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Airport Information For KYIP

Terminal Charts For KYIP

Revision Letter For Cycle 04-2012

Change Notices

Notebook

## General Information

Location: Alpena MI USA  
IATA Code: APN  
Lat/Long: N45° 04.7' W083° 33.6'  
Elevation: 690 ft

Airport Use: Public  
Magnetic Variation: 7.8°W  
Sectional Chart: Lake Huron

Fuel Types: 100 Octane (LL), Jet A  
Repair Types: Minor Airframe, Minor Engine  
Customs: Upon Prior Request  
Airport Type: IFR  
Landing Fee: No  
Control Tower: Yes  
Jet Start Unit: Yes  
LLWS Alert: No  
Beacon: Yes  
Pattern Altitude: 1000 ft AGL

Sunrise: 1216 Z  
Sunset: 2318 Z,

## Runway Information

Runway: 01  
Length x Width: 9001 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 685 ft  
Lighting: Edge, ALS, Pilot controlled  
Stopway: 1004 ft

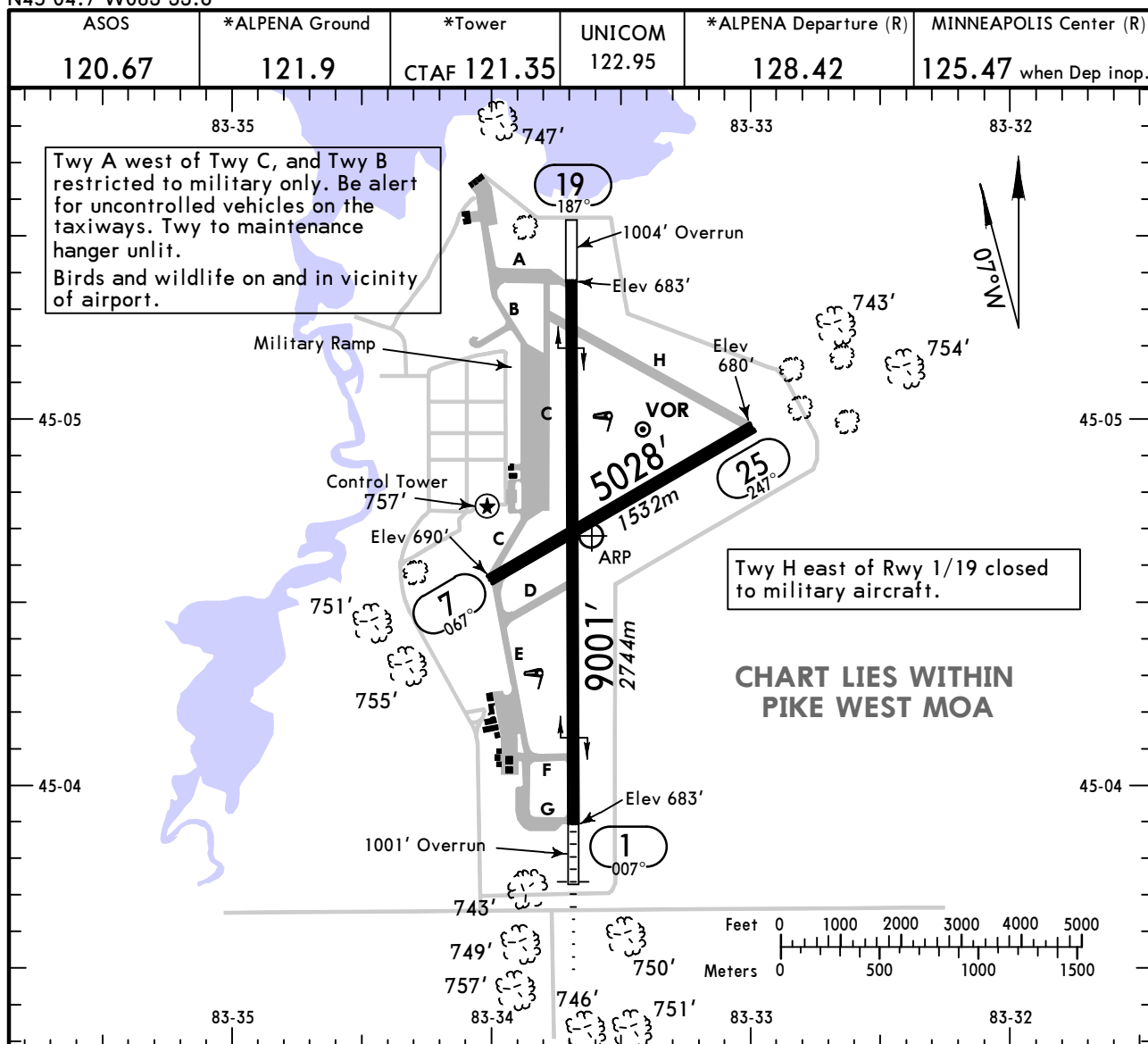
Runway: 07  
Length x Width: 5028 ft x 100 ft  
Surface Type: concrete  
TDZ-Elev: 690 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 19  
Length x Width: 9001 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 683 ft  
Lighting: Edge, REIL, Pilot controlled  
Stopway: 1001 ft

Runway: 25  
Length x Width: 5028 ft x 100 ft  
Surface Type: concrete  
TDZ-Elev: 680 ft  
Lighting: Edge, REIL, Pilot controlled

**Communication Information**

ASOS 120.675  
Alpena Tower 121.35 CTAF PCL  
Alpena Ground Control 121.9  
Alpena Approach Control 128.425  
Alpena Departure Control 128.425  
Alpena Co Regl Unicom 122.95  
Lansing Flight Service Station 122.1 RCO  
Lansing Flight Service Station 108.8 RCO  
Minneapolis Center 125.475 Remote Communications Air-Ground

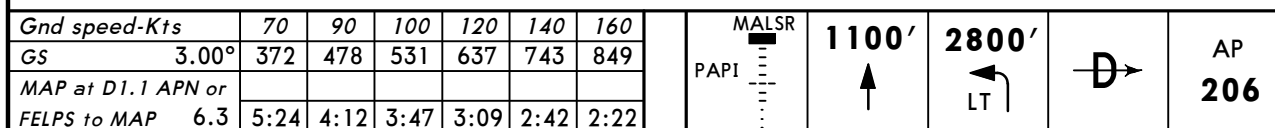


ADDITIONAL RUNWAY INFORMATION

|     |        |         | USABLE LENGTHS               |           | TAKE-OFF    | WIDTH |          |
|-----|--------|---------|------------------------------|-----------|-------------|-------|----------|
|     |        |         | — LANDING BEYOND —           |           |             |       |          |
| RWY |        |         |                              | Threshold | Glide Slope |       |          |
| 1   | ① HIRL | ① MALSR | PAPI-L (angle 3.00°) grooved |           | 8041' 2451m |       | 150' 46m |
| 19  | ① HIRL | ① REIL  | PAPI-L (angle 3.00°) grooved |           |             |       |          |
| 7   | ① MIRL | ① REIL  | PAPI-L (angle 3.00°) grooved |           |             |       | 100' 31m |
| 25  |        |         |                              |           |             |       |          |
|     |        |         |                              |           |             |       |          |
|     |        |         |                              |           |             |       |          |

① Activate on 121.35 when Twr inop.

| TAKE-OFF         |     |                  | FOR FILING AS ALTERNATE                      |       |                                                    |       |
|------------------|-----|------------------|----------------------------------------------|-------|----------------------------------------------------|-------|
| All Rwys         |     |                  | VOR Rwy 1<br>VOR Rwy 19<br>RNAV (GPS) Rwy 19 |       | Authorized Only<br>When Local<br>Weather Available | Other |
| Adequate Vis Ref | STD | RNAV (GPS) Rwy 1 |                                              |       |                                                    |       |
| 1 & 2<br>Eng     | 1/4 | 1                | A                                            | 800-2 | 800-2                                              | NA    |
| 3 & 4<br>Eng     |     | 1/2              | B                                            |       |                                                    |       |
|                  |     |                  | C                                            |       |                                                    |       |
|                  |     |                  | D                                            |       |                                                    |       |

BRIEFING STRIP™

| STRAIGHT-IN LANDING RWY 1       |     |                    |                                                  |          |         |                                                     |          |         | CIRCLE-TO-LAND |                                    |                                       |  |
|---------------------------------|-----|--------------------|--------------------------------------------------|----------|---------|-----------------------------------------------------|----------|---------|----------------|------------------------------------|---------------------------------------|--|
| ILS                             |     |                    | LOC (GS out)                                     |          |         |                                                     |          |         |                |                                    |                                       |  |
| <i>DA(H)</i> <b>883'</b> (200') |     |                    | <i>MDA(H)</i> <b>1140'</b> (457')<br>With HOMSUS |          |         | <i>MDA(H)</i> <b>1260'</b> (577')<br>Without HOMSUS |          |         |                |                                    |                                       |  |
| FULL                            |     | RAIL or<br>ALS out |                                                  | RAIL out | ALS out |                                                     | RAIL out | ALS out | Max<br>Kts     | With HOMSUS<br><i>MDA(H)</i> _____ | Without HOMSUS<br><i>MDA(H)</i> _____ |  |
| A                               | 1/2 | 3/4                | 1/2                                              | 3/4      | 1       | 1/2                                                 | 3/4      | 1       | 90             | 1140' (450')-1                     | 1260' (570')-1                        |  |
| B                               |     |                    |                                                  |          |         |                                                     |          |         | 120            |                                    |                                       |  |
| C                               |     |                    |                                                  |          |         |                                                     |          |         | 140            |                                    |                                       |  |
| D                               |     |                    |                                                  |          |         |                                                     |          |         | 165            |                                    |                                       |  |

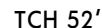
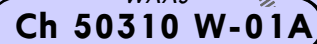
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MSA RWØ1

Alt Set: INCHES                      Trans level: FL 180                      Trans alt: 18000'

1. Use local altimeter setting; if not received, use Rogers City altimeter setting.

2. DME/DME RNP-0.30 not authorized. 3. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 48°C (118°F). 4. Baro-VNAV and VDP not authorized when using Rogers City altimeter setting. 5. VGSI and RNAV glidepath not coincident. 6. Pilot controlled lighting 121.35.



**HIMVO**

## CIRCLE-TO-LAND

### With Local Altimeter Setting

|                 |         |
|-----------------|---------|
| Max             | MDA (H) |
| K <sub>tc</sub> |         |

| KTS | MDA(H) |
|-----|--------|
| 90  |        |

1160' (470') - 1

|     |       |
|-----|-------|
| 120 |       |
|     | 11/21 |

|     |                  |
|-----|------------------|
| 140 | 1160' (470') - 1 |
|-----|------------------|

|     |                |
|-----|----------------|
| 165 | 1260' (570')-2 |
|-----|----------------|

|  |  |
|--|--|
|  |  |
|--|--|

### With Rogers City Altimeter Setting

|     |                 |
|-----|-----------------|
| Max | Ammeter setting |
| Ki  | 100 A (10)      |

|     |          |
|-----|----------|
| Kfs | $MDA(H)$ |
| 90  |          |

1220' (530') - 1

|     |               |
|-----|---------------|
| 120 |               |
|     | 1000' - 1000' |

|     |                |
|-----|----------------|
| 140 | 1220' (530')-1 |
|-----|----------------|

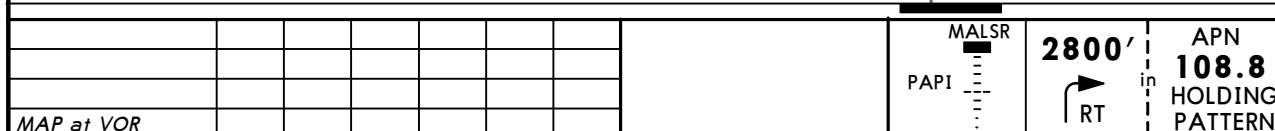
165 | 1320' (630')-2

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**BRIEFING STRIP** <sup>TM</sup>

TERPS AMEND 0 3 JUN 20103 JL

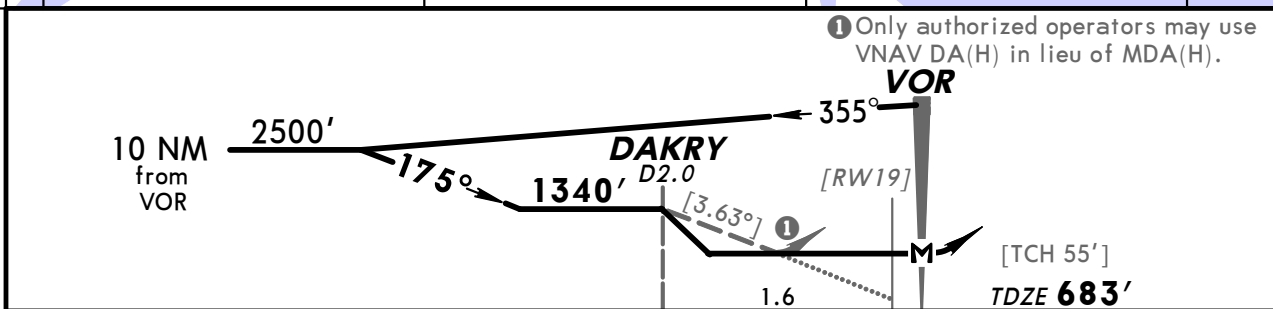
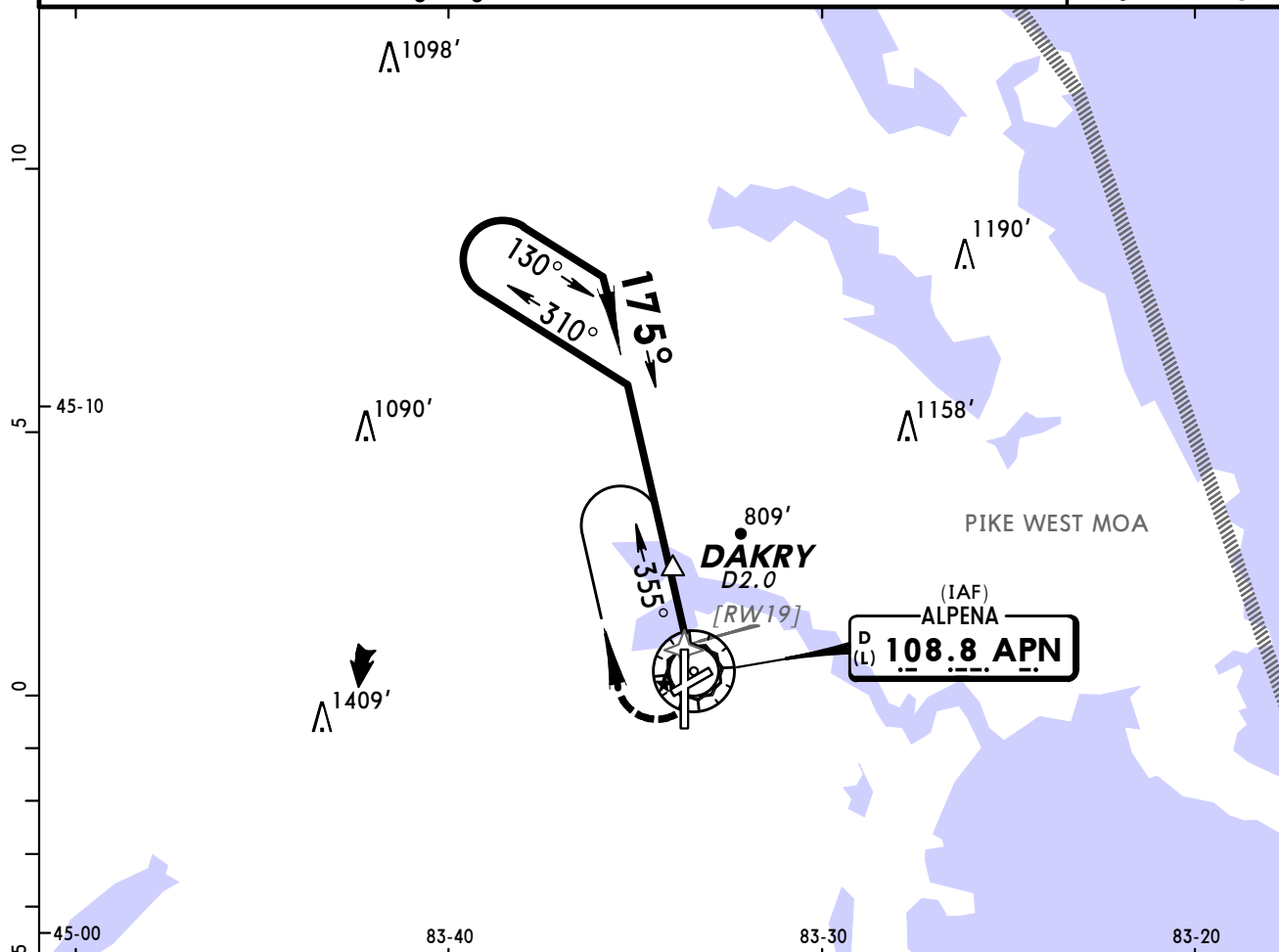
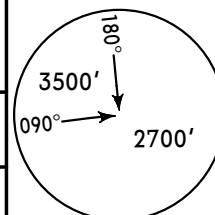
A diagram of a circular sector. The radius is labeled 3500'. The central angle is labeled 90°. The arc length is labeled 2600'.

TERPS AMEND 14C 6 MAY 2010



BRIEFING STRIP™

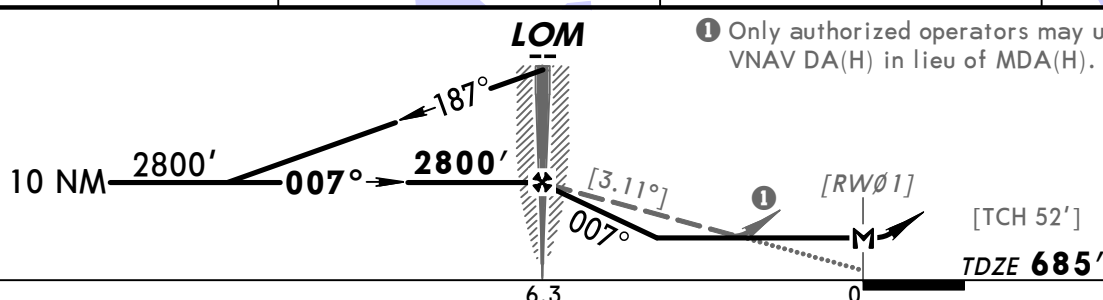
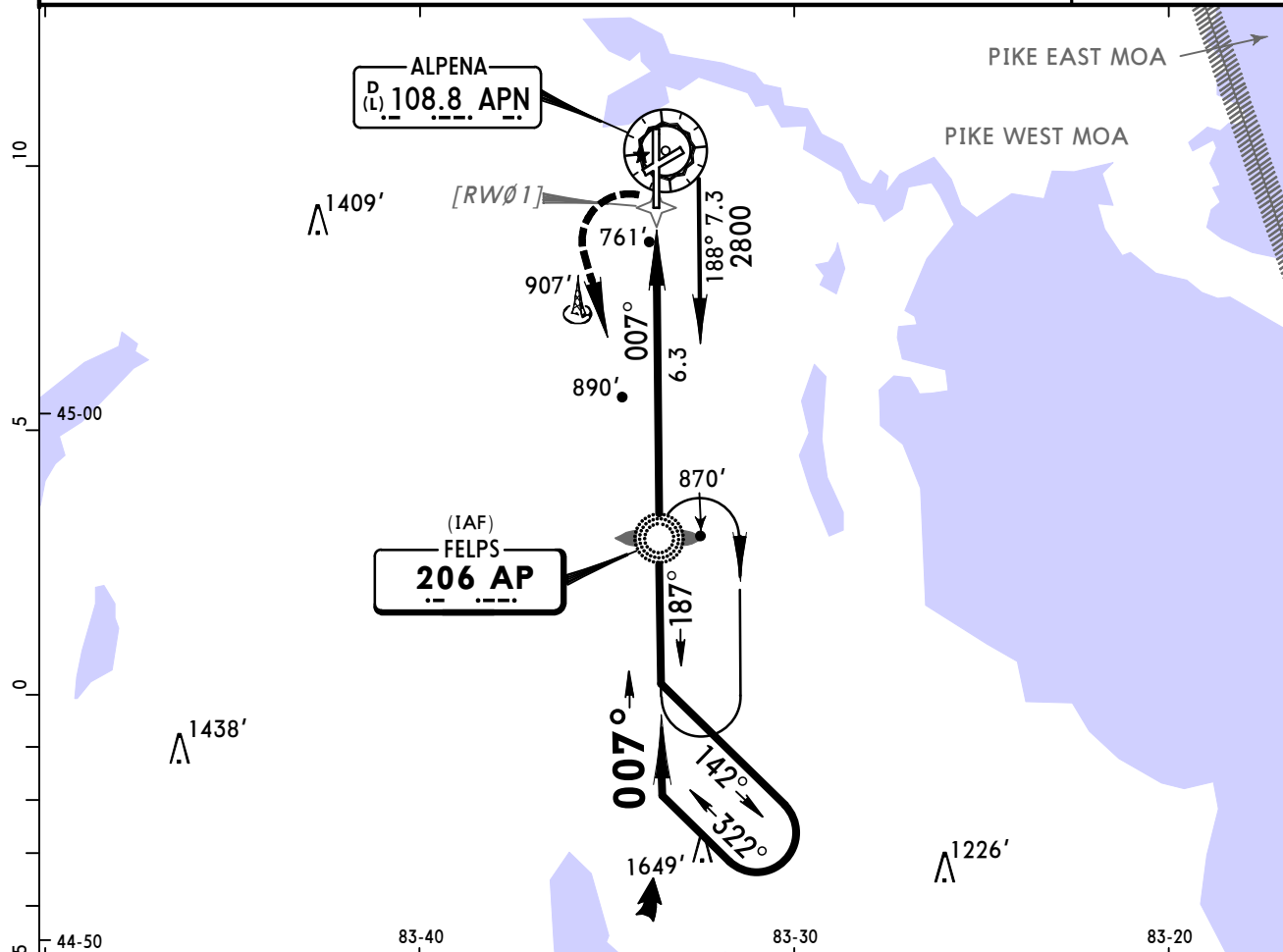
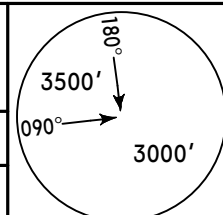
|                                                                                                                                                                                                 |                                |                                                 |                                         |                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------|-----------------------------------------|----------------------------|
| ASOS<br>120.67                                                                                                                                                                                  | *ALPENA Approach (R)<br>128.42 | MINNEAPOLIS Center (R)<br>125.47 when App inop. | *ALPENA Tower<br>CTAF 121.35            | *Ground<br>121.9           |
| VOR<br>APN<br>108.8                                                                                                                                                                             | Final<br>Apch Crs<br>175°      | Minimum Alt<br>DAKRY<br>1340' (657')            | MDA(H)<br>(CONDITIONAL)<br>1100' (417') | Apt Elev 690'<br>TDZE 683' |
| <b>MISSED APCH:</b> Climbing RIGHT turn to 2500' in APN VOR holding pattern.                                                                                                                    |                                |                                                 |                                         |                            |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. Visibility reduction by helicopters not authorized. 2. VGSI and descent angles not coincident. 3. Pilot controlled lighting 121.35. |                                |                                                 |                                         |                            |



|                       |     |     |     |     |     |      |  |  |  |
|-----------------------|-----|-----|-----|-----|-----|------|--|--|--|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160  |  |  |  |
| Descent angle [3.63°] | 450 | 578 | 642 | 771 | 899 | 1028 |  |  |  |
| MAP at VOR            |     |     |     |     |     |      |  |  |  |

| STRAIGHT-IN LANDING RWY 19 |       |                     |  | CIRCLE-TO-LAND |                      |                      |  |
|----------------------------|-------|---------------------|--|----------------|----------------------|----------------------|--|
| MDA(H) 1100' (417')        |       | MDA(H) 1340' (657') |  | With DAKRY     |                      | Without DAKRY        |  |
| With DAKRY                 |       | Without DAKRY       |  | Max Kts        | MDA(H)               | MDA(H)               |  |
| A                          | 1     | 1                   |  | 90             | 1120' (430') - 1     | 1340' (650') - 1     |  |
| B                          | 1     | 1                   |  | 120            | 1140' (450') - 1     | 1340' (650') - 1     |  |
| C                          | 1 1/4 | 1 3/4               |  | 140            | 1140' (450') - 1 1/2 | 1340' (650') - 1 3/4 |  |
| D                          | 1 1/4 | 2                   |  | 165            | 1240' (550') - 2     | 1340' (650') - 2     |  |

|                                                                                                                            |                                       |                                                        |                                                |                                          |
|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--------------------------------------------------------|------------------------------------------------|------------------------------------------|
| ASOS<br><b>120.67</b>                                                                                                      | *ALPENA Approach (R)<br><b>128.42</b> | MINNEAPOLIS Center (R)<br><b>125.47</b> when App inop. | *ALPENA Tower<br>CTAF <b>121.35</b>            | *Ground<br><b>121.9</b>                  |
| LOM<br>AP<br><b>206</b>                                                                                                    | Final<br>Apch Crs<br><b>007°</b>      | Minimum Alt<br>LOM<br><b>2800'</b> (2115')             | MDA(H)<br>(CONDITIONAL)<br><b>1280'</b> (595') | Apt Elev <b>689'</b><br>TDZE <b>685'</b> |
| MISSED APCH: Climbing LEFT turn to 2800' direct AP LOM and hold.                                                           |                                       |                                                        |                                                |                                          |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                                      |                                       |                                                        |                                                |                                          |
| 1. Use local altimeter setting; if not received, use Roger City altimeter setting.<br>2. Pilot controlled lighting 121.35. |                                       |                                                        |                                                |                                          |
| MSA AP LOM                                                                                                                 |                                       |                                                        |                                                |                                          |



① Only authorized operators may use VNAV DA(H) in lieu of MDA(H).

|                       |     |      |      |      |      |      |       |       |        |
|-----------------------|-----|------|------|------|------|------|-------|-------|--------|
| Gnd speed-Kts         | 70  | 90   | 100  | 120  | 140  | 160  | MALSR | 2800' | AP 206 |
| Descent angle [3.11°] | 385 | 495  | 550  | 660  | 770  | 880  | PAPI  | LT    |        |
| LOM to MAP            | 6.3 | 5:24 | 4:12 | 3:47 | 3:09 | 2:42 |       |       |        |

| STRAIGHT-IN LANDING RWY 1    |       |                                   |       |       | CIRCLE-TO-LAND               |                                   |                   |         |
|------------------------------|-------|-----------------------------------|-------|-------|------------------------------|-----------------------------------|-------------------|---------|
| MDA(H) <b>1280'</b> (595')   |       | MDA(H) <b>1340'</b> (655')        |       |       | With Local Altimeter Setting | With Roger City Altimeter Setting |                   |         |
| With Local Altimeter Setting |       | With Roger City Altimeter Setting |       |       | RAIL out                     | ALS out                           | RAIL out          | ALS out |
| A                            | 3/4   | 1                                 | 3/4   | 1     | Max Kts                      | MDA(H)                            | MDA(H)            |         |
| B                            |       |                                   |       |       | 90                           | 1280'(591')-1                     | 1340'(651')-1     |         |
| C                            | 1     | 1 1/2                             | 1 1/4 | 1 3/4 | 120                          |                                   |                   |         |
| D                            | 1 1/2 | 1 3/4                             | 1 3/4 | 2     | 140                          | 1280'(591')-1 1/2                 | 1340'(651')-1 3/4 |         |
|                              |       |                                   |       |       | 165                          | 1280'(591')-2                     | 1340'(651')-2 1/4 |         |

## **General Information**

Location: Kalamazoo MI USA  
IATA Code: AZO  
Lat/Long: N42° 14.1' W085° 33.1'  
Elevation: 874 ft

Airport Use: Public  
Magnetic Variation: 5.4 °W  
Sectional Chart: Chicago

Fuel Types: 100 Octane (LL), Jet A  
Oxygen Types: High Pressure, HP Bottle  
Repair Types: Major Airframe, Major Engine  
Customs: Upon Prior Request  
Airport Type: IFR  
Landing Fee: No  
Control Tower: Yes  
Jet Start Unit: Yes  
LLWS Alert: No  
Beacon: Yes  
Pattern Altitude: 800 ft AGL

Sunrise: 1221 Z  
Sunset: 2329 Z,

## **Runway Information**

Runway: 05  
Length x Width: 3438 ft x 100 ft  
Surface Type: asphalt  
TDZ-Elev: 874 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 09  
Length x Width: 2800 ft x 60 ft  
Surface Type: asphalt  
TDZ-Elev: 873 ft  
Lighting: Edge, Pilot controlled

Runway: 17  
Length x Width: 6502 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 867 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 23  
Length x Width: 3438 ft x 100 ft  
Surface Type: asphalt  
TDZ-Elev: 874 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 27  
Length x Width: 2800 ft x 60 ft  
Surface Type: asphalt  
TDZ-Elev: 873 ft  
Lighting: Edge, Pilot controlled

Runway: 35  
Length x Width: 6502 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 868 ft  
Lighting: Edge, ALS, Pilot controlled

## **Communication Information**

ATIS 127.25  
Kalamazoo Tower 118.3 CTAF PCL  
Kalamazoo Ground Control 121.9  
Kalamazoo Clearance Delivery 121.75  
Kalamazoo Approach Control 123.8 Secondary  
Kalamazoo Approach Control 121.2 (175°-353°) Initial Contact  
Kalamazoo Approach Control 119.2 (354°-174°)  
Kalamazoo Approach TRSA 121.2 (175°-353°)  
Kalamazoo Approach TRSA 119.2 (354°-174°)  
Kalamazoo Departure Control 123.8 Secondary  
Kalamazoo Departure Control 121.2 (175°-353°)  
Kalamazoo Departure Control 119.2 (354°-174°)  
Kalamazoo/Battle Creek IN Unicom 122.95  
Kalamazoo Approach Radar 121.2  
Kalamazoo Approach Radar 119.2  
Lansing Flight Service Station 122.1 RCO  
Lansing Flight Service Station 109.0 RCO  
Chicago Center 127.55 Remote Communications Air-Ground

KALAMAZOO, MICH  
KALAMAZOO/BATTLE CREEK INTL

GENERAL

Birds and deer in vicinity of airport.

## ADDITIONAL RUNWAY INFORMATION

| RWY |                                             | USABLE LENGTHS |             | TAKE-OFF | WIDTH |
|-----|---------------------------------------------|----------------|-------------|----------|-------|
|     |                                             | LANDING        | BEYOND      |          |       |
|     |                                             | Threshold      | Glide Slope |          |       |
| 5   | ① MIRL ① REIL ① PAPI-L (angle 3.0°) grooved |                |             |          | 100'  |
| 23  | ① MIRL ① REIL ① PAPI-L (angle 3.5°) grooved |                |             |          | 30m   |

① Activate on 118.3 when Twr inop.

|    |        |  |  |  |     |
|----|--------|--|--|--|-----|
| 9  | ② MIRL |  |  |  | 60' |
| 27 |        |  |  |  | 18m |

② Activate on 118.3 when Twr inop.

|      |                                          |  |             |  |      |
|------|------------------------------------------|--|-------------|--|------|
| 17   | ④ HIRL ④ REIL ④ PAPI-L                   |  |             |  | 150' |
| ③ 35 | ④ HIRL ④ MALSR ④ PAPI-L (angle 3.0°) RVR |  | 5452' 1662m |  | 46m  |

③ Grooved.

④ Activate on 118.3 when Twr inop.

**RUNWAY INCURSION HOT SPOTS**

For information only, not to be construed as ATC instructions.

**HS1** Complex intersection of Rwy 5, Twy A and Twy D.**HS2** Wrong runway departure risk. Twy C hold short lines serve both Rwy 5 and Rwy 9.**HS3** Wrong runway departure risk. Aircraft departing Rwy 5 can expect to hold short of Rwy 9 on Twy F.

## TAKE-OFF

## All Rwys

|           | Adequate Vis Ref | STD           |
|-----------|------------------|---------------|
| 1 & 2 Eng | RVR 16 or 1/4    | RVR 50 or 1   |
| 3 & 4 Eng |                  | RVR 24 or 1/2 |

## FOR FILING AS ALTERNATE

| Authorized Only When Twr Operating |       |                                                        |           |                                                                    | Authorized Only When Local Weather Available | Authorized Only When Twr Operating or With Approved Weather Service |
|------------------------------------|-------|--------------------------------------------------------|-----------|--------------------------------------------------------------------|----------------------------------------------|---------------------------------------------------------------------|
| ILS Rwy 35                         |       | LOC (BC) Rwy 17<br>LOC Rwy 35<br>NDB Rwy 35<br>RADAR-1 | VOR Rwy 5 | VOR Rwy 17<br>VOR Rwy 35<br>RNAV (GPS) Rwy 17<br>RNAV (GPS) Rwy 35 | RNAV (GPS) Rwy 5<br>RNAV (GPS) Rwy 23        | VOR Rwy 23                                                          |
| A                                  | 600-2 | 800-2                                                  | 800-2     | 800-2                                                              | 800-2                                        | 800-2                                                               |
| B                                  |       |                                                        |           |                                                                    |                                              |                                                                     |
| C                                  |       |                                                        | NA        |                                                                    | NA                                           |                                                                     |
| D                                  |       |                                                        |           |                                                                    |                                              |                                                                     |

*MSA AZO VOR*

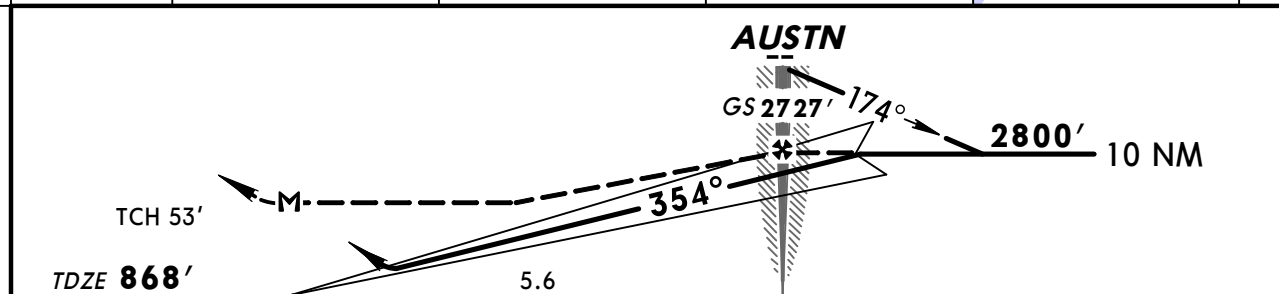
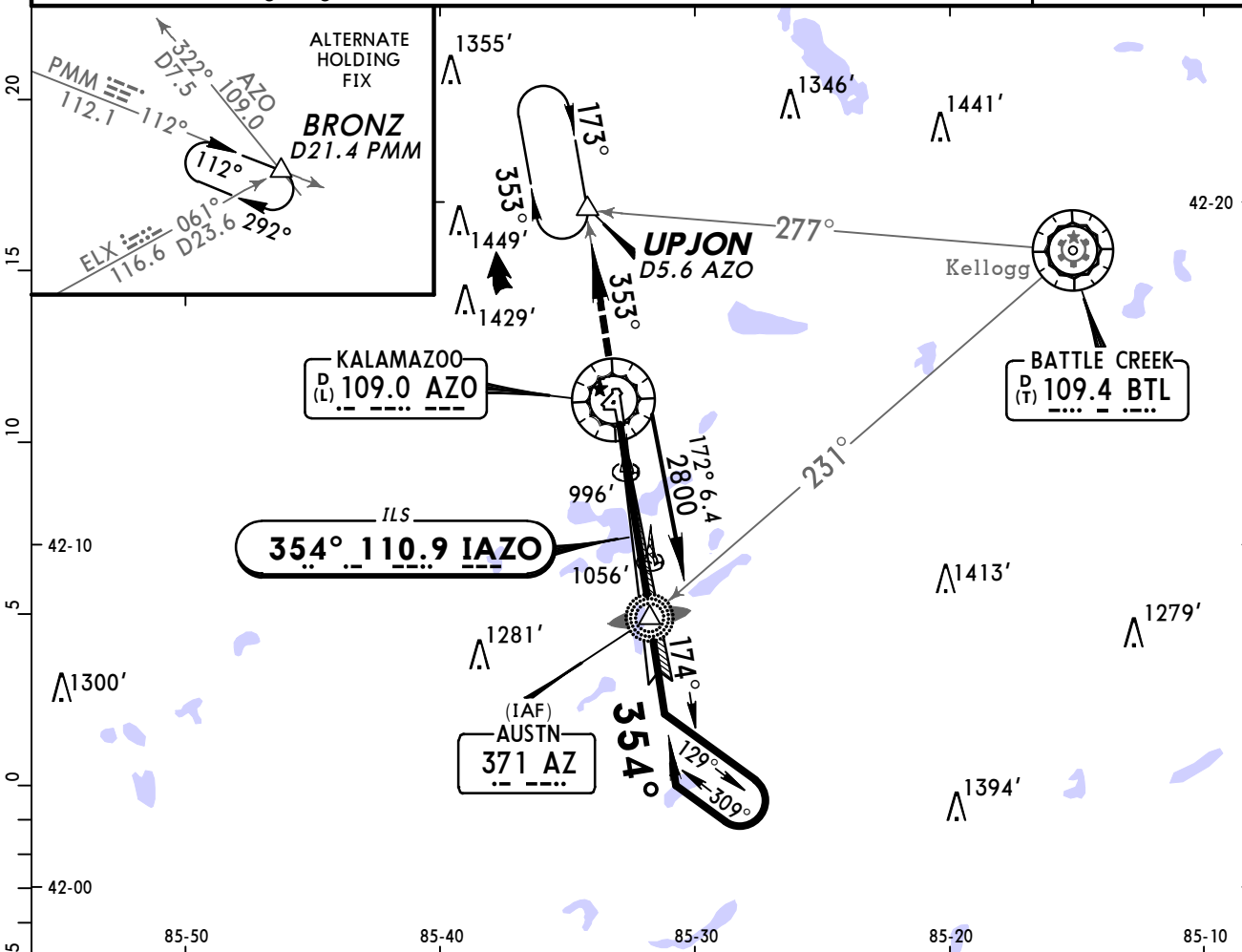


|                                                |      |      |      |      |      |      |
|------------------------------------------------|------|------|------|------|------|------|
| <i>Gnd speed-Kts</i>                           | 70   | 90   | 100  | 120  | 140  | 160  |
| <i>Descent angle</i> [2.97°]                   | 368  | 473  | 525  | 630  | 736  | 841  |
| <i>MAP at D0.9 AZO or<br/>UPJON to MAP</i> 4.7 | 4:02 | 3:08 | 2:49 | 2:21 | 2:01 | 1:46 |

**AMENDMENTS**  
19

BRIEFING STRIP

|                                                                                           |                                  |                                             |                                |                            |
|-------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------|--------------------------------|----------------------------|
| *ATIS<br>127.25                                                                           | *KALAMAZOO Approach (R)<br>121.2 | CHICAGO Center (R)<br>127.55 when App inop. | *KALAMAZOO Tower<br>CTAF 118.3 | *Ground<br>121.9           |
| LOC<br>IAZO<br>110.9                                                                      | Final<br>Apch Crs<br>354°        | GS<br>AUSTN<br>2727' (1859')                | ILS<br>DA(H)<br>1068' (200')   | Apt Elev 874'<br>TDZE 868' |
| MISSED APCH: Climb to 2600' outbound via AZO VOR R-353 to<br>UPJON INT/D5.6 AZO and hold. |                                  |                                             |                                |                            |
| Alt Set: INCHES<br>1. Pilot controlled lighting 118.3.                                    |                                  | Trans level: FL 180                         |                                | Trans alt: 18000'          |
| MSA AZ LOM                                                                                |                                  |                                             |                                |                            |



|                  |       |      |      |      |      |      |     |  |  |  |
|------------------|-------|------|------|------|------|------|-----|--|--|--|
| Gnd speed-Kts    | 70    | 90   | 100  | 120  | 140  | 160  |     |  |  |  |
| GS               | 2.98° | 374  | 481  | 535  | 641  | 748  | 855 |  |  |  |
| AUSTN to MAP 5.6 | 4:48  | 3:44 | 3:22 | 2:48 | 2:24 | 2:06 |     |  |  |  |

| STRAIGHT-IN LANDING RWY 35              |                                      |                      |                                                   |                         |                        | CIRCLE-TO-LAND |                         |                             |
|-----------------------------------------|--------------------------------------|----------------------|---------------------------------------------------|-------------------------|------------------------|----------------|-------------------------|-----------------------------|
| ILS<br><i>DA(H)</i> <b>1068'</b> (200') |                                      |                      | LOC (GS out)<br><i>MDA(H)</i> <b>1320'</b> (452') |                         |                        | Max<br>Kts     | <i>MDA(H)</i>           |                             |
| FULL                                    |                                      | RAIL or ALS out      | RAIL out                                          |                         | ALS out                |                |                         |                             |
| A                                       | <b>1</b><br><br>RVR <b>24</b> or 1/2 | RVR <b>40</b> or 3/4 | RVR <b>24</b><br>or 1/2                           | RVR <b>40</b><br>or 3/4 | RVR <b>50</b> or 1     | 90             | <b>1380'</b> (506') - 1 |                             |
| B                                       |                                      |                      |                                                   |                         |                        | 120            |                         |                             |
| C                                       |                                      |                      |                                                   | RVR <b>40</b><br>or 3/4 | RVR <b>60</b> or 1 1/4 |                | 140                     | <b>1380'</b> (506') - 1 1/2 |
| D                                       |                                      |                      |                                                   | RVR <b>50</b> or 1      | 1 1/2                  |                | 165                     | <b>1440'</b> (566') - 2     |

1 RVR 18 with Flight Director or Autopilot or HUD to DA.

CHANGES: Minimums, obstruction added.

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# KAZO/AZO KALAMAZOO/ BATTLE CREEK INTL

29 APR 11

12-1

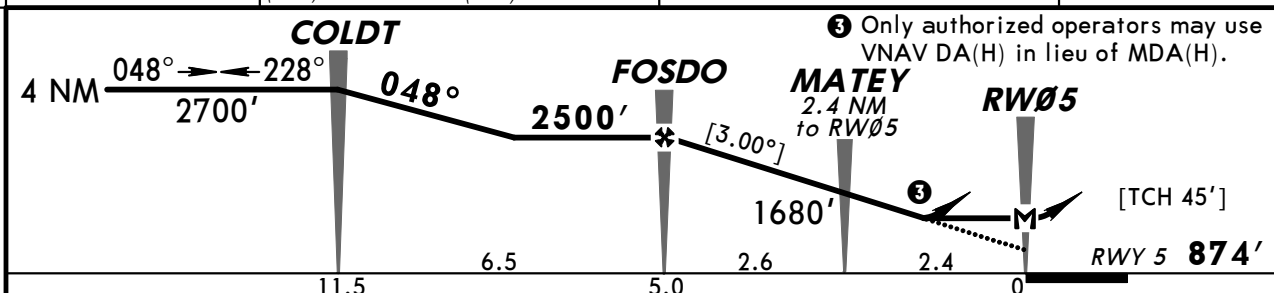
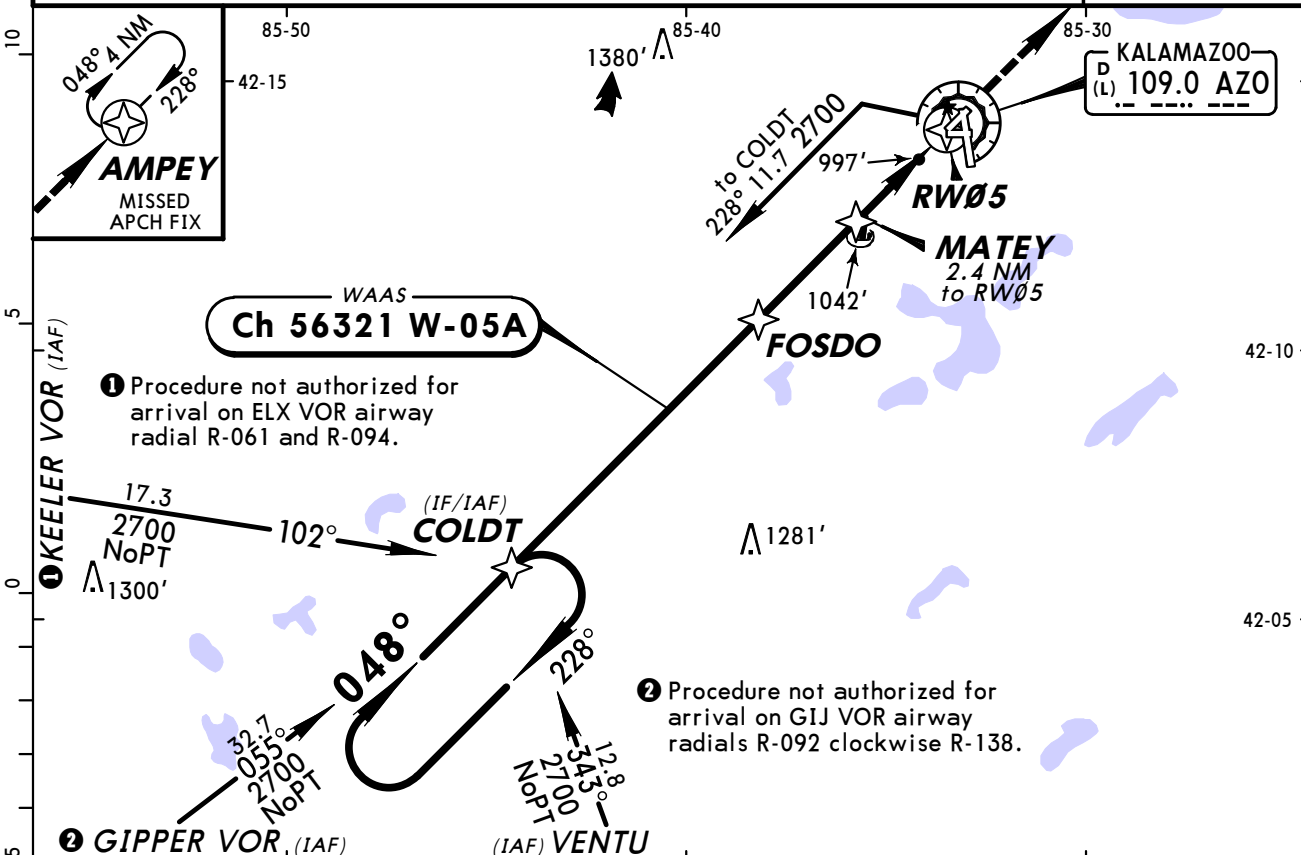
Eff 5 May

CAT A, B & C

# KALAMAZOO, MICH RNAV (GPS) Rwy 5

BRIEFING STRIP™

|                                                                                                                                                                                                                                                                                                                                                            |                                  |                                                     |                                                      |                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------|------------------------------------------------------|------------------------------------|
| *ATIS<br>127.25                                                                                                                                                                                                                                                                                                                                            | *KALAMAZOO Approach (R)<br>121.2 | CHICAGO Center (R)<br>127.55 when App inop.         | *KALAMAZOO Tower<br>CTAF 118.3                       | *Ground<br>121.9                   |
| WAAS<br><b>Ch 56321</b><br>W-05A                                                                                                                                                                                                                                                                                                                           | Final<br>Apch Crs<br><b>048°</b> | Minimum Alt<br><b>FOSDO</b><br><b>2500'</b> (1626') | LP<br>MDA(H)<br>(CONDITIONAL)<br><b>1260'</b> (386') | Apt Elev 874'<br>Rwy 5 <b>874'</b> |
| <b>MISSED APCH: Climb to 3000' direct AMPEY and hold.</b>                                                                                                                                                                                                                                                                                                  |                                  |                                                     |                                                      |                                    |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                                                                                                                                                                                                                                                                      |                                  |                                                     |                                                      |                                    |
| 1. Use local altimeter setting; if not received, use Battle Creek altimeter setting.<br>2. DME/DME RNP-0.30 not authorized. 3. When VGSI inop, circling Rwy 23 not authorized at night. 4. When VGSI inop, straight-in/circling Rwy 5 procedure not authorized at night. 5. VGSI and descent angles not coincident.<br>6. Pilot controlled lighting 118.3. |                                  |                                                     |                                                      |                                    |
|                                                                                                                                                                                                                                                                                                                                                            |                                  |                                                     |                                                      | 3000'<br><br>MSA RW05              |



|                       |     |     |     |     |     |     |  |  |  |  |
|-----------------------|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 |  |  |  |  |
| Descent angle [3.00°] | 372 | 478 | 531 | 637 | 743 | 849 |  |  |  |  |
| MAP at RW05           |     |     |     |     |     |     |  |  |  |  |

| STRAIGHT-IN LANDING RWY 5<br>With Local Altimeter Setting |       |                                    |       | 1 CIRCLE-TO-LAND                    |                                        |
|-----------------------------------------------------------|-------|------------------------------------|-------|-------------------------------------|----------------------------------------|
| LP<br>MDA(H) <b>1260'</b> (386')                          |       | LNAV<br>MDA(H) <b>1360'</b> (486') |       | Max Kts                             | With Local Altimeter Setting<br>MDA(H) |
| A                                                         | 1     | A                                  | 1     | 90                                  | 1380' (506') - 1                       |
| B                                                         | 1     | B                                  | 1     | 120                                 | 1380' (506') - 1                       |
| C                                                         | 1 1/8 | C                                  | 1 3/8 | 140                                 | 1380' (506') - 1 1/2                   |
| D                                                         | NA    | D                                  | NA    |                                     | NA                                     |
| With Battle Creek Altimeter Setting                       |       |                                    |       | With Battle Creek Altimeter Setting |                                        |
| LP<br>MDA(H) <b>1320'</b> (446')                          |       | LNAV<br>MDA(H) <b>1420'</b> (546') |       | Max Kts                             | MDA(H)                                 |
| A                                                         | 1     | A                                  | 1     | 90                                  | 1440' (566') - 1                       |
| B                                                         | 1     | B                                  | 1     | 120                                 | 1440' (566') - 1                       |
| C                                                         | 1 3/8 | C                                  | 1 5/8 | 140                                 | 1440' (566') - 1 5/8                   |
| D                                                         | NA    | D                                  | NA    |                                     | NA                                     |

1 Circling to Rwy 9/27 not authorized at night.

CHANGES: New procedure.

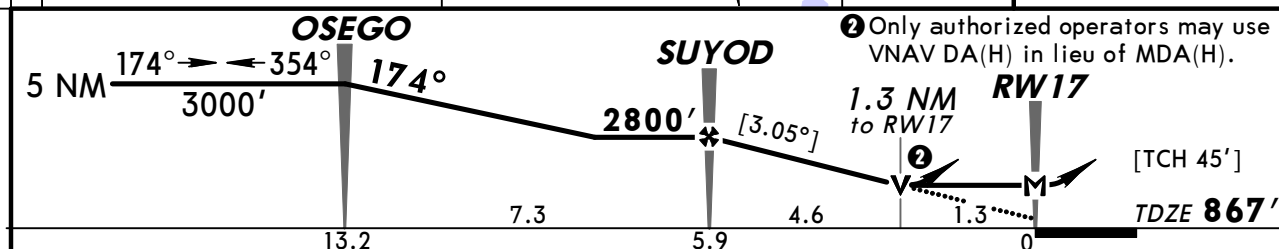
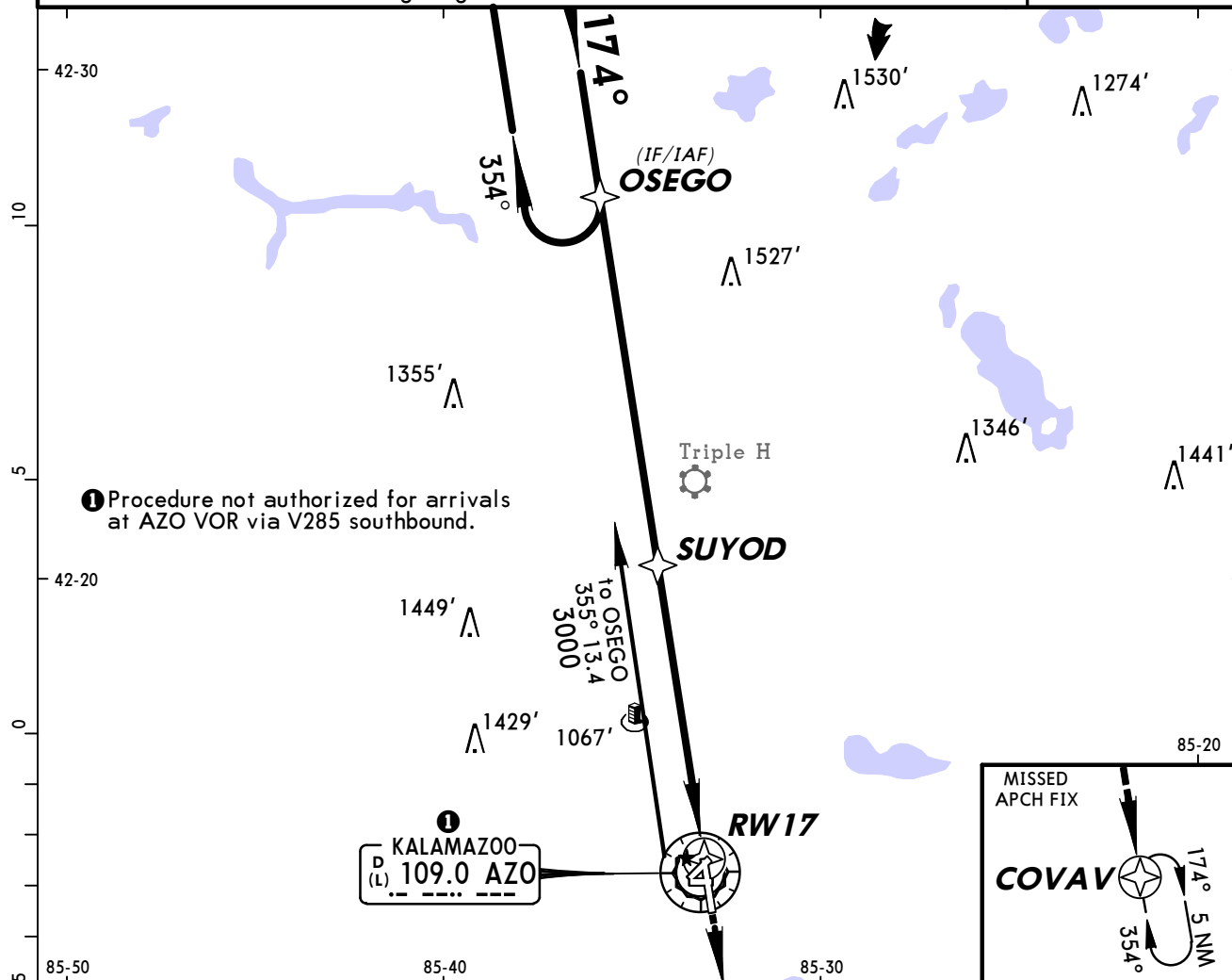
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TERPS AMEND 0 5 MAY 2011

# KAZO/AZO JEPPESEN KALAMAZOO, MICH

## KALAMAZOO/BATTLE CREEK INTL Eff 5 May (12-2) RNAV (GPS) Rwy 17

|                                                                                                                                                                                                                                                      |                                         |                                                     |                                       |                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------------------|---------------------------------------|------------------------------------------|
| *ATIS<br><b>127.25</b>                                                                                                                                                                                                                               | *KALAMAZOO Approach (R)<br><b>121.2</b> | CHICAGO Center (R)<br><b>127.55</b> when App inop.  | *KALAMAZOO Tower<br><b>CTAF 118.3</b> | *Ground<br><b>121.9</b>                  |
| RNAV                                                                                                                                                                                                                                                 | Final<br>Apch Crs<br><b>174°</b>        | Minimum Alt<br><b>SUYOD</b><br><b>2800'</b> (1933') | LNAV<br>MDA(H)<br><b>1320'</b> (453') | Apt Elev <b>874'</b><br><b>TDZE 867'</b> |
| <b>MISSED APCH: Climb to 2800' direct COVAV and hold.</b><br>Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. DME/DME RNP-0.30 not authorized. 2. Visibility reduction by helicopters not authorized. 3. Pilot controlled lighting 118.3. |                                         |                                                     |                                       |                                          |
|                                                                                                                                                                                                                                                      |                                         |                                                     |                                       | 3000'<br><br>MSA RW17                    |



|                       |     |     |     |     |     |     |  |  |  |  |
|-----------------------|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 |  |  |  |  |
| Descent angle [3.05°] | 378 | 486 | 540 | 648 | 755 | 863 |  |  |  |  |
| MAP at RW17           |     |     |     |     |     |     |  |  |  |  |

| STRAIGHT-IN LANDING RWY 17 |       |  |  |  |  | CIRCLE-TO-LAND |                      |  |  |
|----------------------------|-------|--|--|--|--|----------------|----------------------|--|--|
| LNAV                       |       |  |  |  |  | MDA(H)         |                      |  |  |
| MDA(H) 1320' (453')        |       |  |  |  |  | Max Kts        |                      |  |  |
| A                          | 1     |  |  |  |  | 90             | 1380' (506') - 1     |  |  |
| B                          |       |  |  |  |  | 120            |                      |  |  |
| C                          | 1 1/4 |  |  |  |  | 140            | 1380' (506') - 1 1/2 |  |  |
| D                          | 1 1/2 |  |  |  |  | 165            | 1440' (566') - 2     |  |  |

# KAZO/AZO KALAMAZOO/ BATTLE CREEK INTL

29 APR 11

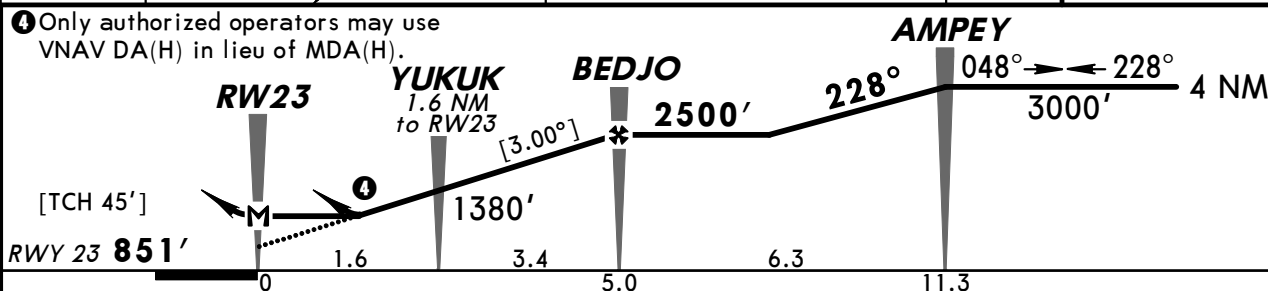
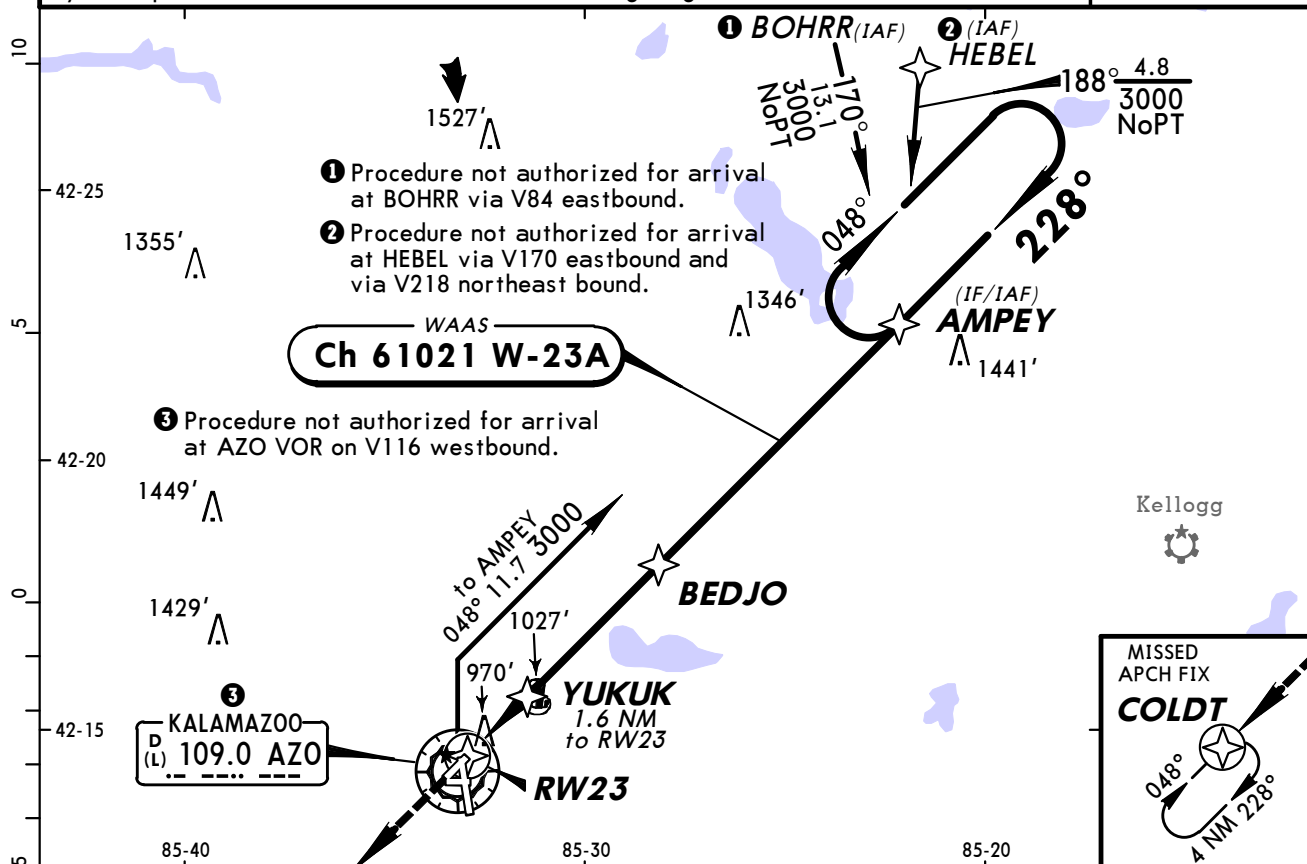
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Eff 5 May

CAT A, B & C

# KALAMAZOO, MICH RNAV (GPS) Rwy 23

|                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                                                     |                                                      |                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------|------------------------------------------------------|--------------------------------------------|
| *ATIS<br>127.25                                                                                                                                                                                                                                                                                                                                                                                                | *KALAMAZOO Approach (R)<br>121.2 | CHICAGO Center (R)<br>127.55 when App inop.         | *KALAMAZOO Tower<br>CTAF 118.3                       | *Ground<br>121.9                           |
| WAAS<br><b>Ch 61021</b><br>W-23A                                                                                                                                                                                                                                                                                                                                                                               | Final<br>Apch Crs<br><b>228°</b> | Minimum Alt<br><b>BEDJO</b><br><b>2500'</b> (1649') | LP<br>MDA(H)<br>(CONDITIONAL)<br><b>1220'</b> (369') | Apt Elev <b>874'</b><br>Rwy 23 <b>851'</b> |
| <b>MISSED APCH: Climb to 2700' direct COLDT and hold.</b>                                                                                                                                                                                                                                                                                                                                                      |                                  |                                                     |                                                      |                                            |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                                                                                                                                                                                                                                                                                                                          |                                  |                                                     |                                                      |                                            |
| 1. Use local altimeter setting; if not received, use Battle Creek altimeter setting.<br>2. DME/DME RNP-0.30 not authorized. 3. When VGSI inop, circling Rwy 5 not authorized at night. 4. When VGSI inop, straight-in/circling Rwy 23 procedure not authorized at night. 5. VGSI and descent angles not coincident. 6. Visibility reduction by helicopters not authorized. 7. Pilot controlled lighting 118.3. |                                  |                                                     |                                                      |                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                                                     |                                                      | 3000'                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                |                                  |                                                     |                                                      | MSA RW23                                   |



|                       |     |     |     |     |     |     |                |       |   |       |
|-----------------------|-----|-----|-----|-----|-----|-----|----------------|-------|---|-------|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 |                |       |   |       |
| Descent angle [3.00°] | 372 | 478 | 531 | 637 | 743 | 849 |                |       |   |       |
| MAP at RW23           |     |     |     |     |     |     |                |       |   |       |
|                       |     |     |     |     |     |     | REIL<br>PAPI-L | 2700' | → | COLDT |

| STRAIGHT-IN LANDING RWY 23<br>With Local Altimeter Setting |       |  |                             |       |  | 1 CIRCLE-TO-LAND                    |                                            |
|------------------------------------------------------------|-------|--|-----------------------------|-------|--|-------------------------------------|--------------------------------------------|
| LP<br>MDA(H) 1220' (369')                                  |       |  | LNAV<br>MDA(H) 1280' (429') |       |  | Max Kts                             | With Local Altimeter Setting MDA(H)        |
| A                                                          | 1     |  | A                           | 1     |  | 90                                  | 1380' (506') - 1                           |
| B                                                          | 1     |  | B                           | 1     |  | 120                                 | 1380' (506') - 1                           |
| C                                                          | 1 1/4 |  | C                           | 1 1/4 |  | 140                                 | 1380' (506') - 1 1/2                       |
| D                                                          | NA    |  | D                           | NA    |  | D                                   | NA                                         |
| With Battle Creek Altimeter Setting                        |       |  |                             |       |  | With Battle Creek Altimeter Setting |                                            |
| LP<br>MDA(H) 1280' (429')                                  |       |  | LNAV<br>MDA(H) 1340' (489') |       |  | Max Kts                             | With Battle Creek Altimeter Setting MDA(H) |
| A                                                          | 1     |  | A                           | 1     |  | 90                                  | 1440' (566') - 1                           |
| B                                                          | 1     |  | B                           | 1     |  | 120                                 | 1440' (566') - 1                           |
| C                                                          | 1 1/4 |  | C                           | 1 3/8 |  | 140                                 | 1440' (566') - 1 1/2                       |
| D                                                          | NA    |  | D                           | NA    |  | D                                   | NA                                         |

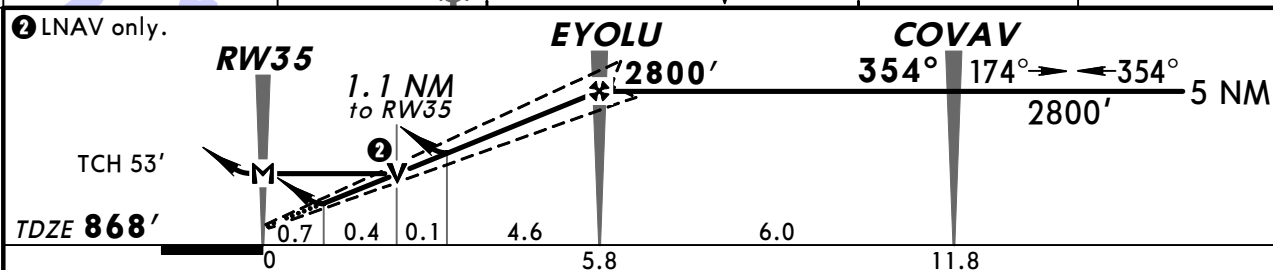
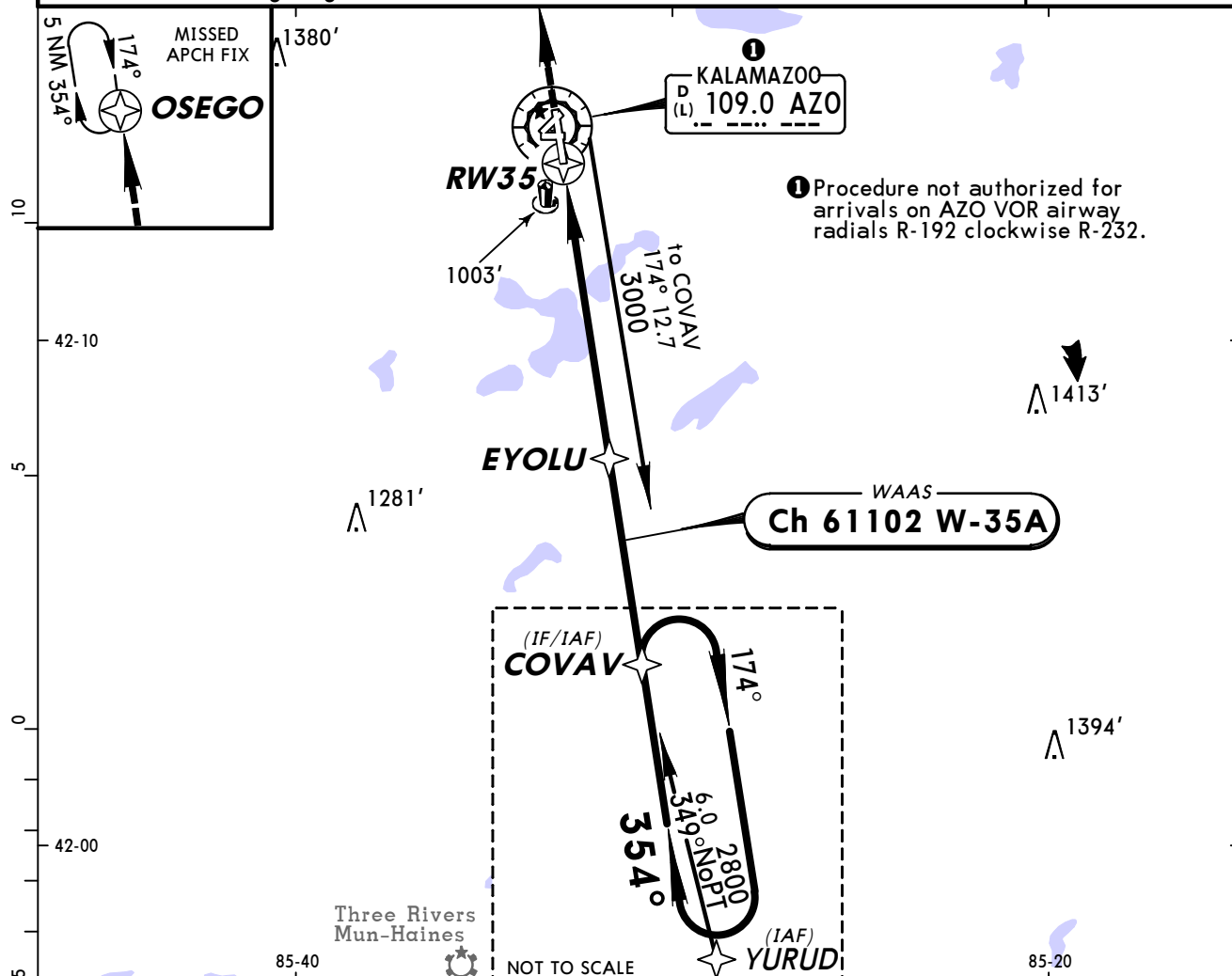
1 Circling to Rwy 9/27 not authorized at night.

CHANGES: New procedure.

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TERPS AMEND 0 5 MAY 2011

|                                                                                                                                                                                   |                                         |                                                     |                                       |                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------------------|---------------------------------------|------------------------------------------|
| *ATIS<br><b>127.25</b>                                                                                                                                                            | *KALAMAZOO Approach (R)<br><b>121.2</b> | CHICAGO Center (R)<br><b>127.55</b> when App inop.  | *KALAMAZOO Tower<br><b>CTAF 118.3</b> | *Ground<br><b>121.9</b>                  |
| WAAS<br><b>Ch 61102</b><br><b>W-35A</b>                                                                                                                                           | Final<br>Apch Crs<br><b>354°</b>        | Minimum Alt<br><b>EYOLU</b><br><b>2800'</b> (1932') | LPV<br>DA(H)<br><b>1134'</b> (266')   | Apt Elev <b>874'</b><br><b>TDZE 868'</b> |
| <b>MISSED APCH: Climb to 3000' direct OSEGO and hold.</b>                                                                                                                         |                                         |                                                     |                                       |                                          |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                                                                                             |                                         |                                                     |                                       |                                          |
| 1. DME/DME RNP-0.30 not authorized. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 49°C (121°F). 3. Pilot controlled lighting 118.3. |                                         |                                                     |                                       |                                          |
| 3000'                                                                                                                                                                             |                                         |                                                     |                                       |                                          |
| MSA RW35                                                                                                                                                                          |                                         |                                                     |                                       |                                          |



|                        |     |     |     |     |     |     |       |       |       |
|------------------------|-----|-----|-----|-----|-----|-----|-------|-------|-------|
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 | MALSR | 3000' | OSEGO |
| Glide Path Angle 2.98° | 369 | 474 | 527 | 633 | 738 | 843 | PAPI  |       |       |
| MAP at RW35            |     |     |     |     |     |     |       |       |       |

| STRAIGHT-IN LANDING RWY 35       |  |                                        |  |                                    |                 |         | CIRCLE-TO-LAND       |  |
|----------------------------------|--|----------------------------------------|--|------------------------------------|-----------------|---------|----------------------|--|
| LPV<br>DA(H) <b>1134'</b> (266') |  | LNAV/VNAV<br>DA(H) <b>1283'</b> (415') |  | LNAV<br>MDA(H) <b>1260'</b> (392') |                 |         | MDA(H)               |  |
| RAIL or ALS out                  |  | RAIL or ALS out                        |  | RAIL out                           | ALS out         | Max Kts |                      |  |
|                                  |  |                                        |  |                                    |                 | 90      |                      |  |
|                                  |  |                                        |  | RVR 24 or 1/2                      | RVR 40 or 3/4   | 120     | 1380' (506') - 1 1/2 |  |
|                                  |  |                                        |  | RVR 50 or 1                        | RVR 60 or 1 1/4 | 140     |                      |  |
|                                  |  |                                        |  |                                    |                 | 165     | 1440' (566') - 2     |  |

# VOR Rwy 5

**BRIFFING STRIP**™

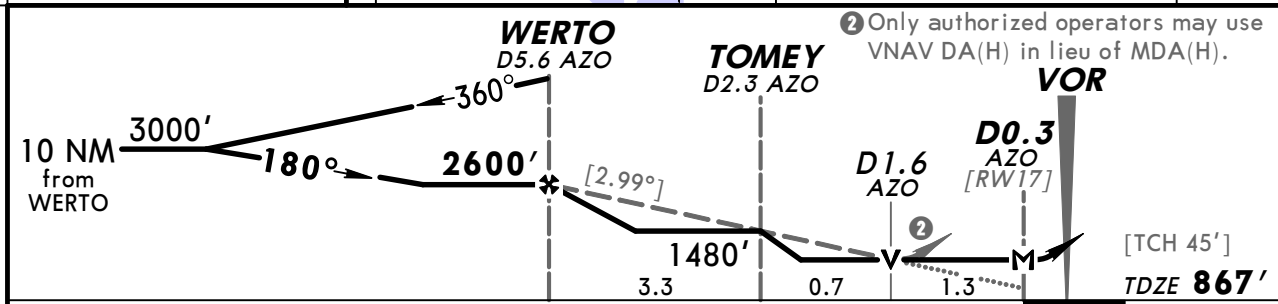
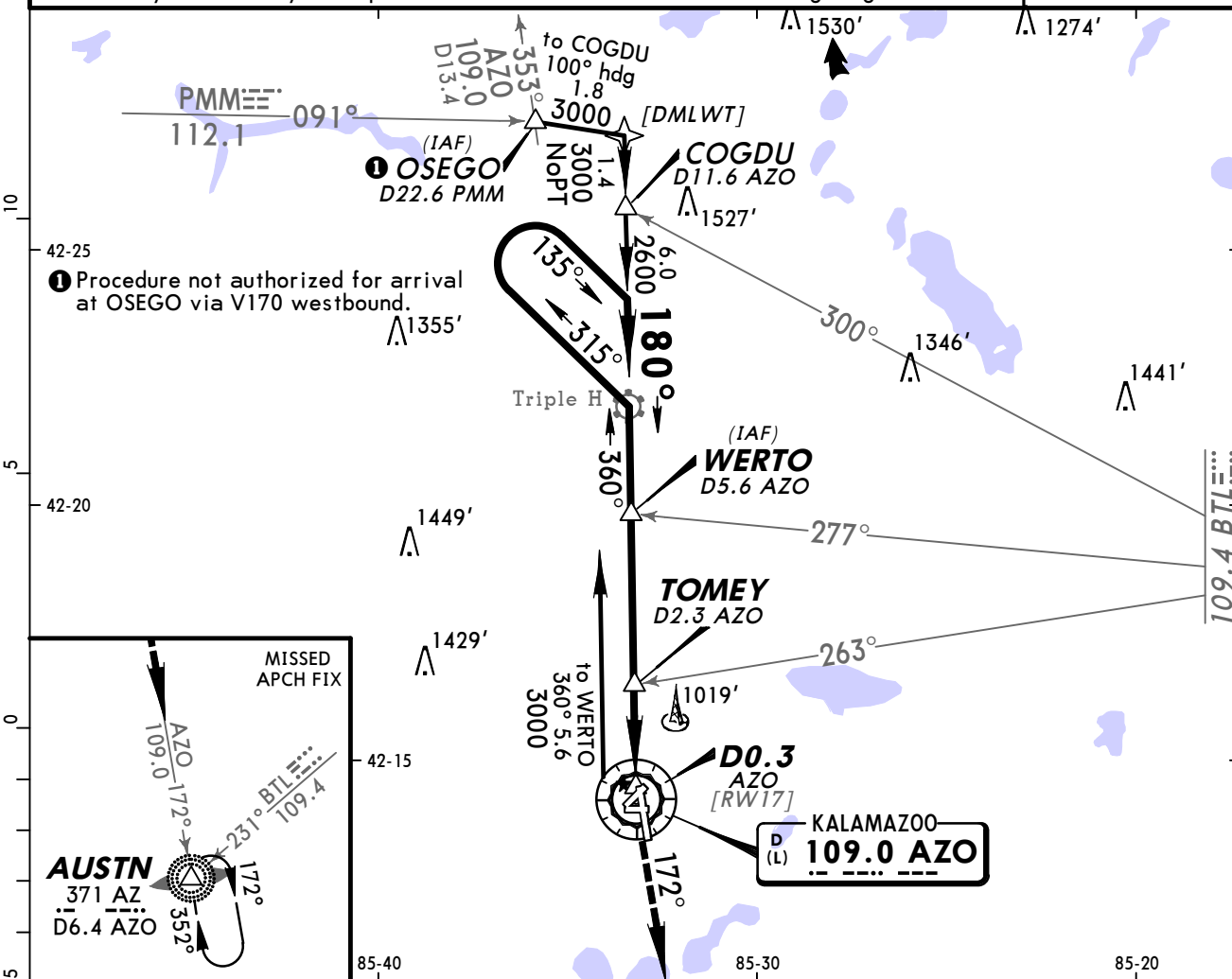


|                              |     |     |     |     |     |     |
|------------------------------|-----|-----|-----|-----|-----|-----|
| <i>Gnd Speed-Kts</i>         | 70  | 90  | 100 | 120 | 140 | 160 |
| <i>Descent angle [3.11°]</i> | 385 | 495 | 550 | 660 | 770 | 880 |
|                              |     |     |     |     |     |     |
| <i>MAP at VOR</i>            |     |     |     |     |     |     |

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AMEND  
OBE

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|                                                                                                   |                                         |                                                     |                                                |                                          |
|---------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------------------|------------------------------------------------|------------------------------------------|
| *ATIS<br><b>127.25</b>                                                                            | *KALAMAZOO Approach (R)<br><b>121.2</b> | CHICAGO Center (R)<br><b>127.55</b> when App inop.  | *KALAMAZOO Tower<br><b>CTAF 118.3</b>          | *Ground<br><b>121.9</b>                  |
| VOR<br>AZO<br><b>109.0</b>                                                                        | Final<br>Apch Crs<br><b>180°</b>        | Minimum Alt<br><b>WERTO</b><br><b>2600'</b> (1733') | MDA(H)<br>(CONDITIONAL)<br><b>1320'</b> (453') | Apt Elev <b>874'</b><br>TDZE <b>867'</b> |
| <b>MISSED APCH:</b> Climb to 2500' outbound via AZO VOR R-172 to AUSTN LOM/INT/D6.4 AZO and hold. |                                         |                                                     |                                                |                                          |
| Alt Set: INCHES      Trans level: FL 180      Trans alt: 18000'                                   |                                         |                                                     |                                                |                                          |
| 1. Visibility reduction by helicopters not authorized. 2. Pilot controlled lighting 118.3.        |                                         |                                                     |                                                |                                          |

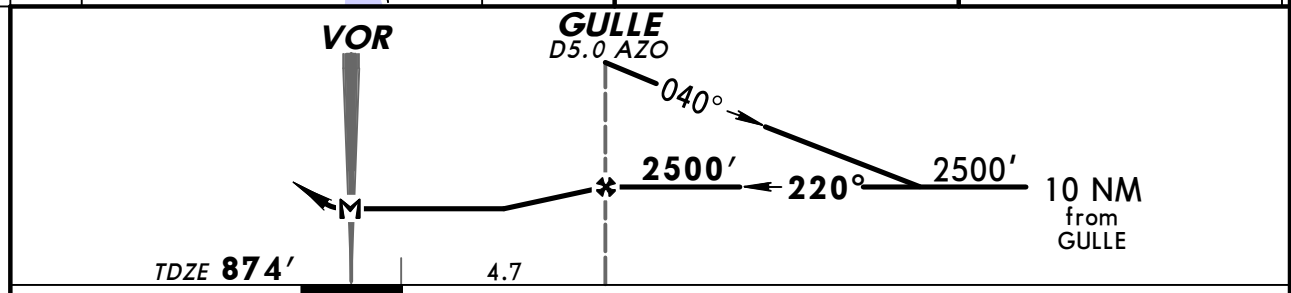
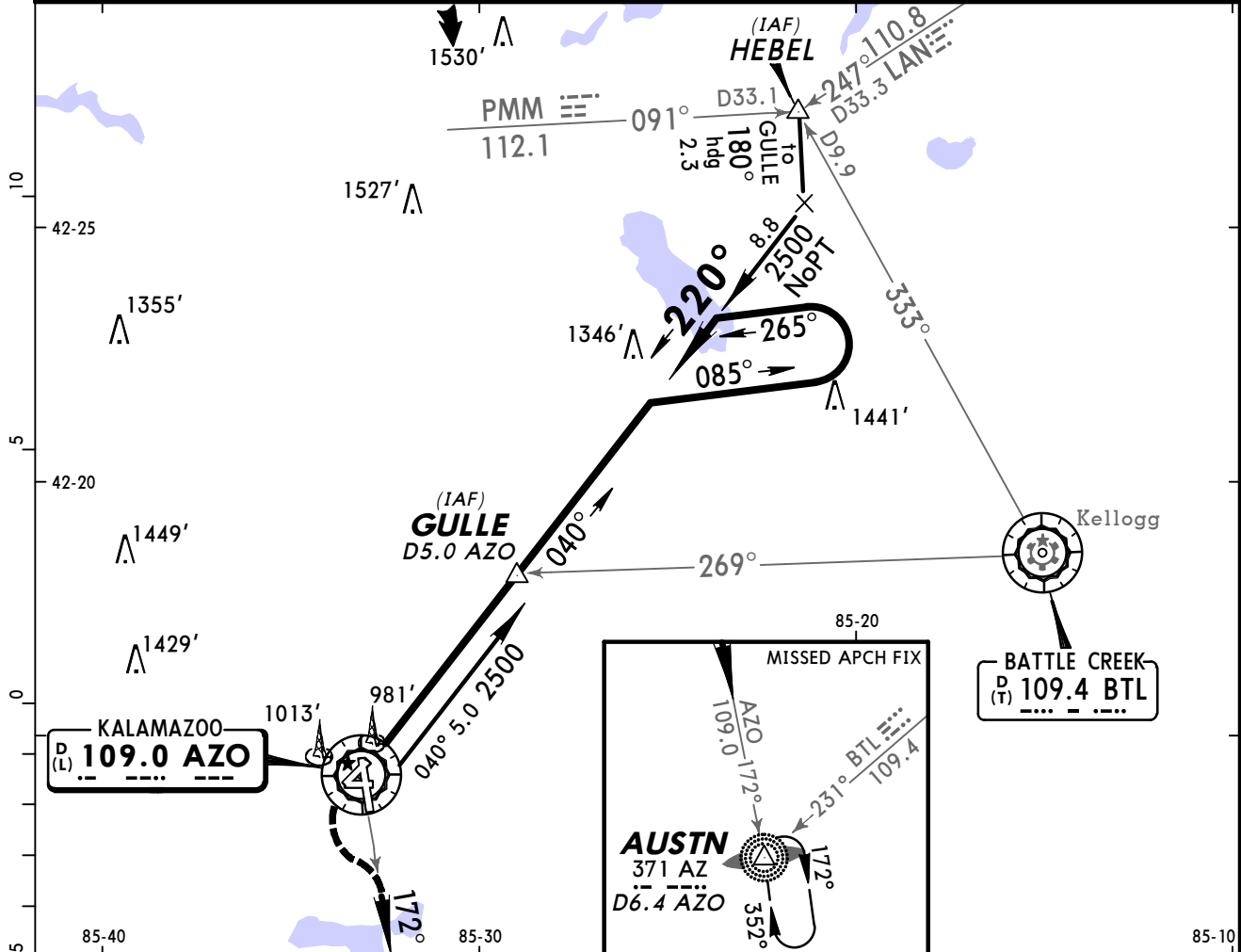


| Gnd speed-Kts         | 70  | 90   | 100  | 120  | 140  | 160  |      | REIL   | 2500' | AZO   | AUSTN |
|-----------------------|-----|------|------|------|------|------|------|--------|-------|-------|-------|
| Descent angle [2.99°] | 370 | 476  | 529  | 635  | 741  | 846  |      | PAPI-L | ↑     | 109.0 |       |
| MAP at D0.3 AZO or    |     |      |      |      |      |      |      |        |       | R-172 |       |
| WERTO to MAP          | 5.3 | 4:33 | 3:32 | 3:11 | 2:39 | 2:16 | 1:59 |        |       |       |       |

| STRAIGHT-IN LANDING RWY 17 |       |                            |  | CIRCLE-TO-LAND |                      |                      |  |
|----------------------------|-------|----------------------------|--|----------------|----------------------|----------------------|--|
| MDA(H) <b>1320'</b> (453') |       | MDA(H) <b>1480'</b> (613') |  | With Tomey     |                      | Without Tomey        |  |
| With Tomey                 |       | Without Tomey              |  | Max Kts.       | MDA(H)               | MDA(H)               |  |
| A                          | 1     | 1                          |  | 90             | 1380' (506') - 1     | 1480' (606') - 1     |  |
| B                          | 1     | 1                          |  | 120            | 1380' (506') - 1     | 1480' (606') - 1     |  |
| C                          | 1 1/4 | 1 3/4                      |  | 140            | 1380' (506') - 1 1/2 | 1480' (606') - 1 3/4 |  |
| D                          | 1 1/2 | 2                          |  | 165            | 1440' (566') - 2     | 1480' (606') - 2     |  |



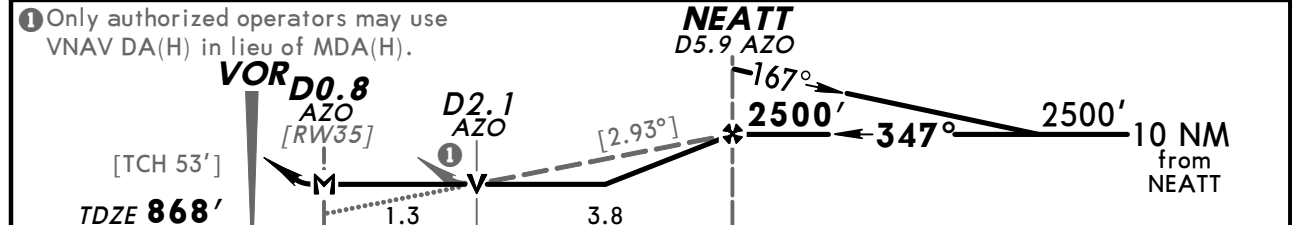
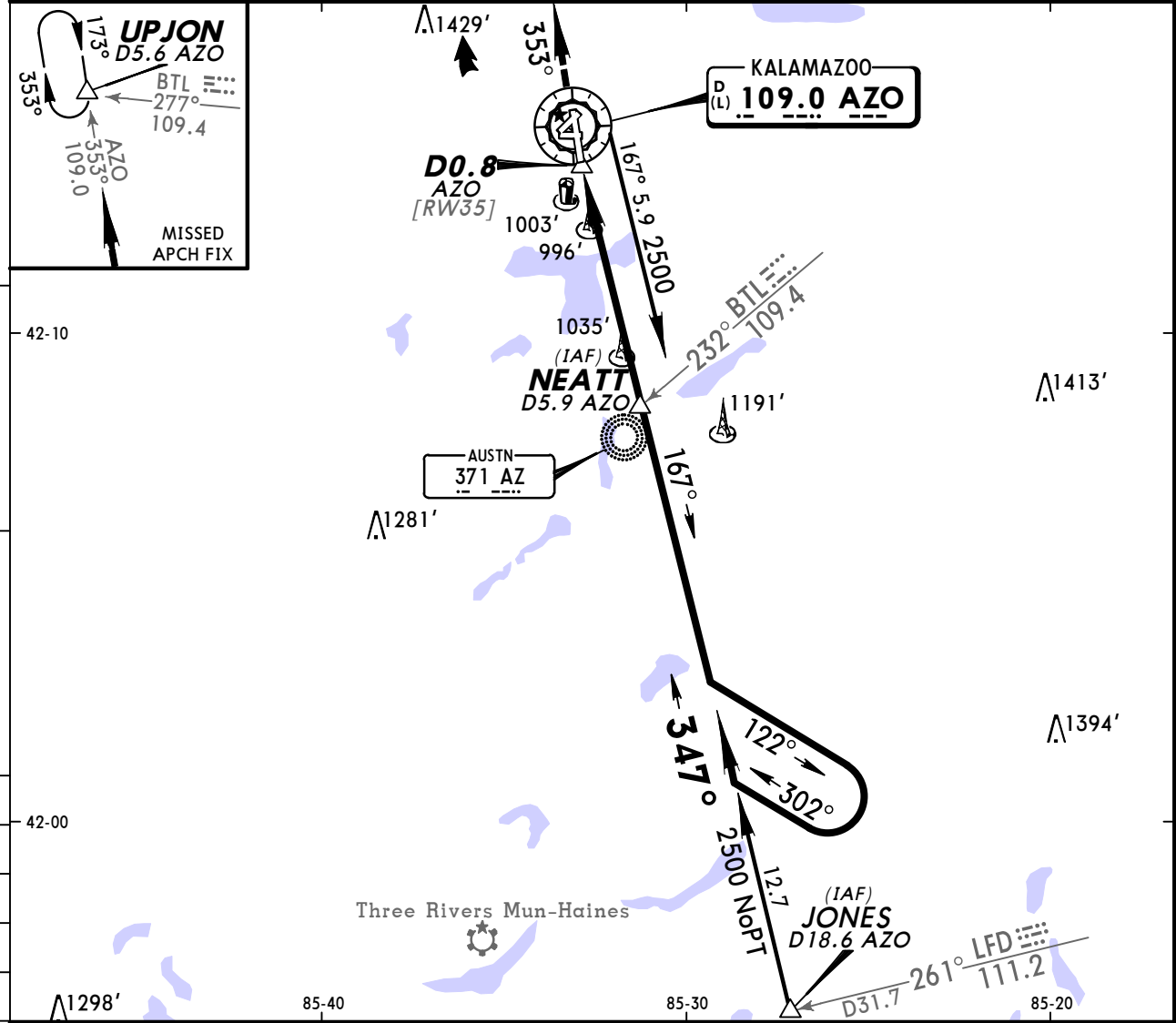
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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------|-----------------------------------------|-----------------------------------------|
| *ATIS<br>127.25                                                                                                                                                                                           | *KALAMAZOO Approach (R)<br>121.2 | CHICAGO Center (R)<br>127.55 when App inop. | *KALAMAZOO Tower<br>CTAF 118.3          | *Ground<br>121.9                        |
| VOR<br>AZO<br>109.0                                                                                                                                                                                       | Final<br>Apch Crs<br>220°        | Minimum Alt<br>GULLE<br>2500' (1626')       | MDA(H)<br>(CONDITIONAL)<br>1300' (426') | Apt Elev 874'<br>TDZE 874'              |
| <b>MISSED APCH:</b> Climbing LEFT turn to 2500' outbound via AZO VOR R-172 to AUSTN LOM/INT/D6.4 AZO and hold.                                                                                            |                                  |                                             |                                         |                                         |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. When Twr inop, except for operators with approved weather service, use South Bend, Ind altimeter setting. 2. Pilot controlled lighting 118.3. |                                  |                                             |                                         |                                         |
|                                                                                                                                                                                                           |                                  |                                             |                                         | <div>3000'</div> <div>MSA AZO VOR</div> |



|            |       |                 |       |
|------------|-------|-----------------|-------|
| REIL       | 2500' | AZO             | AUSTN |
| PAPI-L     | LT    | via 109.0 R-172 |       |
| MAP at VOR |       |                 |       |

| STRAIGHT-IN LANDING RWY23                           |       |                                        | CIRCLE-TO-LAND                                      |                                        |
|-----------------------------------------------------|-------|----------------------------------------|-----------------------------------------------------|----------------------------------------|
| MDA(H) 1300' (426')                                 |       | MDA(H) 1520' (646')                    | When Twr Operating or With Approved Weather Service | With South Bend, Ind Altimeter Setting |
| When Twr Operating or With Approved Weather Service |       | With South Bend, Ind Altimeter Setting | Max Kts                                             | MDA(H)                                 |
| A                                                   | 1     | 1                                      | 90                                                  | 1320' (446')-1                         |
| B                                                   | 1     | 1                                      | 120                                                 | 1340' (466')-1                         |
| C                                                   | 1 1/4 | 1 3/4                                  | 140                                                 | 1340' (466')-1 1/2                     |
| D                                                   | 1 1/2 | 2                                      | 165                                                 | 1440' (566')-2                         |
|                                                     |       |                                        |                                                     | 1540' (666')-1                         |
|                                                     |       |                                        |                                                     | 1560' (686')-2                         |
|                                                     |       |                                        |                                                     | 1640' (766')-2 1/2                     |

|                                                                                           |  |                                  |                     |                                             |  |                                |  |                            |                                         |
|-------------------------------------------------------------------------------------------|--|----------------------------------|---------------------|---------------------------------------------|--|--------------------------------|--|----------------------------|-----------------------------------------|
| *ATIS<br>127.25                                                                           |  | *KALAMAZOO Approach (R)<br>121.2 |                     | CHICAGO Center (R)<br>127.55 when App inop. |  | *KALAMAZOO Tower<br>CTAF 118.3 |  | *Ground<br>121.9           |                                         |
| VOR<br>AZO<br>109.0                                                                       |  | Final<br>Apch Crs<br>347°        |                     | Minimum Alt<br>NEATT<br>2500' (1632')       |  | MDA(H)<br>1320' (452')         |  | Apt Elev 874'<br>TDZE 868' |                                         |
| MISSED APCH: Climb to 2600' outbound via AZO VOR R-353 to<br>UPJON INT/D5.6 AZO and hold. |  |                                  |                     |                                             |  |                                |  |                            | <div>3000'</div> <div>MSA AZO VOR</div> |
| Alt Set: INCHES                                                                           |  |                                  | Trans level: FL 180 |                                             |  | Trans alt: 18000'              |  |                            |                                         |
| 1. Pilot controlled lighting 118.3.                                                       |  |                                  |                     |                                             |  |                                |  |                            |                                         |



|                                                                                                                               |                                                                                                                                         |                                                                                                                                                                        |                                                                                                                              |                               |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| <div> <div>Gnd speed-Kts</div> <div>70</div> <div>90</div> <div>100</div> <div>120</div> <div>140</div> <div>160</div> </div> | <div> <div>Descent angle [2.93°]</div> <div>363</div> <div>466</div> <div>518</div> <div>622</div> <div>726</div> <div>829</div> </div> | <div> <div>MAP at D0.8 AZO or NEATT to MAP</div> <div>5.1</div> <div>4:22</div> <div>3:24</div> <div>3:04</div> <div>2:33</div> <div>2:11</div> <div>1:55</div> </div> | <div> <div>MALSR</div> <div>PAPI</div> <div>2600'</div> <div>↑</div> <div>AZO</div> <div>109.0</div> <div>R-353</div> </div> | <div> <div>UPJON</div> </div> |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-------------------------------|

| STRAIGHT-IN LANDING RWY 35 |  |                 |  | CIRCLE-TO-LAND |                    |
|----------------------------|--|-----------------|--|----------------|--------------------|
| MDA(H) 1320' (452')        |  |                 |  | MDA(H)         |                    |
| RAIL out                   |  | ALS out         |  | Max Kts        |                    |
| RVR 40 or 3/4              |  | RVR 50 or 1     |  | 90             | 1380' (506')-1     |
| RVR 40 or 3/4              |  | RVR 60 or 1 1/4 |  | 120            | 1380' (506')-1 1/2 |
| RVR 50 or 1                |  | 1 1/2           |  | 140            | 1380' (506')-1 1/2 |
|                            |  |                 |  | 165            | 1440' (566')-2     |







## General Information

Location: Battle Creek MI USA  
IATA Code: BTL  
Lat/Long: N42° 18.4' W085° 15.0'  
Elevation: 952 ft

Airport Use: Public  
Magnetic Variation: 5.7°W  
Sectional Chart: Chicago

Fuel Types: 100 Octane (LL), Jet A  
Oxygen Types: HP Bottle  
Repair Types: Major Airframe, Major Engine  
Customs: Upon Prior Request  
Airport Type: IFR  
Landing Fee: No  
Control Tower: Yes  
Jet Start Unit: Yes  
LLWS Alert: No  
Beacon: Yes

Sunrise: 1220 Z  
Sunset: 2328 Z,

## Runway Information

Runway: 05L  
Length x Width: 10004 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 952 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 05R  
Length x Width: 4100 ft x 75 ft  
Surface Type: asphalt  
TDZ-Elev: 927 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 13  
Length x Width: 4835 ft x 100 ft  
Surface Type: asphalt  
TDZ-Elev: 927 ft  
Lighting: Edge, REIL, Pilot controlled

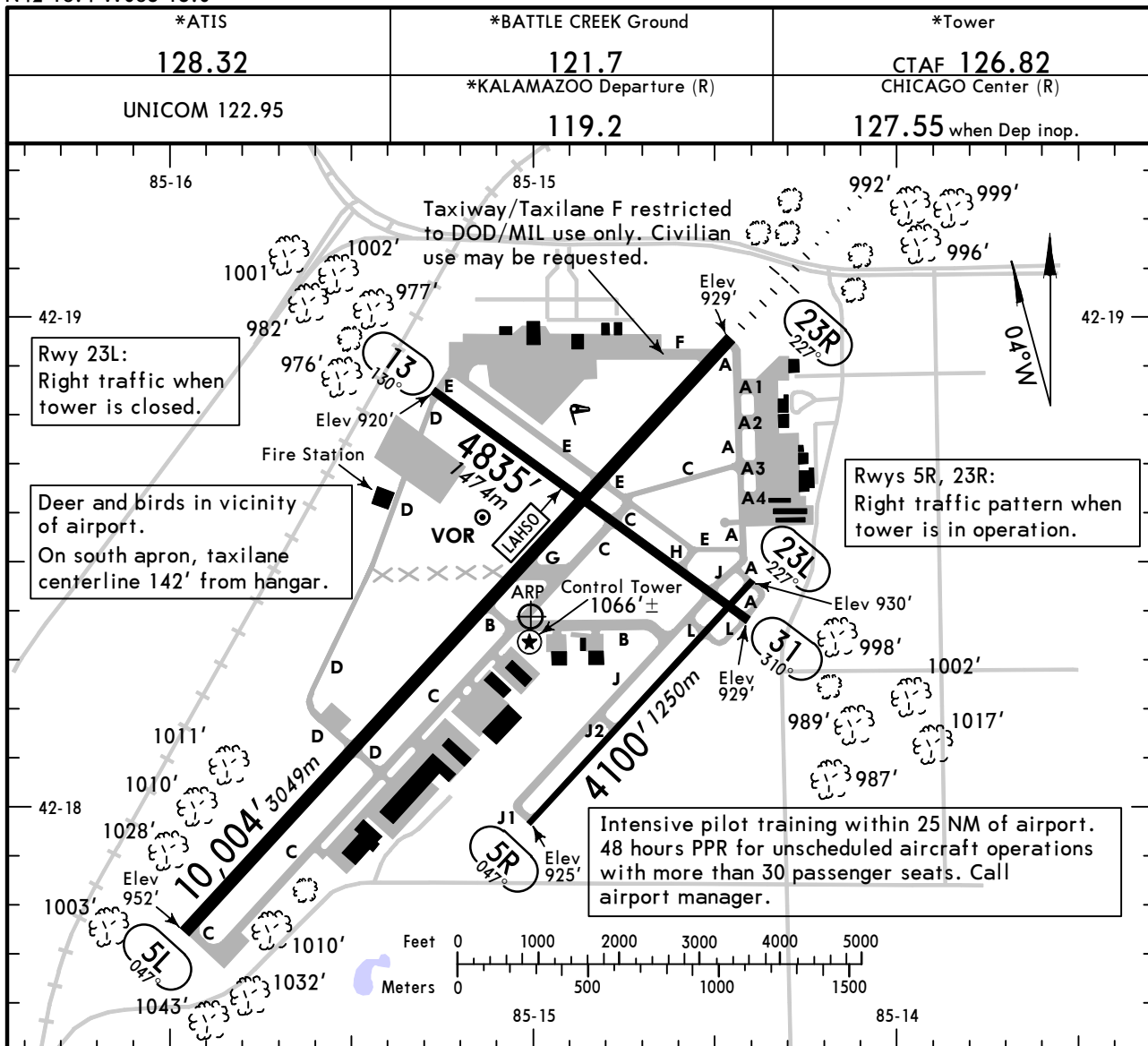
Runway: 23L  
Length x Width: 4100 ft x 75 ft  
Surface Type: asphalt  
TDZ-Elev: 930 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 23R  
Length x Width: 10004 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 929 ft  
Lighting: Edge, ALS, Pilot controlled

Runway: 31  
Length x Width: 4835 ft x 100 ft  
Surface Type: asphalt  
TDZ-Elev: 930 ft  
Lighting: Edge, REIL, Pilot controlled

## **Communication Information**

ATIS 128.325  
Battle Creek Tower 126.825 CTAF PCL  
Battle Creek Ground Control 121.7  
Kalamazoo Approach Control 119.2  
Kalamazoo Departure Control 119.2  
Kellogg Unicom 122.95  
Battle Creek Radar 121.2  
Lansing Flight Service Station 122.2 RCO  
Chicago Center 127.55 Remote Communications Air-Ground



ADDITIONAL RUNWAY INFORMATION

| RWY       |                                              | USABLE LENGTHS |                               |                   | WIDTH      |
|-----------|----------------------------------------------|----------------|-------------------------------|-------------------|------------|
|           |                                              | Threshold      | Landing Beyond<br>Glide Slope | LAHSO<br>Distance |            |
| 5L<br>23R | ① HIRL ① REIL ① VASI-L porous friction       |                |                               | 13/31 7300' 2225m | 150'       |
|           | ① HIRL ① MALSR ① PAPI-L course overlay RVR   |                | 9060' 2761m                   |                   | 46m        |
| 5R<br>23L | ① MIRL ① REIL ① PAPI-L (angle 3.00°)         |                |                               |                   | 75'<br>23m |
| 13<br>31  | ① MIRL ① REIL ① VASI-L grooved               |                |                               |                   | 100'       |
|           | ① MIRL ① REIL ① PAPI-L (angle 3.00°) grooved |                |                               |                   | 30m        |

① Activate on 126.82 when Twr inop.

TAKE-OFF

|           | Rwys 5L, 13, 23R, 31 |               | Rwys 5R, 23L |
|-----------|----------------------|---------------|--------------|
|           | Adequate Vis Ref     | STD           |              |
| 1 & 2 Eng | RVR 16 or 1/4        | RVR 50 or 1   | NA           |
| 3 & 4 Eng |                      | RVR 24 or 1/2 |              |

FOR FILING AS ALTERNATE

| Authorized Only When Twr Operating<br>Authorized Only When Local Weather Available |             | Authorized Only When Kalamazoo Twr Operating | Authorized Only When Twr Operating or With Approved Weather Service | Authorized Only When Local Weather Available                                |       |
|------------------------------------------------------------------------------------|-------------|----------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------|-------|
| ILS Rwy 23R                                                                        | LOC Rwy 23R | RADAR-1                                      | VOR Rwy 31                                                          | RNAV (GPS) Rwy 5L<br>RNAV (GPS) Rwy 23R<br>RNAV (GPS) Rwy 31<br>VOR Rwy 23R | Other |
| A                                                                                  | 600-2       | 800-2                                        | 800-2                                                               | 800-2                                                                       | NA    |
| B                                                                                  |             |                                              |                                                                     |                                                                             |       |
| C                                                                                  |             |                                              |                                                                     |                                                                             |       |
| D                                                                                  |             |                                              |                                                                     |                                                                             |       |

**BATTLE CREEK, MICH**  
**ILS or LOC Rwy 23R**

**Eff 9 Feb**

# ILS or LOC Rwy 23R

**BRIEFING STRIP™**



**BATOL**  
D4.4 BTL  
GS2173/

**WOMRA**  
*D2.2 BTL*

TCH 49' 

Rwy 23R **928'**

③ 1560' when using Grand Rapids altimeter setting.

MALSR  
 PAPI

## 2 CIRCLE-TO-LAND

Not Authorized to Rwys 13/31  
at Night When VGSI Inop

With WOMRA | Without WOMRA

| FULL | RAIL<br>out | ALS<br>out |  | RAIL<br>out | ALS<br>out |  | RAIL<br>out | ALS<br>out |
|------|-------------|------------|--|-------------|------------|--|-------------|------------|
|------|-------------|------------|--|-------------|------------|--|-------------|------------|

|   |                  |                  |                                   |                                   |                       |                                   |                                   |                       |
|---|------------------|------------------|-----------------------------------|-----------------------------------|-----------------------|-----------------------------------|-----------------------------------|-----------------------|
| A | <b>1</b>         |                  | RVR <b>24</b><br>or $\frac{1}{2}$ | RVR <b>40</b><br>or $\frac{3}{4}$ | RVR <b>55</b><br>or 1 | RVR <b>24</b><br>or $\frac{1}{2}$ | RVR <b>40</b><br>or $\frac{3}{4}$ | RVR <b>55</b><br>or 1 |
| B | RVR <b>24</b>    | RVR <b>40</b>    |                                   |                                   |                       |                                   |                                   |                       |
| C | or $\frac{1}{2}$ | or $\frac{3}{4}$ | RVR <b>40</b><br>or $\frac{3}{4}$ | RVR <b>50</b><br>or 1             | 1 $\frac{1}{8}$       | RVR <b>55</b><br>or 1             | 1 $\frac{1}{4}$                   | 1 $\frac{3}{8}$       |
| D |                  |                  |                                   |                                   |                       |                                   |                                   |                       |

| FULL | RAIL<br>out | ALS<br>out |  | RAIL<br>out | ALS<br>out |  | RAIL<br>out | ALS<br>out |
|------|-------------|------------|--|-------------|------------|--|-------------|------------|
|------|-------------|------------|--|-------------|------------|--|-------------|------------|

|   |                  |                  |                  |                               |                               |                    |                               |                               |                    |
|---|------------------|------------------|------------------|-------------------------------|-------------------------------|--------------------|-------------------------------|-------------------------------|--------------------|
| A |                  |                  |                  | RVR $\frac{24}{1\frac{1}{2}}$ | RVR $\frac{40}{3\frac{3}{4}}$ | RVR $\frac{55}{1}$ | RVR $\frac{24}{1\frac{1}{2}}$ | RVR $\frac{40}{3\frac{3}{4}}$ | RVR $\frac{55}{1}$ |
| B | <b>24</b>        | <b>40</b>        | <b>45</b>        |                               |                               |                    |                               |                               |                    |
| C | or $\frac{1}{2}$ | or $\frac{3}{4}$ | or $\frac{7}{8}$ | RVR $\frac{55}{1}$            | $1\frac{1}{4}$                | $1\frac{1}{2}$     | $1\frac{3}{8}$                | $1\frac{1}{2}$                | $1\frac{3}{4}$     |
| D |                  |                  |                  |                               |                               |                    |                               |                               |                    |

**2** Not authorized to Rwys 5R/23L.

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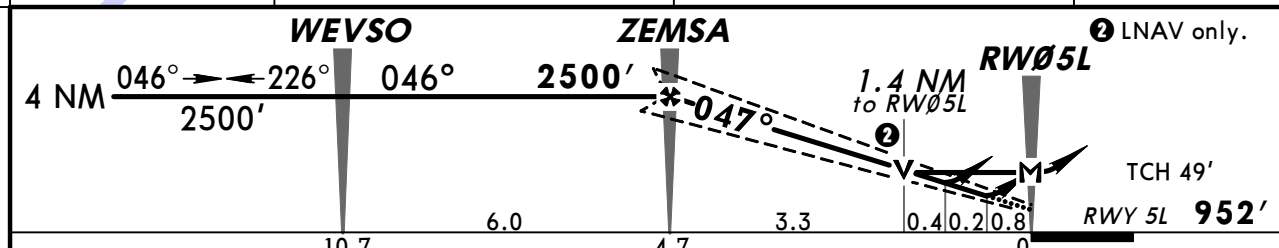
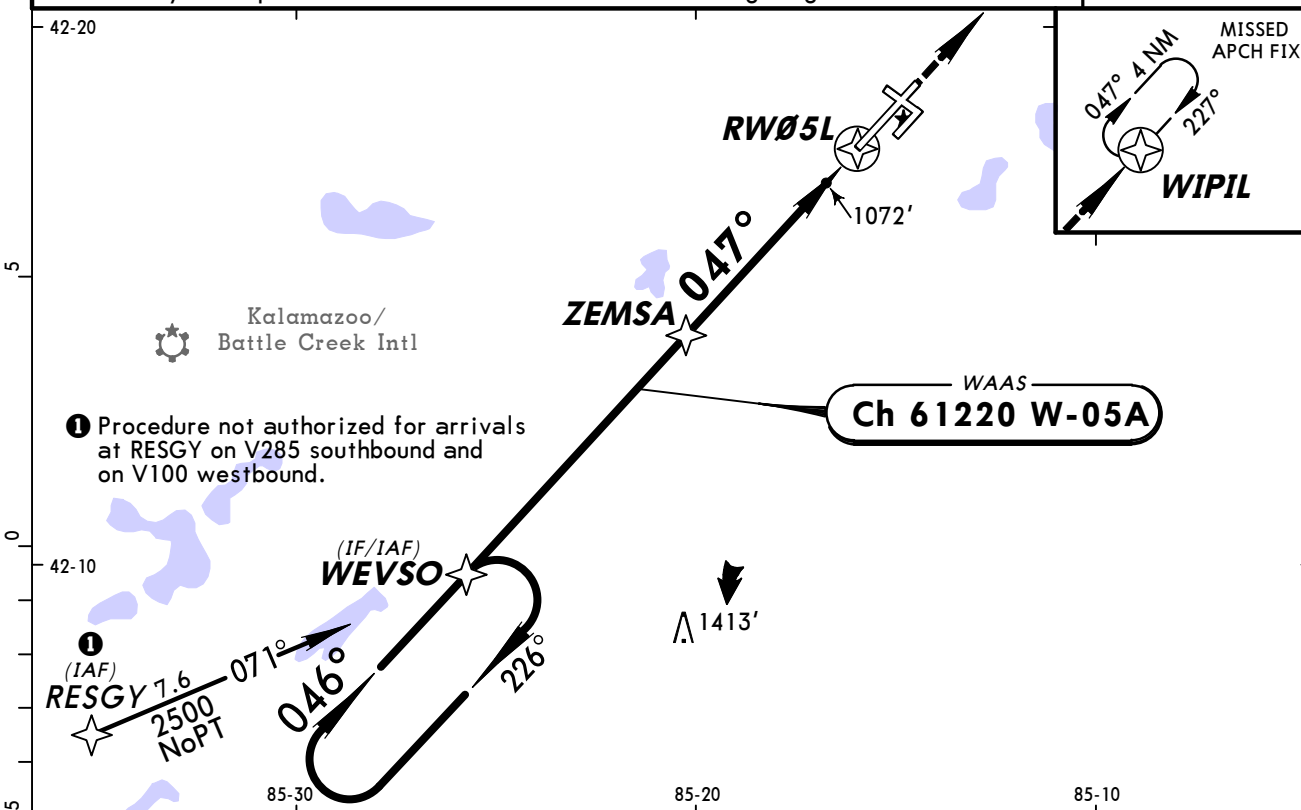
TERPS AMEND 18 5 MAY 2011

**KBTL/BTL  
KELLOGG**

**JEPPESEN**  
29 APR 11 **(12-1)** **Eff 5 May**

**BATTLE CREEK, MICH  
RNAV (GPS) Rwy 5L**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                         |                                                    |                                                            |                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|----------------------------------------------------|------------------------------------------------------------|--------------------------------------------|
| *ATIS<br><b>128.32</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                   | *KALAMAZOO Approach (R)<br><b>119.2</b> | CHICAGO Center (R)<br><b>127.55</b> when App inop. | *BATTLE CREEK Tower<br>CTAF <b>126.82</b>                  | *Ground<br><b>121.7</b>                    |
| WAAS<br><b>Ch 61220<br/>W-05A</b>                                                                                                                                                                                                                                                                                                                                                                                                                                        | Final<br>Apch Crs<br><b>047°</b>        | Minimum Alt<br><b>ZEMSA<br/>2500' (1548')</b>      | RNAV/VNAV<br>DA(H)<br>(CONDITIONAL)<br><b>1253' (301')</b> | Apt Elev <b>952'</b><br>Rwy 5L <b>952'</b> |
| <b>MISSED APCH: Climb to 2500' direct WIPIL and hold.</b>                                                                                                                                                                                                                                                                                                                                                                                                                |                                         |                                                    |                                                            |                                            |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. Use local altimeter setting; if not received, use Grand Rapids altimeter setting.<br>2. DME/DME RNP-0.30 not authorized. 3. VDP and Baro-VNAV not authorized when using Grand Rapids altimeter setting. 4. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 37°C (98°F). 5. Visibility reduction by helicopters not authorized. 6. Pilot controlled lighting 126.82. |                                         |                                                    |                                                            |                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                         |                                                    |                                                            | 3000'<br><br><b>MSA RW05L</b>              |



|                        |     |     |     |     |     |     |  |        |              |              |
|------------------------|-----|-----|-----|-----|-----|-----|--|--------|--------------|--------------|
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 |  | REIL   | <b>2500'</b> | <b>WIPIL</b> |
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |  | VASI-L |              |              |
| MAP at RW05L           |     |     |     |     |     |     |  |        |              |              |

| STRAIGHT-IN LANDING RWY 5L<br>With Local Altimeter Setting |    |                                 |    | 1 CIRCLE-TO-LAND<br>Not Authorized at<br>Night to Rwy 5R/23L<br>With Local<br>Altimeter Setting |                 |
|------------------------------------------------------------|----|---------------------------------|----|-------------------------------------------------------------------------------------------------|-----------------|
| LPV<br>DA(H) 1317' (365')                                  |    | LNAV/VNAV<br>DA(H) 1253' (301') |    | LNAV<br>MDA(H) 1440' (488')                                                                     |                 |
| A                                                          | 1¼ | 1                               | 1  | Max Kts 90                                                                                      | 1440' (488')-1  |
| B                                                          |    |                                 |    | 120                                                                                             |                 |
| C                                                          |    |                                 | 1⅜ | 140                                                                                             | 1480 (528')-1½  |
| D                                                          |    |                                 |    | 165                                                                                             | 1520' (568')-2  |
| With Grand Rapids Altimeter Setting                        |    |                                 |    | With Grand Rapids<br>Altimeter Setting                                                          |                 |
| LPV<br>DA(H) 1423' (471')                                  |    | LNAV/VNAV<br>DA(H) 1359' (407') |    | LNAV<br>MDA(H) 1560' (608')                                                                     |                 |
| A                                                          | 1⅝ | 1⅜                              | 1  | Max Kts 90                                                                                      | 1560' (608')-1  |
| B                                                          |    |                                 |    | 120                                                                                             |                 |
| C                                                          |    |                                 | 1¾ | 140                                                                                             | 1600' (648')-1¾ |
| D                                                          |    |                                 |    | 165                                                                                             | 1640' (688')-2¼ |

**1** Not Authorized at Night to Rws 13/31 when VGSI inop.

CHANGES: Procedure.

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TERPS AMEND 1 5 MAY 2011

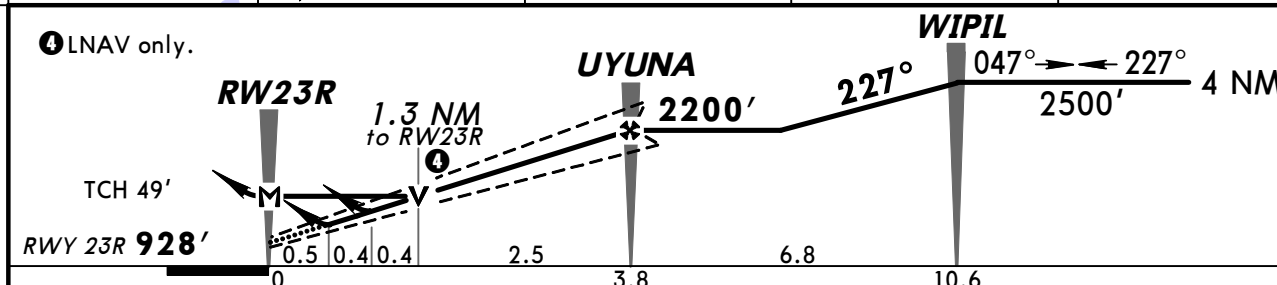
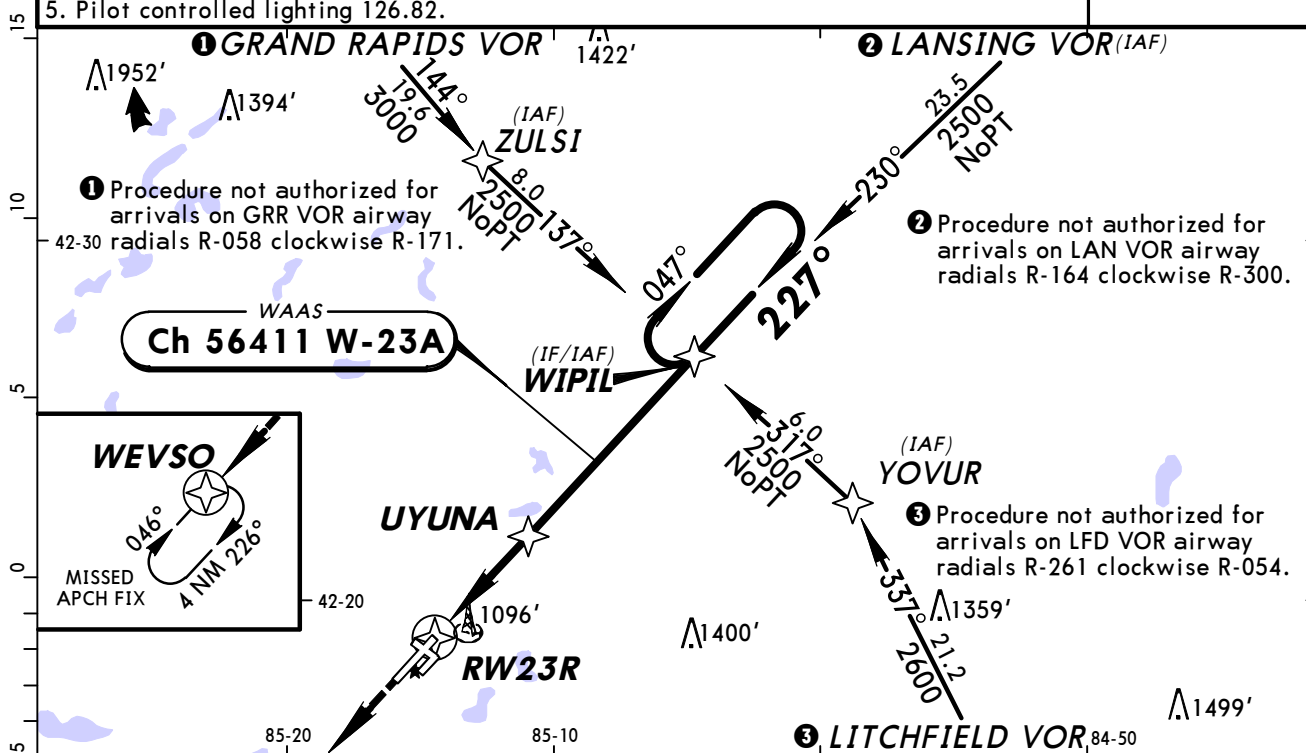


**KBTL/BTL  
KELLOGG**

**JEPPESEN**  
29 APR 11 **(12-2)** Eff 5 May

**BATTLE CREEK, MICH**  
**RNAV (GPS) Rwy 23R**

|                                                                                                                                                                                                                                                                                                                                                              |                                         |                                                     |                                                      |                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------------------|------------------------------------------------------|---------------------------------------------|
| *ATIS<br><b>128.32</b>                                                                                                                                                                                                                                                                                                                                       | *KALAMAZOO Approach (R)<br><b>119.2</b> | CHICAGO Center (R)<br><b>127.55</b> when App inop.  | *BATTLE CREEK Tower<br>CTAF <b>126.82</b>            | *Ground<br><b>121.7</b>                     |
| WAAS<br><b>Ch 56411</b><br><b>W-23A</b>                                                                                                                                                                                                                                                                                                                      | Final<br>Apch Crs<br><b>227°</b>        | Minimum Alt<br><b>UYUNA</b><br><b>2200'</b> (1272') | LPV<br>DA(H)<br>(CONDITIONAL)<br><b>1128'</b> (200') | Apt Elev <b>952'</b><br>Rwy 23R <b>928'</b> |
| <b>MISSED APCH: Climb to 2500' direct WEVSO and hold.</b>                                                                                                                                                                                                                                                                                                    |                                         |                                                     |                                                      |                                             |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                                                                                                                                                                                                                                                                        |                                         |                                                     |                                                      |                                             |
| 1. Use local altimeter setting; if not received, use Grand Rapids altimeter setting.<br>2. DME/DME RNP-0.30 not authorized. 3. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 38°C (100°F). 4. VDP and Baro-VNAV not authorized when using Grand Rapids altimeter setting.<br>5. Pilot controlled lighting 126.82. |                                         |                                                     |                                                      |                                             |
|                                                                                                                                                                                                                                                                                                                                                              |                                         |                                                     |                                                      | 3000'<br><br>MSA RW23R                      |



|                  |       |     |     |     |     |     |     |       |       |  |       |
|------------------|-------|-----|-----|-----|-----|-----|-----|-------|-------|--|-------|
| Gnd speed-Kts    | 70    | 90  | 100 | 120 | 140 | 160 |     | MALSR | 2500' |  | WEVSO |
| Glide Path Angle | 3.00° | 372 | 478 | 531 | 637 | 743 | 849 | PAPI  |       |  |       |
| MAP at RW23R     |       |     |     |     |     |     |     |       |       |  |       |

| STRAIGHT-IN LANDING RWY 23R<br>With Local Altimeter Setting    |                  |                  |                                 |                  |                  |                             |                  |                  |                | 1 CIRCLE-TO-LAND<br>Not Authorized to<br>Rwys 5R/23L<br>With Local<br>Altimeter Setting<br>MDA(H) _____ |                      |
|----------------------------------------------------------------|------------------|------------------|---------------------------------|------------------|------------------|-----------------------------|------------------|------------------|----------------|---------------------------------------------------------------------------------------------------------|----------------------|
| LPV<br>DA(H) 1128' (200')                                      |                  |                  | LNAV/VNAV<br>DA(H) 1257' (329') |                  |                  | LNAV<br>MDA(H) 1380' (452') |                  |                  |                |                                                                                                         |                      |
|                                                                | RAIL out         | ALS out          |                                 | RAIL out         | ALS out          |                             | RAIL out         | ALS out          | Max<br>Kts     |                                                                                                         |                      |
| A                                                              |                  |                  |                                 |                  |                  |                             | RVR 24<br>or 1/2 | RVR 40<br>or 3/4 | RVR 55<br>or 1 | 90                                                                                                      | 1420' (468') - 1     |
| B                                                              | RVR 24<br>or 1/2 | RVR 26<br>or 1/2 | RVR 40<br>or 3/4                | RVR 32<br>or 5/8 | RVR 35<br>or 5/8 | RVR 50<br>or 1              |                  |                  |                | 120                                                                                                     | 1440' (488') - 1     |
| C                                                              |                  |                  |                                 |                  |                  |                             | RVR 45<br>or 7/8 | RVR 55<br>or 1   | 1 3/8          | 140                                                                                                     | 1480' (528') - 1 1/2 |
| D                                                              |                  |                  |                                 |                  |                  |                             |                  |                  |                | 165                                                                                                     | 1520' (568') - 2     |
| With Grand Rapids Altimeter Setting                            |                  |                  |                                 |                  |                  |                             |                  |                  |                | With Grand Rapids<br>Altimeter Setting                                                                  |                      |
| LPV<br>DA(H) 1234' (306')                                      |                  |                  | LNAV/VNAV<br>DA(H) 1363' (435') |                  |                  | LNAV<br>MDA(H) 1500' (572') |                  |                  |                |                                                                                                         |                      |
|                                                                | RAIL out         | ALS out          |                                 | RAIL out         | ALS out          |                             | RAIL out         | ALS out          | Max<br>Kts     | MDA(H) _____                                                                                            |                      |
| A                                                              |                  |                  |                                 |                  |                  |                             | RVR 24<br>or 1/2 | RVR 40<br>or 3/4 | RVR 55<br>or 1 | 90                                                                                                      | 1540' (588') - 1     |
| B                                                              | RVR 24<br>or 1/2 | RVR 35<br>or 5/8 | RVR 50<br>or 1                  | RVR 50<br>or 1   | 1 1/4            |                             |                  |                  |                | 120                                                                                                     | 1560' (608') - 1     |
| C                                                              |                  |                  |                                 |                  |                  |                             | 1 1/4            | 1 3/8            | 1 5/8          | 140                                                                                                     | 1600' (648') - 1 3/4 |
| D                                                              |                  |                  |                                 |                  |                  |                             |                  |                  |                | 165                                                                                                     | 1640' (688') - 2 1/4 |
| 1 When VGSI inop, circling Rwys 13/31 not authorized at night. |                  |                  |                                 |                  |                  |                             |                  |                  |                |                                                                                                         |                      |

1 When VGSI inop, circling Rwys 13/31 not authorized at night.

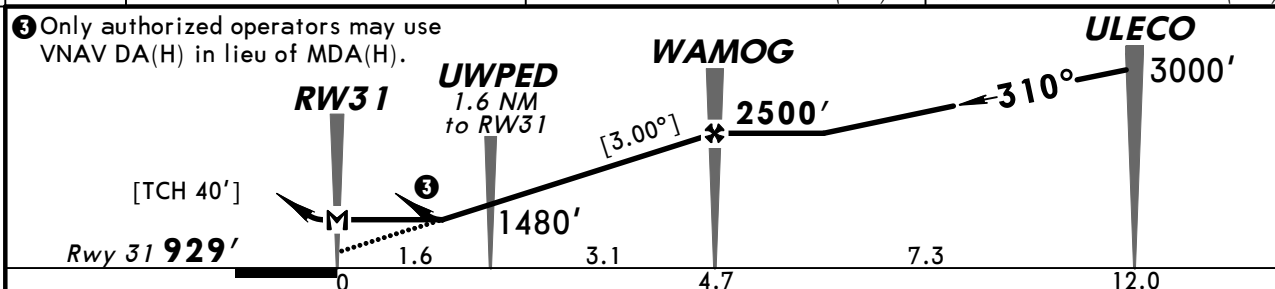
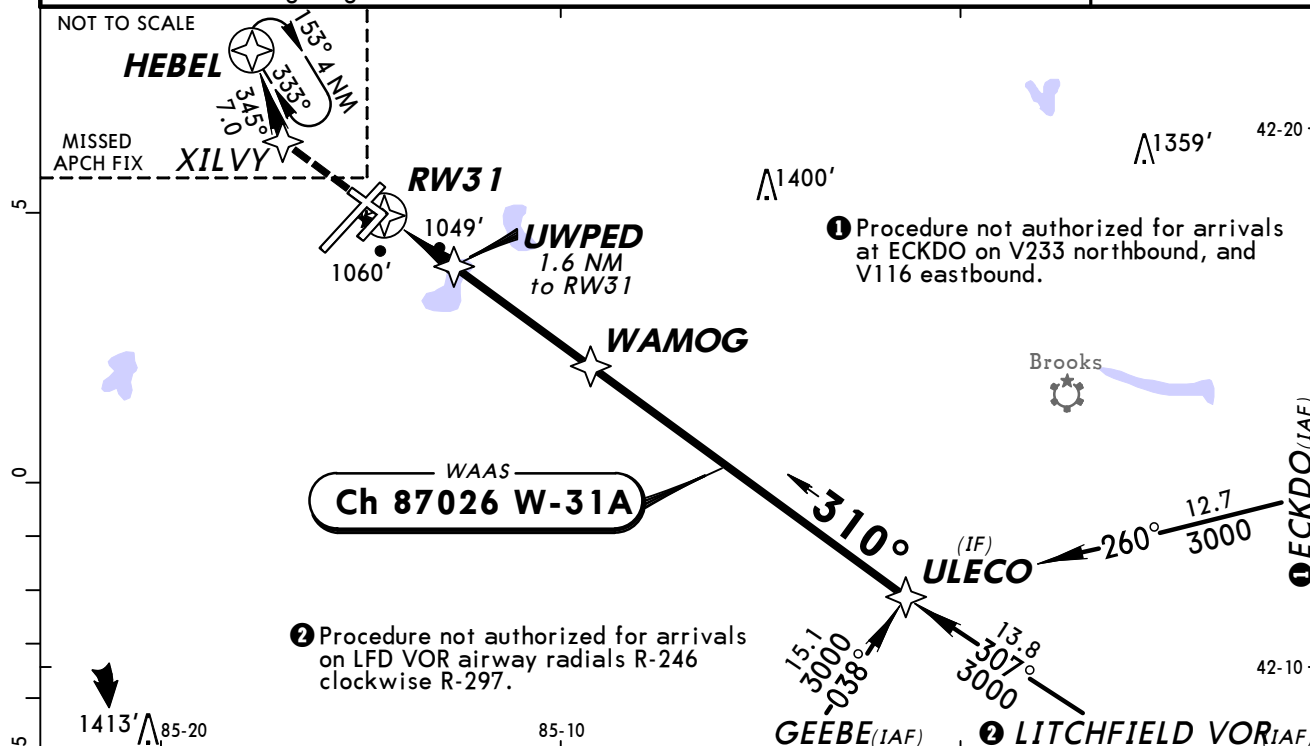
CHANGES: Procedure.

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TERPS AMEND 1 5 MAY 2011



|                                                                                                                                                                                                                                                                                                                                |                                         |                                                     |                                                      |                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------------------|------------------------------------------------------|--------------------------------------------|
| *ATIS<br><b>128.32</b>                                                                                                                                                                                                                                                                                                         | *KALAMAZOO Approach (R)<br><b>119.2</b> | CHICAGO Center (R)<br><b>127.55</b> when App inop.  | *BATTLE CREEK Tower<br>CTAF <b>126.82</b>            | *Ground<br><b>121.7</b>                    |
| WAAS<br><b>Ch 87026</b><br><b>W-31A</b>                                                                                                                                                                                                                                                                                        | Final<br>Apch Crs<br><b>310°</b>        | Minimum Alt<br><b>WAMOG</b><br><b>2500'</b> (1571') | LP<br>MDA(H)<br>(CONDITIONAL)<br><b>1300'</b> (371') | Apt Elev <b>952'</b><br><b>Rwy 31 929'</b> |
| <b>MISSED APCH:</b> Climb to 3000' direct XILVY and on 345° track to HEBEL and hold.                                                                                                                                                                                                                                           |                                         |                                                     |                                                      |                                            |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. Use local altimeter setting; if not received, use Grand Rapids altimeter setting.<br>2. DME/DME RNP-0.30 not authorized. 3. Visibility reduction by helicopters not authorized. 4. VGSI and descent angles not coincident.<br>5. Pilot controlled lighting 126.82. |                                         |                                                     |                                                      |                                            |
| <div style="text-align: center;">3000'</div> <div style="text-align: center;">MSA RW31</div>                                                                                                                                                                                                                                   |                                         |                                                     |                                                      |                                            |



|                       |     |     |     |     |     |     |  |  |  |  |
|-----------------------|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 |  |  |  |  |
| Descent angle [3.00°] | 372 | 478 | 531 | 637 | 743 | 849 |  |  |  |  |
| MAP at RW31           |     |     |     |     |     |     |  |  |  |  |

| TERPS |  |  |  | 1 STRAIGHT-IN LANDING RWY 31<br>With Local Altimeter Setting |                                    | 1 2 CIRCLE-TO-LAND<br>With Local Altimeter Setting |                             |
|-------|--|--|--|--------------------------------------------------------------|------------------------------------|----------------------------------------------------|-----------------------------|
|       |  |  |  | LP<br>MDA(H) <b>1300'</b> (371')                             | LNAV<br>MDA(H) <b>1320'</b> (391') | Max<br>Kts                                         | MDA(H)                      |
| A     |  |  |  |                                                              | 1                                  | 90                                                 | <b>1420'</b> (468') - 1     |
| B     |  |  |  |                                                              | 1                                  | 120                                                | <b>1440'</b> (488') - 1     |
| C     |  |  |  |                                                              | 1 1/8                              | 140                                                | <b>1480'</b> (528') - 1 1/2 |
| D     |  |  |  |                                                              | 1 1/8                              | 165                                                | <b>1520'</b> (568') - 2     |
|       |  |  |  | With Grand Rapids Altimeter Setting                          |                                    | With Grand Rapids Altimeter Setting                |                             |
|       |  |  |  | LP<br>MDA(H) <b>1420'</b> (491')                             | LNAV<br>MDA(H) <b>1440'</b> (511') | Max<br>Kts                                         | MDA(H)                      |
| A     |  |  |  |                                                              | 1                                  | 90                                                 | <b>1540'</b> (588') - 1     |
| B     |  |  |  |                                                              | 1                                  | 120                                                | <b>1560'</b> (608') - 1     |
| C     |  |  |  |                                                              | 1 3/8                              | 140                                                | <b>1600'</b> (648') - 1 3/4 |
| D     |  |  |  |                                                              | 1 1/2                              | 165                                                | <b>1640'</b> (688') - 2 1/4 |

1 When VGSI inop, Straight-in/Circling Rwy 13-31 procedure not authorized at night.  
 2 Not Authorized to Rwy 5R/23L.

**BATTLE CREEK, MICH**  
**VOR Rwy 23R**

**BRIEFING STRIP**™

| Date           | Number of cases per 100,000 population |
|----------------|----------------------------------------|
| March 2020     | 0.0                                    |
| April 2020     | 0.5                                    |
| May 2020       | 10.0                                   |
| June 2020      | 5.0                                    |
| July 2020      | 2.0                                    |
| August 2020    | 1.0                                    |
| September 2020 | 1.0                                    |
| October 2020   | 4.0                                    |
| November 2020  | 5.0                                    |
| December 2020  | 2.0                                    |
| January 2021   | 1.0                                    |
| February 2021  | 1.0                                    |
| March 2021     | 1.5                                    |



MALSR  
 PAPI

TERPS  
AMEND  
18

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KBTL/BTL

KELLOGG

3 FEB 12

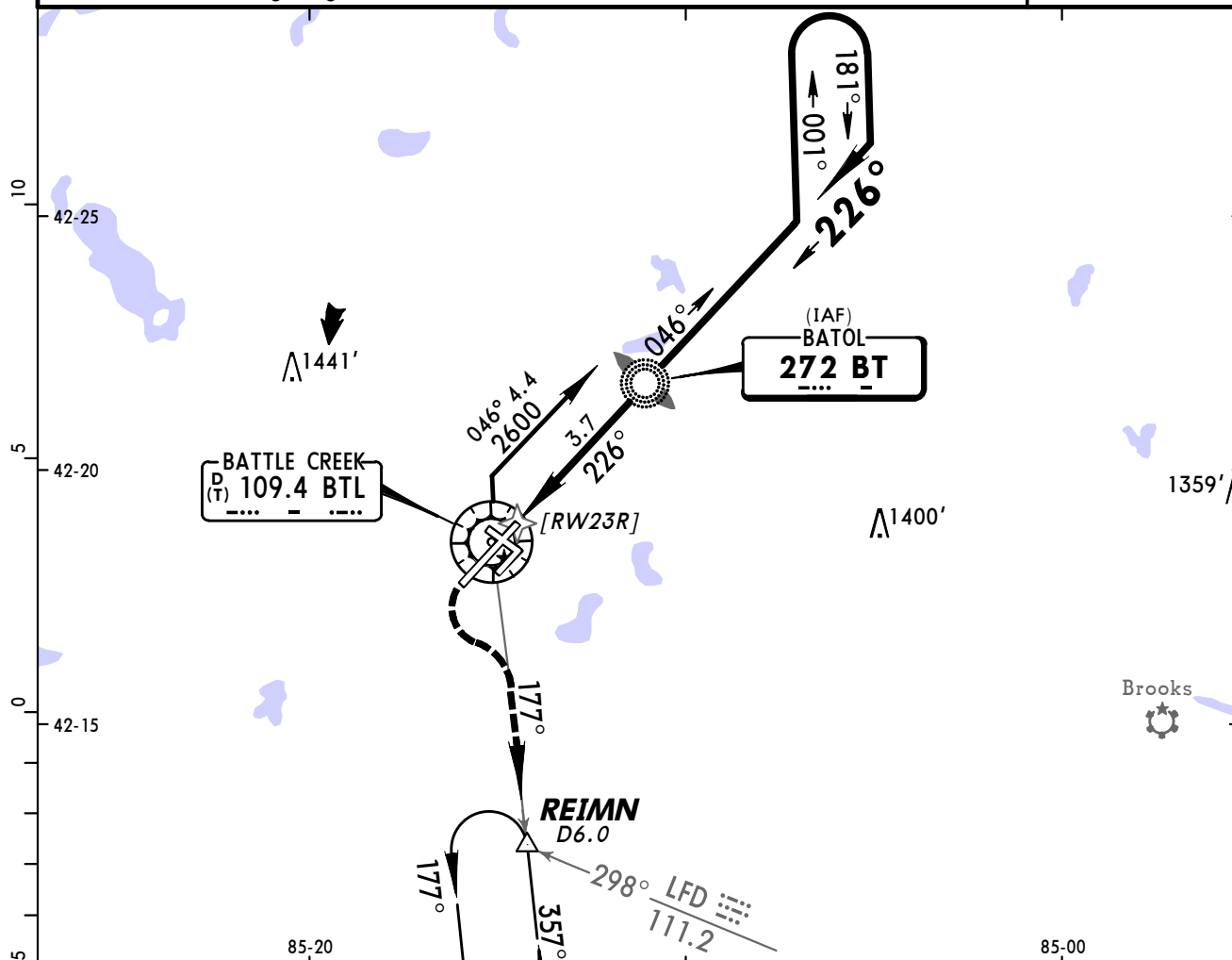
(16-1)

Eff 9 Feb

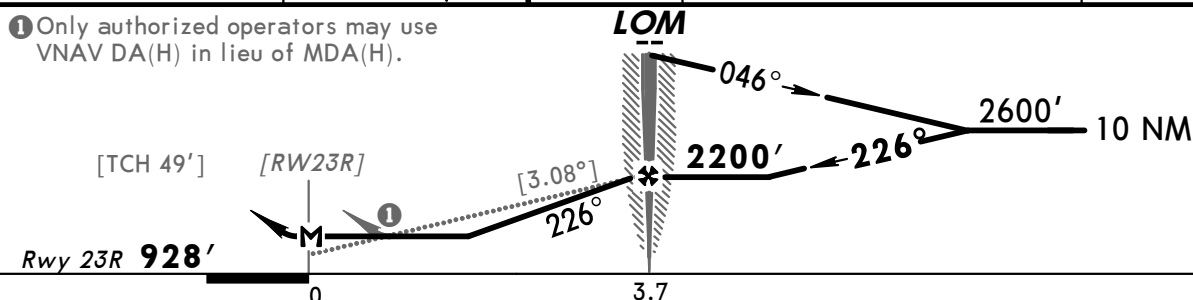
BATTLE CREEK, MICH

NDB Rwy 23R

|                                                                                                                                                                                                                                                                                                                                    |                                  |                                             |                                         |                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------|-----------------------------------------|-------------------------------|
| *ATIS<br>128.32                                                                                                                                                                                                                                                                                                                    | *KALAMAZOO Approach (R)<br>119.2 | CHICAGO Center (R)<br>127.55 when App inop. | *BATTLE CREEK Tower<br>CTAF 126.82      | *Ground<br>121.7              |
| NDB<br>BT<br>272                                                                                                                                                                                                                                                                                                                   | Final<br>Apch Crs<br>226°        | Minimum Alt<br>LOM<br>2200' (1272')         | MDA(H)<br>(CONDITIONAL)<br>1480' (552') | Apt Elev 952'<br>Rwy 23R 928' |
| <b>MISSED APCH:</b> Climbing LEFT turn to 3000' outbound on BTL VOR<br>R-177 to REIMN INT/D6.0 and hold. Continue climb-in-hold to 3000'.<br>Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. Use local altimeter setting; if not received, use Grand Rapids altimeter setting.<br>2. Pilot controlled lighting 126.82. |                                  |                                             |                                         |                               |
|                                                                                                                                                                                                                                                                                                                                    |                                  |                                             |                                         | 3000'                         |
|                                                                                                                                                                                                                                                                                                                                    |                                  |                                             |                                         | MSA BT LOM                    |



① Only authorized operators may use VNAV DA(H) in lieu of MDA(H).



| Gnd speed-Kts         | 70  | 90   | 100  | 120  | 140  | 160  |
|-----------------------|-----|------|------|------|------|------|
| Descent angle [3.08°] | 381 | 490  | 545  | 654  | 763  | 872  |
| LOM to MAP            | 3.7 | 3:10 | 2:28 | 2:13 | 1:51 | 1:35 |

|       |       |          |       |
|-------|-------|----------|-------|
| MALSR | 3000' | BTL      | REIMN |
| PAPI  | LT    | on 109.4 | R-177 |

#### TERPS STRAIGHT-IN LANDING RWY 23R

| MDA(H) 1480' (552')          |                 | MDA(H) 1600' (672')                 |               |
|------------------------------|-----------------|-------------------------------------|---------------|
| With Local Altimeter Setting |                 | With Grand Rapids Altimeter Setting |               |
| RAIL out                     | ALS out         | RAIL out                            | ALS out       |
| A                            | RVR 40 or 3/4   | RVR 55 or 1                         | RVR 40 or 3/4 |
| B                            | RVR 60 or 1 1/4 | 1 3/8                               | 1 1/2         |
| C                            | RVR 60 or 1 1/4 | 1 3/8                               | 1 1/2         |
| D                            | RVR 60 or 1 1/4 | 1 3/8                               | 1 1/2         |

| CIRCLE-TO-LAND                                                                         |                                            |
|----------------------------------------------------------------------------------------|--------------------------------------------|
| Not Authorized to Rwy 5R/23L<br>Not Authorized at Night to Rwy 13/31<br>When VGSi Inop |                                            |
| With Local Altimeter Setting MDA(H)                                                    | With Grand Rapids Altimeter Setting MDA(H) |
| Max Kts                                                                                | Max Kts                                    |
| 90                                                                                     | 1480' (528') - 1                           |
| 120                                                                                    | 1600' (648') - 1                           |
| 140                                                                                    | 1480' (528') - 1 5/8                       |
| 165                                                                                    | 1520' (568') - 2                           |
|                                                                                        | 1640' (688') - 2 1/4                       |

TERPS AMEND 18 5 MAY 2011

CHANGES: Printing sequence.

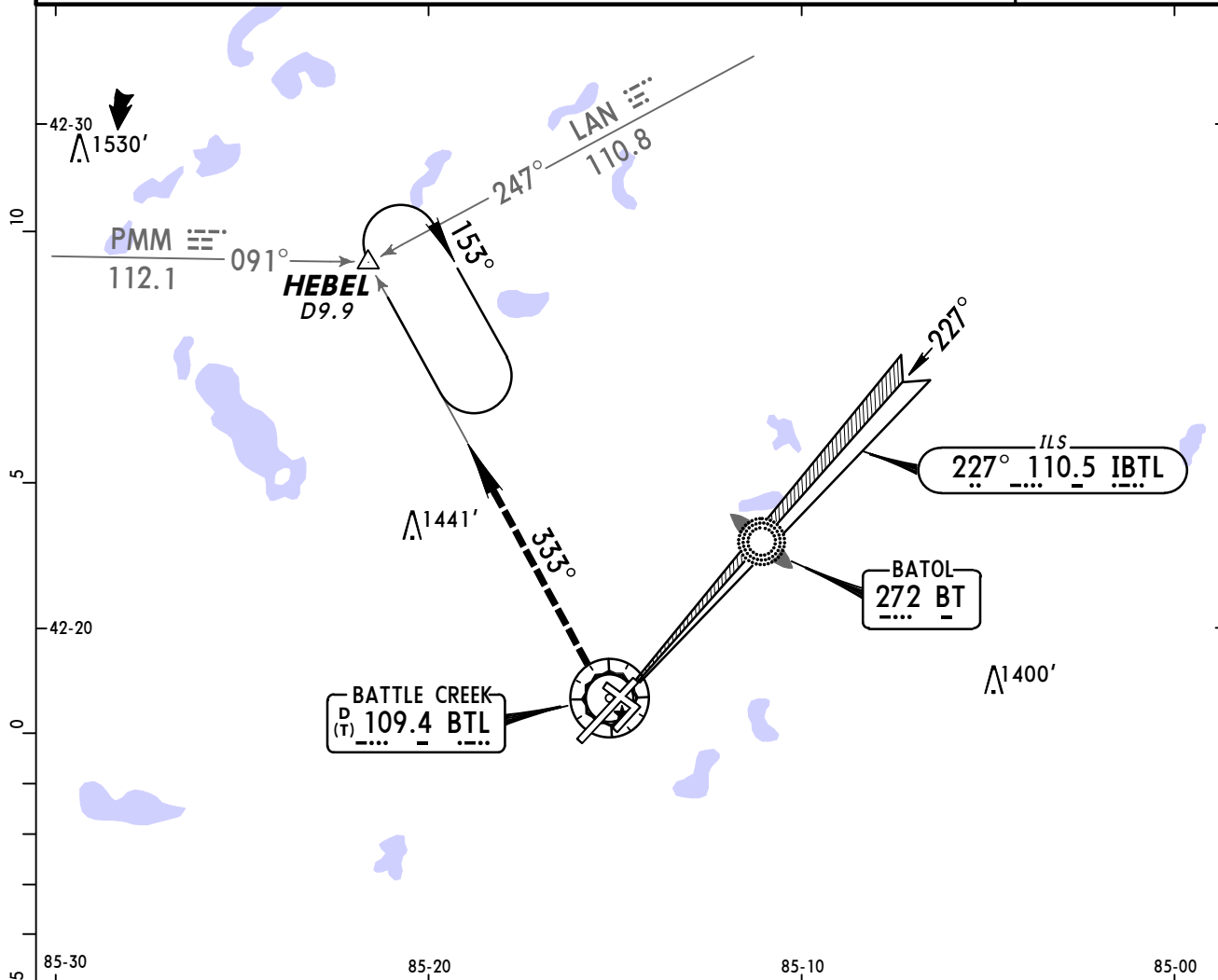
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KBTL/BTL  
KELLOGG

JEPPESEN  
3 FEB 12 (18-1) Eff 9 Feb

BATTLE CREEK, MICH  
RADAR-1 ASR

|                                                                                                                                                        |                                  |                                             |                                    |                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------|------------------------------------|----------------------|
| *ATIS<br>128.32                                                                                                                                        | *KALAMAZOO Approach (R)<br>119.2 | CHICAGO Center (R)<br>127.55 when App inop. | *BATTLE CREEK Tower<br>CTAF 126.82 | *Ground<br>121.7     |
| RADAR                                                                                                                                                  | Final<br>Apch Crs<br>By ATC      | No FAF                                      | MDA(H)<br>Refer to<br>Minimums     | Apt Elev <b>952'</b> |
| MISSED APCH: Climbing LEFT turn to 3000' outbound via BTL VOR<br>R-333 to HEBEL INT/D9.9 and hold.                                                     |                                  |                                             |                                    |                      |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. When Kalamazoo Twr inop, procedure not authorized. 2. Pilot controlled lighting<br>126.82. |                                  |                                             |                                    |                      |
| No MSA<br>published                                                                                                                                    |                                  |                                             |                                    |                      |



|                                   |  |  |                                 |                      |                                  |       |
|-----------------------------------|--|--|---------------------------------|----------------------|----------------------------------|-------|
| Lighting - Refer to Airport Chart |  |  |                                 | 3000' LT             | BTL via 109.4 R-333              | HEBEL |
| CIRCLE-TO-LAND                    |  |  |                                 |                      |                                  |       |
|                                   |  |  | When Battle Creek Twr Operating |                      | With Kalamazoo Altimeter Setting |       |
|                                   |  |  | Max Kts                         | MDA(H)               | MDA(H)                           |       |
|                                   |  |  | A 90                            | 1420' (468') - 1     | 1480' (528') - 1                 |       |
|                                   |  |  | B 120                           | 1440' (488') - 1     | 1500' (548') - 1                 |       |
|                                   |  |  | C 140                           | 1480' (528') - 1 1/2 | 1540' (588') - 1 1/2             |       |
|                                   |  |  | D 165                           | 1520' (568') - 2     | 1580' (628') - 2                 |       |

CHANGES: Printing sequence.

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## General Information

Location: Sault Ste Marie MI USA  
IATA Code: CIU  
Lat/Long: N46° 15.0' W084° 28.3'  
Elevation: 799 ft

Airport Use: Public  
Magnetic Variation: 7.3°W  
Sectional Chart: Lake Huron

Fuel Types: 100 Octane (LL), Jet A  
Customs: ADCUS  
Airport Type: IFR  
Landing Fee: No  
Control Tower: No  
Jet Start Unit: No  
LLWS Alert: No  
Beacon: Yes  
Pattern Altitude: 800 ft AGL

Sunrise: 1221 Z  
Sunset: 2320 Z,

## Runway Information

Runway: 09  
Length x Width: 5000 ft x 75 ft  
Surface Type: asphalt  
TDZ-Elev: 799 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 16  
Length x Width: 7201 ft x 200 ft  
Surface Type: concrete  
TDZ-Elev: 799 ft  
Lighting: Edge, ALS, Pilot controlled

Runway: 27  
Length x Width: 5000 ft x 75 ft  
Surface Type: asphalt  
TDZ-Elev: 799 ft  
Lighting: Edge, REIL, Pilot controlled

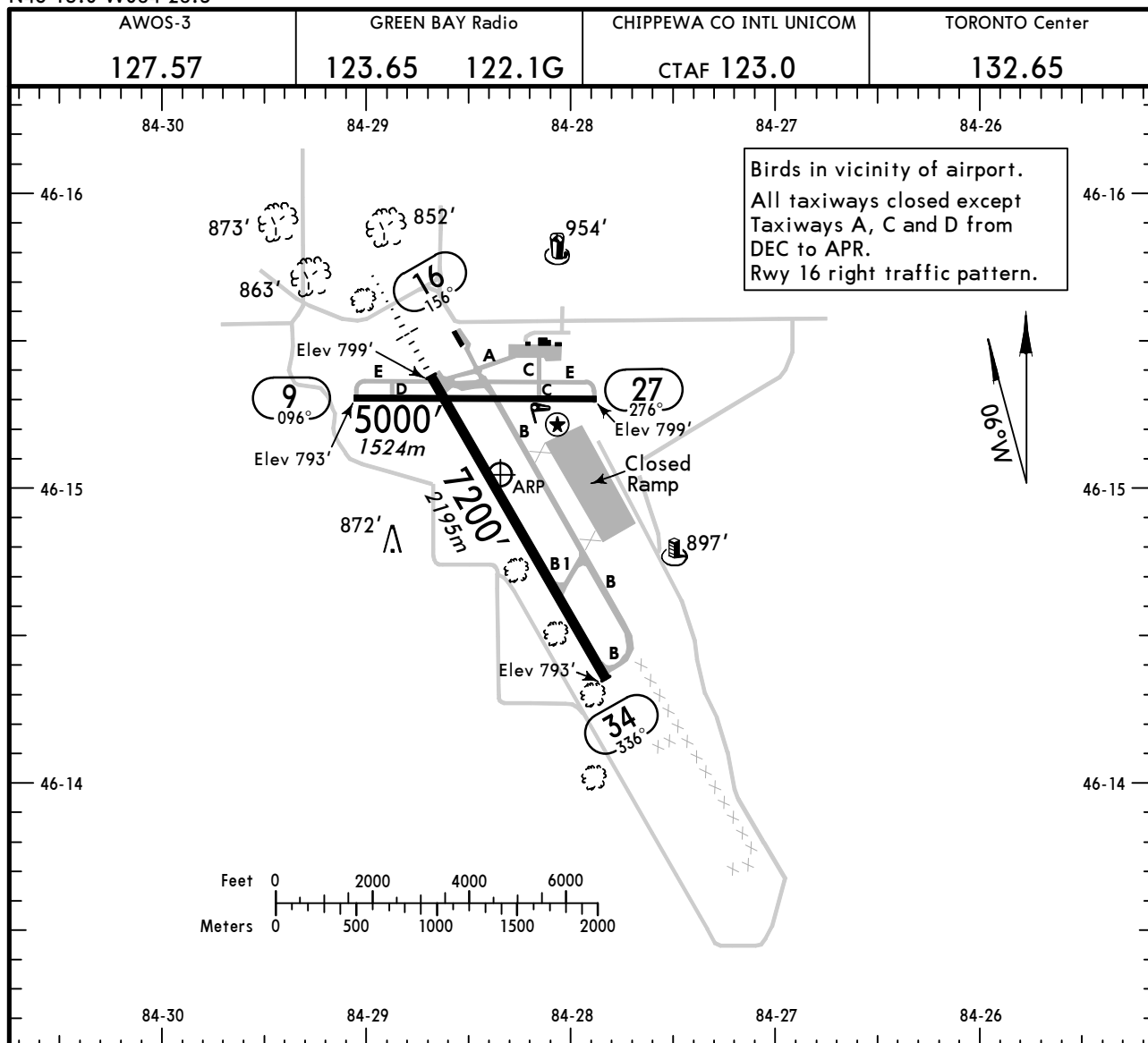
Runway: 34  
Length x Width: 7201 ft x 200 ft  
Surface Type: concrete  
TDZ-Elev: 796 ft  
Lighting: Edge, REIL, Pilot controlled

**Communication Information**

AWOS 127.575  
Chippewa Co Intl Unicom 123.0 CTAF PCL  
Green Bay Flight Service Station 123.65 RCO  
Green Bay Flight Service Station 122.1 RCO  
Green Bay Flight Service Station 112.2 RCO  
Toronto Centre Center 132.65 Remote Communications Air-Ground

KCIU/CIU  
Apt Elev 800'  
N46 15.0 W084 28.3

JEPPESEN SAULT STE MARIE, MICH  
16 OCT 09 11-1 Eff 22 Oct  
CHIPPEWA CO INTL



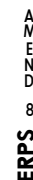
| ADDITIONAL RUNWAY INFORMATION |    |                                      |         |                    |             |          |             |
|-------------------------------|----|--------------------------------------|---------|--------------------|-------------|----------|-------------|
| RWY                           |    |                                      |         | USABLE LENGTHS     |             | TAKE-OFF | WIDTH       |
|                               |    |                                      |         | — LANDING BEYOND — |             |          |             |
|                               |    |                                      |         | Threshold          | Glide Slope |          |             |
| 9                             | 27 | ① MIRL ① REIL ① PAPI-L (angle 3.0°)  | grooved |                    |             |          | 75'<br>23m  |
| 16                            | 34 | ① HIRL ① MALSR ① PAPI-L (angle 3.0°) | grooved |                    | 6124' 1867m |          | 200'<br>61m |
|                               |    | ① HIRL ② REIL ② PAPI-L (angle 3.0°)  | grooved |                    |             |          |             |
|                               |    |                                      |         |                    |             |          |             |
|                               |    |                                      |         |                    |             |          |             |
|                               |    |                                      |         |                    |             |          |             |

- ① Activate on 123.0.
- ② Activate on 123.0 Apr-Nov. Operate continuously Dec-Mar.

| TAKE-OFF  |     |     | FOR FILING AS ALTERNATE                           |       |
|-----------|-----|-----|---------------------------------------------------|-------|
| All Rwys  |     |     | Authorized Only When Local Weather Available      |       |
|           |     |     | ① VOR-A<br>RNAV (GPS) Rwy 16<br>RNAV (GPS) Rwy 34 | Other |
| 1 & 2 Eng | 1/4 | 1   | 800-2                                             | NA    |
| 3 & 4 Eng |     | 1/2 |                                                   |       |

① DME standard, ADF not authorized.

