT, MI			
COLEMAN A. YOUNG MUNI (DET)	15	07-25	4,900 feet
FLINT, MI			
BISHOP INTL (FNT)	09	18-36	4,100 feet
	36	09-27	6,300 feet
TRAVERSE CITY, MI			
CHERRY CAPITAL (TVC)	18	10-28	2,850 feet
	28	18-36	5,950 feet

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20198

19283

HOT SPOTS

An "airport surface hot spot" is a location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

A "hot spot" is a runway safety related problem area on an airport that presents increased risk during surface operations. Typically it is a complex or confusing taxiway/taxiway or taxiway/runway intersection. The area of increased risk has either a history of or potential for runway incursions or surface incidents, due to a variety of causes, such as but not limited to: airport layout, traffic flow, airport marking, signage and lighting, situational awareness, and training. Hot spots are depicted on airport diagrams as open circles or polygons designated as "HS 1", "HS 2", etc. and tabulated in the list below with a brief description of each hot spot. Hot spots will remain charted on airport diagrams until such time the increased risk has been reduced or eliminated.

CITY/AIRPORT	HOT SPOT	DESCRIPTION*
ANN ARBOR, MI		
ANN ARBOR MUNI (ARB)	HS 1	Int of Twy A1/A not visible from the control twr.
	HS 2	Twy A crosses turf Rwy 12-30.
DETROIT, MI		
DETROIT METROPOLITAN WAYNE COUNTY (DTW)	HS 1	Int of Rwy 09L and Rwy 03L-21R.
DETROIT, MI		
WILLOW RUN (YIP)	HS 1	Complex rwys/twy int.
	HS 2	Twy E1 to Rwy 27 or Rwy 23L wrong rwy departure risk.
FLINT, MI		
BISHOP INTL (FNT)	HS 1	Int of Twy C and Rwy 18-36.
	HS 2	Deicing Pad. Twy C and Rwy 09-27.
GRAND RAPIDS, MI		
GERALD R FORD INTL (GRR)	HS 1	Pilot confusion risk int Twy A, Twy M Twy A2 near Rwy 08R-26L.
	HS 2	Pilot confusion risk int Twy A, Twy F, Twy B, Twy A1 near Rwy 08R-26L.
	HS 3	Pilot confusion risk int Twy B, Twy V, Twy B4 near Rwy 17-35
JACKSON, MI		
JACKSON COUNTY-REYNOLDS FIELD (JXN)	HS 1	Twy A and Twy D complex int in close proximity to two rwys.
KALAMAZOO, MI		
KALAMAZOO/BATTLE CREEK INTL (AZO)	HS 1	Complex rwy/twy int.
LANSING, MI		
CAPITAL REGION INTL (LAN)	HS 1	Twy C intersecting Twy B; and Rwy 10R-28L.
	HS 2	Twy M intersecting Twy B; and Rwy 10R-28L.
MUSKEGON, MI		
MUSKEGON COUNTY (MKG)	HS 1	Twy A at Rwy 14-32.

*See appropriate Chart Supplement HOT SPOT table for additional information.

19283

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(BONZZ.BONZZ2) 19283

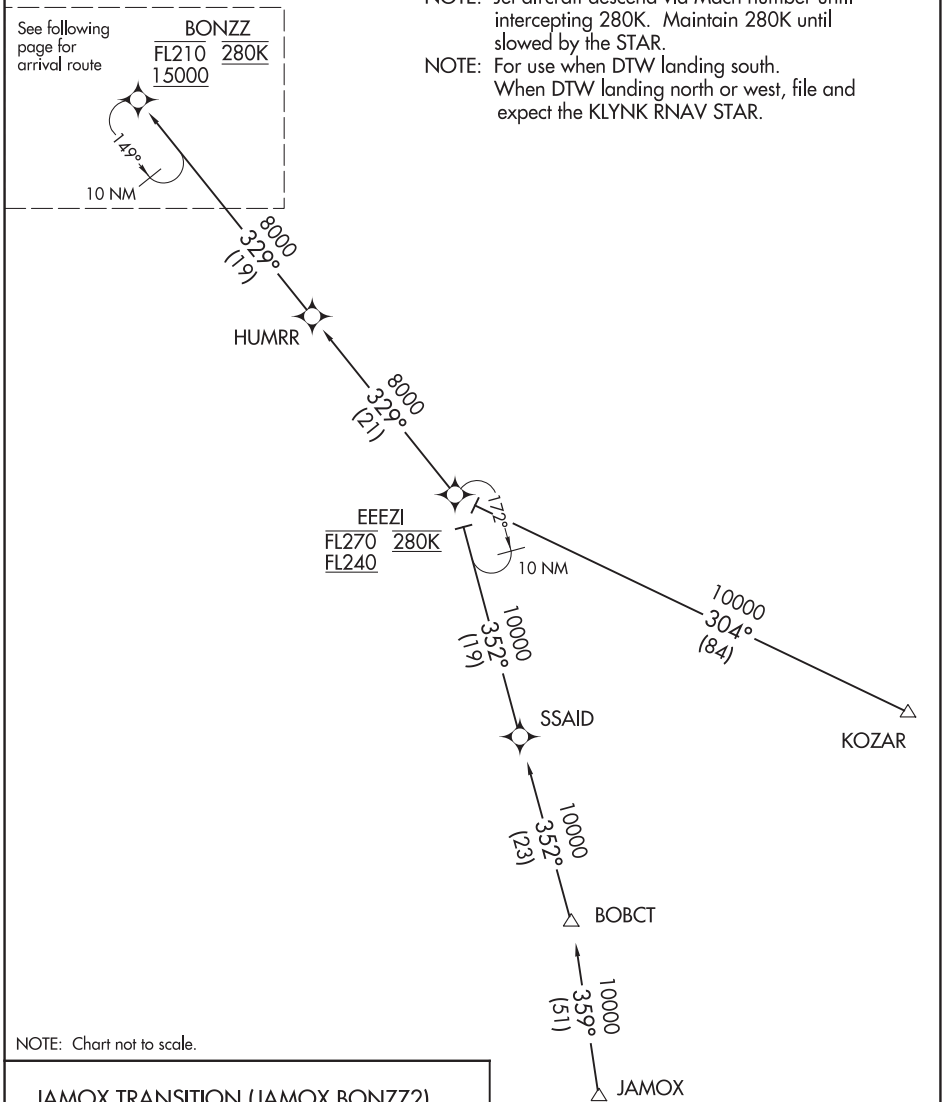
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

BONZZ TWO ARRIVAL (RNAV) Transition Routes

DETROIT, MICHIGAN

D-ATIS
133.675
DETROIT APP CON
126.225 284.0

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Use Rwy 21L transition or as assigned by ATC. Expect runway assignment from Detroit APP CON no later than 10 NM from FFORK.
NOTE: Jet aircraft descend via Mach number until intercepting 280K. Maintain 280K until slowed by the STAR.
NOTE: For use when DTW landing south. When DTW landing north or west, file and expect the KLYNK RNAV STAR.



NOTE: Chart not to scale.

JAMOX TRANSITION (JAMOX.BONZZ2)
KOZAR TRANSITION (KOZAR.BONZZ2)

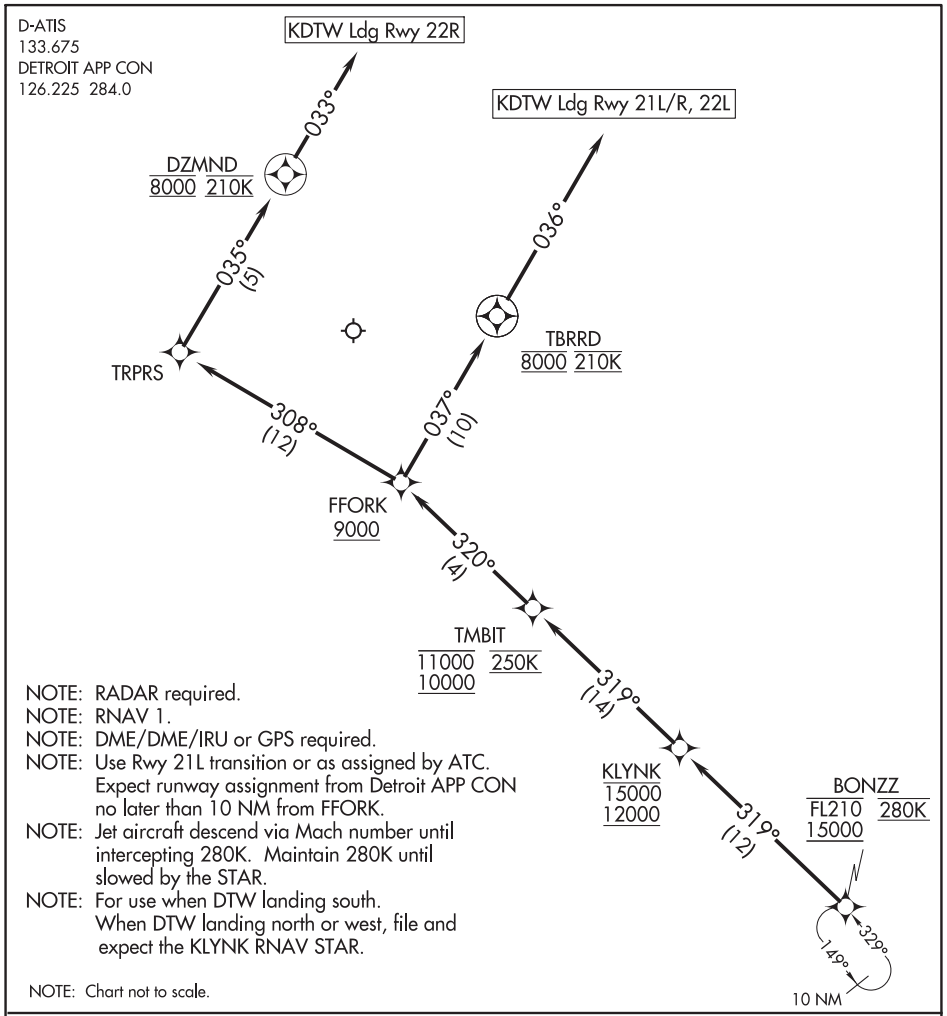
(CONTINUED ON FOLLOWING PAGE)

EC-1, 25 FEB 2021 to 22 APR 2021

BONZZ TWO ARRIVAL (RNAV) Transition Routes
DETROIT, MICHIGAN
(BONZZ.BONZZ2) 10OCT19
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

BONZZ TWO ARRIVAL (RNAV) Arrival Routes

DETROIT, MICHIGAN



NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Use Rwy 21L transition or as assigned by ATC. Expect runway assignment from Detroit APP CON no later than 10 NM from FFORK.
NOTE: Jet aircraft descend via Mach number until intercepting 280K. Maintain 280K until slowed by the STAR.
NOTE: For use when DTW landing south. When DTW landing north or west, file and expect the KLYNK RNAV STAR.

NOTE: Chart not to scale.

ARRIVAL ROUTE DESCRIPTION

From BONZZ on track 319° to cross KLYNK between 12000 and 15000, then on track 319° to cross TMBIT between 10000 and 11000 and at 250K, then on track 320° to cross FFORK at or above 9000.

LANDING RWYS 22L, 21L/R: From FFORK on track 037° to cross TBRRD at 8000 and at 210K, then on track 036°. Expect RADAR vectors to final apporach course.
LANDING RWY 22R: From FFORK on track 308° to TRPRS, then on track 035° to cross DZMND at 8000 and at 210K, then on track 033°. Expect RADAR vectors to final approach course.

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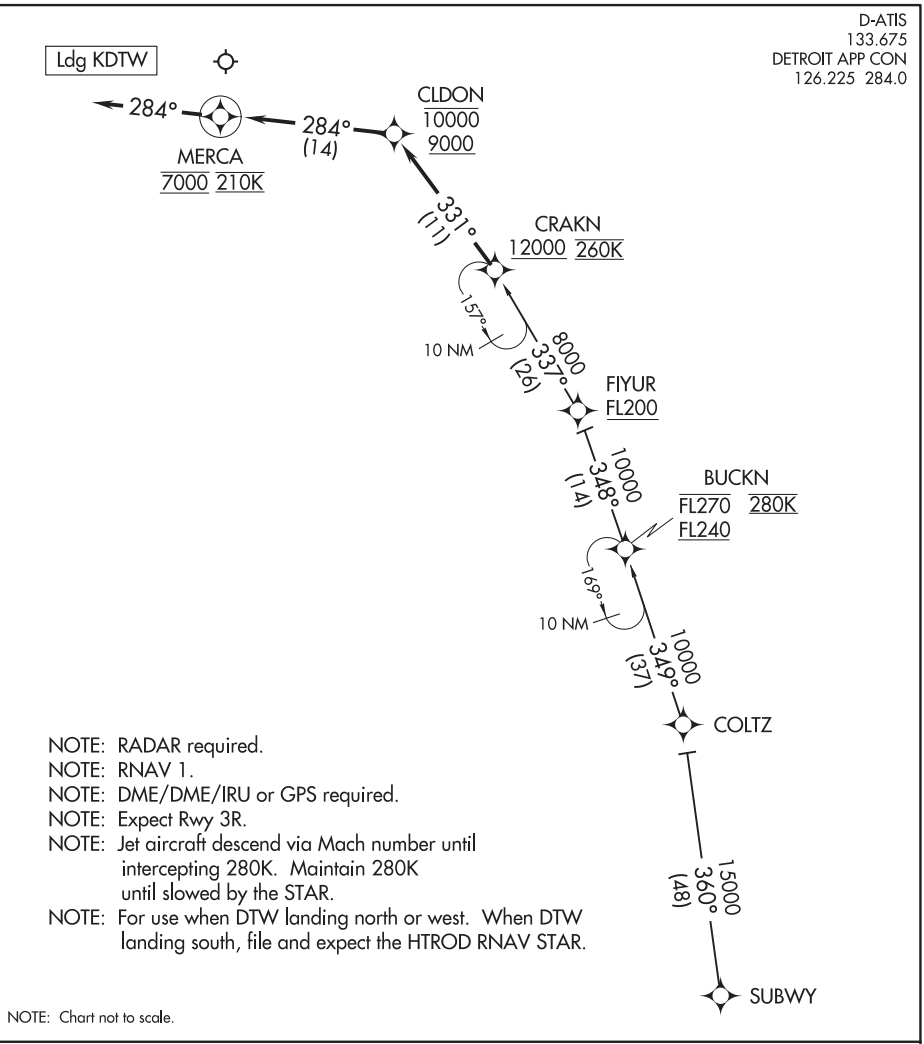
(CRAKN.CRAKN2) 19283

CRAKN TWO ARRIVAL (RNAV)

AL-119 (FAA)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)
DETROIT, MICHIGAN



NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Expect Rwy 3R.
NOTE: Jet aircraft descend via Mach number until intercepting 280K. Maintain 280K until slowed by the STAR.
NOTE: For use when DTW landing north or west. When DTW landing south, file and expect the HTROD RNAV STAR.

NOTE: Chart not to scale.

ARRIVAL ROUTE DESCRIPTION

SUBWY TRANSITION (SUBWY.CRAKN2)

From CRAKN on track 331° to cross CLDON between 9000 and 10000, then on track 284° to cross MERCA at 7000 and at 210K, then on track 284°. Expect RADAR vectors to final approach course.

LOST COMMUNICATIONS:
From MERCA, execute ILS Rwy 3R approach.

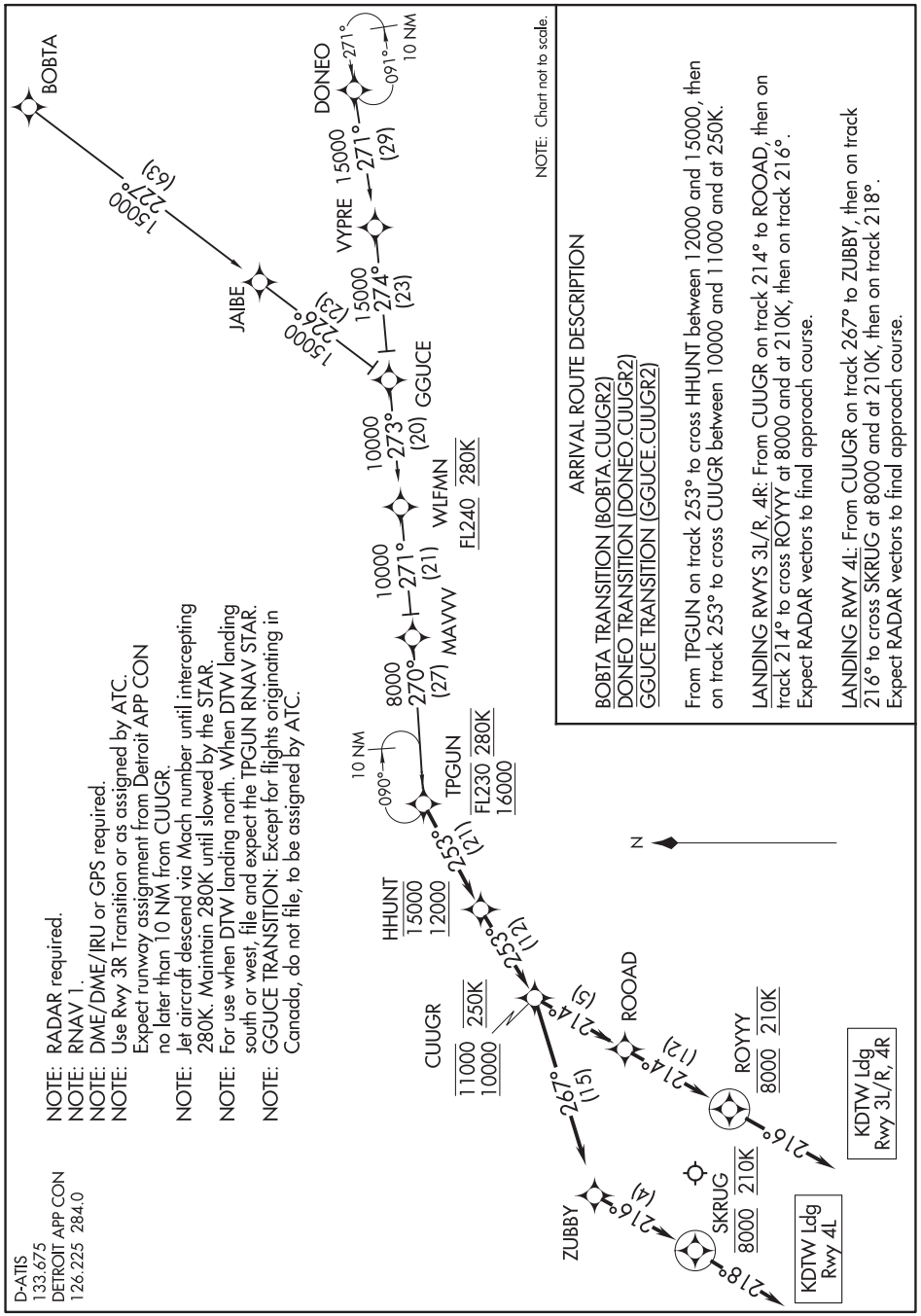
EC-1, 25 FEB 2021 to 22 APR 2021

CUUGR TWO ARRIVAL (RNAV)

DETROIT, MICHIGAN

D-ATIS
133.675
DETROIT APP CON
126.225 284.0

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Use Rwy 3R Transition or as assigned by ATC. Expect runway assignment from Detroit APP CON no later than 10 NM from CUUGR.
NOTE: Jet aircraft descend via Mach number until intercepting 280K. Maintain 280K until slowed by the STAR.
NOTE: For use when DTW landing north. When DTW landing south or west, file and expect the TPGUN RNAV STAR.
NOTE: GGUCE TRANSITION: Except for flights originating in Canada, do not file, to be assigned by ATC.



NOTE: Chart not to scale.

ARRIVAL ROUTE DESCRIPTION

BOBTA TRANSITION (BOBTA.CUUGR2)
DONEO TRANSITION (DONEO.CUUGR2)
GGUCE TRANSITION (GGUCE.CUUGR2)

From TPGUN on track 253° to cross HHUNT between 12000 and 15000, then on track 253° to cross CUUGR between 10000 and 11000 and at 250K.

LANDING RWYS 3L/R, 4R: From CUUGR on track 214° to ROOAD, then on track 214° to cross ROYYY at 8000 and at 210K, then on track 216°. Expect RADAR vectors to final approach course.

LANDING RWY 4L: From CUUGR on track 267° to ZUBBY, then on track 216° to cross SKRUG at 8000 and at 210K, then on track 218°. Expect RADAR vectors to final approach course.

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CUUGR TWO ARRIVAL (RNAV)
DETROIT, MICHIGAN

FERRL TWO ARRIVAL (RNAV)

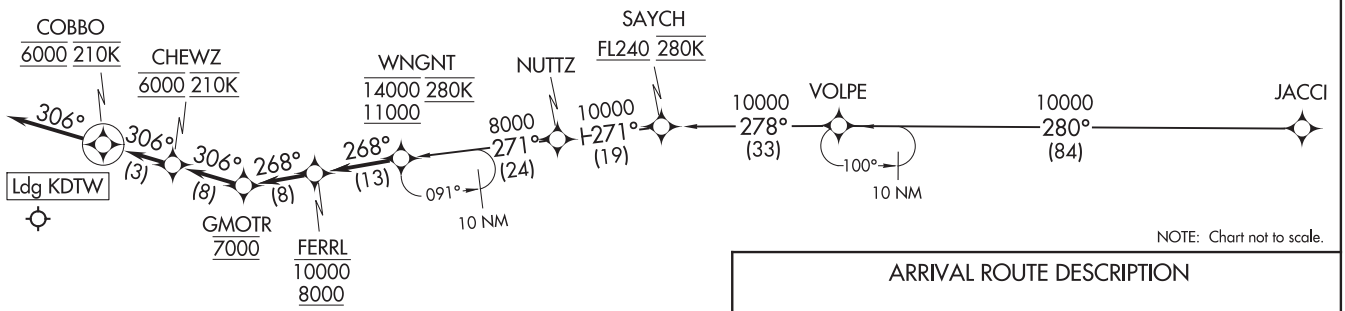
(WNGNT.FERRL2) 10OCT19

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

DETROIT, MICHIGAN

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Expect Rwy 21L.
NOTE: Jet aircraft descend via Mach number until intercepting 280K. Maintain 280K until slowed by the STAR.
NOTE: For use when DTW landing south or west. When DTW landing north, file and expect the WNGNT RNAV STAR.

D-ATIS
133.675
DETROIT APP CON
126.225 284.0



NOTE: Chart not to scale.

ARRIVAL ROUTE DESCRIPTION

JACCI TRANSITION (JACCI.FERRL2)

From WNGNT on track 268° to cross FERRL between 8000 and 10000, then on track 268° to cross GMOTR at 7000, then on track 306° to cross CHEWZ at 6000 and at 210K, then on track 306° to cross COBBO at 6000 and at 210K, then on track 306°. Expect RADAR vectors to final approach course.

LOST COMMUNICATIONS:

From COBBO, execute ILS Rwy 21L approach.

(WNGNT.FERRL2) 19283
FERRL TWO ARRIVAL (RNAV)
DETROIT METROPOLITAN WAYNE COUNTY (DTW)
DETROIT, MICHIGAN

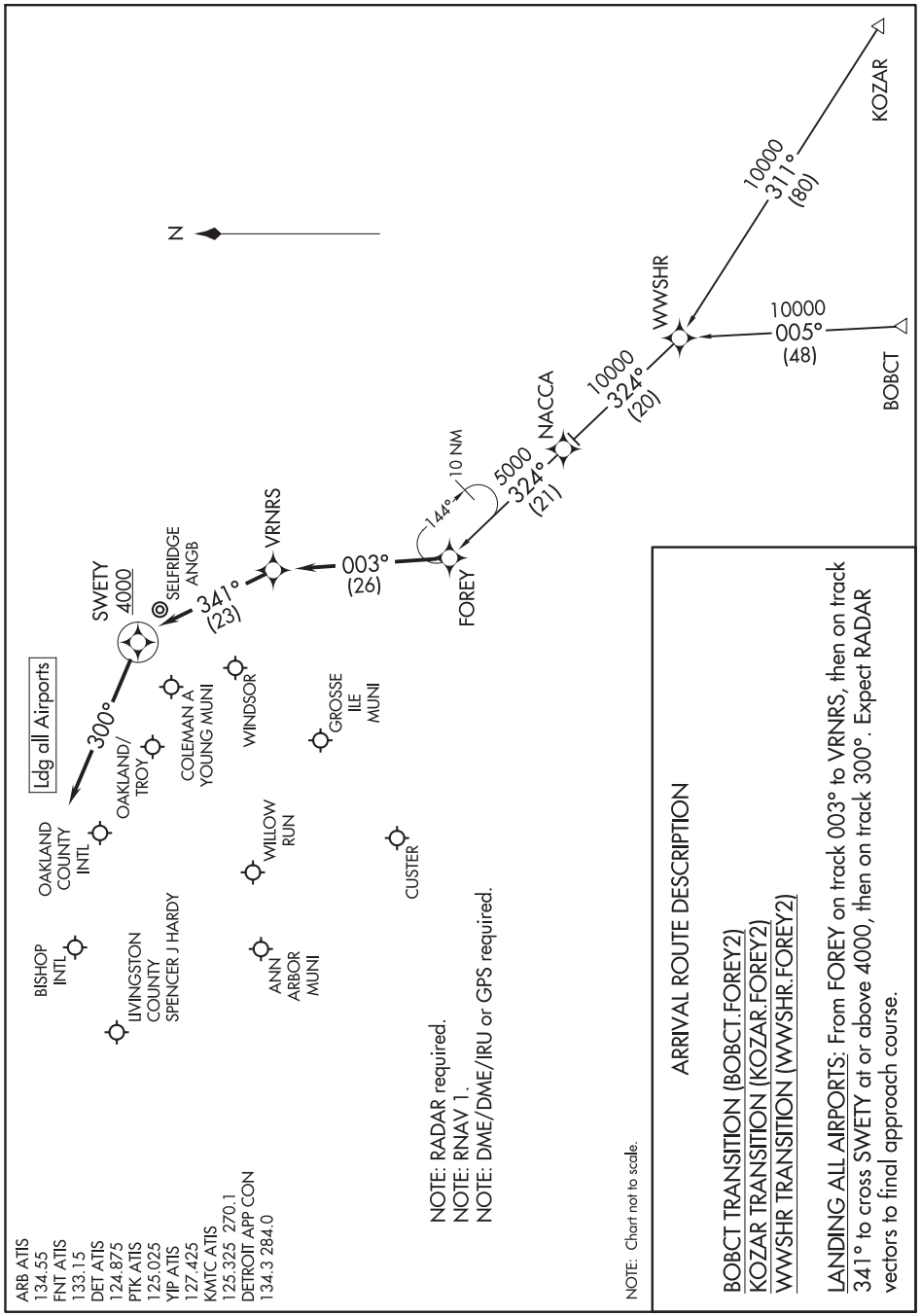
AL-119 (FAA)

Z5

FOREY TWO ARRIVAL (RNAV)

AL-5052 (FAA)

PONTIAC, MICHIGAN



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FOREY TWO ARRIVAL (RNAV)

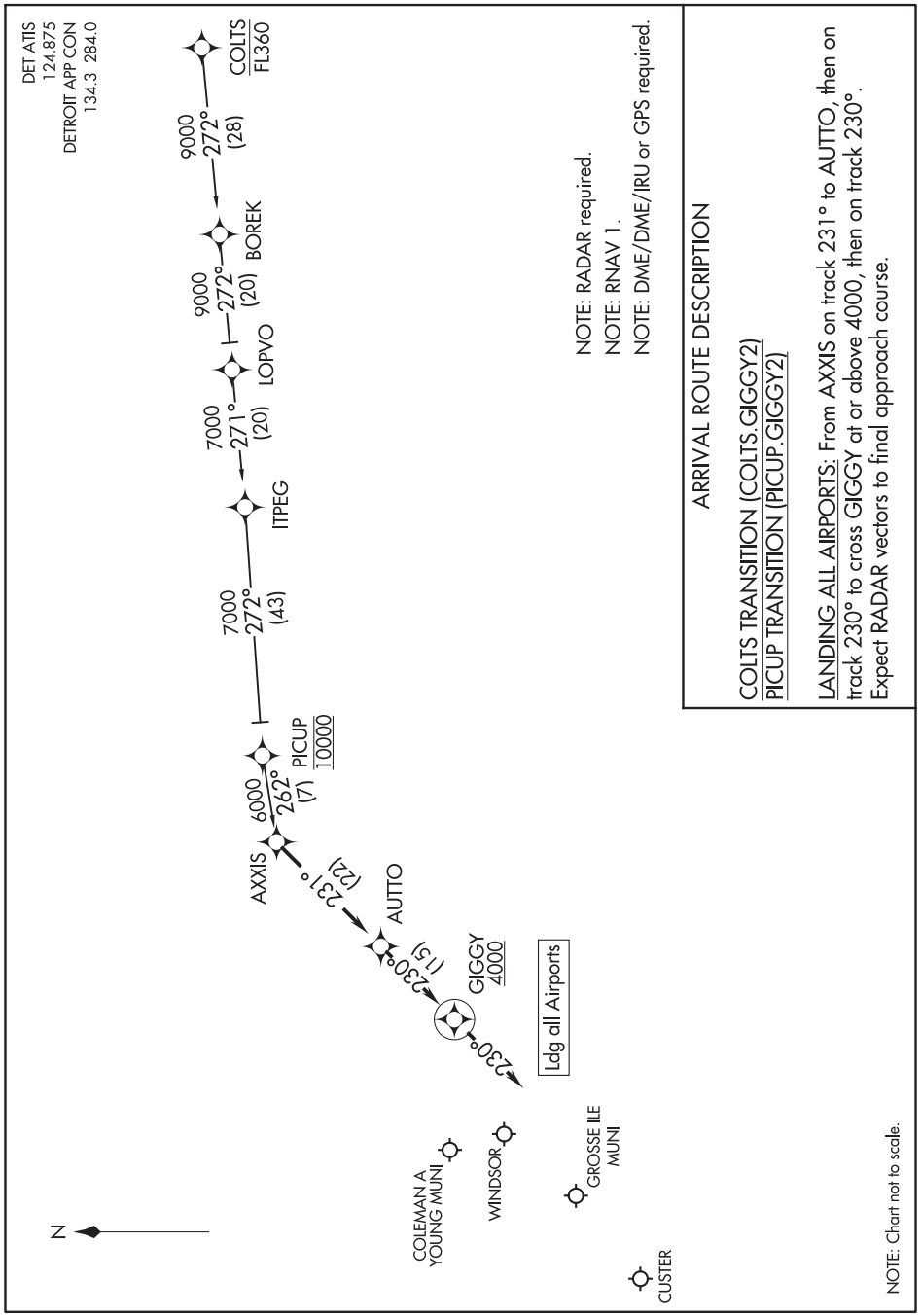
PONTIAC, MICHIGAN

(AXXIS.GIGGY2) 20198

AL-118 (FAA)

GIGGY TWO ARRIVAL (RNAV)

DETROIT, MICHIGAN



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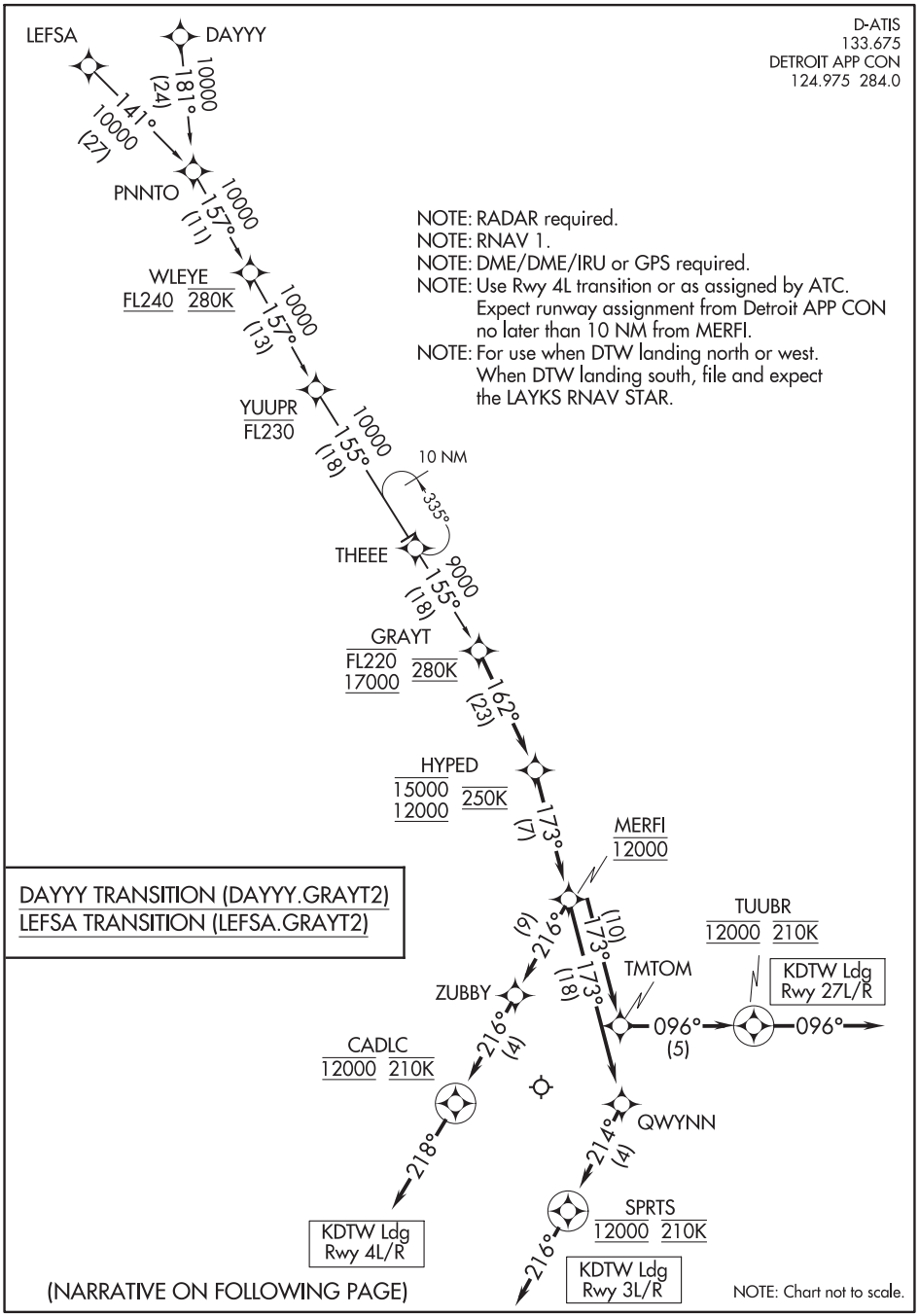
GIGGY TWO ARRIVAL (RNAV)

DETROIT, MICHIGAN

(AXXIS.GIGGY2) 10OCT19

GRAYT TWO ARRIVAL (RNAV)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)
DETROIT, MICHIGAN



(NARRATIVE ON FOLLOWING PAGE)

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GRAYT TWO ARRIVAL (RNAV)
(GRAYT.GRAYT2) 10OCT19
DETROIT, MICHIGAN
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

ARRIVAL ROUTE DESCRIPTION

From GRAYT on track 162° to cross HYPED between 12000 and 15000 and at 250K, then on track 173° to cross MERFI at 12000.

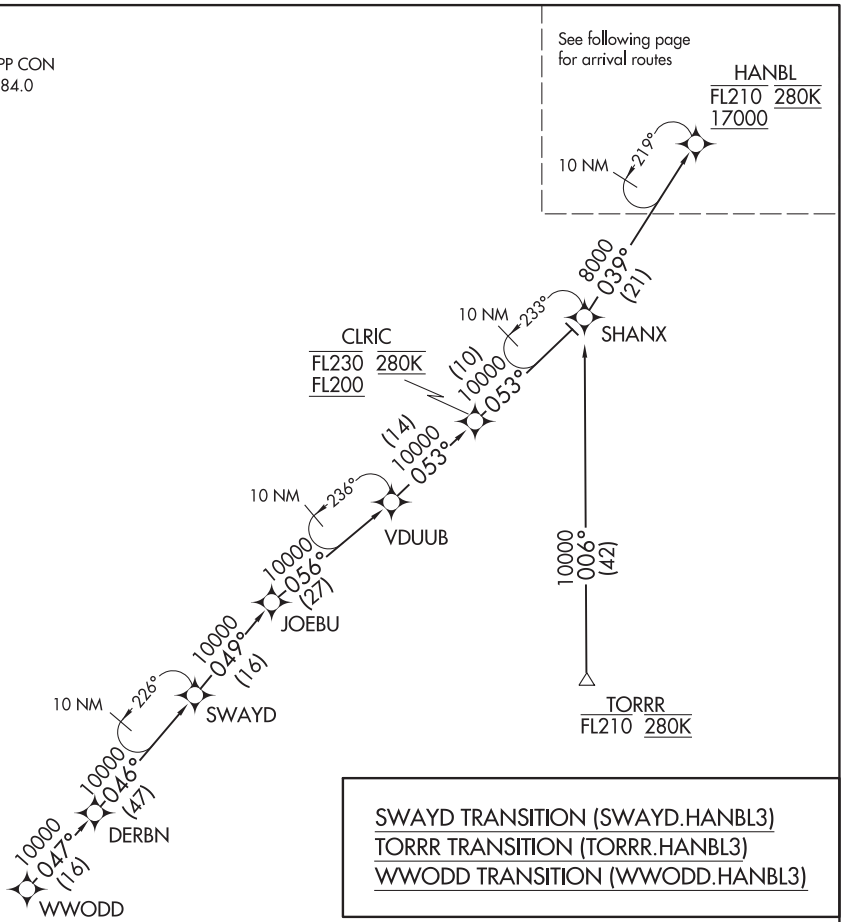
LANDING RWY 3L/R: From MERFI on track 173° to QWYNN, then on track 214° to cross SPRTS at 12000 and at 210K, then on track 216°.
Expect RADAR vectors to final approach course.

LANDING RWY 4L/R: From MERFI on track 216° to ZUBBY, then on track 216° to cross CADLC at 12000 and at 210K, then on track 218°.
Expect RADAR vectors to final approach course.

LANDING RWY 27L/R: From MERFI on track 173° to TMTOM, then on track 096° to cross TUUBR at 12000 and at 210K, then on track 096°.
Expect RADAR vectors to final approach course.

EC-1, 25 FEB 2021 to 22 APR 2021

HANBL THREE ARRIVAL (RNAV) Transition Routes



NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Use Runway 22R transition or as assigned by ATC. Expect runway assignment from Detroit APP CON no later than 10 NM from HEMIE.
NOTE: For use when DTW landing south or west. When DTW landing north, file and expect the LECTR RNAV STAR.
NOTE: TORRR Transition for use by CVG/DAY/SDF/LEX terminal area departures at or below FL210 only and ATC use as assigned.

(NARRATIVE ON FOLLOWING PAGE)
(CONTINUED ON FOLLOWING PAGE)

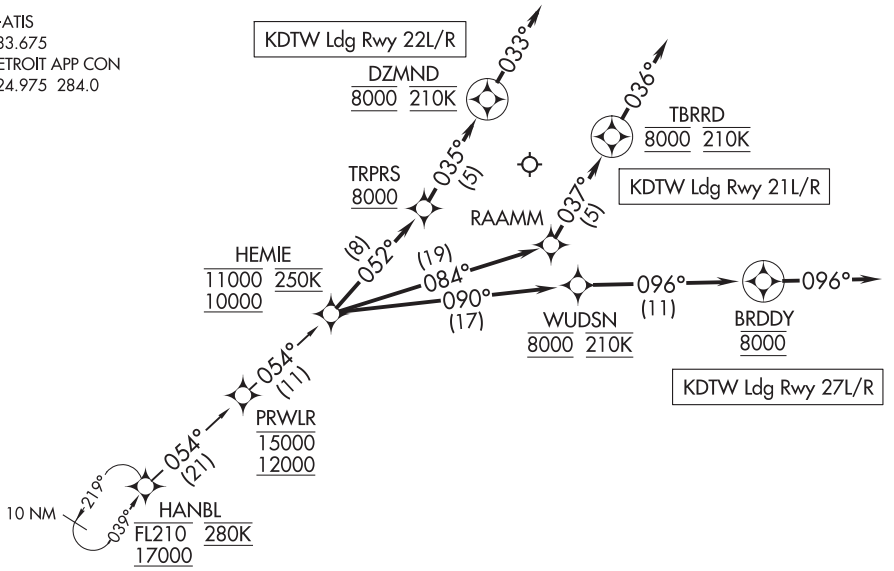
NOTE: Chart not to scale.

(HANBL.HANBL3) 19339 AL-119 (FAA)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

HANBL THREE ARRIVAL (RNAV) Arrival Routes

DETROIT, MICHIGAN



NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Use Runway 22R transition or as assigned by ATC. Expect runway assignment from Detroit APP CON no later than 10 NM from HEMIE.
NOTE: For use when DTW landing south or west. When DTW landing north, file and expect the LECTR RNAV STAR.
NOTE: TORRR Transition for use by CVG/DAY/SDF/LEX terminal area departures at or below FL210 only and ATC use as assigned.

NOTE: Chart not to scale.

ARRIVAL ROUTE DESCRIPTION

From HANBL on track 054° to cross PRWLR between 12000 and 15000, then on track 054° to cross HEMIE between 10000 and 11000 and at 250K.

LANDING RUNWAY 21L/R: From HEMIE on track 084° to RAAMM, then on track 037° to cross TBRRD at 8000 and at 210K, then on track 036°. Expect RADAR vectors to final approach course.

LANDING RUNWAY 22L/R: From HEMIE on track 052° to cross TRPRS at or above 8000, then on track 035° to cross DZMND at 8000 and at 210K, then on track 033°. Expect RADAR vectors to final approach course.

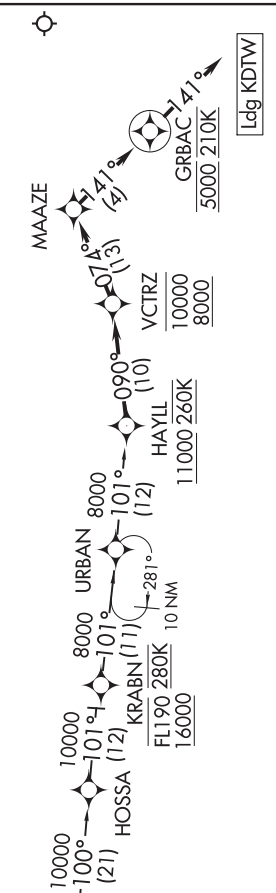
LANDING RUNWAY 27L/R: From HEMIE on track 090° to cross WUDSN at 8000 and at 210K, then on track 096° to cross BRDDY at 8000, then on track 096°. Expect RADAR vectors to final approach course.

EC-1, 25 FEB 2021 to 22 APR 2021

HANBL THREE ARRIVAL (RNAV) Arrival Routes
DETROIT, MICHIGAN
(HANBL.HANBL3) 05DEC19
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Expect Rwy 4L.
NOTE: For use when DTW landing north. When DTW landing south or west, file and expect the VCTRZ RNAV STAR.
NOTE: For use by flights departing MDW, SBN, AZO, MCI, LAS, LAX, PHX, SAN, SNA airports only, or as assigned by ATC.

D-ATIS
133.675
DETROIT APP CON
124.975 284.0



ARRIVAL ROUTE DESCRIPTION

HOSSA TRANSITION (HOSSA.HAYLL3)
SAMPL TRANSITION (SAMPL.HAYLL3)

From HAYLL on track 090° to cross VCTRZ between 8000 and 10000, then on track 074° to MAAZE, then on track 141° to cross GRBAC at 5000 and at 210K, then on track 141°. Expect RADAR vectors to final approach course.

LOST COMMUNICATIONS

From GRBAC, execute RNAV (GPS) Y RWY 4L approach or ILS Y RWY 4L approach.

NOTE: Chart not to scale.

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(CRAKN.HTROD2) 19283

AL-119 (FAA)

HTROD TWO ARRIVAL (RNAV)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

DETROIT, MICHIGAN

D-ATIS
133.675
DETROIT APP CON
126.225 284.0

KDTW Ldg Rwy 22R

KDTW Ldg Rwy 21L/R, 22L

SEEGR
12000 210K

033°

036°

MODLT
12000 210K

036°
(5)

037°
(10)

TRPRS

FFORK

326°
(13)

038°
(4)

HTROD
12000 250K

327°
(14)

BEERR
15000
12000

326°
(14)

CRAKN
FL210 280K
15000

(26)
8000

157°

337°

10 NM

FIYUR
FL200

348°
(14)
10000

BUCKN
FL270 280K
FL240

169°

10 NM

349°
(37)
10000

COLTZ

360°
(48)
15000

SUBWY

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Use Rwy 21L transition or as assigned by ATC. Expect runway assignment from Detroit APP CON no later than 10 NM from HTROD.
NOTE: Jet aircraft descend via Mach number until intercepting 280K. Maintain 280K until slowed by the STAR.
NOTE: For use when DTW landing south. When DTW landing north or west, file and expect the CRAKN RNAV STAR.

NOTE: Chart not to scale.

ARRIVAL ROUTE DESCRIPTION

SUBWY TRANSITION (SUBWY.HTROD2)

From CRAKN on track 326° to cross BEERR between 12000 and 15000, then on track 327° to cross HTROD at 12000 and at 250K.
LANDING RUNWAY 22L, 21L/R: From HTROD on track 038° to FFORK, then on track 037° to cross MODLT at 12000 and at 210K, then on track 036°. Expect RADAR vectors to final approach course.
LANDING RUNWAY 22R: From HTROD on track 326° to TRPRS, then on track 036° to cross SEEGR at 12000 and at 210K, then on track 033°. Expect RADAR vectors to final approach course.

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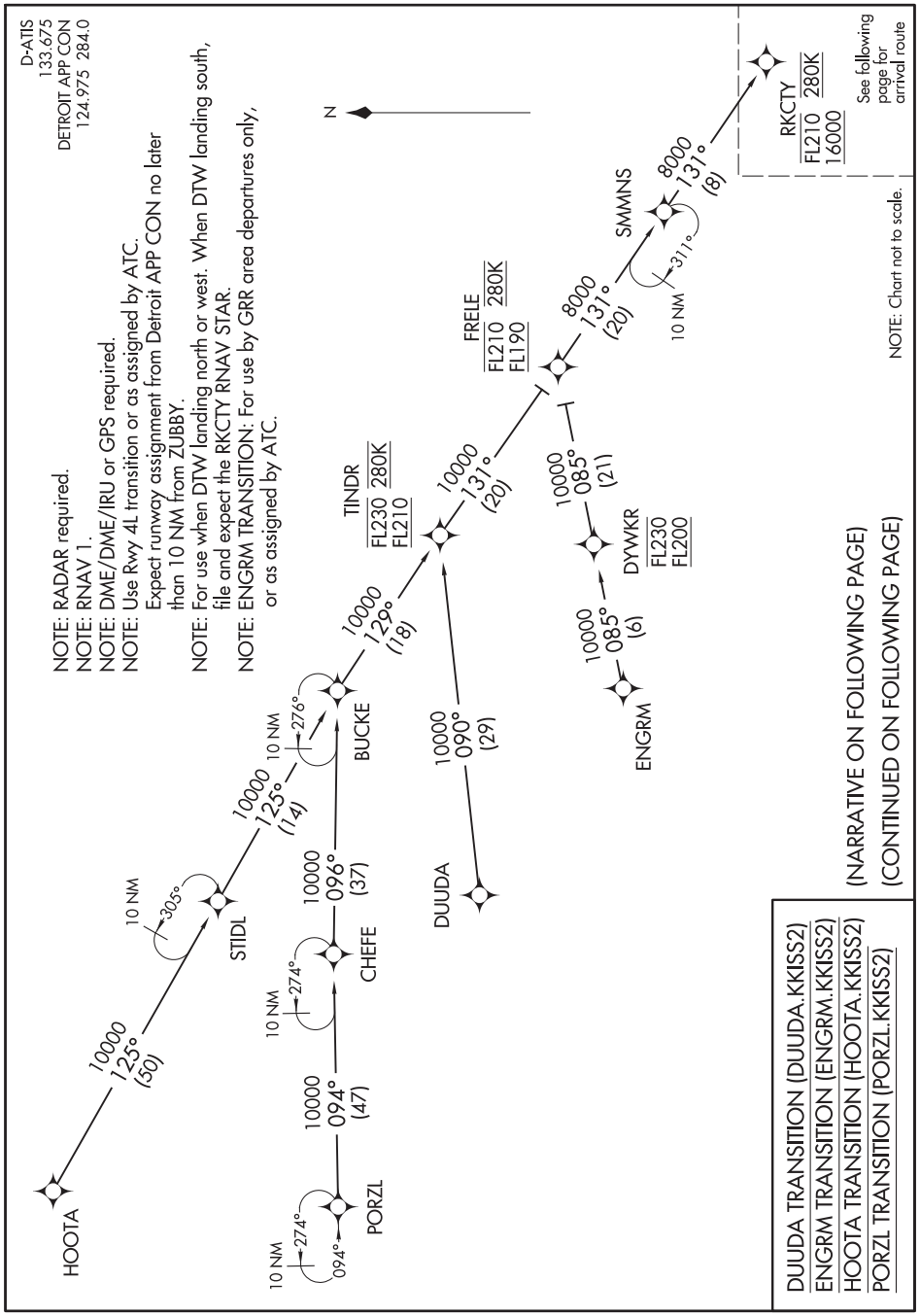
EC-1, 25 FEB 2021 to 22 APR 2021

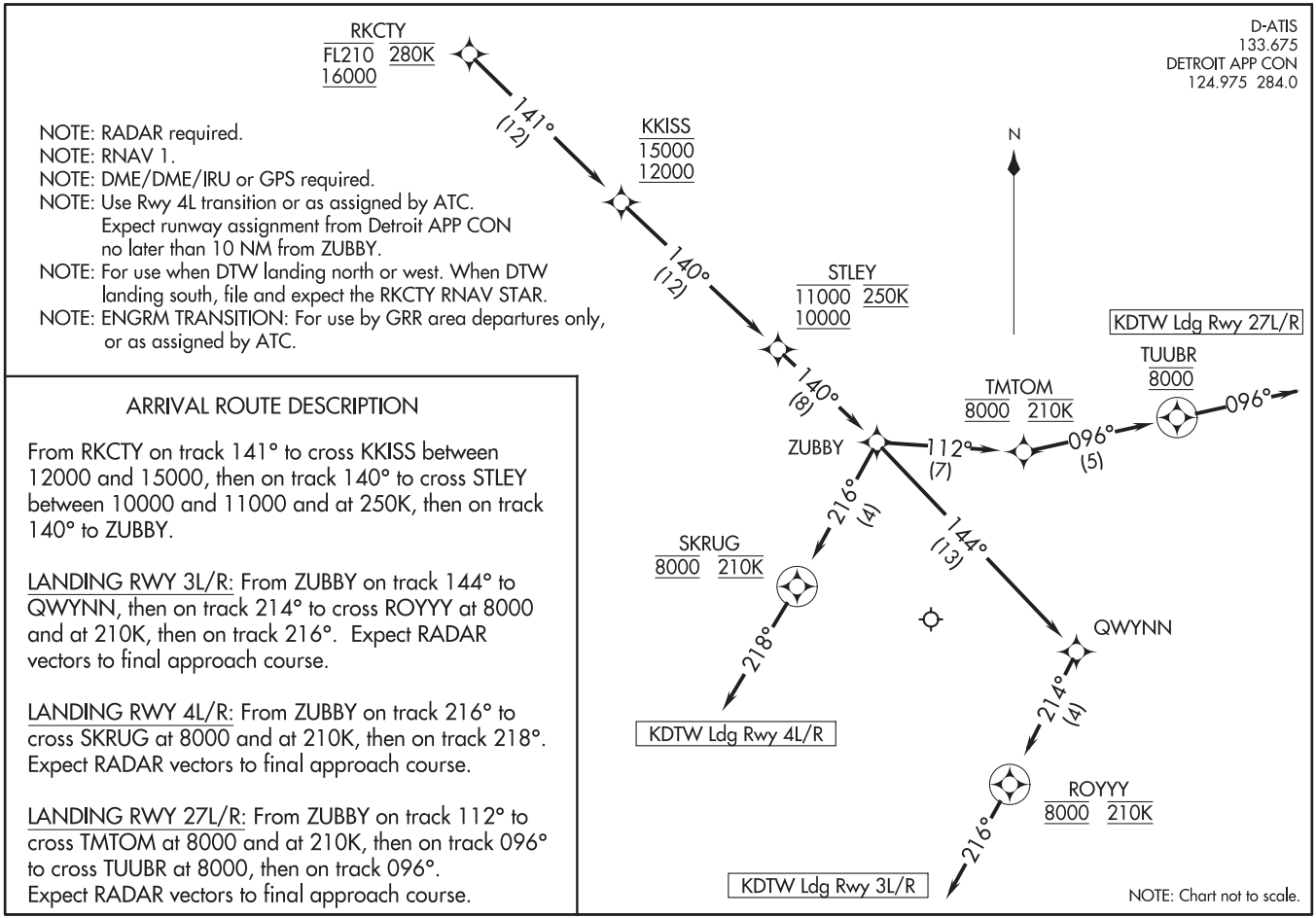
KKISS TWO ARRIVAL (RNAV) Transition Routes

AL-119 (FAA)



EC-1, 25 FEB 2021 to 22 APR 2021

KKISS TWO ARRIVAL (RNAV) Transition Routes
DETROIT, MICHIGAN



NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Use Rwy 4L transition or as assigned by ATC.
Expect runway assignment from Detroit APP CON no later than 10 NM from ZUBBY.
NOTE: For use when DTW landing north or west. When DTW landing south, file and expect the RKCTY RNAV STAR.
NOTE: ENGRM TRANSITION: For use by GRR area departures only, or as assigned by ATC.

ARRIVAL ROUTE DESCRIPTION

From RKCTY on track 141° to cross KKISS between 12000 and 15000, then on track 140° to cross STLEY between 10000 and 11000 and at 250K, then on track 140° to ZUBBY.

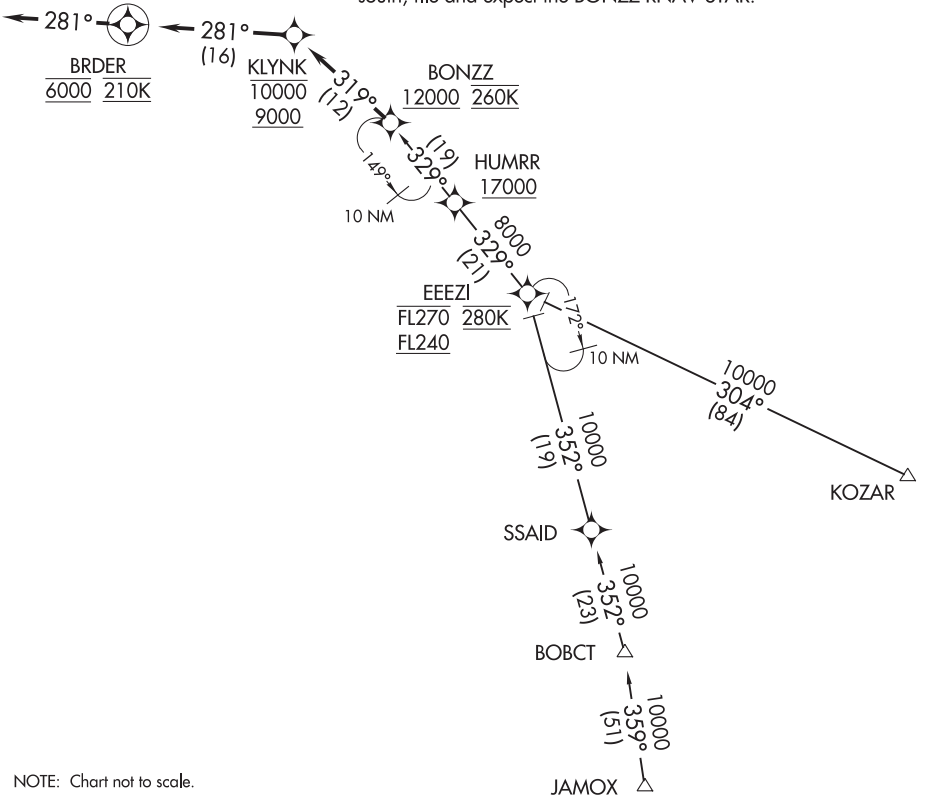
LANDING RWY 3L/R: From ZUBBY on track 144° to QWYNN, then on track 214° to cross ROYYY at 8000 and at 210K, then on track 216°. Expect RADAR vectors to final approach course.

LANDING RWY 4L/R: From ZUBBY on track 216° to cross SKRUG at 8000 and at 210K, then on track 218°. Expect RADAR vectors to final approach course.

LANDING RWY 27L/R: From ZUBBY on track 112° to cross TMTOM at 8000 and at 210K, then on track 096° to cross TUUBR at 8000, then on track 096°. Expect RADAR vectors to final approach course.

D-ATIS
133.675
DETROIT APP CON
126.225 284.0

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Expect Rwy 3R.
NOTE: Jet aircraft descend via Mach number until intercepting 280K. Maintain 280K until slowed by the STAR.
NOTE: For use when DTW landing north or west. When DTW landing south, file and expect the BONZZ RNAV STAR.



NOTE: Chart not to scale.

ARRIVAL ROUTE DESCRIPTION

JAMOX TRANSITION (JAMOX.KLYNK3)
KOZAR TRANSITION (KOZAR.KLYNK3)

From BONZZ on track 319° to cross KLYNK between 9000 and 10000, then on track 281° to cross BRDER at 6000 and at 210K, then on track 281°. Expect RADAR vectors to final approach course.

LOST COMMUNICATIONS
From BRDER, execute ILS Rwy 3R approach.

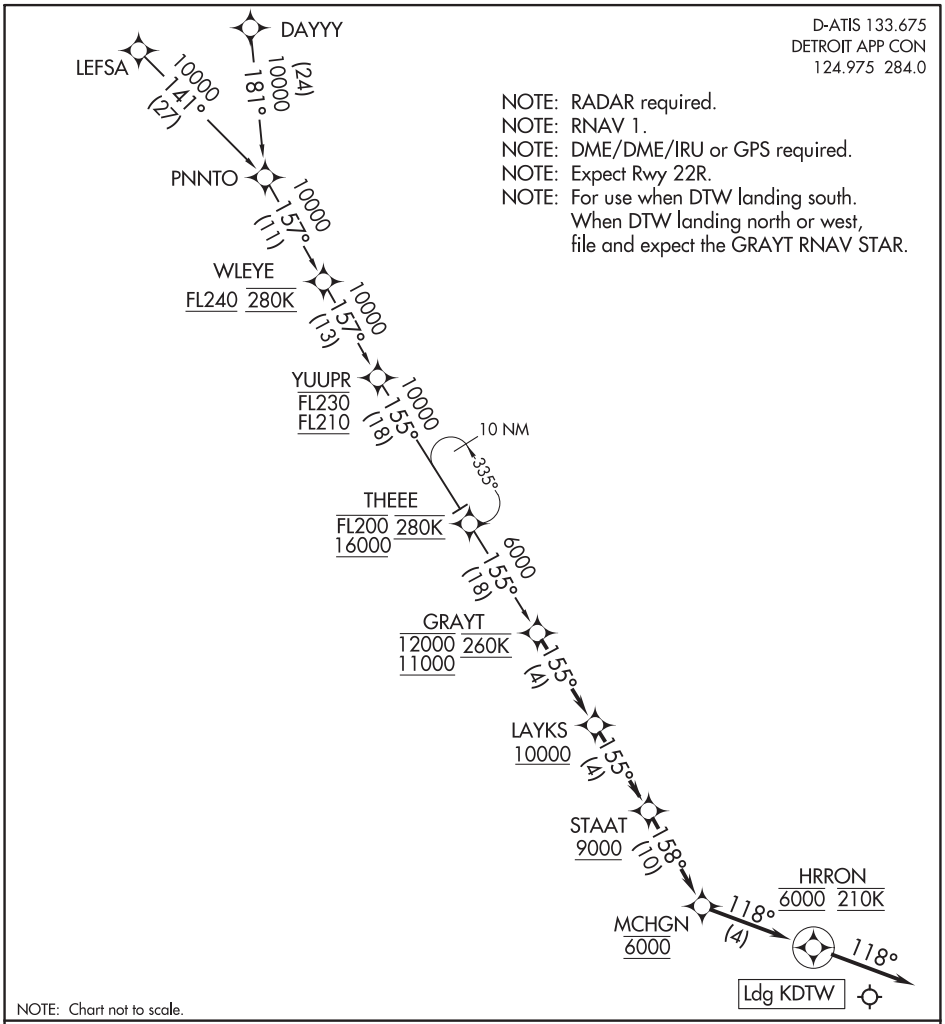
EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

(GRAYT.LAYKS2) 19283

LAYKS TWO ARRIVAL (RNAV)

AL-119 (FAA)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)
DETROIT, MICHIGAN



ARRIVAL ROUTE DESCRIPTION

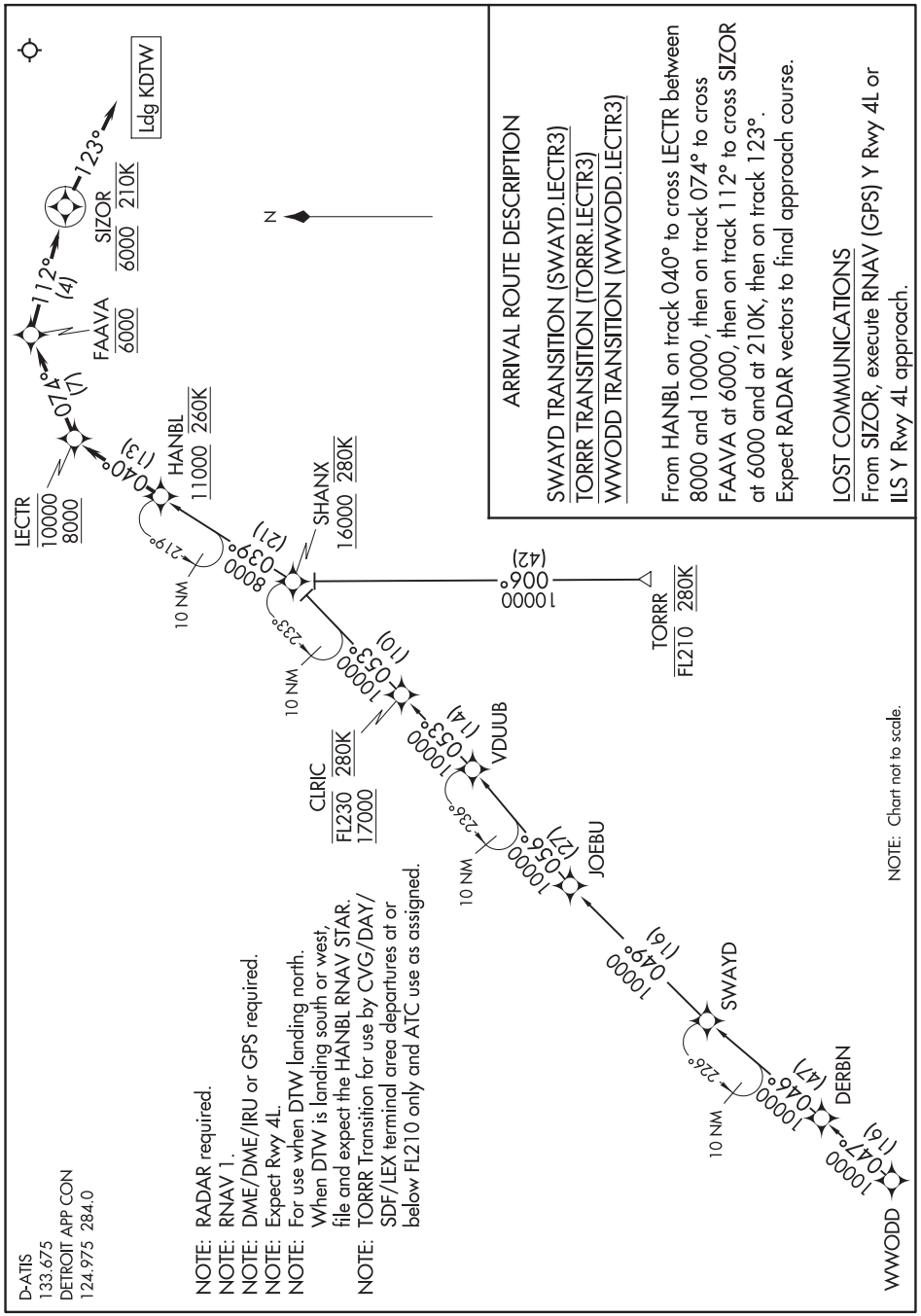
DAYYY TRANSITION (DAYYY.LAYKS2)
LEFSA TRANSITION (LEFSA.LAYKS2)

From GRAYT on track 155° to cross LAYKS at or above 10000, then on track 155° to cross STAAT at or above 9000, then on track 158° to MCHGN at 6000, then on track 118° to cross HRRON at 6000 and at 210K, then on track 118°. Expect RADAR vectors to final approach course.

LOST COMMUNICATIONS: From HRRON, execute RNAV (GPS) Y RWY 22R or ILS Y RWY 22R approach.

EC-1, 25 FEB 2021 to 22 APR 2021

LAYKS TWO ARRIVAL (RNAV)
(GRAYT.LAYKS2) 10OCT19
DETROIT, MICHIGAN
DETROIT METROPOLITAN WAYNE COUNTY (DTW)



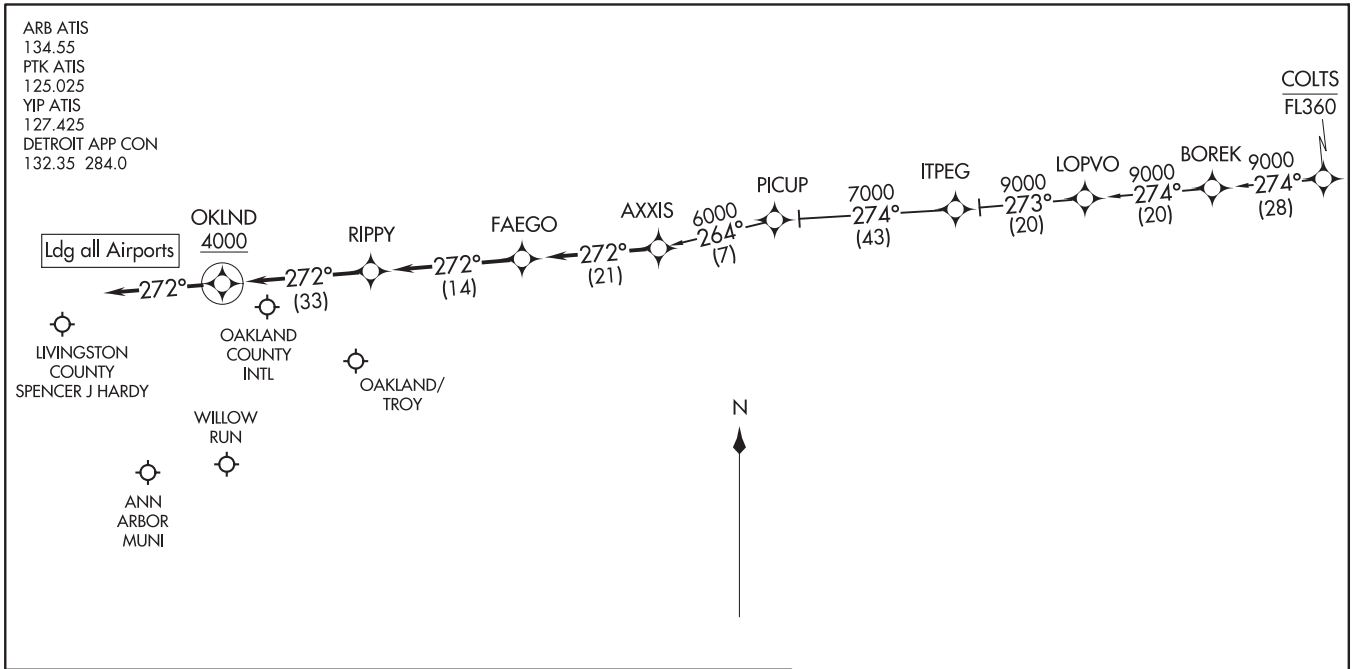
EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

OKLND ONE ARRIVAL (RNAV)

(AXXIS.OKLND1) 24MAY18

PONTIAC, MICHIGAN



ARRIVAL ROUTE DESCRIPTION

COLTS TRANSITION (COLTS.OKLND1):
PICUP TRANSITION (PICUP.OKLND1):

LANDING ALL AIRPORTS: From AXXIS on track 272° to FAEGO, then on track 272° to RIPPY, then on track 272° to cross OKLND at or above 4000, then on track 272°. Expect RADAR vectors to final approach course.

NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.

NOTE: Chart not to scale.

(AXXIS.OKLND1) 20198
OKLND ONE ARRIVAL (RNAV)

AL-5052 (FAA)

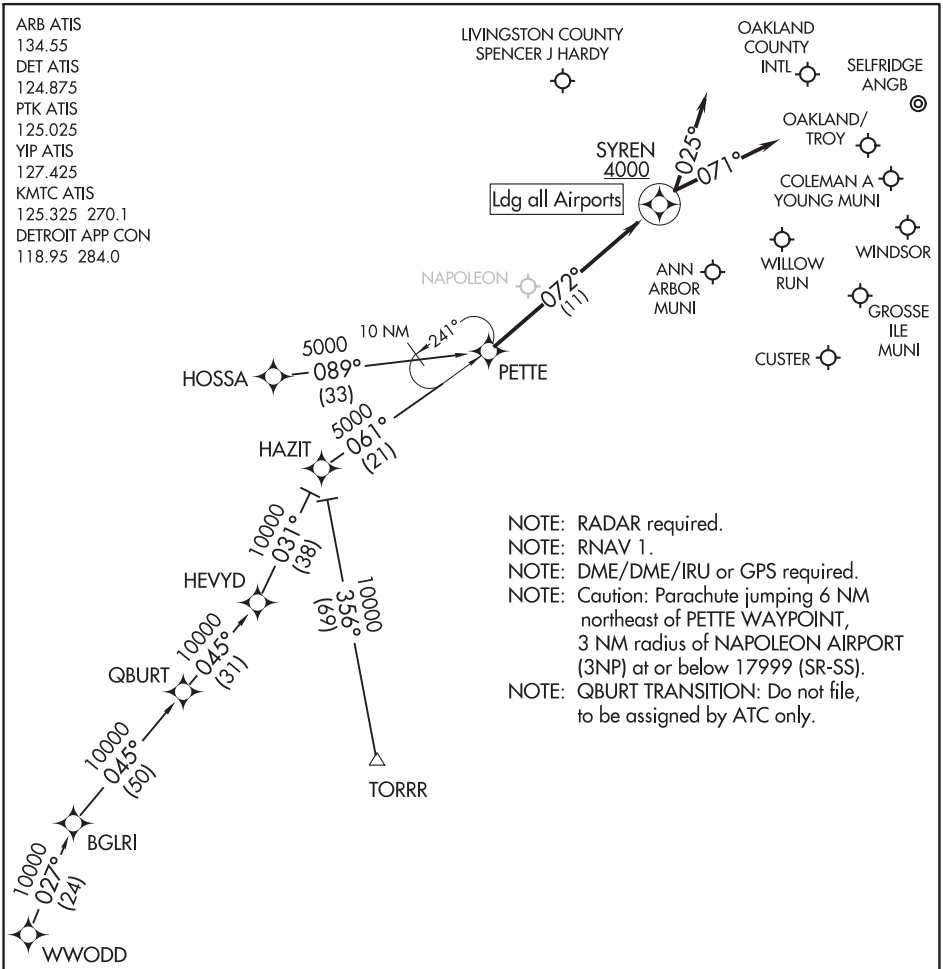
PONTIAC, MICHIGAN

EC-1, 25 FEB 2021 to 22 APR 2021

PETTE TWO ARRIVAL (RNAV)

PONTIAC, MICHIGAN

ARB ATIS
134.55
DET ATIS
124.875
PTK ATIS
125.025
YIP ATIS
127.425
KMTC ATIS
125.325 270.1
DETROIT APP CON
118.95 284.0



NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Caution: Parachute jumping 6 NM northeast of PETTE WAYPOINT, 3 NM radius of NAPOLEON AIRPORT (3NP) at or below 17999 (SR-SS).
NOTE: QBURT TRANSITION: Do not file, to be assigned by ATC only.

NOTE: Chart not to scale.

ARRIVAL ROUTE DESCRIPTION

HOSSA TRANSITION (HOSSA.PETTE2):
QBURT TRANSITION (QBURT.PETTE2):
TORRR TRANSITION (TORRR.PETTE2):
WWODD TRANSITION (WWODD.PETTE2):

LANDING CYQG, KONZ, KARB, KYIP, KTTF, KDET: From PETTE on track 072° to cross SYREN at or above 4000, then on track 071°. Expect RADAR vectors to final approach course.

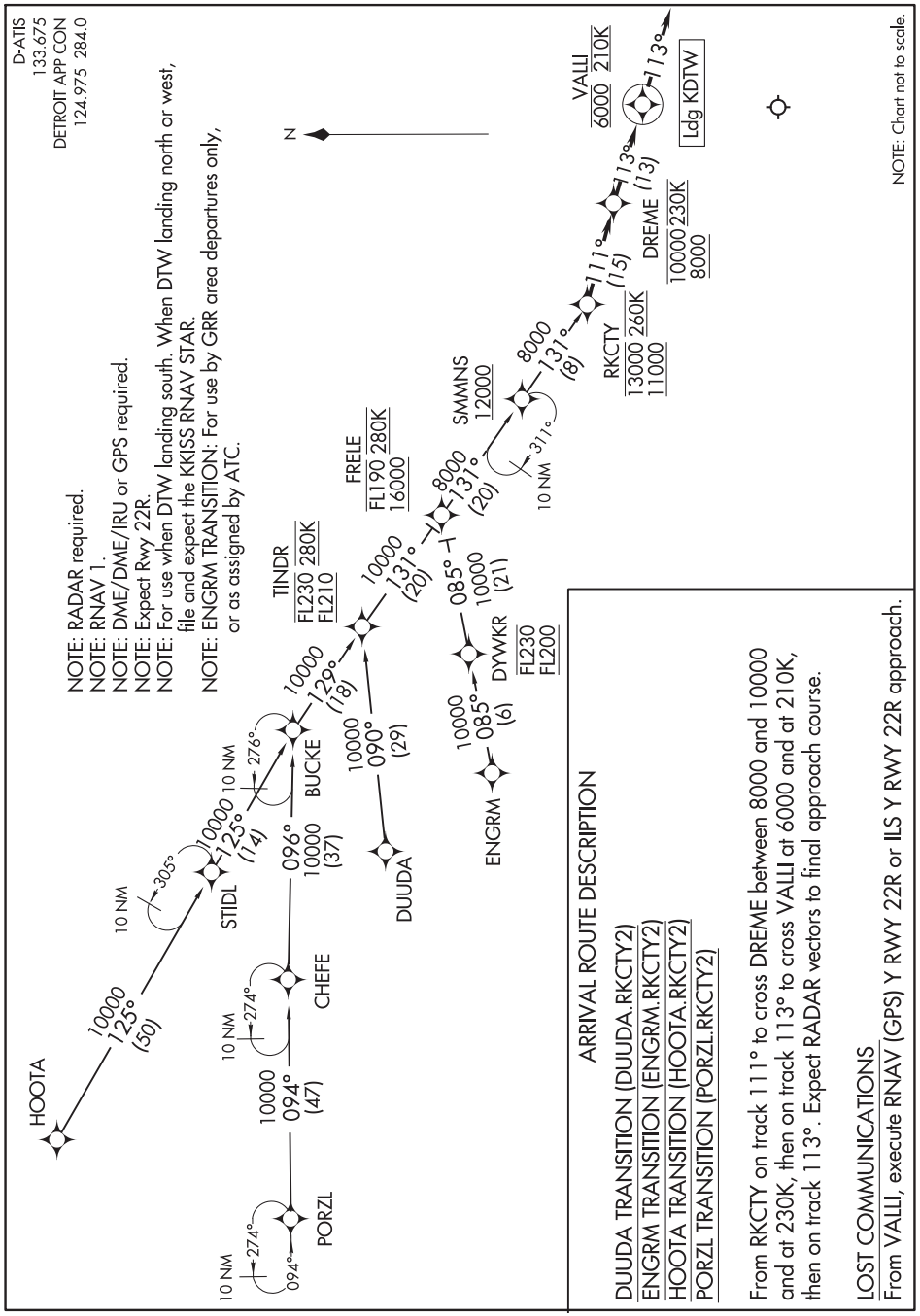
LANDING KPTK, KMTC, KOZW, KVLL: From PETTE on track 072° to cross SYREN at or above 4000, then on track 025°. Expect RADAR vectors to final approach course.

PETTE TWO ARRIVAL (RNAV)
PONTIAC, MICHIGAN

(RKCTY.RKCTY2) 19283

RKCTY TWO ARRIVAL (RNAV)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)
AL-119 (FAA)
DETROIT, MICHIGAN



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RKCTY TWO ARRIVAL (RNAV)

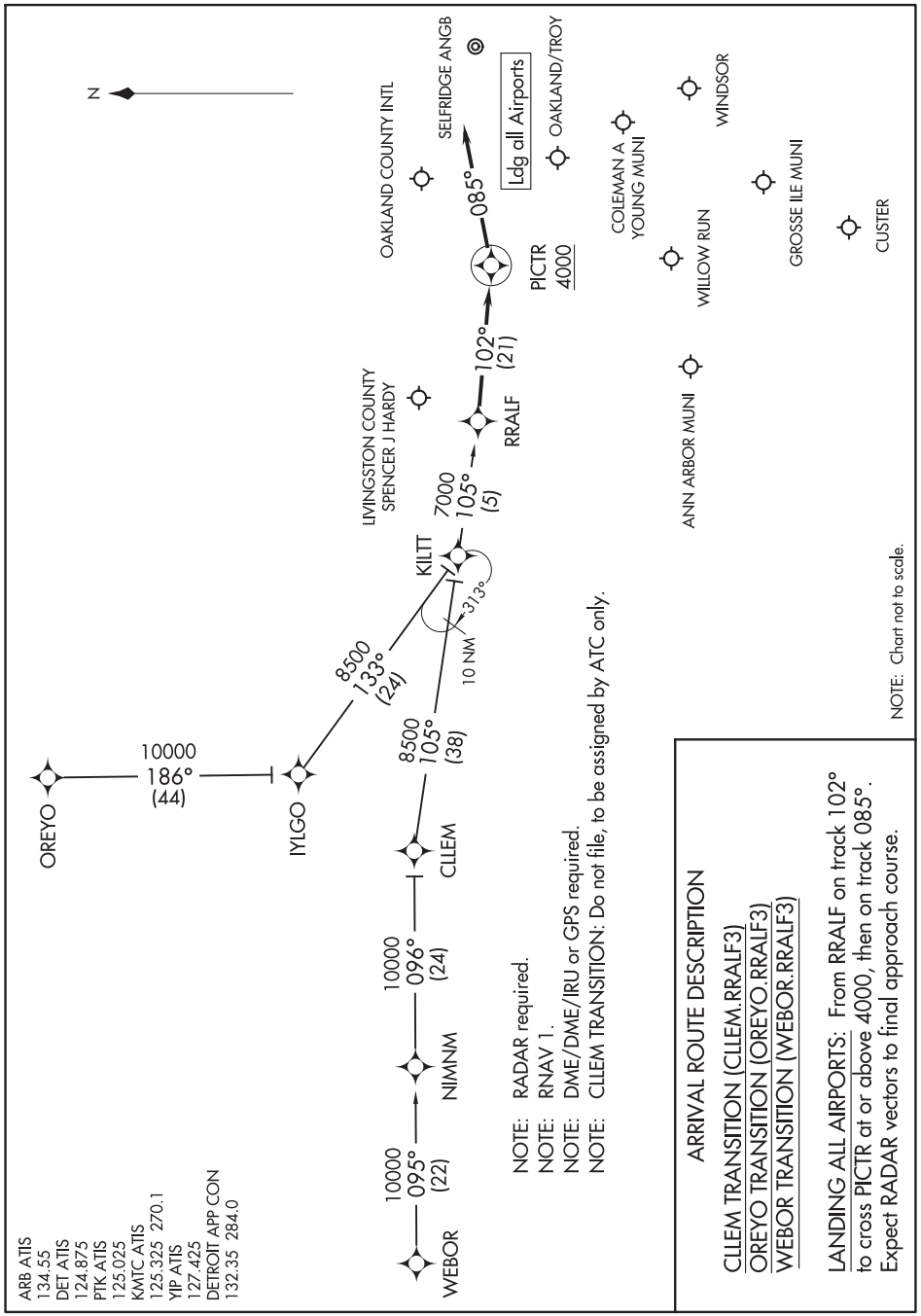
(RKCTY.RKCTY2) 10OCT19

DETROIT METROPOLITAN WAYNE COUNTY (DTW)
DETROIT, MICHIGAN

RRALF THREE ARRIVAL (RNAV)

AL-5052 (FAA)

PONTIAC, MICHIGAN



EC-1, 25 FEB 2021 to 22 APR 2021

RRALF THREE ARRIVAL (RNAV)

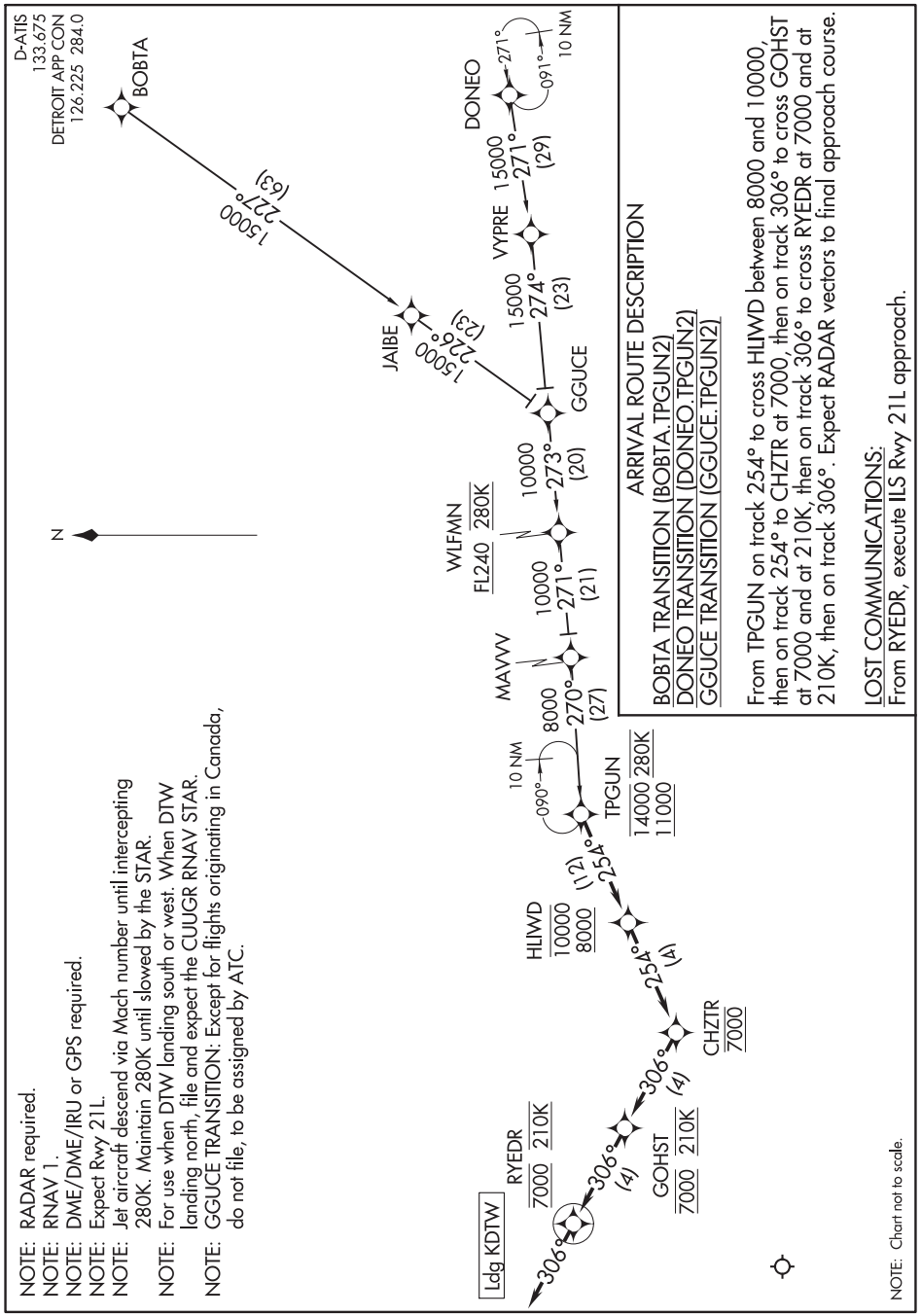
PONTIAC, MICHIGAN

(TPGUN.TPGUN2) 19283

TPGUN TWO ARRIVAL (RNAV)

AL-119 (FAA)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)
DETROIT, MICHIGAN



EC-1, 25 FEB 2021 to 22 APR 2021

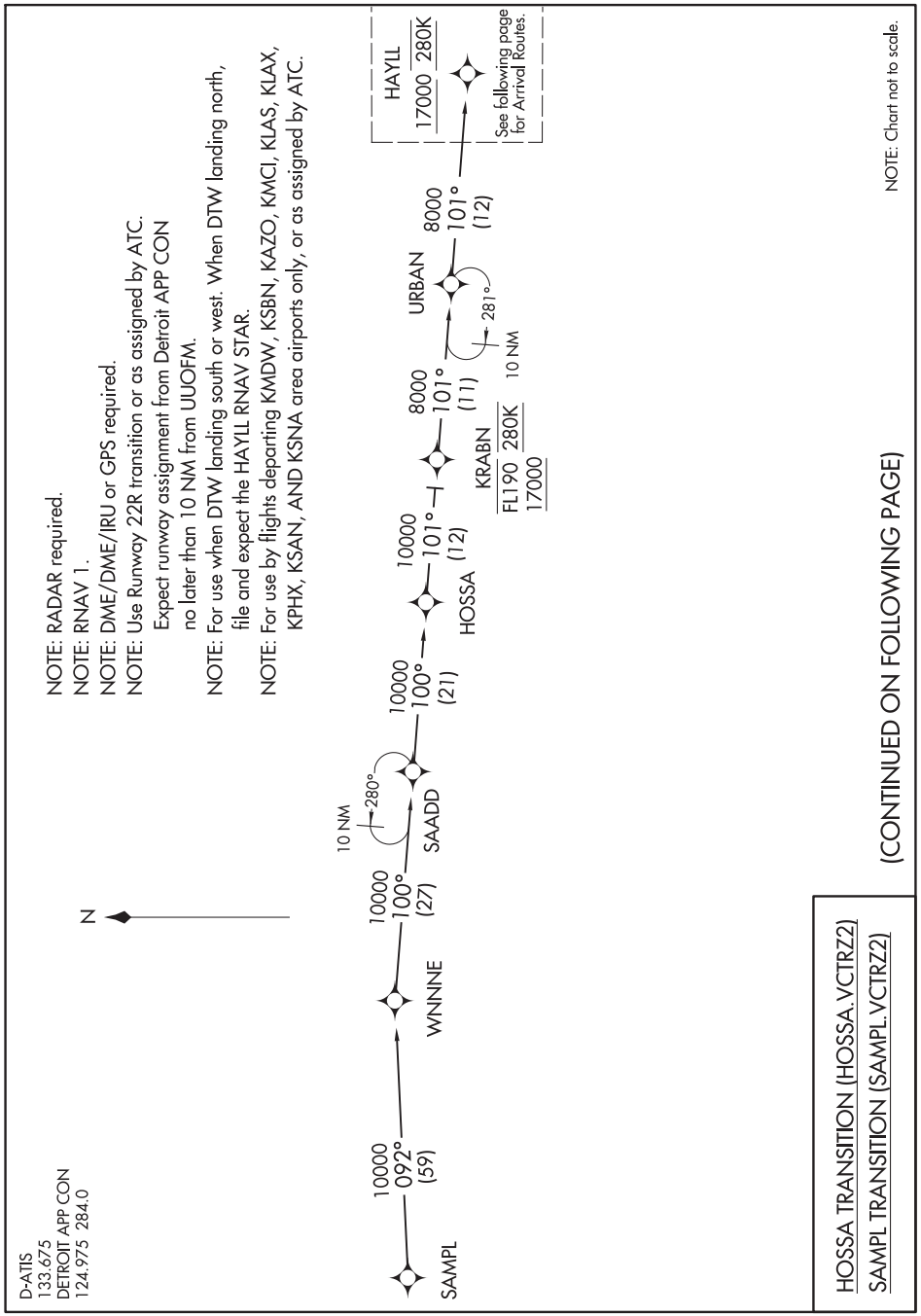
TPGUN TWO ARRIVAL (RNAV)

(TPGUN.TPGUN2) 10OCT19

DETROIT, MICHIGAN
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

VCTRZ TWO ARRIVAL (RNAV) Transition Routes

DETROIT, MICHIGAN



EC-1, 25 FEB 2021 to 22 APR 2021

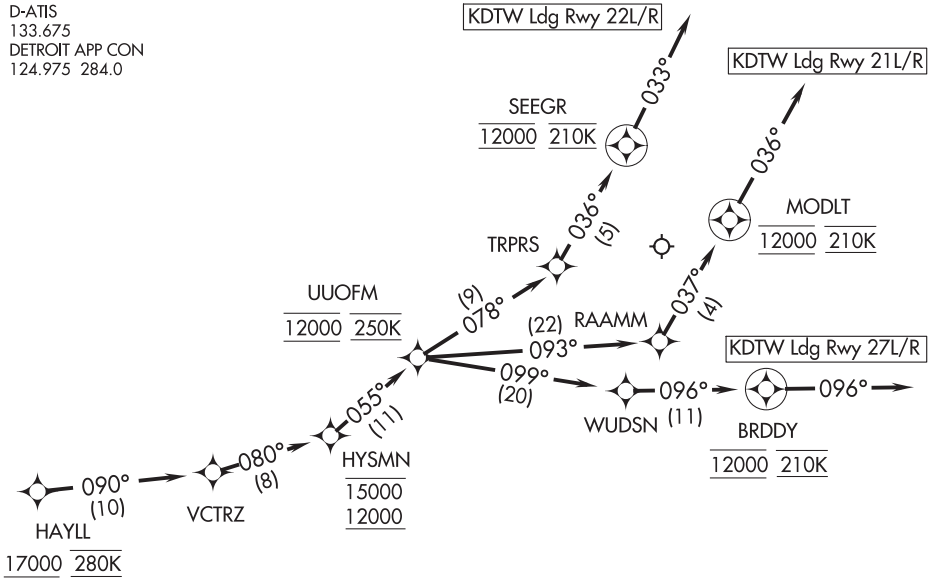
VCTRZ TWO ARRIVAL (RNAV) Transition Routes
DETROIT, MICHIGAN
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

(HAYLL.VCTRZ2) 19283

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

VCTRZ TWO ARRIVAL (RNAV) Arrival Routes

DETROIT, MICHIGAN



NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Use Runway 22R transition or as assigned by ATC. Expect runway assignment from Detroit APP CON no later than 10 NM from UUOFM.
NOTE: For use when DTW landing south or west. When DTW landing north, file and expect the HAYLL RNAV STAR.
NOTE: For use by flights departing KMDW, KSBN, KAZO, KMCI, KLAS, KLAX, KPHX, KSAN, AND KSNA area airports only, or as assigned by ATC.

NOTE: Chart not to scale.

ARRIVAL ROUTE DESCRIPTION

From HAYLL on track 090° to VCTRZ, then on track 080° to cross HYSMN between 12000 and 15000, then on track 055° to cross UUOFM at 12000 and at 250K.

LANDING RUNWAY 21L/R: From UUOFM on track 093° to RAAMM, then on track 037° to cross MODLT at 12000 and at 210K, then on track 036°. Expect RADAR vectors to final approach course.

LANDING RUNWAY 22L/R: From UUOFM on track 078° to TRPRS, then on track 036° to cross SEEGR at 12000 and at 210K, then on track 033°. Expect RADAR vectors to final approach course.

LANDING RUNWAY 27L/R: From UUOFM on track 099° to WUDSN, then on track 096° to cross BRDDY at 12000 and at 210K, then on track 096°. Expect RADAR vectors to final approach course.

VCTRZ TWO ARRIVAL (RNAV) Arrival Routes

DETROIT, MICHIGAN

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

(HAYLL.VCTRZ2) 10OCT19

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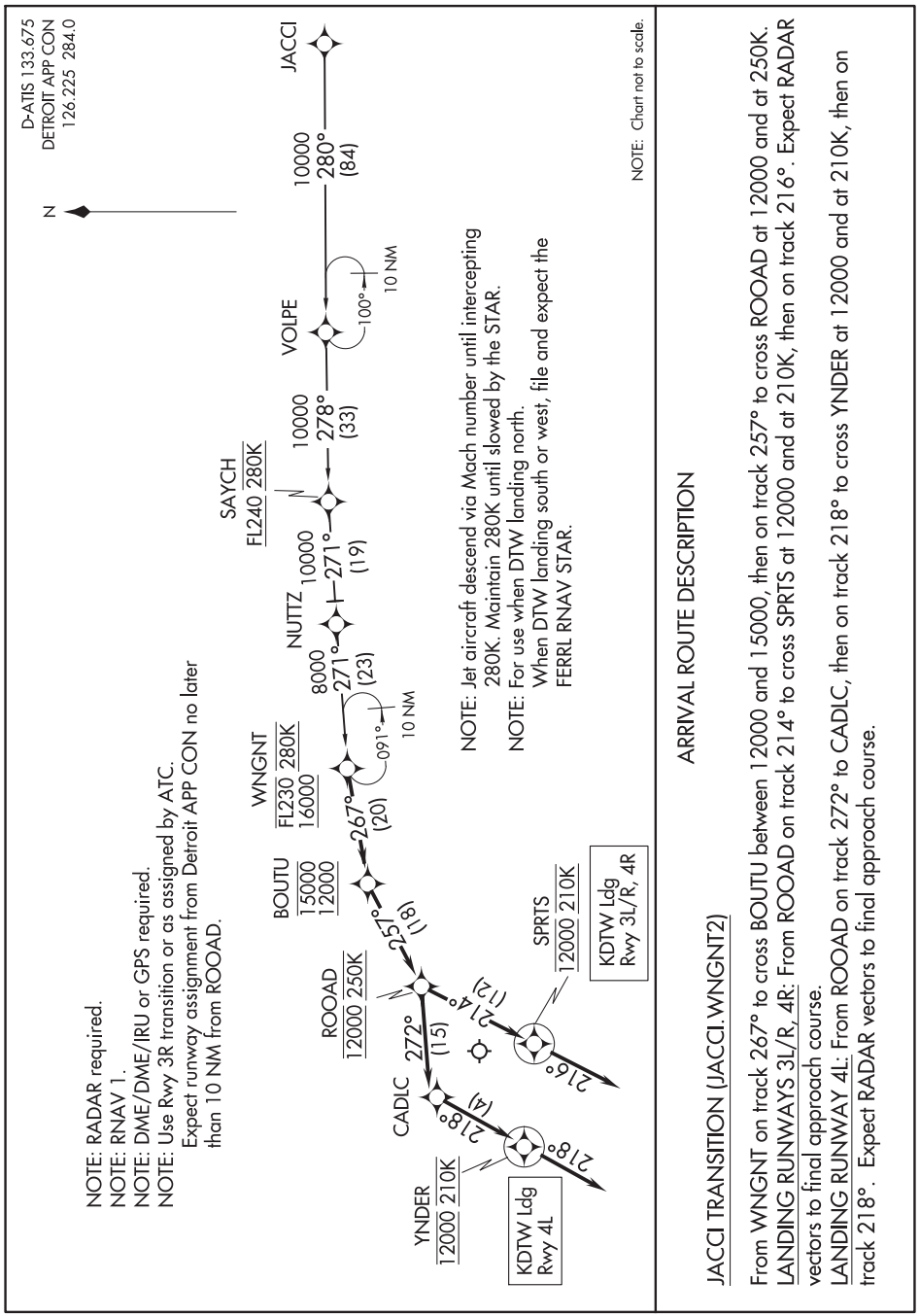
D-ATIS 133.675
DETROIT APP CON
126.225 284.0
N
JACCI
10000
280°
(84)
VOLPE
100°
10 NM
10000
278°
(33)
SAYCH
FL240 280K
NUTTZ
10000
271°
(19)
8000
271°
(23)
091°
10 NM
WNGNT
FL230 280K
16000
267°
(20)
BOUTU
15000
12000
257°
(18)
ROOAD
12000 250K
272°
(15)
CADLC
218°
(4)
YNDER
12000 210K
KDTW Ldg
Rwy 4L
214°
(12)
SPRTS
12000 210K
216°
218°
KDTW Ldg
Rwy 3L/R, 4R
NOTE: RADAR required.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Use Rwy 3R transition or as assigned by ATC.
Expect runway assignment from Detroit APP CON no later than 10 NM from ROOAD.
NOTE: Jet aircraft descend via Mach number until intercepting 280K. Maintain 280K until slowed by the STAR.
NOTE: For use when DTW landing north.
When DTW landing south or west, file and expect the FERRL RNAV STAR.
NOTE: Chart not to scale.
ARRIVAL ROUTE DESCRIPTION
JACCI TRANSITION (JACCI.WNGNT2)
From WNGNT on track 267° to cross BOUTU between 12000 and 15000, then on track 257° to cross ROOAD at 12000 and at 250K.
LANDING RUNWAYS 3L/R, 4R: From ROOAD on track 214° to cross SPRTS at 12000 and at 210K, then on track 216°. Expect RADAR vectors to final approach course.
LANDING RUNWAY 4L: From ROOAD on track 272° to CADLC, then on track 218° to cross YNDER at 12000 and at 210K, then on track 218°. Expect RADAR vectors to final approach course.

INTENTIONALLY

LEFT

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EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 42603 W05A	APP CRS 053°	Rwy ldg 5001 TDZE 798 Apt Elev 798

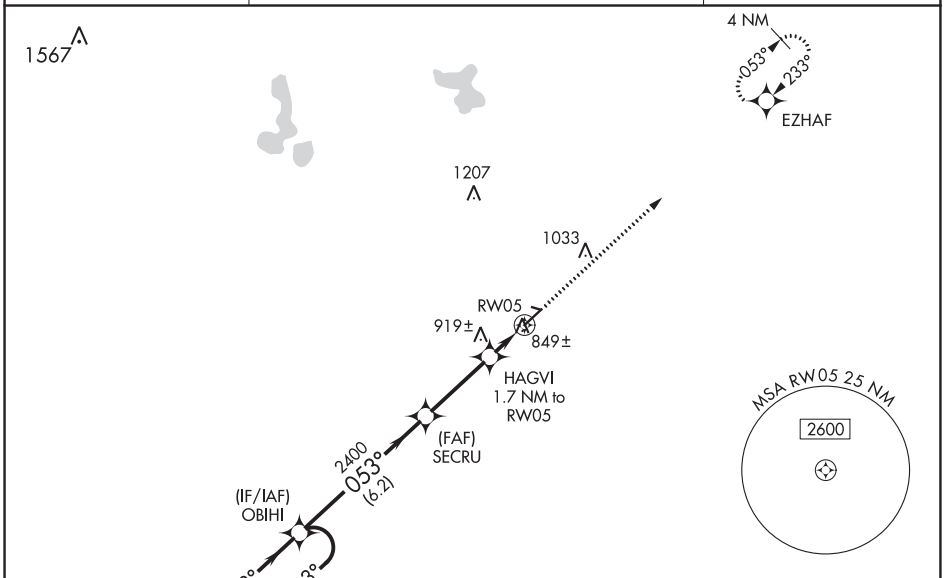
RNAV (GPS) RWY 5
LENAWEE COUNTY (ADG)

RNP APCH.

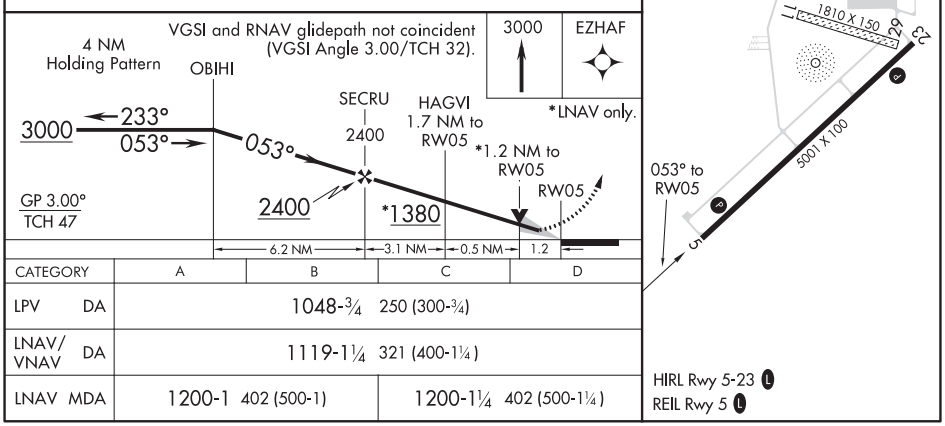
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C. When local altimeter setting not received, use Ann Arbor Muni altimeter setting; increase LPV all Cats DA to 1114 feet and all visibilities ⅛ SM; increase LNAV/VNAV all Cats DA to 1185 feet; increase all MDA 80 feet and visibility LNAV Cats C/D ¼ SM. Baro-VNAV and VDP NA when using Ann Arbor Muni altimeter setting.

MISSED APPROACH: Climb to 3000 direct EZHAF and hold.

ASOS	TOLEDO APP CON	UNICOM
118.375	134.35 317.55	122.8 (CTAF) L



ELEV 798 TDZE 798



CATEGORY	A	B	C	D
LPV DA	1048-¾ 250 (300-¾)			
LNAV/VNAV DA	1119-1¼ 321 (400-1¼)			
LNAV MDA	1200-1 402 (500-1)		1200-1¼ 402 (500-1¼)	

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ADRIAN, MICHIGAN AL-5555 (FAA) 18144

RNAV (GPS) RWY 23
LENAWEE COUNTY (ADG)

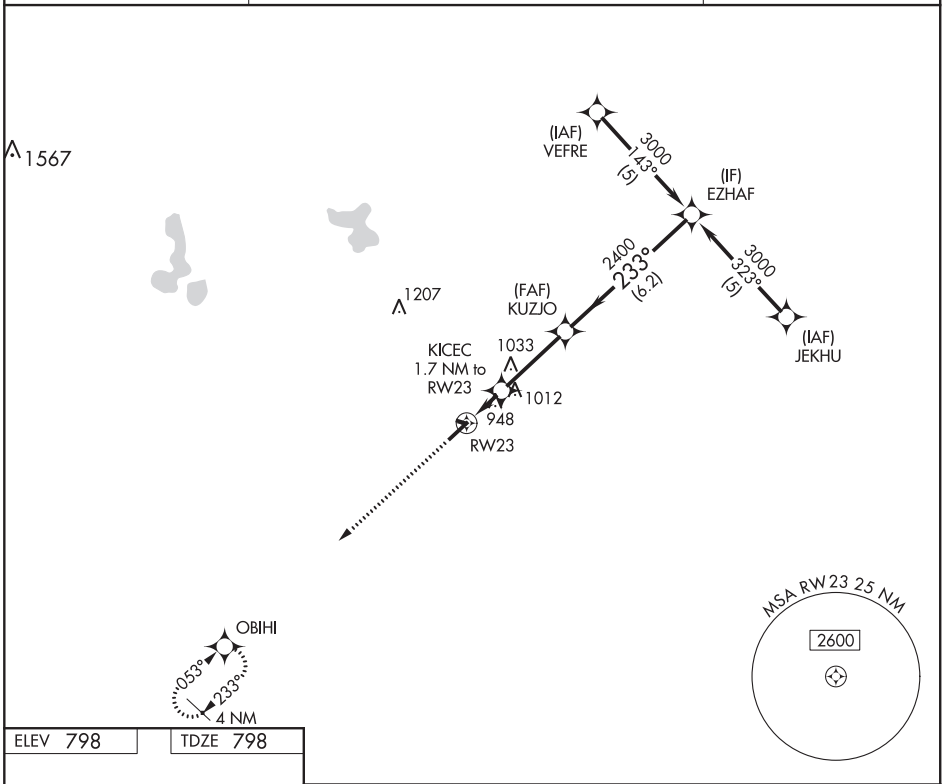
APP CRS	Rwy ldg	5001
233°	TDZE	798
	Apt Elev	798

RNP APCH.

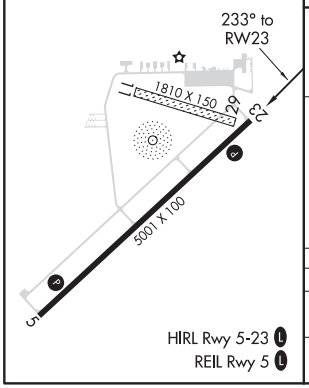
Rwy 23 helicopter visibility reduction below ¾ SM NA. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Ann Arbor Muni altimeter setting: increase all MDAs 80 feet and visibility LNAV Cat C/D and Circling Cat C ¼ SM.

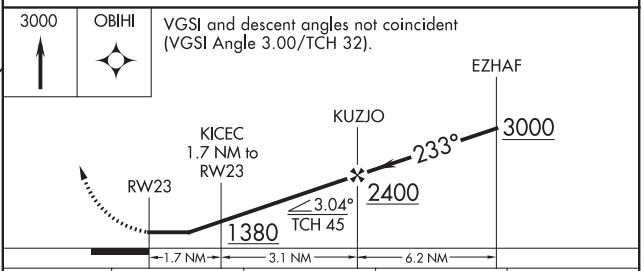
MISSED APPROACH: Climb to 3000 direct OBIHI and hold.

ASOS	TOLEDO APP CON	UNICOM
118.375	134.35 317.55	122.8 (CTAF) L



ELEV 798 TDZE 798





CATEGORY	A	B	C	D
LNAV MDA	1260-1 462 (500-1)		1260-1⅜ 462 (500-1⅜)	1260-1½ 462 (500-1½)
CIRCLING	1300-1 502 (600-1)	1320-1 522 (600-1)	1320-1½ 522 (600-1½)	1380-2 582 (600-2)

ADRIAN, MICHIGAN 41°52′N-84°05′W LENAWEE COUNTY (ADG)
Orig-A 24MAY18 RNAV (GPS) RWY 23

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APP CRS	Rwy ldg	4300
103°	TDZE	706
	Apt Elev	706

RNAV (GPS) RWY 11
PADGHAM FIELD (35D)

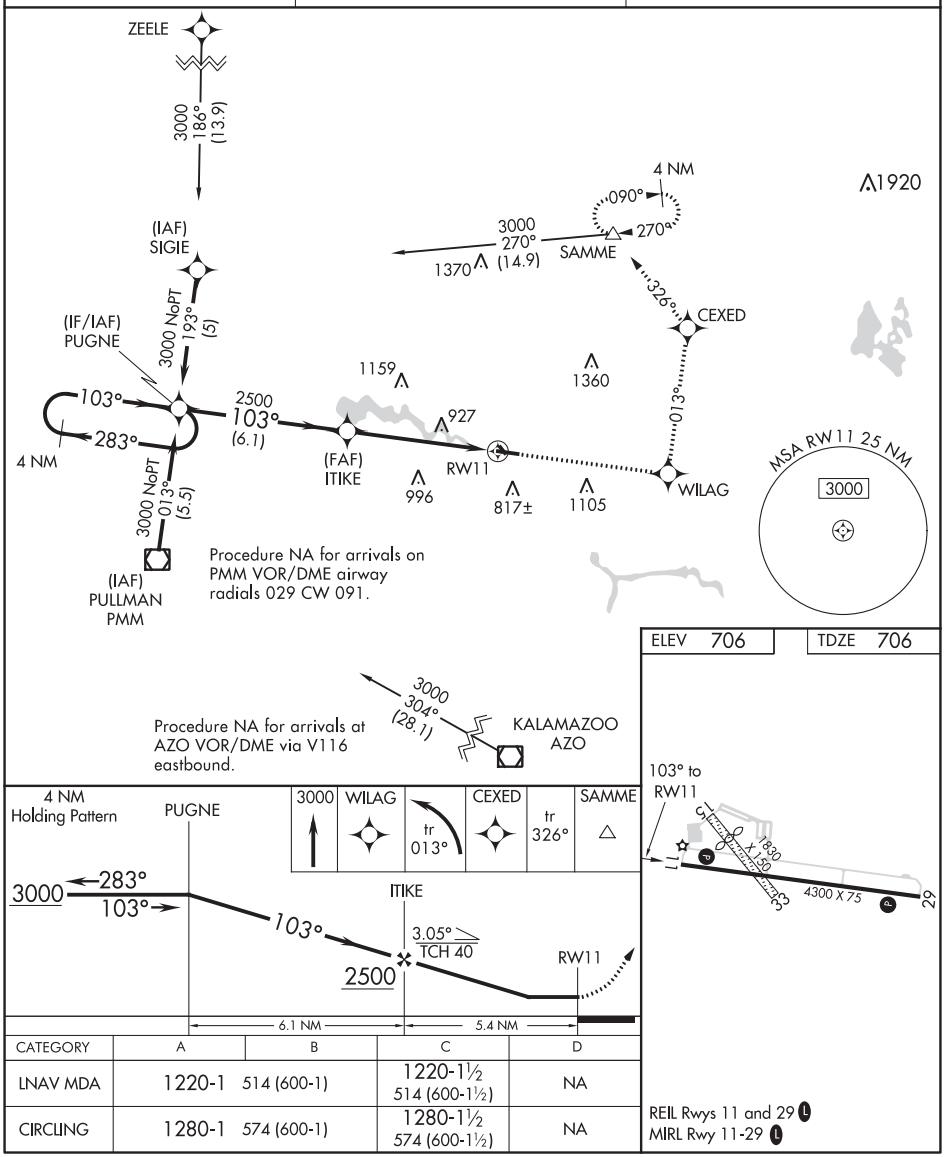
RNP APCH.

NA

Rwy 11 helicopter visibility reduction below ¾ SM NA. Use Holland altimeter setting, when not received use Grand Rapids altimeter setting and increase all MDAs 40 feet. Circling NA to Rwys 15 and 33. Circling Rwy 29 NA at night.

MISSED APPROACH: Climb to 3000 direct WILAG and left turn on track 013° to CEXED and on track 326° to SAMME and hold.

BIV ASOS	GREAT LAKES APP CON ★	UNICOM
119.025	128.4 257.6	122.8 (CTAF) L



ELEV 706 TDZE 706

CATEGORY	A	B	C	D
LNAV MDA	1220-1 514 (600-1)		1220-1½ 514 (600-1½)	NA
CIRCLING	1280-1 574 (600-1)		1280-1½ 574 (600-1½)	NA

REIL Rwys 11 and 29 L
MIRL Rwy 11-29 L

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ALLEGAN, MICHIGAN

AL-5465 (FAA)

19283

RNAV (GPS) RWY 29

PADGHAM FIELD (35D)

APP CRS	Rwy ldg	4300
283°	TDZE	705
	Apt Elev	706

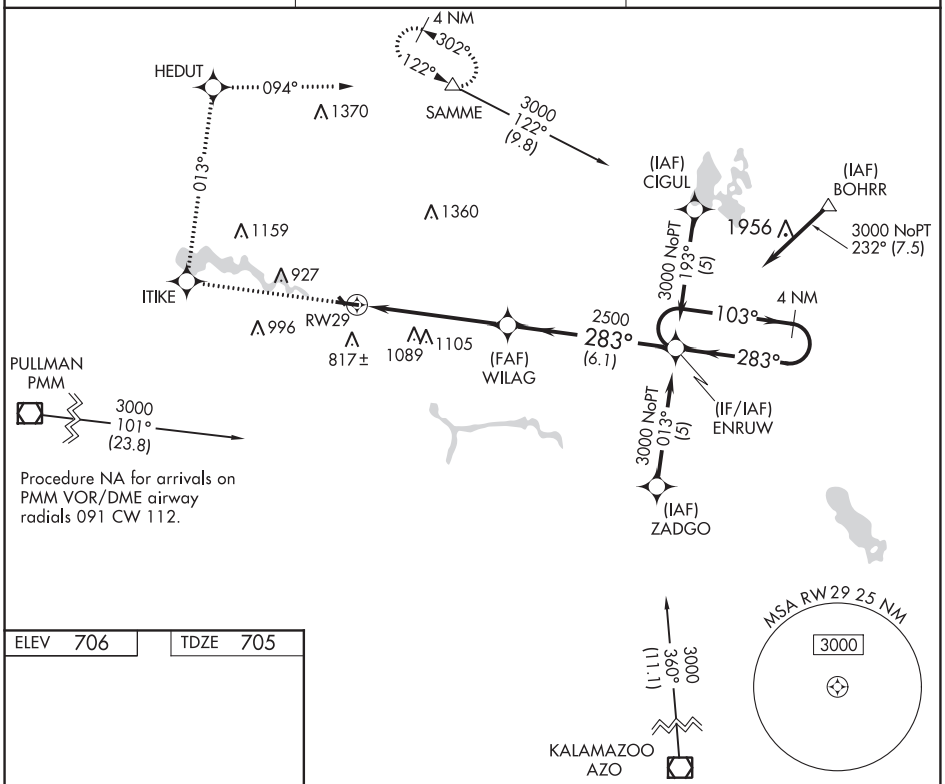
RNP APCH.

NA

Rwy 29 helicopter visibility reduction below 1 SM NA. Use Holland altimeter setting, when not received use Grand Rapids altimeter setting and increase all MDAs 40 feet. Circling NA to Rwys 15 and 33. Straight-in Rwy 29 NA at night, Circling Rwy 29 NA at night.

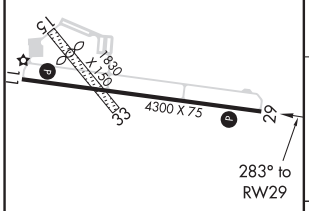
MISSED APPROACH: Climb to 3000 direct ITIKE and right turn on track 013° to HEDUT and on track 094° to SAMME and hold.

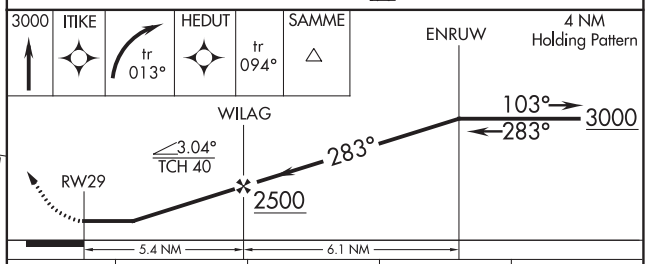
BIV ASOS	GREAT LAKES APP CON ★	UNICOM
119.025	128.4 257.6	122.8 (CTAF) L



Procedure NA for arrivals on PMM VOR/DME airway radials 091 CW 112.

ELEV 706	TDZE 705





CATEGORY	A	B	C	D
LNAV MDA	1380-1 675 (700-1)		1380-2 675 (700-2)	NA
CIRCLING	1380-1 674 (700-1)		1380-2 674 (700-2)	NA

REIL Rwys 11 and 29 L
MIRL Rwy 11-29 L

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WAAS CH 90228 W09A	APP CRS 095°	Rwy ldg 5004 TDZE 753 Apt Elev 754

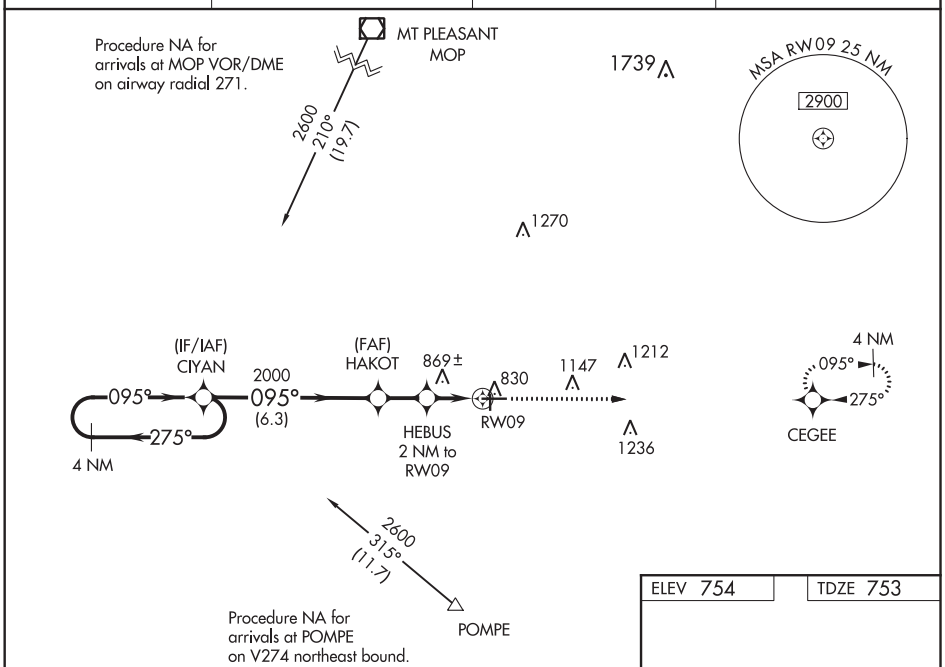
RNAV (GPS) RWY 9
GRATIOT COMMUNITY (AMN)

RNP APCH.

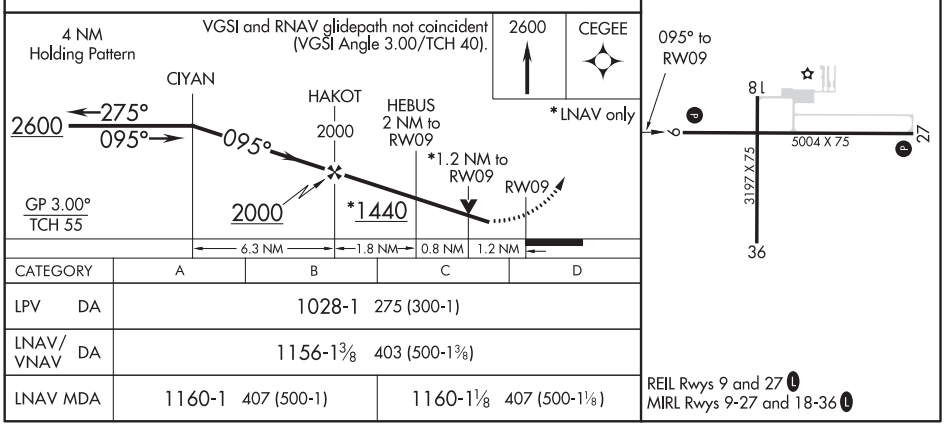
Baro-VNAV NA when using Mount Pleasant altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 39°C. Rwy 9 helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Mount Pleasant altimeter setting and increase all DA 42 feet and VNAV all Cats visibility ⅛ mile, increase all MDA 60 feet, and LNAV Cat C and D visibility ¼ mile. VDP NA when using Mount Pleasant altimeter setting.

MISSED APPROACH: Climb to 2600 direct CEGEE and hold.

AWOS-3	GREAT LAKES APP CON*	CLNC DEL	UNICOM
124.175	126.45 235.625	119.25	122.8 (CTAF) L



ELEV 754 TDZE 753



CATEGORY	A	B	C	D
LPV DA	1028-1 275 (300-1)			
LNAV/VNAV DA	1156-1⅜ 403 (500-1⅜)			
LNAV MDA	1160-1 407 (500-1)		1160-1⅛ 407 (500-1⅛)	

REIL Rwys 9 and 27 L
MIRL Rwys 9-27 and 18-36 L

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ALMA, MICHIGAN

AL-5620 (FAA)

19339

APP CRS	Rwy ldg	3197
185°	TDZE	754
	Apt Elev	754

RNAV (GPS) RWY 18
GRATIOT COMMUNITY (AMN)

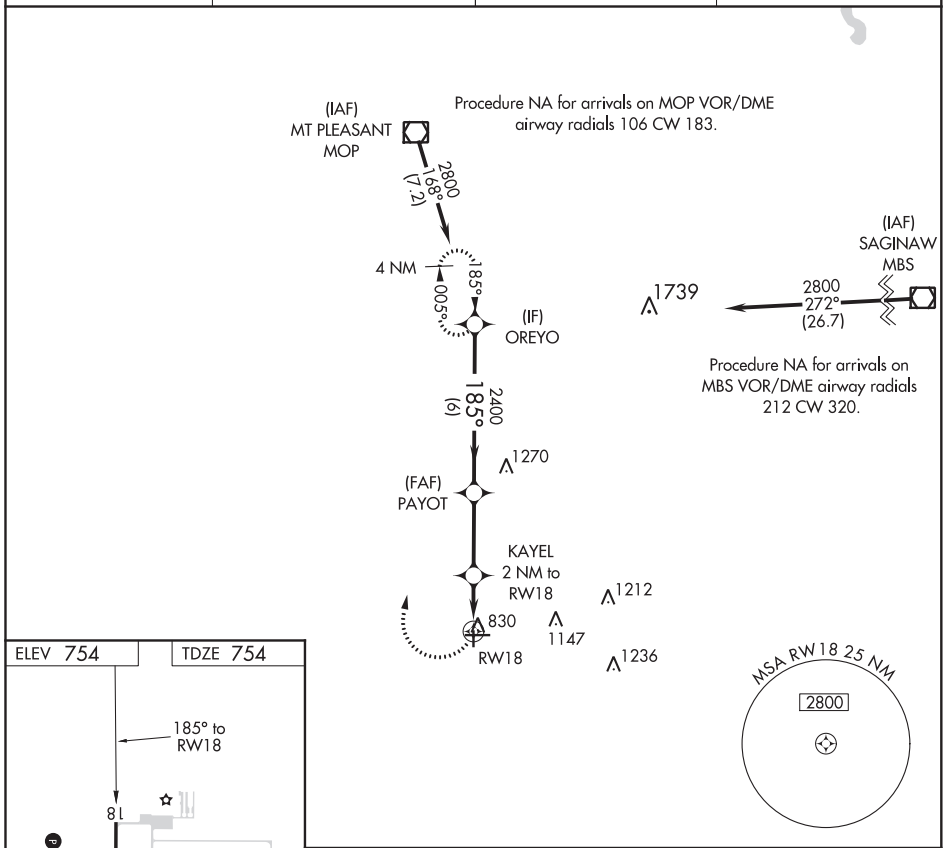
RNP APCH.

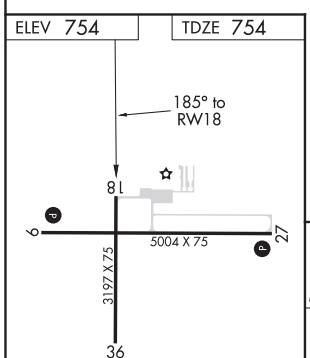
NA

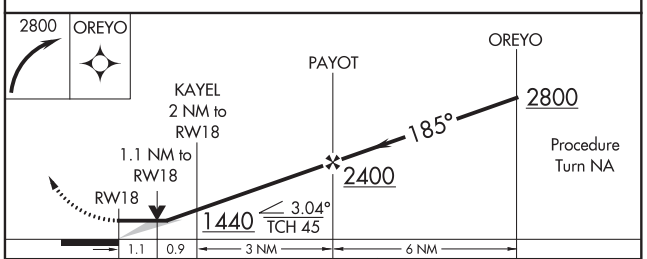
Procedure NA at night.

MISSED APPROACH: Climbing right turn to 2800 direct OREYO WP and hold.

AWOS-3	GREAT LAKES APP CON★	CLNC DEL	UNICOM
124.175	126.45 235.625	119.25	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1160-1 406 (500-1)		1160-1¼ 406 (500-1¼)	NA

REIL Rwys 9 and 27 L
MIRL Rwys 9-27 and 18-36 L

ALMA, MICHIGAN
Orig-A 18JUL19

43°19′N-84°41′W

GRATIOT COMMUNITY (AMN)
RNAV (GPS) RWY 18

EC-1, 25 FEB 2021 to 22 APR 2021

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RNAV (GPS) RWY 27
GRATIOT COMMUNITY (AMN)

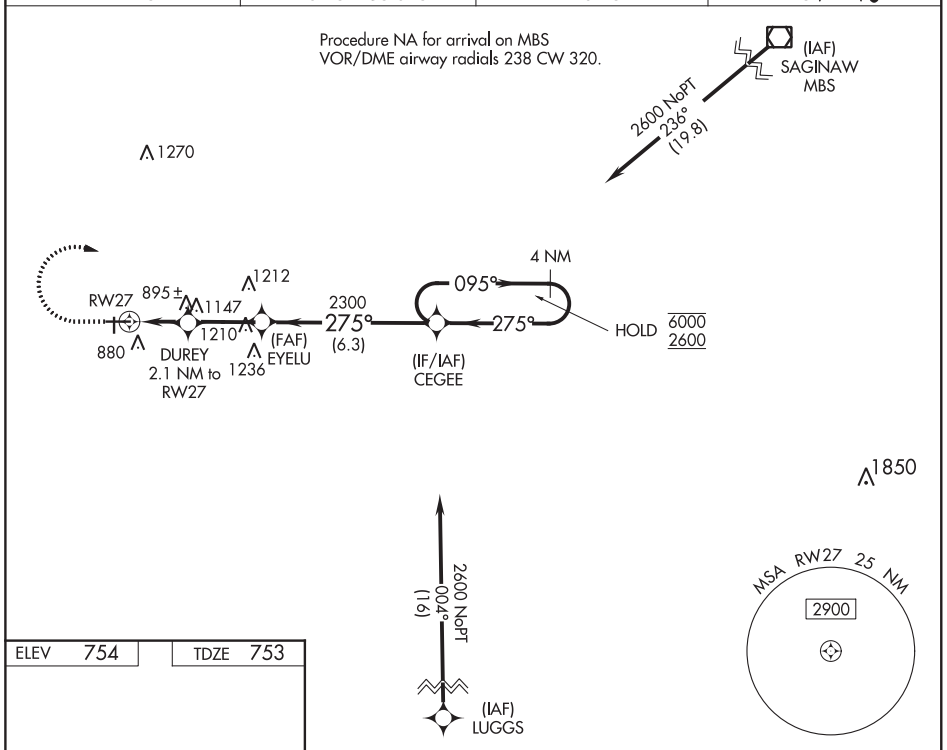
WAAS CH 58028 W27A	APP CRS 275°	Rwy ldg 5004 TDZE 753 Apt Elev 754

RNP APCH.

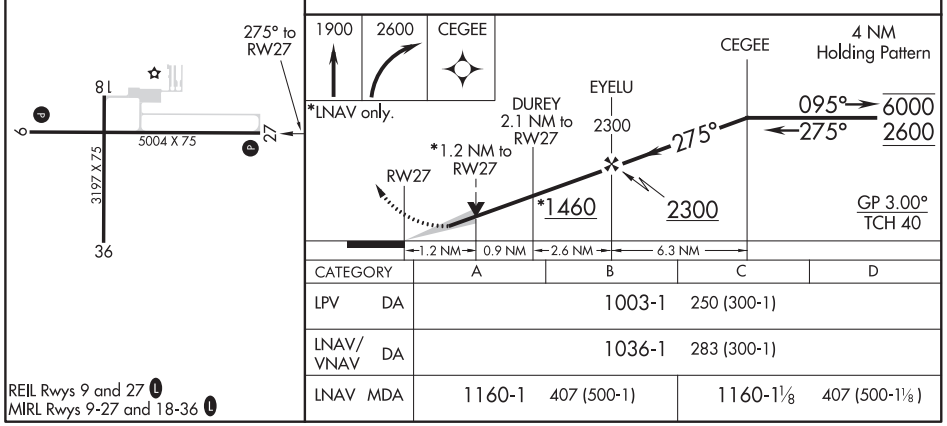
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C.

MISSED APPROACH: Climb to 1900 then climbing right turn 2600 direct CEGEE and hold.

AWOS-3	GREAT LAKES APP CON ★	CLNC DEL	UNICOM
124.175	126.45 235.625	119.25	122.8 (CTAF) L



ELEV 754	TDZE 753



CATEGORY	A	B	C	D
LPV DA	1003-1 250 (300-1)			
LNAV/VNAV DA	1036-1 283 (300-1)			
LNAV MDA	1160-1 407 (500-1)		1160-1⅛ 407 (500-1⅛)	

REIL Rwys 9 and 27 L
MIRL Rwys 9-27 and 18-36 L

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

ALMA, MICHIGAN | AL-5620 (FAA) | 19339

VOR/DME MOP	APP CRS	Rwy ldg	3197
110.6	178°	TDZE	753
Chan 43		Apt Elev	754

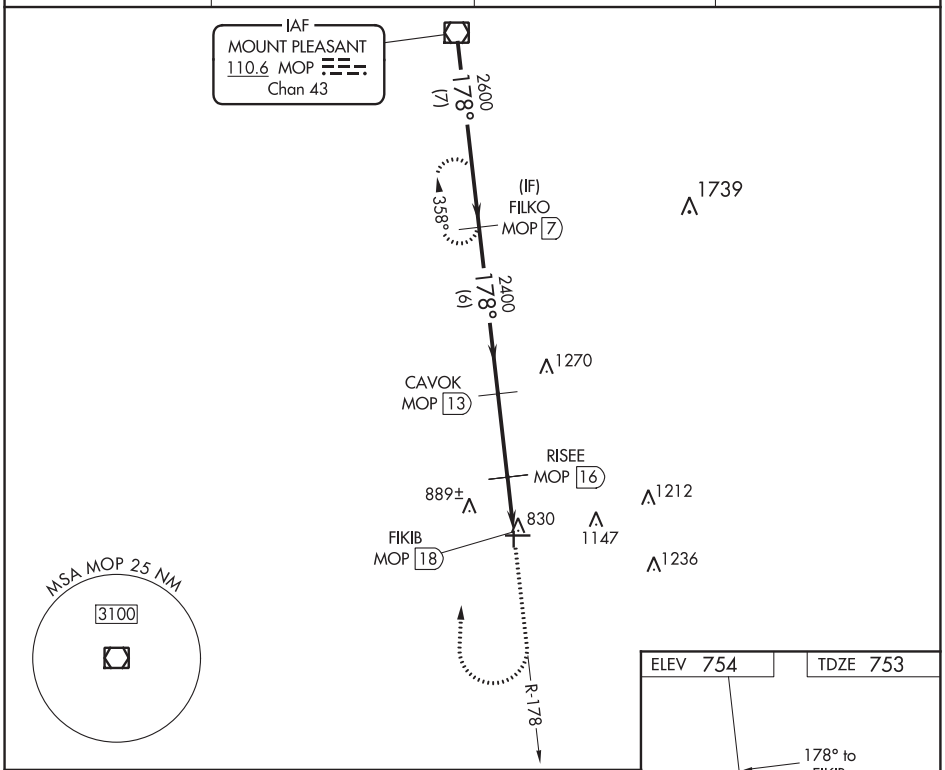
VOR RWY 18
GRATIOT COMMUNITY (AMN)

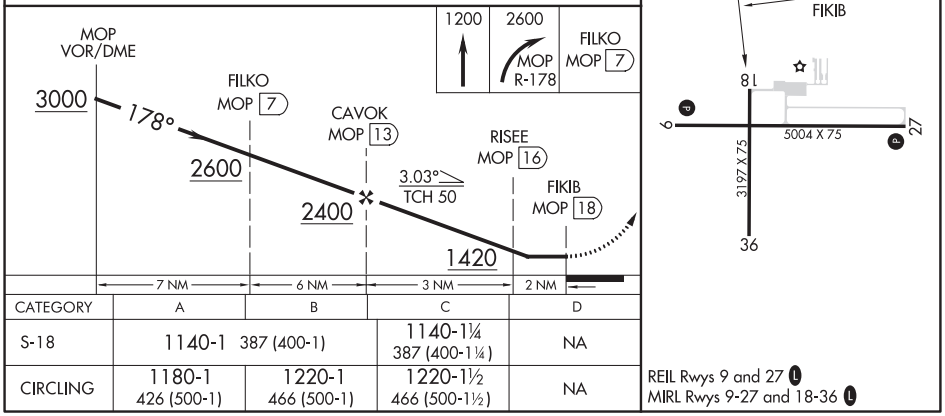
NA

Night landing: Rwy 18, 36 NA. DME required.
Straight-in Rwy 18 NA at night, Circling Rwy 18, 36 NA at night. Rwy 18 helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 1200 then climbing right turn to 2600 on MOP VOR/DME R-178 direct FILKO/MOP VOR/DME 7 DME and hold.

AWOS-3	GREAT LAKES APP CON*		CLNC DEL	UNICOM
124.175	126.45	235.625	119.25	122.8 (CTAF) L





CATEGORY	A	B	C	D
S-18	1140-1 387 (400-1)		1140-1¼ 387 (400-1¼)	NA
CIRCLING	1180-1 426 (500-1)	1220-1 466 (500-1)	1220-1½ 466 (500-1½)	NA

REIL Rwys 9 and 27 L
MIRL Rwys 9-27 and 18-36 L

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LOC I-APN	APP CRS	Rwy ldg	9001
109.7	007°	TDZE	685
		Apt Elev	690

ILS or LOC RWY 1
ALPENA COUNTY RGNL (APN)

ADF required.

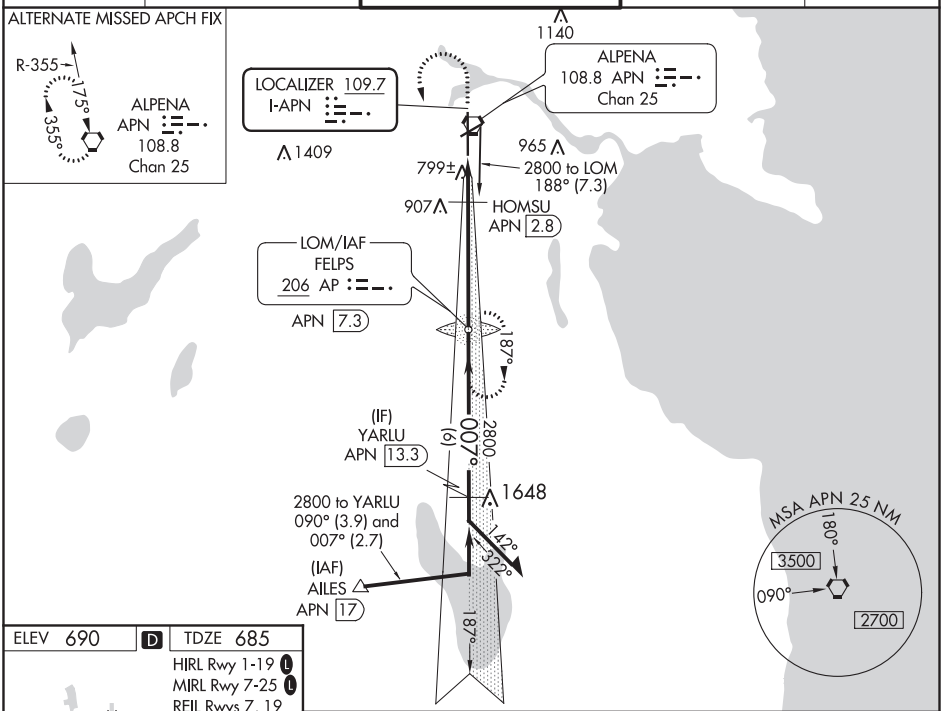
For inop ALS, increase S-LOC 1 Cat C/D visibility to 1⅝ SM.

-32°C

MALSR

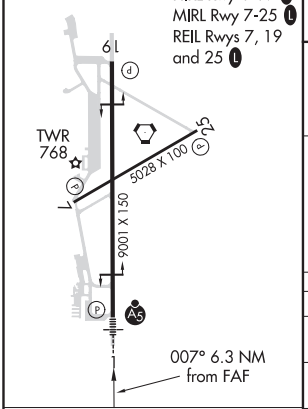
MISSED APPROACH: Climb to 1100 then climbing left turn to 2800 direct AP LOM and hold.

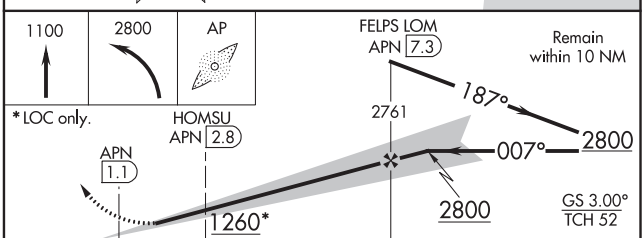
ASOS	ALPENA APP CON ★	ALPENA TOWER ★	GND CON	UNICOM
120.675	128.425 379.3	121.35 (CTAF) L 318.1	121.9 275.8	122.95



ELEV 690 D TDZE 685

HIRL Rwy 1-19 L
MIRL Rwy 7-25 L
REIL Rwys 7, 19 and 25 L





CATEGORY	A	B	C	D
S-ILS 1	885-½ 200 (200-½)			
S-LOC 1	1260-½ 575 (600-½)		1260-1¼ 575 (600-1¼)	

FAF to MAP 6.3 NM					
Knots	60	90	120	150	180
Min:Sec	6:18	4:12	3:09	2:31	2:06

HOMSU FIX MINIMUMS	
S-LOC 1	1140-½ 455 (500-½)

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ALPENA, MICHIGAN AL-718 (FAA) 20226

WAAS CH 50310 W01A	APP CRS 007°	Rwy ldg 9001 TDZE 685 Apt Elev 690

RNAV (GPS) RWY 1
ALPENA COUNTY RGNL (APN)

RNP APCH.

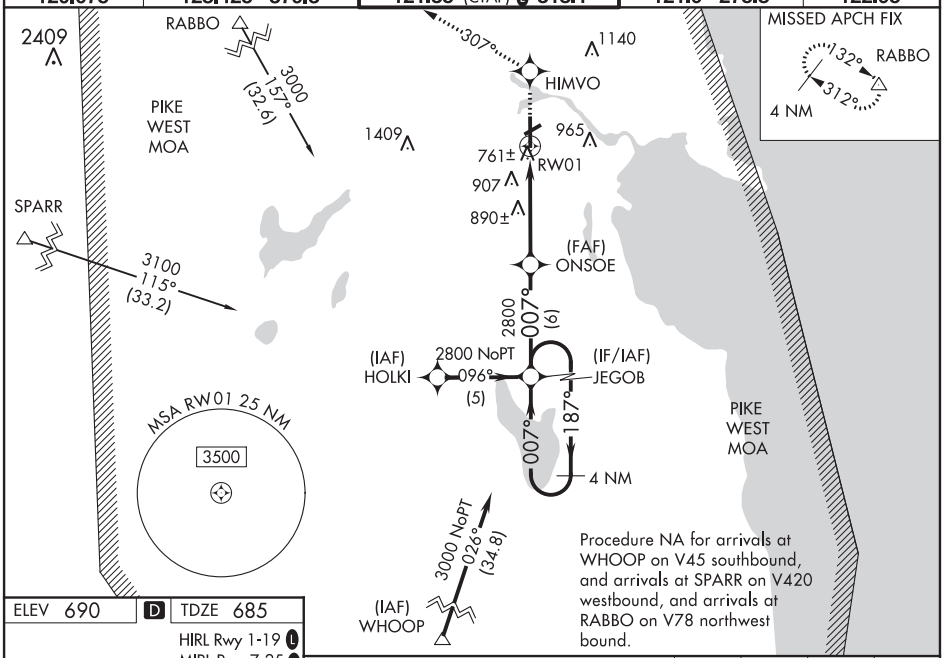
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 48°C. When local altimeter setting not received, use Rogers City altimeter setting; increase all LPV DAs to 1029 feet, LNAV/VNAV DAs to 1084 feet and all MDAs 60 feet; increase LPV all Cats, LNAV/VNAV all Cats and LNAV Cats C and D visibility ¼ SM. Baro-VNAV and VDP NA when using Roger City altimeter setting. For inop ALS, increase LPV all Cats visibility to 1 SM.

-32°C

MALSR

MISSED APPROACH: Climb to 3500 direct HIMVO and on track 307° to RABBO and hold.

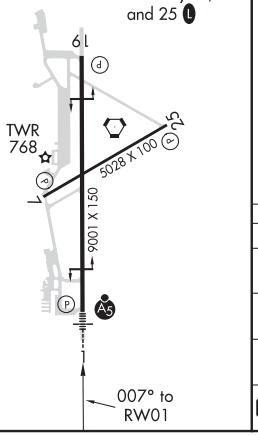
ASOS	ALPENA APP CON ★	ALPENA TOWER ★	GND CON	UNICOM
120.675	128.425 379.3	121.35 (CTAF) L 318.1	121.9 275.8	122.95

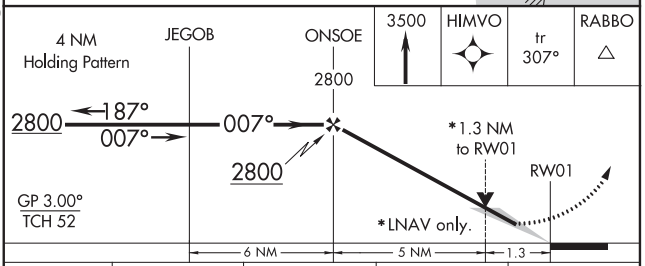


Procedure NA for arrivals at WHOOP on V45 southbound, and arrivals at SPARR on V420 westbound, and arrivals at RABBO on V78 northwest bound.

ELEV 690 | D | TDZE 685

HIRL Rwy 1-19 L
MIRL Rwy 7-25 L
REIL Rwys 7, 19 and 25 L





CATEGORY	A	B	C	D
LPV DA	974-½ 289 (300-½)			
LNAV/VNAV DA	1029-¾ 344 (400-¾)			
LNAV MDA	1160-½ 475 (500-½)		1160-¾ 475 (500-¾)	1160-1 475 (500-1)
C CIRCLING	1160-1 470 (500-1)		1220-1½ 530 (600-1½)	1280-2 590 (600-2)

ALPENA, MICHIGAN
Orig-D 13AUG20

45°05'N-83°34'W

ALPENA COUNTY RGNL (APN)
RNAV (GPS) RWY 1

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RNAV (GPS) RWY 19
ALPENA COUNTY RGNL (APN)

WAAS CH 53717 W19A	APP CRS 187°	Rwy ldg 9001 TDZE 683 Apt Elev 690

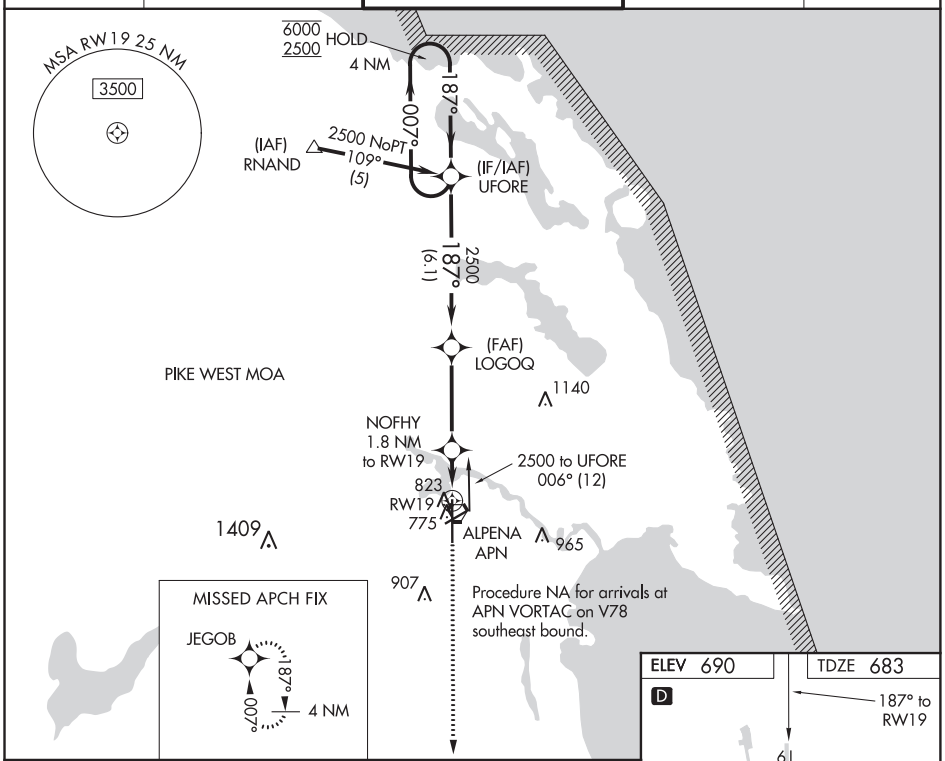
RNP APCH.

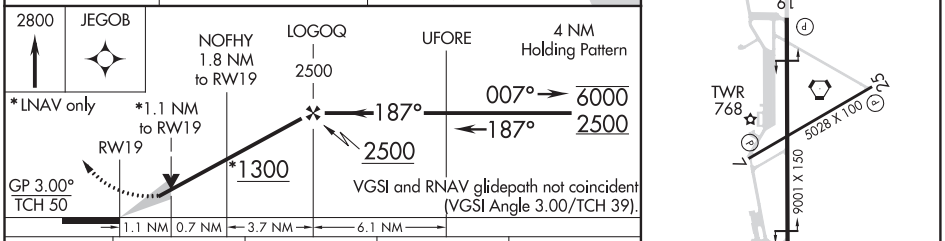
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C.

-32°C

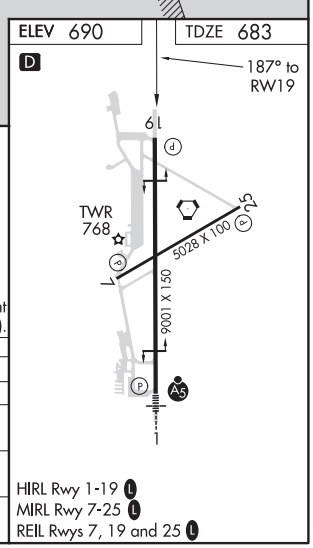
MISSED APPROACH: Climb to 2800 direct JEGOB and hold.

ASOS	ALPENA APP CON ★	ALPENA TOWER ★	GND CON	UNICOM
120.675	128.425 379.3	121.35 (CTAF) L 318.1	121.9 275.8	122.95





CATEGORY	A	B	C	D
LPV DA	933-¾ 250 (300-¾)			
LNAV/VNAV DA	1020-1¼ 337 (400-1¼)			
LNAV MDA	1080-1 397 (400-1)		1080-1⅛ 397 (400-1⅛)	
C CIRCLING	1140-1 450 (500-1)		1220-1½ 530 (600-1½)	1280-2 590 (600-2)



HIRL Rwy 1-19 L
MIRL Rwy 7-25 L
REIL Rwys 7, 19 and 25 L

ALPENA, MICHIGAN

AL-718 (FAA)

19227

VOR RWY 19

ALPENA COUNTY RGNL (APN)

VORTAC APN	APP CRS	Rwy ldg	9001
108.8	175°	TDZE	683
Chan 25		Apt Elev	690

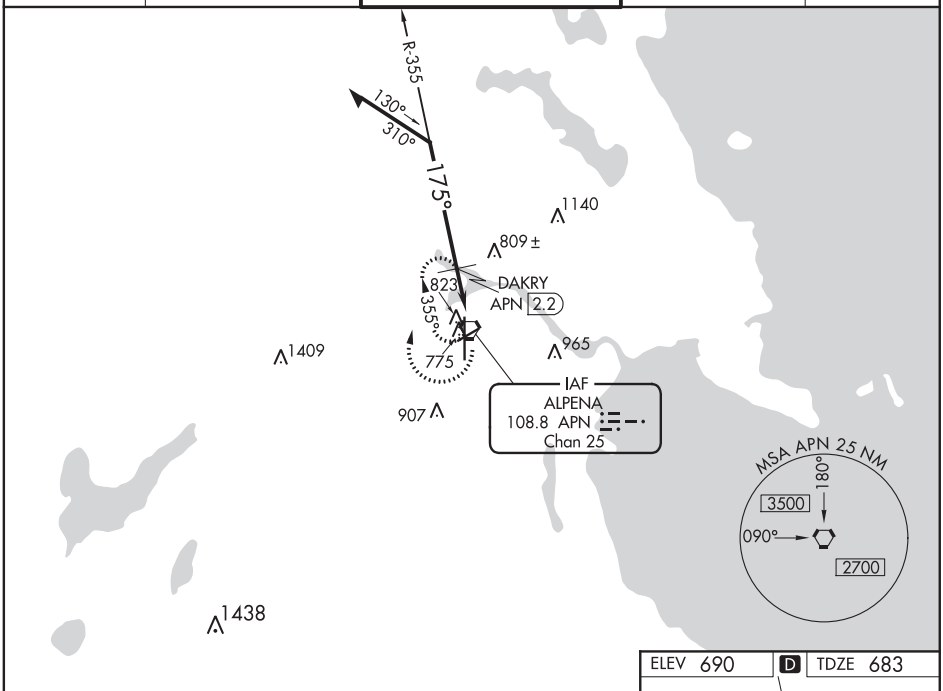
T

-32°C

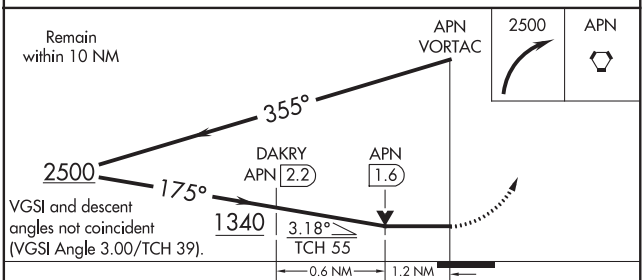
Rwy 19 helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climbing right turn to 2500 in APN VORTAC holding pattern.

ASOS	ALPENA APP CON ★	ALPENA TOWER ★	GND CON	UNICOM
120.675	128.425 379.3	121.35 (CTAF) L 318.1	121.9 275.8	122.95



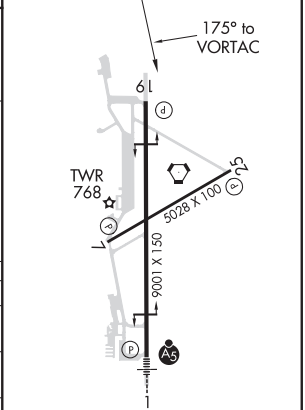
Remain within 10 NM



VGSI and descent angles not coincident (VGSI Angle 3.00/TCH 39).

CATEGORY	A	B	C	D
S-19	1340-1 657 (700-1)		1340-1⅞	657 (700-1⅞)
C CIRCLING	1340-1 650 (700-1)		1340-1⅞ 650 (700-1⅞)	1340-2 650 (700-2)
DAKRY FIX MINIMUMS				
S-19	1100-1 417 (500-1)		1100-1⅛	417 (500-1⅛)
C CIRCLING	1140-1 450 (500-1)		1220-1½ 530 (600-1½)	1280-2 590 (600-2)

ELEV 690 D TDZE 683



HIRL Rwy 1-19 L
MIRL Rwy 7-25 L
REIL Rwys 7, 19 and 25 L

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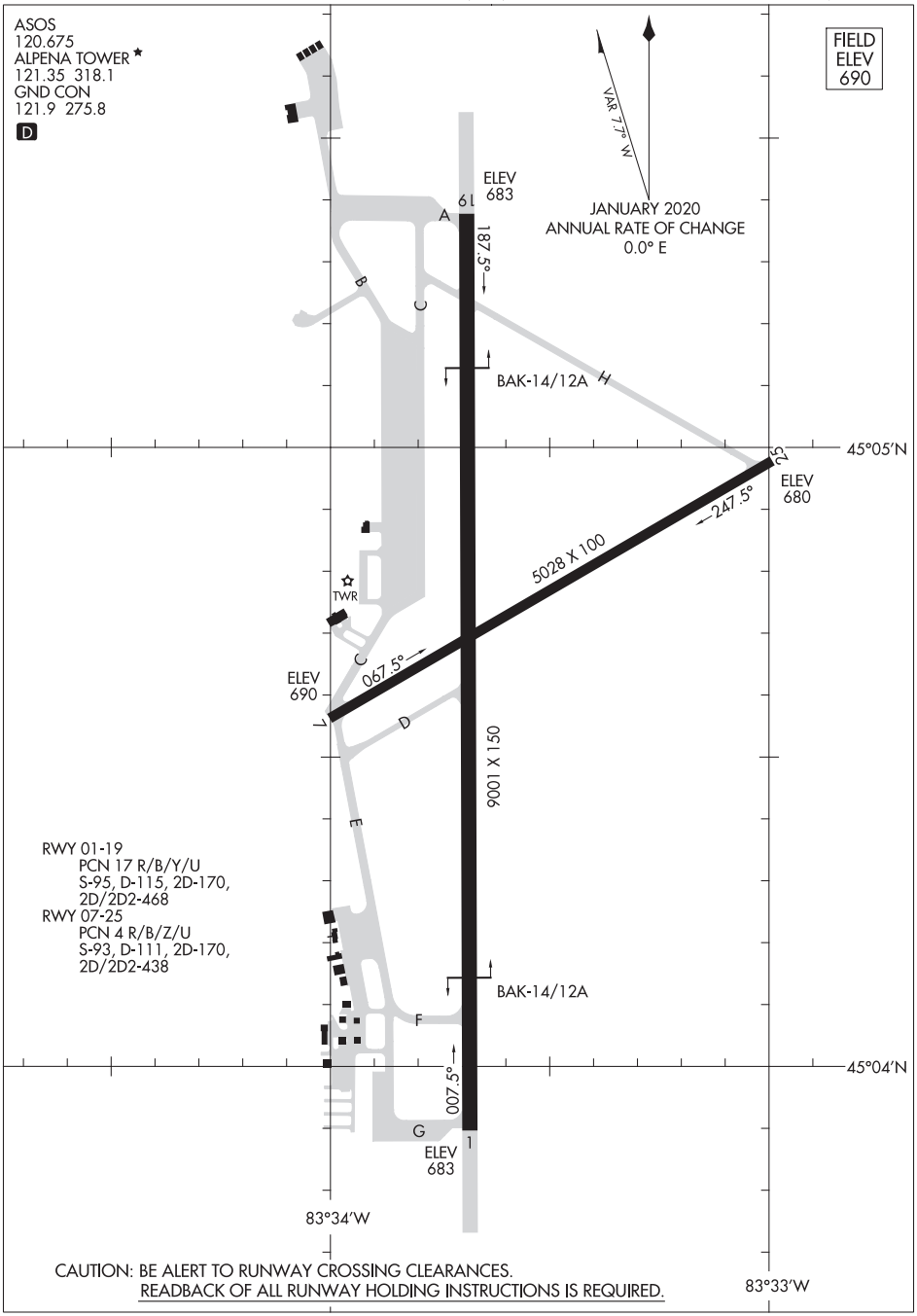
AL-718 (FAA)



CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

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ANN ARBOR, MICHIGAN AL-5506 (FAA) 20086

WAAS CH 77601 W06A	APP CRS 059°	Rwy ldg 3505 TDZE 831 Apt Elev 839

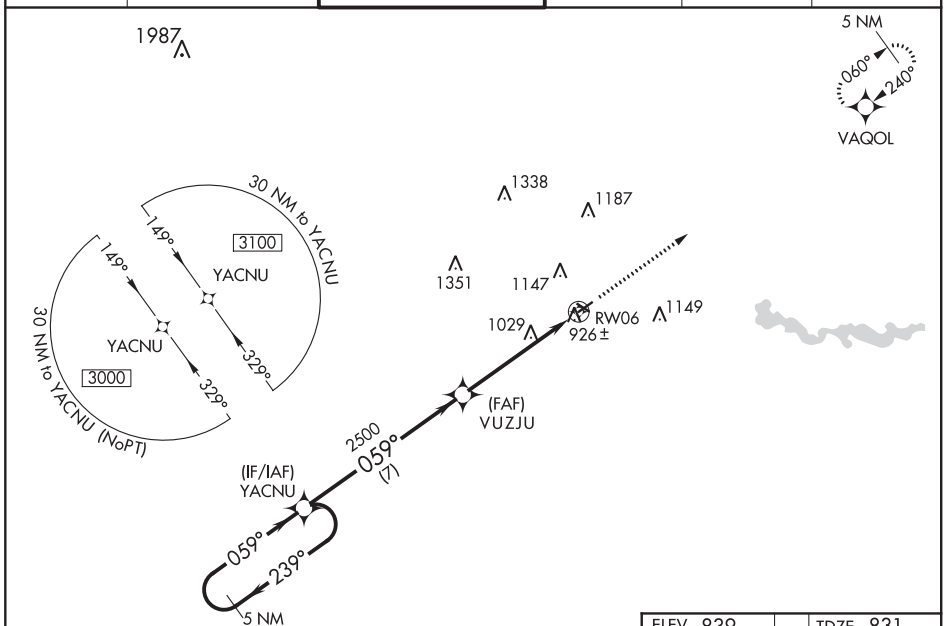
RNAV (GPS) RWY 6
ANN ARBOR MUNI (ARB)

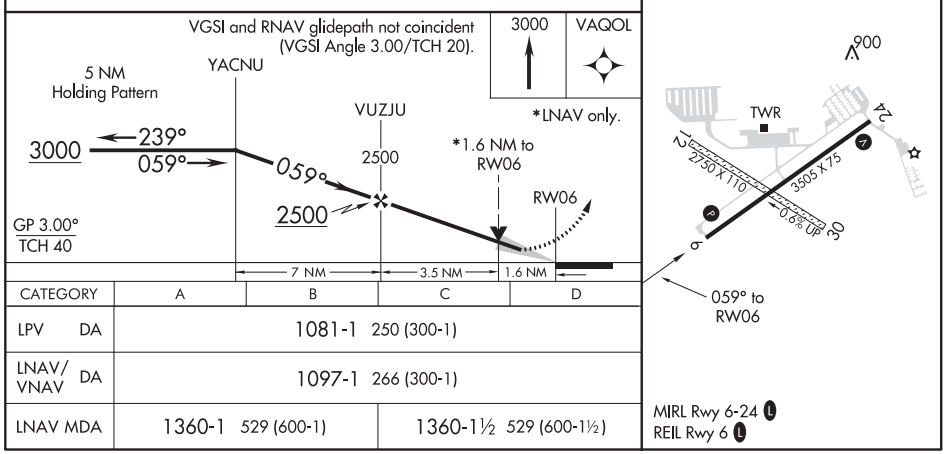
RNP APCH.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 38°C. VDP and Baro-VNAV NA when using Willow Run altimeter setting. When local altimeter setting not received, use Willow Run altimeter setting and increase all DA/MDA 40 feet; increase LNAV Cats C and D visibility ⅛ SM.

MISSED APPROACH: Climb to 3000 direct VAQOL and hold.

ATIS	DETROIT APP CON	ANN ARBOR TOWER ★	GND CON	CLNC DEL	UNICOM
134.55	118.95 284.0	120.3 (CTAF) L	121.6	121.6	123.0





CATEGORY	A	B	C	D
LPV DA	1081-1 250 (300-1)			
LNAV/VNAV DA	1097-1 266 (300-1)			
LNAV MDA	1360-1 529 (600-1)		1360-1½ 529 (600-1½)	

MIRL Rwy 6-24 L
REIL Rwy 6 L

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WAAS CH 61120 W24A	APP CRS 240°	Rwy ldg 3505 TDZE 831 Apt Elev 839

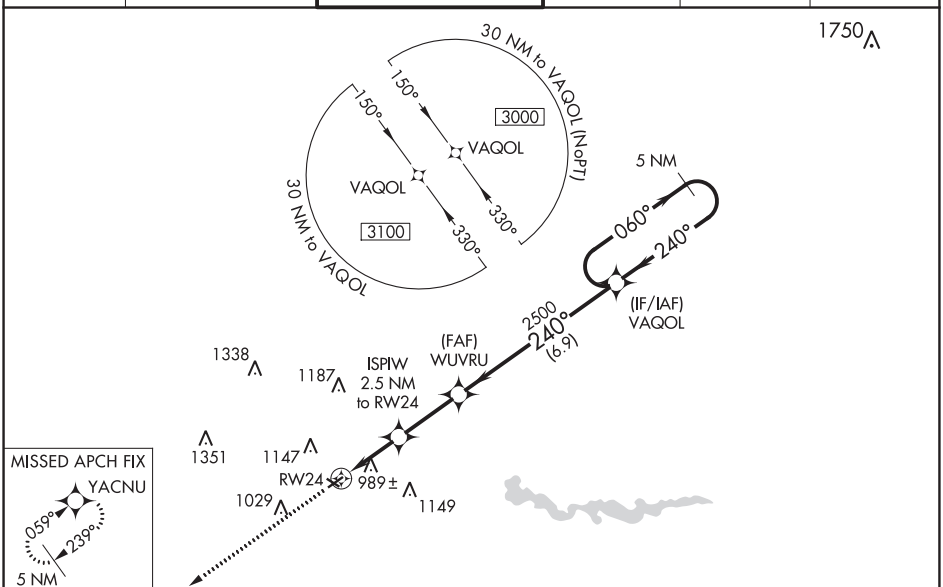
RNAV (GPS) RWY 24
ANN ARBOR MUNI (ARB)

RNP APCH.

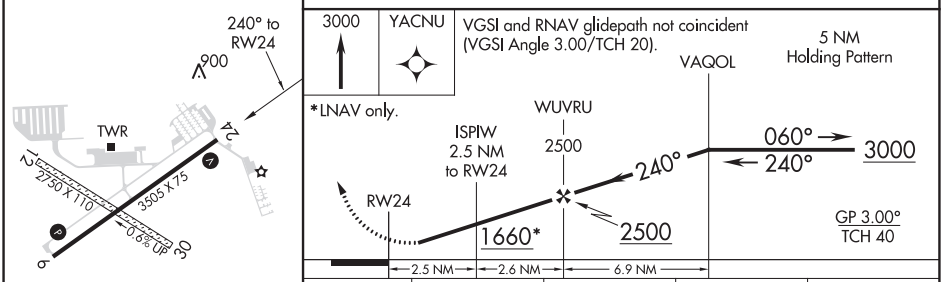
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 38°C. Baro-VNAV NA when using Willow Run altimeter setting. Rwy 24 helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Willow Run altimeter setting and increase all DA/MDA 40 feet.

MISSED APPROACH: Climb to 3000 direct YACNU and hold.

ATIS	DETROIT APP CON	ANN ARBOR TOWER ★	GND CON	CLNC DEL	UNICOM
134.55	118.95 284.0	120.3 (CTAF) L	121.6	121.6	123.0



ELEV 839 TDZE 831



CATEGORY	A	B	C	D
LPV DA	1081-1 250 (300-1)			
LNAV/VNAV DA	1155-1 324 (400-1)			
LNAV MDA	1300-1 469 (500-1)		1300-1¼ 469 (500-1¼)	

MIRL Rwy 6-24 L
REIL Rwy 6 L

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ANN ARBOR, MICHIGAN AL-5506 (FAA) 20086

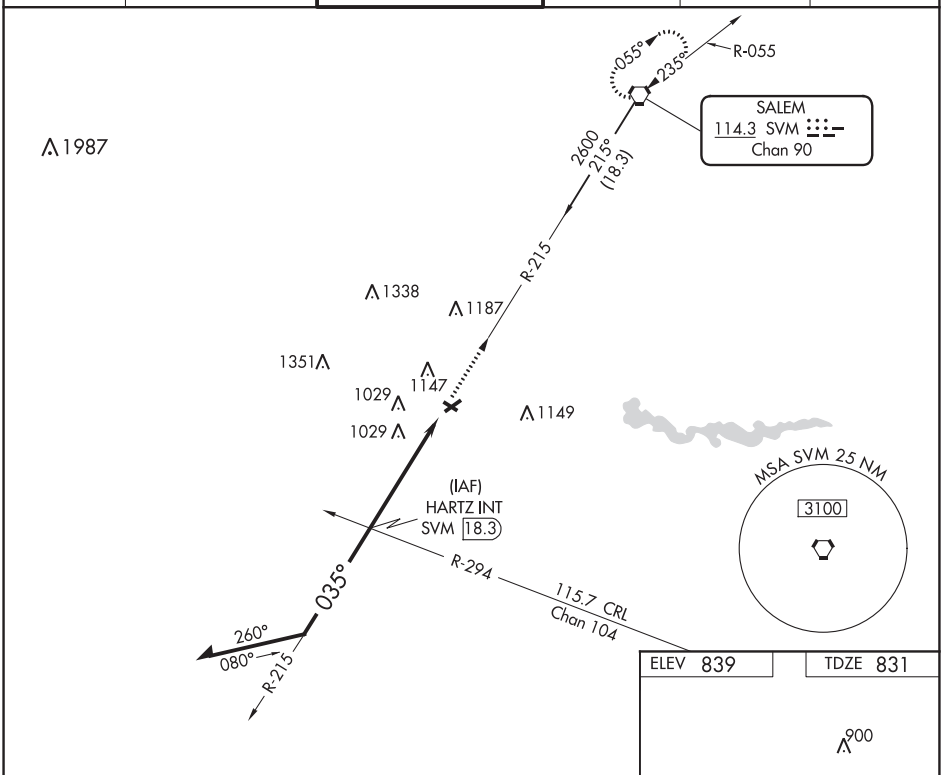
VOR RWY 6
ANN ARBOR MUNI (ARB)

VORTAC SVM	APP CRS	Rwy ldg	3505
114.3	035°	TDZE	831
Chan 90		Apt Elev	839

When local altimeter setting not received, use Willow Run altimeter setting and increase all MDA 40 feet and Cat C/D visibility ⅛ mile and Circling Cat C/D visibility ¼ mile.
Rwy 6 helicopter visibility reduction below ¾ SM NA. Circling NA to Rwys 12 and 30.

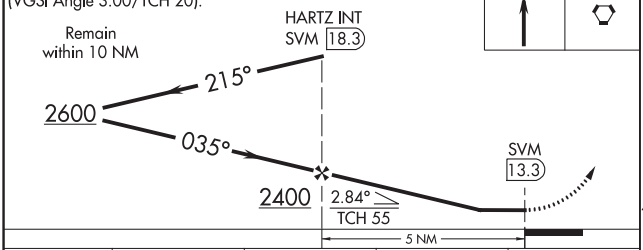
MISSED APPROACH: Climb to 3000 direct SVM VORTAC and hold.

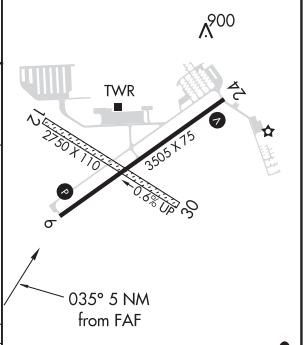
ATIS	DETROIT APP CON	ANN ARBOR TOWER ★	GND CON	CLNC DEL	UNICOM
134.55	118.95 284.0	120.3 (CTAF)	121.6	121.6	123.0



ELEV 839 TDZE 831

VGSI and descent angles not coincident
(VGSI Angle 3.00/TCH 20).





REIL Rwy 6
MIRL Rwy 6-24

CATEGORY	A	B	C	D
S-6	1360-1 529 (600-1)		1360-1½ 529 (600-1½)	
CIRCLING	1500-1 661 (700-1)		1500-1¾ 661 (700-1¾)	1500-2 661 (700-2)

FAF to MAP 5 NM

Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

ANN ARBOR, MICHIGAN
Amdt 13E 01FEB18

42°13′N-83°45′W

ANN ARBOR MUNI (ARB)
VOR RWY 6

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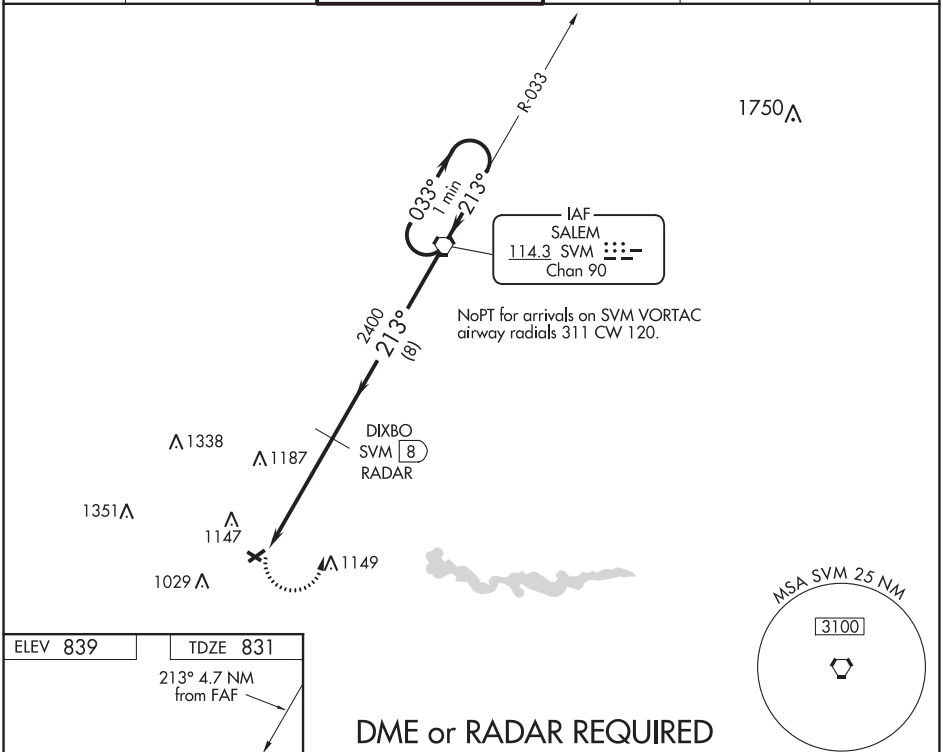
VOR RWY 24
ANN ARBOR MUNI (ARB)

VORTAC SVM	APP CRS	Rwy ldg	3505
114.3	213°	TDZE	831
Chan 90		Apt Elev	839

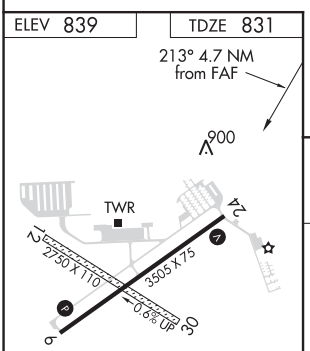
Inop table does not apply. Rwy 24 helicopter visibility reduction below ¾ SM NA.
When local altimeter setting not received, use Willow Run altimeter setting and increase all MDAs 40 feet and increase visibility S-24 Cat C/D visibility ⅛ SM and Circling Cat C/D visibility ¼ SM. Circling NA to Rwys 12 and 30.

MISSED APPROACH: Climbing left turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	ANN ARBOR TOWER ★	GND CON	CLNC DEL	UNICOM
134.55	118.95 284.0	120.3 (CTAF) L	121.6	121.6	123.0

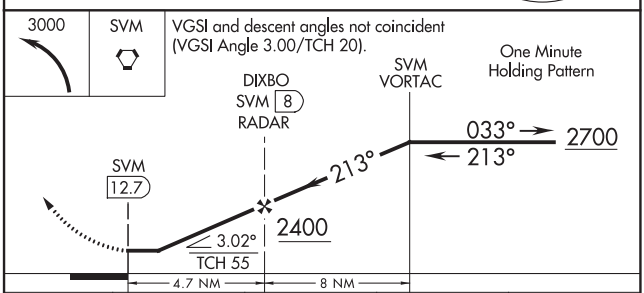


DME or RADAR REQUIRED



MIRL Rwy 6-24 L
REIL Rwy 6 L

FAF to MAP 4.7 NM					
Knots	60	90	120	150	180
Min:Sec	4:42	3:08	2:21	1:53	1:34



CATEGORY	A	B	C	D
S-24	1460-1	629 (700-1)	1460-1¾ 629 (700-1¾)	1460-1¾ 629 (700-1¾)
CIRCLING	1500-1	661 (700-1)	1500-1¾ 661 (700-1¾)	1500-2 661 (700-2)

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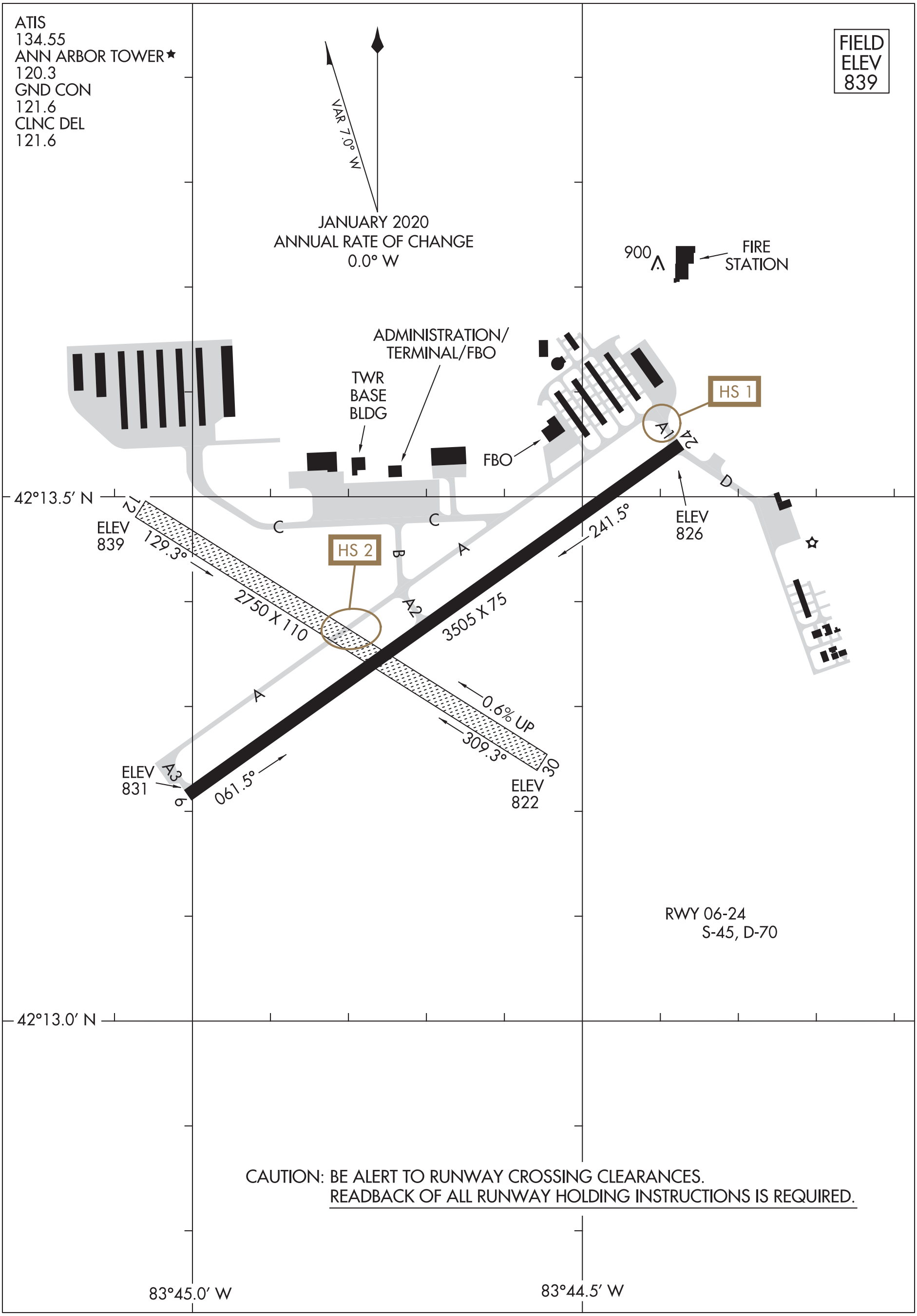
20086

AIRPORT DIAGRAM

AL-5506 (FAA)

ANN ARBOR MUNI (ARB)
ANN ARBOR, MICHIGAN



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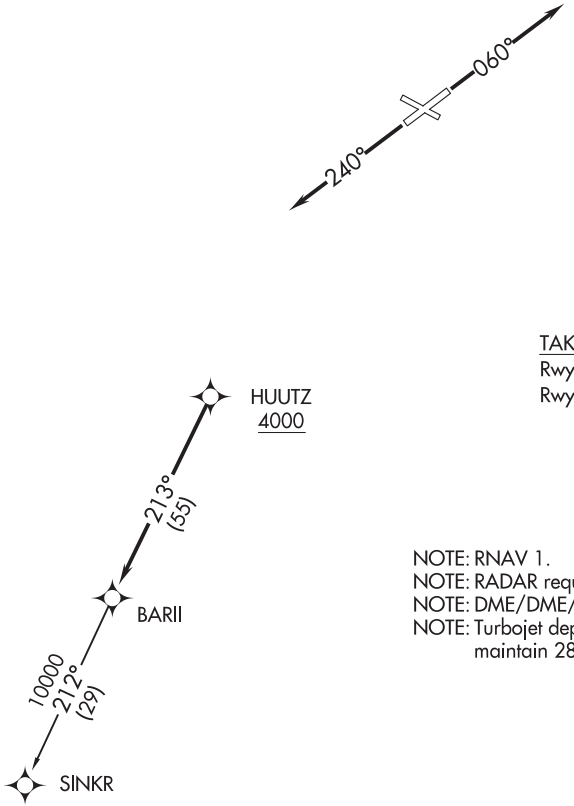
TOP ALTITUDE: ASSIGNED BY ATC

ATIS
134.55
CLNC DEL
121.6
GND CON
121.6
ANN ARBOR TOWER★
120.3 (CTAF)
DETROIT DEP CON
118.95 284.0



TAKEOFF MINIMUMS:
Rwys 6, 24: Standard.
Rwys 12, 30: NA-Environmental.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 6: Climb on heading 060° or as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....
TAKEOFF RUNWAY 24: Climb on heading 240° or as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....

....on track 213° to BARII, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

SINKR TRANSITION (BARII2.SINKR):

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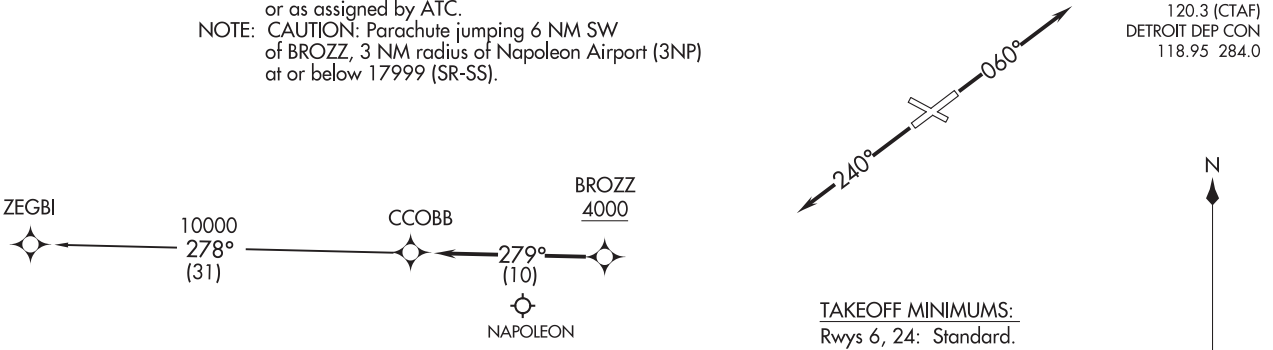
EC-1, 25 FEB 2021 to 22 APR 2021

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: For use by aircraft filed at or below FL220, or as assigned by ATC.
NOTE: CAUTION: Parachute jumping 6 NM SW of BROZZ, 3 NM radius of Napoleon Airport (3NP) at or below 17999 (SR-SS).

ATIS
134.55
CLNC DEL
121.6
GND CON
121.6
ANN ARBOR TOWER ★
120.3 (CTAF)
DETROIT DEP CON
118.95 284.0



TAKEOFF MINIMUMS:
Rwys 6, 24: Standard.
Rwys 12, 30: NA-Environmental.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

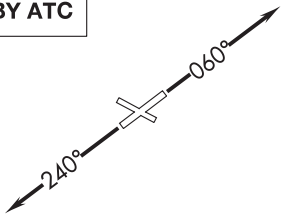
TAKEOFF RUNWAY 6: Climb on heading 060° or as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 24: Climb on heading 240° or as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....

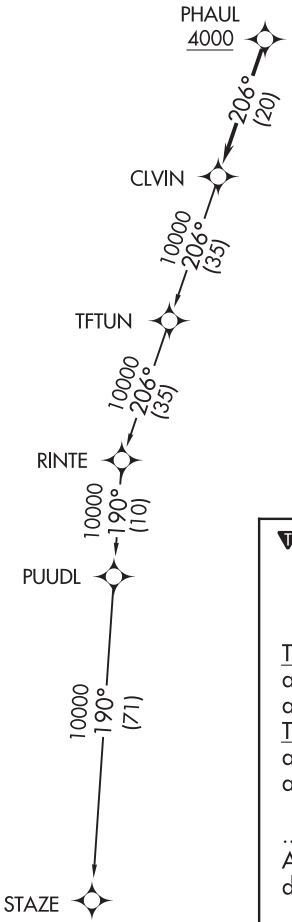
....on track 279° to CCOBB, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ZEGBI TRANSITION (CCOBB2.ZEGBI):

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
134.55
CLNC DEL
121.6
GND CON
121.6
ANN ARBOR TOWER ★
120.3 (CTAF)
DETROIT DEP CON
118.95 284.0





TAKEOFF MINIMUMS:
Rwys 6, 24: Standard.
Rwys 12, 30: NA-Environmental.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 6: Climb on heading 060° or as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 24: Climb on heading 240° or as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....

....on track 206° to CLVIN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

STAZE TRANSITION (CLVIN2.STAZE):

HHOWE THREE DEPARTURE (RNAV)

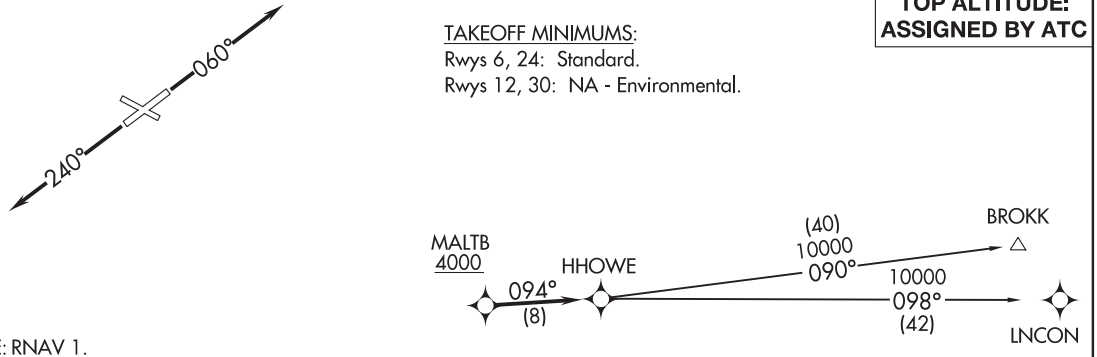
(HHOWE3.HHOWE) 05DEC19

ANN ARBOR, MICHIGAN
ANN ARBOR MUNI (ARB)

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
134.55
CLNC DEL
121.6
GND CON
121.6
ANN ARBOR TOWER ★
120.3 (CTAF)
DETROIT DEP CON
118.95 284.0

TAKEOFF MINIMUMS:
Rwys 6, 24: Standard.
Rwys 12, 30: NA - Environmental.



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: BROKK TRANSITION: For use by flights filed at or below FL270, or as assigned by ATC.

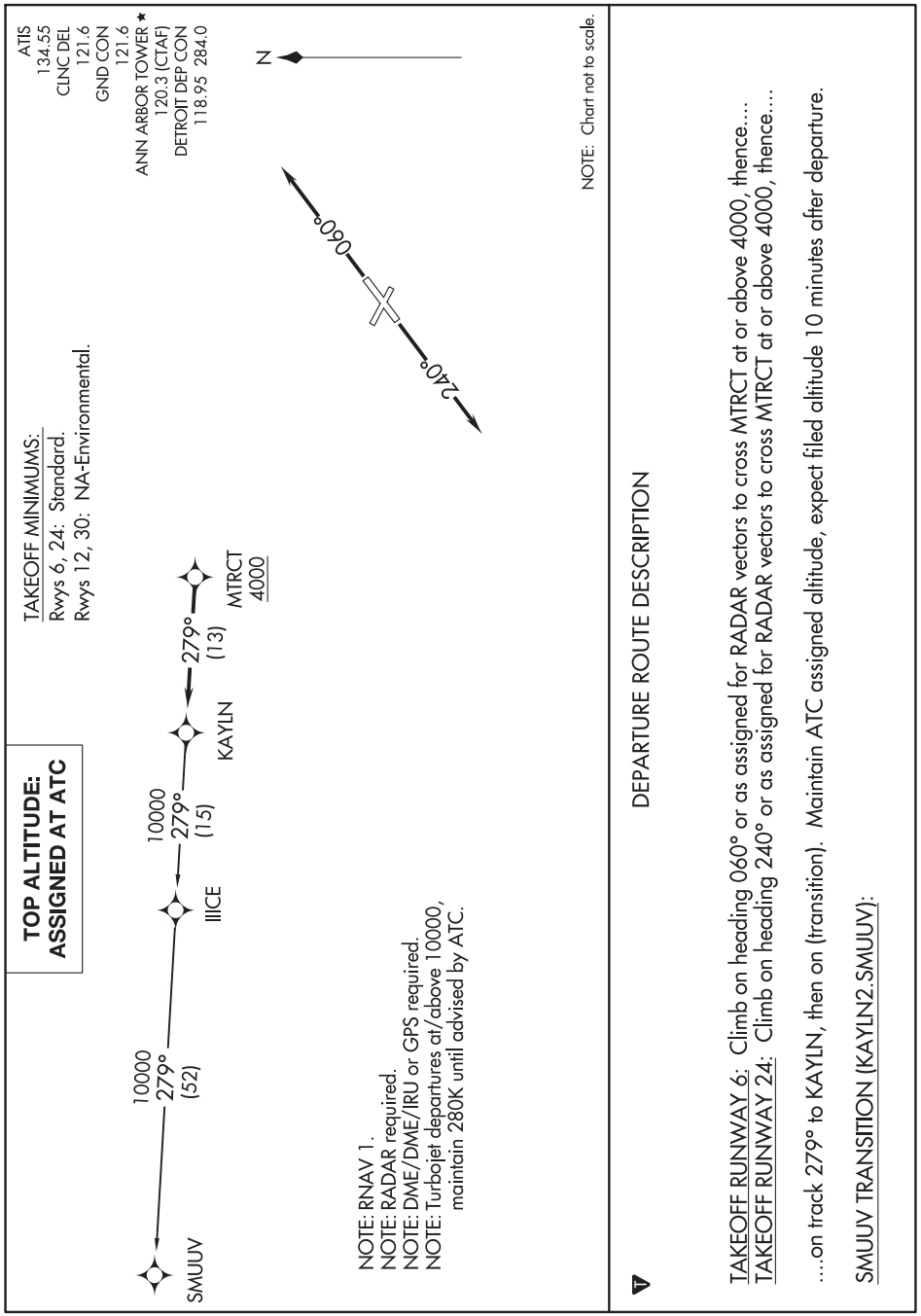
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 6: Climb on heading 060° or as assigned for RADAR vectors to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 24: Climb on heading 240° or as assigned for RADAR vectors to cross MALTB at or above 4000, thence....

....on track 094° to HHOWE, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

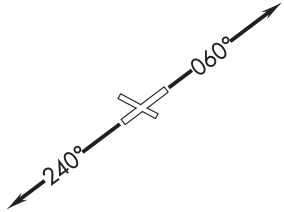
BROKK TRANSITION (HHOWE3.BROKK)
LNCON TRANSITION (HHOWE3.LNCON)

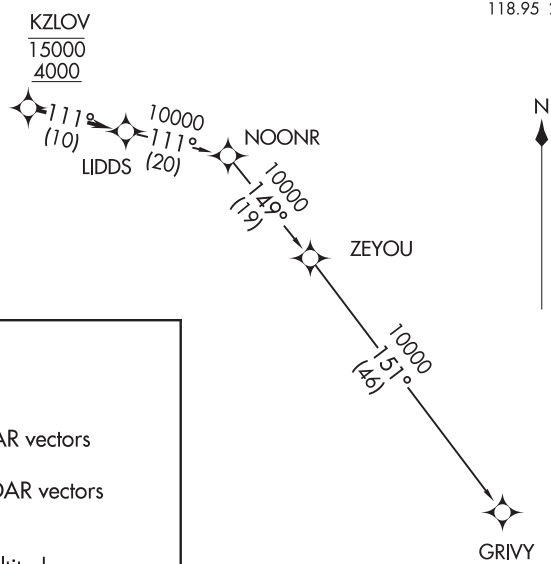

ATIS
134.55
CLNC DEL
121.6
GND CON
121.6
ANN ARBOR TOWER ★
120.3 (CTAF)
DETROIT DEP CON
118.95 284.0
N
060°
240°
NOTE: Chart not to scale.
TAKEOFF MINIMUMS:
Rwys 6, 24: Standard.
Rwys 12, 30: NA-Environmental.
TOP ALTITUDE:
ASSIGNED AT ATC
SMUUV
10000
279°
(52)
IIICE
10000
279°
(15)
KAYLN
279°
(13)
MTRCT
4000
NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
DEPARTURE ROUTE DESCRIPTION
TAKEOFF RUNWAY 6: Climb on heading 060° or as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....
TAKEOFF RUNWAY 24: Climb on heading 240° or as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....
....on track 279° to KAYLN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.
SMUUV TRANSITION (KAYLN2.SMUUV):

TOP ALTITUDE: ASSIGNED BY ATC

TAKEOFF MINIMUMS:
Rwys 6, 24: Standard.
Rwys 12, 30: NA-Environmental.

ATIS
134.55
CLNC DEL
121.6
GND CON
121.6
ANN ARBOR TOWER ★
120.3 (CTAF)
DETROIT DEP CON
118.95 284.0





NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

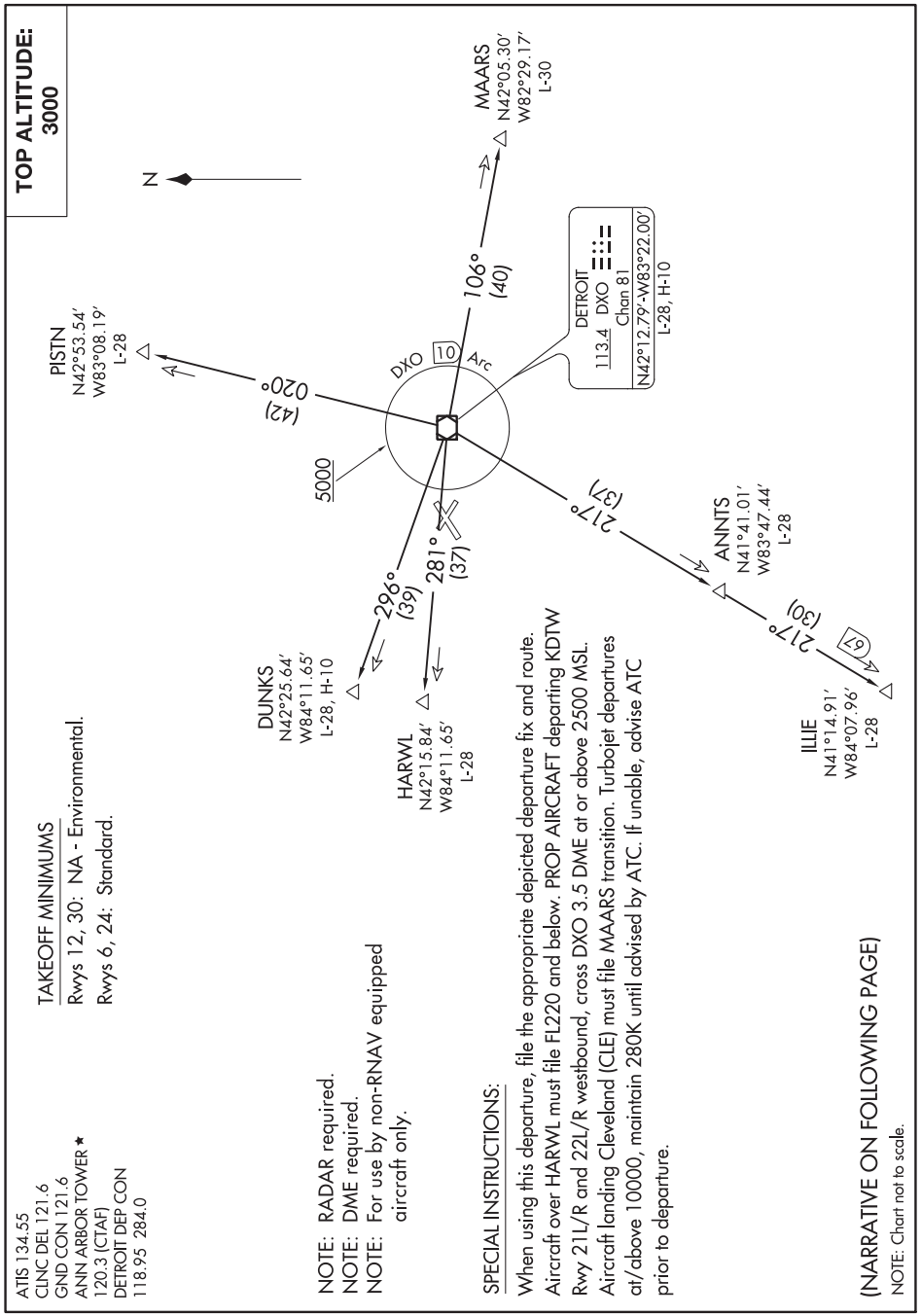
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 6: Climb on heading 060° or as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAY 24: Climb on heading 240° or as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....

....on track 111° to LIDDS, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GRIVY TRANSITION (LIDDS2.GRIVY):

NOTE: Chart not to scale.



ATIS 134.55
CLNC DEL 121.6
GND CON 121.6
ANN ARBOR TOWER ★
120.3 (CTAF)
DETROIT DEP CON
118.95 284.0

TAKEOFF MINIMUMS

Rwys 12, 30: NA - Environmental.
Rwys 6, 24: Standard.

NOTE: RADAR required.
NOTE: DME required.
NOTE: For use by non-RNAV equipped aircraft only.

SPECIAL INSTRUCTIONS:

When using this departure, file the appropriate depicted departure fix and route. Aircraft over HARWL must file FL220 and below. PROP AIRCRAFT departing KDTW Rwy 21L/R and 22L/R westbound, cross DXO 3.5 DME at or above 2500 MSL. Aircraft landing Cleveland (CLE) must file MAARS transition. Turbojet departures at/above 10000, maintain 280K until advised by ATC. If unable, advise ATC prior to departure.

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 6/24: Climb on assigned heading, thence ...

..... maintain ATC assigned altitude for RADAR vectors to intercept filed/assigned transition or enroute fix/navaid. When ATC assigned altitude is at or above 5000, cross DXO 10 DME Arc at or above 5000 for noise abatement. If unable to comply, advise ATC prior to departure. Expect clearance to filed altitude/flight level within ten (10) minutes after departure.

DUNKS TRANSITION (METRO3.DUNKS): From over DXO VOR/DME on DXO R-296 to DUNKS.
HARWL TRANSITION (METRO3.HARWL): From over DXO VOR/DME on DXO R-281 to HARWL.
ILLIE TRANSITION (METRO3.ILLIE): From over DXO VOR/DME on DXO R-217 to ILLIE.
MAARS TRANSITION (METRO3.MAARS): From over DXO VOR/DME on DXO R-106 to MAARS.
PISTN TRANSITION (METRO3.PISTN): From over DXO VOR/DME on DXO R-020 to PISTN.

EC-1, 25 FEB 2021 to 22 APR 2021

MIGGY TWO DEPARTURE (RNAV)

AL-5506 (FAA)

ATIS
134.55
CLNC DEL
121.6
GND CON
121.6
ANN ARBOR TOWER ★
120.3 (CTAF)
DETROIT DEP CON
118.95 284.0

TOP ALTITUDE: ASSIGNED BY ATC

HUBBY
10000
332°
(34)
SLLAP
10000
308°
(24)
GETCH
10000
274°
(70)
MONEE
10000
323°
(20)
MIGGY
323°
(18)
JAXII
4000

060°
240°

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: GETCH TRANSITION: For use by KMKE area arrivals only, or as assigned by ATC.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 6: Climb on heading 060° or as assigned for RADAR vectors to cross JAXII at or above 4000, thence....
TAKEOFF RUNWAY 24: Climb on heading 240° or as assigned for RADAR vectors to cross JAXII at or above 4000, thence....

....on track 323° to MIGGY, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GETCH TRANSITION (MIGGY2.GETCH):
HUBBY TRANSITION (MIGGY2.HUBBY):
SLLAP TRANSITION (MIGGY2.SLLAP):

TAKEOFF MINIMUMS:
Rwys 6, 24: Standard.
Rwys 12, 30: NA-Environmental.

N

NOTE: Chart not to scale.

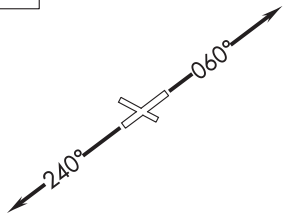
EC-1, 25 FEB 2021 to 22 APR 2021

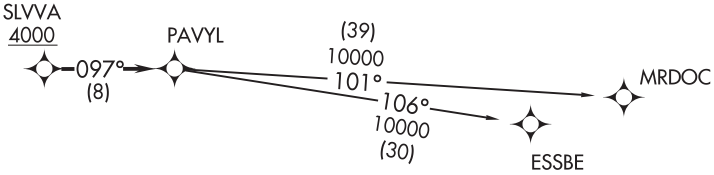
EC-1, 25 FEB 2021 to 22 APR 2021

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

ATIS
134.55
CLNC DEL
121.6
GND CON
121.6
ANN ARBOR TOWER ★
120.3 (CTAF)
DETROIT DEP CON
118.95 284.0





TAKEOFF MINIMUMS:
Rwys 6, 24: Standard.
Rwys 12, 30: NA-Environmental.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 6: Climb on heading 060° or as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 24: Climb on heading 240° or as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....

....on track 097° to PAVYL, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ESSBE TRANSITION (PAVYL2.ESSBE):
MRDOC TRANSITION (PAVYL2.MRDOC):

ATIS 134.55
CLNC DEL 121.6
GND CON 121.6
ANN ARBOR TOWER ★ 120.3 (CTAF)
DETROIT DEP CON 118.95 284.0

N

TOP ALTITUDE: ASSIGNED BY ATC

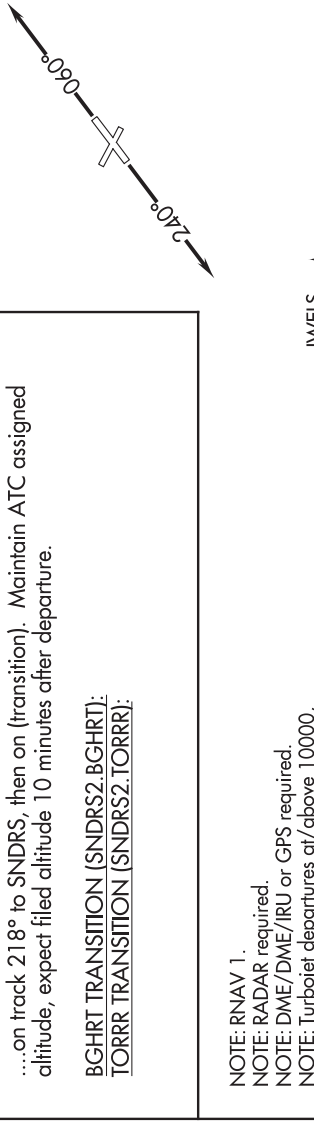
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 6: Climb on heading 060° or as assigned for RADAR vectors to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAY 24: Climb on heading 240° or as assigned for RADAR vectors to cross JWELS at or above 4000, thence....

....on track 218° to SNDRS, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

BGHRT TRANSITION (SNDRS2.BGHRT):
TORRR TRANSITION (SNDRS2.TORRR):

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TORRR TRANSITION: For use by KIND and KCVG area arrivals only and flights filed at or below FL220, or as assigned by ATC.



TAKEOFF MINIMUMS:
Rwys 6, 24: Standard.
Rwys 12, 30: NA-Environmental.

NOTE: Chart not to scale.

EC-1, 25 FEB 2021 to 22 APR 2021

(TRMML3.TRMML) 19283

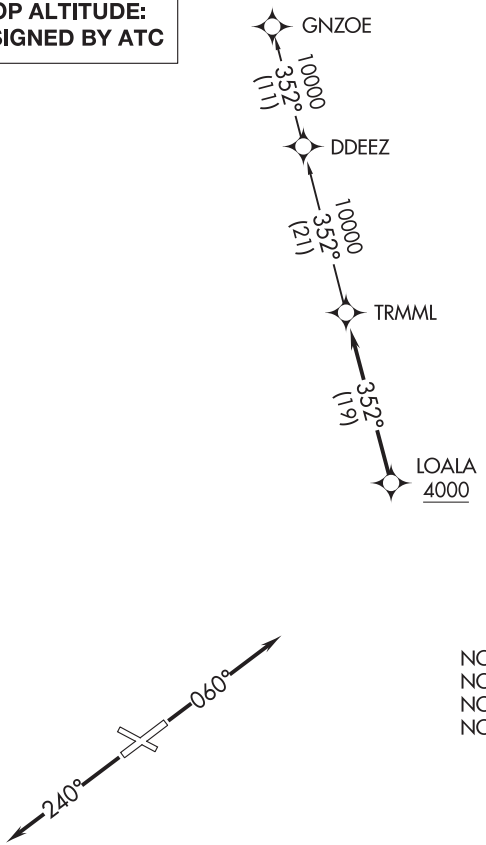
TRMML THREE DEPARTURE (RNAV)

AL-5506 (FAA)

ANN ARBOR MUNI (ARB)
ANN ARBOR, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
134.55
CLNC DEL
121.6
GND CON
121.6
ANN ARBOR TOWER ★
120.3 (CTAF)
DETROIT DEP CON
118.95 284.0



TAKEOFF MINIMUMS:
Rwys 6, 24: Standard.
Rwys 12, 30: NA-Environmental.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 6: Climb on heading 060° or as assigned for RADAR vectors to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 24: Climb on heading 240° or as assigned for RADAR vectors to cross LOALA at or above 4000, thence....

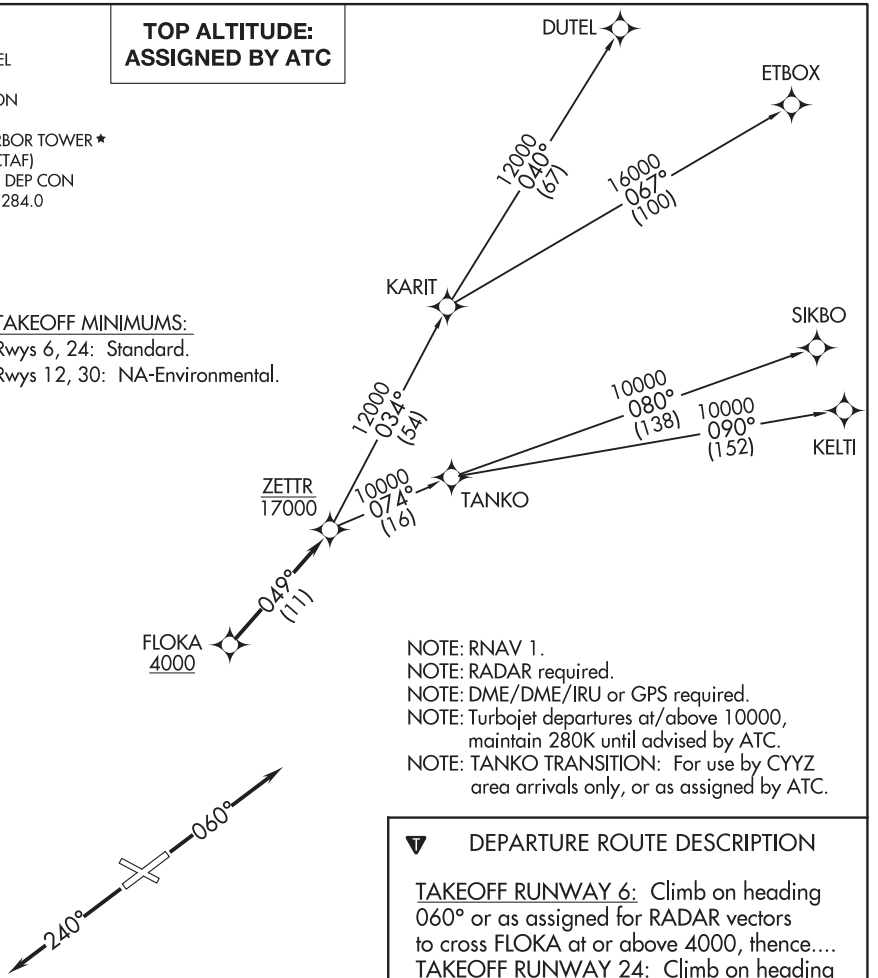
....on track 352° to TRMML, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GNZOE TRANSITION (TRMML3.GNZOE):

ATIS
134.55
CLNC DEL
121.6
GND CON
121.6
ANN ARBOR TOWER ★
120.3 (CTAF)
DETROIT DEP CON
118.95 284.0

TOP ALTITUDE: ASSIGNED BY ATC

TAKEOFF MINIMUMS:
Rwys 6, 24: Standard.
Rwys 12, 30: NA-Environmental.



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TANKO TRANSITION: For use by CYYZ area arrivals only, or as assigned by ATC.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 6: Climb on heading 060° or as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 24: Climb on heading 240° or as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....

....on track 049° to cross ZETTR at or below 17000, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

DUTEL TRANSITION (ZETTR3.DUTEL):
ETBOX TRANSITION (ZETTR3.ETBOX):
KELTI TRANSITION (ZETTR3.KELTI):
SIKBO TRANSITION (ZETTR3.SIKBO):
TANKO TRANSITION (ZETTR3.TANKO):

NOTE: Chart not to scale.

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

BAD AXE, MICHIGAN | AL-5908 (FAA) | 19199

APP CRS	Rwy ldg	3195
033°	TDZE	763
	Apt Elev	763

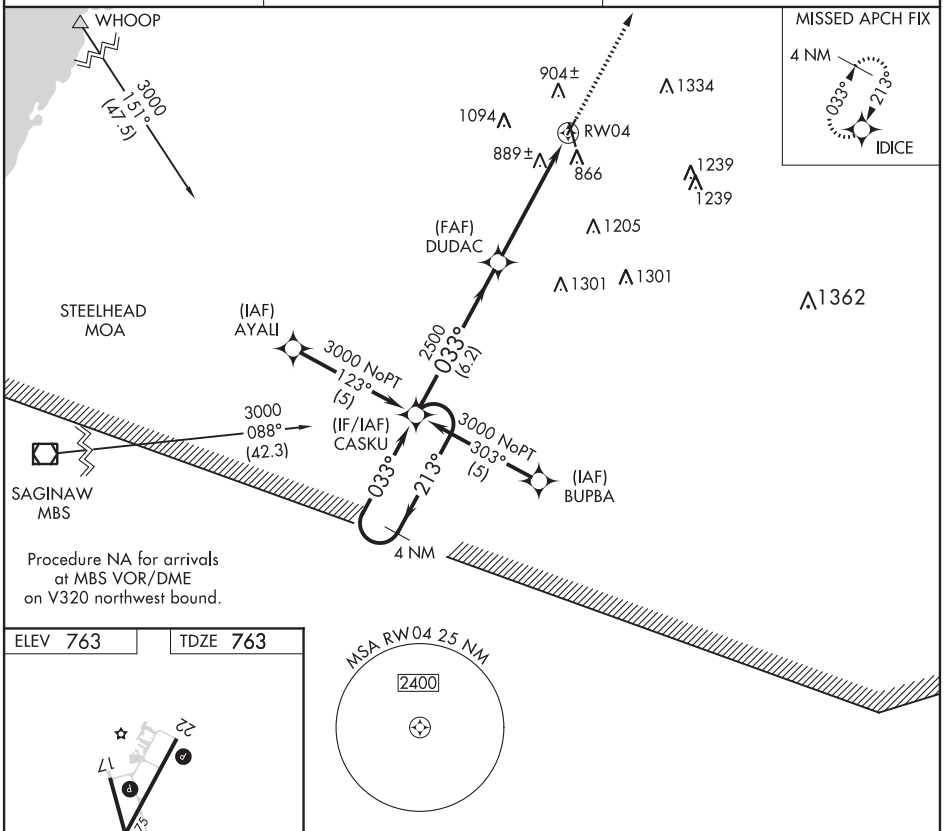
RNAV (GPS) RWY 4
HURON COUNTY MEMORIAL (BAX)

RNP APCH.

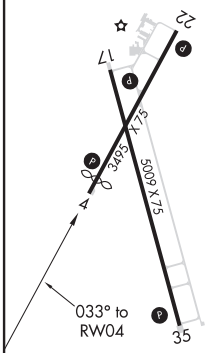
When local altimeter setting not received, use MBS Intl altimeter setting and increase all MDA 140 feet increase LNAV Cat C visibility ½ mile. Helicopter visibility reduction below 1 SM NA. Procedure NA at night.

MISSED APPROACH: Climb to 3000 direct IDICE and hold.

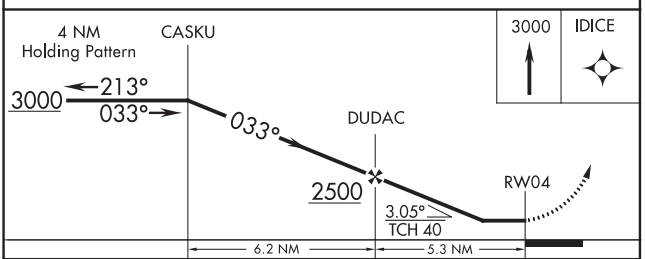
AWOS-3	CLEVELAND CENTER	UNICOM
118.6	126.75 348.75	123.075 (CTAF) L



ELEV 763 | TDZE 763



REIL Rwys 17 and 35 L
MIRL Rwys 4-22 and 17-35 L



CATEGORY	A	B	C	D
LNAV MDA	1140-1 377 (400-1)			NA

BAD AXE, MICHIGAN
Orig-B 18JUL19

43°47′N-82°59′W

HURON COUNTY MEMORIAL (BAX)
RNAV (GPS) RWY 4

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH **69205** **W17A**	APP CRS **170°**	Rwy ldg **5009** TDZE **763** Apt Elev **763**

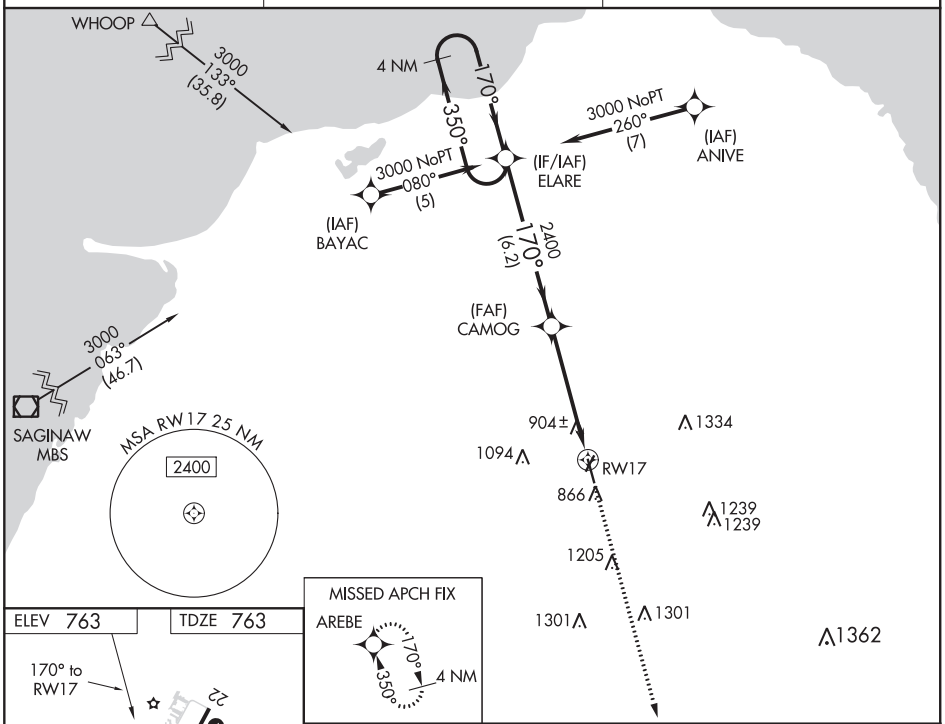
RNAV (GPS) RWY 17
HURON COUNTY MEMORIAL (BAX)

RNP APCH.

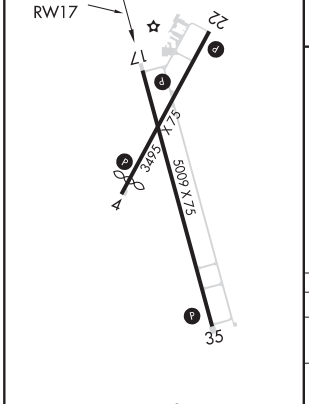
Baro-VNAV NA when using MBS Intl altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C. When local altimeter setting not received, use MBS Intl altimeter setting and increase all DA 129 feet and all MDA 140 feet, increase LPV all Cats visibility ⅜ mile; increase LNAV Cat C ½ mile. Rwy 17 helicopter visibility reduction below ¾ SM NA.

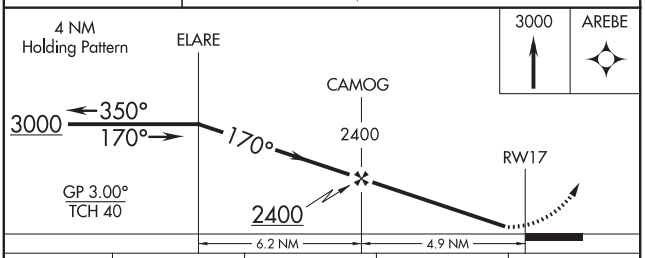
MISSED APPROACH: Climb to 3000 direct AREBE and hold.

AWOS-3	CLEVELAND CENTER	UNICOM
118.6	**126.75 348.75**	**123.075** (CTAF) L



ELEV 763 TDZE 763





CATEGORY	A	B	C	D
LPV DA	1075-1 312 (400-1)			NA
LNAV/VNAV DA	1352-2 589 (600-2)			NA
LNAV MDA	1220-1 457 (500-1)		1220-1¼ 457 (500-1¼)	NA

REIL Rwys 17 and 35 L
MIRL Rwys 4-22 and 17-35 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

BAD AXE, MICHIGAN | AL-5908 (FAA) | 20198

APP CRS	Rwy ldg	3495
213°	TDZE	763
	Apt Elev	763

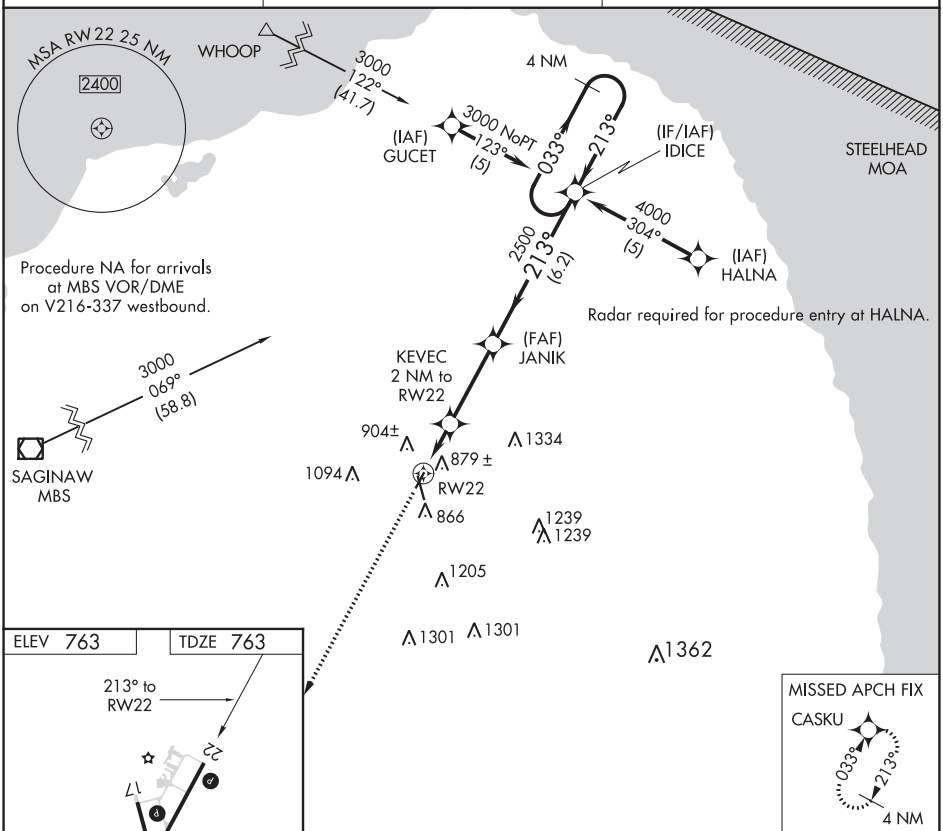
RNAV (GPS) RWY 22
HURON COUNTY MEMORIAL (BAX)

RNP APCH.

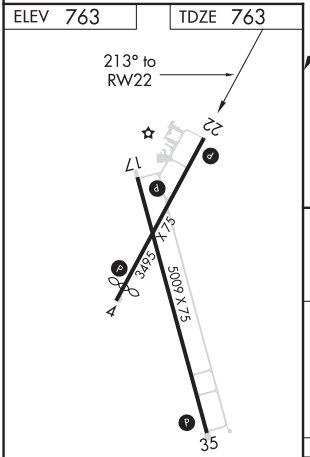
When local altimeter setting not received, use MBS Intl altimeter setting and increase all MDA 140 feet; increase LNAV Cat C visibility ½ SM. Procedure NA at night. Rwy 22 helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 3000 direct CASKU and hold.

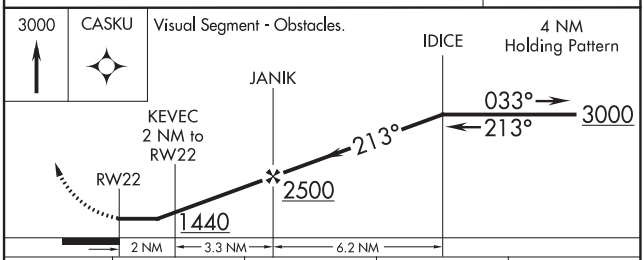
AWOS-3	CLEVELAND CENTER	UNICOM
118.6	126.75 348.75	123.075 (CTAF) L



ELEV 763 | TDZE 763



REIL Rwys 17 and 35 L
MIRL Rwys 4-22 and 17-35 L



CATEGORY	A	B	C	D
LNAV MDA	1140-1 377 (400-1)			NA

BAD AXE, MICHIGAN
Orig-C 18JUL19

43°47'N-82°59'W

HURON COUNTY MEMORIAL (BAX)
RNAV (GPS) RWY 22

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 62805 W35A	APP CRS 350°	Rwy ldg 5009 TDZE 756 Apt Elev 763

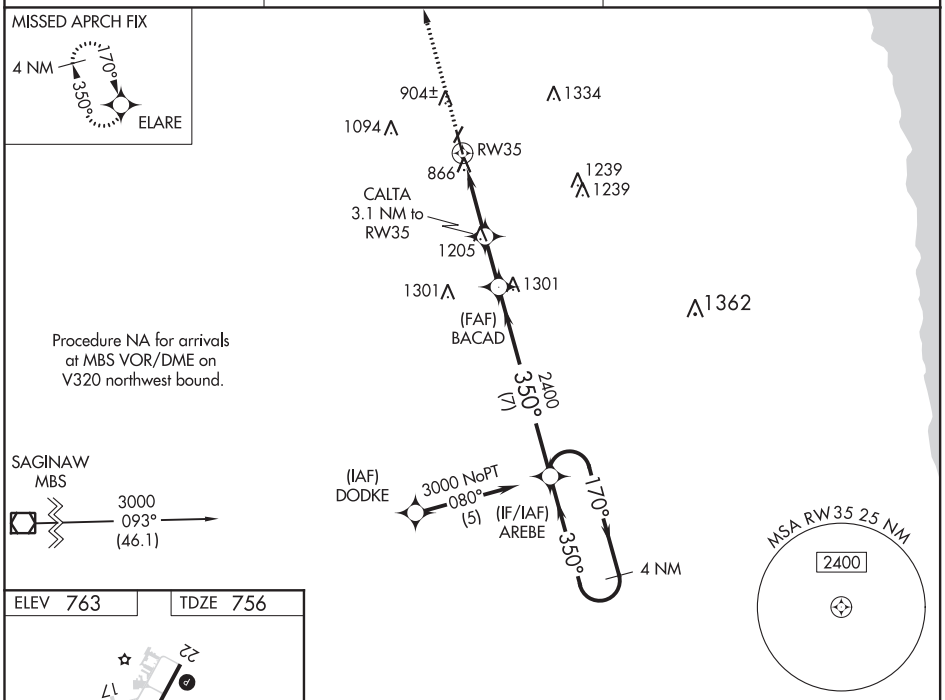
RNAV (GPS) RWY 35
HURON COUNTY MEMORIAL (BAX)

RNP APCH.

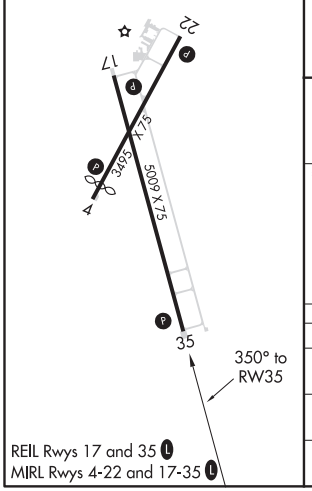
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C. When local altimeter setting not received, use MBS Intl altimeter setting and increase all DA 129 feet and all MDA 140 feet; increase LPV all Cats and LNAV Cat C visibility ⅜ mile. Rwy 35 helicopter visibility reduction below ¾ SM NA. VDP and Baro/VNAV NA when using MBS Intl altimeter setting.

MISSED APPROACH: Climb to 3000 direct ELARE and hold.

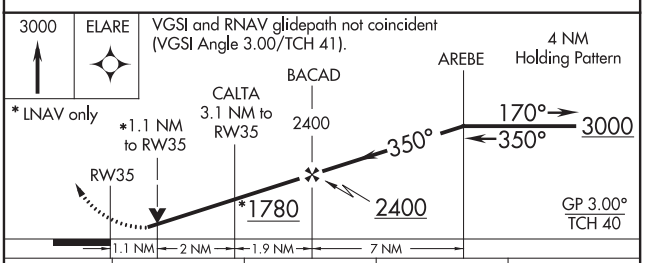
AWOS-3	CLEVELAND CENTER	UNICOM
118.6	126.75 348.75	123.075 (CTAF) L



ELEV 763	TDZE 756



REIL Rwys 17 and 35 L
MIRL Rwys 4-22 and 17-35 L



CATEGORY	A	B	C	D
LPV DA	1113-1¼ 357 (400-1¼)			NA
LNAV/VNAV DA	1154-1½ 398 (400-1½)			NA
LNAV MDA	1520-1 764 (800-1)	1520-1¼ 764 (800-1¼)	1520-2½ 764 (800-2½)	NA

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BALDWIN, MICHIGAN AL-6787 (FAA) 20086

APP CRS	Rwy ldg	N/A
280°	TDZE	N/A
	Apt Elev	828

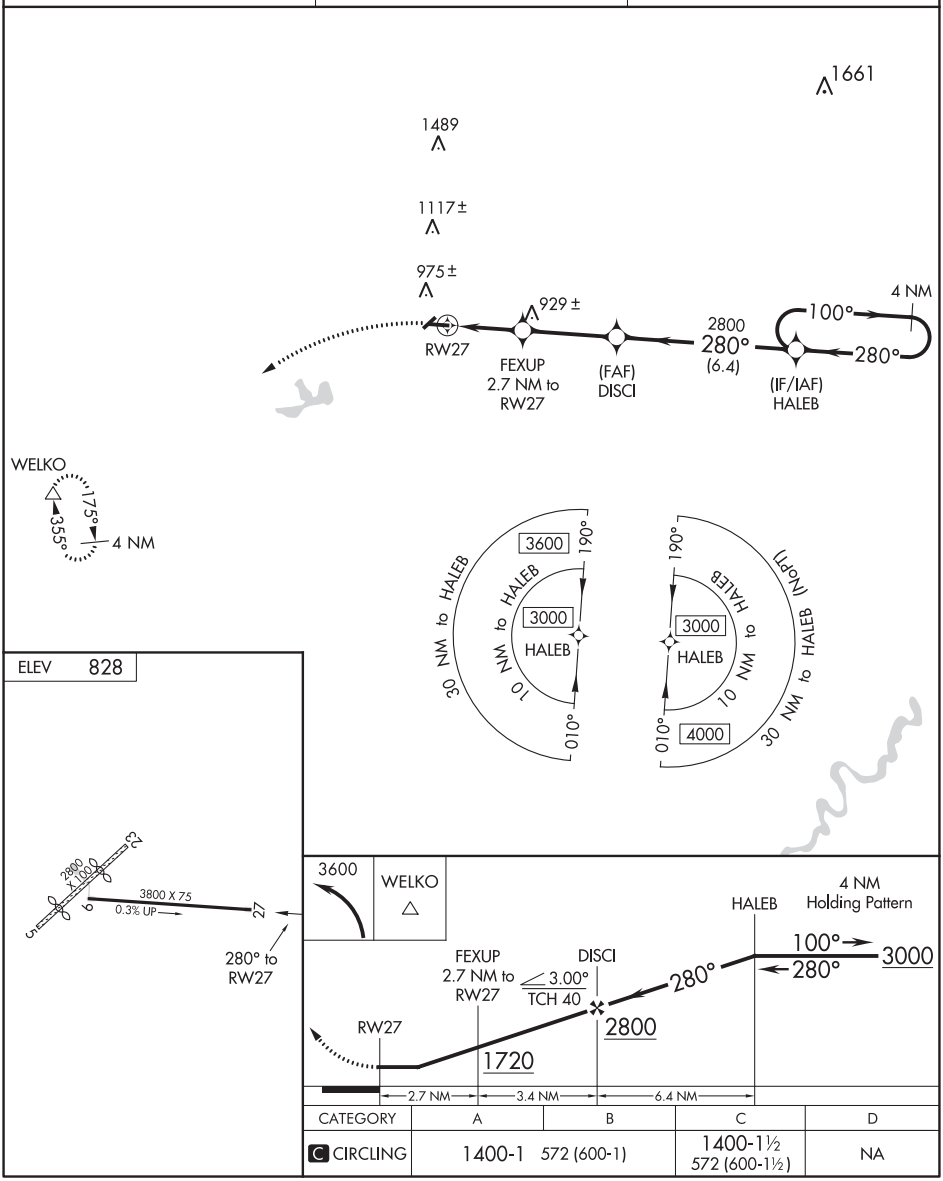
RNAV (GPS)-A
BALDWIN MUNI (7D3)

Circling NA to Rwys 5 and 23. DME/DME RNP-0.3 NA.
Helicopter visibility reduction below 1 SM NA.
Use Fremont Muni altimeter setting. Procedure NA at night.

NA

MISSED APPROACH: Climbing left turn to 3600 direct WELKO and hold.

FFX AWOS-3	MINNEAPOLIS CENTER	CTAF
118.775	120.85 322.35	122.9



CATEGORY	A	B	C	D
C CIRCLING	1400-1 572 (600-1)		1400-1½ 572 (600-1½)	NA

EC-1, 25 FEB 2021 to 22 APR 2021

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LOC I-BTL	APP CRS	Rwy ldg	10004
110.5	227°	TDZE	929
		Apt Elev	952

ILS or LOC RWY 23R
BATTLE CREEK EXECUTIVE AT KELLOGG FIELD (BTL)

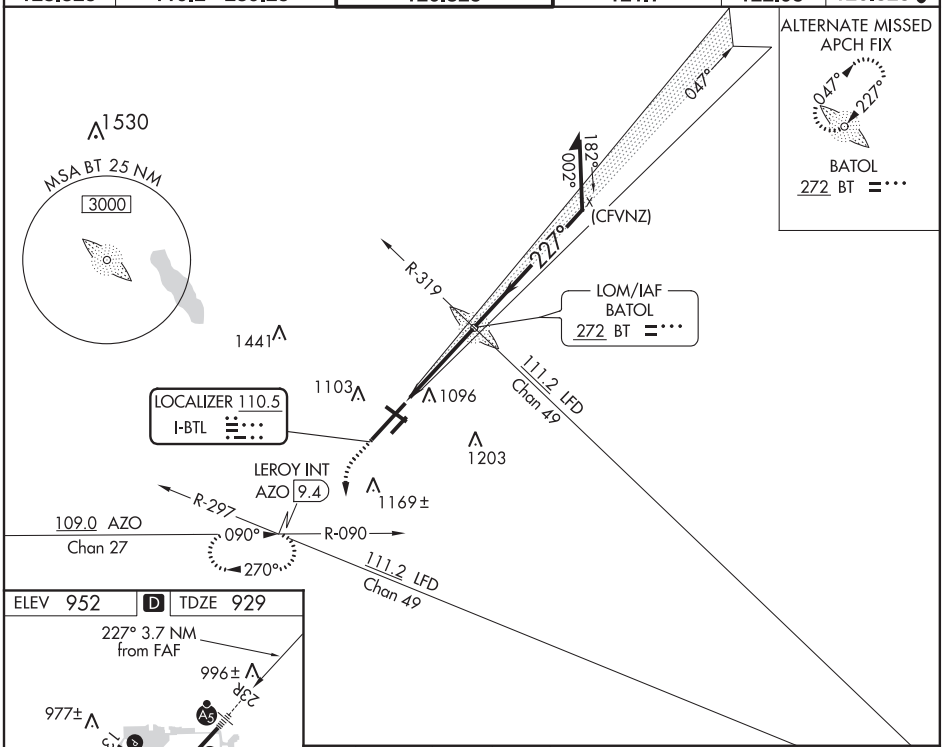
DME required, RADAR required for procedure entry.

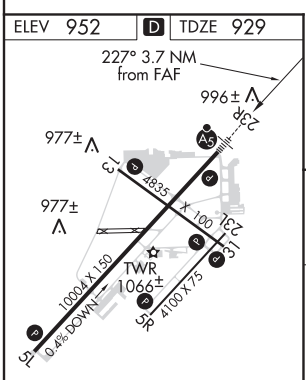
T A Circling Rwy 5R, 23L NA. Circling Rwy 31 NA at night. When local altimeter setting not received, use Grand Rapids altimeter setting: increase DA to 1236 feet and increase all MDA 120 feet. Increase S-LOC 23R Cats C/D visibility to 1¼ SM, Circling Cat C visibility to 2 SM and Cat D visibility to 2¼ SM. For inop ALS, increase S-LOC 23R Cat C/D visibility to 1⅜ SM. For inop ALS when using Grand Rapids altimeter setting, increase S-ILS 23R all Cats visibility to RVR 5000. #RVR 1800 authorized with use of FD or AP or HUD to DA (NA when using Grand Rapids altimeter setting).

MALSR

MISSED APPROACH: Climb to 1500 then climbing left turn to 3000 on heading 215° and AZO VOR/DME R-090 to LEROY/AZO 9.4 DME and hold, continue climb-in-hold to 3000.

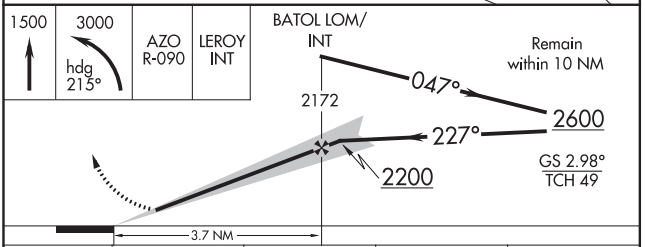
ATIS	GREAT LAKES APP CON ★	BATTLE CREEK TOWER ★	GND CON	UNICOM	CTAF
128.325	119.2 239.25	126.825	121.7	122.95	126.825 L





HIRL Rwy 5L-23R L
MIRL Rwy 13-31 and 5R-23L L
REIL Rwys 5L, 5R, 13, 23L and 31 L

FAF to MAP 3.7 NM					
Knots	60	90	120	150	180
Min:Sec	3:42	2:28	1:51	1:29	1:14



CATEGORY	A	B	C	D
S-ILS 23R	#1129/24 200 (200-½)			
S-LOC 23R	1400/24 471 (500-½)		1400/50 471 (500-1)	
C CIRCLING	1420-1 468 (500-1)	1480-1 528 (600-1)	1520-1½ 568 (600-1½)	1520-2 568 (600-2)

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WAAS CH 61220 W05A	APP CRS 047°	Rwy ldg 10004 TDZE 952 Apt Elev 952

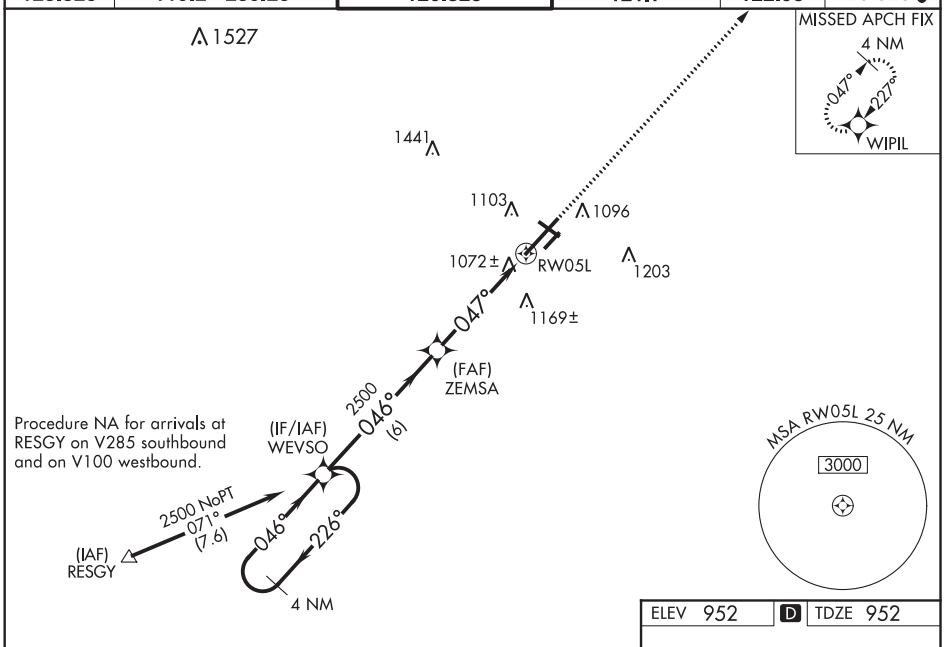
RNAV (GPS) RWY 5L
BATTLE CREEK EXECUTIVE AT KELLOGG FIELD (BTL)

RNP APCH.

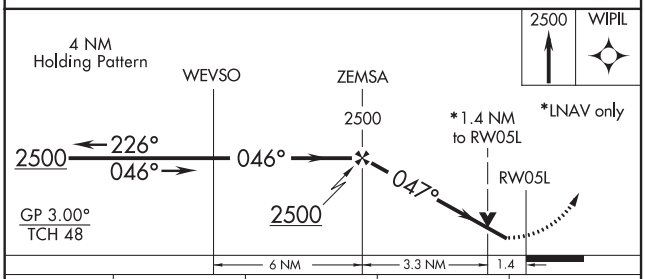
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 37°C. Rwy 5L helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Grand Rapids altimeter setting: increase all DAs 106 feet and all visibilities ⅜ SM; increase all MDAs 120 feet and increase LNAV Cats C and D visibility ⅜ SM and Circling Cat C visibility ½ SM and Cat D visibility ¼ SM. VDP and Baro-VNAV NA when using Grand Rapids altimeter setting. Circling Rwy 31 NA at night. Circling NA to Rwys 5R and 23L.

MISSED APPROACH: Climb to 2500 direct WIPIL and hold.

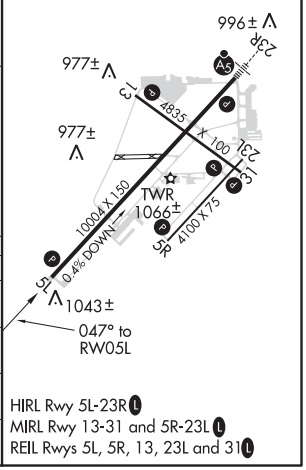
ATIS	GREAT LAKES APP CON ★	BATTLE CREEK TOWER ★	GND CON	UNICOM	CTAF
128.325	119.2 239.25	126.825	121.7	122.95	126.825 L



ELEV 952 | D | TDZE 952



CATEGORY	A	B	C	D
LPV DA	1317-1¼ 365 (400-1¼)			
LNAV/VNAV DA	1253-1 301 (400-1)			
LNAV MDA	1440-1 488 (500-1)		1440-1⅜ 488 (500-1⅜)	
C CIRCLING	1440-1 488 (500-1)	1480-1 528 (600-1)	1520-1½ 568 (600-1½)	1520-2 568 (600-2)



HIRL Rwy 5L-23R L
MIRL Rwy 13-31 and 5R-23L L
REIL Rwys 5L, 5R, 13, 23L and 31 L

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WAAS CH 56411 W23A	APP CRS 227°	Rwy ldg 10004 TDZE 929 Apt Elev 952

RNAV (GPS) RWY 23R
BATTLE CREEK EXECUTIVE AT KELLOGG FIELD (BTL)

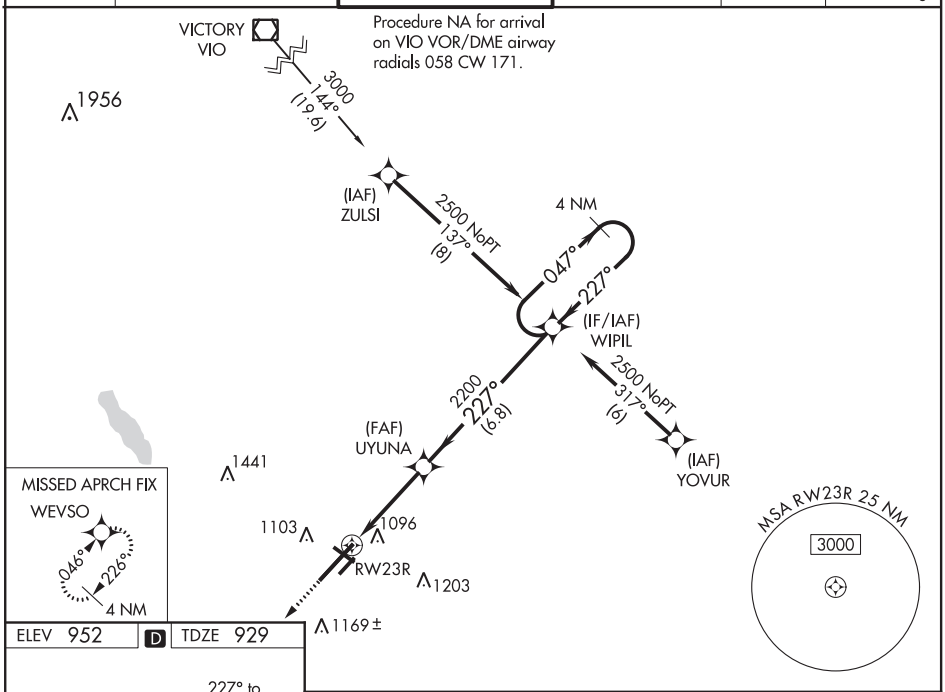
RNP APCH.

T A Circling NA to Rwys 5R and 23L. Circling Rwy 31 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C or above 54°C. **RVR 1800 authorized with use of FD or AP or HUD to DA.

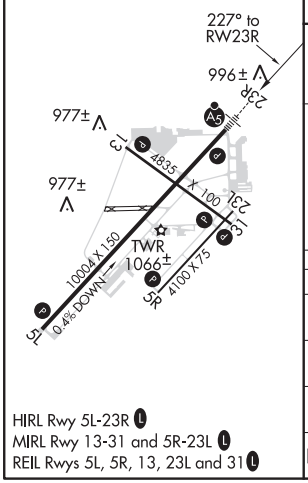
MALSR A5

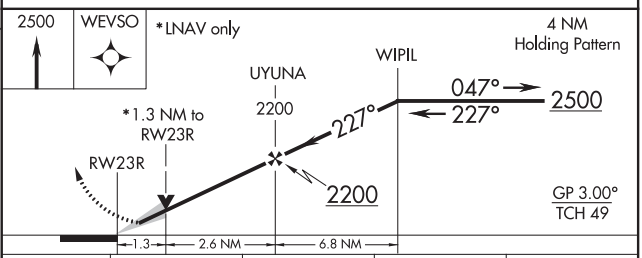
MISSED APPROACH: Climb to 2500 direct WEVSO and hold.

ATIS	GREAT LAKES APP CON ★	BATTLE CREEK TOWER ★	GND CON	UNICOM	CTAF
128.325	119.2 239.25	126.825	121.7	122.95	126.825 L



ELEV 952	D	TDZE 929





CATEGORY	A	B	C	D
LPV DA **	1129/24 200 (200-½)			
LNAV/VNAV DA	1258/32 329 (400-⅝)			
LNAV MDA	1380/24 451 (500-½)		1380/45 451 (500-⅞)	
C CIRCLING	1420-1 468 (500-1)	1480-1 528 (600-1)	1520-1½ 568 (600-1½)	1520-2 568 (600-2)

HIRL Rwy 5L-23R L
MIRL Rwy 13-31 and 5R-23L L
REIL Rwys 5L, 5R, 13, 23L and 31 L

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BATTLE CREEK, MICHIGAN AL-41 (FAA) 20254

APP CRS	Rwy ldg	4835
310°	TDZE	930
	Apt Elev	952

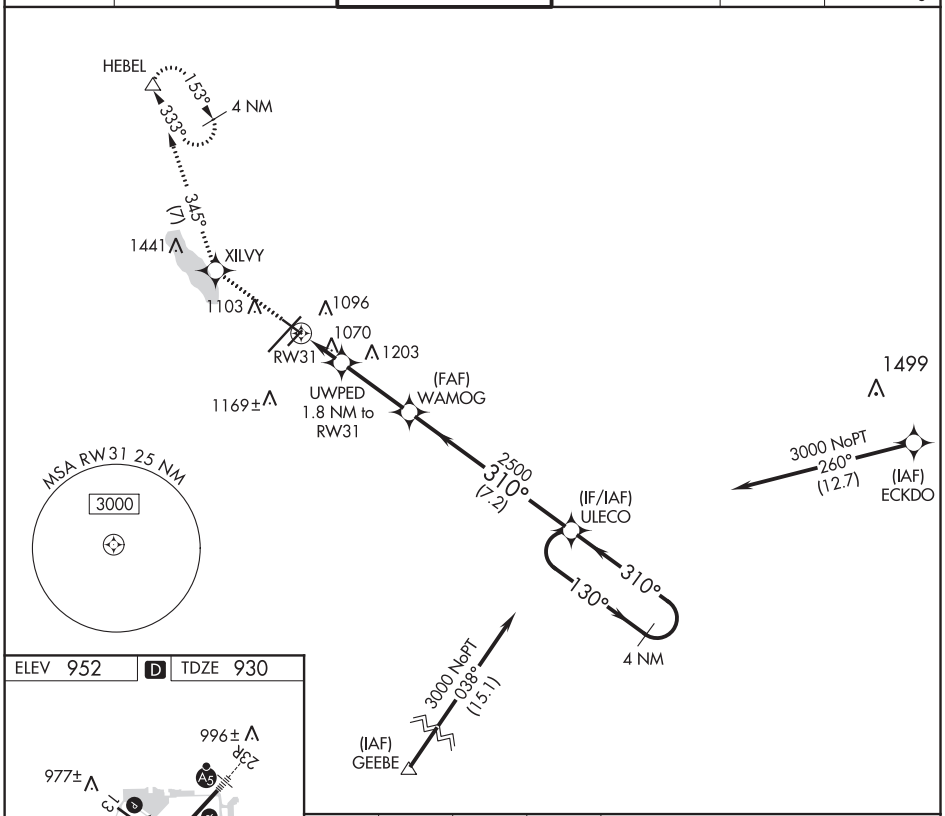
RNAV (GPS) RWY 31
BATTLE CREEK EXECUTIVE AT KELLOGG FIELD (BTL)

RNP APCH.

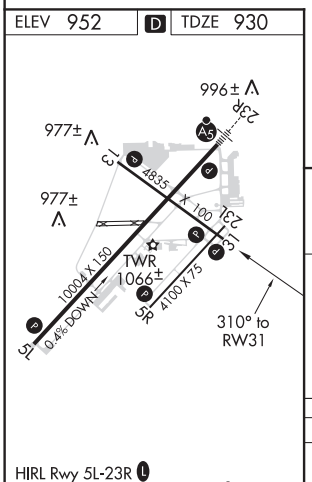
Circling NA to Rwys 5R and 23L. Rwy 31 helicopter visibility reduction below 1 SM NA. Procedure NA at night.

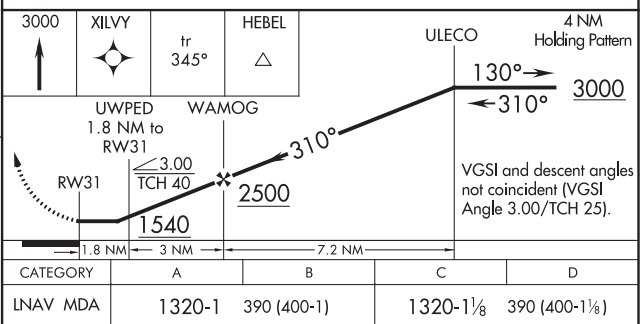
MISSED APPROACH: Climb to 3000 direct XILVY and on 345° track to HEBEL and hold.

ATIS	GREAT LAKES APP CON ★	BATTLE CREEK TOWER ★	GND CON	UNICOM	CTAF
128.325	119.2 239.25	126.825	121.7	122.95	126.825 L



ELEV 952 | D | TDZE 930





CATEGORY	A	B	C	D
LNAV MDA	1320-1	390 (400-1)	1320-1⅛	390 (400-1⅛)
C CIRCLING	1420-1 468 (500-1)	1480-1 528 (600-1)	1520-1½ 568 (600-1½)	1520-2 568 (600-2)

HIRL Rwy 5L-23R L
MIRL Rwys 13-31 and 5R-23L L
REIL Rwys 5L, 5R, 13, 23L and 31 L

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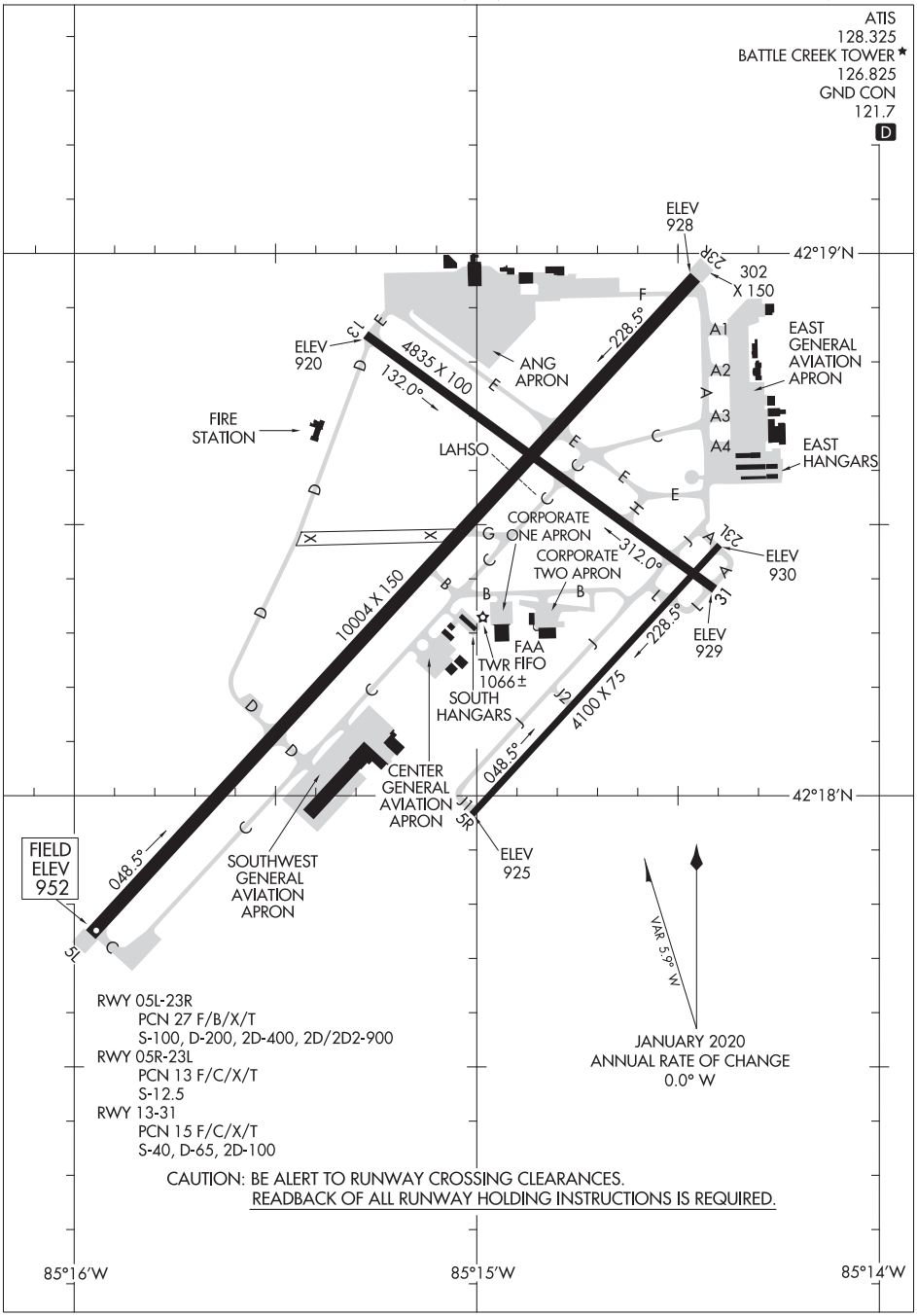


EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

BAY CITY, MICHIGAN AL-5437 (FAA) 19339

APP CRS	Rwy ldg	3798
183°	TDZE	585
	Apt Elev	585

RNAV (GPS) RWY 18
JAMES CLEMENTS MUNI (3CM)

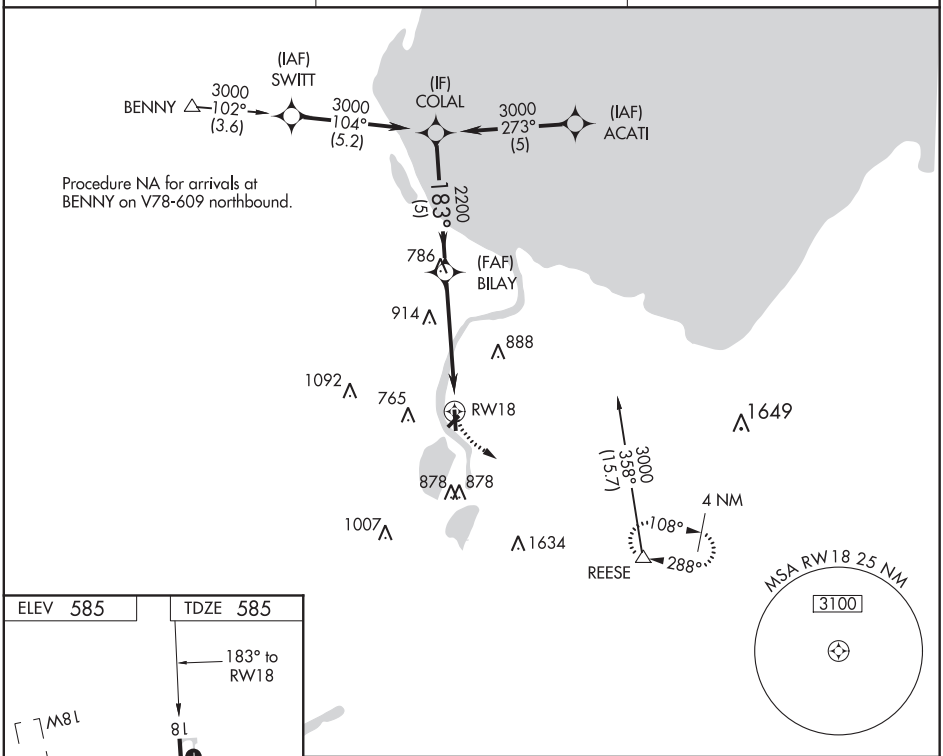
RNP APCH.

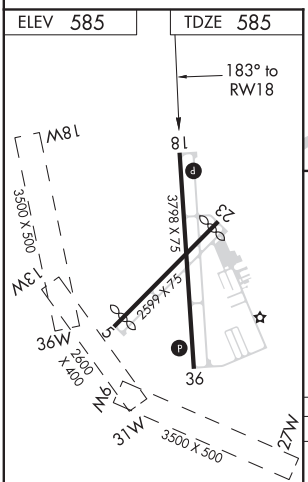
NA

Circling NA to Rwys 18W, 36W, 13W, 31W, 9W and 27W. Circling NA southeast of Rwys 23 and 36. Rwy 18 helicopter visibility reduction below 1 SM NA. Use Saginaw County H W Browne altimeter setting. Straight-in Rwy 18 NA at night, Circling Rwy 18, 23, 36 NA at night.

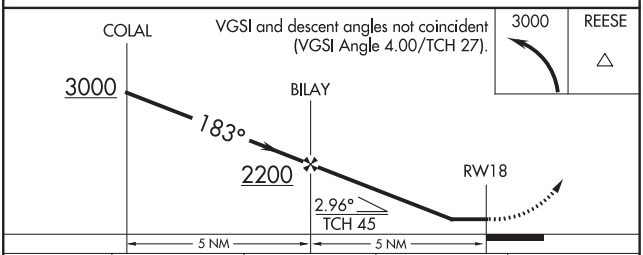
MISSED APPROACH: Climbing left turn to 3000 direct REESE and hold.

HYX AWOS-3	GREAT LAKES APP CON ★	UNICOM
118.325	120.95 235.625	122.725 (CTAF) L





MIRL Rwys 5-23 and 18-36 L



CATEGORY	A	B	C	D
LNAV MDA	1260-1 675 (700-1)		1260-2 675 (700-2)	NA
CIRCLING	1260-1 675 (700-1)		1260-2 675 (700-2)	NA

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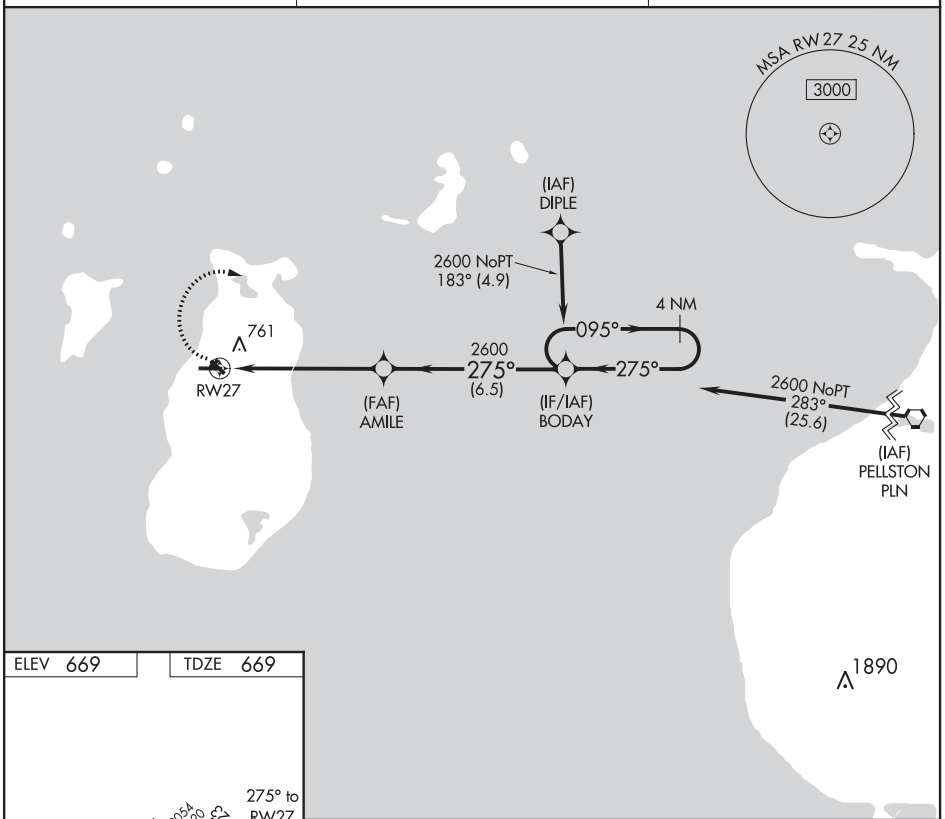
APP CRS	Rwy ldg	4299
275°	TDZE	669
	Apt Elev	669

RNAV (GPS) RWY 27
BEAVER ISLAND (SJX)

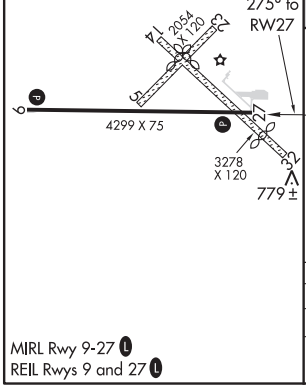
DME/DME RNP -0.3 NA. When local altimeter setting not received, use Pellston altimeter setting and increase all MDA 100 feet. Circling NA to Rwys 5, 14, 23, 32.

MISSED APPROACH: Climbing right turn to 2600 direct BODAY and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
118.075	134.6 354.05	122.8 (CTAF)



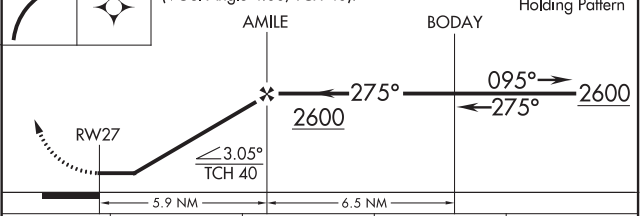
ELEV 669 TDZE 669



2600 BODAY

VGSI and descent angles not coincident (VGSI Angle 4.00/TCH 40).