# BRIEFING STRIP™

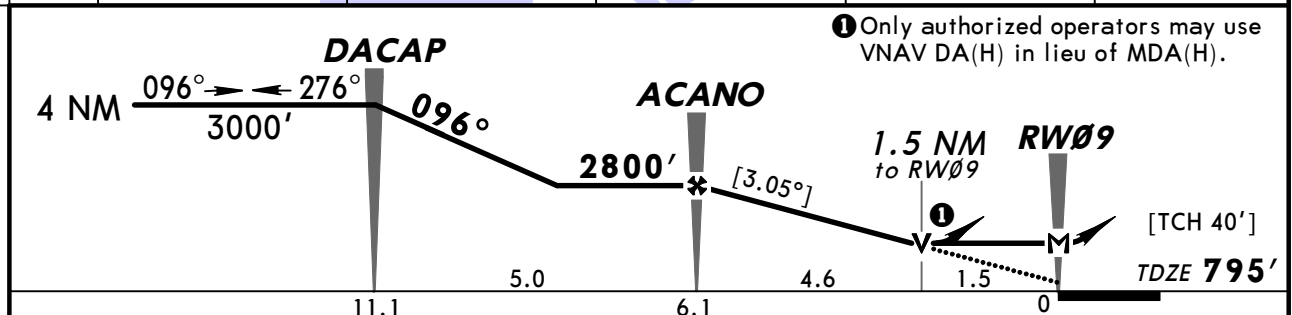
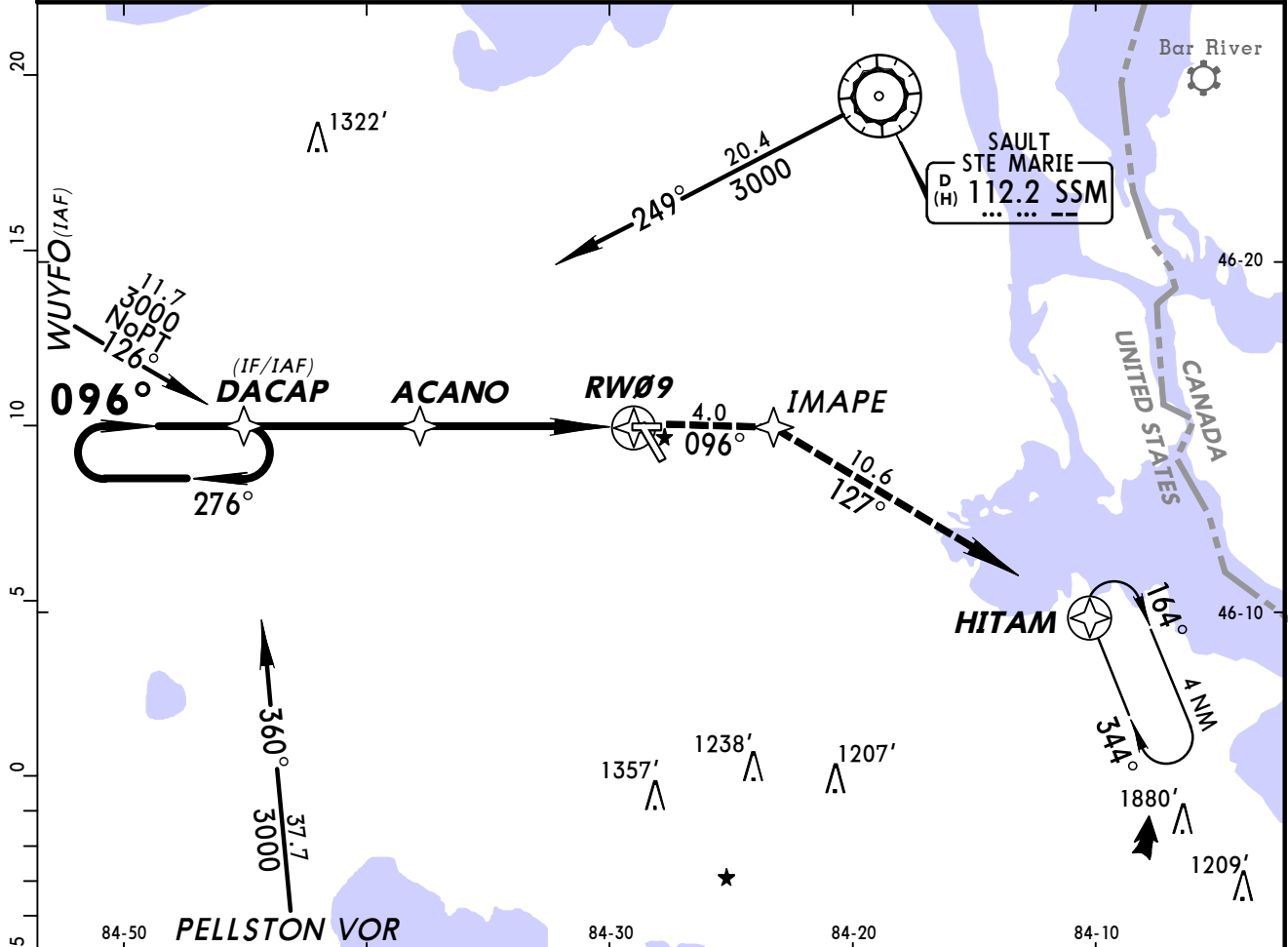


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|                                                                                                                                                       |                                  |                                                     |                                                        |                                          |  |                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------|--------------------------------------------------------|------------------------------------------|--|---------------------------------------|
| AWOS-3<br>127.57                                                                                                                                      |                                  | TORONTO Center<br>132.65                            |                                                        | GREEN BAY Radio<br>123.65 122.1G         |  | CHIPPEWA CO INTL UNICOM<br>CTAF 123.0 |
| RNAV                                                                                                                                                  | Final<br>Apch Crs<br><b>096°</b> | Minimum Alt<br><b>ACANO</b><br><b>2800'</b> (2005') | LNAV<br>MDA(H)<br>(CONDITIONAL)<br><b>1320'</b> (525') | Apt Elev <b>800'</b><br>TDZE <b>795'</b> |  |                                       |
| <b>MISSED APCH:</b> Climb to 2900' via 096° course to IMAPE and via 127° track to HITAM and hold.                                                     |                                  |                                                     |                                                        |                                          |  | <div>4000'</div> <div>MSA RW09</div>  |
| Alt Set: INCHES Trans level: FL 180<br>1. <b>GPS or RNP-0.30 required.</b> 2. DME/DME RNP-0.30 not authorized.<br>3. Pilot controlled lighting 123.0. |                                  |                                                     |                                                        |                                          |  |                                       |



|                           |    |     |     |     |       |     |     |  |                |                        |                 |  |  |  |     |                  |
|---------------------------|----|-----|-----|-----|-------|-----|-----|--|----------------|------------------------|-----------------|--|--|--|-----|------------------|
| Gnd speed-Kts             |    | 70  | 90  | 100 | 120   | 140 | 160 |  | REIL<br>PAPI-L | 2900'<br>↑<br>via 096° | IMAPE           |  |  |  |     |                  |
| Descent angle [3.05°]     |    | 378 | 486 | 540 | 648   | 755 | 863 |  |                |                        |                 |  |  |  |     |                  |
|                           |    |     |     |     |       |     |     |  |                |                        |                 |  |  |  |     |                  |
| MAP at RW09               |    |     |     |     |       |     |     |  |                |                        |                 |  |  |  |     |                  |
| STRAIGHT-IN LANDING RWY 9 |    |     |     |     |       |     |     |  |                | CIRCLE-TO-LAND         |                 |  |  |  |     |                  |
| LNAV                      |    |     |     |     |       |     |     |  |                |                        |                 |  |  |  |     |                  |
| MDA(H) 1320'(525')        |    |     |     |     |       |     |     |  |                |                        |                 |  |  |  |     |                  |
| DAY                       |    |     |     |     | NIGHT |     |     |  |                | Max<br>Kts             | MDA(H)          |  |  |  |     |                  |
| A                         | 1  |     |     |     | NA    |     |     |  |                | 90                     | 1320'(520') - 1 |  |  |  |     |                  |
| B                         |    |     |     |     |       |     |     |  |                | 120                    |                 |  |  |  |     |                  |
| C                         |    |     |     |     |       |     |     |  |                | 140                    |                 |  |  |  |     |                  |
| D                         | 1½ |     |     |     |       |     |     |  |                |                        |                 |  |  |  | 165 | 1320'(520') - 1½ |
|                           | 1¾ |     |     |     |       |     |     |  |                |                        |                 |  |  |  |     | 1360'(560') - 2  |

|                                                                                           |                                  |                                                     |                                                      |
|-------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------|------------------------------------------------------|
| AWOS-3<br>127.57                                                                          | TORONTO Center<br>132.65         | GREEN BAY Radio<br>123.65 122.1G                    | CHIPPEWA CO INTL UNICOM<br>CTAF 123.0                |
| WAAS<br><b>Ch 69215</b><br>W-16A                                                          | Final<br>Apch Crs<br><b>156°</b> | Minimum Alt<br><b>FATPA</b><br><b>2600'</b> (1801') | LPV<br>DA(H)<br>(CONDITIONAL)<br><b>1068'</b> (269') |
| Apt Elev 800'                                                                             |                                  |                                                     | TDZE <b>799'</b>                                     |
| MISSED APCH: Climb to 3000' direct CAKRU and RIGHT turn via track 208° to PINES and hold. |                                  |                                                     | MSA RW16                                             |

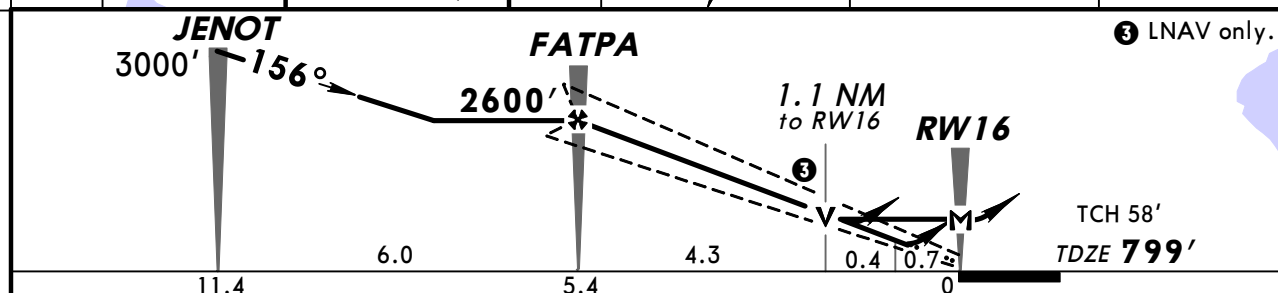
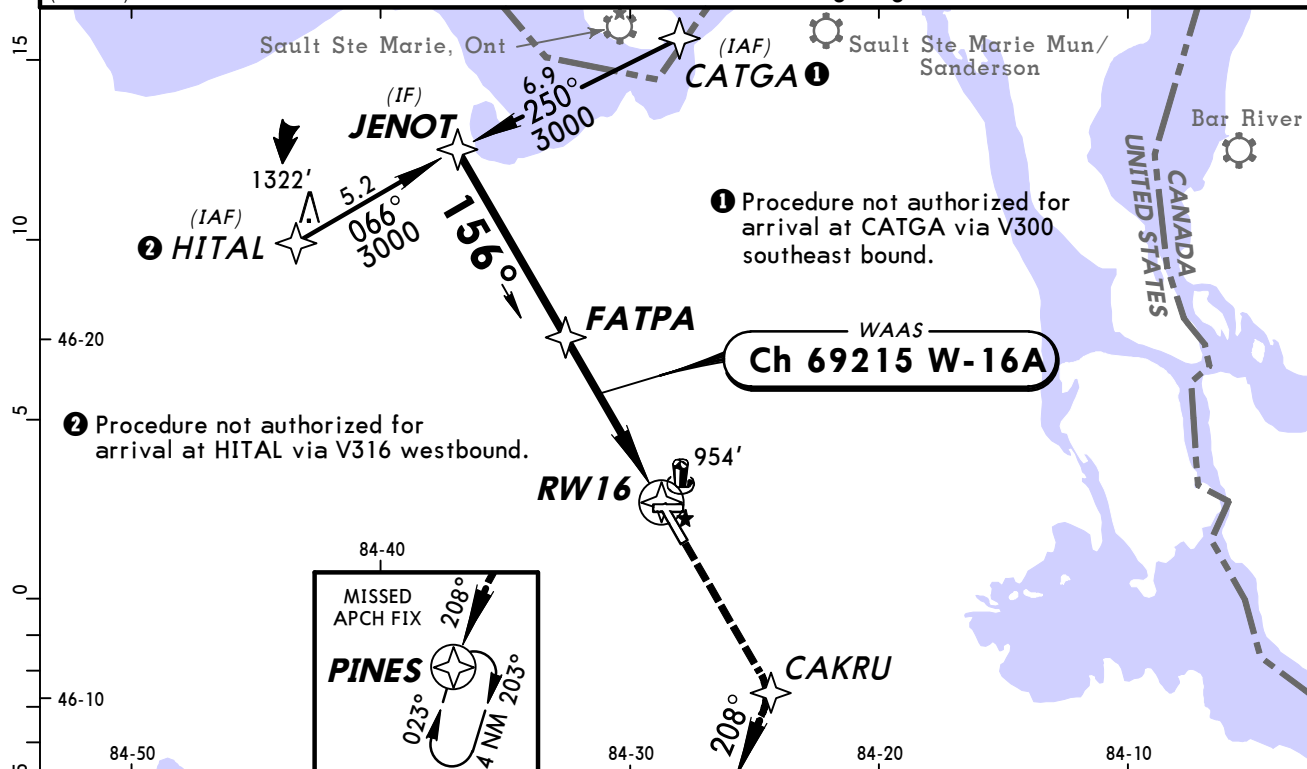
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'

1. Use local altimeter setting; if not received, use Sault Ste Marie Mun/Sanderson altimeter setting.

2. Baro-VNAV and VDP not authorized when using Sault Ste Marie Mun/Sanderson altimeter setting.

3. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F).

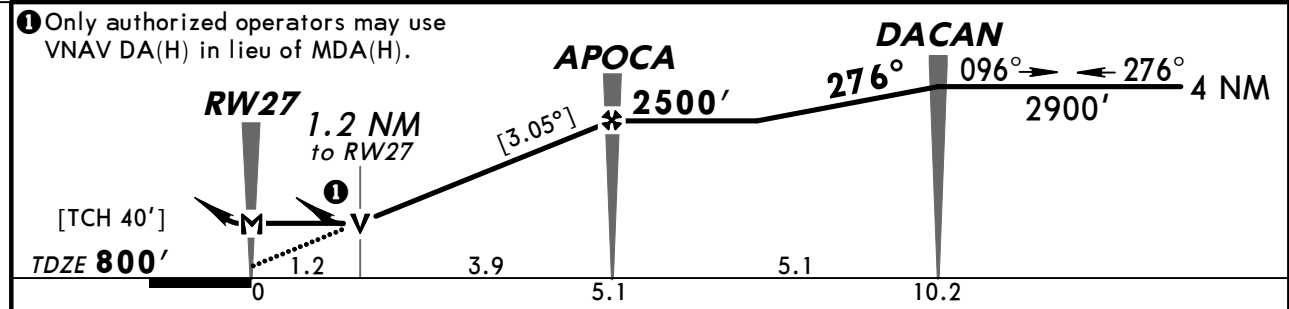
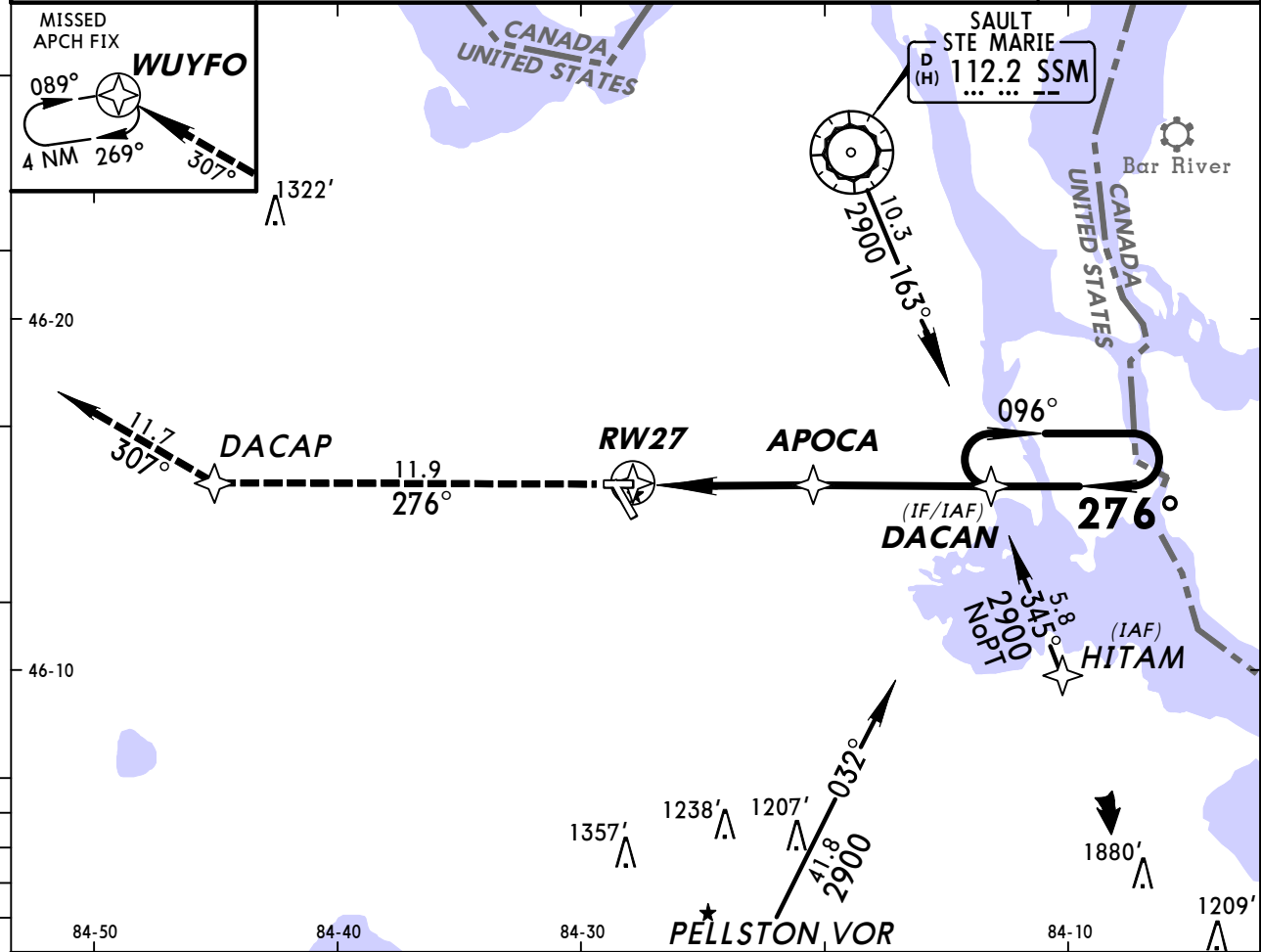
4. DME/DME RNP-0.30 not authorized. 5. Pilot controlled lighting 123.0.



|                        |     |     |     |     |     |     |       |       |       |
|------------------------|-----|-----|-----|-----|-----|-----|-------|-------|-------|
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 | MALSR | 3000' | CAKRU |
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 | PAPI  |       |       |
| MAP at RW16            |     |     |     |     |     |     |       |       |       |

| STRAIGHT-IN LANDING RWY 16                           |     |                    |   |                     |         |         | CIRCLE-TO-LAND                                       |  |
|------------------------------------------------------|-----|--------------------|---|---------------------|---------|---------|------------------------------------------------------|--|
| With Local Altimeter Setting                         |     |                    |   |                     |         |         | With Local Altimeter Setting                         |  |
| LPV                                                  |     | LNAV/VNAV          |   | LNAV                |         |         |                                                      |  |
| DA(H) 1068' (269')                                   |     | DA(H) 1204' (405') |   | MDA(H) 1220' (421') |         |         | MDA(H)                                               |  |
| RAIL or ALS out                                      |     | RAIL or ALS out    |   | RAIL out            | ALS out | Max Kts |                                                      |  |
| A                                                    |     |                    |   | 1/2                 | 3/4     | 90      | 1260' (460') - 1                                     |  |
| B                                                    | 1/2 | 1                  | 1 | 3/4                 | 1       | 120     | 1260' (460') - 1 1/2                                 |  |
| C                                                    |     |                    |   | 1                   | 1 1/4   | 140     | 1360' (560') - 2                                     |  |
| D                                                    |     |                    |   |                     |         | 165     |                                                      |  |
| With Sault Ste Marie Mun/Sanderson Altimeter Setting |     |                    |   |                     |         |         | With Sault Ste Marie Mun/Sanderson Altimeter Setting |  |
| LPV                                                  |     | LNAV/VNAV          |   | LNAV                |         |         |                                                      |  |
| DA(H) 1113' (314')                                   |     | DA(H) 1249' (450') |   | MDA(H) 1280' (481') |         |         | MDA(H)                                               |  |
| RAIL or ALS out                                      |     | RAIL or ALS out    |   | RAIL out            | ALS out | Max Kts |                                                      |  |
| A                                                    |     |                    |   | 1/2                 | 3/4     | 90      | 1320' (520') - 1                                     |  |
| B                                                    | 1/2 | 1                  | 1 | 3/4                 | 1       | 120     | 1320' (520') - 1 1/2                                 |  |
| C                                                    |     |                    |   | 1                   | 1 1/2   | 140     | 1420' (620') - 2                                     |  |
| D                                                    |     |                    |   |                     |         | 165     |                                                      |  |

|                                                                                                                                                                  |                           |                                       |                                                 |                                  |                                      |                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------|-------------------------------------------------|----------------------------------|--------------------------------------|---------------------------------------|
| AWOS-3<br>127.57                                                                                                                                                 |                           | TORONTO Center<br>132.65              |                                                 | GREEN BAY Radio<br>123.65 122.1G |                                      | CHIPPEWA CO INTL UNICOM<br>CTAF 123.0 |
| RNAV                                                                                                                                                             | Final<br>Apch Crs<br>276° | Minimum Alt<br>APOCA<br>2500' (1700') | RNAV<br>MDA(H)<br>(CONDITIONAL)<br>1220' (420') | Apt Elev 800'<br>TDZE 800'       | <div>4000'</div> <div>MSA RW27</div> |                                       |
| MISSED APCH: Climb to 3000' via 276° course to DACAP and via 307° track to WUYFO and hold.                                                                       |                           |                                       |                                                 |                                  |                                      |                                       |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. GPS or RNP-0.30 required. 2. DME/DME RNP-0.30 not authorized.<br>3. Pilot controlled lighting 123.0. |                           |                                       |                                                 |                                  |                                      |                                       |

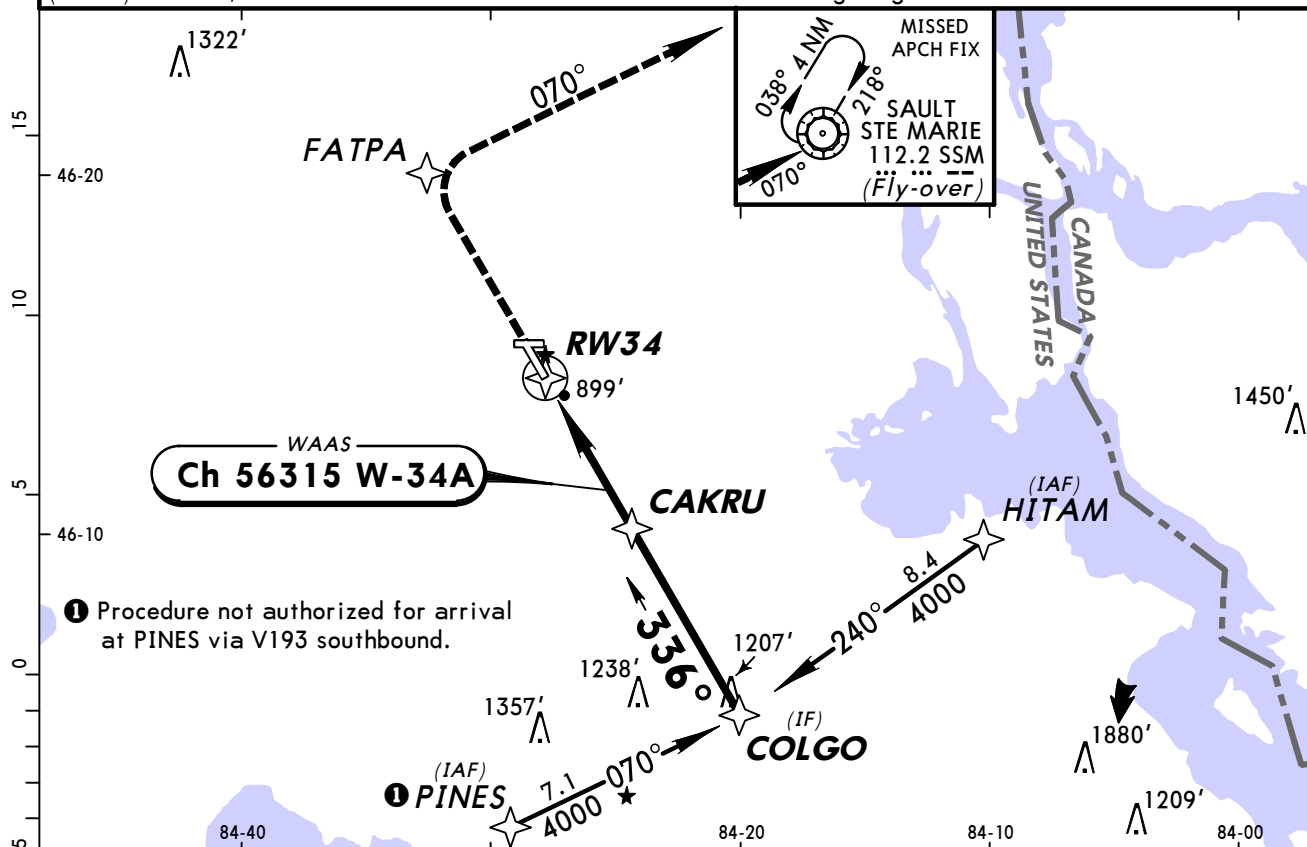


|                       |     |     |     |     |     |     |                |       |          |       |
|-----------------------|-----|-----|-----|-----|-----|-----|----------------|-------|----------|-------|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 | REIL<br>PAPI-L | 3000' | via 276° | DACAP |
| Descent angle [3.05°] | 378 | 486 | 540 | 648 | 755 | 863 |                |       |          |       |
| MAP at RW27           |     |     |     |     |     |     |                |       |          |       |

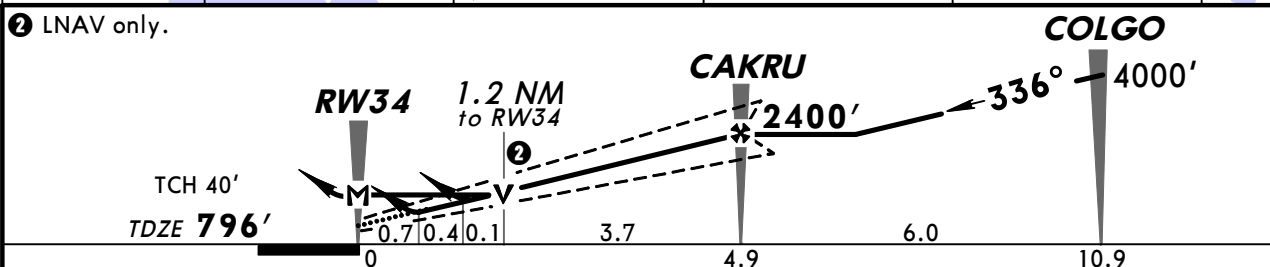
| STRAIGHT-IN LANDING RWY 27 |    |  |  |  |  | CIRCLE-TO-LAND |                   |  |  |
|----------------------------|----|--|--|--|--|----------------|-------------------|--|--|
| RNAV                       |    |  |  |  |  | MDA(H)         |                   |  |  |
| DAY                        |    |  |  |  |  | Max Kts        |                   |  |  |
| A                          | 1  |  |  |  |  | 90             | 1260' (460') - 1  |  |  |
| B                          |    |  |  |  |  | 120            |                   |  |  |
| C                          |    |  |  |  |  | 140            | 1260' (460') - 1½ |  |  |
| D                          | 1¼ |  |  |  |  | 165            | 1360' (560') - 2  |  |  |

|                                                                                             |                           |                                      |                                              |                                  |  |                                       |
|---------------------------------------------------------------------------------------------|---------------------------|--------------------------------------|----------------------------------------------|----------------------------------|--|---------------------------------------|
| AWOS-3<br>127.57                                                                            |                           | TORONTO Center<br>132.65             |                                              | GREEN BAY Radio<br>123.65 122.1G |  | CHIPPEWA CO INTL UNICOM<br>CTAF 123.0 |
| WAAS<br>Ch 56315<br>W-34A                                                                   | Final<br>Apch Crs<br>336° | Minimum Alt<br>CAKRU<br>2400'(1604') | LPV<br>DA(H)<br>(CONDITIONAL)<br>1046'(250') | Apt Elev 800'<br><br>TDZE 796'   |  | <div>4000'</div> <div>MSA RW34</div>  |
| MISSED APCH: Climb to 3000' direct FATPA and RIGHT turn via track 070° to SSM VOR and hold. |                           |                                      |                                              |                                  |  |                                       |

Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'  
 1. Use local altimeter setting; if not received, use Sault Ste Marie Mun/Sanderson altimeter setting.  
 2. Baro-VNAV and VDP not authorized when using Sault Ste Marie Mun/Sanderson altimeter setting.  
 3. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 4. DME/DME RNP-0.30 not authorized. 5. Pilot controlled lighting 123.0.

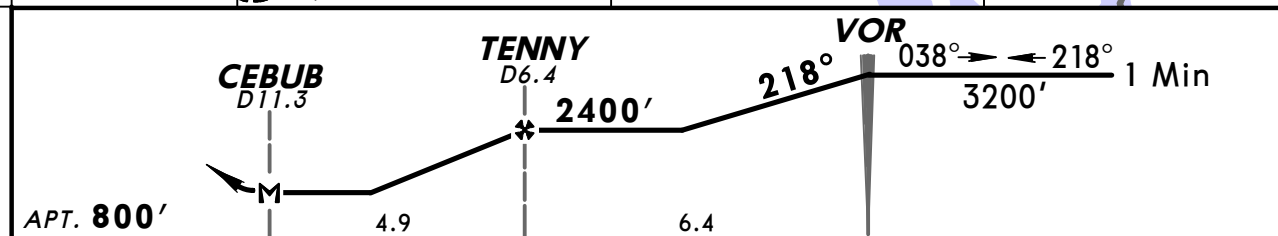


① Procedure not authorized for arrival at PINES via V193 southbound.

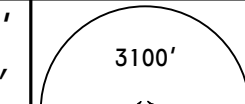


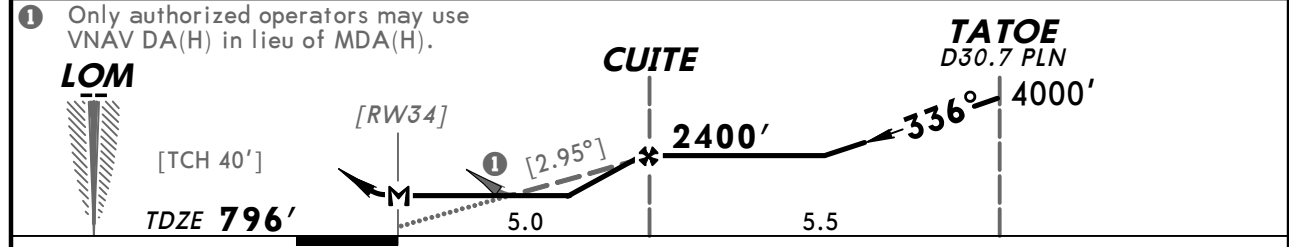
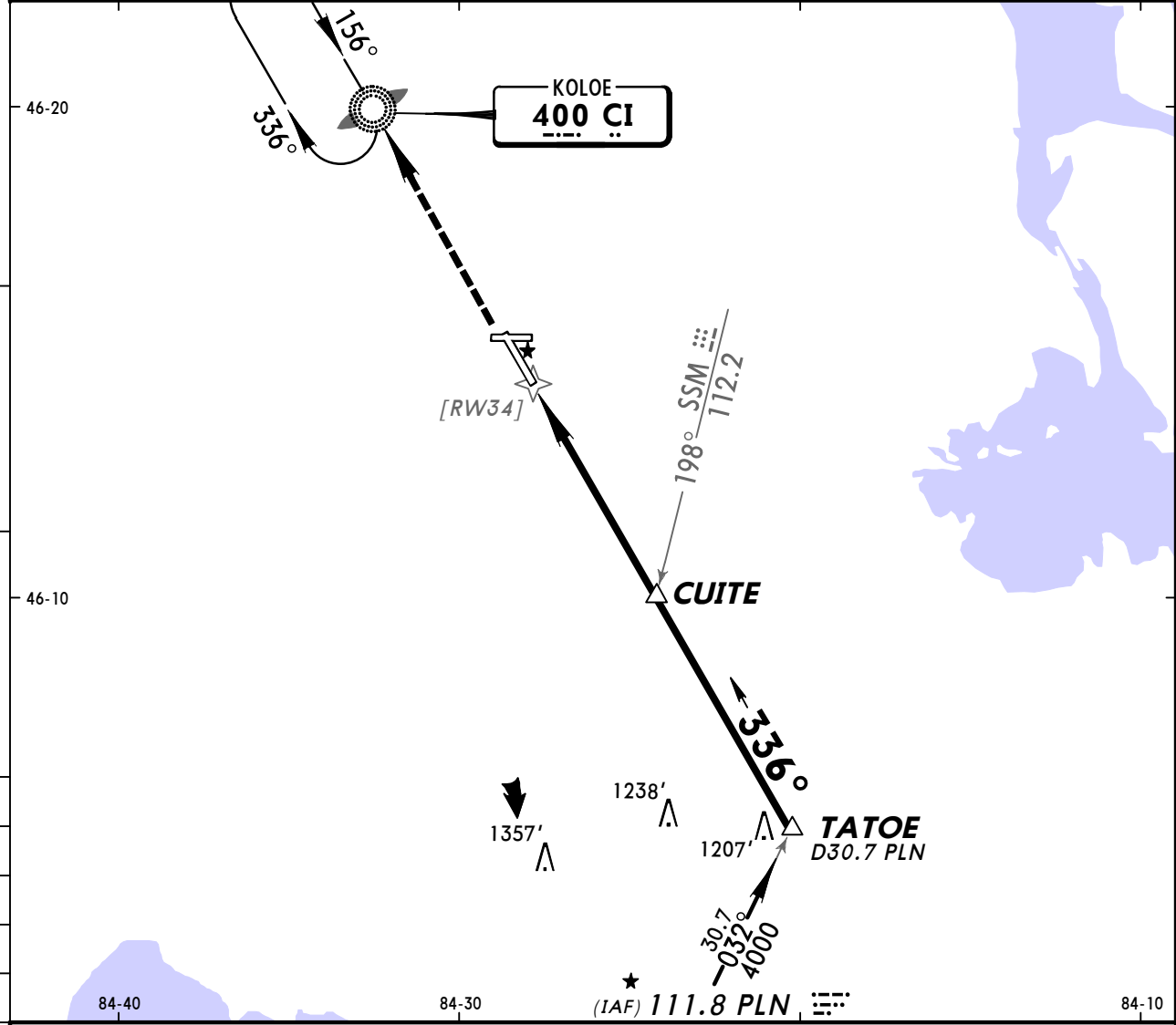
|                        |     |     |     |     |     |     |  |  |  |  |  |
|------------------------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 |  |  |  |  |  |
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |  |  |  |  |  |
| MAP at RW34            |     |     |     |     |     |     |  |  |  |  |  |

| STRAIGHT-IN LANDING RWY 34                           |   |                    |    |                     |     | CIRCLE-TO-LAND                                       |                  |                   |
|------------------------------------------------------|---|--------------------|----|---------------------|-----|------------------------------------------------------|------------------|-------------------|
| With Local Altimeter Setting                         |   |                    |    |                     |     | With Local Altimeter Setting                         |                  |                   |
| LPV                                                  |   | LNAV/VNAV          |    | LNAV                |     | Max Kts                                              | MDA(H)           |                   |
| DA(H) 1046' (250')                                   |   | DA(H) 1198' (402') |    | MDA(H) 1200' (404') |     | 90                                                   | 1260' (460') - 1 |                   |
| A                                                    | 1 |                    | 1½ |                     | 1   |                                                      | 120              | 1260' (460') - 1½ |
| 1¼                                                   |   |                    |    |                     | 140 | 1260' (460') - 1¾                                    |                  |                   |
| 1½                                                   |   |                    |    |                     | 165 | 1360' (560') - 2                                     |                  |                   |
|                                                      |   |                    |    |                     |     |                                                      |                  |                   |
| With Sault Ste Marie Mun/Sanderson Altimeter Setting |   |                    |    |                     |     | With Sault Ste Marie Mun/Sanderson Altimeter Setting |                  |                   |
| LPV                                                  |   | LNAV/VNAV          |    | LNAV                |     | Max Kts                                              | MDA(H)           |                   |
| DA(H) 1091' (295')                                   |   | DA(H) 1243' (447') |    | MDA(H) 1260' (464') |     | 90                                                   | 1320' (520') - 1 |                   |
| A                                                    | 1 |                    | 1½ |                     | 1   |                                                      | 120              | 1320' (520') - 1½ |
| 1¼                                                   |   |                    |    |                     | 140 | 1320' (520') - 1¾                                    |                  |                   |
| 1½                                                   |   |                    |    |                     | 165 | 1420' (620') - 2                                     |                  |                   |
|                                                      |   |                    |    |                     |     |                                                      |                  |                   |



|  | CIRCLE-TO-LAND |                                                              |                                                                                         |
|--|----------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------|
|  | Max<br>Kts     | With Local<br>Altimeter Setting<br>_____ <i>MDA(H)</i> _____ | With Sault Ste Marie<br>Mun/Sanderson<br>Altimeter Setting<br>_____ <i>MDA(H)</i> _____ |
|  | A              | 90                                                           |                                                                                         |
|  | B              | 120                                                          | <b>1260'</b> (460') - 1 <b>1320'</b> (520') - 1                                         |
|  | C              | 140                                                          | <b>1260'</b> (460') - 1½ <b>1320'</b> (520') - 1½                                       |
|  | D              | 165                                                          | <b>1360'</b> (560') - 2 <b>1420'</b> (620') - 2                                         |

|                                                        |                           |                                       |                        |                                  |  |                                                                                                   |  |
|--------------------------------------------------------|---------------------------|---------------------------------------|------------------------|----------------------------------|--|---------------------------------------------------------------------------------------------------|--|
| AWOS-3<br>127.57                                       |                           | TORONTO Center<br>132.65              |                        | GREEN BAY Radio<br>123.65 122.1G |  | CHIPPEWA CO INTL UNICOM<br>CTAF 123.0                                                             |  |
| LOM<br>CI<br>400                                       | Final<br>Apch Crs<br>336° | Minimum Alt<br>CUITE<br>2400' (1604') | MDA(H)<br>1220' (424') | Apt Elev 800'<br>TDZE 796'       |  | <br>MSA CI LOM |  |
| MISSED APCH: Climb to 2600' direct CI LOM and hold.    |                           |                                       |                        |                                  |  |                                                                                                   |  |
| Alt Set: INCHES<br>1. Pilot controlled lighting 123.0. |                           | Trans level: FL 180                   |                        | Trans alt: 18000'                |  |                                                                                                   |  |



|                       |      |      |      |      |      |      |  |                |            |                                                                                       |           |
|-----------------------|------|------|------|------|------|------|--|----------------|------------|---------------------------------------------------------------------------------------|-----------|
| Gnd speed-Kts         | 70   | 90   | 100  | 120  | 140  | 160  |  | REIL<br>PAPI-L | 2600'<br>↑ |  | CI<br>400 |
| Descent angle [2.95°] | 365  | 470  | 522  | 626  | 731  | 835  |  |                |            |                                                                                       |           |
|                       |      |      |      |      |      |      |  |                |            |                                                                                       |           |
|                       |      |      |      |      |      |      |  |                |            |                                                                                       |           |
| CUITE to MAP 5.0      | 4:17 | 3:20 | 3:00 | 2:30 | 2:09 | 1:53 |  |                |            |                                                                                       |           |

|                            |  |  |  |  |  |                |  |  |  |  |  |
|----------------------------|--|--|--|--|--|----------------|--|--|--|--|--|
| STRAIGHT-IN LANDING RWY 34 |  |  |  |  |  | CIRCLE-TO-LAND |  |  |  |  |  |
| MDA(H) <b>1220' (424')</b> |  |  |  |  |  | MDA(H)         |  |  |  |  |  |
|                            |  |  |  |  |  | Max Kts        |  |  |  |  |  |
|                            |  |  |  |  |  | 90             |  |  |  |  |  |
|                            |  |  |  |  |  | 120            |  |  |  |  |  |
|                            |  |  |  |  |  | 140            |  |  |  |  |  |
|                            |  |  |  |  |  | 165            |  |  |  |  |  |

## General Information

Location: Hancock MI USA  
IATA Code: CMX  
Lat/Long: N47° 10.1' W088° 29.3'  
Elevation: 1095 ft

Airport Use: Public  
Magnetic Variation: 4.0°W  
Sectional Chart: Green Bay

Fuel Types: 100 Octane (LL), Jet A  
Repair Types: Major Airframe, Major Engine  
Customs: No  
Airport Type: IFR  
Landing Fee: Yes  
Control Tower: No  
Jet Start Unit: Yes  
LLWS Alert: No  
Beacon: Yes

Sunrise: 1238 Z  
Sunset: 2335 Z,

## Runway Information

Runway: 07  
Length x Width: 5201 ft x 100 ft  
Surface Type: asphalt  
TDZ-Elev: 1067 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 13  
Length x Width: 6500 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 1095 ft  
Lighting: Edge, REIL, Pilot controlled

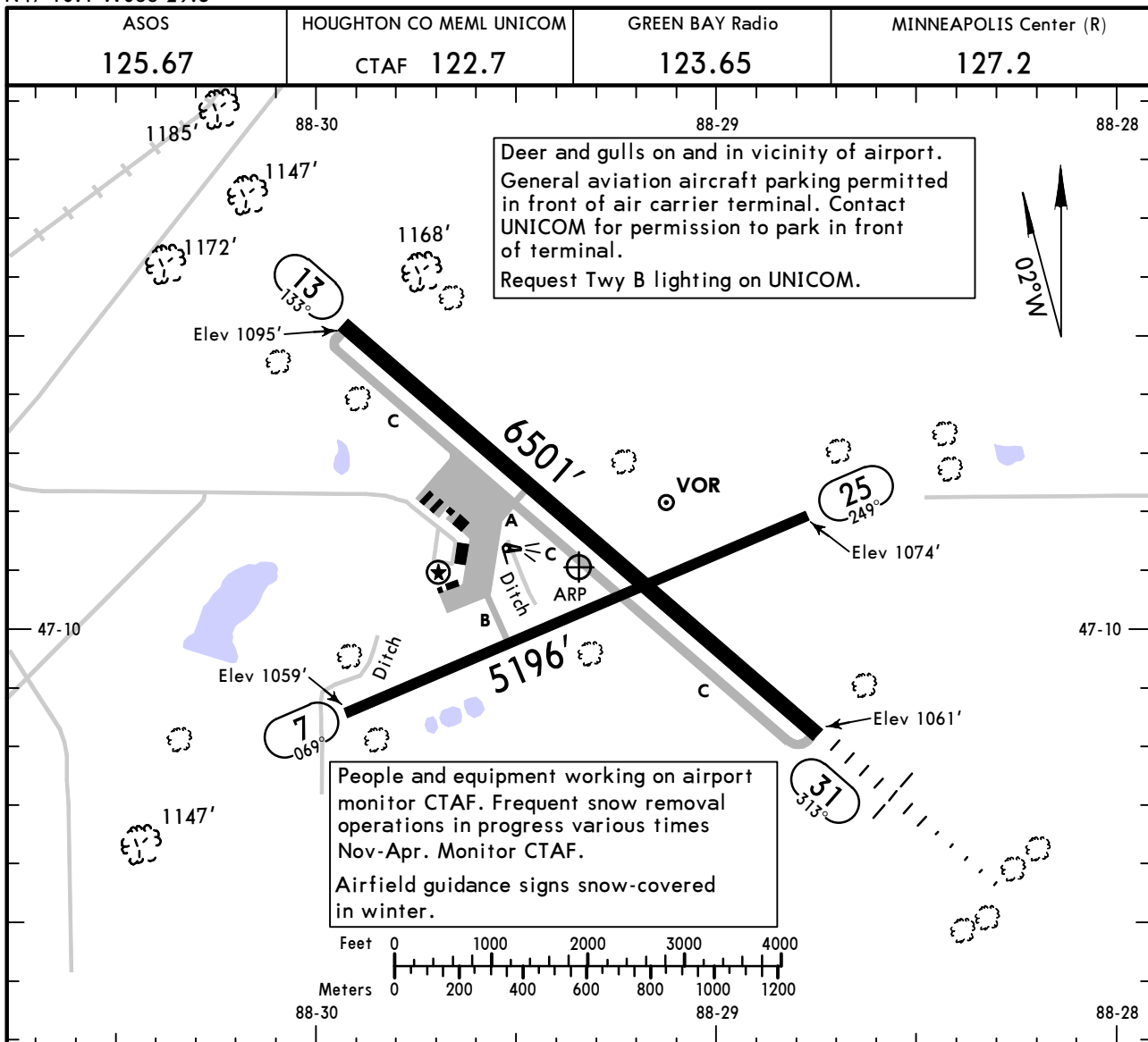
Runway: 25  
Length x Width: 5201 ft x 100 ft  
Surface Type: asphalt  
TDZ-Elev: 1074 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 31  
Length x Width: 6500 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 1070 ft  
Lighting: Edge, ALS, Pilot controlled

**Communication Information**

ASOS 125.675  
Houghton Co Meml Unicom 122.7 CTAF PCL  
Green Bay Flight Service Station 123.65 RCO  
Green Bay Flight Service Station 122.525 RCO  
Minneapolis Center 127.2 Remote Communications Air-Ground





#### ADDITIONAL RUNWAY INFORMATION

|          |                                  |  |  | USABLE LENGTHS |             |          |       |
|----------|----------------------------------|--|--|----------------|-------------|----------|-------|
| RWY      |                                  |  |  | LANDING BEYOND |             | TAKE-OFF | WIDTH |
|          |                                  |  |  | Threshold      | Glide Slope |          |       |
| 7<br>25  | ① MIRL ① REIL ①② PAPI-L grooved  |  |  |                |             |          | 100'  |
| 13<br>31 | ① HIRL ① REIL ①② PAPI-L grooved  |  |  |                |             |          | 150'  |
|          | ① HIRL ① MALSR ①② PAPI-L grooved |  |  |                | 5701'       |          |       |

- ① Activate on 122.7.  
② Angle 3.00°.

#### TAKE-OFF & OBSTACLE DEPARTURE PROCEDURE

|           | Rwys 7, 13       |     | Rwy 25                               |                  |           | Rwy 31                               |                  |           |
|-----------|------------------|-----|--------------------------------------|------------------|-----------|--------------------------------------|------------------|-----------|
|           | Adequate Vis Ref | STD | ① With Min climb of 205'/NM to 1600' | Adequate Vis Ref | STD       | ② With Min climb of 245'/NM to 1400' | Adequate Vis Ref | STD       |
| 1 & 2 Eng | 1/4              | 1   | 1/4                                  | 1/2              | 400-2 1/2 | 1/4                                  | 1                | 300-1 1/2 |
| 3 & 4 Eng |                  | 1/2 |                                      |                  |           |                                      | 1/2              |           |

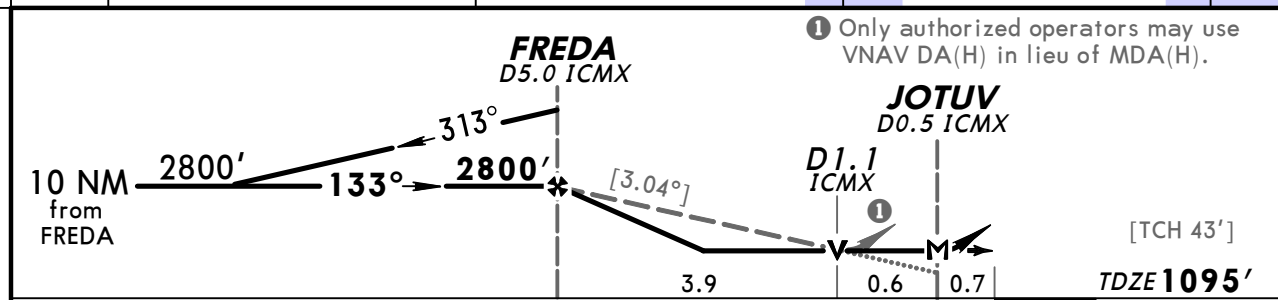
① Alternatively, with standard takeoff minimums and a normal 200'/NM climb gradient, takeoff must occur no later than 1300' prior to departure end of runway.

② Alternatively, with standard takeoff minimums and a normal 200'/NM climb gradient, takeoff must occur no later than 2200' prior to departure end of runway.

#### FOR FILING AS ALTERNATE

| Authorized Only When Local Weather Available |                                   |            |                          |                      | Other |
|----------------------------------------------|-----------------------------------|------------|--------------------------|----------------------|-------|
| ILS Rwy 31                                   | LOC DME (BC) Rwy 13<br>LOC Rwy 31 | VOR Rwy 13 | VOR Rwy 25<br>VOR Rwy 31 | RNAV (GPS)<br>Rwy 31 |       |
| A                                            | 700-2                             | 800-2      | 800-2                    | 800-2                | NA    |
| B                                            |                                   |            |                          |                      |       |
| C                                            |                                   |            |                          |                      |       |
| D                                            | 700-2 1/4                         | 800-2 1/4  |                          | 800-2 1/4            |       |

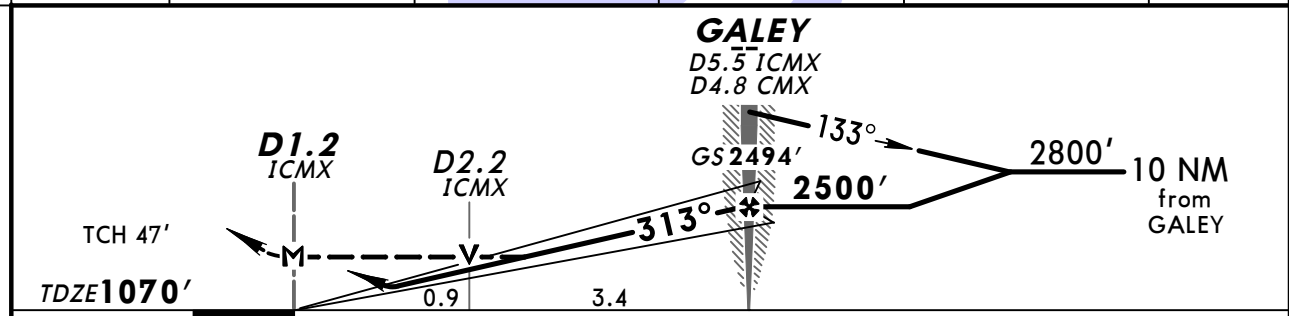
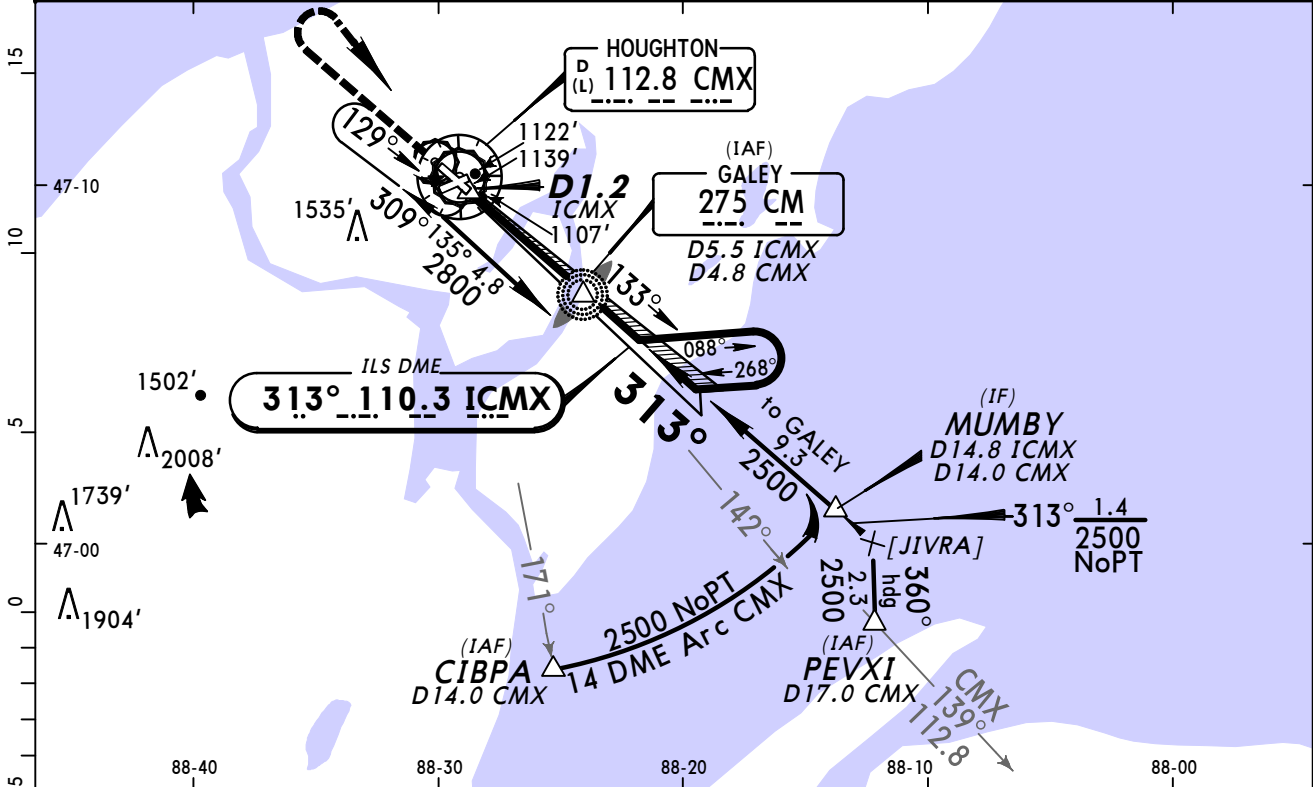
|                                                                      |                                            |                                       |                                         |                              |  |                                         |  |
|----------------------------------------------------------------------|--------------------------------------------|---------------------------------------|-----------------------------------------|------------------------------|--|-----------------------------------------|--|
| ASOS<br>125.67                                                       |                                            | MINNEAPOLIS Center (R)<br>127.2       |                                         | GREEN BAY Radio<br>123.65    |  | HOUGHTON CO MEML UNICOM<br>CTAF 122.7   |  |
| LOC<br>ICMX<br>110.3                                                 | Final Apch Crs<br>133°<br>(Front Crs 313°) | Minimum Alt<br>FREDA<br>2800' (1705') | MDA(H)<br>(CONDITIONAL)<br>1540' (445') | Apt Elev 1095'<br>TDZE 1095' |  | <div>3100'</div> <div>MSA CMX VOR</div> |  |
| MISSED APCH: Climb to 3100' then RIGHT turn direct CMX VOR and hold. |                                            |                                       |                                         |                              |  |                                         |  |
| Alt Set: INCHES                                                      |                                            |                                       |                                         |                              |  |                                         |  |



|                       |     |     |     |     |     |     |                |       |    |   |              |
|-----------------------|-----|-----|-----|-----|-----|-----|----------------|-------|----|---|--------------|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 | REIL<br>PAPI-L | 3100' | RT | D | CMX<br>112.8 |
| Descent angle [3.04°] | 376 | 484 | 538 | 645 | 753 | 861 |                |       |    |   |              |
| MAP at JOTUV          |     |     |     |     |     |     |                |       |    |   |              |

| STRAIGHT-IN LANDING RWY 13   |   |                                  |  | CIRCLE-TO-LAND               |                      |                                  |  |
|------------------------------|---|----------------------------------|--|------------------------------|----------------------|----------------------------------|--|
| MDA(H) <b>1540'</b> (445')   |   | MDA(H) <b>1720'</b> (625')       |  | With Local Altimeter Setting |                      | With Marquette Altimeter Setting |  |
| With Local Altimeter Setting |   | With Marquette Altimeter Setting |  | Max Kts                      | MDA(H)               | MDA(H)                           |  |
| A                            | 1 | 1                                |  | 90                           | 1620' (525') - 1     | 1800' (705') - 1                 |  |
|                              |   |                                  |  | 120                          | 1640' (545') - 1     | 1820' (725') - 1                 |  |
|                              |   |                                  |  | 140                          | 1640' (545') - 1 1/2 | 1820' (725') - 1 3/4             |  |
|                              |   |                                  |  | 165                          | 1780' (685') - 2 1/4 | 1960' (865') - 2 1/2             |  |

|                                                                                                                                                                                                                                                                                                                                                                                              |                                  |                                     |                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------------|------------------------------------------------------|
| ASOS<br>125.67                                                                                                                                                                                                                                                                                                                                                                               | MINNEAPOLIS Center (R)<br>127.2  | GREEN BAY Radio<br>123.65           | HOUGHTON CO MEML UNICOM<br>CTAF 122.7                |
| LOC<br>ICMX<br><b>110.3</b>                                                                                                                                                                                                                                                                                                                                                                  | Final<br>Apch Crs<br><b>313°</b> | GS<br><b>GALEY</b><br>2494' (1424') | ILS<br>DA(H)<br>(CONDITIONAL)<br><b>1270'</b> (200') |
| Apt Elev 1095'                                                                                                                                                                                                                                                                                                                                                                               |                                  |                                     | TDZE <b>1070'</b>                                    |
| <b>MISSED APCH:</b> Climb to 3100' then RIGHT turn direct CMX VOR and hold.<br>Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. ADF or DME required. 2. Use local altimeter setting; if not received use Marquette altimeter setting. 3. Use ICMX DME when on localizer course. 4. VDP not authorized when using Marquette altimeter setting. 5. Pilot controlled lighting 122.7. |                                  |                                     |                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                              |                                  |                                     | 3000'<br>090° → ← 270°<br>3400'<br>MSA CM LOM        |

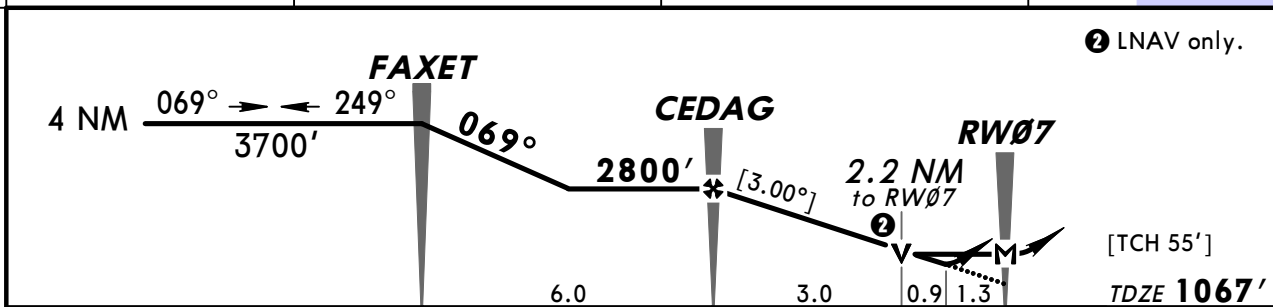
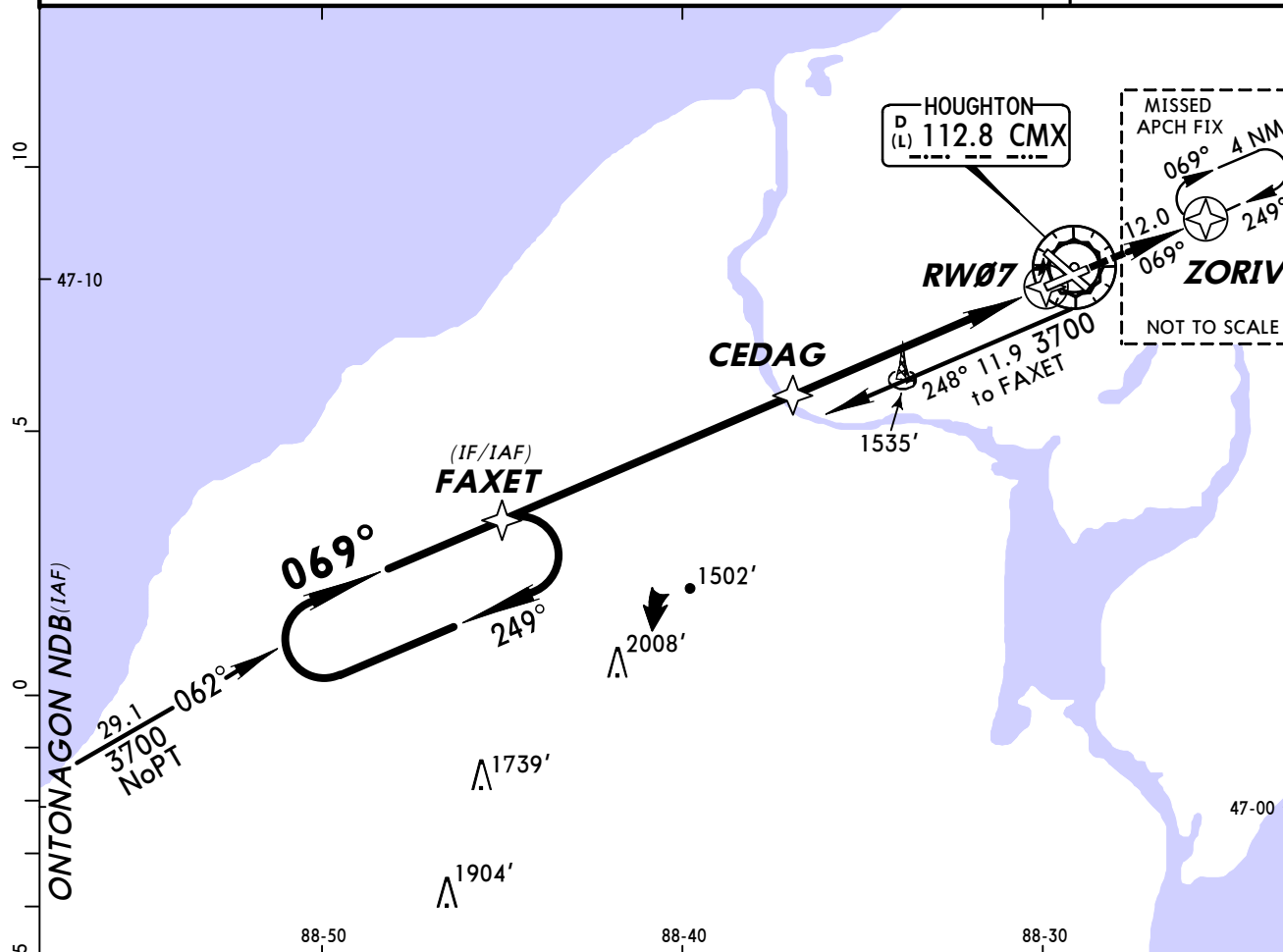


|                                  |       |      |      |      |      |      |      |       |    |           |
|----------------------------------|-------|------|------|------|------|------|------|-------|----|-----------|
| Gnd speed-Kts                    | 70    | 90   | 100  | 120  | 140  | 160  | MALS | 3100' | RT | CMX 112.8 |
| GS                               | 3.00° | 377  | 484  | 538  | 646  | 753  | PAPI | ↑     |    |           |
| MAP at D1.2 ICMX or GALEY to MAP | 4.3   | 3:41 | 2:52 | 2:35 | 2:09 | 1:51 |      |       |    |           |

| STRAIGHT-IN LANDING RWY 31       |     |                 |                                     |     |         | CIRCLE-TO-LAND                   |                    |
|----------------------------------|-----|-----------------|-------------------------------------|-----|---------|----------------------------------|--------------------|
| With Local Altimeter Setting     |     |                 |                                     |     |         | With Local Altimeter Setting     |                    |
| ILS<br>DA(H) 1270' (200')        |     |                 | LOC (GS out)<br>MDA(H) 1400' (330') |     |         | Max<br>Kts                       | MDA(H)             |
| FULL                             |     | RAIL or ALS out | RAIL out                            |     | ALS out |                                  |                    |
| A                                | 1/2 | 3/4             | 1/2                                 | 3/4 | 1       | 90                               | 1620' (525')-1     |
| B                                |     |                 |                                     |     |         | 120                              | 1640' (545')-1     |
| C                                |     |                 |                                     |     |         | 140                              | 1640' (545')-1 1/2 |
| D                                |     |                 | 3/4                                 | 1   |         | 165                              | 1780' (685')-2 1/4 |
| With Marquette Altimeter Setting |     |                 |                                     |     |         | With Marquette Altimeter Setting |                    |
| ILS<br>DA(H) 1441' (371')        |     |                 | LOC (GS out)<br>MDA(H) 1580' (510') |     |         | Max<br>Kts                       | MDA(H)             |
| FULL                             |     | RAIL or ALS out | RAIL out                            |     | ALS out |                                  |                    |
| A                                | 3/4 | 1 1/4           | 1/2                                 | 3/4 | 1       | 90                               | 1800' (705')-1     |
| B                                |     |                 |                                     |     |         | 120                              | 1820' (725')-1     |
| C                                |     |                 | 3/4                                 |     |         | 140                              | 1820' (725')-1 3/4 |
| D                                |     |                 |                                     |     | 1       |                                  | 165                |

BRIEFING STRIP™

|                                                                                                                                                                                                                                                                                      |                           |                                       |                                    |                              |  |                                       |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------|------------------------------------|------------------------------|--|---------------------------------------|--|
| ASOS<br>125.67                                                                                                                                                                                                                                                                       |                           | MINNEAPOLIS Center (R)<br>127.2       |                                    | GREEN BAY Radio<br>123.65    |  | HOUGHTON CO MEML UNICOM<br>CTAF 122.7 |  |
| RNAV                                                                                                                                                                                                                                                                                 | Final<br>Apch Crs<br>069° | Minimum Alt<br>CEDAG<br>2800' (1733') | LNAV/VNAV<br>DA(H)<br>1520' (453') | Apt Elev 1095'<br>TDZE 1067' |  | <div>3300'</div> <div>MSA RW07</div>  |  |
| MISSED APCH: Climb to 3700' via 069° course to ZORIV and hold.                                                                                                                                                                                                                       |                           |                                       |                                    |                              |  |                                       |  |
| Alt Set: INCHES                      Trans level: FL 180                      Trans alt: 18000'<br>1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -17°C (2°F) or above 46°F (114°F). 2. DME/DME RNP-0.30 not authorized. 3. Pilot controlled lighting 122.7. |                           |                                       |                                    |                              |  |                                       |  |

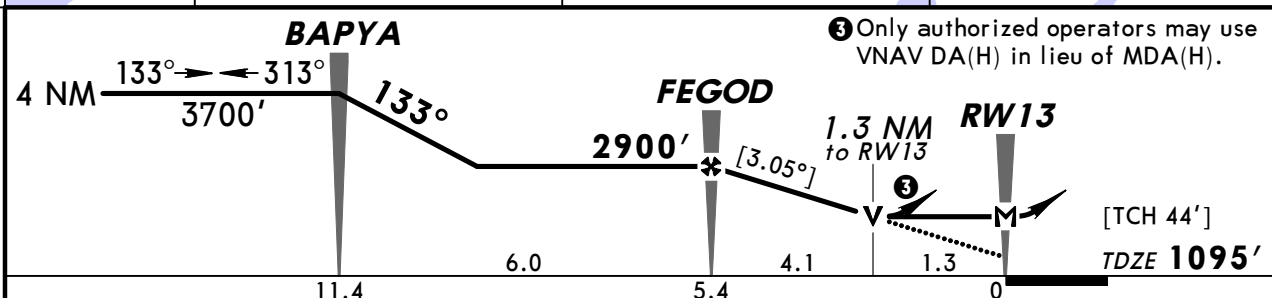
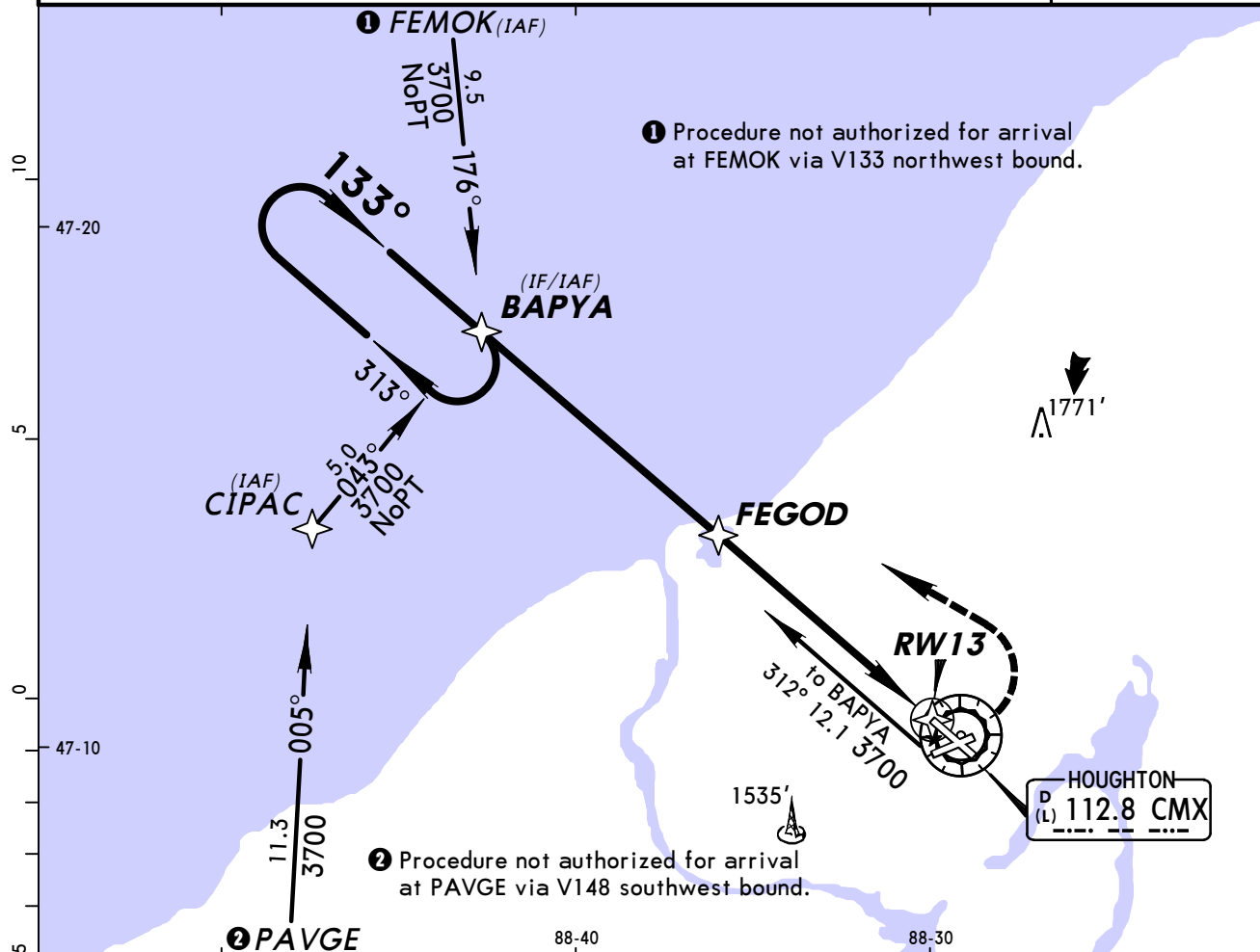


|                       |     |     |     |     |     |     |        |  |       |          |       |
|-----------------------|-----|-----|-----|-----|-----|-----|--------|--|-------|----------|-------|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 | REIL   |  | 3700' | via 069° | ZORIV |
| Descent angle [3.00°] | 372 | 478 | 531 | 637 | 743 | 849 | PAPI-L |  |       |          |       |
| MAP at RW07           |     |     |     |     |     |     |        |  |       |          |       |

| STRAIGHT-IN LANDING RWY 7 |  |                            |  | CIRCLE-TO-LAND |                   |
|---------------------------|--|----------------------------|--|----------------|-------------------|
| RNAV/VNAV                 |  | RNAV                       |  | Max Kts        | MDA(H)            |
| DA(H) <b>1520'</b> (453') |  | MDA(H) <b>1840'</b> (773') |  |                |                   |
| 1½                        |  | 1                          |  | 90             | 1840' (745') - 1½ |
|                           |  | 1¼                         |  | 120            | 1840' (745') - 2¼ |
|                           |  | 2¼                         |  | 140            | 1840' (745') - 2½ |
|                           |  | 2½                         |  | 165            | 1840' (745') - 2½ |

BRIEFING STRIP™

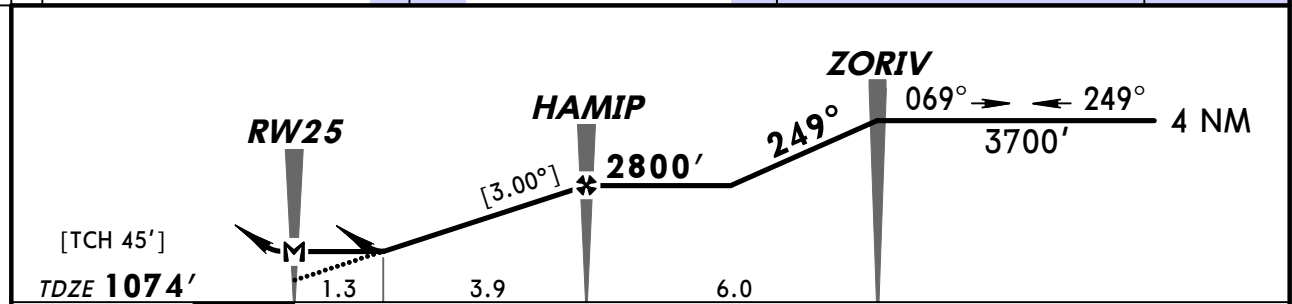
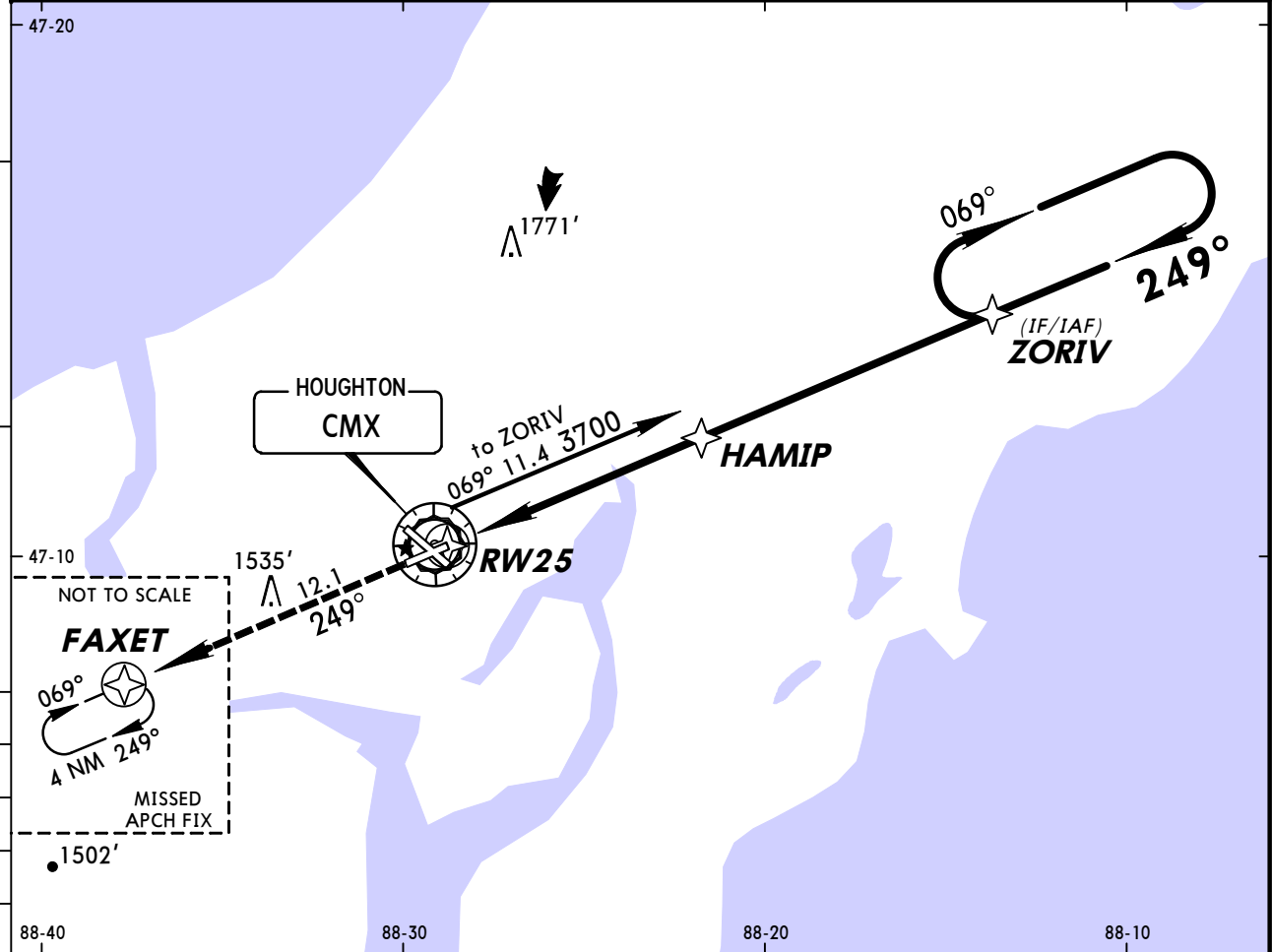
|                                                                                                                                                                              |                           |                                       |                                |                              |  |                                       |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------|--------------------------------|------------------------------|--|---------------------------------------|--|
| ASOS<br>125.67                                                                                                                                                               |                           | MINNEAPOLIS Center (R)<br>127.2       |                                | GREEN BAY Radio<br>123.65    |  | HOUGHTON CO MEML UNICOM<br>CTAF 122.7 |  |
| RNAV                                                                                                                                                                         | Final<br>Apch Crs<br>133° | Minimum Alt<br>FEGOD<br>2900' (1805') | LNAV<br>MDA(H)<br>1560' (465') | Apt Elev 1095'<br>TDZE 1095' |  | <div>3300'</div> <div>MSA RW13</div>  |  |
| MISSED APCH: Climbing LEFT turn to 3700' direct BAPYA and hold.                                                                                                              |                           |                                       |                                |                              |  |                                       |  |
| Alt Set: INCHES      Trans level: FL 180      Trans alt: 18000'<br>1. GPS or RNP-0.30 required.   2. DME/DME RNP-0.30 not authorized.<br>3. Pilot controlled lighting 122.7. |                           |                                       |                                |                              |  |                                       |  |



|                       |     |     |     |     |     |     |  |                |                                                                                                      |                                                                                       |       |
|-----------------------|-----|-----|-----|-----|-----|-----|--|----------------|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 |  | REIL<br>PAPI-L | 3700'<br><br>LT |  | BAPYA |
| Descent angle [3.05°] | 378 | 486 | 540 | 648 | 755 | 863 |  |                |                                                                                                      |                                                                                       |       |
|                       |     |     |     |     |     |     |  |                |                                                                                                      |                                                                                       |       |
| MAP at RW13           |     |     |     |     |     |     |  |                |                                                                                                      |                                                                                       |       |

| STRAIGHT-IN LANDING RWY 13 |       |  |  |  |  | CIRCLE-TO-LAND |                     |  |  |  |  |
|----------------------------|-------|--|--|--|--|----------------|---------------------|--|--|--|--|
| LNAV                       |       |  |  |  |  | MDA(H)         |                     |  |  |  |  |
| MDA(H) 1560' (465')        |       |  |  |  |  | Max Kts        |                     |  |  |  |  |
| A                          | 1     |  |  |  |  | 90             | 1600' (505') -1     |  |  |  |  |
| B                          | 1 1/4 |  |  |  |  | 120            | 1600' (505') -1 1/2 |  |  |  |  |
| C                          | 1 1/2 |  |  |  |  | 140            | 1700' (605') -2     |  |  |  |  |
| D                          |       |  |  |  |  | 165            |                     |  |  |  |  |

|                                                                |                           |                                       |                                    |                           |                              |                                       |                                      |
|----------------------------------------------------------------|---------------------------|---------------------------------------|------------------------------------|---------------------------|------------------------------|---------------------------------------|--------------------------------------|
| ASOS<br>125.67                                                 |                           | MINNEAPOLIS Center (R)<br>127.2       |                                    | GREEN BAY Radio<br>123.65 |                              | HOUGHTON CO MEML UNICOM<br>CTAF 122.7 |                                      |
| RNAV                                                           | Final<br>Apch Crs<br>249° | Minimum Alt<br>HAMIP<br>2800' (1726') | LNAV/VNAV<br>DA(H)<br>1520' (446') |                           | Apt Elev 1095'<br>TDZE 1074' |                                       | <div>3300'</div> <div>MSA RW25</div> |
| MISSED APCH: Climb to 3700' via 249° course to FAXET and hold. |                           |                                       |                                    |                           |                              |                                       |                                      |
| Alt Set: INCHES                                                |                           |                                       |                                    |                           |                              |                                       |                                      |



|                       |     |     |     |     |     |     |                |  |                |       |
|-----------------------|-----|-----|-----|-----|-----|-----|----------------|--|----------------|-------|
| Grnd speed-Kts        | 70  | 90  | 100 | 120 | 140 | 160 | REIL<br>VASI-L |  | 3700' via 249° | FAXET |
| Descent angle [3.00°] | 372 | 478 | 531 | 637 | 743 | 849 |                |  |                |       |
| MAP at RW25           |     |     |     |     |     |     |                |  |                |       |

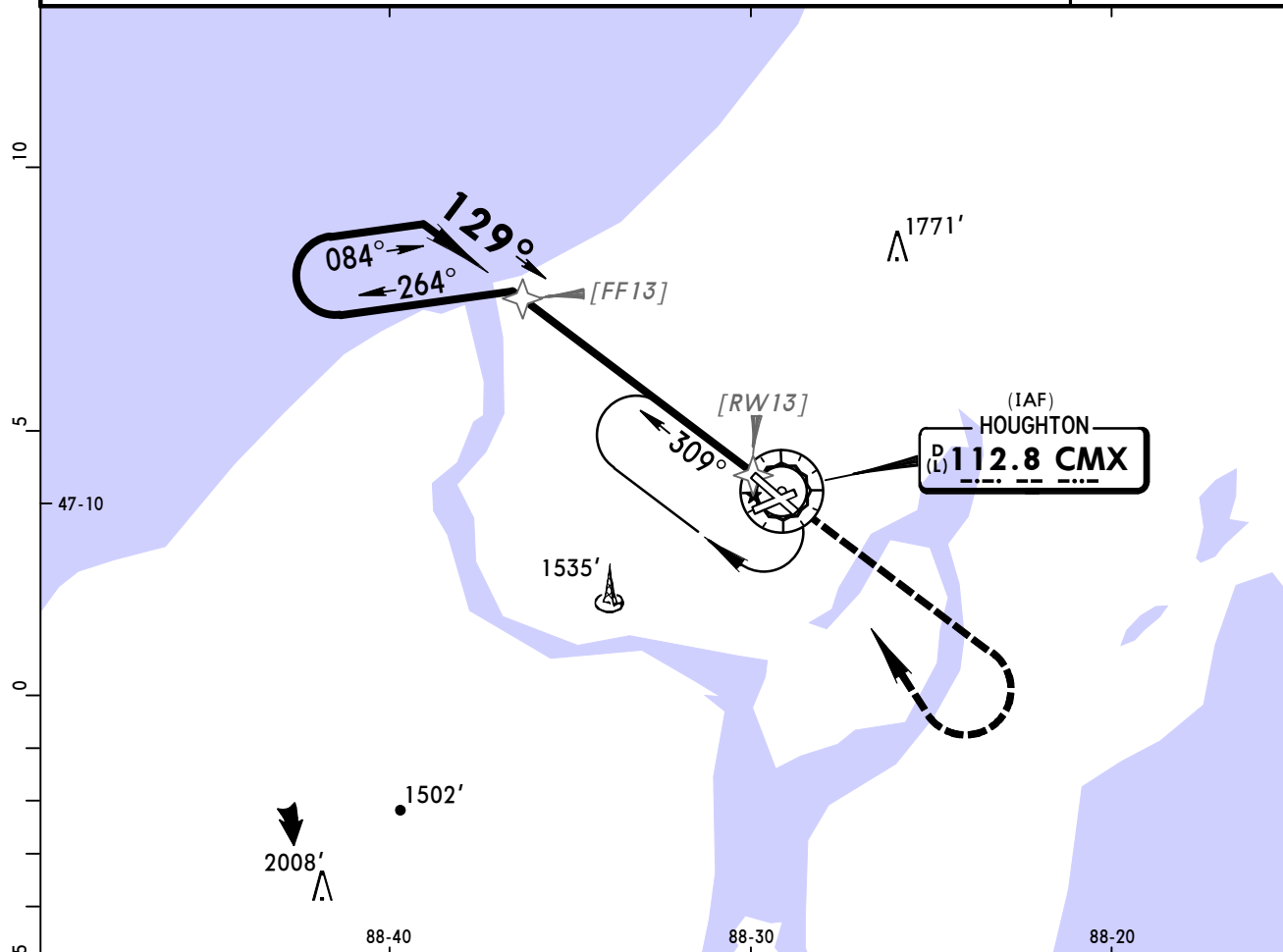
| STRAIGHT-IN LANDING RWY 25 |  |                     |  | CIRCLE-TO-LAND |                 |
|----------------------------|--|---------------------|--|----------------|-----------------|
| LNAV/VNAV                  |  | LNAV                |  | Max Kts        | MDA(H)          |
| DA(H) 1520' (446')         |  | MDA(H) 1520' (446') |  | 90             |                 |
| 1½                         |  | 1                   |  | 120            | 1580' (485')-1½ |
|                            |  | 1¼                  |  | 140            |                 |
|                            |  | 1½                  |  | 165            | 1700' (605')-2  |



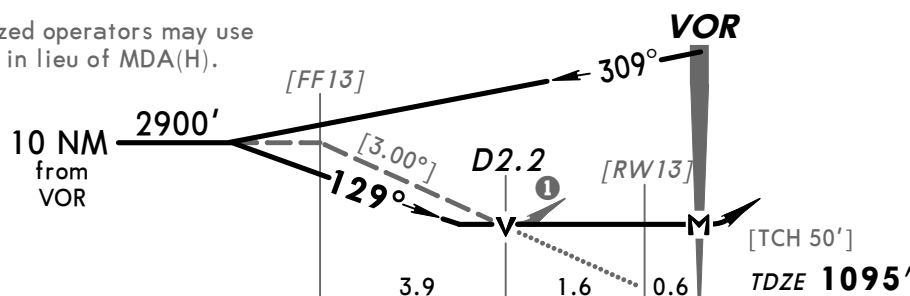


BRIEFING STRIP

|                                                                                         |                           |                                 |  |                           |                              |                                       |                                         |
|-----------------------------------------------------------------------------------------|---------------------------|---------------------------------|--|---------------------------|------------------------------|---------------------------------------|-----------------------------------------|
| ASOS<br>125.67                                                                          |                           | MINNEAPOLIS Center (R)<br>127.2 |  | GREEN BAY Radio<br>123.65 |                              | HOUGHTON CO MEML UNICOM<br>CTAF 122.7 |                                         |
| VOR<br>CMX<br>112.8                                                                     | Final<br>Apch Crs<br>129° | No FAF                          |  | MDA(H)<br>1640' (545')    | Apt Elev 1095'<br>TDZE 1095' |                                       | <div>3300'</div> <div>MSA CMX VOR</div> |
| MISSED APCH: Climb to 2700', then climbing RIGHT turn to 2900' direct CMX VOR and hold. |                           |                                 |  |                           |                              |                                       |                                         |
| Alt Set: INCHES<br>1. Pilot controlled lighting 122.7.                                  |                           | Trans level: FL 180             |  | Trans alt: 18000'         |                              |                                       |                                         |



① Only authorized operators may use  
VNAV DA(H) in lieu of MDA(H).



|                       |     |     |     |     |     |     |                |                                                                                     |                                                                                      |                                                                                       |              |
|-----------------------|-----|-----|-----|-----|-----|-----|----------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 | REIL<br>VASI-L | 2700'                                                                               | 2900'                                                                                |  | CMX<br>112.8 |
| Descent angle [3.00°] | 372 | 478 | 531 | 637 | 743 | 849 |                |  |  |                                                                                       |              |
| MAP at VOR            |     |     |     |     |     |     |                |                                                                                     |                                                                                      |                                                                                       |              |

STRAIGHT-IN LANDING RWY 13

MDA(H) 1640' (545')

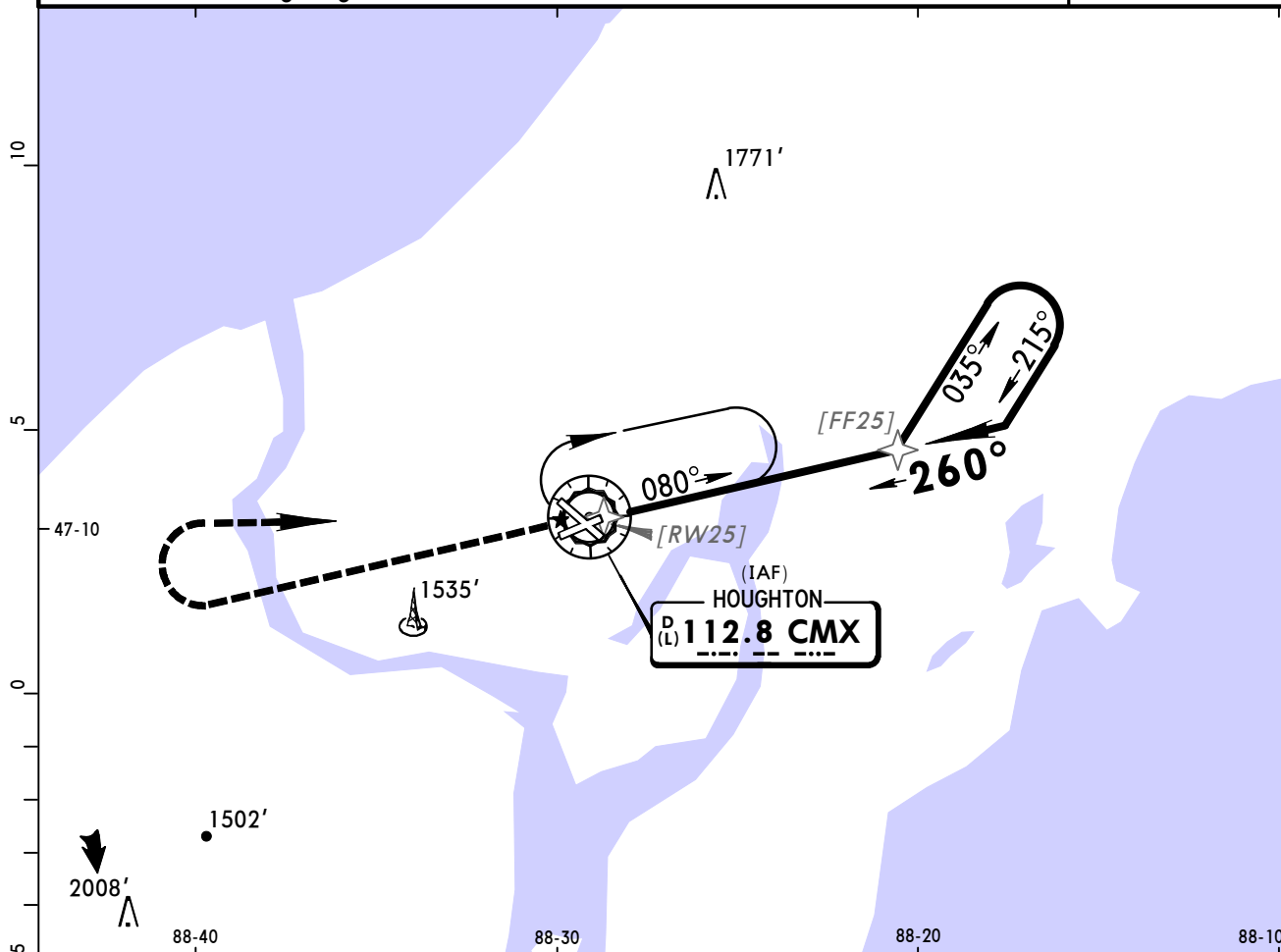
CIRCLE-TO-LAND

|   |    | Max<br>Kts | MDA(H)          |
|---|----|------------|-----------------|
|   |    | 90         | 1640' (545')-1  |
| A | 1  | 120        | 1640' (545')-1  |
| B | 1½ | 140        | 1640' (545')-1½ |
| C | 1¾ | 165        | 1700' (605')-2  |
| D |    |            |                 |

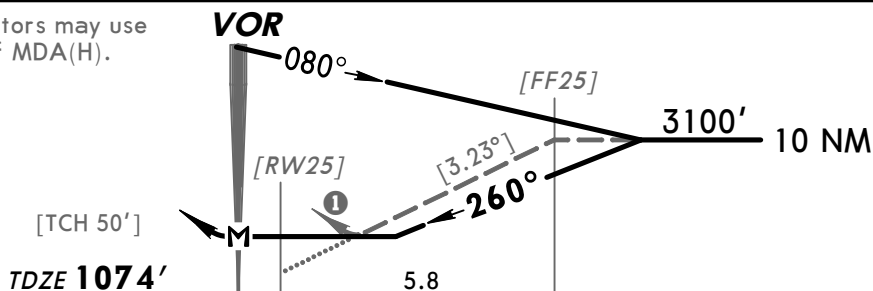


BRIEFING STRIP™

|                                                                       |                           |                                 |  |                           |                              |                                         |  |
|-----------------------------------------------------------------------|---------------------------|---------------------------------|--|---------------------------|------------------------------|-----------------------------------------|--|
| ASOS<br>125.67                                                        |                           | MINNEAPOLIS Center (R)<br>127.2 |  | GREEN BAY Radio<br>123.65 |                              | HOUGHTON CO MEML UNICOM<br>CTAF 122.7   |  |
| VOR<br>CMX<br>112.8                                                   | Final<br>Apch Crs<br>260° | No FAF                          |  | MDA(H)<br>1620' (546')    | Apt Elev 1095'<br>TDZE 1074' | <div>3100'</div> <div>MSA CMX VOR</div> |  |
| MISSED APCH: Climb to 3100', then RIGHT turn direct CMX VOR and hold. |                           |                                 |  |                           |                              |                                         |  |
| Alt Set: INCHES<br>1. Pilot controlled lighting 122.7.                |                           |                                 |  |                           |                              |                                         |  |
| Trans level: FL 180                                                   |                           |                                 |  | Trans alt: 18000'         |                              |                                         |  |



① Only authorized operators may use VNAV DA(H) in lieu of MDA(H).



|                       |     |     |     |     |     |     |                |       |    |   |              |
|-----------------------|-----|-----|-----|-----|-----|-----|----------------|-------|----|---|--------------|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 | REIL<br>VASI-L | 3100' | RT | D | CMX<br>112.8 |
| Descent angle [3.23°] | 400 | 514 | 571 | 686 | 800 | 914 |                |       |    |   |              |
| MAP at VOR            |     |     |     |     |     |     |                |       |    |   |              |

STRAIGHT-IN LANDING RWY 25

CIRCLE-TO-LAND

MDA(H) 1620' (546')

| Max Kts | MDA(H)            |
|---------|-------------------|
| 90      | 1620' (525') - 1  |
| 120     | 1640' (545') - 1  |
| 140     | 1640' (545') - 1½ |
| 165     | 1780' (685') - 2¼ |

TERPS A A 17 DZMMA

HANCOCK, MICH  
VOR Rwy 31

**BRIEFING STRIP** <sup>TM</sup>

[illegible]

AMEND  
14A  
ERPS

| STRAIGHT-IN LANDING RWY 31 |     |          |         | CIRCLE-TO-LAND |                      |
|----------------------------|-----|----------|---------|----------------|----------------------|
| MDA(H) 1500' (430')        |     |          |         | MDA(H)         |                      |
|                            |     | RAIL out | ALS out | Max Kts        |                      |
| A                          | 1/2 | 3/4      | 1       | 90             | 1620' (525') - 1     |
| B                          |     |          |         | 120            | 1640' (545') - 1     |
| C                          | 3/4 | 1 1/4    |         | 140            | 1640' (545') - 1 1/2 |
| D                          | 1   | 1 1/2    |         | 165            | 1780' (685') - 2 1/4 |

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## General Information

Location: Detroit MI USA  
IATA Code: DTW  
Lat/Long: N42° 12.7' W083° 21.2'  
Elevation: 645 ft

Airport Use: Public  
Magnetic Variation: 7.2°W  
Sectional Chart: Detroit

Fuel Types: 100 Octane (LL), Jet A  
Customs: Upon Prior Request  
Airport Type: IFR  
Landing Fee: Yes  
Control Tower: Yes  
Jet Start Unit: Yes  
LLWS Alert: Yes  
Beacon: Yes

Sunrise: 1212 Z  
Sunset: 2320 Z,

## Runway Information

Runway: 03L  
Length x Width: 8501 ft x 200 ft  
Surface Type: asphalt  
TDZ-Elev: 636 ft  
Lighting: Edge, Centerline, REIL

Runway: 03R  
Length x Width: 10001 ft x 150 ft  
Surface Type: concrete  
TDZ-Elev: 633 ft  
Lighting: Edge, ALS, Centerline, TDZ

Runway: 04L  
Length x Width: 10000 ft x 150 ft  
Surface Type: concrete  
TDZ-Elev: 645 ft  
Lighting: Edge, ALS, Centerline, TDZ

Runway: 04R  
Length x Width: 12003 ft x 200 ft  
Surface Type: concrete  
TDZ-Elev: 638 ft  
Lighting: Edge, ALS, Centerline, TDZ

Runway: 09L  
Length x Width: 8708 ft x 150 ft

Surface Type: asphalt  
TDZ-Elev: 640 ft  
Lighting: Edge, REIL

Runway: 09R  
Length x Width: 8500 ft x 150 ft  
Surface Type: concrete  
TDZ-Elev: 636 ft  
Lighting: Edge, Centerline, REIL

Runway: 21L  
Length x Width: 10001 ft x 150 ft  
Surface Type: concrete  
TDZ-Elev: 632 ft  
Lighting: Edge, ALS, Centerline

Runway: 21R  
Length x Width: 8501 ft x 200 ft  
Surface Type: asphalt  
TDZ-Elev: 634 ft  
Lighting: Edge, Centerline, REIL

Runway: 22L  
Length x Width: 12003 ft x 200 ft  
Surface Type: concrete  
TDZ-Elev: 637 ft  
Lighting: Edge, ALS, Centerline

Runway: 22R  
Length x Width: 10000 ft x 150 ft  
Surface Type: concrete  
TDZ-Elev: 642 ft  
Lighting: Edge, ALS, Centerline

Runway: 27L  
Length x Width: 8500 ft x 150 ft  
Surface Type: concrete  
TDZ-Elev: 630 ft  
Lighting: Edge, ALS, Centerline

Runway: 27R  
Length x Width: 8708 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 635 ft  
Lighting: Edge, ALS

## **Communication Information**

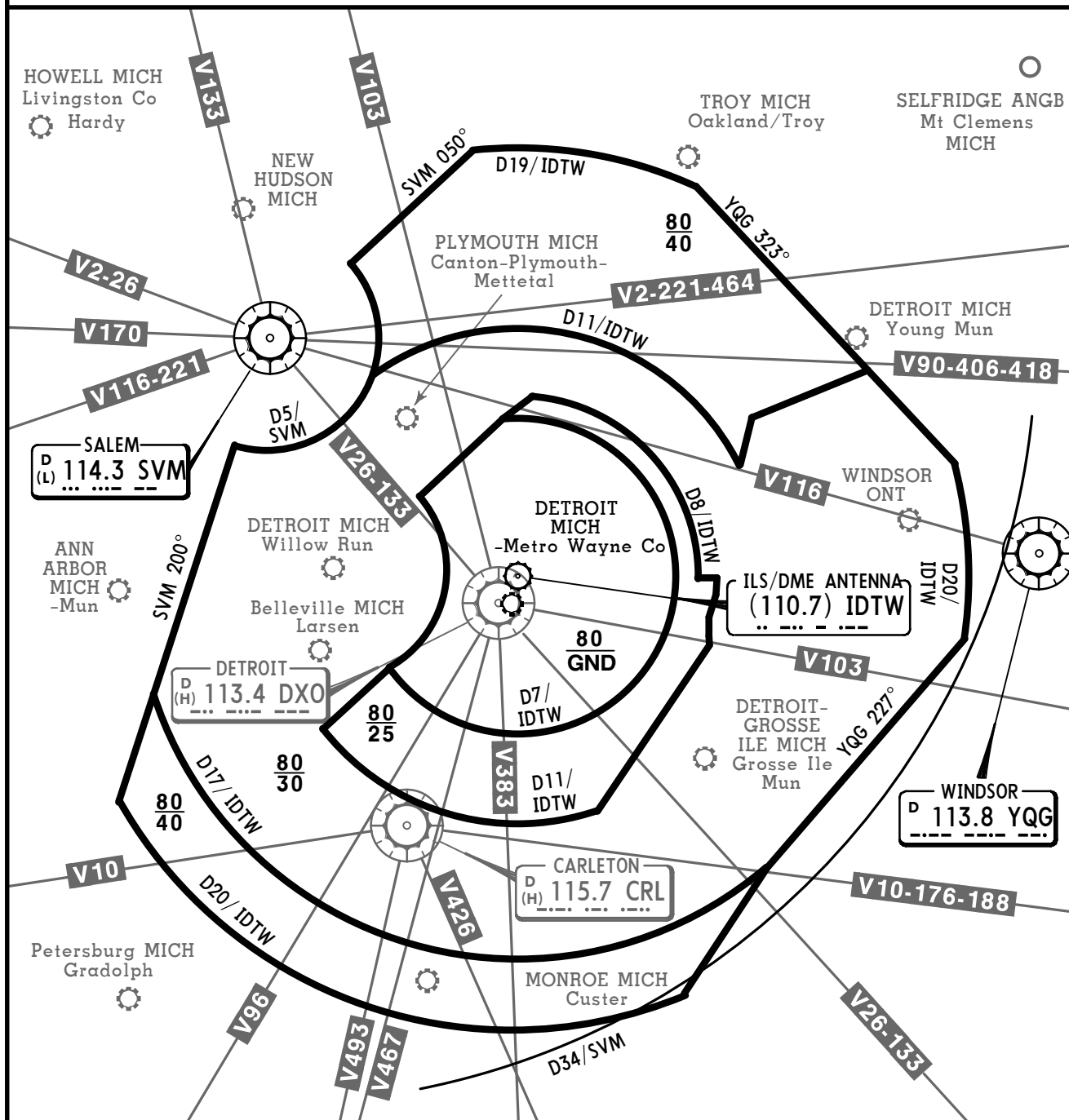
ATIS 133.675  
ASOS 133.675  
Metro Tower 135.0  
Metro Tower 128.125

Metro Tower 118.4  
Metro Tower 135.775  
Metro Tower 128.35  
Metro Tower 127.05  
Metro Ground Control 132.725  
Metro Ground Control 121.8  
Metro Ground Control 119.45  
Metro Ground Control 119.25  
North Ramp Control Ramp/Taxi Control 130.8  
North Ramp Control Ramp/Taxi Control 130.15  
Delta Ramp Control Ramp/Taxi Control 130.75  
Delta Ramp Control Ramp/Taxi Control 127.825  
Delta Ramp Control Ramp/Taxi Control 123.675  
Delta Ramp Control Ramp/Taxi Control 121.125  
Metro Clearance Delivery 120.65  
Metro Pre-Taxi Clearance 120.65 Pre-Departure Clearance  
Detroit Approach Control 124.05  
Detroit Approach Control 125.15  
Detroit Approach Control 118.575 Secondary  
Detroit Approach Control 124.975 Arrival Service  
Detroit Approach Control 124.25 Arrival Service Secondary  
Detroit App TCA 134.3  
Detroit App TCA 118.95  
Detroit App TCA 127.5  
Detroit App TCA 126.85 At or above 3001 ft  
Detroit Departure Control 134.3 Departure Service  
Detroit Departure Control 132.025  
Detroit Departure Control 125.525  
Detroit Departure Control 118.95 Departure Service  
Detroit Departure Control 118.575 Secondary  
Detroit Metro Wayne Co Unicom 122.95  
Lansing Flight Service Station 122.1 RCO  
Lansing Flight Service Station 115.7 RCO

## DETROIT CLASS B AIRSPACE

## CLASS B AIRSPACE COMMUNICATIONS

NW/NE **Detroit App** 127.5    E **Detroit App** above 3000' 126.85    SE **Detroit App** 134.3    SW **Detroit App** 118.95



FOR OPERATING RULES AND PILOT AND EQUIPMENT REQUIREMENTS  
SEE FAR 91.131, 91.117 AND 91.215.

## FLIGHT PROCEDURES

IFR Flights-Aircraft within the Class B airspace are required to operate in accordance with current IFR procedures.

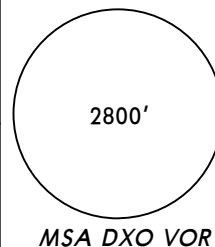
### VFR Flights-

- a. Arriving aircraft should contact Detroit Approach Control on the specified frequencies. Although arriving aircraft may be operating beneath the floor of the Class B airspace on initial contact, communications should be established with Approach Control for sequencing and spacing purposes.
- b. Aircraft departing the primary airport are requested to advise clearance delivery prior to taxiing of their intended altitude and direction of flight to depart the Class B airspace. Aircraft departing from other than Detroit Metro Wayne Airport whose route of flight would penetrate the Class B airspace should give this information to ATC on appropriate frequencies.
- c. Aircraft desiring to transit the Class B airspace may obtain an ATC clearance and will be handled on an equitable "first-come, first-served" basis, provided the requirements of FAR 91 are met.

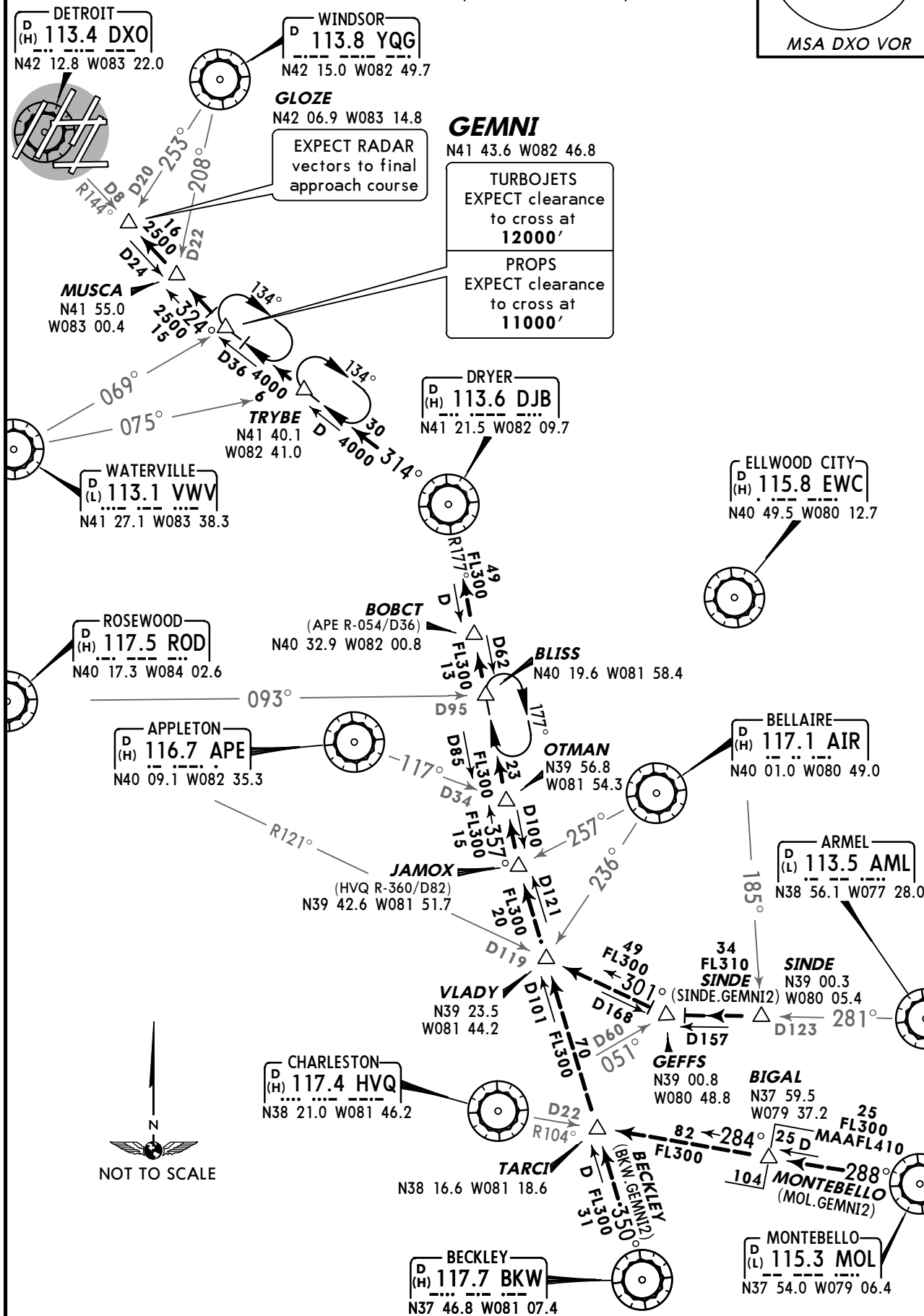
D-ATIS  
**133.67**

Apt Elev  
**645'**

Alt Set: INCHES  
Trans level: FL180 Trans alt: 18000'  
1. RADAR required.  
2. DME required.



## GEMNI TWO ARRIVAL (DJB.GEMNI2)



### ROUTING

From over DJB via DJB R-314 to GEMNI, then via DXO R-144 to GLOZE. EXPECT RADAR vectors to final approach course.

Alt Set: INCHES  
Trans level: FL180      Trans alt: 18000'

1. DME required.
2. DAYTON transition for use by CVG/DAY/SDF  
/LEX terminal area departures at or below  
FL230 only and ATC use as assigned.

2800'

*MSA DXO VOR*

EXPECT RADAR  
vectors to final  
approach course

N41 49.5 W084 02.4

|                                                   |
|---------------------------------------------------|
| TURBOJETS<br>EXPECT to cross at<br><b>12000'</b>  |
| TURBOPROPS<br>EXPECT to cross at<br><b>11000'</b> |

W084 45

**RANDL**  
N41 45.7  
W084 12.3

FT WAYNE  
(FWA.MIZAR3)  
4000  
57

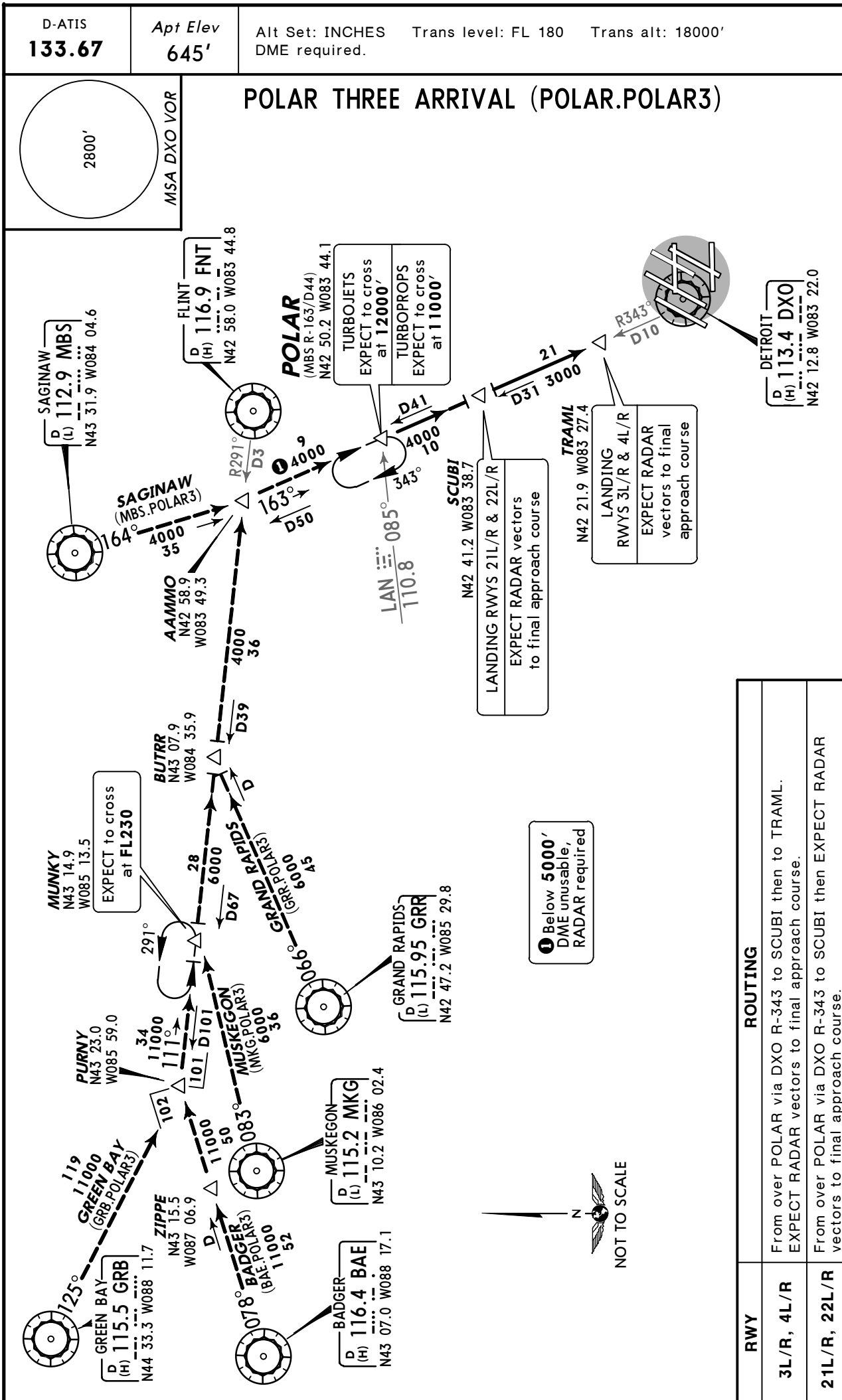
$$\begin{array}{r} \uparrow 004 \\ \hline \hline \hline 5: \\ \hline \end{array}$$

29  
10000  
AA FL33

43  
MAA FL330  
10000  
DAYTON  
(DQN.MIZAR3

From over MIZAR via DXO R-239 to RAZIM. EXPECT RADAR vectors to final approach course.

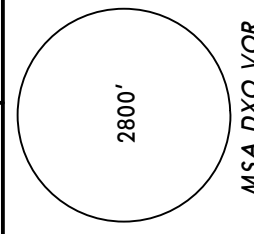




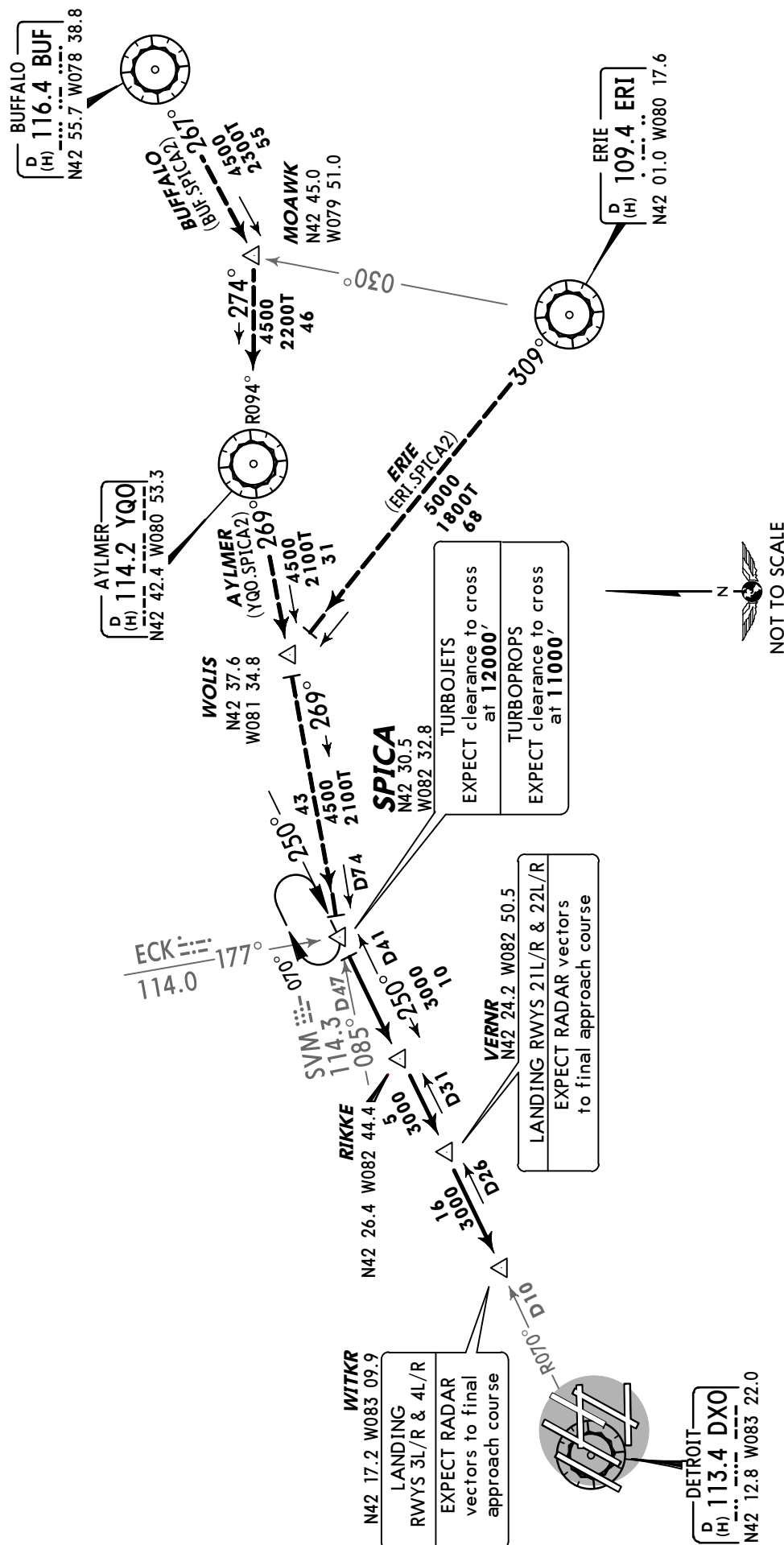
D-ATIS  
**133.67**

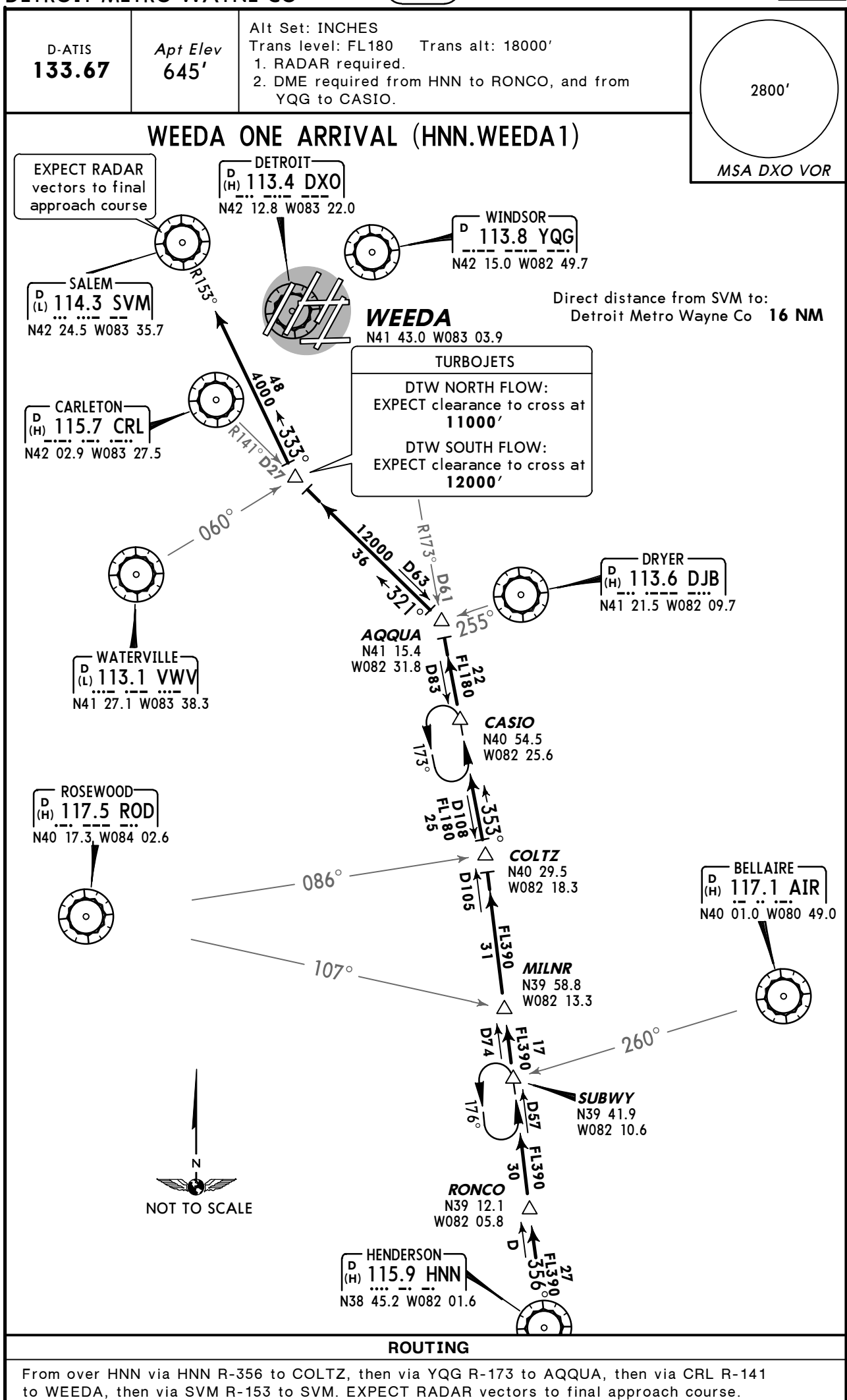
Apt Elev  
**645'**

Alt Set: INCHES  
Trans level: FL 180 Trans alt: 18000'  
DME required.



# SPICA TWO ARRIVAL (SPICA.SPICA2)





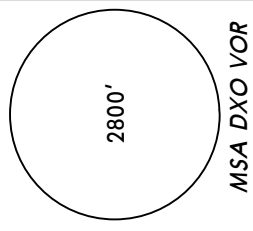
DETROIT Departure (R)

Jets 132.02  
Props 134.3

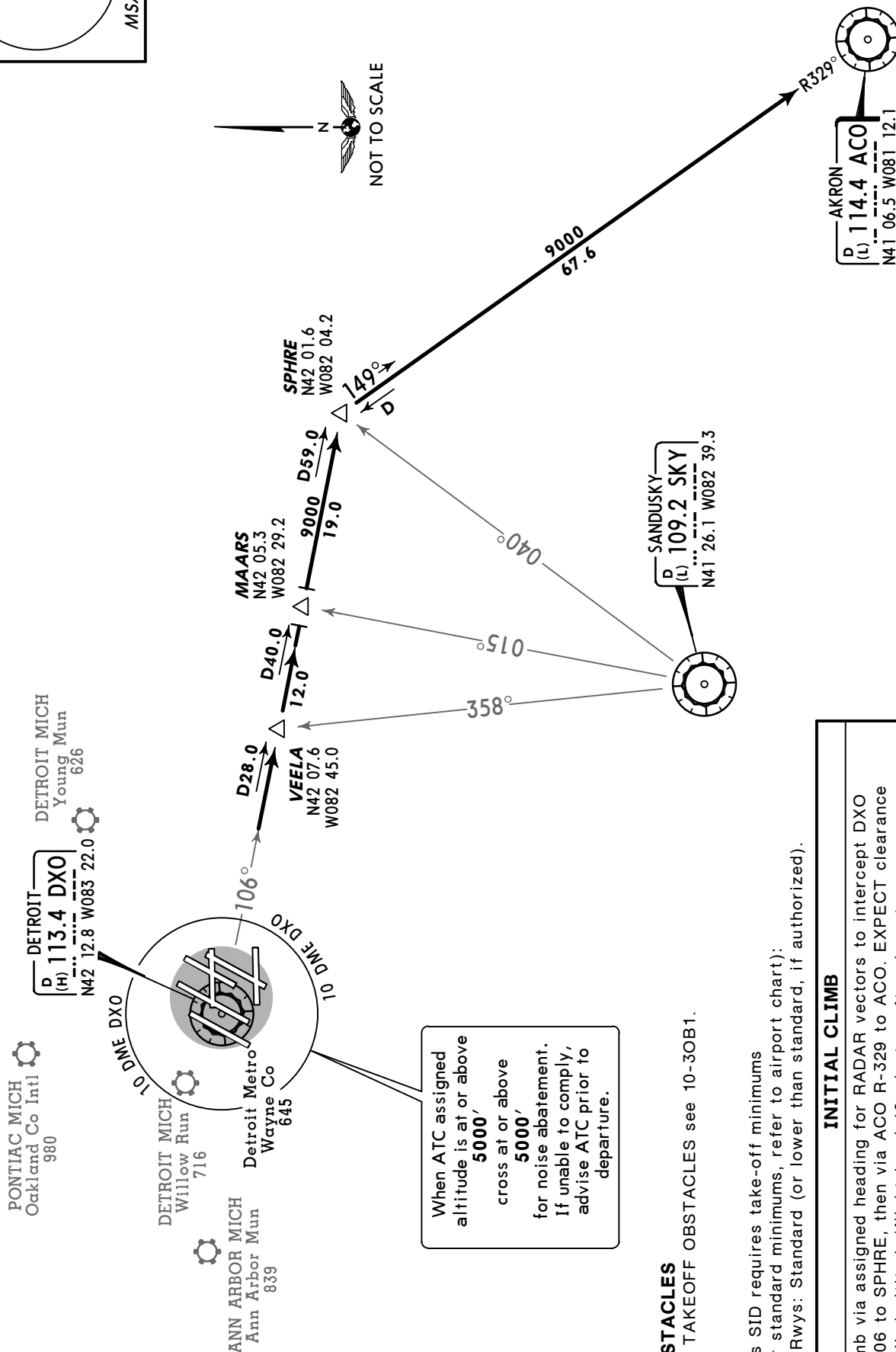
Apt Elev  
See Graphic

Trans level: FL180 Trans alt: 18000'

1. RADAR required.
2. When using this departure, file the appropriate depicted fix and route.



## AKRON THREE DEPARTURE (AC03.ACO)



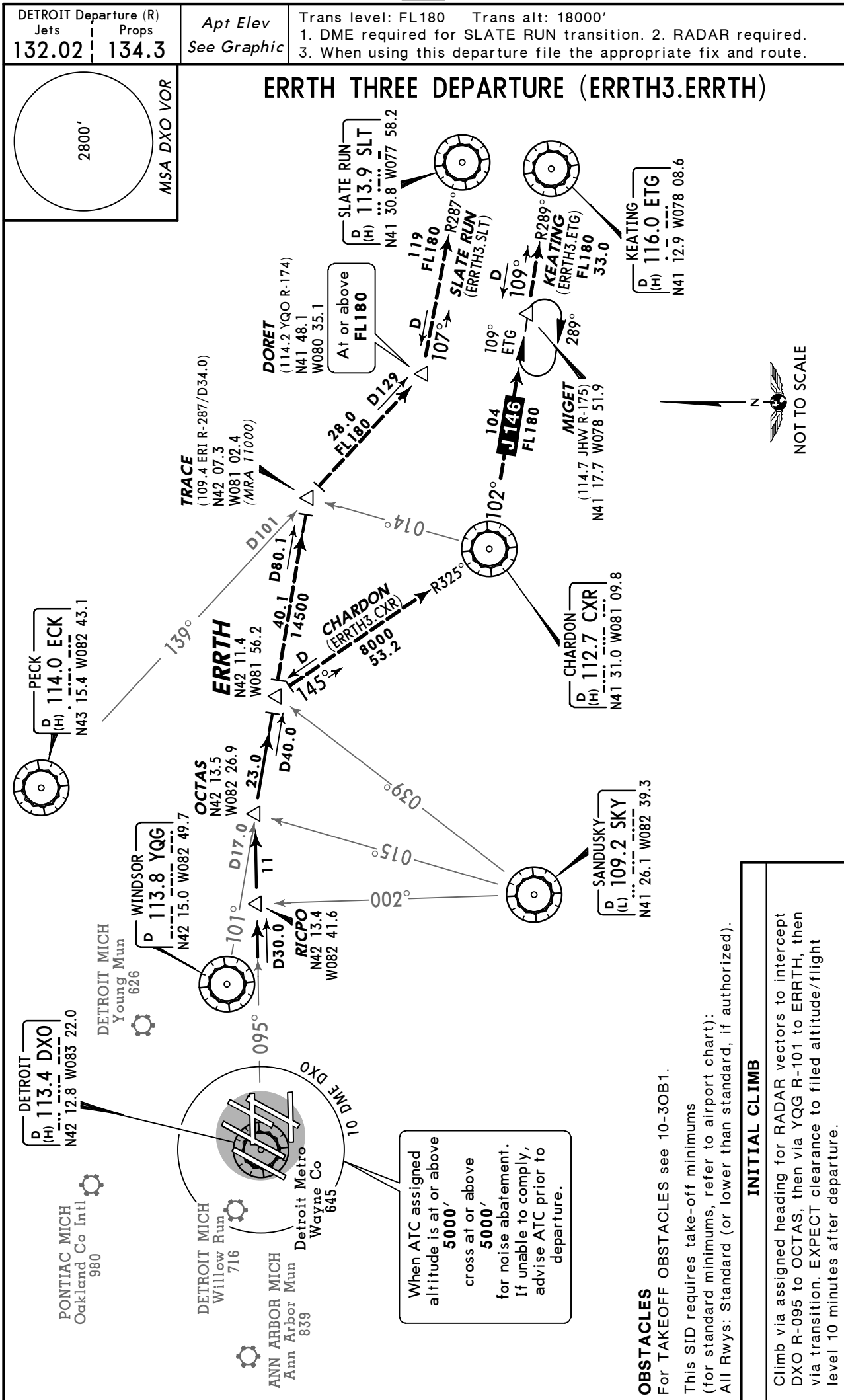
### OBSTACLES

For TAKEOFF OBSTACLES see 10-30B1.

This SID requires take-off minimums (for standard minimums, refer to airport chart):  
All Rwy's: Standard (or lower than standard, if authorized).

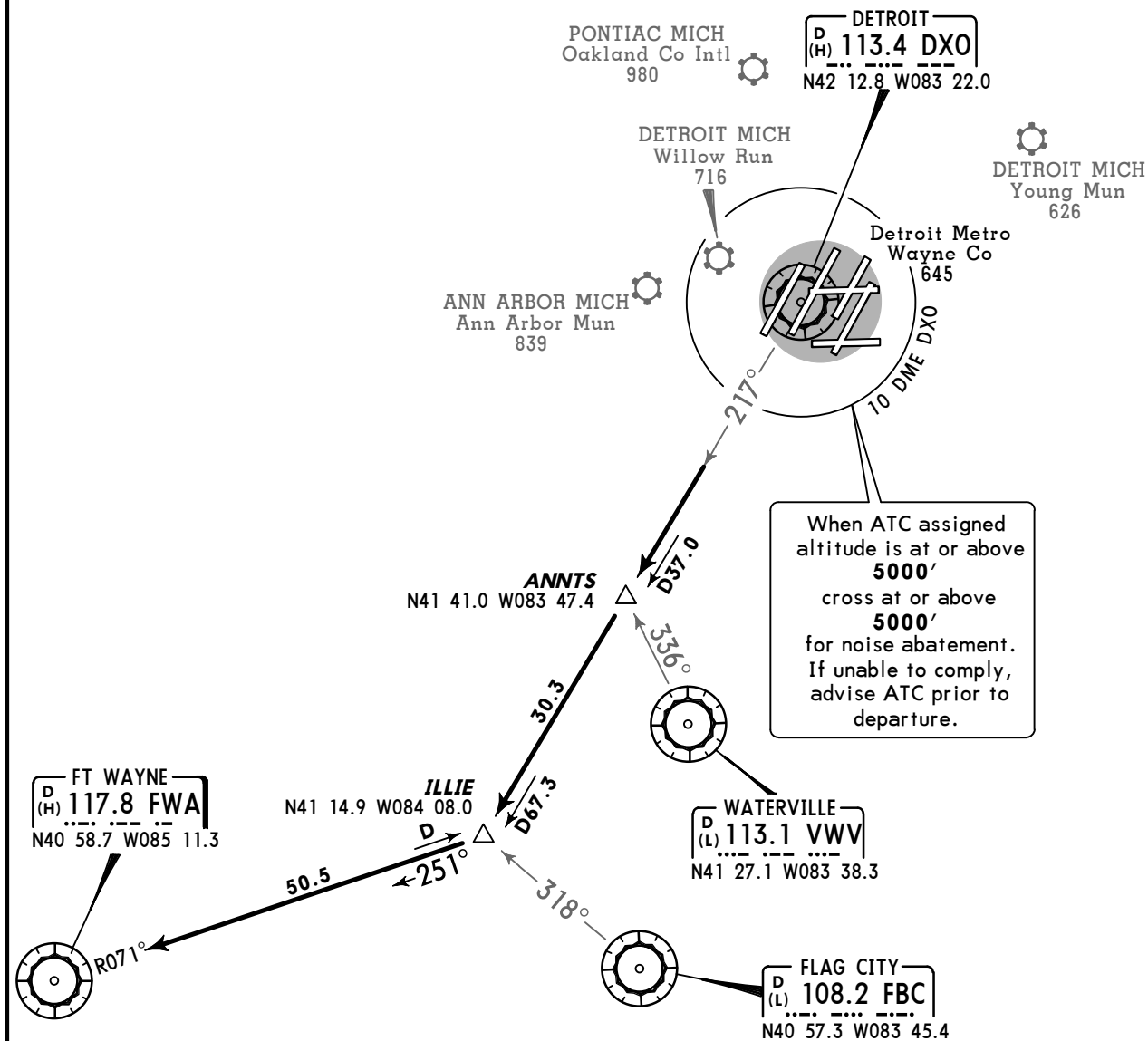
### INITIAL CLIMB

Climb via assigned heading for RADAR vectors to intercept DXO R-106 to SPHRE, then via ACO R-329 to ACO. EXPECT clearance to filed altitude/flight level 10 minutes after departure.



|                                        |                                       |                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DETROIT Departure (R)<br><b>125.52</b> | <i>Apt Elev</i><br><i>See Graphic</i> | Trans level: FL180 Trans alt: 18000'<br>1. RADAR required.<br>2. Jets only.<br>3. When using this departure, file the appropriate depicted fix and route. | <div style="border: 1px solid black; border-radius: 50%; width: 100px; height: 100px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <div style="border: 1px solid black; border-radius: 50%; width: 80px; height: 80px; display: flex; align-items: center; justify-content: center;"> 2800' </div> </div> <div style="text-align: center; margin-top: 5px;">MSA DXO VOR</div> |
|----------------------------------------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## FT WAYNE FOUR DEPARTURE (FWA4.FWA)



### OBSTACLES

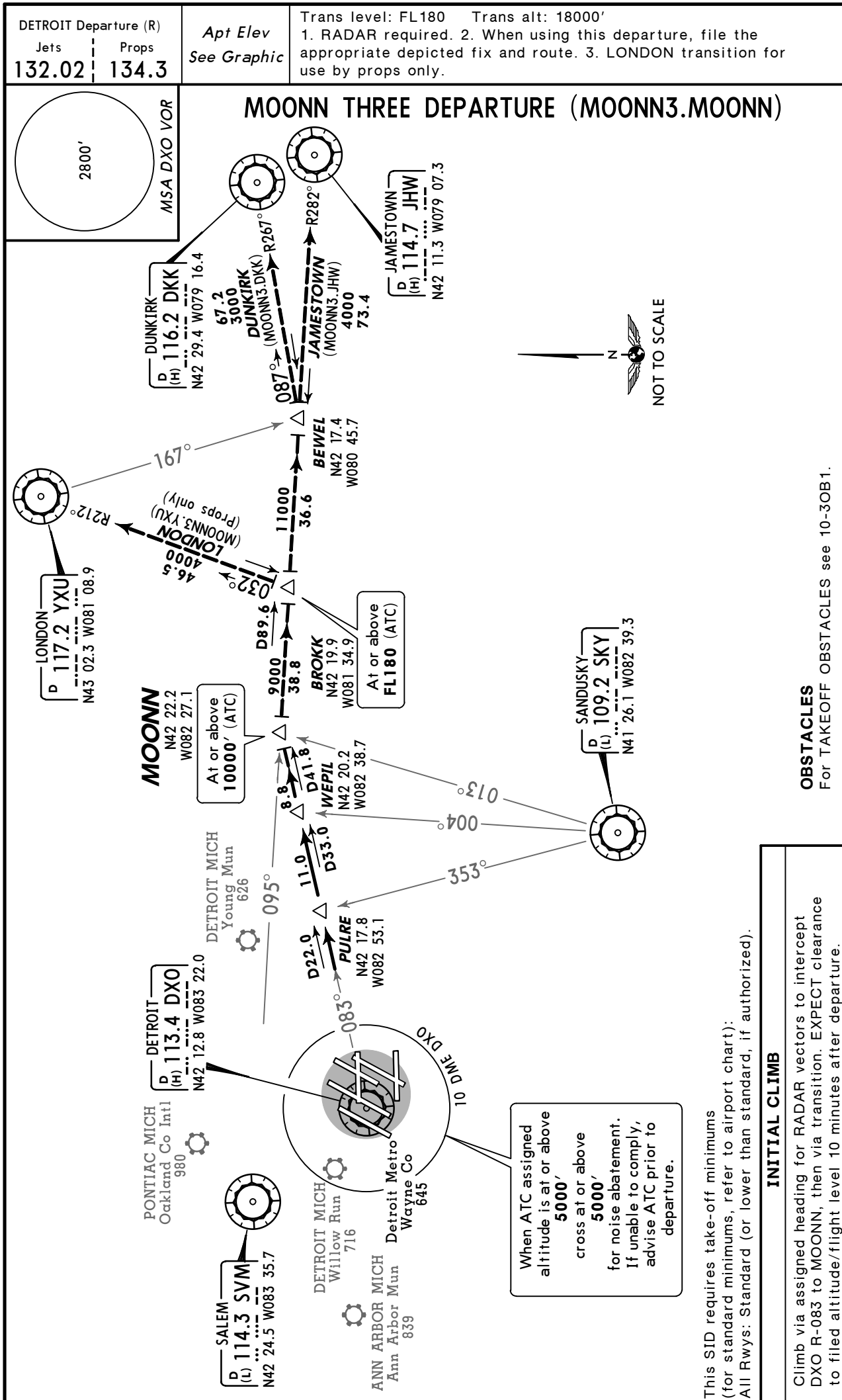
For TAKEOFF OBSTACLES see 10-3OB1.

This SID requires take-off minimums  
(for standard minimums, refer to airport chart):  
All Rwys: Standard (or lower than standard, if authorized).

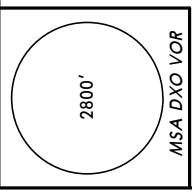
### INITIAL CLIMB

Climb via assigned heading for RADAR vectors to intercept DXO R-217 to ILLIE, then via FWA R-071 to FWA. EXPECT clearance to filed altitude/flight level 10 minutes after departure.

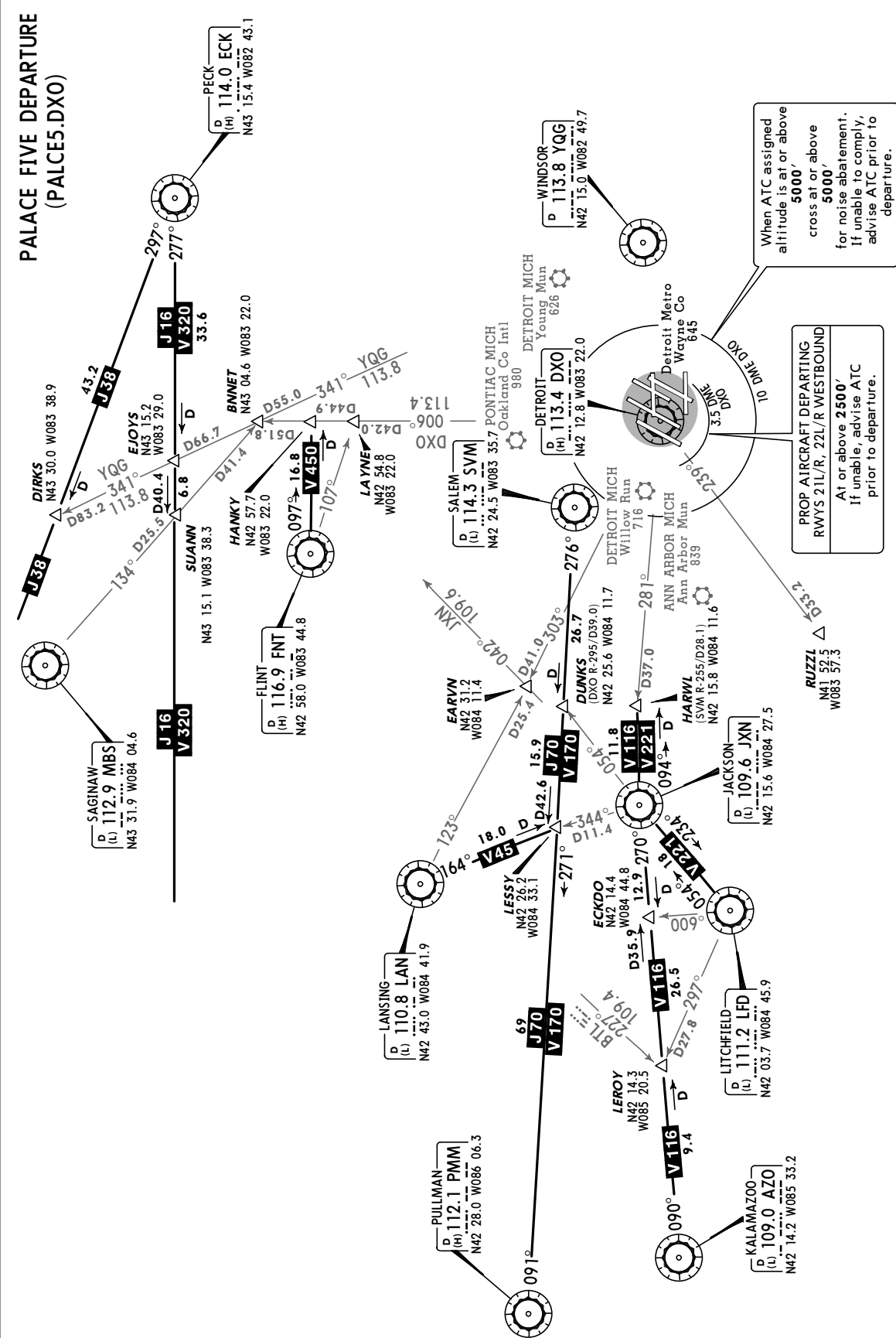




|                       |                    |                    |
|-----------------------|--------------------|--------------------|
| DETROIT Departure (R) | <b>Apt Elev</b>    | Trans level: FL180 |
| Jets                  | Props              | Trans alt: 18000'  |
| <b>125.52</b>         | <b>118.95</b>      |                    |
|                       | <i>See Graphic</i> |                    |



**PALACE FIVE DEPARTURE  
(PALCE5.DX0)**



**OBSTACLES**  
For TAKEOFF OBSTACLES see 10-30B1.

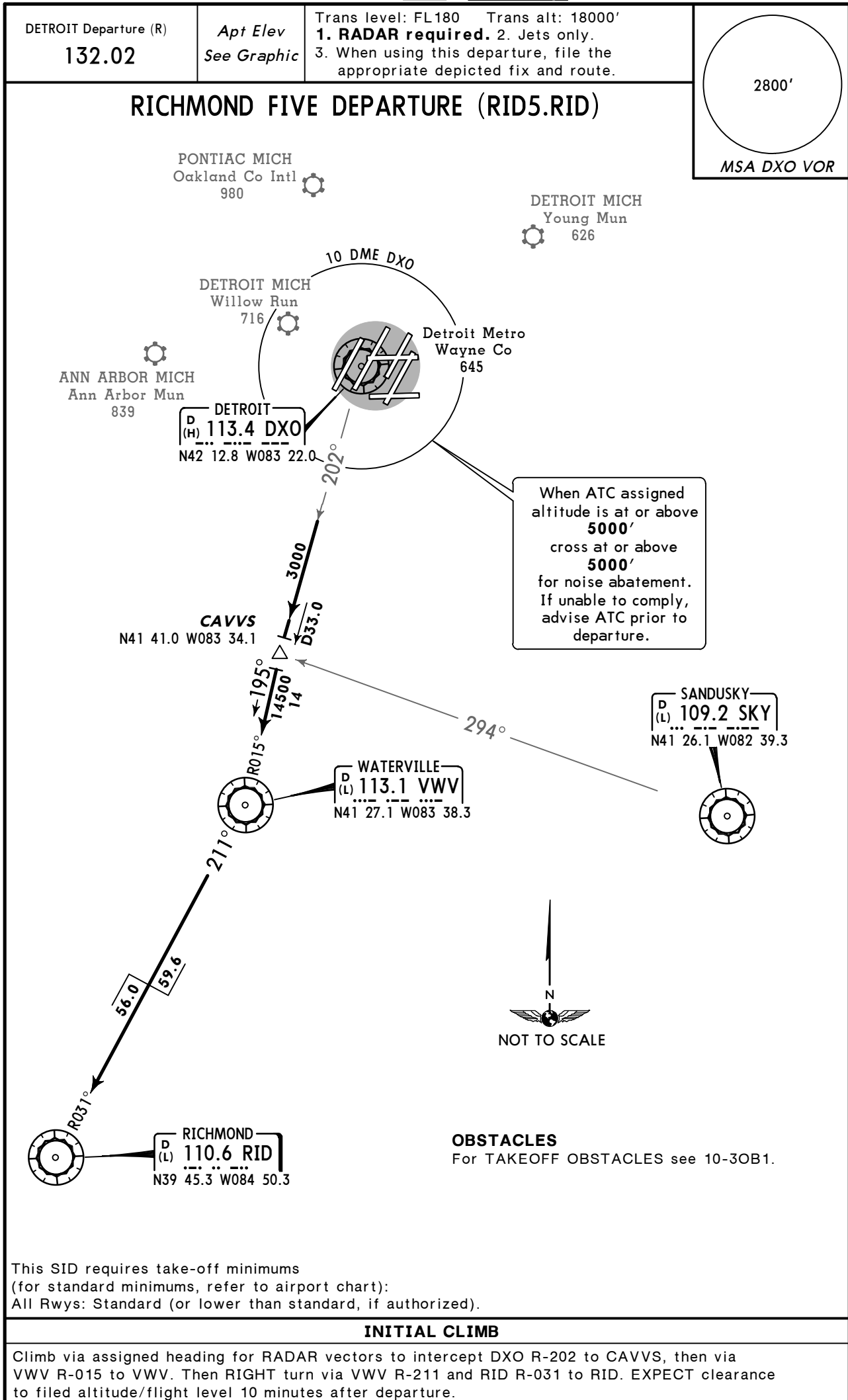
**This SID requires take-off minimums**  
(for standard minimums, refer to airport chart):  
**All Rwys: Standard (or lower than standard, if authorized).**

## INITIAL CLIMB

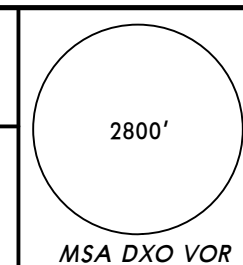
Climb via assigned heading for RADAR vectors to join the assigned airway or radial. Then proceed to the assigned departure fix, then via the assigned route. EXPECT clearance to filed altitude/flight level 10 minutes after departure.

**CHANGES:** Procedure note, prop aircraft crossing restriction, renumbered.

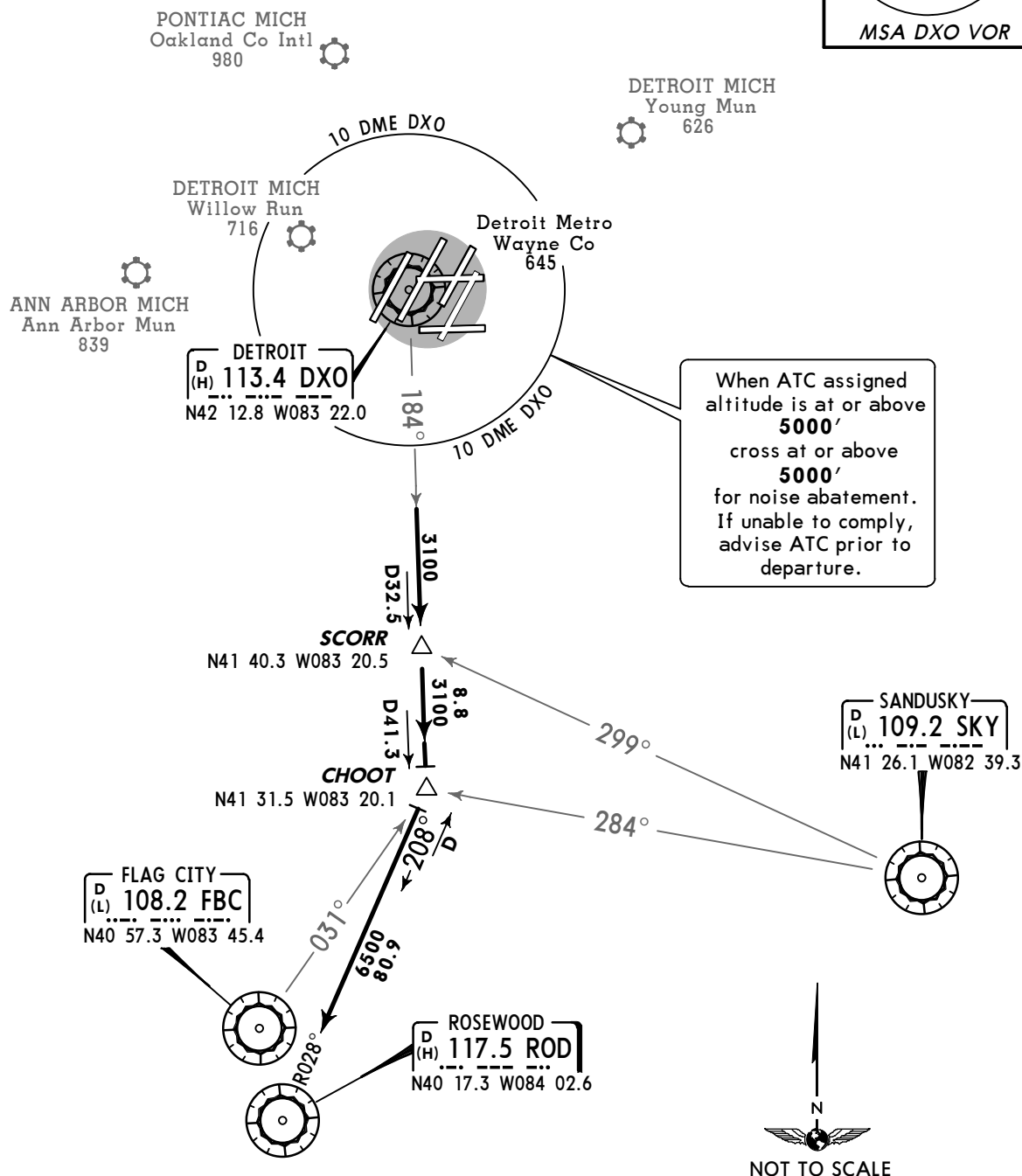




|                       |                |                         |                                                                                                                                                 |
|-----------------------|----------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| DETROIT Departure (R) |                | Apt Elev<br>See Graphic | Trans level: FL180 Trans alt: 18000'<br><b>1. RADAR required.</b><br>2. When using this departure, file the appropriate depicted fix and route. |
| Jets<br>132.02        | Props<br>134.3 |                         |                                                                                                                                                 |



## ROSEWOOD THREE DEPARTURE (ROD3.ROD)



### OBSTACLES

For TAKEOFF OBSTACLES see 10-3OB1.

This SID requires take-off minimums  
(for standard minimums, refer to airport chart):  
All Rwys: Standard (or lower than standard, if authorized).

### INITIAL CLIMB

Climb via assigned heading for RADAR vectors to intercept DXO R-184 to CHOOT, then turn RIGHT via ROD R-028 to ROD. EXPECT clearance to filed altitude/flight level 10 minutes after departure.

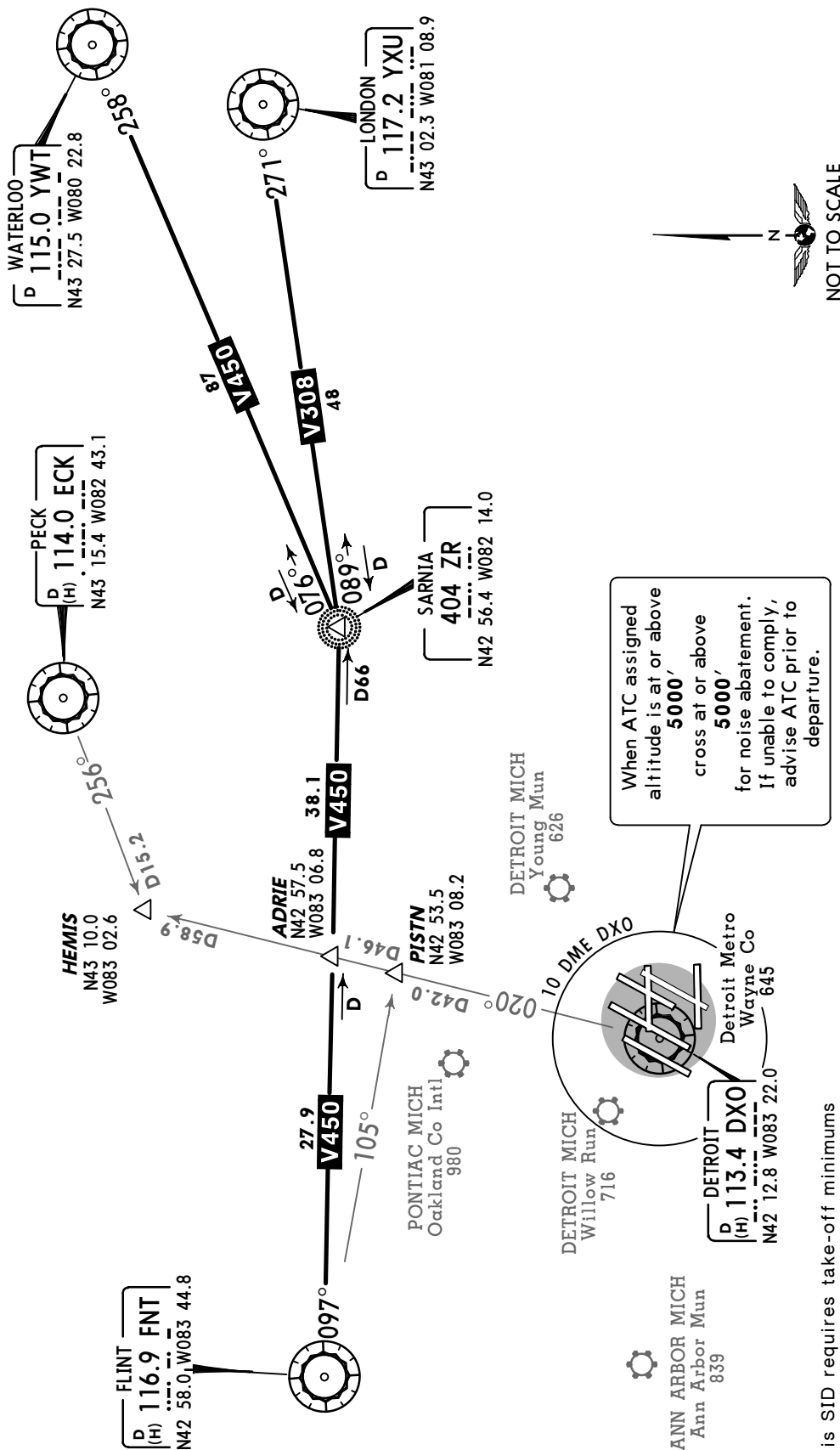
DETROIT Departure (R)  
132.02

Apt Elev  
See Graphic

Trans level: FL180 Trans alt: 18000'  
1. **RADAR required.** 2. **DME required.** 3. Jets only.  
4. When using this departure, file the appropriate fix and route.

# ST CLAIR FOUR DEPARTURE (STCLR4.DXO)

2800'  
MSA DXO VOR



**OBSTACLES**  
For TAKEOFF OBSTACLES see 10-3OB1.

## INITIAL CLIMB

This SID requires take-off minimums (for standard minimums, refer to airport chart):  
All Rwy: Standard (or lower than standard, if authorized).

Climb via assigned heading for RADAR vectors to join the assigned airway or radial. Then proceed to the assigned departure fix, then via assigned route.  
EXPECT clearance to filed altitude/flight level 10 minutes after departure.

**TAKEOFF OBSTACLE NOTES**

- RWY 3L:  
TREE 3794' FROM DER, 1441' LEFT OF CENTERLINE, 100' AGL/734' MSL.
- RWY 3R:  
HEADWALL 399' FROM DER, 566' RIGHT OF CENTERLINE, 17' AGL/647' MSL.
- RWY 4L:  
TRANSMISSION TOWERS BEGINNING 1516' FROM DER, 827' LEFT OF CENTERLINE, UP TO 60' AGL/690' MSL. RODS ON TOWERS BEGINNING 2751' FROM DER, 762' RIGHT OF CENTERLINE, UP TO 41' AGL/714' MSL.
- RWY 4R:  
TREES BEGINNING 2850' FROM DER, 1058' LEFT OF CENTERLINE, UP TO 100' AGL/744' MSL. ANTENNA ON BUILDING 3348' FROM DER, 1301' LEFT OF CENTERLINE, 100' AGL/736' MSL.
- RWY 9L:  
TREES BEGINNING 968' FROM DER, 461' LEFT OF CENTERLINE, UP TO 15' AGL/682' MSL. TREES BEGINNING 987' FROM DER, 607' RIGHT OF CENTERLINE, UP TO 45' AGL/715' MSL.
- RWY 9R:  
TREES BEGINNING 1172' FROM DER, 686' RIGHT OF CENTERLINE, UP TO 100' AGL/729' MSL.
- RWY 21L:  
TREES BEGINNING 1079' FROM DER, 586' LEFT OF CENTERLINE, UP TO 100' AGL/739' MSL. TREE 3910' FROM DER, 1188' RIGHT OF CENTERLINE, 101' AGL/733' MSL.
- RWY 21R:  
TREE 1963' FROM DER, 554' LEFT OF CENTERLINE, 100' AGL/739' MSL. TREES BEGINNING 2468' FROM DER, 721' RIGHT OF CENTERLINE, UP TO 100' AGL/739' MSL.
- RWY 22L:  
BUSH 514' FROM DER, 619' RIGHT OF CENTERLINE, 17' AGL/652' MSL. TREES BEGINNING 794' FROM DER, 611' RIGHT OF CENTERLINE, UP TO 100' AGL/739' MSL. TREES BEGINNING 1726' FROM DER, 921' LEFT OF CENTERLINE, UP TO 100' AGL/744' MSL.
- RWY 22R:  
TREES BEGINNING 1014' FROM DER, 729' LEFT OF CENTERLINE, UP TO 100' AGL/749' MSL. TREES BEGINNING 1039' FROM DER, 680' RIGHT OF CENTERLINE, UP TO 100' AGL/749' MSL.
- RWY 27L:  
TREES BEGINNING 2623' FROM DER, 693' LEFT OF CENTERLINE, UP TO 100' AGL/744' MSL. TREES 3589' FROM DER, 777' RIGHT OF CENTERLINE, 100' AGL/739' MSL.
- RWY 27R:  
TREES BEGINNING 2998' FROM DER, 949' LEFT OF CENTERLINE, UP TO 100' AGL/754' MSL. ROD ON OBSTACLE LIGHT ASR 4461' FROM DER, 464' LEFT OF CENTERLINE, 106' AGL/756' MSL. MULTIPLE TREES BEGINNING 3289' FROM DER, 1239' RIGHT OF CENTERLINE, UP TO 100' AGL/744' MSL.