4 NM Holding Pattern



CATEGORY	A	B	C	D
LNAV MDA	1080-1 411 (500-1)		NA	
CIRCLING	1080-1 411 (500-1)	1120-1 451 (500-1)	NA	

MIRL Rwy 9-27
REIL Rwys 9 and 27

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BELLAIRE, MICHIGAN AL-5131 (FAA) 19339

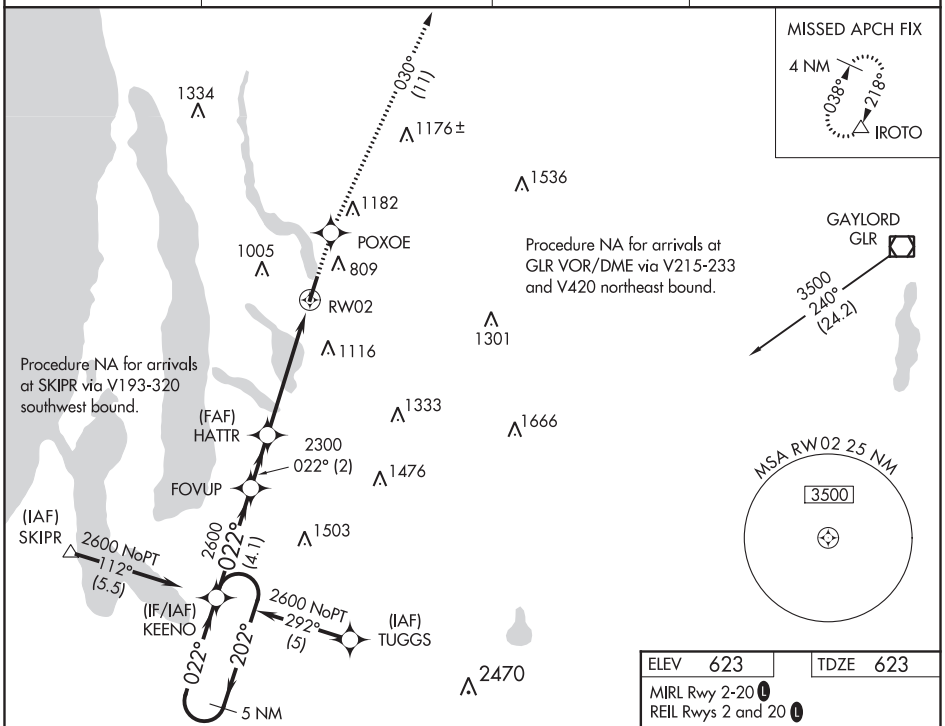
WAAS CH 56301 W02A	APP CRS 022°	Rwy ldg 5003 TDZE 623 Apt Elev 623

RNAV (GPS) RWY 2
ANTRIM COUNTY (ACB)

DME/DME RNP-0.3 NA. VDP NA when using Cherry Capital altimeter setting. If local altimeter setting not received, use Cherry Capital altimeter setting and increase all DAs/MDAs 60 feet.

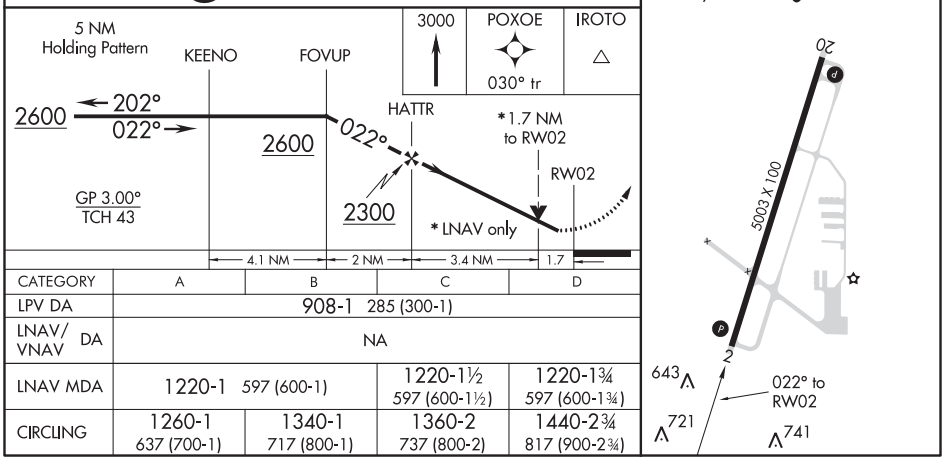
MISSED APPROACH: Climb to 3000 direct POXOE and via 030° track to IROTO and hold.

AWOS-3	MINNEAPOLIS CENTER	GCO	UNICOM
119.275	132.9 338.3	121.725	122.7 (CTAF) L



ELEV 623	TDZE 623

MIRL Rwy 2-20 L
REIL Rwys 2 and 20 L



CATEGORY	A	B	C	D
LPV DA	908-1 285 (300-1)			
LNAV/VNAV DA	NA			
LNAV MDA	1220-1 597 (600-1)		1220-1½ 597 (600-1½)	1220-1¾ 597 (600-1¾)
CIRCLING	1260-1 637 (700-1)	1340-1 717 (800-1)	1360-2 737 (800-2)	1440-2¾ 817 (900-2¾)

BELLAIRE, MICHIGAN
Orig 03AUG06

44°59′N-85°12′W

ANTRIM COUNTY (ACB)
RNAV (GPS) RWY 2

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ILS or LOC RWY 28
SOUTHWEST MICHIGAN RGNL (BEH)

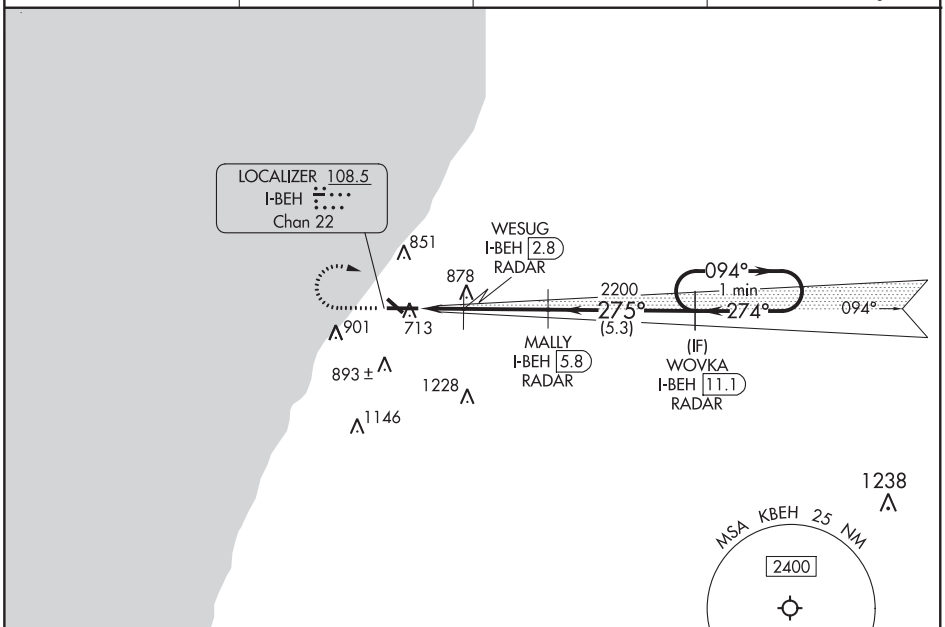
LOC I-BEH 108.5 Chan 22	APP CRS 274°	Rwy ldg 6006 TDZE 649 Apt Elev 649

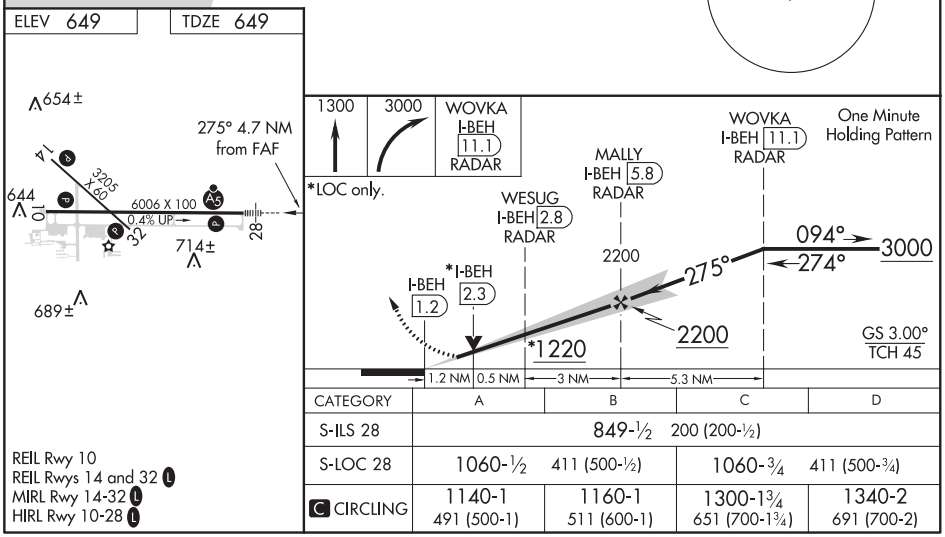
RNAV 1-GPS required.
DME Required for LOC only.
T Circling Rwy 14 and 32 NA at night.
A NA For inop ALS, increase S-LOC 28 Cat C/D visibility to 1⅛ SM.

MALSR

MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct WOVKA and hold.

ASOS	SOUTH BEND APP CON*		SOUTH BEND CLNC DEL	UNICOM
121.55	118.55	257.8	119.7	123.0 (CTAF) L





CATEGORY	A	B	C	D
S-ILS 28	849-½ 200 (200-½)			
S-LOC 28	1060-½ 411 (500-½)		1060-¾ 411 (500-¾)	
C CIRCLING	1140-1 491 (500-1)	1160-1 511 (600-1)	1300-1¾ 651 (700-1¾)	1340-2 691 (700-2)

REIL Rwy 10
REIL Rwys 14 and 32 L
MIRL Rwy 14-32 L
HIRL Rwy 10-28 L

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EC-1, 25 FEB 2021 to 22 APR 2021

BENTON HARBOR, MICHIGAN AL-721 (FAA) 19339

WAAS CH 86912 W10A	APP CRS 094°	Rwy ldg 6006 TDZE 631 Apt Elev 649

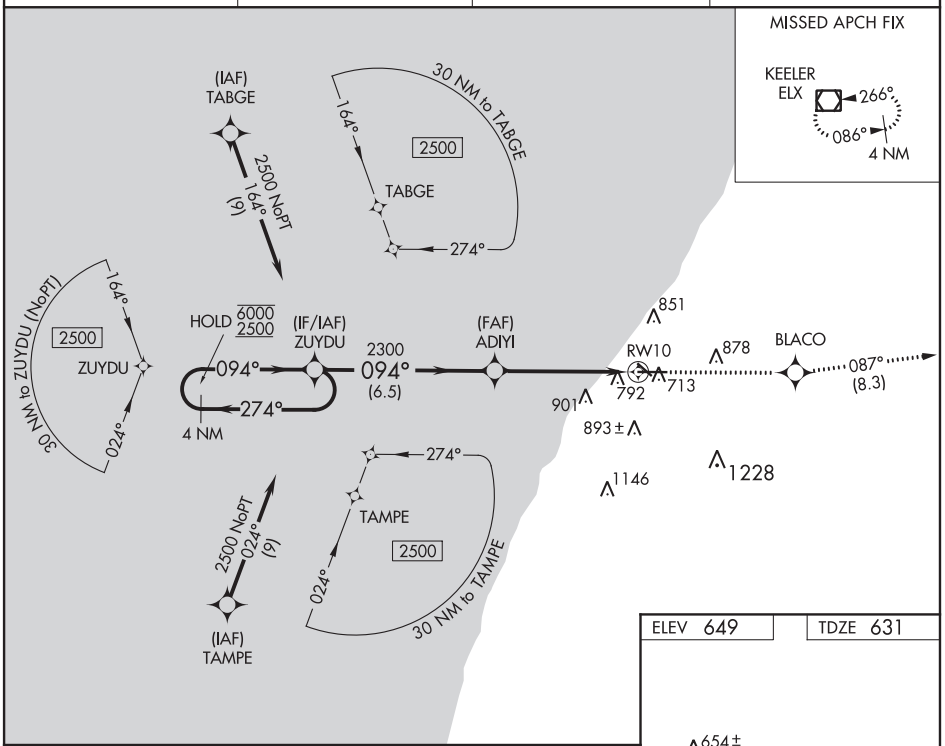
RNAV (GPS) RWY 10
SOUTHWEST MICHIGAN RGNL (BEH)

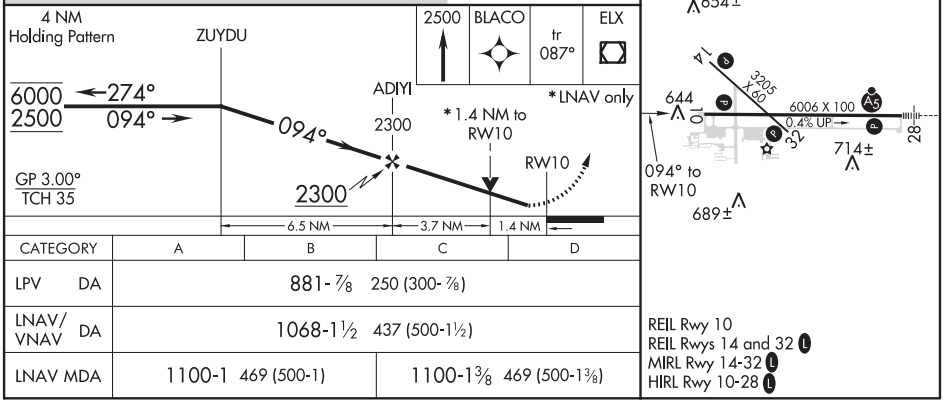
RNP APCH.

T Rwy 10 helicopter visibility reduction below ¾ SM NA.
A For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C or above 54°C.

MISSED APPROACH: Climb to 2500 direct BLACO and on track 087° to ELX VOR/DME and hold.

ASOS	SOUTH BEND APP CON*		SOUTH BEND CLNC DEL	UNICOM
121.55	118.55	257.8	119.7	123.0 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	881-⅞ 250 (300-⅞)			
LNAV/VNAV DA	1068-1½ 437 (500-1½)			
LNAV MDA	1100-1 469 (500-1)		1100-1⅜ 469 (500-1⅜)	

REIL Rwy 10
REIL Rwys 14 and 32 L
MIRL Rwy 14-32 L
HIRL Rwy 10-28 L

BENTON HARBOR, MICHIGAN
Amdt 1D 07NOV19

42°08′N-86°26′W

SOUTHWEST MICHIGAN RGNL (BEH)
RNAV (GPS) RWY 10

EC-1, 25 FEB 2021 to 22 APR 2021

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WAAS CH 45822 W28A	APP CRS 275°	Rwy ldg 6006 TDZE 649 Apt Elev 649

RNAV (GPS) RWY 28
SOUTHWEST MICHIGAN RGNL (BEH)

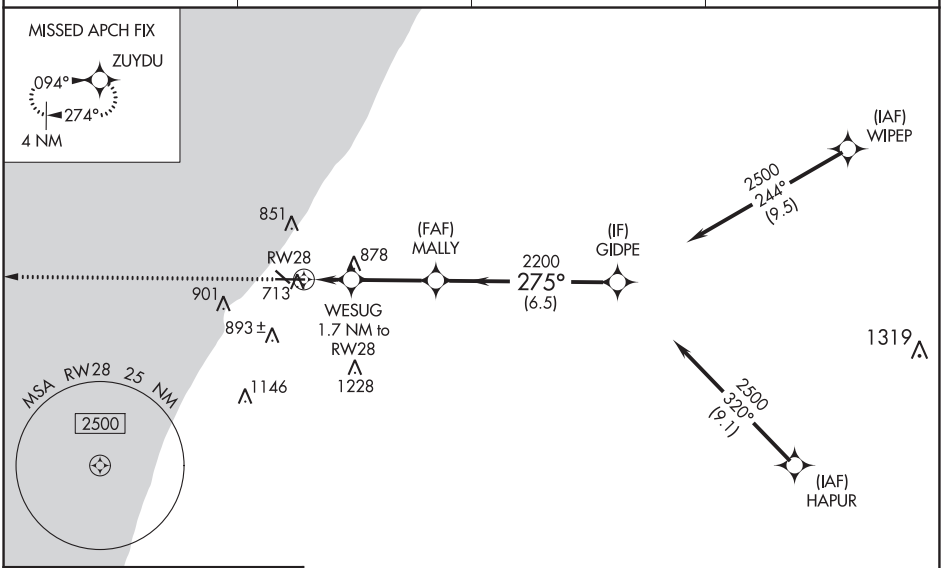
RNP APCH.

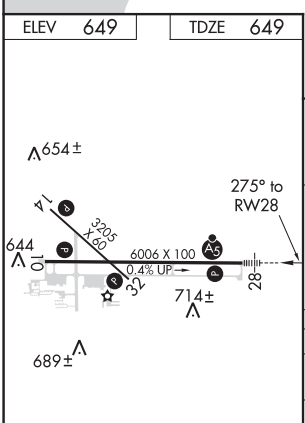
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C (-2°F) or above 39°C (102°F). Circling Rwy 14, 32 NA at night.

MALSR

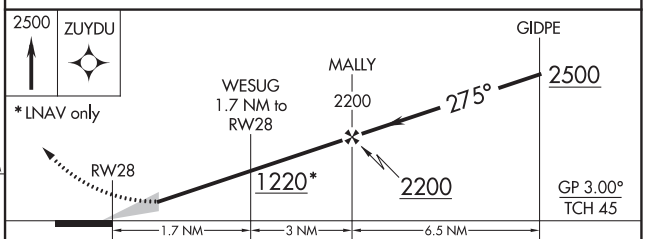
MISSED APPROACH: Climb to 2500 direct ZUYDU and hold.

ASOS	SOUTH BEND APP CON★	SOUTH BEND CLNC DEL	UNICOM
121.55	118.55 257.8	119.7	123.0 (CTAF) L





REIL Rwy 10
REIL Rwys 14 and 32 L
MIRL Rwy 14-32 L
HIRL Rwy 10-28 L



CATEGORY	A	B	C	D
LPV DA	849-½ 200 (200-½)			
LNAV/VNAV DA	941-½ 292 (300-½)			
LNAV MDA	1140-½ 491 (500-½)		1140-1 491 (500-1)	
C CIRCLING	1140-1 491 (500-1)	1160-1 511 (600-1)	1300-1¾ 651 (700-1¾)	1340-2 691 (700-2)

BENTON HARBOR, MICHIGAN
Amdt 2B 19JUL18
42°08'N-86°26'W
SOUTHWEST MICHIGAN RGNL (BEH)
RNAV (GPS) RWY 28
47

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BENTON HARBOR, MICHIGAN AL-721 (FAA) 20086

VOR RWY 28
SOUTHWEST MICHIGAN RGNL (BEH)

VOR/DME ELX 116.6 Chan 113	APP CRS 266°	Rwy ldg 6006 TDZE 649 Apt Elev 649

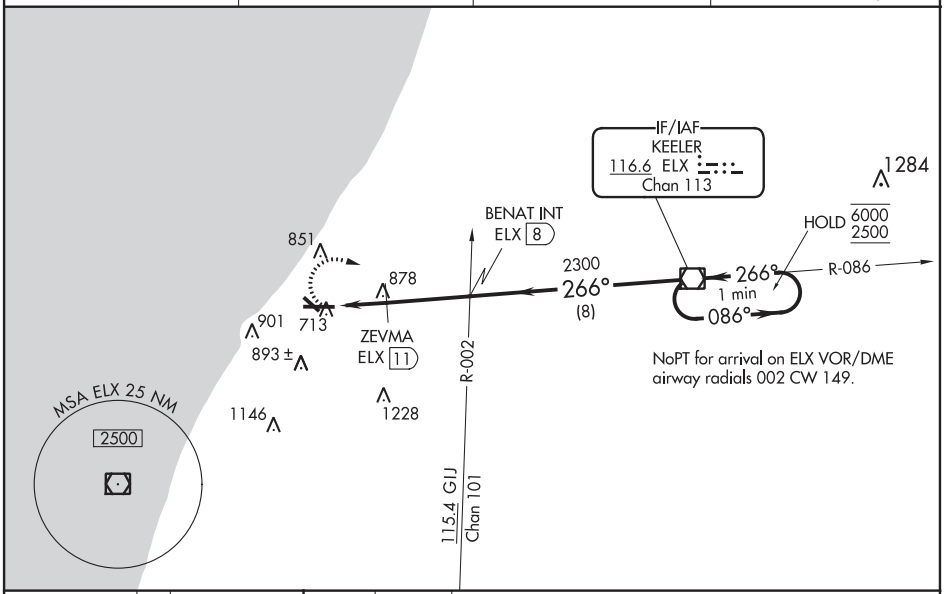
DME required.

Circling Rwy 14, 32 NA at night. For inop ALS, increase S-28 Cats A and B visibility to 1 SM. ZEVMA fix minimums: for inop ALS, increase S-28 Cats A and B visibility to 1 SM and Cats C and D visibility to 1⅜ SM.

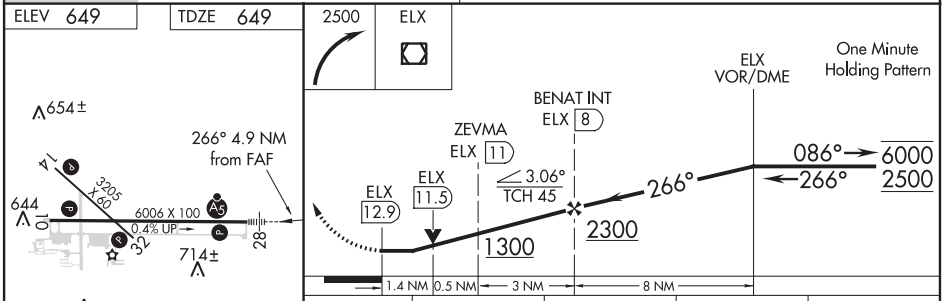
MALSR

MISSED APPROACH: Climbing right turn to 2500 direct ELX VOR/DME and hold.

ASOS	SOUTH BEND APP CON★		SOUTH BEND CLNC DEL	UNICOM
121.55	118.55	257.8	119.7	123.0 (CTAF) L



ELEV 649 TDZE 649



REIL Rwy 10
REIL Rwys 14 and 32 L
MIRL Rwy 14-32 L
HIRL Rwy 10-28 L

FAF to MAP 4.9 NM					
Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

CATEGORY	A	B	C	D
S-28	1300-1 651 (700-1)		1300-1⅜ 651 (700-1⅜)	
C CIRCLING	1300-1 651 (700-1)		1300-1¾ 651 (700-1¾)	1340-2¼ 691 (700-2¼)
ZEVMA FIX MINIMUMS				
S-28	1140-¾ 491 (500-¾)		1140-1 491 (500-1)	
C CIRCLING	1140-1 491 (500-1)	1160-1 511 (600-1)	1300-1¾ 651 (700-1¾)	1340-2¼ 691 (700-2¼)

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WAAS CH 90440 W13A	APP CRS 134°	Rwy ldg 4148 TDZE 669 Apt Elev 674

RNAV (GPS) RWY 13
ANDREWS UNIVERSITY AIRPARK (C2Ø)

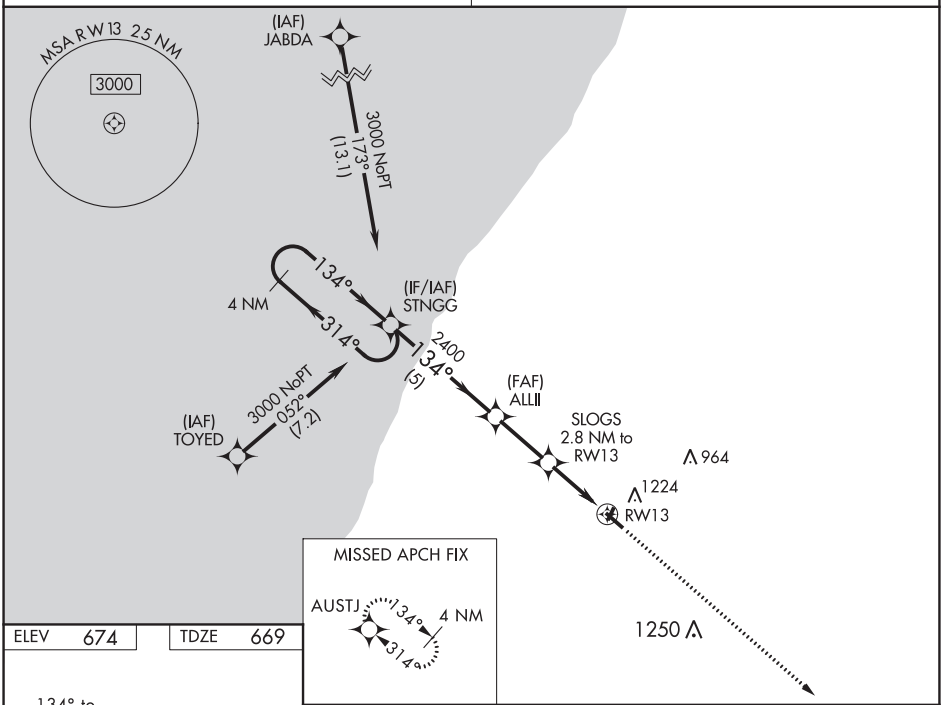
NA

Rwy 13 helicopter visibility reduction below 1 SM NA. DME/DME RNP-0.3 NA. Procedure NA at night. Use Benton Harbor altimeter setting; when not received, use South Bend Int altimeter setting and increase all MDA 40 feet. Increase LP and LNAV Cats C/D visibility ⅛ SM and Circling Cats B/C ¼ SM.

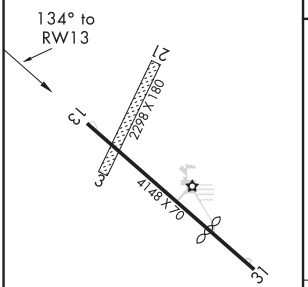
MISSED APPROACH: Climb to 3000 direct AUSTJ and hold.

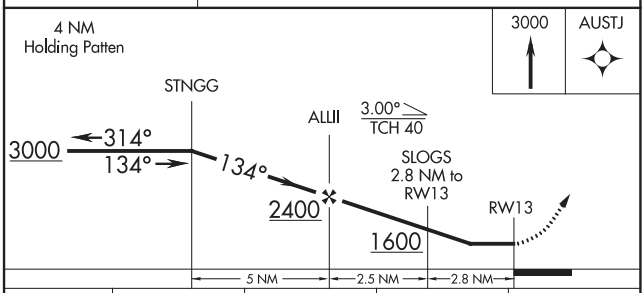
SOUTH BEND APP CON ★
118.55 257.8

UNICOM
122.7 (CTAF) L



ELEV 674	TDZE 669





CATEGORY	A	B	C	D
LP MDA	1100-1 431 (500-1)		1100-1¼ 431 (500-1¼)	
LNAV MDA	1280-1 611 (700-1)		1280-1¾ 611 (700-1¾)	
C CIRCLING	1620-1¼ 946 (1000-1¼)		1620-2¾ 946 (1000-2¾)	1620-3 946 (1000-3)

LIRL Rwy 13-31 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

BERRIEN SPRINGS, MICHIGAN AL-10238 (FAA) 18144

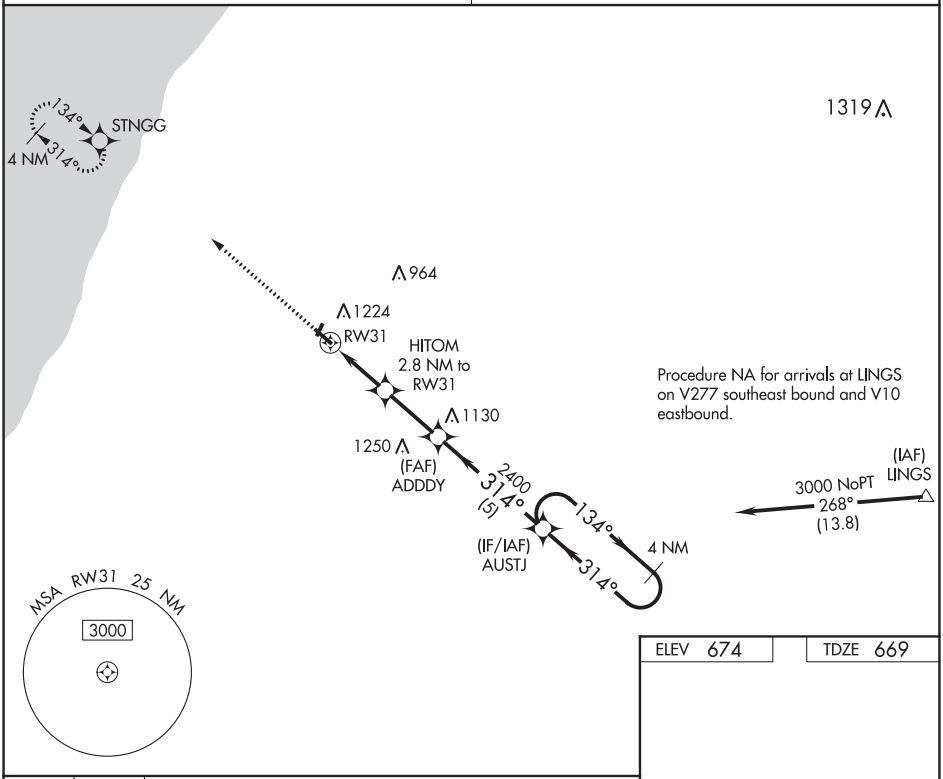
WAAS CH 42840 W31A	APP CRS 314°	Rwy ldg 3019 TDZE 669 Apt Elev 674

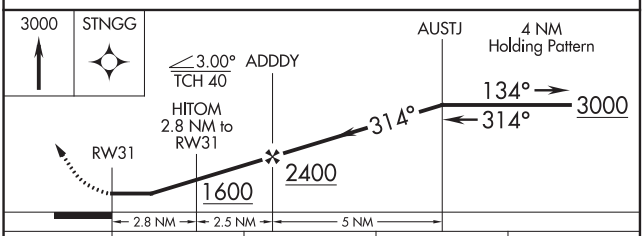
RNAV (GPS) RWY 31
ANDREWS UNIVERSITY AIRPARK (C2Ø)

NA Rwy 31 helicopter visibility reduction below 1 SM NA. DME/DME RNP-0.3 NA. Procedure NA at night. Use Benton Harbor altimeter setting; when not received, use South Bend Intl altimeter setting and increase all MDA 40 feet. Increase LP and LNAV Cats C/D visibility ⅛ SM and Circling Cats B/C ¼ SM.

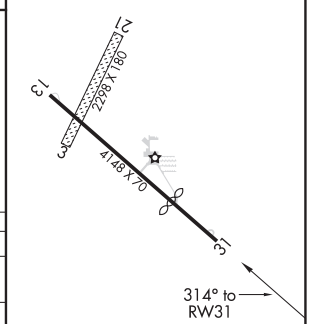
MISSED APPROACH: Climb to 3000 direct STNGG and hold.

SOUTH BEND APP CON ★	UNICOM
118.55 257.8	122.7 (CTAF) L





ELEV 674	TDZE 669



LIRL Rwy 13-31 L

CATEGORY	A	B	C	D
LP MDA	1100-1 431 (500-1)		1100-1¼ 431 (500-1¼)	
LNAV MDA	1160-1 491 (500-1)		1160-1⅜ 491 (500-1⅜)	
C CIRCLING	1620-1¼ 946 (1000-1¼)		1620-2¾ 946 (1000-2¾)	1620-3 946 (1000-3)

EC-1, 25 FEB 2021 to 22 APR 2021

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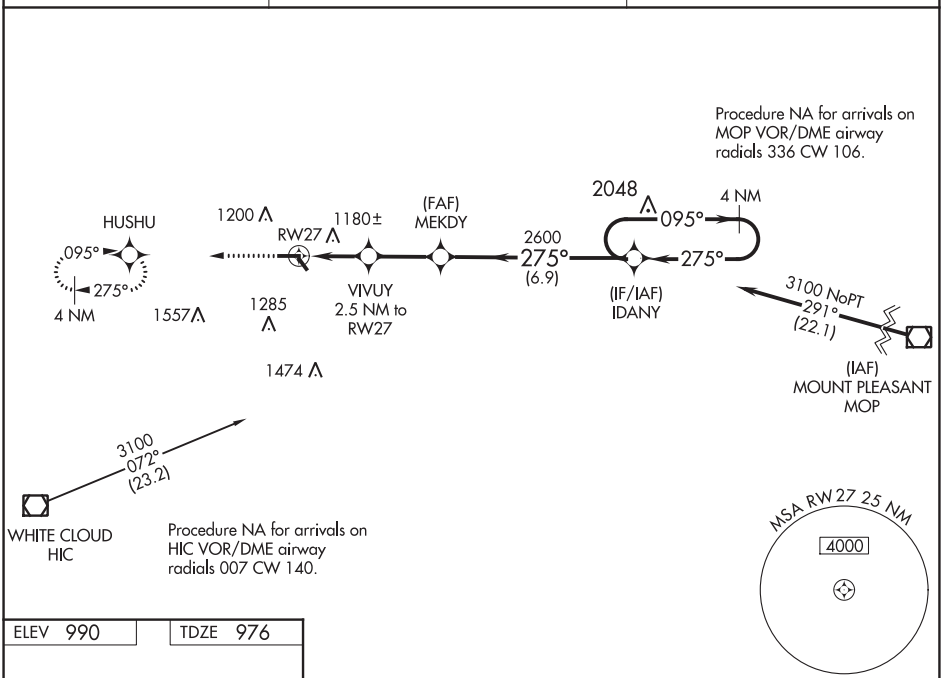
WAAS CH 56238 W27A	APP CRS 275°	Rwy ldg 4300 TDZE 976 Apt Elev 990

RNAV (GPS) RWY 27
ROBEN-HOOD (RQB)

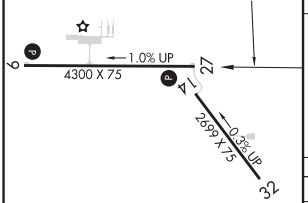
For uncompensated Baro-VNAV systems, procedure NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Night landing: Rwy 32 NA. Baro-VNAV and VDP NA when using Muskegon altimeter setting. When local altimeter setting is not received, use Muskegon altimeter setting and increase DA 157 feet and all visibilities ½ mile; increase all MDAs 160 feet, LNAV Cat C/D visibility and Circling Cat C ½ and Circling Cat D visibility ¼ mile.

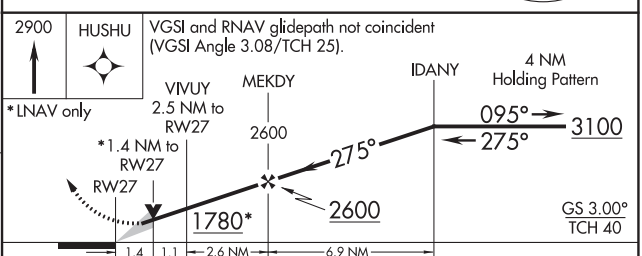
MISSED APPROACH: Climb to 2900 direct HUSHU and hold.

AWOS-3P	MINNEAPOLIS CENTER	UNICOM
125.875	120.85 322.35	122.8 (CTAF) L



ELEV 990	TDZE 976





CATEGORY	A	B	C	D
LPV DA	1176-¾ 200 (200-¾)			
LNAV/VNAV DA	1540-2 564 (600-2)			
LNAV MDA	1440-1 464 (500-1)		1440-1¾ 464 (500-1¾)	
C CIRCLING	1500-1 510 (600-1)	1560-1 570 (600-1)	1700-2 710 (800-2)	1860-2¾ 870 (900-2¾)

REIL Rwys 9 and 27 L
MIRL Rwys 9-27 and 14-32 L

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BOIS BLANC ISLAND, MICHIGAN AL-10997 (FAA) 19283

RNAV (GPS) RWY 10
BOIS BLANC ISLAND (6Y1)

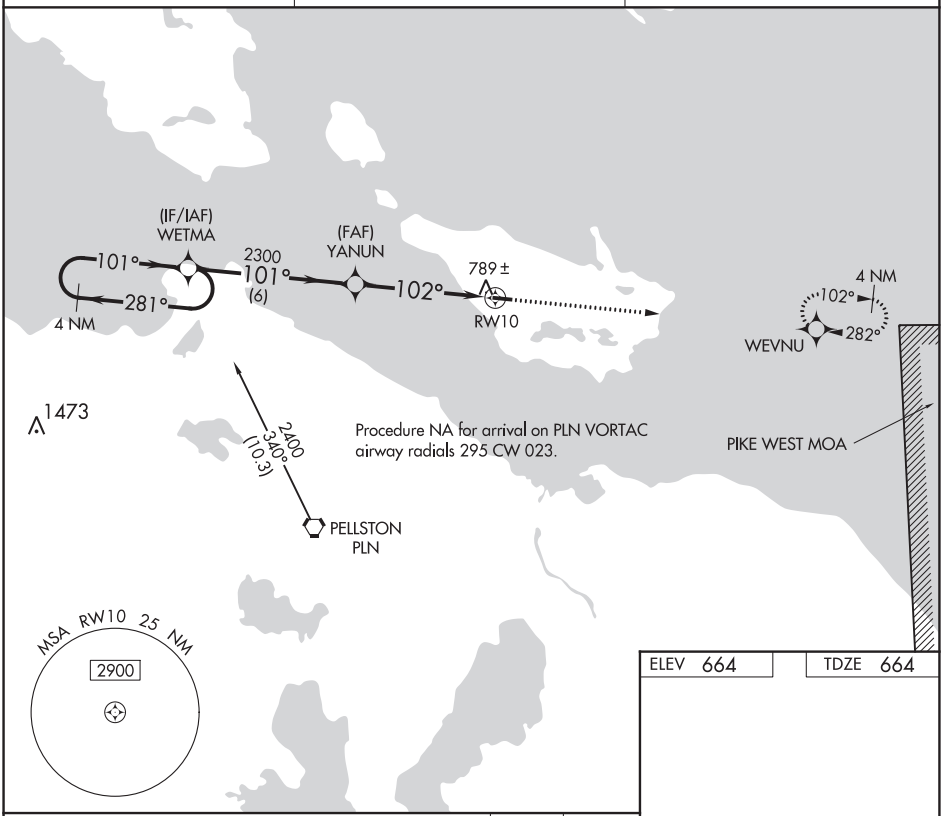
APP CRS	Rwy ldg	3498
102°	TDZE	664
	Apt Elev	664

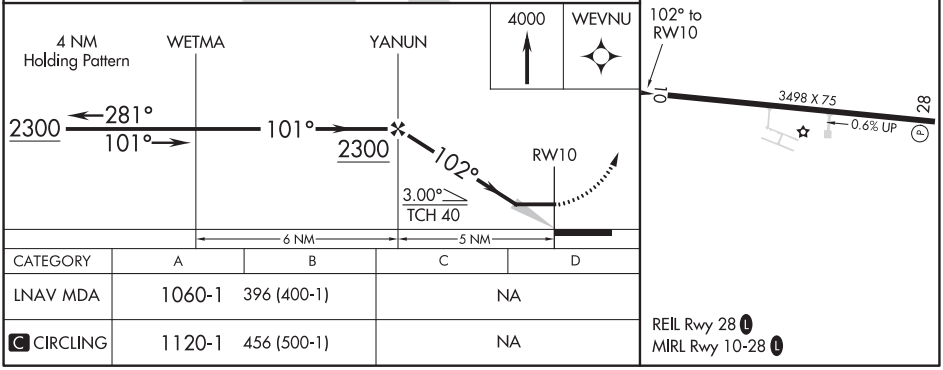
NA

DME/DME RNP-0.3 NA.
Use Cheboygan altimeter setting.

MISSED APPROACH: Climb to 4000 direct WEVNU and hold, continue climb-in-hold to 4000.

SLH AWOS-3	MINNEAPOLIS CENTER	CTAF
118.175	134.6 354.05	122.9 L





CATEGORY	A	B	C	D
LNAV MDA	1060-1	396 (400-1)	NA	
C CIRCLING	1120-1	456 (500-1)	NA	

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WAAS CH 42735 W28A	APP CRS 282°	Rwy ldg 3498 TDZE 664 Apt Elev 664

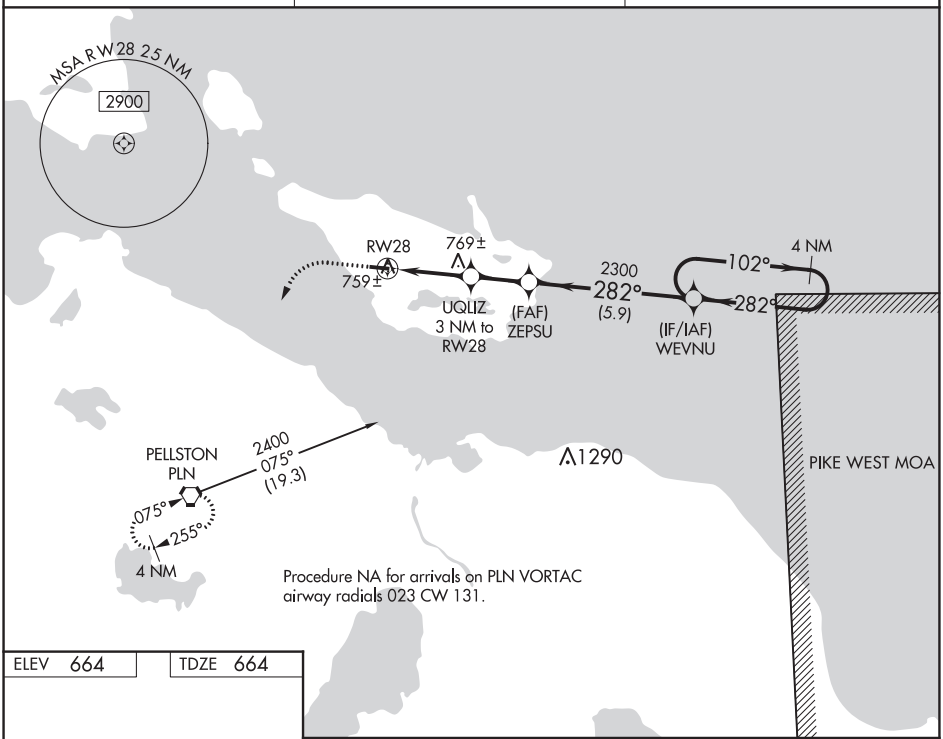
RNAV (GPS) RWY 28
BOIS BLANC ISLAND (6Y1)

T A NA

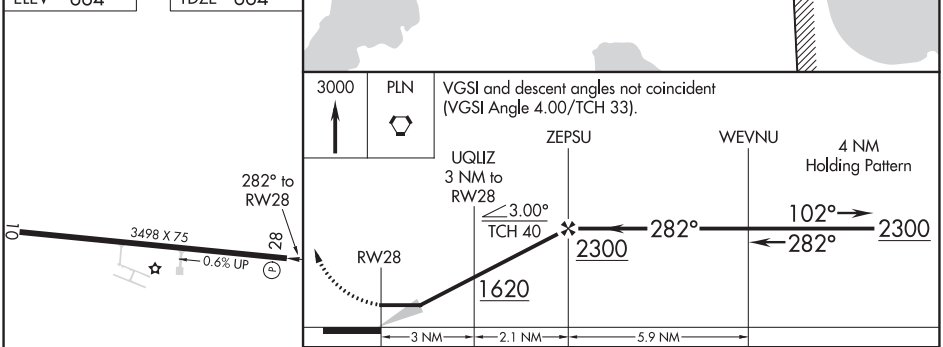
Use Cheboygan altimeter setting; when not received, Mackinac Island altimeter setting. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3000 direct PELLSTON VORTAC and hold.

SLH AWOS-3	MINNEAPOLIS CENTER	CTAF
118.175	134.6 354.05	122.9 L



ELEV 664 | TDZE 664



CATEGORY	A	B	C	D
LP MDA	1040-1 376 (400-1)		NA	
LNAV MDA	1060-1 396 (400-1)		NA	
C CIRCLING	1120-1 456 (500-1)		NA	

REIL Rwy 28 L
MIRL Rwy 10-28 L

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BOYNE CITY, MICHIGAN AL-10402 (FAA) 20086

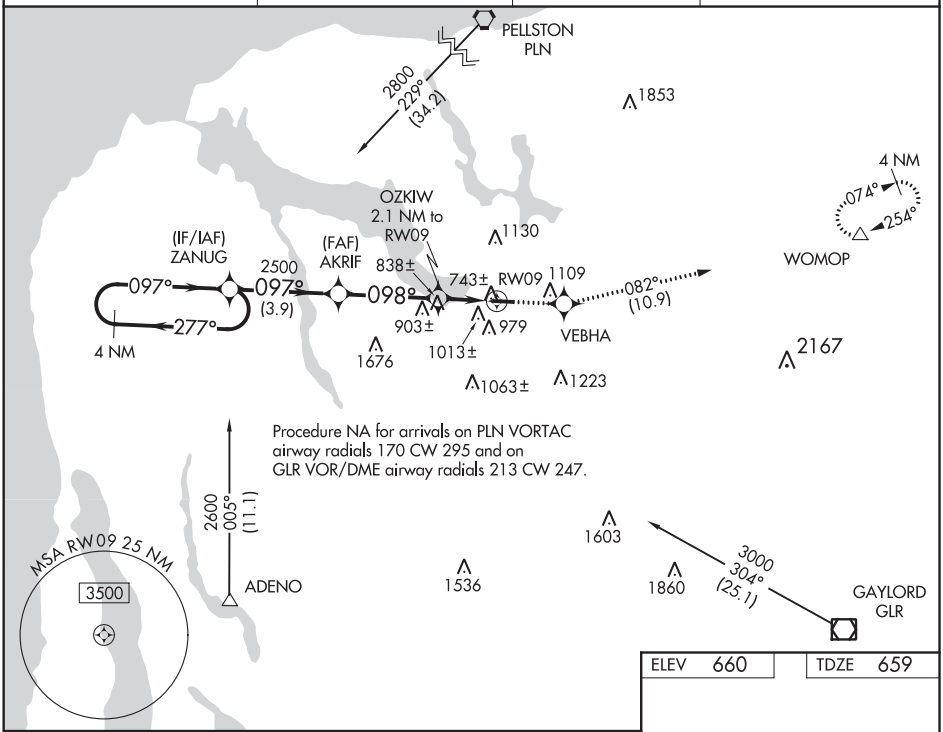
WAAS CH 97526 W09A	APP CRS 098°	Rwy ldg 3402 TDZE 659 Apt Elev 660

RNAV (GPS) RWY 9
BOYNE CITY MUNI (N98)

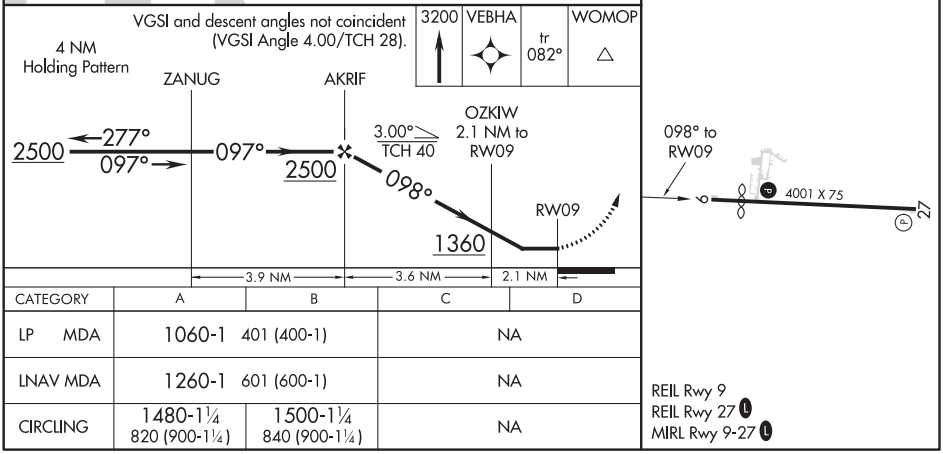
Use Charlevoix altimeter setting; when not received, use Harbor Springs altimeter setting. Procedure NA at night. DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 3200 direct VEBHA and on track 082° to WOMOP and hold.

CVX AWOS-3	MINNEAPOLIS CENTER	UNICOM	
120.0	134.6 354.05	122.8 (CTAF)	122.9 L



ELEV 660	TDZE 659



CATEGORY	A	B	C	D
LP MDA	1060-1 401 (400-1)		NA	
LNAV MDA	1260-1 601 (600-1)		NA	
CIRCLING	1480-1¼ 820 (900-1¼)	1500-1¼ 840 (900-1¼)	NA	

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WAAS CH 50326 W27A	APP CRS 278°	Rwy ldg 4001 TDZE 660 Apt Elev 660

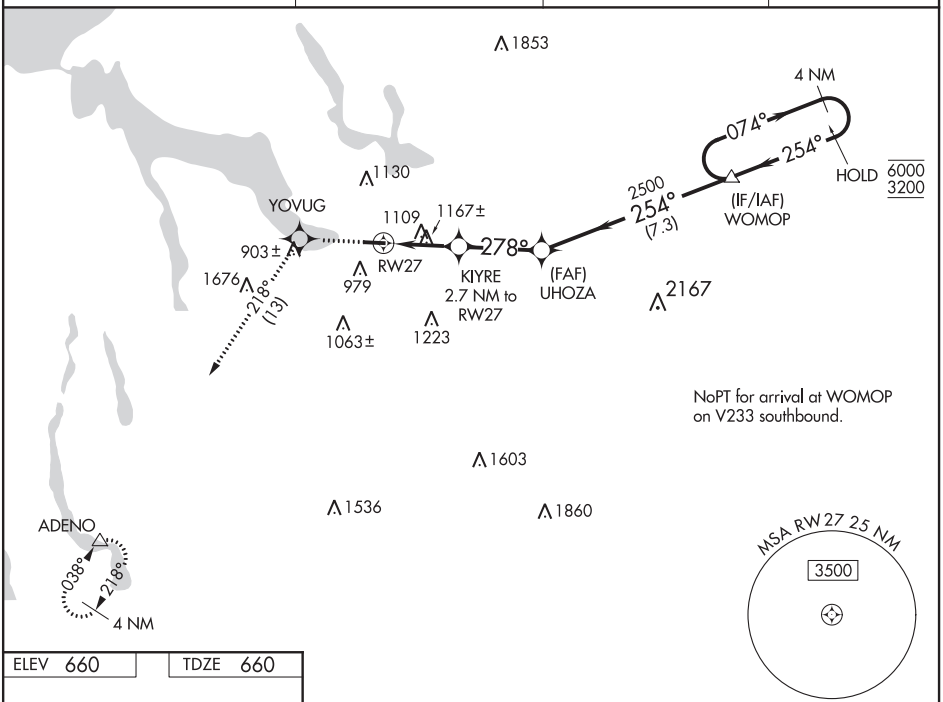
RNAV (GPS) RWY 27
BOYNE CITY MUNI (N98)

RNP APCH.

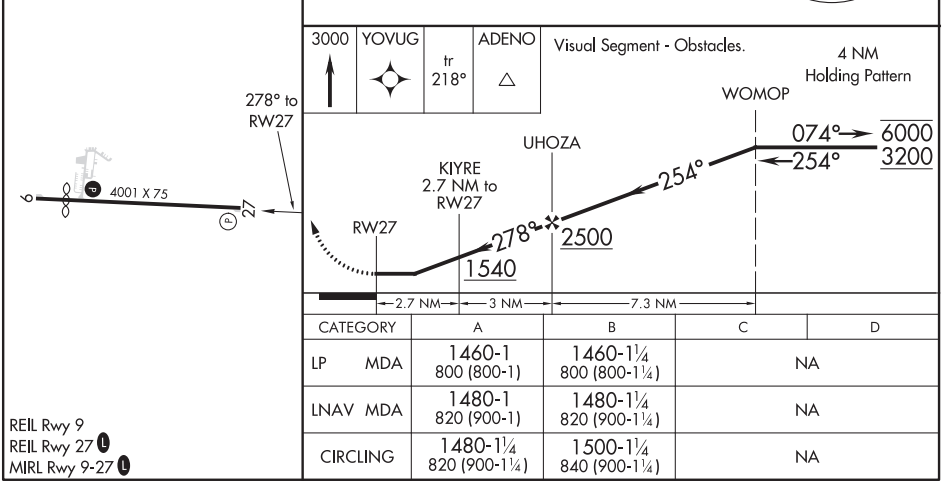
Procedure NA at night. Rwy 27 helicopter visibility reduction below 1 SM NA. Use Charlevoix altimeter setting, when not received, use Harbor Springs altimeter setting.

MISSED APPROACH: Climb to 3000 direct YOVUG and on track 218° to ADENO and hold.

CVX AWOS-3	MINNEAPOLIS CENTER	UNICOM	
120.0	134.6 354.05	122.8 (CTAF)	122.9 L



ELEV 660 TDZE 660



CATEGORY	A	B	C	D
LP MDA	1460-1 800 (800-1)	1460-1¼ 800 (800-1¼)	NA	
LNAV MDA	1480-1 820 (900-1)	1480-1¼ 820 (900-1¼)	NA	
CIRCLING	1480-1¼ 820 (900-1¼)	1500-1¼ 840 (900-1¼)	NA	

REIL Rwy 9
REIL Rwy 27 L
MIRL Rwy 9-27 L

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EC-1, 25 FEB 2021 to 22 APR 2021

BOYNE FALLS, MICHIGAN | AL-6027 (FAA) | 19283

RNAV (GPS) RWY 17
BOYNE MOUNTAIN (BFA)

APP CRS	Rwy ldg	4887
175°	TDZE	707
	Apt Elev	719

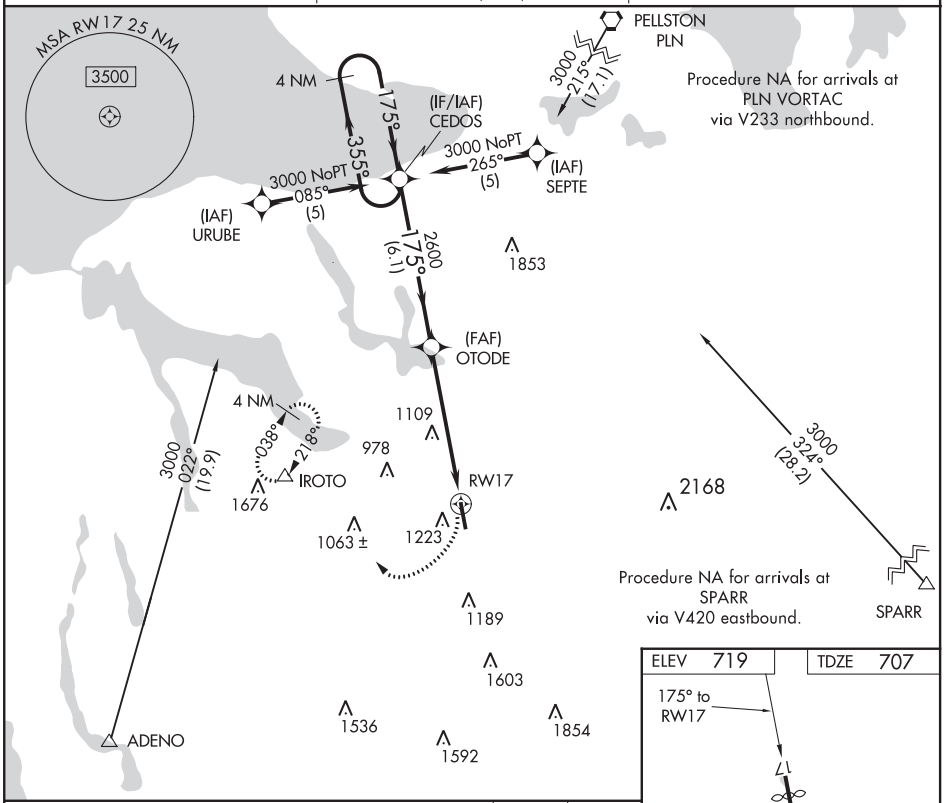
RNP APCH.

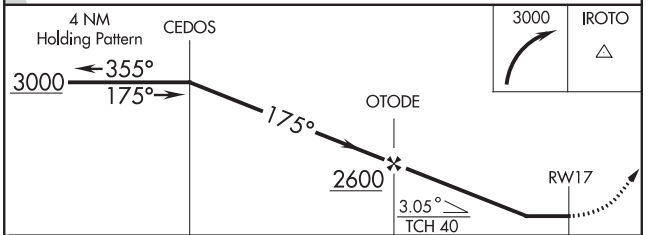
T A NA

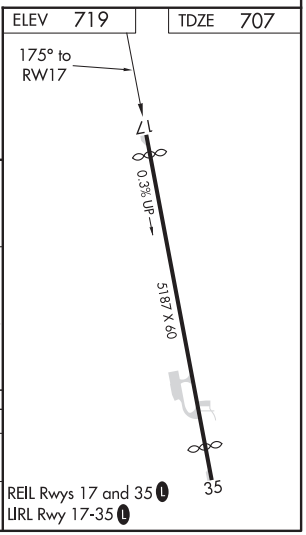
Circling NA west of Rwy 17-35. Use Bellaire altimeter setting; when not received, use Pellston altimeter setting and increase all MDAs 20 feet and increase LNAV Cats A, C, and D visibility ¼ mile, and Circling Cats A and C ¼ mile. Rwy 17 helicopter visibility reduction below 1 SM NA. Procedure NA at night.

MISSED APPROACH: Climbing right turn to 3000 direct IROTO and hold.

MINNEAPOLIS CENTER	UNICOM	
134.6 354.05	122.8 (CTAF)	122.85 L







CATEGORY	A	B	C	D
LNAV MDA	1580 - 1 873 (900-1)	1580 - 1¼ 873 (900-1¼)	1580 - 2½ 873 (900-2½)	1580 - 2¾ 873 (900-2¾)
CIRCLING	1580 - 1 861 (900-1)	1580 - 1¼ 861 (900-1¼)	1580 - 2½ 861 (900-2½)	1640 - 3 921 (1000-3)

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APP CRS	Rwy ldg	4687
355°	TDZE	719
	Apt Elev	719

RNAV (GPS) RWY 35
BOYNE MOUNTAIN (BFA)

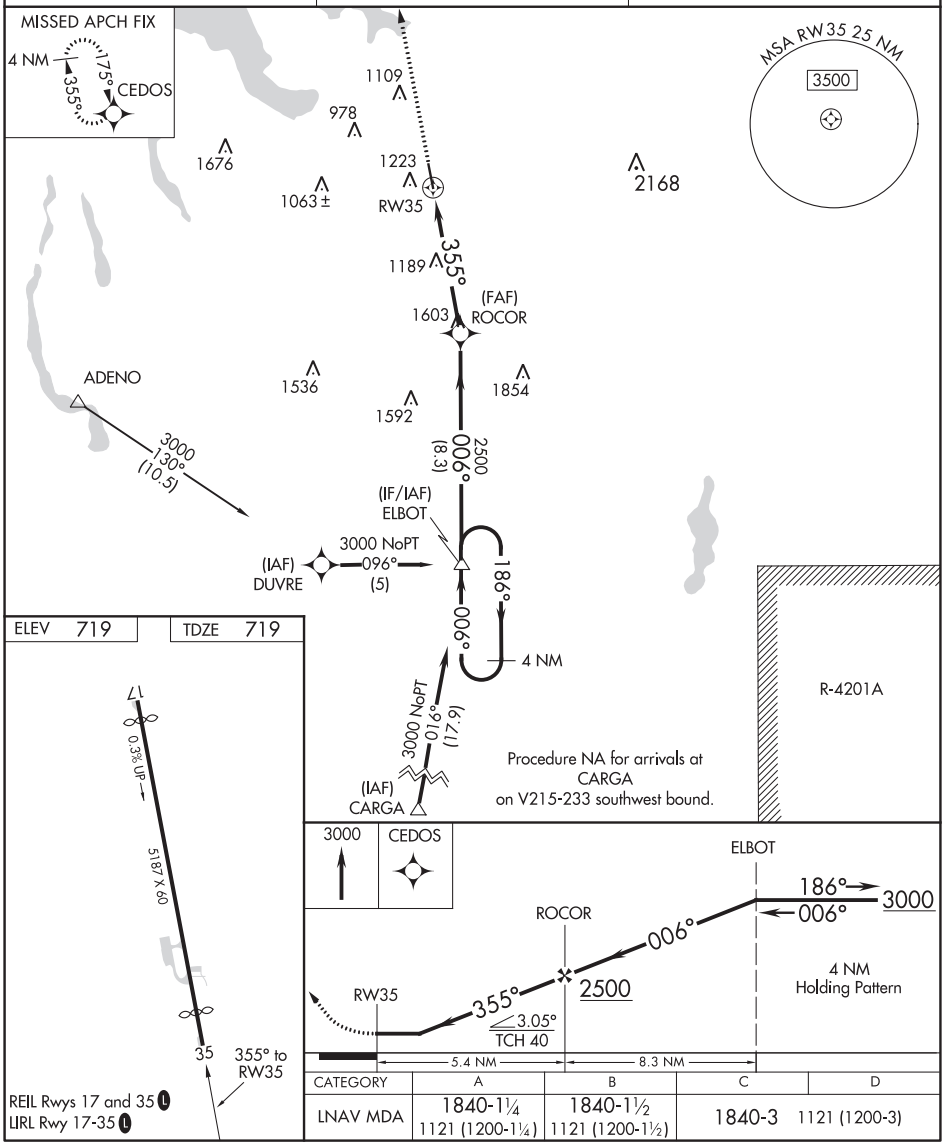
RNP APCH.

NA

Use Bellaire altimeter setting; when not received, use Pellston altimeter setting. Procedure NA at night. Rwy 35 helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 3000 direct CEDOS and hold.

MINNEAPOLIS CENTER	UNICOM	
134.6 354.05	122.8 (CTAF)	122.85 L



CATEGORY	A	B	C	D
LNAV MDA	1840-1¼ 1121 (1200-1¼)	1840-1½ 1121 (1200-1½)	1840-3 1121 (1200-3)	

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CADILLAC, MICHIGAN AL-5421 (FAA) 20338

ILS or LOC RWY 7
WEXFORD COUNTY (CAD)

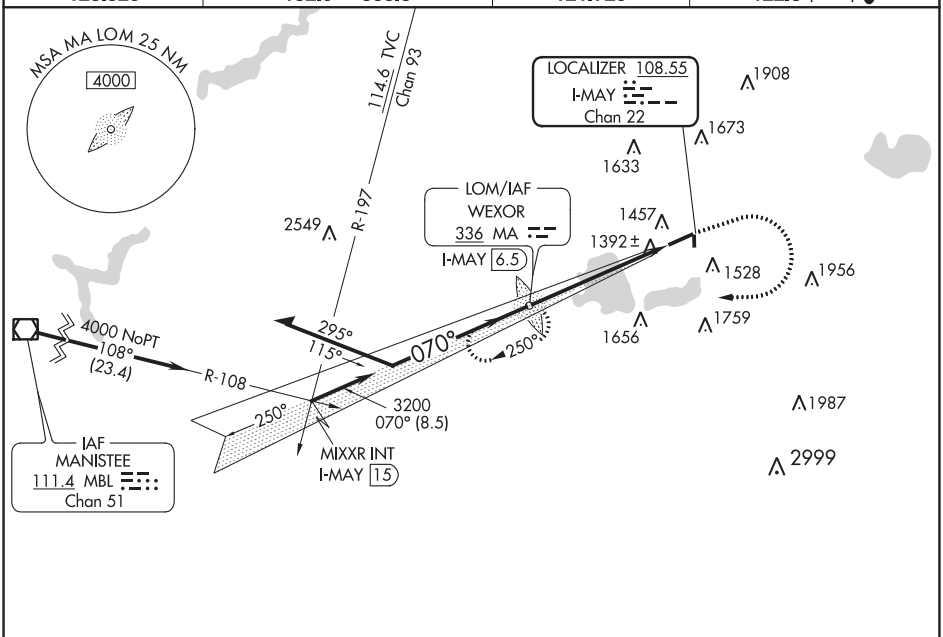
LOC/DME I-MAY	APP CRS	Rwy ldg	5000
108.55	070°	TDZE	1307
Chan 22		Apt Elev	1307

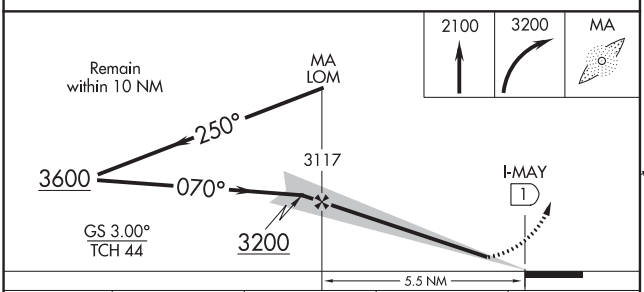
T NA ADF Required. When local altimeter setting not received, use Houghton Lake altimeter setting and increase all DA 137 feet and all MDA 140 feet and increase S-ILS 7 all Cats visibility ½ mile, S-LOC 7 visibility Cat C ½ mile and Cat D ¼ mile, Circling visibility Cat C ½ mile and Cat D ¼ mile. Inoperative table does not apply to S-LOC 7 Cat C visibility when using Houghton Lake altimeter setting.

MALSF

MISSED APPROACH: Climb to 2100, then climbing right turn to 3200 direct WEXOR LOM I-MAY 6.5 DME and hold.

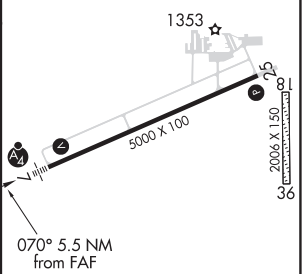
AWOS-3	MINNEAPOLIS CENTER	GCO	UNICOM
128.325	132.9 338.3	121.725	122.8 (CTAF) L





CATEGORY	A	B	C	D
S-ILS 7	1507-¾ 200 (200-¾)			
S-LOC 7	1660-¾ 353 (400-¾)			1660-1¼ 353 (400-1¼)
CIRCLING	1900-1 593 (600-1)		1900-1½ 593 (600-1½)	1900-2 593 (600-2)

ELEV 1307 TDZE 1307



HIRL Rwy 7-25 L
REIL Rwys 7 and 25 L

FAF to MAP 5.5 NM					
Knots	60	90	120	150	180
Min:Sec	5:30	3:40	2:45	2:12	1:50

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 86413 W07A	APP CRS 070°	Rwy ldg 5000 TDZE 1307 Apt Elev 1307

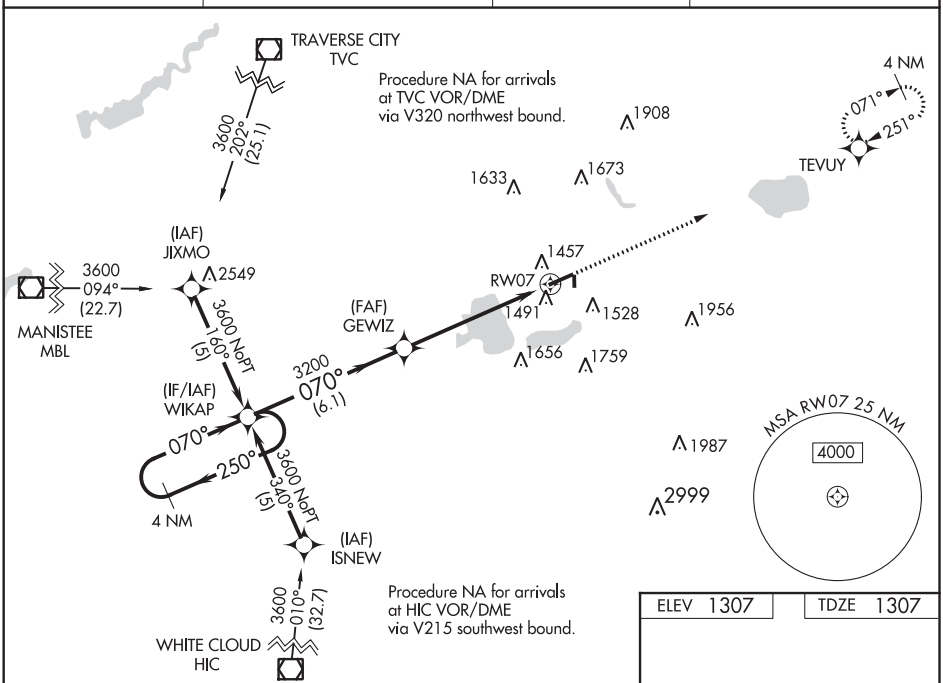
RNAV (GPS) RWY 7
WEXFORD COUNTY (CAD)

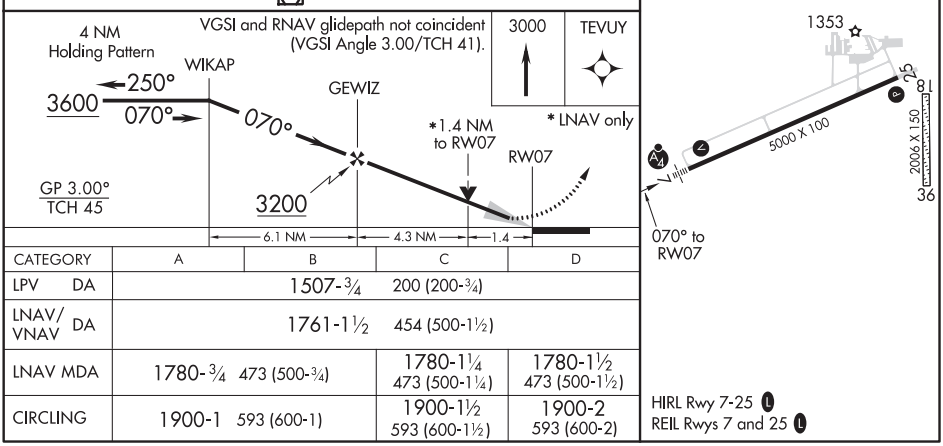
DME/DME RNP-0.3 NA. When local altimeter setting not received, use Houghton Lake altimeter setting and increase all DA 137 feet and all MDA 140 feet, LPV and LNAV/VNAV visibility ½ mile all Cats, LNAV Cats C/D visibility ½ mile, Circling Cat C visibility ½ mile and Cat D visibility ¼ mile. Inop table does not apply to LNAV Cat C visibilities. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). Baro-VNAV and VDP NA when using Houghton Lake altimeter setting.

MALSF

MISSED APPROACH: Climb to 3000 direct TEVUY and hold.

AWOS-3	MINNEAPOLIS CENTER	GCO	UNICOM
128.325	132.9 338.3	121.725	122.8 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	1507-¾ 200 (200-¾)			
LNAV/VNAV DA	1761-1½ 454 (500-1½)			
LNAV MDA	1780-¾ 473 (500-¾)		1780-1¼ 473 (500-1¼)	1780-1½ 473 (500-1½)
CIRCLING	1900-1 593 (600-1)		1900-1½ 593 (600-1½)	1900-2 593 (600-2)

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

CADILLAC, MICHIGAN AL-5421 (FAA) 20030

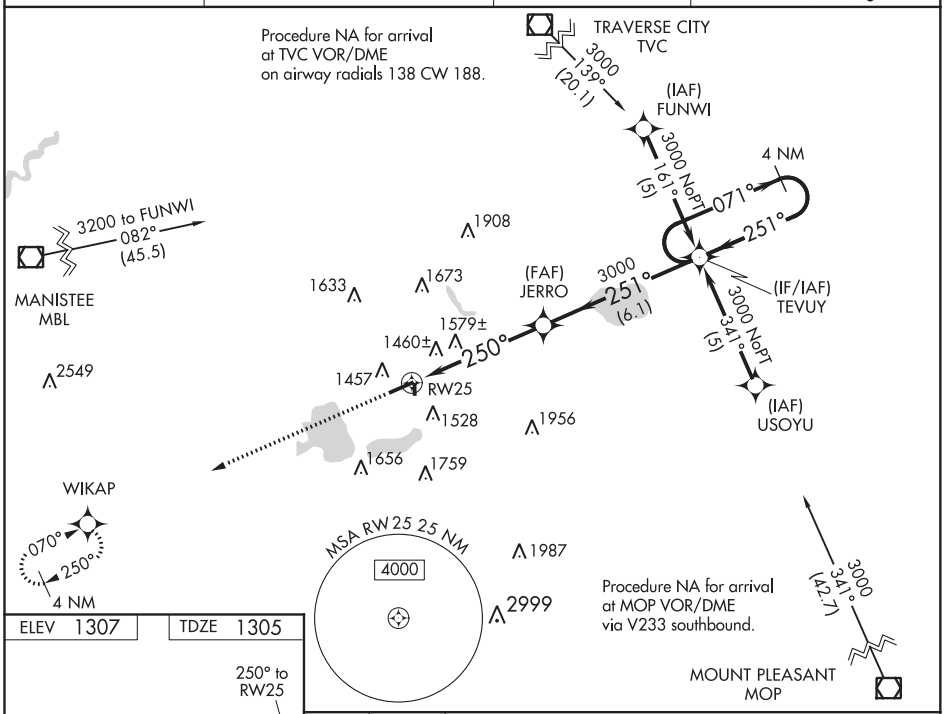
WAAS CH 97513 W25A	APP CRS 250°	Rwy ldg 5000 TDZE 1305 Apt Elev 1307

RNAV (GPS) RWY 25
WEXFORD COUNTY (CAD)

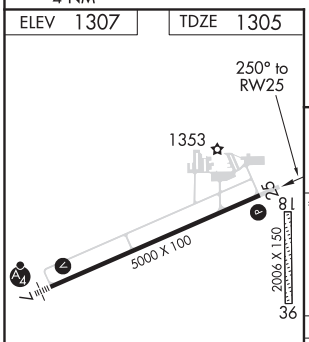
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). Baro-VNAV and VDP NA when using Houghton Lake altimeter setting. When local altimeter setting not received, use Houghton Lake altimeter setting and increase all DA 137 feet, all MDA 140 feet, LPV and LNAV/VNAV visibilities all Cats ½ mile, LNAV visibilities Cats C and D ½ mile, Circling visibilities Cat C ½ mile and Cat D ¼ mile.

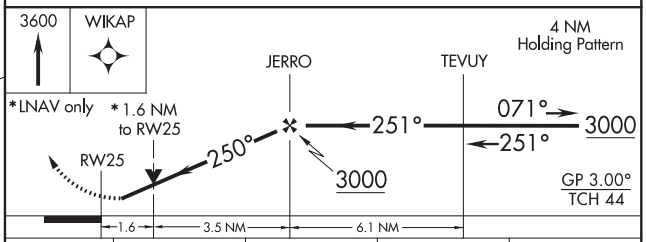
MISSED APPROACH: Climb to 3600 direct WIKAP and hold.

AWOS-3	MINNEAPOLIS CENTER	GCO	UNICOM
128.325	132.9 338.3	121.725	122.8 (CTAF) L



ELEV 1307 TDZE 1305





CATEGORY	A	B	C	D
LPV DA	1625-1¼ 320 (400-1¼)			
LNAV/VNAV DA	1869-2 564 (600-2)			
LNAV MDA	1840-1 535 (600-1)		1840-1½ 535 (600-1½)	1840-1¾ 535 (600-1¾)
CIRCLING	1900-1 593 (600-1)		1900-1½ 593 (600-1½)	1900-2 593 (600-2)

HIRL Rwy 7-25 L
REIL Rwys 7 and 25 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

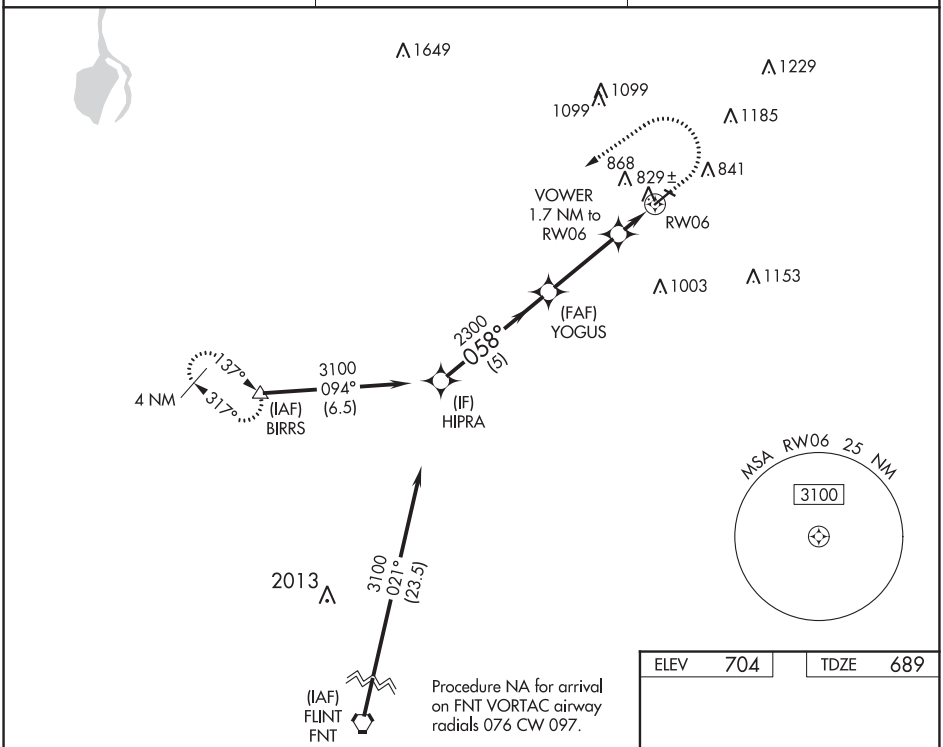
WAAS CH 56441 W06A	APP CRS 058°	Rwy ldg 4302 TDZE 689 Apt Elev 704

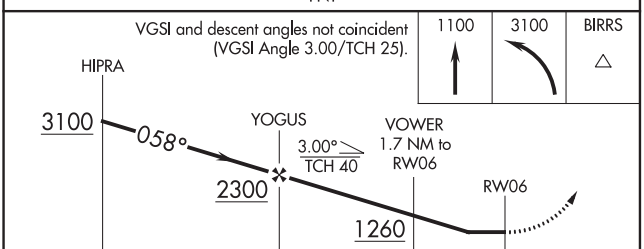
RNAV (GPS) RWY 6
TUSCOLA AREA (CFS)

Circling NA to Rwys 13 and 31.
Helicopter visibility reduction below 1 SM NA.
DME/DME RNP-0.3 NA. Procedure NA at night.

MISSED APPROACH: Climb to 1100 then climbing left turn to 3100 direct BIRRS and hold.

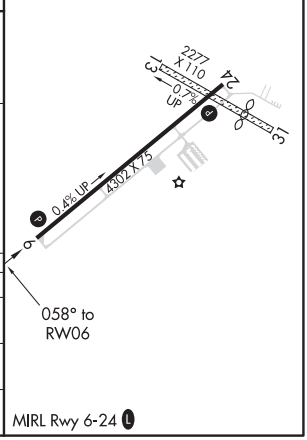
AWOS-3	GREAT LAKES APP CON★	UNICOM
119.275	120.95 235.625	123.0 (CTAF) L





CATEGORY	A	B	C	D
LP MDA	1040-1 351 (400-1)			NA
LNAV MDA	1080-1 391 (400-1)		1080-1¼ 391 (400-1¼)	NA
C CIRCLING	1200-1 496 (500-1)		1220-1½ 516 (600-1½)	NA

ELEV 704 TDZE 689



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CARO, MICHIGAN AL-6375 (FAA) 19171

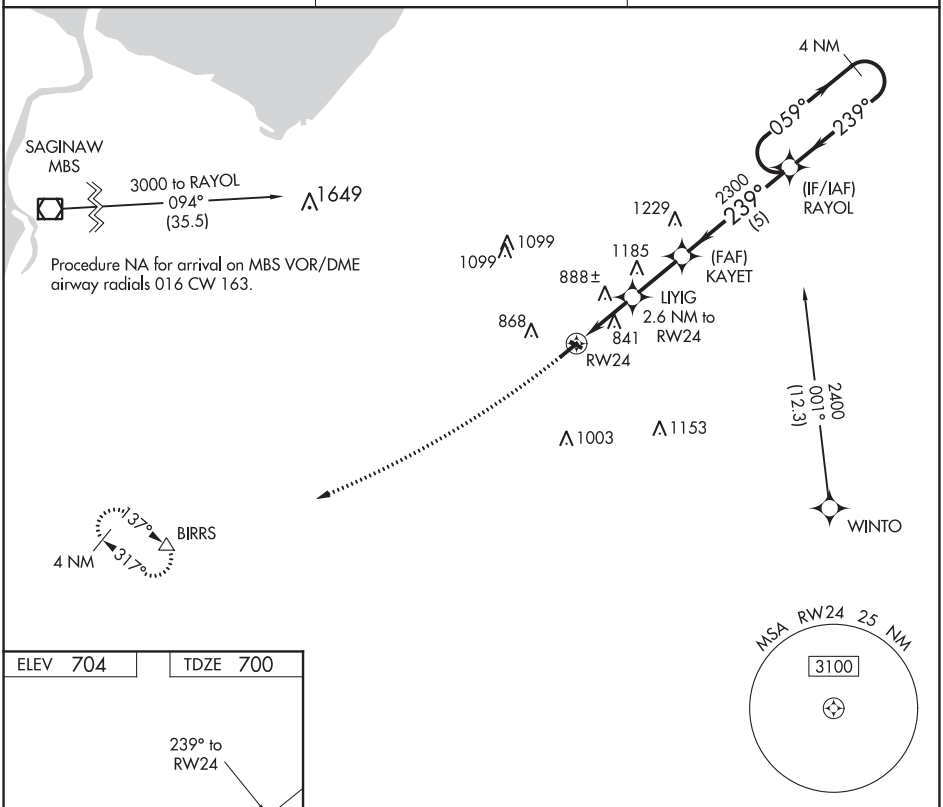
RNAV (GPS) RWY 24
TUSCOLA AREA (CFS)

APP CRS	Rwy ldg	4302
239°	TDZE	700
	Apt Elev	704

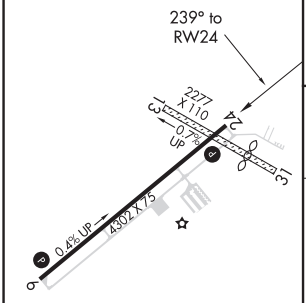
Circling NA to Rwys 13 and 31.
Helicopter visibility reduction below 1 SM NA.
DME/DME RNP-0.3 NA. Procedure NA at night.

MISSED APPROACH: Climbing right turn to 3100 direct BIRRS and hold.

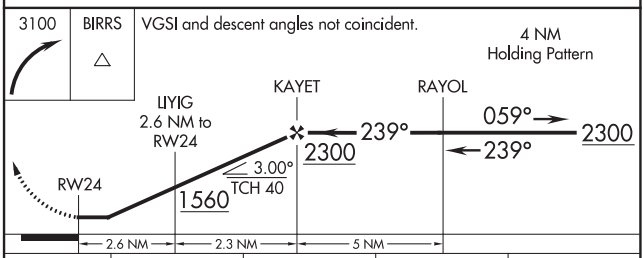
AWOS-3	GREAT LAKES APP CON ★	UNICOM
119.275	120.95 235.625	123.0 (CTAF) L



ELEV 704 | TDZE 700



MIRL Rwy 6-24 L



CATEGORY	A	B	C	D
LNAV MDA	1140-1 440 (500-1)		1140-1¼ 440 (500-1¼)	NA
C CIRCLING	1200-1 496 (500-1)		1220-1½ 516 (600-1½)	NA

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VOR/DME MBS 112.9 Chan 76	APP CRS 102°	Rwy ldg N/A TDZE N/A Apt Elev 704

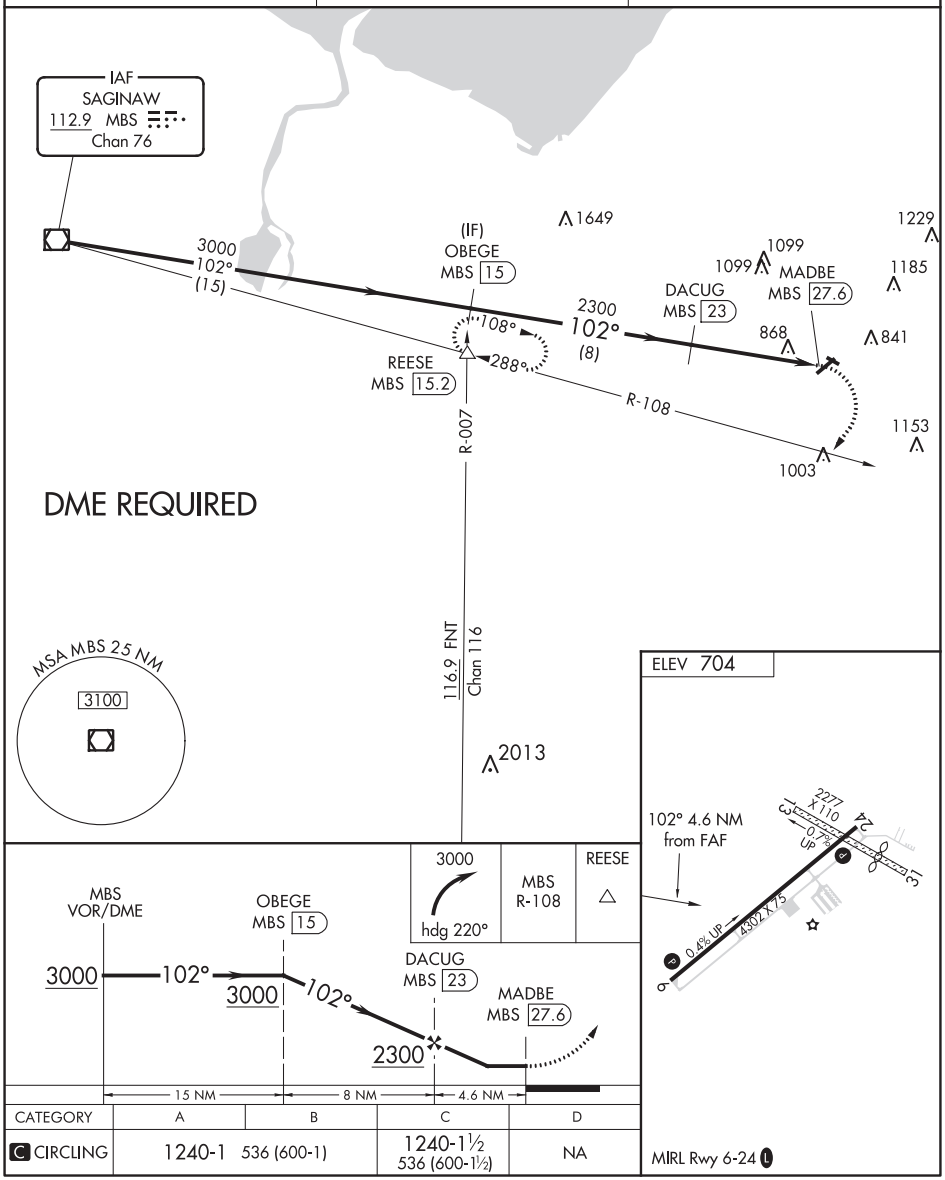
VOR-A

TUSCOLA AREA (CFS)

Circling NA to Rwys 13 and 31. DME required. Procedure NA at night.

MISSED APPROACH: Climbing right turn to 3000 on heading 220° and on MBS VOR/DME R-108 to REESE INT/15.2 DME and hold.

AWOS-3	GREAT LAKES APP CON ★	UNICOM
119.275	120.95 235.625	123.0 (CTAF) L



CATEGORY	A	B	C	D
C CIRCLING	1240-1 536 (600-1)		1240-1½ 536 (600-1½)	NA

MIRL Rwy 6-24 L

EC-1, 25 FEB 2021 to 22 APR 2021
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CHARLEVOIX, MICHIGAN AL-5907 (FAA) 20310

WAAS CH **97708** **W09A**	APP CRS **090°**	Rwy ldg **4549** TDZE **669** Apt Elev **669**

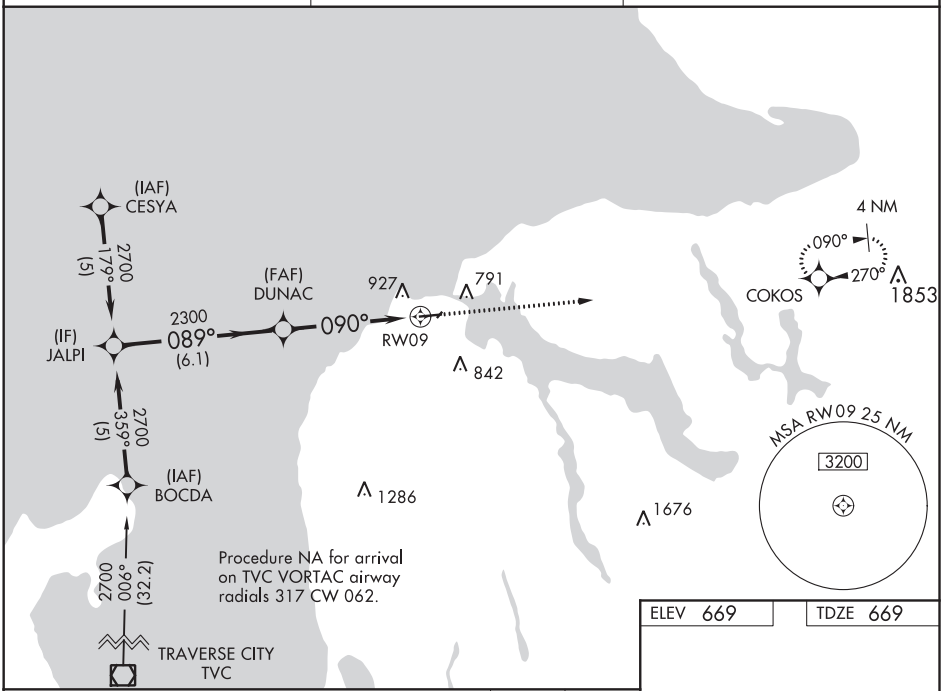
RNAV (GPS) RWY 9
CHARLEVOIX MUNI (CVX)

RNP APCH.

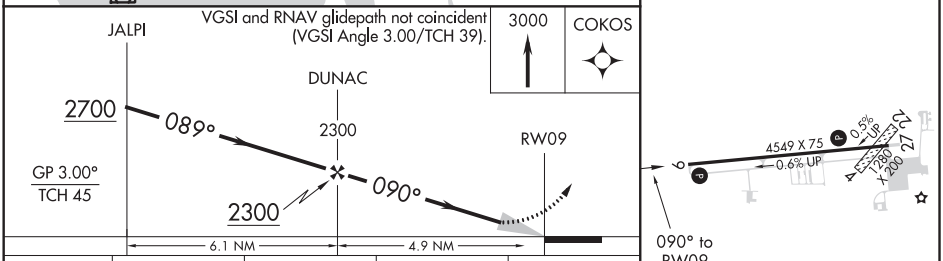
Circling NA to Rwys 4 and 22. Baro-VNAV NA when using Pellston altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C. When local altimeter setting not received, use Pellston altimeter setting: increase LPV DA to 986 feet and all visibilities ⅛ SM; increase LNAV/VNAV DA to 1270 feet and all visibilities ¼ SM; increase all MDA 80 feet and visibility Cats C and D ¼ SM.

MISSED APPROACH: Climb to 3000 direct COKOS and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
120.0	**134.6 354.05**	**122.8** (CTAF) L



ELEV 669	TDZE 669



CATEGORY	A	B	C	D
LPV DA	919-¾ 250 (300-¾)			
LNAV/VNAV DA	1203-1½ 534 (600-1½)			
LNAV MDA	1160-1 491 (500-1)		1160-1⅜ 491 (500-1⅜)	
CIRCLING	1280-1 611 (700-1)		1280-1¾ 611 (700-1¾)	1280-2 611 (700-2)

REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

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EC-1, 25 FEB 2021 to 22 APR 2021

APP CRS	Rwy ldg	4549
270°	TDZE	662
	Apt Elev	669

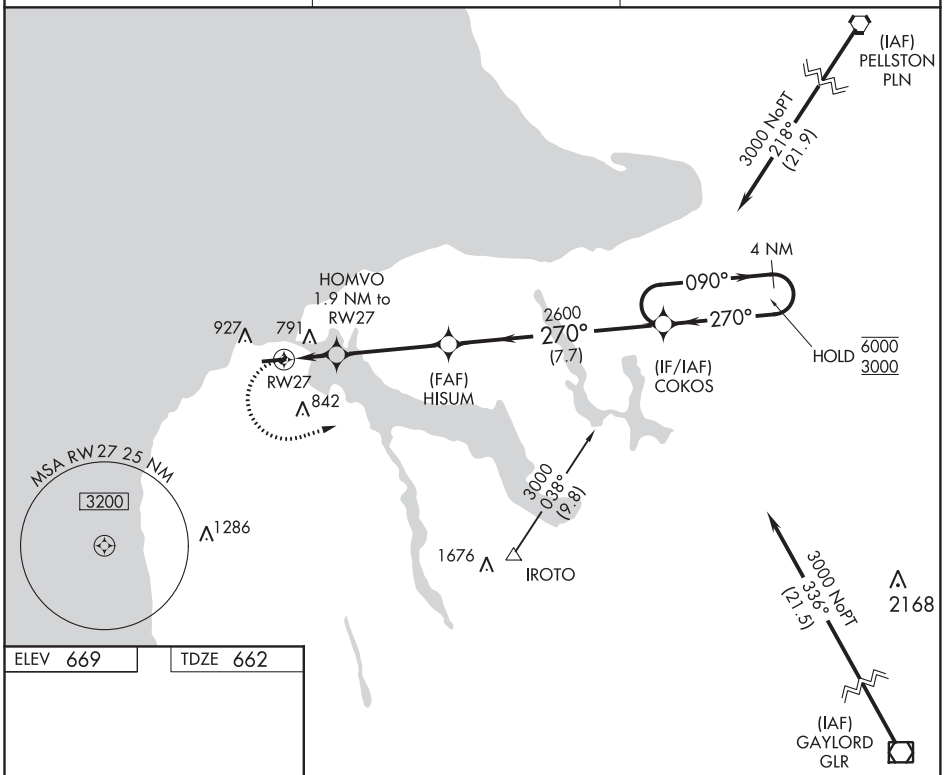
RNAV (GPS) RWY 27
CHARLEVOIX MUNI (CVX)

RNP APCH.

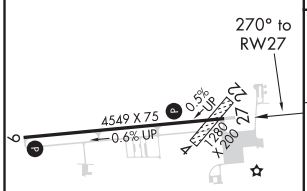
Circling NA to Rwys 4 and 22.
Rwy 27 helicopter visibility reduction below ¾ SM NA.

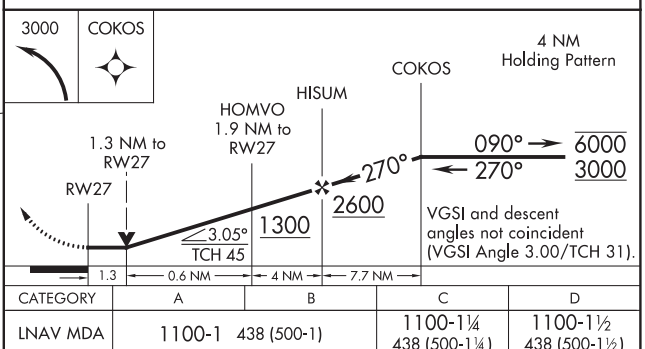
MISSED APPROACH: Climbing left turn to 3000 direct COKOS and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
120.0	134.6 354.05	122.8 (CTAF) L



ELEV 669 TDZE 662





CATEGORY	A	B	C	D
LNAV MDA	1100-1 438 (500-1)		1100-1¼ 438 (500-1¼)	1100-1½ 438 (500-1½)
CIRCLING	1280-1 611 (700-1)		1280-1¾ 611 (700-1¾)	1280-2 611 (700-2)

REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

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EC-1, 25 FEB 2021 to 22 APR 2021

CHARLOTTE, MICHIGAN

AL-5627 (FAA)

20142

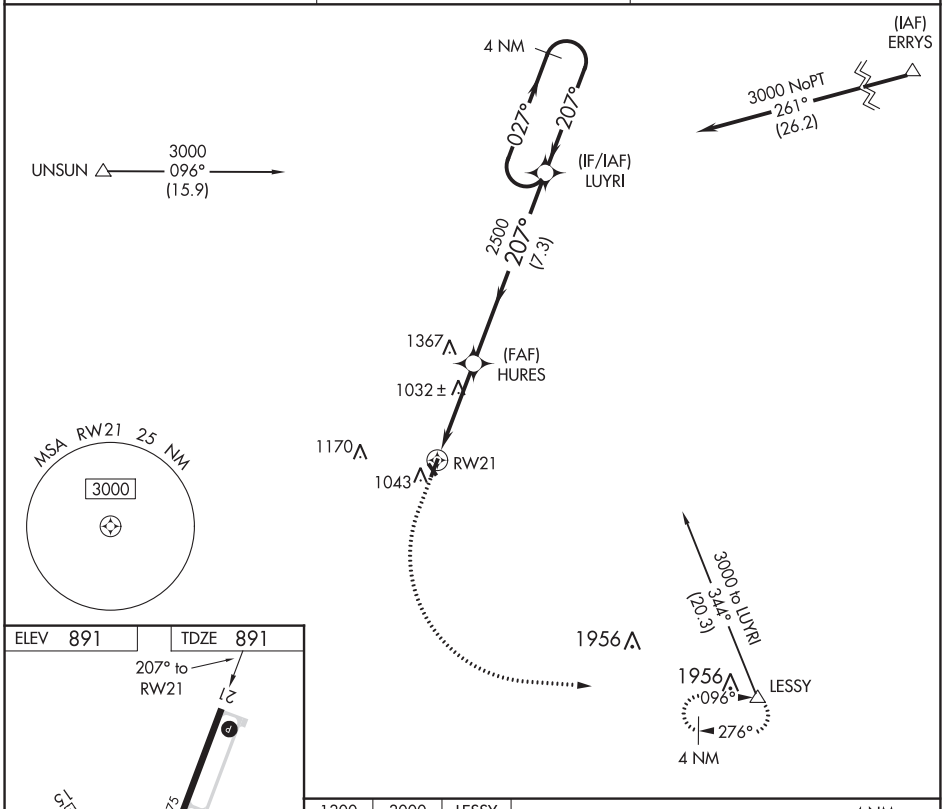
APP CRS	Rwy ldg	3510
207°	TDZE	891
	Apt Elev	891

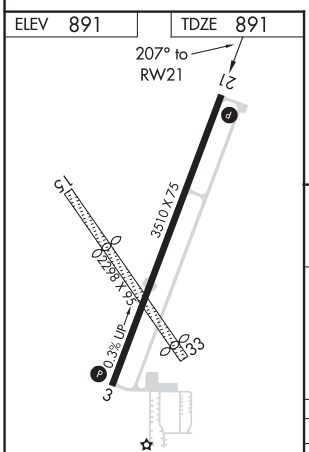
RNAV (GPS) RWY 21
FITCH H BEACH (FPK)

Circling NA to Rwys 15 and 33.
Rwy 21 helicopter visibility reduction below 1 SM NA.
DME/DME RNP-0.3 NA.
Procedure NA at night.

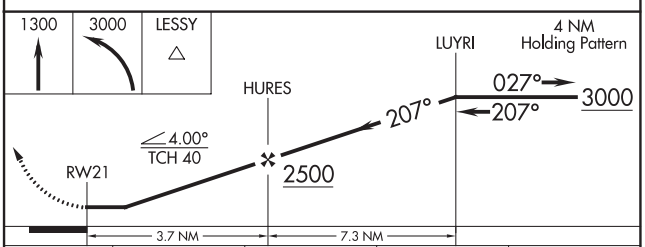
MISSED APPROACH: Climb to 1300 then climbing left turn to 3000 direct LESSY and hold.

AWOS-3	GREAT LAKES APP CON	UNICOM
118.075	118.65 226.4	123.0 (CTAF) L





MIRL Rwy 3-21 L
REIL Rwys 3 and 21 L



CATEGORY	A	B	C	D
LNAV MDA	1300-1 409 (500-1)		NA	
C CIRCLING	1380-1 489 (500-1)	1480-1 589 (600-1)	NA	

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CHARLOTTE, MICHIGAN
Amdt 1A 29MAR18

42°34'N-84°49'W

FITCH H BEACH (FPK)
RNAV (GPS) RWY 21

WAAS CH 50224 W10A	APP CRS 097°	Rwy ldg 4005 TDZE 640 Apt Elev 640

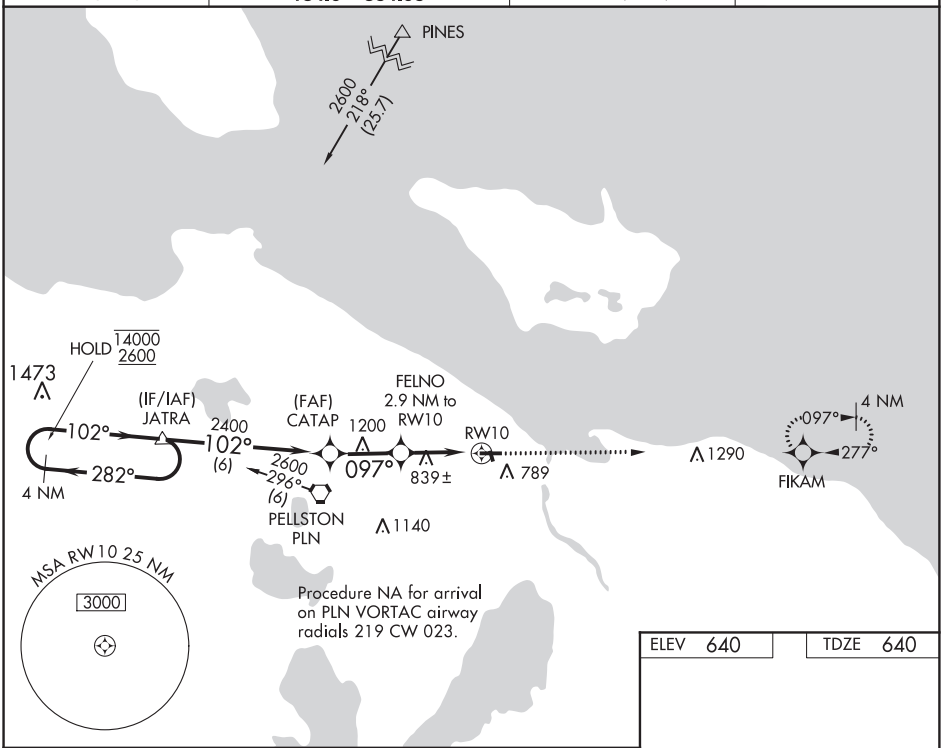
RNAV (GPS) RWY 10
CHEBOYGAN COUNTY (SLH)

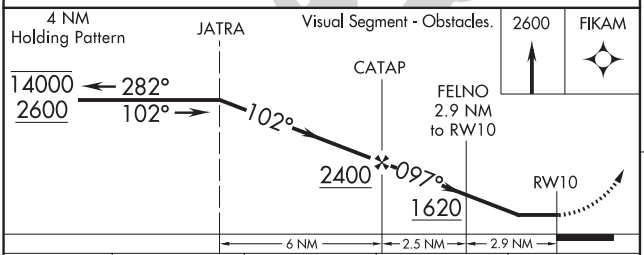
RNP APCH.

Helicopter visibility reduction below 1 SM NA. Straight-in Rwy 10 NA at night, Circling Rwy 10, 17, 35 NA at night. When local altimeter setting not received, use Pellston altimeter setting; increase all MDA 60 feet, increase LP and LNAV Cat C visibility ⅛ SM.

MISSED APPROACH: Climb to 2600 direct FIKAM and hold.

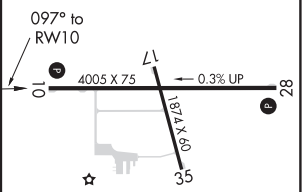
AWOS-3	MINNEAPOLIS CENTER	UNICOM	
118.175	134.6 354.05	122.8 (CTAF)	122.5 L





CATEGORY	A	B	C	D
LP MDA	1060-1 420 (500-1)		1060-1¼ 420 (500-1¼)	NA
LNAV MDA	1100-1 460 (500-1)		1100-1⅜ 460 (500-1⅜)	NA
C CIRCLING	1140-1 500 (500-1)		1140-1½ 500 (500-1½)	NA

ELEV 640 TDZE 640



REIL Rwys 10 and 28 L
MIRL Rwy 10-28 and 17-35 L

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

CHEBOYGAN, MICHIGAN AL-6096 (FAA) 20282

WAAS CH 99727 W28A	APP CRS 277°	Rwy ldg 4005 TDZE 637 Apt Elev 640

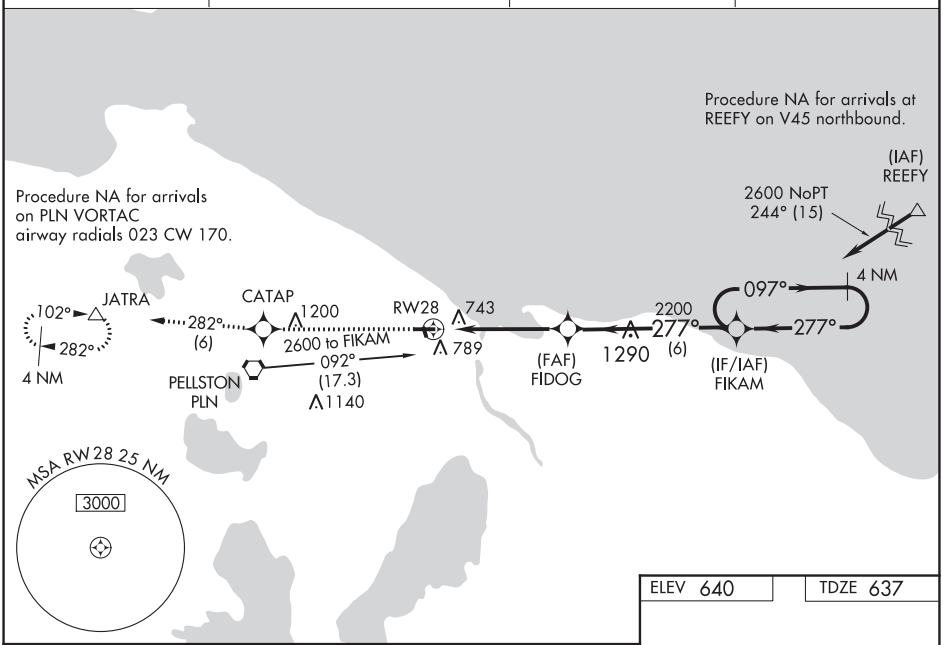
RNAV (GPS) RWY 28
CHEBOYGAN COUNTY (SLH)

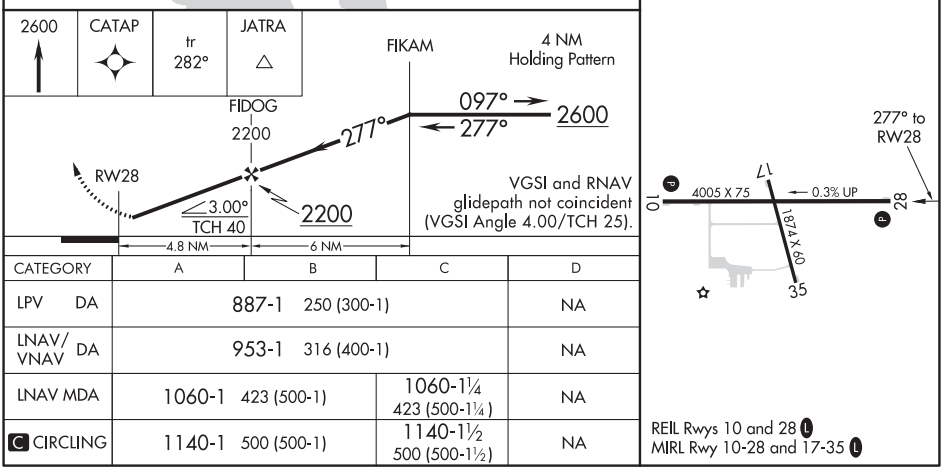
RNP APCH.

Night landing Rwy 17, 35 NA. Baro-VNAV NA when using Pellston altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). Helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Pellston altimeter setting; increase all DA 41 feet and all MDA 60 feet and increase LNAV/VNAV all Cats visibility ¼ SM and LNAV Cat C visibility ⅛ SM.

MISSED APPROACH: Climb to 2600 direct CATAP and on track 282° to JATRA and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM	
118.175	134.6 354.05	122.8 (CTAF)	122.5 L





CATEGORY	A	B	C	D
LPV DA	887-1 250 (300-1)			NA
LNAV/VNAV DA	953-1 316 (400-1)			NA
LNAV MDA	1060-1 423 (500-1)		1060-1¼ 423 (500-1¼)	NA
C CIRCLING	1140-1 500 (500-1)		1140-1½ 500 (500-1½)	NA

CHEBOYGAN, MICHIGAN
Amdt 2B 08OCT20

45°39′N-84°31′W

CHEBOYGAN COUNTY (SLH)
RNAV (GPS) RWY 28

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

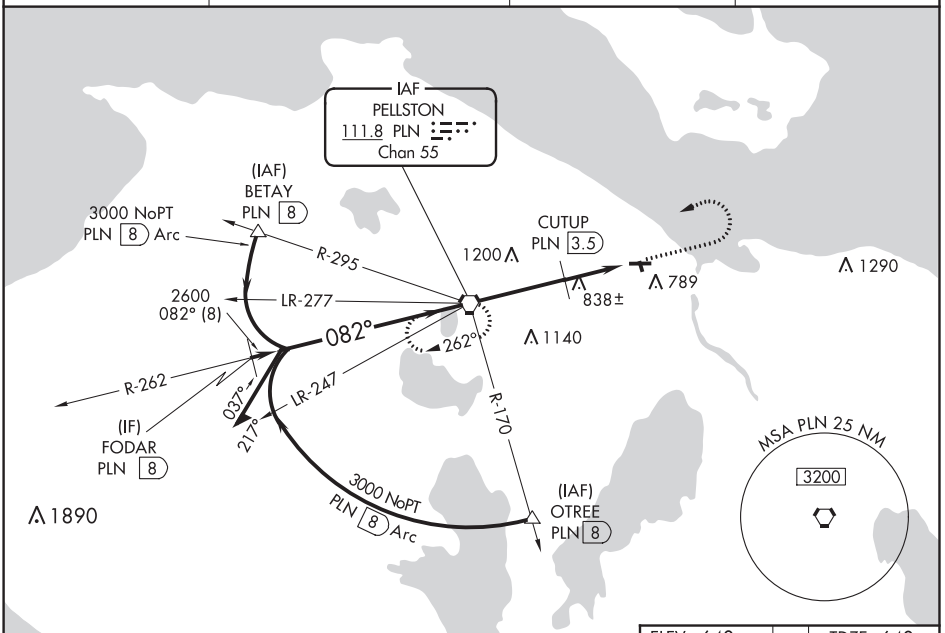
VORTAC PLN	APP CRS	Rwy ldg	4005
111.8	082°	TDZE	640
Chan 55		Apt Elev	640

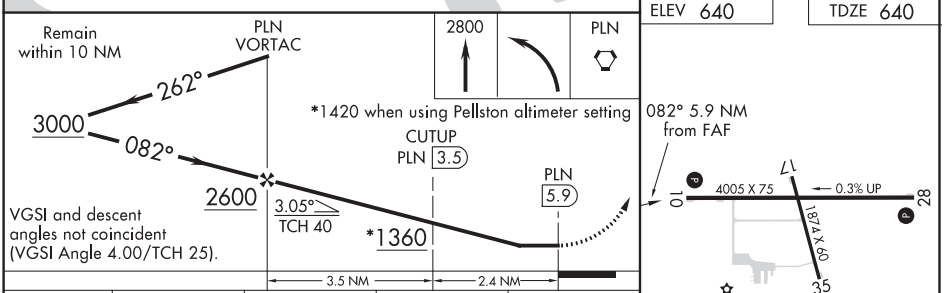
VOR RWY 10
CHEBOYGAN COUNTY (SLH)

Helicopter visibility reduction below 1 SM NA. Night landing Rwy 10, 17, 35 NA. When local altimeter setting not received, use Pellston altimeter setting; increase all MDA 60 feet; increase S-10 Cat B visibility ¼ SM, S-10 Cat C visibility ½ SM, Circling Cat B visibility ¼ SM and Circling Cat C visibility ½ SM; increase CUTUP fix minimums S-10 Cat C visibility ⅛ SM.

MISSED APPROACH: Climb to 2800 then left turn direct PLN VORTAC and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM	
118.175	134.6 354.05	122.8 (CTAF)	122.5 L





ELEV 640 TDZE 640

082° 5.9 NM from FAF

REIL Rwys 10 and 28 L
MIRL Rwy 10-28 and 17-35 L

CATEGORY	A	B	C	D
S-10	1360-1 720 (800-1)		1360-2 720 (800-2)	NA
C CIRCLING	1360-1 720 (800-1)		1360-2 720 (800-2)	NA
CUTUP FIX MINIMUMS				
S-10	1100-1 460 (500-1)		1100-1⅜ 460 (500-1⅜)	NA
C CIRCLING	1140-1 500 (500-1)		1140-1½ 500 (500-1½)	NA

FAF to MAP 5.9 NM					
Knots	60	90	120	150	180
Min:Sec	5:54	3:56	2:57	2:22	1:58

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

CLARE, MICHIGAN AL-5491 (FAA) 19283

RNAV (GPS) RWY 4
CLARE MUNI (48D)

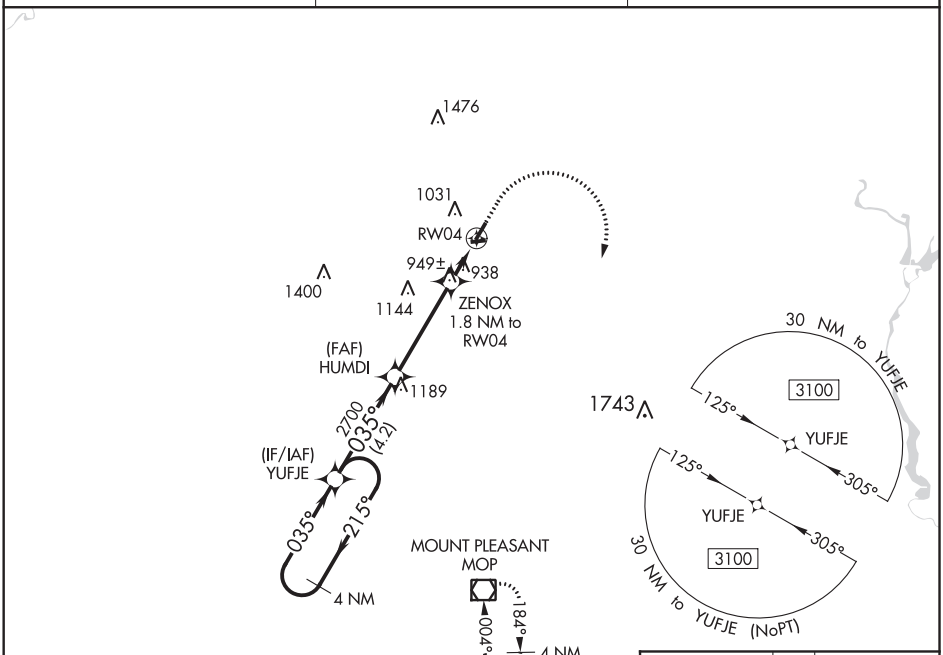
WAAS CH 72734 W04A	APP CRS 035°	Rwy ldg 3500 TDZE 854 Apt Elev 856

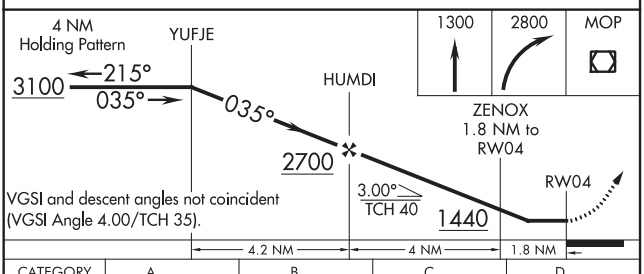
RNP APCH.

NA Use Mount Pleasant altimeter setting; when not received, use Midland altimeter setting and increase all MDA 60 feet. Rwy 4 helicopter visibility reduction below ¾ SM NA. Circling Rwy 9, 27 NA at night.

MISSED APPROACH: Climb to 1300, then climbing right turn to 2800 direct MOP VOR/DME and hold.

MOP AWOS-3	GREAT LAKES APP CON ★	UNICOM
133.025	126.45 235.625	122.8 (CTAF) L

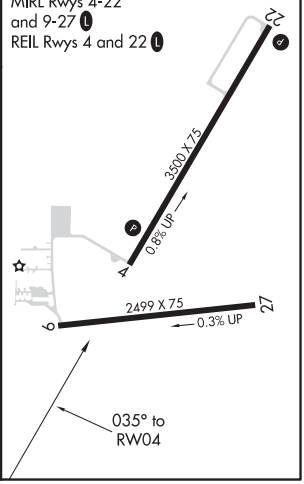




CATEGORY	A	B	C	D
LP MDA	1240-1 386 (400-1)		NA	
LNAV MDA	1260-1 406 (500-1)		NA	
C CIRCLING	1380-1 524 (600-1)	1420-1 564 (600-1)	NA	

ELEV 856 TDZE 854

MIRL Rwys 4-22 and 9-27 L
REIL Rwys 4 and 22 L



CLARE, MICHIGAN
Orig-B 28FEB19

43°50'N-84°44'W

CLARE MUNI (48D)
RNAV (GPS) RWY 4

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 56506 W07A	APP CRS 069°	Rwy ldg 5350 TDZE 959 Apt Elev 959

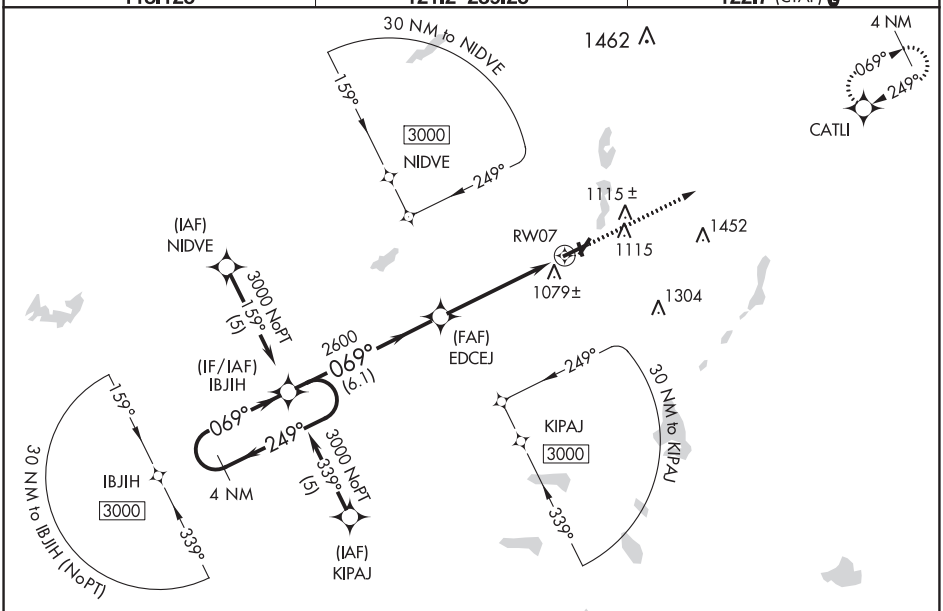
RNAV (GPS) RWY 7
BRANCH COUNTY MEMORIAL (OEB)

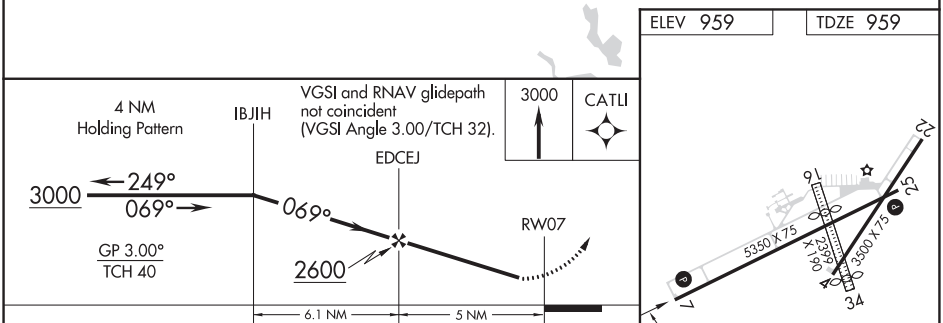
RNP APCH.

Rwy 7 helicopter visibility reduction below ¾ SM NA. Baro-VNAV NA when using Sturgis altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C. Circling NA to Rwys 16 and 34. When local altimeter setting not received, use Sturgis altimeter setting and increase all DAs 48 feet and LPV visibility ¼ mile all Cats and all MDAs 60 feet and LNAV Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 3000 direct CATLI and hold.

AWOS-3	GREAT LAKES APP CON ★	UNICOM
118.125	121.2 239.25	122.7 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	1307-1¼ 348 (400-1¼)			NA
LNAV/VNAV DA	1418-1¾ 459 (500-1¾)			NA
LNAV MDA	1420-1 461 (500-1)		1420-1¼ 461 (500-1¼)	NA
CIRCLING	1420-1 461 (500-1)	1440-1 481 (500-1)	1480-1½ 521 (600-1½)	NA

MIRL Rwys 4-22 and 7-25 L
REIL Rwys 7 and 25 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

COLDWATER, MICHIGAN AL-5259 (FAA) 20198

WAAS CH 99606 W25A	APP CRS 249°	Rwy ldg 5350 TDZE 959 Apt Elev 959

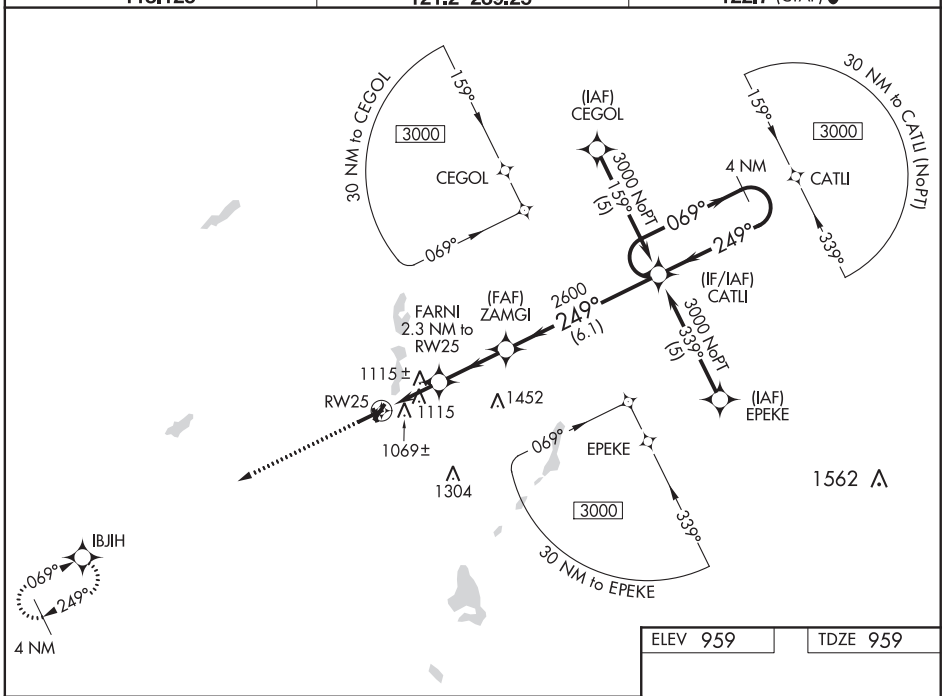
RNAV (GPS) RWY 25
BRANCH COUNTY MEMORIAL (OEB)

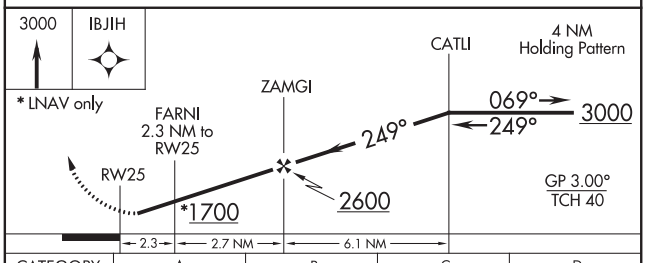
RNP APCH.

Rwy 25 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Sturgis altimeter setting and increase all DAs 48 feet and LPV visibility ¼ mile all Cats and all MDAs 60 feet and LNAV Cat C visibility ¼ mile. Baro-VNAV NA when using Sturgis altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C. Circling NA to Rwys 16 and 34.

MISSED APPROACH: Climb to 3000 direct IBJIH and hold.

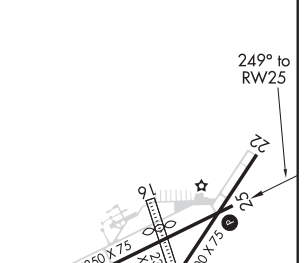
AWOS-3	GREAT LAKES APP CON ★	UNICOM
118.125	121.2 239.25	122.7 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	1306-1¼ 347 (400-1¼)			NA
LNAV/VNAV DA	1424-1¾ 465 (500-1¾)			NA
LNAV MDA	1420-1 461 (500-1)		1420-1¼ 461 (500-1¼)	NA
CIRCLING	1420-1 461 (500-1)	1440-1 481 (500-1)	1480-1½ 521 (600-1½)	NA

ELEV 959 TDZE 959



MIRL Rwys 4-22 and 7-25 L
REIL Rwys 7 and 25 L

COLDWATER, MICHIGAN
Orig-A 16JUL20

41°56'N-85°03'W

BRANCH COUNTY MEMORIAL (OEB)
RNAV (GPS) RWY 25

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

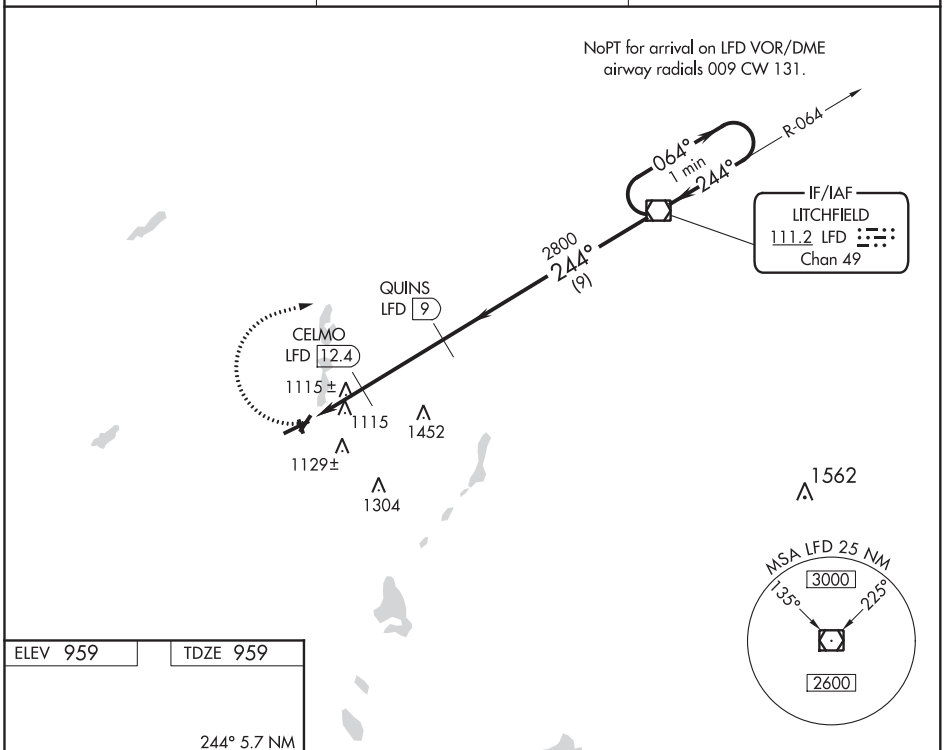
VOR/DME LFD 111.2 Chan 49	APP CRS 244°	Rwy ldg 5350 TDZE 959 Apt Elev 959

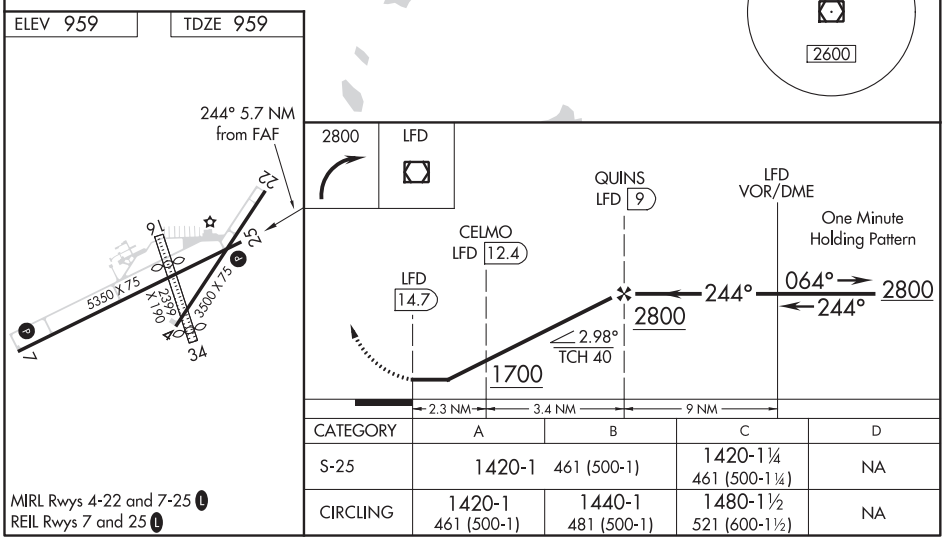
VOR/DME RWY 25
BRANCH COUNTY MEMORIAL (OEB)

When local altimeter setting not received, use Sturgis altimeter setting and increase all MDAs 60 feet and S-25 Cat C visibility ¼ mile. Rwy 25 helicopter visibility reduction below 1 SM NA. Circling NA to Rwys 16 and 34.

MISSED APPROACH: Climbing right turn to 2800 direct LFD VOR/DME and hold.

AWOS-3	GREAT LAKES APP CON ★	UNICOM
118.125	121.2 239.25	122.7 (CTAF) L





CATEGORY	A	B	C	D
S-25	1420-1	461 (500-1)	1420-1¼ 461 (500-1¼)	NA
CIRCLING	1420-1 461 (500-1)	1440-1 481 (500-1)	1480-1½ 521 (600-1½)	NA

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

COLDWATER, MICHIGAN AL-5259 (FAA) 20198

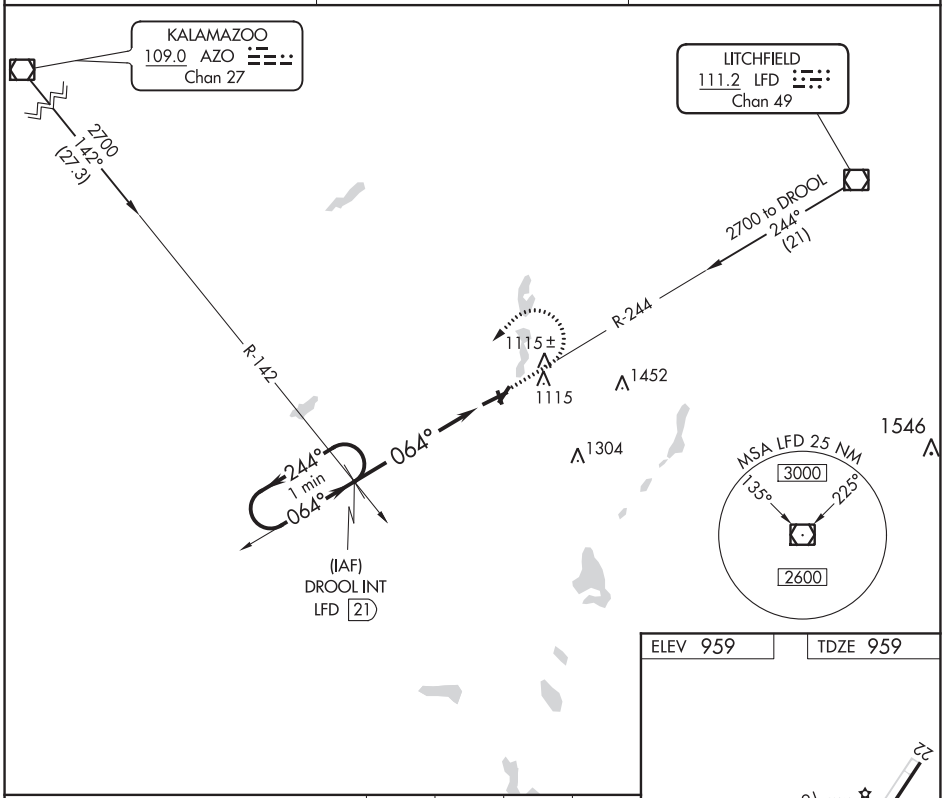
VOR/DME LFD	APP CRS	Rwy ldg	5350
111.2	064°	TDZE	959
Chan 49		Apt Elev	959

VOR RWY 7
BRANCH COUNTY MEMORIAL (OEB)

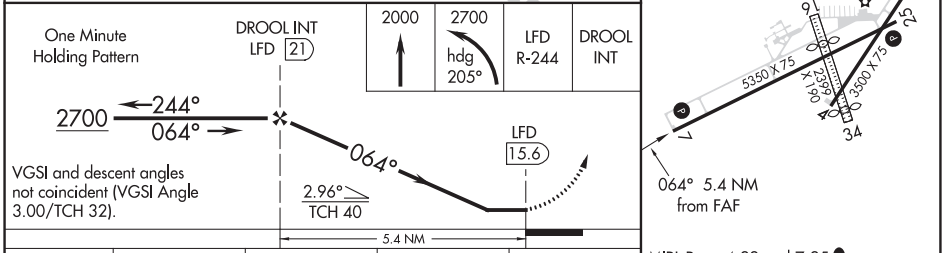
When local altimeter setting not received, use Sturgis altimeter setting and increase all MDAs 60 feet and S-7 Cat C visibility ¼ mile.
Circling NA to Rwys 16 and 34. Rwy 7 helicopter visibility reduction below ¾ SM NA.

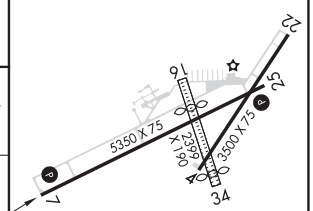
MISSED APPROACH: Climb to 2000 then climbing left turn to 2700 via heading 205° and LFD R-244 to DROOL INT/LFD 21 DME and hold.

AWOS-3	GREAT LAKES APP CON ★	UNICOM
118.125	121.2 239.25	122.7 (CTAF) L



ELEV 959	TDZE 959





MIRL Rwys 4-22 and 7-25 L
REIL Rwys 7 and 25 L

CATEGORY	A	B	C	D
S-7	1440-1	481 (500-1)	1440-1¼ 481 (500-1¼)	NA
CIRCLING	1440-1	481 (500-1)	1480-1½ 521 (600-1½)	NA

FAF to MAP 5.4 NM					
Knots	60	90	120	150	180
Min:Sec	5:24	3:36	2:42	2:10	1:48

COLDWATER, MICHIGAN
Amdt 5A 16JUL20

41°56′N-85°03′W

BRANCH COUNTY MEMORIAL (OEB)
VOR RWY 7

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

LOC I-DET	APP CRS	Rwy ldg	5092
111.3	148°	TDZE	624
		Apt Elev	626

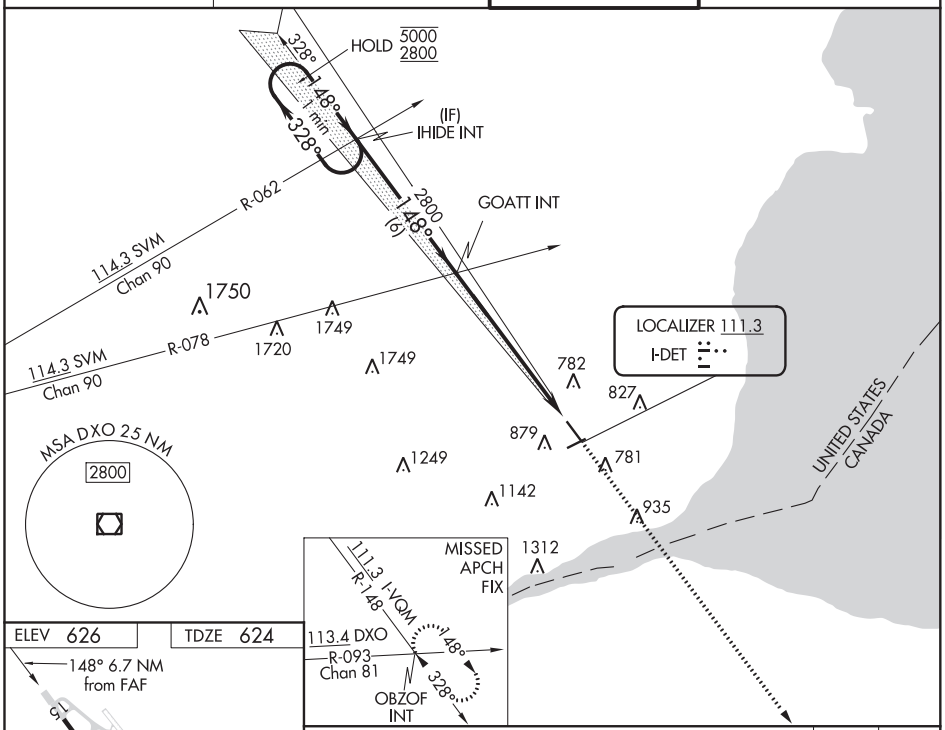
ILS or LOC RWY 15
COLEMAN A YOUNG MUNI (DET)

RNAV 1-GPS and RADAR required.

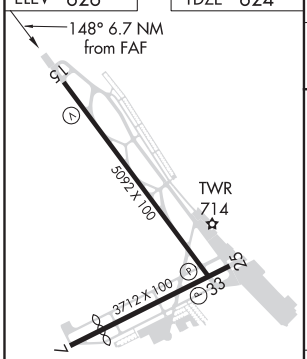
Circling to Rwy 7, 25 NA at night.
Rwy 15 helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climb to 3000 direct OBZOF and hold.

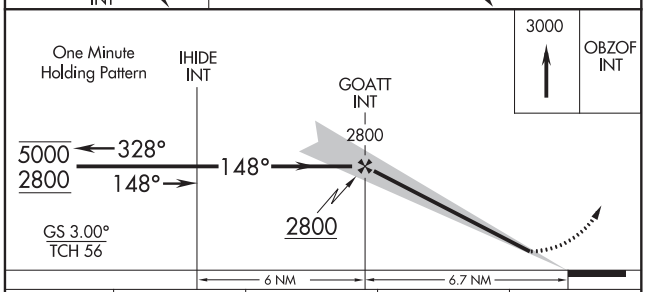
ATIS	DETROIT APP CON	DETROIT CITY TOWER	GND CON
124.875	134.3 284.0	121.3 257.8	121.85



ELEV 626 TDZE 624



MIRL Rwy 7-25
HIRL Rwy 15-33
REIL Rwys 15 and 33



FAF to MAP 6.7 NM					
Knots	60	90	120	150	180
Min:Sec	6:42	4:28	3:21	2:41	2:14

CATEGORY	A	B	C	D
S-ILS 15	896-⅞ 272 (300-⅞)		896-⅞ 270 (300-⅞)	
S-LOC 15	1160-1 536 (600-1)		1160-1½ 536 (600-1½)	
C CIRCLING	1180-1 554 (600-1)		1320-2 694 (700-2)	1500-2¾ 874 (900-2¾)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

LOC I-VQM	APP CRS	Rwy ldg	5092
111.3	328°	TDZE	626
		Apt Elev	626

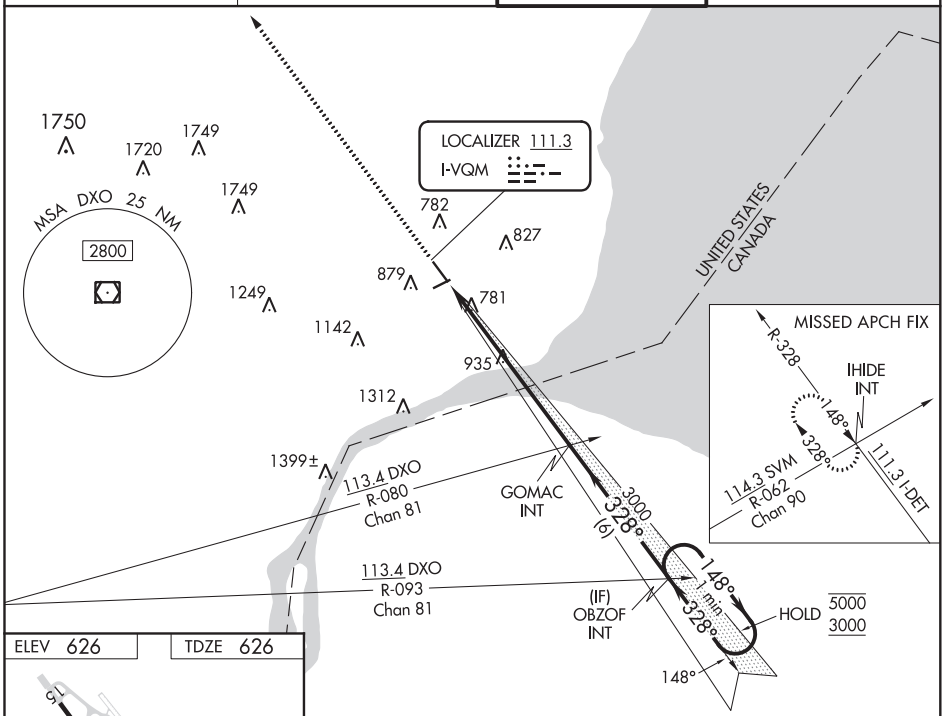
ILS or LOC RWY 33
COLEMAN A YOUNG MUNI (DET)

RNAV 1-GPS and RADAR required

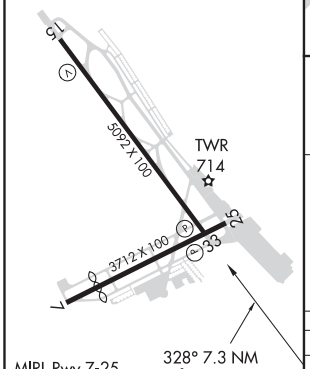
T Circling Rwy 7, 25 NA at night.
A Rwy 33 helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climb to 3000 direct IHIDE and hold.

ATIS	DETROIT APP CON	DETROIT TOWER	GND CON
124.875	134.3 284.0	121.3 257.8	121.85

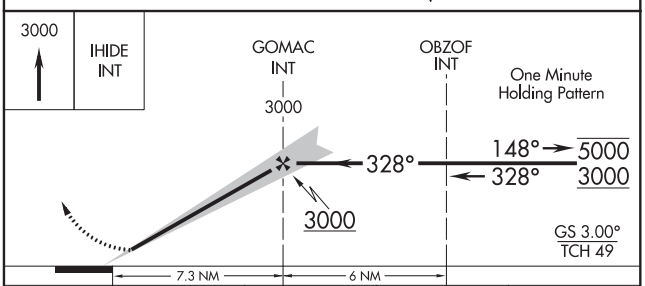


ELEV 626 TDZE 626



MIRL Rwy 7-25
HIRL Rwy 15-33
REIL Rwys 15 and 33

FAF to MAP 7.3 NM					
Knots	60	90	120	150	180
Min:Sec	7:18	4:52	3:39	2:55	2:26



CATEGORY	A	B	C	D
S-ILS 33	876-¾ 250 (300-¾)			
S-LOC 33	1300-1 674 (700-1)		1300-1⅞ 674 (700-1⅞)	
C CIRCLING	1300-1 674 (700-1)		1320-2 694 (700-2)	1500-2¾ 874 (900-2¾)

EC-1, 25 FEB 2021 to 22 APR 2021

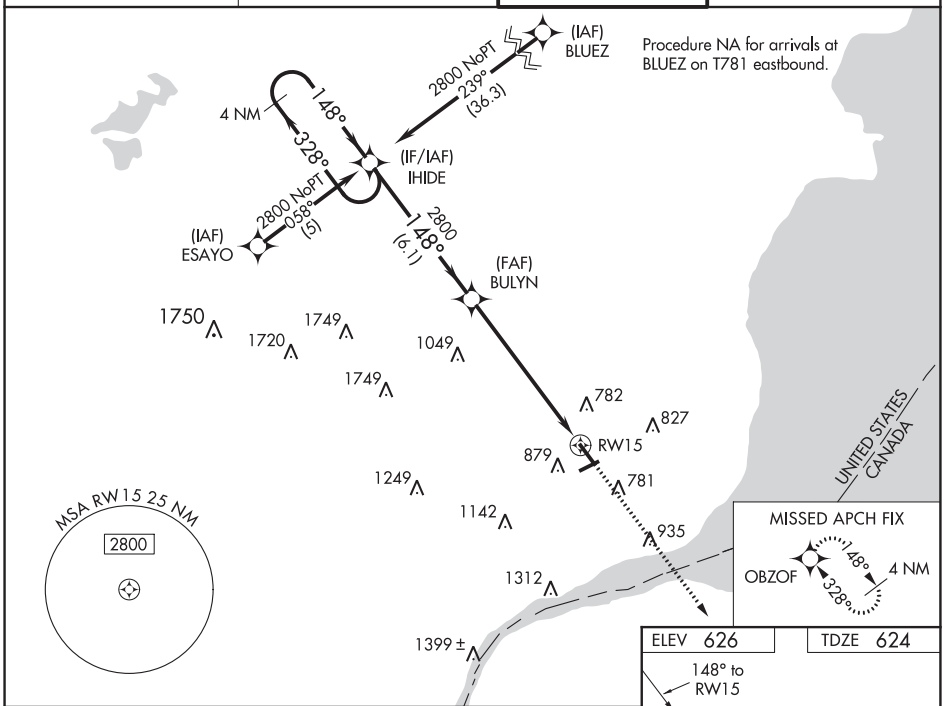
WAAS CH 63211 W15A	APP CRS 148°	Rwy ldg 5092 TDZE 624 Apt Elev 626

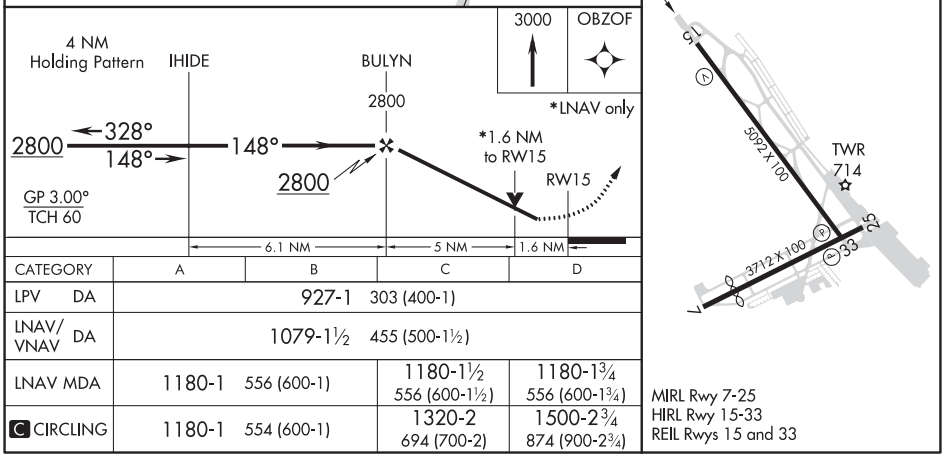
RNAV (GPS) RWY 15
COLEMAN A YOUNG MUNI (DET)

Circling to Rwy 7, 25 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 48°C (118°F). Rwy 15 helicopter visibility reduction below ¾ SM NA. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3000 direct OBZOF and hold.

ATIS	DETROIT APP CON	DETROIT CITY TOWER	GND CON
124.875	134.3 284.0	121.3 257.8	121.85





CATEGORY	A	B	C	D
LPV DA	927-1 303 (400-1)			
LNAV/VNAV DA	1079-1½ 455 (500-1½)			
LNAV MDA	1180-1 556 (600-1)		1180-1½ 556 (600-1½)	1180-1¾ 556 (600-1¾)
C CIRCLING	1180-1 554 (600-1)		1320-2 694 (700-2)	1500-2¾ 874 (900-2¾)

MIRL Rwy 7-25
HIRL Rwy 15-33
REIL Rwys 15 and 33

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EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN AL-118 (FAA) 20366

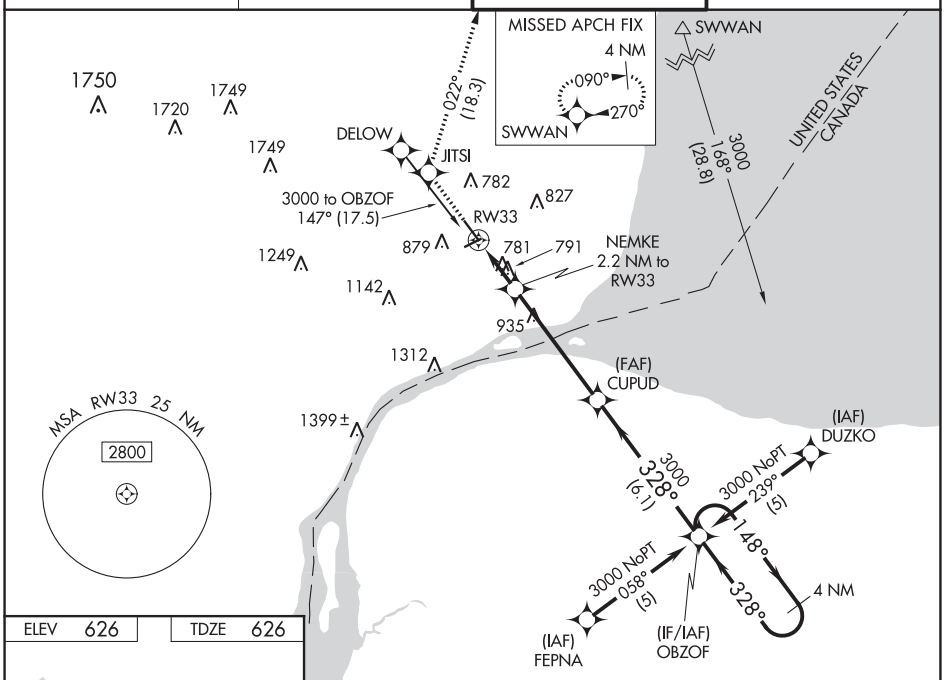
RNAV (GPS) RWY 33
COLEMAN A YOUNG MUNI (DET)

WAAS CH 58211 W33A	APP CRS 328°	Rwy ldg 5092 TDZE 626 Apt Elev 626

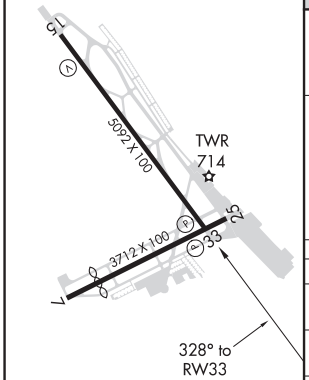
Circling to Rwy 7, 25 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 48°C (118°F). Rwy 33 helicopter visibility reduction below ¾ SM NA. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 4000 direct JITSI and on track 022° to SWWAN and hold.

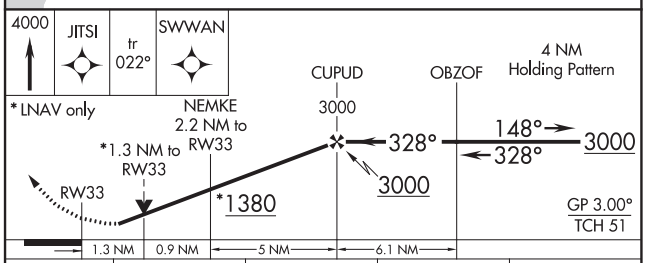
ATIS	DETROIT APP CON	DETROIT CITY TOWER	GND CON
124.875	134.3 284.0	121.3 257.8	121.85



ELEV 626 TDZE 626



MIRL Rwy 7-25
HIRL Rwy 15-33
REIL Rwys 15 and 33



CATEGORY	A	B	C	D
LPV DA	936-1 310 (400-1)			
LNAV/VNAV DA	1039-1½ 413 (500-1½)			
LNAV MDA	1100-1 474 (500-1)		1100-1¼ 474 (500-1¼)	1100-1½ 474 (500-1½)
C CIRCLING	1180-1 554 (600-1)		1320-2 694 (700-2)	1500-2¾ 874 (900-2¾)

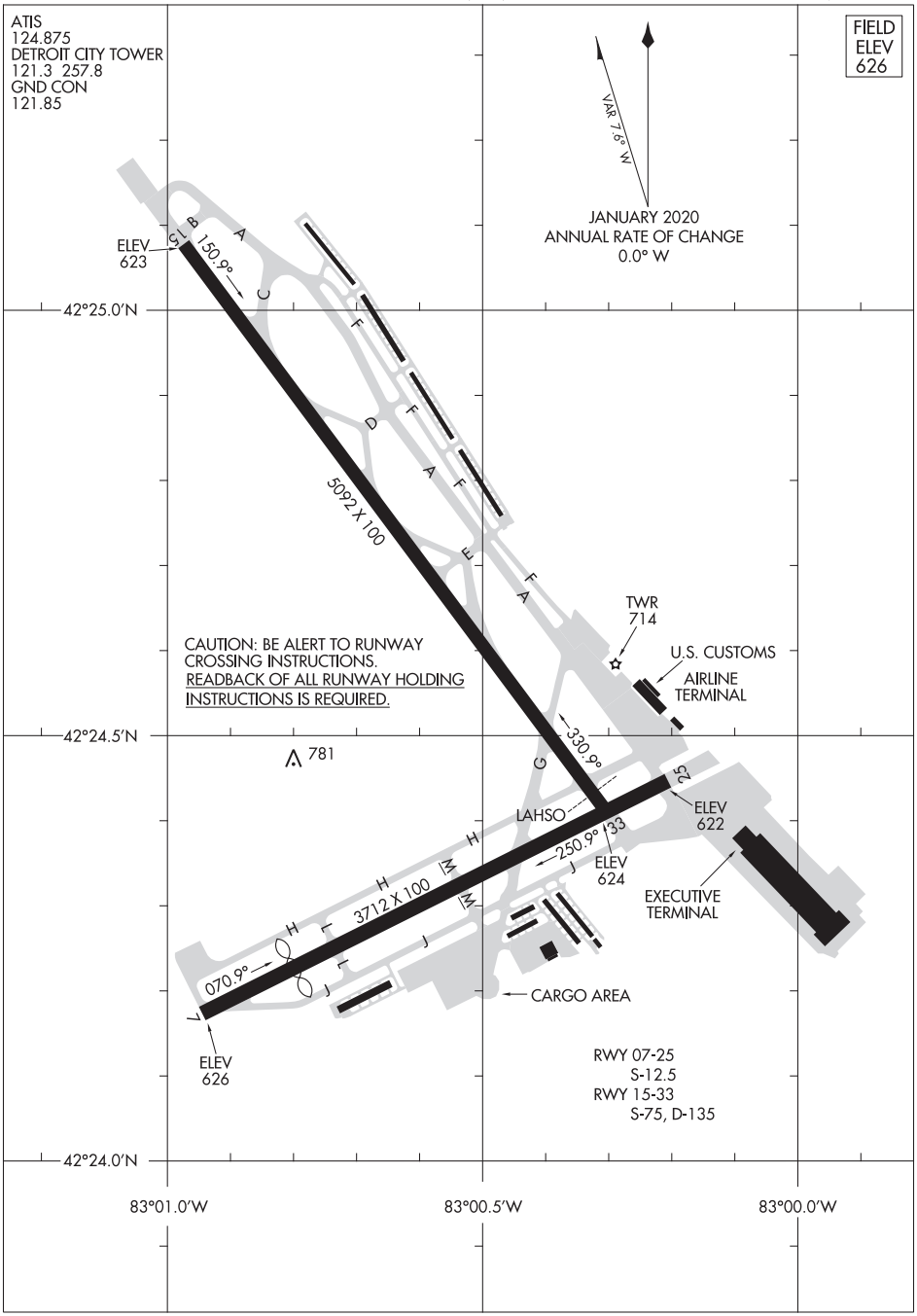
DETROIT, MICHIGAN
Orig-D 24MAY18

42°25′N-83°01′W

COLEMAN A YOUNG MUNI (DET)
RNAV (GPS) RWY 33

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021



EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

(BARII2.BARII) 19227

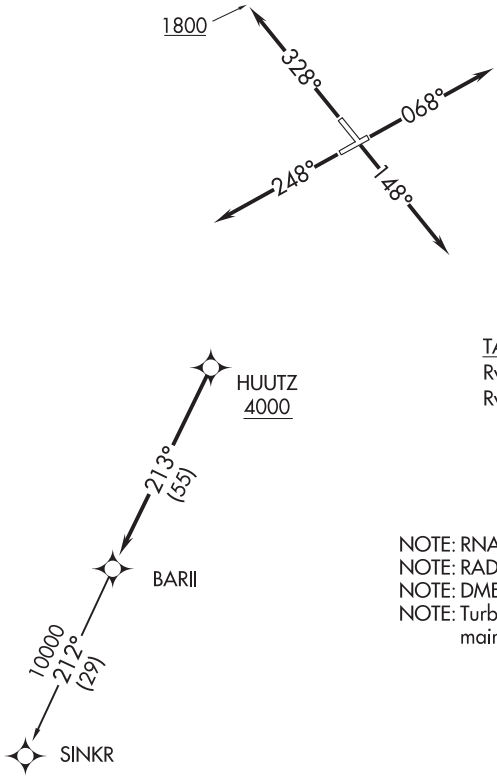
BARII TWO DEPARTURE (RNAV)

AL-118 (FAA)

COLEMAN A YOUNG MUNI (DET)
DETROIT, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
134.3 284.0



TAKEOFF MINIMUMS:
Rwys 7, 15, 33: Standard.
Rwy 25: Standard with minimum climb of 210′ per NM to 1000.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 7: Climb on heading 068° or as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....
TAKEOFF RUNWAY 15: Climb on heading 148° or as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....
TAKEOFF RUNWAY 25: Climb on heading 248° or as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....
TAKEOFF RUNWAY 33: Climb on heading 328° to 1800 then as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....

....on track 213° to BARII, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

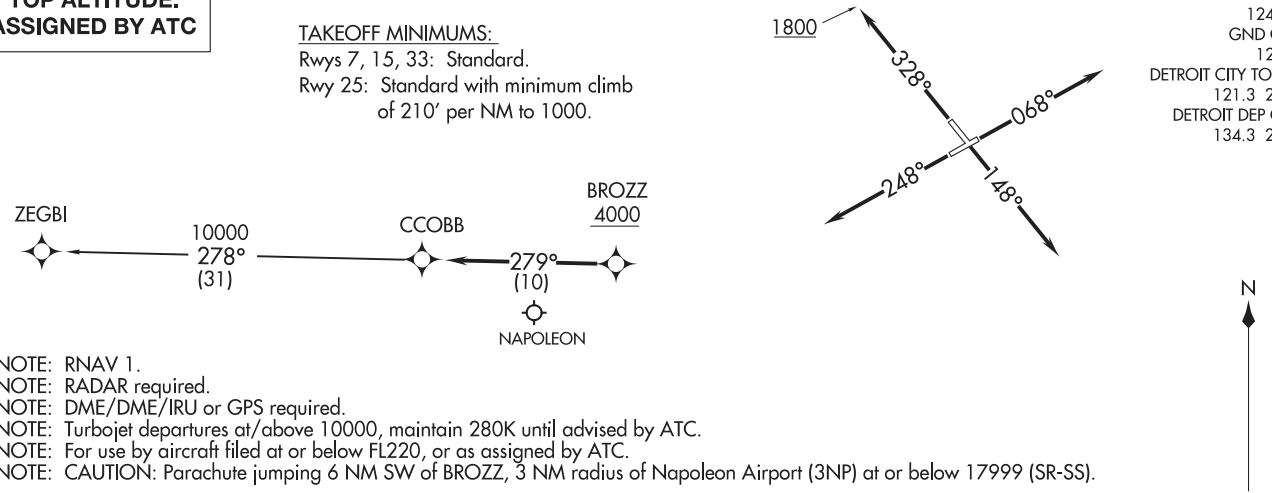
SINKR TRANSITION (BARII2.SINKR):

EC-1, 25 FEB 2021 to 22 APR 2021

TOP ALTITUDE: ASSIGNED BY ATC

TAKEOFF MINIMUMS:
Rwys 7, 15, 33: Standard.
Rwy 25: Standard with minimum climb of 210′ per NM to 1000.

ATIS 124.875
GND CON 121.85
DETROIT CITY TOWER 121.3 257.8
DETROIT DEP CON 134.3 284.0



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: For use by aircraft filed at or below FL220, or as assigned by ATC.
NOTE: CAUTION: Parachute jumping 6 NM SW of BROZZ, 3 NM radius of Napoleon Airport (3NP) at or below 17999 (SR-SS).

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 7: Climb on heading 068° or as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 15: Climb on heading 148° or as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 25: Climb on heading 248° or as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 33: Climb on heading 328° to 1800 then as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....

....on track 279° to CCOBB, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ZEGBI TRANSITION (CCOBB2.ZEGBI):

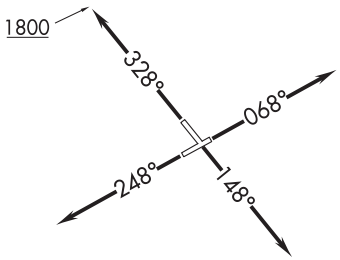
(CLVIN2.CLVIN) 19227

CLVIN TWO DEPARTURE (RNAV)

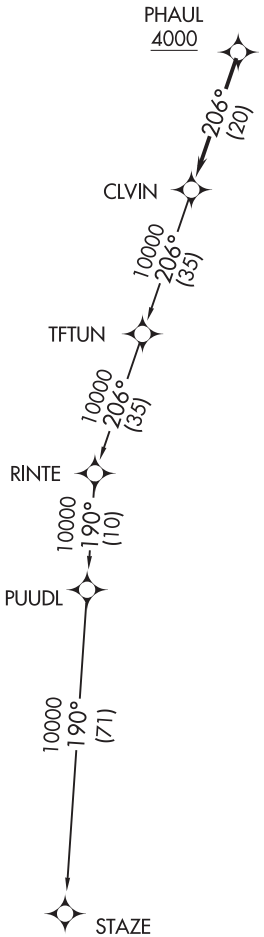
AL-118 (FAA)

COLEMAN A YOUNG MUNI (DET)
DETROIT, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC



ATIS
124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
134.3 284.0



TAKEOFF MINIMUMS:
Rwys 7, 15, 33: Standard.
Rwy 25: Standard with minimum climb of 210′ per NM to 1000.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 7: Climb on heading 068° or as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 15: Climb on heading 148° or as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 25: Climb on heading 248° or as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 33: Climb on heading 328° to 1800 then as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....

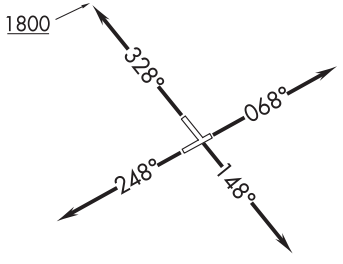
....on track 206° to CLVIN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

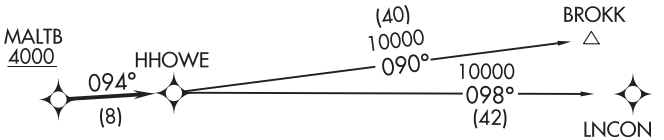
STAZE TRANSITION (CLVIN2.STAZE):

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
134.3 284.0

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: BROKK TRANSITION: For use by flights filed at or below FL270, or as assigned by ATC.





TAKEOFF MINIMUMS:
Rwys 7, 15, 33: Standard.
Rwy 25: Standard with minimum climb of 210′ per NM to 1000.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 7: Climb on heading 068° or as assigned for RADAR vectors to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 15: Climb on heading 148° or as assigned for RADAR vectors to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 25: Climb on heading 248° or as assigned for RADAR vectors to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 33: Climb on heading 328° to 1800 then as assigned for RADAR vectors to cross MALTB at or above 4000, thence....

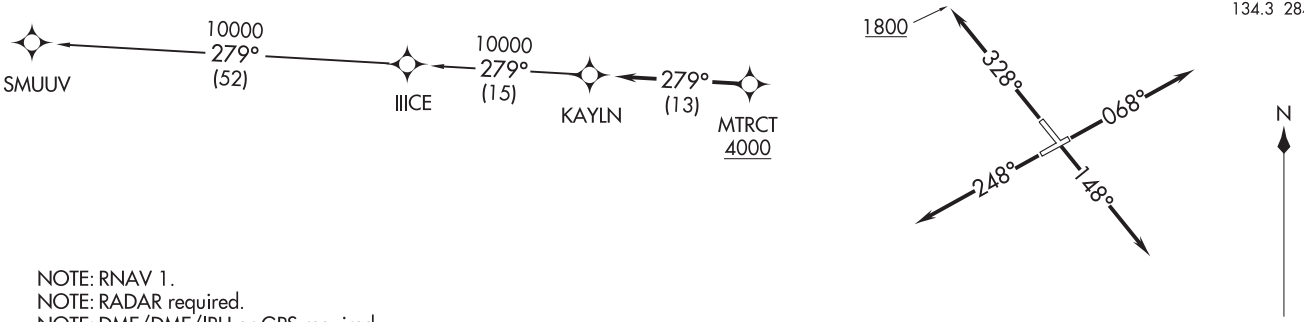
....on track 094° to HHOWE, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

BROKK TRANSITION (HHOWE3.BROKK)
LNCON TRANSITION (HHOWE3.LNCON)

TOP ALTITUDE: ASSIGNED AT ATC

TAKEOFF MINIMUMS:
Rwys 7, 15, 33: Standard.
Rwy 25: Standard with minimum climb of 210′ per NM to 1000.

ATIS
124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
134.3 284.0



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

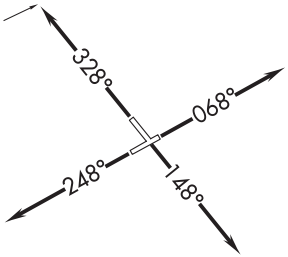
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 7: Climb on heading 068° or as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....
TAKEOFF RUNWAY 15: Climb on heading 148° or as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....
TAKEOFF RUNWAY 25: Climb on heading 248° or as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....
TAKEOFF RUNWAY 33: Climb on heading 328° to 1800 then as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....

....on track 279° to KAYLN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

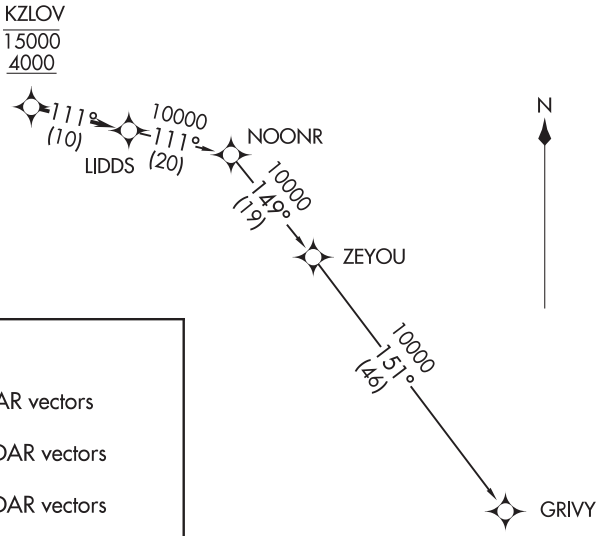
SMUUV TRANSITION (KAYLN2.SMUUV):

TOP ALTITUDE: ASSIGNED BY ATC



TAKEOFF MINIMUMS:
Rwys 7, 15, 33: Standard.
Rwy 25: Standard with minimum climb of 210′ per NM to 1000.

ATIS
124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
134.3 284.0



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 7: Climb on heading 068° or as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAY 15: Climb on heading 148° or as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAY 25: Climb on heading 248° or as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAY 33: Climb on heading 328° to 1800 then as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....

....on track 111° to LIDDS, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GRIVY TRANSITION (LIDDS2.GRIVY):

NOTE: Chart not to scale.

ATIS 124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
134.3 284.0

TOP ALTITUDE: 3000

TAKEOFF MINIMUMS

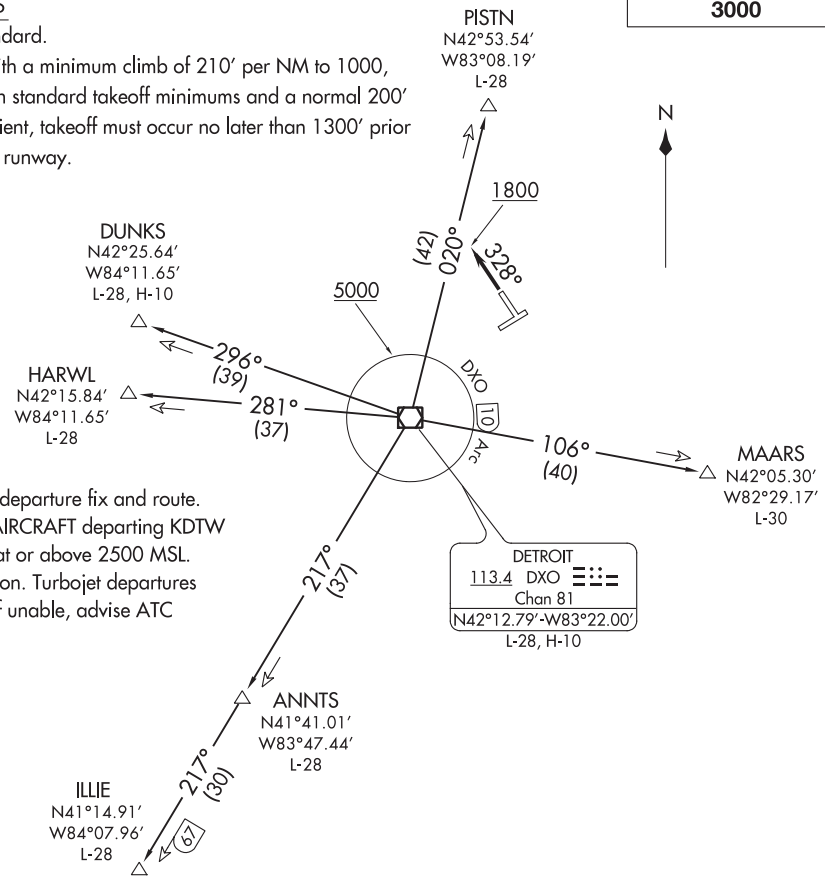
Rwys 7, 15, 33: Standard.

Rwy 25: Standard with a minimum climb of 210′ per NM to 1000, or alternatively, with standard takeoff minimums and a normal 200′ per NM climb gradient, takeoff must occur no later than 1300′ prior to departure end of runway.

NOTE: RADAR required.
NOTE: DME required.
NOTE: For use by non-RNAV equipped aircraft only.

SPECIAL INSTRUCTIONS:

When using this departure, file the appropriate depicted departure fix and route. Aircraft over HARWL must file FL220 and below. PROP AIRCRAFT departing KDTW Rwy 21L/R and 22L/R westbound, cross DXO 3.5 DME at or above 2500 MSL. Aircraft landing Cleveland (CLE) must file MAARS transition. Turbojet departures at/above 10000, maintain 280K until advised by ATC. If unable, advise ATC prior to departure.



(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 7, 15, 25: Climb on assigned heading, thence....
TAKEOFF RUNWAY 33: Climb heading 328° to 1800, then on assigned heading, thence....

.....maintain ATC assigned altitude for RADAR vectors to intercept filed/assigned transition or enroute fix/navaid. When ATC assigned altitude is at or above 5000, cross DXO 10 DME Arc at or above 5000 for noise abatement. If unable to comply, advise ATC prior to departure. Expect clearance to filed altitude/flight level within ten (10) minutes after departure.

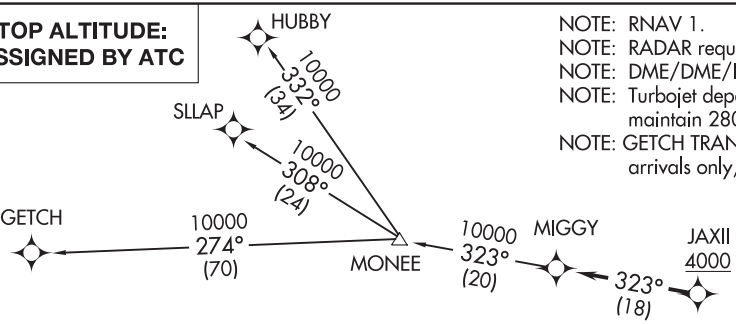
DUNKS TRANSITION (METRO3.DUNKS): From over DXO VOR/DME on DXO R-296 to DUNKS.
HARWL TRANSITION (METRO3.HARWL): From over DXO VOR/DME on DXO R-281 to HARWL.
ILLIE TRANSITION (METRO3.ILLIE): From over DXO VOR/DME on DXO R-217 to ILLIE.
MAARS TRANSITION (METRO3.MAARS): From over DXO VOR/DME on DXO R-106 to MAARS.
PISTN TRANSITION (METRO3.PISTN): From over DXO VOR/DME on DXO R-020 to PISTN.

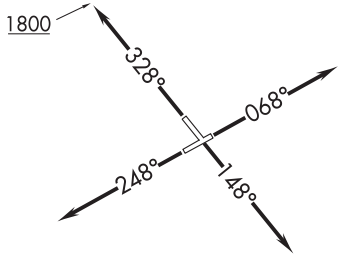
EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: GETCH TRANSITION: For use by KMKE area arrivals only, or as assigned by ATC.

ATIS
124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
134.3 284.0





DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 7: Climb on heading 068° or as assigned for RADAR vectors to cross JAXII at or above 4000, thence....
TAKEOFF RUNWAY 15: Climb on heading 148° or as assigned for RADAR vectors to cross JAXII at or above 4000, thence....
TAKEOFF RUNWAY 25: Climb on heading 248° or as assigned for RADAR vectors to cross JAXII at or above 4000, thence....
TAKEOFF RUNWAY 33: Climb on heading 328° to 1800 then as assigned for RADAR vectors to cross JAXII at or above 4000, thence....

....on track 323° to MIGGY, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GETCH TRANSITION (MIGGY2.GETCH):
HUBBY TRANSITION (MIGGY2.HUBBY):
SLLAP TRANSITION (MIGGY2.SLLAP):

TAKEOFF MINIMUMS:
Rwys 7, 15, 33: Standard.
Rwy 25: Standard with minimum climb of 210′ per NM to 1000.

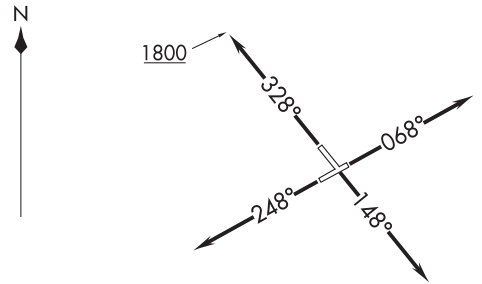
N

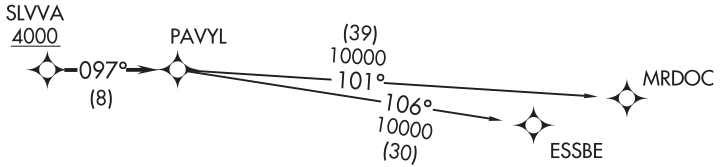
NOTE: Chart not to scale.

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

ATIS
124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
134.3 284.0





TAKEOFF MINIMUMS:
Rwys 7, 15, 33: Standard.
Rwy 25: Standard with minimum climb of 210′ per NM to 1000.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 7: Climb on heading 068° or as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 15: Climb on heading 148° or as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 25: Climb on heading 248° or as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 33: Climb on heading 328° to 1800 then as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....

....on track 097° to PAVYL, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ESSBE TRANSITION (PAVYL2.ESSBE):
MRDOC TRANSITION (PAVYL2.MRDOC):

SNDRS TWO DEPARTURE (RNAV)

(SNDRS2.SNDRS) 15AUG19

COLEMAN A YOUNG MUNI (DET)

DETROIT, MICHIGAN

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 7: Climb on heading 068° or as assigned for RADAR vectors to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAY 15: Climb on heading 148° or as assigned for RADAR vectors to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAY 25: Climb on heading 248° or as assigned for RADAR vectors to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAY 33: Climb on heading 328° to 1800 then as assigned for RADAR vectors to cross JWELS at or above 4000, thence....

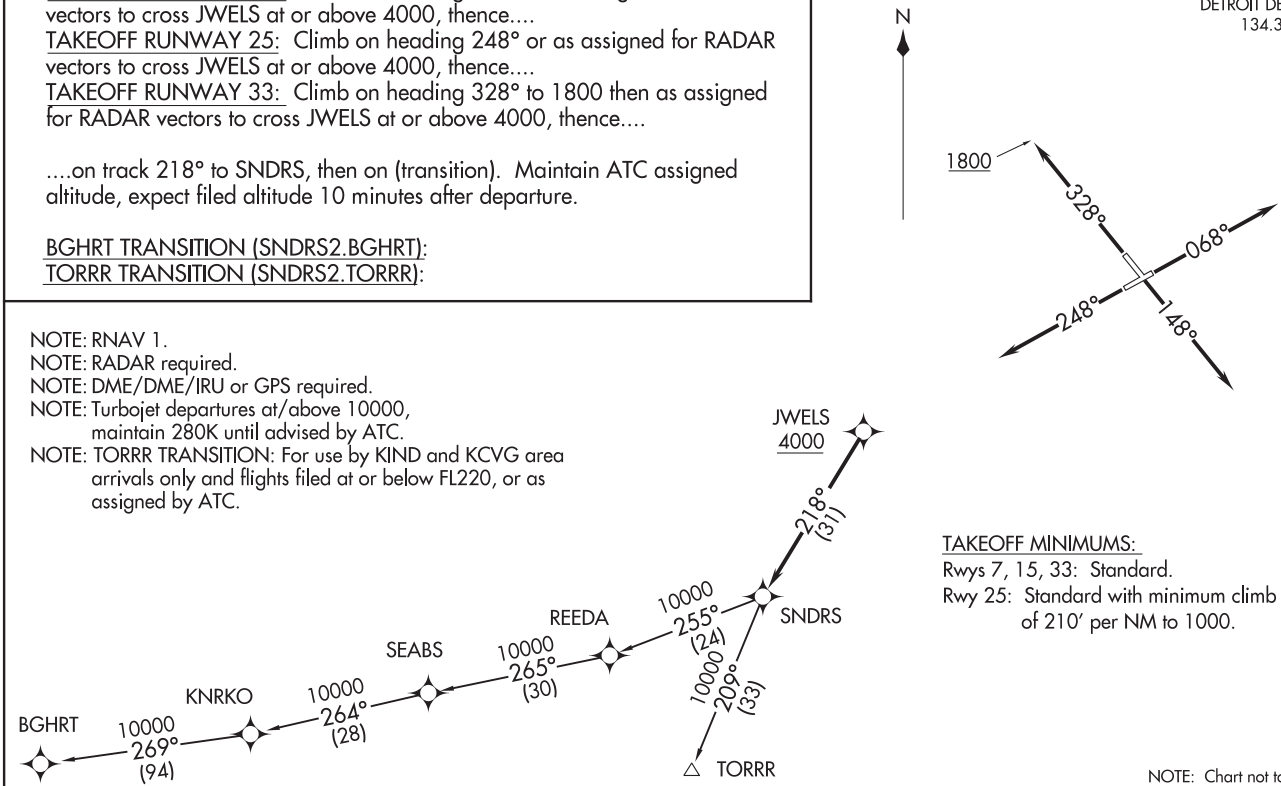
....on track 218° to SNDRS, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

BGHRT TRANSITION (SNDRS2.BGHRT):
TORRR TRANSITION (SNDRS2.TORRR):

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
134.3 284.0

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TORRR TRANSITION: For use by KIND and KCVG area arrivals only and flights filed at or below FL220, or as assigned by ATC.



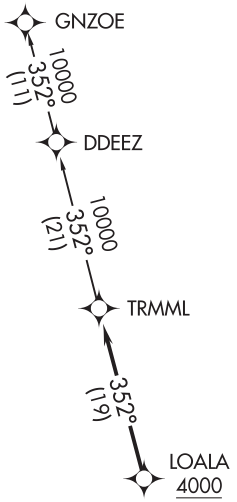
TAKEOFF MINIMUMS:
Rwys 7, 15, 33: Standard.
Rwy 25: Standard with minimum climb of 210′ per NM to 1000.

NOTE: Chart not to scale.

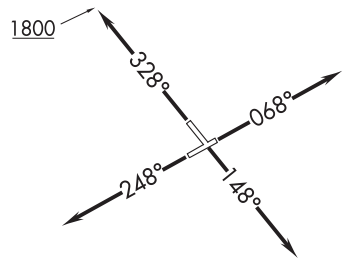
(SNDRS2.SNDRS) 19227
SNDRS TWO DEPARTURE (RNAV)
AL-118 (FAA)
COLEMAN A YOUNG MUNI (DET)
DETROIT, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
134.3 284.0



TAKEOFF MINIMUMS:
Rwys 7, 15, 33: Standard.
Rwy 25: Standard with minimum climb of 210′ per NM to 1000.



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 7: Climb on heading 068° or as assigned for RADAR vectors to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 15: Climb on heading 148° or as assigned for RADAR vectors to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 25: Climb on heading 248° or as assigned for RADAR vectors to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 33: Climb on heading 328° to 1800 then as assigned for RADAR vectors to cross LOALA at or above 4000, thence....

....on track 352° to TRMML, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GNZOE TRANSITION (TRMML3.GNZOE):

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

(ZETTR3.ZETTR) 19339

ZETTR THREE DEPARTURE (RNAV)

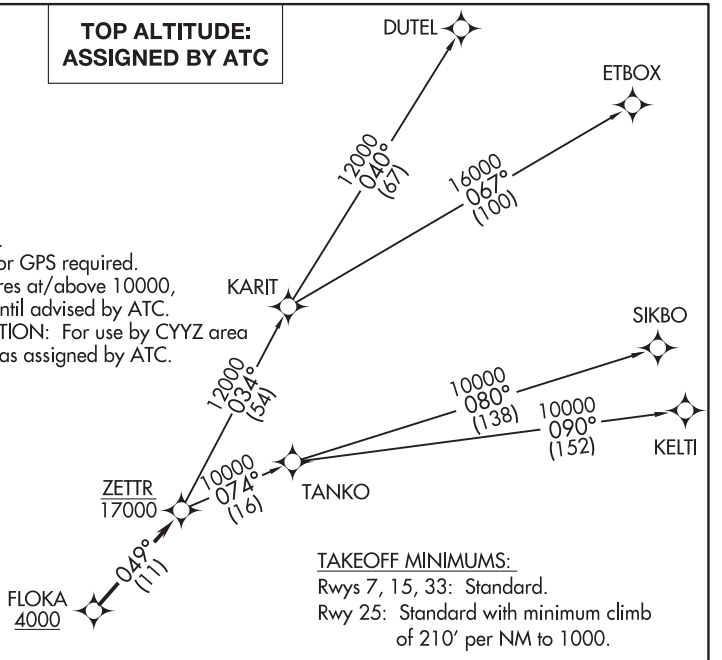
AL-118 (FAA)

COLEMAN A YOUNG MUNI (DET)
DETROIT, MICHIGAN

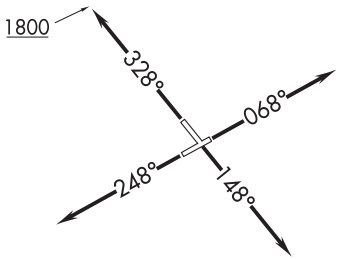
ATIS
124.875
GND CON
121.85
DETROIT CITY TOWER
121.3 257.8
DETROIT DEP CON
134.3 284.0

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TANKO TRANSITION: For use by CYYZ area arrivals only, or as assigned by ATC.



TAKEOFF MINIMUMS:
Rwys 7, 15, 33: Standard.
Rwy 25: Standard with minimum climb of 210′ per NM to 1000.



NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 7: Climb on heading 068° or as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 15: Climb on heading 148° or as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 25: Climb on heading 248° or as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 33: Climb on heading 328° to 1800 then as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....

....on track 049° to cross ZETTR at or below 17000, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

DUTEL TRANSITION (ZETTR3.DUTEL):
ETBOX TRANSITION (ZETTR3.ETBOX):
KELTI TRANSITION (ZETTR3.KELTI):
SIKBO TRANSITION (ZETTR3.SIKBO):
TANKO TRANSITION (ZETTR3.TANKO):

EC-1, 25 FEB 2021 to 22 APR 2021

LOC/DME I-HUU 111.5 Chan 52	APP CRS 036°	Rwy ldg 10001 TDZE 633 Apt Elev 645

ILS or LOC RWY 3R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

RNAV 1-GPS.

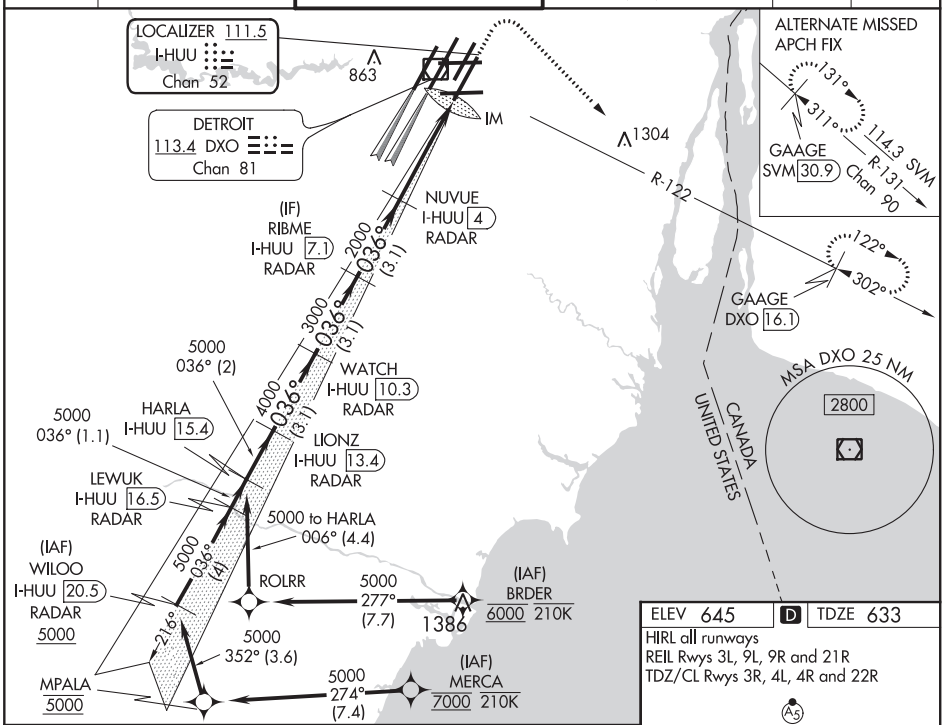
MERCA and BRDER: RNAV 1-DME/DME/IRU or GPS required. Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry.

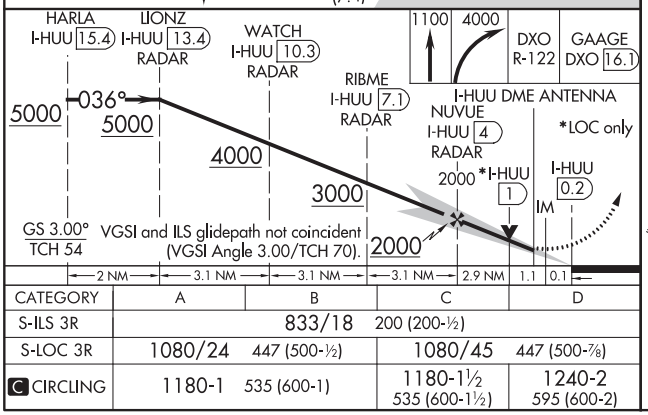
T Simultaneous approach authorized. DME required.

ALSF-2

MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 on DXO VOR/DME R-122 to GAAGE/DXO 16.1 DME and hold.

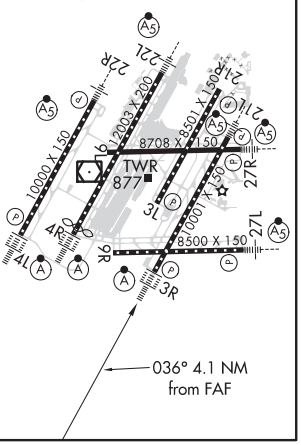
D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	125.15 284.0	118.4 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	





ELEV 645 D TDZE 633

HIRL all runways
REIL Rwys 3L, 9L, 9R and 21R
TDZ/CL Rwys 3R, 4L, 4R and 22R



CATEGORY	A	B	C	D
S-ILS 3R	833/18 200 (200-½)			
S-LOC 3R	1080/24 447 (500-½)		1080/45 447 (500-⅞)	
C CIRCLING	1180-1 535 (600-1)		1180-1½ 535 (600-1½)	1240-2 595 (600-2)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

ILS or LOC RWY 4R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

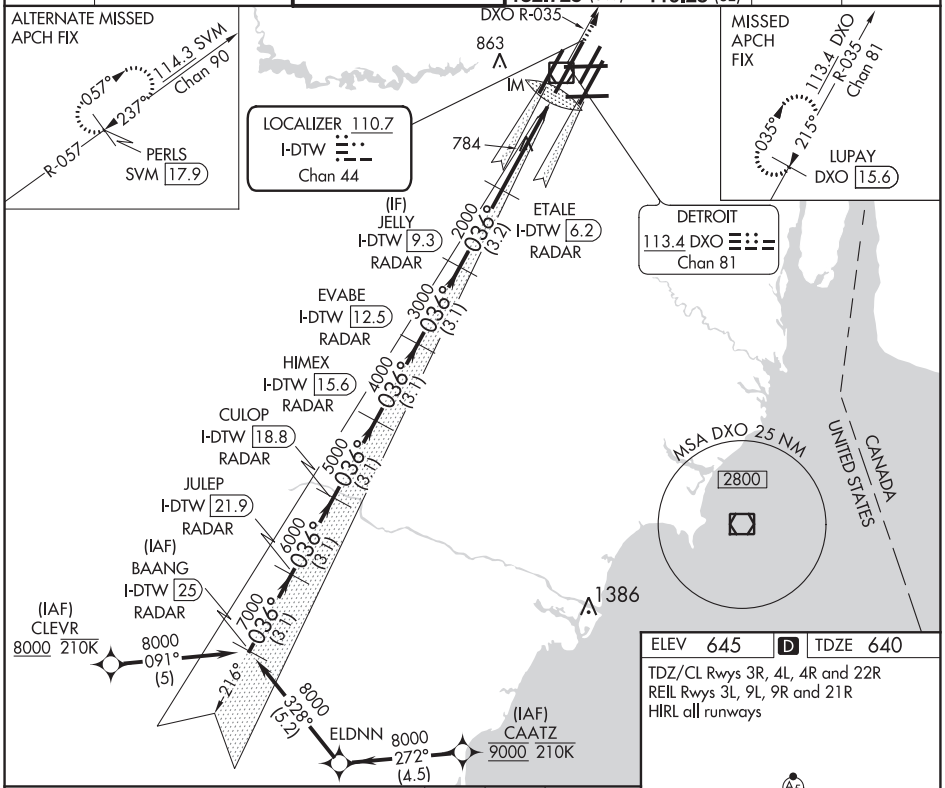
LOC/DME I-DTW	APP CRS	Rwy ldg	11494
110.7	036°	TDZE	640
Chan 44		Apt Elev	645

RNAV 1-GPS.
CLEVR, CAATZ and ELDNN: RNAV 1-DME/DME/IRU or GPS required.
Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry.
DME or RADAR required.
Simultaneous approach authorized. For inop ALS, increase S-LOC 4R Cat C/D visibility to RVR 6000.

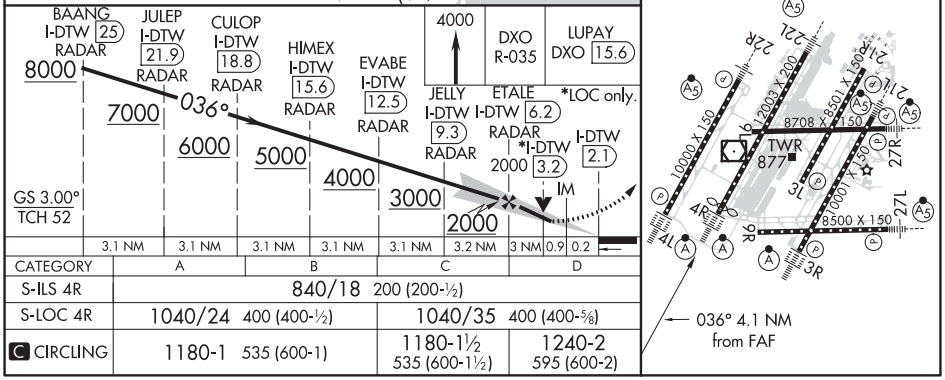
ALSF-2

MISSED APPROACH: Climb to 4000 on DXO VOR/DME R-035 to LUPAY/DXO VOR/DME/15.6 DME and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.125 317.725	121.8 (NW) 132.725 (SW) 119.45 (NE) 119.25 (SE)	120.65	



EC-1, 25 FEB 2021 to 22 APR 2021



CATEGORY	A	B	C	D
S-ILS 4R	840/18 200 (200-½)			
S-LOC 4R	1040/24 400 (400-½)		1040/35 400 (400-⅝)	
C CIRCLING	1180-1 535 (600-1)		1180-1½ 535 (600-1½)	1240-2 595 (600-2)

EC-1, 25 FEB 2021 to 22 APR 2021

ILS or LOC RWY 21L

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-EJR	APP CRS	Rwy ldg	10001
111.5	216°	TDZE	632
Chan 52		Apt Elev	645

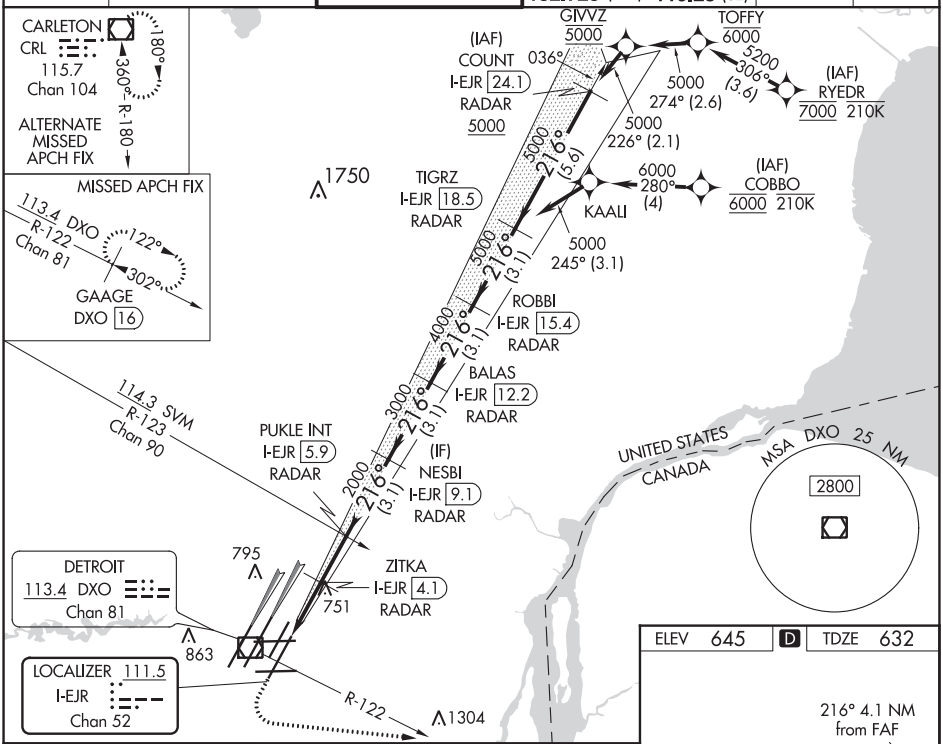
From RYEDR, COBBO: RNAV 1-DME/DME/IRU or GPS required. Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry. DME or RADAR required.

Simultaneous approach authorized.
** RVR 1800 authorized with use of FD or AP or HUD to DA.

MALSR

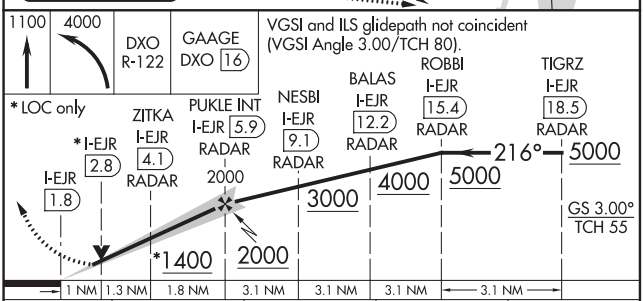
MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 on DXO R-122 to GAAGE/DXO 16 DME and hold, continue climb-in-hold to 4000.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	125.15 284.0	118.4 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	

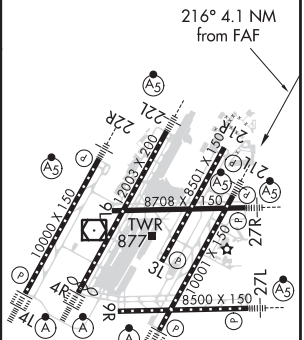


1100	4000	DXO R-122	GAAGE DXO 16

VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 80).



ELEV 645	D	TDZE 632



HIRL all runways
REIL Rwys 3L, 9L, 9R and 21R
TDZ/CL Rwys 3R, 4L, 4R and 22R

CATEGORY	A	B	C	D
S-ILS 21L **	832/24 200 (200-½)			
S-LOC 21L	1020/24 388 (400-½)		1020/35 388 (400-⅝)	
C CIRCLING	1180-1 535 (600-1)		1180-1½ 535 (600-1½)	1240-2 595 (600-2)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

LOC/DME I-DWC 110.7 Chan 44	APP CRS 216°	Rwy ldg 12003 TDZE 637 Apt Elev 645

ILS or LOC RWY 22L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

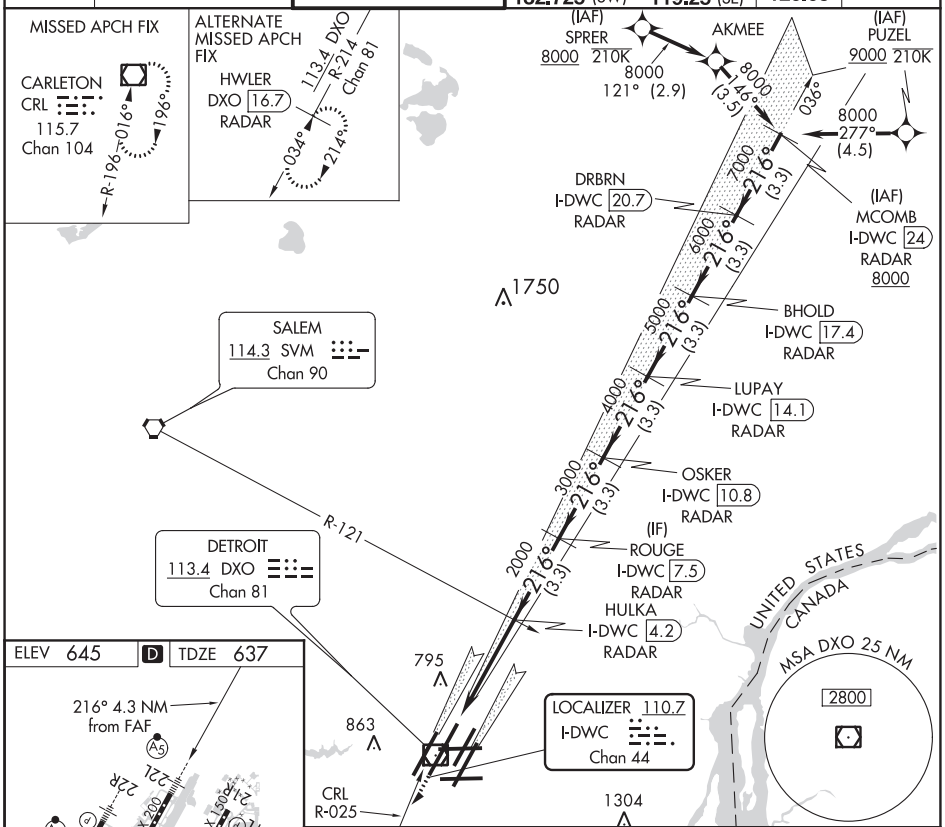
DME or RADAR required.
RNAV 1-DME/DME/IRU or RADAR required for procedure entry.

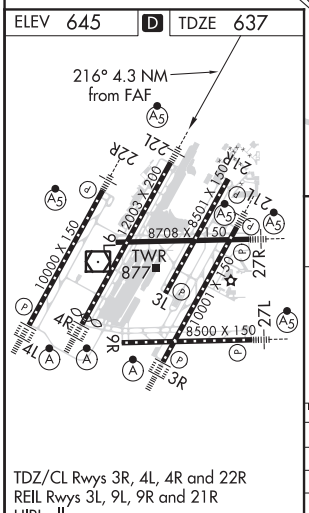
Simultaneous approach authorized.
#RVR 1800 authorized with use of FD or AP or HUD to DA.

MALSR

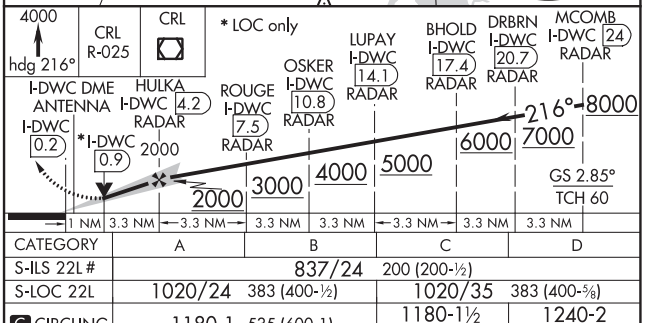
MISSED APPROACH: Climb to 4000 on heading 216° and CRL VOR/DME R-025 to CRL VOR/DME and hold, continue climb-in-hold to 4000.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.125 317.725	121.8 (NW) 132.725 (SW) 119.45 (NE) 119.25 (SE)	120.65	





TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways



CATEGORY	A	B	C	D
S-ILS 22L #	837/24 200 (200-½)			
S-LOC 22L	1020/24 383 (400-½)		1020/35 383 (400-⅝)	
C CIRCLING	1180-1 535 (600-1)		1180-1½ 535 (600-1½)	1240-2 595 (600-2)

EC-1, 25 FEB 2021 to 22 APR 2021

ILS or LOC RWY 27L

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

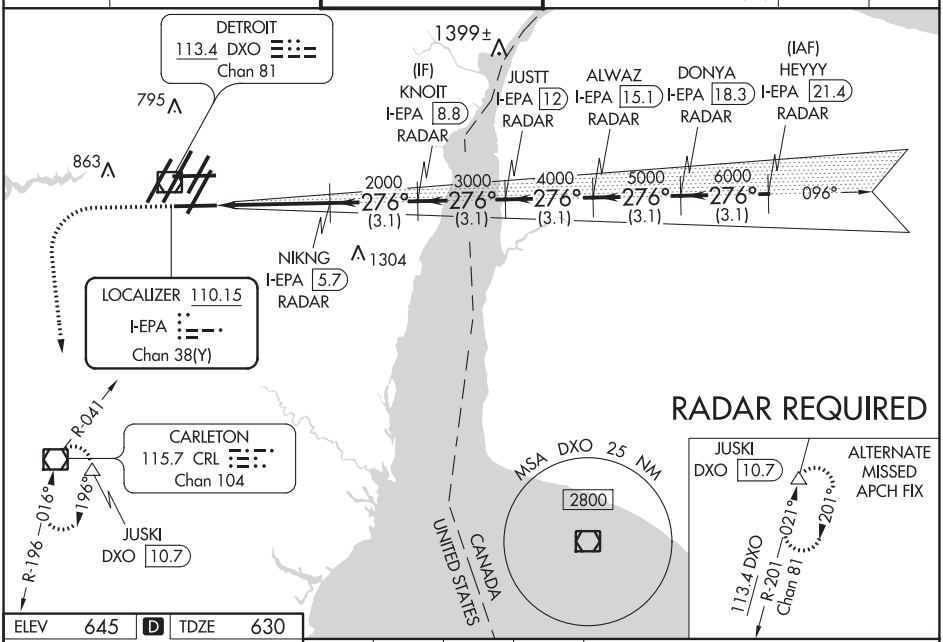
LOC/DME I-EPA	APP CRS	Rwy ldg	8500
110.15	276°	TDZE	630
Chan 38(Y)		Apt Elev	645

DME or RADAR required.
Simultaneous approach authorized.
**RVR 1800 authorized with use of FD or AP or HUD to DA.

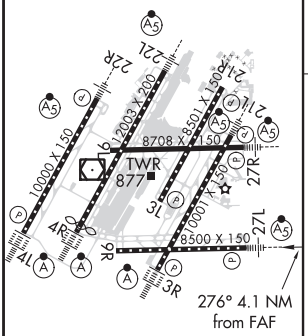
MALSR

MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 on heading 180° and CRL VOR/DME R-041 to CRL VOR/DME and hold, continue climb-in-hold to 4000.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.75 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	

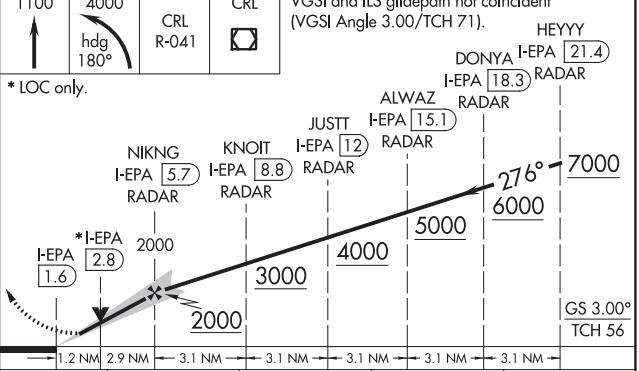


ELEV 645 D TDZE 630



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

FAF to MAP 4.1 NM					
Knots	60	90	120	150	180
Min:Sec	4:06	2:44	2:03	1:38	1:22



CATEGORY	A	B	C	D
S-ILS 27L **	830/24 200 (200-½)			
S-LOC 27L	1080/24 450 (500-½)		1080/45 450 (500-⅞)	
C CIRCLING	1180-1 535 (600-1)		1180-1½ 535 (600-1½)	1240-2 595 (600-2)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

ILS or LOC RWY 27R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

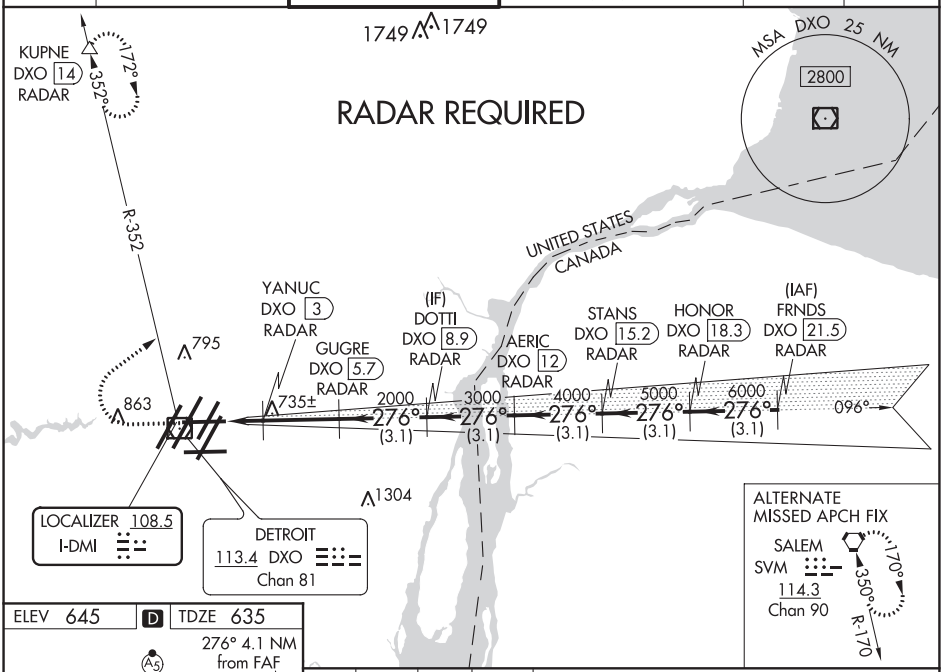
LOC I-DMI	APP CRS	Rwy ldg / TDZE / Apt Elev
108.5	276°	8708 / 635 / 645

DME or RADAR required. Simultaneous approach authorized. DME from DXO VOR/DME. Simultaneous reception of I-DMI and DXO DME required. For inop ALS, increase S-LOC 27R Cats C and D visibility to RVR 5500.
** RVR 1800 authorized with use of FD or AP or HUD to DA.

MALSR

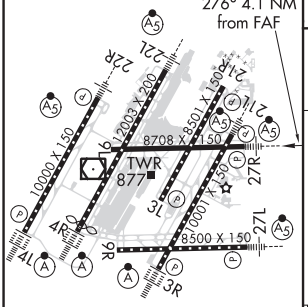
MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 on DXO VOR/DME R-352 to KUPNE/DXO 14 DME/RADAR and hold, continue climb-in-hold to 4000.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	125.15 284.0	118.4 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	



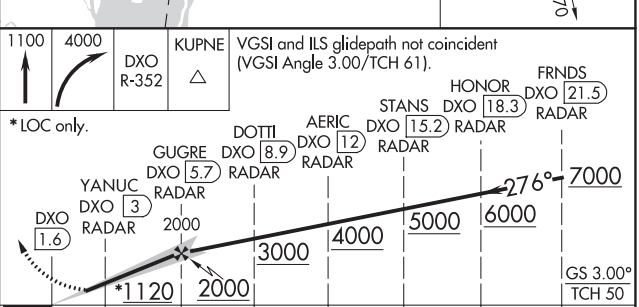
ELEV 645 | D | TDZE 635

276° 4.1 NM from FAF



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

FAF to MAP 4.1 NM					
Knots	60	90	120	150	180
Min:Sec	4:06	2:44	2:03	1:38	1:22



CATEGORY	A	B	C	D
S-ILS 27R	** 835/24 200 (200-½)			
S-LOC 27R	1000/24 365 (400-½)		1000/35 365 (400-⅝)	
C CIRCLING	1180-1 535 (600-1)		1180-1½ 535 (600-1½)	1240-2 595 (600-2)

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EC-1, 25 FEB 2021 to 22 APR 2021

LOC/DME I-HJT	APP CRS	Rwy ldg	10000
111.95	036°	TDZE	645
Chan 56 (Y)		Apt Elev	645

ILS Z or LOC RWY 4L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

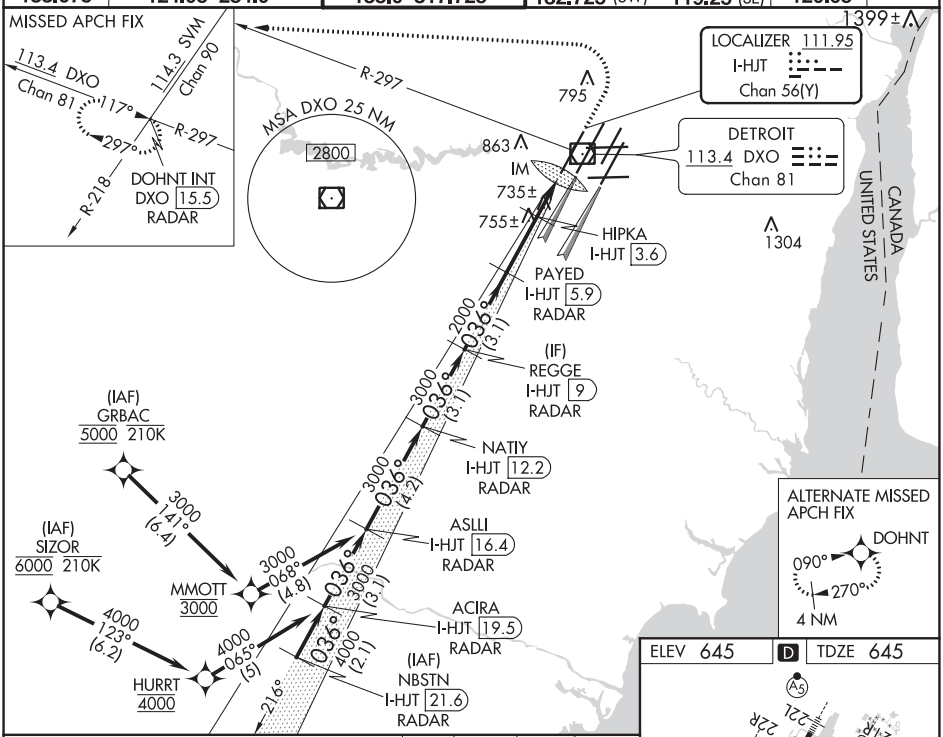
From GRBAC, SIZOR: RNAV 1-DME/DME/IRU or GPS required. Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry. DME or RADAR required.

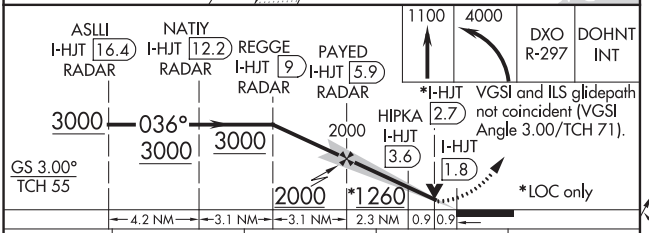
T Simultaneous approach authorized.

ALSF-2

MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 on DXO VOR/DME R-297 to DOHNT INT/DXO 15.5 DME/RADAR and hold.

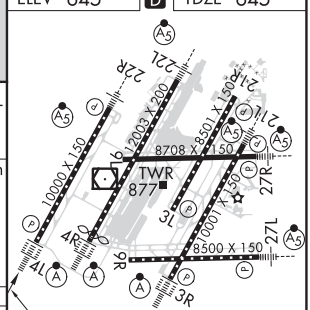
D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	





CATEGORY	A	B	C	D
S-ILS 4L	845/18 200 (200-½)			
S-LOC 4L	1260/24 615 (700-½)		1260-1⅜ 615 (700-1⅜)	
C CIRCLING	1260-1 615 (700-1)		1260-1¾ 615 (700-1¾)	1260-2 615 (700-2)
HIPKA FIX MINIMUMS (DME REQUIRED)				
S-LOC 4L	1000/24 355 (400-½)		1000/30 355 (400-⅝)	
C CIRCLING	1180-1 535 (600-1)		1180-1½ 535 (600-1½)	1240-2 595 (600-2)

ELEV 645 D TDZE 645



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

FAF to MAP 4.1 NM					
Knots	60	90	120	150	180
Min:Sec	4:06	2:44	2:03	1:38	1:22

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN — AL-119 (FAA) — 20254

ILS Z or LOC RWY 22R

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-JKI	APP CRS	Rwy ldg	10000
111.95	216°	TDZE	642
Chan 56 (Y)		Apt Elev	645

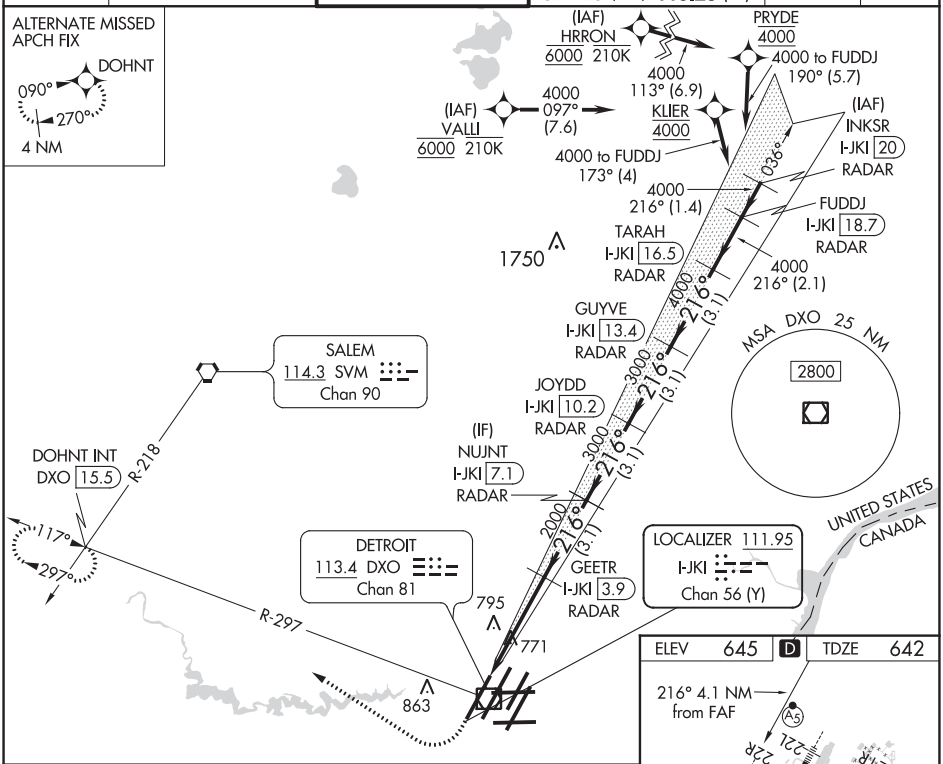
RNAV 1-GPS. HRRON and VALLI: RNAV 1-DME/DME/IRU or GPS required.
Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry.

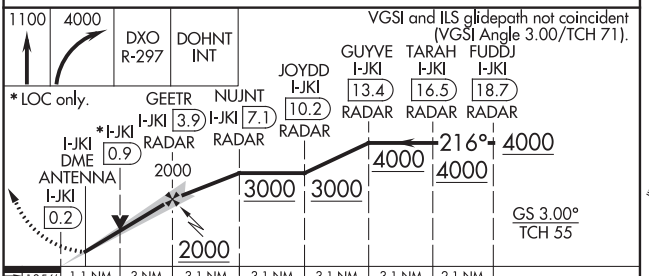
T Simultaneous approach authorized.
**RVR 1800 authorized with use of FD or AP or HUD to DA.

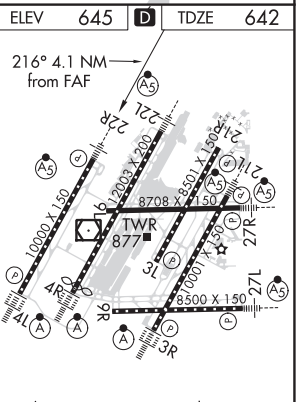
MALSR (A5)

MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 on DXO VOR/DME R-297 to DOHNT INT/DXO 15.5 DME and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	







TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all Rwys

CATEGORY	A	B	C	D
S-ILS 22R**	842/24 200 (200-½)			
S-LOC 22R	1060/24 418 (500-½)		1060/40 418 (500-¾)	
C CIRCLING	1180-1 535 (600-1)		1180-1½ 535 (600-1½)	1240-2 595 (600-2)

FAF to MAP 4.1 NM

Knots	60	90	120	150	180
Min:Sec	4:06	2:44	2:03	1:38	1:22

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

ILS Y RWY 4L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-ALA	APP CRS	Rwy ldg	10000
111.75	038°	TDZE	645
Chan 54 (Y)		Apt Elev	645

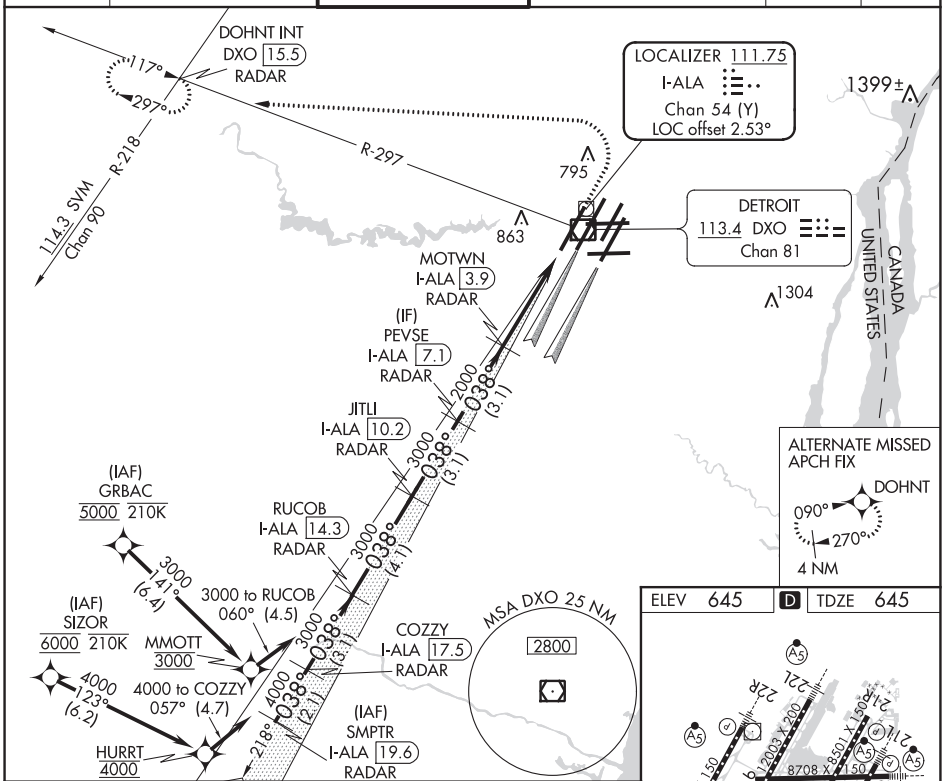
From GRBAC, SIZOR: RNAV 1-DME/DME/IRU or GPS required.
Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry.
DME or RADAR required.

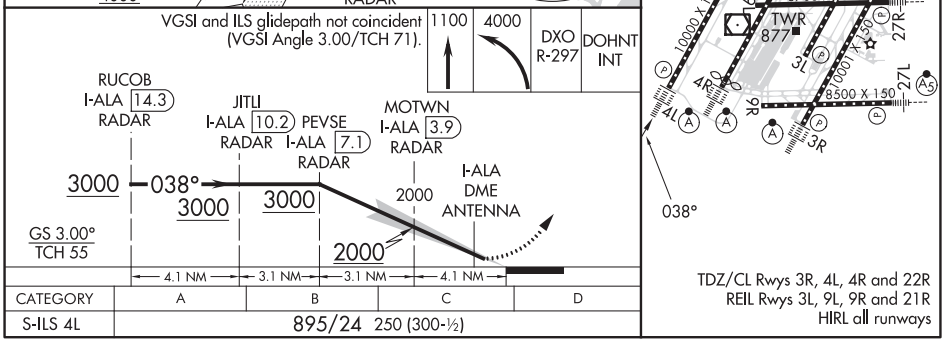
Simultaneous approach authorized.

ALSF-2

MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 on DXO VOR/DME R-297 to DOHNT INT/DXO 15.5 DME/RADAR and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	





CATEGORY	A	B	C	D
S-ILS 4L	895/24 250 (300-½)			

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EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN | AL-119 (FAA) | 20254

ILS Y RWY 22R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-BZB	APP CRS	Rwy ldg	10000
111.75	213°	TDZE	642
Chan 54 (Y)		Apt Elev	645

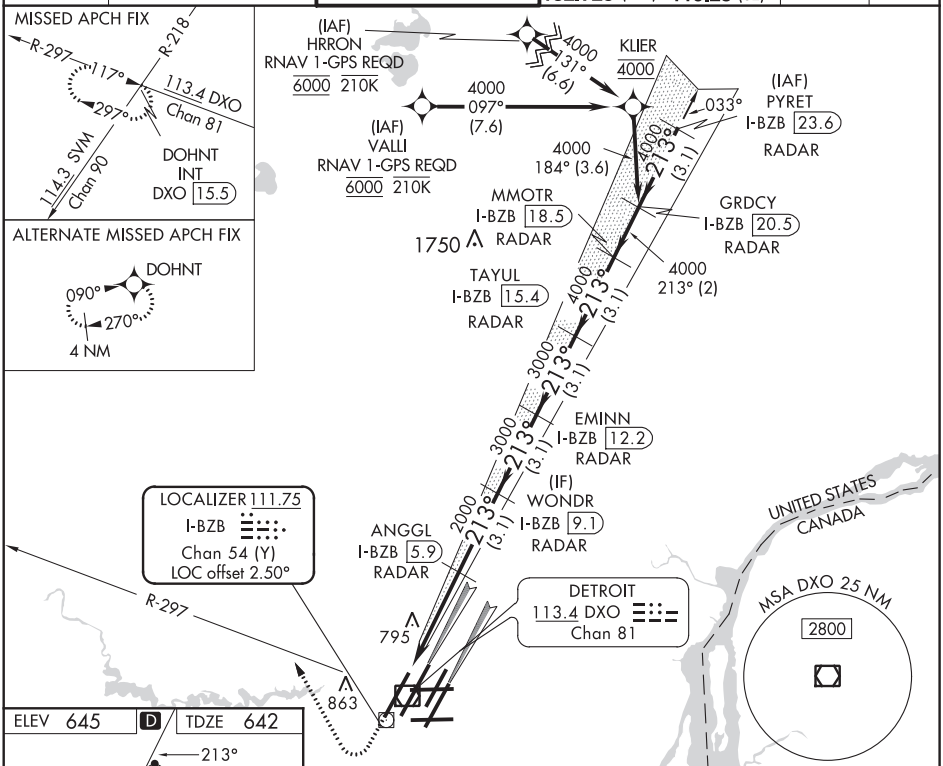
RNAV 1-GPS. HRRON and VALLI: RNAV 1-DME/DME/IRU or GPS required. Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry.

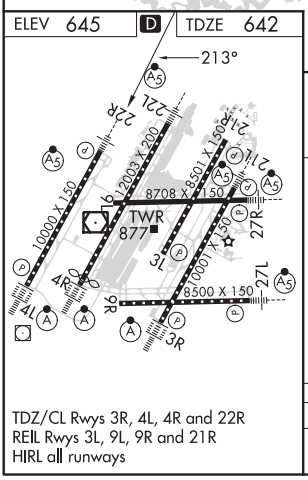
Simultaneous approach authorized.

MALSR

MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 on DXO VOR/DME R-297 to DOHNT INT/DXO 15.5 DME and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	

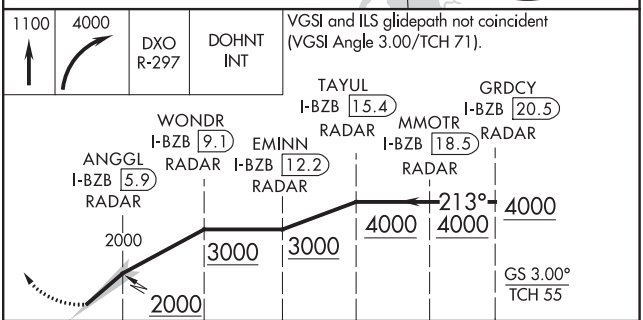




TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

1100	4000	DXO R-297	DOHNT INT

VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 71).



CATEGORY	A	B	C	D
S-ILS 22R	892/24 250 (300-½)			

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EC-1, 25 FEB 2021 to 22 APR 2021

LOC/DME I-HUU 111.5 Chan 52	APP CRS 036°	Rwy ldg 10001 TDZE 633 Apt Elev 645

ILS RWY 3R (SA CAT I)
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

RNAV 1-GPS.

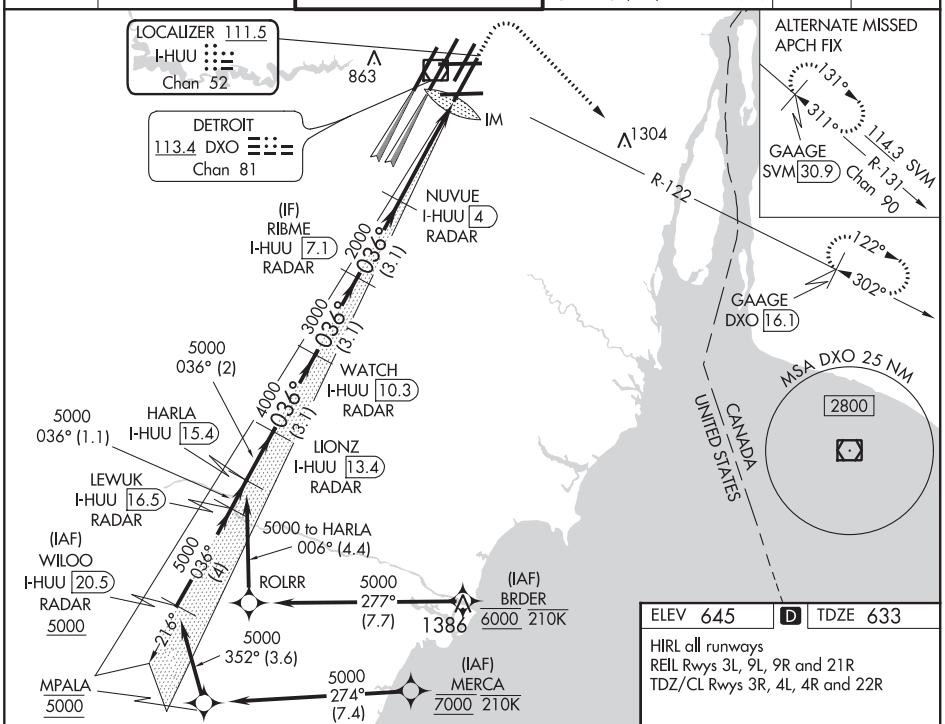
MERCA and BRDER: RNAV 1-DME/DME/IRU or GPS required. Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry.

T Simultaneous approach authorized. DME required. Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH.

ALSF-2

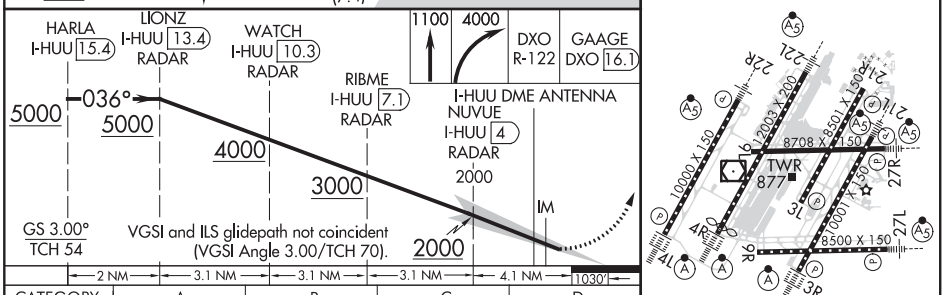
MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 on DXO VOR/DME R-122 to GAAGE/DXO 16.1 DME and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	125.15 284.0	118.4 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	



ELEV 645 D TDZE 633

HIRL all runways
REIL Rwys 3L, 9L, 9R and 21R
TDZ/CL Rwys 3R, 4L, 4R and 22R



CATEGORY	A	B	C	D
S-ILS 3R	RA 153/14 150 DA 783			

SA CATEGORY I ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN AL-119 (FAA) 20254

LOC/DME I-DTW 110.7 Chan 44	APP CRS 036°	Rwy ldg 11494 TDZE 640 Apt Elev 645

ILS RWY 4R (SA CAT I)
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

RNAV 1-GPS.

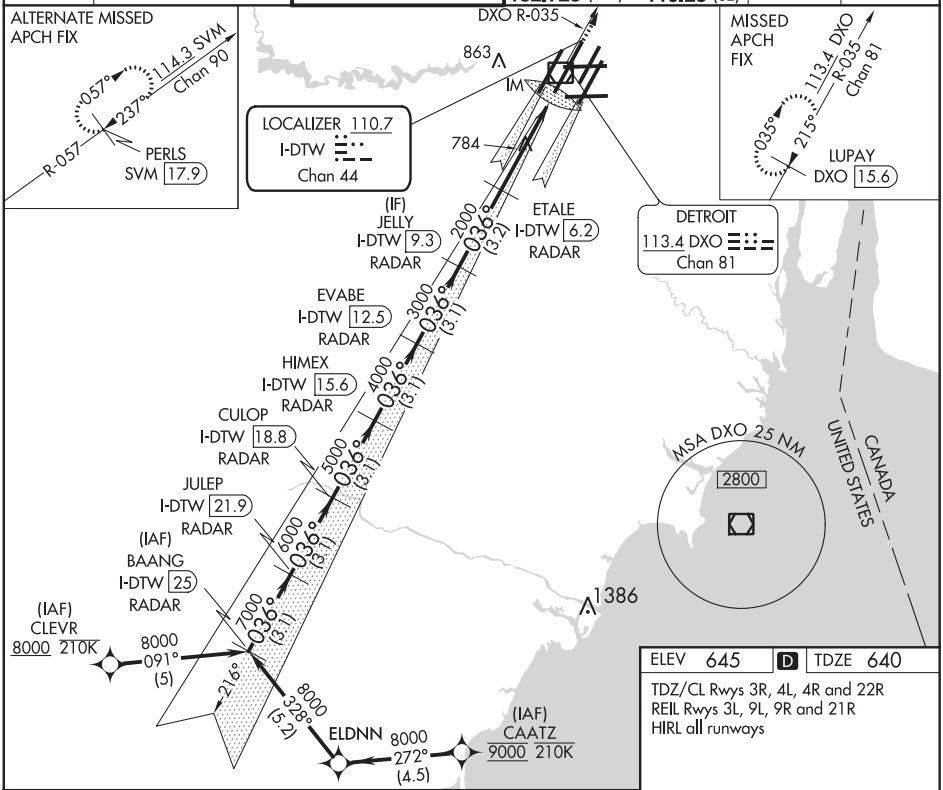
CLEVR, CAATZ and ELDNN: RNAV 1-DME/DME/IRU or GPS required. Aircraft not DME/DME/IRU or GPS equipped- RADAR required for procedure entry. DME or RADAR required.

Simultaneous approach authorized.
Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH.

ALSF-2

MISSED APPROACH: Climb to 4000 on DXO VOR/DME R-035 to LUPAY/DXO VOR/DME/15.6 DME and hold.

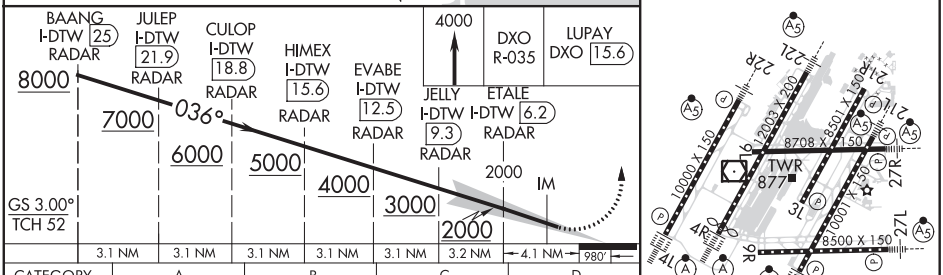
D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.125 317.725	121.8 (NW) 132.725 (SW) 119.45 (NE) 119.25 (SE)	120.65	



EC-1, 25 FEB 2021 to 22 APR 2021

ELEV 645	D	TDZE 640

TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways



CATEGORY	A	B	C	D
S-ILS 4R	RA 154/14	150 DA 790		

SA CATEGORY I ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

EC-1, 25 FEB 2021 to 22 APR 2021

LOC/DME I-EJR	APP CRS	Rwy ldg	10001
111.5	216°	TDZE	632
Chan 52		Apt Elev	645

ILS RWY 21L (SA CAT I & II)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

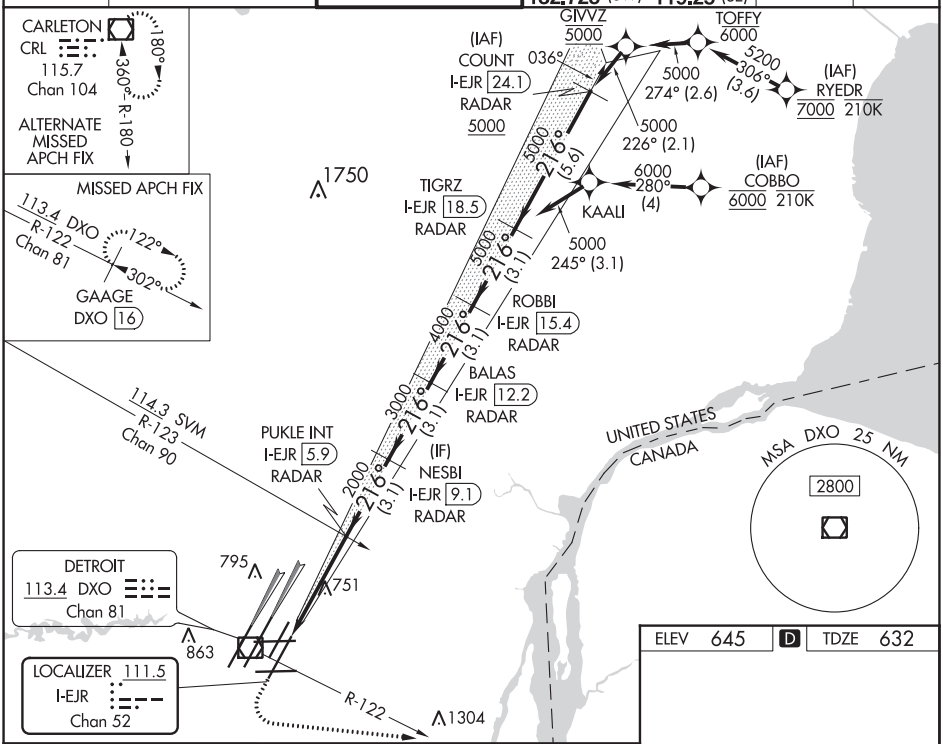
From RYEDR, COBBO: RNAV 1-DME/DME/IRU or GPS required. Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry. DME or RADAR required.

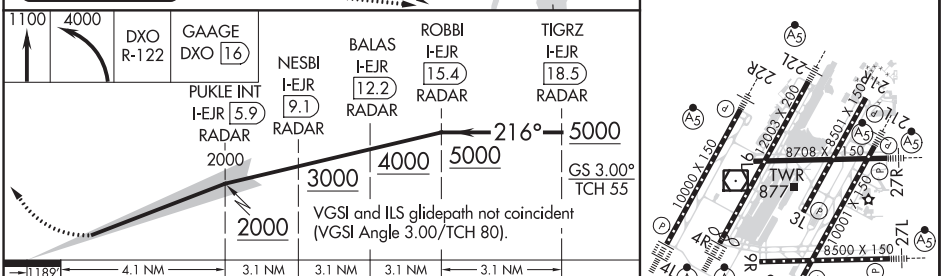
T Simultaneous approach authorized. SA CAT I: Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH. SA CAT II: Reduced lighting; requires specific OPSPEC, MSPEC, or LOA approval and use of autoland or HUD to touchdown.

MALSR A5

MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 on DXO R-122 to GAAGE/DXO 16 DME and hold, continue climb-in-hold to 4000.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	125.15 284.0	118.4 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	





CATEGORY	A	B	C	D
S-ILS 21L	SA CAT I RA 148/14 150 DA 782			
S-ILS 21L	SA CAT II RA 98/12 100 DA 732			

SA CATEGORY I & II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

ELEV 645 D TDZE 632

HIRL all runways
REIL Rwys 3L, 9L, 9R and 21R
TDZ/CL Rwys 3R, 4L, 4R and 22R

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

LOC/DME I-DWC 110.7 Chan 44	APP CRS 216°	Rwy ldg 12003 TDZE 637 Apt Elev 645

ILS RWY 22L (SA CAT I)
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

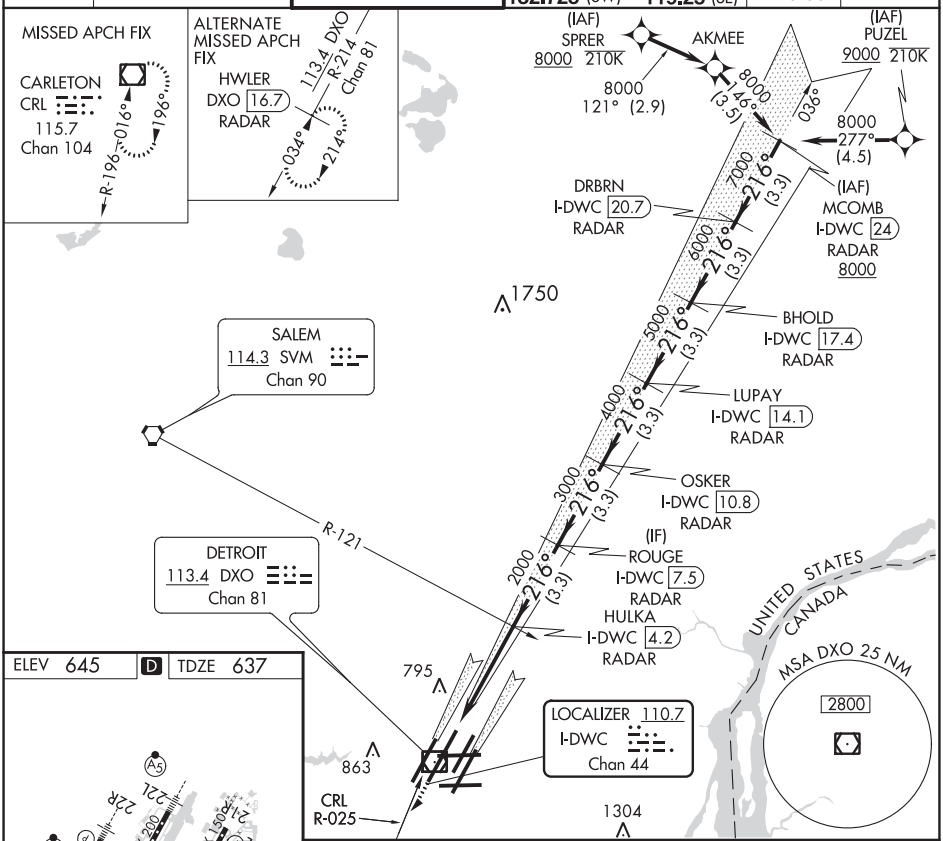
DME or RADAR required. RNAV 1-DME/DME/IRU or RADAR required for procedure entry.

T Simultaneous approach authorized.
Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH.

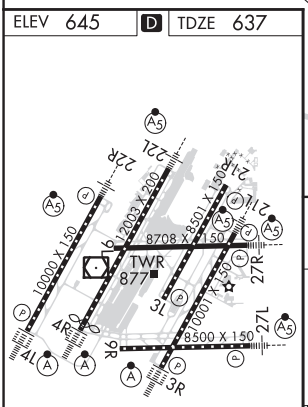
MALSR

MISSED APPROACH: Climb to 4000 on heading 216° and CRL VOR/DME R-025 to CRL VOR/DME and hold, continue climb-in-hold to 4000.

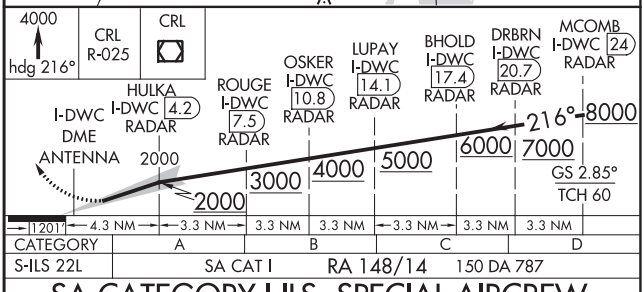
D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.125 317.725	121.8 (NW) 132.725 (SW) 119.45 (NE) 119.25 (SE)	120.65	



ELEV 645 D TDZE 637



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways



CATEGORY	A	B	C	D
S-ILS 22L	SA CAT I	RA 148/14	150 DA 787	

SA CATEGORY I ILS- SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

EC-1, 25 FEB 2021 to 22 APR 2021

LOC/DME I-EPA	APP CRS	Rwy ldg	8500
110.15	276°	TDZE	630
Chan 38(Y)		Apt Elev	645

ILS RWY 27L (SA CAT I & II)

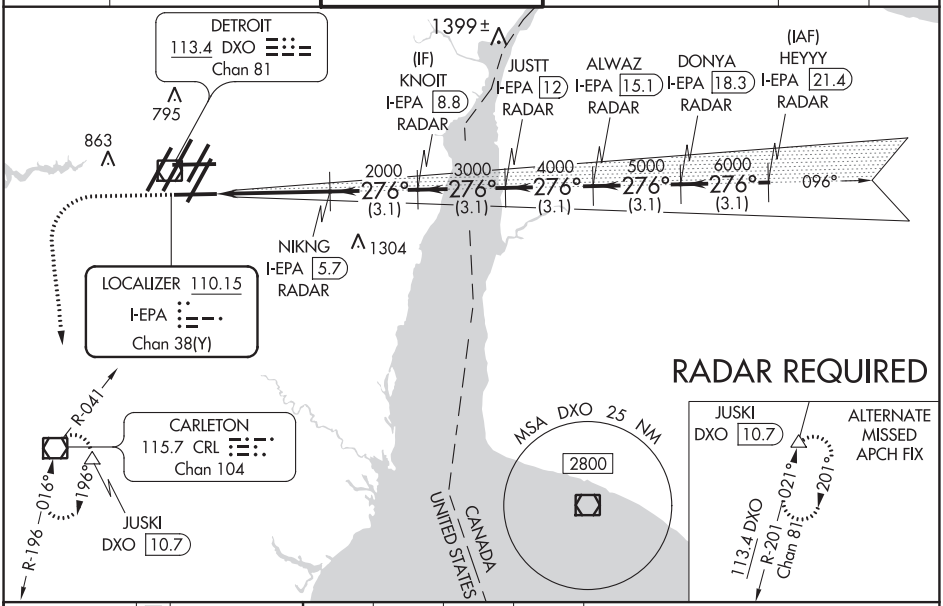
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

DME or RADAR required. Simultaneous approach authorized.
SA Cat I: Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH.
SA Cat II: Reduced lighting: Requires specific OPSPEC, MSPEC, or LOA approval and use of Autoland or HUD to touchdown.

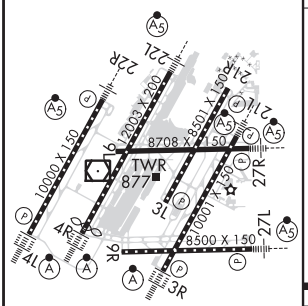
MALSR

MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 on heading 180° and CRL VOR/DME R-041 to CRL VOR/DME and hold, continute climb-in-hold to 4000.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.75 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	



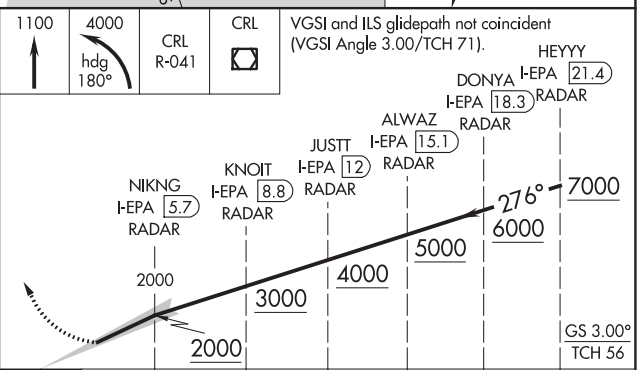
ELEV	645	D	TDZE	630



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

1100	4000 hdg 180°	CRL R-041	CRL

VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 71).



CATEGORY	A	B	C	D
S-ILS 27L	SA CAT I RA 146/16		150 DA 780	
S-ILS 27L	SA CAT II RA 96/16		100 DA 730	

SA CATEGORY I & II ILS SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN — AL-119 (FAA) — 20254

LOC/DME I-JKI	APP CRS	Rwy ldg	10000
111.95	216°	TDZE	642
Chan 56 (Y)		Apt Elev	645

ILS Z RWY 22R (SA CAT I & II)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

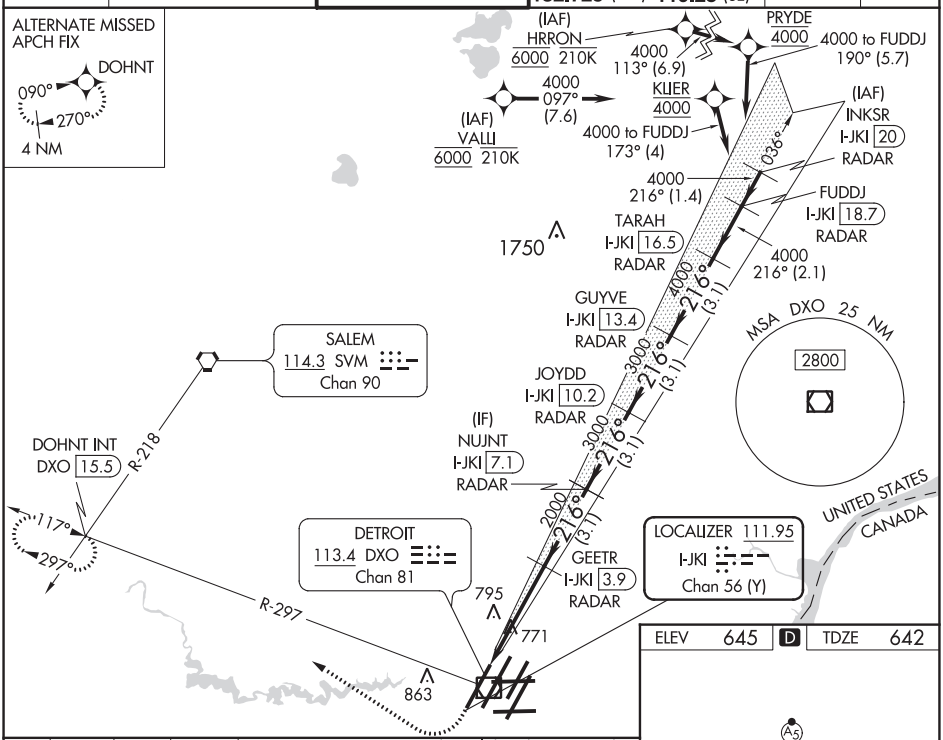
RNAV 1-GPS. HRRON and VALLI: RNAV 1-DME/DME/IRU or GPS required. Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry.

Simultaneous approach authorized. SA CAT I: Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH. SA CAT II: Reduced lighting: Requires specific OPSPEC, MSPEC, or LOA approval and use of autoland or HUD to touchdown.

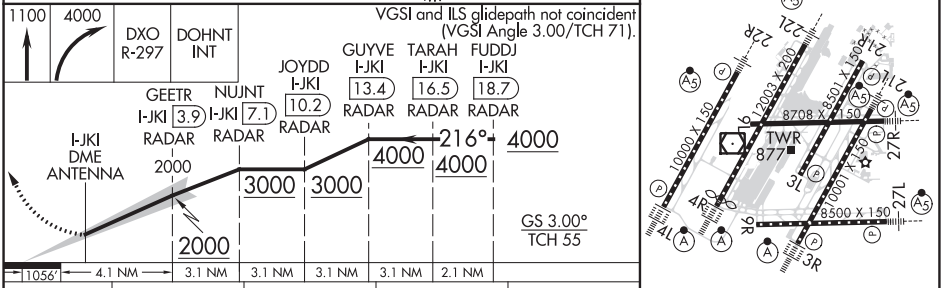
MALSR

MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 on DXO VOR/DME R-297 to DOHNT INT/DXO 15.5 DME and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	



ELEV	645	D	TDZE	642



CATEGORY	A	B	C	D
S-ILS 22R	SA CAT I	RA 148/14	150 DA 792	
S-ILS 22R	SA CAT II	RA 98/12	100 DA 742	

SA CATEGORY I & II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all Rwys

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

ILS RWY 3R (CAT II & III)
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-HUU	APP CRS	Rwy ldg	10001
111.5	036°	TDZE	633
Chan 52		Apt Elev	645

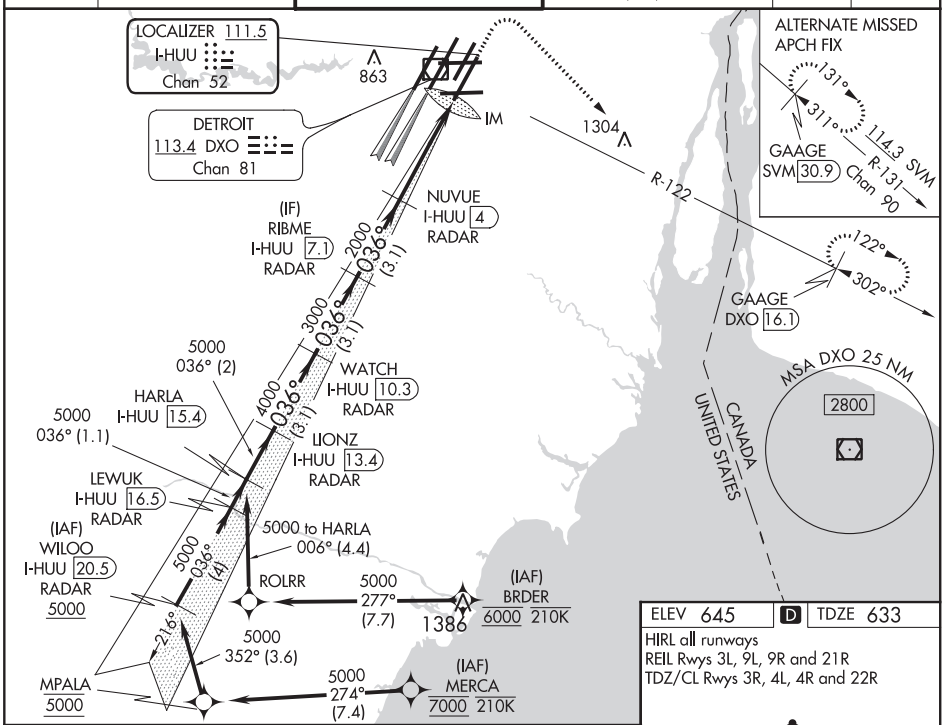
RNAV 1-GPS.
MERCA and BRDER: RNAV 1-DME/DME/IRU or GPS required. Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry.

Simultaneous approach authorized. DME required. RVR 1000 authorized with specific OPSPEC, MSPEC, or LOA approval and use of autoland or HUD to touchdown.

ALSF-2

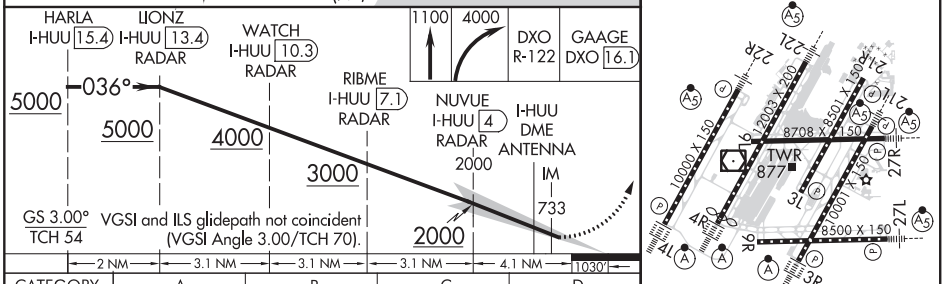
MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 on DXO VOR/DME R-122 to GAAGE/DXO 16.1 DME and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	125.15 284.0	118.4 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	



ELEV 645 | D | TDZE 633

HIRL all runways
REIL Rwys 3L, 9L, 9R and 21R
TDZ/CL Rwys 3R, 4L, 4R and 22R



CATEGORY	A	B	C	D
S-ILS 3R	CAT II RA 101/12 100 DA 733			
S-ILS 3R	CAT III RVR 06			

CATEGORY II & III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

LOC/DME I-DTW 110.7 Chan 44	APP CRS 036°	Rwy ldg 11494 TDZE 640 Apt Elev 645

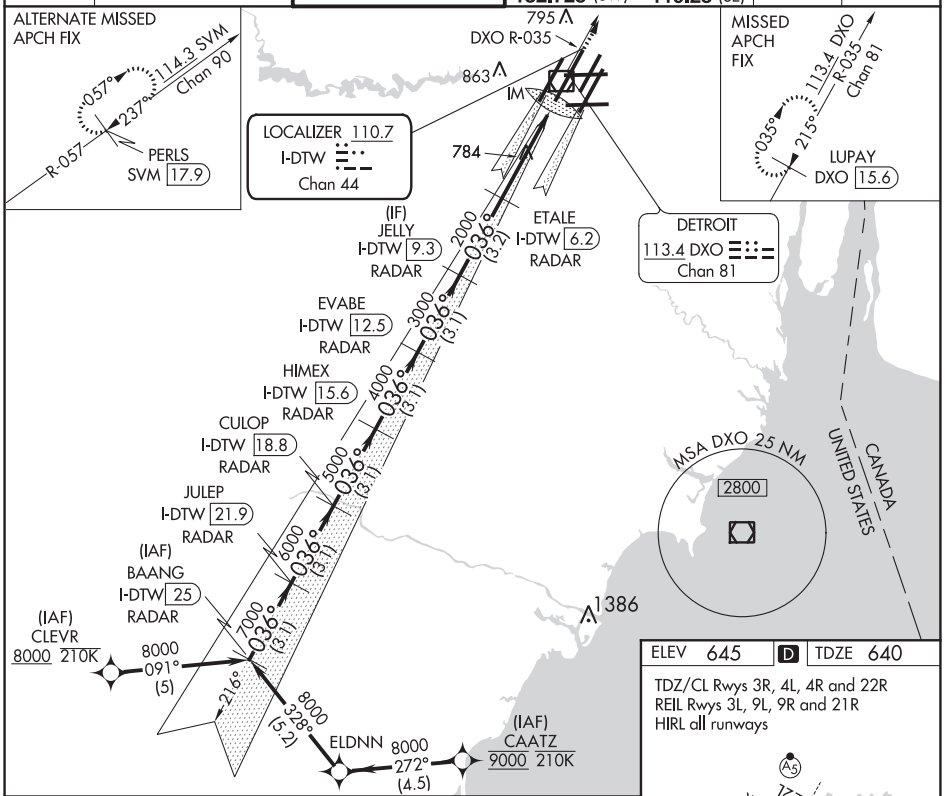
ILS RWY 4R (CAT II & III)
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

RNAV 1-GPS.
CLEVR, CAATZ and ELDNN: RNAV 1-DME/DME/IRU or GPS required.
Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry.
DME or RADAR required.
Simultaneous approach authorized.

ALSF-2

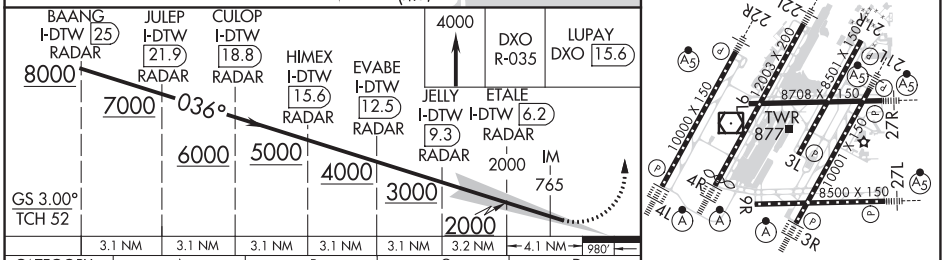
MISSED APPROACH: Climb to 4000 on DXO VOR/DME R-035 to LUPAY/DXO VOR/DME/15.6 DME and hold.

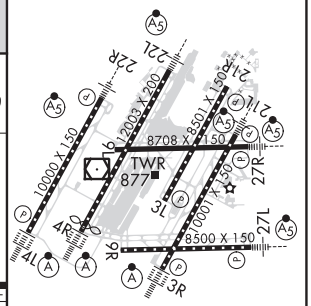
D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.125 317.725	121.8 (NW) 132.725 (SW) 119.45 (NE) 119.25 (SE)	120.65	



ELEV 645	D	TDZE 640

TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways





CATEGORY	A	B	C	D
S-ILS 4R	CAT II RA 104/12 100 DA 740			
S-ILS 4R	CAT III RVR 06			

CATEGORY II & III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

EC-1, 25 FEB 2021 to 22 APR 2021

LOC/DME I-HJT	APP CRS	Rwy ldg	10000
111.95	036°	TDZE	645
Chan 56 (Y)		Apt Elev	645

ILS Z RWY 4L (CAT II & III)
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

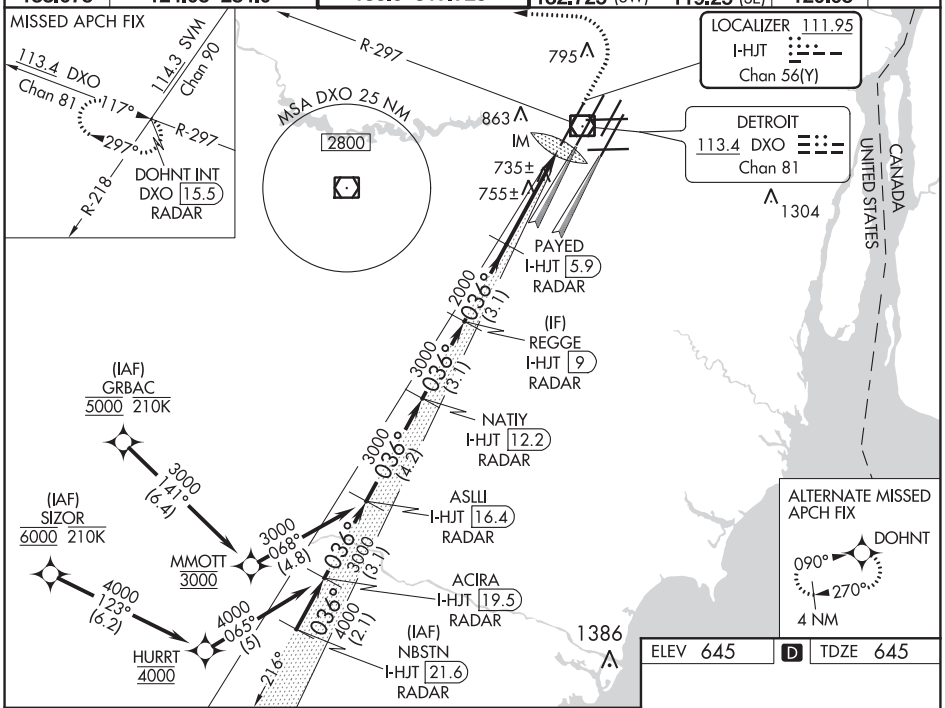
From GRBAC, SIZOR: RNAV 1-DME/DME/IRU or GPS required. Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry. DME or RADAR required.

Simultaneous approach authorized. CAT II; RVR 1000 authorized with specific OPSPEC, MSPEC, or LOA approval and use of autoland or HUD to touchdown.

ALSF-2

MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 on DXO VOR/DME R-297 to DOHNT INT/DXO 15.5 DME/RADAR and hold.

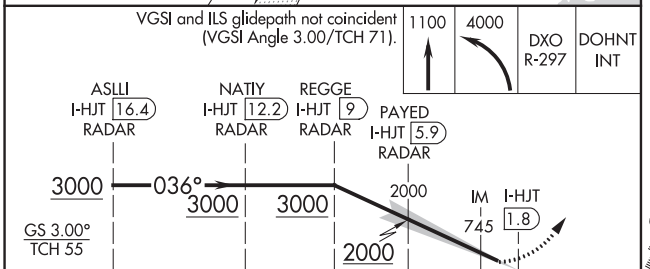
D-ATIS	DETROIT APP CON	METRO TOWER	GND CON		CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725	121.8 (NW) 132.725 (SW)	119.45 (NE) 119.25 (SE)	120.65	



ELEV 645 | D | TDZE 645

VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 71).

1100	4000	DXO R-297	DOHNT INT



CATEGORY	A	B	C	D
S-ILS 4L	CAT II RA 101/12 100 DA 745			
S-ILS 4L	CAT III RVR 600			

TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

CATEGORY II & III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN

AL-119 (FAA)

20254

RNAV (RNP) U RWY 4L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

APP CRS	Rwy ldg	10000
038°	TDZE	645
	Apt Elev	645

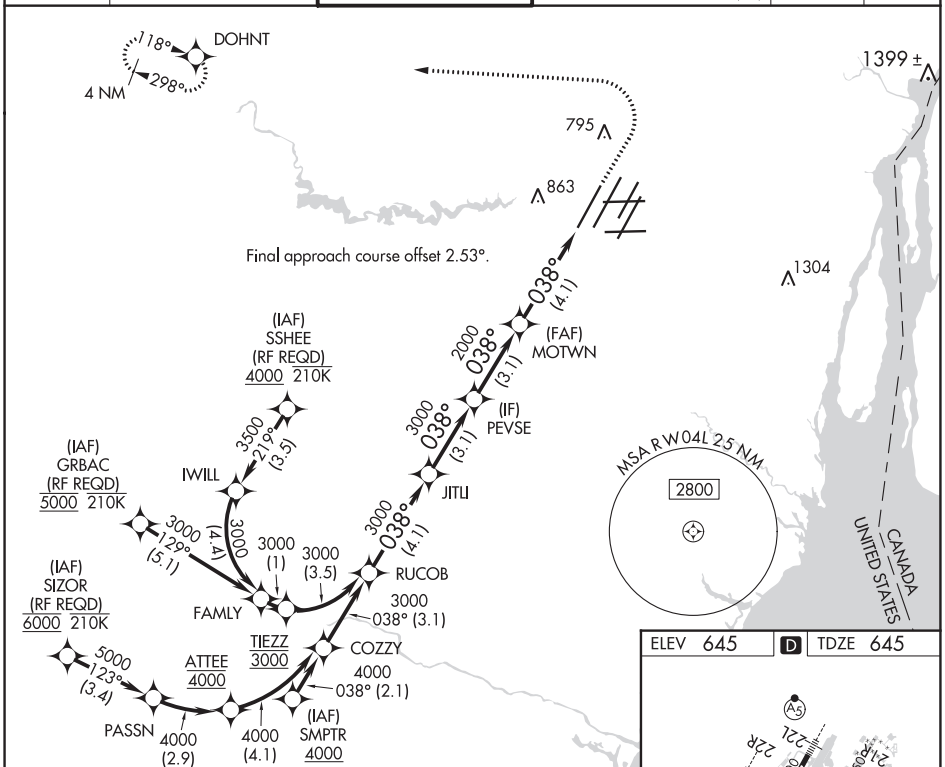
RNP AR APCH.

Simultaneous approach authorized. For uncompensated Baro-VNAV systems, procedure NA below -19°C or above 54°C. For inop ALS, increase RNP 0.30 DA all Cats visibility to RVR 6000.

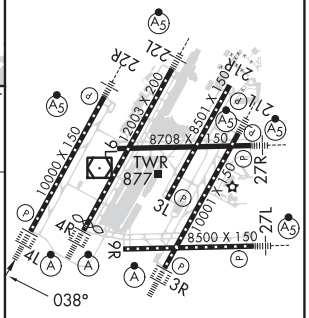
ALSF-2

MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 direct DOHNT and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	

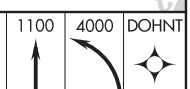


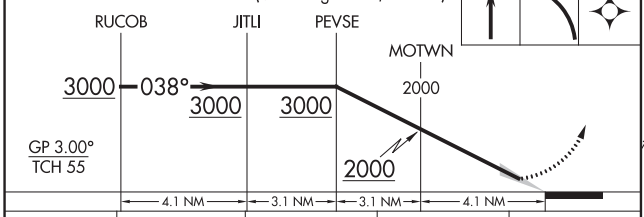
ELEV 645 | D | TDZE 645



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all Rwys

VGSI and RNAV glidepath not coincident
(VGSI Angle 3.00/TCH 71).





CATEGORY	A	B	C	D
RNP 0.30 DA	1058/40	413 (500-¾)		

AUTHORIZATION REQUIRED

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

APP CRS	Rwy ldg	10000
213°	TDZE	642
	Apt Elev	645

RNAV (RNP) U RWY 22R

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

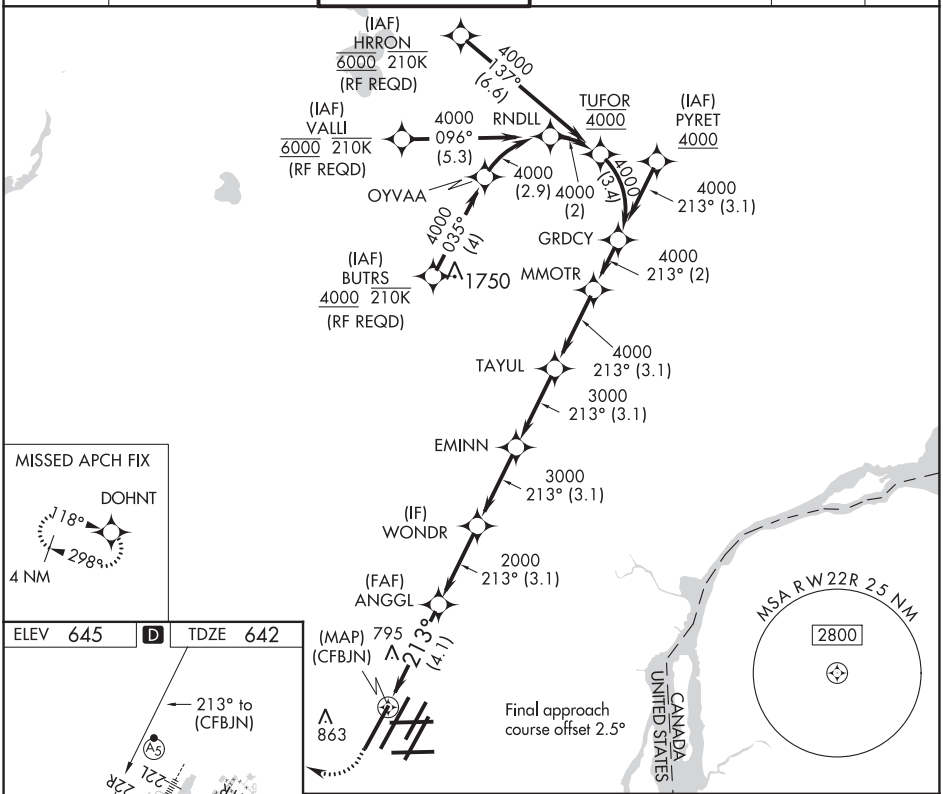
RNP AR APCH.

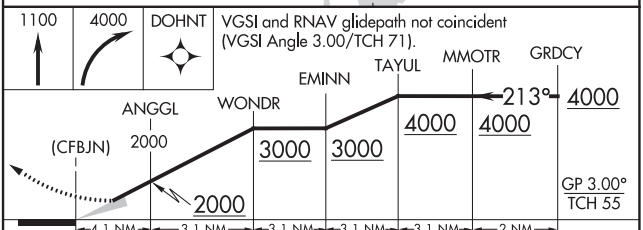
For uncompensated Baro-VNAV systems, procedure NA below -19°C (-2°F) or above 54°C (130°F). Simultaneous approach authorized. For inop ALS, increase RNP 0.30 all Cats visibility to RVR 5500.

MALSR

MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 direct DOHNT and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	





CATEGORY	A	B	C	D
RNP 0.30 DA	987/30	345 (400-⅝)		

TDZ/CL Rwys 3R, 4L, 4R and 22R
HIRL all runways
REIL Rwys 3L, 9L, 9R and 21R

AUTHORIZATION REQUIRED

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

APP CRS	Rwy ldg	10001
036°	TDZE	633
	Apt Elev	645

RNAV (RNP) W RWY 3R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

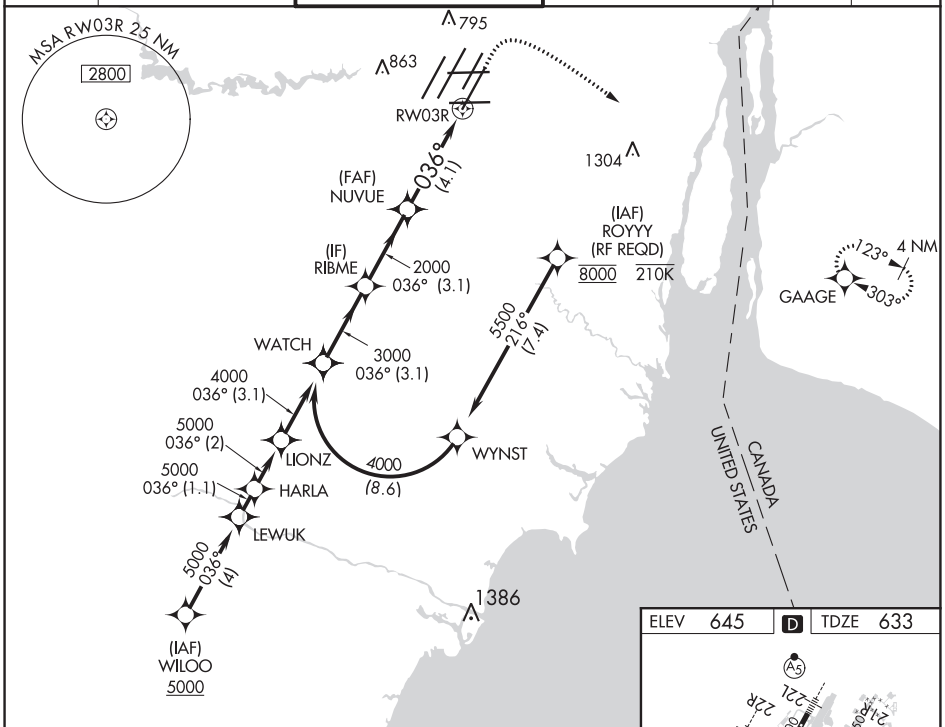
RNP AR APCH.

For uncompensated Baro-VNAV systems, procedure NA below -19°C (-2°F) or above 54°C (130°F). Simultaneous approach authorized.

ALSF-2

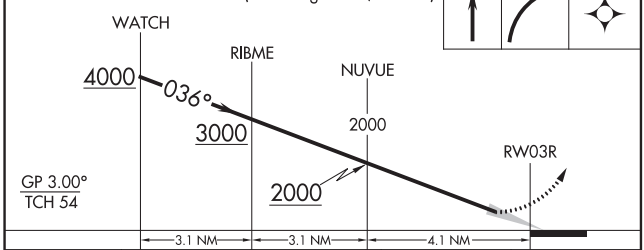
MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 direct GAAGE and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	125.15 284.0	118.4 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	



VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 70).

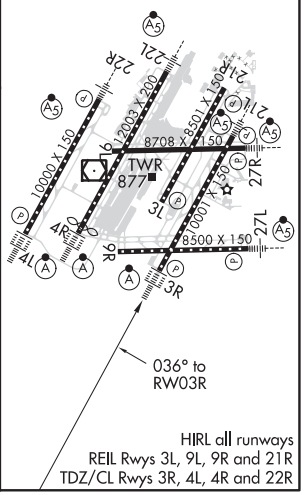
1100	4000	GAAGE



CATEGORY	A	B	C	D
RNP 0.30 DA	1021/35 388 (400-5/8)			

AUTHORIZATION REQUIRED

ELEV 645 D TDZE 633



HIRL all runways
REIL Rwys 3L, 9L, 9R and 21R
TDZ/CL Rwys 3R, 4L, 4R and 22R

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

APP CRS	Rwy ldg	10000
036°	TDZE	645
	Apt Elev	645

RNAV (RNP) W RWY 4L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

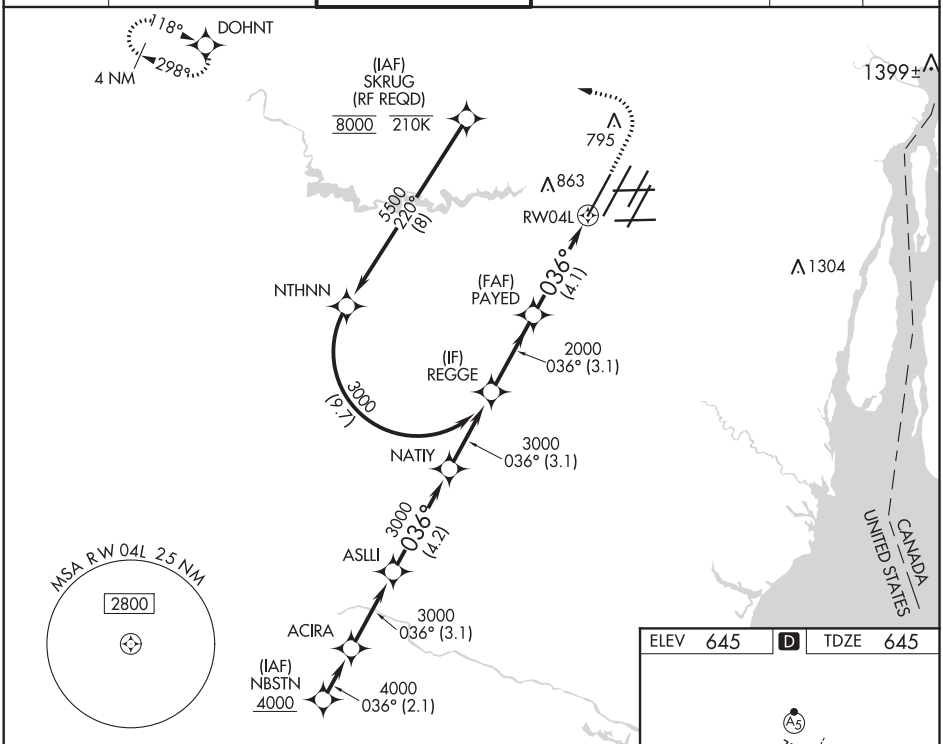
RNP AR APCH.

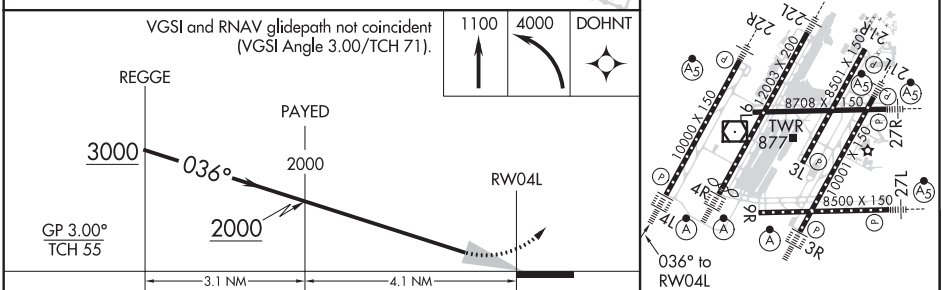
Simultaneous approach authorized. For uncompensated Baro-VNAV systems, procedure NA below -19°C or above 54°C. For inop ALS, increase RNP 0.30 all Cats visibility to RVR 6000.

ALSF-2

MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 direct DOHNT and hold, continue climb-in-hold to 4000.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	

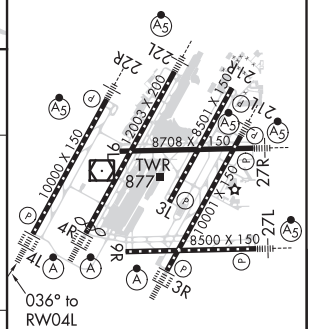




CATEGORY	A	B	C	D
RNP 0.15 DA	970/26	325 (400-½)		
RNP 0.30 DA	1058/40	413 (500-¾)		

AUTHORIZATION REQUIRED

ELEV 645 D TDZE 645



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN | AL-119 (FAA) | 20254

APP CRS	Rwy ldg	10001
216°	TDZE	632
	Apt Elev	645

RNAV (RNP) W RWY 21L

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

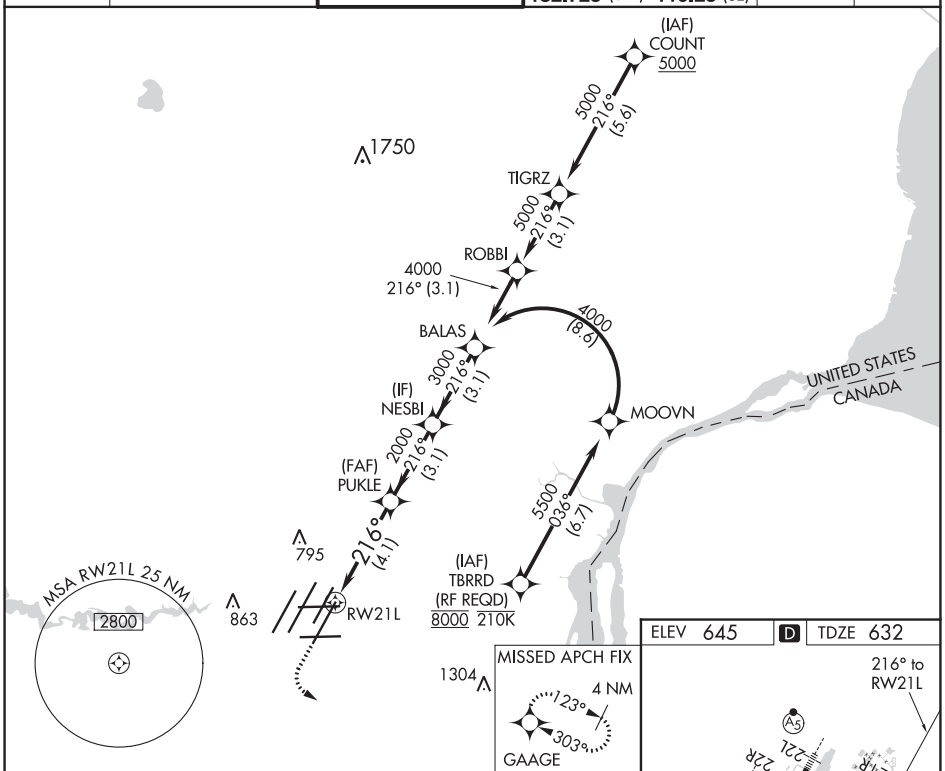
RNP AR APCH.

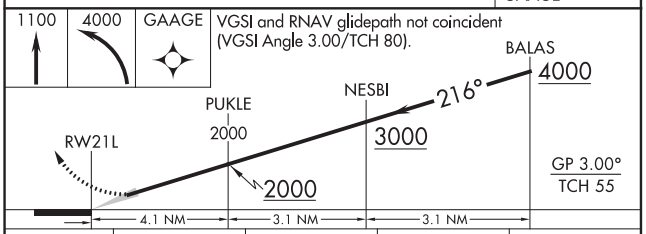
For uncompensated Baro-VNAV systems, procedure NA below -19°C or above 54°C. Simultaneous approach authorized. Use of FD or AP providing RNAV track guidance required during simultaneous operations.

MALSR

MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 direct GAAGE and hold.

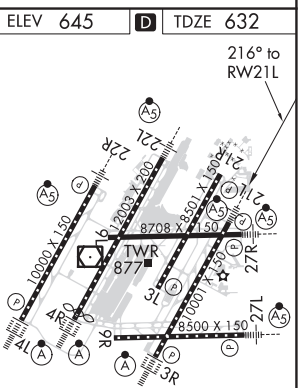
D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	125.15 284.0	118.4 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	





CATEGORY	A	B	C	D
RNP 0.30 DA	1062/40 430 (500-¾)			

AUTHORIZATION REQUIRED



HIRL all runways
REIL Rwys 3L, 9L, 9R and 21R
TDZ/CL Rwys 3R, 4L, 4R and 22R

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

APP CRS	Rwy ldg	10000
216°	TDZE	642
	Apt Elev	645

RNAV (RNP) W RWY 22R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

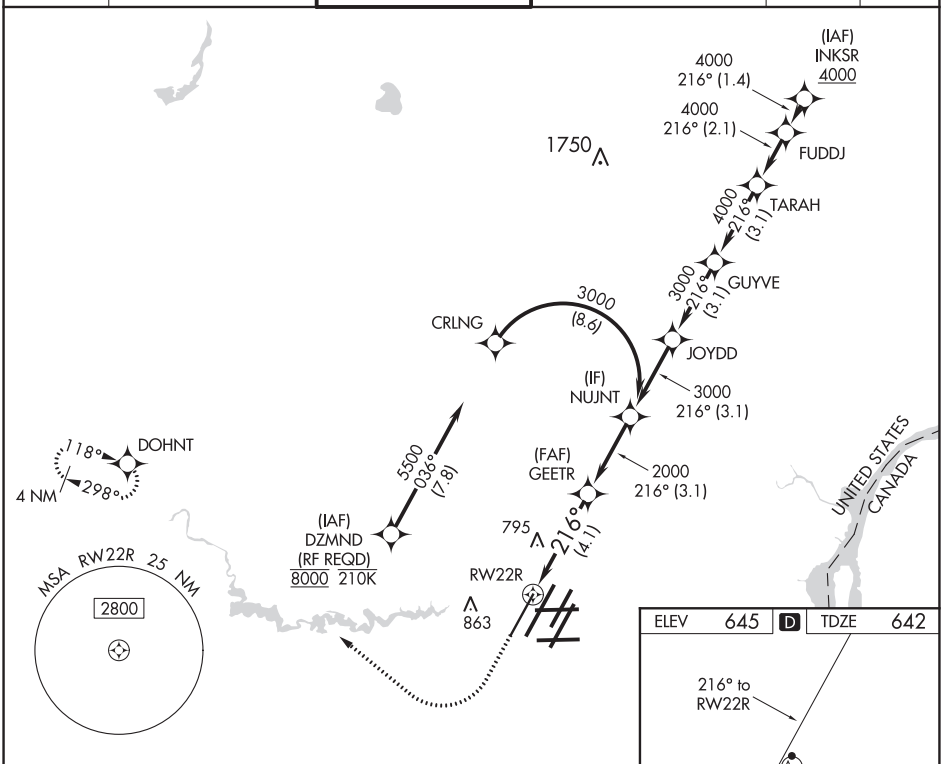
RNP AR APCH.

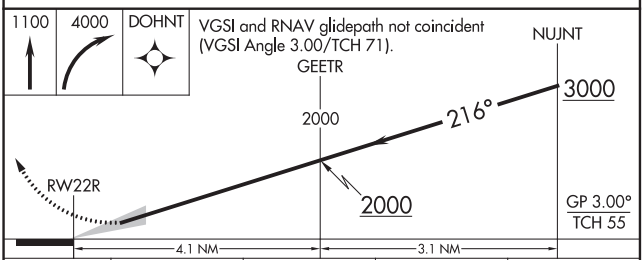
For uncompensated Baro-VNAV systems, procedure NA below -19°C or above 54°C.
Simultaneous approach authorized.
For inop ALS, increase RNP 0.30 all Cats visibility to RVR 5500.

MALSR

MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 direct DOHNT and hold, continue climb-in-hold to 4000.

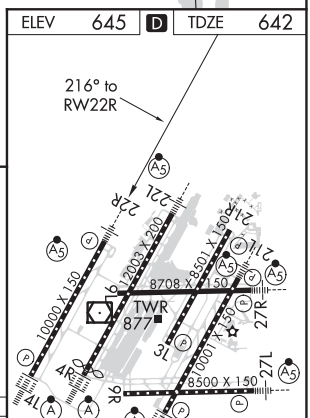
D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	





CATEGORY	A	B	C	D
RNP 0.30 DA	987/30 345 (400-⅝)			

AUTHORIZATION REQUIRED



TDZ/CL Rwys 3R, 4L, 4R, and 22R
REIL Rwys 3L, 9L, 9R, and 21R
HIRL all runways

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN AL-119 (FAA) 20254

APP CRS	Rwy ldg	10001
036°	TDZE	633
	Apt Elev	645

RNAV (RNP) X RWY 3R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

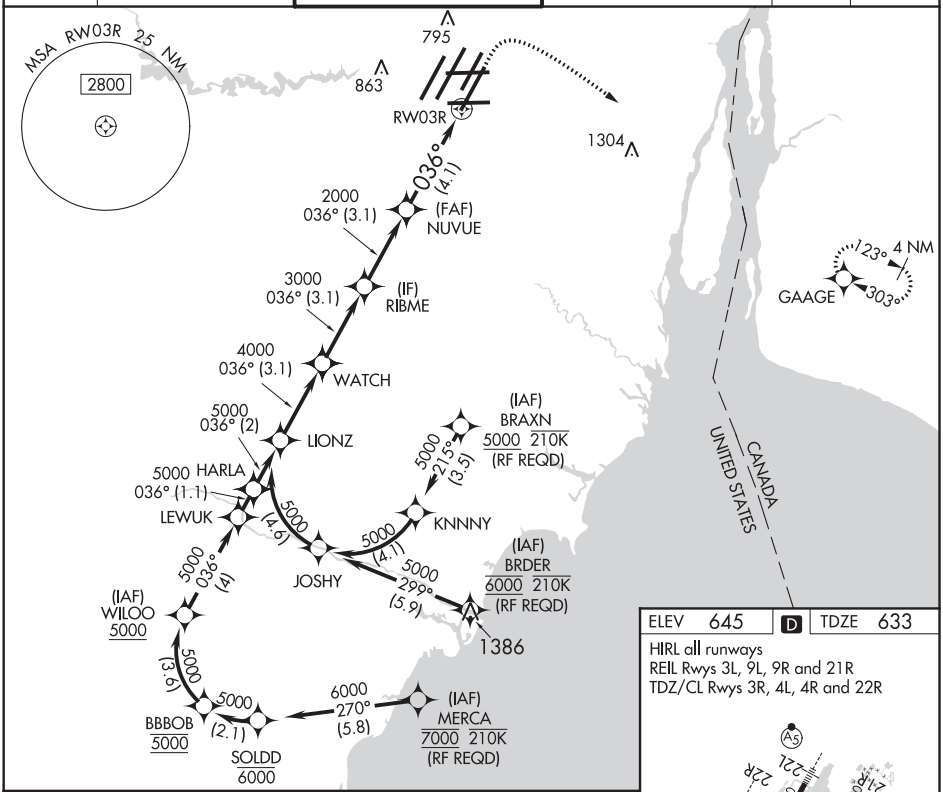
RNP AR APCH.

Simultaneous approach authorized. For uncompensated Baro-VNAV systems, procedure NA below -19°C or above 54°C.

ALSF-2

MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 direct GAAGE and hold.

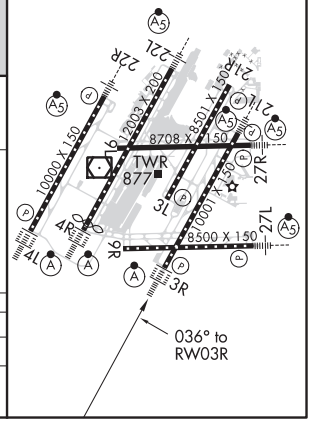
D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	125.15 284.0	118.4 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	



EC-1, 25 FEB 2021 to 22 APR 2021

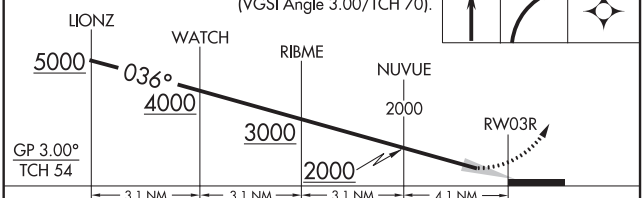
ELEV	645	D	TDZE	633

HIRL all runways
REIL Rwys 3L, 9L, 9R and 21R
TDZ/CL Rwys 3R, 4L, 4R and 22R



VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 70).

1100 4000 GAAGE



CATEGORY	A	B	C	D
RNP 0.30 DA	1021/35 388 (400-⅝)			

AUTHORIZATION REQUIRED

EC-1, 25 FEB 2021 to 22 APR 2021

APP CRS	Rwy ldg	10000
036°	TDZE	645
	Apt Elev	645

RNAV (RNP) X RWY 4L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

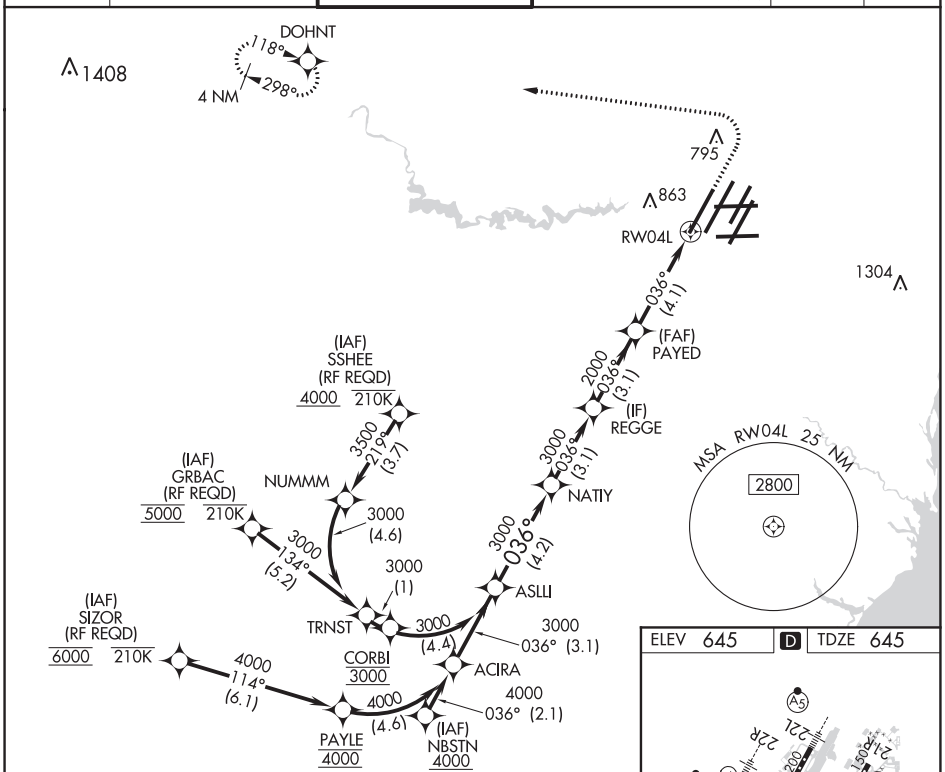
RNP AR APCH.

Simultaneous approach authorized. For uncompensated Baro-VNAV systems, procedure NA below -19°C or above 54°C. For inop ALS, increase RNP 0.30 DA all Cats visibility to RVR 6000.

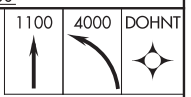
ALSF-2

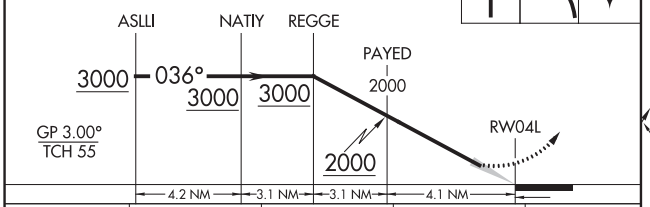
MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 direct DOHNT and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	



VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 71).

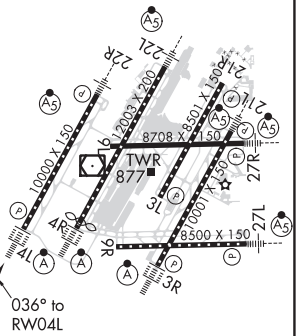




CATEGORY	A	B	C	D
RNP 0.15 DA	970/26 325 (400-½)			
RNP 0.30 DA	1058/40 413 (500-¾)			

AUTHORIZATION REQUIRED

ELEV 645 D TDZE 645



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN

AL-119 (FAA)

20254

APP CRS	Rwy ldg	11494
036°	TDZE	640
	Apt Elev	645

RNAV (RNP) X RWY 4R

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

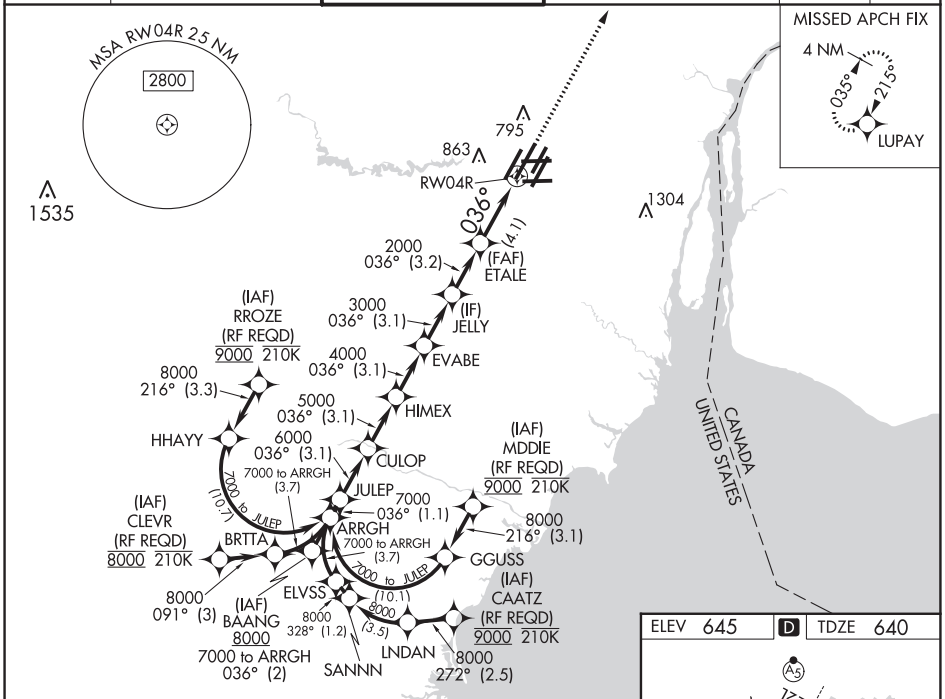
RNP AR APCH.

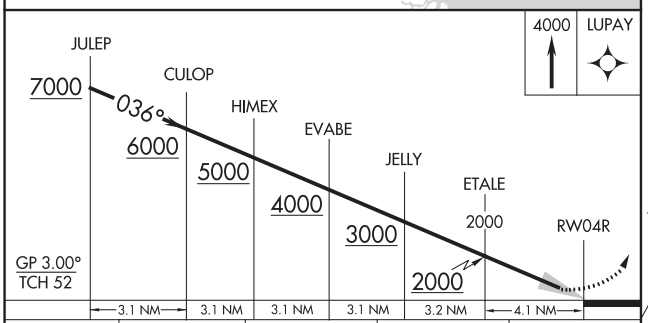
For uncompensated Baro-VNAV systems, procedure NA below -19°C (-2°F) or above 54°C (130°F). Simultaneous approach authorized.

ALSF-2

MISSED APPROACH: Climb to 4000 direct LUPAY and hold.

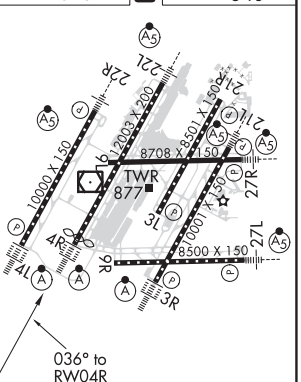
D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.125 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	





CATEGORY	A	B	C	D
RNP 0.30 DA	1031/35 391 (400-⅝)			

AUTHORIZATION REQUIRED



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

APP CRS	Rwy ldg	10001
216°	TDZE	632
	Apt Elev	645

RNAV (RNP) X RWY 21L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

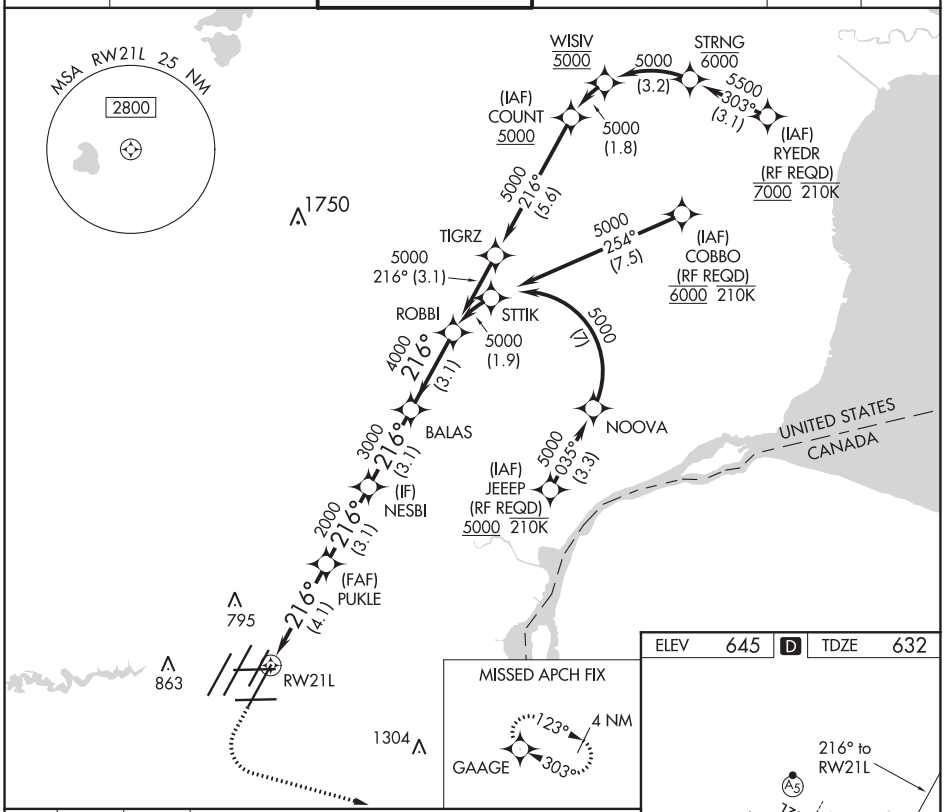
RNP AR APCH.

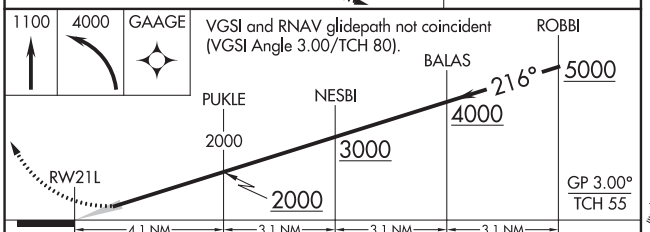
Simultaneous approach authorized. Use of FD or AP providing RNAV track guidance required during simultaneous operations. For uncompensated Baro-VNAV systems, procedure NA below -19°C or above 54°C.

MALSR

MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 direct GAAGE and hold, continue climb-in-hold to 4000.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	125.15 284.0	118.4 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	

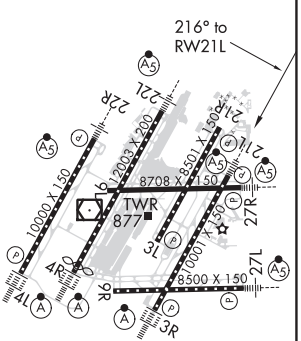




CATEGORY	A	B	C	D
RNP 0.30 DA	1062/40 430 (500-¾)			

AUTHORIZATION REQUIRED

ELEV 645 D TDZE 632



HIRL all runways
REIL Rwys 3L, 9L, 9R, and 21R
TDZ/CL Rwys 3R, 4L, 4R, and 22R

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN AL-119 (FAA) 20254

APP CRS	Rwy ldg	12003
216°	TDZE	637
	Apt Elev	645

RNAV (RNP) X RWY 22L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

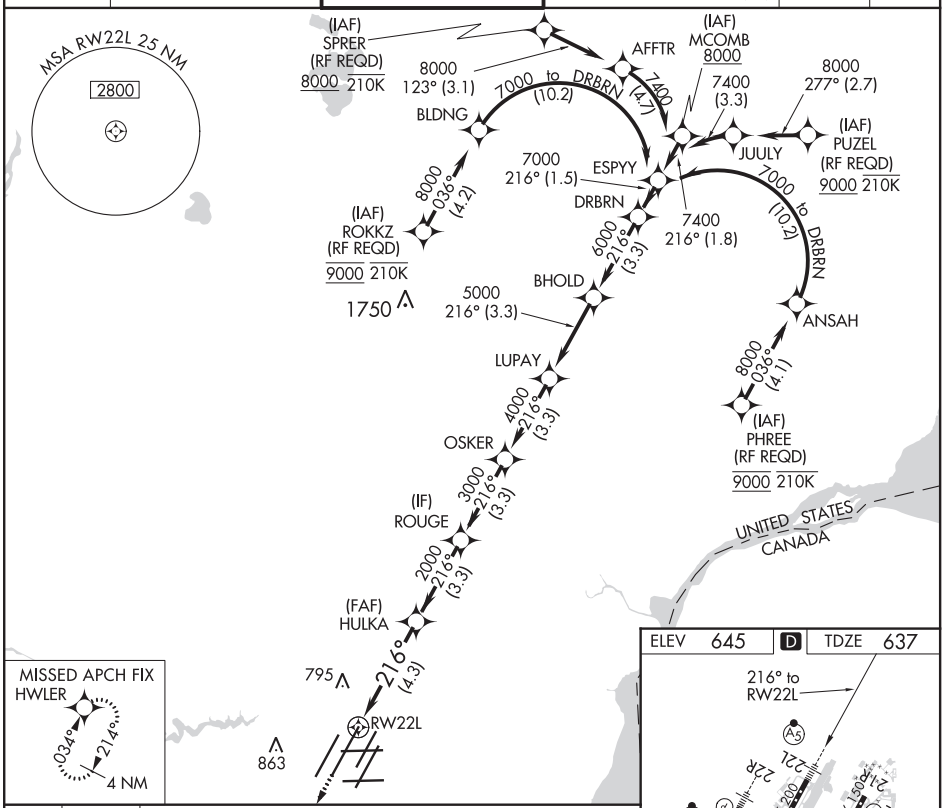
RNP AR APCH.

For uncompensated Baro-VNAV systems, procedure NA below -10°C (14°F) or above 54°C (130°F). Simultaneous approach authorized. For inop ALS, increase RNP 0.15 all Cats visibility to RVR 4500 and RNP 0.30 all Cats visibility to RVR 6000.

MALSR

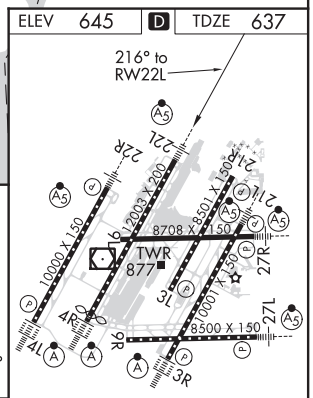
MISSED APPROACH: Climb to 4000 direct HWLER and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.125 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	



CATEGORY	A	B	C	D
RNP 0.15 DA	941/24	304 (300-½)		
RNP 0.30 DA	1040/40	403 (400-¾)		

AUTHORIZATION REQUIRED



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

APP CRS	Rwy ldg	10000
216°	TDZE	642
	Apt Elev	645

RNAV (RNP) X RWY 22R

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

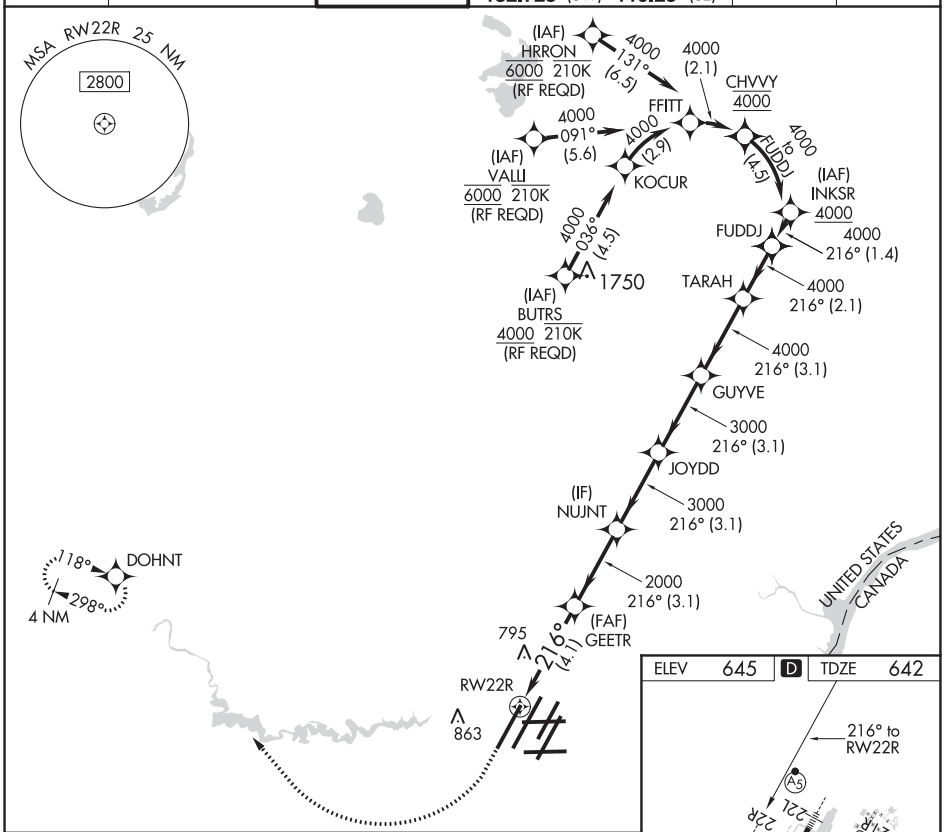
RNP AR APCH.

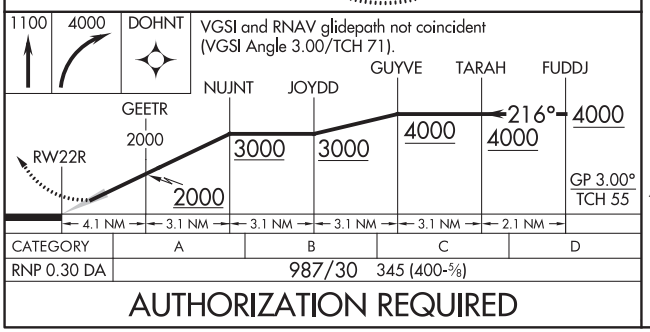
For uncompensated Baro-VNAV systems, procedure NA below -19°C (-2°F) or above 54°C (130°F). Simultaneous approach authorized. For inop ALS, increase RNP 0.30 all Cats visibility to RVR 5500.

MALSR

MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 direct DOHNT and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	

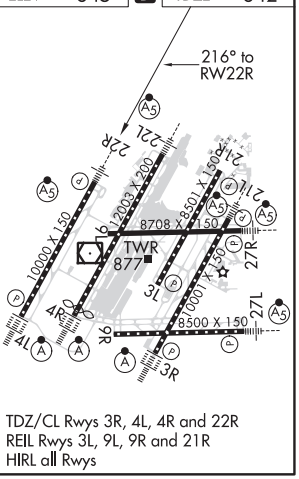




CATEGORY	A	B	C	D
RNP 0.30 DA	987/30 345 (400-⅝)			

AUTHORIZATION REQUIRED

ELEV 645 D TDZE 642



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all Rwys

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 53300 W27B	APP CRS 276°	Rwy ldg 8500 TDZE 630 Apt Elev 645

RNAV (GPS) RWY 27L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

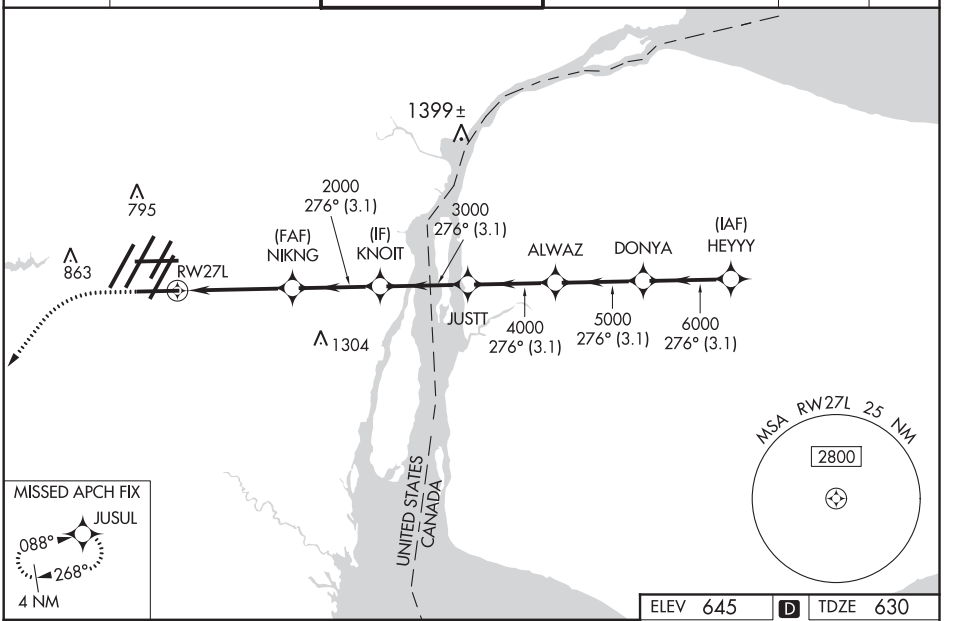
RNP APCH.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C (-2°F) or above 54°C (130°F). Simultaneous approach authorized. LNAV procedure NA during simultaneous operations. Use of FD or AP required during simultaneous operations. For inop ALS, increase LNAV/VNAV all Cats visibility to RVR 5000.
** RVR 1800 authorized with use of FD or AP or HUD to DA.

MALSR

MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 direct JUSUL and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.75 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	

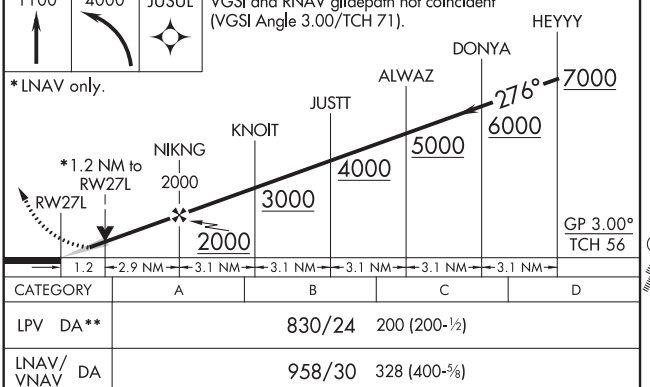


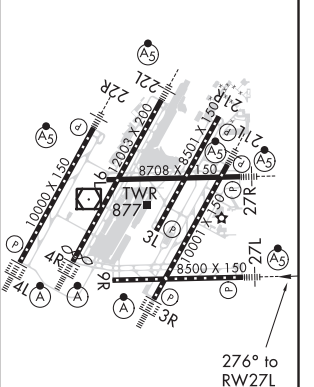
ELEV 645 D TDZE 630

1100 4000 JUSUL

VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 71).

*LNAV only.





CATEGORY	A	B	C	D
LPV DA**	830/24 200 (200-½)			
LNAV/VNAV DA	958/30 328 (400-⅝)			
LNAV MDA	1080/24 450 (500-½)		1080/45 450 (500-⅞)	
C CIRCLING	1180-1 535 (600-1)		1180-1½ 535 (600-1½)	1240-2 595 (600-2)

TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 86220 W27A	APP CRS 276°	Rwy ldg 8708 TDZE 635 Apt Elev 645

RNAV (GPS) RWY 27R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

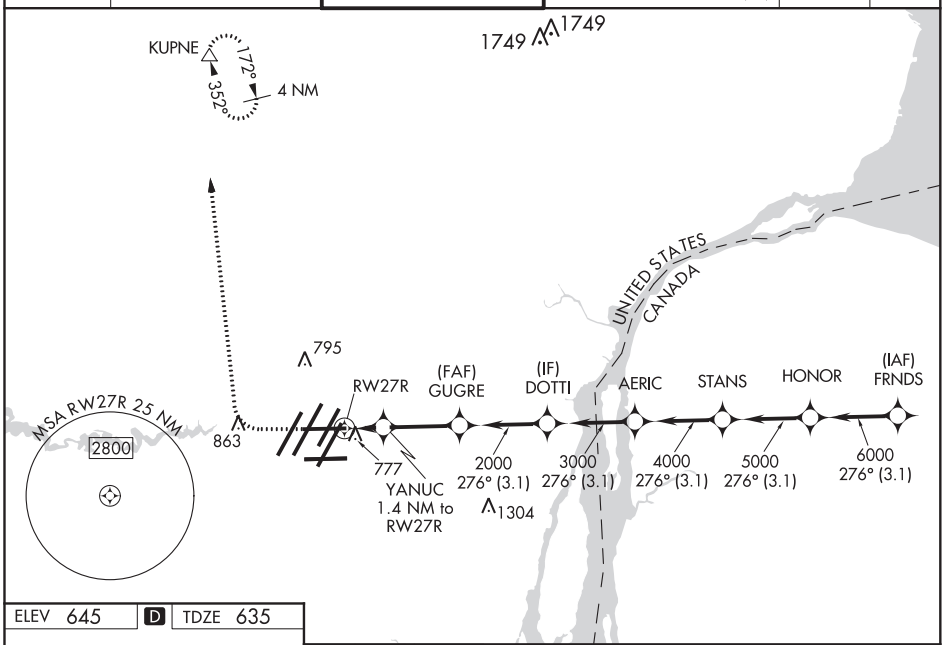
RNP APCH.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C (-4°F) or above 54°C (130°F). For inop ALS, increase LNAV Cat C and D visibility to RVR 6000. Simultaneous approach authorized. LNAV procedure NA during simultaneous operations. Use of FD or AP required during simultaneous operations. **RVR 1800 authorized with use of FD or AP or HUD to DA.

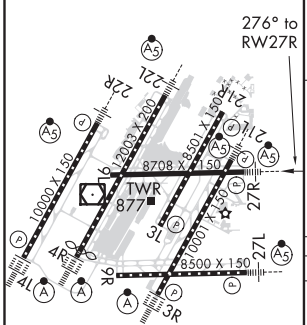
MALSR

MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 direct KUPNE and hold, continue climb-in-hold to 4000.

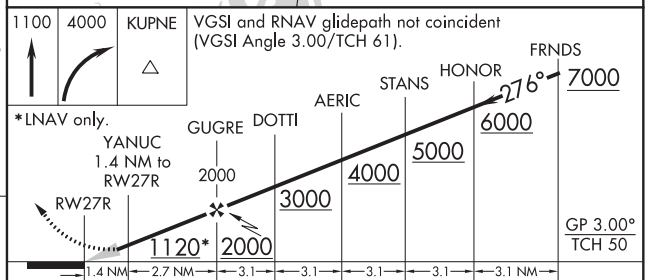
D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	125.15 284.0	118.4 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	



ELEV 645 | D | TDZE 635



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways



CATEGORY	A	B	C	D
LPV DA**	835/24 200 (200-½)			
LNAV/VNAV DA	938/24 303 (300-½)			
LNAV MDA	1040/24 405 (400-½)		1040/40 405 (400-¾)	
C CIRCLING	1180-1 535 (600-1)		1180-1½ 535 (600-1½)	1240-2 595 (600-2)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 82439 W04A	APP CRS 038°	Rwy ldg 10000 TDZE 645 Apt Elev 645

RNAV (GPS) Y RWY 4L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

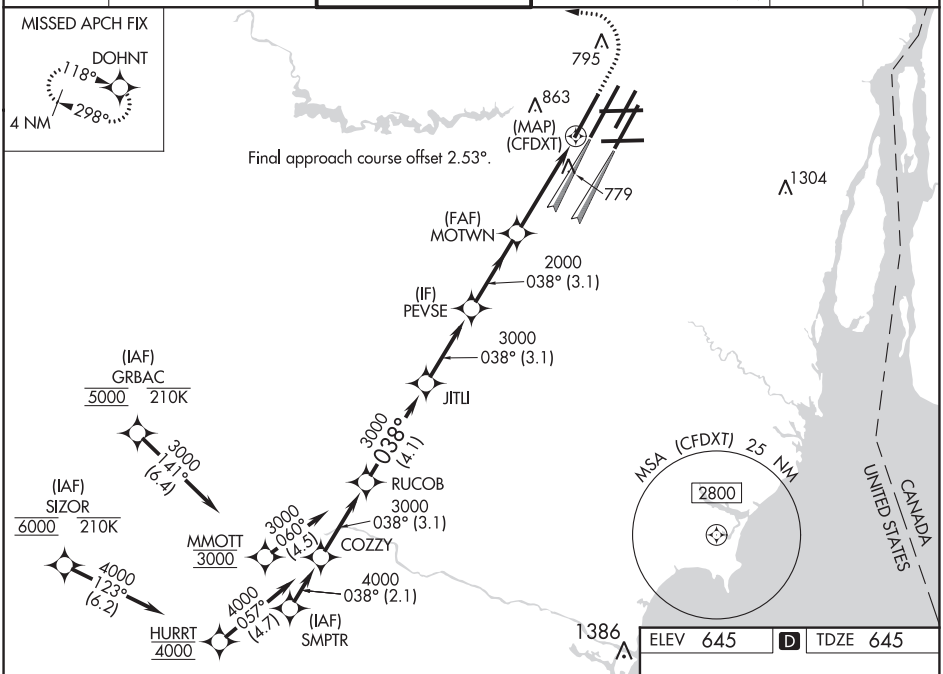
RNP APCH.

Simultaneous approach authorized. LNAV procedure NA during simultaneous operations. Use of FD or AP required during simultaneous operations. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C or above 54°C.

ALSF-2

MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 direct DOHNT and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	

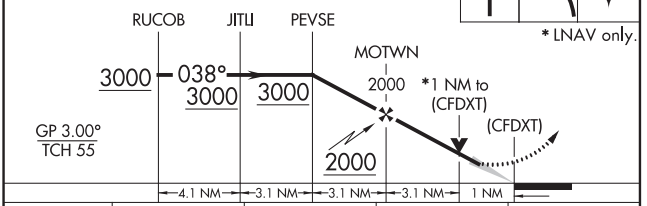


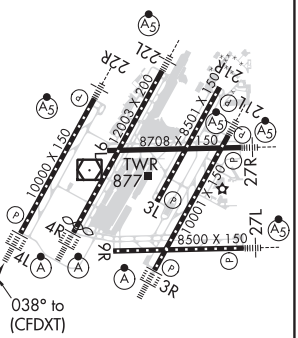
ELEV 645	D	TDZE 645

VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 71).

1100	4000	DOHNT

* LNAV only.





CATEGORY	A	B	C	D
LPV DA	895/24 250 (300-½)			
LNAV/VNAV DA	1068/45 423 (500-⅞)			
LNAV MDA	1040/24 395 (400-½)		1040/35 395 (400-⅝)	
C CIRCLING	1180-1 535 (600-1)		1180-1½ 535 (600-1½)	1240-2 595 (600-2)

TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 42939 W22B	APP CRS 213°	Rwy ldg 10000 TDZE 642 Apt Elev 645

RNAV (GPS) Y RWY 22R

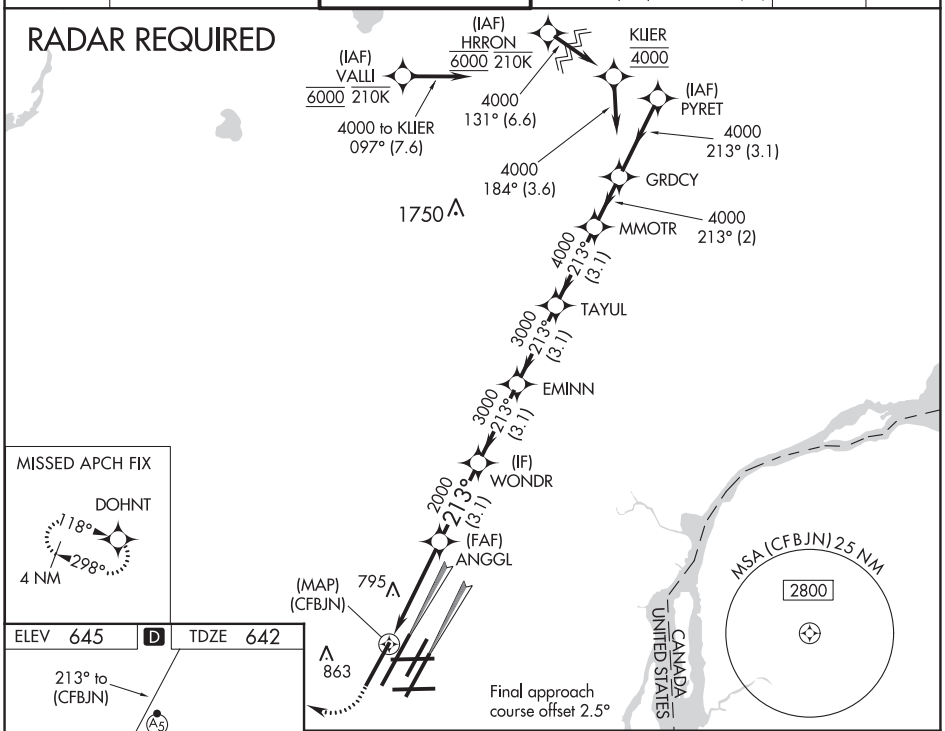
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

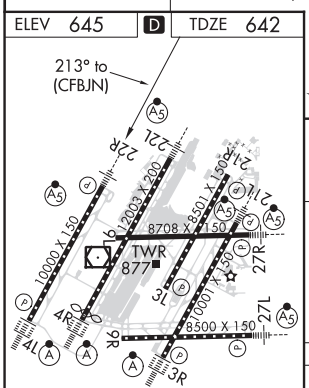
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C (-2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Simultaneous approach authorized. LNAV procedure NA during simultaneous operations. Use of FD or AP providing RNAV track guidance required during simultaneous operations.

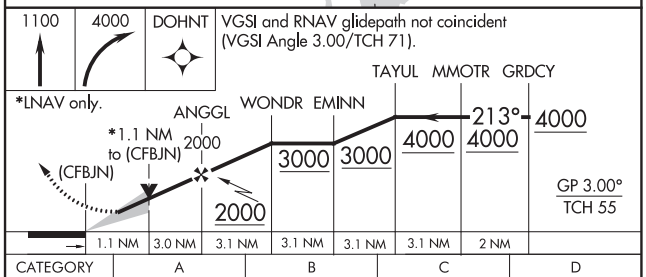
MALSR

MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 direct DOHNT and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	







CATEGORY	A	B	C	D
LPV DA	892/24 250 (300-½)			
LNAV/VNAV DA	1050/45 408 (500-⅞)			
LNAV MDA	1060/24 418 (500-½)		1060/40 418 (500-¾)	
C CIRCLING	1180-1 535 (600-1)		1180-1½ 535 (600-1½)	1240-2 595 (600-2)

TDZ/CL Rwys 3R, 4L, 4R and 22R
HIRL all runways
REIL Rwys 3L, 9L, 9R and 21R

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 61304 W03A	APP CRS 036°	Rwy ldg 10001 TDZE 633 Apt Elev 645

RNAV (GPS) Z RWY 3R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

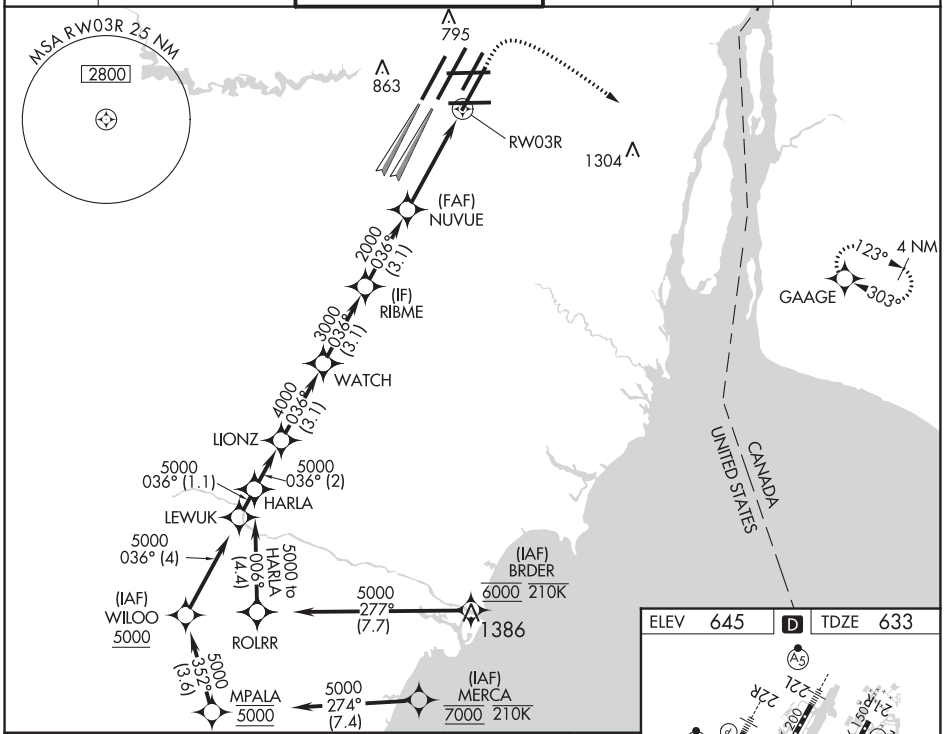
RNP APCH.

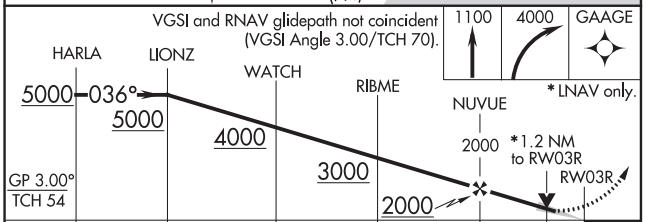
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C (-2°F) or above 54°C (130°F). Simultaneous approach authorized. LNAV procedure NA during simultaneous operations. Use of FD or AP required during simultaneous operations.

ALSF-2

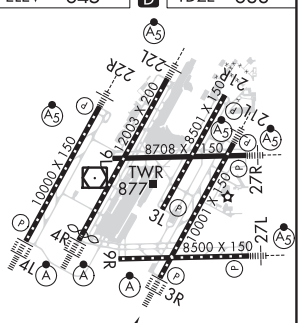
MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 direct GAAGE and hold, continue climb-in-hold to 4000.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	125.15 284.0	118.4 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	





CATEGORY	A	B	C	D
LPV DA	833/18 200 (200-½)			
LNAV/VNAV DA	1013/35 380 (400-⅝)			
LNAV MDA	1080/24 447 (500-½)		1080/45 447 (500-⅞)	
C CIRCLING	1180-1 535 (600-1)		1180-1½ 535 (600-1½)	1240-2 595 (600-2)



EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 82241 W04D	APP CRS 036°	Rwy ldg 10000 TDZE 645 Apt Elev 645

RNAV (GPS) Z RWY 4L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

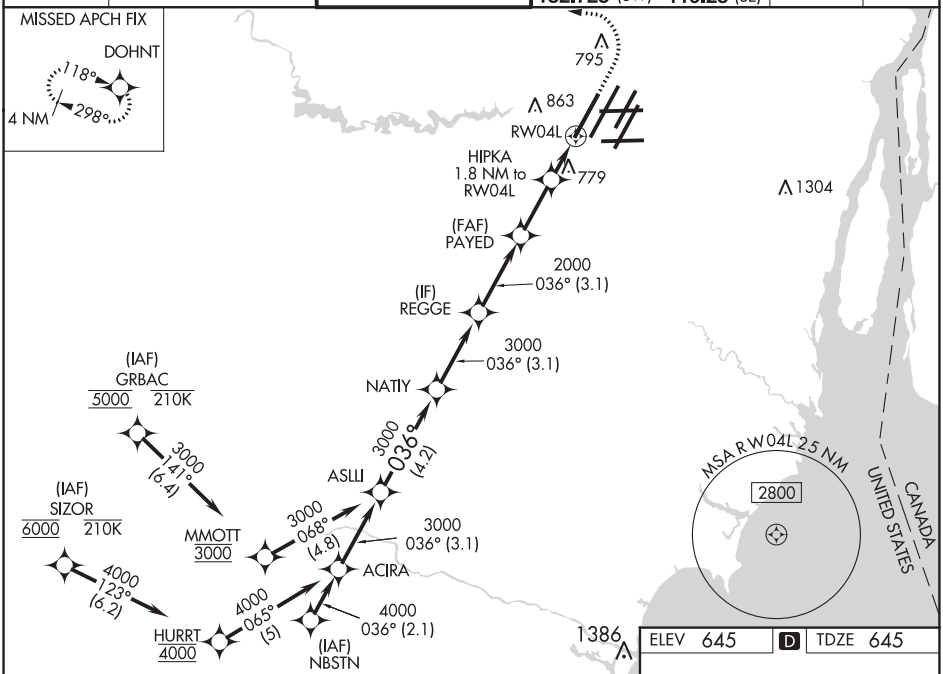
RNP APCH.

Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. LNAV procedure NA during simultaneous operations. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C or above 54°C. For inop ALS, increase LNAV/VNAV all Cats visibility to RVR 6000.

ALSF-2

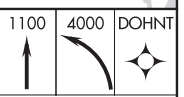
MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 direct DOHNT and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	

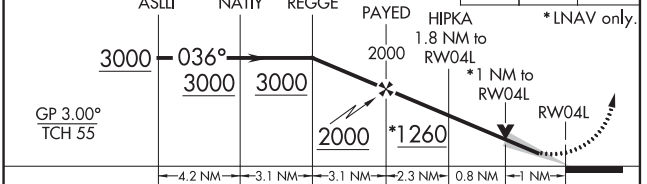


ELEV 645 D TDZE 645

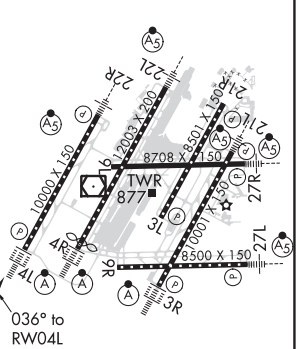
VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 71).



* LNAV only.



CATEGORY	A	B	C	D
LPV DA	845/18 200 (200-½)			
LNAV/VNAV DA	1046/40 401 (500-¾)			
LNAV MDA	1040/24 395 (400-½)		1040/35 395 (400-⅝)	
C CIRCLING	1180-1 535 (600-1)		1180-1½ 535 (600-1½)	1240-2 595 (600-2)



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN

AL-119 (FAA)

20254

WAAS CH 63004 W04B	APP CRS 036°	Rwy ldg 11494 TDZE 640 Apt Elev 645

RNAV (GPS) Z RWY 4R

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

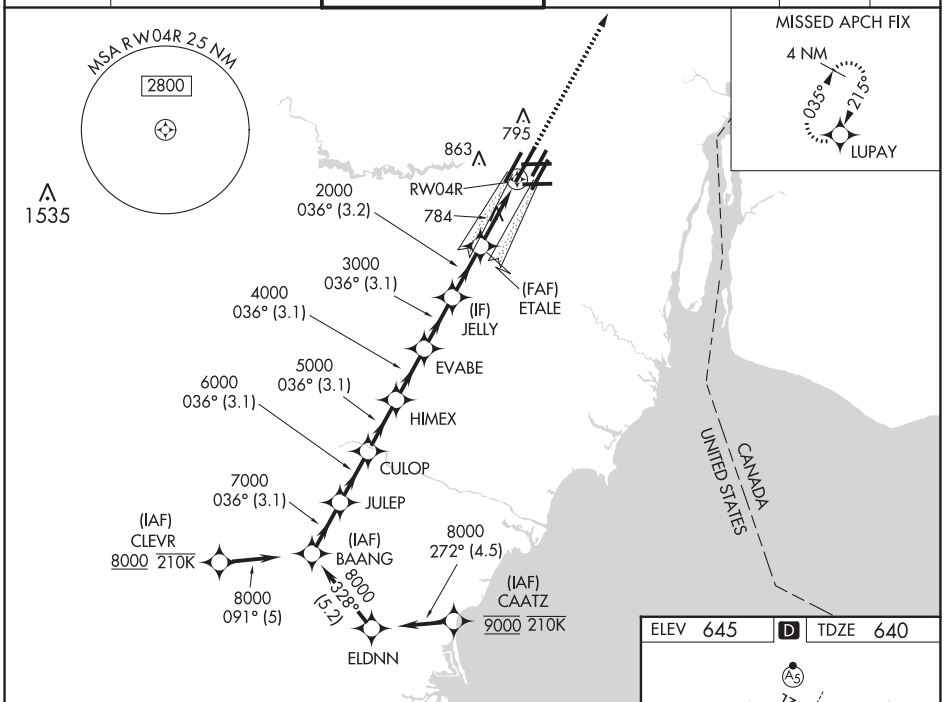
RNP APCH.

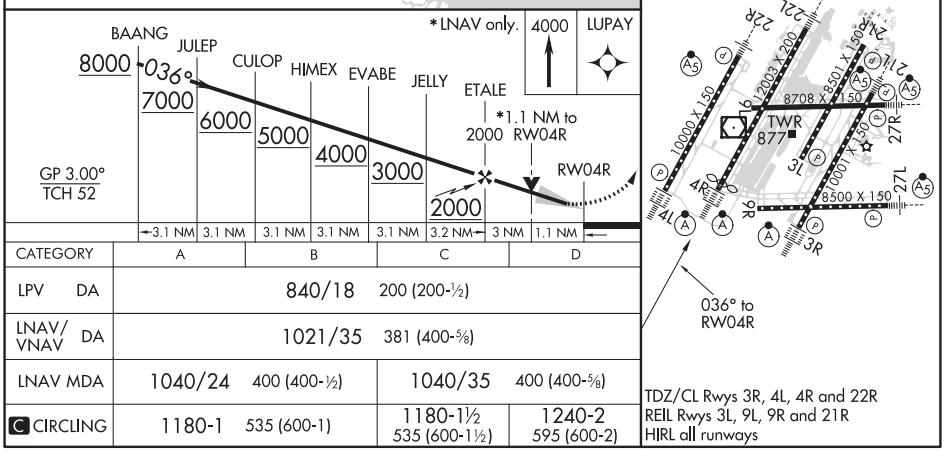
Simultaneous approach authorized. LNAV procedure NA during simultaneous operations. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19° C or above 54° C. Use of FD or AP required during simultaneous operations.

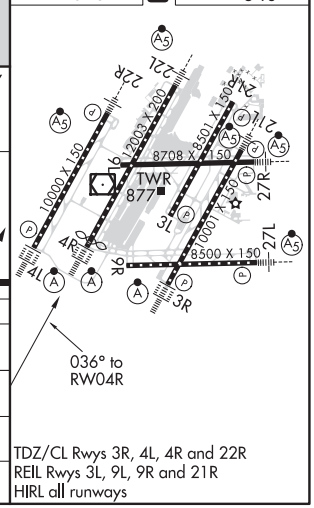
ALSF-2

MISSED APPROACH: Climb to 4000 direct LUPAY and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.125 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	







TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 81820 W21A	APP CRS 216°	Rwy ldg 10001 TDZE 632 Apt Elev 645

RNAV (GPS) Z RWY 21L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

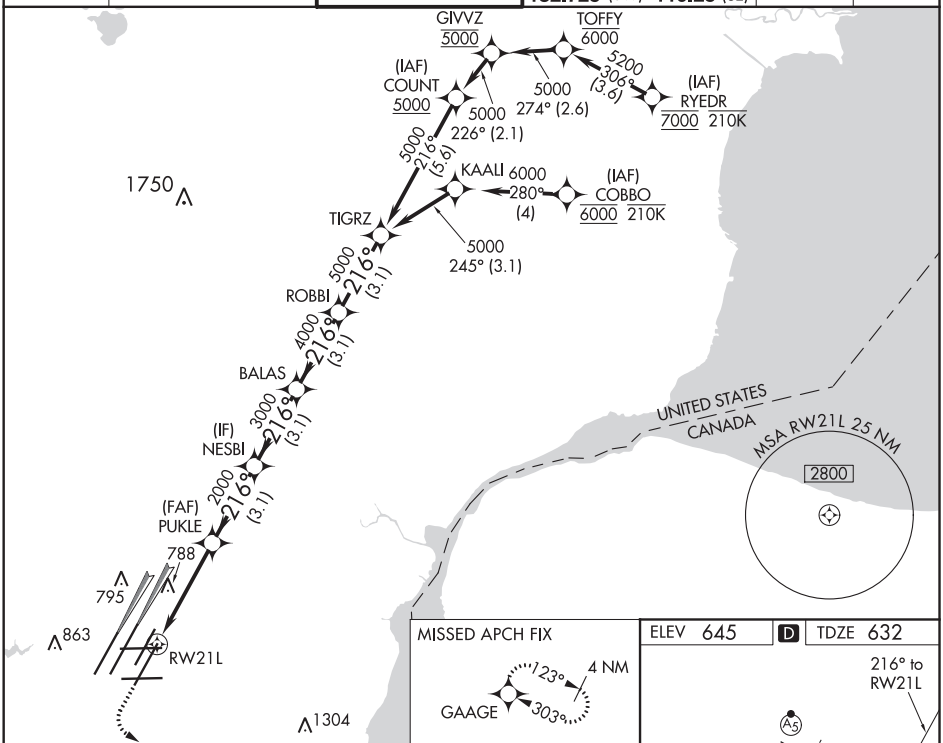
RNP APCH.

T LNAV procedure NA during simultaneous operations. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C or above 54°C. For inop ALS increase LNAV Cats C and D visibility to RVR 6000. Simultaneous approach authorized. Use of FD or AP required during simultaneous operations.
**RVR 1800 authorized with use of FD or AP or HUD to DA.

MALSR

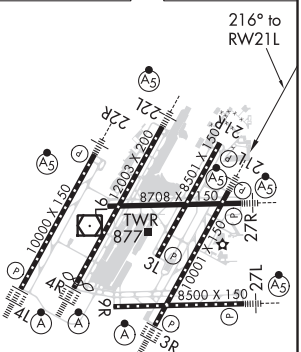
MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 direct GAAGE and hold, continue climb-in hold to 4000.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	125.15 284.0	118.4 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	

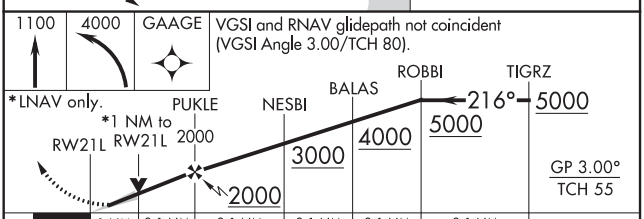


MISSED APCH FIX

ELEV 645 | D | TDZE 632



HIRL all runways
REIL Rwys 3L, 9L, 9R and 21R
TDZ/CL Rwys 3R, 4L, 4R and 22R



CATEGORY	A	B	C	D
LPV DA**	832/24 200 (200-½)			
LNAV/VNAV DA	1062/40 430 (500-¾)			
LNAV MDA	1040/24 408 (400-½)		1040/40 408 (400-¾)	
C CIRCLING	1180-1 535 (600-1)		1180-1½ 535 (600-1½)	1240-2 595 (600-2)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN

AL-119 (FAA)

20254

RNAV (GPS) Z RWY 22L
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

WAAS CH 99601 W22A	APP CRS 216°	Rwy ldg 12003 TDZE 637 Apt Elev 645

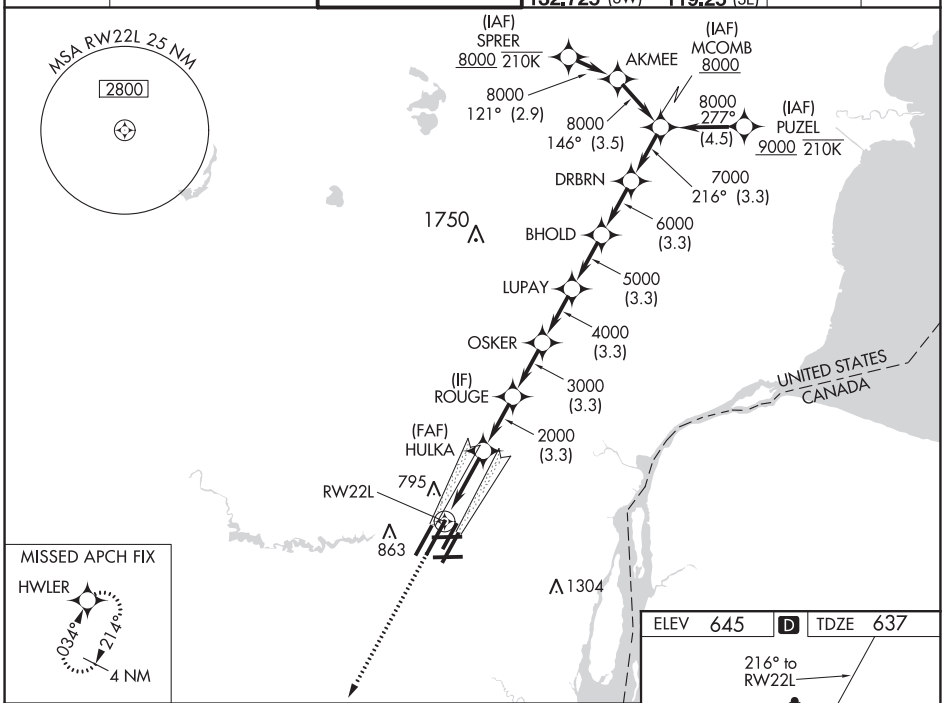
RNP APCH.

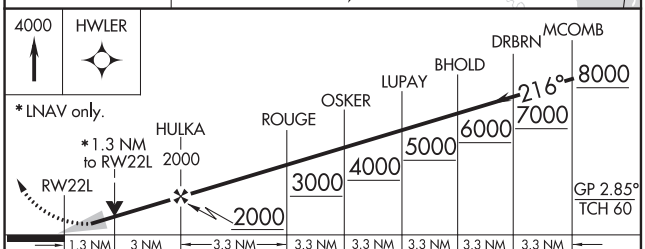
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -10°C (14°F) or above 54°C (130°F). Simultaneous approach authorized. LNAV procedure NA during simultaneous operations. Use of FD or AP required during simultaneous operations. For inop ALS, increase LNAV/VNAV all Cats visibility to RVR 4500 and LNAV Cat C/D visibility to 1⅜ SM. #RVR 1800 authorized with use of FD or AP or HUD to DA.

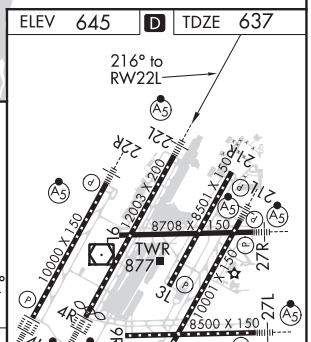
MALSR

MISSED APPROACH: Climb to 4000 direct HWLER and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.125 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	







CATEGORY	A	B	C	D
LPV DA#	837/24 200 (200-½)			
LNAV/VNAV DA	938/24 301 (300-½)			
LNAV MDA	1100/24 463 (500-½)		1100/50 463 (500-¾)	
C CIRCLING	1180-1 535 (600-1)		1180-1½ 535 (600-1½)	1240-2 595 (600-2)

TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 70642 W22D	APP CRS 216°	Rwy ldg 10000 TDZE 642 Apt Elev 645

RNAV (GPS) Z RWY 22R
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

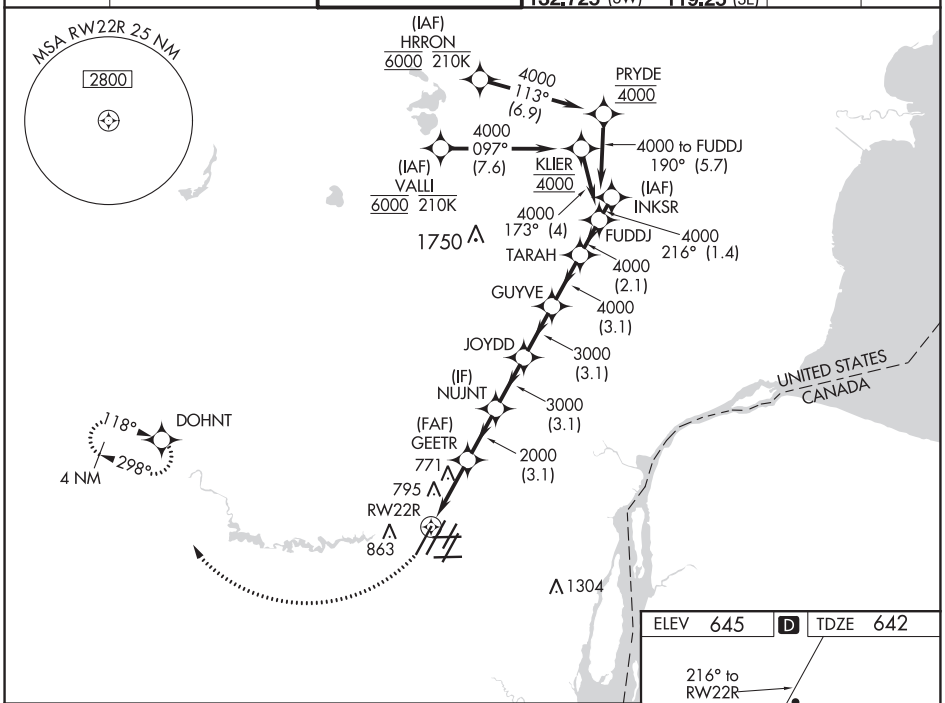
RNP APCH.

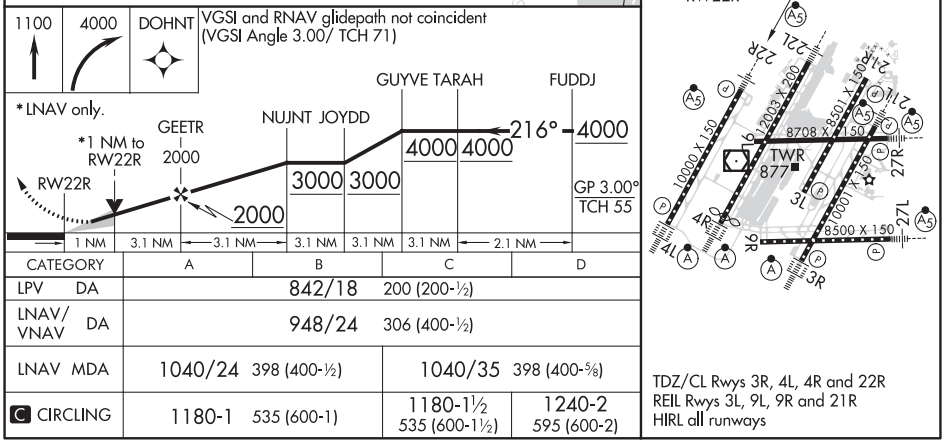
T Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. LNAV procedure NA during simultaneous operations. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C or above 54°C. For inop ALS, increase LNAV/VNAV all Cats visibility to RVR 4500.

MALSR

MISSED APPROACH: Climb to 1100 then climbing right turn 4000 direct DOHNT and hold, continue climb in hold to 4000.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.125 317.725	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	





CATEGORY	A	B	C	D
LPV DA	842/18 200 (200-½)			
LNAV/VNAV DA	948/24 306 (400-½)			
LNAV MDA	1040/24 398 (400-½)		1040/35 398 (400-⅝)	
C CIRCLING	1180-1 535 (600-1)		1180-1½ 535 (600-1½)	1240-2 595 (600-2)

TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

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ATTENTION ALL USERS PAGE (AAUP)

Pilots who are unable to participate will be afforded appropriate arrival services as operational conditions permit and must notify the controlling ATC facility as soon as practical, but at least 100 miles from destination.

ILS PRM Rwys 4R, 22L
ILS PRM Y Rwys 4L, 22R
ILS PRM (SA CAT I) Rwy 4R
ILS PRM (CAT II & III) Rwy 4R
RNAV (GPS) PRM Z Rwys 4R, 22L
RNAV (GPS) PRM Y Rwys 4L, 22R

Review procedure for executing a climbing and descending PRM breakout

Breakout phraseology: "TRAFFIC ALERT (call sign) TURN (left/right) IMMEDIATELY HEADING (degrees) CLIMB/DESCEND AND MAINTAIN (altitude)."

All breakouts: Hand flown, initiate immediately.

Descending on the glideslope/glidepath ensures compliance with any charted crossing restrictions.

Dual VHF Comm.: When assigned or planning a specific PRM approach, tune a second receiver to the PRM monitor frequency or, if silent, another active frequency (i.e., ATIS), set the volume, retune the PRM frequency if necessary, then deselect the audio. When directed by ATC, immediately switch to the tower frequency and select the second receiver audio to ON.

If later assigned the same runway, non-PRM approach, consider it briefed provided the same minimums are utilized. PRM related chart notes and PRM frequency no longer apply.

TCAS during breakout: Follow TCAS climb/descend if it differs from ATC, while executing the breakout turn.

Runway Specific

RWY 4L

- Exit the runway as soon as practical; whenever possible, do not stop on taxiway A.
- ILS PRM Y 4L and RNAV (GPS) PRM Y 4L approaches offset 2.5 degrees.

RWY 22R

- Exit the runway as soon as practical; whenever possible, do not stop on taxiway A.
- ILS PRM Y 22R and RNAV (GPS) PRM Y 22R approaches offset 2.5 degrees.

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DETROIT, MICHIGAN

AL-119 (FAA)

ILS PRM RWY 4R (CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-DTW	APP CRS	Rwy ldg	11494
110.7	036°	TDZE	640
Chan 44		Apt Elev	645

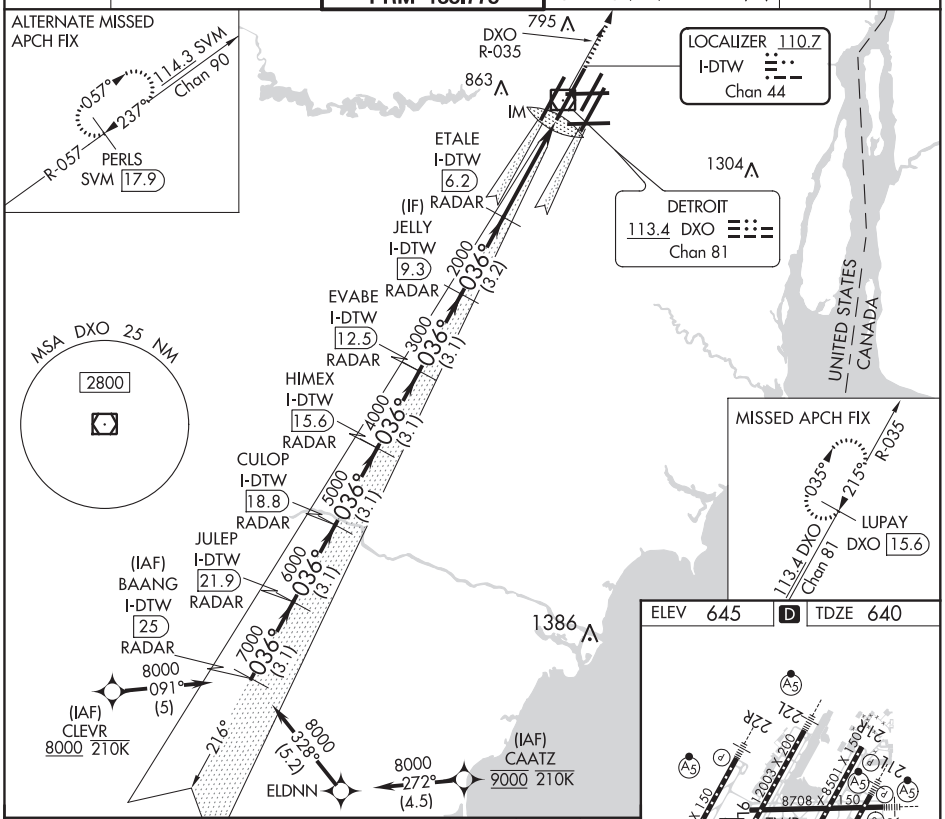
RNAV 1-GPS.
DME or RADAR required. CLEVR, CAATZ and ELDNN: RNAV 1-DME/DME/IRU or GPS required. Aircraft not DME/DME/IRU or GPS equipped- RADAR required for procedure entry.

Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. Dual VHF Comm required. See additional requirements on AAUP. Procedure NA when glideslope not available.

ALSF-2

MISSED APPROACH: Climb to 4000 on DXO VOR/DME R-035 to LUPAY/DXO VOR/DME 15.6 DME and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.125 317.725 PRM 135.775	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	



EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN

AL-119 (FAA)

20254

ILS PRM RWY 22L (CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-DWC 110.7 Chan 44	APP CRS 216°	Rwy ldg 12003 TDZE 637 Apt Elev 645

RNAV 1-GPS.

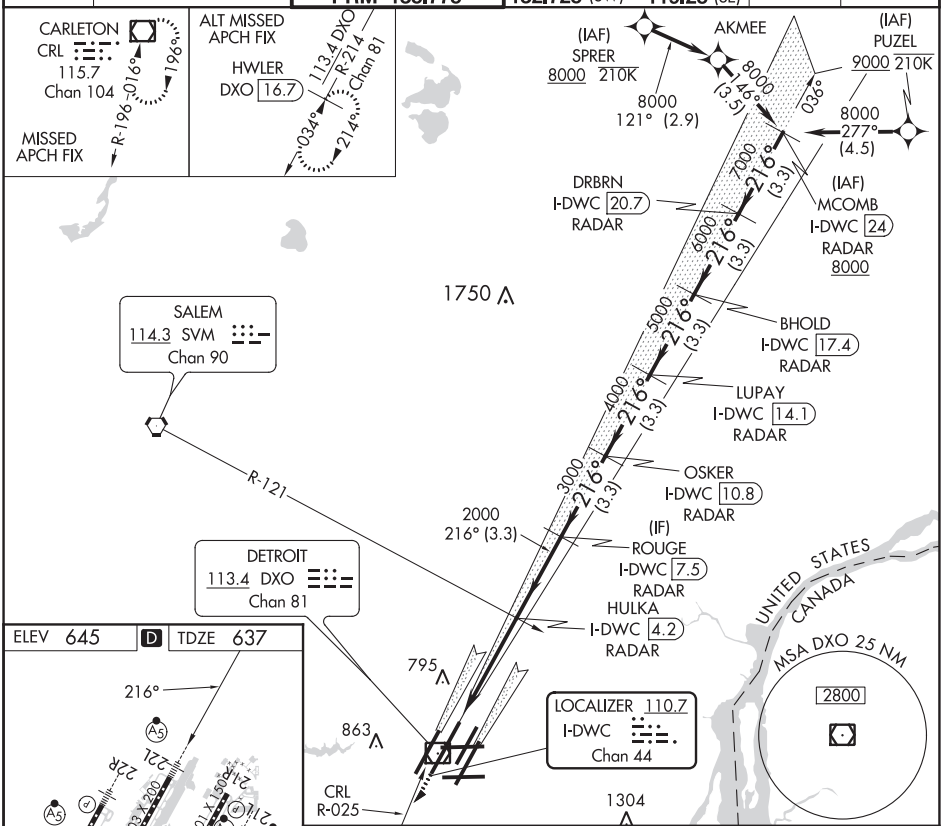
RNAV 1-DME/DME/IRU or RADAR required for procedure entry. DME or RADAR required.

T Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. Dual VHF comm required. See additional requirements on AAUP. Procedure NA when glide slope not available.
*RVR 1800 authorized with use of FD or AP or HUD to DA.

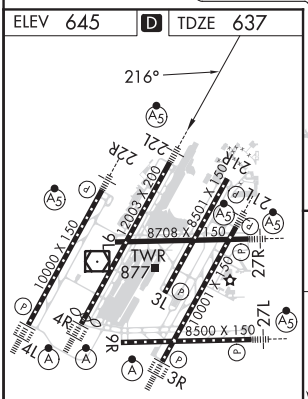
MALSR

MISSED APPROACH: Climb to 4000 on heading 216°and CRL VOR/DME R-025 to CRL VOR/DME and hold, continue climb-in-hold to 4000.

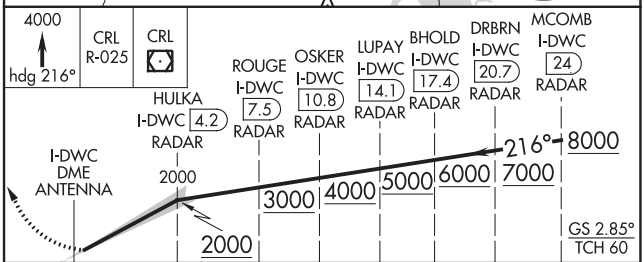
D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.125 317.725 PRM 135.775	121.8 (NW) 132.725 (SW) 119.45 (NE) 119.25 (SE)	120.65	



ELEV 645 | D | TDZE 637



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways



CATEGORY	A	B	C	D
S-ILS 22L*	837/24 200 (200-½)			

LOC/DME I-ALA	APP CRS	Rwy ldg	10000
111.75	038°	TDZE	645
Chan 54 (Y)		Apt Elev	645

ILS PRM Y RWY 4L (CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

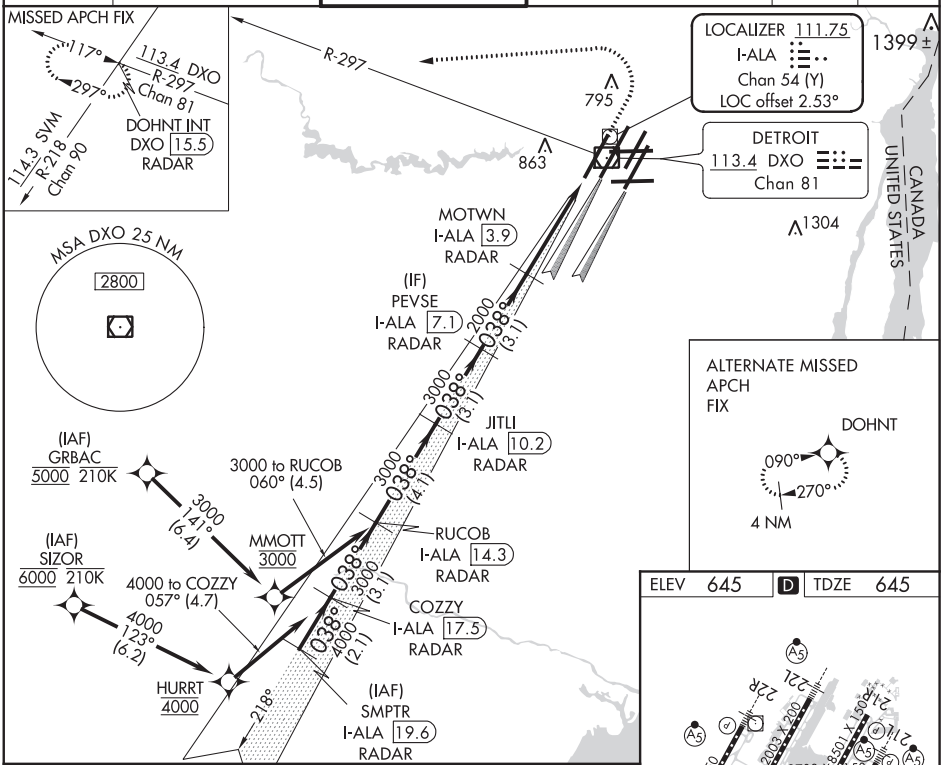
From GRBAC, SIZOR: RNAV 1-DME/DME/IRU or GPS required.
Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry.
DME or RADAR required.

Rwy 4L and 4R separated by 3000 feet centerline to centerline. Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. Dual VHF Comm required. See additional requirements on AAUP.

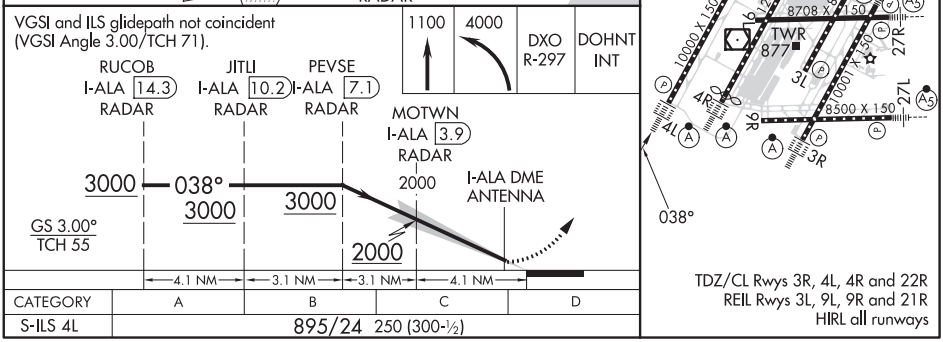
ALSF-2

MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 on DXO VOR/DME R-297 to DOHNT INT/DXO 15.5 DME/ RADAR and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725 PRM 127.05	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	



ELEV 645	D	TDZE 645



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

CATEGORY	A	B	C	D
S-ILS 4L	895/24 250 (300-½)			

DETROIT, MICHIGAN

AL-119 (FAA)

20254

ILS PRM Y RWY 22R (CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-BZB	APP CRS	Rwy ldg	10000
111.75	213°	TDZE	642
Chan 54 (Y)		Apt Elev	645

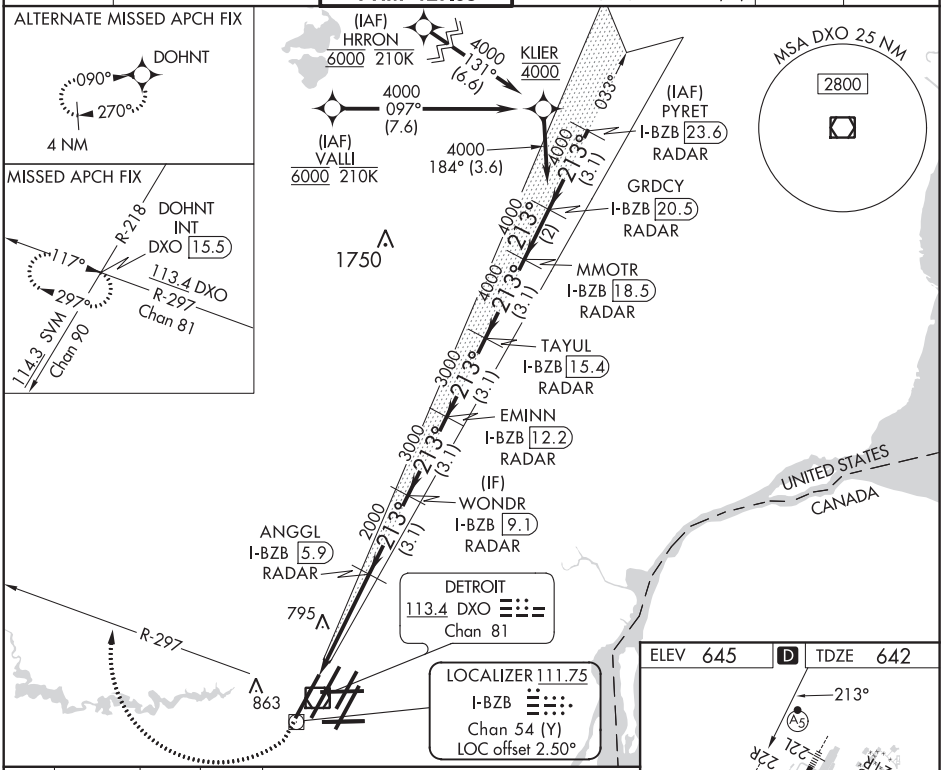
RNAV 1-GPS. HRRON and VALLI: RNAV 1-DME/DME/IRU or GPS required.
Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry.

Simultaneous approach authorized.
Procedure NA when glide slope not available (ILS procedures only).
Dual VHF Comm required. See additional requirements on AAUP.

MALSR

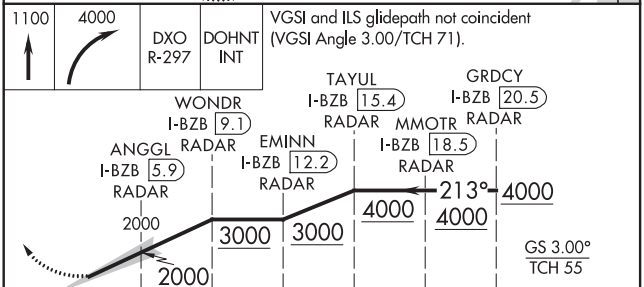
MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 on DXO VOR/DME R-297 to DOHNT INT/DXO 15.5 DME and hold.

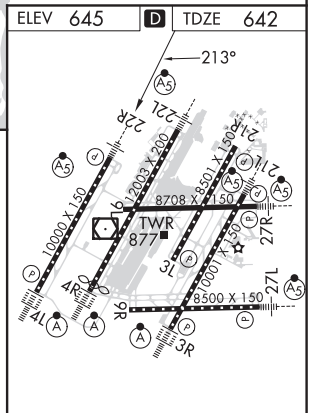
D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725 PRM 127.05	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	



1100	4000	DXO R-297	DOHNT INT

VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 71).





TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

CATEGORY	A	B	C	D
S-ILS 22R	892/24 250 (300-½)			

DETROIT, MICHIGAN
Amdt 1B 30JAN20

42°13'N-83°21'W

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

ILS PRM Y RWY 22R (CLOSE PARALLEL)

EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN

AL-119 (FAA)

ILS PRM Z RWY 4L
(CLOSE PARALLEL)
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-HJT	APP CRS	Rwy ldg	10000
111.95	036°	TDZE	645
Chan 56 (Y)		Apt Elev	645

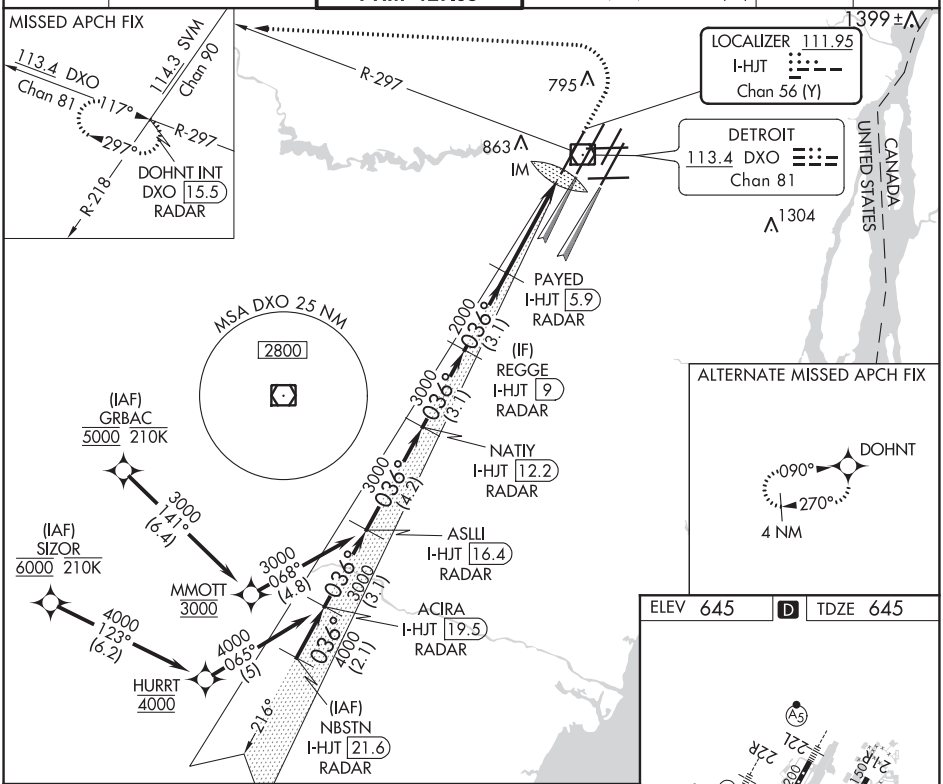
From GRBAC, SIZOR: RNAV 1-DME/DME/IRU or GPS required. Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry. DME or RADAR required.

Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. Dual VHF Comm required. See additional requirements on AAUP.

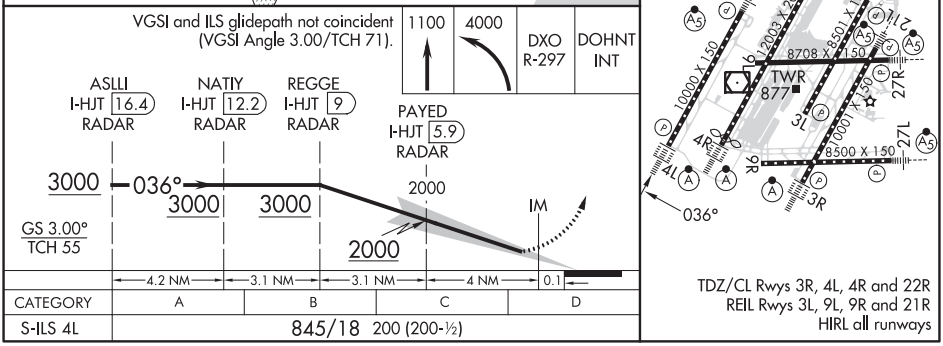
ALSF-2

MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 on DXO VOR/DME R-297 to DOHNT INT/DXO 15.5 DME/RADAR and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725 PRM 127.05	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	



ELEV 645 | D | TDZE 645



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1, 25 FEB 2021 to 22 APR 2021

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DETROIT, MICHIGAN — AL-119 (FAA) — 20254

ILS PRM Z RWY 22R (CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-JKI	APP CRS	Rwy ldg	10000
111.95	216°	TDZE	642
Chan 56 (Y)		Apt Elev	645

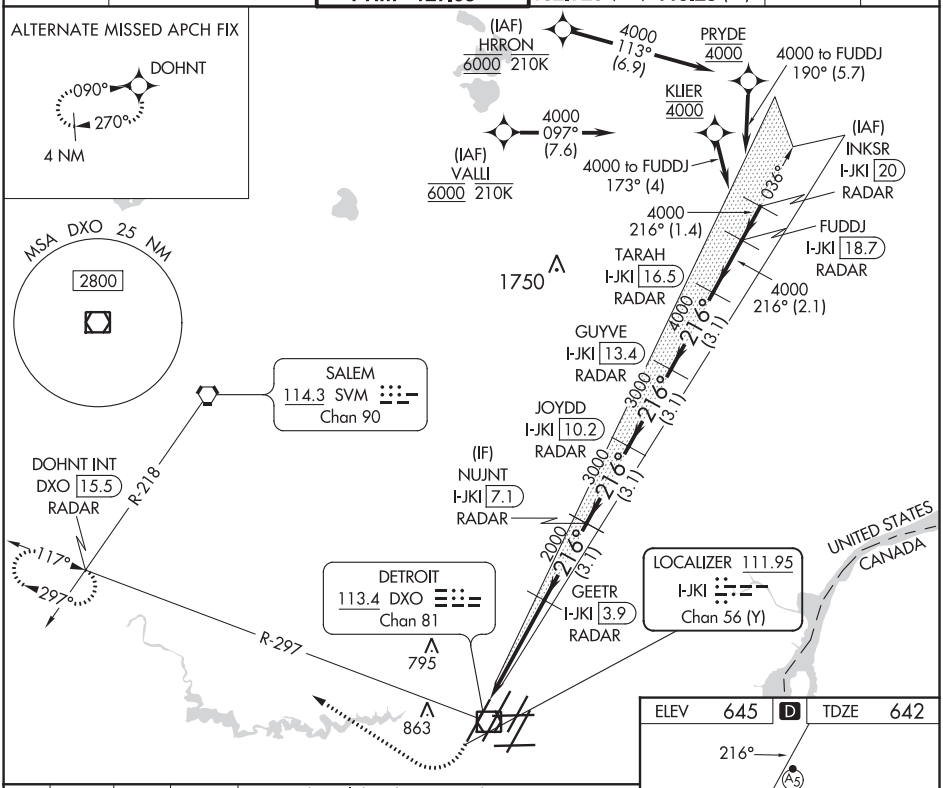
RNAV 1-GPS. HRRON and VALLI: RNAV 1-DME/DME/IRU or GPS required.
Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry.

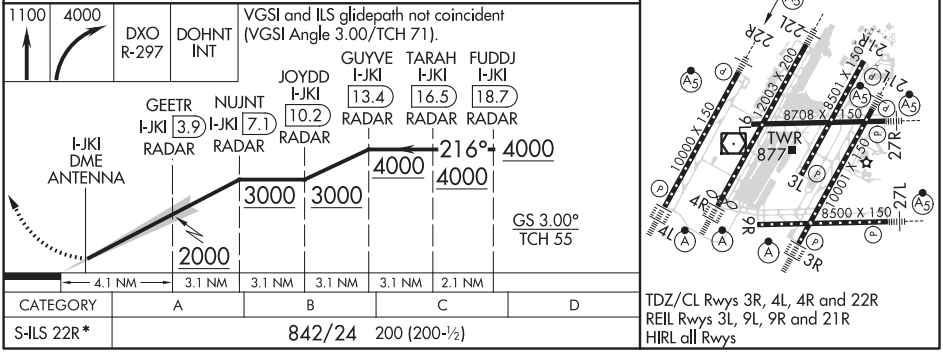
Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. Dual VHF Comm required. See additional requirements on AAUP.
*RVR 1800 authorized with use of FD or AP or HUD to DA.

MALSR

MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 on DXO VOR/DME R-297 to DOHNT INT/DXO 15.5 DME/RADAR and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725 PRM 127.05	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	





CATEGORY	A	B	C	D
S-ILS 22R*	842/24 200 (200-½)			

TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all Rwys

EC-1, 25 FEB 2021 to 22 APR 2021

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AL-119 (FAA)

20254

ILS PRM RWY 4R (SA CAT I) (CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-DTW	APP CRS	Rwy ldg	11494
110.7	036°	TDZE	640
Chan 44		Apt Elev	645

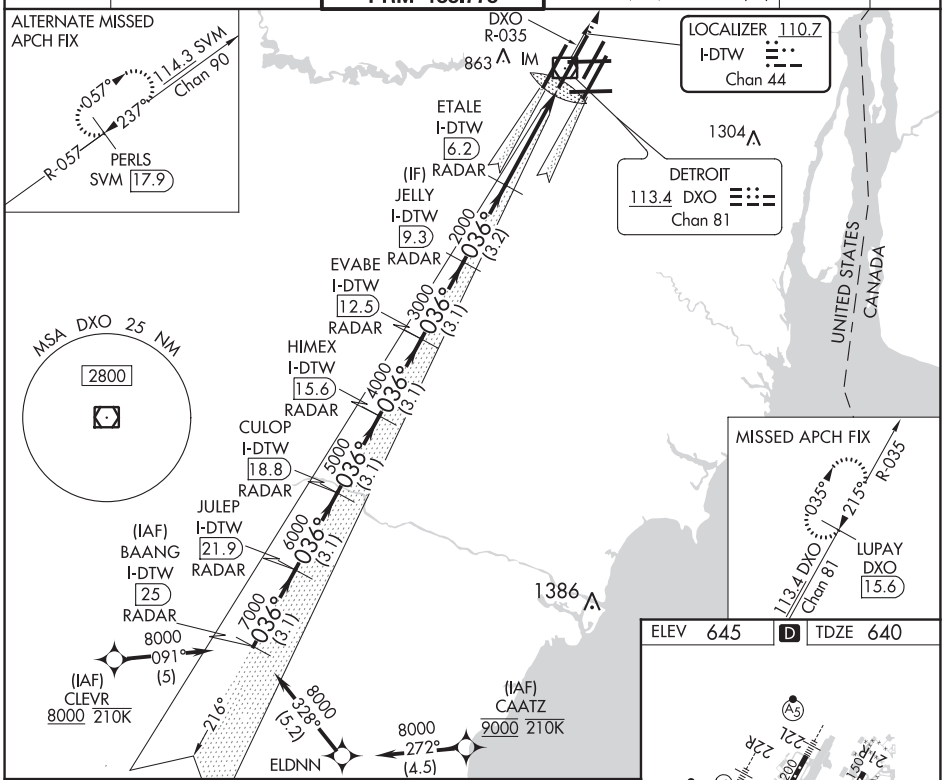
RNAV 1-GPS. DME or RADAR required. CLEVR, CAATZ and ELDNN: RNAV 1-DME/DME/IRU or GPS required. Aircraft not DME/DME/IRU or GPS equipped- RADAR required for procedure entry.

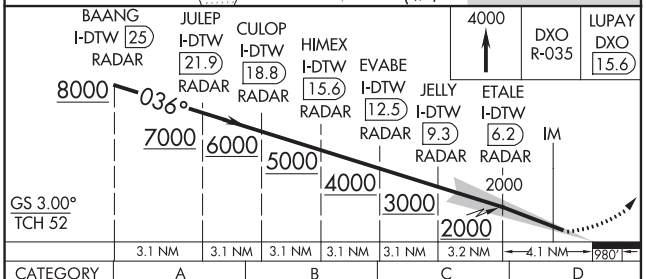
Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. Dual VHF Comm required. See additional requirements on AAUP. Procedure NA when glideslope not available. Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH.

ALSF-2

MISSED APPROACH: Climb to 4000 on DXO VOR/DME R-035 to LUPAY/DXO VOR/DME 15.6 DME and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.125 317.725 PRM 135.775	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	

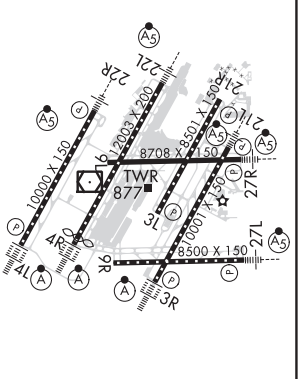




CATEGORY	A	B	C	D
S-ILS 4R	RA 154/14		150 DA 790	

SA CATEGORY I ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

ELEV 645 | D | TDZE 640



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN

AL-119 (FAA)

ILS PRM Z RWY 22R (SA CAT I & II) (CLOSE PARALLEL)

20254

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-JKI	APP CRS	Rwy ldg	10000
111.95	216°	TDZE	642
Chan 56 (Y)		Apt Elev	645

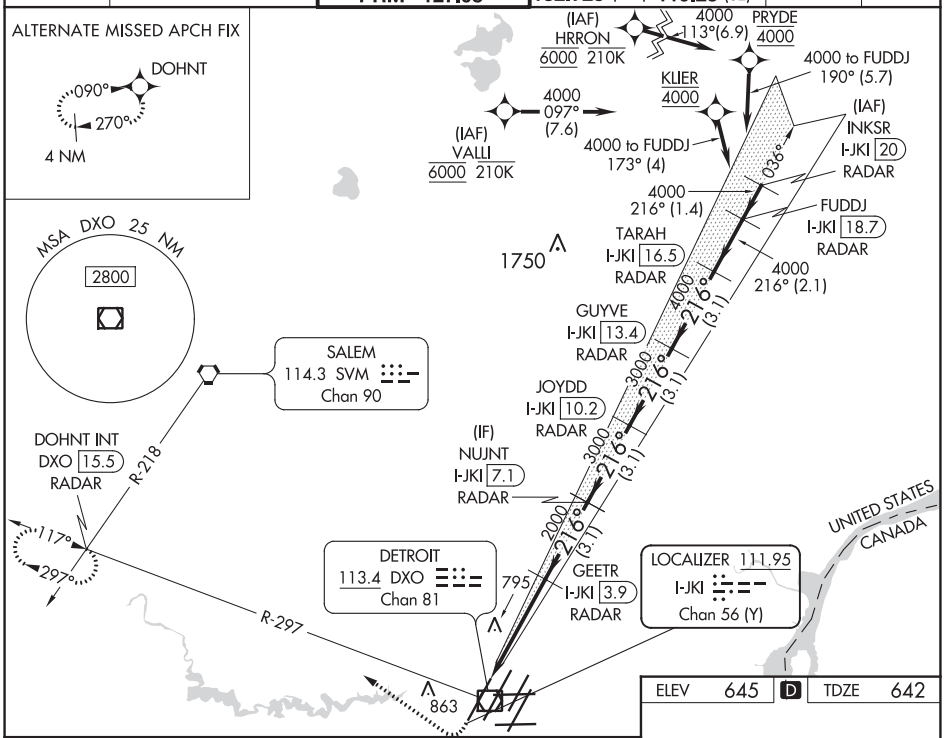
RNAV 1-GPS. HRRON and VALLI: RNAV 1-DME/DME/IRU or GPS required.
Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry.

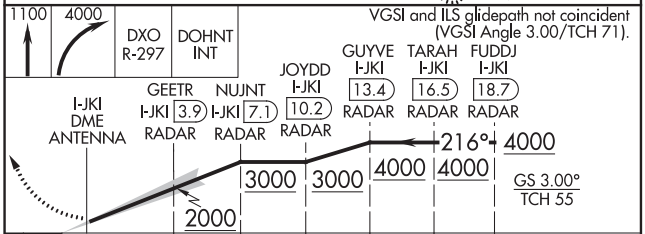
Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. Dual VHF Comm required. See additional requirements on AAUP.
SA CAT I: Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH.
SA CAT II: Reduced lighting: Requires specific OPSPEC, MSPEC, or LOA approval and use of autoland or HUD to touchdown.

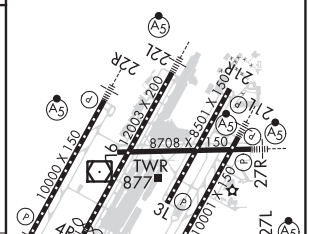
MALSR

MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 on DXO VOR/DME R-297 to DOHNT INT/DXO 15.5 DME/RADAR and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725 PRM 127.05	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	







CATEGORY	A	B	C	D
S-ILS 22R	SA CAT I RA 148/14 150 DA 792			
S-ILS 22R	SA CAT II RA 98/12 100 DA 742			

TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all Rwys

SA CATEGORY I & II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

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EC-1, 25 FEB 2021 to 22 APR 2021

ILS PRM RWY 4R (CAT II & III) (CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-DTW	APP CRS	Rwy ldg	11494
110.7	036°	TDZE	640
Chan 44		Apt Elev	645

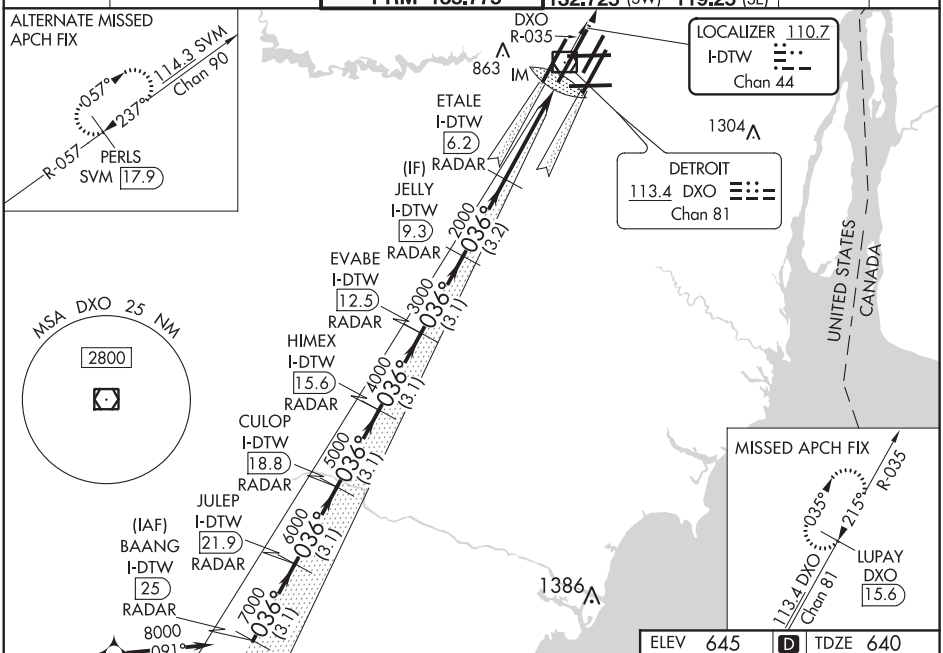
RNAV 1-GPS. DME or RADAR required. CLEVR, CAATZ and ELDNN: RNAV 1-DME/DME/IRU or GPS required. Aircraft not DME/DME/IRU or GPS equipped- RADAR required for procedure entry.

Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. Dual VHF Comm required. See additional requirements on AAUP. Procedure NA when glideslope not available.

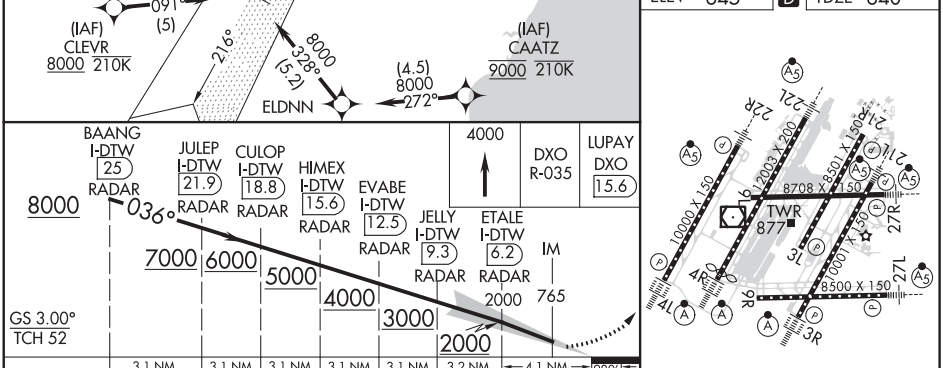
ALSF-2

MISSED APPROACH: Climb to 4000 on DXO VOR/DME R-035 to LUPAY/DXO VOR/DME 15.6 DME and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.125 317.725 PRM 135.775	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	



EC-1, 25 FEB 2021 to 22 APR 2021



CATEGORY	A	B	C	D
S-ILS 4R	CAT II RA 104/12 100 DA 740			
S-ILS 4R	CAT III RVR 06			

CATEGORY II & III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

ELEV 645 | D | TDZE 640

TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

EC-1, 25 FEB 2021 to 22 APR 2021

AL-119 (FAA) 20254

DETROIT, MICHIGAN

ILS PRM Z RWY 4L (CAT II & III) (CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

LOC/DME I-HJT	APP CRS	Rwy ldg	10000
111.95	036°	TDZE	645
Chan 56 (Y)		Apt Elev	645

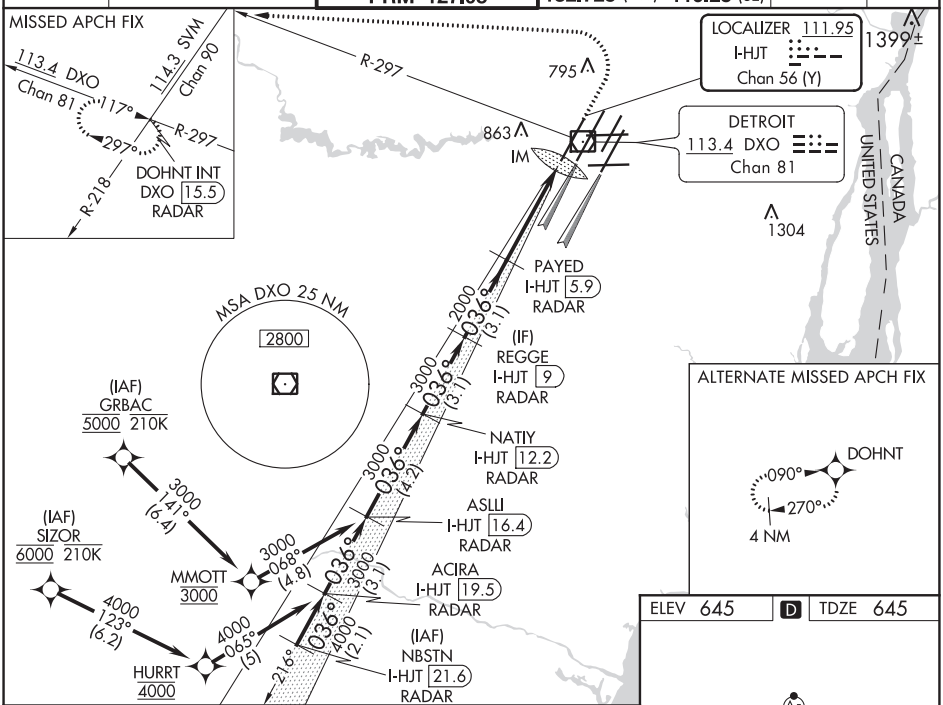
From GRBAC, SIZOR: RNAV 1-DME/DME/IRU or GPS required. Aircraft not DME/DME/IRU or GPS equipped - RADAR required for procedure entry. DME or RADAR required.

T Cat II: RVR 1000 authorized with specific OPSPEC, MSPEC, or LOA approval and use of autoland or HUD to touchdown. Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. Dual VHF Comm required. See additional requirements on AAUP.

ALSF-2

MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 on DXO VOR/DME R-297 to DOHNT INT/DXO 15.5 DME/RADAR and hold.

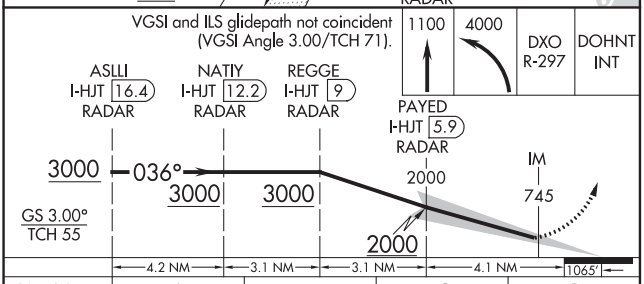
D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725 PRM 127.05	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	

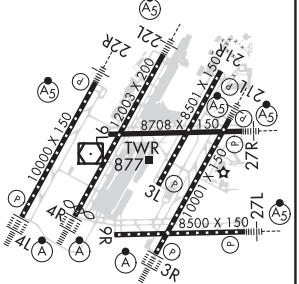


ELEV 645 | D | TDZE 645

VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 71).

1100	4000	DXO R-297	DOHNT INT





CATEGORY	A	B	C	D
S-ILS 4L	CAT II RA 101/12 100 DA 745			
S-ILS 4L	CAT III RVR 06			

CATEGORY II & III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

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DETROIT, MICHIGAN

AL-119 (FAA)

RNAV (GPS) PRM Y RWY 4L (CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

WAAS CH 73039 W04A	APP CRS 038°	Rwy ldg 10000 TDZE 645 Apt Elev 645

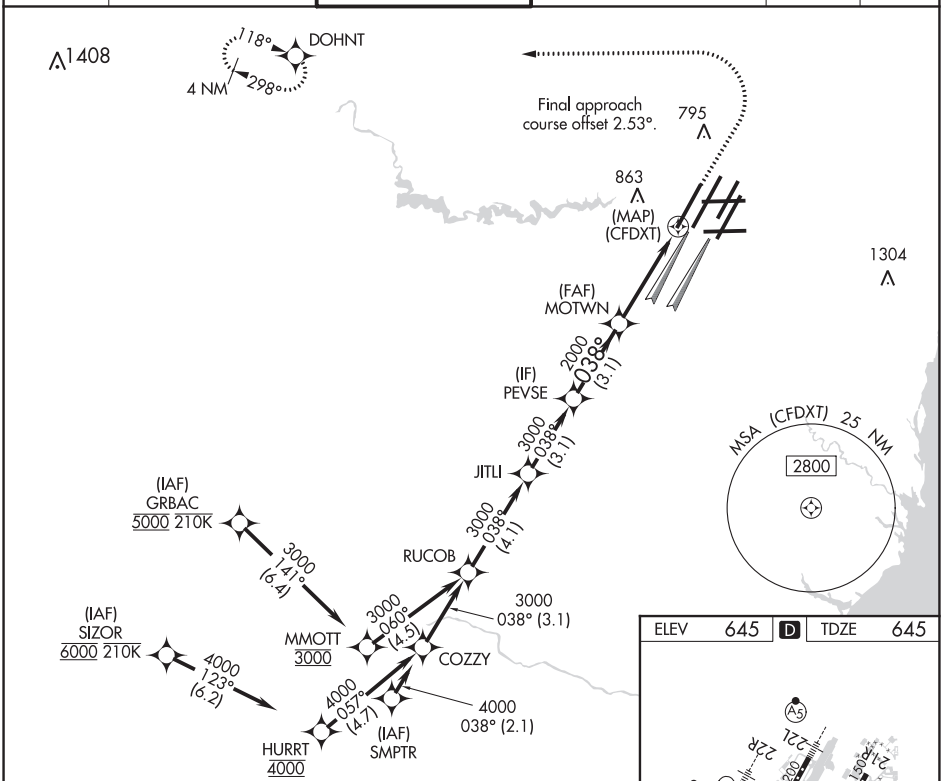
RNP APCH.

Rwy 4L and 4R separated by 3000 feet centerline to centerline. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C or above 54°C. Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. Dual VHF comm required. See additional requirements on AAUP.

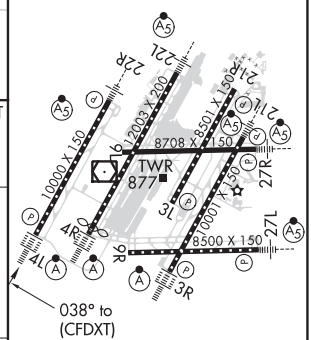
ALSF-2

MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 direct DOHNT and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725 PRM 127.05	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	

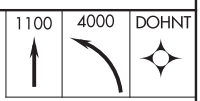


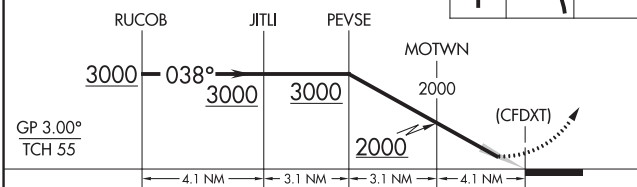
ELEV 645	D	TDZE 645



TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R, and 21R
HIRL all runways

VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 71).





CATEGORY		A	B	C	D
LPV	DA	895/24 250 (300-½)			
LNAV/VNAV	DA	1068/45 423 (500-⅞)			

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20254

DETROIT, MICHIGAN

AL-119 (FAA)

RNAV (GPS) PRM Y RWY 22R (CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

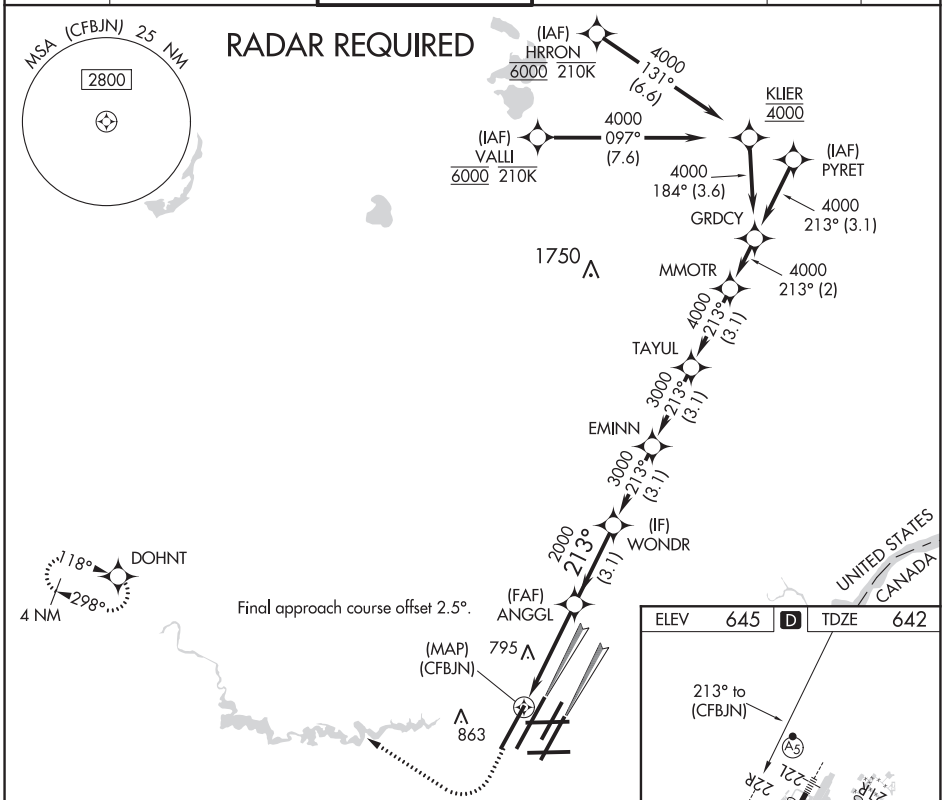
WAAS CH 42939 W22B	APP CRS 213°	Rwy ldg 10000 TDZE 642 Apt Elev 645

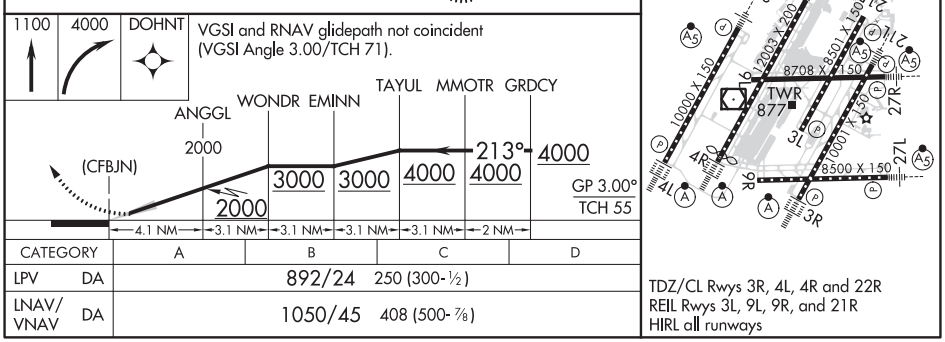
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C (-2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Use of FD or AP providing RNAV track guidance required during simultaneous operations. Simultaneous approach authorized. Dual VHF comm required. See additional requirements on AAUP.

MALSR

MISSED APPROACH: Climb to 1100 then climbing right turn to 4000 direct DOHNT and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	135.0 317.725 PRM 127.05	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	





CATEGORY		A	B	C	D
LPV	DA	892/24 250 (300-½)			
LNAV/VNAV	DA	1050/45 408 (500-⅞)			

TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R, and 21R
HIRL all runways

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DETROIT, MICHIGAN

AL-119 (FAA)

RNAV (GPS) PRM Z RWY 4R (CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

WAAS CH 87139 W04B	APP CRS 036°	Rwy ldg 11494 TDZE 640 Apt Elev 645

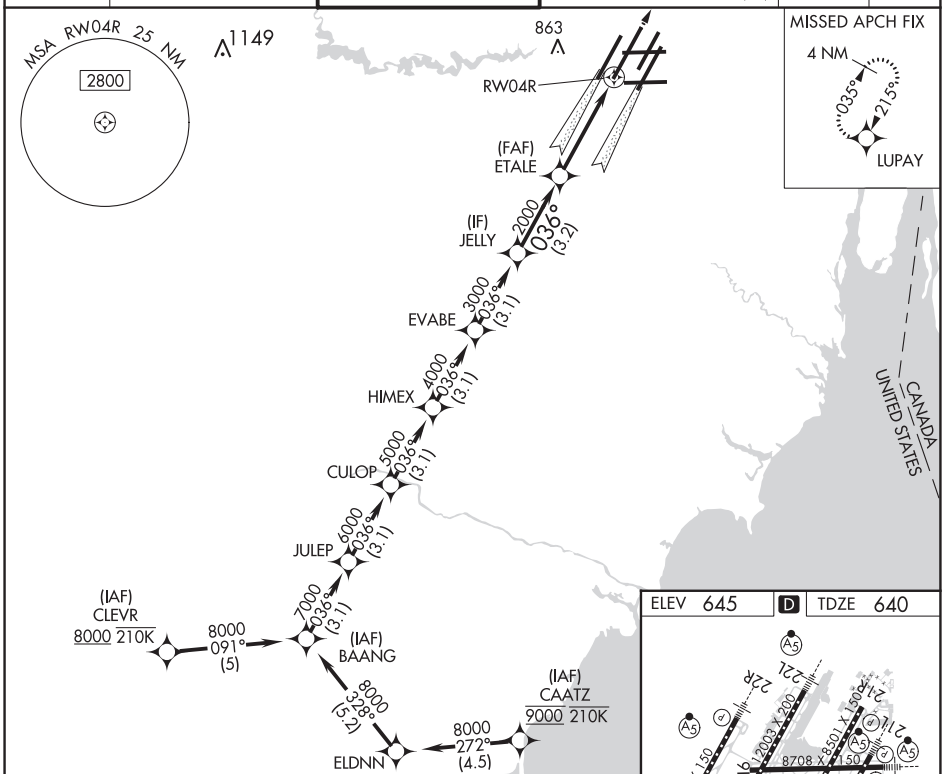
RNP APCH.

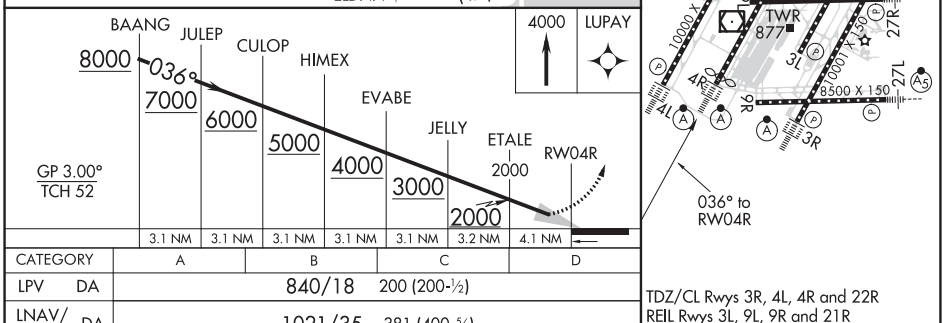
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C or above 54°C . Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. Dual VHF comm required. See additional requirements on AAUP.

ALSF-2

MISSED APPROACH: Climb to 4000 direct LUPAY and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.125 317.725 PRM 135.775	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	





CATEGORY	A	B	C	D
LPV DA	840/18 200 (200-½)			
LNAV/VNAV DA	1021/35 381 (400-⅝)			

TDZ/CL Rwys 3R, 4L, 4R and 22R
REIL Rwys 3L, 9L, 9R and 21R
HIRL all runways

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20254

DETROIT, MICHIGAN

AL-119 (FAA)

RNAV (GPS) PRM Z RWY 22L (CLOSE PARALLEL)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

WAAS	APP CRS	Rwy ldg	12003
CH 99601	216°	TDZE	637
W22A		Apt Elev	645

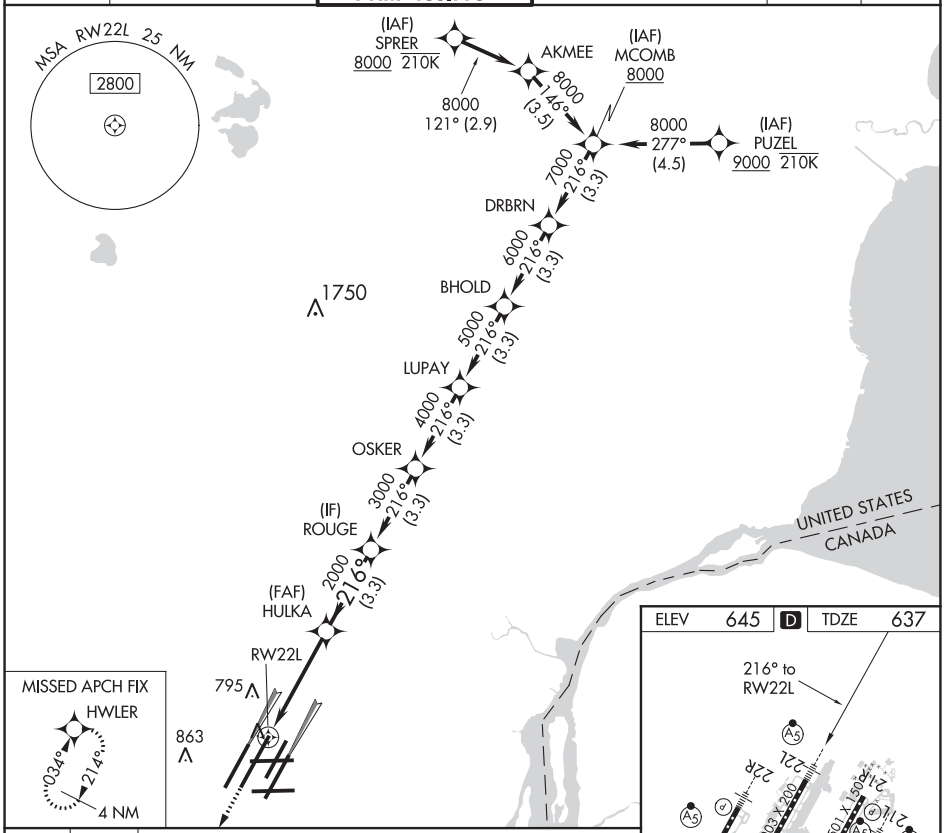
RNP APCH.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -10°C or above 54°C. Simultaneous approach authorized. Use of FD or AP required during simultaneous operations. Dual VHF comm required. See additional requirements on AAUP. For inop ALS, increase LNAV/VNAV all Cats visibility to RVR 4500.
* RVR 1800 authorized with use of FD or AP or HUD to DA.

MALSR

MISSED APPROACH: Climb to 4000 direct HWLER and hold.

D-ATIS	DETROIT APP CON	METRO TOWER	GND CON	CLNC DEL	CPDLC
133.675	124.05 284.0	128.125 317.725 PRM 135.775	121.8 (NW) 119.45 (NE) 132.725 (SW) 119.25 (SE)	120.65	



CATEGORY	A	B	C	D
LPV DA*	837/24 200 (200-½)			
LNAV/VNAV DA	938/24 301 (300-½)			

TDZ/CL Rwys 3R, 4L, 4R, and 22R
REIL Rwys 3L, 9L, 9R, and 21R
HIRL all runways

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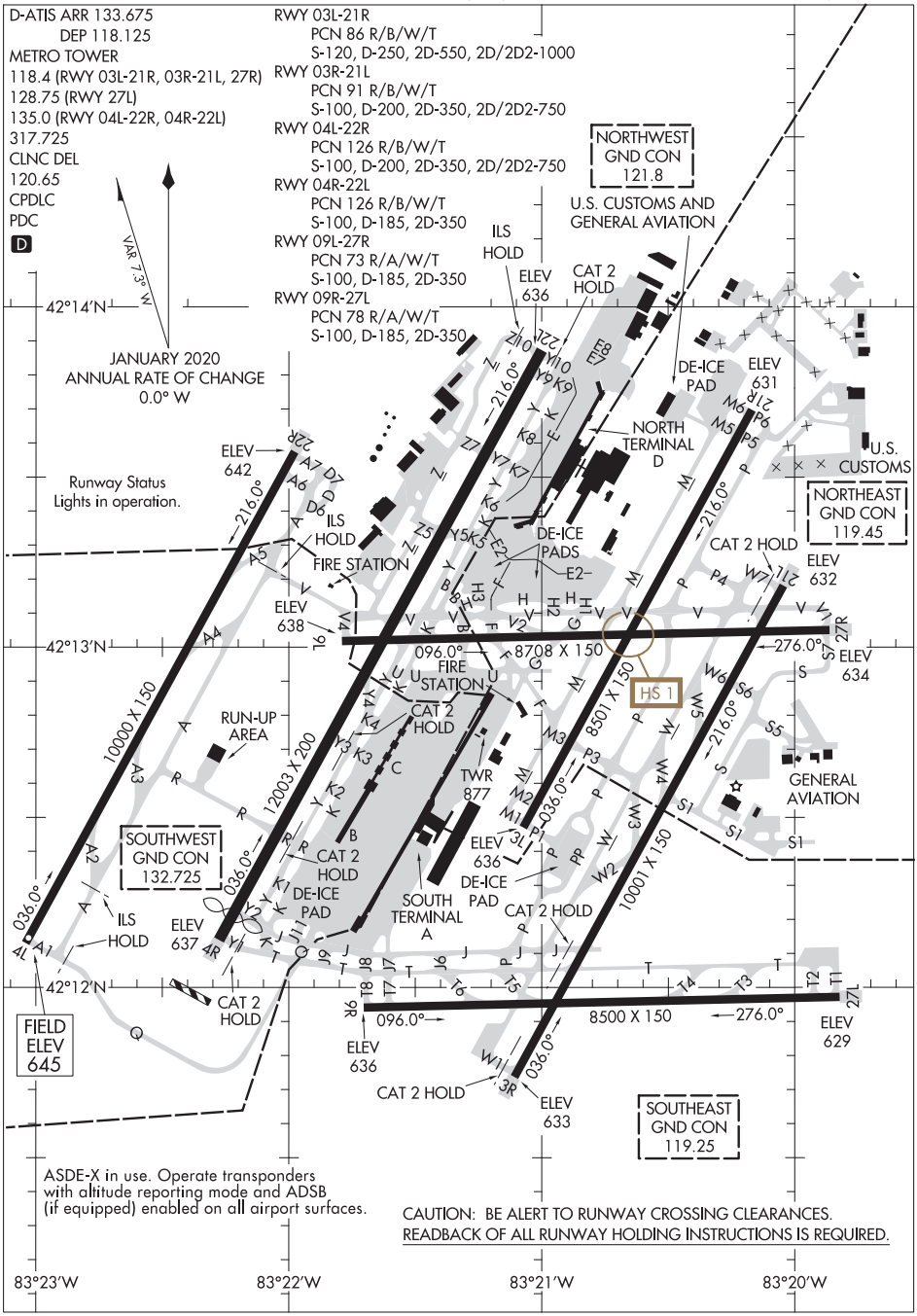

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ATTENTION ALL USERS PAGE (AAUP)

SIMULTANEOUS RNAV DEPARTURES

The purpose of this briefing is to provide guidance, safe operating practices, and phraseology that will help ensure heightened awareness when conducting parallel RNAV departures at the Detroit Metropolitan Wayne County Airport (DTW). Where applicable, pilots should comply with established company procedures for RNAV operations.

1. **PREFLIGHT:** Expect clearance for RNAV Standard Instrument Departure (SID), if capable of terminal RNAV procedures. If unable to accept the assigned RNAV SID, advise Clearance Delivery on initial contact. Upon assignment of an RNAV SID, crosscheck the charted RNAV SID with the aircraft navigation system against the ATC clearance. Consider the following cross items:
- Ensure correct departure runway is loaded
- Ensure all transitions are loaded correctly
- Ensure sequence of waypoints match the appropriate charts
- Use the LEGS page to verify routing (for navigation systems with ROUTE and LEGS pages)
- Ensure altitude set in the altitude window matches the TOP ALTITUDE of the SID (unless amended by ATC)
- Do not modify or manually construct RNAV procedures
- Advise ATC prior to takeoff if unable verify correct loading or if unable to comply with the SID

2. **BEFORE TAKEOFF:** Ensure the departure runway assigned on taxi is depicted by the navigation system.
- Verify all modifications, including runway changes, in the navigation system with the RNAV SID
- Verify aircraft symbol relative to the runway symbol, lateral track, and depicted route agree with the ATC clearance (electronic navigation map displays)

3. **LINE UP/TAKEOFF:** Expect a takeoff clearance that will include "RNAV to" the first waypoint on the SID, or a heading. If issued a heading, do not delete the SID from the navigation system.
- Clearance: "Delta 123, RNAV to SAAMS, Runway 22L, Cleared for Takeoff"
- Response: "Delta 123, RNAV to SAAMS, Runway 22L, Cleared for Takeoff"
- Verify the correct runway and SID are loaded and the correct lateral navigation mode is available and ready for use after takeoff
- If the takeoff clearance does not match the planned/loaded procedure, request an initial heading from tower or refuse the takeoff clearance until the discrepancy is resolved.

4. **AFTER TAKEOFF:** Unless issued a heading, engage lateral navigation flight guidance as soon as practical and fly the departure precisely.
- Parallel RNAV departures must not encroach on the airspace between parallel runway centerlines without specific ATC clearance
- When possible, track the runway centerline until reaching the departure end of runway
- Strict compliance with the lateral and vertical tracks and charted speed restrictions is imperative
- Once established on the procedure, maintain route centerline, as depicted by onboard lateral navigation indicators and/or flight guidance
- Manually intervene if necessary, to stay on track to avoid transgressing in the direction of a parallel runway, track, or aircraft
- If unable to comply with the SID profile, either laterally or vertically, immediately notify ATC

(CONTINUED ON FOLLOWING PAGE)

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ATTENTION ALL USERS PAGE (AAUP)

(CONTINUED FROM PREVIOUS PAGE)

5. **SPECIFIC INFORMATION:** Runway assignments will be issued on initial contact with Ground Control and will be based on traffic conditions, runway closures, and other operational requirements.

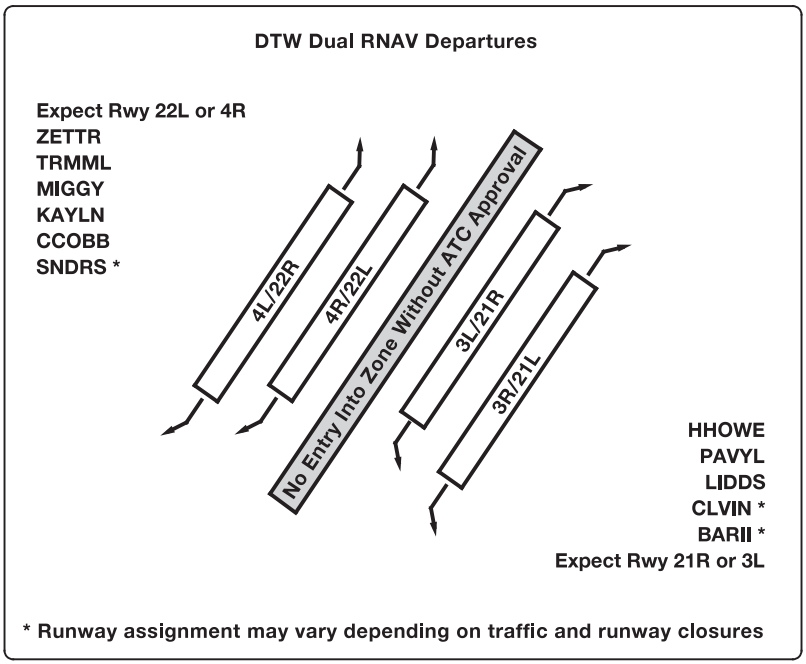
For planning purposes, pilots can anticipate a runway assignment based upon the information below.

Runway Assignment for Dual Departure Operations

Departing Runways 22L/R, 21L/R
SNDRS, CCOBB, KAYLN, MIGGY, TRMML, ZETTR - Expect Runway 22L
HHOWE, PAVYL, LIDDS, BARII, CLVIN - Expect Runway 21R

Departing Runways 4L/R, 3L/R
SNDRS, CCOBB, KAYLN, MIGGY, TRMML, ZETTR - Expect Runway 04R
HHOWE, PAVYL, LIDDS, BARII, CLVIN - Expect Runway 03L

Departing Runways 27L/R (not depicted below)
KAYLN, MIGGY, TRMML, ZETTR, HHOWE - Expect Runway 27R
CCOBB, SNDRS, BARII, CLVIN, LIDDS, PAVYL - Expect Runway 27L



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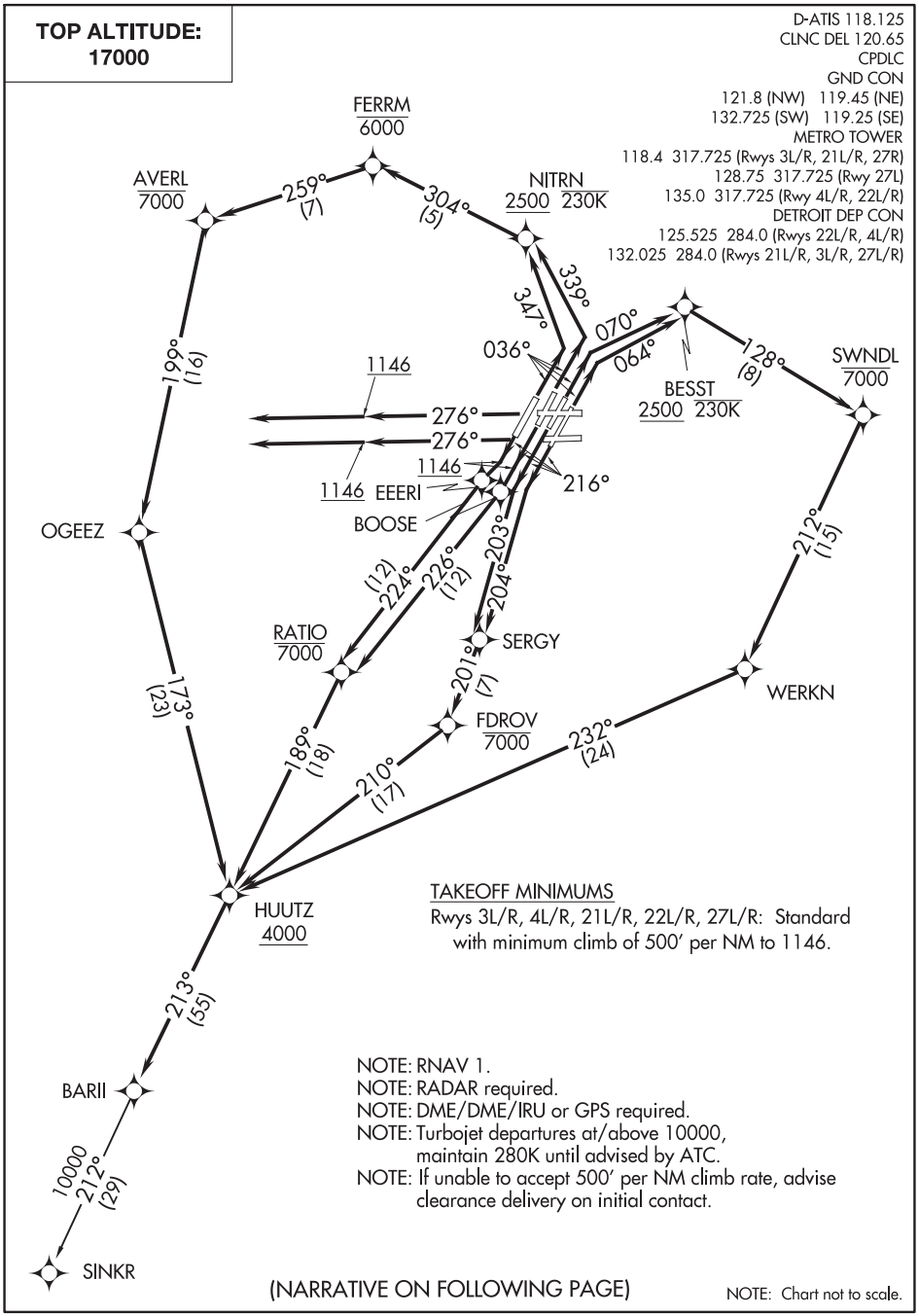
(BARII2.BARII) 19227

BARII TWO DEPARTURE (RNAV)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)
AL-119 (FAA)
DETROIT, MICHIGAN

TOP ALTITUDE: 17000

D-ATIS 118.125
CLNC DEL 120.65
CPDLC
GND CON
121.8 (NW) 119.45 (NE)
132.725 (SW) 119.25 (SE)
METRO TOWER
118.4 317.725 (Rwys 3L/R, 21L/R, 27R)
128.75 317.725 (Rwy 27L)
135.0 317.725 (Rwy 4L/R, 22L/R)
DETROIT DEP CON
125.525 284.0 (Rwys 22L/R, 4L/R)
132.025 284.0 (Rwys 21L/R, 3L/R, 27L/R)



TAKEOFF MINIMUMS
Rwys 3L/R, 4L/R, 21L/R, 22L/R, 27L/R: Standard with minimum climb of 500′ per NM to 1146.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

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DEPARTURE ROUTE DESCRIPTION

NOTE: See additional requirements in RNAV departure AAUP.

TAKEOFF RWY 3L: Climb on heading 036° to intercept course 070° to cross BESST at or above 2500 and at or below 230K, then on track 128° to cross SWNDL at or below 7000, then on track 212° to WERKN, then on track 232° to cross HUUTZ at or above 4000, thence....
TAKEOFF RWY 3R: Climb on heading 036° to intercept course 064° to cross BESST at or above 2500 and at or below 230K, then on track 128° to cross SWNDL at or below 7000, then on track 212° to WERKN, then on track 232° to cross HUUTZ at or above 4000, thence....
TAKEOFF RWY 4L: Climb on heading 036° to intercept course 347° to cross NITRN at or above 2500 and at or below 230K, then on track 304° to cross FERRM at or below 6000, then on track 259° to cross AVERL at or below 7000, then on track 199° to OGEEZ, then on track 173° to cross HUUTZ at or above 4000, thence....
TAKEOFF RWY 4R: Climb on heading 036° to intercept course 339° to cross NITRN at or above 2500 and at or below 230K, then on track 304° to cross FERRM at or below 6000, then on track 259° to cross AVERL at or below 7000, then on track 199° to OGEEZ, then on track 173° to cross HUUTZ at or above 4000, thence....
TAKEOFF RWY 21L: Climb on heading 216° to intercept course 204° to SERGY, then on track 201° to cross FDROV at or below 7000, then on track 210° to cross HUUTZ at or above 4000, thence....
TAKEOFF RWY 21R: Climb on heading 216° to intercept course 203° to SERGY, then on track 201° to cross FDROV at or below 7000, then on track 210° to cross HUUTZ at or above 4000, thence....
TAKEOFF RWY 22L: Climb on heading 216° to 1146, then direct BOOSE, then on track 226° to cross RATIO at or below 7000, then on track 189° to cross HUUTZ at or above 4000, thence....
TAKEOFF RWY 22R: Climb on heading 216° to 1146, then direct EEERI, then on track 224° to cross RATIO at or below 7000, then on track 189° to cross HUUTZ at or above 4000, thence....
TAKEOFF RWY 27L/R: Climb on heading 276° to 1146, then on heading 276° or as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....

....on track 213° to BARII, then on (transition). Maintain 17000 or as assigned by ATC, expect filed altitude 10 minutes after departure.

SINKR TRANSITION (BARII2.SINKR):

CCOBB TWO DEPARTURE (RNAV)

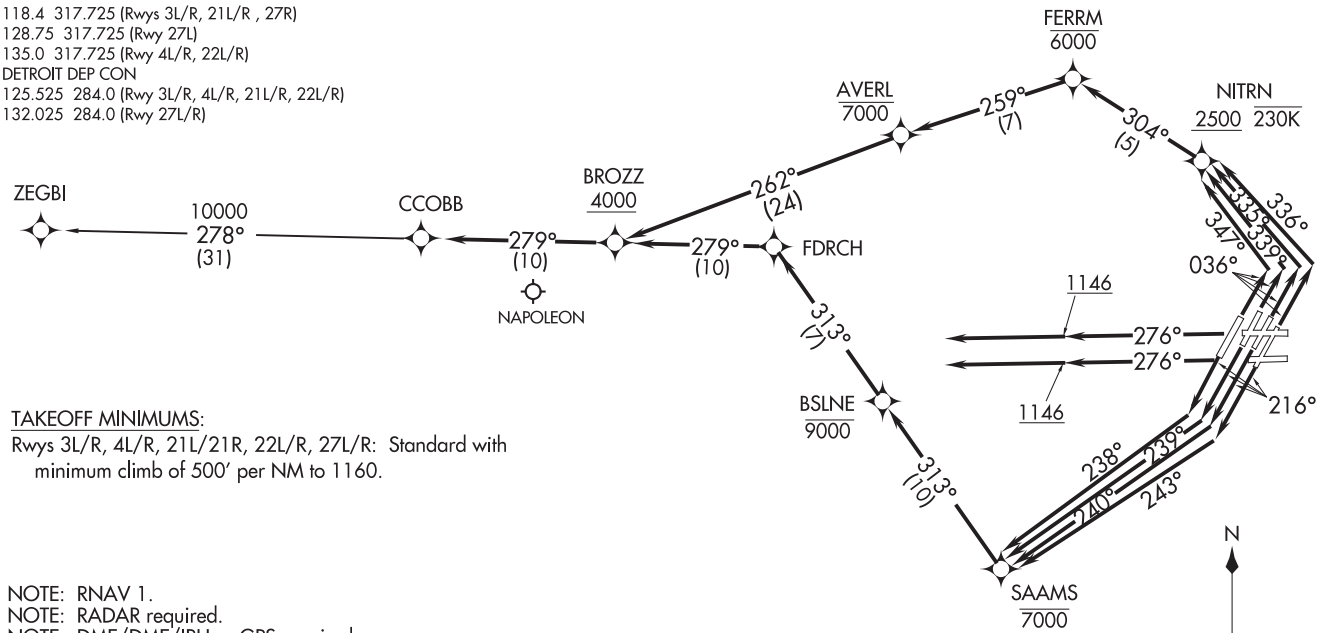
(CCOBB2.CCOBB) 15AUG19

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

DETROIT, MICHIGAN

D-ATIS 118.125
CLNC DEL 120.65
CPDLC
GND CON
121.8 (NW) 119.45 (NE)
132.725 (SW) 119.25 (SE)
METRO TOWER
118.4 317.725 (Rwys 3L/R, 21L/R , 27R)
128.75 317.725 (Rwy 27L)
135.0 317.725 (Rwy 4L/R, 22L/R)
DETROIT DEP CON
125.525 284.0 (Rwy 3L/R, 4L/R, 21L/R, 22L/R)
132.025 284.0 (Rwy 27L/R)

TOP ALTITUDE: 17000



TAKEOFF MINIMUMS:
Rwys 3L/R, 4L/R, 21L/21R, 22L/R, 27L/R: Standard with minimum climb of 500′ per NM to 1160.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: For use by aircraft filed at or below FL220, or as assigned by ATC.
NOTE: CAUTION: Parachute jumping 6 NM SW of BROZZ, 3 NM radius of Napoleon Airport (3NP) at or below 17999 (SR-SS).
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

(CCOBB2.CCOBB) 20142
CCOBB TWO DEPARTURE (RNAV)
AL-119 (FAA)
DETROIT METROPOLITAN WAYNE COUNTY (DTW)
DETROIT, MICHIGAN

EC-1, 25 FEB 2021 to 22 APR 2021

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DEPARTURE ROUTE DESCRIPTION

NOTE: See additional requirements in RNAV departure AAUP.

TAKEOFF RUNWAY 3L: Climb on heading 036° to intercept course 335° to cross NITRN at or above 2500 and at or below 230K, then on track 304° to cross FERRM at or below 6000, then on track 259° to cross AVERL at or below 7000, then on track 262° to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 3R: Climb on heading 036° to intercept course 336° to cross NITRN at or above 2500 and at or below 230K, then on track 304° to cross FERRM at or below 6000, then on track 259° to cross AVERL at or below 7000, then on track 262° to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 4L: Climb on heading 036° to intercept course 347° to cross NITRN at or above 2500 and at or below 230K, then on track 304° to cross FERRM at or below 6000, then on track 259° to cross AVERL at or below 7000, then on track 262° to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 4R: Climb on heading 036° to intercept course 339° to cross NITRN at or above 2500 and at or below 230K, then on track 304° to cross FERRM at or below 6000, then on track 259° to cross AVERL at or below 7000, then on track 262° to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 21L: Climb heading 216° to intercept course 243° to cross SAAMS at or below 7000, then on track 313° to cross BSLNE at or below 9000, then on track 313° to FDRCH, then on track 279° to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 21R: Climb on heading 216° to intercept course 240° to cross SAAMS at or below 7000, then on track 313° to cross BSLNE at or below 9000, then on track 313° to FDRCH, then on track 279° to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 22L: Climb on heading 216° to intercept course 239° to cross SAAMS at or below 7000, then on track 313° to cross BSLNE at or below 9000, then on track 313° to FDRCH, then on track 279° to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 22R: Climb on heading 216° to intercept course 238° to cross SAAMS at or below 7000, then on track 313° to cross BSLNE at or below 9000, then on track 313° to FDRCH, then on track 279° to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAYS 27L/27R: Climb on heading 276° to 1146, then on heading 276° or as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....

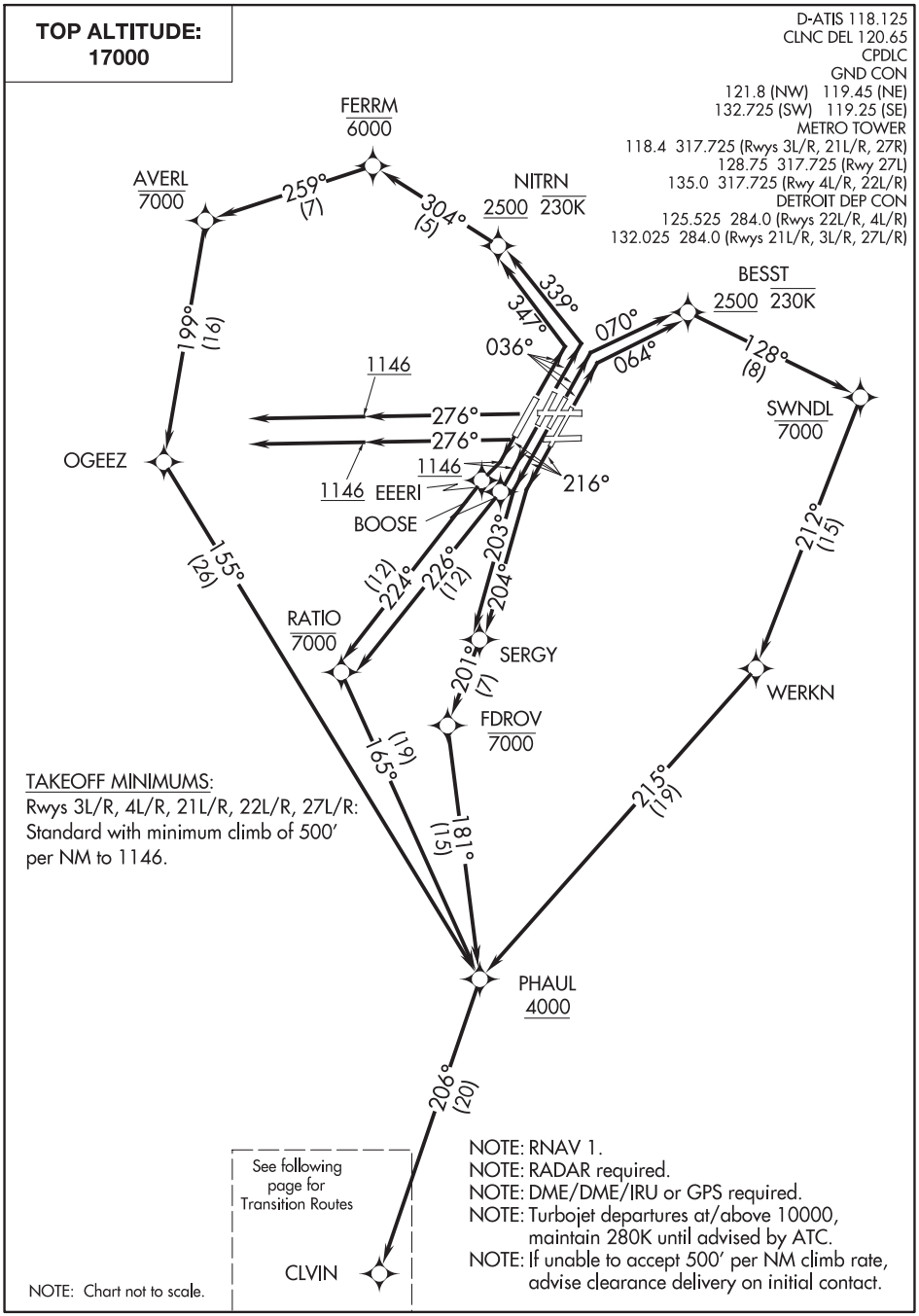
....on track 279° to CCOBB, then on (transition). Maintain 17000 or as assigned by ATC, expect filed altitude within 10 minutes after departure.

ZEGBI TRANSITION (CCOBB2.ZEGBI):

(CLVIN2.CLVIN) 19227 AL-119 (FAA)

CLVIN TWO DEPARTURE (RNAV)

DETROIT METROPOLITAN WAYNE COUNTY (DTW)
Departure Routes
DETROIT, MICHIGAN



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CLVIN TWO DEPARTURE (RNAV)
Departure Routes
DETROIT, MICHIGAN
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

(CLVIN2.CLVIN) 15AUG19

TOP ALTITUDE: 17000

D-ATIS 118.125
CLNC DEL 120.65
CPDLC
GND CON
121.8 (NW) 119.45 (NE)
132.725 (SW) 119.25 (SE)
METRO TOWER
118.4 317.725 (Rwys 3L/R, 21L/R, 27R)
128.75 317.725 (Rwy 27L)
135.0 317.725 (Rwy 4L/R, 22L/R)
DETROIT DEP CON
125.525 284.0 (Rwys 22L/R, 4L/R)
132.025 284.0 (Rwys 21L/R, 3L/R, 27L/R)

CLVIN

10000
206°
(35)

TFTUN

10000
206°
(35)

RINTE

10000
190°
(10)

PUUDL

10000
190°
(71)

STAZE

TAKEOFF MINIMUMS:
Rwys 3L/R, 4L/R, 21L/R, 22L/R, 27L/R:
Standard with minimum climb of 500′
per NM to 1146.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

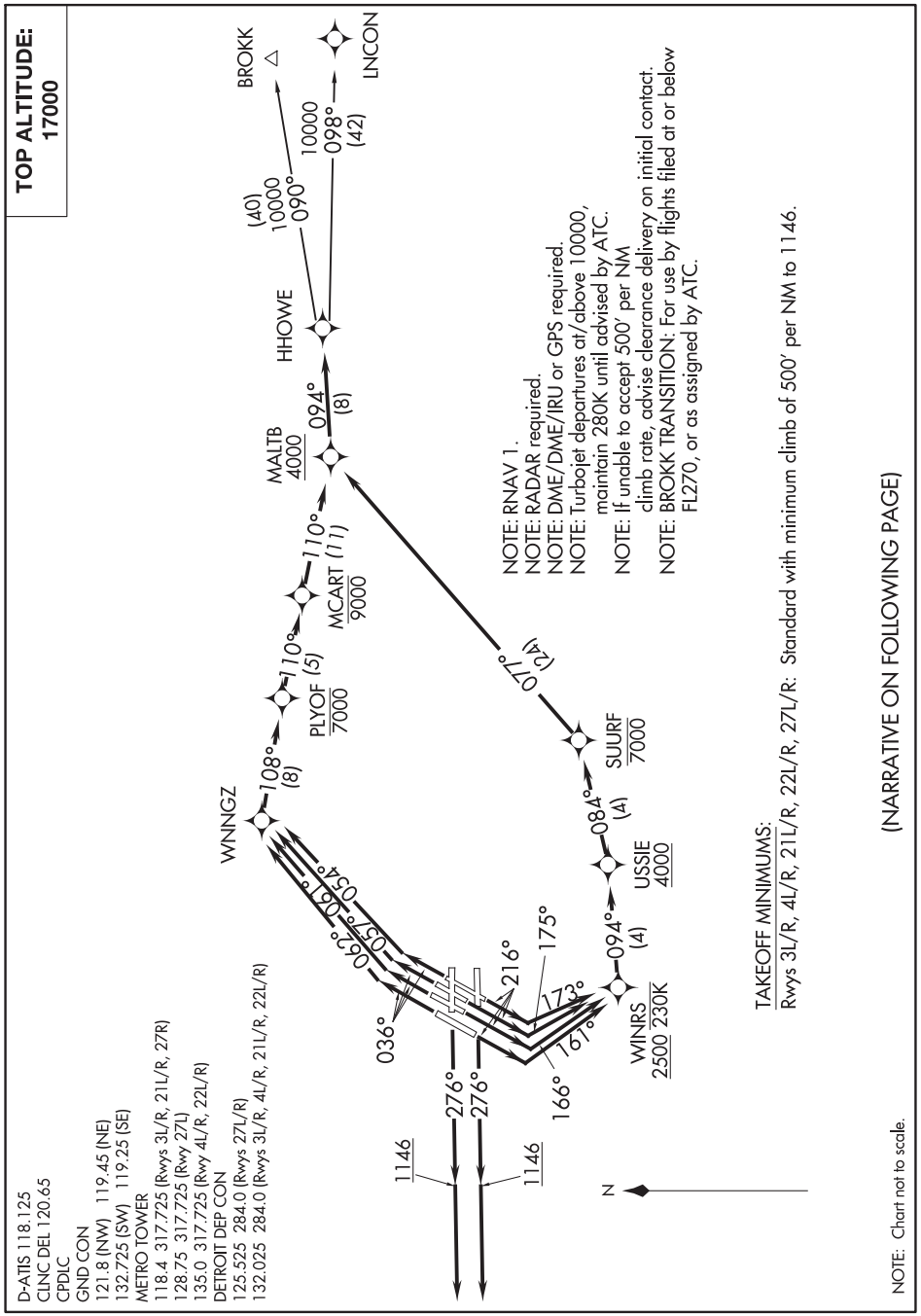
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 3L: Climb on heading 036° to intercept course 070° to cross BESST at or above 2500 and at or below 230K, then on track 128° to cross SWINDL at or below 7000, then on track 212° to WERKN, then on track 215° to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 3R: Climb on heading 036° to intercept course 064° to cross BESST at or above 2500 and at or below 230K, then on track 128° to cross SWINDL at or below 7000, then on track 212° to WERKN, then on track 215° to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 4L: Climb on heading 036° to intercept course 347° to cross NITRN at or above 2500 and at or below 230K, then on track 304° to cross FERRM at or below 6000, then on track 259° to cross AVERL at or below 7000, then on track 199° to OGEEZ, then on track 155° to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 4R: Climb on heading 036° to intercept course 339° to cross NITRN at or above 2500 and at or below 230K, then on track 304° to cross FERRM at or below 6000, then on track 259° to cross AVERL at or below 7000, then on track 199° to OGEEZ, then on track 155° to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 21L: Climb on heading 216° to intercept course 204° to SERGY, then on track 201° to cross FDROV at or below 7000, then on track 181° to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 21R: Climb on heading 216° to intercept course 203° to SERGY, then on track 201° to cross FDROV at or below 7000, then on track 181° to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 22L: Climb on heading 216° to 1146, then direct BOOSE, then on track 226° to cross RATIO at or below 7000, then on track 165° to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 22R: Climb on heading 216° to 1146, then direct EEERI, then on track 224° to cross RATIO at or below 7000, then on track 165° to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAYS 27L/27R: Climb on heading 276° to 1146, then on heading 276° or as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....

....on track 206° to CLVIN, then on (transition). Maintain 17000 or as assigned by ATC, expect filed altitude 10 minutes after departure.

STAZE TRANSITION (CLVIN2.STAZE):

EC-1, 25 FEB 2021 to 22 APR 2021



EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

DEPARTURE ROUTE DESCRIPTION

NOTE:See additional requirements in RNAV departures AAUP.

TAKEOFF RUNWAY 3L: Climb on heading 036° to intercept course 057° to WNNGZ, then on track 108° to cross PLYOF at or below 7000, then on track 110° to cross MCART at or below 9000, then on track 110° to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 3R: Climb on heading 036° to intercept course 054° to WNNGZ, then on track 108° to cross PLYOF at or below 7000, then on track 110° to cross MCART at or below 9000, then on track 110° to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 4L: Climb on heading 036° to intercept course 062° to WNNGZ, then on track 108° to cross PLYOF at or below 7000, then on track 110° to cross MCART at or below 9000, then on track 110° to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 4R: Climb on heading 036° to intercept course 061° to WNNGZ, then on track 108° to cross PLYOF at or below 7000, then on track 110° to cross MCART at or below 9000, then on track 110° to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 21L: Climb on heading 216° to intercept course 173° to cross WINRS at or above 2500 and at or below 230K, then on track 094° to cross USSIE at or above 4000, then on track 084° to cross SUURF at or below 7000, then on track 077° to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 21R: Climb on heading 216° to intercept course 175° to cross WINRS at or above 2500 and at or below 230K, then on track 094° to cross USSIE at or above 4000, then on track 084° to cross SUURF at or below 7000, then on track 077° to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 22L: Climb on heading 216° to intercept course 166° to cross WINRS at or above 2500 and at or below 230K, then on track 094° to cross USSIE at or above 4000, then on track 084° to cross SUURF at or below 7000, then on track 077° to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 22R: Climb on heading 216° to intercept course 161° to cross WINRS at or above 2500 and at or below 230K, then on track 094° to cross USSIE at or above 4000, then on track 084° to cross SUURF at or below 7000, then on track 077° to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAYS 27L/27R: Climb on heading 276° to 1146, then on heading 276° or as assigned for RADAR vectors to cross MALTB at or above 4000, thence....

....on track 094° to HHOWE, then on (transition). Maintain 17000 or as assigned by ATC, expect filed altitude 10 minutes after departure.

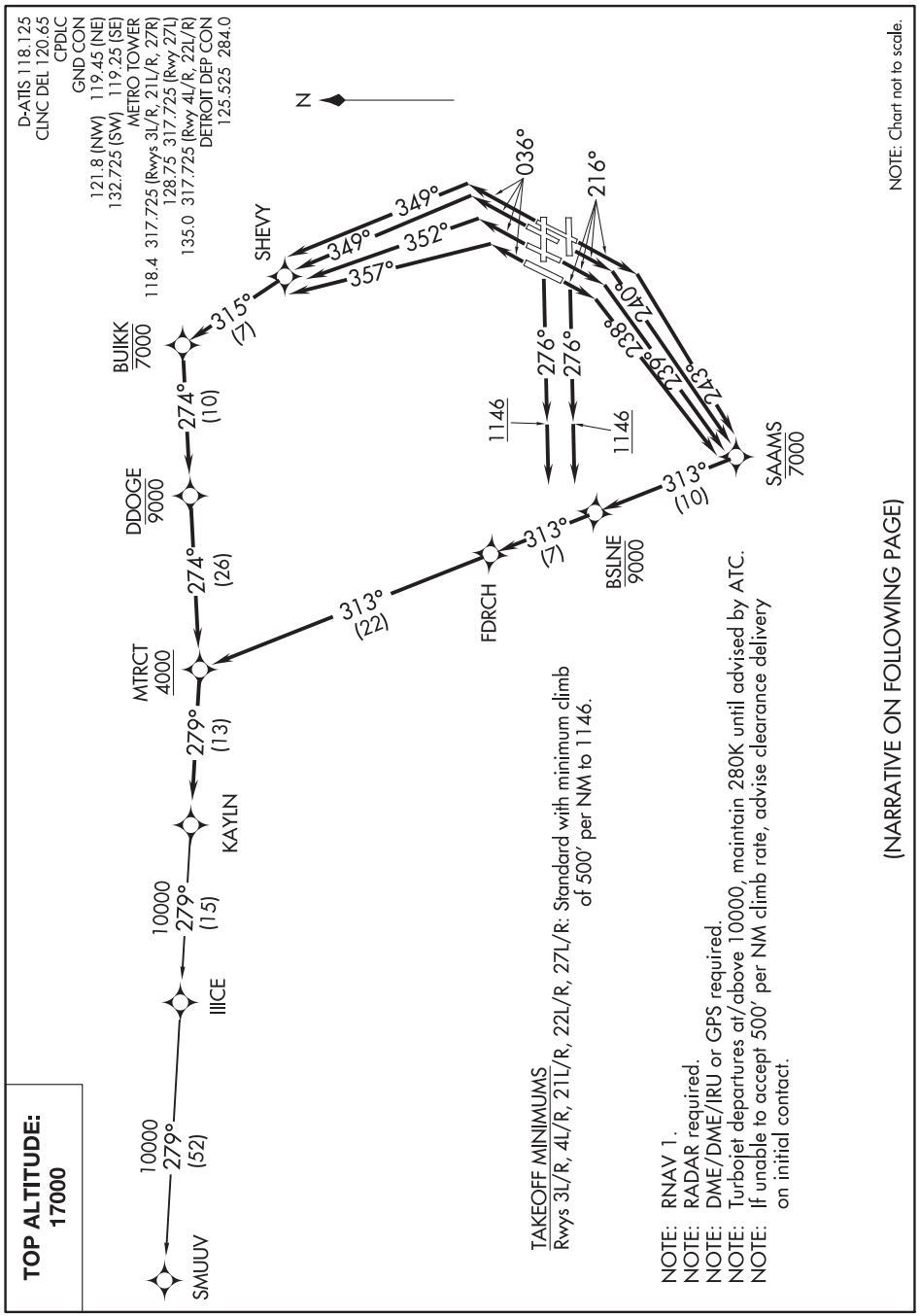
BROKK TRANSITION (HHOWE3.BROKK)
LNCON TRANSITION (HHOWE3.LNCON)

EC-1, 25 FEB 2021 to 22 APR 2021

KAYLN TWO DEPARTURE (RNAV)

AL-119 (FAA)

DETROIT, MICHIGAN



EC-1, 25 FEB 2021 to 22 APR 2021

KAYLN TWO DEPARTURE (RNAV)
(KAYLN2.KAYLN) 15AUG19
DETROIT, MICHIGAN
DETROIT METROPOLITAN WAYNE COUNTY (DTW)

DEPARTURE ROUTE DESCRIPTION

NOTE:See additional requirements in RNAV departure AAUP.

TAKEOFF RUNWAY 3L/R: Climb on heading 036° to intercept course 349° to SHEVY, then on track 315° to cross BUIKK at or below 7000, then on track 274° to cross DDOGE at or below 9000, then on track 274° to cross MTRCT at or above 4000, thence....

TAKEOFF RUNWAY 4L: Climb on heading 036° to intercept course 357° to SHEVY, then on track 315° to cross BUIKK at or below 7000, then on track 274° to cross DDOGE at or below 9000, then on track 274° to cross MTRCT at or above 4000, thence....

TAKEOFF RUNWAY 4R: Climb on heading 036° to intercept course 352° to SHEVY, then on track 315° to cross BUIKK at or below 7000, then on track 274° to cross DDOGE at or below 9000, then on track 274° to cross MTRCT at or above 4000, thence....

TAKEOFF RUNWAY 21L: Climb on heading 216° to intercept course 243° to cross SAAMS at or below 7000, then on track 313° to cross BSLNE at or below 9000, then on track 313° to FDRCH, then on track 313° to cross MTRCT at or above 4000, thence....

TAKEOFF RUNWAY 21R: Climb on heading 216° to intercept course 240° to cross SAAMS at or below 7000, then on track 313° to cross BSLNE at or below 9000, then on track 313° to FDRCH, then on track 313° to cross MTRCT at or above 4000, thence....

TAKEOFF RUNWAY 22L: Climb on heading 216° to intercept course 239° to cross SAAMS at or below 7000, then on track 313° to cross BSLNE at or below 9000, then on track 313° to FDRCH, then on track 313° to cross MTRCT at or above 4000, thence....

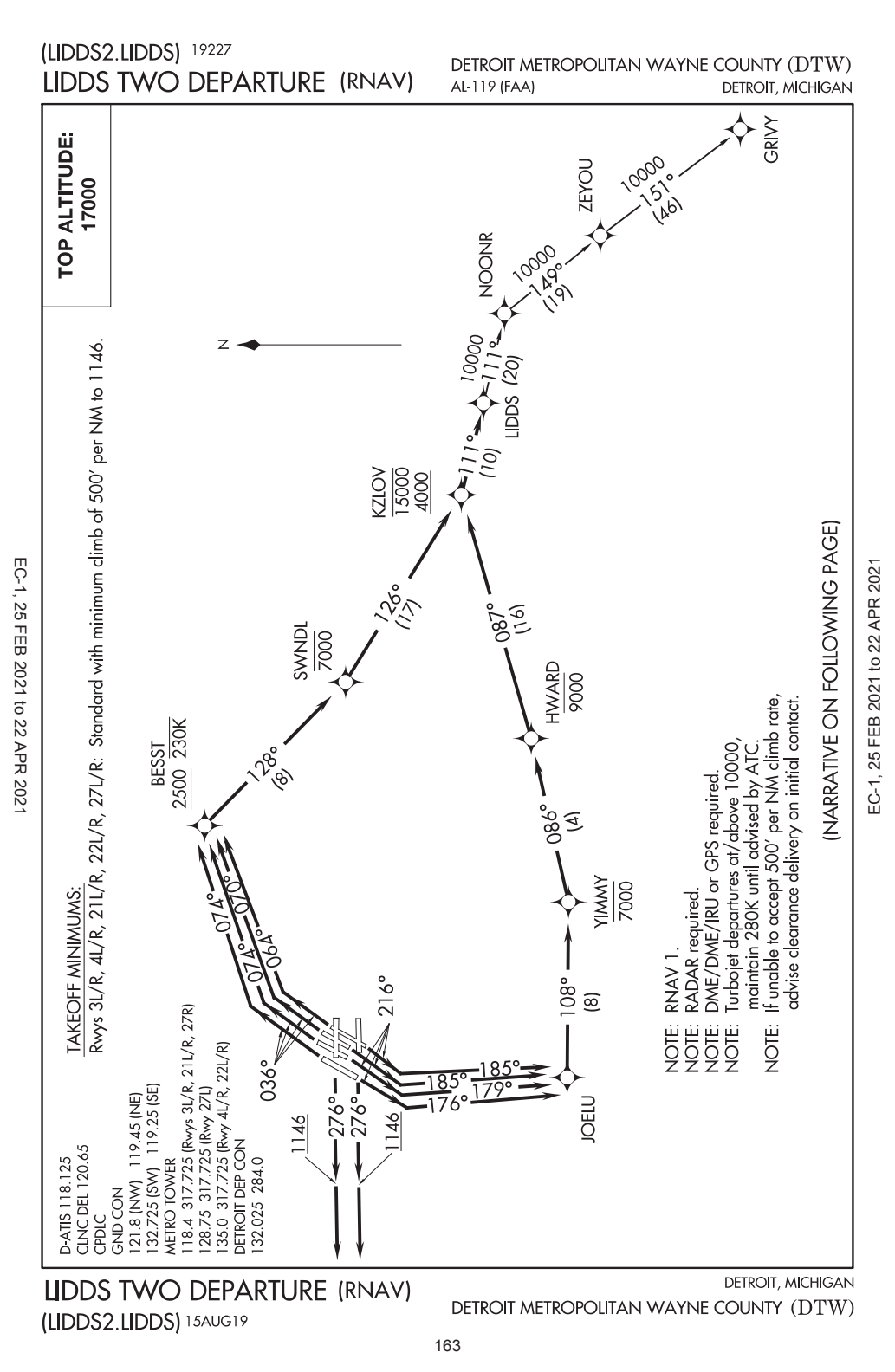
TAKEOFF RUNWAY 22R: Climb on heading 216° to intercept course 238° to cross SAAMS at or below 7000, then on track 313° to cross BSLNE at or below 9000, then on track 313° to FDRCH, then on track 313° to cross MTRCT at or above 4000, thence...

TAKEOFF RUNWAYS 27L/R: Climb on heading 276° to 1146, then on heading 276° or as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....

....on track 279° to KAYLN, then on (transition). Maintain 17000 or as assigned by ATC, expect filed altitude 10 minutes after departure.

SMUUV TRANSITION (KAYLN2.SMUUV)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021


TOP ALTITUDE: 17000
TAKEOFF MINIMUMS:
Rwys 3L/R, 4L/R, 21L/R, 22L/R, 27L/R: Standard with minimum climb of 500' per NM to 1146.
D-ATIS 118.125
CLNC DEL 120.65
CPDLC
GND CON
121.8 (NW) 119.45 (NE)
132.725 (SW) 119.25 (SE)
METRO TOWER
118.4 317.725 (Rwys 3L/R, 21L/R, 27R)
128.75 317.725 (Rwy 27L)
135.0 317.725 (Rwy 4L/R, 22L/R)
DETROIT DEP CON
132.025 284.0
N
BESST
2500 230K
128°
(8)
SWNDL
7000
126°
(17)
KZLOV
15000
4000
111°
(10)
LIDDS (20)
10000
111°
NOONR
10000
149°
(19)
ZEYOU
10000
151°
(46)
GRIVY
087°
(16)
HWARD
9000
086°
(4)
YIMMY
7000
108°
(8)
JOELU
036°
074°
070°
074°
090°
216°
1146
276°
276°
1146
185°
185°
176°
179°
NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: If unable to accept 500' per NM climb rate, advise clearance delivery on initial contact.
(NARRATIVE ON FOLLOWING PAGE)
EC-1, 25 FEB 2021 to 22 APR 2021

DEPARTURE ROUTE DESCRIPTION

NOTE:See additional requirements in RNAV departure AAUP.

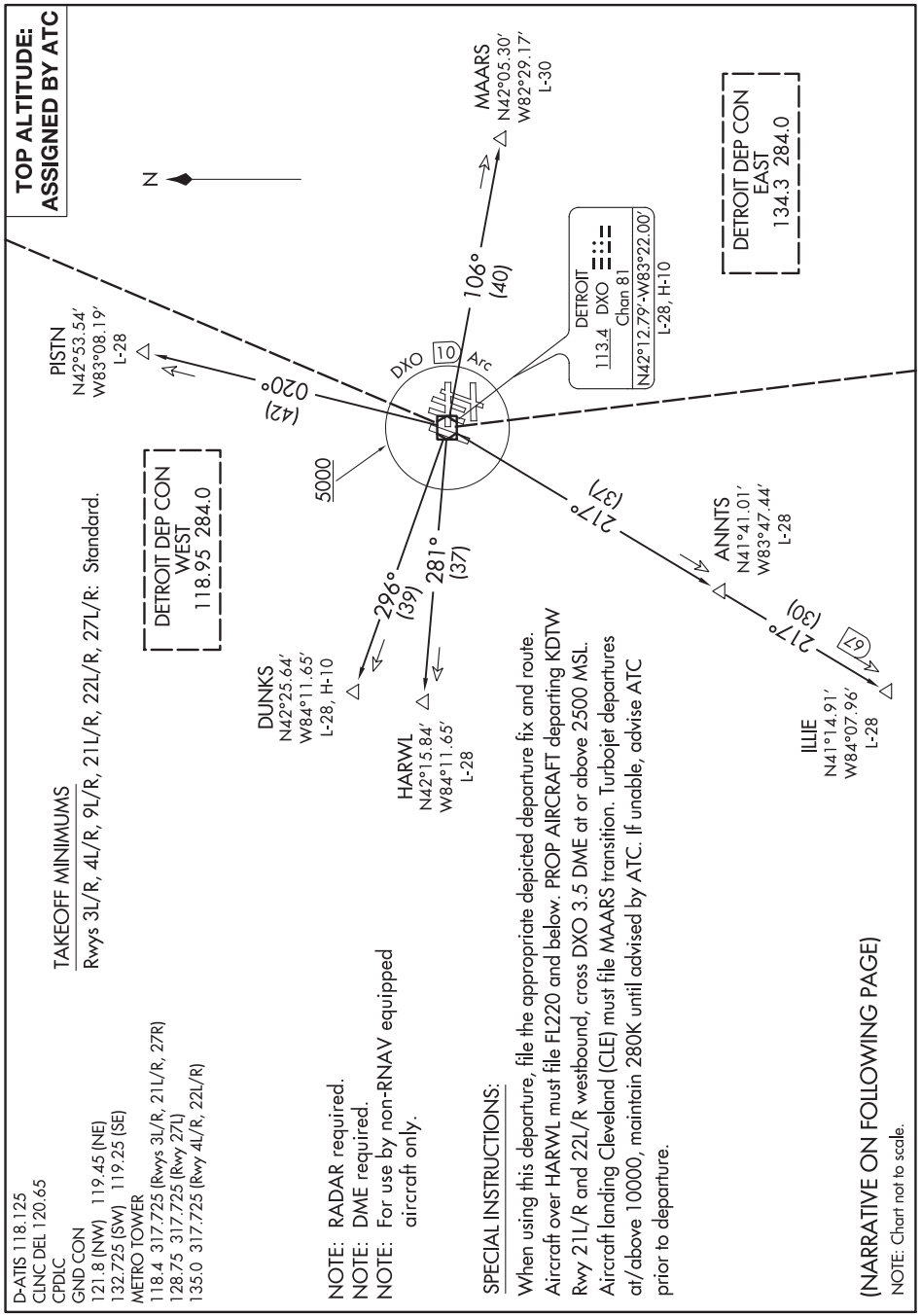
TAKEOFF RUNWAY 3L: Climb on heading 036° to intercept course 070° to cross BESST at or above 2500 and at or below 230K, then on track 128° to cross SWNDL at or below 7000, then on track 126° to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAY 3R: Climb on heading 036° to intercept course 064° to cross BESST at or above 2500 and at or below 230K, then on track 128° to cross SWNDL at or below 7000, then on track 126° to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAYS 4L/R: Climb on heading 036° to intercept course 074° to cross BESST at or above 2500 and at or below 230K, then on track 128° to cross SWNDL at or below 7000, then on track 126° to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAYS 21L/R: Climb on heading 216° to intercept course 185° to JOELU, then on track 108° to cross YIMMY at or below 7000, then on track 086° to cross HWARD at or below 9000, then on track 087° to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAY 22L: Climb on heading 216° to intercept course 179° to JOELU, then on track 108° to cross YIMMY at or below 7000, then on track 086° to cross HWARD at or below 9000, then on track 087° to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAY 22R: Climb on heading 216° to intercept course 176° to JOELU, then on track 108° to cross YIMMY at or below 7000, then on track 086° to cross HWARD at or below 9000, then on track 087° to cross KZLOV between 4000 and 1500, thence....
TAKEOFF RUNWAY 27L: Climb on heading 276° to 1146, then on heading 276° or as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAY 27R: Climb on heading 276° to 1146, then on heading 276° or as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....

....on track 111° to LIDDS, then on (transition). Maintain 17000 or as assigned by ATC, expect filed altitude 10 minutes after departure.

GRIVY TRANSITION (LIDDS2.GRIVY)

EC-1, 25 FEB 2021 to 22 APR 2021

METRO THREE DEPARTURE



D-ATIS 118.125
CLNC DEL 120.65
CPDC
GND CON
121.8 (NW) 119.45 (NE)
132.725 (SW) 119.25 (SE)
METRO TOWER
118.4 317.725 (Rwys 3L/R, 21L/R, 27R)
128.75 317.725 (Rwy 27L)
135.0 317.725 (Rwy 4L/R, 22L/R)

TAKEOFF MINIMUMS

Rwys 3L/R, 4L/R, 9L/R, 21L/R, 22L/R, 27L/R: Standard.

NOTE: RADAR required.
NOTE: DME required.
NOTE: For use by non-RNAV equipped aircraft only.

SPECIAL INSTRUCTIONS:

When using this departure, file the appropriate depicted departure fix and route. Aircraft over HARWL must file FL220 and below. PROP AIRCRAFT departing KDTW Rwy 21L/R and 22L/R westbound, cross DXO 3.5 DME at or above 2500 MSL. Aircraft landing Cleveland (CLE) must file MAARS transition. Turbojet departures at/above 10000, maintain 280K until advised by ATC. If unable, advise ATC prior to departure.

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

EC-1, 25 FEB 2021 to 22 APR 2021

DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading, thence....

.....maintain ATC assigned altitude for RADAR vectors to intercept filed/assigned transition or enroute fix/navaid. When ATC assigned altitude is at or above 5000, cross DXO 10 DME Arc at or above 5000 for noise abatement. If unable to comply, advise ATC prior to departure. Expect clearance to filed altitude/flight level within ten (10) minutes after departure.

DUNKS TRANSITION (METRO3.DUNKS): From over DXO VOR/DME on DXO R-296 to DUNKS.
HARWL TRANSITION (METRO3.HARWL): From over DXO VOR/DME on DXO R-281 to HARWL.
ILLIE TRANSITION (METRO3.ILLIE): From over DXO VOR/DME on DXO R-217 to ILLIE.
MAARS TRANSITION (METRO3.MAARS): From over DXO VOR/DME on DXO R-106 to MAARS.
PISTN TRANSITION (METRO3.PISTN): From over DXO VOR/DME on DXO R-020 to PISTN.

EC-1, 25 FEB 2021 to 22 APR 2021

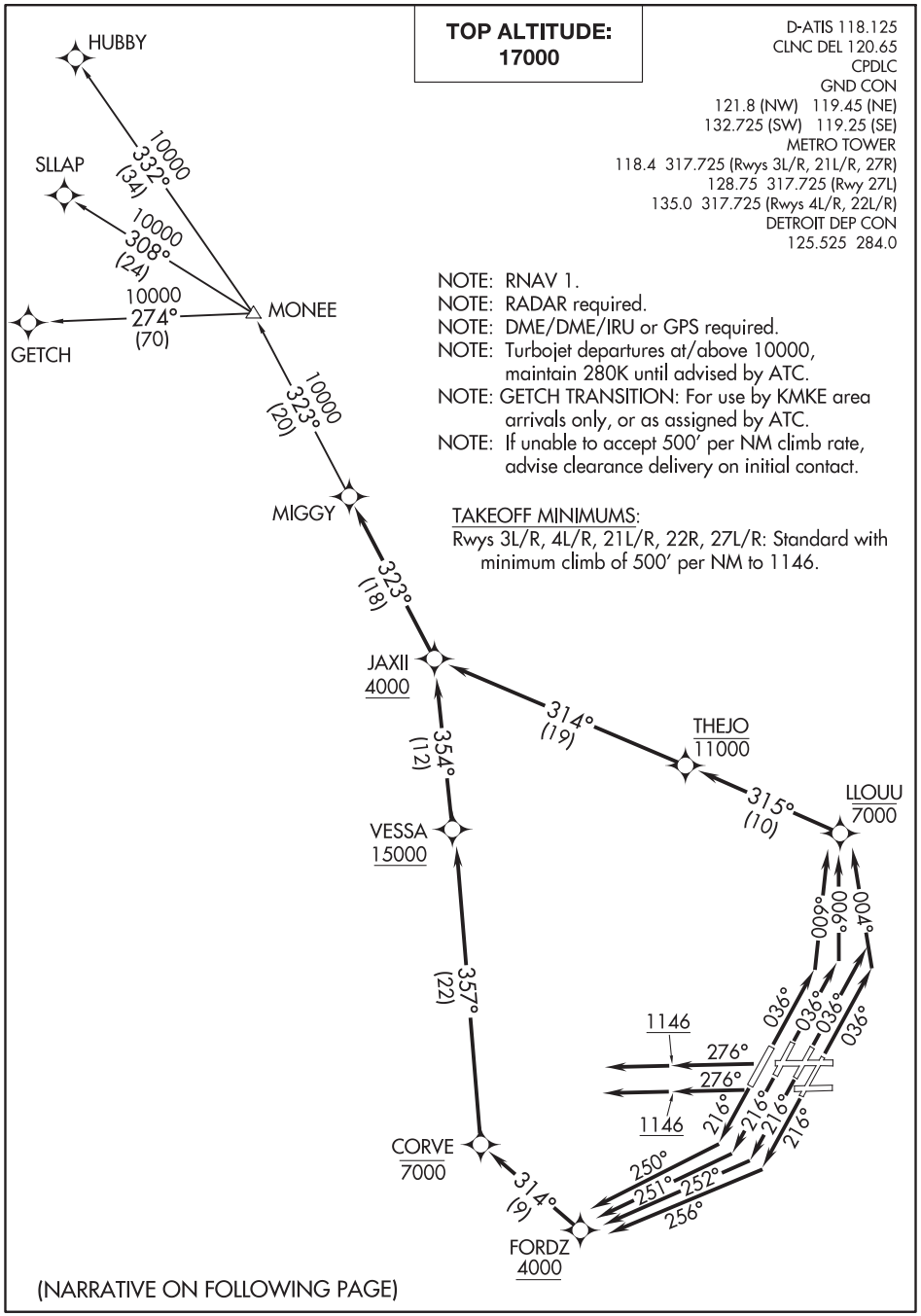
MIGGY TWO DEPARTURE (RNAV)

TOP ALTITUDE: 17000

D-ATIS 118.125
CLNC DEL 120.65
CPDLC
GND CON
121.8 (NW) 119.45 (NE)
132.725 (SW) 119.25 (SE)
METRO TOWER
118.4 317.725 (Rwys 3L/R, 21L/R, 27R)
128.75 317.725 (Rwy 27L)
135.0 317.725 (Rwys 4L/R, 22L/R)
DETROIT DEP CON
125.525 284.0

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: GETCH TRANSITION: For use by KMKE area arrivals only, or as assigned by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.

TAKEOFF MINIMUMS:
Rwys 3L/R, 4L/R, 21L/R, 22R, 27L/R: Standard with minimum climb of 500′ per NM to 1146.



(NARRATIVE ON FOLLOWING PAGE)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

DEPARTURE ROUTE DESCRIPTION

NOTE:See additional requirements in RNAV departure AAUP.

TAKEOFF RUNWAYS 3L/R: Climb on heading 036° to intercept course 004° to cross LLOUU at or below 7000, then on track 315° to cross THEJO at or below 11000, then on track 314° to cross JAXII at or above 4000, thence....

TAKEOFF RUNWAY 4L: Climb on heading 036° to intercept course 009° to cross LLOUU at or below 7000, then on track 315° to cross THEJO at or below 11000, then on track 314° to cross JAXII at or above 4000, thence....

TAKEOFF RUNWAY 4R: Climb on heading 036° to intercept course 006° to cross LLOUU at or below 7000, then on track 315° to cross THEJO at or below 11000, then on track 314° to cross JAXII at or above 4000, thence....

TAKEOFF RUNWAY 21L: Climb on heading 216° to intercept course 256° to cross FORDZ at or above 4000, then on track 314° to cross CORVE at or below 7000, then on track 357° to cross VESSA at or above 15000, then on track 354° to JAXII, thence....

TAKEOFF RUNWAY 21R: Climb on heading 216° to intercept course 252° to cross FORDZ at or above 4000, then on track 314° to cross CORVE at or below 7000, then on track 357° to cross VESSA at or above 15000, then on track 354° to JAXII, thence....

TAKEOFF RUNWAY 22L: Climb on heading 216° to intercept course 251° to cross FORDZ at or above 4000, then on track 314° to cross CORVE at or below 7000, then on track 357° to cross VESSA at or above 15000, then on track 354° to JAXII, thence....

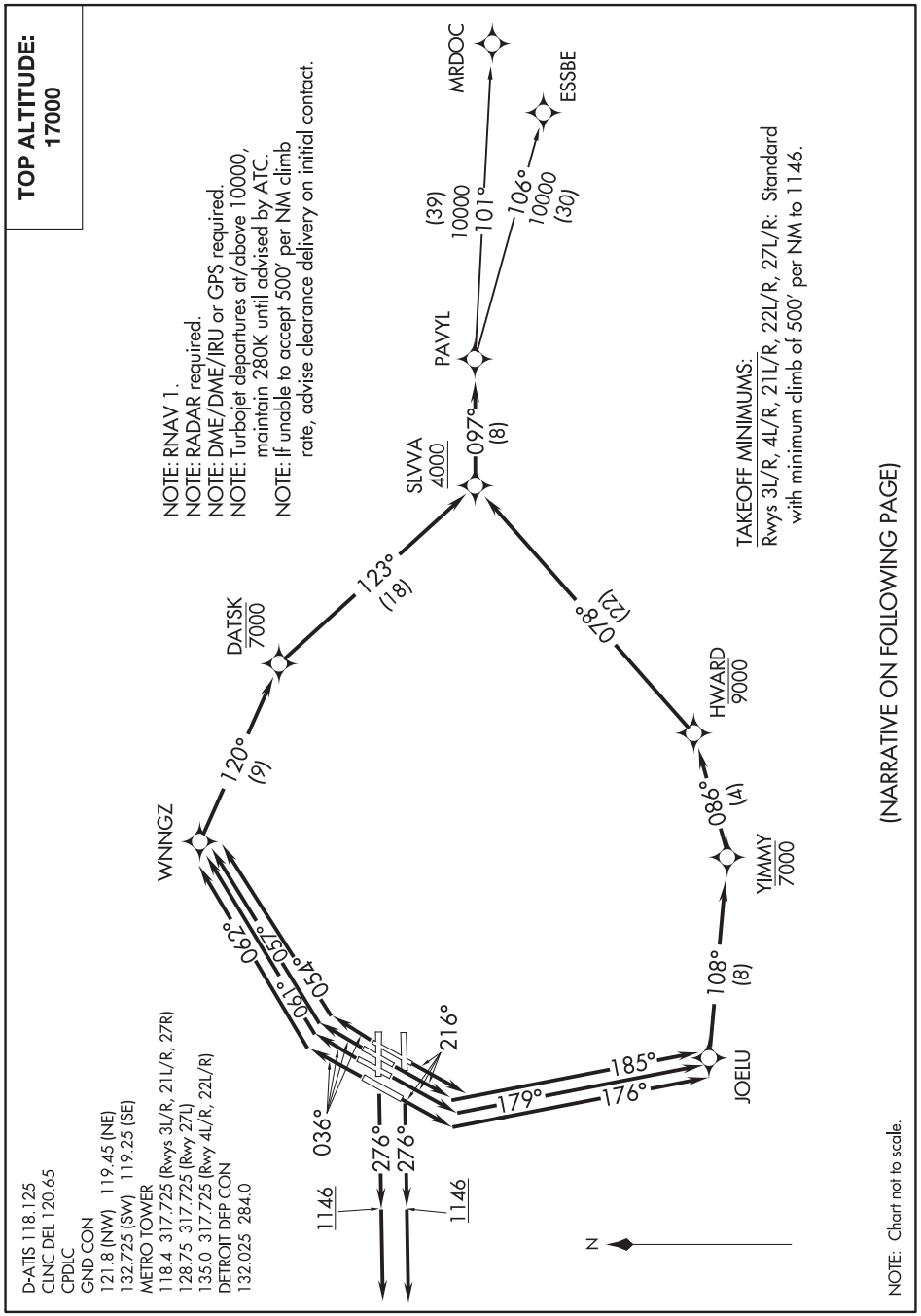
TAKEOFF RUNWAY 22R: Climb on heading 216° to intercept course 250° to cross FORDZ at or above 4000, then on track 314° to cross CORVE at or below 7000, then on track 357° to cross VESSA at or above 15000, then on track 354° to JAXII, thence....

TAKEOFF RUNWAY 27L/R: Climb on heading 276° to 1146, then on heading 276° or as assigned for RADAR vectors to cross JAXII at or above 4000, thence....

....on track 323° to MIGGY, then on (transition). Maintain 17000 or as assigned by ATC, expect filed altitude 10 minutes after departure.

GETCH TRANSITION (MIGGY2.GETCH)
HUBBY TRANSITION (MIGGY2.HUBBY)
SLLAP TRANSITION (MIGGY2.SLLAP)

EC-1, 25 FEB 2021 to 22 APR 2021


TOP ALTITUDE: 17000
NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: If unable to accept 500' per NM climb rate, advise clearance delivery on initial contact.
D-ATIS 118.125
CLNC DEL 120.65
CPDLC
GND CON
121.8 (NW) 119.45 (NE)
132.725 (SW) 119.25 (SE)
METRO TOWER
118.4 317.725 (Rwys 3L/R, 21L/R, 27R)
128.75 317.725 (Rwy 27L)
135.0 317.725 (Rwy 4L/R, 22L/R)
DETROIT DEP CON
132.025 284.0
WNNGZ
120° (9)
DATSK 7000
123° (18)
SLVVA 4000
097° (8)
PAVYL
(39) 10000
101°
MRDOC
106° 10000 (30)
ESSBE
078° (12)
HWARD 9000
086° (4)
YIMMY 7000
108° (8)
JOELU
185°
179°
176°
216°
036°
054°
057°
061°
090°
1146
276°
276°
1146
N
TAKEOFF MINIMUMS:
Rwys 3L/R, 4L/R, 21L/R, 22L/R, 27L/R: Standard with minimum climb of 500' per NM to 1146.
(NARRATIVE ON FOLLOWING PAGE)
NOTE: Chart not to scale.

EC-1, 25 FEB 2021 to 22 APR 2021

DEPARTURE ROUTE DESCRIPTION

NOTE:See additional requirements in RNAV departure AAUP.

TAKEOFF RUNWAY 3L: Climb on heading 036° to intercept course 057° to WNNGZ, then on track 120° to cross DATSK at or below 7000, then on track 123° to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 3R: Climb on heading 036° to intercept course 054° to WNNGZ, then on track 120° to cross DATSK at or below 7000, then on track 123° to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 4L: Climb on heading 036° to intercept course 062° to WNNGZ, then on track 120° to cross DATSK at or below 7000, then on track 123° to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 4R: Climb on heading 036° to intercept course 061° to WNNGZ, then on track 120° to cross DATSK at or below 7000, then on track 123° to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAYS 21L/R: Climb on heading 216° to intercept course 185° to JOELU, then on track 108° to cross YIMMY at or below 7000, then on track 086° to cross HWARD at or below 9000, then on track 078° to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 22L: Climb on heading 216° to intercept course 179° to JOELU, then on track 108° to cross YIMMY at or below 7000, then on track 086° to cross HWARD at or below 9000, then on track 078° to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 22R: Climb on heading 216° to intercept course 176° to JOELU, then on track 108° to cross YIMMY at or below 7000, then on track 086° to cross HWARD at or below 9000, then on track 078° to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAYS 27L/27R: Climb on heading 276° to 1146, then on heading 276° or as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....

....on track 097° to PAVYL, then on (transition). Maintain 17000 or as assigned by ATC, expect filed altitude 10 minutes after departure.

ESSBE TRANSITION (PAVYL2.ESSBE)
MRDOC TRANSITION (PAVYL2.MRDOC)

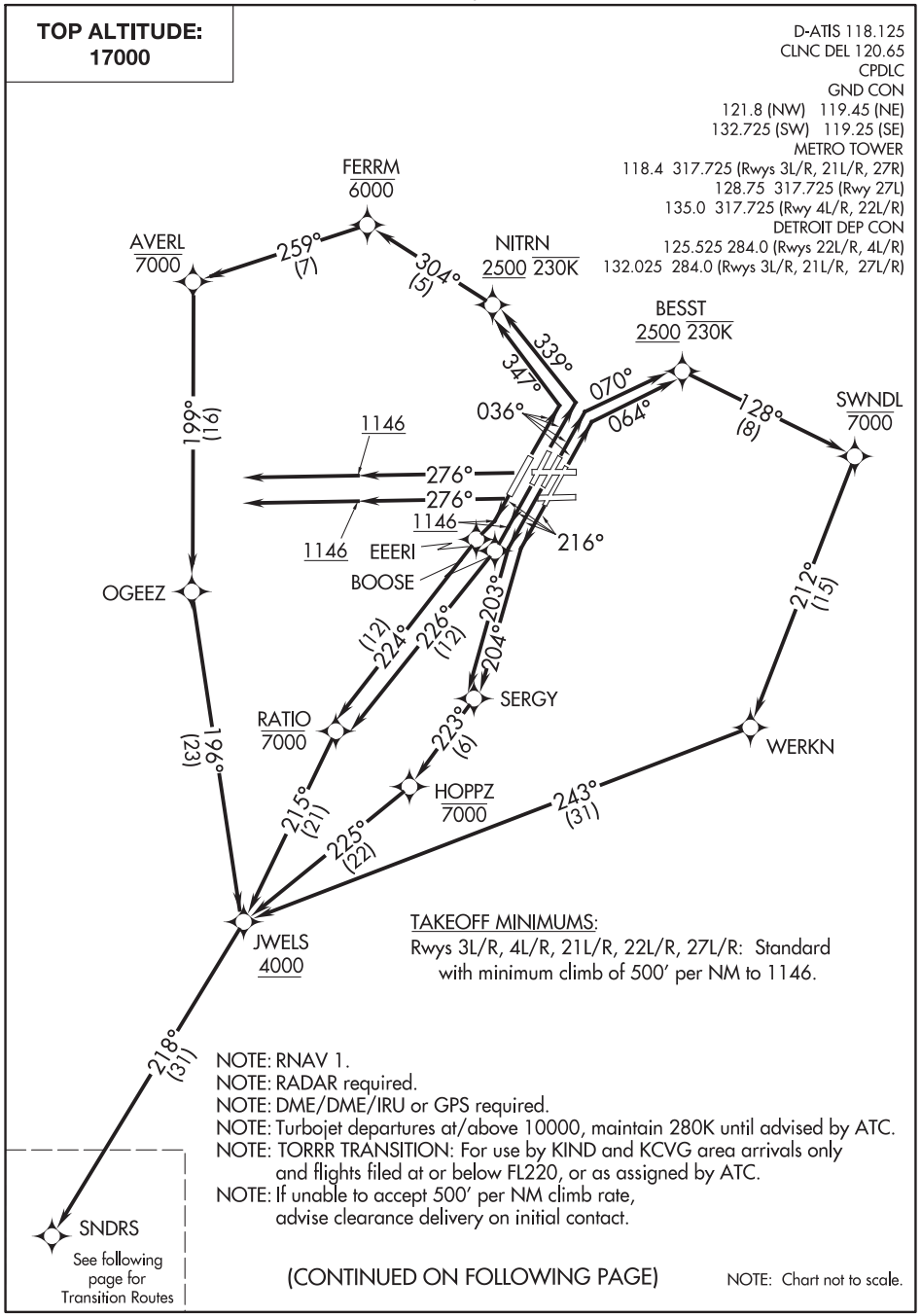
EC-1, 25 FEB 2021 to 22 APR 2021

SNDRS TWO DEPARTURE (RNAV) Departure Routes

DETROIT METROPOLITAN WAYNE COUNTY (DTW)
DETROIT, MICHIGAN

TOP ALTITUDE: 17000

D-ATIS 118.125
CLNC DEL 120.65
CPDLC
GND CON
121.8 (NW) 119.45 (NE)
132.725 (SW) 119.25 (SE)
METRO TOWER
118.4 317.725 (Rwys 3L/R, 21L/R, 27R)
128.75 317.725 (Rwy 27L)
135.0 317.725 (Rwy 4L/R, 22L/R)
DETROIT DEP CON
125.525 284.0 (Rwys 22L/R, 4L/R)
132.025 284.0 (Rwys 3L/R, 21L/R, 27L/R)



TAKEOFF MINIMUMS:
Rwys 3L/R, 4L/R, 21L/R, 22L/R, 27L/R: Standard with minimum climb of 500′ per NM to 1146.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TORRR TRANSITION: For use by KIND and KCVG area arrivals only and flights filed at or below FL220, or as assigned by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.

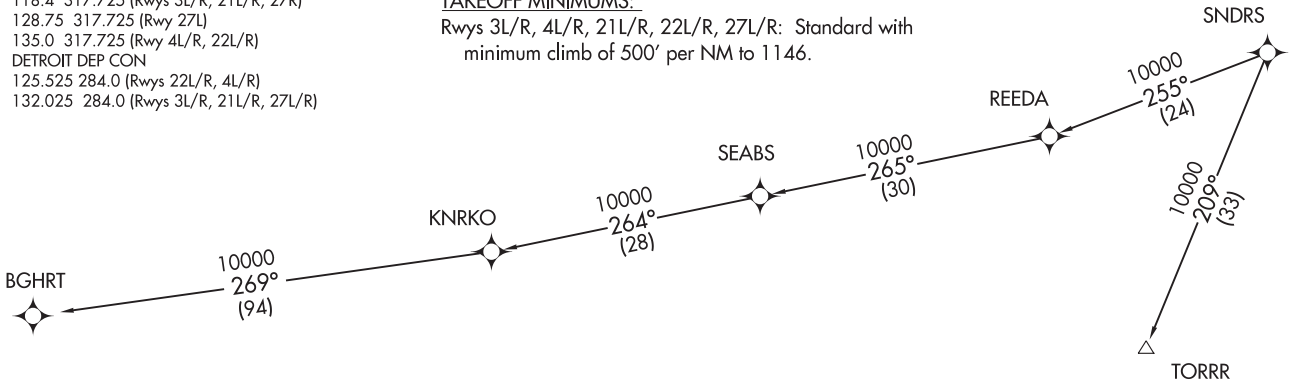
(CONTINUED ON FOLLOWING PAGE)

NOTE: Chart not to scale.

TOP ALTITUDE: 17000

D-ATIS 118.125
CLNC DEL 120.65
CPDLC
GND CON
121.8 (NW) 119.45 (NE)
132.725 (SW) 119.25 (SE)
METRO TOWER
118.4 317.725 (Rwys 3L/R, 21L/R, 27R)
128.75 317.725 (Rwy 27L)
135.0 317.725 (Rwy 4L/R, 22L/R)
DETROIT DEP CON
125.525 284.0 (Rwys 22L/R, 4L/R)
132.025 284.0 (Rwys 3L/R, 21L/R, 27L/R)

TAKEOFF MINIMUMS:
Rwys 3L/R, 4L/R, 21L/R, 22L/R, 27L/R: Standard with minimum climb of 500′ per NM to 1146.



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TORRR TRANSITION: For use by KIND and KCVG area arrivals only and flights filed at or below FL220, or as assigned by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.

N

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

DEPARTURE ROUTE DESCRIPTION

NOTE:See additional requirements in RNAV departure AAUP.

TAKEOFF RUNWAY 3L: Climb on heading 036° to intercept course 070° to cross BESST at or above 2500 and at or below 230K, then on track 128° to cross SWNDL at or below 7000, then on track 212° to WERKN, then on track 243° to cross JWELS at or above 4000, thence...
TAKEOFF RUNWAY 3R: Climb on heading 036° to intercept course 064° to cross BESST at or above 2500 and at or below 230K, then on track 128° to cross SWNDL at or below 7000, then on track 212° to WERKN, then on track 243° to cross JWELS at or above 4000, thence...
TAKEOFF RUNWAY 4L: Climb on heading 036° to intercept course 347° to cross NITRN at or above 2500 and at or below 230K, then on track 304° to cross FERRM at or below 6000, then on track 259° to cross AVERL at or below 7000, then or track 199° to OGEEZ, then on track 196° to cross JWELS at or above 4000, thence...
TAKEOFF RUNWAY 4R: Climb on heading 036° to intercept course 339° to cross NITRN at or above 2500 and at or below 230K, then on track 304° to cross FERRM at or below 6000, then on track 259° to cross AVERL at or below 7000, then or track 199° to OGEEZ, then on track 196° to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAY 21L: Climb on heading 216° to intercept course 204° to SERGY, then on track 223° to cross HOPPZ at or below 7000, then on track 225° to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAY 21R: Climb on heading 216° to intercept course 203° to SERGY, then on track 223° to cross HOPPZ at or below 7000, then on track 225° to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAY 22L: Climb on heading 216° to 1146, then direct BOOSE, then on track 226° to cross RATIO at or below 7000, then on track 215° to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAY 22R: Climb on heading 216° to 1146, then direct EEERI, then on track 224° to cross RATIO at or below 7000, then on track 215° to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAYS 27L/27R: Climb on heading 276° to 1146, then on heading 276° or as assigned for RADAR vectors to cross JWELS at or above 4000, thence....

....on track 218° to SNDRS, then on (transition). Maintain 17000 or as assigned by ATC, expect filed altitude 10 minutes after departure.

BGHRT TRANSITION (SNDRS2.BGHRT):
TORRR TRANSITION (SNDRS2.TORRR):

(TRMML3.TRMML) 19283

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

TRMML THREE DEPARTURE (RNAV) Departure Routes

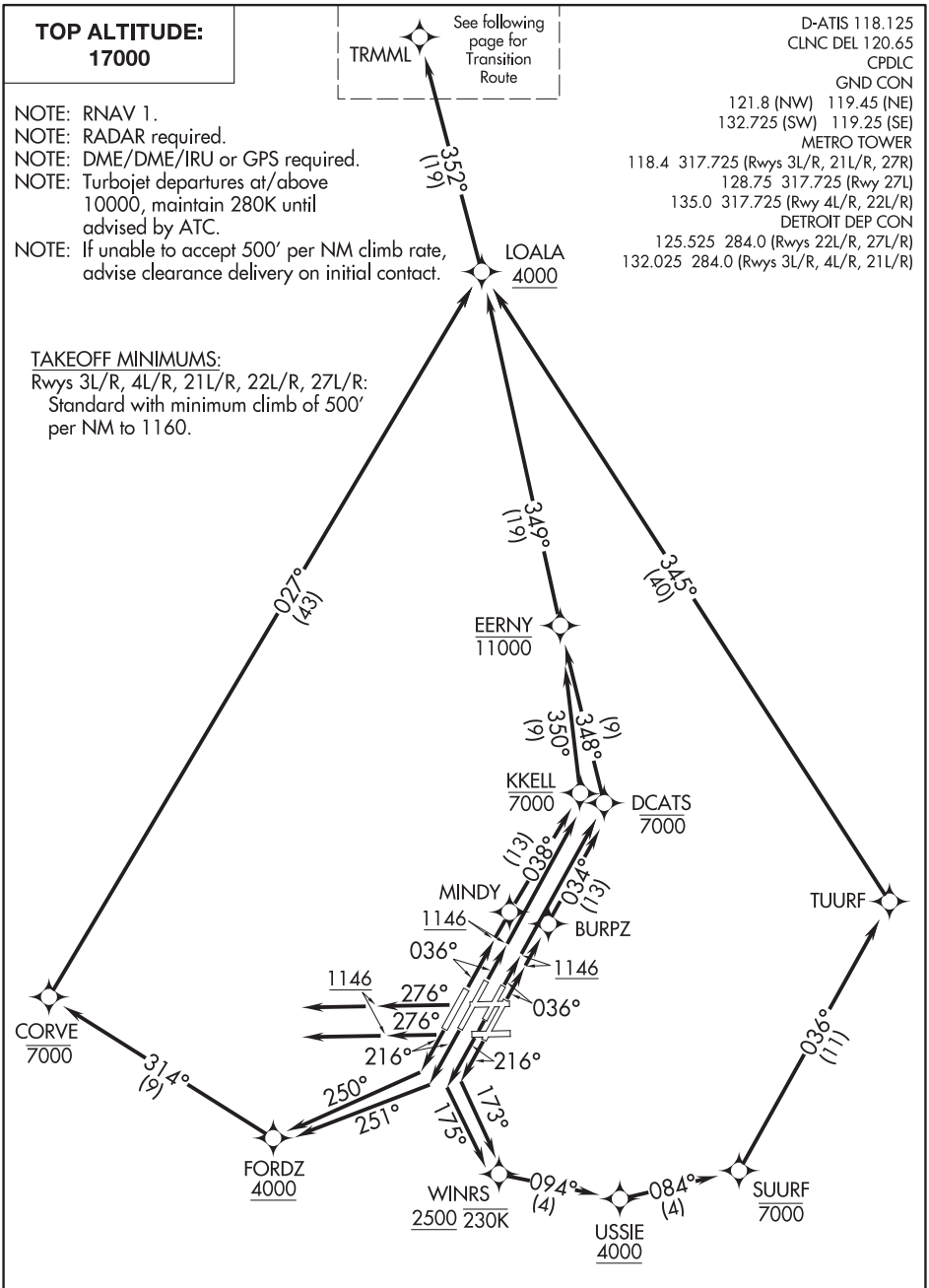
DETROIT, MICHIGAN

TOP ALTITUDE: 17000

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.

D-ATIS 118.125
CLNC DEL 120.65
CPDLC
GND CON
121.8 (NW) 119.45 (NE)
132.725 (SW) 119.25 (SE)
METRO TOWER
118.4 317.725 (Rwys 3L/R, 21L/R, 27R)
128.75 317.725 (Rwy 27L)
135.0 317.725 (Rwy 4L/R, 22L/R)
DETROIT DEP CON
125.525 284.0 (Rwys 22L/R, 27L/R)
132.025 284.0 (Rwys 3L/R, 4L/R, 21L/R)

TAKEOFF MINIMUMS:
Rwys 3L/R, 4L/R, 21L/R, 22L/R, 27L/R:
Standard with minimum climb of 500′ per NM to 1160.



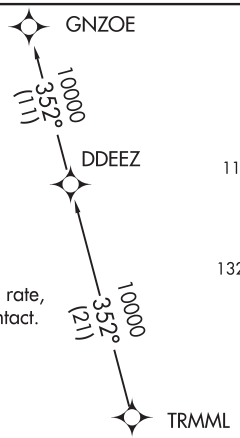
(CONTINUED ON FOLLOWING PAGE)

NOTE: Chart not to scale.

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

TOP ALTITUDE: 17000

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.



D-ATIS 118.125
CLNC DEL 120.65
CPDLC
GND CON
121.8 (NW) 119.45 (NE)
132.725 (SW) 119.25 (SE)
METRO TOWER
118.4 317.725 (Rwys 3L/R, 21L/R, 27R)
128.75 317.725 (Rwy 27L)
135.0 317.725 (Rwy 4L/R, 22L/R)
DETROIT DEP CON
125.525 284.0 (Rwys 22L/R, 27L/R)
132.025 284.0 (Rwys 3L/R, 4L/R, 21L/R)

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

NOTE: See additional requirements in RNAV departure AAUP.

TAKEOFF RUNWAY 3L: Climb on heading 036° to 1146, then direct to cross DCATS at or below 7000, then on track 348° to cross EERNY at or below 11000, then on track 349° to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 3R: Climb on heading 036° to 1146, then direct BURPZ, then on track 034° to cross DCATS at or below 7000, then on track 348° to cross EERNY at or below 11000, then on track 349° to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 4L: Climb on heading 036° to 1146, then direct MINDY, then on track 038° to cross KKELL at or below 7000, then on track 350° to cross EERNY at or below 11000, then on track 349° to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 4R: Climb on heading 036° to 1146, then direct to cross KKELL at or below 7000, then on track 350° to cross EERNY at or below 11000, then on track 349° to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 21L: Climb on heading 216° to intercept course 173° to cross WINRS at or above 2500 and at or below 230K, then on track 094° to cross USSIE at or above 4000, then on track 084° to cross SUURF at or below 7000, then on track 036° to TUURF, then on track 345° to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 21R: Climb on heading 216° to intercept course 175° to cross WINRS at or above 2500 and at or below 230K, then on track 094° to cross USSIE at or above 4000, then on track 084° to cross SUURF at or below 7000, then on track 036° to TUURF, then on track 345° to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 22L: Climb on heading 216° to intercept course 251° to cross FORDZ at or above 4000, then on track 314° to cross CORVE at or below 7000, then on track 027° to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 22R: Climb on heading 216° to intercept course 250° to cross FORDZ at or above 4000, then on track 314° to cross CORVE at or below 7000, then on track 027° to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAYS 27L/R: Climb on heading 276° to 1146, then on heading 276° or as assigned for RADAR vectors to cross LOALA at or above 4000, thence....

....on track 352° to TRMML, then on (transition). Maintain 17000 or as assigned by ATC, expect filed altitude 10 minutes after departure.
GNZOE TRANSITION (TRMML3.GNZOE)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

(ZETTR3.ZETTR) 19339

DETROIT METROPOLITAN WAYNE COUNTY (DTW)

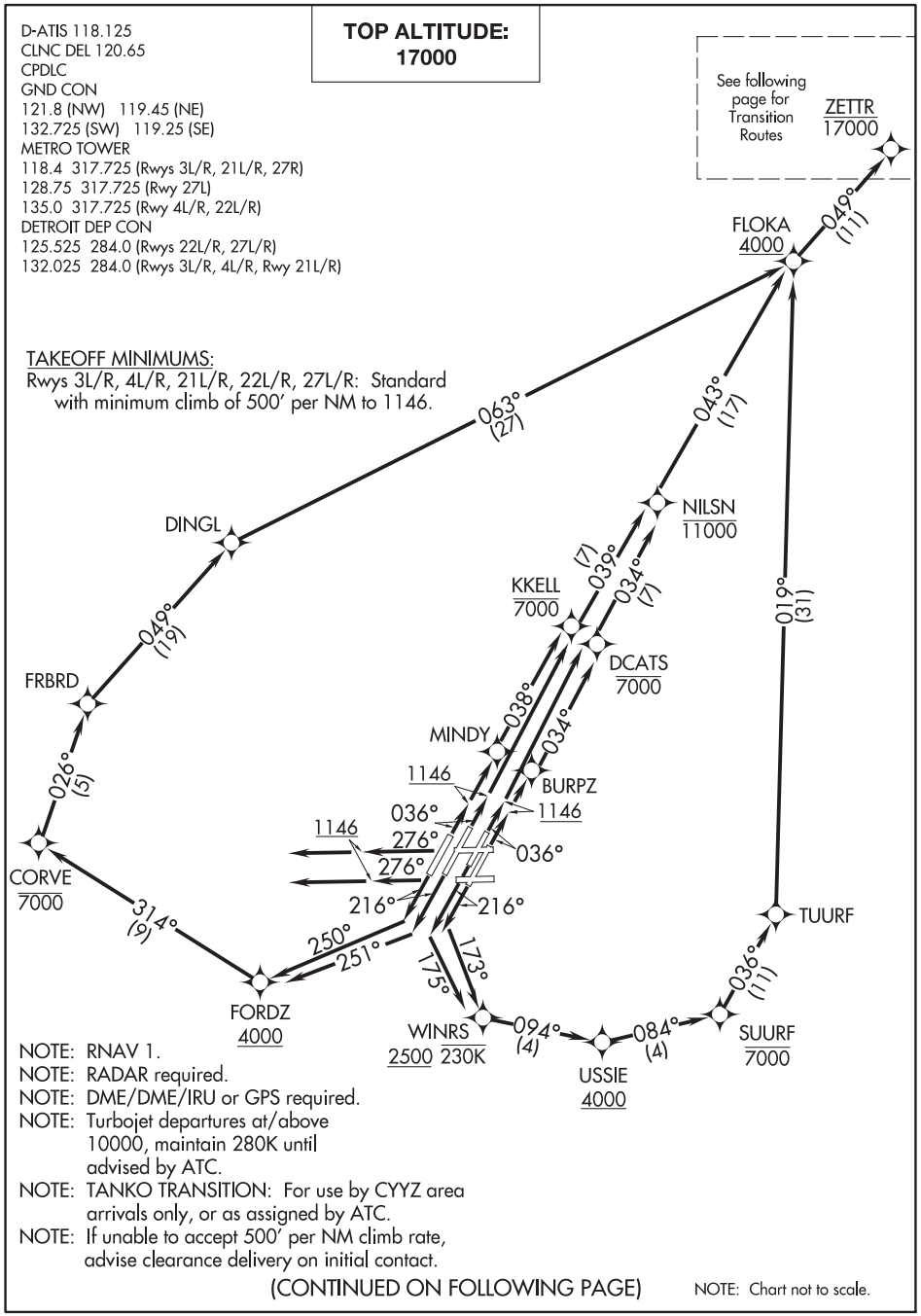
ZETTR THREE DEPARTURE (RNAV) Departure Routes

DETROIT, MICHIGAN

TOP ALTITUDE: 17000

D-ATIS 118.125
CLNC DEL 120.65
CPDLC
GND CON
121.8 (NW) 119.45 (NE)
132.725 (SW) 119.25 (SE)
METRO TOWER
118.4 317.725 (Rwys 3L/R, 21L/R, 27R)
128.75 317.725 (Rwy 27L)
135.0 317.725 (Rwy 4L/R, 22L/R)
DETROIT DEP CON
125.525 284.0 (Rwys 22L/R, 27L/R)
132.025 284.0 (Rwys 3L/R, 4L/R, Rwy 21L/R)

TAKEOFF MINIMUMS:
Rwys 3L/R, 4L/R, 21L/R, 22L/R, 27L/R: Standard with minimum climb of 500′ per NM to 1146.



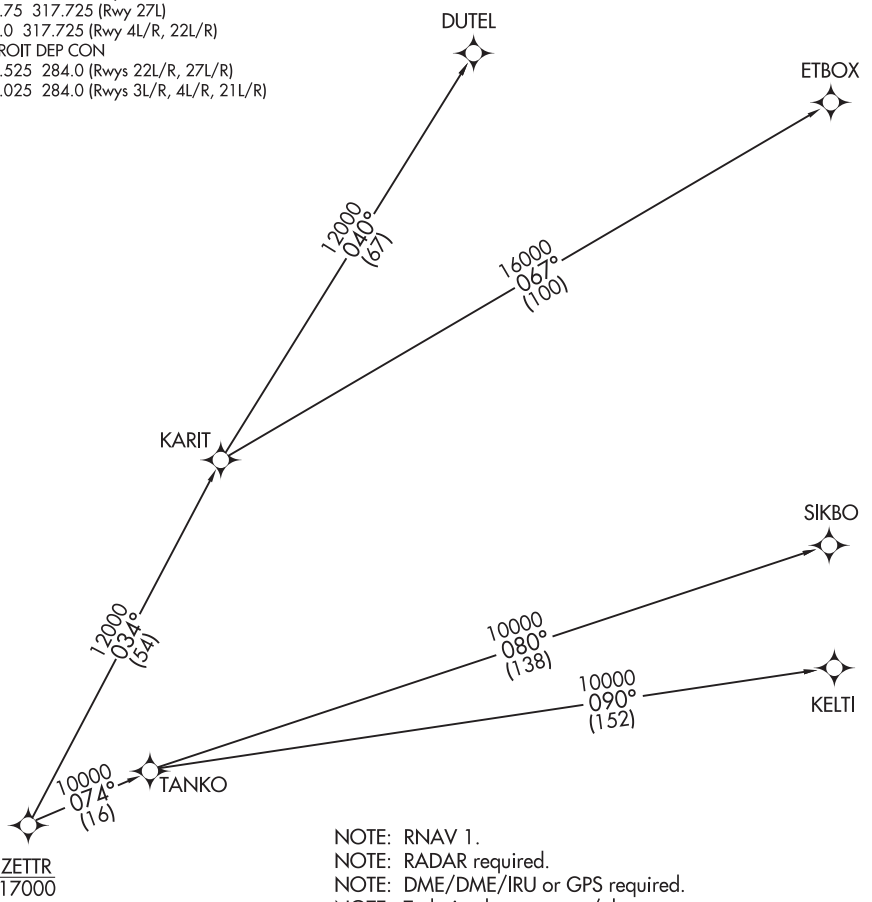
NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TANKO TRANSITION: For use by CYYZ area arrivals only, or as assigned by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.

(CONTINUED ON FOLLOWING PAGE)

NOTE: Chart not to scale.

TOP ALTITUDE: 17000

D-ATIS 118.125
CLNC DEL 120.65
CPDLC
GND CON
121.8 (NW) 119.45 (NE)
132.725 (SW) 119.25 (SE)
METRO TOWER
118.4 317.725 (Rwys 3L/R, 21L/R, 27R)
128.75 317.725 (Rwy 27L)
135.0 317.725 (Rwy 4L/R, 22L/R)
DETROIT DEP CON
125.525 284.0 (Rwys 22L/R, 27L/R)
132.025 284.0 (Rwys 3L/R, 4L/R, 21L/R)



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TANKO TRANSITION: For use by CYYZ area arrivals only, or as assigned by ATC.
NOTE: If unable to accept 500' per NM climb rate, advise clearance delivery on initial contact.

(NARRATIVE CONTINUED ON FOLLOWING PAGE) NOTE: Chart not to scale.

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

DEPARTURE ROUTE DESCRIPTION

NOTE: See additional requirements in RNAV departure AAUP.

TAKEOFF RUNWAY 3L: Climb on heading 036° to 1146, then direct to cross DCATS at or below 7000, then on track 034° to cross NILSN at or below 11000, then on track 043° to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 3R: Climb on heading 036° to 1146, then direct BURPZ, then on track 034° to cross DCATS at or below 7000, then on track 034° to cross NILSN at or below 11000, then on track 043° to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 4L: Climb on heading 036° to 1146, then direct MINDY, then on track 038° to cross KKELL at or below 7000, then on track 039° to cross NILSN at or below 11000, then on track 043° to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 4R: Climb on heading 036° to 1146, then direct to cross KKELL at or below 7000, then on track 039° to cross NILSN at or below 11000, then on track 043° to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 21L: Climb on heading 216° to intercept course 173° to cross WINRS at or above 2500 and at or below 230K, then on track 094° to cross USSIE at or above 4000, then on track 084° to cross SUURF at or below 7000, then on track 036° to TUURF, then on track 019° to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 21R: Climb on heading 216° to intercept course 175° to cross WINRS, at or above 2500 and at or below 230K, then on track 094° to cross USSIE at or above 4000, then on track 084° to cross SUURF at or below 7000, then on track 036° to TUURF, then on track 019° to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 22L: Climb on heading 216° to intercept course 251° to cross FORDZ at or above 4000, then on track 314° to cross CORVE at or below 7000, then on track 026° to FRBRD, then on track 049° to DINGL, then on track 063° to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 22R: Climb on heading 216° to intercept course 250° to cross FORDZ at or above 4000, then on track 314° to cross CORVE at or below 7000, then on track 026° to FRBRD, then on track 049° to DINGL, then on track 063° to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAYS 27L/R: Climb on heading 276° to 1146, then on heading 276° or as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....

....on track 049° to cross ZETTR at or below 17000, then on (transition). Maintain 17000 or as assigned by ATC, expect filed altitude 10 minutes after departure.

DUTEL TRANSITION (ZETTR3.DUTEL):
ETBOX TRANSITION (ZETTR3.ETBOX):
KELTI TRANSITION (ZETTR3.KELTI):
SIKBO TRANSITION (ZETTR3.SIKBO):
TANKO TRANSITION (ZETTR3.TANKO):

ILS or LOC RWY 5R
WILLOW RUN (YIP)

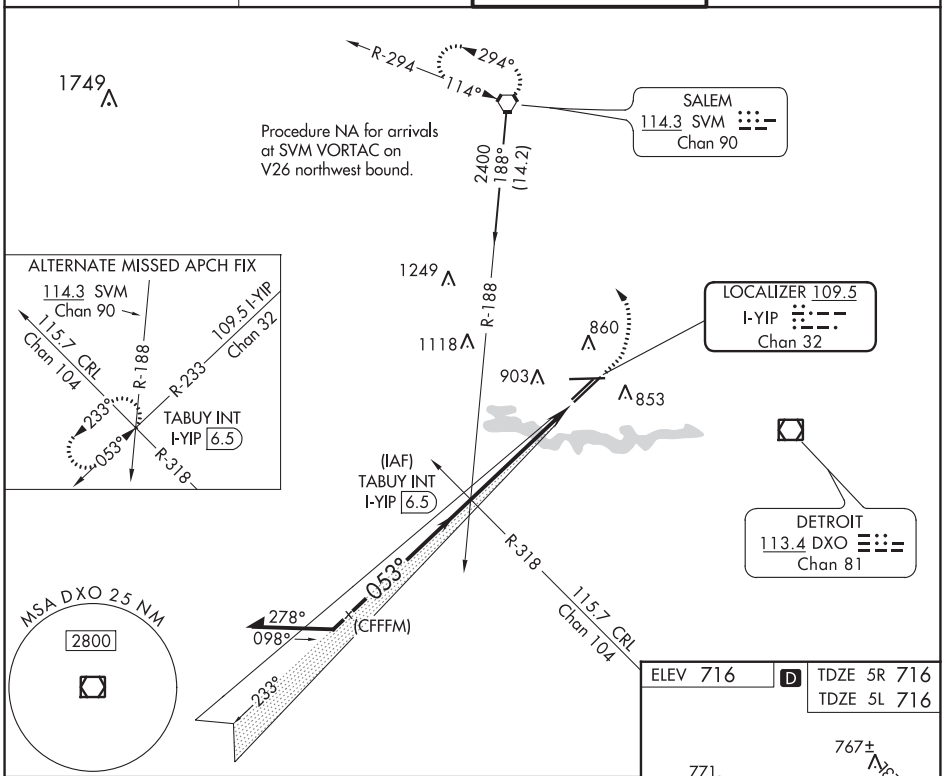
LOC/DME I-YIP	APP CRS		5R	5L
109.5	053°	Rwy ldg	7543	5996
Chan 32		TDZE	716	716
		Apt Elev	716	716

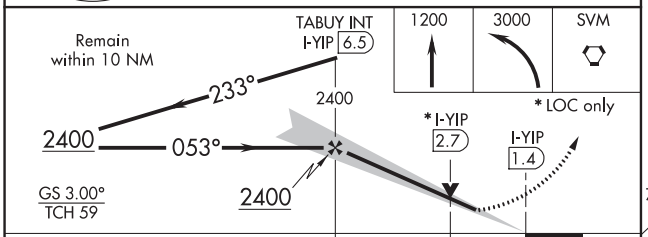
Circling to Rwy 9 NA at night.
For inop ALS, increase S-LOC 5R Cat C/D visibility to 1⅜ SM.

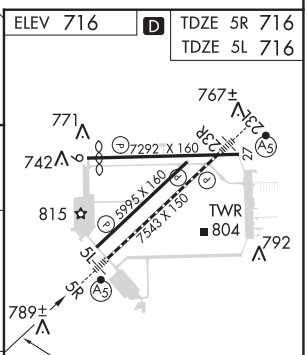
MALSR

MISSED APPROACH: Climb to 1200 then climbing left turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 284.0	125.275 256.9	119.975







TDZ/CL Rwy 5R
HIRL Rwy 5R-23L
MIRL Rwys 5L-23R, and 9-27

CATEGORY	A	B	C	D
S-ILS 5R	916/18 200 (200-½)			
S-LOC 5R	1200/24 484 (500-½)		1200/50 484 (500-1)	
SIDESTEP RWY 5L	1240-1 524 (600-1)		1240-1½ 524 (600-1½)	1240-2 524 (600-2)
C CIRCLING	1220-1 504 (600-1)		1220-1½ 504 (600-1½)	1400-2¼ 684 (700-2¼)

FAF to MAP 5.1 NM

Knots	60	90	120	150	180
Min:Sec	5:06	3:24	2:33	2:02	1:42

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN — AL-467 (FAA) — 20086

ILS or LOC RWY 23L
WILLOW RUN (YIP)

LOC/DME I-LSW	APP CRS		23R	23L
109.5	233°	Rwy ldg	5596	7543
Chan 32		TDZE	712	710
		Apt Elev	716	716

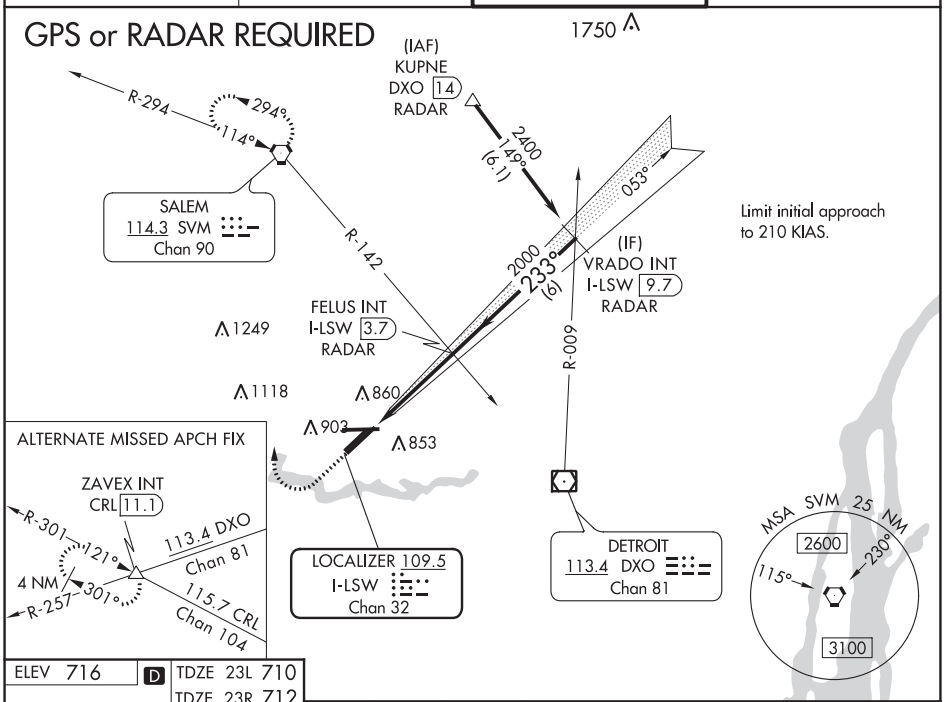
Inoperative table does not apply to S-ILS 23L.
For inoperative MALSR, increase S-LOC 23L Cat A/B visibility to 1 mile.
Helicopter visibility reduction below ¾ SM NA.

MALSR

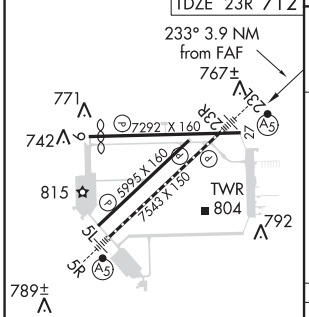
MISSED APPROACH: Climb to 1400 then climbing right turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 284.0	125.275 256.9	119.975

GPS or RADAR REQUIRED

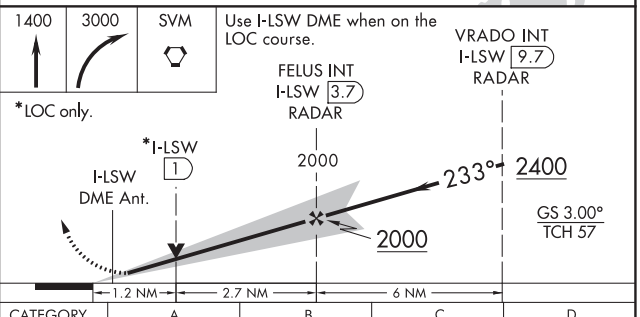


ELEV 716	D	TDZE 23L 710
		TDZE 23R 712



TDZ/CL Rwy 5R
HIRL Rwy 5R-23L
MIRL Rwys 5L-23R, and 9-27

FAF to MAP 3.9 NM					
Knots	60	90	120	150	180
Min:Sec	3:54	2:36	1:57	1:34	1:18



CATEGORY	A	B	C	D
S-ILS 23L	960-¾ 250 (300-¾)			
S-LOC 23L	1140-¾ 430 (500-¾)			
SIDESTEP RWY 23R	1140-1 428 (500-1)		1140-1½ 428 (500-1½)	1140-2 428 (500-2)
C CIRCLING	1220-1 504 (600-1)		1220-1½ 504 (600-1½)	1400-2¼ 684 (700-2¼)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

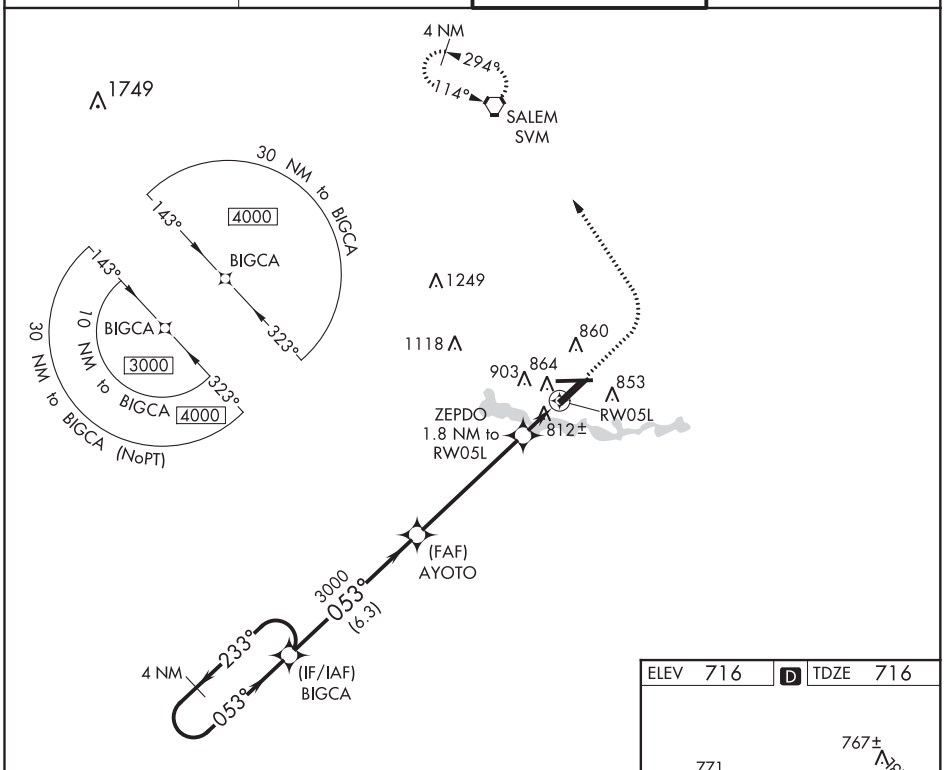
WAAS CH 78435 W05B	APP CRS 053°	Rwy ldg 5996 TDZE 716 Apt Elev 716

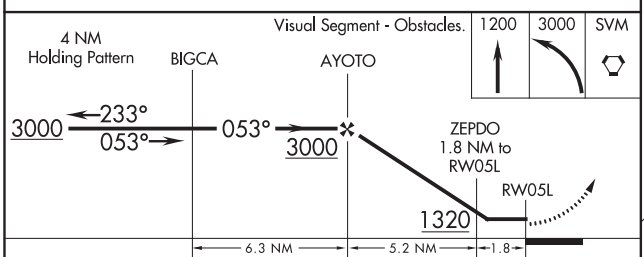
RNAV (GPS) RWY 5L
WILLOW RUN (YIP)

DME/DME RNP-0.3 NA.
Helicopter visibility reduction below ¾ SM NA.