## CODED TAXI ROUTES FOR DEPARTURES

These standardized taxi routes will use color coded designations for routings to various runways. The color coded routes will be issued by the DTW ground controller instead of the normal traditional full taxiway routings.

| To Runway 21R |                                                             |                |                                                                                                                                                                            |
|---------------|-------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Route Ident   | Starting Point                                              | Contact Ground | Routing Via                                                                                                                                                                |
| Blue 1        | <u>South Terminal</u><br>Circles 3N or 4N.                  | 121.8          | <b>TURN RIGHT</b> on Uniform, Golf, Rwy 9L, Mike and M-6. <b>Hold short</b> of U-8 and contact ground on 119.45.                                                           |
| Blue 2        | <u>South Terminal</u><br>Circles 3N or 4N.                  | 121.8          | <b>TURN RIGHT</b> on Uniform, Golf, Victor, Mike and M-6. <b>Hold short</b> of U-8 and contact ground on 119.45.                                                           |
| Blue 3        | <u>South Terminal</u><br>Circle 2N.                         | 119.45         | Uniform, Golf, Victor, Mike, M-6.                                                                                                                                          |
| Blue 4        | <u>South Terminal</u><br>Circles 2N.                        | 119.45         | Uniform, Golf, Rwy 9L, Mike, M-6.                                                                                                                                          |
| Blue 5        | <u>South Terminal</u><br>Circle 2S.                         | 119.25         | Juliet, Papa Papa, Foxtrot, Whiskey, P-4 and Papa.                                                                                                                         |
| Blue 6        | <u>South Terminal</u><br>Circles 3N or 4N.                  | 121.8          | <b>TURN LEFT</b> on Uniform, join Kilo, Rwy 9L, Golf, Victor, Mike and M-6. <b>Hold short</b> of Foxtrot and contact ground on 119.45 joining Rwy 9L.                      |
| Blue 11       | <u>South Terminal</u><br>Circles 3N or 4N.                  | 121.8          | <b>TURN LEFT</b> on Uniform, join Kilo, Rwy 9L, Mike and M-6. <b>Hold short</b> of Foxtrot and contact ground on 119.45 joining Rwy 9L.                                    |
| Blue 12       | <u>South Terminal</u><br>Taxiway Kilo between K-4 and K-10. | 132.72         | Kilo, Rwy 9L, Mike and M-6. <b>Hold short</b> of K-10 and contact ground 121.8. <b>Hold short</b> of Foxtrot and contact ground on 119.45 joining Rwy 9L.                  |
| Blue 13       | <u>South Terminal</u><br>Taxiway Kilo between K-4 and K-10. | 132.72         | Kilo, Rwy 9L, Golf, Victor, Mike and M-6. <b>Hold short</b> of K-10 and contact ground on 121.8. <b>Hold short</b> of Foxtrot and contact ground on 119.45 joining Rwy 9L. |
| Blue 14       | <u>North Terminal</u><br>Circle 1                           | 119.45         | Foxtrot, Victor Mike and M-6.                                                                                                                                              |
| Blue 15       | <u>North Terminal</u><br>Circles 2 through 6.               | 121.8          | Kilo, Victor, Mike and M-6. <b>Hold short</b> of Foxtrot and contact ground on 119.45.                                                                                     |

## CODED TAXI ROUTES FOR DEPARTURES

## To Runway 22L

| Route Ident | Starting Point                             | Contact Ground | Routing Via                                                                                                                          |
|-------------|--------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Green 1     | <u>South Terminal</u><br>Circles 3N or 4N. | 121.8          | Uniform, K-10, Yankee.                                                                                                               |
| Green 2     | <u>South Terminal</u><br>Circle 2S.        | 119.25         | J-8, Tango, Yankee, <b>Hold short</b> of Quebec and contact ground on 132.72. <b>Hold short</b> of K-10 and contact ground on 121.8. |
| Green 3     | <u>North Terminal</u><br>Circle 1.         | 119.45         | Hotel, K-11 and Yankee. <b>Hold short</b> of Kilo and contact ground 121.8.                                                          |
| Green 4     | <u>South Terminal</u><br>Circle 2N.        | 119.45         | Uniform, Foxtrot, Hotel, K-11 and Yankee. <b>Hold short</b> of Kilo and contact ground on 121.8.                                     |

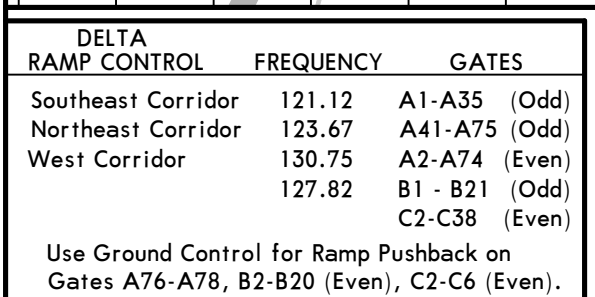
## To Runway 3L

| Route Ident | Starting Point                                                        | Contact Ground | Routing Via                                                                                                                                                   |
|-------------|-----------------------------------------------------------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Brown 1     | <u>South Terminal</u><br>Taxiway Kilo between K-4 and Taxiway Uniform | 132.72         | Kilo, Rwy 9L, Foxtrot and Mike. <b>Hold short</b> of K-10 and contact ground 121.8. <b>Hold short</b> of Foxtrot and contact ground on 119.45 joining Rwy 9L. |
| Brown 2     | <u>South Terminal</u><br>Circle 2S.                                   | 119.25         | Juliet, Papa Papa. <b>Hold short</b> of PP-1 and <b>MONITOR</b> tower on 118.4.                                                                               |
| Brown 4     | <u>North Terminal</u><br>Circles 2 through 6.                         | 121.8          | Kilo, Victor, Foxtrot, Mike. <b>Hold short</b> of Foxtrot and contact ground on 119.45.                                                                       |
| Brown 6     | <u>North Terminal</u><br>Circle 1.                                    | 119.45         | Foxtrot, Mike.                                                                                                                                                |
| Brown 7     | <u>South Terminal</u><br>Circle 2S.                                   | 119.25         | Juliet, Papa Papa, PP-1.                                                                                                                                      |



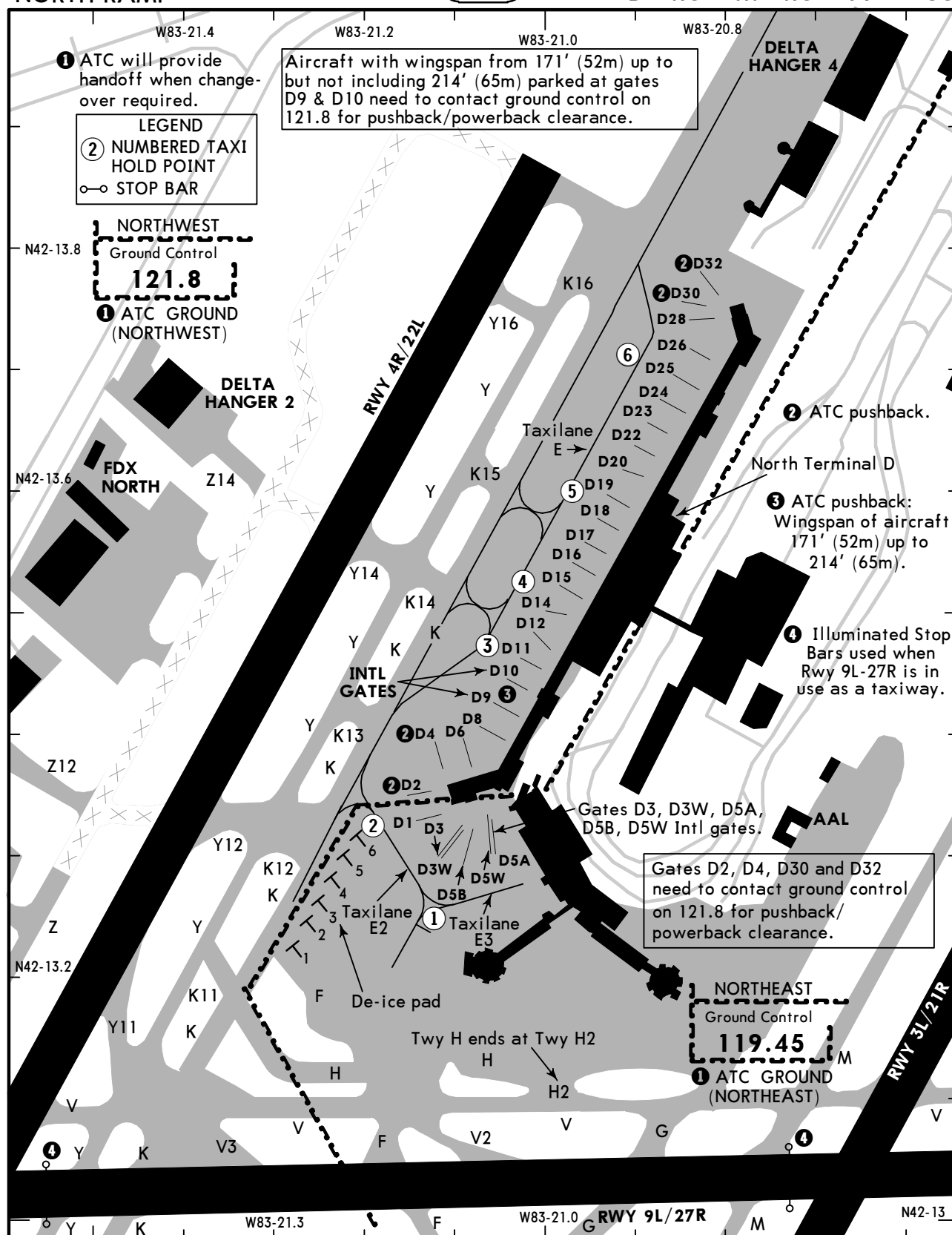






## PARKING GATE COORDINATES

| GATE No.           | COORDINATES        | GATE No.                       | COORDINATES        |
|--------------------|--------------------|--------------------------------|--------------------|
| <b>Concourse A</b> |                    | <b>Concourse C</b>             |                    |
| A1 thru A4         | N42 12.1 W083 21.7 | C1 thru C4                     | N42 12.6 W083 21.7 |
| A5                 | N42 12.2 W083 21.6 | C5                             | N42 12.6 W083 21.6 |
| A6                 | N42 12.2 W083 21.7 | C6, C8                         | N42 12.6 W083 21.7 |
| A7                 | N42 12.2 W083 21.6 | C7, C9, C11                    | N42 12.6 W083 21.6 |
| A8                 | N42 12.2 W083 21.7 | C10, C12, C14                  | N42 12.7 W083 21.7 |
| A9                 | N42 12.2 W083 21.6 | C15 thru C26                   | N42 12.7 W083 21.6 |
| A10                | N42 12.2 W083 21.7 | C28, C30                       | N42 12.8 W083 21.6 |
| A11, A12, A15, A17 | N42 12.2 W083 21.6 | C29, C31                       | N42 12.7 W083 21.6 |
| A18 thru A21       | N42 12.3 W083 21.6 | C32, C34, C36                  | N42 12.8 W083 21.6 |
| A23                | N42 12.3 W083 21.5 | C33, C35, C37                  | N42 12.8 W083 21.5 |
| A24                | N42 12.3 W083 21.6 | C38, C40                       | N42 12.8 W083 21.6 |
| A25, A27, A28      | N42 12.3 W083 21.5 | C39, C41, C43                  | N42 12.8 W083 21.5 |
| A29 thru A31       | N42 12.4 W083 21.5 |                                |                    |
| A33, A34           | N42 12.4 W083 21.5 | <b>DEICING PAD COORDINATES</b> |                    |
| A35                | N42 12.4 W083 21.4 | 1 thru 3                       | N42 12.2 W083 22.0 |
| A36                | N42 12.4 W083 21.5 | 4, 5                           | N42 12.3 W083 22.0 |
| A38                | N42 12.5 W083 21.5 | 6                              | N42 12.3 W083 21.9 |
| A40, A41, A43      | N42 12.5 W083 21.4 |                                |                    |
| A45                | N42 12.6 W083 21.3 | <b>HOLD SPOT COORDINATES</b>   |                    |
| A46                | N42 12.5 W083 21.4 | 1 (J-8)                        | N42 12.1 W083 21.6 |
| A47, A49           | N42 12.6 W083 21.3 | 2 (J-7)                        | N42 12.2 W083 21.5 |
| A50                | N42 12.6 W083 21.4 | 3 (J-8)                        | N42 12.3 W083 21.4 |
| A51, A53, A54, A55 | N42 12.6 W083 21.3 | 4 (J-7)                        | N42 12.3 W083 21.4 |
| A56, A57, A59, A60 | N42 12.7 W083 21.3 | 5 (U-8)                        | N42 12.6 W083 21.3 |
| A61, A63           | N42 12.7 W083 21.2 | 6 (U-7)                        | N42 12.6 W083 21.2 |
| A64                | N42 12.7 W083 21.3 | 7 (U-7)                        | N42 12.8 W083 21.1 |
| A65                | N42 12.8 W083 21.2 | 8 (U-8)                        | N42 12.8 W083 21.1 |
| A66                | N42 12.7 W083 21.2 | 1 (U-9)                        | N42 12.2 W083 21.8 |
| A67                | N42 12.8 W083 21.2 | 2 (Q)                          | N42 12.2 W083 21.9 |
| A68                | N42 12.8 W083 21.2 | 3 (U-9)                        | N42 12.4 W083 21.6 |
| A69 thru A74       | N42 12.8 W083 21.2 | 4 (Q)                          | N42 12.5 W083 21.7 |
| A75                | N42 12.8 W083 21.1 | 5 (U-9)                        | N42 12.8 W083 21.3 |
| A76                | N42 12.8 W083 21.2 | 6 (Q)                          | N42 12.8 W083 21.4 |
| A77                | N42 12.8 W083 21.1 |                                |                    |
| A78                | N42 12.9 W083 21.2 | <b>HOLD CIRCLE COORDINATES</b> |                    |
| <b>Concourse B</b> |                    | 1S                             | N42 12.1 W083 21.6 |
| B1 thru B4         | N42 12.6 W083 21.7 | 2S                             | N42 12.1 W083 21.7 |
| B5                 | N42 12.5 W083 21.7 | 3S                             | N42 12.1 W083 21.9 |
| B6                 | N42 12.6 W083 21.7 | 4S                             | N42 12.1 W083 21.9 |
| B7                 | N42 12.5 W083 21.7 | 1N                             | N42 12.9 W083 21.0 |
| B8, B10            | N42 12.5 W083 21.8 | 2N                             | N42 12.9 W083 21.1 |
| B11                | N42 12.5 W083 21.7 | 3N                             | N42 12.9 W083 21.4 |
| B12, B15, B16, B18 | N42 12.5 W083 21.8 | 4N                             | N42 12.9 W083 21.4 |
| B19 thru B21       | N42 12.5 W083 21.8 | 3W                             | N42 12.8 W083 21.6 |



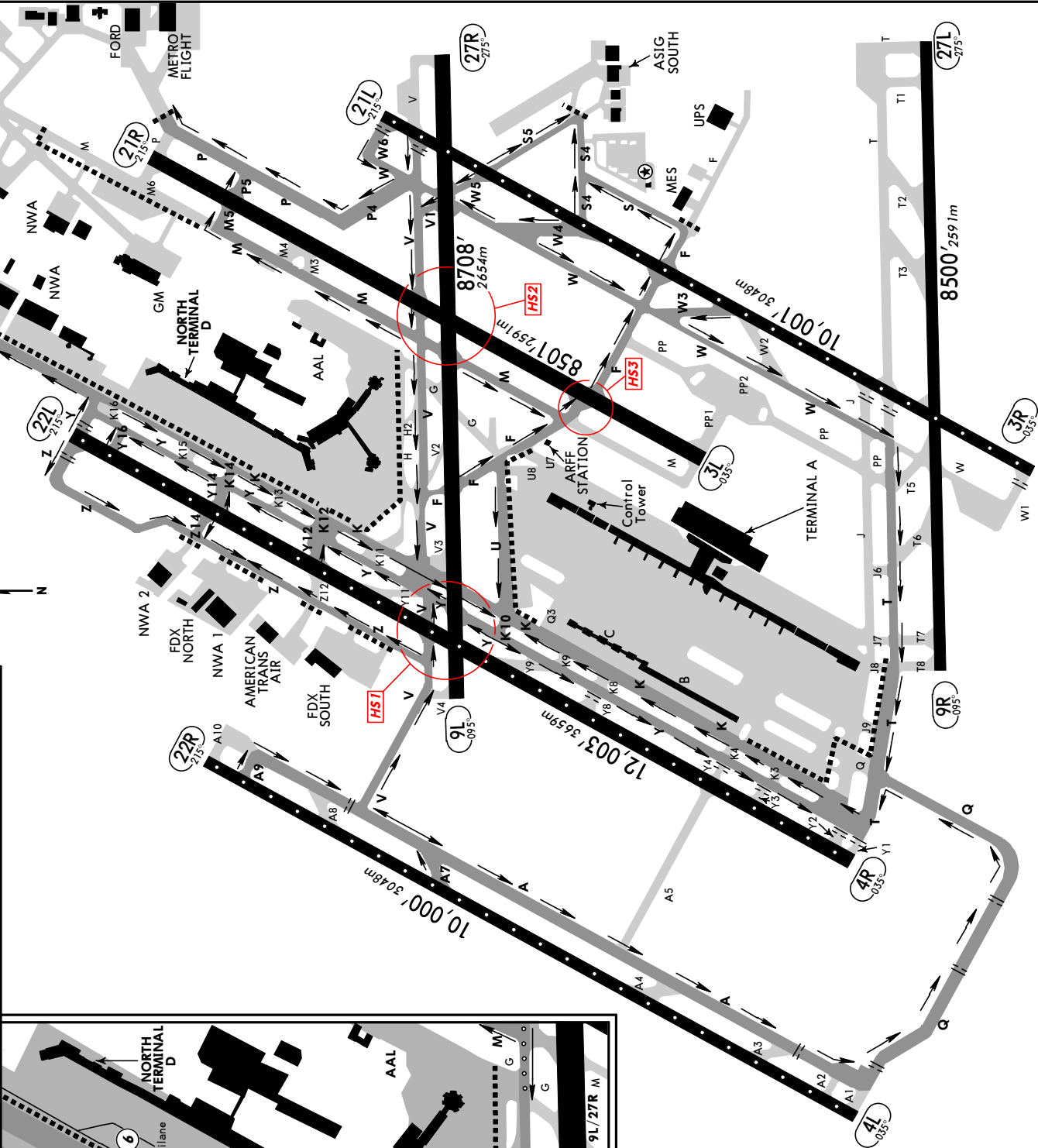
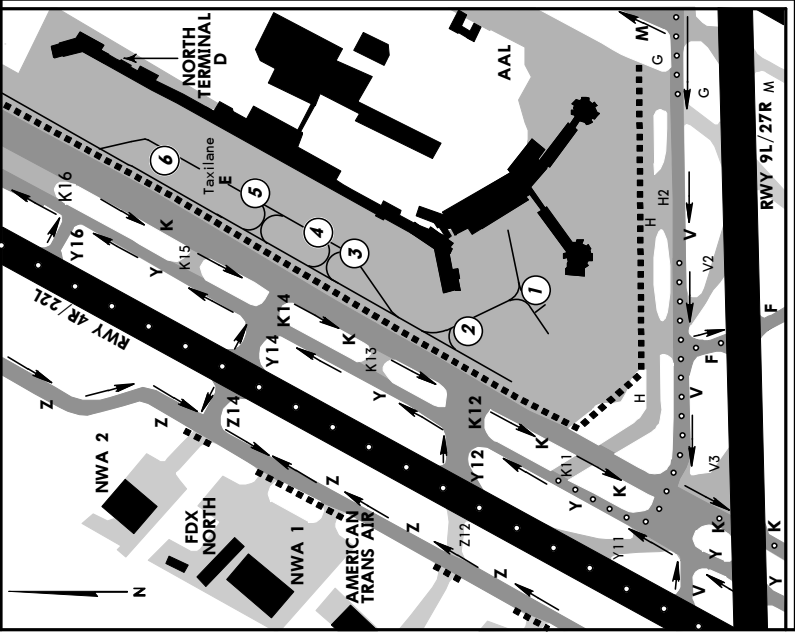
## TAXI HOLD POINT COORDINATES

| TAXI HOLD POINT | COORDINATES        |
|-----------------|--------------------|
| 1               | N42 13.2 W083 21.1 |
| 2               | N42 13.3 W083 21.2 |
| 3               | N42 13.5 W083 21.1 |
| 4               | N42 13.5 W083 21.0 |
| 5               | N42 13.6 W083 21.0 |
| 6               | N42 13.7 W083 20.9 |

## PARKING GATE COORDINATES

| GATE No.          | COORDINATES        | GATE No. | COORDINATES |
|-------------------|--------------------|----------|-------------|
| <b>Terminal D</b> |                    |          |             |
| D1                | N42 13.3 W083 21.1 |          |             |
| D2                | N42 13.4 W083 21.1 |          |             |
| D3, D3W           | N42 13.3 W083 21.1 |          |             |
| D4                | N42 13.4 W083 21.1 |          |             |
| D5A, D5B, D5W     | N42 13.3 W083 21.1 |          |             |
| D6                | N42 13.4 W083 21.1 |          |             |
| D8 thru D10       | N42 13.4 W083 21.0 |          |             |
| D11, D12, D14     | N42 13.5 W083 21.0 |          |             |
| D15, D16          | N42 13.5 W083 20.9 |          |             |
| D17 thru D20      | N42 13.6 W083 20.9 |          |             |
| D22               | N42 13.6 W083 20.9 |          |             |
| D23 thru D26      | N42 13.7 W083 20.8 |          |             |
| D28, D30, D32     | N42 13.8 W083 20.8 |          |             |

| D-ATIS<br>133.67<br>VOT 109.8 | ACARS:<br>D-ATIS<br>TWIP<br>PDC | METRO Clearance (Cpt) |                       | NORTH RAMP Control |                       | SOUTH RAMP Control |            |        |       |
|-------------------------------|---------------------------------|-----------------------|-----------------------|--------------------|-----------------------|--------------------|------------|--------|-------|
|                               |                                 | Tower                 | DETROIT Departure (R) |                    | DETROIT Departure (R) |                    |            |        |       |
|                               |                                 |                       | West                  | East               | Jets West             | Jets East          | Props East |        |       |
| 121.8                         | 119.45                          | 132.72                | 119.25                | 135.0              | 118.4                 | 125.52             | 118.95     | 132.02 | 134.3 |



LEGEND

Centerline lights

Low visibility taxi route

Taxiway and apron

Directional low visibility taxi route

Movement area boundary

Taxi hold point

ILS holdline

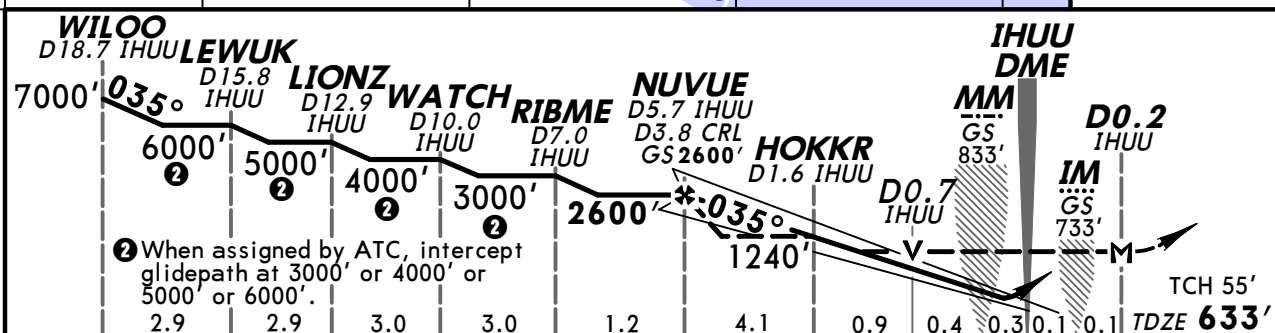
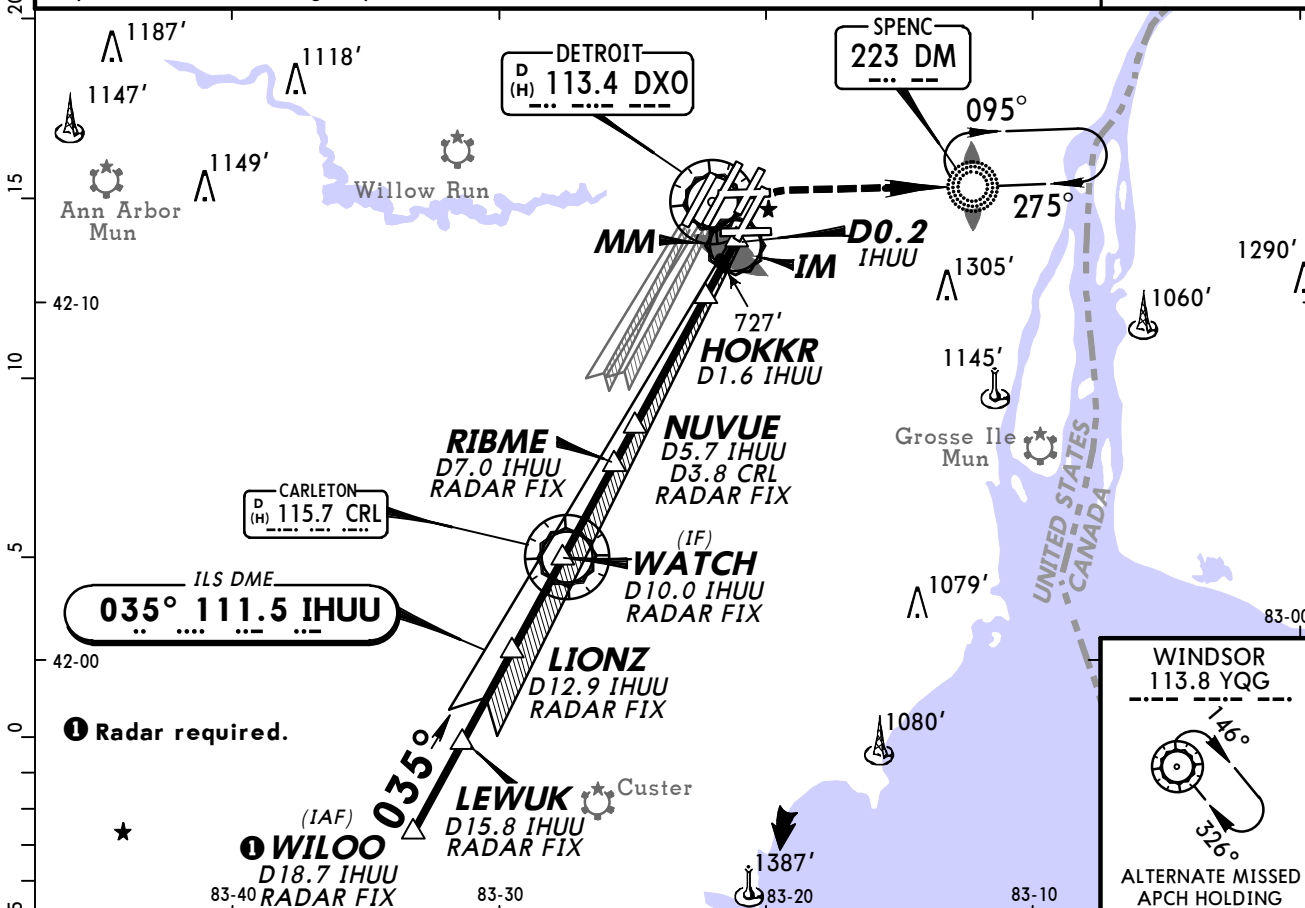
Runway incursion hot spots

See 10-9A for description of Hot Spots



BRIEFING STRIP TM

| D-ATIS                                                                                                                                                                                          | DETROIT Approach (R)      |        | METRO Tower                  |       | Ground                      |           |                            |           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------|------------------------------|-------|-----------------------------|-----------|----------------------------|-----------|
|                                                                                                                                                                                                 | West                      | East   | West                         | East  | Northwest                   | Northeast | Southwest                  | Southeast |
| 133.67                                                                                                                                                                                          | 124.05                    | 125.15 | 135.0                        | 118.4 | 121.8                       | 119.45    | 132.72                     | 119.25    |
| LOC<br>IHUU<br>111.5                                                                                                                                                                            | Final<br>Apch Crs<br>035° |        | GS<br>NUVUE<br>2600' (1967') |       | ILS<br>DA(H)<br>833' (200') |           | Apt Elev 645'<br>TDZE 633' |           |
| MISSED APCH: Climb to 1300' then climbing RIGHT turn to 3000' direct DM LOM and hold.                                                                                                           |                           |        |                              |       |                             |           |                            | 2800'     |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. ADF and DME or Radar required. 2. Simultaneous approach authorized with Rwy 4R or Rwy 4L. 3. VGSI and ILS glidepath not coincident. |                           |        |                              |       |                             |           |                            |           |
| MSA DXO VOR                                                                                                                                                                                     |                           |        |                              |       |                             |           |                            |           |



| Gnd speed-Kts       | 70    | 90   | 100  | 120  | 140  | 160  | ALS-II | 1300' | 3000' | DM  |
|---------------------|-------|------|------|------|------|------|--------|-------|-------|-----|
| GS                  | 3.00° | 372  | 478  | 531  | 637  | 743  | PAPI   | ↑     | RT    | 223 |
| MAP at D0.2 IHUU or |       |      |      |      |      |      |        |       |       |     |
| NUVUE to MAP        | 5.9   | 5:03 | 3:56 | 3:32 | 2:57 | 2:32 |        |       |       |     |

| STRAIGHT-IN LANDING RWY 3R |  |  |                     |  |  | CIRCLE-TO-LAND     |  |                    |  |
|----------------------------|--|--|---------------------|--|--|--------------------|--|--------------------|--|
| ILS                        |  |  | LOC (GS out)        |  |  | With Hokkr         |  | Without Hokkr      |  |
| DA(H) 833' (200')          |  |  | MDA(H) 1040' (407') |  |  | MDA(H)             |  | MDA(H)             |  |
| FULL                       |  |  | With Hokkr          |  |  | 1200' (555')-1     |  | 1240' (595')-1     |  |
| TDZ or CL out              |  |  | Without Hokkr       |  |  | 1200' (555')-1 1/2 |  | 1240' (595')-1 3/4 |  |
| ALS out                    |  |  | ALS out             |  |  | 1200' (555')-2     |  | 1240' (595')-2     |  |
| RVR 18 or 1/2              |  |  | RVR 24 or 1/2       |  |  | 1200' (555')-1     |  | 1240' (595')-1     |  |
| RVR 24 or 1/2              |  |  | RVR 50 or 1         |  |  | 1200' (555')-1 1/2 |  | 1240' (595')-1 3/4 |  |
| RVR 40 or 3/4              |  |  | RVR 60 or 1 1/4     |  |  | 1200' (555')-2     |  | 1240' (595')-2     |  |
| RVR 18 or 1/2              |  |  | RVR 24 or 1/2       |  |  | 1200' (555')-1     |  | 1240' (595')-1     |  |
| RVR 24 or 1/2              |  |  | RVR 50 or 1         |  |  | 1200' (555')-1 1/2 |  | 1240' (595')-1 3/4 |  |
| RVR 40 or 3/4              |  |  | RVR 60 or 1 1/4     |  |  | 1200' (555')-2     |  | 1240' (595')-2     |  |

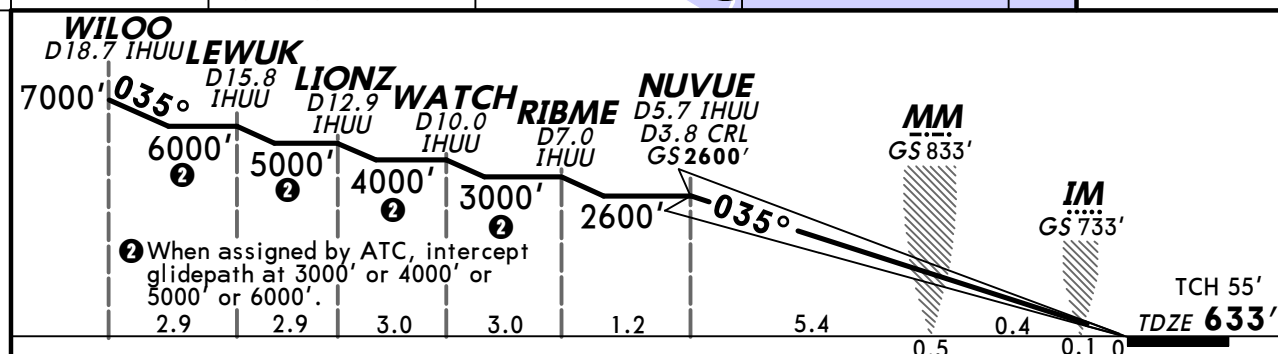
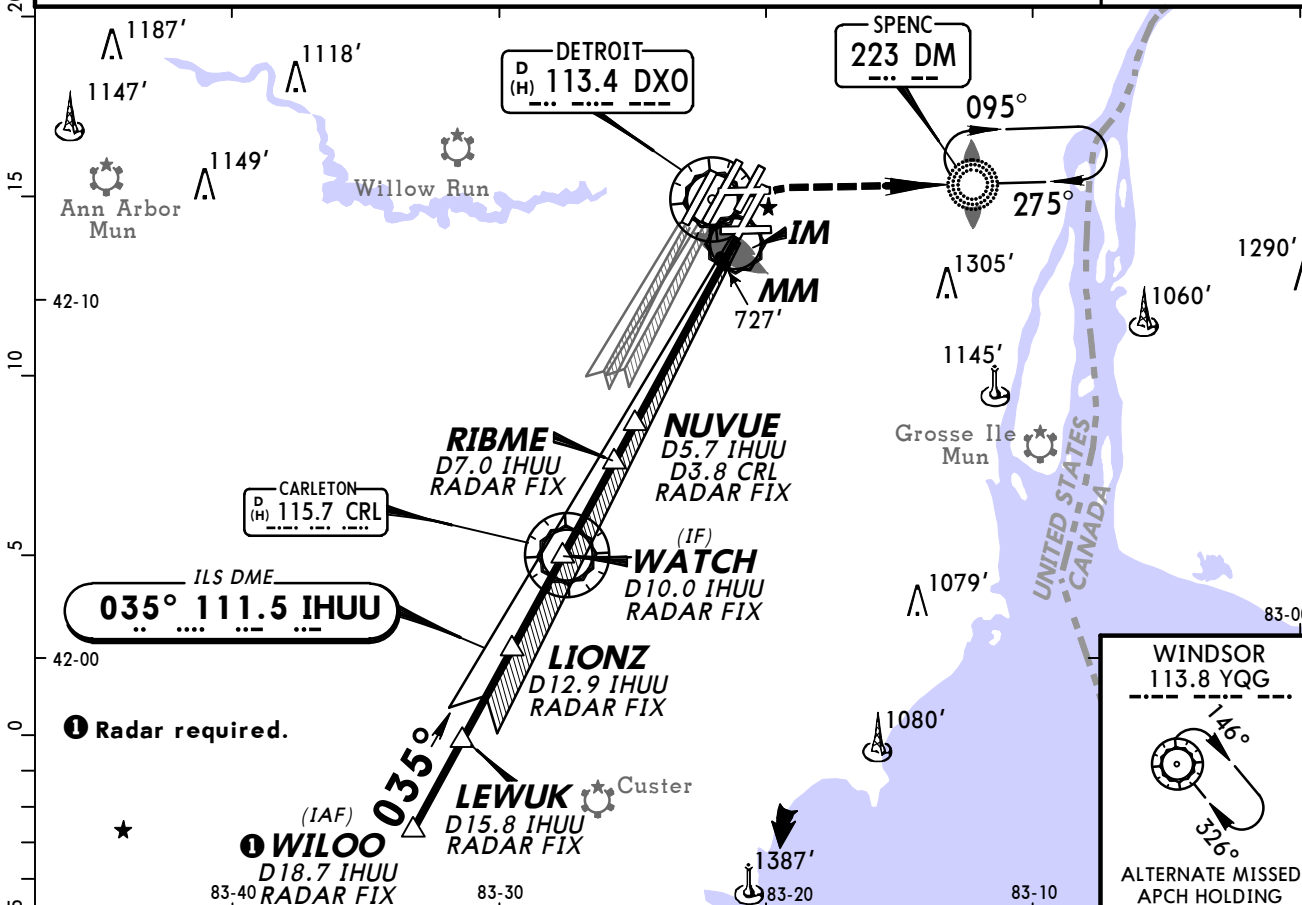
1 Not authorized during simultaneous operations.

CHANGES: Approach communications sectorized.

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| D-ATIS                                                                                                                                                                                         | DETROIT Approach (R) |               | METRO Tower |          | Ground    |                   |           |             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------|-------------|----------|-----------|-------------------|-----------|-------------|
|                                                                                                                                                                                                | West                 | East          | West        | East     | Northwest | Northeast         | Southwest | Southeast   |
| 133.67                                                                                                                                                                                         | 124.05               | 125.15        | 135.0       | 118.4    | 121.8     | 119.45            | 132.72    | 119.25      |
| LOC                                                                                                                                                                                            | Final                | GS            | CAT IIIC    | CAT IIIB | CAT IIIA  | CAT II ILS        | Apt Elev  | 2800'       |
| IHHU                                                                                                                                                                                           | Apch Crs             | NUVUE         | NA          | Refer to | Minimums  | RA 101'           | 645'      |             |
| 111.5                                                                                                                                                                                          | 035°                 | 2600' (1967') |             |          |           | DA(H) 733' (100') | TDZE 633' |             |
| <b>MISSED APCH:</b> Climb to 1300' then climbing RIGHT turn to 3000' direct DM LOM and hold.                                                                                                   |                      |               |             |          |           |                   |           |             |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                                                                                                          |                      |               |             |          |           |                   |           |             |
| 1. Special Aircrew and Aircraft Certification Required. 2. ADF and DME or Radar required. 3. Simultaneous approach authorized with Rwy 4R or Rwy 4L. 4. VGSI and ILS glidepath not coincident. |                      |               |             |          |           |                   |           | MSA DXO VOR |



| Gnd speed-Kts | 70    | 90  | 100 | 120 | 140 | 160 | ALSF-II | 1300' | 3000' | DM  |
|---------------|-------|-----|-----|-----|-----|-----|---------|-------|-------|-----|
| GS            | 3.00° | 372 | 478 | 531 | 637 | 743 | 849     |       |       | 223 |

| STRAIGHT-IN LANDING RWY3R |              |              |                   |
|---------------------------|--------------|--------------|-------------------|
| CAT IIIC ILS              | CAT IIIB ILS | CAT IIIA ILS | CAT II ILS        |
| NA                        | RVR 6        | RVR 7        | RA 101'           |
|                           |              |              | DA(H) 733' (100') |
|                           |              |              | RVR 12            |



**ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)  
ILS PRM RWY 3R**

(SIMULTANEOUS CLOSE PARALLEL)

Special pilot training required. Pilots who are unable to participate will be afforded appropriate arrival services as operational conditions permit and must notify the controlling ARTCC as soon as practical, but at least 100 miles from destination.

Condensed Briefing Point:

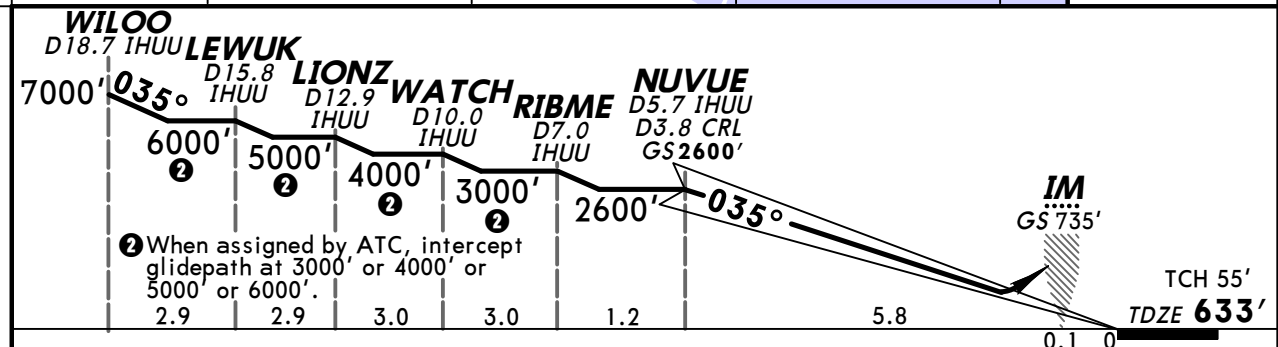
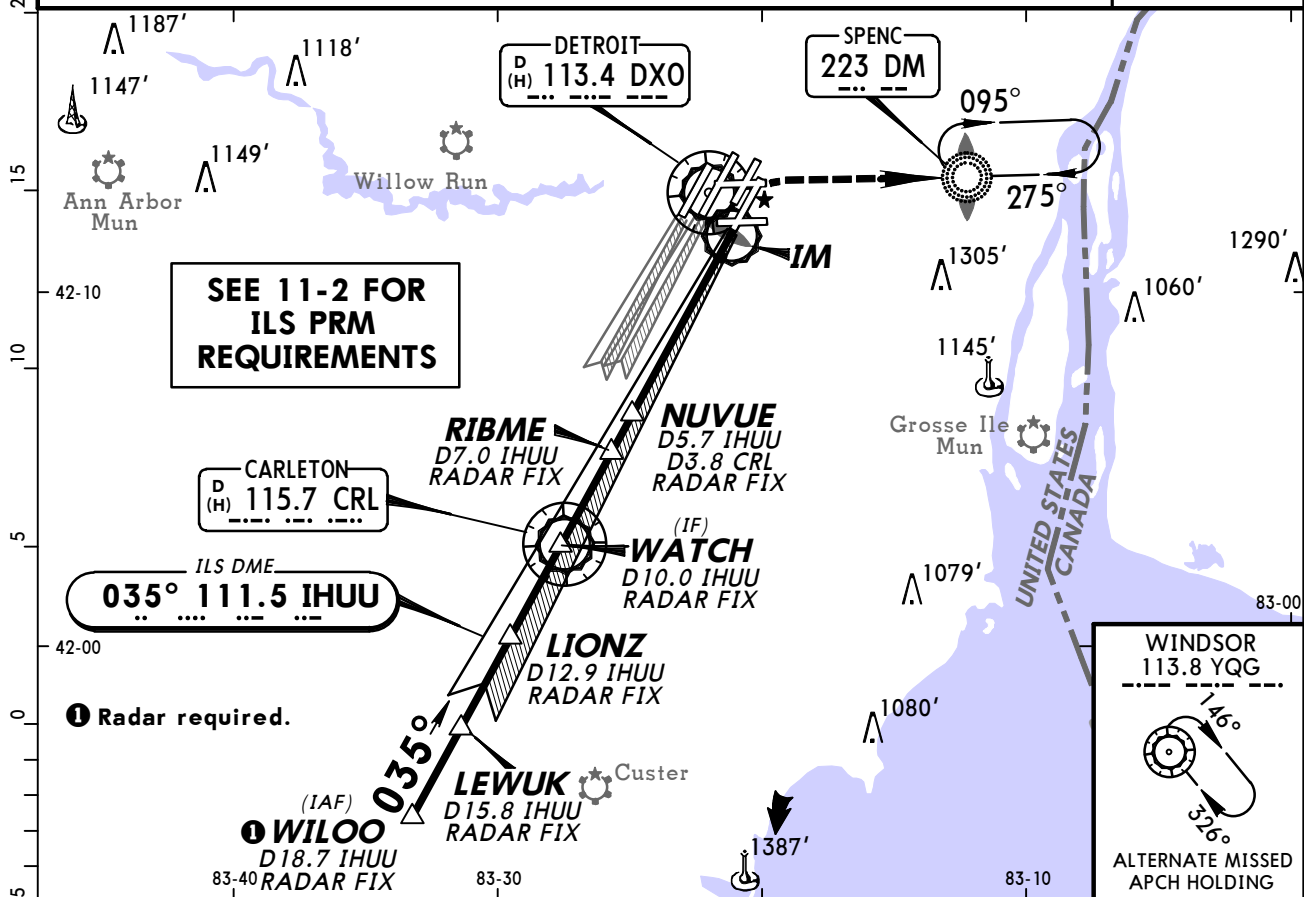
- When instructed, IMMEDIATELY switch to the tower frequency and select the monitor frequency audio.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 3R approach. If later advised to expect an ILS 3R approach, the ILS/PRM 3R chart may be used after completing the following briefing items:
  - (a) **Minimums and missed approach procedures are unchanged.**
  - (b) **Monitor frequency no longer required.**
  - (c) **A lower glideslope intercept altitude may be assigned when advised to expect ILS 3R approach.**
2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will ONLY transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.
3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.
  - (a) ATC Directed "Breakouts". ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstruction clearance. The MVA in the final approach segment is 2400 feet south of Detroit Metro Wayne Co. airport.
  - (b) Phraseology - "TRAFFIC ALERT": If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)", the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:  
"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".
4. **ILS Navigation:** Descending on the ILS glide slope ensures complying with any charted crossing restrictions.

BRIEFING STRIP™

0

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                      |                           |                          |                              |                             |                            |           |                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------------|--------------------------|------------------------------|-----------------------------|----------------------------|-----------|-----------------------------------------|
| D-ATIS                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DETROIT Approach (R) |                           | METRO Tower              |                              | Ground                      |                            |           |                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | West                 | East                      | 118.4                    |                              | Northwest                   | Northeast                  | Southwest | Southeast                               |
| 133.67                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 124.05               | 125.15                    | Monitor Frequency 128.35 |                              | 121.8                       | 119.45                     | 132.72    | 119.25                                  |
| LOC<br>IHUU<br>111.5                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      | Final<br>Apch Crs<br>035° |                          | GS<br>NUVUE<br>2600' (1967') | ILS<br>DA(H)<br>833' (200') | Apt Elev 645'<br>TDZE 633' |           | <div>2800'</div> <div>MSA DXO VOR</div> |
| MISSED APCH: Climb to 1300' then climbing RIGHT turn to 3000' direct DM LOM and hold.                                                                                                                                                                                                                                                                                                                                                                            |                      |                           |                          |                              |                             |                            |           |                                         |
| Alt Set: INCHES      Trans level: FL 180      Trans alt: 18000'<br>1. ADF and DME or Radar required. 2. Dual VHF comm required. 3. Simultaneous close parallel approach authorized with ILS PRM Rwy 4R, ILS PRM Rwy 4R (CAT II), ILS PRM Rwy 4R (CAT III), and ILS PRM Rwy 4L. 4. See 11-2 for "Attention All Users of ILS Precision Runway Monitor (PRM)". 5. VGSI and ILS glidepath not coincident. 6. Procedure not authorized when glideslope not available. |                      |                           |                          |                              |                             |                            |           |                                         |



| Gnd speed-Kts | 70    | 90  | 100 | 120 | 140 | 160 | ALSIF-II |  |  |  | PAPI |  | 1300' |  | 3000' |  | DM |  |
|---------------|-------|-----|-----|-----|-----|-----|----------|--|--|--|------|--|-------|--|-------|--|----|--|
| GS            | 3.00° | 377 | 484 | 538 | 646 | 753 |          |  |  |  |      |  |       |  |       |  |    |  |
| MAP at DA     |       |     |     |     |     |     |          |  |  |  |      |  |       |  |       |  |    |  |

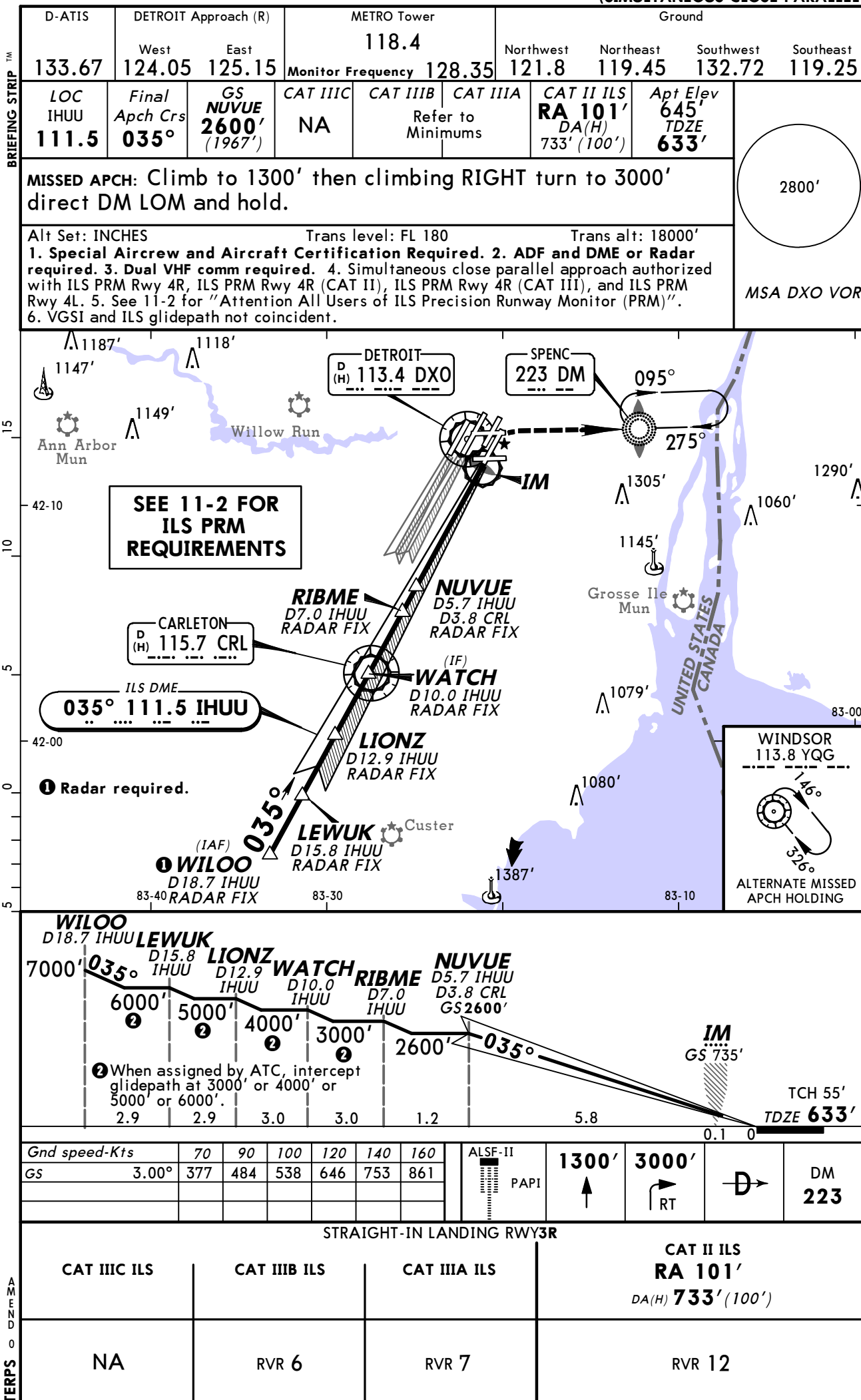
| STRAIGHT-IN LANDING RWY 3R |               |         |  |
|----------------------------|---------------|---------|--|
| ILS                        |               |         |  |
| DA(H) 833' (200')          |               |         |  |
| FULL                       | TDZ or CL out | ALS out |  |
| A                          |               |         |  |
| B                          |               |         |  |
| C                          |               |         |  |
| D                          |               |         |  |

KDTW/DTW  
DETROIT METRO  
WAYNE CO

17 SEP 10

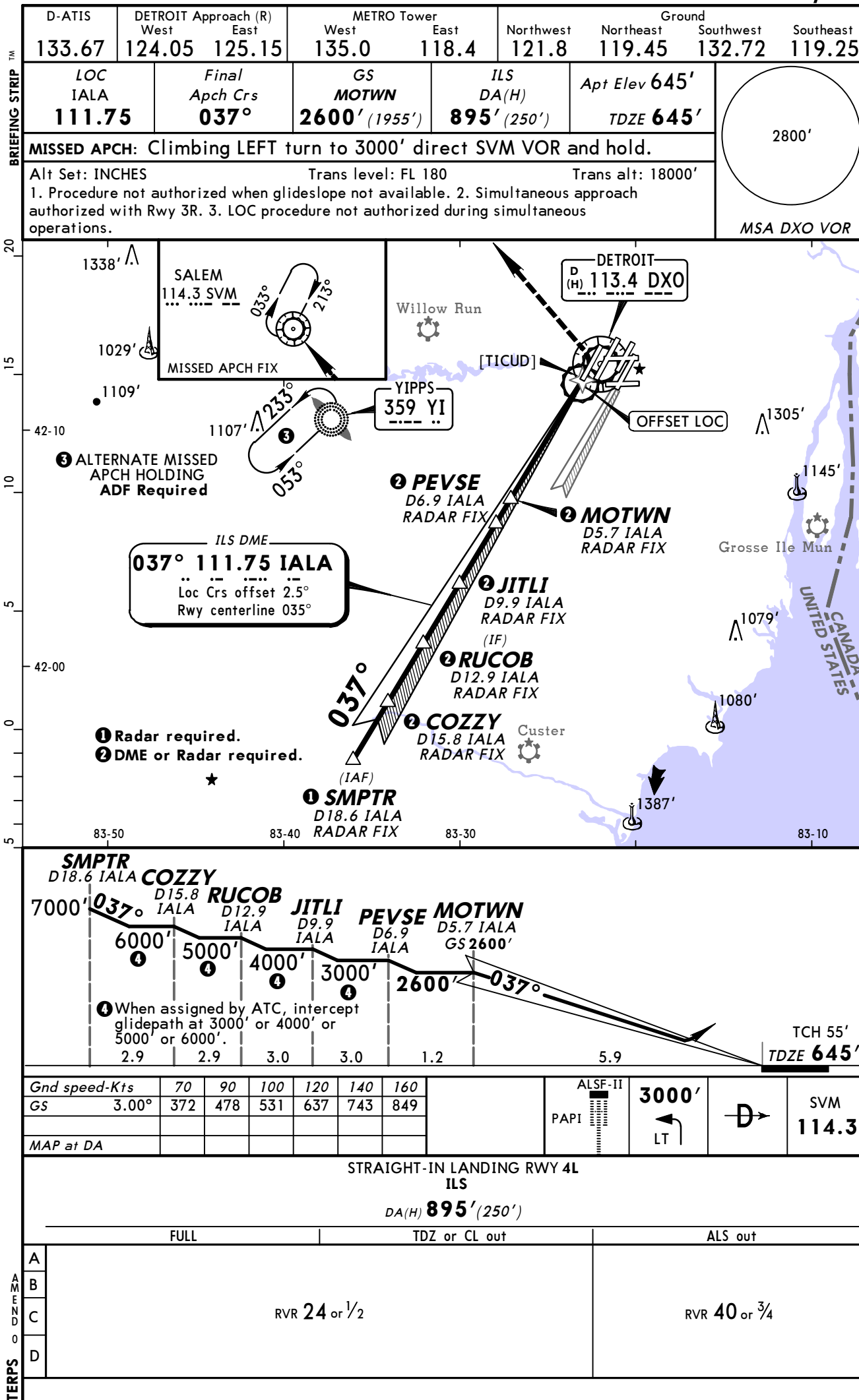
11-2B

DETROIT, MICH  
ILS PRM Rwy 3R CAT II & III  
(SIMULTANEOUS CLOSE PARALLEL)



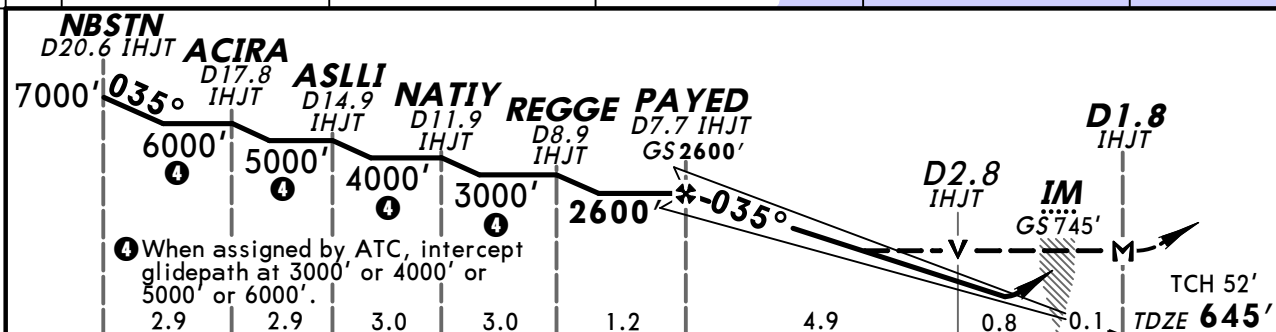
CHANGES: Tower frequency.

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BRIEFING STRIP

|                                                                                       |                           |        |                              |                             |                            |           |                                         |           |
|---------------------------------------------------------------------------------------|---------------------------|--------|------------------------------|-----------------------------|----------------------------|-----------|-----------------------------------------|-----------|
| D-ATIS                                                                                | DETROIT Approach (R)      |        | METRO Tower                  |                             | Ground                     |           |                                         |           |
|                                                                                       | West                      | East   | West                         | East                        | Northwest                  | Northeast | Southwest                               | Southeast |
| 133.67                                                                                | 124.05                    | 125.15 | 135.0                        | 118.4                       | 121.8                      | 119.45    | 132.72                                  | 119.25    |
| LOC<br>IHJT<br>111.95                                                                 | Final<br>Apch Crs<br>035° |        | GS<br>PAYED<br>2600' (1955') | ILS<br>DA(H)<br>845' (200') | Apt Elev 645'<br>TDZE 645' |           | <div>2800'</div> <div>MSA DXO VOR</div> |           |
| MISSED APCH: Climb to 1300' then climbing LEFT turn to 3000' direct SVM VOR and hold. |                           |        |                              |                             |                            |           |                                         |           |
| Alt Set: INCHES                                                                       |                           |        | Trans level: FL 180          |                             | Trans alt: 18000'          |           |                                         |           |
| 1. Simultaneous approach authorized with Rwy 3R.                                      |                           |        |                              |                             |                            |           |                                         |           |



| Gnd speed-Kts                       | 70    | 90   | 100  | 120  | 140  | 160  | ALSIF-II |  | PAPI |  | 1300' | 3000' | → | SVM   |
|-------------------------------------|-------|------|------|------|------|------|----------|--|------|--|-------|-------|---|-------|
| GS                                  | 3.00° | 372  | 478  | 531  | 637  | 743  |          |  |      |  | ↑     | LT    | → | 114.3 |
| MAP at D1.8 IHJT or<br>PAYED to MAP | 5.9   | 5:03 | 3:56 | 3:32 | 2:57 | 2:32 |          |  |      |  |       |       |   |       |

| STRAIGHT-IN LANDING RWY4L       |               |               |               |               | 1 LOC (GS out)             |                    | CIRCLE-TO-LAND |  |
|---------------------------------|---------------|---------------|---------------|---------------|----------------------------|--------------------|----------------|--|
| ILS<br>DA(H) <b>845'</b> (200') |               |               |               |               | MDA(H) <b>1000'</b> (355') |                    |                |  |
| FULL                            | TDZ or CL out | ALS out       | ALS out       |               | Max Kts                    | MDA(H)             |                |  |
| A                               |               |               |               |               | 90                         | 1200' (555')-1     |                |  |
| B                               | RVR 18 or 1/2 | RVR 24 or 1/2 | RVR 40 or 3/4 | RVR 24 or 1/2 | 120                        | 1200' (555')-1 1/2 |                |  |
| C                               |               |               |               |               | 140                        | 1200' (555')-2     |                |  |
| D                               |               |               |               |               | 165                        |                    |                |  |

1 Not authorized during simultaneous operations.

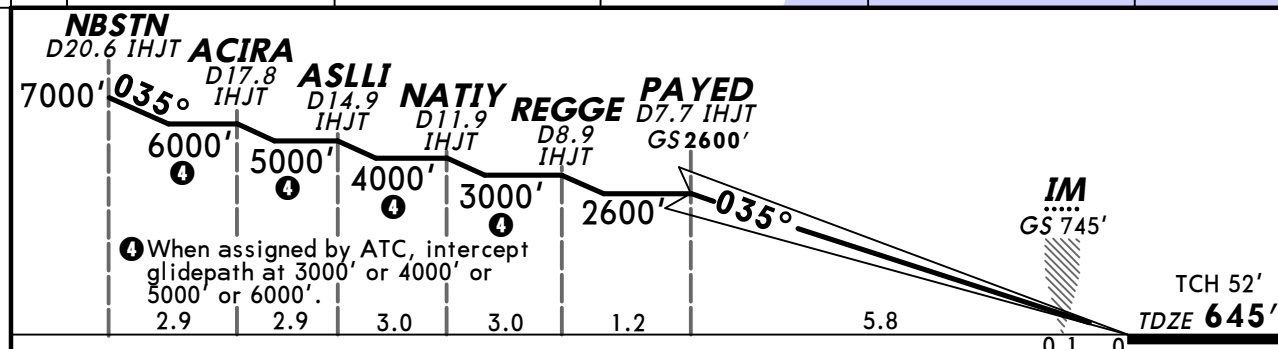
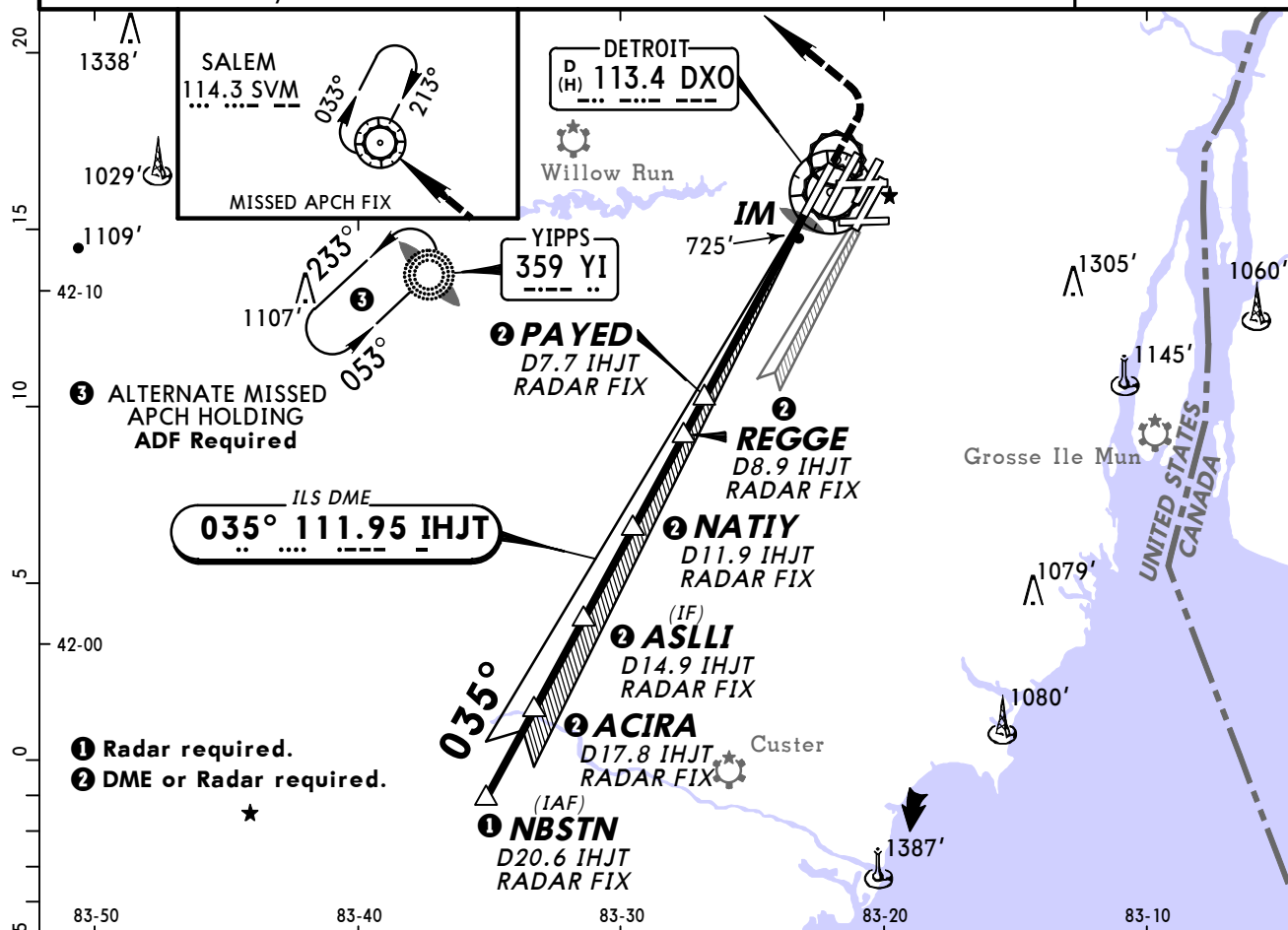
CHANGES: PAPI added.

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TERPS AMEND 3A 17 DEC 2009

# KDTW/DTW DETROIT METRO WAYNE CO 25 NOV 11 (11-4A) ILS Z Rwy 4L CAT II & III

| D-ATIS                                                                                |          | DETROIT Approach (R) |          | METRO Tower |          | Ground                   |           |                                         |           |
|---------------------------------------------------------------------------------------|----------|----------------------|----------|-------------|----------|--------------------------|-----------|-----------------------------------------|-----------|
| West                                                                                  |          | East                 |          | West        | East     | Northwest                | Northeast | Southwest                               | Southeast |
| 133.67                                                                                |          | 124.05 125.15        |          | 135.0 118.4 |          | 121.8 119.45             |           | 132.72 119.25                           |           |
| LOC                                                                                   | Final    | GS                   | CAT IIIC | CAT IIIB    | CAT IIIA | CAT II ILS               | Apt Elev  | <div>2800'</div> <div>MSA DXO VOR</div> |           |
| IHJT                                                                                  | Apch Crs | PAYED                | NA       | Refer to    |          | RA 101'                  | 645'      |                                         |           |
| 111.95                                                                                | 035°     | 2600'                |          | Minimums    |          | DA(H)                    | TDZE      |                                         |           |
|                                                                                       |          | (1955')              |          |             |          | 745' (100')              | 645'      |                                         |           |
| MISSED APCH: Climb to 1300' then climbing LEFT turn to 3000' direct SVM VOR and hold. |          |                      |          |             |          |                          |           |                                         |           |
| Alt Set: INCHES                                                                       |          | Trans level: FL 180  |          |             |          | Trans alt: 18000'        |           |                                         |           |
| 1. Special Aircrew and Aircraft Certification Required.                               |          |                      |          |             |          | 2. Simultaneous approach |           |                                         |           |
| authorized with Rwy 3R.                                                               |          |                      |          |             |          |                          |           |                                         |           |



| Gnd speed-Kts | 70    | 90  | 100 | 120 | 140 | 160 | ALSIF-II |  | 1300' | 3000' | SVM | 114.3 |
|---------------|-------|-----|-----|-----|-----|-----|----------|--|-------|-------|-----|-------|
| GS            | 3.00° | 372 | 478 | 531 | 637 | 743 | PAPI     |  | ↑     | LT    |     |       |

| STRAIGHT-IN LANDING RWY 4L |              |              |                   |
|----------------------------|--------------|--------------|-------------------|
| CAT IIIC ILS               | CAT IIIB ILS | CAT IIIA ILS | CAT II ILS        |
| NA                         | RVR 6        | RVR 7        | RA 101'           |
|                            |              |              | DA(H) 745' (100') |
|                            |              |              | RVR 12            |

TERPS AMEND 3A 17 DEC 2009

CHANGES: PAPI added.

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**ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)  
ILS Y PRM RWY 4L  
(SIMULTANEOUS CLOSE PARALLEL)**

Special pilot training required. Pilots who are unable to participate will be afforded appropriate arrival services as operational conditions permit and must notify the controlling ARTCC as soon as practical, but at least 100 miles from destination.

**Condensed Briefing Point:**

- When instructed, **IMMEDIATELY** switch to the tower frequency and select the monitor frequency audio.
- Exit the runway at Taxiway A7 (6700 ft) or A8 (7700 ft) whenever practical. See Taxiway Use below.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS Y PRM 4L approach. If later advised to expect an ILS Yankee 4L approach, the ILS Y PRM 4L chart may be used after completing the following briefing items:
  - (a) **Minimums and missed approach procedures are unchanged.**
  - (b) **Monitor frequency no longer required.**
  - (c) **A lower glideslope intercept altitude may be assigned when advised to expect ILS Yankee 4L approach.**
2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will **ONLY** transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.
3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.
  - (a) ATC Directed "Breakouts". ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstruction clearance. The MVA in the final approach segment is 2400 feet south of Detroit Metro Wayne Co. airport.
  - (b) Phraseology - "TRAFFIC ALERT": If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)", the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:  
"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".
4. **ILS Navigation:** Descending on the ILS glide slope ensures complying with any charted crossing restrictions.
5. **Taxiway Use:** Because of the location of the offset LOC critical area, whenever practical, pilots should exit the runway at Taxiway A7 (6700ft) or A8 (7700 ft). If feasible, do not stop on Taxiways A9 and A10, or on Taxiway A northeast of Taxiway V.

## DETROIT METRO WAYNE CO

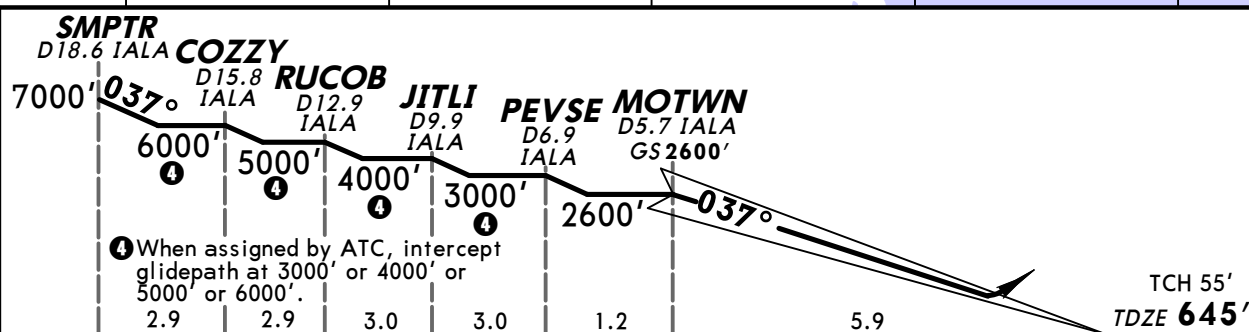
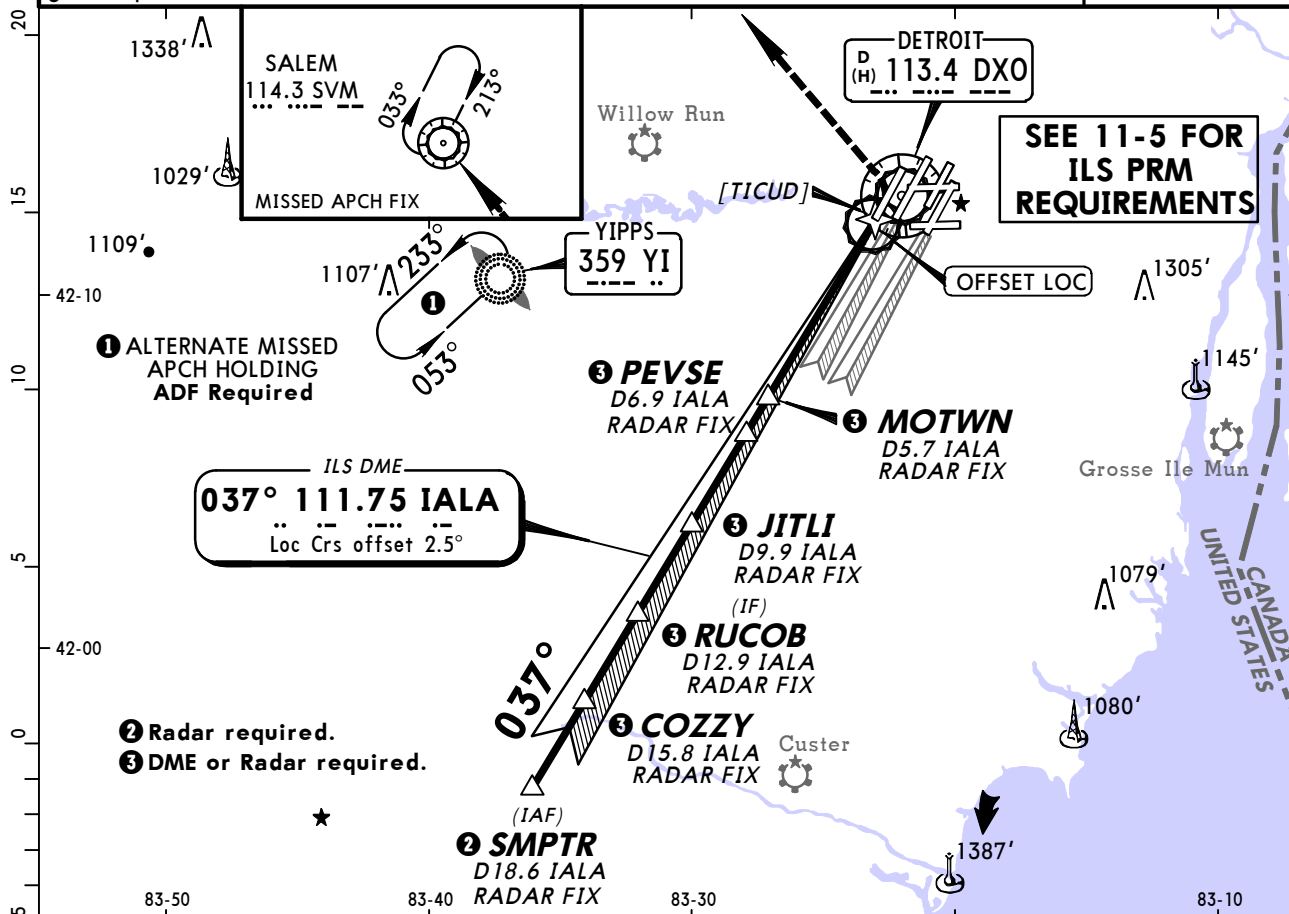
25 NOV 11 (11-5A)

ILS Y PRM Rwy 4L  
(SIMULTANEOUS CLOSE PARALLEL)

BRIEFING STRIP™

|                                                                                                                                                                                                                                                                                                                                                                      |                      |                   |                          |  |              |                   |               |           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------|--------------------------|--|--------------|-------------------|---------------|-----------|
| D-ATIS                                                                                                                                                                                                                                                                                                                                                               | DETROIT Approach (R) |                   | METRO Tower              |  | Ground       |                   |               |           |
|                                                                                                                                                                                                                                                                                                                                                                      | West                 | East              | 128.12                   |  | Northwest    | Northeast         | Southwest     | Southeast |
| 133.67                                                                                                                                                                                                                                                                                                                                                               | 124.05               | 125.15            | Monitor Frequency 127.05 |  | 121.8        | 119.45            | 132.72        | 119.25    |
| LOC<br>IALA                                                                                                                                                                                                                                                                                                                                                          |                      | Final<br>Apch Crs | GS<br>MOTWN              |  | ILS<br>DA(H) |                   | Apt Elev 645' |           |
| 111.75                                                                                                                                                                                                                                                                                                                                                               |                      | 037°              | 2600' (1955')            |  | 895' (250')  |                   | TDZE 645'     |           |
| MISSED APCH: Climbing LEFT turn to 3000' direct SVM VOR and hold.                                                                                                                                                                                                                                                                                                    |                      |                   |                          |  |              |                   |               |           |
| Alt Set: INCHES                                                                                                                                                                                                                                                                                                                                                      |                      |                   | Trans level: FL 180      |  |              | Trans alt: 18000' |               |           |
| 1. Dual VHF comm required. 2. Simultaneous close parallel approach authorized with ILS PRM Rwy 4R, ILS PRM Rwy 4R (CAT II), ILS PRM Rwy 4R (CAT III), ILS PRM Rwy 3R, ILS PRM Rwy 3R (CAT II), and ILS PRM Rwy 3R (CAT III). 3. See 11-5 for "Attention All Users of ILS Precision Runway Monitor (PRM)". 4. Procedure not authorized when glideslope not available. |                      |                   |                          |  |              |                   |               |           |
| MSA DXO VOR                                                                                                                                                                                                                                                                                                                                                          |                      |                   |                          |  |              |                   |               |           |

2800'



| Gnd speed-Kts | 70    | 90  | 100 | 120 | 140 | 160 | ALSIF-II |  | 3000' |  | SVM   |  |
|---------------|-------|-----|-----|-----|-----|-----|----------|--|-------|--|-------|--|
| GS            | 3.00° | 372 | 478 | 531 | 637 | 743 | PAPI     |  | LT    |  | 114.3 |  |
| MAP at DA     |       |     |     |     |     |     |          |  |       |  |       |  |

| STRAIGHT-IN LANDING RWY 4L |  |  |  |               |  |  |  |         |  |  |  |  |
|----------------------------|--|--|--|---------------|--|--|--|---------|--|--|--|--|
| ILS                        |  |  |  |               |  |  |  |         |  |  |  |  |
| DA(H) 895' (250')          |  |  |  |               |  |  |  |         |  |  |  |  |
| FULL                       |  |  |  | TDZ or CL out |  |  |  | ALS out |  |  |  |  |
| A                          |  |  |  |               |  |  |  |         |  |  |  |  |
| B                          |  |  |  |               |  |  |  |         |  |  |  |  |
| C                          |  |  |  |               |  |  |  |         |  |  |  |  |
| D                          |  |  |  |               |  |  |  |         |  |  |  |  |

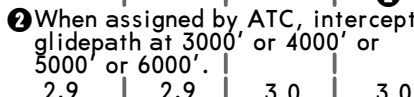


BRIEFING STRIP<sup>TM</sup>

2800'

MSA DXO VOR

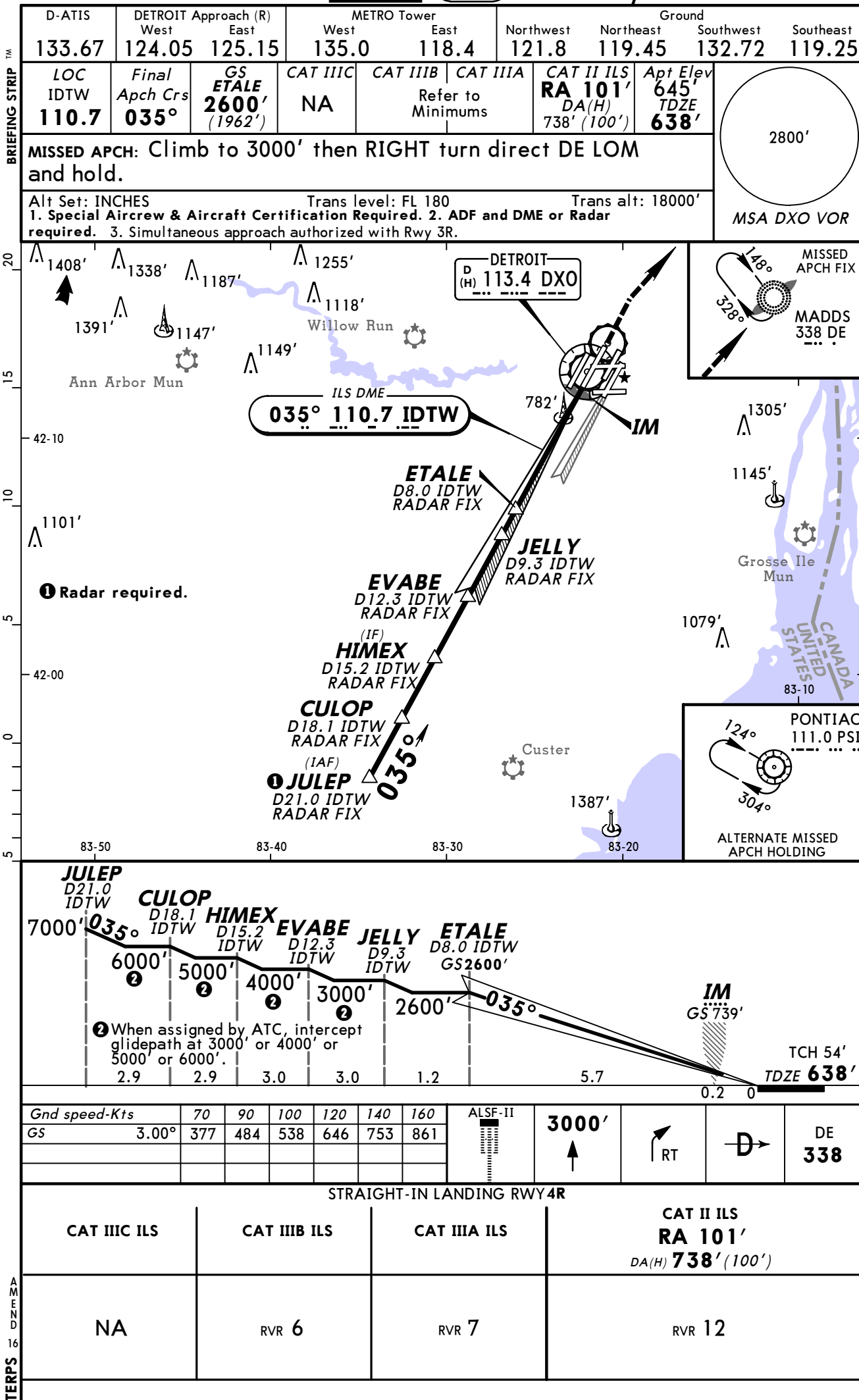
|   |  |   |
|---|--|---|
| A |  | A |
|---|--|---|



ALSF-1

TERPS  
16  
A  
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M  
D

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**ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)  
ILS PRM RWY 4R**

(SIMULTANEOUS CLOSE PARALLEL)

Special pilot training required. Pilots who are unable to participate, will be afforded appropriate arrival services as operational conditions permit and must notify the controlling ARTCC as soon as practical, but at least 100 miles from destination.

**Condensed Briefing Point:**

- When instructed, **IMMEDIATELY** switch to the tower frequency and select the monitor frequency audio.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 4R approach. If later advised to expect an ILS 4R approach, the ILS/PRM 4R chart may be used after completing the following briefing items:
  - (a) **Minimums and missed approach procedures are unchanged.**
  - (b) **Monitor frequency no longer required.**
  - (c) **A lower glideslope intercept altitude may be assigned when advised to expect ILS 4R approach.**
2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will **ONLY** transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.
3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.
  - (a) ATC Directed "Breakouts". ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstruction clearance. The MVA in the final approach segment is 2400 feet south of Detroit Metro Wayne Co. airport.
  - (b) Phraseology - "TRAFFIC ALERT": If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)", the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:  
"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".
4. **ILS Navigation:** Descending on the ILS glide slope ensures complying with any charted crossing restrictions.

KDTW/DTW

JEPPESSEN

DETROIT, MICH

ILS PRM Rwy 4R

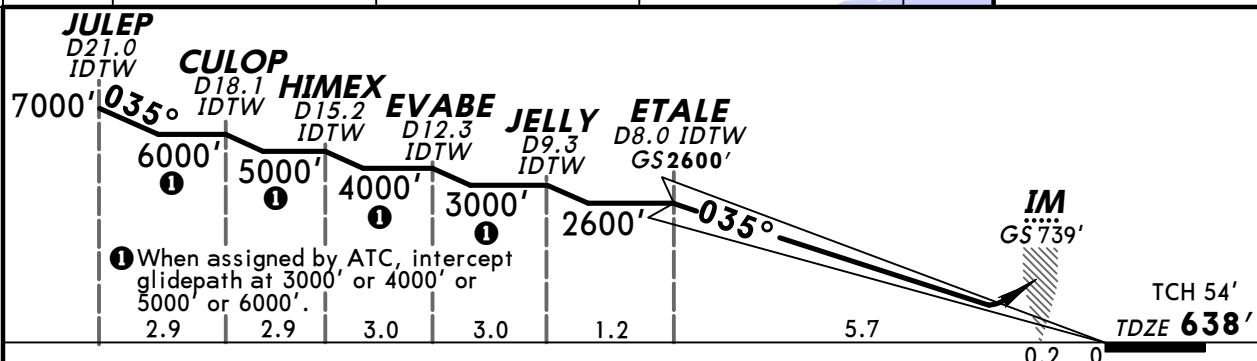
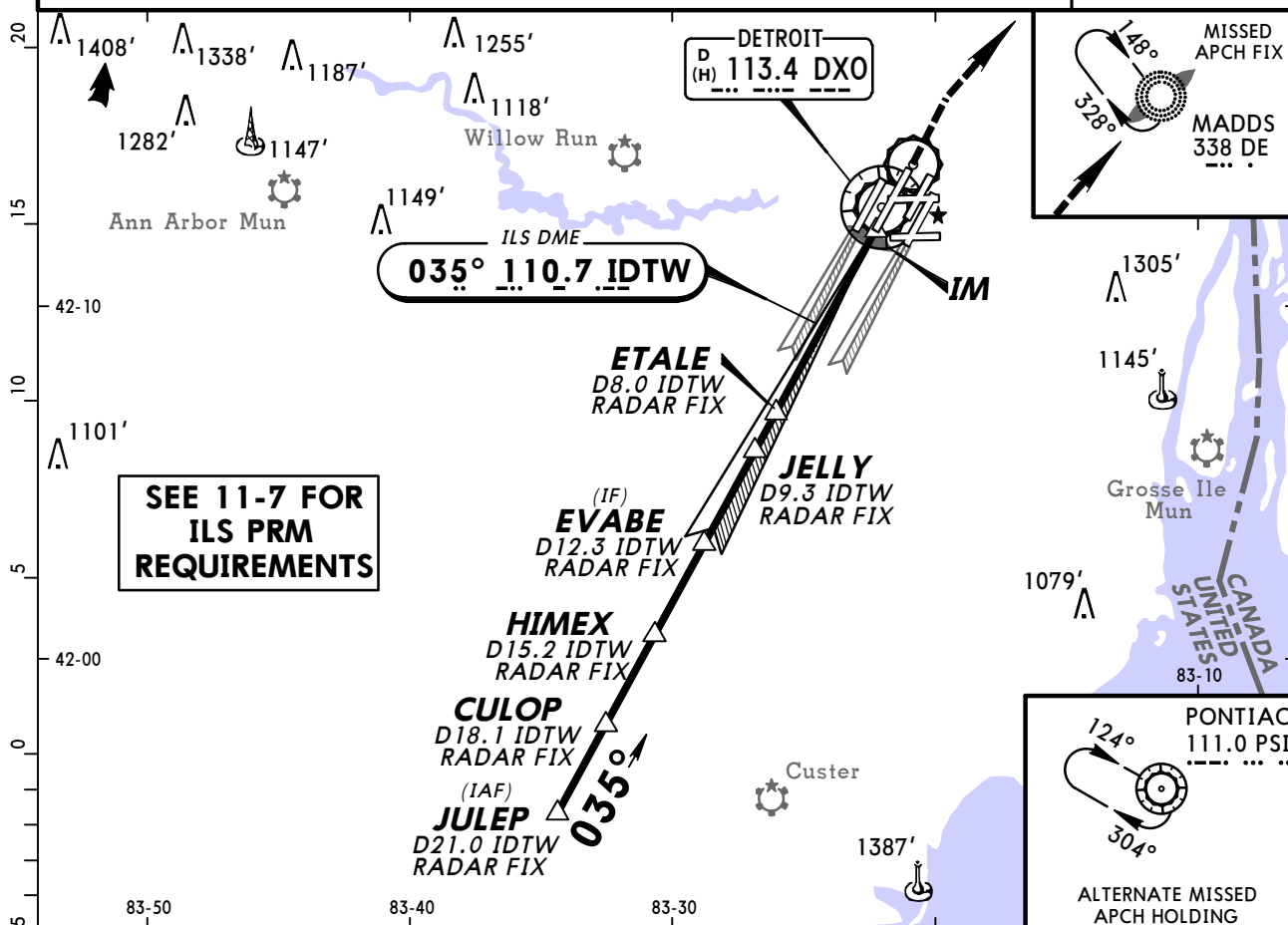
DETROIT METRO WAYNE CO

17 SEP 10 (11-7A)

(SIMULTANEOUS CLOSE PARALLEL)

BRIEFING STRIP™

|                                                                                                                                                                                                                                                                                                                                                     |                      |                           |                          |                              |                             |                            |           |                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------------|--------------------------|------------------------------|-----------------------------|----------------------------|-----------|-----------------------------------------|
| D-ATIS                                                                                                                                                                                                                                                                                                                                              | DETROIT Approach (R) |                           | METRO Tower              |                              | Ground                      |                            |           |                                         |
|                                                                                                                                                                                                                                                                                                                                                     | West                 | East                      | 135.0                    |                              | Northwest                   | Northeast                  | Southwest | Southeast                               |
| 133.67                                                                                                                                                                                                                                                                                                                                              | 124.05               | 125.15                    | Monitor Frequency 135.77 |                              | 121.8                       | 119.45                     | 132.72    | 119.25                                  |
| LOC<br>IDTW<br>110.7                                                                                                                                                                                                                                                                                                                                |                      | Final<br>Apch Crs<br>035° |                          | GS<br>ETALE<br>2600' (1962') | ILS<br>DA(H)<br>838' (200') | Apt Elev 645'<br>TDZE 638' |           | <div>2800'</div> <div>MSA DXO VOR</div> |
| MISSED APCH: Climb to 3000' then RIGHT turn direct DE LOM and hold.                                                                                                                                                                                                                                                                                 |                      |                           |                          |                              |                             |                            |           |                                         |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                                                                                                                                                                                                                                                               |                      |                           |                          |                              |                             |                            |           |                                         |
| 1. ADF and DME or Radar required. 2. Dual VHF comm required. 3. Simultaneous close parallel approach authorized with ILS PRM Rwy 4L, ILS PRM Rwy 3R, ILS PRM Rwy 3R (CAT II), and ILS PRM Rwy 3R (CAT III). 4. See 11-7 for "Attention All Users of ILS Precision Runway Monitor (PRM)". 5. Procedure not authorized when glideslope not available. |                      |                           |                          |                              |                             |                            |           |                                         |



| Gnd speed-Kts | 70    | 90  | 100 | 120 | 140 | 160 | ALSIF-II | 3000' | RT | DE  |
|---------------|-------|-----|-----|-----|-----|-----|----------|-------|----|-----|
| GS            | 3.00° | 377 | 484 | 538 | 646 | 753 | 861      |       |    | 338 |
| MAP at DA     |       |     |     |     |     |     |          |       |    |     |

STRAIGHT-IN LANDING RWY4R

ILS

DA(H) 838' (200')

|   | FULL          | TDZ or CL out | ALS out       |
|---|---------------|---------------|---------------|
| A |               |               |               |
| B |               |               |               |
| C | RVR 18 or 1/2 | RVR 24 or 1/2 | RVR 40 or 3/4 |
| D |               |               |               |

CHANGES: Tower frequency.

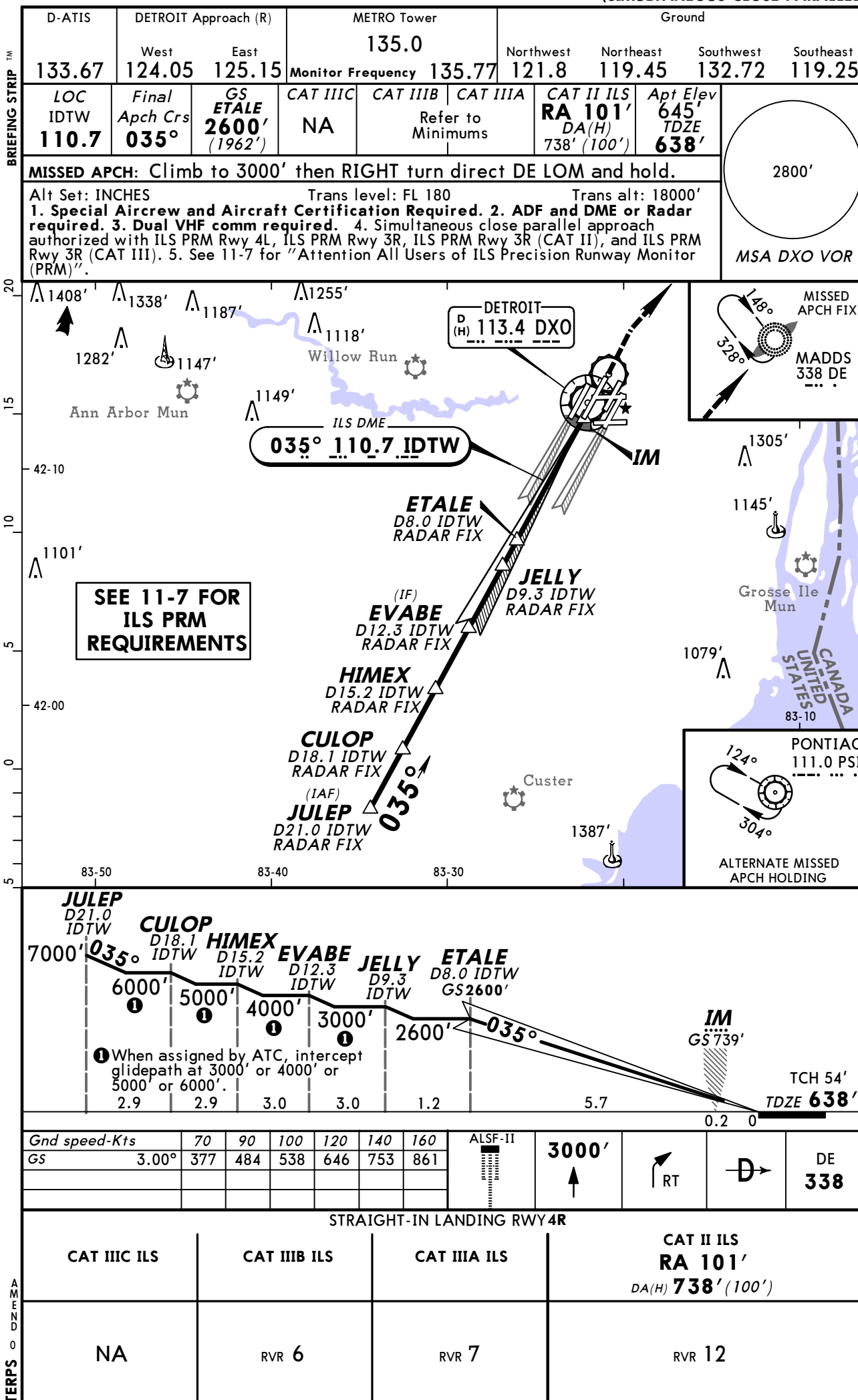
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**KDTW/DTW**  
**DETROIT METRO**  
**WAYNE CO**

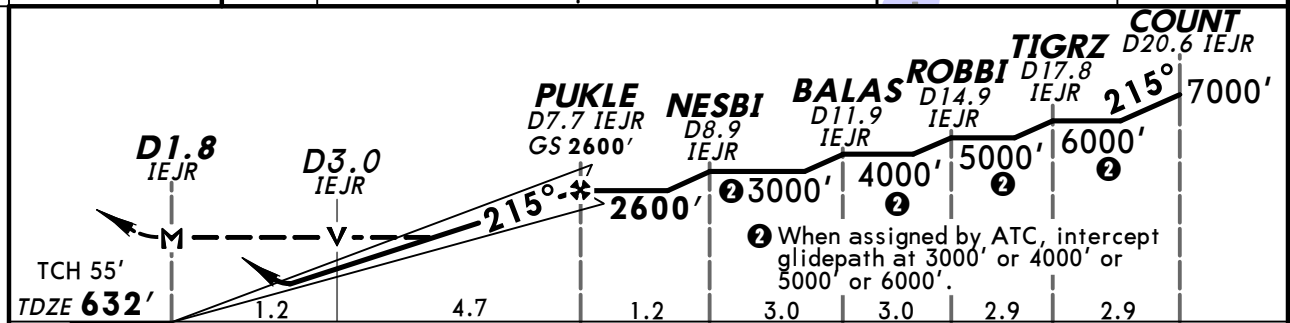
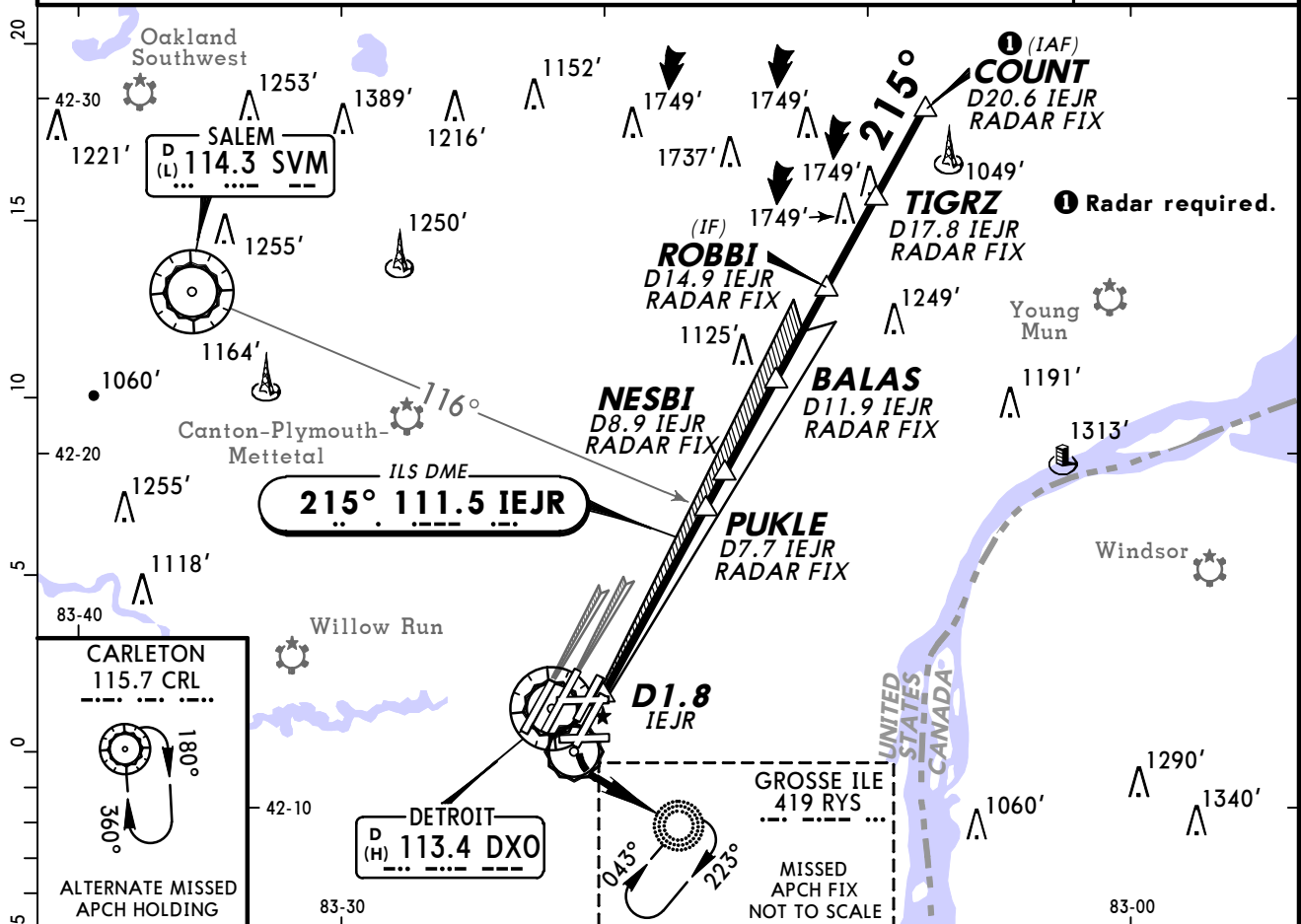
17 SEP 10

(11-7B)

**DETROIT, MICH**  
**ILS PRM Rwy 4R CAT II & III**  
**(SIMULTANEOUS CLOSE PARALLEL)**



| D-ATIS                                                                                                                                         | DETROIT Approach (R) |        | METRO Tower   |              | Ground        |           |           |                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------|---------------|--------------|---------------|-----------|-----------|-----------------------------------------|
|                                                                                                                                                | West                 | East   | West          | East         | Northwest     | Northeast | Southwest | Southeast                               |
| 133.67                                                                                                                                         | 124.05               | 125.15 | 135.0         | 118.4        | 121.8         | 119.45    | 132.72    | 119.25                                  |
| LOC<br>IEJR                                                                                                                                    | Final<br>Apch Crs    |        | GS<br>PUKLE   | ILS<br>DA(H) | Apt Elev 645' |           |           | <div>2800'</div> <div>MSA DXO VOR</div> |
| 111.5                                                                                                                                          | 215°                 |        | 2600' (1968') | 832' (200')  | TDZE 632'     |           |           |                                         |
| MISSED APCH: Climb to 1100' then climbing LEFT turn to 3000' direct RYS NDB and hold.                                                          |                      |        |               |              |               |           |           |                                         |
| Alt Set: INCHES                      Trans level: FL 180                      Trans alt: 18000'                                                |                      |        |               |              |               |           |           |                                         |
| 1. ADF and DME or Radar required.    2. Simultaneous approach authorized with Rwy 22L or Rwy 22R.    3. VGSI and ILS glidepath not coincident. |                      |        |               |              |               |           |           |                                         |



|                                         |      |      |      |      |      |      |                                                                                                                                                                                        |
|-----------------------------------------|------|------|------|------|------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gnd speed-Kts                           | 70   | 90   | 100  | 120  | 140  | 160  | <div><div><div>MALSR</div><div>PAPI</div></div><div><div>1100'</div><div>3000'</div></div><div><div><div>D</div><div>LT</div></div></div><div><div>RYS</div><div>419</div></div></div> |
| GS 3.00°                                | 377  | 484  | 538  | 646  | 753  | 861  |                                                                                                                                                                                        |
| MAP AT D1.8 IEJR or<br>PUKLE to MAP 5.9 | 5:03 | 3:56 | 3:32 | 2:57 | 2:32 | 2:13 |                                                                                                                                                                                        |

| STRAIGHT-IN LANDING Rwy 21L |  |                                    |  |          | CIRCLE-TO-LAND |         |  |
|-----------------------------|--|------------------------------------|--|----------|----------------|---------|--|
| ILS DA(H) 832' (200')       |  | 2 LOC (GS out) MDA(H) 1100' (468') |  |          |                |         |  |
| FULL                        |  | RAIL or ALS out                    |  | RAIL out |                | ALS out |  |
| A                           |  |                                    |  |          |                |         |  |
| B                           |  |                                    |  |          |                |         |  |
| C                           |  |                                    |  |          |                |         |  |
| D                           |  |                                    |  |          |                |         |  |

1 RVR 18 authorized with use of Flight Director or Autopilot or HUD to DA.

2 Not authorized during simultaneous operations.



**ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)  
ILS PRM RWY 21L**

(SIMULTANEOUS CLOSE PARALLEL)

Special pilot training required. Pilots who are unable to participate will be afforded appropriate arrival services as operational conditions permit and must notify the controlling ARTCC as soon as practical, but at least 100 miles from destination.

Condensed Briefing Point:

- When instructed, **IMMEDIATELY** switch to the tower frequency and select the monitor frequency audio.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 21L approach. If later advised to expect an ILS 21L approach, the ILS/PRM 21L chart may be used after completing the following briefing items:
  - (a) **Minimums and missed approach procedures are unchanged.**
  - (b) **Monitor frequency no longer required.**
  - (c) **A lower glideslope intercept altitude may be assigned when advised to expect ILS 21L approach.**
2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will **ONLY** transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.
3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.
  - (a) ATC Directed "Breakouts". ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstruction clearance. The MVA in the final approach segment is 2800 feet north of Detroit Metro Wayne Co. airport.
  - (b) Phraseology - "TRAFFIC ALERT": If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)", the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:  
"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".
4. **ILS Navigation:** Descending on the ILS glide slope ensures complying with any charted crossing restrictions.

KDTW/DTW

JEPPESSEN

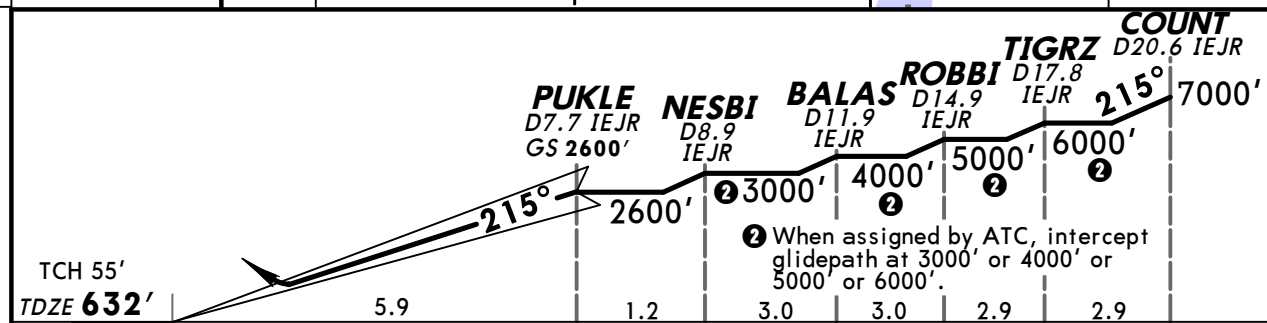
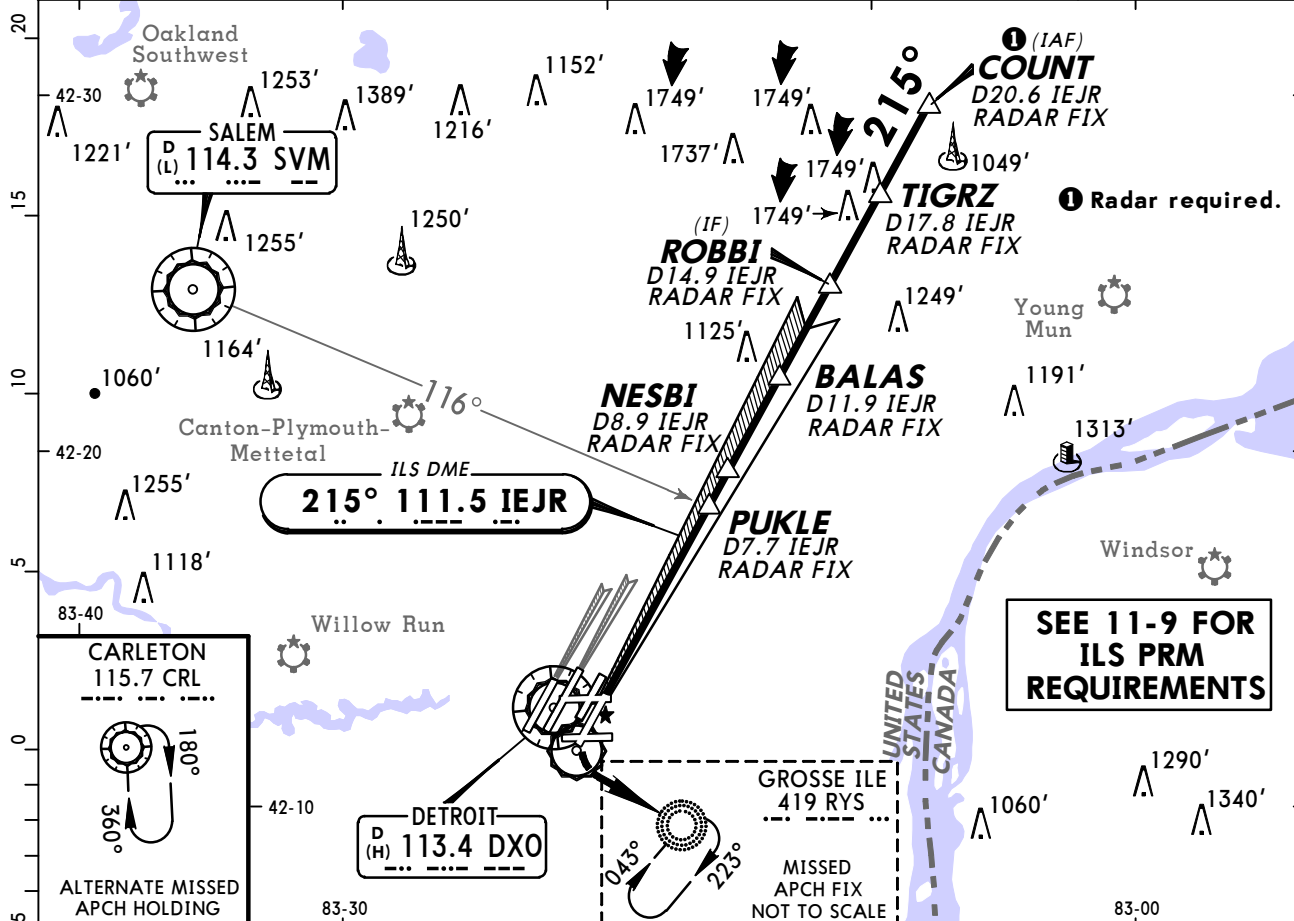
DETROIT, MICH  
ILS PRM Rwy 21L  
(SIMULTANEOUS CLOSE PARALLEL)

DETROIT METRO WAYNE CO

4 FEB 11

11-9A

|                 |                                                                                       |  |                      |        |                          |  |              |           |               |           |
|-----------------|---------------------------------------------------------------------------------------|--|----------------------|--------|--------------------------|--|--------------|-----------|---------------|-----------|
| BRIEFING STRIP™ | D-ATIS                                                                                |  | DETROIT Approach (R) |        | METRO Tower              |  | Ground       |           |               |           |
|                 |                                                                                       |  | West                 | East   | 118.4                    |  | Northwest    | Northeast | Southwest     | Southeast |
|                 | 133.67                                                                                |  | 124.05               | 125.15 | Monitor Frequency 128.35 |  | 121.8        | 119.45    | 132.72        | 119.25    |
|                 | LOC<br>IEJR                                                                           |  | Final<br>Apch Crs    |        | GS<br>PUKLE              |  | ILS<br>DA(H) |           | Apt Elev 645' |           |
|                 | 111.5                                                                                 |  | 215°                 |        | 2600' (1968')            |  | 832' (200')  |           | TDZE 632'     |           |
|                 | MISSED APCH: Climb to 1100' then climbing LEFT turn to 3000' direct RYS NDB and hold. |  |                      |        |                          |  |              |           |               |           |
| Alt Set: INCHES |                                                                                       |  |                      |        |                          |  |              |           |               |           |



|               |       |     |     |     |     |     |                                            |  |       |       |                                     |                                   |            |
|---------------|-------|-----|-----|-----|-----|-----|--------------------------------------------|--|-------|-------|-------------------------------------|-----------------------------------|------------|
| Gnd speed-Kts | 70    | 90  | 100 | 120 | 140 | 160 | <div><div>MALSR</div><div>PAPI</div></div> |  | 1100' | 3000' | <div><div></div><div>LT</div></div> | <div><div></div><div></div></div> | RYS<br>419 |
| GS            | 3.00° | 377 | 484 | 538 | 646 | 753 | 861                                        |  |       |       |                                     |                                   |            |
| MAP at DA     |       |     |     |     |     |     |                                            |  |       |       |                                     |                                   |            |

| STRAIGHT-IN LANDING RWY 21L |  |  |  |  |  |                 |  |  |  |  |
|-----------------------------|--|--|--|--|--|-----------------|--|--|--|--|
| ILS DA(H) 832' (200')       |  |  |  |  |  |                 |  |  |  |  |
| FULL                        |  |  |  |  |  | RAIL or ALS out |  |  |  |  |
| A                           |  |  |  |  |  |                 |  |  |  |  |
| B                           |  |  |  |  |  |                 |  |  |  |  |
| C                           |  |  |  |  |  |                 |  |  |  |  |
| D                           |  |  |  |  |  |                 |  |  |  |  |

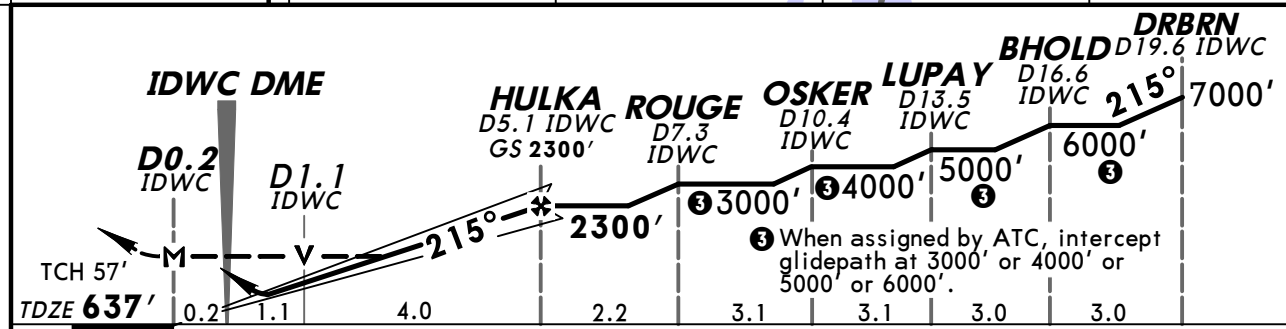
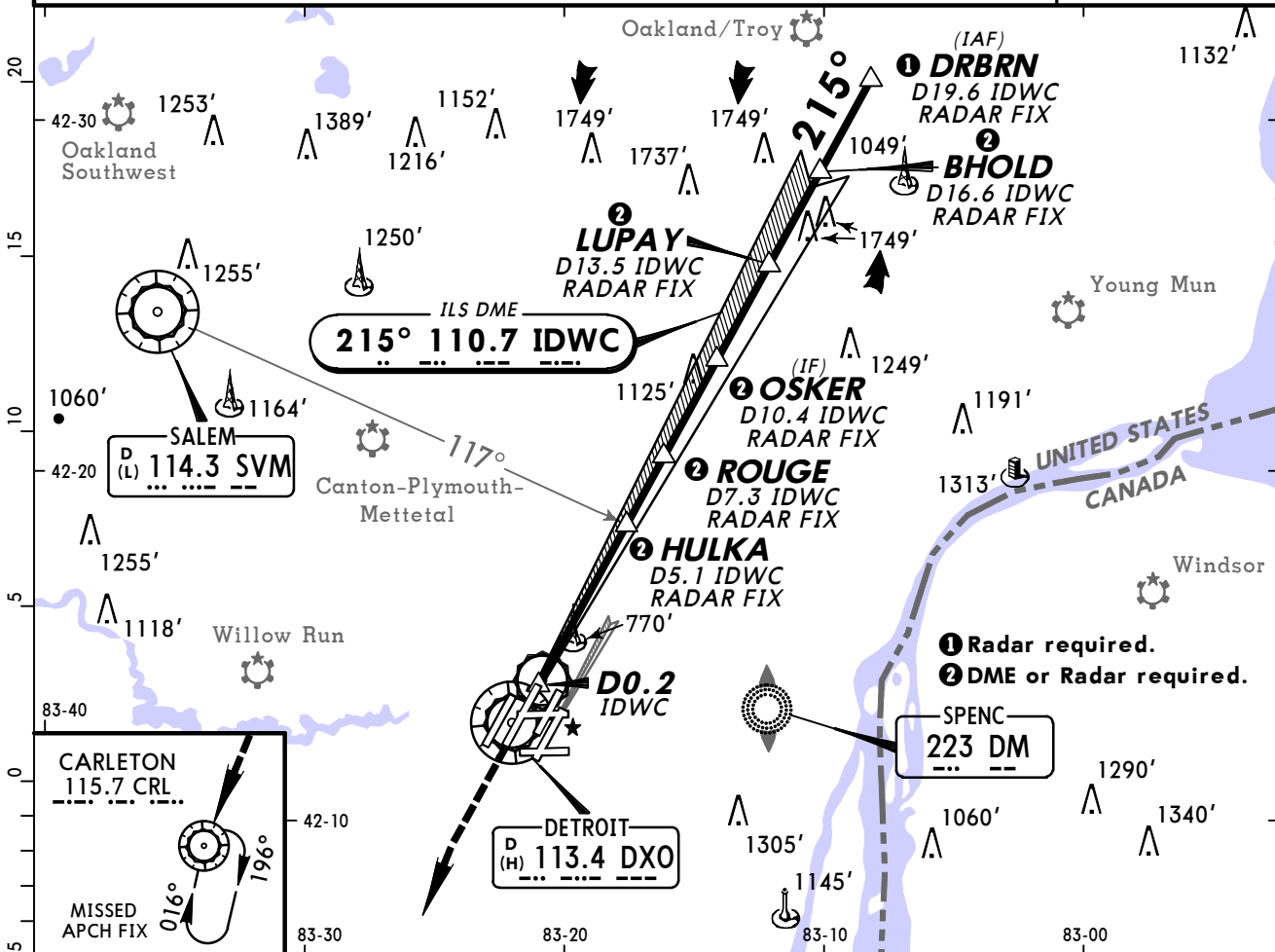
**1** RVR 18 authorized with use of Flight Director or Autopilot or HUD to DA.

CHANGES: none.

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|                 |                                                      |                                  |                     |                              |       |                                                |                   |                                |                                         |
|-----------------|------------------------------------------------------|----------------------------------|---------------------|------------------------------|-------|------------------------------------------------|-------------------|--------------------------------|-----------------------------------------|
| BRIEFING STRIP™ | D-ATIS                                               | DETROIT Approach (R)<br>WestEast |                     | METRO Tower<br>WestEast      |       | Ground<br>NorthwestNortheastSouthwestSoutheast |                   |                                |                                         |
|                 | 133.67                                               | 124.05                           | 125.15              | 135.0                        | 118.4 | 121.8                                          | 119.45            | 132.72                         | 119.25                                  |
|                 | LOC<br>IDWC<br>110.7                                 | Final<br>Apch Crs<br>215°        |                     | GS<br>HULKA<br>2300' (1663') |       | ILS<br>DA(H)<br>837' (200')                    |                   | Apt Elev 645'<br><br>TDZE 637' |                                         |
|                 | MISSED APCH: Climb to 3000' direct CRL VOR and hold. |                                  |                     |                              |       |                                                |                   |                                | <div>2800'</div> <div>MSA DXO VOR</div> |
|                 | Alt Set: INCHES                                      |                                  | Trans level: FL 180 |                              |       |                                                | Trans alt: 18000' |                                |                                         |
|                 | 1. Simultaneous approach authorized with Rwy 21L.    |                                  |                     |                              |       |                                                |                   |                                |                                         |



| Gnd speed-Kts                    | 70    | 90   | 100  | 120  | 140  | 160  | MALSR |  | 3000' | D→ | CRL 115.7 |
|----------------------------------|-------|------|------|------|------|------|-------|--|-------|----|-----------|
| GS                               | 2.85° | 358  | 460  | 512  | 614  | 716  |       |  |       |    |           |
| MAP at D0.2 IDWC or HULKA to MAP | 5.2   | 4:27 | 3:28 | 3:07 | 2:36 | 2:14 | 1:57  |  |       |    |           |

| STRAIGHT-IN LANDING RWY22L |                 |                 |                     |                 |             | CIRCLE-TO-LAND |                    |
|----------------------------|-----------------|-----------------|---------------------|-----------------|-------------|----------------|--------------------|
| ILS                        |                 |                 | 2 LOC (GS out)      |                 |             |                |                    |
| DA(H) 837' (200')          |                 |                 | MDA(H) 1080' (443') |                 |             |                |                    |
| FULL                       |                 | RAIL or ALS out |                     | RAIL out        | ALS out     | Max Kts        | MDA(H)             |
| A                          | 1 RVR 24 or 1/2 | RVR 40 or 3/4   | RVR 24 or 1/2       | RVR 40 or 3/4   | RVR 50 or 1 | 90             | 1200' (555')-1     |
| B                          |                 |                 |                     |                 |             | 120            |                    |
| C                          |                 |                 | RVR 40 or 3/4       | RVR 60 or 1 1/4 |             | 140            | 1200' (555')-1 1/2 |
| D                          |                 |                 | RVR 50 or 1         | 1 1/2           |             | 165            | 1200' (555')-2     |

**1** RVR 18 authorized with the use of Flight Director or Autopilot or HUD to DA.  
**2** Not authorized during simultaneous operations.

**ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)  
ILS PRM RWY 22L**

(SIMULTANEOUS CLOSE PARALLEL)

Special pilot training required. Pilots who are unable to participate will be afforded appropriate arrival services as operational conditions permit and must notify the controlling ARTCC as soon as practical, but at least 100 miles from destination.

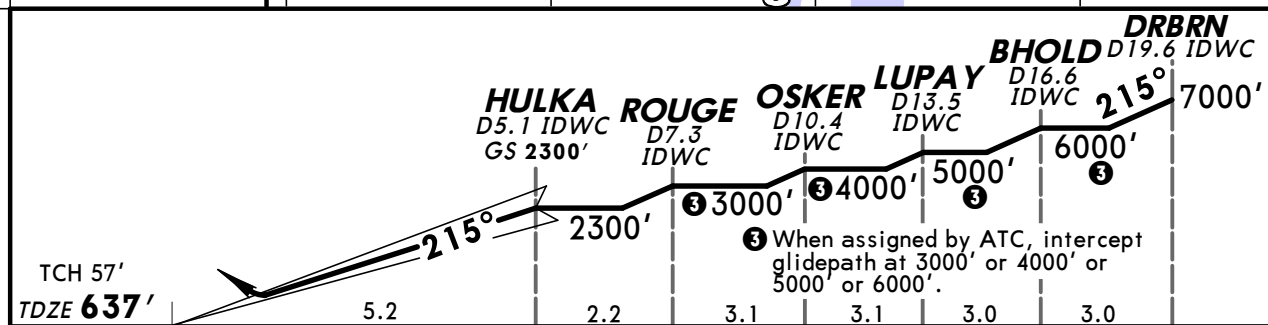
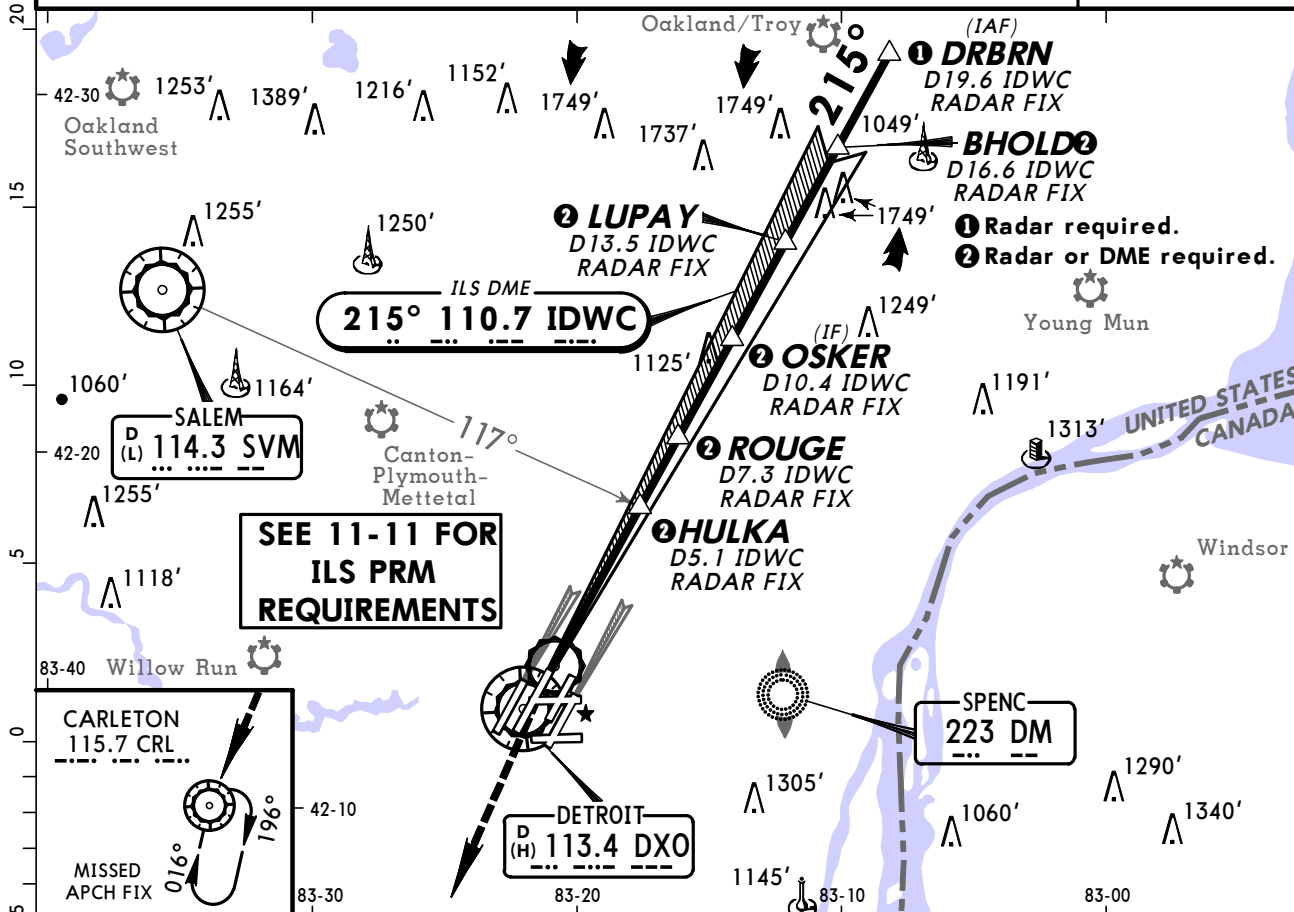
**Condensed Briefing Point:**

- When instructed, **IMMEDIATELY** switch to the tower frequency and select the monitor frequency audio.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS/PRM 22L approach. If later advised to expect an ILS 22L approach, the ILS/PRM 22L chart may be used after completing the following briefing items:
  - (a) **Minimums and missed approach procedures are unchanged.**
  - (b) **Monitor frequency no longer required.**
  - (c) **A lower glideslope intercept altitude may be assigned when advised to expect ILS 22L approach.**
2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will **ONLY** transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.
3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.
  - (a) **ATC Directed "Breakouts".** ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstruction clearance. The MVA in the final approach segment is 2800 feet north of Detroit Metro Wayne Co. airport.
  - (b) **Phraseology - "TRAFFIC ALERT":** If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)", the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:  
"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".
4. **ILS Navigation:** Descending on the ILS glide slope ensures complying with any charted crossing restrictions.

BRIEFING STRIP™

|                                                                                                                                                                                                                                                                  |                           |        |                              |                             |                            |           |                                         |           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------|------------------------------|-----------------------------|----------------------------|-----------|-----------------------------------------|-----------|
| D-ATIS                                                                                                                                                                                                                                                           | DETROIT Approach (R)      |        | METRO Tower                  |                             | Ground                     |           |                                         |           |
|                                                                                                                                                                                                                                                                  | West                      | East   | 135.0                        |                             | Northwest                  | Northeast | Southwest                               | Southeast |
| 133.67                                                                                                                                                                                                                                                           | 124.05                    | 125.15 | Monitor Frequency            | 135.77                      | 121.8                      | 119.45    | 132.72                                  | 119.25    |
| LOC<br>IDWC<br>110.7                                                                                                                                                                                                                                             | Final<br>Apch Crs<br>215° |        | GS<br>HULKA<br>2300' (1663') | ILS<br>DA(H)<br>837' (200') | Apt Elev 645'<br>TDZE 637' |           | <div>2800'</div> <div>MSA DXO VOR</div> |           |
| MISSED APCH: Climb to 3000' direct CRL VOR and hold.                                                                                                                                                                                                             |                           |        |                              |                             |                            |           |                                         |           |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                                                                                                                                                                            |                           |        |                              |                             |                            |           |                                         |           |
| 1. Dual VHF comm required. 2. Simultaneous close parallel approach authorized with ILS PRM Rwy 21L and ILS PRM Rwy 22R. 3. See 11-11 for "Attention All Users of ILS Precision Runway Monitor (PRM)." 4. Procedure not authorized when glideslope not available. |                           |        |                              |                             |                            |           |                                         |           |



| Gnd speed-Kts | 70    | 90  | 100 | 120 | 140 | 160 | MALSR |  | 3000' | CRL   |
|---------------|-------|-----|-----|-----|-----|-----|-------|--|-------|-------|
| GS            | 2.85° | 358 | 460 | 512 | 614 | 716 | 818   |  | ↑     | 115.7 |
| MAP at DA     |       |     |     |     |     |     |       |  |       |       |

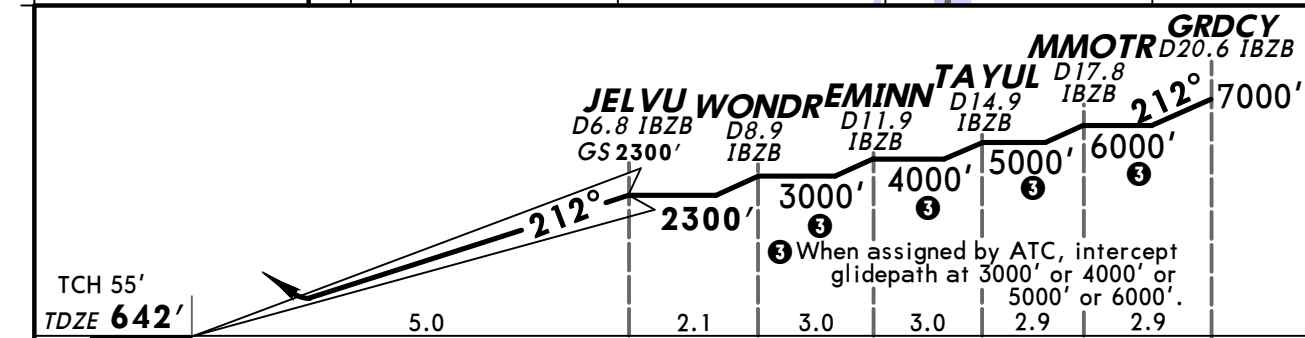
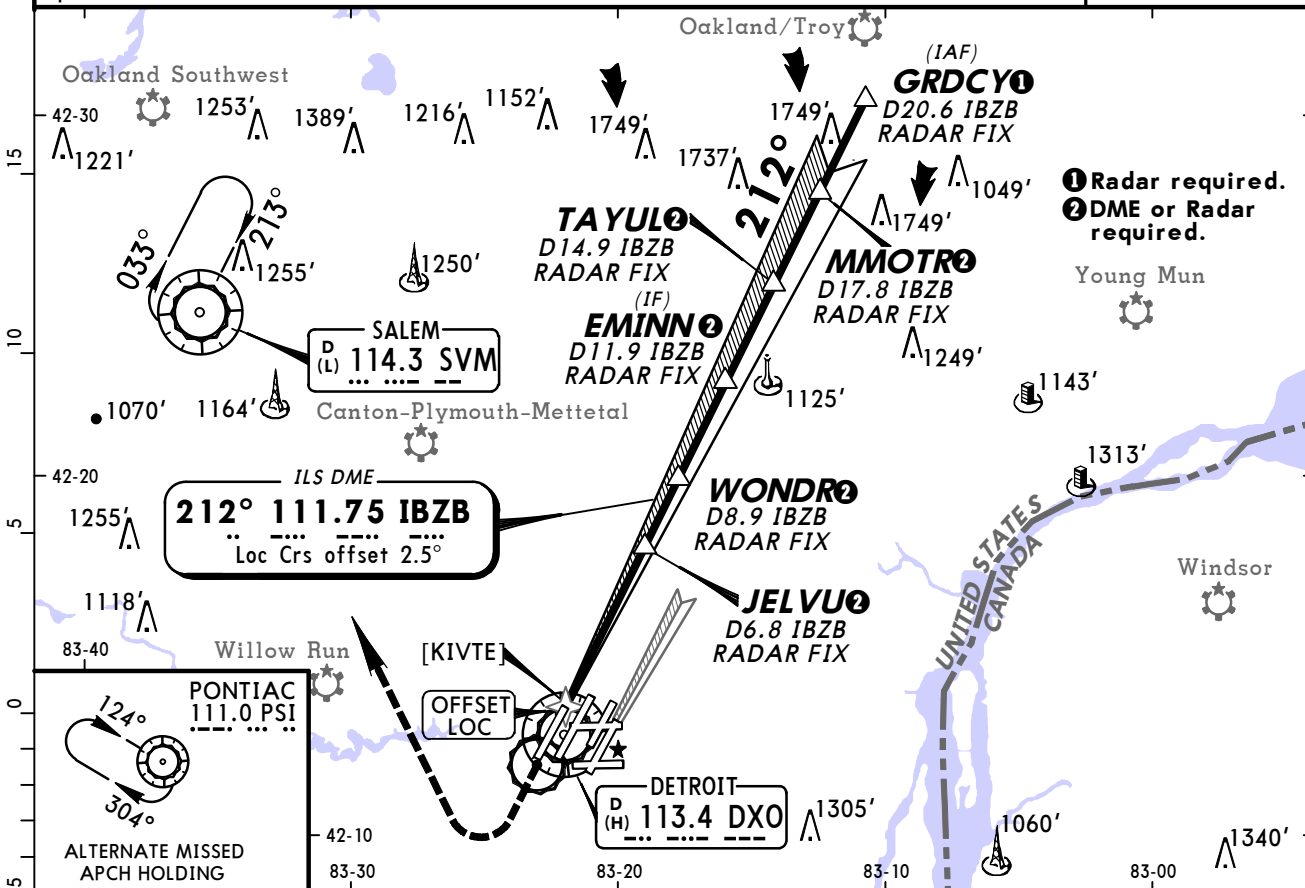
| STRAIGHT-IN LANDING RWY 22L |                        |  |  |  |  |                 |  |  |  |  |
|-----------------------------|------------------------|--|--|--|--|-----------------|--|--|--|--|
| ILS                         |                        |  |  |  |  |                 |  |  |  |  |
| DA(H) <b>837'</b> (200')    |                        |  |  |  |  |                 |  |  |  |  |
| FULL                        |                        |  |  |  |  | RAIL or ALS out |  |  |  |  |
| A                           | <b>1</b> RVR 24 or 1/2 |  |  |  |  | RVR 40 or 3/4   |  |  |  |  |
| B                           |                        |  |  |  |  |                 |  |  |  |  |
| C                           |                        |  |  |  |  |                 |  |  |  |  |
| D                           |                        |  |  |  |  |                 |  |  |  |  |

**1** RVR 18 with Flight Director or Autopilot or HUD to DA.

CHANGES: None.

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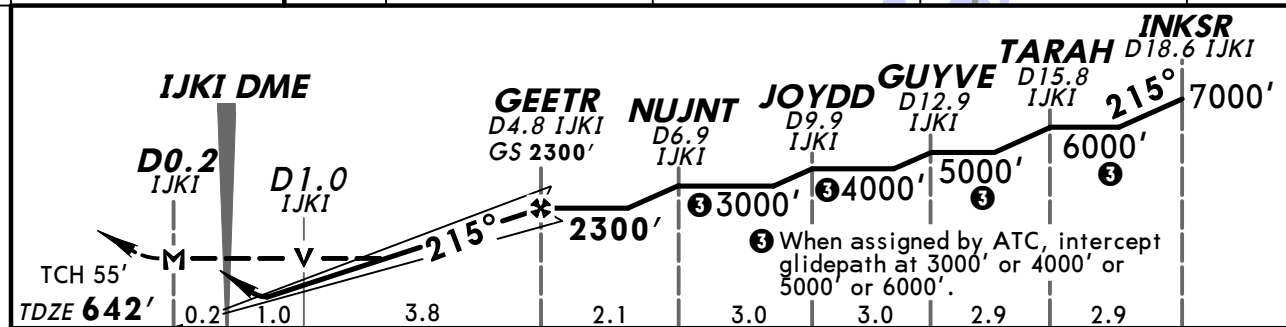
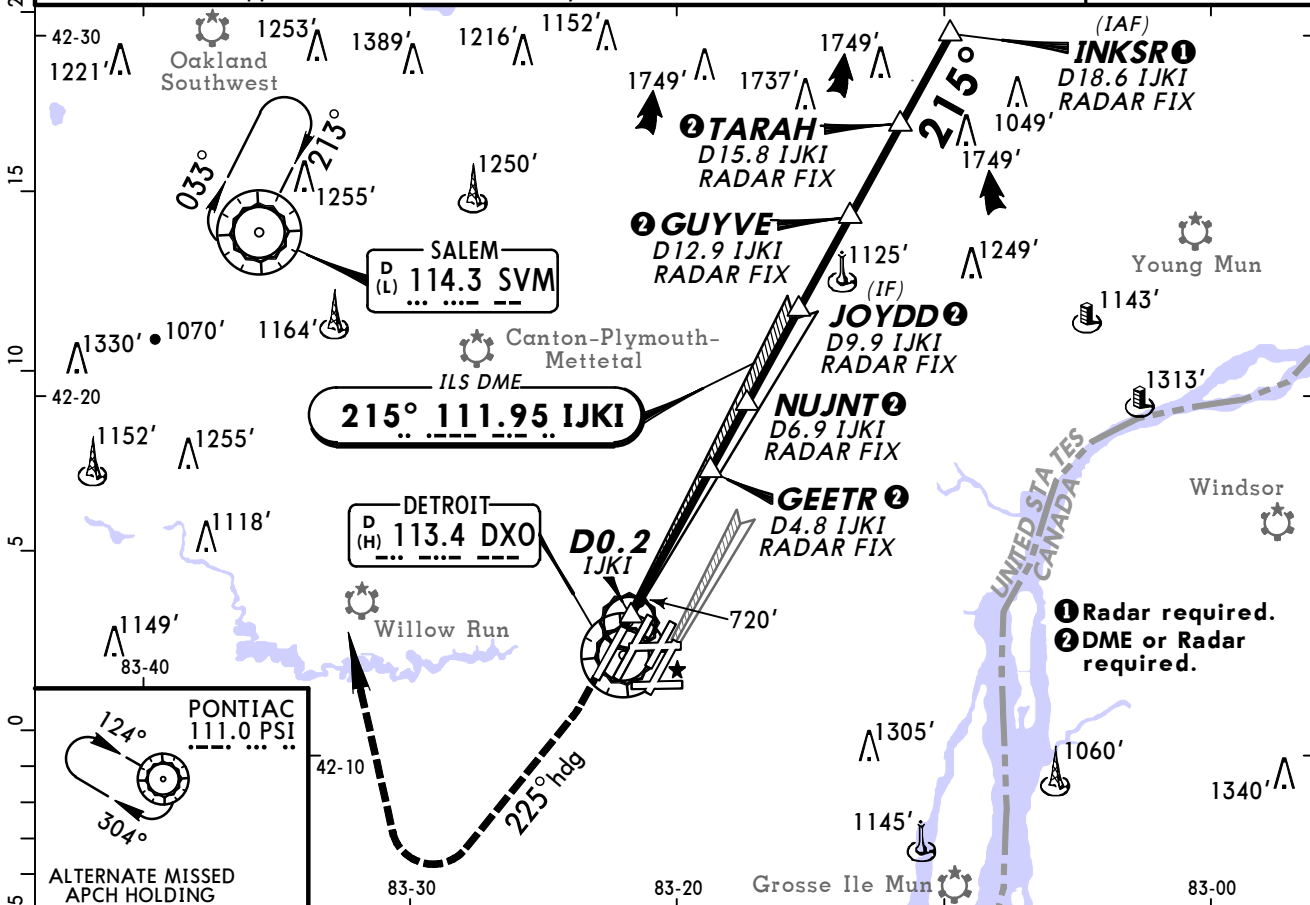
|                 |                                                                                                                                                                              |                                   |                     |                          |              |                                                   |        |                                         |        |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------|--------------------------|--------------|---------------------------------------------------|--------|-----------------------------------------|--------|
| BRIEFING STRIP™ | D-ATIS                                                                                                                                                                       | DETROIT Approach (R)<br>West East |                     | METRO Tower<br>West East |              | Ground<br>Northwest Northeast Southwest Southeast |        |                                         |        |
|                 | 133.67                                                                                                                                                                       | 124.05                            | 125.15              | 135.0                    | 118.4        | 121.8                                             | 119.45 | 132.72                                  | 119.25 |
|                 | LOC<br>IBZB                                                                                                                                                                  | Final<br>Aptch Crs                |                     | GS<br>JELVU              | ILS<br>DA(H) | Apt Elev 645'                                     |        | <div>2800'</div> <div>MSA DXO VOR</div> |        |
|                 | 111.75                                                                                                                                                                       | 212°                              |                     | 2300' (1658')            | 892' (250')  | TDZE 642'                                         |        |                                         |        |
|                 | MISSED APCH: Climb to 1300' then climbing RIGHT turn to 3000' direct SVM VOR and hold.                                                                                       |                                   |                     |                          |              |                                                   |        |                                         |        |
|                 | Alt Set: INCHES                                                                                                                                                              |                                   | Trans level: FL 180 |                          |              | Trans alt: 18000'                                 |        |                                         |        |
|                 | 1. Procedure not authorized when glideslope not available. 2. Simultaneous approach authorized with Rwy 21L. 3. LOC procedure not authorized during simultaneous operations. |                                   |                     |                          |              |                                                   |        |                                         |        |



|               |       |     |     |     |     |     |               |       |       |   |           |
|---------------|-------|-----|-----|-----|-----|-----|---------------|-------|-------|---|-----------|
| Gnd speed-Kts | 70    | 90  | 100 | 120 | 140 | 160 | MALSR<br>PAPI | 1300' | 3000' | → | SVM 114.3 |
| GS            | 3.00° | 372 | 478 | 531 | 637 | 743 |               | ↑     | RT    |   |           |
| MAP at DA     |       |     |     |     |     |     |               |       |       |   |           |

|                            |               |  |  |  |  |                 |  |  |  |  |  |
|----------------------------|---------------|--|--|--|--|-----------------|--|--|--|--|--|
| STRAIGHT-IN LANDING RWY22R |               |  |  |  |  |                 |  |  |  |  |  |
| ILS                        |               |  |  |  |  |                 |  |  |  |  |  |
| DA(H) 892' (250')          |               |  |  |  |  |                 |  |  |  |  |  |
| FULL                       |               |  |  |  |  | RAIL or ALS out |  |  |  |  |  |
| A                          | RVR 24 or 1/2 |  |  |  |  | RVR 40 or 3/4   |  |  |  |  |  |
| B                          |               |  |  |  |  |                 |  |  |  |  |  |
| C                          |               |  |  |  |  |                 |  |  |  |  |  |
| D                          |               |  |  |  |  |                 |  |  |  |  |  |

|                                                   |                                                                                                                          |                           |                     |                              |                             |                            |           |                  |           |  |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------|------------------------------|-----------------------------|----------------------------|-----------|------------------|-----------|--|
| BRIEFING STRIP™                                   | D-ATIS                                                                                                                   | DETROIT Approach (R)      |                     | METRO Tower                  |                             | Ground                     |           |                  |           |  |
|                                                   |                                                                                                                          | West                      | East                | West                         | East                        | Northwest                  | Northeast | Southwest        | Southeast |  |
|                                                   | 133.67                                                                                                                   | 124.05                    | 125.15              | 135.0                        | 118.4                       | 121.8                      | 119.45    | 132.72           | 119.25    |  |
|                                                   | LOC<br>IJKI<br>111.95                                                                                                    | Final<br>Apch Crs<br>215° |                     | GS<br>GEETR<br>2300' (1658') | ILS<br>DA(H)<br>842' (200') | Apt Elev 645'<br>TDZE 642' |           | <div>2800'</div> |           |  |
|                                                   | MISSED APCH: Climb to 1300' then climbing RIGHT turn via 225° heading to 3000', then RIGHT turn direct SVM VOR and hold. |                           |                     |                              |                             |                            |           |                  |           |  |
|                                                   | Alt Set: INCHES                                                                                                          |                           | Trans level: FL 180 |                              | Trans alt: 18000'           |                            |           |                  |           |  |
| 1. Simultaneous approach authorized with Rwy 21L. |                                                                                                                          |                           |                     |                              |                             |                            |           | MSA DXO VOR      |           |  |



| Gnd speed-Kts                       | 70    | 90   | 100  | 120  | 140  | 160  | MALSR |  | 1300' | 3000' | 225° |
|-------------------------------------|-------|------|------|------|------|------|-------|--|-------|-------|------|
| GS                                  | 3.00° | 372  | 478  | 531  | 637  | 743  | 849   |  |       |       | hdg  |
| MAP at D0.2 IJKI or<br>GEETR to MAP | 5.0   | 4:17 | 3:20 | 3:00 | 2:30 | 2:09 | 1:53  |  |       |       |      |

| STRAIGHT-IN LANDING RWY22R      |                 |                                              |               |             | CIRCLE-TO-LAND |                      |
|---------------------------------|-----------------|----------------------------------------------|---------------|-------------|----------------|----------------------|
| ILS<br>DA(H) <b>842'</b> (200') |                 | 2 LOC (GS out)<br>MDA(H) <b>1060'</b> (418') |               |             | Max<br>Kts     | MDA(H)               |
| FULL                            | RAIL or ALS out | RAIL out                                     | ALS out       |             | 90             | 1200' (555') - 1     |
| A                               |                 | RVR 24 or 1/2                                | RVR 40 or 3/4 | RVR 50 or 1 | 120            |                      |
| B                               |                 |                                              |               |             | 140            | 1200' (555') - 1 1/2 |
| C                               | 1 RVR 24 or 1/2 | RVR 40 or 3/4                                |               |             | 165            | 1200' (555') - 2     |
| D                               |                 | RVR 40 or 3/4                                | RVR 60 or 1/4 |             |                |                      |

1 RVR 18 authorized with the use of Flight Director or Autopilot or HUD to DA.  
2 Not authorized during simultaneous operations.

**ATTENTION ALL USERS OF ILS PRECISION RUNWAY MONITOR (PRM)  
ILS Y PRM RWY 22R  
(SIMULTANEOUS CLOSE PARALLEL)**

Special pilot training required. Pilots who are unable to participate will be afforded appropriate arrival services as operational conditions permit and must notify the controlling ARTCC as soon as practical, but at least 100 miles from destination.

**Condensed Briefing Point:**

- When instructed, **IMMEDIATELY** switch to the tower frequency and select the monitor frequency audio.
- Exit the runway at Taxiway A4 (6700 ft) or A3 (7700 ft) whenever practical. See Exit Taxiway Use below.

1. **ATIS.** When the ATIS broadcast advises that simultaneous ILS/PRM approaches are in progress, pilots should brief to fly the ILS Y PRM 22R approach. If later advised to expect an ILS Yankee 22R approach, the ILS Y PRM 22R chart may be used after completing the following briefing items:
  - (a) **Minimums and missed approach procedures are unchanged.**
  - (b) **Monitor frequency no longer required.**
  - (c) **A lower glideslope intercept altitude may be assigned when advised to expect ILS Yankee 22R approach.**
2. **Dual VHF Communication required.** To avoid blocked transmissions, each runway will have two frequencies, a primary and a monitor frequency. The tower controller will transmit on both frequencies. The Monitor controller's transmissions, if needed, will override both frequencies. Pilots will **ONLY** transmit on the tower controller's frequency, but will listen to both frequencies. Select the monitor frequency audio only when instructed by ATC to contact the tower. The volume levels should be set about the same on both radios so that the pilots will be able to hear transmissions on at least one frequency if the other is blocked.
3. **All "Breakouts" are to be hand flown** to assure that the maneuver is accomplished in the shortest amount of time. Pilots, when directed by ATC to break off an approach, must assume that an aircraft is blundering toward their course and a breakout must be initiated immediately.
  - (a) ATC Directed "Breakouts". ATC directed breakouts will consist of a turn and a climb or descent. Pilots must always initiate the breakout in response to an air traffic controller instruction. Controllers will give a descending breakout only when there are no other reasonable options available, but in no case will the descent be below minimum vectoring altitude (MVA) which provides at least 1,000 feet required obstruction clearance. The MVA in the final approach segment is 2800 feet north of Detroit Metro Wayne Co. airport.
  - (b) Phraseology - "TRAFFIC ALERT": If an aircraft enters the "NO TRANSGRESSION ZONE (NTZ)", the controller will breakout the threatened aircraft on the adjacent approach. The phraseology for the breakout will be:  
"TRAFFIC ALERT, (aircraft call sign) TURN (left/right) IMMEDIATELY, HEADING (degrees), CLIMB/DESCEND AND MAINTAIN (altitude)".
4. **ILS Navigation:** Descending on the ILS glide slope ensures complying with any charted crossing restrictions.
5. **Exit Taxiway Use:** Because of the location of the offset LOC critical area, whenever possible, pilots should exit the runway at Taxiway A4 (6700 ft) or A3 (7700 ft). If practical, do not stop on Taxiway A between Taxiway A3 and Taxiway Q.



KDTW/DTW

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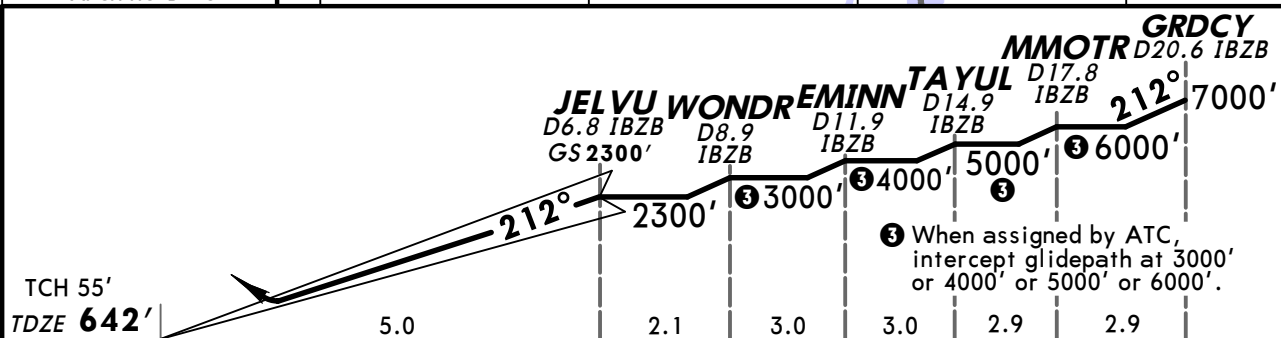
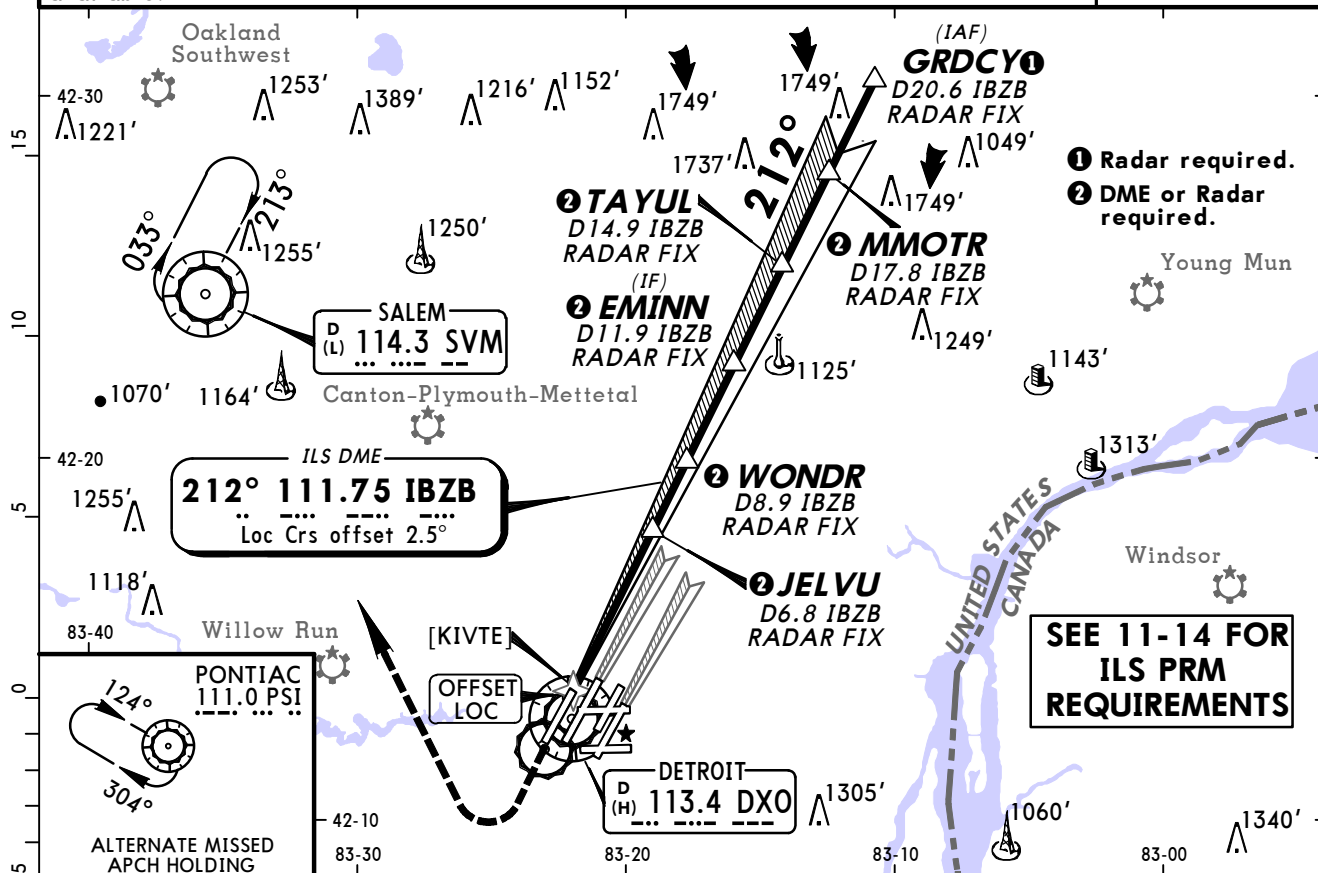
DETROIT METRO WAYNE CO

17 FEB 12

11-14AA

ILS Y PRM Rwy 22R  
(SIMULTANEOUS CLOSE PARALLEL)

|                 |                                                                                        |  |                           |        |                              |  |                             |           |                            |           |
|-----------------|----------------------------------------------------------------------------------------|--|---------------------------|--------|------------------------------|--|-----------------------------|-----------|----------------------------|-----------|
| BRIEFING STRIP™ | D-ATIS                                                                                 |  | DETROIT Approach (R)      |        | METRO Tower                  |  | Ground                      |           |                            |           |
|                 |                                                                                        |  | West                      | East   | 128.12                       |  | Northwest                   | Northeast | Southwest                  | Southeast |
|                 | 133.67                                                                                 |  | 124.05                    | 125.15 | Monitor Frequency 127.05     |  | 121.8                       | 119.45    | 132.72                     | 119.25    |
|                 | LOC<br>IBZB<br>111.75                                                                  |  | Final<br>Apch Crs<br>212° |        | GS<br>JELVU<br>2300' (1658') |  | ILS<br>DA(H)<br>892' (250') |           | Apt Elev 645'<br>TDZE 642' |           |
|                 | MISSED APCH: Climb to 1300' then climbing RIGHT turn to 3000' direct SVM VOR and hold. |  |                           |        |                              |  |                             |           |                            |           |
|                 | Alt Set: INCHES                                                                        |  |                           |        |                              |  |                             |           |                            |           |



|               |       |     |     |     |     |     |                                            |                               |                                             |               |                                 |     |
|---------------|-------|-----|-----|-----|-----|-----|--------------------------------------------|-------------------------------|---------------------------------------------|---------------|---------------------------------|-----|
| Gnd speed-Kts | 70    | 90  | 100 | 120 | 140 | 160 | <div><div>MALSR</div><div>PAPI</div></div> | <div>1300'</div> <div>↑</div> | <div>3000'</div> <div>→</div> <div>RT</div> | <div>D→</div> | <div>SVM</div> <div>114.3</div> |     |
| Gs            | 3.00° | 372 | 478 | 531 | 637 | 743 |                                            |                               |                                             |               |                                 | 849 |
|               |       |     |     |     |     |     |                                            |                               |                                             |               |                                 |     |
| MAP at DA     |       |     |     |     |     |     |                                            |                               |                                             |               |                                 |     |

STRAIGHT-IN LANDING RWY 22R

ILS

DA(H) 892' (250')

FULL

RAIL or ALS out

| A |               |  |  |  |  |  |               |  |  |  |  |  |
|---|---------------|--|--|--|--|--|---------------|--|--|--|--|--|
| B |               |  |  |  |  |  |               |  |  |  |  |  |
| C | RVR 24 or 1/2 |  |  |  |  |  | RVR 40 or 3/4 |  |  |  |  |  |
| D |               |  |  |  |  |  |               |  |  |  |  |  |

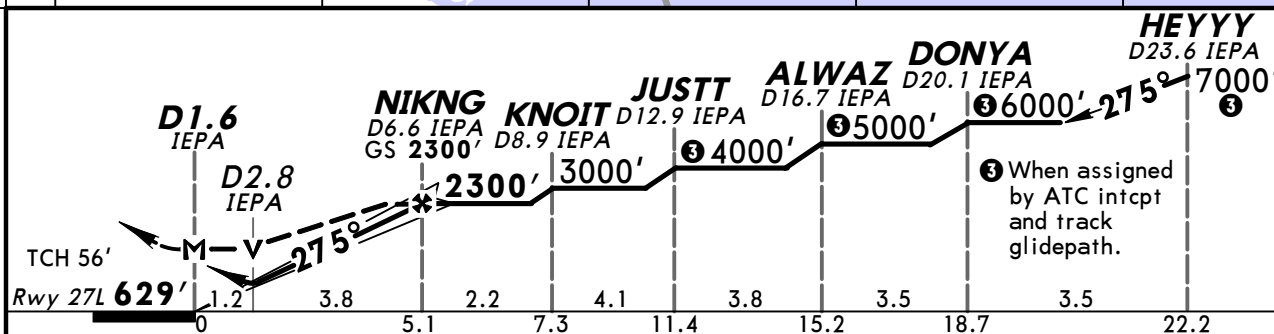
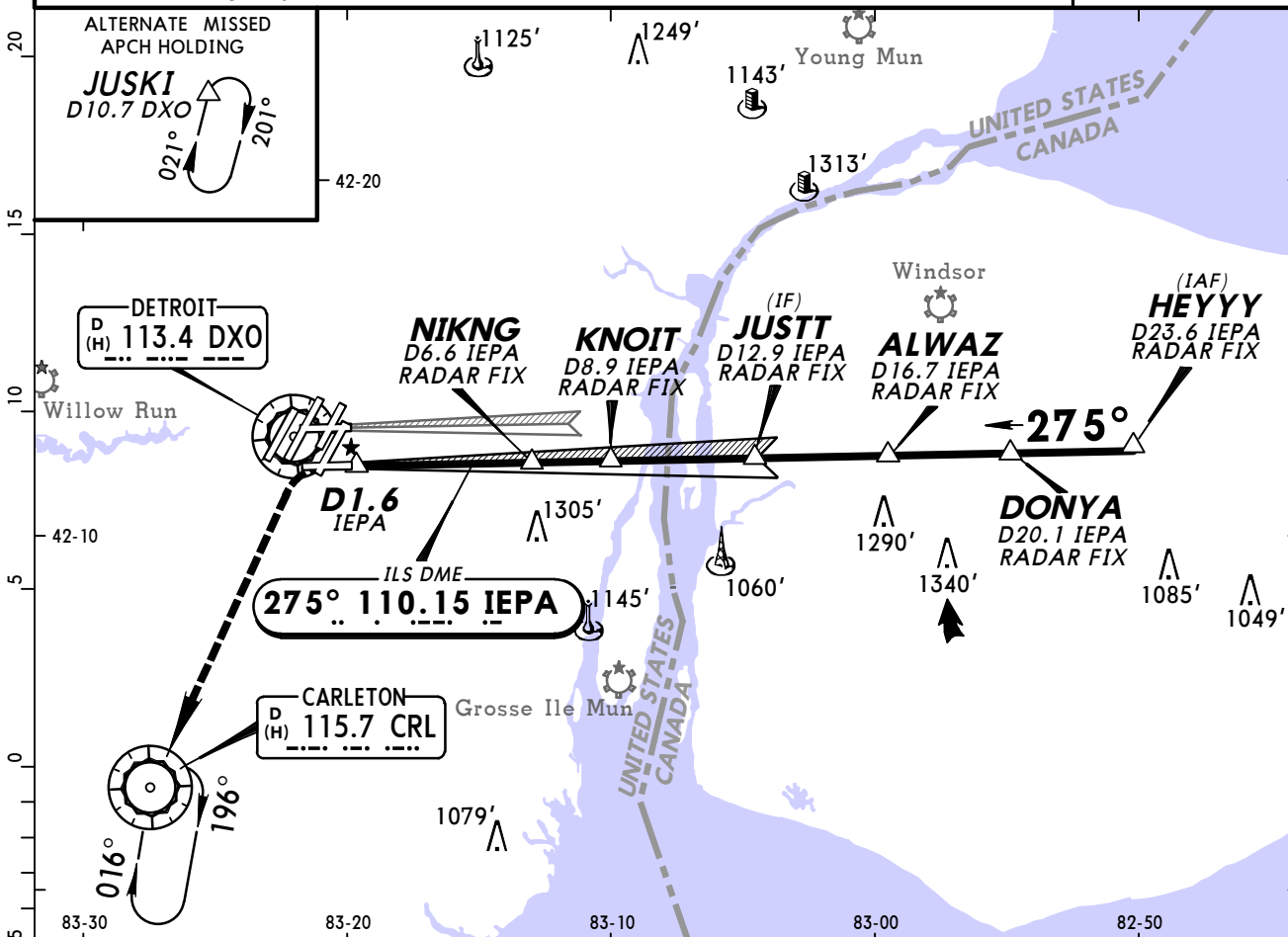
CHANGES: Lighting.

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TERPS AMEND 08 10 FEB 2011

BRIEFING STRIP™

|                                                                                                                   |                           |        |                              |                             |                               |           |                                         |           |
|-------------------------------------------------------------------------------------------------------------------|---------------------------|--------|------------------------------|-----------------------------|-------------------------------|-----------|-----------------------------------------|-----------|
| D-ATIS                                                                                                            | DETROIT Approach (R)      |        | METRO Tower                  |                             | Ground                        |           |                                         |           |
|                                                                                                                   | West                      | East   | West                         | East                        | Northwest                     | Northeast | Southwest                               | Southeast |
| 133.67                                                                                                            | 124.05                    | 125.15 | 135.0                        | 118.4                       | 121.8                         | 119.45    | 132.72                                  | 119.25    |
| LOC<br>IEPA<br>110.15                                                                                             | Final<br>Apch Crs<br>275° |        | GS<br>NIKNG<br>2300' (1671') | ILS<br>DA(H)<br>829' (200') | Apt Elev 645'<br>Rwy 27L 629' |           | <div>2800'</div> <div>MSA DXO VOR</div> |           |
| MISSED APCH: Climb to 1100' then climbing LEFT turn to 3000' direct CRL VOR and hold, or as directed by ATC.      |                           |        |                              |                             |                               |           |                                         |           |
| Alt Set: INCHES                      Trans level: FL 180                      Trans alt: 18000'                   |                           |        |                              |                             |                               |           |                                         |           |
| 1. Radar required. 2. Simultaneous approach authorized with Rwy 27R.<br>3. VGSI and ILS glidepath not coincident. |                           |        |                              |                             |                               |           |                                         |           |



| Gnd speed-Kts                    | 70    | 90   | 100  | 120  | 140  | 160  | MALSR |  | PAPI |  | 1100' |  | 3000' |  | CRL 115.7 |  |
|----------------------------------|-------|------|------|------|------|------|-------|--|------|--|-------|--|-------|--|-----------|--|
| GS                               | 3.00° | 372  | 478  | 531  | 637  | 743  |       |  |      |  |       |  |       |  |           |  |
| MAP at D1.6 IEPA or NIKNG to MAP | 5.1   | 4:22 | 3:24 | 3:04 | 2:33 | 2:11 |       |  |      |  |       |  |       |  |           |  |

| TERPS |                        | STRAIGHT-IN LANDING RWY 27L |                 |                            | CIRCLE-TO-LAND |         |                      |
|-------|------------------------|-----------------------------|-----------------|----------------------------|----------------|---------|----------------------|
|       |                        | ILS                         |                 | LOC (GS out)               |                |         |                      |
|       |                        | DA(H) <b>829'</b> (200')    |                 | MDA(H) <b>1080'</b> (451') |                |         |                      |
|       |                        | FULL                        | RAIL or ALS out | RAIL out                   | ALS out        | Max Kts | MDA(H)               |
| A     |                        |                             |                 |                            |                | 90      | 1200' (555') - 1     |
| B     |                        |                             |                 |                            |                | 120     |                      |
| C     | <b>1</b> RVR 24 or 1/2 | RVR 40 or 3/4               |                 | RVR 40 or 3/4              | RVR 55 or 1    | 140     | 1200' (555') - 1 1/2 |
| D     |                        |                             |                 | RVR 45 or 7/8              | RVR 55 or 1    | 165     | 1200' (555') - 2     |

**1** RVR 18 with Flight Director or Autopilot or HUD to DA.  
**2** Not authorized during simultaneous operations.

CHANGES: Procedure.