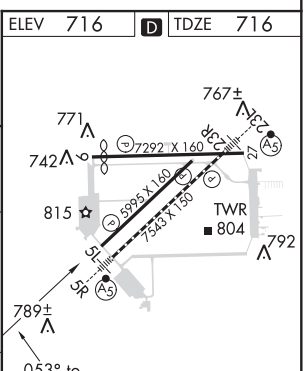
MISSED APPROACH: Climb to 1200, then climbing left turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 284.0	125.275 256.9	119.975





CATEGORY	A	B	C	D
LP MDA	1080-1 364 (400-1)			
LNAV MDA	1120-1 404 (500-1)		1120-1⅛ 404 (500-1⅛)	
C CIRCLING	1220-1 504 (600-1)		1220-1½ 504 (600-1½)	1400-2¼ 684 (700-2¼)



TDZ/CL Rwy 5R
HIRL Rwy 5R-23L
MIRL Rwys 5L-23R, and 9-27

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN

AL-467 (FAA)

19171

RNAV (GPS) RWY 5R
WILLOW RUN (YIP)

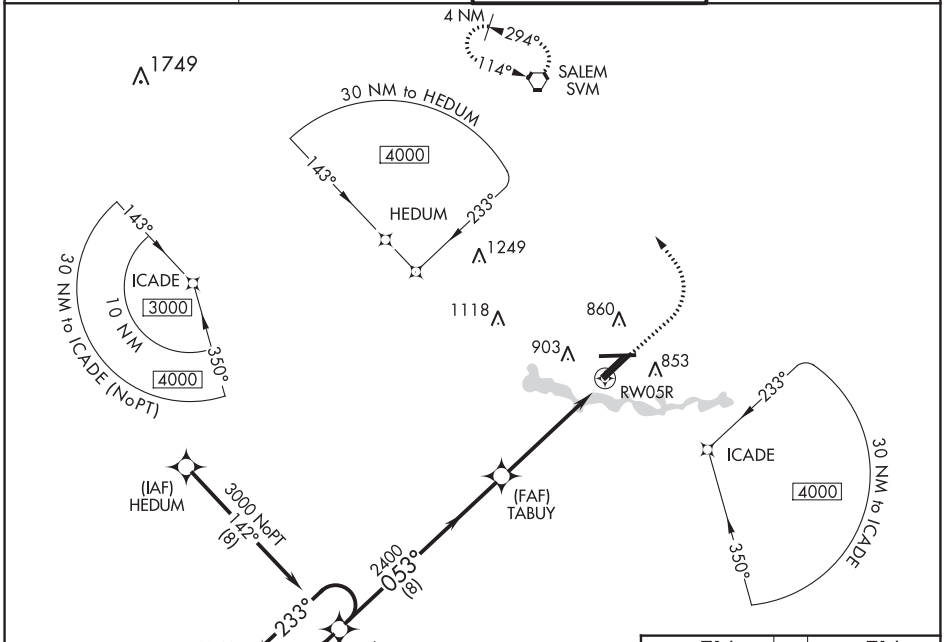
WAAS CH 97718 W05A	APP CRS 053°	Rwy ldg 7543 TDZE 716 Apt Elev 716

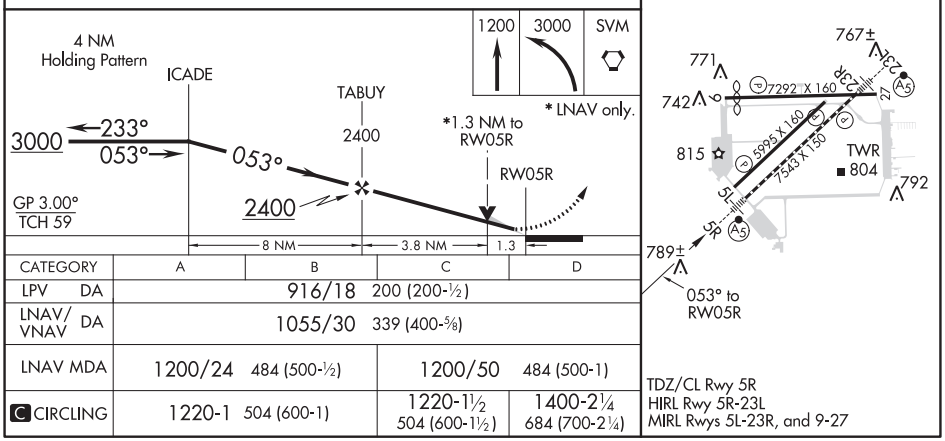
Circling to Rwy 9 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. For inop ALS, increase LNAV Cat C/D visibility to 1⅜ SM.

MALSR

MISSED APPROACH: Climb to 1200 then climbing left turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 284.0	125.275 256.9	119.975





CATEGORY	A	B	C	D
LPV DA	916/18 200 (200-½)			
LNAV/VNAV DA	1055/30 339 (400-⅝)			
LNAV MDA	1200/24 484 (500-½)		1200/50 484 (500-1)	
C CIRCLING	1220-1 504 (600-1)		1220-1½ 504 (600-1½)	1400-2¼ 684 (700-2¼)

TDZ/CL Rwy 5R
HIRL Rwy 5R-23L
MIRL Rwys 5L-23R, and 9-27

EC-1, 25 FEB 2021 to 22 APR 2021

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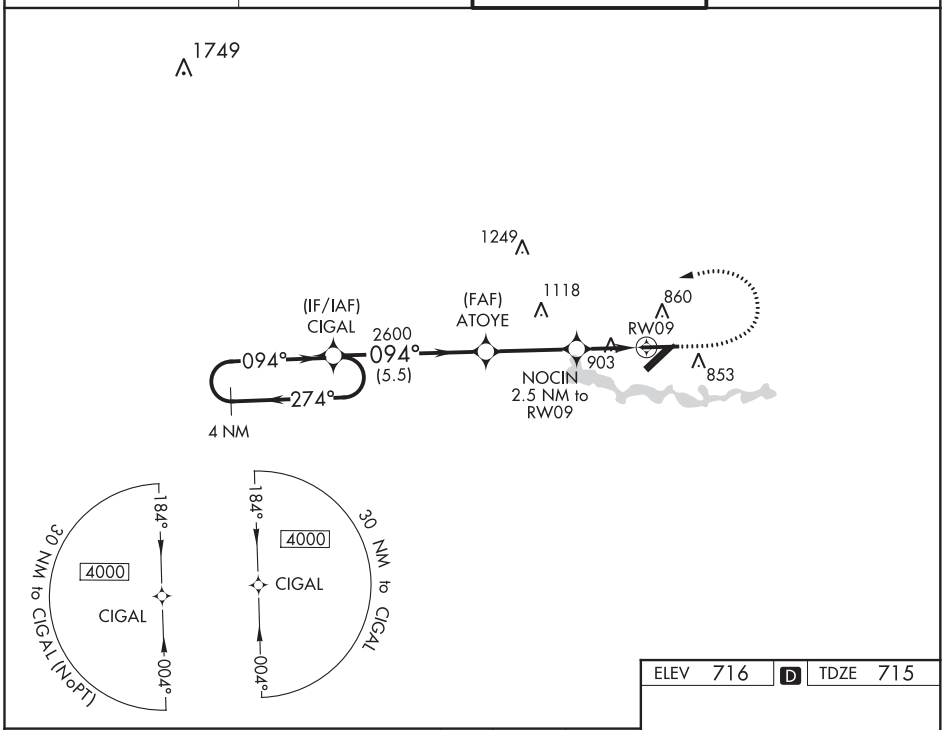
WAAS CH 73035 W09A	APP CRS 094°	Rwy ldg 6716 TDZE 715 Apt Elev 716

RNAV (GPS) RWY 9
WILLOW RUN (YIP)

DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C (-2°F) or above 54°C (130°F).

MISSED APPROACH: Climb to 1900 then climbing left turn to 4000 direct CIGAL and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 284.0	125.275 256.9	119.975



CATEGORY	A	B	C	D
LPV DA	965-1 250 (300-1)			
LNAV/VNAV DA	1197-1⅝ 482 (500-1⅝)			
LNAV MDA	1160-1 445 (500-1)		1160-1⅜ 445 (500-1⅜)	
C CIRCLING	1220-1 504 (600-1)		1220-1½ 504 (600-1½)	1400-2¼ 684 (700-2¼)

TDZ/CL Rwy 5R
HIRL Rwy 5R-23L
MIRL Rwys 5L-23R, and 9-27

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

DETROIT, MICHIGAN AL-467 (FAA) 19171

RNAV (GPS) RWY 23L
WILLOW RUN (YIP)

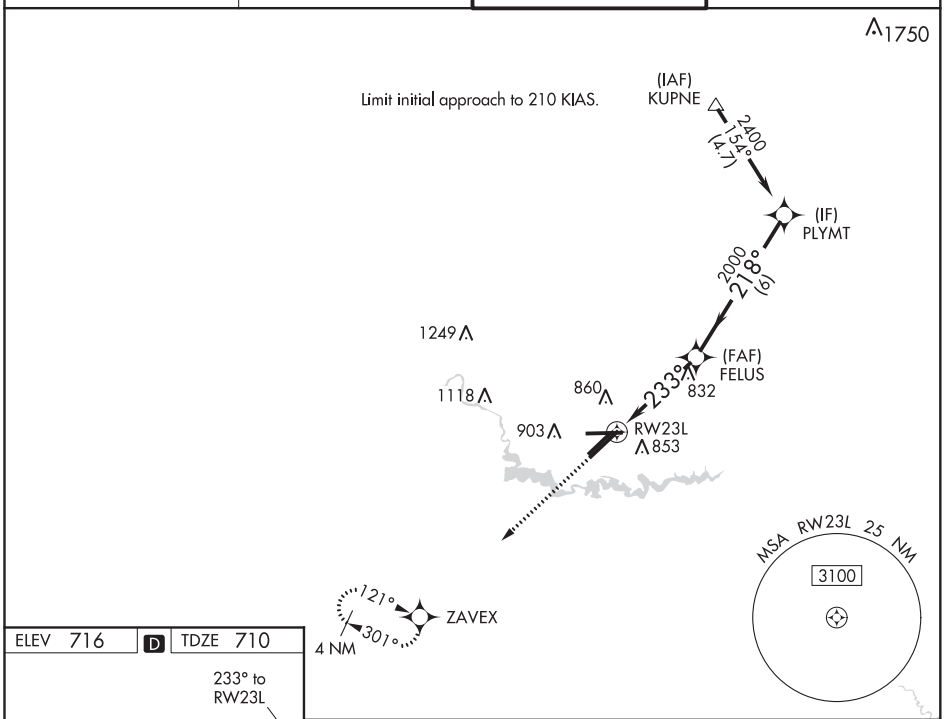
WAAS CH 81910 W23A	APP CRS 233°	Rwy ldg 7543 TDZE 710 Apt Elev 716

T A Inoperative table does not apply to LPV. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C (-2°F) or above 54°C (130°F). For inop MALSR, increase visibility LNAV/VNAV all Cats to ⅞ mile and LNAV Cat A/B to 1 mile, Cat C/D to 1⅛ mile. DME/DME RNP-0.3 NA. Helicopter visibility reduction below ¾ SM NA.

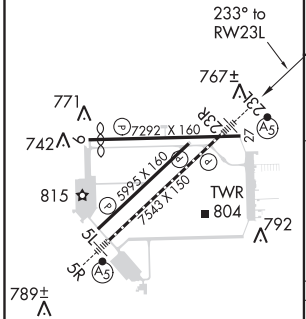
MALSR A5

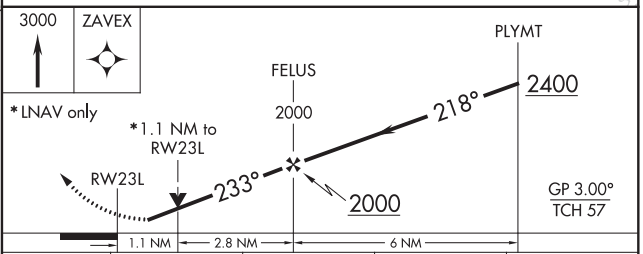
MISSED APPROACH: Climb to 3000 direct ZAVEX and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 284.0	125.275 256.9	119.975



ELEV 716 D TDZE 710





CATEGORY	A	B	C	D
LPV DA	959-¾ 249 (300-¾)			
LNAV/VNAV DA	974-¾ 264 (300-¾)			
LNAV MDA	1100-¾ 390 (400-¾)			
C CIRCLING	1220-1 504 (600-1)		1220-1½ 504 (600-1½)	1400-2¼ 684 (700-2¼)

TDZ/CL Rwy 5R
HIRL Rwy 5R-23L
MIRL Rwys 5L-23R, and 9-27

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

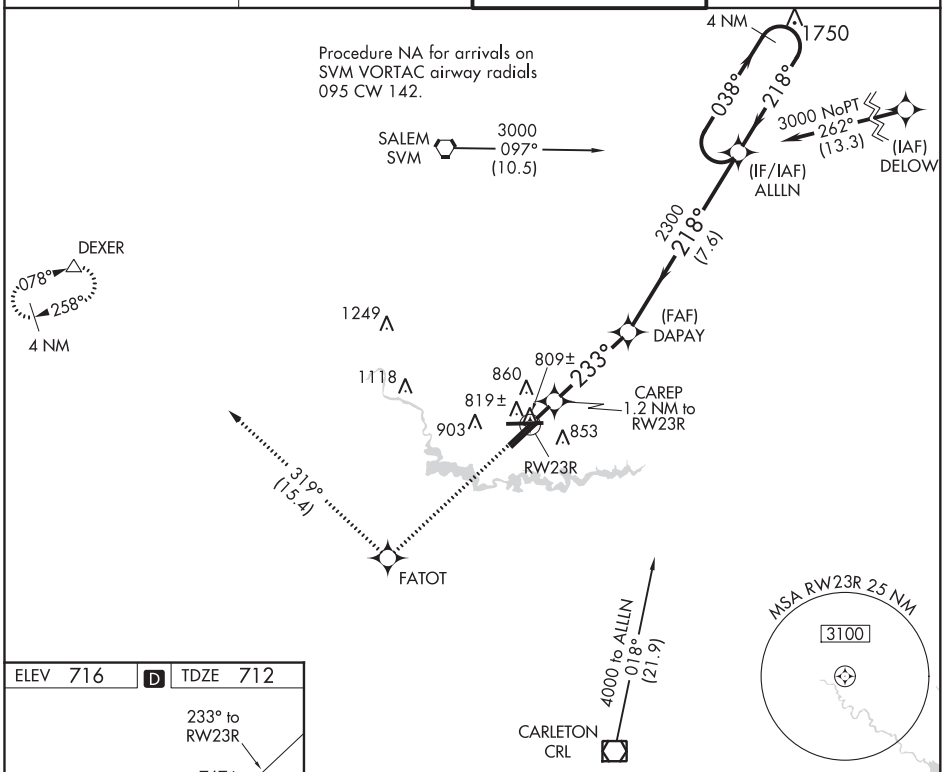
WAAS CH 93622 W23B	APP CRS 233°	Rwy ldg 5596 TDZE 712 Apt Elev 716

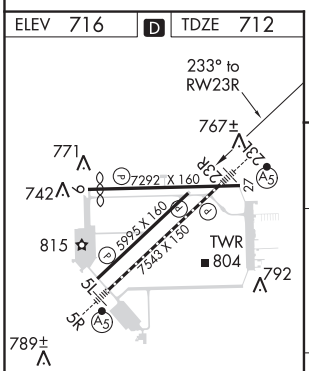
RNAV (GPS) RWY 23R
WILLOW RUN (YIP)

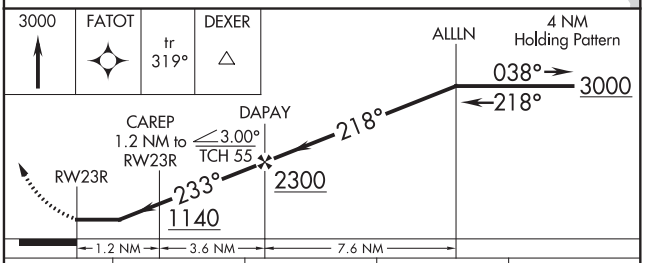
Helicopter visibility reduction below ¾ SM NA.
DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3000 direct FATOT and on track 319° to DEXER and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 284.0	125.275 256.9	119.975







CATEGORY	A	B	C	D
LP MDA	1060-1 348 (400-1)			
LNAV MDA	1080-1 368 (400-1)			
C CIRCLING	1220-1 504 (600-1)		1220-1½ 504 (600-1½)	1400-2¼ 684 (700-2¼)

TDZ/CL Rwy 5R
HIRL Rwy 5R-23L
MIRL Rwys 5L-23R, and 9-27

EC-1, 25 FEB 2021 to 22 APR 2021

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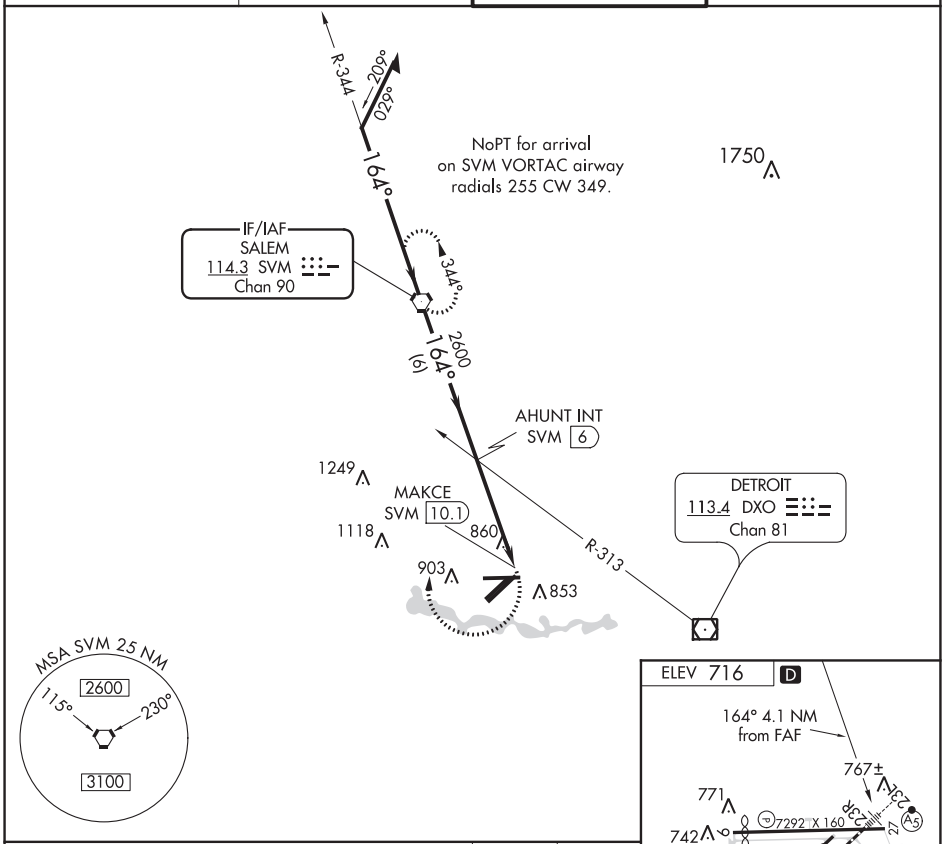
VORTAC SVM	APP CRS	Rwy ldg	N/A
114.3	164°	TDZE	N/A
Chan 90		Apt Elev	716

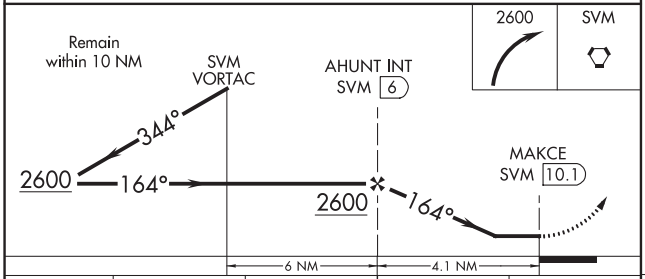
VOR-A
WILLOW RUN (YIP)

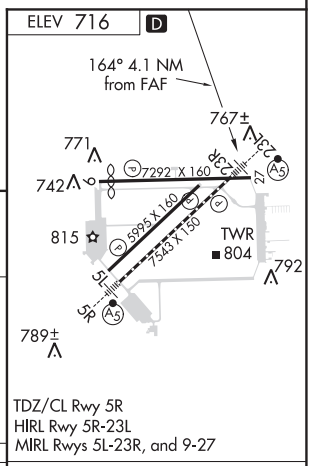
Helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climbing right turn to 2600 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	WILLOW RUN TOWER	GND CON
127.425	118.95 284.0	125.275 256.9	119.975







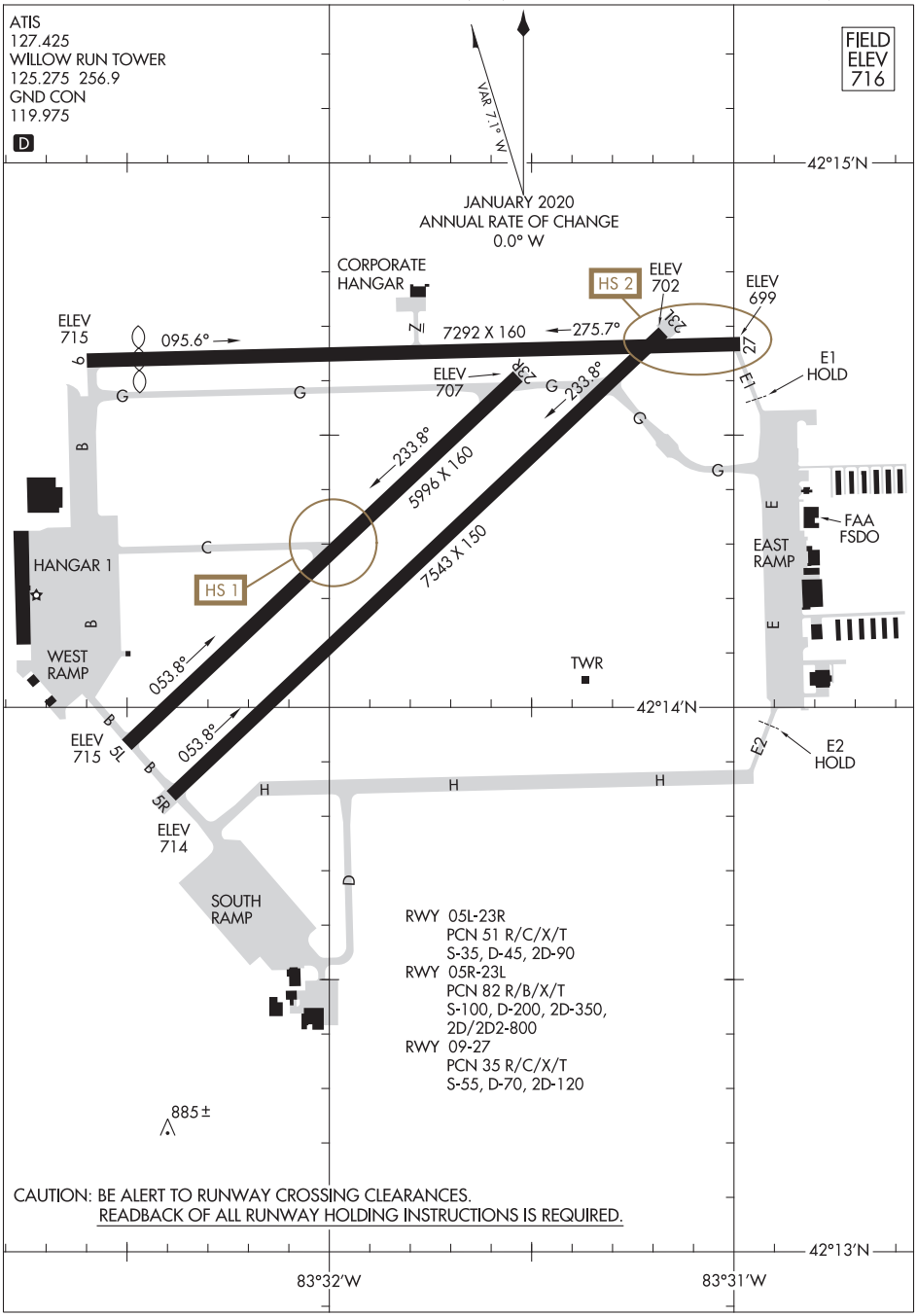
CATEGORY	A	B	C	D
C CIRCLING	1420-1 704 (800-1)		1420-2 704 (800-2)	1420-2¼ 704 (800-2¼)

FAF to MAP 4.1 NM					
Knots	60	90	120	150	180
Min:Sec	4:06	2:44	2:03	1:38	1:22

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

AL-467 (FAA)



EC-1, 25 FEB 2021 to 22 APR 2021

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(BARII2.BARII) 19227

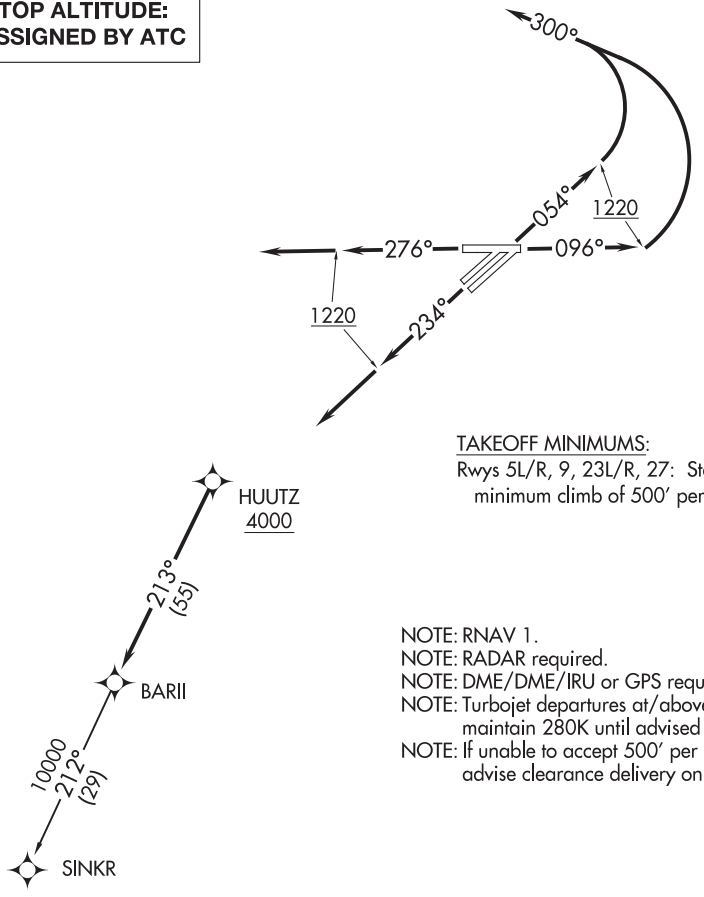
BARII TWO DEPARTURE (RNAV)

AL-467 (FAA)

WILLOW RUN (YIP)
DETROIT, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
127.425
GND CON
119.975
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 284.0



TAKEOFF MINIMUMS:
Rwys 5L/R, 9, 23L/R, 27: Standard with minimum climb of 500′ per NM to 1220.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 5L/R: Climb on heading 054° to 1220, then left turn heading 300° for RADAR vectors to cross HUUTZ at or above 4000, thence....
TAKEOFF RUNWAY 9: Climb on heading 096° to 1220, then left turn heading 300° for RADAR vectors to cross HUUTZ at or above 4000, thence....
TAKEOFF RUNWAYS 23L/R: Climb on heading 234° to 1220, then on heading 234° for RADAR vectors to cross HUUTZ at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1220, then on heading 276° for RADAR vectors to cross HUUTZ at or above 4000, thence....

....on track 213° to BARII, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

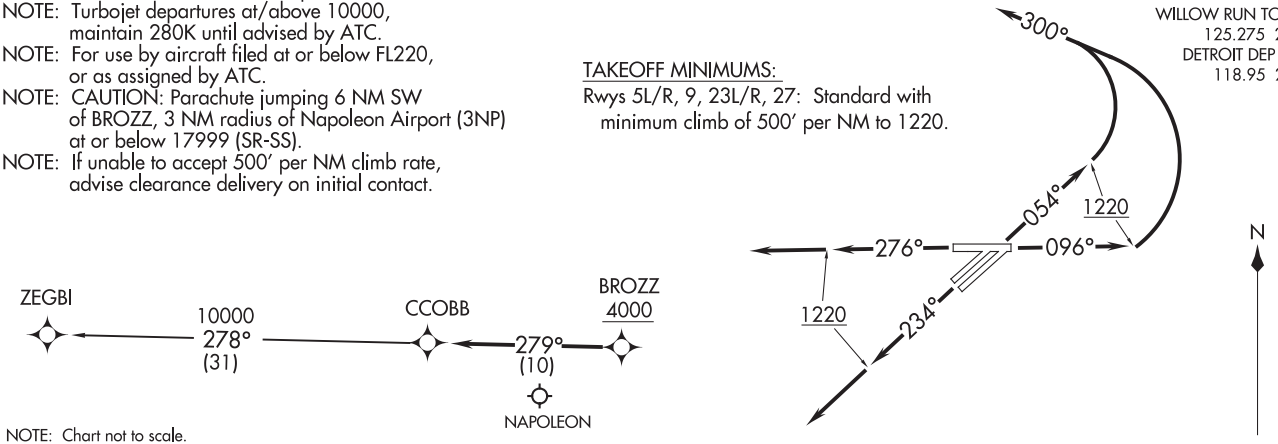
SINKR TRANSITION (BARII2.SINKR):

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: For use by aircraft filed at or below FL220, or as assigned by ATC.
NOTE: CAUTION: Parachute jumping 6 NM SW of BROZZ, 3 NM radius of Napoleon Airport (3NP) at or below 17999 (SR-SS).
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
127.425
GND CON
119.975
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 284.0

TAKEOFF MINIMUMS:
Rwys 5L/R, 9, 23L/R, 27: Standard with minimum climb of 500′ per NM to 1220.



NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 5L/R: Climb on heading 054° to 1220, then left turn heading 300° for RADAR vectors to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 9: Climb on heading 096° to 1220, then left turn heading 300° for RADAR vectors to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAYS 23L/R: Climb on heading 234° to 1220, then on heading 234° for RADAR vectors to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1220, then on heading 276° for RADAR vectors to cross BROZZ at or above 4000, thence....

....on track 279° to CCOBB, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ZEGBI TRANSITION (CCOBB2.ZEGBI):

(CLVIN2.CLVIN) 19227

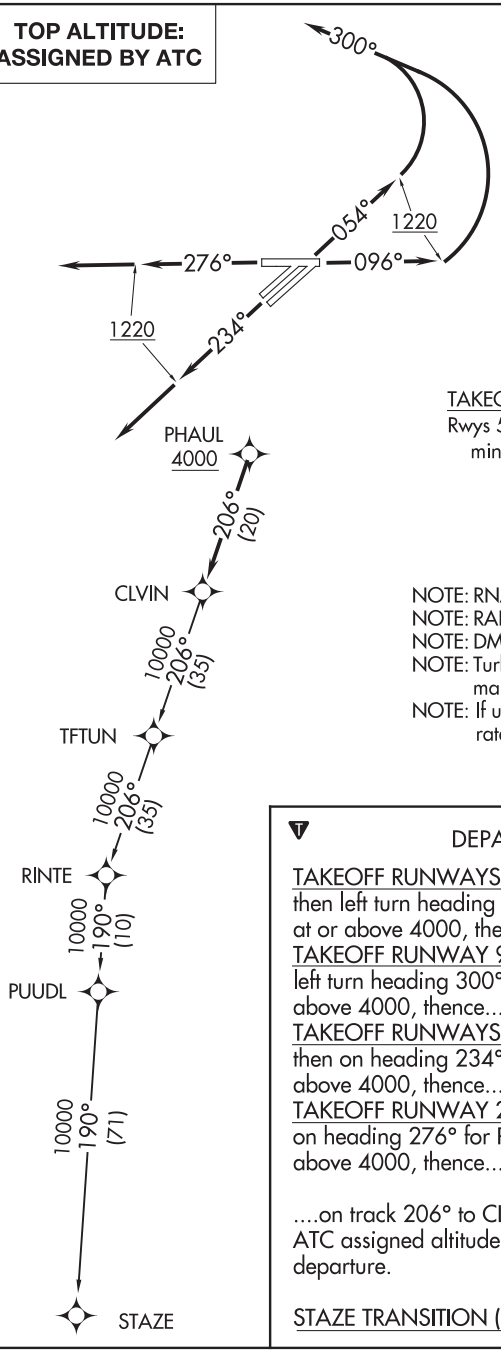
CLVIN TWO DEPARTURE (RNAV)

AL-467 (FAA)

WILLOW RUN (YIP)
DETROIT, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
127.425
GND CON
119.975
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 284.0



TAKEOFF MINIMUMS:
Rwys 5L/R, 9, 23L/R, 27: Standard with minimum climb of 500′ per NM to 1220.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery in initial contact.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 5L/R: Climb on heading 054° to 1220, then left turn heading 300° for RADAR vectors to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 9: Climb on heading 096° to 1220, then left turn heading 300° for RADAR vectors to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAYS 23L/R: Climb on heading 234° to 1220, then on heading 234° for RADAR vectors to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1220, then on heading 276° for RADAR vectors to cross PHAUL at or above 4000, thence....

....on track 206° to CLVIN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

STAZE TRANSITION (CLVIN2.STAZE):

EC-1, 25 FEB 2021 to 22 APR 2021

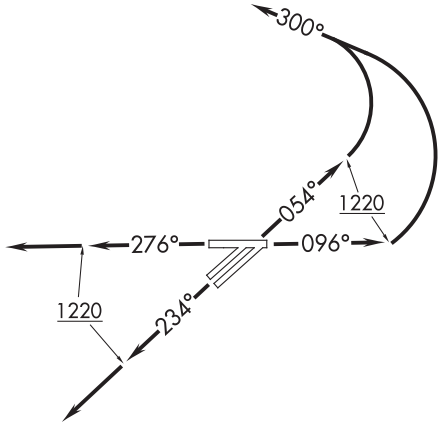
CLVIN TWO DEPARTURE (RNAV)
(CLVIN2.CLVIN) 15AUG19

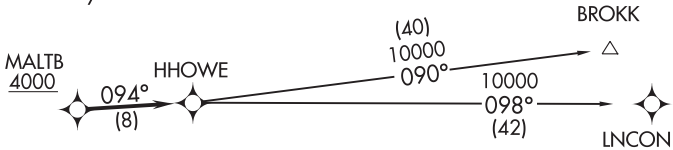
DETROIT, MICHIGAN
WILLOW RUN (YIP)

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: BROKK TRANSITION: For use by flights filed at or below FL270, or as assigned by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.

ATIS
127.425
GND CON
119.975
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 284.0





TAKEOFF MINIMUMS:
Rwys 5L/R, 9, 23L/R, 27: Standard with minimum climb of 500′ per NM to 1220.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 5L/R: Climb on heading 054° to 1220, then left turn heading 300° for RADAR vectors to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 9: Climb on heading 096° to 1220, then left turn heading 300° for RADAR vectors to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAYS 23L/R: Climb on heading 234° to 1220, then on heading 234° for RADAR vectors to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1220, then on heading 276° for RADAR vectors to cross MALTB at or above 4000, thence....

....on track 094° to HHOWE, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

BROKK TRANSITION (HHOWE3.BROKK)
LNCON TRANSITION (HHOWE3.LNCON)

KAYLN TWO DEPARTURE (RNAV)

(KAYLN2.KAYLN) 15AUG19

WILLOW RUN (YIP)
DETROIT, MICHIGAN

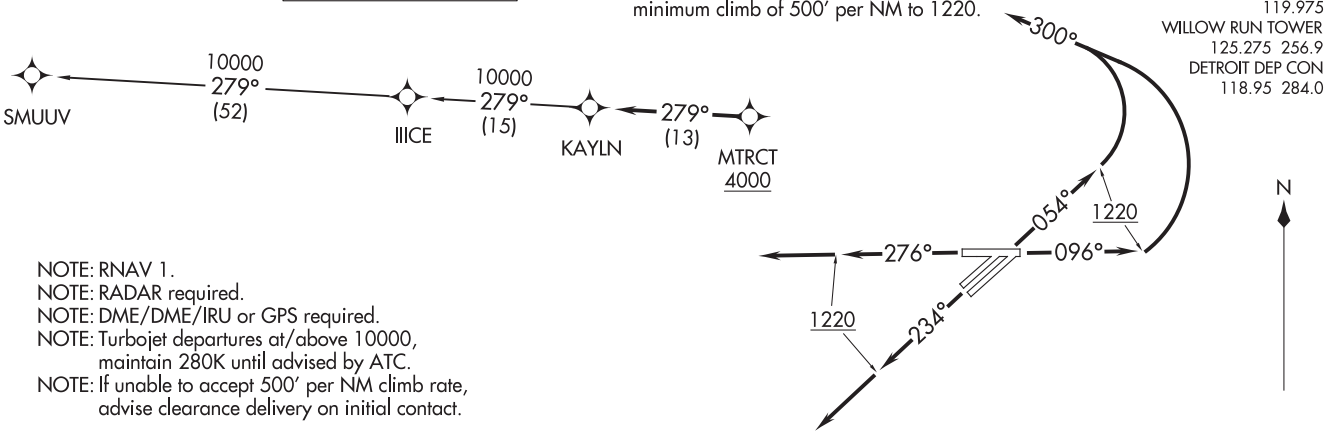
(KAYLN2.KAYLN) 19227

AL-467 (FAA)

TOP ALTITUDE: ASSIGNED AT ATC

TAKEOFF MINIMUMS:
Rwys 5L/R, 9, 23L/R, 27: Standard with minimum climb of 500′ per NM to 1220.

ATIS
127.425
GND CON
119.975
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 284.0



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.

NOTE: Chart not to scale.

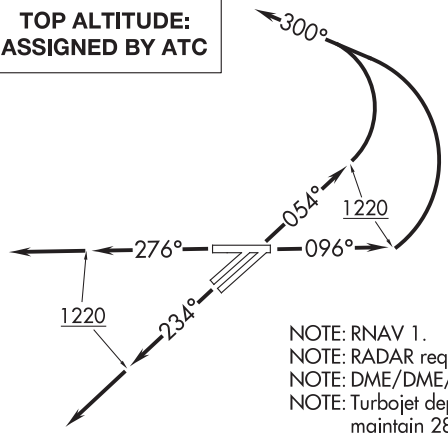
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 5L/R: Climb on heading 054° to 1220, then left turn heading 300° for RADAR vectors to cross MTRCT at or above 4000, thence....
TAKEOFF RUNWAY 9: Climb on heading 096° to 1220, then left turn heading 300° for RADAR vectors to cross MTRCT at or above 4000, thence....
TAKEOFF RUNWAYS 23L/R: Climb on heading 234° to 1220, then on heading 234° for RADAR vectors to cross MTRCT at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1220, then on heading 276° for RADAR vectors to cross MTRCT at or above 4000, thence....

....on track 279° to KAYLN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

SMUUV TRANSITION (KAYLN2.SMUUV):

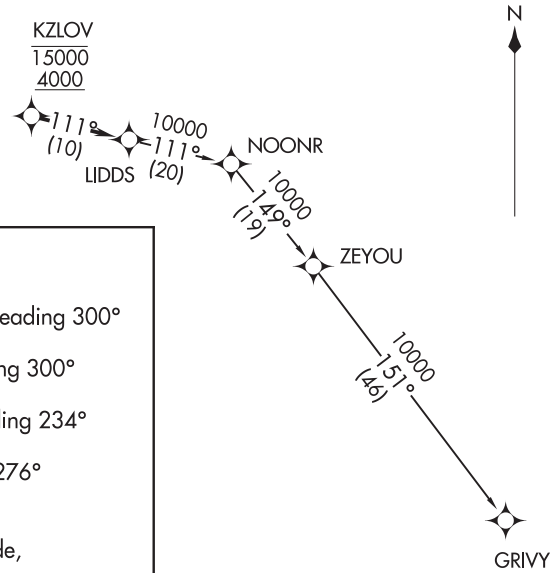
TOP ALTITUDE: ASSIGNED BY ATC



TAKEOFF MINIMUMS:
Rwys 5L/R, 9, 23L/R, 27: Standard with minimum climb of 500′ per NM to 1220.

ATIS
127.425
GND CON
119.975
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 284.0

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.



NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 5L/R: Climb on heading 054° to 1220, then left turn heading 300° for RADAR vectors to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAY 9: Climb on heading 096° to 1220, then left turn heading 300° for RADAR vectors to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAYS 23L/R: Climb on heading 234° to 1220, then on heading 234° for RADAR vectors to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1220, then on heading 276° for RADAR vectors to cross KZLOV between 4000 and 15000, thence....

....on track 111° to LIDDS, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GRIVY TRANSITION (LIDDS2.GRIVY):

ATIS 127.425
GND CON
119.975
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 284.0

TOP ALTITUDE: 3000

TAKEOFF MINIMUMS

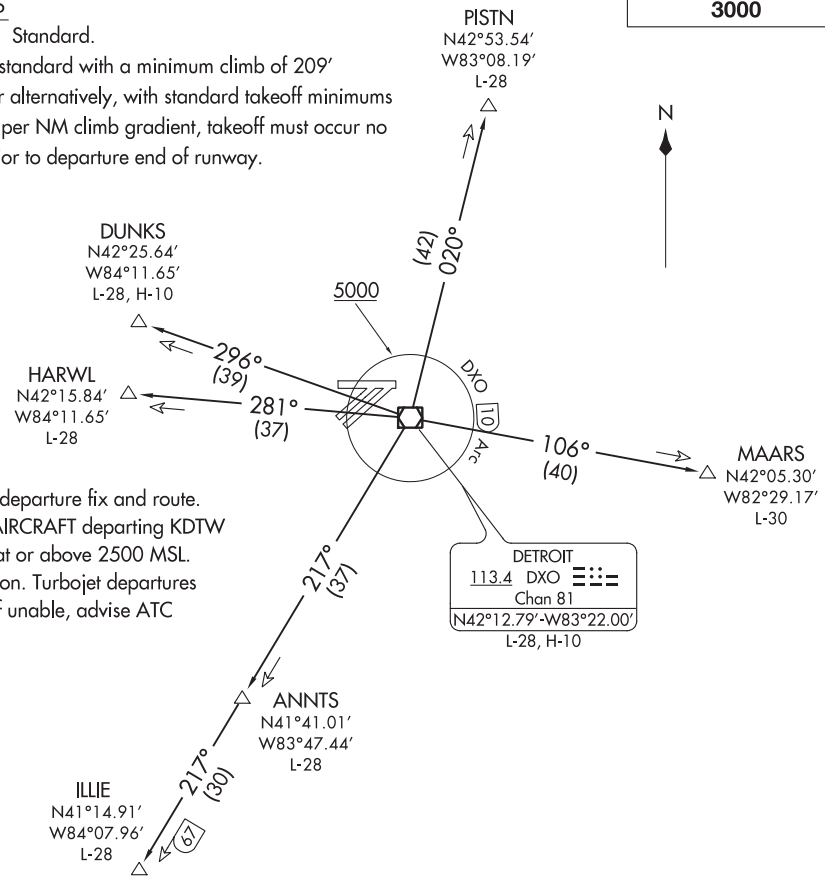
Rwys 5L/R, 9, 23L/R: Standard.

Rwy 27: 300-1½ or standard with a minimum climb of 209′ per NM to 1000, or alternatively, with standard takeoff minimums and a normal 200′ per NM climb gradient, takeoff must occur no later than 1300′ prior to departure end of runway.

NOTE: RADAR required.
NOTE: DME required.
NOTE: For use by non-RNAV equipped aircraft only.

SPECIAL INSTRUCTIONS:

When using this departure, file the appropriate depicted departure fix and route. Aircraft over HARWL must file FL220 and below. PROP AIRCRAFT departing KDTW Rwy 21L/R and 22L/R westbound, cross DXO 3.5 DME at or above 2500 MSL. Aircraft landing Cleveland (CLE) must file MAARS transition. Turbojet departures at/above 10000, maintain 280K until advised by ATC. If unable, advise ATC prior to departure.



(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading, thence....

.....maintain ATC assigned altitude for RADAR vectors to intercept filed/assigned transition or enroute fix/navaid. When ATC assigned altitude is at or above 5000, cross DXO 10 DME Arc at or above 5000 for noise abatement. If unable to comply, advise ATC prior to departure. Expect clearance to filed altitude/flight level within ten (10) minutes after departure.

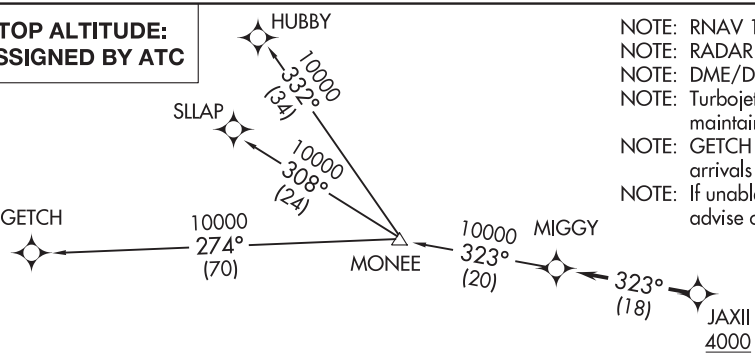
DUNKS TRANSITION (METRO3.DUNKS): From over DXO VOR/DME on DXO R-296 to DUNKS.
HARWL TRANSITION (METRO3.HARWL): From over DXO VOR/DME on DXO R-281 to HARWL.
ILLIE TRANSITION (METRO3.ILLIE): From over DXO VOR/DME on DXO R-217 to ILLIE.
MAARS TRANSITION (METRO3.MAARS): From over DXO VOR/DME on DXO R-106 to MAARS.
PISTN TRANSITION (METRO3.PISTN): From over DXO VOR/DME on DXO R-020 to PISTN.

EC-1, 25 FEB 2021 to 22 APR 2021

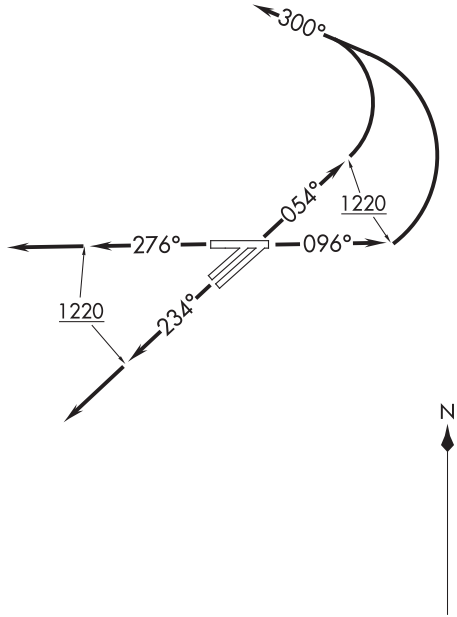
TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: GETCH TRANSITION: For use by KMKE area arrivals only, or as assigned by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.

ATIS
127.425
GND CON
119.975
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 284.0



TAKEOFF MINIMUMS:
Rwys 5L/R, 9, 23L/R, 27: Standard with minimum climb of 500′ per NM to 1220.



NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 5L/R: Climb on heading 054° to 1220, then left turn heading 300° for RADAR vectors to cross JAXII at or above 4000, thence....
TAKEOFF RUNWAY 9: Climb on heading 096° to 1220, then left turn heading 300° for RADAR vectors to cross JAXII at or above 4000, thence....
TAKEOFF RUNWAYS 23L/R: Climb on heading 234° to 1220, then on heading 234° for RADAR vectors to cross JAXII at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1220, then on heading 276° for RADAR vectors to cross JAXII at or above 4000, thence....

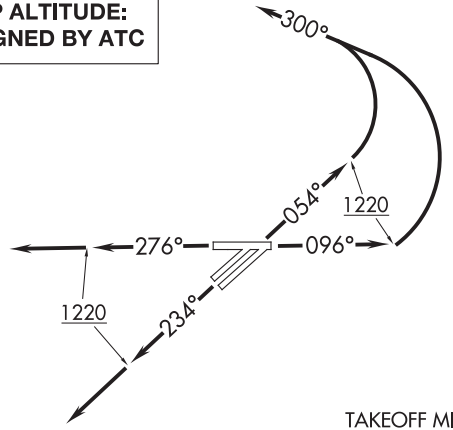
....on track 323° to MIGGY, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

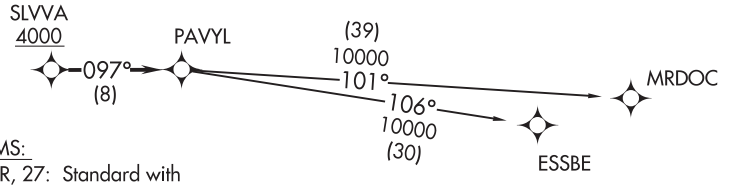
GETCH TRANSITION (MIGGY2.GETCH):
HUBBY TRANSITION (MIGGY2.HUBBY):
SLLAP TRANSITION (MIGGY2.SLLAP):

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.

ATIS
127.425
GND CON
119.975
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 284.0





TAKEOFF MINIMUMS:
Rwys 5L/R, 9, 23L/R, 27: Standard with minimum climb of 500′ per NM to 1220.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 5L/R: Climb on heading 054° to 1220, then left turn heading 300° for RADAR vectors to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 9: Climb on heading 096° to 1220, then left turn heading 300° for RADAR vectors to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAYS 23L/R: Climb on heading 234° to 1220, then on heading 234° for RADAR vectors to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1220, then on heading 276° for RADAR vectors to cross SLVVA at or above 4000, thence....

....on track 097° to PAVYL, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ESSBE TRANSITION (PAVYL2.ESSBE):
MRDOC TRANSITION (PAVYL2.MRDOC):

SNDRS TWO DEPARTURE (RNAV)

(SNDRS2.SNDRS) 15AUG19

DETROIT, MICHIGAN
WILLOW RUN (YIP)

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 5L/R: Climb on heading 054° to 1220, then left turn heading 300° for RADAR vectors to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAY 9: Climb on heading 096° to 1220, then left turn heading 300° for RADAR vectors to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAYS 23L/R: Climb on heading 234° to 1220, then on heading 234° for RADAR vectors to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1220, then on heading 276° for RADAR vectors to cross JWELS at or above 4000, thence....

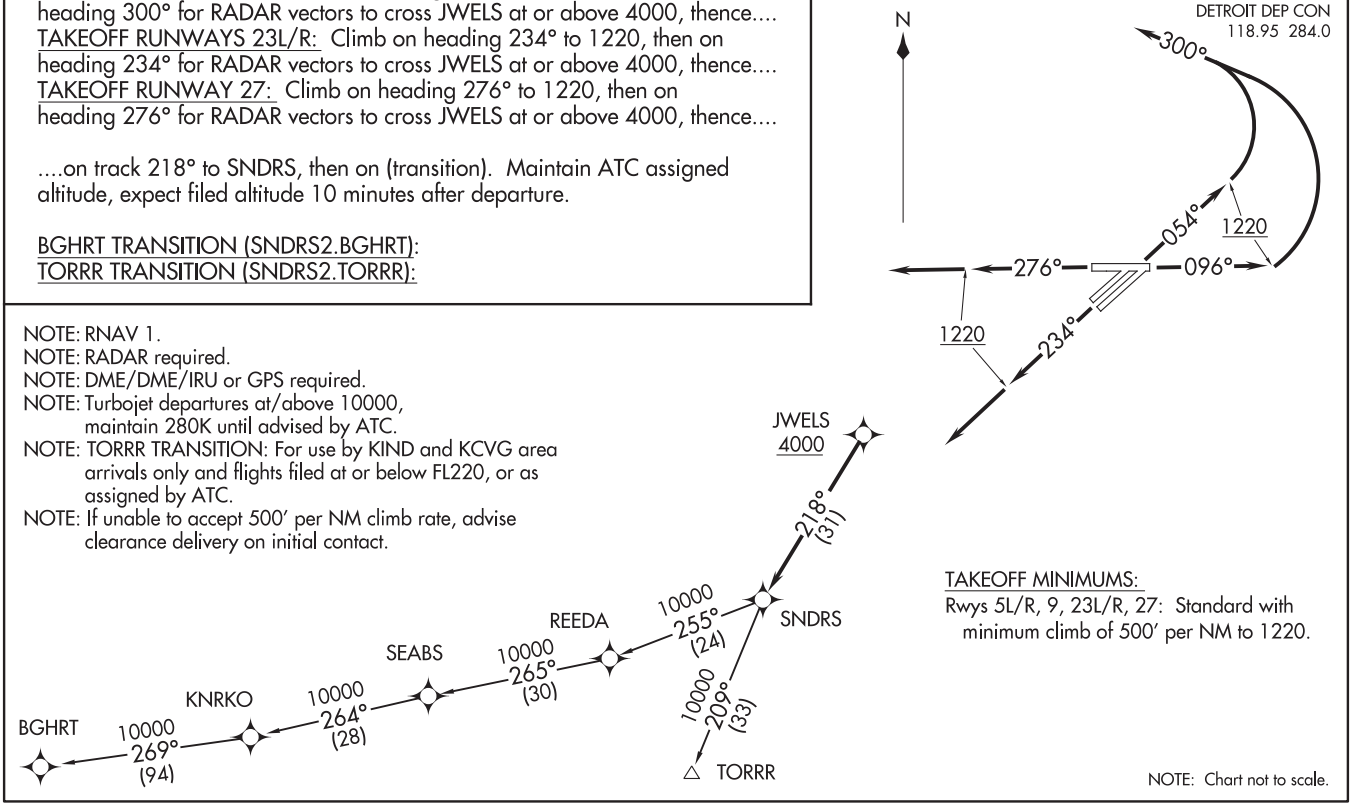
....on track 218° to SNDRS, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

BGHRT TRANSITION (SNDRS2.BGHRT):
TORRR TRANSITION (SNDRS2.TORRR):

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
127.425
GND CON
119.975
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 284.0

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TORRR TRANSITION: For use by KIND and KCVG area arrivals only and flights filed at or below FL220, or as assigned by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.



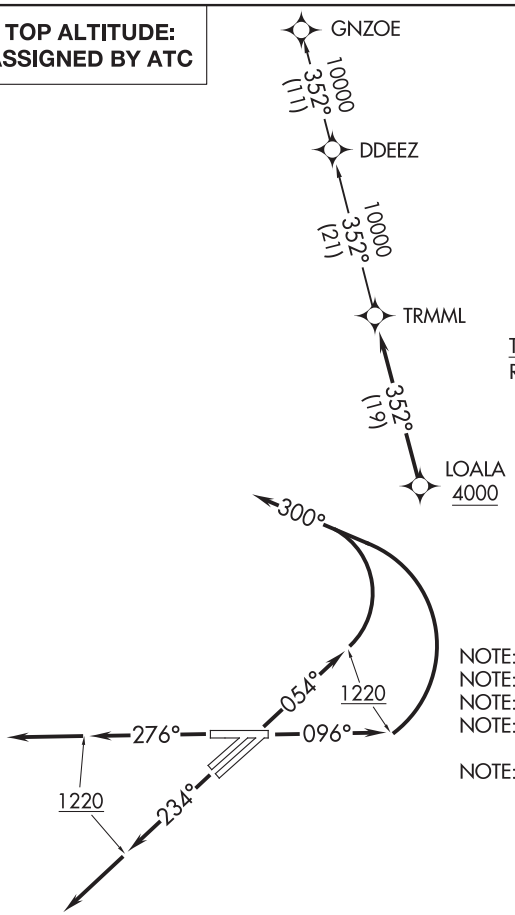
TAKEOFF MINIMUMS:
Rwys 5L/R, 9, 23L/R, 27: Standard with minimum climb of 500′ per NM to 1220.

NOTE: Chart not to scale.

(SNDRS2.SNDRS) 19227
SNDRS TWO DEPARTURE (RNAV)
AL-467 (FAA)
WILLOW RUN (YIP)
DETROIT, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
127.425
GND CON
119.975
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 284.0



TAKEOFF MINIMUMS:
Rwys 5L/R, 9, 23L/R, 27: Standard with minimum climb of 500′ per NM to 1220.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 5L/R: Climb on heading 054° to 1220, then left turn heading 300° for RADAR vectors to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 9: Climb on heading 096° to 1220, then left turn heading 300° for RADAR vectors to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAYS 23L/R: Climb on heading 234° to 1220, then on heading 234° for RADAR vectors to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1220, then on heading 276° for RADAR vectors to cross LOALA at or above 4000, thence....

....on track 352° to TRMML, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GNZOE TRANSITION (TRMML3.GNZOE):

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(ZETTR3.ZETTR) 19339

ZETTR THREE DEPARTURE (RNAV)

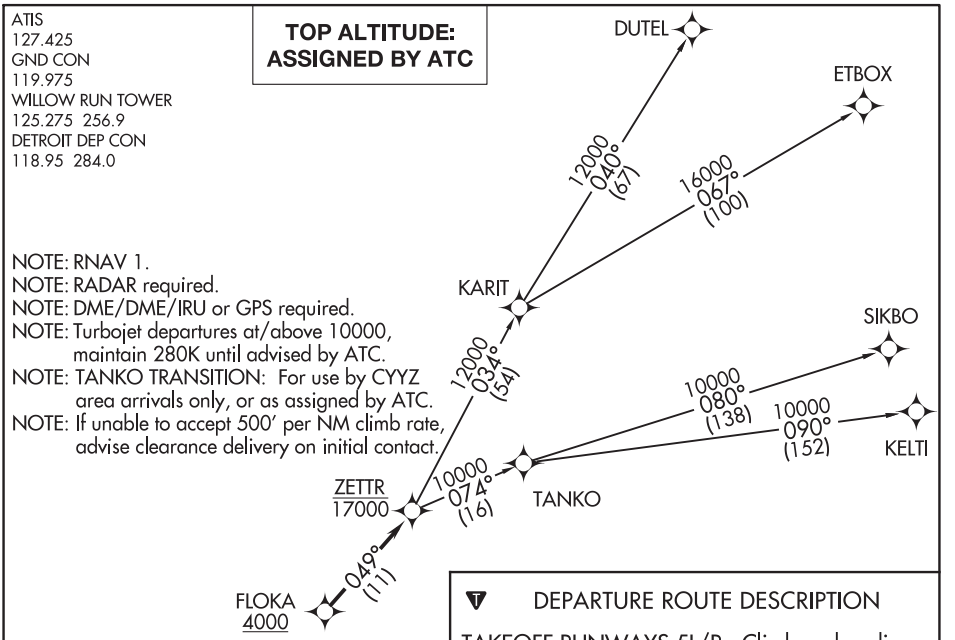
AL-467 (FAA)

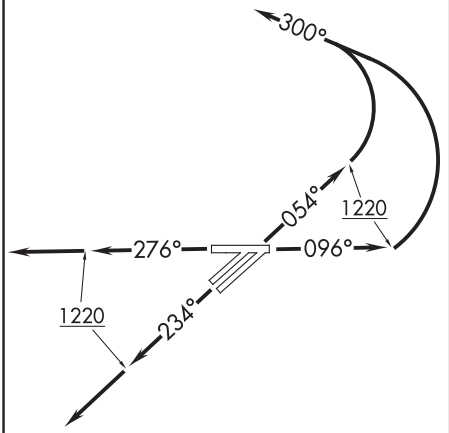
WILLOW RUN (YIP)
DETROIT, MICHIGAN

ATIS
127.425
GND CON
119.975
WILLOW RUN TOWER
125.275 256.9
DETROIT DEP CON
118.95 284.0

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TANKO TRANSITION: For use by CYYZ area arrivals only, or as assigned by ATC.
NOTE: If unable to accept 500′ per NM climb rate, advise clearance delivery on initial contact.





TAKEOFF MINIMUMS:
Rwys 5L/R, 9, 23L/R, 27: Standard with minimum climb of 500′ per NM to 1220.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 5L/R: Climb on heading 054° to 1220, then left turn heading 300° for RADAR vectors to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 9: Climb on heading 096° to 1220, then left turn heading 300° for RADAR vectors to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAYS 23L/R: Climb on heading 234° to 1220, then on heading 234° for RADAR vectors to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1220, then on heading 276° for RADAR vectors to cross FLOKA at or above 4000, thence....

....on track 049° to cross ZETTR at or below 17000, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

DUTEL TRANSITION (ZETTR3.DUTEL):
ETBOX TRANSITION (ZETTR3.ETBOX):
KELTI TRANSITION (ZETTR3.KELTI):
SIKBO TRANSITION (ZETTR3.SIKBO):
TANKO TRANSITION (ZETTR3.TANKO):

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APP CRS	Rwy ldg	4846
037°	TDZE	588
	Apt Elev	591

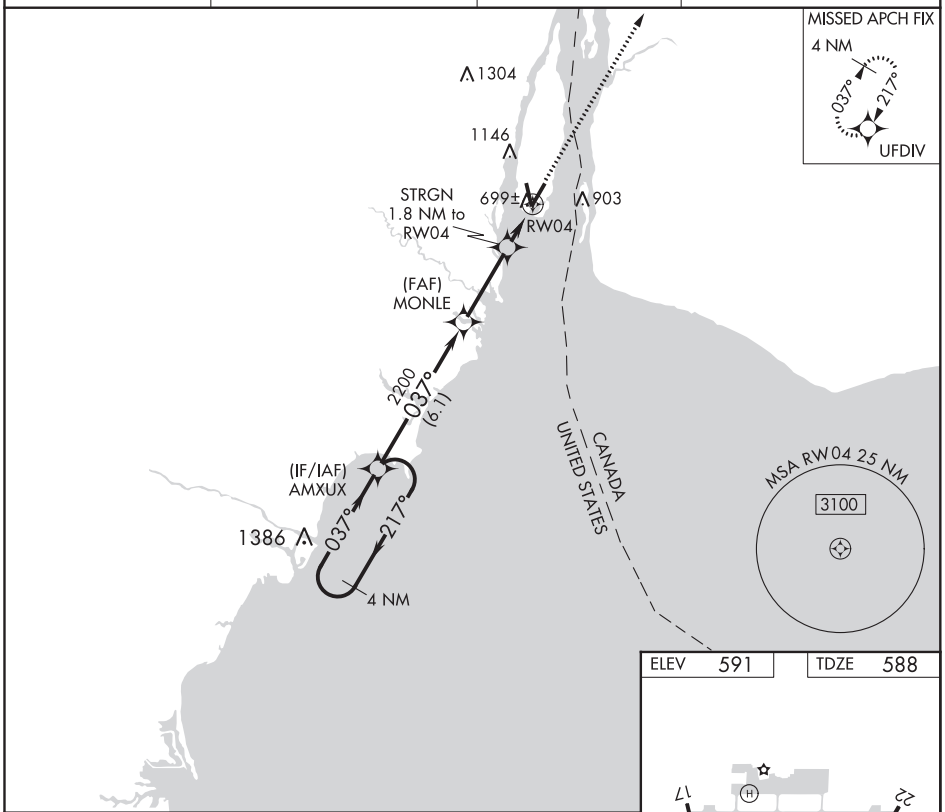
RNAV (GPS) RWY 4
GROSSE ILE MUNI (ONZ)

RNP APCH.

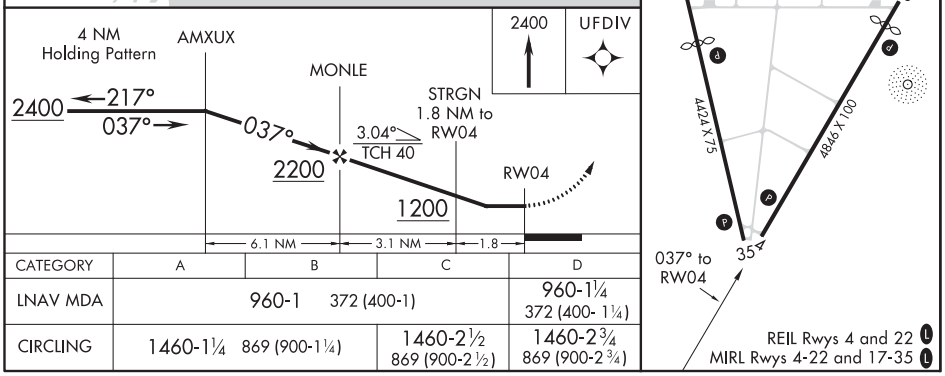
Rwy 4 helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climb to 2400 direct UFDIV and hold.

AWOS-3	DETROIT APP CON	GCO	UNICOM
119.675	134.3 284.0	121.725	123.0 (CTAF) L



ELEV	591	TDZE	588



CATEGORY	A	B	C	D
LNAV MDA	960-1 372 (400-1)			960-1¼ 372 (400- 1¼)
CIRCLING	1460-1¼ 869 (900-1¼)		1460-2½ 869 (900-2½)	1460-2¾ 869 (900-2¾)

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DETROIT/GROSSE ILE, MICHIGAN AL-940 (FAA) 19171

RNAV (GPS) RWY 22
GROSSE ILE MUNI (ONZ)

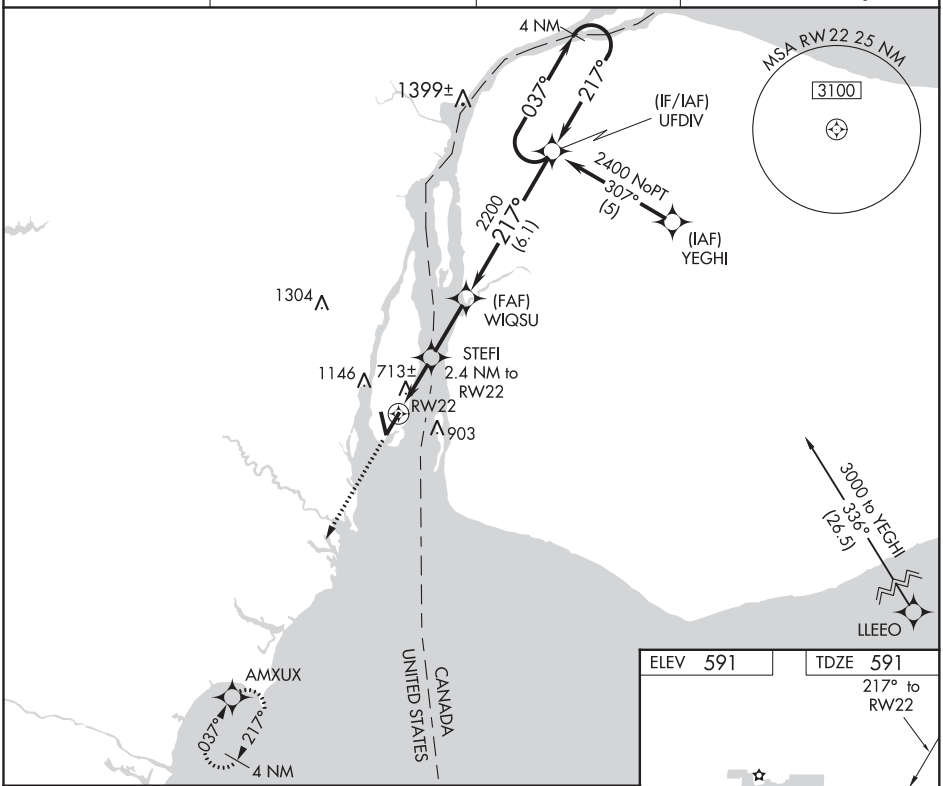
APP CRS	Rwy ldg	4418
217°	TDZE	591
	Apt Elev	591

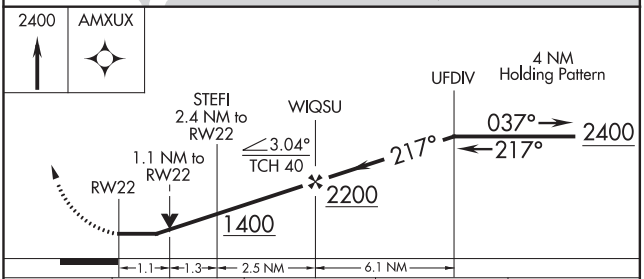
RNP APCH.

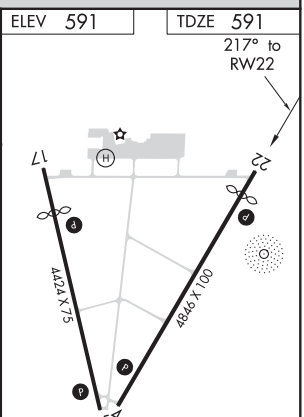
Rwy 22 helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climb to 2400 direct AMXUX and hold.

AWOS-3	DETROIT APP CON	GCO	UNICOM
119.675	134.3 284.0	121.725	123.0 (CTAF) L







REIL Rwys 4 and 22 L
MIRL Rwys 4-22 and 17-35 L

CATEGORY	A	B	C	D
LNAV MDA	980-1	389 (400-1)	980-1⅛ 389 (400-1⅛)	980-1¼ 389 (400-1¼)
CIRCLING	1460-1¼	869 (900-1¼)	1460-2½ 869 (900-2½)	1460-2¾ 869 (900-2¾)

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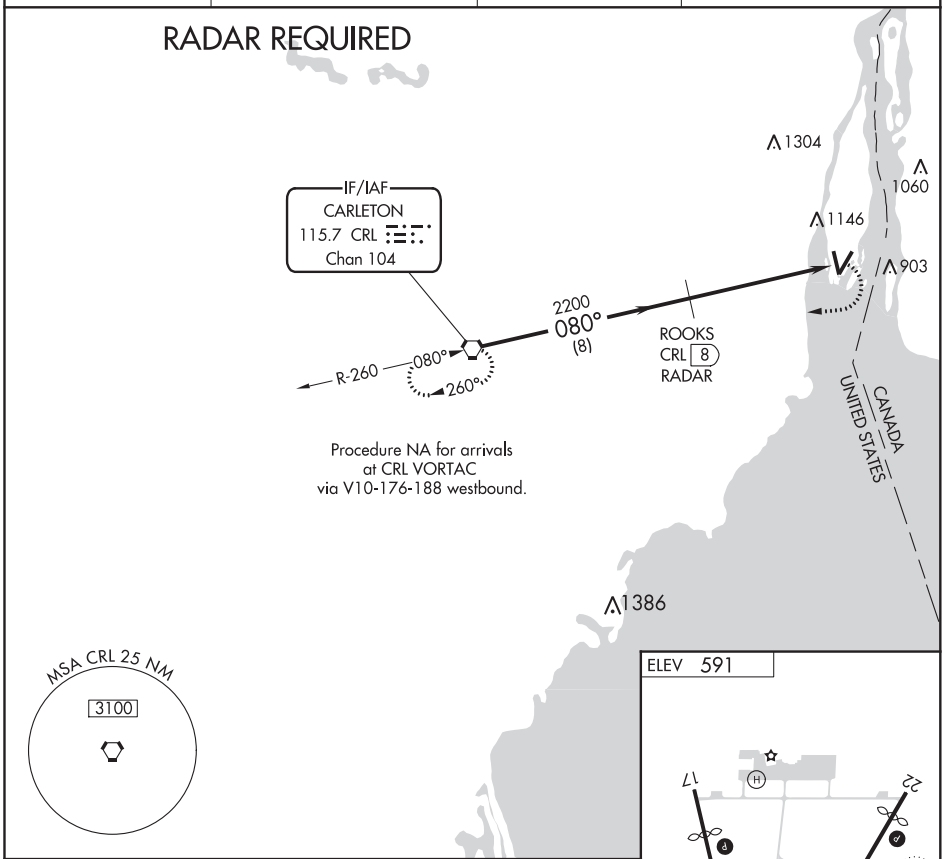
VORTAC CRL	APP CRS	Rwy ldg	N/A
115.7	080°	TDZE	N/A
Chan 104		Apt Elev	591

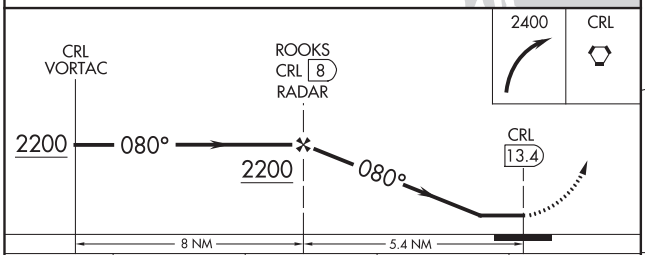
VOR-A
GROSSE ILE MUNI (ONZ)

When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all MDA 40 feet and Cat A, C, and D visibilities ¼ mile.

MISSED APPROACH: Climbing right turn to 2400 direct CRL VORTAC and hold.

AWOS-3	DETROIT APP CON	GCO	UNICOM
119.675	134.3 284.0	121.725	123.0 (CTAF) L





CATEGORY	A	B	C	D
CIRCLING	1460 - 1 869 (900-1)	1460 - 1¼ 869 (900-1¼)	1460 - 2½ 869 (900-2½)	1460 - 2¾ 869 (900-2¾)

FAF to MAP 5.4 NM

Knots	60	90	120	150	180
Min:Sec	5:24	3:36	2:42	2:10	1:48

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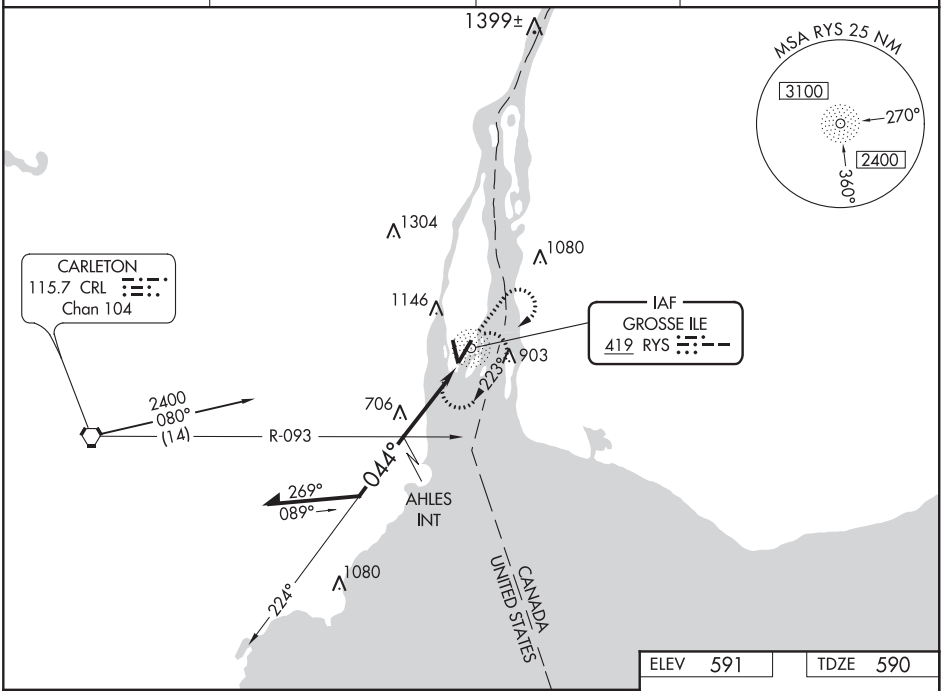
NDB RYS	APP CRS	Rwy ldg / TDZE / Apt Elev
419	044°	4846 / 590 / 591

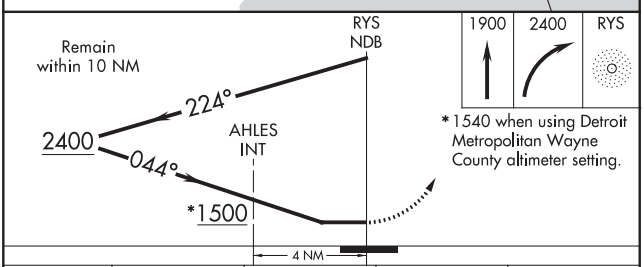
NDB RWY 4
GROSSE ILE MUNI (ONZ)

Visibility reduction by helicopters NA. When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all MDA 40 feet. Increase AHLES fix minimums Circling Cat A, C, and D visibilities ¼ mile.

MISSED APPROACH: Climb to 1900 then climbing right turn to 2400 direct RYS NDB and hold.

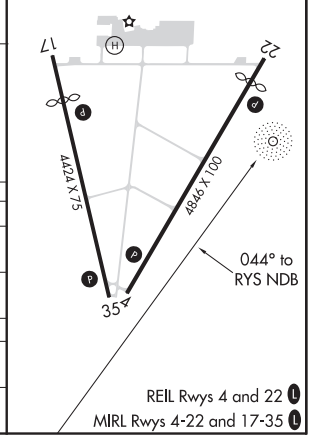
AWOS-3	DETROIT APP CON	GCO	UNICOM
119.675	134.3 284.0	121.725	123.0 (CTAF) L





*1540 when using Detroit Metropolitan Wayne County altimeter setting.

ELEV 591 TDZE 590



REIL Rwys 4 and 22 L
MIRL Rwys 4-22 and 17-35 L

CATEGORY	A	B	C	D
S-4	1500-1¼	910 (1000-1¼)	1500 - 2¾ 910 (1000-2¾)	1500 - 3 910 (1000-3)
CIRCLING	1500-1¼	909 (1000-1¼)	1500 - 2¾ 909 (1000-2¾)	1500 - 3 909 (1000-3)
	AHLES FIX MINIMUMS			
S-4	1140 - 1	550 (600-1)	1140 - 1½ 550 (600-1½)	1140 - 1¾ 550 (600-1¾)
CIRCLING	1460 - 1 869 (900-1)	1460 - 1¼ 869 (900-1¼)	1460 - 2½ 869 (900-2½)	1460 - 2¾ 869 (900-2¾)

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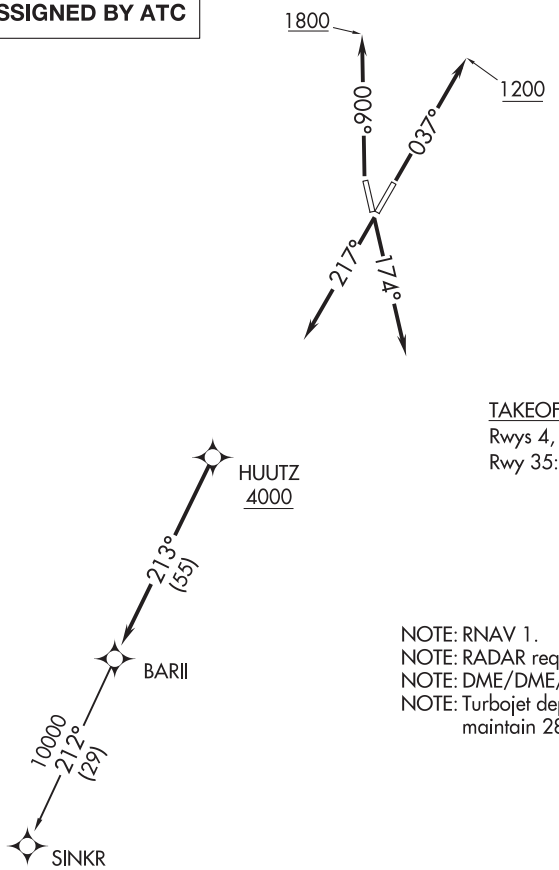
EC-1, 25 FEB 2021 to 22 APR 2021

TOP ALTITUDE: ASSIGNED BY ATC

AWOS-3
119.675
CTAF
123.0
DETROIT DEP CON
134.3 284.0



TAKEOFF MINIMUMS:
Rwys 4, 17, 22: Standard.
Rwy 35: Standard with minimum climb of 500′ per NM to 1100.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 037° to 1200 then as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....
TAKEOFF RUNWAY 17: Climb on heading 174° or as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....
TAKEOFF RUNWAY 22: Climb on heading 217° or as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....
TAKEOFF RUNWAY 35: Climb on heading 006° to 1800 then as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....

....on track 213° to BARII, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

SINKR TRANSITION (BARII2.SINKR):

EC-1, 25 FEB 2021 to 22 APR 2021
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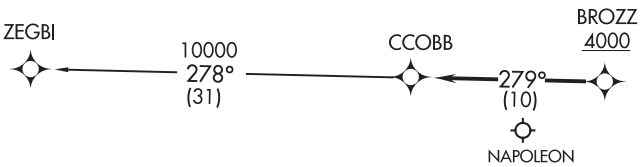
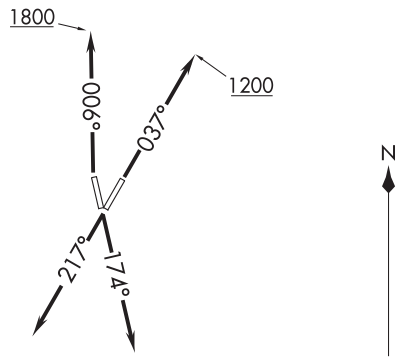
TOP ALTITUDE: ASSIGNED BY ATC

AWOS-3
119.675
CTAF
123.0
DETROIT DEP CON
134.3 284.0





TAKEOFF MINIMUMS:
Rwys 4, 17, 22: Standard.
Rwy 35: Standard with minimum climb of 500′ per NM to 1100.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: For use by aircraft filed at or below FL220, or as assigned by ATC.
NOTE: CAUTION: Parachute jumping 6 NM SW of BROZZ, 3 NM radius of Napoleon Airport (3NP) at or below 17999 (SR-SS).

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

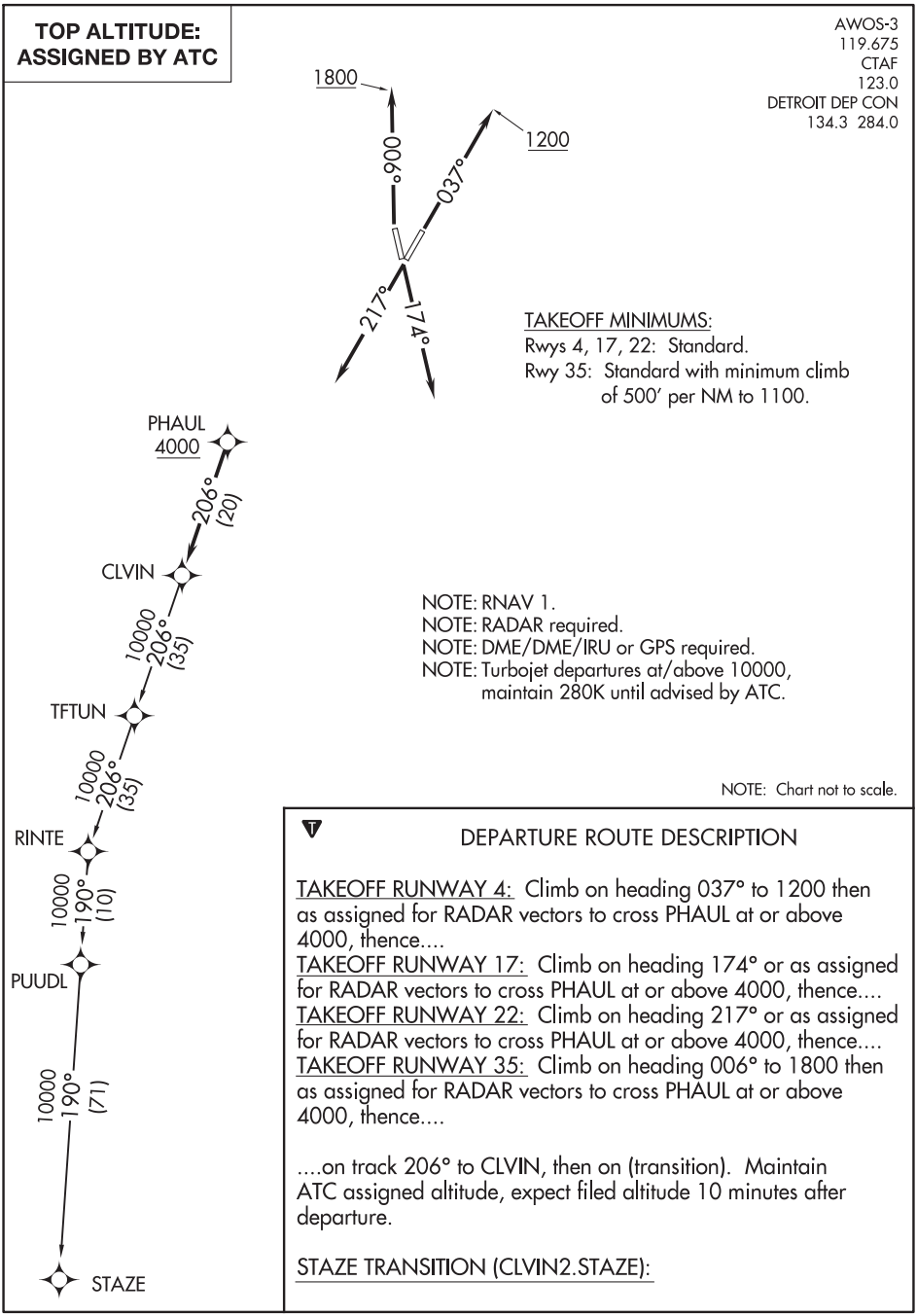
TAKEOFF RUNWAY 4: Climb on heading 037° to 1200 then as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 17: Climb on heading 174° or as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 22: Climb on heading 217° or as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 35: Climb on heading 006° to 1800 then as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....

....on track 279° to CCOBB, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ZEGBI TRANSITION (CCOBB2.ZEGBI):

TOP ALTITUDE: ASSIGNED BY ATC

AWOS-3
119.675
CTAF
123.0
DETROIT DEP CON
134.3 284.0



TAKEOFF MINIMUMS:
Rwys 4, 17, 22: Standard.
Rwy 35: Standard with minimum climb of 500′ per NM to 1100.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

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DEPARTURE ROUTE DESCRIPTION

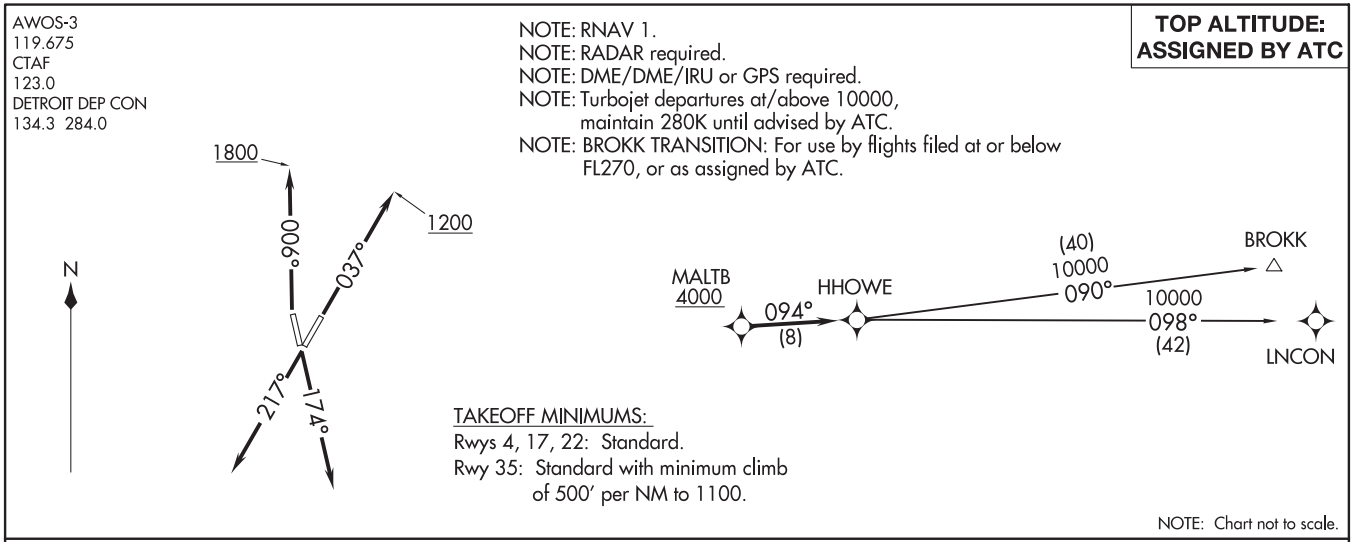
TAKEOFF RUNWAY 4: Climb on heading 037° to 1200 then as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 17: Climb on heading 174° or as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 22: Climb on heading 217° or as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 35: Climb on heading 006° to 1800 then as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....

....on track 206° to CLVIN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

STAZE TRANSITION (CLVIN2.STAZE):

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: BROKK TRANSITION: For use by flights filed at or below FL270, or as assigned by ATC.



TAKEOFF MINIMUMS:
Rwys 4, 17, 22: Standard.
Rwy 35: Standard with minimum climb of 500′ per NM to 1100.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 037° to 1200 then as assigned for RADAR vectors to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 17: Climb on heading 174° or as assigned for RADAR vectors to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 22: Climb on heading 217° or as assigned for RADAR vectors to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 35: Climb on heading 006° to 1800 then as assigned for RADAR vectors to cross MALTB at or above 4000, thence....

....on track 094° to HHOWE, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

BROKK TRANSITION (HHOWE3.BROKK)
LNCON TRANSITION (HHOWE3.LNCON)

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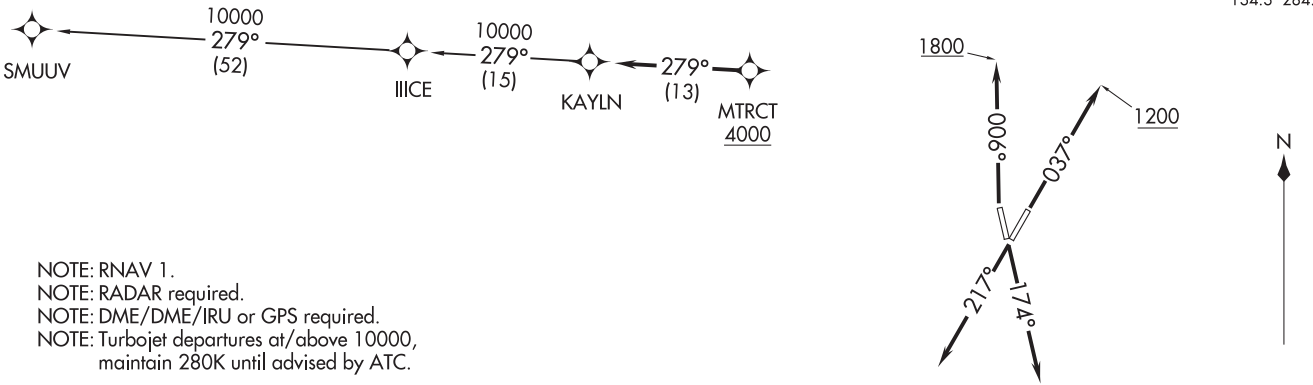
TOP ALTITUDE: ASSIGNED AT ATC

TAKEOFF MINIMUMS:
Rwys 4, 17, 22: Standard.
Rwy 35: Standard with minimum climb of 500′ per NM to 1100.

AWOS-3
119.675
CTAF
123.0
DETROIT DEP CON
134.3 284.0



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 037° to 1200 then as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....
TAKEOFF RUNWAY 17: Climb on heading 174° or as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....
TAKEOFF RUNWAY 22: Climb on heading 217° or as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....
TAKEOFF RUNWAY 35: Climb on heading 006° to 1800 then as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....

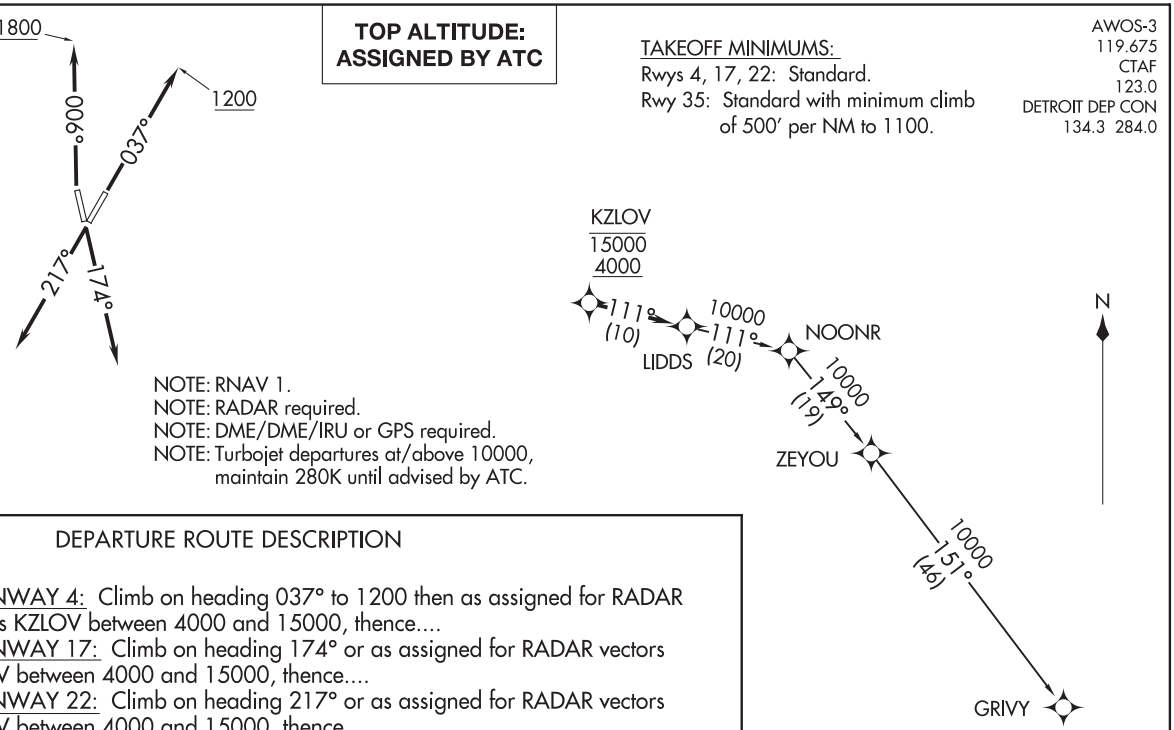
....on track 279° to KAYLN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

SMUUV TRANSITION (KAYLN2.SMUUV):

TOP ALTITUDE: ASSIGNED BY ATC

TAKEOFF MINIMUMS:
Rwys 4, 17, 22: Standard.
Rwy 35: Standard with minimum climb of 500′ per NM to 1100.

AWOS-3
119.675
CTAF
123.0
DETROIT DEP CON
134.3 284.0



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 037° to 1200 then as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAY 17: Climb on heading 174° or as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAY 22: Climb on heading 217° or as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAY 35: Climb on heading 006° to 1800 then as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....

....on track 111° to LIDDS, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GRIVY TRANSITION (LIDDS2.GRIVY):

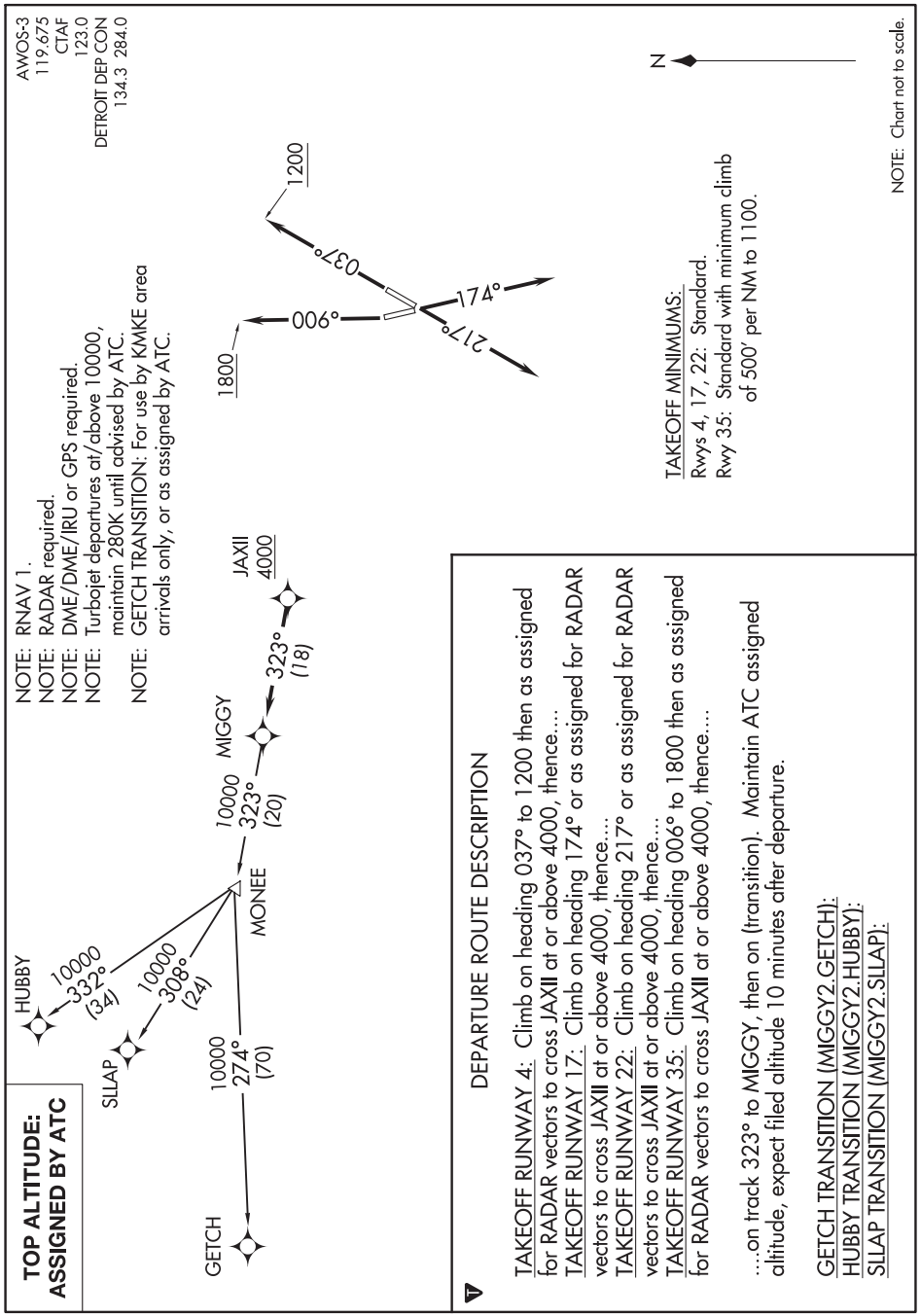
MIGGY TWO DEPARTURE (RNAV)

AL-940 (FAA)

DETROIT/GROSSE ILE, MICHIGAN

AWOS-3 119.675
CTAF 123.0
DETROIT DEP CON 134.3 284.0

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: GETCH TRANSITION: For use by KMKE area arrivals only, or as assigned by ATC.



DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 037° to 1200 then as assigned for RADAR vectors to cross JAXII at or above 4000, thence....
TAKEOFF RUNWAY 17: Climb on heading 174° or as assigned for RADAR vectors to cross JAXII at or above 4000, thence....
TAKEOFF RUNWAY 22: Climb on heading 217° or as assigned for RADAR vectors to cross JAXII at or above 4000, thence....
TAKEOFF RUNWAY 35: Climb on heading 006° to 1800 then as assigned for RADAR vectors to cross JAXII at or above 4000, thence....

....on track 323° to MIGGY, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GETCH TRANSITION (MIGGY2.GETCH):
HUBBY TRANSITION (MIGGY2.HUBBY):
SLLAP TRANSITION (MIGGY2.SLLAP):

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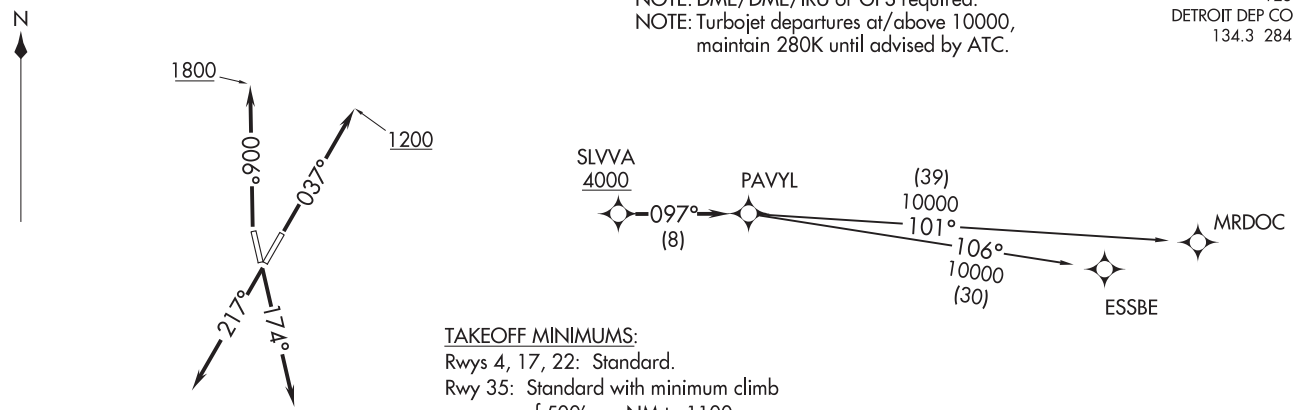
TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

AWOS-3
119.675
CTAF
123.0
DETROIT DEP CON
134.3 284.0



TAKEOFF MINIMUMS:
Rwys 4, 17, 22: Standard.
Rwy 35: Standard with minimum climb of 500′ per NM to 1100.

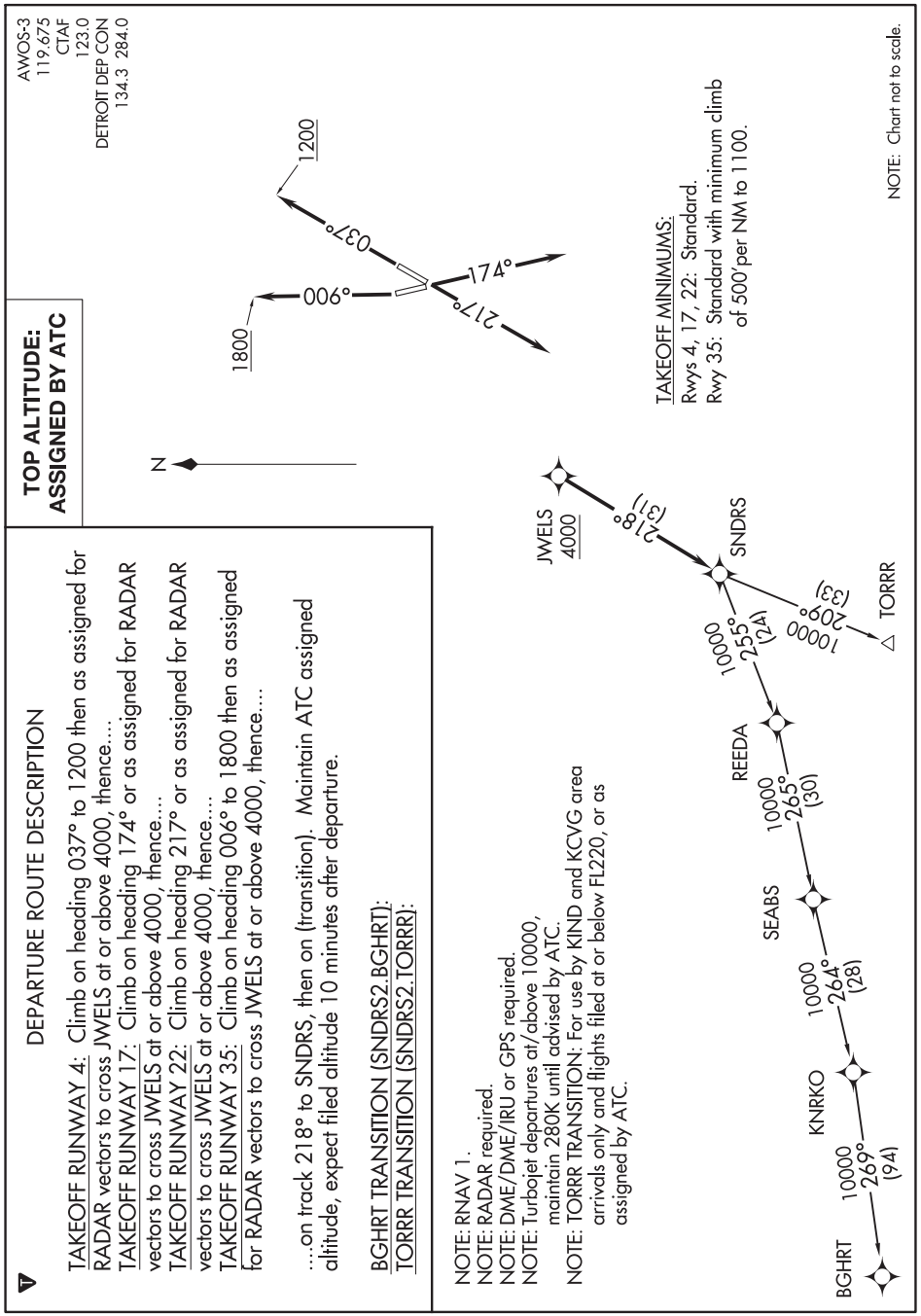
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 037° to 1200 then as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 17: Climb on heading 174° or as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 22: Climb on heading 217° or as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 35: Climb on heading 006° to 1800 then as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....

....on track 097° to PAVYL, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ESSBE TRANSITION (PAVYL2.ESSBE):
MRDOC TRANSITION (PAVYL2.MRDOC):


AWOS-3
119.675
CTAF
123.0
DETROIT DEP CON
134.3 284.0
TOP ALTITUDE:
ASSIGNED BY ATC
N
1800
1200
090°
037°
174°
217°
TAKEOFF MINIMUMS:
Rwys 4, 17, 22: Standard.
Rwy 35: Standard with minimum climb of 500' per NM to 1100.
NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION
TAKEOFF RUNWAY 4: Climb on heading 037° to 1200 then as assigned for RADAR vectors to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAY 17: Climb on heading 174° or as assigned for RADAR vectors to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAY 22: Climb on heading 217° or as assigned for RADAR vectors to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAY 35: Climb on heading 006° to 1800 then as assigned for RADAR vectors to cross JWELS at or above 4000, thence....
...on track 218° to SNDRS, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.
BGHRT TRANSITION (SNDRS2.BGHRT):
TORRR TRANSITION (SNDRS2.TORRR):
NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TORRR TRANSITION: For use by KIND and KCVG area arrivals only and flights filed at or below FL220, or as assigned by ATC.
JWELS
4000
218°
(31)
SNDRS
10000
255°
(24)
REEDA
10000
265°
(30)
SEABS
10000
264°
(28)
KNRKO
10000
269°
(94)
BGHRT
10000
209°
(33)
TORRR

(TRMML3.TRMML) 19283

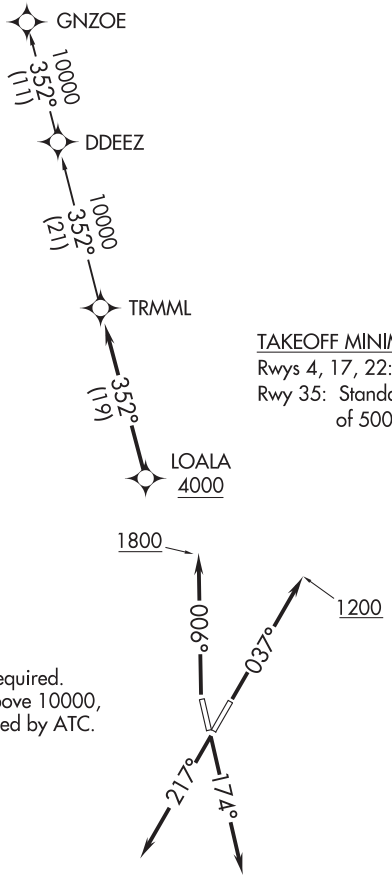
TRMML THREE DEPARTURE (RNAV)

AL-940 (FAA)

GROSSE ILE MUNI (ONZ)
DETROIT/GROSSE ILE, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

AWOS-3
119.675
CTAF
123.0
DETROIT DEP CON
134.3 284.0



TAKEOFF MINIMUMS:
Rwys 4, 17, 22: Standard.
Rwy 35: Standard with minimum climb of 500′ per NM to 1100.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 037° to 1200 then as assiged for RADAR vectors to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 17: Climb on heading 174° or as assigned for RADAR vectors to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 22: Climb on heading 217° or as assigned for RADAR vectors to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 35: Climb on heading 006° to 1800 then as assigned for RADAR vectors to cross LOALA at or above 4000, thence....

....on track 352° to TRMML, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GNZOE TRANSITION (TRMML3.GNZOE):

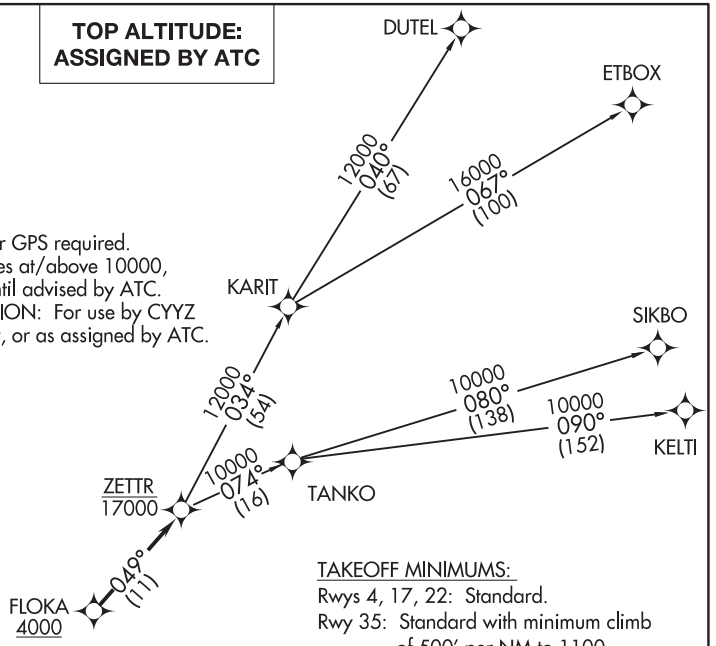
ZETTR THREE DEPARTURE (RNAV)

AL-940 (FAA)

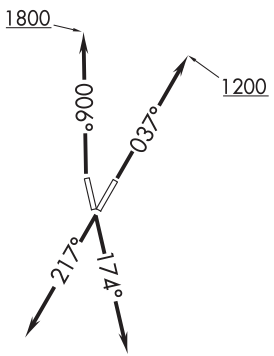
AWOS-3
119.675
CTAF
123.0
DETROIT DEP CON
134.3 284.0

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TANKO TRANSITION: For use by CYYZ area arrivals only, or as assigned by ATC.



TAKEOFF MINIMUMS:
Rwys 4, 17, 22: Standard.
Rwy 35: Standard with minimum climb of 500′ per NM to 1100.



NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 4: Climb on heading 037° to 1200 then as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 17: Climb on heading 174° or as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 22: Climb on heading 217° or as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 35: Climb on heading 006° to 1800 then as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....

....on track 049° to cross ZETTR at or below 17000, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

DUTEL TRANSITION (ZETTR3.DUTEL):
ETBOX TRANSITION (ZETTR3.ETBOX):
KELTI TRANSITION (ZETTR3.KELTI):
SIKBO TRANSITION (ZETTR3.SIKBO):
TANKO TRANSITION (ZETTR3.TANKO):

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DOWAGIAC, MICHIGAN

AL-5321 (FAA)

18200

RNAV (GPS) RWY 9

DOWAGIAC MUNI (C91)

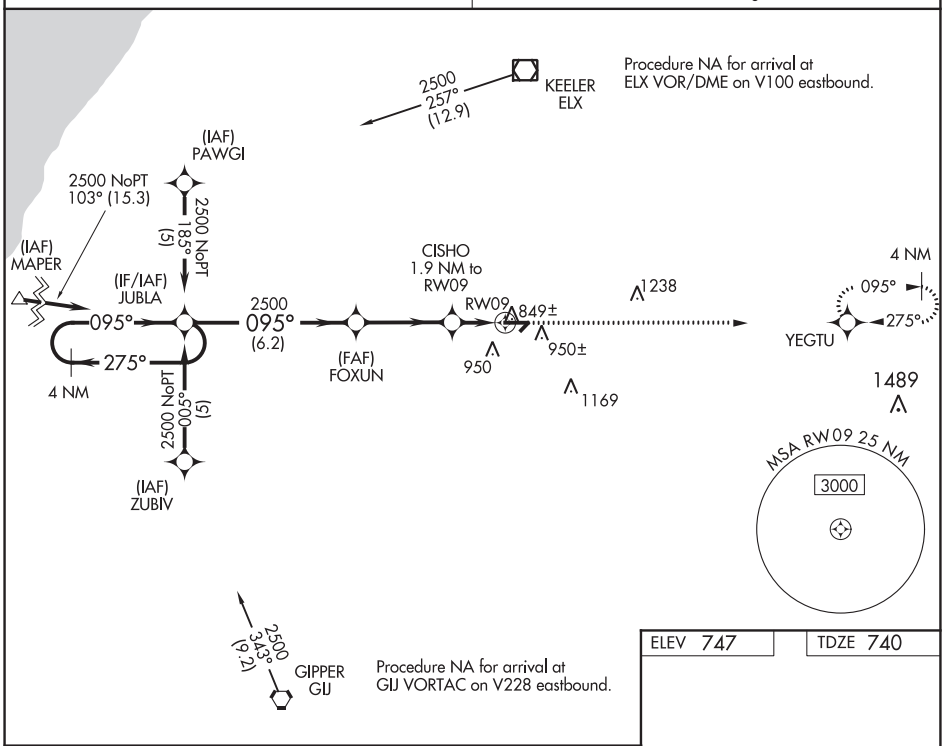
APP CRS	Rwy ldg	4700
095°	TDZE	740
	Apt Elev	747

DME/DME RNP-0.3 NA. Procedure NA at night.
Visibility reduction by helicopters NA. Obtain local altimeter setting on CTAF, when not received, use Elkhart altimeter setting and increase all MDA 60 feet; increase LNAV and Circling Cat C visibility ¼ mile.

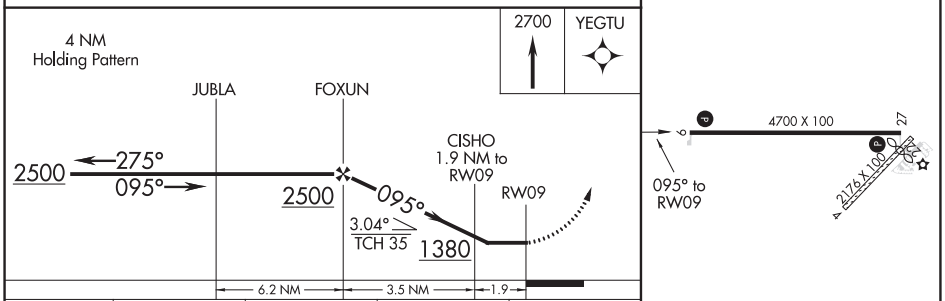
NA

MISSED APPROACH: Climb to 2700 direct YEGTU and hold.

SOUTH BEND APP CON ★	UNICOM
118.55 257.8	122.8 (CTAF) L



ELEV 747	TDZE 740



CATEGORY	A	B	C	D
LNAV MDA	1100-1 360 (400-1)			1100-1¼ 360 (400-1¼)
CIRCLING	1320-1 573 (600-1)		1340-1½ 593 (600-1½)	1340-2 593 (600-2)

REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

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APP CRS	Rwy ldg	4700
275°	TDZE	747
	Apt Elev	747

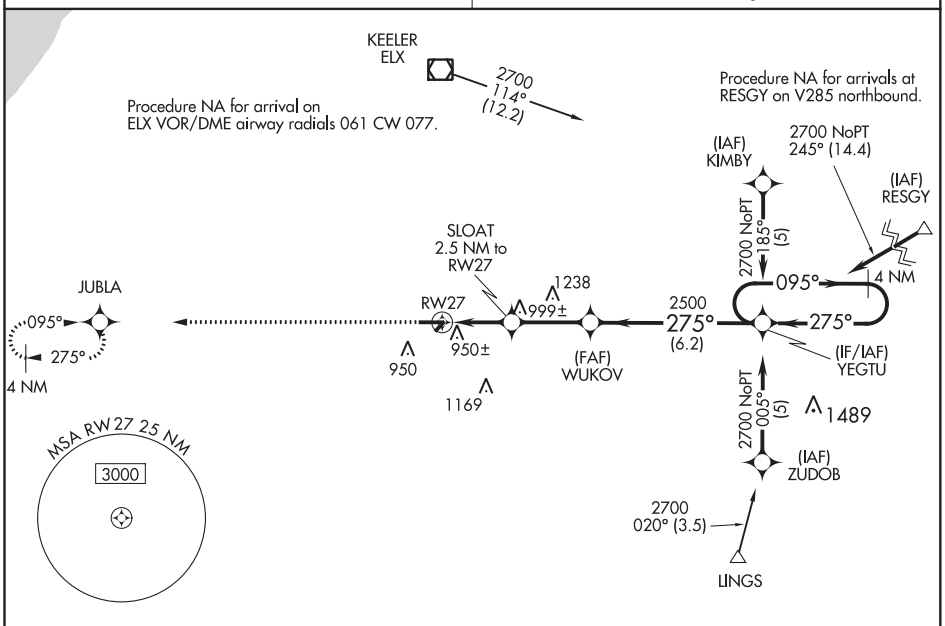
RNAV (GPS) RWY 27
DOWAGIAC MUNI (C91)

NA

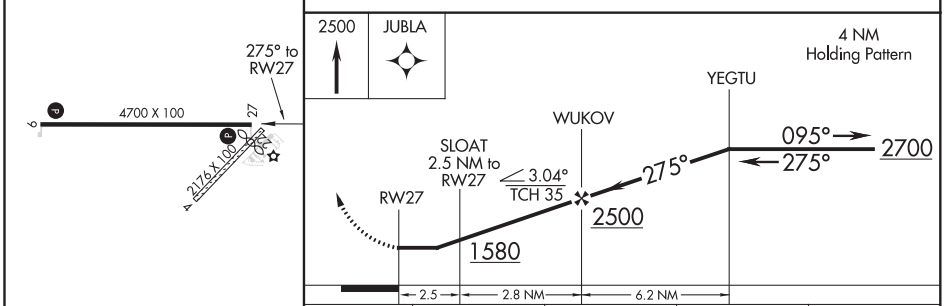
DME/DME RNP-0.3 NA. Procedure NA at night. Visibility reduction by helicopters NA. Obtain local altimeter setting on CTAF, when not received, use Elkhart altimeter setting and increase all MDA 60 feet; increase circling Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 2500 direct JUBLA and hold.

SOUTH BEND APP CON ★	UNICOM
118.55 257.8	122.8 (CTAF) L



ELEV 747 TDZE 747



CATEGORY	A	B	C	D
LNAV MDA	1260-1 513 (600-1)		1260-1½ 513 (600-1½)	1260-1¾ 513 (600-1¾)
CIRCLING	1320-1 573 (600-1)		1340-1½ 593 (600-1½)	1340-2 593 (600-2)

REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

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DRUMMOND ISLAND, MICHIGAN AL-6718 (FAA) 20086

APP CRS	Rwy ldg	3350
079°	TDZE	661
	Apt Elev	668

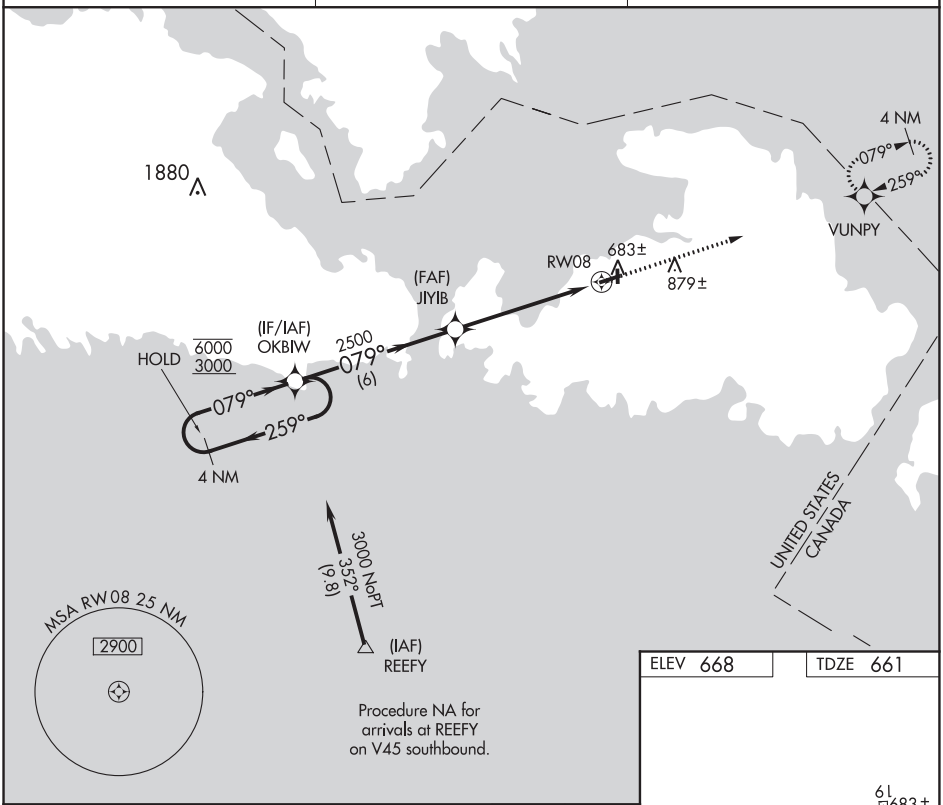
RNAV (GPS) RWY 8
DRUMMOND ISLAND (DRM)

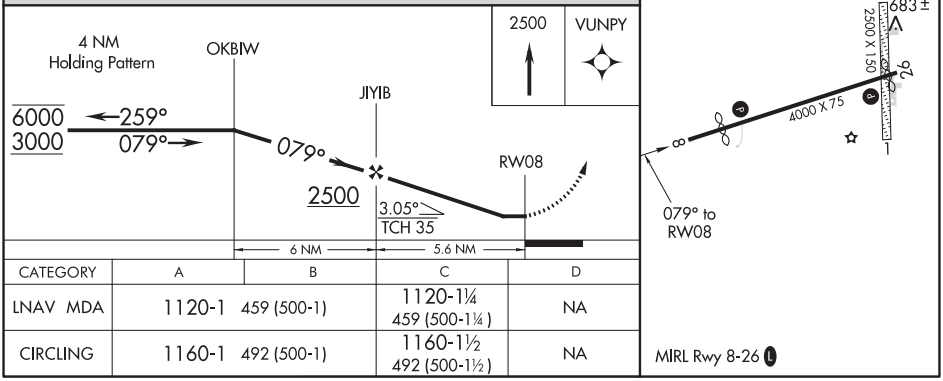
RNP APCH.

Rwy 8 helicopter visibility reduction below 1 SM NA.
Procedure NA at night. Circling to Rwy 1-19 NA.

MISSED APPROACH: Climb to 2500 direct VUNPY and hold.

AWOS-3	TORONTO CENTER	UNICOM
118.325	132.65 344.5	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1120-1 459 (500-1)		1120-1¼ 459 (500-1¼)	NA
CIRCLING	1160-1 492 (500-1)		1160-1½ 492 (500-1½)	NA

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APP CRS	Rwy ldg	3830
259°	TDZE	661
	Apt Elev	668

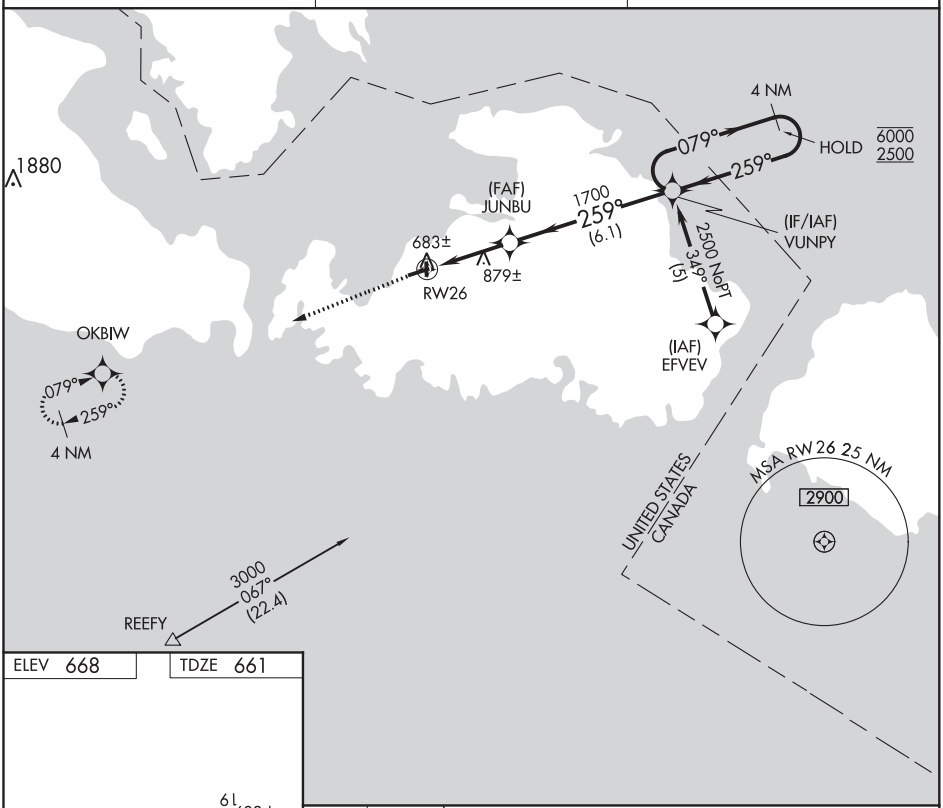
RNAV (GPS) RWY 26
DRUMMOND ISLAND (DRM)

RNP APCH.

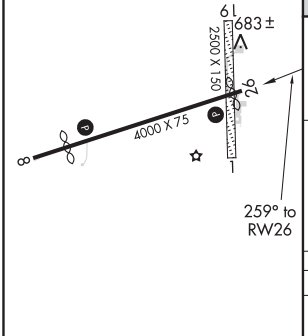
Rwy 26 helicopter visibility reduction below 1 SM NA.
Procedure NA at night. Circling to Rwy 1-19 NA.

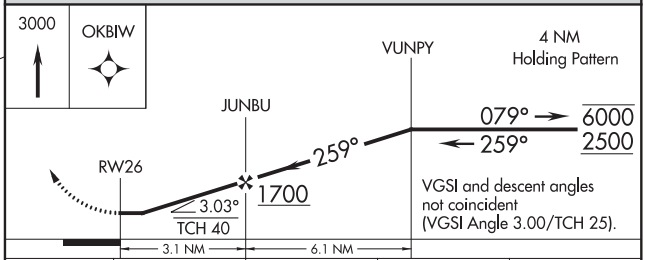
MISSED APPROACH: Climb to 3000 direct OKBIW and hold.

AWOS-3	TORONTO CENTER	UNICOM
118.325	132.65 344.5	122.8 (CTAF) L



ELEV 668 TDZE 661





CATEGORY	A	B	C	D
LNAV MDA	1180-1 519 (600-1)		1180-1½ 519 (600-1½)	NA
CIRCLING	1180-1 512 (600-1)		1180-1½ 512 (600-1½)	NA

MIRL Rwy 8-26 L

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EAST TAWAS, MICHIGAN AL-5929 (FAA) 20198

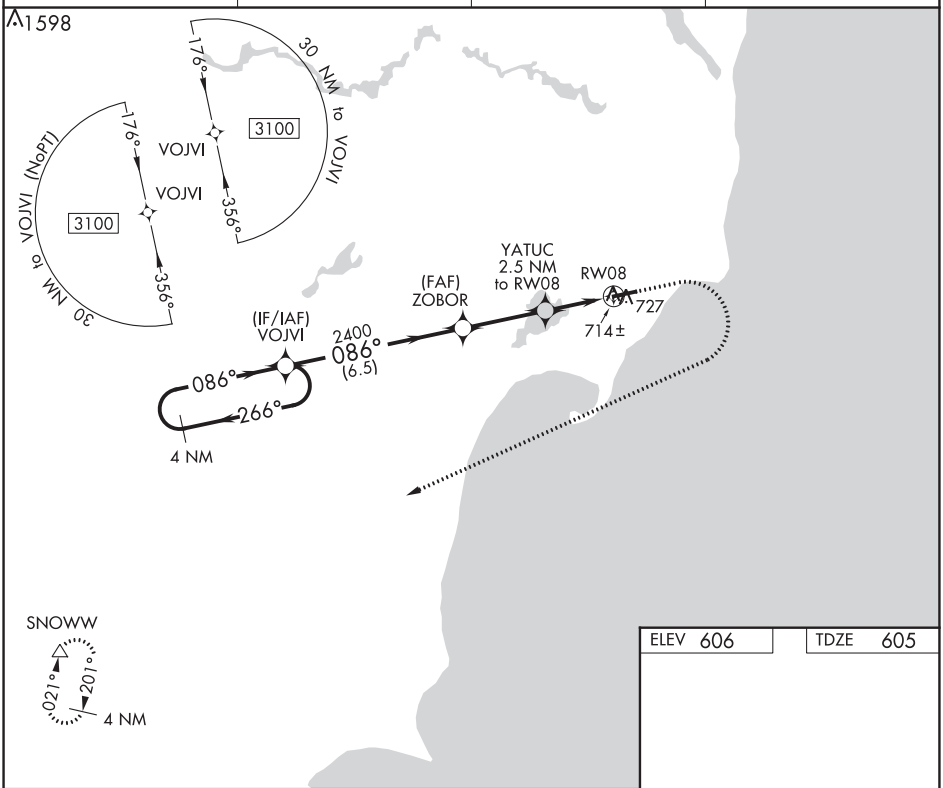
APP CRS	Rwy ldg	4802
086°	TDZE	605
	Apt Elev	606

RNAV (GPS) RWY 8
IOSCO COUNTY (6D9)

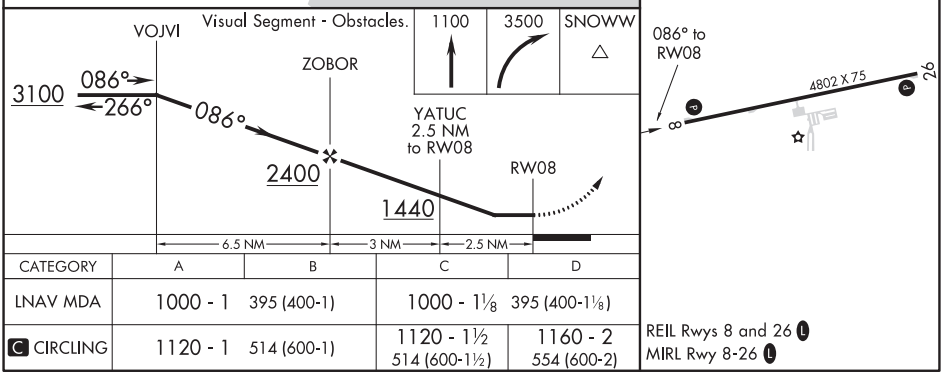
T A NA DME/DME RNP-0.3 NA. Procedure NA at night. Helicopter visibility reduction below 1 SM NA. Use Oscoda altimeter setting: when not received, use Bad Axe altimeter setting and increase all MDA 100 feet; increase LNAV Cats C and D visibilities ¼ mile, increase Circling visibility Cat C ¼ mile.

MISSED APPROACH: Climb to 1100 then climbing right turn to 3500 direct SNOWW and hold.

OSC AWOS-3	MINNEAPOLIS CENTER	UNICOM	
118.7	125.475 269.45	122.8 (CTAF)	122.85 L



ELEV 606 TDZE 605



CATEGORY	A	B	C	D
LNAV MDA	1000 - 1 395 (400-1)		1000 - 1⅛ 395 (400-1⅛)	
C CIRCLING	1120 - 1 514 (600-1)		1120 - 1½ 514 (600-1½)	1160 - 2 554 (600-2)

REIL Rwys 8 and 26 L
MIRL Rwy 8-26 L

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LOC/DME I-ESC	APP CRS	Rwy ldg	6498
109.3	094°	TDZE	609
Chan 30		Apt Elev	609

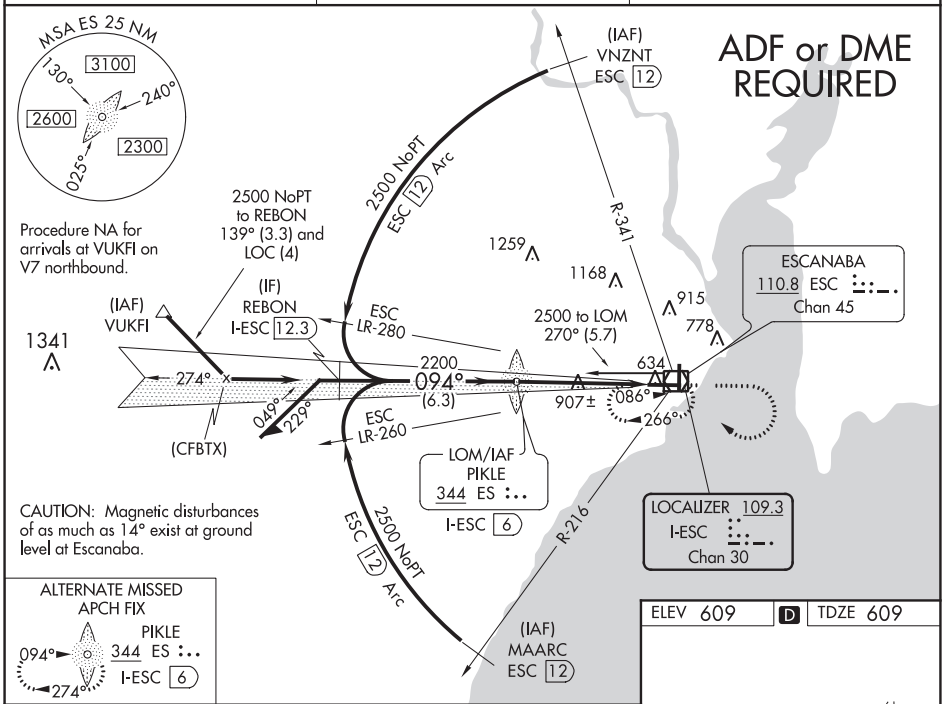
ILS or LOC RWY 9
DELTA COUNTY (ESC)

ADF or DME required. Night landing: Rwy 19 NA. When local altimeter setting not received, use Marquette altimeter setting and increase all DA 178 feet and all MDA 180 feet, increase S-ILS 9 all Cats visibility ⅛ mile, S-LOC 9 Cats C/D visibility ½ mile, Circling Cats C visibility ½ mile and Circling Cat D visibility ¼ mile. For inoperative MALSR when using Marquette altimeter setting, increase S-ILS 9 all Cats visibility to 1 mile, and S-LOC 9 Cats C/D visibility to 2 miles.

MALSR

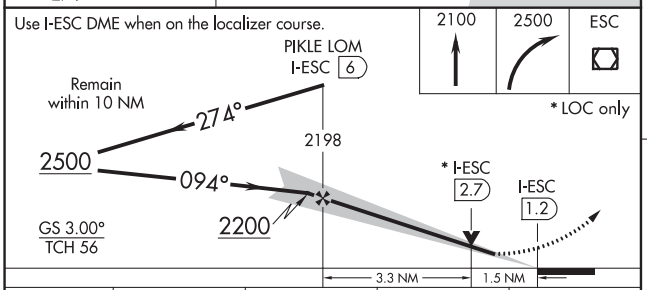
MISSED APPROACH: Climb to 2100 then climbing right turn to 2500 direct ESC VOR/DME and hold.

AWOS-3PT	MINNEAPOLIS CENTER	UNICOM
121.425	127.65	122.8 (CTAF)



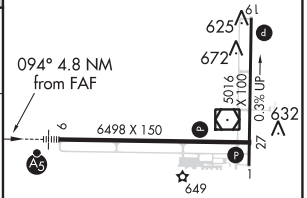
ALTERNATE MISSED APCH FIX
PIKLE
094° 344 ES
274° I-ESC 6

Use I-ESC DME when on the localizer course.



* LOC only

ELEV 609 D TDZE 609



HIRL Rwy 9-27 L
MIRL Rwy 1-19 L
REIL Rwys 1 and 27 L

CATEGORY	A	B	C	D
S-ILS 9	809-½ 200 (200-½)			
S-LOC 9	1160-½ 551 (600-½)		1160-1⅛ 551 (600-1⅛)	
C CIRCLING	1160-1 551 (600-1)		1280-2 671 (700-2)	1480-2¾ 871 (900-2¾)

FAF to MAP 4.8 NM					
Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36

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EC-1, 25 FEB 2021 to 22 APR 2021

ESCANABA, MICHIGAN AL-5123 (FAA) 18256

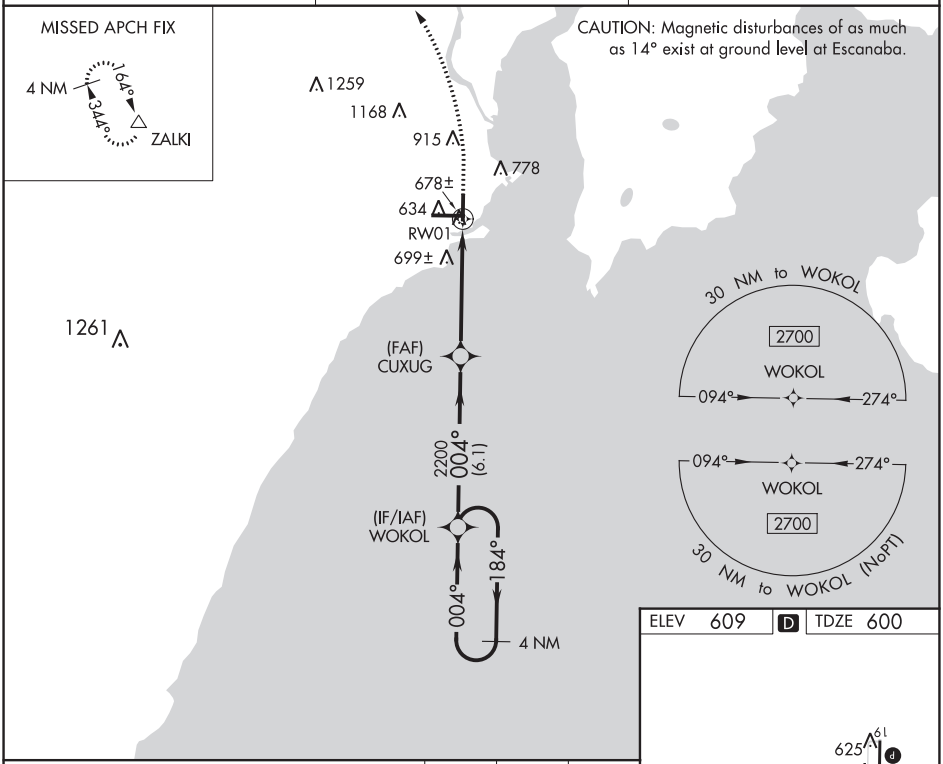
WAAS CH 69333 W01A	APP CRS 004°	Rwy ldg 5016 TDZE 600 Apt Elev 609

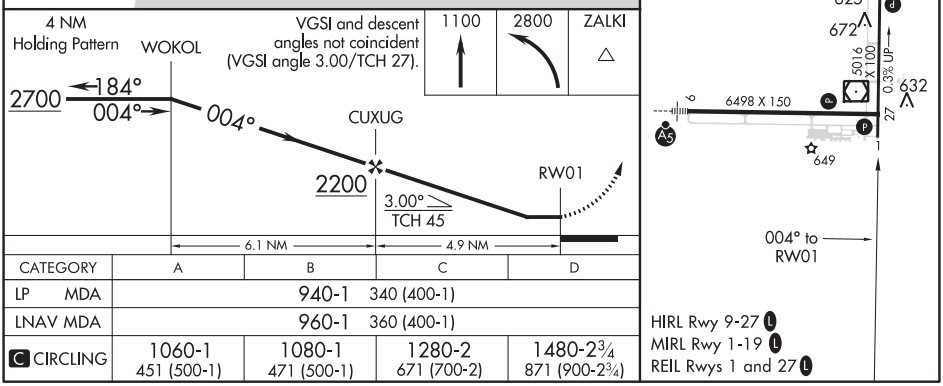
RNAV (GPS) RWY 1
DELTA COUNTY (ESC)

T A Rwy 1 helicopter visibility reduction below 1 SM NA. DME/DME RNP-0.3 NA. Straight-in Rwy 1 NA at night, Circling Rwy 1, 19 NA at night. When local altimeter setting not received, use Marquette altimeter setting and increase all MDA 180 feet and increase LP Cat C and D visibility ½ SM, LNAV Cat C and D visibility ⅝ SM, and Circling Cat C visibility ½ SM and Cat D visibility ¼ SM.

MISSED APPROACH: Climb to 1100, then climbing left turn to 2800 direct ZALKI and hold.

AWOS-3PT	MINNEAPOLIS CENTER	UNICOM
121.425	127.65	122.8 (CTAF) L





CATEGORY	A	B	C	D
LP MDA	940-1 340 (400-1)			
LNAV MDA	960-1 360 (400-1)			
C CIRCLING	1060-1 451 (500-1)	1080-1 471 (500-1)	1280-2 671 (700-2)	1480-2¾ 871 (900-2¾)

ESCANABA, MICHIGAN
Orig-C 13SEP18

45°43′N-87°06′W

DELTA COUNTY (ESC)
RNAV (GPS) RWY 1

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 70511 W09A	APP CRS 094°	Rwy ldg 6498 TDZE 609 Apt Elev 609

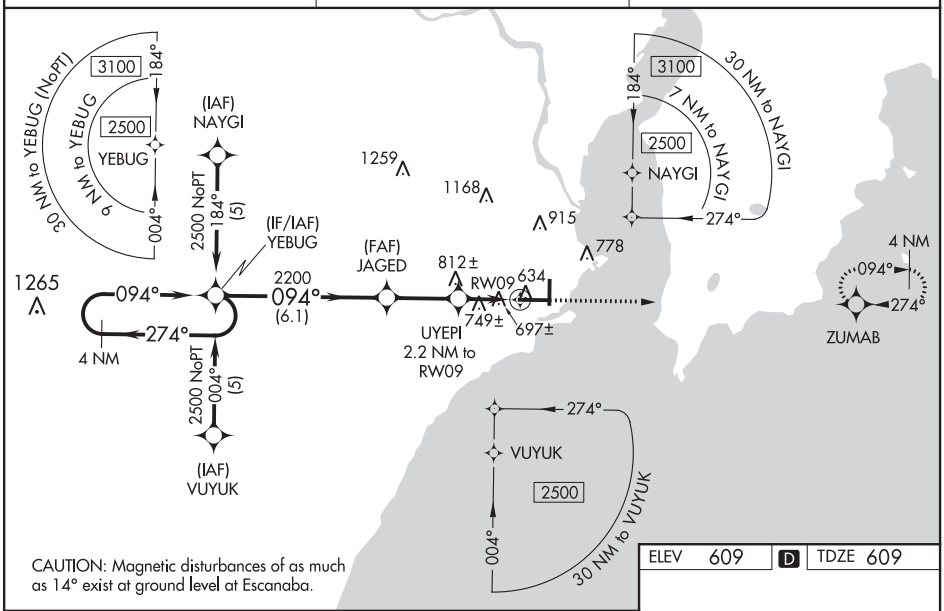
RNAV (GPS) RWY 9
DELTA COUNTY (ESC)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Marquette altimeter setting and increase all DA 178 feet and all MDA 180 feet and increase LPV all Cats visibility ⅛ mile, LNAV/VNAV all Cats visibility ⅜ mile, LNAV Cat C and D visibility ⅝ mile, and Circling Cat C visibility ½ mile, Cat D visibility ¼ mile. For inoperative MALSR, increase LNAV/VNAV all Cats visibility to 1 mile. For inoperative MALSR, when using Marquette altimeter setting, increase LPV all Cats visibility to 1 mile, LNAV Cat C and D visibility to 1⅝ mile. VDP NA when using Marquette altimeter setting. Baro-VNAV NA when using Marquette altimeter setting. Circling to Rwy 19 NA at night.

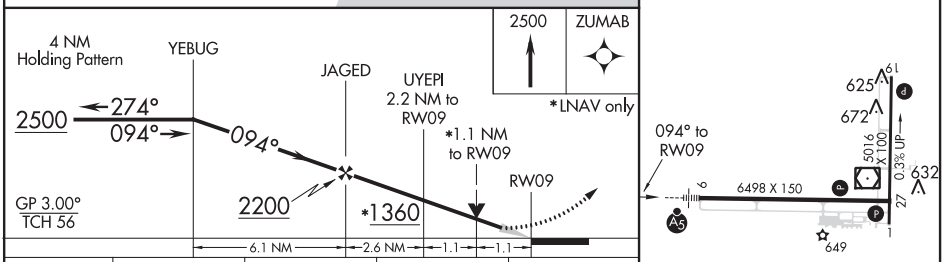
MALSR

MISSED APPROACH: Climb to 2500 direct ZUMAB and hold.

AWOS-3PT	MINNEAPOLIS CENTER	UNICOM
121.425	127.65	122.8 (CTAF) L



CAUTION: Magnetic disturbances of as much as 14° exist at ground level at Escanaba.



CATEGORY	A	B	C	D
LPV DA	809-½		200 (200-½)	
LNAV/VNAV DA	967-⅝		358 (400-⅝)	
LNAV MDA	1000-½ 391 (400-½)		1000-⅝ 391 (400-⅝)	
C CIRCLING	1060-1 451 (500-1)	1080-1 471 (500-1)	1280-2 671 (700-2)	1480-2¾ 871 (900-2¾)

HIRL Rwy 9-27 L
MIRL Rwy 1-19 L
REIL Rwys 1 and 27 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

ESCANABA, MICHIGAN AL-5123 (FAA) 19059

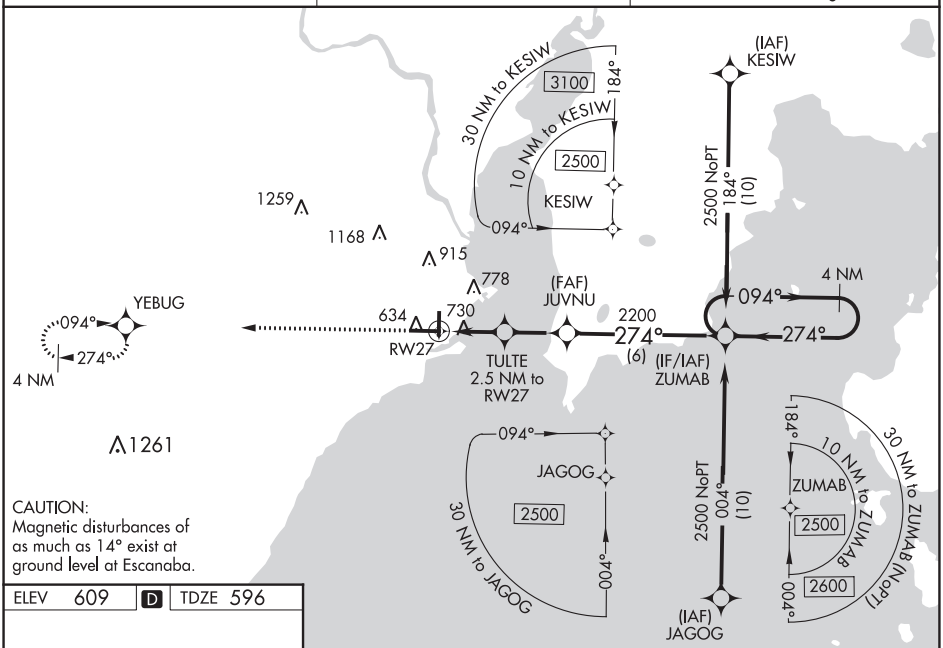
WAAS CH 63128 W27A	APP CRS 274°	Rwy ldg 6498 TDZE 596 Apt Elev 609

RNAV (GPS) RWY 27
DELTA COUNTY (ESC)

Baro-VNAV NA when using Marquette altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). Rwy 27 Straight-in and Circling and Circling to Rwy 19 NA at night. DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Marquette altimeter setting and increase all DA 178 feet and all MDA 180 feet and increase LPV all Cats visibility ⅜ mile, LNAV/VNAV all Cats visibility ⅝ mile, LNAV Cat C and D visibility ⅜ mile, and Circling Cat C visibility ½ mile and Cat D visibility ¼ mile.

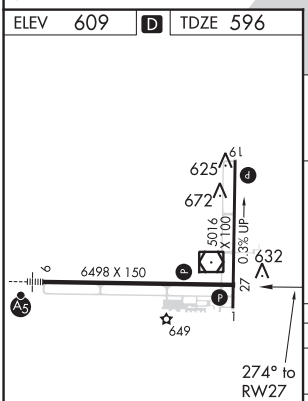
MISSED APPROACH: Climb to 2500 direct YEBUG and hold.

AWOS-3PT	MINNEAPOLIS CENTER	UNICOM
121.425	127.65	122.8 (CTAF) L

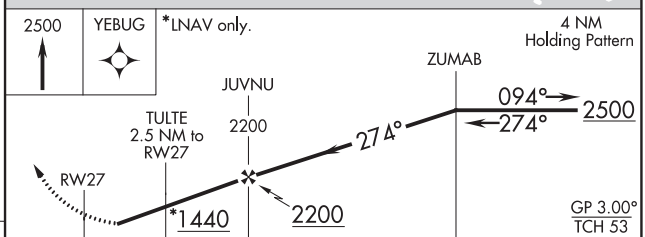


CAUTION:
Magnetic disturbances of as much as 14° exist at ground level at Escanaba.

ELEV 609 | D | TDZE 596



HIRL Rwy 9-27 L
MIRL Rwy 1-19 L
REIL Rwys 1 and 27 L



CATEGORY	A	B	C	D
LPV DA	846-1 250 (300-1)			
LNAV/VNAV DA	1076-1⅝ 480 (500-1⅝)			
LNAV MDA	1040-1 444 (500-1)		1040-1⅜ 444 (500-1⅜)	
C CIRCLING	1060-1 451 (500-1)	1080-1 471 (500-1)	1280-2 671 (700-2)	1480-2¾ 871 (900-2¾)

ESCANABA, MICHIGAN
Amdt 1B 28MAY15

45°43'N-87°06'W

DELTA COUNTY (ESC)
RNAV (GPS) RWY 27

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

LOC/DME I-ESC 109.3 Chan 30	APP CRS 274°	Rwy ldg 6498 TDZE 596 Apt Elev 609

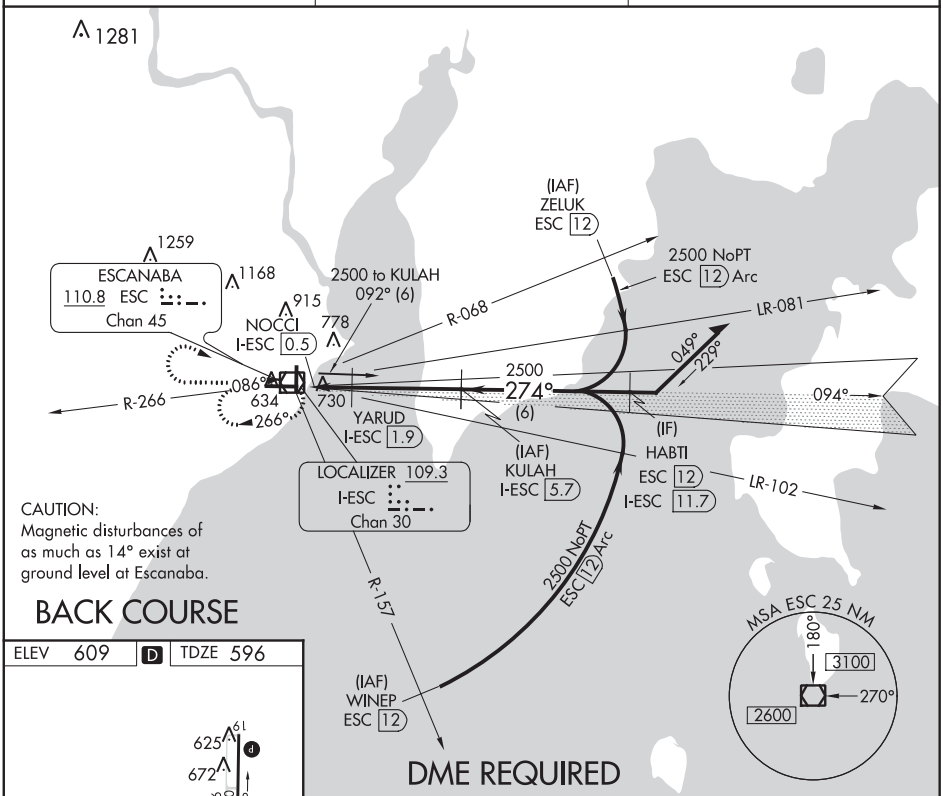
LOC/DME BC RWY 27

DELTA COUNTY (ESC)

Rwy 27 Straight-In and Circling and Circling to Rwy 19 NA at night. Helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Marquette altimeter setting and increase all MDA 180 feet and S-27 Cat C and D visibility ⅜ mile and Circling Cat C visibility ½ mile and Cat D visibility ¼ mile.

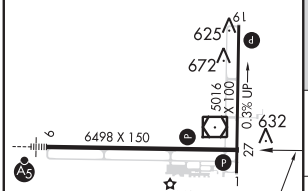
MISSED APPROACH: Climb to 2500 then right turn direct ESC VOR/DME and hold.

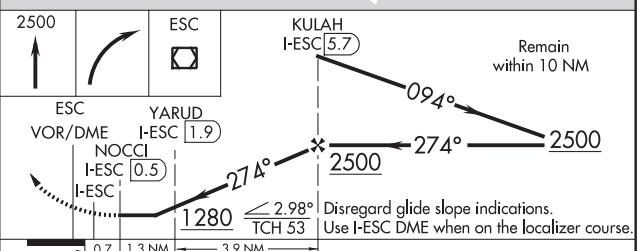
AWOS-3PT	MINNEAPOLIS CENTER	UNICOM
121.425	127.65	122.8 (CTAF) L



EC-1, 25 FEB 2021 to 22 APR 2021

ELEV 609 | D | TDZE 596





CATEGORY	A	B	C	D
S-27	1040-1 444 (500-1)		1040-1⅜ 444 (500-1⅜)	
C CIRCLING	1060-1 451 (500-1)	1080-1 471 (500-1)	1280-2 671 (700-2)	1480-2¾ 871 (900-2¾)

HIRL Rwy 9-27 L
MIRL Rwy 1-19 L
REIL Rwys 1 and 27 L

ESCANABA, MICHIGAN AL-5123 (FAA) 20254

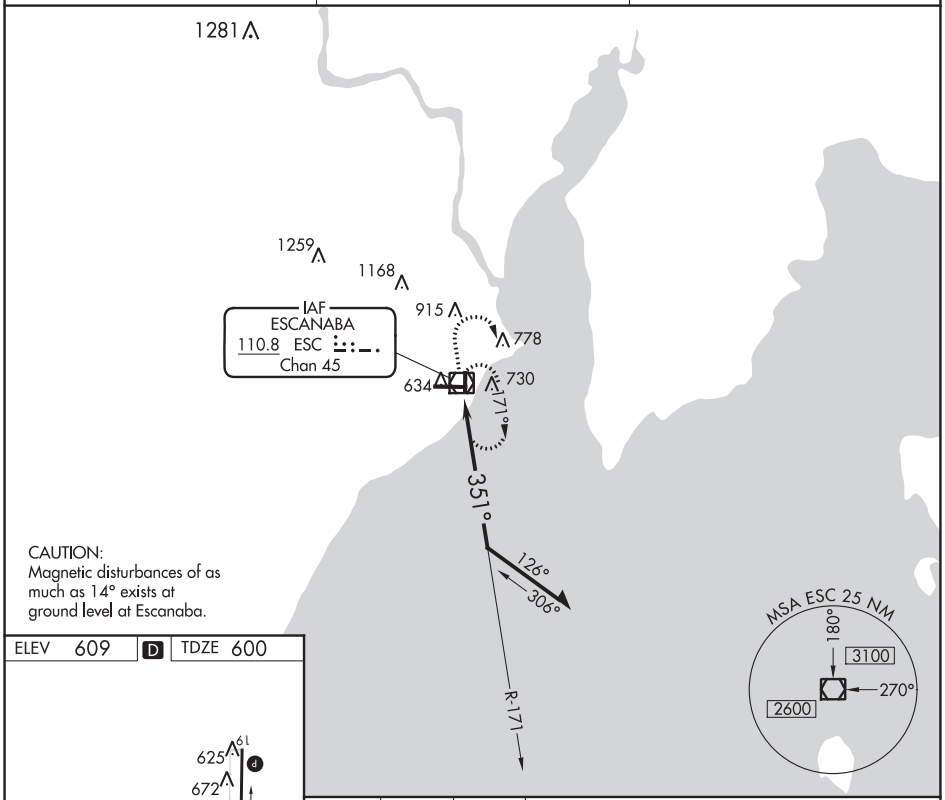
VOR/DME ESC 110.8 Chan 45	APP CRS 351°	Rwy ldg 5016 TDZE 600 Apt Elev 609

VOR RWY 1
DELTA COUNTY (ESC)

Straight-in Rwy 1 NA at night, Circling Rwy 1, 19 NA at night. Rwy 1 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Marquette altimeter setting and increase all MDA 180 feet and increase S-01 Cat C and D visibility ½ SM, Circling Cat C visibility ½ SM and Cat D visibility ¼ SM.

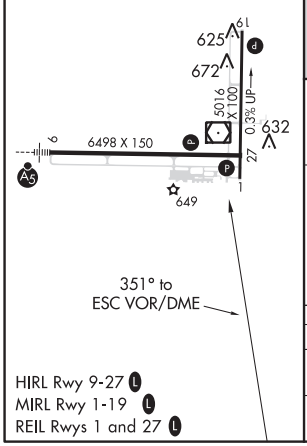
MISSED APPROACH: Climb to 2400 then right turn direct ESC VOR/DME and hold.

AWOS-3PT	MINNEAPOLIS CENTER	UNICOM
121.425	127.65	122.8 (CTAF) L

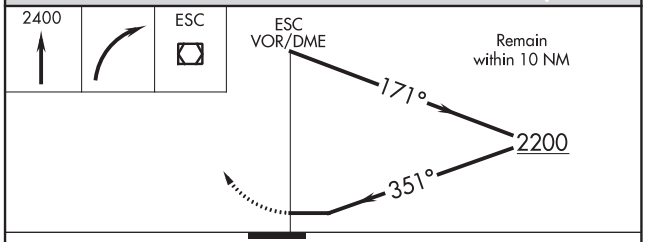


CAUTION:
Magnetic disturbances of as much as 14° exists at ground level at Escanaba.

ELEV 609 D TDZE 600

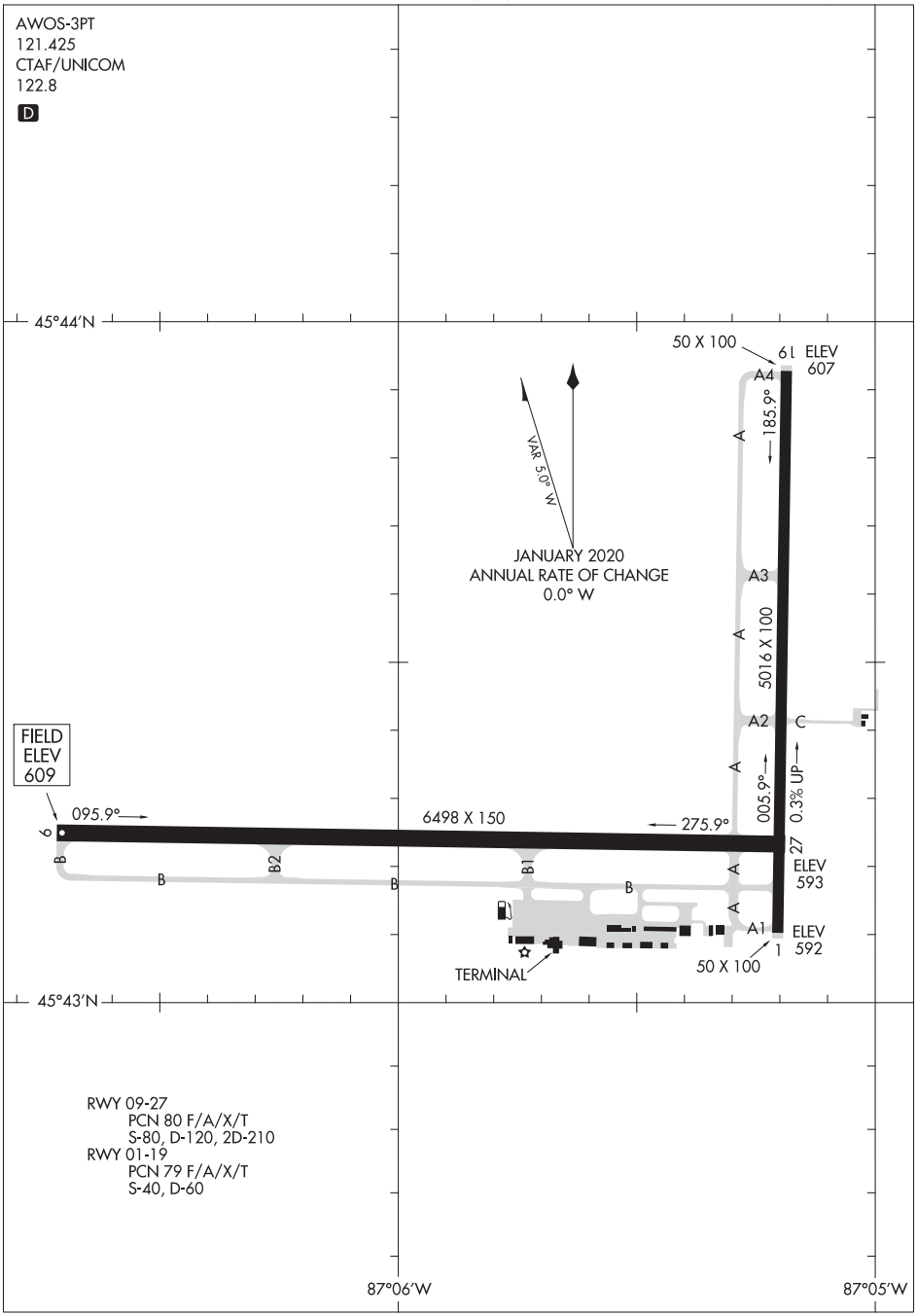


HIRL Rwy 9-27 L
MIRL Rwy 1-19 L
REIL Rwys 1 and 27 L



CATEGORY	A	B	C	D
S-1	1080-1 480 (500-1)		1080-1⅜ 480 (500-1⅜)	
C CIRCLING	1080-1 471 (500-1)		1280-2 671 (700-2)	1480-2¾ 871 (900-2¾)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021


AWOS-3PT
121.425
CTAF/UNICOM
122.8
D
45°44'N
50 X 100
6 L
ELEV
607
A4
185.9°
A
VAR 5.0° W
JANUARY 2020
ANNUAL RATE OF CHANGE
0.0° W
A3
5016 X 100
A2
C
005.9°
0.3% UP
FIELD
ELEV
609
095.9°
6
6498 X 150
275.9°
27
ELEV
593
B
B2
B1
A1
ELEV
592
1
50 X 100
TERMINAL
45°43'N
RWY 09-27
PCN 80 F/A/X/T
S-80, D-120, 2D-210
RWY 01-19
PCN 79 F/A/X/T
S-40, D-60
87°06'W
87°05'W

FLINT, MICHIGAN AL-618 (FAA) 20366

ILS or LOC RWY 9
BISHOP INTL (FNT)

LOC I-FNT	APP CRS	Rwy ldg 7201
109.9	094°	TDZE 771
		Apt Elev 782

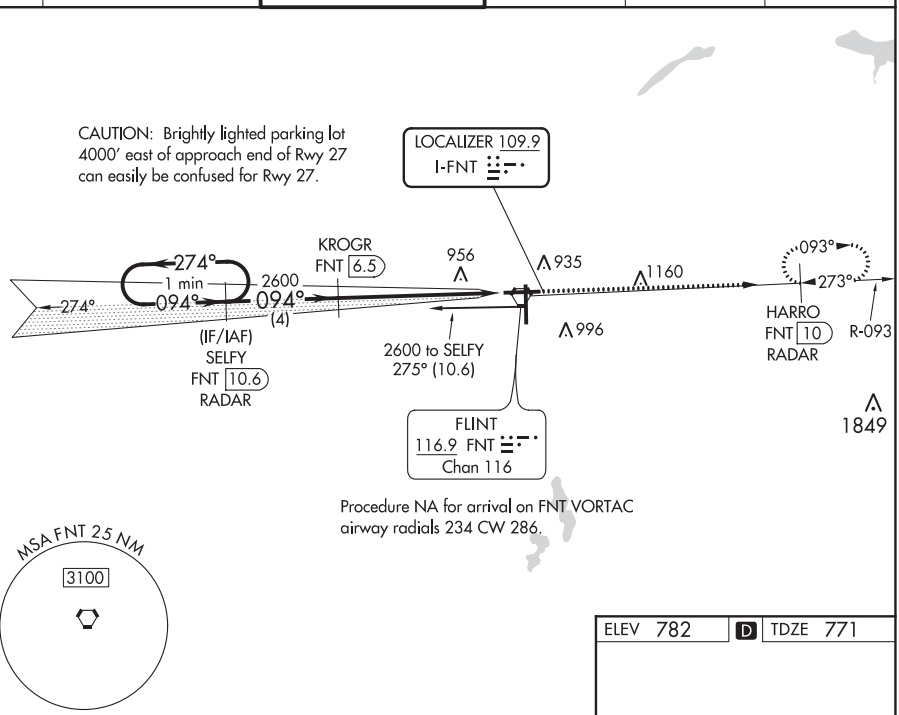
DME or RADAR required for procedure entry. DME or RADAR required.

T A ASR DME from FNT VORTAC. Simultaneous reception of I-FNT and FNT DME required. For inop ALS, increase S-LOC 9 Cat C/D visibility to 1⅜ SM. **RVR 1800 authorized with use of FD or AP or HUD to DA.

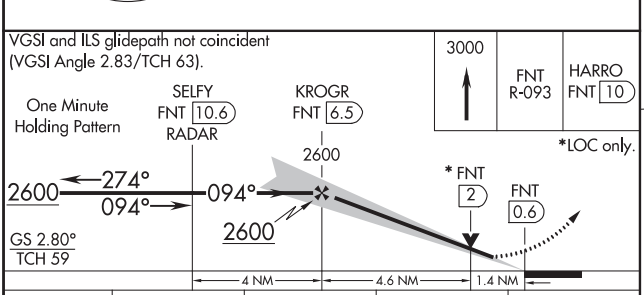
MALSR A5

MISSED APPROACH: Climb to 3000 on FNT VORTAC R-093 to HARRO/FNT VORTAC 10 DME/RADAR and hold.

ATIS	GREAT LAKES APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	118.8 257.9	126.3 (CTAF) L 257.9	121.9	121.75	122.95

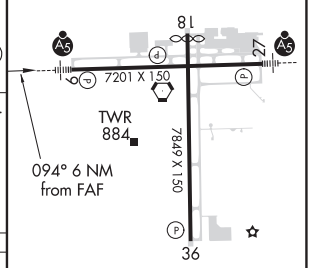


VGSI and ILS glidepath not coincident (VGSI Angle 2.83/TCH 63).



CATEGORY	A	B	C	D
S-ILS 9 **	971/24 200 (200-½)			
S-LOC 9	1280/24 509 (500-½)		1280/55 509 (500-1)	
C CIRCLING	1280-1 498 (500-1)	1300-1 518 (600-1)	1300-1½ 518 (600-1½)	1520-2¼ 738 (800-2¼)

ELEV 782 D TDZE 771



HIRL Rwys 9-27 and 18-36
REIL Rwy 18 and 36

FAF to MAP 6 NM					
Knots	60	90	120	150	180
Min:Sec	6:00	4:00	3:00	2:24	2:00

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

FLINT, MICHIGAN
Amdt 23 24MAY18

42°58'N-83°45'W

BISHOP INTL (FNT)
ILS or LOC RWY 9

ILS or LOC RWY 27
BISHOP INTL (FNT)

LOC I-TUN	APP CRS	Rwy ldg / TDZE / Apt Elev
109.9	274°	7201 / 770 / 782

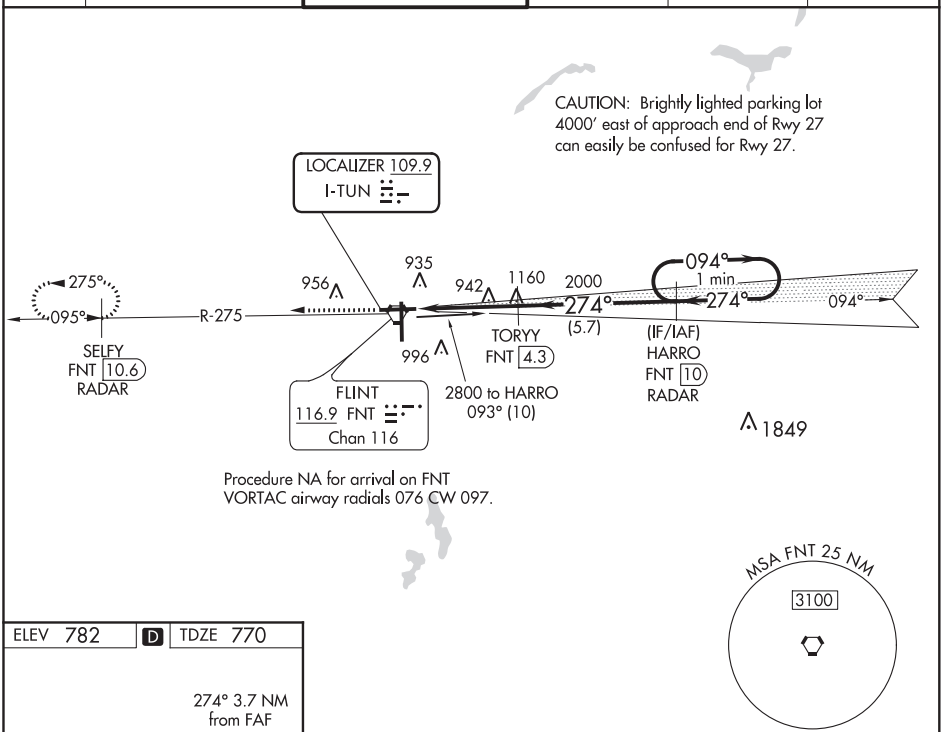
DME or RADAR required for procedure entry. DME or RADAR required.

ASR: DME from FNT VORTAC. Simultaneous reception of I-TUN and FNT DME required. For inop ALS, increase S-LOC 27 Cat A/B visibility to 1 SM, and Cat C/D visibility to 1⅜ SM.

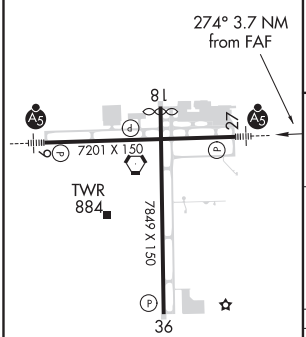
MALSR

MISSED APPROACH: Climb to 2600 on FNT VORTAC R-275 direct SELFY/FNT VORTAC 10.6 DME/RADAR and hold.

ATIS	GREAT LAKES APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	118.8 257.9	126.3 (CTAF) L 257.9	121.9	121.75	122.95

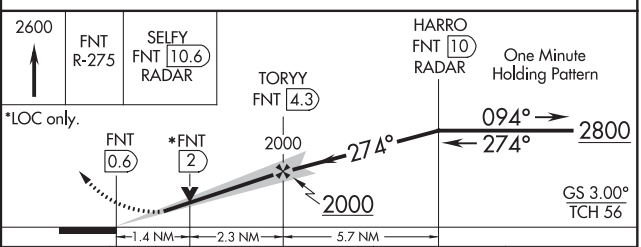


ELEV 782 | D | TDZE 770



HIRL Rwys 9-27 and 18-36
REIL Rwy 18 and 36

FAF to MAP 3.7 NM					
Knots	60	90	120	150	180
Min:Sec	3:42	2:28	1:51	1:29	1:14



CATEGORY	A	B	C	D
S-ILS 27	970-½ 200 (200-½)			
S-LOC 27	1260-½ 490 (500-½)		1260-1 490 (500-1)	
C CIRCLING	1260-1 478 (500-1)	1300-1 518 (600-1)	1300-1½ 518 (600-1½)	1520-2¼ 738 (800-2¼)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

FLINT, MICHIGAN — AL-618 (FAA) — 20366

RNAV (GPS) RWY 9
BISHOP INTL (FNT)

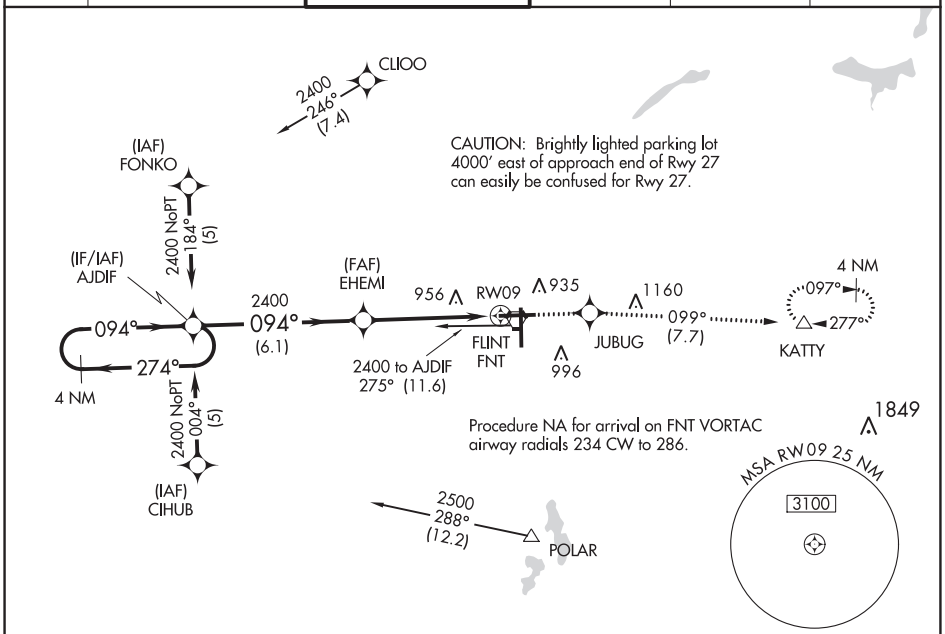
WAAS	APP CRS	Rwy ldg	7201
CH **45714**	**094°**	TDZE	771
W09A		Apt Elev	782

ASR: For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. For inop ALS, increase LNAV Cat C/D visibility to 1⅜ SM.
**RVR 1800 authorized with use of FD or AP or HUD to DA.

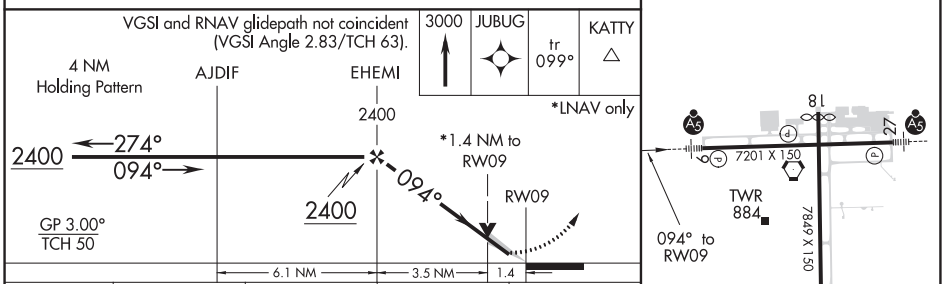
MALSR

MISSED APPROACH: Climb to 3000 direct JUBUG and on track 099° to KATTY and hold.

ATIS	GREAT LAKES APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	**118.8 257.9**	**126.3** (CTAF) L **257.9**	**121.9**	**121.75**	**122.95**



ELEV 782 | D | TDZE 771



CATEGORY	A	B	C	D
LPV DA **	971/24 200 (200-½)			
LNAV/VNAV DA	1227/50 456 (500-1)			
LNAV MDA	1260/24 489 (500-½)		1260/50 489 (500-1)	
C CIRCLING	1260-1 478 (500-1)	1300-1 518 (600-1)	1300-1½ 518 (600-1½)	1520-2¼ 738 (800-2¼)

HIRL Rwys 9-27 and 18-36
REIL Rwy 18 and 36

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

RNAV (GPS) RWY 18
BISHOP INTL (FNT)

WAAS	APP CRS	Rwy ldg	7648
CH **99514**	**185°**	TDZE	**777**
W18A		Apt Elev	**782**

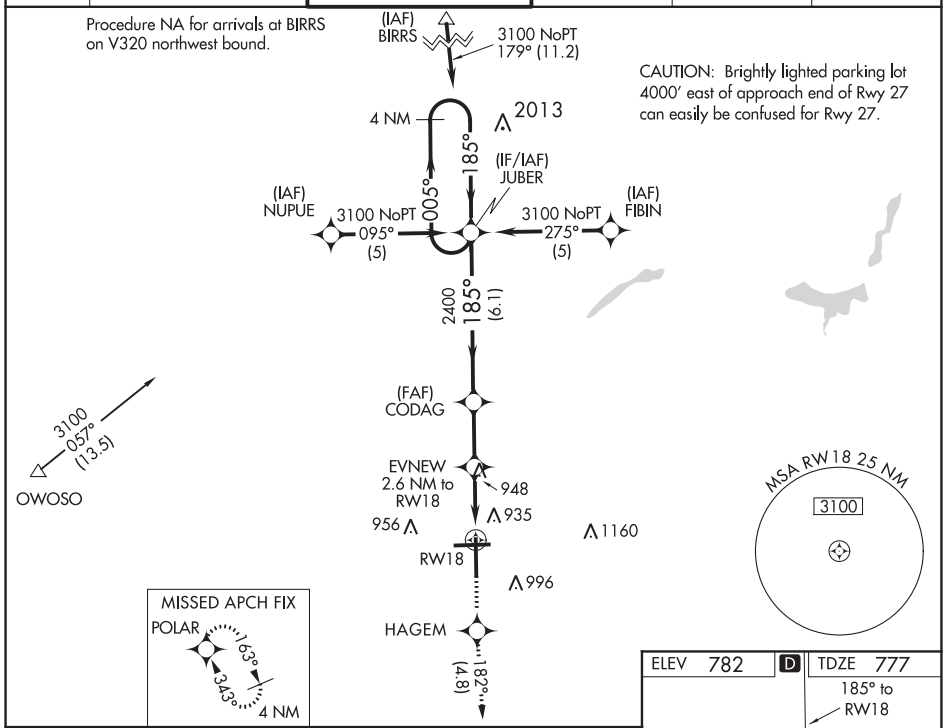
ASR: For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Rwy 18 helicopter visibility reduction below ¾ SM NA.

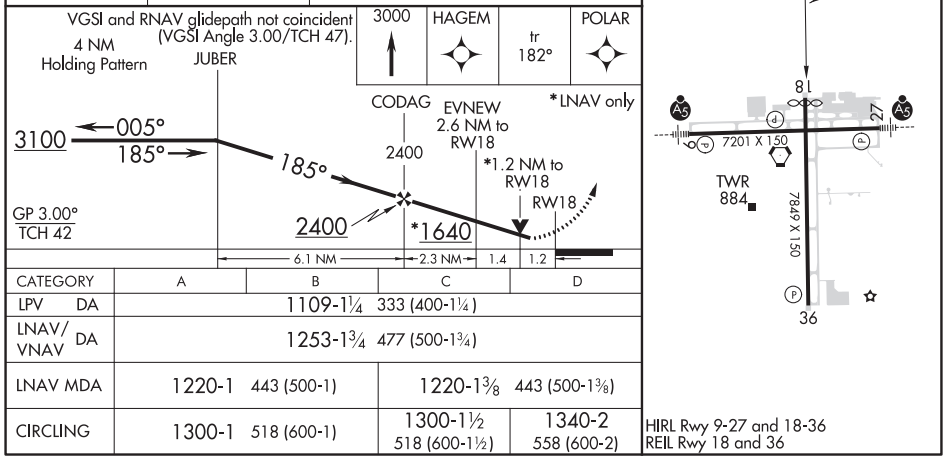
MISSED APPROACH: Climb to 3000 direct HAGEM and on track 182° to POLAR and hold.

ATIS	GREAT LAKES APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	**118.8 257.9**	**126.3** (CTAF) **257.9**	**121.9**	**121.75**	**122.95**

Procedure NA for arrivals at BIRRS on V320 northwest bound.

CAUTION: Brightly lighted parking lot 4000′ east of approach end of Rwy 27 can easily be confused for Rwy 27.





CATEGORY	A	B	C	D
LPV DA	1109-1¼ 333 (400-1¼)			
LNAV/VNAV DA	1253-1¾ 477 (500-1¾)			
LNAV MDA	1220-1 443 (500-1)		1220-1⅜ 443 (500-1⅜)	
CIRCLING	1300-1 518 (600-1)		1300-1½ 518 (600-1½)	1340-2 558 (600-2)

HIRL Rwy 9-27 and 18-36
REIL Rwy 18 and 36

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

FLINT, MICHIGAN | AL-618 (FAA) | 20366

RNAV (GPS) RWY 27
BISHOP INTL (FNT)

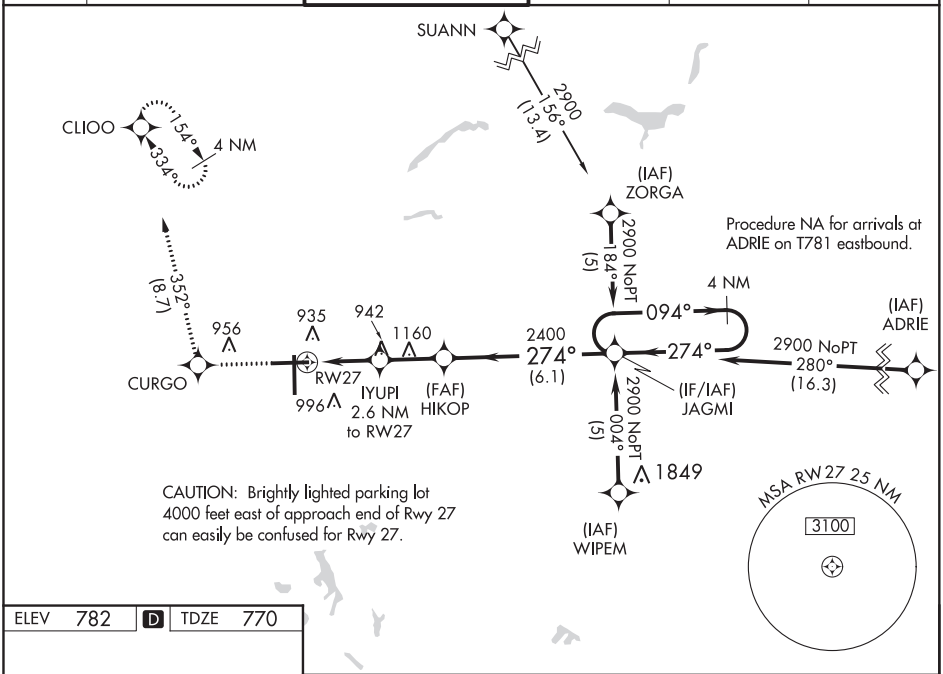
WAAS CH 72810 W27A	APP CRS 274°	Rwy ldg 7201	TDZE 770	Apt Elev 782

ASR: For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). Rwy 27 helicopter visibility reduction below ¾ SM NA. DME/DME RNP-0.3 NA. For inop ALS, increase LNAV/VNAV all Cats visibility to 1⅜ SM, LNAV Cat A/B visibility to 1 SM and LNAV Cat C/D visibility to 1⅜ SM.

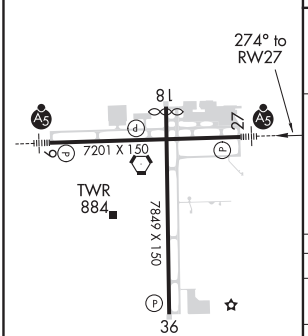
MALSR

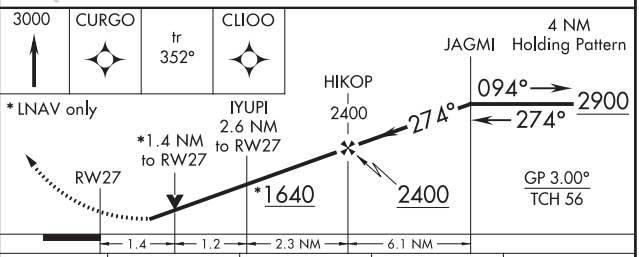
MISSED APPROACH: Climb to 3000 direct CURGO and track 352° to CLIOO and hold.

ATIS	GREAT LAKES APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	118.8 257.9	126.3 (CTAF) L 257.9	121.9	121.75	122.95



ELEV 782 | D | TDZE 770





CATEGORY	A	B	C	D
LPV DA	1098-¾ 328 (400-¾)			
LNAV/VNAV DA	1240-1 470 (500-1)			
LNAV MDA	1260-¾ 490 (500-¾)		1260-1 490 (500-1)	
C CIRCLING	1260-1 478 (500-1)	1300-1 518 (600-1)	1300-1½ 518 (600-1½)	1520-2¼ 738 (800-2¼)

HIRL Rwys 9-27 and 18-36
REIL Rwy 18 and 36

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RNAV (GPS) RWY 36
BISHOP INTL (FNT)

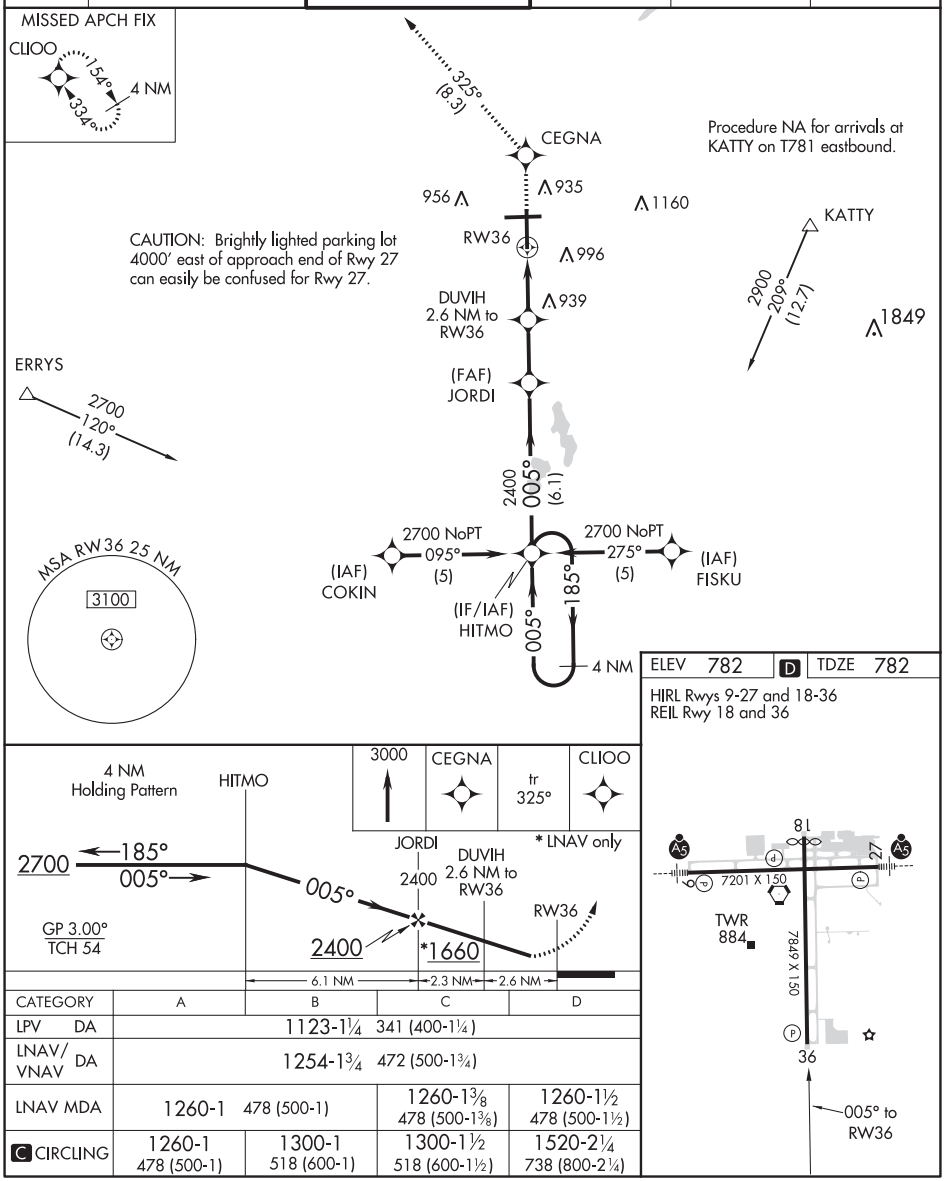
WAAS CH 65914 W36A	APP CRS 005°	Rwy ldg 7648 TDZE 782 Apt Elev 782

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). Rwy 36 helicopter visibility reduction below ¾ SM NA. DME/DME RNP -0.3 NA.

ASR

MISSED APPROACH: Climb to 3000 direct CEGNA and on track 325° to CLIOO and hold.

ATIS	GREAT LAKES APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	118.8 257.9	126.3 (CTAF) 257.9	121.9	121.75	122.95



CATEGORY	A	B	C	D
LPV DA	1123-1¼ 341 (400-1¼)			
LNAV/VNAV DA	1254-1¾ 472 (500-1¾)			
LNAV MDA	1260-1 478 (500-1)		1260-1⅜ 478 (500-1⅜)	1260-1½ 478 (500-1½)
C CIRCLING	1260-1 478 (500-1)	1300-1 518 (600-1)	1300-1½ 518 (600-1½)	1520-2¼ 738 (800-2¼)

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FLINT, MICHIGAN

AL-618 (FAA)

20366

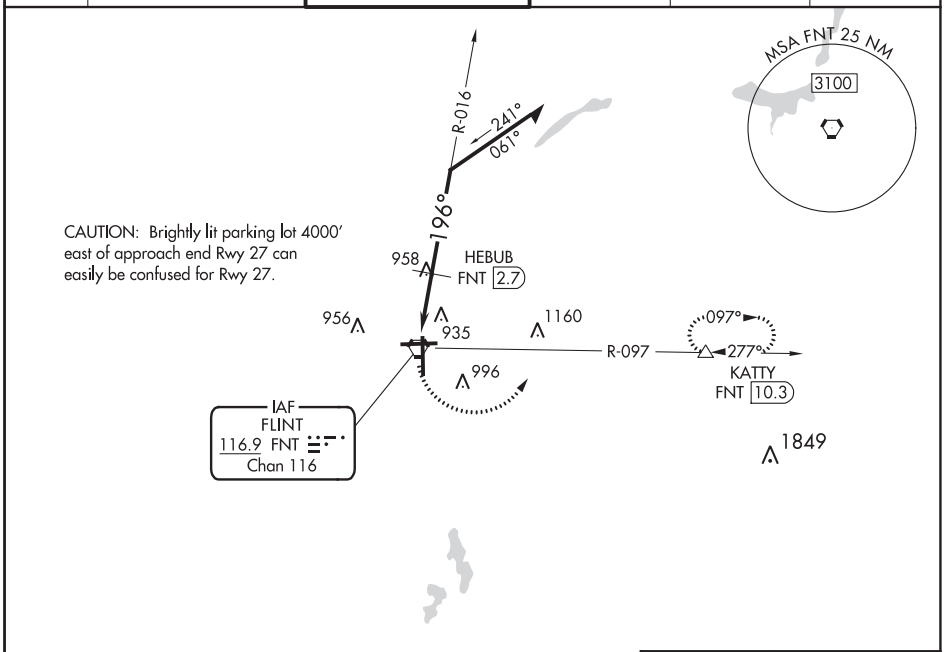
VOR RWY 18
BISHOP INTL (FNT)

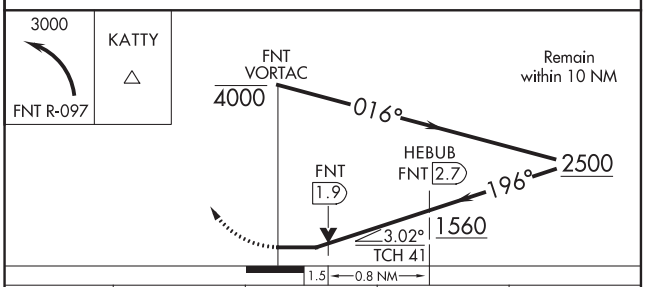
VORTAC FNT	APP CRS	Rwy ldg 7648
116.9	196°	TDZE 777
Chan 116		Apt Elev 782

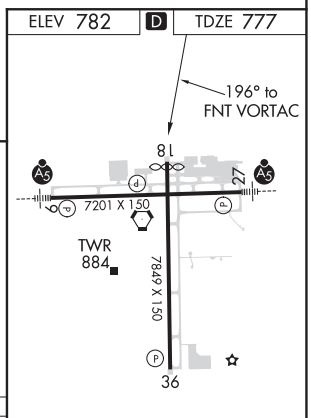
T A ASR — Rwy 18 helicopter visibility reduction below ¾ SM NA. DME required.

MISSED APPROACH: Climbing left turn to 3000 on FNT VORTAC R-097 to KATTY/10.3 DME and hold.

ATIS	GREAT LAKES APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	118.8 257.9	126.3 (CTAF) L 257.9	121.9	121.75	122.95







CATEGORY	A	B	C	D
S-18	1300-1 523 (600-1)		1300-1½ 523 (600-1½)	1300-1¾ 523 (600-1¾)
C CIRCLING	1300-1 518 (600-1)		1300-1½ 518 (600-1½)	1520-2¼ 738 (800-2¼)

HIRL Rwys 9-27 and 18-36
REIL Rwy 18 and 36

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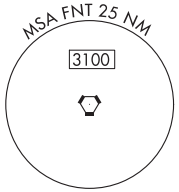
VOR RWY 36
BISHOP INTL (FNT)

VORTAC FNT 116.9 Chan 116	APP CRS 359°	Rwy ldg 7648 TDZE 782 Apt Elev 782

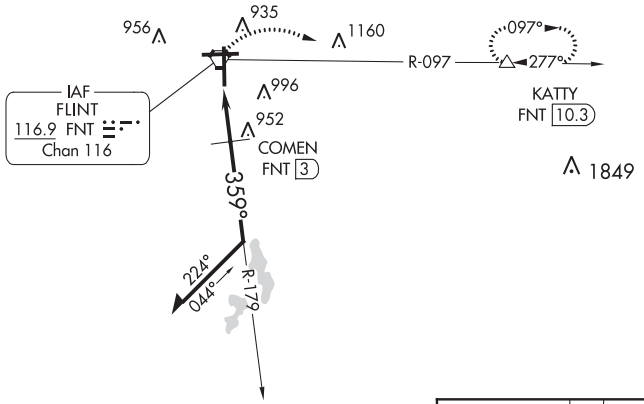
ASR: Rwy 36 helicopter visibility reduction below ¾ SM NA. DME required.

MISSED APPROACH: Climbing right turn to 3000 on FNT VORTAC R-097 to KATTY/10.3 DME and hold.

ATIS	GREAT LAKES APP CON ★	FLINT TOWER ★	GND CON	CLNC DEL	UNICOM
133.15	118.8 257.9	126.3 (CTAF) L 257.9	121.9	121.75	122.95

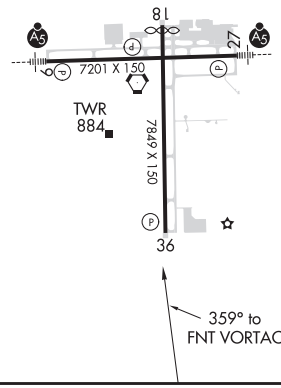


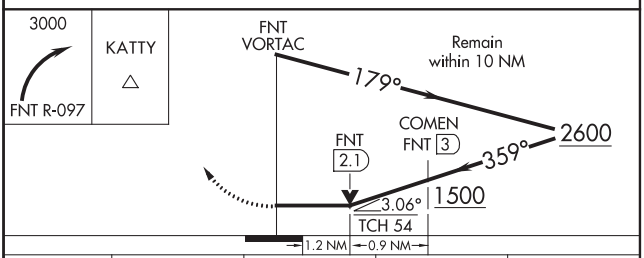
CAUTION: Brightly lighted parking lot 4000′ east of approach end Rwy 27 can easily be confused for Rwy 27.



ELEV 782	D	TDZE 782

HIRL Rwys 9-27 and 18-36
REIL Rwy 18 and 36





CATEGORY	A	B	C	D
S-36	1220-1 438 (500-1)		1220-1¼ 438 (500-1¼)	
C CIRCLING	1240-1 458 (500-1)	1300-1 518 (600-1)	1300-1½ 518 (600-1½)	1520-2¼ 738 (800-2¼)

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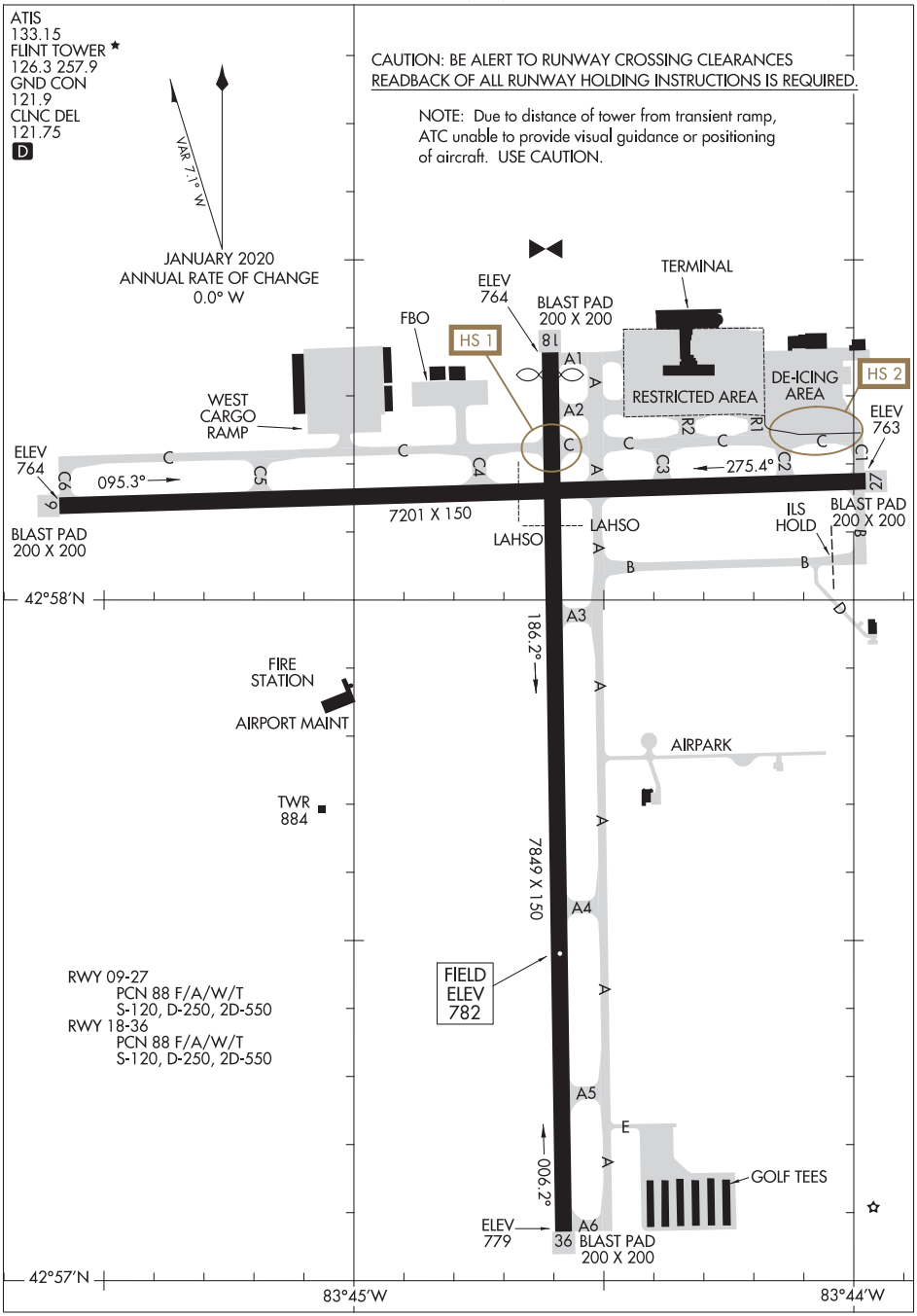
20086

AIRPORT DIAGRAM

AL-618 (FAA)

BISHOP INTL (FNT)
FLINT, MICHIGAN



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AIRPORT DIAGRAM
20086
FLINT, MICHIGAN
BISHOP INTL (FNT)

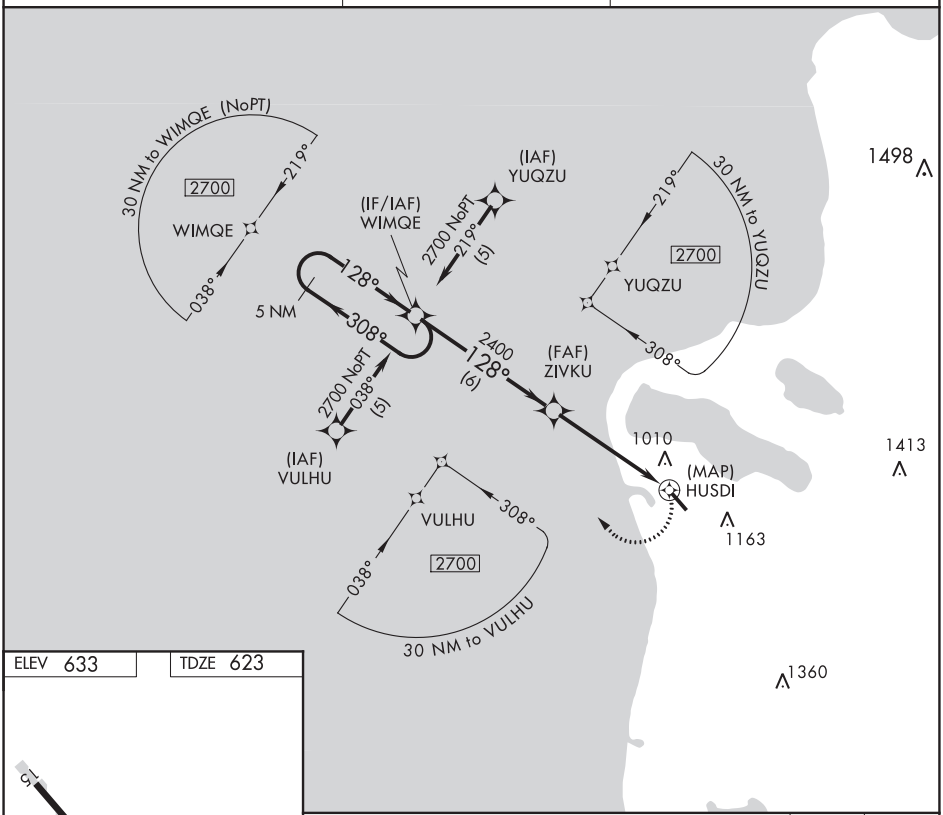
APP CRS	Rwy ldg	2956
128°	TDZE	623
	Apt Elev	633

RNAV (GPS) RWY 15
FRANKFORT DOW MEMORIAL FIELD (FKS)

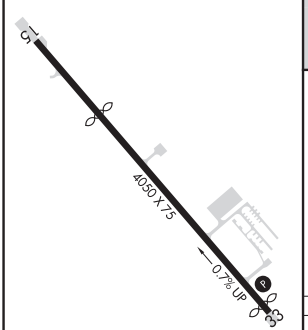
If local altimeter setting not received, use Manistee altimeter setting and increase all MDA's 60 feet. Procedure NA at night. Helicopter visibility reduction below 1 SM NA. DME/DME RNP-0.3 NA.

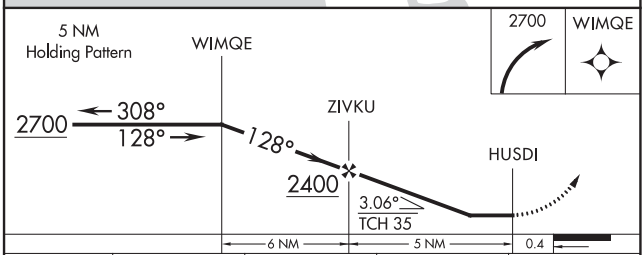
MISSED APPROACH: Climbing right turn to 2700 direct WIMQE and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
118.325	132.9 338.3	123.05 (CTAF) L



ELEV 633 TDZE 623





CATEGORY	A	B	C	D
LNAV MDA	1220-1	597 (600-1)	1220-1½ 597 (600-1½)	NA
CIRCLING	1320-1	687 (700-1)	1520-2¾ 887 (900-2¾)	NA

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FRANKFORT, MICHIGAN | AL-6732 (FAA) | 18144

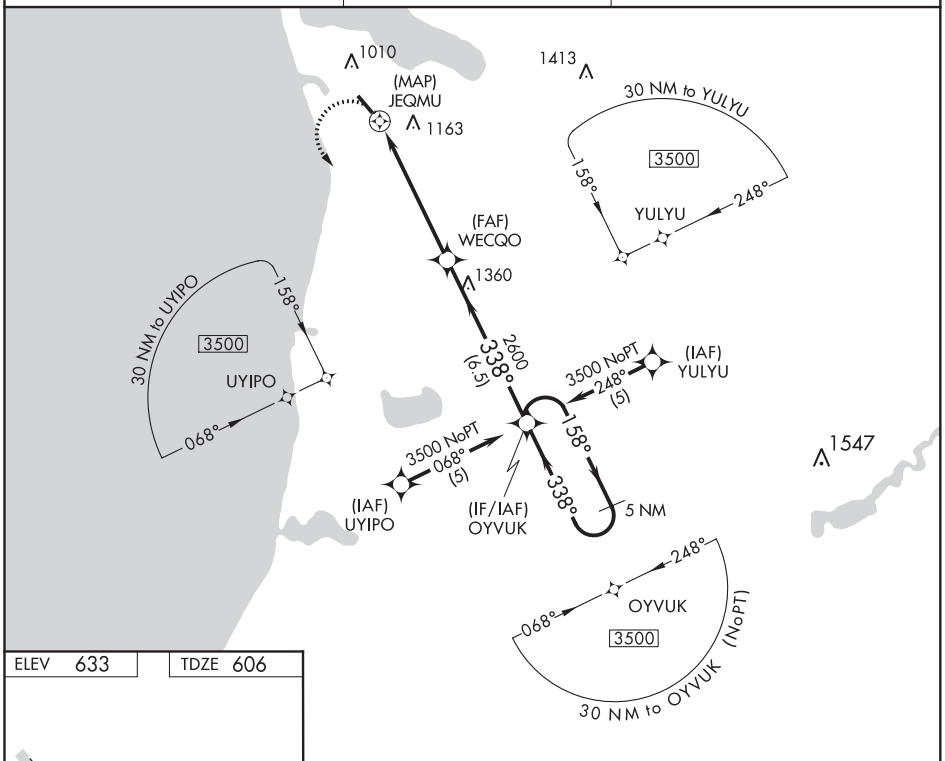
APP CRS	Rwy ldg	3939
338°	TDZE	606
	Apt Elev	633

RNAV (GPS) RWY 33
FRANKFORT DOW MEMORIAL FIELD (FKS)

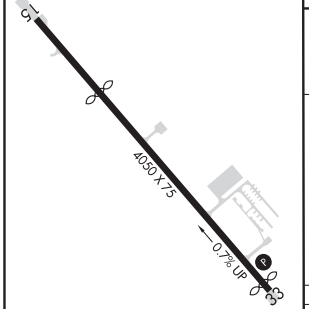
DME/DME RNP-0.3 NA. If local altimeter setting not received, use Manistee altimeter setting and increase all MDAs 60 feet. Helicopter visibility reduction below 1 SM NA. Procedure NA at night.

MISSED APPROACH: Climbing left turn to 3500 direct OYVUK and hold.

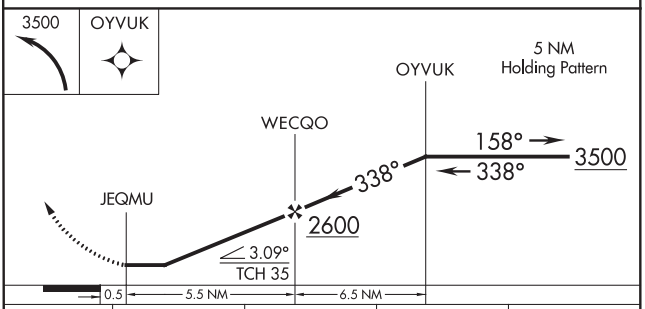
AWOS-3	MINNEAPOLIS CENTER	UNICOM
118.325	132.9 338.3	123.05 (CTAF) L



ELEV 633 | TDZE 606



MIRL Rwy 15-33 L
REIL Rwy 33 L



CATEGORY	A	B	C	D
LNAV MDA	1320-1 714 (700-1)		1320-2 714 (700-2)	NA
CIRCLING	1320-1 687 (700-1)		1520-2¾ 887 (900-2¾)	NA

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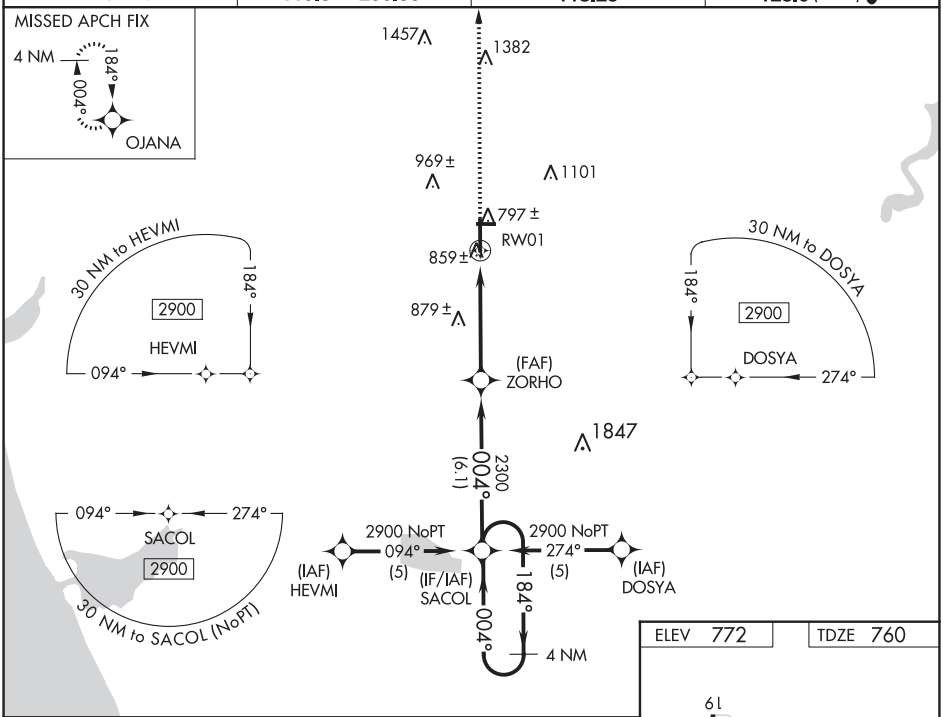
WAAS CH 56505 W01A	APP CRS 004°	Rwy ldg 6501 TDZE 760 Apt Elev 772

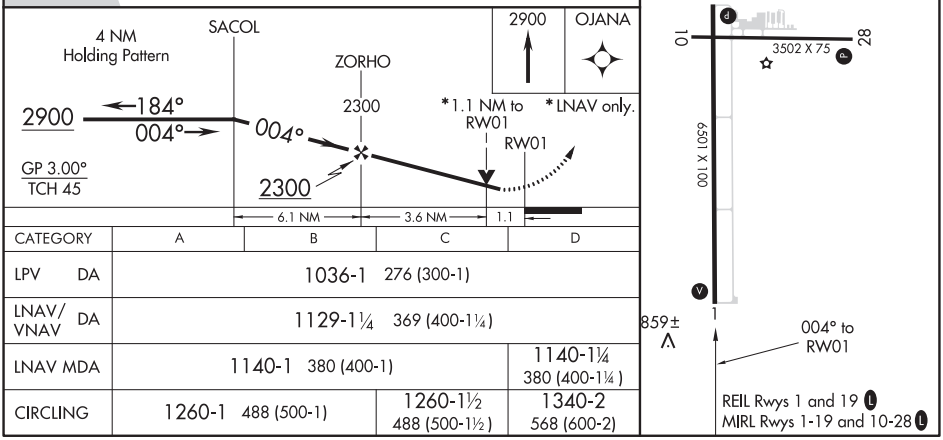
RNAV (GPS) RWY 1
FREMONT MUNI (FFX)

Baro-VNAV NA when using Muskegon altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). Rwy 1 helicopter visibility reduction below ¾ SM NA. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Muskegon altimeter setting and increase all DA 65 feet, and all visibilities ¼ mile. Increase all MDA 80 feet, and Cat C/D visibilities ¼ mile. VDP NA when using Muskegon altimeter setting.

MISSED APPROACH: Climb to 2900 direct OJANA and hold.

AWOS-3	GREAT LAKES APP CON ★	CLNC DEL	UNICOM
118.775	119.8 290.35	118.25	123.0 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	1036-1 276 (300-1)			
LNAV/VNAV DA	1129-1¼ 369 (400-1¼)			
LNAV MDA	1140-1 380 (400-1)			1140-1¼ 380 (400-1¼)
CIRCLING	1260-1 488 (500-1)		1260-1½ 488 (500-1½)	1340-2 568 (600-2)

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FREMONT, MICHIGAN AL-5260 (FAA) 19171

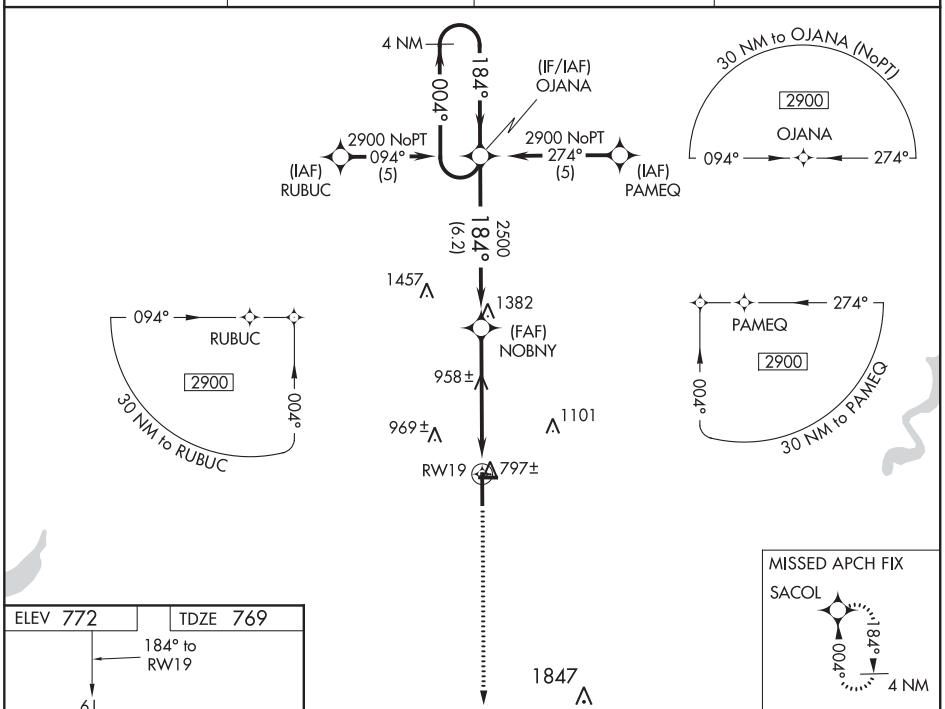
WAAS CH 82405 W19A	APP CRS 184°	Rwy ldg 6501 TDZE 769 Apt Elev 772

RNAV (GPS) RWY 19
FREMONT MUNI (FFX)

Baro-VNAV NA when using Muskegon altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). Rwy 19 helicopter visibility reduction below ¾ SM NA. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Muskegon altimeter setting and increase all DA 65 feet, and all visibilities ¼ mile. Increase all MDA 80 feet, and Cat C/D visibilities ¼ mile. VDP NA when using Muskegon altimeter setting.

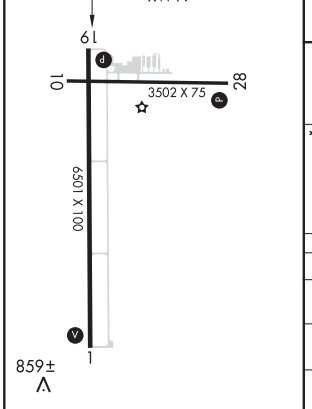
MISSED APPROACH: Climb to 2900 direct SACOL and hold.

AWOS-3	GREAT LAKES APP CON *	CLNC DEL	UNICOM
118.775	119.8 290.35	118.25	123.0 (CTAF) L

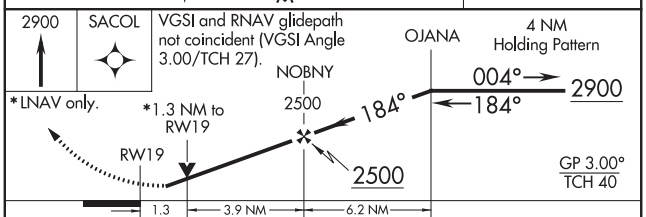


MISSED APCH FIX
SACOL
184°
004°
4 NM

ELEV 772 TDZE 769



REIL Rwys 1 and 19 L
MIRL Rwys 1-19 and 10-28 L



CATEGORY	A	B	C	D
LPV DA	1074-1 305 (400-1)			
LNAV/VNAV DA	1295-2 526 (600-2)			
LNAV MDA	1220-1 451 (500-1)		1220-1¼ 451 (500-1¼)	1220-1½ 451 (500-1½)
CIRCLING	1260-1 488 (500-1)		1260-1½ 488 (500-1½)	1340-2 568 (600-2)

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LOC I-GLR	APP CRS	Rwy ldg	6579
111.1	096°	TDZE	1321
		Apt Elev	1328

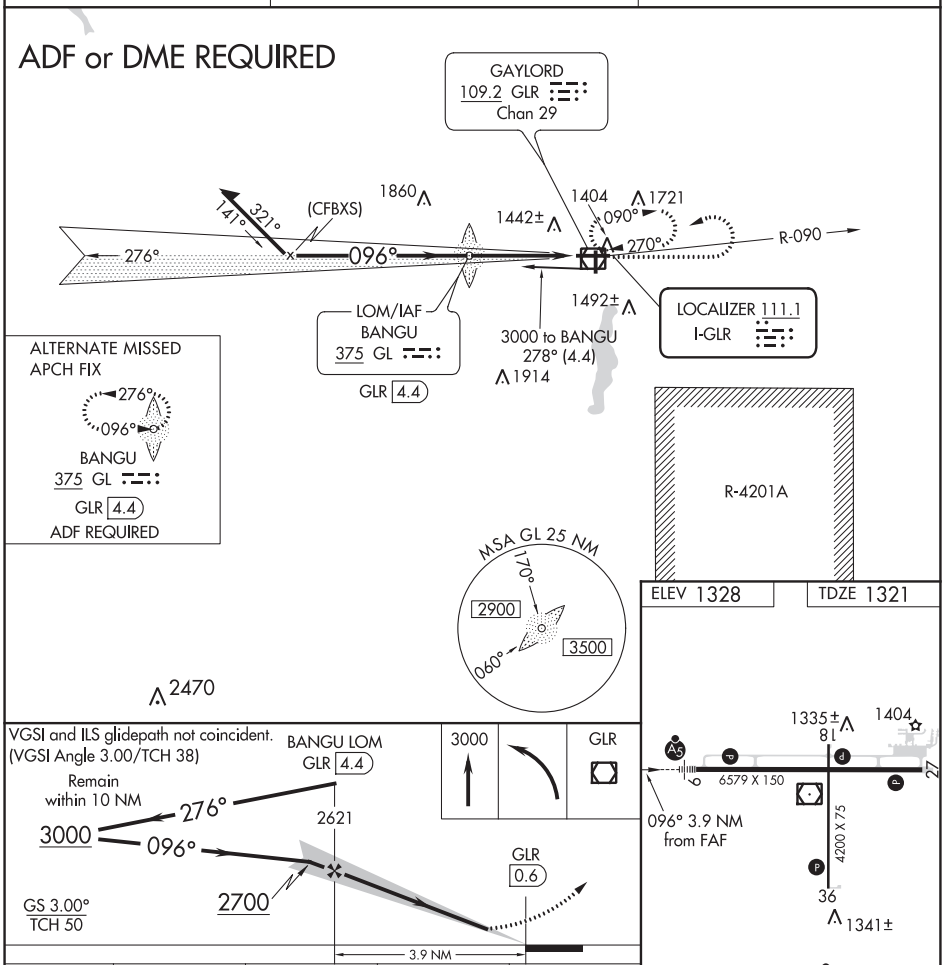
ILS or LOC RWY 9
GAYLORD RGNL (GLR)

T
A NA When local altimeter setting not received, use Grayling altimeter setting and increase all DA 71 feet and all MDA 80 feet; increase S-LOC 9 and Circling Cat C/D visibility ¼ mile. For inop MALSR when using Grayling altimeter setting, increase S-ILS all Cats visibility to ⅞ mile. Night landing: Rwy 18,36 NA.

MALSR A5

MISSED APPROACH: Climb to 3000 then left turn direct GLR VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
118.375	134.6 354.05	122.8 (CTAF) L



CATEGORY	A	B	C	D
S-ILS 9	1521-½ 200 (200-½)			
S-LOC 9	1860-½ 539 (600-½)		1860-1 539 (600-1)	
CIRCLING	1860-1 532 (600-1)	1940-1 612 (700-1)	1940-1¾ 612 (700-1¾)	2080-2½ 752 (800-2½)

REIL Rwy 27, 18 and 36 L
MIRL Rwy 18-36 L
HIRL Rwy 9-27 L

FAF to MAP 3.9 NM					
Knots	60	90	120	150	180
Min:Sec	3:54	2:36	1:57	1:34	1:18

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GAYLORD, MICHIGAN AL-5373 (FAA) 19171

RNAV (GPS) RWY 9
GAYLORD RGNL (GLR)

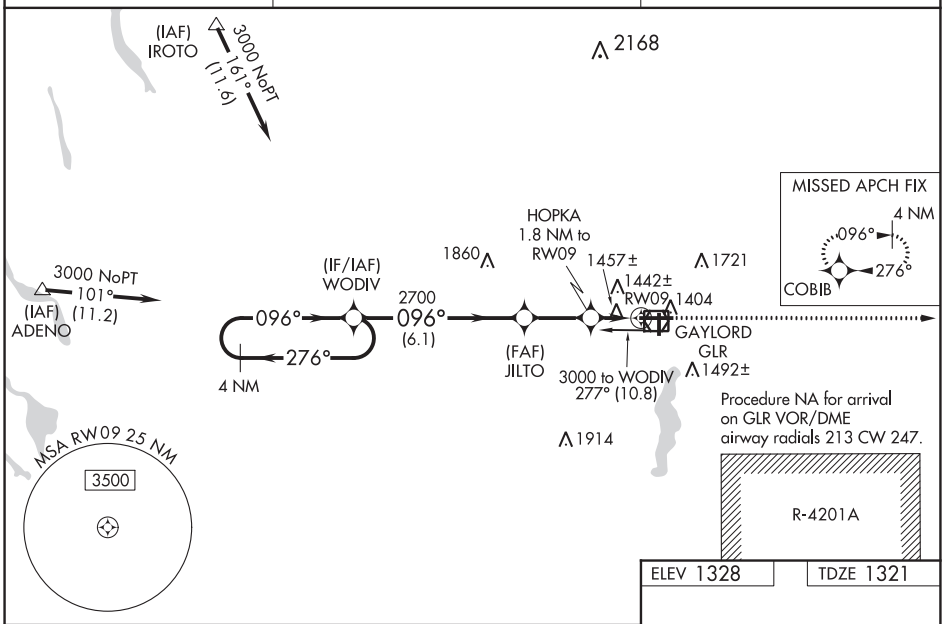
WAAS CH 97427 W09A	APP CRS 096°	Rwy ldg 6579 TDZE 1321 Apt Elev 1328

Circling to Rwy 18 and Rwy 36 NA at night. Baro-VNAV and VDP NA when using Grayling altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 35°C (95°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Grayling altimeter setting and increase all DA 71 feet and all MDA 80 feet. Increase LNAV/VNAV all Cats visibility ⅛ mile and Circling Cats C and D visibility ¼ mile. Inoperative table does not apply to LNAV Cats A and B. For inoperative MALSR increase LNAV Cats C and D visibility to 1⅛. When using Grayling altimeter setting increase LNAV Cats C and D visibility to 1⅜.

MALSR

MISSED APPROACH: Climb to 3100 direct COBIB and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
118.375	134.6 354.05	122.8 (CTAF) L

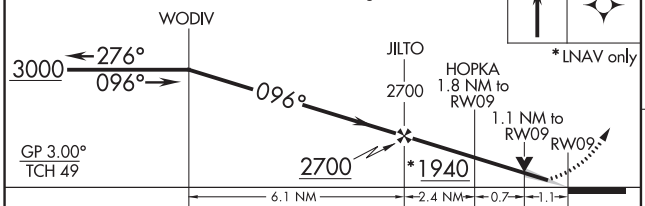


ELEV 1328 TDZE 1321

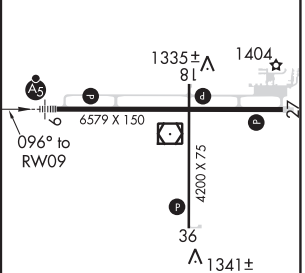
4 NM
Holding Pattern

VGSI and RNAV glidepath not coincident
(VGSI Angle 3.00/TCH 38).

3100 COBIB



*LNAV only



CATEGORY	A	B	C	D
LPV DA	1571-1 250 (300-1)			
LNAV/VNAV DA	1732-1 411 (500-1)			
LNAV MDA	1720-1 399 (400-1)			
CIRCLING	1840-1 512 (600-1)	1940-1 612 (700-1)	1940-1¾ 612 (700-1¾)	2080-2½ 752 (800-2½)

REIL Rwy 18, 27 and 36 L
MIRL Rwy 18-36 L
HIRL Rwy 9-27 L

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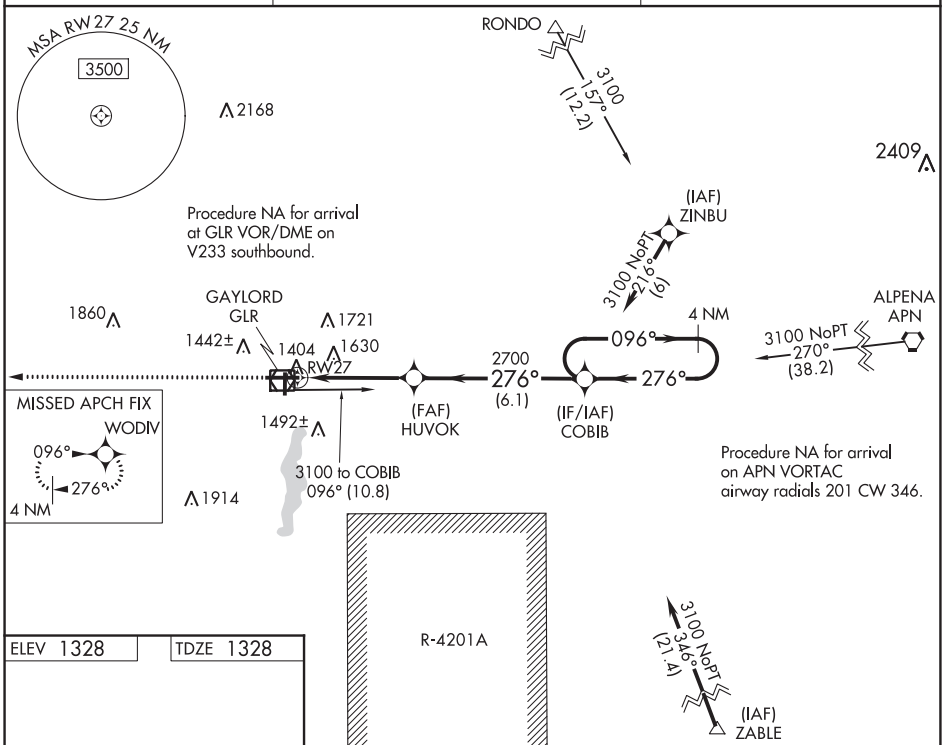
WAAS CH 56327 W27A	APP CRS 276°	Rwy ldg 6579 TDZE 1328 Apt Elev 1328

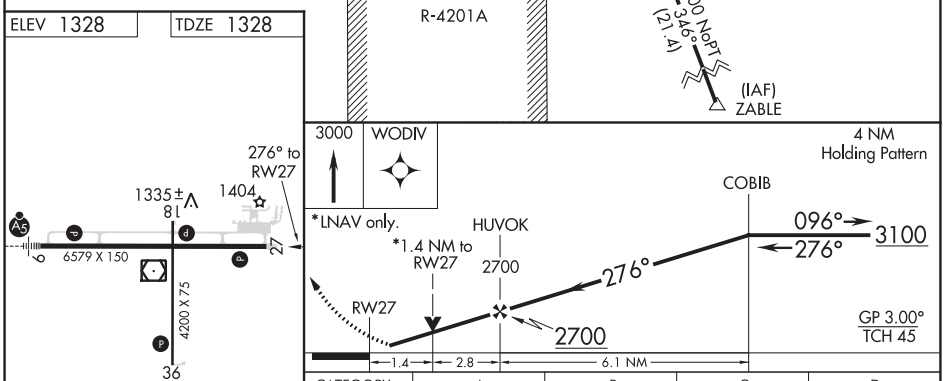
RNAV (GPS) RWY 27
GAYLORD RGNL (GLR)

Circling to Rwy 18 and Rwy 36 NA at night. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Grayling altimeter setting and increase all DA 71 feet and all MDA 80 feet. Increase LNAV and Circling Cats C and D visibility ¼ mile. Rwy 27 Helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climb to 3000 direct WODIV and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
118.375	134.6 354.05	122.8 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	1578-1 250 (300-1)			
LNAV MDA	1820-1 492 (500-1)		1820-1⅜ 492 (500-1⅜)	
CIRCLING	1840-1 512 (600-1)	1940-1 612 (700-1)	1940-1¾ 612 (700-1¾)	2080-2½ 752 (800-2½)

REIL Rwy 18, 27 and 36 L
MIRL Rwy 18-36 L
HIRL Rwy 9-27 L

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GAYLORD, MICHIGAN | AL-5373 (FAA) | 19227

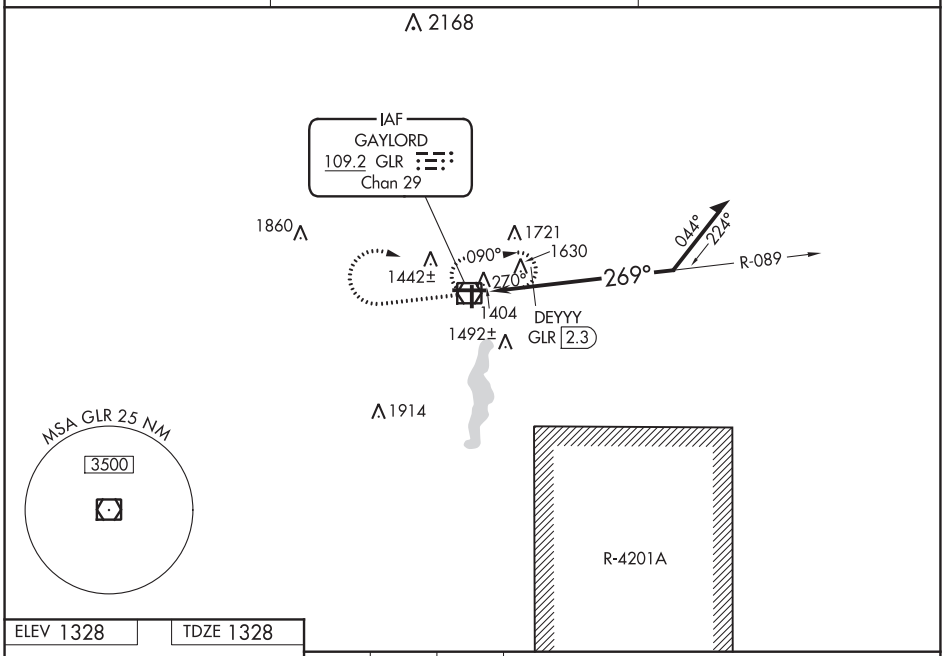
VOR RWY 27
GAYLORD RGNL (GLR)

VOR/DME GLR	APP CRS	Rwy ldg	6579
109.2	269°	TDZE	1328
Chan 29		Apt Elev	1328

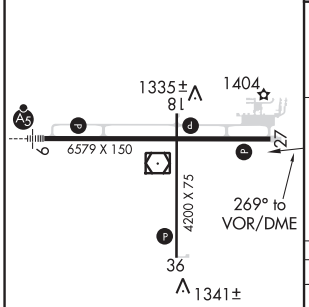
Circling Rwy 18, 36 NA at night. Rwy 27 helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Grayling altimeter setting and increase all MDA 80 feet. Increase S-27 and Circling Cat C/D visibility ¼ mile. Increase DEYYY FIX minimums S-27 and Circling Cat C/D visibility ¼ mile.

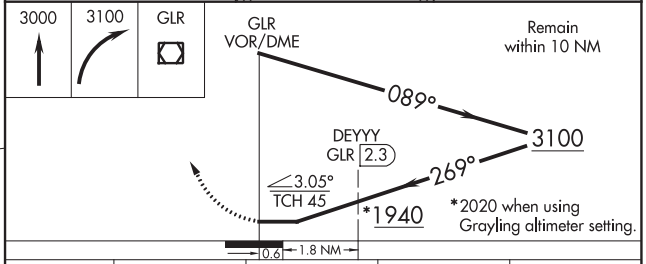
MISSED APPROACH: Climb to 3000 then climbing right turn to 3100 direct GLR VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
118.375	134.6 354.05	122.8 (CTAF) L



ELEV 1328 | TDZE 1328





CATEGORY	A	B	C	D
S-27	1940-1 612 (700-1)		1940-1¾ 612 (700-1¾)	
CIRCLING	1940-1 612 (700-1)		1940-1¾ 612 (700-1¾)	2080-2½ 752 (800-2½)
DEYYY FIX MINIMUMS				
S-27	1880-1 552 (600-1)		1880-1⅝ 552 (600-1⅝)	
CIRCLING	1880-1 552 (600-1)	1940-1 612 (700-1)	1940-1¾ 612 (700-1¾)	2080-2½ 752 (800-2½)

HIRL Rwy 9-27 L
MIRL Rwy 18-36 L
REIL Rwys 18, 27 and 36 L

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WAAS CH 48826 W09A	APP CRS 092°	Rwy ldg 4699 TDZE 774 Apt Elev 774

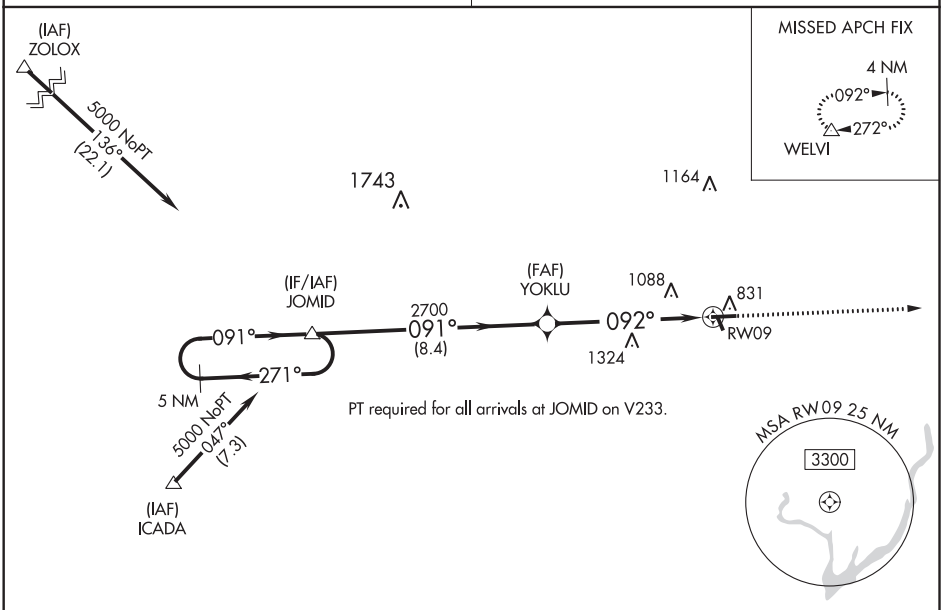
RNAV (GPS) RWY 9
GLADWIN ZETTEL MEMORIAL (GDW)

RNP APCH.

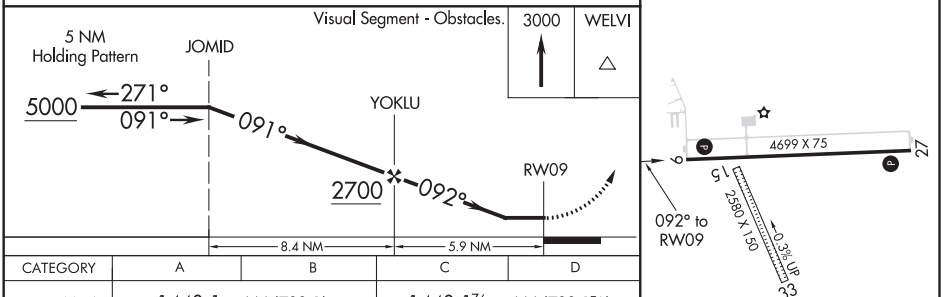
Circling NA to Rwys 15 and 33. Rwy 9 helicopter visibility reduction below 1 SM NA. DME/DME RNP-0.30 NA. Procedure NA at night. Use Mount Pleasant altimeter setting; when not received, use Midland altimeter setting and increase all MDA 20 feet; increase LP and LNAV Cats C/D visibility ⅛ SM and Circling Cats C/D visibility ¼ SM.

MISSED APPROACH: Climb to 3000 direct WELVI and hold.

GREAT LAKES APP CON *	UNICOM
126.45 235.625	122.8 (CTAF) L



ELEV 774	TDZE 774



CATEGORY	A	B	C	D
LP MDA	1440-1 666 (700-1)		1440-1⅞ 666 (700-1⅞)	
LNAV MDA	1440-1 666 (700-1)		1440-1⅞ 666 (700-1⅞)	
CIRCLING	1440-1 666 (700-1)	1500-1 726 (800-1)	1500-2 726 (800-2)	1500-2¼ 726 (800-2¼)

REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

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EC-1, 25 FEB 2021 to 22 APR 2021

GLADWIN, MICHIGAN

AL-6672 (FAA)

20254

RNAV (GPS) RWY 27

GLADWIN ZETTEL MEMORIAL (GDW)

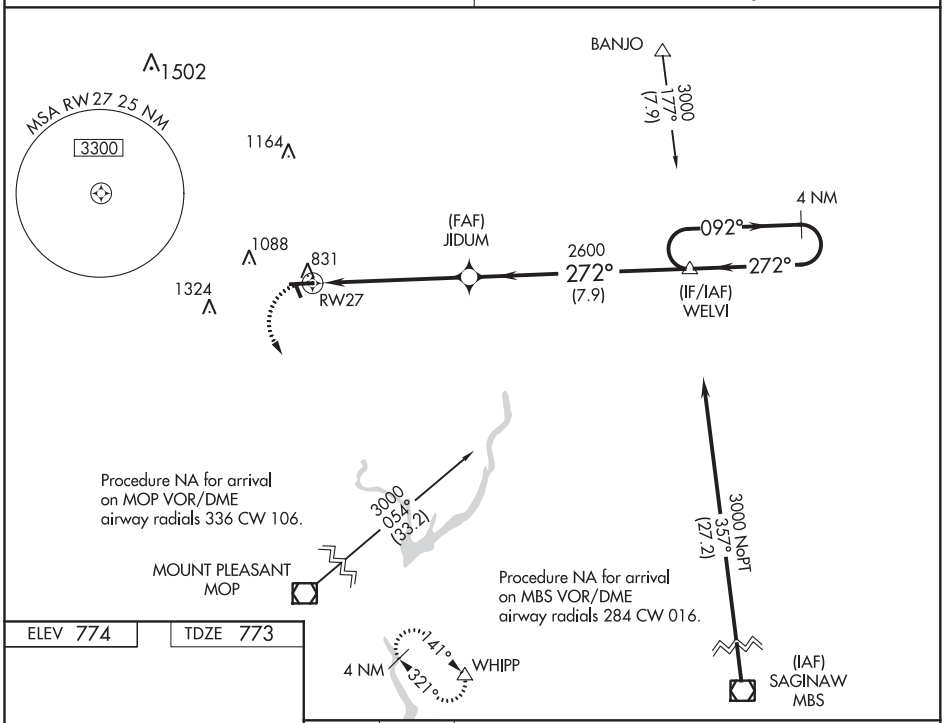
WAAS CH 99326 W27A	APP CRS 272°	Rwy ldg 4699 TDZE 773 Apt Elev 774

RNP APCH.

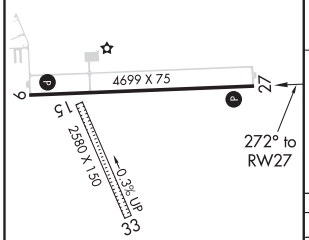
T NA Circling NA to Rwys 15 and 33. Rwy 27 helicopter visibility reduction below 1 SM NA. DME/DME RNP-0.3 NA. Procedure NA at night. Use Mount Pleasant altimeter setting; when not received, use Midland altimeter setting and increase all MDA 20 feet; increase LP and LNAV Cats C/D visibility ⅛ SM And Circling Cats C/D visibility ¼ SM.

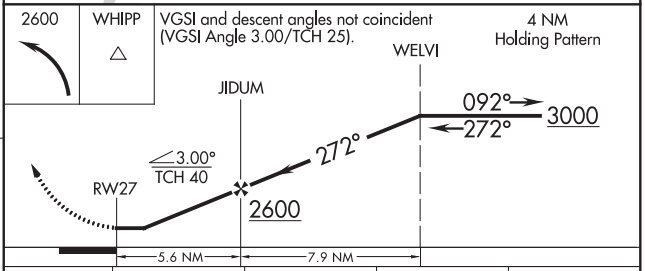
MISSED APPROACH: Climbing left turn to 2600 direct WHIPP and hold.

GREAT LAKES APP CON ★	UNICOM
126.45 235.625	122.8 (CTAF) L



ELEV 774	TDZE 773





CATEGORY	A	B	C	D
LP MDA	1280-1	507 (600-1)	1280-1⅜	507 (600-1⅜)
LNAV MDA	1280-1	507 (600-1)	1280-1⅜	507 (600-1⅜)
CIRCLING	1420-1 646 (700-1)	1500-1 726 (800-1)	1500-2 726 (800-2)	1500-2¼ 726 (800-2¼)

MIRL Rwy 9-27 L
REIL Rwys 9 and 27 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

APP CRS	Rwy ldg	3752
095°	TDZE	603
	Apt Elev	604

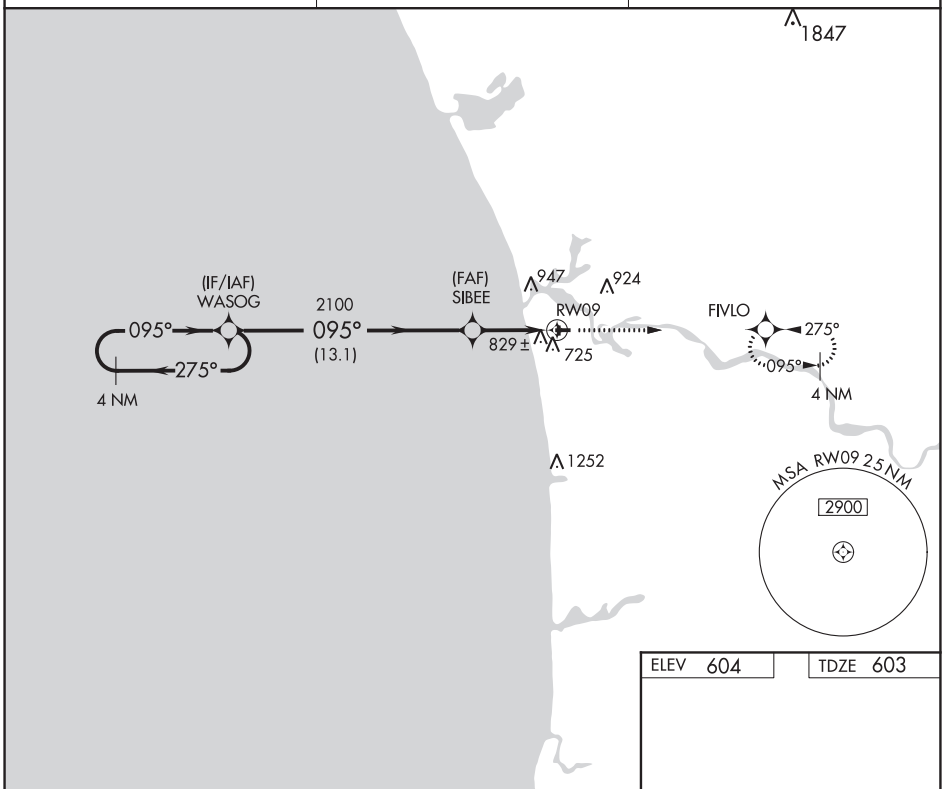
RNAV (GPS) RWY 9
GRAND HAVEN MEMORIAL AIRPARK (3GM)

RNP APCH.

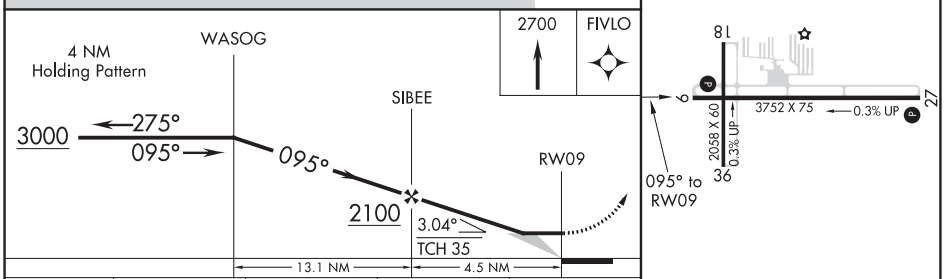
T Use Muskegon altimeter setting. Circling Rwy 18, 36 NA at night.
A NA Rwy 9 helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climb to 2700 direct FIVLO and hold.

MKG ASOS	GREAT LAKES APP CON★	UNICOM
124.3	133.825 290.35	122.7 (CTAF) L



ELEV 604 TDZE 603



CATEGORY	A	B	C	D
LNAV MDA	1120-1 517 (600-1)		1120-1½ 517 (600-1½)	NA
CIRCLING	1160-1 556 (600-1)	1180-1 576 (600-1)	1180-1½ 576 (600-1½)	NA

REIL Rwys 9 and 27 L
MIRL Rwys 9-27 and 18-36 L

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GRAND HAVEN, MICHIGAN | AL-5113 (FAA) | 20030

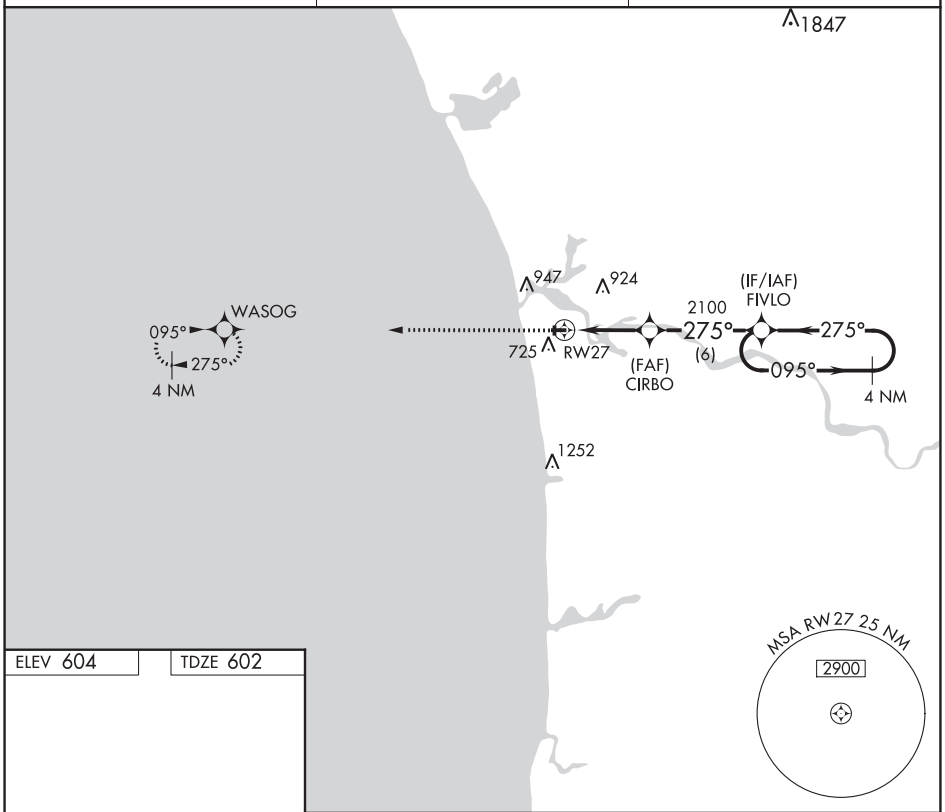
APP CRS	Rwy ldg	3752
275°	TDZE	602
	Apt Elev	604

RNAV (GPS) RWY 27
GRAND HAVEN MEMORIAL AIRPORT (3GM)

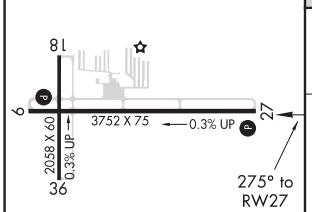
RNP APCH.
NA
Use Muskegon altimeter setting. Rwy 27 helicopter visibility reduction below ¾ SM NA. Circling Rwy 18, 36 NA at night.

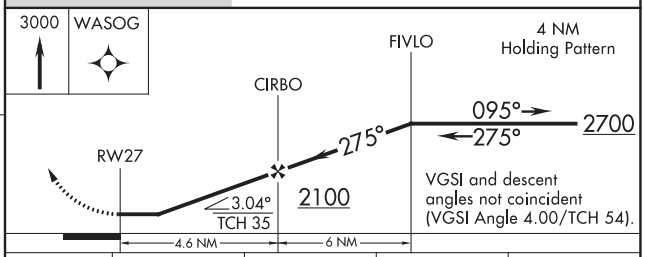
MISSED APPROACH:
Climb to 3000 direct WASOG and hold.

MKG ASOS	GREAT LAKES APP CON★		UNICOM
124.3	133.825	290.35	122.7 (CTAF) L



ELEV 604 | TDZE 602





CATEGORY	A	B	C	D
LNAV MDA	1000-1 398 (400-1)			NA
CIRCLING	1160-1 556 (600-1)	1180-1 576 (600-1)	1180-1½ 576 (600-1½)	NA

REIL Rwys 9 and 27 L
MIRL Rwys 9-27 and 18-36 L

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WAAS CH 58334 W09A	APP CRS 090°	Rwy ldg 3200 TDZE 841 Apt Elev 841

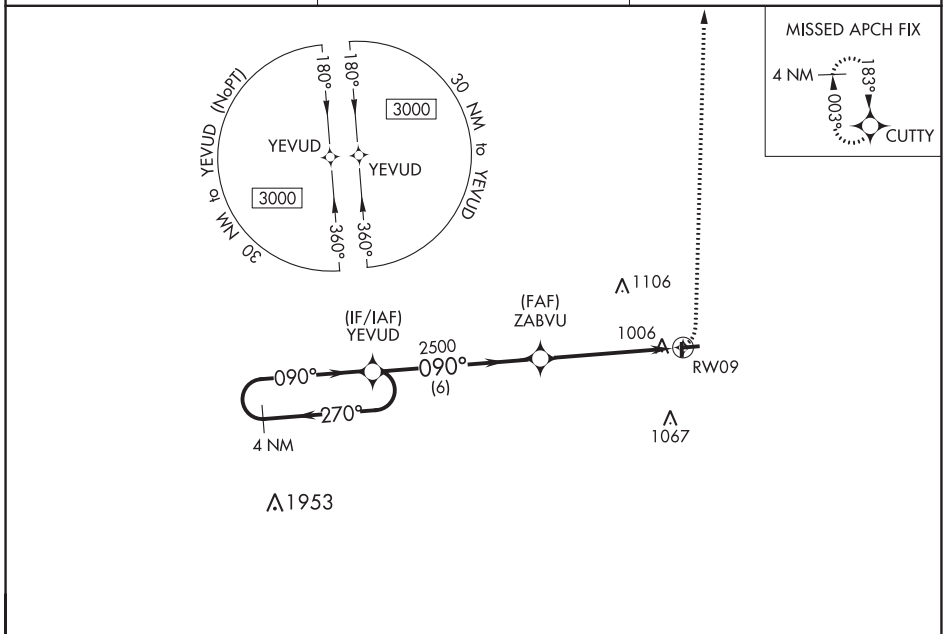
RNAV (GPS) RWY 9
ABRAMS MUNI (4DØ)

T
A NA

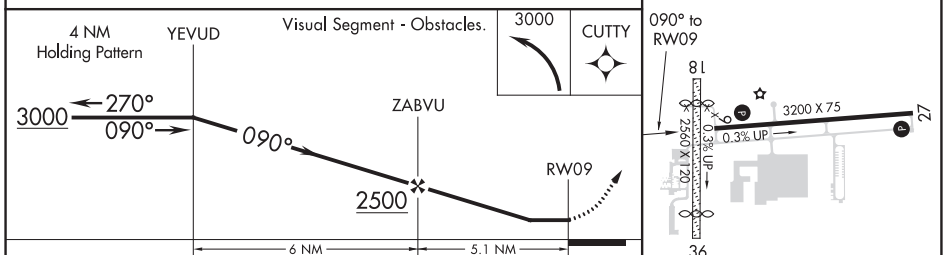
Use Lansing altimeter setting. DME/DME RNP-0.3 NA. Circling NA to Rwys 18 and 36. Helicopter visibility reduction below ¾ SM NA. Night Landing Rwy 27 NA.

MISSED APPROACH: Climbing left turn 3000 direct CUTTY and hold.

LAN ASOS	GREAT LAKES APP CON ★	UNICOM
119.75	118.65 226.4	122.7 (CTAF) L



ELEV 841	TDZE 841



CATEGORY	A	B	C	D
LP MDA	1380-1 539 (600-1)		NA	
LNAV MDA	1400-1 559 (600-1)		NA	
C CIRCLING	1400-1 559 (600-1)	1420-1 579 (600-1)	NA	

REIL Rwy 27 L
MIRL Rwy 9-27 L

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GRAND RAPIDS, MICHIGAN — AL-5184 (FAA) — 20366

ILS or LOC RWY 8R
GERALD R FORD INTL (GRR)

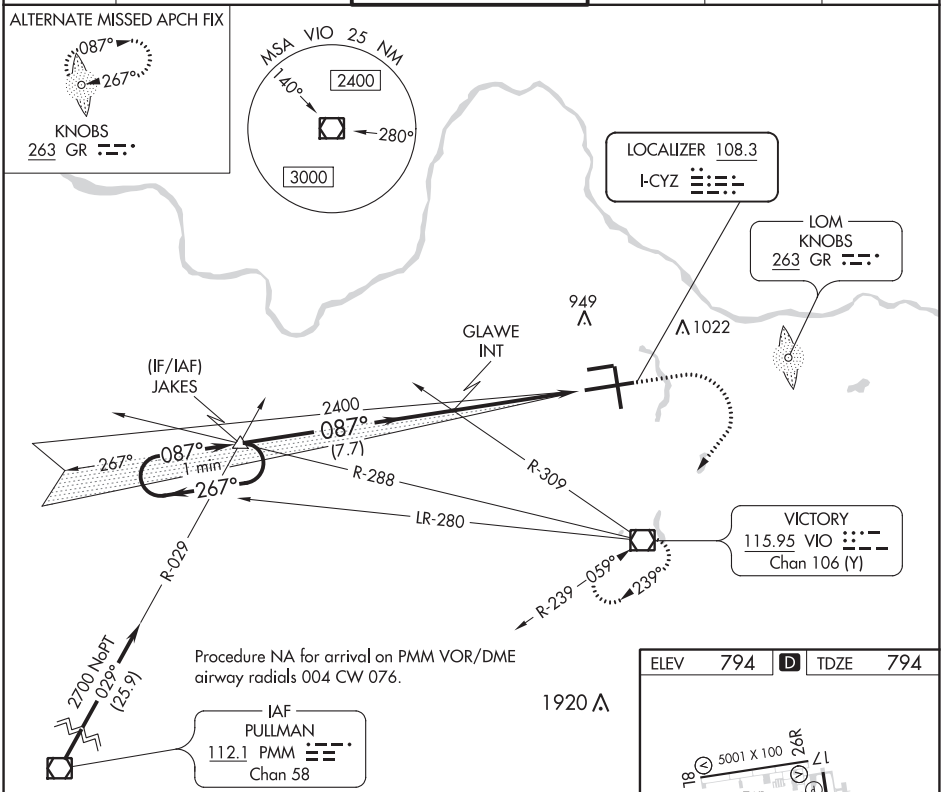
LOC I-CYZ	APP CRS	Rwy ldg	10001
108.3	087°	TDZE	794
		Apt Elev	794

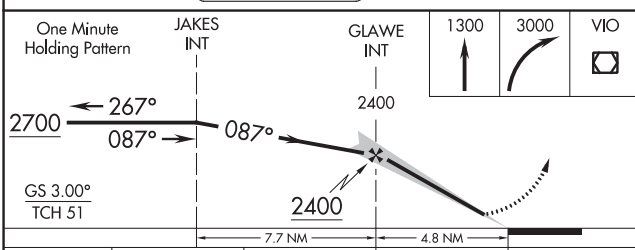
ASR — *RVR 1800 authorized with the use of FD or AP or HUD to DA.

MALSR

MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct VIO VOR/DME and hold.

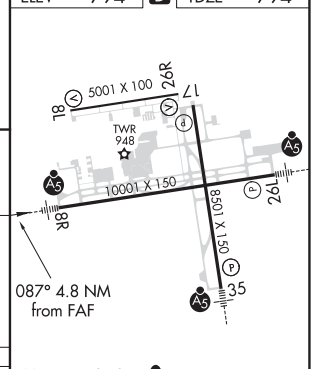
ATIS	GREAT LAKES APP CON ★	GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
118.725	128.4 257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95





CATEGORY	A	B	C	D
S-ILS 8R	*994/24 200 (200-½)			
S-LOC 8R	1240/24 446 (500-½)		1240/45 446 (500-⅞)	
C CIRCLING	1260-1 466 (500-1)		1340-1½ 546 (600-1½)	1360-2 566 (600-2)

ELEV 794 — D — TDZE 794



MIRL Rwy 8L-26R L
REIL Rwys 8L, 17 and 26R L
HIRL Rwys 8R-26L and 17-35 L

FAF to MAP 4.8 NM					
Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36

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LOC I-GRR	APP CRS	Rwy ldg	10001
109.7	267°	TDZE	790
		Apt Elev	794

ILS or LOC RWY 26L

GERALD R FORD INTL (GRR)

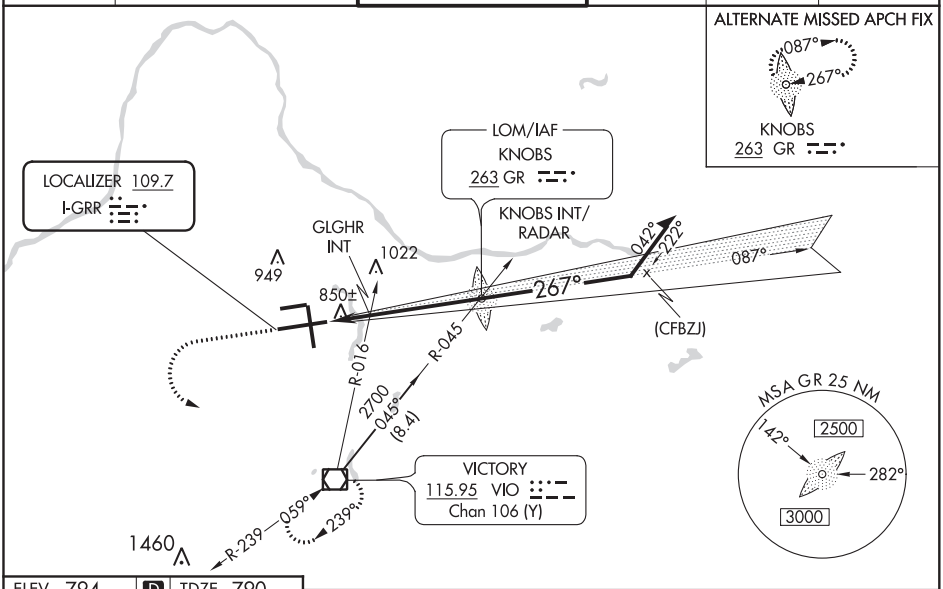
ASR

For inop MALSR when using GLGHR INT minimums, increase S-LOC 26L Cat D visibility to RVR 5000. For inop MALSR when using Holland altimeter setting, increase S-ILS 26L all Cats visibility to RVR 5000.
**RVR 1800 authorized with the use of FD or AP or HUD to DA.