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TERPS AMEND 3 15 DEC 2011



KDTW/DTW

DETROIT METRO WAYNE CO

9 DEC 11

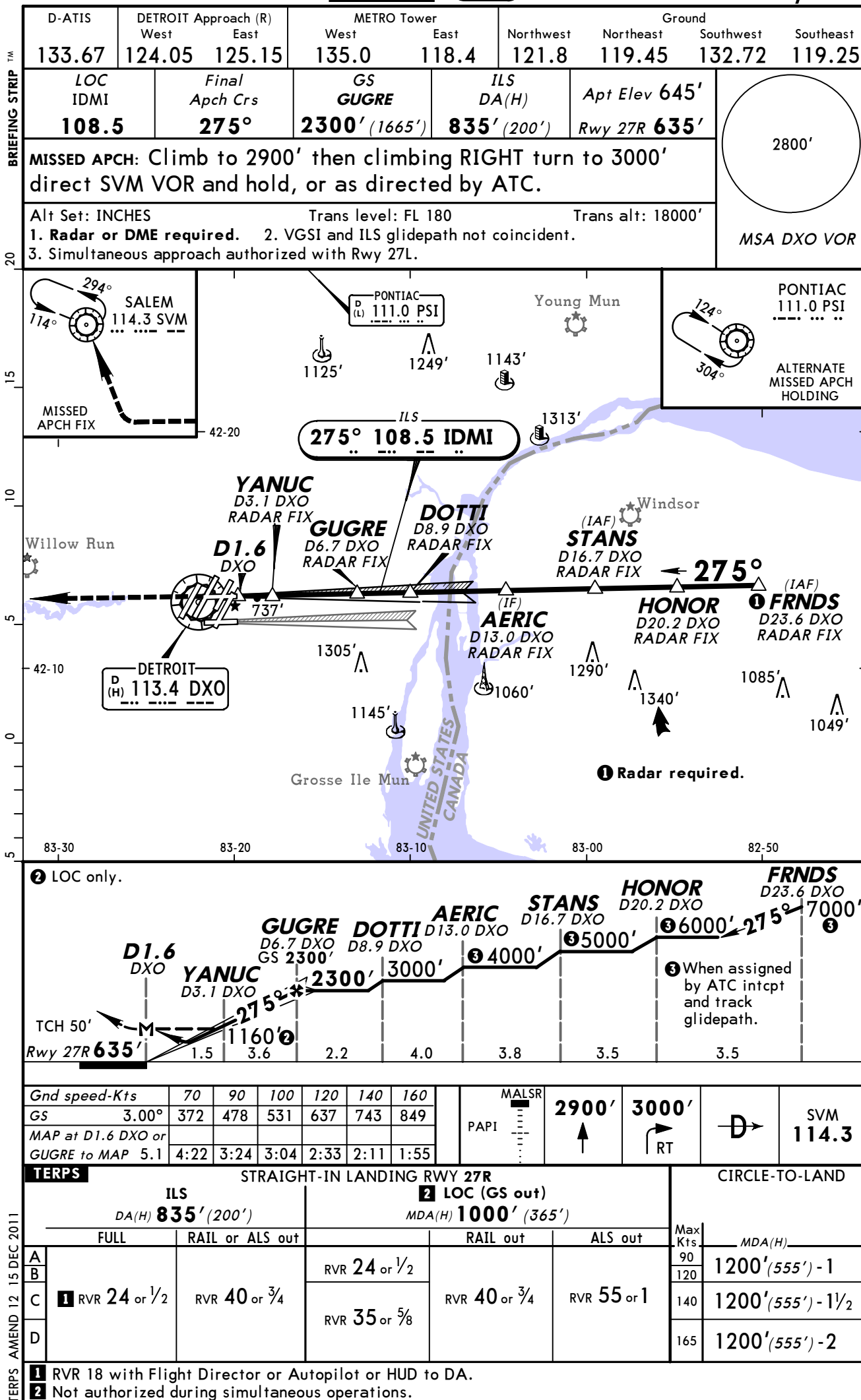
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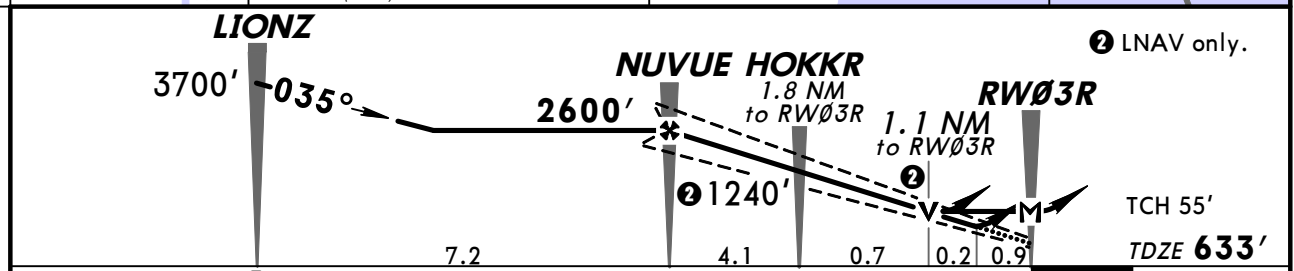
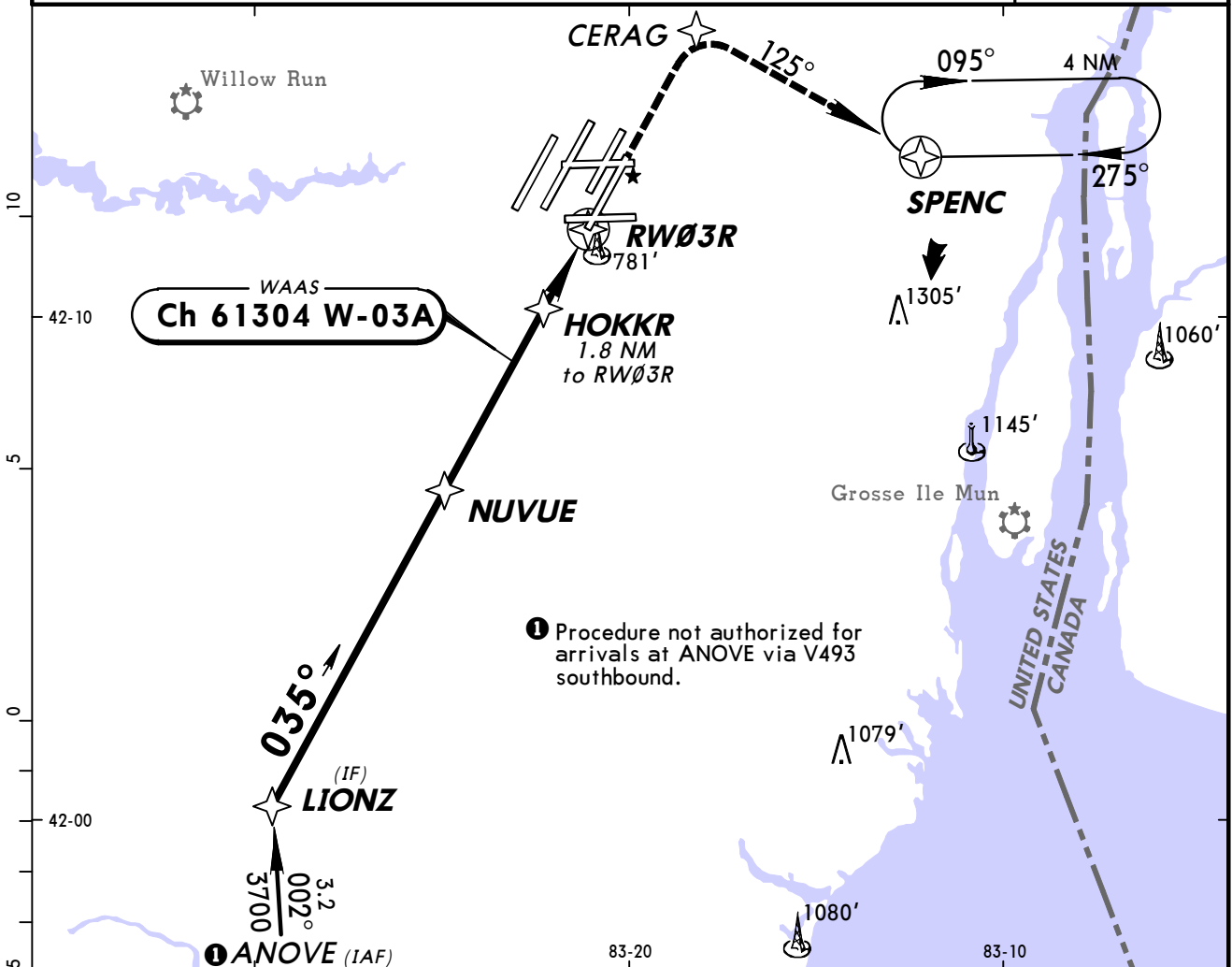
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DETROIT, MICH

ILS or LOC Rwy 27R



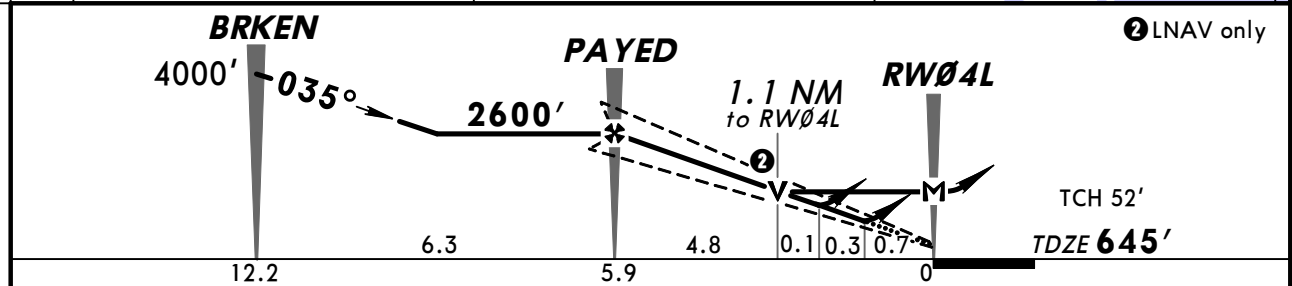
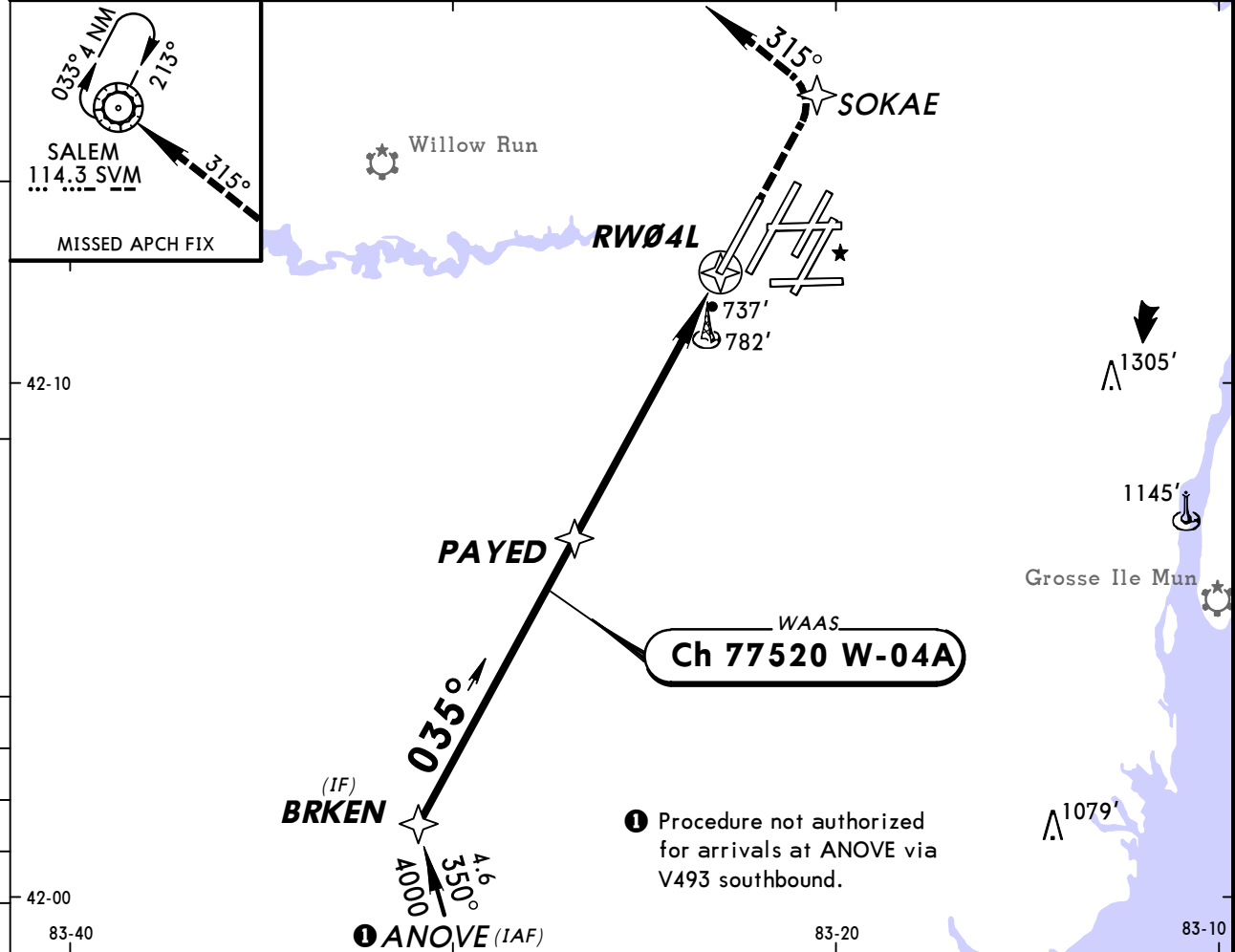
| D-ATIS                                                                                                                     |  | DETROIT Approach (R)      |        | METRO Tower                           |       | Ground                      |           |                            |                                       |
|----------------------------------------------------------------------------------------------------------------------------|--|---------------------------|--------|---------------------------------------|-------|-----------------------------|-----------|----------------------------|---------------------------------------|
|                                                                                                                            |  | West                      | East   | West                                  | East  | Northwest                   | Northeast | Southwest                  | Southeast                             |
| 133.67                                                                                                                     |  | 124.05                    | 125.15 | 135.0                                 | 118.4 | 121.8                       | 119.45    | 132.72                     | 119.25                                |
| WAAS<br>Ch 61304<br>W-03A                                                                                                  |  | Final<br>Apch Crs<br>035° |        | Minimum Alt<br>NUVUE<br>2600' (1967') |       | LPV<br>DA(H)<br>957' (324') |           | Apt Elev 645'<br>TDZE 633' |                                       |
| MISSED APCH: Climb to 3000' direct CERAG and RIGHT turn via 125° track to SPENC and hold, continue climb-in-hold to 3000'. |  |                           |        |                                       |       |                             |           |                            | <div>2800'</div> <div>MSA RW03R</div> |
| Alt Set: INCHES                                                                                                            |  |                           |        |                                       |       |                             |           |                            |                                       |



|                        |     |     |     |     |     |     |                                                                                     |                 |            |                                                                                       |       |  |
|------------------------|-----|-----|-----|-----|-----|-----|-------------------------------------------------------------------------------------|-----------------|------------|---------------------------------------------------------------------------------------|-------|--|
| 13.1                   |     |     |     |     |     |     | 5.9                                                                                 |                 | 0          |                                                                                       |       |  |
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 |  | ALSF-II<br>PAPI | 3000'<br>↑ |  | CERAG |  |
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |                                                                                     |                 |            |                                                                                       |       |  |
| MAP at RW03R           |     |     |     |     |     |     |                                                                                     |                 |            |                                                                                       |       |  |

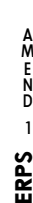
| STRAIGHT-IN LANDING RWY 3R |               |             |               |                 |               | CIRCLE-TO-LAND |                      |
|----------------------------|---------------|-------------|---------------|-----------------|---------------|----------------|----------------------|
| LPV                        |               | LNAV/VNAV   |               | LNAV            |               | Max Kts        | MDA(H)               |
| DA(H)                      | 957' (324')   | DA(H)       | 1031' (398')  | MDA(H)          | 1060' (427')  |                |                      |
| ALS out                    |               | ALS out     |               | ALS out         |               | 90             | 1200' (555') - 1     |
| A                          |               |             |               |                 |               | 120            |                      |
| B                          |               |             |               |                 |               | 140            |                      |
| C                          | RVR 24 or 1/2 | RVR 50 or 1 | RVR 40 or 3/4 | RVR 60 or 1 1/4 | RVR 40 or 3/4 | 165            | 1200' (555') - 1 1/2 |
| D                          |               |             |               |                 | RVR 50 or 1   |                | 1200' (555') - 2     |

| D-ATIS                                                                                                                                                                                                          | DETROIT Approach (R)             |        | METRO Tower                                         |                                    | Ground                                   |           |                                       |           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|--------|-----------------------------------------------------|------------------------------------|------------------------------------------|-----------|---------------------------------------|-----------|
|                                                                                                                                                                                                                 | West                             | East   | West                                                | East                               | Northwest                                | Northeast | Southwest                             | Southeast |
| 133.67                                                                                                                                                                                                          | 124.05                           | 125.15 | 135.0                                               | 118.4                              | 121.8                                    | 119.45    | 132.72                                | 119.25    |
| WAAS<br><b>Ch 77520</b><br>W-04A                                                                                                                                                                                | Final<br>Apch Crs<br><b>035°</b> |        | Minimum Alt<br><b>PAYED</b><br><b>2600' (1955')</b> | LPV<br>DA(H)<br><b>916' (271')</b> | Apt Elev <b>645'</b><br><b>TDZE 645'</b> |           | <div>2800'</div> <div>MSA RW04L</div> |           |
| <b>MISSED APCH:</b> Climb to 3000' direct SOKAE and via 315° track to SVM VOR and hold.                                                                                                                         |                                  |        |                                                     |                                    |                                          |           |                                       |           |
| Alt Set: INCHES      Trans level: FL 180      Trans alt: 18000'<br>1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 2. DME/DME RNP-0.3 not authorized. |                                  |        |                                                     |                                    |                                          |           |                                       |           |



|                        |     |     |     |     |     |     |                                                                                                      |
|------------------------|-----|-----|-----|-----|-----|-----|------------------------------------------------------------------------------------------------------|
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 | <div><div>ALSF-II</div><div>PAPI</div><div>3000'</div><div>↑</div><div>→</div><div>SOKAE</div></div> |
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |                                                                                                      |
|                        |     |     |     |     |     |     |                                                                                                      |
| MAP at RW04L           |     |     |     |     |     |     |                                                                                                      |

| STRAIGHT-IN LANDING RWY 4L      |             |                                        |             |                                    |             | CIRCLE-TO-LAND |                   |
|---------------------------------|-------------|----------------------------------------|-------------|------------------------------------|-------------|----------------|-------------------|
| LPV<br>DA(H) <b>916'</b> (271') |             | LNAV/VNAV<br>DA(H) <b>1008'</b> (363') |             | LNAV<br>MDA(H) <b>1040'</b> (395') |             | Max Kts        | MDA(H)            |
| ALS out                         |             | ALS out                                |             | ALS out                            |             | 90             | 1200' (555') - 1  |
| A                               |             |                                        |             |                                    |             | 120            |                   |
| B                               |             |                                        |             |                                    |             | 140            | 1200' (555') - 1½ |
| C                               | RVR 24 or ½ | RVR 50 or 1                            | RVR 40 or ¾ | RVR 60 or 1¼                       | RVR 24 or ½ | 165            | 1200' (555') - 2  |
| D                               |             |                                        |             |                                    | RVR 50 or 1 |                |                   |

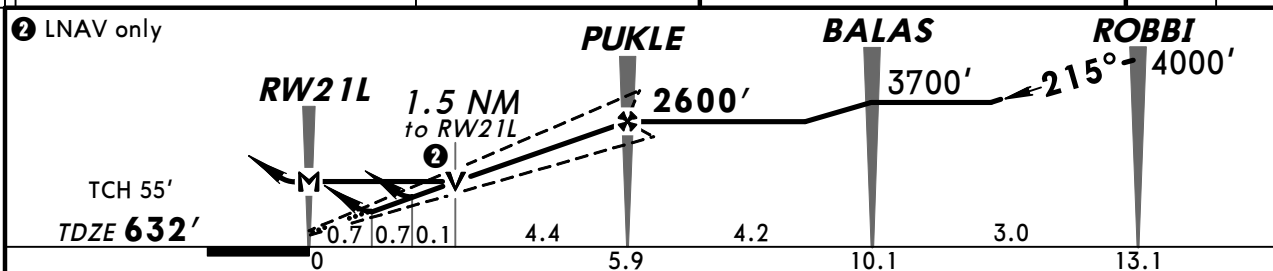
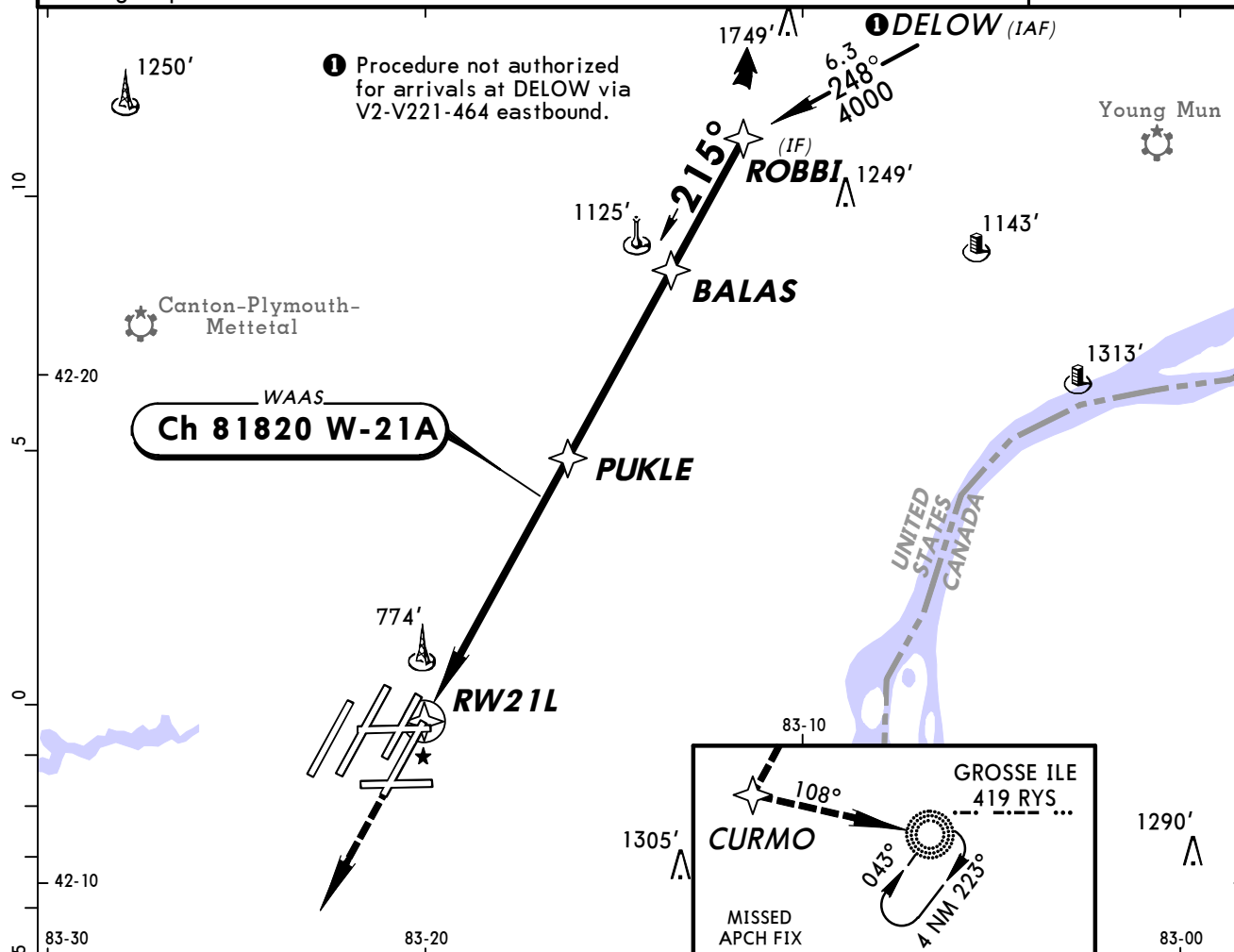
BRIEFING STRIP™

|                               |     |     |     |     |     |     |
|-------------------------------|-----|-----|-----|-----|-----|-----|
| <i>Gnd speed-Kts</i>          | 70  | 90  | 100 | 120 | 140 | 160 |
| <i>Glide Path Angle 3.00°</i> | 372 | 478 | 531 | 637 | 743 | 849 |
|                               |     |     |     |     |     |     |
| <i>MAP at RWØ4R</i>           |     |     |     |     |     |     |

| STRAIGHT-IN LANDING RWY 4R             |                      |                    |                                               |                        |                                           |                    | CIRCLE-TO-LAND       |                        |     |                           |
|----------------------------------------|----------------------|--------------------|-----------------------------------------------|------------------------|-------------------------------------------|--------------------|----------------------|------------------------|-----|---------------------------|
| LPV<br><i>DA(H)</i> <b>964'</b> (326') |                      |                    | LNAV/VNAV<br><i>DA(H)</i> <b>1015'</b> (377') |                        | LNAV<br><i>MDA(H)</i> <b>1060'</b> (422') |                    | Max<br>Kts.          | <i>MDA(H)</i>          |     |                           |
|                                        |                      | ALS out            |                                               |                        | ALS out                                   |                    |                      |                        |     |                           |
| A                                      | RVR <b>24</b> or 1/2 | RVR <b>50</b> or 1 | RVR <b>40</b> or 3/4                          | RVR <b>60</b> or 1 1/4 | RVR <b>24</b> or 1/2                      | RVR <b>50</b> or 1 | 90                   | <b>1200'</b> (555')-1  |     |                           |
| B                                      |                      |                    |                                               |                        |                                           |                    | 120                  |                        |     |                           |
| C                                      |                      |                    |                                               |                        |                                           |                    | RVR <b>40</b> or 3/4 | RVR <b>60</b> or 1 1/4 | 140 | <b>1200'</b> (555')-1 1/2 |
| D                                      |                      |                    |                                               |                        |                                           |                    | RVR <b>50</b> or 1   |                        | 165 | <b>1200'</b> (555')-2     |

BRIEFING STRIP™

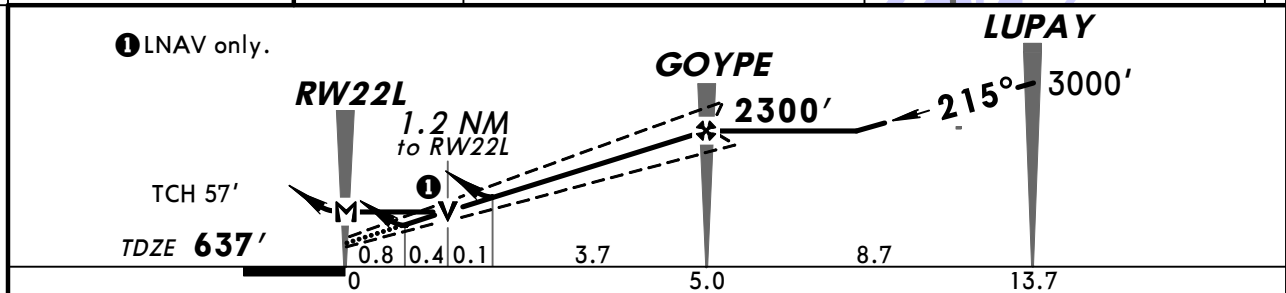
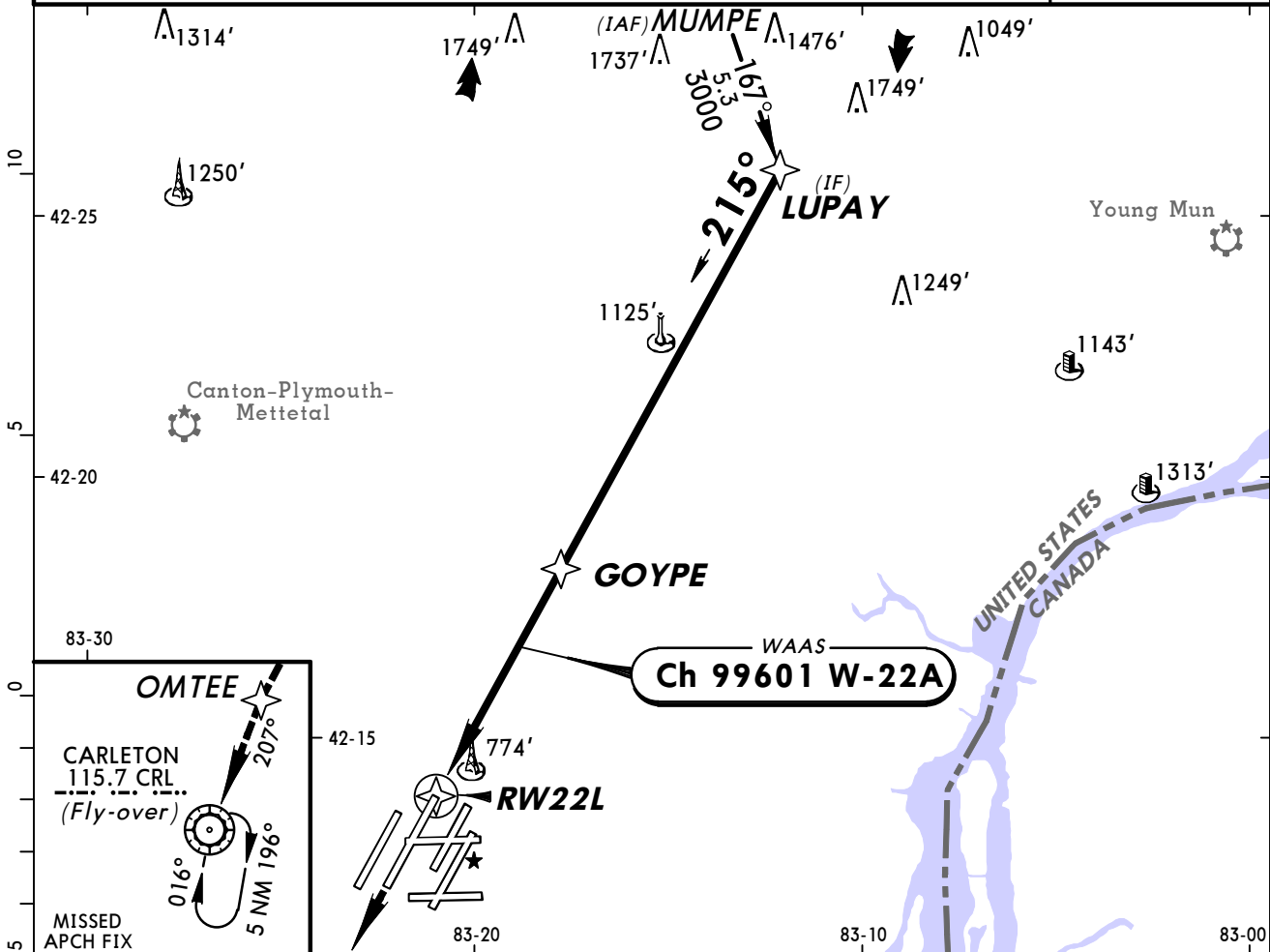
| D-ATIS                                                                                                                                                                                                                                                                                     | DETROIT Approach (R) |                                  | METRO Tower                                         |       | Ground                             |                                          |           |                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------------------|-----------------------------------------------------|-------|------------------------------------|------------------------------------------|-----------|---------------------------------------|
|                                                                                                                                                                                                                                                                                            | West                 | East                             | West                                                | East  | Northwest                          | Northeast                                | Southwest | Southeast                             |
| 133.67                                                                                                                                                                                                                                                                                     | 124.05               | 125.15                           | 135.0                                               | 118.4 | 121.8                              | 119.45                                   | 132.72    | 119.25                                |
| WAAS<br><b>Ch 81820</b><br>W-21A                                                                                                                                                                                                                                                           |                      | Final<br>Apch Crs<br><b>215°</b> | Minimum Alt<br><b>PUKLE</b><br><b>2600'</b> (1968') |       | LPV<br>DA(H)<br><b>922'</b> (290') | Apt Elev <b>645'</b><br>TDZE <b>632'</b> |           |                                       |
| <b>MISSED APCH:</b> Climb to 3000' direct CURMO and LEFT turn via 108° track to RYS NDB and hold.                                                                                                                                                                                          |                      |                                  |                                                     |       |                                    |                                          |           | <div>2800'</div> <div>MSA RW21L</div> |
| Alt Set: INCHES                      Trans level: FL 180                      Trans alt: 18000'<br>1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F) 2. DME/DME RNP-0.30 not authorized. 3. VGSI and RNAV glidepath not coincident. |                      |                                  |                                                     |       |                                    |                                          |           |                                       |



| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 | MALSR |  | PAPI |  | 3000' | CURMO |  |
|------------------------|-----|-----|-----|-----|-----|-----|-------|--|------|--|-------|-------|--|
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |       |  |      |  |       |       |  |
| MAP at RW21L           |     |     |     |     |     |     |       |  |      |  |       |       |  |

| STRAIGHT-IN LANDING RWY 21L     |                  |                                        |                    |                                    |                    | CIRCLE-TO-LAND |     |                   |  |
|---------------------------------|------------------|----------------------------------------|--------------------|------------------------------------|--------------------|----------------|-----|-------------------|--|
| LPV<br>DA(H) <b>922'</b> (290') |                  | LNAV/VNAV<br>DA(H) <b>1118'</b> (486') |                    | LNAV<br>MDA(H) <b>1180'</b> (548') |                    | Max Kts        |     | MDA(H)            |  |
| RAIL or ALS out                 |                  | RAIL or ALS out                        |                    | RAIL out                           |                    | ALS out        |     |                   |  |
| A                               |                  |                                        |                    | RVR 24                             | RVR 40             | RVR 50         | 90  | 1200'(555')-1     |  |
| B                               |                  |                                        |                    | or 1/2                             | or 3/4             | or 1           | 120 |                   |  |
| C                               | RVR 24<br>or 1/2 | RVR 50<br>or 1                         | RVR 60<br>or 1 1/4 | 1 3/4                              | RVR 50<br>or 1     | 1 1/2          | 140 | 1200'(555')-1 1/2 |  |
| D                               |                  |                                        |                    |                                    | RVR 60<br>or 1 1/4 | 1 3/4          | 165 | 1200'(555')-2     |  |

| D-ATIS                                                                                                                                                              |  | DETROIT Approach (R)             |        | METRO Tower                                         |       | Ground                             |           |                                              |                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------|--------|-----------------------------------------------------|-------|------------------------------------|-----------|----------------------------------------------|---------------------------------------|
|                                                                                                                                                                     |  | West                             | East   | West                                                | East  | Northwest                          | Northeast | Southwest                                    | Southeast                             |
| 133.67                                                                                                                                                              |  | 124.05                           | 125.15 | 135.0                                               | 118.4 | 121.8                              | 119.45    | 132.72                                       | 119.25                                |
| WAAS<br><b>Ch 99601</b><br>W-22A                                                                                                                                    |  | Final<br>Apch Crs<br><b>215°</b> |        | Minimum Alt<br><b>GOYPE</b><br><b>2300' (1663')</b> |       | LPV<br>DA(H)<br><b>932' (295')</b> |           | Apt Elev <b>645'</b><br><br><b>TDZE 637'</b> |                                       |
| MISSED APCH: Climb to 3000' direct OMTEE and via 207° track to CRL VOR and hold.                                                                                    |  |                                  |        |                                                     |       |                                    |           |                                              | <div>2800'</div> <div>MSA RW22L</div> |
| Alt Set: INCHES                      Trans level: FL 180                      Trans alt: 18000'                                                                     |  |                                  |        |                                                     |       |                                    |           |                                              |                                       |
| 1. Radar required.    2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 3. DME/DME RNP-0.30 not authorized. |  |                                  |        |                                                     |       |                                    |           |                                              |                                       |



|                  |  |       |     |     |     |     |     |           |           |              |
|------------------|--|-------|-----|-----|-----|-----|-----|-----------|-----------|--------------|
| Gnd speed-Kts    |  | 70    | 90  | 100 | 120 | 140 | 160 | MALSR<br> | 3000'<br> | <b>OMTEE</b> |
| Glide Path Angle |  | 3.00° | 372 | 478 | 531 | 637 | 743 |           |           |              |
| MAP at RW22L     |  |       |     |     |     |     |     |           |           |              |

| STRAIGHT-IN LANDING RWY 22L     |   |                                        |             |                                    |         |                  | CIRCLE-TO-LAND |                  |
|---------------------------------|---|----------------------------------------|-------------|------------------------------------|---------|------------------|----------------|------------------|
| LPV<br>DA(H) <b>932'</b> (295') |   | LNAV/VNAV<br>DA(H) <b>1117'</b> (480') |             | LNAV<br>MDA(H) <b>1080'</b> (443') |         |                  | Max<br>Kts     | MDA(H)           |
| RAIL or ALS out                 |   | RAIL or ALS out                        |             | RAIL out                           | ALS out |                  |                |                  |
| TERPS                           | A | RVR 24<br>or 1/2                       | RVR 50 or 1 | RVR 60 or 1 1/4                    | 1 3/4   | RVR 24<br>or 1/2 | 90             | 1200' (555') - 1 |
|                                 | B |                                        |             |                                    |         | RVR 40<br>or 3/4 | 120            |                  |
|                                 | C |                                        |             |                                    |         | RVR 40<br>or 3/4 | 140            |                  |
| D                               |   |                                        |             |                                    |         | RVR 50<br>or 1   | 165            | 1200' (555') - 2 |





KDTW/DTW

JEPPESEN

DETROIT, MICH

DETROIT METRO WAYNE CO

9 DEC 11

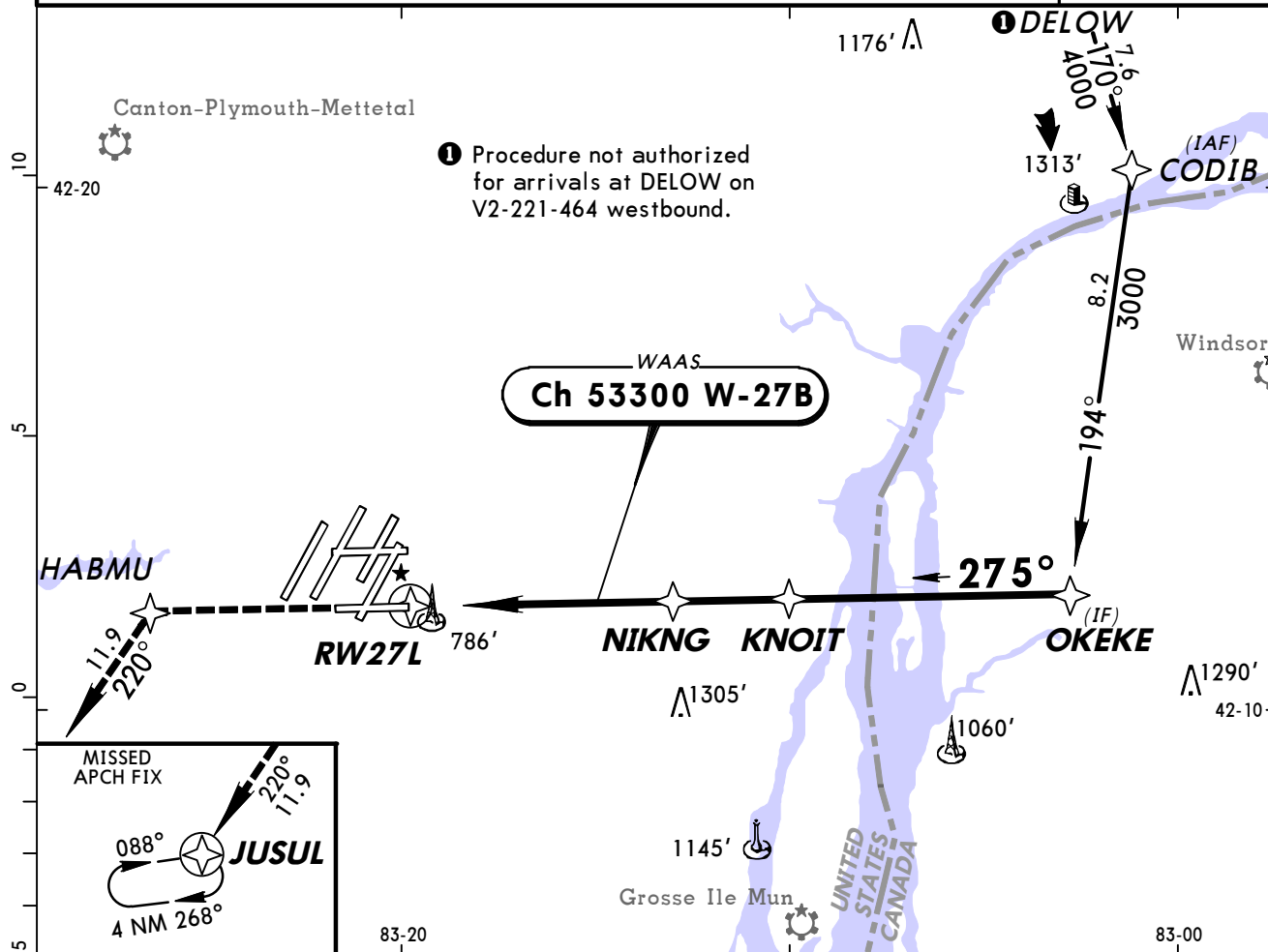
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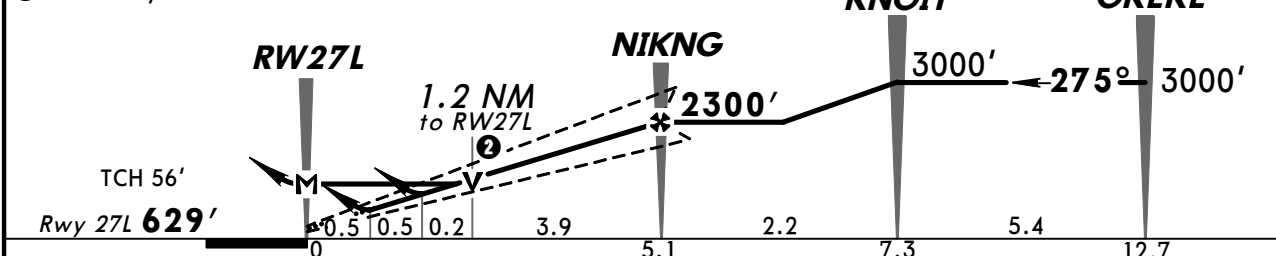
RNAV (GPS) Rwy 27L

BRIEFING STRIP™

| D-ATIS                                                                                                                                                                                      |  | DETROIT Approach (R)             |        | METRO Tower                                         |       | Ground                             |           |                                             |                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------|--------|-----------------------------------------------------|-------|------------------------------------|-----------|---------------------------------------------|---------------------------------------|
|                                                                                                                                                                                             |  | West                             | East   | West                                                | East  | Northwest                          | Northeast | Southwest                                   | Southeast                             |
| 133.67                                                                                                                                                                                      |  | 124.05                           | 125.15 | 135.0                                               | 118.4 | 121.8                              | 119.45    | 132.72                                      | 119.25                                |
| WAAS<br><b>Ch 53300</b><br>W-27B                                                                                                                                                            |  | Final<br>Apch Crs<br><b>275°</b> |        | Minimum Alt<br><b>NIKNG</b><br><b>2300'</b> (1671') |       | LPV<br>DA(H)<br><b>829'</b> (200') |           | Apt Elev <b>645'</b><br>Rwy 27L <b>629'</b> |                                       |
| MISSED APCH: Climb to 3000' direct HABMU and on 220° track to JUSUL and hold.                                                                                                               |  |                                  |        |                                                     |       |                                    |           |                                             | <div>2800'</div> <div>MSA RW27L</div> |
| Alt Set: INCHES                      Trans level: FL 180                      Trans alt: 18000'                                                                                             |  |                                  |        |                                                     |       |                                    |           |                                             |                                       |
| 1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 39°C (102°F). 2. DME/DME RNP-0.30 not authorized.<br>3. VGSI and RNAV glidepath not coincident. |  |                                  |        |                                                     |       |                                    |           |                                             |                                       |



② LNAV only.



| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 | MALSR |  | 3000' |  | HABMU |  |
|------------------------|-----|-----|-----|-----|-----|-----|-------|--|-------|--|-------|--|
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 | PAPI  |  | ↑     |  | →     |  |
| MAP at RW27L           |     |     |     |     |     |     |       |  |       |  |       |  |

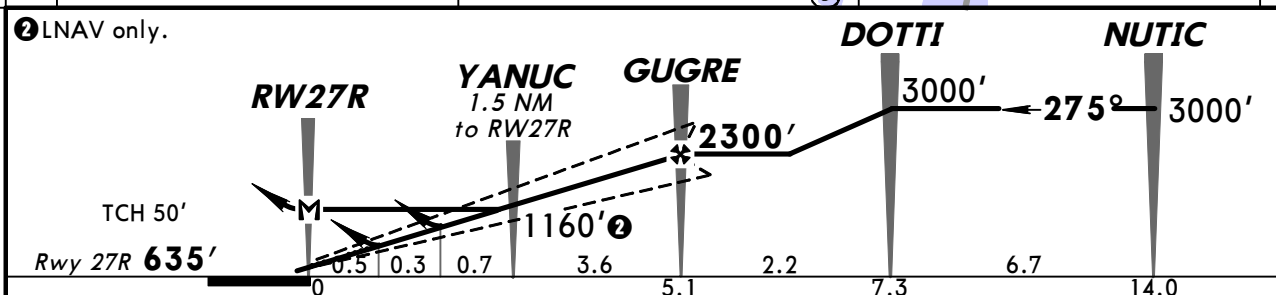
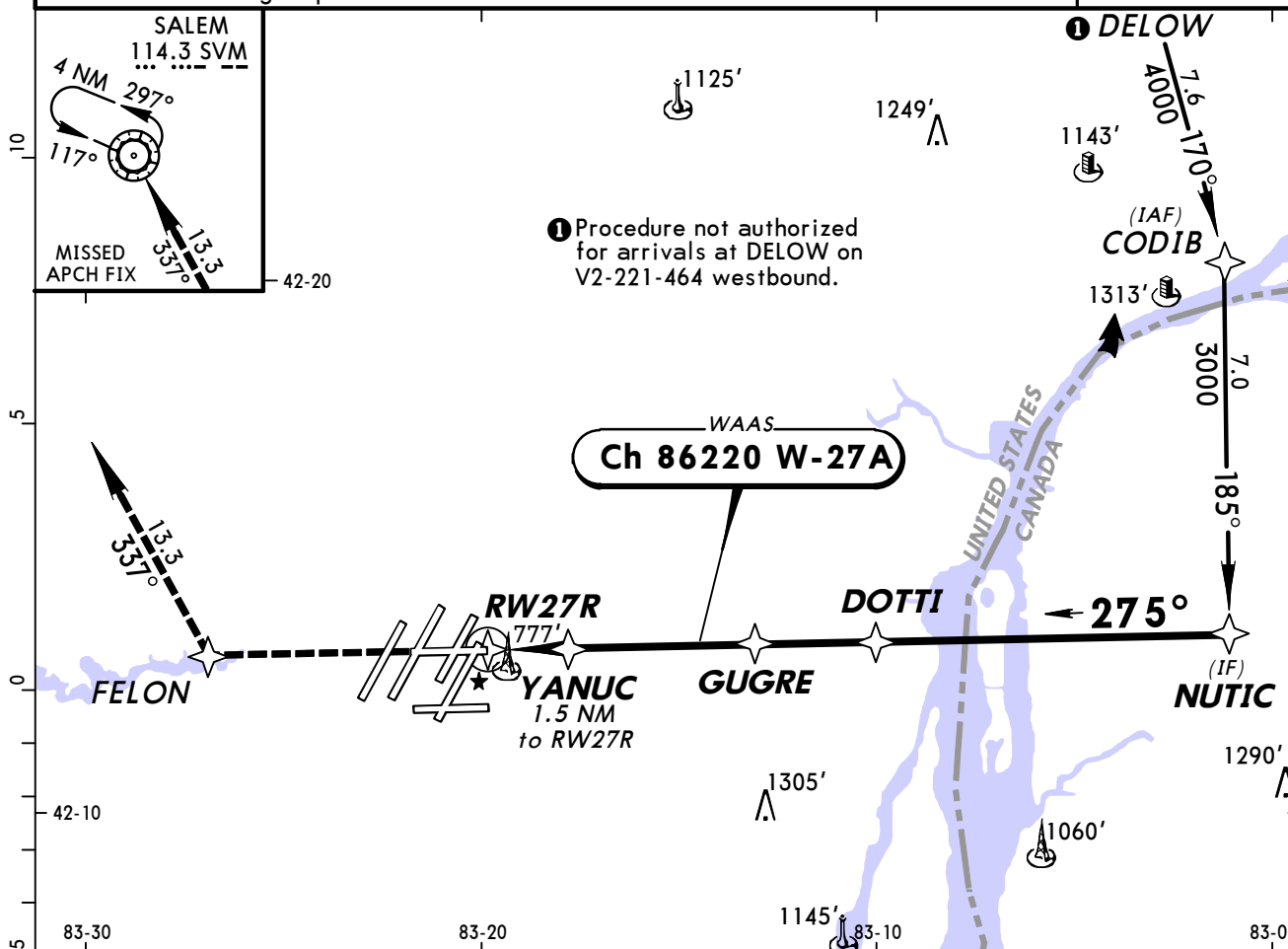
| TERPS                           |  |                                       |  |                                    |  |               |  | CIRCLE-TO-LAND |  |
|---------------------------------|--|---------------------------------------|--|------------------------------------|--|---------------|--|----------------|--|
| STRAIGHT-IN LANDING RWY 27L     |  |                                       |  | CIRCLE-TO-LAND                     |  |               |  |                |  |
| LPV<br>DA(H) <b>829'</b> (200') |  | LNAV/VNAV<br>DA(H) <b>997'</b> (368') |  | LNAV<br>MDA(H) <b>1080'</b> (451') |  |               |  |                |  |
| RAIL or ALS out                 |  | RAIL out                              |  | RAIL out                           |  | ALS out       |  | Max Kts        |  |
| A                               |  |                                       |  | RVR 24 or 1/2                      |  | RVR 40 or 3/4 |  | 90             |  |
| B                               |  |                                       |  | RVR 40 or 3/4                      |  | RVR 55 or 1   |  | 120            |  |
| C                               |  |                                       |  | RVR 45 or 7/8                      |  | RVR 55 or 1   |  | 140            |  |
| D                               |  |                                       |  |                                    |  | 13/8          |  | 165            |  |

CHANGES: Procedure.

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|                                                                                                                                                                                                                                                      |                                   |                           |                                       |                             |                               |           |                                       |           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------|---------------------------------------|-----------------------------|-------------------------------|-----------|---------------------------------------|-----------|
| D-ATIS                                                                                                                                                                                                                                               | DETROIT Approach (R)<br>West East |                           | METRO Tower<br>West East              |                             | Northwest                     | Northeast | Ground Southwest                      | Southeast |
| 133.67                                                                                                                                                                                                                                               | 124.05                            | 125.15                    | 135.0                                 | 118.4                       | 121.8                         | 119.45    | 132.72                                | 119.25    |
| WAAS<br>Ch 86220<br>W-27A                                                                                                                                                                                                                            |                                   | Final<br>Apch Crs<br>275° | Minimum Alt<br>GUGRE<br>2300' (1665') | LPV<br>DA(H)<br>835' (200') | Apt Elev 645'<br>Rwy 27R 635' |           | <div>2800'</div> <div>MSA RW27R</div> |           |
| MISSED APCH: Climb to 3000' direct FELON and on 337° track to SVM VOR and hold.                                                                                                                                                                      |                                   |                           |                                       |                             |                               |           |                                       |           |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 39°C (102°F). 2. DME/DME RNP-0.30 not authorized.<br>3. VGSI and RNAV glidepath not coincident. |                                   |                           |                                       |                             |                               |           |                                       |           |



|                        |     |     |     |     |     |     |                                      |
|------------------------|-----|-----|-----|-----|-----|-----|--------------------------------------|
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 | MALSR<br>PAPI<br>3000'<br>D<br>FELON |
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |                                      |
| MAP at RW27R           |     |     |     |     |     |     |                                      |

| TERPS                    |               |                                |               |               | STRAIGHT-IN LANDING RWY 27R |               |                 | CIRCLE-TO-LAND  |                    |  |
|--------------------------|---------------|--------------------------------|---------------|---------------|-----------------------------|---------------|-----------------|-----------------|--------------------|--|
| LPV<br>DA(H) 835' (200') |               | LNAV/VNAV<br>DA(H) 938' (303') |               |               | LNAV<br>MDA(H) 1040' (405') |               |                 | Max Kts. MDA(H) |                    |  |
| RAIL or ALS out          |               | RAIL out ALS out               |               |               | RAIL out ALS out            |               |                 |                 |                    |  |
| A                        |               |                                |               |               | RVR 24 or 1/2               | RVR 40 or 3/4 | RVR 55 or 1     | 90              | 1200' (555')-1     |  |
| B                        | RVR 24 or 1/2 | RVR 40 or 3/4                  | RVR 24 or 1/2 | RVR 40 or 3/4 | RVR 45 or 7/8               |               |                 | 120             |                    |  |
| C                        |               |                                |               |               |                             | RVR 40 or 3/4 | RVR 50 or 1     | 140             | 1200' (555')-1 1/2 |  |
| D                        |               |                                |               |               |                             |               | RVR 60 or 1 1/8 | 165             | 1200' (555')-2     |  |

## General Information

Location: Flint MI USA  
IATA Code: FNT  
Lat/Long: N42° 57.9' W083° 44.6'  
Elevation: 782 ft

Airport Use: Public  
Magnetic Variation: 7.0°W  
Sectional Chart: Detroit

Fuel Types: 100 Octane (LL), Jet A  
Repair Types: Major Airframe, Major Engine  
Customs: Yes  
Airport Type: IFR  
Landing Fee: No  
Control Tower: Yes  
Jet Start Unit: Yes  
LLWS Alert: No  
Beacon: Yes

Sunrise: 1215 Z  
Sunset: 2321 Z,

## Runway Information

Runway: 09  
Length x Width: 7200 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 771 ft  
Lighting: Edge, ALS

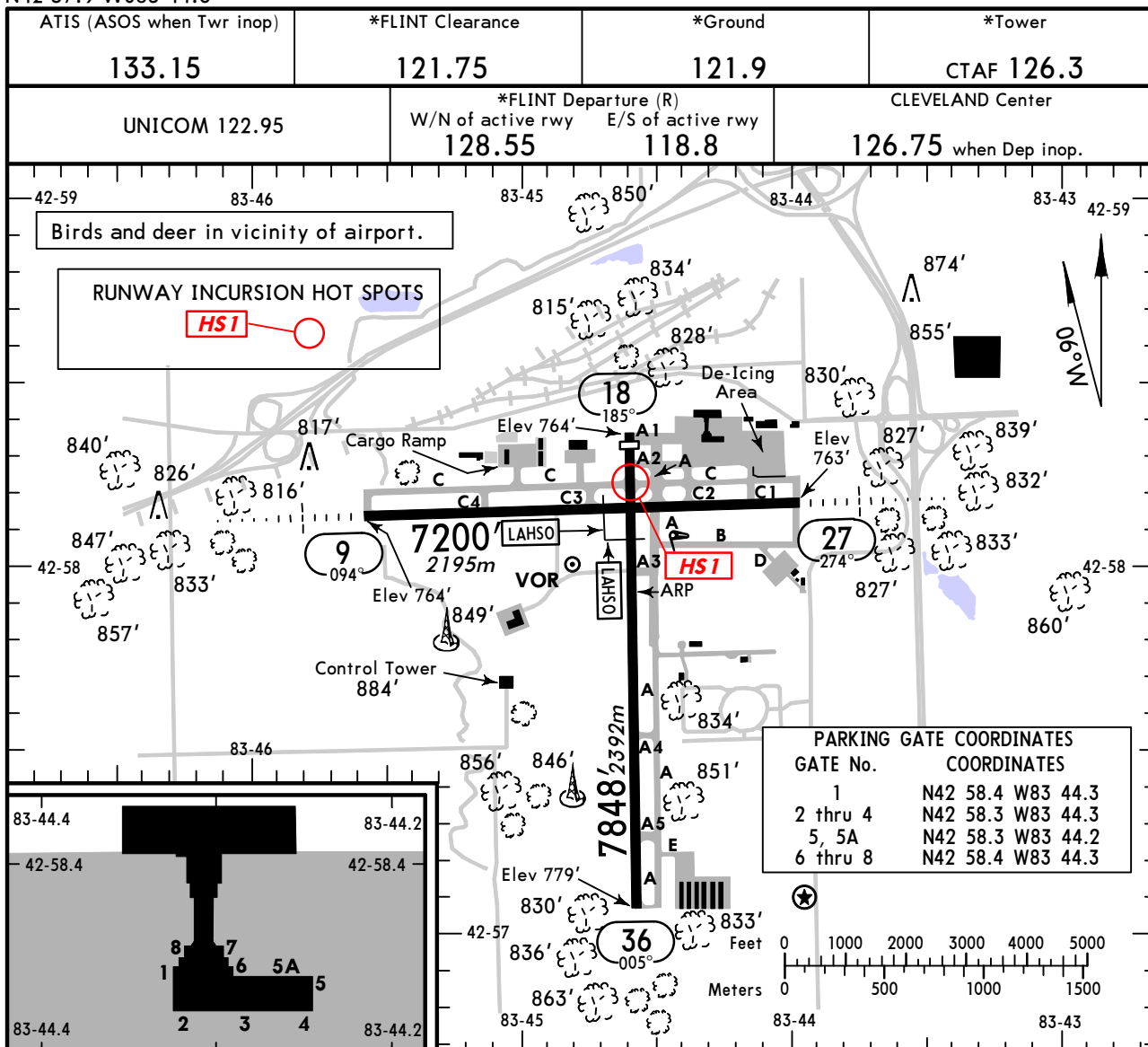
Runway: 18  
Length x Width: 7848 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 776 ft  
Lighting: Edge  
Displaced Threshold: 200 ft

Runway: 27  
Length x Width: 7200 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 770 ft  
Lighting: Edge, ALS

Runway: 36  
Length x Width: 7848 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 782 ft  
Lighting: Edge

## Communication Information

ATIS 133.15  
ASOS 133.15  
Flint Tower 126.3 CTAF  
Flint Ground Control 121.9  
Flint Clearance Delivery 121.75  
Flint Approach Control 128.55  
Flint Approach Control 133.8 Secondary  
Flint Approach Control 118.8 Initial Contact  
Flint App ARSA 128.55  
Flint App ARSA 118.8  
Flint App ARSA 133.8  
Flint Departure Control 128.55  
Flint Departure Control 118.8  
Bishop Intl Unicom 122.95  
Lansing Flight Service Station 122.3 RCO  
Cleveland Center 126.75 Remote Communications Air-Ground



ADDITIONAL RUNWAY INFORMATION

| RWY           |                     |                  | USABLE LENGTHS |                | TAKE-OFF             | WIDTH       |
|---------------|---------------------|------------------|----------------|----------------|----------------------|-------------|
|               |                     |                  | LANDING BEYOND | LAHSO          |                      |             |
|               |                     |                  | Threshold      | Glide Slope    | Distance             |             |
| 9<br>①<br>27  | HIRL ② MALSR        | RVR              |                | 6049'<br>1844m | 18/36 4100'<br>1250m | 150'<br>46m |
|               | HIRL ② MALSR VASI-L |                  |                | 6201'<br>1890m |                      |             |
| 18<br>①<br>36 | HIRL VASI-L         |                  | 7648'<br>2331m |                |                      | 150'<br>46m |
|               |                     | ③ 7648'<br>2331m |                |                | 9/27 6300'<br>1920m  |             |

- ① Porous friction course overlay.    ③ Last 200' (61m) unavailable for landing distance computations.  
 ② Activate on 126.3 when Twr inop.

**RUNWAY INCURSION HOT SPOTS**

HOT SPOT (For information only, not to be construed as ATC instructions.)  
**HS1** Taxiway C crosses Runway 18/36. Manage taxi speed and be prepared to hold short.

| TAKE-OFF  |                  |               | FOR FILING AS ALTERNATE            |                                         |                                                                                                                   |                   |
|-----------|------------------|---------------|------------------------------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------|
| All Rwys  |                  |               | Authorized Only When Twr Operating |                                         | Authorized Only When Local Weather Available                                                                      |                   |
|           | Adequate Vis Ref | STD           | ①<br>ILS Rwy 9<br>ILS Rwy 27       | ①<br>LOC Rwy 9<br>LOC Rwy 27<br>Radar-1 | RNAV (GPS) Rwy 9<br>RNAV (GPS) Rwy 18<br>RNAV (GPS) Rwy 36<br>VOR Rwy 9<br>VOR Rwy 18<br>VOR Rwy 27<br>VOR Rwy 36 | RNAV (GPS) Rwy 27 |
|           |                  |               |                                    |                                         |                                                                                                                   |                   |
| 1 & 2 Eng | RVR 16 or 1/4    | RVR 50 or 1   | A                                  | 600-2                                   | 800-2                                                                                                             | 800-2             |
| 3 & 4 Eng |                  | RVR 24 or 1/2 | B                                  |                                         |                                                                                                                   |                   |
|           |                  |               | C                                  |                                         |                                                                                                                   |                   |
|           |                  |               | D                                  |                                         |                                                                                                                   |                   |

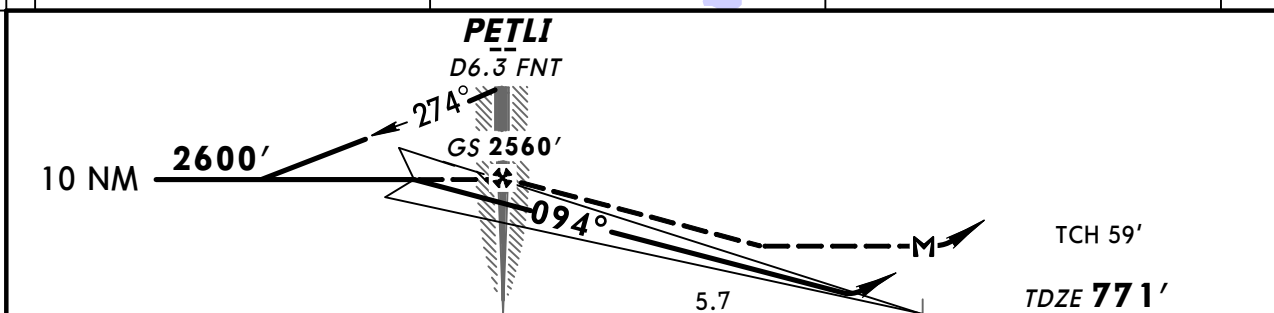
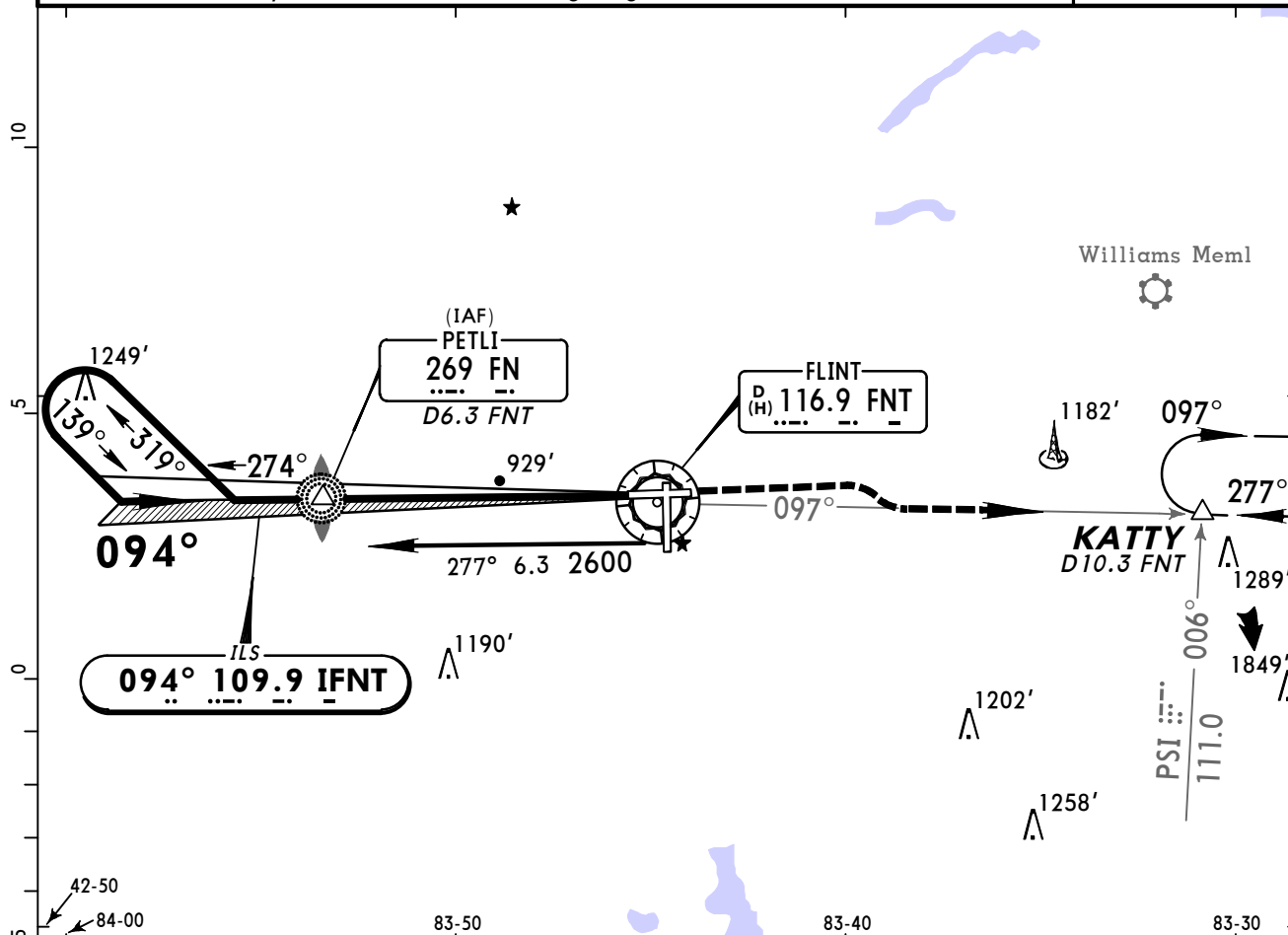
① ILS Rwy 27 & LOC Rwy 27: Authorized Only When Local Weather Available

# KFNT/FNT BISHOP INTL

JEPPESSEN  
13 MAY 11 (11-1)

FLINT, MICH  
ILS or LOC Rwy 9

|                                                                                                                                                                                                                                                                                                                                                |                           |                              |                                                           |                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------------------|-----------------------------------------------------------|---------------------|
| ATIS (ASOS when Twr inop)                                                                                                                                                                                                                                                                                                                      | *FLINT Approach (R)       | CLEVELAND Center             | *FLINT Tower                                              | *Ground             |
| 133.15                                                                                                                                                                                                                                                                                                                                         | 118.8                     | 126.75 when App inop.        | CTAF 126.3                                                | 121.9               |
| LOC<br>IFNT<br>109.9                                                                                                                                                                                                                                                                                                                           | Final<br>Apch Crs<br>094° | GS<br>PETLI<br>2560' (1789') | ILS<br>DA(H)<br>971' (200')<br>Apt Elev 782'<br>TDZE 771' | 3100'<br>MSA FN LOM |
| <b>MISSED APCH:</b> Climb to 1500' then climbing RIGHT turn to 3000' outbound via FNT VOR R-097 to KATTY INT/D10.3 FNT and hold.<br>Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. CAUTION: Brightly lighted parking lot 4000' east of approach end Rwy 27 can easily be confused for Rwy 27. 2. Pilot controlled lighting 126.3. |                           |                              |                                                           |                     |



|               |       |      |      |      |      |      |       |       |       |           |       |
|---------------|-------|------|------|------|------|------|-------|-------|-------|-----------|-------|
| Gnd speed-Kts | 70    | 90   | 100  | 120  | 140  | 160  | MALSR | 1500' | 3000' | FNT       | KATTY |
| GS            | 2.80° | 347  | 446  | 495  | 594  | 693  | 792   |       |       | via 116.9 |       |
| PETLI to MAP  | 5.7   | 4:53 | 3:48 | 3:25 | 2:51 | 2:27 | 2:08  |       |       | R-097     |       |

| STRAIGHT-IN LANDING RWY 9 |                 |               |                     |                 |             | CIRCLE-TO-LAND |                      |
|---------------------------|-----------------|---------------|---------------------|-----------------|-------------|----------------|----------------------|
| ILS                       |                 |               | LOC (GS out)        |                 |             | Max Kts        | MDA(H)               |
| DA(H) 971' (200')         |                 |               | MDA(H) 1180' (409') |                 |             | 90             |                      |
| FULL                      | RAIL or ALS out |               | RAIL out            | ALS out         |             | 120            | 1300' (518') - 1     |
| A                         |                 |               | RVR 24 or 1/2       | RVR 40 or 3/4   | RVR 50 or 1 |                |                      |
| B                         |                 |               |                     |                 |             |                |                      |
| C                         | 1 RVR 24 or 1/2 | RVR 40 or 3/4 | RVR 40 or 3/4       | RVR 60 or 1 1/4 |             | 140            | 1300' (518') - 1 1/2 |
| D                         |                 |               |                     |                 |             | 165            | 1340' (558') - 2     |

1 RVR 18 with Flight Director or Autopilot or HUD to DA.

CHANGES: None.

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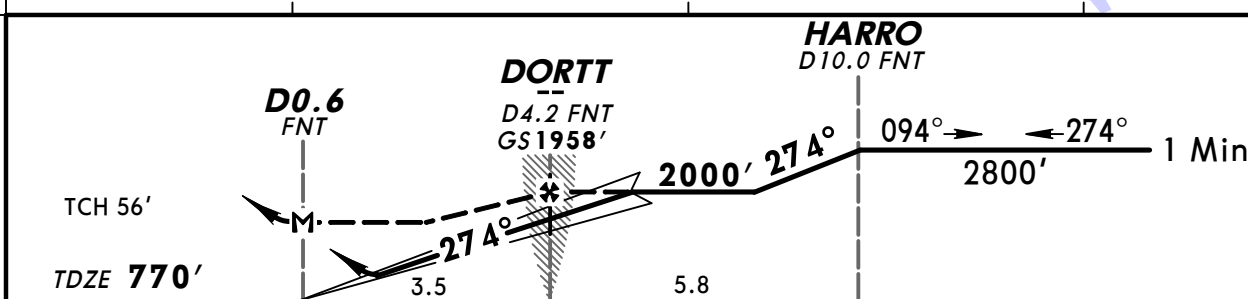
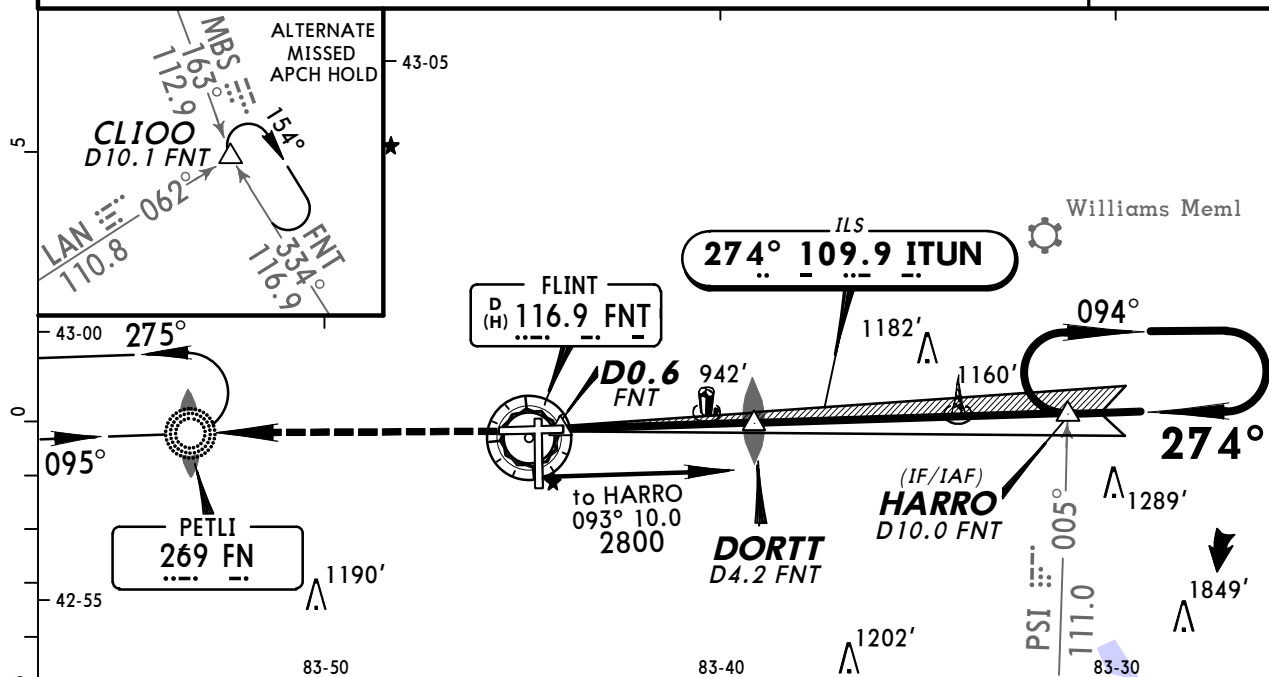
TERPS AMEND 22B 7 APR 2011

# KFNT/FNT BISHOP INTL

JEPPESSEN  
30 APR 10 11-2 Eff 6 May

FLINT, MICH  
ILS or LOC Rwy 27

|                                                                                                                                                                                                                                                   |                           |                              |                                              |                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------------------|----------------------------------------------|----------------------------|
| ATIS (ASOS when Twr inop)                                                                                                                                                                                                                         | *FLINT Approach (R)       | CLEVELAND Center             | *FLINT Tower                                 | *Ground                    |
| 133.15                                                                                                                                                                                                                                            | 118.8                     | 126.75 when App inop.        | CTAF 126.3                                   | 121.9                      |
| LOC<br>ITUN<br>109.9                                                                                                                                                                                                                              | Final<br>Apch Crs<br>274° | GS<br>DORTT<br>1958' (1188') | ILS<br>DA(H)<br>(CONDITIONAL)<br>970' (200') | Apt Elev 782'<br>TDZE 770' |
| MISSED APCH: Climb to 2800' direct FN LOM and hold.                                                                                                                                                                                               |                           |                              |                                              |                            |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                                                                                                                                                             |                           |                              |                                              |                            |
| 1. ADF required. 2. CAUTION: Brightly lighted parking lot 4000' east of approach end Rwy 27 can easily be confused for Rwy 27. 3. Use local altimeter setting; if not received, use Owosso altimeter setting. 4. Pilot controlled lighting 126.3. |                           |                              |                                              |                            |
| 3100'                                                                                                                                                                                                                                             |                           |                              |                                              |                            |
| MSA FNT VOR                                                                                                                                                                                                                                       |                           |                              |                                              |                            |



|                     |       |      |      |      |      |      |     |       |       |   |        |
|---------------------|-------|------|------|------|------|------|-----|-------|-------|---|--------|
| Gnd speed-Kts       | 70    | 90   | 100  | 120  | 140  | 160  |     | MALSR | 2800' | → | FN 269 |
| GS                  | 3.00° | 377  | 484  | 538  | 646  | 753  | 861 | VASI  |       |   |        |
| MAP at D0.6 FNT     |       |      |      |      |      |      |     |       |       |   |        |
| or DORTT to MAP 3.5 | 3:00  | 2:20 | 2:06 | 1:45 | 1:30 | 1:19 |     |       |       |   |        |

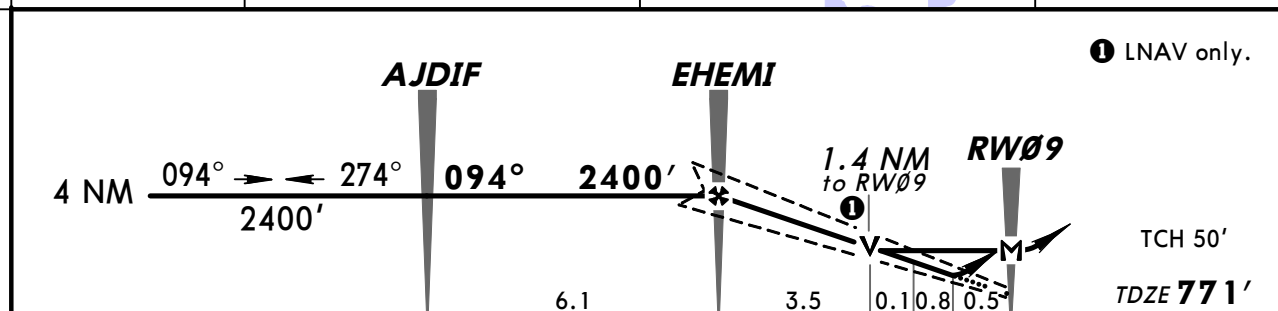
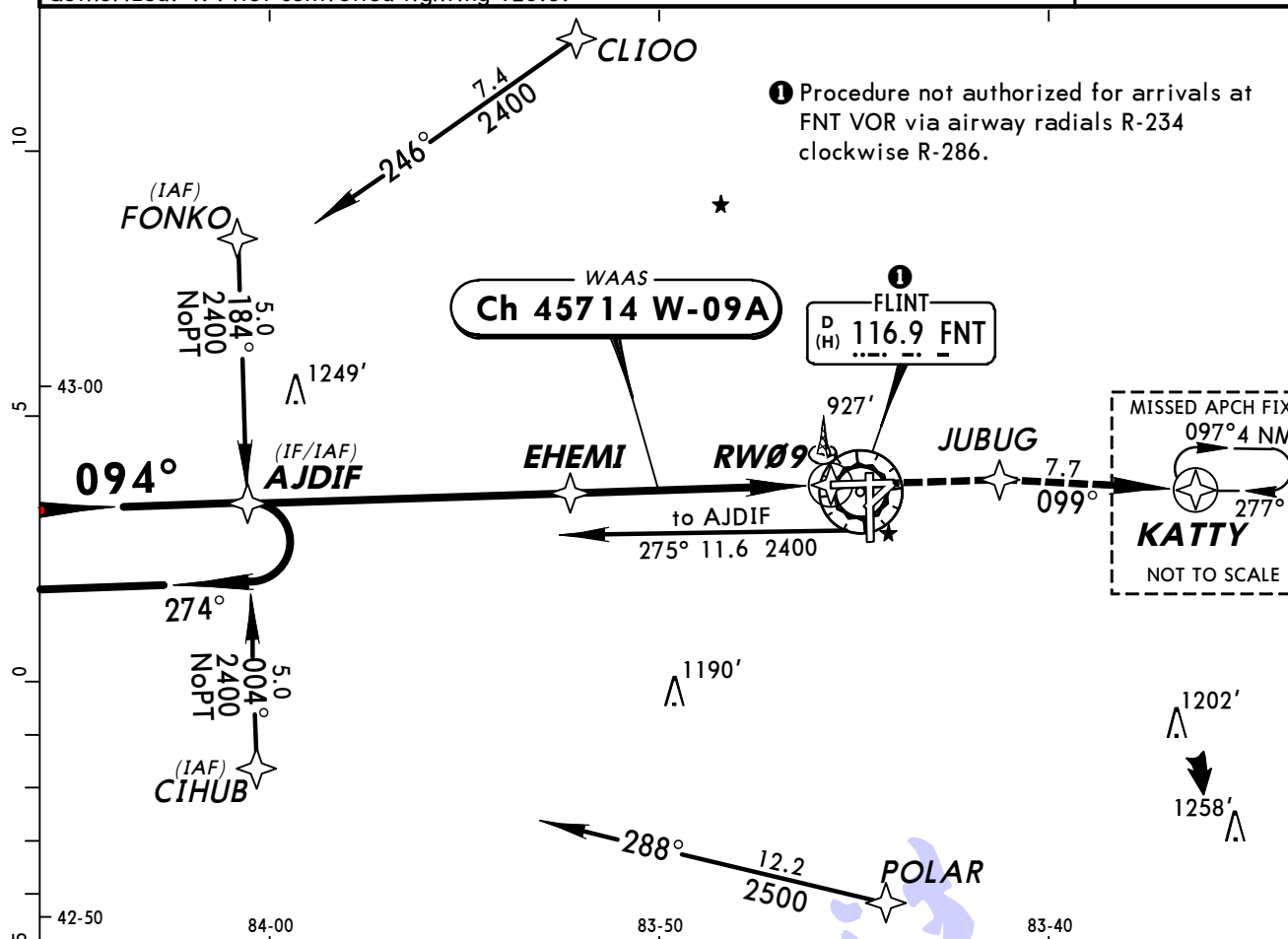
| STRAIGHT-IN LANDING RWY 27    |                 |     |                     |         |   | CIRCLE-TO-LAND                |                    |
|-------------------------------|-----------------|-----|---------------------|---------|---|-------------------------------|--------------------|
| ILS                           |                 |     | LOC (GS out)        |         |   | With Local Altimeter Setting  |                    |
| DA(H) 970' (200')             |                 |     | MDA(H) 1260' (490') |         |   |                               |                    |
| FULL                          | RAIL or ALS out |     | RAIL out            | ALS out |   | Max Kts                       | MDA(H)             |
| A                             |                 |     | 1/2                 | 3/4     | 1 | 90                            | 1260' (478')-1     |
| B                             |                 |     |                     |         |   | 120                           | 1300' (518')-1     |
| C                             | 1/2             | 3/4 | 3/4                 | 1 1/4   |   | 140                           | 1300' (518')-1 1/2 |
| D                             |                 |     | 1                   | 1 1/2   |   | 165                           | 1340' (558')-2     |
| With Owosso Altimeter Setting |                 |     |                     |         |   | With Owosso Altimeter Setting |                    |
| ILS                           |                 |     | LOC (GS out)        |         |   |                               |                    |
| DA(H) 1017' (247')            |                 |     | MDA(H) 1320' (550') |         |   |                               |                    |
| FULL                          | RAIL or ALS out |     | RAIL out            | ALS out |   | Max Kts                       | MDA(H)             |
| A                             |                 |     | 1/2                 | 3/4     | 1 | 90                            | 1320' (538')-1     |
| B                             |                 |     |                     |         |   | 120                           | 1360' (578')-1     |
| C                             | 1/2             | 3/4 | 1                   | 1 1/2   |   | 140                           | 1360' (578')-1 1/2 |
| D                             |                 |     | 1 1/4               | 1 3/4   |   | 165                           | 1400' (618')-2     |

CHANGES: Procedure.

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TERPS AMEND 5 6 MAY 2010

|                                                                                                                                                                                                                                                                                                                                                          |                                     |                                                     |                                    |                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------|------------------------------------|------------------------------------------|
| ATIS (ASOS when Twr inop)<br><b>133.15</b>                                                                                                                                                                                                                                                                                                               | *FLINT Approach (R)<br><b>118.8</b> | CLEVELAND Center<br><b>126.75</b> when App inop.    | *FLINT Tower<br><b>CTAF 126.3</b>  | *Ground<br><b>121.9</b>                  |
| WAAS<br><b>Ch 45714</b><br><b>W-09A</b>                                                                                                                                                                                                                                                                                                                  | Final<br>Apch Crs<br><b>094°</b>    | Minimum Alt<br><b>EHEMI</b><br><b>2400'</b> (1629') | LPV<br>DA(H)<br><b>971'</b> (200') | Apt Elev <b>782'</b><br><b>TDZE 771'</b> |
| <b>MISSED APCH:</b> Climb to 3000' direct JUBUG and via 099° track to KATTY and hold.                                                                                                                                                                                                                                                                    |                                     |                                                     |                                    |                                          |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. CAUTION: Brightly lighted parking lot 4000' east of approach end Rwy 27 can easily be confused for Rwy 27. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 3. DME/DME RNP-0.30 not authorized. 4. Pilot controlled lighting 126.3. |                                     |                                                     |                                    |                                          |
| <div style="text-align: center;">3100'</div> <div style="text-align: center;">MSA RW09</div>                                                                                                                                                                                                                                                             |                                     |                                                     |                                    |                                          |

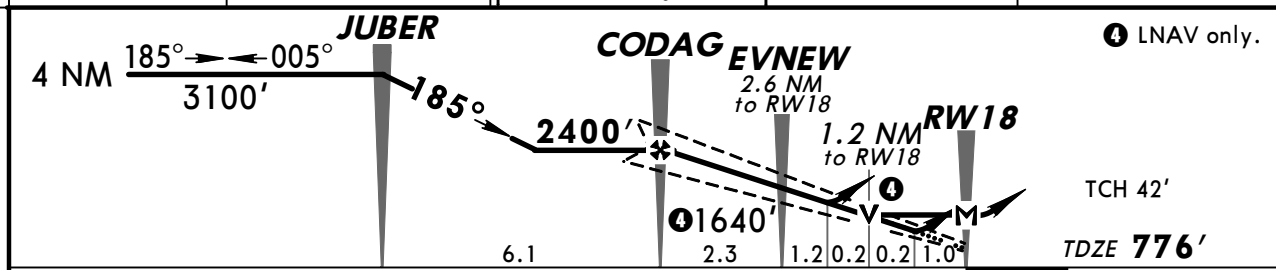
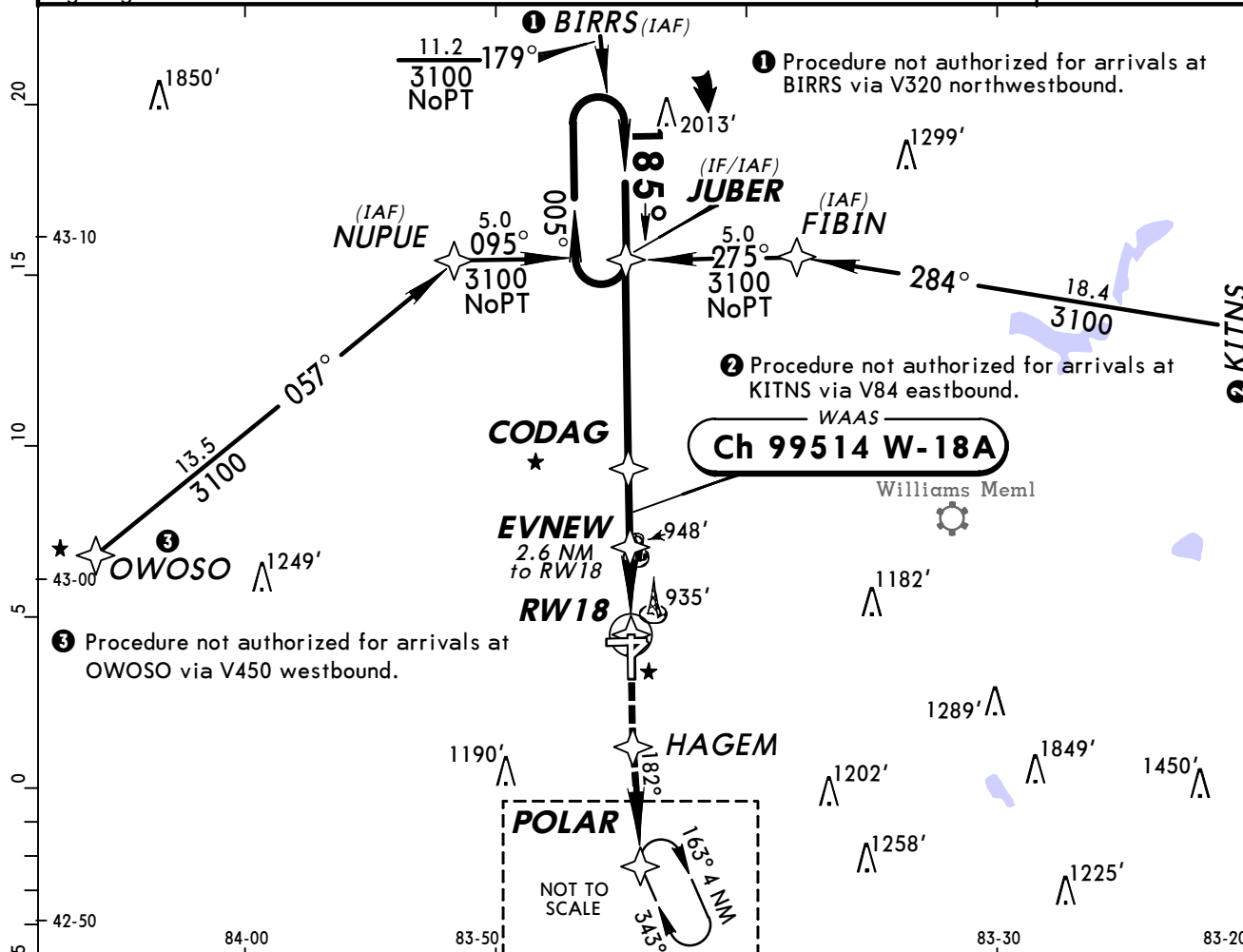


|                  |       |     |     |     |     |     |       |       |       |
|------------------|-------|-----|-----|-----|-----|-----|-------|-------|-------|
| Gnd speed-Kts    | 70    | 90  | 100 | 120 | 140 | 160 | MALSR | 3000' | JUBUG |
| Glide Path Angle | 3.00° | 372 | 478 | 531 | 637 | 743 | 849   |       |       |
| MAP at RW09      |       |     |     |     |     |     |       |       |       |

| STRAIGHT-IN LANDING RWY 9       |               |                                        |       | CIRCLE-TO-LAND                     |               |                    |
|---------------------------------|---------------|----------------------------------------|-------|------------------------------------|---------------|--------------------|
| LPV<br>DA(H) <b>971'</b> (200') |               | LNAV/VNAV<br>DA(H) <b>1227'</b> (456') |       | LNAV<br>MDA(H) <b>1260'</b> (489') |               | Max Kts            |
| RAIL or ALS out                 |               | RAIL or ALS out                        |       | RAIL out                           | ALS out       | 90                 |
| RVR 24 or 1/2                   | RVR 40 or 3/4 | RVR 50 or 1                            | 1 1/2 | RVR 24 or 1/2                      | RVR 40 or 3/4 | 120                |
|                                 |               |                                        |       | RVR 40 or 3/4                      | RVR 60 or 1/4 | 140                |
|                                 |               |                                        |       | RVR 50 or 1                        | 1 1/2         | 165                |
|                                 |               |                                        |       |                                    |               | MDA(H)             |
|                                 |               |                                        |       |                                    |               | 1300' (518')-1     |
|                                 |               |                                        |       |                                    |               | 1300' (518')-1 1/2 |
|                                 |               |                                        |       |                                    |               | 1340' (558')-2     |



|                                                                                                                                                                                                                                                                                                                                                                                                                 |                                     |                                                     |                                     |                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ATIS (ASOS when Twr inop)<br><b>133.15</b>                                                                                                                                                                                                                                                                                                                                                                      | *FLINT Approach (R)<br><b>118.8</b> | CLEVELAND Center<br><b>126.75</b> when App inop.    | *FLINT Tower<br>CTAF <b>126.3</b>   | *Ground<br><b>121.9</b>                                                                                                                                                                         |
| WAAS<br><b>Ch 99514</b><br><b>W-18A</b>                                                                                                                                                                                                                                                                                                                                                                         | Final<br>Apch Crs<br><b>185°</b>    | Minimum Alt<br><b>CODAG</b><br><b>2400'</b> (1624') | LPV<br>DA(H)<br><b>1109'</b> (333') | Apt Elev <b>782'</b><br><b>TDZE 776'</b>                                                                                                                                                        |
| <b>MISSED APCH: Climb to 3000' direct HAGEM and via 182° track to POLAR and hold.</b>                                                                                                                                                                                                                                                                                                                           |                                     |                                                     |                                     |                                                                                                                                                                                                 |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. CAUTION: Brightly lighted parking lot 4000' east of approach end Rwy 27 can easily be confused for Rwy 27. 2. DME/DME RNP-0.30 not authorized. 3. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 4. Visibility reduction by helicopters not authorized. 5. Pilot controlled lighting 126.3. |                                     |                                                     |                                     |                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                 |                                     |                                                     |                                     | <div style="border: 1px solid black; border-radius: 50%; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">3100'</div> <p>MSA RW18</p> |



|                        |     |     |     |     |     |     |  |  |  |  |  |
|------------------------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 |  |  |  |  |  |
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |  |  |  |  |  |
| MAP at RW18            |     |     |     |     |     |     |  |  |  |  |  |

| STRAIGHT-IN LANDING RWY 18 |                           |                            |  | CIRCLE-TO-LAND |                          |
|----------------------------|---------------------------|----------------------------|--|----------------|--------------------------|
| LPV                        | LNAV/VNAV                 | LNAV                       |  | Max Kts        | MDA(H)                   |
| DA(H) <b>1109'</b> (333')  | DA(H) <b>1253'</b> (477') | MDA(H) <b>1200'</b> (424') |  | 90             | <b>1300'</b> (518') - 1  |
|                            |                           |                            |  | 120            |                          |
|                            |                           |                            |  | 140            | <b>1300'</b> (518') - 1½ |
|                            |                           |                            |  | 165            | <b>1340'</b> (558') - 2  |



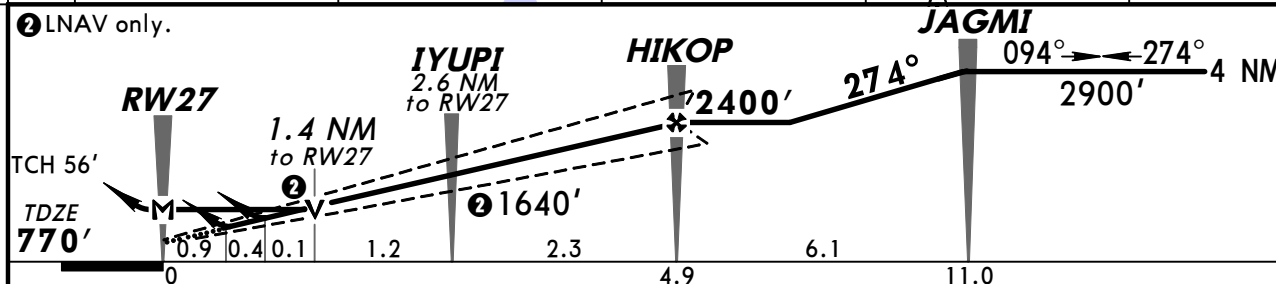
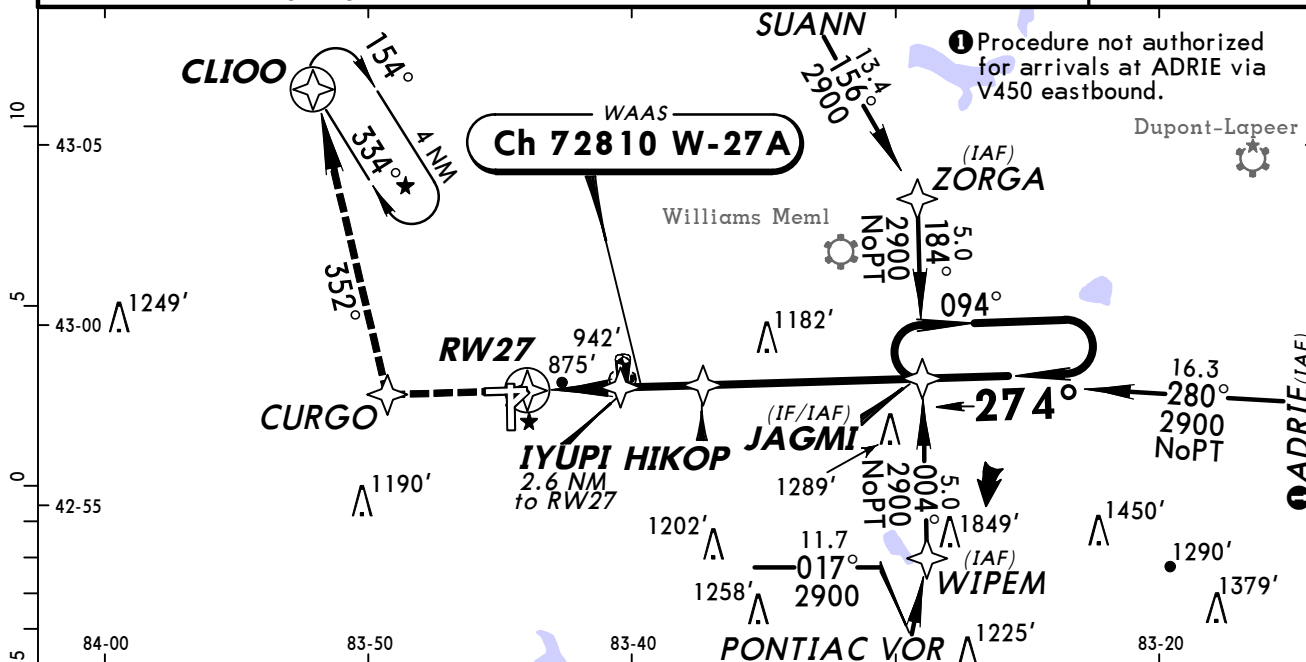
KFNT/FNT  
BISHOP INTL

21 AUG 09  
Eff 27 Aug

12-3

FLINT, MICH  
RNAV (GPS) Rwy 27

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                     |                                                     |                                                      |                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------|------------------------------------------------------|------------------------------------------|
| ATIS (ASOS when Twr inop)<br><b>133.15</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | *FLINT Approach (R)<br><b>118.8</b> | CLEVELAND Center<br><b>126.75</b> when App inop.    | *FLINT Tower<br><b>CTAF 126.3</b>                    | *Ground<br><b>121.9</b>                  |
| WAAS<br><b>Ch 72810</b><br><b>W-27A</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Final<br>Apch Crs<br><b>274°</b>    | Minimum Alt<br><b>HIKOP</b><br><b>2400'</b> (1630') | LPV<br>DA(H)<br>(CONDITIONAL)<br><b>1098'</b> (328') | Apt Elev <b>782'</b><br><b>TDZE 770'</b> |
| <b>MISSED APCH:</b> Climb to 3000' direct <b>CURGO</b> and via 352° track to <b>CLIOO</b> and hold.                                                                                                                                                                                                                                                                                                                                                                                                        |                                     |                                                     |                                                      |                                          |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                     |                                                     |                                                      |                                          |
| 1. CAUTION: Brightly lighted parking lot 4000' east of approach end Rwy 27 can easily be confused for Rwy 27. 2. Use local altimeter setting; if not received, use Owosso altimeter setting. 3. DME/DME RNP-0.30 not authorized. 4. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 5. Baro-VNAV not authorized when using Owosso altimeter setting. 6. VDP not authorized when using Owosso altimeter setting. 7. Pilot controlled lighting 126.3. |                                     |                                                     |                                                      |                                          |
| <b>3100'</b><br><b>MSA RW27</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                     |                                                     |                                                      |                                          |



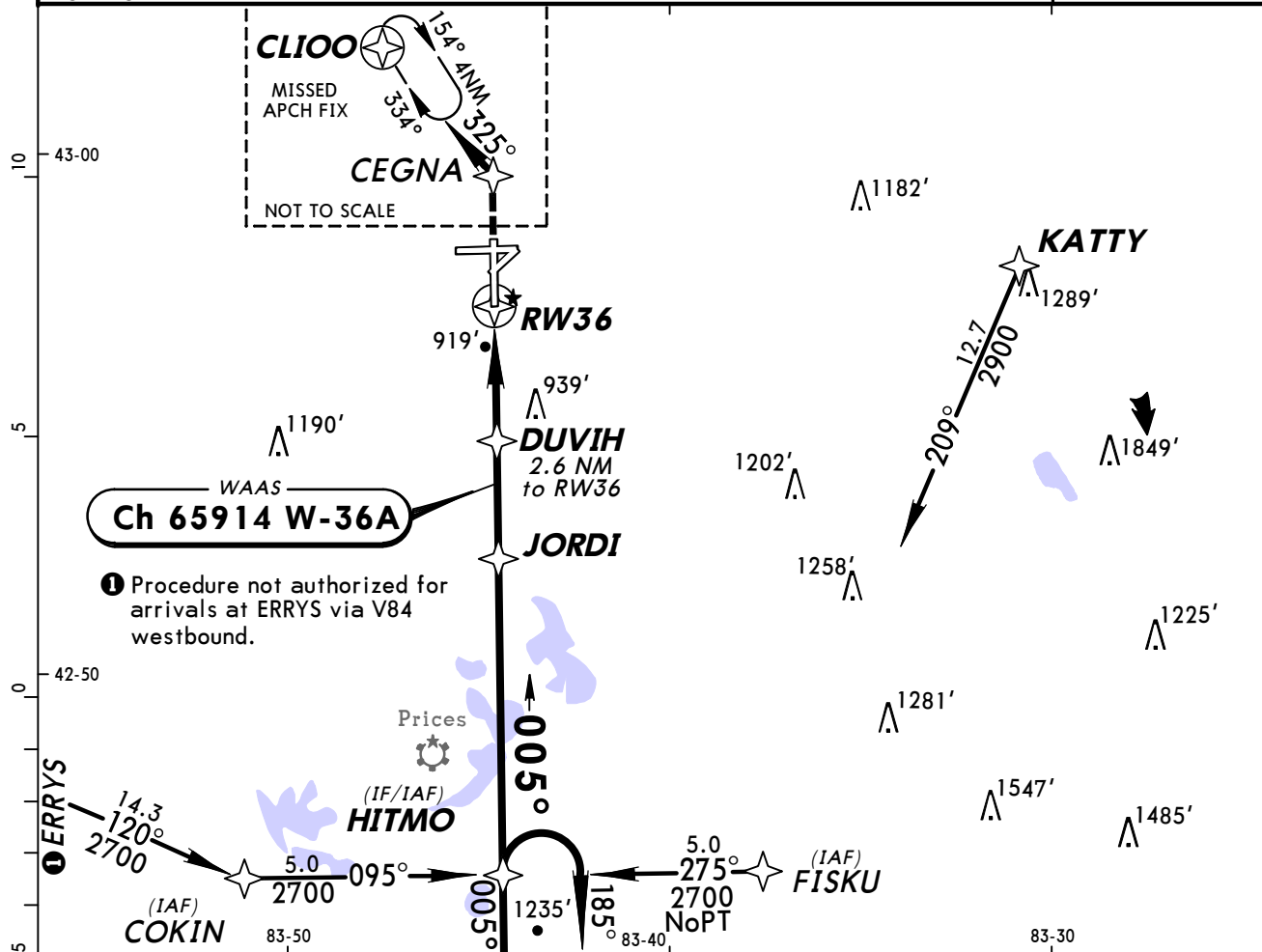
|                  |       |     |     |     |     |     |       |       |   |       |
|------------------|-------|-----|-----|-----|-----|-----|-------|-------|---|-------|
| Gnd speed-Kts    | 70    | 90  | 100 | 120 | 140 | 160 | MALSR | 3000' | → | CURGO |
| Glide Path Angle | 3.00° | 372 | 478 | 531 | 637 | 743 | VASI  | ↑     |   |       |
| MAP at RW27      |       |     |     |     |     |     |       |       |   |       |

| STRAIGHT-IN LANDING RWY 27    |     |                                 |       |                             |       |     | CIRCLE-TO-LAND                |               |
|-------------------------------|-----|---------------------------------|-------|-----------------------------|-------|-----|-------------------------------|---------------|
| With Local Altimeter Setting  |     |                                 |       |                             |       |     | With Local Altimeter Setting  |               |
| LPV<br>DA(H) 1098' (328')     |     | LNAV/VNAV<br>DA(H) 1240' (470') |       | LNAV<br>MDA(H) 1260' (490') |       |     | Max<br>Kts                    | MDA(H)        |
| RAIL or ALS out               |     | RAIL or ALS out                 |       | RAIL out ALS out            |       |     |                               |               |
| A                             | 3/4 | 1 1/4                           | 1 1/4 | 1/2                         | 3/4   | 1   | 90                            | 1260'(478')-1 |
| B                             |     |                                 |       | 3/4                         | 1 1/4 | 120 | 1300'(518')-1                 |               |
| C                             |     |                                 |       |                             |       | 140 | 1300'(518')-1 1/2             |               |
| D                             |     |                                 |       | 1                           | 1 1/2 | 165 | 1340'(558')-2                 |               |
| With Owosso Altimeter Setting |     |                                 |       |                             |       |     | With Owosso Altimeter Setting |               |
| LPV<br>DA(H) 1145' (375')     |     | LNAV/VNAV<br>DA(H) 1287' (517') |       | LNAV<br>MDA(H) 1320' (550') |       |     | Max<br>Kts                    | MDA(H)        |
| RAIL or ALS out               |     | RAIL or ALS out                 |       | RAIL out ALS out            |       |     |                               |               |
| A                             | 3/4 | 1 1/4                           | 1 1/4 | 1/2                         | 3/4   | 1   | 90                            | 1320'(538')-1 |
| B                             |     |                                 |       | 1                           | 1 1/4 | 120 | 1360'(578')-1                 |               |
| C                             |     |                                 |       |                             |       | 140 | 1360'(578')-1 1/2             |               |
| D                             |     |                                 |       | 1 1/4                       | 1 3/4 | 165 | 1400'(618')-2                 |               |

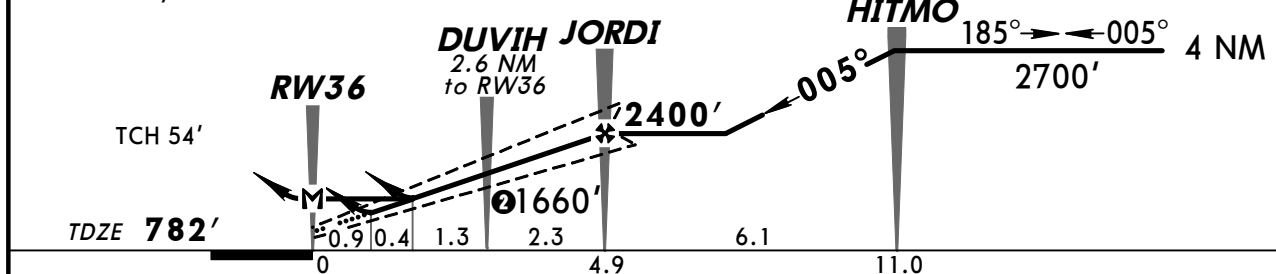
CHANGES: None.

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|                                                                                                                                                                                                                                                                                                                                                                                                                    |                                     |                                                     |                                     |                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------------|-------------------------------------|------------------------------------------|
| ATIS (ASOS when Twr inop)<br><b>133.15</b>                                                                                                                                                                                                                                                                                                                                                                         | *FLINT Approach (R)<br><b>118.8</b> | CLEVELAND Center<br><b>126.75</b> when App inop.    | *FLINT Tower<br><b>CTAF 126.3</b>   | *Ground<br><b>121.9</b>                  |
| WAAS<br><b>Ch 65914</b><br><b>W-36A</b>                                                                                                                                                                                                                                                                                                                                                                            | Final<br>Apch Crs<br><b>005°</b>    | Minimum Alt<br><b>JORDI</b><br><b>2400'</b> (1618') | LPV<br>DA(H)<br><b>1123'</b> (341') | Apt Elev <b>782'</b><br><b>TDZE 782'</b> |
| <b>MISSED APCH: Climb to 3000' direct CEGNA and via 325° track to CLIOO and hold.</b>                                                                                                                                                                                                                                                                                                                              |                                     |                                                     |                                     |                                          |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. CAUTION: Brightly lighted parking lot 4000' east of approach end of Rwy 27 can easily be confused for Rwy 27. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 3. DME/DME RNP-0.30 not authorized. 4. Visibility reduction by helicopters not authorized. 5. Pilot controlled lighting 126.3. |                                     |                                                     |                                     |                                          |
| <div style="border: 1px solid black; border-radius: 50%; width: 100px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">             3100'           </div> <b>MSA RW36</b>                                                                                                                                                                                            |                                     |                                                     |                                     |                                          |



② LNAV only.



|                        |     |     |     |     |     |     |  |  |  |  |  |
|------------------------|-----|-----|-----|-----|-----|-----|--|--|--|--|--|
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 |  |  |  |  |  |
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |  |  |  |  |  |
| MAP at RW36            |     |     |     |     |     |     |  |  |  |  |  |

| STRAIGHT-IN LANDING RWY 36 |                           |                            |  | CIRCLE-TO-LAND |                           |
|----------------------------|---------------------------|----------------------------|--|----------------|---------------------------|
| LPV                        | LNAV/VNAV                 | LNAV                       |  | Max Kts        | MDA(H)                    |
| DA(H) <b>1123'</b> (341')  | DA(H) <b>1254'</b> (472') | MDA(H) <b>1260'</b> (478') |  | 90             | <b>1300'</b> (518')-1     |
|                            |                           |                            |  | 120            | <b>1300'</b> (518')-1 1/2 |
|                            |                           |                            |  | 140            | <b>1300'</b> (518')-1 1/2 |
|                            |                           |                            |  | 165            | <b>1340'</b> (558')-2     |

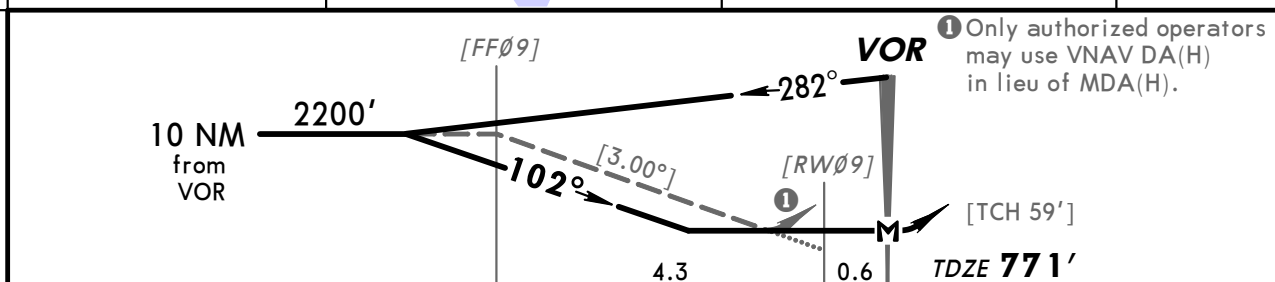
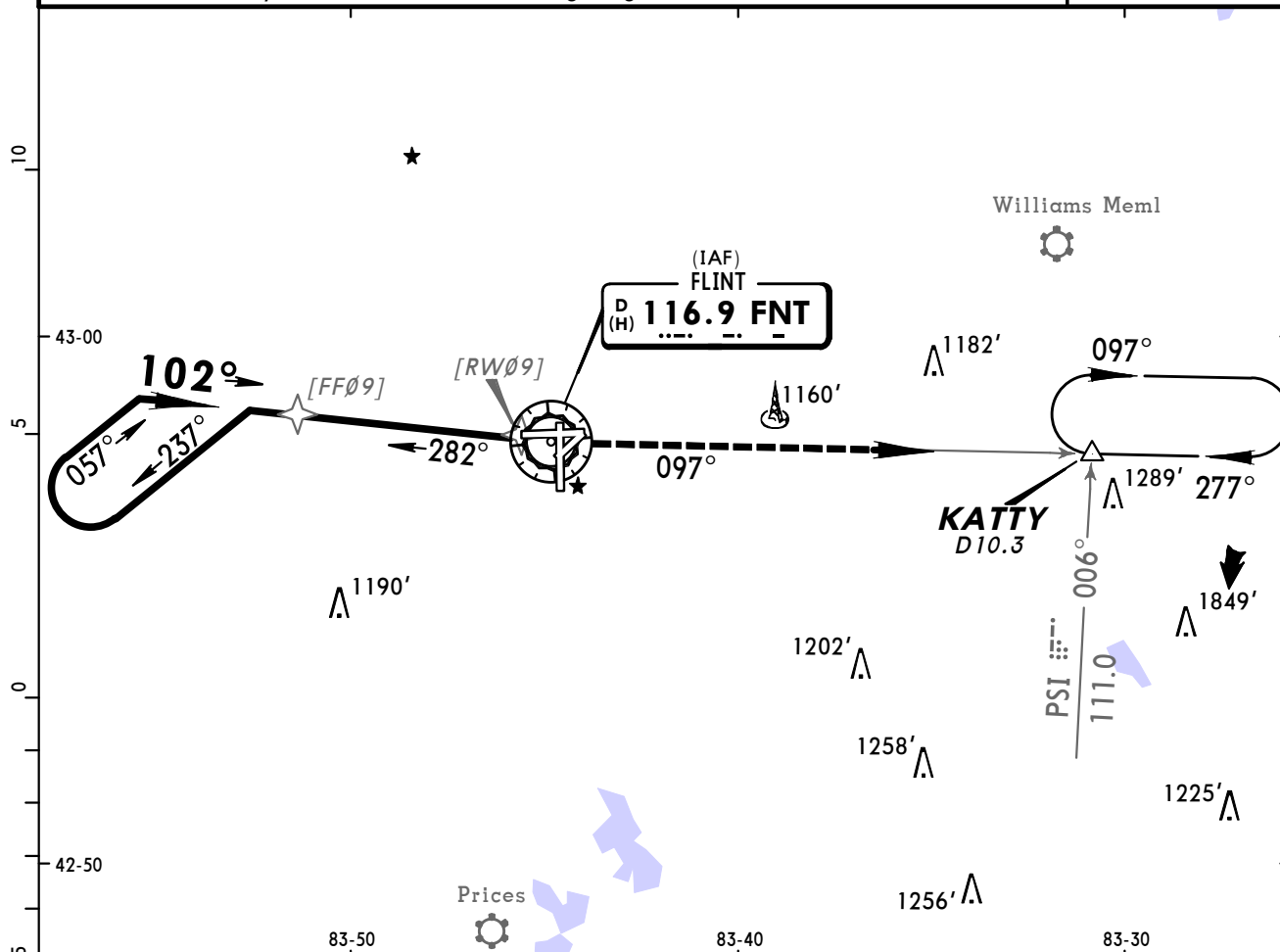
# KFNT/FNT BISHOP INTL

JEPPesen  
19 MAY 06 (13-1)

FLINT, MICH  
VOR Rwy 9

BRIEFING STRIP™

|                                                                                                                                                                                                            |                           |                       |                        |                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------------|------------------------|----------------------------|
| ATIS (ASOS when Twr inop)                                                                                                                                                                                  | *FLINT Approach (R)       | CLEVELAND Center      | *FLINT Tower           | *Ground                    |
| 133.15                                                                                                                                                                                                     | 118.8                     | 126.75 when App inop. | CTAF 126.3             | 121.9                      |
| VOR<br>FNT<br>116.9                                                                                                                                                                                        | Final<br>Apch Crs<br>102° | No FAF                | MDA(H)<br>1300' (529') | Apt Elev 782'<br>TDZE 771' |
| <b>MISSED APCH:</b> Climb to 3000' outbound via FNT VOR R-097 to KATTY INT/D10.3 and hold.                                                                                                                 |                           |                       |                        |                            |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. CAUTION: Brightly lighted parking lot 4000' east of approach end Rwy 27 can easily be confused for Rwy 27. 2. Pilot controlled lighting 126.3. |                           |                       |                        |                            |
| <div>3100'</div> <div>MSA FNT VOR</div>                                                                                                                                                                    |                           |                       |                        |                            |



|                       |     |     |     |     |     |     |       |       |                       |       |
|-----------------------|-----|-----|-----|-----|-----|-----|-------|-------|-----------------------|-------|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 | MALSR | 3000' | FNT<br>116.9<br>R-097 | KATTY |
| Descent angle [3.00°] | 372 | 478 | 531 | 637 | 743 | 849 |       |       |                       |       |
| MAP at VOR            |     |     |     |     |     |     |       |       |                       |       |

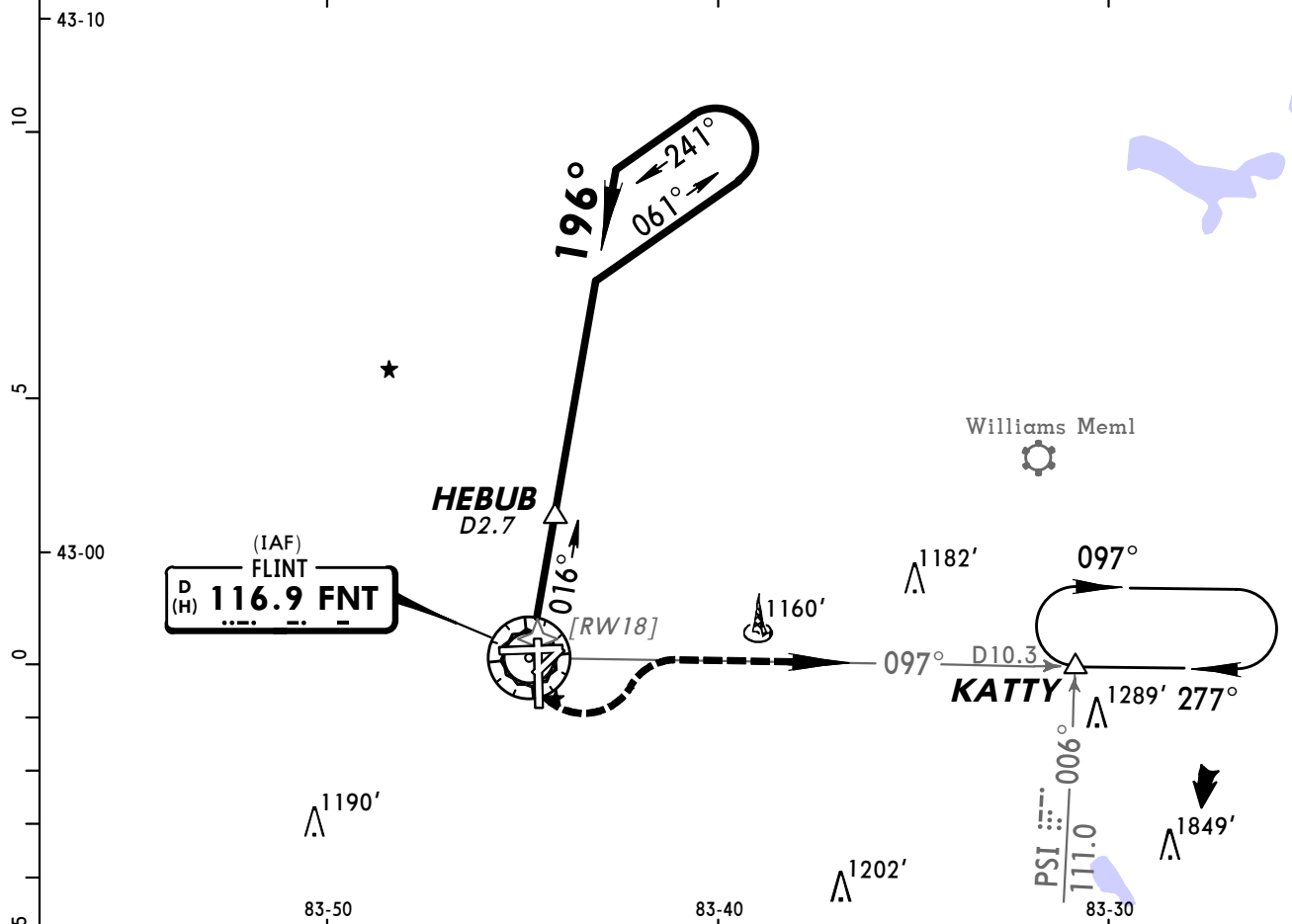
| STRAIGHT-IN LANDING RWY 9 |                 |          |  |         | CIRCLE-TO-LAND |                      |  |  |  |
|---------------------------|-----------------|----------|--|---------|----------------|----------------------|--|--|--|
| MDA(H) 1300' (529')       |                 |          |  |         |                |                      |  |  |  |
|                           |                 | RAIL out |  | ALS out | Max Kts        | MDA(H)               |  |  |  |
| A                         | RVR 24 or 1/2   |          |  |         | 90             | 1300' (518') - 1     |  |  |  |
| B                         | RVR 50 or 1     |          |  |         | 120            | 1300' (518') - 1 1/2 |  |  |  |
| C                         | RVR 60 or 1 1/4 |          |  |         | 140            | 1340' (558') - 2     |  |  |  |
| D                         |                 |          |  |         | 165            |                      |  |  |  |

CHANGES: None.

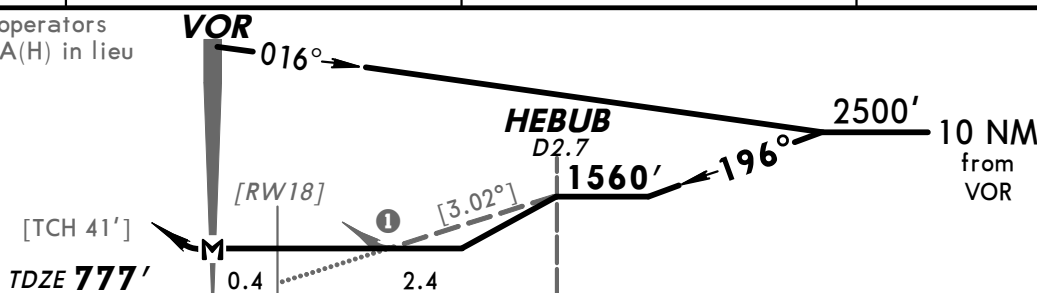
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BRIEFING STRIP™

|                                                                                                                                                                                                                                                      |                           |                                      |                                         |                            |  |                                         |  |         |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------------|-----------------------------------------|----------------------------|--|-----------------------------------------|--|---------|--|
| ATIS (ASOS when Twr inop)                                                                                                                                                                                                                            |                           | *FLINT Approach (R)                  |                                         | CLEVELAND Center           |  | *FLINT Tower                            |  | *Ground |  |
| 133.15                                                                                                                                                                                                                                               |                           | 118.8                                |                                         | 126.75 when App inop.      |  | CTAF 126.3                              |  | 121.9   |  |
| VOR<br>FNT<br>116.9                                                                                                                                                                                                                                  | Final<br>Apch Crs<br>196° | Minimum Alt<br>HEBUB<br>1560' (783') | MDA(H)<br>(CONDITIONAL)<br>1300' (523') | Apt Elev 782'<br>TDZE 777' |  | <div>3100'</div> <div>MSA FNT VOR</div> |  |         |  |
| MISSED APCH: Climbing LEFT turn to 3000' outbound via FNT VOR R-097 to KATTY INT and hold.                                                                                                                                                           |                           |                                      |                                         |                            |  |                                         |  |         |  |
| Alt Set: INCHES                      Trans level: FL 180                      Trans alt: 18000'<br>1. CAUTION: Brightly lighted parking lot 4000' east of approach end Rwy 27 can easily be confused for Rwy 27. 2. Pilot controlled lighting 126.3. |                           |                                      |                                         |                            |  |                                         |  |         |  |



① Only authorized operators may use VNAV DA(H) in lieu of MDA(H).



|                       |     |     |     |     |     |     |        |  |                                          |
|-----------------------|-----|-----|-----|-----|-----|-----|--------|--|------------------------------------------|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 | VASI-L |  | 3000' FNT<br>via 116.9 KATTY<br>LT R-097 |
| Descent angle [3.02°] | 374 | 481 | 534 | 641 | 748 | 855 |        |  |                                          |
| MAP at VOR            |     |     |     |     |     |     |        |  |                                          |

STRAIGHT-IN LANDING RWY18

CIRCLE-TO-LAND

| <i>MDA(H)</i> <b>1300'(523')</b><br>With HEBUB |    | <i>MDA(H)</i> <b>1560'(783')</b><br>Without HEBUB | Max<br>Kts | With HEBUB              | Without HEBUB           |
|------------------------------------------------|----|---------------------------------------------------|------------|-------------------------|-------------------------|
|                                                |    |                                                   |            | <i>MDA(H)</i>           | <i>MDA(H)</i>           |
| A                                              | 1  | 1                                                 | 90         | <b>1300'(518') - 1</b>  | <b>1560'(778') - 1</b>  |
| B                                              |    | 1¼                                                | 120        |                         | <b>1560'(778') - 1¼</b> |
| C                                              | 1½ | 2¼                                                | 140        | <b>1300'(518') - 1½</b> | <b>1560'(778') - 2¼</b> |
| D                                              | 1¾ | 2½                                                | 165        | <b>1340'(558') - 2</b>  | <b>1560'(778') - 2½</b> |

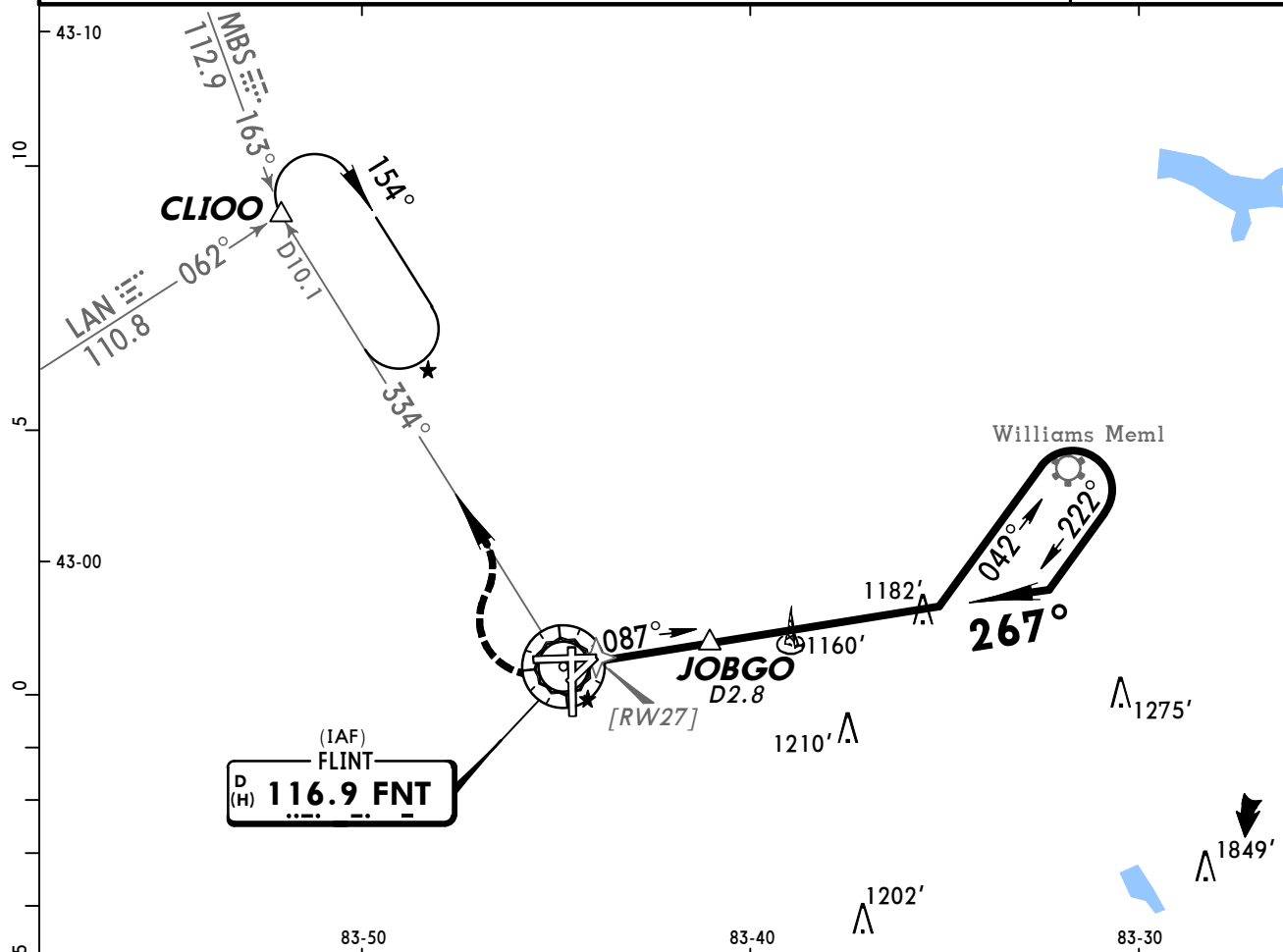
TERPS

# KFNT BISHOP INTL

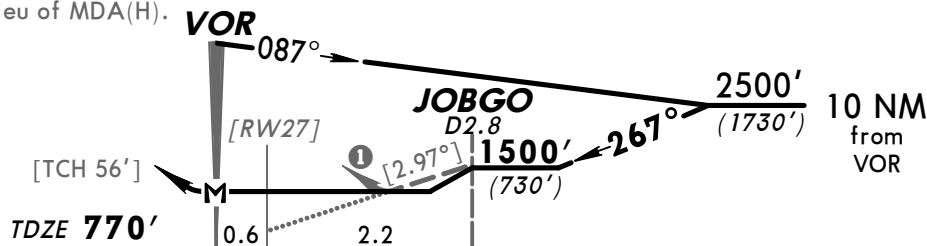
JEPPESEN  
15 FEB 02 (13-3) Eff 21 Feb

FLINT, MICH  
VOR Rwy 27

|                                                                                                                                                                                                                                                           |                                     |                                                  |                                                |                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------------|------------------------------------------------|------------------------------------------|
| *ATIS (ASOS O/T)<br><b>133.15</b>                                                                                                                                                                                                                         | *FLINT Approach (R)<br><b>118.8</b> | CLEVELAND Center<br><b>126.75</b> when App inop. | *FLINT Tower<br><b>CTAF 126.3</b>              | *Ground<br><b>121.9</b>                  |
| VOR<br>FNT<br><b>116.9</b>                                                                                                                                                                                                                                | Final<br>Apch Crs<br><b>267°</b>    | Minimum Alt<br>JOBGO<br><b>1500'</b> (730')      | MDA(H)<br>(CONDITIONAL)<br><b>1260'</b> (490') | Apt Elev <b>782'</b><br>TDZE <b>770'</b> |
| <b>MISSED APCH: Climbing RIGHT turn to 3000' outbound via FNT VOR R-334 to CLIOO INT and hold.</b>                                                                                                                                                        |                                     |                                                  |                                                |                                          |
| <b>1. CAUTION: Brightly lighted parking lot 4000' east of approach end Rwy 27 can easily be confused for Rwy 27. 2. Pilot controlled lighting 126.3.</b>                                                                                                  |                                     |                                                  |                                                |                                          |
| <div style="border: 1px solid black; border-radius: 50%; width: 100px; height: 100px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">3100'</div> <div style="text-align: right; margin-top: 5px;"><b>MSA FNT VOR</b></div> |                                     |                                                  |                                                |                                          |



① Only authorized operators may use VNAV DA(H) in lieu of MDA(H).



| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 |  | MALSR | 3000' | FNT       | CLIOO |
|-----------------------|-----|-----|-----|-----|-----|-----|--|-------|-------|-----------|-------|
| Descent angle [2.97°] | 368 | 473 | 525 | 630 | 736 | 841 |  | VASI  | RT    | via 116.9 |       |
| MAP at VOR            |     |     |     |     |     |     |  |       |       | R-334     |       |

| STRAIGHT-IN LANDING RWY 27 |          |         |                     |          |         | CIRCLE-TO-LAND |                    |                    |  |
|----------------------------|----------|---------|---------------------|----------|---------|----------------|--------------------|--------------------|--|
| MDA(H) 1260' (490')        |          |         | MDA(H) 1500' (730') |          |         | With JOBGO     |                    | Without JOBGO      |  |
| With JOBGO                 |          |         | Without JOBGO       |          |         | Max Kts        | MDA(H)             | MDA(H)             |  |
|                            | RAIL out | ALS out |                     | RAIL out | ALS out |                |                    |                    |  |
| A                          | 1/2      | 3/4     | 1                   | 1/2      | 3/4     | 90             | 1280' (498')-1     | 1500' (718')-1     |  |
| B                          | 1/2      | 3/4     | 1                   | 1/2      | 3/4     | 120            | 1300' (518')-1     | 1500' (718')-1     |  |
| C                          | 3/4      | 1 1/4   | 1 1/2               | 2        |         | 140            | 1300' (518')-1 1/2 | 1500' (718')-2     |  |
| D                          | 1        | 1 1/2   | 1 3/4               | 2 1/4    |         | 165            | 1340' (558')-2     | 1500' (718')-2 1/4 |  |

CHANGES: Procedure.

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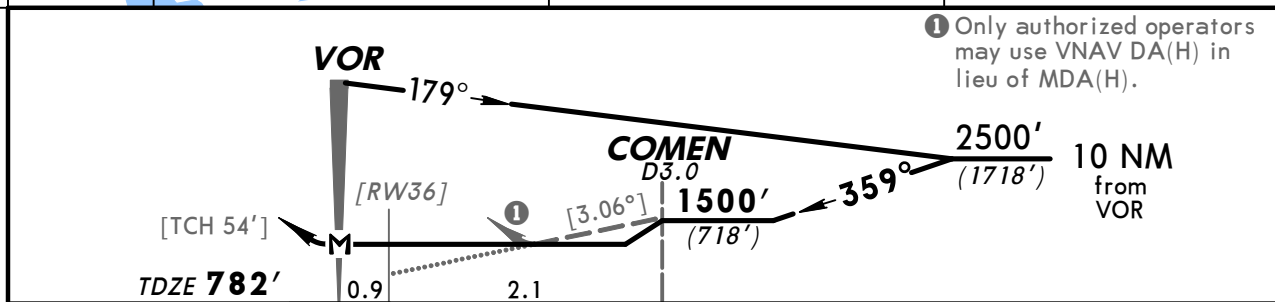
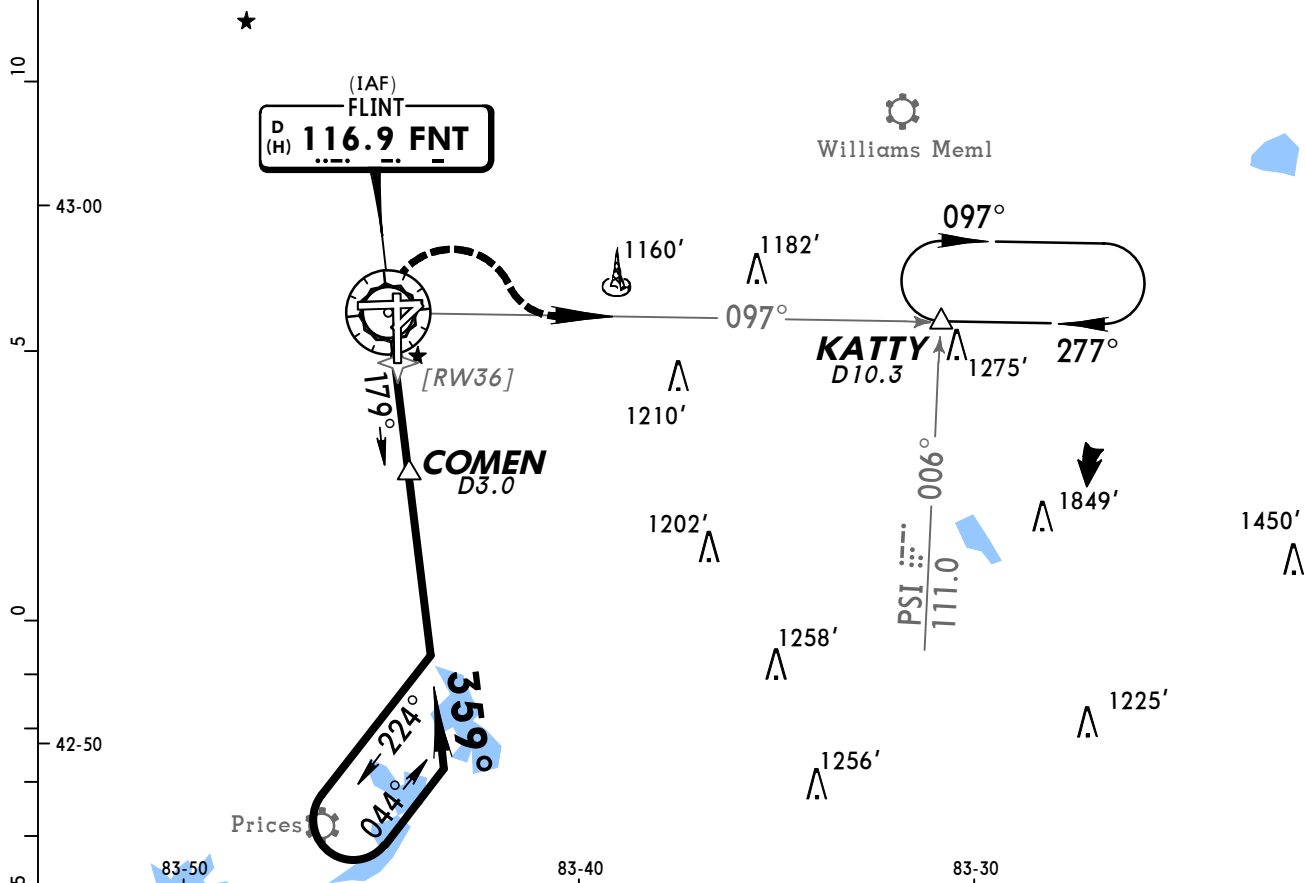
# KFNT BISHOP INTL

JEPPESEN  
15 FEB 02 (13-4) Eff 21 Feb

FLINT, MICH  
VOR Rwy 36

BRIEFING STRIP™

|                                                                                                                                                                                               |                                     |                                                    |                                                |                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|----------------------------------------------------|------------------------------------------------|------------------------------------------|
| *ATIS (ASOS O/T)<br><b>133.15</b>                                                                                                                                                             | *FLINT Approach (R)<br><b>118.8</b> | CLEVELAND Center<br><b>126.75</b> when App inop.   | *FLINT Tower<br>CTAF <b>126.3</b>              | *Ground<br><b>121.9</b>                  |
| VOR<br>FNT<br><b>116.9</b>                                                                                                                                                                    | Final<br>Apch Crs<br><b>359°</b>    | Minimum Alt<br><b>COMEN</b><br><b>1500'</b> (718') | MDA(H)<br>(CONDITIONAL)<br><b>1200'</b> (418') | Apt Elev <b>782'</b><br>TDZE <b>782'</b> |
| <b>MISSED APCH:</b> Climbing RIGHT turn to 3000' outbound via FNT VOR<br>R-097 to KATTY INT/D10.3 and hold.                                                                                   |                                     |                                                    |                                                |                                          |
| 1. CAUTION: Brightly lighted parking lot 4000' east of approach end Rwy 27 can easily<br>be confused for Rwy 27. 2. Pilot controlled lighting 126.3.                                          |                                     |                                                    |                                                |                                          |
| <div style="border: 1px solid black; border-radius: 50%; width: 100px; height: 100px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> 3100' </div> MSA FNT VOR |                                     |                                                    |                                                |                                          |



|                       |     |     |     |     |     |     |  |  |  |  |
|-----------------------|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 |  |  |  |  |
| Descent angle [3.06°] | 379 | 487 | 541 | 650 | 758 | 866 |  |  |  |  |
| MAP at VOR            |     |     |     |     |     |     |  |  |  |  |

| STRAIGHT-IN LANDING RWY 36 |       |                            |  | CIRCLE-TO-LAND |                             |                             |  |
|----------------------------|-------|----------------------------|--|----------------|-----------------------------|-----------------------------|--|
| MDA(H) <b>1200'</b> (418') |       | MDA(H) <b>1500'</b> (718') |  | With COMEN     |                             | Without COMEN               |  |
| With COMEN                 |       | Without COMEN              |  | Max Kts        | MDA(H)                      | MDA(H)                      |  |
| A                          | 1     | 1                          |  | 90             | <b>1280'</b> (498') - 1     | <b>1500'</b> (718') - 1     |  |
| B                          | 1     | 1                          |  | 120            | <b>1300'</b> (518') - 1     | <b>1500'</b> (718') - 1     |  |
| C                          | 1 1/4 | 2                          |  | 140            | <b>1300'</b> (518') - 1 1/2 | <b>1500'</b> (718') - 2     |  |
| D                          | 1 1/4 | 2 1/4                      |  | 165            | <b>1340'</b> (558') - 2     | <b>1500'</b> (718') - 2 1/4 |  |

CHANGES: Procedure.

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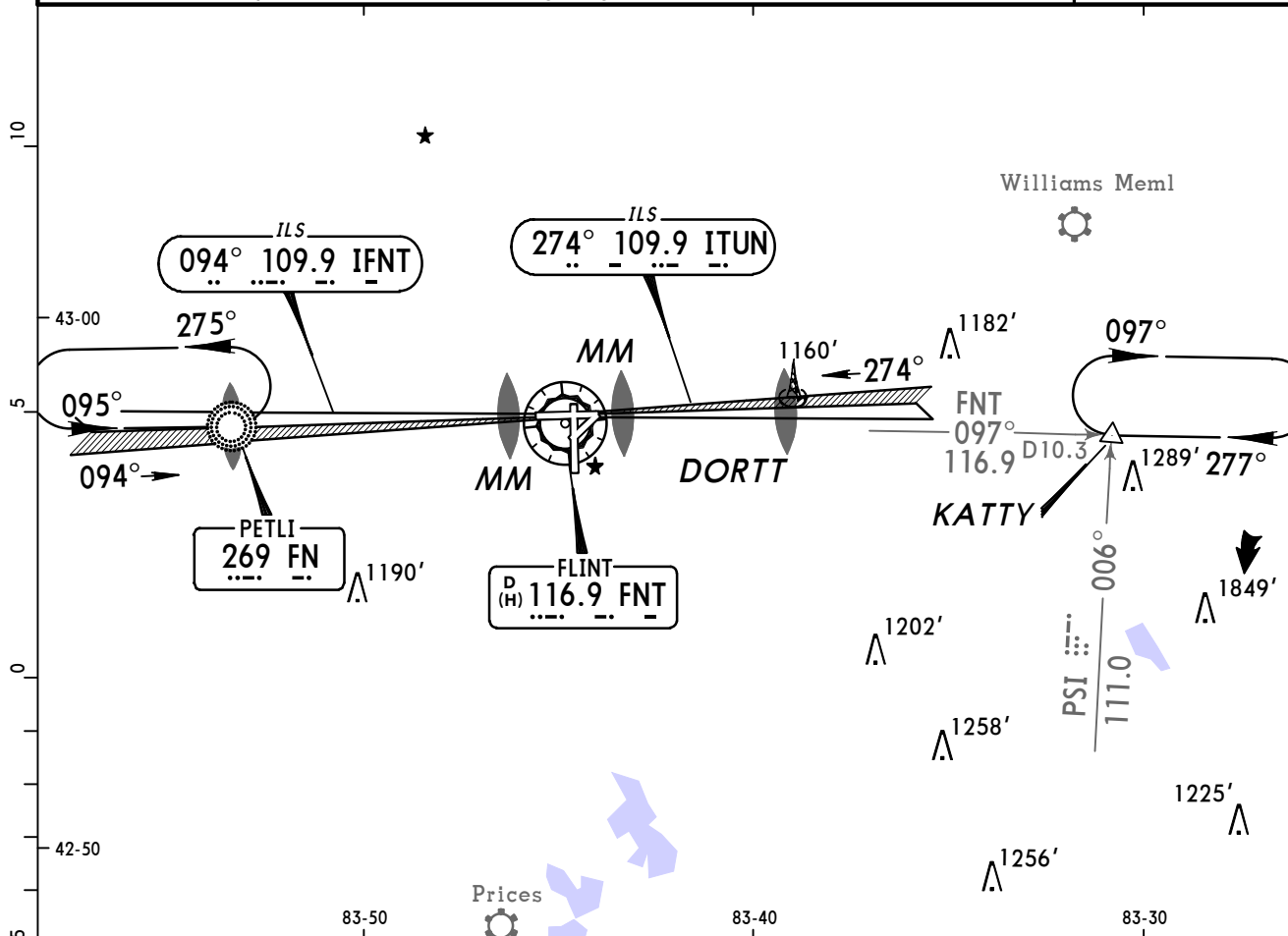
KFNT/FNT  
BISHOP INTL

JEPPESEN  
19 MAY 06 (18-1)

FLINT, MICH  
RADAR-1  
\*ASR Rwys 18, 27, 36

BRIEFING STRIP™

|                           |                          |                       |  |                                |  |                                         |  |                                 |  |
|---------------------------|--------------------------|-----------------------|--|--------------------------------|--|-----------------------------------------|--|---------------------------------|--|
| ATIS (ASOS when Twr inop) |                          | *FLINT Approach (R)   |  | CLEVELAND Center               |  | *FLINT Tower                            |  | *Ground                         |  |
| 133.15                    |                          | 118.8                 |  | 126.75 when App inop.          |  | CTAF 126.3                              |  | 121.9                           |  |
| RADAR                     | Final Apch Crs<br>By ATC | Minimum Alt<br>No FAF |  | MDA(H)<br>Refer to<br>Minimums |  | Apt Elev <b>782'</b><br>TDZE- See Below |  | <div>No MSA<br/>published</div> |  |
| Missed Approach-See Below |                          |                       |  |                                |  |                                         |  |                                 |  |
| Alt Set: INCHES           |                          |                       |  |                                |  |                                         |  |                                 |  |



**MISSED APPROACH:**

Runway 18: Climbing RIGHT turn to 2600' direct FN LOM and hold.

Runway 27: Climb to 2600' direct FN LOM and hold.

Runway 36: Climbing RIGHT turn to 3000' outbound via FNT VOR R-097 to KATY INT and hold.

|                     |                     |                     |
|---------------------|---------------------|---------------------|
| RWY 18<br>TDZE 777' | RWY 27<br>TDZE 770' | RWY 36<br>TDZE 782' |
|---------------------|---------------------|---------------------|

ASR Rwys 18, 27, 36: MAP at Rwy Thr

Lighting -  
Refer to  
Airport  
Chart

| ASR 18<br>MDA(H) <b>1300'</b> (523') |       | STRAIGHT-IN LANDING<br>ASR 27<br>MDA(H) <b>1240'</b> (470') |       | ASR 36<br>MDA(H) <b>1180'</b> (398') | CIRCLE-TO-LAND |                    |
|--------------------------------------|-------|-------------------------------------------------------------|-------|--------------------------------------|----------------|--------------------|
|                                      |       | RAIL out                                                    |       | ALS out                              | Max Kts        | MDA(H)             |
| A                                    | 1     | 3/4                                                         |       | 1                                    | 90             | 1300' (518')-1     |
| B                                    | 1     | 3/4                                                         |       | 1                                    | 120            | 1300' (518')-1     |
| C                                    | 1 1/2 | 3/4                                                         | 1 1/4 |                                      | 140            | 1300' (518')-1 1/2 |
| D                                    | 1 3/4 | 1                                                           | 1 1/2 |                                      | 165            | 1340' (558')-2     |

CHANGES: Minimums.

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## General Information

Location: Gaylord MI USA  
IATA Code: GLR  
Lat/Long: N45° 00.8' W084° 42.2'  
Elevation: 1328 ft

Airport Use: Public  
Magnetic Variation: 6.8°W  
Sectional Chart: Lake Huron

Fuel Types: 100 Octane (LL), Jet A  
Repair Types: Major Airframe, Major Engine  
Customs: No  
Airport Type: IFR  
Landing Fee: Yes  
Control Tower: No  
Jet Start Unit: Yes  
LLWS Alert: No  
Beacon: Yes

Sunrise: 1221 Z  
Sunset: 2323 Z,

## Runway Information

Runway: 09  
Length x Width: 6579 ft x 100 ft  
Surface Type: asphalt  
TDZ-Elev: 1321 ft  
Lighting: Edge, ALS, Pilot controlled

Runway: 18  
Length x Width: 4200 ft x 75 ft  
Surface Type: asphalt  
TDZ-Elev: 1322 ft  
Lighting: Edge, REIL, Pilot controlled

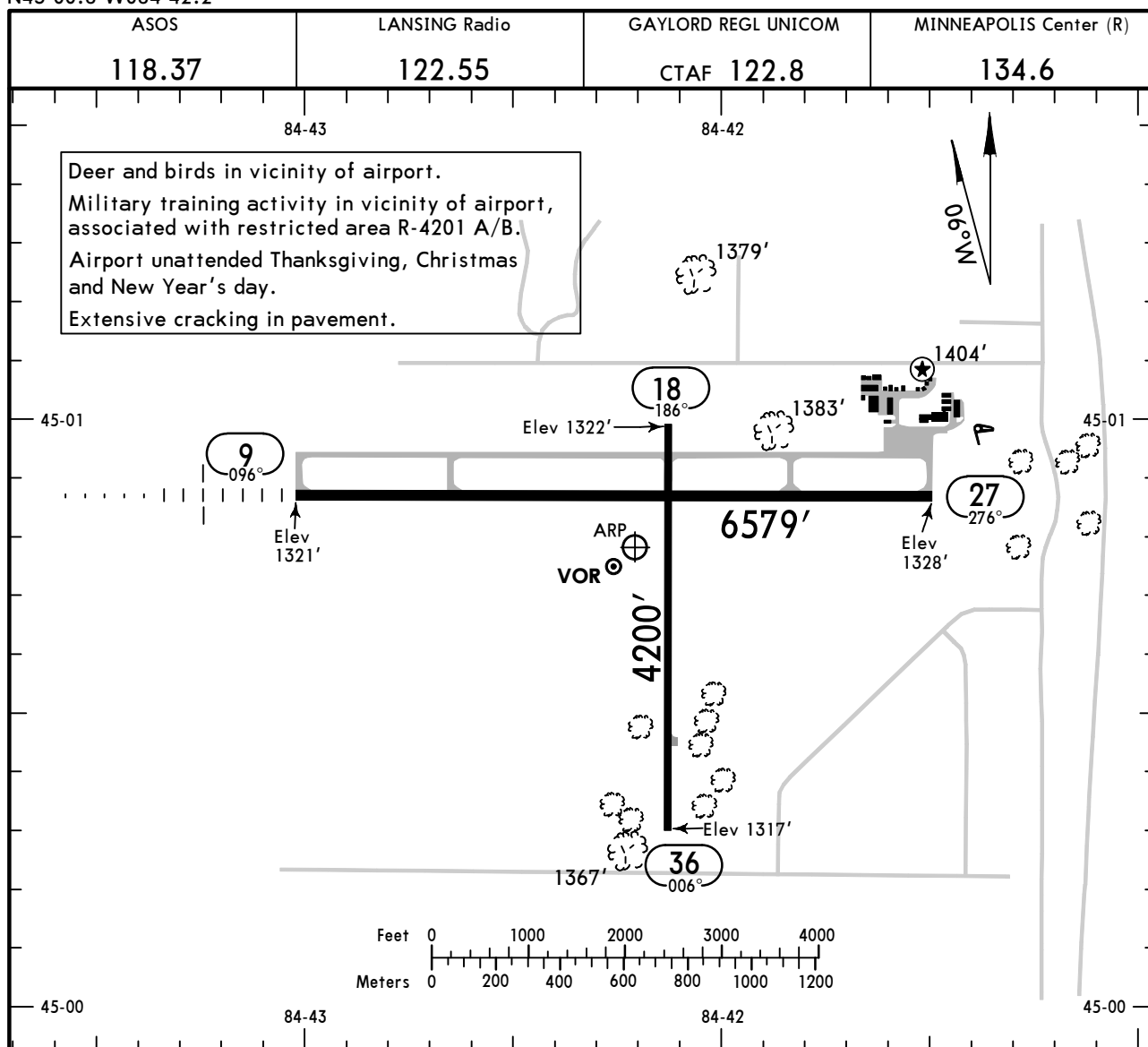
Runway: 27  
Length x Width: 6579 ft x 100 ft  
Surface Type: asphalt  
TDZ-Elev: 1328 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 36  
Length x Width: 4200 ft x 75 ft  
Surface Type: asphalt  
TDZ-Elev: 1321 ft  
Lighting: Edge, REIL, Pilot controlled



**Communication Information**

ASOS 118.375  
Gaylord Regl Unicom 122.8 CTAF PCL  
Lansing Flight Service Station 122.55 RCO  
Minneapolis Center 134.6 Remote Communications Air-Ground

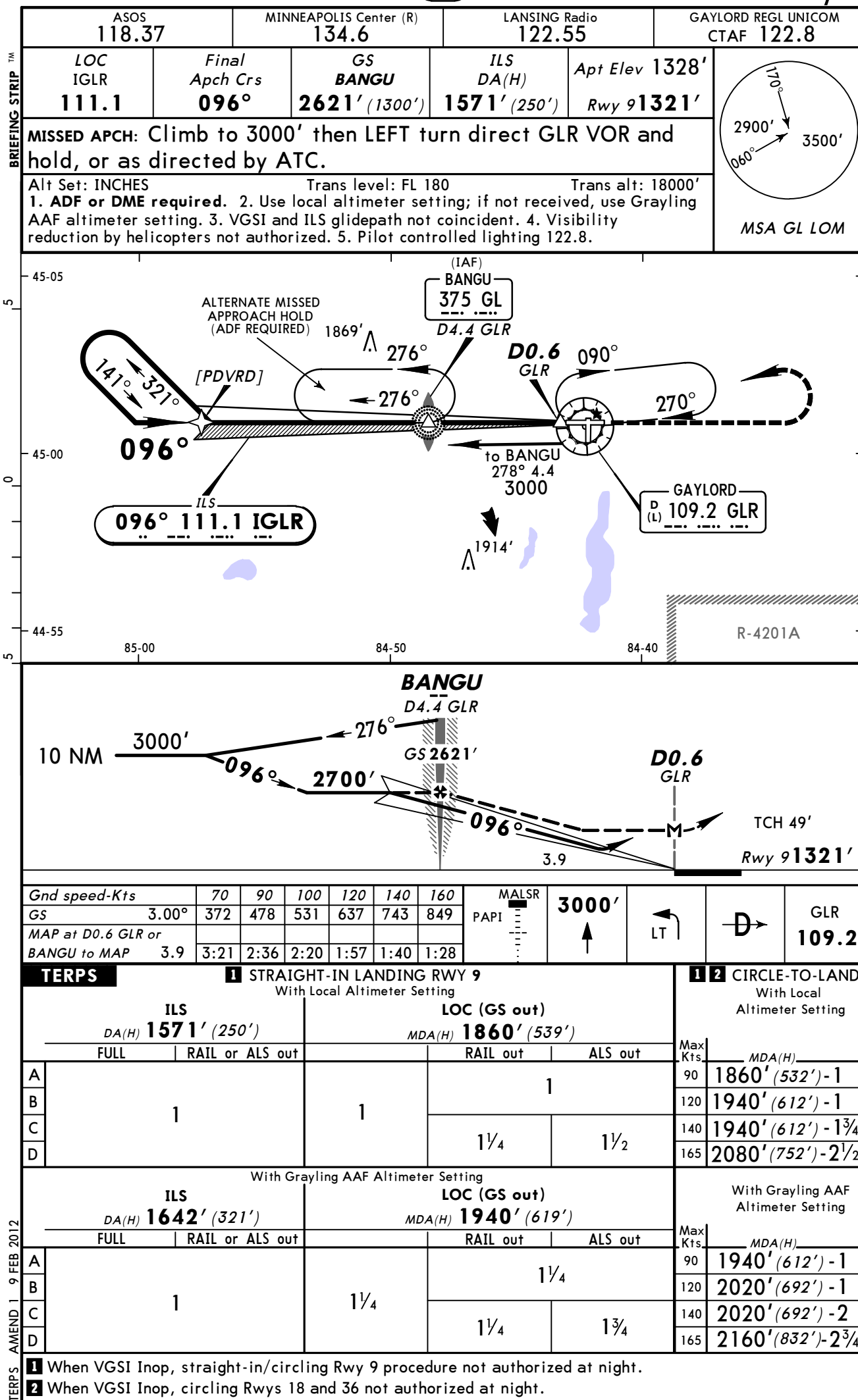


**ADDITIONAL RUNWAY INFORMATION**

| RWY |                                       | USABLE LENGTHS |             | TAKE-OFF | WIDTH |
|-----|---------------------------------------|----------------|-------------|----------|-------|
|     |                                       | Threshold      | Glide Slope |          |       |
| 9   | ① HIRL ① MALSR ① PAPI-L (angle 3.0°)  |                | 5480'       |          | 150'  |
| 27  | ① HIRL ① REIL ① PAPI-L (angle 3.0°)   |                |             |          |       |
| 18  | ① MIRL ① REIL ① PAPI-R (angle 3.00°)  |                |             |          | 75'   |
| 36  | ① MIRL ① REIL ①② PAPI-R (angle 3.00°) |                |             |          |       |
|     |                                       |                |             |          |       |
|     |                                       |                |             |          |       |
|     |                                       |                |             |          |       |

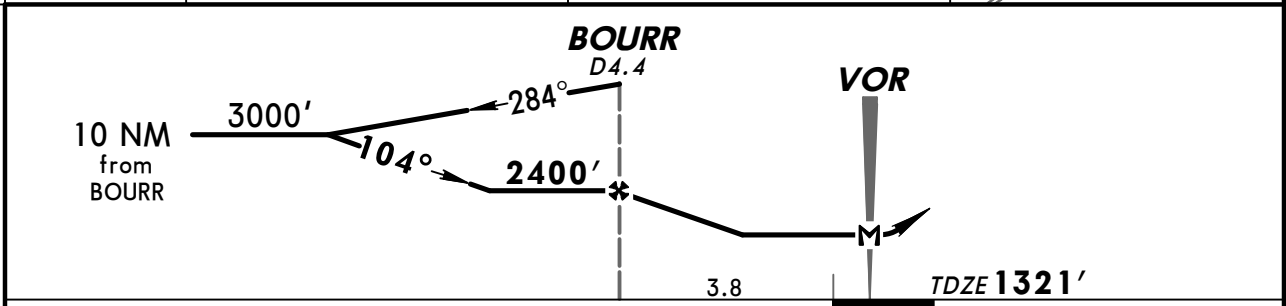
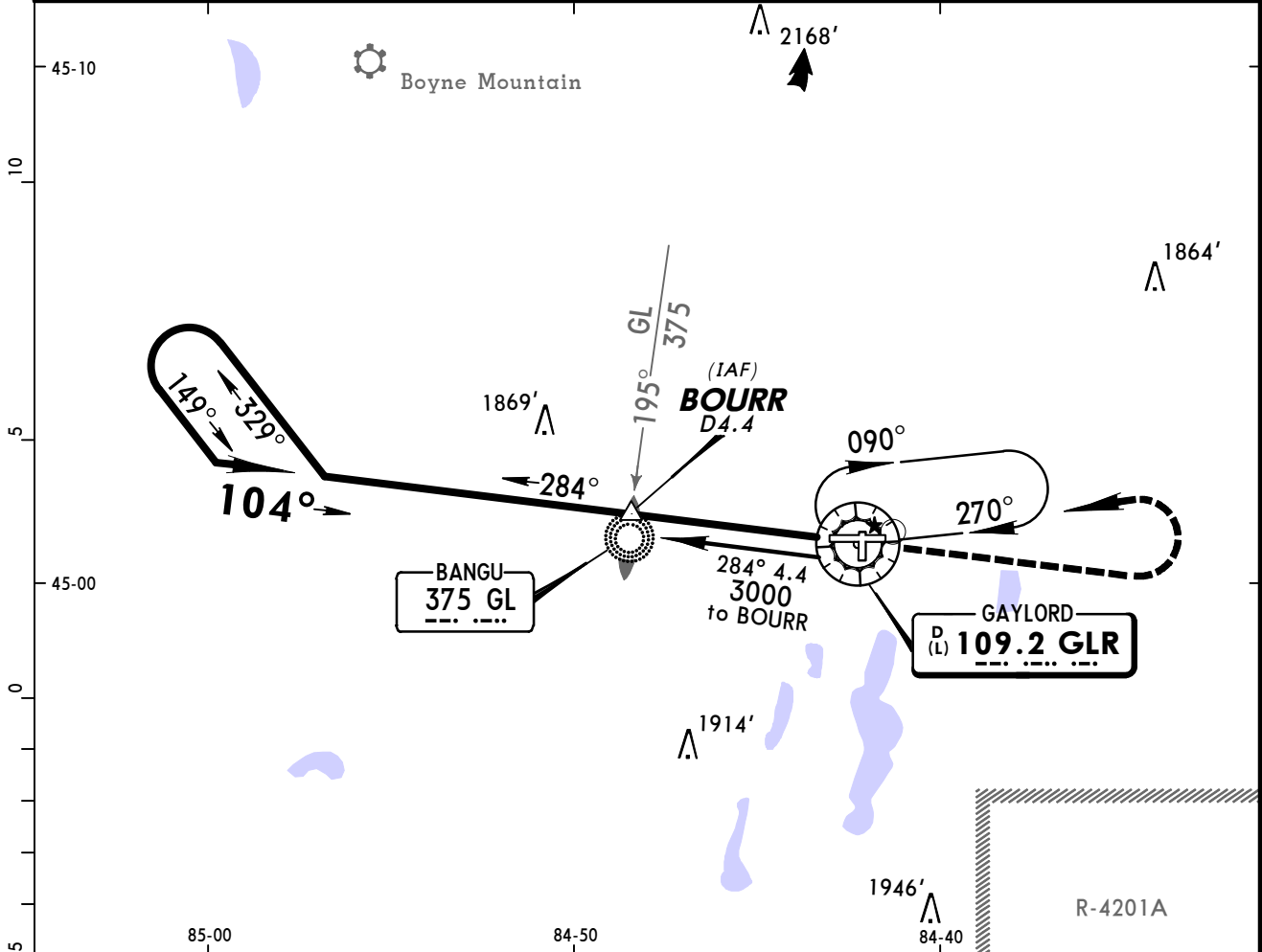
- ① Activate on 122.8.  
 ② Unusable beyond 5° left/right of centerline.

| TAKE-OFF  |                  |     | FOR FILING AS ALTERNATE               |       |
|-----------|------------------|-----|---------------------------------------|-------|
|           | All Rwys         |     | VOR or GPS Rwy 9<br>VOR or GPS Rwy 27 | Other |
|           | Adequate Vis Ref | STD |                                       |       |
| 1 & 2 Eng | 1/4              | 1   | 800-2                                 | NA    |
| 3 & 4 Eng |                  | 1/2 |                                       |       |



BRIEFING STRIP™

|                                                                                                                                                                   |                           |                                       |                        |                              |  |                                         |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------|------------------------|------------------------------|--|-----------------------------------------|--|
| ASOS<br>118.37                                                                                                                                                    |                           | MINNEAPOLIS Center (R)<br>134.6       |                        | LANSING Radio<br>122.55      |  | GAYLORD REGL UNICOM<br>CTAF 122.8       |  |
| VOR<br>GLR<br>109.2                                                                                                                                               | Final<br>Apch Crs<br>104° | Minimum Alt<br>BOURR<br>2400' (1079') | MDA(H)<br>1700' (379') | Apt Elev 1328'<br>TDZE 1321' |  | <div>3500'</div> <div>MSA GLR VOR</div> |  |
| MISSED APCH: Climb to 3000', then LEFT turn direct GLR VOR and hold.                                                                                              |                           |                                       |                        |                              |  |                                         |  |
| Alt Set: INCHES                      Trans level: FL 180                      Trans alt: 18000'<br>1. ADF or DME required.    2. Pilot controlled lighting 122.8. |                           |                                       |                        |                              |  |                                         |  |

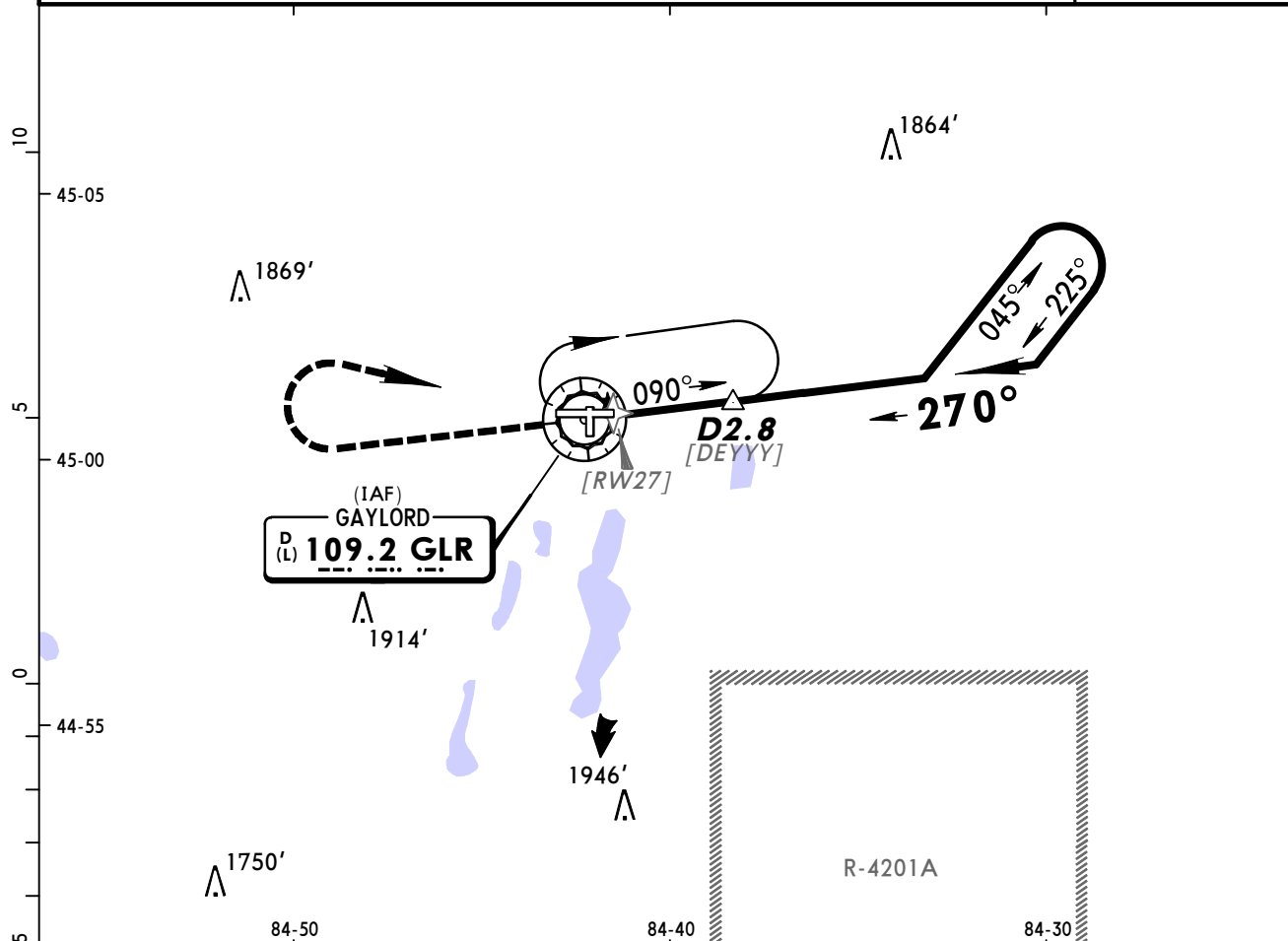


|            |  |  |  |  |  |       |       |    |           |
|------------|--|--|--|--|--|-------|-------|----|-----------|
|            |  |  |  |  |  | MALSR | 3000' | LT | GLR 109.2 |
|            |  |  |  |  |  | PAPI  | ↑     |    |           |
| MAP at VOR |  |  |  |  |  |       |       |    |           |

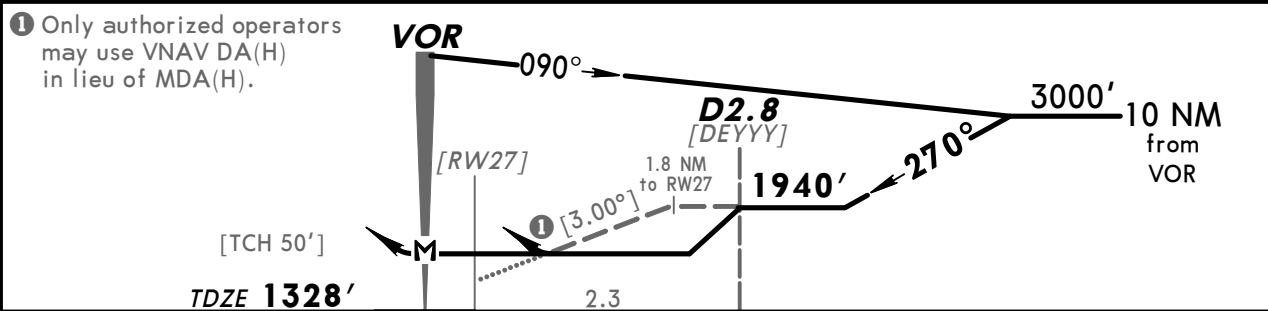
| STRAIGHT-IN LANDING RWY 9  |          |         |         | CIRCLE-TO-LAND       |  |
|----------------------------|----------|---------|---------|----------------------|--|
| MDA(H) <b>1700'</b> (379') |          |         |         |                      |  |
|                            | RAIL out | ALS out | Max Kts | MDA(H)               |  |
| A                          |          |         | 90      | 1840' (512') - 1     |  |
| B                          | 1/2      | 3/4     | 120     | 1940' (612') - 1     |  |
| C                          |          |         | 140     | 1940' (612') - 1 3/4 |  |
| D                          | 1        | 1 1/4   | 165     | 2080' (752') - 2 1/2 |  |

BRIEFING STRIP™

|                                                                       |                           |                                     |                                         |                              |  |                                                   |  |
|-----------------------------------------------------------------------|---------------------------|-------------------------------------|-----------------------------------------|------------------------------|--|---------------------------------------------------|--|
| ASOS<br>118.37                                                        |                           | MINNEAPOLIS Center (R)<br>134.6     |                                         | LANSING Radio<br>122.55      |  | GAYLORD REGL UNICOM<br>CTAF 122.8                 |  |
| VOR<br>GLR<br>109.2                                                   | Final<br>Apch Crs<br>270° | Minimum Alt<br>D2.8<br>1940' (612') | MDA(H)<br>(CONDITIONAL)<br>1880' (552') | Apt Elev 1328'<br>TDZE 1328' |  | <div><div>3500'</div><div>MSA GLR VOR</div></div> |  |
| MISSED APCH: Climb to 3000', then RIGHT turn direct GLR VOR and hold. |                           |                                     |                                         |                              |  |                                                   |  |
| Alt Set: INCHES<br>1. Pilot controlled lighting 122.8.                |                           | Trans level: FL 180                 |                                         | Trans alt: 18000'            |  |                                                   |  |

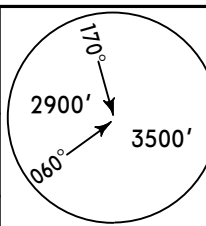


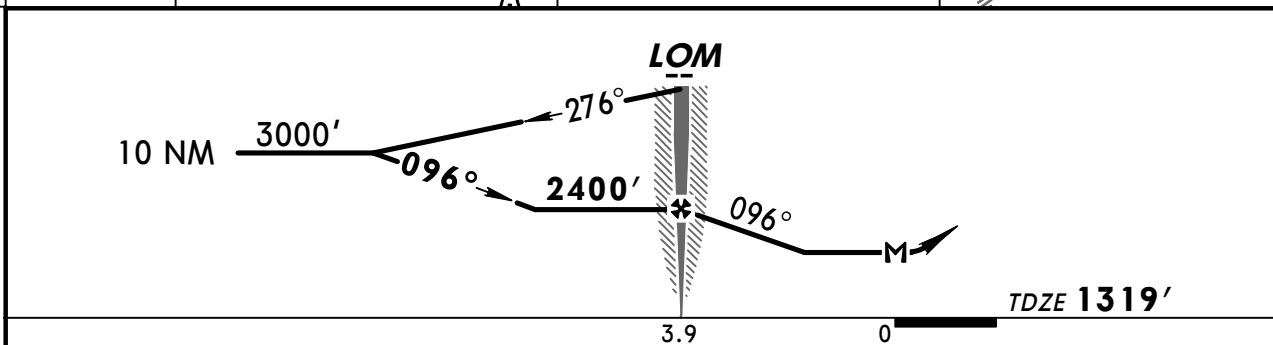
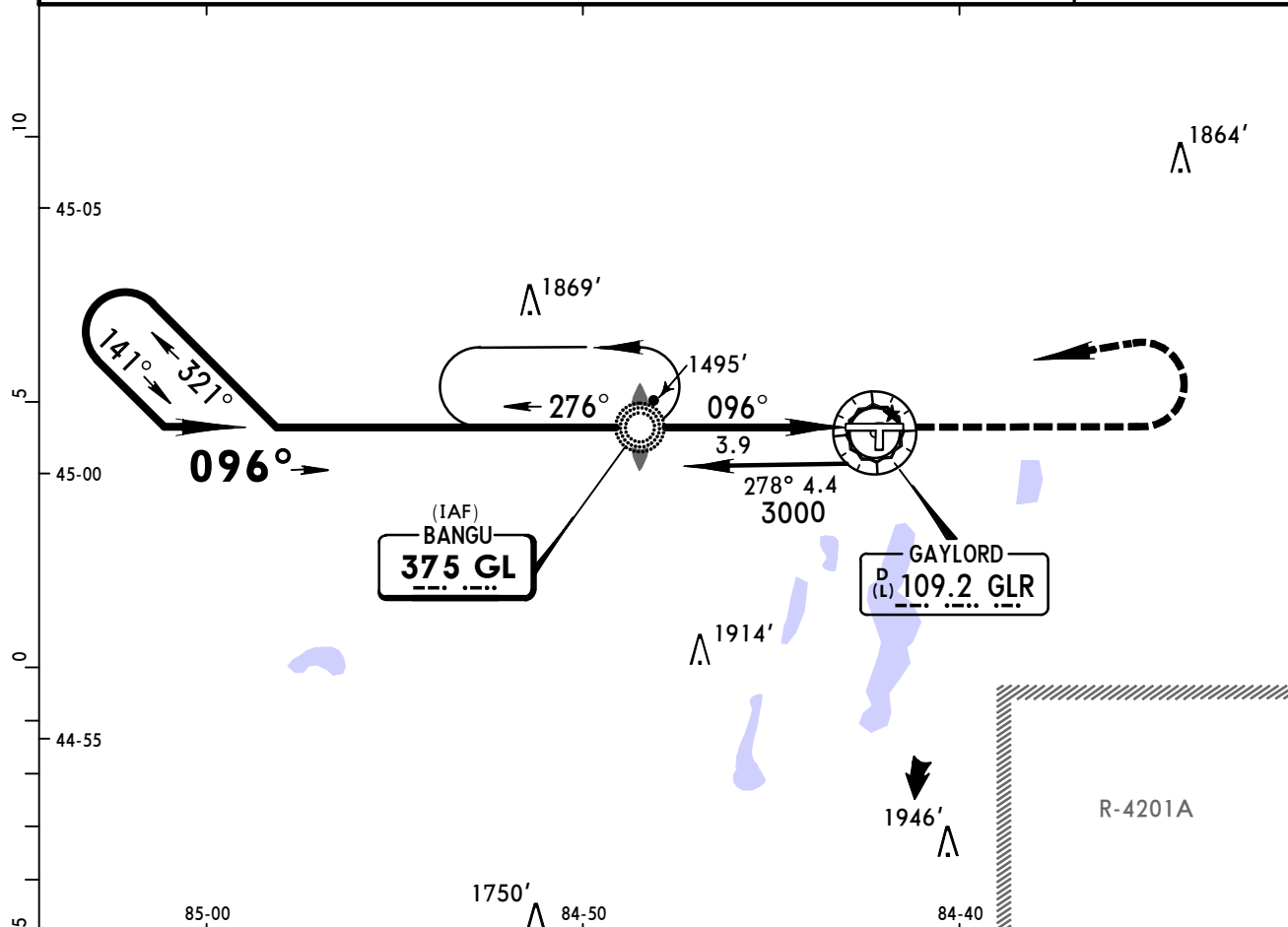
**1** Only authorized operators may use VNAV DA(H) in lieu of MDA(H).



|                       |     |     |     |     |     |     |                |                   |         |        |                     |
|-----------------------|-----|-----|-----|-----|-----|-----|----------------|-------------------|---------|--------|---------------------|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 | REIL<br>PAPI-L | <b>3000'</b><br>↑ | RT<br>→ | D<br>→ | GLR<br><b>109.2</b> |
| Descent angle [3.00°] | 372 | 478 | 531 | 637 | 743 | 849 |                |                   |         |        |                     |
| MAP at VOR            |     |     |     |     |     |     |                |                   |         |        |                     |

| STRAIGHT-IN LANDING RWY 27              |    |                                            |    | CIRCLE-TO-LAND |                        |                        |  |
|-----------------------------------------|----|--------------------------------------------|----|----------------|------------------------|------------------------|--|
| MDA(H) <b>1880'</b> (552')<br>With D2.8 |    | MDA(H) <b>1940'</b> (612')<br>Without D2.8 |    | Max Kts        | With D2.8<br>MDA(H)    | Without D2.8<br>MDA(H) |  |
| A                                       | 1  | 1                                          | 1  | 90             | <b>1880'</b> (552')-1  | <b>1940'</b> (612')-1  |  |
| B                                       | 1  | 1                                          | 1  | 120            | <b>1940'</b> (612')-1  |                        |  |
| C                                       | 1½ | 1¾                                         | 1¾ | 140            | <b>1940'</b> (612')-1¾ | <b>1940'</b> (612')-1¾ |  |
| D                                       | 1¾ | 2                                          | 2  | 165            | <b>2080'</b> (752')-2½ |                        |  |

|                      |                                                                     |                           |                                     |                        |                              |                                                                                     |                                   |  |
|----------------------|---------------------------------------------------------------------|---------------------------|-------------------------------------|------------------------|------------------------------|-------------------------------------------------------------------------------------|-----------------------------------|--|
| BRIEFING STRIP<br>TM | ASOS<br>118.37                                                      |                           | MINNEAPOLIS Center (R)<br>134.6     |                        | LANSING Radio<br>122.55      |                                                                                     | GAYLORD REGL UNICOM<br>CTAF 122.8 |  |
|                      | LOM<br>GL<br>375                                                    | Final<br>Apch Crs<br>096° | Minimum Alt<br>LOM<br>2400' (1081') | MDA(H)<br>1780' (461') | Apt Elev 1328'<br>TDZE 1319' |  |                                   |  |
|                      | MISSED APCH: Climb to 3000', then LEFT turn direct GL LOM and hold. |                           |                                     |                        |                              |                                                                                     |                                   |  |
|                      | Alt Set: INCHES                                                     |                           | Trans level: FL 180                 |                        | Trans alt: 18000'            |                                                                                     |                                   |  |
|                      | 1. Pilot controlled lighting 122.8.                                 |                           |                                     |                        |                              | MSA GL LOM                                                                          |                                   |  |



|               |     |      |      |      |      |      |               |       |    |   |           |
|---------------|-----|------|------|------|------|------|---------------|-------|----|---|-----------|
| Gnd speed-Kts | 70  | 90   | 100  | 120  | 140  | 160  | MALSR<br>PAPI | 3000' | LT | → | GL<br>375 |
| LOM to MAP    | 3.9 | 3:21 | 2:36 | 2:20 | 1:57 | 1:40 |               |       |    |   |           |

| STRAIGHT-IN LANDING RWY 9  |       |  |         |       |  | CIRCLE-TO-LAND |                    |  |  |
|----------------------------|-------|--|---------|-------|--|----------------|--------------------|--|--|
| MDA(H) <b>1780'</b> (461') |       |  |         |       |  |                |                    |  |  |
| RAIL out                   |       |  | ALS out |       |  | Max Kts        | MDA(H)             |  |  |
| A                          | 3/4   |  |         | 1     |  | 90             | 1840' (512')-1     |  |  |
| B                          |       |  |         |       |  | 120            | 1940' (612')-1     |  |  |
| C                          | 3/4   |  |         | 1 1/4 |  | 140            | 1940' (612')-1 3/4 |  |  |
| D                          | 1 1/4 |  |         | 1 1/2 |  | 165            | 2080' (752')-2 1/2 |  |  |

## General Information

Location: Grand Rapids MI USA  
IATA Code: GRR  
Lat/Long: N42° 52.8' W085° 31.4'  
Elevation: 794 ft

Airport Use: Public  
Magnetic Variation: 5.6°W  
Sectional Chart: Chicago

Fuel Types: 100 Octane (LL), Jet A  
Oxygen Types: High Pressure, HP Bottle  
Repair Types: Major Airframe, Major Engine  
Customs: Upon Prior Request  
Airport Type: IFR  
Landing Fee: No  
Control Tower: Yes  
Jet Start Unit: Yes  
LLWS Alert: No  
Beacon: Yes

Sunrise: 1222 Z  
Sunset: 2328 Z,

## Runway Information

Runway: 08L  
Length x Width: 5000 ft x 100 ft  
Surface Type: concrete  
TDZ-Elev: 787 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 08R  
Length x Width: 10000 ft x 150 ft  
Surface Type: concrete  
TDZ-Elev: 794 ft  
Lighting: Edge, ALS, Pilot controlled

Runway: 17  
Length x Width: 8501 ft x 150 ft  
Surface Type: concrete  
TDZ-Elev: 789 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 26L  
Length x Width: 10000 ft x 150 ft  
Surface Type: concrete  
TDZ-Elev: 790 ft  
Lighting: Edge, ALS, Pilot controlled

Runway: 26R  
Length x Width: 5000 ft x 100 ft  
Surface Type: concrete  
TDZ-Elev: 787 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 35  
Length x Width: 8501 ft x 150 ft  
Surface Type: concrete  
TDZ-Elev: 790 ft  
Lighting: Edge, ALS, Pilot controlled

## **Communication Information**

ATIS 127.1  
Grand Rapids Tower 135.65 CTAF PCL  
Grand Rapids Ground Control 121.8  
Grand Rapids Clearance Delivery 119.3  
Grand Rapids Approach Control 124.6  
Grand Rapids Approach Control 128.4 (91°-270°) Initial Contact  
Grand Rapids App ARSA 128.4 (91°-270°)  
Grand Rapids App ARSA 124.6 (271°-90°)  
Grand Rapids Departure Control 124.6  
Grand Rapids Departure Control 128.4 (91°-270°)  
Kent Co Intl Unicom 122.95  
Lansing Flight Service Station 122.25 RCO  
Chicago Center 128.4 Remote Communications Air-Ground

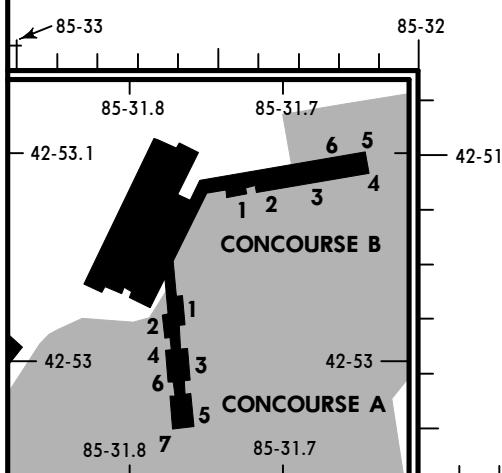
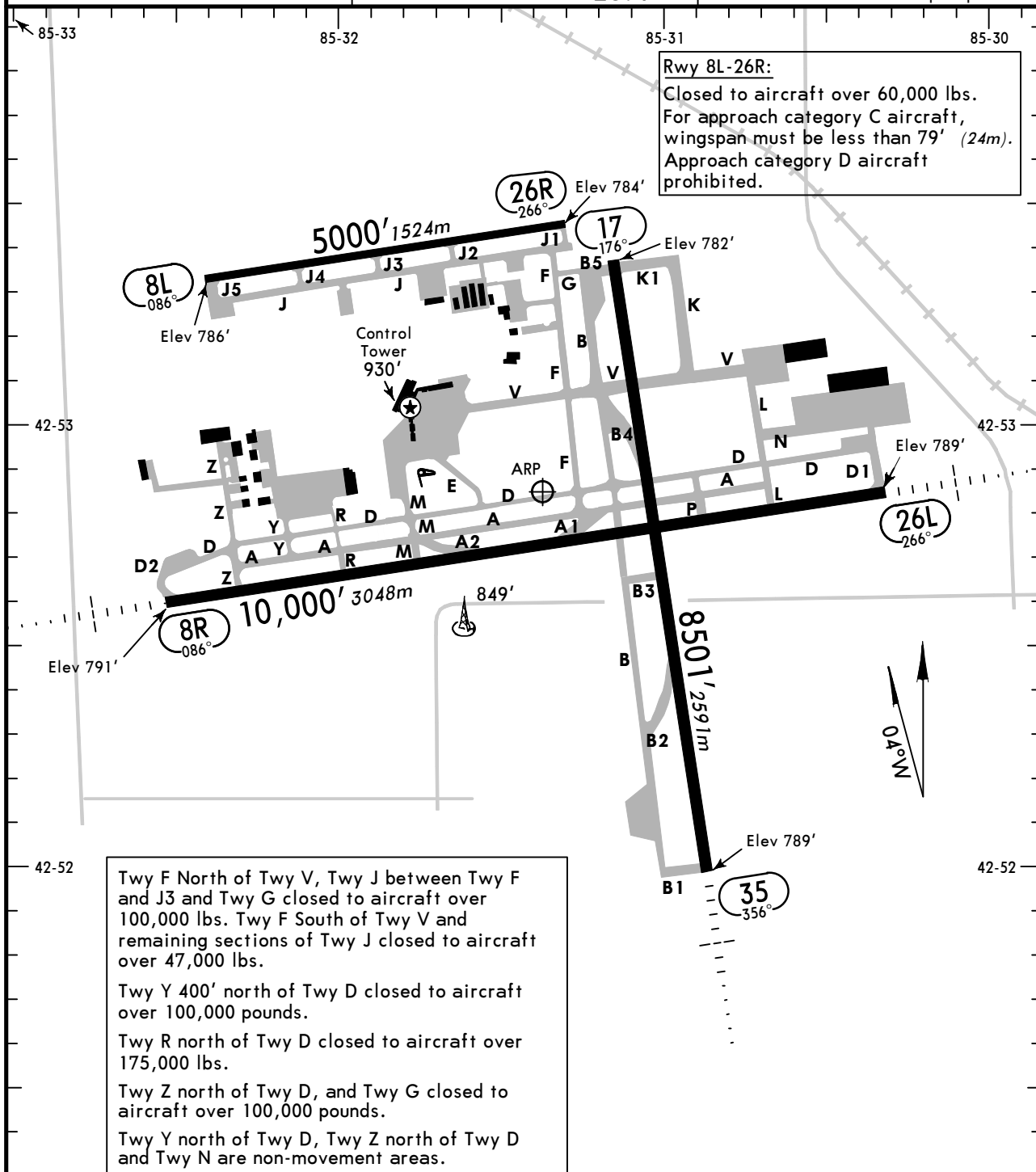


**KGRR / GRR**  
 Apt Elev **794'**  
 N42 52.9 W085 31.4

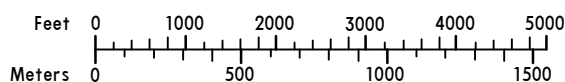
**JEPPesen**  
 4 FEB 11 **(10-9)** **Eff 10 Feb**

**GRAND RAPIDS, MICH**  
**FORD INTL**

|                           |                                                      |                       |                                                   |
|---------------------------|------------------------------------------------------|-----------------------|---------------------------------------------------|
| ATIS (ASOS when Twr inop) | *GRAND RAPIDS Clearance                              | *Ground               | *Tower                                            |
| <b>127.1</b>              | <b>119.3</b>                                         | <b>121.8</b>          | <b>CTAF 135.65</b>                                |
| UNICOM 122.95             | *GRAND RAPIDS Departure (R)<br>North<br><b>124.6</b> | South<br><b>128.4</b> | CHICAGO Center (R)<br><b>128.4</b> when Dep inop. |



| PARKING GATE COORDINATES |                    |
|--------------------------|--------------------|
| GATE NO.                 | COORDINATES        |
| <b>CONCOURSE A</b>       |                    |
| 1 thru 7                 | N42 53.0 W085 31.8 |
| <b>CONCOURSE B</b>       |                    |
| 1 thru 3                 | N42 53.1 W085 31.7 |
| 4 thru 6                 | N42 53.1 W085 31.6 |



CHANGES: None.

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GENERAL

Birds on and in vicinity of airport.

Weather Systems Processor (WSP) provided by tower.

Airport Beacon Schedule: Dusk-Dawn.

Snow removal personnel will monitor CTAF when Tower is closed.

## ADDITIONAL RUNWAY INFORMATION

| RWY |                         |         |     |  | USABLE LENGTHS |             | TAKE-OFF | WIDTH |
|-----|-------------------------|---------|-----|--|----------------|-------------|----------|-------|
|     |                         |         |     |  | LANDING        | BEYOND      |          |       |
|     |                         |         |     |  | Threshold      | Glide Slope |          |       |
| 8R  | ① HIRL ① MALSR          | grooved | RVR |  |                | 9053' 2759m |          | 150'  |
| 26L | ① HIRL ① MALSR ② PAPI-L | grooved | RVR |  |                | 8951' 2728m |          | 46m   |

① Activate on 135.65 when Twr inop.

② Angle 3.00°.

|     |                        |         |  |  |  |  |  |      |
|-----|------------------------|---------|--|--|--|--|--|------|
| 8L  | ③ MIRL ③ REIL ③ VASI-L | grooved |  |  |  |  |  | 100' |
| 26R |                        |         |  |  |  |  |  | 30m  |

③ Activate on 135.65 when Twr inop.

|    |                         |         |     |  |  |             |  |      |
|----|-------------------------|---------|-----|--|--|-------------|--|------|
| 17 | ④ HIRL ④ REIL ④ VASI-L  | grooved |     |  |  |             |  | 150' |
| 35 | ④ HIRL ④ MALSR ⑤ PAPI-R | grooved | RVR |  |  | 7452' 2271m |  | 46m  |

④ Activate on 135.65 when Twr inop.

⑤ Angle 3.00°.

|  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|

## TAKE-OFF

## Rwys 8R, 26L

| Both RVRs are<br>required and controlling | Adequate<br>Vis Ref | STD              |                |
|-------------------------------------------|---------------------|------------------|----------------|
|                                           |                     | 3 & 4 Eng        | 1 & 2 Eng      |
| TDZ RVR 10<br>Rollout RVR 10              | RVR 16<br>or 1/4    | RVR 24<br>or 1/2 | RVR 50<br>or 1 |

## Rwys 8L, 17, 26R, 35

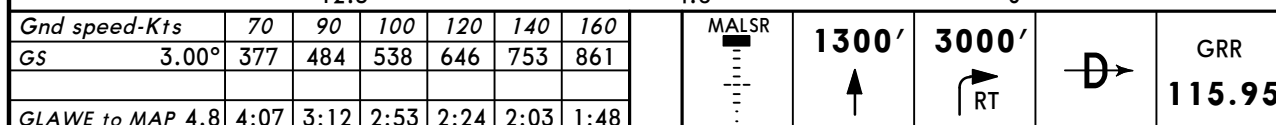
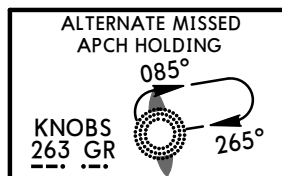
| Adequate<br>Vis Ref | STD           |             |
|---------------------|---------------|-------------|
|                     | 3 & 4 Eng     | 1 & 2 Eng   |
| RVR 16 or 1/4       | RVR 24 or 1/2 | RVR 50 or 1 |

## FOR FILING AS ALTERNATE

Authorized Only When Local Weather Available

|   | ILS Rwy 8R<br>ILS Rwy 26L | LOC Rwy 8R<br>LOC Rwy 26L<br>RNAV (GPS) Rwy 8L<br>RNAV (GPS) Rwy 8R<br>RNAV (GPS) Rwy 17 | RNAV (GPS) Rwy 26L<br>RNAV (GPS) Rwy 26R<br>RNAV (GPS) Rwy 35<br>VOR Rwy 35 | Authorized Only When<br>Twr Operating |            | VOR Rwy 17 | Authorized<br>Only When<br>Twr Operating<br>RADAR-1 |
|---|---------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|---------------------------------------|------------|------------|-----------------------------------------------------|
|   |                           |                                                                                          |                                                                             | ILS Rwy 35                            | LOC Rwy 35 |            |                                                     |
| A | 600-2                     | 800-2                                                                                    |                                                                             | 700-2                                 | 800-2      | 800-2      | 800-2                                               |
| B |                           |                                                                                          |                                                                             |                                       |            |            |                                                     |
| C |                           |                                                                                          |                                                                             |                                       |            |            |                                                     |
| D |                           |                                                                                          |                                                                             | 700-2 1/4                             | 800-2 1/4  |            |                                                     |

A diagram of a circular structure, possibly a culvert, with a diameter of 3000'. Two arrows point towards the center from the upper left and upper right edges. The arrow from the upper left is labeled 140° and the arrow from the upper right is labeled 280°. The distance from the center to the upper left edge is labeled 2400'.



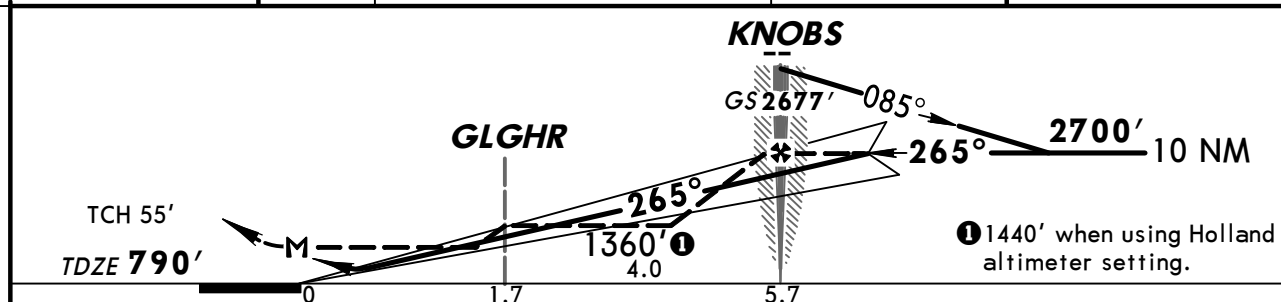
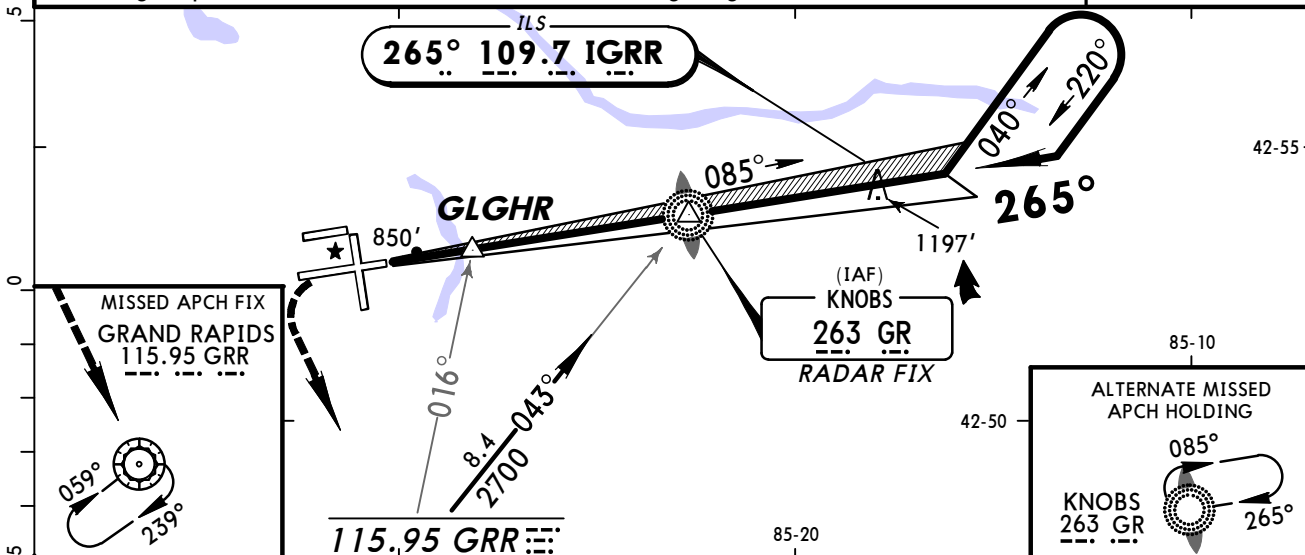
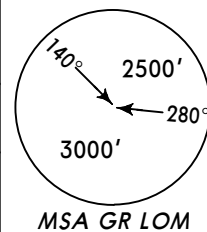
| STRAIGHT-IN LANDING RWY 8R   |                                         |                                |                                |                                 |                    | CIRCLE-TO-LAND               |                                       |
|------------------------------|-----------------------------------------|--------------------------------|--------------------------------|---------------------------------|--------------------|------------------------------|---------------------------------------|
| With Local Altimeter Setting |                                         |                                |                                |                                 |                    | With Local Altimeter Setting |                                       |
| ILS                          |                                         |                                | LOC (GS out)                   |                                 |                    | Max<br>Kts                   | MDA(H)                                |
| DA(H) <b>994'</b> (200')     |                                         |                                | MDA(H) <b>1240'</b> (446')     |                                 |                    |                              |                                       |
| FULL                         |                                         | RAIL or ALS out                |                                | RAIL out                        | ALS out            |                              |                                       |
| A                            | <b>I</b> RVR <b>24</b> or $\frac{1}{2}$ | RVR <b>40</b> or $\frac{3}{4}$ | RVR <b>24</b> or $\frac{1}{2}$ | RVR <b>40</b> or $\frac{3}{4}$  | RVR <b>50</b> or 1 | 90                           | <b>1280'</b> (486') - 1               |
| B                            |                                         |                                |                                |                                 |                    | 120                          |                                       |
| C                            |                                         |                                | RVR <b>40</b> or $\frac{3}{4}$ | RVR <b>60</b> or $1\frac{1}{4}$ |                    | 140                          | <b>1280'</b> (486') - 1 $\frac{1}{2}$ |
| D                            |                                         |                                | RVR <b>50</b> or 1             | $1\frac{1}{2}$                  |                    | 165                          | <b>1360'</b> (566') - 2               |

| With Holland Altimeter Setting |                                |                    |                                 |                                |                    | With Holland Altimeter Setting |                                       |
|--------------------------------|--------------------------------|--------------------|---------------------------------|--------------------------------|--------------------|--------------------------------|---------------------------------------|
| ILS                            |                                |                    | LOC (GS out)                    |                                |                    | Max<br>Kts                     | MDA(H)                                |
| DA(H) <b>1070'</b> (276')      |                                |                    | MDA(H) <b>1320'</b> (526')      |                                |                    |                                |                                       |
| FULL                           |                                | RAIL or ALS out    |                                 | RAIL out                       | ALS out            |                                |                                       |
| A                              | RVR <b>24</b> or $\frac{1}{2}$ | RVR <b>50</b> or 1 | RVR <b>24</b> or $\frac{1}{2}$  | RVR <b>40</b> or $\frac{3}{4}$ | RVR <b>50</b> or 1 | 90                             | <b>1360'</b> (566') - 1               |
| B                              |                                |                    |                                 |                                |                    | 120                            |                                       |
| C                              |                                |                    | RVR <b>50</b> or 1              | $1\frac{1}{2}$                 |                    | 140                            | <b>1360'</b> (566') - 1 $\frac{1}{2}$ |
| D                              |                                |                    | RVR <b>60</b> or $1\frac{1}{4}$ | $1\frac{3}{4}$                 |                    | 165                            | <b>1440'</b> (646') - 2               |

**1** RVR 18 with Flight Director or Autopilot or HUD to DA.

|                                                                                                                                                                                                                         |                                            |                                                   |                                                     |                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------------------|-----------------------------------------------------|------------------------------------------|
| ATIS (ASOS when Twr inop)<br><b>127.1</b>                                                                                                                                                                               | *GRAND RAPIDS Approach (R)<br><b>128.4</b> | CHICAGO Center (R)<br><b>128.4</b> when App inop. | *GRAND RAPIDS Tower<br><b>CTAF 135.65</b>           | *Ground<br><b>121.8</b>                  |
| LOC<br>IGRR<br><b>109.7</b>                                                                                                                                                                                             | Final<br>Apch Crs<br><b>265°</b>           | GS<br>KNOBS<br><b>2677'</b> (1887')               | ILS<br>DA(H)<br>(CONDITIONAL)<br><b>990'</b> (200') | Apt Elev <b>794'</b><br>TDZE <b>790'</b> |
| <b>MISSED APCH:</b> Climb to 1300', then climbing LEFT turn to 3000' direct GRR VOR and hold.                                                                                                                           |                                            |                                                   |                                                     |                                          |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. Use local altimeter setting; if not received, use Holland altimeter setting. 2. VGSI and ILS glidepath not coincident. 3. Pilot controlled lighting 135.65. |                                            |                                                   |                                                     |                                          |

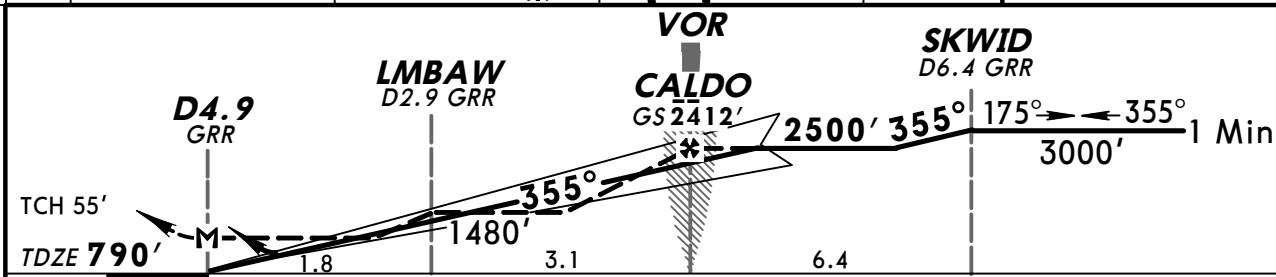
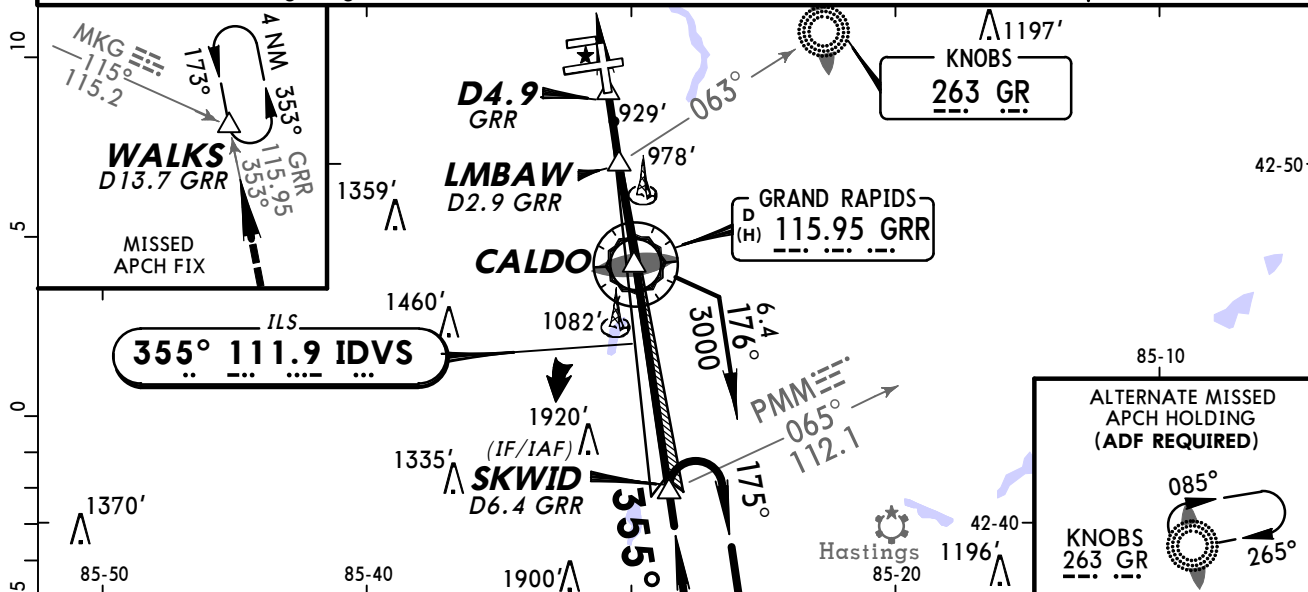
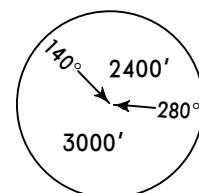


|                  |       |      |      |      |      |      |     |  |  |  |  |  |
|------------------|-------|------|------|------|------|------|-----|--|--|--|--|--|
| Gnd speed-Kts    | 70    | 90   | 100  | 120  | 140  | 160  |     |  |  |  |  |  |
| GS               | 3.00° | 377  | 484  | 538  | 646  | 753  | 861 |  |  |  |  |  |
| KNOBS to MAP 5.7 | 4:53  | 3:48 | 3:25 | 2:51 | 2:27 | 2:08 |     |  |  |  |  |  |

| STRAIGHT-IN LANDING RWY 26L    |    |                  |                                              |                  |                    |                  |                    |                |            | CIRCLE-TO-LAND                 |        |               |        |                   |                   |               |
|--------------------------------|----|------------------|----------------------------------------------|------------------|--------------------|------------------|--------------------|----------------|------------|--------------------------------|--------|---------------|--------|-------------------|-------------------|---------------|
| With GLGHR                     |    |                  |                                              |                  | Without GLGHR      |                  |                    |                |            | With GLGHR                     |        | Without GLGHR |        |                   |                   |               |
| ILS<br>DA(H)<br>990'(200')     |    |                  | With Local Altimeter Setting<br>LOC (GS out) |                  |                    |                  |                    |                |            | With Local Altimeter Setting   |        |               |        |                   |                   |               |
| FULL                           |    |                  | RAIL or ALS out                              |                  | MDA(H) 1120'(330') |                  | MDA(H) 1360'(570') |                |            | MDA(H)                         |        | MDA(H)        |        |                   |                   |               |
| A                              | 1  | RVR 24<br>or 1/2 | RVR 40<br>or 3/4                             | RVR 24<br>or 1/2 | RVR 40<br>or 3/4   | RVR 50<br>or 1   | RVR 24             | RVR 40         | RVR 50     | Max<br>Kts                     | MDA(H) | MDA(H)        |        |                   |                   |               |
| B                              |    |                  |                                              |                  |                    |                  | or 1/2             | or 3/4         | or 1       |                                |        |               |        | 90                | 1280'(486')-1     | 1360'(566')-1 |
| C                              |    |                  |                                              |                  |                    |                  | or 1               | 1 1/2          | 140        |                                |        |               |        | 1280'(486')-1 1/2 | 1360'(566')-1 1/2 |               |
| D                              |    |                  |                                              |                  |                    |                  | or 1 1/4           | 1 3/4          | 165        |                                |        |               |        | 1360'(566')-2     | 1360'(566')-2     |               |
| With Holland Altimeter Setting |    |                  |                                              |                  |                    |                  |                    |                |            | With Holland Altimeter Setting |        |               |        |                   |                   |               |
| DA(H)<br>1066'(276')           |    |                  | MDA(H) 1200'(410')                           |                  |                    |                  |                    |                |            | MDA(H) 1440'(650')             |        |               | MDA(H) |                   | MDA(H)            |               |
| FULL                           |    |                  | RAIL or ALS out                              |                  | RAIL out           |                  | RAIL out           |                |            | RAIL out                       |        | RAIL out      |        | RAIL out          |                   |               |
| A                              | 24 | RVR 50<br>or 1   | RVR 24<br>or 1/2                             | RVR 40<br>or 3/4 | RVR 50<br>or 1     | RVR 24<br>or 1/2 | RVR 40<br>or 3/4   | RVR 50<br>or 1 | Max<br>Kts | MDA(H)                         | MDA(H) |               |        |                   |                   |               |
| B                              |    |                  |                                              |                  |                    |                  |                    |                |            |                                |        |               | 90     | 1360'(566')-1     | 1440'(646')-1     |               |
| C                              |    |                  |                                              |                  |                    |                  |                    |                |            |                                |        |               | 120    | 1360'(566')-1 1/2 | 1440'(646')-1 3/4 |               |
| D                              |    |                  |                                              |                  |                    |                  |                    |                |            |                                |        |               | 140    | 1360'(566')-2     | 1440'(646')-2     |               |

1 RVR 18 with Flight Director or Autopilot or HUD to DA.

|                                                                                                                                                                                                                                                                       |                                            |                                                   |                                                     |                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------------------|-----------------------------------------------------|------------------------------------------|
| ATIS (ASOS when Twr inop)<br><b>127.1</b>                                                                                                                                                                                                                             | *GRAND RAPIDS Approach (R)<br><b>128.4</b> | CHICAGO Center (R)<br><b>128.4</b> when App inop. | *GRAND RAPIDS Tower<br>CTAF <b>135.65</b>           | *Ground<br><b>121.8</b>                  |
| LOC<br>IDVS<br><b>111.9</b>                                                                                                                                                                                                                                           | Final<br>Apch Crs<br><b>355°</b>           | GS<br>CALDO<br><b>2412'</b> (1622')               | ILS<br>DA(H)<br>(CONDITIONAL)<br><b>990'</b> (200') | Apt Elev <b>794'</b><br>TDZE <b>790'</b> |
| <b>MISSED APCH:</b> Climb to 1300' then climbing LEFT turn to 3000' via GRR<br>VOR R-353 to WALKS INT/D13.7 GRR and hold.                                                                                                                                             |                                            |                                                   |                                                     |                                          |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br><b>1. DME or RADAR required.</b> 2. Use local altimeter setting; if not received, use<br>Holland altimeter setting. 3. VGSI and ILS glidepath not coincident.<br><b>4. Pilot controlled lighting 135.65.</b> |                                            |                                                   |                                                     |                                          |



|                    |       |      |      |      |      |      |       |       |       |            |       |
|--------------------|-------|------|------|------|------|------|-------|-------|-------|------------|-------|
| Gnd speed-Kts      | 70    | 90   | 100  | 120  | 140  | 160  | MALSR | 1300' | 3000' | GRR        | WALKS |
| GS                 | 3.00° | 377  | 484  | 538  | 646  | 753  | PAPI  | ↑     | LT    | via 115.95 |       |
| MAP at D4.9 GRR or |       |      |      |      |      |      |       |       |       |            |       |
| CALDO to MAP       | 4.9   | 4:12 | 3:16 | 2:56 | 2:27 | 2:06 | 1:50  |       |       |            |       |

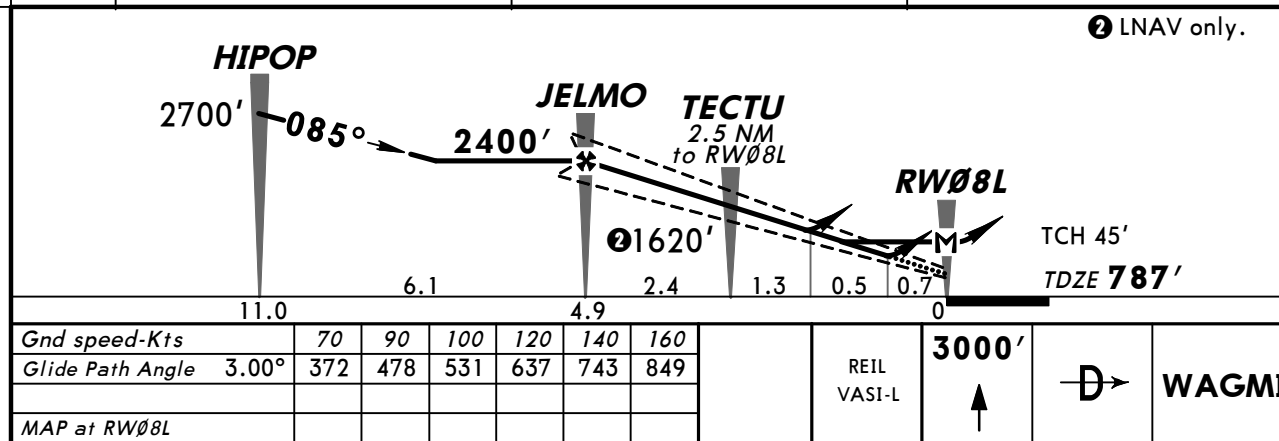
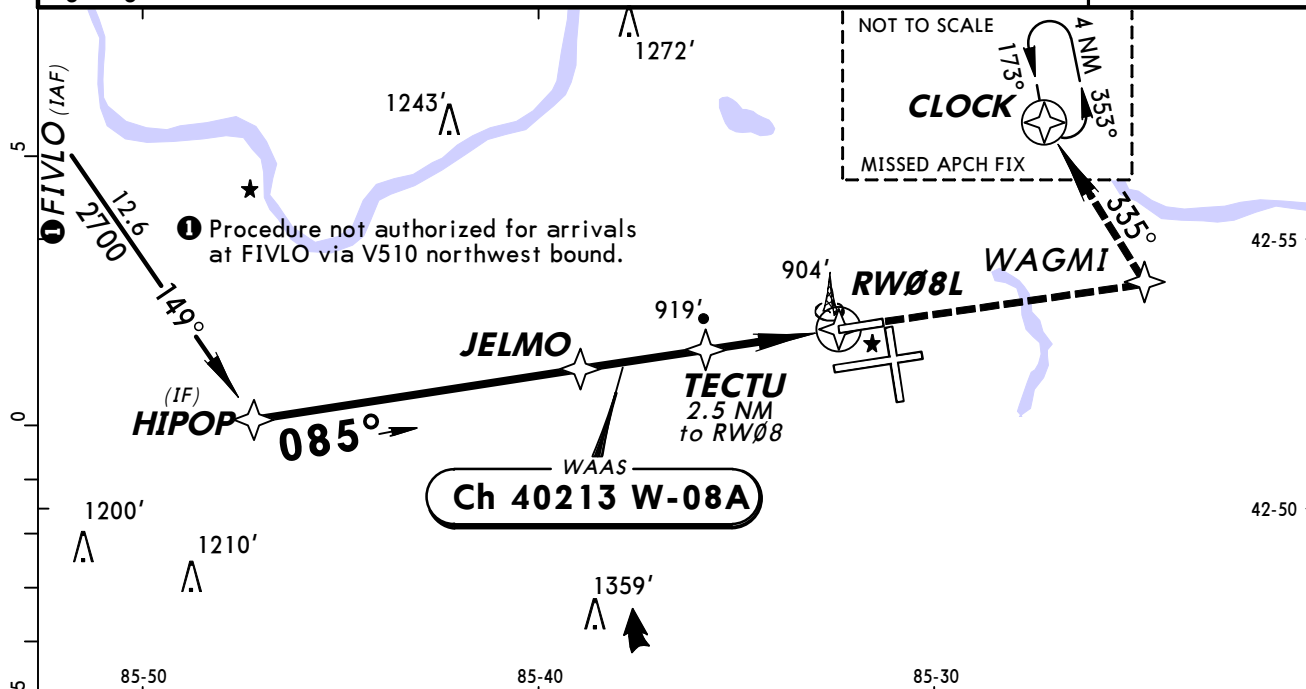
| STRAIGHT-IN LANDING RWY 35     |        |  |                     |        |                     |        |            |        |          | CIRCLE-TO-LAND                    |                |                    |                |        |  |
|--------------------------------|--------|--|---------------------|--------|---------------------|--------|------------|--------|----------|-----------------------------------|----------------|--------------------|----------------|--------|--|
| With LMBAW                     |        |  |                     |        | Without LMBAW       |        |            |        |          | With LMBAW                        |                | Without LMBAW      |                |        |  |
| ILS<br>DA(H)<br>990' (200')    |        |  | LOC (GS out)        |        |                     |        |            |        |          | With Local<br>Altimeter Setting   |                |                    |                |        |  |
| FULL                           |        |  | RAIL or<br>ALS out  |        | RAIL out            |        | ALS out    |        | RAIL out |                                   | ALS out        |                    | Max<br>Kts     | MDA(H) |  |
| A                              | 1      |  | RVR 24              | RVR 40 | RVR 50              | RVR 24 | RVR 40     | RVR 50 | 90       | 1260' (466')-1                    |                | 1480' (686')-1     |                |        |  |
| B                              | RVR 24 |  | RVR 40              | or 1/2 | or 3/4              | or 1   | or 1/2     | or 3/4 | or 1     | 120                               | 1260' (466')-1 |                    | 1480' (686')-1 |        |  |
| C                              | or 1/2 |  | or 3/4              | RVR 35 | or 5/8              | 1 1/4  | 1 1/2      | 2      | 140      | 1260' (466')-1 1/2                |                | 1480' (686')-2     |                |        |  |
| D                              |        |  |                     |        |                     |        |            | 2 1/4  | 165      | 1360' (566')-2                    |                | 1480' (686')-2 1/4 |                |        |  |
| With Holland Altimeter Setting |        |  |                     |        |                     |        |            |        |          | With Holland<br>Altimeter Setting |                |                    |                |        |  |
| DA(H) 1066' (276')             |        |  | MDA(H) 1260' (470') |        | MDA(H) 1560' (770') |        | Max<br>Kts |        |          |                                   |                |                    |                |        |  |
| FULL                           |        |  | RAIL or<br>ALS out  |        | RAIL out            |        | ALS out    |        | RAIL out |                                   | ALS out        |                    | MDA(H)         |        |  |
| A                              |        |  | RVR 24              | RVR 40 | RVR 50              | RVR 24 | RVR 40     | RVR 50 | 90       | 1340' (546')-1                    |                | 1560' (766')-1     |                |        |  |
| B                              | RVR 24 |  | RVR 45              | or 1/2 | or 3/4              | or 1   | or 1/2     | or 3/4 | or 1     | 120                               | 1340' (546')-1 |                    | 1560' (766')-1 |        |  |
| C                              | or 1/2 |  | or 7/8              | RVR 50 | or 1                | 1 3/8  | 1 3/4      | 2 1/2  | 140      | 1340' (546')-1 1/2                |                | 1560' (766')-2 1/4 |                |        |  |
| D                              |        |  |                     |        |                     |        |            |        | 165      | 1440' (646')-2                    |                | 1560' (766')-2 1/2 |                |        |  |

**1** RVR 18 with Flight Director or Autopilot or HUD to DA.

CHANGES: Notes added, minimums.

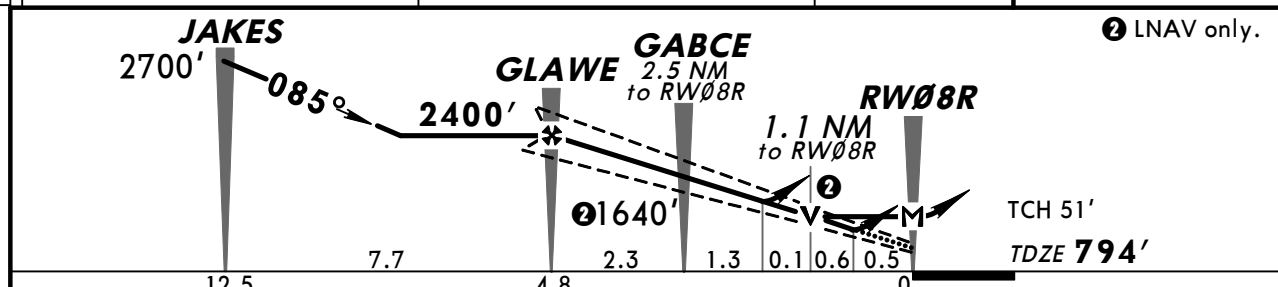
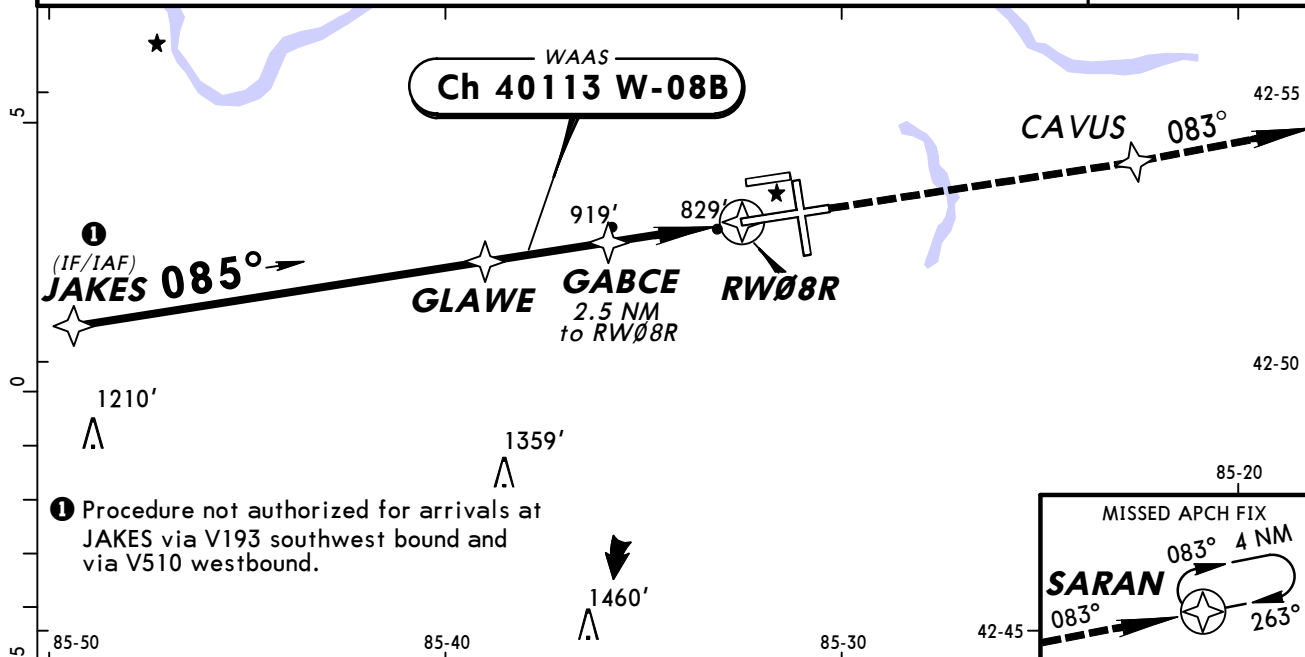
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                  |                                                     |                                                      |                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------|------------------------------------------------------|------------------------------------------|
| ATIS (ASOS when Twr inop)                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | *GRAND RAPIDS Approach (R)       | CHICAGO Center (R)                                  | *GRAND RAPIDS Tower                                  | *Ground                                  |
| 127.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 128.4                            | 128.4 when App inop.                                | CTAF 135.65                                          | 121.8                                    |
| WAAS<br><b>Ch 40213</b><br>W-08A                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Final<br>Apch Crs<br><b>085°</b> | Minimum Alt<br><b>JELMO</b><br><b>2400'</b> (1613') | LPV<br>DA(H)<br>(CONDITIONAL)<br><b>1037'</b> (250') | Apt Elev <b>794'</b><br>TDZE <b>787'</b> |
| <b>MISSED APCH:</b> Climb to 3000' direct WAGMI and LEFT turn via 335° track to CLOCK and hold.                                                                                                                                                                                                                                                                                                                                                                                                 |                                  |                                                     |                                                      |                                          |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. Use local altimeter setting; if not received, use Holland altimeter setting. 2. Baro-VNAV not authorized when using Holland altimeter setting. 3. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 4. DME/DME RNP-0.30 not authorized. 5. Visibility reduction by helicopters not authorized. 6. VGSI and RNAV glidepath not coincident. 7. Pilot controlled lighting 135.65. |                                  |                                                     |                                                      |                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                  |                                                     |                                                      | 3000'                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                  |                                                     |                                                      | MSA RW08L                                |



| STRAIGHT-IN LANDING RWY 8L     |    |                                 |     |                             | CIRCLE-TO-LAND                 |  |
|--------------------------------|----|---------------------------------|-----|-----------------------------|--------------------------------|--|
| With Local Altimeter Setting   |    |                                 |     |                             | With Local Altimeter Setting   |  |
| LPV<br>DA(H) 1037' (250')      |    | LNAV/VNAV<br>DA(H) 1204' (417') |     | LNAV<br>MDA(H) 1180' (393') |                                |  |
| A                              | 1  | 1½                              | 1   | Max Kts 90                  | 1260' (466') - 1               |  |
| B                              |    |                                 |     | 120                         |                                |  |
| C                              |    |                                 |     | 140                         |                                |  |
| D                              |    |                                 | 165 | 1360' (566') - 2            |                                |  |
| With Holland Altimeter Setting |    |                                 |     |                             | With Holland Altimeter Setting |  |
| LPV<br>DA(H) 1113' (326')      |    | LNAV/VNAV<br>DA(H) 1280' (493') |     | LNAV<br>MDA(H) 1260' (473') |                                |  |
| A                              | 1¼ | 1¾                              | 1   | Max Kts 90                  | 1340' (546') - 1               |  |
| B                              |    |                                 |     | 120                         |                                |  |
| C                              |    |                                 |     | 140                         |                                |  |
| D                              |    |                                 | 165 | 1440' (646') - 2            |                                |  |

|                                                                                                                                                                                                                                                                                                                                                                                                                 |                                  |                                                     |                                                     |                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------|-----------------------------------------------------|------------------------------------------|
| ATIS (ASOS when Twr inop)                                                                                                                                                                                                                                                                                                                                                                                       | *GRAND RAPIDS Approach (R)       | CHICAGO Center (R)                                  | *GRAND RAPIDS Tower                                 | *Ground                                  |
| 127.1                                                                                                                                                                                                                                                                                                                                                                                                           | 128.4                            | 128.4 when App inop.                                | CTAF 135.65                                         | 121.8                                    |
| WAAS<br><b>Ch 40113</b><br>W-08B                                                                                                                                                                                                                                                                                                                                                                                | Final<br>Apch Crs<br><b>085°</b> | Minimum Alt<br><b>GLAWE</b><br><b>2400'</b> (1606') | LPV<br>DA(H)<br>(CONDITIONAL)<br><b>994'</b> (200') | Apt Elev <b>794'</b><br>TDZE <b>794'</b> |
| <b>MISSED APCH: Climb to 2700' direct CAVUS and via 083° track to SARAN and hold.</b>                                                                                                                                                                                                                                                                                                                           |                                  |                                                     |                                                     |                                          |
| Alt Set: INCHES      Trans level: FL 180      Trans alt: 18000'<br>1. Use local altimeter setting; if not received, use Holland altimeter setting. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 3. DME/DME RNP-0.30 not authorized. 4. VDP and Baro-VNAV not authorized when using Holland altimeter setting. 5. Pilot controlled lighting 135.65. |                                  |                                                     |                                                     |                                          |
| <div style="text-align: right;"><b>3000'</b></div> <div style="text-align: right;"><b>MSA RW08R</b></div>                                                                                                                                                                                                                                                                                                       |                                  |                                                     |                                                     |                                          |



|                  |       |     |     |     |     |     |       |       |       |
|------------------|-------|-----|-----|-----|-----|-----|-------|-------|-------|
| Gnd speed-Kts    | 70    | 90  | 100 | 120 | 140 | 160 | MALSR | 2700' | CAVUS |
| Glide Path Angle | 3.00° | 372 | 478 | 531 | 637 | 743 | 849   |       |       |
| MAP at RW08R     |       |     |     |     |     |     |       |       |       |

| STRAIGHT-IN LANDING RWY 8R     |                  |                  |                    |                 |                     |                      | CIRCLE-TO-LAND                 |                              |                  |
|--------------------------------|------------------|------------------|--------------------|-----------------|---------------------|----------------------|--------------------------------|------------------------------|------------------|
| LPV                            |                  |                  | LNAV/VNAV          |                 | LNAV                |                      |                                | With Local Altimeter Setting |                  |
| DA(H) 994' (200')              |                  |                  | DA(H) 1213' (419') |                 | MDA(H) 1180' (386') |                      |                                | Max Kts                      | MDA(H)           |
| FULL                           |                  | RAIL or ALS out  |                    | RAIL or ALS out |                     | RAIL out             | ALS out                        |                              |                  |
| A                              | RVR 24<br>or 1/2 | RVR 40<br>or 3/4 | RVR 50<br>or 1     | 1 1/2           | RVR 24<br>or 1/2    | RVR 40<br>or 3/4     | RVR 50<br>or 1                 | 90                           | 1260' (466') - 1 |
| B                              |                  |                  |                    |                 |                     |                      |                                | 120                          |                  |
| C                              |                  |                  |                    |                 | 140                 | 1260' (466') - 1 1/2 |                                |                              |                  |
| D                              |                  |                  |                    |                 | 165                 |                      | 1360' (566') - 2               |                              |                  |
|                                |                  |                  | RVR 50<br>or 1     | RVR 60 or 1 1/4 |                     |                      |                                |                              |                  |
| With Holland Altimeter Setting |                  |                  |                    |                 |                     |                      | With Holland Altimeter Setting |                              |                  |
| DA(H) 1070' (276')             |                  |                  | DA(H) 1289' (495') |                 | MDA(H) 1260' (466') |                      |                                | Max Kts                      | MDA(H)           |
| FULL                           |                  | RAIL or ALS out  |                    | RAIL or ALS out |                     | RAIL out             | ALS out                        |                              |                  |
| A                              | RVR 24<br>or 1/2 | RVR 50<br>or 1   | RVR 60<br>or 1 1/4 | 1 3/4           | RVR 24<br>or 1/2    | RVR 40<br>or 3/4     | RVR 50<br>or 1                 | 90                           | 1340' (546') - 1 |
| B                              |                  |                  |                    |                 |                     |                      |                                | 120                          |                  |
| C                              |                  |                  |                    |                 | 140                 | 1340' (546') - 1 1/2 |                                |                              |                  |
| D                              |                  |                  |                    |                 | 165                 |                      | 1440' (646') - 2               |                              |                  |
|                                |                  |                  | RVR 40<br>or 3/4   | RVR 60 or 1 1/4 |                     |                      |                                |                              |                  |
|                                |                  |                  | RVR 50<br>or 1     | 1 1/2           |                     |                      |                                |                              |                  |



GRAND RAPIDS, MICH  
RNAV (GPS) Rwy 17

**BRIEFING STRIP** <sup>TM</sup>



|   |              |
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| ➤ | <b>LMBAW</b> |
|---|--------------|

**TERPS**

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GRAND RAPIDS, MICH  
RNAV (GPS) Rwy 26L

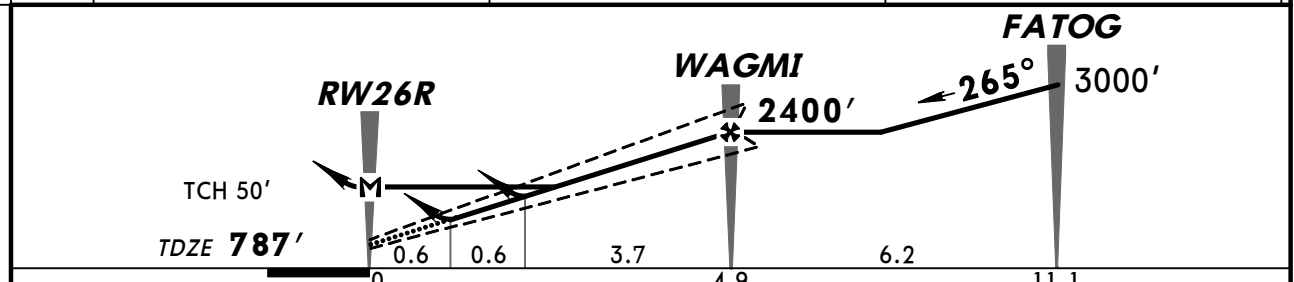
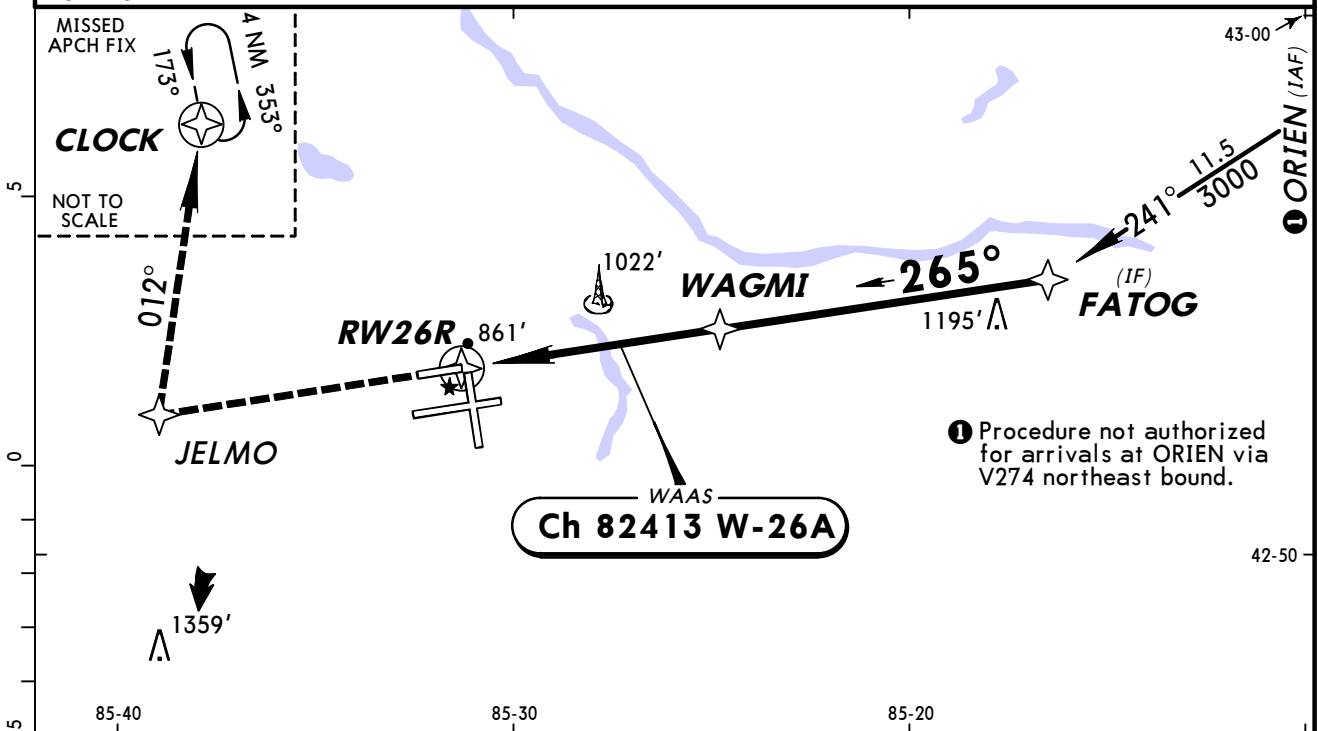
**BRIEFING STRIP™**

TERPS  
1  
AMEND  
1

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|                                                                                                  |                                            |                                                     |                                                      |                                          |
|--------------------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------------|------------------------------------------------------|------------------------------------------|
| ATIS (ASOS when Twr inop)<br><b>127.1</b>                                                        | *GRAND RAPIDS Approach (R)<br><b>128.4</b> | CHICAGO Center (R)<br><b>128.4</b> when App inop.   | *GRAND RAPIDS Tower<br><b>CTAF 135.65</b>            | *Ground<br><b>121.8</b>                  |
| WAAS<br><b>Ch 82413</b><br><b>W-26A</b>                                                          | Final<br>Apch Crs<br><b>265°</b>           | Minimum Alt<br><b>WAGMI</b><br><b>2400'</b> (1613') | LPV<br>DA(H)<br>(CONDITIONAL)<br><b>1037'</b> (250') | Apt Elev <b>794'</b><br><b>TDZE 787'</b> |
| <b>MISSED APCH:</b> Climb to 3000' direct JELMO and RIGHT turn via 012° track to CLOCK and hold. |                                            |                                                     |                                                      |                                          |
| <b>MSA RW26R</b>                                                                                 |                                            |                                                     |                                                      |                                          |

Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'  
 1. Use local altimeter setting; if not received, use Holland altimeter setting. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 3. Baro-VNAV not authorized when using Holland altimeter setting. 4. DME/DME RNP-0.30 not authorized. 5. VGSI and RNAV glidepath not coincident. 6. Visibility reduction by helicopters not authorized. 7. Pilot controlled lighting 135.65.

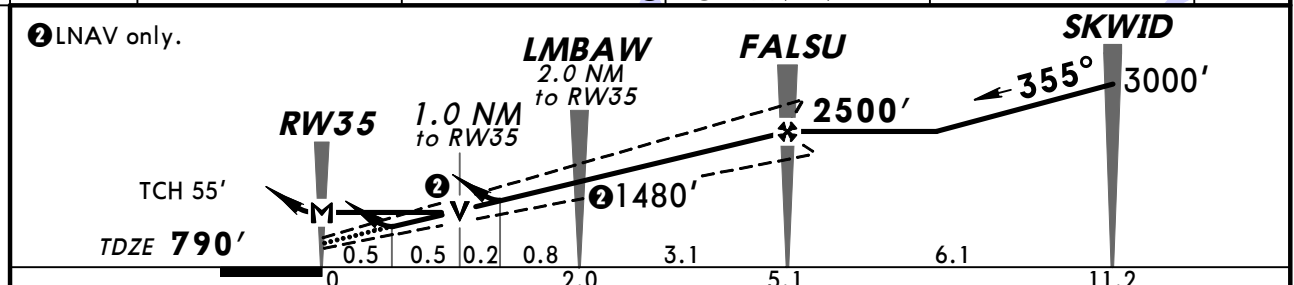
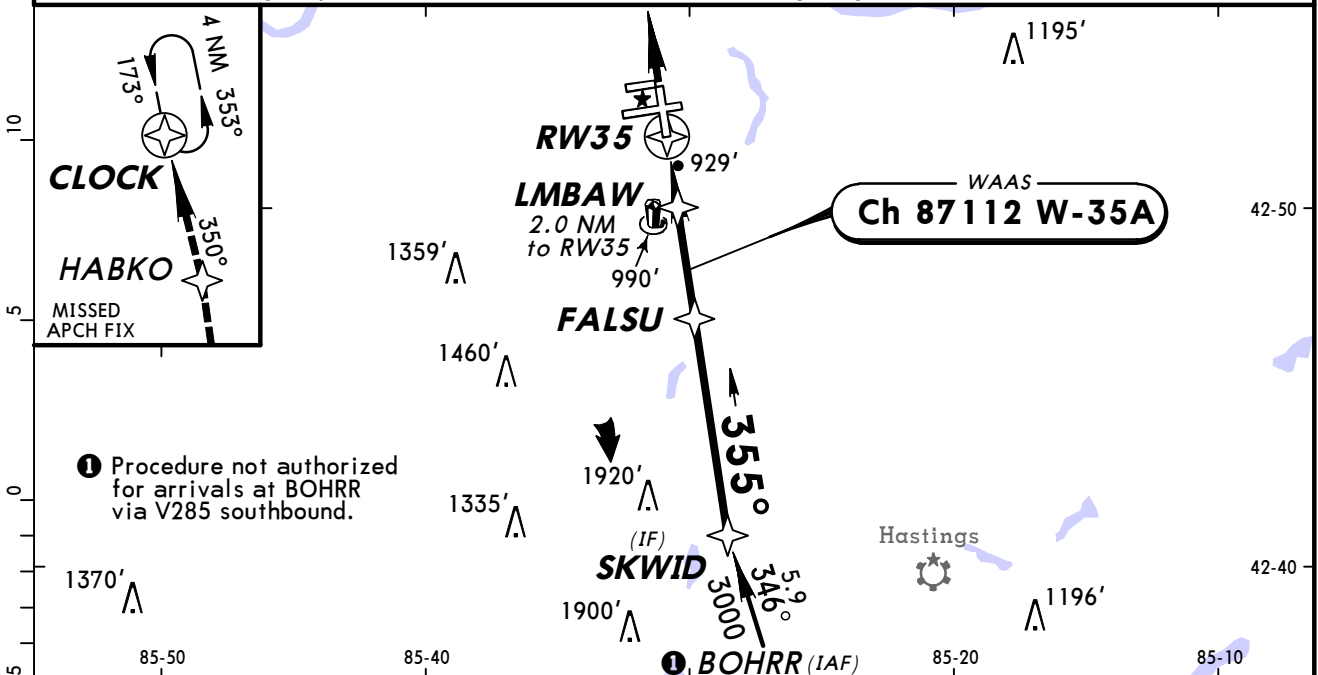


|                        |     |     |     |     |     |     |  |        |       |  |       |
|------------------------|-----|-----|-----|-----|-----|-----|--|--------|-------|--|-------|
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 |  | REIL   | 3000' |  | JELMO |
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |  | VASI-L | ↑     |  |       |
| MAP at RW26R           |     |     |     |     |     |     |  |        |       |  |       |

| STRAIGHT-IN LANDING RWY 26R    |    |                    |   |                     | CIRCLE-TO-LAND                 |                   |
|--------------------------------|----|--------------------|---|---------------------|--------------------------------|-------------------|
| With Local Altimeter Setting   |    |                    |   |                     | With Local Altimeter Setting   |                   |
| LPV                            |    | LNAV/VNAV          |   | LNAV                |                                |                   |
| DA(H) 1037' (250')             |    | DA(H) 1216' (429') |   | MDA(H) 1280' (493') |                                |                   |
| A                              | 1  | 1½                 | 1 | Max Kts 90          | MDA(H) 1280' (486') - 1        |                   |
| B                              |    |                    |   | 120                 |                                |                   |
| C                              |    |                    |   | 1¼                  | 140                            | 1280' (486') - 1½ |
| D                              |    |                    |   | 1½                  | 165                            | 1360' (566') - 2  |
| With Holland Altimeter Setting |    |                    |   |                     | With Holland Altimeter Setting |                   |
| DA(H) 1113' (326')             |    | DA(H) 1292' (505') |   | MDA(H) 1360' (573') |                                |                   |
| A                              | 1¼ | 1¾                 | 1 | Max Kts 90          | MDA(H) 1360' (566') - 1        |                   |
| B                              |    |                    |   | 120                 |                                |                   |
| C                              |    |                    |   | 1½                  | 140                            | 1360' (566') - 1½ |
| D                              |    |                    |   | 1¾                  | 165                            | 1440' (646') - 2  |

|                                                                                       |                                            |                                                     |                                                     |                                          |
|---------------------------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|------------------------------------------|
| ATIS (ASOS when Twr inop)<br><b>127.1</b>                                             | *GRAND RAPIDS Approach (R)<br><b>128.4</b> | CHICAGO Center (R)<br><b>128.4</b> when App inop.   | *GRAND RAPIDS Tower<br><b>CTAF 135.65</b>           | *Ground<br><b>121.8</b>                  |
| WAAS<br><b>Ch 87112</b><br><b>W-35A</b>                                               | Final<br>Apch Crs<br><b>355°</b>           | Minimum Alt<br><b>FALSU</b><br><b>2500'</b> (1710') | LPV<br>DA(H)<br>(CONDITIONAL)<br><b>990'</b> (200') | Apt Elev <b>794'</b><br><b>TDZE 790'</b> |
| <b>MISSED APCH:</b> Climb to 3000' direct HABKO and via 350° track to CLOCK and hold. |                                            |                                                     |                                                     | <b>3000'</b><br><b>MSA RW35</b>          |

Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'  
 1. Use local altimeter setting; if not received, use Holland altimeter setting. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 3. Baro-VNAV and VDP not authorized when using Holland altimeter setting. 4. DME/DME RNP-0.30 not authorized. 5. VGSI and RNAV glidepath not coincident. 6. Pilot controlled lighting 135.65.



|                        |     |     |     |     |     |     |      |       |       |
|------------------------|-----|-----|-----|-----|-----|-----|------|-------|-------|
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 | MALS | 3000' | HABKO |
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 | PAPI |       |       |
| MAP at RW35            |     |     |     |     |     |     |      |       |       |

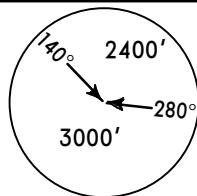
| STRAIGHT-IN LANDING RWY 35<br>With Local Altimeter Setting |                  |                                 |                    |                             |                  |                  | CIRCLE-TO-LAND<br>With Local Altimeter Setting |                      |                  |
|------------------------------------------------------------|------------------|---------------------------------|--------------------|-----------------------------|------------------|------------------|------------------------------------------------|----------------------|------------------|
| LPV<br>DA(H) 990' (200')                                   |                  | LNAV/VNAV<br>DA(H) 1236' (446') |                    | LNAV<br>MDA(H) 1180' (390') |                  |                  | Max<br>Kts                                     | _____ MDA(H) _____   |                  |
| RAIL or ALS out                                            |                  | RAIL or ALS out                 |                    | RAIL out                    |                  | ALS out          |                                                |                      |                  |
| A                                                          | RVR 24<br>or 1/2 | RVR 40<br>or 3/4                | RVR 50<br>or 1     | 1 1/2                       | RVR 24<br>or 1/2 | RVR 40<br>or 3/4 | RVR 50<br>or 1                                 | 90                   | 1260' (466') - 1 |
| B                                                          |                  |                                 |                    |                             | RVR 50<br>or 1   | RVR 60 or 1 1/4  | 120                                            |                      |                  |
| C                                                          |                  |                                 |                    |                             |                  |                  | 140                                            | 1260' (466') - 1 1/2 |                  |
| D                                                          |                  |                                 |                    |                             | 165              | 1360' (566') - 2 |                                                |                      |                  |
| With Holland Altimeter Setting                             |                  |                                 |                    |                             |                  |                  | With Holland Altimeter Setting                 |                      |                  |
| DA(H) 1066' (276')                                         |                  | DA(H) 1312' (522')              |                    | MDA(H) 1260' (470')         |                  |                  | Max<br>Kts                                     | _____ MDA(H) _____   |                  |
| RAIL or ALS out                                            |                  | RAIL or ALS out                 |                    | RAIL out                    |                  | ALS out          |                                                |                      |                  |
| A                                                          | RVR 24<br>or 1/2 | RVR 50<br>or 1                  | RVR 60<br>or 1 1/4 | 1 3/4                       | RVR 24<br>or 1/2 | RVR 40<br>or 3/4 | RVR 50<br>or 1                                 | 90                   | 1340' (546') - 1 |
| B                                                          |                  |                                 |                    |                             | RVR 40<br>or 3/4 | RVR 60 or 1 1/4  | 120                                            |                      |                  |
| C                                                          |                  |                                 |                    |                             |                  |                  | 140                                            | 1340' (546') - 1 1/2 |                  |
| D                                                          |                  |                                 |                    |                             | 165              | 1440' (646') - 2 |                                                |                      |                  |

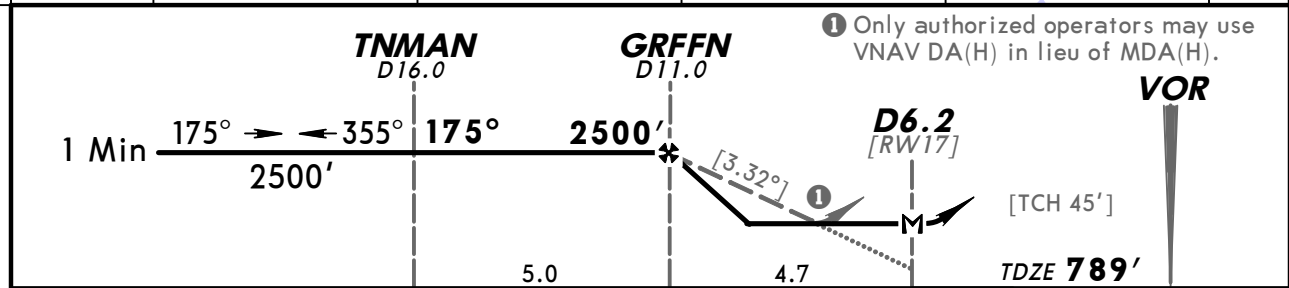
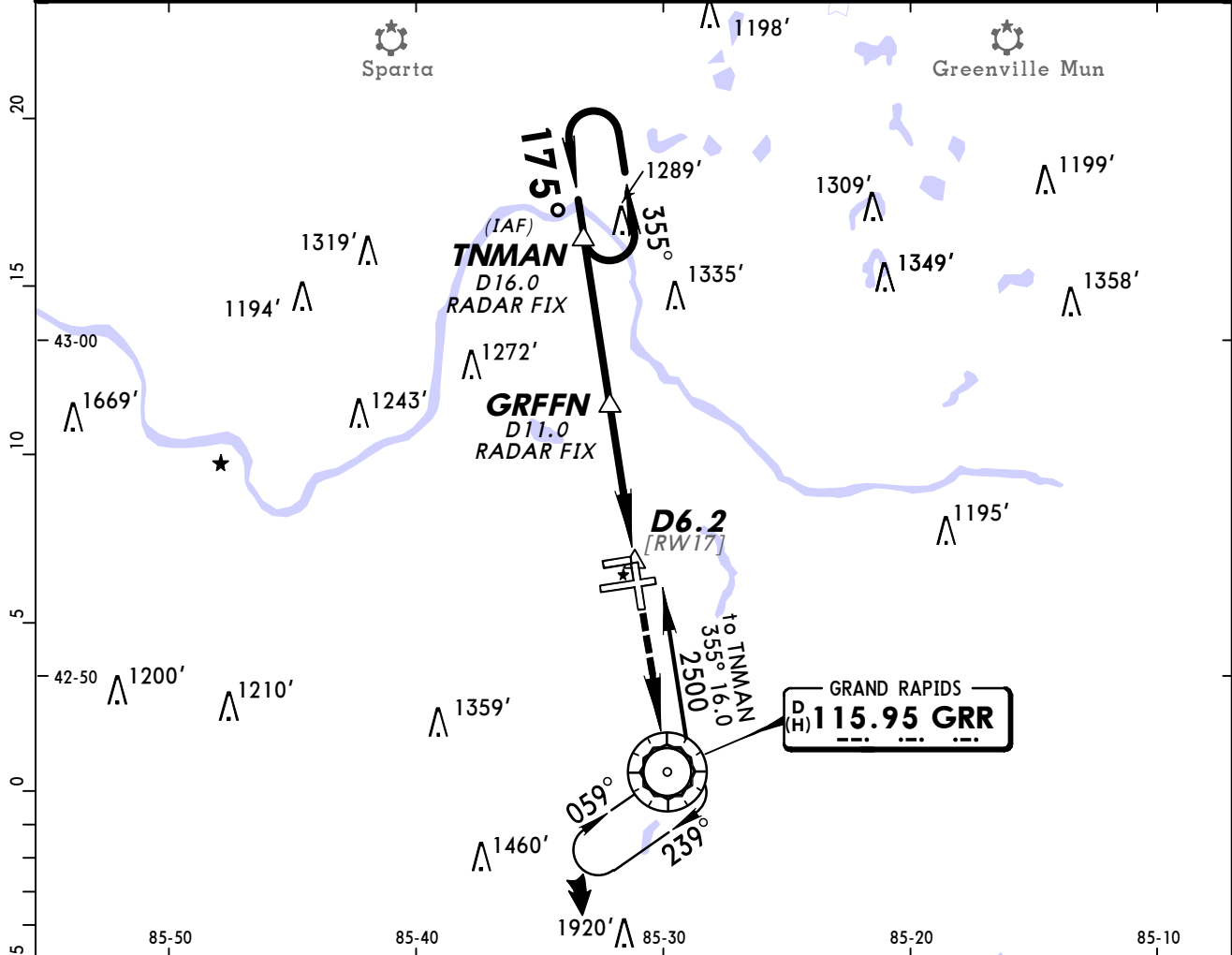
**KGRR/GRR**  
**FORD INTL**

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 26 JUN 09 **(13-1)** **Eff 2 Jul**

**GRAND RAPIDS, MICH**  
**VOR Rwy 17**

BRIEFING STRIP™

|                                                                                                              |                                  |                                                     |                               |                                                   |  |                                                                                                                       |  |                         |  |
|--------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------|-------------------------------|---------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------|--|-------------------------|--|
| ATIS (ASOS when Twr inop)<br><b>127.1</b>                                                                    |                                  | *GRAND RAPIDS Approach (R)<br><b>128.4</b>          |                               | CHICAGO Center (R)<br><b>128.4</b> when App inop. |  | *GRAND RAPIDS Tower<br><b>CTAF 135.65</b>                                                                             |  | *Ground<br><b>121.8</b> |  |
| VOR<br>GRR<br><b>115.95</b>                                                                                  | Final<br>Apch Crs<br><b>175°</b> | Minimum Alt<br><b>GRFFN</b><br><b>2500' (1711')</b> | MDA(H)<br><b>1200' (411')</b> | Apt Elev <b>794'</b><br>TDZE <b>789'</b>          |  | <div><br/><b>MSA GRR VOR</b></div> |  |                         |  |
| <b>MISSED APCH: Climb to 3000' direct GRR VOR and hold.</b>                                                  |                                  |                                                     |                               |                                                   |  |                                                                                                                       |  |                         |  |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                        |                                  |                                                     |                               |                                                   |  |                                                                                                                       |  |                         |  |
| 1. Radar or DME required. 2. VGSI and descent angles not coincident.<br>3. Pilot controlled lighting 135.65. |                                  |                                                     |                               |                                                   |  |                                                                                                                       |  |                         |  |



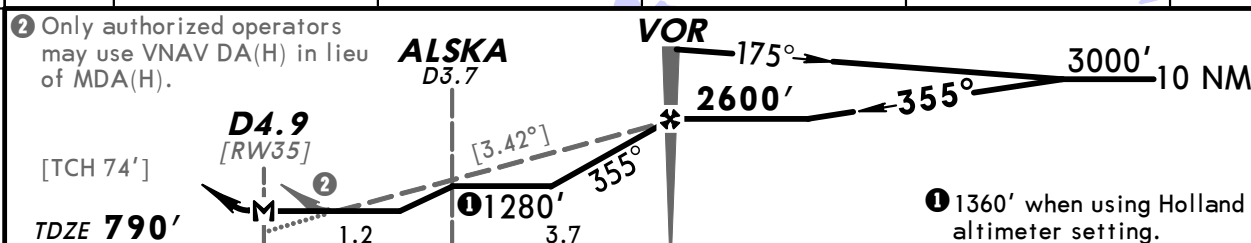
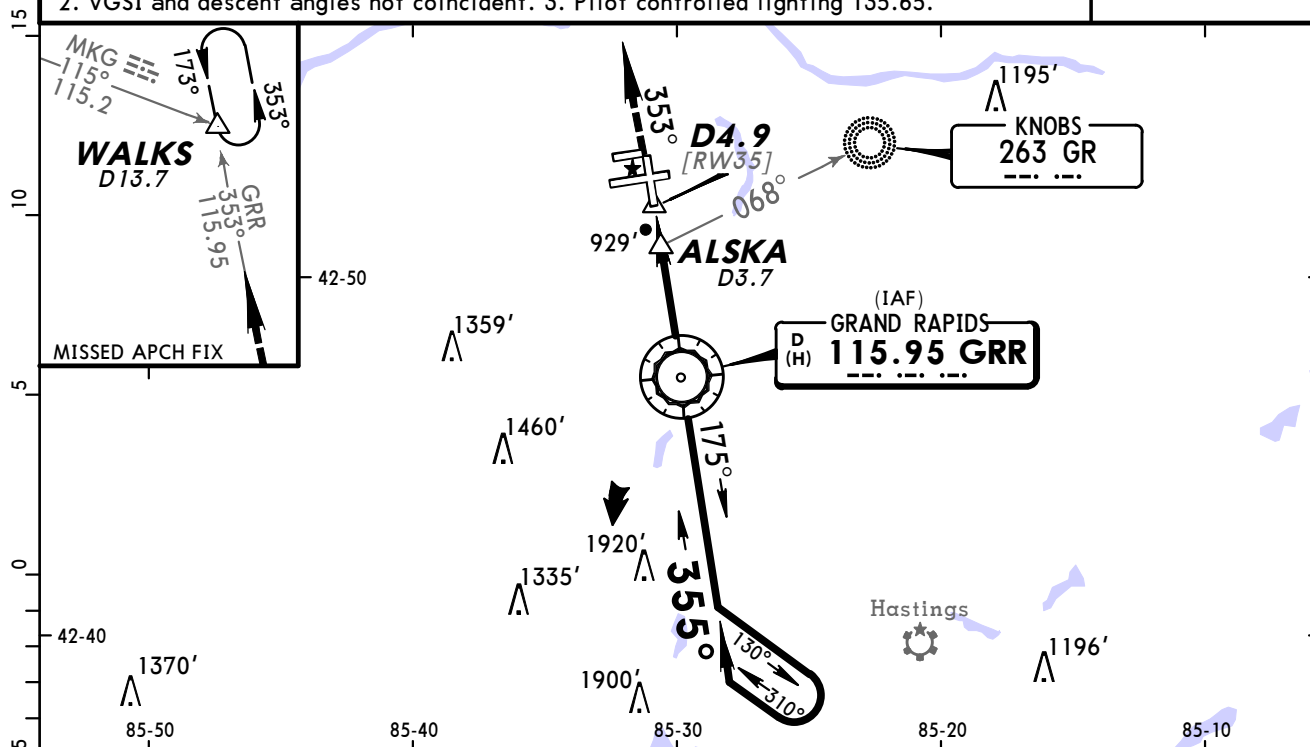
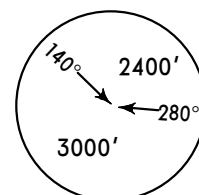
|                                    |      |      |      |      |      |      |                |            |    |               |
|------------------------------------|------|------|------|------|------|------|----------------|------------|----|---------------|
| Gnd speed-Kts                      | 70   | 90   | 100  | 120  | 140  | 160  | REIL<br>VASI-L | 3000'<br>↑ | D→ | GRR<br>115.95 |
| Descent angle [3.32°]              | 411  | 529  | 587  | 705  | 822  | 940  |                |            |    |               |
| MAP at D6.2 or<br>GRFFN to MAP 4.7 | 4:02 | 3:08 | 2:49 | 2:21 | 2:01 | 1:46 |                |            |    |               |

| STRAIGHT-IN LANDING RWY 17 |   |  |  | CIRCLE-TO-LAND |                      |
|----------------------------|---|--|--|----------------|----------------------|
| MDA(H) <b>1200'</b> (411') |   |  |  |                |                      |
| A                          | 1 |  |  | Max<br>Kts.    | MDA(H)               |
| B                          |   |  |  | 90             | 1280' (486') - 1     |
| C                          |   |  |  | 120            |                      |
| D                          |   |  |  | 140            | 1280' (486') - 1 1/2 |
|                            |   |  |  | 165            | 1360' (566') - 2     |

CHANGES: None.

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|                                                                                                                                                                                                                             |                                            |                                                   |                                                |                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------------------|------------------------------------------------|------------------------------------------|
| ATIS (ASOS when Twr inop)<br><b>127.1</b>                                                                                                                                                                                   | *GRAND RAPIDS Approach (R)<br><b>128.4</b> | CHICAGO Center (R)<br><b>128.4</b> when App inop. | *GRAND RAPIDS Tower<br><b>CTAF 135.65</b>      | *Ground<br><b>121.8</b>                  |
| VOR<br>GRR<br><b>115.95</b>                                                                                                                                                                                                 | Final<br>Apch Crs<br><b>355°</b>           | Minimum Alt<br>VOR<br><b>2600'</b> (1810')        | MDA(H)<br>(CONDITIONAL)<br><b>1180'</b> (390') | Apt Elev <b>794'</b><br>TDZE <b>790'</b> |
| <b>MISSED APCH: Climb to 3000' via GRR VOR R-353 outbound to WALKS INT/D13.7 and hold.</b>                                                                                                                                  |                                            |                                                   |                                                |                                          |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. Use local altimeter setting; if not received, use Holland altimeter setting.<br>2. VGSI and descent angles not coincident. 3. Pilot controlled lighting 135.65. |                                            |                                                   |                                                |                                          |

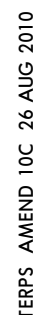


|                           |     |      |      |      |      |      |       |       |        |       |
|---------------------------|-----|------|------|------|------|------|-------|-------|--------|-------|
| Gnd speed-Kts             | 70  | 90   | 100  | 120  | 140  | 160  | MALSR | 3000' | GRR    | WALKS |
| Descent angle [3.42°]     | 424 | 545  | 605  | 726  | 847  | 968  | PAPI  | ↑     | 115.95 |       |
| MAP at D4.9 or VOR to MAP | 4.9 | 4:12 | 3:16 | 2:56 | 2:27 | 2:06 | 1:50  |       | R-353  |       |

| STRAIGHT-IN LANDING RWY 35     |                  |                  |                |                     |                  |                | CIRCLE-TO-LAND                 |                |               |                    |
|--------------------------------|------------------|------------------|----------------|---------------------|------------------|----------------|--------------------------------|----------------|---------------|--------------------|
| With ALSKA                     |                  |                  |                | Without ALSKA       |                  |                | With ALSKA                     |                | Without ALSKA |                    |
| With Local Altimeter Setting   |                  |                  |                |                     |                  |                | With Local Altimeter Setting   |                |               |                    |
| MDA(H) 1180' (390')            |                  |                  |                | MDA(H) 1280' (490') |                  |                | Max Kts                        | MDA(H)         |               |                    |
| RAIL out                       |                  | ALS out          |                | RAIL out            |                  | ALS out        |                                |                |               |                    |
| A                              | RVR 24<br>or 1/2 | RVR 40<br>or 3/4 | RVR 50<br>or 1 | RVR 24<br>or 1/2    | RVR 40<br>or 3/4 | RVR 50<br>or 1 | 90                             | 1280' (486')-1 |               |                    |
| B                              |                  |                  |                | RVR 40<br>or 3/4    | RVR 60 or 1 1/4  |                | 120                            |                |               |                    |
| C                              |                  |                  |                |                     |                  |                | 140                            |                |               | 1280' (486')-1 1/2 |
| D                              | RVR 50<br>or 1   | RVR 60 or 1 1/4  |                | RVR 50<br>or 1      | 1 1/2            |                | 165                            | 1360' (566')-2 |               |                    |
| With Holland Altimeter Setting |                  |                  |                |                     |                  |                | With Holland Altimeter Setting |                |               |                    |
| MDA(H) 1260' (470')            |                  |                  |                | MDA(H) 1360' (570') |                  |                | Max Kts                        | MDA(H)         |               |                    |
| RAIL out                       |                  | ALS out          |                | RAIL out            |                  | ALS out        |                                |                |               |                    |
| A                              | RVR 24<br>or 1/2 | RVR 40<br>or 3/4 | RVR 50<br>or 1 | RVR 24<br>or 1/2    | RVR 40<br>or 3/4 | RVR 50<br>or 1 | 90                             | 1360' (566')-1 |               |                    |
| B                              |                  |                  |                | RVR 40<br>or 3/4    | RVR 60 or 1 1/4  |                | 120                            |                |               |                    |
| C                              |                  |                  |                |                     |                  |                | 140                            |                |               | 1360' (566')-1 1/2 |
| D                              | RVR 50<br>or 1   | 1 1/2            |                | RVR 60<br>or 1 1/4  | 1 3/4            |                | 165                            | 1440' (646')-2 |               |                    |

# GRAND RAPIDS, MICH

# BRIEFING STRIP™



Lighting -  
Refer to  
Airport  
Chart

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## **General Information**

Location: Iron MT-Kingsford MI USA

IATA Code: IMT

Lat/Long: N45° 49.1' W088° 06.9'

Elevation: 1182 ft

Airport Use: Public

Magnetic Variation: 4.0°W

Sectional Chart: Green Bay

Fuel Types: 100 Octane (LL), Jet A

Oxygen Types: LP Bottle

Repair Types: Major Airframe, Major Engine

Customs: No

Airport Type: IFR

Landing Fee: Yes

Control Tower: No

Jet Start Unit: Yes

LLWS Alert: No

Beacon: Yes

Sunrise: 1235 Z

Sunset: 2335 Z,

## **Runway Information**

Runway: 01

Length x Width: 6501 ft x 150 ft

Surface Type: asphalt

TDZ-Elev: 1133 ft

Lighting: Edge, ALS, Pilot controlled

Runway: 13

Length x Width: 3809 ft x 75 ft

Surface Type: asphalt

TDZ-Elev: 1129 ft

Lighting: Edge, Pilot controlled

Runway: 19

Length x Width: 6501 ft x 150 ft

Surface Type: asphalt

TDZ-Elev: 1182 ft

Lighting: Edge, REIL, Pilot controlled

Runway: 31

Length x Width: 3809 ft x 75 ft

Surface Type: asphalt

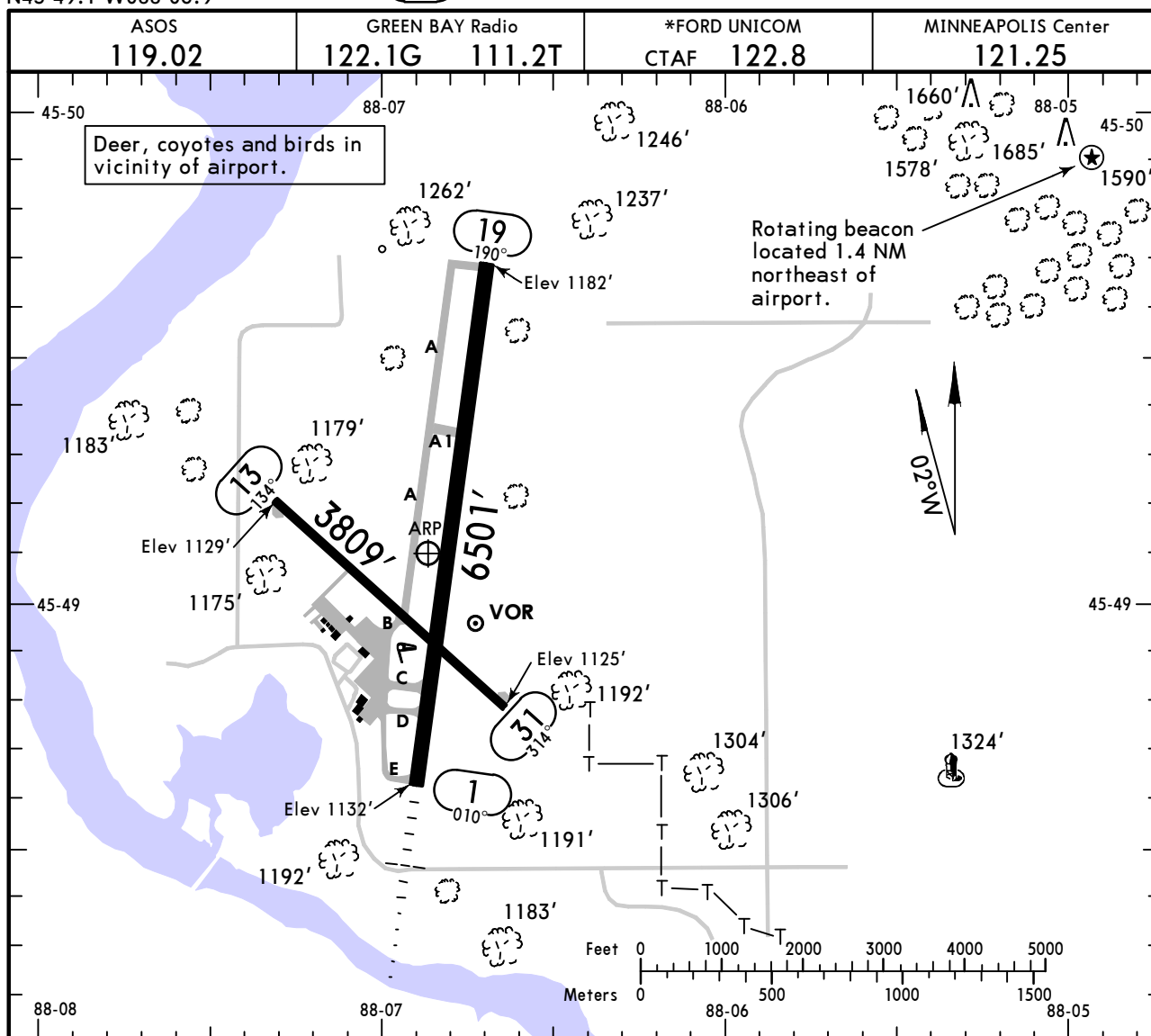
TDZ-Elev: 1131 ft

Lighting: Edge, REIL, Pilot controlled

**Communication Information**

ASOS 119.025  
Ford Unicom 122.8 CTAF PCL  
Green Bay Flight Service Station 122.1 RCO  
Green Bay Flight Service Station 111.2 RCO  
Minneapolis Center 121.25 Remote Communications Air-Ground





## ADDITIONAL RUNWAY INFORMATION

| RWY |                                       | USABLE LENGTHS |                               |          | WIDTH |
|-----|---------------------------------------|----------------|-------------------------------|----------|-------|
|     |                                       | Threshold      | Landing Beyond<br>Glide Slope | TAKE-OFF |       |
| 1   | ① HIRL ① MALSR porous friction        |                | 5435'                         |          | 150'  |
| 19  | ① HIRL ① REIL ① VASI-L course overlay |                |                               |          |       |
| 13  | ① MIRL                                |                |                               |          | 75'   |
| 31  | ① MIRL ① REIL ① VASI-L (angle 4.0°)   |                |                               |          |       |

① Activate on 122.8.

## TAKE-OFF &amp; OBSTACLE DEPARTURE PROCEDURE

|              | Rwys 1, 19          |     | Rwy 13                                |     |       | Rwy 31                                |     |           |
|--------------|---------------------|-----|---------------------------------------|-----|-------|---------------------------------------|-----|-----------|
|              | Adequate<br>Vis Ref | STD | With Min climb of<br>590'/NM to 1400' |     | Other | With Min climb of<br>260'/NM to 1400' |     | Other     |
|              |                     |     | Adequate<br>Vis Ref                   | STD |       | Adequate<br>Vis Ref                   | STD |           |
| 1 & 2<br>Eng | 1/4                 | 1   | 1/4                                   | 1   | 300-1 | 1/4                                   | 1   | 300-1 1/4 |
| 3 & 4<br>Eng |                     | 1/2 |                                       | 1/2 |       |                                       | 1/2 |           |

## FOR FILING AS ALTERNATE

Authorized Only When  
Local Weather Available

VOR Rwy 31

RNAV (GPS) Rwy 1

RNAV (GPS) Rwy 19

LOC DME (Back Crs) Rwy 19  
NDB Rwy 1

Other

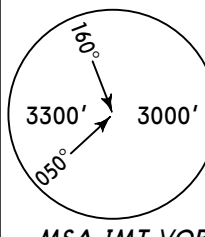
|   |       |       |    |
|---|-------|-------|----|
| A | 800-2 | 800-2 | NA |
| B |       |       |    |
| C |       |       |    |
| D |       |       |    |

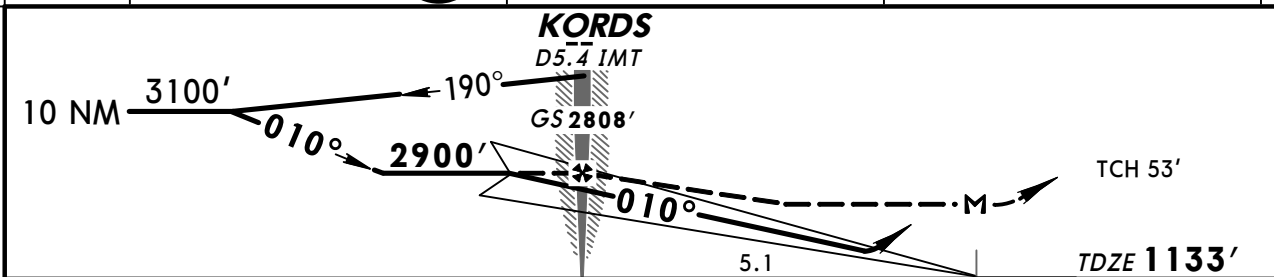
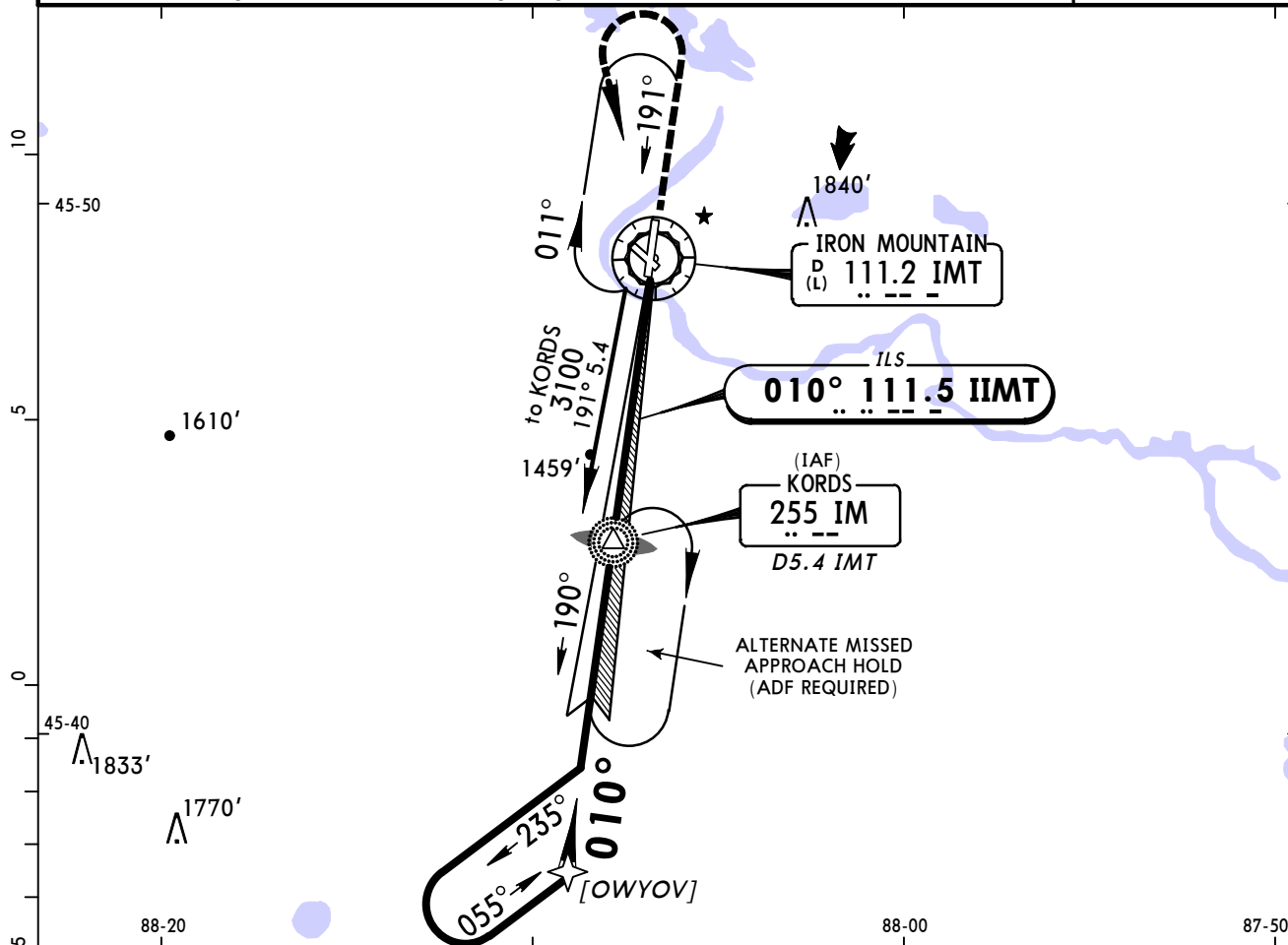
OBSTACLE DP: Rwy 1, climb heading 010° to 1700' before tuning right. Rwy 13, climb heading 134° to 1900' before turning left.

CHANGES: Rwy 31 elev, alternate minimums.

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BRIEFING STRIP™

|                                                                                                                                              |                           |                              |                                               |                                  |  |                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------------------|-----------------------------------------------|----------------------------------|--|--------------------------------------------------------------------------------------------------------|
| ASOS<br>119.02                                                                                                                               |                           | MINNEAPOLIS Center<br>121.25 |                                               | GREEN BAY Radio<br>122.1G 111.2T |  | *FORD UNICOM<br>CTAF 122.8                                                                             |
| LOC<br>IIMT<br>111.5                                                                                                                         | Final<br>Apch Crs<br>010° | GS<br>KORDS<br>2808' (1675') | ILS<br>DA(H)<br>(CONDITIONAL)<br>1333' (200') | Apt Elev 1182'<br>TDZE 1133'     |  |                                                                                                        |
| MISSED APCH: Climb to 2200', then climbing LEFT turn to 3100' direct IMT VOR and hold, or as directed by ATC.                                |                           |                              |                                               |                                  |  |  <p>MSA IMT VOR</p> |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                                                        |                           |                              |                                               |                                  |  |                                                                                                        |
| 1. ADF or DME required. 2. Use local altimeter setting; if not received, use Escanaba altimeter setting. 3. Pilot controlled lighting 122.8. |                           |                              |                                               |                                  |  |                                                                                                        |

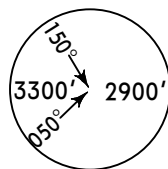


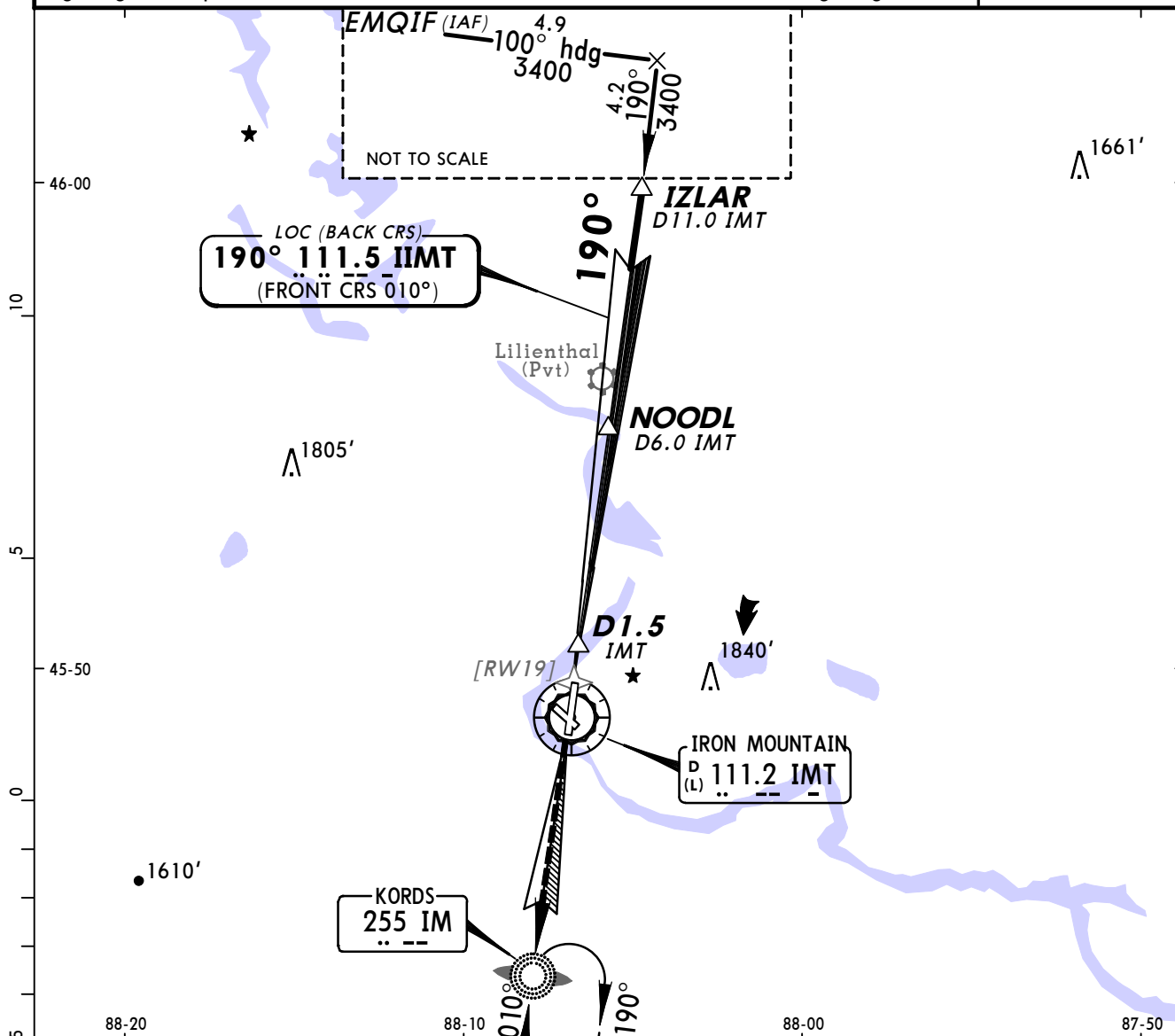
|                  |       |      |      |      |      |      |       |  |       |       |           |
|------------------|-------|------|------|------|------|------|-------|--|-------|-------|-----------|
| Gnd speed-Kts    | 70    | 90   | 100  | 120  | 140  | 160  | MALSR |  | 2200' | 3100' | IMT 111.2 |
| GS               | 2.98° | 369  | 474  | 527  | 633  | 738  |       |  | ↑     | LT    |           |
| KORDS to MAP 5.1 | 4:22  | 3:24 | 3:04 | 2:33 | 2:11 | 1:55 |       |  |       |       |           |

| STRAIGHT-IN LANDING RWY 1    |                 |                                 |                 |                              |          |                                 |      |                                         |         | CIRCLE-TO-LAND               |                    |                                 |  |
|------------------------------|-----------------|---------------------------------|-----------------|------------------------------|----------|---------------------------------|------|-----------------------------------------|---------|------------------------------|--------------------|---------------------------------|--|
| ILS                          |                 |                                 |                 | LOC (GS out)                 |          |                                 |      | Not Authorized Northeast of Rwy 19 & 31 |         | With Local Altimeter Setting |                    | With Escanaba Altimeter Setting |  |
| DA(H)                        |                 | DA(H)                           |                 | MDA(H)                       |          | MDA(H)                          |      |                                         |         |                              |                    |                                 |  |
| 1333' (200')                 |                 | 1513' (380')                    |                 | 1720' (587')                 |          | 1900' (767')                    |      |                                         |         |                              |                    |                                 |  |
| With Local Altimeter Setting |                 | With Escanaba Altimeter Setting |                 | With Local Altimeter Setting |          | With Escanaba Altimeter Setting |      |                                         |         |                              |                    |                                 |  |
| FULL                         | RAIL or ALS out | FULL                            | RAIL or ALS out | FULL                         | RAIL out | ALS out                         | FULL | RAIL out                                | ALS out | Max Kts                      | MDA(H)             | MDA(H)                          |  |
| A                            |                 |                                 |                 |                              |          |                                 |      |                                         |         | 90                           | 1720' (538')-1     | 1900' (718')-1                  |  |
| B                            |                 |                                 |                 |                              |          |                                 |      |                                         |         | 120                          | 1720' (538')-1     | 1900' (718')-1 1/4              |  |
| C                            | 1/2             | 3/4                             | 3/4             | 1 1/4                        | 1/2      | 3/4                             | 1    | 3/4                                     | 1 1/4   | 140                          | 1780' (598')-1 1/2 | 1960' (778')-2 1/4              |  |
| D                            |                 |                                 |                 |                              | 1 1/4    | 1 3/4                           | 2    | 2 1/2                                   |         | 165                          | 1780' (598')-2     | 1960' (778')-2 1/2              |  |

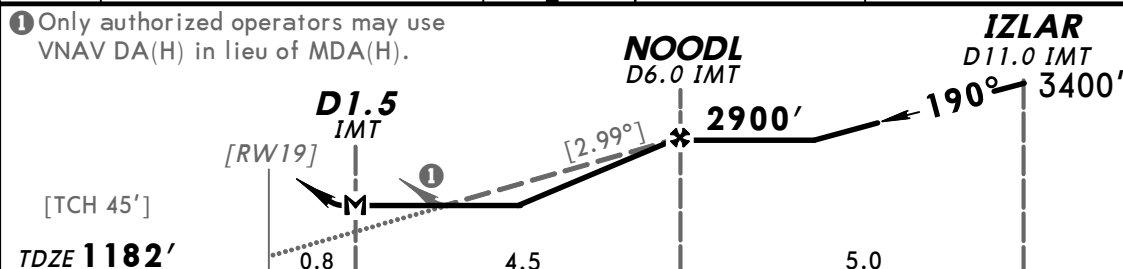
When VGSI inop, circling Rwy 31 not authorized at night.

# KIMT/IMT JEPPESEN IRON MOUNTAIN/KINGSFORD, MICH FORD 6 MAR 09 11-2 Eff 12 Mar LOC DME (BACKCRS) Rwy 19

|                                                                                                                                                                                                                                                                                                       |                                            |                                       |                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------------|----------------------------------------------------------------------------------------------------|
| ASOS<br>119.02                                                                                                                                                                                                                                                                                        | MINNEAPOLIS Center<br>121.25               | GREEN BAY Radio<br>122.1G 111.2T      | *FORD UNICOM<br>CTAF 122.8                                                                         |
| LOC<br>IIMT<br>111.5                                                                                                                                                                                                                                                                                  | Final Apch Crs<br>190°<br>(Front Crs 010°) | Minimum Alt<br>NOODL<br>2900' (1718') | MDA(H)<br>1660' (478')                                                                             |
| Apt Elev 1182'<br>TDZE 1182'                                                                                                                                                                                                                                                                          |                                            |                                       |                                                                                                    |
| <b>MISSED APCH: Climb to 3100' direct KORDS LOM and hold.</b><br>Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. ADF required. 2. Simultaneous reception of IIMT LOC and IMT DME required. 3. Disregard glide slope indications. 4. DME from IMT VOR. 5. Pilot controlled lighting 122.8. |                                            |                                       |                                                                                                    |
|                                                                                                                                                                                                                                                                                                       |                                            |                                       | <br>MSA IMT VOR |



① Only authorized operators may use VNAV DA(H) in lieu of MDA(H).



|                       |     |     |     |     |     |     |  |        |       |   |     |
|-----------------------|-----|-----|-----|-----|-----|-----|--|--------|-------|---|-----|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 |  | REIL   | 3100' |   | IM  |
| Descent angle [2.99°] | 370 | 476 | 529 | 635 | 741 | 846 |  | VASI-L | ↑     | → | 255 |
| MAP at D1.5 IMT       |     |     |     |     |     |     |  |        |       |   |     |

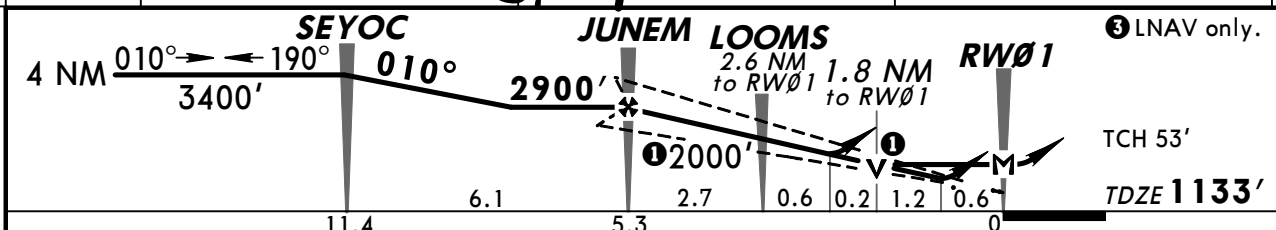
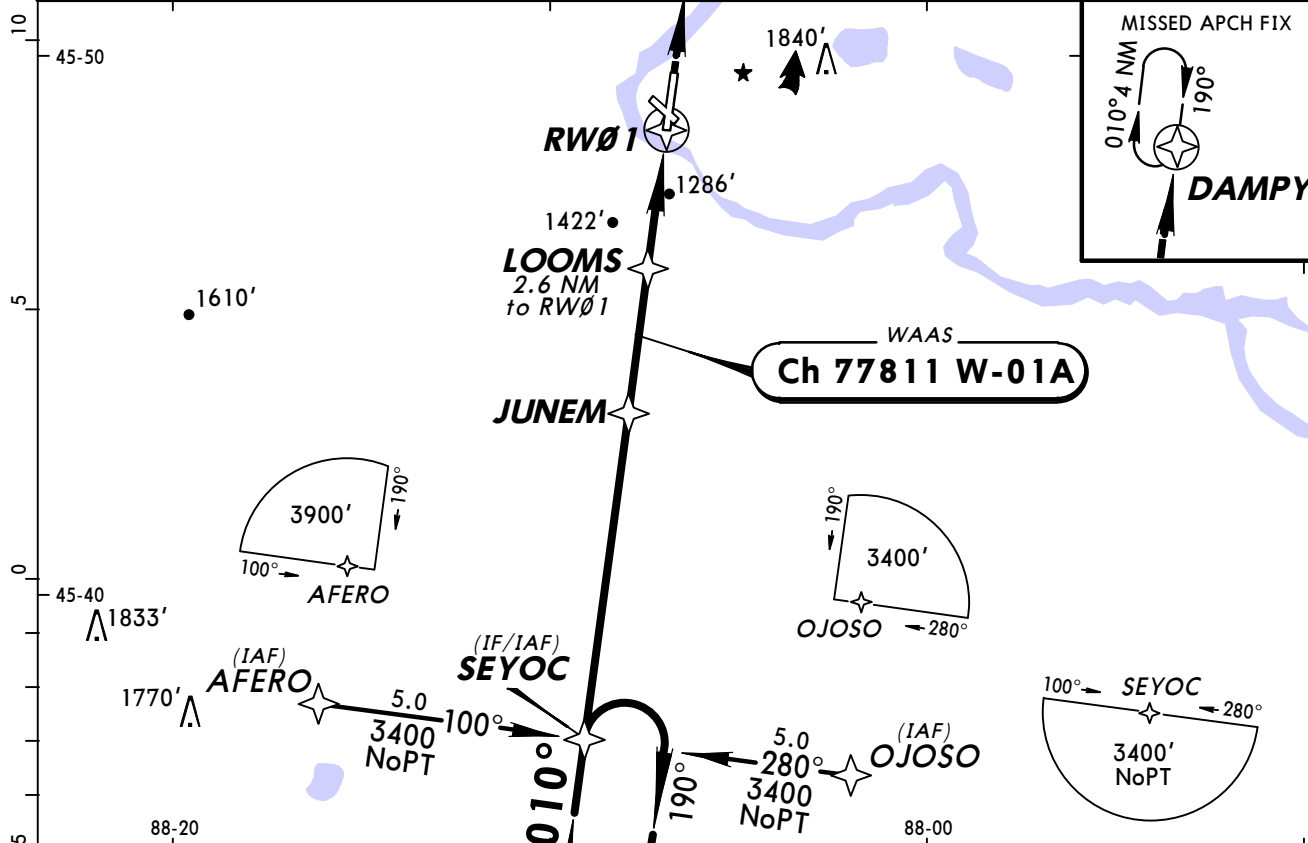
| STRAIGHT-IN LANDING RWY 19 |  |  |  |  |  | CIRCLE-TO-LAND                            |  |  |                   |  |  |
|----------------------------|--|--|--|--|--|-------------------------------------------|--|--|-------------------|--|--|
| MDA(H) 1660' (478')        |  |  |  |  |  | Not Authorized Northeast of Rwy 19 and 31 |  |  |                   |  |  |
|                            |  |  |  |  |  | Max Kts                                   |  |  |                   |  |  |
| A                          |  |  |  |  |  | 90                                        |  |  | 1660' (478') - 1  |  |  |
| B                          |  |  |  |  |  | 120                                       |  |  | 1720' (538') - 1  |  |  |
| C                          |  |  |  |  |  | 140                                       |  |  | 1780' (598') - 1½ |  |  |
| D                          |  |  |  |  |  | 165                                       |  |  | 1780' (598') - 2  |  |  |

|                                  |                                  |                                                     |                                                      |
|----------------------------------|----------------------------------|-----------------------------------------------------|------------------------------------------------------|
| ASOS<br>119.02                   | MINNEAPOLIS Center<br>121.25     | GREEN BAY Radio<br>122.1G 111.2T                    | *FORD UNICOM<br>CTAF 122.8                           |
| WAAS<br><b>Ch 77811</b><br>W-01A | Final<br>Apch Crs<br><b>010°</b> | Minimum Alt<br><b>JUNEM</b><br><b>2900'</b> (1767') | LPV<br>DA(H)<br>(CONDITIONAL)<br><b>1383'</b> (250') |
|                                  |                                  | Apt Elev <b>1182'</b>                               | TDZE <b>1133'</b>                                    |

**MISSED APCH: Climb to 3400' direct DAMPY and hold.**

Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'  
 1. Use local altimeter setting; if not received, use Escanaba altimeter setting.  
 2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -17°C (2°F) or above 46°C (114°F). 3. Baro-VNAV and VDP not authorized when using Escanaba altimeter setting. 4. DME/DME RNP-0.3 not authorized. 5. Pilot controlled lighting 122.8.

TAA  
30 NM  
IAF



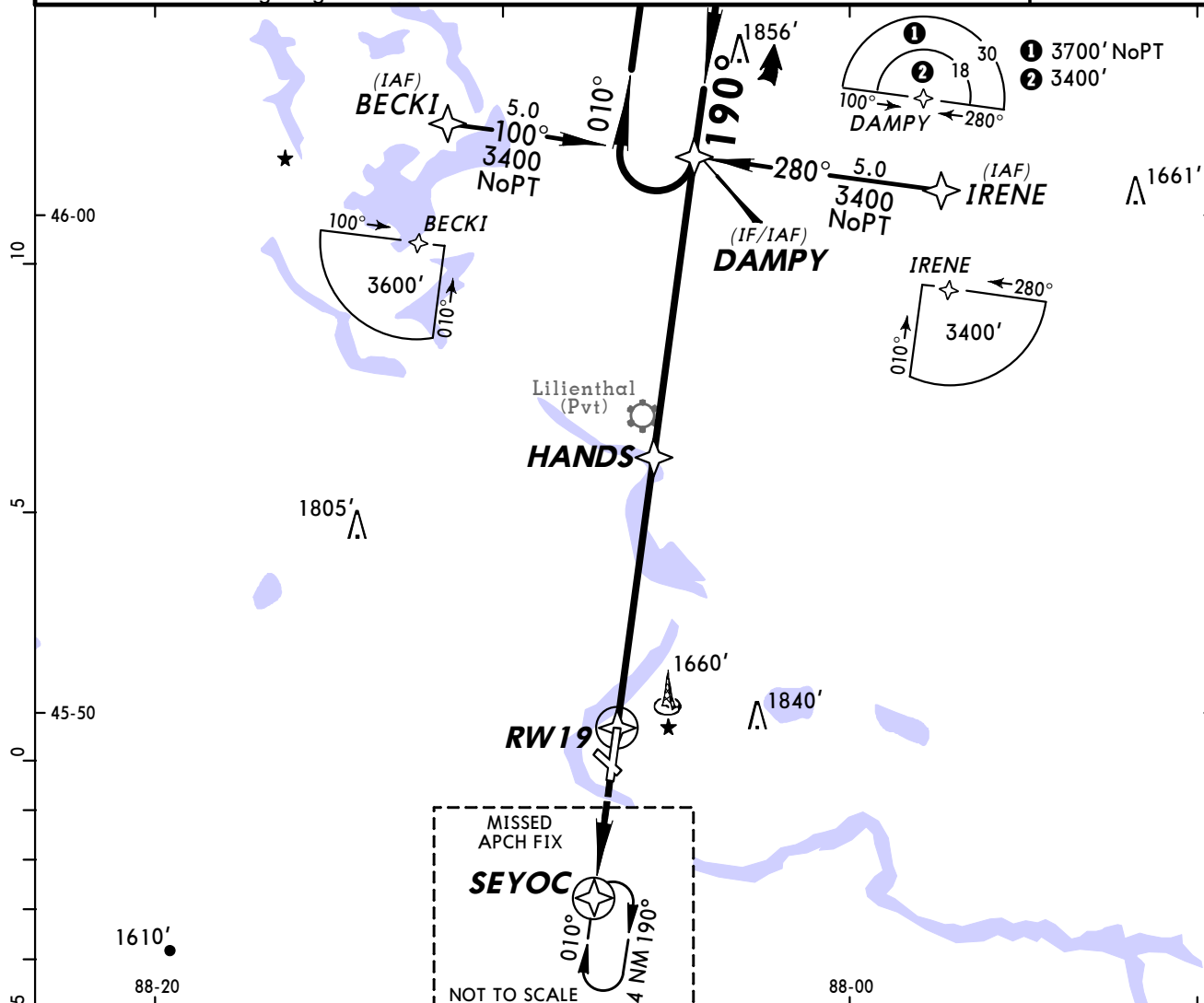
|                        |     |     |     |     |     |     |       |       |   |       |
|------------------------|-----|-----|-----|-----|-----|-----|-------|-------|---|-------|
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 | MALSR | 3400' | D | DAMPY |
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |       |       |   |       |
| MAP at RWY 1           |     |     |     |     |     |     |       |       |   |       |

| STRAIGHT-IN LANDING RWY 1<br>With Local Altimeter Setting |     |         |                                |       |         |                            |   |         |                   | 1 CIRCLE-TO-LAND<br>With Local Altimeter Setting |                   |                   |
|-----------------------------------------------------------|-----|---------|--------------------------------|-------|---------|----------------------------|---|---------|-------------------|--------------------------------------------------|-------------------|-------------------|
| LPV<br>DA(H) 1383'(250')                                  |     |         | LNAV/VNAV<br>DA(H) 1806'(673') |       |         | LNAV<br>MDA(H) 1760'(627') |   |         | Max<br>Kts        | MDA(H)                                           |                   |                   |
| RAILout                                                   |     | ALS out | RAILout                        |       | ALS out | RAILout                    |   | ALS out |                   |                                                  |                   |                   |
| A                                                         | 3/4 |         | 2                              | 2 1/4 |         | 3/4                        | 1 |         | 90                | 1760'(578')-1                                    |                   |                   |
| B                                                         |     |         |                                |       |         | 1 1/4                      |   | 1 3/4   | 140               |                                                  | 1780'(598')-1 3/4 |                   |
| C                                                         |     |         |                                |       |         | 1 1/2                      |   | 2       | 165               |                                                  |                   | 1780'(598')-2     |
| D                                                         |     |         |                                |       |         |                            |   |         |                   |                                                  |                   |                   |
| With Escanaba Altimeter Setting                           |     |         |                                |       |         |                            |   |         |                   | With Escanaba Altimeter Setting                  |                   |                   |
| DA(H) 1563'(430')                                         |     |         | DA(H) 1986'(853')              |       |         | MDA(H) 1940'(807')         |   |         | Max<br>Kts        | MDA(H)                                           |                   |                   |
| RAILout                                                   |     | ALS out | RAILout                        |       | ALS out | RAILout                    |   | ALS out |                   |                                                  |                   |                   |
| A                                                         | 1   | 1 1/2   | 2 3/4                          | 3     |         | 3/4                        | 1 |         | 90                | 1940'(758')-1                                    |                   |                   |
| B                                                         |     |         |                                |       |         | 1 1/4                      |   | 120     | 1940'(758')-1 1/4 |                                                  |                   |                   |
| C                                                         |     |         |                                |       |         | 1 3/4                      |   | 2 1/4   |                   |                                                  | 140               | 1960'(778')-2 1/4 |
| D                                                         |     |         |                                |       |         | 2                          |   | 2 1/2   |                   |                                                  | 165               |                   |

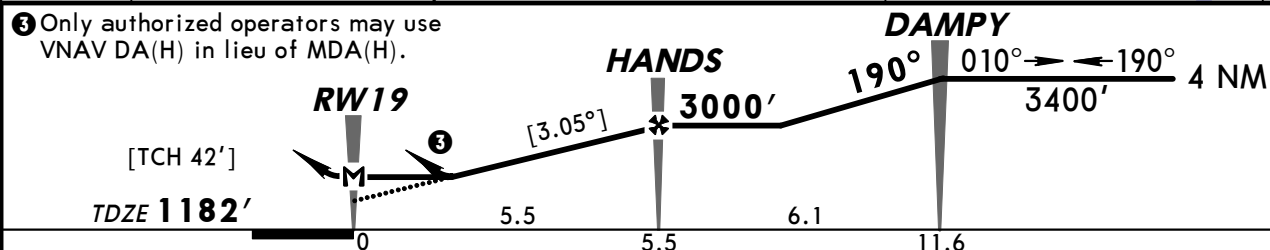
**1** Not Authorized Northeast of Rwy 19 & 31

6 MAR 09 (12-2) Eff 12 Mar

|                                                                                                                                                                                                                                                                                                                                            |                                  |                                                     |                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------|--------------------------------------------------------|
| ASOS<br>119.02                                                                                                                                                                                                                                                                                                                             | MINNEAPOLIS Center<br>121.25     | GREEN BAY Radio<br>122.1G 111.2T                    | *FORD UNICOM<br>CTAF 122.8                             |
| RNAV                                                                                                                                                                                                                                                                                                                                       | Final<br>Apch Crs<br><b>190°</b> | Minimum Alt<br><b>HANDS</b><br><b>3000'</b> (1818') | LNAV<br>MDA(H)<br>(CONDITIONAL)<br><b>1760'</b> (578') |
|                                                                                                                                                                                                                                                                                                                                            |                                  | Apt Elev <b>1182'</b><br>TDZE <b>1182'</b>          |                                                        |
| <b>MISSED APCH: Climb to 3400' direct SEYOC and hold.</b><br>Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. Use local altimeter setting; if not received, use Escanaba altimeter setting.<br>2. Visibility reduction by helicopters not authorized. 3. DME/DME RNP-0.3 not authorized.<br>4. Pilot controlled lighting 122.8. |                                  |                                                     |                                                        |
| TAA<br>30 NM<br>IAF                                                                                                                                                                                                                                                                                                                        |                                  |                                                     |                                                        |



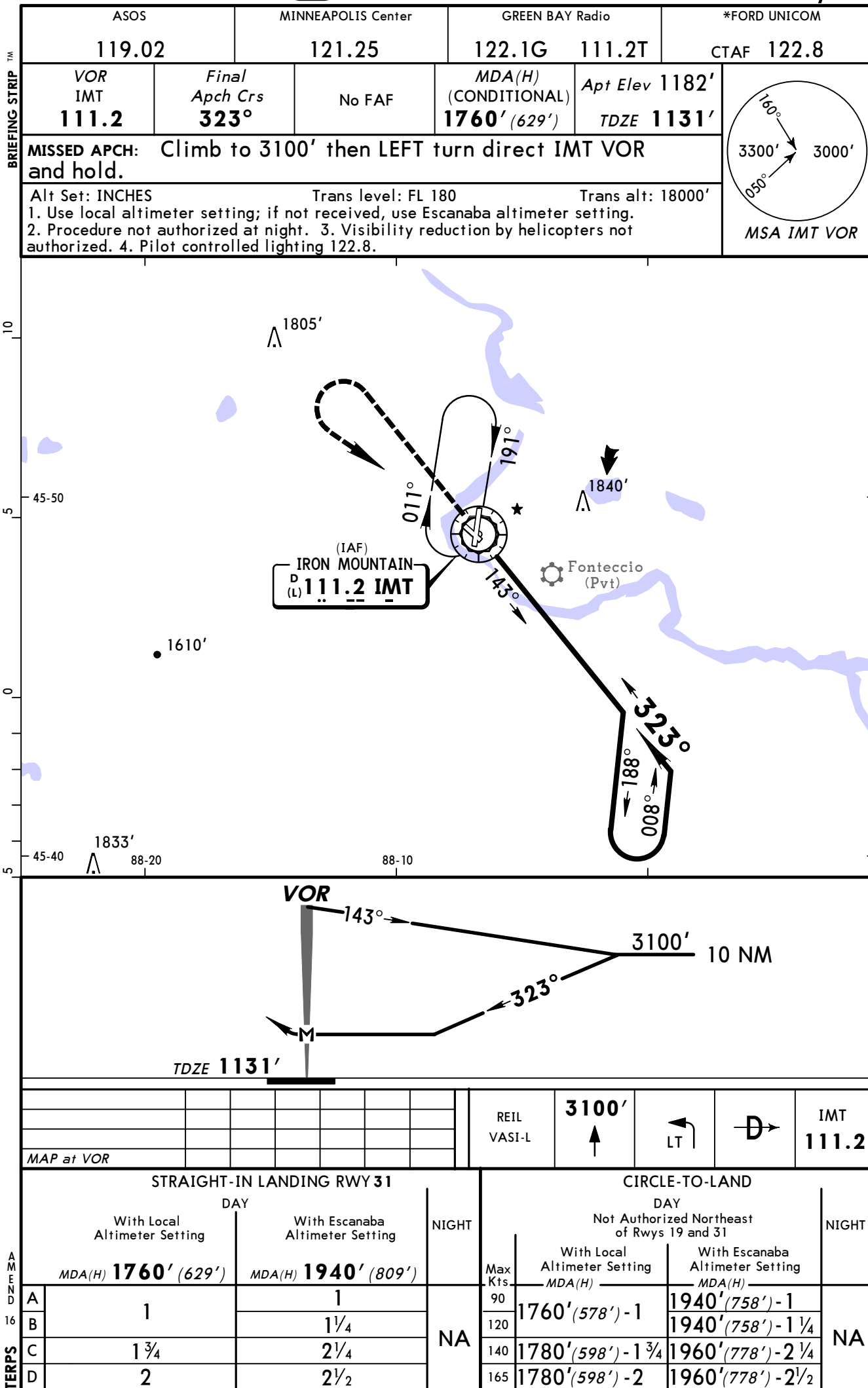
③ Only authorized operators may use VNAV DA(H) in lieu of MDA(H).



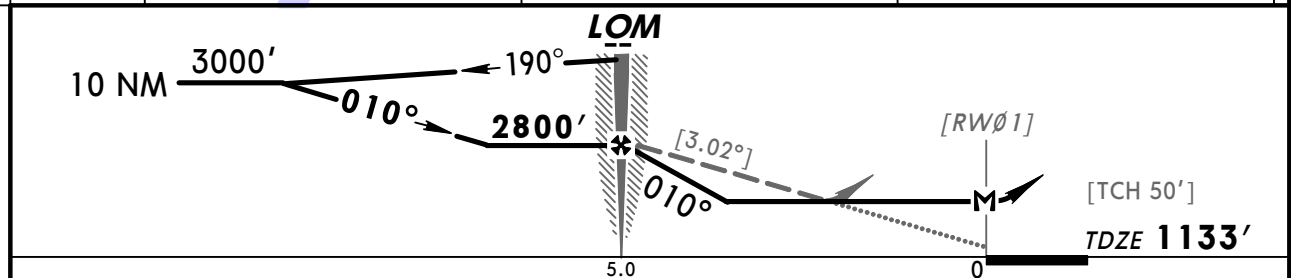
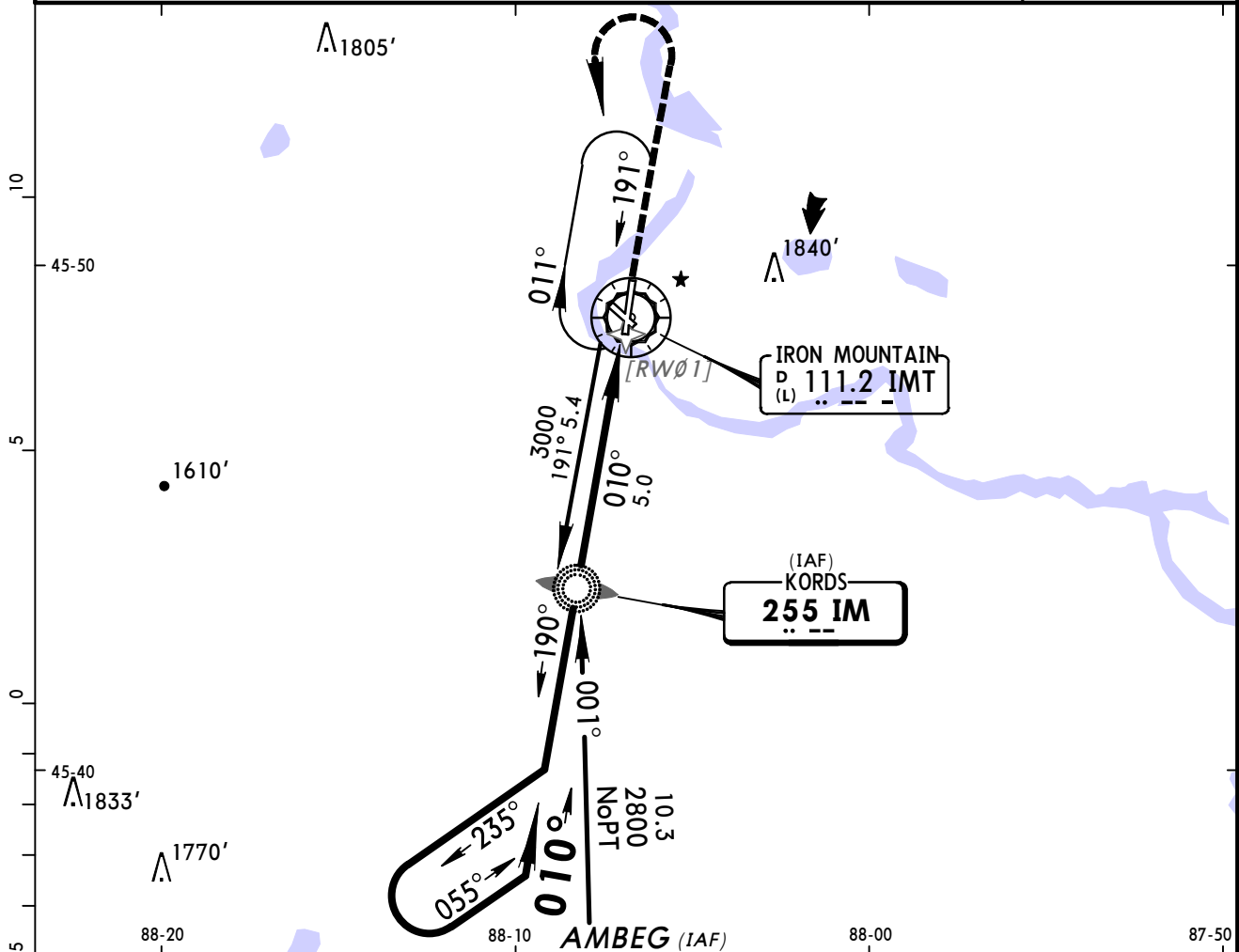
|                       |     |     |     |     |     |     |  |                |       |   |       |
|-----------------------|-----|-----|-----|-----|-----|-----|--|----------------|-------|---|-------|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 |  | REIL<br>VASI-L | 3400' | → | SEYOC |
| Descent angle [3.05°] | 378 | 486 | 540 | 648 | 755 | 863 |  |                |       |   |       |
| MAP at RW19           |     |     |     |     |     |     |  |                |       |   |       |

| STRAIGHT-IN LANDING RWY 19   |       |  |                                 |  |         | ① CIRCLE-TO-LAND             |  |                                 |  |
|------------------------------|-------|--|---------------------------------|--|---------|------------------------------|--|---------------------------------|--|
| LNAV                         |       |  |                                 |  |         | With Local Altimeter Setting |  | With Escanaba Altimeter Setting |  |
| With Local Altimeter Setting |       |  | With Escanaba Altimeter Setting |  |         | MDA(H)                       |  | MDA(H)                          |  |
| MDA(H) 1760' (578')          |       |  | MDA(H) 1940' (758')             |  |         |                              |  |                                 |  |
| A                            | 1     |  | 1                               |  | Max Kts | 1760' (578')-1               |  | 1940' (758')-1                  |  |
| B                            | 1     |  | 1 1/4                           |  | 90      |                              |  | 1940' (758')-1 1/4              |  |
| C                            | 1 1/2 |  | 2 1/4                           |  | 120     | 1780' (598')-1 1/2           |  | 1960' (778')-2 1/4              |  |
| D                            | 1 3/4 |  | 2 1/2                           |  | 140     | 1780' (598')-2               |  | 1960' (778')-2 3/4              |  |
|                              |       |  |                                 |  | 165     |                              |  |                                 |  |

① Not Authorized Northeast of Rwy 19 & 31



|                                                                      |                           |                                     |                        |                                  |  |                                        |
|----------------------------------------------------------------------|---------------------------|-------------------------------------|------------------------|----------------------------------|--|----------------------------------------|
| ASOS<br>119.02                                                       |                           | MINNEAPOLIS Center<br>121.25        |                        | GREEN BAY Radio<br>122.1G 111.2T |  | *FORD UNICOM<br>CTAF 122.8             |
| LOM<br>IM<br>255                                                     | Final<br>Apch Crs<br>010° | Minimum Alt<br>LOM<br>2800' (1667') | MDA(H)<br>1780' (647') | Apt Elev 1182'<br>TDZE 1133'     |  | <div>3300'</div> <div>MSA IM LOM</div> |
| MISSED APCH: Climb to 3100', then LEFT turn direct IMT VOR and hold. |                           |                                     |                        |                                  |  |                                        |
| Alt Set: INCHES<br>1. Pilot controlled lighting 122.8.               |                           | Trans level: FL 180                 |                        | Trans alt: 18000'                |  |                                        |



|                       |     |      |      |      |      |      |       |       |    |   |              |
|-----------------------|-----|------|------|------|------|------|-------|-------|----|---|--------------|
| Gnd speed-Kts         | 70  | 90   | 100  | 120  | 140  | 160  | MALSR | 3100' | LT | D | IMT<br>111.2 |
| Descent angle [3.02°] | 374 | 481  | 534  | 641  | 748  | 855  |       |       |    |   |              |
| LOM to MAP            | 5.0 | 4:17 | 3:20 | 3:00 | 2:30 | 2:09 |       |       |    |   |              |

| STRAIGHT-IN LANDING RWY 1 |       |          |         | CIRCLE-TO-LAND                                                                 |                    |  |  |
|---------------------------|-------|----------|---------|--------------------------------------------------------------------------------|--------------------|--|--|
| MDA(H) 1780' (647')       |       |          |         | Not Authorized Northeast of Rwy 19 and 31<br>Not Authorized at Night to Rwy 31 |                    |  |  |
|                           |       | RAIL out | ALS out | Max Kts                                                                        | MDA(H)             |  |  |
| A                         | 3/4   |          | 1       | 90                                                                             | 1780' (598')-1     |  |  |
| B                         | 1 1/4 |          | 1 3/4   | 120                                                                            | 1780' (598')-1 3/4 |  |  |
| C                         | 1 3/4 |          | 2       | 140                                                                            | 1780' (598')-2     |  |  |
| D                         |       |          |         | 165                                                                            |                    |  |  |



## **General Information**

Location: Ironwood MI USA  
IATA Code: IWD  
Lat/Long: N46° 31.6' W090° 07.9'  
Elevation: 1230 ft

Airport Use: Public  
Magnetic Variation: 2.4 °W  
Sectional Chart: Green Bay

Fuel Types: 100 Octane (LL), Jet A  
Customs: No  
Airport Type: IFR  
Landing Fee: Yes  
Control Tower: No  
Jet Start Unit: Yes  
LLWS Alert: No  
Beacon: Yes

Sunrise: 1244 Z  
Sunset: 2343 Z,

## **Runway Information**

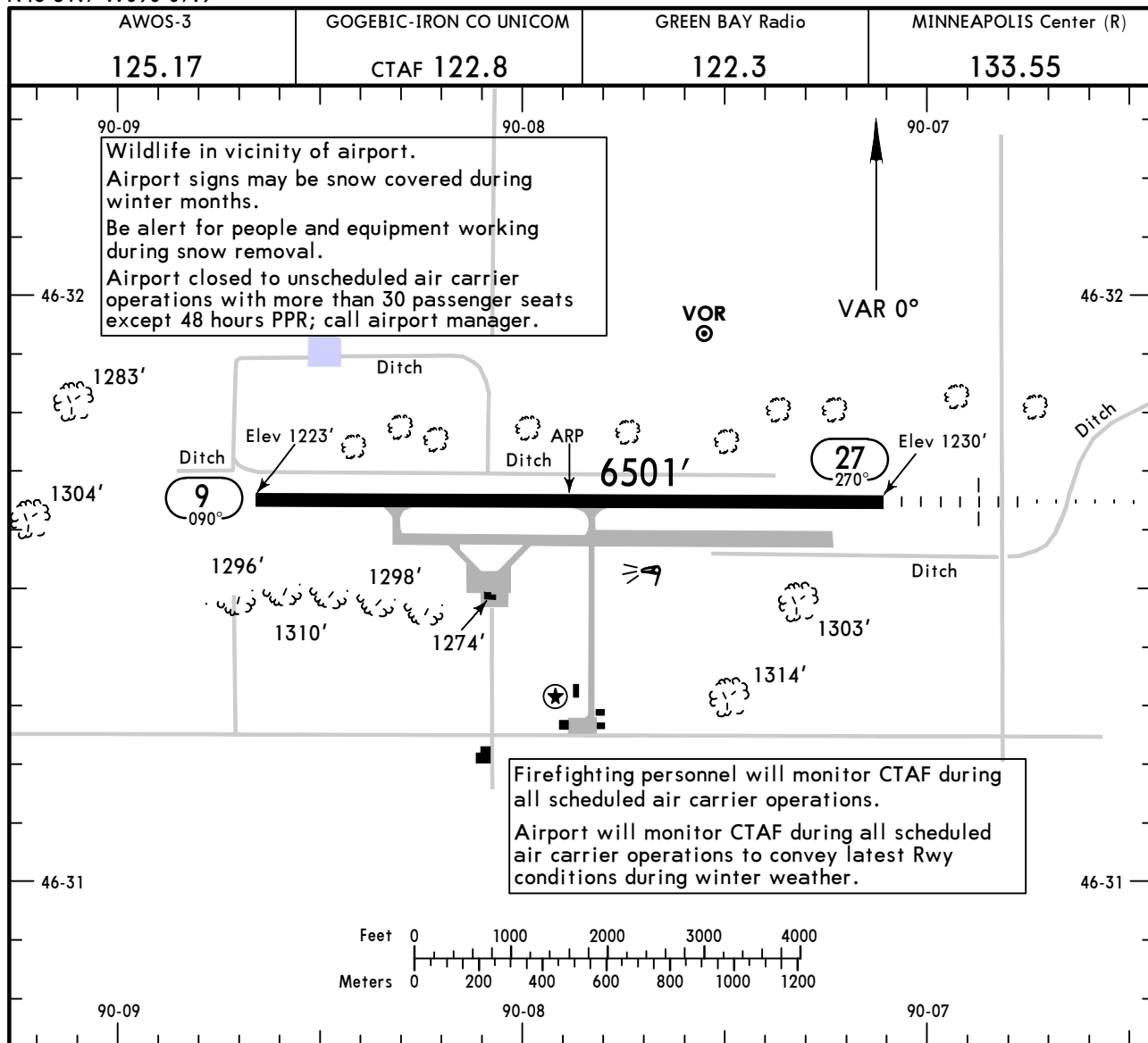
Runway: 09  
Length x Width: 6501 ft x 130 ft  
Surface Type: asphalt  
TDZ-Elev: 1230 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 27  
Length x Width: 6501 ft x 130 ft  
Surface Type: asphalt  
TDZ-Elev: 1230 ft  
Lighting: Edge, ALS, Pilot controlled

## **Communication Information**

AWOS 125.175  
Gogebic-Iron Co Unicom 122.8 CTAF PCL  
Green Bay Flight Service Station 122.3 RCO  
Minneapolis Center 133.55 Remote Communications Air-Ground





| ADDITIONAL RUNWAY INFORMATION |                              |                |             |          |       |
|-------------------------------|------------------------------|----------------|-------------|----------|-------|
| RWY                           |                              | USABLE LENGTHS |             | TAKE-OFF | WIDTH |
|                               |                              | LANDING BEYOND |             |          |       |
|                               |                              | Threshold      | Glide Slope |          |       |
| 9                             | ① HIRL ① REIL VASI-L grooved |                |             |          | 130'  |
| 27                            | ① HIRL ① MALSR grooved       |                | 5451'       |          |       |
|                               |                              |                |             |          |       |
|                               |                              |                |             |          |       |
|                               |                              |                |             |          |       |

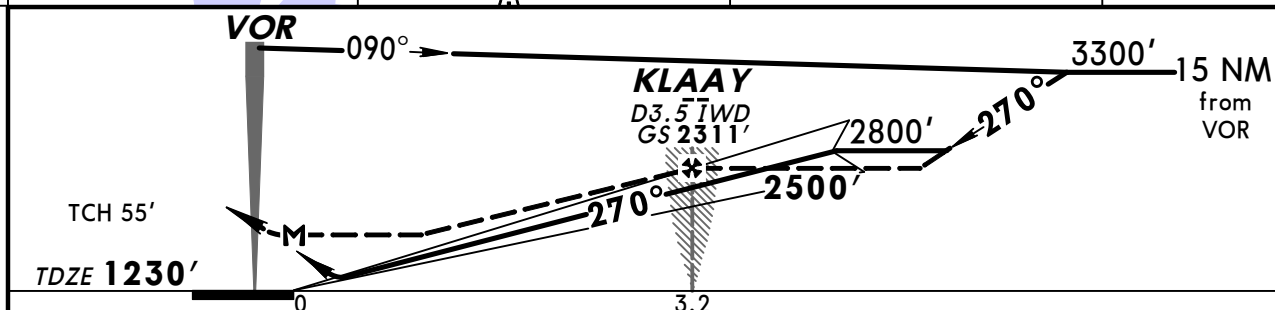
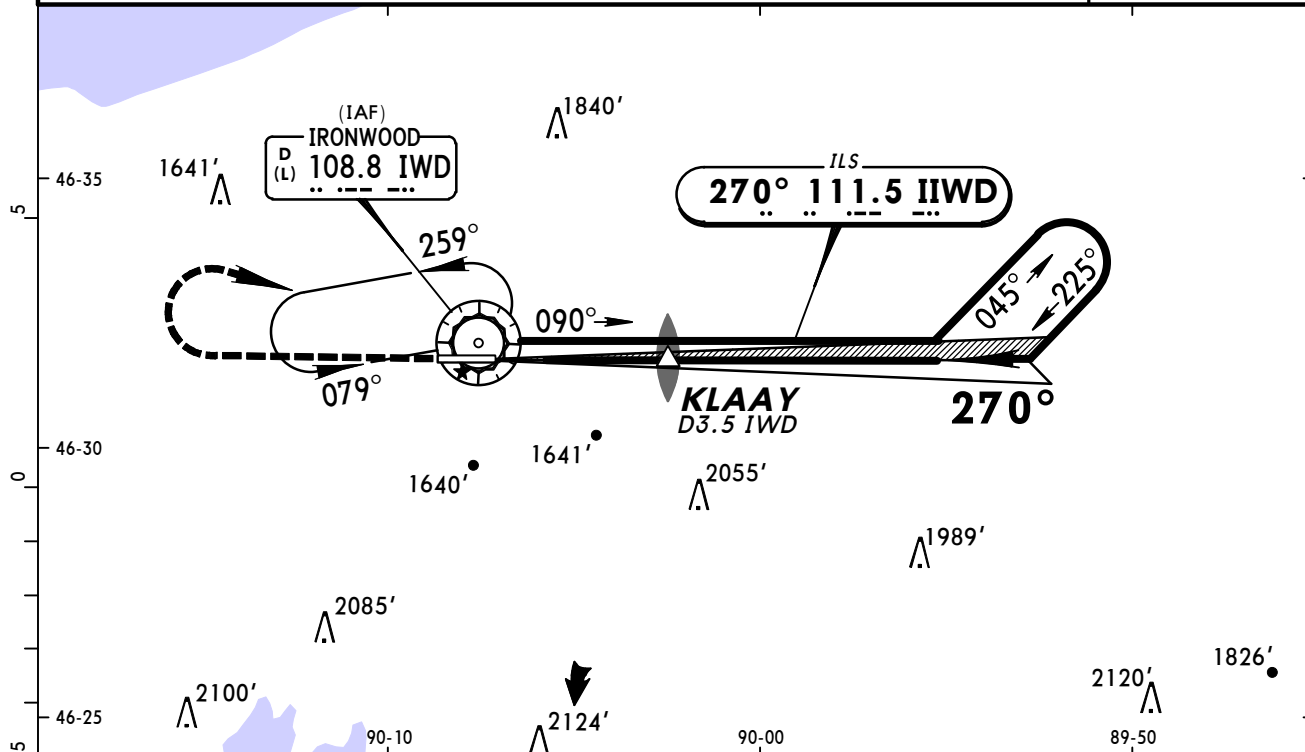
① Activate on 122.8.

| TAKE-OFF & OBSTACLE DEPARTURE PROCEDURE |     |     | FOR FILING AS ALTERNATE                                                  |                          |
|-----------------------------------------|-----|-----|--------------------------------------------------------------------------|--------------------------|
| All Rwys                                |     |     | Authorized Only When Local Weather Available                             |                          |
| Adequate Vis Ref                        |     | STD | RNAV (GPS) Rwy 9<br>RNAV (GPS) Rwy 27<br>VOR DME Rwy 9<br>VOR DME Rwy 27 | ILS Rwy 27<br>LOC Rwy 27 |
| 1 & 2 Eng                               | 1/4 | 1   | A 900-2                                                                  | NA                       |
| 3 & 4 Eng                               |     | 1/2 | B 900-2 1/2                                                              |                          |
|                                         |     |     | C 900-2 1/2                                                              |                          |
|                                         |     |     | D 1000-3                                                                 |                          |

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

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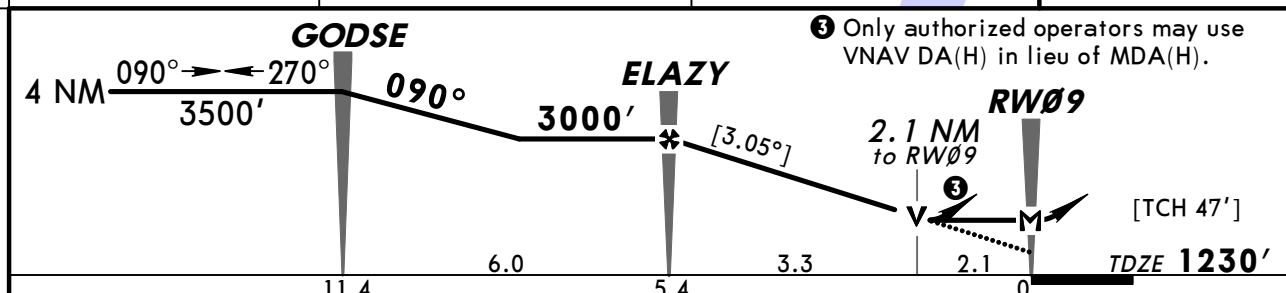
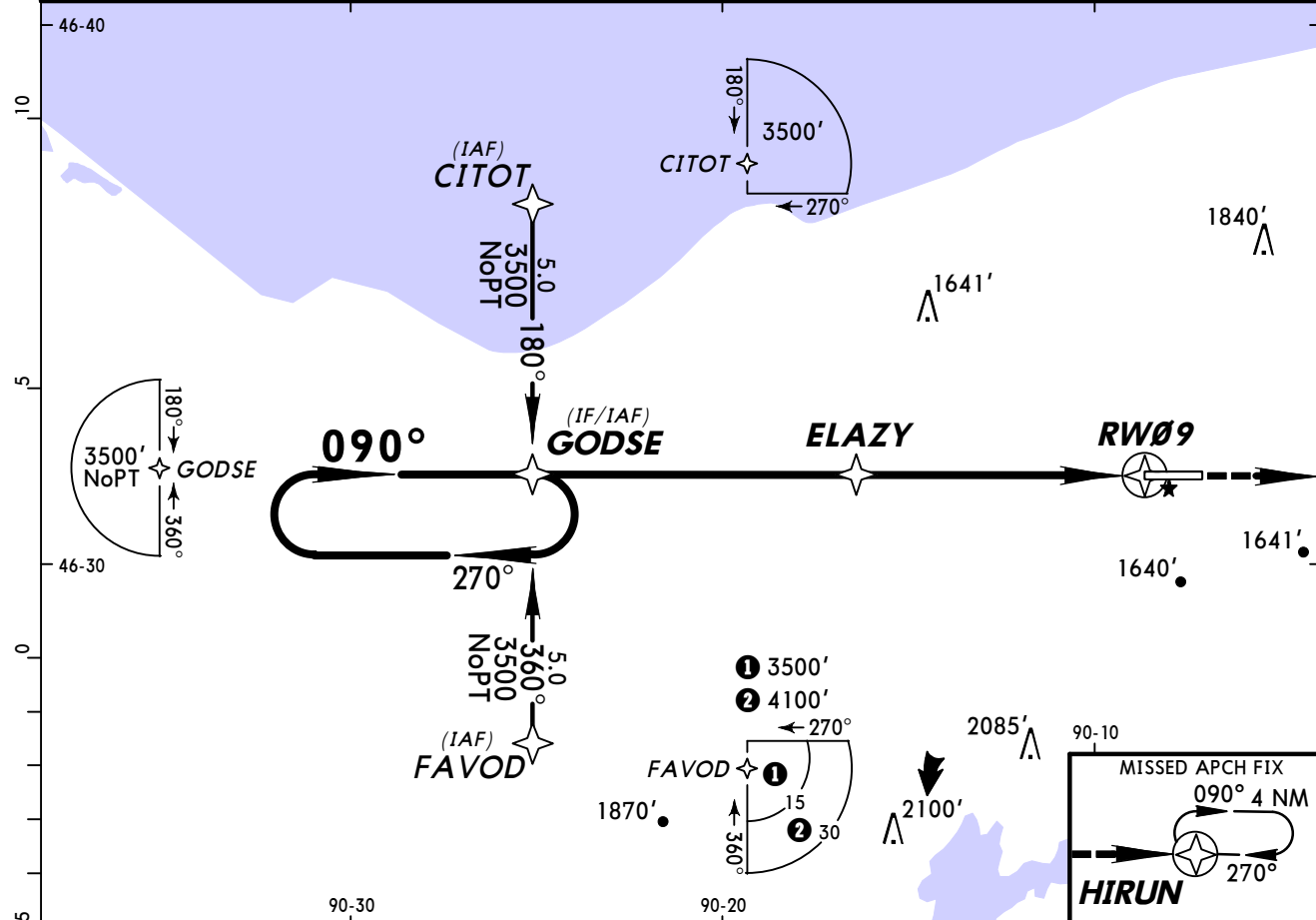
|                                                                                                                                                 |                           |                                  |                                               |                              |  |                                         |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------|-----------------------------------------------|------------------------------|--|-----------------------------------------|--|
| AWOS-3<br>125.17                                                                                                                                |                           | MINNEAPOLIS Center (R)<br>133.55 |                                               | GREEN BAY Radio<br>122.3     |  | GOGEBIC-IRON CO UNICOM<br>CTAF 122.8    |  |
| LOC<br>IIWD<br>111.5                                                                                                                            | Final<br>Apch Crs<br>270° | GS<br>KLAAY<br>2311' (1081')     | ILS<br>DA(H)<br>(CONDITIONAL)<br>1430' (200') | Apt Elev 1230'<br>TDZE 1230' |  | <div>3200'</div> <div>MSA IWD VOR</div> |  |
| MISSED APCH: Climb to 3300' then RIGHT turn direct IWD VOR and hold.                                                                            |                           |                                  |                                               |                              |  |                                         |  |
| Alt Set: INCHES<br>1. Use local altimeter setting; if not received, use Ashland, Wisc altimeter setting.<br>2. Pilot controlled lighting 122.8. |                           |                                  |                                               |                              |  |                                         |  |
|                                                                                                                                                 |                           | Trans level: FL 180              |                                               | Trans alt: 18000'            |  |                                         |  |



|               |       |      |      |      |      |      |       |       |    |    |              |
|---------------|-------|------|------|------|------|------|-------|-------|----|----|--------------|
| Gnd speed-Kts | 70    | 90   | 100  | 120  | 140  | 160  | MALSR | 3300' | RT | D→ | IWD<br>108.8 |
| GS            | 3.00° | 377  | 484  | 538  | 646  | 753  |       |       |    |    |              |
| KLAAY to MAP  | 3.2   | 2:45 | 2:08 | 1:55 | 1:36 | 1:22 |       |       |    |    |              |