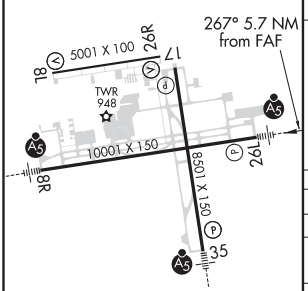
MALSR

MISSED APPROACH: Climb to 1300 then climbing left turn to 3000 direct VIO VOR/DME and hold.

ATIS	GREAT LAKES APP CON ★		GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
118.725	128.4	257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95

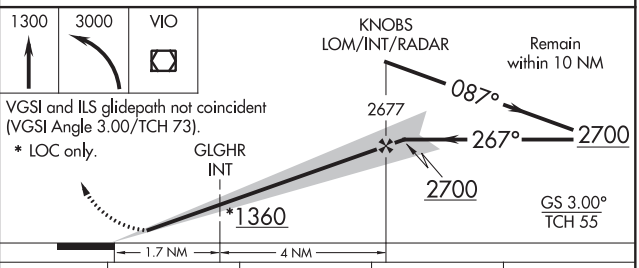


ELEV 794	D	TDZE 790



MIRL Rwy 8L-26R L
REIL Rwys 8L, 17 and 26R L
HIRL Rwys 8R-26L and 17-35 L

FAF to MAP 5.7 NM					
Knots	60	90	120	150	180
Min:Sec	5:42	3:48	2:51	2:17	1:54



CATEGORY	A	B	C	D
S-ILS 26L**	990/24 200 (200-½)			
S-LOC 26L	1360/24 570 (600-½)		1360/50 570 (600-1)	1360/60 570 (600-1¼)
C CIRCLING	1360-1 566 (600-1)		1360-1½ 566 (600-1½)	1360-2 566 (600-2)
GLGHR INT MINIMUMS (DUAL VOR RECEIVERS REQUIRED)				
S-LOC 26L	1120/24 330 (400-½)			1120/40 330 (400-¾)
C CIRCLING	1260-1 466 (500-1)		1340-1½ 546 (600-1½)	1360-2 566 (600-2)

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GRAND RAPIDS, MICHIGAN — AL-5184 (FAA) — 20366

ILS or LOC RWY 35

GERALD R FORD INTL (GRR)

LOC I-DVS	APP CRS	Rwy ldg / TDZE / Apt Elev
111.9	357°	8501 / 790 / 794

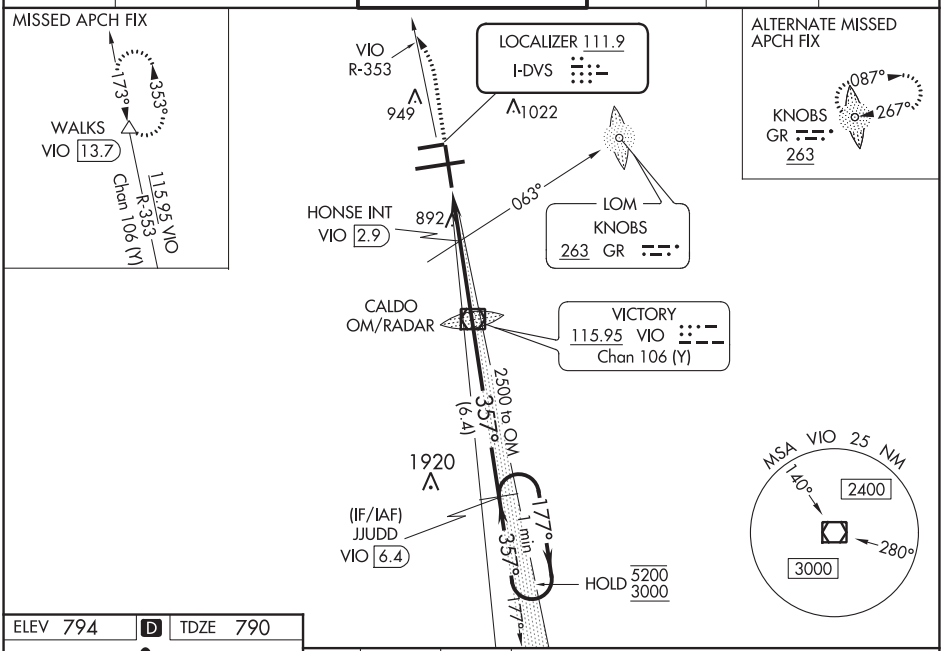
DME required. DME or RADAR required for procedure entry.

T A ASR — HONSE fix minimums: for inop ALS, increase Cat C and D visibility to RVR 6000.
** RVR 1800 authorized with use of FD or AP or HUD to DA.

MALSR

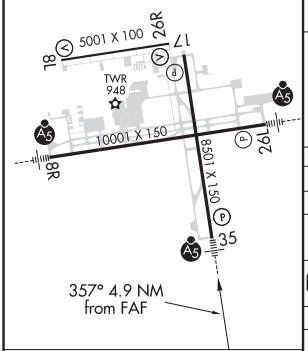
MISSED APPROACH: Climb to 1300 then climbing left turn to 3000 on VIO VOR/DME R-353 to WALKS 13.7 DME and hold.

ATIS	GREAT LAKES APP CON ★	GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
118.725	128.4 257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95

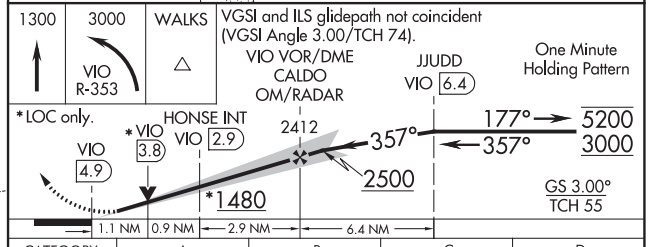


ELEV 794 | D | TDZE 790

MIRL Rwy 8L-26R L
REIL Rwys 8L, 17 and 26R L
HIRL Rwys 8R-26L and 17-35 L



FAF to MAP 4.9 NM					
Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38



CATEGORY	A	B	C	D
S-ILS 35 **	990/24 200 (200-½)			
S-LOC 35	1480/24 690 (700-½)		1480-1½ 690 (700-1½)	
C CIRCLING	1480-1 686 (700-1)		1480-2 686 (700-2)	1480-2¼ 686 (700-2¼)
HONSE MINIMUMS (ADF OR DME REQUIRED)				
S-LOC 35	1200/24 410 (500-½)		1200/40 410 (500-¾)	
C CIRCLING	1260-1 466 (500-1)		1340-1½ 546 (600-1½)	1360-2 566 (600-2)

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ILS RWY 35 (SA CAT I & II)
GERALD R FORD INTL (GRR)

LOC I-DVS	APP CRS	Rwy ldg / TDZE / Apt Elev
111.9	357°	8501 / 790 / 794

DME required. DME or RADAR required for procedure entry.

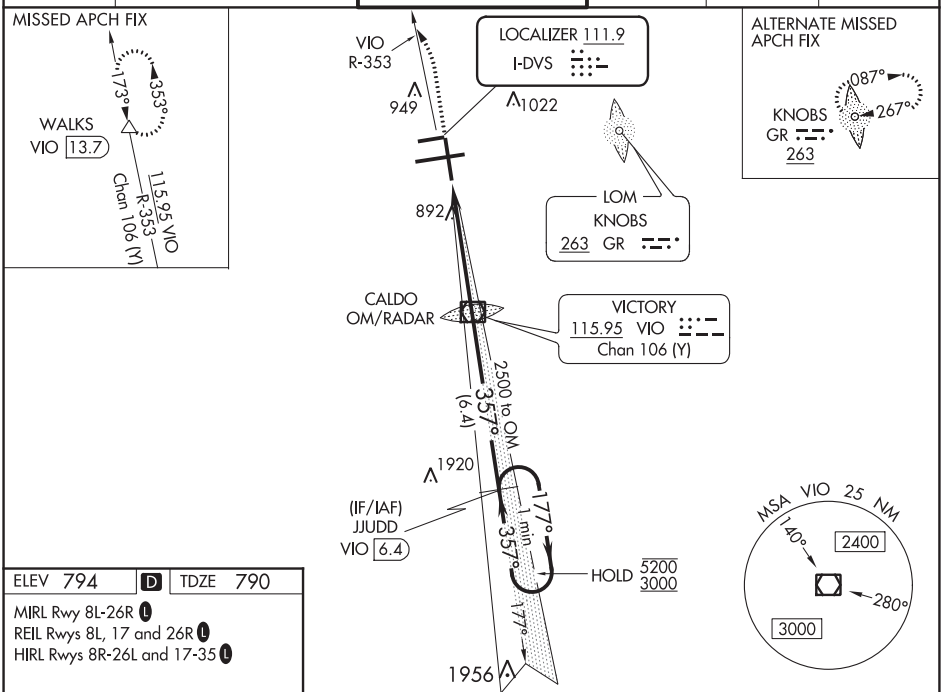
ASR

SA CAT I: Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH.
SA CAT II: Reduced lighting: requires specific OPSPEC, MSPEC, or LOA approval and use of autoland or HUD to touchdown.
Procedure NA when tower closed.

MALSR

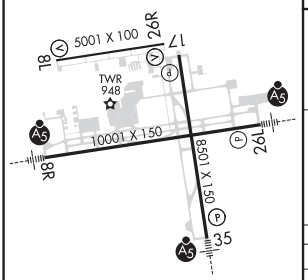
MISSED APPROACH: Climb to 1300 then climbing left turn to 3000 on VIO VOR/DME R-353 to WALKS 13.7 DME and hold.

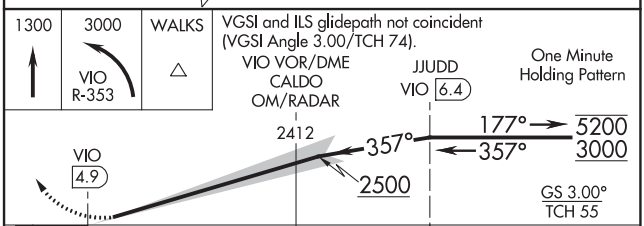
ATIS	GREAT LAKES APP CON ★	GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
118.725	128.4 257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95



ELEV 794 D TDZE 790

MIRL Rwy 8L-26R L
REIL Rwys 8L, 17 and 26R L
HIRL Rwys 8R-26L and 17-35 L





CATEGORY	A	B	C	D
S-ILS 35	SA CAT I RA 160/14 150 DA 940			
S-ILS 35	SA CAT II RA 122/12 100 DA 890			

FAF to MAP 4.9 NM					
Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

SA CATEGORY I & II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

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EC-1, 25 FEB 2021 to 22 APR 2021

GRAND RAPIDS, MICHIGAN — AL-5184 (FAA) — 20366

RNAV (GPS) RWY 8L
GERALD R FORD INTL (GRR)

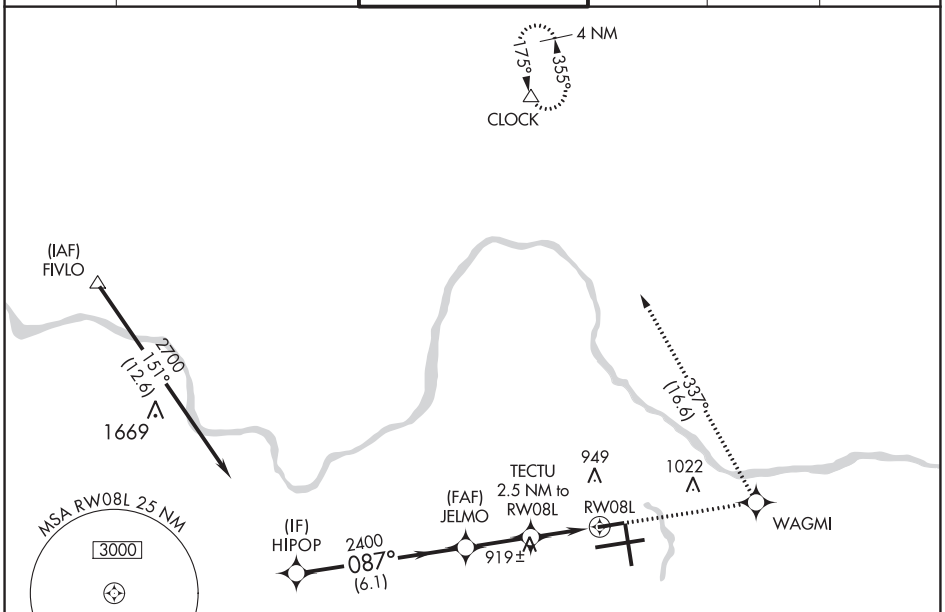
WAAS CH 40213 W08A	APP CRS 087°	Rwy ldg 5001 TDZE 786 Apt Elev 794

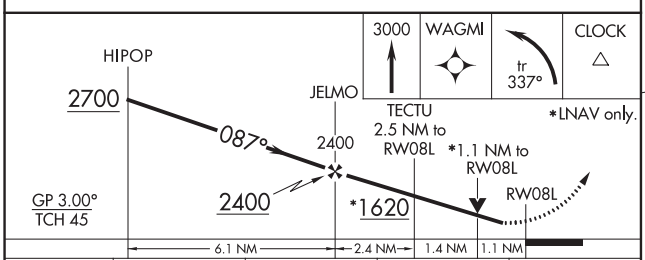
RNP APCH.

ASR — Rwy 8L helicopter visibility reduction below ¾ SM NA.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C.

MISSED APPROACH: Climb to 3000 direct WAGMI and left turn on track 337° to CLOCK and hold.

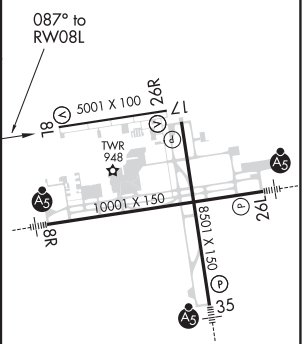
ATIS	GREAT LAKES APP CON ★	GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
118.725	128.4 257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95





CATEGORY	A	B	C	D
LPV DA	1036-1 250 (300-1)			
LNAV/VNAV DA	1203-1½ 417 (500-1½)			
LNAV MDA	1180-1 394 (400-1)		1180-1⅛ 394 (400-1⅛)	1180-1¼ 394 (400-1¼)
C CIRCLING	1260-1 466 (500-1)		1340-1½ 546 (600-1½)	1360-2 566 (600-2)

ELEV 794 — D — TDZE 786



MIRL Rwy 8L-26R L
REIL Rwys 8L, 17 and 26R L
HIRL Rwys 8R-26L and 17-35 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH **40113** **W08B**	APP CRS **087°**	Rwy ldg **10001** TDZE **794** Apt Elev **794**

RNAV (GPS) RWY 8R

GERALD R FORD INTL (GRR)

RNP APCH.

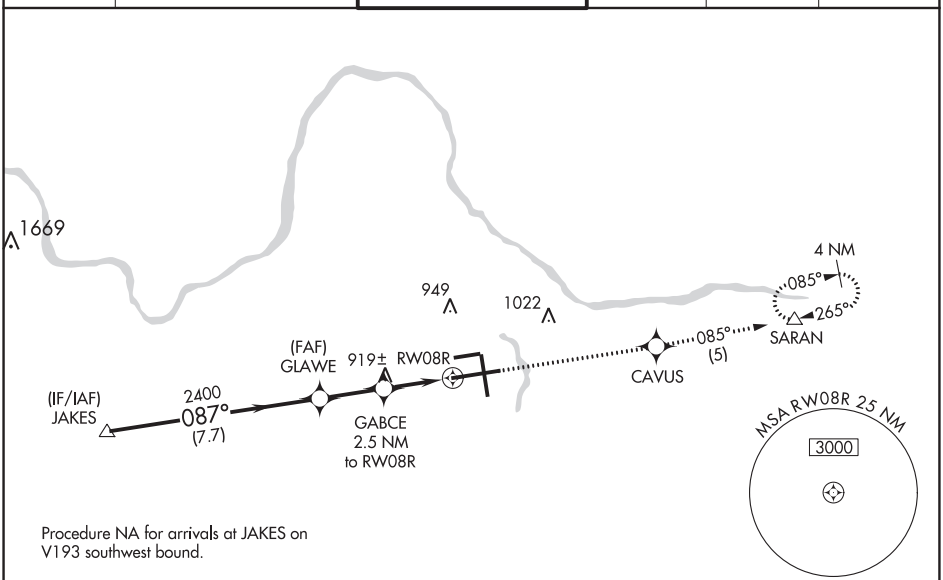
ASR

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 47°C. For inop ALS, increase LNAV Cat D visibility to RVR 6000.
** RVR 1800 authorized with use of FD or AP or HUD to DA.

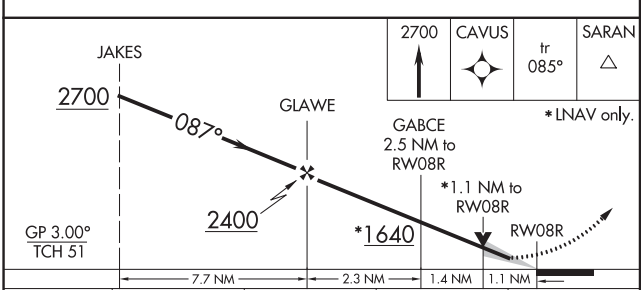
MALSR

MISSED APPROACH: Climb to 2700 direct CAVUS and on track 085° to SARAN and hold.

ATIS	GREAT LAKES APP CON ★	GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
118.725	**128.4 257.6**	**135.65** (CTAF) L **339.8**	**121.8**	**119.3**	**122.95**

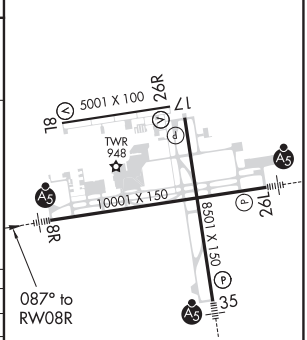


Procedure NA for arrivals at JAKES on V193 southwest bound.



CATEGORY	A	B	C	D
LPV DA **	994/24 200 (200-½)			
LNAV/VNAV DA	1297/50 503 (600-1)			
LNAV MDA	1180/24 386 (400-½)		1180/35 386 (400-⅝)	1180/50 386 (400-1)
C CIRCLING	1260-1 466 (500-1)		1340-1½ 546 (600-1½)	1360-2 566 (600-2)

ELEV 794 D TDZE 794



MIRL Rwy 8L-26R L
REIL Rwys 8L, 17 and 26R L
HIRL Rwys 8R-26L and 17-35 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

GRAND RAPIDS, MICHIGAN — AL-5184 (FAA) — 20366

WAAS CH 93912 W17A	APP CRS 177°	Rwy ldg 8501 TDZE 789 Apt Elev 794

RNAV (GPS) RWY 17

GERALD R FORD INTL (GRR)

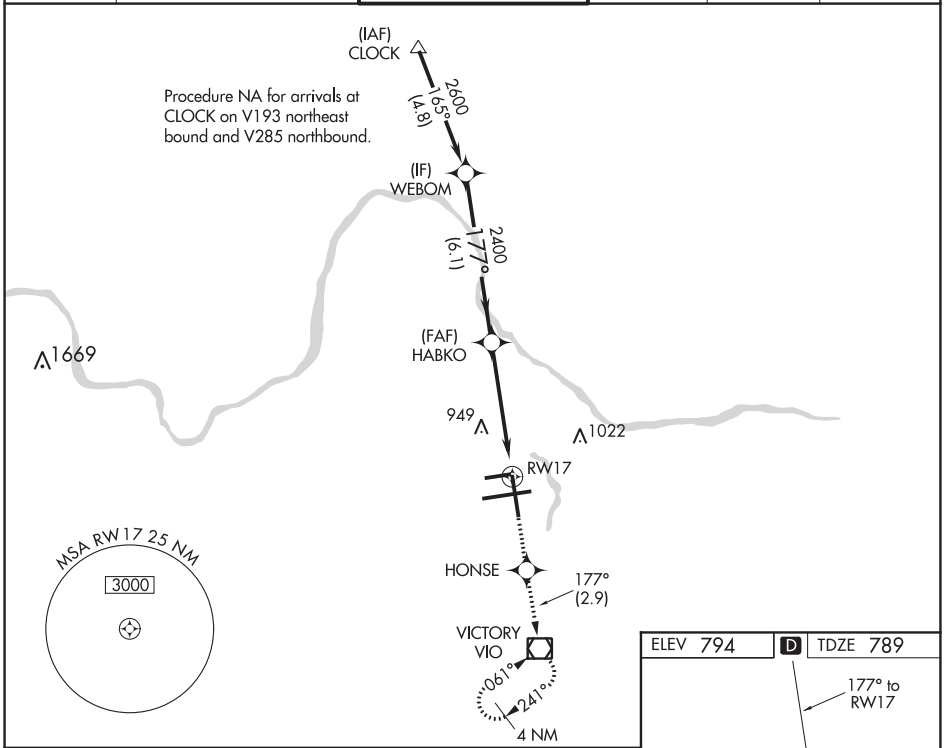
RNP APCH.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C. Rwy 17 helicopter visibility reduction below ¾ SM NA.

ASR

MISSED APPROACH: Climb to 3000 direct HONSE and on track 177° to VIO VOR/DME and hold, continue climb-in-hold to 3000.

ATIS	GREAT LAKES APP CON ★	GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
118.725	128.4 257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95



CATEGORY	A	B	C	D
LPV DA	1108/50 319 (400-1)			
LNAV/VNAV DA	1259-1¾ 470 (500-1¾)			
LNAV MDA	1200/55 411 (500-1)		1200-1¼ 411 (500-1¼)	
C CIRCLING	1260-1 466 (500-1)		1340-1½ 546 (600-1½)	1360-2 566 (600-2)

MIRL Rwy 8L-26R L
REIL Rwys 8L, 17 and 26R L
HIRL Rwys 8R-26L and 17-35 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 86713 W26B	APP CRS 267°	Rwy ldg 10001 TDZE 790 Apt Elev 794

RNAV (GPS) RWY 26L

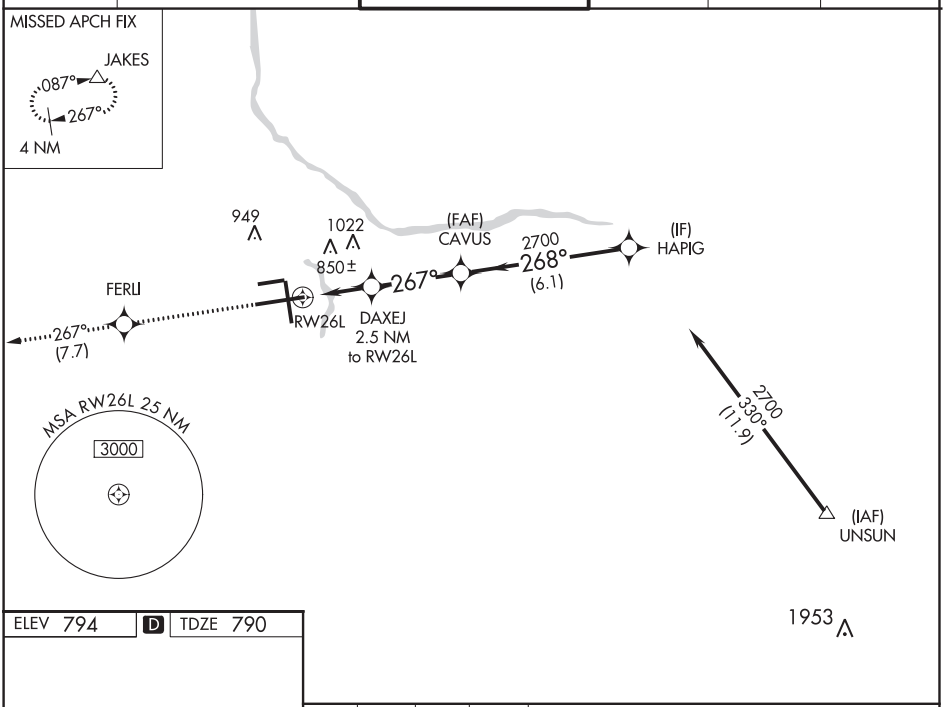
GERALD R FORD INTL (GRR)

ASR: For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. For inoperative ALS, increase LNAV/VNAV Cat D visibility to RVR 5000.
** RVR 1800 authorized with use of FD or AP or HUD to DA.

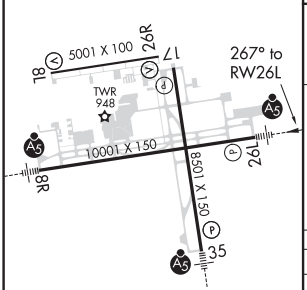
MALSR

MISSED APPROACH: Climb to 2700 direct FERLI and track 267° to JAKES and hold.

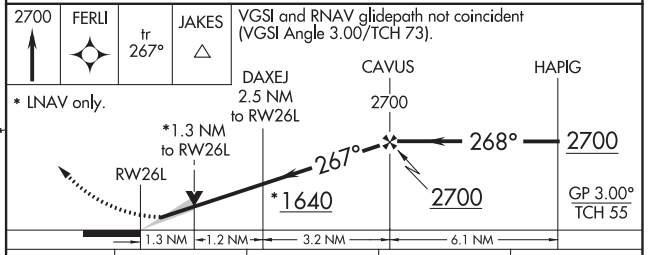
ATIS	GREAT LAKES APP CON ★	GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
118.725	128.4 257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95



ELEV 794 | D | TDZE 790



MIRL Rwy 8L-26R L
REIL Rwys 8L, 17 and 26R L
HIRL Rwys 8R-26L and 17-35 L



CATEGORY	A	B	C	D
LPV DA**	990/24 200 (200-½)			
LNAV/VNAV DA	1114/24 324 (400-½)			1114/40 324 (400-¾)
LNAV MDA	1280/24 490 (500-½)		1280/40 490 (500-¾)	1280/50 490 (500-1)
C CIRCLING	1280-1 486 (500-1)		1340-1½ 546 (600-1½)	1360-2 566 (600-2)

EC-1, 25 FEB 2021 to 22 APR 2021
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GRAND RAPIDS, MICHIGAN — AL-5184 (FAA) — 20366

RNAV (GPS) RWY 26R
GERALD R FORD INTL (GRR)

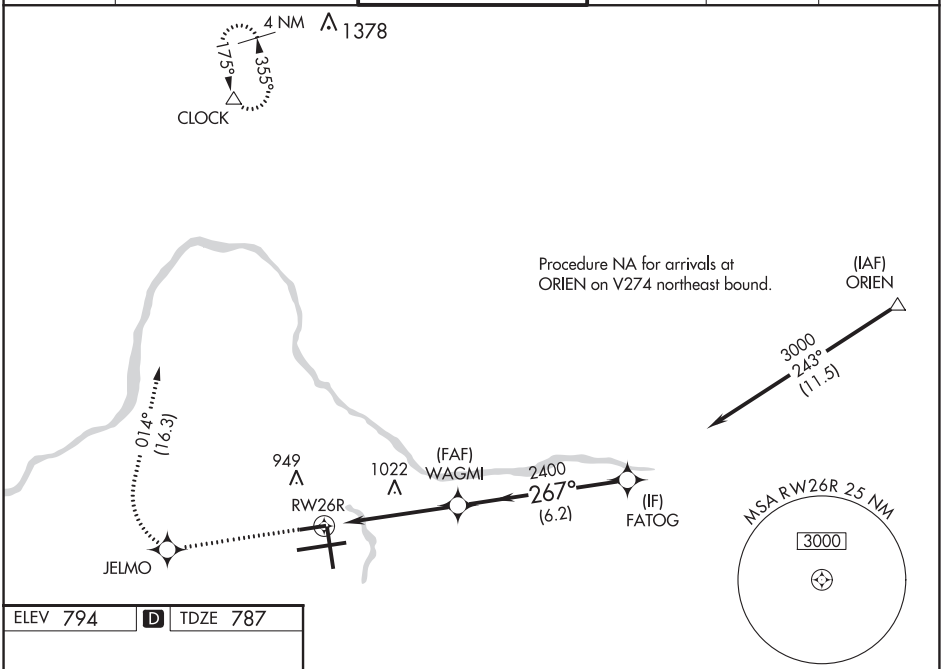
WAAS CH 82413 W26A	APP CRS 267°	Rwy ldg 5001 TDZE 787 Apt Elev 794

RNP APCH.

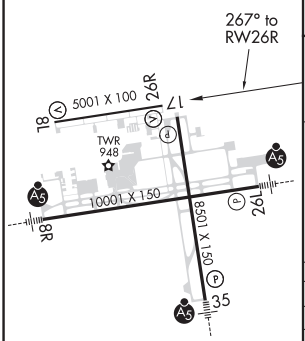
ASR For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 47°C. Rwy 26R helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 3000 direct JELMO and right turn on track 014° to CLOCK and hold.

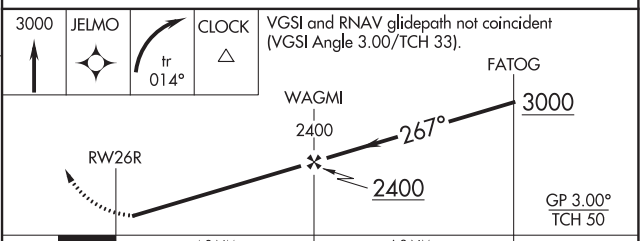
ATIS	GREAT LAKES APP CON ★	GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
118.725	128.4 257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95



ELEV 794 | D | TDZE 787



MIRL Rwy 8L-26R L
REIL Rwys 8L, 17 and 26R L
HIRL Rwys 8R-26L and 17-35 L



CATEGORY	A	B	C	D
LPV DA	1037-1 250 (300-1)			
LNAV/VNAV DA	1216-1½ 429 (500-1½)			
LNAV MDA	1280-1 493 (500-1)		1280-1⅜ 493 (500-1⅜)	1280-1½ 493 (500-1½)
C CIRCLING	1280-1 486 (500-1)		1340-1½ 546 (600-1½)	1360-2 566 (600-2)

GRAND RAPIDS, MICHIGAN — GERALD R FORD INTL (GRR)

Amdt 1B 12SEP19 — 42°53′N - 85°31′W

RNAV (GPS) RWY 26R

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 87112 W35A	APP CRS 357°	Rwy ldg 8501 TDZE 790 Apt Elev 794

RNAV (GPS) RWY 35

GERALD R FORD INTL (GRR)

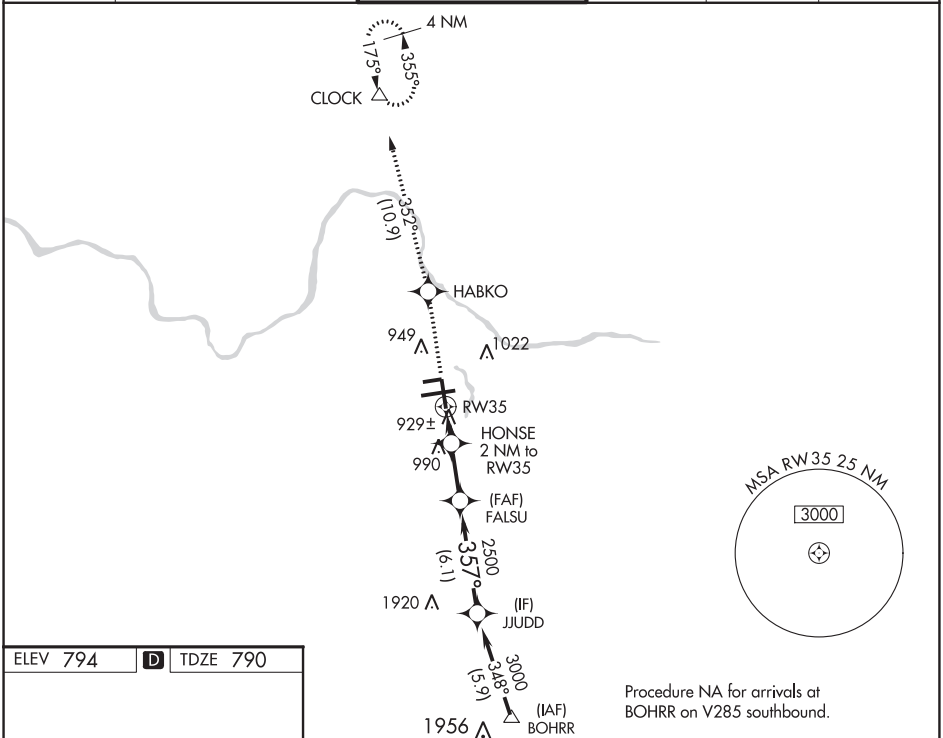
RNP APCH.

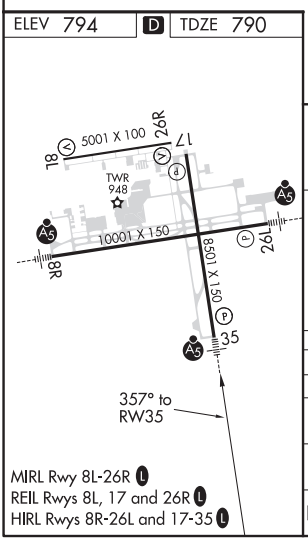
ASR: For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C. For inop ALS, increase LNAV Cat D visibility to RVR 6000. ** RVR 1800 authorized with use of FD or AP or HUD to DA.

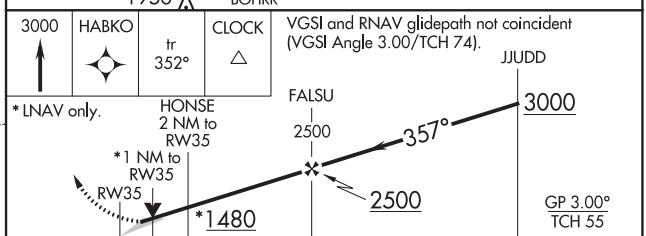
MALSR A5

MISSED APPROACH: Climb to 3000 direct HABKO and track 352° to CLOCK and hold.

ATIS	GREAT LAKES APP CON ★	GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
118.725	128.4 257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95







* LNAV only.

CATEGORY	A	B	C	D
LPV DA**	990/24 200 (200-½)			
LNAV/VNAV DA	1236/50 446 (500-1)			
LNAV MDA	1180/24 390 (400-½)		1180/35 390 (400-⅝)	1180/50 390 (400-1)
C CIRCLING	1260-1 466 (500-1)		1340-1½ 546 (600-1½)	1360-2 566 (600-2)

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GRAND RAPIDS, MICHIGAN — AL-5184 (FAA) — 20366

VOR RWY 17

GERALD R FORD INTL (GRR)

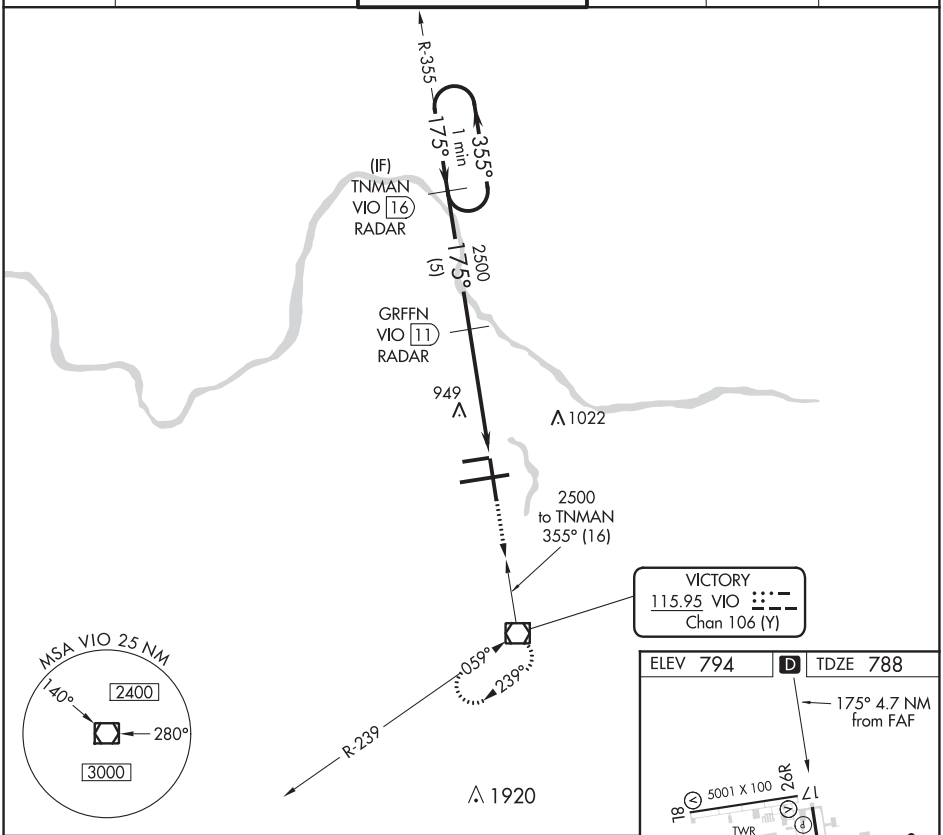
VOR/DME VIO	APP CRS	Rwy ldg	8501
115.95	175°	TDZE	788
Chan 106 (Y)		Apt Elev	794

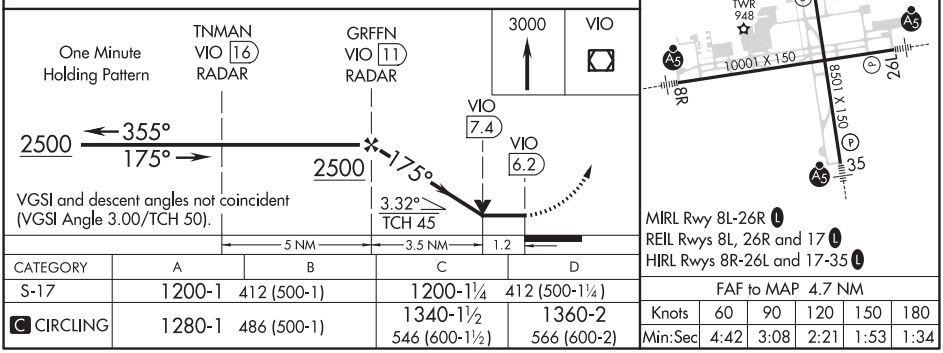
DME or RADAR required.

T A ASR — When local altimeter setting not received, use Holland altimeter setting and increase all MDAs 80 feet and increase S-17 Cat D visibility ¼ SM. Rwy 17 helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climb to 3000 direct VIO VOR/DME and hold.

ATIS	GREAT LAKES APP CON ★		GRAND RAPIDS TOWER ★	GND CON	CLNC DEL	UNICOM
118.725	128.4	257.6	135.65 (CTAF) L 339.8	121.8	119.3	122.95

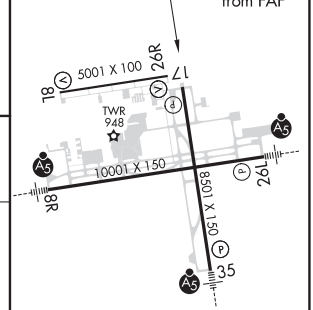




VGSI and descent angles not coincident (VGSI Angle 3.00/TCH 50).

ELEV 794 — D — TDZE 788

175° 4.7 NM from FAF



MIRL Rwy 8L-26R L
REIL Rwys 8L, 26R and 17 L
HIRL Rwys 8R-26L and 17-35 L

CATEGORY	A	B	C	D
S-17	1200-1	412 (500-1)	1200-1¼	412 (500-1¼)
C CIRCLING	1280-1	486 (500-1)	1340-1½	1360-2
			546 (600-1½)	566 (600-2)

FAF to MAP 4.7 NM

Knots	60	90	120	150	180
Min:Sec	4:42	3:08	2:21	1:53	1:34

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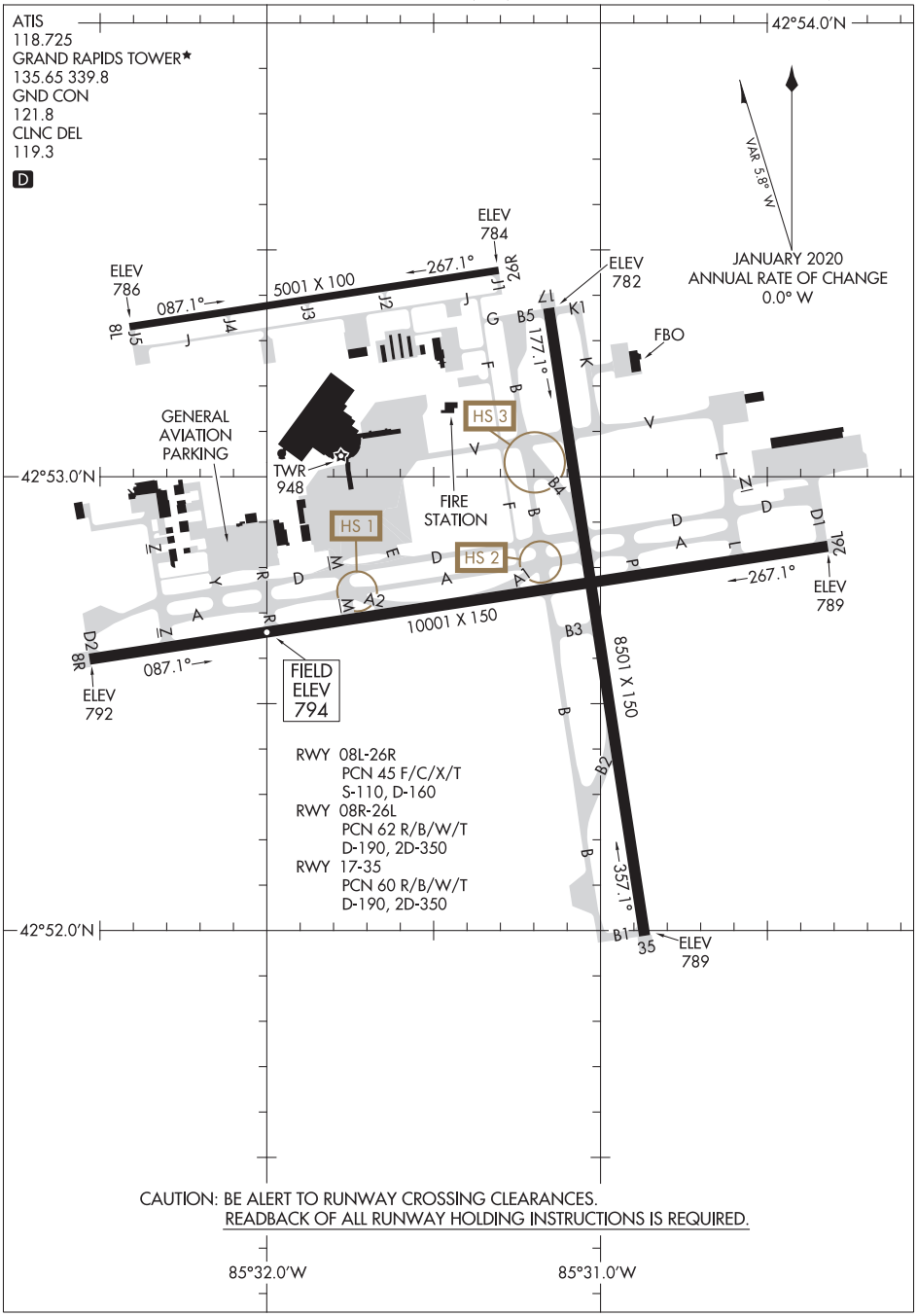

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GRAYLING, MICHIGAN | AL-5957 (FAA) | 20142

RNAV (GPS) RWY 14

GRAYLING AAF (GOV)

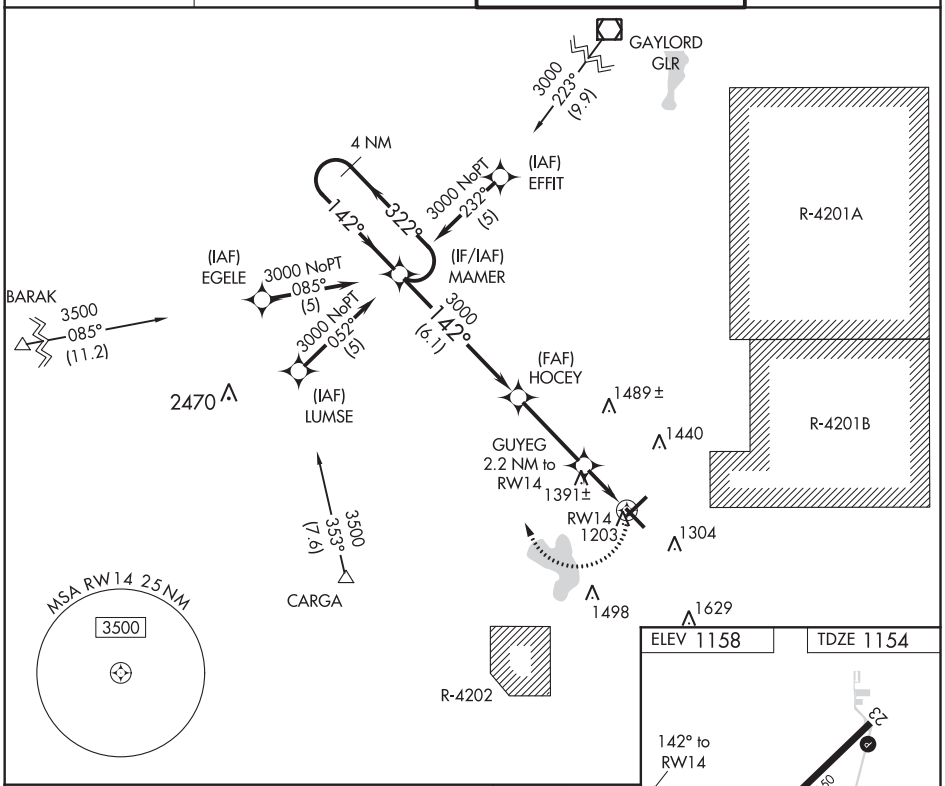
APP CRS	Rwy ldg	5005
142°	TDZE	1154
	Apt Elev	1158

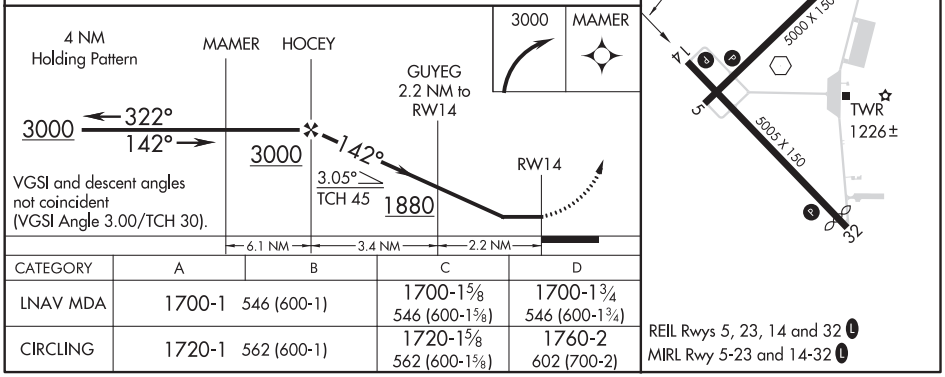
RNP APCH.

Circling Rwy 5, 23, 32 NA at night. Rwy 14 helicopter visibility reduction below ¾ SM NA.
When local altimeter setting not received use Houghton Lake altimeter setting and increase all MDAs 60 feet and visibility Cat C ⅛ SM.

MISSED APPROACH: Climbing right turn to 3000 direct MAMER and hold.

ATIS	MINNEAPOLIS CENTER	GRAYLING TOWER ★	GND CON
119.075	125.475 269.45	126.2 (CTAF) L	121.9





CATEGORY	A	B	C	D
LNAV MDA	1700-1 546 (600-1)		1700-1⅝ 546 (600-1⅝)	1700-1¾ 546 (600-1¾)
CIRCLING	1720-1 562 (600-1)		1720-1⅝ 562 (600-1⅝)	1760-2 602 (700-2)

GRAYLING, MICHIGAN
Orig-C 11OCT18

44°41′N-84°44′W

GRAYLING AAF (GOV)

RNAV (GPS) RWY 14

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

VOR CGG	APP CRS	Rwy ldg	5005
109.8	127°	TDZE	1154
		Apt Elev	1158

VOR RWY 14

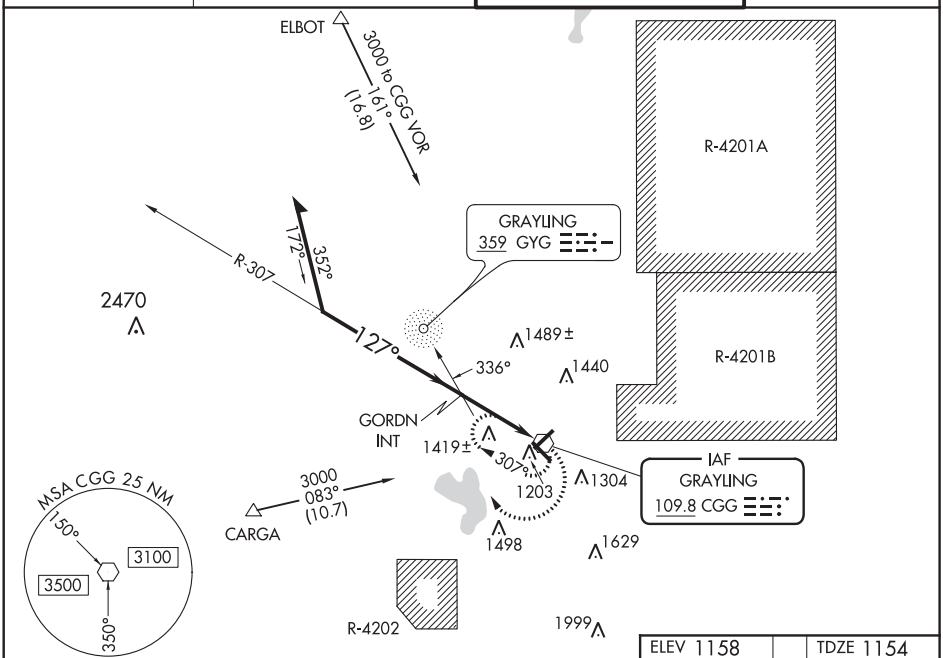
GRAYLING AAF (GOV)

Rwy 14 helicopter visibility reduction below ¾ SM NA. Circling Rwy 5, 23, 32 NA at night. When local altimeter setting not received, use Houghton Lake altimeter setting and increase all MDAs 60 feet and visibility S-14 and Circling Cat B/C/D ½ SM and GORDN fix minimums S-14 and Circling Cat C ⅛ SM.

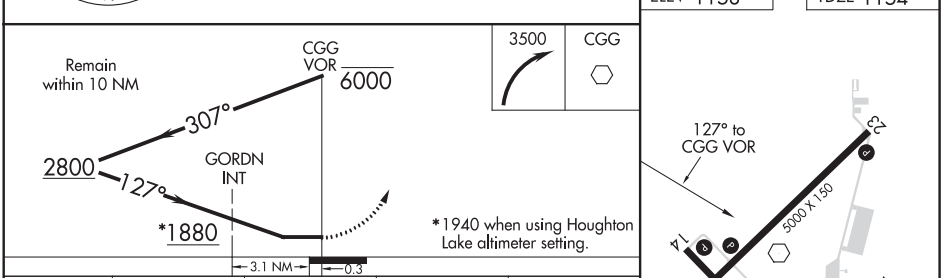
NA

MISSED APPROACH: Climbing right turn to 3500 in CGG VOR holding pattern.

ATIS	MINNEAPOLIS CENTER	GRAYLING TOWER ★	GND CON
119.075	125.475 269.45	126.2 (CTAF) L	121.9



ELEV 1158 TDZE 1154



CATEGORY	A	B	C	D
S-14	1880-1 726 (800-1)		1880-2 726 (800-2)	1880-2¼ 726 (800-2¼)
CIRCLING	1880-1 722 (800-1)		1880-2 722 (800-2)	1880-2¼ 722 (800-2¼)
GORDN FIX MINIMUMS				
S-14	1720-1 566 (600-1)		1720-1⅝ 566 (600-1⅝)	1720-1¾ 566 (600-1¾)
CIRCLING	1720-1 562 (600-1)		1720-1⅝ 562 (600-1⅝)	1760-2 602 (700-2)

REIL Rwys 5, 23, 14 and 32 L
MIRL Rwy 5-23 and 14-32 L

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

GRAYLING, MICHIGAN | AL-5957 (FAA) | 20142

NDB RWY 14

GRAYLING AAF (GOV)

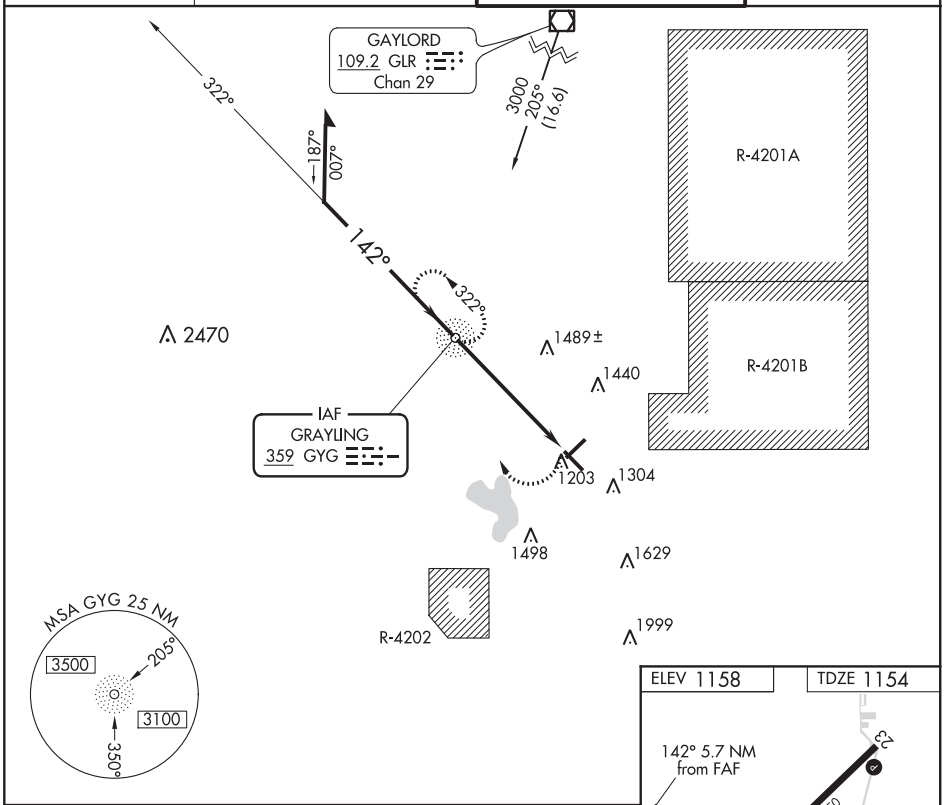
NDB GYG	APP CRS	Rwy ldg	5005
359	142°	TDZE	1154
		Apt Elev	1158

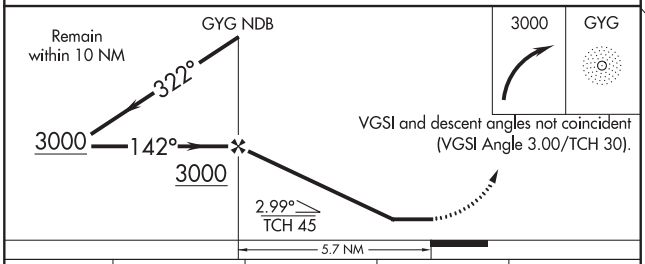
Circling Rwy 5, 23, 32 NA at night. Rwy 14 helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Houghton Lake altimeter setting and increase all MDAs 60 feet and visibility Cat B/C/D ½ SM.

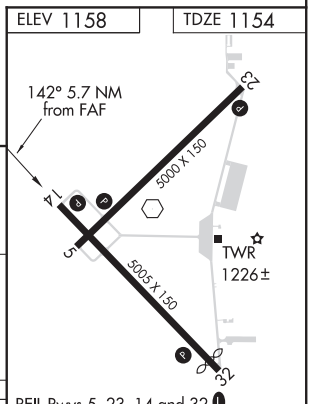
NA

MISSED APPROACH: Climbing right turn to 3000 direct GYG NDB and hold.

ATIS	MINNEAPOLIS CENTER	GRAYLING TOWER ★	GND CON
119.075	125.475 269.45	126.2 (CTAF) L	121.9







REIL Rwys 5, 23, 14 and 32 L
MIRL Rwy 5-23 and 14-32 L

CATEGORY	A	B	C	D
S-14	1880-1 726 (800-1)		1880-2 726 (800-2)	1880-2¼ 726 (800-2¼)
CIRCLING	1880-1 722 (800-1)		1880-2 722 (800-2)	1880-2¼ 722 (800-2¼)

FAF to MAP 5.7 NM					
Knots	60	90	120	150	180
Min:Sec	5:42	3:48	2:51	2:17	1:54

EC-1, 25 FEB 2021 to 22 APR 2021

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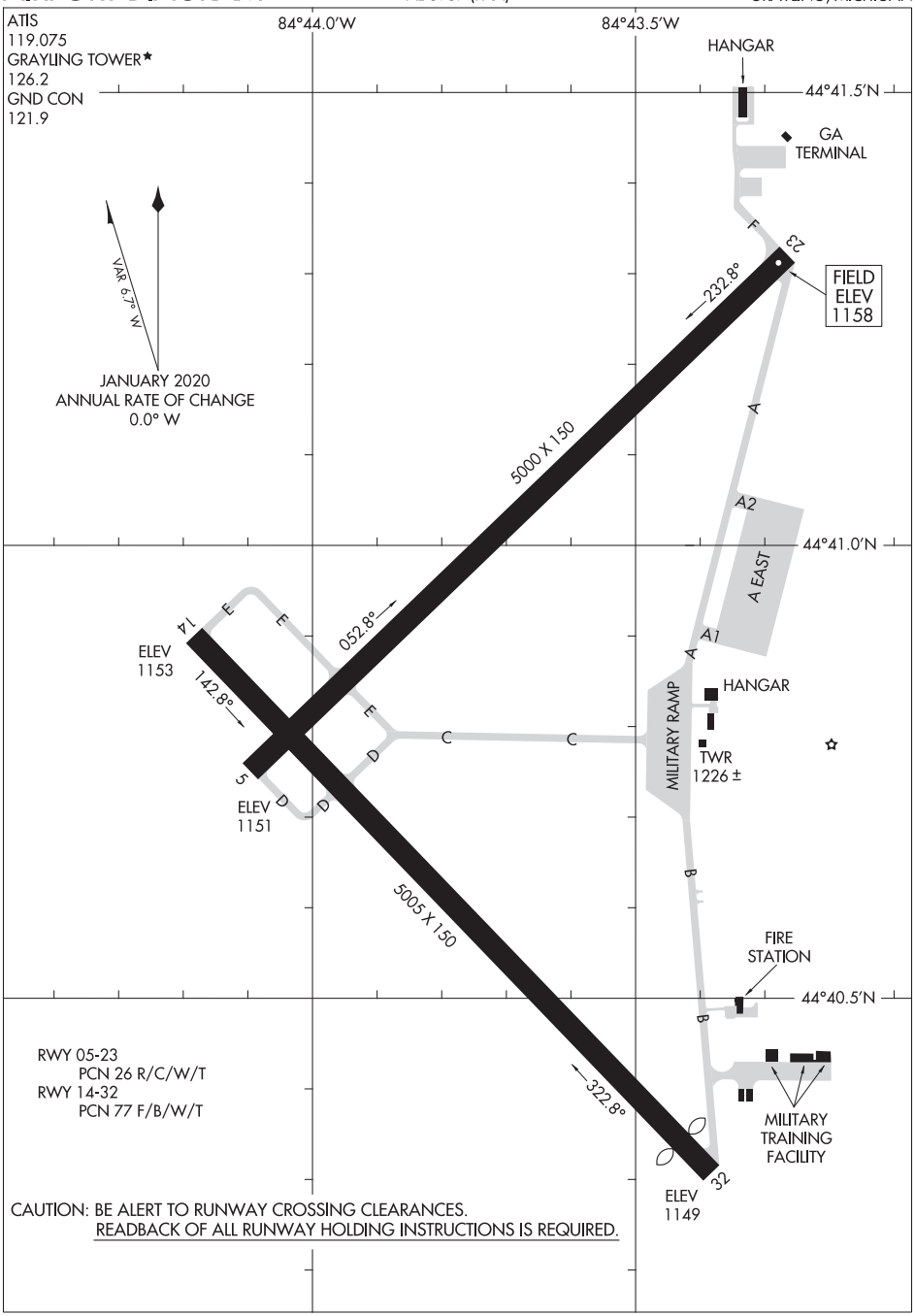

ATIS
119.075
GRAYLING TOWER★
126.2
GND CON
121.9
84°44.0'W
84°43.5'W
44°41.5'N
44°41.0'N
44°40.5'N
HANGAR
GA TERMINAL
VAR 6.7° W
JANUARY 2020
ANNUAL RATE OF CHANGE
0.0° W
232.8°
FIELD ELEV 1158
23
5000 X 150
A
A2
A EAST
A1
052.8°
ELEV 1153
14
142.8°
5
ELEV 1151
E
F
C
D
MILITARY RAMP
HANGAR
TWR 1226 ±
B
5005 X 150
FIRE STATION
322.8°
32
ELEV 1149
MILITARY TRAINING FACILITY
RWY 05-23
PCN 26 R/C/W/T
RWY 14-32
PCN 77 F/B/W/T
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

GREENVILLE, MICHIGAN

AL-6875 (FAA)

20086

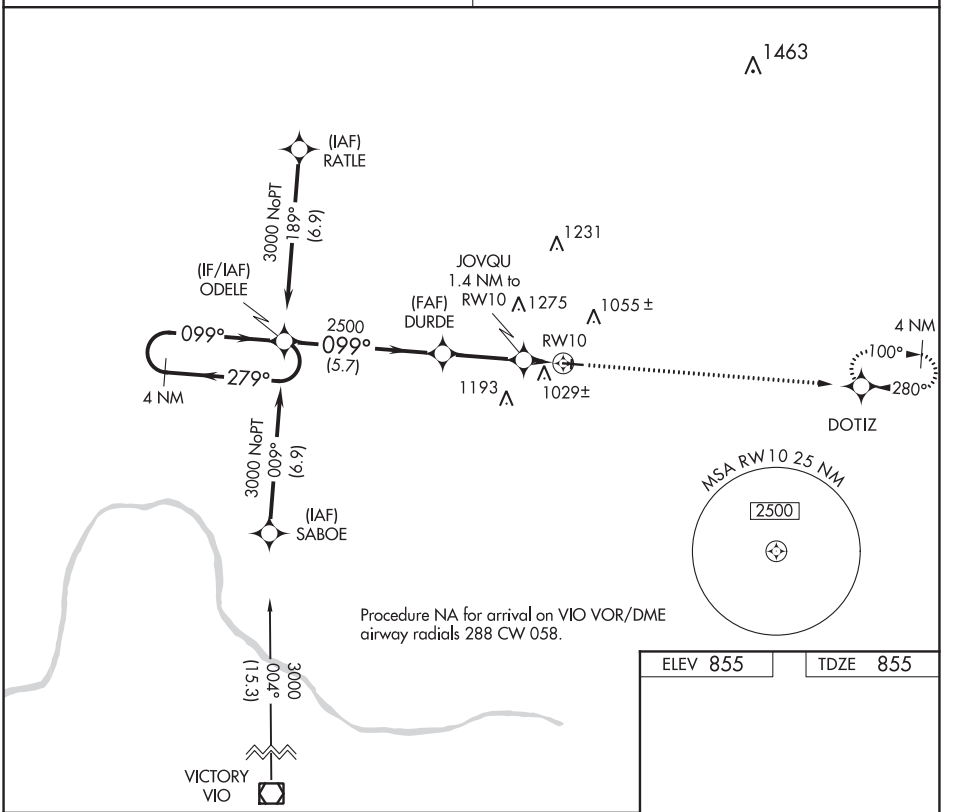
RNAV (GPS) RWY 10
GREENVILLE MUNI (6D6)

APP CRS	Rwy ldg	4199
099°	TDZE	855
	Apt Elev	855

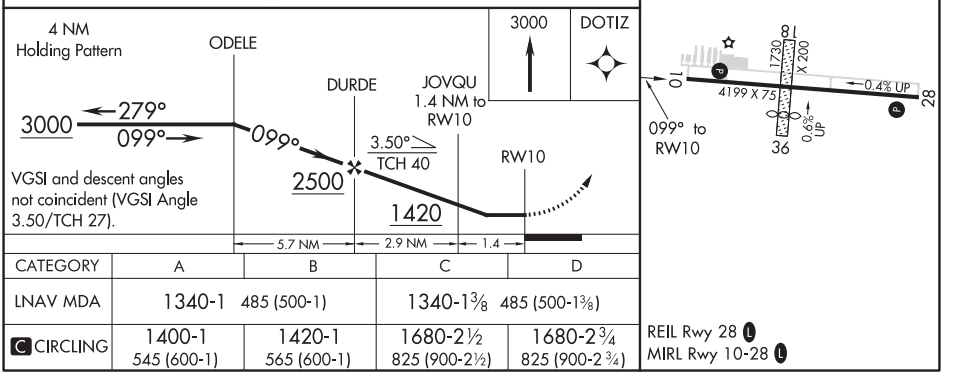
Circling NA to Rwys 18 and 36. Rwy 10 helicopter visibility reduction below 1 SM NA. DME/DME RNP-0.3 NA. Straight-in and Circling Rwy 10 NA at night. Use Grand Rapids altimeter setting; when not received, use Ionia altimeter setting.

MISSED APPROACH: Climb to 3000 direct DOTIZ and hold.

GREAT LAKES APP CON ★	UNICOM
124.6 257.6	122.8 (CTAF) L



ELEV 855	TDZE 855



CATEGORY	A	B	C	D
LNAV MDA	1340-1 485 (500-1)		1340-1⅜ 485 (500-1⅜)	
C CIRCLING	1400-1 545 (600-1)	1420-1 565 (600-1)	1680-2½ 825 (900-2½)	1680-2¾ 825 (900-2¾)

REIL Rwy 28 L
MIRL Rwy 10-28 L

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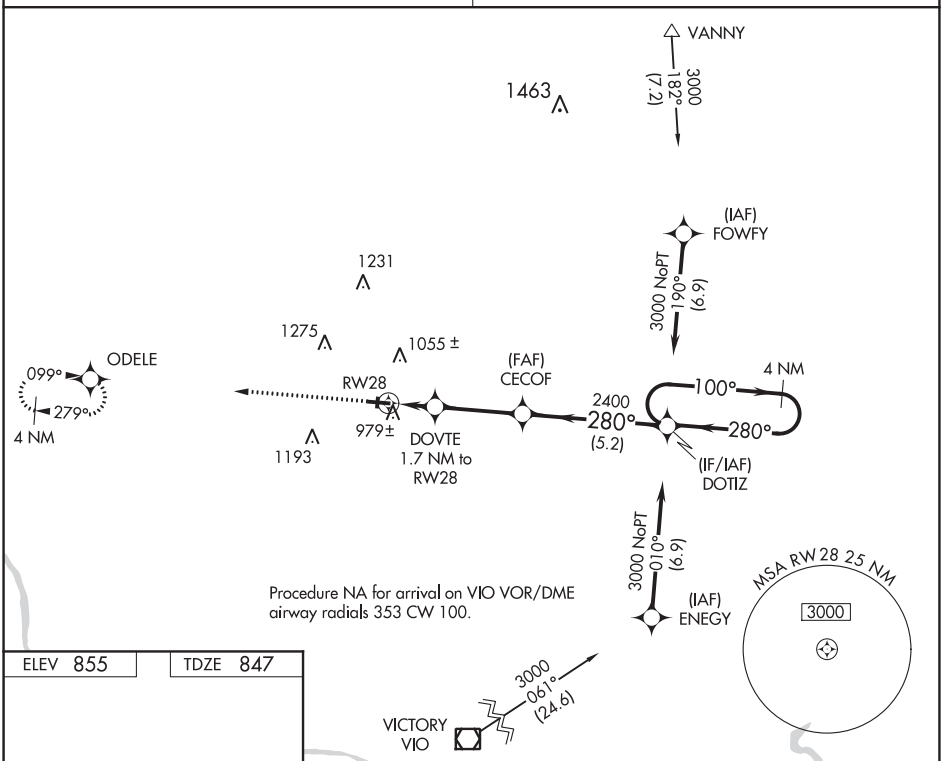
APP CRS	Rwy ldg	4199
280°	TDZE	847
	Apt Elev	855

RNAV (GPS) RWY 28
GREENVILLE MUNI (6D6)

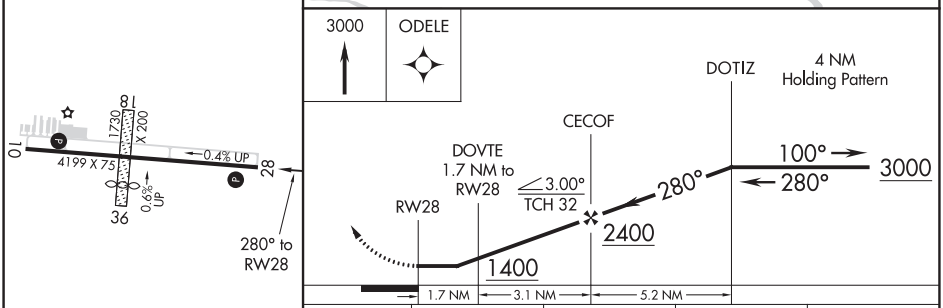
Circling NA to Rwys 18 and 36. DME/DME RNP-0.3 NA. Rwy 28 helicopter visibility reduction below ¾ SM NA. Circling Rwy 10 NA at night. Use Grand Rapids altimeter setting; when not received, use Ionia altimeter setting.

MISSED APPROACH: Climb to 3000 direct ODELE and hold.

GREAT LAKES APP CON ★	UNICOM
124.6 257.6	122.8 (CTAF) L



ELEV 855	TDZE 847



CATEGORY	A	B	C	D
LNAV MDA	1300-1 453 (500-1)		1300-1⅜ 453 (500-1⅜)	
C CIRCLING	1400-1 545 (600-1)	1420-1 565 (600-1)	1680-2½ 825 (900-2½)	1680-2¾ 825 (900-2¾)

REIL Rwy 28 L
MIRL Rwy 10-28 L

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HANCOCK, MICHIGAN — AL-896 (FAA) — 21056

ILS or LOC RWY 31
HOUGHTON COUNTY MEML (CMX)

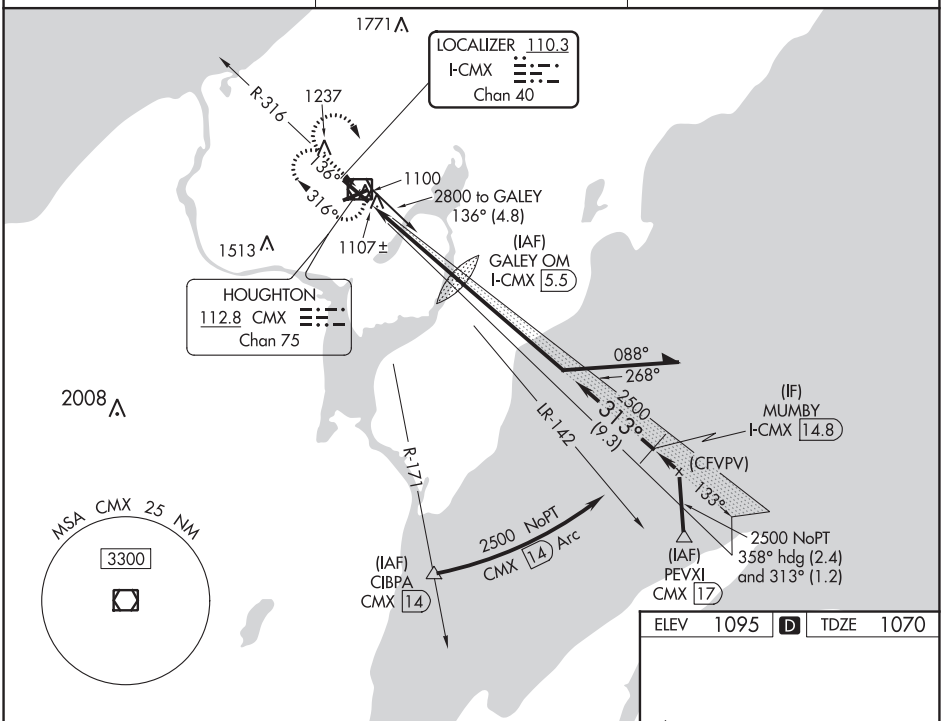
LOC/DME I-CMX	APP CRS	Rwy ldg	6500
110.3	313°	TDZE	1070
Chan 40		Apt Elev	1095

DME required for procedure entry.

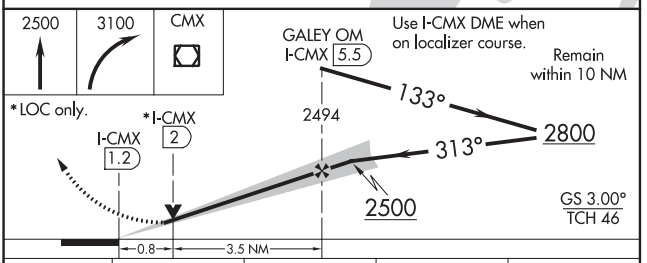
MALSR

MISSED APPROACH: Climb to 2500 then climbing right turn to 3100 direct CMX VOR/DME and hold.

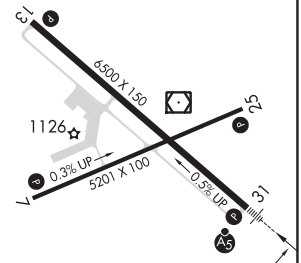
ASOS	MINNEAPOLIS CENTER	UNICOM
125.675	133.55 379.1	122.7 (CTAF) L



2500	3100	CMX



ELEV 1095 D TDZE 1070



MIRL Rwy 7-25 L
HIRL Rwy 13-31 L
REIL Rwy 7, 13, and 25 L

313° 4.3 NM from FAF

FAF to MAP 4.3 NM					
Knots	60	90	120	150	180
Min:Sec	4:18	2:52	2:09	1:43	1:26

CATEGORY	A	B	C	D
S-ILS 31	1270-½ 200 (200-½)			
S-LOC 31	1360-½ 290 (300-½)			
C CIRCLING	1560-1 465 (500-1)	1600-1 505 (600-1)	1680-1½ 585 (700-1½)	1820-2¼ 725 (800-2¼)

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WAAS CH 58233 W07A	APP CRS 069°	Rwy ldg 5201 TDZE 1067 Apt Elev 1095

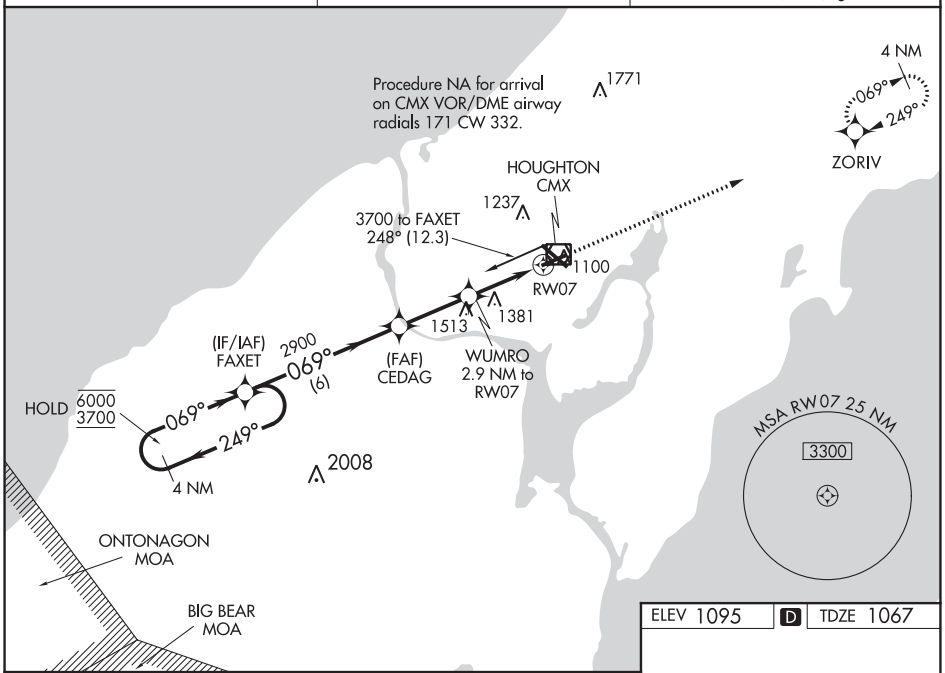
RNAV (GPS) RWY 7
HOUGHTON COUNTY MEML (CMX)

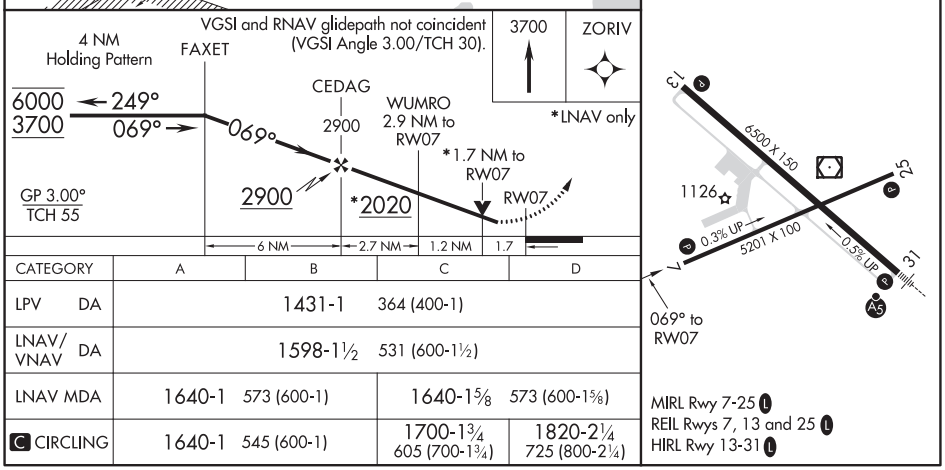
RNP APCH.

Rwy 7 helicopter visibility reduction below ¾ SM NA.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C or above 54°C.

MISSED APPROACH: Climb to 3700 direct ZORIV and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
125.675	133.55 379.1	122.7 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	1431-1 364 (400-1)			
LNAV/VNAV DA	1598-1½ 531 (600-1½)			
LNAV MDA	1640-1 573 (600-1)		1640-1⅝ 573 (600-1⅝)	
C CIRCLING	1640-1 545 (600-1)		1700-1¾ 605 (700-1¾)	1820-2¼ 725 (800-2¼)

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HANCOCK, MICHIGAN AL-896 (FAA) 21056

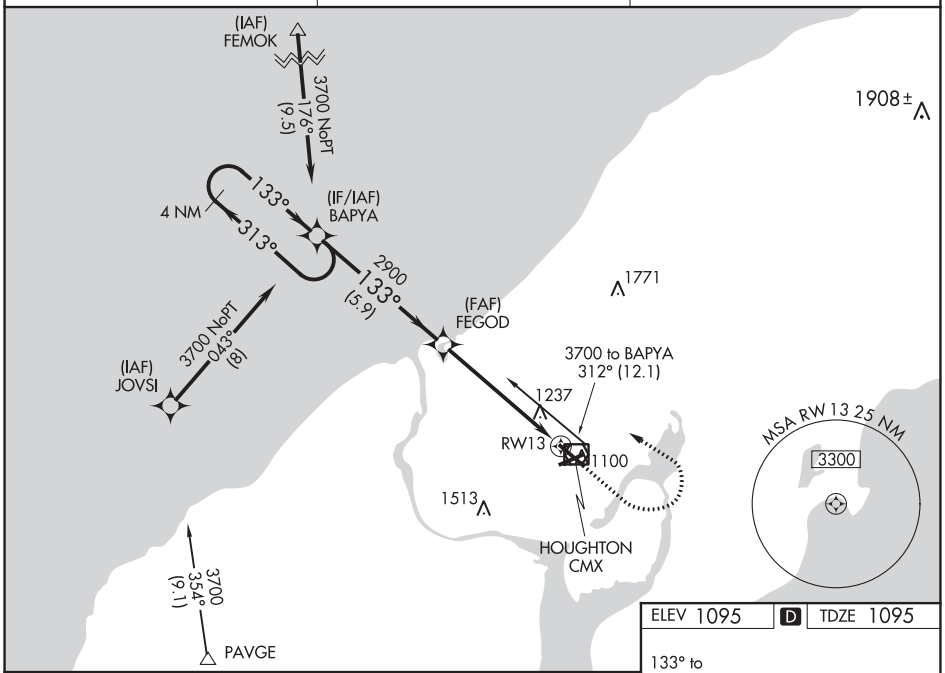
WAAS CH 93533 W13A	APP CRS 133°	Rwy ldg 6500 TDZE 1095 Apt Elev 1095

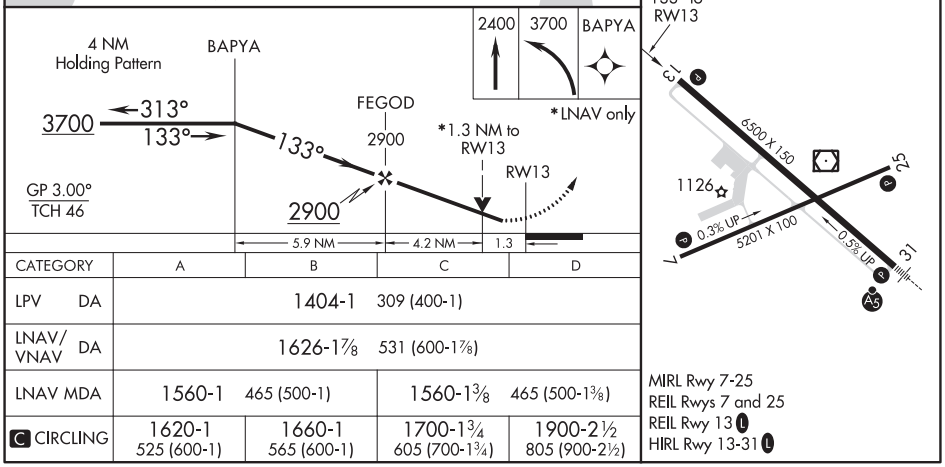
RNAV (GPS) RWY 13
HOUGHTON COUNTY MEML (CMX)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -21°C (-5°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Baro-VNAV and VDP NA when using Marquette altimeter setting. When local altimeter setting not received, use Marquette altimeter setting and increase all DA 171 feet and all visibilities ¾ mile. Increase all MDA 180 feet and all Cat C/D visibilities ½ mile. Helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climb to 2400 then climbing left turn to 3700 direct BAPYA and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
125.675	133.55 379.1	122.7 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	1404-1 309 (400-1)			
LNAV/VNAV DA	1626-1⅞ 531 (600-1⅞)			
LNAV MDA	1560-1 465 (500-1)		1560-1⅜ 465 (500-1⅜)	
C CIRCLING	1620-1 525 (600-1)	1660-1 565 (600-1)	1700-1¾ 605 (700-1¾)	1900-2½ 805 (900-2½)

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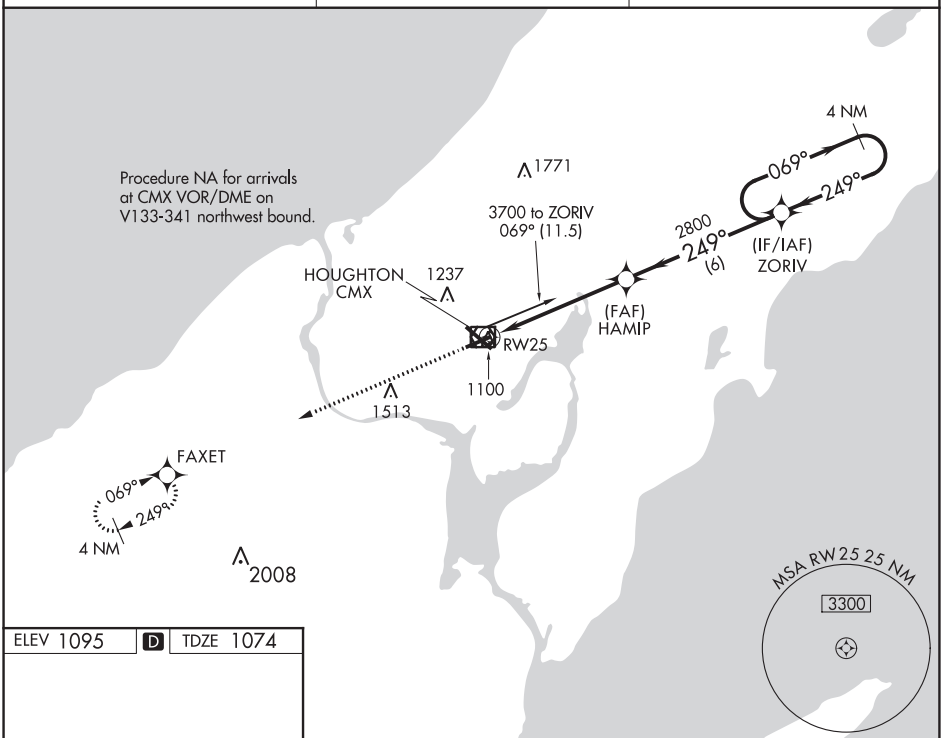
WAAS CH 86634 W25A	APP CRS 249°	Rwy ldg 5201 TDZE 1074 Apt Elev 1095

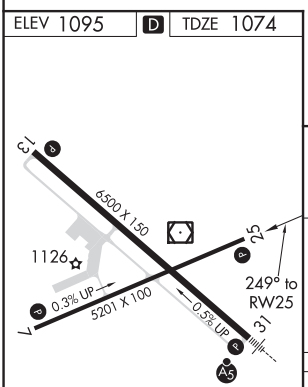
RNAV (GPS) RWY 25
HOUGHTON COUNTY MEML (CMX)

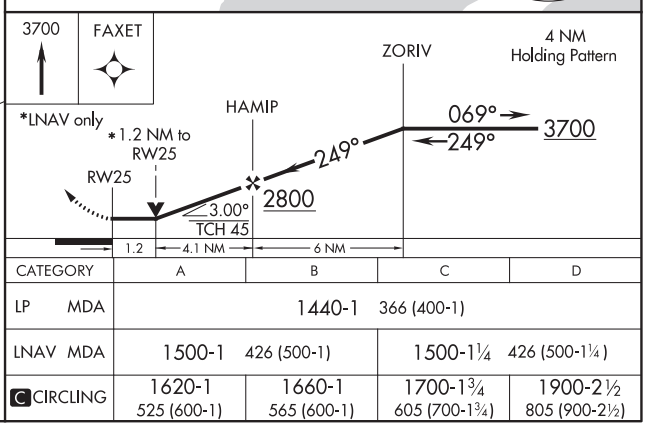
DME/DME RNP-0.3 NA. VDP NA with Marquette altimeter setting. When local altimeter setting not received, use Marquette altimeter setting and increase all MDA 180 feet and increase all Cat C/D visibilities ⅝ mile. Helicopter visibility reduction below ¾ SM not authorized.

MISSED APPROACH: Climb to 3700 direct FAXET and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
125.675	133.55 379.1	122.7 (CTAF) L







CATEGORY	A	B	C	D
LP MDA	1440-1 366 (400-1)			
LNAV MDA	1500-1 426 (500-1)		1500-1¼ 426 (500-1¼)	
C CIRCLING	1620-1 525 (600-1)	1660-1 565 (600-1)	1700-1¾ 605 (700-1¾)	1900-2½ 805 (900-2½)

MIRL Rwy 7-25
REIL Rwys 7 and 25
REIL Rwy 13 L
HIRL Rwy 13-31 L

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WAAS CH 45809 W31A	APP CRS 313°	Rwy ldg 6500 TDZE 1070 Apt Elev 1095

RNAV (GPS) RWY 31
HOUGHTON COUNTY MEML (CMX)

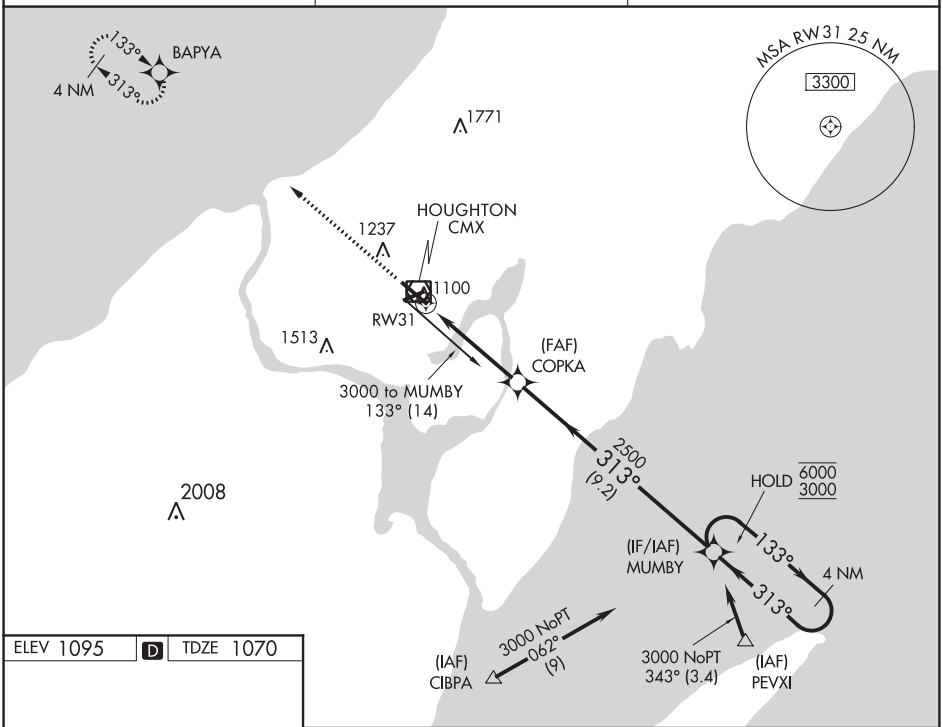
RNP APCH.

Inop table does not apply to LNAV Cat D. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C or above 46°C. For inop ALS, increase LPV visibility all Cats to 1 SM, increase LNAV/VNAV Cat D visibility to 1 SM.

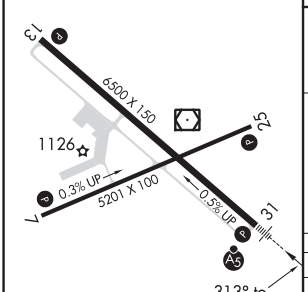
MALSR

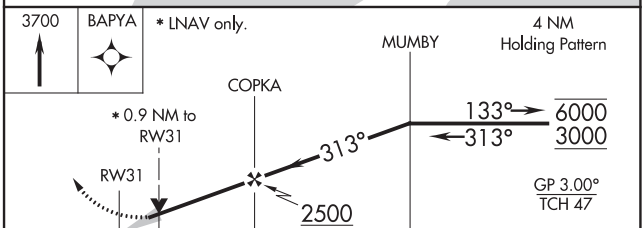
MISSED APPROACH: Climb to 3700 direct BAPYA and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
125.675	133.55 379.1	122.7 (CTAF) L



ELEV 1095 | D | TDZE 1070





CATEGORY	A	B	C	D
LPV DA	1320-½ 250 (300-½)			
LNAV/VNAV DA	1367-½ 297 (300-½)			1367-¾ 297 (300-¾)
LNAV MDA	1420-½ 350 (400-½)			1420-1 350 (400-1)
C CIRCLING	1560-1 465 (500-1)	1600-1 505 (600-1)	1680-1½ 585 (600-1½)	1820-2¼ 725 (700-2¼)

MIRL Rwy 7-25 L
REIL Rwys 7, 13 and 25 L
HIRL Rwy 13-31 L

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LOC I-CMX 110.3 Chan 40	APP CRS 133°	Rwy ldg 6500 TDZE 1095 Apt Elev 1095

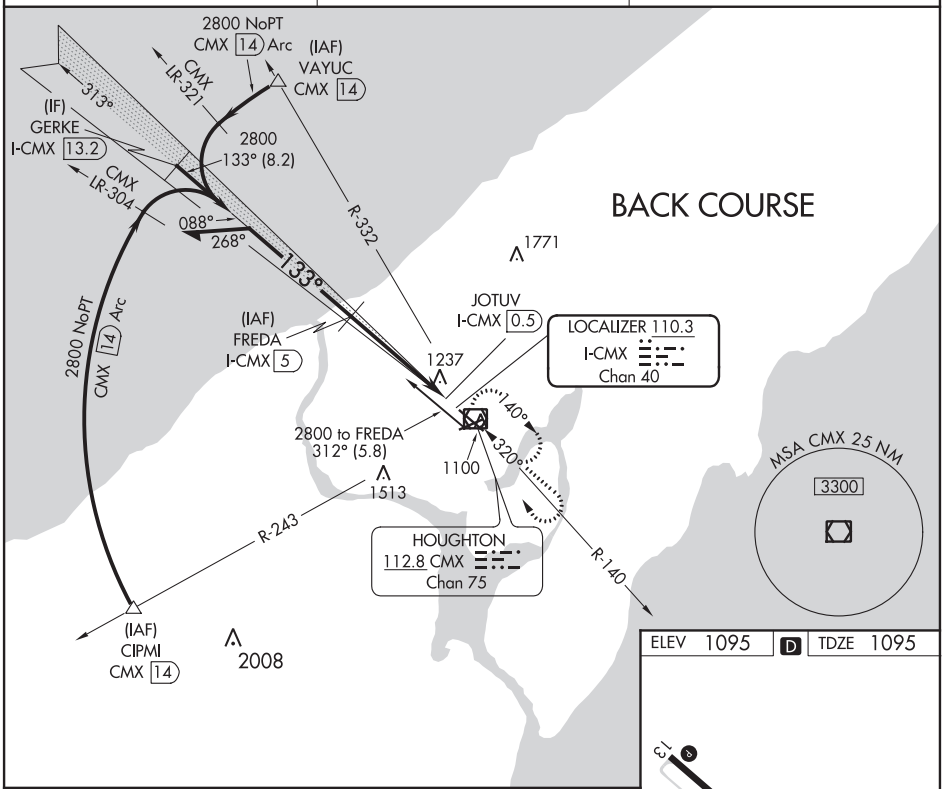
LOC BC RWY 13
HOUGHTON COUNTY MEML (CMX)

DME required.

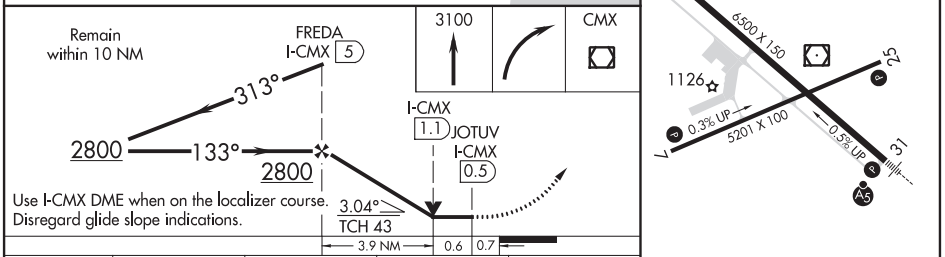
T A Rwy 13 helicopter visibility reduction below ¾ SM NA. Request MIRL Rwy 7-27 - CTAF.

MISSED APPROACH: Climb to 3100 then right turn direct CMX VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
125.675	133.55 379.1	122.7 (CTAF) L



ELEV 1095 D TDZE 1095



CATEGORY	A	B	C	D
S- LOC 13	1540-1 445 (500-1)		1540-1¼ 445 (500-1¼)	1540-1½ 445 (500-1½)
C CIRCLING	1560-1 465 (500-1)	1600-1 505 (600-1)	1680-1½ 585 (600-1½)	1820-2¼ 725 (700-2¼)

MIRL Rwy 7-25 L
REIL Rwys 7, 13 and 25 L
HIRL Rwy 13-31 L

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HANCOCK, MICHIGAN | AL-896 (FAA) | 21056

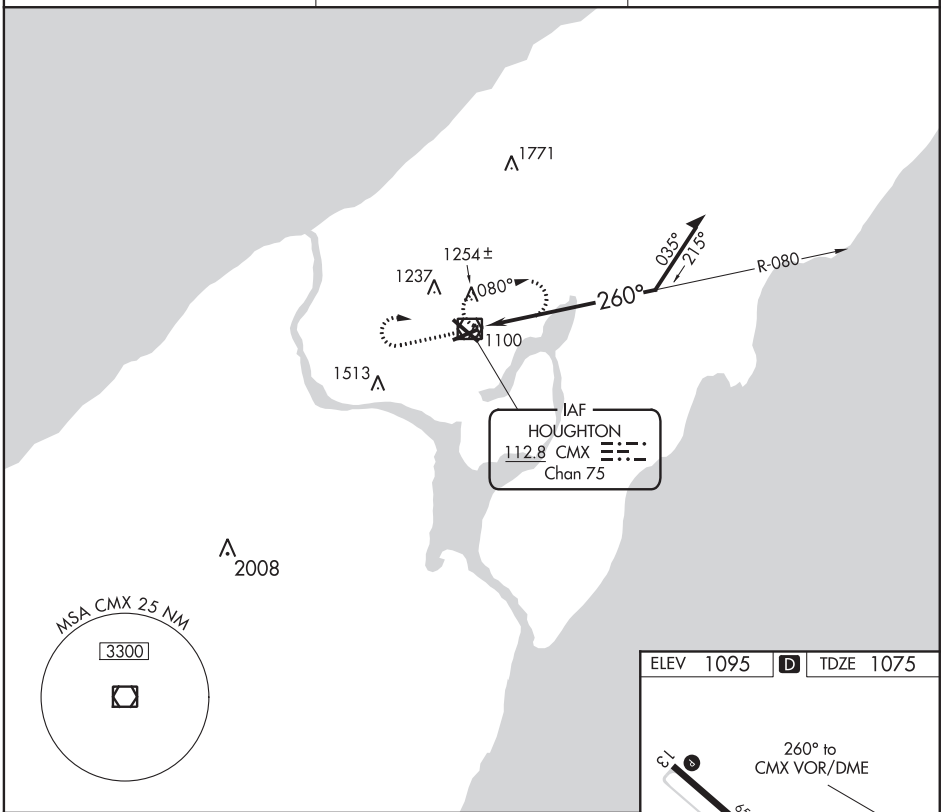
VOR RWY 25
HOUGHTON COUNTY MEML (CMX)

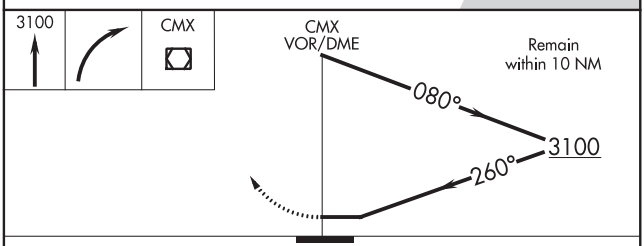
VOR/DME CMX	APP CRS	Rwy ldg	5201
112.8	260°	TDZE	1075
Chan 75		Apt Elev	1095

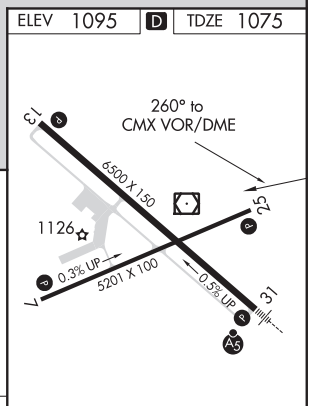
Rwy 25 helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climb to 3100 then right turn direct CMX VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
125.675	133.55 379.1	122.7 (CTAF) L







CATEGORY	A	B	C	D
S-25	1620-1	545 (600-1)	1620-1⅝ 545 (600-1⅝)	1620 1¾ 545 (600-1¾)
C CIRCLING	1620-1	525 (600-1)	1700-1¾ 605 (700-1¾)	1820-2¼ 725 (800-2¼)

MIRL Rwy 7-25 L
REIL Rwys 7, 13 and 25 L
HIRL Rwy 13-31 L

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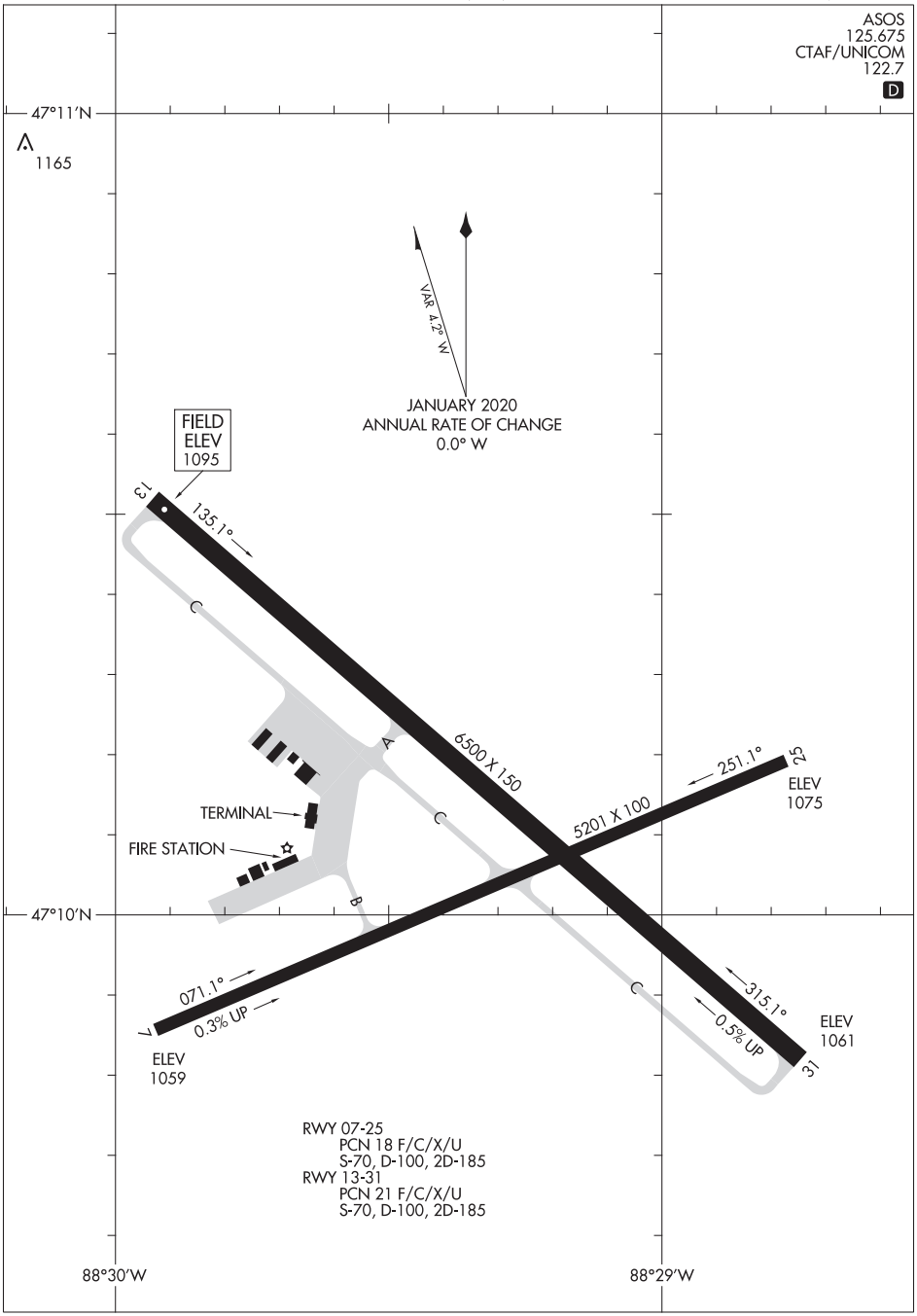

ASOS
125.675
CTAF/UNICOM
122.7
D
47°11'N
1165
VAR 4.2° W
JANUARY 2020
ANNUAL RATE OF CHANGE
0.0° W
FIELD
ELEV
1095
13
135.1°
C
A
6500 X 150
251.1°
25
ELEV
1075
TERMINAL
FIRE STATION
5201 X 100
C
B
47°10'N
071.1°
0.3% UP
7
ELEV
1059
C
315.1°
0.5% UP
ELEV
1061
31
RWY 07-25
PCN 18 F/C/X/U
S-70, D-100, 2D-185
RWY 13-31
PCN 21 F/C/X/U
S-70, D-100, 2D-185
88°30'W
88°29'W

HARBOR SPRINGS, MICHIGAN AL-6985 (FAA) 20086

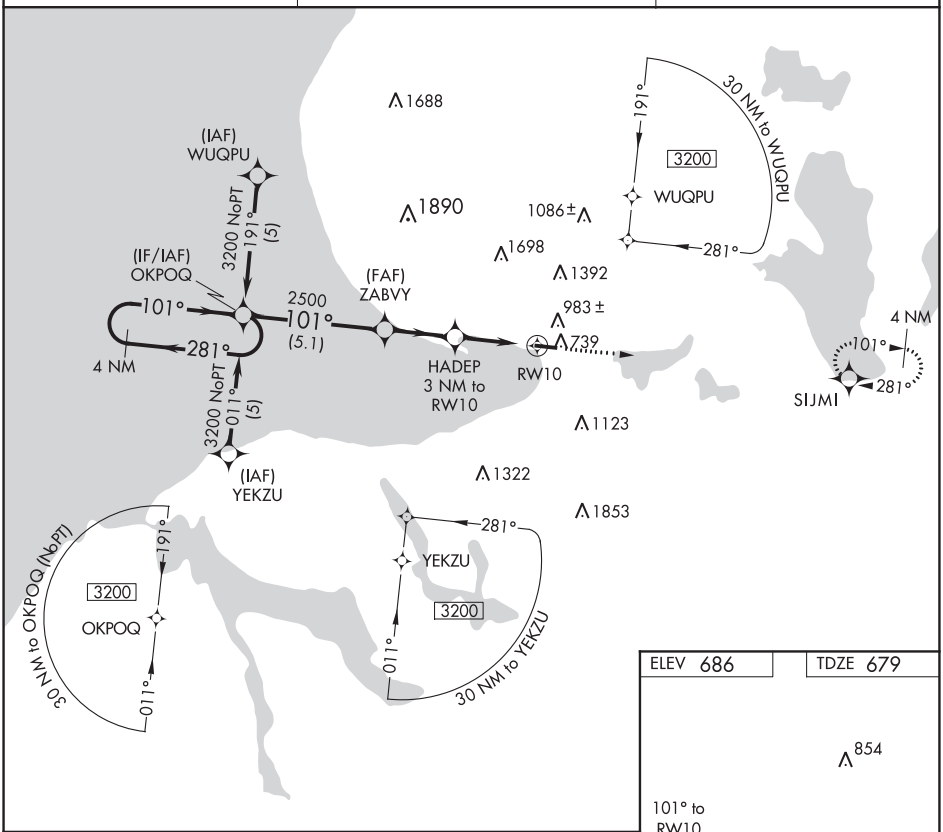
RNAV (GPS) RWY 10
HARBOR SPRINGS (MGN)

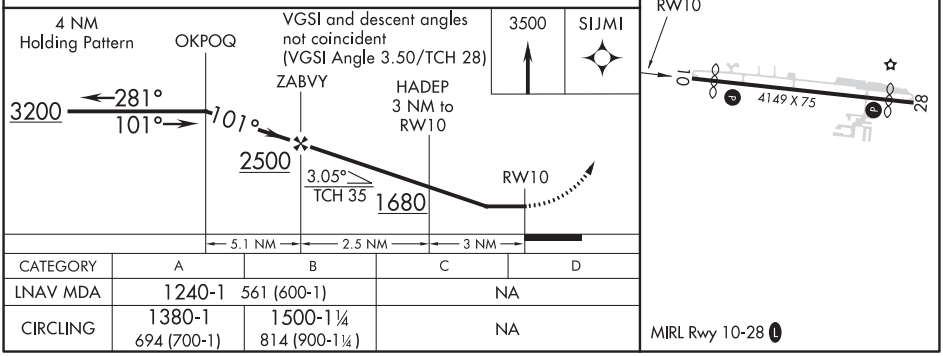
APP CRS	Rwy ldg	3712
101°	TDZE	679
	Apt Elev	686

DME/DME RNP-0.3 NA. When local altimeter setting not received, use Pellston altimeter setting and increase all MDAs 40 feet. Procedure NA at night. Helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 3500 direct SIJMI and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
119.925	134.6 354.05	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1240-1	561 (600-1)	NA	
CIRCLING	1380-1 694 (700-1)	1500-1¼ 814 (900-1¼)	NA	

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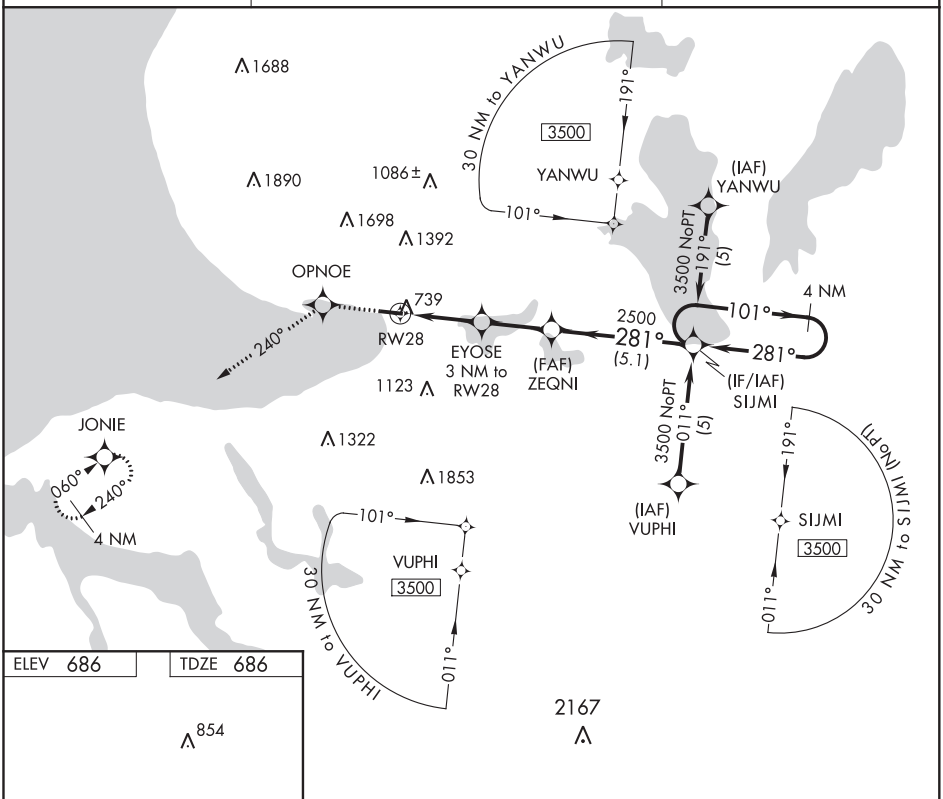
APP CRS	Rwy ldg	3705
281°	TDZE	686
	Apt Elev	686

RNAV (GPS) RWY 28
HARBOR SPRINGS (MGN)

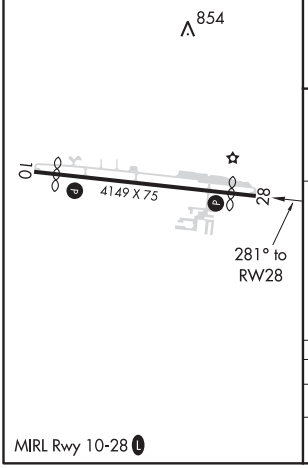
DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Pellston altimeter setting and increase all MDAs 40 feet. Procedure NA at night.

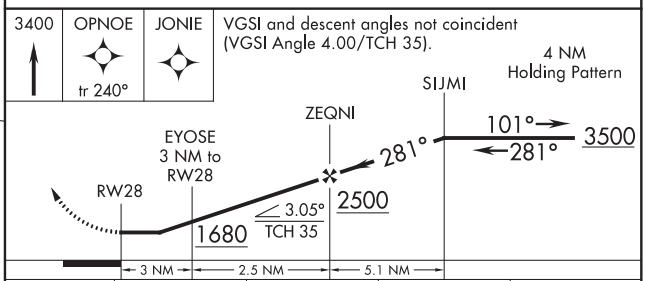
MISSED APPROACH: Climb to 3400 direct OPNOE and via 240° track to JONIE and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
119.925	134.6 354.05	122.8 (CTAF) L



ELEV 686 TDZE 686





CATEGORY	A	B	C	D
LNAV MDA	1120-1 434 (500-1)		NA	
CIRCLING	1380-1 694 (700-1)	1500-1¼ 814 (900-1¼)	NA	

MIRL Rwy 10-28 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

HARBOR SPRINGS, MICHIGAN AL-6985 (FAA) 20254

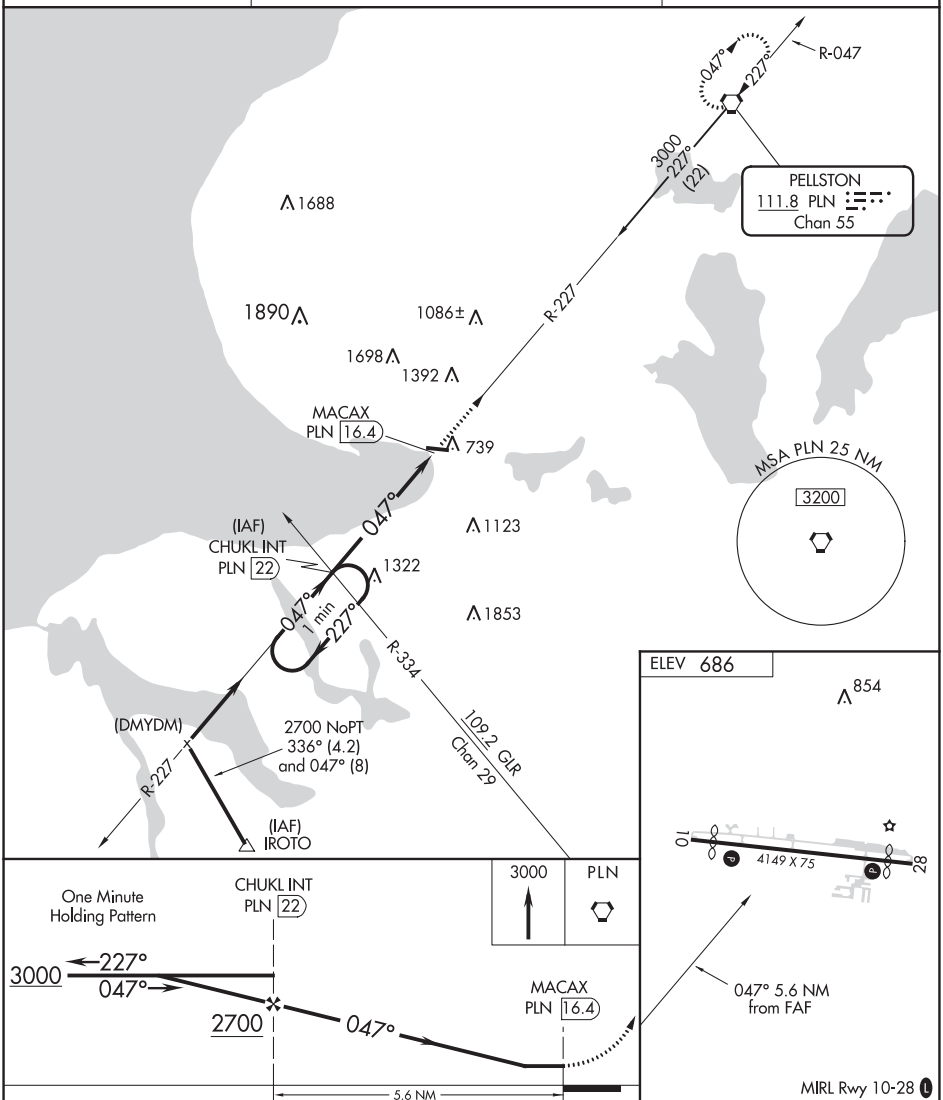
VORTAC PLN 111.8 Chan 55	APP CRS 047°	Rwy Idg N/A TDZE N/A Apt Elev 686

VOR-A
HARBOR SPRINGS (MGN)

When local altimeter setting not received, use Pellston altimeter setting and increase all MDAs 40 feet.
NA Procedure NA at night. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3000 direct PLN VORTAC and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
119.925	134.6 354.05	122.8 (CTAF) L



CATEGORY	A	B	C	D
CIRCLING	1640-1¼ 954 (1000-1¼)	1640-1½ 954 (1000-1½)	NA	

FAF to MAP 5.6 NM					
Knots	60	90	120	150	180
Min:Sec	5:36	3:44	2:48	2:14	1:52

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

APP CRS	Rwy ldg	3500
088°	TDZE	916
	Apt Elev	916

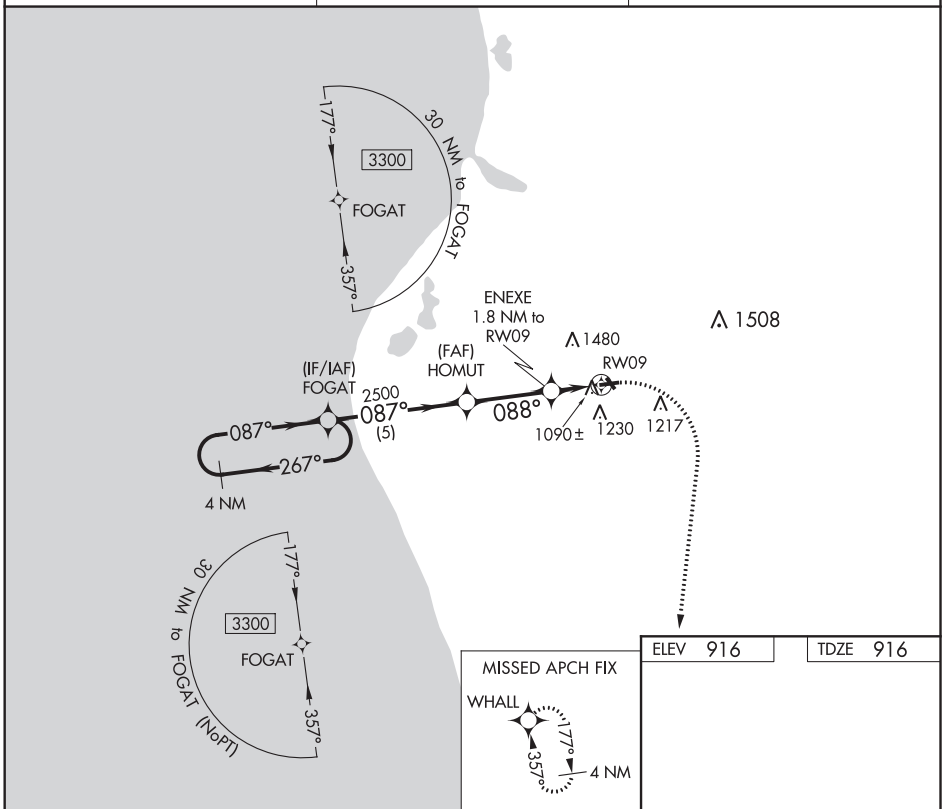
RNAV (GPS) RWY 9

OCEANA COUNTY (CØ4)

When local altimeter setting not received, use Fremont altimeter setting and increase all MDAs 80 feet. DME/DME RNP-0.3 NA. Procedure NA at night. Helicopter visibility reduction below 1 SM NA. Circling NA to Rwys 15 and 33.

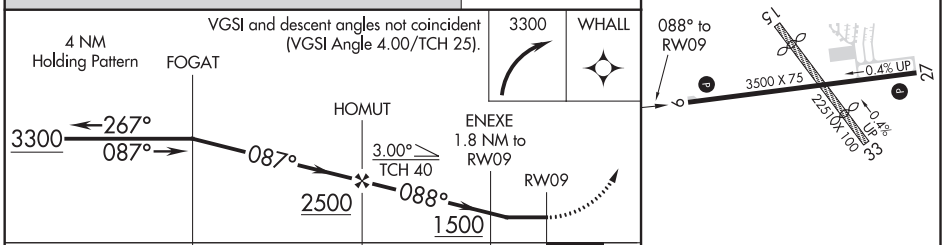
MISSED APPROACH: Climbing right turn to 3300 direct WHALL and hold.

AWOS-A	GREAT LAKES APP CON ★	UNICOM
122.7	119.8 290.35	122.7 (CTAF) L



ELEV	916	TDZE	916

VGSI and descent angles not coincident (VGSI Angle 4.00/TCH 25).



CATEGORY	A	B	C	D
LNAV MDA	1340-1	424 (500-1)	NA	
C CIRCLING	1540-1 624 (700-1)	1780-1¼ 864 (900-1¼)	NA	

MIRL Rwys 9-27 L

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

HART/SHELBY, MICHIGAN AL-10401 (FAA) 21056

WAAS CH 97637 W27A	APP CRS 268°	Rwy ldg 3500 TDZE 912 Apt Elev 916

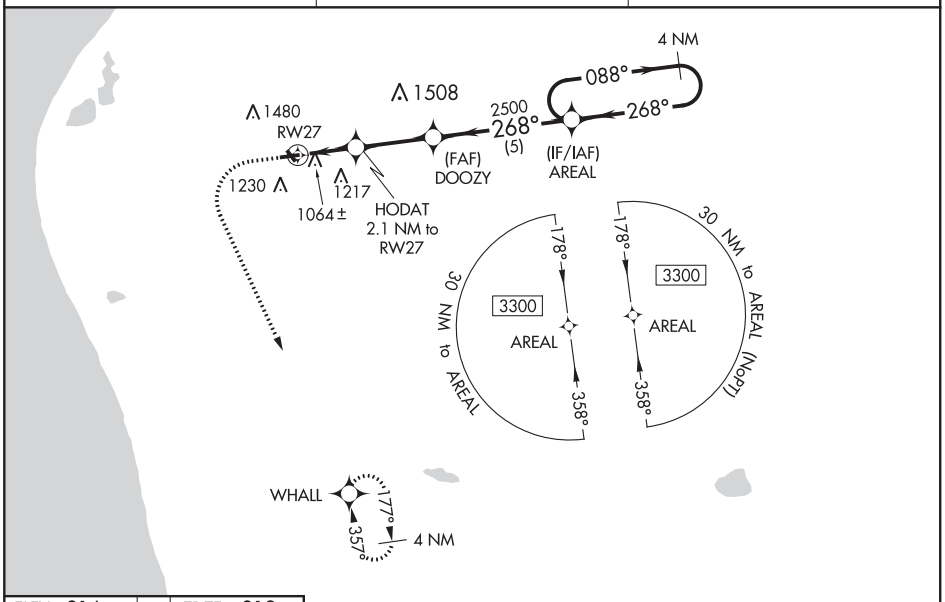
RNAV (GPS) RWY 27
OCEANA COUNTY (C04)

NA

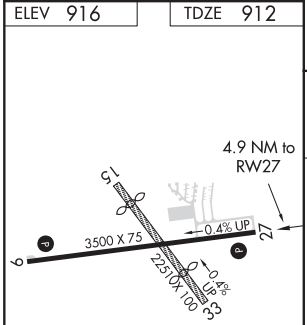
Baro-VNAV NA when using Fremont altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). When local altimeter setting not received, use Fremont altimeter setting and increase all DA 64 feet, all MDA 80 feet, and LPV and LNAV/VNAV visibility all Cats ¼ mile. DME/DME RNP-0.3 NA. Procedure NA at night.
Helicopter visibility reduction below 1 SM NA. Circling NA to Rwys 15 and 33.

MISSED APPROACH: Climb to 1500 then climbing left turn to 3300 direct WHALL and hold.

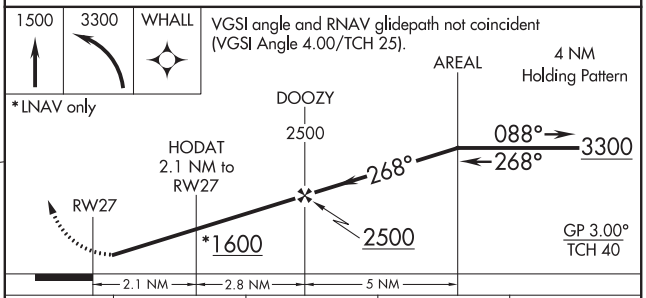
AWOS-A	GREAT LAKES APP CON*	UNICOM
122.7	119.8 290.35	122.7 (CTAF) L



ELEV 916 TDZE 912



MIRL Rwy 09-27 L



CATEGORY	A	B	C	D
LPV DA	1254-1⅛	342 (400-1⅛)	NA	
LNAV/VNAV DA	1236-1⅛	324 (400-1⅛)	NA	
LNAV MDA	1340-1	428 (500-1)	NA	
C CIRCLING	1540-1 624 (700-1)	1780-1¼ 864 (900-1¼)	NA	

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

RNAV (GPS) RWY 12
HASTINGS (9D9)

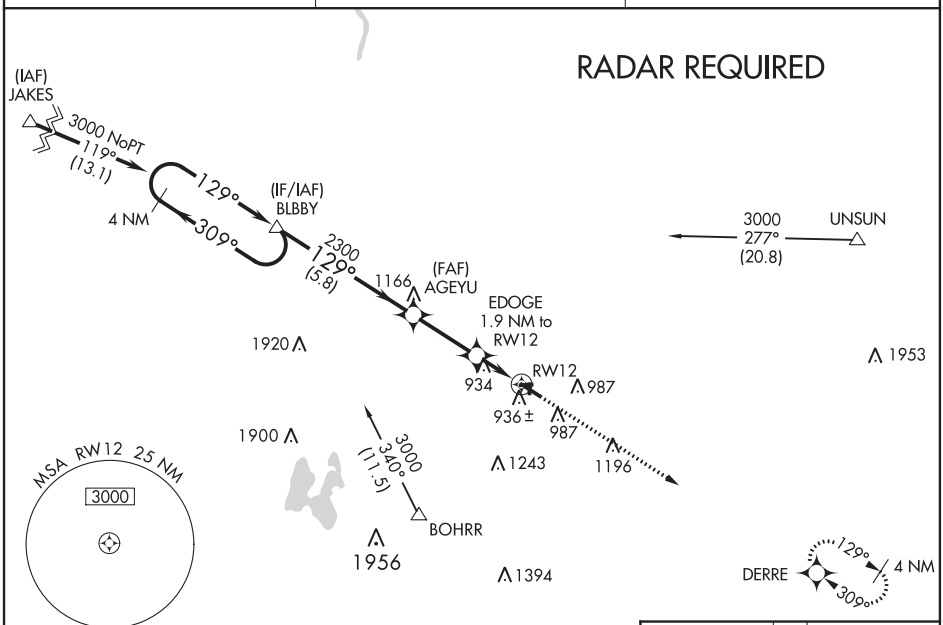
WAAS CH 53326 W12A	APP CRS 129°	Rwy ldg 4762 TDZE 800 Apt Elev 800

T
A NA

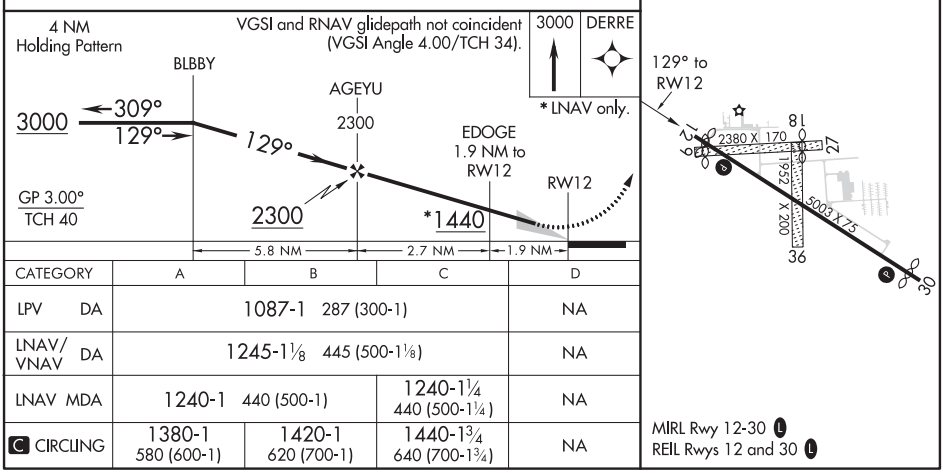
Circling NA to Rwys 9,18, 27 and 36. Baro-VNAV NA. DME/DME RNP-0.3 NA. Use Grand Rapids altimeter setting; when not received, use Ionia altimeter setting: increase LPV DA to 1102 feet; increase LNAV/VNAV DA to 1260 feet and all visibilities ⅛ SM; increase all MDA 20 feet, and LNAV visibility Cat C ⅛ SM.

MISSED APPROACH: Climb to 3000 direct DERRE and hold.

GRR ASOS	GREAT LAKES APP CON *	UNICOM
118.725	128.4 257.6	123.075 (CTAF) L



ELEV 800	TDZE 800



CATEGORY	A	B	C	D
LPV DA	1087-1 287 (300-1)			NA
LNAV/VNAV DA	1245-1⅛ 445 (500-1⅛)			NA
LNAV MDA	1240-1 440 (500-1)		1240-1¼ 440 (500-1¼)	NA
C CIRCLING	1380-1 580 (600-1)	1420-1 620 (700-1)	1440-1¾ 640 (700-1¾)	NA

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

HASTINGS, MICHIGAN AL-5778 (FAA) 20366

WAAS CH 86326 W30A	APP CRS 309°	Rwy ldg 4752 TDZE 800 Apt Elev 800

RNAV (GPS) RWY 30
HASTINGS (9D9)

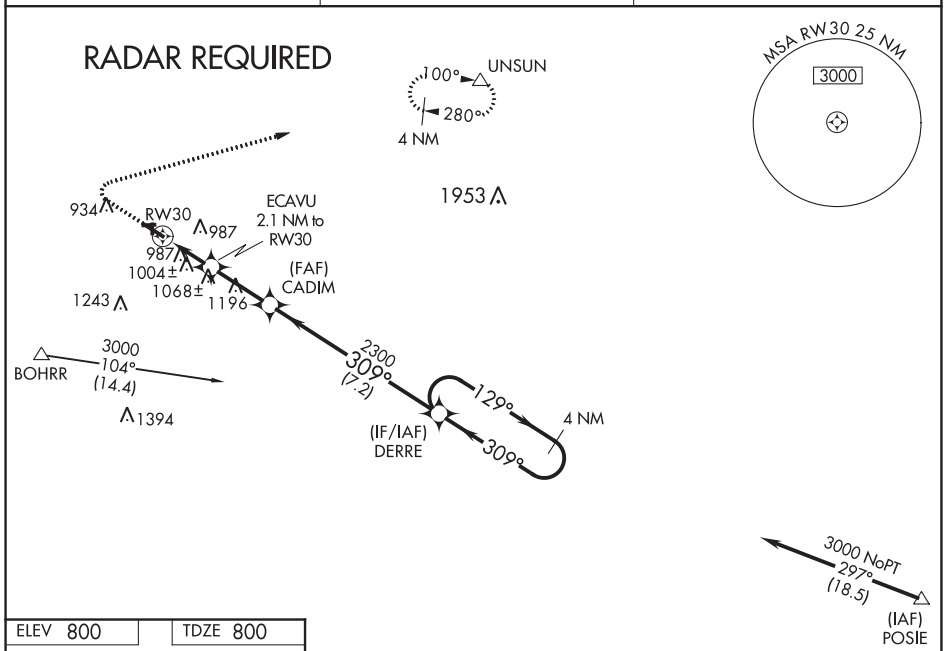
RNP APCH.

NA

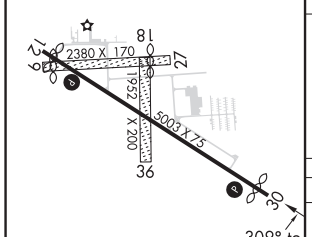
Circling NA to Rwys 9, 18, 27 and 36. Baro-VNAV NA. Use Grand Rapids altimeter setting; when not received, use Ionia altimeter setting: increase LPV DA to 1131 feet; increase LNAV/VNAV DA to 1377; increase all MDAs 20 feet.

MISSED APPROACH: Climb to 1400 then climbing right turn to 3000 direct UNSUN and hold.

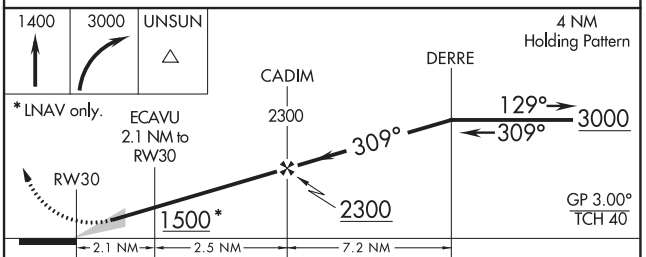
GRR ASOS	GREAT LAKES APP CON ★	UNICOM
118.725	128.4 257.6	123.075 (CTAF) L



ELEV 800 TDZE 800



MIRL Rwy 12-30 L
REIL Rwys 12 and 30 L



CATEGORY	A	B	C	D
LPV DA	1116-1 316 (400-1)			NA
LNAV/VNAV DA	1362-1⅝ 562 (600-1⅝)			NA
LNAV MDA	1300-1 500 (500-1)		1300-1⅜ 500 (500-1⅜)	NA
C CIRCLING	1380-1 580 (600-1)	1420-1 620 (700-1)	1440-1¾ 640 (700-1¾)	NA

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

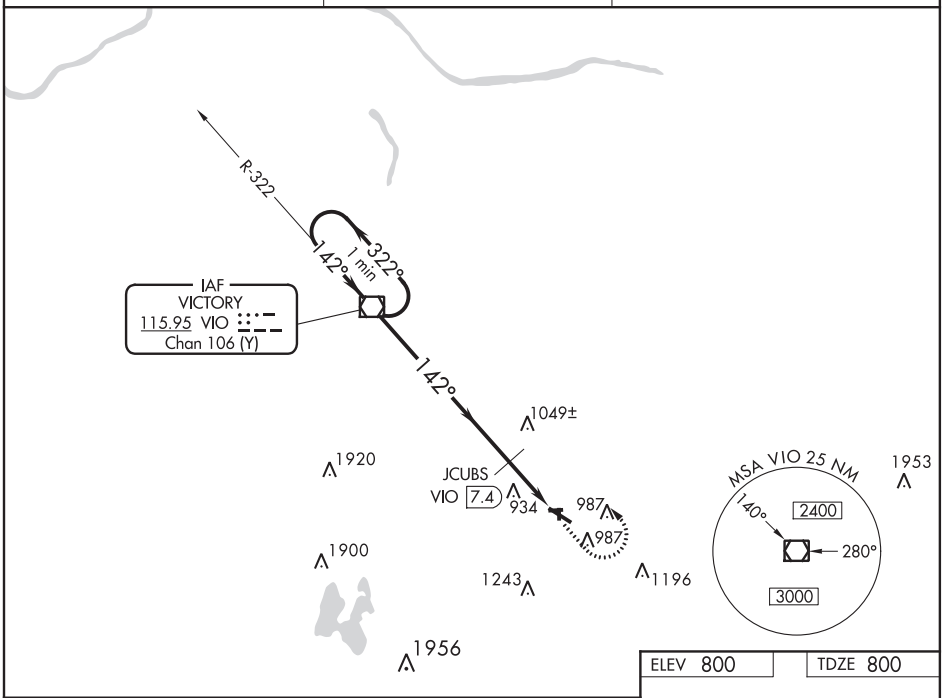
VOR RWY 12
HASTINGS (9D9)

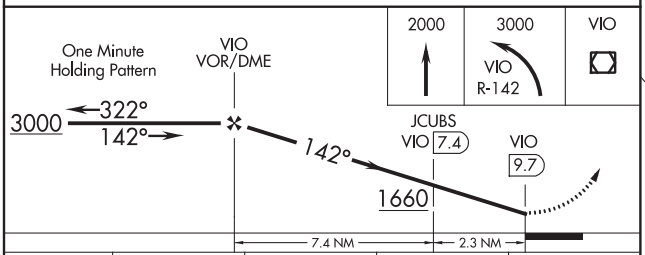
VOR/DME VIO	APP CRS	Rwy ldg	4763
115.95	142°	TDZE	800
Chan 106 (Y)		Apt Elev	800

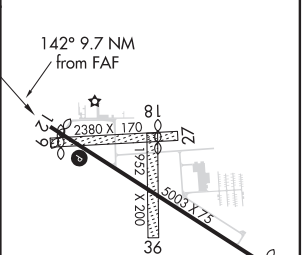
T A NA — Helicopter visibility reduction below ¾ SM NA. Use Grand Rapids altimeter setting; when not received, use Ionia altimeter setting and increase all MDA 20 feet. Increase JCUBS DME minimums S-12 Cat C visibility ⅛ mile. Circling NA to Rwy 9, 18, 27, 36.

MISSED APPROACH: Climb to 2000, then climbing left turn to 3000 on VIO VOR/DME R-142 to VIO VOR/DME and hold.

GRR ASOS	GREAT LAKES APP CON ★	UNICOM
118.725	128.4 257.6	123.075 (CTAF) L







CATEGORY	A	B	C	D
S-12	1660-1 860 (900-1)	1660-1¼ 860 (900-1¼)	1660-2½ 860 (900-2½)	NA
C CIRCLING	1660-1 860 (900-1)	1660-1¼ 860 (900-1¼)	1660-2½ 860 (900-2½)	NA
JCUBS DME MINIMUMS				
S-12	1340-1 540 (600-1)		1340-1½ 540 (600-1½)	NA
C CIRCLING	1380-1 580 (600-1)	1420-1 620 (700-1)	1440-1¾ 640 (700-1¾)	NA

MIRL Rwy 12-30 L
REIL Rwys 12 and 30 L

FAF to MAP 9.7 NM					
Knots	60	90	120	150	180
Min:Sec	9:42	6:28	4:51	3:53	3:14

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

HILLSDALE, MICHIGAN AL-5484 (FAA) 18144

RNAV (GPS) RWY 10

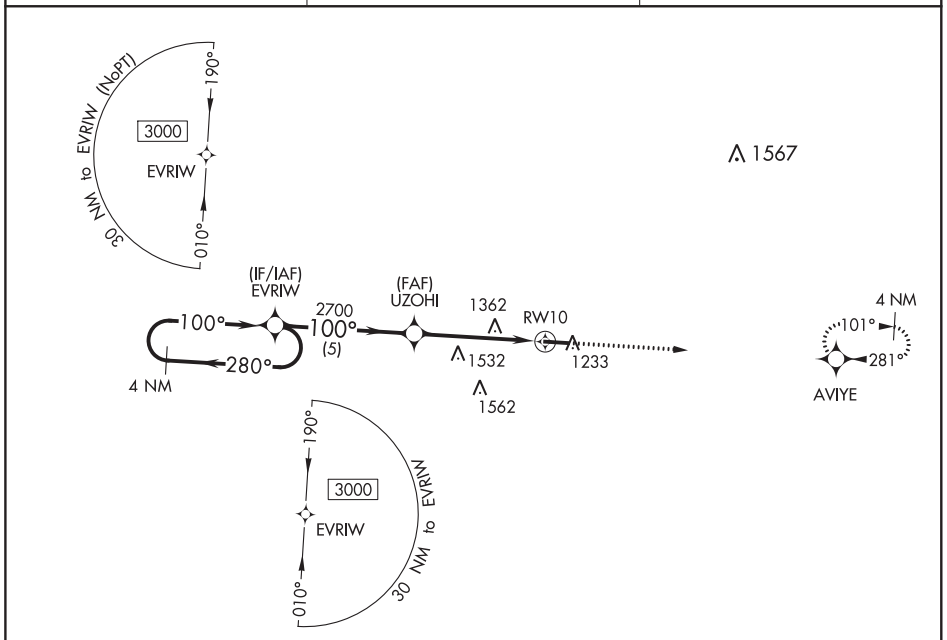
HILLSDALE MUNI (JYM)

WAAS CH 77534 W10A	APP CRS 100°	Rwy ldg 5000 TDZE 1172 Apt Elev 1184

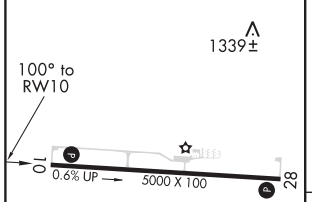
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3100 direct AVIYE and hold.

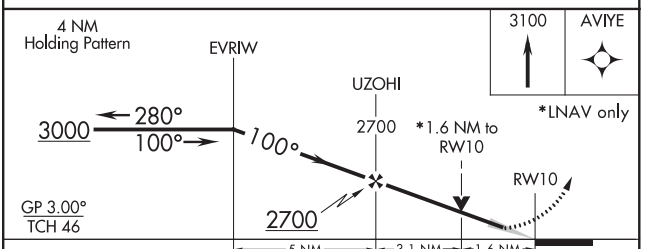
AWOS-3	TOLEDO APP CON	UNICOM
121.025	134.35 317.55	122.8 (CTAF) L



ELEV 1184 TDZE 1172



REIL Rwy 10 and 28 L
HIRL Rwy 10-28 L



CATEGORY	A	B	C	D
LPV DA	1441-1 269 (300-1)			NA
LNAV/VNAV DA	1601-1½ 429 (500-1½)			NA
LNAV MDA	1720-1 548 (600-1)		1720-1⅝ 548 (600-1⅝)	NA
C CIRCLING	1720-1 536 (600-1)		1720-1⅝ 536 (600-1⅝)	NA

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

RNAV (GPS) RWY 28
HILLSDALE MUNI (JYM)

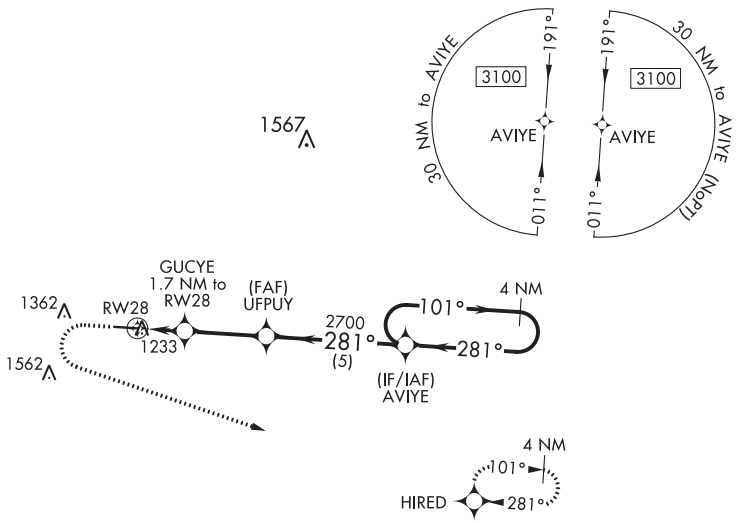
WAAS CH 50134 W28A	APP CRS 281°	Rwy ldg 5000 TDZE 1184 Apt Elev 1184

RNP APCH.

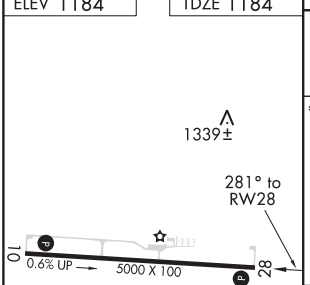
Rwy 28 helicopter visibility reduction below ¾ SM NA.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C or above 54°C.

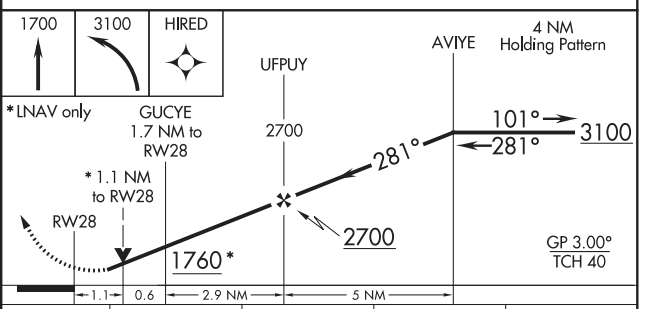
MISSED APPROACH: Climb to 1700 then climbing left turn to 3100 direct HIRED and hold.

AWOS-3	TOLEDO APP CON	UNICOM
121.025	134.35 317.55	122.8 (CTAF) L



ELEV 1184 TDZE 1184





CATEGORY	A	B	C	D
LPV DA	1474-1 290 (300-1)			NA
LNAV/VNAV DA	1489-1 305 (400-1)			NA
LNAV MDA	1580-1 396 (400-1)		1580-1⅛ 396 (400-1⅛)	NA
C CIRCLING	1640-1 456 (500-1)	1680-1 496 (500-1)	1680-1½ 496 (500-1½)	NA

REIL Rwy 10 and 28 L
HIRL Rwy 10-28 L

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

HOLLAND, MICHIGAN — AL-5652 (FAA) — 20254

ILS or LOC RWY 26
WEST MICHIGAN RGNL (BIV)

LOC/DME I-BIV	APP CRS	Rwy ldg	6002
110.55	264°	TDZE	686
Chan 42 (Y)		Apt Elev	698

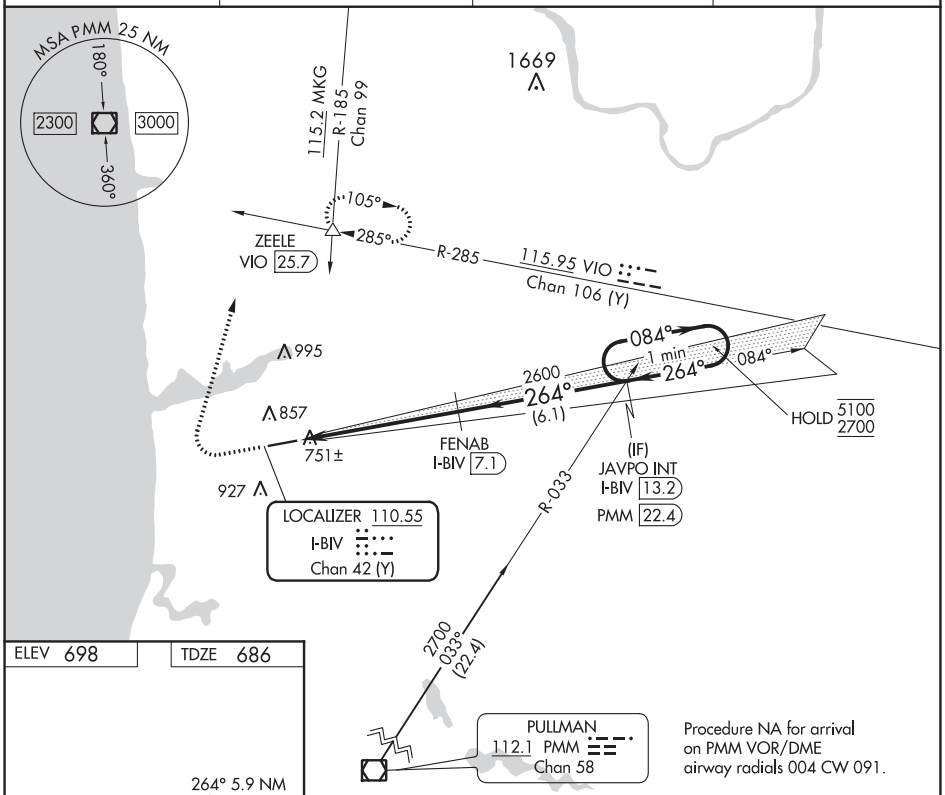
DME required.

NA

MALSR

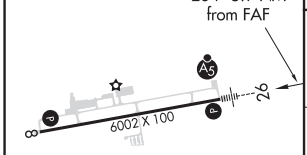
MISSED APPROACH: Climb to 1500 then climbing right turn to 2600 on heading 020° and VIO VOR/DME R-285 to ZEELE/VIO 25.7 DME and hold.

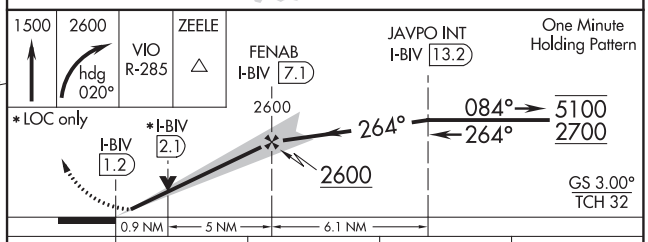
ASOS	GREAT LAKES APP CON★		CLNC DEL	UNICOM
119.025	133.825	290.35	123.95	123.05 (CTAF)



Procedure NA for arrival on PMM VOR/DME airway radials 004 CW 091.

ELEV 698 | TDZE 686





CATEGORY	A	B	C	D
S-ILS 26	886-½ 200 (200-½)			NA
S-LOC 26	1020-½ 334 (400-½)			NA
C CIRCLING	1200-1 502 (600-1)	1240-1 542 (600-1)	1240-1½ 542 (600-1½)	NA

REIL Rwy 8
HIRL Rwy 8-26

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 49222 W08A	APP CRS 084°	Rwy ldg 6002 TDZE 698 Apt Elev 698

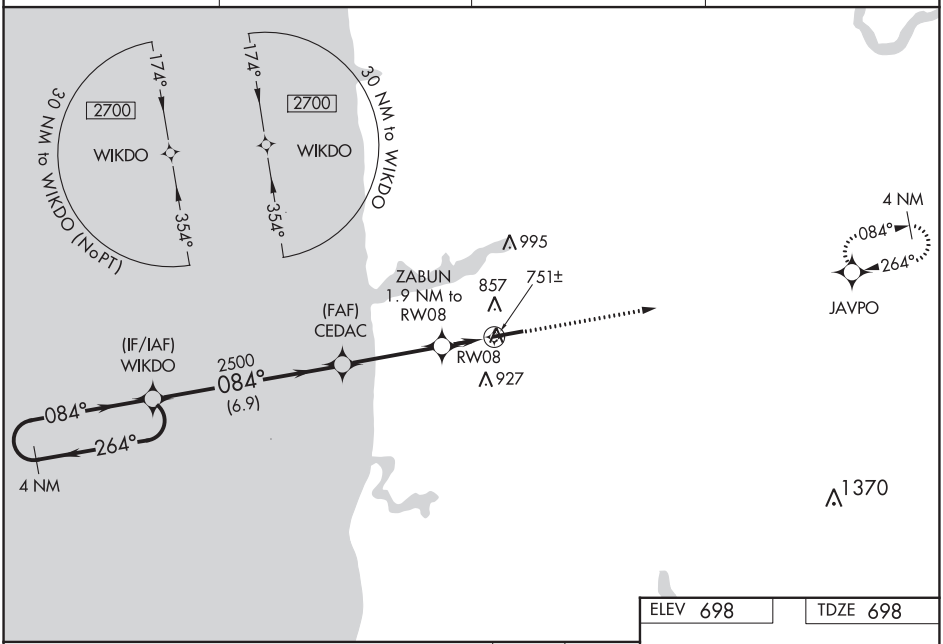
RNAV (GPS) RWY 8

WEST MICHIGAN RGNL (BIV)

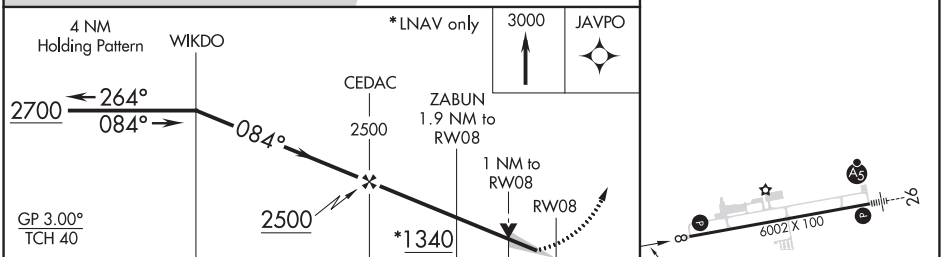
Baro-VNAV NA when using Muskegon County altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). When local altimeter setting not received, use Muskegon County altimeter setting and increase LPV DA to 1018, increase LPV all Cats visibility ¼ mile; increase LNAV/VNAV DA to 1050, increase LNAV/VNAV all Cats visibility ⅜ mile; increase all MDA 80 feet, increase LNAV Cat C/D visibility ⅜ mile. DME/DME RNP-0.3 NA. VDP NA when using Muskegon County altimeter setting.

MISSED APPROACH: Climb to 3000 direct JAVPO and hold.

ASOS	GREAT LAKES APP CON*	CLNC DEL	UNICOM
119.025	133.825 290.35	123.95	123.05 (CTAF) L



ELEV 698	TDZE 698



CATEGORY	A	B	C	D
LPV DA	948- ⅞ 250 (300-⅞)			
LNAV/VNAV DA	980- ⅞ 282 (300-⅞)			
LNAV MDA	1060-1 362 (400-1)			
CIRCLING	1200-1 502 (600-1)		1200-1½ 502 (600-1½)	1260-2 562 (600-2)

REIL Rwy 8 L
HIRL Rwy 8-26 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

HOLLAND, MICHIGAN AL-5652 (FAA) 20086

RNAV (GPS) RWY 26
WEST MICHIGAN RGNL (BIV)

WAAS CH 53402 W26A	APP CRS 264°	Rwy ldg 6002 TDZE 686 Apt Elev 698

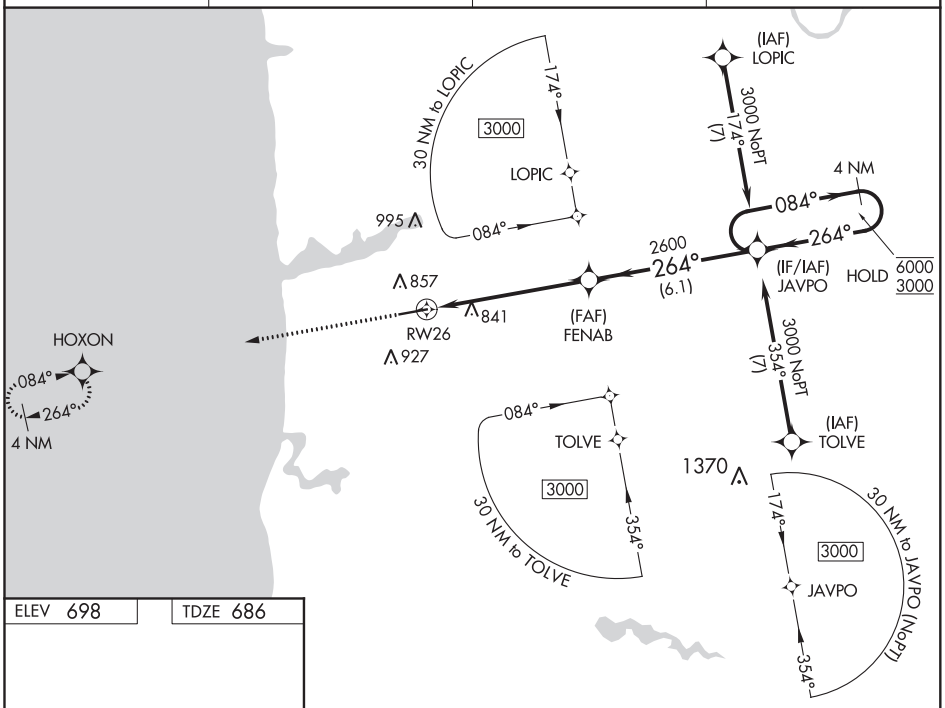
RNP APCH.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C.
For inoperative ALS, increase LNAV/VNAV all Cats visibility to 1 SM; increase LNAV Cat C visibility to 1⅛ SM.

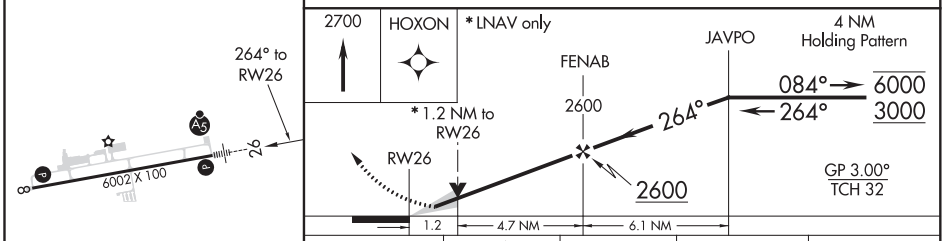
MALSR

MISSED APPROACH: Climb to 2700 direct HOXON and hold.

ASOS	GREAT LAKES APP CON★	CLNC DEL	UNICOM
119.025	133.825 290.35	123.95	123.05 (CTAF) L



ELEV 698 TDZE 686



CATEGORY	A	B	C	D
LPV DA	886-½ 200 (200-½)			NA
LNAV/VNAV DA	1040-⅝ 354 (400-⅝)			NA
LNAV MDA	1100-½ 414 (500-½)		1100-¾ 414 (500-¾)	NA
C CIRCLING	1200-1 502 (600-1)	1240-1 542 (600-1)	1240-1½ 542 (600-1½)	NA

REIL Rwy 8 L
HIRL Rwy 8-26 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

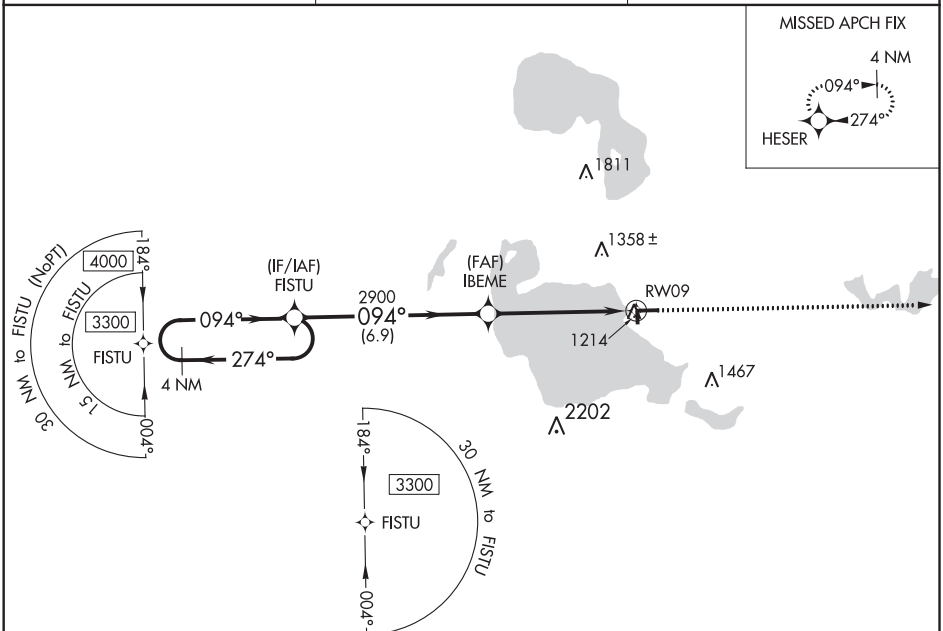
WAAS CH 56434 W09A	APP CRS 094°	Rwy ldg 4000 TDZE 1148 Apt Elev 1150

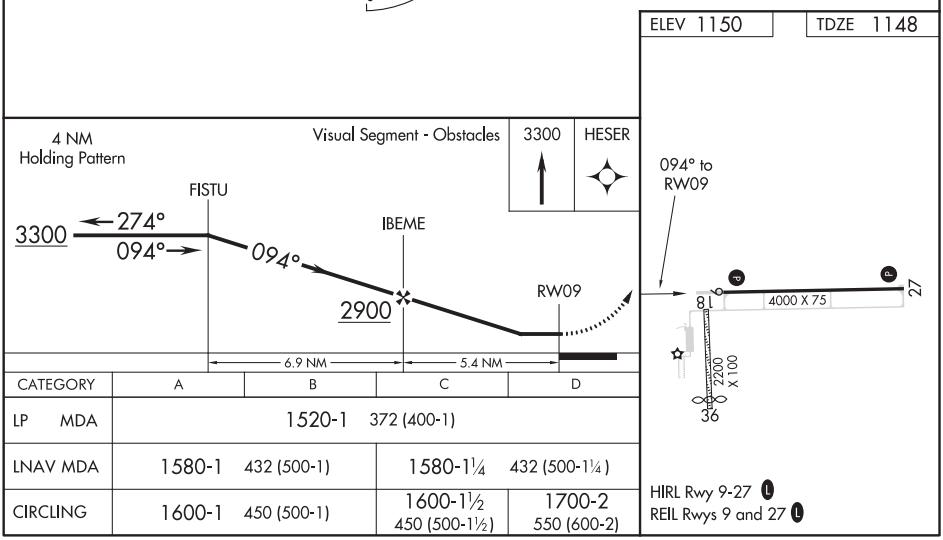
RNAV (GPS) RWY 9
ROSCOMMON COUNTY-BLODGETT MEMORIAL (HTL)

When local altimeter setting not received, use Gaylord altimeter setting and increase all MDA 120 feet and LP and LNAV Cat C/D visibility ⅜ mile. DME/DME RNP-0.3 NA. Procedure NA at night. Helicopter visibility reduction below 1 SM NA. Circling NA to Rwy 18 and 36.

MISSED APPROACH: Climb to 3300 direct HESER and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
118.05	125.475 269.45	122.8 (CTAF) L





CATEGORY	A	B	C	D
LP MDA	1520-1 372 (400-1)			
LNAV MDA	1580-1 432 (500-1)		1580-1¼ 432 (500-1¼)	
CIRCLING	1600-1 450 (500-1)		1600-1½ 450 (500-1½)	1700-2 550 (600-2)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

HOUGHTON LAKE, MICHIGAN

AL-5517 (FAA)

20198

RNAV (GPS) RWY 27

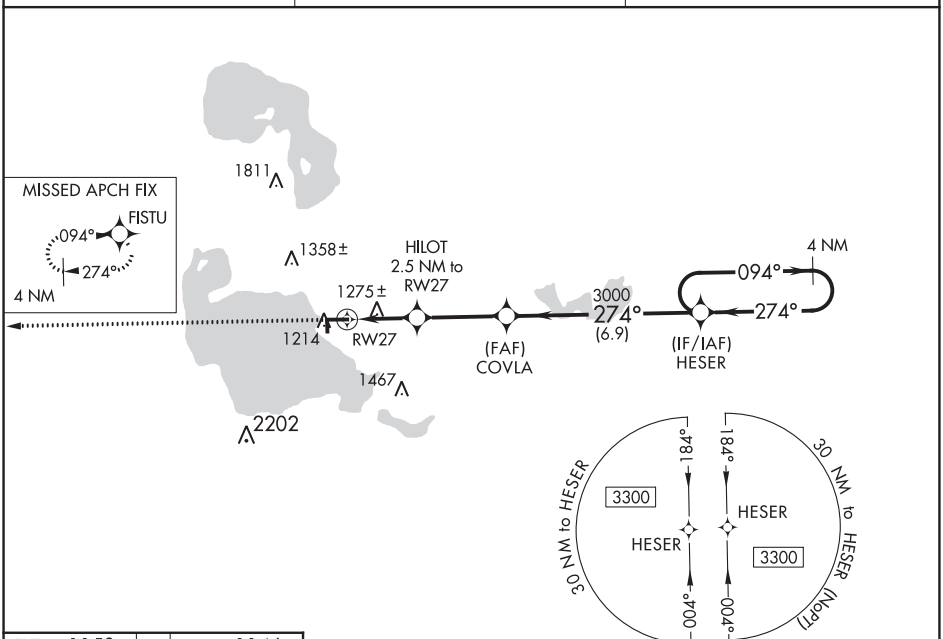
ROSCOMMON COUNTY-BLODGETT MEMORIAL (HTL)

WAAS CH 70534 W27A	APP CRS 274°	Rwy ldg 4000 TDZE 1146 Apt Elev 1150

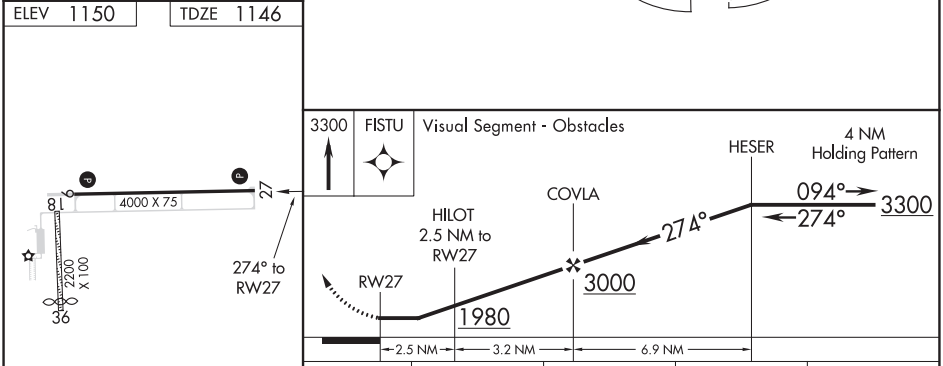
When local altimeter setting not received, use Gaylord altimeter setting and increase all MDA 120 feet, and increase LP and LNAV Cat C/D visibility ⅜ mile. DME/DME RNP-0.3 NA. Procedure NA at night. Helicopter visibility reduction below 1 SM NA. Circling NA to Rwys 18, 36.

MISSED APPROACH: Climb to 3300 direct FISTU and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
118.05	125.475 269.45	122.8 (CTAF) L



ELEV 1150 | TDZE 1146



CATEGORY	A	B	C	D
LP MDA	1540-1	394 (400-1)	1540-1¼	394 (400-1¼)
LNAV MDA	1560-1	414 (500-1)	1560-1¼	414 (500-1¼)
CIRCLING	1600-1	450 (500-1)	1600-1½ 450 (500-1½)	1700-2 550 (600-2)

HIRL Rwy 9-27 L
REIL Rwys 9 and 27 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

LOC/DME I-OGO 108.55 Chan 22 (Y)	APP CRS 132°	Rwy ldg 5002 TDZE 962 Apt Elev 962

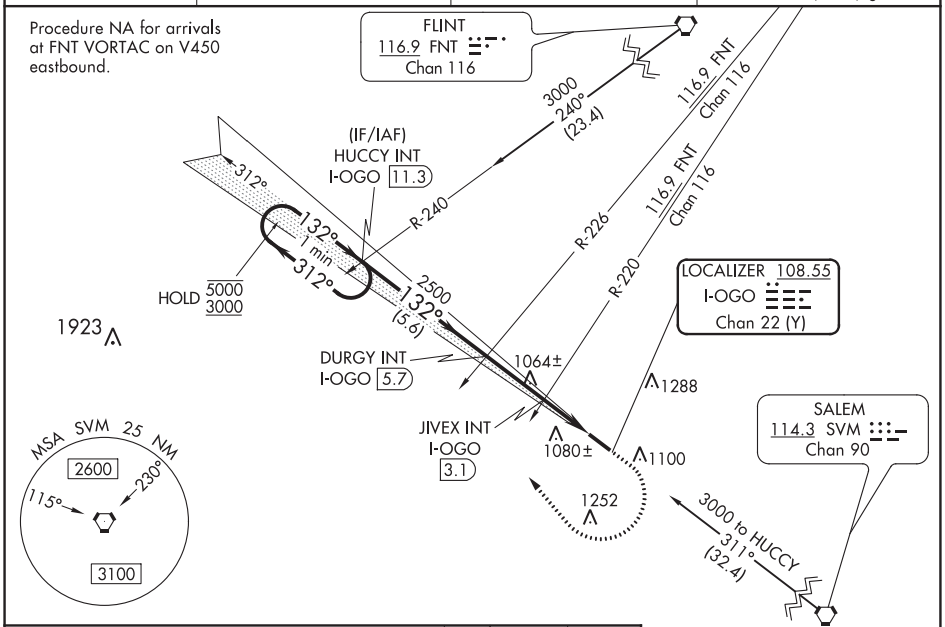
ILS or LOC RWY 13
LIVINGSTON COUNTY SPENCER J HARDY (OZW)

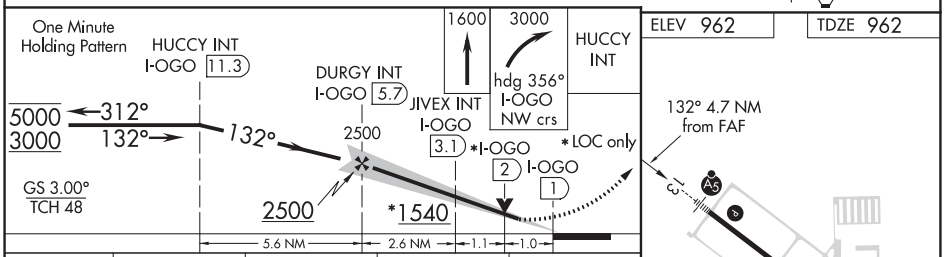
For inop ALS, increase LOC Cat C and D visibility to 1⅝ SM, and JIVEX fix minimums S-13 Cat C and D visibility to 1 SM.

MALSR

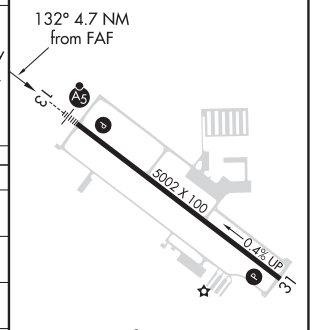
MISSED APPROACH: Climb to 1600 then climbing right turn to 3000 heading 356° and I-OGO NW course to HUCCY INT/ I-OGO 11.3 DME and hold.

AWOS-3	DETROIT APP CON	CLNC DEL	UNICOM
118.875	132.35 284.0	121.725 (GCO)	123.0 (CTAF)





ELEV 962 TDZE 962



HIRL Rwy 13-31
REIL Rwy 31

CATEGORY	A	B	C	D
S-ILS 13	1162-½ 200 (200-½)			
S-LOC 13	1540-½ 578 (600-½)		1540-1¼ 578 (600-1¼)	
CIRCLING	1540-1 578 (600-1)		1540-1⅝ 578 (600-1⅝)	1540-2 578 (600-2)
JIVEX FIX MINIMUMS (DUAL VOR RECEIVERS OR DME REQUIRED)				
S-LOC 13	1320-½ 358 (400-½)		1320-⅝ 358 (400-⅝)	
CIRCLING	1400-1 438 (500-1)	1420-1 458 (500-1)	1420-1½ 458 (500-1½)	1520-2 558 (600-2)

FAF to MAP 4.7 NM

Knots	60	90	120	150	180
Min:Sec	4:42	3:08	2:21	1:53	1:34

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

HOWELL, MICHIGAN | AL-5485 (FAA) | 19339

WAAS CH 69601 W13A	APP CRS 132°	Rwy ldg 5002 TDZE 962 Apt Elev 962

RNAV (GPS) RWY 13
LIVINGSTON COUNTY SPENCER J HARDY (OZW)

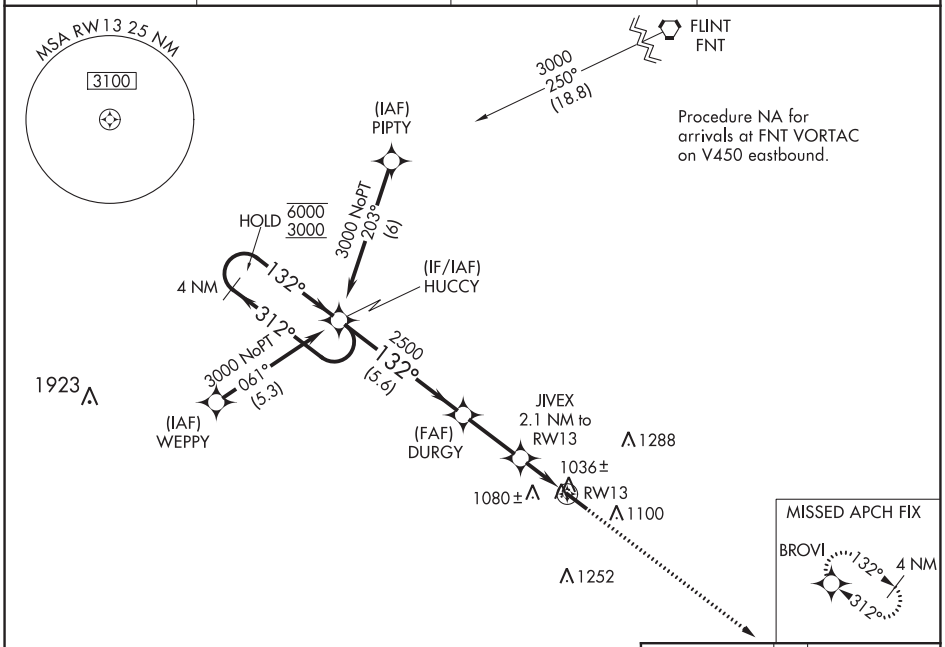
RNP APCH.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 37°C. For inop ALS, increase LNAV/VNAV all Cats visibility to ¾ SM.

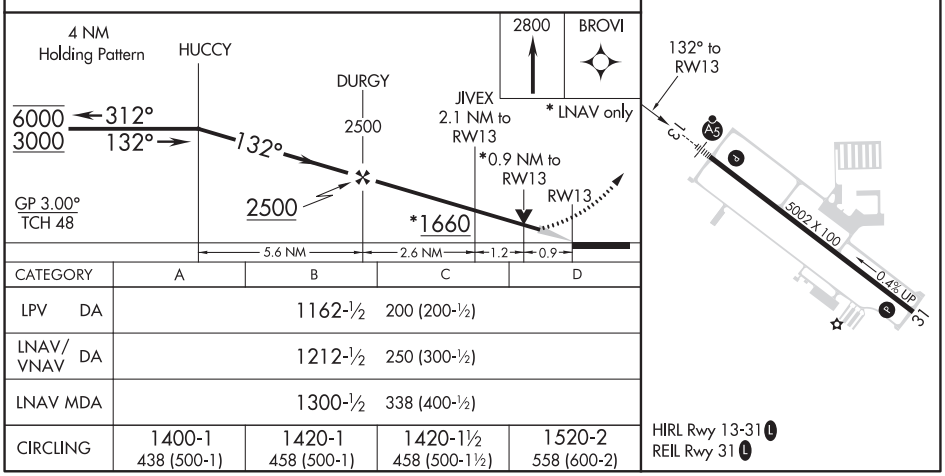
MALSR

MISSED APPROACH: Climb to 2800 direct BROVI and hold.

AWOS-3	DETROIT APP CON	CLNC DEL	UNICOM
118.875	132.35 284.0	121.725 (GCO)	123.0 (CTAF) L



ELEV 962 | TDZE 962



CATEGORY	A	B	C	D
LPV DA	1162-½ 200 (200-½)			
LNAV/VNAV DA	1212-½ 250 (300-½)			
LNAV MDA	1300-½ 338 (400-½)			
CIRCLING	1400-1 438 (500-1)	1420-1 458 (500-1)	1420-1½ 458 (500-1½)	1520-2 558 (600-2)

HOWELL, MICHIGAN
Amdt 2B 05DEC19

42°38′N-83°59′W

LIVINGSTON COUNTY SPENCER J HARDY (OZW)
RNAV (GPS) RWY 13

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

RNAV (GPS) RWY 31
LIVINGSTON COUNTY SPENCER J HARDY (OZW)

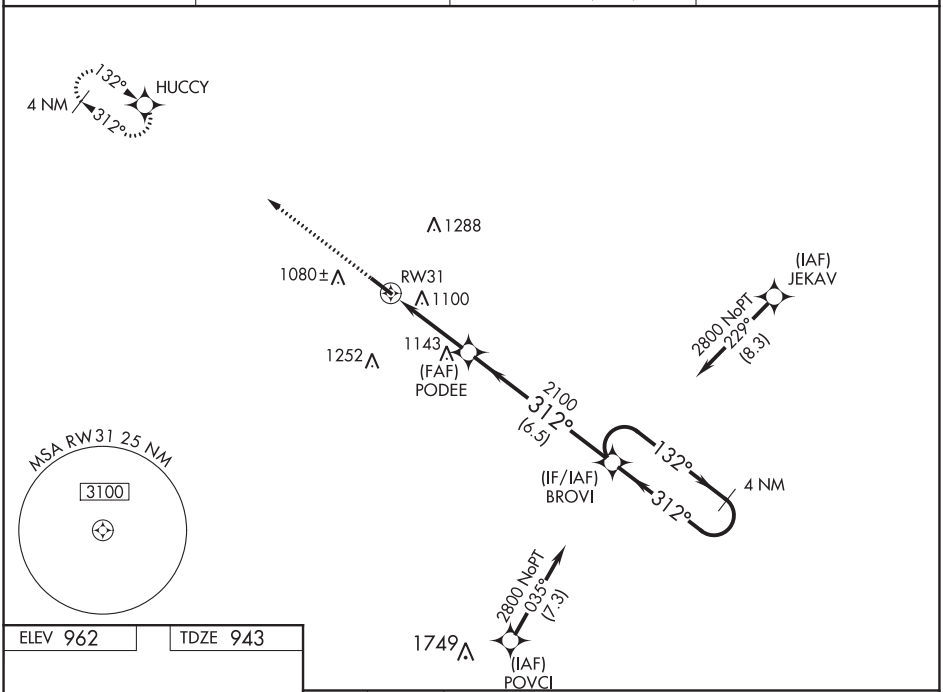
WAAS CH 99722 W31A	APP CRS 312°	Rwy ldg 5002 TDZE 943 Apt Elev 962

RNP APCH.

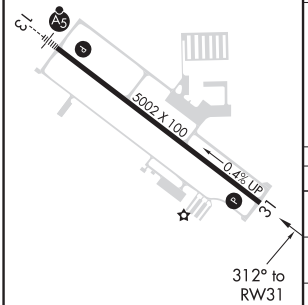
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C.

MISSED APPROACH: Climb to 3000 direct HUCCY and hold.

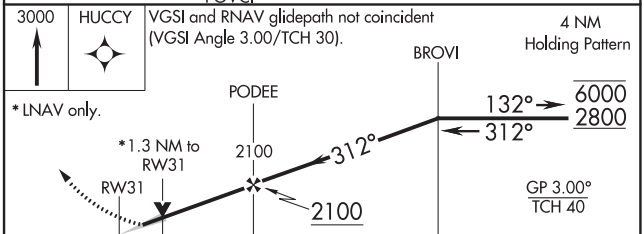
AWOS-3	DETROIT APP CON	CLNC DEL	UNICOM
118.875	132.35 284.0	121.725 (GCO)	123.0 (CTAF) L



ELEV 962 | TDZE 943



HIRL Rwy 13-31 L
REIL Rwy 31 L



CATEGORY	A	B	C	D
LPV DA	1143-¾ 200 (200-¾)			
LNAV/VNAV DA	1410-1⅝ 467 (500-1⅝)			
LNAV MDA	1400-1 457 (500-1)		1400-1⅜ 457 (500-1⅜)	
CIRCLING	1400-1 438 (500-1)	1420-1 458 (500-1)	1420-1½ 458 (500-1½)	1520-2 558 (600-2)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

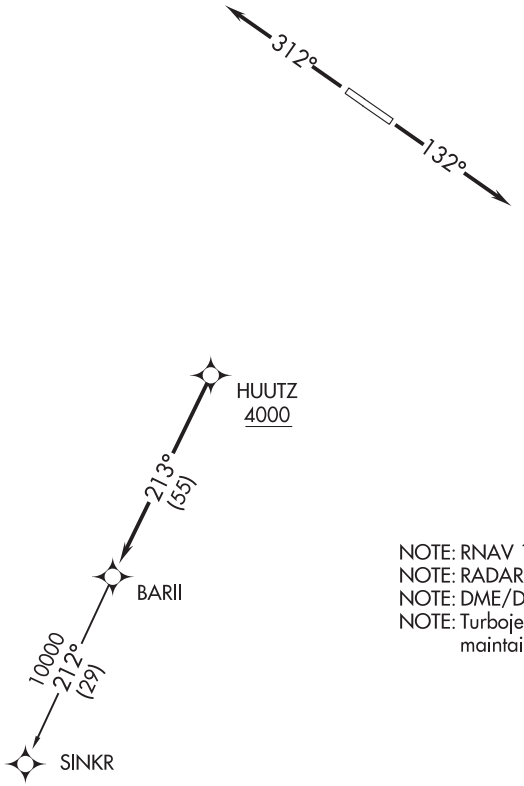
(BARII2.BARII) 19227

BARII TWO DEPARTURE (RNAV)

LIVINGSTON COUNTY SPENCER J HARDY (OZW)
AL-5485 (FAA)
HOWELL, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

AWOS-3
118.875
CLNC DEL
121.725
CTAF
123.0
DETROIT DEP CON
132.35 284.0



TAKEOFF MINIMUMS:
Standard.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 13: Climb on heading 132° or as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....
TAKEOFF RUNWAY 31: Climb on heading 312° or as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....

....on track 213° to BARII, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

SINKR TRANSITION (BARII2.SINKR):

EC-1, 25 FEB 2021 to 22 APR 2021

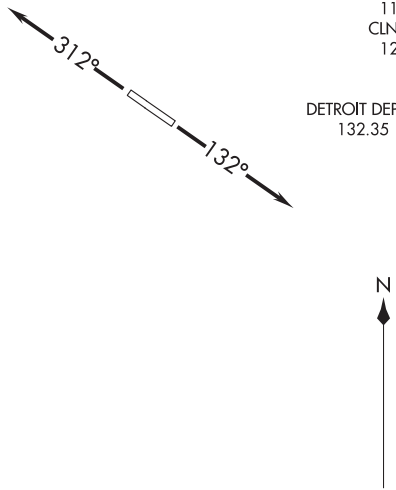
BARII TWO DEPARTURE (RNAV)
(BARII2.BARII) 15AUG19
HOWELL, MICHIGAN
LIVINGSTON COUNTY SPENCER J HARDY (OZW)

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: For use by aircraft filed at or below FL220, or as assigned by ATC.
NOTE: CAUTION: Parachute jumping 6 NM SW of BROZZ, 3 NM radius of Napoleon Airport (3NP) at or below 17999 (SR-SS).

TAKEOFF MINIMUMS:
Standard.

AWOS-3
118.875
CLNC DEL
121.725
CTAF
123.0
DETROIT DEP CON
132.35 284.0



NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 13: Climb on heading 132° or as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 31: Climb on heading 312° or as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....

....on track 279° to CCOBB, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ZEGBI TRANSITION (CCOBB2.ZEGBI):

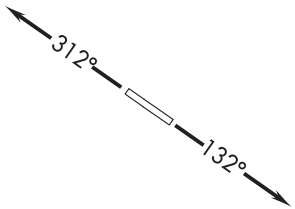
(CLVIN2.CLVIN) 19227

CLVIN TWO DEPARTURE (RNAV)

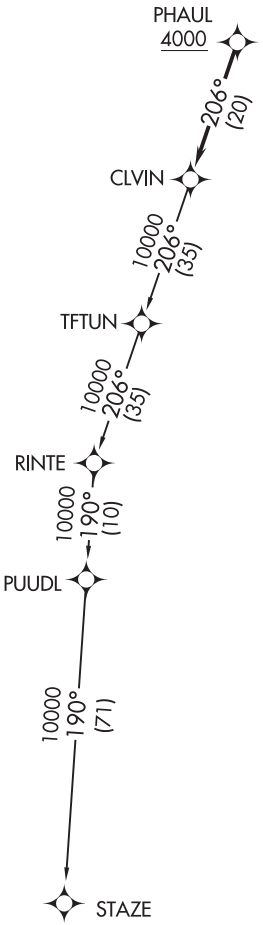
LIVINGSTON COUNTY SPENCER J HARDY (OZW)
AL-5485 (FAA)
HOWELL, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

AWOS-3
118.875
CLNC DEL
121.725
CTAF
123.0
DETROIT DEP CON
132.35 284.0



TAKEOFF MINIMUMS:
Standard.



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 13: Climb on heading 132° or as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 31: Climb on heading 312° or as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....

....on track 206° to CLVIN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

STAZE TRANSITION (CLVIN2.STAZE):

EC-1, 25 FEB 2021 to 22 APR 2021

CLVIN TWO DEPARTURE (RNAV)
(CLVIN2.CLVIN) 15AUG19
HOWELL, MICHIGAN
LIVINGSTON COUNTY SPENCER J HARDY (OZW)

HHOWE THREE DEPARTURE (RNAV)

(HHOWE3.HHOWE) 05DEC19

LIVINGSTON COUNTY SPENCER J HARDY (OZW)

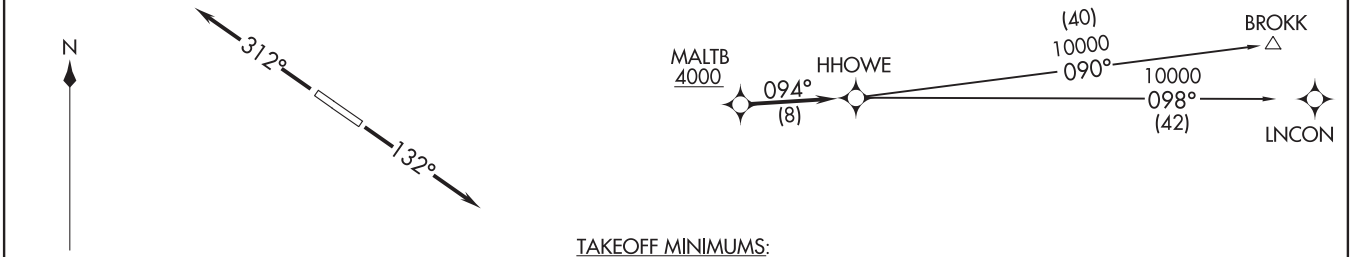
HOWELL, MICHIGAN

297

AWOS-3
118.875
CLNC DEL
121.725
CTAF
123.0
DETROIT DEP CON
132.35 284.0

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: BROKK TRANSITION: For use by flights filed at or below FL270, or as assigned by ATC.

TOP ALTITUDE: ASSIGNED BY ATC



TAKEOFF MINIMUMS:
Standard.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 13: Climb on heading 132° or as assigned for RADAR vectors to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 31: Climb on heading 312° or as assigned for RADAR vectors to cross MALTB at or above 4000, thence....

....on track 094° to HHOWE, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

BROKK TRANSITION (HHOWE3.BROKK)
LNCON TRANSITION (HHOWE3.LNCON)

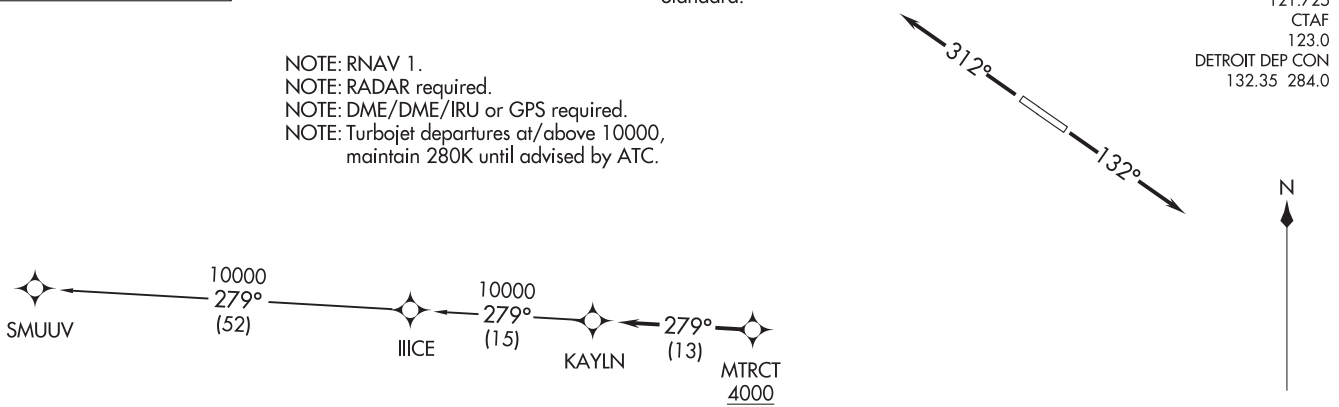
(HHOWE3.HHOWE) 19339
HHOWE THREE DEPARTURE (RNAV)
AL-5485 (FAA)
LIVINGSTON COUNTY SPENCER J HARDY (OZW)
HOWELL, MICHIGAN

TOP ALTITUDE: ASSIGNED AT ATC

TAKEOFF MINIMUMS:
Standard.

AWOS-3
118.875
CLNC DEL
121.725
CTAF
123.0
DETROIT DEP CON
132.35 284.0

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.



NOTE: Chart not to scale.

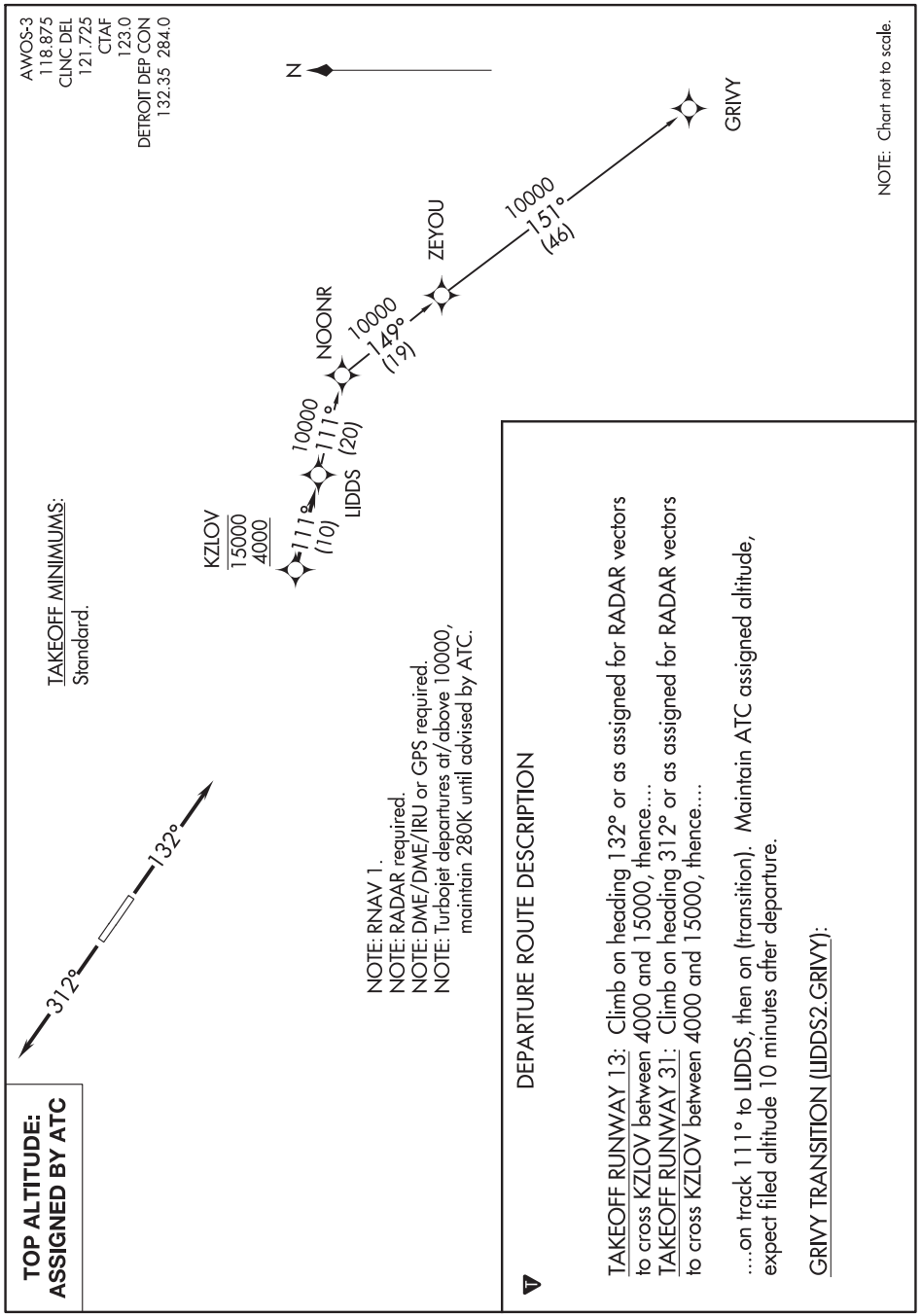
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 13: Climb on heading 132° or as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....
TAKEOFF RUNWAY 31: Climb on heading 312° or as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....

....on track 279° to KAYLN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

SMUUV TRANSITION (KAYLN2.SMUUV):

LIDDS TWO DEPARTURE (RNAV)



LIDDS TWO DEPARTURE (RNAV)
HOWELL, MICHIGAN
LIVINGSTON COUNTY SPENCER J HARDY (OZW)

MIGGY TWO DEPARTURE (RNAV)

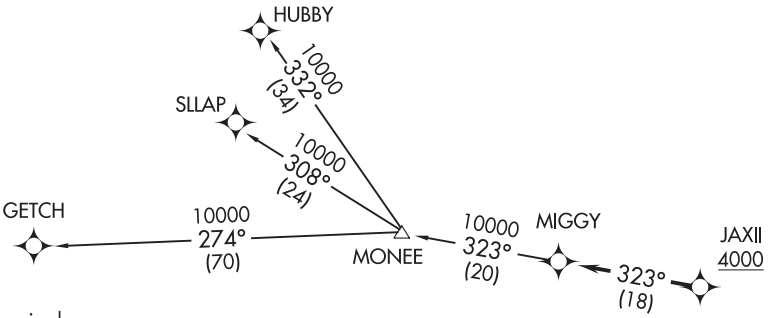
(MIGGY2.MIGGY) 15AUG19

LIVINGSTON COUNTY SPENCER J HARDY (OZW)

HOWELL, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

AWOS-3
118.875
CLNC DEL
121.725
CTAF
123.0
DETROIT DEP CON
132.35 284.0



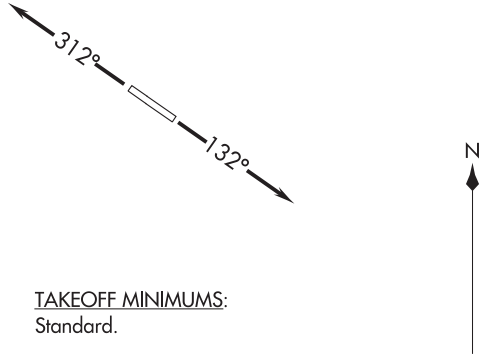
NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: GETCH TRANSITION: For use by KMKE area arrivals only, or as assigned by ATC.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 13: Climb on heading 132° or as assigned for RADAR vectors to cross JAXII at or above 4000, thence....
TAKEOFF RUNWAY 31: Climb on heading 312° or as assigned for RADAR vectors to cross JAXII at or above 4000, thence....

....on track 323° to MIGGY, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GETCH TRANSITION (MIGGY2.GETCH):
HUBBY TRANSITION (MIGGY2.HUBBY):
SLLAP TRANSITION (MIGGY2.SLLAP):



TAKEOFF MINIMUMS:
Standard.

NOTE: Chart not to scale.

(MIGGY2.MIGGY) 19227
MIGGY TWO DEPARTURE (RNAV)
LIVINGSTON COUNTY SPENCER J HARDY (OZW)
AL-5485 (FAA)
HOWELL, MICHIGAN

PAVYL TWO DEPARTURE (RNAV)

(PAVYL2.PAVYL) 15AUG19

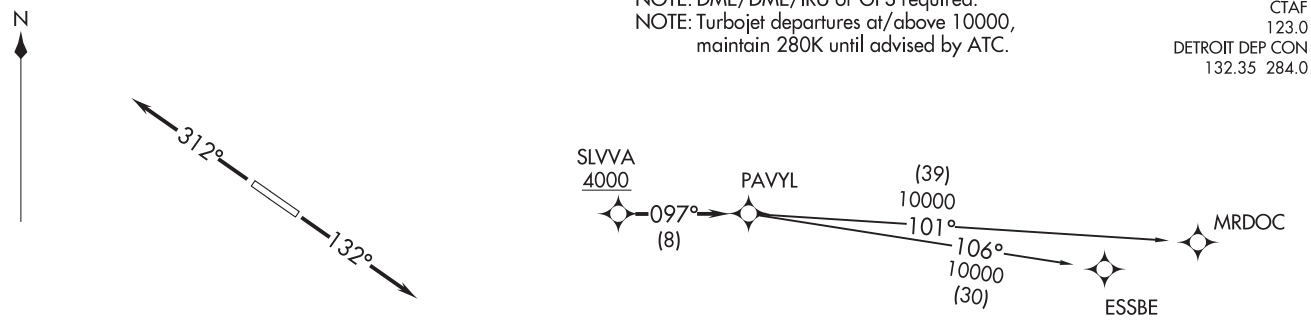
LIVINGSTON COUNTY SPENCER J HARDY (OZW)

HOWELL, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

AWOS-3
118.875
CLNC DEL
121.725
CTAF
123.0
DETROIT DEP CON
132.35 284.0



TAKEOFF MINIMUMS:
Standard.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 13: Climb on heading 132° or as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 31: Climb on heading 312° or as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....

....on track 097° to PAVYL, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ESSBE TRANSITION (PAVYL2.ESSBE):
MRDOC TRANSITION (PAVYL2.MRDOC):

(PAVYL2.PAVYL) 19227
PAVYL TWO DEPARTURE (RNAV)
LIVINGSTON COUNTY SPENCER J HARDY (OZW)
HOWELL, MICHIGAN

AL-5485 (FAA)

SNDRS TWO DEPARTURE (RNAV)

(SNDRS2.SNDRS) 15AUG19

LIVINGSTON COUNTY SPENCER J HARDY (OZW)

HOWELL, MICHIGAN

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 13: Climb on heading 132° or as assigned for RADAR vectors to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAY 31: Climb on heading 312° or as assigned for RADAR vectors to cross JWELS at or above 4000, thence....

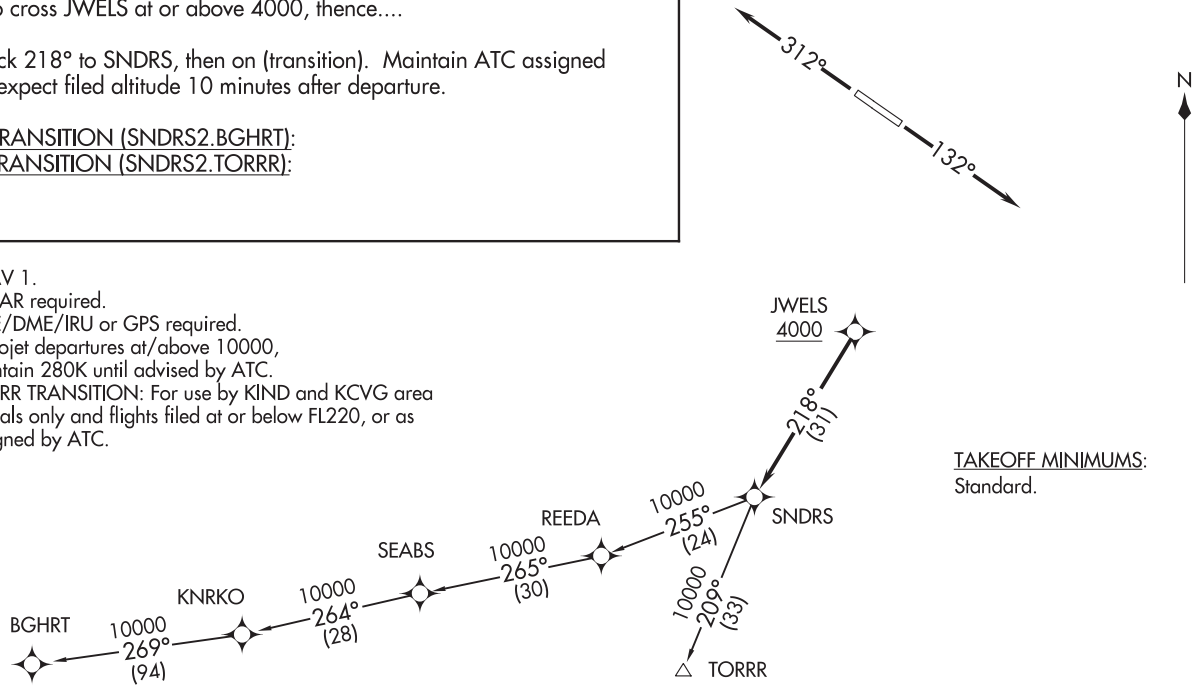
....on track 218° to SNDRS, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

BGHRT TRANSITION (SNDRS2.BGHRT):
TORRR TRANSITION (SNDRS2.TORRR):

TOP ALTITUDE: ASSIGNED BY ATC

AWOS-3
118.875
CLNC DEL
121.725
CTAF
123.0
DETROIT DEP CON
132.35 284.0

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TORRR TRANSITION: For use by KIND and KCVG area arrivals only and flights filed at or below FL220, or as assigned by ATC.



TAKEOFF MINIMUMS:
Standard.

NOTE: Chart not to scale.

(SNDRS2.SNDRS) 19227
SNDRS TWO DEPARTURE (RNAV)
LIVINGSTON COUNTY SPENCER J HARDY (OZW)
HOWELL, MICHIGAN

AL-5485 (FAA)

TOP ALTITUDE: ASSIGNED BY ATC

AWOS-3
118.875
CLNC DEL
121.725
CTAF
123.0
DETROIT DEP CON
132.35 284.0

GNZOE
10000
352°
(11)
DDEEZ
10000
352°
(21)
TRMML
352°
(19)
LOALA
4000

TAKEOFF MINIMUMS:
Standard.

312°
132°

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 13: Climb on heading 132° or as assigned for RADAR vectors to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 31: Climb on heading 312° or as assigned for RADAR vectors to cross LOALA at or above 4000, thence....

....on track 352° to TRMML, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GNZOE TRANSITION (TRMML3.GNZOE):

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EC-1, 25 FEB 2021 to 22 APR 2021

(ZETTR3.ZETTR) 19339

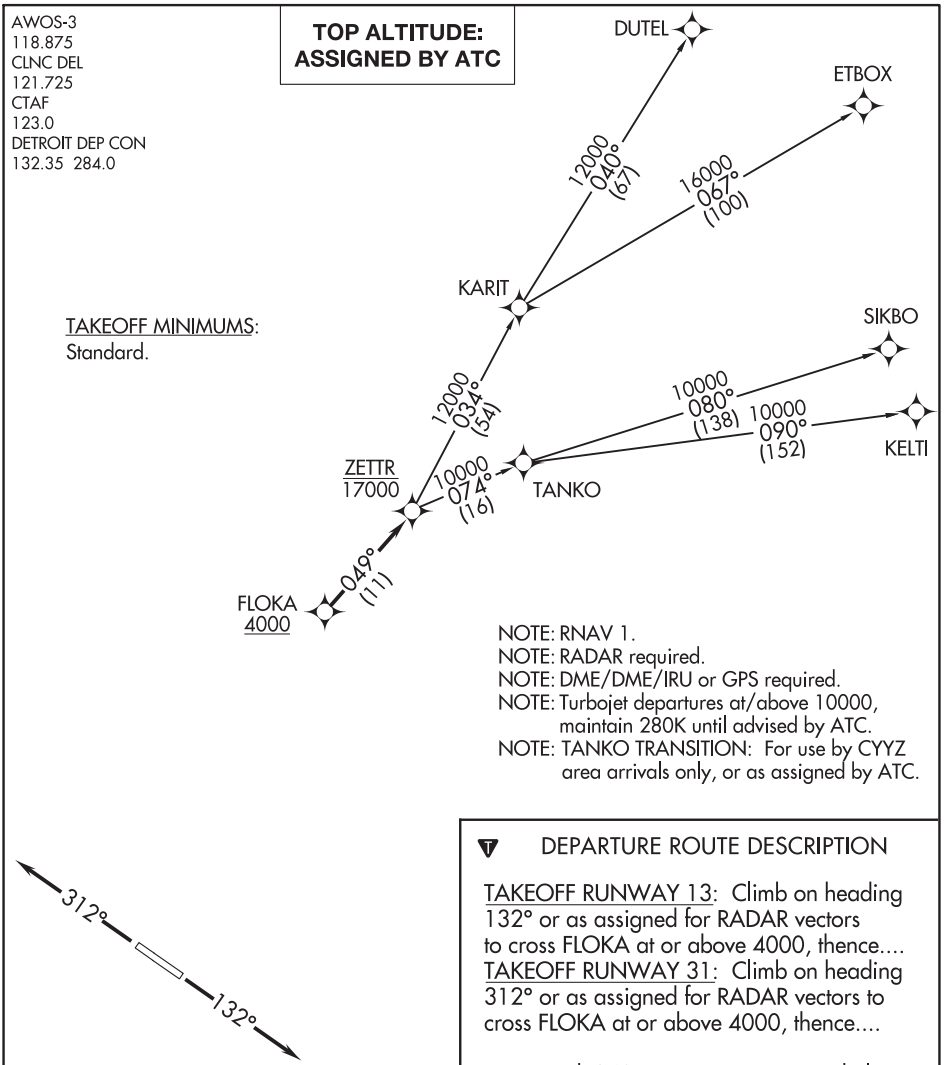
ZETTR THREE DEPARTURE (RNAV)

LIVINGSTON COUNTY SPENCER J HARDY (OZW)
AL-5485 (FAA)
HOWELL, MICHIGAN

AWOS-3
118.875
CLNC DEL
121.725
CTAF
123.0
DETROIT DEP CON
132.35 284.0

TOP ALTITUDE: ASSIGNED BY ATC

TAKEOFF MINIMUMS:
Standard.



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TANKO TRANSITION: For use by CYYZ area arrivals only, or as assigned by ATC.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 13: Climb on heading 132° or as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 31: Climb on heading 312° or as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....

....on track 049° to cross ZETTR at or below 17000, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

DUTEL TRANSITION (ZETTR3.DUTEL):
ETBOX TRANSITION (ZETTR3.ETBOX):
KELTI TRANSITION (ZETTR3.KELTI):
SIKBO TRANSITION (ZETTR3.SIKBO):
TANKO TRANSITION (ZETTR3.TANKO):

NOTE: Chart not to scale.

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

RNAV (GPS) RWY 27
IONIA COUNTY (Y7Ø)

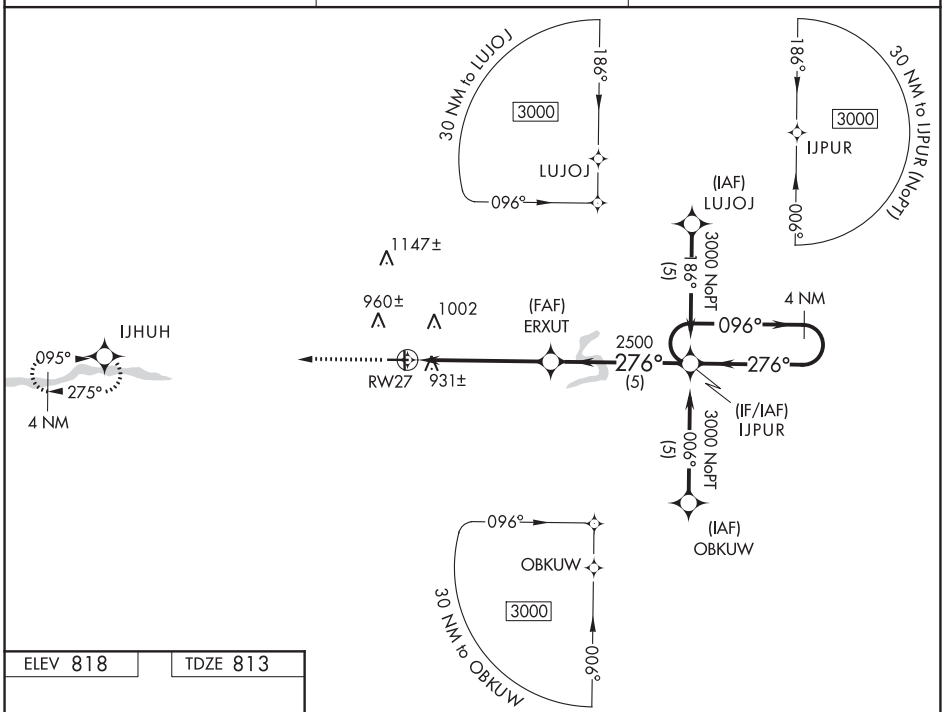
APP CRS	Rwy ldg	4298
276°	TDZE	813
	Apt Elev	818

RNP APCH.

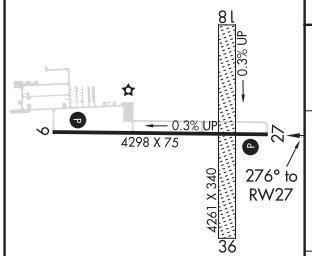
Rwy 27 helicopter visibility reduction below 1 SM NA.
NA Circling NA to Rwys 18 and 36.

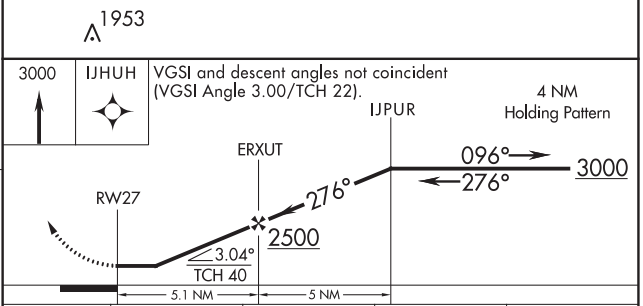
MISSED APPROACH: Climb to 3000 direct IJHUH WP and hold.

AWOS-3	GREAT LAKES APP CON	UNICOM
118.9	118.65 226.4	122.8 (CTAF) L



ELEV 818	TDZE 813





CATEGORY	A	B	C	D
LNAV MDA	1260 - 1	447 (500-1)	1260-1⅜ 447 (500-1⅜)	NA
CIRCLING	1380 - 1	562 (600-1)	1380-1½ 562 (600-1½)	NA

REIL Rwy 27 L
MIRL Rwy 9-27 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

IRON MOUNTAIN KINGSFORD, MICHIGAN AL-5347 (FAA) 20086

ILS or LOC RWY 1
FORD (IMT)

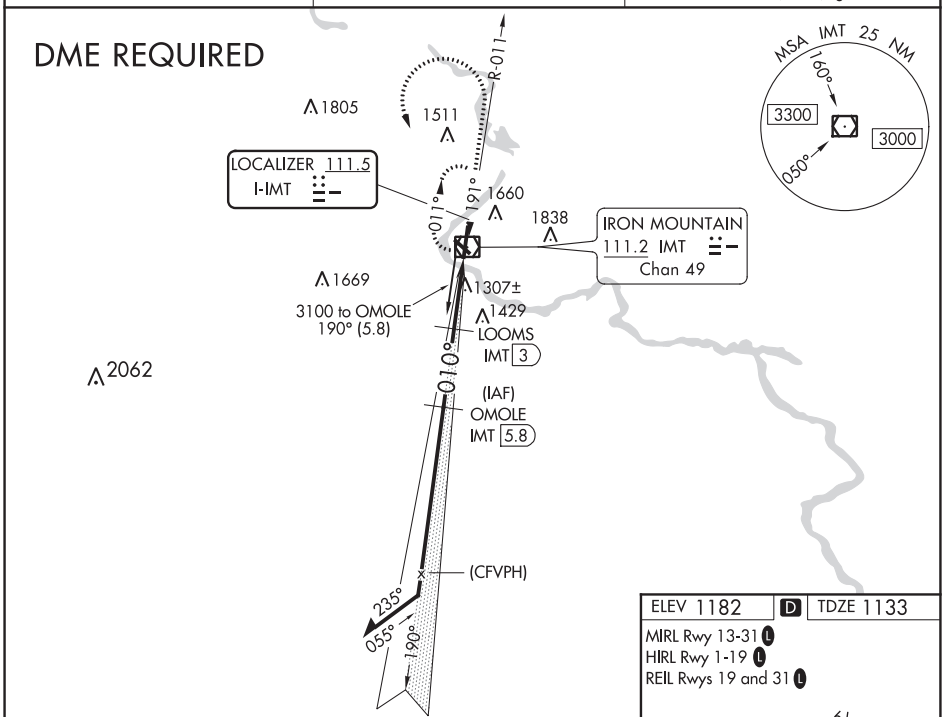
LOC I-IMT	APP CRS	Rwy ldg	6501
111.5	010°	TDZE	1133
		Apt Elev	1182

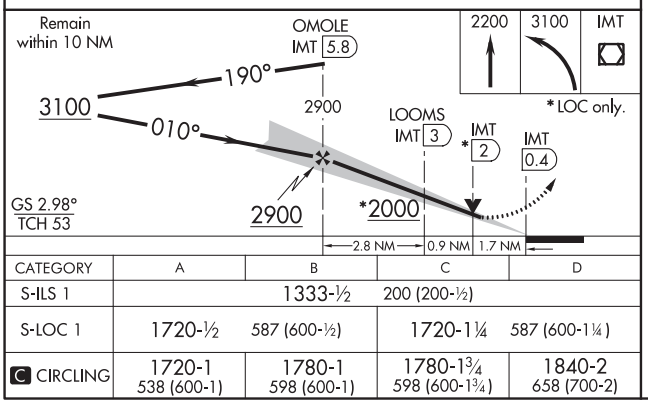
T A NA Circling NA NE of Rwys 19 and 31. DME required. VDP NA with Escanaba altimeter setting. Night Landing: Rwy 13, 31 NA. When local altimeter setting not received, use Escanaba altimeter setting and increase all DA/MDA 180 feet, increase S-ILS 1 visibility all Cats ¼ mile, increase S-LOC 1 Cat B visibility ¼ mile, Cat C and D visibility ½ mile, increase Circling Cat B visibility ¼ mile, Cat C visibility ¾ mile, Cat D visibility ½ mile. For inoperative MALSR when using Escanaba altimeter setting, increase S-LOC 1 visibility Cat C/D to 2½ mile. DME from IMT VOR/DME. Simulatneous reception of I-IMT and IMT DME required.

MALSR A5

MISSED APPROACH: Climb to 2200 then climbing left turn to 3100 direct IMT VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	121.25 322.5	122.8 (CTAF) L

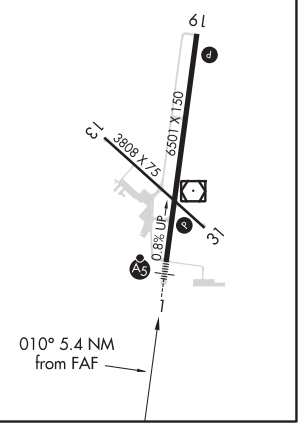




CATEGORY	A	B	C	D
S-ILS 1	1333-½		200 (200-½)	
S-LOC 1	1720-½	587 (600-½)	1720-1¼	587 (600-1¼)
C CIRCLING	1720-1 538 (600-1)	1780-1 598 (600-1)	1780-1¾ 598 (600-1¾)	1840-2 658 (700-2)

ELEV 1182 D TDZE 1133

MIRL Rwy 13-31 L
HIRL Rwy 1-19 L
REIL Rwys 19 and 31 L



EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 77811 W01A	APP CRS 010°	Rwy ldg 6501 TDZE 1133 Apt Elev 1182

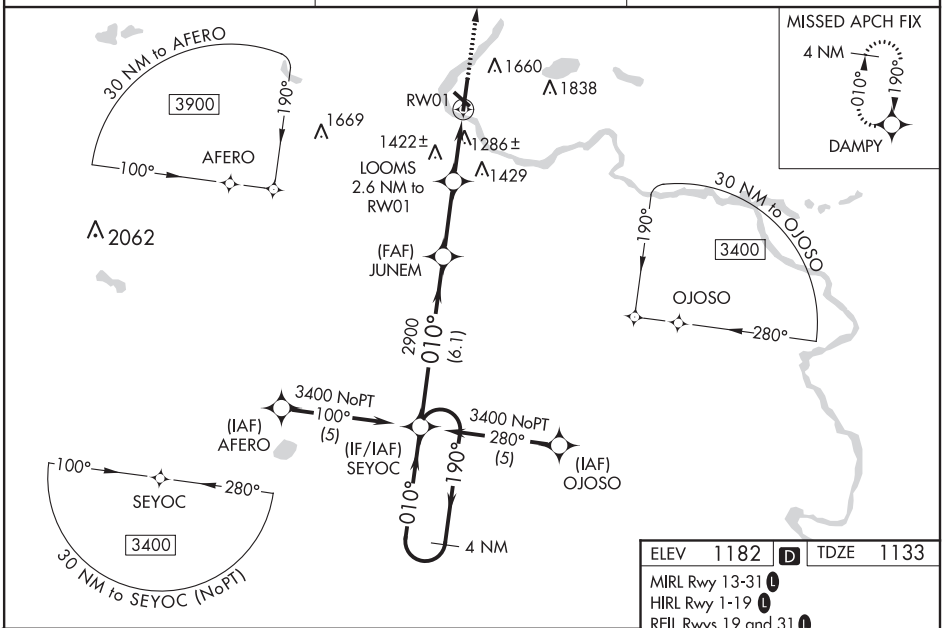
RNAV (GPS) RWY 1
FORD (IMT)

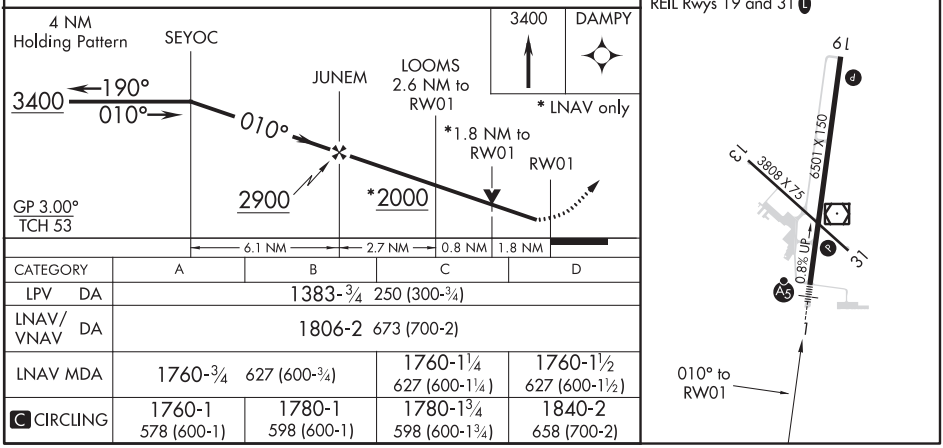
Inoperative table does not apply to LPV. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). Circling NA NE of Rwys 19 and 31. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Escanaba altimeter setting and increase all DA/MDA 180 feet, increase LPV all Cats visibility ¼ SM, LNAV/VNAV all Cats visibility ¾ SM, LNAV Cat C/D visibility ½ SM, and Circling Cat B visibility ¼ SM, Cat C/D visibility ¾ SM. For inoperative MALSR increase visibility LNAV Cat A and B ¼ mile. For Inoperative MALSR when using Escanaba altimeter setting, increase LPV all Cats visibility to 1½ mile, LNAV Cat A visibility to 1 mile. Baro-VNAV and VDP NA when using Escanaba altimeter setting. Circling to Rwy 31 NA at night. Helicopter visibility reduction below ¾ SM NA.

MALSR A5

MISSED APPROACH: Climb to 3400 direct DAMPY and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	121.25 322.5	122.8 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	1383-¾ 250 (300-¾)			
LNAV/VNAV DA	1806-2 673 (700-2)			
LNAV MDA	1760-¾ 627 (600-¾)		1760-1¼ 627 (600-1¼)	1760-1½ 627 (600-1½)
C CIRCLING	1760-1 578 (600-1)	1780-1 598 (600-1)	1780-1¾ 598 (600-1¾)	1840-2 658 (700-2)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

IRON MOUNTAIN/KINGSFORD, MICHIGAN AL-5347 (FAA) 20114

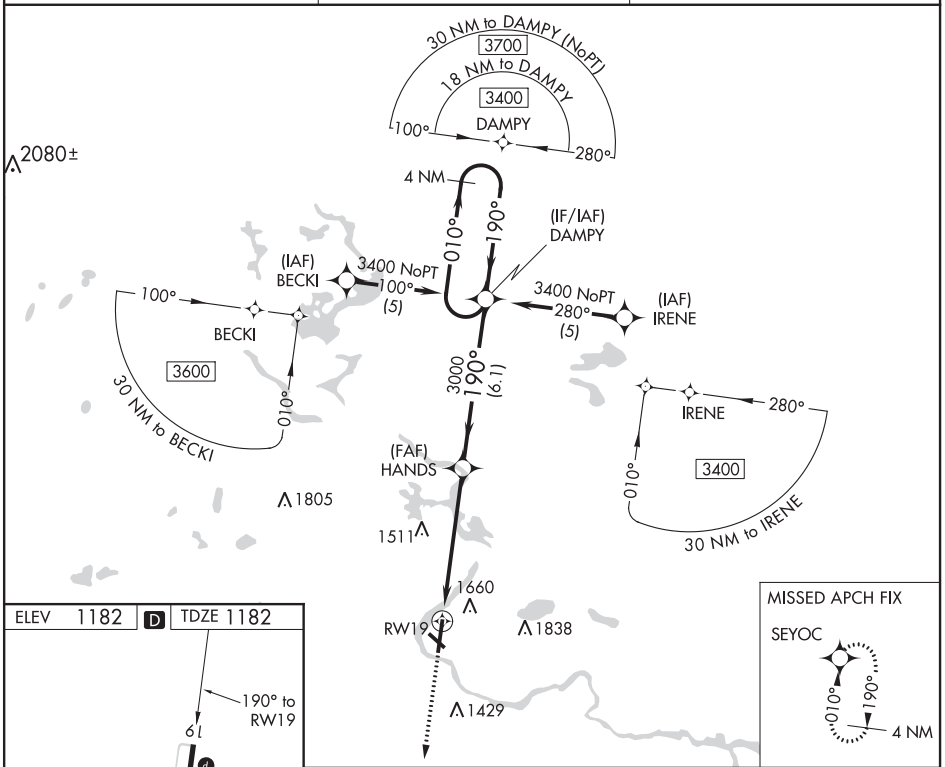
APP CRS	Rwy ldg	6376
190°	TDZE	1182
	Apt Elev	1182

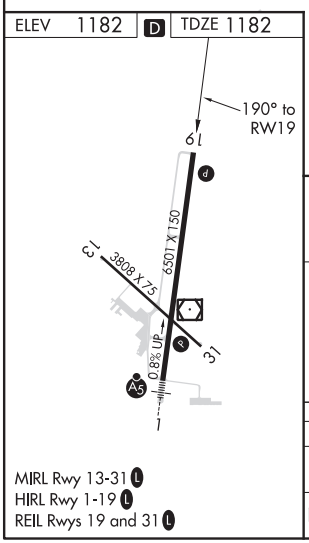
RNAV (GPS) RWY 19
FORD (IMT)

Circling NA northeast of Rwys 19 and 31. DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Escanaba altimeter setting and increase all MDA 180 feet, increase LNAV Cat B visibility ¼ SM, Cat C visibility ½ SM, Cat D visibility ¼ SM, and Circling Cat B visibility ¼ SM, Cat C visibility ⅝ SM Cat D visibility ¾ SM. Rwy 19 Straight-in and Circling and Circling to Rwy 31 NA at night.

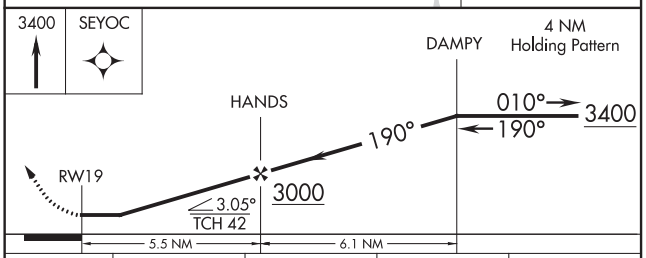
MISSED APPROACH: Climb to 3400 direct SEYOC and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	121.25 322.5	122.8 (CTAF) L





MIRL Rwy 13-31 L
HIRL Rwy 1-19 L
REIL Rwys 19 and 31 L



MISSED APCH FIX

CATEGORY	A	B	C	D
LNAV MDA	1760-1 578 (600-1)		1760-1½ 578 (600-1½)	1760-1¾ 578 (600-1¾)
C CIRCLING	1760-1 578 (600-1)	1780-1 598 (600-1)	1780-1⅝ 598 (600-1⅝)	1840-2 658 (700-2)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

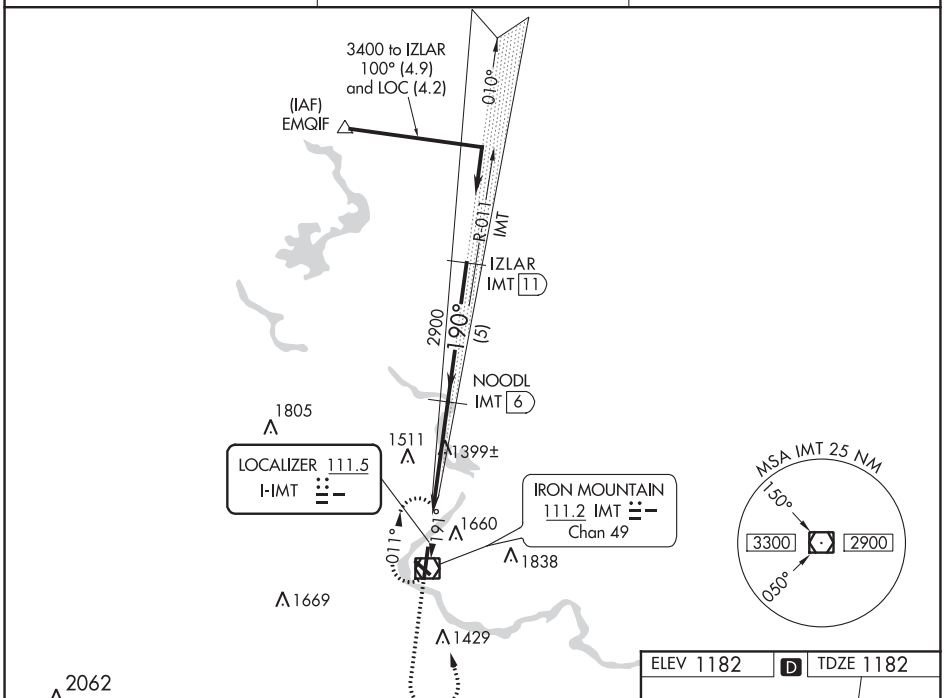
LOC I-IMT	APP CRS	Rwy ldg	6376
111.5	190°	TDZE	1182
		Apt Elev	1182

LOC/DME BC RWY 19
FORD (IMT)

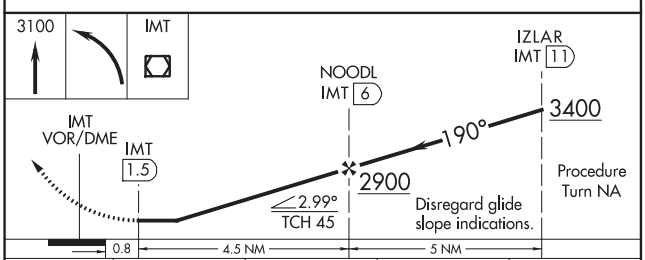
Circling NA northeast of Rwys 19 and 31. DME from IMT VOR/DME. Simultaneous reception of I-IMT and IMT DME required. Helicopter visibility reduction below 1 SM NA. Rwy 19 Straight-in and Circling and Circling to Rwy 31 NA at night.

MISSED APPROACH: Climb to 3100 then left turn direct IMT VOR/DME and hold.

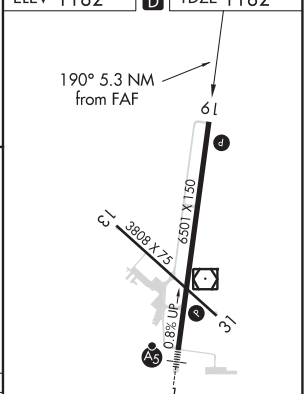
ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	121.25 322.5	122.8 (CTAF) L



BACK COURSE



CATEGORY	A	B	C	D
S-19	1660-1 478 (500-1)		1660-1¼ 478 (500-1¼)	1660-1½ 478 (500-1½)
C CIRCLING	1660-1 478 (500-1)	1780-1 598 (600-1)	1780-1½ 598 (600-1½)	1840-2 658 (700-2)



MIRL Rwy 13-31 L
HIRL Rwy 1-19 L
REIL Rwys 19 and 31 L

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

IRON MOUNTAIN/KINGSFORD, MICHIGAN AL-5347 (FAA) 20254

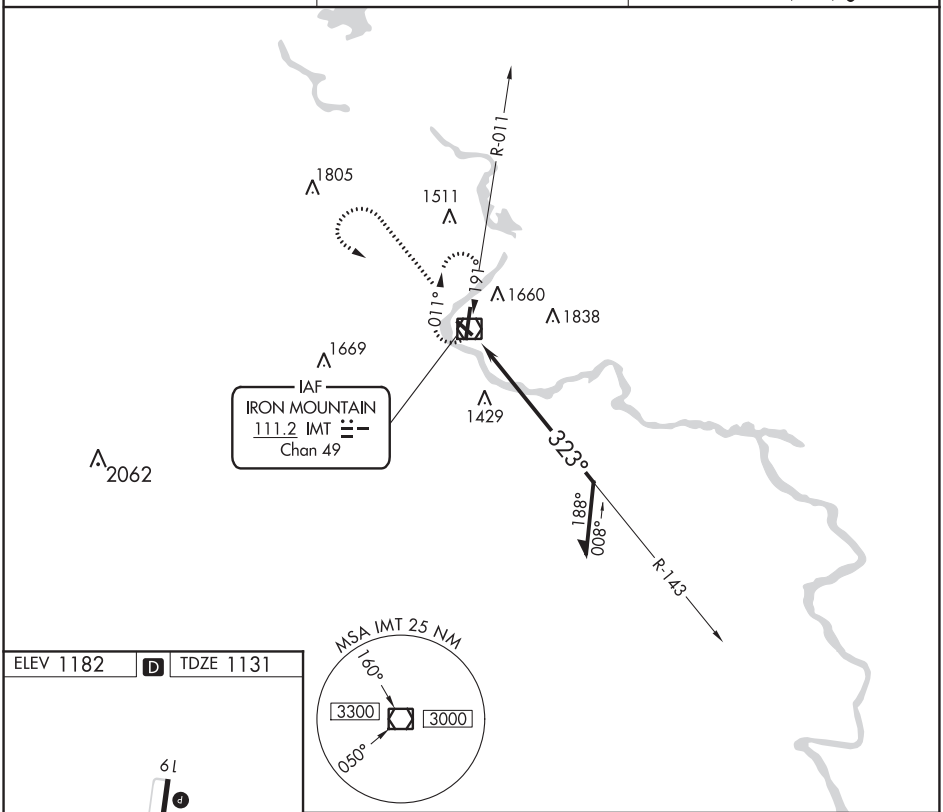
VOR RWY 31
FORD (IMT)

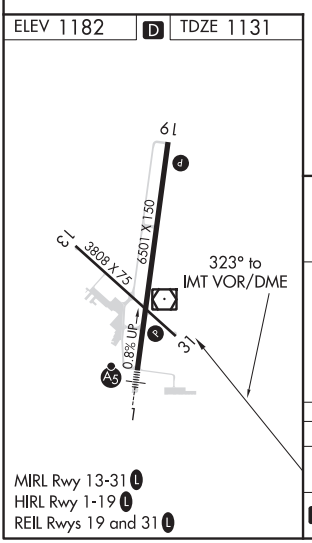
VOR/DME IMT	APP CRS	Rwy ldg	3808
111.2	323°	TDZE	1131
Chan 49		Apt Elev	1182

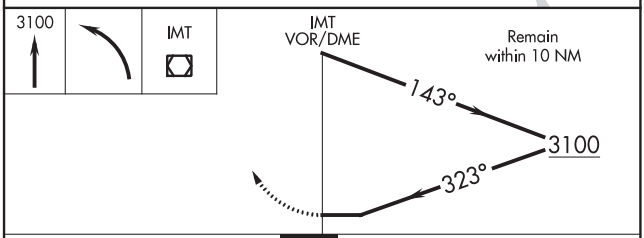
Circling NA northeast of Rwys 19 and 31. Helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Escanaba altimeter setting and increase all MDA 180 feet, increase S-31 Cat B visibility ¼ SM, Cat C visibility ¾ SM, Cat D visibility ½ SM, and Circling Cat B visibility ¼ SM, Cat C/D visibility ¾ SM.

MISSED APPROACH: Climb to 3100 then left turn direct IMT VOR/DME and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	121.25 322.5	122.8 (CTAF) L

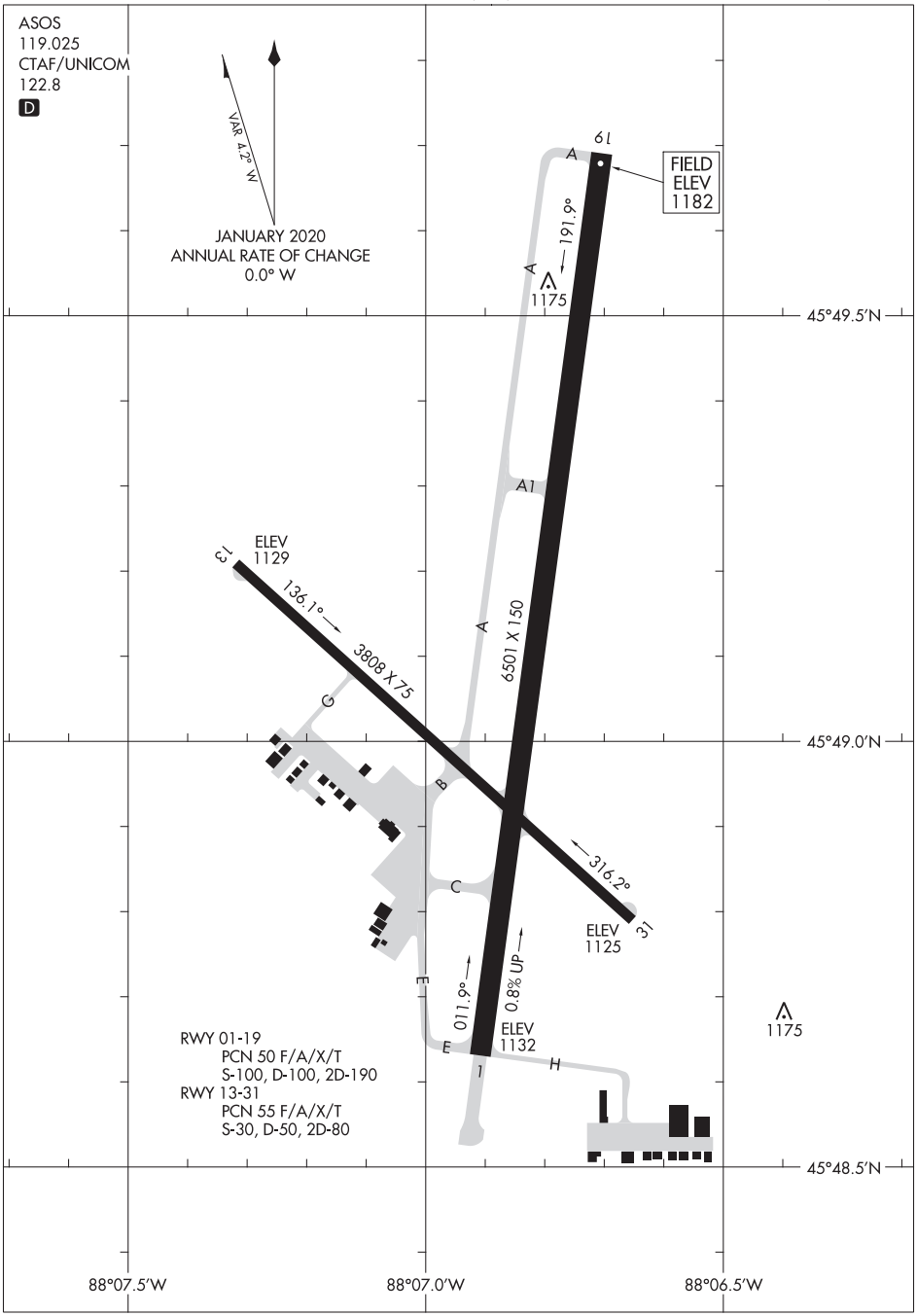






CATEGORY	A	B	C	D
S-31	1760-1 629 (600-1)		1760-1¾ 629 (600-1¾)	1760-2 629 (600-2)
C CIRCLING	1760-1 578 (600-1)	1780-1 598 (600-1)	1780-1¾ 598 (600-1¾)	1840-2 658 (700-2)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021



EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

IRONWOOD, MICHIGAN AL-5213 (FAA) 20086

ILS or LOC RWY 27
GOGEBIC-IRON COUNTY (IWD)

LOC I-IWD	APP CRS	Rwy ldg / TDZE / Apt Elev
111.5	270°	6501 / 1230 / 1230

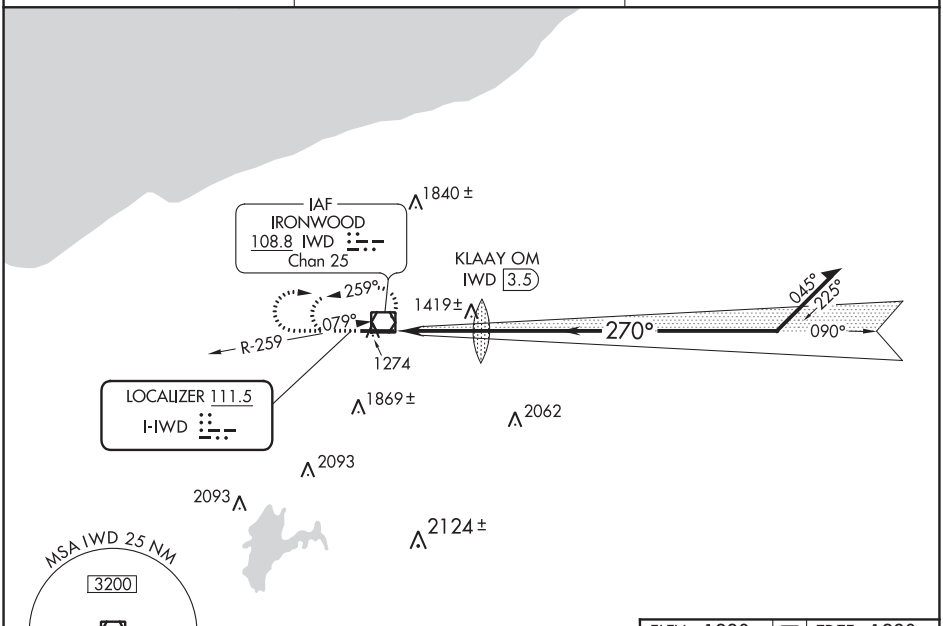
T
NA
-27°C

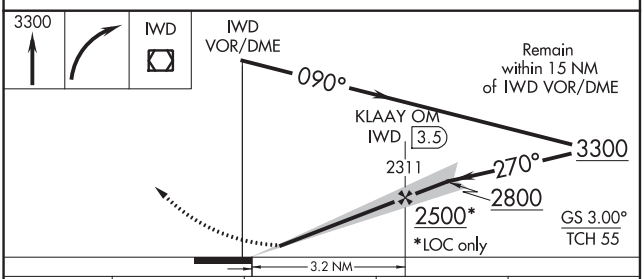
When local altimeter setting not received, use Ashland altimeter setting and increase all DA 132 feet and all MDA 140 feet, increase S-LOC 27 Cat C/D visibility ½ mile, Circling Cat A/B visibility ¼ mile and Circling Cat C ½ mile. For inop ALS when using Ashland altimeter setting, increase S-ILS 27 all Cats visibility to 1.

MALSR

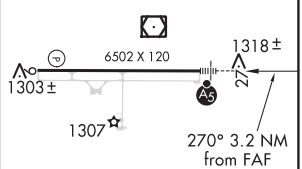
MISSED APPROACH: Climb to 3300 then right turn direct IWD VOR/DME and hold.

AWOS-3PT	MINNEAPOLIS CENTER	UNICOM
125.175	133.55	122.8 (CTAF) L





ELEV 1230	D	TDZE 1230



REIL Rwy 9 L
HIRL Rwy 9-27 L

CATEGORY	A	B	C	D
S-ILS 27	1430-½ 200 (200-½)			
S-LOC-27	1720-½ 490 (500-½)		1720-¾ 490 (500-¾)	1720-1 490 (500-1)
CIRCLING	2100-1 870 (900-1)	2100-1¼ 870 (900-1¼)	2100-2½ 870 (900-2½)	2220-3 990 (1000-3)

FAF to MAP 3.2 NM

Knots	60	90	120	150	180
Min:Sec	3:12	2:08	1:36	1:17	1:04

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

APP CRS	Rwy ldg	6501
090°	TDZE	1230
	Apt Elev	1230

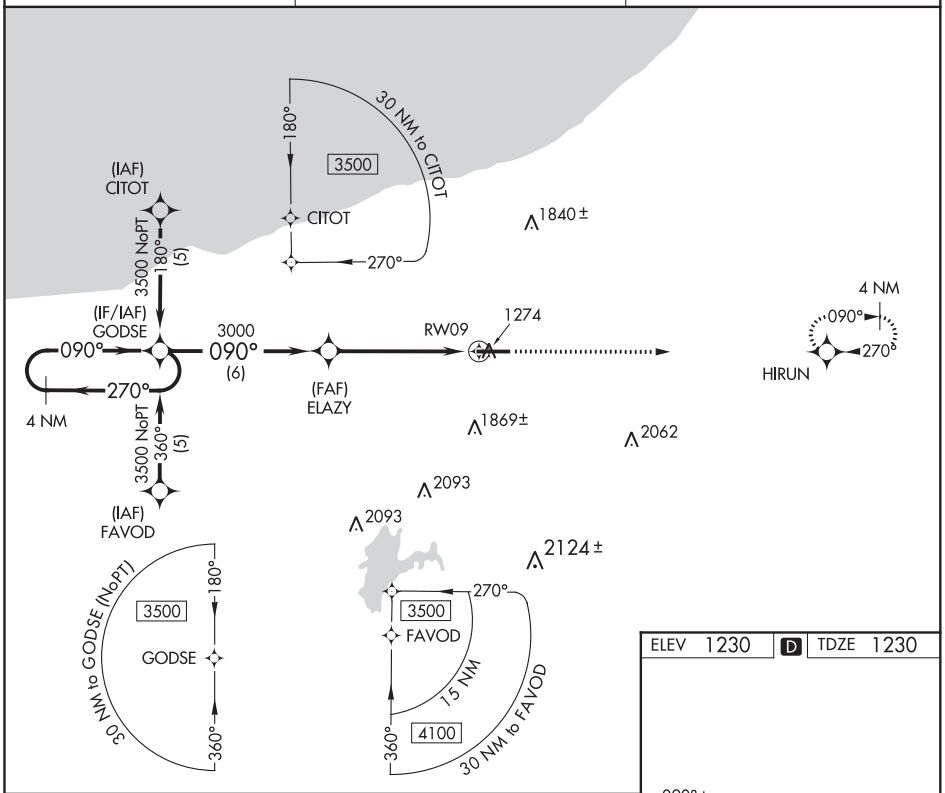
RNAV (GPS) RWY 9
GOGEBIC-IRON COUNTY (IWD)

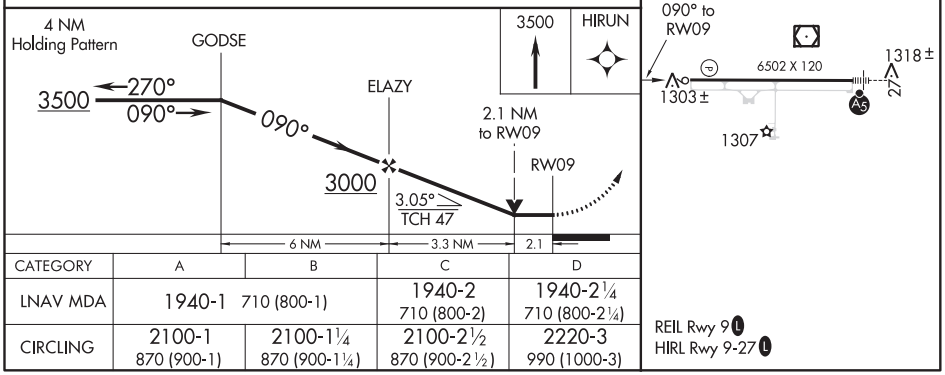
-27°C

DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Ashland altimeter setting and increase all MDA 140 feet, increase LNAV Cat B visibility ¼ mile, Cat C/D ½ mile and increase Circling Cat A/B visibility ¼ mile, Cat C ½ mile.

MISSED APPROACH: Climb to 3500 direct HIRUN and hold.

AWOS-3PT	MINNEAPOLIS CENTER	UNICOM
125.175	133.55	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1940-1 710 (800-1)		1940-2 710 (800-2)	1940-2¼ 710 (800-2¼)
CIRCLING	2100-1 870 (900-1)	2100-1¼ 870 (900-1¼)	2100-2½ 870 (900-2½)	2220-3 990 (1000-3)

REIL Rwy 9 L
HIRL Rwy 9-27 L

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

IRONWOOD, MICHIGAN AL-5213 (FAA) 20086

WAAS CH 50212 W27A	APP CRS 270°	Rwy ldg 6501 TDZE 1230 Apt Elev 1230

RNAV (GPS) RWY 27
GOGEBIC-IRON COUNTY (IWD)

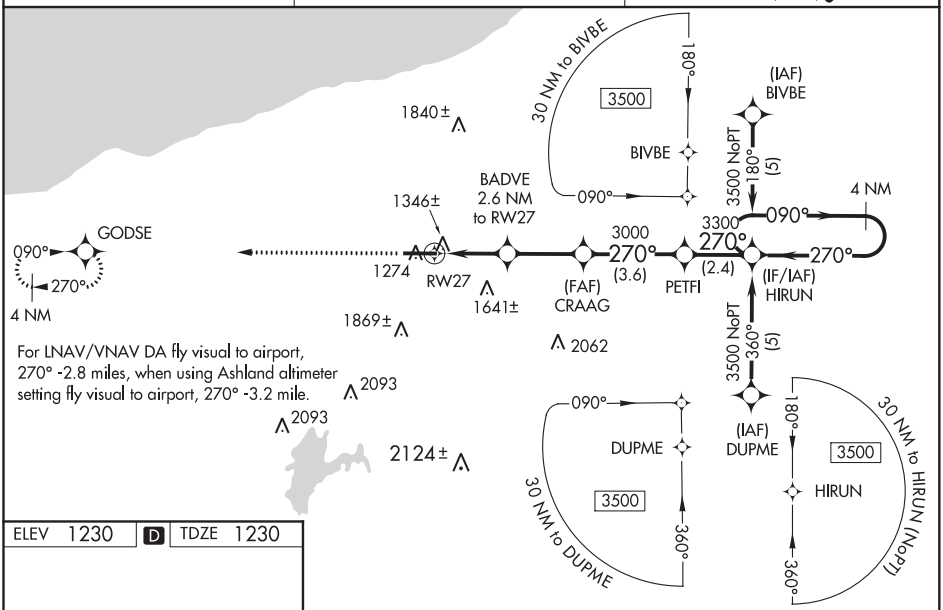
Inoperative table does not apply to LPV and LNAV/VNAV all Cats and LNAV Cats A and B. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. When using Ashland altimeter setting: inop table does not apply to LNAV/VNAV all Cats and LNAV Cat A. When using Ashland altimeter setting: for inoperative MALSR, increase LNAV Cat B visibility to 1¼ mile. Baro-VNAV and VDP NA when using Ashland altimeter setting. When local altimeter setting not received, use Ashland altimeter setting and increase all DA 132 feet and all MDA 140 feet, increase LNAV/VNAV Cat C visibility ¼ mile, LNAV Cat C/D visibility ½ mile, and Circling Cat A/B visibility ¼ mile, Cat C ½ mile.

-27°C

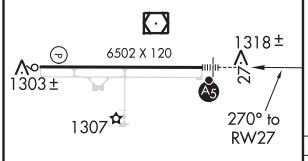
MALSR

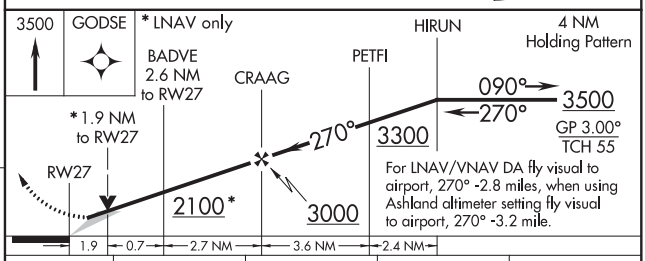
MISSED APPROACH: Climb to 3500 direct GODSE and hold.

AWOS-3PT	MINNEAPOLIS CENTER	UNICOM
125.175	133.55	122.8 (CTAF) L



ELEV 1230	D	TDZE 1230





CATEGORY	A	B	C	D
LPV DA	1430-1 200 (200-1)			
LNAV/ VNAV DA	2166-2 936 (1000-2)		2166-2¾ 936 (1000-2¾)	2166-3 936 (1000-3)
LNAV MDA	1900-1 670 (700-1)		1900-1¼ 670 (700-1¼)	1900-1½ 670 (700-1½)
CIRCLING	2100-1 870 (900-1)	2100-1¼ 870 (900-1¼)	2100-2½ 870 (900-2½)	2220-3 990 (1000-3)

REIL Rwy 9 L
HIRL Rwy 9-27 L

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VOR RWY 9

GOGEBIC-IRON COUNTY (IWD)

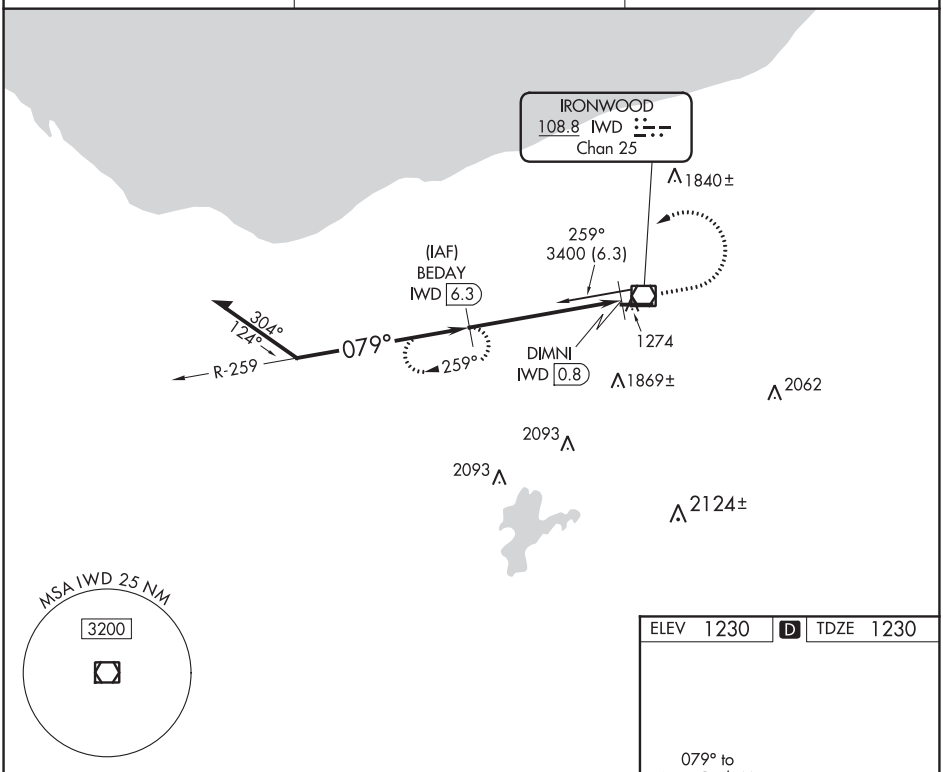
VOR/DME IWD 108.8 Chan 25	APP CRS 079°	Rwy ldg 6501 TDZE 1230 Apt Elev 1230

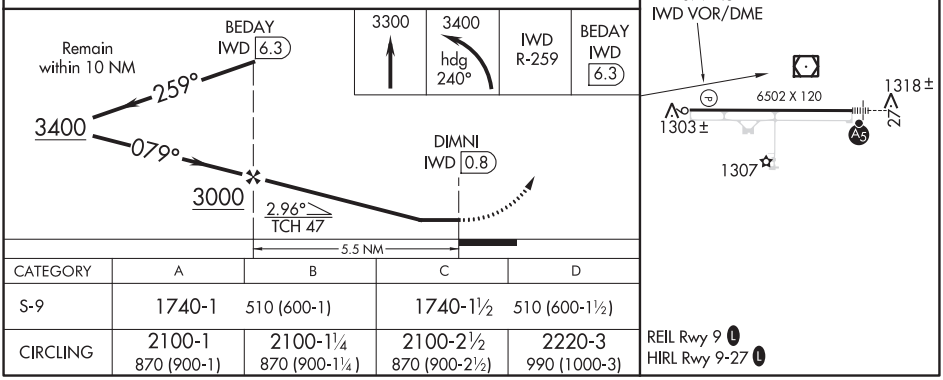
DME required.

Rwy 9 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Ashland altimeter setting and increase all MDA 140 feet, increase S-9 visibility Cat C ¼ mile, and Cat D ½ mile. Increase Circling visibility Cat A/B ¼ mile and Cat C ½ mile. -27°C

MISSED APPROACH: Climb to 3300 then climbing left turn to 3400 on heading 240° and IWD R-259 to BEDAY/6.3 DME and hold.

AWOS-3PT	MINNEAPOLIS CENTER	UNICOM
125.175	133.55	122.8 (CTAF) L





CATEGORY	A	B	C	D
S-9	1740-1 510 (600-1)		1740-1½ 510 (600-1½)	
CIRCLING	2100-1 870 (900-1)	2100-1¼ 870 (900-1¼)	2100-2½ 870 (900-2½)	2220-3 990 (1000-3)

REIL Rwy 9 L
HIRL Rwy 9-27 L

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JACKSON, MICHIGAN AL-861 (FAA) 20254

ILS or LOC RWY 25
JACKSON COUNTY-REYNOLDS FIELD (JXN)

LOC I-JXN 109.1	APP CRS 254°	Rwy ldg 5351 TDZE 996 Apt Elev 1001

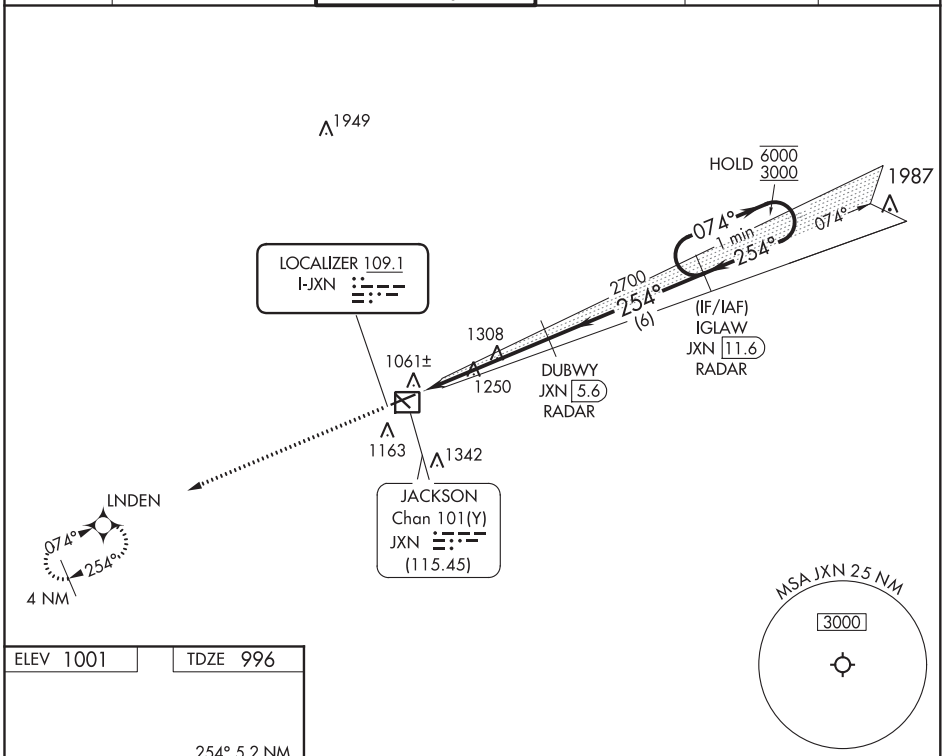
RNAV-1 GPS required. RADAR required for procedure entry. DME or RADAR required.

For inop ALS, increase S-LOC 25 Cat C/D visibility to 1¾ SM.

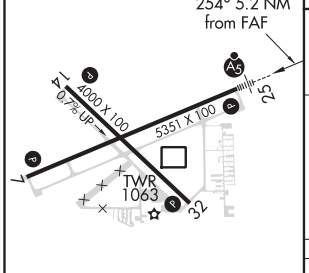
MALSR

MISSED APPROACH: Climb to 3000 direct LNDEN and hold.

ATIS	GREAT LAKES APP CON ★	JACKSON TOWER ★	GND CON	CLNC DEL	UNICOM
125.725	127.3 335.575	128.475 (CTAF) L 257.8	121.9	121.9	122.95

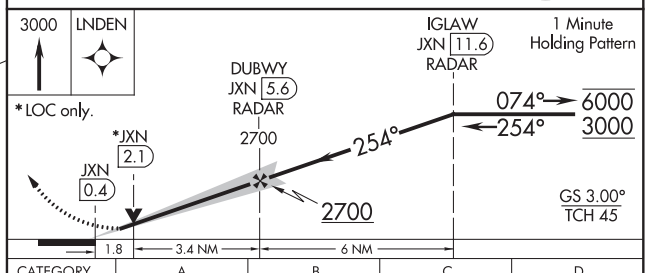


ELEV 1001 TDZE 996



HIRL Rwy 7-25 L
MIRL Rwy 14-32 L
REIL Rwys 7 and 32 L

FAF to MAP 5.2 NM					
Knots	60	90	120	150	180
Min:Sec	5:12	3:28	2:36	2:05	1:44



CATEGORY	A	B	C	D
S-ILS 25	1196-½ 200 (200-½)			
S-LOC 25	1620-½ 624 (700-½)		1620-1⅜ 624 (700-1⅜)	
C CIRCLING	1620-1 619 (700-1)		1660-1¾ 659 (700-1¾)	1660-2 659 (700-2)

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WAAS CH 62841 W07A	APP CRS 074°	Rwy ldg 5351 TDZE 993 Apt Elev 1001

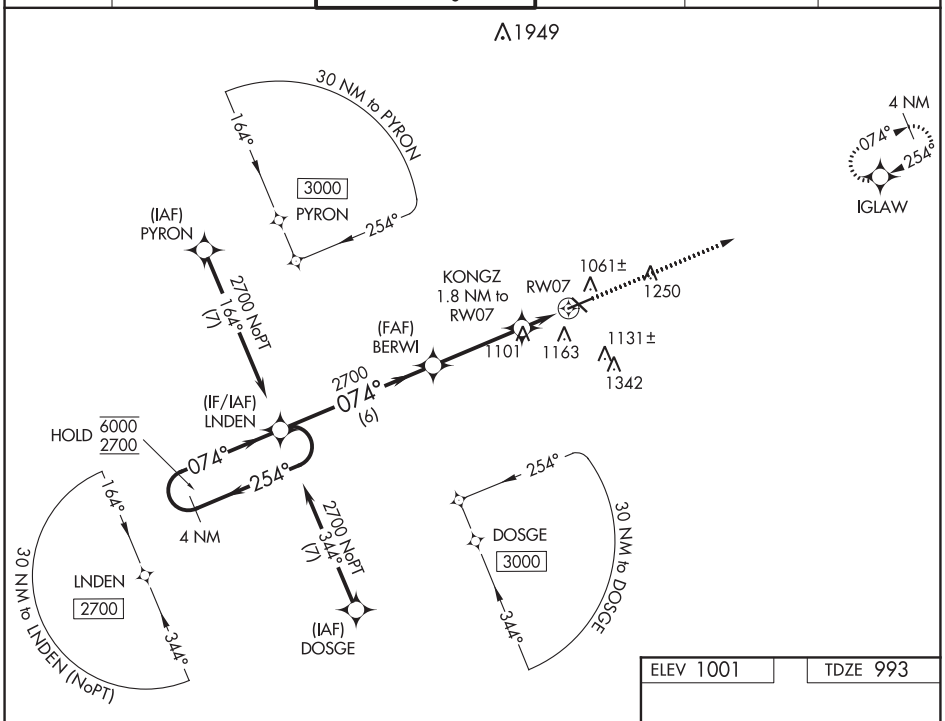
RNAV (GPS) RWY 7
JACKSON COUNTY-REYNOLDS FIELD (JXN)

RNP APCH.

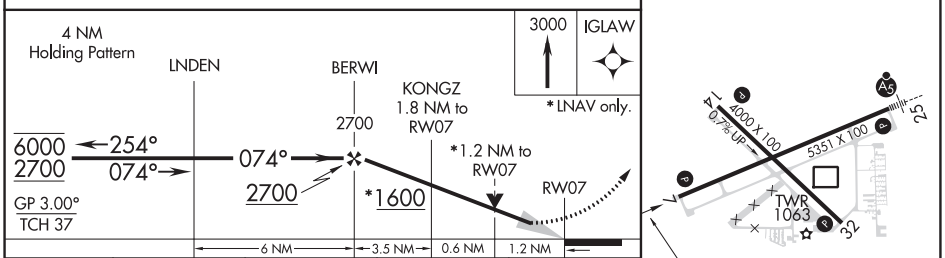
For uncompensated Baro-VNAV systems, LNAV/ VNAV NA below -23°C or above 54°C.

MISSED APPROACH: Climb to 3000 direct IGLAW and hold.

ATIS	GREAT LAKES APP CON *	JACKSON TOWER *	GND CON	CLNC DEL	UNICOM
125.725	127.3 335.575	128.475 (CTAF) L 257.8	121.9	121.9	122.95



ELEV 1001 TDZE 993



CATEGORY	A	B	C	D
LPV DA	1258-⅞ 265 (300-⅞)			
LNAV/ VNAV DA	1292-⅞ 299 (300-⅞)			
LNAV MDA	1400-1 407 (400-1)		1400-1⅛ 407 (400-1⅛)	
C CIRCLING	1480-1 479 (500-1)		1660-1¾ 659 (700-1¾)	1660-2 659 (700-2)

HIRL Rwy 7-25 L
MIRL Rwy 14-32 L
REIL Rwys 7 and 32 L

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JACKSON, MICHIGAN AL-861 (FAA) 20254

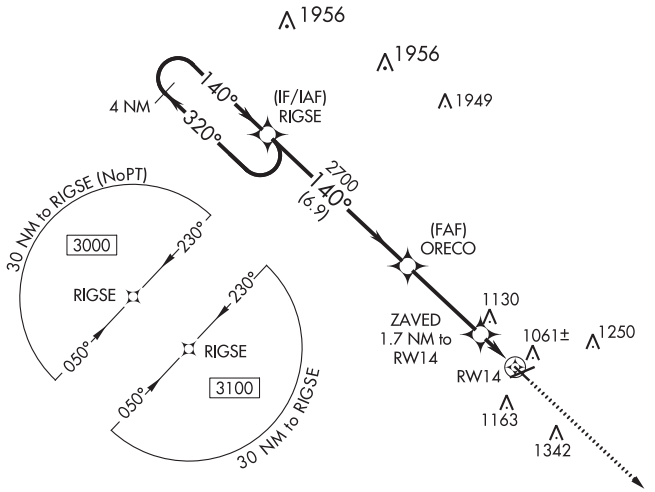
RNAV (GPS) RWY 14
JACKSON COUNTY-REYNOLDS FIELD (JXN)

WAAS CH 86527 W14A	APP CRS 140°	Rwy ldg 4000 TDZE 996 Apt Elev 1001

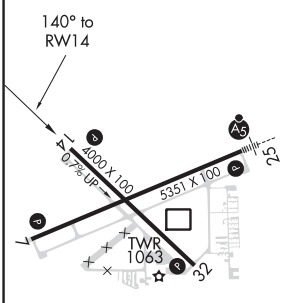
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -21°C (-5°F) or above 54°C (130°F). Rwy 14 helicopter visibility reduction below ¾ SM NA. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3100 direct JERIK and hold.

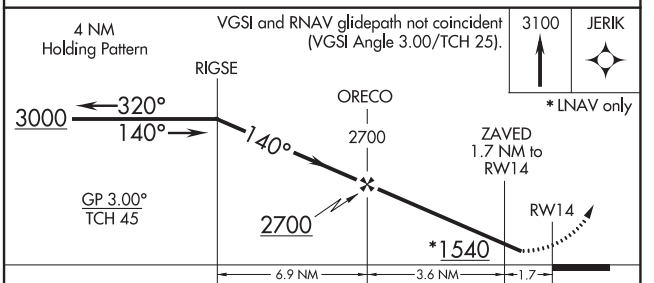
ATIS	GREAT LAKES APP CON *	JACKSON TOWER *	GND CON	CLNC DEL	UNICOM
125.725	127.3 335.575	128.475 (CTAF) L 257.8	121.9	121.9	122.95



ELEV 1001 TDZE 996



HIRL Rwy 7-25 L
MIRL Rwy 14-32 L
REIL Rwys 7 and 32 L



CATEGORY	A	B	C	D
LPV DA	1345-1¼ 349 (400-1¼)			
LNAV/VNAV DA	1463-1⅝ 467 (500-1⅝)			
LNAV MDA	1380-1 384 (400-1)		1380-1⅛ 384 (400-1⅛)	
C CIRCLING	1480-1 479 (500-1)		1660-1¾ 659 (700-1¾)	1660-2 659 (700-2)

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WAAS CH 86341 W25A	APP CRS 254°	Rwy ldg 5351 TDZE 995 Apt Elev 1001

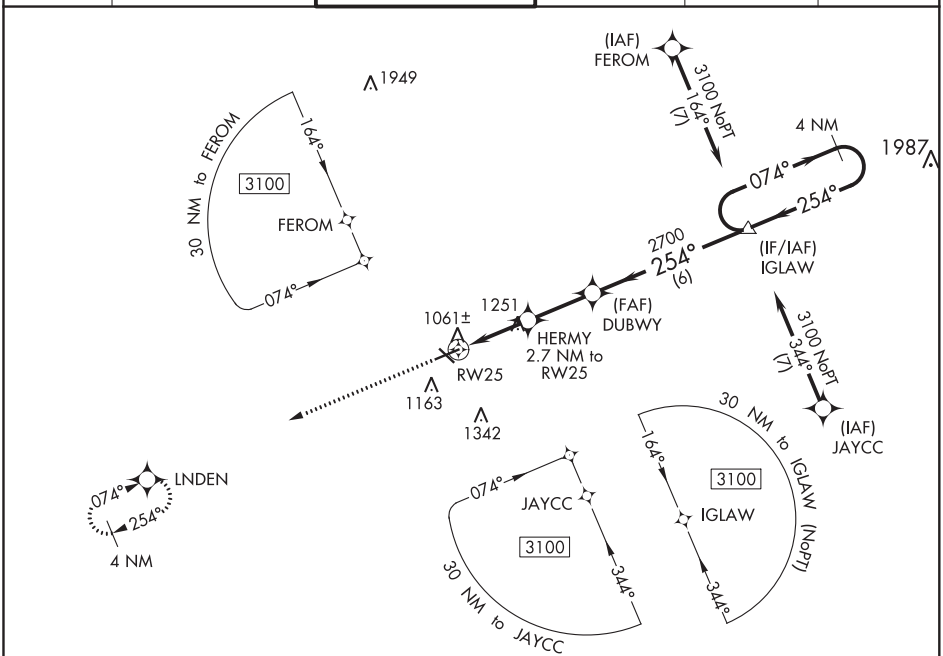
RNAV (GPS) RWY 25
JACKSON COUNTY-REYNOLDS FIELD (JXN)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -21°C (-5°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. For inop ALS, increase LNAV/VNAV all Cats visibility to ⅞ SM.

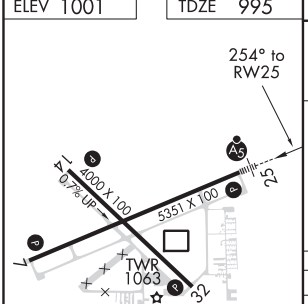
MALSR

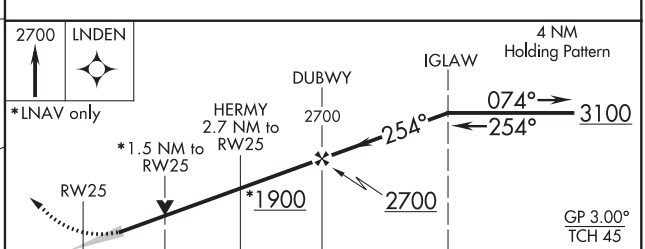
MISSED APPROACH: Climb to 2700 direct LNDEN and hold.

ATIS	GREAT LAKES APP CON ★	JACKSON TOWER ★	GND CON	CLNC DEL	UNICOM
125.725	127.3 335.575	128.475 (CTAF) L 257.8	121.9	121.9	122.95



ELEV 1001 TDZE 995





CATEGORY	A	B	C	D
LPV DA	1195-½ 200 (200-½)			
LNAV/VNAV DA	1278-½ 283 (300-½)			
LNAV MDA	1520-¾ 525 (600-¾)		1520-1 525 (600-1)	
C CIRCLING	1520-1 519 (600-1)		1660-1¾ 659 (700-1¾)	1660-2 659 (700-2)

HIRL Rwy 7-25 L
MIRL Rwy 14-32 L
REIL Rwys 7 and 32 L

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JACKSON, MICHIGAN

AL-861 (FAA)

20254

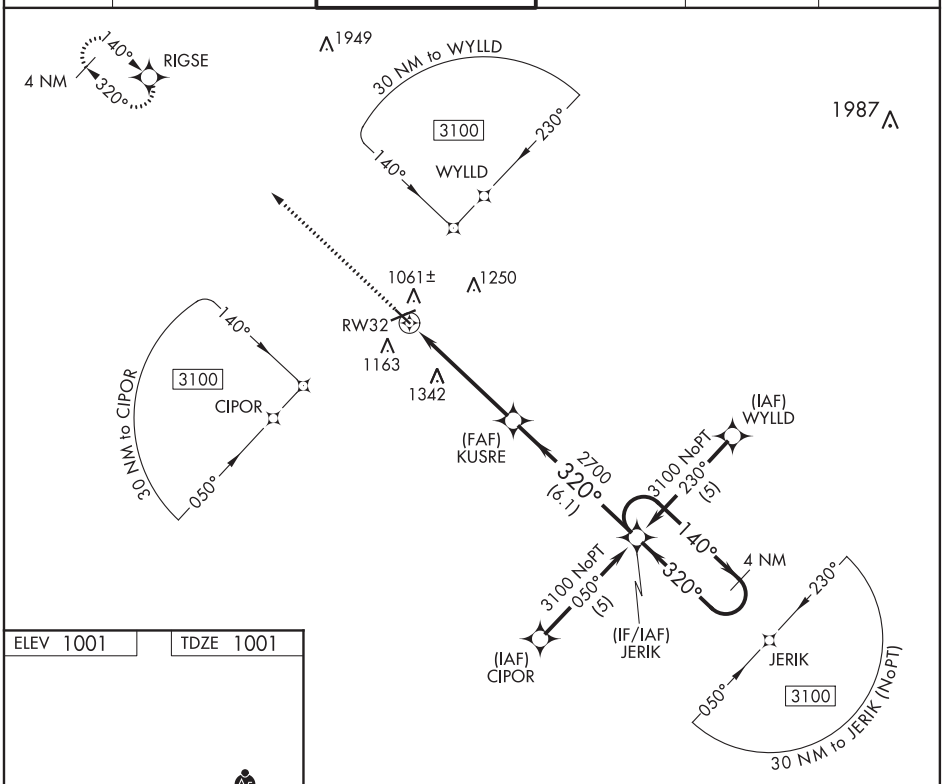
RNAV (GPS) RWY 32
JACKSON COUNTY-REYNOLDS FIELD (JXN)

APP CRS	Rwy ldg	4000
320°	TDZE	1001
	Apt Elev	1001

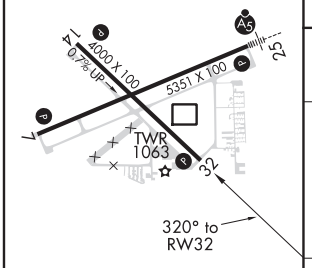
Rwy 32 helicopter visibility reduction below ¾ SM NA.
DME/DME RNP-0.3 NA.

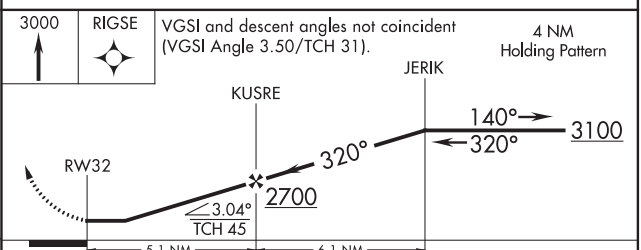
MISSED APPROACH: Climb to 3000 direct RIGSE and hold.

ATIS	GREAT LAKES APP CON ★	JACKSON TOWER ★	GND CON	CLNC DEL	UNICOM
125.725	127.3 335.575	128.475 (CTAF) L 257.8	121.9	121.9	122.95



ELEV 1001 | TDZE 1001





CATEGORY	A	B	C	D
LNAV MDA	1560-1 559 (600-1)		1560-1⅝ 559 (600-1⅝)	
C CIRCLING	1560-1 559 (600-1)		1660-1¾ 659 (700-1¾)	1660-2 659 (700-2)

HIRL Rwy 7-25 L
MIRL Rwy 14-32 L
REIL Rwys 7 and 32 L

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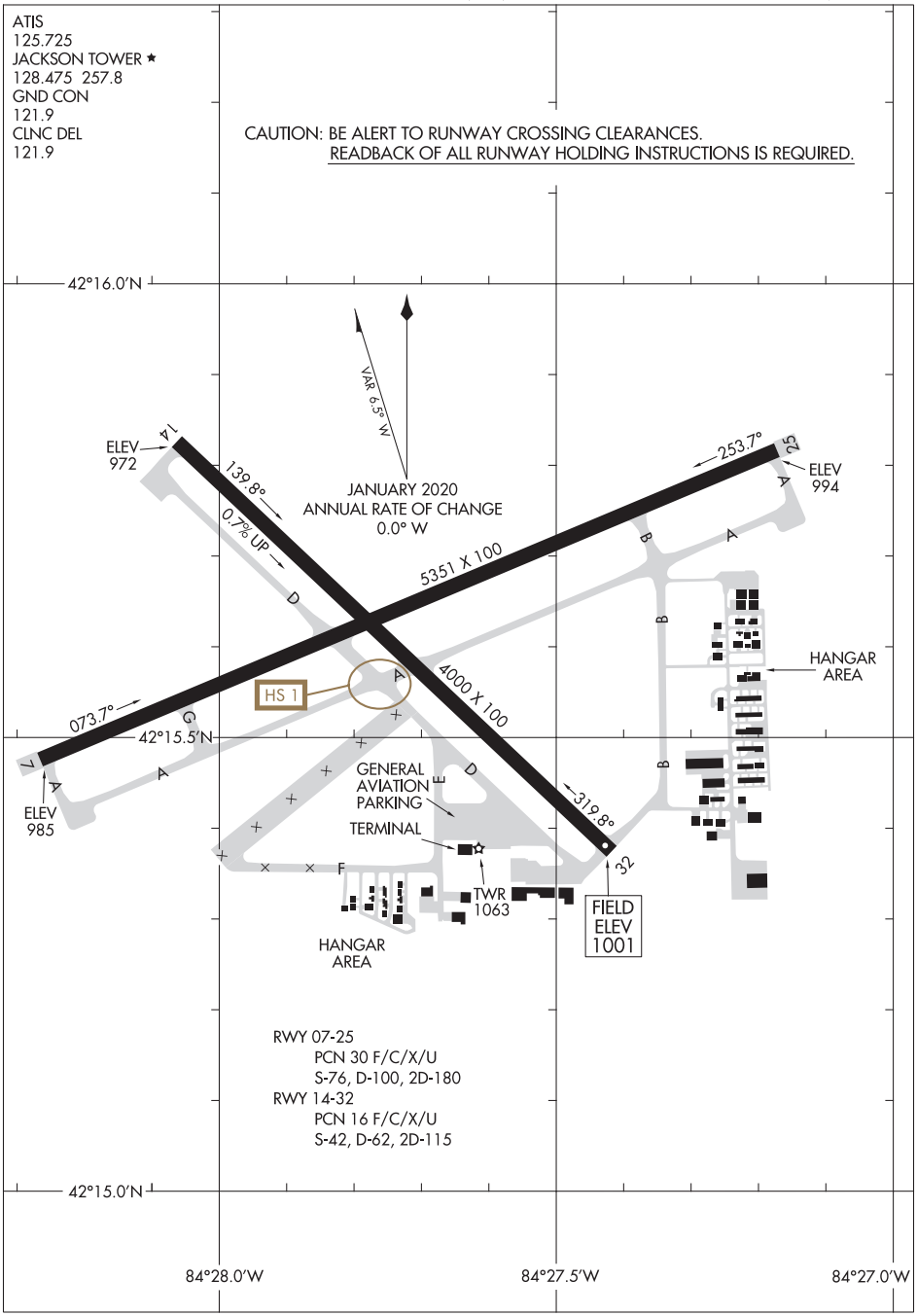

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KALAMAZOO, MICHIGAN AL-717 (FAA) 20254

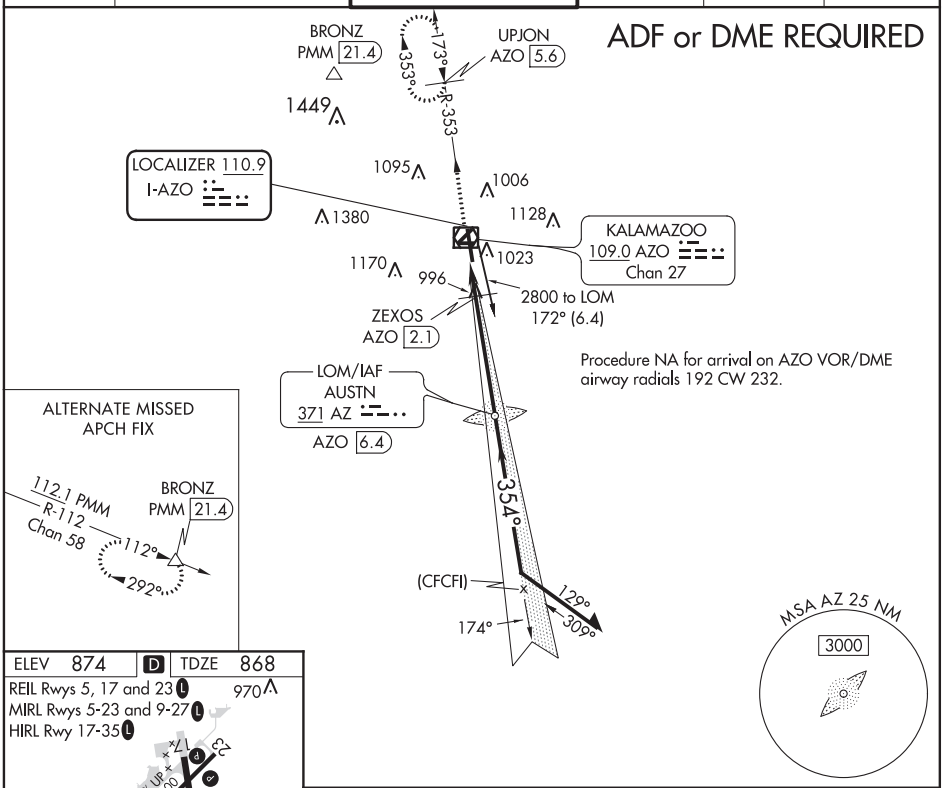
ILS or LOC RWY 35
KALAMAZOO/BATTLE CREEK INTL (AZO)

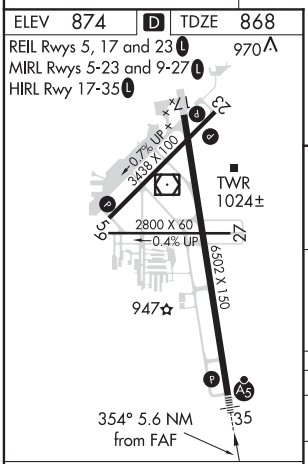
LOC I-AZO	APP CRS	Rwy ldg	6502
110.9	354°	TDZE	868
		Apt Elev	874

T A ASR — Night landing: Rwy 5, 9, 23, 27 NA. DME required. For inop MALSR, increase S-LOC 35 Cats C and D visibility to 1⅜ mile. ** RVR 1800 authorized with use of FD or AP or HUD to DA.

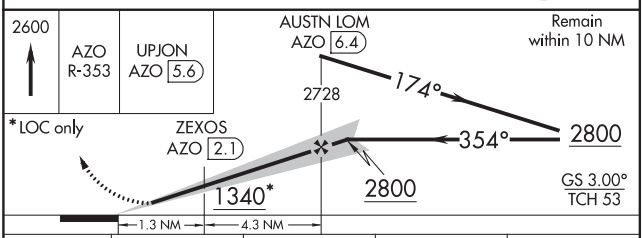
MALSR A5 — MISSED APPROACH: Climb to 2600 on AZO VOR/DME R-353 to UPJON/AZO VOR/DME 5.6 DME and hold.

ATIS	GREAT LAKES APP CON ★	KALAMAZOO TOWER ★	GND CON	CLNC DEL	UNICOM
127.25	121.2 239.25	118.3 (CTAF) L 257.875	121.9	121.75	122.95





FAF to MAP 5.6 NM					
Knots	60	90	120	150	180
Min:Sec	5:36	3:44	2:48	2:14	1:52



CATEGORY	A	B	C	D
S-ILS 35	**1068/24 200 (200-½)			
S-LOC 35	1260/24 392 (400-½)		1260/35 392 (400-⅝)	
C CIRCLING	1380-1 506 (600-1)		1480-1¾ 606 (700-1¾)	1480-2 606 (700-2)

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KALAMAZOO, MICHIGAN
Amdt 23 02MAR17

42°14'N-85°33'W

KALAMAZOO/BATTLE CREEK INTL (AZO)
ILS or LOC RWY 35

WAAS CH 56321 W05A	APP CRS 048°	Rwy ldg 3439 TDZE 874 Apt Elev 874

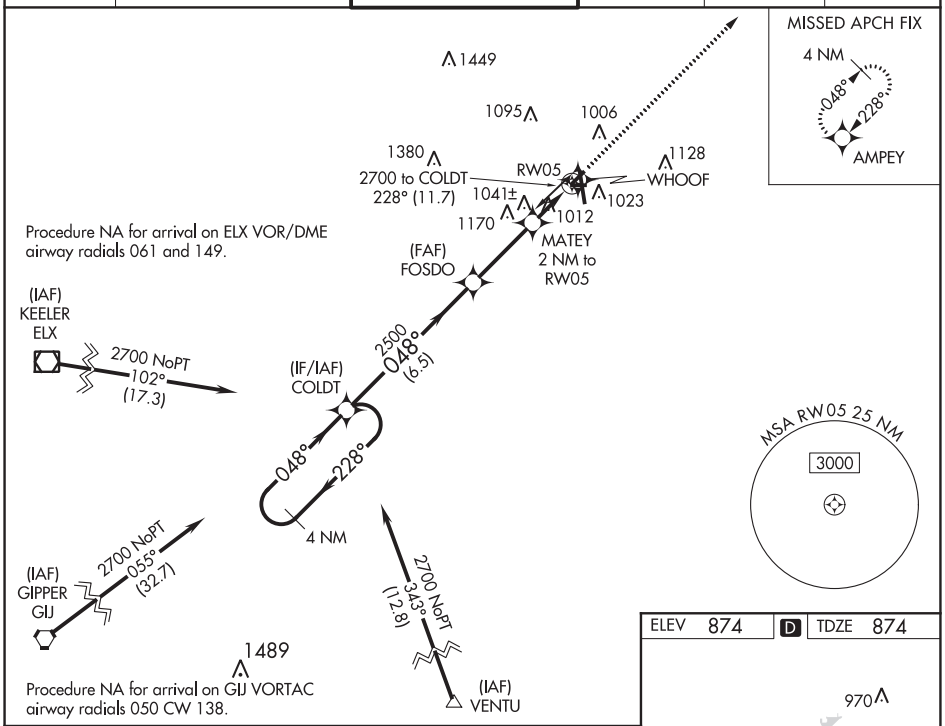
RNAV (GPS) RWY 5
KALAMAZOO/BATTLE CREEK INTL (AZO)

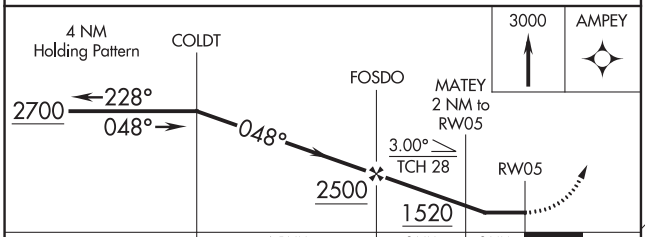
RNP APCH.

ASR — Circling Rwy 5, 9, 17, 23, 27 NA at night. Straight-in Rwy 5 NA at night. Rwy 5 helicopter visibility below 1 SM NA.

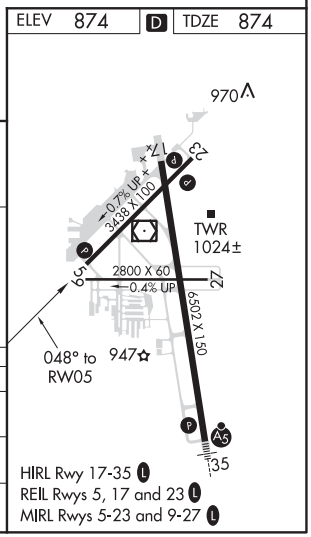
MISSED APPROACH: Climb to 3000 direct AMPEY and hold.

ATIS	GREAT LAKES APP CON ★	KALAMAZOO TOWER ★	GND CON	CLNC DEL	UNICOM
127.25	121.2 239.25	118.3 (CTAF) L 257.875	121.9	121.75	122.95





CATEGORY	A	B	C	D
LP MDA	1280-1	406 (500-1)	1280-1⅛ 406 (500-1⅛)	NA
LNAV MDA	1300-1	426 (500-1)	1300-1¼ 426 (500-1¼)	NA
C CIRCLING	1380-1	506 (600-1)	1480-1¾ 606 (700-1¾)	NA



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KALAMAZOO, MICHIGAN AL-717 (FAA) 20142

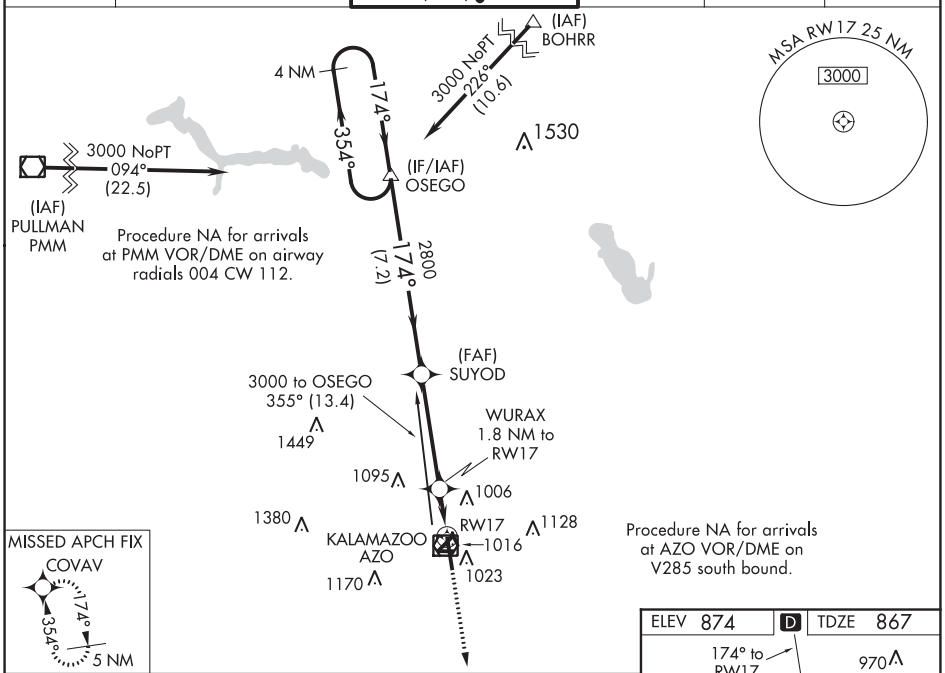
WAAS CH 57933 W17A	APP CRS 174°	Rwy ldg 6502 TDZE 867 Apt Elev 874

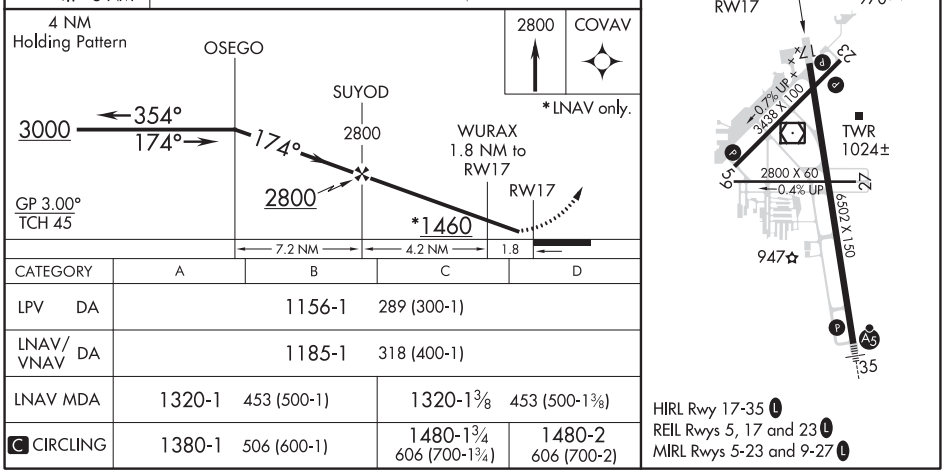
RNAV (GPS) RWY 17
KALAMAZOO/BATTLE CREEK INTL (AZO)

T A ASR — Baro-VNAV NA when using Battle Creek altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -21°C (-5°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below ¾ SM not authorized. When local altimeter setting not received, use Battle Creek altimeter setting and increase all DA 44 feet and all MDA 60 feet. Increase LPV all Cats and LNAV Cat C/D visibility ⅛ mile. Increase LNAV/VNAV visibility all Cats ¼ mile. Circling to Rwy 9/27 and 5/23 NA at night.

MISSED APPROACH: Climb to 2800 direct COVAV and hold.

ATIS	GREAT LAKES APP CON *	KALAMAZOO TOWER *	GND CON	CLNC DEL	UNICOM
127.25	121.2 239.25	118.3 (CTAF) L 257.875	121.9	121.75	122.95





CATEGORY	A	B	C	D
LPV DA	1156-1 289 (300-1)			
LNAV/VNAV DA	1185-1 318 (400-1)			
LNAV MDA	1320-1 453 (500-1)		1320-1⅜ 453 (500-1⅜)	
C CIRCLING	1380-1 506 (600-1)		1480-1¾ 606 (700-1¾)	1480-2 606 (700-2)

HIRL Rwy 17-35 L
REIL Rwys 5, 17 and 23 L
MIRL Rwys 5-23 and 9-27 L

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EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 61021 W23A	APP CRS 228°	Rwy ldg 3439 TDZE 874 Apt Elev 874

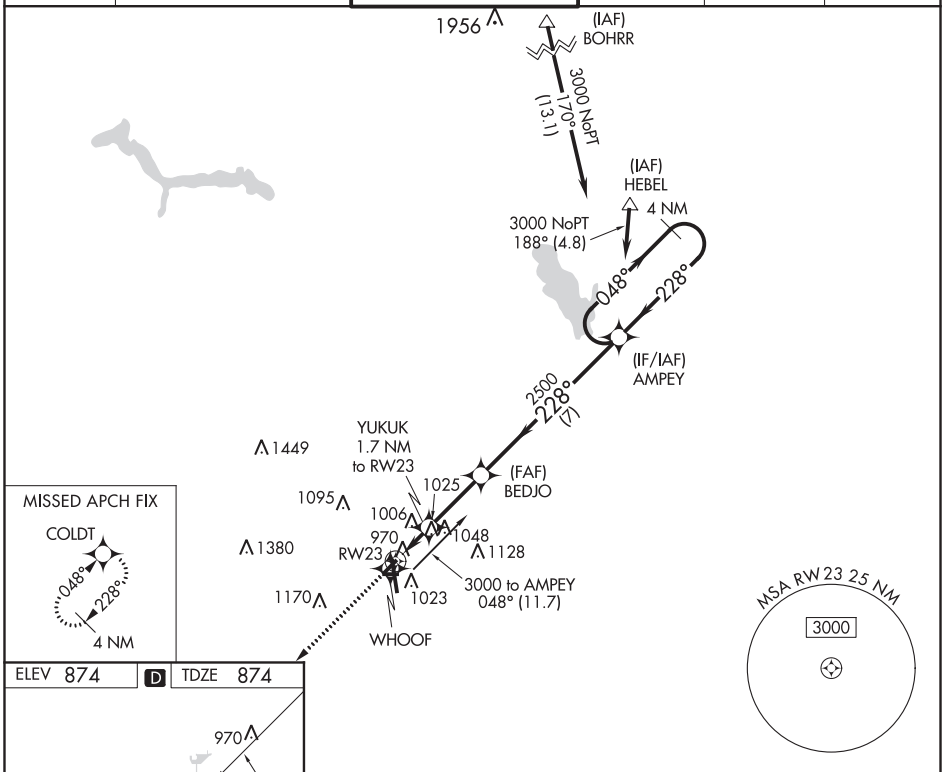
RNAV (GPS) RWY 23
KALAMAZOO/BATTLE CREEK INTL (AZO)

RNP APCH.

ASR Circling Rwy 5, 9, 17, 23, 27 NA at night. Rwy 23 helicopter visibility reduction below 1 SM NA. Straight-in Rwy 23 NA at night.

MISSED APPROACH: Climb to 2700 direct COLDT and hold.

ATIS	GREAT LAKES APP CON ★	KALAMAZOO TOWER ★	GND CON	CLNC DEL	UNICOM
127.25	121.2 239.25	118.3 (CTAF) L 257.875	121.9	121.75	122.95



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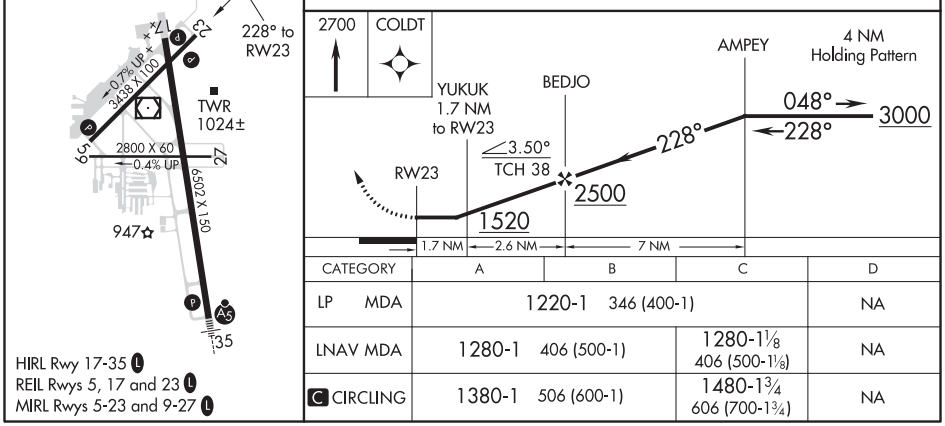

HIRL Rwy 17-35 L
REIL Rwys 5, 17 and 23 L
MIRL Rwys 5-23 and 9-27 L

CATEGORY	A	B	C	D
LP MDA	1220-1 346 (400-1)			NA
LNAV MDA	1280-1 406 (500-1)		1280-1⅛ 406 (500-1⅛)	NA
C CIRCLING	1380-1 506 (600-1)		1480-1¾ 606 (700-1¾)	NA

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KALAMAZOO, MICHIGAN AL-717 (FAA) 20142

WAAS CH 61102 W35A	APP CRS 354°	Rwy ldg 6502 TDZE 868 Apt Elev 874

RNAV (GPS) RWY 35
KALAMAZOO/BATTLE CREEK INTL (AZO)

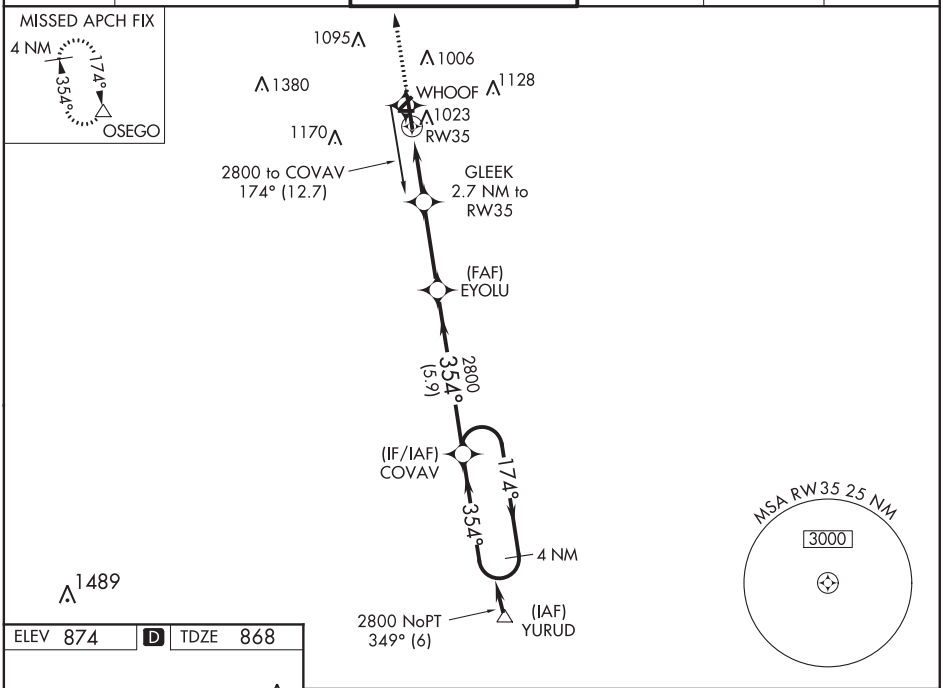
RNP APCH.

ASR: For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C or above 54°C. Circling Rwy 5, 9, 17, 23, 27 NA at night. ** RVR 1800 authorized with use of FD or AP or HUD to DA.

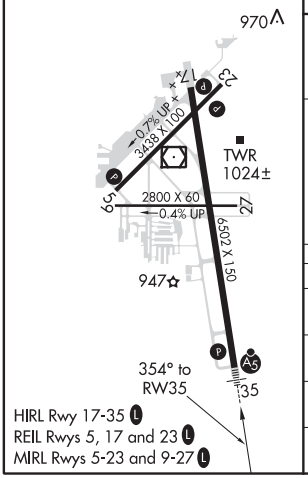
MALSR

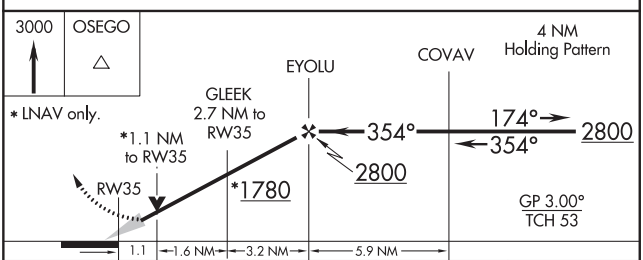
MISSED APPROACH: Climb to 3000 direct OSEGO and hold.

ATIS	GREAT LAKES APP CON ★	KALAMAZOO TOWER ★	GND CON	CLNC DEL	UNICOM
127.25	121.2 239.25	118.3 (CTAF) L 257.875	121.9	121.75	122.95



ELEV 874 D TDZE 868





CATEGORY	A	B	C	D
LPV DA **	1068/24 200 (200-½)			
LNAV/VNAV DA	1264/35 396 (400-⅝)			
LNAV MDA	1280/24 412 (500-½)		1280/40 412 (500-¾)	
C CIRCLING	1380-1 506 (600-1)		1480-1¾ 606 (700-1¾)	1480-2 606 (700-2)

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VOR/DME AZO 109.0 Chan 27	APP CRS 347°	Rwy ldg 6502 TDZE 868 Apt Elev 874

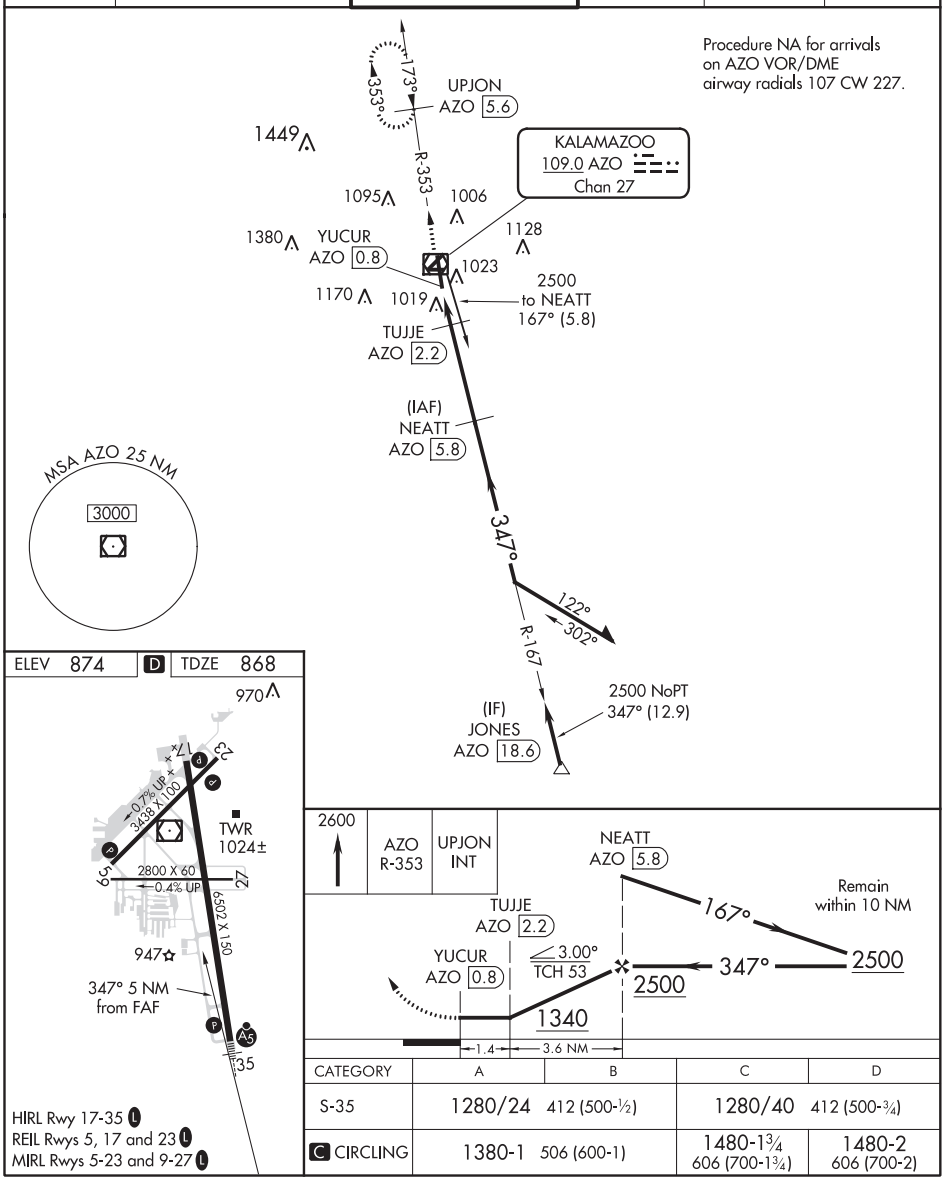
VOR RWY 35

KALAMAZOO/BATTLE CREEK INTL (AZO)

ASR: Circling to Rwy 5, 9, 23, 27 NA at night. DME required. For inoperative MALSR, increase S-35 Cat C and D visibility to RVR 6000.

MALSR: MISSED APPROACH: Climb to 2600 on AZO VOR/DME R-353 to UPJON/AZO 5.6 DME and hold.

ATIS	GREAT LAKES APP CON ★	KALAMAZOO TOWER ★	GND CON	CLNC DEL	UNICOM
127.25	121.2 239.25	118.3 (CTAF) L 257.875	121.9	121.75	122.95



HIRL Rwy 17-35 L
REIL Rwys 5, 17 and 23 L
MIRL Rwys 5-23 and 9-27 L

CATEGORY	A	B	C	D
S-35	1280/24 412 (500-½)		1280/40 412 (500-¾)	
C CIRCLING	1380-1 506 (600-1)		1480-1¾ 606 (700-1¾)	1480-2 606 (700-2)

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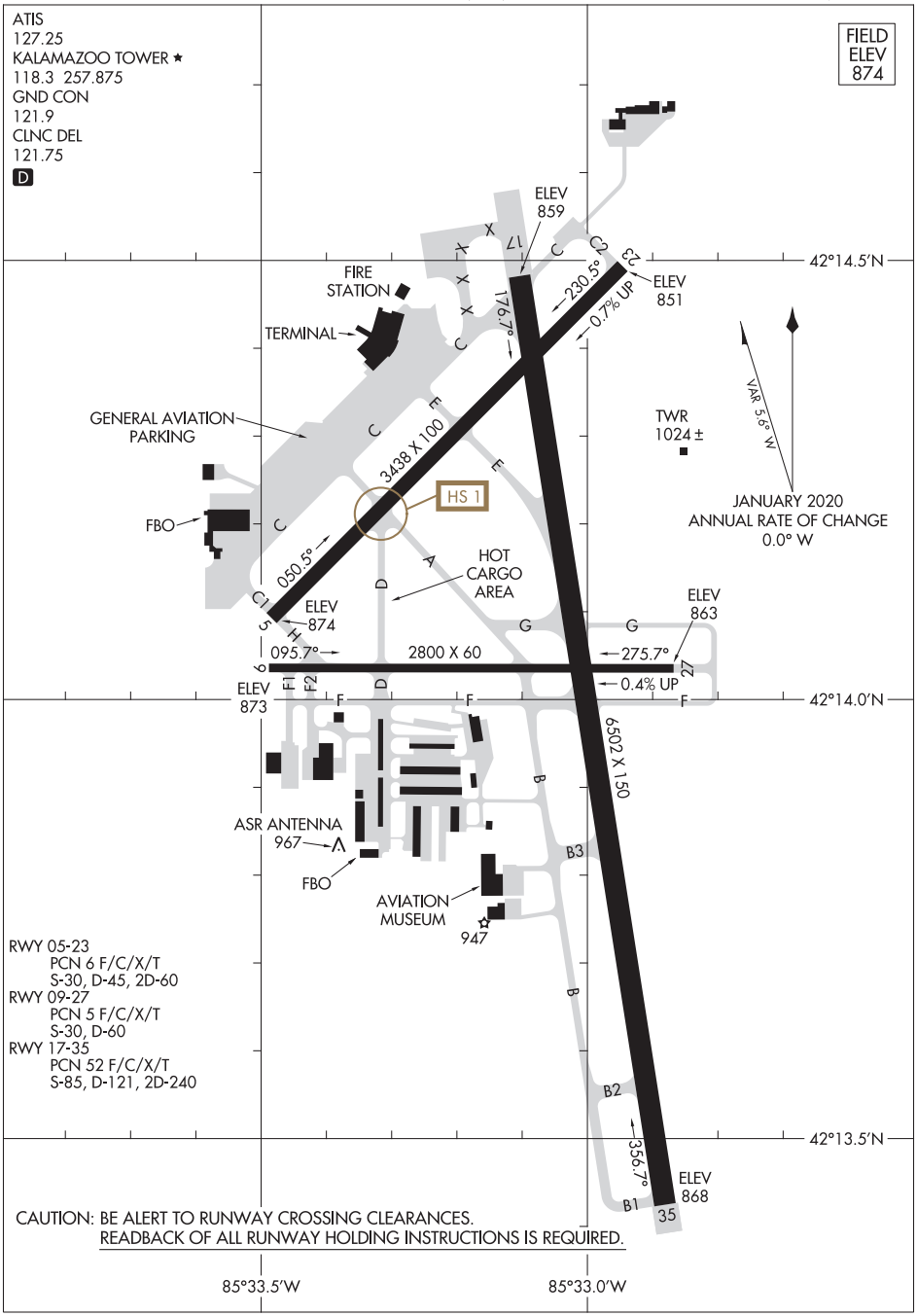
20086

AIRPORT DIAGRAM

AL-717 (FAA)

KALAMAZOO/BATTLE CREEK INTL (AZO)
KALAMAZOO, MICHIGAN



RWY 05-23
PCN 6 F/C/X/T
S-30, D-45, 2D-60
RWY 09-27
PCN 5 F/C/X/T
S-30, D-60
RWY 17-35
PCN 52 F/C/X/T
S-85, D-121, 2D-240

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

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20086
KALAMAZOO, MICHIGAN
KALAMAZOO/BATTLE CREEK INTL (AZO)

APP CRS	Rwy ldg	3499
094°	TDZE	969
	Apt Elev	969

RNAV (GPS) RWY 10
LAKEVIEW-GRIFFITH FIELD (13C)

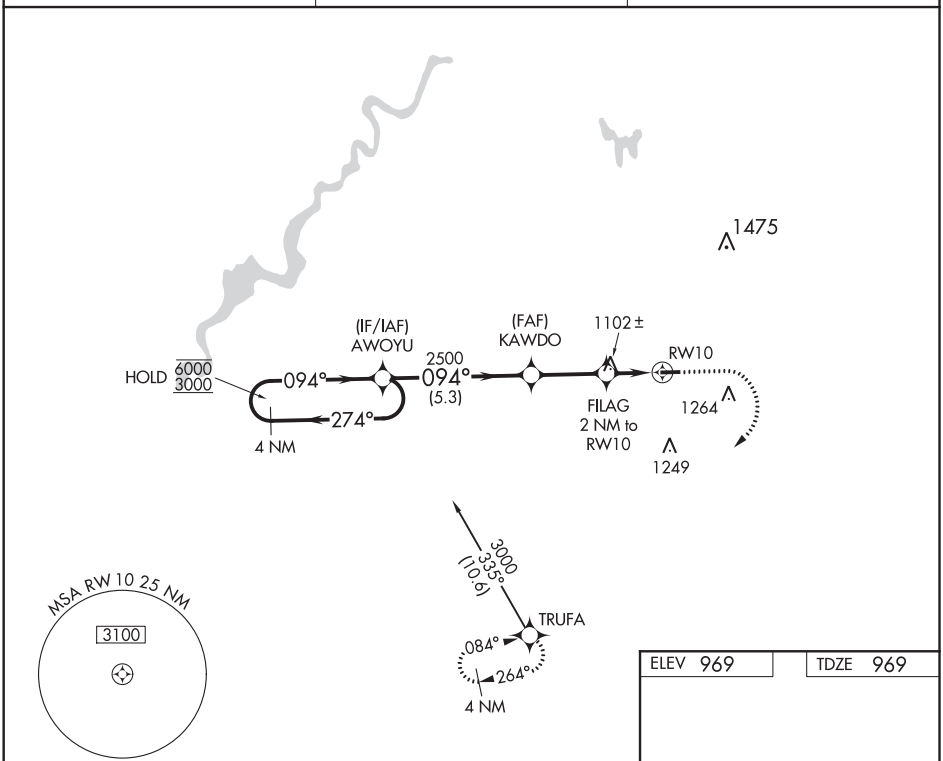
RNP APCH.

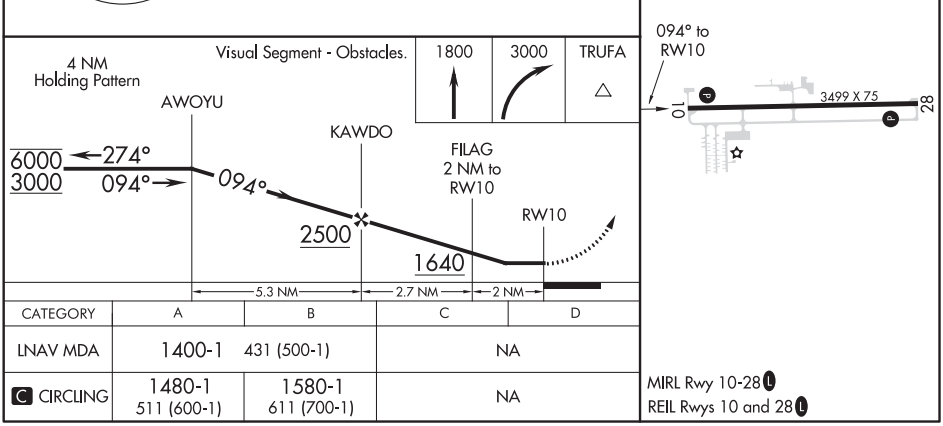
NA

Procedure NA at night. Rwy 10 helicopter visibility reduction below 1 SM NA. Use Big Rapids altimeter setting.

MISSED APPROACH: Climb to 1800 then climbing right turn to 3000 direct TRUFA and hold.

RQB AWOS-3P	GREAT LAKES APP CON *	UNICOM
125.875	124.6 257.6	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1400-1 431 (500-1)		NA	
C CIRCLING	1480-1 511 (600-1)	1580-1 611 (700-1)	NA	

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LAKEVIEW, MICHIGAN | AL-9344 (FAA) | 19283

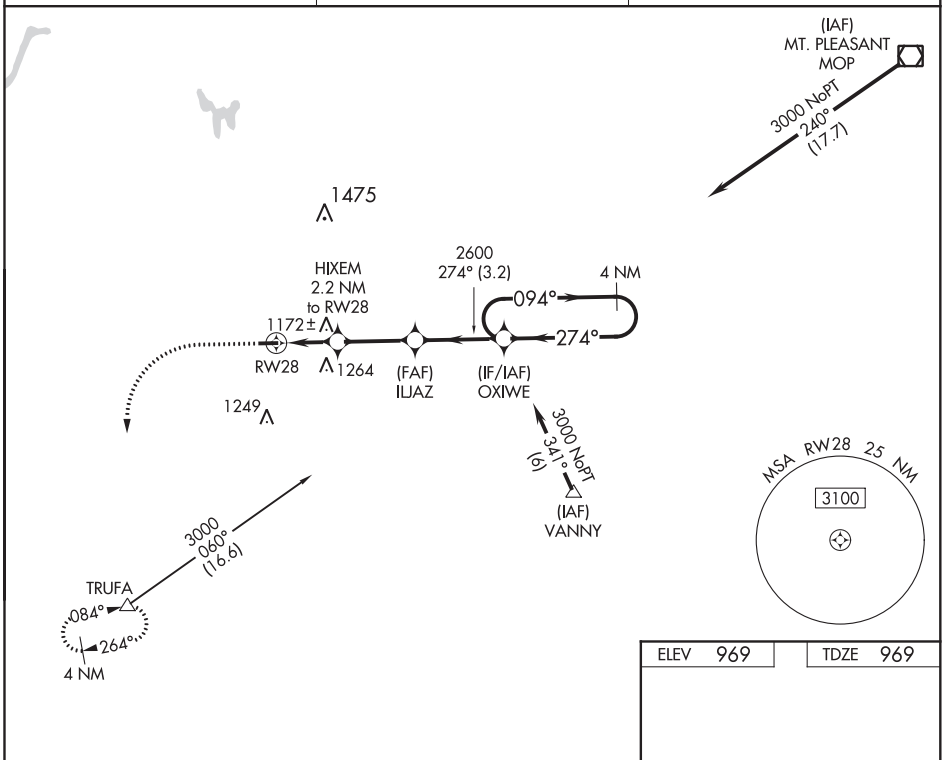
RNAV (GPS) RWY 28
LAKEVIEW-GRIFFITH FIELD (13C)

APP CRS	Rwy ldg	3499
274°	TDZE	969
	Apt Elev	969

T A NA — Use Big Rapids altimeter setting; when not received, use Mount Pleasant altimeter setting and increase all MDA 40 ft. DME/DME RNP-0.3 NA. Procedure NA at night. Helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 1800 then climbing left turn to 3000 direct TRUFA and hold.

RQB AWOS-3P	GREAT LAKES APP CON ★	UNICOM
125.875	124.6 257.6	122.8 (CTAF) L



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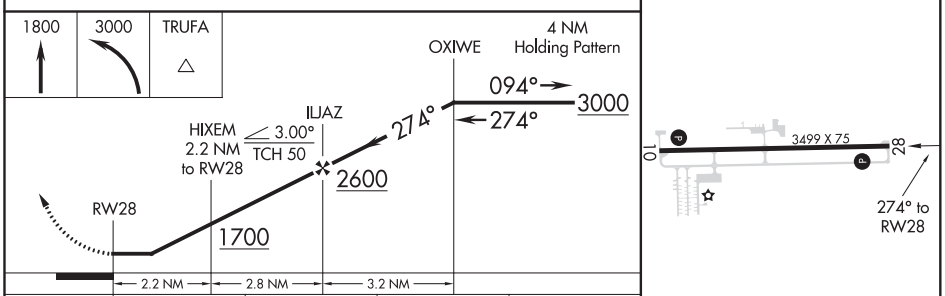
ELEV 969	TDZE 969



CATEGORY	A	B	C	D
LNAV MDA	1480-1 511 (600-1)		NA	
C CIRCLING	1480-1 511 (600-1)	1580-1 611 (700-1)	NA	

MIRL Rwy 10-28 L
REIL Rwys 10 and 28 L

APP CRS	Rwy ldg	N/A
004°	TDZE	N/A
	Apt Elev	671

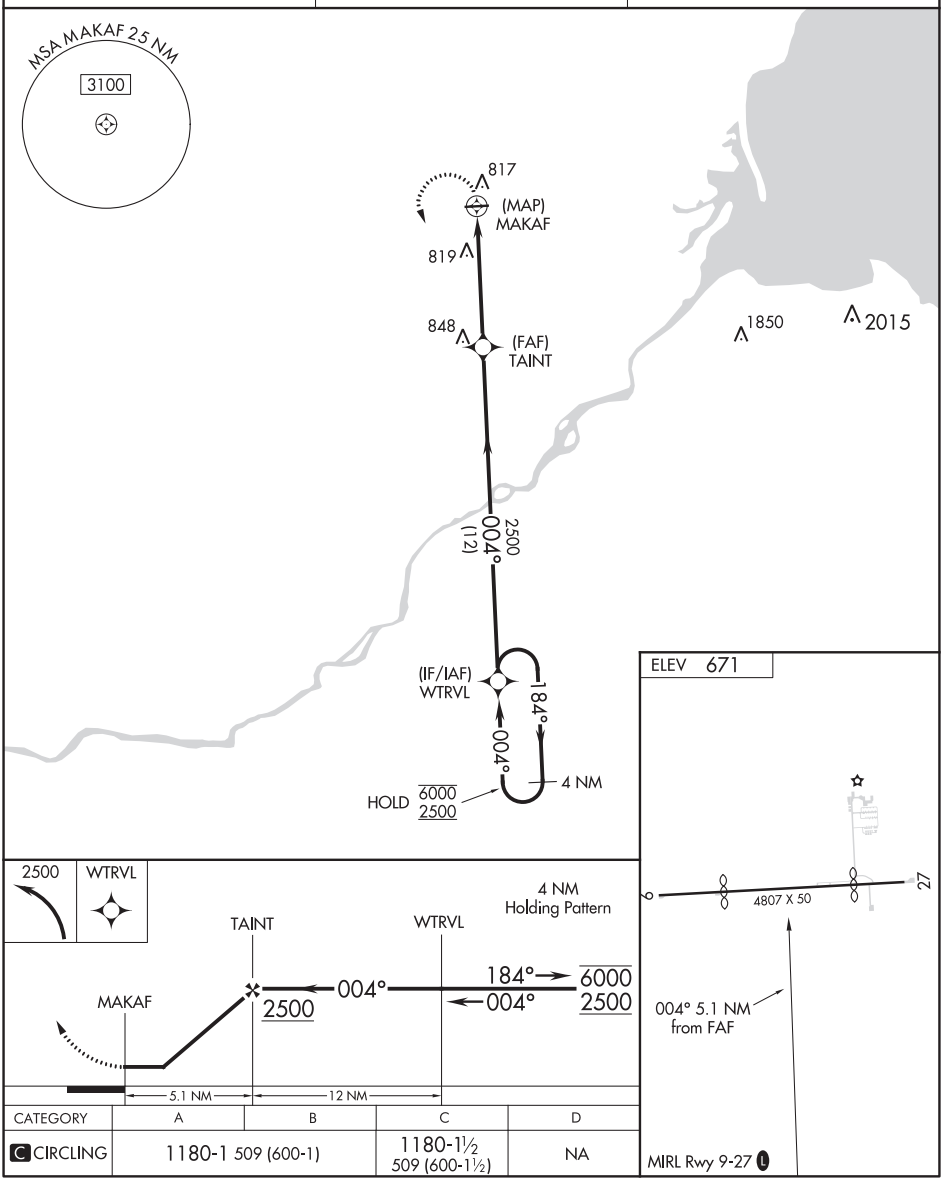
RNAV (GPS)-A
TOLEDO SUBURBAN (DUH)

RNP APCH.

Procedure NA at night.

MISSED APPROACH: Climbing left turn to 2500 direct WTRVL and hold.

AWOS-3	TOLEDO APP CON	UNICOM
119.175	126.1 317.55	122.7 (CTAF) L



CATEGORY	A	B	C	D
C CIRCLING	1180-1 509 (600-1)		1180-1½ 509 (600-1½)	NA

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LANSING, MICHIGAN — AL-224 (FAA) — 21056

ILS or LOC RWY 10R
CAPITAL REGION INTL (LAN)

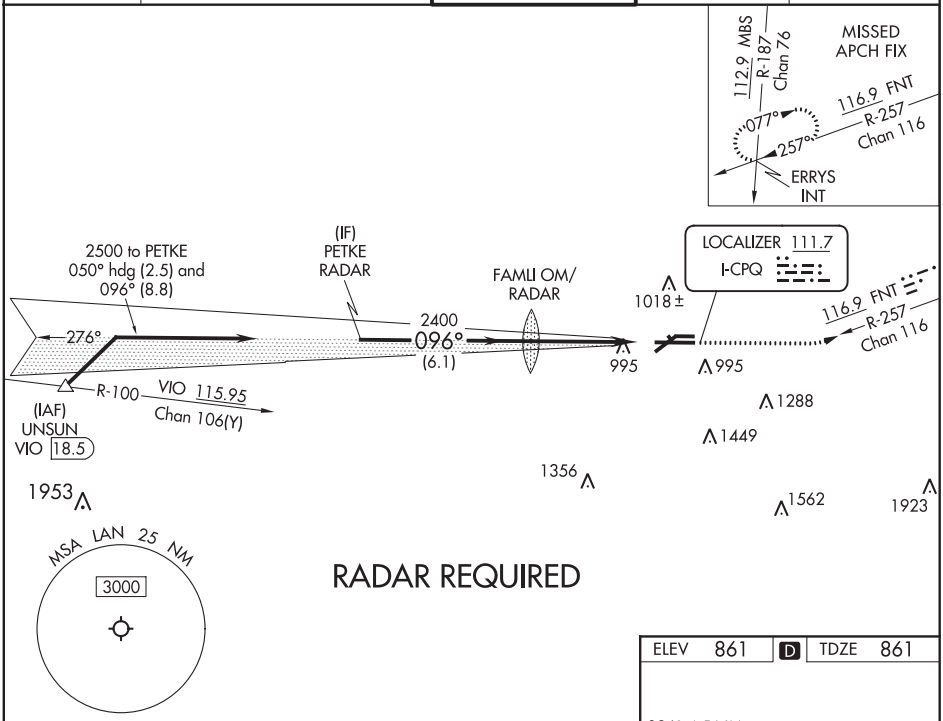
LOC I-CPQ	APP CRS	Rwy ldg	8506
111.7	096°	TDZE	861
		Apt Elev	861

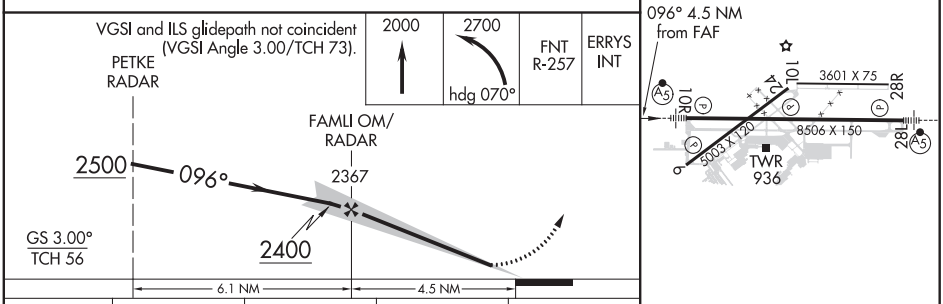
Circling Rwy 10L, 28R NA at night.
** RVR 1800 authorized with use of FD or AP or HUD to DA.

MALSR

MISSED APPROACH: Climb to 2000 then climbing left turn to 2700 on heading 070° and on FNT VORTAC R-257 to ERRYS INT and hold.

ATIS	GREAT LAKES APP CON ★	LANSING TOWER	GND CON	CLNC DEL
119.75	118.65 226.4	119.9 240.9	121.9	123.675





ELEV 861 | D | TDZE 861

CATEGORY	A	B	C	D
S-ILS 10R**	1061/24 200 (200-½)			
S-LOC 10R	1340/24 479 (500-½)		1340/50 479 (500-1)	
C CIRCLING	1380-1 519 (600-1)		1600-2 739 (800-2)	1760-3 899 (900-3)

REIL Rwys 6 and 24
HIRL Rwy 10R-28L
MIRL Rwys 6-24 and 10L-28R

FAF to MAP 4.5 NM

Knots	60	90	120	150	180
Min:Sec	4:30	3:00	2:15	1:48	1:30

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LOC/DME I-LAN 110.1 Chan 38	APP CRS 276°	Rwy ldg 8506 TDZE 852 Apt Elev 861

ILS or LOC RWY 28L
CAPITAL REGION INTL (LAN)

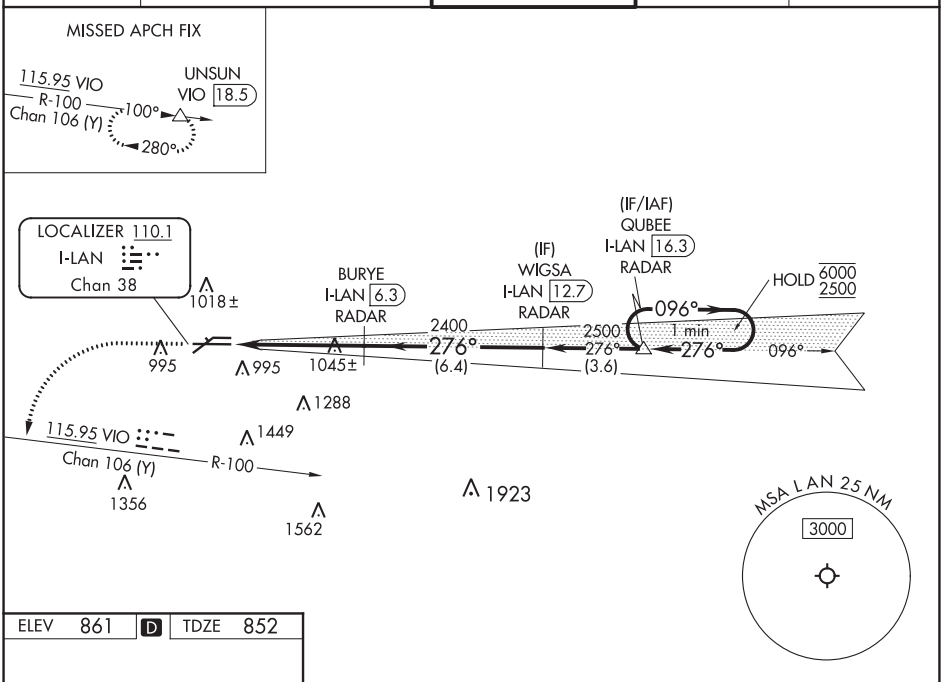
DME required. RADAR required for procedure entry.

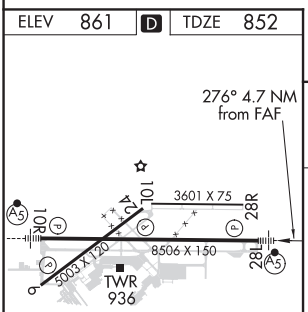
** RVR 1800 authorized with use of FD or AP or HUD to DA.

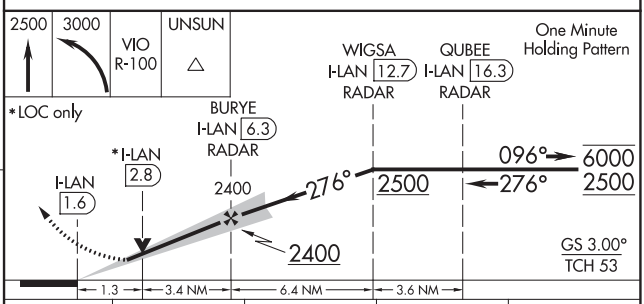
MALSR

MISSED APPROACH: Climb to 2500 then climbing left turn to 3000 on VIO VOR/DME R-100 to UNSUN/VIO 18.5 DME and hold.

ATIS	GREAT LAKES APP CON ★	LANSING TOWER	GND CON	CLNC DEL
119.75	118.65 226.4	119.9 240.9	121.9	123.675







REIL Rwys 6 and 24
HIRL Rwy 10R-28L
MIRL Rwys 6-24 and 10L-28R

FAF to MAP 4.7 NM					
Knots	60	90	120	150	180
Min:Sec	4:42	3:08	2:21	1:53	1:34

CATEGORY	A	B	C	D
S-ILS 28L**	1052/24 200 (200-½)			
S-LOC 28L	1300/24 448 (500-½)		1300/45 448 (500-⅞)	
C CIRCLING	1380-1 519 (600-1)		1600-2 739 (800-2)	1760-3 899 (900-3)

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LANSING, MICHIGAN AL-224 (FAA) 21056

WAAS CH 82118 W06A	APP CRS 058°	Rwy ldg 5002 TDZE 859 Apt Elev 861

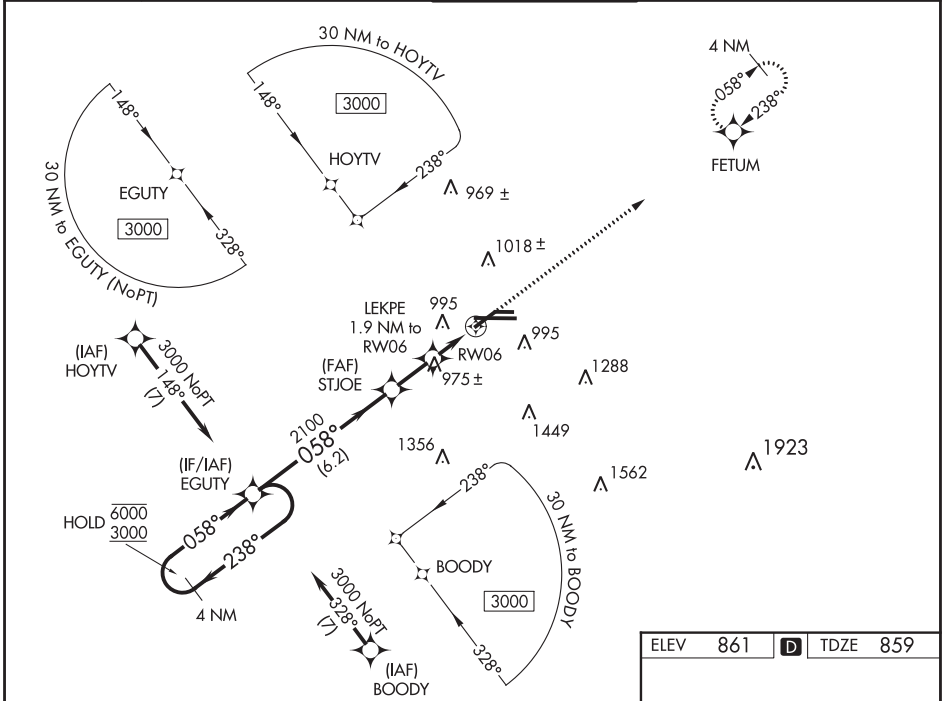
RNAV (GPS) RWY 6
CAPITAL REGION INTL (LAN)

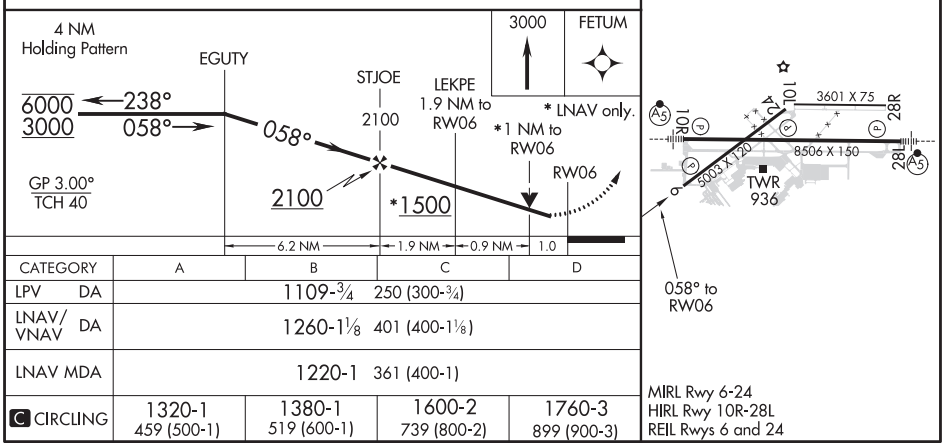
RNP APCH.

Circling Rwy 10L, 28R NA at night. Rwy 6 helicopter visibility reduction below ¾ SM NA.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -21°C or above 54°C.

MISSED APPROACH: Climb to 3000 direct FETUM and hold.

ATIS	GREAT LAKES APP CON ★	LANSING TOWER	GND CON	CLNC DEL
119.75	118.65 226.4	119.9 240.9	121.9	123.675





CATEGORY	A	B	C	D
LPV DA	1109-¾ 250 (300-¾)			
LNAV/VNAV DA	1260-1⅛ 401 (400-1⅛)			
LNAV MDA	1220-1 361 (400-1)			
C CIRCLING	1320-1 459 (500-1)	1380-1 519 (600-1)	1600-2 739 (800-2)	1760-3 899 (900-3)

MIRL Rwy 6-24
HIRL Rwy 10R-28L
REIL Rwys 6 and 24

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WAAS CH 61314 W10A	APP CRS 096°	Rwy ldg 8506 TDZE 861 Apt Elev 861

RNAV (GPS) RWY 10R
CAPITAL REGION INTL (LAN)

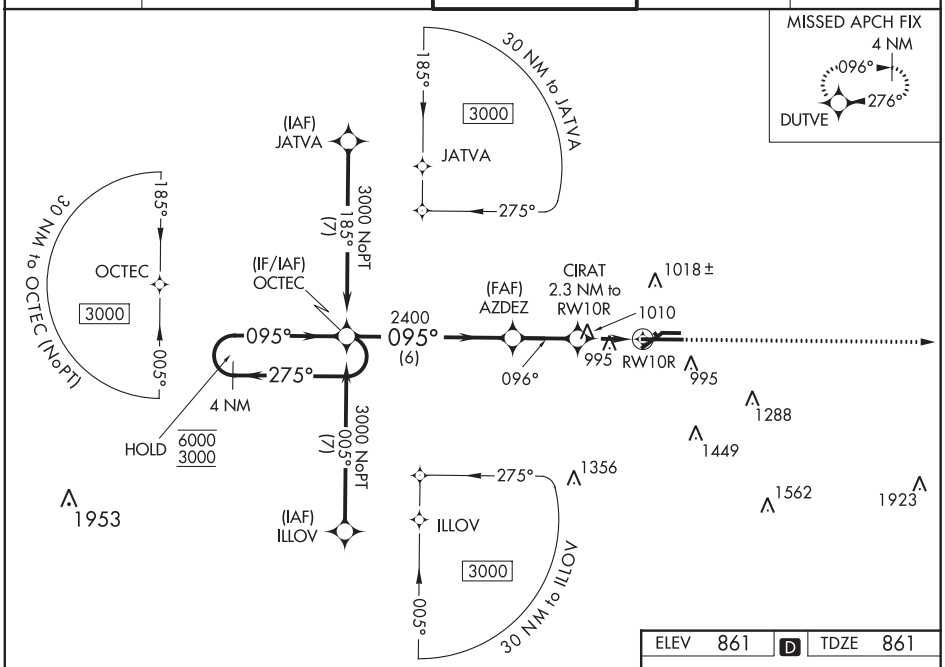
RNP APCH.

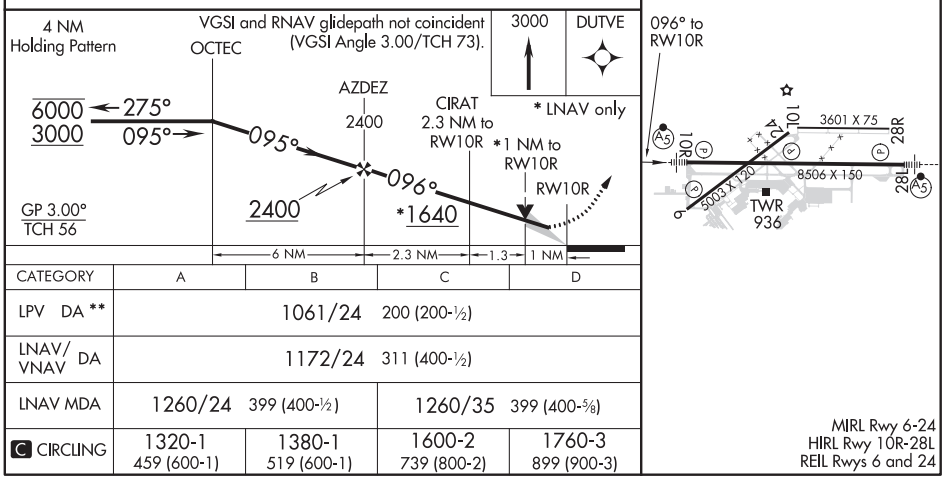
Circling Rwy 10L, 28R NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C or above 54°C. For inop ALS, increase LNAV/VNAV all Cats visibility to RVR 4500. ** RVR 1800 authorized with use of FD or AP or HUD to DA.

MALSR

MISSED APPROACH: Climb to 3000 direct DUTVE and hold.

ATIS	GREAT LAKES APP CON *	LANSING TOWER	GND CON	CLNC DEL
119.75	118.65 226.4	119.9 240.9	121.9	123.675





CATEGORY	A	B	C	D
LPV DA **	1061/24 200 (200-½)			
LNAV/VNAV DA	1172/24 311 (400-½)			
LNAV MDA	1260/24 399 (400-½)		1260/35 399 (400-⅝)	
C CIRCLING	1320-1 459 (600-1)	1380-1 519 (600-1)	1600-2 739 (800-2)	1760-3 899 (900-3)

MIRL Rwy 6-24
HIRL Rwy 10R-28L
REIL Rwys 6 and 24

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LANSING, MICHIGAN AL-224 (FAA) 21056

RNAV (GPS) RWY 24
CAPITAL REGION INTL (LAN)

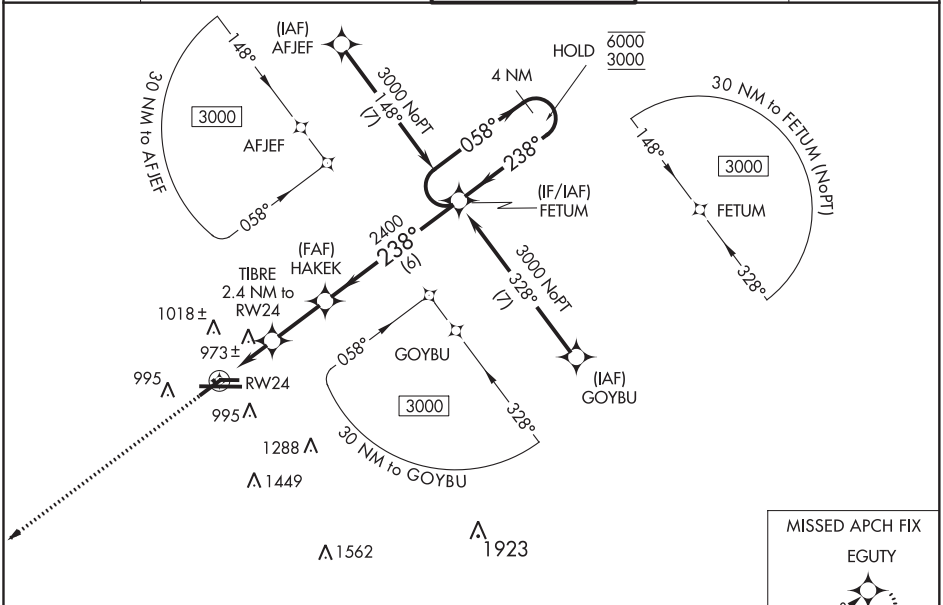
WAAS CH 50413 W24A	APP CRS 238°	Rwy ldg 5002 TDZE 857 Apt Elev 861

RNP APCH.

Circling Rwy 10L, 28R NA at night. Rwy 24 helicopter visibility reduction below ¾ SM NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -22°C or above 54°C.

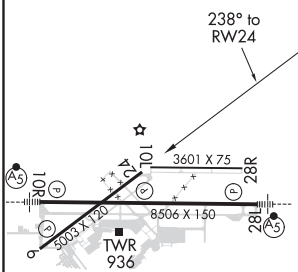
MISSED APPROACH: Climb to 3000 direct EGUTY and hold.

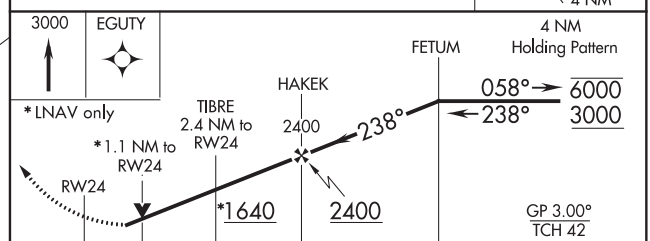
ATIS	GREAT LAKES APP CON ★	LANSING TOWER	GND CON	CLNC DEL
119.75	118.65 226.4	119.9 240.9	121.9	123.675



MISSED APCH FIX

ELEV 861 | D | TDZE 857





CATEGORY	A	B	C	D
LPV DA	1162-⅞ 305 (400-⅞)			
LNAV/VNAV DA	1286-1¼ 429 (500-1¼)			
LNAV MDA	1240-1 383 (400-1)		1240-1⅛ 383 (400-1⅛)	
C CIRCLING	1320-1 459 (500-1)	1380-1 519 (600-1)	1600-2 739 (800-2)	1760-3 899 (900-3)

MIRL Rwy 6-24
HIRL Rwy 10R-28L
REIL Rwys 6 and 24

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WAAS CH 40414 W28A	APP CRS 276°	Rwy ldg 8506 TDZE 852 Apt Elev 861

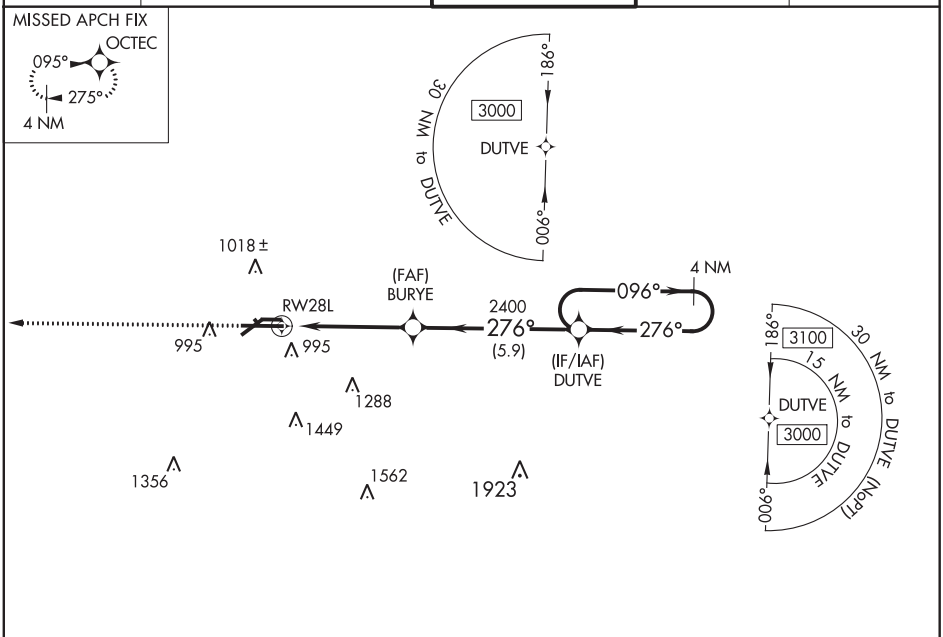
RNAV (GPS) RWY 28L
CAPITAL REGION INTL (LAN)

T A For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C (-2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Circling Rwy 10L, 28R NA at night.
RVR 1800 authorized with use of FD or AP or HUD to DA.

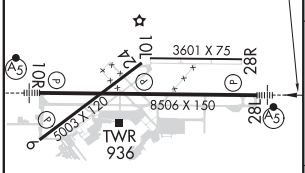
MALSR A5

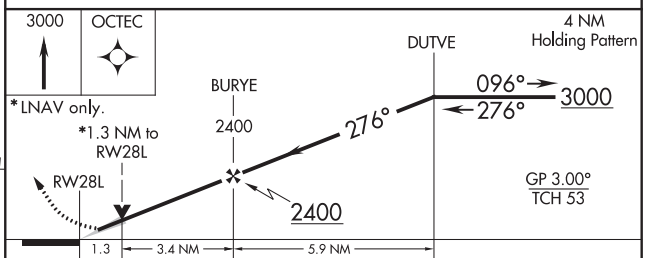
MISSED APPROACH: Climb to 3000 direct OCTEC and hold.

ATIS	GREAT LAKES APP CON ★	LANSING TOWER	GND CON	CLNC DEL
119.75	118.65 226.4	119.9 240.9	121.9	123.675



ELEV 861 D TDZE 852





CATEGORY	A	B	C	D
LPV DA #	1052/24 200 (200-½)			
LNAV/VNAV DA	1174/28 322 (400-⅝)			
LNAV MDA	1300/24 448 (500-½)		1300/45 448 (500-⅞)	
C CIRCLING	1380-1 519 (600-1)		1600-2 739 (800-2)	1760-3 899 (900-3)

REIL Rwys 6 and 24
HIRL Rwy 10R-28L
MIRL Rwys 6-24 and 10L-28R

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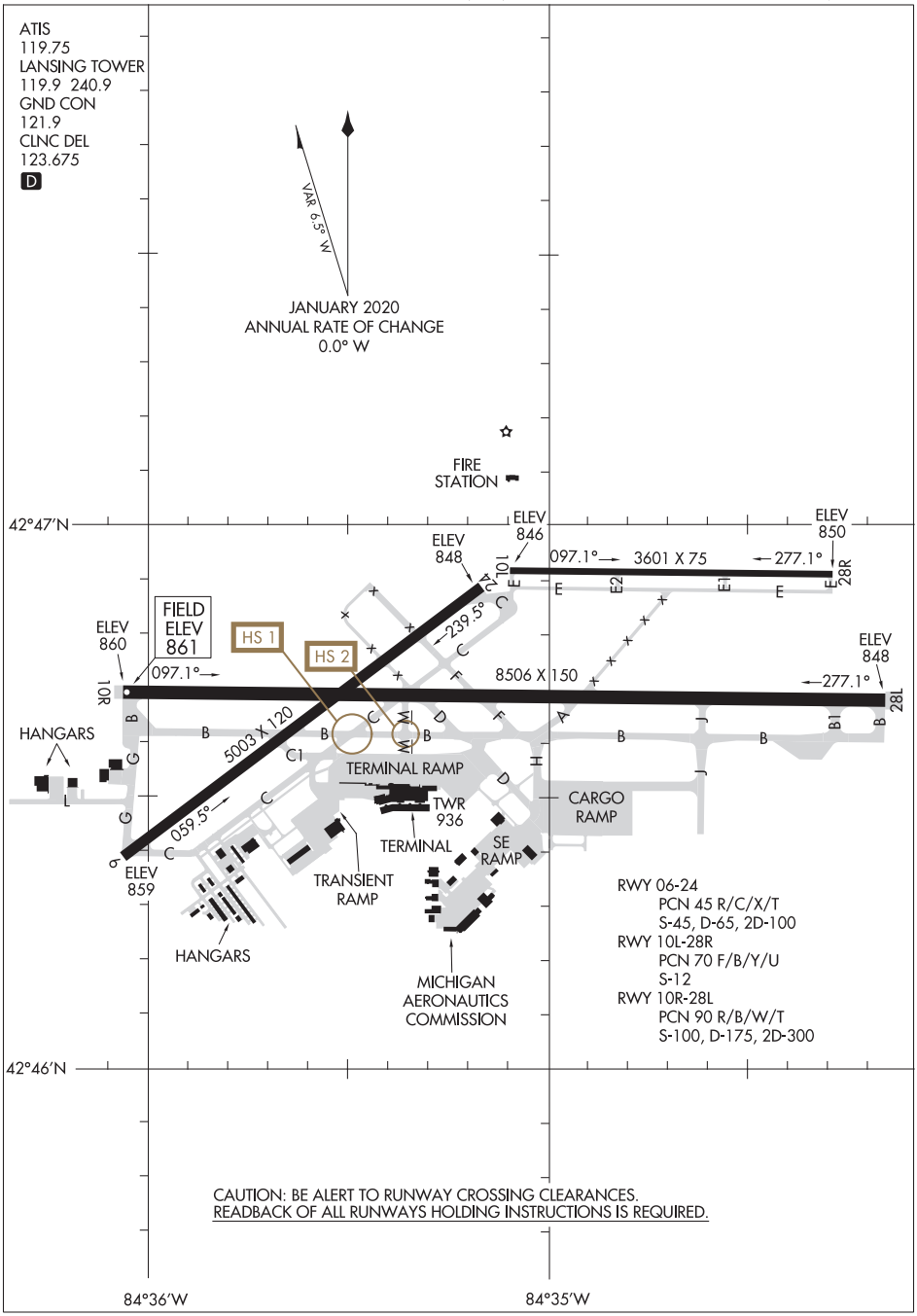
AIRPORT DIAGRAM

AL-224 (FAA)

CAPITAL REGION INTL (LAN)
LANSING, MICHIGAN



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AIRPORT DIAGRAM
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LANSING, MICHIGAN
CAPITAL REGION INTL (LAN)

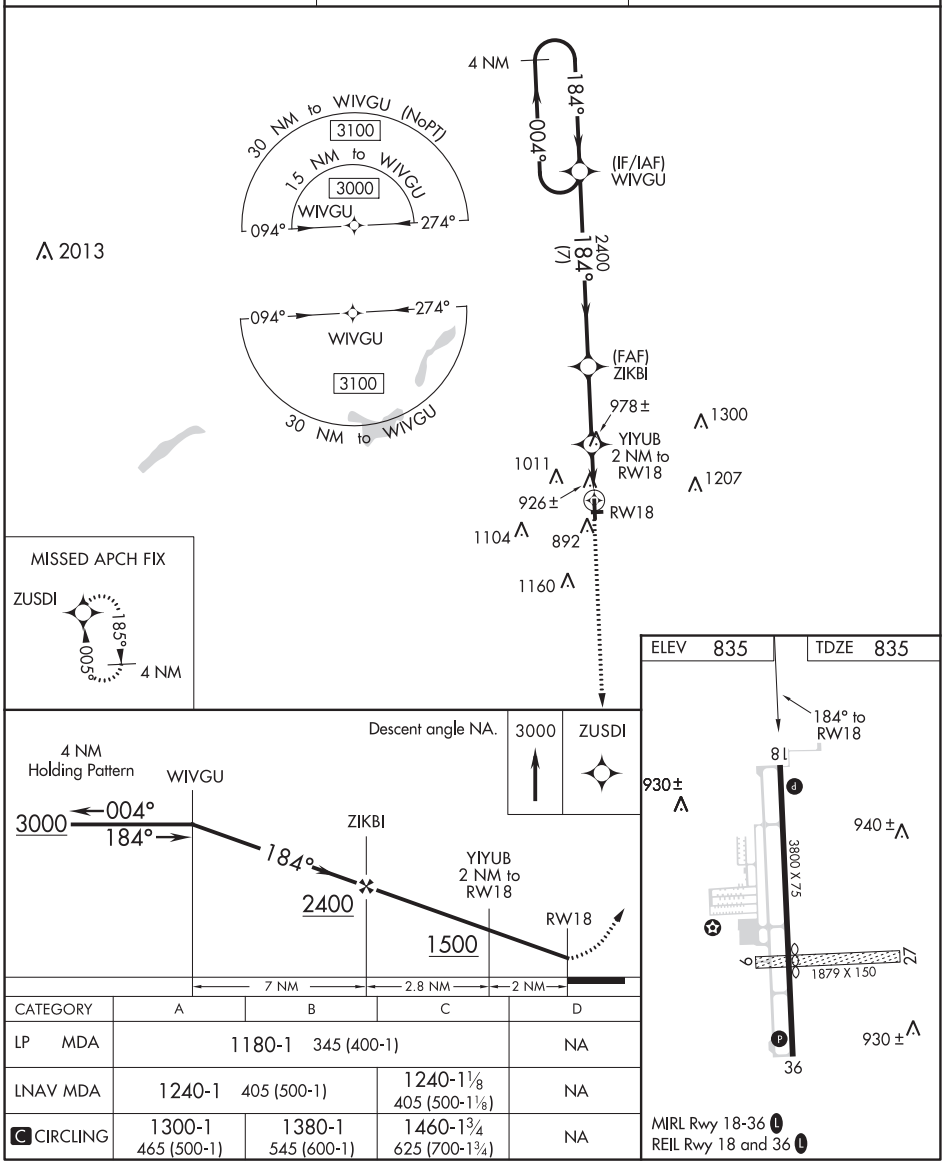
RNAV (GPS) RWY 18
DUPONT-LAPEER (D95)

WAAS CH 56234 W18A	APP CRS 184°	Rwy ldg 3800 TDZE 835 Apt Elev 835

DME/DME RNP-0.3 NA. Helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Flint altimeter setting and increase all MDAs 60 feet and increase LP Cat C visibility ⅛ mile, LNAV Cat C and Circling Cat C visibility ¼ mile. Circling NA to Rwys 9 and 27.

MISSED APPROACH: Climb to 3000 direct ZUSDI and hold.

AWOS-3P	GREAT LAKES APP CON ★	UNICOM
134.050	118.8 257.9	123.0 (CTAF) L



CATEGORY	A	B	C	D
LP MDA	1180-1 345 (400-1)			NA
LNAV MDA	1240-1 405 (500-1)		1240-1⅛ 405 (500-1⅛)	NA
C CIRCLING	1300-1 465 (500-1)	1380-1 545 (600-1)	1460-1¾ 625 (700-1¾)	NA

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LAPEER, MICHIGAN AL-5446 (FAA) 19171

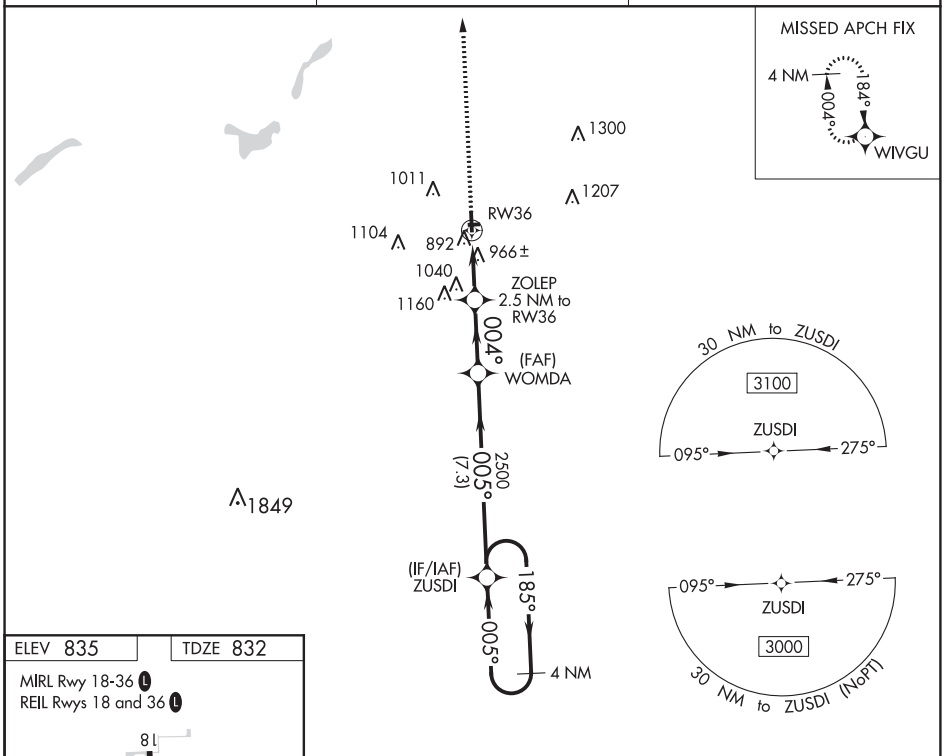
RNAV (GPS) RWY 36
DUPONT-LAPEER (D95)

WAAS CH 60934 W36A	APP CRS 004°	Rwy ldg 3800 TDZE 832 Apt Elev 835

DME/DME RNP-0.3 NA. Helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Flint altimeter setting and increase all MDA 60 feet and increase LNAV Cat C visibility ⅛ mile and LP Cat C and Circling Cat C visibility ¼ mile. Circling NA to Rwys 9 and 27.

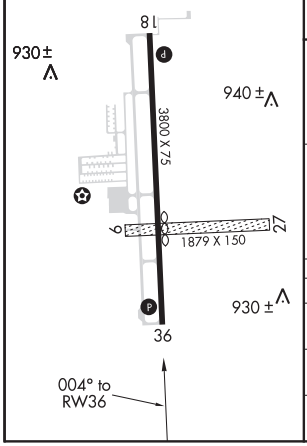
MISSED APPROACH: Climb to 3000 direct WIVGU and hold.

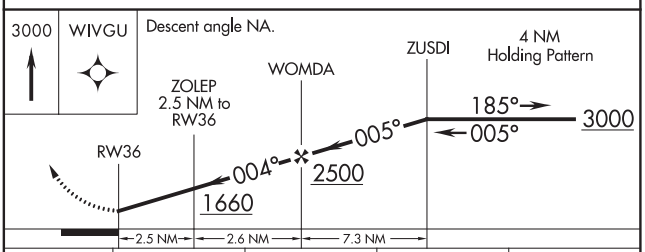
AWOS-3P	GREAT LAKES APP CON ★	UNICOM
134.050	118.8 257.9	123.0 (CTAF) L



ELEV 835 TDZE 832

MIRL Rwy 18-36 L
REIL Rwys 18 and 36 L





CATEGORY	A	B	C	D
LP MDA	1220-1 388 (400-1)		1220-1⅛ 388 (400-1⅛)	NA
LNAV MDA	1260-1 428 (500-1)		1260-1¼ 428 (500-1¼)	NA
C CIRCLING	1300-1 465 (500-1)	1380-1 545 (600-1)	1460-1¾ 625 (700-1¾)	NA

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VORTAC FNT 116.9 Chan 116	APP CRS 080°	Rwy ldg N/A TDZE N/A Apt Elev 835

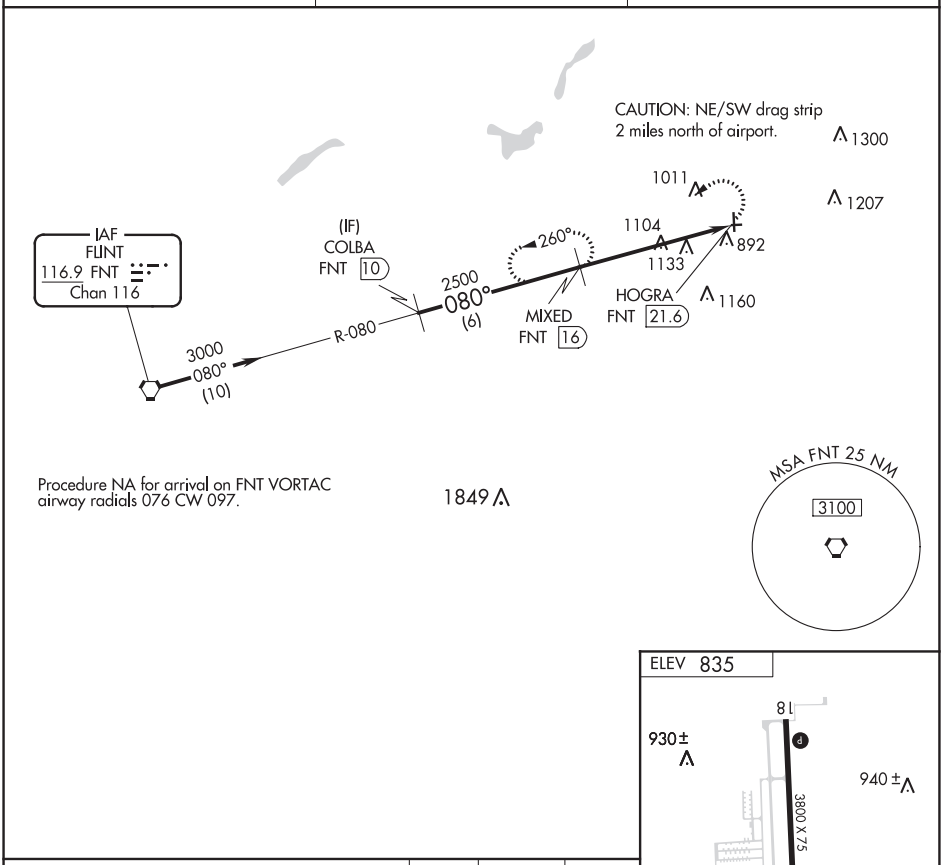
VOR-A
DUPONT-LAPEER (D95)

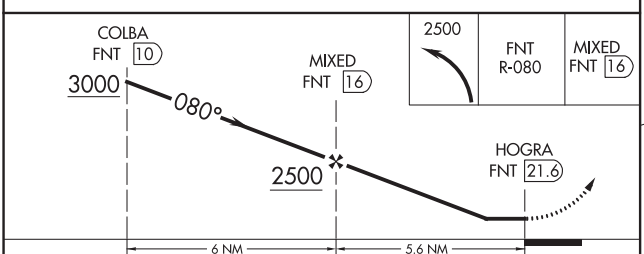
DME required.

Circling NA to Rwys 9 and 27. Circling Rwy 18 NA at night. Rwy 18 helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climbing left turn to 2500 on FNT VORTAC R-080 to MIXED 16 DME and hold.

AWOS-3P	GREAT LAKES APP CON ★	UNICOM
134.050	118.8 257.9	123.0 (CTAF) L





CATEGORY	A	B	C	D
C CIRCLING	1400-1 565 (600-1)		1460-1¾ 625 (700-1¾)	NA

FAF to MAP 5.6 NM					
Knots	60	90	120	150	180
Min:Sec	5:36	3:44	2:48	2:14	1:52

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LINDEN, MICHIGAN AL-6232 (FAA) 19283

RNAV (GPS) RWY 9
PRICES (9G2)

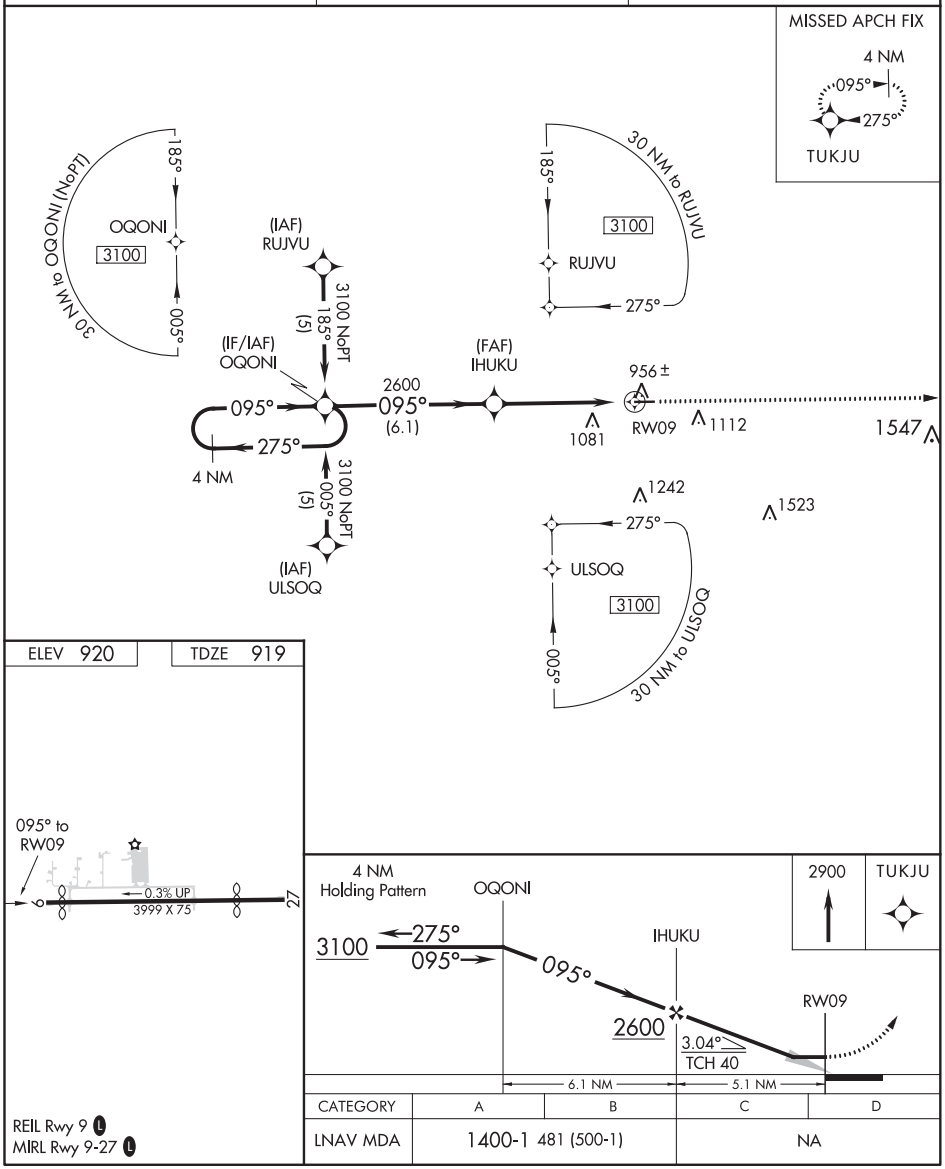
APP CRS	Rwy ldg	3732
095°	TDZE	919
	Apt Elev	920

RNP APCH.

Use Flint altimeter setting; when not received, use Howell altimeter setting.
NA Procedure NA at night. Rwy 9 helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 2900 direct TUKJU and hold.

FNT ASOS	GREAT LAKES APP CON ★	UNICOM
133.15	128.55 257.9	123.0 (CTAF) L



CATEGORY	A	B	C	D
LNAV MDA	1400-1 481 (500-1)		NA	

LINDEN, MICHIGAN
Amdt 1B 18JUL19

42°48′N-83°46′W

PRICES (9G2)
RNAV (GPS) RWY 9

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APP CRS	Rwy ldg	3199
275°	TDZE	919
	Apt Elev	920

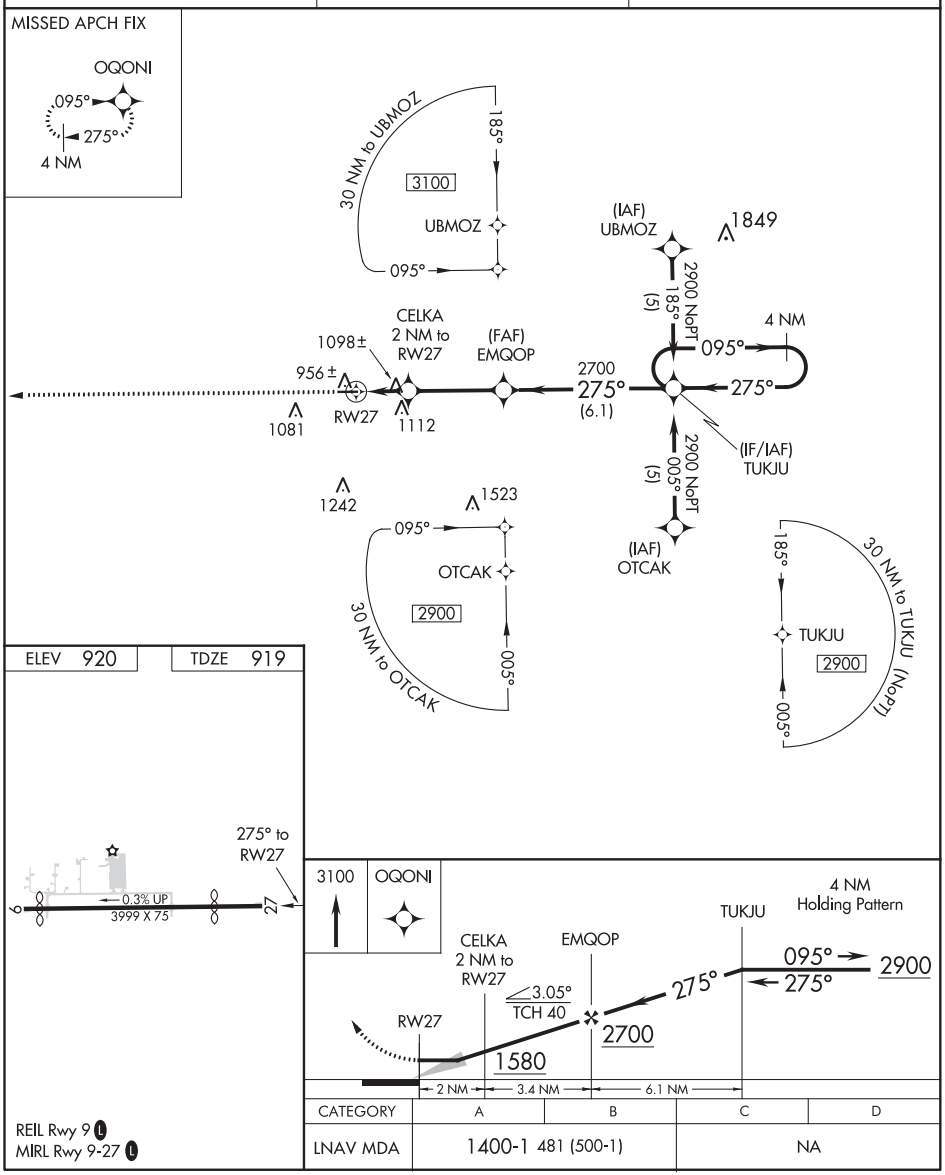
RNAV (GPS) RWY 27
PRICES (9G2)

RNP APCH.

Use Flint altimeter setting; when not received, use Howell altimeter setting.
NA Procedure NA at night. Rwy 27 helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 3100 direct OQONI and hold.

FNT ASOS	GREAT LAKES APP CON ★	UNICOM
133.15	128.55 257.9	123.0 (CTAF) L



CATEGORY	A	B	C	D
LNAV MDA	1400-1 481 (500-1)		NA	

REIL Rwy 9 L
MIRL Rwy 9-27 L

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LINDEN, MICHIGAN — AL-6232 (FAA) — 19283

VOR-A
PRICES (9G2)

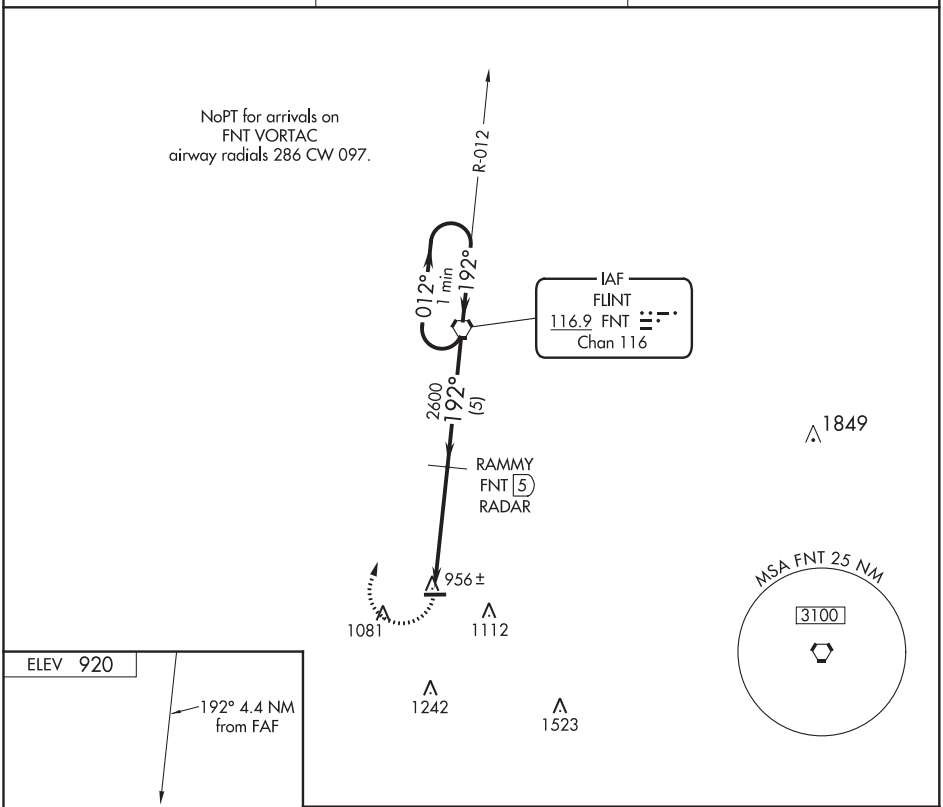
VORTAC FNT	APP CRS	Rwy ldg	N/A
116.9	192°	TDZE	N/A
Chan 116		Apt Elev	920

DME or RADAR required.

Use Flint altimeter setting; when not received, use Howell altimeter setting.
NA Procedure NA at night.

MISSED APPROACH: Climbing right turn to 2600 direct FNT VORTAC and hold.

FNT ASOS	GREAT LAKES APP CON ★	UNICOM
133.15	128.55 257.9	123.0 (CTAF) L



REIL Rwy 9 L
MIRL Rwy 9-27 L

FAF to MAP 4.4 NM					
Knots	60	90	120	150	180
Min:Sec	4:24	2:56	2:12	1:46	1:28

CATEGORY	A	B	C	D
CIRCLING	1460-1 540 (600-1)		NA	

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APP CRS	Rwy ldg	5003
074°	TDZE	643
	Apt Elev	646

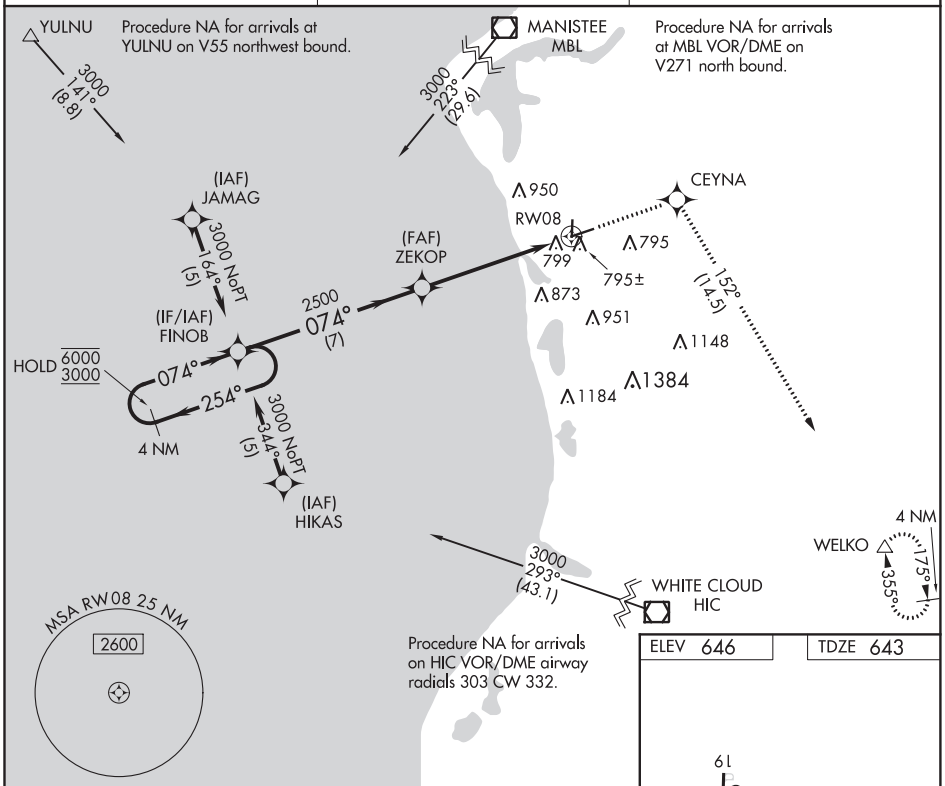
RNAV (GPS) RWY 8
MASON COUNTY (LDM)

RNP APCH.

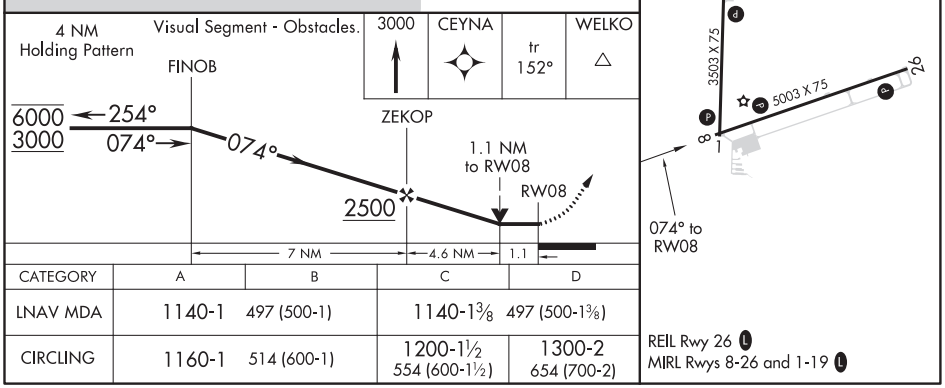
Circling Rwy 1, 19 NA at night.
Rwy 8 helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climb to 3000 direct CEYNA and on track 152° to WELKO and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
119.925	120.85 322.35	123.0 (CTAF) L



ELEV 646	TDZE 643



CATEGORY	A	B	C	D
LNAV MDA	1140-1 497 (500-1)		1140-1⅜ 497 (500-1⅜)	
CIRCLING	1160-1 514 (600-1)		1200-1½ 554 (600-1½)	1300-2 654 (700-2)

REIL Rwy 26 L
MIRL Rwys 8-26 and 1-19 L

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LUDINGTON, MICHIGAN AL-5618 (FAA) 20030

RNAV (GPS) RWY 26
MASON COUNTY (LDM)

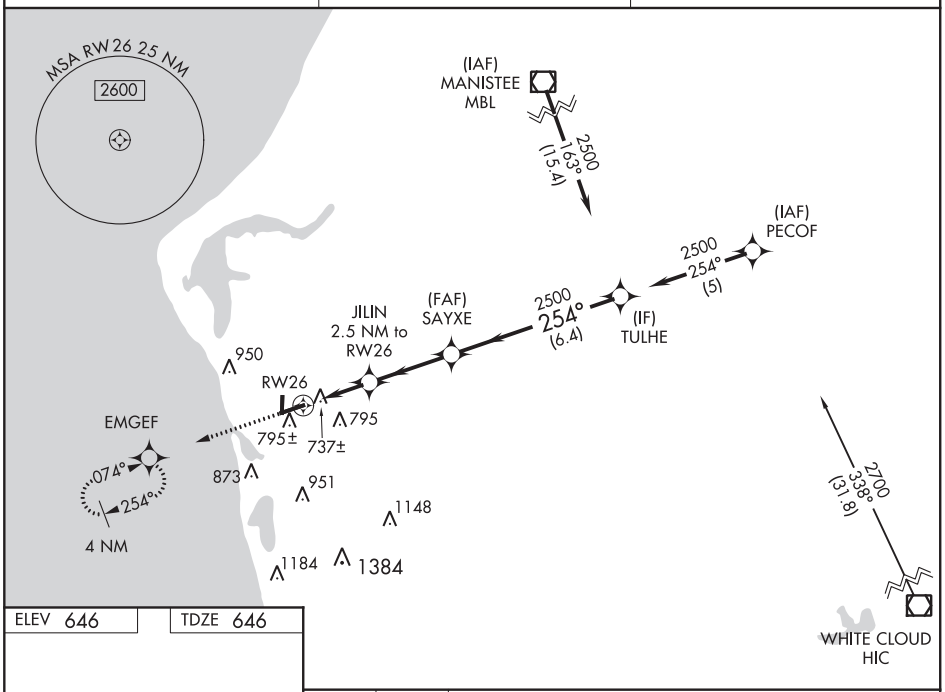
WAAS CH 49206 W26A	APP CRS 254°	Rwy ldg 5003 TDZE 646 Apt Elev 646

RNP APCH.

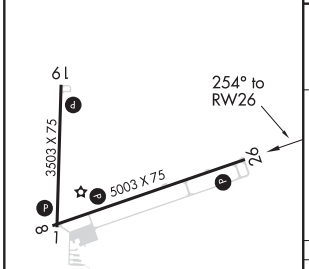
Circling Rwy 1, 19 NA at night. Rwy 26 helicopter visibility reduction below ¾ SM NA.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C.

MISSED APPROACH: Climb to 2500 direct EMGEF and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
119.925	120.85 322.35	123.0 (CTAF) L



ELEV 646 TDZE 646

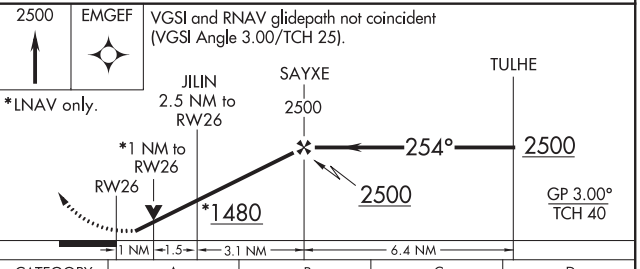


REIL Rwy 26 L
MIRL Rwys 8-26 and 1-19 L

2500 | EMGEF

VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 25).

*LNAV only.



CATEGORY	A	B	C	D
LPV DA	975-1¼ 329 (400-1¼)			
LNAV/VNAV DA	1020-1¼ 374 (400-1¼)			
LNAV MDA	1000-1 354 (400-1)			1000-1¼ 354 (400-1¼)
CIRCLING	1160-1 514 (600-1)		1200-1½ 554 (600-1½)	1300-2 654 (700-2)

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WAAS CH 63129 W08A	APP CRS 082°	Rwy ldg 3501 TDZE 739 Apt Elev 741

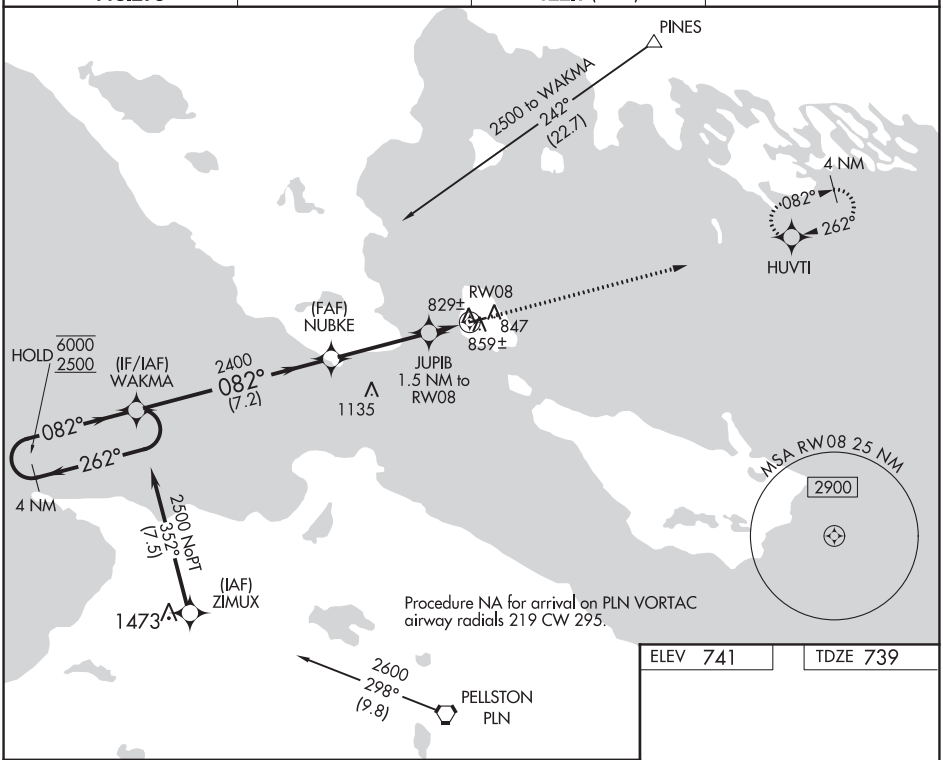
RNAV (GPS) RWY 8
MACKINAC ISLAND (MCD)

RNP APCH.

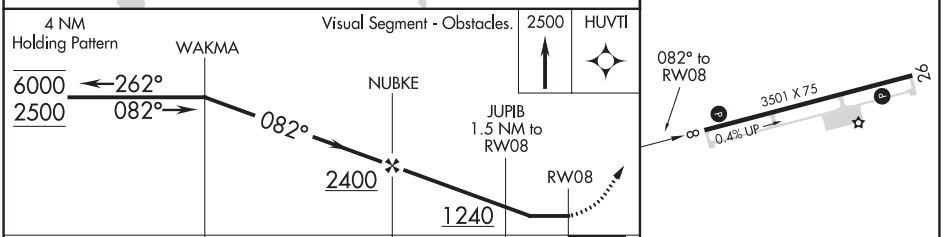
Rwy 8 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Pellston altimeter setting and increase all MDA 60 feet, increase LP and LNAV Cat C visibility ⅛ SM and Circling Cat C visibility ¼ SM. Straight-in and Circling Rwy 8 NA at night.

MISSED APPROACH: Climb to 2500 direct HUVTI and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM	
118.275	134.6 354.05	122.7 (CTAF)	122.8 L



ELEV 741 TDZE 739



CATEGORY	A	B	C	D
LP MDA	1080-1 341 (400-1)			NA
LNAV MDA	1120-1 381 (400-1)		1120-1⅛ 381 (400-1⅛)	NA
C CIRCLING	1320-1 579 (600-1)		1320-1½ 579 (600-1½)	NA

MIRL Rwy 8-26 L
REIL Rwys 8 and 26 L

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MACKINAC ISLAND, MICHIGAN AL-6041 (FAA) 21056

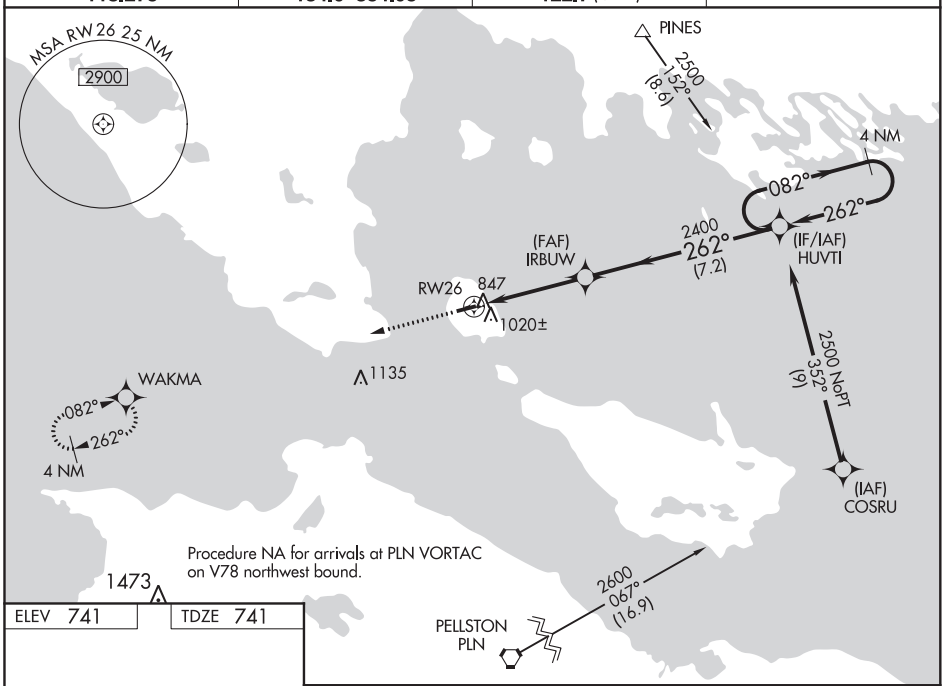
WAAS CH 99529 W26A	APP CRS 262°	Rwy ldg 3501 TDZE 741 Apt Elev 741

RNAV (GPS) RWY 26
MACKINAC ISLAND (MCD)

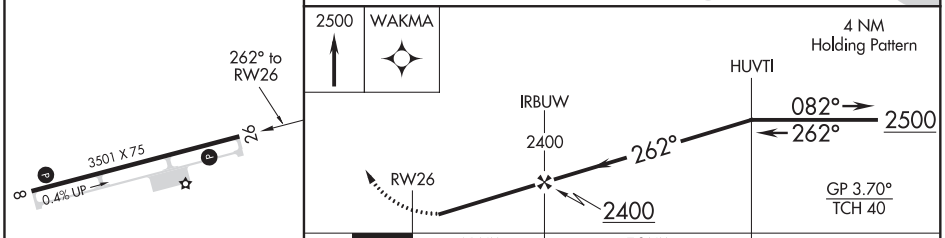
Baro-VNAV NA when using Pellston altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). When local altimeter setting not received, use Pellston altimeter setting and increase all DA 47 feet and all MDA 60 feet, increase LNAV Cat C visibility ⅛ mile and Circling Cat C visibility ¼ mile. DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. Night landing: Rwy 8 NA.

MISSED APPROACH: Climb to 2500 direct WAKMA and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM	
118.275	134.6 354.05	122.7 (CTAF)	122.8 L



ELEV 741 TDZE 741



CATEGORY	A	B	C	D
LPV DA	1058-1 317 (400-1)		NA	
LNAV/VNAV DA	1182-1⅜ 441 (500-1⅜)		NA	
LNAV MDA	1280-1 539 (600-1)		1280-1½ 539 (600-1½)	NA
C CIRCLING	1320-1 579 (600-1)		1320-1½ 579 (600-1½)	NA

MIRL Rwy 8-26 L
REIL Rwys 8 and 26 L

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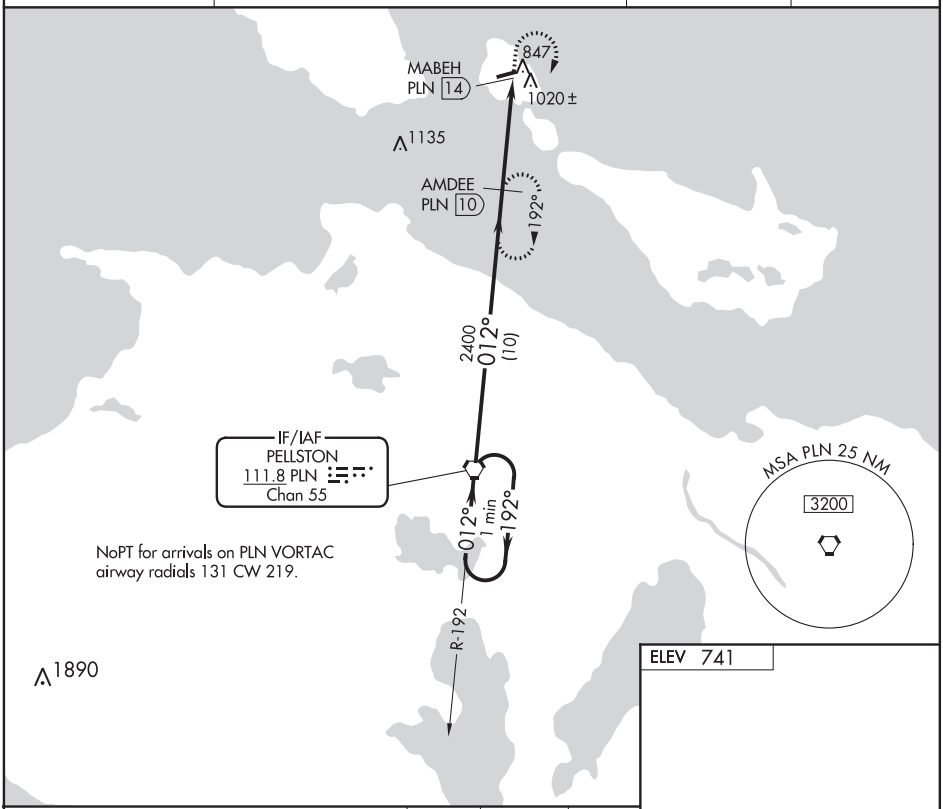
VOR/DME-A
MACKINAC ISLAND (MCD)

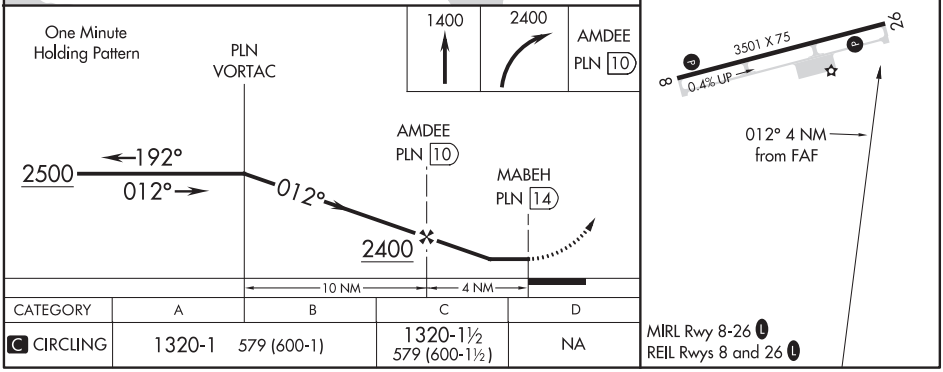
VORTAC PLN	APP CRS	Rwy ldg	N/A
111.8	012°	TDZE	N/A
Chan 55		Apt Elev	741

When local altimeter setting not received, use Pellston altimeter setting and increase all MDA 60 feet, increase Cat C visibility ¼ mile. Visibility reduction by helicopters NA. Night landing: Rwy 8 NA.

MISSED APPROACH: Climb to 1400 then climbing right turn to 2400 direct AMDEE 10 DME and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM	
118.275	134.6 354.05	122.7 (CTAF)	122.8 L





CATEGORY	A	B	C	D
C CIRCLING	1320-1 579 (600-1)		1320-1½ 579 (600-1½)	NA

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MANISTEE, MICHIGAN AL-5257 (FAA) 21056

LOC I-MBL	APP CRS	Rwy ldg	5501
108.35	277°	TDZE	621
		Apt Elev	621

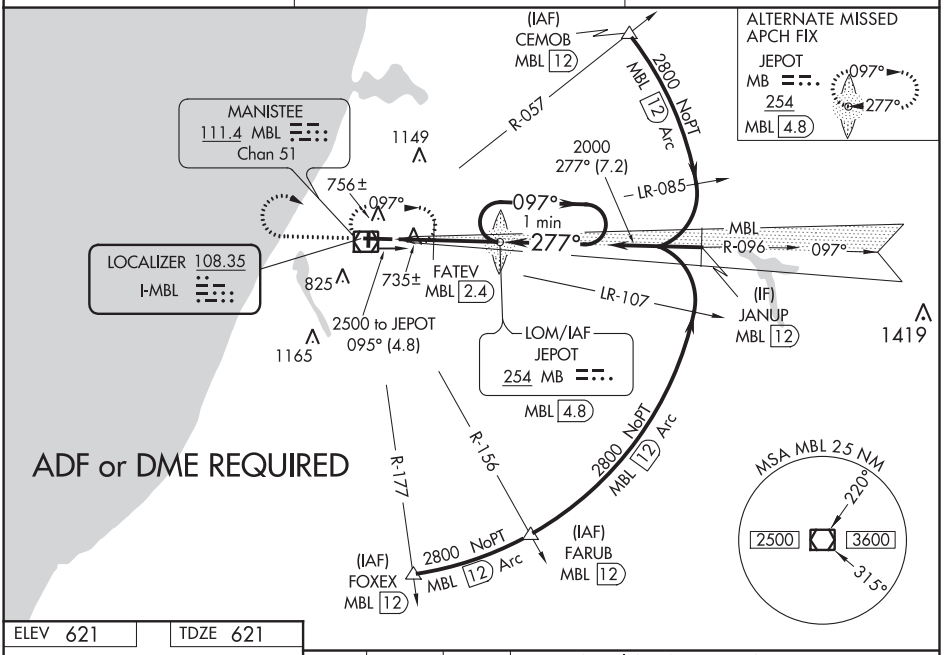
ILS or LOC RWY 28
MANISTEE COUNTY-BLACKER (MBL)

T A NA — Night landing: Rwy 1/19 NA. When local altimeter not received, use Ludington altimeter setting and increase all DA 50 feet and all MDA 60 feet; increase S-LOC 28 Cat C/D visibility ¼ mile, and Circling Cat C visibility ¼ mile. FATEV FIX minimums: increase S-LOC 28 Cat C/D visibility ⅛ mile and Circling Cat C ¼ mile.

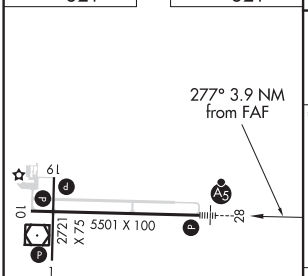
MALSR A5

MISSED APPROACH: Climb to 1600 then climbing right turn to 2500 direct MBL VOR/DME and hold, continue climb-in-hold to 2500.

AWOS-3PT	MINNEAPOLIS CENTER	UNICOM
111.4	120.85 322.35	122.8 (CTAF) L

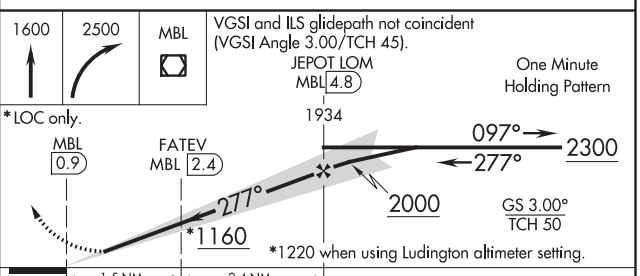


ELEV 621 TDZE 621



HIRL Rwys 10-28 L
MIRL Rwys 1-19 L
REIL Rwys 10 L

FAF to MAP 3.9 NM					
Knots	60	90	120	150	180
Min:Sec	3:54	2:36	1:57	1:34	1:18



CATEGORY	A	B	C	D
S-ILS 28	821-½ 200 (200-½)			
S-LOC 28	1160-½ 539 (600-½)		1160-1 539 (600-1)	
CIRCLING	1160-1 539 (600-1)		1200-1½ 579 (600-1½)	1300-2¼ 679 (700-2¼)
FATEV FIX MINIMUMS				
S-LOC 28	1000-½ 379 (400-½)		1000-⅝ 379 (400-⅝)	
CIRCLING	1120-1 499 (500-1)	1160-1 539 (600-1)	1200-1½ 579 (600-1½)	1300-2¼ 679 (700-2¼)

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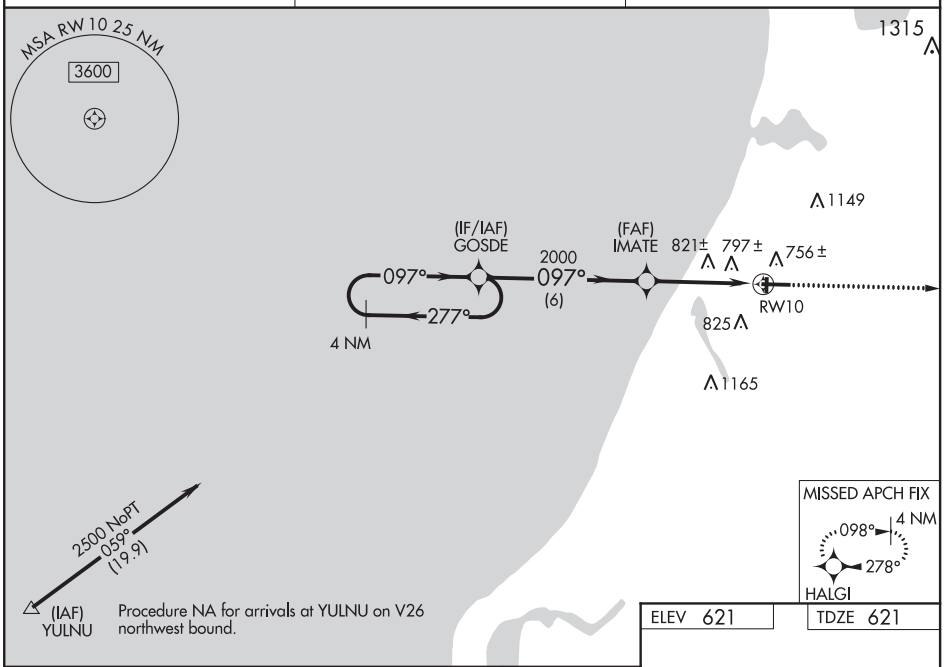
WAAS CH 60933 W10A	APP CRS 097°	Rwy ldg 5501 TDZE 621 Apt Elev 621

RNAV (GPS) RWY 10
MANISTEE COUNTY-BLACKER (MBL)

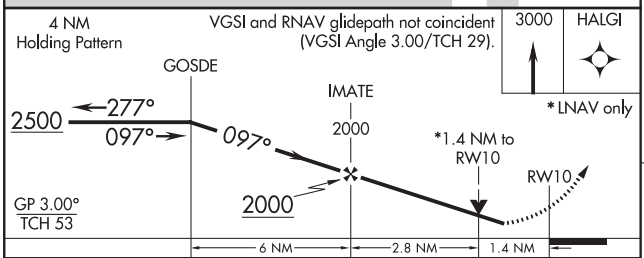
Night landing Rwy 1/19 NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP -0.3 NA. Baro-VNAV and VDP NA with Ludington altimeter setting. Helicopter visibility reduction below ¾ SM not authorized. When local altimeter setting not received, use Ludington altimeter setting and increase all DA 50 feet and all MDA 60 feet. Increase LPV visibility all Cats ¼ mile, LNAV/VNAV visibility all Cats ⅛ mile. Increase LNAV Cats C/D visibility ⅛ mile, and Circling Cat C visibility ¼ mile.

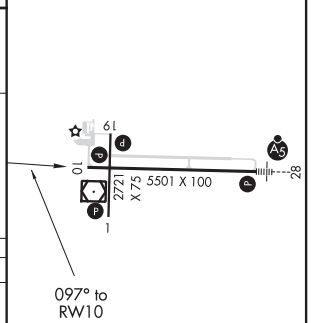
MISSED APPROACH: Climb to 3000 direct HALGI and hold.

AWOS-3PT	MINNEAPOLIS CENTER	UNICOM
111.4	120.85 322.35	122.8 (CTAF) L



ELEV 621	TDZE 621





CATEGORY	A	B	C	D
LPV DA	871-¾ 250 (300-¾)			
LNAV/VNAV DA	1091-1⅝ 470 (500-1⅝)			
LNAV MDA	1080-1 459 (500-1)		1080-1⅜ 459 (500-1⅜)	
CIRCLING	1120-1 499 (500-1)	1160-1 539 (600-1)	1200-1½ 579 (600-1½)	1300-2¼ 679 (700-2¼)

HIRL Rwys 10-28 L
MIRL Rwys 1-19 L
REIL Rwys 10 L

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MANISTEE, MICHIGAN AL-5257 (FAA) 21056

WAAS CH 42532 W28A	APP CRS 278°	Rwy ldg 5501 TDZE 621 Apt Elev 621

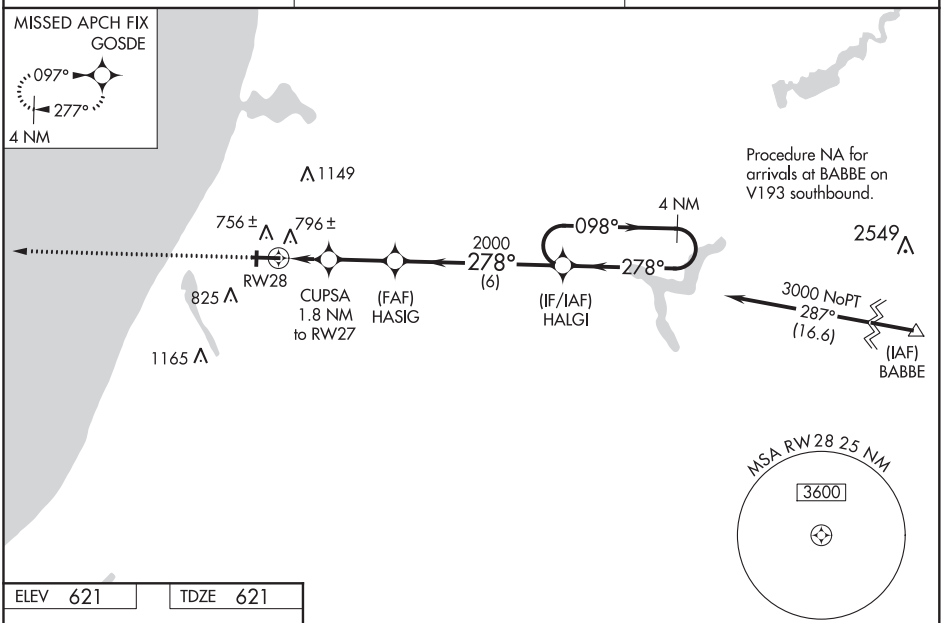
RNAV (GPS) RWY 28
MANISTEE COUNTY-BLACKER (MBL)

Night landing: Rwy 1/19 NA. Baro-VNAV NA when using Ludington altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. VDP NA with Ludington altimeter setting. When local altimeter setting not received, use Ludington altimeter setting and increase all DA 50 feet and all MDA 60 feet. Increase LNAV/VNAV visibility all Cats ⅛ mile. Increase LNAV Cats C/D visibility ¼ mile, and Circling Cat C visibility ¼ mile.

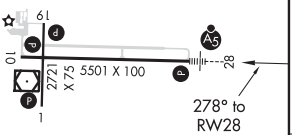
MALSR

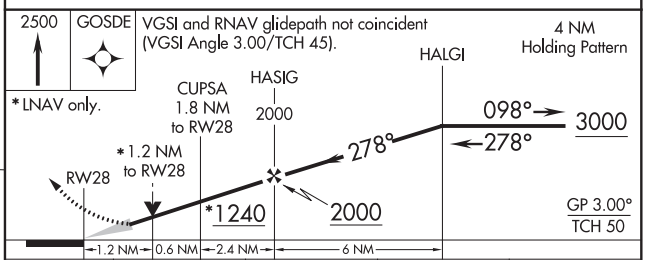
MISSED APPROACH: Climb to 2500 direct GOSDE and hold.

AWOS-3PT	MINNEAPOLIS CENTER	UNICOM
111.4	120.85 322.35	122.8 (CTAF) L



ELEV 621	TDZE 621





CATEGORY	A	B	C	D
LPV DA	821-½ 200 (200-½)			
LNAV/VNAV DA	984-¾ 363 (400-¾)			
LNAV MDA	1060-½ 439 (500-½)		1060-¾ 439 (500-¾)	
CIRCLING	1120-1 499 (500-1)	1160-1 539 (600-1)	1200-1½ 579 (600-1½)	1300-2¼ 679 (700-2¼)

HIRL Rwys 10-28 L
MIRL Rwys 1-19 L
REIL Rwy 10 L

EC-1, 25 FEB 2021 to 22 APR 2021

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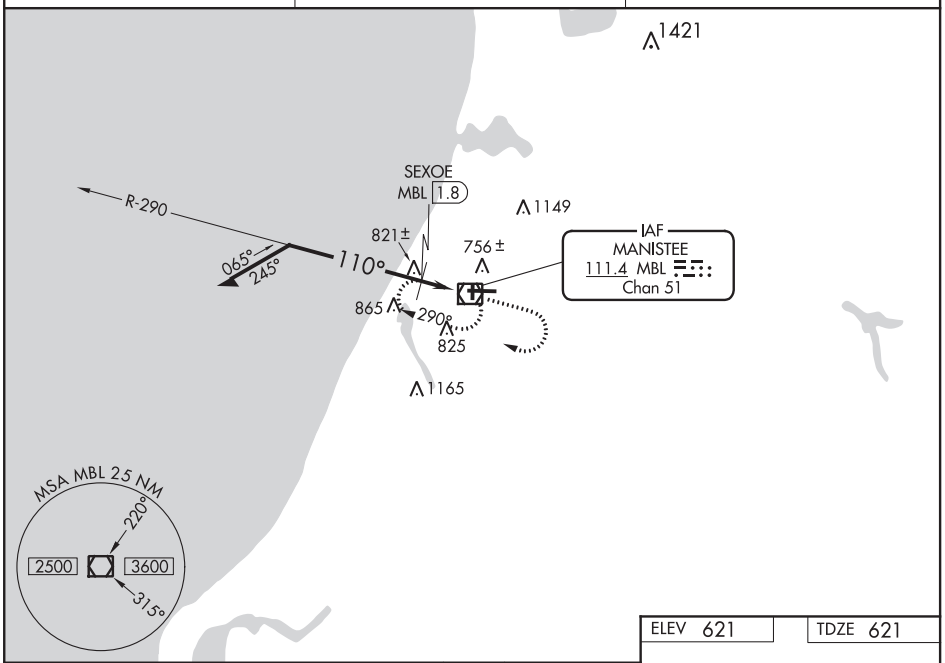
VOR/DME MBL	APP CRS	Rwy ldg	5501
111.4	110°	TDZE	621
Chan 51		Apt Elev	621

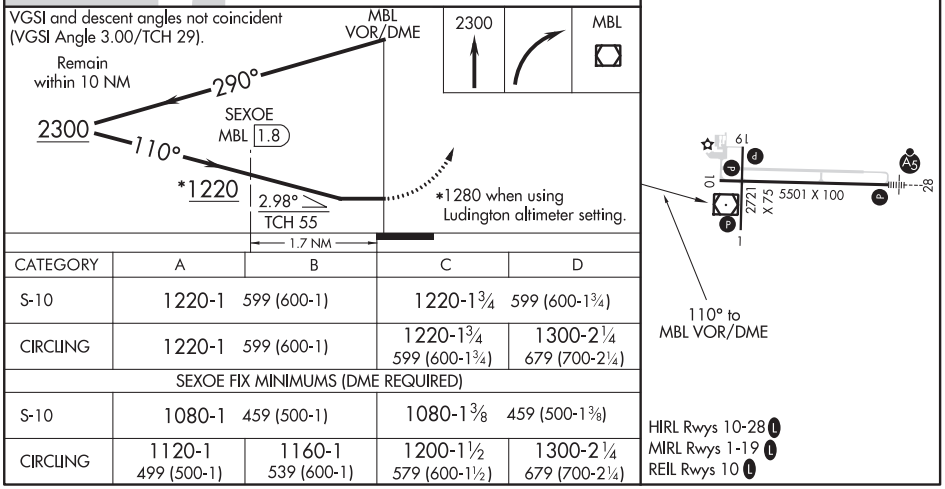
VOR RWY 10
MANISTEE COUNTY-BLACKER (MBL)

When local altimeter setting not received, use Ludington altimeter setting and increase all MDA 60 feet. Increase S-10 Cat C and D and Circling Cat C visibility ⅛ mile, increase SEXOE FIX minimums S-10 Cat C and D visibility ⅛ mile, and Cat C Circling visibility ¼ mile. Helicopter visibility reduction below ¾ SM NA. Night landing Rwy 1/19 NA.

MISSED APPROACH: Climb to 2300 then right turn direct MBL VOR/DME and hold.

AWOS-3PT	MINNEAPOLIS CENTER	UNICOM
111.4	120.85 322.35	122.8 (CTAF) L





CATEGORY	A	B	C	D
S-10	1220-1 599 (600-1)		1220-1¾ 599 (600-1¾)	
CIRCLING	1220-1 599 (600-1)		1220-1¾ 599 (600-1¾)	1300-2¼ 679 (700-2¼)
SEXOE FIX MINIMUMS (DME REQUIRED)				
S-10	1080-1 459 (500-1)		1080-1⅜ 459 (500-1⅜)	
CIRCLING	1120-1 499 (500-1)	1160-1 539 (600-1)	1200-1½ 579 (600-1½)	1300-2¼ 679 (700-2¼)

HIRL Rwys 10-28 L
MIRL Rwys 1-19 L
REIL Rwys 10 L

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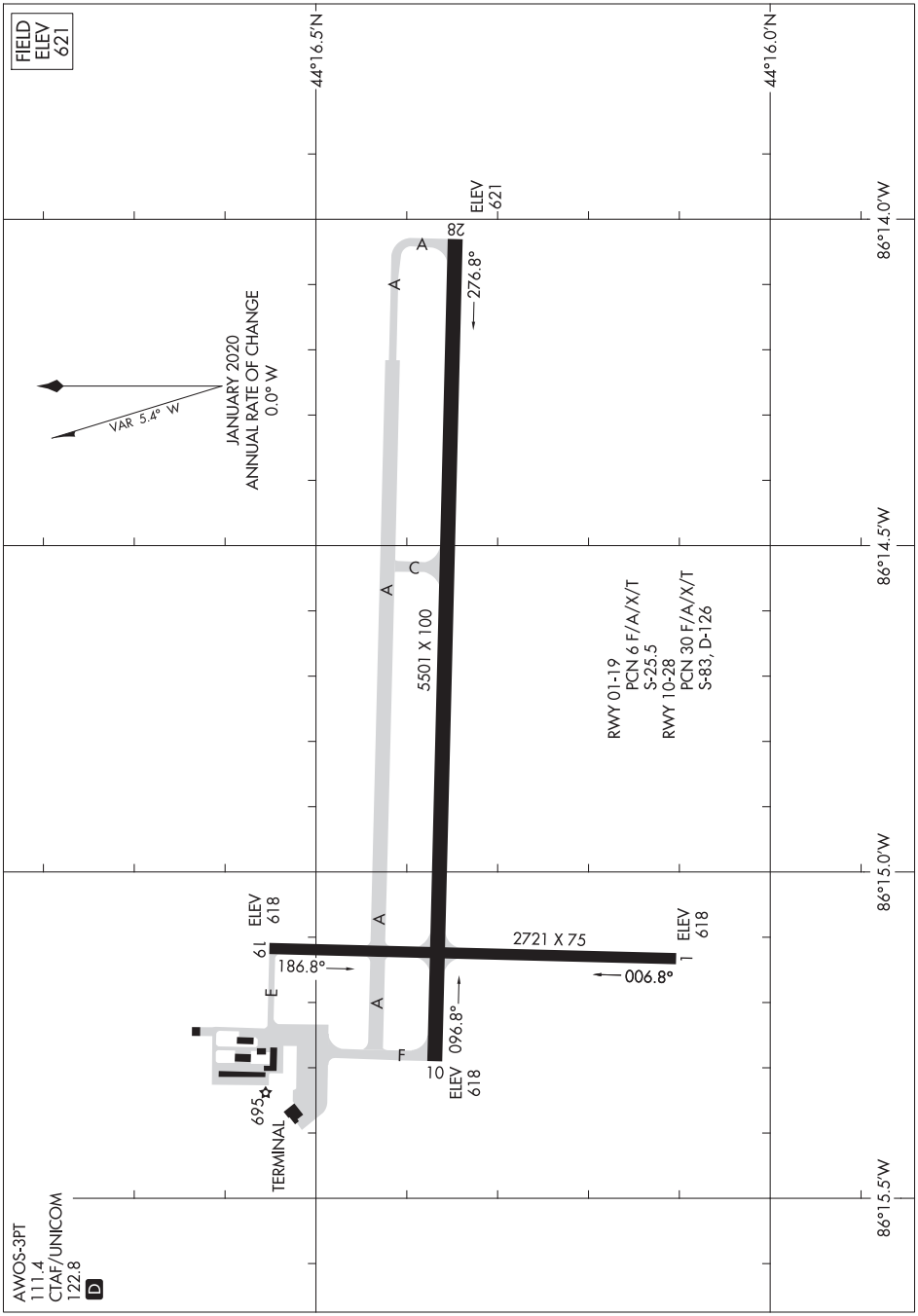
20086

AIRPORT DIAGRAM

AL-5257 (FAA)

MANISTEE CO-BLACKER (MBL)
MANISTEE, MICHIGAN



EC-1, 25 FEB 2021 to 22 APR 2021

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AIRPORT DIAGRAM
20086
MANISTEE, MICHIGAN
MANISTEE CO-BLACKER (MBL)

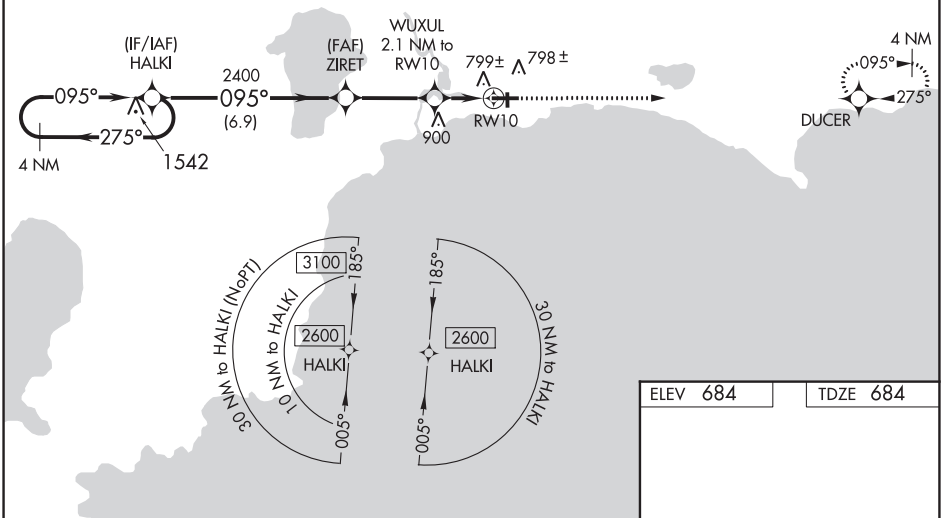
APP CRS	Rwy ldg	5001
095°	TDZE	684
	Apt Elev	684

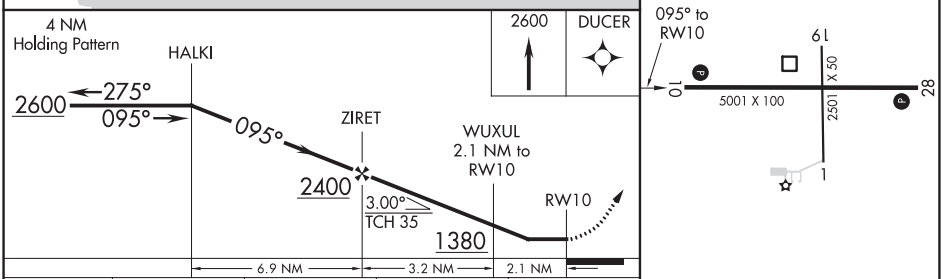
RNAV (GPS) RWY 10
SCHOOLCRAFT COUNTY (ISQ)

DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Beaver Island altimeter setting and increase all MDA 80 feet, increase LNAV Cat C and D visibility ⅜ mile. When VGSI inop, Straight-In/Circling Rwy 10 procedure NA at night. When VGSI inop, Circling Rwy 28 NA at night. Night landing: Rwy 1, 19 NA.

MISSED APPROACH: Climb to 2600 direct DUCER and hold.

AWOS-3	MINNEAPOLIS APP CON	UNICOM
118.775	134.6 354.05	122.8 (CTAF) L





ELEV 684 TDZE 684

CATEGORY	A	B	C	D
LNAV MDA	1060-1 376 (400-1)			
CIRCLING	1120-1 436 (500-1)	1140-1 456 (500-1)	1140-1½ 456 (500-1½)	1260-2 576 (600-2)

REIL Rwy 28 L
MIRL Rwy 10-28 L

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MANISTIQUE, MICHIGAN

AL-5616 (FAA)

20086

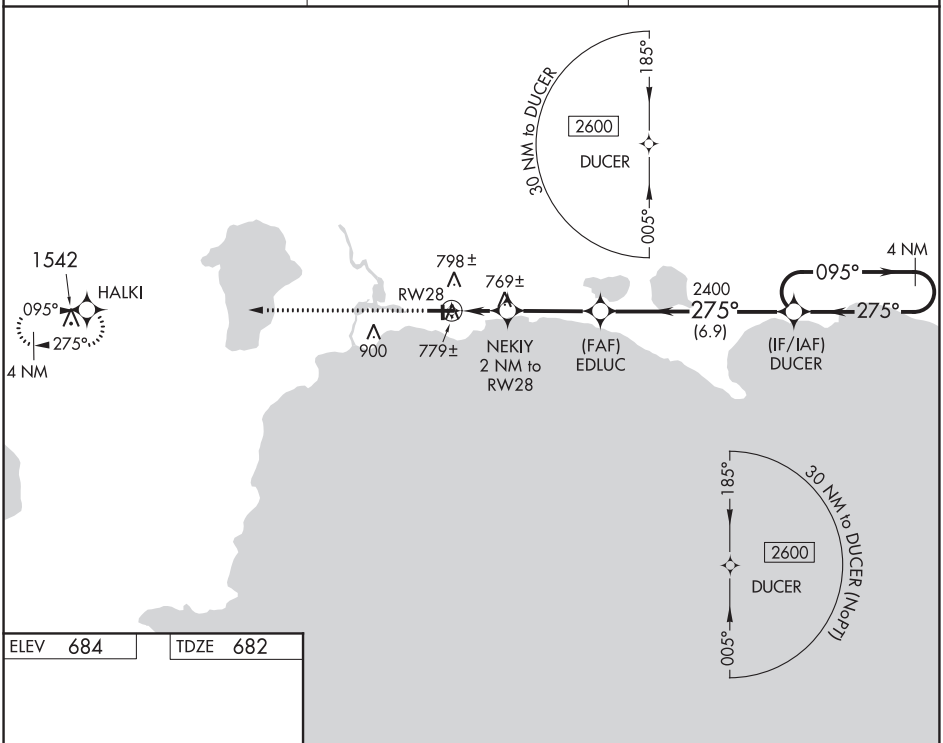
RNAV (GPS) RWY 28
SCHOOLCRAFT COUNTY (ISQ)

WAAS CH 53527 W28A	APP CRS 275°	Rwy ldg 5001 TDZE 682 Apt Elev 684

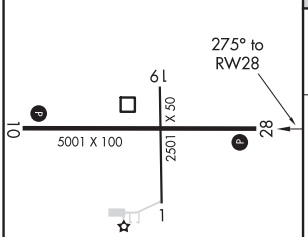
When local altimeter setting not received, use Beaver Island altimeter setting and increase all MDA 80 feet, increase LP Cat C and D visibility ¼ mile and LNAV Cat C and D visibility ⅜ mile. When VGSI inop, Straight-In/Circling Rwy 28 procedure NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. Circling to Rwy 1/19 NA at night.

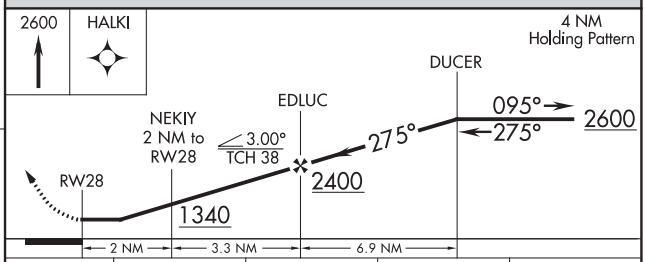
MISSED APPROACH: Climb to 2600 direct HALKI and hold.

AWOS-3	MINNEAPOLIS APP CON	UNICOM
118.775	134.6 354.05	122.8 (CTAF) L



ELEV 684 TDZE 682





CATEGORY	A	B	C	D
LP MDA	1020-1 338 (400-1)			
LNAV MDA	1040-1 358 (400-1)			
CIRCLING	1120-1 436 (500-1)	1140-1 456 (500-1)	1140-1½ 456 (500-1½)	1260-2 576 (600-2)

REIL Rwy 28 L
MIRL Rwy 10-28 L

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APP CRS	Rwy ldg	3795
097°	TDZE	880
	Apt Elev	895

RNAV (GPS) RWY 9
MARLETTE TOWNSHIP (77G)

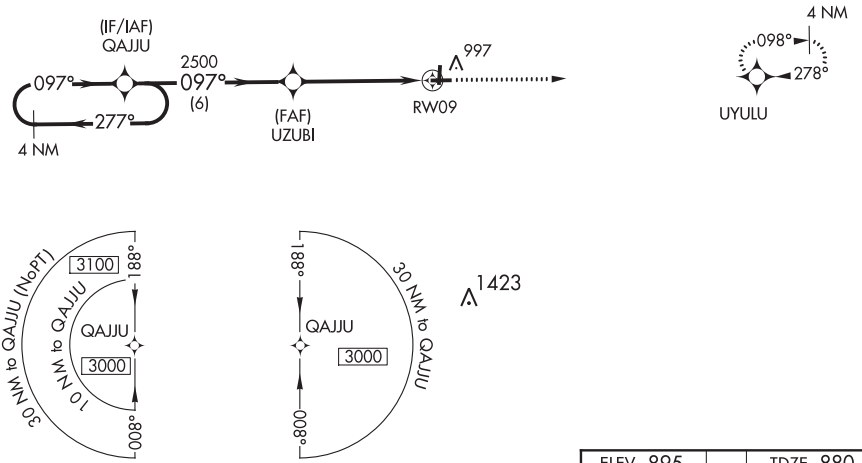
RNP APCH.

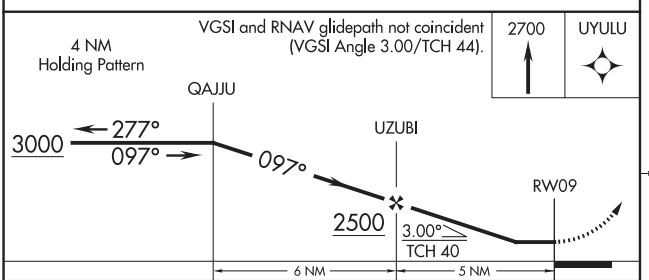
NA

Rwy 9 helicopter visibility reduction below 1 SM NA. Procedure NA at night. Use Caro altimeter setting; when not received, use Bad Axe altimeter setting and increase all MDA 20 feet and visibility Cats C and D ¼ SM.

MISSED APPROACH: Climb to 2700 direct UYULU and hold.

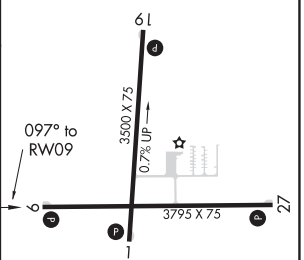
CFS AWOS-3	CLEVELAND CENTER	UNICOM
119.275	126.525 285.525	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1420-1 540 (600-1)		1420-1½ 540 (600-1½)	
C CIRCLING	1460-1 565 (600-1)		1460-1½ 565 (600-1½)	1560-2 665 (700-2)

ELEV 895 TDZE 880



MIRL Rwys 1-19 and 9-27 L

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MARLETTE, MICHIGAN AL-6266 (FAA) 21056

RNAV (GPS) RWY 19
MARLETTE TOWNSHIP (77G)

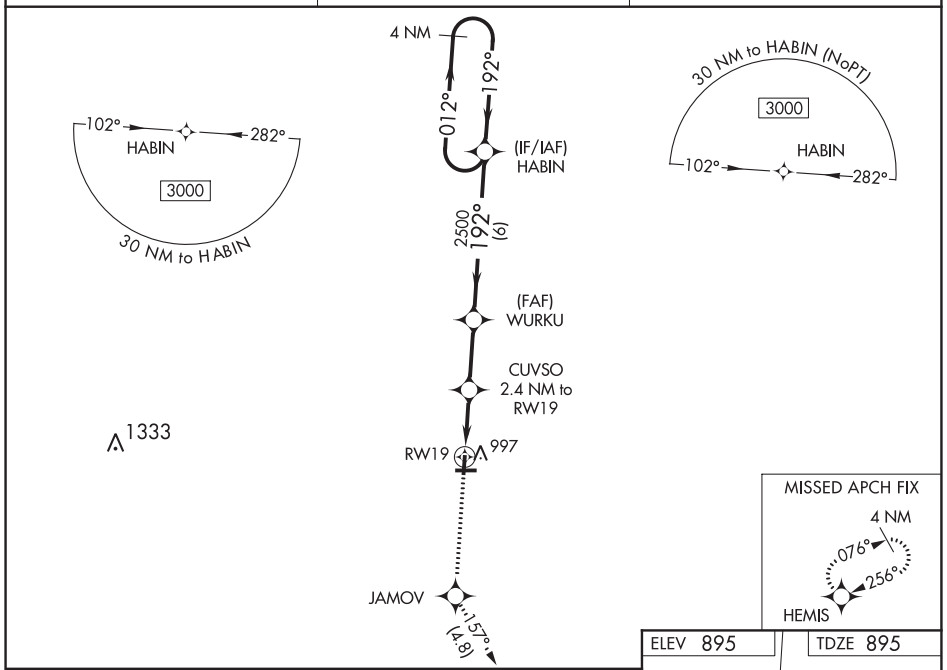
WAAS CH 70421 W19A	APP CRS 192°	Rwy ldg 3500 TDZE 895 Apt Elev 895

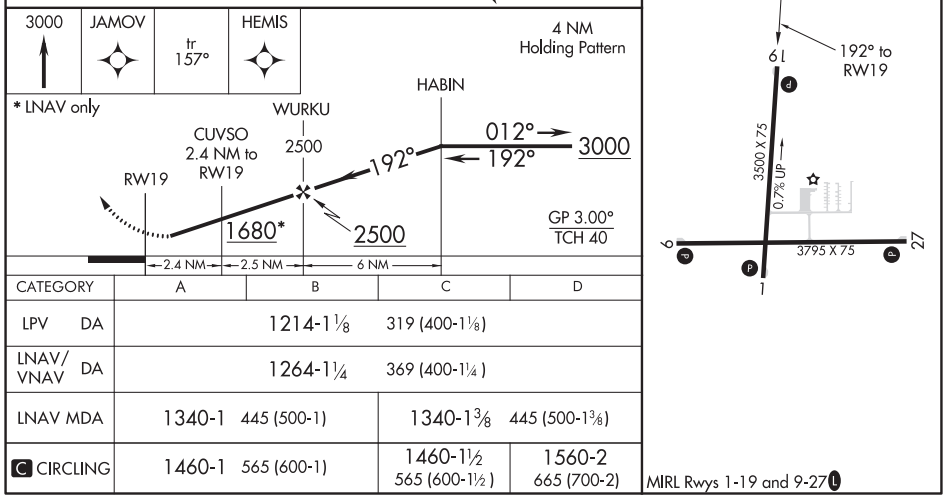
RNP APCH.

Baro-VNAV NA. Rwy 19 helicopter visibility reduction below 1 SM NA. Procedure NA at night. Use Caro altimeter setting; when not received use Bad Axe altimeter setting and increase LPV DA to 1230 feet; increase LNAV/VNAV DA to 1280 feet; increase all MDA 20 feet and Circling Cat D visibility ¼ SM.

MISSED APPROACH: Climb to 3000 direct JAMOV and on track 157° to HEMIS and hold.

CFS AWOS-3	CLEVELAND CENTER	UNICOM
119.275	126.525 285.525	122.8 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	1214-1⅛ 319 (400-1⅛)			
LNAV/VNAV DA	1264-1¼ 369 (400-1¼)			
LNAV MDA	1340-1 445 (500-1)		1340-1⅜ 445 (500-1⅜)	
C CIRCLING	1460-1 565 (600-1)		1460-1½ 565 (600-1½)	1560-2 665 (700-2)

MIRL Rwys 1-19 and 9-27 L

MARLETTE, MICHIGAN
Orig-C 15AUG19

43°19′N-83°05′W

MARLETTE TOWNSHIP (77G)
RNAV (GPS) RWY 19

EC-1, 25 FEB 2021 to 22 APR 2021

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APP CRS	Rwy ldg	3795
278°	TDZE	880
	Apt Elev	895

RNAV (GPS) RWY 27
MARLETTE TOWNSHIP (77G)

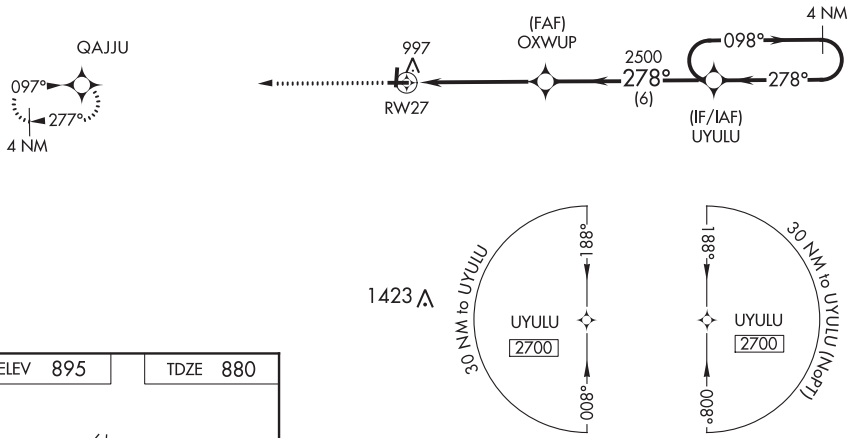
RNP APCH.

T
A NA

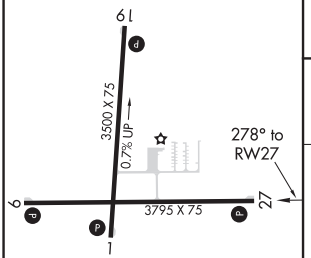
Rwy 27 helicopter visibility reduction below 1 SM NA. Procedure NA at night. Use Caro altimeter setting; when not received, use Bad Axe altimeter setting and increase all MDA 20 feet and Circling Cat D visibility ¼ SM.

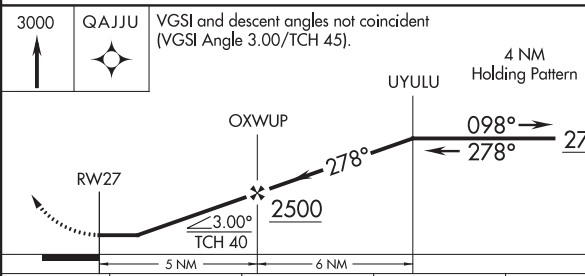
MISSED APPROACH: Climb to 3000 direct QAJJU and hold.

CFS AWOS-3	CLEVELAND CENTER	UNICOM
119.275	126.525 285.525	122.8 (CTAF) L



ELEV 895 TDZE 880





CATEGORY	A	B	C	D
LNAV MDA	1360-1 480 (500-1)		1360-1⅜ 480 (500-1⅜)	
C CIRCLING	1460-1 565 (600-1)		1460-1½ 565 (600-1½)	1560-2 665 (700-2)

MIRL Rwys 1-19 and 9-27 L

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EC-1, 25 FEB 2021 to 22 APR 2021

MARQUETTE, MICHIGAN AL-773 (FAA) 20114

LOC I-SOU 110.1	APP CRS 013°	Rwy ldg 9072 TDZE 1180 Apt Elev 1204

ILS or LOC RWY 1
SAWYER INTL (SAW)

DME required for LOC only.

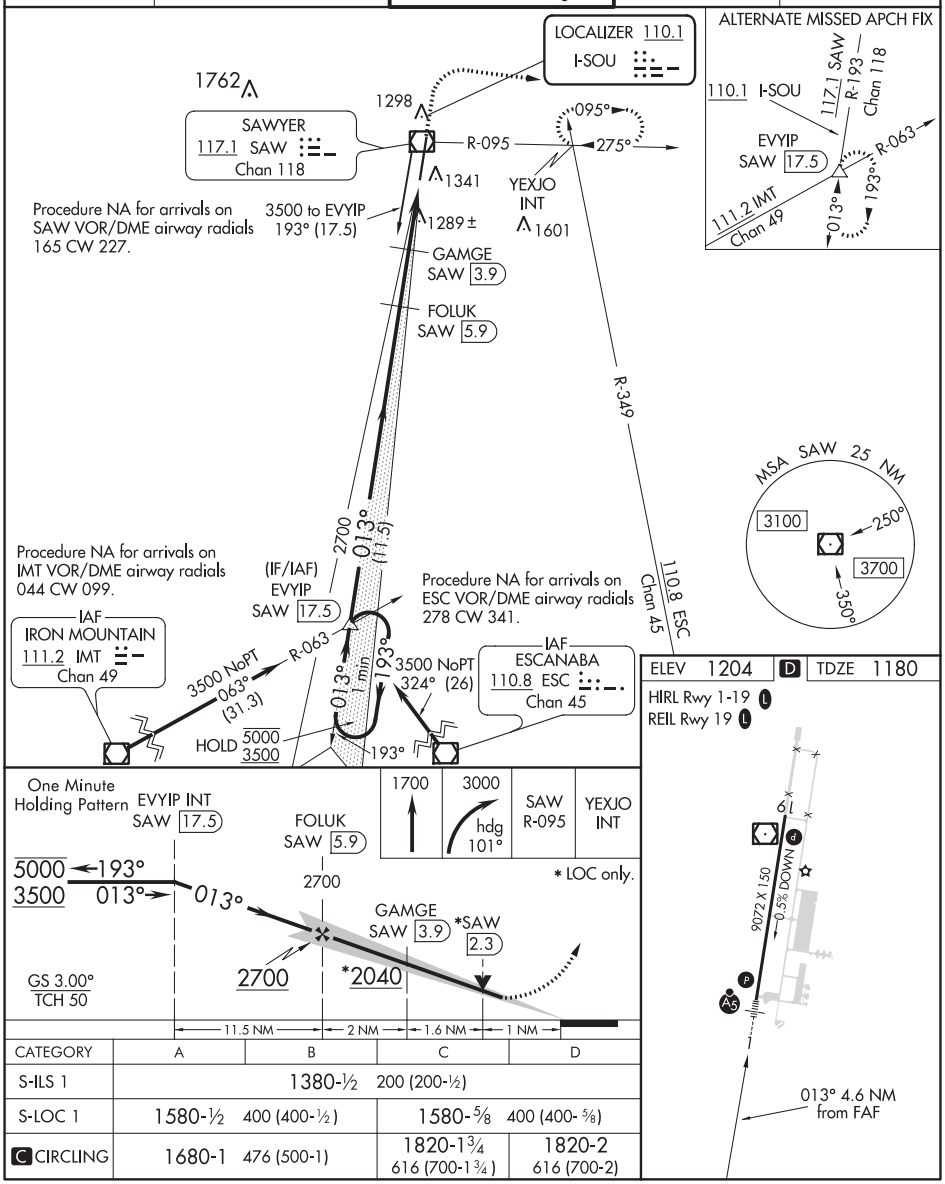
NA

Autopilot coupled approach NA below 1360 MSL.

MALSR

MISSED APPROACH: Climb to 1700 then climbing right turn to 3000 on heading 101° and on SAW VOR/DME R-095 to YEXJO INT and hold.

AWOS-3	MINNEAPOLIS CENTER	SAWYER TOWER ★	GND CON	UNICOM
118.375	119.1 290.2	119.975 (CTAF) L	121.65	122.7



CATEGORY	A	B	C	D
S-ILS 1	1380-½ 200 (200-½)			
S-LOC 1	1580-½ 400 (400-½)		1580-⅝ 400 (400-⅝)	
C CIRCLING	1680-1 476 (500-1)		1820-1¾ 616 (700-1¾)	1820-2 616 (700-2)

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RNAV (GPS) RWY 1
SAWYER INTL (SAW)

WAAS CH 97431 W01A	APP CRS 013°	Rwy ldg 9072 TDZE 1180 Apt Elev 1204

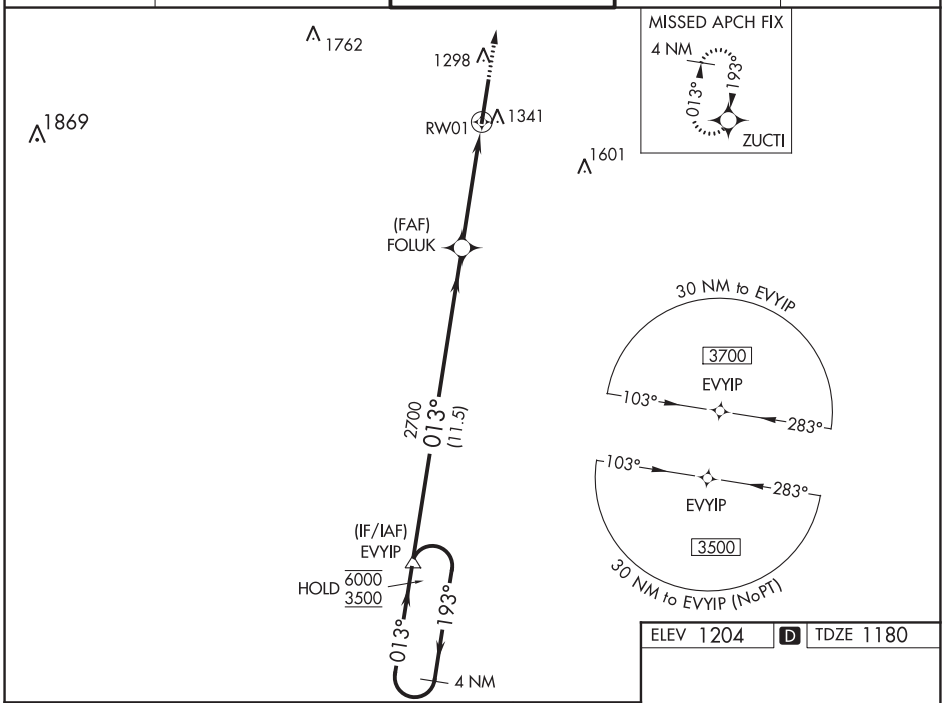
RNP APCH.

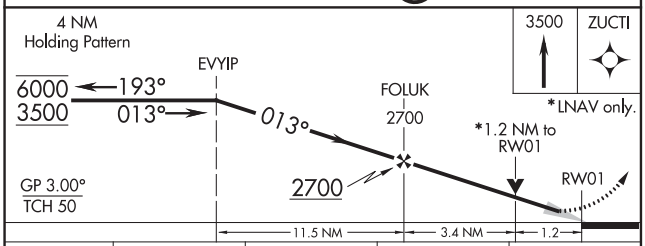
For inop ALS, increase LNAV Cat C/D visibility to 1⅛ SM.
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C or above 54°C.

MALSR

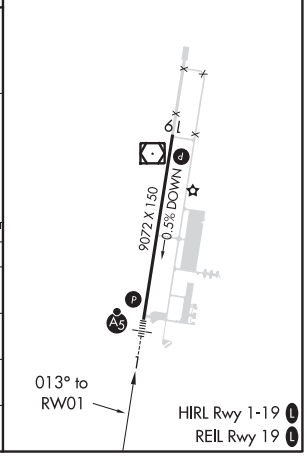
MISSED APPROACH: Climb to 3500 direct ZUCTI and hold.

AWOS-3	MINNEAPOLIS CENTER	SAWYER TOWER ★	GND CON	UNICOM
118.375	119.1 290.2	119.975 (CTAF) L	121.65	122.7





ELEV 1204 D TDZE 1180



CATEGORY	A	B	C	D
LPV DA	1380-½ 200 (200-½)			
LNAV/VNAV DA	1503-½ 323 (300-½)			
LNAV MDA	1600-½ 420 (400-½)		1600-¾ 420 (400-¾)	
C CIRCLING	1680-1 476 (500-1)		1820-1¾ 616 (700-1¾)	1820-2 616 (700-2)

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MARQUETTE, MICHIGAN AL-773 (FAA) 19283

RNAV (GPS) RWY 19
SAWYER INTL (SAW)

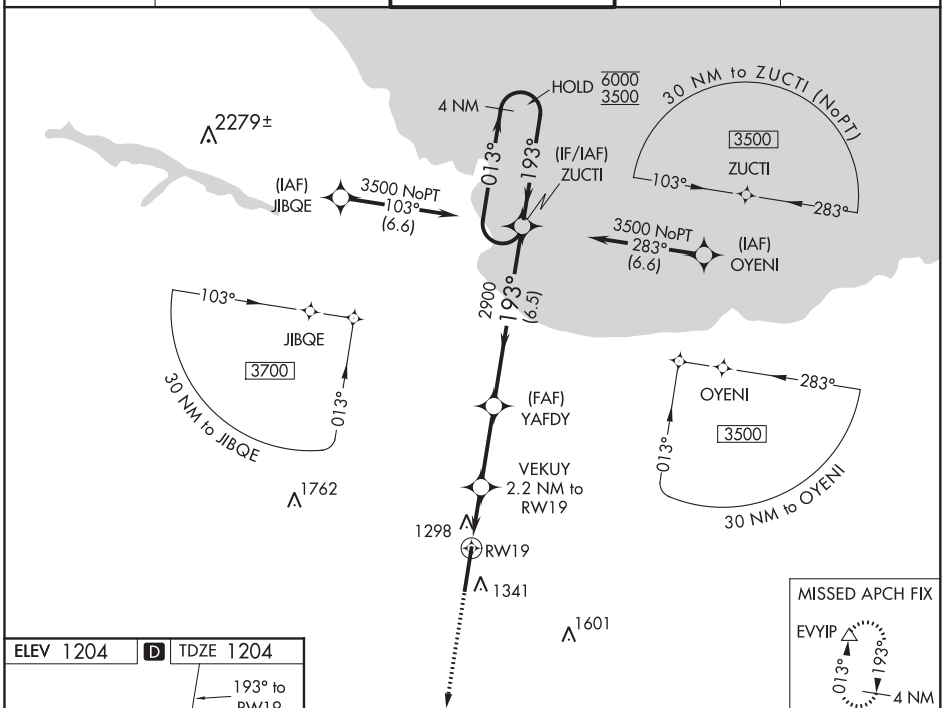
WAAS CH 86616 W19A	APP CRS 193°	Rwy ldg 9072 TDZE 1204 Apt Elev 1204

RNP APCH.

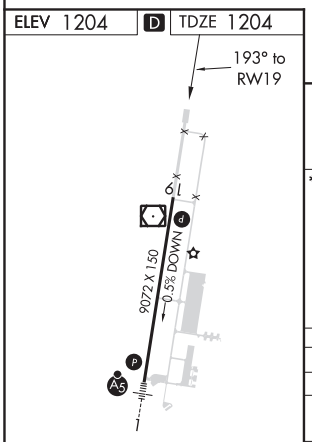
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C or above 54°C.

MISSED APPROACH: Climb to 3500 direct EVYIP and hold.

AWOS-3	MINNEAPOLIS CENTER	SAWYER TOWER ★	GND CON	UNICOM
118.375	119.1 290.2	119.975 (CTAF) L	121.65	122.7



ELEV 1204 | D | TDZE 1204



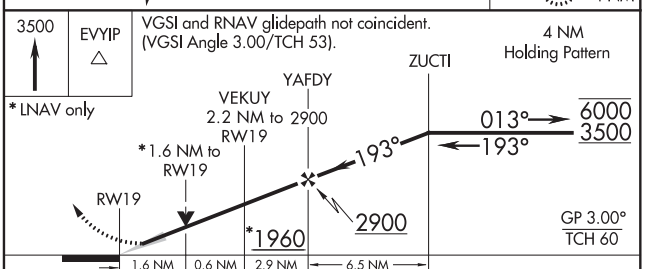
HIRL Rwy 1-19 L
REIL Rwy 19 L

3500 | EVYIP

* LNAV only

VGSI and RNAV glidepath not coincident. (VGSI Angle 3.00/TCH 53).

4 NM Holding Pattern



CATEGORY	A	B	C	D
LPV DA	1404-¾ 200 (200-¾)			
LNAV/VNAV DA	1521-⅞ 317 (400-⅞)			
LNAV MDA	1620-1 416 (500-1)		1620-1⅛ 416 (500-1⅛)	
C CIRCLING	1680-1 476 (500-1)		1820-1¾ 616 (700-1¾)	1820-2 616 (700-2)

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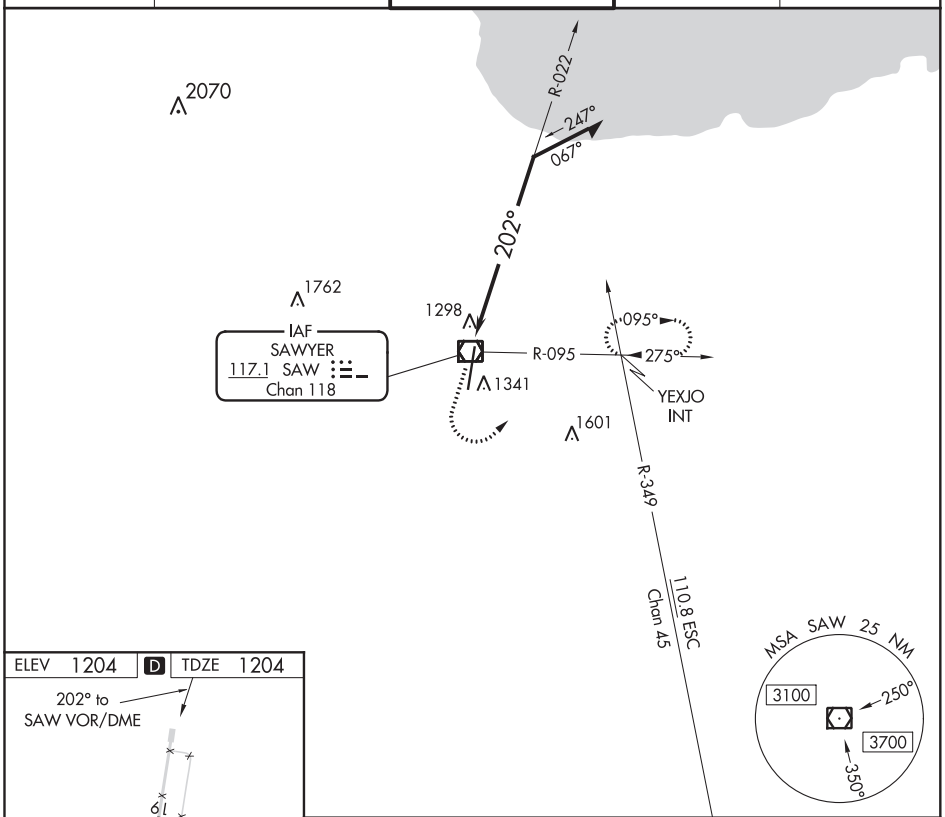
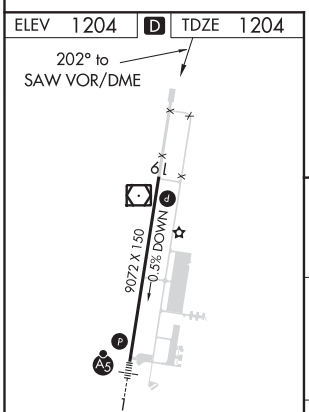
VOR/DME SAW 117.1 Chan 118	APP CRS 202°	Rwy ldg 9072 TDZE 1204 Apt Elev 1204

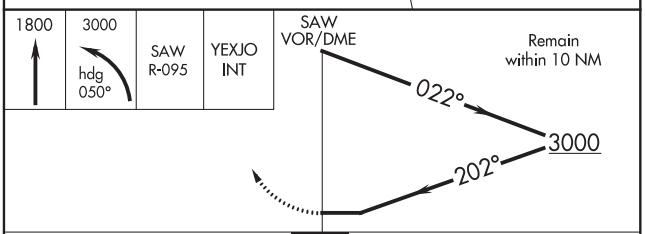
VOR RWY 19
SAWYER INTL (SAW)

MISSED APPROACH: Climb to 1800 then climbing left turn to 3000 on heading 050° and SAW VOR/DME R-095 to YEXJO Int and hold.

AWOS-3	MINNEAPOLIS CENTER	SAWYER TOWER ★	GND CON	UNICOM
118.375	119.1 290.2	119.975 (CTAF) L	121.65	122.7







HIRL Rwy 1-19 L
REIL Rwy 19 L

CATEGORY	A	B	C	D
S-19	1780-1 576 (600-1)		1780-1⅝ 576 (600-1⅝)	
C CIRCLING	1780-1 576 (600-1)		1820-1¾ 616 (700-1¾)	1820-2 616 (700-2)

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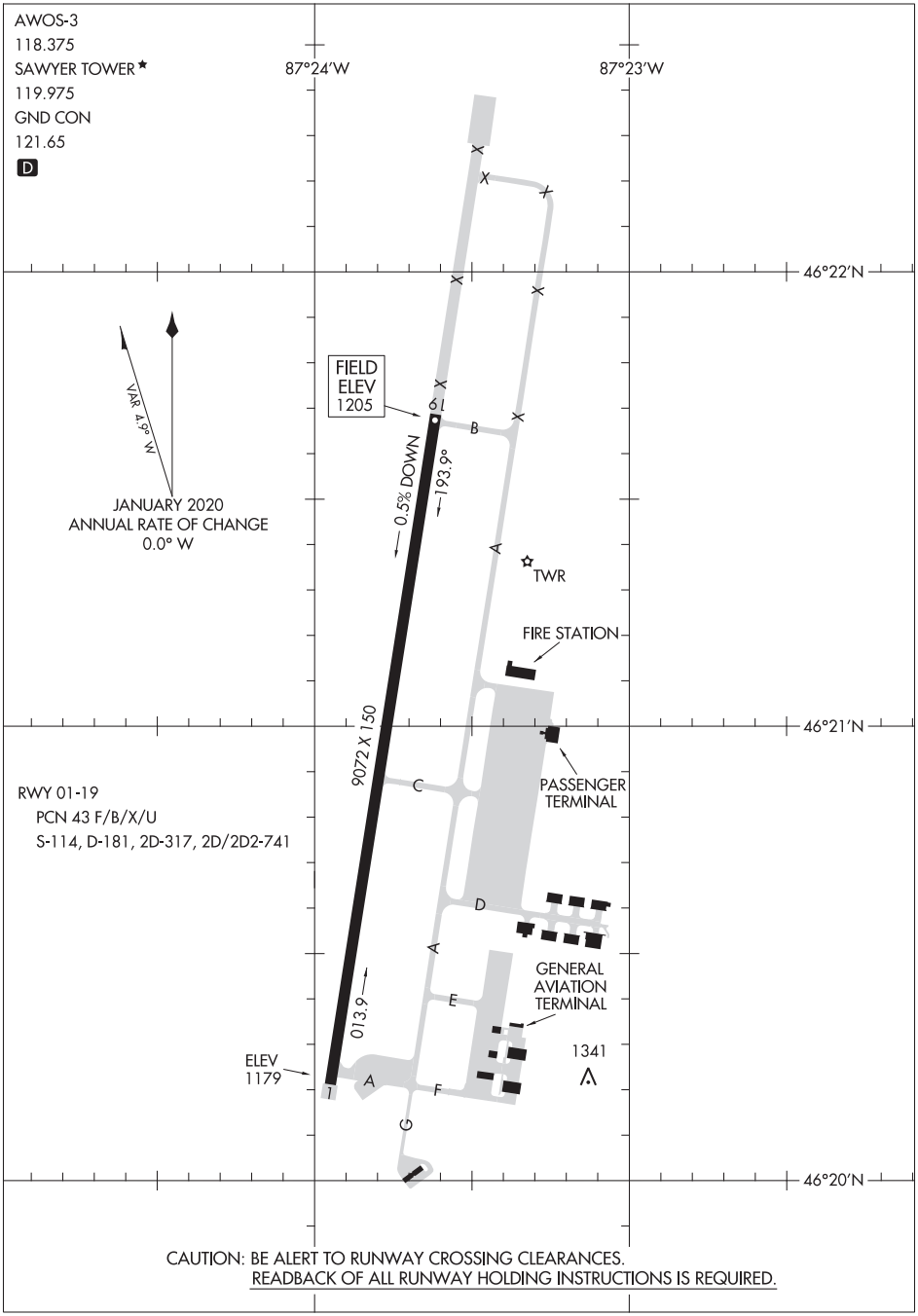
20086

AIRPORT DIAGRAM

AL-773 (FAA)

SAWYER INTL (SAW)
MARQUETTE, MICHIGAN



CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

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AIRPORT DIAGRAM
20086
MARQUETTE, MICHIGAN
SAWYER INTL (SAW)

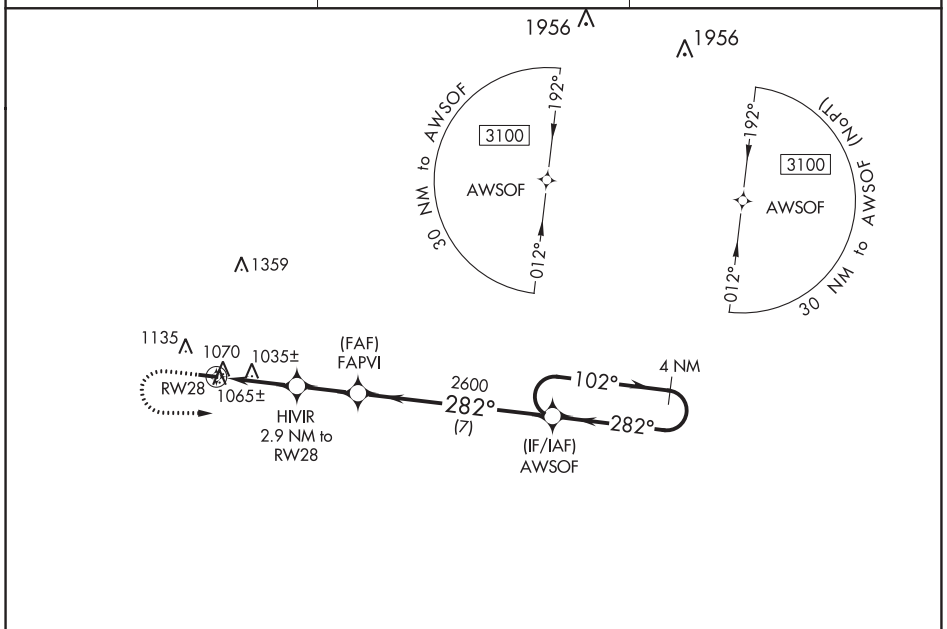
WAAS CH45533 W28A	APP CRS 282°	Rwy ldg 3501 TDZE 941 Apt Elev 941

RNAV (GPS) RWY 28
BROOKS FIELD (RMY)

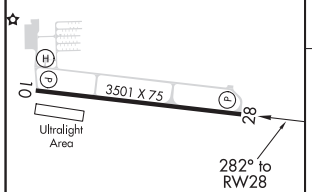
DME/DME RNP-0.3 NA. VDP NA with Battle Creek altimeter setting.
When local altimeter setting not received, use Battle Creek altimeter setting and increase all MDA 40 feet; increase LP and LNAV Cat C visibility ⅛ mile.
Helicopter visibility reduction below ¾ SM NA. Night landing: Rwy 10 NA.

MISSED APPROACH: Climb to 1500 then climbing left turn to 3100 direct AWSOF and hold.

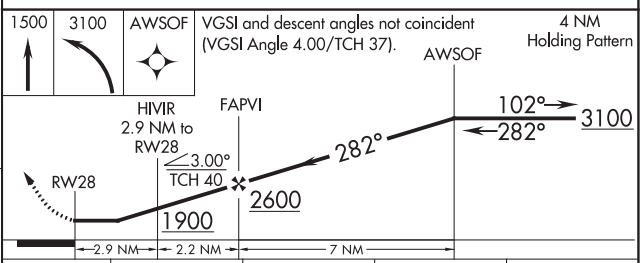
AWOS-3	GREAT LAKES APP CON *	UNICOM
120.025	119.2 239.25	122.8 (CTAF) L



ELEV 941 TDZE 941



MIRL Rwy 10-28 L



CATEGORY	A	B	C	D
LP MDA	1300-1 359 (400-1)			NA
LNAV MDA	1320-1 379 (400-1)		1320-1⅛ 379 (400-1⅛)	NA
CIRCLING	1440-1 499 (500-1)		1440-1½ 499 (500-1½)	NA

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MARSHALL, MICHIGAN | AL-5467 (FAA) | 21056

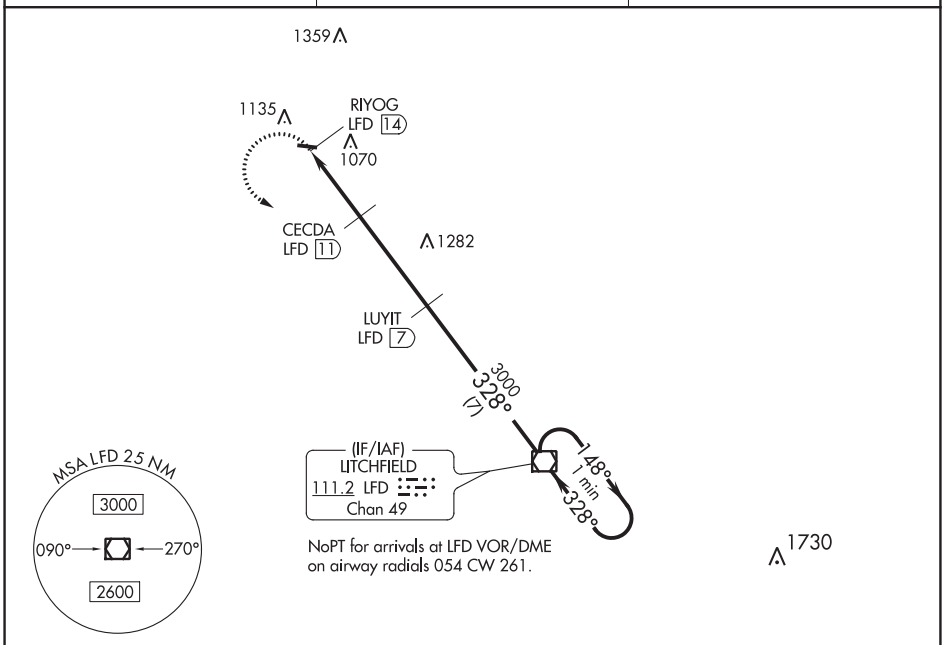
VOR/DME-A
BROOKS FIELD (RMY)

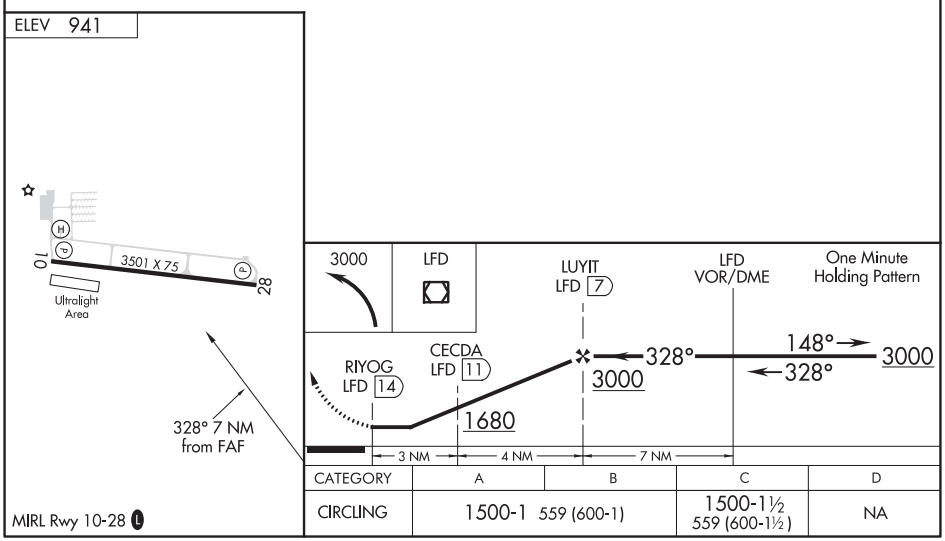
VOR/DME LFD	APP CRS	Rwy ldg	NA
111.2	328°	TDZE	NA
Chan 49		Apt Elev	941

When local altimeter setting not received, use Battle Creek altimeter setting and increase all MDA 40 feet. Helicopter visibility reduction below ¾ SM NA. Night landing: Rwy 10 NA.

MISSED APPROACH: Climbing left turn to 3000 direct LFD VOR/DME and hold.

AWOS-3	GREAT LAKES APP CON ★	UNICOM
120.025	119.2 239.25	122.8 (CTAF) L





CATEGORY	A	B	C	D
CIRCLING	1500-1 559 (600-1)		1500-1½ 559 (600-1½)	NA

MIRL Rwy 10-28 L

MARSHALL, MICHIGAN
Orig-A 31MAR16

42°15′N-84°57′W

BROOKS FIELD (RMY)
VOR/DME-A

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WAAS CH 61134 W10A	APP CRS 095°	Rwy ldg 4004 TDZE 920 Apt Elev 920

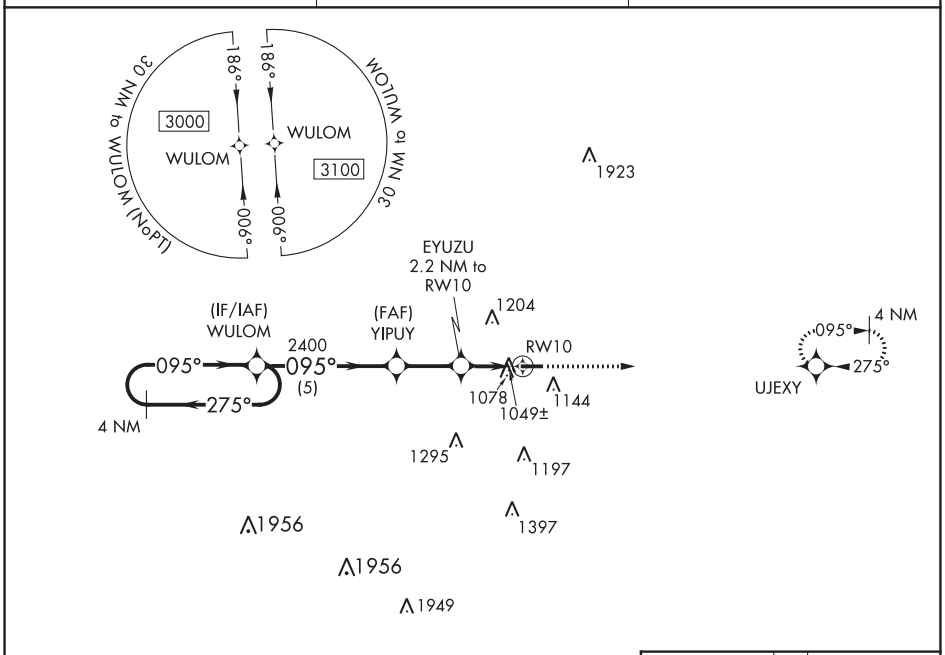
RNAV (GPS) RWY 10
MASON JEWETT FIELD (TEW)

RNP APCH.

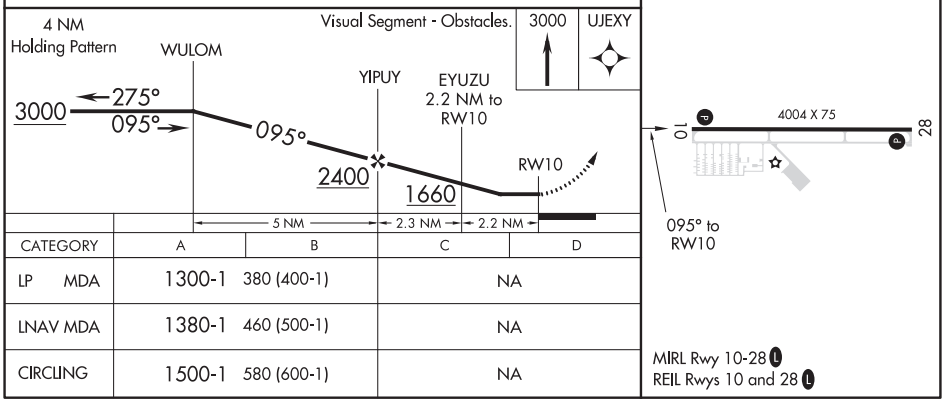
Rwy 10 helicopter visibility reduction below 1 SM NA. Straight-in Rwy 10 NA at night, Circling Rwy 10 NA at night.

MISSED APPROACH: Climb to 3000 direct UJEXY and hold.

AWOS-3	GREAT LAKES APP CON ★	UNICOM
119.425	118.65 226.4	122.7 (CTAF) L



ELEV 920 TDZE 920



CATEGORY	A	B	C	D
LP MDA	1300-1 380 (400-1)		NA	
LNAV MDA	1380-1 460 (500-1)		NA	
CIRCLING	1500-1 580 (600-1)		NA	

MIRL Rwy 10-28 L
REIL Rwys 10 and 28 L

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MASON, MICHIGAN | AL-6487 (FAA) | 20198

WAAS CH 53534 W28A	APP CRS 275°	Rwy ldg 4004 TDZE 918 Apt Elev 920

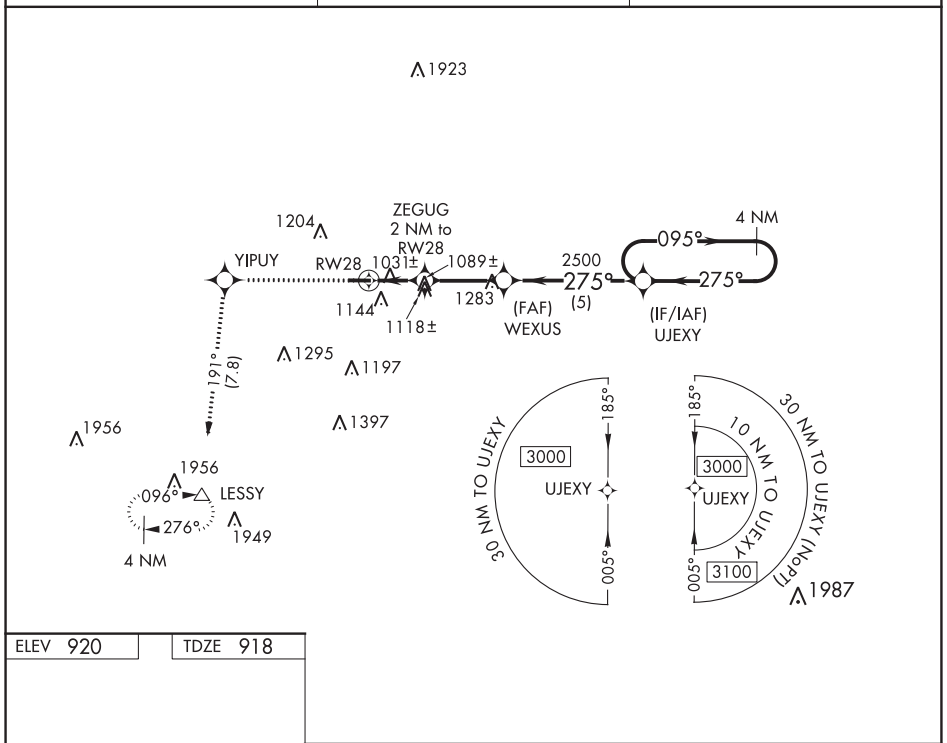
RNAV (GPS) RWY 28
MASON JEWETT FIELD (TEW)

RNP APCH.

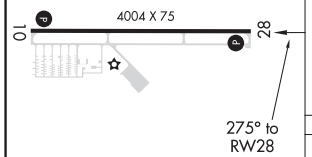
Rwy 28 helicopter visibility reduction below ¾ SM NA.
Circling Rwy 10 NA at night.

MISSED APPROACH: Climb to 3000 direct YIPUY and on track 191° direct LESSY and hold.

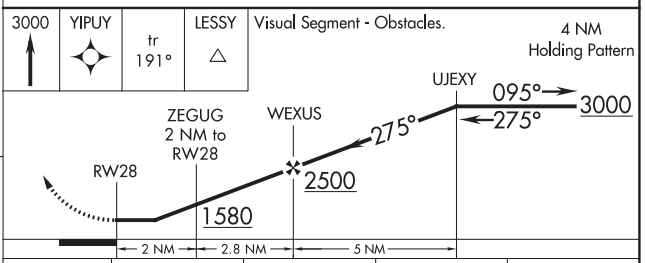
AWOS-3	GREAT LAKES APP CON ★	UNICOM
119.425	118.65 226.4	122.7 (CTAF) L



ELEV 920	TDZE 918



MIRL Rwy 10-28 L
REIL Rwys 10 and 28 L



CATEGORY	A	B	C	D
LP MDA	1300-1 382 (400-1)		NA	
LNAV MDA	1380-1 462 (500-1)		NA	
CIRCLING	1500-1 580 (600-1)		NA	

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LOC I-TNQ	APP CRS	Rwy ldg	5999
108.7	034°	TDZE	624
		Apt Elev	625

ILS or LOC RWY 3
MENOMINEE RGNL (MNM)

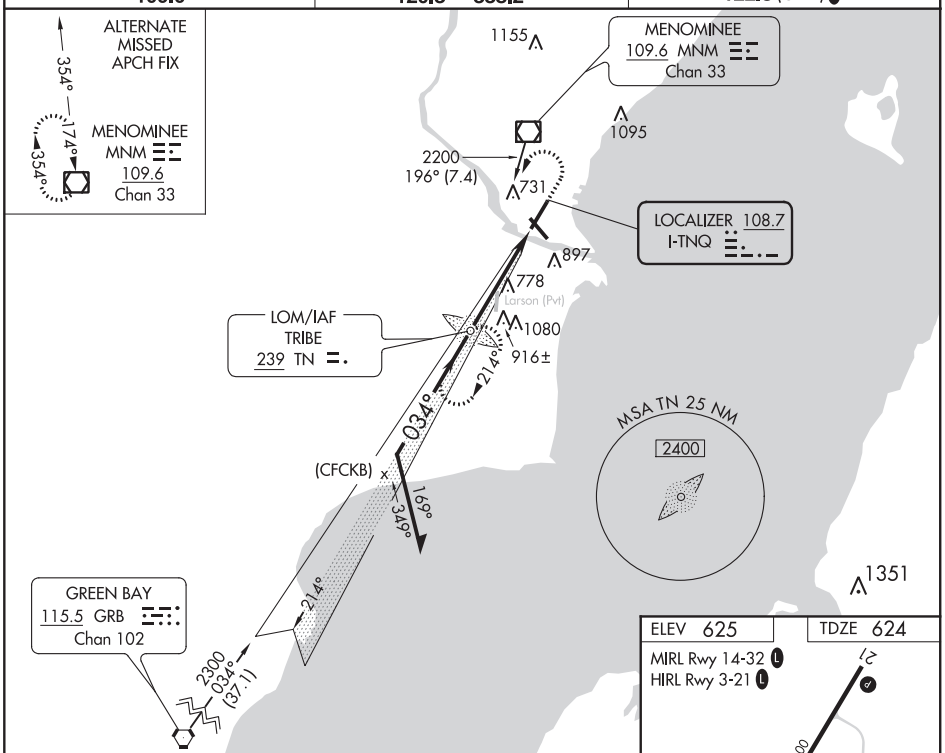
ADF required. ADF or RADAR required for procedure entry.

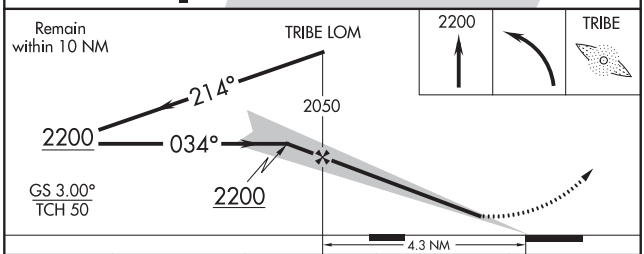
T A NA — Circling Rwy 14, 32 NA at night. Autopilot coupled approach NA below 1574. Inop table does not apply. When local altimeter setting not received, use Sturgeon Bay altimeter setting and increase all DA/MDA 60 feet, Circling Cat C/D visibility ¼ SM. For inop ALS when using Sturgeon Bay altimeter setting, increase S-LOC 3 Cat C/D visibility to 1⅛ SM.

MALSR A5

MISSED APPROACH: Climb to 2200 then left turn direct TRIBE LOM and hold.

AWOS-3PT	GREEN BAY APP CON ★		UNICOM
109.6	120.3	338.2	122.8 (CTAF) L

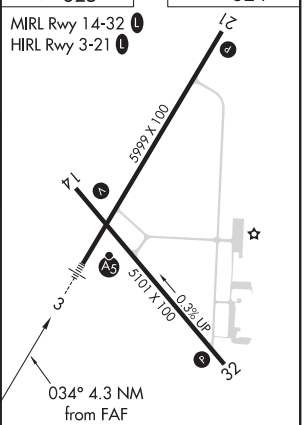




CATEGORY	A	B	C	D
S-ILS 3	824-1 200 (200-1)			
S-LOC 3	980-1 356 (400-1)			
C CIRCLING	1200-1 575 (600-1)		1200-1½ 575 (600-1½)	1380-2½ 755 (800-2½)

ELEV 625 TDZE 624

MIRL Rwy 14-32 L
HIRL Rwy 3-21 L



FAF to MAP 4.3 NM					
Knots	60	90	120	150	180
Min:Sec	4:18	2:52	2:09	1:43	1:26

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MENOMINEE, MICHIGAN AL-5145 (FAA) 20366

WAAS CH 73014 W03A	APP CRS 034°	Rwy ldg 5999 TDZE 624 Apt Elev 625

RNAV (GPS) RWY 3
MENOMINEE RGNL (MNM)

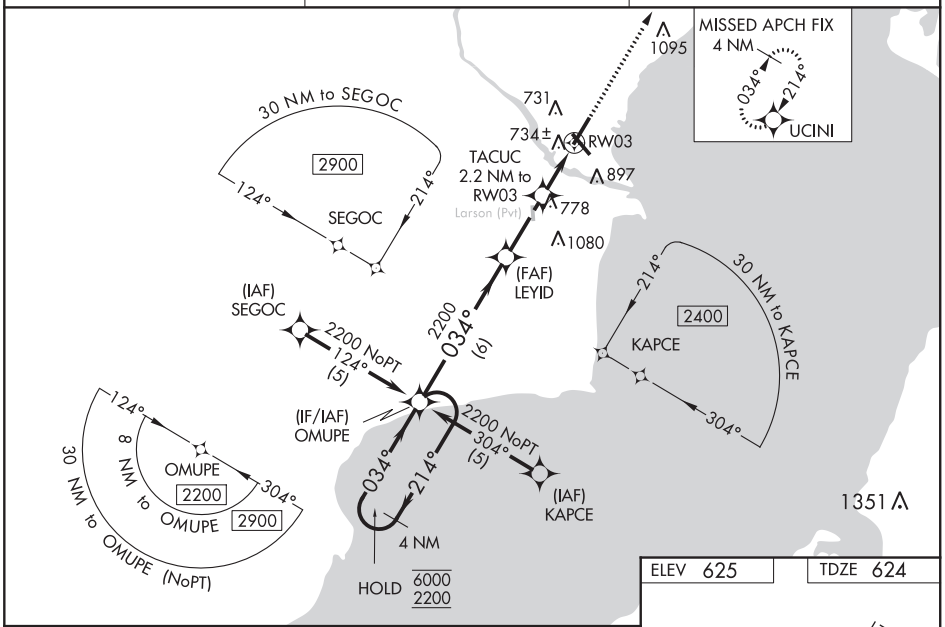
RNP APCH.

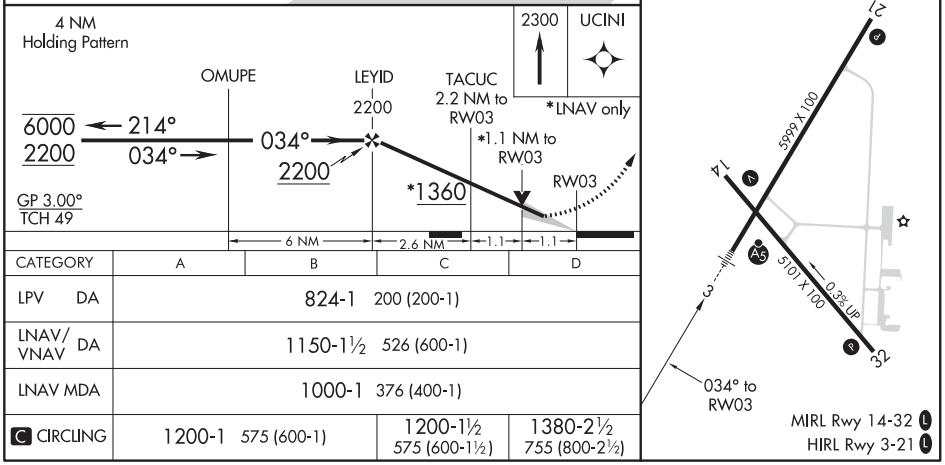
Circling Rwy 14, 32 NA at night. Baro-VNAV and VDP NA when using Sturgeon Bay altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C. When local altimeter setting not received, use Sturgeon Bay altimeter setting and increase all DA/MDA 60 feet, increase Circling Cat C/D visibility ¼ SM. For inop MALSR when using Sturgeon Bay altimeter setting increase LNAV MDA visibility Cat C/D to 1⅜. Inop table does not apply to LPV and LNAV/VNAV all Cats and LNAV MDA Cats A/B.

MALSR

MISSED APPROACH: Climb to 2300 direct UCINI and hold.

AWOS-3PT	GREEN BAY APP CON ★	UNICOM
109.6	120.3 338.2	122.8 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	824-1 200 (200-1)			
LNAV/VNAV DA	1150-1½ 526 (600-1)			
LNAV MDA	1000-1 376 (400-1)			
C CIRCLING	1200-1 575 (600-1)		1200-1½ 575 (600-1½)	1380-2½ 755 (800-2½)

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APP CRS	Rwy ldg	5999
214°	TDZE	625
	Apt Elev	625

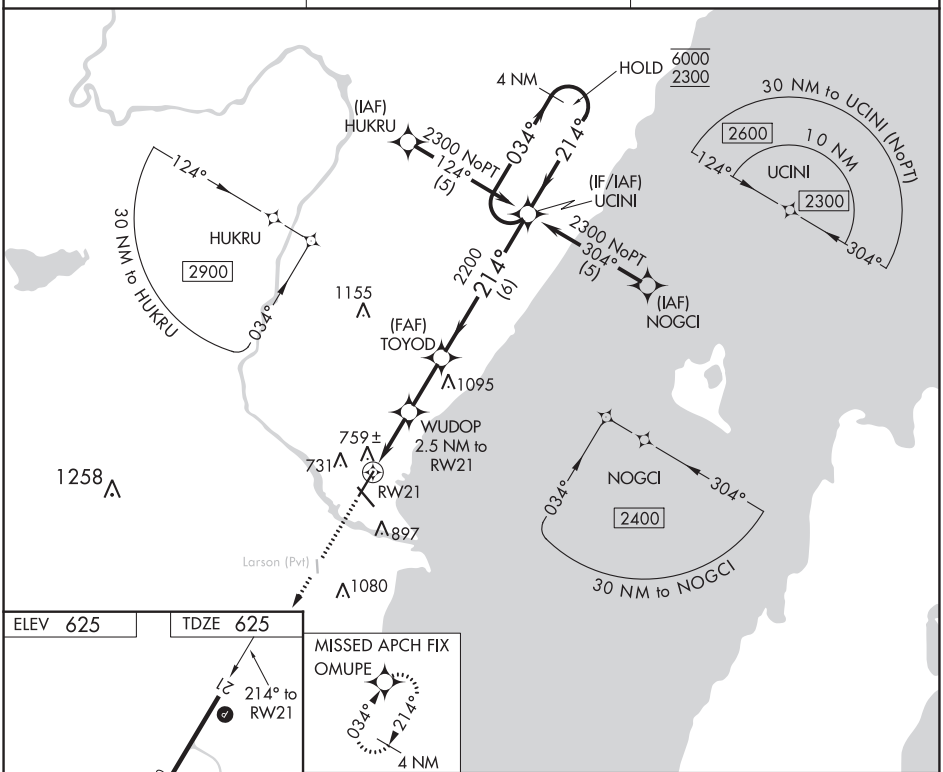
RNAV (GPS) RWY 21
MENOMINEE RGNL (MNM)

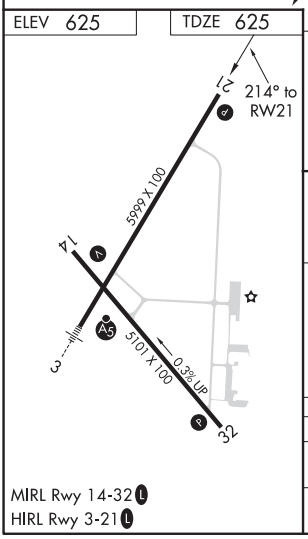
RNP APCH.

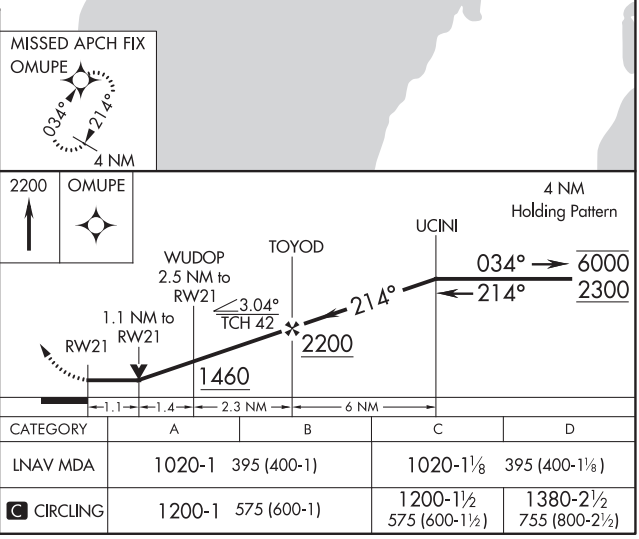
T A Circling Rwy 14, 32 NA at night. Rwy 21 helicopter visibility reduction below ¾ SM NA. VDP NA when using Sturgeon Bay altimeter setting. When local altimeter setting not received, use Sturgeon Bay altimeter setting and increase all MDA 60 feet, increase LNAV Cat C/D and Circling Cat C/D visibility ¼ SM.

MISSED APPROACH: Climb to 2200 direct OMUPE and hold.

AWOS-3PT	GREEN BAY APP CON ★	UNICOM
109.6	120.3 338.2	122.8 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1020-1 395 (400-1)		1020-1⅛ 395 (400-1⅛)	
C CIRCLING	1200-1 575 (600-1)		1200-1½ 575 (600-1½)	1380-2½ 755 (800-2½)

MIRL Rwy 14-32 L
HIRL Rwy 3-21 L

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MENOMINEE, MICHIGAN AL-5145 (FAA) 20366

RNAV (GPS) RWY 32

MENOMINEE RGNL (MNM)

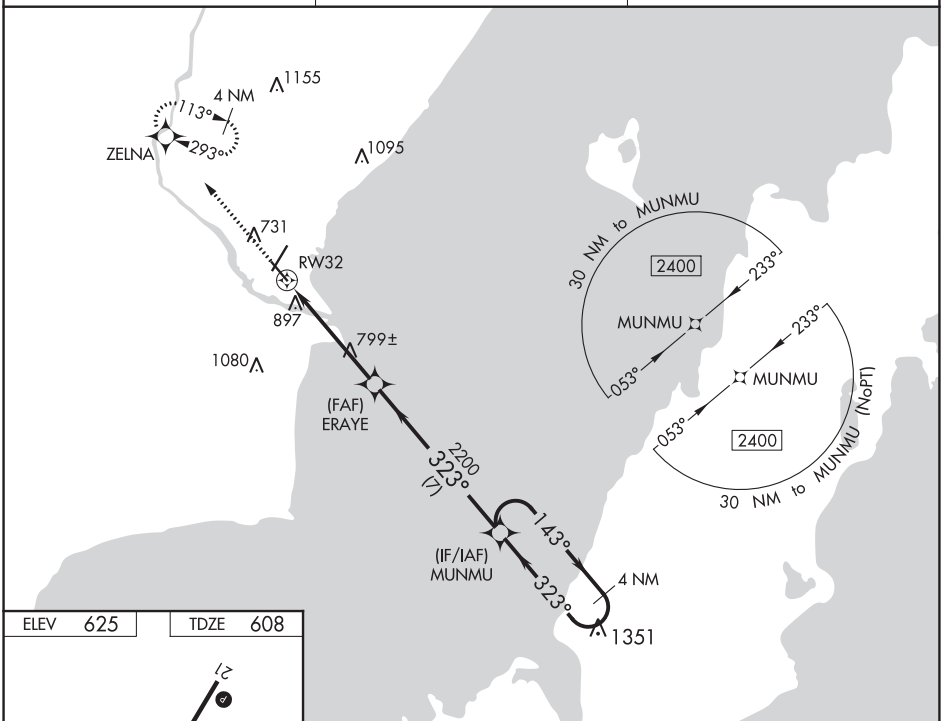
WAAS	APP CRS	Rwy ldg	5101
CH 56333	323°	TDZE	608
W32A		Apt Elev	625

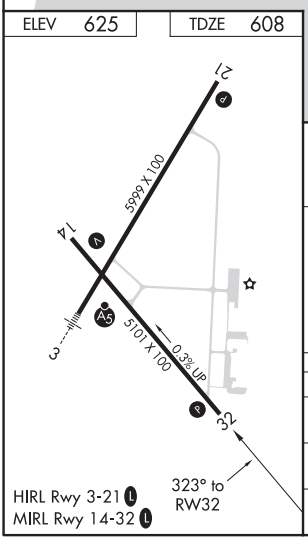
RNP APCH

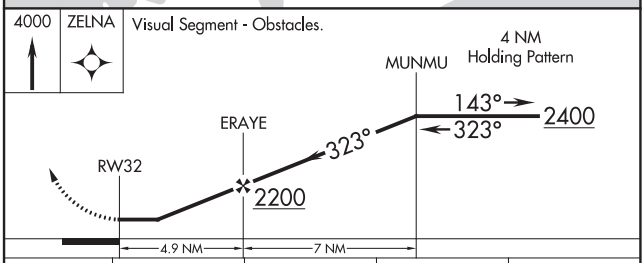
Rwy 32 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Sturgeon Bay altimeter setting and increase all MDA 60 feet, increase LNAV Cat C/D and Circling Cat C visibility ⅛ SM, and Circling Cat D visibility ¼ SM. Straight-in Rwy 32 NA at night, Circling Rwy 14, 32 NA at night.

MISSED APPROACH: Climb to 4000 direct ZELNA and hold, continue climb-in-hold to 4000.

AWOS-3PT	GREEN BAY APP CON ★	UNICOM
109.6	120.3 338.2	122.8 (CTAF) L







CATEGORY	A	B	C	D
LP MDA	1060-1	452 (500-1)	1060-1⅜	452 (500-1⅜)
LNAV MDA	1160-1	552 (600-1)	1160-1⅝	552 (600-1⅝)
C CIRCLING	1200-1	575 (600-1)	1200-1⅝ 575 (600-1⅝)	1380-2½ 755 (800-2½)

MENOMINEE, MICHIGAN
Amdt 1C 19JUL18

45°08′N-87°38′W

MENOMINEE RGNL (MNM)

RNAV (GPS) RWY 32

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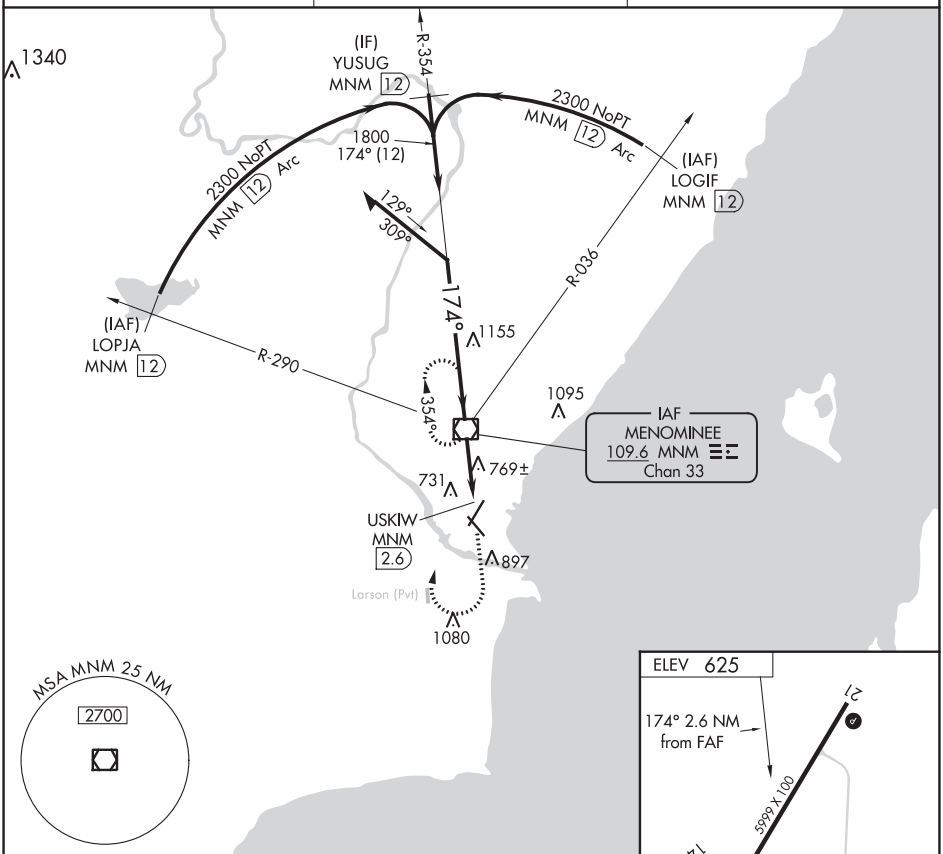
VOR/DME MNM	APP CRS	Rwy ldg	N/A
109.6	174°	TDZE	N/A
Chan 33		Apt Elev	625

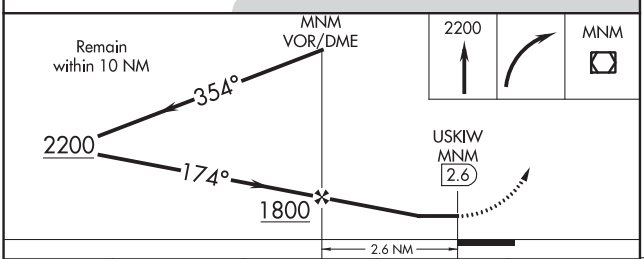
VOR-A
MENOMINEE RGNL (MNM)

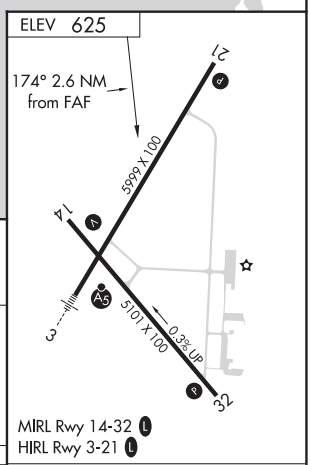
Circling Rwy 14, 32 NA at night. When local altimeter setting not received, use Sturgeon Bay altimeter setting and increase all MDA 60 feet, increase Circling Cat C/D visibility ¼ mile.

MISSED APPROACH: Climb to 2200 then right turn direct MNM VOR/DME and hold.

AWOS-3PT	GREEN BAY APP CON*	UNICOM
109.6	120.3 338.2	122.8 (CTAF) L







CATEGORY	A	B	C	D
C CIRCLING	1200-1 575 (600-1)		1200-1½ 575 (600-1½)	1380-2½ 755 (800-2½)

FAF to MAP 2.6 NM					
Knots	60	90	120	150	180
Min:Sec	2:36	1:44	1:18	1:02	0:52

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MIDLAND, MICHIGAN AL-5476 (FAA) 19171

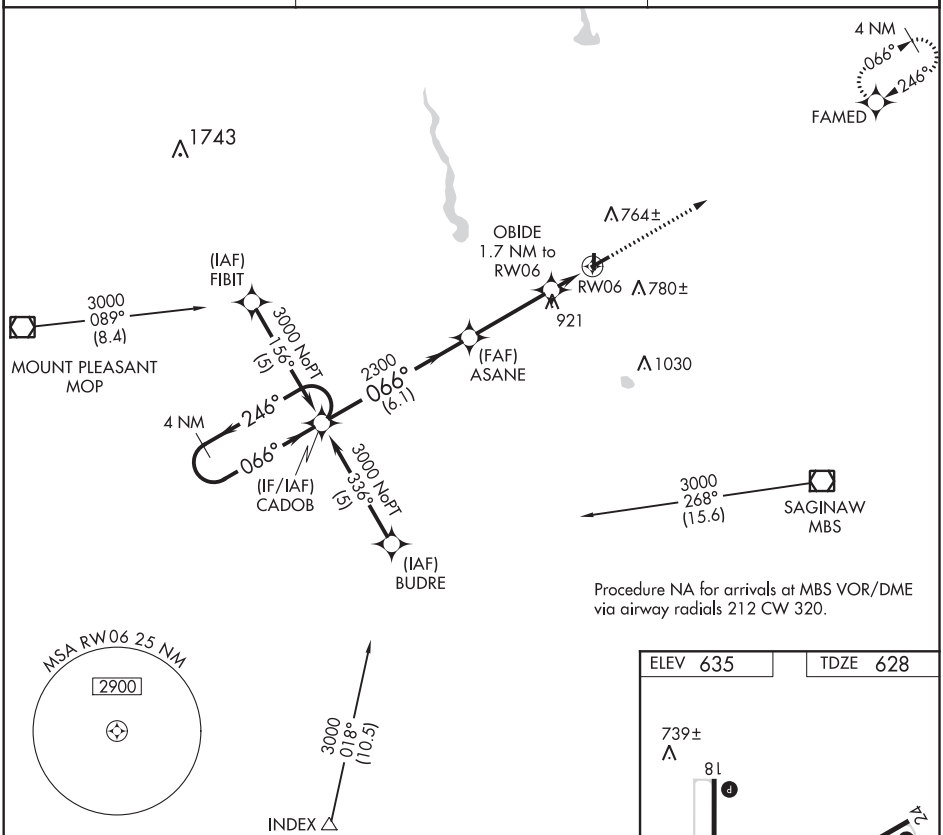
APP CRS	Rwy ldg	3801
066°	TDZE	628
	Apt Elev	635

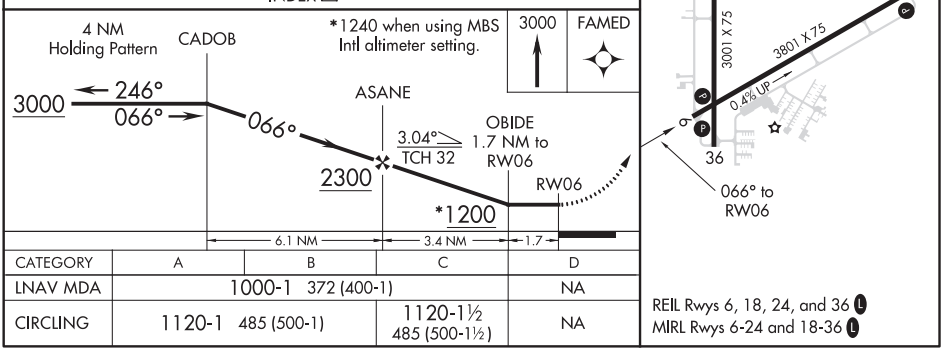
RNAV (GPS) RWY 6
JACK BARSTOW (IKW)

DME/DME RNP-0.3 NA. Rwy 24 helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use MBS Intl altimeter setting and increase all MDA 40 feet and LNAV Cat C visibility ¼ mile. Circling Rwy 18, 36 NA at night.

MISSED APPROACH: Climb to 3000 direct FAMED and hold.

AWOS-3	GREAT LAKES APP CON ★	UNICOM
119.525	126.45 235.625	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1000-1 372 (400-1)			NA
CIRCLING	1120-1 485 (500-1)		1120-1½ 485 (500-1½)	NA

REIL Rwys 6, 18, 24, and 36 L
MIRL Rwys 6-24 and 18-36 L

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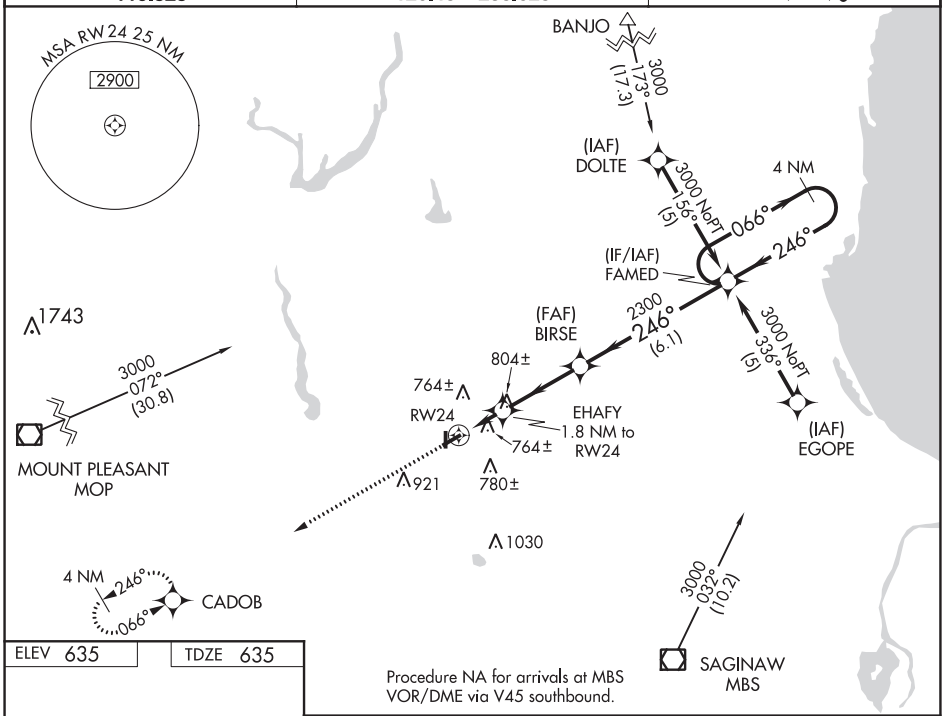
WAAS CH 72912 W24A	APP CRS 246°	Rwy ldg 3801 TDZE 635 Apt Elev 635

RNAV (GPS) RWY 24
JACK BARSTOW (IKW)

Baro-VNAV NA when using MBS Intl altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Rwy 24 helicopter visibility reduction below ¾ SM NA. 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 ¼ mile. Circling Rwy 18, 36 NA at night.

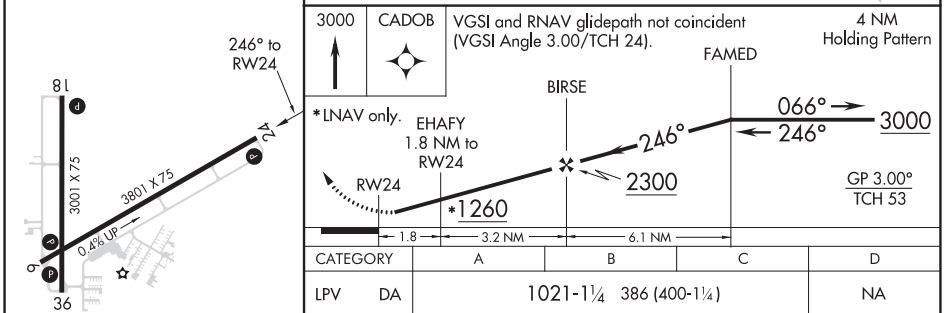
MISSED APPROACH: Climb to 3000 direct CADOB and hold.

AWOS-3	GREAT LAKES APP CON ★	UNICOM
119.525	126.45 235.625	122.8 (CTAF) L



Procedure NA for arrivals at MBS VOR/DME via V45 southbound.

ELEV 635	TDZE 635



CATEGORY	A	B	C	D
LPV DA	1021-1¼ 386 (400-1¼)			NA
LNAV/VNAV DA	1068-1½ 433 (500-1½)			NA
LNAV MDA	1060-1 425 (500-1)		1060-1¼ 425 (500-1¼)	NA
CIRCLING	1120-1 485 (500-1)		1120-1½ 485 (500-1½)	NA

REIL Rwys 6, 18, 24 and 36 L
MIRL Rwys 6-24 and 18-36 L

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EC-1, 25 FEB 2021 to 22 APR 2021

MIDLAND, MICHIGAN AL-5476 (FAA) 20254

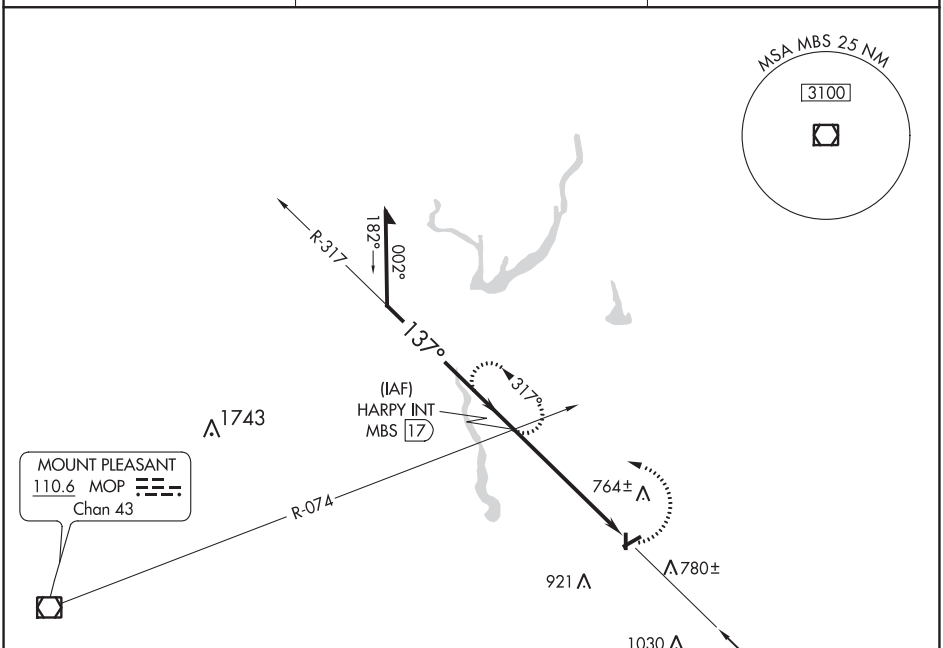
VOR-A
JACK BARSTOW (IKW)

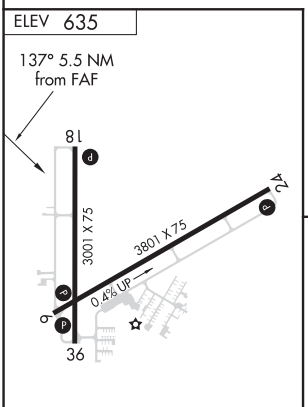
VOR/DME MBS	APP CRS	Rwy ldg	N/A
112.9	137°	TDZE	N/A
Chan 76		Apt Elev	635

When local altimeter setting not received, use MBS Intl altimeter setting and increase all MDA 40 feet. Circling Rwy 18, 36 NA at night. Rwy 18, 36 helicopter visibility reduction below 1 SM NA.

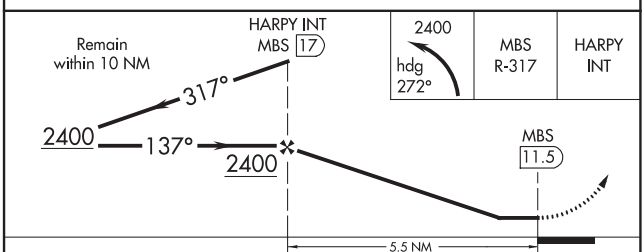
MISSED APPROACH: Climbing left turn to 2400 via heading 272° and MBS VOR/DME R-317 to HARPY INT/17 DME and hold.

AWOS-3	GREAT LAKES APP CON ★	UNICOM
119.525	126.45 235.625	122.8 (CTAF) L





REIL Rwys 6, 18, 24 and 36 L
MIRL Rwys 6-24 and 18-36 L



FAF to MAP 5.5 NM					
Knots	60	90	120	150	180
Min:Sec	5:30	3:40	2:45	2:12	1:50

CATEGORY	A	B	C	D
CIRCLING	1140-1 505 (600-1)		1140-1½ 505 (600-1½)	NA

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APP CRS	Rwy ldg	4997
027°	TDZE	614
	Apt Elev	616

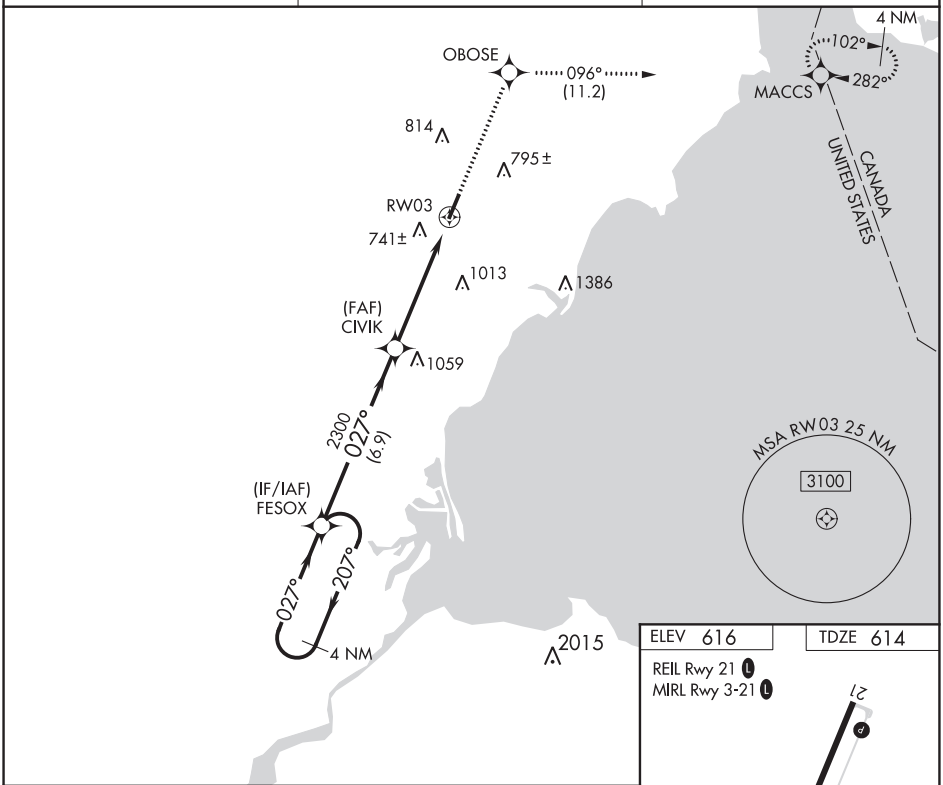
RNAV (GPS) RWY 3
CUSTER (TTF)

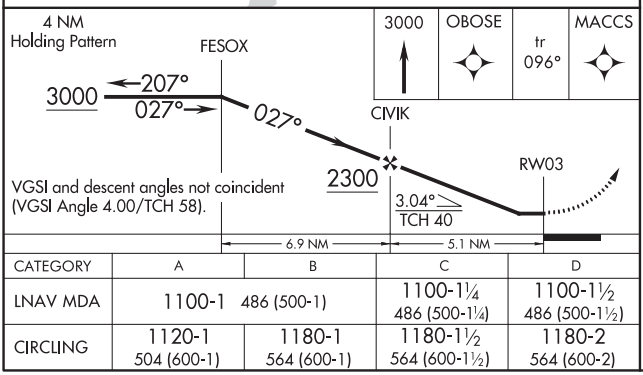
RNP APCH.

When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase all MDA 60 feet, LNAV Cat C/D visibility ¼ SM, and Circling Cat C visibility ¼ SM. Rwy 3 helicopter visibility reduction below 1 SM NA. Straight-in Rwy 3 NA at night.

MISSED APPROACH: Climb to 3000 direct OBOSE and on track 096° to MACCS and hold.

AWOS-3	DETROIT APP CON	UNICOM
119.075	134.3 363.2	122.7 (CTAF) L

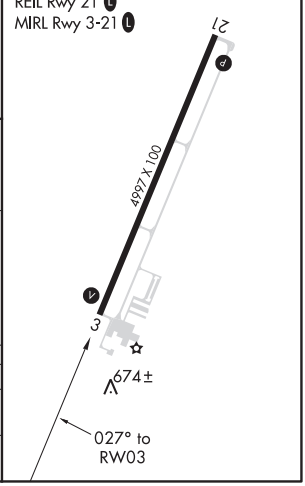




CATEGORY	A	B	C	D
LNAV MDA	1100-1 486 (500-1)		1100-1¼ 486 (500-1¼)	1100-1½ 486 (500-1½)
CIRCLING	1120-1 504 (600-1)	1180-1 564 (600-1)	1180-1½ 564 (600-1½)	1180-2 564 (600-2)

ELEV 616 TDZE 614

REIL Rwy 21 L
MIRL Rwy 3-21 L



EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

MONROE, MICHIGAN

AL-5642 (FAA)

20086

RNAV (GPS) RWY 21
CUSTER (TTF)

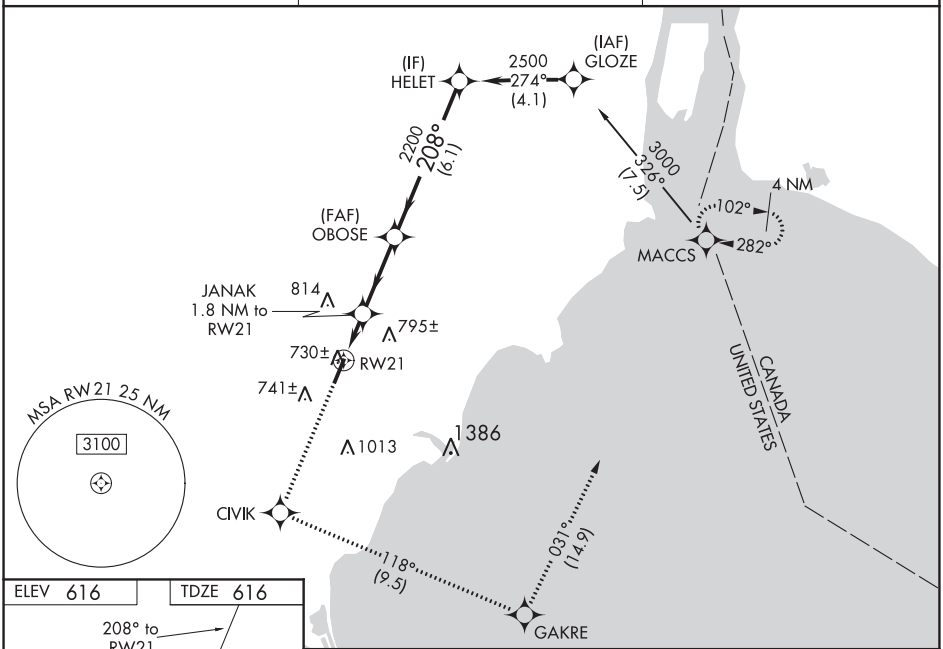
WAAS CH 86707 W21A	APP CRS 208°	Rwy ldg 4997 TDZE 616 Apt Elev 616

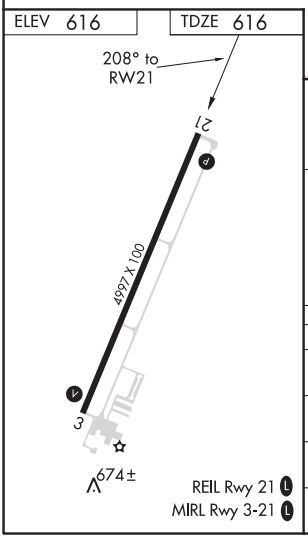
RNP APCH.