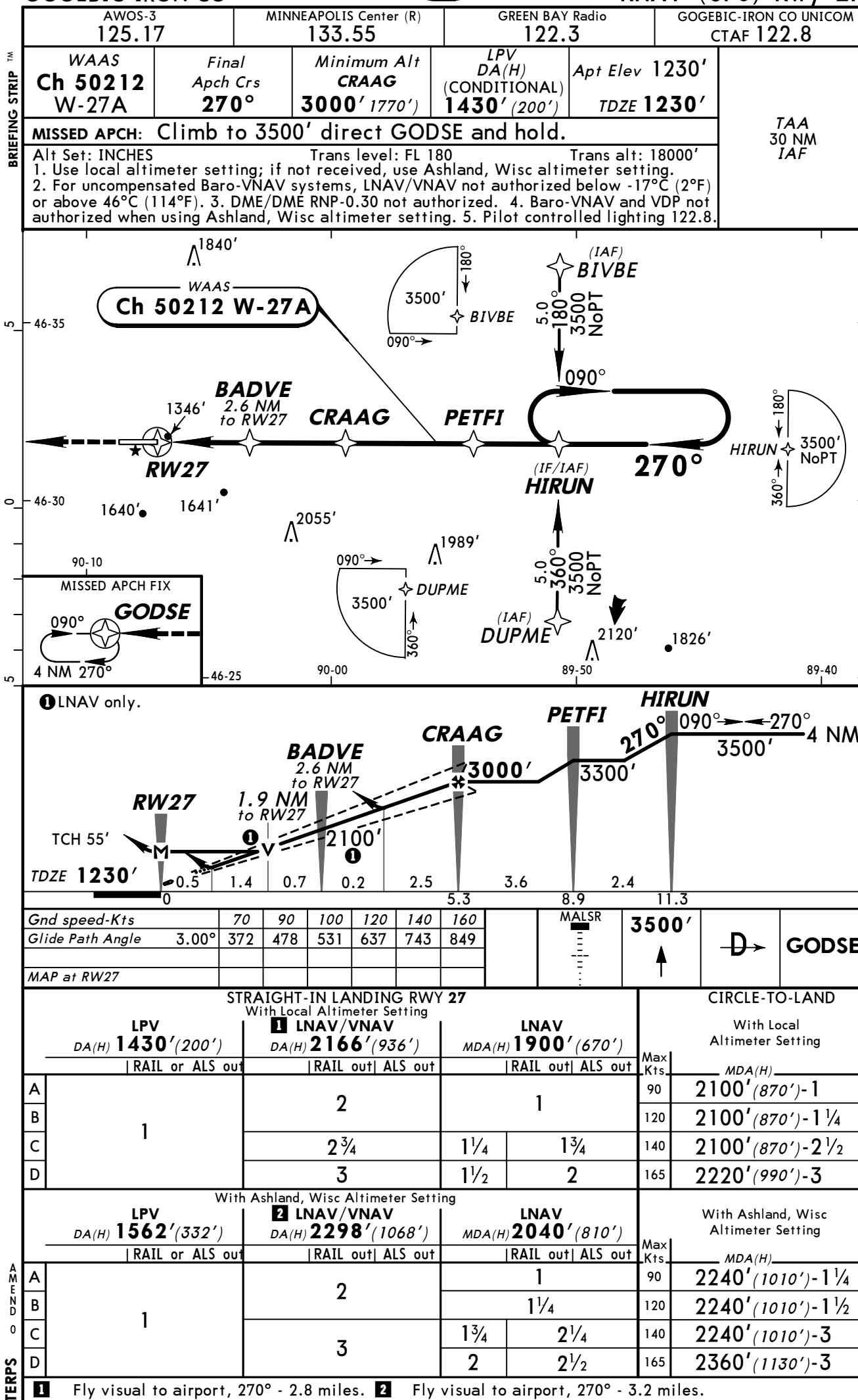
| STRAIGHT-IN LANDING RWY27<br>With Local Altimeter Setting |                 |     |                                            |         |        | CIRCLE-TO-LAND                          |                                 |
|-----------------------------------------------------------|-----------------|-----|--------------------------------------------|---------|--------|-----------------------------------------|---------------------------------|
| ILS<br>DA(H) <b>1430'</b> (200')                          |                 |     | LOC (GS out)<br>MDA(H) <b>1720'</b> (490') |         |        | Max<br>Kts                              | With Local<br>Altimeter Setting |
| FULL                                                      | RAIL or ALS out |     | RAIL out                                   | ALS out | MDA(H) |                                         |                                 |
| A                                                         | 1/2             | 3/4 | 1/2                                        | 3/4     | 1      | 90                                      | 2100' (870') - 1                |
| B                                                         |                 |     | 3/4                                        | 1 1/4   | 120    | 2100' (870') - 1 1/4                    |                                 |
| C                                                         |                 |     |                                            |         | 140    | 2100' (870') - 2 1/2                    |                                 |
| D                                                         |                 |     | 1                                          | 1 1/2   | 165    | 2220' (990') - 3                        |                                 |
| With Ashland, Wisc Altimeter Setting                      |                 |     |                                            |         |        | With Ashland, Wisc<br>Altimeter Setting |                                 |
| ILS<br>DA(H) <b>1562'</b> (332')                          |                 |     | LOC (GS out)<br>MDA(H) <b>1860'</b> (630') |         |        | Max<br>Kts                              | MDA(H)                          |
| FULL                                                      | RAIL or ALS out |     | RAIL out                                   | ALS out |        |                                         |                                 |
| A                                                         | 1/2             | 1   | 1/2                                        | 3/4     | 1      | 90                                      | 2240' (1010') - 1 1/4           |
| B                                                         |                 |     | 1 1/4                                      | 1 3/4   | 120    | 2240' (1010') - 1 1/2                   |                                 |
| C                                                         |                 |     |                                            |         | 140    | 2240' (1010') - 3                       |                                 |
| D                                                         |                 |     | 1 1/2                                      | 2       | 165    | 2360' (1130') - 3                       |                                 |

|                                                                                                                                                                                                                         |                           |                                       |                                                 |                              |  |                                      |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------|-------------------------------------------------|------------------------------|--|--------------------------------------|--|
| AWOS-3<br>125.17                                                                                                                                                                                                        |                           | MINNEAPOLIS Center (R)<br>133.55      |                                                 | GREEN BAY Radio<br>122.3     |  | GOGEBIC-IRON CO UNICOM<br>CTAF 122.8 |  |
| RNAV                                                                                                                                                                                                                    | Final<br>Apch Crs<br>090° | Minimum Alt<br>ELAZY<br>3000' (1770') | LNAV<br>MDA(H)<br>(CONDITIONAL)<br>1940' (710') | Apt Elev 1230'<br>TDZE 1230' |  | TAA<br>30 NM<br>IAF                  |  |
| MISSED APCH: Climb to 3500' direct HIRUN and hold.                                                                                                                                                                      |                           |                                       |                                                 |                              |  |                                      |  |
| Alt Set: INCHES                      Trans level: FL 180                      Trans alt: 18000'                                                                                                                         |                           |                                       |                                                 |                              |  |                                      |  |
| 1. Use local altimeter setting; if not received, use Ashland, Wisc altimeter setting.<br>2. DME/DME RNP-0.30 not authorized. 3. Visibility reduction by helicopters not authorized. 4. Pilot controlled lighting 122.8. |                           |                                       |                                                 |                              |  |                                      |  |



|               |         |     |     |     |     |     |        |  |       |       |
|---------------|---------|-----|-----|-----|-----|-----|--------|--|-------|-------|
| Gnd speed-Kts | 70      | 90  | 100 | 120 | 140 | 160 | REIL   |  | 3500' | HIRUN |
| Descent angle | [3.05°] | 378 | 486 | 540 | 648 | 755 | VASI-L |  | ↑     |       |
| MAP at RW09   |         |     |     |     |     |     |        |  |       |       |

| STRAIGHT-IN LANDING RWY 9    |       |                                      |     | CIRCLE-TO-LAND               |  |                                      |  |
|------------------------------|-------|--------------------------------------|-----|------------------------------|--|--------------------------------------|--|
| LNAV                         |       |                                      |     | With Local Altimeter Setting |  | With Ashland, Wisc Altimeter Setting |  |
| MDA(H) 1940' (710')          |       | MDA(H) 2080' (850')                  |     | Max Kts                      |  | MDA(H)                               |  |
| With Local Altimeter Setting |       | With Ashland, Wisc Altimeter Setting |     |                              |  |                                      |  |
| A                            | 1     | 1                                    | 90  | 2100' (870')-1               |  | 2240' (1010')-1 1/4                  |  |
| B                            | 1     | 1 1/4                                | 120 | 2100' (870')-1 1/4           |  | 2240' (1010')-1 1/2                  |  |
| C                            | 2     | 2 1/2                                | 140 | 2100' (870')-2 1/2           |  | 2240' (1010')-3                      |  |
| D                            | 2 1/4 | 2 3/4                                | 165 | 2220' (990')-3               |  | 2360' (1130')-3                      |  |



IRONWOOD, MICH  
VOR DME Rwy 9

**BRIEFING STRIP** <sup>TM</sup>



| STRAIGHT-IN LANDING RWY 9       |    |                                   | CIRCLE-TO-LAND |                                 |                                   |
|---------------------------------|----|-----------------------------------|----------------|---------------------------------|-----------------------------------|
| MDA(H) <b>1740'</b> (510')      |    | MDA(H) <b>1880'</b> (650')        |                | With Local<br>Altimeter Setting | With Ashland<br>Altimeter Setting |
| With Local<br>Altimeter Setting |    | With Ashland<br>Altimeter Setting | Max<br>Kts.    | MDA(H) _____                    | MDA(H) _____                      |
| A                               | 1  | 1                                 | 90             | <b>2100'</b> (870')- 1          | <b>2240'</b> (1010')- 1¼          |
| B                               |    |                                   | 120            | <b>2100'</b> (870')- 1¼         | <b>2240'</b> (1010')- 1½          |
| C                               | 1½ | 1¾                                | 140            | <b>2100'</b> (870')- 2½         | <b>2240'</b> (1010')- 3           |
| D                               |    | 2                                 | 165            | <b>2220'</b> (990')- 3          | <b>2360'</b> (1130')- 3           |

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|                              |     |     |     |     |     |     |
|------------------------------|-----|-----|-----|-----|-----|-----|
| <i>Gnd speed-Kts</i>         | 70  | 90  | 100 | 120 | 140 | 160 |
| <i>Descent angle [3.04°]</i> | 376 | 484 | 538 | 645 | 753 | 861 |
|                              |     |     |     |     |     |     |
| <i>MAP at MAHTU</i>          |     |     |     |     |     |     |

TERPS  
AMEND  
9

## General Information

Location: Lansing MI USA  
IATA Code: LAN  
Lat/Long: N42° 46.7' W084° 35.2'  
Elevation: 861 ft

Airport Use: Public  
Magnetic Variation: 6.3°W  
Sectional Chart: Detroit

Fuel Types: 100 Octane (LL), Jet A  
Oxygen Types: High Pressure  
Repair Types: Major Airframe, Major Engine  
Customs: No  
Airport Type: IFR  
Landing Fee: Yes  
Control Tower: Yes  
Jet Start Unit: Yes  
LLWS Alert: No  
Beacon: Yes

Sunrise: 1218 Z  
Sunset: 2325 Z,

## Runway Information

Runway: 06  
Length x Width: 5002 ft x 120 ft  
Surface Type: asphalt  
TDZ-Elev: 858 ft  
Lighting: Edge, REIL

Runway: 10L  
Length x Width: 3601 ft x 75 ft  
Surface Type: asphalt  
TDZ-Elev: 848 ft  
Lighting: Edge

Runway: 10R  
Length x Width: 8506 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 861 ft  
Lighting: Edge, ALS

Runway: 24  
Length x Width: 5002 ft x 120 ft  
Surface Type: asphalt  
TDZ-Elev: 857 ft  
Lighting: Edge, REIL

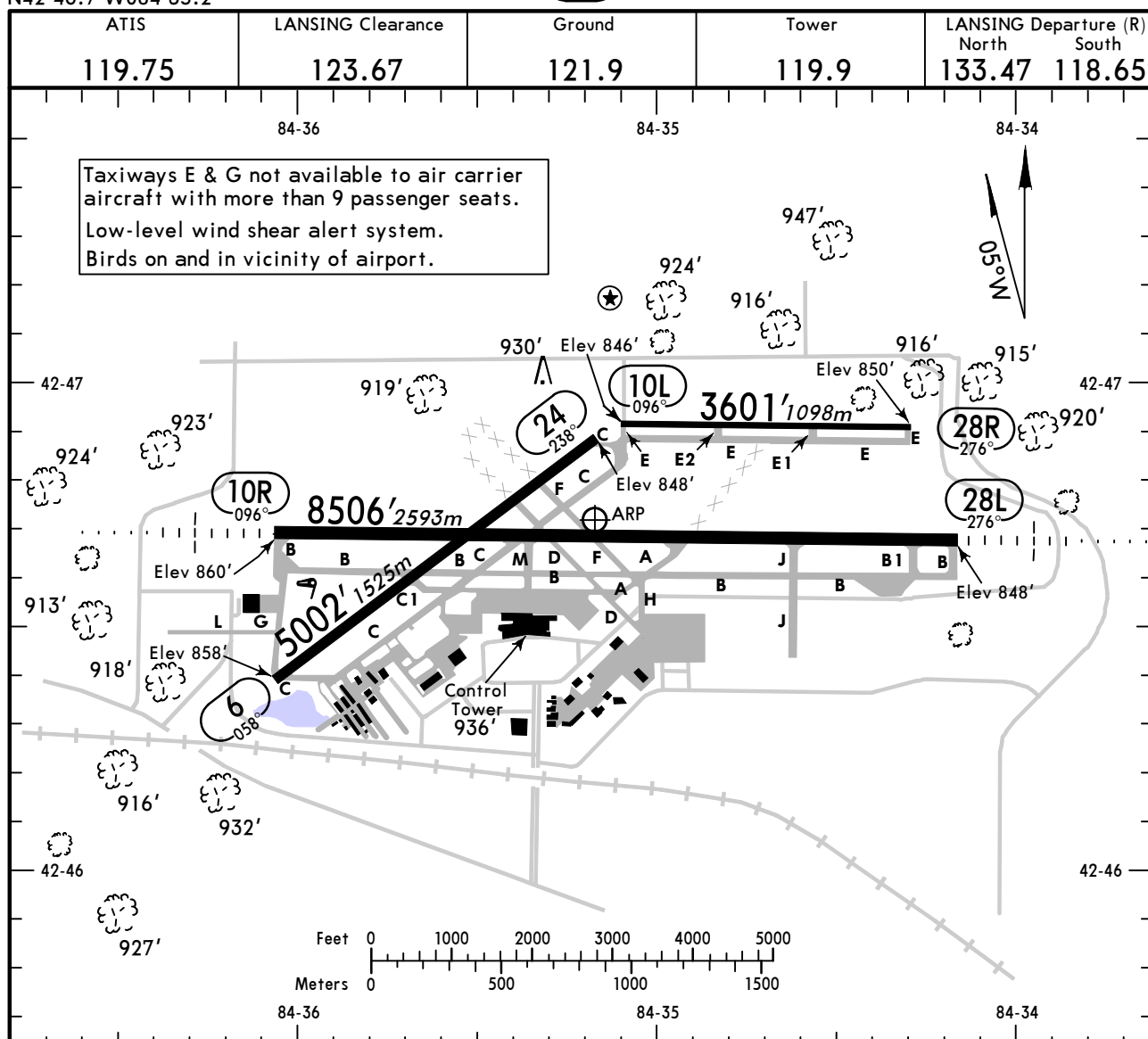
Runway: 28L  
Length x Width: 8506 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 852 ft  
Lighting: Edge, ALS

Runway: 28R  
Length x Width: 3601 ft x 75 ft  
Surface Type: asphalt  
TDZ-Elev: 850 ft  
Lighting: Edge

## **Communication Information**

ATIS 119.75  
Lansing Tower 119.9  
Lansing Ground Control 121.9  
Lansing Clearance Delivery 123.675  
Lansing Approach Control 118.65 (91°-270°)  
Lansing Approach Control 133.475  
Lansing ARSA 118.65 (91°-270°)  
Lansing ARSA 126.65 (271°-90°)  
Lansing Departure Control 118.65 (91°-270°) Departure Service  
Lansing Departure Control 133.475 Departure Service  
Lansing Unicom 122.95  
Lansing Flight Service Station 122.2 RCO





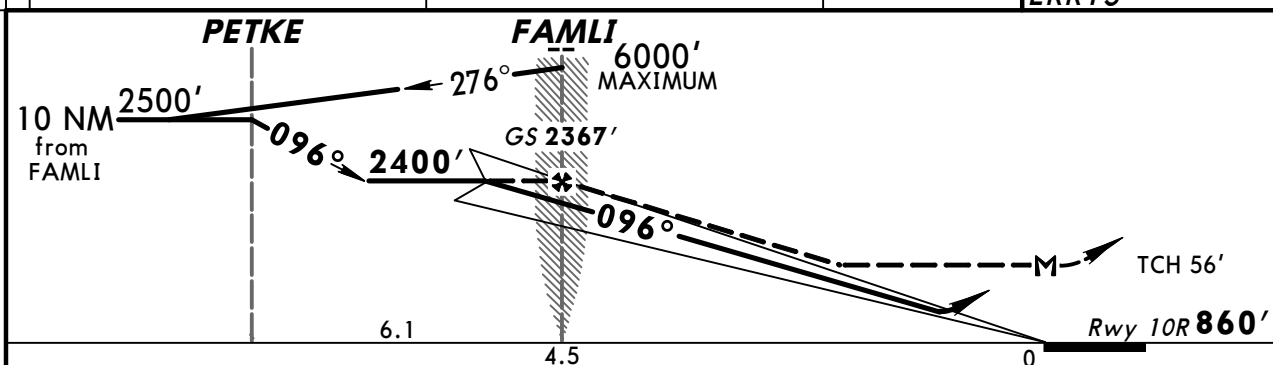
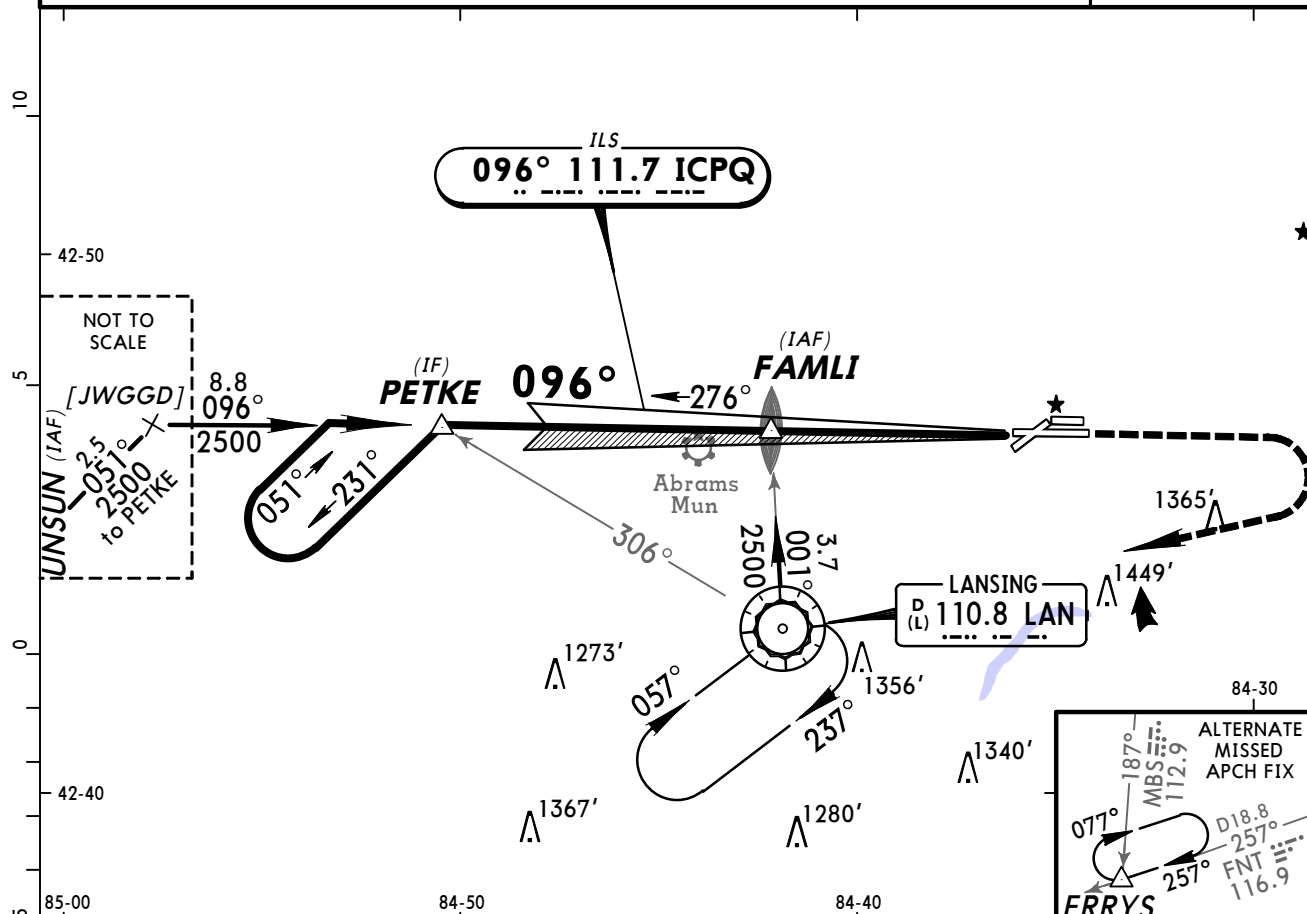
| ADDITIONAL RUNWAY INFORMATION |     |                                             |                |                |             |
|-------------------------------|-----|---------------------------------------------|----------------|----------------|-------------|
| RWY                           |     |                                             | USABLE LENGTHS |                | WIDTH       |
|                               |     |                                             | Threshold      | Landing Beyond |             |
| 6                             | 24  | MIRL REIL PAPI-L (angle 3.00°) grooved      |                |                | 120'<br>37m |
| 10R                           | 28L | HIRL MALSR grooved RVR                      |                | 7348' 2240m    | 150'<br>46m |
| 10L                           | 28R | HIRL MALSR PAPI-R (angle 3.00°) grooved RVR |                | 7558' 2304m    | 75'<br>23m  |
|                               |     |                                             |                |                |             |
|                               |     |                                             |                |                |             |

❶ Rwy 10L/28R not available to air carrier aircraft with more than 9 passenger seats.

| TAKE-OFF & OBSTACLE DEPARTURE PROCEDURE |  |                  |           |                      | FOR FILING AS ALTERNATE    |                  |                                       |       |                                         |       |  |       |  |
|-----------------------------------------|--|------------------|-----------|----------------------|----------------------------|------------------|---------------------------------------|-------|-----------------------------------------|-------|--|-------|--|
| Rwys 10R, 28L                           |  |                  |           | Rwys 6, 10L, 24, 28R | ILS Rwy 10R<br>ILS Rwy 28L |                  | LOC Rwy 10R<br>LOC Rwy 28L<br>RADAR-1 |       | RNAV (GPS) Rwy 6<br>RNAV (GPS) Rwy 10R  |       |  |       |  |
| Both RVRs are required & controlling    |  | Adequate Vis Ref | STD       |                      |                            |                  | VOR Rwy 24<br>VOR Rwy 6               |       | RNAV (GPS) Rwy 24<br>RNAV (GPS) Rwy 28L |       |  |       |  |
| RCLM & HIRL                             |  |                  | 1 & 2 Eng |                      | 3 & 4 Eng                  |                  | A                                     | 600-2 |                                         | 800-2 |  |       |  |
| TDZ RVR 10<br>Rollout RVR 10            |  | RVR 16<br>or 1/4 |           | RVR 50<br>or 1       |                            | RVR 24<br>or 1/2 |                                       |       |                                         |       |  | 300-1 |  |
|                                         |  |                  |           |                      |                            |                  |                                       |       |                                         |       |  |       |  |
|                                         |  |                  |           |                      |                            |                  |                                       |       |                                         |       |  |       |  |

OBSTACLE DP: Rwys 10L/R climb runway heading to 2000' before turning south. Rwys 6, 24 & 28L/R climb runway heading to 1500' before turning southeast.

|                                                                                                                         |                                  |                                            |                                     |                                             |
|-------------------------------------------------------------------------------------------------------------------------|----------------------------------|--------------------------------------------|-------------------------------------|---------------------------------------------|
| ATIS                                                                                                                    | LANSING Approach (R)             |                                            | LANSING Tower                       | Ground                                      |
| 119.75                                                                                                                  | North<br>133.47                  | South<br>118.65                            | 119.9                               | 121.9                                       |
| LOC<br>ICPQ<br><b>111.7</b>                                                                                             | Final<br>Apch Crs<br><b>096°</b> | GS<br><b>FAMLI</b><br><b>2367'</b> (1507') | ILS<br>DA(H)<br><b>1060'</b> (200') | Apt Elev <b>861'</b><br>Rwy 10R <b>860'</b> |
| <b>MISSED APCH:</b> Climb to 2000' then climbing RIGHT turn to 3000'<br>direct LAN VOR and hold, or as directed by ATC. |                                  |                                            |                                     |                                             |
| Alt Set: INCHES                                                                                                         | Trans level: FL 180              |                                            | Trans alt: 18000'                   | MSA LAN VOR                                 |



|               |       |      |      |      |      |      |       |       |       |              |
|---------------|-------|------|------|------|------|------|-------|-------|-------|--------------|
| Gnd speed-Kts | 70    | 90   | 100  | 120  | 140  | 160  | MALSR | 2000' | 3000' | LAN<br>110.8 |
| GS            | 3.00° | 372  | 478  | 531  | 637  | 743  |       | ↑     | RT    |              |
| FAMLI to MAP  | 4.5   | 3:51 | 3:00 | 2:42 | 2:15 | 1:56 |       |       |       |              |

| TERPS |                 |                 |  |  | STRAIGHT-IN LANDING RWY 10R |  | CIRCLE-TO-LAND                            |                      |
|-------|-----------------|-----------------|--|--|-----------------------------|--|-------------------------------------------|----------------------|
| ILS   |                 | LOC (GS out)    |  |  | DA(H) 1060' (200')          |  | Not Authorized to<br>Rwy 10L/28R at Night |                      |
| FULL  |                 | RAIL or ALS out |  |  | MDA(H) 1340' (480')         |  |                                           |                      |
|       |                 |                 |  |  |                             |  | Max<br>Kts                                | MDA(H)               |
| A     |                 |                 |  |  |                             |  | 90                                        |                      |
| B     |                 |                 |  |  |                             |  | 120                                       | 1380' (519') - 1     |
| C     | 1 RVR 24 or 1/2 | RVR 40 or 3/4   |  |  |                             |  | 140                                       | 1380' (519') - 1 1/2 |
| D     |                 |                 |  |  |                             |  | 165                                       | 1440' (579') - 2     |

1 RVR 18 with Flight Director or Autopilot or HUD to DA.

CHANGES: None.

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|                                                                                                                                   |  |                           |  |                              |  |                              |  |
|-----------------------------------------------------------------------------------------------------------------------------------|--|---------------------------|--|------------------------------|--|------------------------------|--|
| ATIS                                                                                                                              |  | LANSING Approach (R)      |  | LANSING Tower                |  | Ground                       |  |
| 119.75                                                                                                                            |  | North<br>133.47           |  | South<br>118.65              |  | 119.9                        |  |
| 121.9                                                                                                                             |  |                           |  |                              |  |                              |  |
| LOC<br>ILAN<br>110.1                                                                                                              |  | Final<br>Apch Crs<br>276° |  | GS<br>BURYE<br>2400' (1548') |  | ILS<br>DA(H)<br>1052' (200') |  |
|                                                                                                                                   |  |                           |  |                              |  | Apt Elev 861'<br>TDZE 852'   |  |
| MISSED APCH: Climb to 2500', then climbing LEFT turn to 3000'<br>inbound on GRR VOR/DME R-100 to UNSUN INT/GRR D18.5 and<br>hold. |  |                           |  |                              |  |                              |  |
| Alt Set: INCHES                                                                                                                   |  | Trans level: FL 180       |  |                              |  | Trans alt: 18000'            |  |
| 1. DME or Radar required.                                                                                                         |  |                           |  |                              |  |                              |  |

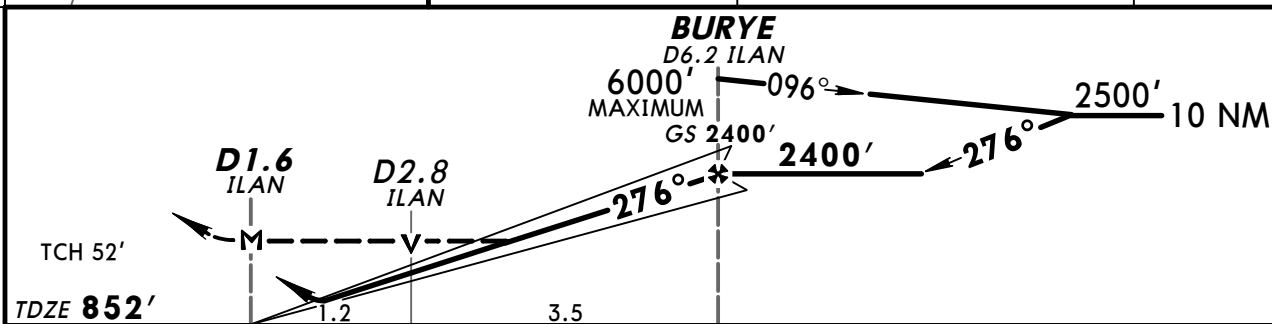
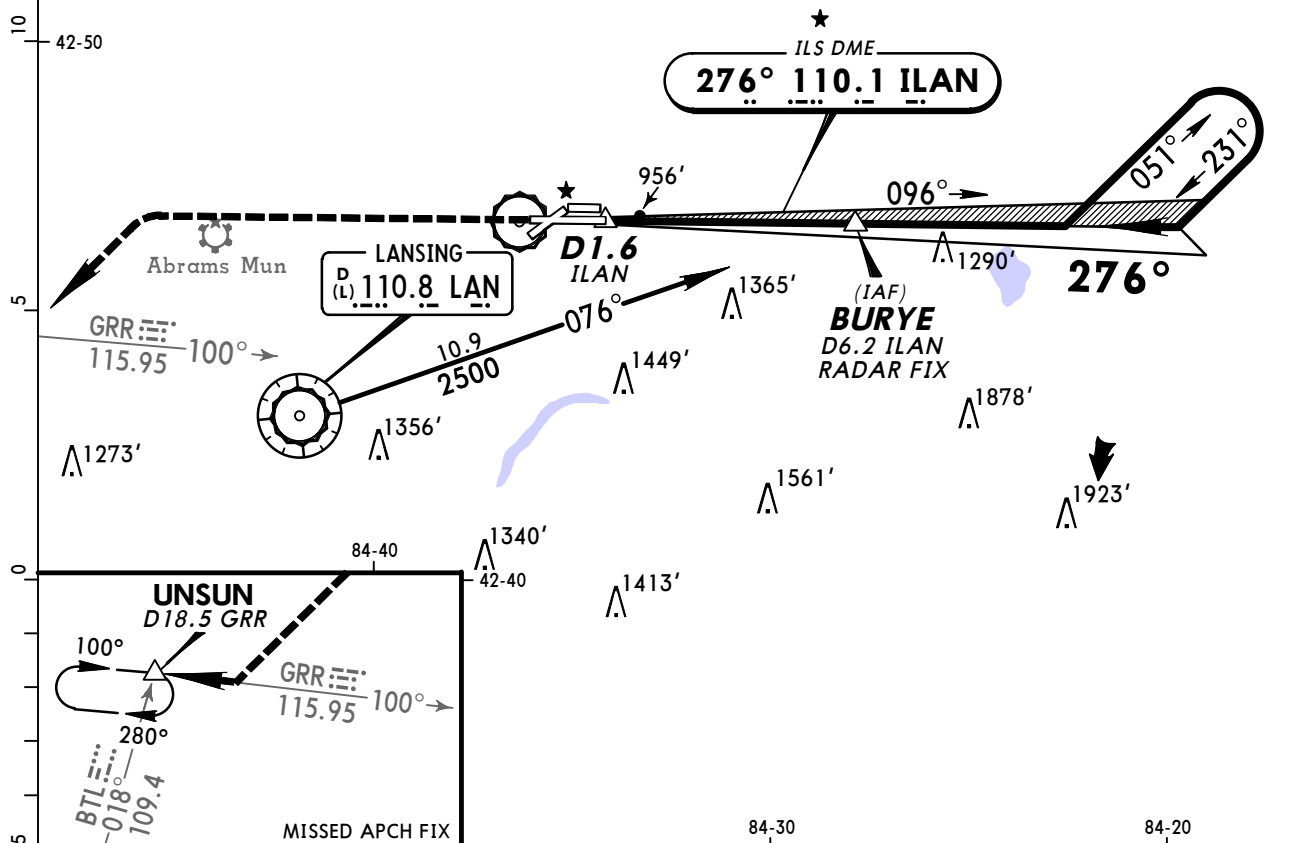
2500'

3000'

105°

260°

MSA LAN VOR



|                                  |       |      |      |      |      |      |      |       |       |        |       |
|----------------------------------|-------|------|------|------|------|------|------|-------|-------|--------|-------|
| Gnd speed-Kts                    | 70    | 90   | 100  | 120  | 140  | 160  | MALS | 2500' | 3000' | GRR    | UNSUB |
| GS                               | 3.00° | 372  | 478  | 531  | 637  | 743  | PAPI | ↑     | LT    | 115.95 | R-100 |
| MAP at D1.6 ILAN or BURYE to MAP | 4.7   | 4:02 | 3:08 | 2:49 | 2:21 | 1:46 |      |       |       |        |       |

| STRAIGHT-IN LANDING RWY 28L      |                 |               |                                            |                 |             | CIRCLE-TO-LAND |                    |
|----------------------------------|-----------------|---------------|--------------------------------------------|-----------------|-------------|----------------|--------------------|
| ILS<br><i>DA(H)</i> 1052' (200') |                 |               | LOC (GS out)<br><i>MDA(H)</i> 1300' (448') |                 |             | Max<br>Kts     | <i>MDA(H)</i>      |
| FULL                             | RAIL or ALS out |               | RAIL out                                   | ALS out         |             |                |                    |
| A                                | 1 RVR 24 or 1/2 | RVR 40 or 3/4 | RVR 24 or 1/2                              | RVR 40 or 3/4   | RVR 50 or 1 | 90             | 1380' (519')-1     |
| B                                |                 |               |                                            |                 |             | 120            |                    |
| C                                |                 |               | RVR 40 or 3/4                              | RVR 60 or 1 1/4 |             | 140            | 1380' (519')-1 1/2 |
| D                                |                 |               | RVR 50 or 1                                | 1 1/2           |             | 165            | 1440' (579')-2     |

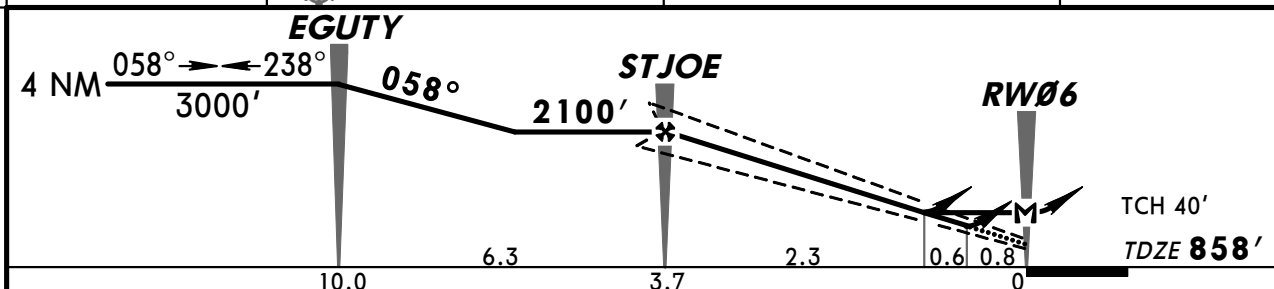
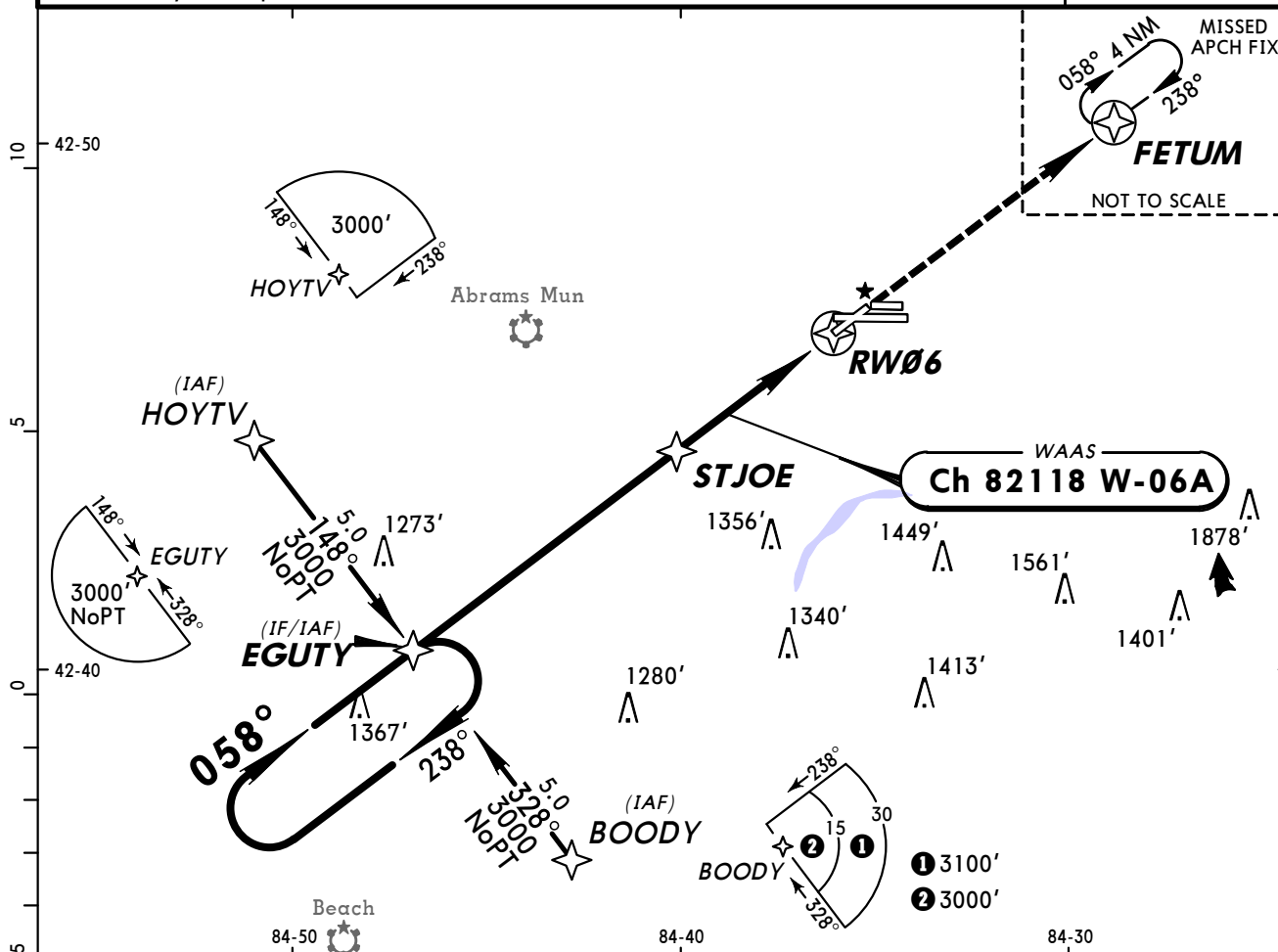
**1** RVR 18 with Flight Director or Autopilot or HUD to DA.

CHANGES: Lighting.

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|                                                                                                                                                                                                      |  |                                                   |  |                                       |  |                              |  |                            |  |                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------|--|---------------------------------------|--|------------------------------|--|----------------------------|--|---------------------|
| ATIS<br>119.75                                                                                                                                                                                       |  | LANSING Approach (R)<br>North 133.47 South 118.65 |  | LANSING Tower<br>119.9                |  | Ground<br>121.9              |  |                            |  |                     |
| WAAS<br>Ch 82118<br>W-06A                                                                                                                                                                            |  | Final<br>Apch Crs<br>058°                         |  | Minimum Alt<br>STJOE<br>2100' (1242') |  | LPV<br>DA(H)<br>1140' (282') |  | Apt Elev 861'<br>TDZE 858' |  | TAA<br>30 NM<br>IAF |
| MISSED APCH: Climb to 3000' direct FETUM and hold.                                                                                                                                                   |  |                                                   |  |                                       |  |                              |  |                            |  |                     |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                                                                                                                |  |                                                   |  |                                       |  |                              |  |                            |  |                     |
| 1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 46°C (114°F). 2. DME/DME RNP-0.30 not authorized. 3. Visibility reduction by helicopters not authorized. |  |                                                   |  |                                       |  |                              |  |                            |  |                     |



|                          |     |     |     |     |     |     |                |            |    |       |
|--------------------------|-----|-----|-----|-----|-----|-----|----------------|------------|----|-------|
| Gnd speed-Kts            | 70  | 90  | 100 | 120 | 140 | 160 | REIL<br>PAPI-L | 3000'<br>↑ | D→ | FETUM |
| Glide Path Angle [3.00°] | 372 | 478 | 531 | 637 | 743 | 849 |                |            |    |       |
| MAP at RW06              |     |     |     |     |     |     |                |            |    |       |

| STRAIGHT-IN LANDING RWY 6 |                                 |                             |       | CIRCLE-TO-LAND |                      |
|---------------------------|---------------------------------|-----------------------------|-------|----------------|----------------------|
| LPV<br>DA(H) 1140' (282') | LNAV/VNAV<br>DA(H) 1338' (480') | LNAV<br>MDA(H) 1340' (482') |       | Max<br>Kts     | MDA(H)               |
| 1                         | 1 3/4                           | 1                           | 1 1/4 | 90             | 1380' (519') - 1     |
|                           |                                 |                             |       | 120            | 1380' (519') - 1 1/2 |
|                           |                                 |                             |       | 140            | 1380' (519') - 1 1/2 |
|                           |                                 |                             |       | 165            | 1440' (579') - 2     |

TERPS AMEND 0 29 JUL 2010

**BRIEFING STRIP** <sup>TM</sup>

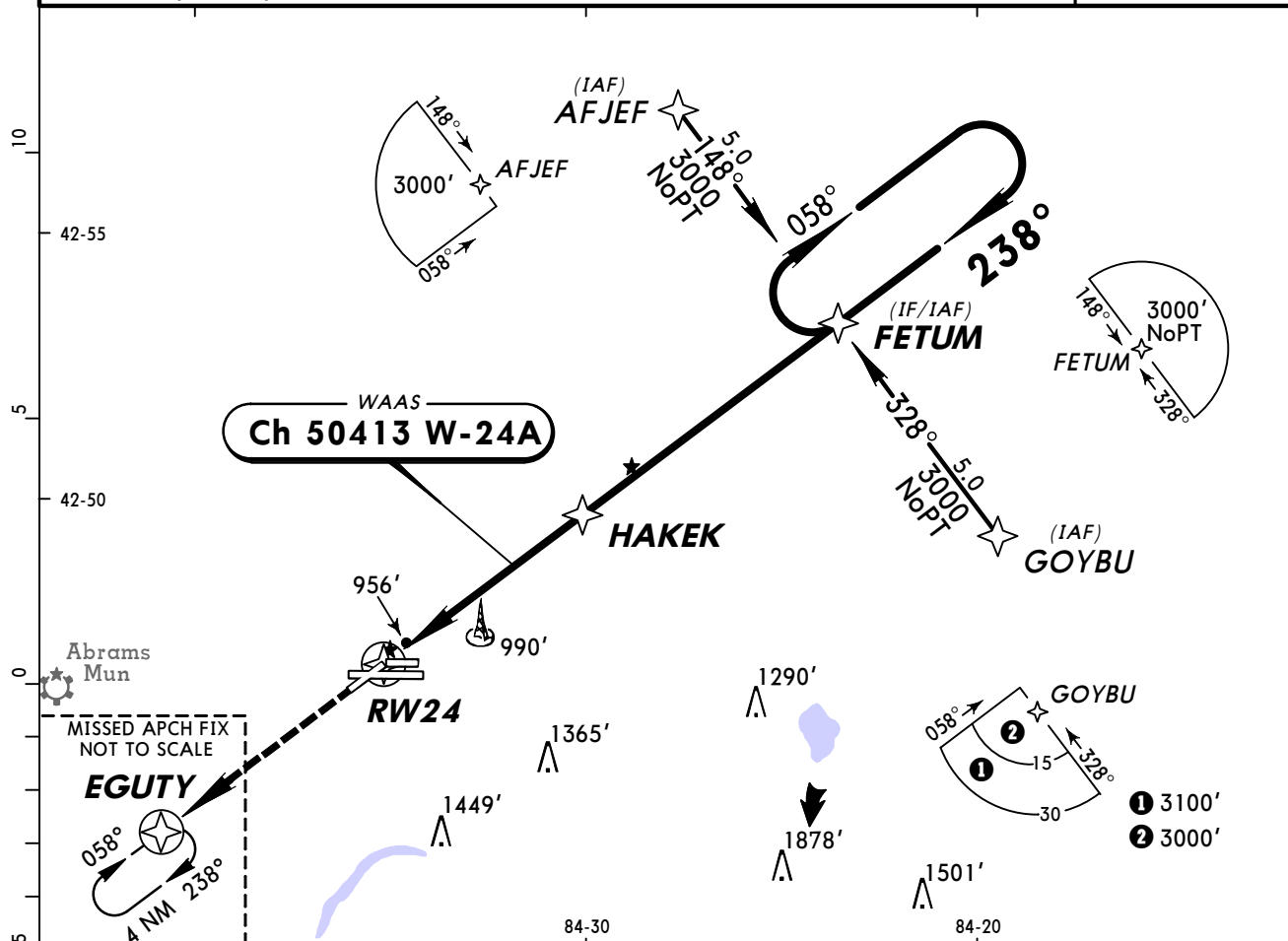


|                             |  |                    |  |                     |  |                |        |
|-----------------------------|--|--------------------|--|---------------------|--|----------------|--------|
| STRAIGHT-IN LANDING RWY 10R |  |                    |  |                     |  | CIRCLE-TO-LAND |        |
| LPV                         |  | LNAV/VNAV          |  | LNAV                |  |                |        |
| DA(H) 1061' (200')          |  | DA(H) 1290' (429') |  | MDA(H) 1320' (459') |  |                |        |
| RAIL or ALS out             |  | RAIL or ALS out    |  | RAIL out ALS out    |  | Max<br>Kts.    | MDA(H) |

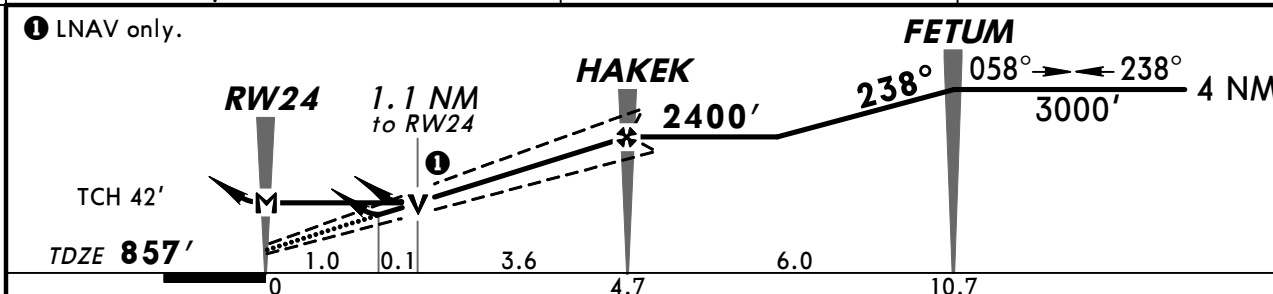
TERPS  
AMEND  
0

BRIEFING STRIP™

|                                                                                                                                                                                                                                                               |                                  |                                                     |                                     |                                          |                     |        |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------|-------------------------------------|------------------------------------------|---------------------|--------|--|
| ATIS                                                                                                                                                                                                                                                          |                                  | LANSING Approach (R)<br>North<br>South              |                                     | LANSING Tower                            |                     | Ground |  |
| 119.75                                                                                                                                                                                                                                                        |                                  | 133.47 118.65                                       |                                     | 119.9                                    |                     | 121.9  |  |
| WAAS<br><b>Ch 50413</b><br>W-24A                                                                                                                                                                                                                              | Final<br>Apch Crs<br><b>238°</b> | Minimum Alt<br><b>HAKEK</b><br><b>2400'</b> (1543') | LPV<br>DA(H)<br><b>1215'</b> (358') | Apt Elev <b>861'</b><br>TDZE <b>857'</b> | TAA<br>30 NM<br>IAF |        |  |
| MISSED APCH: Climb to 3000' direct EGUTY and hold.                                                                                                                                                                                                            |                                  |                                                     |                                     |                                          |                     |        |  |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 2. DME/DME RNP-0.30 not authorized. 3. Visibility reduction by helicopters not authorized. |                                  |                                                     |                                     |                                          |                     |        |  |



① LNAV only.



|                        |     |     |     |     |     |     |                |                   |              |              |
|------------------------|-----|-----|-----|-----|-----|-----|----------------|-------------------|--------------|--------------|
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 | REIL<br>PAPI-L | <b>3000'</b><br>↑ | → <b>D</b> → | <b>EGUTY</b> |
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |                |                   |              |              |
| MAP at RW24            |     |     |     |     |     |     |                |                   |              |              |

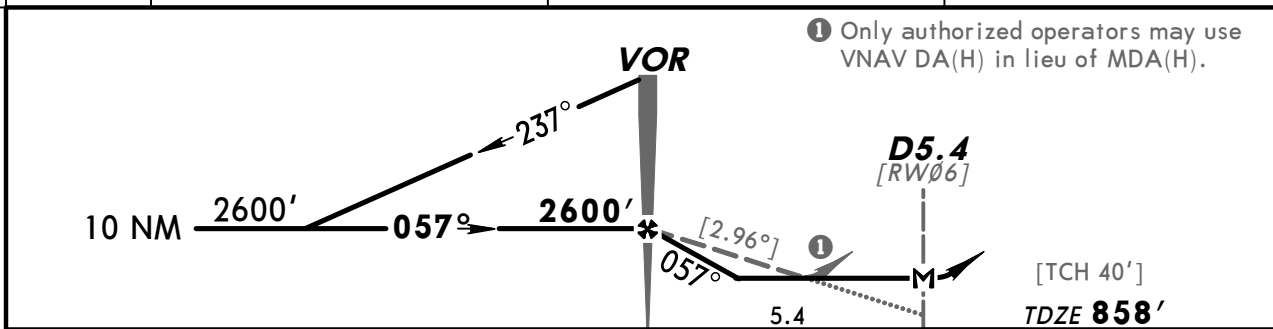
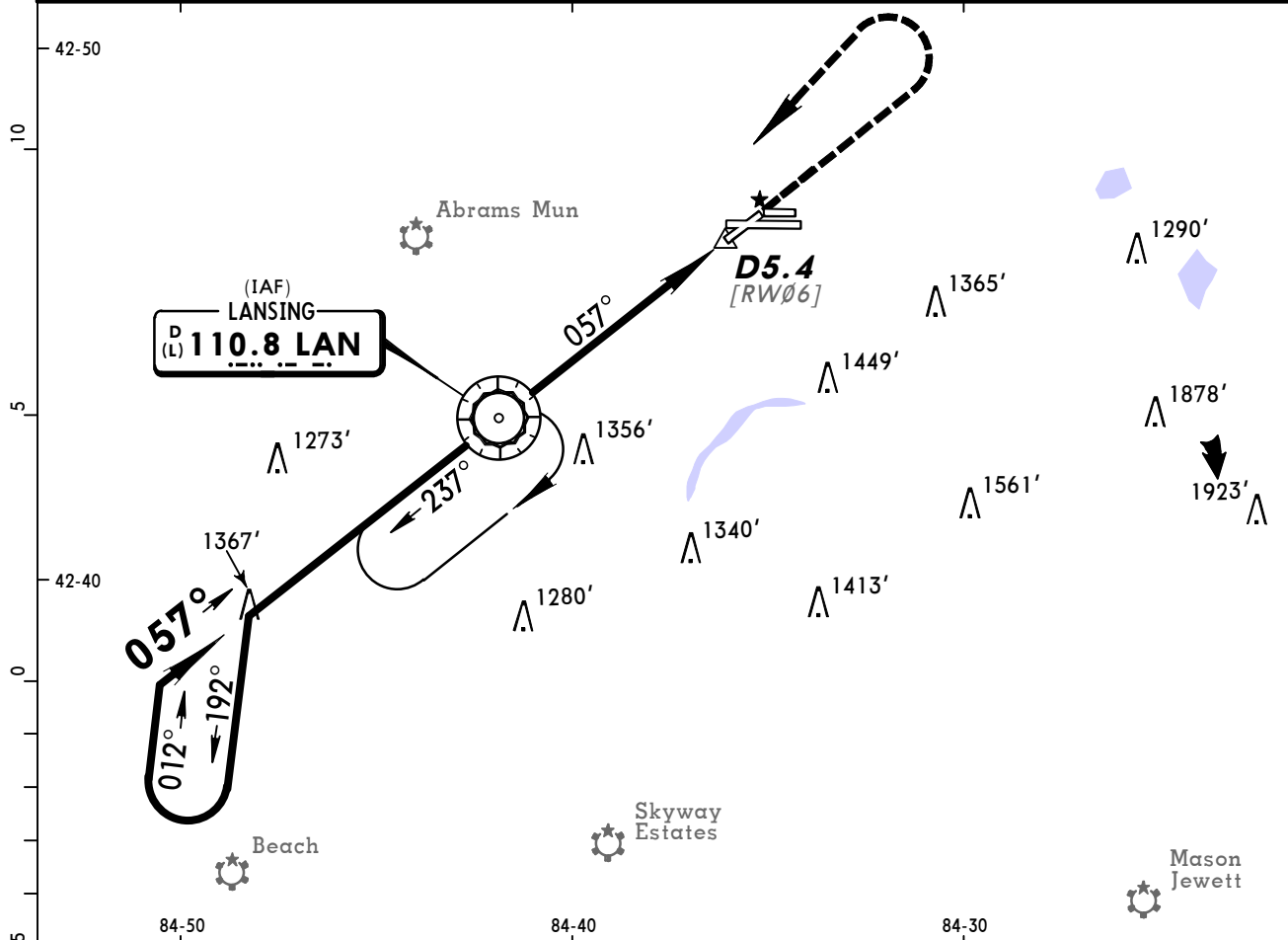
| STRAIGHT-IN LANDING RWY 24 |                           |                            | CIRCLE-TO-LAND |                           |
|----------------------------|---------------------------|----------------------------|----------------|---------------------------|
| LPV                        | LNAV/VNAV                 | LNAV                       | Max Kts        | MDA(H)                    |
| DA(H) <b>1215'</b> (358')  | DA(H) <b>1254'</b> (397') | MDA(H) <b>1240'</b> (383') | 90             | <b>1380'</b> (519')-1     |
| <b>1 1/4</b>               | <b>1 1/2</b>              | <b>1</b>                   | 120            | <b>1380'</b> (519')-1 1/2 |
|                            |                           |                            | 140            |                           |
|                            |                           | <b>1 1/4</b>               | 165            | <b>1440'</b> (579')-2     |

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BRIEFING STRIP™

|                                                                                                                                                           |                           |                                                          |                        |               |                            |                                                   |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------------------------------|------------------------|---------------|----------------------------|---------------------------------------------------|--|
| ATIS                                                                                                                                                      |                           | LANSING Approach (R)<br>North                      South |                        | LANSING Tower |                            | Ground                                            |  |
| 119.75                                                                                                                                                    |                           | 133.47      118.65                                       |                        | 119.9         |                            | 121.9                                             |  |
| VOR<br>LAN<br>110.8                                                                                                                                       | Final<br>Apch Crs<br>057° | Minimum Alt<br>VOR<br>2600' (1742')                      | MDA(H)<br>1340' (482') |               | Apt Elev 861'<br>TDZE 858' | <div><div>3000'</div><div>MSA LAN VOR</div></div> |  |
| MISSED APCH: Climb to 2500', then climbing LEFT turn to 2600' direct LAN VOR and hold.                                                                    |                           |                                                          |                        |               |                            |                                                   |  |
| Alt Set: INCHES                      Trans level: FL 180                      Trans alt: 18000'<br>1. Visibility reduction by helicopters not authorized. |                           |                                                          |                        |               |                            |                                                   |  |



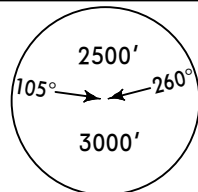
|                           |     |      |      |      |      |      |                                                                                                                                                                                                                                    |
|---------------------------|-----|------|------|------|------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Gnd speed-Kts             | 70  | 90   | 100  | 120  | 140  | 160  | REIL<br>PAPI-L<br><div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">2500'</div> <div style="margin-right: 10px;">2600'</div> <div style="margin-right: 10px;">D</div> <div>LAN 110.8</div> </div> |
| Descent angle [2.96°]     | 367 | 471  | 524  | 628  | 733  | 838  |                                                                                                                                                                                                                                    |
| MAP at D5.4 or VOR to MAP | 5.4 | 4:38 | 3:36 | 3:14 | 2:42 | 2:19 |                                                                                                                                                                                                                                    |

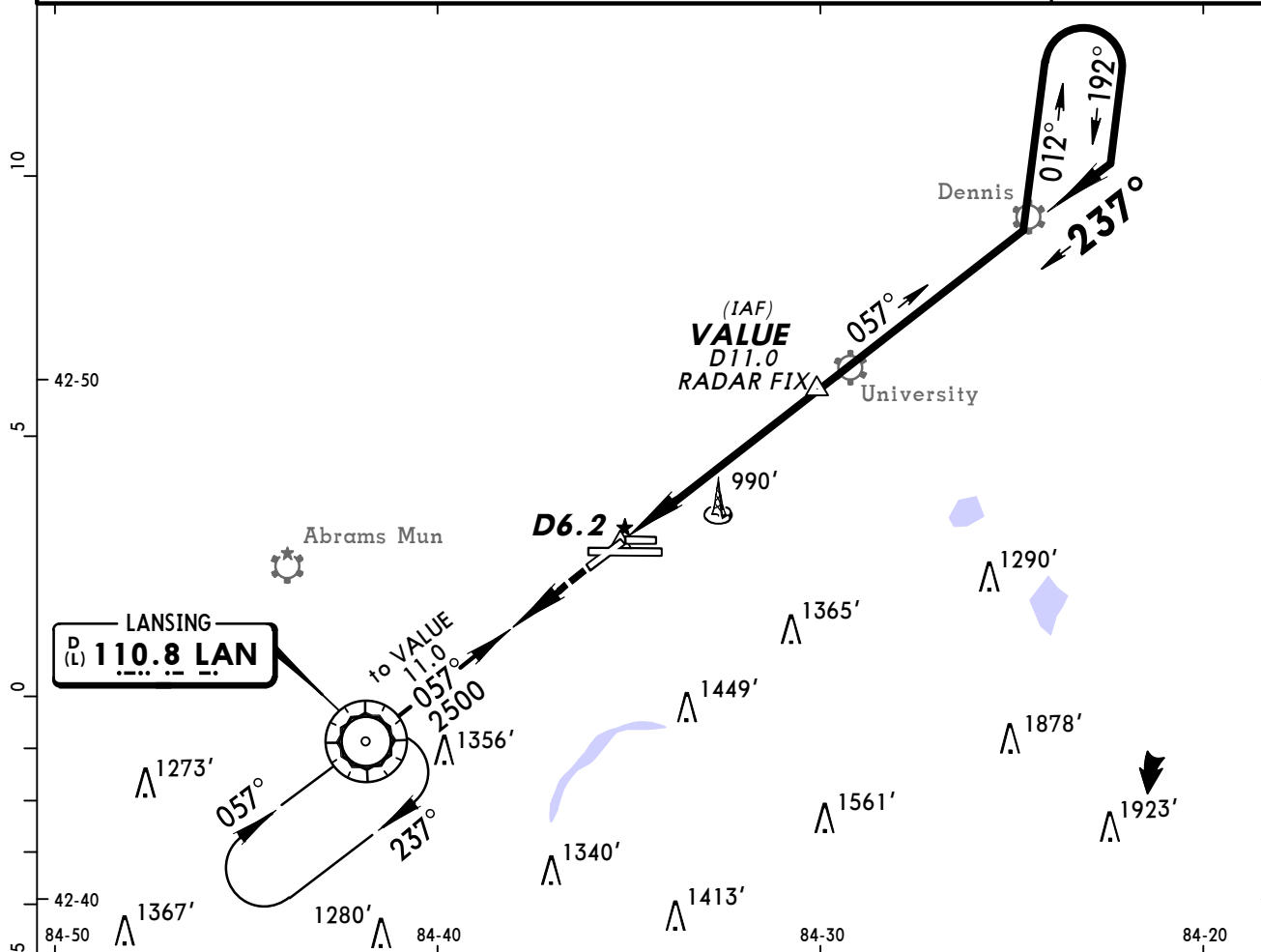
| STRAIGHT-IN LANDING RWY 6  |       |  | CIRCLE-TO-LAND |                      |  |
|----------------------------|-------|--|----------------|----------------------|--|
| MDA(H) <b>1340'</b> (482') |       |  | Max Kts        | MDA(H)               |  |
| A                          | 1     |  | 90             | 1380' (519') - 1     |  |
| B                          |       |  | 120            |                      |  |
| C                          | 1 1/4 |  | 140            | 1380' (519') - 1 1/2 |  |
| D                          | 1 1/2 |  | 165            | 1440' (579') - 2     |  |

TERPS AMEND 25 29 JUL 2010

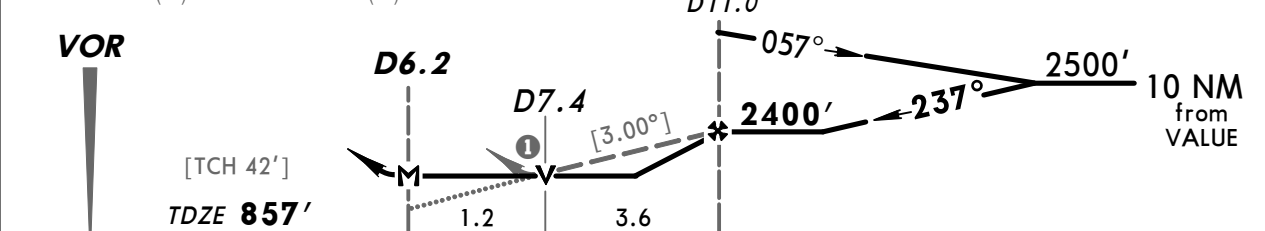


BRIEFING STRIP™

|                                                                               |                           |                                                            |                        |                            |                                                                                     |
|-------------------------------------------------------------------------------|---------------------------|------------------------------------------------------------|------------------------|----------------------------|-------------------------------------------------------------------------------------|
| ATIS<br><br>119.75                                                            |                           | LANSING Approach (R)<br>North<br>133.47<br>South<br>118.65 |                        | LANSING Tower<br><br>119.9 | Ground<br><br>121.9                                                                 |
| VOR<br>LAN<br>110.8                                                           | Final<br>Apch Crs<br>237° | Minimum Alt<br>VALUE<br>2400' (1543')                      | MDA(H)<br>1260' (403') | Apt Elev 861'<br>TDZE 857' |  |
| MISSED APCH: Climb to 2500' direct LAN VOR and hold.                          |                           |                                                            |                        |                            |                                                                                     |
| Alt Set: INCHES<br>1. DME or RADAR required.                                  |                           |                                                            |                        |                            |                                                                                     |
| Trans level: FL 180<br>2. Visibility reduction by helicopters not authorized. |                           |                                                            |                        |                            | Trans alt: 18000'                                                                   |
|                                                                               |                           |                                                            |                        |                            | MSA LAN VOR                                                                         |



① Only authorized operators may use VNAV DA(H) in lieu of MDA(H).



|                                |     |      |      |      |      |      |                |                   |              |                            |
|--------------------------------|-----|------|------|------|------|------|----------------|-------------------|--------------|----------------------------|
| Gnd speed-Kts                  | 70  | 90   | 100  | 120  | 140  | 160  | REIL<br>PAPI-L | <b>2500'</b><br>↑ | → <b>D</b> → | <b>LAN</b><br><b>110.8</b> |
| Descent angle [3.00°]          | 372 | 478  | 531  | 637  | 743  | 849  |                |                   |              |                            |
| MAP at D6.2 or<br>VALUE to MAP | 4.8 | 4:07 | 3:12 | 2:53 | 2:24 | 1:48 |                |                   |              |                            |

| STRAIGHT-IN LANDING RWY 24 |       |  |  | CIRCLE-TO-LAND |                      |  |  |
|----------------------------|-------|--|--|----------------|----------------------|--|--|
| MDA(H) <b>1260'</b> (403') |       |  |  | MDA(H)         |                      |  |  |
| A                          | 1     |  |  | Max Kts 90     | 1380' (519') - 1     |  |  |
| B                          |       |  |  | 120            |                      |  |  |
| C                          | 1 1/4 |  |  | 140            | 1380' (519') - 1 1/2 |  |  |
| D                          |       |  |  | 165            | 1440' (579') - 2     |  |  |

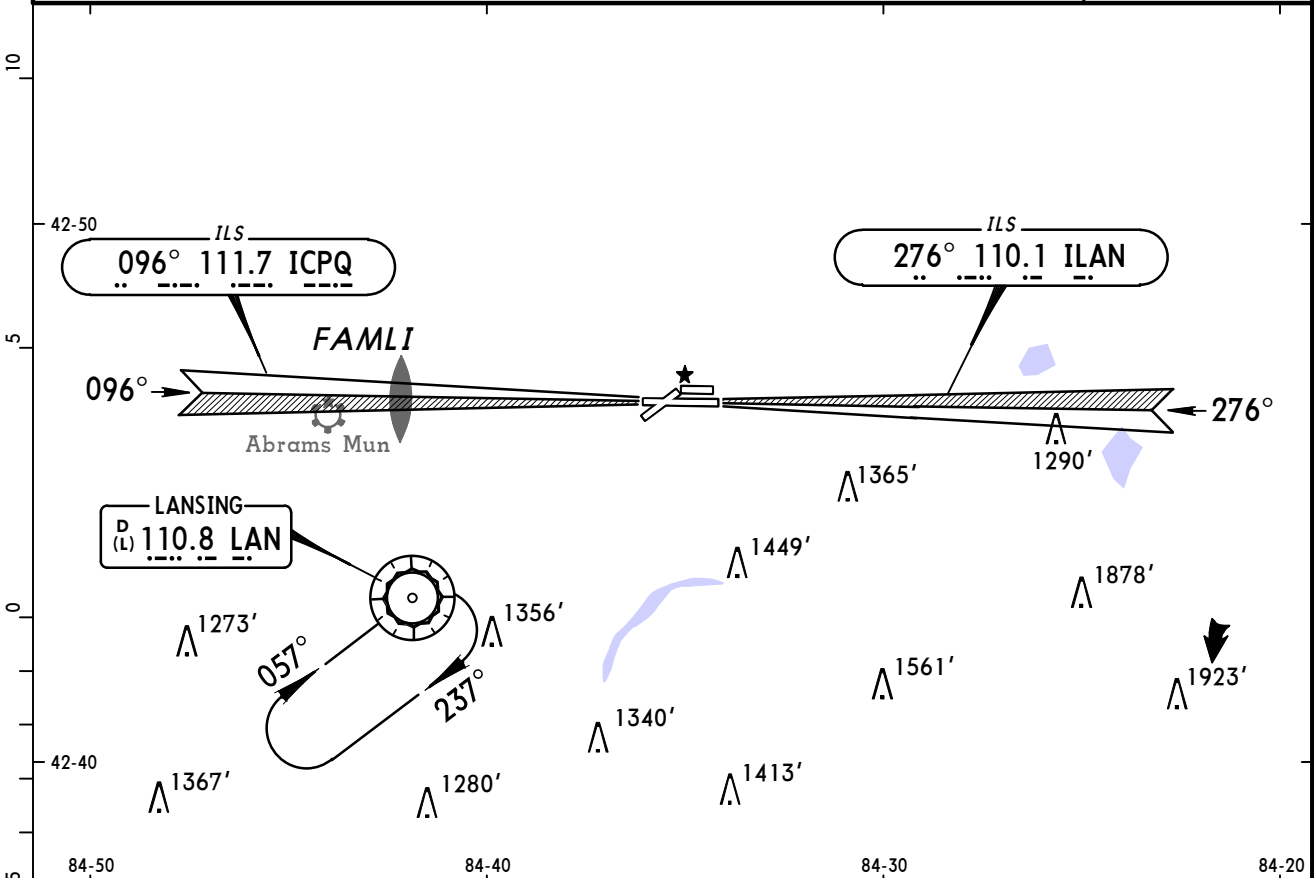
# KLAN/LAN CAPITAL CITY

21 AUG 09  
Eff 27 Aug (18-1)

LANSGING, MICH  
RADAR-1  
ASR RwyS 6, 10R, 24, 28L

BRIEFING STRIP

|                                                                             |  |                             |       |                       |  |                                |  |               |  |                |                     |                                     |                   |  |  |
|-----------------------------------------------------------------------------|--|-----------------------------|-------|-----------------------|--|--------------------------------|--|---------------|--|----------------|---------------------|-------------------------------------|-------------------|--|--|
| ATIS                                                                        |  | LANSGING Approach (R)       |       | LANSGING Tower        |  | Ground                         |  |               |  |                |                     |                                     |                   |  |  |
| 119.75                                                                      |  | North                       | South | 119.9                 |  | 121.9                          |  |               |  |                |                     |                                     |                   |  |  |
| 133.47                                                                      |  | 118.65                      |       |                       |  |                                |  |               |  |                |                     |                                     |                   |  |  |
| RADAR                                                                       |  | Final<br>Apch Crs<br>By ATC |       | Minimum Alt<br>No FAF |  | MDA(H)<br>Refer to<br>Minimums |  | Apt Elev 861' |  | TDZE-See below |                     | <div>No<br/>MSA<br/>published</div> |                   |  |  |
| Missed Approach- See below                                                  |  |                             |       |                       |  |                                |  |               |  |                |                     |                                     |                   |  |  |
| Alt Set: INCHES                                                             |  |                             |       |                       |  |                                |  |               |  |                | Trans level: FL 180 |                                     | Trans alt: 18000' |  |  |
| 1. Visibility reduction by helicopters not authorized for Rwy 6 and Rwy 24. |  |                             |       |                       |  |                                |  |               |  |                |                     |                                     |                   |  |  |



## MISSED APPROACH:

- Runway 6: Climb to 2500' then LEFT turn direct LAN VOR and hold.
- Runway 10R: Climb to 3000' then RIGHT turn direct LAN VOR and hold.
- Runway 24: Climb to 2500' direct LAN VOR and hold.
- Runway 28L: Climb to 2500' then LEFT turn direct LAN VOR and hold.

|                    |                      |                     |                      |
|--------------------|----------------------|---------------------|----------------------|
| RWY 6<br>TDZE 858' | RWY 10R<br>TDZE 861' | RWY 24<br>TDZE 857' | RWY 28L<br>TDZE 851' |
|--------------------|----------------------|---------------------|----------------------|

ASR RwyS 6, 10R, 24, 28L: MAP at Rwy Thr

Lighting -  
Refer to  
Airport  
Chart

| STRAIGHT-IN LANDING |       |                    |                  |                |                    |                  |                    |                |         | CIRCLE-TO-LAND    |        |
|---------------------|-------|--------------------|------------------|----------------|--------------------|------------------|--------------------|----------------|---------|-------------------|--------|
| ASR 6               |       | ASR 10R            |                  |                | ASR 24             |                  | ASR 28L            |                |         | Max<br>Kts        | MDA(H) |
| MDA(H) 1320'(462')  |       | MDA(H) 1260'(399') |                  |                | MDA(H) 1260'(403') |                  | MDA(H) 1320'(469') |                |         |                   |        |
|                     |       | RAIL out           |                  | ALS out        |                    |                  | RAIL out           |                | ALS out |                   |        |
| A                   | 1     | RVR 24<br>or 1/2   | RVR 40<br>or 3/4 | RVR 50<br>or 1 | 1                  | RVR 24<br>or 1/2 | RVR 40<br>or 3/4   | RVR 50<br>or 1 | 90      | 1380'(519')-1     |        |
| B                   |       |                    |                  |                |                    |                  |                    |                | 120     |                   |        |
| C                   |       |                    |                  |                |                    |                  |                    |                | 140     |                   |        |
| D                   | 1 1/2 | RVR 50<br>or 1     | RVR 60 or 1 1/4  |                | 1 1/4              | RVR 40<br>or 3/4 | RVR 60 or 1 1/4    |                | 140     | 1380'(519')-1 1/2 |        |
|                     |       |                    |                  |                |                    | RVR 50<br>or 1   | 1 1/2              |                | 165     | 1440'(579')-2     |        |

## General Information

Location: Saginaw MI USA  
IATA Code: MBS  
Lat/Long: N43° 32.0' W084° 04.8'  
Elevation: 668 ft

Airport Use: Public  
Magnetic Variation: 6.9°W  
Sectional Chart: Detroit

Fuel Types: 100 Octane (LL), Jet A  
Oxygen Types: HP Bottle  
Repair Types: Minor Airframe, Minor Engine  
Customs: Upon Prior Request  
Airport Type: IFR  
Landing Fee: Yes  
Control Tower: Yes  
Jet Start Unit: Yes  
LLWS Alert: No  
Beacon: Yes

Sunrise: 1217 Z  
Sunset: 2322 Z,

## Runway Information

Runway: 05  
Length x Width: 8002 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 666 ft  
Lighting: Edge, ALS

Runway: 14  
Length x Width: 6399 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 668 ft  
Lighting: Edge, REIL

Runway: 23  
Length x Width: 8002 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 661 ft  
Lighting: Edge, ALS

Runway: 32  
Length x Width: 6399 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 665 ft  
Lighting: Edge, REIL

## Communication Information

ATIS 125.925

Saginaw Tower 120.1 CTAF

Saginaw Ground Control 121.7

Saginaw Clearance Delivery 121.85

Saginaw Approach Control 126.45 (230°-49°) Out to 20 mi.

Saginaw Approach Control 120.95 (50°-229°) Out to 20 mi.

Saginaw TRSA 126.45 (230°-49°) Out to 20 mi.

Saginaw TRSA 120.95 (50°-229°) Out to 20 mi.

Saginaw Departure Control 126.45 (230°-49°) Out to 20 mi.

Saginaw Departure Control 120.95 (50°-229°) Out to 20 mi.

Mbs Intl Unicom 122.95

Saginaw Radar 118.45

Lansing Flight Service Station 122.4 RCO

Lansing Flight Service Station 122.2 RCO

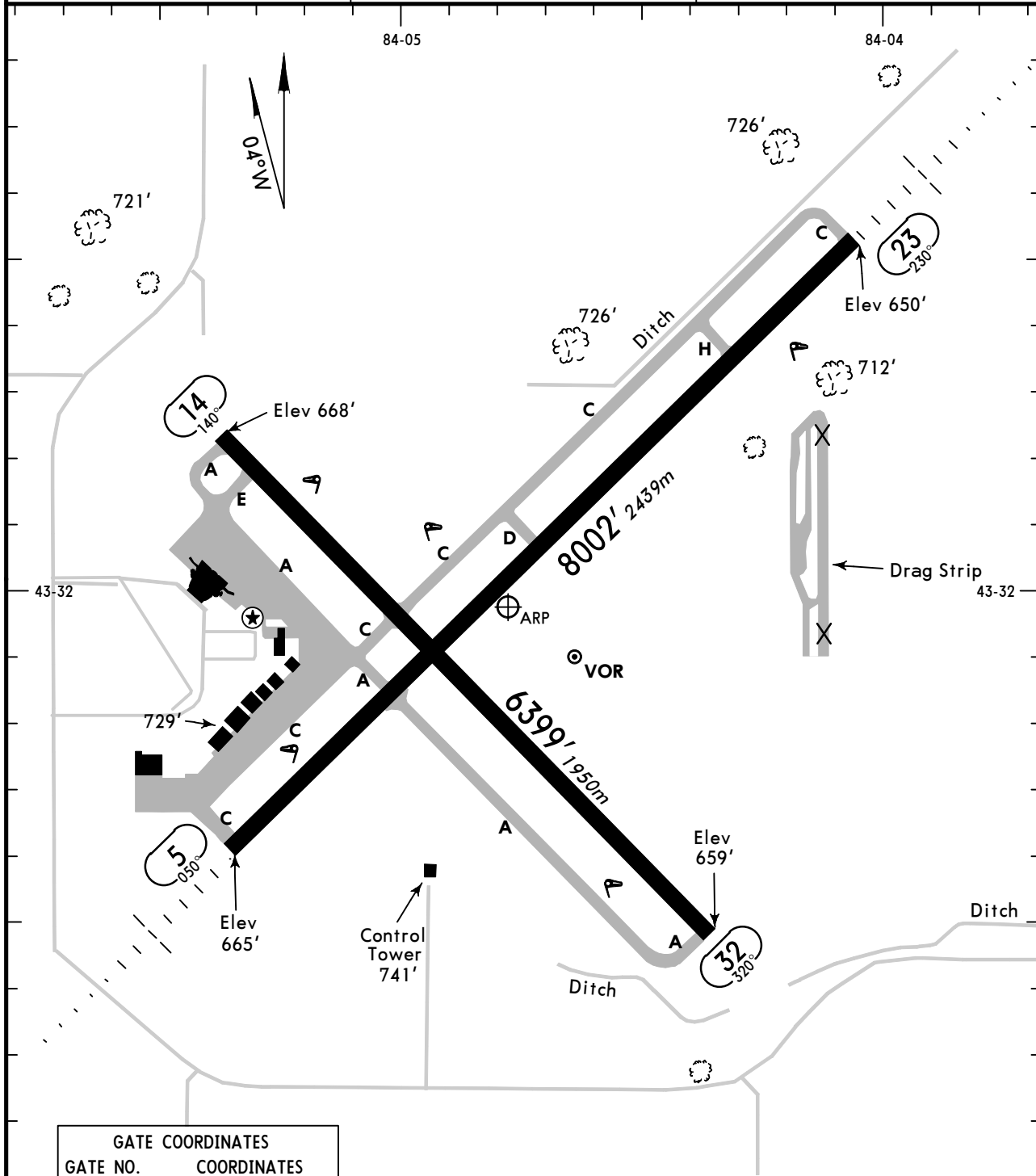
Cleveland Center 127.7 Secondary Remote Communications Air-Ground

**KMBS/MBS**  
Apt Elev **668'**  
N43 32.0 W084 04.8

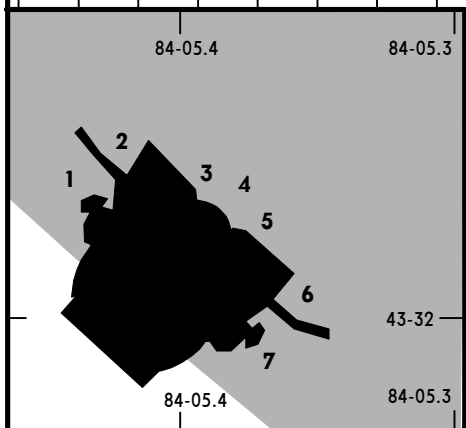
**JEPPESSEN**  
26 NOV 10 **(10-9)**

**SAGINAW, MICH**  
**MBS INTL**

| ATIS          | *SAGINAW Clearance                                             | *Ground | *Tower                                   |
|---------------|----------------------------------------------------------------|---------|------------------------------------------|
| 125.92        | 121.85                                                         | 121.7   | CTAF 120.1                               |
| UNICOM 122.95 | *SAGINAW Departure (R)<br>230°-049° 050°-229°<br>126.45 120.95 |         | CLEVELAND Center<br>127.7 when Dep inop. |



| GATE COORDINATES |                    |
|------------------|--------------------|
| GATE NO.         | COORDINATES        |
| 1 thru 7         | N43 32.0 W084 05.4 |



**GENERAL:**

Birds and deer in the vicinity of airport.

**ADDITIONAL RUNWAY INFORMATION**

| ADDITIONAL RUNWAY INFORMATION |        |         |          |         |     | USABLE LENGTHS |             | TAKE-OFF    | WIDTH |
|-------------------------------|--------|---------|----------|---------|-----|----------------|-------------|-------------|-------|
| RWY                           |        |         |          |         |     | LANDING BEYOND |             |             |       |
|                               |        |         |          |         |     | Threshold      | Glide Slope |             |       |
| 5                             | ① HIRL | ② MALSR | grooved  | RVR     |     | 6752' 2058m    |             | 150'<br>46m |       |
| 23                            | ① HIRL | ② MALSR | ③ PAPI-L | grooved | RVR | 7023' 2141m    |             |             |       |

① Preset medium intensity when Twr inop.

② Activate on 120.1 when Twr inop.

③ Angle 3.0°.

|    |        |      |          |         |  |  |  |      |
|----|--------|------|----------|---------|--|--|--|------|
| 14 | ④ HIRL | REIL | VASI-L   | grooved |  |  |  | 150' |
| 32 | ④ HIRL | REIL | ⑤ PAPI-L | grooved |  |  |  | 46m  |

④ Preset medium intensity when Twr inop.

⑤ Angle 3.0°.

**TAKE-OFF & OBSTACLE DEPARTURE PROCEDURE**

| All Rwys  |                  |               |
|-----------|------------------|---------------|
|           | Adequate Vis Ref | STD           |
| 1 & 2 Eng | RVR 16 or 1/4    | RVR 50 or 1   |
| 3 & 4 Eng |                  | RVR 24 or 1/2 |

**OBSTACLE DP:**

Rwys 5 &amp; 23, climb runway heading to 1100' before turning.

**FOR FILING AS ALTERNATE**

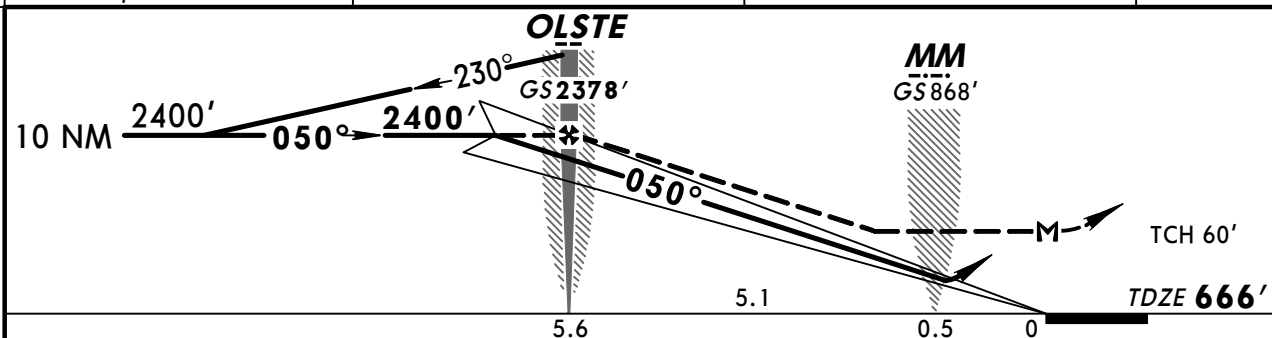
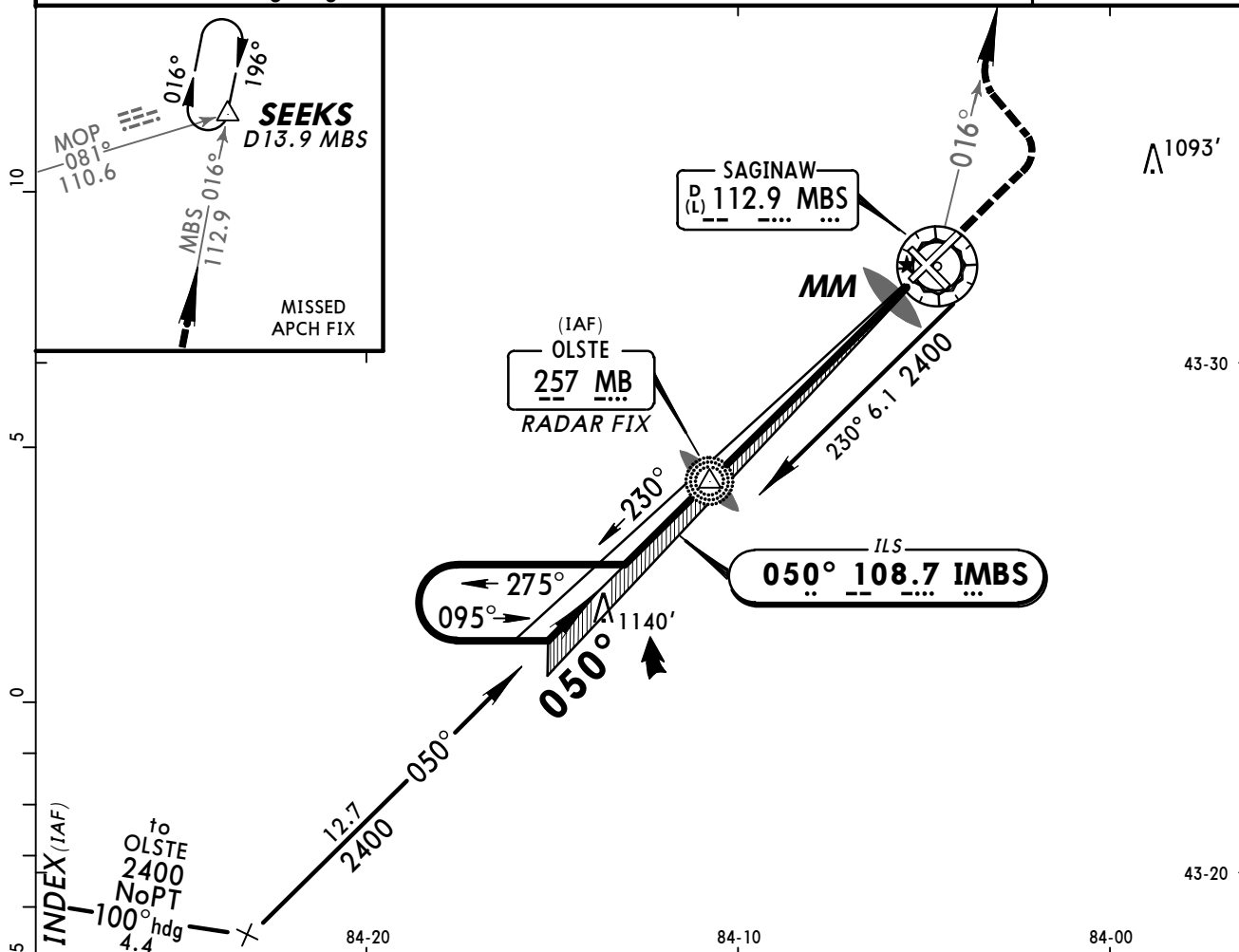
|   | Authorized Only<br>When Twr Operating |                           | Authorized When Twr<br>Inop for DME Equipped<br>Aircraft Only | Authorized Only<br>When Local<br>Weather Available          | VOR Rwy 23 | Other |
|---|---------------------------------------|---------------------------|---------------------------------------------------------------|-------------------------------------------------------------|------------|-------|
|   | ILS Rwy 5<br>① ILS Rwy 23             | LOC Rwy 5<br>① LOC Rwy 23 | VOR Rwy 5<br>VOR Rwy 14<br>VOR Rwy 32                         | RNAV (GPS) Rwy 14<br>RNAV (GPS) Rwy 23<br>RNAV (GPS) Rwy 32 |            |       |
| A | 600-2                                 | 800-2                     | 800-2                                                         | 800-2                                                       | 800-2      | NA    |
| B |                                       |                           |                                                               |                                                             |            |       |
| C |                                       |                           |                                                               |                                                             |            |       |
| D |                                       |                           |                                                               |                                                             |            |       |

① DME or Radar required.

A  
M  
E  
N  
D  
0

BRIEFING STRIP

|                                                                                                        |                                              |                              |                                          |                              |                                        |
|--------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------------------|------------------------------------------|------------------------------|----------------------------------------|
| ATIS<br>125.92                                                                                         | *SAGINAW Approach (R)<br>230°-049°<br>126.45 | 050°-229°<br>120.95          | CLEVELAND Center<br>127.7 when App inop. | *SAGINAW Tower<br>CTAF 120.1 | *Ground<br>121.7                       |
| LOC<br>IMBS<br>108.7                                                                                   | Final<br>Apch Crs<br>050°                    | GS<br>OLSTE<br>2378' (1712') | ILS<br>DA(H)<br>866' (200')              | Apt Elev 668'<br>TDZE 666'   | <div>3100'</div> <div>MSA MB LOM</div> |
| MISSED APCH: Climb to 2400' then LEFT turn outbound via MBS VOR R-016 to SEEKS INT/D13.9 MBS and hold. |                                              |                              |                                          |                              |                                        |
| Alt Set: INCHES<br>1. Pilot controlled lighting 120.1.                                                 |                                              |                              |                                          |                              |                                        |
| Trans level: FL 180                                                                                    |                                              |                              | Trans alt: 18000'                        |                              |                                        |



|               |       |      |      |      |      |      |       |       |    |       |       |
|---------------|-------|------|------|------|------|------|-------|-------|----|-------|-------|
| Gnd speed-Kts | 70    | 90   | 100  | 120  | 140  | 160  | MALSR | 2400' | LT | MBS   | SEEKS |
| GS            | 2.75° | 346  | 444  | 494  | 593  | 691  | 790   |       |    | 112.9 | R-016 |
| OLSTE to MAP  | 5.6   | 4:48 | 3:44 | 3:22 | 2:48 | 2:24 | 2:06  |       |    |       |       |

| STRAIGHT-IN LANDING RWY 5       |                               |                      |                                            |                           |                        | CIRCLE-TO-LAND |                       |
|---------------------------------|-------------------------------|----------------------|--------------------------------------------|---------------------------|------------------------|----------------|-----------------------|
| ILS<br>DA(H) <b>866'</b> (200') |                               |                      | LOC (GS out)<br>MDA(H) <b>1060'</b> (394') |                           |                        | Max<br>Kts.    | MDA(H)                |
| FULL                            | RAIL or ALS out               |                      | RAIL out                                   | ALS out                   |                        |                |                       |
| A                               | <b>I</b> RVR <b>24</b> or 1/2 | RVR <b>40</b> or 3/4 | RVR <b>24</b> or 1/2                       | RVR <b>40</b> or 3/4      | RVR <b>50</b> or 1     | 90             | <b>1100'</b> (432')-1 |
| B                               |                               |                      |                                            |                           |                        | 120            | <b>1120'</b> (452')-1 |
| C                               |                               |                      | 140                                        | <b>1120'</b> (452')-1 1/2 |                        |                |                       |
| D                               |                               |                      |                                            | RVR <b>40</b> or 3/4      | RVR <b>60</b> or 1 1/4 |                | 165                   |

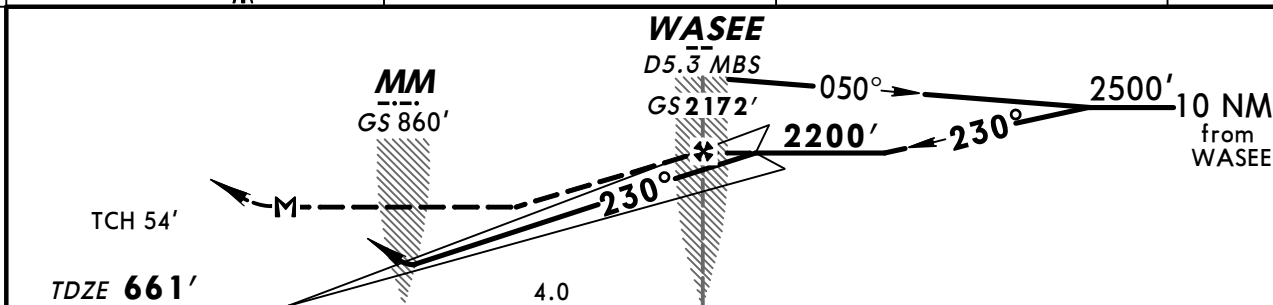
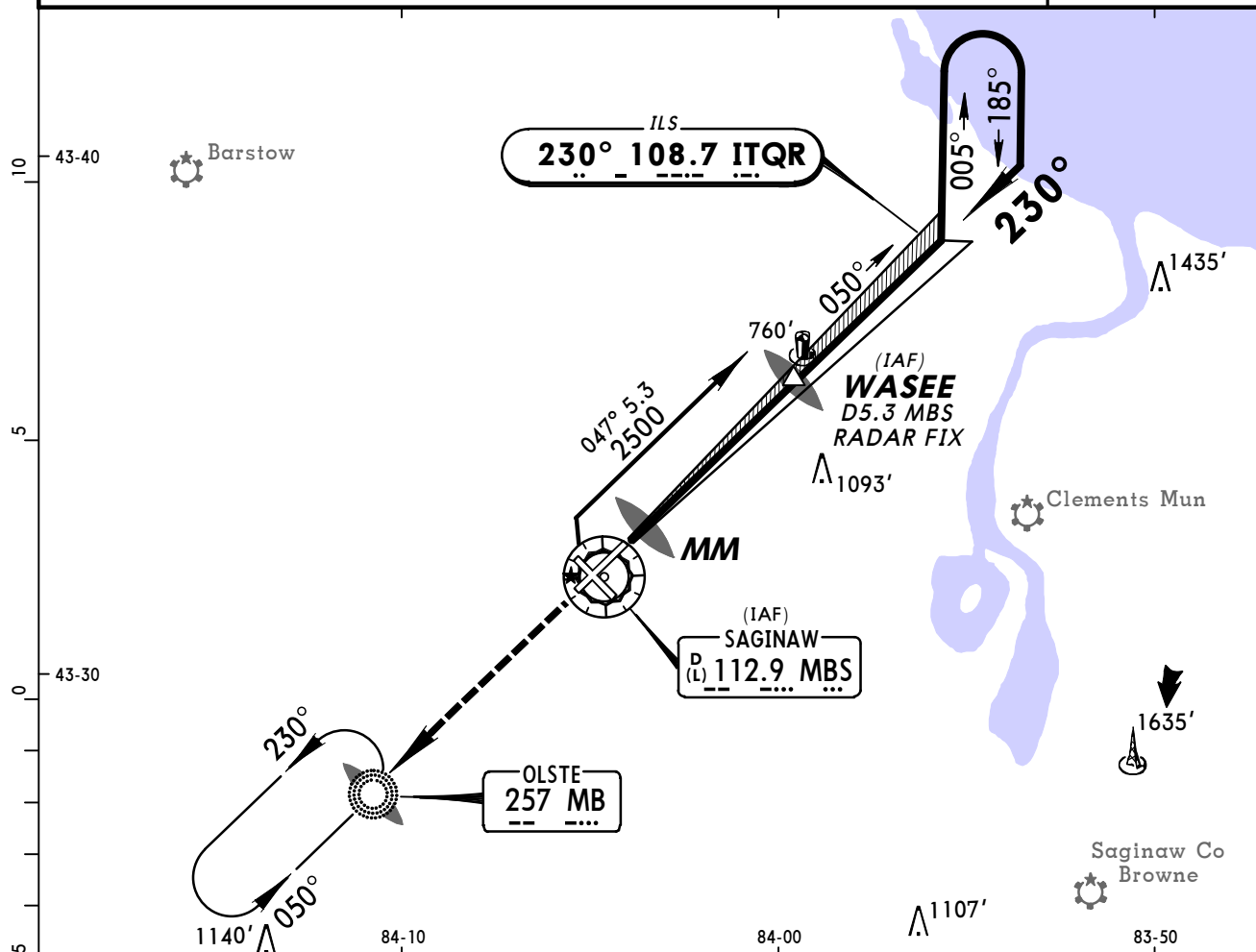
1 RVR 18 with Flight Director or Autopilot or HUD to DA.

CHANGES: None.

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|                                                                                |                                                     |                                     |                                    |                                                 |                                         |                         |
|--------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------|------------------------------------|-------------------------------------------------|-----------------------------------------|-------------------------|
| ATIS<br><b>125.92</b>                                                          | *SAGINAW Approach (R)<br>230°-049°<br><b>126.45</b> |                                     | 050°-229°<br><b>120.95</b>         | CLEVELAND Center<br><b>127.7</b> when App inop. | *SAGINAW Tower<br>CTAF <b>120.1</b>     | *Ground<br><b>121.7</b> |
| LOC<br>ITQR<br><b>108.7</b>                                                    | Final<br>Apch Crs<br><b>230°</b>                    | GS<br>WASEE<br><b>2172'</b> (1511') | ILS<br>DA(H)<br><b>861'</b> (200') | Apt Elev <b>668'</b><br>TDZE <b>661'</b>        | <div>3100'</div> <div>MSA MBS VOR</div> |                         |
| MISSED APCH: Climb to 2500' direct MB LOM and hold.                            |                                                     |                                     |                                    |                                                 |                                         |                         |
| Alt Set: INCHES                                                                |                                                     | Trans level: FL 180                 |                                    | Trans alt: 18000'                               |                                         |                         |
| 1. DME or RADAR required. 2. ADF required. 3. Pilot controlled lighting 120.1. |                                                     |                                     |                                    |                                                 |                                         |                         |



|               |       |      |      |      |      |      |      |  |  |  |
|---------------|-------|------|------|------|------|------|------|--|--|--|
| Gnd speed-Kts | 70    | 90   | 100  | 120  | 140  | 160  |      |  |  |  |
| GS            | 3.00° | 377  | 484  | 538  | 646  | 753  | 861  |  |  |  |
| WASEE to MAP  | 4.5   | 3:51 | 3:00 | 2:42 | 2:15 | 1:56 | 1:41 |  |  |  |

| ILS STRAIGHT-IN LANDING RWY 23 |  |                 |  | LOC (GS out)               |  |         |  | CIRCLE-TO-LAND |                      |
|--------------------------------|--|-----------------|--|----------------------------|--|---------|--|----------------|----------------------|
| DA(H) <b>861' (200')</b>       |  |                 |  | MDA(H) <b>1060' (399')</b> |  |         |  | Max Kts        | MDA(H)               |
| FULL                           |  | RAIL or ALS out |  | RAIL out                   |  | ALS out |  |                |                      |
| A                              |  |                 |  |                            |  |         |  | 90             | 1100' (432') - 1     |
| B                              |  |                 |  |                            |  |         |  | 120            | 1120' (452') - 1     |
| C                              |  |                 |  |                            |  |         |  | 140            | 1120' (452') - 1 1/2 |
| D                              |  |                 |  |                            |  |         |  | 165            | 1220' (552') - 2     |

1 RVR 18 with Flight Director or Autopilot or HUD to DA.

CHANGES: Procedure title, notes, minimums.

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TERPS AMEND 4B 8 APR 2010



BRIEFING STRIP™

|                                  |                                                                      |                                                     |                                                     |                                          |
|----------------------------------|----------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|------------------------------------------|
| ATIS<br><b>125.92</b>            | *SAGINAW Approach (R)<br>230°-049° 050°-229°<br><b>126.45 120.95</b> | CLEVELAND Center<br><b>127.7</b> when App inop.     | *SAGINAW Tower<br>CTAF <b>120.1</b>                 | *Ground<br><b>121.7</b>                  |
| WAAS<br><b>Ch 82010</b><br>W-05A | Final<br>Apch Crs<br><b>050°</b>                                     | Minimum Alt<br><b>OTILE</b><br><b>2300'</b> (1634') | LPV<br>DA(H)<br>(CONDITIONAL)<br><b>866'</b> (200') | Apt Elev <b>668'</b><br>TDZE <b>666'</b> |
|                                  |                                                                      |                                                     |                                                     | TAA<br>30 NM<br>IAF                      |

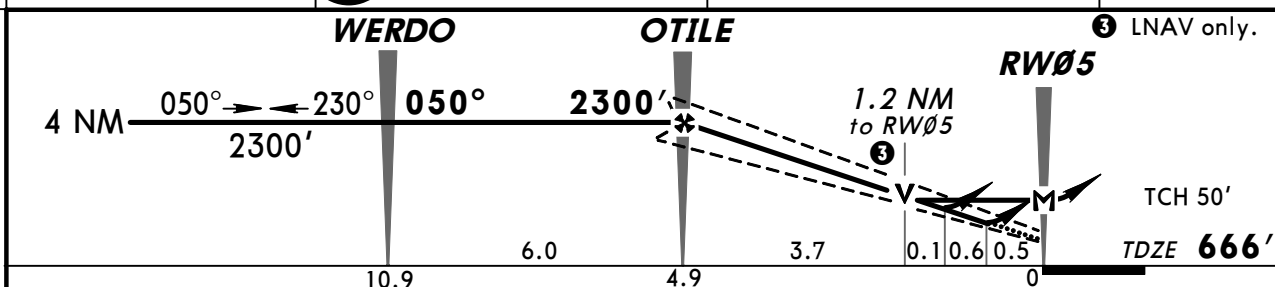
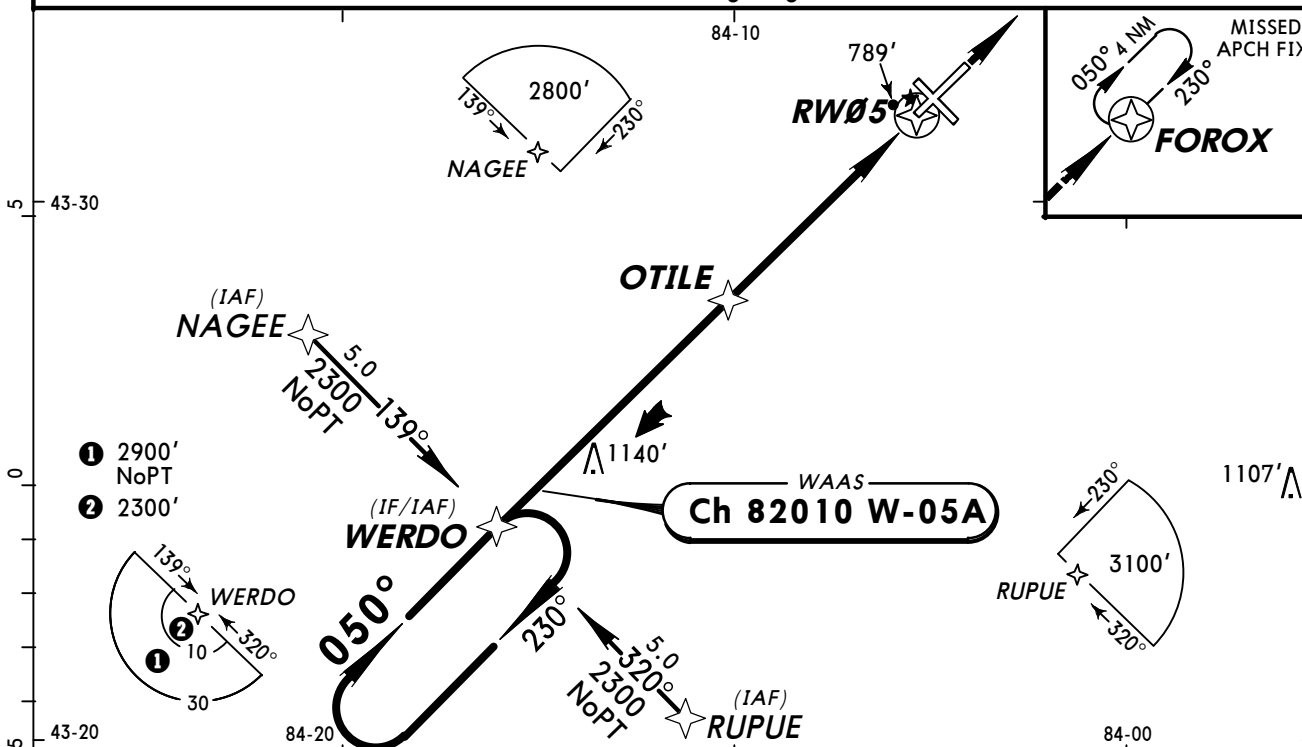
**MISSED APCH: Climb to 2500' direct FOROX and hold.**

Alt Set: INCHES

Trans level: FL 180

Trans alt: 18000'

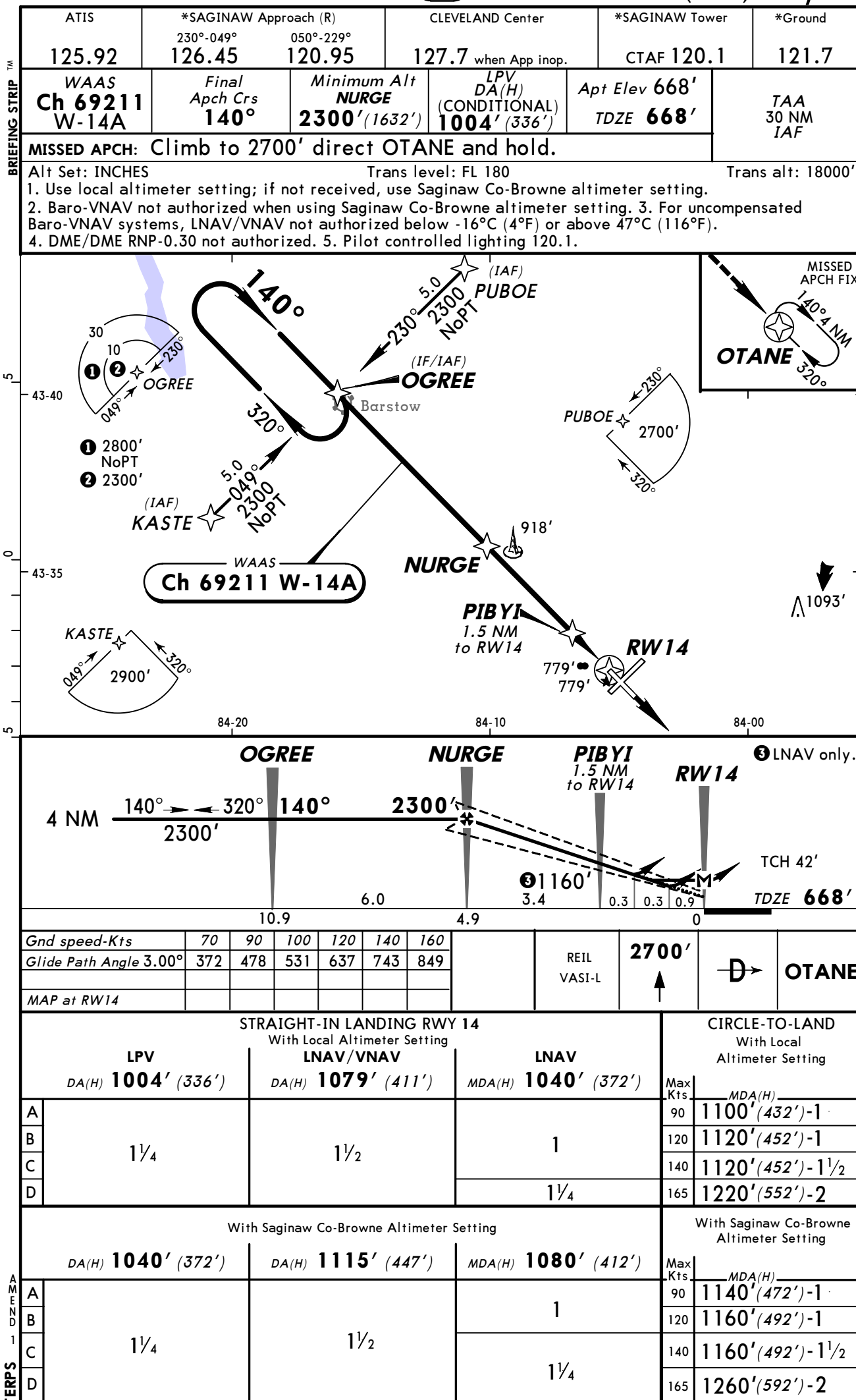
1. Use local altimeter setting; if not received, use Saginaw Co-Browne altimeter setting. 2. Baro-VNAV and VDP not authorized when using Saginaw Co-Browne altimeter setting. 3. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 4. DME/DME RNP-0.30 not authorized. 5. Pilot controlled lighting 120.1.



|                        |     |     |     |     |     |     |       |       |       |
|------------------------|-----|-----|-----|-----|-----|-----|-------|-------|-------|
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 | MALSR | 2500' | FOROX |
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |       |       |       |
| MAP at RW05            |     |     |     |     |     |     |       |       |       |

| STRAIGHT-IN LANDING RWY 5<br>With Local Altimeter Setting |               |                                        |               |                                    |               | CIRCLE-TO-LAND<br>With Local<br>Altimeter Setting |                    |
|-----------------------------------------------------------|---------------|----------------------------------------|---------------|------------------------------------|---------------|---------------------------------------------------|--------------------|
| LPV<br>DA(H) <b>866'</b> (200')                           |               | LNAV/VNAV<br>DA(H) <b>1059'</b> (393') |               | LNAV<br>MDA(H) <b>1080'</b> (414') |               | Max Kts                                           | MDA(H)             |
| RAIL or ALS out                                           |               | RAIL out                               | ALS out       | RAIL out                           | ALS out       |                                                   |                    |
| A                                                         |               |                                        |               | RVR 24 or 1/2                      | RVR 40 or 3/4 | 90                                                | 1100' (432')-1     |
| B                                                         |               |                                        |               | RVR 40 or 3/4                      | RVR 60 or 1/4 | 120                                               | 1120' (452')-1     |
| C                                                         | RVR 24 or 1/2 | RVR 40 or 3/4                          | RVR 40 or 3/4 | RVR 40 or 3/4                      | RVR 60 or 1/4 | 140                                               | 1120' (452')-1 1/2 |
| D                                                         |               |                                        |               | RVR 50 or 1                        | RVR 60 or 1/4 | 165                                               | 1220' (552')-2     |

| With Saginaw Co-Browne Altimeter Setting |               |                           |             |                            |               | With Saginaw Co-Browne<br>Altimeter Setting |                    |
|------------------------------------------|---------------|---------------------------|-------------|----------------------------|---------------|---------------------------------------------|--------------------|
| DA(H) <b>902'</b> (236')                 |               | DA(H) <b>1095'</b> (429') |             | MDA(H) <b>1120'</b> (454') |               | Max Kts                                     | MDA(H)             |
| RAIL or ALS out                          |               | RAIL out                  | ALS out     | RAIL out                   | ALS out       |                                             |                    |
| A                                        |               |                           |             | RVR 24 or 1/2              | RVR 40 or 3/4 | 90                                          | 1140' (472')-1     |
| B                                        |               |                           |             | RVR 40 or 3/4              | RVR 60 or 1/4 | 120                                         | 1160' (492')-1     |
| C                                        | RVR 24 or 1/2 | RVR 40 or 3/4             | RVR 50 or 1 | RVR 50 or 1                | RVR 60 or 1/4 | 140                                         | 1160' (492')-1 1/2 |
| D                                        |               |                           |             | RVR 50 or 1                | 1 1/2         | 165                                         | 1260' (592')-2     |



|                                  |                                                                      |                                                     |                                                     |                                          |                         |
|----------------------------------|----------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|------------------------------------------|-------------------------|
| ATIS<br><b>125.92</b>            | *SAGINAW Approach (R)<br>230°-049° 050°-229°<br><b>126.45 120.95</b> |                                                     | CLEVELAND Center<br><b>127.7</b> when App inop.     | *SAGINAW Tower<br><b>CTAF 120.1</b>      | *Ground<br><b>121.7</b> |
| WAAS<br><b>Ch 49010</b><br>W-23A | Final<br>Apch Crs<br><b>230°</b>                                     | Minimum Alt<br><b>JURBO</b><br><b>2300'</b> (1639') | LPV<br>DA(H)<br>(CONDITIONAL)<br><b>861'</b> (200') | Apt Elev <b>668'</b><br>TDZE <b>661'</b> | TAA<br>30 NM<br>IAF     |

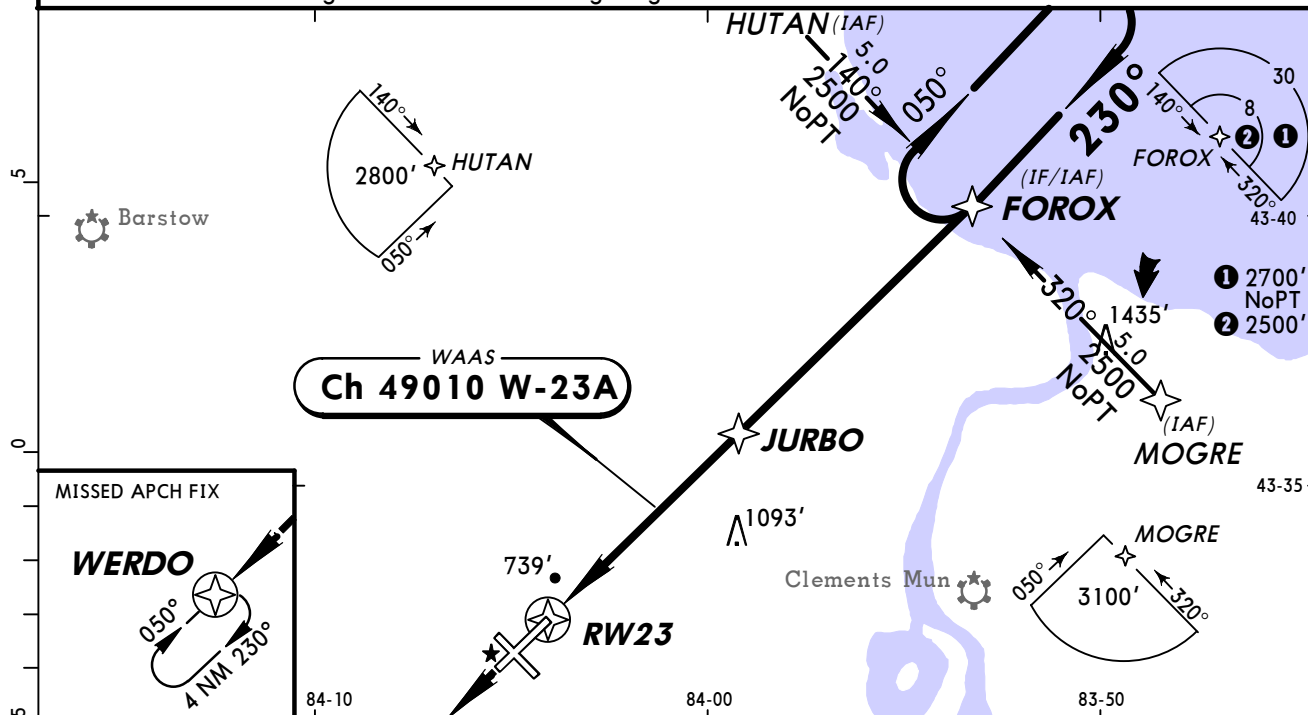
**MISSED APCH:** Climb to 2300' direct WERDO and hold.

Alt Set: INCHES

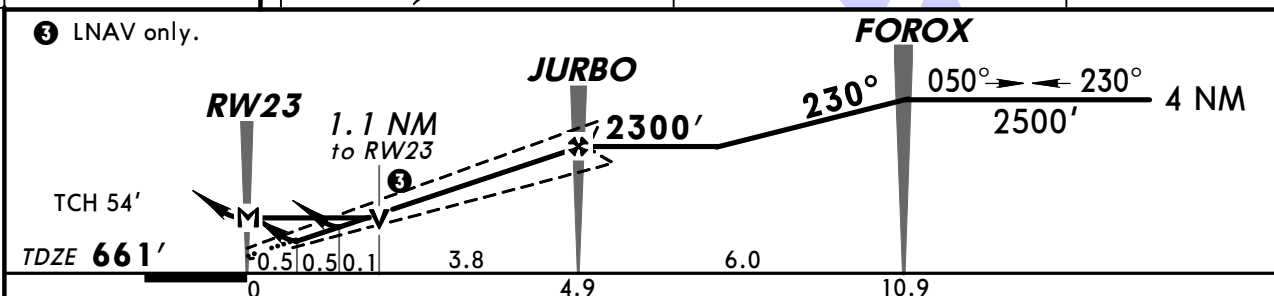
Trans level: FL 180

Trans alt: 18000'

1. Use local altimeter setting; if not received, use Saginaw Co-Browne altimeter setting. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F).
3. DME/DME RNP-0.30 not authorized. 4. Baro-VNAV and VDP not authorized when using Saginaw Co-Browne altimeter setting. 5. Pilot controlled lighting 120.1.



③ LNAV only.



|                        |     |     |     |     |     |     |                        |    |       |
|------------------------|-----|-----|-----|-----|-----|-----|------------------------|----|-------|
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 | MALSR<br>PAPI<br>2300' | D→ | WERDO |
| Glide path angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |                        |    |       |
| MAP at RW23            |     |     |     |     |     |     |                        |    |       |

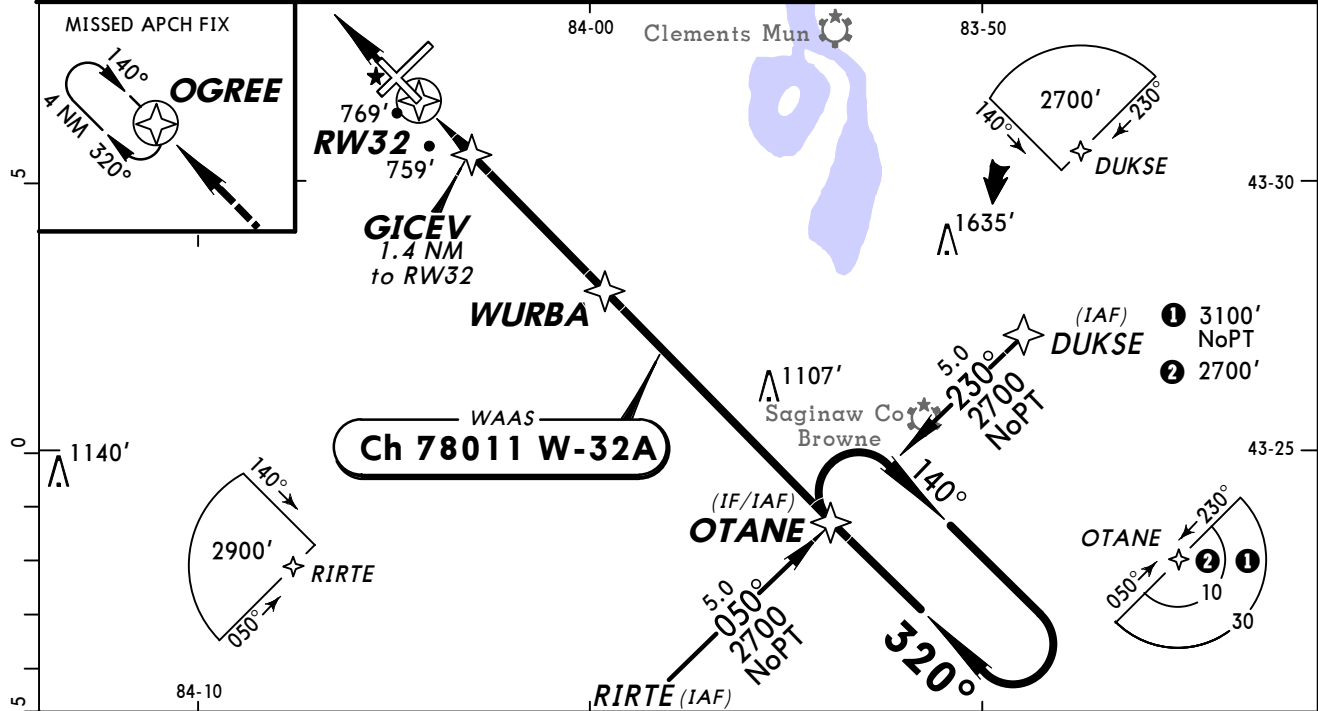
| STRAIGHT-IN LANDING RWY 23               |               |                    |               |                     |               |                 |                 | CIRCLE-TO-LAND                           |                    |
|------------------------------------------|---------------|--------------------|---------------|---------------------|---------------|-----------------|-----------------|------------------------------------------|--------------------|
| With Local Altimeter Setting             |               |                    |               |                     |               |                 |                 | With Local Altimeter Setting             |                    |
| LPV                                      |               | LNAV/VNAV          |               | LNAV                |               |                 |                 |                                          |                    |
| DA(H) 861' (200')                        |               | DA(H) 1034' (373') |               | MDA(H) 1060' (399') |               |                 |                 |                                          |                    |
| RAIL or ALS out                          |               | RAIL out ALS out   |               | RAIL out ALS out    |               |                 |                 |                                          |                    |
| A                                        |               |                    |               |                     |               |                 |                 | Max Kts                                  | MDA(H)             |
| B                                        | RVR 24        | RVR 40 or 3/4      | RVR 40        | RVR 60 or 1 1/4     | RVR 24 or 1/2 | RVR 40 or 3/4   | RVR 50 or 1     | 90                                       | 1100' (432')-1     |
| C                                        | RVR 24 or 1/2 | RVR 40 or 3/4      | RVR 40 or 3/4 | RVR 60 or 1 1/4     | RVR 50 or 1   | RVR 60 or 1 1/4 | RVR 60 or 1 1/4 | 120                                      | 1120' (452')-1     |
| D                                        |               |                    |               |                     | RVR 50 or 1   | RVR 60 or 1 1/4 | RVR 60 or 1 1/4 | 140                                      | 1120' (452')-1 1/2 |
|                                          |               |                    |               |                     |               |                 |                 | 165                                      | 1220' (552')-2     |
| With Saginaw Co-Browne Altimeter Setting |               |                    |               |                     |               |                 |                 | With Saginaw Co-Browne Altimeter Setting |                    |
| DA(H) 897' (236')                        |               | DA(H) 1070' (409') |               | MDA(H) 1100' (439') |               |                 |                 |                                          |                    |
| RAIL or ALS out                          |               | RAIL out ALS out   |               | RAIL out ALS out    |               |                 |                 |                                          |                    |
| A                                        |               |                    |               |                     |               |                 |                 | Max Kts                                  | MDA(H)             |
| B                                        | RVR 24        | RVR 40 or 3/4      | RVR 40        | 1 1/2               | RVR 24 or 1/2 | RVR 40 or 3/4   | RVR 50 or 1     | 90                                       | 1140' (472')-1     |
| C                                        | RVR 24 or 1/2 | RVR 40 or 3/4      | RVR 40 or 3/4 | 1 1/2               | RVR 50 or 1   | RVR 60 or 1 1/4 | RVR 60 or 1 1/4 | 120                                      | 1160' (492')-1     |
| D                                        |               |                    |               |                     | RVR 50 or 1   | 1 1/2           | 1 1/2           | 140                                      | 1160' (492')-1 1/2 |
|                                          |               |                    |               |                     |               |                 |                 | 165                                      | 1260' (592')-2     |

BRIEFING STRIP™

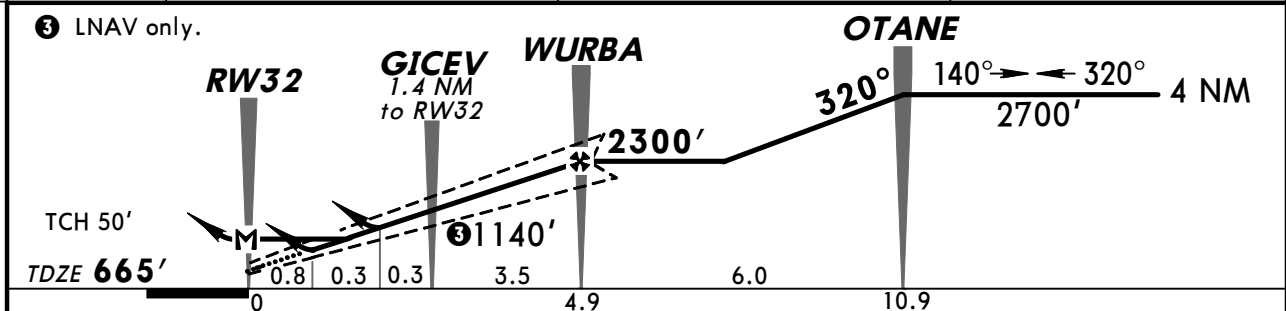
|                                  |                                                                      |                                                     |                                                     |                                          |
|----------------------------------|----------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|------------------------------------------|
| ATIS<br><b>125.92</b>            | *SAGINAW Approach (R)<br>230°-049° 050°-229°<br><b>126.45 120.95</b> | CLEVELAND Center<br><b>127.7</b> when App inop.     | *SAGINAW Tower<br>CTAF <b>120.1</b>                 | *Ground<br><b>121.7</b>                  |
| WAAS<br><b>Ch 78011</b><br>W-32A | Final<br>Apch Crs<br><b>320°</b>                                     | Minimum Alt<br><b>WURBA</b><br><b>2300'</b> (1635') | LPV<br>DA(H)<br>(CONDITIONAL)<br><b>964'</b> (299') | Apt Elev <b>668'</b><br>TDZE <b>665'</b> |

**MISSED APCH: Climb to 2300' direct OGRE and hold.**

Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'  
1. Use local altimeter setting; if not received, use Saginaw Co-Browne altimeter setting. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 3. DME/DME RNP-0.30 not authorized. 4. Baro-VNAV not authorized when using Saginaw Co-Browne altimeter setting. 5. Pilot controlled lighting 120.1.



③ LNAV only.

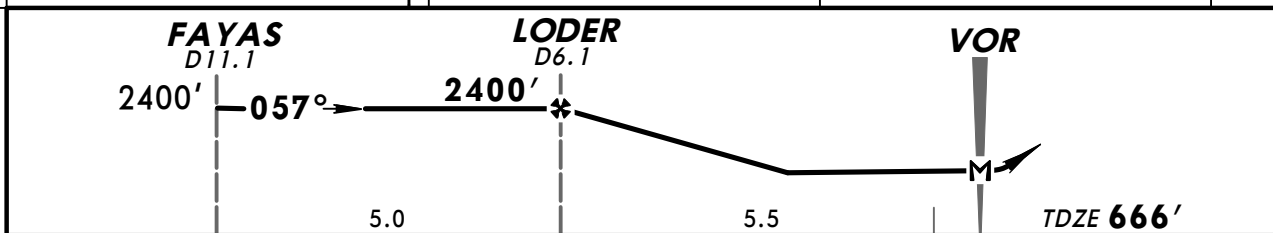
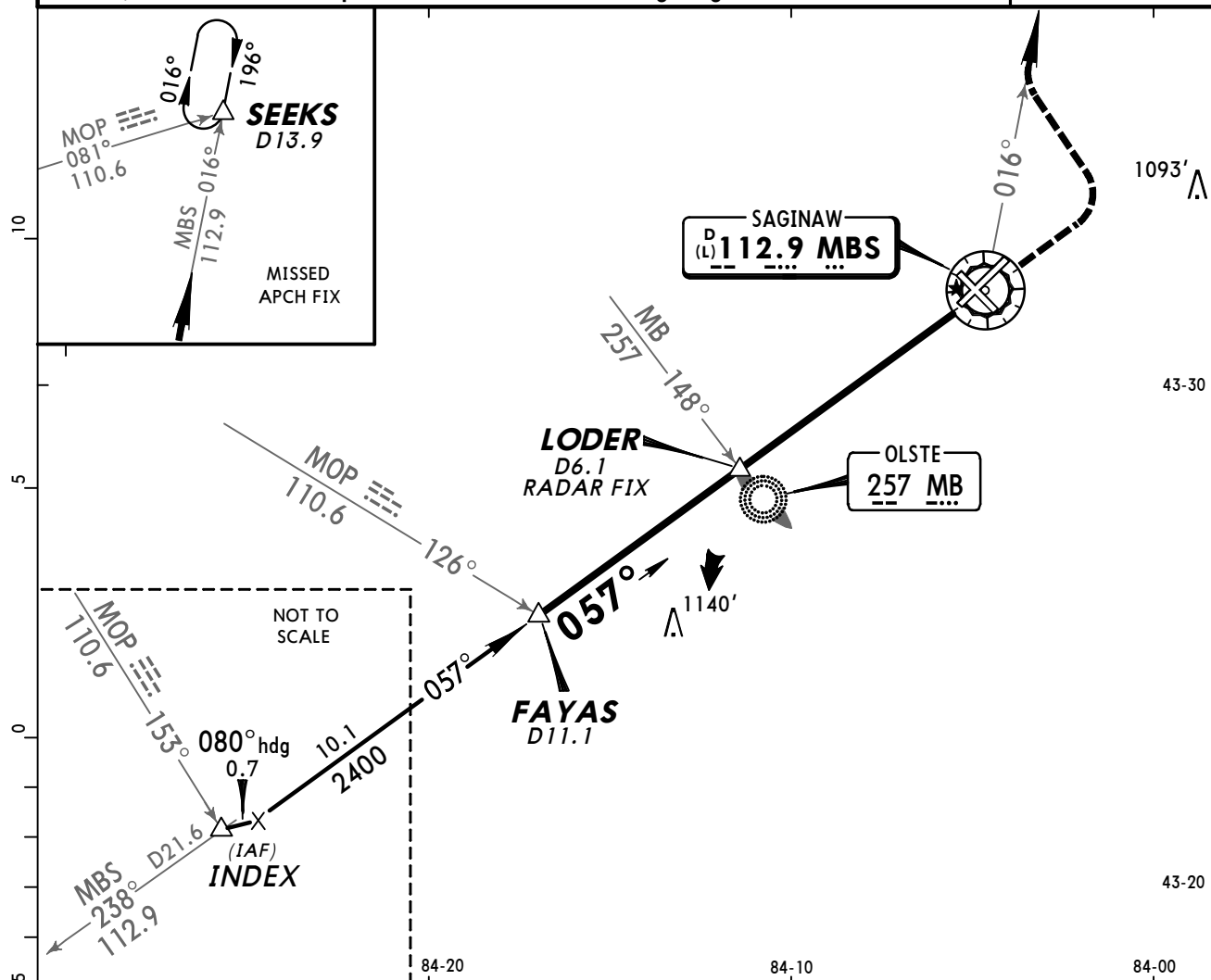


|                        |     |     |     |     |     |     |  |                |              |              |
|------------------------|-----|-----|-----|-----|-----|-----|--|----------------|--------------|--------------|
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 |  | REIL<br>PAPI-L | <b>2300'</b> | <b>OGREE</b> |
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |  |                |              |              |
| MAP at RW32            |     |     |     |     |     |     |  |                |              |              |

| STRAIGHT-IN LANDING RWY 32<br>With Local Altimeter Setting |                                        |                                    |    | CIRCLE-TO-LAND<br>With Local Altimeter Setting |                         |  |  |
|------------------------------------------------------------|----------------------------------------|------------------------------------|----|------------------------------------------------|-------------------------|--|--|
| LPV<br>DA(H) <b>964'</b> (299')                            | LNAV/VNAV<br>DA(H) <b>1057'</b> (392') | LNAV<br>MDA(H) <b>1040'</b> (375') |    | Max Kts                                        | MDA(H)                  |  |  |
| A                                                          |                                        |                                    |    | 90                                             | <b>1100'</b> (432') -1  |  |  |
| B                                                          |                                        |                                    |    | 120                                            | <b>1120'</b> (452') -1  |  |  |
| C                                                          | 1                                      | 1½                                 |    | 140                                            | <b>1120'</b> (452') -1½ |  |  |
| D                                                          |                                        |                                    | 1¼ | 165                                            | <b>1220'</b> (552') -2  |  |  |
| With Saginaw Co-Browne Altimeter Setting                   |                                        |                                    |    | With Saginaw Co-Browne Altimeter Setting       |                         |  |  |
| DA(H) <b>1000'</b> (335')                                  | DA(H) <b>1093'</b> (428')              | MDA(H) <b>1080'</b> (415')         |    | Max Kts                                        | MDA(H)                  |  |  |
| A                                                          |                                        |                                    |    | 90                                             | <b>1140'</b> (472') -1  |  |  |
| B                                                          |                                        |                                    |    | 120                                            | <b>1160'</b> (492') -1  |  |  |
| C                                                          | 1¼                                     | 1½                                 |    | 140                                            | <b>1160'</b> (492') -1½ |  |  |
| D                                                          |                                        |                                    | 1¼ | 165                                            | <b>1260'</b> (592') -2  |  |  |

BRIEFING STRIP™

|                                                                                                                                            |                                                                                |                                              |                                                 |                                          |                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------|-------------------------------------------------|------------------------------------------|-----------------------------------------|
| ATIS<br><b>125.92</b>                                                                                                                      | *SAGINAW Approach (R)<br>230°-049°      050°-229°<br><b>126.45      120.95</b> |                                              | CLEVELAND Center<br><b>127.7</b> when App inop. | *SAGINAW Tower<br>CTAF <b>120.1</b>      | *Ground<br><b>121.7</b>                 |
| VOR<br>MBS<br><b>112.9</b>                                                                                                                 | Final<br>Apch Crs<br><b>057°</b>                                               | Minimum Alt<br>LODER<br><b>2400'</b> (1734') | MDA(H)<br><b>1060'</b> (394')                   | Apt Elev <b>668'</b><br>TDZE <b>666'</b> | <div>3100'</div> <div>MSA MBS VOR</div> |
| MISSED APCH: Climb to 2400' then LEFT turn outbound via MBS<br>VOR R-016 to SEEKS INT/D13.9 and hold.                                      |                                                                                |                                              |                                                 |                                          |                                         |
| Alt Set: INCHES      Trans level: FL 180      Trans alt: 18000'<br>1. DME, ADF or RADAR required.      2. Pilot controlled lighting 120.1. |                                                                                |                                              |                                                 |                                          |                                         |

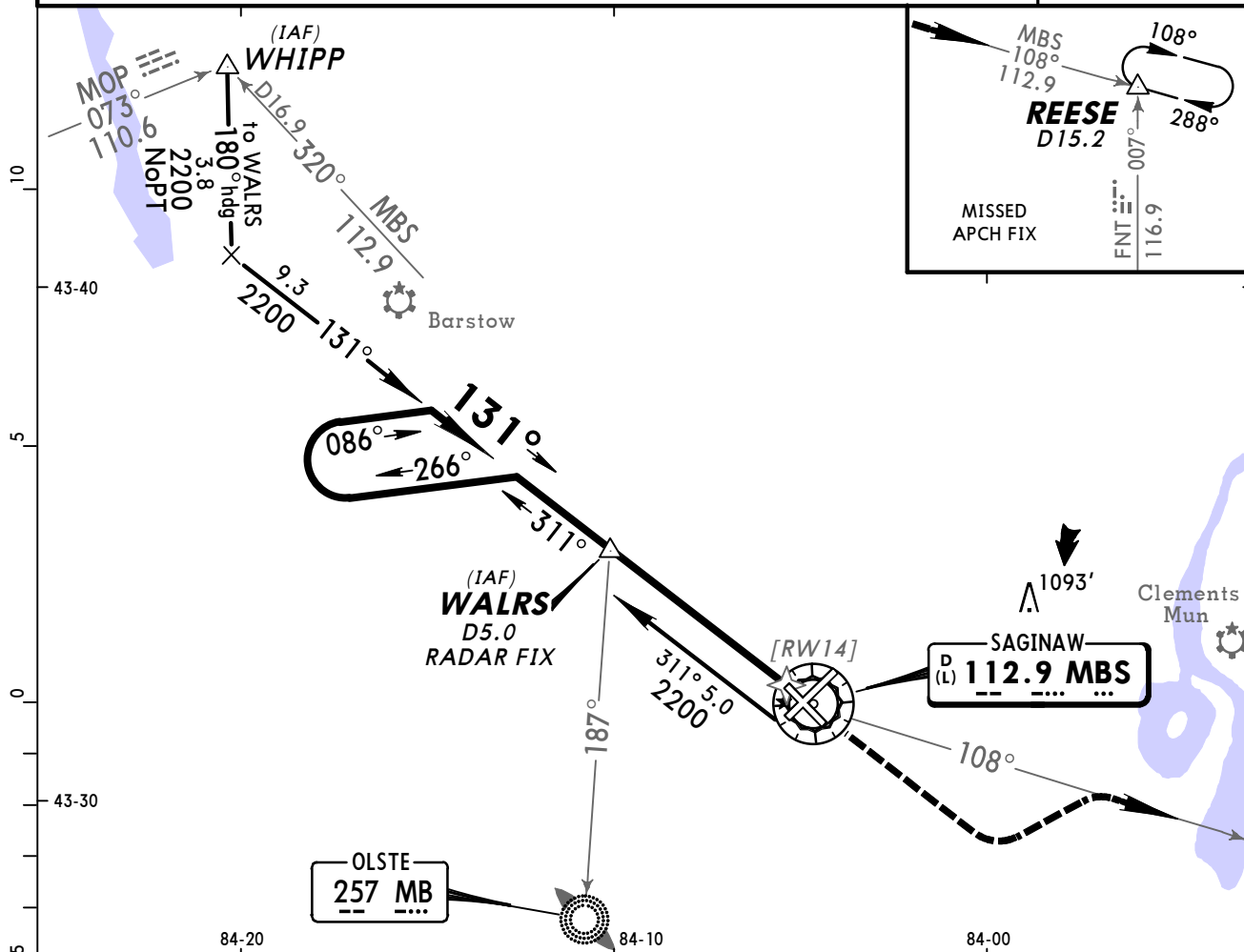


|            |  |  |  |       |       |    |                           |       |
|------------|--|--|--|-------|-------|----|---------------------------|-------|
| MAP at VOR |  |  |  | MALSR | 2400' | LT | MBS<br>via 112.9<br>R-016 | SEEKS |
|------------|--|--|--|-------|-------|----|---------------------------|-------|

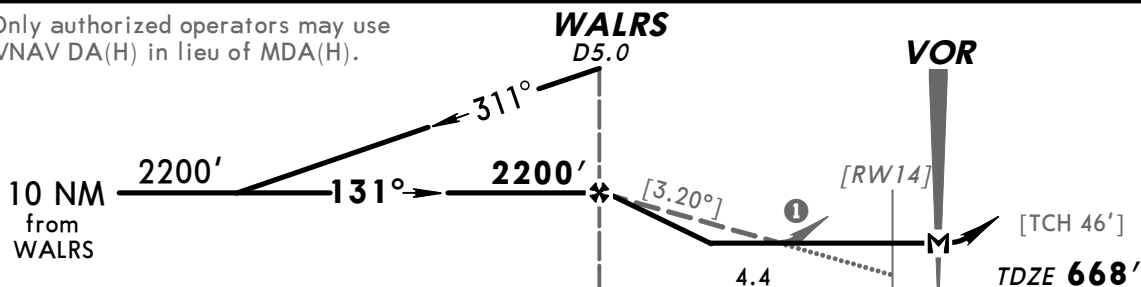
| STRAIGHT-IN LANDING RWY 5  |               |                 |         | CIRCLE-TO-LAND       |  |
|----------------------------|---------------|-----------------|---------|----------------------|--|
| MDA(H) <b>1060'</b> (394') |               |                 |         |                      |  |
|                            | RAIL out      | ALS out         | Max Kts | MDA(H)               |  |
| A                          |               |                 | 90      | 1100' (432') - 1     |  |
| B                          | RVR 24 or 1/2 | RVR 40 or 3/4   | 120     | 1120' (452') - 1     |  |
| C                          |               |                 | 140     | 1120' (452') - 1 1/2 |  |
| D                          | RVR 50 or 1   | RVR 60 or 1 1/4 | 165     | 1220' (552') - 2     |  |

BRIEFING STRIP

|                                                                                                       |                                              |                                      |                                              |                                  |                                         |                                                            |
|-------------------------------------------------------------------------------------------------------|----------------------------------------------|--------------------------------------|----------------------------------------------|----------------------------------|-----------------------------------------|------------------------------------------------------------|
| ATIS<br><br>125.92                                                                                    | *SAGINAW Approach (R)<br>230°-049°<br>126.45 | 050°-229°<br>120.95                  | CLEVELAND Center<br><br>127.7 when App inop. | *SAGINAW Tower<br><br>CTAF 120.1 | *Ground<br><br>121.7                    |                                                            |
| VOR<br>MBS<br>112.9                                                                                   | Final<br>Apch Crs<br>131°                    | Minimum Alt<br>WALRS<br>2200'(1532') | MDA(H)<br>1040'(372')                        | Apt Elev 668'<br>TDZE 668'       | <div>3100'</div> <div>MSA MBS VOR</div> |                                                            |
| MISSED APCH: Climb to 3000' then LEFT turn outbound via MBS<br>VOR R-108 to REESE INT/D15.2 and hold. |                                              |                                      |                                              |                                  |                                         |                                                            |
| Alt Set: INCHES<br>1. DME, ADF or RADAR required.                                                     |                                              |                                      |                                              |                                  |                                         | Trans level: FL 180<br>2. Pilot controlled lighting 120.1. |



① Only authorized operators may use VNAV DA(H) in lieu of MDA(H).



| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 | REIL | 3000' | VASI-L | LT | MBS   | REESE |
|-----------------------|-----|-----|-----|-----|-----|-----|------|-------|--------|----|-------|-------|
| Descent angle [3.20°] | 396 | 510 | 566 | 679 | 793 | 906 |      |       |        |    | 112.9 |       |
| MAP at VOR            |     |     |     |     |     |     |      |       |        |    | R-108 |       |

STRAIGHT-IN LANDING RWY 14

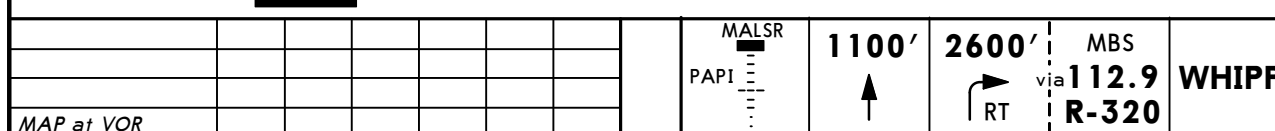
MDA(H) **1040'** (372')

CIRCLE-TO-LAND

| Max Kts | MDA(H)                     |
|---------|----------------------------|
| 90      | <b>1100'</b> (432') -1     |
| 120     | <b>1120'</b> (452') -1     |
| 140     | <b>1120'</b> (452') -1 1/2 |
| 165     | <b>1220'</b> (552') -2     |

TERPS

| A | 1     |
|---|-------|
| B | 1     |
| C | 1     |
| D | 1 1/4 |

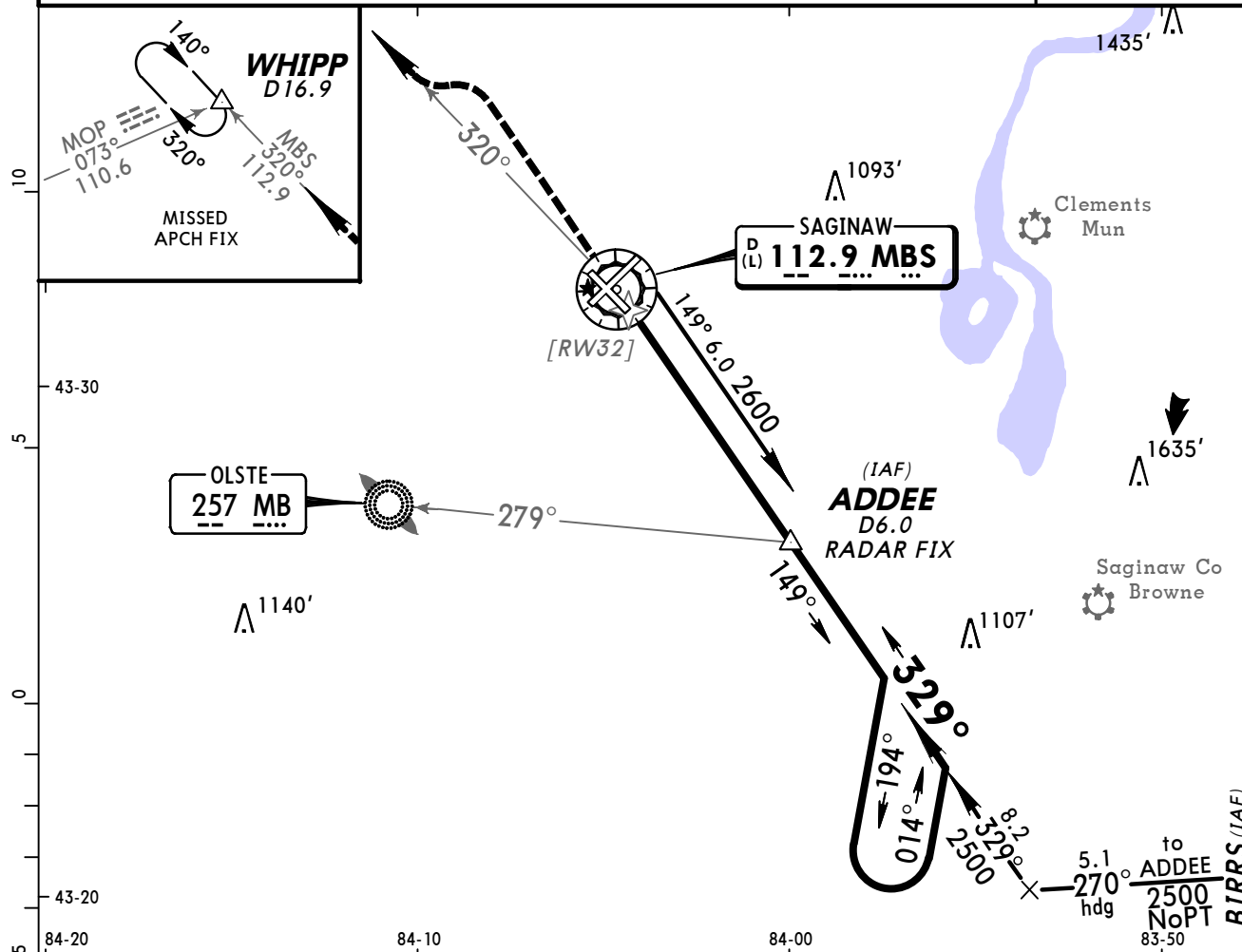
BRIEFING STRIP™TERPS  
AMEND  
14  
A



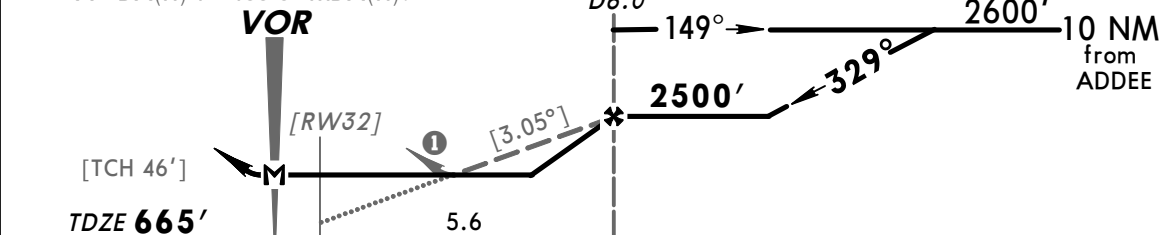
BRIEFING STRIP

TM

|                                                                                                    |                                              |                                       |                                          |                              |                                         |
|----------------------------------------------------------------------------------------------------|----------------------------------------------|---------------------------------------|------------------------------------------|------------------------------|-----------------------------------------|
| ATIS<br>125.92                                                                                     | *SAGINAW Approach (R)<br>230°-049°<br>126.45 | 050°-229°<br>120.95                   | CLEVELAND Center<br>127.7 when App inop. | *SAGINAW Tower<br>CTAF 120.1 | *Ground<br>121.7                        |
| VOR<br>MBS<br>112.9                                                                                | Final<br>Apch Crs<br>329°                    | Minimum Alt<br>ADDEE<br>2500' (1835') | MDA(H)<br>1200' (535')                   | Apt Elev 668'<br>TDZE 665'   | <div>3100'</div> <div>MSA MBS VOR</div> |
| MISSED APCH: Climb to 2600' then LEFT turn outbound via MBS VOR R-320 to WHIPP INT/D16.9 and hold. |                                              |                                       |                                          |                              |                                         |
| Alt Set: INCHES<br>1. DME, ADF or RADAR required.                                                  |                                              |                                       |                                          |                              |                                         |
| Trans alt: 18000'                                                                                  |                                              |                                       |                                          |                              |                                         |



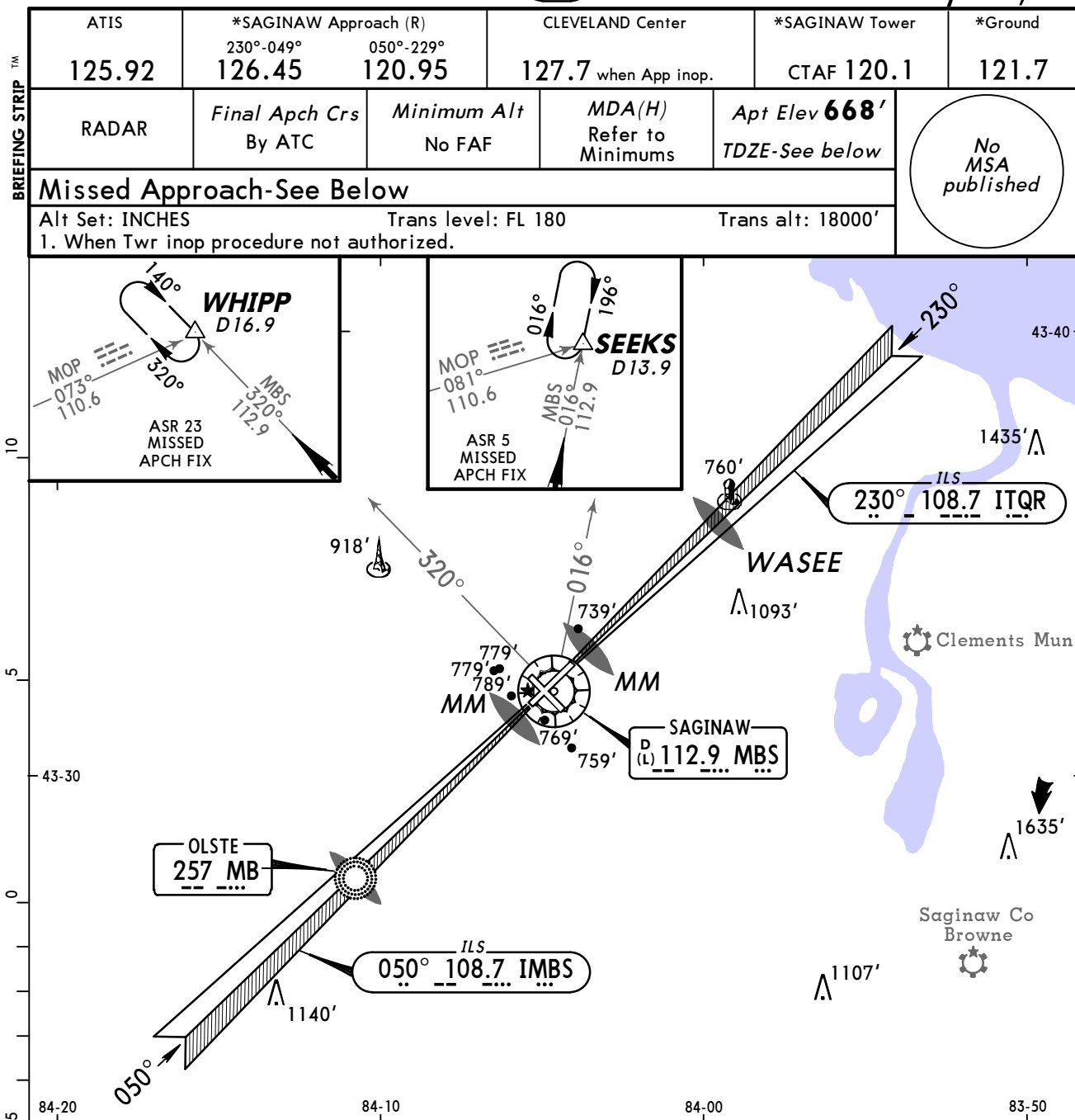
① Only authorized operators may use VNAV DA(H) in lieu of MDA(H).



| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 | REIL<br>PAPI-L | 2600'<br>↑ | LT | MBS<br>112.9<br>R-320 | WHIPP |
|-----------------------|-----|-----|-----|-----|-----|-----|----------------|------------|----|-----------------------|-------|
| Descent angle [3.05°] | 378 | 486 | 540 | 648 | 755 | 863 |                |            |    |                       |       |
| MAP at VOR            |     |     |     |     |     |     |                |            |    |                       |       |

| STRAIGHT-IN LANDING RWY 32 |    |  |  |  |  | CIRCLE-TO-LAND |                  |  |  |  |  |
|----------------------------|----|--|--|--|--|----------------|------------------|--|--|--|--|
| MDA(H) 1200'(535')         |    |  |  |  |  | MDA(H)         |                  |  |  |  |  |
| A                          | 1  |  |  |  |  | Max Kts        | 1200'(532') - 1  |  |  |  |  |
| B                          |    |  |  |  |  | 90             |                  |  |  |  |  |
| C                          | 1½ |  |  |  |  | 120            | 1200'(532') - 1½ |  |  |  |  |
| D                          | 1¾ |  |  |  |  | 140            | 1200'(532') - 1½ |  |  |  |  |
|                            |    |  |  |  |  | 165            | 1220'(552') - 2  |  |  |  |  |





**MISSED APPROACH:**

Runway 5: Climb to 2400' then LEFT turn outbound via MBS VOR R-016 to SEEKS INT/D13.9 and hold.

Runway 23: Climb to 1100' then climbing RIGHT turn to 2600' outbound via MBS VOR R-320 to WHIPP INT/D16.9 and hold.

RWY 5  
TDZE 666'

RWY 23  
TDZE 661'

ASR Rwys 5, 23; MAP at Rwy Thr

Lighting -  
Refer to  
Airport  
Chart

| STRAIGHT-IN LANDING          |               |                 |                               |                 |               | CIRCLE-TO-LAND |                    |
|------------------------------|---------------|-----------------|-------------------------------|-----------------|---------------|----------------|--------------------|
| ASR 5<br>MDA(H) 1060' (394') |               |                 | ASR 23<br>MDA(H) 1020' (359') |                 |               | Max<br>Kts.    | MDA(H)             |
|                              | RAIL out      | ALS out         |                               | RAIL out        | ALS out       |                |                    |
| A                            |               |                 |                               |                 |               | 90             | 1100' (432')-1     |
| B                            | RVR 24 or 1/2 | RVR 40 or 3/4   | RVR 50 or 1                   | RVR 24 or 1/2   | RVR 40 or 3/4 | 120            | 1120' (452')-1     |
| C                            |               |                 |                               |                 |               | 140            | 1120' (452')-1 1/2 |
| D                            | RVR 50 or 1   | RVR 60 or 1 1/4 | RVR 50 or 1                   | RVR 60 or 1 1/4 |               | 165            | 1220' (552')-2     |

## General Information

Location: Muskegon MI USA  
IATA Code: MKG  
Lat/Long: N43° 10.2' W086° 14.3'  
Elevation: 629 ft

Airport Use: Public  
Magnetic Variation: 5.0°W  
Sectional Chart: Chicago

Fuel Types: 100 Octane (LL), Jet A  
Oxygen Types: Low Pressure  
Repair Types: Major Airframe, Major Engine  
Customs: No  
Airport Type: IFR  
Landing Fee: Yes  
Control Tower: Yes  
Jet Start Unit: Yes  
LLWS Alert: No  
Beacon: Yes

Sunrise: 1225 Z  
Sunset: 2331 Z,

## Runway Information

Runway: 06  
Length x Width: 6501 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 623 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 14  
Length x Width: 6100 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 627 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 24  
Length x Width: 6501 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 627 ft  
Lighting: Edge, ALS, Pilot controlled

Runway: 32  
Length x Width: 6100 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 629 ft  
Lighting: Edge, ALS, Pilot controlled

## Communication Information

ATIS 124.3

Muskegon Tower 126.25 CTAF PCL

Muskegon Ground Control 121.6

Muskegon Approach Control 133.825

Muskegon Approach Control 119.8

Muskegon Approach TRSA 119.8

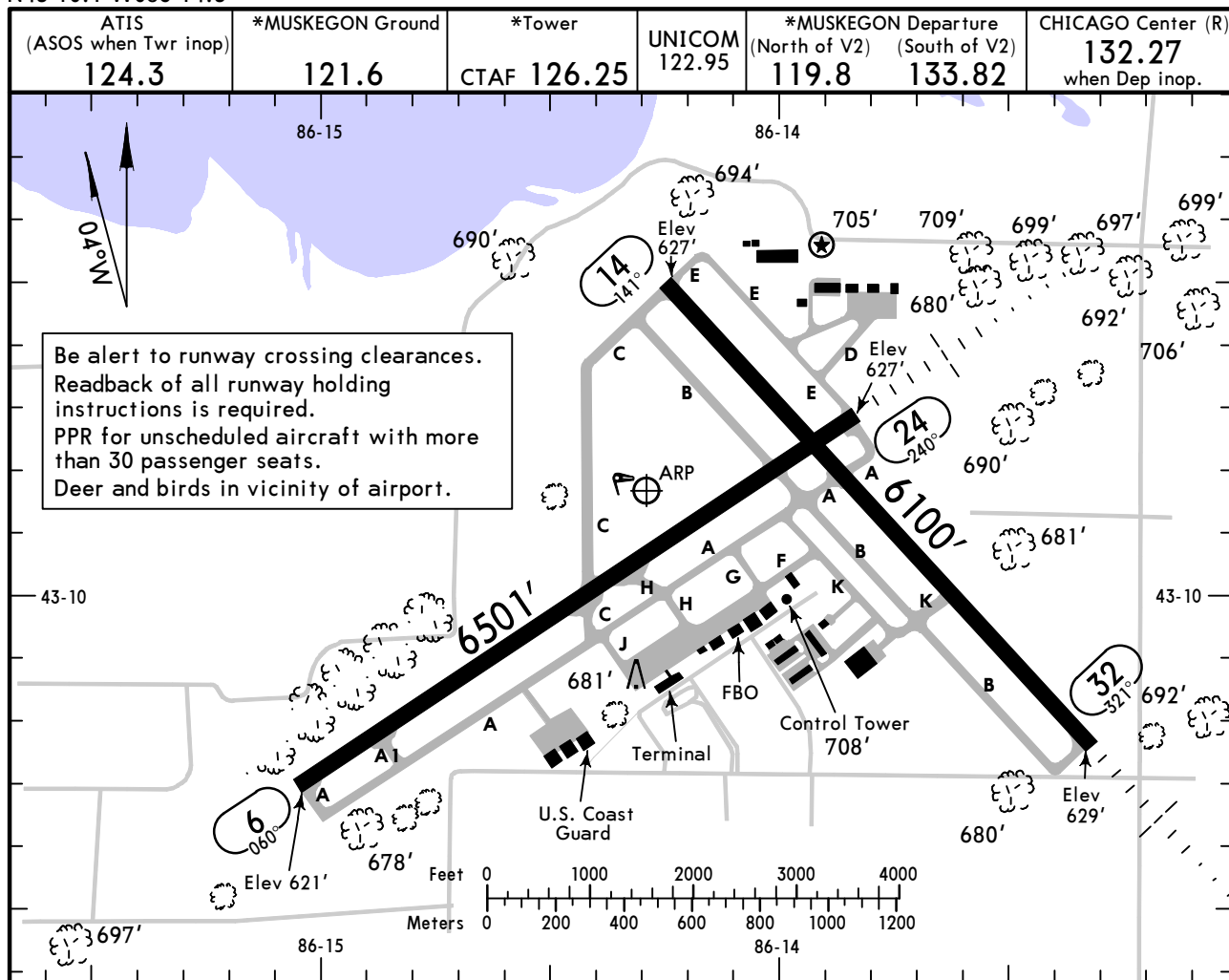
Muskegon Departure Control 133.825

Muskegon Departure Control 119.8

Muskegon Co Unicom 122.95

Lansing Flight Service Station 122.5 RCO

Chicago Center 132.275 Remote Communications Air-Ground



#### ADDITIONAL RUNWAY INFORMATION

| RWY        |                               | USABLE LENGTHS |                |          |       |
|------------|-------------------------------|----------------|----------------|----------|-------|
|            |                               | Threshold      | Landing Beyond | TAKE-OFF | WIDTH |
| 6<br>24    | ① HIRL ① REIL VASI-L          |                |                |          | 150'  |
|            | ① HIRL ① MALSR VASI-L         |                | 5414'          |          |       |
| 14<br>② 32 | HIRL REIL PAPI-L (angle 3.0°) |                |                |          | 150'  |
|            | HIRL MALSR                    |                | 5090'          |          |       |
|            |                               |                |                |          |       |
|            |                               |                |                |          |       |

① Activate on 126.25 when Twr inop.

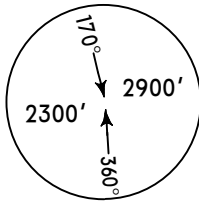
② Closed between 2300-0600 LT daily.

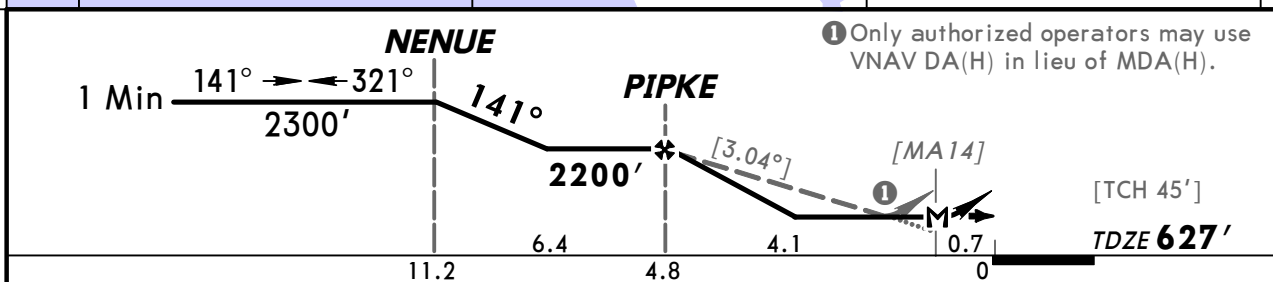
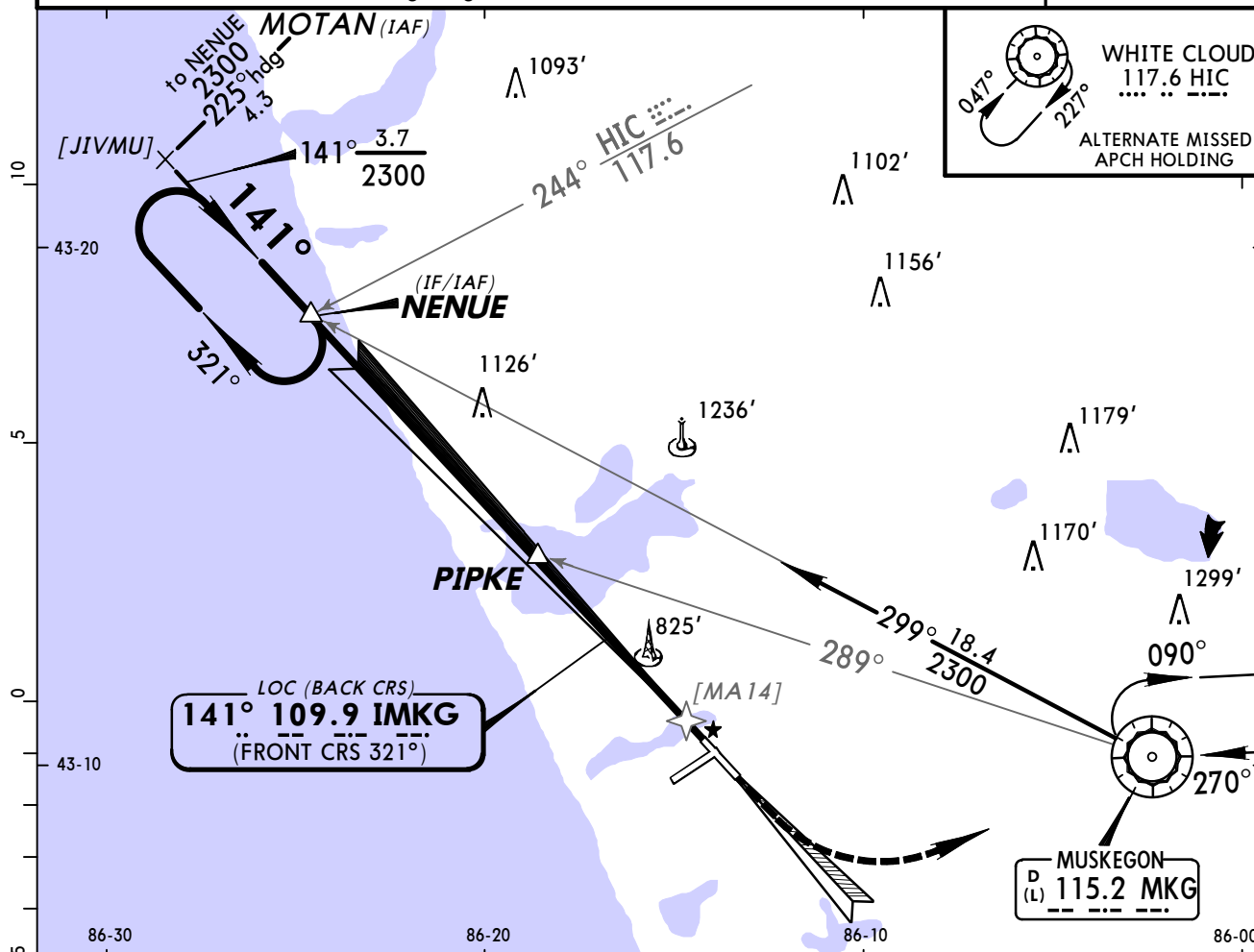
#### TAKE-OFF

| All Rwy's           |               |
|---------------------|---------------|
| Adequate<br>Vis Ref | STD           |
| 1 & 2<br>Eng        | RVR 50 or 1   |
| 3 & 4<br>Eng        | RVR 24 or 1/2 |

#### FOR FILING AS ALTERNATE

| Authorized Only<br>When Local<br>Weather Available<br>& Tower Operating |                               | Authorized Only When<br>Tower Operating |                     | Authorized Only When<br>Local Weather Available |                                        |
|-------------------------------------------------------------------------|-------------------------------|-----------------------------------------|---------------------|-------------------------------------------------|----------------------------------------|
| ILS Rwy 24                                                              | LOC Rwy 24<br>LOC (BC) Rwy 14 | ILS Rwy 32                              | LOC Rwy 32<br>VOR-A | RNAV (GPS) Rwy 6<br>RNAV (GPS) Rwy 14           | RNAV (GPS) Rwy 24<br>RNAV (GPS) Rwy 32 |
| A                                                                       | 600-2                         | 600-2                                   | 800-2               | 800-2                                           | 800-2                                  |
| B                                                                       |                               |                                         |                     |                                                 |                                        |
| C                                                                       |                               |                                         |                     |                                                 |                                        |
| D                                                                       |                               |                                         |                     |                                                 |                                        |

|                                                                                                                                                                                                                                                                                                                                                            |                                                                                 |                                                     |                                                |                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| ATIS (ASOS when Twr inop)<br><b>124.3</b>                                                                                                                                                                                                                                                                                                                  | *MUSKEGON Approach<br>(North of V2) <b>119.8</b><br>(South of V2) <b>133.82</b> | CHICAGO Center (R)<br><b>132.27</b> when App inop.  | *MUSKEGON Tower<br><b>CTAF 126.25</b>          | *Ground<br><b>121.6</b>                                                                                   |
| LOC<br>IMKG<br><b>109.9</b>                                                                                                                                                                                                                                                                                                                                | Final<br>Apch Crs<br><b>141°</b><br>(Front Crs 321°)                            | Minimum Alt<br><b>PIPKE</b><br><b>2200' (1573')</b> | MDA(H)<br>(CONDITIONAL)<br><b>1140' (513')</b> | Apt Elev <b>629'</b><br>TDZE <b>627'</b>                                                                  |
| <b>MISSED APCH:</b> Climb to 2500' then LEFT turn direct MKG VOR and hold.<br>Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. Use local altimeter setting; if not received, use Fremont altimeter setting.<br>2. Disregard glideslope indications. 3. Visibility reduction by helicopters not authorized. 4. Pilot controlled lighting 126.25. |                                                                                 |                                                     |                                                |                                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                            |                                                                                 |                                                     |                                                | <br><b>MSA MKG VOR</b> |



| Gnd speed-Kts         | 70  | 90   | 100  | 120  | 140  | 160  |      |                |                   |         |
|-----------------------|-----|------|------|------|------|------|------|----------------|-------------------|---------|
| Descent angle [3.04°] | 376 | 484  | 538  | 645  | 753  | 861  |      |                |                   |         |
| PIPKE to MAP          | 4.1 | 3:31 | 2:44 | 2:28 | 2:03 | 1:45 | 1:32 | REIL<br>PAPI-L | <b>2500'</b><br>↑ | LT<br>↶ |

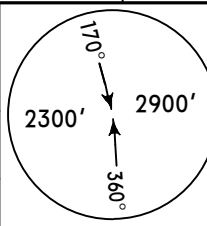
| STRAIGHT-IN LANDING RWY 14                                    |    |                                                                 |    | CIRCLE-TO-LAND |                                           |                                             |  |
|---------------------------------------------------------------|----|-----------------------------------------------------------------|----|----------------|-------------------------------------------|---------------------------------------------|--|
| MDA(H) <b>1140' (513')</b><br>With Local<br>Altimeter Setting |    | MDA(H) <b>1220' (593')</b><br>With Fremont<br>Altimeter Setting |    | Max<br>Kts     | With Local<br>Altimeter Setting<br>MDA(H) | With Fremont<br>Altimeter Setting<br>MDA(H) |  |
| A                                                             | 1  | 1                                                               | 1  | 90             | <b>1140' (511') - 1</b>                   | <b>1220' (591') - 1</b>                     |  |
| B                                                             | 1  | 1                                                               | 1  | 120            |                                           |                                             |  |
| C                                                             | 1½ | 1½                                                              | 1½ | 140            | <b>1140' (511') - 1½</b>                  | <b>1220' (591') - 1½</b>                    |  |
| D                                                             | 1¾ | 1¾                                                              | 1¾ | 165            | <b>1180' (551') - 2</b>                   | <b>1260' (631') - 2</b>                     |  |

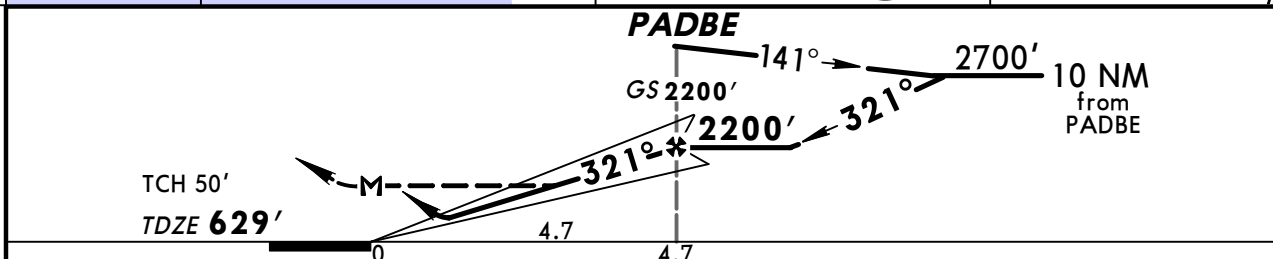
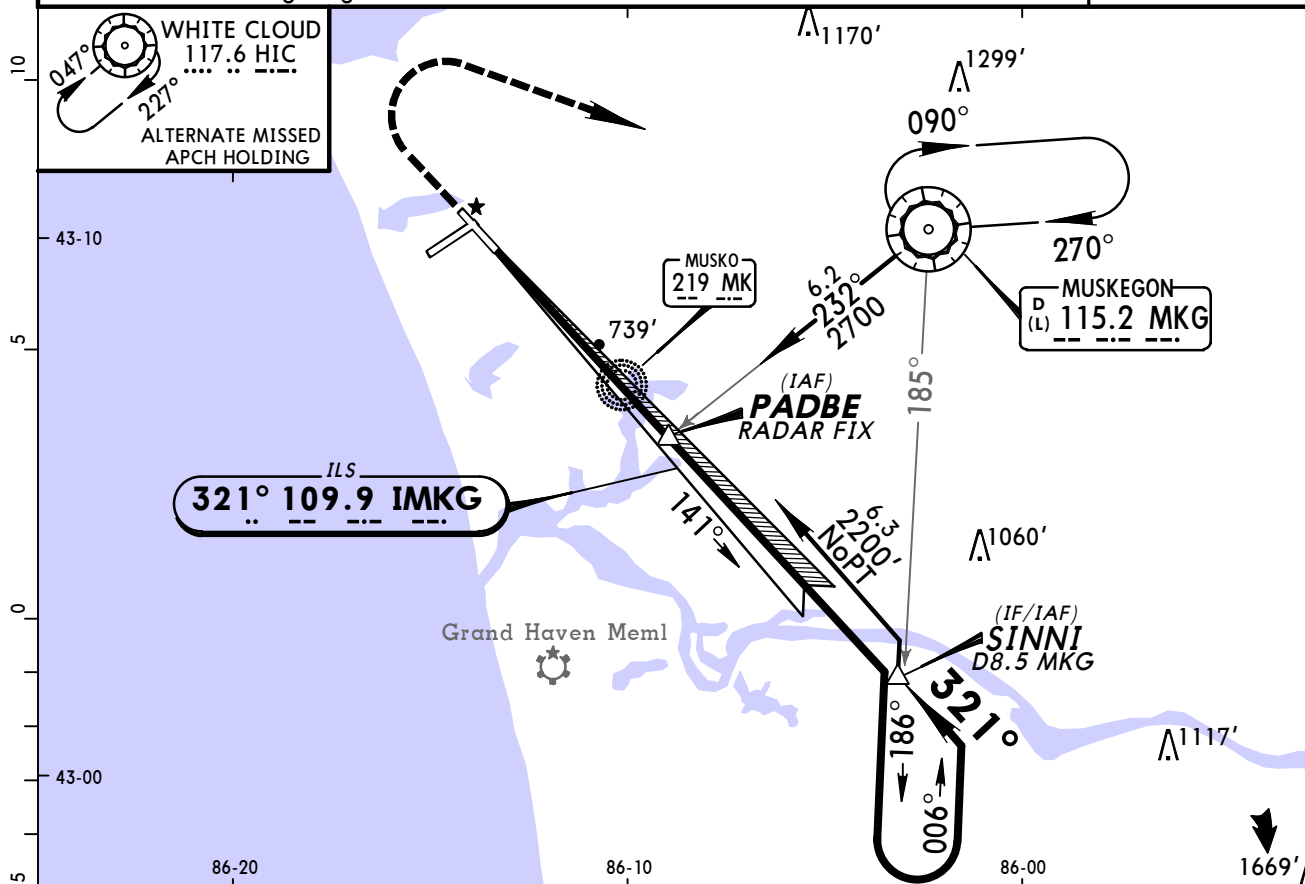


# KMKG/MKG MUSKEGON CO

JEPPESSEN  
8 JUL 11 (11-3)

MUSKEGON, MICH  
ILS or LOC Rwy 32

|                                                                                                                                            |                                  |                                                                                 |                                                     |                                                    |                                       |                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------|
| ATIS (ASOS when Twr inop)<br><b>124.3</b>                                                                                                  |                                  | *MUSKEGON Approach<br>(North of V2) <b>119.8</b><br>(South of V2) <b>133.82</b> |                                                     | CHICAGO Center (R)<br><b>132.27</b> when App inop. | *MUSKEGON Tower<br><b>CTAF 126.25</b> | *Ground<br><b>121.6</b>                                                             |
| LOC<br>IMKG<br><b>109.9</b>                                                                                                                | Final<br>Apch Crs<br><b>321°</b> | GS<br>PADBE<br><b>2200'</b> (1571')                                             | ILS<br>DA(H)<br>(CONDITIONAL)<br><b>829'</b> (200') | Apt Elev <b>629'</b><br>TDZE <b>629'</b>           |                                       |                                                                                     |
| <b>MISSED APCH: Climb to 2500' then RIGHT turn direct MKG VOR and hold.</b>                                                                |                                  |                                                                                 |                                                     |                                                    |                                       |  |
| Alt Set: INCHES<br>1. Use local altimeter setting; if not received, use Fremont altimeter setting.<br>2. Pilot controlled lighting 126.25. |                                  |                                                                                 |                                                     |                                                    |                                       | MSA MKG VOR                                                                         |



|               |       |      |      |      |      |      |       |       |    |   |              |
|---------------|-------|------|------|------|------|------|-------|-------|----|---|--------------|
| Gnd speed-Kts | 70    | 90   | 100  | 120  | 140  | 160  | MALSR | 2500' | RT | D | MKG<br>115.2 |
| GS            | 3.00° | 377  | 484  | 538  | 646  | 753  |       |       |    |   |              |
| PADBE to MAP  | 4.7   | 4:02 | 3:08 | 2:49 | 2:21 | 2:01 |       |       |    |   |              |

| STRAIGHT-IN LANDING RWY 32<br>With Local Altimeter Setting |                 |               |                                            |                 |             | CIRCLE-TO-LAND<br>With Local Altimeter Setting |                    |
|------------------------------------------------------------|-----------------|---------------|--------------------------------------------|-----------------|-------------|------------------------------------------------|--------------------|
| ILS<br>DA(H) <b>829'</b> (200')                            |                 |               | LOC (GS out)<br>MDA(H) <b>1000'</b> (371') |                 |             | Max Kts                                        | MDA(H)             |
| FULL                                                       | RAIL or ALS out |               | RAIL out                                   | ALS out         |             | 90                                             | 1080' (451')-1     |
| A                                                          |                 |               |                                            |                 |             | 120                                            | 1140' (511')-1 1/2 |
| B                                                          |                 |               |                                            |                 |             | 140                                            | 1180' (551')-2     |
| C                                                          | RVR 24 or 1/2   | RVR 40 or 3/4 | RVR 24 or 1/2                              | RVR 40 or 3/4   | RVR 50 or 1 | 165                                            |                    |
| D                                                          |                 |               | RVR 40 or 3/4                              | RVR 60 or 1 1/4 |             |                                                |                    |
| With Fremont Altimeter Setting                             |                 |               |                                            |                 |             | With Fremont Altimeter Setting                 |                    |
| ILS<br>DA(H) <b>894'</b> (265')                            |                 |               | LOC (GS out)<br>MDA(H) <b>1080'</b> (451') |                 |             | Max Kts                                        | MDA(H)             |
| FULL                                                       | RAIL or ALS out |               | RAIL out                                   | ALS out         |             | 90                                             | 1160' (531')-1     |
| A                                                          |                 |               |                                            |                 |             | 120                                            | 1220' (591')-1 1/2 |
| B                                                          |                 |               |                                            |                 |             | 140                                            | 1260' (631')-2     |
| C                                                          | RVR 24 or 1/2   | RVR 40 or 3/4 | RVR 24 or 1/2                              | RVR 40 or 3/4   | RVR 50 or 1 | 165                                            |                    |
| D                                                          |                 |               | RVR 40 or 3/4                              | RVR 60 or 1 1/4 |             |                                                |                    |
|                                                            |                 |               | RVR 50 or 1                                | 1 1/2           |             |                                                |                    |

1 RVR 18 with Flight Director or Autopilot or HUD to DA.

CHANGES: Muskegon approach frequencies.

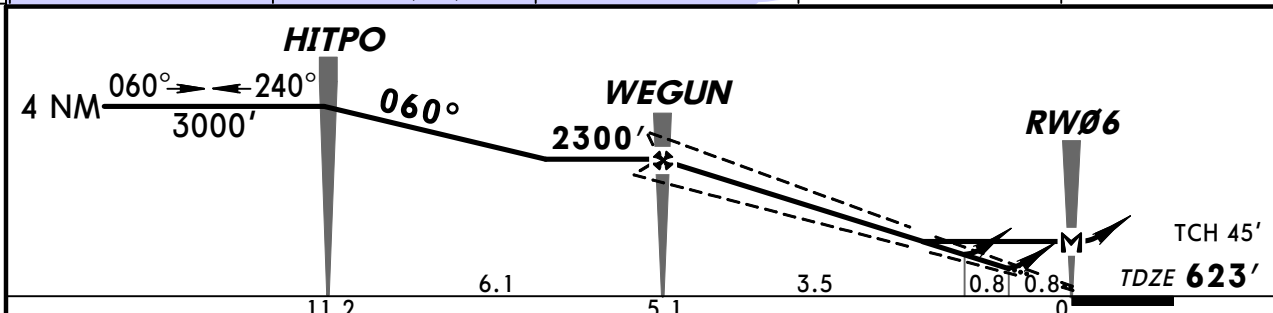
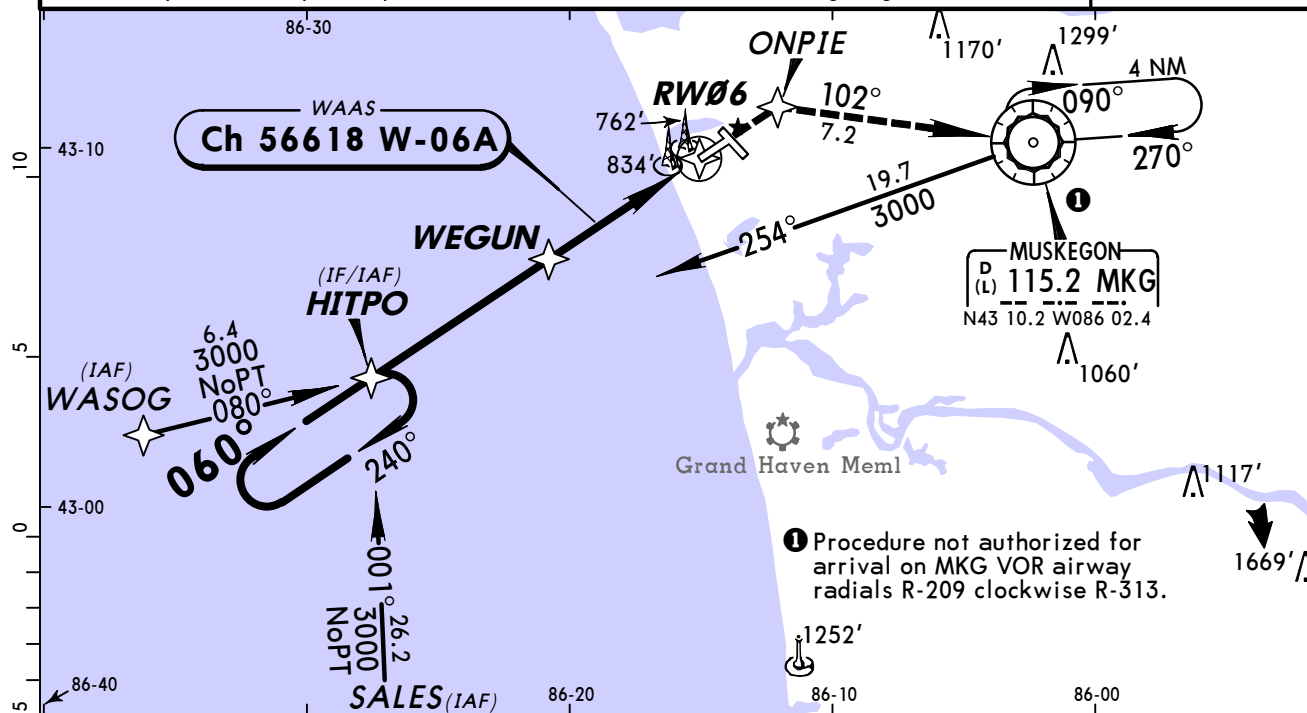
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TERPS AMEND 18A 3 JUN 2010



BRIEFING STRIP™

|                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                             |                                                         |                                                        |                                           |                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------|-------------------------------------------|--------------------------------------|
| ATIS (ASOS when Twr inop)<br><div>124.3</div>                                                                                                                                                                                                                                                                                                                                                                                                     |                                      | *MUSKEGON Approach<br>(North of V2) (South of V2)<br><div>119.8133.82</div> |                                                         | CHICAGO Center (R)<br><div>132.27 when App inop.</div> | *MUSKEGON Tower<br><div>CTAF 126.25</div> | *Ground<br><div>121.6</div>          |
| WAAS<br><div>Ch 56618</div> <div>W-06A</div>                                                                                                                                                                                                                                                                                                                                                                                                      | Final<br>Apch Crs<br><div>060°</div> | Minimum Alt<br><div>WEGUN</div> <div>2300' (1677')</div>                    | LPV<br>DA(H)<br>(CONDITIONAL)<br><div>926' (303')</div> | Apt Elev 629'<br><div>TDZE 623'</div>                  |                                           |                                      |
| MISSED APCH: Climb to 3000' direct ONPIE and on track 102° to MKG VOR and hold.                                                                                                                                                                                                                                                                                                                                                                   |                                      |                                                                             |                                                         |                                                        |                                           | <div>2900'</div> <div>MSA RW06</div> |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                                                                                                                                                                                                                                                                                                                                                             |                                      |                                                                             |                                                         |                                                        |                                           |                                      |
| 1. Use local altimeter setting; if not received, use Fremont altimeter setting. 2. DME/DME RNP-0.30 not authorized. 3. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 4. Baro-VNAV not authorized when using Fremont altimeter setting. 5. When VGSI inop, procedure not authorized at night. 6. Visibility reduction by helicopters not authorized. 7. Pilot controlled lighting 126.25. |                                      |                                                                             |                                                         |                                                        |                                           |                                      |



|                  |       |     |     |     |     |     |     |  |  |  |  |
|------------------|-------|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Gnd speed-Kts    | 70    | 90  | 100 | 120 | 140 | 160 |     |  |  |  |  |
| Glide Path Angle | 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |  |  |  |  |
| MAP at RW06      |       |     |     |     |     |     |     |  |  |  |  |

| STRAIGHT-IN LANDING RWY 6      |       |                                 |   |                             |     | CIRCLE-TO-LAND                 |                      |
|--------------------------------|-------|---------------------------------|---|-----------------------------|-----|--------------------------------|----------------------|
| With Local Altimeter Setting   |       |                                 |   |                             |     | With Local Altimeter Setting   |                      |
| LPV<br>DA(H) 926' (303')       |       | LNAV/VNAV<br>DA(H) 1173' (550') |   | LNAV<br>MDA(H) 1100' (477') |     | Max Kts                        | MDA(H)               |
| A                              | 1     | 2                               | 1 | 1 1/4                       | 140 | 90                             | 1100' (471') - 1     |
| B                              |       |                                 |   |                             |     | 120                            | 1140' (511') - 1 1/2 |
| C                              |       |                                 |   |                             |     | 140                            | 1180' (551') - 2     |
| D                              |       |                                 |   |                             |     | 165                            | 1180' (551') - 2     |
| With Fremont Altimeter Setting |       |                                 |   |                             |     | With Fremont Altimeter Setting |                      |
| LPV<br>DA(H) 991' (368')       |       | LNAV/VNAV<br>DA(H) 1238' (615') |   | LNAV<br>MDA(H) 1180' (557') |     | Max Kts                        | MDA(H)               |
| A                              | 1 1/4 | 2 1/4                           | 1 | 1 1/2                       | 140 | 90                             | 1180' (551') - 1     |
| B                              |       |                                 |   |                             |     | 120                            | 1220' (591') - 1 1/2 |
| C                              |       |                                 |   |                             |     | 140                            | 1260' (631') - 2     |
| D                              |       |                                 |   |                             |     | 165                            | 1260' (631') - 2     |

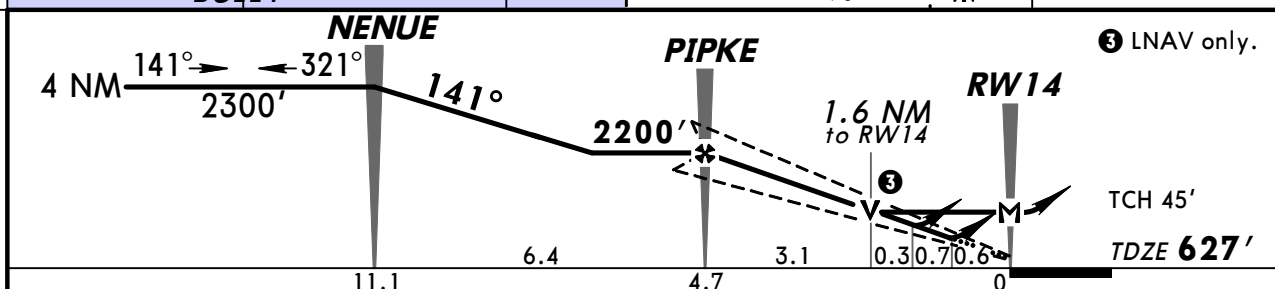


**BRIEFING STRIP** <sup>TM</sup>

Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'

1. Use local altimeter setting; if not received, use Fremont altimeter setting.  
2. DME/DME RNP-0.30 not authorized. 3. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 4. Visibility reduction by helicopters not authorized. 5. VDP and Baro-VNAV not authorized when using Fremont altimeter setting. 6. Pilot controlled lighting on 126.25.

MSA RW14



|                               |     |     |     |     |     |     |  |
|-------------------------------|-----|-----|-----|-----|-----|-----|--|
| <i>Gnd speed-Kts</i>          | 70  | 90  | 100 | 120 | 140 | 160 |  |
| <i>Glide Path Angle 3.00°</i> | 372 | 478 | 531 | 637 | 743 | 849 |  |
|                               |     |     |     |     |     |     |  |
| <i>MAP at RW14</i>            |     |     |     |     |     |     |  |

| STRAIGHT-IN LANDING RWY 14     |     |                                  |                              |            | CIRCLE-TO-LAND                 |  |
|--------------------------------|-----|----------------------------------|------------------------------|------------|--------------------------------|--|
| With Local Altimeter Setting   |     |                                  |                              |            | With Local Altimeter Setting   |  |
| LPV<br>DA(H) 877' (250')       |     | LNNAV/VNAV<br>DA(H) 1079' (452') | LNNAV<br>MDA(H) 1180' (553') | Max<br>Kts | MDA(H) _____                   |  |
| A                              | 3/4 | 1 1/2                            | 1                            | 90         | 1180' (551') - 1               |  |
| B                              |     |                                  | 1 1/2                        | 140        | 1180' (551') - 1 1/2           |  |
| C                              |     |                                  | 1 3/4                        | 165        | 1180' (551') - 2               |  |
| D                              |     |                                  | 1 3/4                        | 165        | 1180' (551') - 2               |  |
| With Fremont Altimeter Setting |     |                                  |                              |            | With Fremont Altimeter Setting |  |
| LPV<br>DA(H) 942' (315')       |     | LNNAV/VNAV<br>DA(H) 1144' (517') | LNNAV<br>MDA(H) 1260' (633') | Max<br>Kts | MDA(H) _____                   |  |
| A                              | 1   | 1 3/4                            | 1                            | 90         | 1260' (631') - 1               |  |
| B                              |     |                                  | 1 3/4                        | 140        | 1260' (631') - 1 3/4           |  |
| C                              |     |                                  | 1 3/4                        | 165        | 1260' (631') - 2               |  |
| D                              |     |                                  | 2                            | 165        | 1260' (631') - 2               |  |

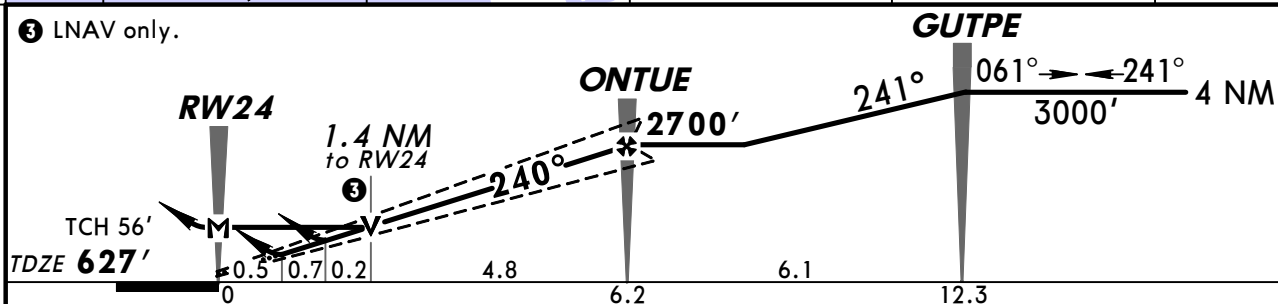
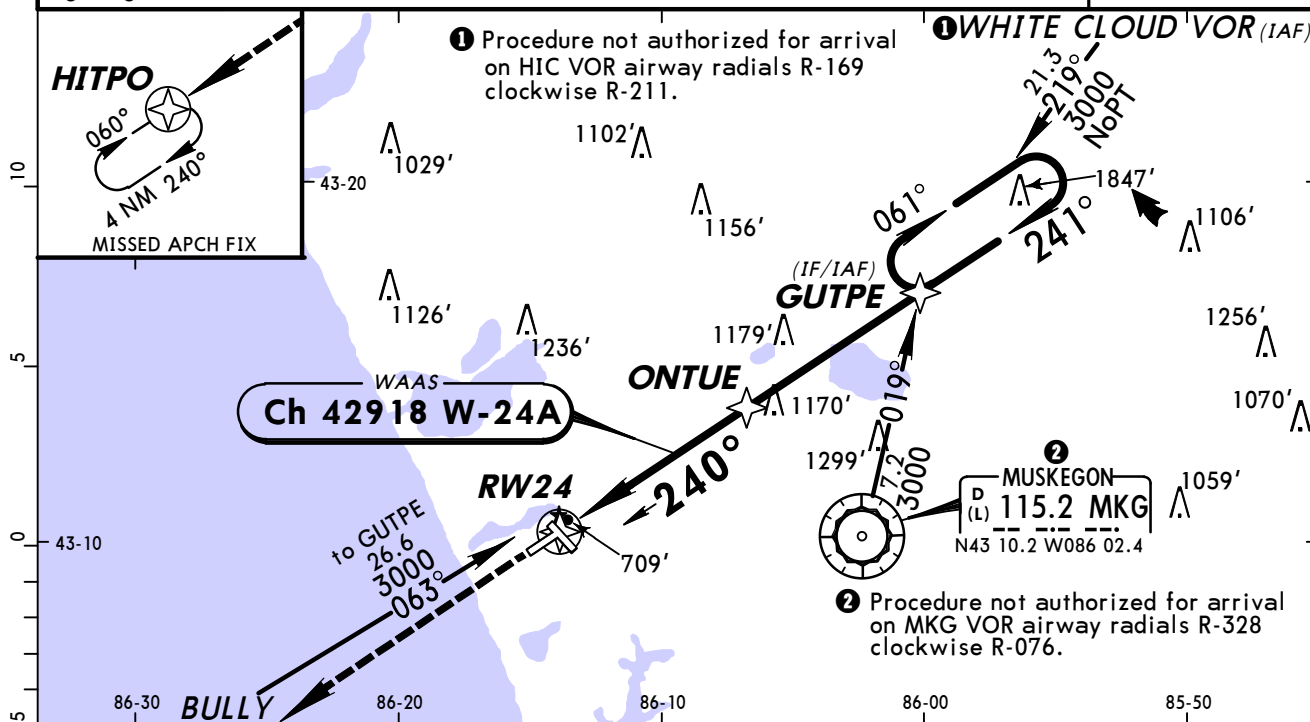
**CHANGES:** Muskegon approach frequencies.

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**TERPS**      **AMEND**  
1

BRIEFING STRIP™

|                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                          |                                                     |                                                     |                                          |                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|------------------------------------------|------------------------------------------------|
| ATIS (ASOS when Twr inop)<br><b>124.3</b>                                                                                                                                                                                                                                                                                                                                                                |  | *MUSKEGON Approach<br>(North of V2) (South of V2)<br><b>119.8 133.82</b> |                                                     | CHICAGO Center (R)<br><b>132.27</b> when App inop.  | *MUSKEGON Tower<br><b>CTAF 126.25</b>    | *Ground<br><b>121.6</b>                        |
| WAAS<br><b>Ch 42918</b><br><b>W-24A</b>                                                                                                                                                                                                                                                                                                                                                                  |  | Final<br>Apch Crs<br><b>240°</b>                                         | Minimum Alt<br><b>ONTUE</b><br><b>2700' (2073')</b> | LPV<br>DA(H)<br>(CONDITIONAL)<br><b>827' (200')</b> | Apt Elev <b>629'</b><br>TDZE <b>627'</b> | <div><div>2900'</div><div>MSA RW24</div></div> |
| MISSED APCH: Climb to 3000' direct HITPO and hold.                                                                                                                                                                                                                                                                                                                                                       |  |                                                                          |                                                     |                                                     |                                          |                                                |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. Use local altimeter setting; if not received, use Fremont altimeter setting.<br>2. DME/DME RNP-0.30 not authorized. 3. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 48°C (118°F). 4. Baro-VNAV and VDP not authorized when using Fremont altimeter setting. 5. Pilot controlled lighting 126.25. |  |                                                                          |                                                     |                                                     |                                          |                                                |



|                  |       |     |     |     |     |     |       |       |       |
|------------------|-------|-----|-----|-----|-----|-----|-------|-------|-------|
| Gnd speed-Kts    | 70    | 90  | 100 | 120 | 140 | 160 | MALSR | 3000' | HITPO |
| Glide Path Angle | 3.00° | 372 | 478 | 531 | 637 | 743 | VASI  |       |       |
| MAP at RW24      |       |     |     |     |     |     |       |       |       |

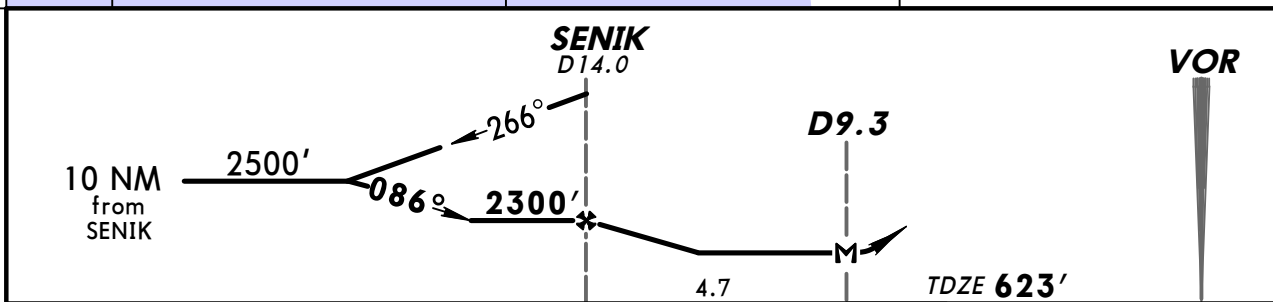
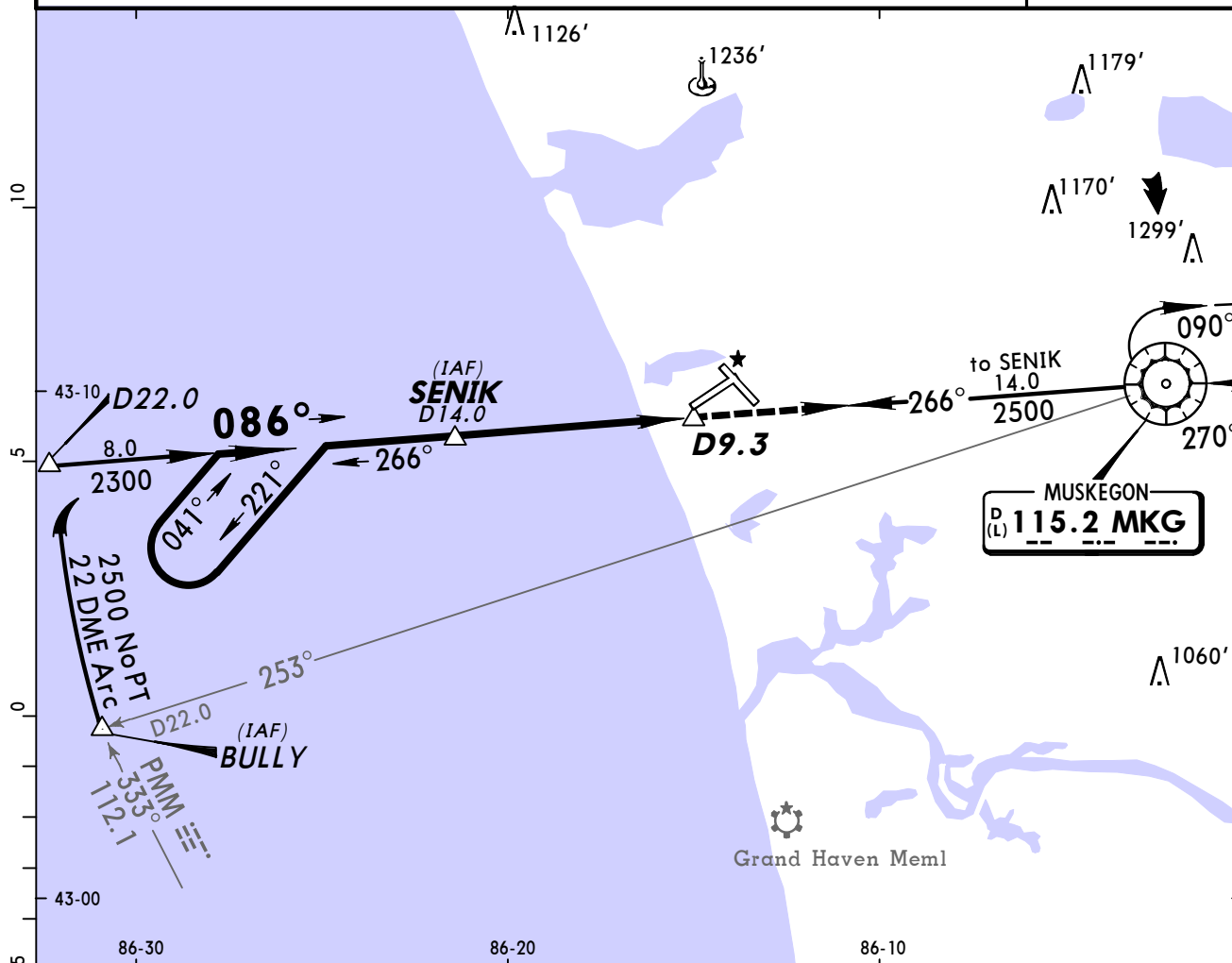
| STRAIGHT-IN LANDING RWY 24   |     |                    |   |                     |       |       | CIRCLE-TO-LAND               |  |  |
|------------------------------|-----|--------------------|---|---------------------|-------|-------|------------------------------|--|--|
| With Local Altimeter Setting |     |                    |   |                     |       |       | With Local Altimeter Setting |  |  |
| LPV                          |     | LNAV/VNAV          |   | LNAV                |       |       |                              |  |  |
| DA(H) 827' (200')            |     | DA(H) 1076' (449') |   | MDA(H) 1140' (513') |       |       | MDA(H)                       |  |  |
| RAIL or ALS out              |     | RAIL or ALS out    |   | RAIL out ALS out    |       |       | Max Kts                      |  |  |
|                              |     |                    |   |                     |       |       | 90                           |  |  |
| A                            |     |                    |   | 1/2                 | 3/4   | 1     | 1140' (511') - 1             |  |  |
| B                            | 1/2 | 3/4                | 1 | 1 1/2               | 1 1/2 | 1 1/2 | 1140' (511') - 1 1/2         |  |  |
| C                            |     |                    |   | 1 1/4               | 1 3/4 | 1 3/4 | 1180' (551') - 2             |  |  |
| D                            |     |                    |   |                     |       |       |                              |  |  |

| With Fremont Altimeter Setting |     |                    |       |                     |       |       | With Fremont Altimeter Setting |  |  |
|--------------------------------|-----|--------------------|-------|---------------------|-------|-------|--------------------------------|--|--|
| LPV                            |     | LNAV/VNAV          |       | LNAV                |       |       |                                |  |  |
| DA(H) 892' (265')              |     | DA(H) 1141' (514') |       | MDA(H) 1220' (593') |       |       | MDA(H)                         |  |  |
| RAIL or ALS out                |     | RAIL or ALS out    |       | RAIL out ALS out    |       |       | Max Kts                        |  |  |
|                                |     |                    |       |                     |       |       | 90                             |  |  |
| A                              |     |                    |       | 1/2                 | 3/4   | 1     | 1220' (591') - 1               |  |  |
| B                              | 1/2 | 1                  | 1 1/4 | 1 3/4               | 1 1/2 | 1 1/2 | 1220' (591') - 1 1/2           |  |  |
| C                              |     |                    |       | 1 1/4               | 1 3/4 | 1 3/4 | 1260' (631') - 2               |  |  |
| D                              |     |                    |       |                     |       |       |                                |  |  |



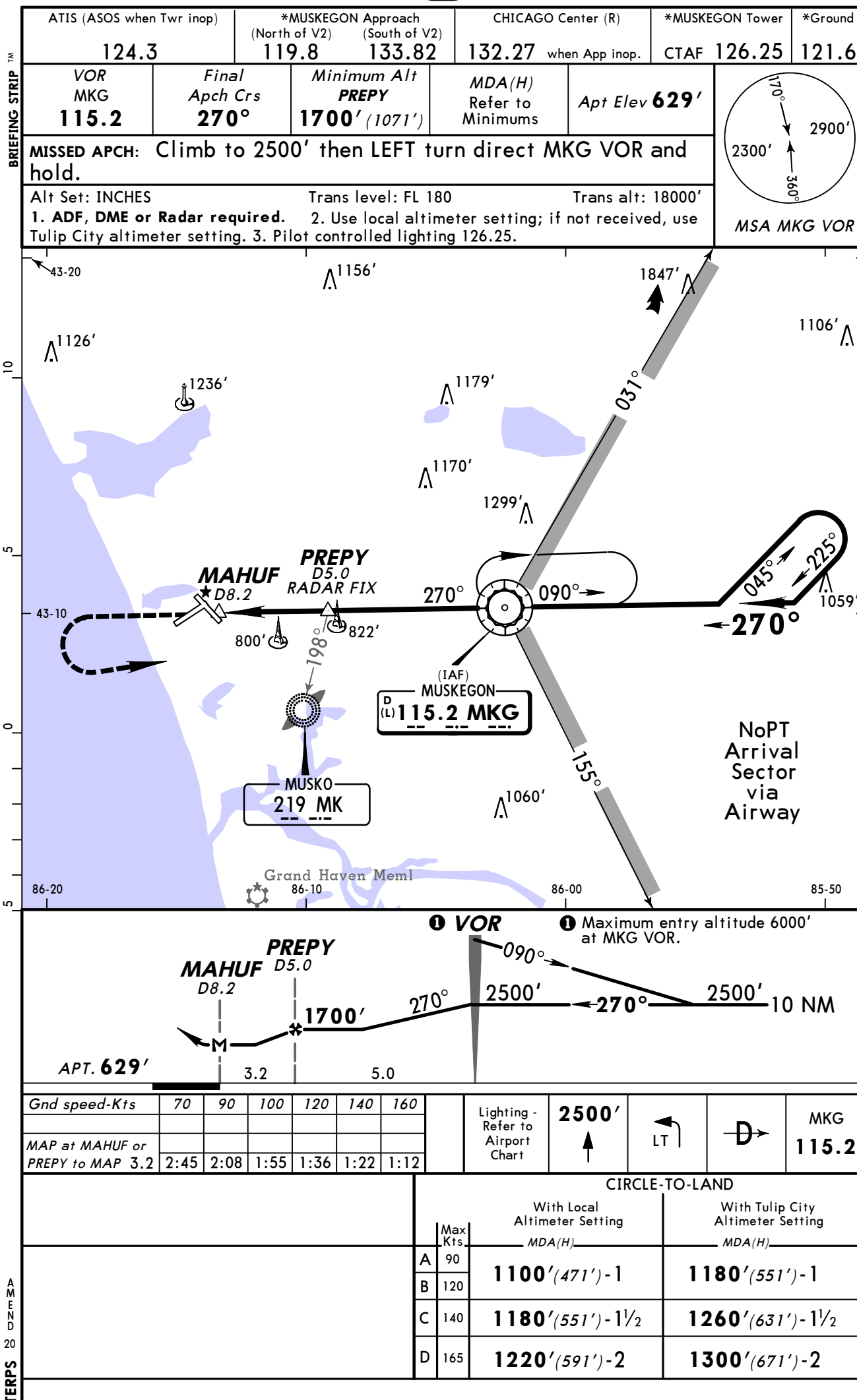
BRIEFING STRIP™

|                                                                                 |                           |                                                   |                                         |                            |                 |         |
|---------------------------------------------------------------------------------|---------------------------|---------------------------------------------------|-----------------------------------------|----------------------------|-----------------|---------|
| ATIS (ASOS when Twr inop)                                                       |                           | *MUSKEGON Approach<br>(North of V2) (South of V2) |                                         | CHICAGO Center (R)         | *MUSKEGON Tower | *Ground |
| 124.3                                                                           |                           | 119.8 133.82                                      |                                         | 132.27 when App inop.      | CTAF 126.25     | 121.6   |
| VOR<br>MKG<br>115.2                                                             | Final<br>Apch Crs<br>086° | Minimum Alt<br>SENIK<br>2300' (1677')             | MDA(H)<br>(CONDITIONAL)<br>1160' (537') | Apt Elev 629'<br>TDZE 623' |                 |         |
| MISSED APCH: Climb to 2500' direct MKG VOR and hold.                            |                           |                                                   |                                         |                            |                 |         |
| Alt Set: INCHES                                                                 |                           | Trans level: FL 180                               |                                         | Trans alt: 18000'          |                 |         |
| 1. Use local altimeter setting; if not received, use Fremont altimeter setting. |                           |                                                   |                                         |                            |                 |         |
| 2. Pilot controlled lighting 126.25.                                            |                           |                                                   |                                         |                            |                 |         |
| MSA MKG VOR                                                                     |                           |                                                   |                                         |                            |                 |         |



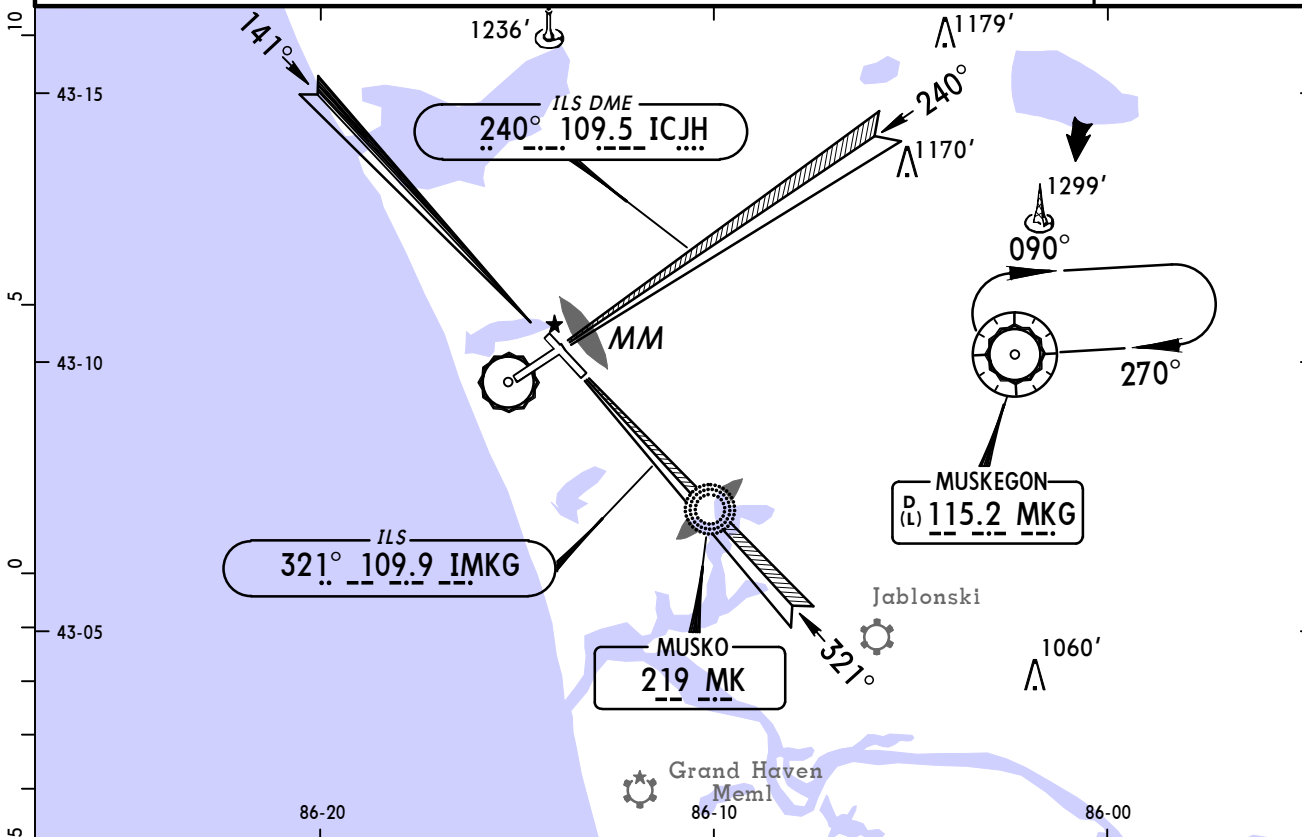
|             |  |  |  |  |  |  |  |        |              |   |              |
|-------------|--|--|--|--|--|--|--|--------|--------------|---|--------------|
|             |  |  |  |  |  |  |  | REIL   | <b>2500'</b> | → | MKG          |
|             |  |  |  |  |  |  |  | VASI-L | ↑            | → | <b>115.2</b> |
| MAP at D9.3 |  |  |  |  |  |  |  |        |              |   |              |

| STRAIGHT-IN LANDING RWY 6    |    |                                |  | CIRCLE-TO-LAND               |                   |                                |  |
|------------------------------|----|--------------------------------|--|------------------------------|-------------------|--------------------------------|--|
| MDA(H) <b>1160'</b> (537')   |    | MDA(H) <b>1240'</b> (617')     |  | With Local Altimeter Setting |                   | With Fremont Altimeter Setting |  |
| With Local Altimeter Setting |    | With Fremont Altimeter Setting |  | Max Kts                      | MDA(H)            | MDA(H)                         |  |
| A                            | 1  | 1                              |  | 90                           | 1160' (531') - 1  | 1240' (611') - 1               |  |
| B                            | 1  | 1                              |  | 120                          | 1160' (531') - 1  | 1240' (611') - 1               |  |
| C                            | 1½ | 1¾                             |  | 140                          | 1160' (531') - 1½ | 1240' (611') - 1¾              |  |
| D                            | 1¾ | 2                              |  | 165                          | 1220' (591') - 2  | 1300' (671') - 2               |  |



BRIEFING STRIP

|                                                                                                                                                                                                               |                             |                                                   |                                |                                  |                                 |         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------|--------------------------------|----------------------------------|---------------------------------|---------|
| ATIS (ASOS when Twr inop)                                                                                                                                                                                     |                             | *MUSKEGON Approach<br>(North of V2) (South of V2) |                                | CHICAGO Center (R)               | *MUSKEGON Tower                 | *Ground |
| 124.3                                                                                                                                                                                                         |                             | 119.8 133.82                                      |                                | 132.27 when App inop.            | CTAF 126.25                     | 121.6   |
| RADAR                                                                                                                                                                                                         | Final<br>Apch Crs<br>By ATC | Minimum Alt<br>No FAF                             | MDA(H)<br>Refer to<br>Minimums | Apt Elev 629'<br>TDZE -See below | <div>No MSA<br/>Published</div> |         |
| Missed Approach-See Below                                                                                                                                                                                     |                             |                                                   |                                |                                  |                                 |         |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. Procedure not authorized when Muskegon App closed.<br>2. Visibility reduction by helicopters not authorized. 3. Pilot controlled lighting 126.25. |                             |                                                   |                                |                                  |                                 |         |



**MISSED APPROACH:**

**Runway 6:** Climb to 2500' then RIGHT turn direct MKG VOR and hold.  
**Runways 14, 24:** Climb to 2500' then LEFT turn direct MKG VOR and hold.  
**Runway 32:** Climb to 2500' then RIGHT turn direct MKG VOR and hold.

|                  |                  |                  |
|------------------|------------------|------------------|
| RWY 6            | RWY 14, 24       | RWY 32           |
| TDZE <b>623'</b> | TDZE <b>627'</b> | TDZE <b>629'</b> |

ASR Rws 6, 14, 24, 32: MAP at Rwy Thr

Lighting -  
Refer to  
Airport Chart

| ASR 6<br>MDA(H) 1140' (517')  |   |          |             | STRAIGHT-IN LANDING           |             |                 |         | ASR 14<br>MDA(H) 1080' (453') |        |     |                |                |  |
|-------------------------------|---|----------|-------------|-------------------------------|-------------|-----------------|---------|-------------------------------|--------|-----|----------------|----------------|--|
| A                             | 1 |          |             | 1                             |             |                 |         |                               |        |     |                |                |  |
| B                             |   |          |             |                               |             |                 |         |                               |        |     |                |                |  |
| C                             |   |          |             |                               |             |                 |         |                               |        |     |                |                |  |
| D                             |   |          |             |                               |             |                 |         |                               |        |     |                |                |  |
| 1½                            |   |          |             | 1¼                            |             |                 |         |                               |        |     |                |                |  |
| 1¾                            |   |          |             | 1½                            |             |                 |         |                               |        |     |                |                |  |
| STRAIGHT-IN LANDING           |   |          |             |                               |             |                 |         |                               |        |     |                | CIRCLE-TO-LAND |  |
| ASR 24<br>MDA(H) 1040' (413') |   |          |             | ASR 32<br>MDA(H) 1100' (471') |             |                 |         |                               |        |     |                |                |  |
|                               |   | RAIL out | ALS out     |                               |             | RAIL out        | ALS out | Max Kts                       | MDA(H) |     |                |                |  |
| A                             | ¾ | ¾        | 1           | RVR 24 or ½                   | RVR 40 or ¾ | RVR 50 or 1     | 90      | 1140' (511')-1                |        |     |                |                |  |
| B                             |   |          |             |                               |             |                 | 120     |                               |        |     |                |                |  |
| C                             |   | 1¼       | RVR 40 or ¾ | RVR 60 or 1¼                  | 140         | 1140' (511')-1½ |         |                               |        |     |                |                |  |
| D                             | 1 |          |             |                               | RVR 50 or 1 |                 |         |                               | 1½     | 165 | 1200' (571')-2 |                |  |

## **General Information**

Location: MT Clemens MI USA  
IATA Code: MTC  
Lat/Long: N42° 36.8' W082° 50.2'  
Elevation: 580 ft

Airport Use: Military  
Magnetic Variation: 7.7°W  
Sectional Chart: Detroit

Fuel Types: 115-145 Octane, Jet, Jet 4  
Repair Types: Major Airframe, Major Engine  
Customs: No  
Airport Type: IFR  
Landing Fee: No  
Control Tower: Yes  
Jet Start Unit: Yes  
LLWS Alert: No  
Beacon: Yes

Sunrise: 1211 Z  
Sunset: 2318 Z,

## **Runway Information**

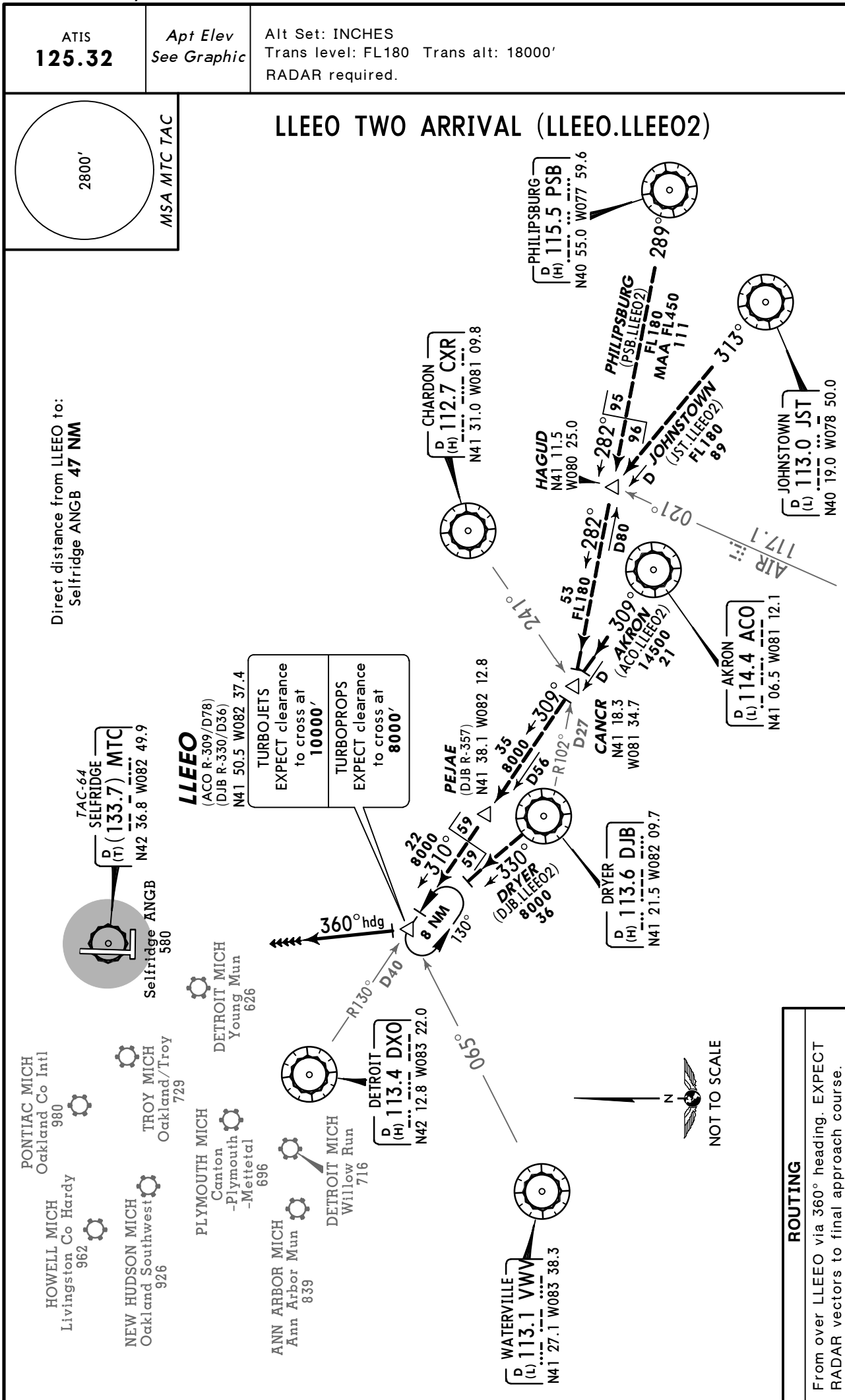
Runway: 01  
Length x Width: 9001 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 580 ft  
Lighting: Edge, ALS, REIL  
Stopway: 1000 ft

Runway: 19  
Length x Width: 9001 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 579 ft  
Lighting: Edge, ALS, REIL  
Stopway: 1000 ft

## **Communication Information**

ATIS 125.325  
Selfridge Tower 120.15  
Selfridge Ground Control 128.3  
Selfridge Clearance Delivery 119.0  
Selfridge Approach Control 119.6  
Selfridge Departure Control 119.6  
Selfridge Radar 119.6  
Detroit AIR Operations 569.2  
Cleveland Center 127.7 Remote Communications Air-Ground



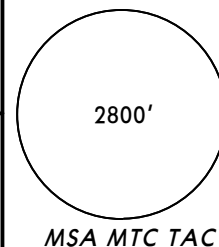




ATIS  
**125.32**

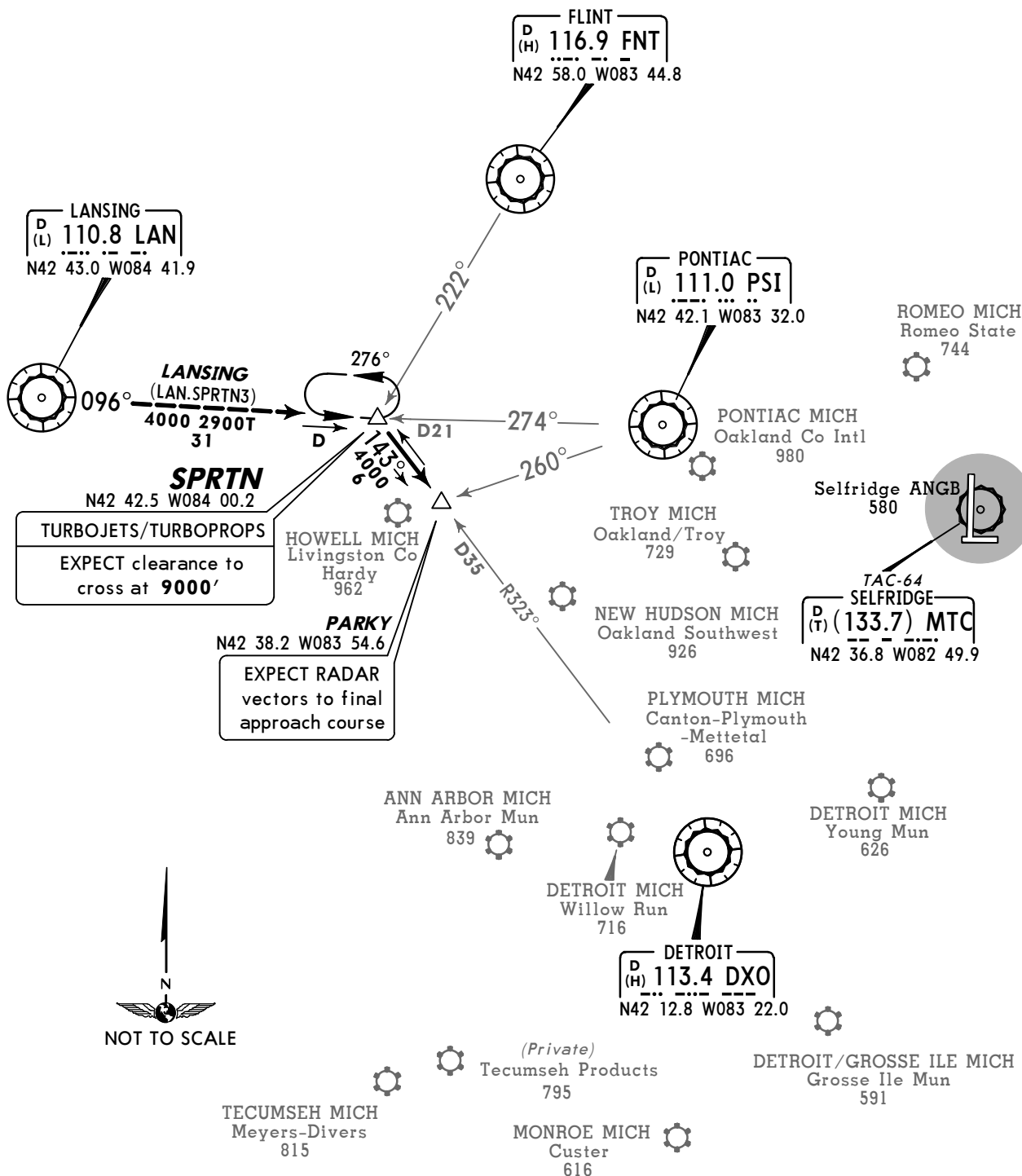
*Apt Elev*  
*See Graphic*

Alt Set: INCHES  
Trans level: FL180 Trans alt: 18000'  
This STAR for use at or above 9000'.



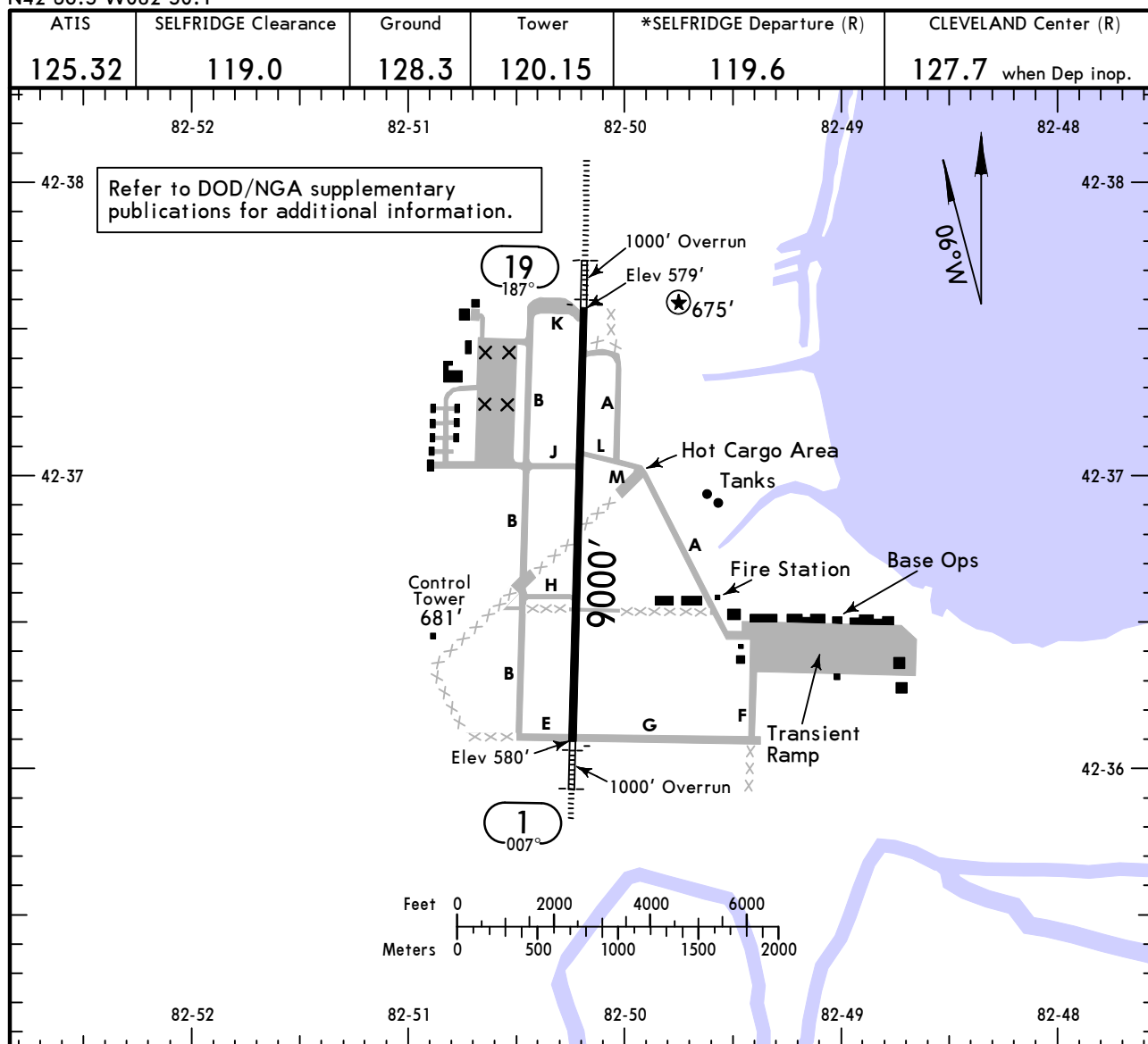
## SPRTN THREE ARRIVAL (SPRTN.SPRTN3)

Direct distance from PARKY to:  
Selfridge ANGB **48 NM**



### ROUTING

From over SPRTN via DXO R-323 to PARKY, then EXPECT RADAR vectors to final approach course.



**ADDITIONAL RUNWAY INFORMATION**

| RWY |      |        |      |        | USABLE LENGTHS |             |       |
|-----|------|--------|------|--------|----------------|-------------|-------|
|     |      |        |      |        | LANDING BEYOND | TAKE-OFF    | WIDTH |
|     |      |        |      |        | Threshold      | Glide Slope |       |
| 1   | HIRL | SALS   | REIL | PAPI-L | RVR            | 7965'       | 150'  |
| 19  | HIRL | ALSF-I | REIL | PAPI-L | RVR            | 7949'       |       |

**TAKE-OFF & OBSTACLE DEPARTURE PROCEDURE**

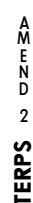
| WIRE OFF & OBSTACLE DEPARTURE PROCEDURE |               |                  |           |                                    |               |                                | AS ALTERNATE |       |       |
|-----------------------------------------|---------------|------------------|-----------|------------------------------------|---------------|--------------------------------|--------------|-------|-------|
| Rwy 1                                   |               |                  |           | Rwy 19                             |               |                                |              |       |       |
| With Min climb of 280'/NM to 1000'      |               |                  | Other     | With Min climb of 260'/NM to 1600' |               | For Climb in Visual Conditions |              |       |       |
| Adequate Vis Ref                        | STD           | Adequate Vis Ref |           | STD                                |               |                                |              |       |       |
| 1 & 2 Eng                               | RVR 16 or 1/4 | RVR 50 or 1      | 300-1 1/4 | RVR 16 or 1/4                      | RVR 50 or 1   | 1300-2 1/2                     | A            | 600-2 | 800-2 |
| 3 & 4 Eng                               |               | RVR 24 or 1/2    |           |                                    | RVR 24 or 1/2 |                                | B            |       |       |
|                                         |               |                  |           |                                    |               |                                | C            |       |       |
|                                         |               |                  |           |                                    |               |                                | D            |       |       |

OBSTACLE DP: Rwy 19: Remain within 5.6 NM of KMTC airport, cross KMTC airport at or above 1700' before proceeding on course. Max airspeed 250 KIAS.

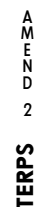
TAKE-OFF OBSTACLES: Rwy 19: Power poles 2274' from DER 38' right of centerline, 36' AGL/616' MSL. Trees 3310' from DER 929' right of centerline, 80' AGL/660' MSL. Rwy 1: Rising terrain 6' out to 237' from DER beginning 500' out to 563' left of centerline, up to 585' MSL (up to 6' above Thr). Fence from 68' out to 220' from DER beginning 341' to 523' right of centerline, 10' AGL/595' MSL.

Trees starting 3043' out to 3099' from DER beginning 451' to 927' right of centerline, 80' AGL/660' MSL. Trees starting 2334' out to 3059' from DER beginning 1057' to 1105' left of centerline, 80' AGL/660' MSL. Vehicle 1560' from DER 427' left of centerline, 15' AGL/600' MSL. West bracket reflector 997' from DER 226' left of centerline, 15' AGL/592' MSL.

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BRIEFING STRIP™

**TERPS**  
**AMEND**  
**2**

**TERPS**  
**AMEND**  
**2**

## General Information

Location: Oscoda MI USA  
IATA Code: OSC  
Lat/Long: N44° 27.1' W083° 23.6'  
Elevation: 633 ft

Airport Use: Public  
Magnetic Variation: 7.7°W  
Sectional Chart: Lake Huron

Fuel Types: 100 Octane (LL), Jet A  
Oxygen Types: Low Pressure  
Repair Types: Major Airframe, Major Engine  
Customs: No  
Airport Type: IFR  
Landing Fee: No  
Control Tower: No  
Jet Start Unit: No  
LLWS Alert: No  
Beacon: Yes  
Pattern Altitude: 1000 ft AGL

Sunrise: 1215 Z  
Sunset: 2318 Z,

## Runway Information

Runway: 06  
Length x Width: 11800 ft x 200 ft  
Surface Type: concrete  
TDZ-Elev: 633 ft  
Lighting: Edge, Part time, Pilot controlled

Runway: 24  
Length x Width: 11800 ft x 200 ft  
Surface Type: concrete  
TDZ-Elev: 624 ft  
Lighting: Edge, ALS, Part time, Pilot controlled

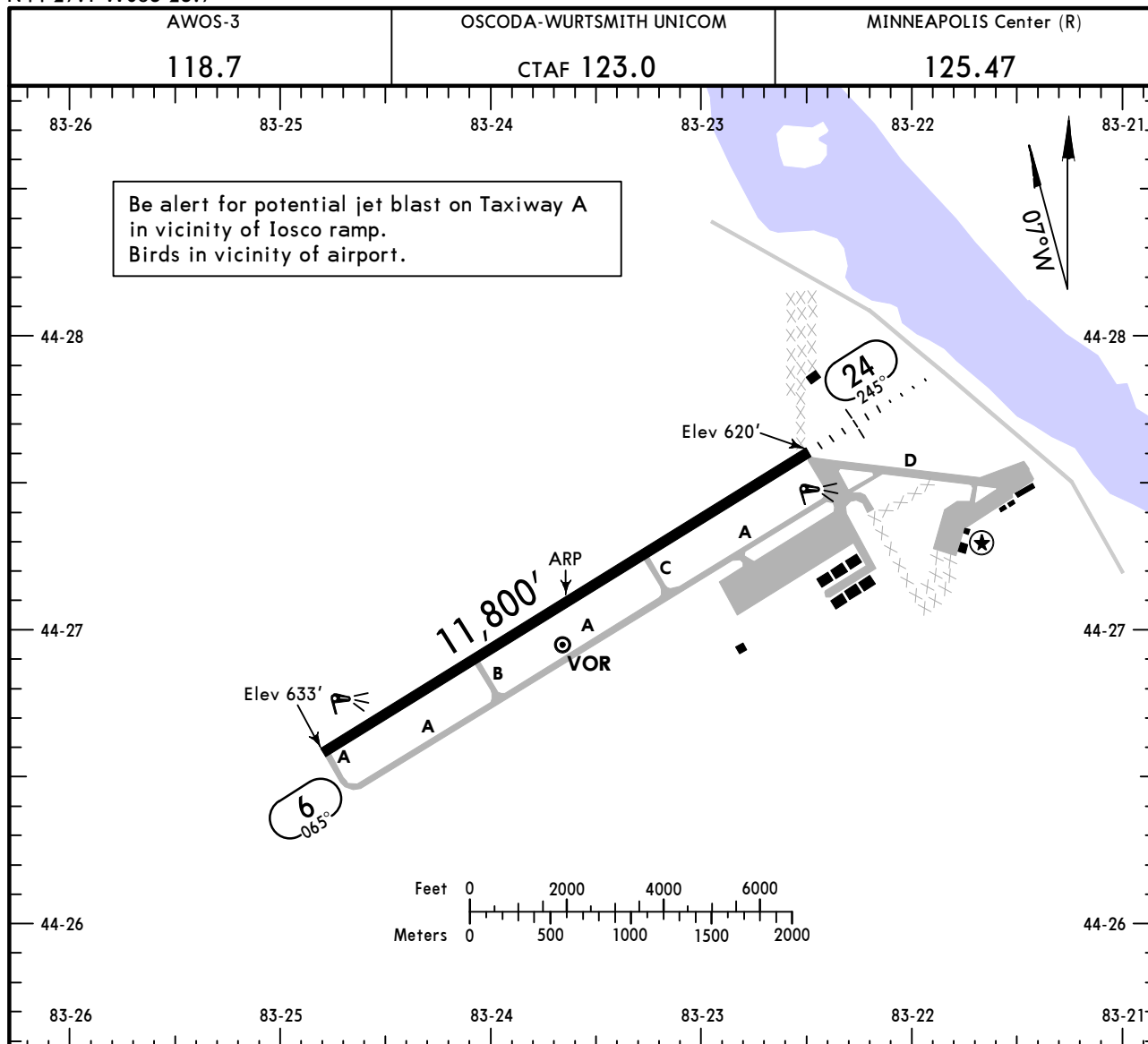
## Communication Information

AWOS 118.7  
Oscoda-Wurtsmith Unicom 123.0 CTAF PCL  
Minneapolis Center 125.475 Remote Communications Air-Ground

KOSC/OSC  
Apt Elev 633'  
N44 27.1 W083 23.7

JEPPESEN  
17 FEB 12 (11-1)

OSCODA, MICH  
-WURTSMITH

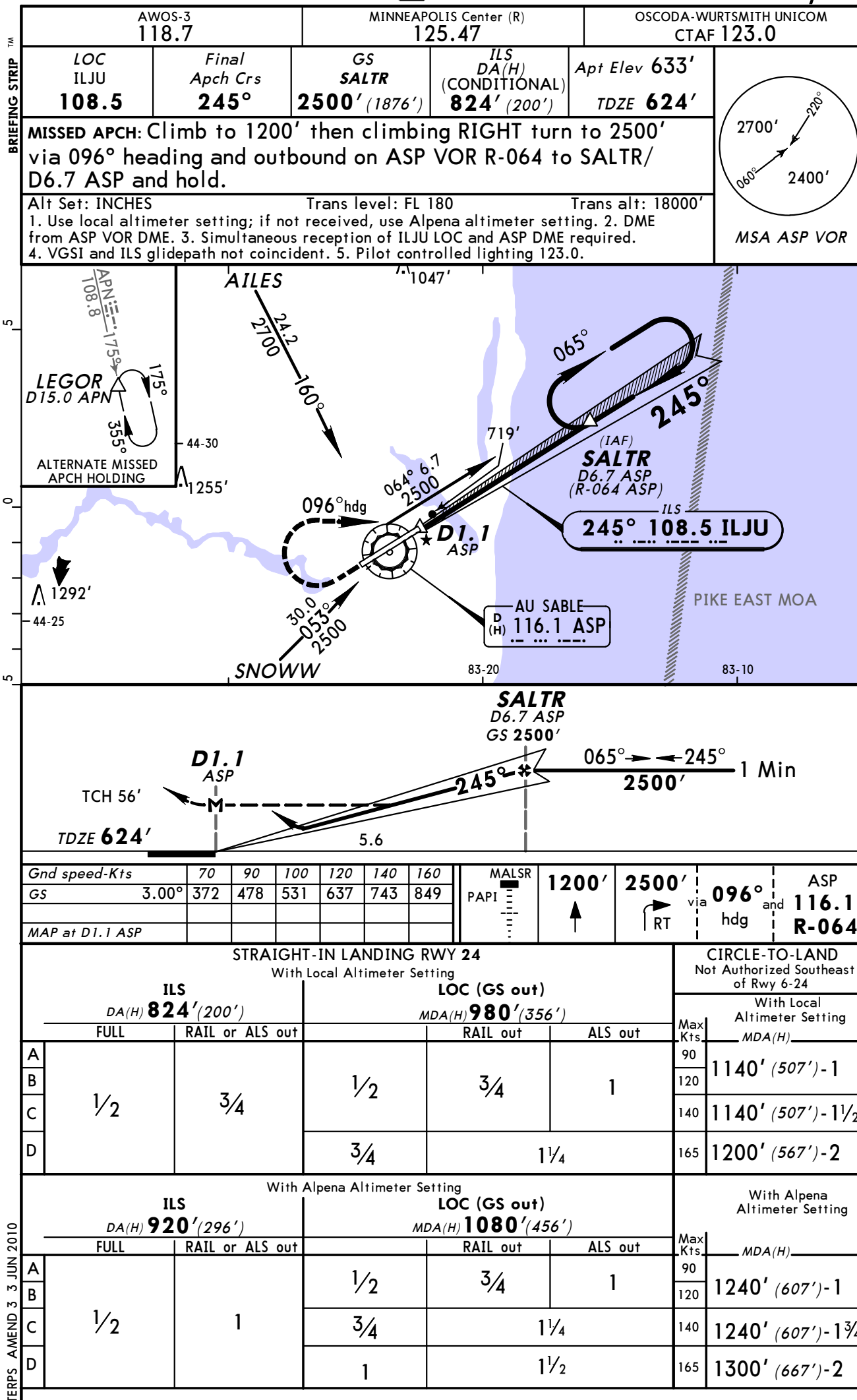


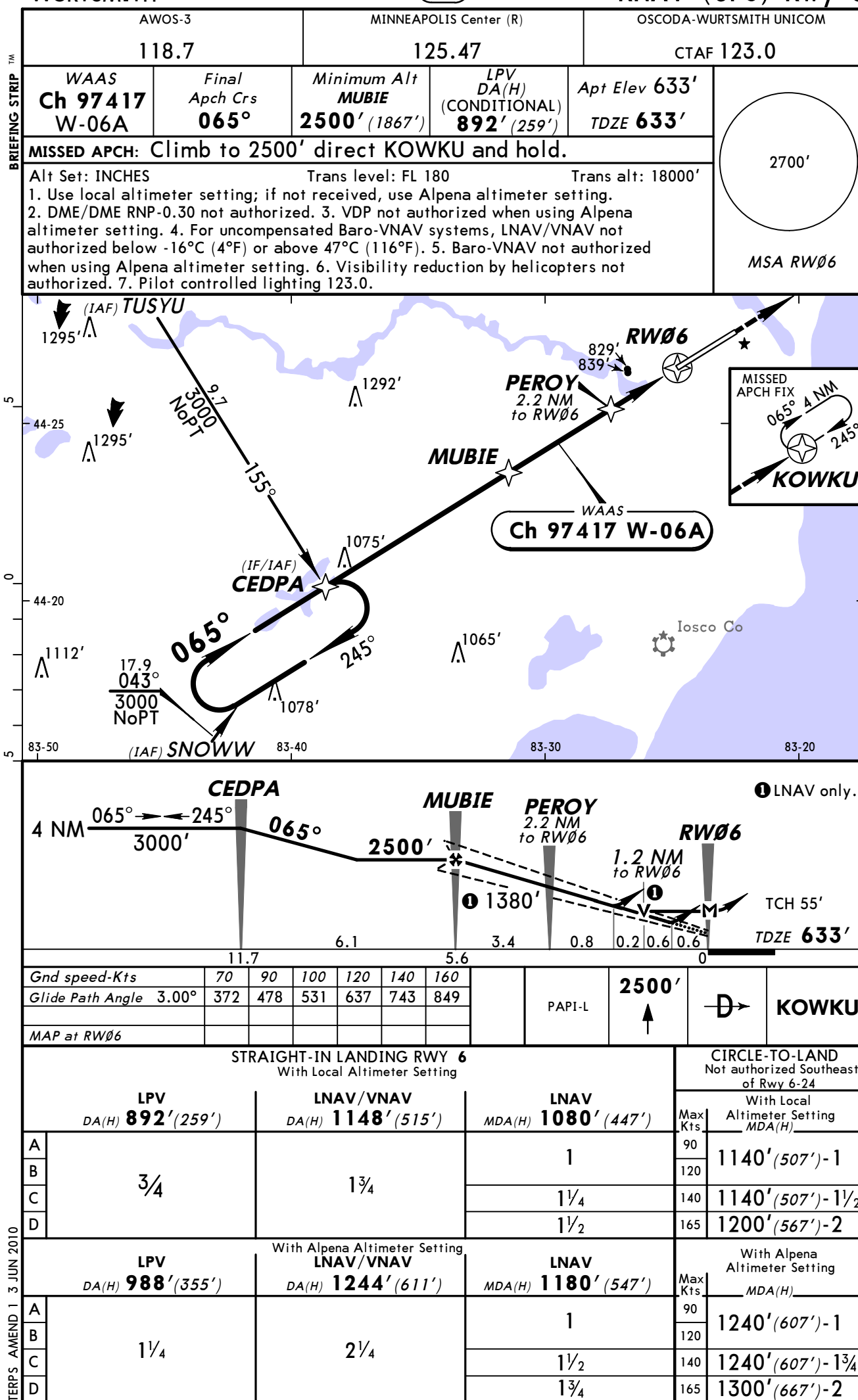
#### ADDITIONAL RUNWAY INFORMATION

| RWY |   |                                              | USABLE LENGTHS |                            | TAKE-OFF | WIDTH |
|-----|---|----------------------------------------------|----------------|----------------------------|----------|-------|
|     |   |                                              | Threshold      | Landing Beyond Glide Slope |          |       |
| 6   | ① | ② HIRL ② PAPI-L (angle 3.0°) grooved         |                |                            |          | 200'  |
| 24  | ② | ② HIRL ② MALSR ② PAPI-L (angle 3.0°) grooved |                | 10,765'                    |          |       |
|     |   |                                              |                |                            |          |       |
|     |   |                                              |                |                            |          |       |
|     |   |                                              |                |                            |          |       |
|     |   |                                              |                |                            |          |       |

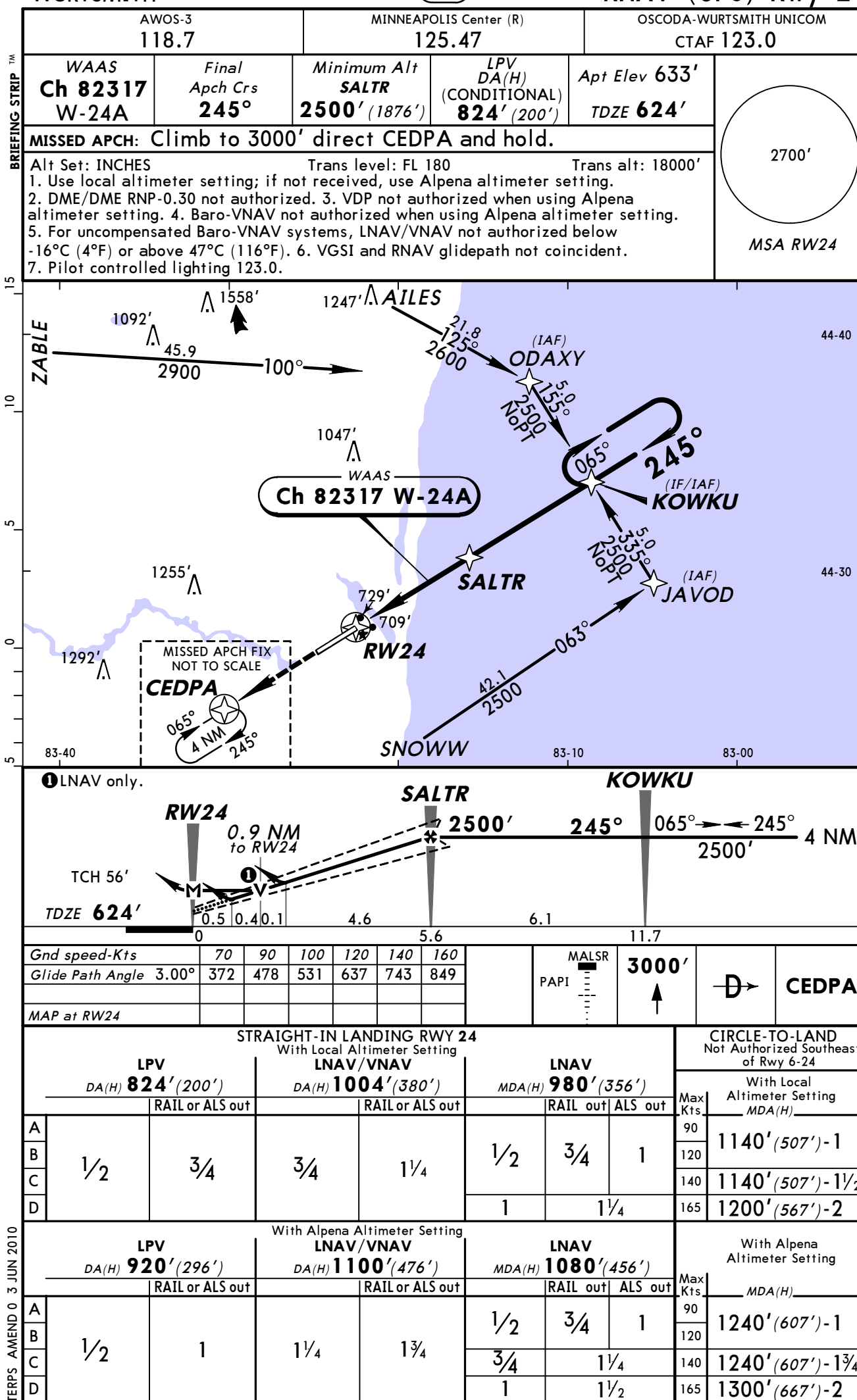
- ① During daylight hours tailwinds may exist over approach ends of Rwy 6 and Rwy 24 simultaneously.  
② Activate on 123.0.

|           | TAKE-OFF         |     | FOR FILING AS ALTERNATE                      |       |
|-----------|------------------|-----|----------------------------------------------|-------|
|           | All Rwys         |     | Authorized Only When Local Weather Available |       |
|           | Adequate Vis Ref | STD | RNAV (GPS) Rwy 24<br>RNAV (GPS) Rwy 6        | Other |
| 1 & 2 Eng | 1/4              | 1   | 800-2                                        | NA    |
| 3 & 4 Eng |                  | 1/2 |                                              |       |
|           |                  |     |                                              |       |
|           |                  |     |                                              |       |











## General Information

Location: Pellston MI USA  
IATA Code: PLN  
Lat/Long: N45° 34.3' W084° 47.8'  
Elevation: 721 ft

Airport Use: Public  
Magnetic Variation: 6.9°W  
Sectional Chart: Lake Huron

Fuel Types: 100 Octane (LL), Jet A  
Repair Types: Major Airframe, Major Engine  
Customs: No  
Airport Type: IFR  
Landing Fee: Yes  
Control Tower: No  
Jet Start Unit: Yes  
LLWS Alert: No  
Beacon: Yes

Sunrise: 1222 Z  
Sunset: 2322 Z,

## Runway Information

Runway: 05  
Length x Width: 5401 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 716 ft  
Lighting: Edge, REIL, Part time, Pilot controlled

Runway: 14  
Length x Width: 6513 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 718 ft  
Lighting: Edge, REIL, Part time, Pilot controlled

Runway: 23  
Length x Width: 5401 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 721 ft  
Lighting: Edge, REIL, Part time, Pilot controlled

Runway: 32  
Length x Width: 6513 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 712 ft  
Lighting: Edge, ALS, Part time, Pilot controlled

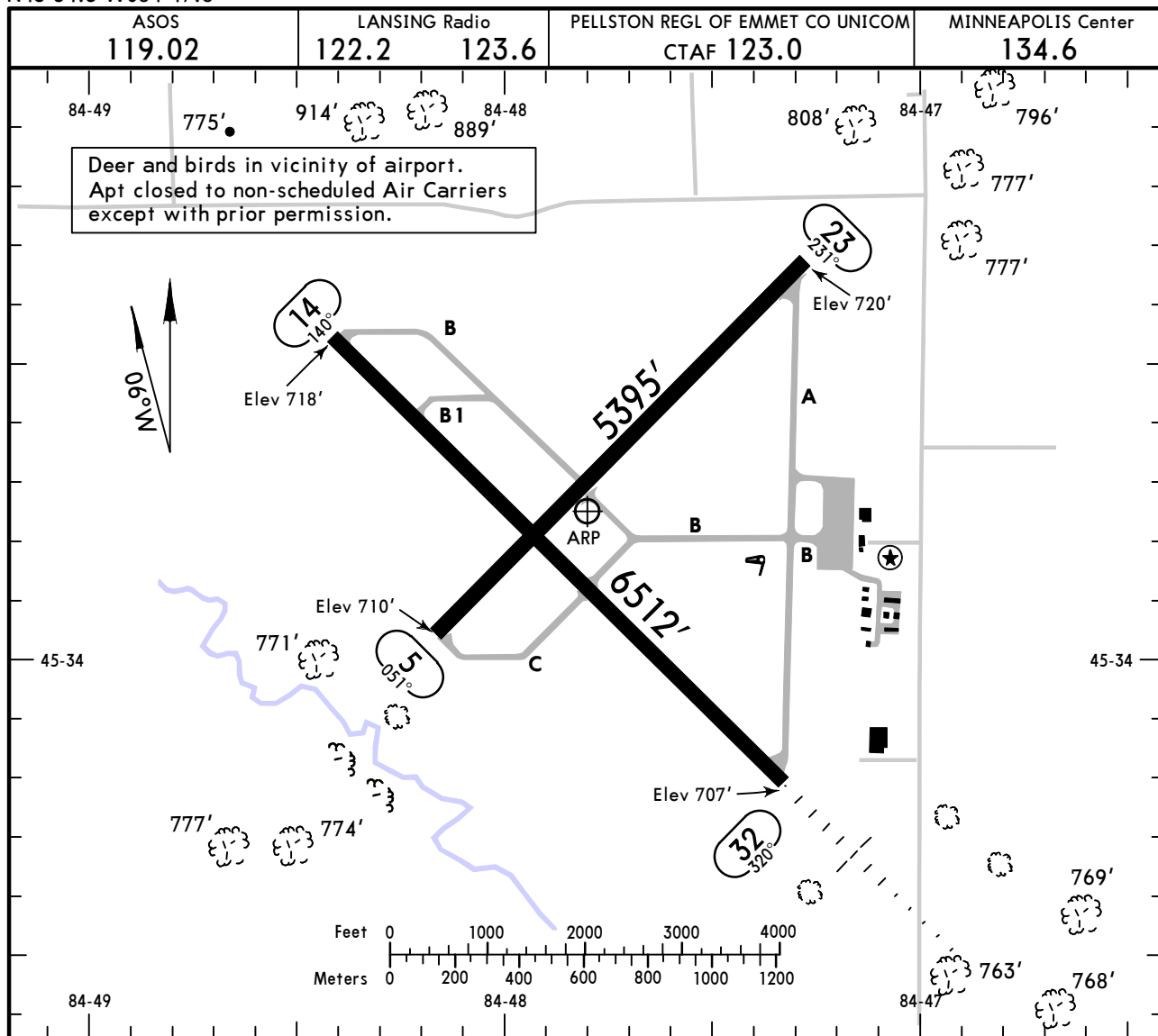
**Communication Information**

ASOS 119.025  
Pellston Regl Apt of Emme Unicom 123.0 CTAF PCL  
Lansing Flight Service Station 123.6 RCO  
Lansing Flight Service Station 122.3 RCO  
Lansing Flight Service Station 122.2 RCO  
Minneapolis Center 134.6 Remote Communications Air-Ground

KPLN/PLN  
Apt Elev 721'  
N45 34.3 W084 47.8

JEPPesen  
11 NOV 11 (11-1)

PELLSTON, MICH  
PELLSTON REGL OF EMMET CO



ADDITIONAL RUNWAY INFORMATION

| ADDITIONAL RUNWAY INFORMATION |        |         |        |         | USABLE LENGTHS |             | WIDTH |          |
|-------------------------------|--------|---------|--------|---------|----------------|-------------|-------|----------|
| RWY                           |        |         |        |         | LANDING BEYOND |             |       | TAKE-OFF |
|                               |        |         |        |         | Threshold      | Glide Slope |       |          |
| 5                             | ① MIRL | ① REIL  | VASI-R | grooved |                |             |       | 150'     |
| 23                            | ① MIRL | ① REIL  | VASI-L | grooved |                |             |       |          |
| 14                            | ① HIRL | ① REIL  | VASI-L | grooved |                |             |       | 150'     |
| 32                            | ① HIRL | ① MALSR |        | grooved |                | 5522'       |       |          |
|                               |        |         |        |         |                |             |       |          |

① Activate on 123.0 0030-0500LT.

TAKE-OFF & OBSTACLE DEPARTURE PROCEDURE

|              | Rwys 5, 14          |     | Rwy 23                                |     |                                      | Rwy 32                                |     |                                      |
|--------------|---------------------|-----|---------------------------------------|-----|--------------------------------------|---------------------------------------|-----|--------------------------------------|
|              | Adequate<br>Vis Ref | STD | With Mim Climb<br>of 260'/NM to 1800' |     | For Climb<br>In Visual<br>Conditions | With Mim Climb<br>of 290'/NM to 1100' |     | For Climb<br>In Visual<br>Conditions |
|              |                     |     | Adequate<br>Vis Ref                   | STD |                                      | Adequate<br>Vis Ref                   | STD |                                      |
| 1 & 2<br>Eng | 1/4                 | 1   | 1/4                                   | 1   | 1000-2½                              | 1/4                                   | 1   | 1000-2½                              |
| 3 & 4<br>Eng |                     | 1/2 |                                       | 1/2 |                                      |                                       | 1/2 |                                      |

OBSTACLE DP: Rwys 23, 32 - For climb in visual conditions: Cross Pellston Regl of Emmet Co at or above 1600'.

FOR FILING AS ALTERNATE

Authorized Only When Local Weather Available

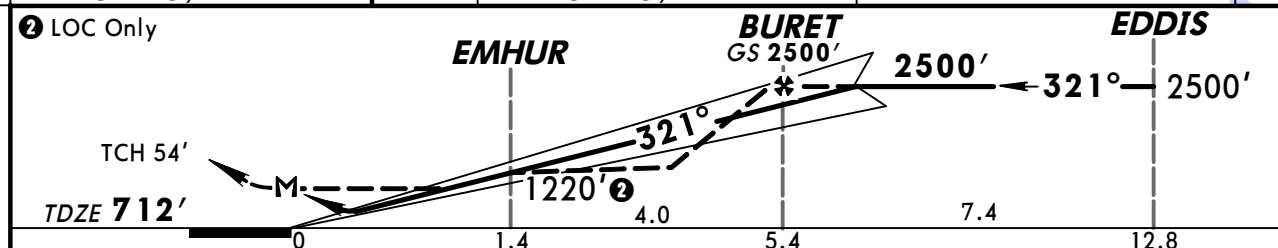
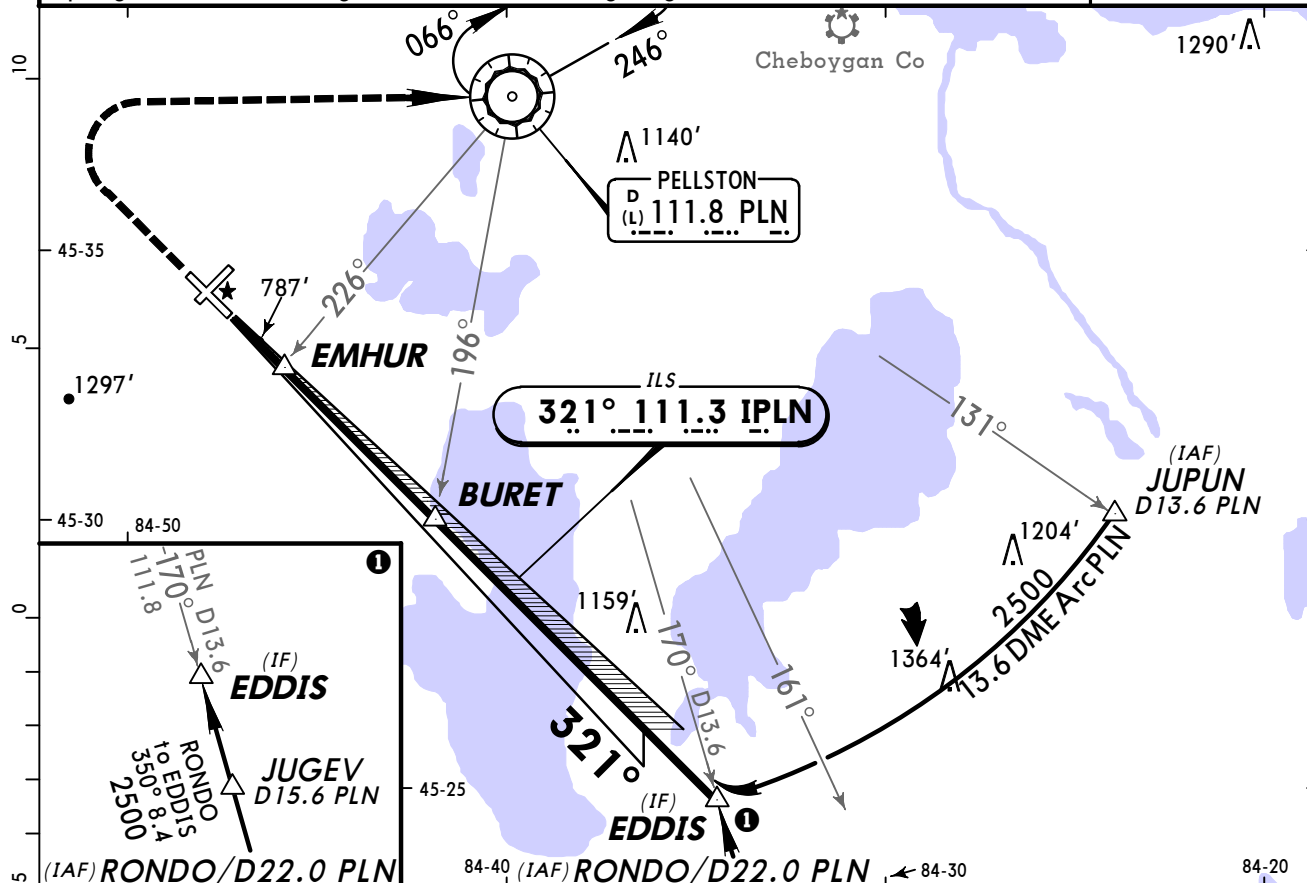
|            |        | LOC Rwy 32<br>RNAV (GPS) Rwy 23<br>RNAV (GPS) Rwy 32 |        |                  |               |
|------------|--------|------------------------------------------------------|--------|------------------|---------------|
| ILS Rwy 32 |        | VOR Rwy 23                                           |        | RNAV (GPS) Rwy 5 | VOR DME Rwy 5 |
| A          | 600-2  | 800-2                                                | 900-2  |                  | 900-2         |
| B          |        |                                                      | 900-2½ |                  | 900-2½        |
| C          |        |                                                      | 900-2¾ |                  | 900-2¾        |
| D          | 700-2¼ | 800-2¼                                               | 900-2¾ |                  | 900-2¾        |

CHANGES: None.

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# KPLN/PLN PELLSTON REGL OF EMMET CO 11 NOV 11 11-1 PELLSTON, MICH ILS or LOC Rwy 32

|                                                                                                                                                                                                             |                             |                              |                                                |                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------|------------------------------------------------|----------------------------|
| ASOS<br>119.02                                                                                                                                                                                              | MINNEAPOLIS Center<br>134.6 | LANSING Radio<br>122.2 123.6 | PELLSTON REGL OF EMMET CO UNICOM<br>CTAF 123.0 |                            |
| LOC<br>IPLN<br>111.3                                                                                                                                                                                        | Final<br>Apch Crs<br>321°   | GS<br>BURET<br>2500' (1788') | ILS<br>DA(H)<br>(CONDITIONAL)<br>912' (200')   | Apt Elev 721'<br>TDZE 712' |
| <b>MISSED APCH:</b> Climb to 1400' then climbing RIGHT turn to 2600' direct PLN VOR and hold.                                                                                                               |                             |                              |                                                | 3200'                      |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br><b>1. DME required.</b> 2. Use local altimeter setting; if not received, use Harbor Springs Altimeter setting. 3. Pilot controlled lighting 123.0. |                             |                              |                                                | MSA PLN VOR                |



|               |       |      |      |      |      |      |       |  |       |       |           |
|---------------|-------|------|------|------|------|------|-------|--|-------|-------|-----------|
| Gnd speed-Kts | 70    | 90   | 100  | 120  | 140  | 160  | MALSR |  | 1400' | 2600' | PLN 111.8 |
| GS            | 3.00° | 372  | 478  | 531  | 637  | 743  | 849   |  |       | RT    |           |
| BURET to MAP  | 5.4   | 4:38 | 3:36 | 3:14 | 2:42 | 2:19 | 2:02  |  |       |       |           |

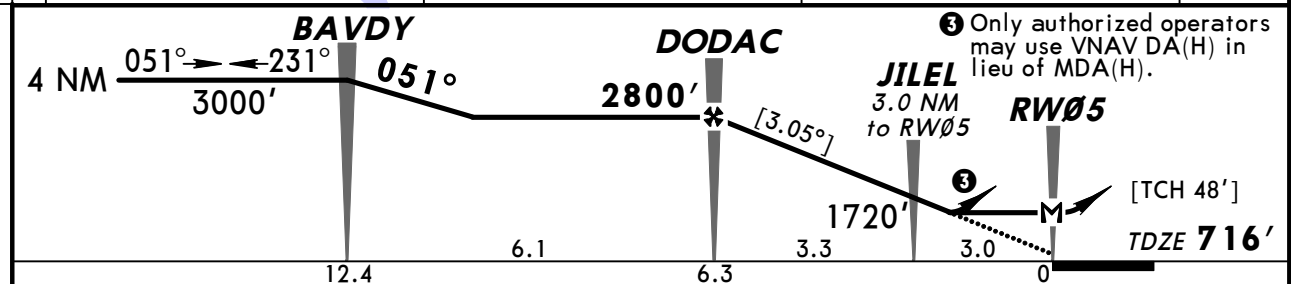
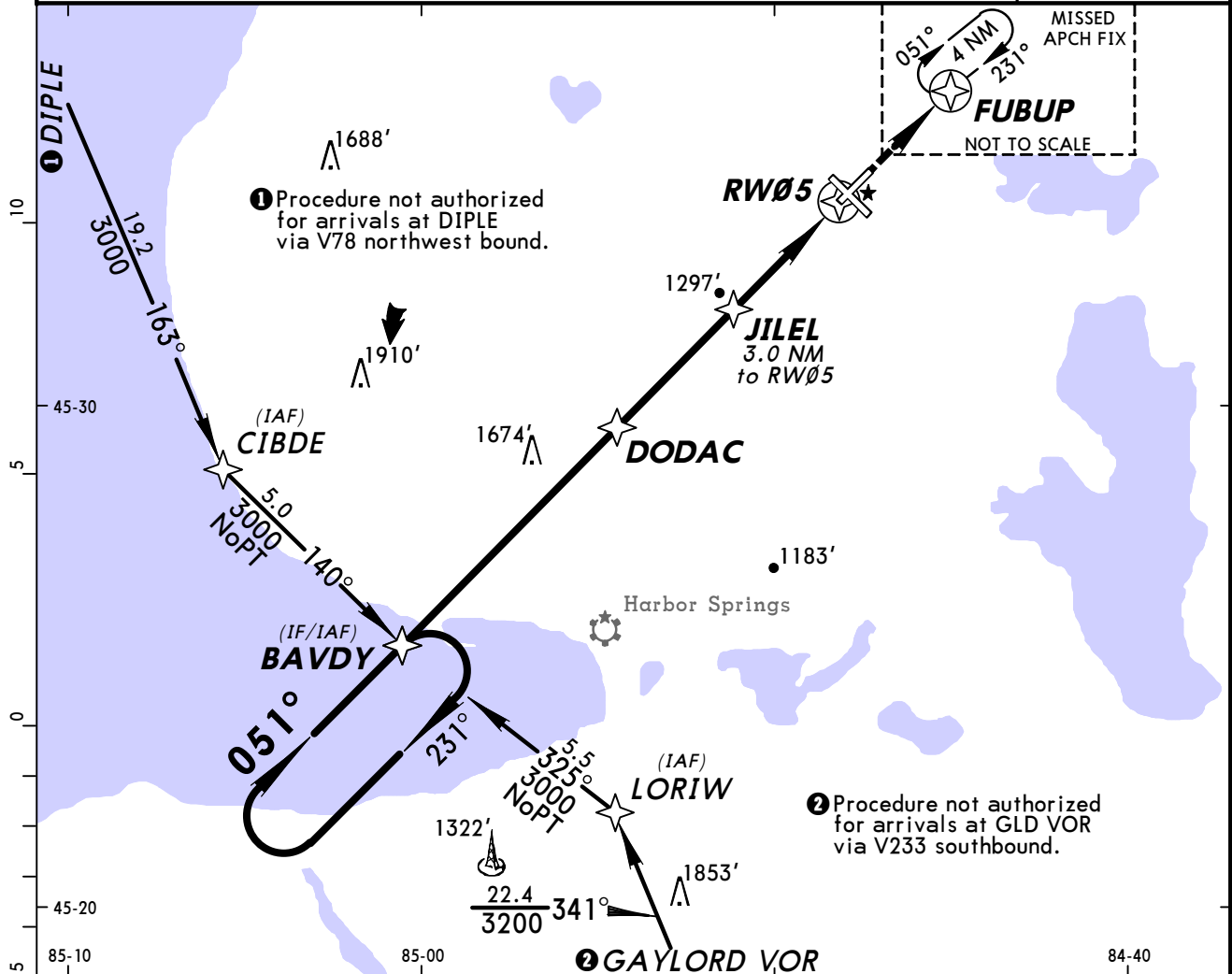
| STRAIGHT-IN LANDING RWY 32<br>With Local Altimeter Setting |                 |                                     |         |          |                     |          |         | CIRCLE-TO-LAND<br>With Local Altimeter Setting |                  |                      |                      |
|------------------------------------------------------------|-----------------|-------------------------------------|---------|----------|---------------------|----------|---------|------------------------------------------------|------------------|----------------------|----------------------|
| ILS<br>DA(H) 912' (200')                                   |                 | LOC (GS out)<br>MDA(H) 1080' (368') |         |          | MDA(H) 1220' (508') |          |         | Max Kts                                        |                  | MDA(H)               |                      |
| FULL                                                       | RAIL or ALS out | RAIL out                            | ALS out | RAIL out | ALS out             | RAIL out | ALS out | 90                                             | 120              | 140                  | 165                  |
| A                                                          |                 |                                     |         |          |                     |          |         | 1260' (539') - 1                               | 1280' (559') - 1 | 1280' (559') - 1 1/2 | 1420' (699') - 2 1/4 |
| B                                                          | 1/2             | 3/4                                 | 1/2     | 3/4      | 1                   | 1/2      | 3/4     | 1                                              |                  |                      |                      |
| C                                                          |                 |                                     |         |          |                     |          |         |                                                |                  |                      |                      |
| D                                                          |                 |                                     | 3/4     | 1 1/4    | 1                   | 1 1/2    |         |                                                |                  |                      |                      |
| With Harbor Springs Altimeter Setting                      |                 |                                     |         |          |                     |          |         | With Harbor Springs Altimeter Setting          |                  |                      |                      |
| DA(H) 940' (228')                                          |                 | MDA(H) 1120' (408')                 |         |          | MDA(H) 1260' (548') |          |         | Max Kts                                        |                  | MDA(H)               |                      |
| FULL                                                       | RAIL or ALS out | RAIL out                            | ALS out | RAIL out | ALS out             | RAIL out | ALS out | 90                                             | 120              | 140                  | 165                  |
| A                                                          |                 |                                     |         |          |                     |          |         | 1300' (579') - 1                               | 1320' (599') - 1 | 1320' (599') - 1 1/2 | 1460' (739') - 2 1/4 |
| B                                                          | 1/2             | 3/4                                 | 1/2     | 3/4      | 1                   | 1/2      | 3/4     | 1                                              |                  |                      |                      |
| C                                                          |                 |                                     |         |          |                     |          |         |                                                |                  |                      |                      |
| D                                                          |                 |                                     | 3/4     | 1 1/4    | 1 1/4               | 1 3/4    |         |                                                |                  |                      |                      |

1 When VGSI inop, Circling Rwy 5 not authorized at night.

CHANGES: Charted obstructions, amendment date, circling note added.

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|                                                                                                                                                                                                                                                                                                                                                          |                                  |                                                     |                                                        |                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------|--------------------------------------------------------|----------------------------------------------|
| ASOS<br>119.02                                                                                                                                                                                                                                                                                                                                           | MINNEAPOLIS Center<br>134.6      | LANSING Radio<br>122.2 123.6                        | PELLSTON REGL OF EMMET CO UNICOM<br>CTAF 123.0         |                                              |
| RNAV                                                                                                                                                                                                                                                                                                                                                     | Final<br>Apch Crs<br><b>051°</b> | Minimum Alt<br><b>DODAC</b><br><b>2800'</b> (2084') | LNAV<br>MDA(H)<br>(CONDITIONAL)<br><b>1560'</b> (844') | Apt Elev <b>721'</b><br><br><b>TDZE 716'</b> |
| <b>MISSED APCH: Climb to 2400' direct FUBUP and hold.</b><br>Alt Set: INCHES      Trans level: FL 180      Trans alt: 18000'<br>1. Use local altimeter setting; if not received, use Harbor Springs altimeter setting.<br>2. DME/DME RNP-0.30 not authorized. 3. Visibility reduction by helicopters not authorized. 4. Pilot controlled lighting 123.0. |                                  |                                                     |                                                        |                                              |
|                                                                                                                                                                                                                                                                                                                                                          |                                  |                                                     |                                                        | <div>3200'</div> <div>MSA RW05</div>         |

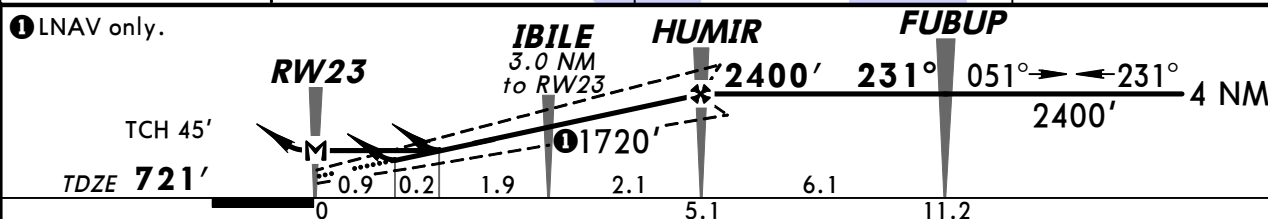
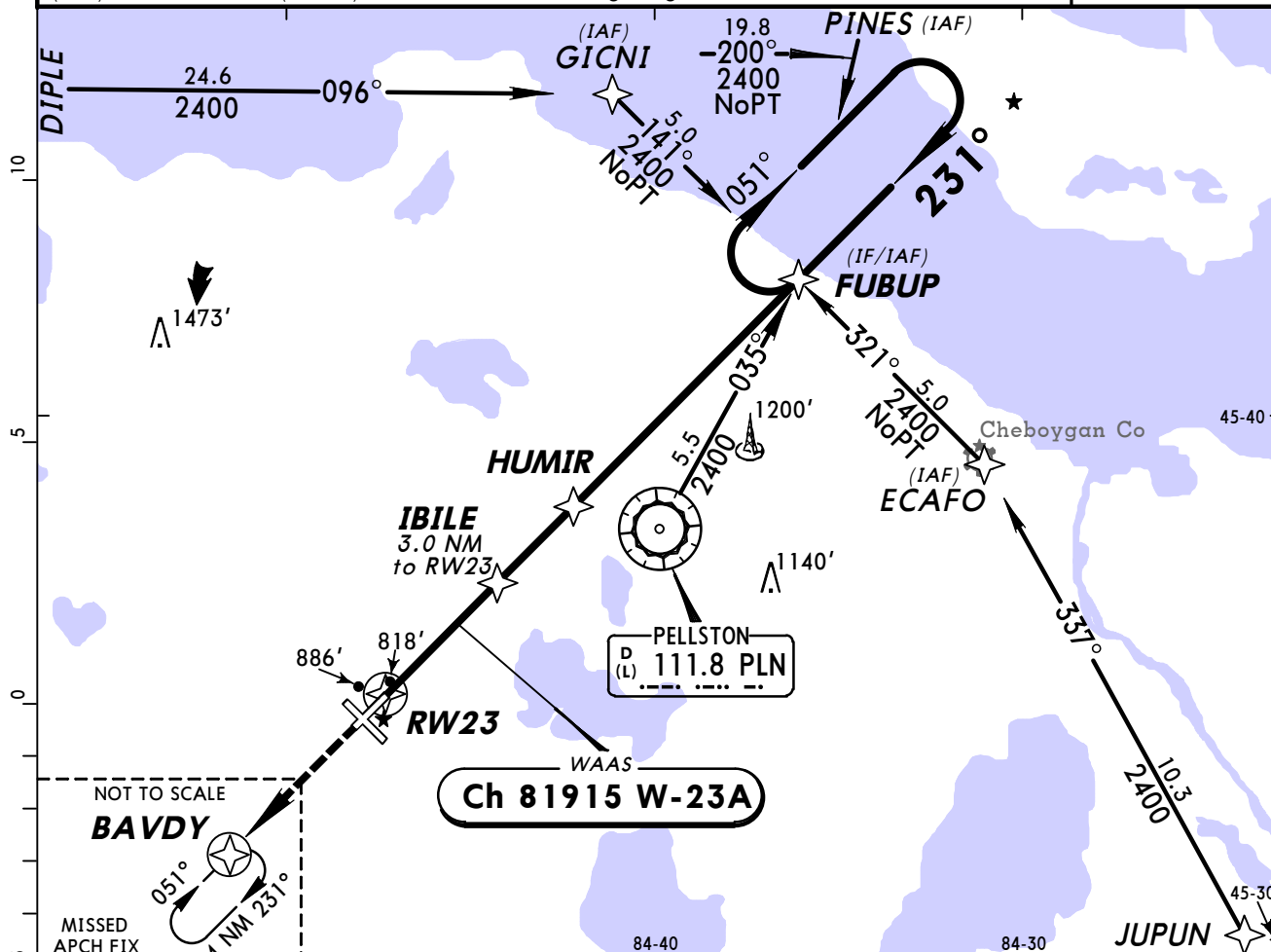


|                       |     |     |     |     |     |     |  |  |        |       |   |       |
|-----------------------|-----|-----|-----|-----|-----|-----|--|--|--------|-------|---|-------|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 |  |  | REIL   | 2400' | → | FUBUP |
| Descent Angle [3.05°] | 378 | 486 | 540 | 648 | 755 | 863 |  |  | VASI-R | ↑     |   |       |
| MAP at RW05           |     |     |     |     |     |     |  |  |        |       |   |       |

| 1 STRAIGHT-IN LANDING RWY 5  |       |                                       |  | 1 CIRCLE-TO-LAND             |                      |                                       |  |
|------------------------------|-------|---------------------------------------|--|------------------------------|----------------------|---------------------------------------|--|
| MDA(H) <b>1560'</b> (844')   |       | MDA(H) <b>1600'</b> (884')            |  | With Local Altimeter Setting |                      | With Harbor Springs Altimeter Setting |  |
| With Local Altimeter Setting |       | With Harbor Springs Altimeter Setting |  | Max Kts                      | MDA(H)               | MDA(H)                                |  |
| A                            | 1     | 1 1/4                                 |  | 90                           | 1560' (839') - 1     | 1600' (879') - 1                      |  |
| B                            | 1 1/4 |                                       |  | 120                          | 1560' (839') - 1 1/4 | 1600' (879') - 1 1/4                  |  |
| C                            | 2 1/2 | 2 3/4                                 |  | 140                          | 1560' (839') - 2 1/2 | 1600' (879') - 2 1/2                  |  |
| D                            | 2 3/4 | 3                                     |  | 165                          | 1560' (839') - 2 3/4 | 1600' (879') - 2 3/4                  |  |

1 When VGSI inop, Straight-in/Circling Rwy 5 procedure not authorized at night.





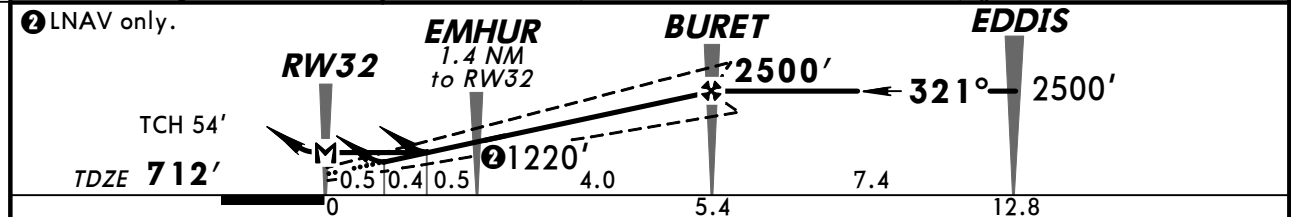
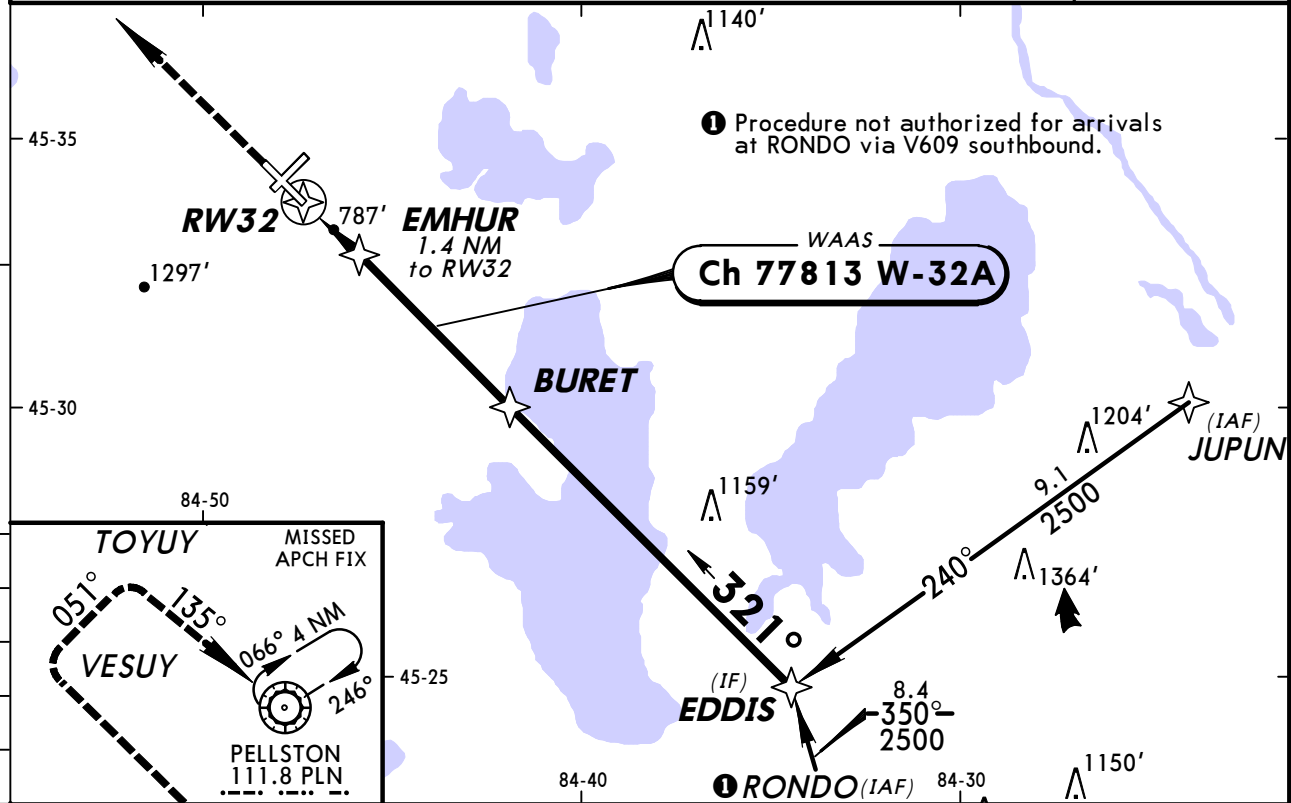
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 |  |  |  |  |
|------------------------|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |  |  |  |  |
| MAP at RW23            |     |     |     |     |     |     |  |  |  |  |

| 1 STRAIGHT-IN LANDING RWY 23 |                    |                     |       | 2 CIRCLE-TO-LAND  |                     |                    |  |
|------------------------------|--------------------|---------------------|-------|-------------------|---------------------|--------------------|--|
| 3 LPV                        | 4 LNAV/VNAV        | 5 LNAV              |       | With Local        | With Harbor Springs |                    |  |
| DA(H) 1057' (336')           | DA(H) 1109' (388') | MDA(H) 1240' (519') |       | Altimeter Setting | Altimeter Setting   |                    |  |
|                              |                    |                     |       | MDA(H)            | MDA(H)              |                    |  |
| A                            |                    |                     | 1     | 90                | 1260' (539')-1      | 1300' (579')-1     |  |
| B                            |                    |                     |       | 120               | 1280' (559')-1      | 1320' (599')-1     |  |
| C                            | 1 1/4              | 1 1/4               | 1 1/2 | 140               | 1280' (559')-1 1/2  | 1320' (599')-1 1/2 |  |
| D                            |                    |                     | 1 3/4 | 165               | 1420' (699')-2 1/4  | 1460' (739')-2 1/4 |  |

- When VGSI inop, Straight-in minimums Rwy 23 not authorized at night.
- When VGSI inop, Circling Rwy 5 not authorized at night.
- DA(H) 1085' (364') with Harbor Springs altimeter setting.
- DA(H) 1137' (416') VIS 1 1/2 with Harbor Springs altimeter setting.
- MDA(H) 1280' (559') with Harbor Springs altimeter setting.



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                           |                                       |                                              |                                |                                      |                                                |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------|----------------------------------------------|--------------------------------|--------------------------------------|------------------------------------------------|--|
| ASOS<br>119.02                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                           | MINNEAPOLIS Center<br>134.6           |                                              | LANSING Radio<br>122.2 123.6   |                                      | PELLSTON REGL OF EMMET CO UNICOM<br>CTAF 123.0 |  |
| WAAS<br>Ch 77813<br>W-32A                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Final<br>Apch Crs<br>321° | Minimum Alt<br>BURET<br>2500' (1788') | LPV<br>DA(H)<br>(CONDITIONAL)<br>912' (200') | Apt Elev 721'<br><br>TDZE 712' | <div>3200'</div> <div>MSA RW32</div> |                                                |  |
| MISSED APCH: Climb to 2600' direct VESUY and via 051° track to TOYUY and via 135° track to PLN VOR and hold.                                                                                                                                                                                                                                                                                                                                                                          |                           |                                       |                                              |                                |                                      |                                                |  |
| Alt Set: INCHES                      Trans level: FL 180                      Trans alt: 18000'<br>1. Use local altimeter setting; if not received, use Harbor Springs altimeter setting.<br>2. DME/DME RNP-0.30 not authorized. 3. Baro-VNAV not authorized when using Harbor Springs altimeter setting. 4. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 5. Do not exceed 200 KIAS.<br>6. Pilot controlled lighting 123.0. |                           |                                       |                                              |                                |                                      |                                                |  |



# KPLN/PLN

## PELLSTON REGL OF EMMET CO

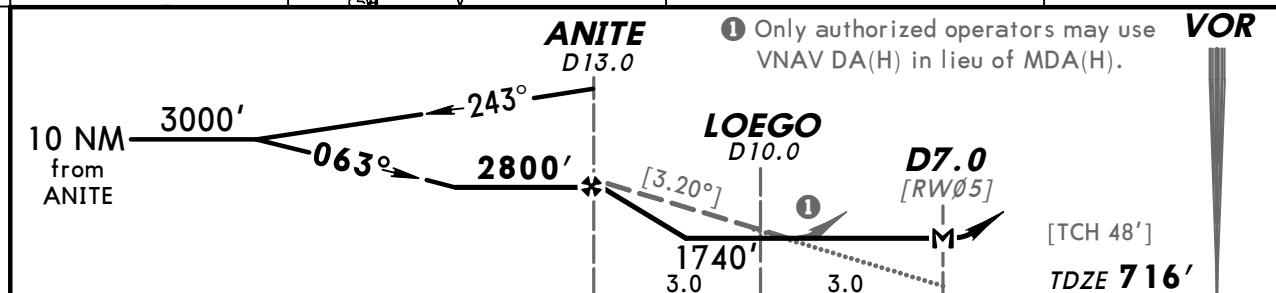
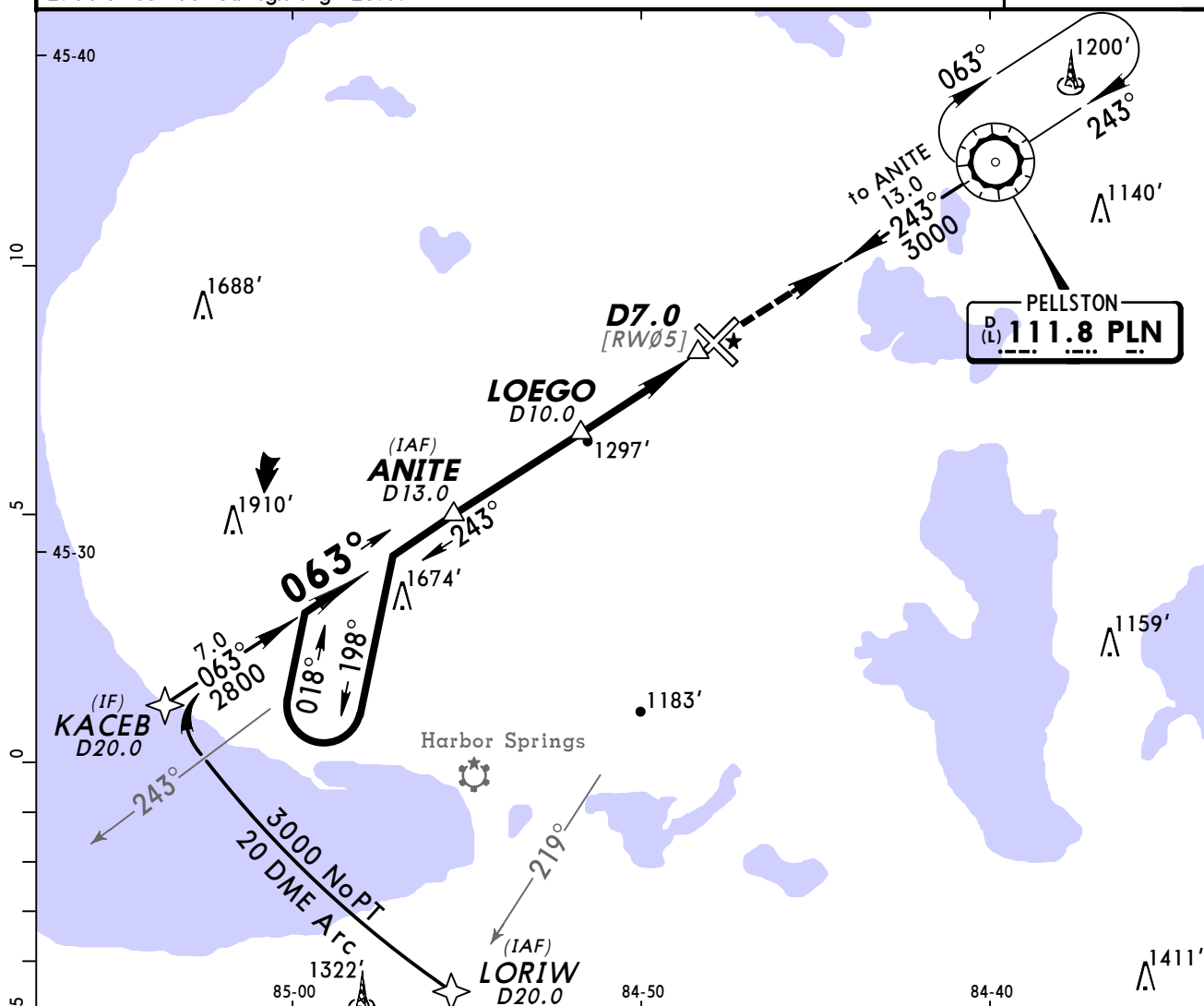
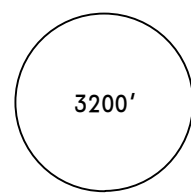
11 NOV 11

(13-1)

# JEPPESEN

# PELLSTON, MICH VOR DME Rwy 5

|                                                                                                                               |                                    |                                                     |                                                       |
|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------------------------------------------------|-------------------------------------------------------|
| ASOS<br><b>119.02</b>                                                                                                         | MINNEAPOLIS Center<br><b>134.6</b> | LANSING Radio<br><b>122.2 123.6</b>                 | PELLSTON REGL OF EMMET CO UNICOM<br><b>CTAF 123.0</b> |
| VOR<br>PLN<br><b>111.8</b>                                                                                                    | Final<br>Apch Crs<br><b>063°</b>   | Minimum Alt<br><b>ANITE</b><br><b>2800'</b> (2084') | MDA(H)<br>(CONDITIONAL)<br><b>1560'</b> (844')        |
| Apt Elev <b>721'</b><br>TDZE <b>716'</b>                                                                                      |                                    |                                                     |                                                       |
| <b>MISSED APCH: Climb to 2400' direct PLN VOR and hold.</b>                                                                   |                                    |                                                     |                                                       |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                                         |                                    |                                                     |                                                       |
| 1. Use local altimeter setting; if not received, use Harbor Springs altimeter setting.<br>2. Pilot controlled lighting 123.0. |                                    |                                                     |                                                       |



|                       |     |     |     |     |     |     |  |        |              |   |              |
|-----------------------|-----|-----|-----|-----|-----|-----|--|--------|--------------|---|--------------|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 |  | REIL   | <b>2400'</b> | ↗ | PLN          |
| Descent Angle [3.20°] | 396 | 510 | 566 | 679 | 793 | 906 |  | VASI-R | ↑            | → | <b>111.8</b> |
| MAP at D7.0           |     |     |     |     |     |     |  |        |              |   |              |

| 1 STRAIGHT-IN LANDING RWY 5  |       |                                       |       | 1 CIRCLE-TO-LAND             |                           |                                       |  |
|------------------------------|-------|---------------------------------------|-------|------------------------------|---------------------------|---------------------------------------|--|
| MDA(H) <b>1560'</b> (844')   |       | MDA(H) <b>1600'</b> (884')            |       | With Local Altimeter Setting |                           | With Harbor Springs Altimeter Setting |  |
| With Local Altimeter Setting |       | With Harbor Springs Altimeter Setting |       | Max Kts                      | MDA(H)                    | MDA(H)                                |  |
| A                            | 1     |                                       |       | 90                           | <b>1560'</b> (839')-1     | <b>1600'</b> (879')-1                 |  |
| B                            | 1 1/4 |                                       | 1 1/4 | 120                          | <b>1560'</b> (839')-1 1/4 | <b>1600'</b> (879')-1 1/4             |  |
| C                            | 2 1/2 |                                       | 2 3/4 | 140                          | <b>1560'</b> (839')-2 1/2 | <b>1600'</b> (879')-2 1/2             |  |
| D                            | 2 3/4 |                                       | 3     | 165                          | <b>1560'</b> (839')-2 3/4 | <b>1600'</b> (879')-2 3/4             |  |

1 When VGSI inop, Straight-in/Circling Rwy 5 procedure not authorized at night.

TERPS AMEND 12A 17 NOV 2011

KPLN/PLN

PELLSTON REGL OF EMMET CO

11 NOV 11

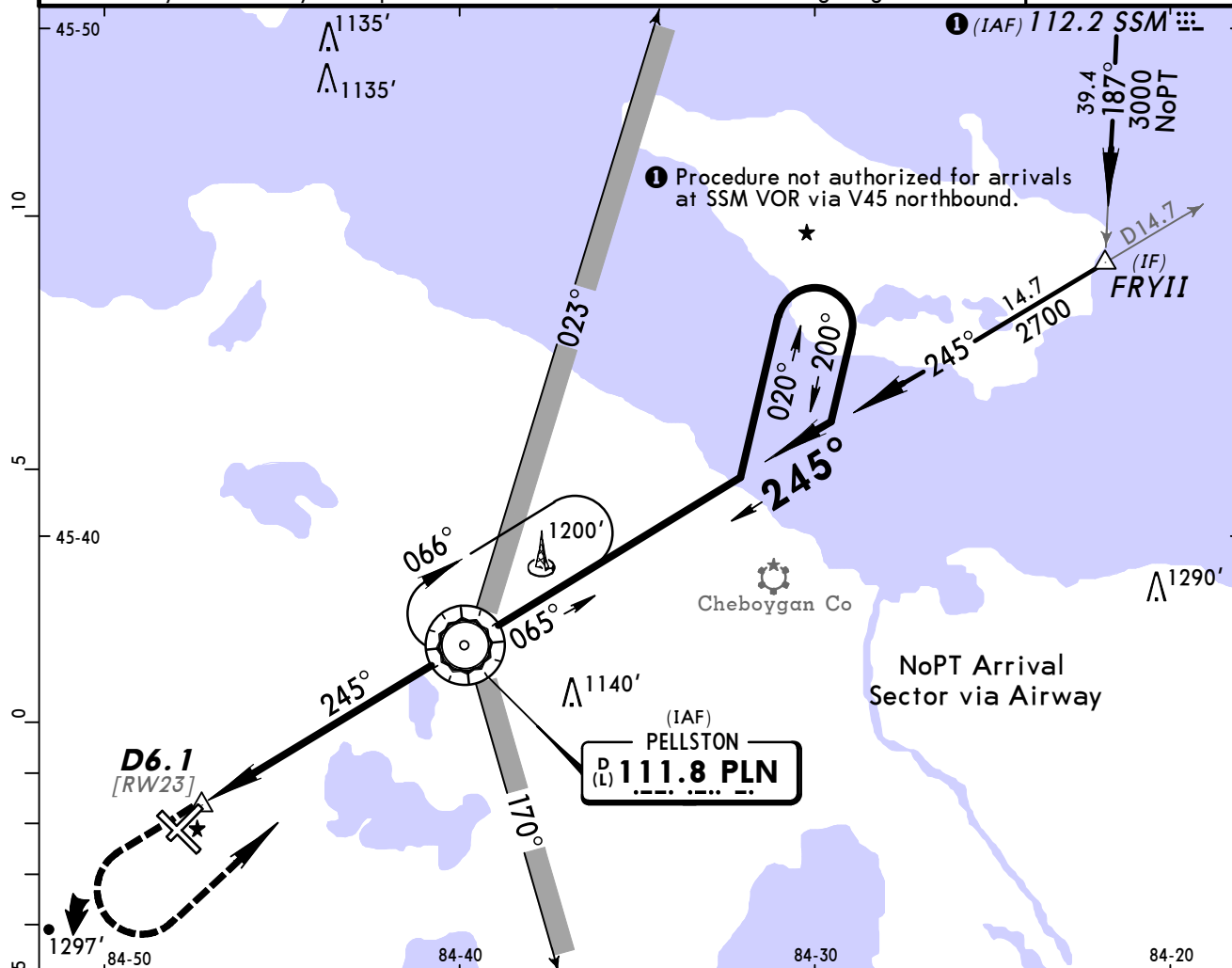
(13-2)

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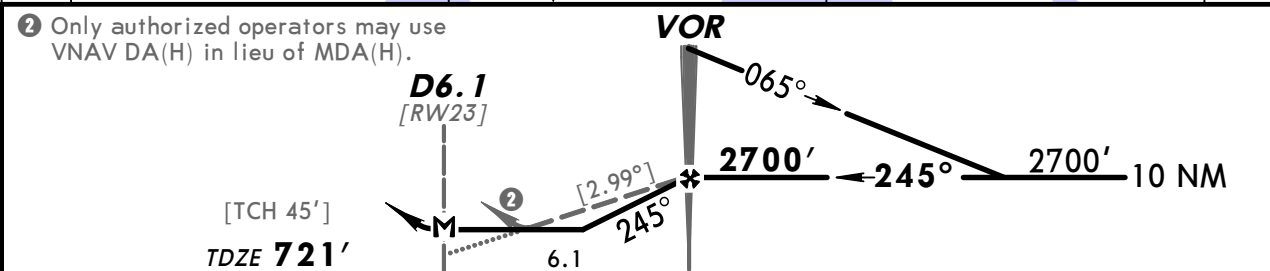
PELLSTON, MICH

VOR Rwy 23

|                                                                                                                                                                                                                                               |                             |                                     |                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------------------|------------------------------------------------|
| ASOS<br>119.02                                                                                                                                                                                                                                | MINNEAPOLIS Center<br>134.6 | LANSING Radio<br>122.2 123.6        | PELLSTON REGL OF EMMET CO UNICOM<br>CTAF 123.0 |
| VOR<br>PLN<br>111.8                                                                                                                                                                                                                           | Final<br>Apch Crs<br>245°   | Minimum Alt<br>VOR<br>2700' (1979') | MDA(H)<br>(CONDITIONAL)<br>1300' (579')        |
| Apt Elev 721'<br>TDZE 721'                                                                                                                                                                                                                    |                             |                                     |                                                |
| <b>MISSED APCH:</b> Climb to 2000' then climbing LEFT turn to 2800'<br>direct PLN VOR and hold.                                                                                                                                               |                             |                                     |                                                |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. Use local altimeter setting; if not received, use Harbor Springs altimeter setting.<br>2. Visibility reduction by helicopters not authorized. 3. Pilot controlled lighting 123.0. |                             |                                     |                                                |
| <div style="text-align: center;">3200'</div> <div style="text-align: center;">MSA PLN VOR</div>                                                                                                                                               |                             |                                     |                                                |



② Only authorized operators may use VNAV DA(H) in lieu of MDA(H).



| Gnd speed-Kts             | 70  | 90   | 100  | 120  | 140  | 160  | REIL   | 2000' | 2800' | PLN   |
|---------------------------|-----|------|------|------|------|------|--------|-------|-------|-------|
| Descent Angle [2.99°]     | 370 | 476  | 529  | 635  | 741  | 846  | VASI-L | ↑     | LT    | 111.8 |
| MAP at D6.1 or VOR to MAP | 6.1 | 5:14 | 4:04 | 3:40 | 3:03 | 2:37 |        |       |       |       |

| ① STRAIGHT-IN LANDING RWY 23 |    |                                       |    | ② CIRCLE-TO-LAND             |                   |                                       |  |
|------------------------------|----|---------------------------------------|----|------------------------------|-------------------|---------------------------------------|--|
| MDA(H) 1300' (579')          |    | MDA(H) 1340' (619')                   |    | With Local Altimeter Setting |                   | With Harbor Springs Altimeter Setting |  |
| With Local Altimeter Setting |    | With Harbor Springs Altimeter Setting |    | Max Kts                      | MDA(H)            | MDA(H)                                |  |
| A                            | 1  | 1                                     | 1  | 90                           | 1300' (579') - 1  | 1340' (619') - 1                      |  |
| B                            | 1  | 1                                     | 1  | 120                          | 1300' (579') - 1  | 1340' (619') - 1                      |  |
| C                            | 1½ | 1¾                                    | 1¾ | 140                          | 1300' (579') - 1½ | 1340' (619') - 1¾                     |  |
| D                            | 1¾ | 2                                     | 2  | 165                          | 1420' (699') - 2¼ | 1460' (739') - 2¼                     |  |

① When VGSI inop, Straight-in minimums Rwy 23 not authorized at night.

② When VGSI inop, Circling Rwy 5 not authorized at night.

CHANGES: Charted obstructions, amendment date, notes added.

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TERPS AMEND 16A 17 NOV 2011

## General Information

Location: Pontiac MI USA  
IATA Code: PTK  
Lat/Long: N42° 39.9' W083° 25.2'  
Elevation: 981 ft

Airport Use: Public  
Magnetic Variation: 7.2°W  
Sectional Chart: Detroit

Fuel Types: 100 Octane (LL), Jet A  
Oxygen Types: High Pressure  
Repair Types: Major Airframe, Major Engine  
Customs: Upon Prior Request  
Airport Type: IFR  
Landing Fee: Yes  
Control Tower: Yes  
Jet Start Unit: Yes  
LLWS Alert: No  
Beacon: Yes

Sunrise: 1213 Z  
Sunset: 2320 Z,

## Runway Information

Runway: 09L  
Length x Width: 5676 ft x 100 ft  
Surface Type: asphalt  
TDZ-Elev: 976 ft  
Lighting: Edge, REIL, Part time, Pilot controlled

Runway: 09R  
Length x Width: 6521 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 981 ft  
Lighting: Edge, ALS, Pilot controlled

Runway: 18  
Length x Width: 2582 ft x 75 ft  
Surface Type: asphalt  
TDZ-Elev: 973 ft  
Displaced Threshold: 650 ft

Runway: 27L  
Length x Width: 6521 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 974 ft  
Lighting: Edge, REIL, Pilot controlled

Runway: 27R  
Length x Width: 5676 ft x 100 ft  
Surface Type: asphalt  
TDZ-Elev: 974 ft  
Lighting: Edge, REIL, Part time, Pilot controlled

Runway: 36  
Length x Width: 2582 ft x 75 ft  
Surface Type: asphalt  
TDZ-Elev: 969 ft

## **Communication Information**

ATIS 125.025  
Pontiac Tower 123.7 Secondary  
Pontiac Tower 120.5 CTAF PCL  
Pontiac Ground Control 121.9  
Pontiac Ground Control 121.65 Secondary  
Pontiac Clearance Delivery 118.25  
Detroit Approach Control 127.5  
Detroit Departure Control 127.5  
Oakland Co Intl Unicom 122.95  
Lansing Flight Service Station 122.15 RCO  
Lansing Flight Service Station 111.0 RCO

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Alt Set: INCHES  
Trans level: FL180 Trans alt: 18000'

1. **RADAR required.**
2. Also serves **1**

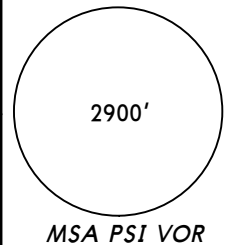
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OAKLAND CO INTL  
ATIS  
(ASOS when Twr inop)  
**125.02**

*Apt Elev*  
*See Graphic*

Alt Set: INCHES  
Trans level: FL180 Trans alt: 18000'  
1. This STAR for use at or above 9000'.  
2. Also serves **1**



## SPRTN THREE ARRIVAL (SPRTN.SPRTN3)

Direct distance from PARKY to:

Oakland Co Intl **22 NM**

Direct distance from PARKY to:

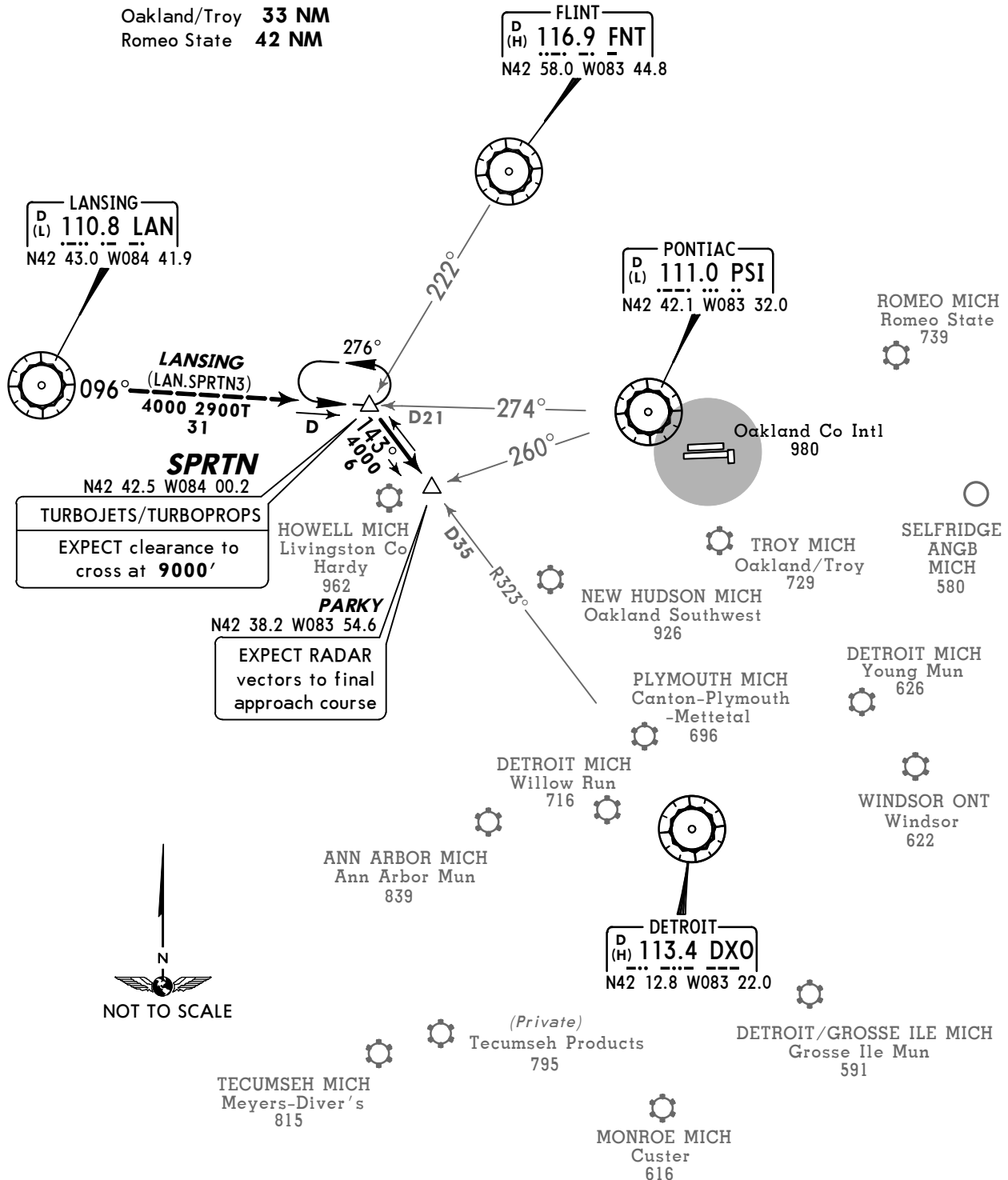
**1** AIRPORTS SERVED

Livingston Co Hardy **3 NM**

Oakland Southwest **15 NM**

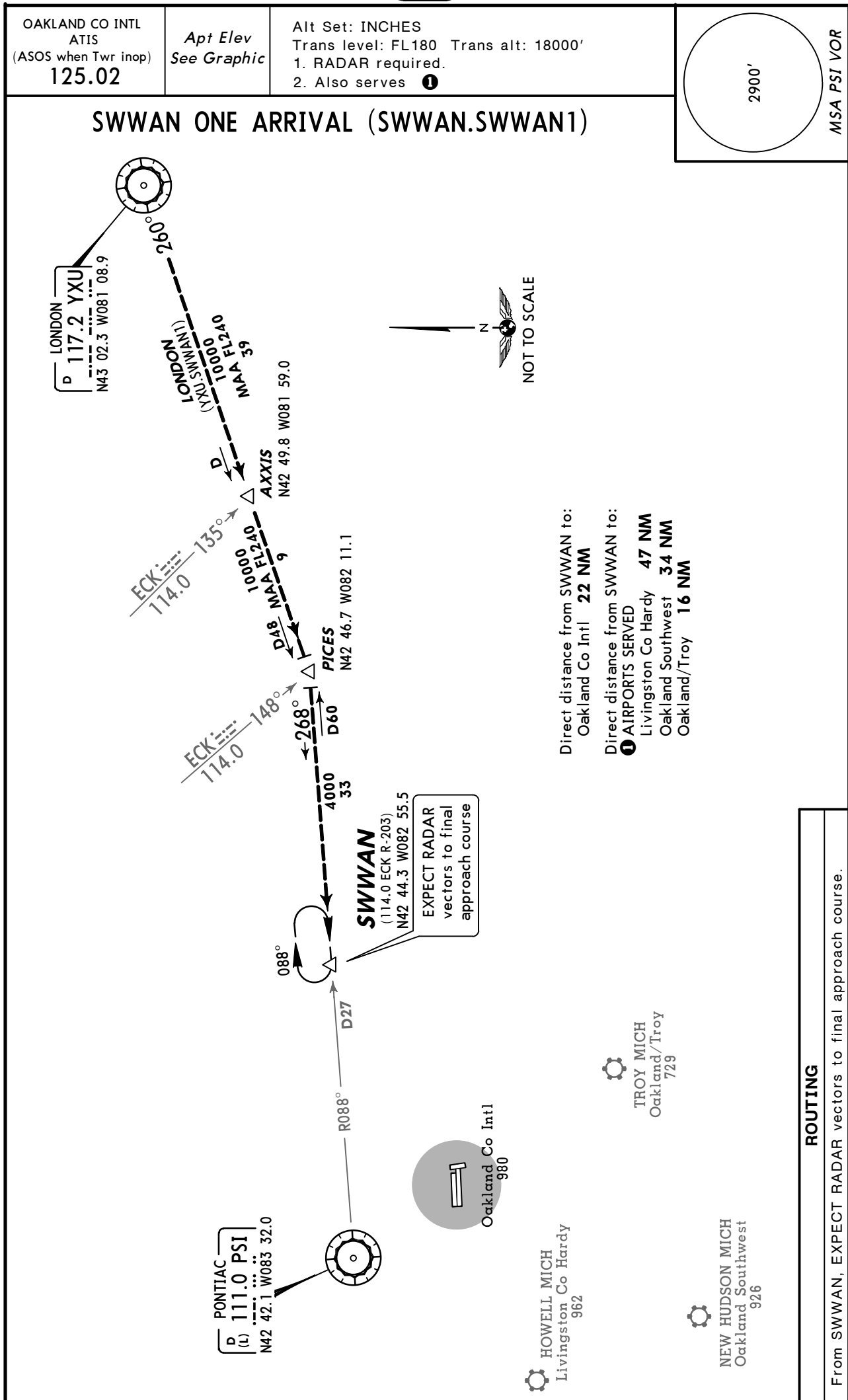
Oakland/Troy **33 NM**

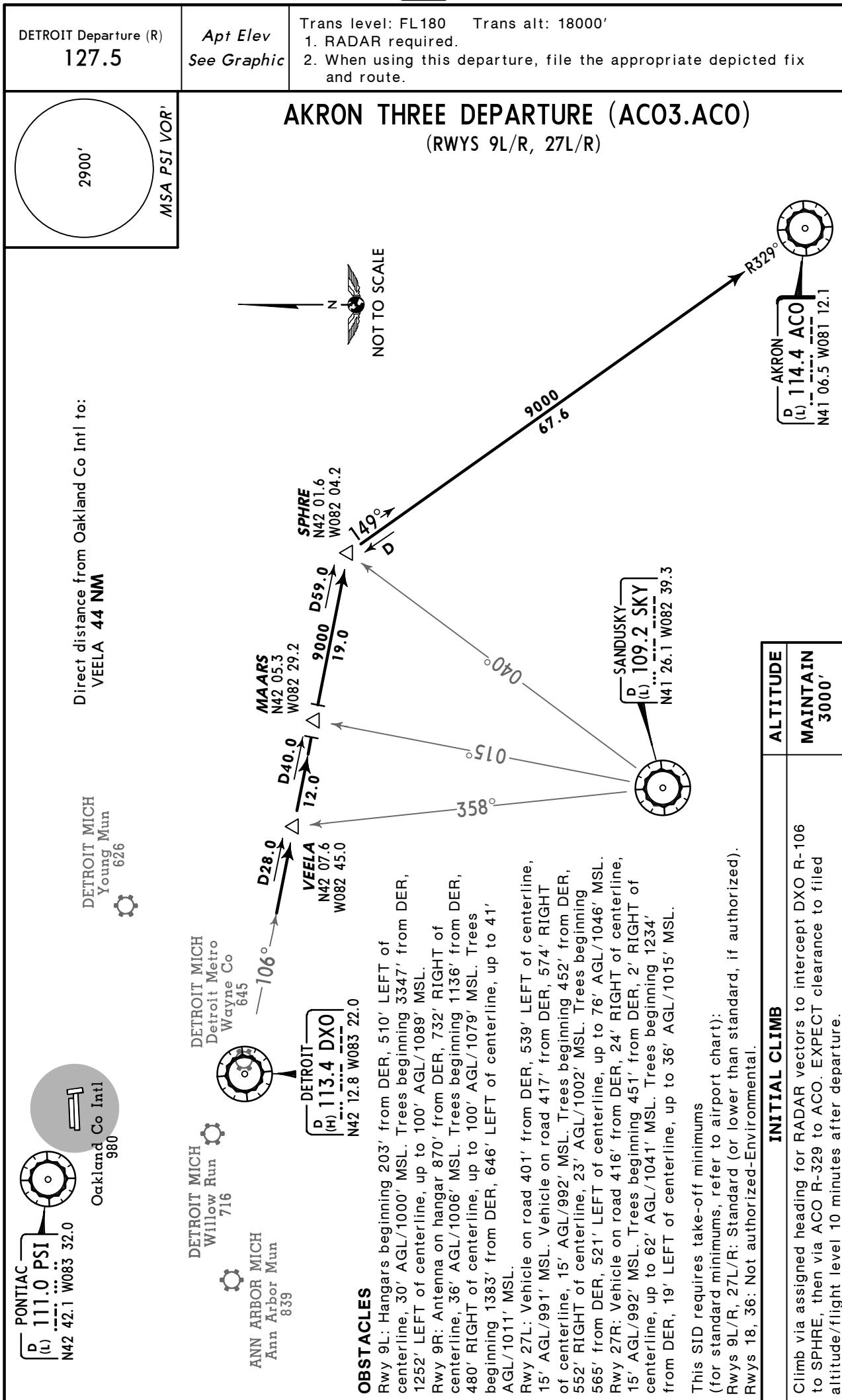
Romeo State **42 NM**

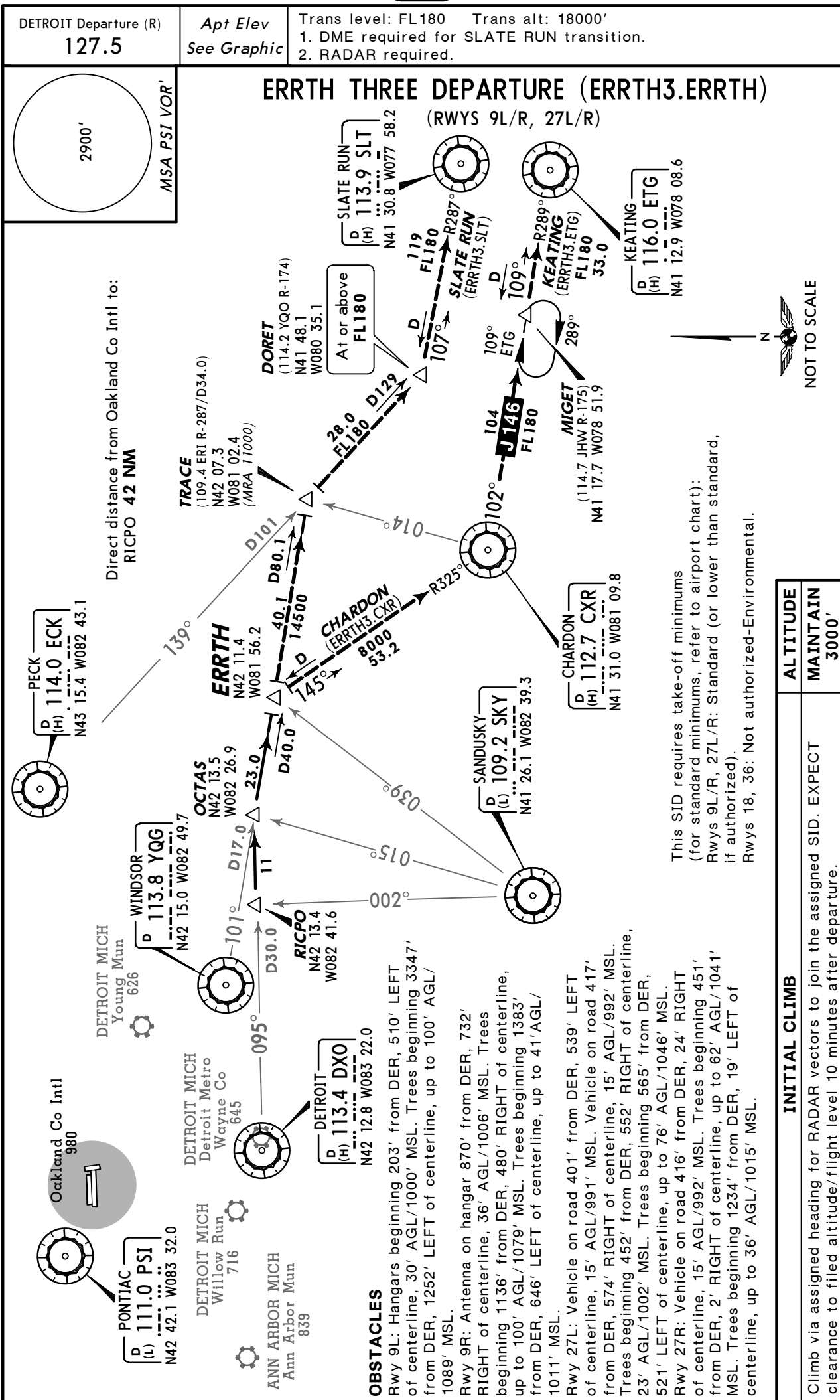


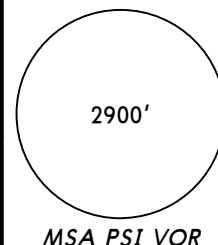
### ROUTING

From over SPRTN via DXO R-323 to PARKY, then EXPECT RADAR vectors to final approach course.

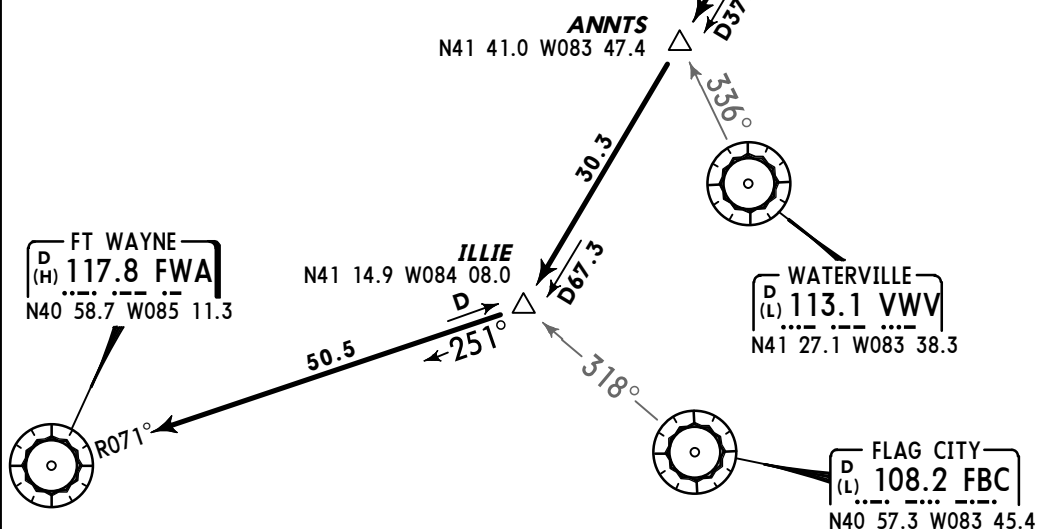






DETROIT Departure (R)  
127.5Apt Elev  
See GraphicTrans level: FL180 Trans alt: 18000'  
1. RADAR required.  
2. Jets only.  
3. When using this departure, file the appropriate depicted fix and route.FT WAYNE FOUR DEPARTURE (FWA4.FWA)  
(RWYS 9L/R, 27L/R)PONTIAC  
D (L) 111.0 PSI  
N42 42.1 W083 32.0  
Oakland Co Intl  
980Direct distance from Oakland Co Intl to:  
ANNTS 61 NMDETROIT MICH  
Willow Run  
716  
DETROIT MICH  
Young Mun  
626  
DETROIT MICH  
Detroit Metro  
Wayne Co  
645

This SID requires take-off  
minimums (for standard minimums,  
refer to airport chart):  
Rwys 9L/R, 27L/R: Standard (or lower  
than standard, if authorized).  
Rwys 18, 36: Not authorized-Environmental.



## OBSTACLES

Rwy 9L: Hangars beginning 203' from DER, 510' LEFT of centerline, 30' AGL/1000' MSL. Trees beginning 3347' from DER, 1252' LEFT of centerline, up to 100' AGL/1089' MSL.

Rwy 9R: Antenna on hangar 870' from DER, 732' RIGHT of centerline, 36' AGL/1006' MSL. Trees beginning 1136' from DER, 480' RIGHT of centerline, up to 100' AGL/1079' MSL. Trees beginning 1383' from DER, 646' LEFT of centerline, up to 41' AGL/1011' MSL.