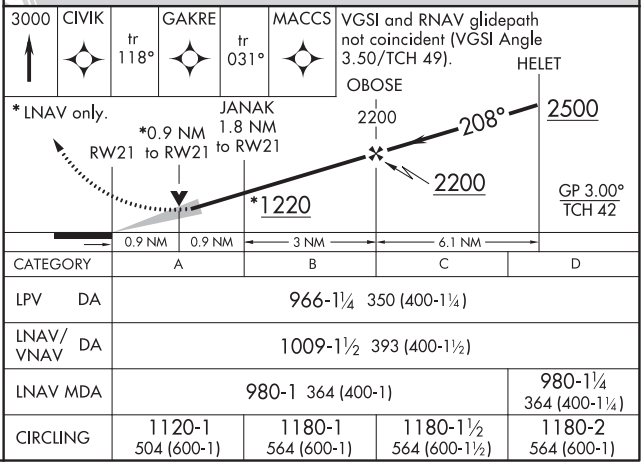
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). When local altimeter setting not received, use Detroit Metropolitan Wayne County altimeter setting and increase LPV DA 43 feet and all visibilities ¼ SM, LNAV/VNAV DA 138 feet and all visibilities ½ SM and all MDA 60 feet and Cat C visibilities ¼ SM. Baro-VNAV and VDP NA when using Detroit Metropolitan Wayne County altimeter setting.

MISSED APPROACH: Climb to 3000 direct CIVIK and on track 118° to GAKRE and on track 031° to MACCS and hold.

AWOS-3	DETROIT APP CON	UNICOM
119.075	134.3 363.2	122.7 (CTAF) L







CATEGORY	A	B	C	D
LPV DA	966-1¼ 350 (400-1¼)			
LNAV/VNAV DA	1009-1½ 393 (400-1½)			
LNAV MDA	980-1 364 (400-1)			980-1¼ 364 (400-1¼)
CIRCLING	1120-1 504 (600-1)	1180-1 564 (600-1)	1180-1½ 564 (600-1½)	1180-2 564 (600-1)

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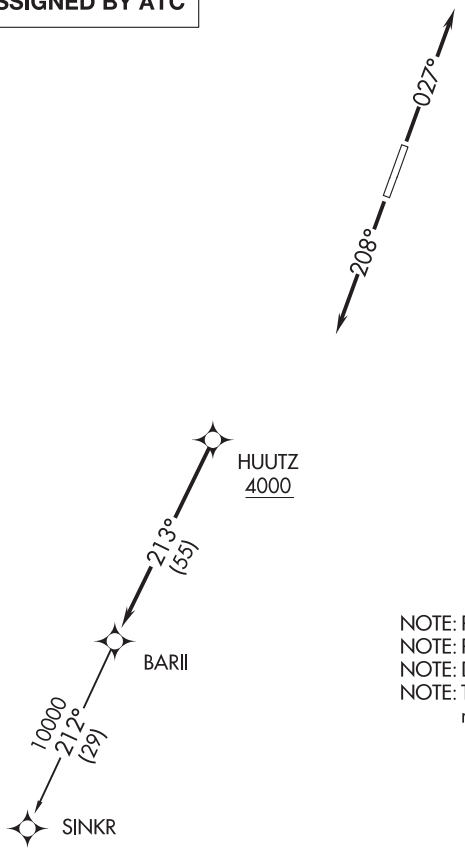
TOP ALTITUDE: ASSIGNED BY ATC

AWOS-3
119.075
CTAF
122.7
DETROIT DEP CON
134.3 284.0



TAKEOFF MINIMUMS:
Standard.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 3: Climb on heading 027° or as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....
TAKEOFF RUNWAY 21: Climb on heading 208° or as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....

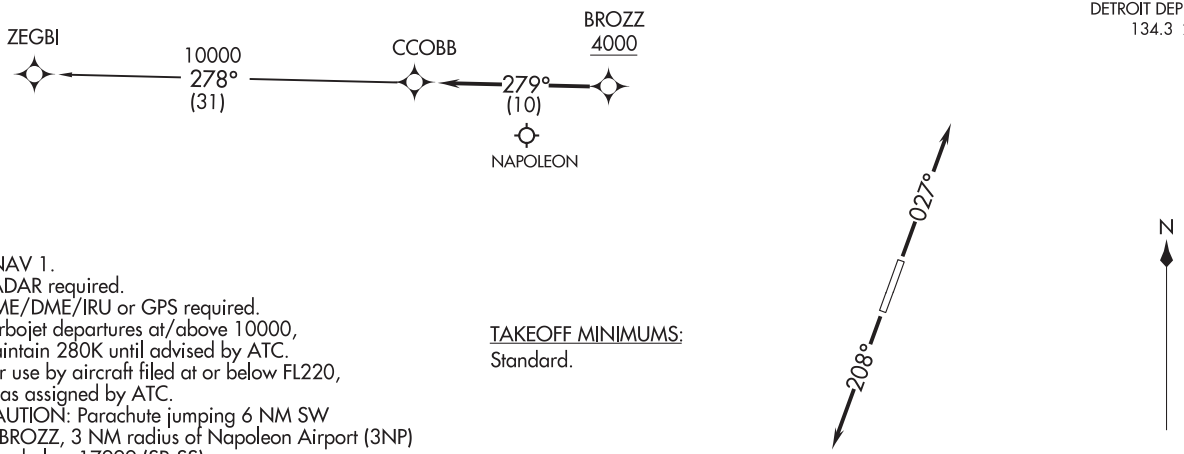
....on track 213° to BARII, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

SINKR TRANSITION (BARII2.SINKR):

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

TOP ALTITUDE: ASSIGNED BY ATC

AWOS-3
119.075
CTAF
122.7
DETROIT DEP CON
134.3 284.0



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: For use by aircraft filed at or below FL220, or as assigned by ATC.
NOTE: CAUTION: Parachute jumping 6 NM SW of BROZZ, 3 NM radius of Napoleon Airport (3NP) at or below 17999 (SR-SS).

NOTE: Chart not to scale.

TAKEOFF MINIMUMS:
Standard.

DEPARTURE ROUTE DESCRIPTION

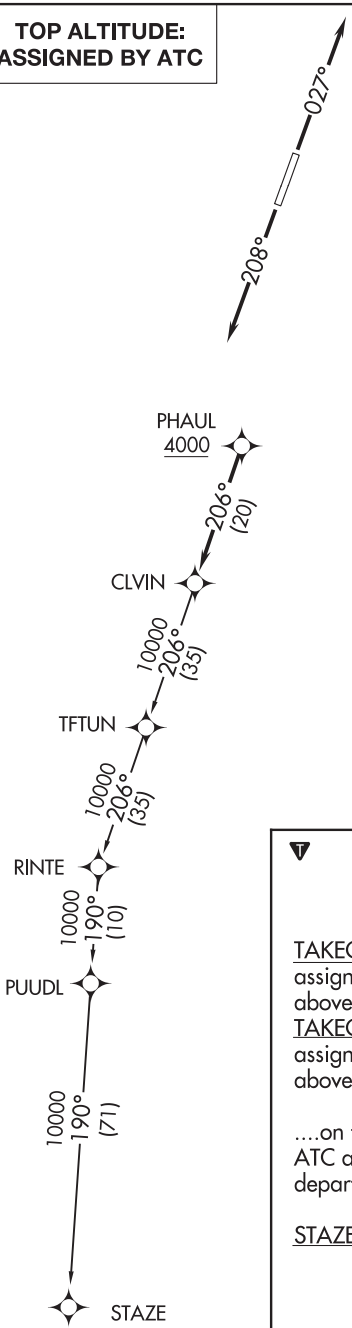
TAKEOFF RUNWAY 3: Climb on heading 027° or as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 21: Climb on heading 208° or as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....

....on track 279° to CCOBB, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ZEGBI TRANSITION (CCOBB2.ZEGBI):

TOP ALTITUDE: ASSIGNED BY ATC

AWOS-3
119.075
CTAF
122.7
DETROIT DEP CON
134.3 284.0



TAKEOFF MINIMUMS:
Standard.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 3: Climb on heading 027° or as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 21: Climb on heading 208° or as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....

....on track 206° to CLVIN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

STAZE TRANSITION (CLVIN2.STAZE):

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EC-1, 25 FEB 2021 to 22 APR 2021

HHOWE THREE DEPARTURE (RNAV)

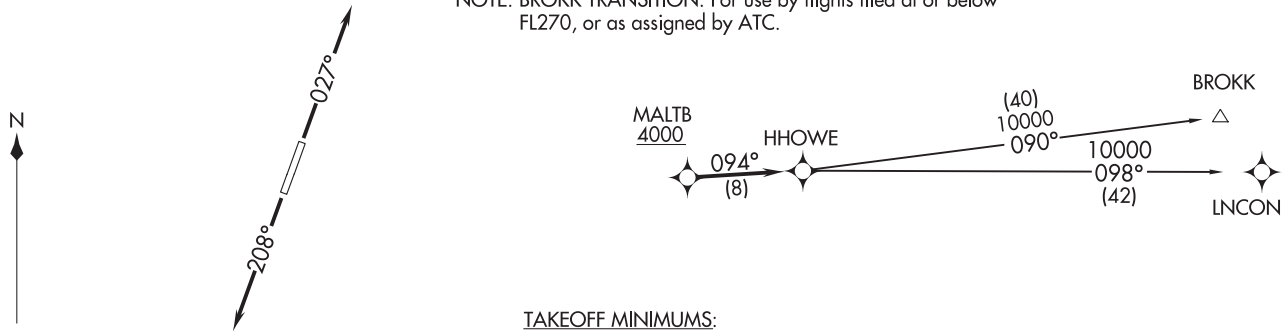
(HHOWE3.HHOWE) 05DEC19

MONROE, MICHIGAN
CUSTER (TTF)

AWOS-3
119.075
CTAF
122.7
DETROIT DEP CON
134.3 284.0

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: BROKK TRANSITION: For use by flights filed at or below FL270, or as assigned by ATC.



TAKEOFF MINIMUMS:
Standard.

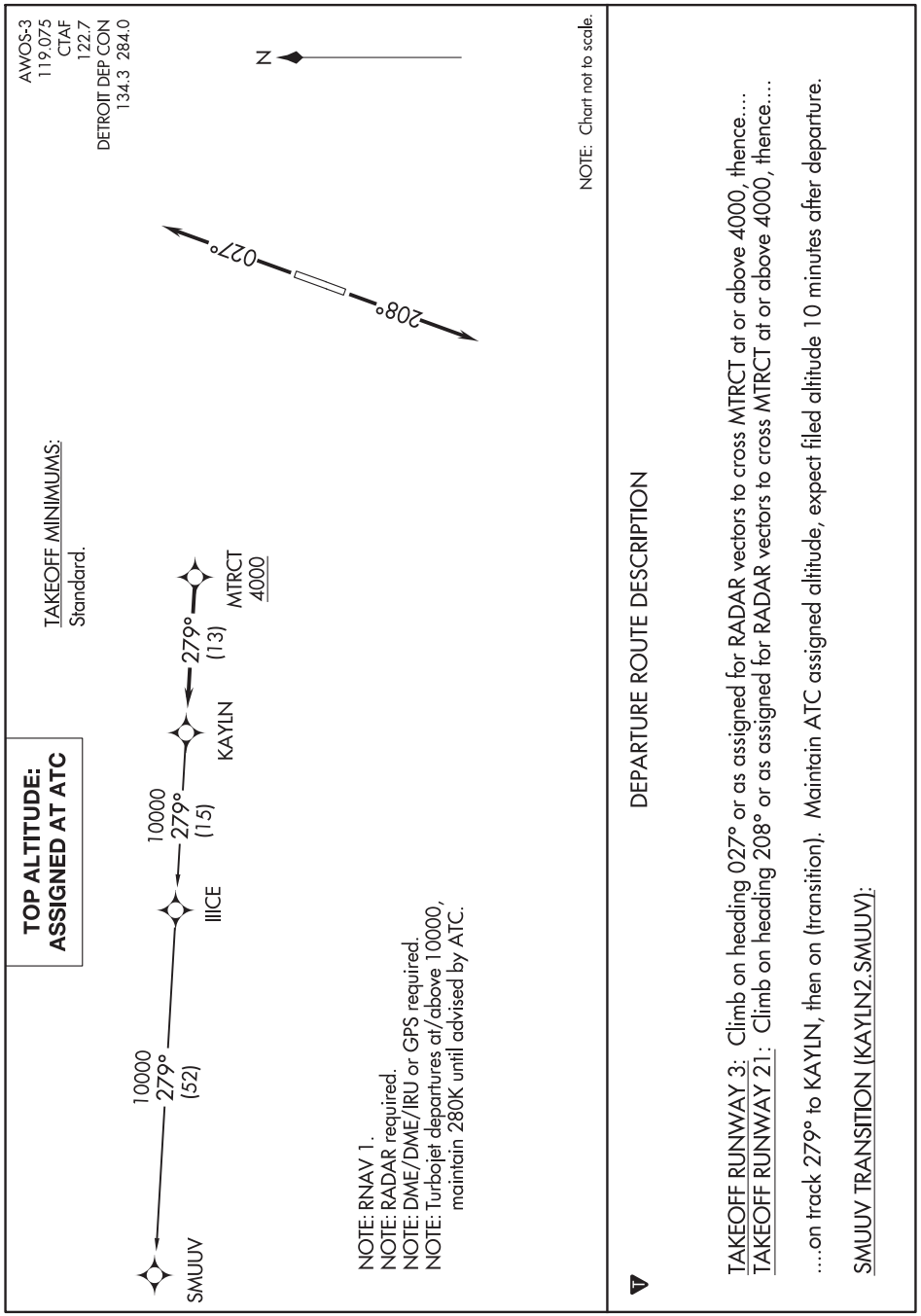
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 3: Climb on heading 027° or as assigned for RADAR vectors to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 21: Climb on heading 208° or as assigned for RADAR vectors to cross MALTB at or above 4000, thence....

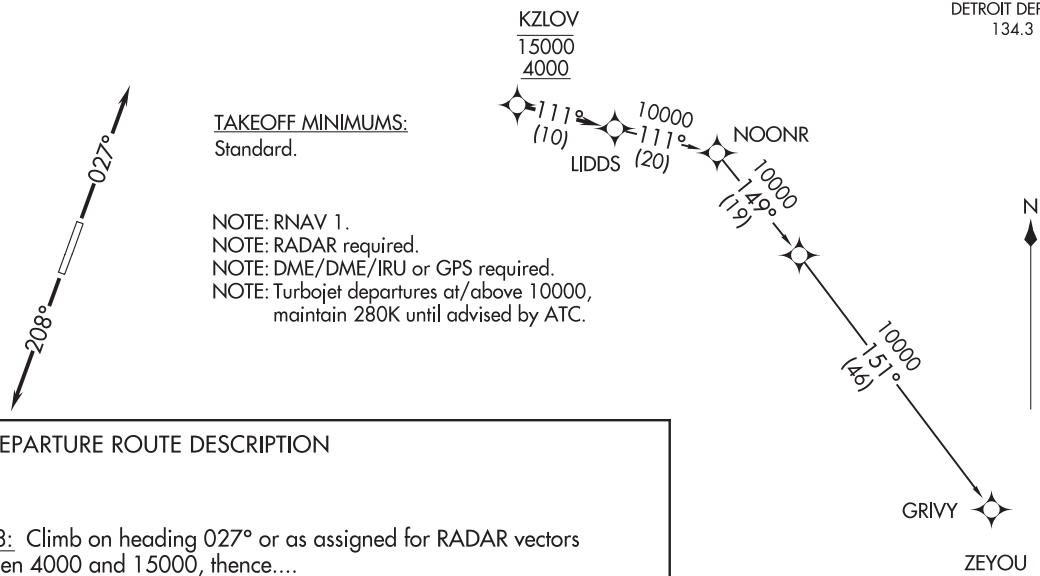
....on track 094° to HHOWE, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

BROKK TRANSITION (HHOWE3.BROKK)
LNCON TRANSITION (HHOWE3.LNCON)


AWOS-3
119.075
CTAF
122.7
DETROIT DEP CON
134.3 284.0
N
208°
027°
NOTE: Chart not to scale.
TOP ALTITUDE:
ASSIGNED AT ATC
TAKEOFF MINIMUMS:
Standard.
SMUUV
10000
279°
(52)
IICE
10000
279°
(15)
KAYLN
279°
(13)
MTRCT
4000
NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000,
maintain 280K until advised by ATC.
DEPARTURE ROUTE DESCRIPTION
TAKEOFF RUNWAY 3: Climb on heading 027° or as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....
TAKEOFF RUNWAY 21: Climb on heading 208° or as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....
....on track 279° to KAYLN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.
SMUUV TRANSITION (KAYLN2.SMUUV):

TOP ALTITUDE: ASSIGNED BY ATC

AWOS-3
119.075
CTAF
122.7
DETROIT DEP CON
134.3 284.0



TAKEOFF MINIMUMS:
Standard.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 3: Climb on heading 027° or as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAY 21: Climb on heading 208° or as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....

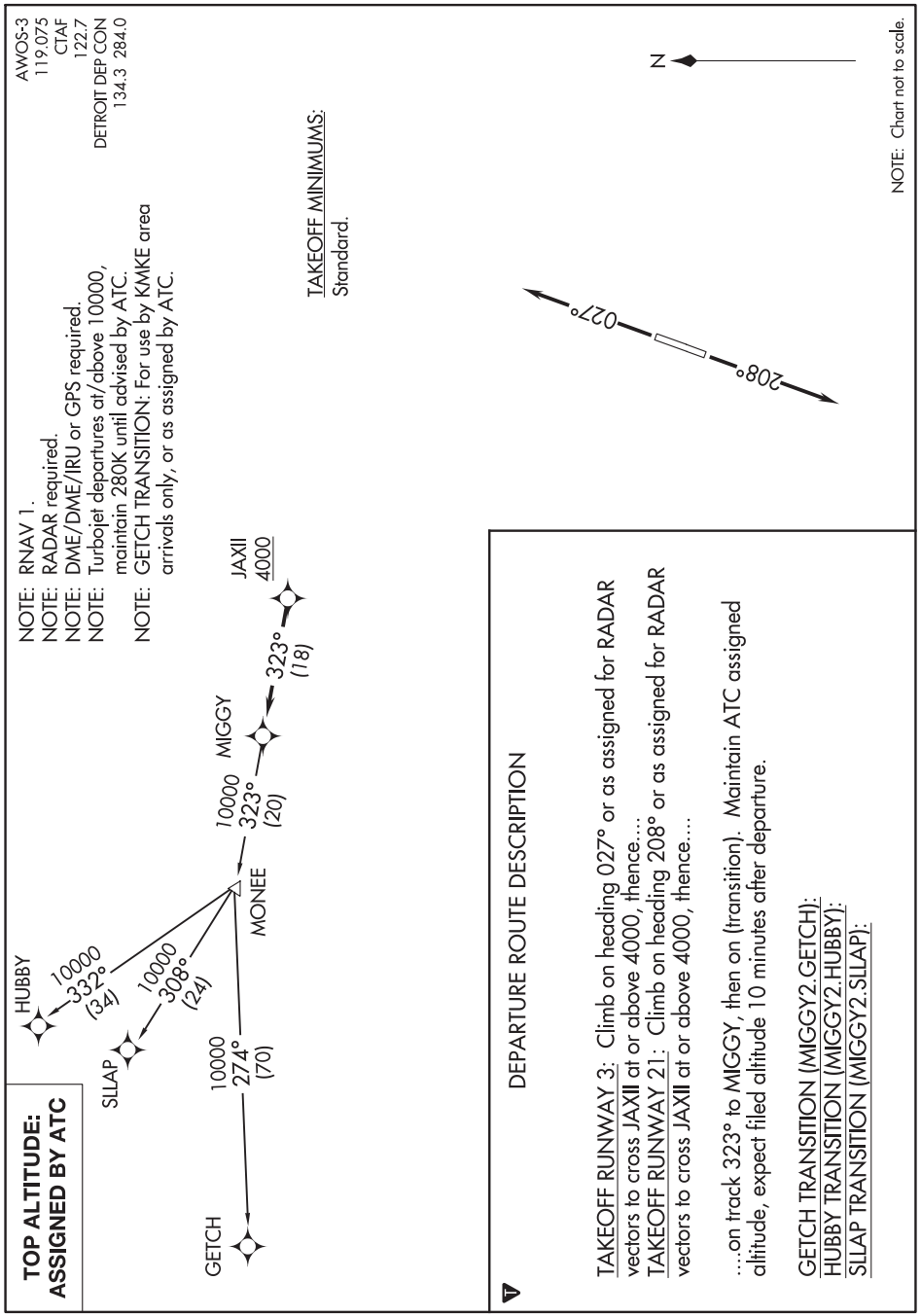
....on track 111° to LIDDS, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GRIVY TRANSITION (LIDDS2.GRIVY):

NOTE: Chart not to scale.

MIGGY TWO DEPARTURE (RNAV)

AL-5642 (FAA)



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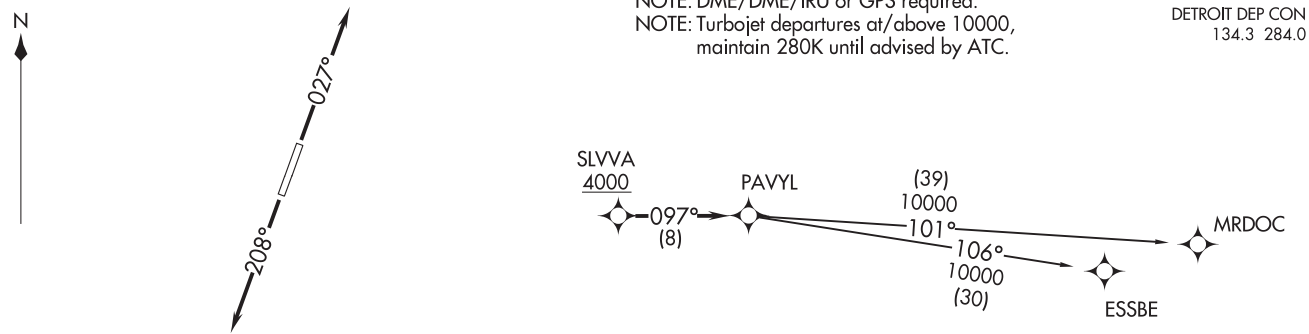
EC-1, 25 FEB 2021 to 22 APR 2021

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

AWOS-3
119.075
CTAF
122.7
DETROIT DEP CON
134.3 284.0



TAKEOFF MINIMUMS:
Standard.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 3: Climb on heading 027° or as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 21: Climb on heading 208° or as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....

....on track 097° to PAVYL, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ESSBE TRANSITION (PAVYL2.ESSBE):
MRDOC TRANSITION (PAVYL2.MRDOC):

SNDRS TWO DEPARTURE (RNAV)

AL-5642 (FAA)

AWOS-3
119.075
CTAF
122.7
DETROIT DEP CON
134.3 284.0

TOP ALTITUDE: ASSIGNED BY ATC

N

208° 027°

TAKEOFF MINIMUMS:
Standard.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 3: Climb on heading 027° or as assigned for RADAR vectors to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAY 21: Climb on heading 208° or as assigned for RADAR vectors to cross JWELS at or above 4000, thence....

....on track 218° to SNDRS, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

BGHRT TRANSITION (SNDRS2.BGHRT):
TORRR TRANSITION (SNDRS2.TORRR):

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TORRR TRANSITION: For use by KIND and KCVG area arrivals only and flights filed at or below FL220, or as assigned by ATC.

BGHRT 10000 269° (94) KNRKO 10000 264° (28) SEABS 10000 265° (30) REEDA 10000 255° (24) SNDRS 218° (31) JWELS 4000

SNDRS 10000 209° (33) TORRR

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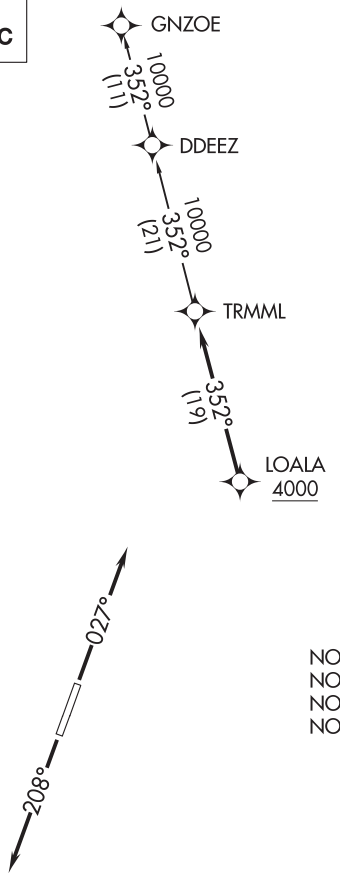
(TRMML3.TRMML) 19283

TRMML THREE DEPARTURE (RNAV) AL-5642 (FAA)

CUSTER (TTF)
MONROE, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

AWOS-3
119.075
CTAF
122.7
DETROIT DEP CON
134.3 284.0



TAKEOFF MINIMUMS:
Standard.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 3: Climb on heading 027° or as assigned for RADAR vectors to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 21: Climb on heading 208° or as assigned for RADAR vectors to cross LOALA at or above 4000, thence....

....on track 352° to TRMML, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GNZOE TRANSITION (TRMML3.GNZOE):

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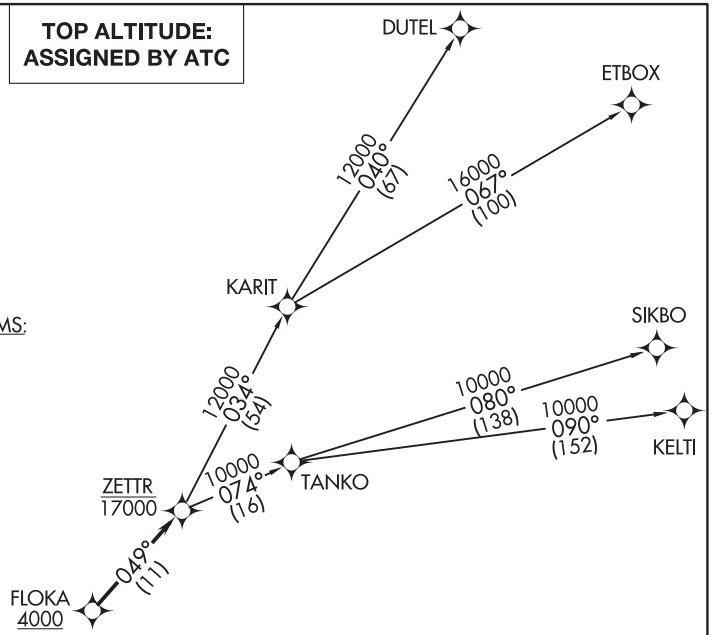
ZETTR THREE DEPARTURE (RNAV)

AL-5642 (FAA)

AWOS-3
119.075
CTAF
122.7
DETROIT DEP CON
134.3 284.0

TOP ALTITUDE: ASSIGNED BY ATC

TAKEOFF MINIMUMS:
Standard.



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TANKO TRANSITION: For use by CYYZ area arrivals only, or as assigned by ATC.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 3: Climb on heading 027° or as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 21: Climb on heading 208° or as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....

....on track 049° to cross ZETTR at or below 17000, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

DUTEL TRANSITION (ZETTR3.DUTEL):
ETBOX TRANSITION (ZETTR3.ETBOX):
KELTI TRANSITION (ZETTR3.KELTI):
SIKBO TRANSITION (ZETTR3.SIKBO):
TANKO TRANSITION (ZETTR3.TANKO):

NOTE: Chart not to scale.

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EC-1, 25 FEB 2021 to 22 APR 2021

MOUNT PLEASANT, MICHIGAN AL-5283 (FAA) 20198

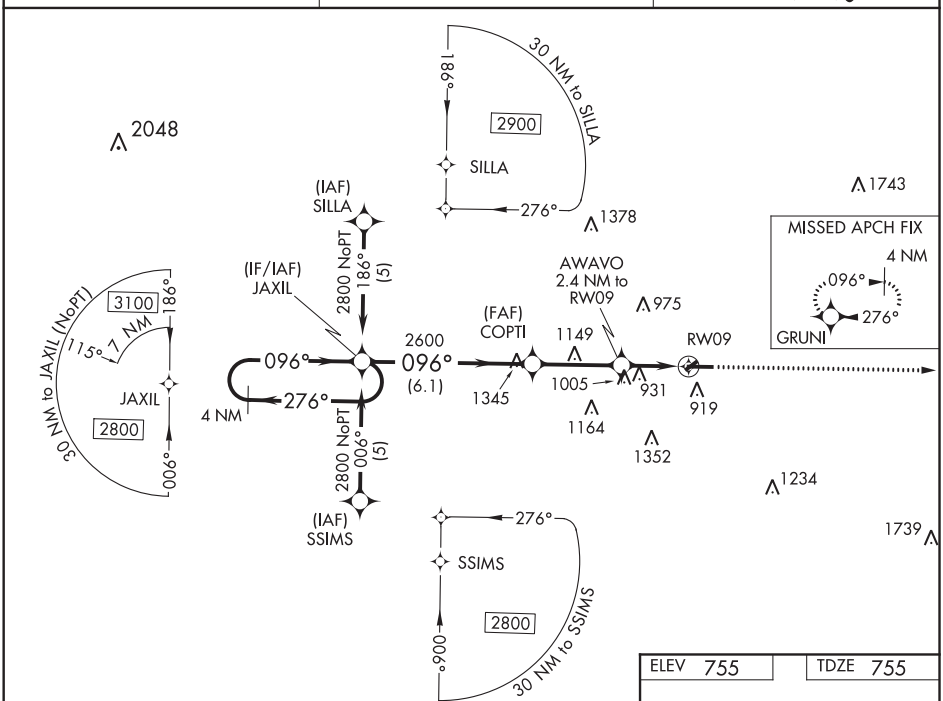
APP CRS	Rwy ldg	5000
096°	TDZE	755
	Apt Elev	755

RNAV (GPS) RWY 9
MOUNT PLEASANT MUNI (MOP)

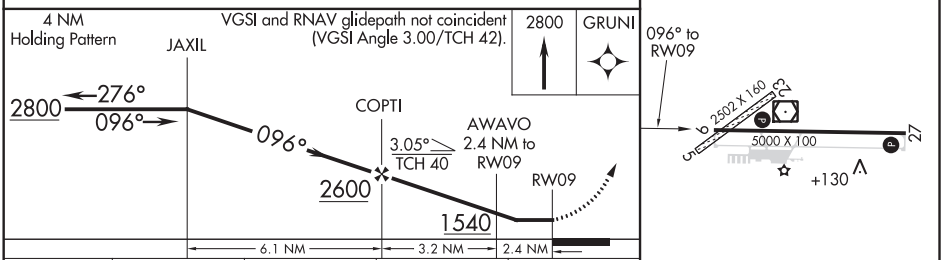
DME/DME RNP-0.3 NA. When local altimeter setting not received use Alma altimeter setting and increase all MDA 60 feet, increase LNAV Cat C/D and Circling Cat C visibility ¼ mile. Circling NA to Rwys 5 and 23. Rwy 9 helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climb to 2800 direct GRUNI and hold.

AWOS-3	GREAT LAKES APP CON ★	UNICOM
133.025	126.45 235.625	123.0 (CTAF) L



ELEV 755	TDZE 755



CATEGORY	A	B	C	D
LNAV MDA	1320-1 565 (600-1)		1320-1½ 565 (600-1½)	1320-1¾ 565 (600-1¾)
CIRCLING	1320-1 565 (600-1)		1320-1½ 565 (600-1½)	1360-2 605 (700-2)

REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

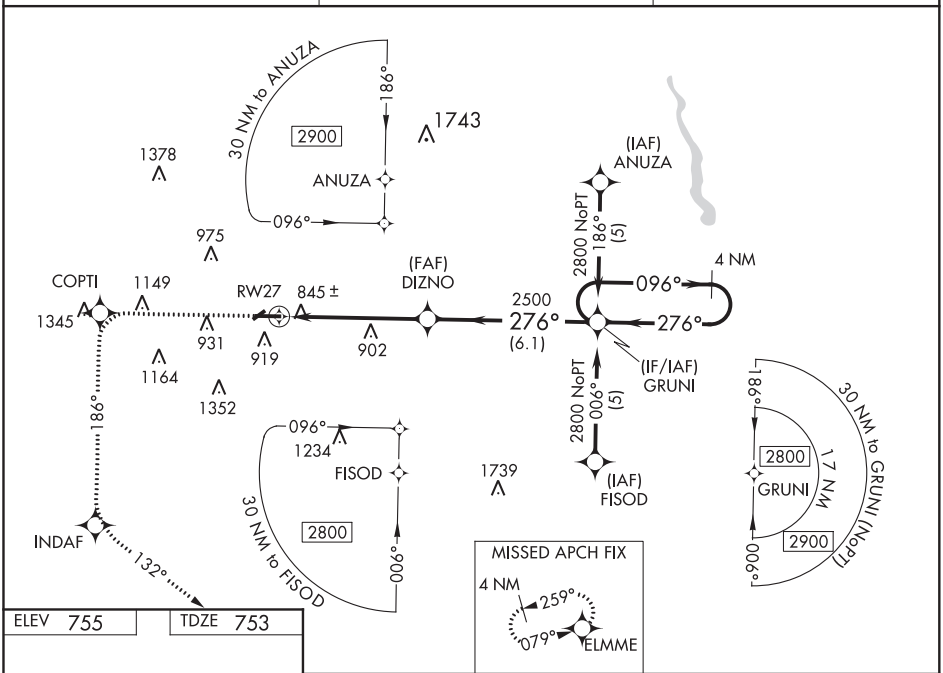
WAAS CH 82613 W27A	APP CRS 276°	Rwy ldg 5000 TDZE 753 Apt Elev 755

RNAV (GPS) RWY 27
MOUNT PLEASANT MUNI (MOP)

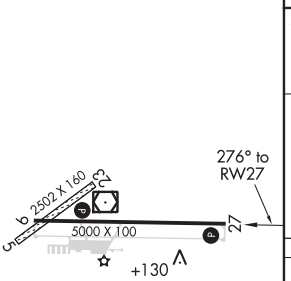
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Alma altimeter setting and increase all DA 42 feet and all MDA 60 feet, increase LPV, LNAV/VNAV all Cats, LNAV Cat D and Circling Cat C visibilities ¼ mile. Baro-VNAV and VDP NA when using Alma altimeter setting. Circling NA to Rwys 5 and 23.

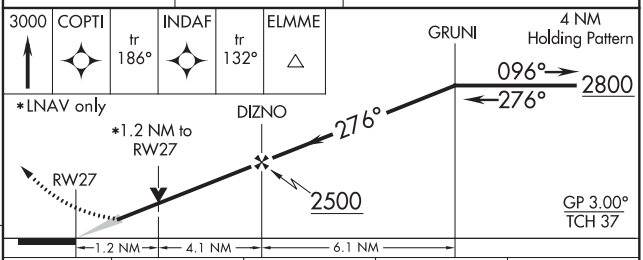
MISSED APPROACH: Climb to 3000 direct COPTI and via 186° track direct INDAF and via 132° track to ELMME and hold.

AWOS-3	GREAT LAKES APP CON*	UNICOM
133.025	126.45 235.625	123.0 (CTAF) L



ELEV 755 TDZE 753





CATEGORY	A	B	C	D
LPV DA	1099-1¼ 346 (400-1¼)			
LNAV/VNAV DA	1201-1½ 448 (500-1½)			
LNAV MDA	1160-1 407 (500-1)		1160-1¼ 407 (500-1¼)	
CIRCLING	1240-1 485 (500-1)		1320-1½ 565 (600-1½)	1360-2 605 (700-2)

REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

MOUNT PLEASANT, MICHIGAN AL-5283 (FAA) 20254

VOR RWY 27

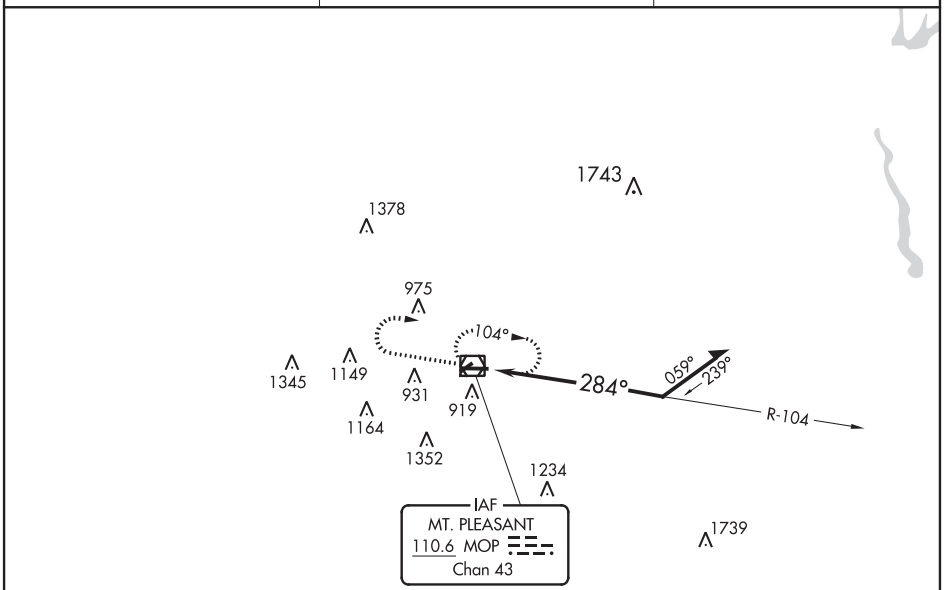
MOUNT PLEASANT MUNI (MOP)

VOR/DME MOP	APP CRS	Rwy ldg	5000
110.6	284°	TDZE	753
Chan 43		Apt Elev	755

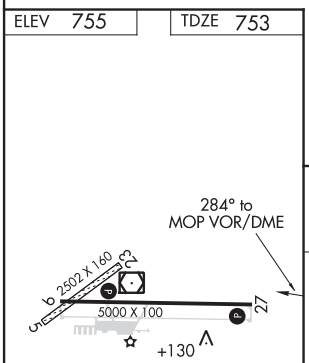
When local altimeter setting not received, use Alma altimeter setting and increase all MDA 60 feet, S-27 Cat D and Circling Cat C visibilities ¼ mile. VDP NA when using Alma altimeter setting. Circling NA to Rwys 5 and 23. Rwy 27 helicopter visibility reduction below ¾ SM NA.

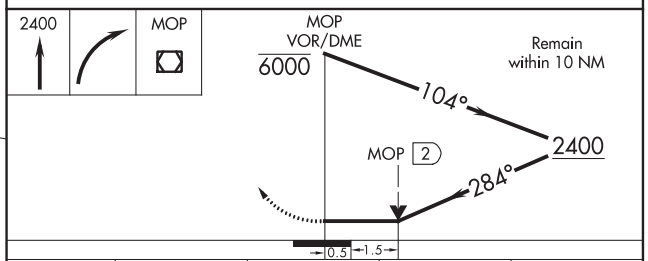
MISSED APPROACH: Climb to 2400 then right turn direct MOP VOR/DME and hold.

AWOS-3	GREAT LAKES APP CON ★	UNICOM
133.025	126.45 235.625	123.0 (CTAF) L



ELEV 755 TDZE 753





CATEGORY	A	B	C	D
S-27	1260-1	507 (600-1)	1260-1½	507 (600-1½)
CIRCLING	1260-1	505 (600-1)	1320-1½ 565 (600-1½)	1360-2 605 (700-2)

REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

ILS or LOC RWY 24
MUSKEGON COUNTY (MKG)

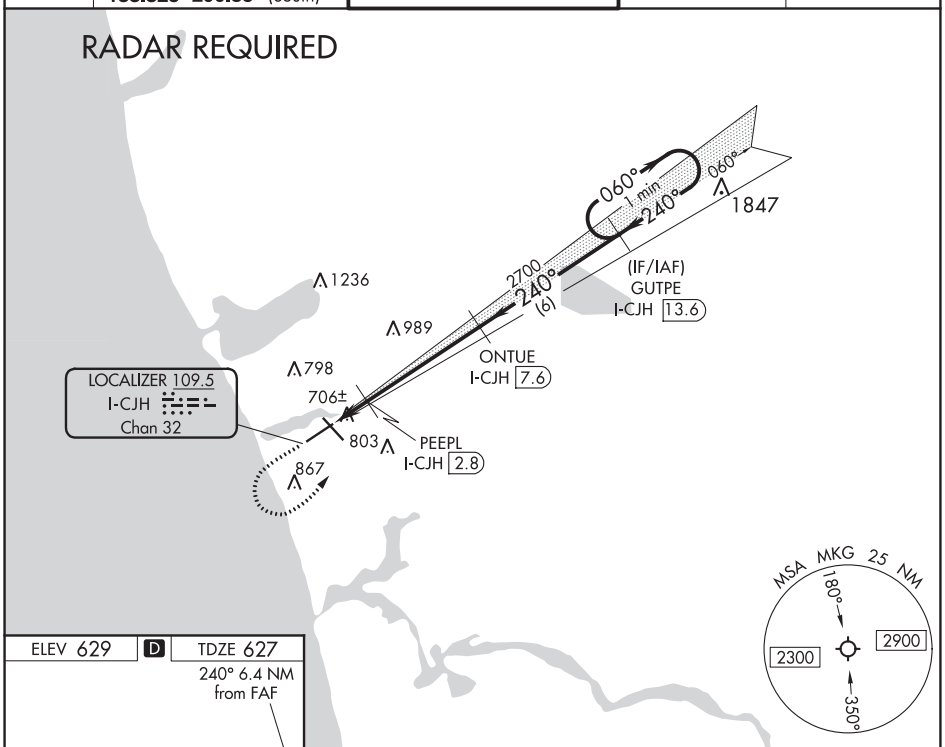
LOC/DME I-CJH	APP CRS	Rwy ldg	6501
109.5	240°	TDZE	627
Chan 32		Apt Elev	629

DME required.
RADAR required.
RNAV 1-GPS required.

MALSR

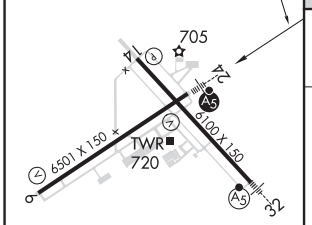
MISSED APPROACH: Climb to 2500 then climbing left turn to 3000 direct GUTPE and hold.

ATIS	GREAT LAKES APP CON ★	MUSKEGON TOWER ★	GND CON	UNICOM
124.3	119.8 290.35 (North) 133.825 290.35 (South)	126.25 (CTAF) L 343.725	121.6	122.95



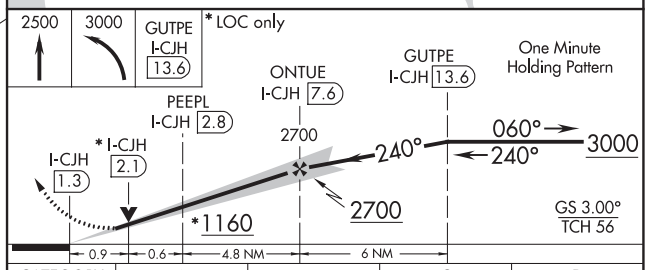
ELEV 629 D TDZE 627

240° 6.4 NM from FAF



REIL Rwy 6 L
REIL Rwy 14
HIRL Rwys 6-24 L
HIRL Rwys 14-32

FAF to MAP 6.3 NM					
Knots	60	90	120	150	180
Min:Sec	6:18	4:12	3:09	2:31	2:06



CATEGORY	A	B	C	D
S-ILS 24	827-½ 200 (200-½)			
S-LOC 24	960-½ 333 (400-½)			
C CIRCLING	1080-1 451 (500-1)	1180-1 551 (600-1)	1200-1½ 571 (600-1½)	1200-2 571 (600-2)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

MUSKEGON, MICHIGAN

AL-278 (FAA)

20254

ILS or LOC RWY 32
MUSKEGON COUNTY (MKG)

LOC/DME I-MKG	APP CRS	Rwy ldg	6100
109.9	321°	TDZE	629
Chan 36		Apt Elev	629

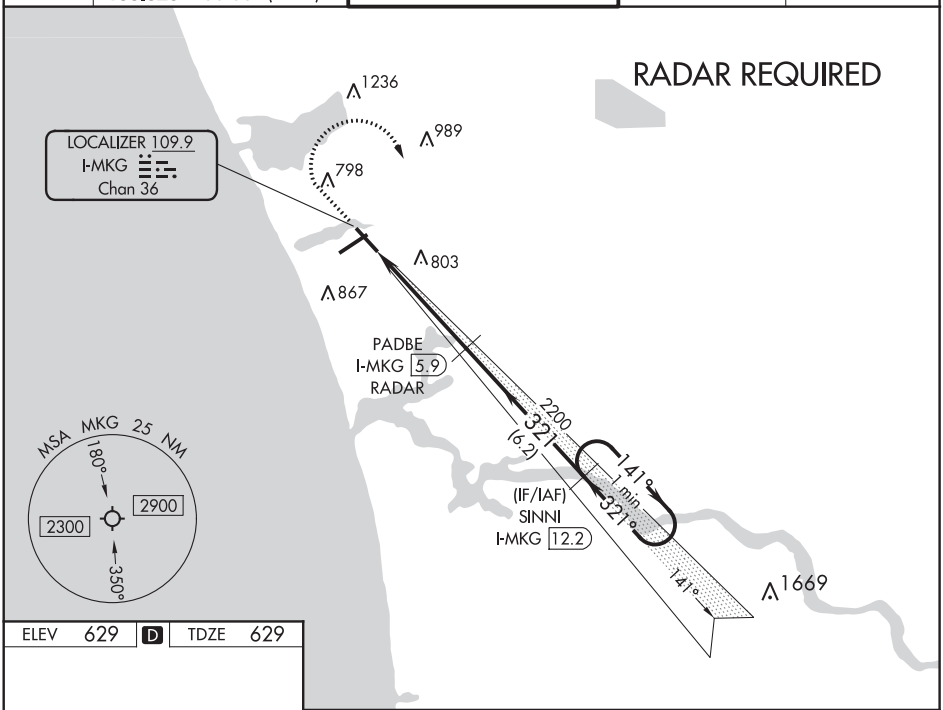
DME or RADAR required. RNAV 1-GPS required.

For inop ALS, increase S-LOC Cat C/D visibility to 1⅜ SM.
**RVR 1800 authorized with use of FD or AP or HUD to DA.

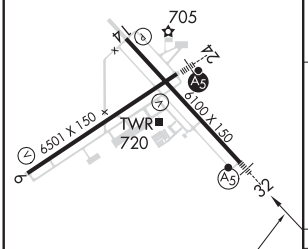
MALSR

MISSED APPROACH:
Climb to 2500 then climbing right turn to 3000 direct SINNI and hold.

ATIS	GREAT LAKES APP CON ★	MUSKEGON TOWER ★	GND CON	UNICOM
124.3	119.8 290.35 (North) 133.825 290.35 (South)	126.25 (CTAF) L 343.725	121.6	122.95

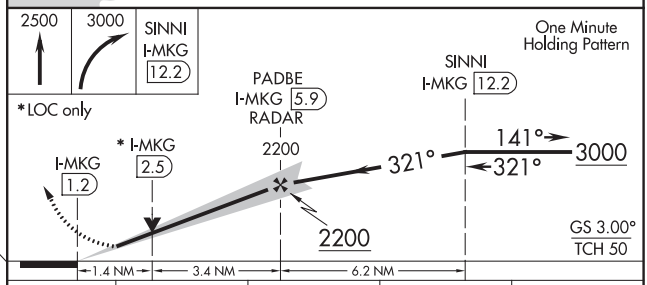


ELEV 629 | D | TDZE 629



REIL Rwy 6 L
REIL Rwy 14
HIRL Rwys 6-24 L
HIRL Rwys 14-32

321° 4.8 NM from FAF



CATEGORY	A	B	C	D
S-ILS 32**	829/24 200 (200-½)			
S-LOC 32	1120/24 491 (500-½)		1120/50 491 (500-1)	
C CIRCLING	1120-1 491 (500-1)	1180-1 551 (600-1)	1200-1½ 571 (600-1½)	1200-2 571 (600-2)

FAF to MAP 4.8 NM

Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36

RNAV (GPS) RWY 6
MUSKEGON COUNTY (MKG)

WAAS CH 56618 W06A	APP CRS 060°	Rwy ldg 6501 TDZE 623 Apt Elev 629

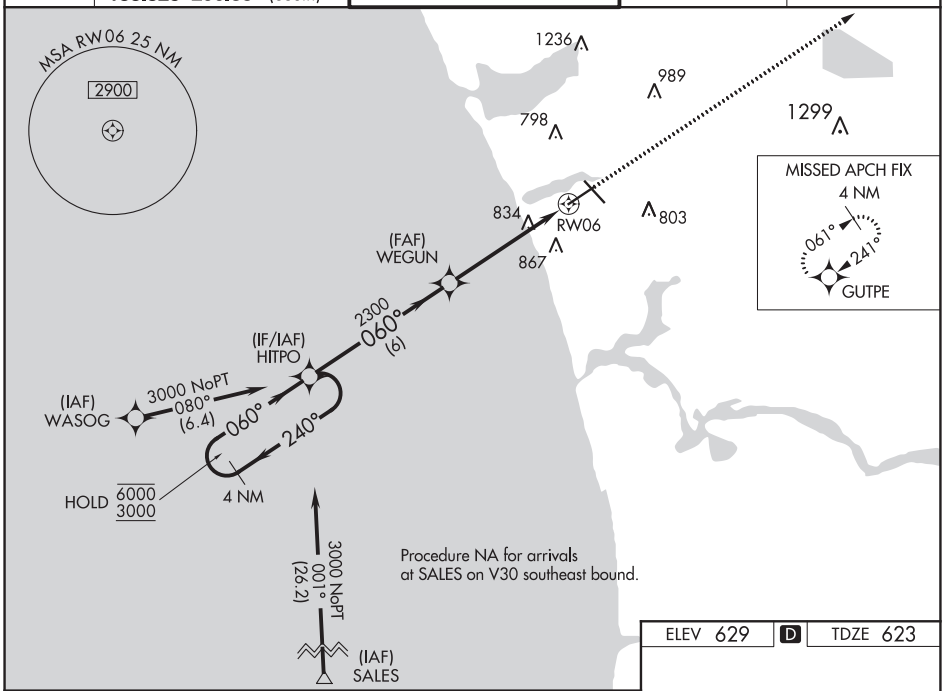
RNP APCH.

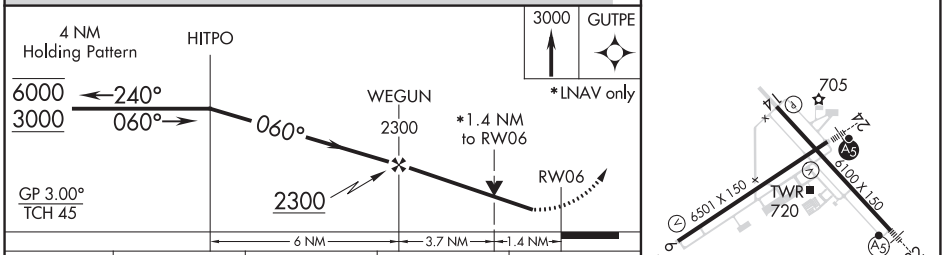
ASR

Rwy 6 helicopter visibility reduction below ¾ SM NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C or above 54°C.

MISSED APPROACH: Climb to 3000 direct GUTPE and hold.

ATIS	GREAT LAKES APP CON*	MUSKEGON TOWER*	GND CON	UNICOM
124.3	119.8 290.35 (North) 133.825 290.35 (South)	126.25 (CTAF) L 343.725	121.6	122.95





CATEGORY	A	B	C	D
LPV DA	928-⅞ 305 (300-⅞)			
LNAV/VNAV DA	975-1 352 (400-1)			
LNAV MDA	1100-1 477 (500-1)		1100-1⅜ 477 (500-1⅜)	
C CIRCLING	1100-1 471 (500-1)	1180-1 551 (600-1)	1200-1½ 571 (600-1½)	1200-2 571 (600-2)

REIL Rwy 6 L
REIL Rwy 14
HIRL Rwys 6-24 L
HIRL Rwys 14-32

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

MUSKEGON, MICHIGAN

AL-278 (FAA)

20310

RNAV (GPS) RWY 14
MUSKEGON COUNTY (MKG)

WAAS CH 69410 W14A	APP CRS 141°	Rwy ldg 6100 TDZE 627 Apt Elev 629

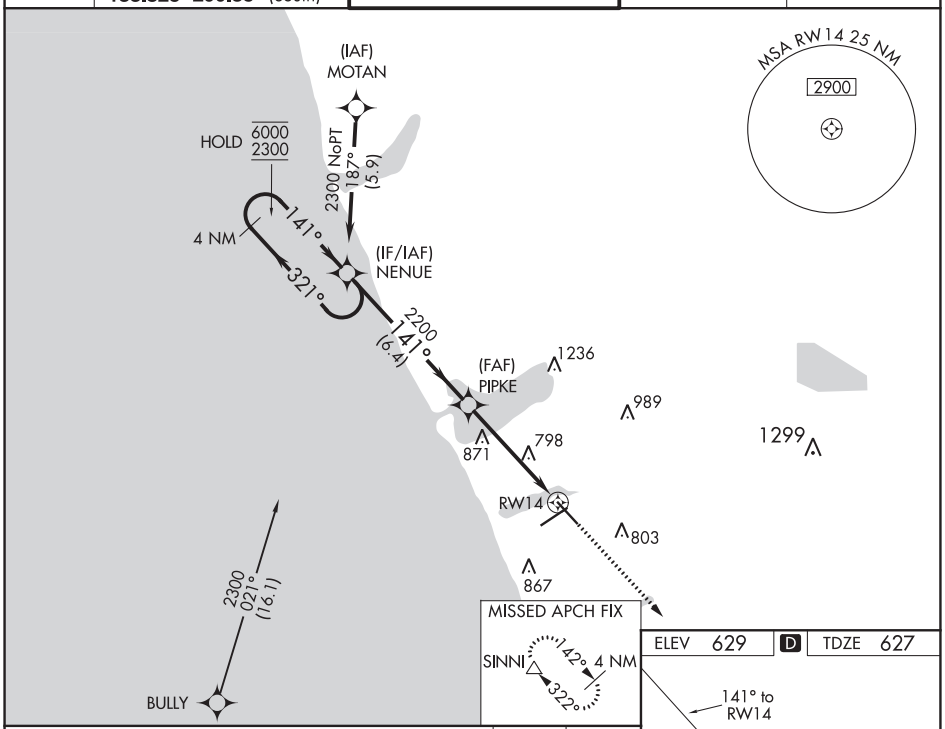
RNP APCH.

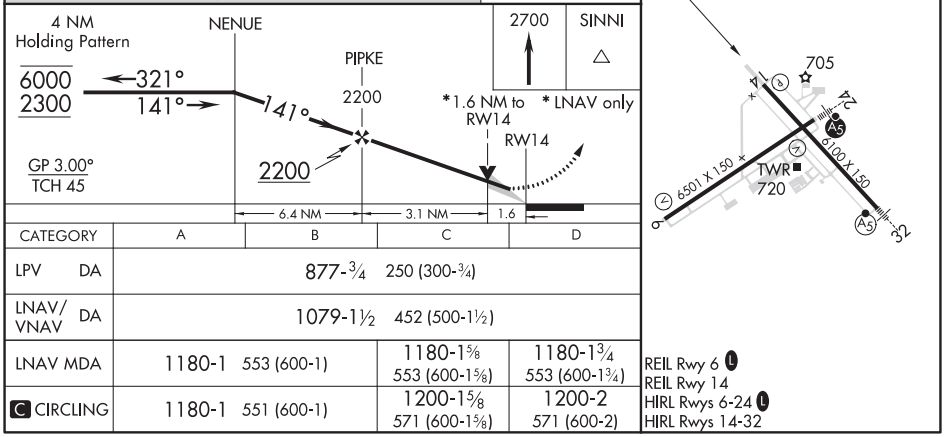
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C or above 54°C.

ASR

MISSED APPROACH: Climb to 2700 direct SINNI and hold.

ATIS	GREAT LAKES APP CON ★	MUSKEGON TOWER ★	GND CON	UNICOM
124.3	119.8 290.35 (North) 133.825 290.35 (South)	126.25 (CTAF) L 343.725	121.6	122.95





CATEGORY	A	B	C	D
LPV DA	877-¾ 250 (300-¾)			
LNAV/VNAV DA	1079-1½ 452 (500-1½)			
LNAV MDA	1180-1 553 (600-1)		1180-1⅝ 553 (600-1⅝)	1180-1¾ 553 (600-1¾)
C CIRCLING	1180-1 551 (600-1)		1200-1⅝ 571 (600-1⅝)	1200-2 571 (600-2)

MUSKEGON, MICHIGAN
Amdt 1C 05NOV20

43°10′N-86°14′W

MUSKEGON COUNTY (MKG)
RNAV (GPS) RWY 14

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RNAV (GPS) RWY 24
MUSKEGON COUNTY (MKG)

WAAS CH 42918 W24A	APP CRS 240°	Rwy ldg 6501 TDZE 627 Apt Elev 629

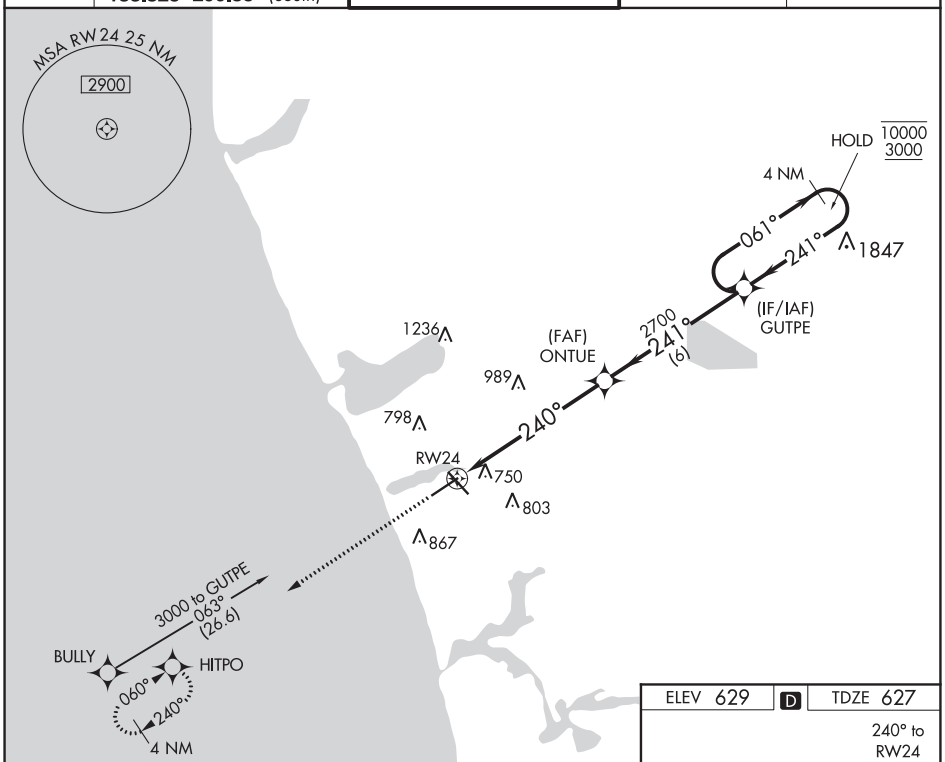
RNP APCH.

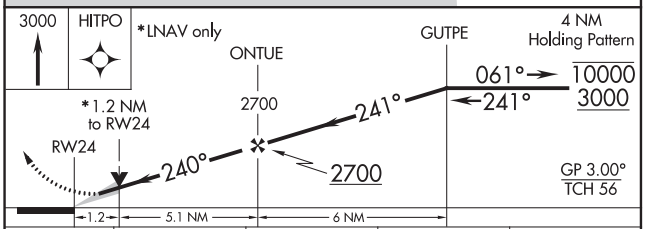
ASR For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C or above 54°C. For inop ALS, increase LPV visibility all Cats to ¾ SM, LNAV/VNAV visibility all Cats to 1⅜ SM, LNAV Cats A/B to 1 SM and LNAV Cats C/D to 1⅜ SM.

MALSR

MISSED APPROACH: Climb to 3000 direct HITPO and hold.

ATIS	GREAT LAKES APP CON★	MUSKEGON TOWER★	GND CON	UNICOM
124.3	119.8 290.35 (North) 133.825 290.35 (South)	126.25 (CTAF) L 343.725	121.6	122.95





CATEGORY	A	B	C	D
LPV DA	827-½ 200 (200-½)			
LNAV/VNAV DA	1092-1 465 (500-1)			
LNAV MDA	1080-½ 453 (500-½)		1080-⅞ 453 (500-⅞)	
C CIRCLING	1080-1 451 (500-1)	1180-1 551 (600-1)	1200-1½ 571 (600-1½)	1200-2 571 (600-2)

REIL Rwy 6 L
REIL Rwy 14
HIRL Rwys 6-24 L
HIRL Rwys 14-32

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EC-1, 25 FEB 2021 to 22 APR 2021

MUSKEGON, MICHIGAN

AL-278 (FAA)

20310

RNAV (GPS) RWY 32
MUSKEGON COUNTY (MKG)

WAAS CH 63010 W32A	APP CRS 321°	Rwy ldg 6100 TDZE 629 Apt Elev 629

RNP APCH.

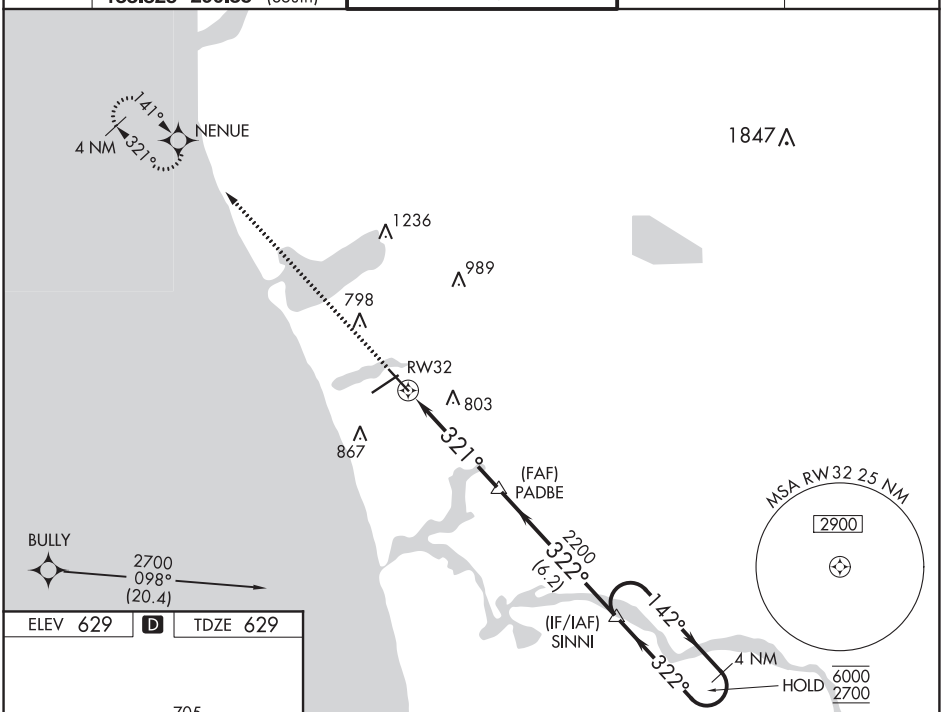
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18° C or above 54°C. For inop ALS, increase LPV visibility all Cats to RVR 4000, LNAV/VNAV visibility all Cats to RVR 4500, and LNAV visibility Cats A/B to RVR 5500 and Cats C/D to 1⅜ SM.
** RVR 1800 authorized with use of FD or AP or HUD to DA, NA when using Fremont altimeter setting.

ASR

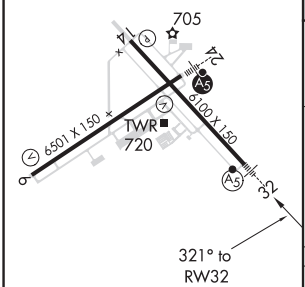
MALSR

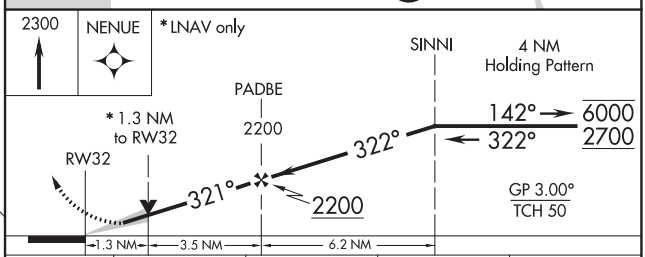
MISSED APPROACH: Climb to 2300 direct NENUE and hold.

ATIS	GREAT LAKES APP CON ★	MUSKEGON TOWER ★	GND CON	UNICOM
124.3	119.8 290.35 (North) 133.825 290.35 (South)	126.25 (CTAF) L 343.725	121.6	122.95



ELEV 629	D	TDZE 629





CATEGORY	A	B	C	D
LPV DA**	829/24 200 (200-½)			
LNAV/VNAV DA	915/24 286 (300-½)			
LNAV MDA	1080/24 451 (500-½)		1080/45 451 (500-⅞)	
C CIRCLING	1080-1 451 (500-1)	1180-1 551 (600-1)	1200-1½ 571 (600-1½)	1200-2 571 (600-2)

REIL Rwy 6 L
REIL Rwy 14
HIRL Rwys 6-24 L
HIRL Rwys 14-32

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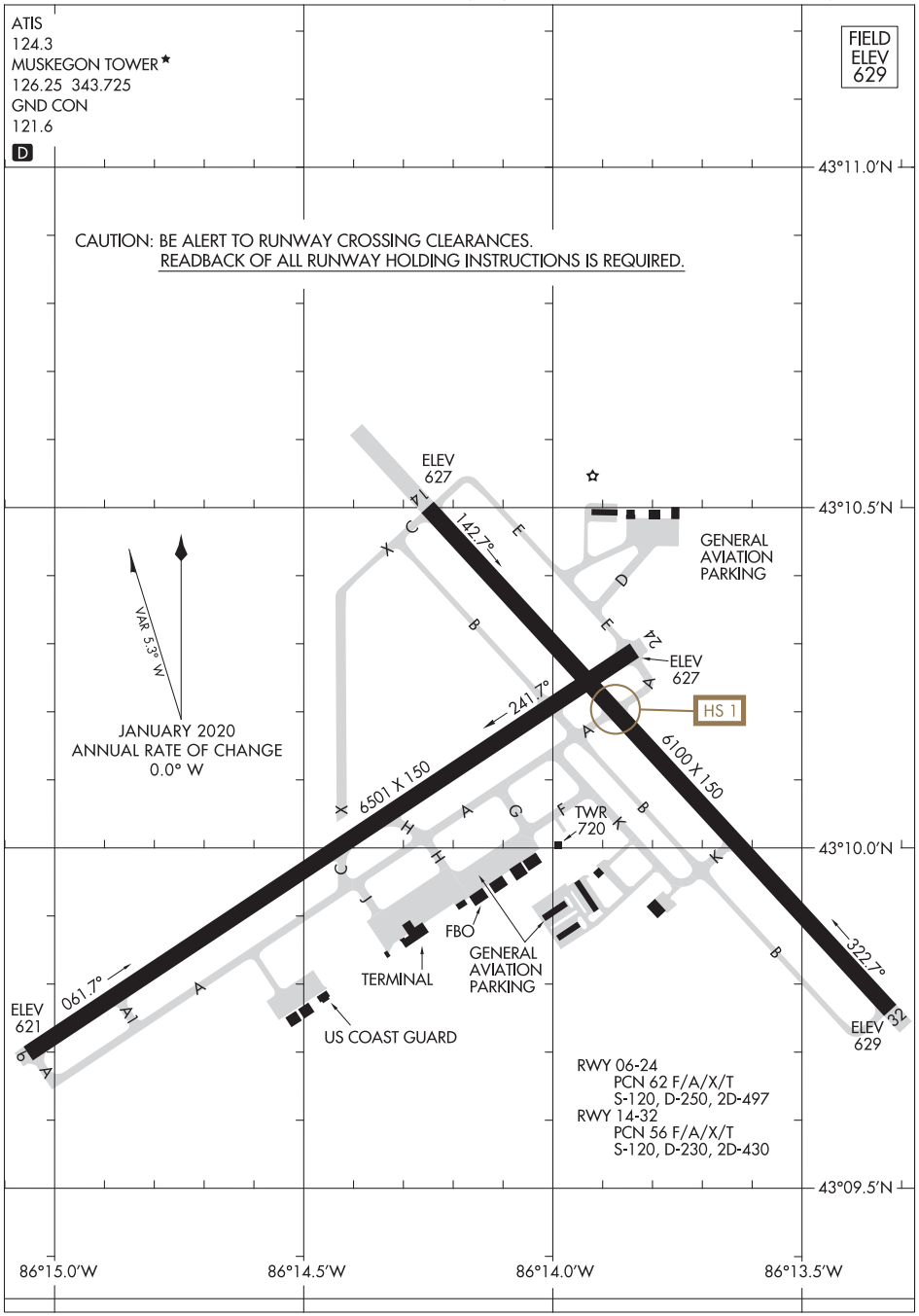


EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

NEW HUDSON, MICHIGAN AL-5487 (FAA) 20254

VOR or GPS-A

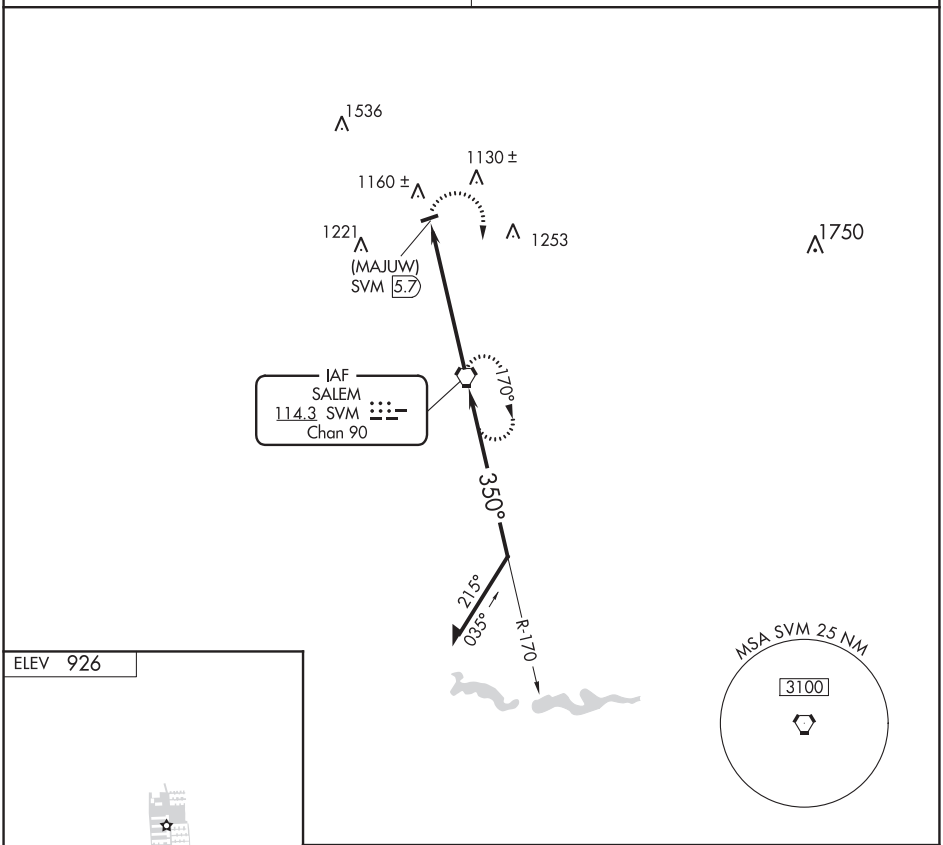
OAKLAND SOUTHWEST (Y47)

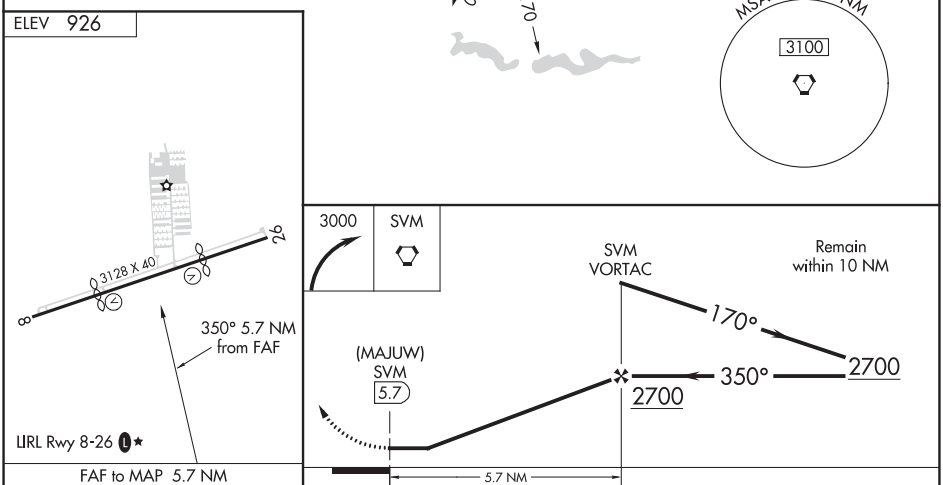
VORTAC SVM	APP CRS	Rwy ldg	N/A
114.3	350°	TDZE	N/A
Chan 90		Apt Elev	926

Use Detroit Willow Run airport altimeter setting.
NA Procedure NA at night.

MISSED APPROACH: Climbing right turn to 3000 direct SVM VORTAC and hold.

DETROIT APP CON	UNICOM
132.35 284.0	122.7 (CTAF)





FAF to MAP 5.7 NM

Knots	60	90	120	150	180
Min:Sec	5:42	3:48	2:51	2:17	1:54

CATEGORY	A	B	C	D
CIRCLING	1580-1 654 (700-1)		NA	

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EC-1, 25 FEB 2021 to 22 APR 2021

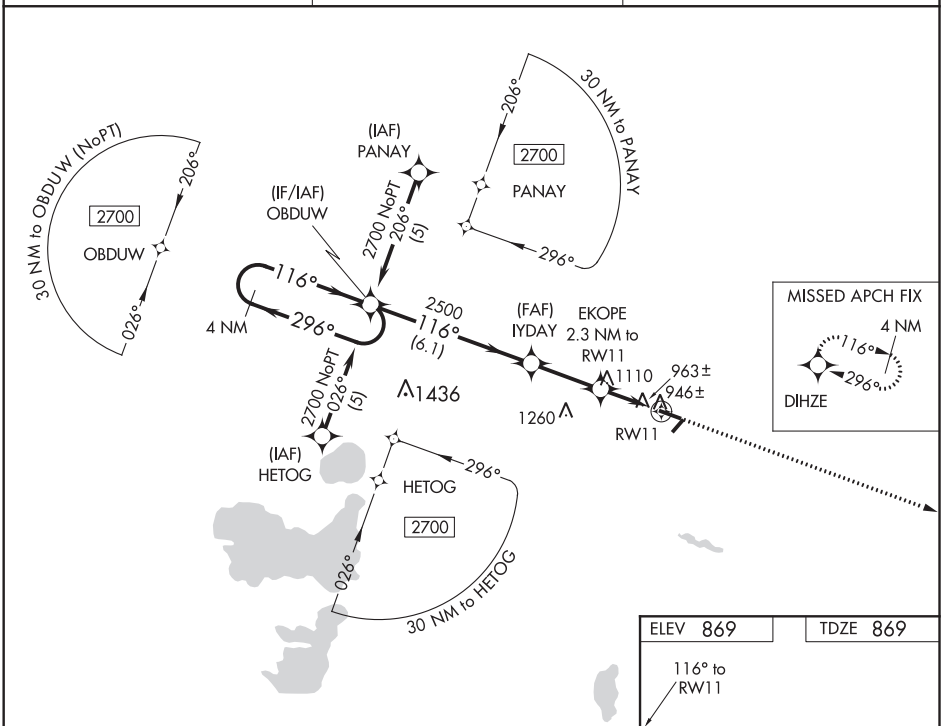
APP CRS	Rwy ldg	4304
116°	TDZE	869
	Apt Elev	869

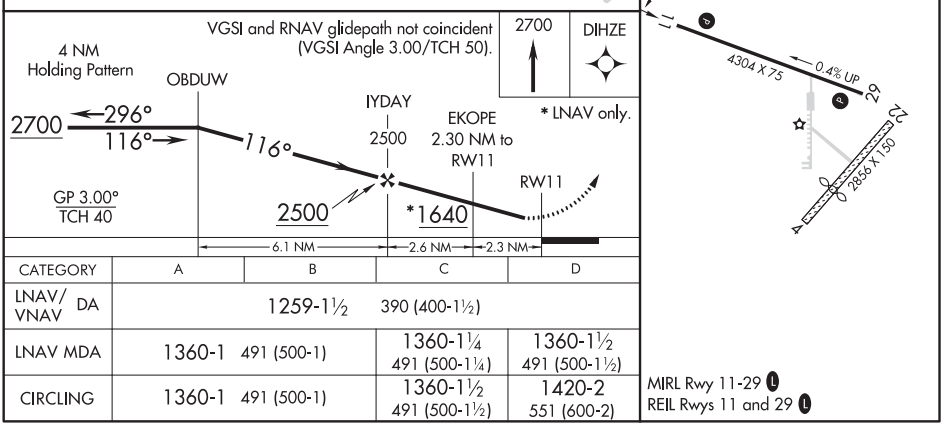
RNAV (GPS) RWY 11
LUCE COUNTY (ERY)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Chippewa Co Intl altimeter setting and increase DA 105 feet and all MDA 120 feet, increase LNAV/VNAV visibility ¼ mile all Cats, LNAV Cats C and D ½ mile, and Circling Cats C and D ¼ mile. Baro-VNAV NA when using Chippewa Co Intl altimeter setting.

MISSED APPROACH: Climb to 2700 direct DIHZE and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
119.525	134.6 354.05	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV/VNAV DA	1259-1½ 390 (400-1½)			
LNAV MDA	1360-1 491 (500-1)		1360-1¼ 491 (500-1¼)	1360-1½ 491 (500-1½)
CIRCLING	1360-1 491 (500-1)		1360-1½ 491 (500-1½)	1420-2 551 (600-2)

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EC-1, 25 FEB 2021 to 22 APR 2021

NEWBERRY, MICHIGAN AL-5836 (FAA) 20086

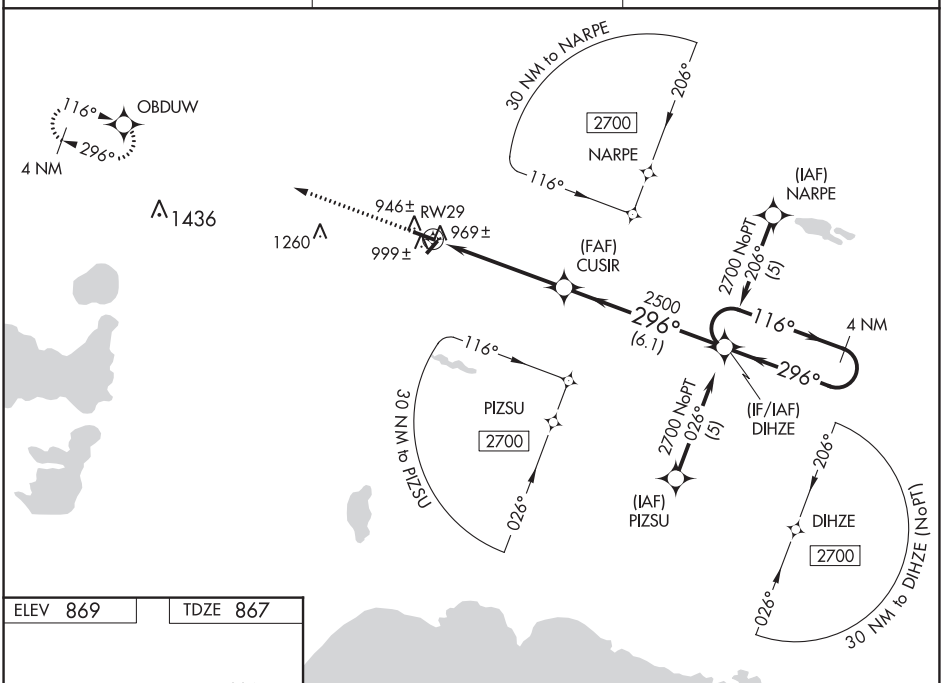
WAAS CH 40418 W29A	APP CRS 296°	Rwy ldg 4304 TDZE 867 Apt Elev 869

RNAV (GPS) RWY 29
LUCE COUNTY (ERY)

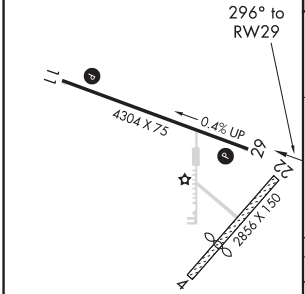
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Chippewa Co Intl altimeter setting and increase all DA 105 feet and all MDA 120 feet, increase LPV and LNAV/VNAV visibility ¼ mile all Cats, LNAV Cats C and D ½ mile, and Circling Cat D ¼ mile. Baro-VNAV NA when using Chippewa Co Intl altimeter setting.

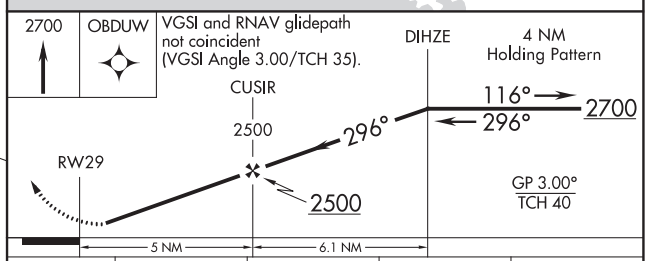
MISSED APPROACH: Climb to 2700 direct OBDUW and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
119.525	134.6 354.05	122.8 (CTAF) L



ELEV 869 TDZE 867





CATEGORY	A	B	C	D
LPV DA	1117-1 250 (300-1)			
LNAV/VNAV DA	1239-1½ 372 (400-1½)			
LNAV MDA	1260-1 393 (400-1)			1260-1¼ 393 (400-1¼)
CIRCLING	1300-1 431 (500-1)	1320-1 451 (500-1)	1320-1½ 451 (500-1½)	1420-2 551 (600-2)

MIRL Rwy 11-29 L
REIL Rwys 11 and 29 L

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EC-1, 25 FEB 2021 to 22 APR 2021

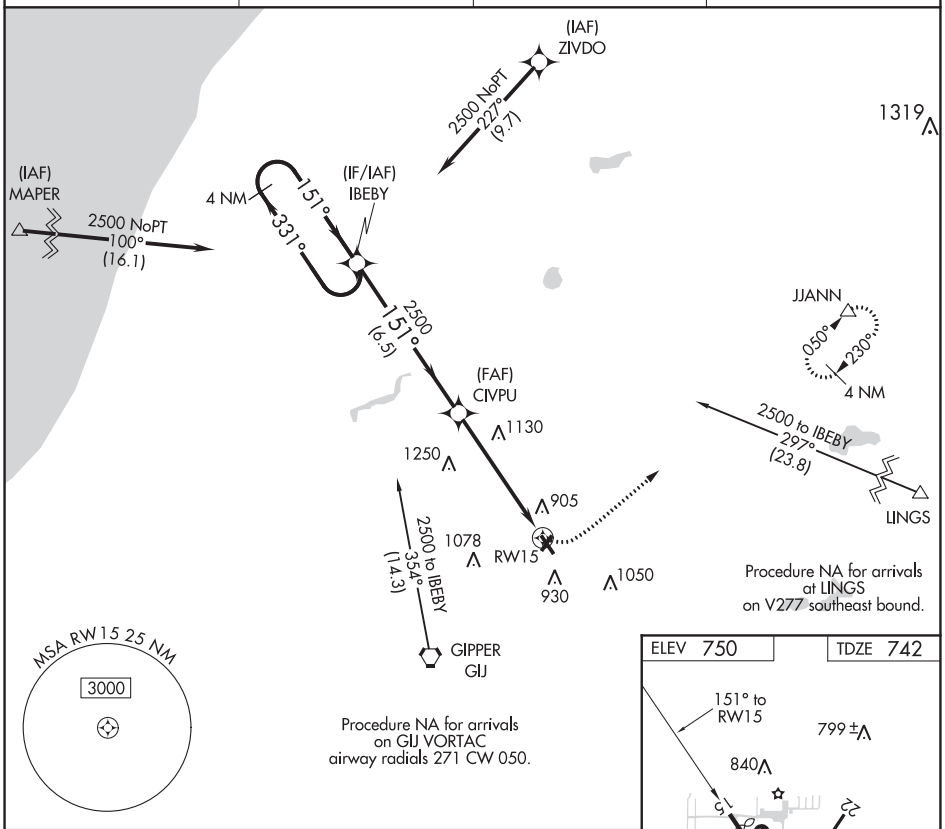
APP CRS	Rwy ldg	3800
151°	TDZE	742
	Apt Elev	750

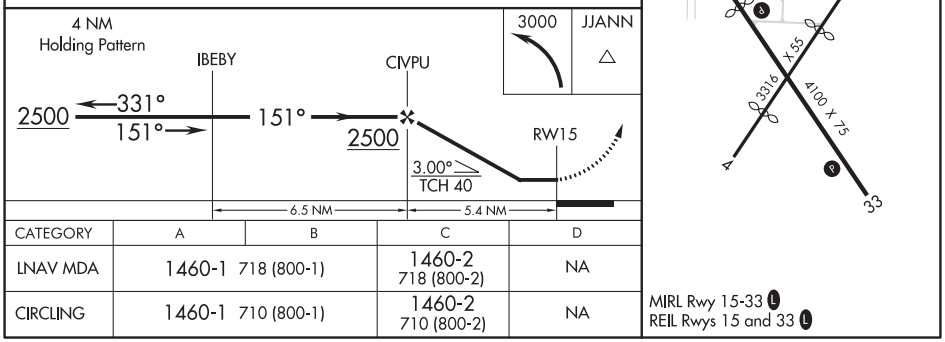
RNAV (GPS) RWY 15
JERRY TYLER MEMORIAL (3TR)

T A NA — Use South Bend altimeter setting; when not received use Elkhart altimeter setting and increase all MDA 20 feet. DME/DME RNP-0.3 NA. Procedure NA at night. Visibility reduction by helicopters NA.

MISSED APPROACH: Climbing left turn to 3000 direct JJANN and hold.

SBN ASOS	SOUTH BEND APP CON ★	GCO	UNICOM
118.15	118.55 257.8	121.725	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1460-1 718 (800-1)		1460-2 718 (800-2)	NA
CIRCLING	1460-1 710 (800-1)		1460-2 710 (800-2)	NA

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EC-1, 25 FEB 2021 to 22 APR 2021

NILES, MICHIGAN | AL-5046 (FAA) | 21056

RNAV (GPS) RWY 33
JERRY TYLER MEMORIAL (3TR)

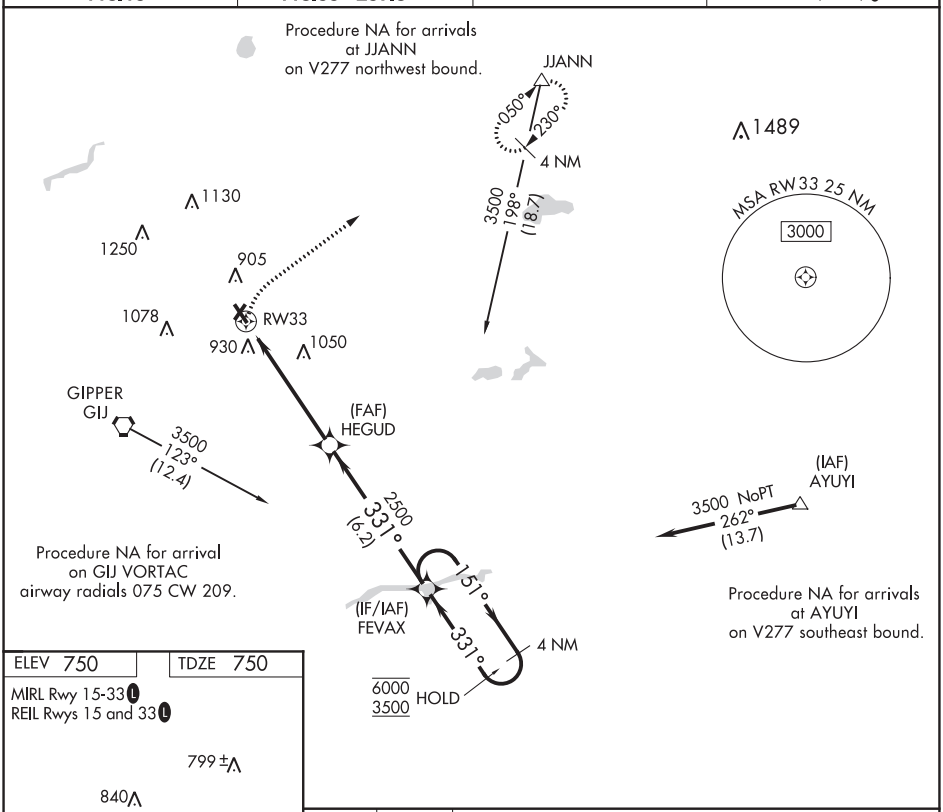
APP CRS	Rwy ldg	4100
331°	TDZE	750
	Apt Elev	750

RNP APCH.

NA — Procedure NA at night. Rwy 33 helicopter visibility reduction below 1 SM NA. Use South Bend altimeter setting; when not received, use Elkhart altimeter setting and increase all MDA 20 feet and all Cat C visibility ⅛ SM.

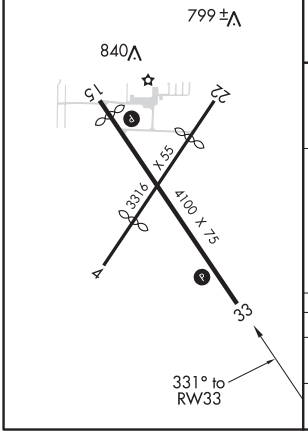
MISSED APPROACH: Climbing right turn to 3000 direct JJANN and hold.

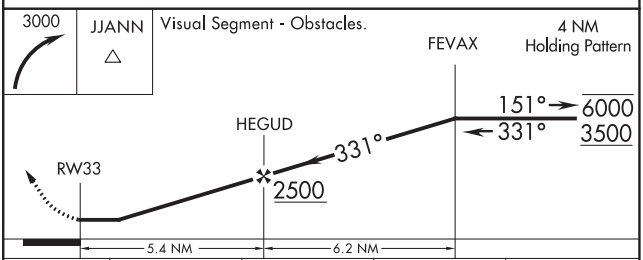
SBN ASOS	SOUTH BEND APP CON★	GND CON	UNICOM
118.15	118.55 257.8	121.725	122.8 (CTAF) L



ELEV 750 | TDZE 750

MIRL Rwy 15-33 L
REIL Rwys 15 and 33 L





CATEGORY	A	B	C	D
LNAV MDA	1320-1 570 (600-1)		1320-1⅝ 570 (600-1⅝)	NA
CIRCLING	1320-1 570 (600-1)		1320-1⅝ 570 (600-1⅝)	NA

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

VORTAC GIJ	APP CRS	Rwy ldg	N/A
115.4	046°	TDZE	N/A
Chan 101		Apt Elev	750

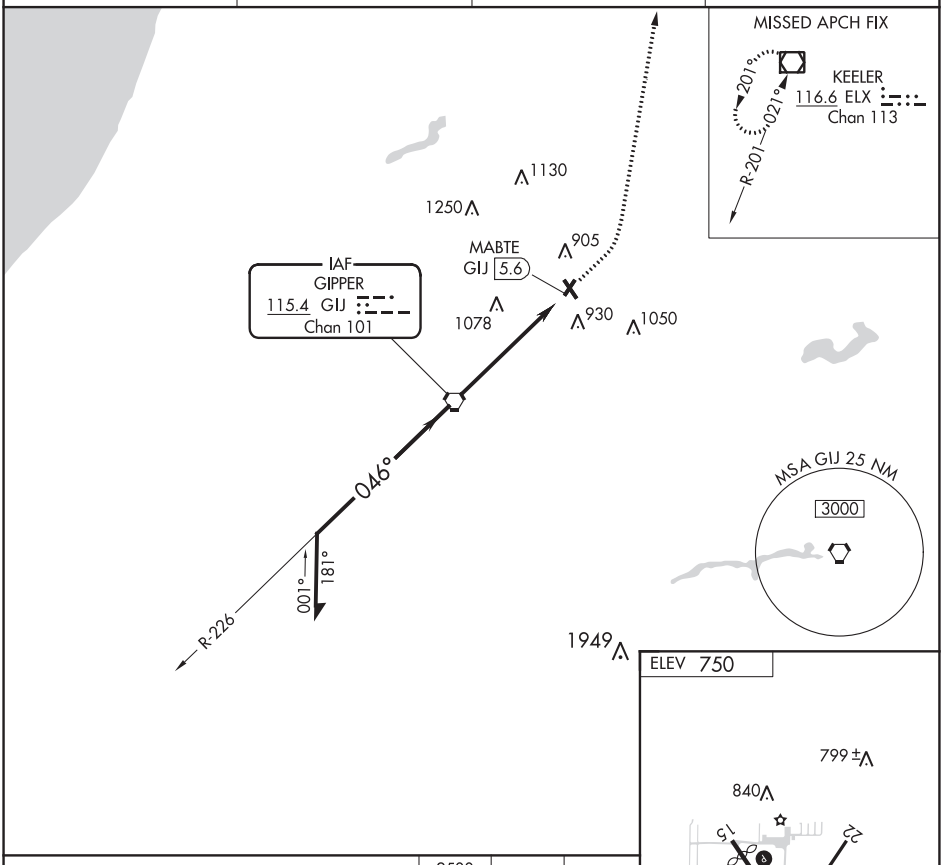
VOR-A

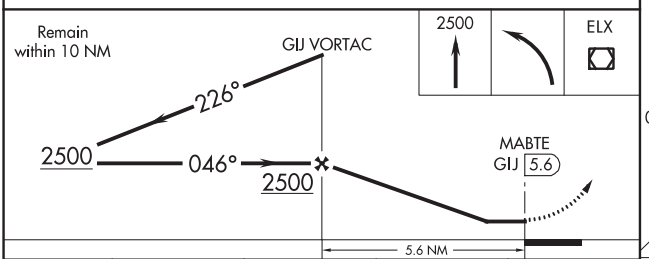
JERRY TYLER MEMORIAL (3TR)

T A NA — Use South Bend altimeter setting; when not received, use Elkhart altimeter setting and increase all MDA 20 feet. Procedure NA at night. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2500 then left turn direct ELX VOR/DME and hold.

SBN ASOS	SOUTH BEND APP CON ★	GCO	UNICOM
118.15	118.55 257.8	121.725	122.8 (CTAF) L





CATEGORY	A	B	C	D
CIRCLING	1300-1 550 (600-1)		1300-1½ 550 (600-1½)	NA

FAF to MAP 5.6 NM

Knots	60	90	120	150	180
Min:Sec	5:36	3:44	2:48	2:14	1:52

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

ONTONAGON, MICHIGAN AL-5919 (FAA) 20142

WAAS CH 40340 W35A	APP CRS 346°	Rwy ldg 3503 TDZE 665 Apt Elev 665

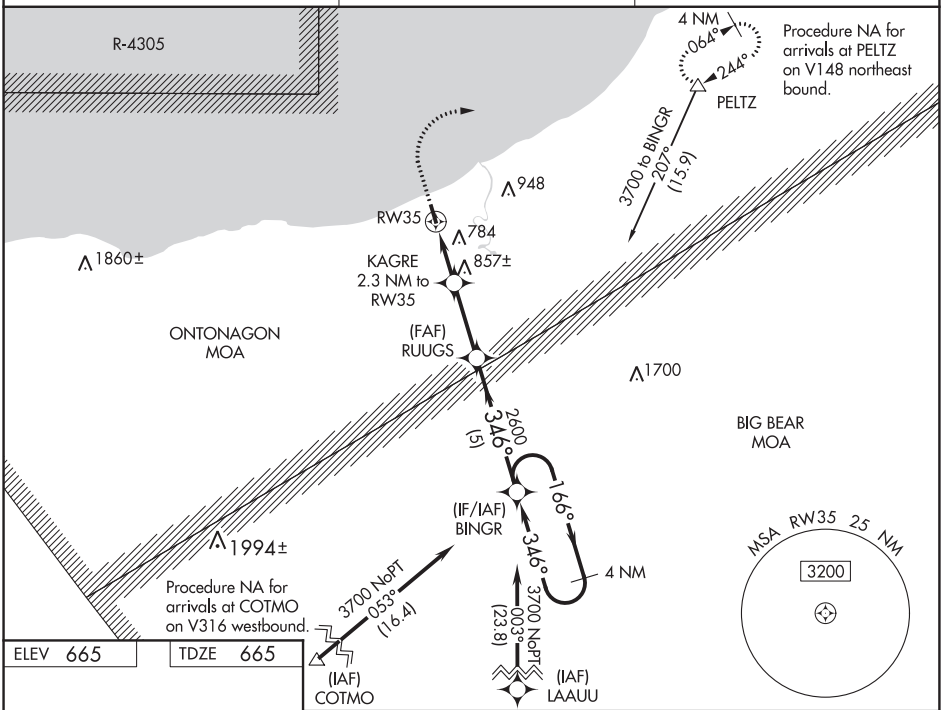
RNAV (GPS) RWY 35
ONTONAGON COUNTY - SCHUSTER FIELD (OGM)

T NA

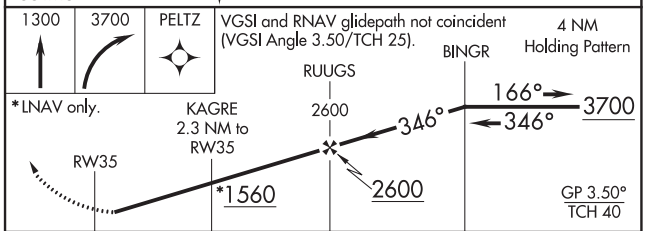
Baro-VNAV NA.
Rwy 35 helicopter visibility reduction below ¾ SM NA.
DME/DME RNP-0.3 NA. Use Hancock altimeter setting.

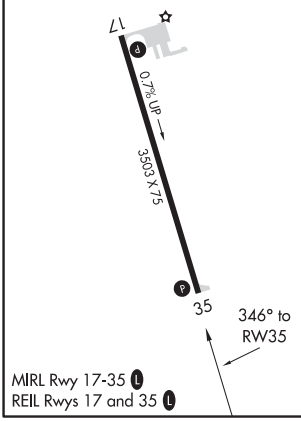
MISSED APPROACH: Climb to 1300 then climbing right turn to 3700 direct PELTZ and hold, continue climb-in-hold to 3700.

CMX ASOS	MINNEAPOLIS CENTER	CTAF
125.675	133.55 379.1	122.9 L



ELEV 665	TDZE 665





MIRL Rwy 17-35 L
REIL Rwys 17 and 35 L

CATEGORY	A	B	C	D
LPV DA	1152-1½ 487 (500-1½)			NA
LNAV/VNAV DA	1301-1⅞ 636 (700-1⅞)			NA
LNAV MDA	1280-1 615 (700-1)		1280-1¾ 615 (700-1¾)	NA
C CIRCLING	1320-1 655 (700-1)		1420-2¼ 755 (800-2¼)	NA

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

ILS or LOC RWY 25
OSCODA-WURTSMITH (OSC)

LOC I-LJU	APP CRS	Rwy ldg	11800
108.5	245°	TDZE	624
		Apt Elev	633

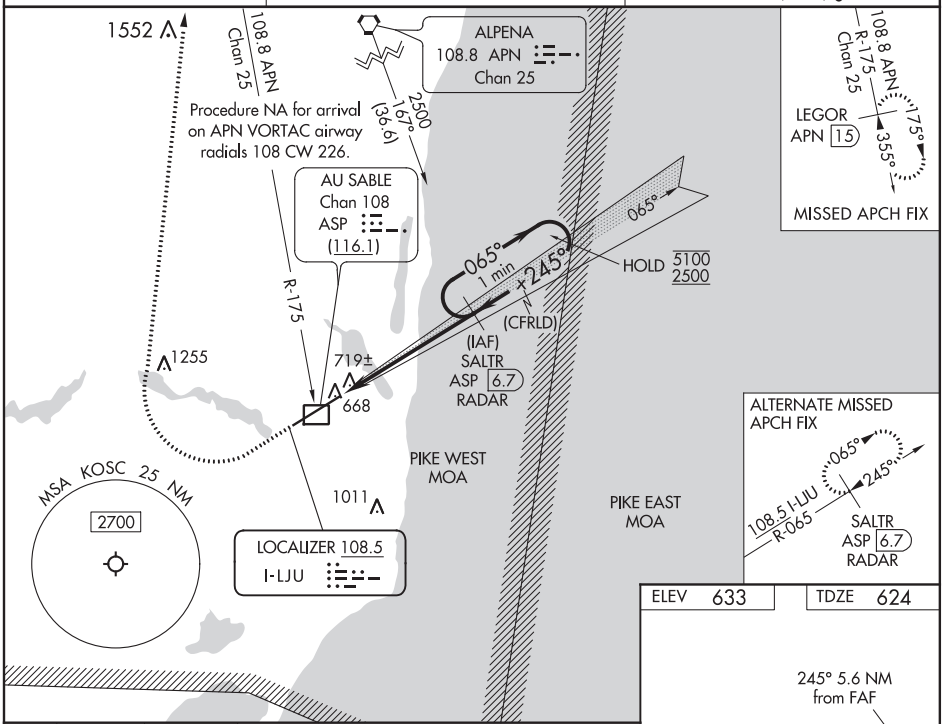
DME required.

T A NA Circling NA southeast of Rwy 7-25. For inop ALS, increase S-LOC Cats C and D visibility to 1 SM. DME from ASP DME. Simultaneous reception of I-LJU and ASP DME required.

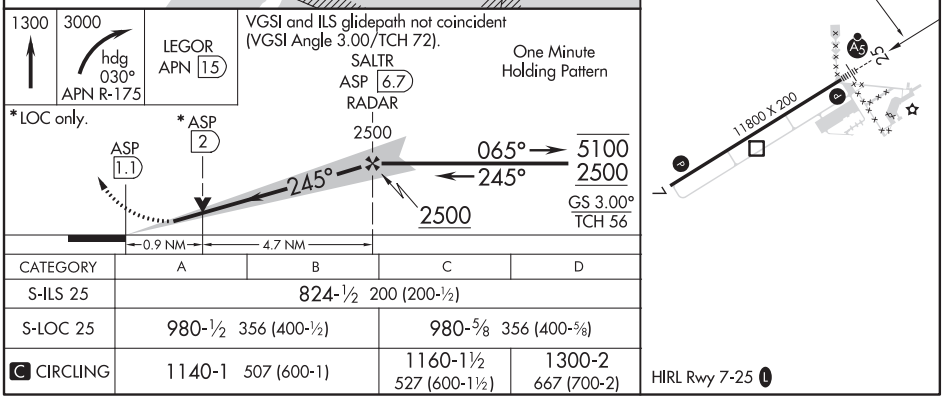
MALSR A5

MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 on heading 030° and on APN VORTAC R-175 to LEGOR/APN 15 DME and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
118.7	125.475 269.45	123.0 (CTAF) L



ELEV 633	TDZE 624



CATEGORY	A	B	C	D
S-ILS 25	824-½ 200 (200-½)			
S-LOC 25	980-½ 356 (400-½)		980-⅝ 356 (400-⅝)	
C CIRCLING	1140-1 507 (600-1)		1160-1½ 527 (600-1½)	1300-2 667 (700-2)

EC-1, 25 FEB 2021 to 22 APR 2021

OSCODA, MICHIGAN AL-32 (FAA) 19283

WAAS CH **97417** **W07A**	APP CRS **065°**	Rwy ldg **11800** TDZE **633** Apt Elev **633**

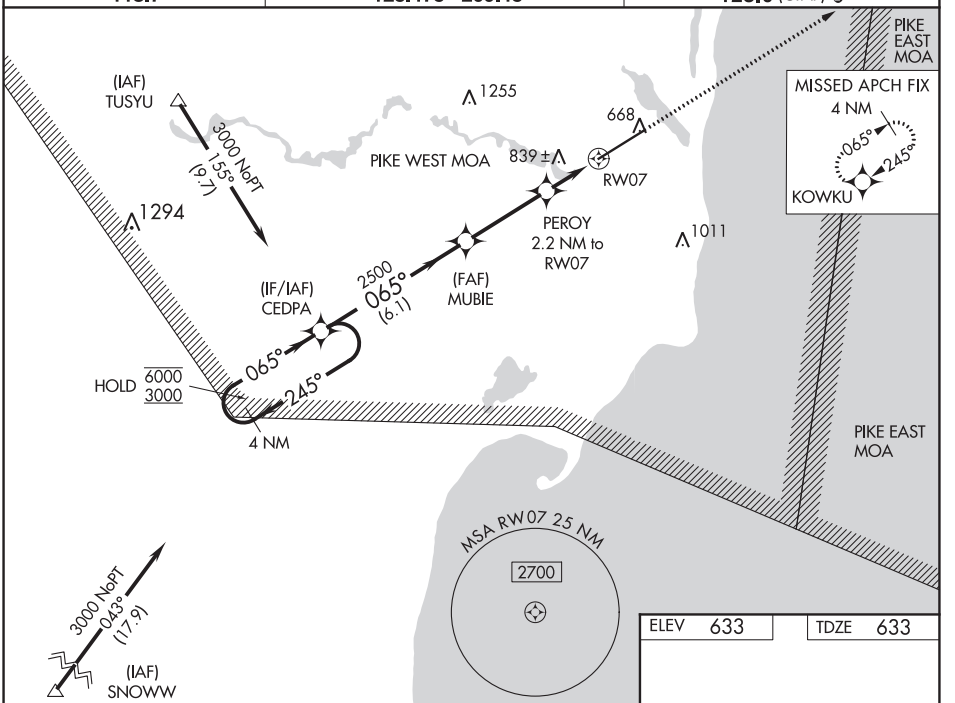
RNAV (GPS) RWY 7
OSCODA-WURTSMITH (OSC)

RNP APCH.

T Circling NA southeast of Rwy 7-25. Baro-VNAV and VDP NA when using Alpena altimeter setting. Rwy 7 helicopter visibility reduction below ¾ SM NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C. When local altimeter setting not received use Alpena altimeter setting and increase all DA 96 feet and all MDA 100 feet. Increase LPV all Cats and LNAV Cat C and D visibility ¼ SM, and Circling Cat C visibility ¼ SM and Cat D visibility ½ SM.

MISSED APPROACH: Climb to 2500 direct KOWKU and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
118.7	**125.475 269.45**	**123.0** (CTAF) L



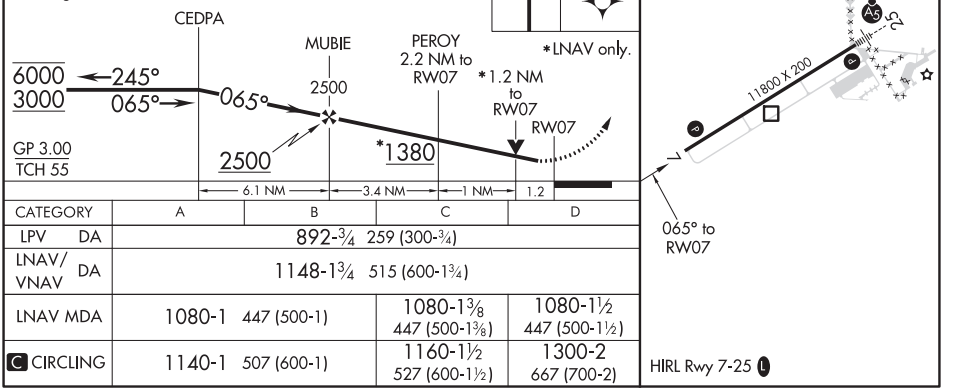
ELEV 633 TDZE 633

4 NM Holding Pattern

VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 75).

2500 KOWKU

*LNAV only.



CATEGORY	A	B	C	D
LPV DA	892-¾ 259 (300-¾)			
LNAV/VNAV DA	1148-1¾ 515 (600-1¾)			
LNAV MDA	1080-1 447 (500-1)		1080-1⅜ 447 (500-1⅜)	1080-1½ 447 (500-1½)
C CIRCLING	1140-1 507 (600-1)		1160-1½ 527 (600-1½)	1300-2 667 (700-2)

EC-1, 25 FEB 2021 to 22 APR 2021

RNAV (GPS) RWY 25
OSCODA-WURTSMITH (OSC)

WAAS CH 82317 W25A	APP CRS 245°	Rwy ldg 11800 TDZE 624 Apt Elev 633

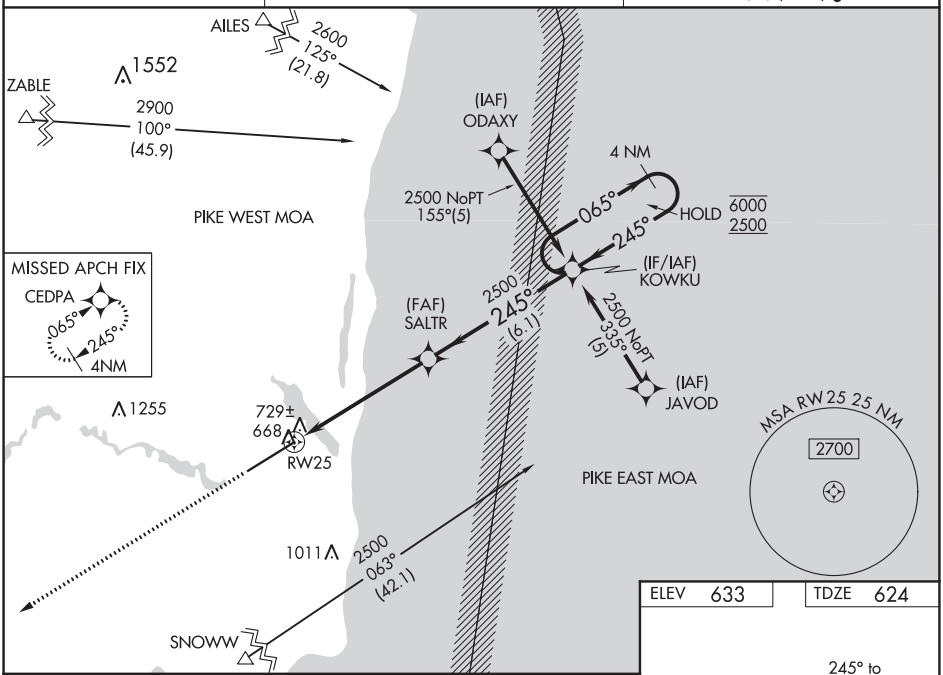
RNP APCH.

T Circling NA southeast of Rwy 7-25. Baro-VNAV and VDP NA when using Alpena altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C. When local altimeter setting not received, use Alpena altimeter setting and increase all DA 96 feet and all MDA 100 feet. Increase LNAV/VNAV all Cats and LNAV and Circling Cat C visibility ¼ SM, and Circling Cat D visibility ½ SM. For inop ALS, increase LNAV Cats C and D visibility to 1 SM. For inop ALS when using Alpena altimeter setting, increase LPV all Cats visibility to ⅞ SM.

MALSR A5

MISSED APPROACH: Climb to 3000 direct CEDPA and hold.

AWOS-3	MINNEAPOLIS CENTER	UNICOM
118.7	125.475 269.45	123.0 (CTAF) L

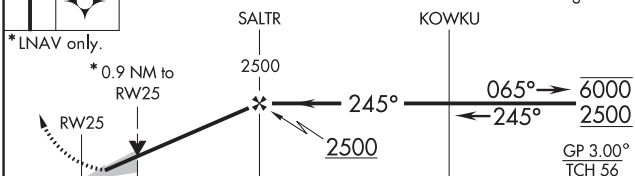


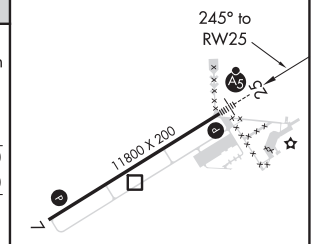
ELEV 633 TDZE 624

3000 CEDPA VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 72).

4 NM Holding Pattern

*LNAV only.





CATEGORY	A	B	C	D
LPV DA	824-½ 200 (200-½)			
LNAV/VNAV DA	1004-¾ 380 (400-¾)			
LNAV MDA	980-½ 356 (400-½)		980-⅝ 356 (400-⅝)	980-1 356 (400-1)
C CIRCLING	1140-1 507 (600-1)		1160-1½ 527 (600-1½)	1300-2 667 (700-2)

HIRL Rwy 7-25 L

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

OWOSSO, MICHIGAN AL-5312 (FAA) 20170

WAAS CH 50209 W11A	APP CRS 109°	Rwy ldg 4300 TDZE 736 Apt Elev 737

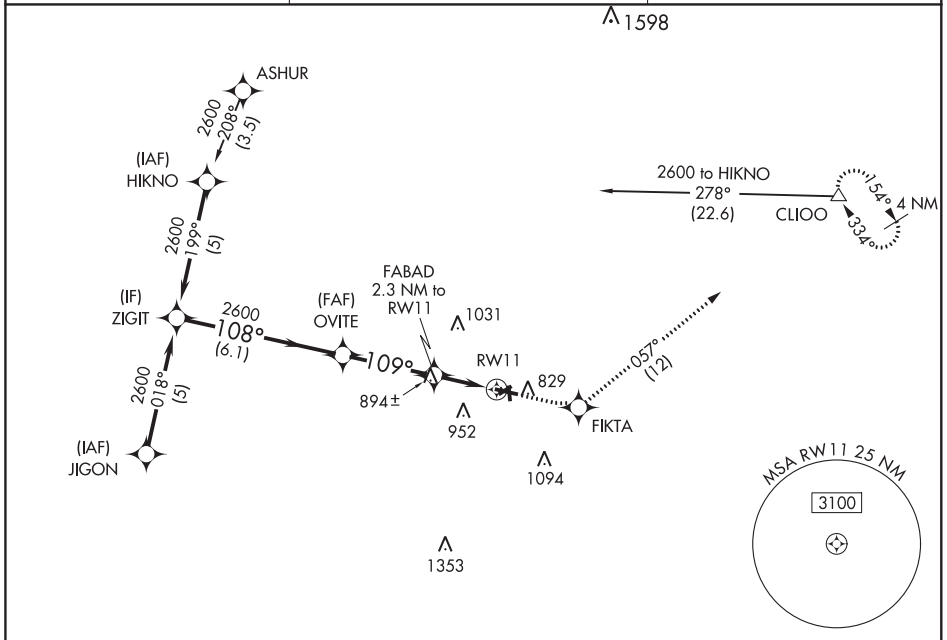
RNAV (GPS) RWY 11
OWOSSO COMMUNITY (RNP)

RNP APCH.

T Circling NA to Rwys 6, 18, 24, and 36. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). Rwy 11 helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climb to 3000 direct FIKTA and on track 057° to CLIOO and hold.

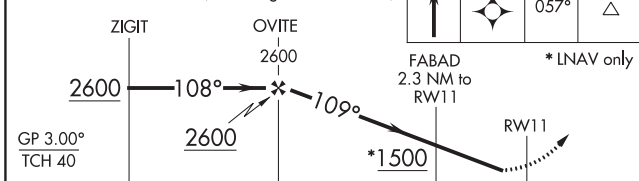
AWOS-3	GREAT LAKES APP CON *	UNICOM
118.025	128.55 257.9	123.0 (CTAF) L



ELEV 737 TDZE 736

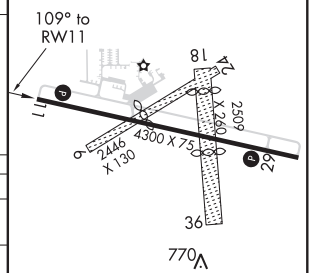
VGSI and RNAV glidepath not coincident (VGSI Angle 3.50/TCH 25).

3000	FIKTA	tr 057°	CLIOO



* LNAV only

CATEGORY	A	B	C	D
LPV DA	1079-1¼ 343 (400-1¼)			NA
LNAV/VNAV DA	1258-2 522 (600-2)			NA
LNAV MDA	1180-1 444 (500-1)		1180-1¼ 444 (500-1¼)	NA
C CIRCLING	1220-1 483 (500-1)	1260-1 523 (600-1)	1400-1¾ 663 (700-1¾)	NA



REIL Rwys 11 and 29 L
MIRL Rwy 11-29 L

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

APP CRS	Rwy ldg	4300
289°	TDZE	737
	Apt Elev	737

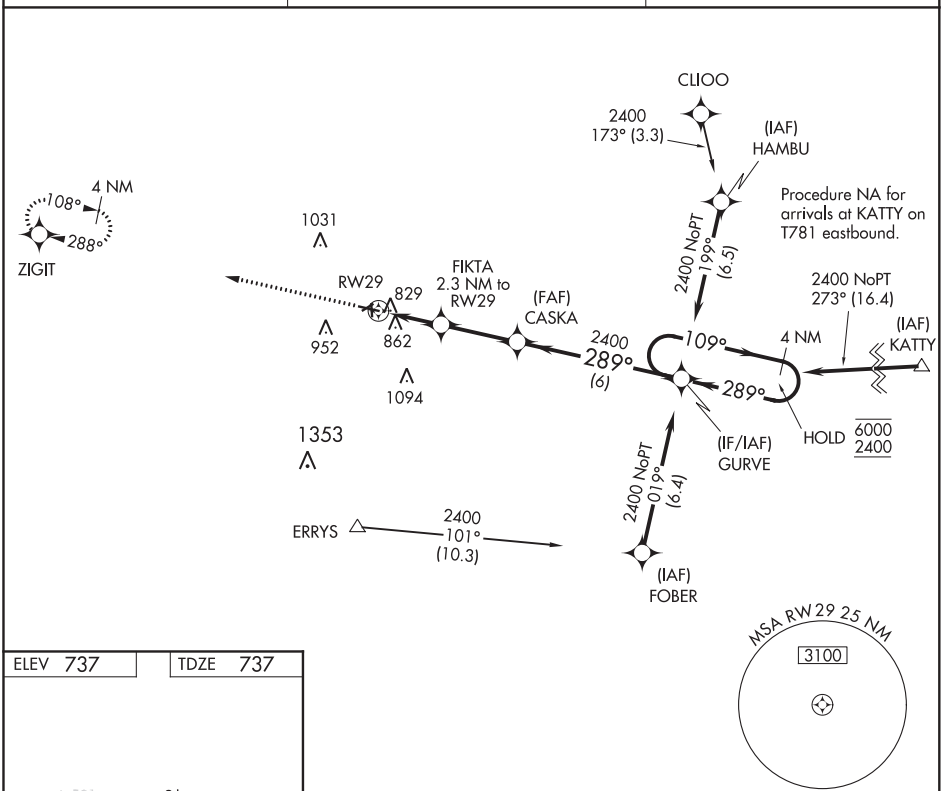
RNAV (GPS) RWY 29
OWOSSO COMMUNITY (RNP)

RNP APCH.

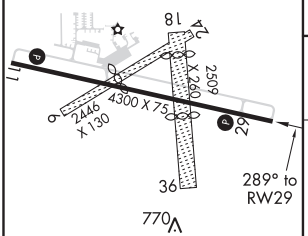
Circling NA to Rwys 6, 18, 24 and 36. Procedure NA at night. Rwy 29 helicopter visibility reduction below ¾ SM NA.

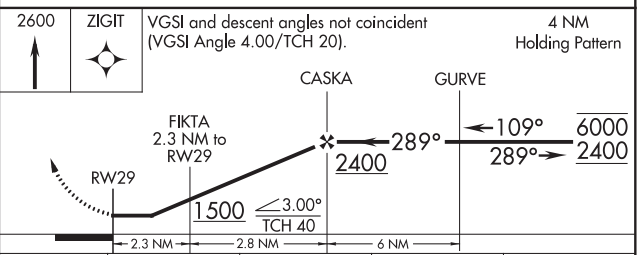
MISSED APPROACH: Climb to 2600 direct ZIGIT and hold.

AWOS-3	GREAT LAKES APP CON ★	UNICOM
118.025	128.55 257.9	123.0 (CTAF) L



ELEV 737 TDZE 737





CATEGORY	A	B	C	D
LNAV MDA	1120-1 383 (400-1)		1120-1⅛ 383 (400-1⅛)	NA
C CIRCLING	1220-1 483 (500-1)	1260-1 523 (600-1)	1400-1¾ 663 (700-1¾)	NA

REIL Rwys 11 and 29 L
MIRL Rwy 11-29 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

OWOSSO, MICHIGAN AL-5312 (FAA) 20170

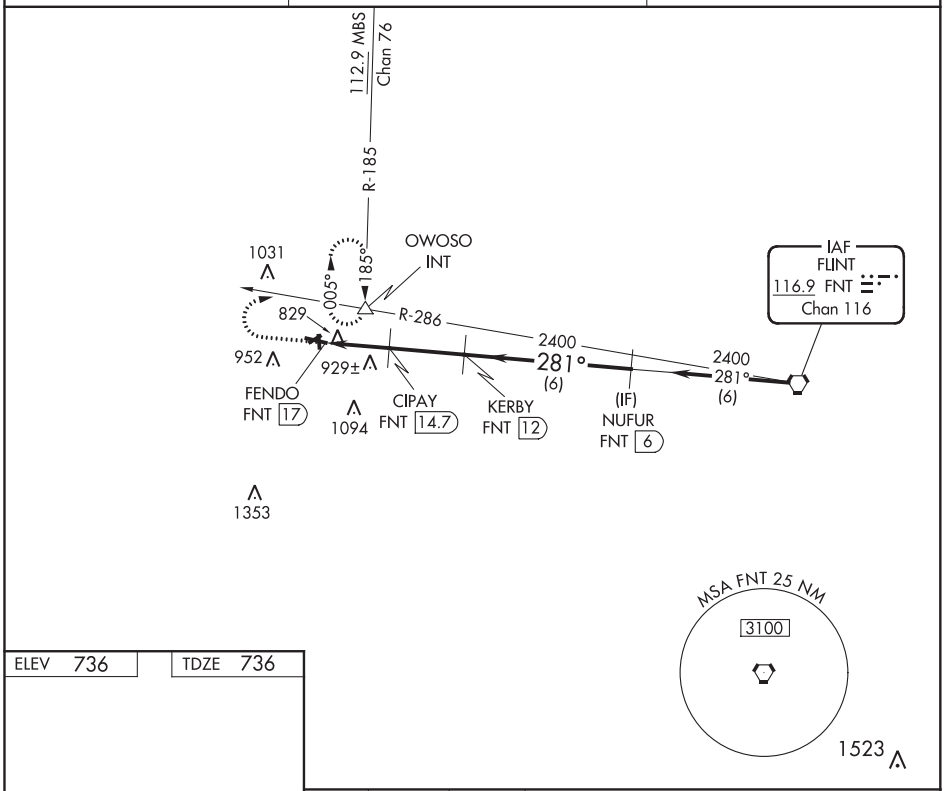
VORTAC FNT	APP CRS	Rwy ldg 4300
116.9	281°	TDZE 736
Chan 116		Apt Elev 736

VOR/DME RWY 29
OWOSSO COMMUNITY (RNP)

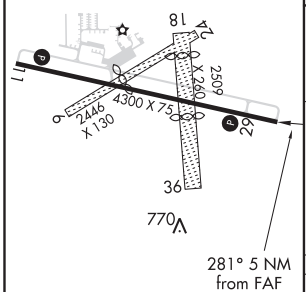
Circling NA to Rwys 6, 18, 24 and 36. Rwy 29 helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Flint altimeter setting and increase all MDA 60 feet and S-29 Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 1900 then climbing right turn to 2700 via FNT VORTAC R-286 to OWOSO INT and hold.

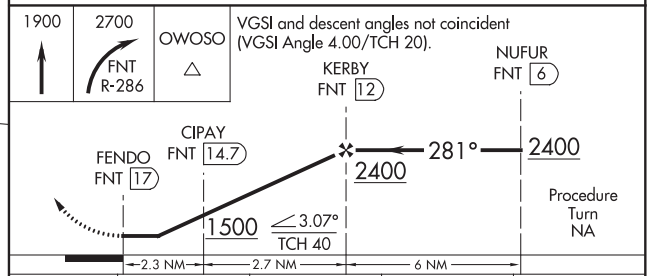
AWOS-3	GREAT LAKES APP CON ★	UNICOM
118.025	128.55 257.9	123.0 (CTAF) L



ELEV 736 TDZE 736



REIL Rwys 11 and 29 L
MIRL Rwy 11-29 L



CATEGORY	A	B	C	D
S-29	1180-1	444 (500-1)	1180-1¼ 444 (500-1¼)	NA
C CIRCLING	1220-1 483 (500-1)	1260-1 523 (600-1)	1400-1¾ 663 (700-1¾)	NA

OWOSSO, MICHIGAN
Amdt 1E 18JUN20

43°00′N-84°08′W

OWOSSO COMMUNITY (RNP)
VOR/DME RWY 29

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

LOC I-PLN	APP CRS	Rwy ldg	6513
111.3	321°	TDZE	712
		Apt Elev	721

ILS or LOC RWY 32

PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

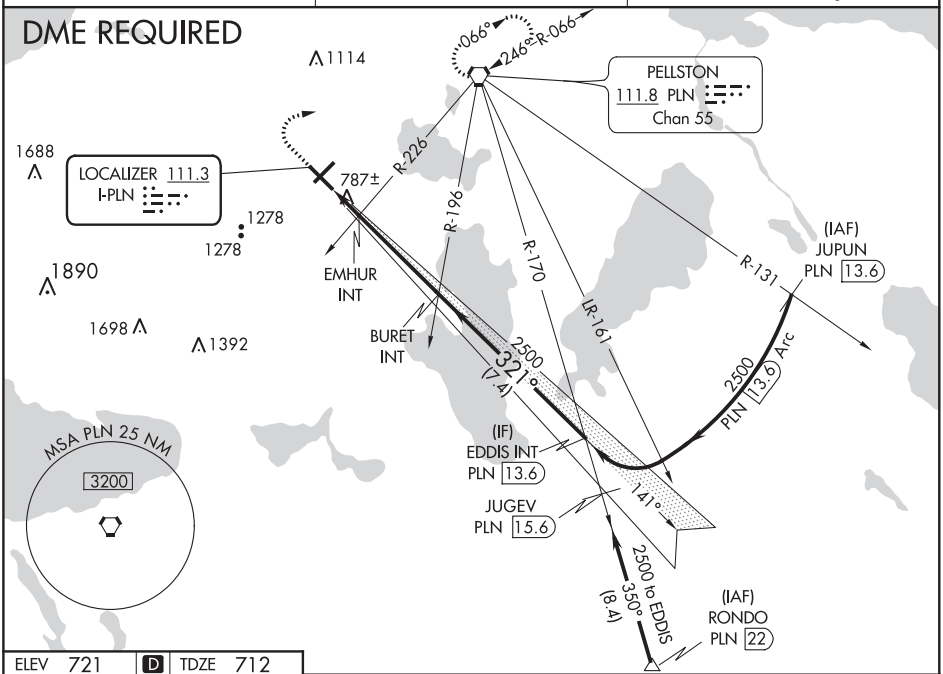
When local altimeter setting not received, use Harbor Springs altimeter setting and increase DA to 940, and all MDA 40 feet; increase S-LOC 32 Cat D, Circling Cat C and EMHUR fix minimums S-LOC 32 Cat C, Circling Cat C visibility ¼ mile. Circling Rwy 5 NA at night.

- 33°C

MALSR

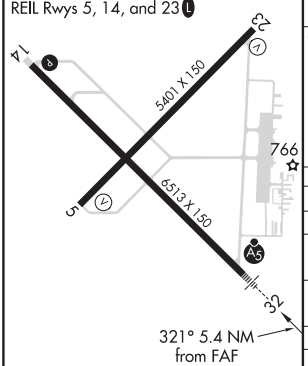
MISSED APPROACH: Climb to 1400 then climbing right turn to 2600 direct PLN VORTAC and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	134.6 354.05	123.0 (CTAF) L

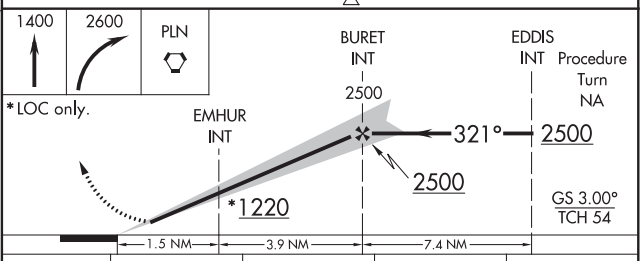


ELEV 721 | D | TDZE 712

HIRL Rwy 14-32 L
MIRL Rwy 5-23 L
REIL Rwys 5, 14, and 23 L



FAF to MAP 5.4 NM					
Knots	60	90	120	150	180
Min:Sec	5:24	3:36	2:42	2:10	1:48



CATEGORY	A	B	C	D
S-ILS 32	912-½ 200 (200-½)			
S-LOC 32	1220-½ 508 (500-½)		1220-1 508 (500-1)	
CIRCLING	1260-1 539 (600-1)	1300-1 579 (600-1)	1300-1½ 579 (600-1½)	1420-2¼ 699 (700-2¼)
EMHUR FIX MINIMUMS (DUAL VOR RECEIVERS REQUIRED)				
S-LOC 32	1080-½ 368 (400-½)			1080-¾ 368 (400-¾)
CIRCLING	1260-1 539 (600-1)	1300-1 579 (600-1)	1300-1½ 579 (600-1½)	1420-2¼ 699 (700-2¼)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

PELLSTON, MICHIGAN

AL-647 (FAA)

20366

APP CRS	Rwy ldg	5395
051°	TDZE	716
	Apt Elev	721

RNAV (GPS) RWY 5

PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

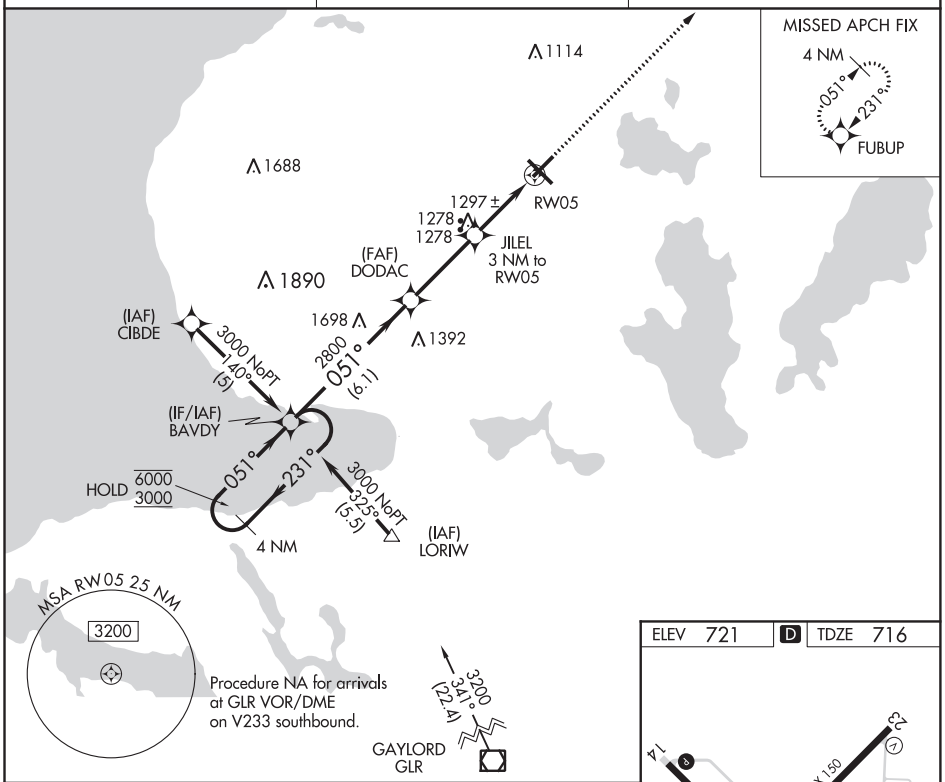
RNP APCH.

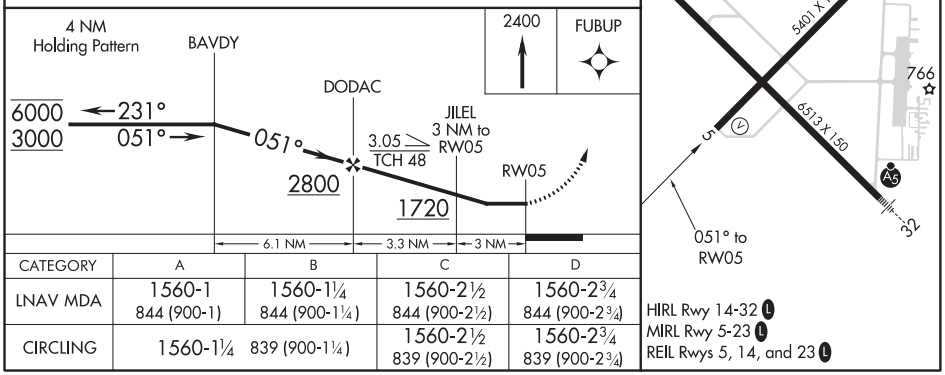
Straight-in and Circling Rwy 5 NA at night. Rwy 5 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Harbor Springs altimeter setting and increase all MDA 40 feet, increase LNAV Cat A visibility ¼ SM.

-33°C

MISSED APPROACH: Climb to 2400 direct FUBUP and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	134.6 354.05	123.0 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1560-1 844 (900-1)	1560-1¼ 844 (900-1¼)	1560-2½ 844 (900-2½)	1560-2¾ 844 (900-2¾)
CIRCLING	1560-1¼ 839 (900-1¼)		1560-2½ 839 (900-2½)	1560-2¾ 839 (900-2¾)

HIRL Rwy 14-32 L
MIRL Rwy 5-23 L
REIL Rwys 5, 14, and 23 L

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 81915 W23A	APP CRS 231°	Rwy ldg 5395 TDZE 721 Apt Elev 721

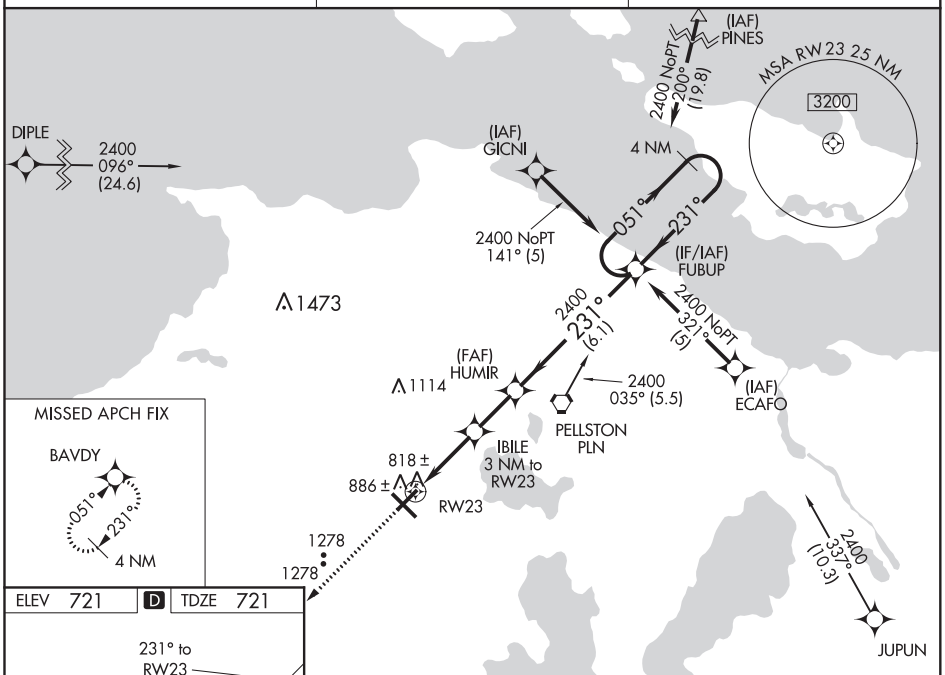
RNAV (GPS) RWY 23
PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

T
A
-33°C

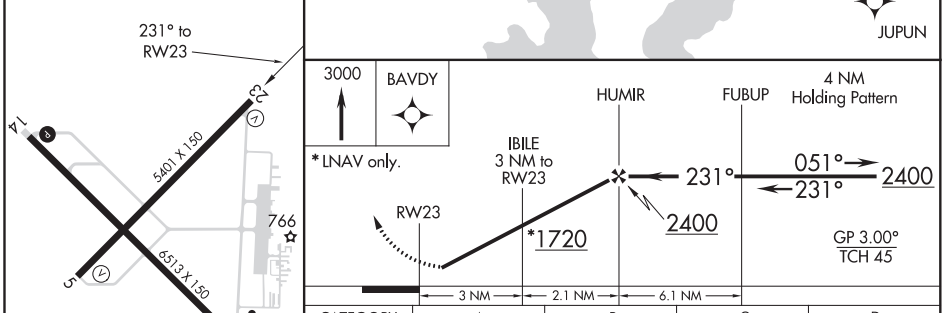
Baro-VNAV NA when using Harbor Springs altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Rwy 23 helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Harbor Springs altimeter setting and increase LPV DA to 1085, LNAV/VNAV DA to 1137 and all visibilities ¼ mile, and all MDA 40 feet; increase Circling Cat C visibility ¼ mile. Circling Rwy 5 NA at night.

MISSED APPROACH: Climb to 3000 direct BAVDY and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	134.6 354.05	123.0 (CTAF) L



ELEV 721 | D | TDZE 721



CATEGORY	A	B	C	D
LPV DA	1057-1¼ 336 (400-1¼)			
LNAV/VNAV DA	1109-1¼ 338 (400-1¼)			
LNAV MDA	1240-1 519 (600-1)		1240-1½ 519 (600-1½)	1240-1¾ 519 (600-1¾)
CIRCLING	1260-1 539 (600-1)	1300-1 579 (600-1)	1300-1½ 579 (600-1½)	1420-2¼ 699 (700-2¼)

HIRL Rwy 14-32 L
MIRL Rwy 5-23 L
REIL Rwys 5, 14, and 23 L

EC-1, 25 FEB 2021 to 22 APR 2021

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WAAS CH 77813 W32A	APP CRS 321°	Rwy ldg 6513 TDZE 712 Apt Elev 721

RNAV (GPS) RWY 32

PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

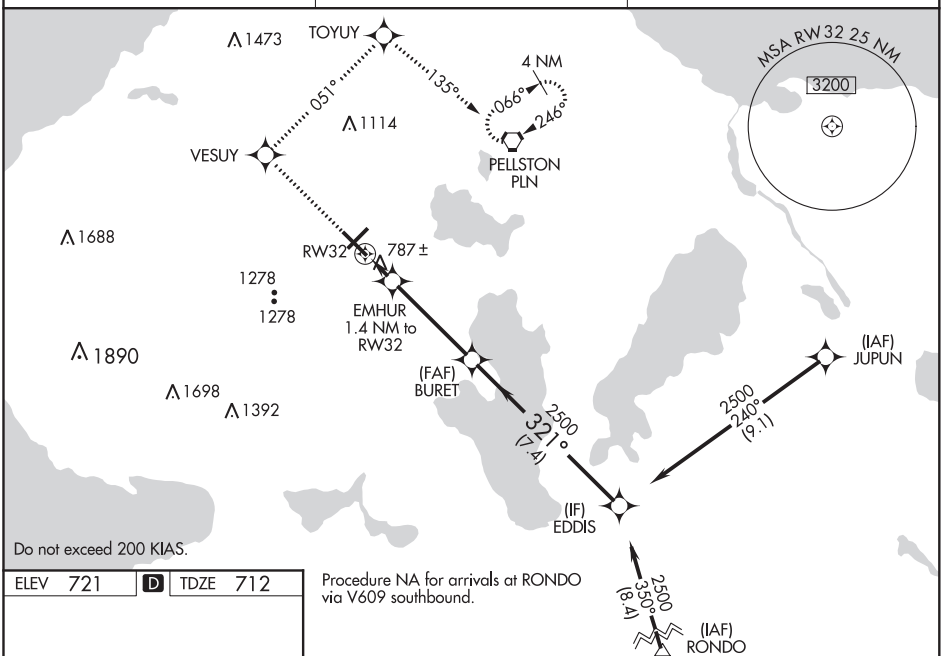
Baro-VNAV NA when using Harbor Springs altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Harbor Springs altimeter setting and increase LPV DA to 940, LNAV/VNAV DA to 1084, and all MDA 40 feet; increase Circling Cat C visibility ¼ mile. Night Landing: Rwy 5 NA.

-33°C

MALSR

MISSED APPROACH: Climb to 2600 direct VESUY and via track 051° to TOYUY and via track 135° to PLN VORTAC and hold.

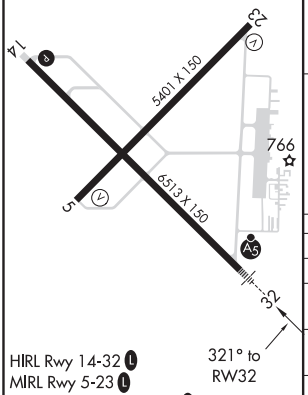
ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	134.6 354.05	123.0 (CTAF) L



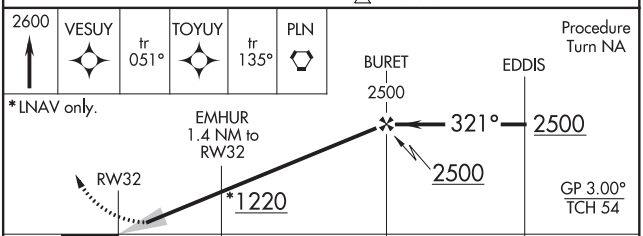
Do not exceed 200 KIAS.

Procedure NA for arrivals at RONDO via V609 southbound.

ELEV 721 | D | TDZE 712



HIRL Rwy 14-32 L
MIRL Rwy 5-23 L
REIL Rwys 5, 14, and 23 L



CATEGORY	A	B	C	D
LPV DA	912-½ 200 (200-½)			
LNAV/VNAV DA	1056-⅝ 344 (400-⅝)			
LNAV MDA	1080-½ 368 (400-½)		1080-⅝ 368 (400-⅝)	
CIRCLING	1260-1 539 (600-1)	1300-1 579 (600-1)	1300-1½ 579 (600-1½)	1420-2¼ 699 (700-2¼)

EC-1, 25 FEB 2021 to 22 APR 2021

VOR RWY 23

PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)

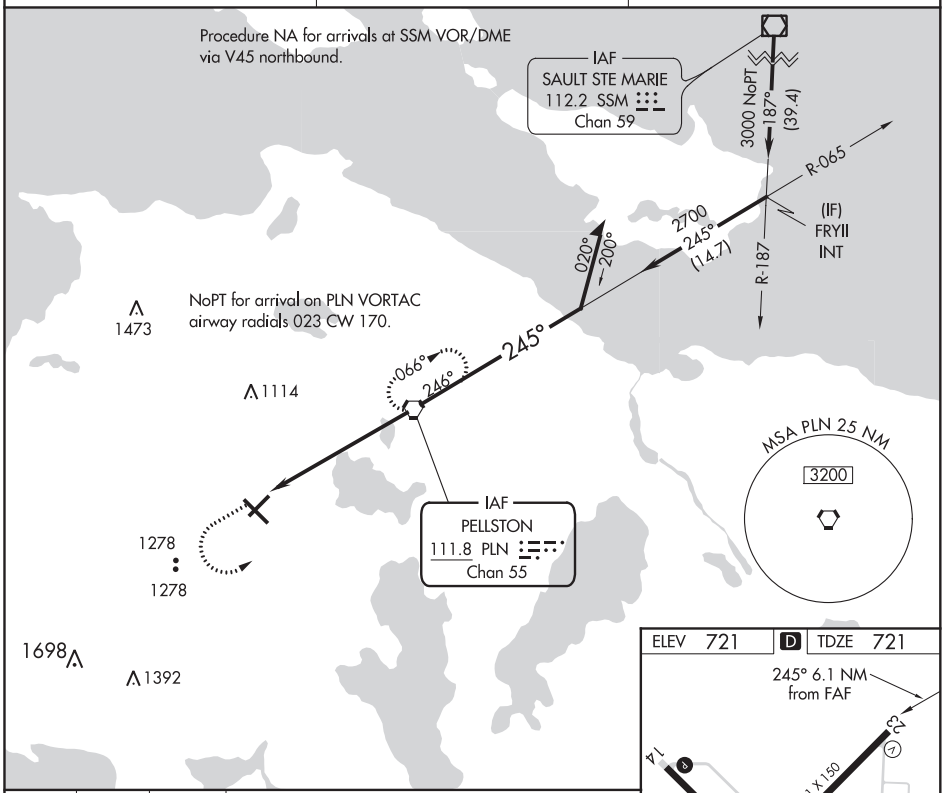
VORTAC PLN	APP CRS	Rwy ldg 5395
111.8	245°	TDZE 721
Chan 55		Apt Elev 721

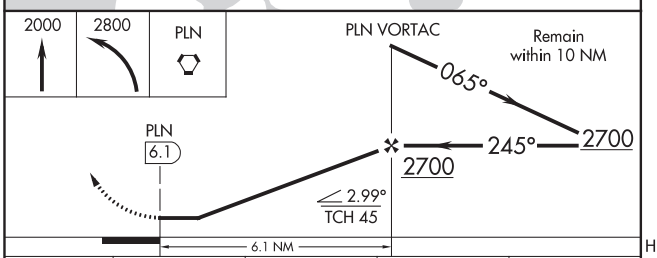
-33°C

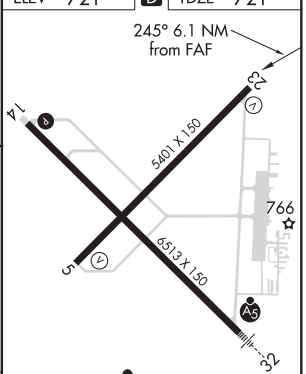
When local altimeter setting not received, use Harbor Springs altimeter setting and increase all MDA 40 feet. Increase all Cat C and S-23 Cat D visibility ¼ mile. Rwy 23 helicopter visibility reduction below 1 SM NA. Straight-in Rwy 23 NA at night, Circling Rwy 5, 23 NA at night.

MISSED APPROACH: Climb to 2000 then climbing left turn to 2800 direct PLN VORTAC and hold.

ASOS	MINNEAPOLIS CENTER	UNICOM
119.025	134.6 354.05	123.0 (CTAF) L







HIRL Rwy 14-32 L
MIRL Rwy 5-23 L
REIL Rwys 5, 14, and 23 L

CATEGORY	A	B	C	D
S-23	1300-1	579 (600-1)	1300-1½ 579 (600-1½)	1300-1¾ 579 (600-1¾)
CIRCLING	1300-1	579 (600-1)	1300-1½ 579 (600-1½)	1420-2¼ 699 (700-2¼)

FAF to MAP 6.1 NM					
Knots	60	90	120	150	180
Min:Sec	6:06	4:04	3:03	2:26	2:02

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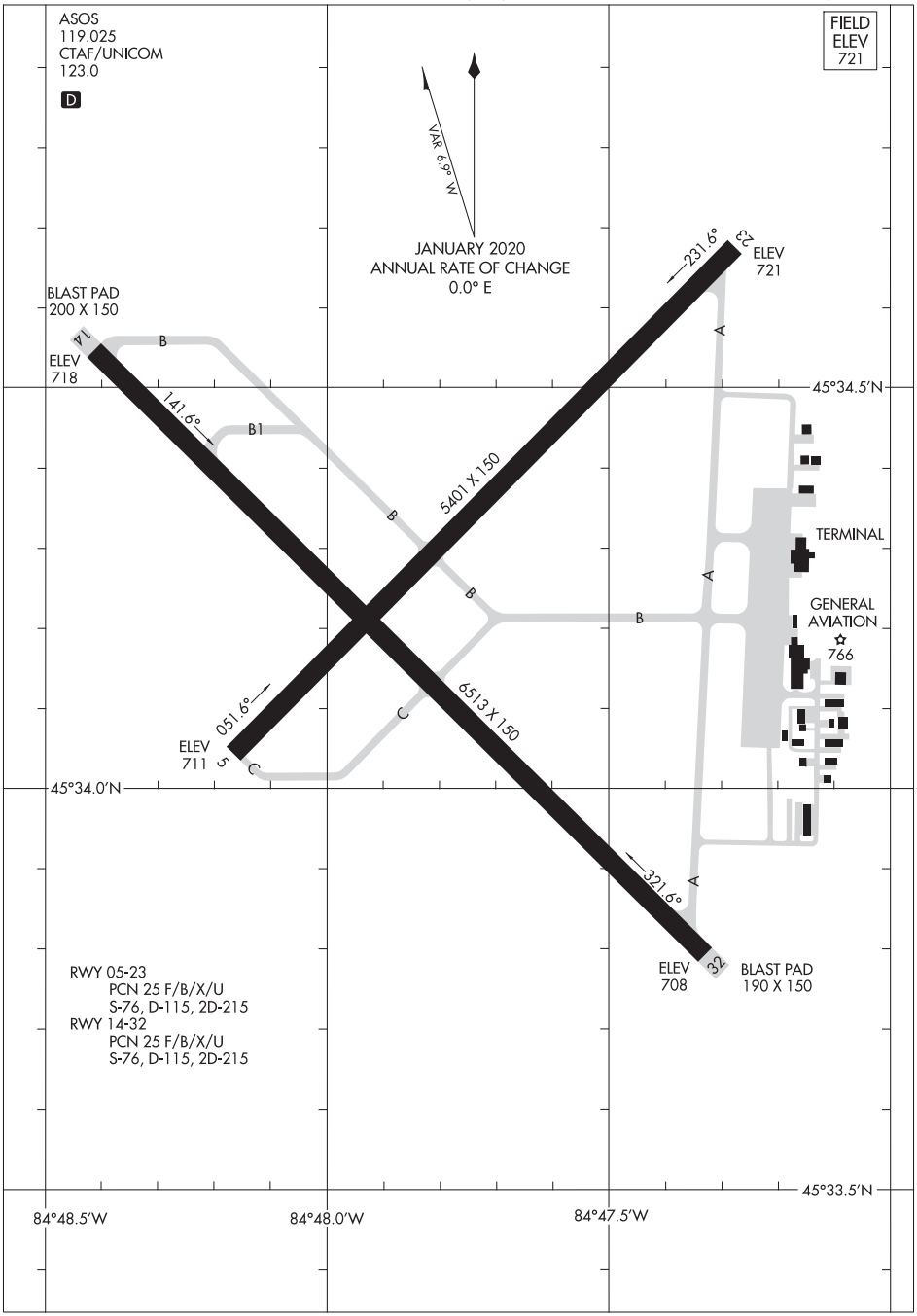
EC-1, 25 FEB 2021 to 22 APR 2021

20086

AIRPORT DIAGRAM

PELLSTON RGNL AIRPORT OF EMMET COUNTY (PLN)
AL-647 (FAA)
PELLSTON, MICHIGAN



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EC-1, 25 FEB 2021 to 22 APR 2021

AIRPORT DIAGRAM
20086
PELLSTON, MICHIGAN
PELLSTON RGNL OF EMMET COUNTY (PLN)

APP CRS	Rwy ldg	2302
183°	TDZE	N/A
	Apt Elev	696

RNAV (GPS)-B
CANTON-PLYMOUTH-METTETAL (1D2)

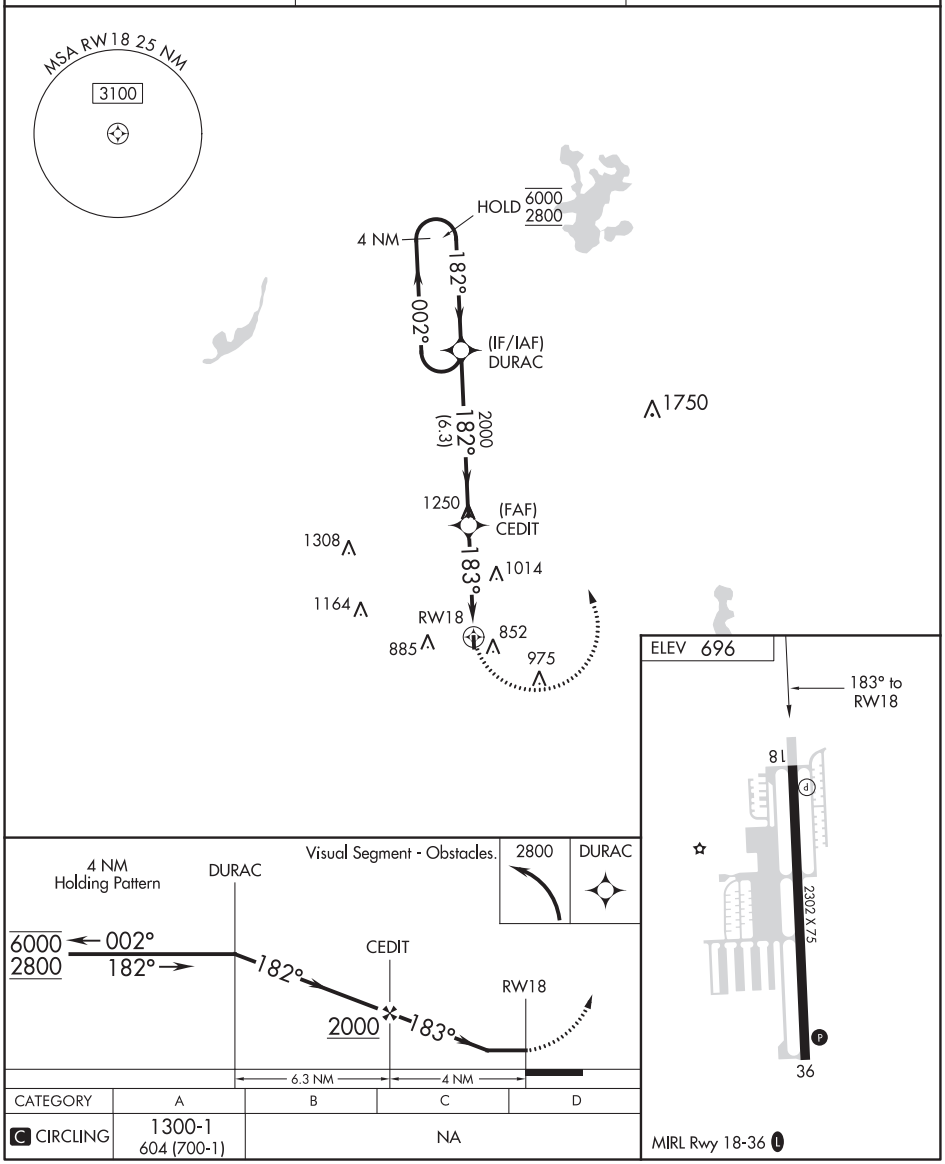
RNP APCH.

NA

Procedure NA at night. Use Willow Run altimeter setting.
Helicopter visibility reduction below 1 SM NA.

MISSED APPROACH:
Climbing left turn to 2800
direct DURAC and hold.

YIP ASOS	DETROIT APP CON	UNICOM
127.425	118.95 284.0	122.7 (CTAF) L



CATEGORY	A	B	C	D
C CIRCLING	1300-1 604 (700-1)	NA		

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LOC I-PTK	APP CRS	Rwy ldg	6520
111.1	095°	TDZE	981
		Apt Elev	981

ILS or LOC RWY 9R
OAKLAND COUNTY INTL (PTK)

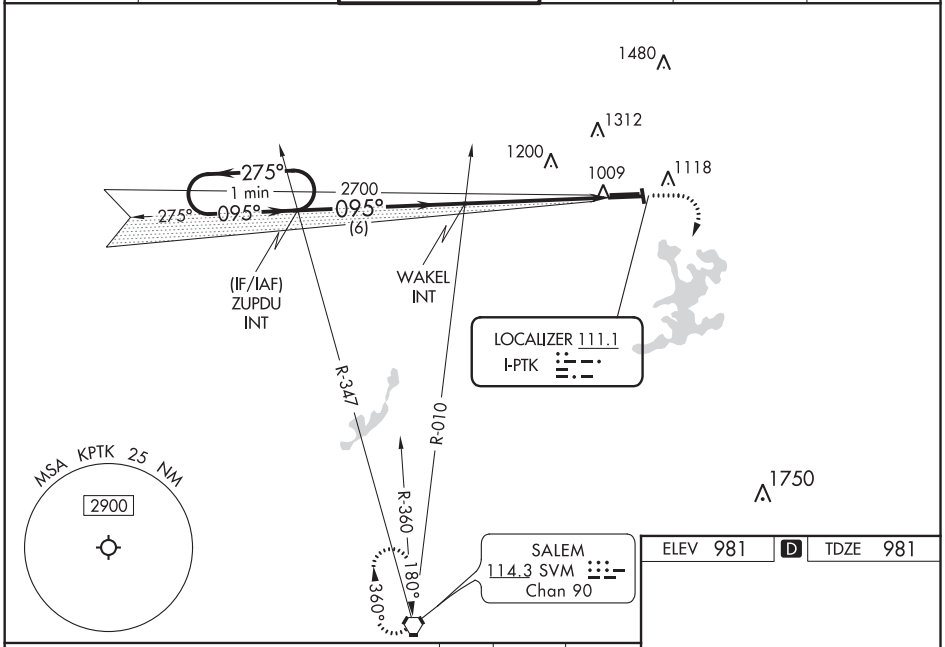
RADAR required for procedure entry.

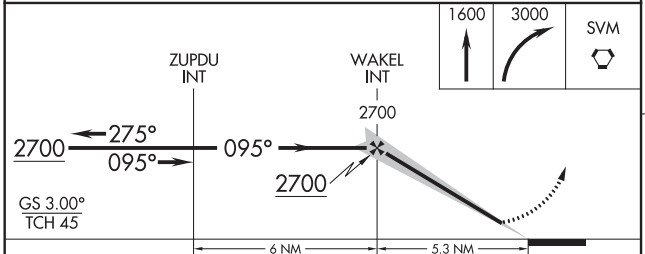
T A Circling Rwy 9L, 36 NA at night. When local altimeter setting not received, use Coleman A Young Muni altimeter setting and increase DA to 1286 feet and all MDA 120 feet, increase S-LOC 9R Cat B visibility to RVR 4000, Cat C/D visibility ⅜ SM, and Circling Cat B/C/D visibility ½ SM. For inop MALSR, increase S-LOC 9R Cat C/D visibility to 1¾ SM. For inop MALSR, when using Coleman A Young altimeter, increase S-ILS 9R all Cats visibility to RVR 4500, and increase S-LOC 9R Cat C/D visibility to 2 SM. **RVR 1800 authorized with the use of FD or AP or HUD to DA, NA when using Coleman A Young Muni altimeter setting.

MALSR

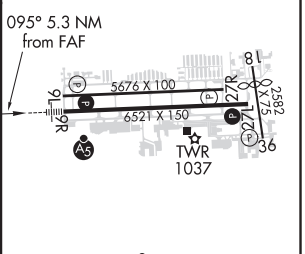
MISSED APPROACH: Climb to 1600 then climbing right turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	PONTIAC TOWER*	GND CON	CLNC DEL	UNICOM
125.025	132.35 284.0	120.5 (CTAF) L	121.9	118.25	122.95





ELEV 981 D TDZE 981



HIRL Rwy 9R-27L L
MIRL Rwy 9L-27R
REIL Rwy 27L L
REIL Rwys 9L and 27R

CATEGORY	A	B	C	D
S-ILS 9R	**1181/24	200 (200-½)		
S-LOC 9R	1620/24	639 (700-½)	1620-1⅜	639 (700-1⅜)
C CIRCLING	1620-1	639 (700-1)	1640-1¾ 659 (700-1¾)	1640-2 659 (700-2)

FAF to MAP 5.3 NM					
Knots	60	90	120	150	180
Min:Sec	5:18	3:32	2:39	2:07	1:46

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WAAS CH 90415 W09A	APP CRS 095°	Rwy ldg 6520 TDZE 981 Apt Elev 981

RNAV (GPS) RWY 9R
OAKLAND COUNTY INTL (PTK)

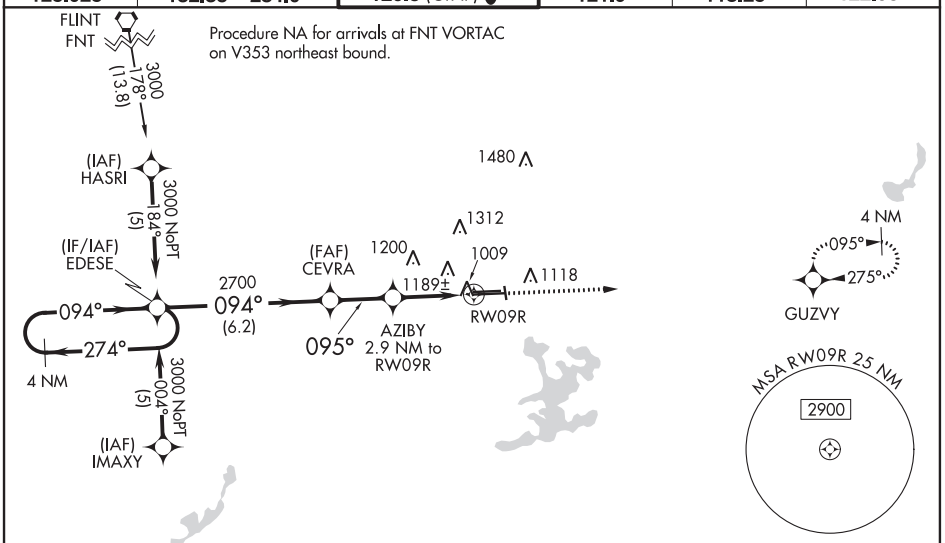
RNP APCH.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). Baro-VNAV and VDP NA when using Coleman A Young altimeter setting. Circling Rwy 9L, 36 NA at night. When local altimeter setting not received, use Coleman A Young Muni altimeter setting and increase LPV DA to 1286 feet, LNAV/VNAV DA to 1685 feet and all MDA 120 feet, increase LNAV/VNAV all Cats visibility to 2 SM, increase LNAV Cat C visibility to RVR 5000, Cat D visibility to RVR 6000, and Circling Cat C/D visibility ½ SM. For inop MALSR increase LNAV Cats A/B visibility to RVR 5000. For inop MALSR when using Coleman A Young Muni altimeter setting; increase LPV all Cats, and LNAV Cats A/B visibility to RVR 5000. # RVR 1800 authorized with use of FD or AP or HUD to DA, NA when using Coleman A Young Muni alitmeter setting.

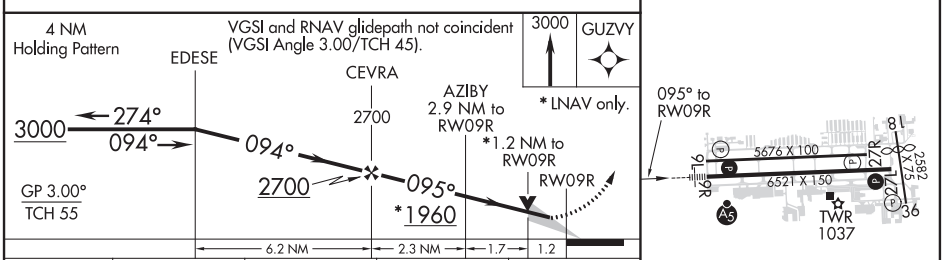
MALSR A5

MISSED APPROACH: Climb to 3000 direct GUZVY and hold.

ATIS	DETROIT APP CON	PONTIAC TOWER*	GND CON	CLNC DEL	UNICOM
125.025	132.35 284.0	120.5 (CTAF) L	121.9	118.25	122.95



ELEV 981	D	TDZE 981



CATEGORY	A	B	C	D
LPV DA	1181/24 200 (200-½)			
LNAV/VNAV DA	1580-1½ 599 (600-1½)			
LNAV MDA	1420/40 439 (500-¾)			1420/50 439 (500-1)
C CIRCLING	1500-1 519 (600-1)	1540-1 559 (600-1)	1640-1¾ 659 (700-1¾)	1640-2 659 (700-2)

HIRL Rwy 9R-27L L
MIRL Rwy 9L-27R
REIL Rwy 27L L
REIL Rwys 9L and 27R

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PONTIAC, MICHIGAN AL-5052 (FAA) 20142

WAAS CH 70615 W27A	APP CRS 275°	Rwy ldg 6520 TDZE 974 Apt Elev 981

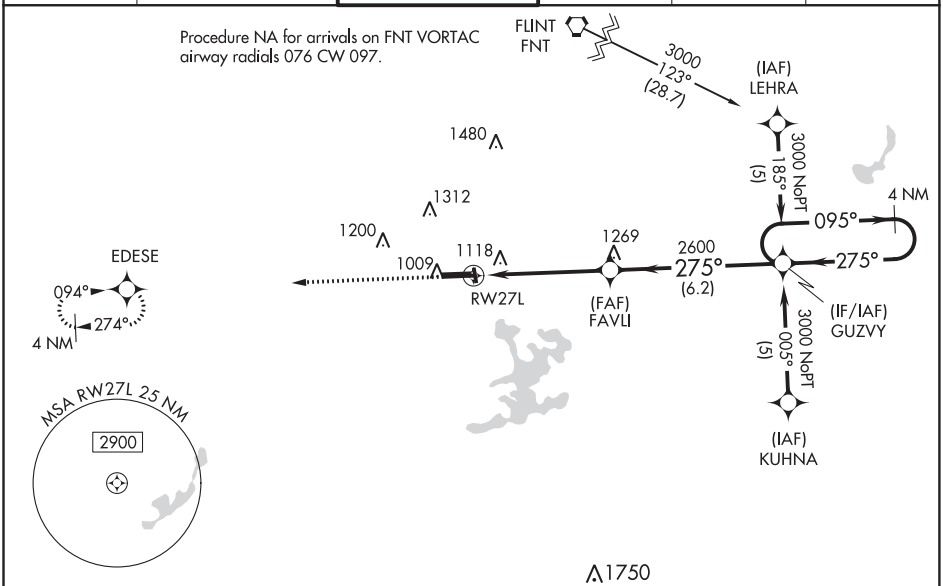
RNAV (GPS) RWY 27L
OAKLAND COUNTY INTL (PTK)

RNP APCH.

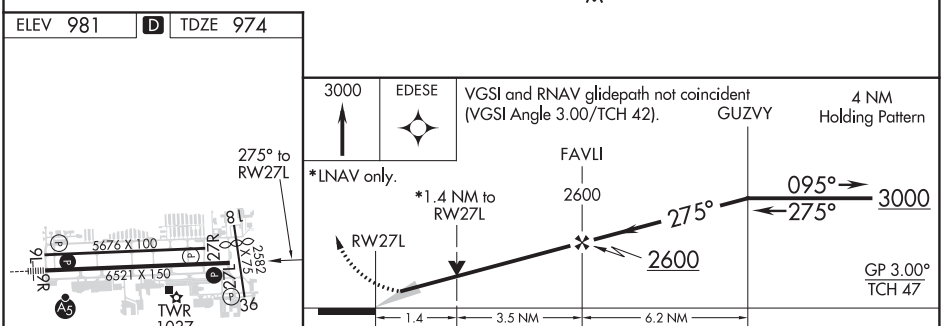
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). Baro-VNAV and VDP NA when using Coleman A Young altimeter setting. Circling Rwy 9L, 36 NA at night. When local altimeter setting not received, use Coleman A Young Muni altimeter setting and increase LPV DA to 1279 feet, LNAV/VNAV DA to 1568 and all MDA 120 feet, increase LPV and LNAV/VNAV all cats visibility ¼ SM, LNAV Cat C/D, and Circling Cat C/D visibility ½ SM.

MISSED APPROACH: Climb to 3000 direct EDESE and hold.

ATIS	DETROIT APP CON	PONTIAC TOWER*	GND CON	CLNC DEL	UNICOM
125.025	132.35 284.0	120.5 (CTAF) L	121.9	118.25	122.95



ELEV 981 D TDZE 974



CATEGORY	A	B	C	D
LPV DA	1174-¾ 200 (200-¾)			
LNAV/VNAV DA	1463-1¾ 489 (500-1¾)			
LNAV MDA	1460-1 486 (500-1)		1460-1¼ 486 (500-1¼)	1460-1½ 486 (500-1½)
C CIRCLING	1500-1 519 (600-1)	1540-1 559 (600-1)	1640-1¾ 659 (700-1¾)	1640-2 659 (700-2)

HIRL Rwy 9R-27L L
MIRL Rwy 9L-27R
REIL Rwy 27L L
REIL Rwys 9L and 27R

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EC-1, 25 FEB 2021 to 22 APR 2021

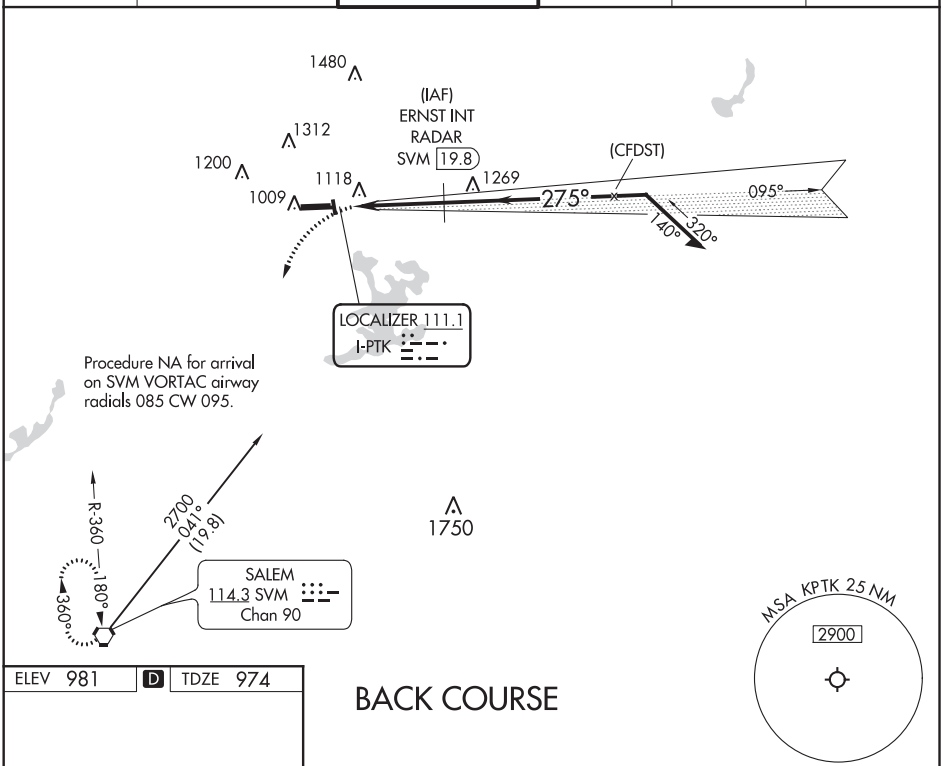
LOC I-PTK	APP CRS	Rwy ldg	6520
111.1	275°	TDZE	974
		Apt Elev	981

LOC BC RWY 27L
OAKLAND COUNTY INTL (PTK)

Circling Rwy 9L, 36 NA at night. When local altimeter setting not received, use Coleman A Young Muni altimeter setting and increase all MDA 120 feet, increase S-27L Cat C/D visibility ⅜ SM and Circling Cat C/D visibility ½ SM.

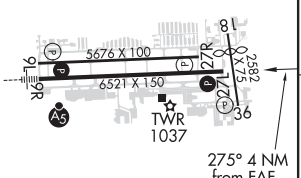
MISSED APPROACH: Climbing left turn to 3000 direct SVM VORTAC and hold.

ATIS	DETROIT APP CON	PONTIAC TOWER ★	GND CON	CLNC DEL	UNICOM
125.025	132.35 284.0	120.5 (CTAF) L	121.9	118.25	122.95



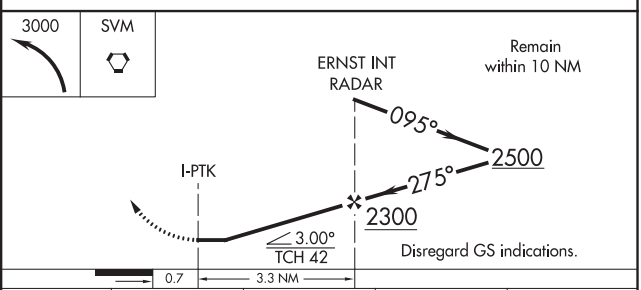
BACK COURSE

ELEV 981 D TDZE 974



HIRL Rwy 9R-27L L
MIRL Rwy 9L-27R
REIL Rwy 27L L
REIL Rwys 9L and 27R

FAF to MAP 3.3 NM					
Knots	60	90	120	150	180
Min:Sec	3:18	2:12	1:39	1:19	1:06



CATEGORY	A	B	C	D
S-LOC 27L	1440-1 466 (500-1)		1440-1⅜ 466 (500-1⅜)	
C CIRCLING	1500-1 519 (600-1)	1540-1 559 (600-1)	1640-1¾ 659 (700-1¾)	1640-2 659 (700-2)

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EC-1, 25 FEB 2021 to 22 APR 2021

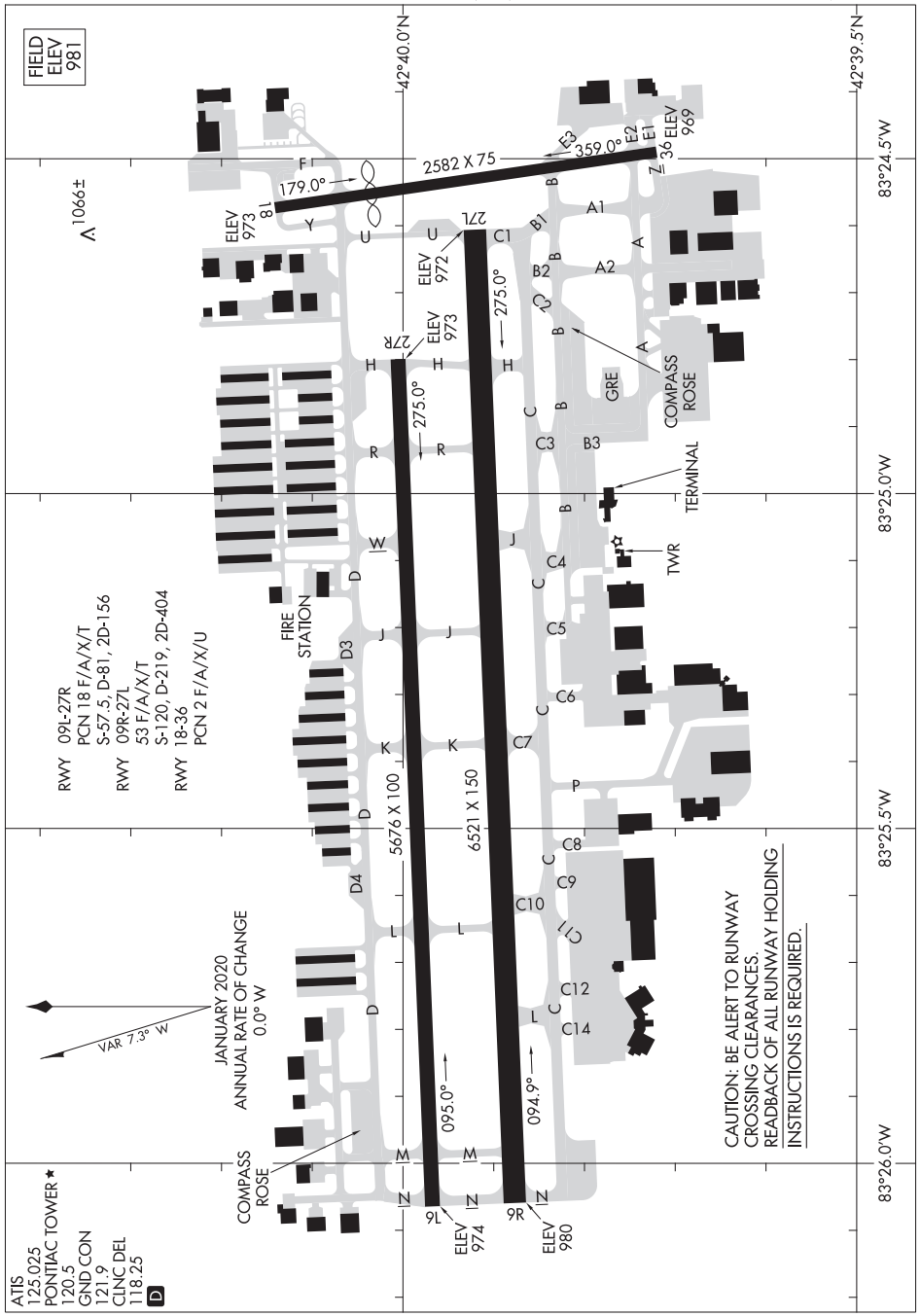
20086

AIRPORT DIAGRAM

OAKLAND COUNTY INTL (PTK)

AL-5052 (FAA)

PONTIAC, MICHIGAN



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EC-1, 25 FEB 2021 to 22 APR 2021

AIRPORT DIAGRAM

PONTIAC, MICHIGAN

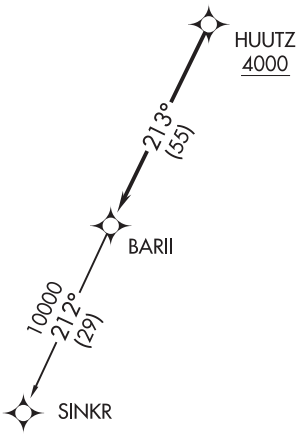
OAKLAND COUNTY INTL (PTK)

20086

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
125.025
CLNC DEL
118.25
GND CON
121.9
PONTIAC TOWER ★
120.5 (CTAF)
DETROIT DEP CON
132.35 284.0

TAKEOFF MINIMUMS:
Rwys 9L/R, 27L/R: Standard.
Rwys 18, 36: NA-Environmental.



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 9L/R: Climb on heading 095° or as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....
TAKEOFF RUNWAYS 27L/R: Climb on heading 275° or as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....

....on track 213° to BARII, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

SINKR TRANSITION (BARII2.SINKR):

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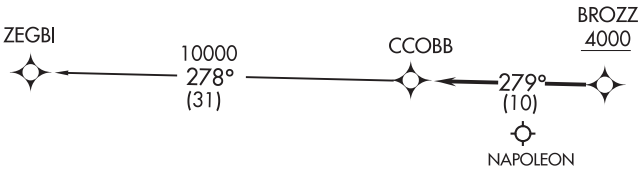
EC-1, 25 FEB 2021 to 22 APR 2021

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: For use by aircraft filed at or below FL220, or as assigned by ATC.
NOTE: CAUTION: Parachute jumping 6 NM SW of BROZZ, 3 NM radius of Napoleon Airport (3NP) at or below 17999 (SR-SS).

TAKEOFF MINIMUMS:
Rwys 9L/R, 27L/R: Standard.
Rwys 18, 36: NA-Environmental.

ATIS
125.025
CLNC DEL
118.25
GND CON
121.9
PONTIAC TOWER★
120.5 (CTAF)
DETROIT DEP CON
132.35 284.0



NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 9L/R: Climb on heading 095° or as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAYS 27L/R: Climb on heading 275° or as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....

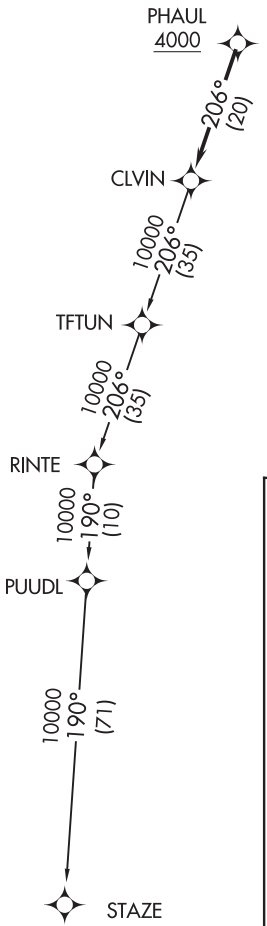
....on track 279° to CCOBB, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ZEGBI TRANSITION (CCOBB2.ZEGBI):

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
125.025
CLNC DEL
118.25
GND CON
121.9
PONTIAC TOWER★
120.5 (CTAF)
DETROIT DEP CON
132.35 284.0

TAKEOFF MINIMUMS:
Rwys 9L/R, 27L/R: Standard.
Rwys 18, 36: NA-Environmental.



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 9L/R: Climb on heading 095° or as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAYS 27L/R: Climb on heading 275° or as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....

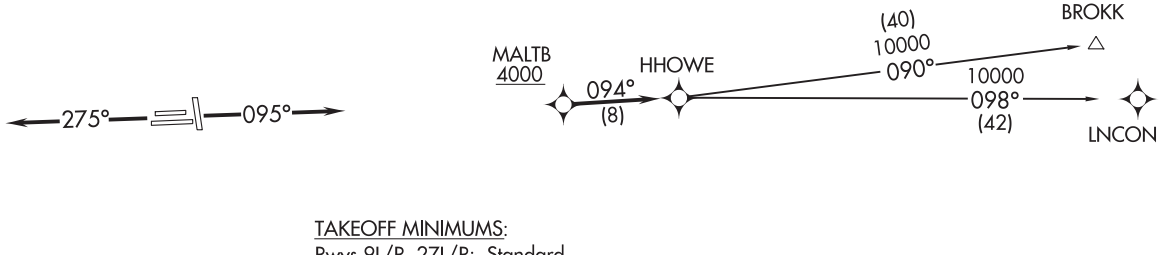
....on track 206° to CLVIN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

STAZE TRANSITION (CLVIN2.STAZE):

ATIS
125.025
CLNC DEL
118.25
GND CON
121.9
PONTIAC TOWER ★
120.5 (CTAF)
DETROIT DEP CON
132.35 284.0

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: BROKK TRANSITION: For use by flights filed at or below FL270, or as assigned by ATC.

TOP ALTITUDE: ASSIGNED BY ATC



TAKEOFF MINIMUMS:
Rwys 9L/R, 27L/R: Standard.
Rwys 18, 36: NA-Environmental.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 9L/R: Climb on heading 095° or as assigned for RADAR vectors to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAYS 27L/R: Climb on heading 275° or as assigned for RADAR vectors to cross MALTB at or above 4000, thence....

....on track 094° to HHOWE, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

BROKK TRANSITION (HHOWE3.BROKK)
LNCON TRANSITION (HHOWE3.LNCON)

EC-1, 25 FEB 2021 to 22 APR 2021

TOP ALTITUDE: ASSIGNED AT ATC

ATIS
125.025
CLNC DEL
118.25
GND CON
121.9
PONTIAC TOWER ★
120.5 (CTAF)
DETROIT DEP CON
132.35 284.0

275° — 095°

SMUUV — 10000 279° (52) — IIICE — 10000 279° (15) — KAYLN — 279° (13) — MTRCT 4000

N

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

TAKEOFF MINIMUMS:
Rwys 9L/R, 27L/R: Standard.
Rwys 18, 36: NA-Environmental.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 9L/R: Climb on heading 095° or as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....
TAKEOFF RUNWAYS 27L/R: Climb on heading 275° or as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....

....on track 279° to KAYLN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

SMUUV TRANSITION (KAYLN2.SMUUV):

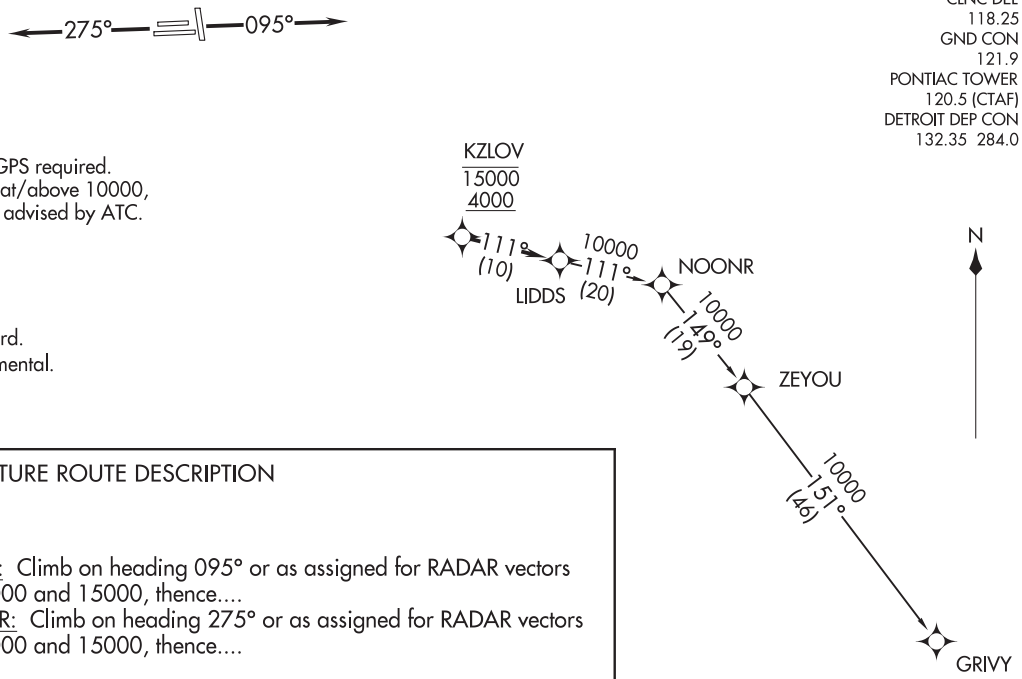
OAKLAND COUNTY INTL (PTK)
PONTIAC, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
125.025
CLNC DEL
118.25
GND CON
121.9
PONTIAC TOWER ★
120.5 (CTAF)
DETROIT DEP CON
132.35 284.0

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

TAKEOFF MINIMUMS:
Rwys 9L/R, 27L/R: Standard.
Rwys 18, 36: NA-Environmental.



NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 9L/R: Climb on heading 095° or as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAYS 27L/R: Climb on heading 275° or as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....

....on track 111° to LIDDS, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GRIVY TRANSITION (LIDDS2.GRIVY):

METRO THREE DEPARTURE

AL-5052 (FAA)

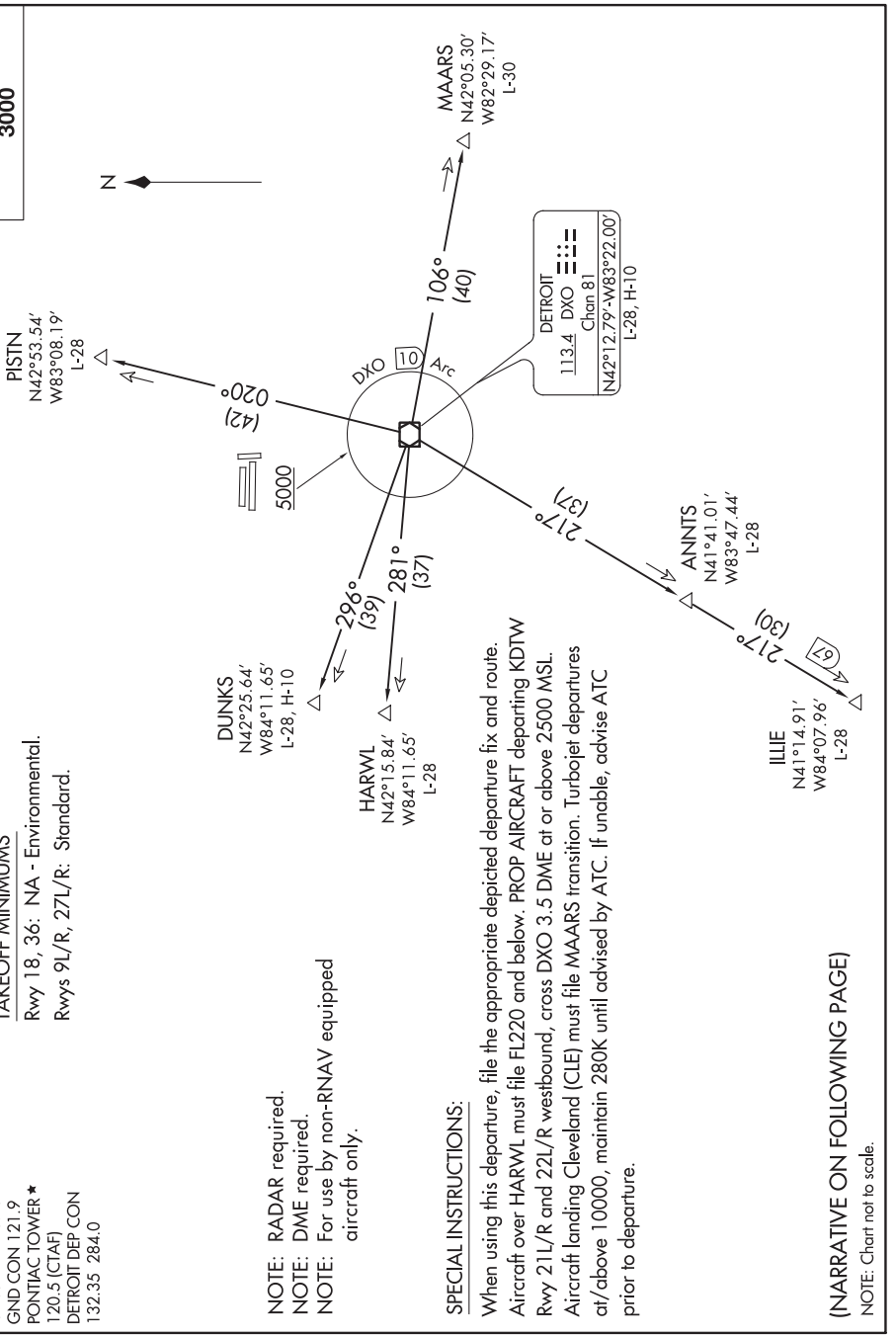
TOP ALTITUDE: 3000

ATIS 125.025
CLNC DEL 118.25
GND CON 121.9
PONTIAC TOWER★
120.5 (CTAF)
DETROIT DEP CON
132.35 284.0

TAKEOFF MINIMUMS

Rwy 18, 36: NA - Environmental.
Rwys 9L/R, 27L/R: Standard.

NOTE: RADAR required.
NOTE: DME required.
NOTE: For use by non-RNAV equipped aircraft only.



SPECIAL INSTRUCTIONS:

When using this departure, file the appropriate depicted departure fix and route. Aircraft over HARWL must file FL220 and below. PROP AIRCRAFT departing KDTW Rwy 21L/R and 22L/R westbound, cross DXO 3.5 DME at or above 2500 MSL. Aircraft landing Cleveland (CLE) must file MAARS transition. Turbojet departures at/above 10000, maintain 280K until advised by ATC. If unable, advise ATC prior to departure.

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

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DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 9L/R and 27L/R: Climb on assigned heading, thence....

.....maintain ATC assigned altitude for RADAR vectors to intercept filed/assigned transition or enroute fix/navaid. When ATC assigned altitude is at or above 5000, cross DXO 10 DME Arc at or above 5000 for noise abatement. If unable to comply, advise ATC prior to departure. Expect clearance to filed altitude/flight level within ten (10) minutes after departure.

DUNKS TRANSITION (METRO3.DUNKS): From over DXO VOR/DME on DXO R-296 to DUNKS.
HARWL TRANSITION (METRO3.HARWL): From over DXO VOR/DME on DXO R-281 to HARWL.
ILLIE TRANSITION (METRO3.ILLIE): From over DXO VOR/DME on DXO R-217 to ILLIE.
MAARS TRANSITION (METRO3.MAARS): From over DXO VOR/DME on DXO R-106 to MAARS.
PISTN TRANSITION (METRO3.PISTN): From over DXO VOR/DME on DXO R-020 to PISTN.

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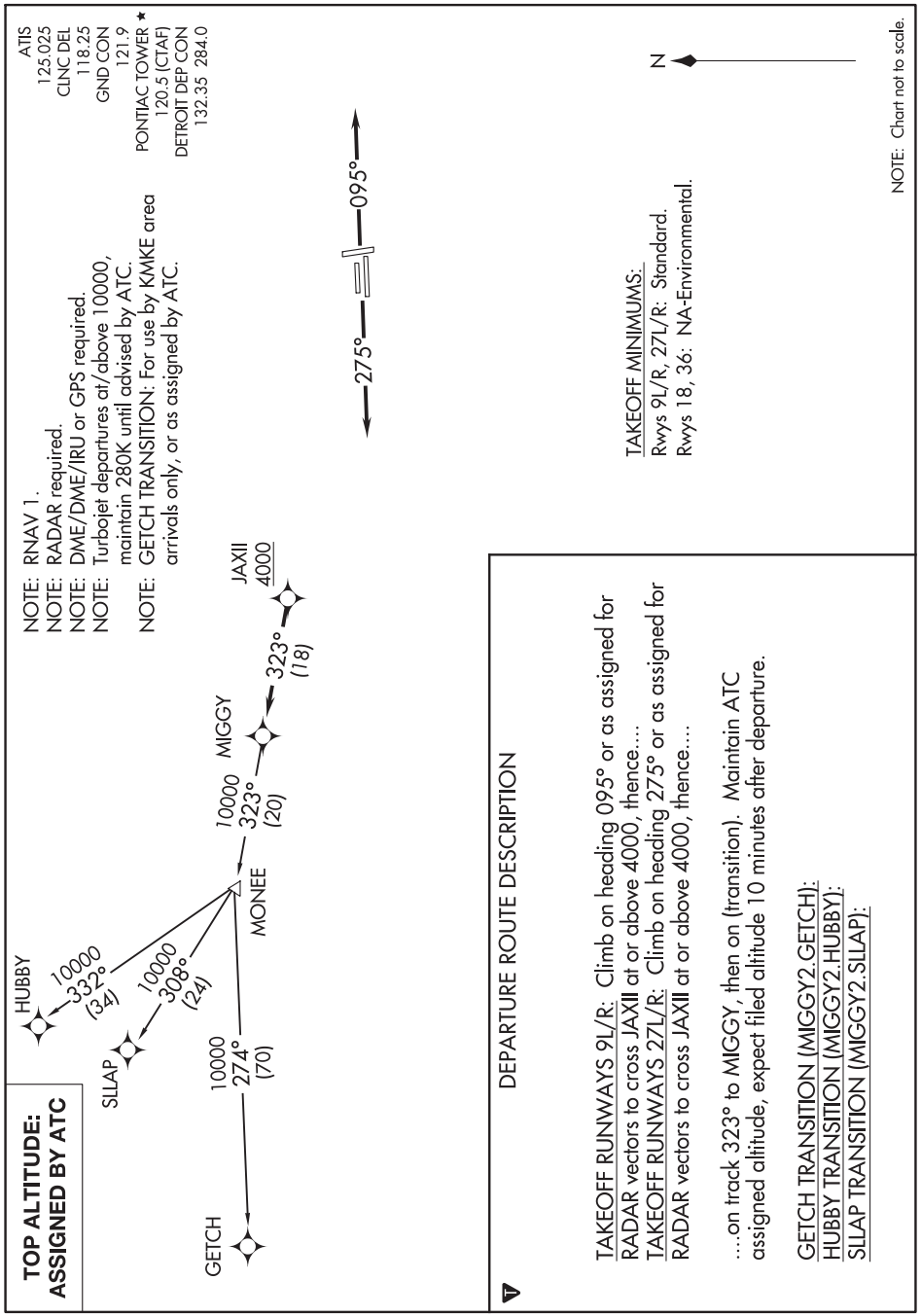

TOP ALTITUDE: ASSIGNED BY ATC
HUBBY
10000
332°
(34)
SLAP
10000
308°
(24)
GETCH
10000
274°
(70)
MONEE
10000
323°
(20)
MIGGY
323°
(18)
JAXII
4000
NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: GETCH TRANSITION: For use by KMKE area arrivals only, or as assigned by ATC.
ATIS 125.025
CLNC DEL 118.25
GND CON 121.9
PONTIAC TOWER ★ 120.5 (CTAF)
DETROIT DEP CON 132.35 284.0
275°
095°
TAKEOFF MINIMUMS:
Rwys 9L/R, 27L/R: Standard.
Rwys 18, 36: NA-Environmental.
N
NOTE: Chart not to scale.
DEPARTURE ROUTE DESCRIPTION
TAKEOFF RUNWAYS 9L/R: Climb on heading 095° or as assigned for RADAR vectors to cross JAXII at or above 4000, thence....
TAKEOFF RUNWAYS 27L/R: Climb on heading 275° or as assigned for RADAR vectors to cross JAXII at or above 4000, thence....
....on track 323° to MIGGY, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.
GETCH TRANSITION (MIGGY2.GETCH):
HUBBY TRANSITION (MIGGY2.HUBBY):
SLAP TRANSITION (MIGGY2.SLAP):

PAVYL TWO DEPARTURE (RNAV)

(PAVYL2.PAVYL) 19227

(PAVYL2.PAVYL) 15AUG19

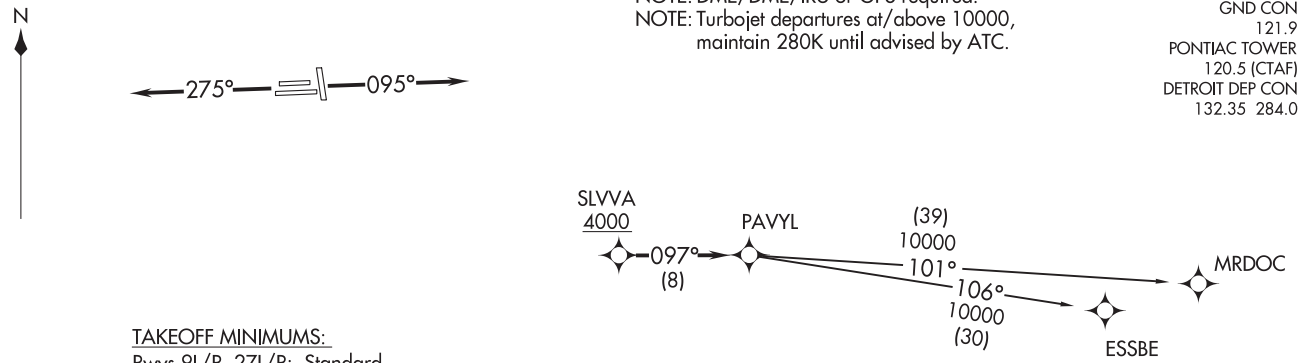
AL-5052 (FAA)

OAKLAND COUNTY INTL (PTK)
PONTIAC, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

ATIS
125.025
CLNC DEL
118.25
GND CON
121.9
PONTIAC TOWER ★
120.5 (CTAF)
DETROIT DEP CON
132.35 284.0



TAKEOFF MINIMUMS:
Rwys 9L/R, 27L/R: Standard.
Rwys 18, 36: NA-Environmental.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 9L/R: Climb on heading 095° or as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAYS 27L/R: Climb on heading 275° or as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....

....on track 097° to PAVYL, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ESSBE TRANSITION (PAVYL2.ESSBE):
MRDOC TRANSITION (PAVYL2.MRDOC):

ATIS 125.025
CLNC DEL 118.25
GND CON 121.9
PONTIAC TOWER ★ 120.5 (CTAF)
DETROIT DEP CON 132.35 284.0

TOP ALTITUDE: ASSIGNED BY ATC

N

275° 095°

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 9L/R: Climb on heading 095° or as assigned for RADAR vectors to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAYS 27L/R: Climb on heading 275° or as assigned for RADAR vectors to cross JWELS at or above 4000, thence....

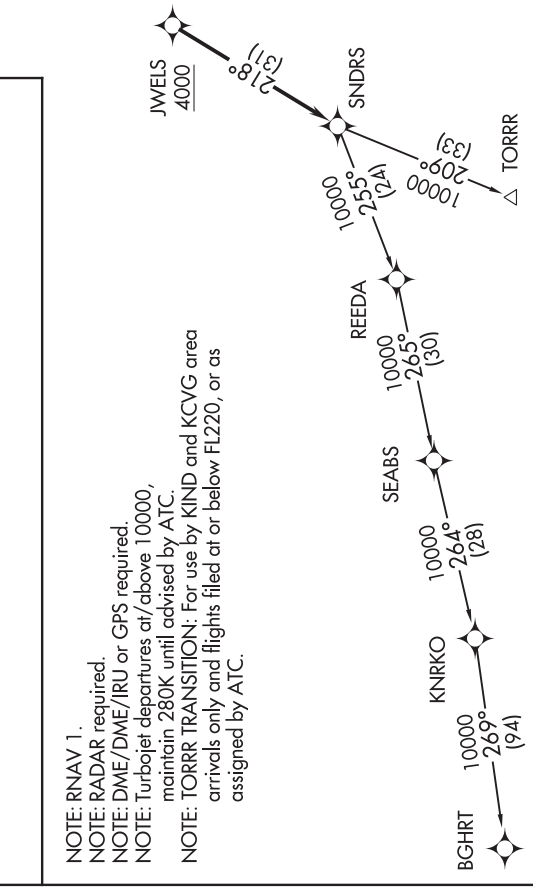
....on track 218° to SNDRS, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

BGHRT TRANSITION (SNDRS2.BGHRT):
TORRR TRANSITION (SNDRS2.TORRR):

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TORRR TRANSITION: For use by KIND and KCVG area arrivals only and flights filed at or below FL220, or as assigned by ATC.

TAKEOFF MINIMUMS:
Rwys 9L/R, 27L/R: Standard.
Rwys 18, 36: NA-Environmental.

NOTE: Chart not to scale.



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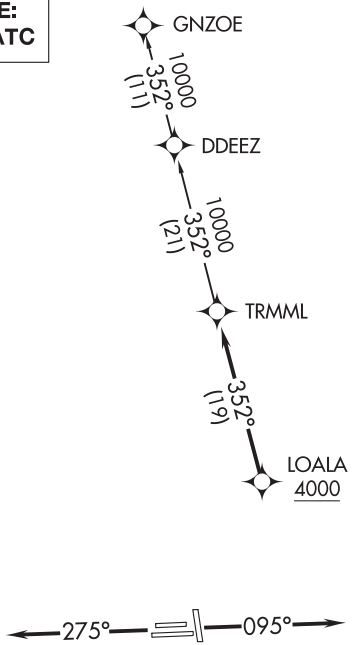
(TRMML3.TRMML) 19283

TRMML THREE DEPARTURE (RNAV) AL-5052 (FAA)

OAKLAND COUNTY INTL (PTK)
PONTIAC, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
125.025
CLNC DEL
118.25
GND CON
121.9
PONTIAC TOWER ★
120.5 (CTAF)
DETROIT DEP CON
132.35 284.0



TAKEOFF MINIMUMS:
Rwys 9L/R, 27L/R: Standard.
Rwys 18, 36: NA-Environmental.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 9L/R: Climb on heading 095° or as assigned for RADAR vectors to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAYS 27L/R: Climb on heading 275° or as assigned for RADAR vectors to cross LOALA at or above 4000, thence....

....on track 352° to TRMML, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

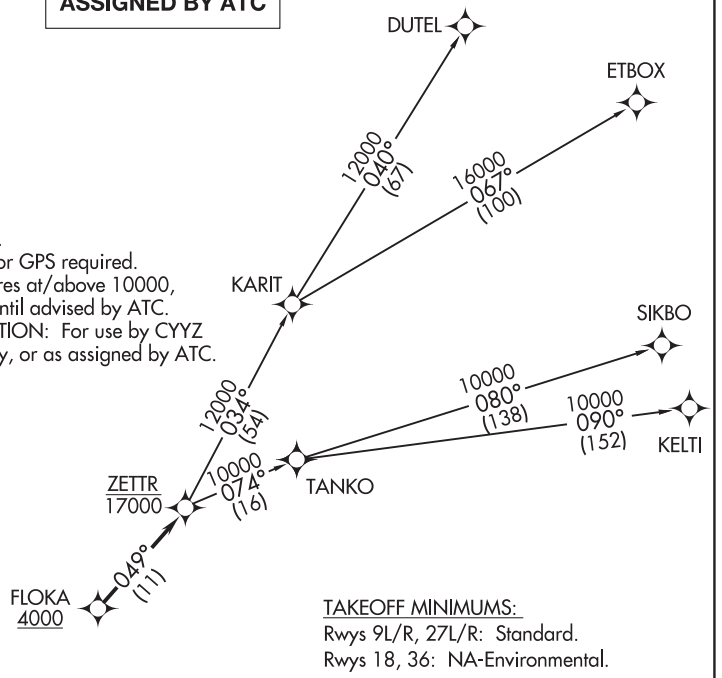
GNZOE TRANSITION (TRMML3.GNZOE):

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

ATIS
125.025
CLNC DEL
118.25
GND CON
121.9
PONTIAC TOWER★
120.5 (CTAF)
DETROIT DEP CON
132.35 284.0

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TANKO TRANSITION: For use by CYYZ area arrivals only, or as assigned by ATC.



TAKEOFF MINIMUMS:
Rwys 9L/R, 27L/R: Standard.
Rwys 18, 36: NA-Environmental.

275° 095°

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 9L/R: Climb on heading 095° or as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAYS 27L/R: Climb on heading 275° or as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....

....on track 049° to cross ZETTR at or below 17000, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

DUTEL TRANSITION (ZETTR3.DUTEL):
ETBOX TRANSITION (ZETTR3.ETBOX):
KELTI TRANSITION (ZETTR3.KELTI):
SIKBO TRANSITION (ZETTR3.SIKBO):
TANKO TRANSITION (ZETTR3.TANKO):

NOTE: Chart not to scale.

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EC-1, 25 FEB 2021 to 22 APR 2021

PORT HURON, MICHIGAN | AL-5445 (FAA) | 19339

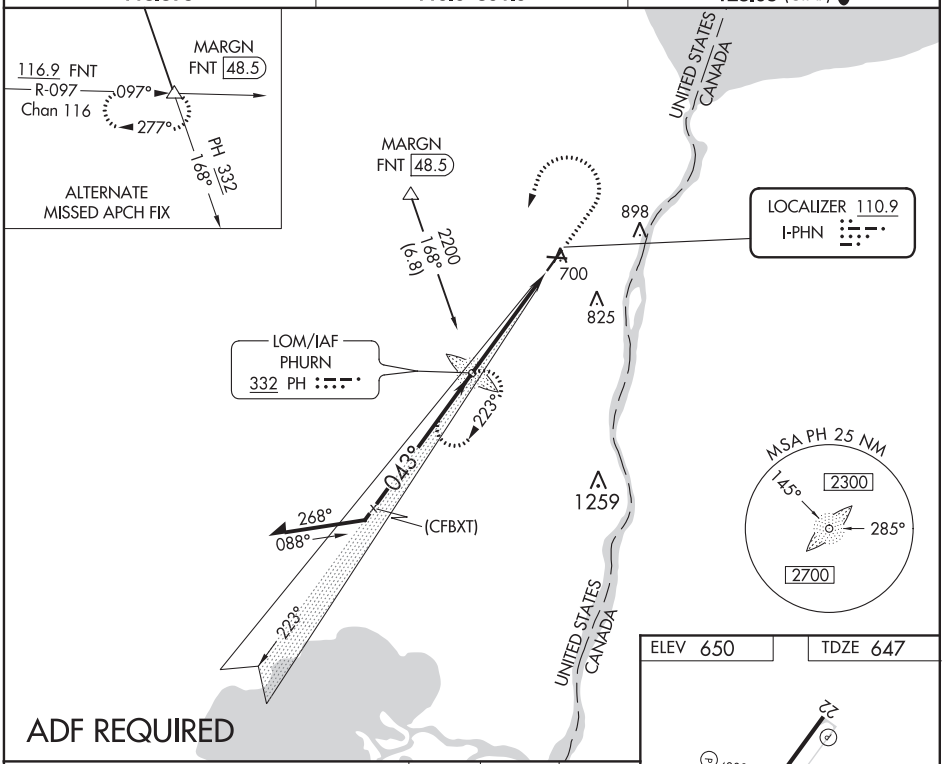
ILS or LOC RWY 4
ST CLAIR COUNTY INTL (PHN)

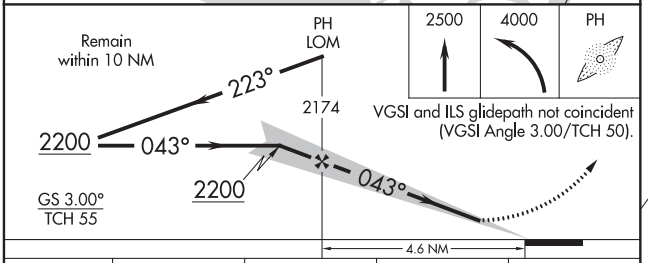
LOC I-PHN	APP CRS	Rwy ldg	5104
110.9	043°	TDZE	647
		Apt Elev	650

T A NA — ADF required. When local altimeter setting not received, use Troy altimeter setting and increase all DA 95 feet and all MDA 100 feet; increase S-LOC 4 Cats C and D and Circling Cats C and D visibility ¼ mile. For inop MALSR when using Troy altimeter setting, increase S-ILS 4 all Cats visibility to ⅞ mile. Night landing: Rwy 10, 22, 28 NA.

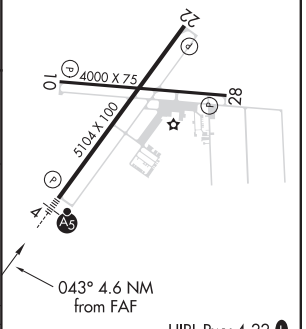
MALSR — MISSED APPROACH: Climb to 2500 then climbing left turn to 4000 direct PHURN LOM and hold, continue climb-in-hold to 4000.

AWOS-3	SELFRIDGE APP CON ★	UNICOM
118.375	119.6 391.9	123.05 (CTAF) L





ELEV 650 | TDZE 647



043° 4.6 NM
from FAF

HIRL Rwy 4-22 L
MIRL Rwy 10-28 L
REIL Rwys 10, 22, and 28 L

CATEGORY	A	B	C	D
S-ILS 4	847-½ 200 (200-½)			
S-LOC 4	1100-½ 453 (500-½)		1100-⅞ 453 (500-⅞)	
C CIRCLING	1160-1 510 (600-1)		1260-1¾ 610 (700-1¾)	1260-2 610 (700-2)

FAF to MAP 4.6 NM					
Knots	60	90	120	150	180
Min:Sec	4:36	3:04	2:18	1:50	1:32

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EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 53523 W04A	APP CRS 043°	Rwy ldg 5104 TDZE 647 Apt Elev 650

RNAV (GPS) RWY 4
ST CLAIR COUNTY INTL (PHN)

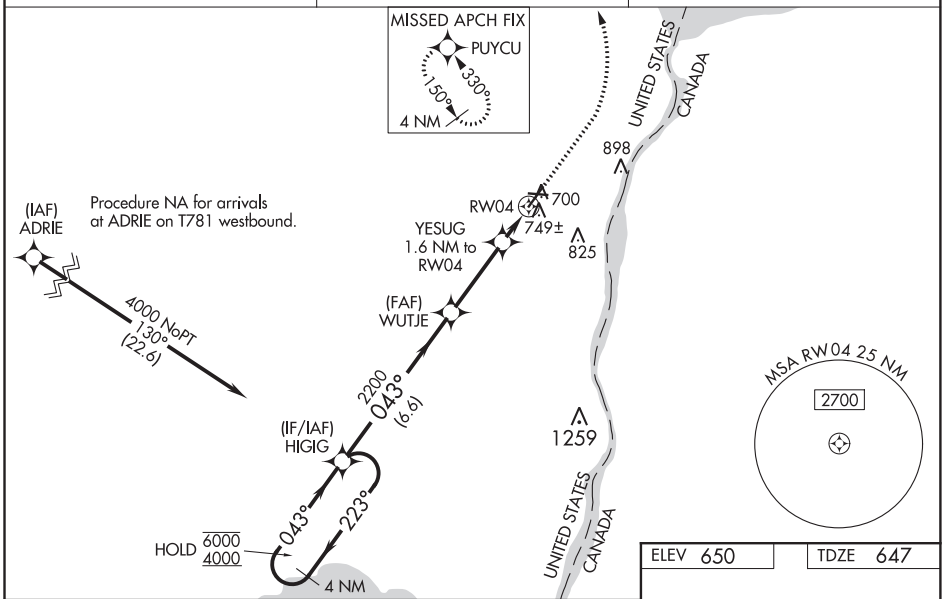
RNP APCH.

Circling Rwy 10, 22, 28 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C. For inoperative ALS, increase LNAV/VNAV all Cats visibility to ⅞ mile and LNAV Cat C/D visibility to 1 SM.

MALSR

MISSED APPROACH: Climb to 1100 then climbing left turn to 4000 direct PUYCU and hold, continue climb-in-hold to 4000.

AWOS-3	SELFRIDGE APP CON*	UNICOM
118.375	119.6 391.9	123.05 (CTAF) L

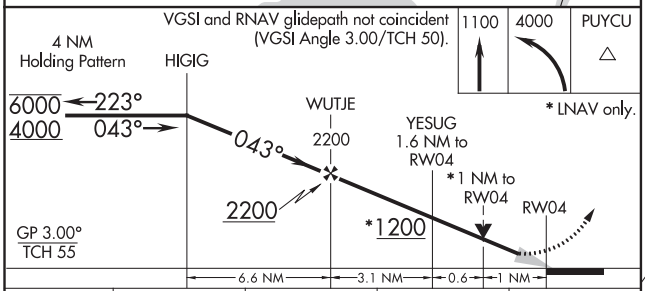


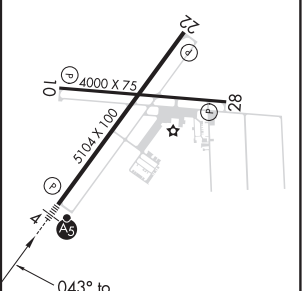
ELEV 650 TDZE 647

VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 50).

1100	4000	PUYCU

* LNAV only.





CATEGORY	A	B	C	D
LPV DA	847-½ 200 (200-½)			
LNAV/VNAV DA	930-½ 283 (300-½)			
LNAV MDA	1000-½ 353 (400-½)		1000-⅝ 353 (400-⅝)	
C CIRCLING	1160-1 510 (600-1)		1260-1¾ 610 (700-1¾)	1260-2 610 (700-2)

HIRL Rwy 4-22 L
MIRL Rwy 10-28 L
REIL Rwys 10, 22, and 28 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

PORT HURON, MICHIGAN | AL-5445 (FAA) | 20366

RNAV (GPS) RWY 22
ST CLAIR COUNTY INTL (PHN)

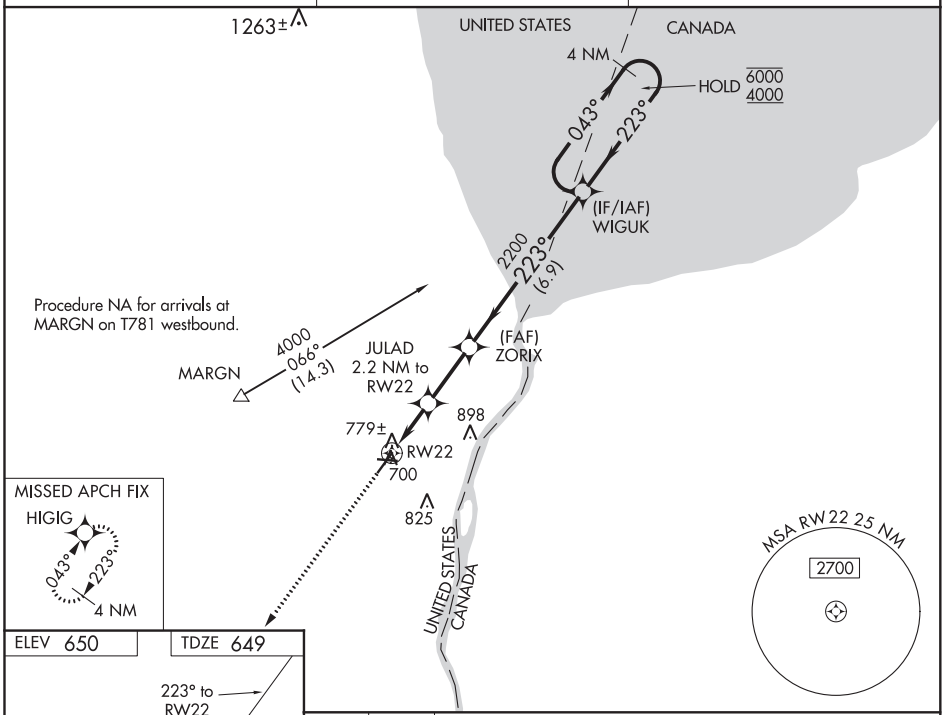
WAAS CH 97723 W22A	APP CRS 223°	Rwy ldg 5104 TDZE 649 Apt Elev 650

RNP APCH.

Rwy 22 helicopter visibility reduction below 1 SM NA.
Straight-in Rwy 22 NA at night, Circling Rwy 10, 22, 28 NA at night.

MISSED APPROACH: Climb to 4000 direct HIGIG and hold, continue climb-in-hold to 4000.

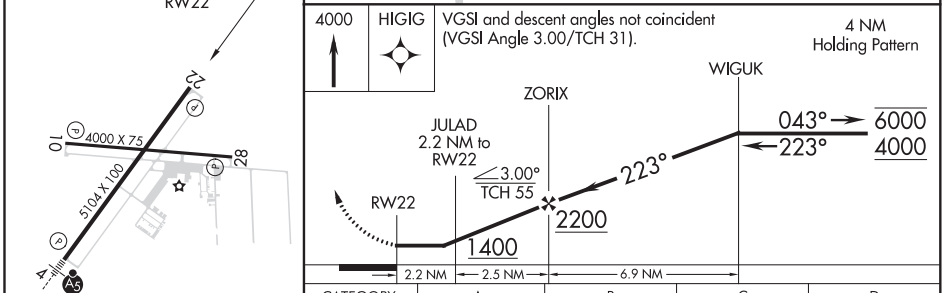
AWOS-3	SELFRIDGE APP CON ★	UNICOM
118.375	119.6 391.9	123.05 (CTAF) L



MISSED APCH FIX
HIGIG
043°
223°
4 NM

ELEV 650 | TDZE 649

223° to RW22



CATEGORY	A	B	C	D
LP MDA	1020-1 371 (400-1)			
LNAV MDA	1040-1 391 (400-1)		1040-1⅛ 391 (400-1⅛)	
C CIRCLING	1160-1 510 (600-1)		1260-1¾ 610 (700-1¾)	1260-2 610 (700-2)

HIRL Rwy 4-22 L
MIRL Rwy 10-28 L
REIL Rwys 10, 22, and 28 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

LOM PH	APP CRS	Rwy ldg	5104
332	043°	TDZE	647
		Apt Elev	650

NDB RWY 4

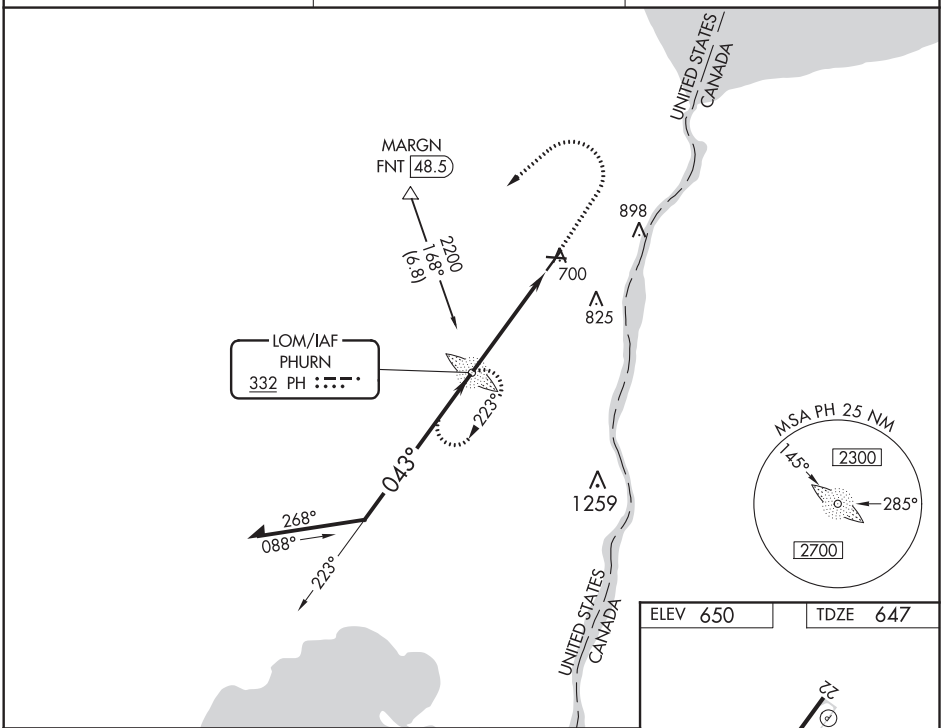
ST CLAIR COUNTY INTL (PHN)

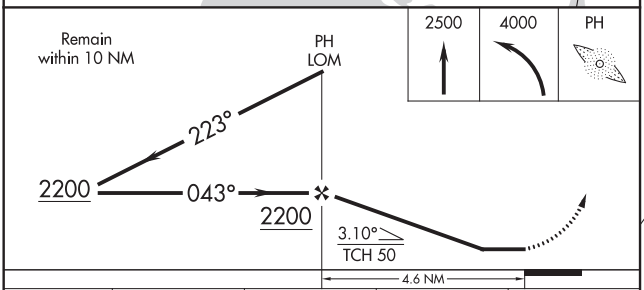
When local altimeter setting not received, use Troy altimeter setting and increase all MDA 100 feet, increase S-4 and Circling Cats C and D visibility ¼. For inoperative MALSR, increase S-4 Cats C and D visibility to 1⅜ mile. For inoperative MALSR when using Troy altimeter setting, increase S-4 Cat D visibility to 1¾ mile. Night landing: Rwy 10, 22, 28 NA.

MALSR

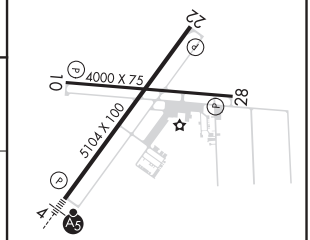
MISSED APPROACH: Climb to 2500 then climbing left turn to 4000 direct PHURN LOM and hold.

AWOS-3	SELFRIDGE APP CON ★	UNICOM
118.375	119.6 391.9	123.05 (CTAF) L





ELEV 650	TDZE 647



043° 4.6 NM from FAF

HIRL Rwy 4-22 L
MIRL Rwy 10-28 L
REIL Rwys 10, 22, and 28 L

CATEGORY	A	B	C	D
S-4	1160-¾ 513 (600-¾)		1160-1 513 (600-1)	
C CIRCLING	1160-1 510 (600-1)		1260-1¾ 610 (700-1¾)	1260-2 610 (700-2)

FAF to MAP 4.6 NM					
Knots	60	90	120	150	180
Min:Sec	4:36	3:04	2:18	1:50	1:32

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

RAY, MICHIGAN | AL-11012 (FAA) | 19283

RNAV (GPS)-A

RAY COMMUNITY (57D)

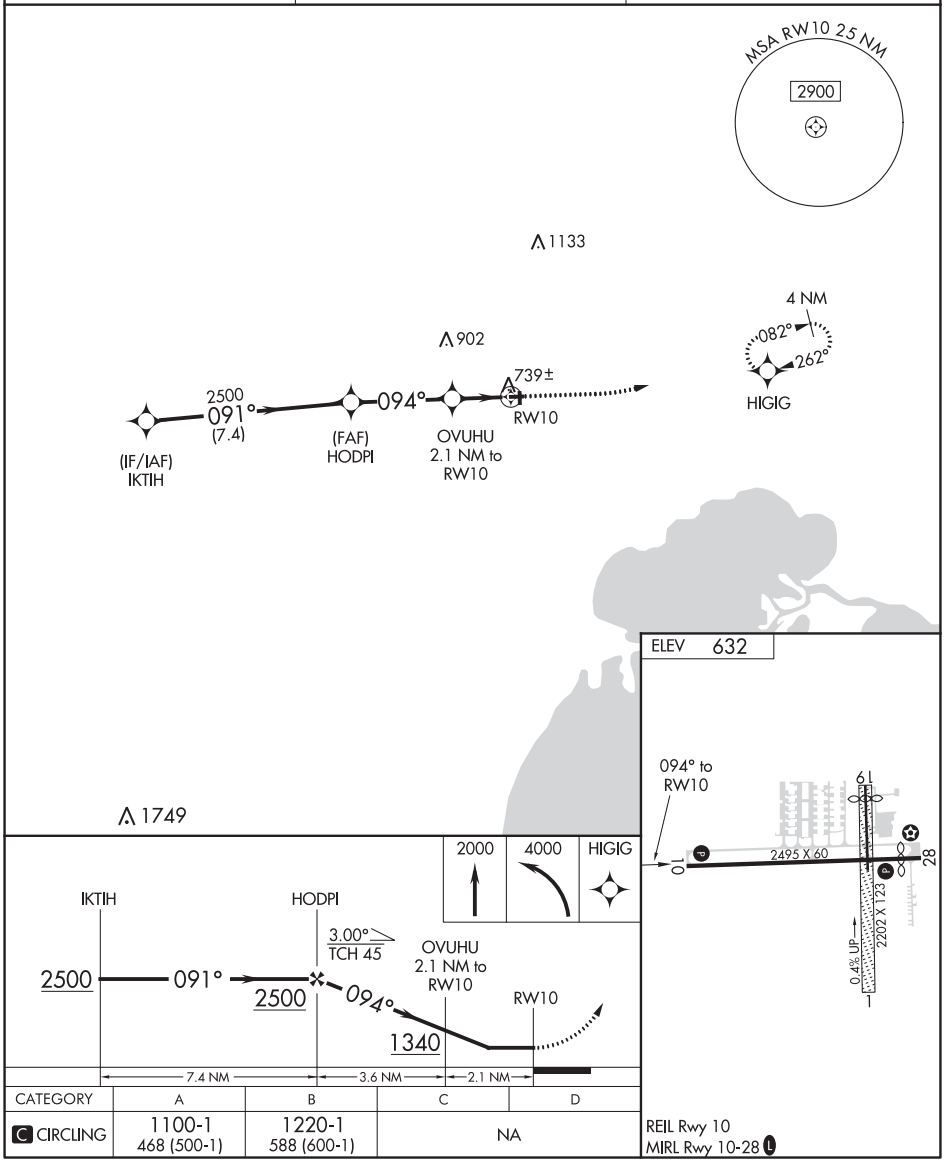
APP CRS	Rwy ldg	N/A
094°	TDZE	N/A
	Apt Elev	632

RNP APCH.

NA — Procedure NA at night. Rwy 10 helicopter visibility reduction below 1 SM NA. Use Troy altimeter setting. When not received use Pontiac altimeter setting and increase all MDAs 60 feet.

MISSED APPROACH: Climb to 2000 then climbing left turn to 4000 direct HIGIG and hold, continue climb-in-hold to 4000.

VLL AWOS-3	SELFRIDGE APP CON *	UNICOM
119.475	119.6 391.9	122.7 (CTAF) L



CATEGORY	A	B	C	D
C CIRCLING	1100-1 468 (500-1)	1220-1 588 (600-1)	NA	

REIL Rwy 10
MIRL Rwy 10-28 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

RNAV (GPS) RWY 9
PRESQUE ISLE COUNTY (PZQ)

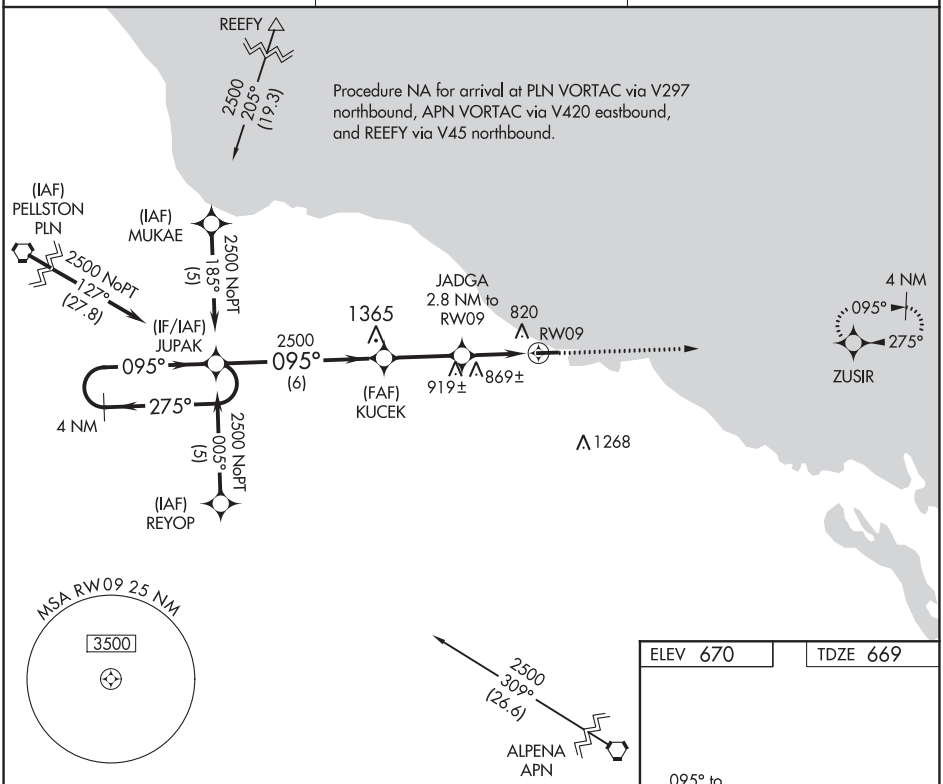
APP CRS	Rwy ldg	3886
095°	TDZE	669
	Apt Elev	670

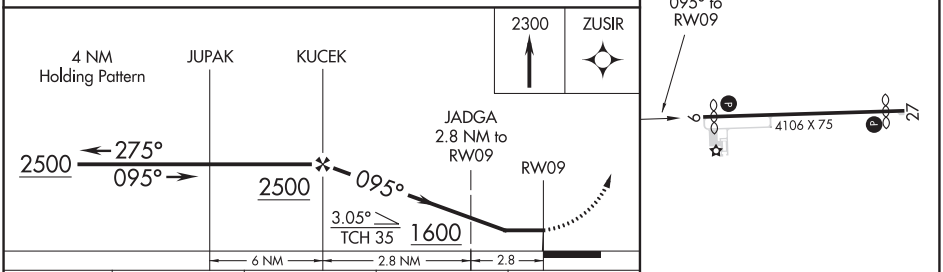
RNP APCH.

T A NA If local altimeter setting not received, use Alpena County Rgnl altimeter setting and increase all MDAs 60 feet. Straight-in/Circling Rwy 9 NA at night. Rwy 9 helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 2300 direct ZUSIR and hold.

AWOS-3	ALPENA APP CON ★	CTAF
118.125	128.425 379.3	122.9 L





CATEGORY	A	B	C	D
LNAV MDA	1120-1 451 (500-1)		1120-1¼ 451 (500-1¼)	NA
CIRCLING	1200-1 530 (600-1)	1220-1 550 (600-1)	1220-1½ 550 (600-1½)	NA

REIL Rwy 9 and 27 L
MIRL Rwy 9-27 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

ROGERS CITY, MICHIGAN AL-6561 (FAA) 18144

RNAV (GPS) RWY 27

PRESQUE ISLE COUNTY (PZQ)

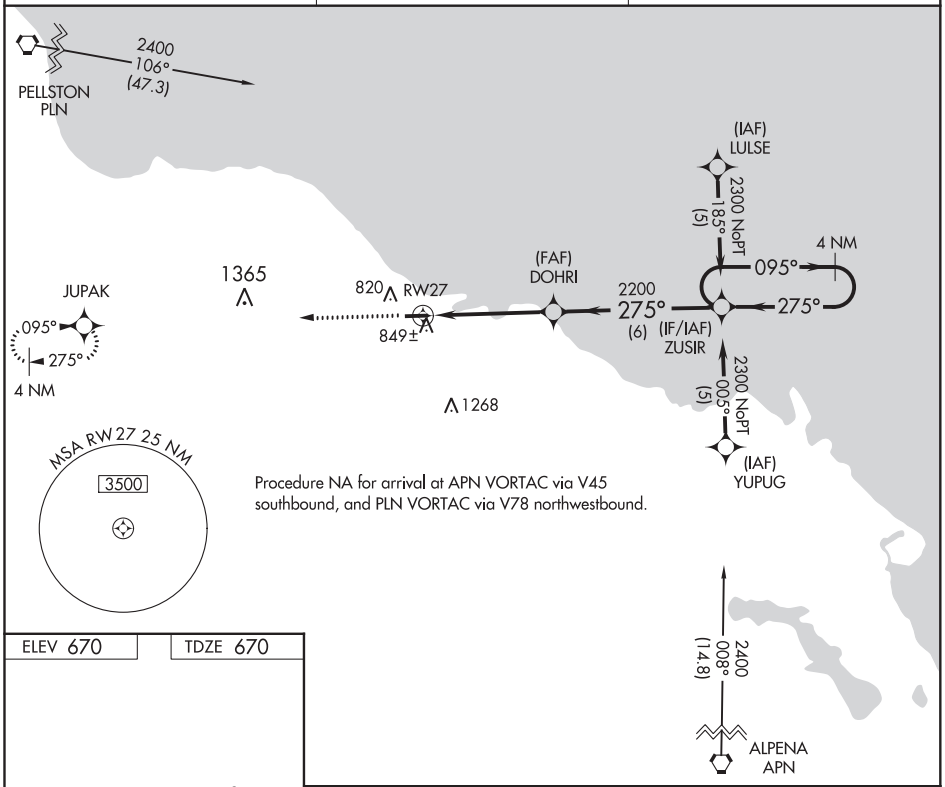
APP CRS	Rwy ldg	3727
275°	TDZE	670
	Apt Elev	670

DME/DME RNP-0.3 NA. Circling NA at night to Rwy 9.
If local altimeter setting not received, use Alpena County Rgnl altimeter setting and increase all MDAs 60 feet.
VDP NA with Alpena County Rgnl altimeter setting.

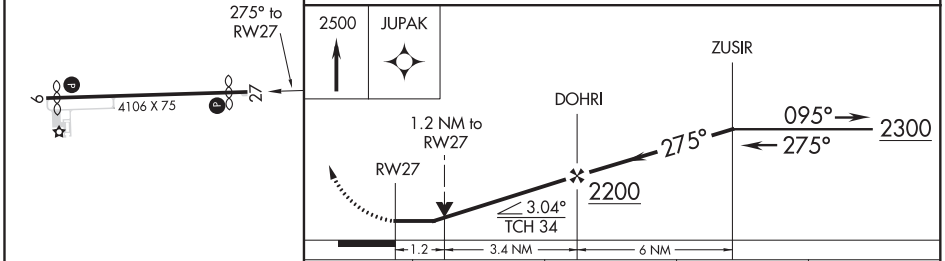
NA

MISSED APPROACH: Climb to 2500 direct JUPAK and hold.

AWOS-3	ALPENA APP CON ★	CTAF
118.125	128.425 379.3	122.9 L



ELEV 670 TDZE 670



CATEGORY	A	B	C	D
LNAV MDA	1100-1 430 (500-1)		1100-1¼ 430 (500-1¼)	NA
CIRCLING	1200-1 530 (600-1)	1220-1 550 (600-1)	1220-1½ 550 (600-1½)	NA

REIL Rwy 9 and 27 L
MIRL Rwy 9-27 L

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

RNAV (GPS) RWY 18
ROMEO STATE (D98)

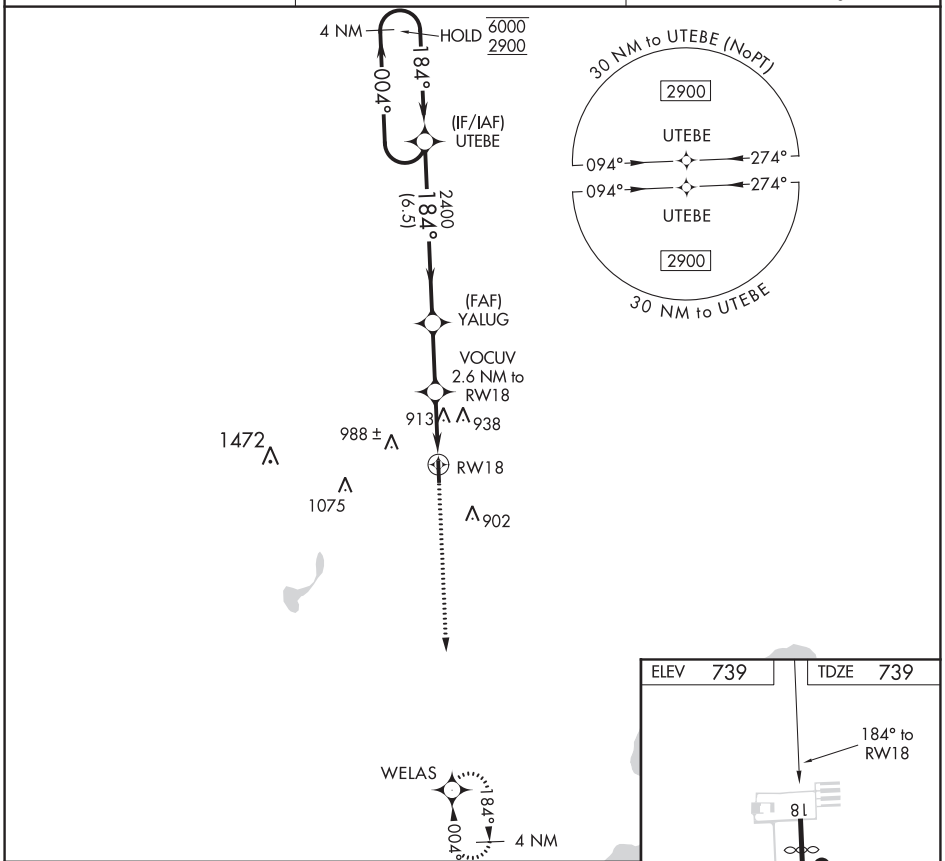
APP CRS	Rwy ldg	3530
184°	TDZE	739
	Apt Elev	739

RNP APCH.

NA Rwy 18 helicopter visibility reduction below 1 SM NA. Use Coleman A Young Muni altimeter setting. Straight-in and Circling Rwy 18 NA at night.

MISSED APPROACH: Climb to 2900 direct WELAS and hold.

DET ASOS	SELFRIDGE APP CON★	UNICOM
124.875	119.6 391.9	122.8 (CTAF) L



CATEGORY	A	B	C	D
LNAV MDA	1240-1 501 (600-1)		1240-1⅜ 501 (600-1⅜)	
CIRCLING	1300-1 561 (600-1)	1320-1 581 (600-1)	1320-1½ 581 (600-1½)	1420-2¼ 681 (700-2¼)

MIRL Rwy 18-36 L
REIL Rwys 18 and 36 L

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EC-1, 25 FEB 2021 to 22 APR 2021

ROMEO, MICHIGAN AL-6112 (FAA) 20198

RNAV (GPS) RWY 36
ROMEO STATE (D98)

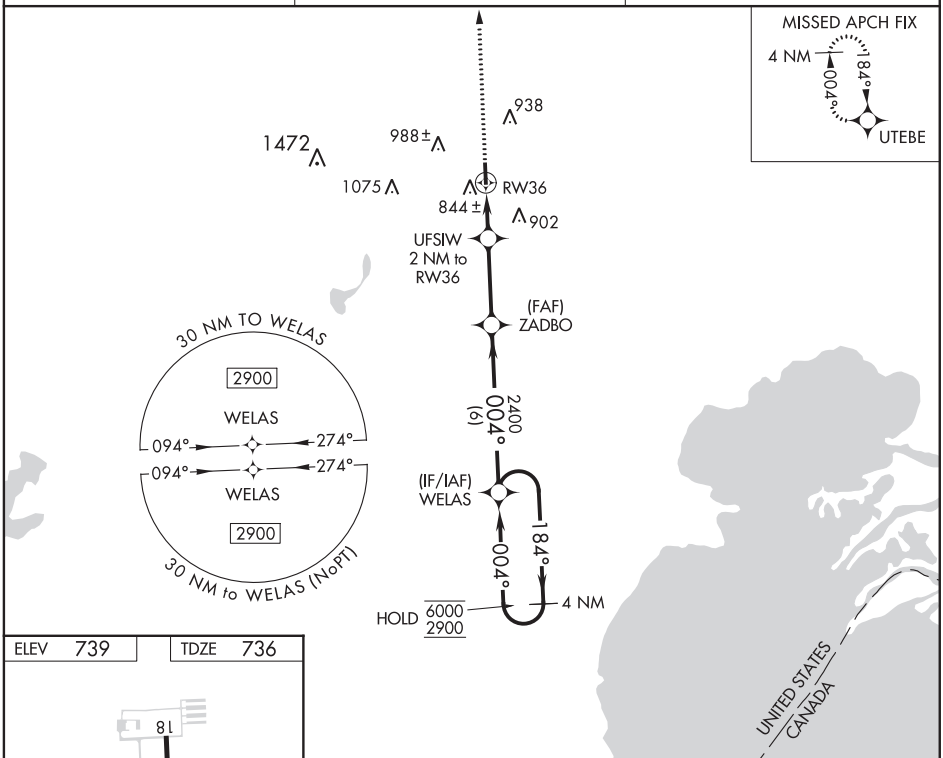
APP CRS	Rwy ldg	4000
004°	TDZE	736
	Apt Elev	739

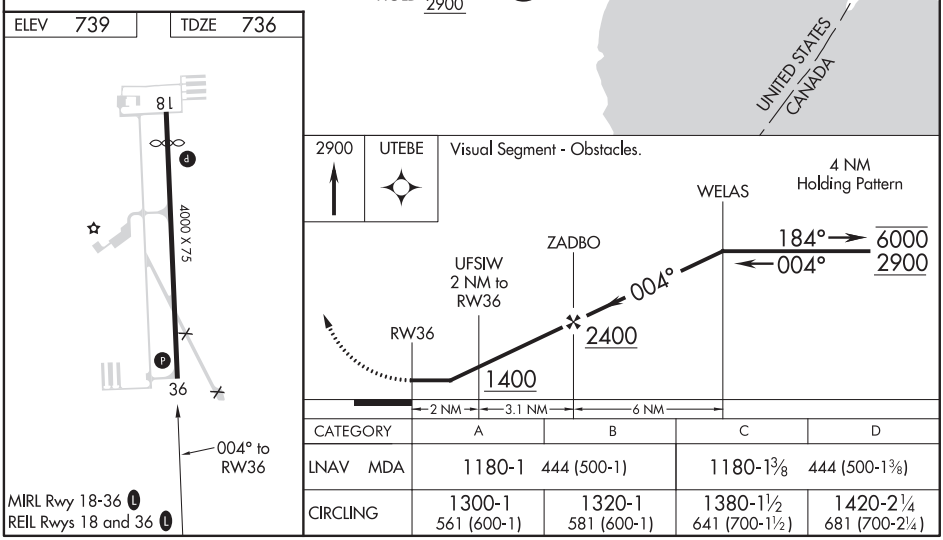
RNP APCH.

Circling Rwy 18 NA at night. Rwy 36 helicopter visibility reduction below 1 SM NA. Use Coleman A Young Muni altimeter setting.

MISSED APPROACH: Climb to 2900 direct UTEBE and hold.

DET ASOS	SELFRIDGE APP CON★	UNICOM
124.875	119.6 391.9	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1180-1 444 (500-1)		1180-1⅜ 444 (500-1⅜)	
CIRCLING	1300-1 561 (600-1)	1320-1 581 (600-1)	1380-1½ 641 (700-1½)	1420-2¼ 681 (700-2¼)

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EC-1, 25 FEB 2021 to 22 APR 2021

ILS or LOC RWY 5

MBS INTL (MBS)

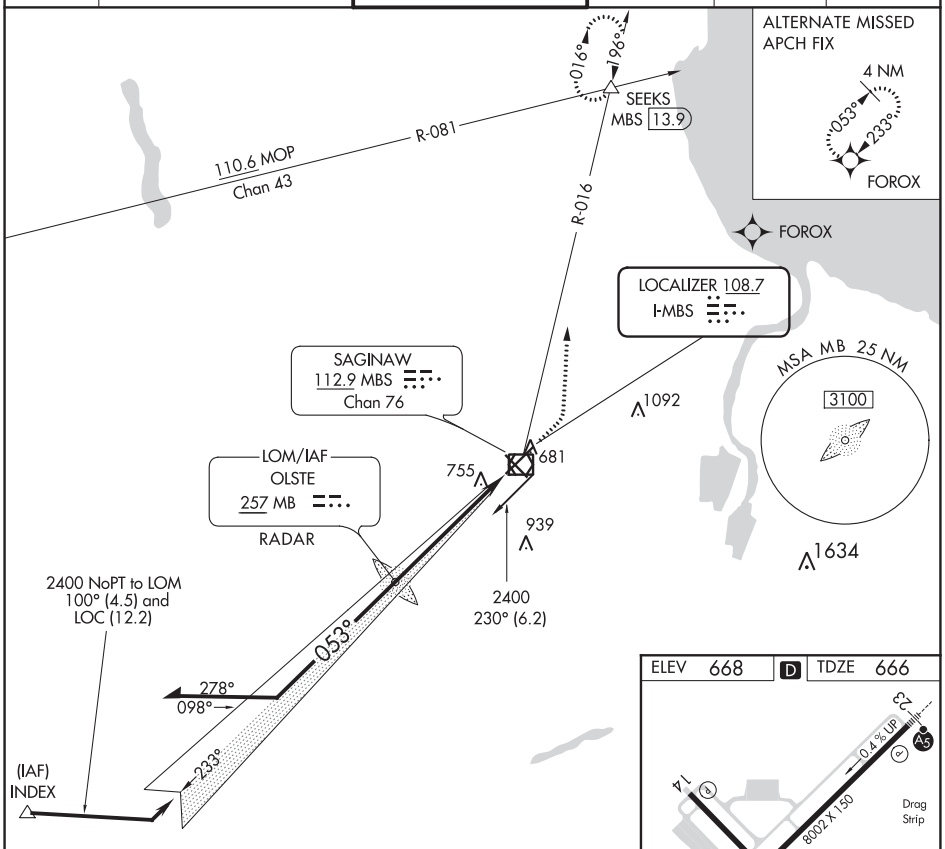
LOC I-MBS	APP CRS	Rwy ldg	8002
108.7	053°	TDZE	666
		Apt Elev	668

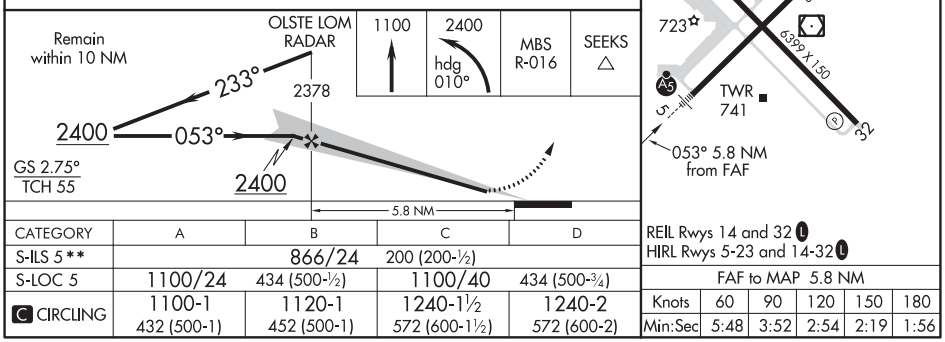
T A **RVR 1800 authorized with the use of FD or AP or HUD to DA.

MALSR A5

MISSED APPROACH: Climb to 1100 then climbing left turn to 2400 on heading 010° and MBS VOR/DME R-016 to SEEKS INT/MBS 13.9 DME and hold.

ATIS	GREAT LAKES APP CON ★	SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
125.925	126.45 235.625	120.1 (CTAF) L 257.7	121.7	121.85	122.95





CATEGORY	A	B	C	D
S-ILS 5**	866/24		200 (200-½)	
S-LOC 5	1100/24	434 (500-½)	1100/40	434 (500-¾)
C CIRCLING	1100-1	1120-1	1240-1½	1240-2
	432 (500-1)	452 (500-1)	572 (600-1½)	572 (600-2)

REIL Rwys 14 and 32 L
HIRL Rwys 5-23 and 14-32 L

FAF to MAP 5.8 NM					
Knots	60	90	120	150	180
Min:Sec	5:48	3:52	2:54	2:19	1:56

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SAGINAW, MICHIGAN

AL-648 (FAA)

20310

ILS or LOC RWY 23

MBS INTL (MBS)

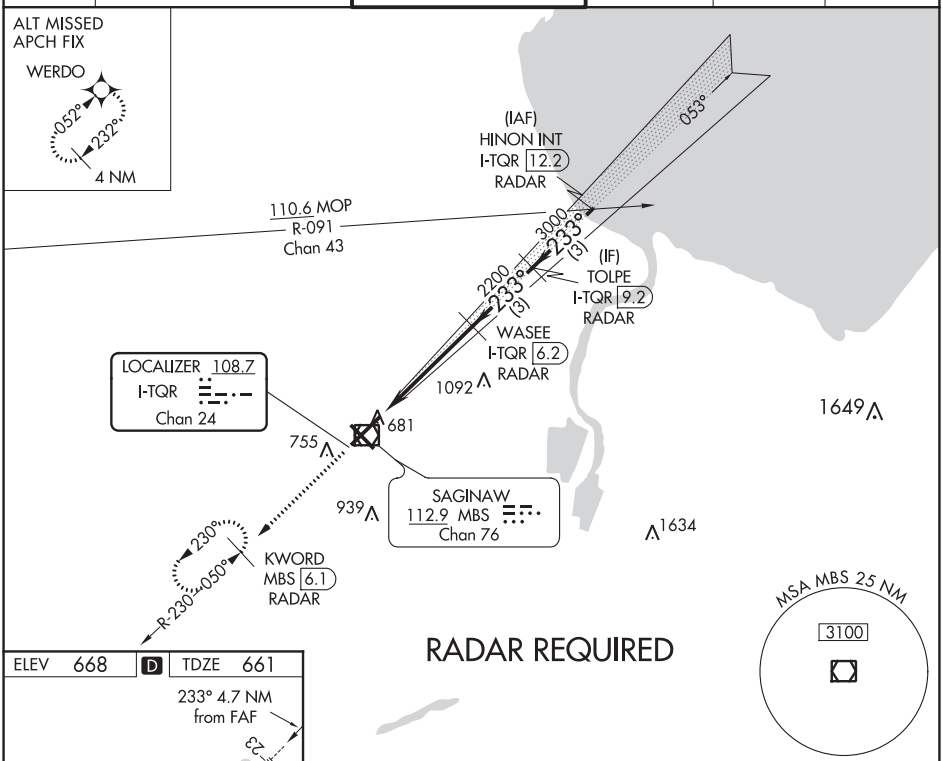
LOC/DME I-TQR	APP CRS	Rwy ldg	8002
108.7	233°	TDZE	661
Chan 24		Apt Elev	668

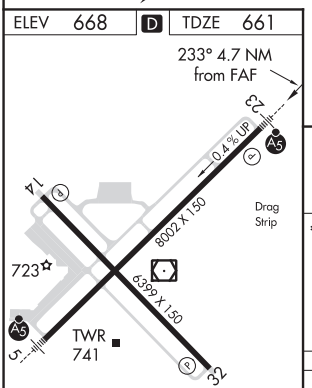
DME or RADAR required.
**RVR 1800 authorized with the use of FD or AP or HUD to DA.

MALSR

MISSED APPROACH: Climb to 2500 on MBS VOR/DME R-230 to KWORD/MBS 6.1 DME/RADAR and hold.

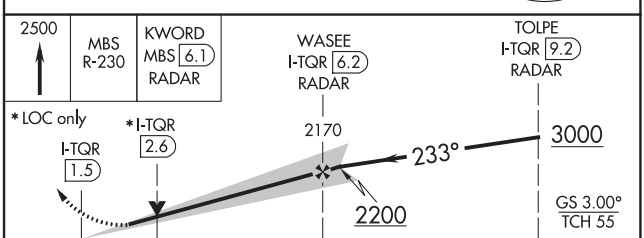
ATIS	GREAT LAKES APP CON ★	SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
125.925	126.45 235.625	120.1 (CTAF) L 257.7	121.7	121.85	122.95





REIL Rwys 14 and 32 L
HIRL Rwys 5-23 and 14-32 L

FAF to MAP 4.7 NM					
Knots	60	90	120	150	180
Min:Sec	4:42	3:08	2:21	1:53	1:34



CATEGORY	A	B	C	D
S-ILS 23 **	861/24 200 (200-½)			
S-LOC 23	1060/24 399 (400-½)		1060/35 399 (400-⅝)	
C CIRCLING	1080-1 412 (500-1)	1120-1 452 (500-1)	1240-1½ 572 (600-1½)	1240-2 572 (600-2)

SAGINAW, MICHIGAN
Amdt 5 01FEB18

43°32′N-84°05′W

MBS INTL (MBS)

ILS or LOC RWY 23

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RNAV (GPS) RWY 5
MBS INTL (MBS)

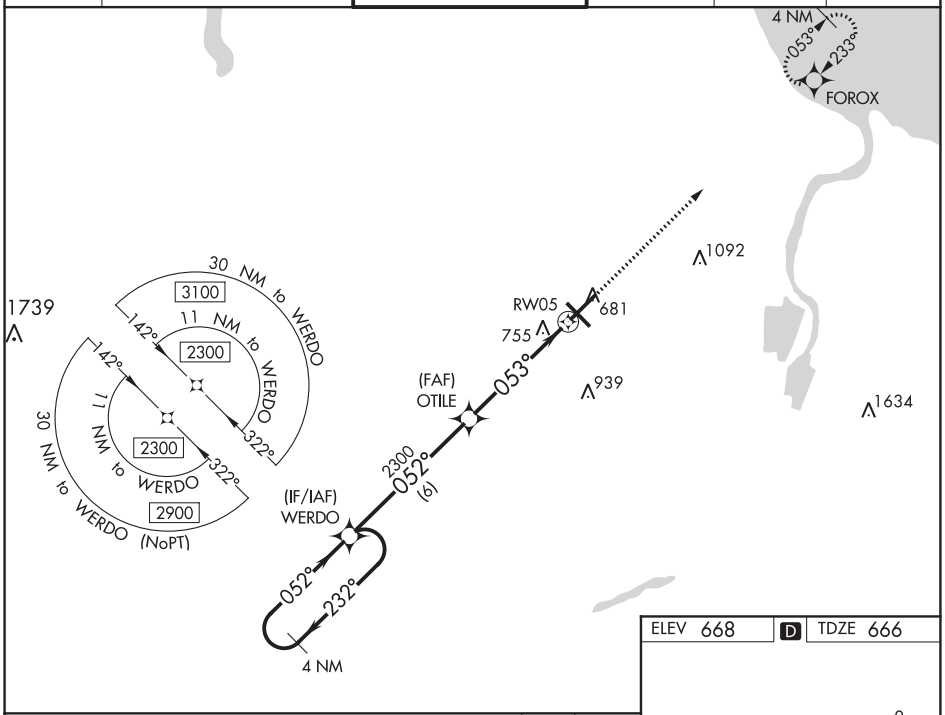
WAAS CH 82010 W05A	APP CRS 053°	Rwy ldg 8002 TDZE 666 Apt Elev 668

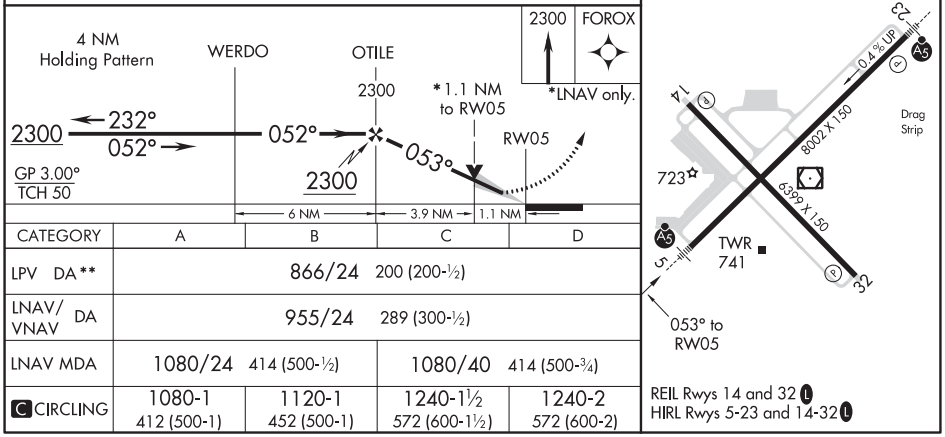
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. For inoperative ALS, increase LNAV/VNAV all Cats visibility to RVR 4500 and LNAV Cats C/D visibility to RVR 6000.
** RVR 1800 authorized with use of FD or AP or HUD to DA.

MALSR

MISSED APPROACH: Climb to 2300 direct FOROX and hold.

ATIS	GREAT LAKES APP CON★	SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
125.925	126.45 235.625	120.1(CTAF) L 257.7	121.7	121.85	122.95





CATEGORY	A	B	C	D
LPV DA**	866/24 200 (200-½)			
LNAV/VNAV DA	955/24 289 (300-½)			
LNAV MDA	1080/24 414 (500-½)		1080/40 414 (500-¾)	
C CIRCLING	1080-1 412 (500-1)	1120-1 452 (500-1)	1240-1½ 572 (600-1½)	1240-2 572 (600-2)

REIL Rwys 14 and 32 L
HIRL Rwys 5-23 and 14-32 L

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SAGINAW, MICHIGAN

AL-648 (FAA)

20310

RNAV (GPS) RWY 14

MBS INTL (MBS)

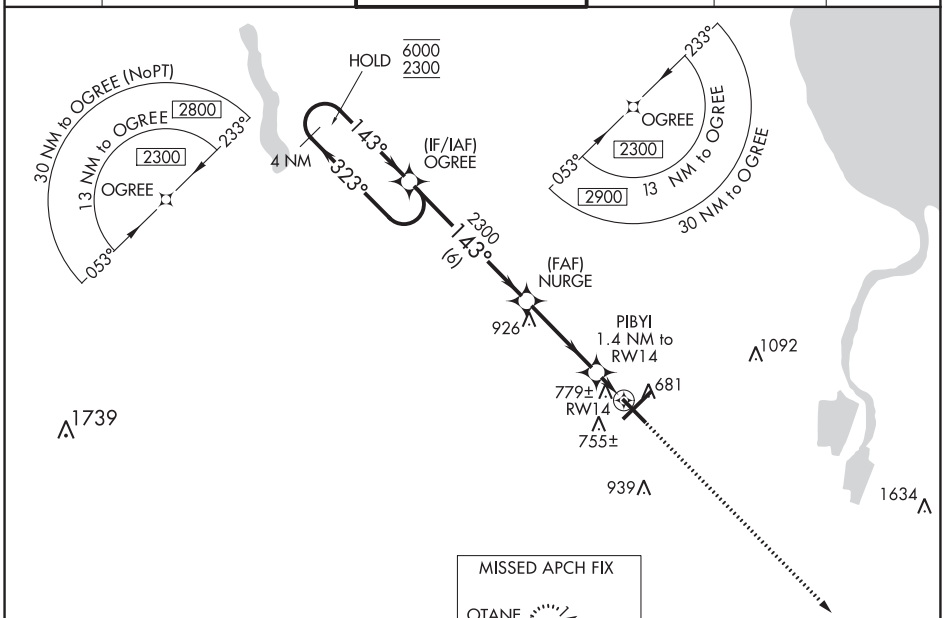
WAAS CH 69211 W14A	APP CRS 143°	Rwy ldg 6399 TDZE 668 Apt Elev 668

RNP APCH.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C or above 54°C .

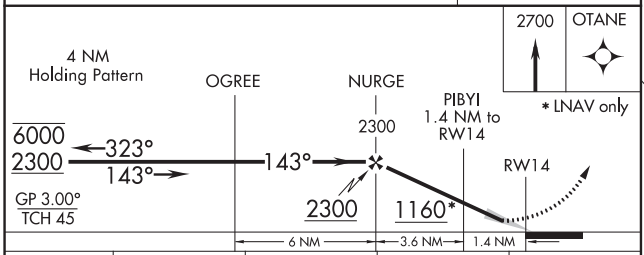
MISSED APPROACH: Climb to 2700 direct OTANE and hold.

ATIS	GREAT LAKES APP CON ★	SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
125.925	126.45 235.625	120.1 (CTAF) (L) 257.7	121.7	121.85	122.95

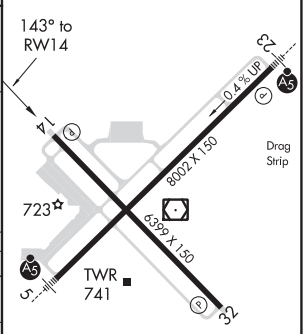


MISSED APCH FIX

ELEV 668 | D | TDZE 668



CATEGORY	A	B	C	D
LPV DA	868-¾ 200 (200-¾)			
LNAV/VNAV DA	960-⅞ 292 (300-⅞)			
LNAV MDA	1040-1 372 (400-1)			
(C) CIRCLING	1080-1 412 (500-1)	1120-1 452 (500-1)	1240-1½ 572 (600-1½)	1240-2 572 (600-2)



REIL Rwys 14 and 32 (L)
HIRL Rwys 5-23 and 14-32 (L)

SAGINAW, MICHIGAN
Amdt 2A 24MAY18

43°32′N-84°05′W

MBS INTL (MBS)

RNAV (GPS) RWY 14

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 49010 W23A	APP CRS 233°	Rwy ldg 8002 TDZE 661 Apt Elev 668

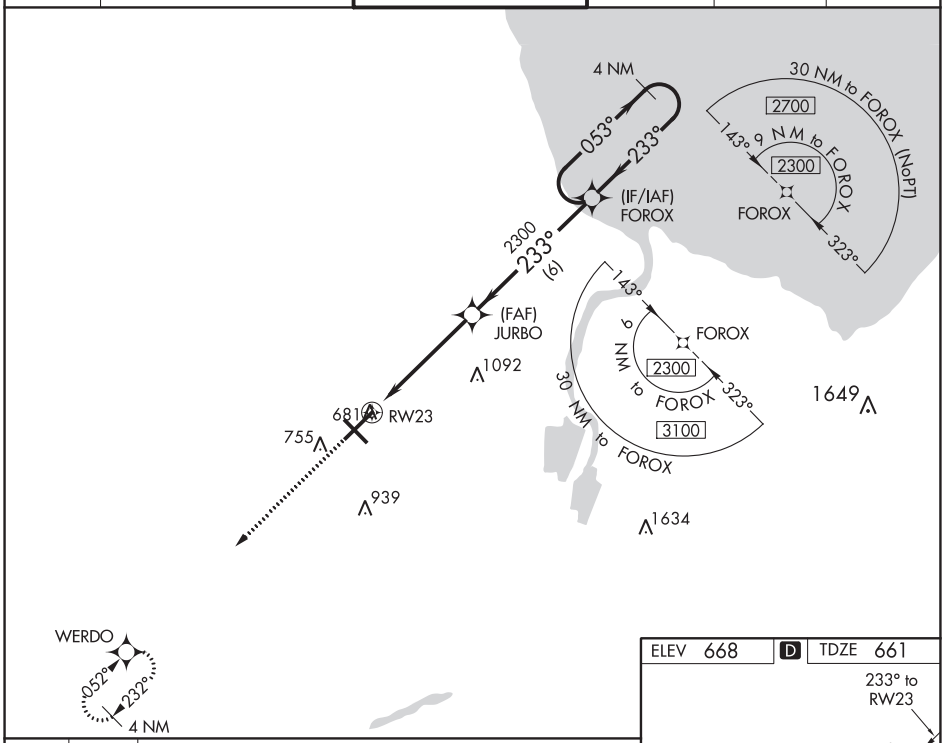
RNAV (GPS) RWY 23
MBS INTL (MBS)

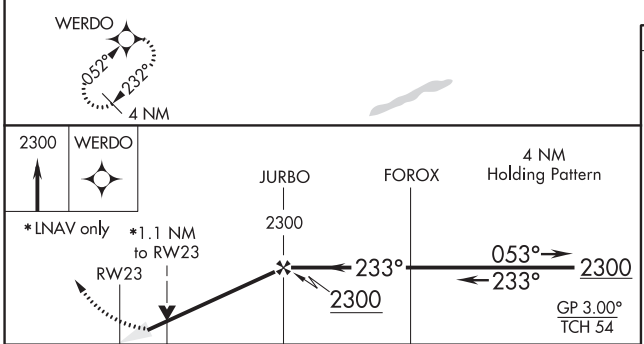
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. For inoperative ALS, increase LNAV/VNAV all Cats visibility to RVR 4500. # RVR 1800 authorized with use of FD or AP or HUD to DA.

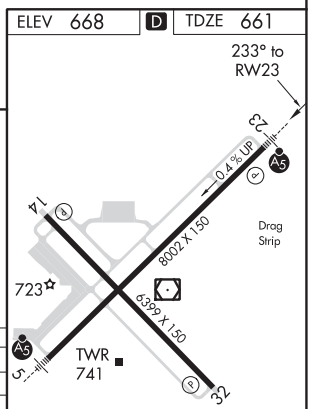
MALSR

MISSED APPROACH: Climb to 2300 direct WERDO and hold.

ATIS	GREAT LAKES APP CON ★	SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
125.925	126.45 235.625	120.1 (CTAF) L 257.7	121.7	121.85	122.95







CATEGORY	A	B	C	D
LPV DA #	861/24 200 (200-½)			
LNAV/VNAV DA	940/24 279 (300-½)			
LNAV MDA	1060/24 399 (400-½)		1060/35 399 (400-⅝)	
C CIRCLING	1080-1 412 (500-1)	1120-1 452 (500-1)	1240-1½ 572 (600-1½)	1240-2 572 (600-2)

REIL Rwys 14 and 32 L
HIRL Rwys 5-23 and 14-32 L

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

SAGINAW, MICHIGAN AL-648 (FAA) 20310

RNAV (GPS) RWY 32

MBS INTL (MBS)

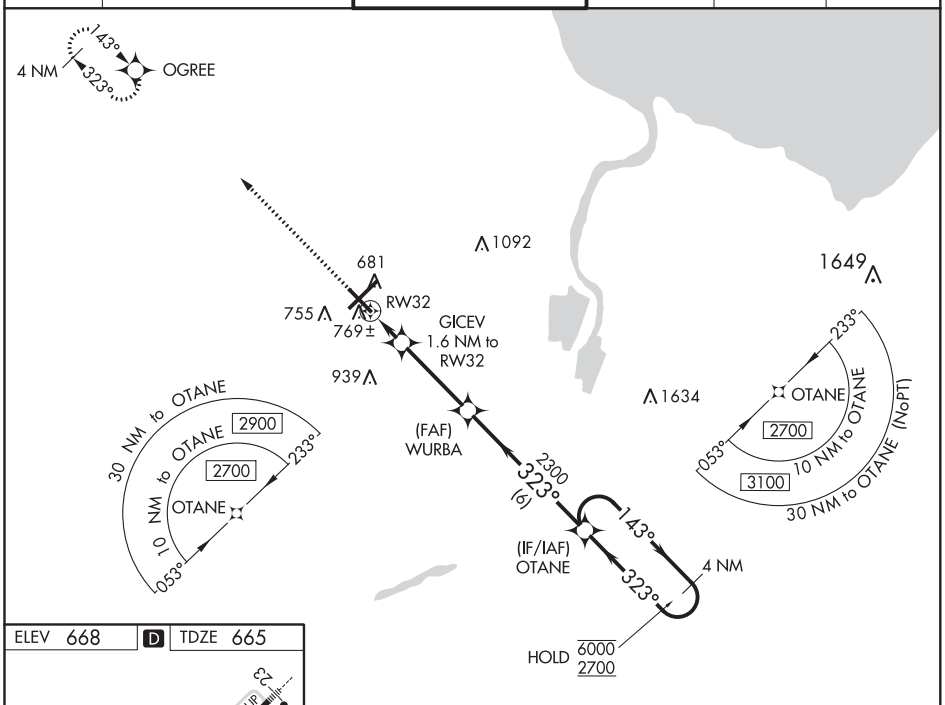
WAAS CH 78011 W32A	APP CRS 323°	Rwy ldg 6399 TDZE 665 Apt Elev 668

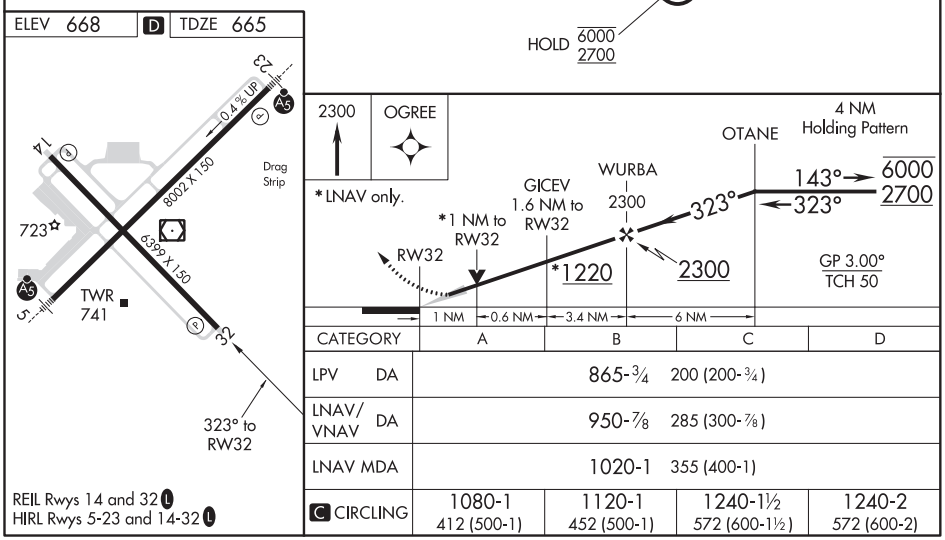
RNP APCH.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C or above 54°C .

MISSED APPROACH: Climb to 2300 direct OGREE and hold.

ATIS	GREAT LAKES APP CON ★	SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
125.925	126.45 235.625	120.1 (CTAF) L 257.7	121.7	121.85	122.95





REIL Rwys 14 and 32 L
HIRL Rwys 5-23 and 14-32 L

CATEGORY	A	B	C	D
LPV DA	865-¾ 200 (200-¾)			
LNAV/VNAV DA	950-⅞ 285 (300-⅞)			
LNAV MDA	1020-1 355 (400-1)			
C CIRCLING	1080-1 412 (500-1)	1120-1 452 (500-1)	1240-1½ 572 (600-1½)	1240-2 572 (600-2)

SAGINAW, MICHIGAN
Amdt 2A 24MAY18

43°32′N-84°05′W

MBS INTL (MBS)

RNAV (GPS) RWY 32

EC-1, 25 FEB 2021 to 22 APR 2021

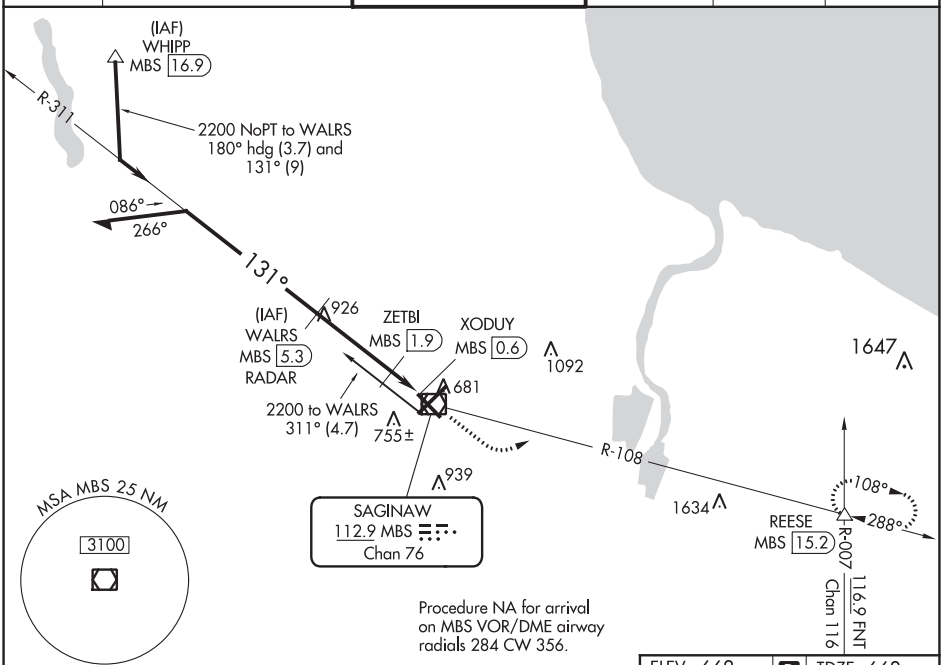
VOR RWY 14
MBS INTL (MBS)

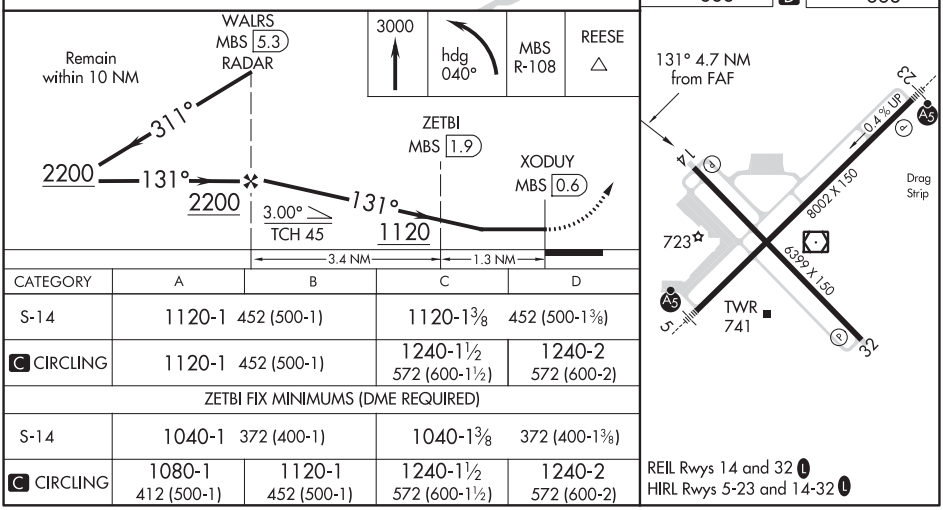
VOR/DME MBS	APP CRS	Rwy ldg	6399
112.9	131°	TDZE	668
Chan 76		Apt Elev	668

T A DME or RADAR required.

MISSED APPROACH: Climb to 3000 then left turn on heading 040° and MBS R-108 to REESE INT/15.2 DME and hold.

ATIS	GREAT LAKES APP CON ★	SAGINAW TOWER ★	GND CON	CLNC DEL	UNICOM
125.925	126.45 235.625	120.1(CTAF) L 257.7	121.7	121.85	122.95





CATEGORY	A	B	C	D
S-14	1120-1 452 (500-1)		1120-1⅜ 452 (500-1⅜)	
C CIRCLING	1120-1 452 (500-1)		1240-1½ 572 (600-1½)	1240-2 572 (600-2)
ZETBI FIX MINIMUMS (DME REQUIRED)				
S-14	1040-1 372 (400-1)		1040-1⅜ 372 (400-1⅜)	
C CIRCLING	1080-1 412 (500-1)	1120-1 452 (500-1)	1240-1½ 572 (600-1½)	1240-2 572 (600-2)

REIL Rwys 14 and 32 L
HIRL Rwys 5-23 and 14-32 L

EC-1, 25 FEB 2021 to 22 APR 2021

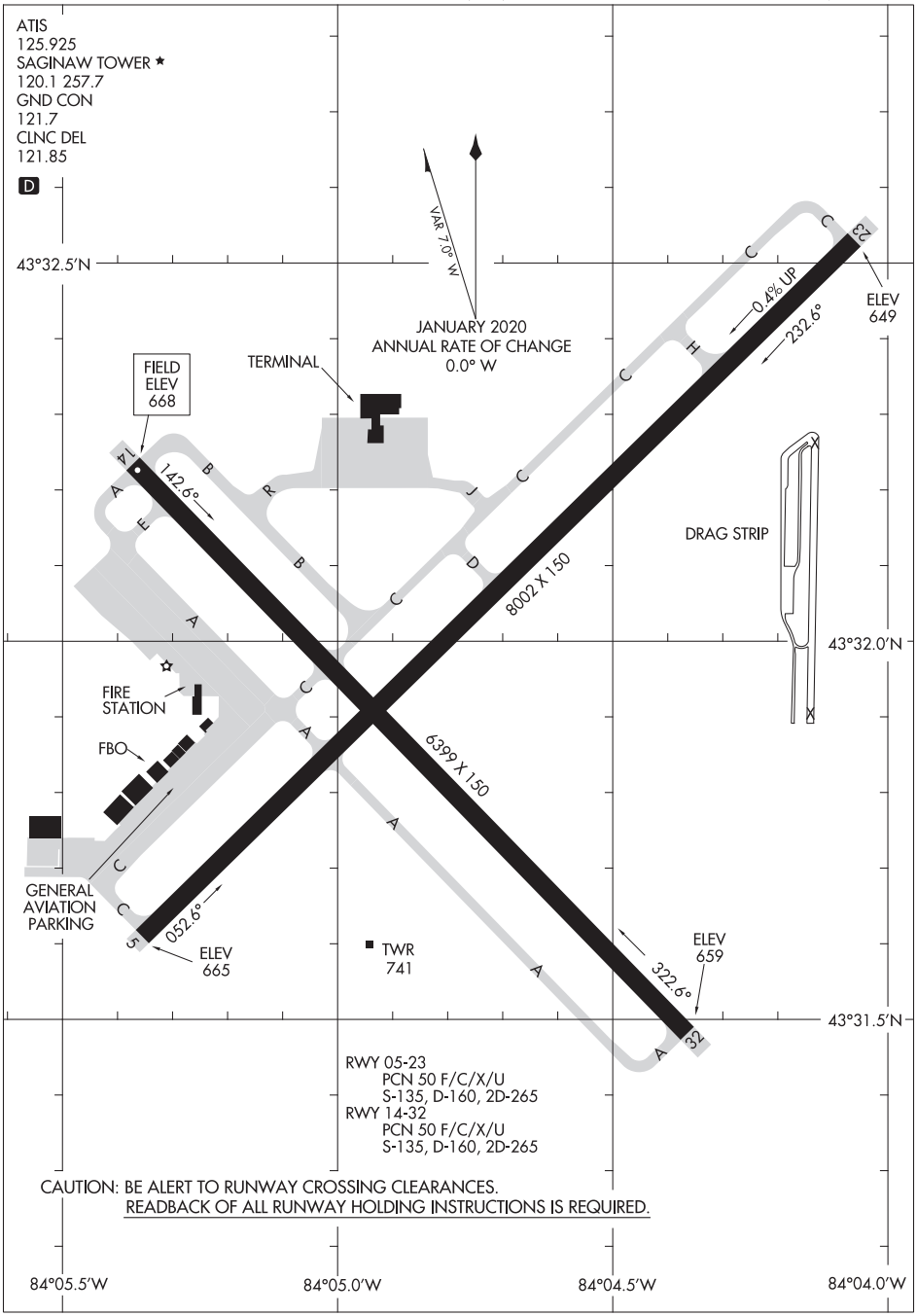
EC-1, 25 FEB 2021 to 22 APR 2021

20310

AIRPORT DIAGRAM

AL-648 (FAA)

MBS INTL (MBS)
SAGINAW, MICHIGAN



EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

AIRPORT DIAGRAM
20310
SAGINAW, MICHIGAN
MBS INTL (MBS)

ILS or LOC RWY 28

SAGINAW COUNTY H W BROWNE (HYX)

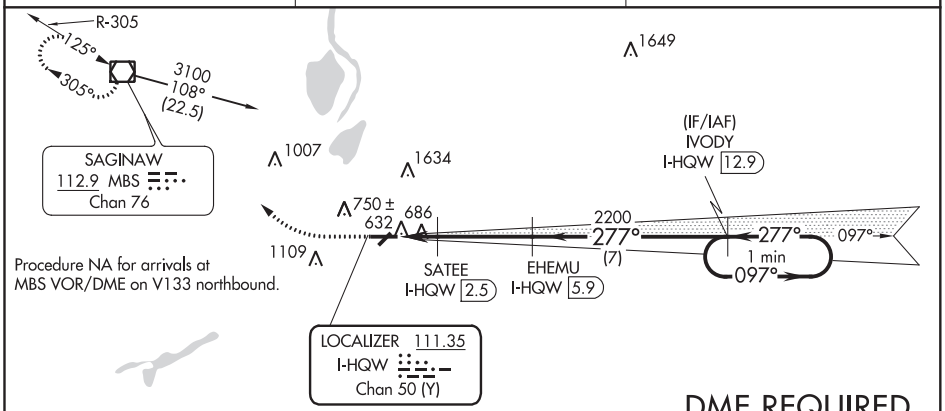
LOC/DME I-HQW	APP CRS	Rwy ldg	5002
111.35	277°	TDZE	599
Chan 50 (Y)		Apt Elev	602

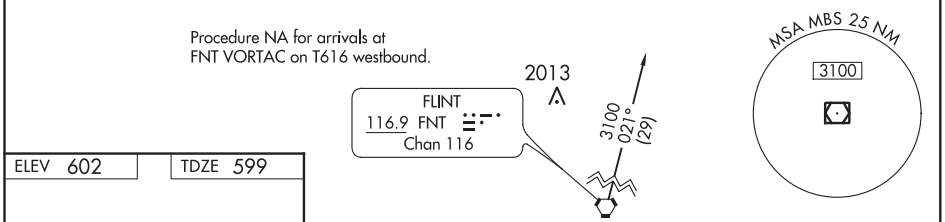
Inoperative table does not apply to S-ILS 28.
DME required. Circling Rwy 5, 23 NA at night.
Circling NA for Cat C north of Rwy 10-28.

MALSF

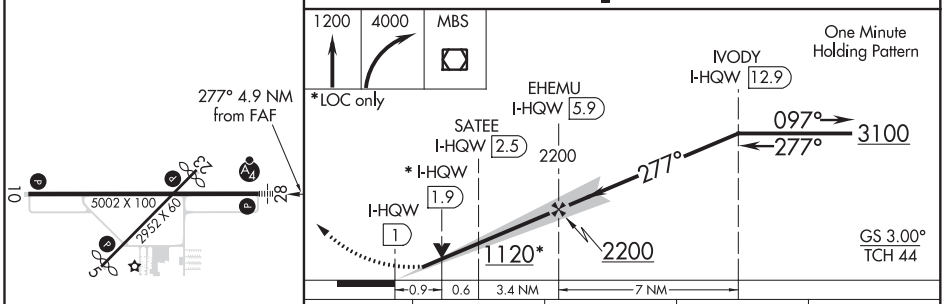
MISSED APPROACH: Climb to 1200 then climbing right turn to 4000 direct MBS VOR/DME and hold, continue climb-in-hold to 4000.

AWOS-3	GREAT LAKES APP CON★	UNICOM
118.325	120.95 235.625	122.8 (CTAF) L





ELEV 602 | TDZE 599



CATEGORY	A	B	C	D
S-ILS 28	802-¾ 203 (200-¾)			NA
S-LOC 28	940-¾ 341 (400-¾)			NA
C CIRCLING	1100-1 498 (500-1)		1460-2½ 858 (900-2½)	NA

REIL Rwy 10 L
MIRL Rwys 5-23 and 10-28 L

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EC-1, 25 FEB 2021 to 22 APR 2021

SAGINAW, MICHIGAN AL-6474 (FAA) 20086

RNAV (GPS) RWY 10

SAGINAW COUNTY H W BROWNE (HYX)

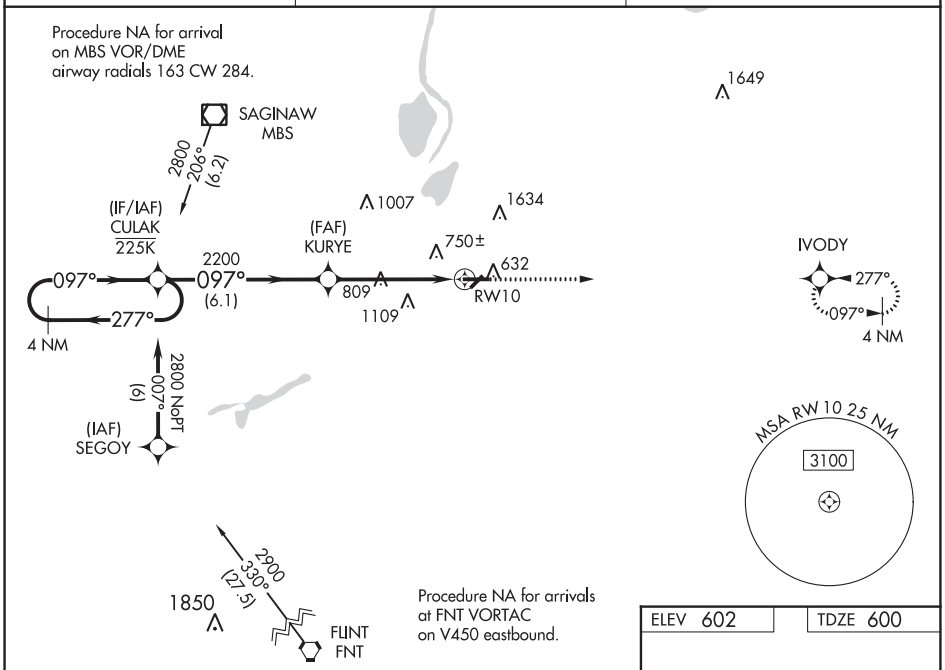
WAAS CH 50200 W10A	APP CRS 097°	Rwy ldg 5002 TDZE 600 Apt Elev 602

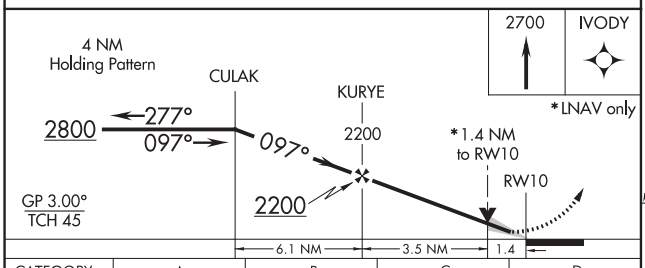
RNP APCH.

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C or above 54°C. Circling NA for Cat C north of Rwy 10-28. Circling Rwy 5, 23 NA at night.

MISSED APPROACH: Climb to 2700 direct IVODY and hold.

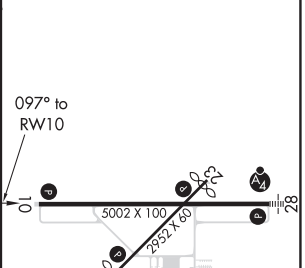
AWOS-3	GREAT LAKES APP CON ★	UNICOM
118.325	120.95 235.625	122.8 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	800-¾ 200 (200-¾)			NA
LNAV/VNAV DA	1018-1⅜ 418 (500-1⅜)			NA
LNAV MDA	1060-1 460 (500-1)		1060-1⅜ 460 (500-1⅜)	NA
C CIRCLING	1100-1 498 (500-1)		1460-2½ 858 (900-2½)	NA

ELEV 602 TDZE 600



REIL Rwy 10 L
MIRL Rwys 5-23 and 10-28 L

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EC-1, 25 FEB 2021 to 22 APR 2021

RNAV (GPS) RWY 28

SAGINAW COUNTY H W BROWNE (HYX)

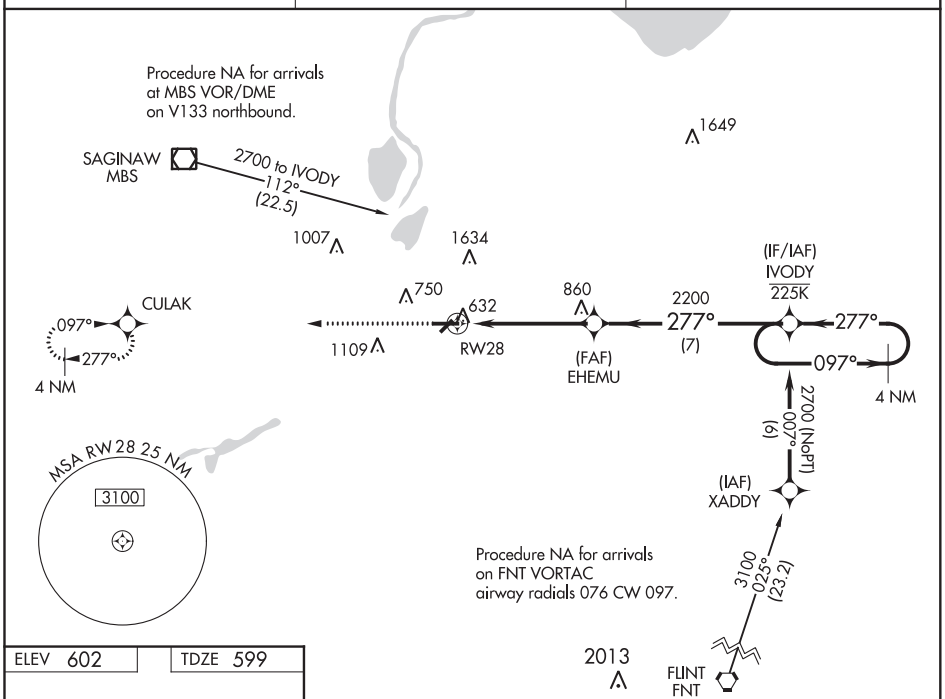
WAAS CH 90200 W28A	APP CRS 277°	Rwy ldg 5002 TDZE 599 Apt Elev 602

Inop table does not apply to LPV DA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). Circling NA for Cat C north of Rwy 10-28. Circling Rwy 5, 23 NA at night. DME/DME RNP-0.3 NA. For inop ALS, increase LNAV/VNAV all Cats visibility to ⅞ SM.

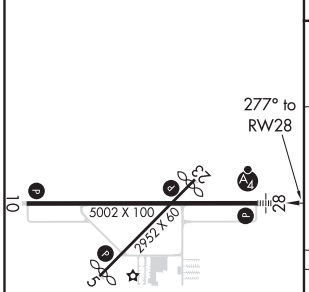
MALSF

MISSED APPROACH: Climb to 2800 direct CULAK and hold.

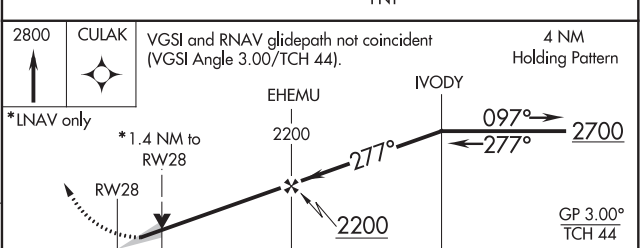
AWOS-3	GREAT LAKES APP CON★	UNICOM
118.325	120.95 235.625	122.8 (CTAF) L



ELEV 602 TDZE 599



REIL Rwy 10 L
MIRL Rwys 5-23 and 10-28 L



CATEGORY	A	B	C	D
LPV DA	804-¾ 205 (300-¾)			NA
LNAV/VNAV DA	849-¾ 250 (300-¾)			NA
LNAV MDA	1080-¾ 481 (500-¾)		1080-1⅛ 481 (500-1⅛)	NA
C CIRCLING	1100-1 498 (500-1)		1460-2½ 858 (900-2½)	NA

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SAGINAW, MICHIGAN AL-6474 (FAA) 20254

VOR/DME-A

SAGINAW COUNTY H W BROWNE (HYX)

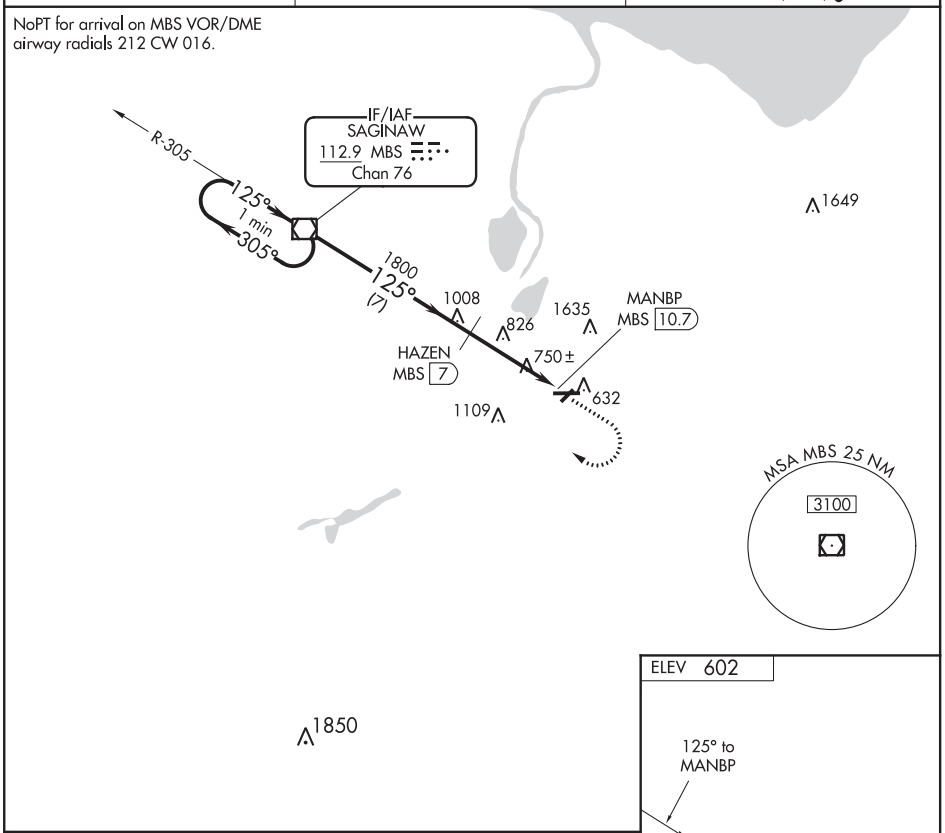
VOR/DME MBS	APP CRS	Rwy ldg	N/A
112.9	125°	TDZE	N/A
Chan 76		Apt Elev	602

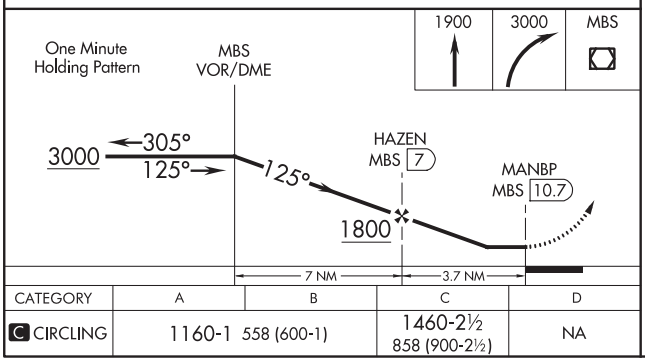
T A Circling to Rwy 5/23 NA at night. When local altimeter setting not received, use Saginaw MBS Intl altimeter setting and increase all MDA 40 feet and increase Circling Cat C visibility ¼ SM. Circling NA for Cat C north of Rwy 10-28.

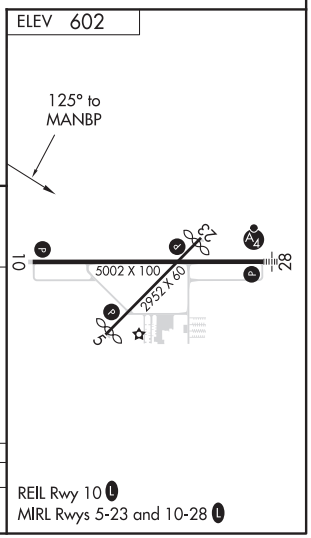
MISSED APPROACH: Climb to 1900 then climbing right turn to 3000 direct MBS VOR/DME and hold.

AWOS-3	GREAT LAKES APP CON ★	UNICOM
118.325	120.95 235.625	122.8 (CTAF) L

NoPT for arrival on MBS VOR/DME airway radials 212 CW 016.







CATEGORY	A	B	C	D
C CIRCLING	1160-1 558 (600-1)		1460-2½ 858 (900-2½)	NA

REIL Rwy 10 L
MIRL Rwys 5-23 and 10-28 L

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APP CRS	Rwy ldg	3800
074°	TDZE	624
	Apt Elev	624

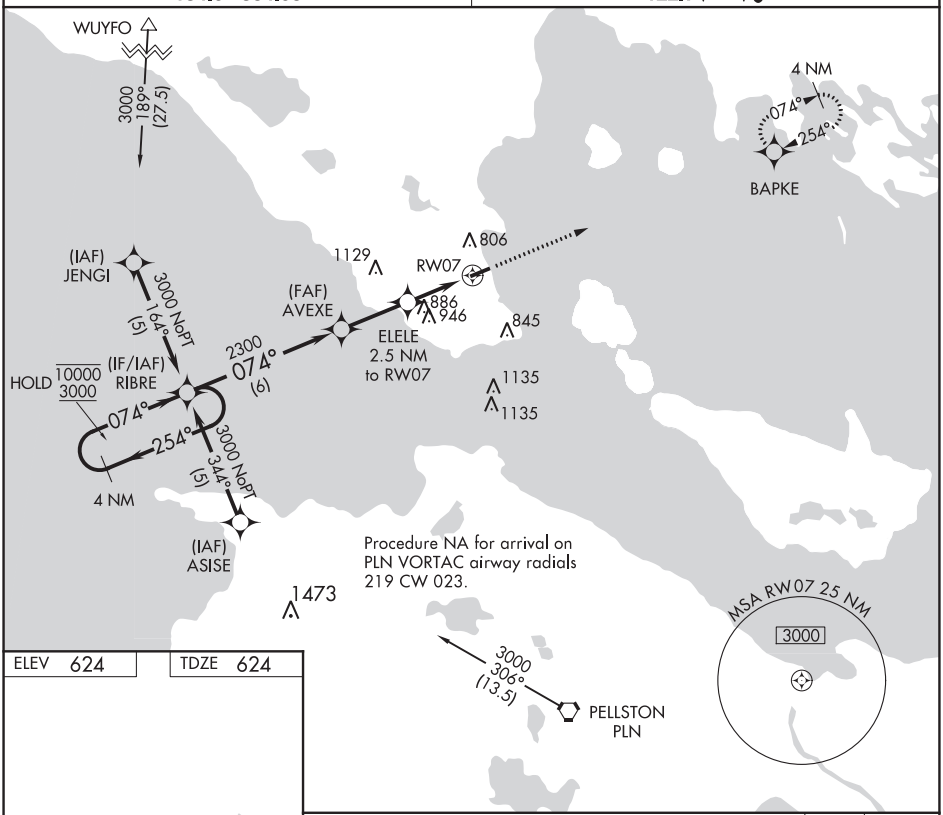
RNAV (GPS) RWY 7
MACKINAC COUNTY (83D)

RNP APCH.

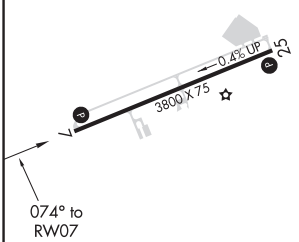
Straight-in Rwy 07 NA at night, Circling Rwy 07 NA at night.
NA Rwy 07 helicopter visibility reduction below 1 SM NA.
Circling NA at night south of Rwy 07-25.

MISSED APPROACH: Climb to 3000 direct BAPKE and hold.

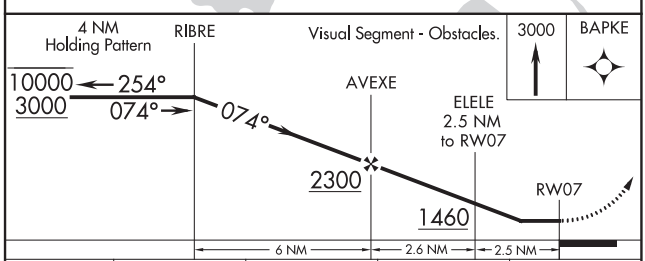
MINNEAPOLIS CENTER	UNICOM
134.6 354.05	122.7 (CTAF) L



ELEV 624 TDZE 624



MIRL Rwy 7-25 L
REIL Rwys 7 and 25 L



CATEGORY	A	B	C	D
LNAV MDA	1200-1 576 (600-1)		1200-1⅝ 576 (600-1⅝)	NA
CIRCLING	1260-1 636 (700-1)		1260-1¾ 636 (700-1¾)	NA

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EC-1, 25 FEB 2021 to 22 APR 2021

ST IGNACE, MICHIGAN

AL-10180 (FAA)

18284

RNAV (GPS) RWY 25
MACKINAC COUNTY (83D)

APP CRS	Rwy ldg	3800
254°	TDZE	623
	Apt Elev	624

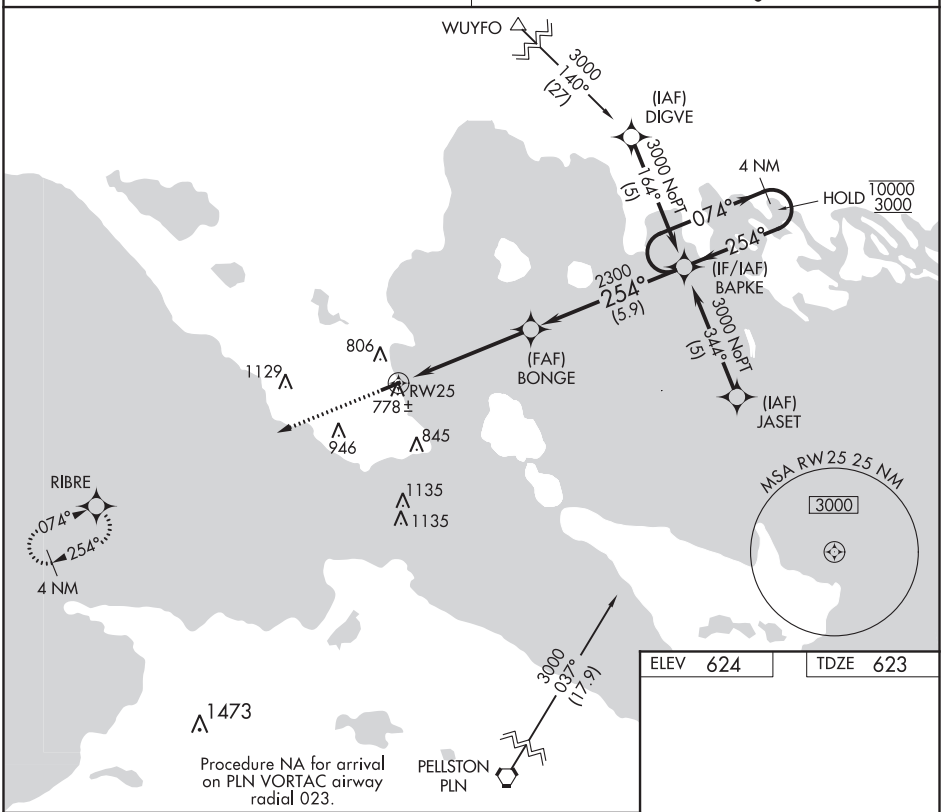
RNP APCH.

Circling Rwy 7 NA at night.
Circling NA at night south of Rwy 7-25.
Rwy 25 helicopter visibility reduction below ¾ SM NA.

NA

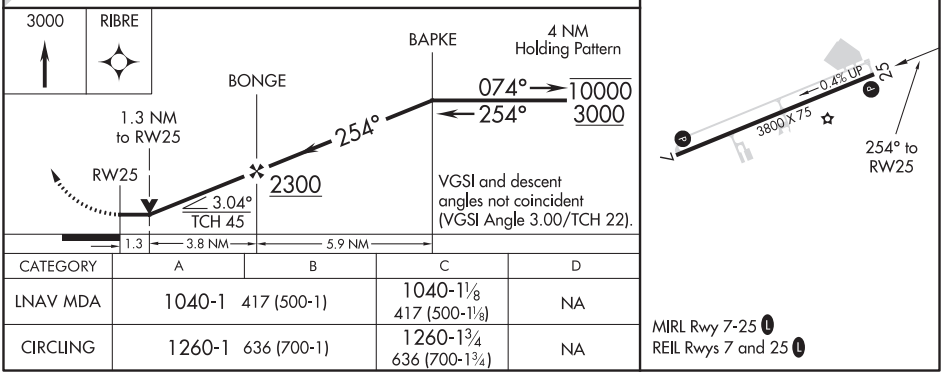
MISSED APPROACH: Climb to 3000 direct RIBRE and hold.

MINNEAPOLIS CENTER	UNICOM
134.6 354.05	122.7 (CTAF) L



Procedure NA for arrival on PLN VORTAC airway radial 023.

ELEV 624	TDZE 623



CATEGORY	A	B	C	D
LNAV MDA	1040-1 417 (500-1)		1040-1⅛ 417 (500-1⅛)	NA
CIRCLING	1260-1 636 (700-1)		1260-1¾ 636 (700-1¾)	NA

MIRL Rwy 7-25 L
REIL Rwys 7 and 25 L

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LOC I-CIU	APP CRS	Rwy ldg	7203
110.3	157°	TDZE	799
		Apt Elev	799

ILS or LOC RWY 16
CHIPPEWA COUNTY INTL (CIU)

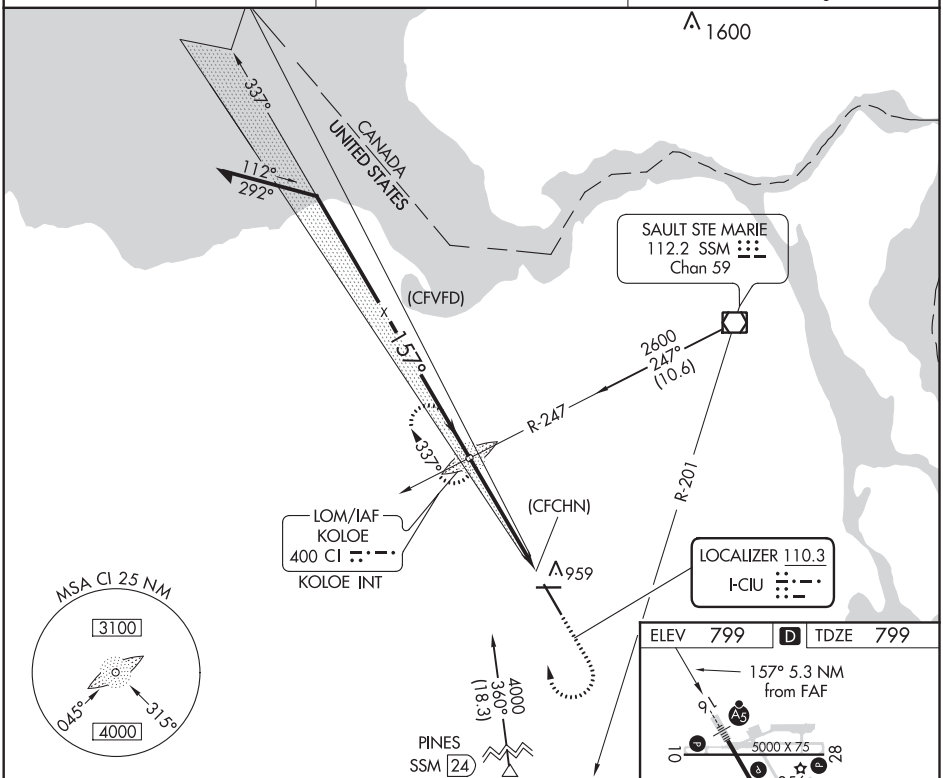
ADF required.

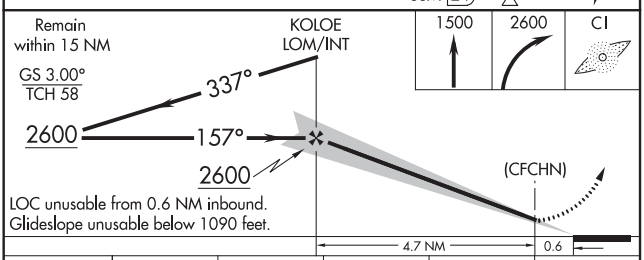
T
A NA Autopilot coupled approach NA below 1380.

MALSR A5

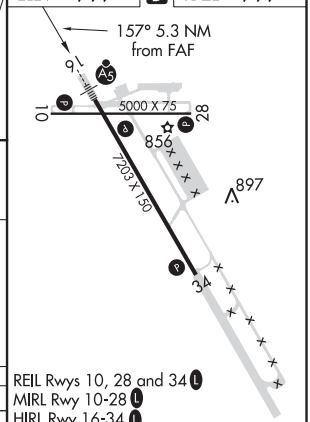
MISSED APPROACH: Climb to 1500 then climbing right turn to 2600 direct KOLOE LOM/INT and hold. (TACAN aircraft climb to 5000 on heading 160° and SSM VOR/DME R-201 to PINES/SSM 24 DME and hold south, right turn, 021° inbound.)

AWOS-3PT	TORONTO CENTER	UNICOM
127.575	132.65 344.5	123.0 (CTAF) L





LOC unusable from 0.6 NM inbound.
Glideslope unusable below 1090 feet.



REIL Rwys 10, 28 and 34 L
MIRL Rwy 10-28 L
HIRL Rwy 16-34 L

CATEGORY	A	B	C	D	E
S-ILS 16	1090-½ 291 (300-½)				
S-LOC 16	1160-½ 361 (400-½)		1160-⅝ 361 (400-⅝)		
C CIRCLING	1260-1 461 (500-1)		1260-1½ 461 (500-1½)	1360-2 561 (600-2)	1380-2 581 (600-2)

FAF to MAP 4.7 NM

Knots	60	90	120	150	180
Min:Sec	4:42	3:08	2:21	1:53	1:34

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EC-1, 25 FEB 2021 to 22 APR 2021

SAULT STE MARIE, MICHIGAN AL-810 (FAA) 20282

APP CRS	Rwy ldg	5000
097°	TDZE	799
	Apt Elev	799

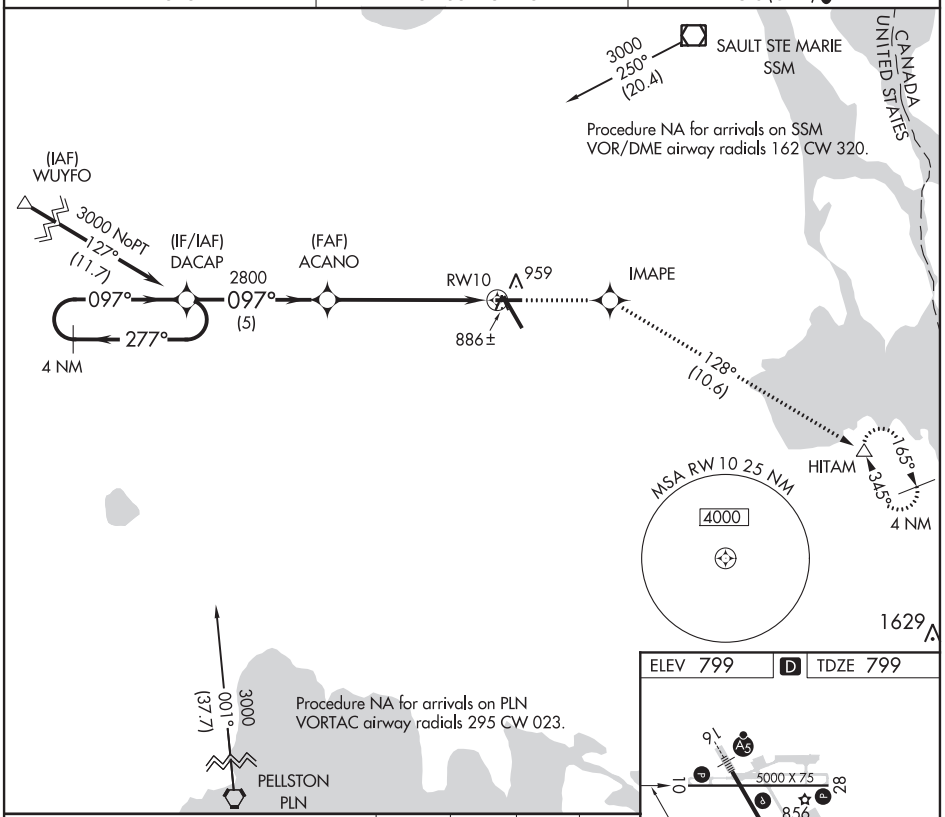
RNAV (GPS) RWY 10
CHIPPEWA COUNTY INTL (CIU)

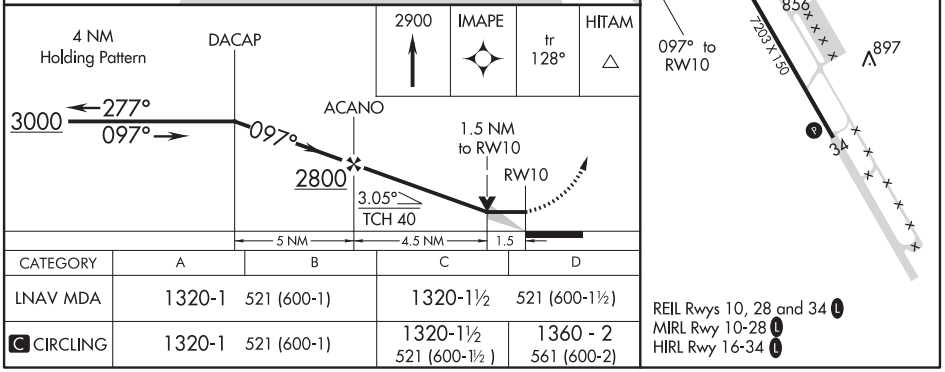
RNP APCH.

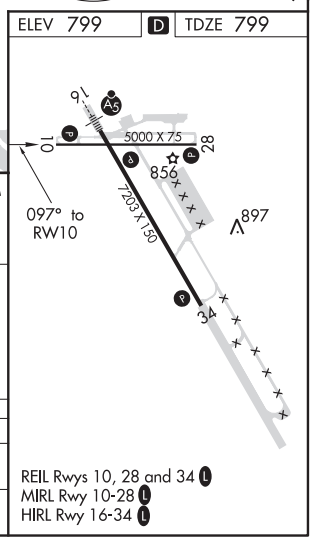
VDP NA with Sault Ste Marie altimeter setting. When local altimeter setting not received, use Sault Ste Marie Muni/Sanderson Field altimeter setting; increase all MDA 60 feet, increase LNAV visibility Cat C/D and Circling Cat C ¼ SM.

MISSED APPROACH: Climb to 2900 direct IMAPE and track 128° to HITAM and hold.

AWOS-3PT	TORONTO CENTER	UNICOM
127.575	132.65 344.5	123.0 (CTAF) L







CATEGORY	A	B	C	D
LNAV MDA	1320-1 521 (600-1)		1320-1½	521 (600-1½)
C CIRCLING	1320-1 521 (600-1)		1320-1½ 521 (600-1½)	1360 - 2 561 (600-2)

REIL Rwys 10, 28 and 34 L
MIRL Rwy 10-28 L
HIRL Rwy 16-34 L

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EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 69215 W16A	APP CRS 157°	Rwy ldg 7203 TDZE 799 Apt Elev 799

RNAV (GPS) RWY 16
CHIPPEWA COUNTY INTL (CIU)

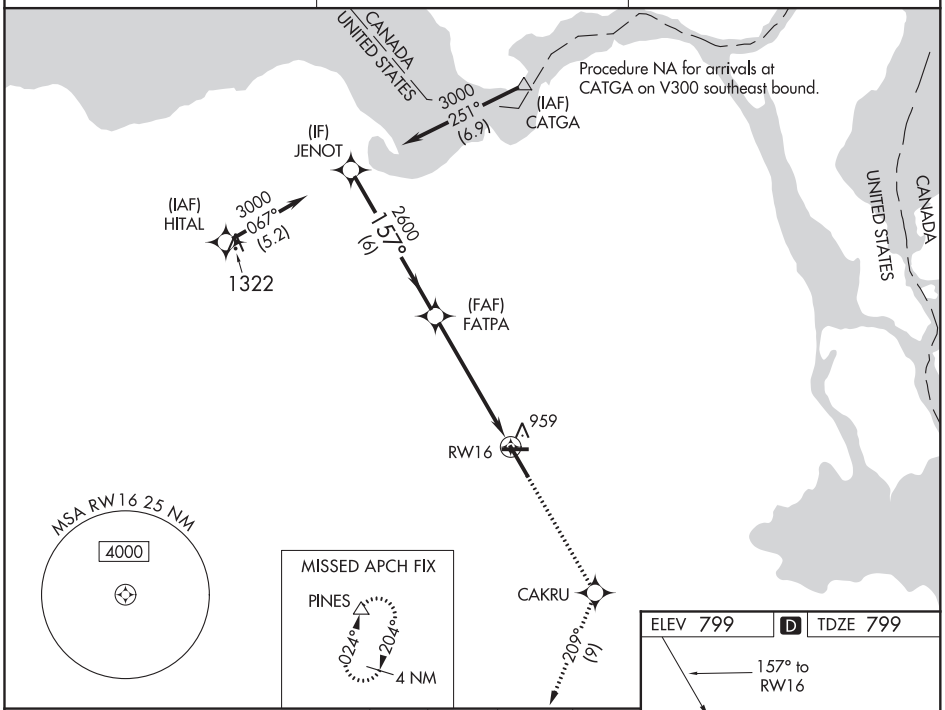
RNP APCH.

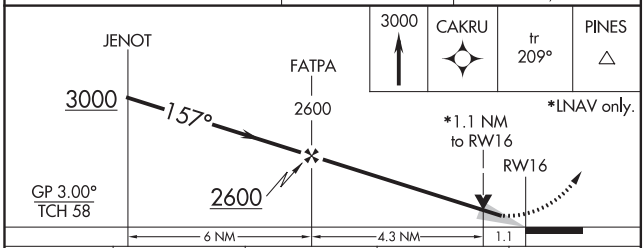
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C. For inop ALS, increase LPV all Cats, LNAV/VNAV all Cats and LNAV Cats A/B/C ½ SM; increase LNAV Cat D ¼ SM.

MALSR

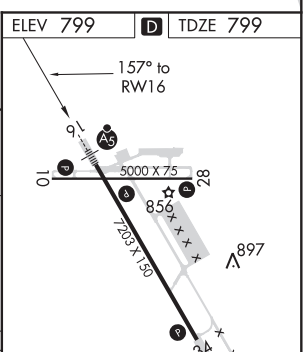
MISSED APPROACH: Climb to 3000 direct CAKRU and on track 209° to PINES and hold.

AWOS-3PT	TORONTO CENTER	UNICOM
127.575	132.65 344.5	123.0 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	1068-½ 269 (300-½)			
LNAV/VNAV DA	1204-1 405 (500-1)			
LNAV MDA	1220-½ 421 (500-½)		1220-¾ 421 (500-¾)	1220-1 421 (500-1)
C CIRCLING	1260-1 461 (500-1)		1260-1½ 461 (500-1½)	1360-2 561 (600-2)



REIL Rwys 10, 28 and 34 L
MIRL Rwy 10-28 L
HIRL Rwy 16-34 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

SAULT STE MARIE, MICHIGAN | AL-810 (FAA) | 20282

APP CRS	Rwy ldg	5000
277°	TDZE	799
	Apt Elev	799

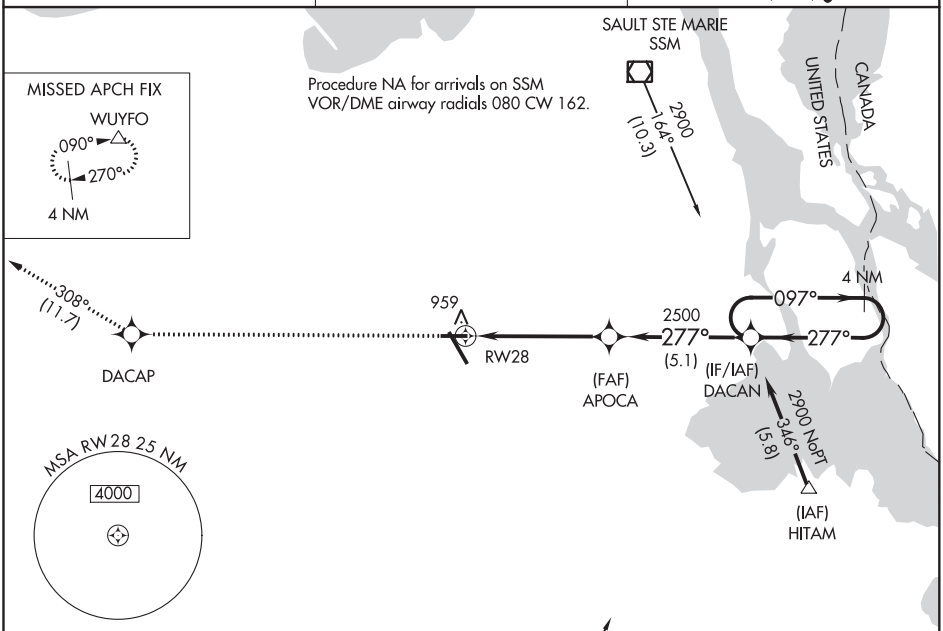
RNAV (GPS) RWY 28
CHIPPEWA COUNTY INTL (CIU)

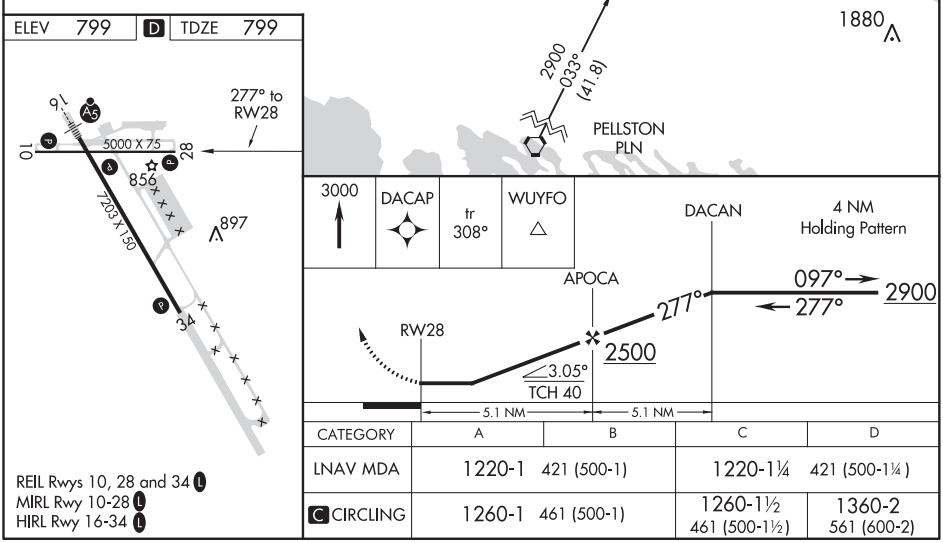
RNP APCH.

Rwy 28 helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Sault Ste Marie Muni/Sanderson Field altimeter setting; increase all MDA 60 feet, increase LNAV and Circling visibility Cat C/D ¼ SM. Straight-in and Circling Rwy 28 NA at night.

MISSED APPROACH: Climb to 3000 direct DACAP and track 308° to WUYFO and hold.

AWOS-3PT	TORONTO CENTER	UNICOM
127.575	132.65 344.5	123.0 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1220-1 421 (500-1)		1220-1¼ 421 (500-1¼)	
C CIRCLING	1260-1 461 (500-1)		1260-1½ 461 (500-1½)	1360-2 561 (600-2)

REIL Rwys 10, 28 and 34 L
MIRL Rwy 10-28 L
HIRL Rwy 16-34 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 56315 W34A	APP CRS 337°	Rwy ldg 7203 TDZE 796 Apt Elev 799

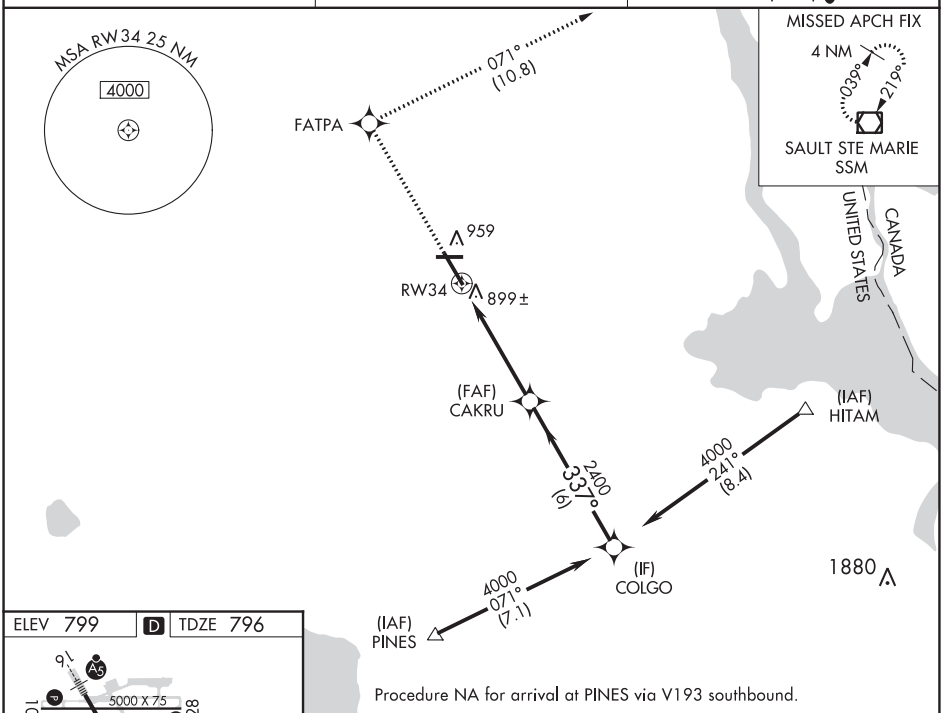
RNAV (GPS) RWY 34
CHIPPEWA COUNTY INTL (CIU)

RNP APCH.

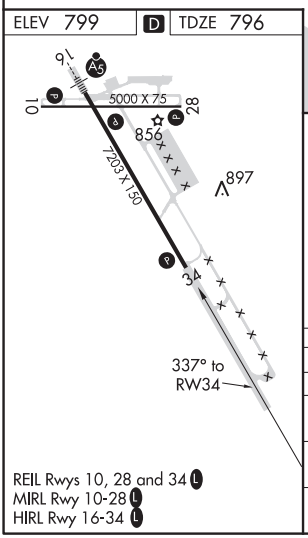
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C. When local altimeter setting not received, use Sault Ste Marie Muni/Sanderson Field altimeter setting; increase LPV DA to 1091 feet, LNAV/VNAV DA to 1243 feet and all MDA 60 feet; increase LNAV Cat D visibility ¼ SM. Baro-VNAV and VDP NA when using Sault Ste Marie Muni/Sanderson Field altimeter setting.

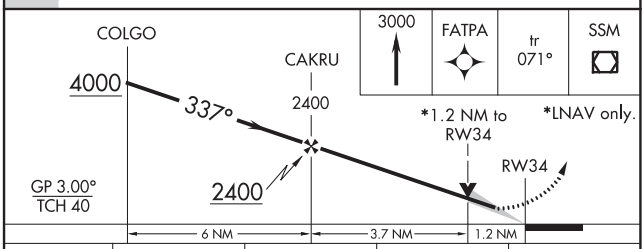
MISSED APPROACH: Climb to 3000 direct FATPA and track 071° to SSM VOR/DME and hold.

AWOS-3PT	TORONTO CENTER	UNICOM
127.575	132.65 344.5	123.0 (CTAF) L



Procedure NA for arrival at PINES via V193 southbound.





CATEGORY	A	B	C	D
LPV DA	1046-1 250 (300-1)			
LNAV/VNAV DA	1198-1½ 402 (400-1½)			
LNAV MDA	1200-1 404 (400-1)		1200-1¼ 404 (400-1¼)	
C CIRCLING	1260-1 461 (500-1)		1260-1½ 461 (500-1½)	1360-2 561 (600-2)

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

SAULT STE MARIE, MICHIGAN — AL-810 (FAA) — 20282

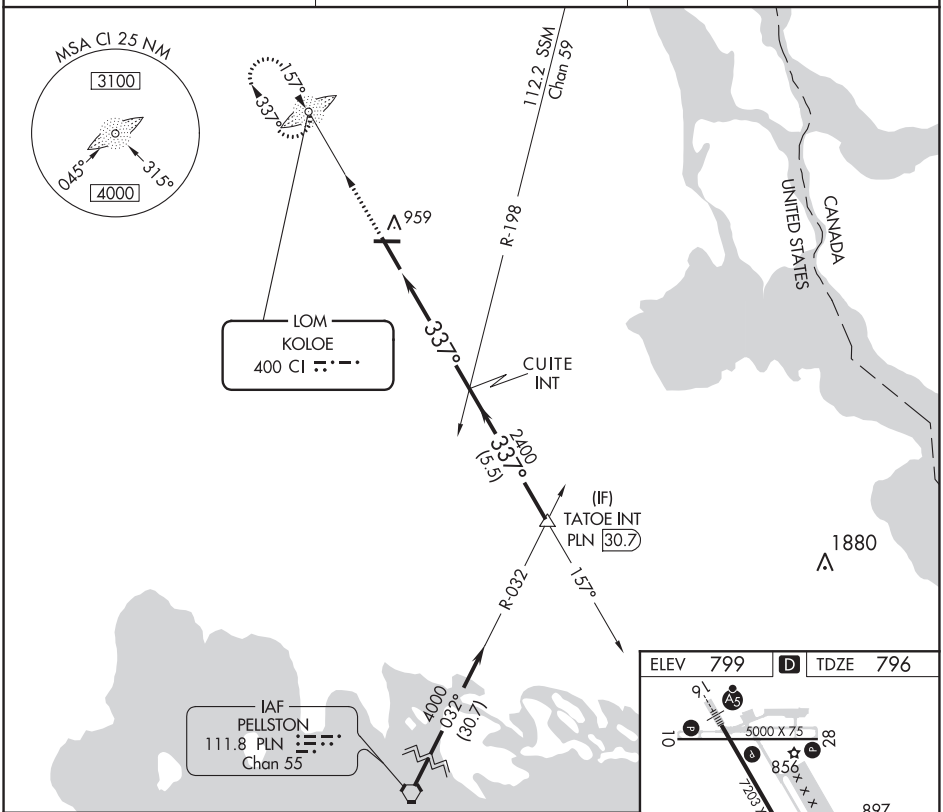
NDB RWY 34
CHIPPEWA COUNTY INTL (CIU)

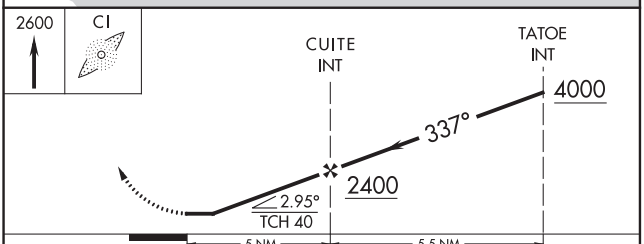
LOM CI	APP CRS	Rwy ldg / TDZE / Apt Elev
400	337°	7203 / 796 / 799

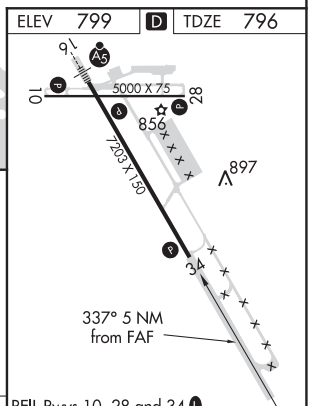
T / A NA — When local altimeter setting not received, use Sault-Ste Marie Muni/ Sanderson Field altimeter setting and increase all MDA 60 feet and increase S-34 Cat C/D visibility to 1⅜ .

MISSED APPROACH: Climb to 2600 direct KOLOE LOM and hold.

AWOS-3PT	TORONTO CENTER	UNICOM
127.575	132.65 344.5	123.0 (CTAF) L







REIL Rwys 10, 28 and 34 L
MIRL Rwy 10-28 L
HIRL Rwy 16-34 L

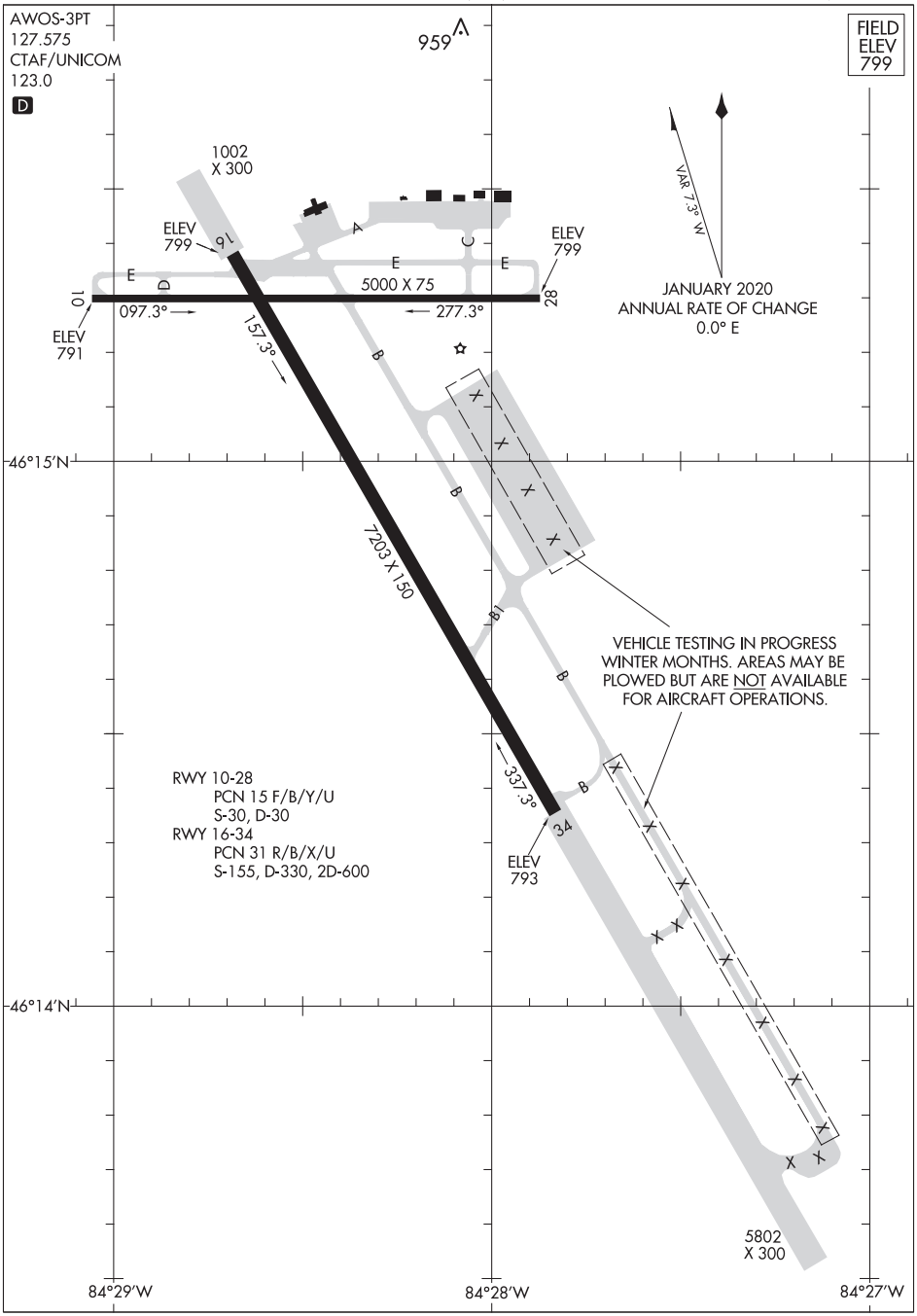
CATEGORY	A	B	C	D
S-34	1220-1 424 (500-1)		1220-1¼ 424 (500-1¼)	
C CIRCLING	1260-1 461 (500-1)		1260-1½ 461 (500-1½)	1360-2 561 (600-2)

FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

AL-810 (FAA)



EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

SAULT STE MARIE, MICHIGAN | AL-503 (FAA) | 19199

WAAS CH 70622 W14A	APP CRS 143°	Rwy ldg 5054 TDZE 712 Apt Elev 716

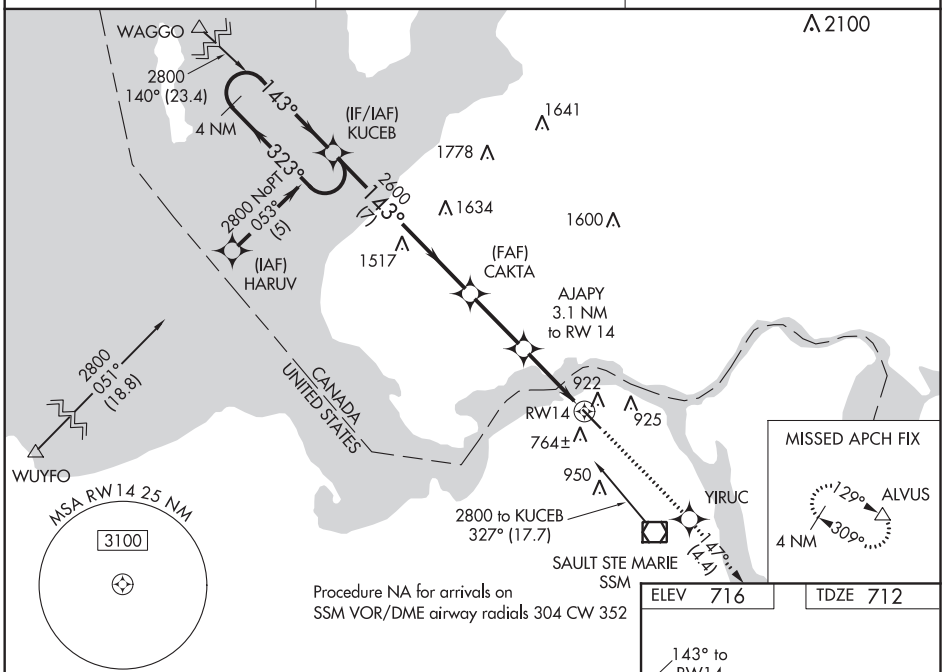
RNAV (GPS) RWY 14
SAULT STE MARIE MUNI/SANDERSON FIELD (ANJ)

RNP APCH.

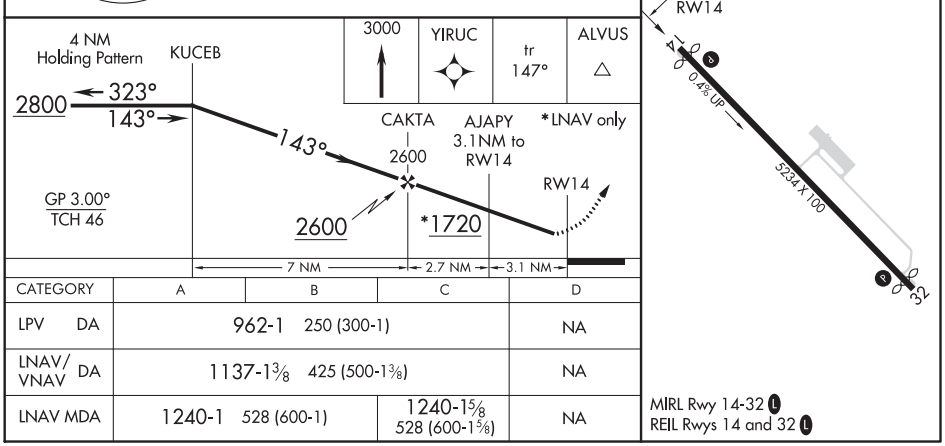
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C or above 54°C.
Rwy 14 helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Chippewa County Intl altimeter setting and increase all DA 45 feet and all MDA 60 feet. Increase LNAV/VNAV all Cats visibilites to 1¾ mile and LNAV Cat C visibility to 1⅝ mile.

MISSED APPROACH: Climb to 3000 direct YIRUC and on track 147° to ALVUS and hold.

ASOS	TORONTO CENTER	UNICOM
118.375	132.65 344.5	122.7 (CTAF) L



ELEV 716	TDZE 712



CATEGORY	A	B	C	D
LPV DA	962-1 250 (300-1)			NA
LNAV/VNAV DA	1137-1⅜ 425 (500-1⅜)			NA
LNAV MDA	1240-1 528 (600-1)		1240-1⅝ 528 (600-1⅝)	NA

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 49122 W32A	APP CRS 323°	Rwy ldg 5056 TDZE 716 Apt Elev 716

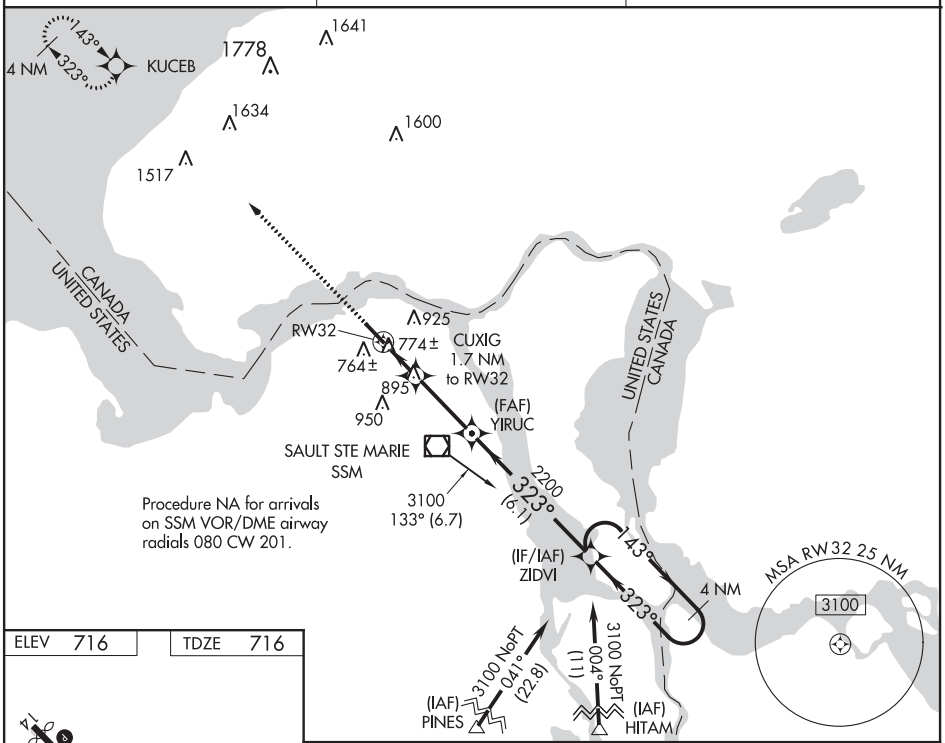
RNAV (GPS) RWY 32
SAULT STE MARIE MUNI/SANDERSON FIELD (ANJ)

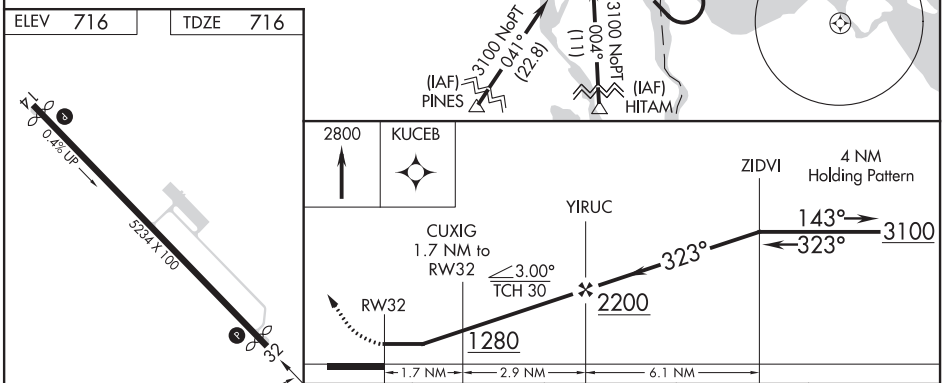
RNP APCH.

Rwy 32 helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Chippewa County Intl altimeter setting and increase all MDA 60 feet, and increase LP Cat C visibility ⅛ mile and LNAV Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 2800 direct KUCEB and hold.

ASOS	TORONTO CENTER	UNICOM
118.375	132.65 344.5	122.7 (CTAF) L





CATEGORY	A	B	C	D
LP MDA	1040-1 324 (400-1)			NA
LNAV MDA	1200-1 484 (500-1)		1200-1⅜ 484 (500-1⅜)	NA
CIRCLING	1280-1 564 (600-1)		1320-1¾ 604 (700-1¾)	NA

MIRL Rwy 14-32 L
REIL Rwys 14 and 32 L

EC-1, 25 FEB 2021 to 22 APR 2021
EC-1, 25 FEB 2021 to 22 APR 2021

SAULT STE MARIE, MICHIGAN | AL-503 (FAA) | 19115

VOR/DME SSM	APP CRS	Rwy ldg	5056
112.2	337°	TDZE	716
Chan 59		Apt Elev	716

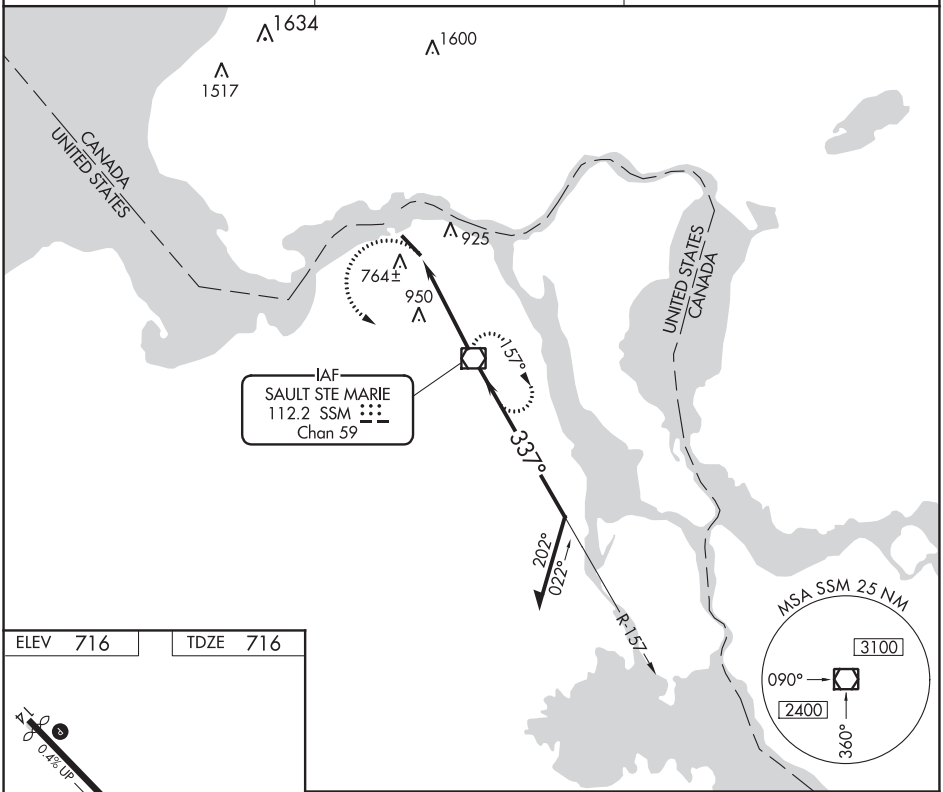
VOR RWY 32

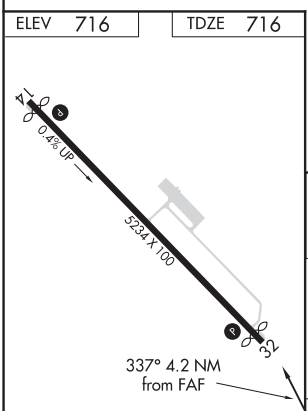
SAULT STE MARIE MUNI/SANDERSON FIELD (ANJ)

When local altimeter setting not received, use Chippewa County Intl altimeter setting and increase all MDA 60 feet and increase S-32 Cat C visibility to 1¾ mile.
Rwy 32 helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH:
Climbing left turn to 2400 direct SSM VOR/DME and hold.

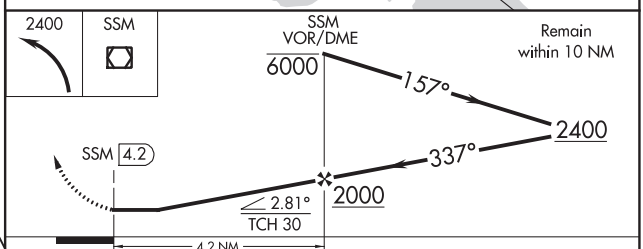
ASOS	TORONTO CENTER	UNICOM
118.375	132.65 344.5	122.7 (CTAF) L





MIRL Rwy 14-32 L
REIL Rwys 14 and 32 L

FAF to MAP 4.2 NM					
Knots	60	90	120	150	180
Min:Sec	4:12	2:48	2:06	1:41	1:24



CATEGORY	A	B	C	D
S-32	1260-1	544 (600-1)	1260-1⅝ 544 (600-1⅝)	NA
CIRCLING	1280-1	564 (600-1)	1320-1¾ 604 (700-1¾)	NA

SAULT STE MARIE, MICHIGAN
Amdt 3B 08NOV18

SAULT STE MARIE MUNI/SANDERSON FIELD (ANJ)
46°29′N-84°22′W
VOR RWY 32

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

MT. CLEMENS, MICHIGAN

ILS or LOC/DME RWY 1

LOC I-RFB	APCH CRS	Rwy ldg	9000
110.1	007°	THRE	579
		Arpt Elev	580

AL-276 [USAF]

SELFRIDGE ANGB (KMTC)

* When ALS inop, increase RVR to 50, vis to 1 mile.
** When ALS inop, increase CAT AB RVR to 55 and vis to 1 mile CAT CDE vis to 1⅜ miles.

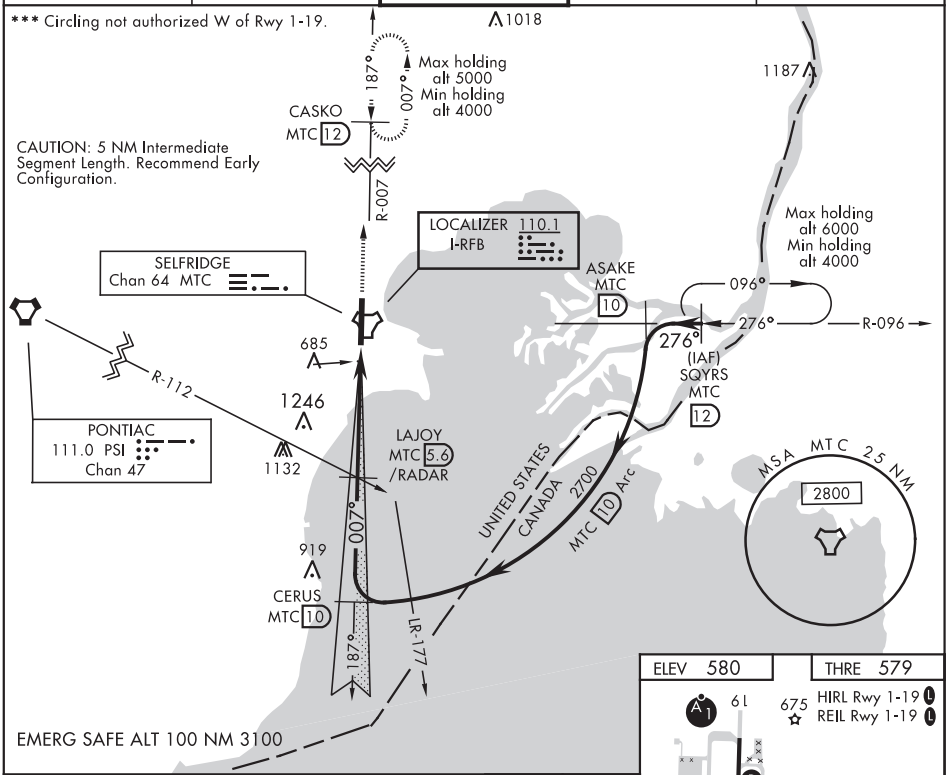
SALS A2

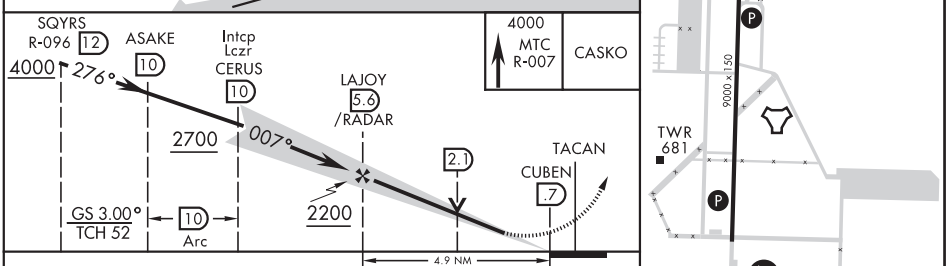
MISSED APPROACH: Climb to 4000 on MTC R-007 to CASKO and hold, continue climb-in-hold to 4000.

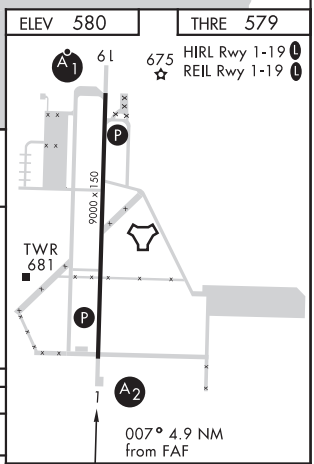
ATIS	SELFRIDGE APP CON	SELFRIDGE TOWER ★	GND CON	CLNC DEL
125.325 270.1	119.6 318.2	120.15 (CTAF) L 225.4	128.3 275.8	128.3 275.8

*** Circling not authorized W of Rwy 1-19.

CAUTION: 5 NM Intermediate Segment Length. Recommend Early Configuration.







CATEGORY	A	B	C	D	E
S-ILS 01*	907/40 328 (400-¾)				
S-LOC 01**	1060/40 481 (500-¾)		1060/60 481 (500-1⅛)		
CIRCLING***	1120-1 541 (600-1)		1120-1½ 541 (600-1½)	1140-2 561 (600-2)	

FAF to MAP 4.9 NM					
Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

MT. CLEMENS, MICHIGAN 42°36′N-82°50′W SELFRIDGE ANGB (KMTC)

Amdt 3 23AUG12

ILS or LOC/DME RWY 1

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

16315

MT. CLEMENS, MICHIGAN

ILS or LOC/DME RWY 19

LOC I-MTC	APCH CRS	Rwy ldg / THRE / Arpt Elev
110.1	187°	9000 / 579 / 580

AL-276 [USAF] SELFRIDGE ANGB (KMTC)

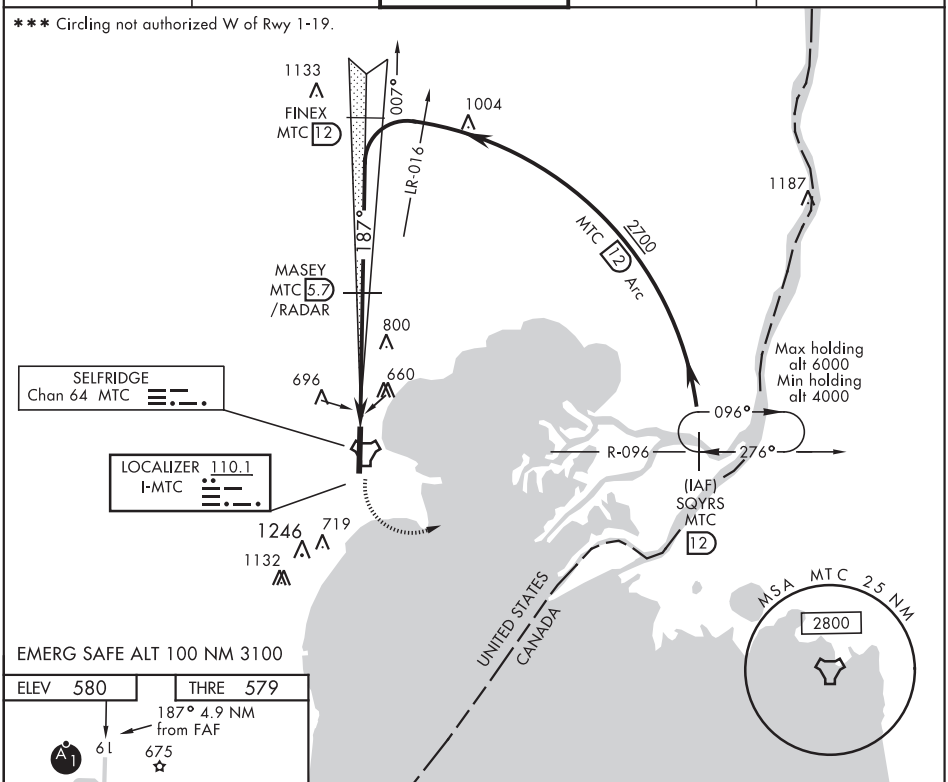
* When ALS inop, increase RVR to 55, vis to 1 mile.
** When ALS inop, increase CAT AB RVR to 55, vis to 1 mile, CAT CDE vis to 1⅜ miles.

ALSF-1

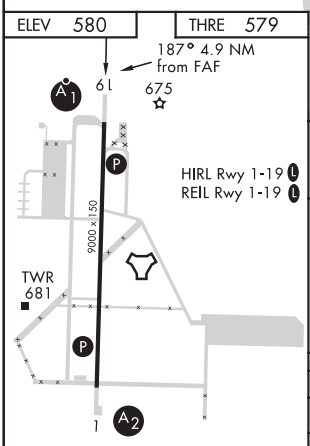
MISSED APPROACH: Climbing left turn to 4000, intercept MTC R-096 to SQYRS and hold, continue climb-in-hold to 4000.

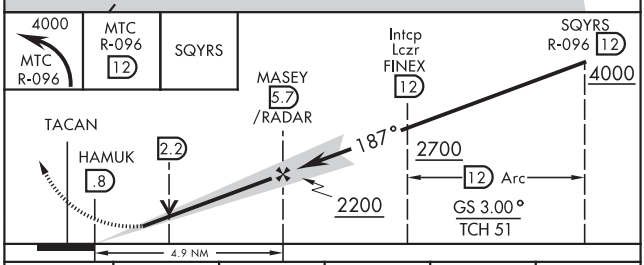
ATIS	SELFRIDGE APP CON	SELFRIDGE TOWER *	GND CON	CLNC DEL
125.325 270.1	119.6 318.2	120.15 (CTAF) L 225.4	128.3 275.8	128.3 275.8

*** Circling not authorized W of Rwy 1-19.



EMERG SAFE ALT 100 NM 3100





FAF to MAP 4.9 NM					
Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

CATEGORY	A	B	C	D	E
S-ILS 19*	923/40 344 (400-¾)				
S-LOC 19**	1080/40 501 (600-¾)		1080/55 501 (600-1)		
CIRCLING ***	1120-1 541 (600-1)		1120-1½ 541 (600-1½)	1140-2 561 (600-2)	

MT. CLEMENS, MICHIGAN 42°36′N-82°50′W SELFRIDGE ANGB (KMTC)

Amdt 3 23AUG12

ILS or LOC/DME RWY 19

EC-1, 25 FEB 2021 to 22 APR 2021

MT. CLEMENS, MICHIGAN

TACAN RWY 1

TACAN MTC Chan 64	APCH CRS 018°	Rwy ldg 9000 THRE 579 Arpt Elev 580

AL-276 [USAF]

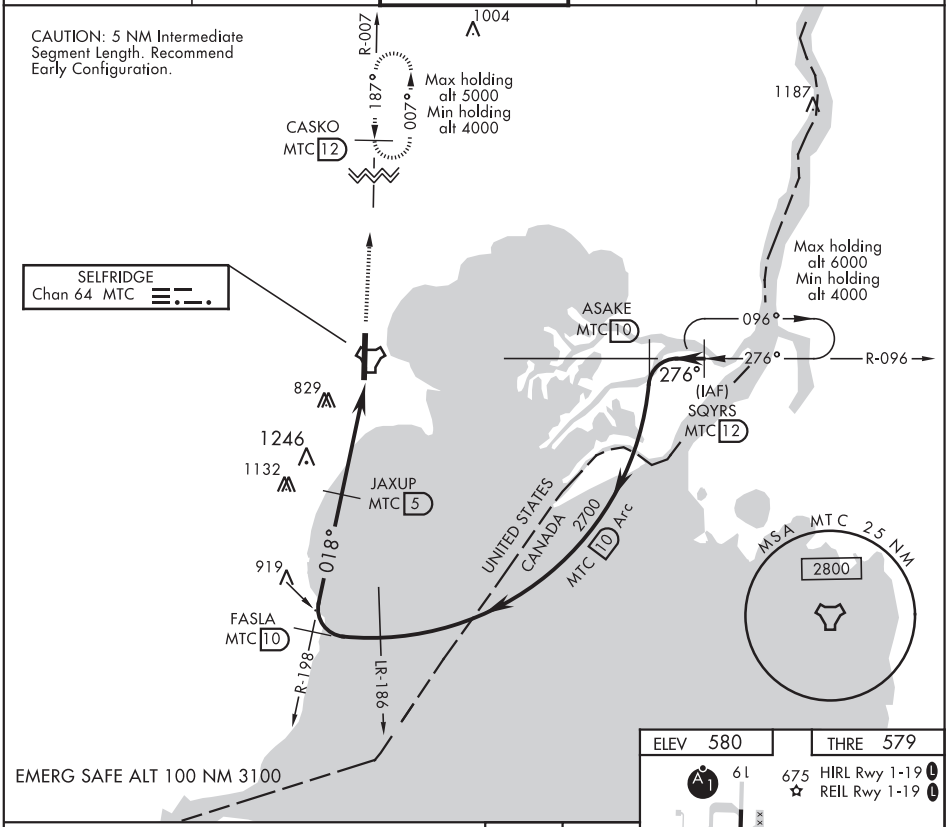
SELFRIDGE ANGB (KMTC)

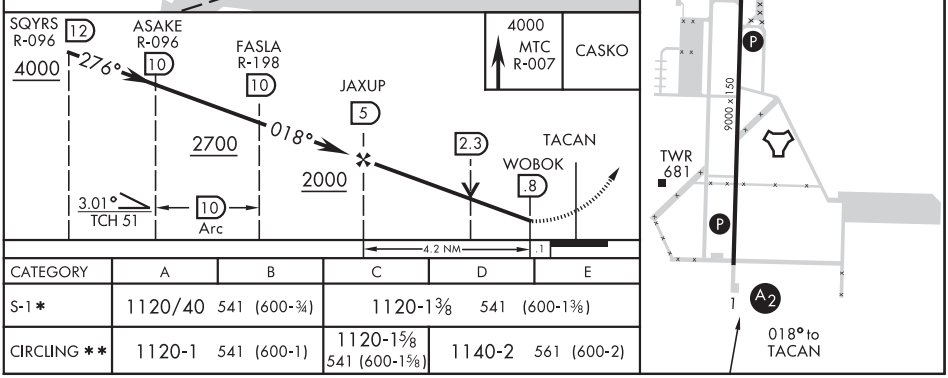
* When ALS inop, increase CAT AB RVR to 55, vis to 1 mile, CAT CDE vis to 1⅝ miles.
** Circling not authorized W of Rwy 1-19.

SALS A2

MISSED APPROACH: Climb to 4000 on MTC R-007 to CASKO and hold, continue climb-in-hold to 4000.

ATIS	SELFRIDGE APP CON	SELFRIDGE TOWER *	GND CON	CLNC DEL
125.325 270.1	119.6 318.2	120.15 (CTAF) L 225.4	128.3 275.8	128.3 275.8





CATEGORY	A	B	C	D	E
S-1*	1120/40 541 (600-¾)		1120-1⅜ 541 (600-1⅜)		
CIRCLING**	1120-1 541 (600-1)		1120-1⅝ 541 (600-1⅝)	1140-2 561 (600-2)	

MT. CLEMENS, MICHIGAN 42°36′N-82°50′W SELFRIDGE ANGB (KMTC)

Amdt 3 23AUG12

TACAN RWY 1

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

16315

MT. CLEMENS, MICHIGAN

TACAN RWY 19

TACAN MTC Chan 64	APCH CRS 177°	Rwy ldg 9000 THRE 579 Arpt Elev 580

AL-276 [USAF]

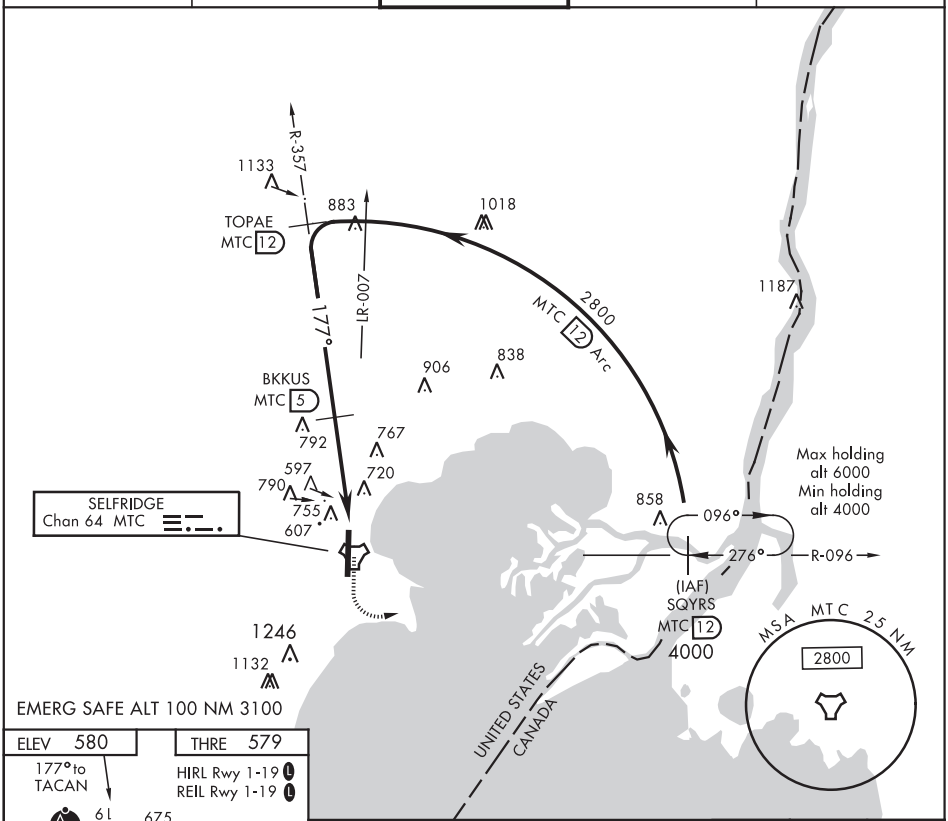
SELFRIDGE ANGB (KMTC)

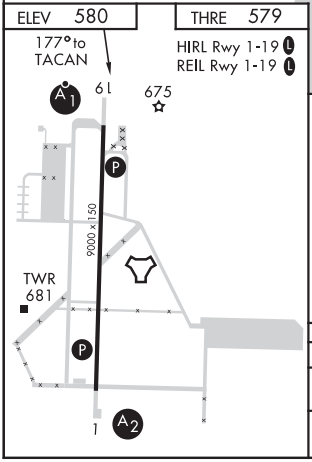
T * When ALS inop, increase CAT AB RVR to 55, vis to 1 mile, CAT CDE vis to 1½ miles.
** Circling not authorized W of Rwy 1-19.

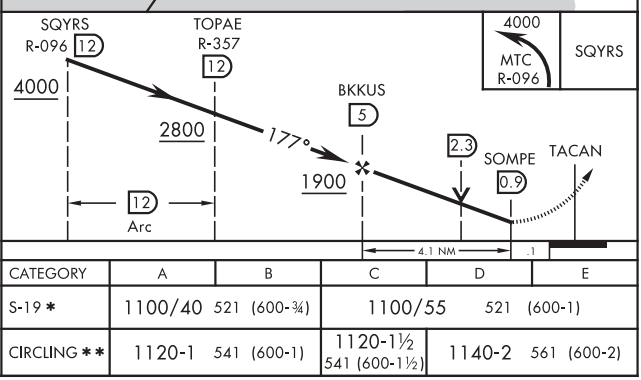
ALSF-1

MISSED APPROACH: Climbing left turn to 4000, intercept MTC R-096 to SQYRS and hold, continue climb-in-hold to 4000.

ATIS	SELFRIDGE APP CON	SELFRIDGE TOWER *	GND CON	CLNC DEL
125.325 270.1	119.6 318.2	120.15 (CTAF) L 225.4	128.3 275.8	128.3 275.8







CATEGORY	A	B	C	D	E
S-19 *	1100/40 521 (600-¾)		1100/55 521 (600-1)		
CIRCLING **	1120-1 541 (600-1)		1120-1½ 541 (600-1½)	1140-2 561 (600-2)	

MT. CLEMENS, MICHIGAN

42°36′N-82°50′W

SELFRIDGE ANGB (KMTC)

Amdt 3 23AUG12

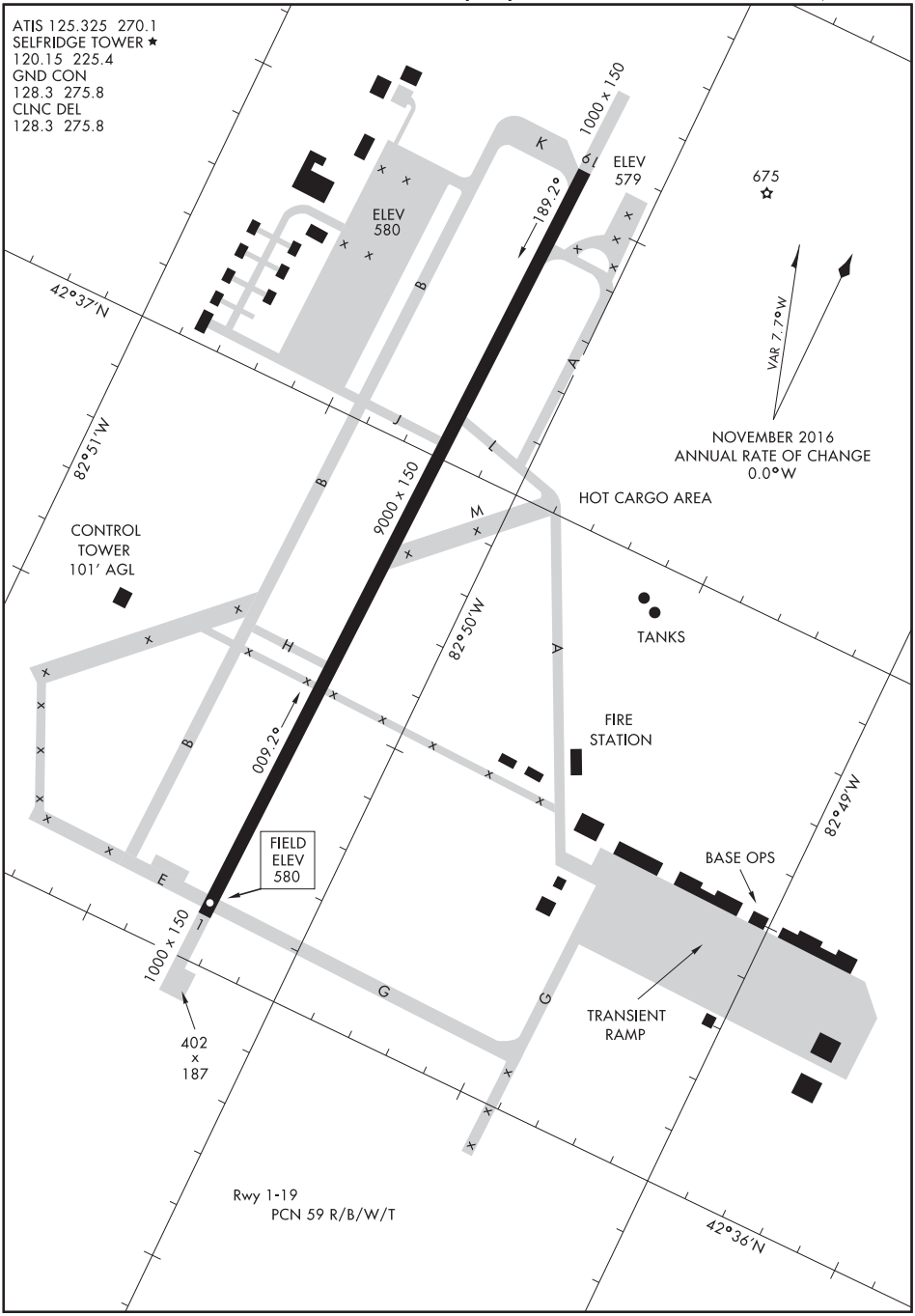
TACAN RWY 19

EC-1, 25 FEB 2021 to 22 APR 2021

AIRPORT DIAGRAM

AFD-276 [USAF]

SELFRIDGE ANGB (KMTC)
MT. CLEMENS, MICHIGAN



EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

AIRPORT DIAGRAM

MT. CLEMENS, MICHIGAN
SELFRIDGE ANGB (KMTC)

(BARII2.BARII) 19227

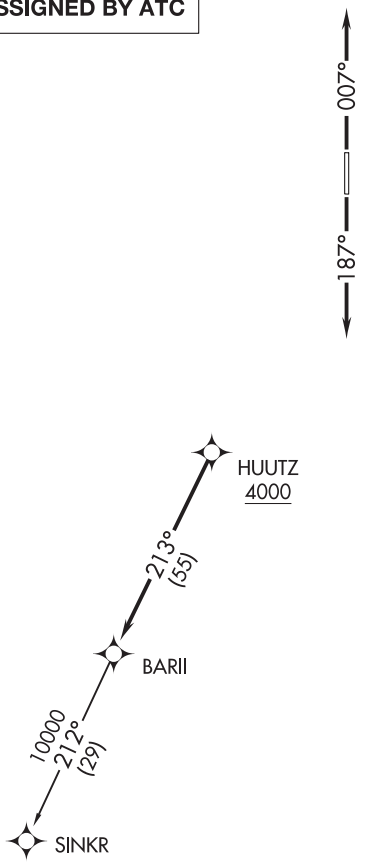
BARII TWO DEPARTURE (RNAV)

AL-276 (FAA)

SELFRIDGE ANGB (MTC)
MOUNT CLEMENS, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
125.325 270.1
CLNC DEL
128.3 275.8
GND CON
128.3 275.8
SELFRIDGE TOWER ★
120.15 225.4
SELFRIDGE DEP CON
119.6 391.9



TAKEOFF MINIMUMS:
Rwy 1: Standard.
Rwy 19: Standard with minimum climb of 234′ per NM to 1500.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 1: Climb on heading 007° or as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....
TAKEOFF RUNWAY 19: Climb on heading 187° or as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....

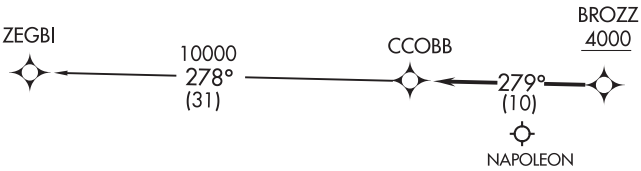
....on track 213° to BARII, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

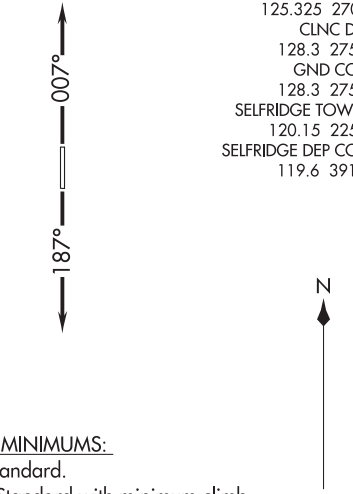
SINKR TRANSITION (BARII2.SINKR):

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: For use by aircraft filed at or below FL220, or as assigned by ATC.
NOTE: CAUTION: Parachute jumping 6 NM SW of BROZZ, 3 NM radius of Napoleon Airport (3NP) at or below 17999 (SR-SS).

ATIS
125.325 270.1
CLNC DEL
128.3 275.8
GND CON
128.3 275.8
SELFRIDGE TOWER ★
120.15 225.4
SELFRIDGE DEP CON
119.6 391.9





TAKEOFF MINIMUMS:
Rwy 1: Standard.
Rwy 19: Standard with minimum climb of 234′ per NM to 1500.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 1: Climb on heading 007° or as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 19: Climb on heading 187° or as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....

....on track 279° to CCOBB, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ZEGBI TRANSITION (CCOBB2.ZEGBI):

(CLVIN2.CLVIN) 19227

CLVIN TWO DEPARTURE (RNAV)

AL-276 (FAA)

SELFRIDGE ANGB (MTC)
MOUNT CLEMENS, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

007°
187°

ATIS
125.325 270.1
CLNC DEL
128.3 275.8
GND CON
128.3 275.8
SELFRIDGE TOWER ★
120.15 225.4
SELFRIDGE DEP CON
119.6 391.9

TAKEOFF MINIMUMS:
Rwy 1: Standard.
Rwy 19: Standard with minimum climb of 234′ per NM to 1500.

PHAUL
4000
206°
(20)
CLVIN
10000
206°
(35)
TFTUN
10000
206°
(35)
RINTE
10000
190°
(10)
PUUDL
10000
190°
(71)
STAZE

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 1: Climb on heading 007° or as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 19: Climb on heading 187° or as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....

....on track 206° to CLVIN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

STAZE TRANSITION (CLVIN2.STAZE):

EC-1, 25 FEB 2021 to 22 APR 2021

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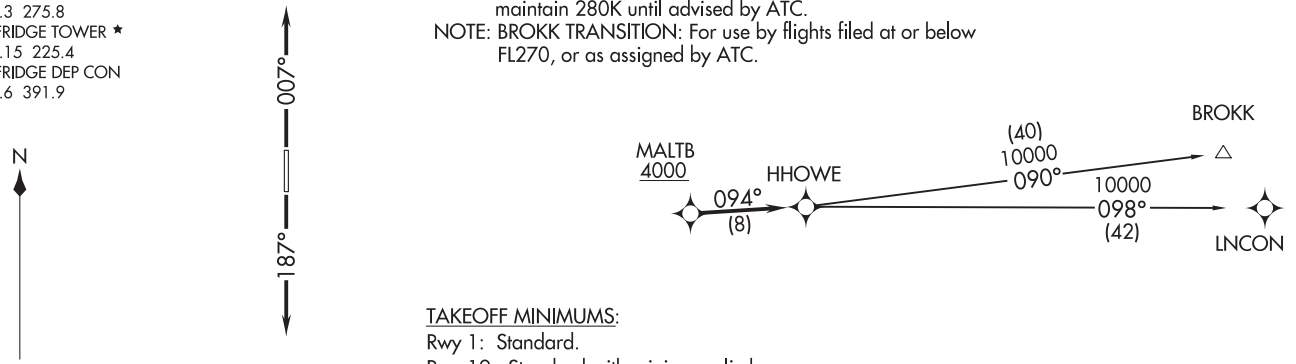
CLVIN TWO DEPARTURE (RNAV)
(CLVIN2.CLVIN) 15AUG19

MOUNT CLEMENS, MICHIGAN
SELFRIDGE ANGB (MTC)

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
125.325 270.1
CLNC DEL
128.3 275.8
GND CON
128.3 275.8
SELFRIDGE TOWER ★
120.15 225.4
SELFRIDGE DEP CON
119.6 391.9

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: BROKK TRANSITION: For use by flights filed at or below FL270, or as assigned by ATC.



TAKEOFF MINIMUMS:
Rwy 1: Standard.
Rwy 19: Standard with minimum climb of 234′ per NM to 1500.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 1: Climb on heading 007° or as assigned for RADAR vectors to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 19: Climb on heading 187° or as assigned for RADAR vectors to cross MALTB at or above 4000, thence....

....on track 094° to HHOWE, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

BROKK TRANSITION (HHOWE3.BROKK)
LNCON TRANSITION (HHOWE3.LNCON)

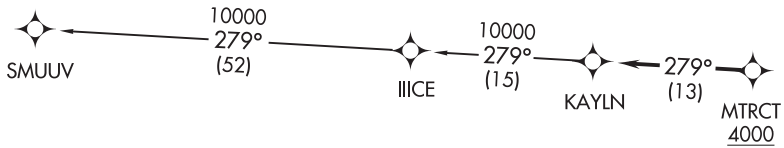
KAYLN TWO DEPARTURE (RNAV)

(KAYLN2.KAYLN) 15AUG19

MOUNT CLEMENS, MICHIGAN
SELFRIDGE ANGB (MTC)

TOP ALTITUDE: ASSIGNED AT ATC

TAKEOFF MINIMUMS:
Rwy 1: Standard.
Rwy 19: Standard with minimum climb of 234′ per NM to 1500.



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

ATIS
125.325 270.1
CLNC DEL
128.3 275.8
GND CON
128.3 275.8
SELFRIDGE TOWER ★
120.15 225.4
SELFRIDGE DEP CON
119.6 391.9

NOTE: Chart not to scale.

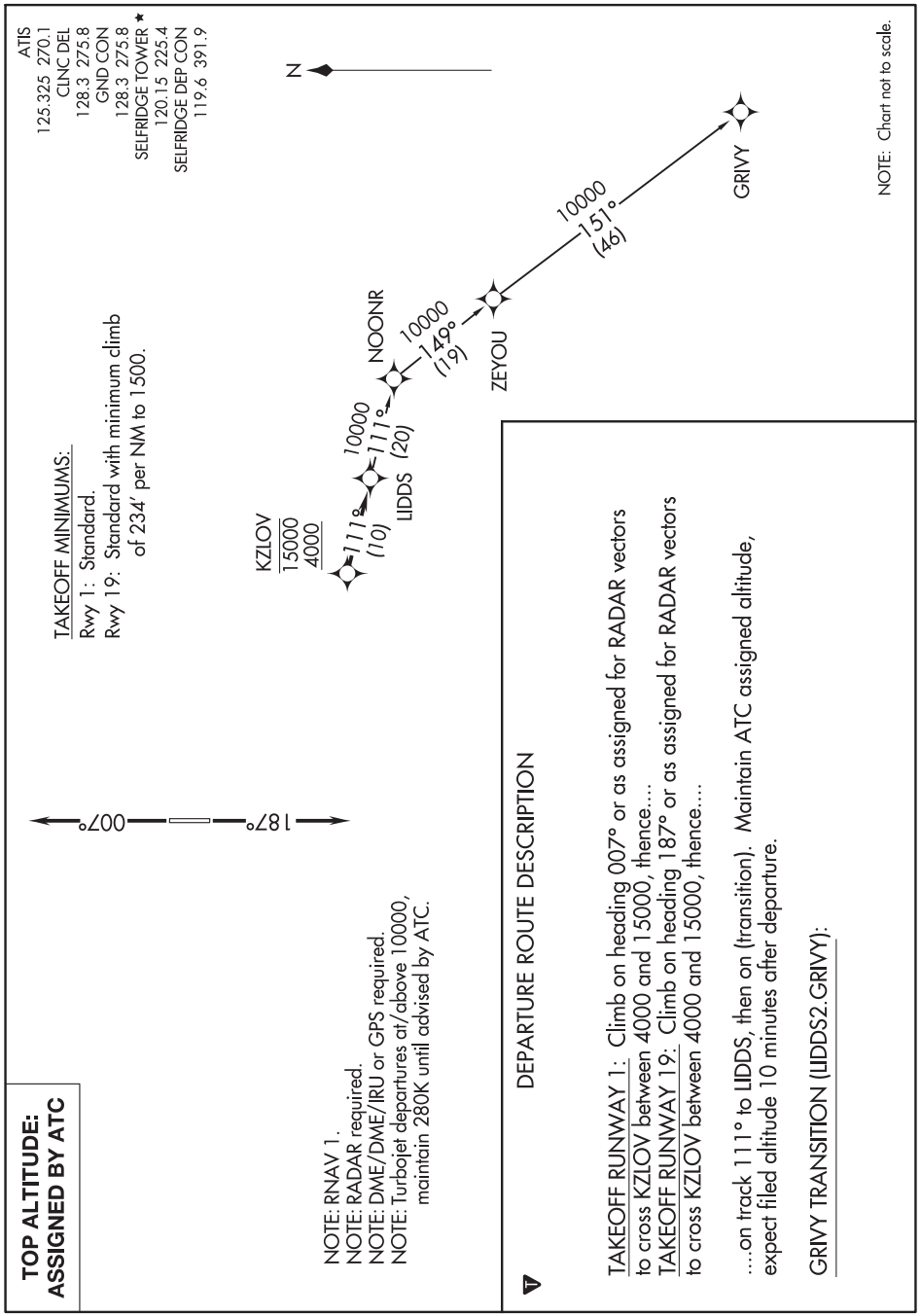
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 1: Climb on heading 007° or as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....
TAKEOFF RUNWAY 19: Climb on heading 187° or as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....

....on track 279° to KAYLN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

SMUUV TRANSITION (KAYLN2.SMUUV):

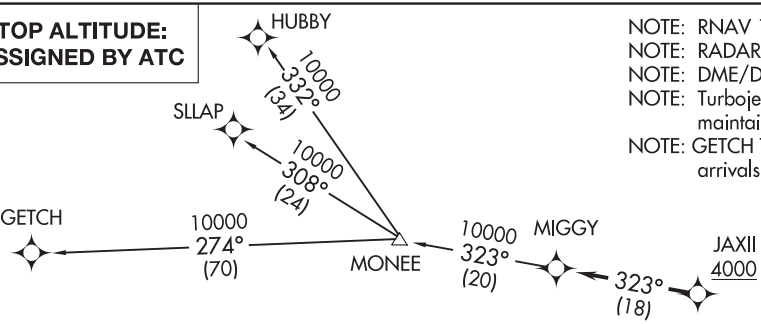
(KAYLN2.KAYLN) 19227
KAYLN TWO DEPARTURE (RNAV)
AL-276 (FAA)
SELFRIDGE ANGB (MTC)
MOUNT CLEMENS, MICHIGAN

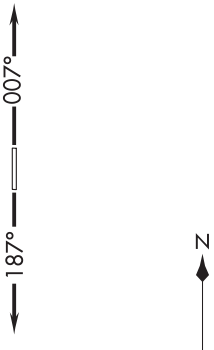

ATIS
125.325 270.1
CLNC DEL
128.3 275.8
GND CON
128.3 275.8
SELFRIDGE TOWER ★
120.15 225.4
SELFRIDGE DEP CON
119.6 391.9
N
TAKEOFF MINIMUMS:
Rwy 1: Standard.
Rwy 19: Standard with minimum climb of 234′ per NM to 1500.
KZLOV
15000
4000
111°
(10)
10000
111°
(20)
LIDDS
NOONR
10000
149°
(19)
ZEYOU
10000
151°
(46)
GRIVY
NOTE: Chart not to scale.
007°
187°
TOP ALTITUDE: ASSIGNED BY ATC
NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
DEPARTURE ROUTE DESCRIPTION
TAKEOFF RUNWAY 1: Climb on heading 007° or as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAY 19: Climb on heading 187° or as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....
....on track 111° to LIDDS, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.
GRIVY TRANSITION (LIDDS2.GRIVY):

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: GETCH TRANSITION: For use by KMKE area arrivals only, or as assigned by ATC.

ATIS
125.325 270.1
CLNC DEL
128.3 275.8
GND CON
128.3 275.8
SELFRIDGE TOWER ★
120.15 225.4
SELFRIDGE DEP CON
119.6 391.9





DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 1: Climb on heading 007° or as assigned for RADAR vectors to cross JAXII at or above 4000, thence....
TAKEOFF RUNWAY 19: Climb on heading 187° or as assigned for RADAR vectors to cross JAXII at or above 4000, thence....

....on track 323° to MIGGY, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GETCH TRANSITION (MIGGY2.GETCH):
HUBBY TRANSITION (MIGGY2.HUBBY):
SLLAP TRANSITION (MIGGY2.SLLAP):

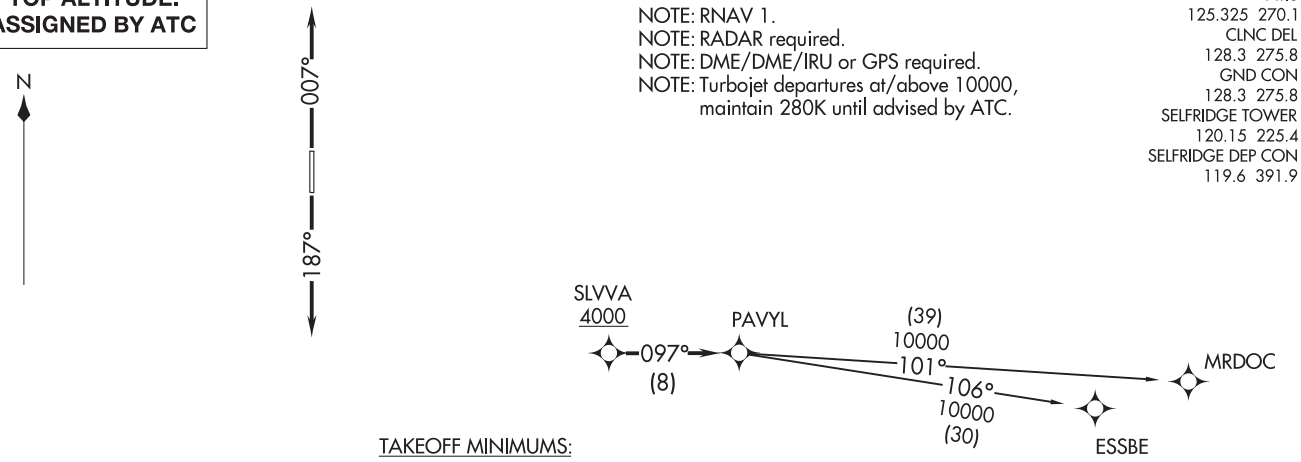
TAKEOFF MINIMUMS:
Rwy 1: Standard.
Rwy 19: Standard with minimum climb of 234′ per NM to 1500.

NOTE: Chart not to scale.

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

ATIS
125.325 270.1
CLNC DEL
128.3 275.8
GND CON
128.3 275.8
SELFRIDGE TOWER ★
120.15 225.4
SELFRIDGE DEP CON
119.6 391.9



TAKEOFF MINIMUMS:
Rwy 1: Standard.
Rwy 19: Standard with minimum climb of 234′ per NM to 1500.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 1: Climb on heading 007° or as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 19: Climb on heading 187° or as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....

....on track 097° to PAVYL, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ESSBE TRANSITION (PAVYL2.ESSBE):
MRDOC TRANSITION (PAVYL2.MRDOC):

(SNDRS2.SNDRS) 19227

SNDRS TWO DEPARTURE (RNAV)

AL-276 (FAA)

SELFRIDGE ANGB (MTC)
MOUNT CLEMENS, MICHIGAN

ATIS 125.325 270.1
CLNC DEL 128.3 275.8
GND CON 128.3 275.8
SELFRIDGE TOWER ★ 120.15 225.4
SELFRIDGE DEP CON 119.6 391.9

TOP ALTITUDE: ASSIGNED BY ATC

N

007° — 187°

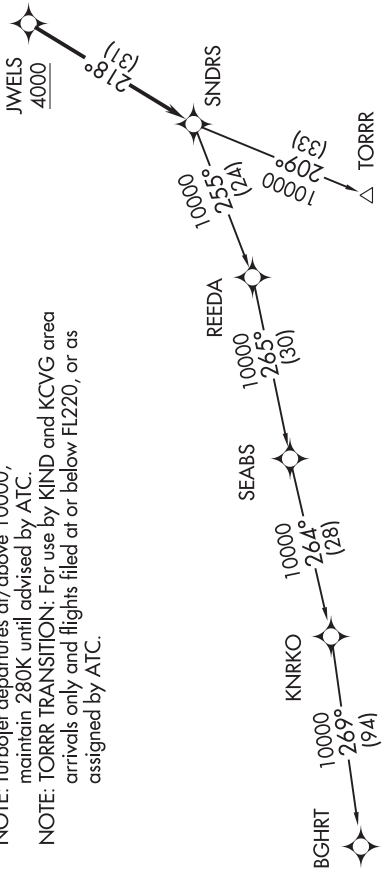
DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 1: Climb on heading 007° or as assigned for RADAR vectors to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAY 19: Climb on heading 187° or as assigned for RADAR vectors to cross JWELS at or above 4000, thence....

....on track 218° to SNDRS, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

BGHRT TRANSITION (SNDRS2.BGHRT):
TORRR TRANSITION (SNDRS2.TORRR):

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TORRR TRANSITION: For use by KIND and KCVG area arrivals only and flights filed at or below FL220, or as assigned by ATC.



TAKEOFF MINIMUMS:
Rwy 1: Standard.
Rwy 19: Standard with minimum climb of 234' per NM to 1500.

NOTE: Chart not to scale.

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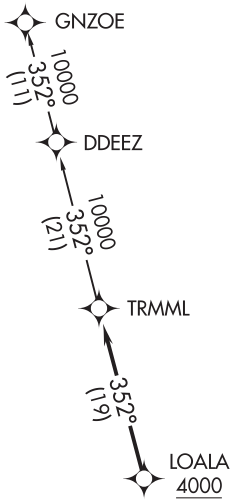
SNDRS TWO DEPARTURE (RNAV)

(SNDRS2.SNDRS) 15AUG19

MOUNT CLEMENS, MICHIGAN
SELFRIDGE ANGB (MTC)

TOP ALTITUDE: ASSIGNED BY ATC

ATIS
125.325 270.1
CLNC DEL
128.3 275.8
GND CON
128.3 275.8
SELFRIDGE TOWER ★
120.15 225.4
SELFRIDGE DEP CON
119.6 391.9



TAKEOFF MINIMUMS:
Rwy 1: Standard.
Rwy 19: Standard with minimum climb of 234′ per NM to 1500.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 1: Climb on heading 007° or as assigned for RADAR vectors to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 19: Climb on heading 187° or as assigned for RADAR vectors to cross LOALA at or above 4000, thence....

....on track 352° to TRMML, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GNZOE TRANSITION (TRMML3.GNZOE):

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(ZETTR3.ZETTR) 19339

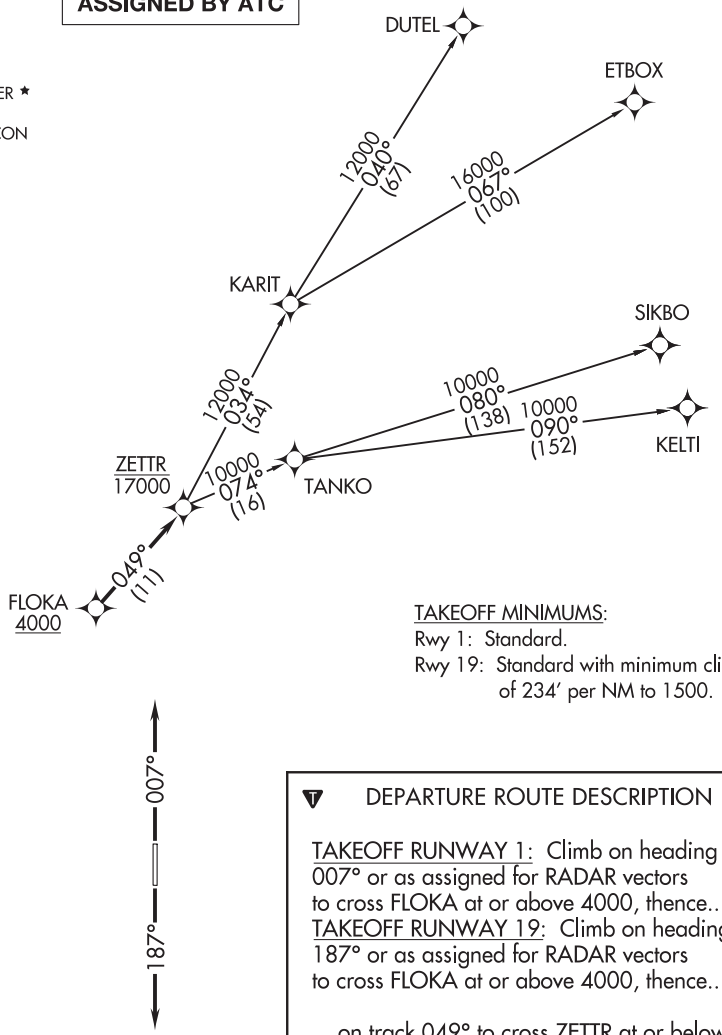
ZETTR THREE DEPARTURE (RNAV)

AL-276 (FAA)

SELFRIDGE ANGB (MTC)
MOUNT CLEMENS, MICHIGAN

ATIS
125.325 270.1
CLNC DEL
128.3 275.8
GND CON
128.3 275.8
SELFRIDGE TOWER ★
120.15 225.4
SELFRIDGE DEP CON
119.6 391.9

TOP ALTITUDE: ASSIGNED BY ATC



TAKEOFF MINIMUMS:
Rwy 1: Standard.
Rwy 19: Standard with minimum climb of 234′ per NM to 1500.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 1: Climb on heading 007° or as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 19: Climb on heading 187° or as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....

....on track 049° to cross ZETTR at or below 17000, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

DUTEL TRANSITION (ZETTR3.DUTEL):
ETBOX TRANSITION (ZETTR3.ETBOX):
KELTI TRANSITION (ZETTR3.KELTI):
SIKBO TRANSITION (ZETTR3.SIKBO):
TANKO TRANSITION (ZETTR3.TANKO):

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TANKO TRANSITION: For use by CYYZ area arrivals only, or as assigned by ATC.

NOTE: Chart not to scale.

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APP CRS	Rwy ldg	4801
047°	TDZE	659
	Apt Elev	666

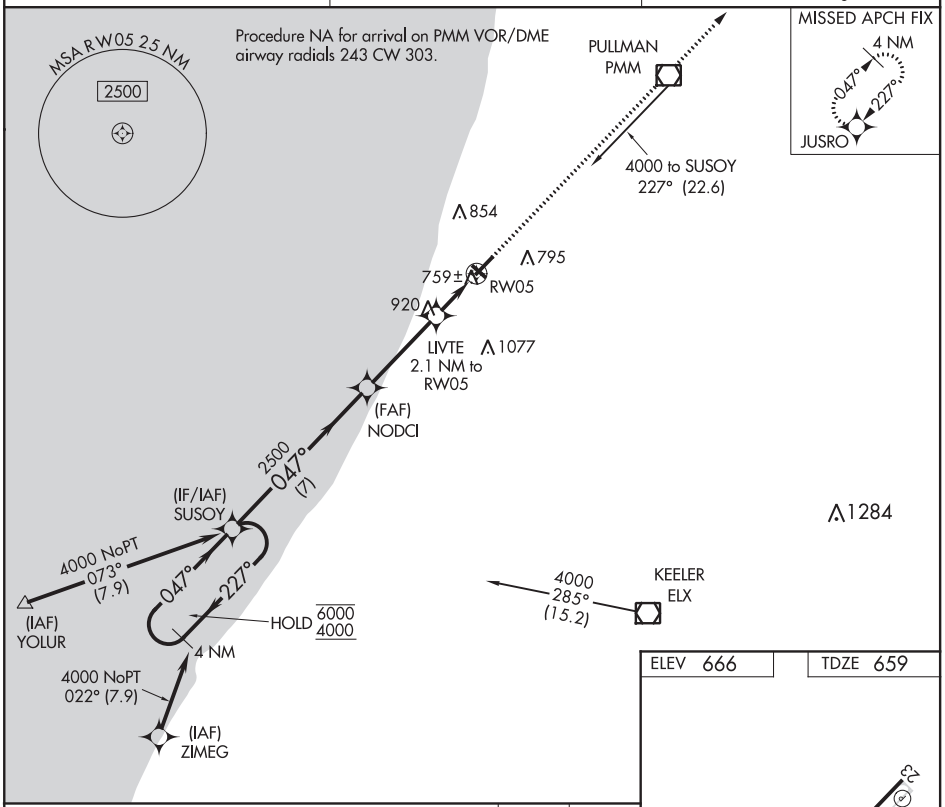
RNAV (GPS) RWY 5
SOUTH HAVEN AREA RGNL (LWA)

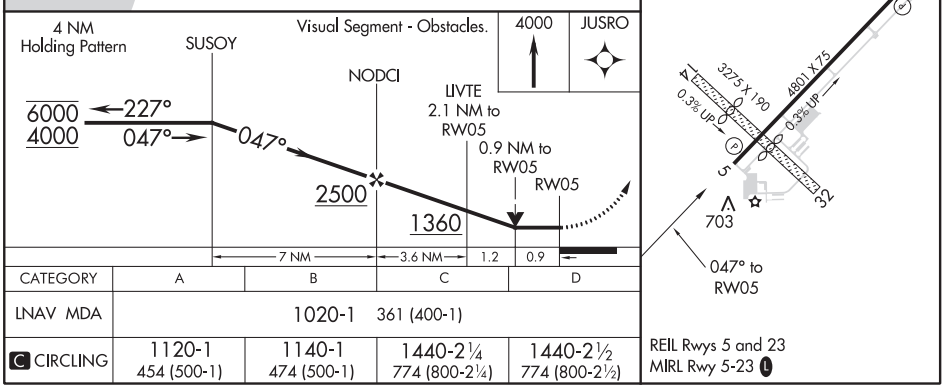
RNP APCH.

Circling NA to Rwys 14 and 32.
Rwy 5 helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climb to 4000 direct JUSRO and hold, continue climb-in-hold to 4000.

AWOS-3	SOUTH BEND APP CON ★	UNICOM
118.025	118.55 257.8	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1020-1 361 (400-1)			
C CIRCLING	1120-1 454 (500-1)	1140-1 474 (500-1)	1440-2¼ 774 (800-2¼)	1440-2½ 774 (800-2½)

REIL Rwys 5 and 23
MIRL Rwy 5-23 L

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EC-1, 25 FEB 2021 to 22 APR 2021

SOUTH HAVEN, MICHIGAN — AL-5472 (FAA) — 20310

APP CRS	Rwy ldg	4801
227°	TDZE	666
	Apt Elev	666

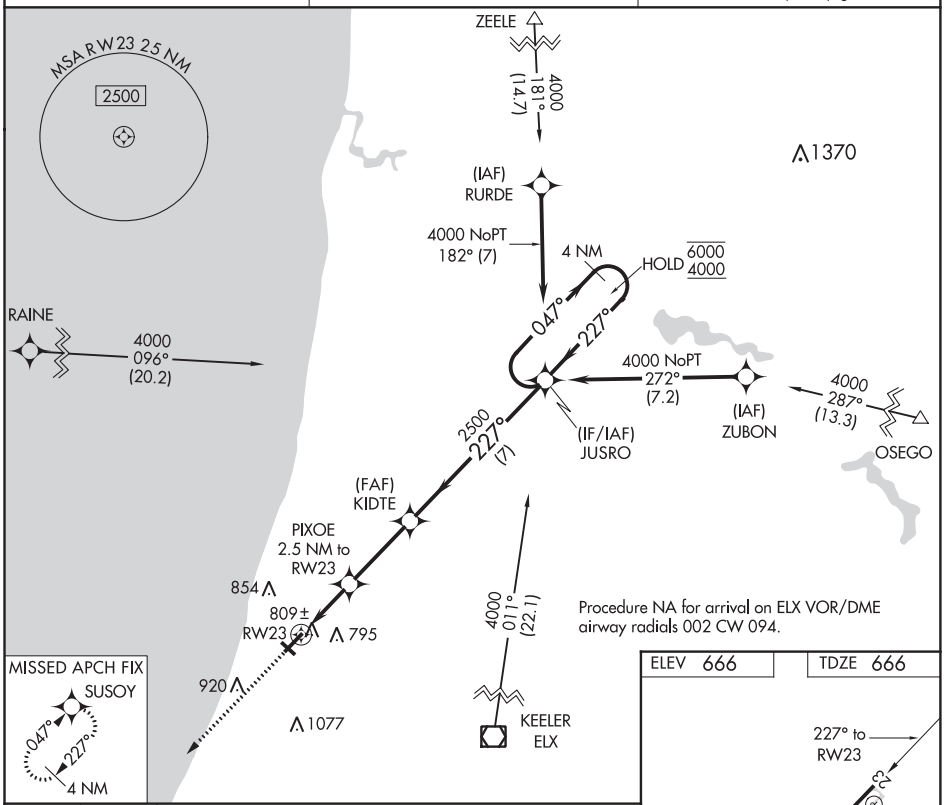
RNAV (GPS) RWY 23
SOUTH HAVEN AREA RGNL (LWA)

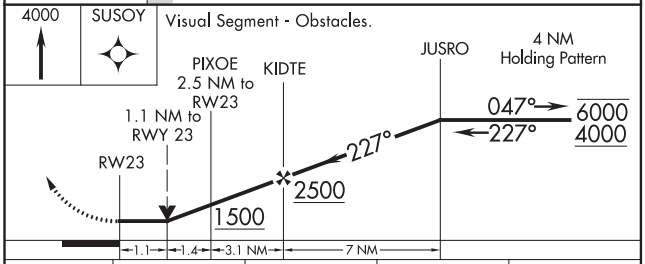
RNP APCH.

Circling NA to Rwys 14 and 32.
Rwy 23 helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climb to 4000 direct SUSOY and hold. Continue climb-in-hold to 4000.

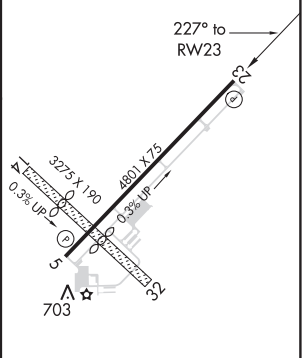
AWOS-3	SOUTH BEND APP CON ★	UNICOM
118.025	118.55 257.8	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1060-1 394 (400-1)		1060-1⅛ 394 (400-1⅛)	
C CIRCLING	1120-1 454 (500-1)	1140-1 474 (500-1)	1440-2¼ 774 (800-2¼)	1440-2½ 774 (800-2½)

ELEV 666 — TDZE 666



REIL Rwys 5 and 23
MIRL Rwy 5-23 L

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EC-1, 25 FEB 2021 to 22 APR 2021

APP CRS	Rwy ldg	4032
066°	TDZE	775
	Apt Elev	775

RNAV (GPS) RWY 7

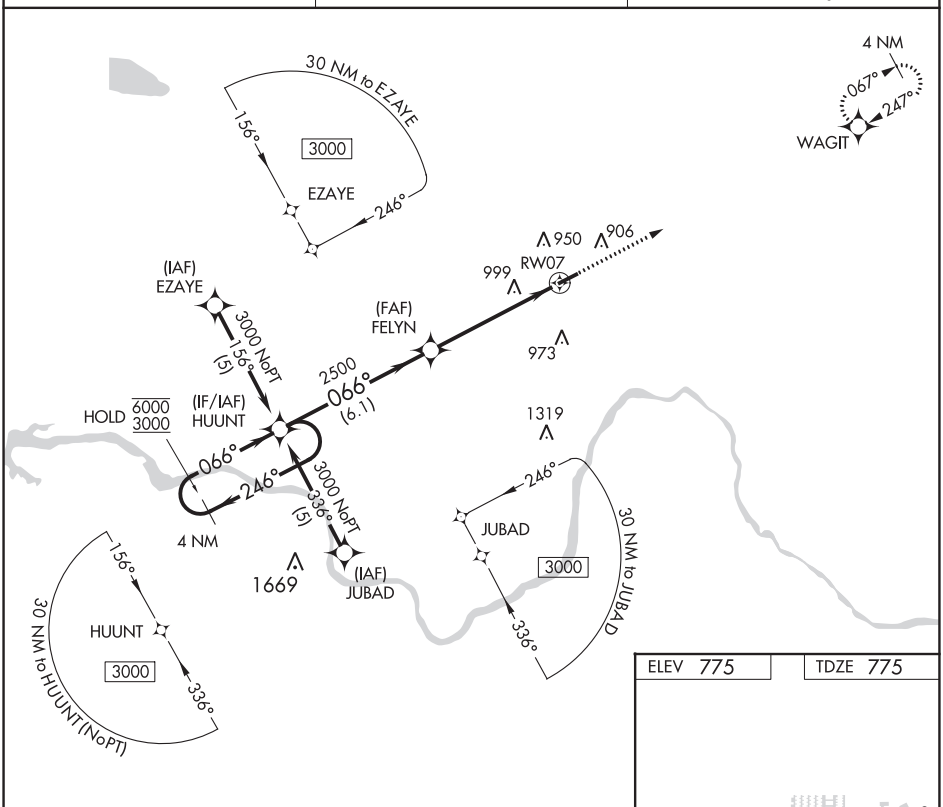
PAUL C MILLER - SPARTA (8D4)

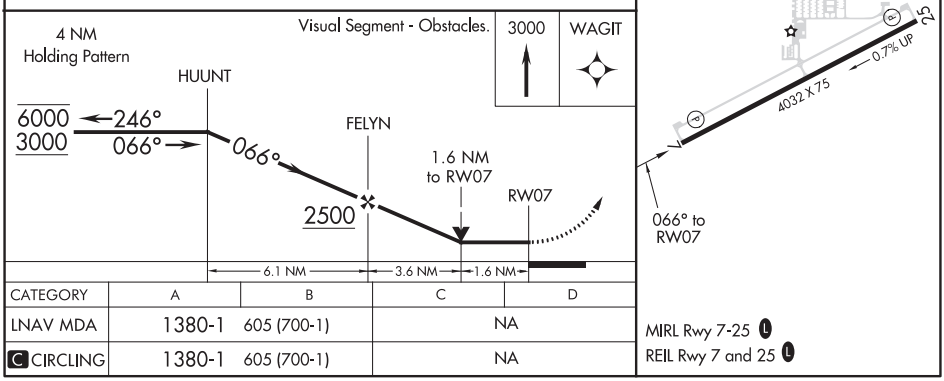
RNP APCH.

Rwy 7 helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Grand Rapids altimeter setting. VDP NA when using Grand Rapids altimeter setting.

MISSED APPROACH: Climb to 3000 direct WAGIT and hold.

AWOS-AV	GREAT LAKES APP CON ★	UNICOM
132.95	124.6 257.6	122.8 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1380-1 605 (700-1)		NA	
C CIRCLING	1380-1 605 (700-1)		NA	

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EC-1, 25 FEB 2021 to 22 APR 2021

SPARTA, MICHIGAN | AL-6186 (FAA) | 20366

RNAV (GPS) RWY 25

PAUL C MILLER - SPARTA (8D4)

APP CRS	Rwy ldg	4032
247°	TDZE	764
	Apt Elev	775

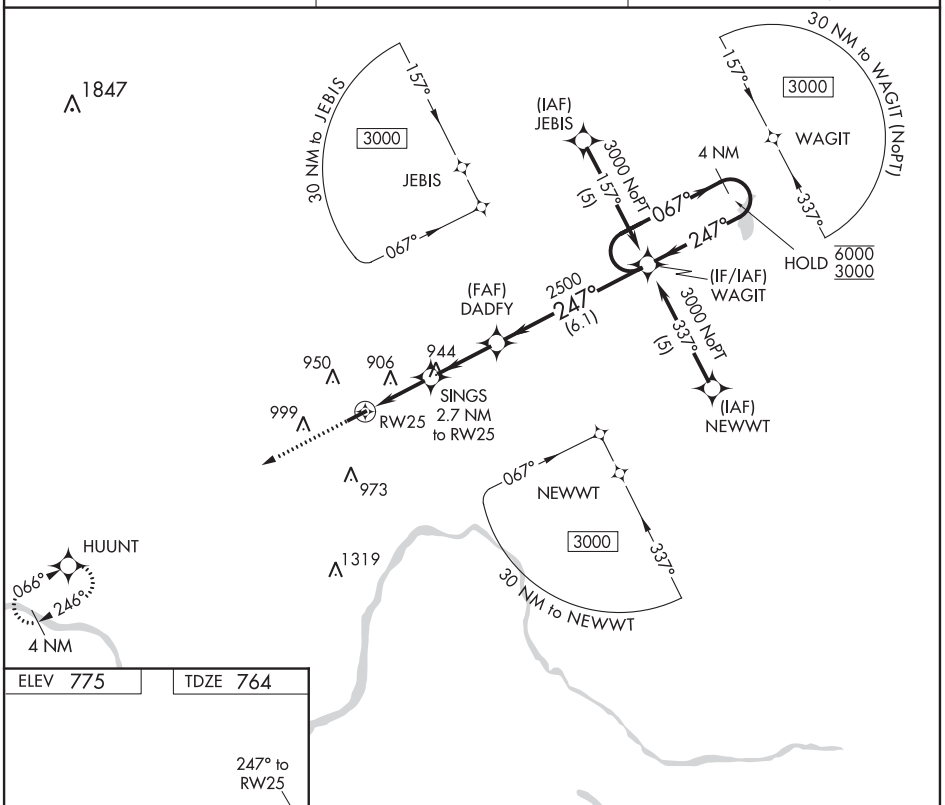
RNP APCH.

Rwy 25 helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Grand Rapids altimeter setting. VDP NA when using Grand Rapids altimeter setting.

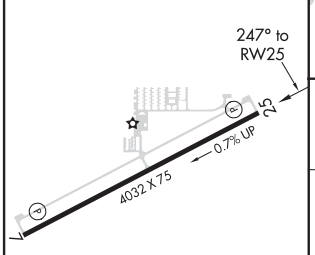
NA

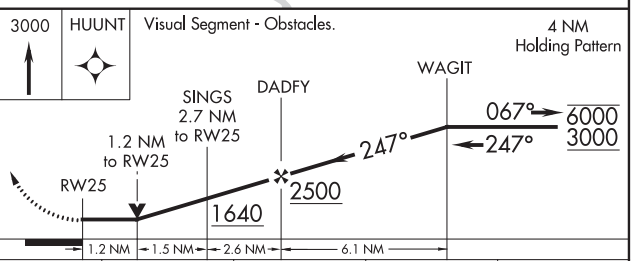
MISSED APPROACH: Climb to 3000 direct HUUNT and hold.

AWOS-AV	GREAT LAKES APP CON ★	UNICOM
132.95	124.6 257.6	122.8 (CTAF) L



ELEV 775 | TDZE 764





CATEGORY	A	B	C	D
LNAV MDA	1240-1 476 (500-1)		NA	
C CIRCLING	1300-1 525 (600-1)	1340-1 565 (600-1)	NA	

MIRL Rwy 7-25 L

REIL Rwy 7 and 25 L

EC-1, 25 FEB 2021 to 22 APR 2021

EC-1, 25 FEB 2021 to 22 APR 2021

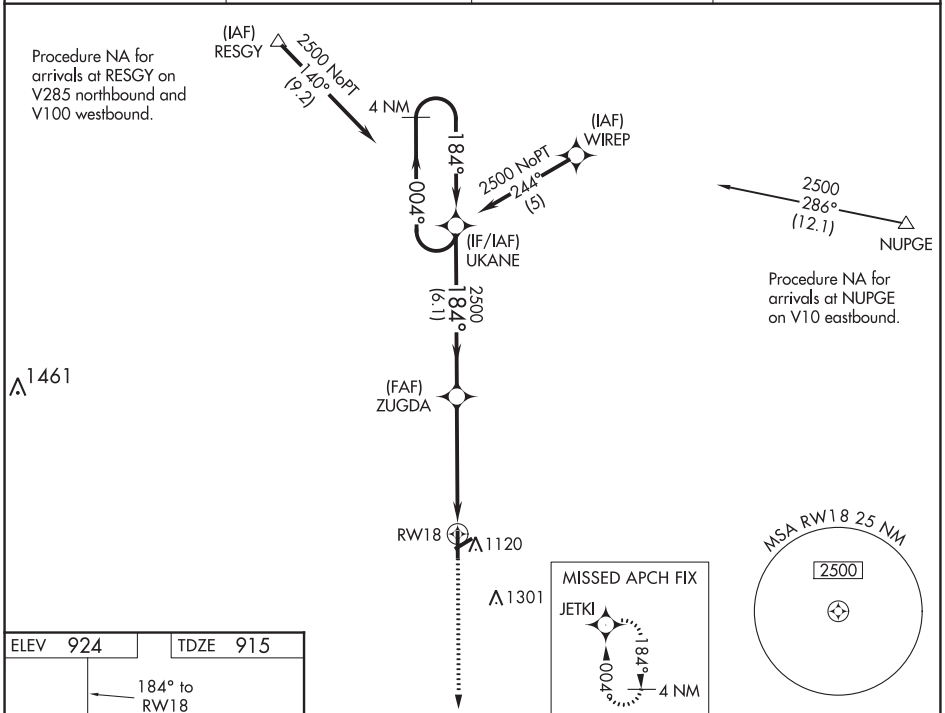
WAAS CH 90230 W18A	APP CRS 184°	Rwy ldg 5201 TDZE 915 Apt Elev 924

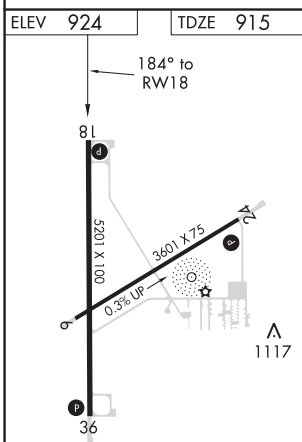
RNAV (GPS) RWY 18
KIRSCH MUNI (IRS)

Circling to Rwy 6, 24 NA at night. Baro-VNAV NA. When VGSI inop, Straight-In/Circling Rwy 18 procedure NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Three Rivers altimeter setting and increase all DA/MDA 40 feet; increase LPV visibility all Cats and LNAV Cat C and D ⅛ mile, increase LNAV/VNAV vis all Cats ¼ mile.

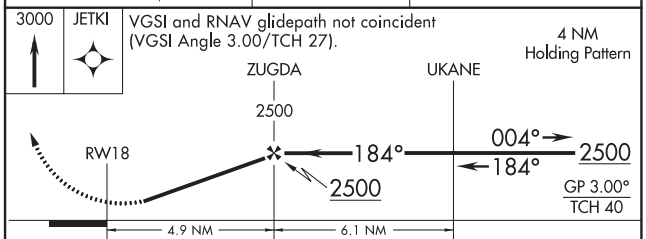
MISSED APPROACH: Climb to 3000 direct JETKI and hold.

AWOS-3	GREAT LAKES APP CON ★	CLNC DEL	UNICOM
121.325	121.2 239.25	118.325	123.05 (CTAF) L





REIL Rwys 18, 24 and 36 L
MIRL Rwys 6-24 and 18-36 L



CATEGORY		A	B	C	D
LPV	DA	1235-1⅛ 320 (400-1⅛)			
LNAV/VNAV	DA	1229-1 314 (300-1)			
LNAV MDA		1400-1 485 (500-1)		1400-1⅜ 485 (500-1⅜)	
CIRCLING		1440-1 516 (600-1)		1440-1½ 516 (600-1½)	1620-2¼ 696 (700-2¼)

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EC-1, 25 FEB 2021 to 22 APR 2021

STURGIS, MICHIGAN AL-5362 (FAA) 19171

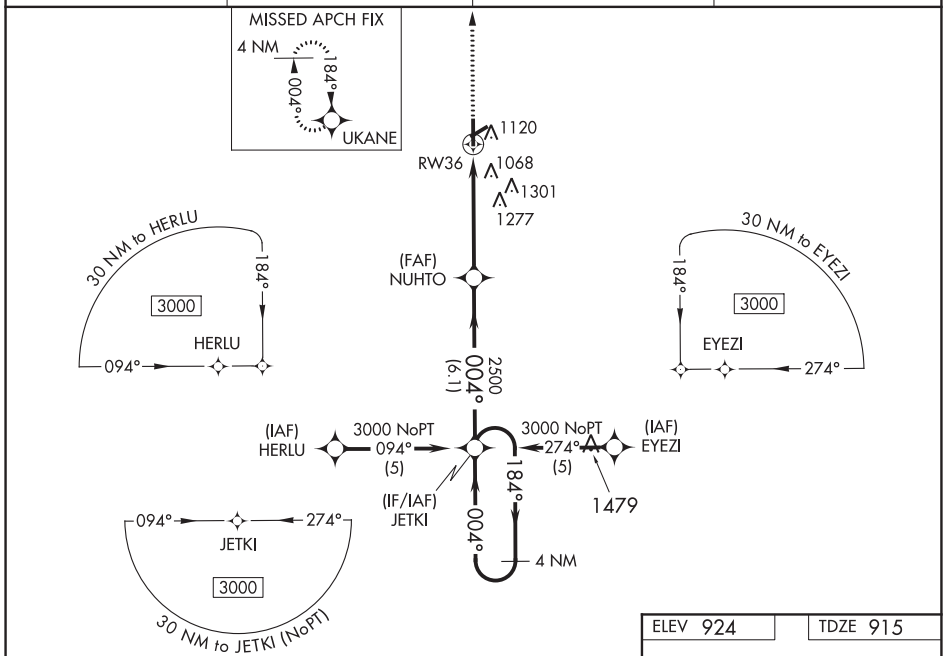
WAAS CH 42915 W36A	APP CRS 004°	Rwy ldg 5201 TDZE 915 Apt Elev 924

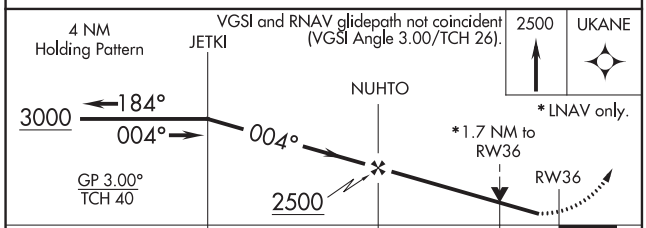
RNAV (GPS) RWY 36
KIRSCH MUNI (IRS)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Three Rivers altimeter setting and increase all DA/MDA 40 feet, increase LNAV/VNAV all Cats and LNAV Cat C/D visibility ¼ mile. VDP NA when using Three Rivers altimeter setting. Baro-VNAV NA when using Three Rivers altimeter setting.

MISSED APPROACH: Climb to 2500 direct UKANE and hold.

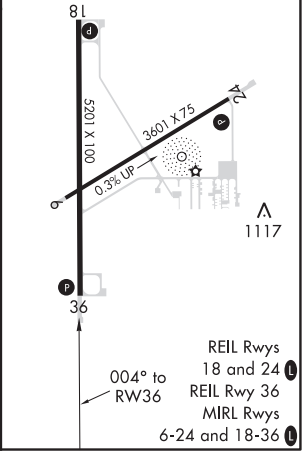
AWOS-3	GREAT LAKES APP CON *	CLNC DEL	UNICOM
121.325	121.2 239.25	118.325	123.05 (CTAF) L





CATEGORY	A	B	C	D
LPV DA	1178-1 263 (300-1)			
LNAV/VNAV DA	1354-1½ 439 (500-1½)			
LNAV MDA	1480-1 565 (600-1)		1480-1½ 565 (600-1½)	1480-1¾ 565 (600-1¾)
CIRCLING	1480-1 556 (600-1)		1480-1½ 556 (600-1½)	1620-2¼ 696 (700-1¼)

ELEV 924 TDZE 915



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NDB IRS	APP CRS	Rwy ldg	5201
382	170°	TDZE	915
		Apt Elev	924

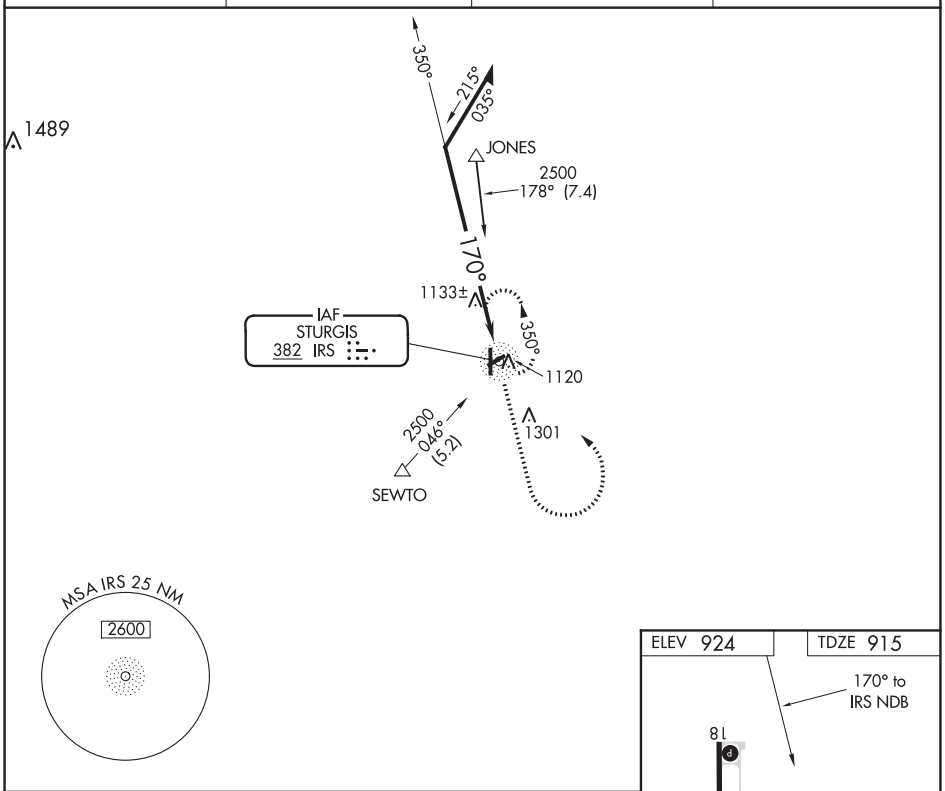
NDB RWY 18
KIRSCH MUNI (IRS)

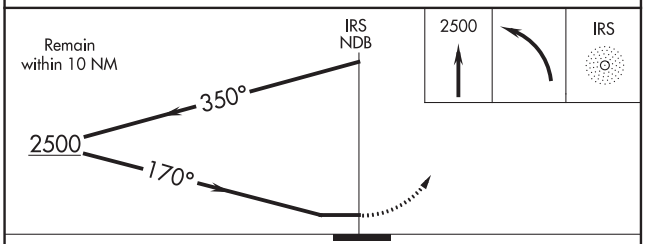
When local altimeter setting not received, use Three Rivers altimeter setting and increase all MDA 40 feet, increase S-18 Cat C and D visibility and Circling Cat C ¼ mile. Rwy 18 helicopter visibility reduction below 1 SM NA. Procedure NA at night.

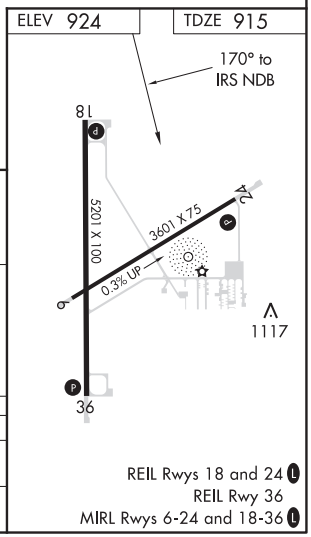
NA

MISSED APPROACH: Climb to 2500 then left turn direct IRS NDB and hold.

AWOS-3	GREAT LAKES APP CON ★	CLNC DEL	UNICOM
121.325	121.2 239.25	118.325	123.05 (CTAF) L







CATEGORY	A	B	C	D
S-18	1500-1	585 (600-1)	1500-1½ 585 (600-1½)	1500-1¾ 585 (600-1¾)
CIRCLING	1500-1	576 (600-1)	1500-1½ 576 (600-1½)	1620-2¼ 696 (700-2¼)

REIL Rwys 18 and 24 L
REIL Rwy 36
MIRL Rwys 6-24 and 18-36 L

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EC-1, 25 FEB 2021 to 22 APR 2021

STURGIS, MICHIGAN AL-5362 (FAA) 20254

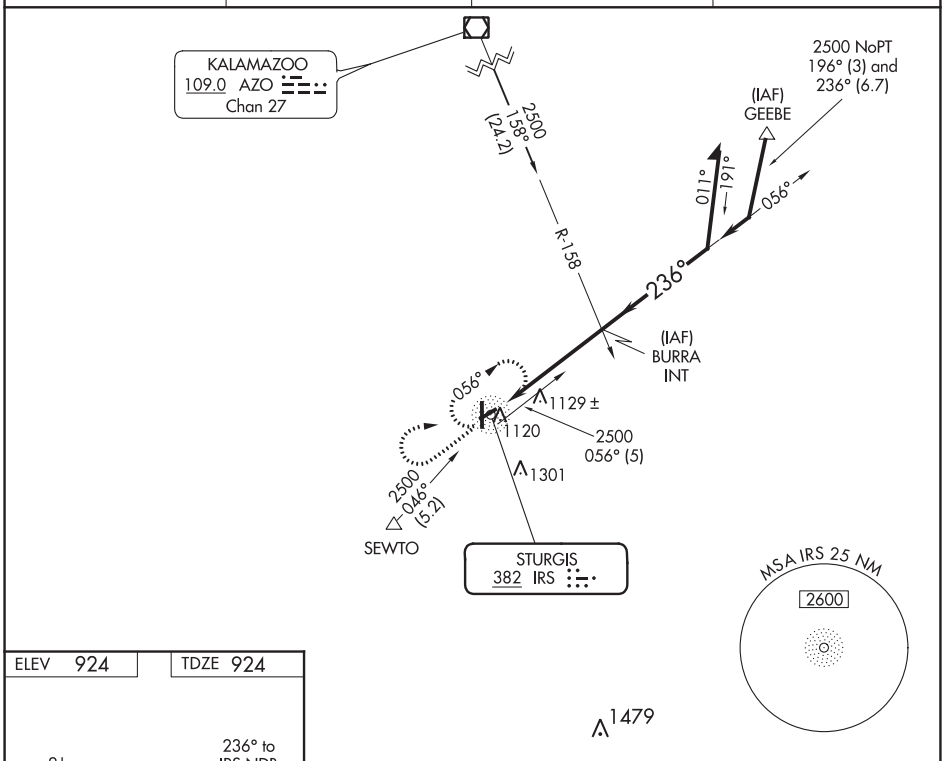
NDB RWY 24
KIRSCH MUNI (IRS)

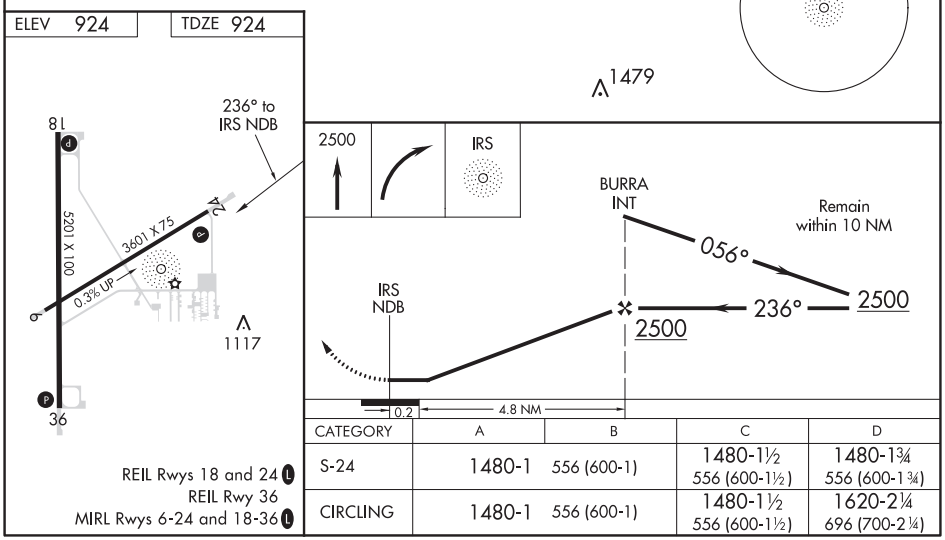
NDB IRS	APP CRS	Rwy ldg	3451
382	236°	TDZE	924
		Apt Elev	924

When local altimeter setting not received, use Three Rivers altimeter setting and increase all MDA 40 feet. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2500 then right turn direct IRS NDB and hold.

AWOS-3	GREAT LAKES APP CON ★	CLNC DEL	UNICOM
121.325	121.2 239.25	118.325	123.05 (CTAF) L





CATEGORY	A	B	C	D
S-24	1480-1	556 (600-1)	1480-1½ 556 (600-1½)	1480-1¾ 556 (600-1¾)
CIRCLING	1480-1	556 (600-1)	1480-1½ 556 (600-1½)	1620-2¼ 696 (700-2¼)

EC-1, 25 FEB 2021 to 22 APR 2021

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STURGIS, MICHIGAN
Amdt 10C 06MAY10

41°49′N-85°26′W

KIRSCH MUNI (IRS)
NDB RWY 24

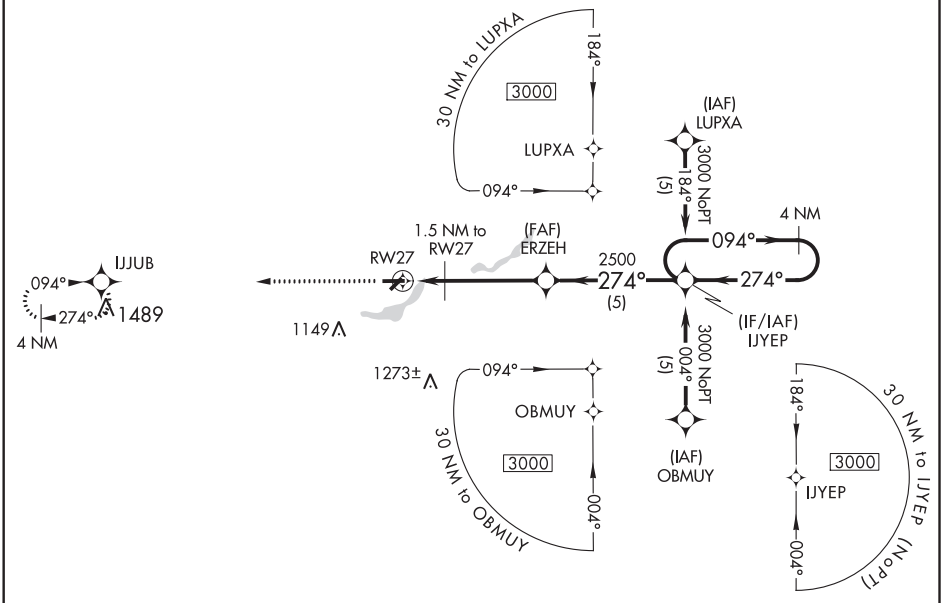
APP CRS	Rwy ldg	3999
274°	TDZE	823
	Apt Elev	824

RNAV (GPS) RWY 27
THREE RIVERS MUNI DR HAINES (HAI)

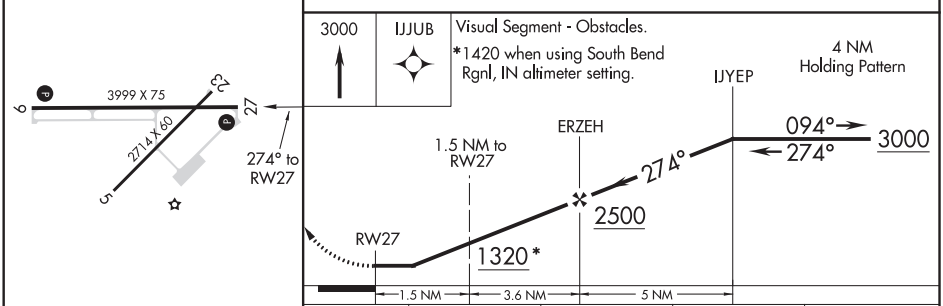
DME/DME RNP-0.3 NA. When local altimeter setting not received, use South Bend altimeter setting and increase all MDA 100 feet; increase LNAV Cat C visibility ⅛ mile and increase Circling Cat C visibility ½ mile. Procedure NA at night. Helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 3000 direct IJJUB WP and hold.

AWOS-3	GREAT LAKES APP CON *	UNICOM
119.975	121.2 239.25	122.8 (CTAF) L



ELEV 824	TDZE 823



CATEGORY	A	B	C	D
LNAV MDA	1200-1 377 (400-1)		1200-1¼ 377 (400-1¼)	NA
C CIRCLING	1320-1 496 (500-1)	1420-1 596 (600-1)	1560-2 736 (800-2)	NA

REIL Rwys 9 and 27
MIRL Rwys 5-23 and 9-27 L

EC-1, 25 FEB 2021 to 22 APR 2021

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THREE RIVERS, MICHIGAN AL-5119 (FAA) 20254

VOR/DME AZO 109.0 Chan 27	APP CRS 187°	Rwy ldg N/A TDZE N/A Apt Elev 824

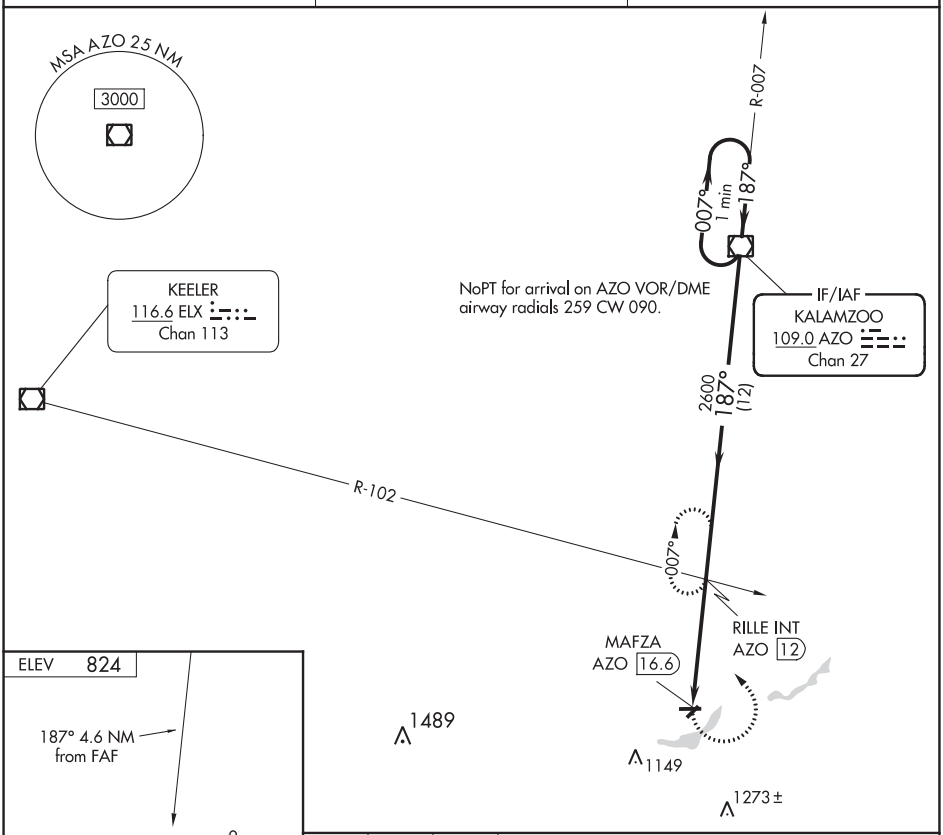
VOR-A

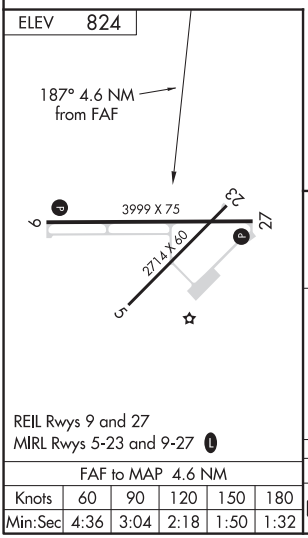
THREE RIVERS MUNI DR HAINES (HAI)

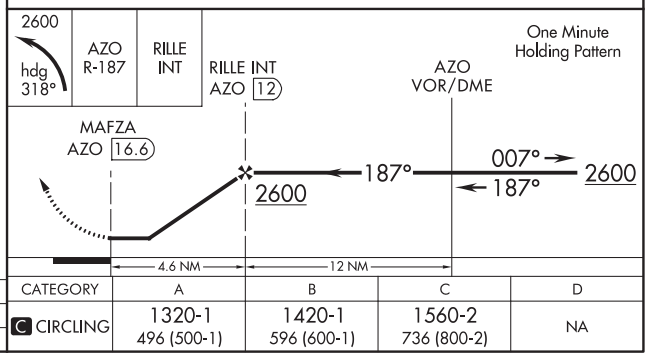
When local altimeter setting not received, use South Bend altimeter setting and increase all MDA 100 feet, and increase Cat C visibility ½ mile. Procedure NA at night. Helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climbing left turn to 2600 on heading 318° and AZO VOR/DME R-187 to RILLE INT/12 DME and hold.

AWOS-3	GREAT LAKES APP CON ★	UNICOM
119.975	121.2 239.25	122.8 (CTAF) L







FAF to MAP 4.6 NM					
Knots	60	90	120	150	180
Min:Sec	4:36	3:04	2:18	1:50	1:32

CATEGORY	A	B	C	D
C CIRCLING	1320-1 496 (500-1)	1420-1 596 (600-1)	1560-2 736 (800-2)	NA

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ILS or LOC RWY 28
CHERRY CAPITAL (TVC)

LOC I-TVC	APP CRS	Rwy ldg	7016
110.7	279°	TDZE	616
		Apt Elev	624

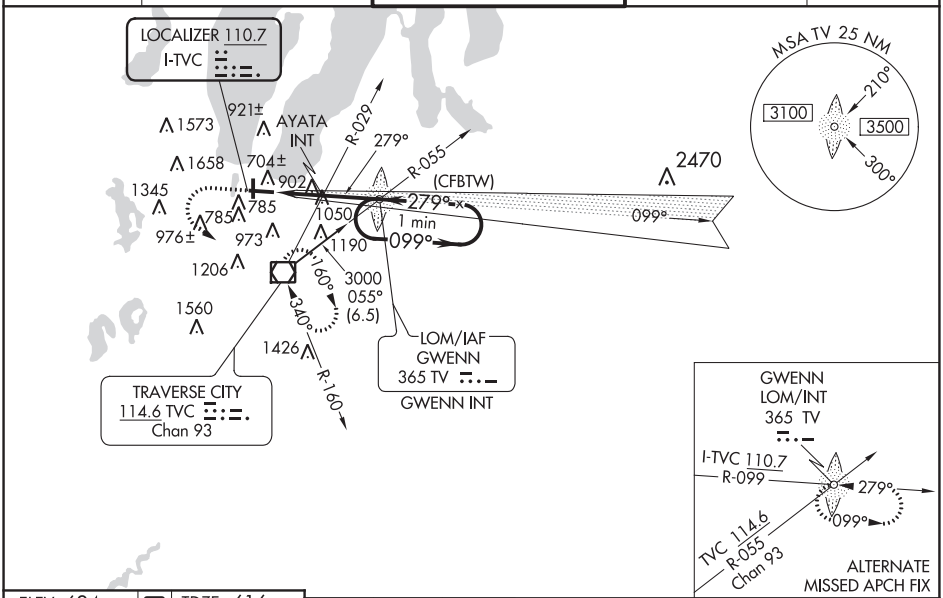
T
A
-20°C

AYATA fix minimums: For inop MALSR, increase S-LOC 28 Cat C, D visibility to 2 miles. AYATA fix minimums: For inop MALSR when using Bellaire altimeter setting, increase S-LOC 28 Cat C, D visibility to 2½ miles. Circling to Rwy 18 NA at night. When local altimeter setting not received, use 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 ¼ mile; increase AYATA fix minimums S-LOC 28 Cats C, D visibility ⅛ mile and Circling Cat C visibility ¼ mile.

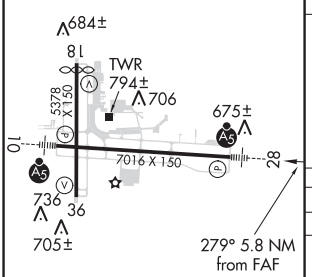
MALSR

MISSED APPROACH: Climb to1100 then climbing left turn to 3000 direct TVC VOR/DME and hold, continue climb-in-hold to 3000.

ATIS	MINNEAPOLIS CENTER	TRAVERSE CITY TOWER *	GND CON	UNICOM
119.175	132.9 338.3	124.2 (CTAF) L 348.6	121.8 348.6	122.95

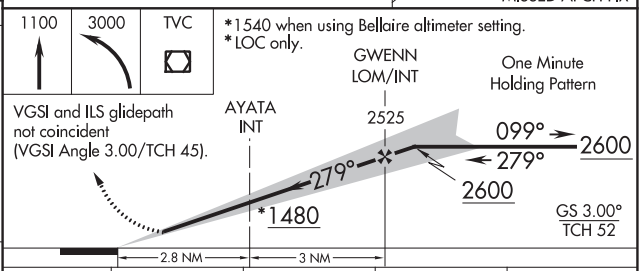


ELEV 624 D TDZE 616



HIRL Rwy 10-28 L
MIRL Rwy 18-36 L
REIL Rwy 36 L

FAF to MAP 5.8 NM					
Knots	60	90	120	150	180
Min:Sec	5:48	3:52	2:54	2:19	1:56



CATEGORY	A	B	C	D
S-ILS 28	816-½ 200 (200-½)			
S-LOC 28	1480-¾ 864 (900-¾)		1480-2 864 (900-2)	
C CIRCLING	1480-1¼ 856 (900-1¼)		1500-2½ 876 (900-2½)	1720-3 1096 (1100-3)
AYATA FIX MINIMUMS				
S-LOC 28	1360-½ 744 (800-½)	1360-¾ 744 (800-¾)	1360-1¾ 744 (800-1¾)	
C CIRCLING	1360-1 736 (800-1)	1360-1¼ 736 (800-1¼)	1500-2½ 876 (900-2½)	1720-3 1096 (1100-3)

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EC-1, 25 FEB 2021 to 22 APR 2021

TRAVERSE CITY, MICHIGAN

AL-425 (FAA)

19171

RNAV (GPS) RWY 10
CHERRY CAPITAL (TVC)

WAAS CH 42610 W10A	APP CRS 099°	Rwy ldg 7016 TDZE 624 Apt Elev 624

RNP APCH.

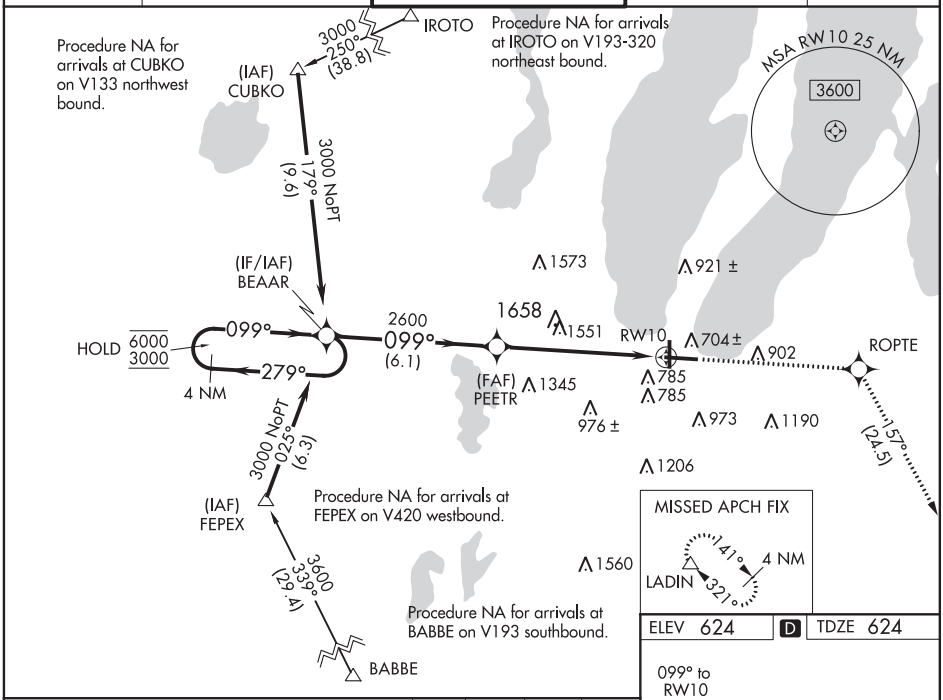
For uncompenstated Baro-VNAV systems, LNAV/VNAV NA below -19°C (-2°F) or above 54°C (130°F). Rwy 10 helicopter visibility reduction below ¾ SM NA. For inop ALS, increase LPV visibility all Cats ⅛ SM. Inop table does not apply to LNAV/VNAV all Cats and LNAV Cats C/D.

-20°C

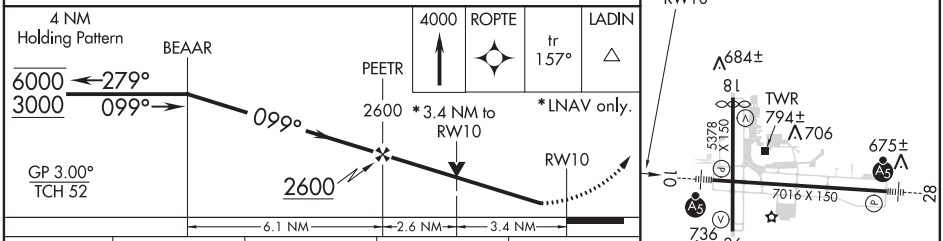
MALSR

MISSED APPROACH: Climb to 4000 direct ROPTE and on track 157° to LADIN and hold.

ATIS	MINNEAPOLIS CENTER	TRAVERSE CITY TOWER★	GND CON	UNICOM
119.175	132.9 338.3	124.2 (CTAF) L 348.6	121.8 348.6	122.95



ELEV 624 D TDZE 624



CATEGORY	A	B	C	D
LPV DA	909-¾ 285 (300-¾)			
LNAV/VNAV DA	1983-5 1359 (1400-5)			
LNAV MDA	1780-¾ 1156 (1200-¾)	1780-1 1156 (1200-1)	1780-3 1156 (1200-3)	
C CIRCLING	1780-1¼ 1156 (1200-1¼)	1780-1½ 1156 (1200-1½)	1780-3 1156 (1200-3)	

HIRL Rwy 10-28 L
MIRL Rwy 18-36 L
REIL Rwy 36 L

EC-1, 25 FEB 2021 to 22 APR 2021

WAAS CH 90335 W18A	APP CRS 185°	Rwy ldg 4838 TDZE 622 Apt Elev 624

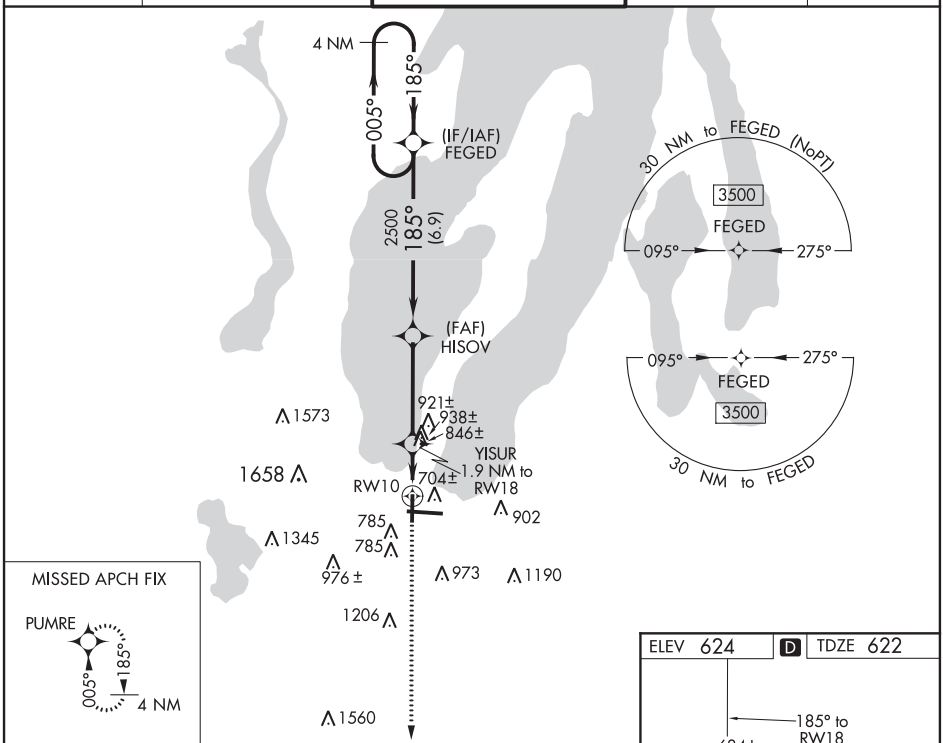
RNAV (GPS) RWY 18
CHERRY CAPITAL (TVC)

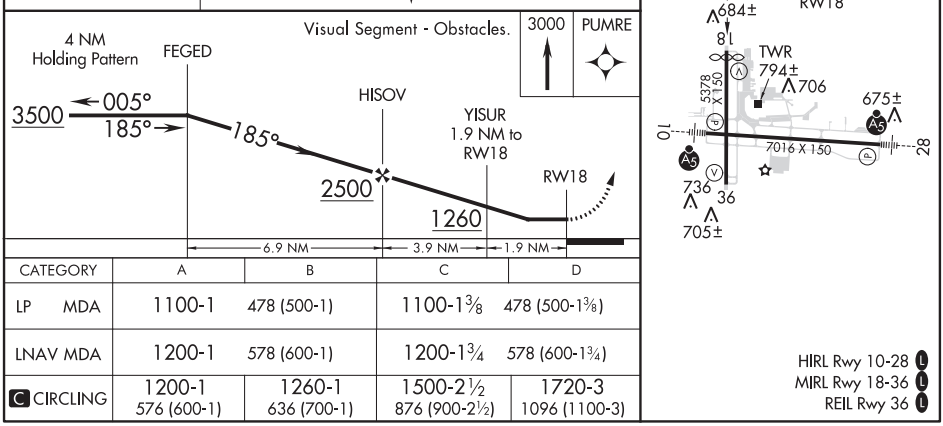
DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. Rwy 18 Straight-in and Circling minimums NA at night. When local altimeter setting not received, use Bellaire altimeter setting and increase all MDA 60 feet, increase LP Cat C and D visibility ¼ mile, LNAV Cat C and D visibility ⅛ mile, and Circling Cat C visibility ¼ mile.

-20°C

MISSED APPROACH: Climb to 3000 direct PUMRE and hold.

ATIS	MINNEAPOLIS CENTER	TRAVERSE CITY TOWER★	GND CON	UNICOM
119.175	132.9 338.3	124.2 (CTAF) L 348.6	121.8 348.6	122.95





CATEGORY	A	B	C	D
LP MDA	1100-1 478 (500-1)		1100-1⅜ 478 (500-1⅜)	
LNAV MDA	1200-1 578 (600-1)		1200-1¾ 578 (600-1¾)	
C CIRCLING	1200-1 576 (600-1)	1260-1 636 (700-1)	1500-2½ 876 (900-2½)	1720-3 1096 (1100-3)

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EC-1, 25 FEB 2021 to 22 APR 2021

TRAVERSE CITY, MICHIGAN — AL-425 (FAA) — 19171

RNAV (GPS) RWY 28
CHERRY CAPITAL (TVC)

WAAS CH 97535 W28A	APP CRS 279°	Rwy ldg 7016 / TDZE 616 / Apt Elev 624

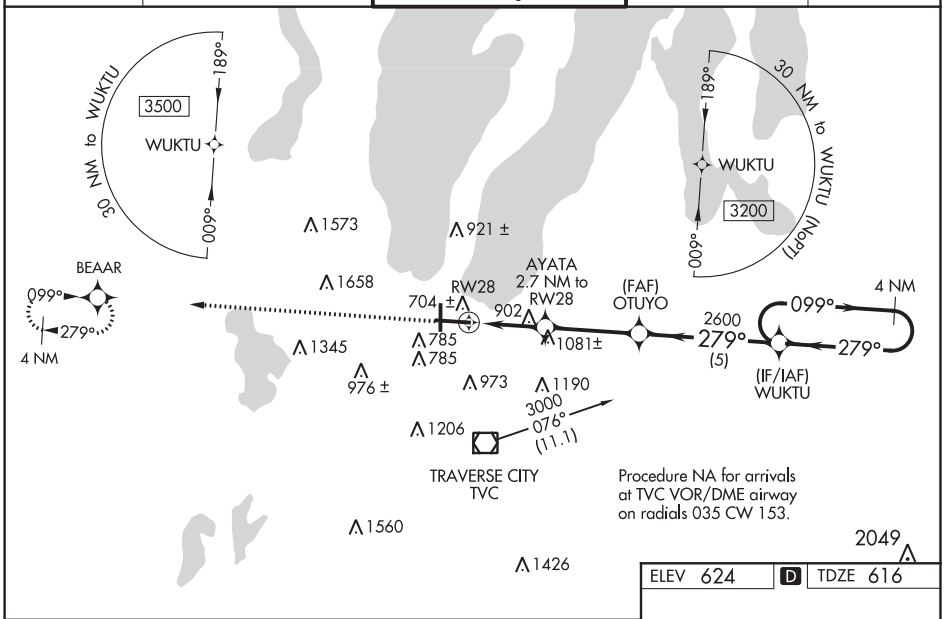
T A -20°C

DME/DME RNP-0.3 NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C (2°F) or above 54°C (130°F). Baro-VNAV and VDP NA with Bellaire altimeter setting. When local altimeter setting not received, Bellaire altimeter setting: increase DA 51 feet and all MDA 60 feet. Increase LPV all Cats visibility ⅛ mile, LNAV/VNAV visibility all Cats ¼ mile and LNAV Cat B visibility ¼ mile and C/D visibilities ⅛ mile and Circling Cat B/C visibility ¼ mile. Night Landing: Rwy 18 NA. For inop MALSR, increase all LPV all Cats visibility to 1¼ , LNAV Cats C/D visibility to 2 miles. For inop MALSR when using Bellaire altimeter setting, increase LPV all Cats visibility to 1½ mile, LNAV Cats C/D visibility to 2½ miles.
#Missed approach requires minimum climb of 237 feet per NM to 2000.

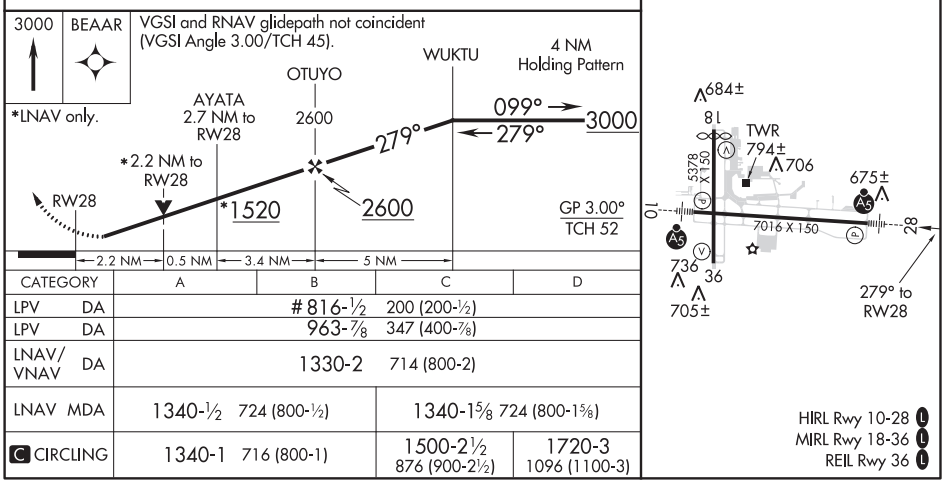
MALSR

MISSED APPROACH: Climb to 3000 direct BEAAR and hold.

ATIS	MINNEAPOLIS CENTER	TRAVERSE CITY TOWER *	GND CON	UNICOM
119.175	132.9 338.3	124.2(CTAF) L 348.6	121.8 348.6	122.95



ELEV 624 D TDZE 616



CATEGORY	A	B	C	D
LPV DA	# 816-½ 200 (200-½)			
LPV DA	963-⅞ 347 (400-⅞)			
LNAV/VNAV DA	1330-2 714 (800-2)			
LNAV MDA	1340-½ 724 (800-½)		1340-1⅝ 724 (800-1⅝)	
C CIRCLING	1340-1 716 (800-1)		1500-2½ 876 (900-2½)	1720-3 1096 (1100-3)

HIRL Rwy 10-28 L
MIRL Rwy 18-36 L
REIL Rwy 36 L

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RNAV (GPS) RWY 36
CHERRY CAPITAL (TVC)

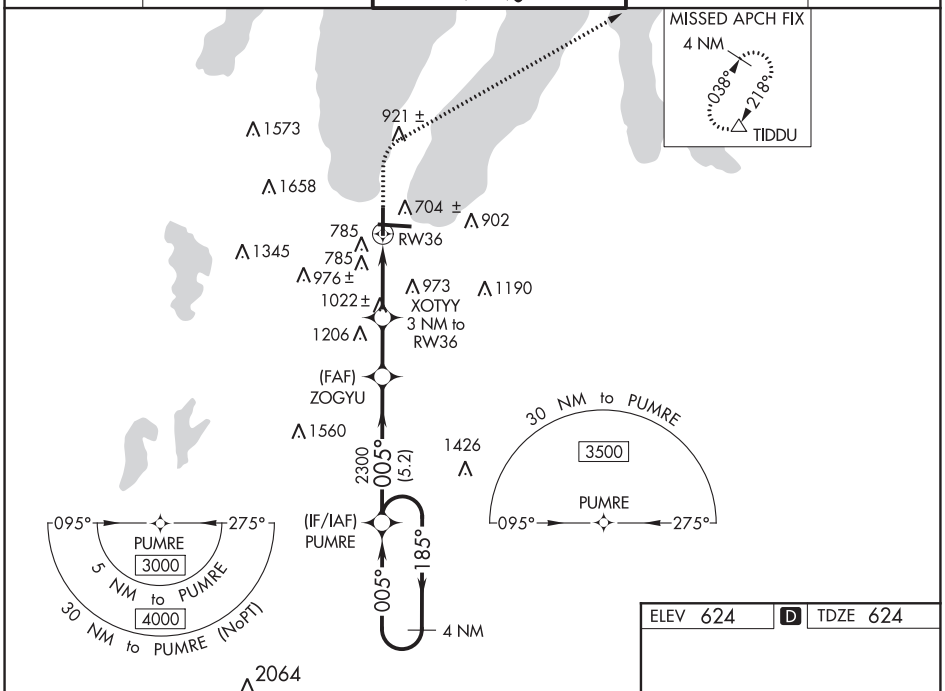
WAAS CH 53733 W36A	APP CRS 005°	Rwy ldg 5108 TDZE 624 Apt Elev 624

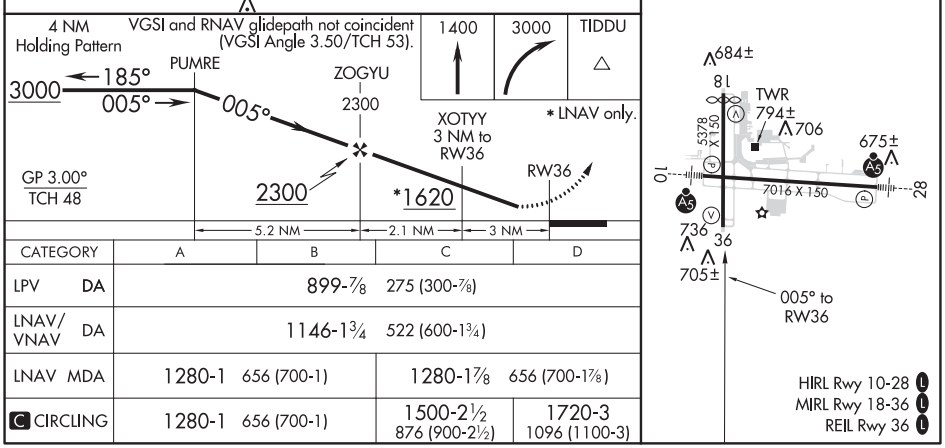
Baro-VNAV NA when using Antrim County altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received use Antrim County altimeter setting; increase all DA 51 feet and all MDA 60 feet, increase LNAV/VNAV all Cats and Circling Cat C visibilities ¼ mile, and increase LPV all Cats, LNAV Cat C/D and Circling Cat D visibilities ⅛ mile. Helicopter visibility reduction below ¾ SM NA. Night landing Rwy 18 NA.

-20°C

MISSED APPROACH: Climb to 1400 then climbing right turn to 3000 direct TIDDU and hold.

ATIS	MINNEAPOLIS CENTER	TRAVERSE CITY TOWER ★	GND CON	UNICOM
119.175	132.9 338.3	124.2 (CTAF) L 348.6	121.8 348.6	122.95





CATEGORY	A	B	C	D
LPV DA	899-⅞ 275 (300-⅞)			
LNAV/VNAV DA	1146-1¾ 522 (600-1¾)			
LNAV MDA	1280-1 656 (700-1)		1280-1⅞ 656 (700-1⅞)	
C CIRCLING	1280-1 656 (700-1)		1500-2½ 876 (900-2½)	1720-3 1096 (1100-3)

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VOR-A
CHERRY CAPITAL (TVC)

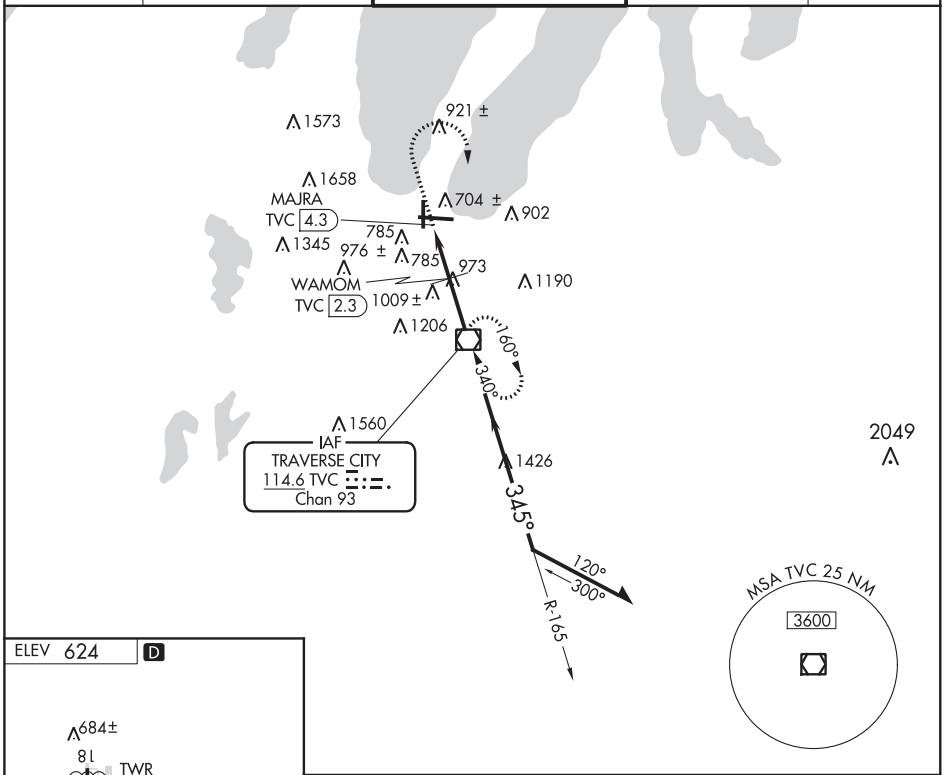
VOR/DME TVC 114.6 Chan 93	APP CRS 345°	Rwy ldg N/A TDZE N/A Apt Elev 624

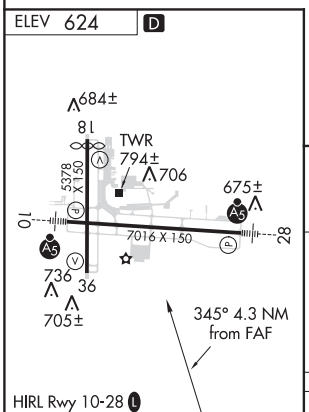
T
A
-20°C

When local altimeter setting not received, use Bellaire altimeter setting and increase all MDA 60 feet and all Cat C visibility ¼ mile. Circling to Rwy 18 NA at night.

MISSED APPROACH: Climb to 1800 then climbing right turn to 3000 direct TVC VOR/DME and hold.

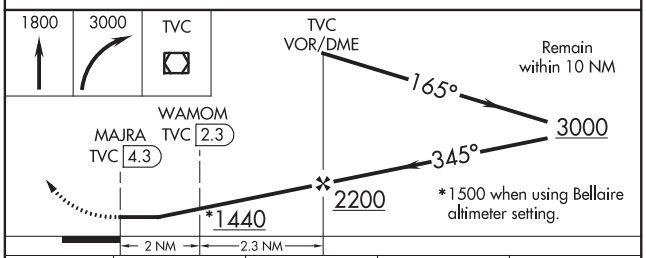
ATIS	MINNEAPOLIS CENTER	TRAVERSE CITY TOWER *	GND CON	UNICOM
119.175	132.9 338.3	124.2 (CTAF) L 348.6	121.8 348.6	122.95





HIRL Rwy 10-28 L
MIRL Rwy 18-36 L
REIL Rwy 36 L

FAF to MAP 4.3 NM					
Knots	60	90	120	150	180
Min:Sec	4:18	2:52	2:09	1:43	1:26



CATEGORY	A	B	C	D
C CIRCLING	1440-1¼	816 (900-1¼)	1500-2½ 876 (900-2½)	1720-3 1096 (1100-3)
WAMOM FIX MINIMUMS (DME REQUIRED)				
C CIRCLING	1300-1	676 (700-1)	1500-2½ 876 (900-2½)	1720-3 1096 (1100-3)

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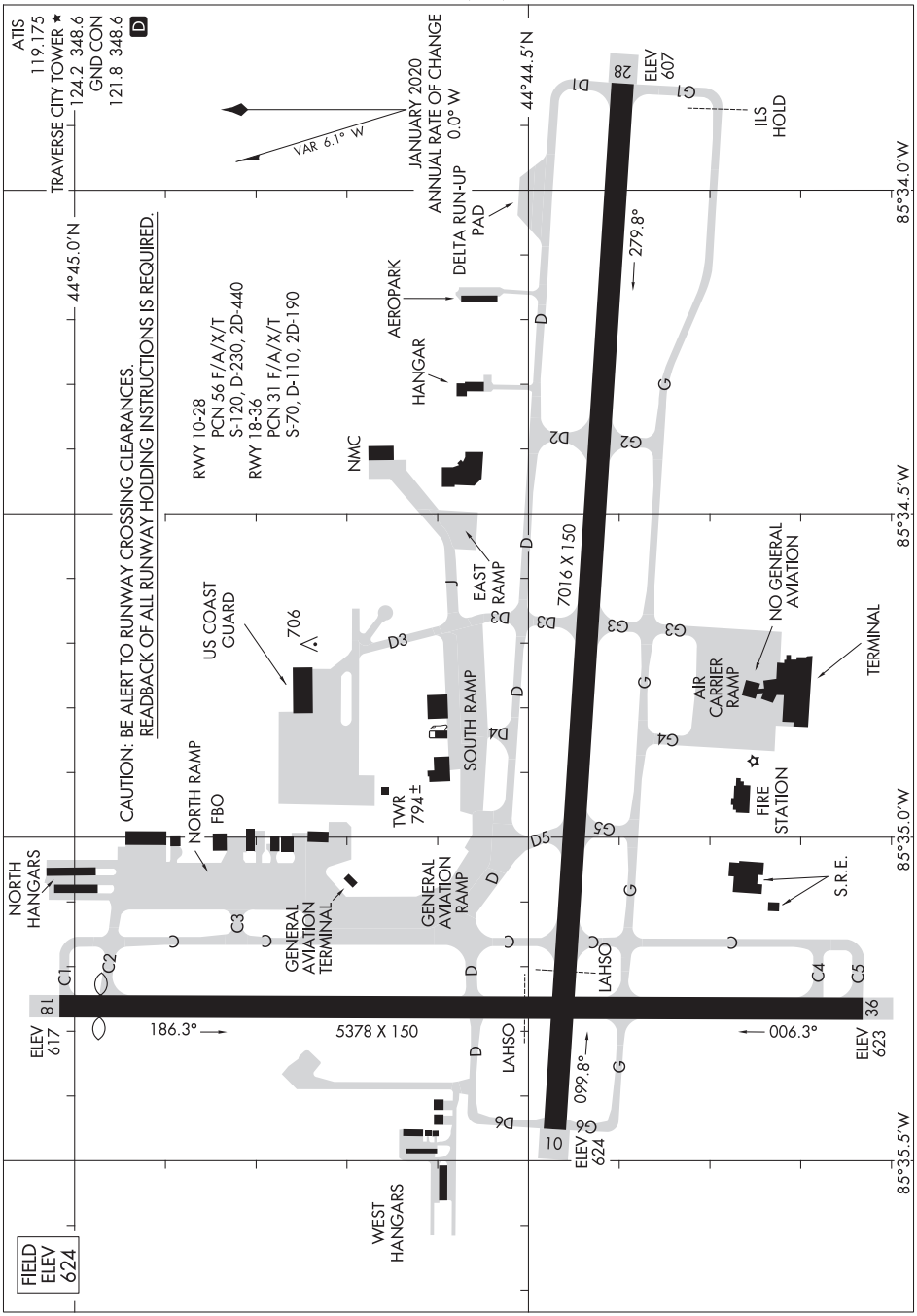

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TROY, MICHIGAN | AL-5293 (FAA) | 18144

RNAV (GPS) RWY 9

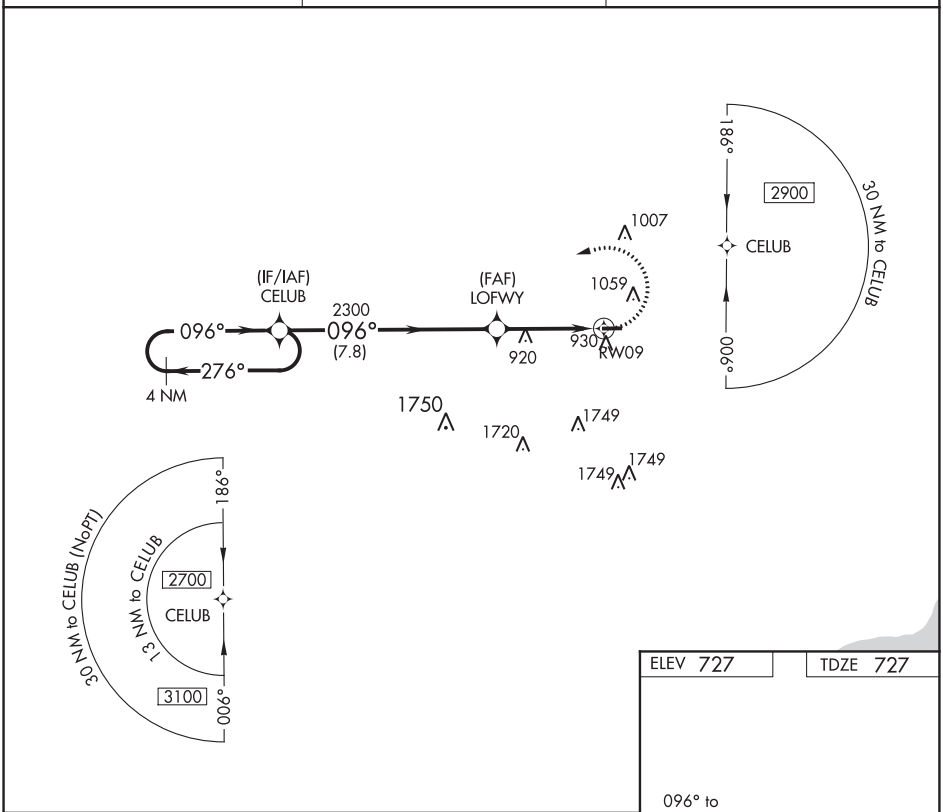
OAKLAND/TROY (VLL)

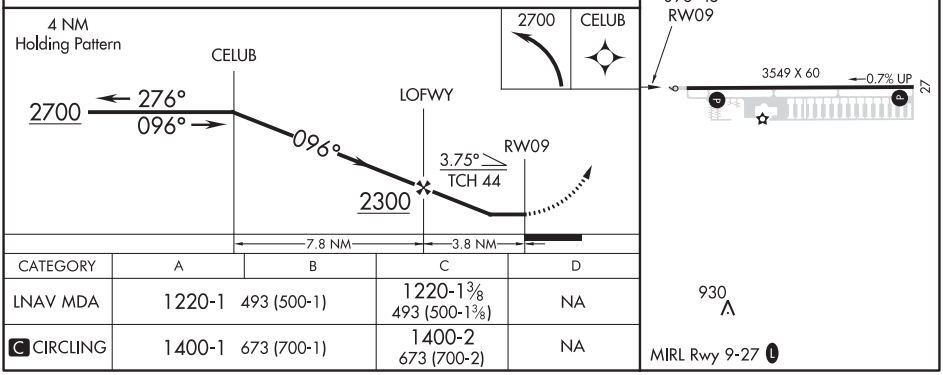
APP CRS	Rwy ldg	3549
096°	TDZE	727
	Apt Elev	727

DME/DME RNP-0.3 NA. Straight -in Rwy 9 at night, operational VGSI required, remain on or above VGSI glidepath until threshold. Circling Rwy 27 NA at night. Rwy 9 helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climbing left turn to 2700 direct CELUB and hold.

AWOS-3	DETROIT APP CON	UNICOM
119.475	134.3 284.0	123.05 (CTAF) L





CATEGORY	A	B	C	D
LNAV MDA	1220-1 493 (500-1)		1220-1⅜ 493 (500-1⅜)	NA
C CIRCLING	1400-1 673 (700-1)		1400-2 673 (700-2)	NA

TROY, MICHIGAN
Amdt 3 22JUN17

42°33′N-83°11′W

OAKLAND/TROY (VLL)

RNAV (GPS) RWY 9

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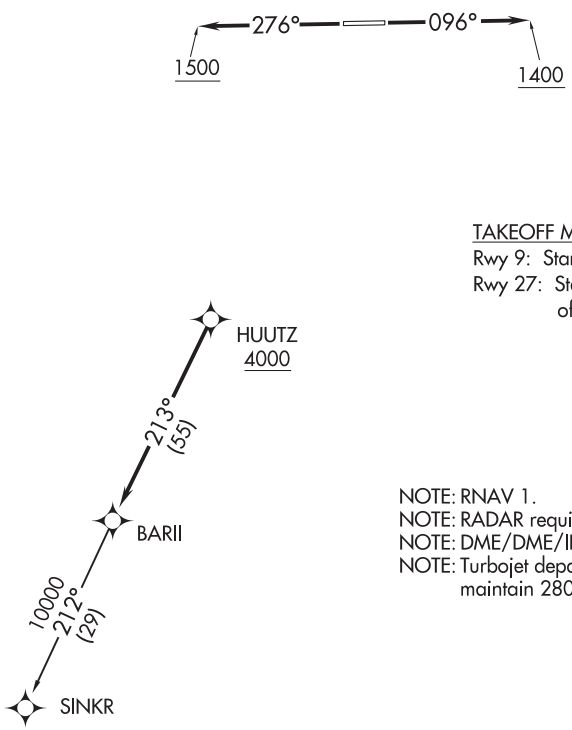
TOP ALTITUDE: ASSIGNED BY ATC

AWOS-3
119.475
CTAF
123.05
DETROIT DEP CON
134.3 284.0



TAKEOFF MINIMUMS:
Rwy 9: Standard.
Rwy 27: Standard with minimum climb of 476′ per NM to 1500.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 096° to 1400 then as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1500 then as assigned for RADAR vectors to cross HUUTZ at or above 4000, thence....

....on track 213° to BARII, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

SINKR TRANSITION (BARII2.SINKR):

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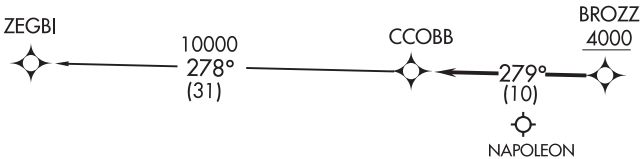
TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: For use by aircraft filed at or below FL220, or as assigned by ATC.
NOTE: CAUTION: Parachute jumping 6 NM SW of BROZZ, 3 NM radius of Napoleon Airport (3NP) at or below 17999 (SR-SS).

AWOS-3
119.475
CTAF
123.05
DETROIT DEP CON
134.3 284.0



TAKEOFF MINIMUMS:
Rwy 9: Standard.
Rwy 27: Standard with minimum climb of 476′ per NM to 1500.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 096° to 1400 then as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1500 then as assigned for RADAR vectors to cross BROZZ at or above 4000, thence....

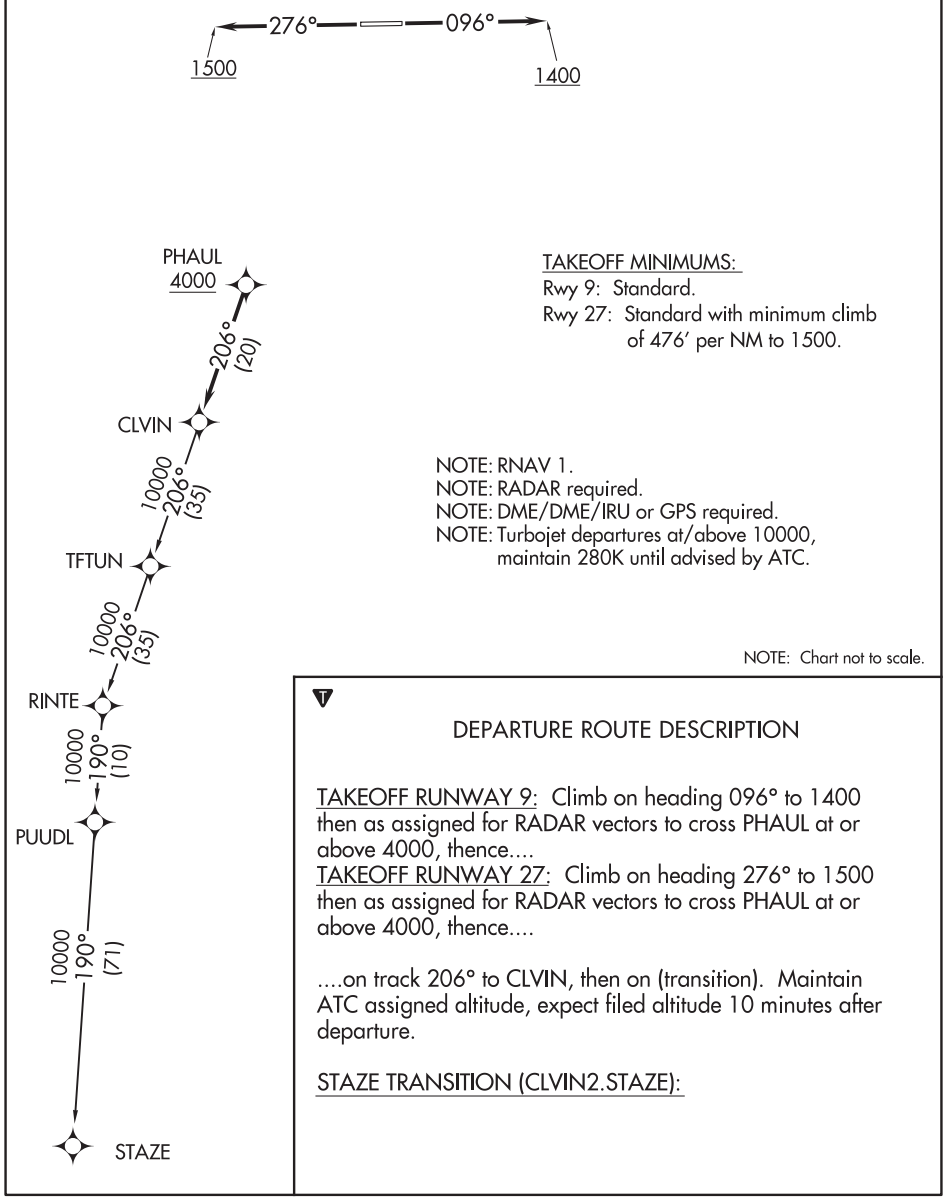
....on track 279° to CCOBB, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ZEGBI TRANSITION (CCOBB2.ZEGBI):

(CCOBB2.CCOBB) 20142
CCOBB TWO DEPARTURE (RNAV)
AL-5293 (FAA)
OAKLAND/TROY (VLL)
TROY, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

AWOS-3
119.475
CTAF
123.05
DETROIT DEP CON
134.3 284.0



TAKEOFF MINIMUMS:
Rwy 9: Standard.
Rwy 27: Standard with minimum climb of 476′ per NM to 1500.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 096° to 1400 then as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1500 then as assigned for RADAR vectors to cross PHAUL at or above 4000, thence....

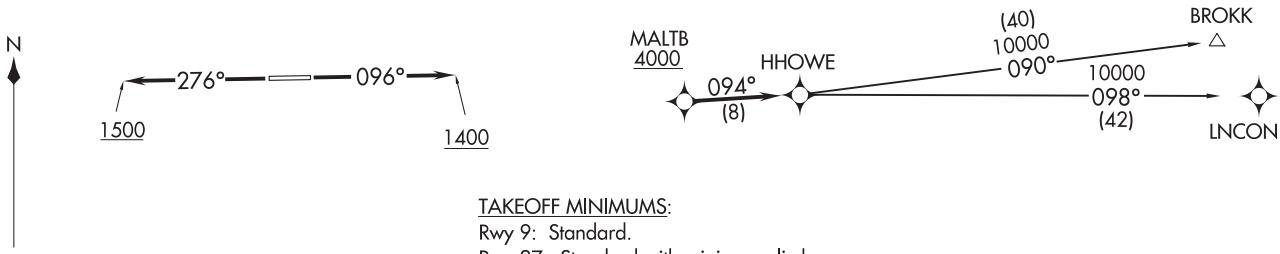
....on track 206° to CLVIN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

STAZE TRANSITION (CLVIN2.STAZE):

AWOS-3
119.475
CTAF
123.05
DETROIT DEP CON
134.3 284.0

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: BROKK TRANSITION: For use by flights filed at or below FL270, or as assigned by ATC.

TOP ALTITUDE: ASSIGNED BY ATC



TAKEOFF MINIMUMS:
Rwy 9: Standard.
Rwy 27: Standard with minimum climb of 476′ per NM to 1500.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 096° to 1400 then as assigned for RADAR vectors to cross MALTB at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1500 then as assigned for RADAR vectors to cross MALTB at or above 4000, thence....

....on track 094° to HHOWE, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

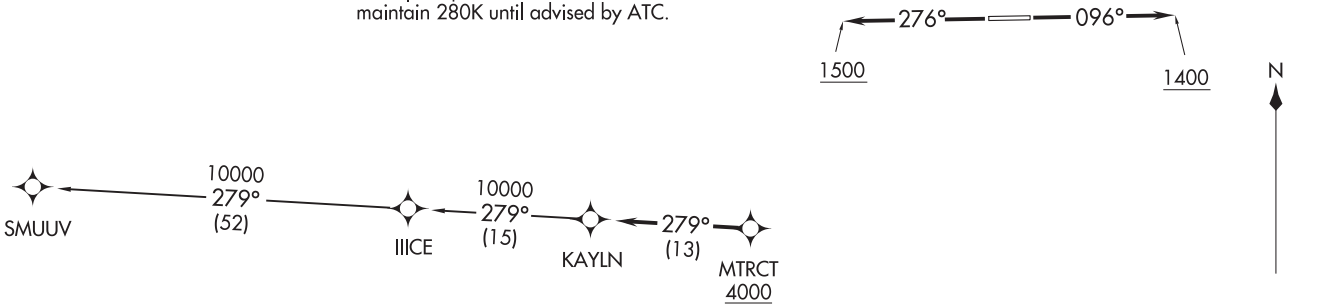
BROKK TRANSITION (HHOWE3.BROKK)
LNCON TRANSITION (HHOWE3.LNCON)

TOP ALTITUDE: ASSIGNED AT ATC

TAKEOFF MINIMUMS:
Rwy 9: Standard.
Rwy 27: Standard with minimum climb of 476′ per NM to 1500.

AWOS-3
119.475
CTAF
123.05
DETROIT DEP CON
134.3 284.0

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.



NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 096° to 1400 then as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1500 then as assigned for RADAR vectors to cross MTRCT at or above 4000, thence....

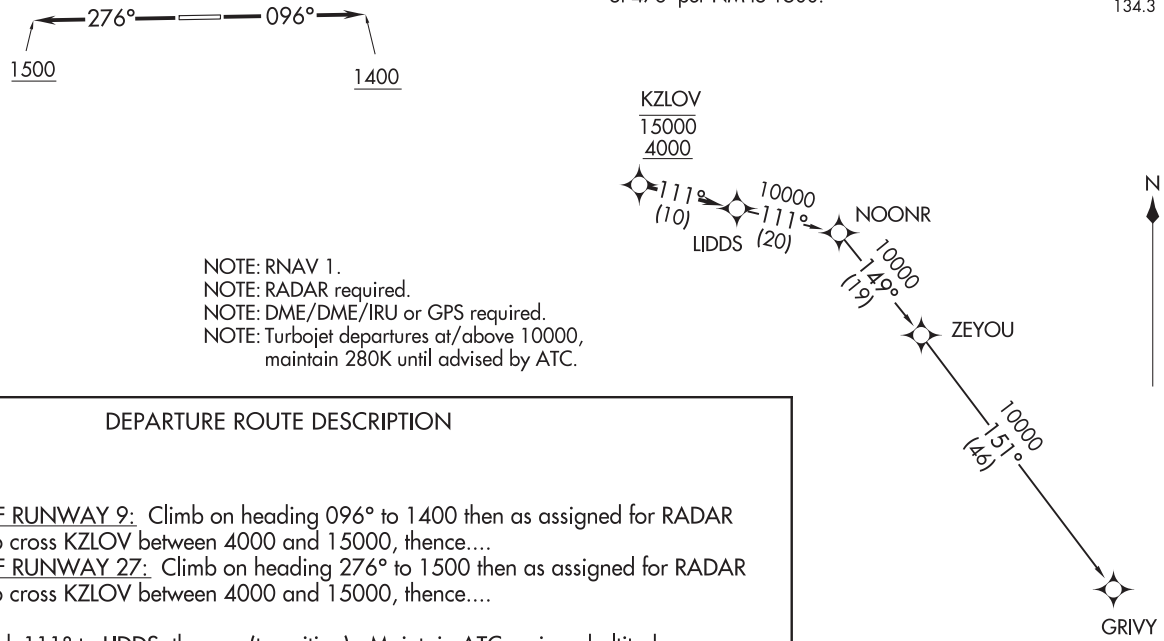
....on track 279° to KAYLN, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

SMUUV TRANSITION (KAYLN2.SMUUV):

TOP ALTITUDE: ASSIGNED BY ATC

TAKEOFF MINIMUMS:
Rwy 9: Standard.
Rwy 27: Standard with minimum climb of 476′ per NM to 1500.

AWOS-3
119.475
CTAF
123.05
DETROIT DEP CON
134.3 284.0



NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 096° to 1400 then as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1500 then as assigned for RADAR vectors to cross KZLOV between 4000 and 15000, thence....

....on track 111° to LIDDS, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GRIVY TRANSITION (LIDDS2.GRIVY):

MIGGY TWO DEPARTURE (RNAV)

AL-5293 (FAA)

AWOS-3 119.475
CTAF 123.05
DETROIT DEP CON 134.3 284.0

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: GETCH TRANSITION: For use by KMKE area arrivals only, or as assigned by ATC.

TOP ALTITUDE: ASSIGNED BY ATC

HUBBY
10000 332° (34)
SLAP
10000 308° (24)
GETCH
10000 274° (70)
MONEE
10000 323° (20)
MIGGY
323° (18)
JAXII 4000

276° 1500
096° 1400

N

TAKEOFF MINIMUMS:
Rwy 9: Standard.
Rwy 27: Standard with minimum climb of 476′ per NM to 1500.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 096° to 1400 then as assigned for RADAR vectors to cross JAXII at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1500 then as assigned for RADAR vectors to cross JAXII at or above 4000, thence....

....on track 323° to MIGGY, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GETCH TRANSITION (MIGGY2.GETCH):
HUBBY TRANSITION (MIGGY2.HUBBY):
SILAP TRANSITION (MIGGY2.SILAP):

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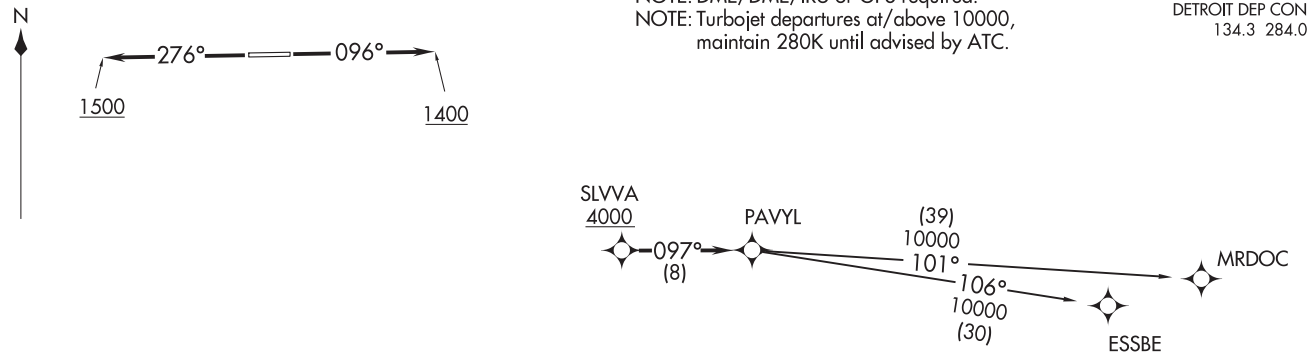
TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

AWOS-3
119.475
CTAF
123.05
DETROIT DEP CON
134.3 284.0



TAKEOFF MINIMUMS:
Rwy 9: Standard.
Rwy 27: Standard with minimum climb of 476′ per NM to 1500.

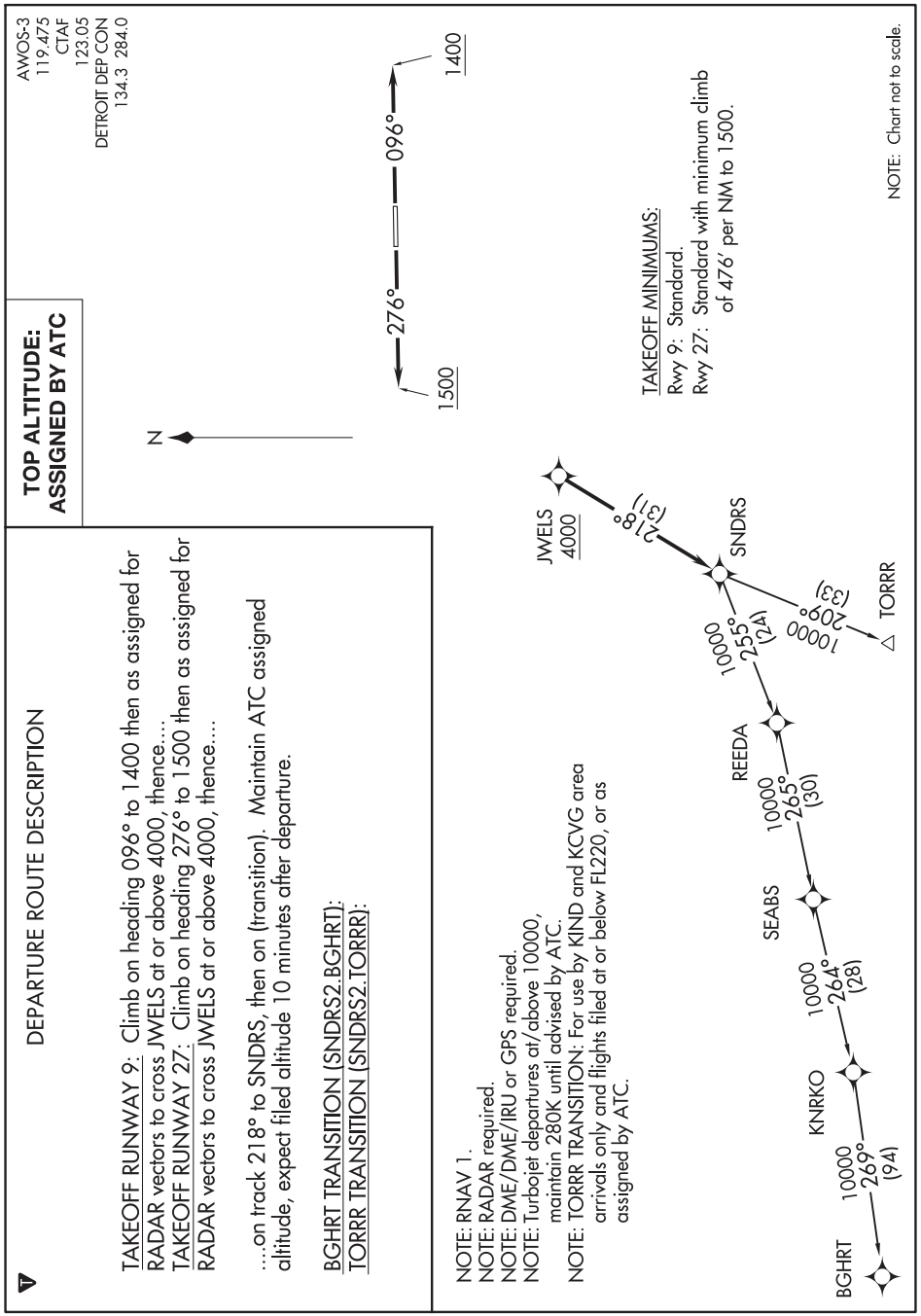
NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 096° to 1400 then as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1500 then as assigned for RADAR vectors to cross SLVVA at or above 4000, thence....

....on track 097° to PAVYL, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

ESSBE TRANSITION (PAVYL2.ESSBE):
MRDOC TRANSITION (PAVYL2.MRDOC):


AWOS-3
119.475
CTAF
123.05
DETROIT DEP CON
134.3 284.0
TOP ALTITUDE:
ASSIGNED BY ATC
N
276°
096°
1500
1400
DEPARTURE ROUTE DESCRIPTION
TAKEOFF RUNWAY 9: Climb on heading 096° to 1400 then as assigned for RADAR vectors to cross JWELS at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1500 then as assigned for RADAR vectors to cross JWELS at or above 4000, thence....
....on track 218° to SNDRS, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.
BGHRT TRANSITION (SNDRS2.BGHRT):
TORRR TRANSITION (SNDRS2.TORRR):
NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TORRR TRANSITION: For use by KIND and KCVG area arrivals only and flights filed at or below FL220, or as assigned by ATC.
TAKEOFF MINIMUMS:
Rwy 9: Standard.
Rwy 27: Standard with minimum climb of 476' per NM to 1500.
NOTE: Chart not to scale.
JWELS
4000
218°
(31)
SNDRS
10000
255°
(24)
REEDA
10000
265°
(30)
SEABS
10000
264°
(28)
KNRKO
10000
269°
(94)
BGHRT
10000
209°
(33)
TORRR

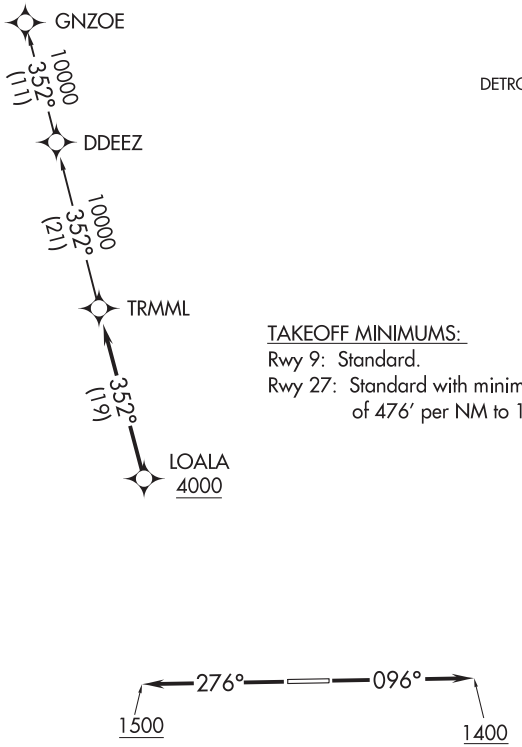
(TRMML3.TRMML) 19283

TRMML THREE DEPARTURE (RNAV) AL-5293 (FAA)

OAKLAND/TROY (VLL)
TROY, MICHIGAN

TOP ALTITUDE: ASSIGNED BY ATC

AWOS-3
119.475
CTAF
123.05
DETROIT DEP CON
134.3 284.0



TAKEOFF MINIMUMS:
Rwy 9: Standard.
Rwy 27: Standard with minimum climb of 476′ per NM to 1500.

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 096° to 1400 then as assigned for RADAR vectors to cross LOALA at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1500 then as assigned for RADAR vectors to cross LOALA at or above 4000, thence....

....on track 352° to TRMML, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

GNZOE TRANSITION (TRMML3.GNZOE):

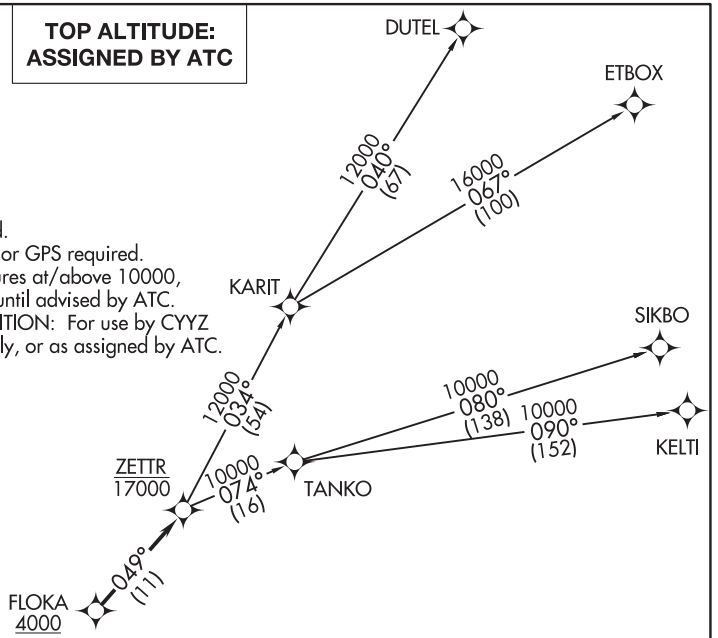
ZETTR THREE DEPARTURE (RNAV)

AL-5293 (FAA)

AWOS-3
119.475
CTAF
123.05
DETROIT DEP CON
134.3 284.0

TOP ALTITUDE: ASSIGNED BY ATC

NOTE: RNAV 1.
NOTE: RADAR required.
NOTE: DME/DME/IRU or GPS required.
NOTE: Turbojet departures at/above 10000, maintain 280K until advised by ATC.
NOTE: TANKO TRANSITION: For use by CYYZ area arrivals only, or as assigned by ATC.



TAKEOFF MINIMUMS:
Rwy 9: Standard.
Rwy 27: Standard with minimum climb of 476′ per NM to 1500.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb on heading 096° to 1400 then as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....
TAKEOFF RUNWAY 27: Climb on heading 276° to 1500 then as assigned for RADAR vectors to cross FLOKA at or above 4000, thence....

....on track 049° to cross ZETTR at or below 17000, then on (transition). Maintain ATC assigned altitude, expect filed altitude 10 minutes after departure.

DUTEL TRANSITION (ZETTR3.DUTEL):
ETBOX TRANSITION (ZETTR3.ETBOX):
KELTI TRANSITION (ZETTR3.KELTI):
SIKBO TRANSITION (ZETTR3.SIKBO):
TANKO TRANSITION (ZETTR3.TANKO):

WEST BRANCH, MICHIGAN | AL-5933 (FAA) | 18312

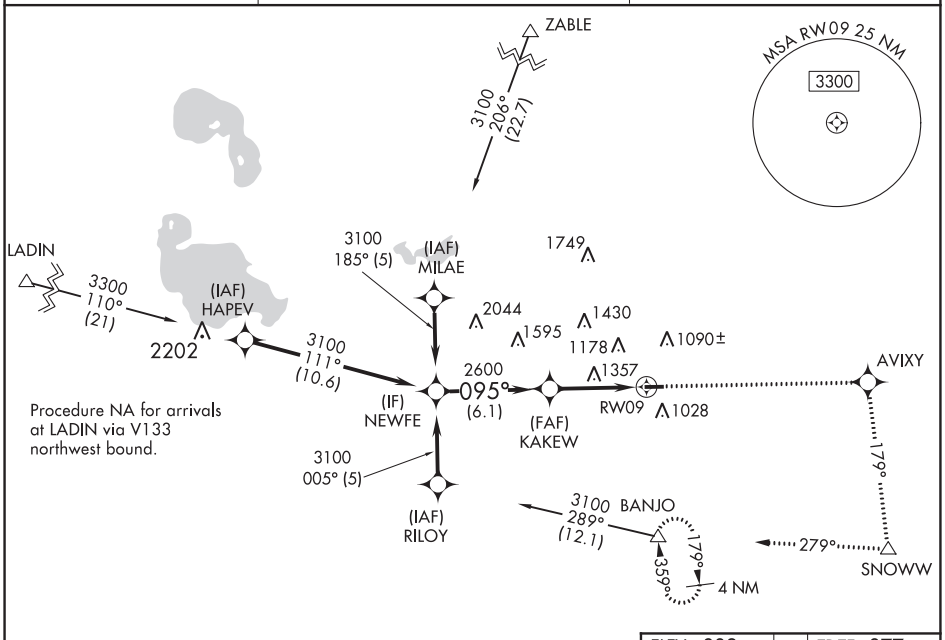
APP CRS	Rwy ldg	5000
095°	TDZE	877
	Apt Elev	882

RNAV (GPS) RWY 9
WEST BRANCH COMMUNITY (Y31)

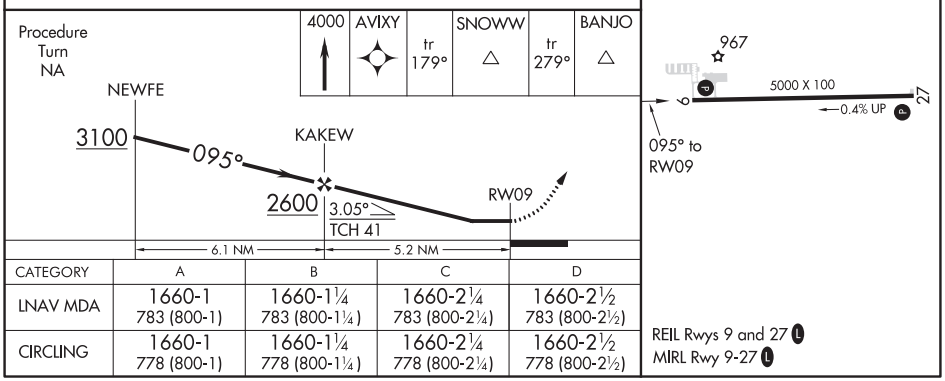
DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use MBS Intl altimeter setting and increase all MDA 140 feet, increase LNAV Cat A visibility ¼ mile and Cat C/D ½ mile, increase Circling Cat A visibility ¼ mile and Cat C/D ½ mile. Night landing: Rwy 9 NA.

MISSED APPROACH: Climb to 4000 direct AVIXY and via track 179° to SNOWW and via track 279° to BANJO and hold.

AWOS-3P	MINNEAPOLIS CENTER	UNICOM
119.575	125.475 269.45	122.8 (CTAF)



ELEV 882	TDZE 877



CATEGORY	A	B	C	D
LNAV MDA	1660-1 783 (800-1)	1660-1¼ 783 (800-1¼)	1660-2¼ 783 (800-2¼)	1660-2½ 783 (800-2½)
CIRCLING	1660-1 778 (800-1)	1660-1¼ 778 (800-1¼)	1660-2¼ 778 (800-2¼)	1660-2½ 778 (800-2½)

REIL Rwys 9 and 27 (L)
MIRL Rwy 9-27 (L)

EC-1, 25 FEB 2021 to 22 APR 2021

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WAAS CH 53541 W27A	APP CRS 275°	Rwy ldg 5000 TDZE 877 Apt Elev 883

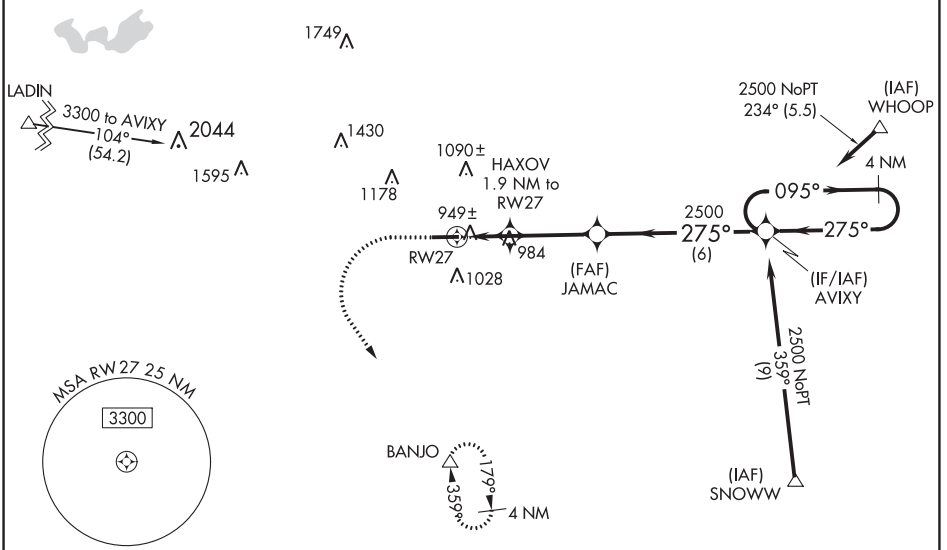
RNAV (GPS) RWY 27
WEST BRANCH COMMUNITY (Y31)

Circling to Rwy 9 NA at night.
DME/DME RNP-0.3 NA.
Rwy 27 helicopter visibility reduction below ¾ SM NA.

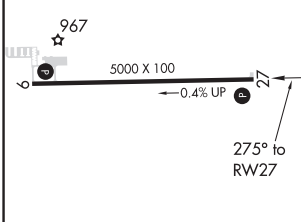
MISSED APPROACH: (Do not exceed 240K until BANJO) Climb to 1300, then climbing left to 4000 direct BANJO and hold, continue climb-in-hold to 4000.

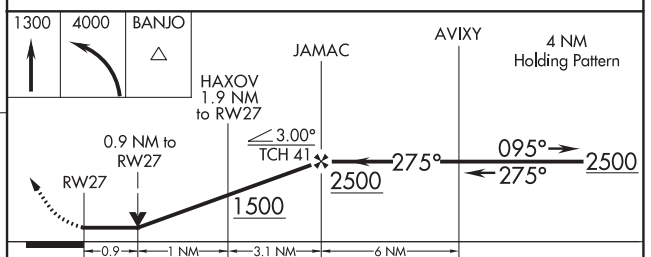
AWOS-3P	MINNEAPOLIS CENTER	UNICOM
119.575	125.475 269.45	122.8 (CTAF) L

Procedure NA for arrivals at LADIN via V133 northwest bound and V215-233 southwest bound.



ELEV 883	TDZE 877





CATEGORY	A	B	C	D
LP MDA	1200-1 323 (400-1)			
LNAV MDA	1240-1 363 (400-1)			
C CIRCLING	1500-1 617 (700-1)		1620-2 737 (800-2)	1740-2¾ 857 (900-2¾)

REIL Rwys 9 and 27 L
MIRL Rwy 9-27 L

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INTENTIONALLY

LEFT

BLANK

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CLIMB/DESCENT TABLE 10042

INSTRUMENT TAKEOFF OR APPROACH PROCEDURE CHARTS
RATE OF CLIMB/DESCENT TABLE

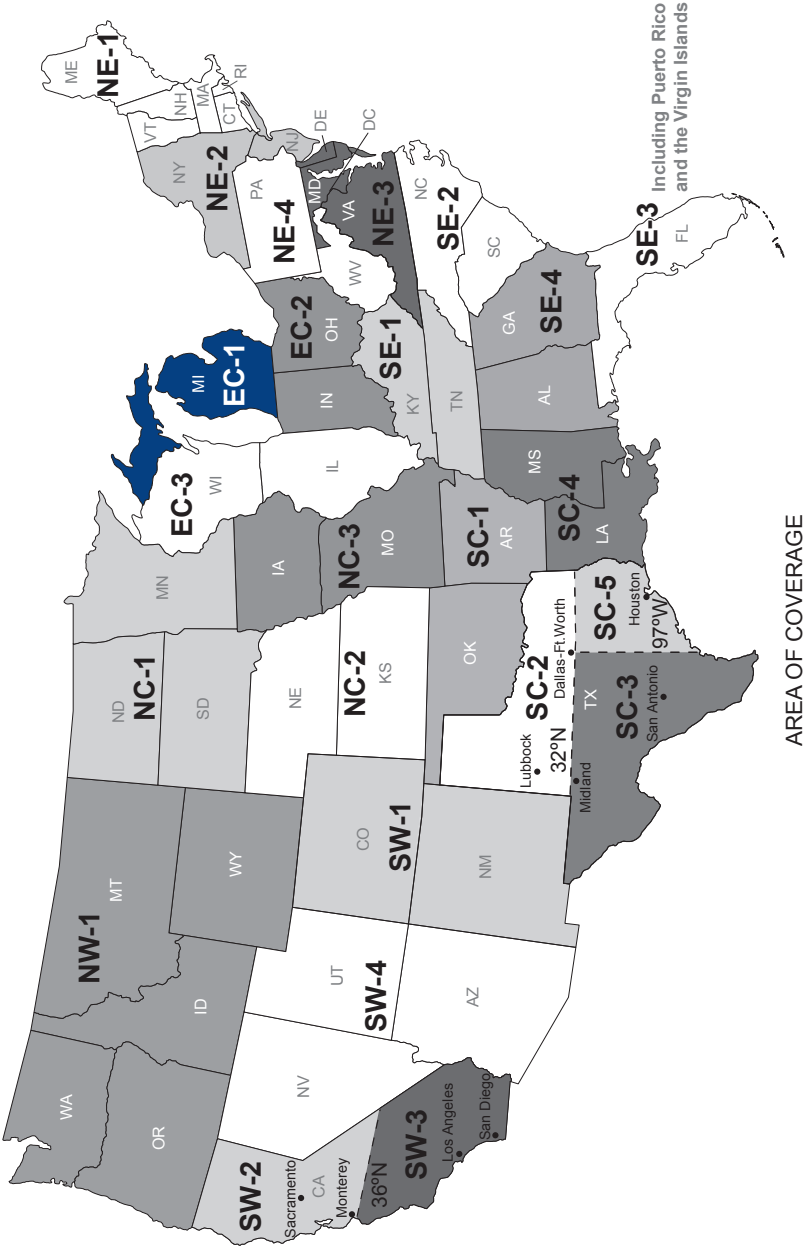
(ft. per min)

A rate of climb/descent table is provided for use in planning and executing climbs or descents under known or approximate ground speed conditions. It will be especially useful for approaches when the localizer only is used for course guidance. A best speed, power, altitude combination can be programmed which will result in a stable glide rate and altitude favorable for executing a landing if minimums exist upon breakout. Care should always be exercised so that minimum descent altitude and missed approach point are not exceeded.

CLIMB/ DESCENT ANGLE (degrees and tenths)	ft/NM	GROUND SPEED (knots)										
		60	90	120	150	180	210	240	270	300	330	360
2.0	210	210	320	425	530	635	743	850	955	1060	1165	1275
2.5	265	265	400	530	665	795	930	1060	1195	1325	1460	1590
VERTICAL PATH ANGLE 2.7	287	287	430	574	717	860	1003	1147	1290	1433	1576	1720
2.8	297	297	446	595	743	892	1041	1189	1338	1486	1635	1783
2.9	308	308	462	616	770	924	1078	1232	1386	1539	1693	1847
3.0	318	318	478	637	797	956	1115	1274	1433	1593	1752	1911
3.1	329	329	494	659	823	988	1152	1317	1481	1646	1810	1975
3.2	340	340	510	680	850	1020	1189	1359	1529	1699	1869	2039
3.3	350	350	526	701	876	1052	1227	1402	1577	1752	1927	2103
3.4	361	361	542	722	903	1083	1264	1444	1625	1805	1986	2166
3.5	370	370	555	745	930	1115	1300	1485	1670	1860	2045	2230
4.0	425	425	640	850	1065	1275	1490	1700	1915	2125	2340	2550
4.5	480	480	715	955	1195	1435	1675	1915	2150	2390	2630	2870
5.0	530	530	795	1065	1330	1595	1860	2125	2390	2660	2925	3190
5.5	585	585	880	1170	1465	1755	2050	2340	2635	2925	3220	3510
6.0	640	640	960	1275	1595	1915	2235	2555	2875	3195	3510	3830
6.5	690	690	1040	1385	1730	2075	2425	2770	3115	3460	3805	4155
7.0	745	745	1120	1490	1865	2240	2610	2985	3355	3730	4105	4475
7.5	800	800	1200	1600	2000	2400	2800	3200	3600	4000	4400	4800
8.0	855	855	1280	1710	2135	2560	2990	3415	3845	4270	4695	5125
8.5	910	910	1360	1815	2270	2725	3180	3630	4085	4540	4995	5450
9.0	960	960	1445	1925	2405	2885	3370	3850	4330	4810	5295	5775
9.5	1015	1015	1525	2035	2540	3050	3560	4065	4575	5085	5590	6100
10.0	1070	1070	1605	2145	2680	3215	3750	4285	4820	5355	5890	6430

CLIMB/DESCENT TABLE 10042

U.S. TERMINAL PUBLICATION VOLUMES



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EFF. DATE 21056