Rwy 27L: Vehicle on road 401' from DER, 539' LEFT of centerline, 15' AGL/991' MSL. Vehicle on road 417' from DER, 574' RIGHT of centerline, 15' AGL/992' MSL. Trees beginning 452' from DER, 552' RIGHT of centerline, 23' AGL/1002' MSL. Trees beginning 565' from DER, 521' LEFT of centerline, up to 76' AGL/1046' MSL.

Rwy 27R: Vehicle on road 416' from DER, 24' RIGHT of centerline, 15' AGL/992' MSL. Trees beginning 451' from DER, 2' RIGHT of centerline, up to 62' AGL/1041' MSL. Trees beginning 1234' from DER, 19' LEFT of centerline, up to 36' AGL/1015' MSL.

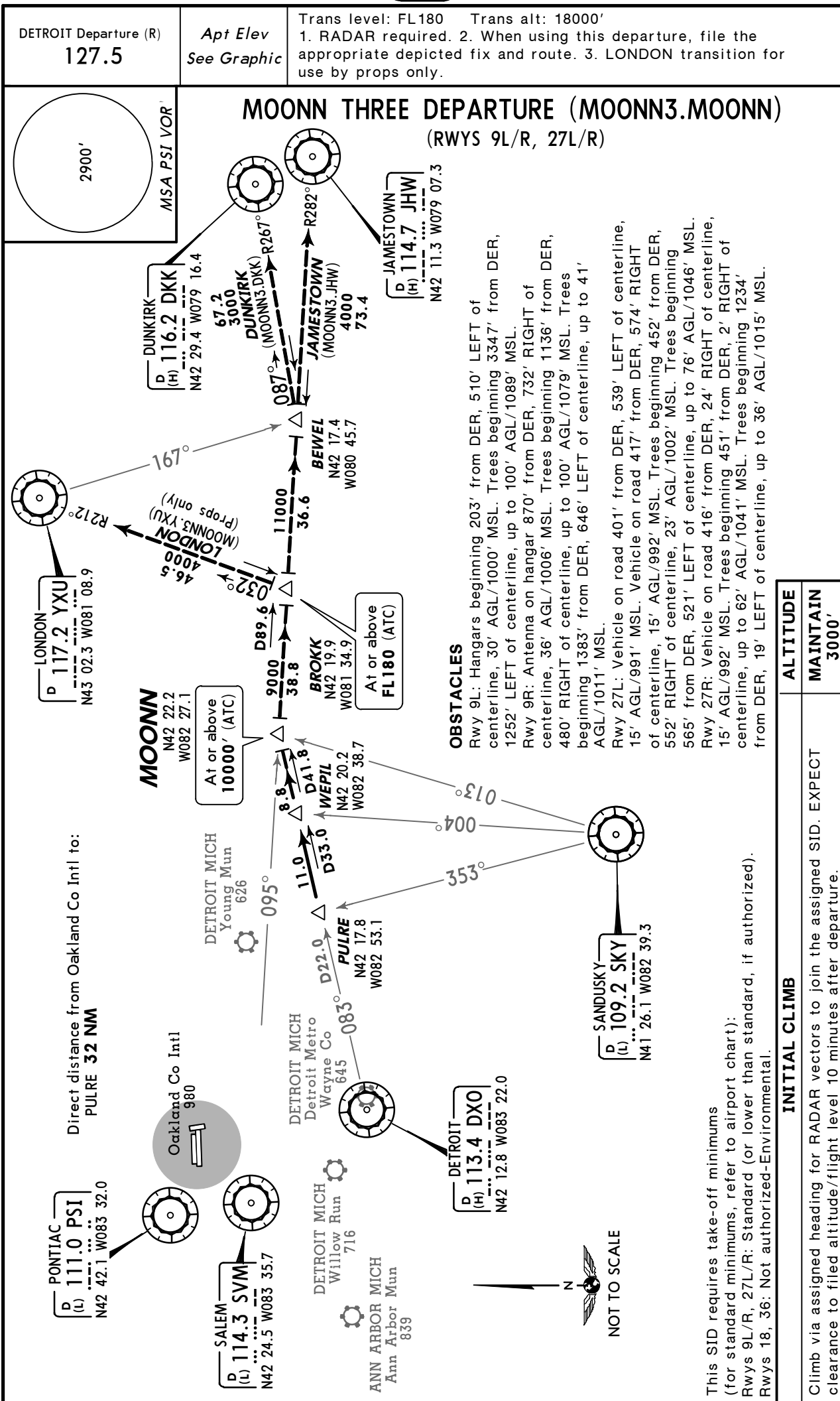


## INITIAL CLIMB

Climb via assigned heading for RADAR vectors to intercept DXO R-217 to ILLIE, then via FWA R-071 to FWA. EXPECT clearance to filed flight level 10 minutes after departure.

## ALTITUDE

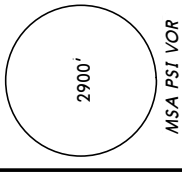
MAINTAIN  
3000'



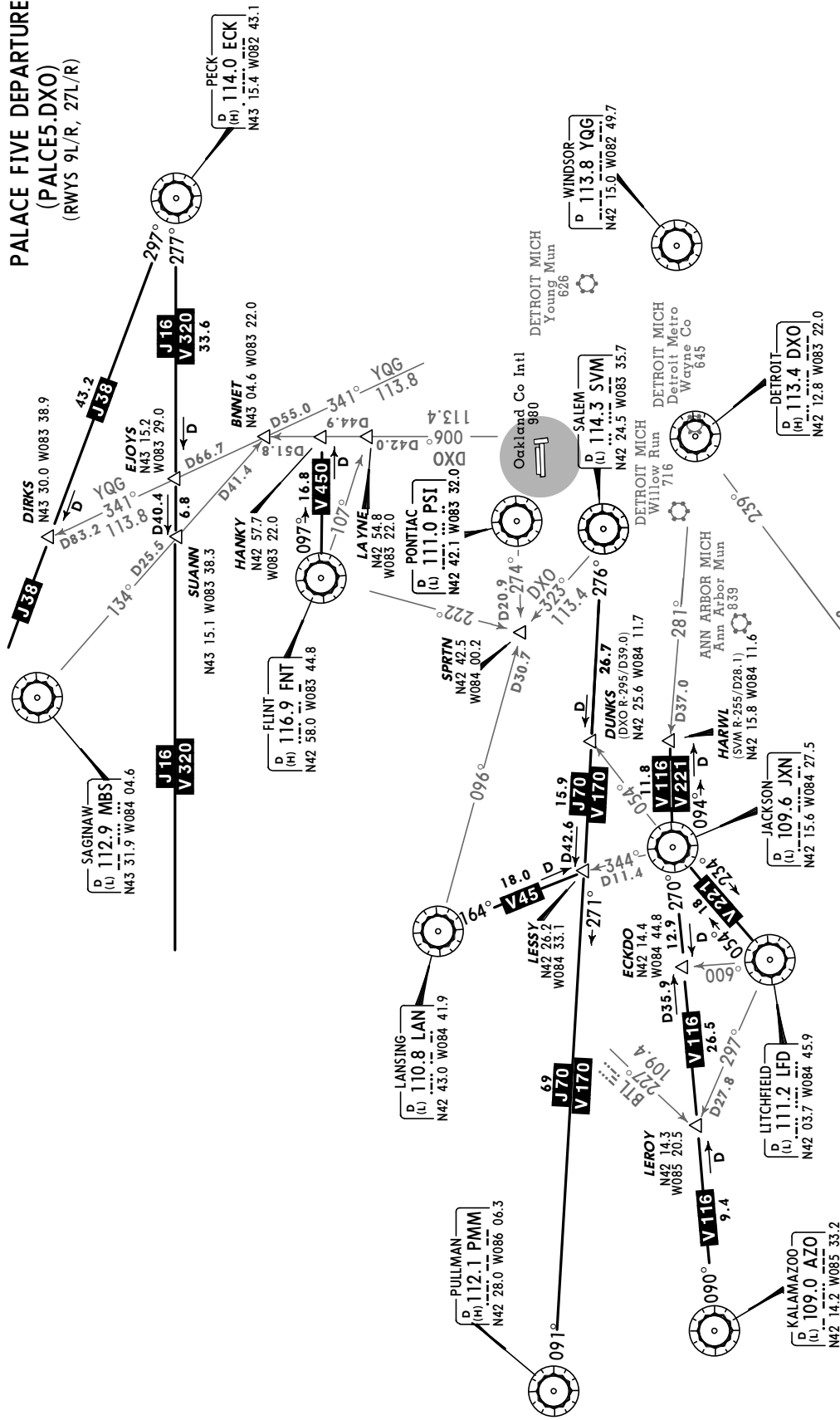
29 APR 11 10-3D Eff 5 May

---

|                    |                    |
|--------------------|--------------------|
| <i>Apt Elev</i>    | Trans level: FL180 |
| <i>See Graphic</i> | Trans alt: 18000'  |



**PALACE FIVE DEPARTMENT  
(PALCE5.DX0)  
(RWYS 9L/R, 27L/R)**



Rwy 9L: Hangars beginning 203' from DER, 510' LEFT of centerline, 30' AGL/1000' MSL. Trees beginning 3347' from DER, 1252' LEFT of centerline, up to 100' AGL/1089' MSL.

Rwy 9R: Antenna on hangar 870' from DER, 732' RIGHT of centerline, 36' AGL/1006' MSL. Trees beginning 1136' from DER, 480' RIGHT of centerline, up to 100' AGL/1079' MSL. Trees beginning 1383' from DER, 646' LEFT of centerline, up to 41' AGL/1011' MSL.

Rwy 27L: Vehicle on road 401' from DER, 539' LEFT of centerline, 15' AGL/991' MSL. Vehicle on road 417' from DER, 574' RIGHT of centerline, 15' AGL/992' MSL. Trees beginning 452' from DER, 552' RIGHT of centerline, 23' AGL/1002' MSL. Trees beginning 565' from DER, 521' LEFT of centerline, up to 76' AGL/1046' MSL.

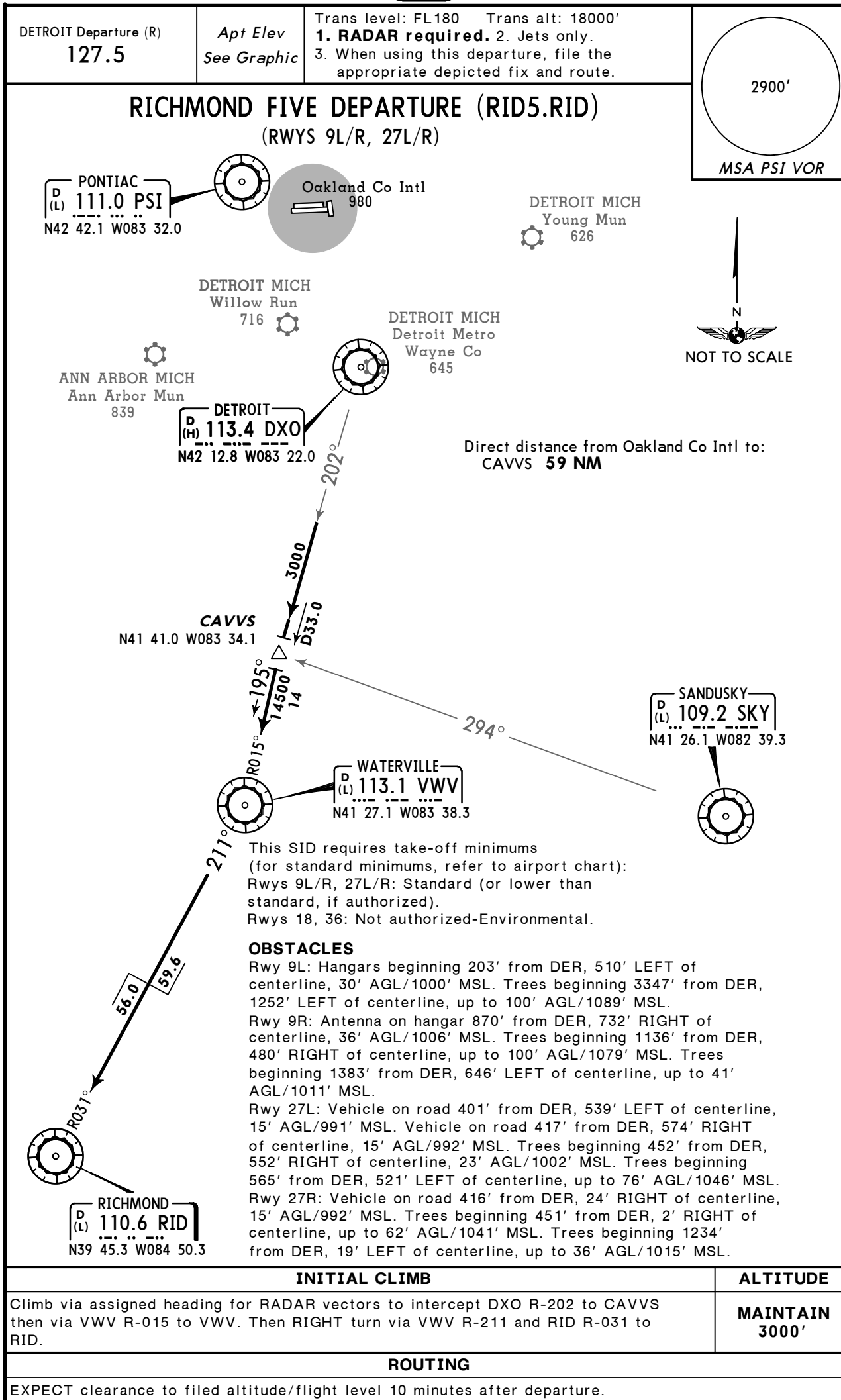
Rwy 27R: Vehicle on road 416' from DER, 24' RIGHT of centerline, 15' AGL/992' MSL. Trees beginning 451' from DER, 2' RIGHT of centerline, up to 62' AGL/1041' MSL. Trees beginning 1234' from DER, 19' LEFT of centerline, up to 36' AGL/1015' MSL.

| INITIAL CLIMB                                                          | ALTITUDE       |
|------------------------------------------------------------------------|----------------|
| Climb via assigned heading for RADAR vectors to join the assigned SID. | MAINTAIN 3000' |

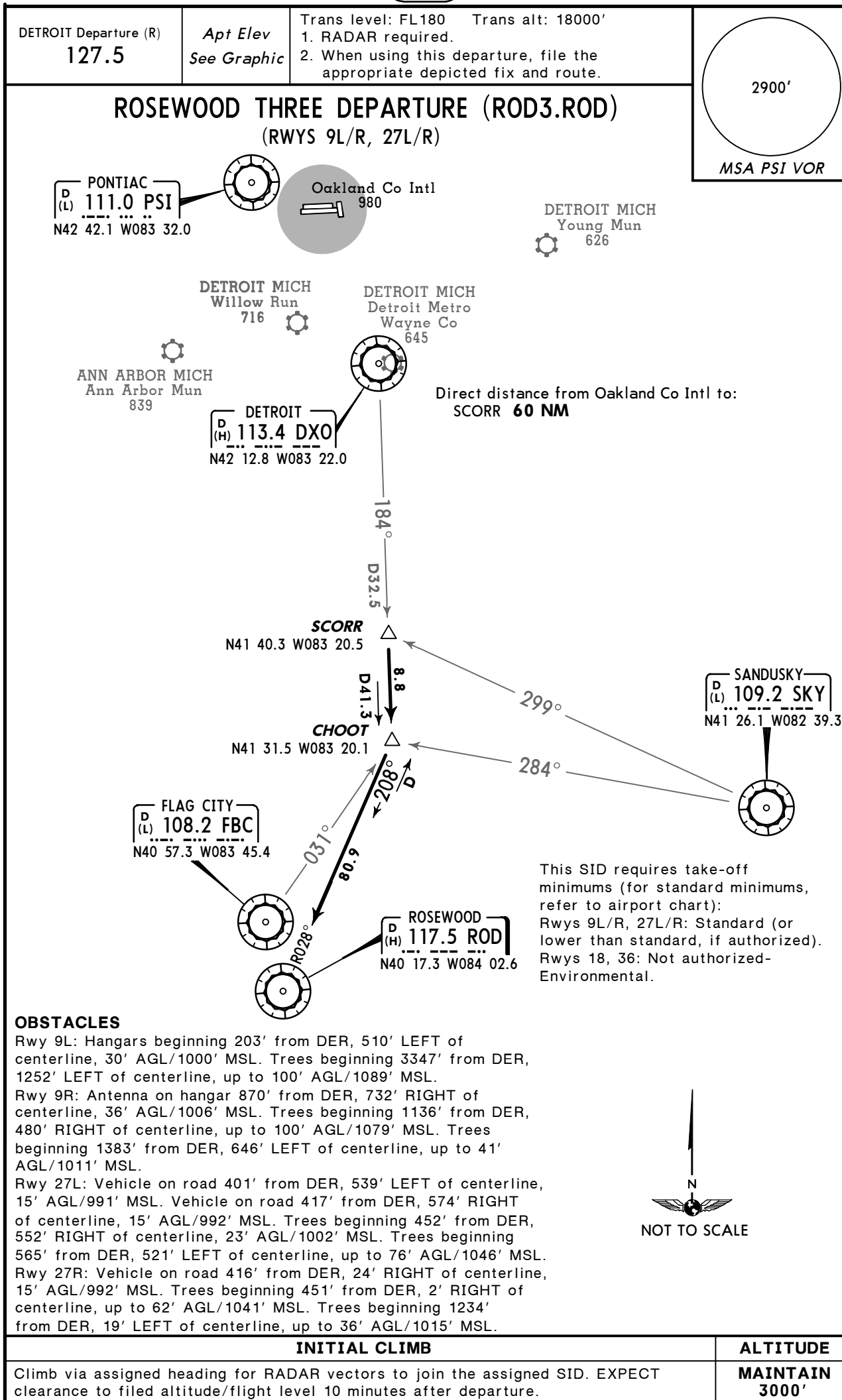
**ROUTING**

EXPECT clearance to filed altitude/flight level 10 minutes after departure.

**CHANGES:** Procedure note, renumbered.



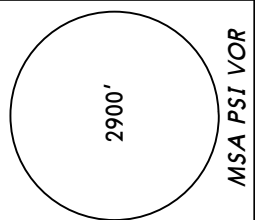




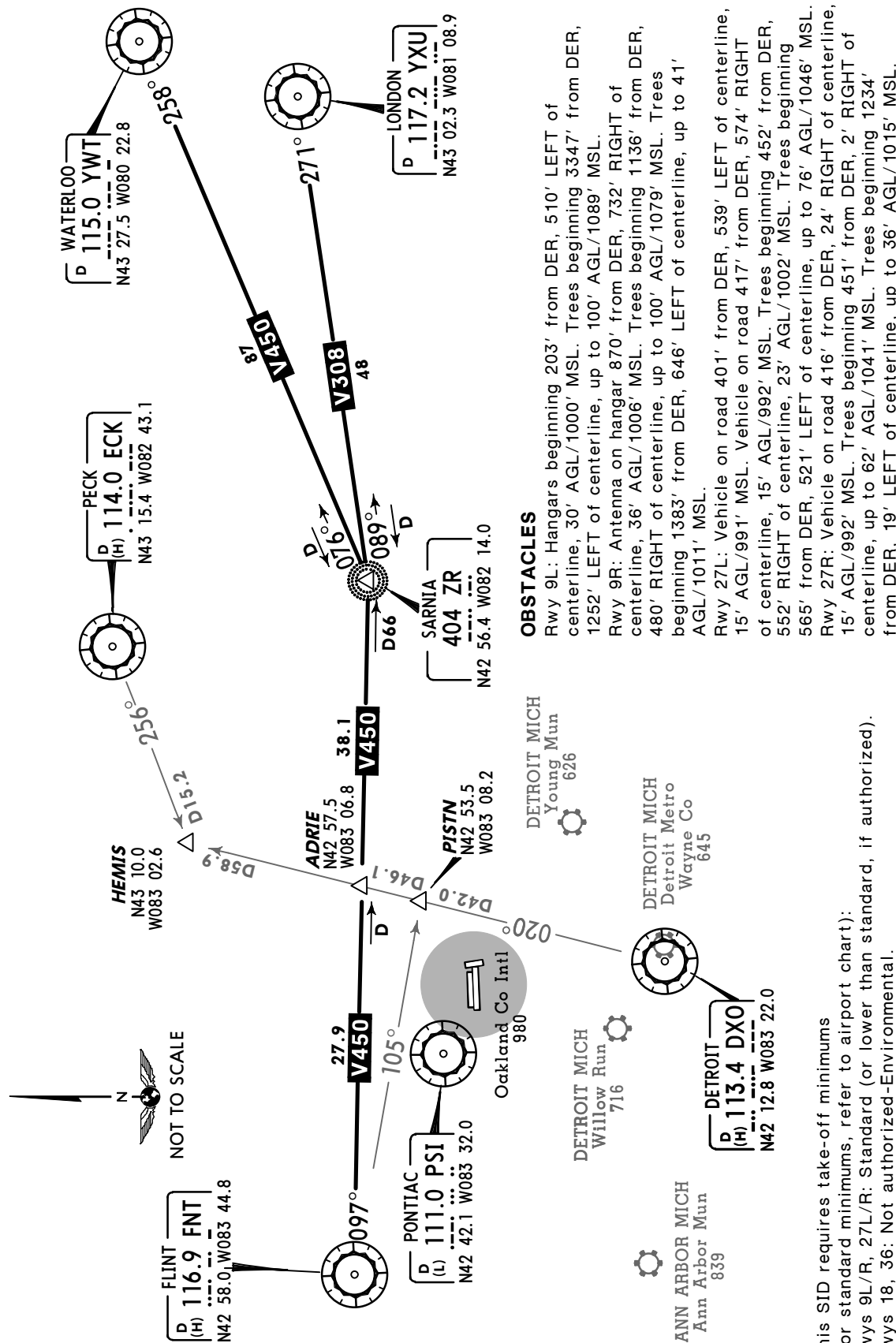
DETROIT Departure (R)  
127.5

Apt Elev  
See Graphic

Trans level: FL180 Trans alt: 18000'  
1. RADAR required. 2. DME required. 3. Jets only.  
4. When using this departure, file the appropriate fix and route.



# ST CLAIR FOUR DEPARTURE (STCLR4.DXO) (RWYS 9L/R, 27L/R)



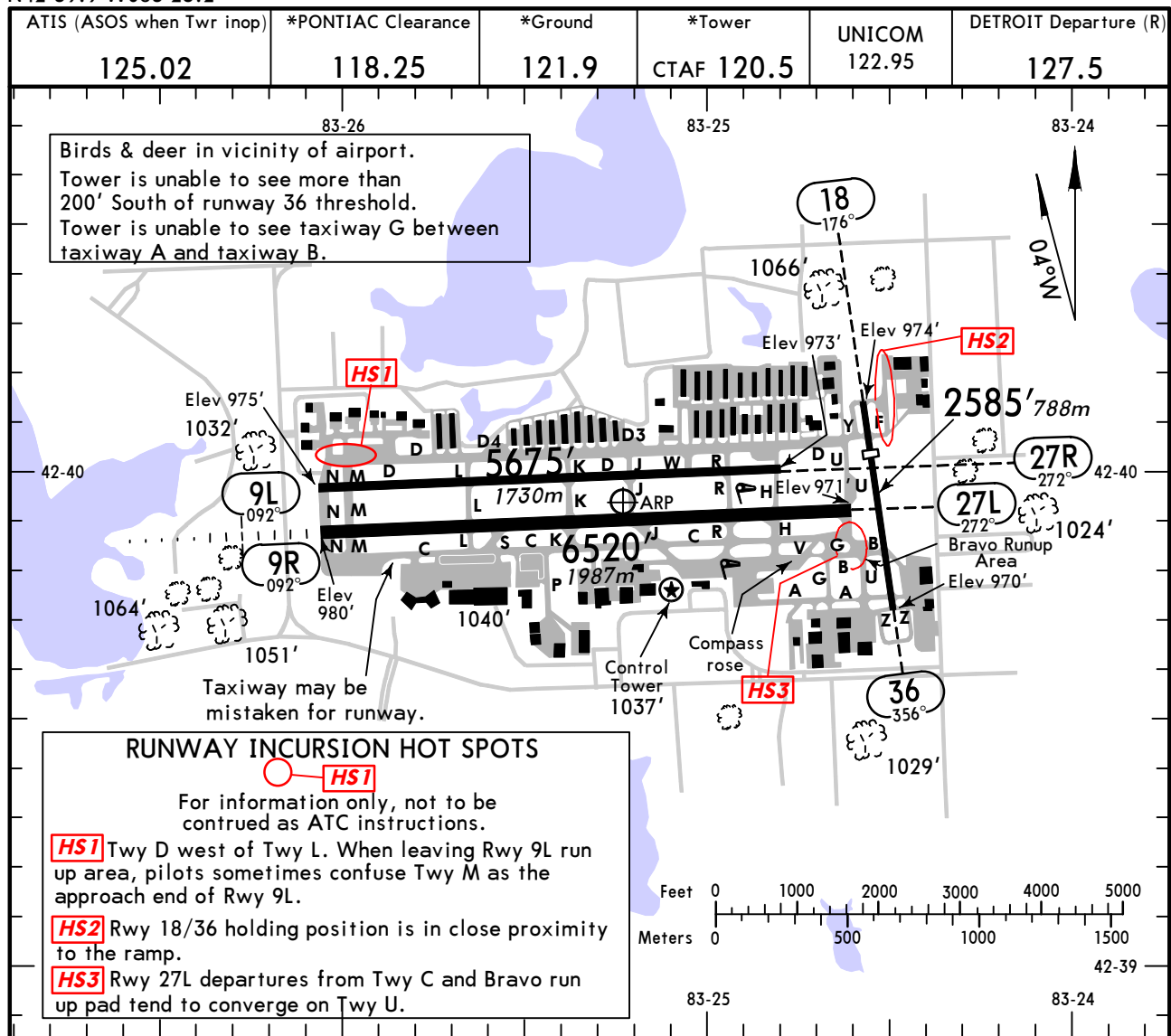
## OBSTACLES

Rwy 9L: Hangars beginning 203' from DER, 510' LEFT of centerline, 30' AGL/1000' MSL. Trees beginning 3347' from DER, 1252' LEFT of centerline, up to 100' AGL/1089' MSL.  
Rwy 9R: Antenna on hangar 870' from DER, 732' RIGHT of centerline, 36' AGL/1006' MSL. Trees beginning 1136' from DER, 480' RIGHT of centerline, up to 100' AGL/1079' MSL. Trees beginning 1383' from DER, 646' LEFT of centerline, up to 41' AGL/1011' MSL.  
Rwy 27L: Vehicle on road 401' from DER, 539' LEFT of centerline, 15' AGL/991' MSL. Vehicle on road 417' from DER, 574' RIGHT of centerline, 15' AGL/992' MSL. Trees beginning 452' from DER, 552' RIGHT of centerline, 23' AGL/1002' MSL. Trees beginning 565' from DER, 521' LEFT of centerline, up to 76' AGL/1046' MSL.  
Rwy 27R: Vehicle on road 416' from DER, 24' RIGHT of centerline, 15' AGL/992' MSL. Trees beginning 451' from DER, 2' RIGHT of centerline, up to 62' AGL/1041' MSL. Trees beginning 1234' from DER, 19' LEFT of centerline, up to 36' AGL/1015' MSL.

This SID requires take-off minimums (for standard minimums, refer to airport chart):  
Rwys 9L/R, 27L/R: Standard (or lower than standard, if authorized).  
Rwys 18, 36: Not authorized-Environmental.

| INITIAL CLIMB |                               |
|---------------|-------------------------------|
|               | ALTITUDE<br>MAINTAIN<br>3000' |

Climb via assigned heading for RADAR vectors to join the assigned SID. EXPECT clearance to filed altitude/flight level 10 minutes after departure.

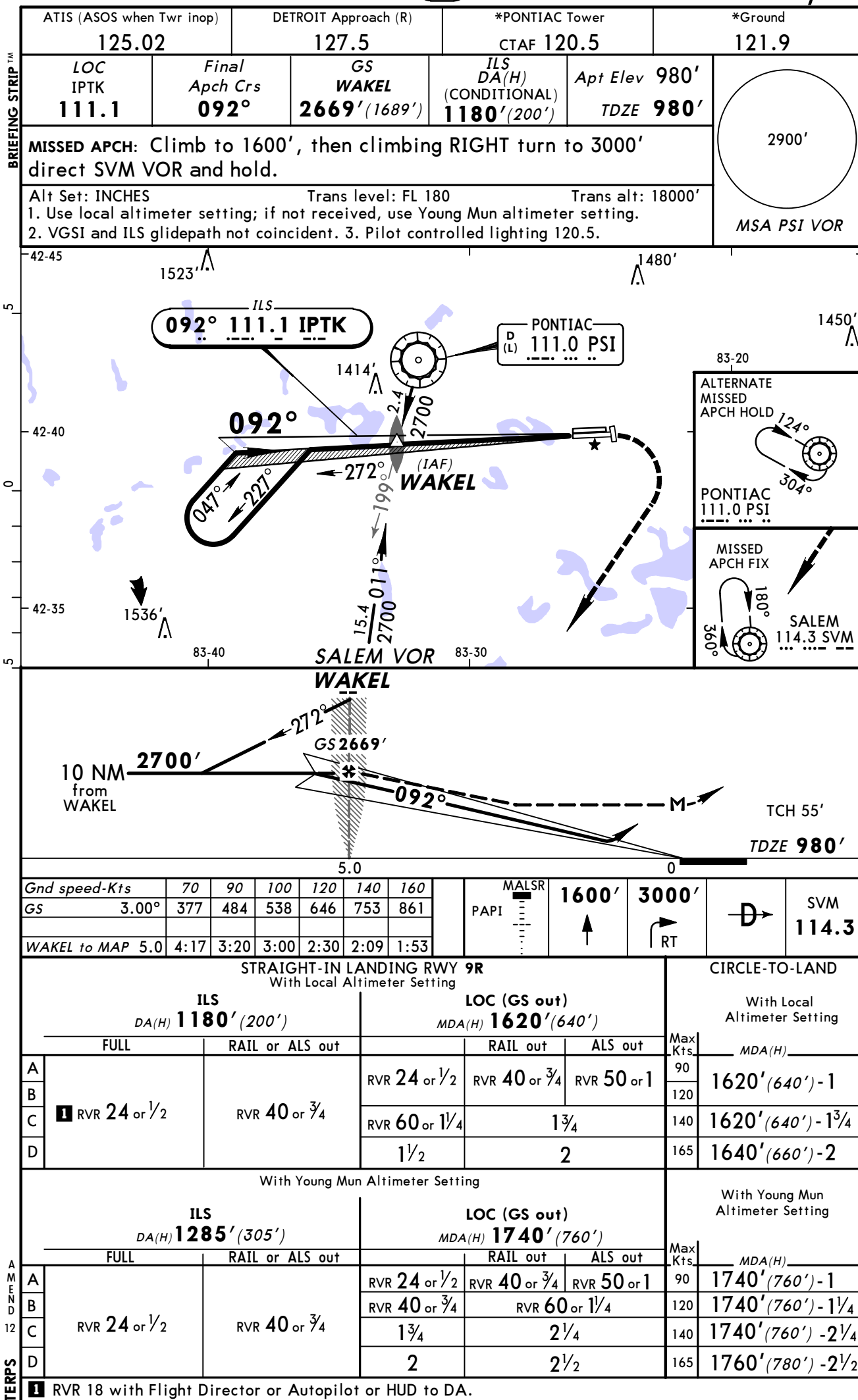


#### ADDITIONAL RUNWAY INFORMATION

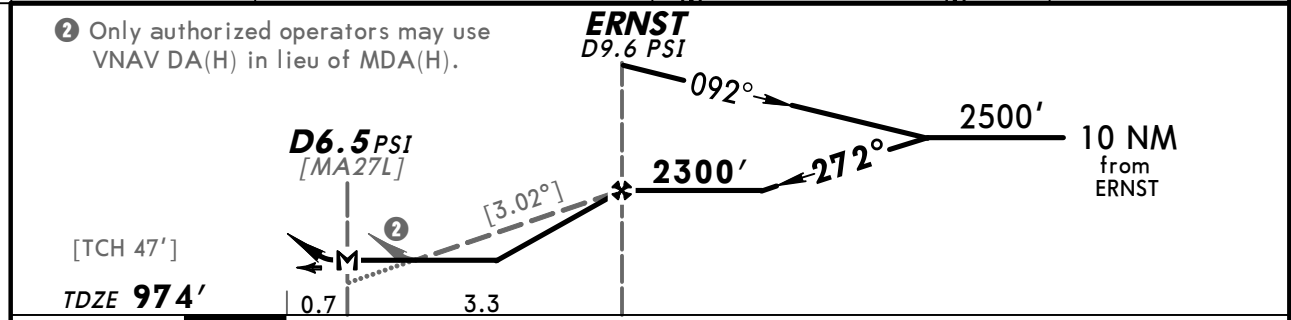
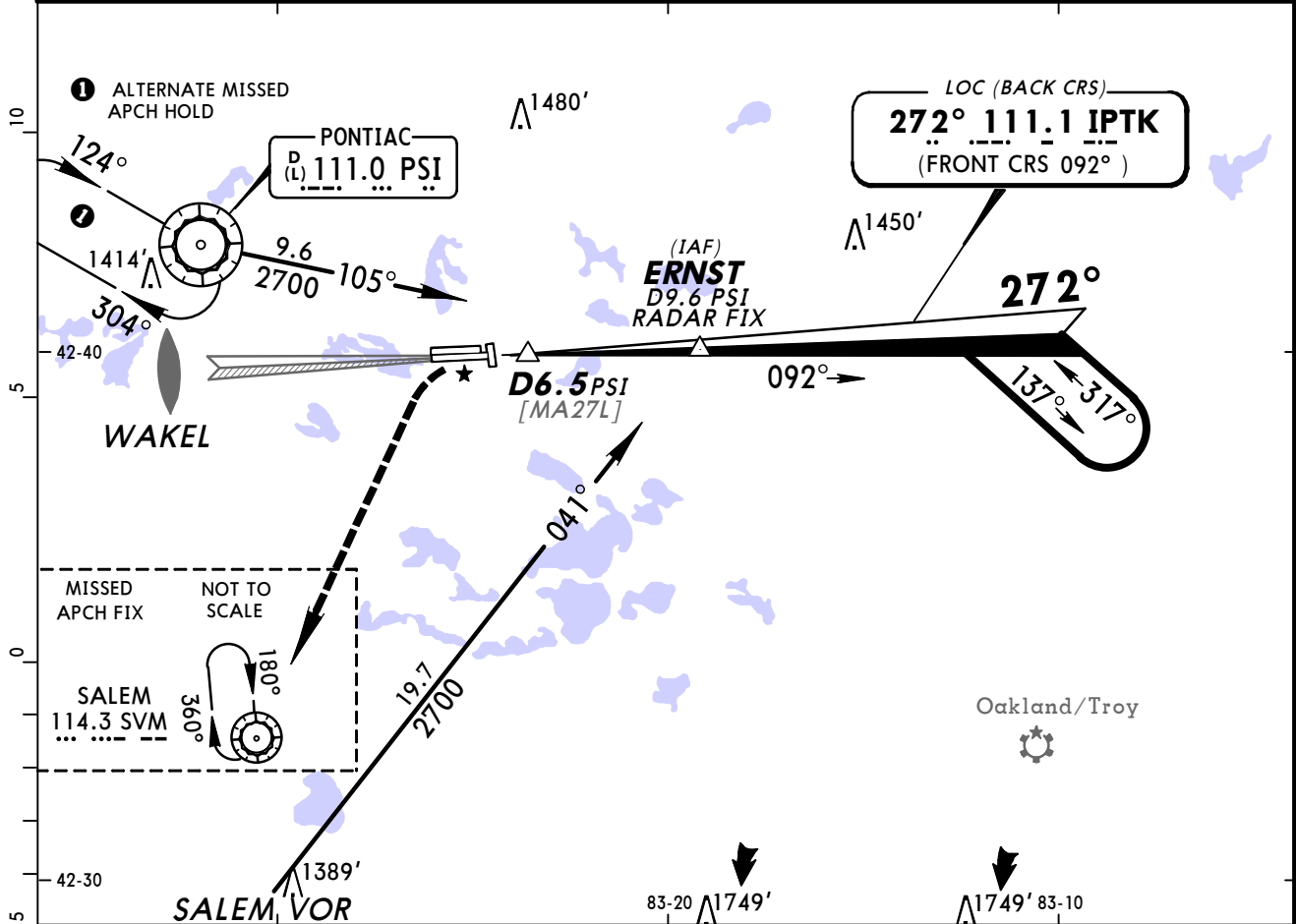
| RWY | USABLE LENGTHS                       |                 |            |       |
|-----|--------------------------------------|-----------------|------------|-------|
|     | Threshold                            | Glide Slope     | TAKE-OFF   | WIDTH |
| 9R  | ① HIRL ② MALSR ② PAPI-L (angle 3.0°) | porous friction | RVR        | 150'  |
| 27L | ① HIRL ③ REIL ③ VASI-L               | course overlay  |            | 46m   |
| 9L  | ③ MIRL ③ REIL ③ PAPI-L (angle 3.0°)  | porous friction |            | 100'  |
| 27R |                                      | course overlay  |            | 30m   |
| 18  | ④ ⑤                                  | porous friction | 2000' 610m | 75'   |
| 36  | ⑤ PAPI-L (angle 3.0°)                | course overlay  |            | 23m   |

- ① Pre-set on Medium intensity when Tower closed. To increase intensity radio request on CTAF.
- ② Activate on CTAF, 3 clicks. Twy lights high, 5 clicks.
- ③ To activate, contact Tower. When Tower closed, radio request on CTAF or UNICOM.
- ④ Closed to aircraft over 12,500 lbs.
- ⑤ Closed except day VMC.

| TAKE-OFF  |                       |               | FOR FILING AS ALTERNATE |   |                                                                                                                      |
|-----------|-----------------------|---------------|-------------------------|---|----------------------------------------------------------------------------------------------------------------------|
|           | Rwys 9L, 9R, 27L, 27R |               | Rwys 18, 36             |   |                                                                                                                      |
|           | Adequate Vis Ref      | STD           |                         |   |                                                                                                                      |
| 1 & 2 Eng | RVR 16 or 1/4         | RVR 50 or 1   | NA                      | A | Authorized Only When Local Weather Available<br>RNAV (GPS) Rwy 9R<br>RNAV (GPS) Rwy 27L<br>VOR Rwy 9R<br>VOR Rwy 27L |
| 3 & 4 Eng |                       | RVR 24 or 1/2 |                         | B |                                                                                                                      |
|           |                       |               |                         | C |                                                                                                                      |
|           |                       |               |                         | D |                                                                                                                      |



|                                                                                                                                                                                                                                                     |                                                   |                                                     |                                                |                                          |  |                                         |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------|------------------------------------------------|------------------------------------------|--|-----------------------------------------|--|
| ATIS (ASOS when Twr inop)<br><b>125.02</b>                                                                                                                                                                                                          |                                                   | DETROIT Approach (R)<br><b>127.5</b>                |                                                | *PONTIAC Tower<br>CTAF <b>120.5</b>      |  | *Ground<br><b>121.9</b>                 |  |
| LOC<br>IPTK<br><b>111.1</b>                                                                                                                                                                                                                         | Final Apch Crs<br><b>272°</b><br>(Front Crs 092°) | Minimum Alt<br><b>ERNST</b><br><b>2300'</b> (1326') | MDA(H)<br>(CONDITIONAL)<br><b>1420'</b> (446') | Apt Elev <b>981'</b><br>TDZE <b>974'</b> |  | <div>2900'</div> <div>MSA PSI VOR</div> |  |
| MISSED APCH: Climbing LEFT turn to 3000' direct SVM VOR and hold.                                                                                                                                                                                   |                                                   |                                                     |                                                |                                          |  |                                         |  |
| Alt Set: INCHES                                                                                                                                                                                                                                     |                                                   | Trans level: FL 180                                 |                                                | Trans alt: 18000'                        |  |                                         |  |
| 1. DME or RADAR required. 2. Use local altimeter setting, if not received, use Young Mun altimeter setting. 3. Disregard glide slope indications. 4. Localizer back course unusable beyond 25° right of course. 5. Pilot controlled lighting 120.5. |                                                   |                                                     |                                                |                                          |  |                                         |  |

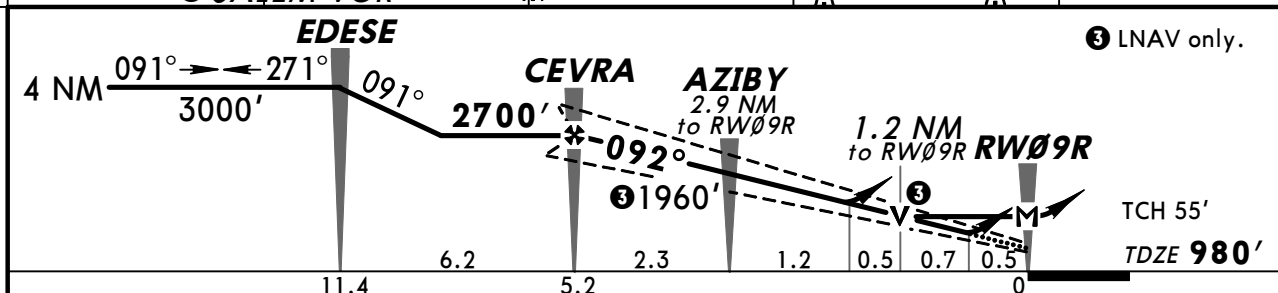
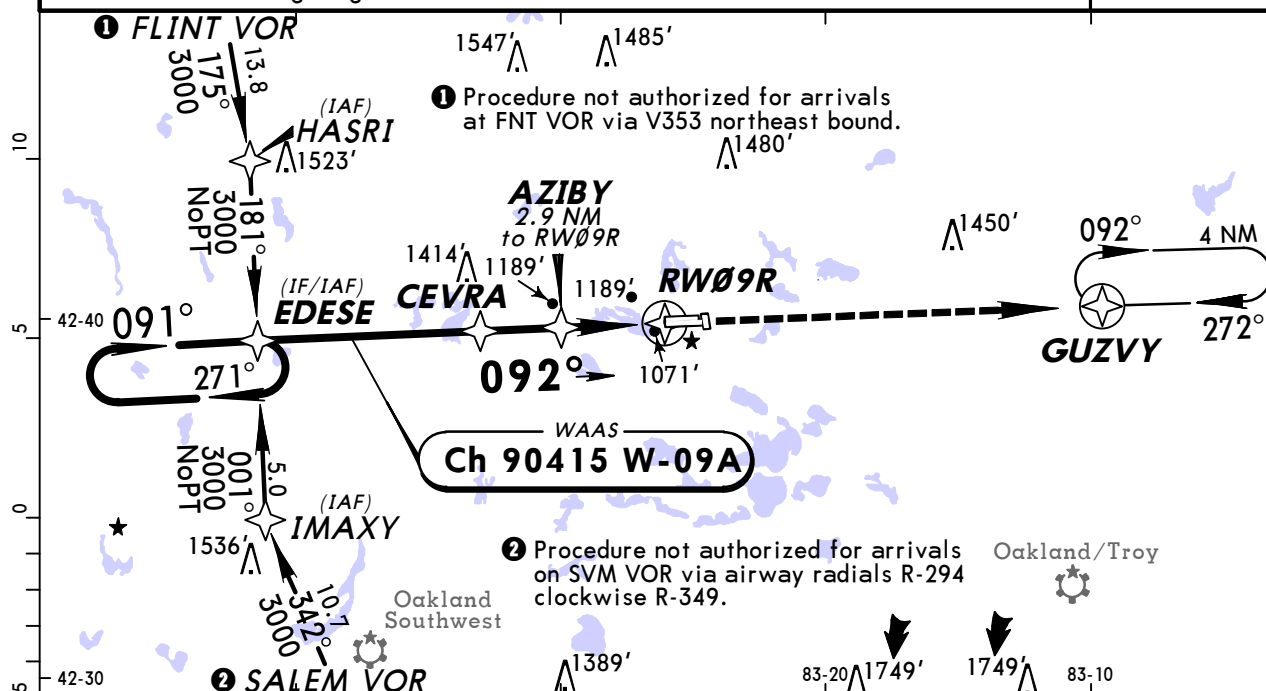


|                                 |     |      |      |      |      |      |                |                    |                     |
|---------------------------------|-----|------|------|------|------|------|----------------|--------------------|---------------------|
| Gnd speed-Kts                   | 70  | 90   | 100  | 120  | 140  | 160  | REIL<br>VASI-L | <b>3000'</b><br>LT | SVM<br><b>114.3</b> |
| Descent angle [3.02°]           | 374 | 481  | 534  | 641  | 748  | 855  |                |                    |                     |
| MAP at D6.5 PSI or ERNST to MAP | 3.3 | 2:50 | 2:12 | 1:59 | 1:39 | 1:25 |                |                    |                     |

| STRAIGHT-IN LANDING RWY 27L  |    |                                  |  | CIRCLE-TO-LAND               |                        |                                  |  |
|------------------------------|----|----------------------------------|--|------------------------------|------------------------|----------------------------------|--|
| MDA(H) <b>1420'</b> (446')   |    | MDA(H) <b>1540'</b> (566')       |  | With Local Altimeter Setting |                        | With Young Mun Altimeter Setting |  |
| With Local Altimeter Setting |    | With Young Mun Altimeter Setting |  | Max Kts                      | MDA(H)                 | MDA(H)                           |  |
| A                            | 1  | 1                                |  | 90                           | <b>1500'</b> (519')-1  | <b>1620'</b> (639')-1            |  |
| B                            | 1  | 1                                |  | 120                          | <b>1520'</b> (539')-1  | <b>1640'</b> (659')-1            |  |
| C                            | 1¼ | 1½                               |  | 140                          | <b>1560'</b> (579')-1½ | <b>1680'</b> (699')-2            |  |
| D                            | 1½ | 1¾                               |  | 165                          | <b>1640'</b> (659')-2  | <b>1760'</b> (779')-2½           |  |

BRIEFING STRIP™

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                  |                                                     |                                                      |                                              |  |                                                 |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------|------------------------------------------------------|----------------------------------------------|--|-------------------------------------------------|--|
| ATIS (ASOS when Twr inop)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                  | DETROIT Approach (R)                                |                                                      | *PONTIAC Tower                               |  | *Ground                                         |  |
| 125.02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                  | 127.5                                               |                                                      | CTAF 120.5                                   |  | 121.9                                           |  |
| WAAS<br><b>Ch 90415</b><br>W-09A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Final<br>Apch Crs<br><b>092°</b> | Minimum Alt<br><b>CEVRA</b><br><b>2700'</b> (1720') | LPV<br>DA(H)<br>(CONDITIONAL)<br><b>1180'</b> (200') | Apt Elev <b>981'</b><br><br>TDZE <b>980'</b> |  | <div><div>2900'</div><div>MSA RW09R</div></div> |  |
| MISSED APCH: Climb to 3000' direct GUVVY and hold.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                  |                                                     |                                                      |                                              |  |                                                 |  |
| Alt Set: INCHES                      Trans level: FL 180                      Trans alt: 18000'<br>1. Use local altimeter setting; if not received, use Young Mun altimeter setting.<br>2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 3. DME/DME RNP-0.30 not authorized. 4. Baro-VNAV and VDP not authorized when using Young Mun altimeter setting. 5. VGSI and RNAV glidepath not coincident. 6. Visibility reduction by helicopters not authorized.<br>7. Pilot controlled lighting 120.5. |                                  |                                                     |                                                      |                                              |  |                                                 |  |



|                        |     |     |     |     |     |     |                                            |                               |              |       |
|------------------------|-----|-----|-----|-----|-----|-----|--------------------------------------------|-------------------------------|--------------|-------|
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 | <div><div>MALSR</div><div>PAPI</div></div> | <div>3000'</div> <div>↑</div> | <div>➔</div> | GUVZY |
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |                                            |                               |              |       |
|                        |     |     |     |     |     |     |                                            |                               |              |       |
| MAP at RW09R           |     |     |     |     |     |     |                                            |                               |              |       |

| STRAIGHT-IN LANDING RWY 9R       |                  |                  |              |          |                  |                 | CIRCLE-TO-LAND                   |                    |
|----------------------------------|------------------|------------------|--------------|----------|------------------|-----------------|----------------------------------|--------------------|
| With Local Altimeter Setting     |                  |                  |              |          |                  |                 | With Local Altimeter Setting     |                    |
| LPV                              |                  | LNAV/VNAV        |              | LNAV     |                  |                 | Max Kts                          | MDA(H)             |
| DA(H)                            | 1180' (200')     | DA(H)            | 1579' (599') | MDA(H)   | 1420' (440')     |                 |                                  |                    |
| RAIL or ALS out                  |                  | RAIL or ALS out  |              | RAIL out |                  | ALS out         |                                  |                    |
| A                                |                  |                  |              |          | RVR 40<br>or 3/4 | RVR 50<br>or 1  | 90                               | 1500' (519')-1     |
| B                                | RVR 24<br>or 1/2 | RVR 40<br>or 3/4 | 1 1/2        | 2        |                  |                 | 120                              | 1520' (539')-1     |
| C                                |                  |                  |              |          | RVR 40 or 3/4    | RVR 60 or 1 1/4 | 140                              | 1560' (579')-1 1/2 |
| D                                |                  |                  |              |          | RVR 50 or 1      | 1 1/2           | 165                              | 1640' (659')-2     |
| With Young Mun Altimeter Setting |                  |                  |              |          |                  |                 | With Young Mun Altimeter Setting |                    |
| LPV                              |                  | LNAV/VNAV        |              | LNAV     |                  |                 | Max Kts                          | MDA(H)             |
| DA(H)                            | 1285' (305')     | DA(H)            | 1684' (704') | MDA(H)   | 1540' (560')     |                 |                                  |                    |
| RAIL or ALS out                  |                  | RAIL or ALS out  |              | RAIL out |                  | ALS out         |                                  |                    |
| A                                |                  |                  |              |          | RVR 40<br>or 3/4 | RVR 50 or 1     | 90                               | 1620' (639')-1     |
| B                                | RVR 24<br>or 1/2 | RVR 50 or 1      | 2            | 2 1/2    |                  |                 | 120                              | 1640' (659')-1     |
| C                                |                  |                  |              |          | RVR 50 or 1      | 1 1/2           | 140                              | 1680' (699')-2     |
| D                                |                  |                  |              |          | RVR 60 or 1 1/4  | 1 3/4           | 165                              | 1760' (779')-2 1/2 |

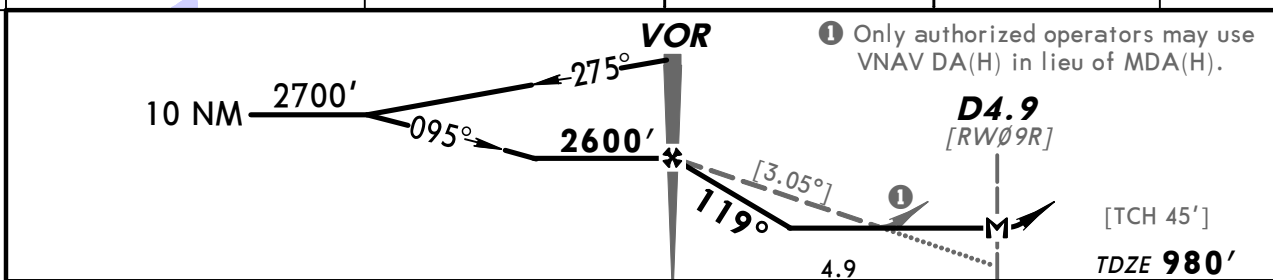
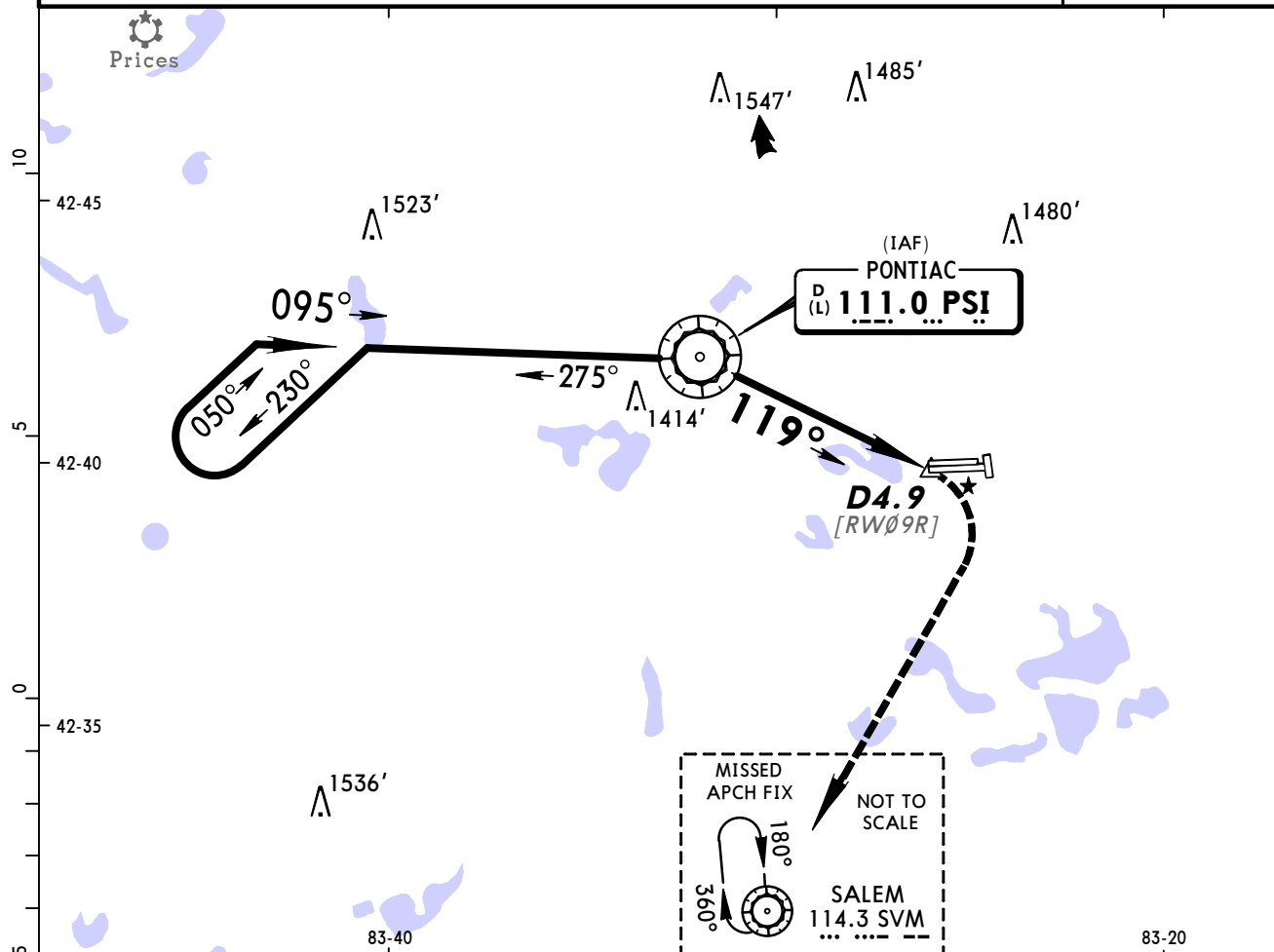


BRIEFING STRIP™TERPS AMEND 0 17 DEC 2009

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BRIEFING STRIP™

|                                                                                                                                                                                 |                           |                                     |                                         |                            |  |                                         |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------------------------|-----------------------------------------|----------------------------|--|-----------------------------------------|--|
| ATIS (ASOS when Twr inop)                                                                                                                                                       |                           | DETROIT Approach (R)                |                                         | *PONTIAC Tower             |  | *Ground                                 |  |
| 125.02                                                                                                                                                                          |                           | 127.5                               |                                         | CTAF 120.5                 |  | 121.9                                   |  |
| VOR<br>PSI<br>111.0                                                                                                                                                             | Final<br>Apch Crs<br>119° | Minimum Alt<br>VOR<br>2600' (1620') | MDA(H)<br>(CONDITIONAL)<br>1600' (620') | Apt Elev 980'<br>TDZE 980' |  | <div>2900'</div> <div>MSA PSI VOR</div> |  |
| MISSED APCH: Climbing RIGHT turn to 3000' direct SVM VOR and hold.                                                                                                              |                           |                                     |                                         |                            |  |                                         |  |
| Alt Set: INCHES                      Trans level: FL 180                      Trans alt: 18000'                                                                                 |                           |                                     |                                         |                            |  |                                         |  |
| 1. Use local altimeter setting; if not received, use Young Mun altimeter setting.<br>2. Visibility reduction by helicopters not authorized. 3. Pilot controlled lighting 120.5. |                           |                                     |                                         |                            |  |                                         |  |



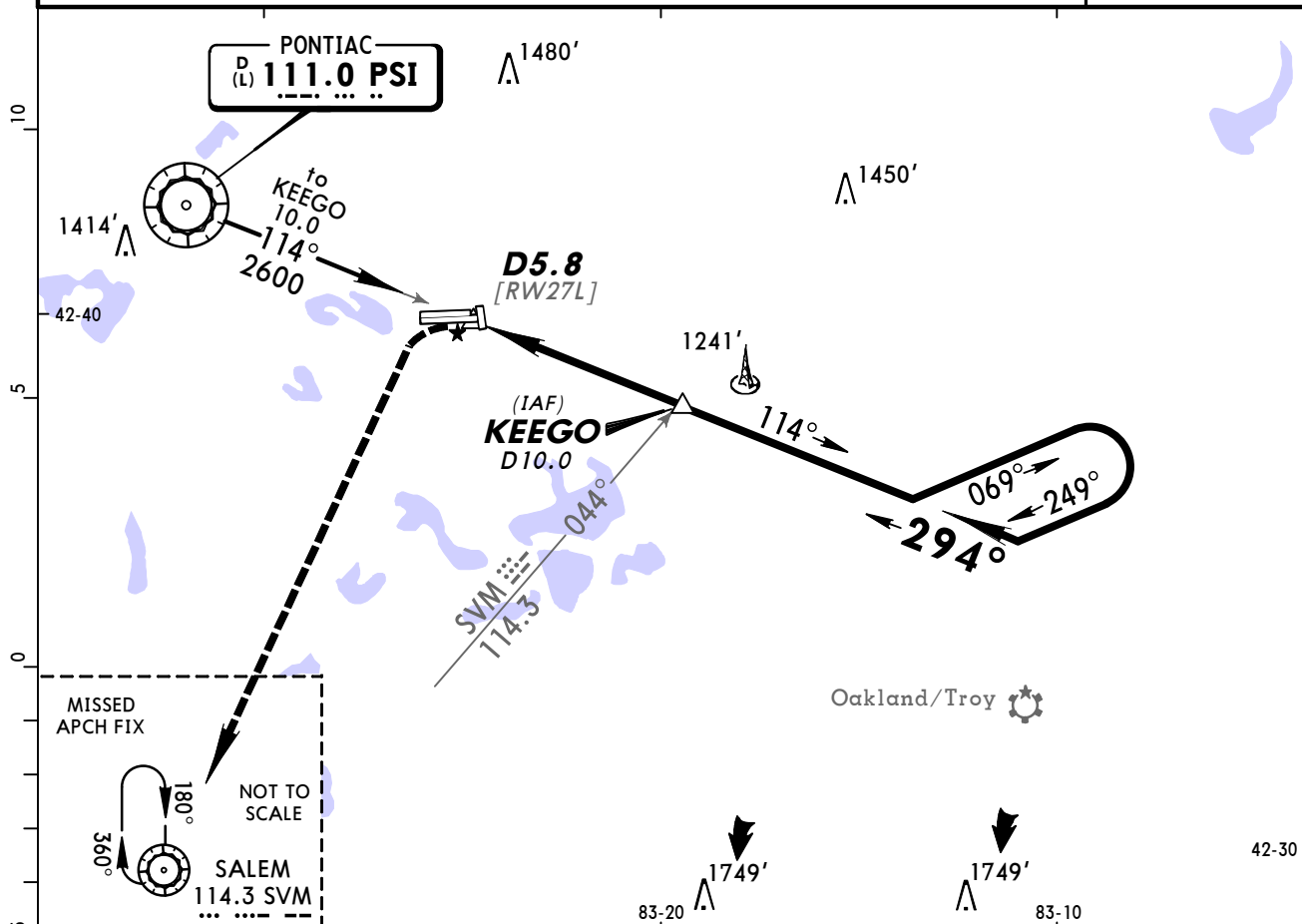
|                           |     |      |      |      |      |      |                                                   |
|---------------------------|-----|------|------|------|------|------|---------------------------------------------------|
| Gnd speed-Kts             | 70  | 90   | 100  | 120  | 140  | 160  | MALSR<br>PAPI<br>3000'<br>RT<br>D<br>SVM<br>114.3 |
| Descent angle [3.05°]     | 378 | 486  | 540  | 648  | 755  | 863  |                                                   |
| MAP at D4.9 or VOR to MAP | 4.9 | 4:12 | 3:16 | 2:56 | 2:27 | 2:06 |                                                   |

| STRAIGHT-IN LANDING RWY 9R   |             |  |  |  | CIRCLE-TO-LAND                   |                      |  |  |
|------------------------------|-------------|--|--|--|----------------------------------|----------------------|--|--|
| MDA(H) <b>1600'</b> (620')   |             |  |  |  | MDA(H) <b>1720'</b> (740')       |                      |  |  |
| With Local Altimeter Setting |             |  |  |  | With Young Mun Altimeter Setting |                      |  |  |
| RAIL out   ALS out           |             |  |  |  | RAIL out   ALS out               |                      |  |  |
| A                            | RVR 50 or 1 |  |  |  | Max Kts                          | MDA(H)               |  |  |
| B                            | RVR 50 or 1 |  |  |  | 90                               | 1600' (620') - 1     |  |  |
| C                            | 1 3/4       |  |  |  | 120                              | 1600' (620') - 1 3/4 |  |  |
| D                            | 2           |  |  |  | 140                              | 1600' (620') - 1 3/4 |  |  |
|                              | 2           |  |  |  | 165                              | 1640' (660') - 2     |  |  |
|                              | 2 1/4       |  |  |  |                                  | 1760' (780') - 2 1/2 |  |  |

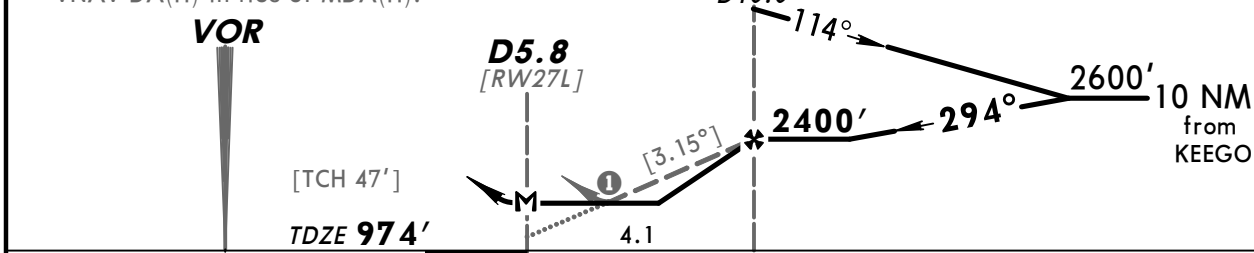


BRIEFING STRIP™

|                                                                                                                                                                                 |                           |                                       |                                         |                            |  |                                         |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------|-----------------------------------------|----------------------------|--|-----------------------------------------|--|
| ATIS (ASOS when Twr inop)                                                                                                                                                       |                           | DETROIT Approach (R)                  |                                         | *PONTIAC Tower             |  | *Ground                                 |  |
| 125.02                                                                                                                                                                          |                           | 127.5                                 |                                         | CTAF 120.5                 |  | 121.9                                   |  |
| VOR<br>PSI<br>111.0                                                                                                                                                             | Final<br>Apch Crs<br>294° | Minimum Alt<br>KEEGO<br>2400' (1426') | MDA(H)<br>(CONDITIONAL)<br>1460' (486') | Apt Elev 980'<br>TDZE 974' |  | <div>2900'</div> <div>MSA PSI VOR</div> |  |
| MISSED APCH: Climbing LEFT turn to 3000' direct SVM VOR and hold.                                                                                                               |                           |                                       |                                         |                            |  |                                         |  |
| Alt Set: INCHES                      Trans level: FL 180                      Trans alt: 18000'                                                                                 |                           |                                       |                                         |                            |  |                                         |  |
| 1. Use local altimeter setting; if not received, use Young Mun altimeter setting.<br>2. Visibility reduction by helicopters not authorized. 3. Pilot controlled lighting 120.5. |                           |                                       |                                         |                            |  |                                         |  |



① Only authorized operators may use VNAV DA(H) in lieu of MDA(H).



| Gnd speed-Kts               | 70  | 90   | 100  | 120  | 140  | 160  |      |  | REIL   | 3000' | → | SVM   |
|-----------------------------|-----|------|------|------|------|------|------|--|--------|-------|---|-------|
| Descent angle [3.15°]       | 390 | 502  | 557  | 669  | 780  | 892  |      |  | VASI-L | LT    |   | 114.3 |
| MAP at D5.8 or KEEGO to MAP | 4.1 | 3:31 | 2:44 | 2:28 | 2:03 | 1:45 | 1:32 |  |        |       |   |       |

| STRAIGHT-IN LANDING RWY 27L  |  |                                  |  | CIRCLE-TO-LAND               |                   |                                  |  |
|------------------------------|--|----------------------------------|--|------------------------------|-------------------|----------------------------------|--|
| MDA(H) <b>1460'</b> (486')   |  | MDA(H) <b>1580'</b> (606')       |  | With Local Altimeter Setting |                   | With Young Mun Altimeter Setting |  |
| With Local Altimeter Setting |  | With Young Mun Altimeter Setting |  | Max Kts.                     | MDA(H)            | MDA(H)                           |  |
| A                            |  | 1                                |  | 90                           | 1500' (520') - 1  | 1620' (640') - 1                 |  |
| B                            |  | 1                                |  | 120                          | 1520' (540') - 1  | 1640' (660') - 1                 |  |
| C                            |  | 1 ¼                              |  | 140                          | 1560' (580') - 1½ | 1680' (700') - 2                 |  |
| D                            |  | 1 ½                              |  | 165                          | 1640' (660') - 2  | 1760' (780') - 2½                |  |

## **General Information**

Location: Marquette MI USA  
IATA Code: MQT  
Lat/Long: N46° 21.2' W087° 23.7'  
Elevation: 1221 ft

Airport Use: Public  
Magnetic Variation: 4.8°W  
Sectional Chart: Green Bay

Fuel Types: 100 Octane (LL), Jet A  
Oxygen Types: High Pressure  
Repair Types: Major Airframe, Major Engine  
Customs: Upon Prior Request  
Airport Type: IFR  
Landing Fee: No  
Control Tower: Yes  
Jet Start Unit: No  
LLWS Alert: No  
Beacon: Yes  
Pattern Altitude: 980 ft AGL

Sunrise: 1233 Z  
Sunset: 2332 Z,

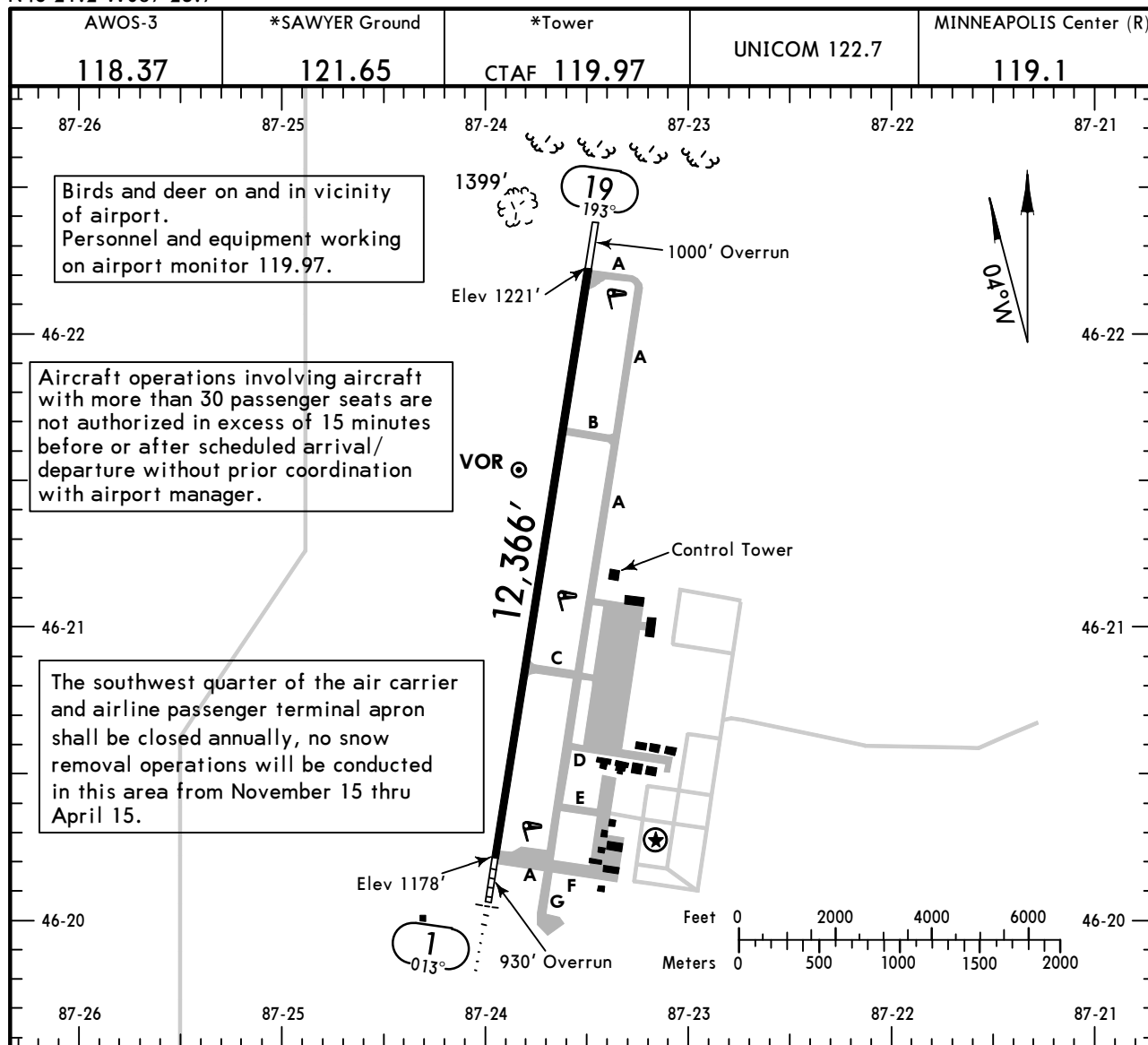
## **Runway Information**

Runway: 01  
Length x Width: 12366 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 1180 ft  
Lighting: Edge, ALS, Pilot controlled  
Stopway: 1000 ft

Runway: 19  
Length x Width: 12366 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 1221 ft  
Lighting: Edge, REIL, Pilot controlled  
Stopway: 930 ft

## **Communication Information**

AWOS 118.375  
Sawyer Tower 119.975 CTAF PCL  
Sawyer Ground Control 121.65  
Sawyer Intl Unicom 122.7  
Minneapolis Center 119.1 Remote Communications Air-Ground



**ADDITIONAL RUNWAY INFORMATION**

| RWY |                                            | USABLE LENGTHS |                               |          |       |
|-----|--------------------------------------------|----------------|-------------------------------|----------|-------|
|     |                                            | Threshold      | Landing Beyond<br>Glide Slope | TAKE-OFF | WIDTH |
| 1   | ① HIRL ① MALSR PAPI-L (angle 3.0°) grooved |                | 11,415'                       |          | 150'  |
| 19  | ① HIRL ① REIL PAPI-L (angle 3.0°) grooved  |                |                               |          |       |
|     |                                            |                |                               |          |       |
|     |                                            |                |                               |          |       |
|     |                                            |                |                               |          |       |
|     |                                            |                |                               |          |       |
|     |                                            |                |                               |          |       |

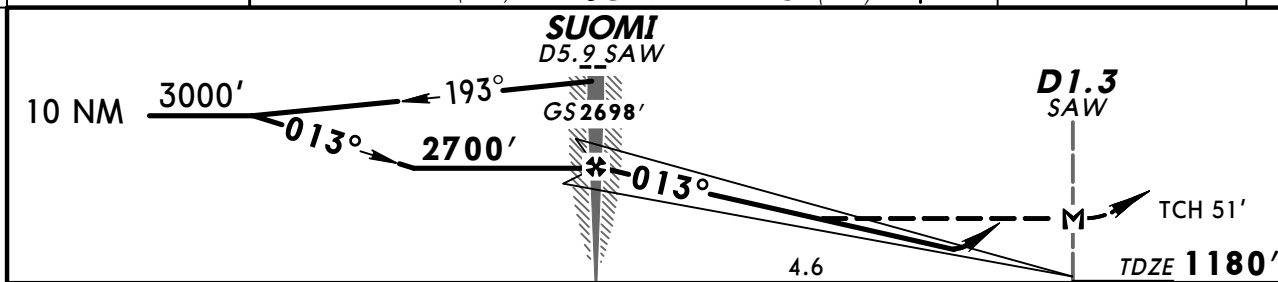
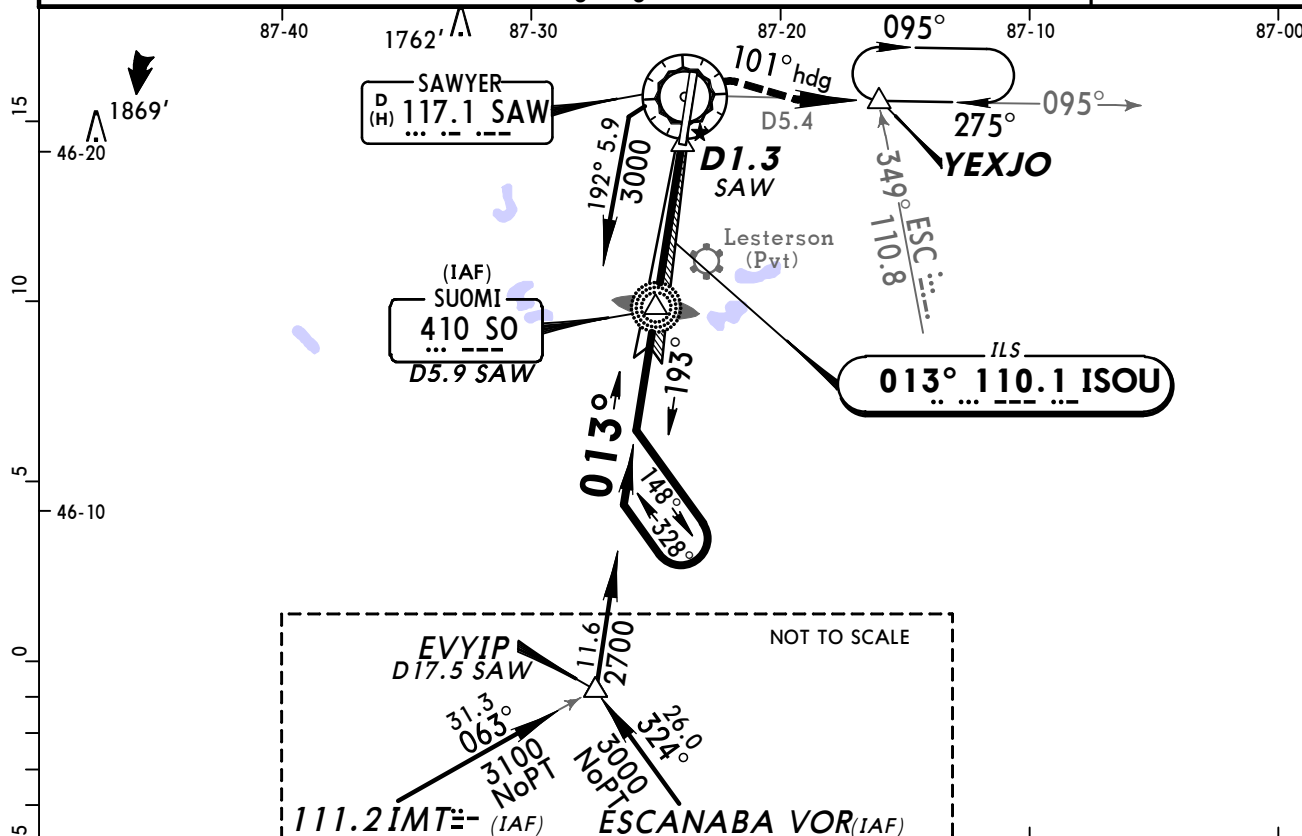
① Activate on 119.97.

| TAKE-OFF     |                  |     | FOR FILING AS ALTERNATE   |                         |                                                    |       |
|--------------|------------------|-----|---------------------------|-------------------------|----------------------------------------------------|-------|
|              | All Rwys         |     | ILS Rwy 1                 | VOR Rwy 1<br>VOR Rwy 19 | Authorized Only<br>When Local<br>Weather Available |       |
|              | Adequate Vis Ref | STD |                           |                         | RNAV (GPS) Rwy 19                                  | Other |
| 1 & 2<br>Eng | 1/4              | 1   | A<br>B<br>C<br>D<br>600-2 | 800-2                   | 800-2                                              | NA    |
| 3 & 4<br>Eng |                  | 1/2 |                           |                         |                                                    |       |
|              |                  |     |                           |                         |                                                    |       |
|              |                  |     |                           |                         |                                                    |       |

AMEND 0

BRIEFING STRIP™

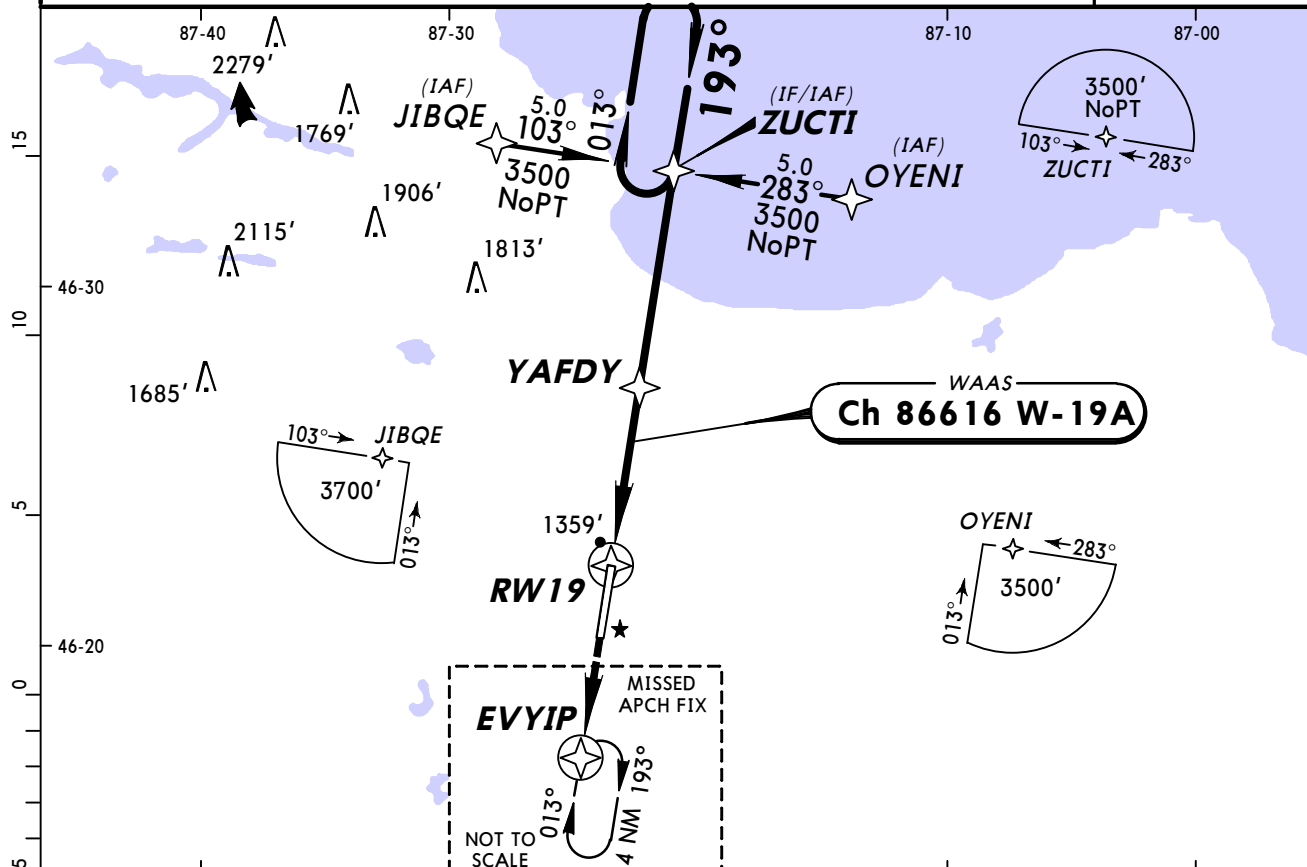
|                                                                                                                                   |  |                                 |  |                              |  |                                               |  |                              |  |
|-----------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------|--|------------------------------|--|-----------------------------------------------|--|------------------------------|--|
| AWOS-3<br>118.37                                                                                                                  |  | MINNEAPOLIS Center (R)<br>119.1 |  | *SAWYER Tower<br>CTAF 119.97 |  | *Ground<br>121.65                             |  |                              |  |
| LOC<br>ISOU<br>110.1                                                                                                              |  | Final<br>Apch Crs<br>013°       |  | GS<br>SUOMI<br>2698' (1518') |  | ILS<br>DA(H)<br>(CONDITIONAL)<br>1380' (200') |  | Apt Elev 1221'<br>TDZE 1180' |  |
| MISSED APCH: Climb to 1600', then climbing RIGHT turn to 3000' via heading 101° and outbound SAW VOR R-095 to YEXJO INT and hold. |  |                                 |  |                              |  |                                               |  |                              |  |
| Alt Set: INCHES                                                                                                                   |  |                                 |  |                              |  |                                               |  |                              |  |



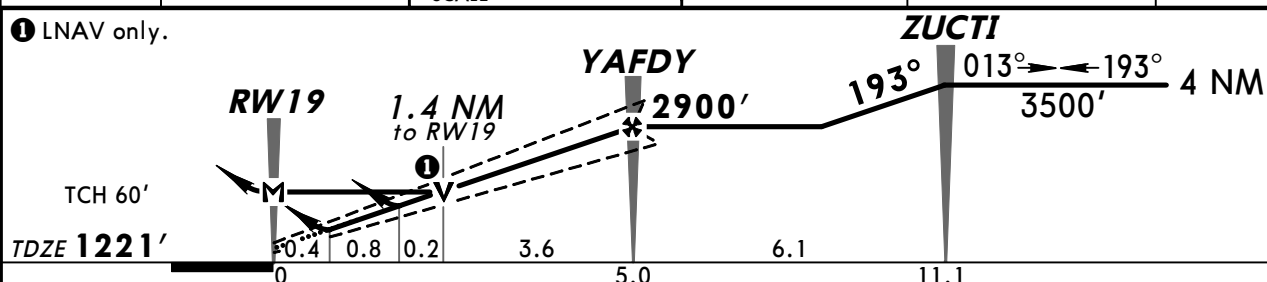
|                                     |       |      |      |      |      |      |       |       |       |      |             |
|-------------------------------------|-------|------|------|------|------|------|-------|-------|-------|------|-------------|
| Gnd speed-Kts                       | 70    | 90   | 100  | 120  | 140  | 160  | MALSR | 1600' | 3000' | 101° | SAW         |
| GS                                  | 3.00° | 372  | 478  | 531  | 637  | 743  | PAPI  | ↑     | RT    | via  | 117.1 YEXJO |
| MAP at D1.3 SAW or SUOMI to MAP 4.6 | 3:57  | 3:04 | 2:46 | 2:18 | 1:58 | 1:43 |       |       |       |      | R-095       |

| STRAIGHT-IN LANDING RWY 1<br>With Local Altimeter Setting |                 |     |                                     |         |   | CIRCLE-TO-LAND<br>With Local Altimeter Setting |                    |
|-----------------------------------------------------------|-----------------|-----|-------------------------------------|---------|---|------------------------------------------------|--------------------|
| ILS<br>DA(H) 1380' (200')                                 |                 |     | LOC (GS out)<br>MDA(H) 1540' (360') |         |   | Max Kts                                        | MDA(H)             |
| FULL                                                      | RAIL or ALS out |     | RAIL out                            | ALS out |   | 90                                             | 1720' (499') - 1   |
| A                                                         |                 |     |                                     |         |   | 120                                            | 1720' (499') - 1   |
| B                                                         | 1/2             | 3/4 | 1/2                                 | 3/4     | 1 | 140                                            | 1720' (499') - 1/2 |
| C                                                         |                 |     | 3/4                                 | 1 1/4   |   | 165                                            | 1780' (559') - 2   |
| D                                                         |                 |     |                                     |         |   |                                                |                    |
| With Ford Altimeter Setting                               |                 |     |                                     |         |   | Max Kts                                        | MDA(H)             |
| DA(H) 1487' (307')                                        | RAIL or ALS out |     | RAIL out                            | ALS out |   | 90                                             | 1840' (619') - 1   |
| A                                                         |                 |     |                                     |         |   | 120                                            | 1840' (619') - 1   |
| B                                                         | 1/2             | 1   | 1/2                                 | 3/4     | 1 | 140                                            | 1840' (619') - 1/2 |
| C                                                         |                 |     | 3/4                                 | 1 1/4   |   | 165                                            | 1900' (679') - 2   |
| D                                                         |                 |     | 1                                   | 1 1/2   |   |                                                |                    |

|                                                                                                                                                                                                                                                                                                                                        |                                  |                                                     |                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------|------------------------------------------------------|
| AWOS-3<br>118.37                                                                                                                                                                                                                                                                                                                       | MINNEAPOLIS Center (R)<br>119.1  | *SAWYER Tower<br>CTAF 119.97                        | *Ground<br>121.65                                    |
| WAAS<br><b>Ch 86616</b><br>W-19A                                                                                                                                                                                                                                                                                                       | Final<br>Apch Crs<br><b>193°</b> | Minimum Alt<br><b>YAFDY</b><br><b>2900'</b> (1679') | LPV<br>DA(H)<br>(CONDITIONAL)<br><b>1421'</b> (200') |
| Apt Elev <b>1221'</b><br>TDZE <b>1221'</b>                                                                                                                                                                                                                                                                                             |                                  |                                                     | TAA<br>30 NM<br>IAF                                  |
| <b>MISSED APCH:</b> Climb to 3500' direct EVYIP and hold.                                                                                                                                                                                                                                                                              |                                  |                                                     |                                                      |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                                                                                                                                                                                                                                                  |                                  |                                                     |                                                      |
| 1. Use local altimeter setting; if not received, use Ford altimeter setting. 2. Baro-VNAV and VDP not authorized when using Ford altimeter setting. 3. DME/DME RNP-0.30 not authorized. 4. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -17°C (2°F) or above 46°C (114°F). 5. Pilot controlled lighting 119.97. |                                  |                                                     |                                                      |

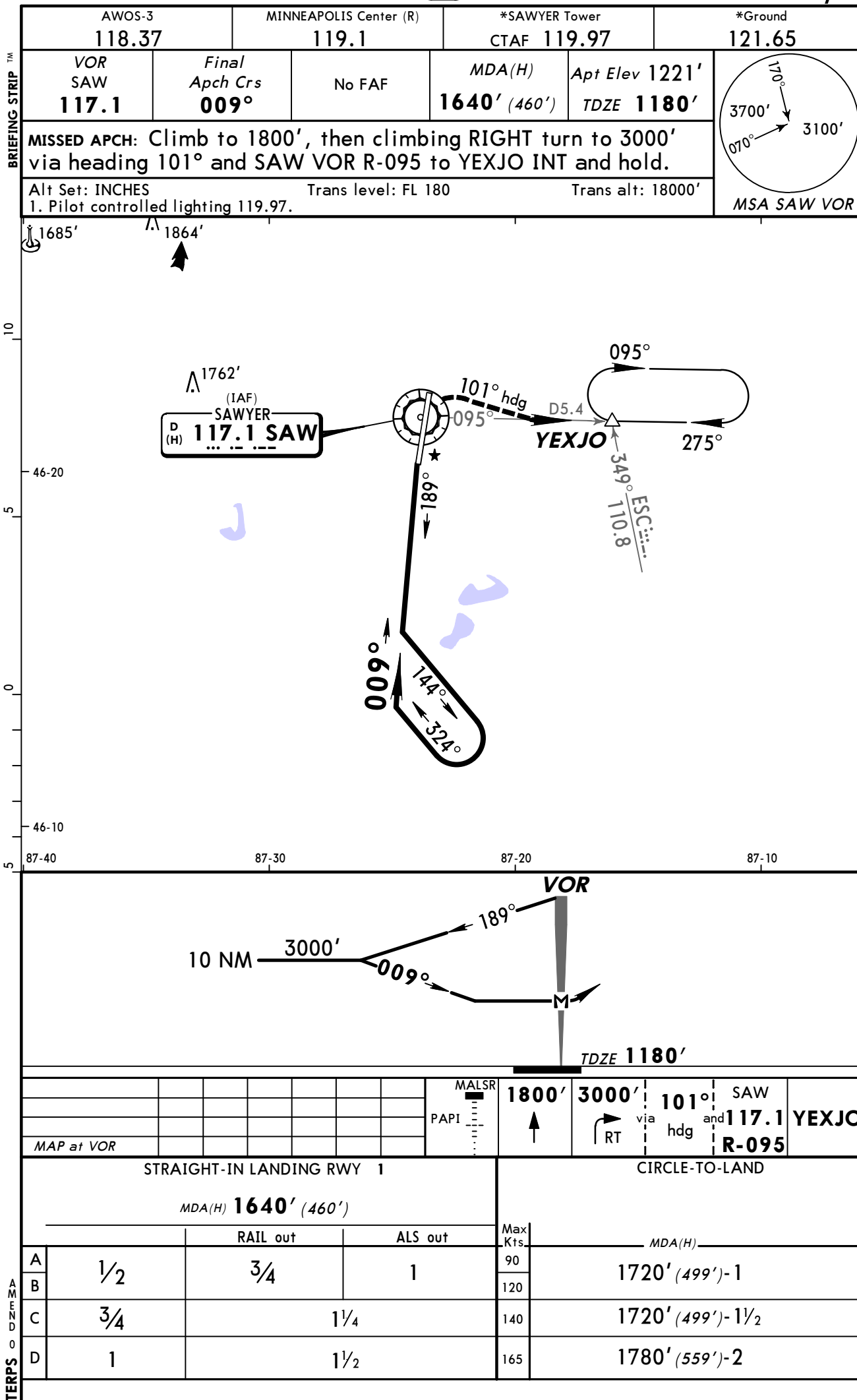


① LNAV only.



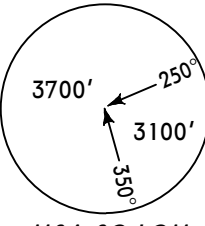
|                  |       |     |     |     |     |     |     |                |       |       |
|------------------|-------|-----|-----|-----|-----|-----|-----|----------------|-------|-------|
| Gnd speed-Kts    | 70    | 90  | 100 | 120 | 140 | 160 |     |                |       |       |
| Glide Path Angle | 3.00° | 372 | 478 | 531 | 637 | 743 | 849 |                |       |       |
| MAP at RW19      |       |     |     |     |     |     |     |                |       |       |
|                  |       |     |     |     |     |     |     | REIL<br>PAPI-L | 3500' | EVYIP |

| STRAIGHT-IN LANDING RWY 19 |     |                                                           |  |                            |  | CIRCLE-TO-LAND               |                                       |
|----------------------------|-----|-----------------------------------------------------------|--|----------------------------|--|------------------------------|---------------------------------------|
| LPV                        |     | LNAV/VNAV                                                 |  | LNAV                       |  | With Local Altimeter Setting |                                       |
| DA(H) <b>1421'</b> (200')  |     | With Local Altimeter Setting<br>DA(H) <b>1665'</b> (444') |  | MDA(H) <b>1720'</b> (499') |  | Max Kts                      | MDA(H)                                |
| A                          |     |                                                           |  | 1                          |  | 90                           | 1720'(499')-1                         |
| B                          |     |                                                           |  |                            |  | 120                          |                                       |
| C                          | 3/4 | 1 1/2                                                     |  | 1 1/4                      |  | 140                          | 1720'(499')-1 1/2                     |
| D                          |     |                                                           |  | 1 1/2                      |  | 165                          | 1780'(559')-2                         |
| DA(H) <b>1528'</b> (307')  |     | With Ford Altimeter Setting<br>DA(H) <b>1772'</b> (551')  |  | MDA(H) <b>1840'</b> (619') |  | Max Kts                      | With Ford Altimeter Setting<br>MDA(H) |
| A                          |     |                                                           |  | 1                          |  | 90                           | 1840'(619')-1                         |
| B                          |     |                                                           |  |                            |  | 120                          |                                       |
| C                          | 1   | 2                                                         |  | 1 3/4                      |  | 140                          | 1840'(619')-1 3/4                     |
| D                          |     |                                                           |  | 2                          |  | 165                          | 1900'(679')-2 1/4                     |

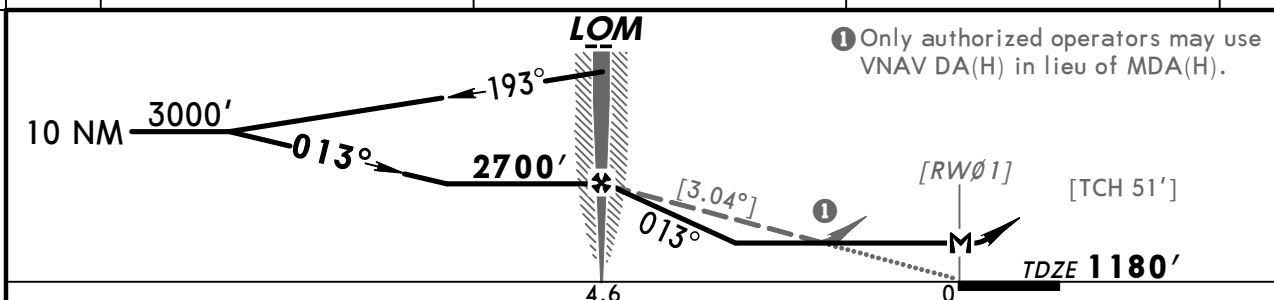
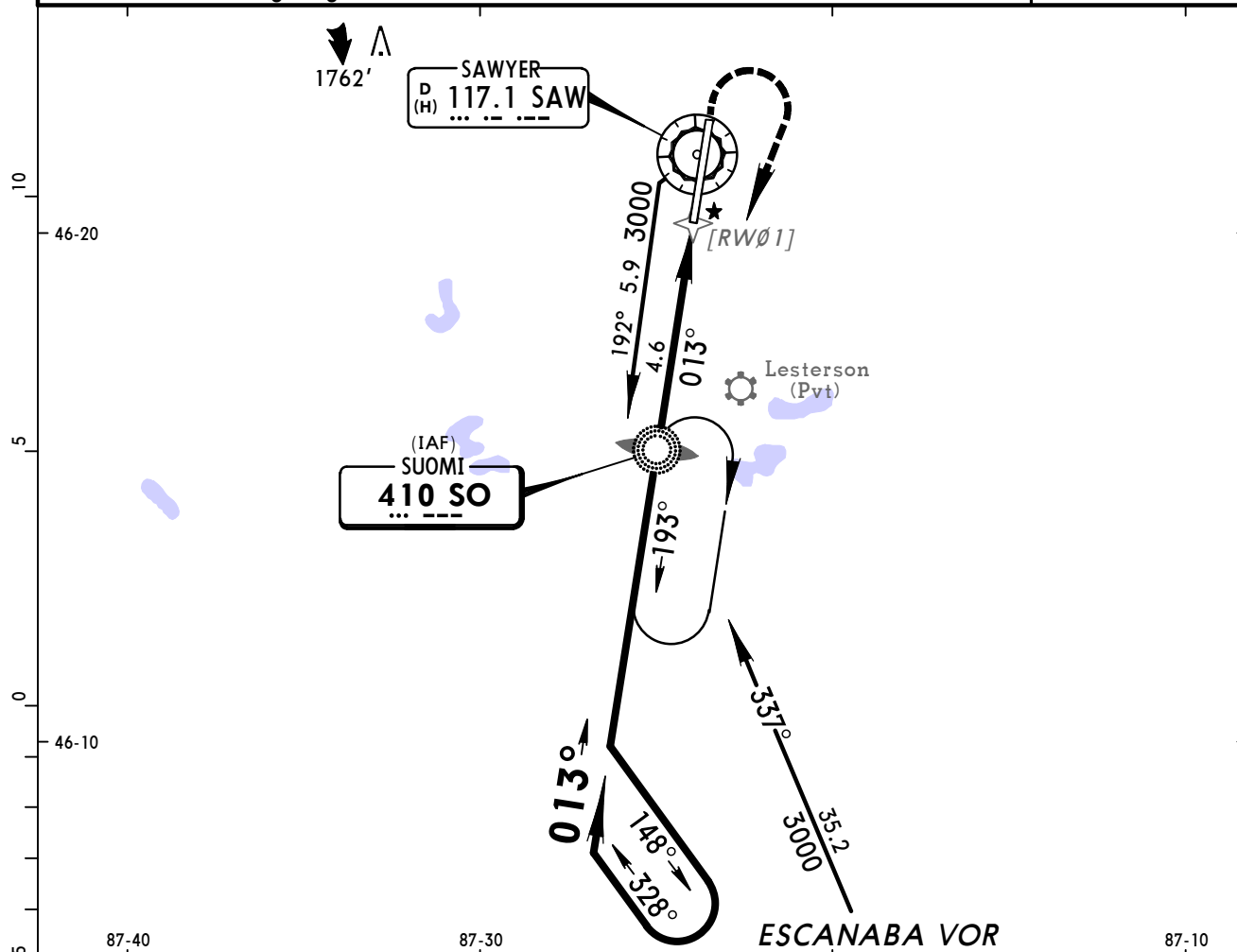




BRIEFING STRIP™

|                                                                                              |                                  |                                            |                                                |                                            |  |                                                                                     |  |
|----------------------------------------------------------------------------------------------|----------------------------------|--------------------------------------------|------------------------------------------------|--------------------------------------------|--|-------------------------------------------------------------------------------------|--|
| AWOS-3<br><b>118.37</b>                                                                      |                                  | MINNEAPOLIS Center (R)<br><b>119.1</b>     |                                                | *SAWYER Tower<br>CTAF <b>119.97</b>        |  | *Ground<br><b>121.65</b>                                                            |  |
| LOM<br>SO<br><b>410</b>                                                                      | Final<br>Apch Crs<br><b>013°</b> | Minimum Alt<br>LOM<br><b>2700' (1520')</b> | MDA(H)<br>(CONDITIONAL)<br><b>1720' (540')</b> | Apt Elev <b>1221'</b><br>TDZE <b>1180'</b> |  |  |  |
| <b>MISSED APCH:</b> Climb to 1800' then climbing RIGHT turn to 3000' direct SO LOM and hold. |                                  |                                            |                                                |                                            |  |                                                                                     |  |
| Alt Set: INCHES                                                                              |                                  | Trans level: FL 180                        |                                                | Trans alt: 18000'                          |  |                                                                                     |  |
| 1. Use local altimeter setting; if not received, use Ford altimeter setting.                 |                                  | 2. Pilot controlled lighting 119.97.       |                                                |                                            |  |                                                                                     |  |

MSA SO LOM



|                       |     |      |      |      |      |      |       |  |       |       |    |     |
|-----------------------|-----|------|------|------|------|------|-------|--|-------|-------|----|-----|
| Gnd speed-Kts         | 70  | 90   | 100  | 120  | 140  | 160  | MALSR |  | 1800' | 3000' | SO | 410 |
| Descent angle [3.04°] | 376 | 484  | 538  | 645  | 753  | 861  | PAPI  |  | ↑     | RT    | →  |     |
| LOM to MAP            | 4.6 | 3:57 | 3:04 | 2:46 | 2:18 | 1:58 |       |  |       |       |    |     |

| STRAIGHT-IN LANDING RWY 1                                  |       |         |                                                           |       |         | CIRCLE-TO-LAND               |                    |                             |  |
|------------------------------------------------------------|-------|---------|-----------------------------------------------------------|-------|---------|------------------------------|--------------------|-----------------------------|--|
| MDA(H) <b>1720' (540')</b><br>With Local Altimeter Setting |       |         | MDA(H) <b>1840' (660')</b><br>With Ford Altimeter Setting |       |         | With Local Altimeter Setting |                    | With Ford Altimeter Setting |  |
| RAIL out                                                   |       | ALS out | RAIL out                                                  |       | ALS out | Max Kts                      | MDA(H)             | MDA(H)                      |  |
| A                                                          | 3/4   | 1       | 3/4                                                       | 1     |         | 90                           | 1720' (499')-1     | 1840' (619')-1              |  |
| B                                                          |       |         |                                                           |       |         | 120                          |                    |                             |  |
| C                                                          | 1     | 1 1/2   | 1 1/4                                                     | 1 3/4 |         | 140                          | 1720' (499')-1 1/2 | 1840' (619')-1 1/2          |  |
| D                                                          | 1 1/2 | 1 3/4   | 1 3/4                                                     | 2     |         | 165                          | 1780' (559')-2     | 1900' (679')-2              |  |



## General Information

Location: Traverse City MI USA  
IATA Code: TVC  
Lat/Long: N44° 44.5' W085° 34.9'  
Elevation: 624 ft

Airport Use: Public  
Magnetic Variation: 6.0°W  
Sectional Chart: Green Bay

Fuel Types: 100 Octane (LL), Jet A  
Repair Types: Major Airframe, Major Engine  
Customs: Upon Prior Request  
Airport Type: IFR  
Landing Fee: Yes  
Control Tower: Yes  
Jet Start Unit: Yes  
LLWS Alert: No  
Beacon: Yes

Sunrise: 1224 Z  
Sunset: 2326 Z,

## Runway Information

Runway: 10  
Length x Width: 6500 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 624 ft  
Lighting: Edge, Pilot controlled

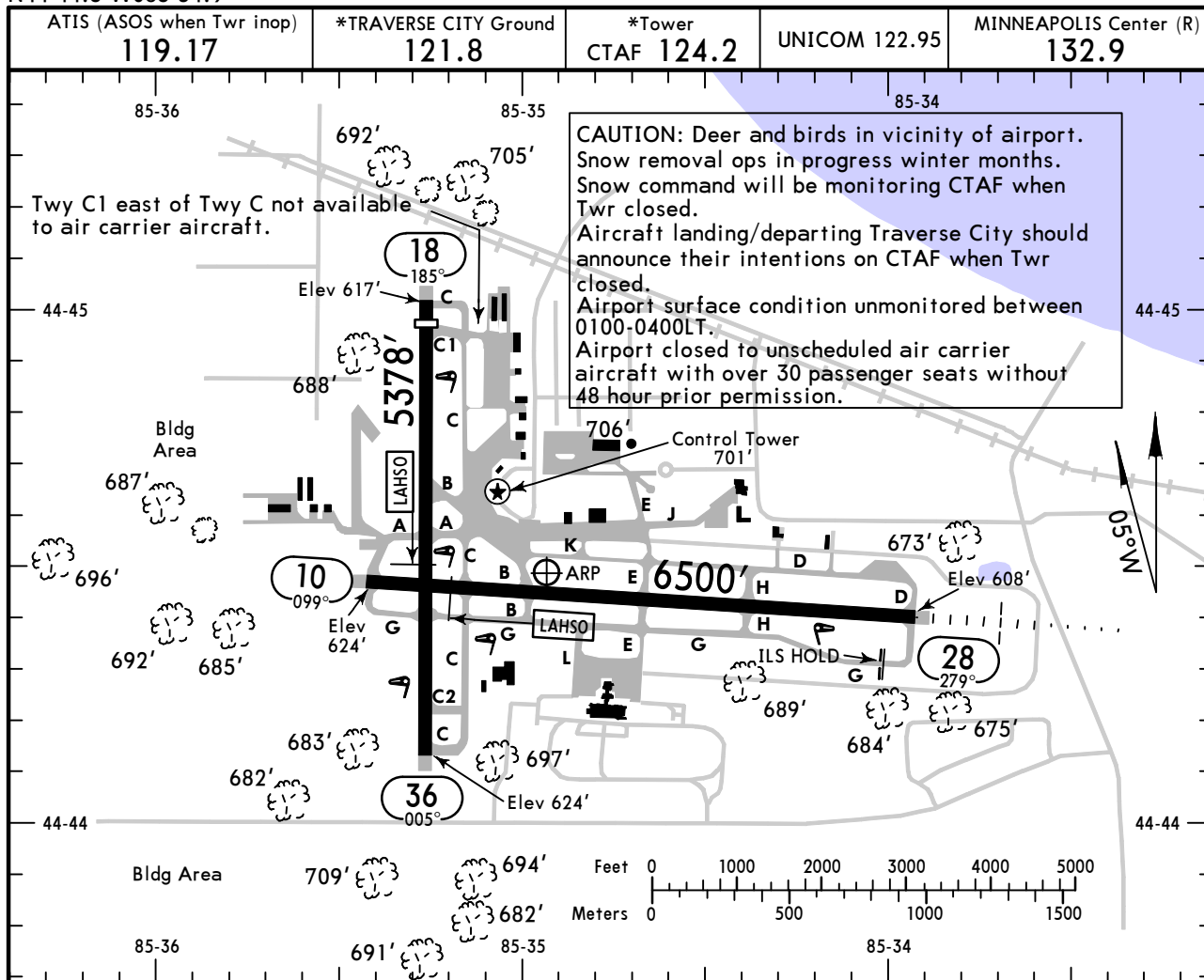
Runway: 18  
Length x Width: 5378 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 622 ft  
Lighting: Edge, Pilot controlled  
Displaced Threshold: 270 ft

Runway: 28  
Length x Width: 6500 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 617 ft  
Lighting: Edge, ALS, Pilot controlled

Runway: 36  
Length x Width: 5378 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 624 ft  
Lighting: Edge, REIL, Pilot controlled

**Communication Information**

ATIS 119.175  
Traverse City Tower 124.2 CTAF PCL  
Traverse City Ground Control 121.8  
Cherry Capital Unicom 122.95  
Lansing Flight Service Station 122.65 RCO  
Lansing Flight Service Station 122.2 RCO  
Minneapolis Center 132.9 Remote Communications Air-Ground



## ADDITIONAL RUNWAY INFORMATION

| RWY |                         | LANDING BEYOND<br>Threshold | GLIDE<br>Slope | LAHSO<br>Distance | TAKE-OFF | WIDTH |
|-----|-------------------------|-----------------------------|----------------|-------------------|----------|-------|
|     |                         |                             |                |                   |          |       |
| 10  | ① HIRL VASI-L           |                             |                |                   |          | 150'  |
| 28  | ① HIRL ① MALSR ② PAPI-L |                             | 5565'          | 18/36 5500'       |          |       |
| 18  | ① MIRL VASI-L           | ③ 4839'                     |                | 10/28 2850'       |          | 150'  |
| 36  | ① MIRL ① REIL VASI-L    | 5109'                       |                |                   |          |       |

① Activate on 124.2 when Twr inop. ③ Last 270' is unavailable for landing distance computations.

② Angle 2.90°

## TAKE-OFF &amp; OBSTACLE DEPARTURE PROCEDURE

|              | 1 Rwy 36                                  |     |              | 1 Rwy 18                                  |     |                                      | Rwy 10                                    |     |                                      | Rwy 28                                    |     |                                      |
|--------------|-------------------------------------------|-----|--------------|-------------------------------------------|-----|--------------------------------------|-------------------------------------------|-----|--------------------------------------|-------------------------------------------|-----|--------------------------------------|
|              | With Mim<br>climb of 202'<br>/NM to 1100' |     | Other        | With Mim<br>climb of 215'<br>/NM to 1400' |     | For Climb<br>in Visual<br>Conditions | With Mim<br>climb of 277'<br>/NM to 1400' |     | For Climb<br>in Visual<br>Conditions | With Mim<br>climb of 342'<br>/NM to 2100' |     | For Climb<br>in Visual<br>Conditions |
|              | Adequate<br>Vis Ref                       | STD |              | Adequate<br>Vis Ref                       | STD |                                      | Adequate<br>Vis Ref                       | STD |                                      | Adequate<br>Vis Ref                       | STD |                                      |
| 1 & 2<br>Eng | 1/4                                       | 1   | 400-2<br>1/2 | 1/4                                       | 1   | 1400-<br>2 1/2                       | 1/4                                       | 1   | 1400-<br>2 1/2                       | 1/4                                       | 1   | 1400-<br>2 1/2                       |
| 3 & 4<br>Eng |                                           | 1/2 |              |                                           | 1/2 |                                      |                                           | 1/2 |                                      |                                           |     |                                      |

① Alternatively, with standard take-off minimums and a normal 200'/NM climb gradient, take-off must occur no later than 1800' prior to departure end of runway.

OBSTACLE DP: Rwy 10 & 28: For climb in visual conditions, cross Cherry Capital Airport at or

above 1900' before proceeding on course. Rwy 18: climb heading 185° to 1200' before turning, or for climb in visual conditions, cross Cherry Capital Airport at or above 1900' before proceeding on course. Rwy 36: Climb heading 005° to 1400' before turning left.

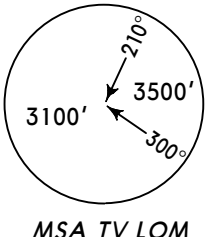
## FOR FILING AS ALTERNATE

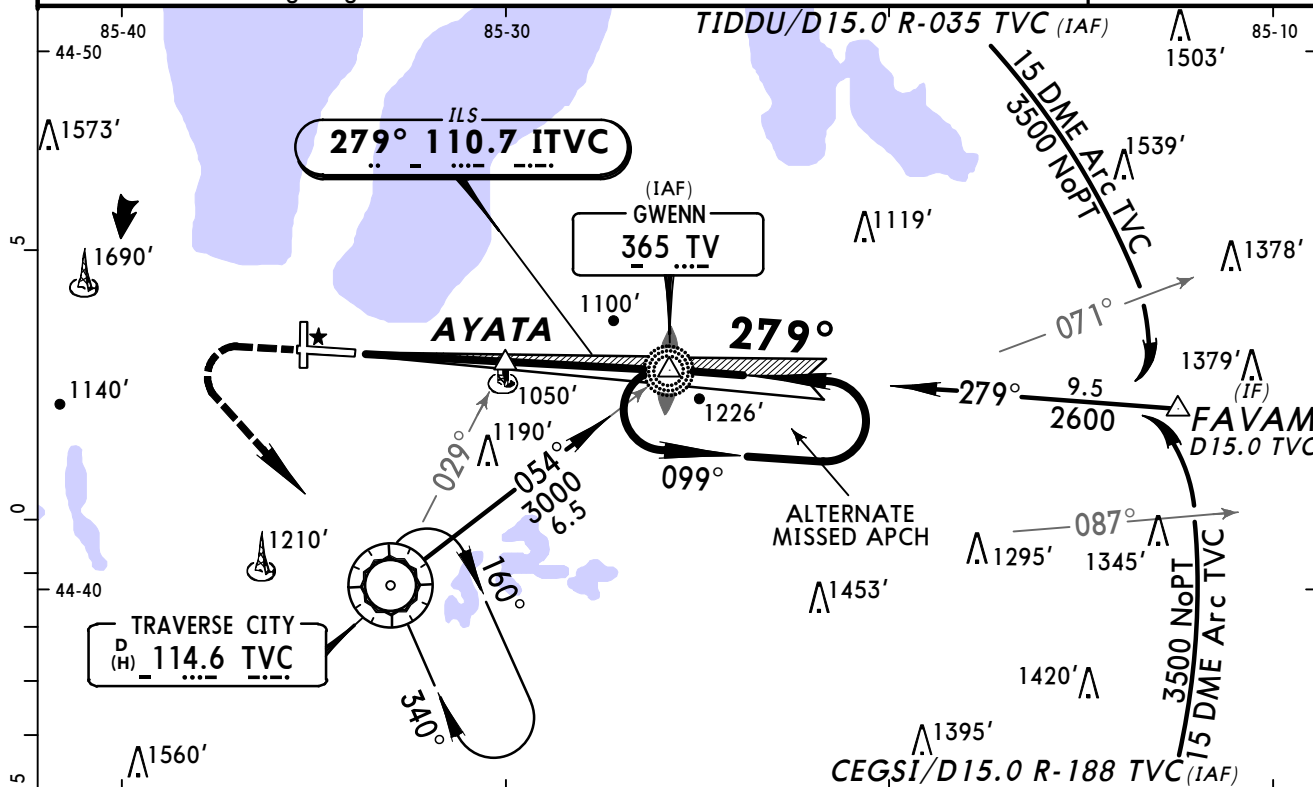
|   | Authorized Only<br>When Twr Operating | VOR-A     | Authorized Only When Twr Operating<br>Authorized Only When Local Weather Available |            | Authorized Only When<br>Local Weather Available | Other |
|---|---------------------------------------|-----------|------------------------------------------------------------------------------------|------------|-------------------------------------------------|-------|
|   | NDB Rwy 28                            |           | ILS Rwy 28                                                                         | LOC Rwy 28 | RNAV (GPS) Rwy 10                               |       |
| A | 800-2                                 | 800-2     | 900-2                                                                              |            | 1400-2                                          | NA    |
| B |                                       |           |                                                                                    |            |                                                 |       |
| C | 800-2 1/4                             | 800-2 1/4 | 900-2 1/2                                                                          |            | 1400-3                                          |       |
| D | 800-2 1/2                             | 800-2 1/2 | 900-2 3/4                                                                          |            |                                                 |       |

# KTVC/TVC CHERRY CAPITAL

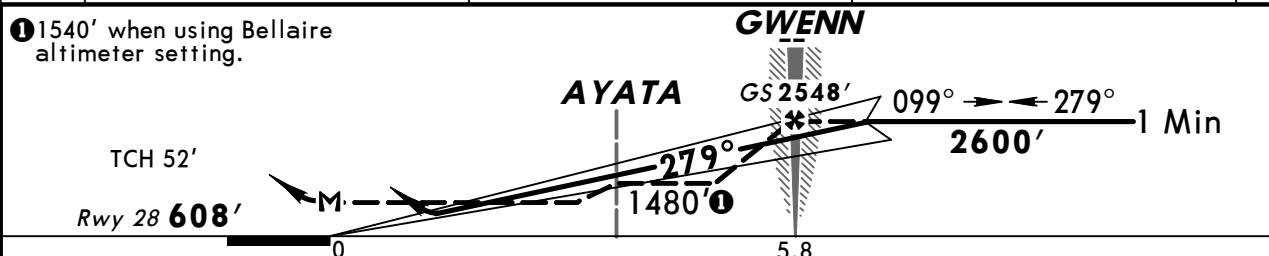
JEPPSEN  
17 FEB 12 (11-1)

TRAVERSE CITY, MICH  
ILS or LOC Rwy 28

|                                                                                                                                                                                  |                                        |                                            |                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------------------------------------------|-----------------------------------------------------|
| ATIS (ASOS when Twr inop)<br><b>119.17</b>                                                                                                                                       | MINNEAPOLIS Center (R)<br><b>132.9</b> | *TRAVERSE CITY Tower<br>CTAF <b>124.2</b>  | *Ground<br><b>121.8</b>                             |
| LOC<br>ITVC<br><b>110.7</b>                                                                                                                                                      | Final<br>Apch Crs<br><b>279°</b>       | GS<br><b>GWENN</b><br><b>2548'</b> (1940') | ILS<br>DA(H)<br>(CONDITIONAL)<br><b>808'</b> (200') |
| Apt Elev <b>624'</b><br>Rwy 28 <b>608'</b>                                                                                                                                       |                                        |                                            |                                                     |
| <b>MISSED APCH:</b> Climb to 1100' then climbing LEFT turn to 3000' direct TVC VOR and hold, continue climb-in-hold to 3000', or as directed by ATC.                             |                                        |                                            |                                                     |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'<br>1. Use local altimeter setting; if not received, use Bellaire altimeter setting.<br>2. Pilot controlled lighting 124.2. |                                        |                                            |                                                     |
|                                                                                               |                                        |                                            |                                                     |



1 1540' when using Bellaire altimeter setting.



|               |       |      |      |      |      |      |      |  |  |  |  |  |
|---------------|-------|------|------|------|------|------|------|--|--|--|--|--|
| Gnd speed-Kts | 70    | 90   | 100  | 120  | 140  | 160  |      |  |  |  |  |  |
| GS            | 3.00° | 372  | 478  | 531  | 637  | 743  | 849  |  |  |  |  |  |
| GWENN to MAP  | 5.8   | 4:58 | 3:52 | 3:29 | 2:54 | 2:29 | 2:10 |  |  |  |  |  |

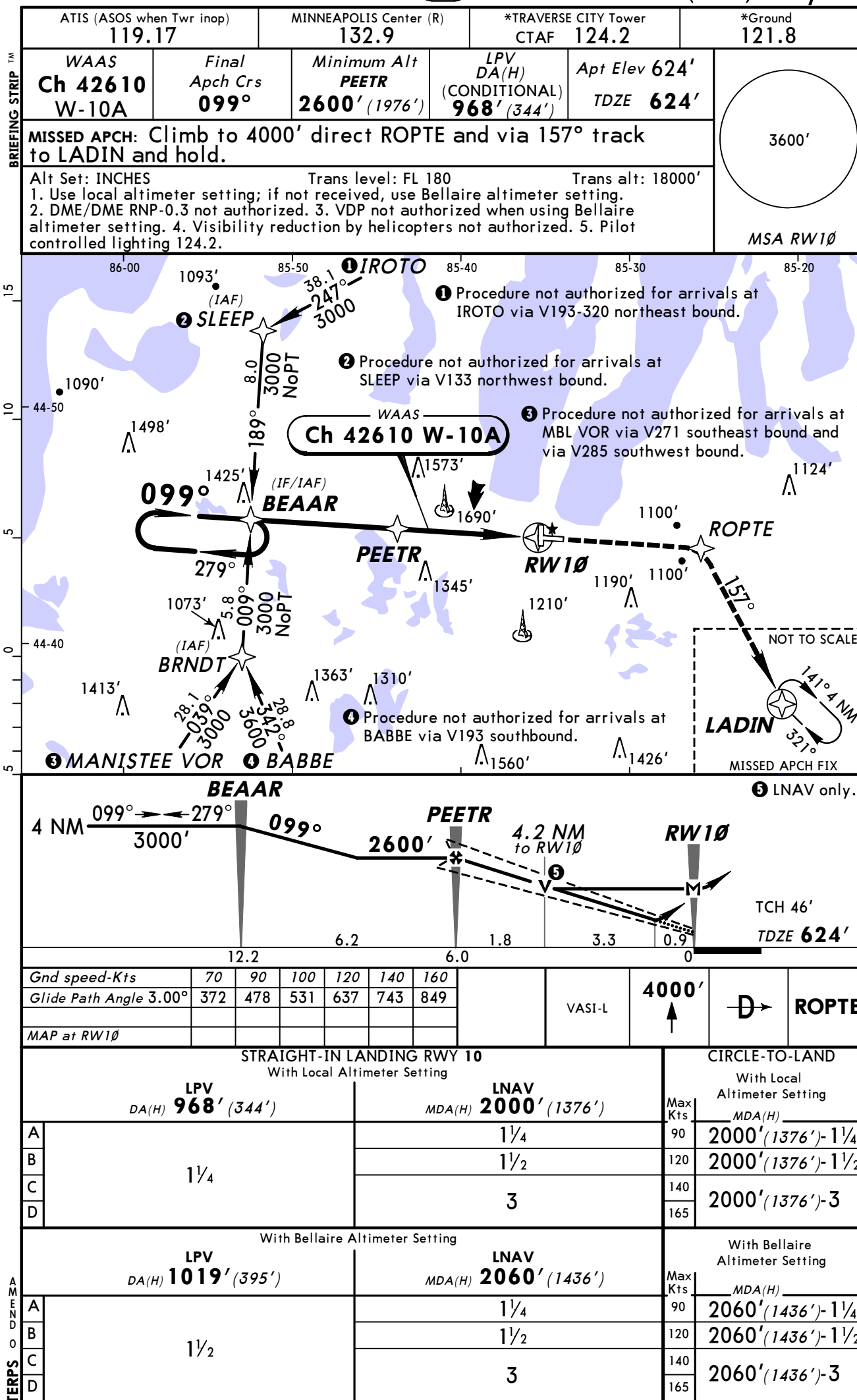
| TERPS                        |  |  |  |  |  |  |  | 1 1100' 3000' 114.6 |  |  |  |
|------------------------------|--|--|--|--|--|--|--|---------------------|--|--|--|
| STRAIGHT-IN LANDING RWY 28   |  |  |  |  |  |  |  |                     |  |  |  |
| With Local Altimeter Setting |  |  |  |  |  |  |  |                     |  |  |  |
| ILS                          |  |  |  |  |  |  |  |                     |  |  |  |
| DA(H) 808' (200')            |  |  |  |  |  |  |  |                     |  |  |  |
| LOC (GS out)                 |  |  |  |  |  |  |  |                     |  |  |  |
| MDA(H) 1360' (752')          |  |  |  |  |  |  |  |                     |  |  |  |
| With AYATA                   |  |  |  |  |  |  |  |                     |  |  |  |
| Without AYATA                |  |  |  |  |  |  |  |                     |  |  |  |
| FULL RAIL or ALS out         |  |  |  |  |  |  |  |                     |  |  |  |
| A                            |  |  |  |  |  |  |  |                     |  |  |  |
| B                            |  |  |  |  |  |  |  |                     |  |  |  |
| C                            |  |  |  |  |  |  |  |                     |  |  |  |
| D                            |  |  |  |  |  |  |  |                     |  |  |  |
| 1 1420' (812')               |  |  |  |  |  |  |  |                     |  |  |  |
| With AYATA                   |  |  |  |  |  |  |  |                     |  |  |  |
| Without AYATA                |  |  |  |  |  |  |  |                     |  |  |  |
| FULL RAIL or ALS out         |  |  |  |  |  |  |  |                     |  |  |  |
| A                            |  |  |  |  |  |  |  |                     |  |  |  |
| B                            |  |  |  |  |  |  |  |                     |  |  |  |
| C                            |  |  |  |  |  |  |  |                     |  |  |  |
| D                            |  |  |  |  |  |  |  |                     |  |  |  |

1 When VGSI inop, Circling Rwy 18, 36 not authorized at night.

CHANGES: None.

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TERPS AMEND 13 20 OCT 2011



# KTVC/TVC CHERRY CAPITAL

14 NOV 08

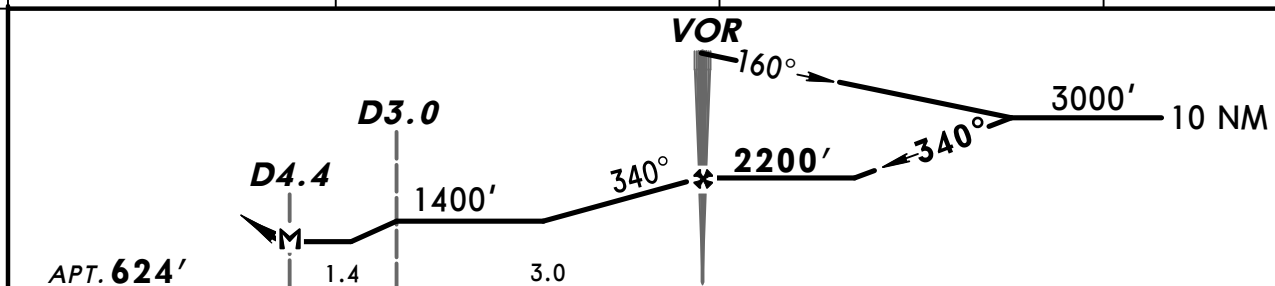
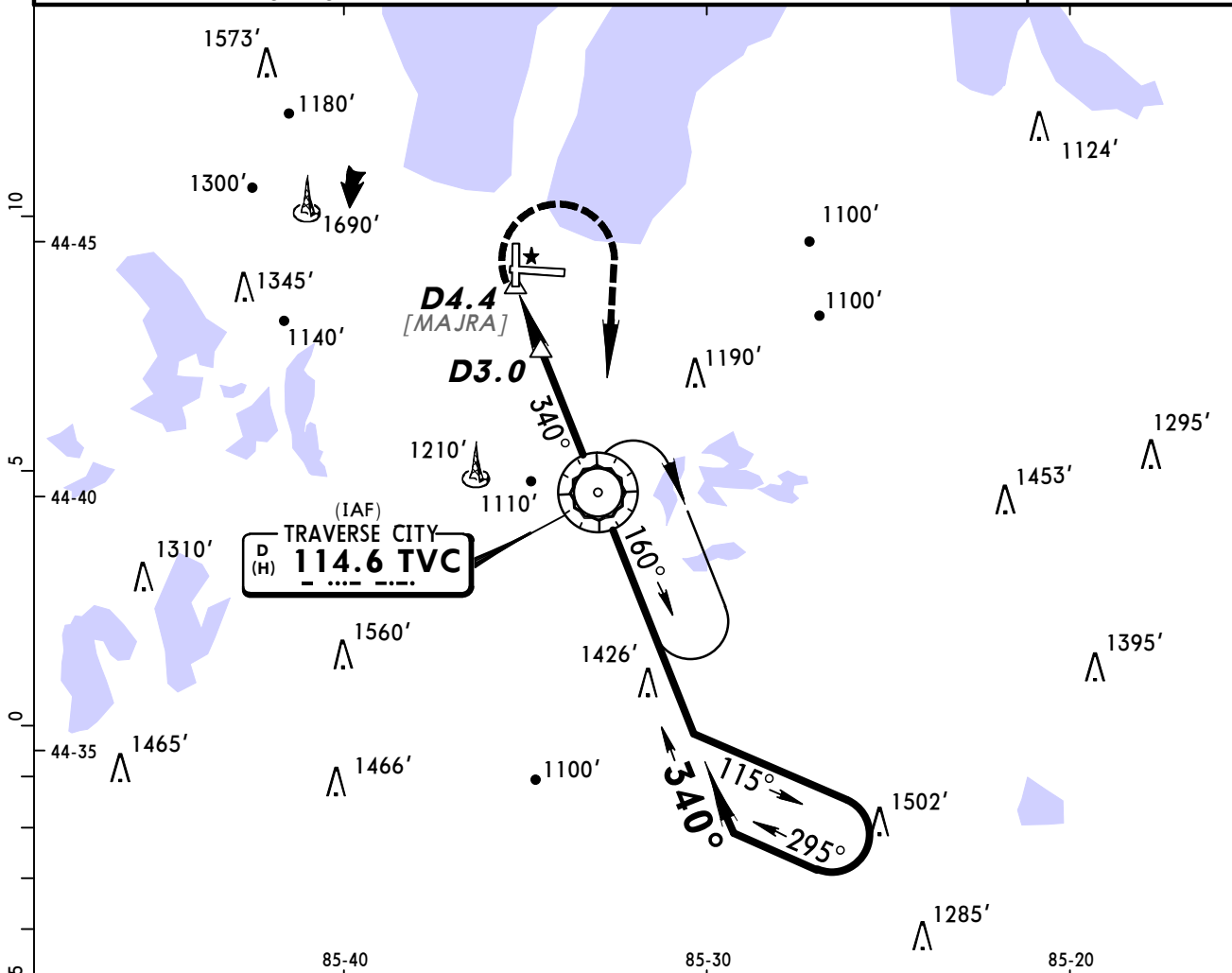
13-1

Eff 20 Nov

# TRAVERSE CITY, MICH VOR or GPS-A

BRIEFING STRIP™

|                                                                    |                           |                                     |                                |                      |  |                                         |  |
|--------------------------------------------------------------------|---------------------------|-------------------------------------|--------------------------------|----------------------|--|-----------------------------------------|--|
| ATIS (ASOS when Twr inop)                                          |                           | MINNEAPOLIS Center (R)              |                                | *TRAVERSE CITY Tower |  | *Ground                                 |  |
| 119.17                                                             |                           | 132.9                               |                                | CTAF 124.2           |  | 121.8                                   |  |
| VOR<br>TVC<br>114.6                                                | Final<br>Apch Crs<br>340° | Minimum Alt<br>VOR<br>2200' (1576') | MDA(H)<br>Refer to<br>Minimums | Apt Elev 624'        |  | <div>3600'</div> <div>MSA TVC VOR</div> |  |
| MISSED APCH: Climbing RIGHT turn to 3000' direct TVC VOR and hold. |                           |                                     |                                |                      |  |                                         |  |
| Alt Set: INCHES                                                    |                           | Trans level: FL 180                 |                                | Trans alt: 18000'    |  |                                         |  |
| 1. Pilot controlled lighting 124.2.                                |                           |                                     |                                |                      |  |                                         |  |



|                                  |      |      |      |      |      |      |                                            |             |   |              |
|----------------------------------|------|------|------|------|------|------|--------------------------------------------|-------------|---|--------------|
| Gnd speed-Kts                    | 70   | 90   | 100  | 120  | 140  | 160  | Lighting -<br>Refer to<br>Airport<br>Chart | 3000'<br>RT | D | TVC<br>114.6 |
| MAP at D4.4 or<br>VOR to MAP 4.4 | 3:46 | 2:56 | 2:38 | 2:12 | 1:53 | 1:39 |                                            |             |   |              |
|                                  |      |      |      |      |      |      |                                            |             |   |              |

|       |   |     |  | CIRCLE-TO-LAND    |                   |
|-------|---|-----|--|-------------------|-------------------|
|       |   |     |  | With D3.0         | Without D3.0      |
|       |   |     |  | Max Kts           | MDA(H)            |
| TERPS | A | 90  |  | 1300'(676')-1     | 1400'(776')-1     |
|       | B | 120 |  | 1300'(676')-1     | 1400'(776')-1 1/4 |
|       | C | 140 |  | 1300'(676')-2     | 1400'(776')-2 1/4 |
|       | D | 165 |  | 1300'(676')-2 1/4 | 1400'(776')-2 1/2 |

CHANGES: None.

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# TRAVERSE CITY, MICH

## NDB or GPS Rwy 28

**BRIEFING STRIP™**



① Only authorized operators may use VNAV DA(H) in lieu of MDA(H).

Figure 1 illustrates a VNAV profile. The profile starts at a threshold (TCH 52') and a TDZE of 617'. The climb gradient is 3.14°. The profile includes a level segment at 2600' with a heading of 279°, and a final climb segment to 3000' with a heading of 099°. The distance to the LOM (Line of Minimum) is 5.8 miles. The total distance to the 10 NM point is 10 NM. A callout ① points to the 3.14° climb gradient segment.

|                                                                                                             |                        |            |                      |
|-------------------------------------------------------------------------------------------------------------|------------------------|------------|----------------------|
|  <p>MALSR<br/>PAPI</p> | <p>3000'</p> <p>LT</p> | <p>→D←</p> | <p>TVC<br/>114.6</p> |
|-------------------------------------------------------------------------------------------------------------|------------------------|------------|----------------------|

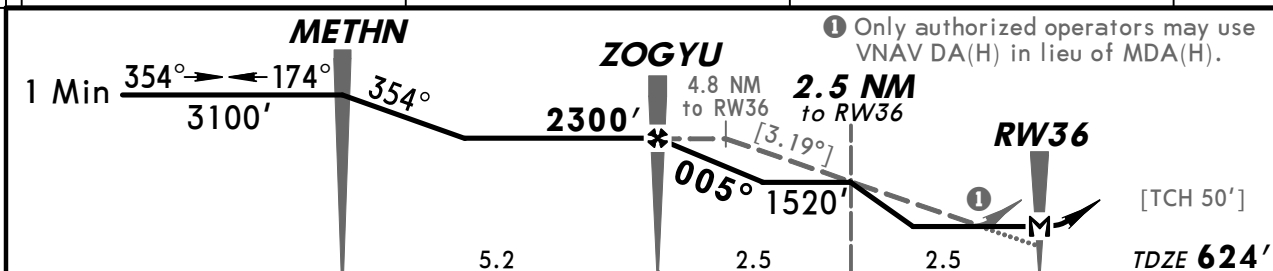
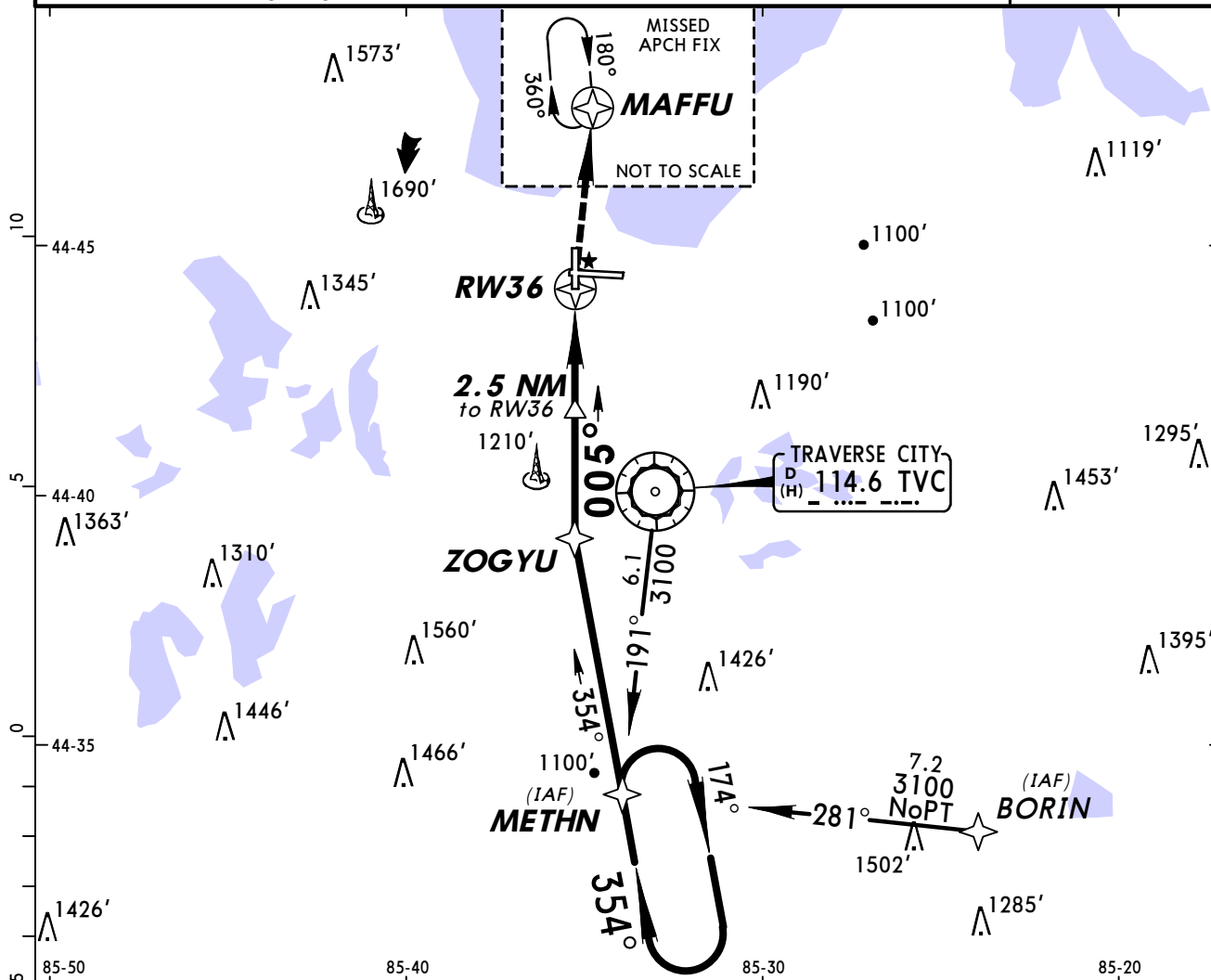
AMEND  
10  
TERPS

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BRIEFING STRIP™

|                                                           |                                          |                                                            |                                      |                                                        |  |                                                |  |
|-----------------------------------------------------------|------------------------------------------|------------------------------------------------------------|--------------------------------------|--------------------------------------------------------|--|------------------------------------------------|--|
| ATIS (ASOS when Twr inop)<br><b>119.17</b>                |                                          | MINNEAPOLIS Center (R)<br><b>132.9</b>                     |                                      | *TRAVERSE CITY Tower<br>CTAF <b>124.2</b>              |  | *Ground<br><b>121.8</b>                        |  |
| <i>GPS</i>                                                | <i>Final<br/>Apch Crs</i><br><b>005°</b> | <i>Minimum Alt</i><br><b>ZOGYU</b><br><b>2300' (1676')</b> | <i>MDA(H)</i><br><b>1280' (656')</b> | <i>Apt Elev</i> <b>624'</b><br><i>TDZE</i> <b>624'</b> |  | <div><div>3600'</div><div>MSA RW36</div></div> |  |
| <b>MISSED APCH: Climb to 3000' direct MAFFU and hold.</b> |                                          |                                                            |                                      |                                                        |  |                                                |  |
| Alt Set: INCHES<br>1. Pilot controlled lighting 124.2.    |                                          | Trans level: FL 180                                        |                                      | Trans alt: 18000'                                      |  |                                                |  |



|                       |     |     |     |     |     |     |                |            |       |       |
|-----------------------|-----|-----|-----|-----|-----|-----|----------------|------------|-------|-------|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 | REIL<br>VASI-L | 3000'<br>↑ | → D → | MAFFU |
| Descent angle [3.19°] | 395 | 508 | 564 | 677 | 790 | 903 |                |            |       |       |
| MAP at RW36           |     |     |     |     |     |     |                |            |       |       |

| STRAIGHT-IN LANDING RWY 36 |       |  |  | CIRCLE-TO-LAND |                      |  |  |
|----------------------------|-------|--|--|----------------|----------------------|--|--|
| MDA(H) <b>1280' (656')</b> |       |  |  | Max Kts        | MDA(H)               |  |  |
| A                          | 1     |  |  | 90             | 1280' (656') - 1     |  |  |
| B                          |       |  |  | 120            |                      |  |  |
| C                          | 1 3/4 |  |  | 140            | 1280' (656') - 1 3/4 |  |  |
| D                          | 2     |  |  | 165            | 1300' (676') - 2 1/4 |  |  |

TERPS AMEND 08 10 MAR 2011



## **General Information**

Location: Detroit MI USA  
IATA Code: YIP  
Lat/Long: N42° 14.4' W083° 31.9'  
Elevation: 716 ft

Airport Use: Public  
Magnetic Variation: 7.0°W  
Sectional Chart: Detroit

Fuel Types: 100 Octane (LL), Jet A  
Oxygen Types: High Pressure, HP Bottle  
Repair Types: Major Airframe, Major Engine  
Customs: Yes  
Airport Type: IFR  
Landing Fee: Yes  
Control Tower: Yes  
Jet Start Unit: Yes  
LLWS Alert: No  
Beacon: Yes  
Pattern Altitude: 1000 ft AGL

Sunrise: 1213 Z  
Sunset: 2321 Z,

## **Runway Information**

Runway: 05L  
Length x Width: 5996 ft x 160 ft  
Surface Type: asphalt  
TDZ-Elev: 716 ft  
Lighting: Edge

Runway: 05R  
Length x Width: 7543 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 715 ft  
Lighting: Edge, ALS

Runway: 09  
Length x Width: 7292 ft x 160 ft  
Surface Type: asphalt  
TDZ-Elev: 715 ft  
Lighting: Edge  
Displaced Threshold: 576 ft

Runway: 14  
Length x Width: 6312 ft x 160 ft  
Surface Type: asphalt  
TDZ-Elev: 714 ft  
Lighting: Edge

Runway: 23L  
Length x Width: 7543 ft x 150 ft  
Surface Type: asphalt  
TDZ-Elev: 708 ft  
Lighting: Edge, ALS

Runway: 23R  
Length x Width: 5996 ft x 160 ft  
Surface Type: asphalt  
TDZ-Elev: 712 ft  
Lighting: Edge

Runway: 27  
Length x Width: 7292 ft x 160 ft  
Surface Type: asphalt  
TDZ-Elev: 708 ft  
Lighting: Edge

Runway: 32  
Length x Width: 6312 ft x 160 ft  
Surface Type: asphalt  
TDZ-Elev: 712 ft  
Lighting: Edge, REIL  
Displaced Threshold: 524 ft

## **Communication Information**

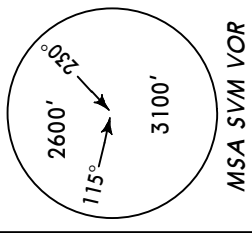
ATIS 127.425  
ASOS 132.35  
Willow Run Tower 125.275  
Willow Run Ground Control 121.75  
Detroit Approach Control 118.95  
Detroit Departure Control 118.95

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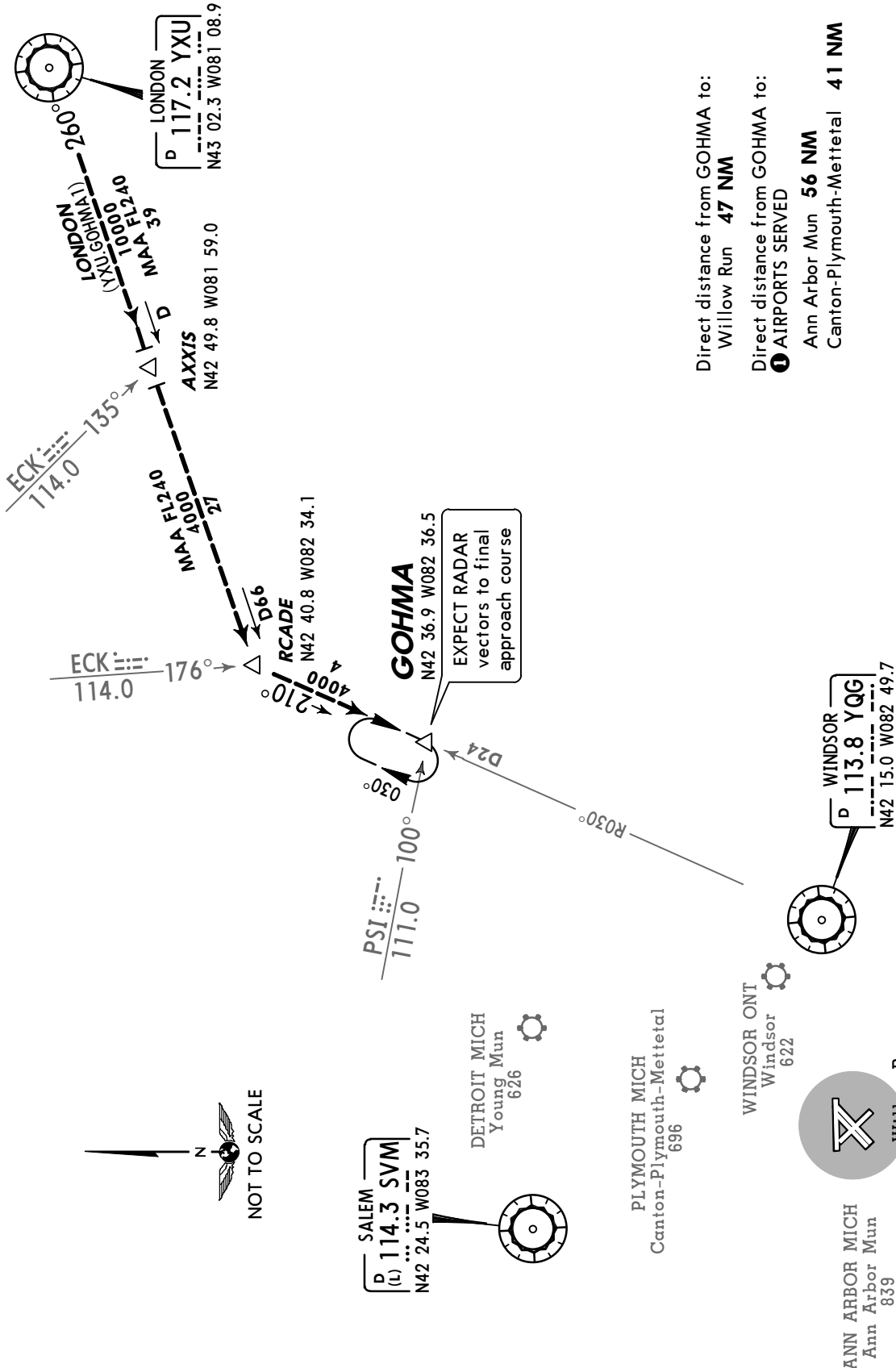
WILLOW RUN  
ATIS  
127.42

Apt Elev  
See Graphic

Alt Set: INCHES  
Trans level: FL180 Trans alt: 18000'  
1. **RADAR required.**  
2. Also serves **1**



## GOHMA ONE ARRIVAL (GOHMA.GOHMA1)



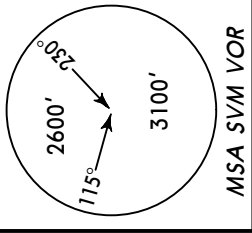
### ROUTING

From GOHMA, EXPECT RADAR vectors to final approach course.

WILLOW RUN  
ATIS  
127.42

Apt Elev  
See Graphic

Alt Set: INCHES  
Trans level: FL180 Trans alt: 18000'  
1. RADAR required.  
2. Also serves **1**



## LLEE TWO ARRIVAL (LLEE.LLEE02)

Direct distance from LLEE to:  
Willow Run **47 NM**  
Direct distance from LLEE to:  
**1** AIRPORTS SERVED  
Ann Arbor Mun **55 NM**  
Canton-Plymouth-Mettetal **48 NM**

### LLEE

(ACO R-309/D78)  
(DJB R-330/D36)  
N41 50.5 W082 37.4

|                                                               |                                                               |
|---------------------------------------------------------------|---------------------------------------------------------------|
| TURBOJETS<br>EXPECT clearance<br>to cross at<br><b>10000'</b> | TURBOPROPS<br>EXPECT clearance<br>to cross at<br><b>8000'</b> |
|---------------------------------------------------------------|---------------------------------------------------------------|

PONTIAC MICH  
Oakland Co Intl  
980

HOWELL MICH  
Livingston Co Hardy  
962

NEW HUDSON MICH  
Oakland Southwest  
926

SALEM  
D 114.3 SVM  
(L) ...  
N42 24.5 W083 35.7

TROY MICH  
Oakland/Troy  
729

SELFDRIDGE ANGB  
MICH  
580

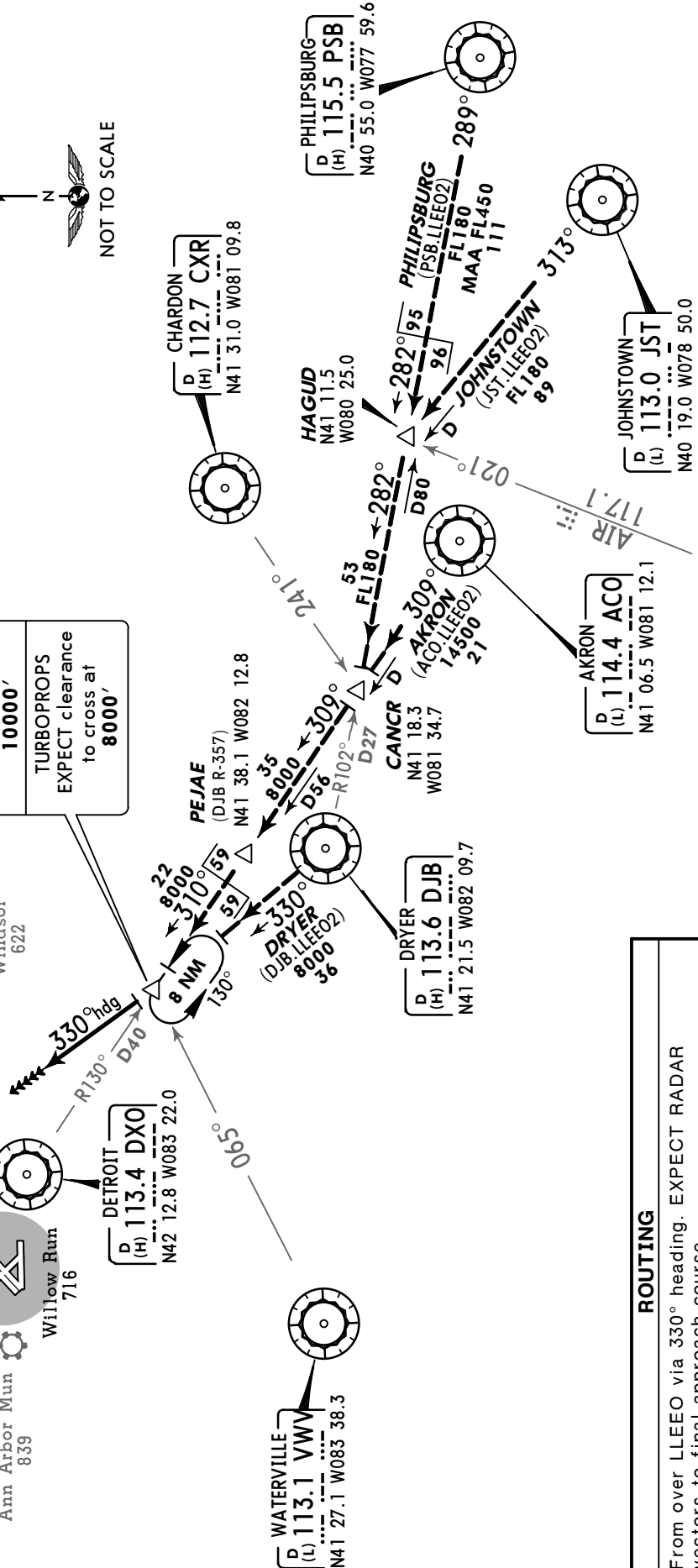
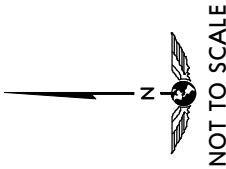
PLYMOUTH MICH  
Canton  
-Plymouth  
-Mettetal  
696

DETROIT MICH  
Young Mun  
626

WINDSOR ONT  
Windsor  
622

ANN ARBOR MICH  
Ann Arbor Mun  
839

WILLOW RUN  
716

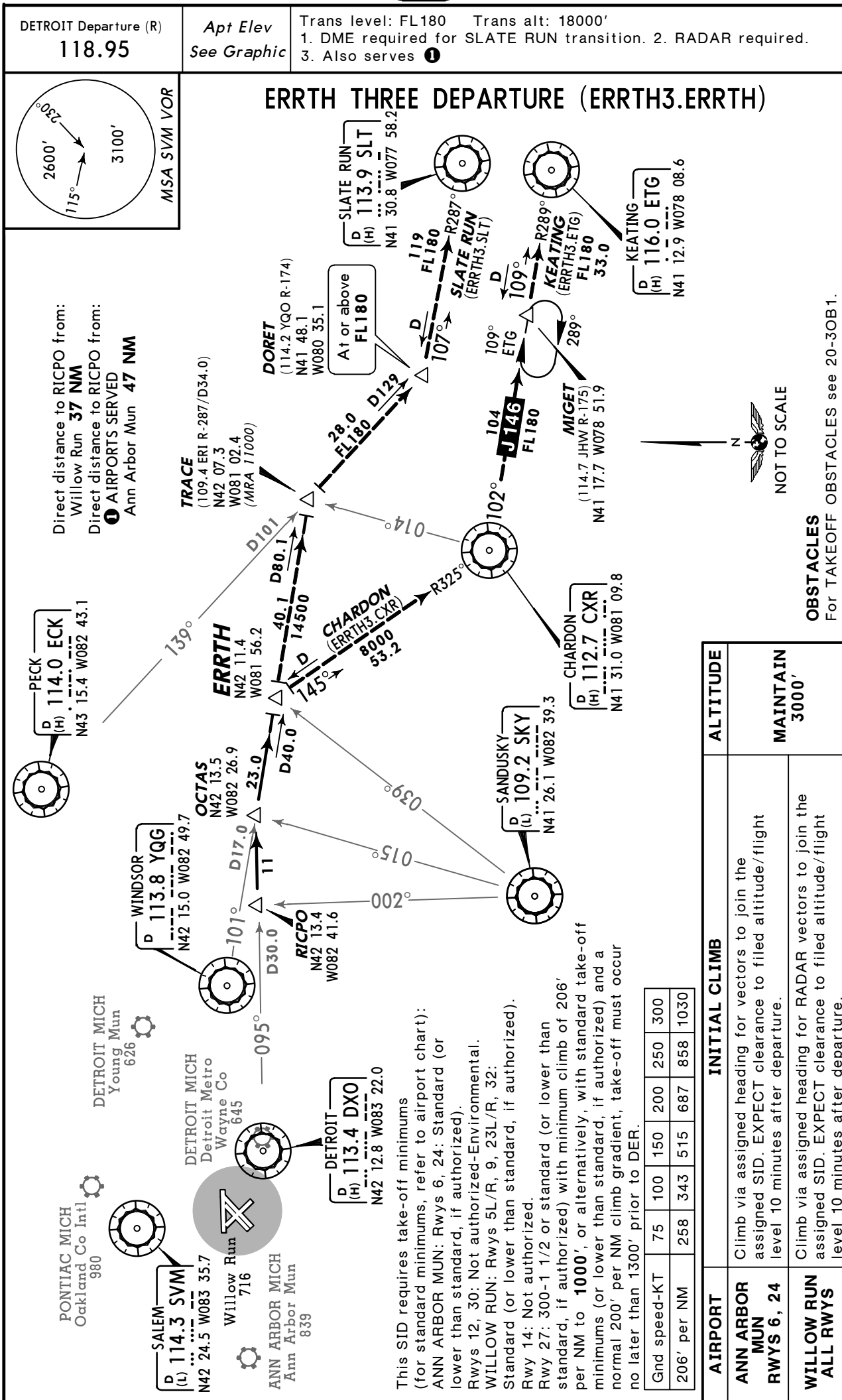


### ROUTING

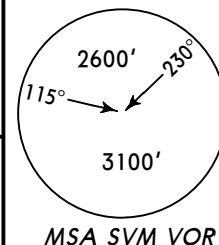
From over LLEE via 330° heading. EXPECT RADAR  
vectors to final approach course.



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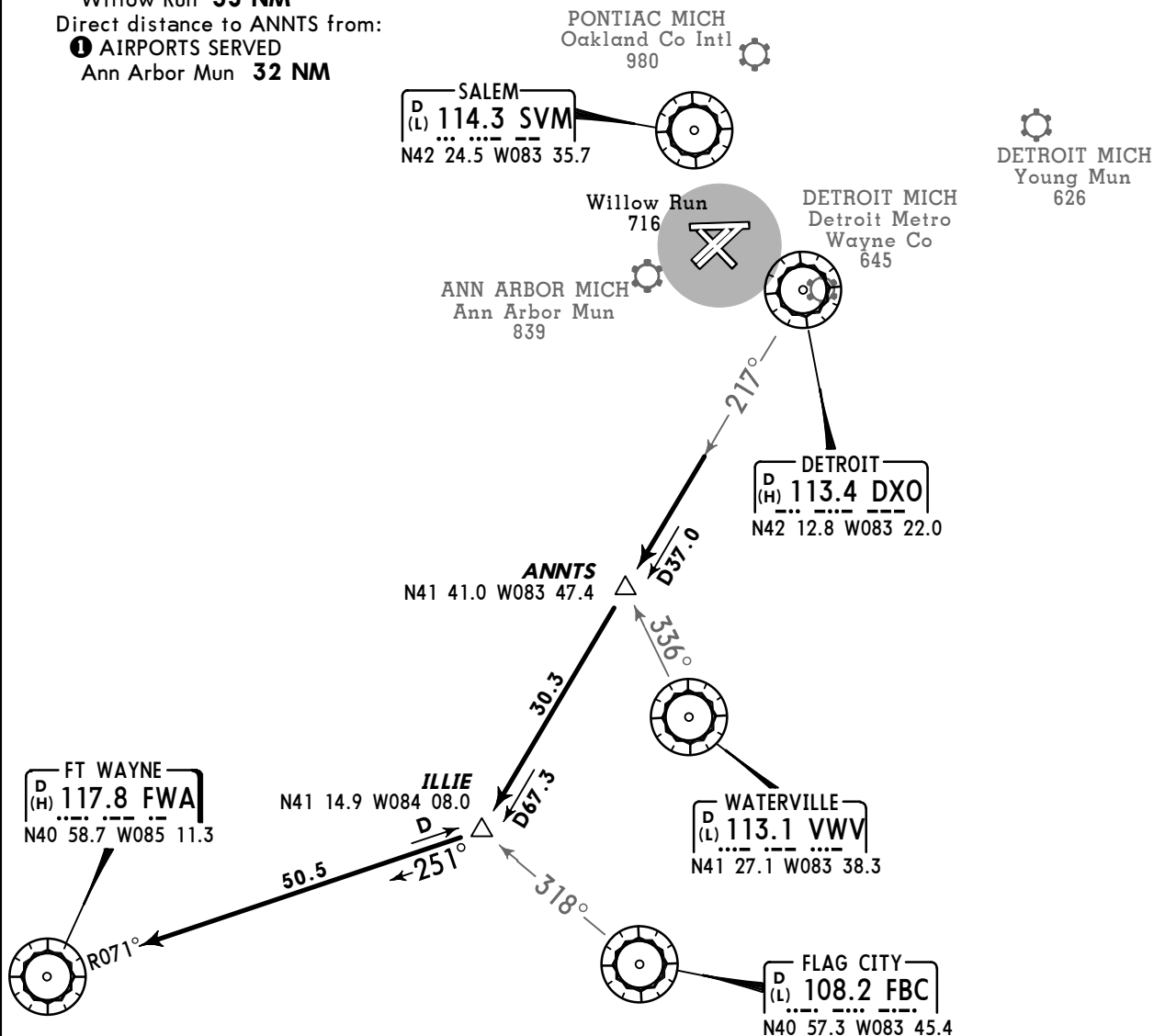
DETROIT Departure (R)  
**118.95**Apt Elev  
See GraphicTrans level: FL180 Trans alt: 18000'  
1. RADAR required. 2. Jets only.  
3. When using this departure, file the appropriate depicted fix and route.  
4. Also serves **1**

## FT WAYNE FOUR DEPARTURE (FWA4.FWA)

Direct distance to ANNTS from:

Willow Run **35 NM**

Direct distance to ANNTS from:

**1** AIRPORTS SERVEDAnn Arbor Mun **32 NM**

This SID requires take-off minimums (for standard minimums, refer to airport chart):

ANN ARBOR MUN: Rwy 6, 24: Standard (or lower than standard, if authorized).  
Rwys 12, 30: Not authorized-Environmental.

WILLOW RUN: Rwy 5L/R, 9, 23L/R, 32: Standard (or lower than standard, if authorized).  
Rwy 14: Not authorized.  
Rwy 27: 300-1 1/2 or standard (or lower than standard, if authorized) with minimum climb of 206' per NM to **1000'**, or alternatively, with standard take-off minimums (or lower than standard, if authorized) and a normal 200' per NM climb gradient, take-off must occur no later than 1300' prior to DER.

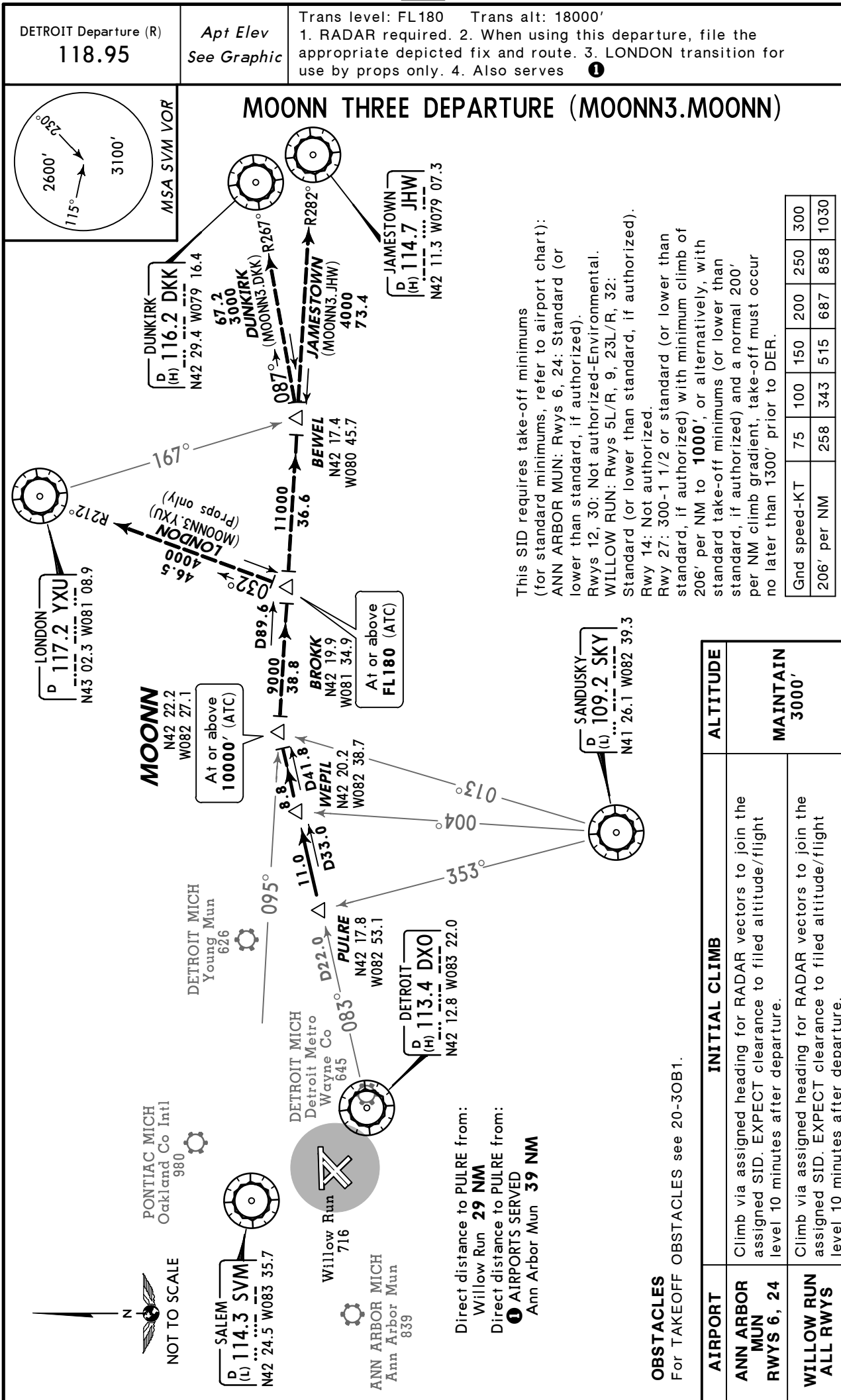
| Gnd speed-KT | 75  | 100 | 150 | 200 | 250 | 300  |
|--------------|-----|-----|-----|-----|-----|------|
| 206' per NM  | 258 | 343 | 515 | 687 | 858 | 1030 |

## OBSTACLES

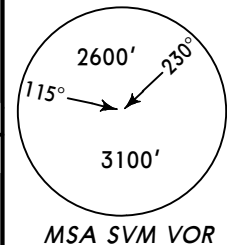
For TAKEOFF OBSTACLES see 20-3OB1.



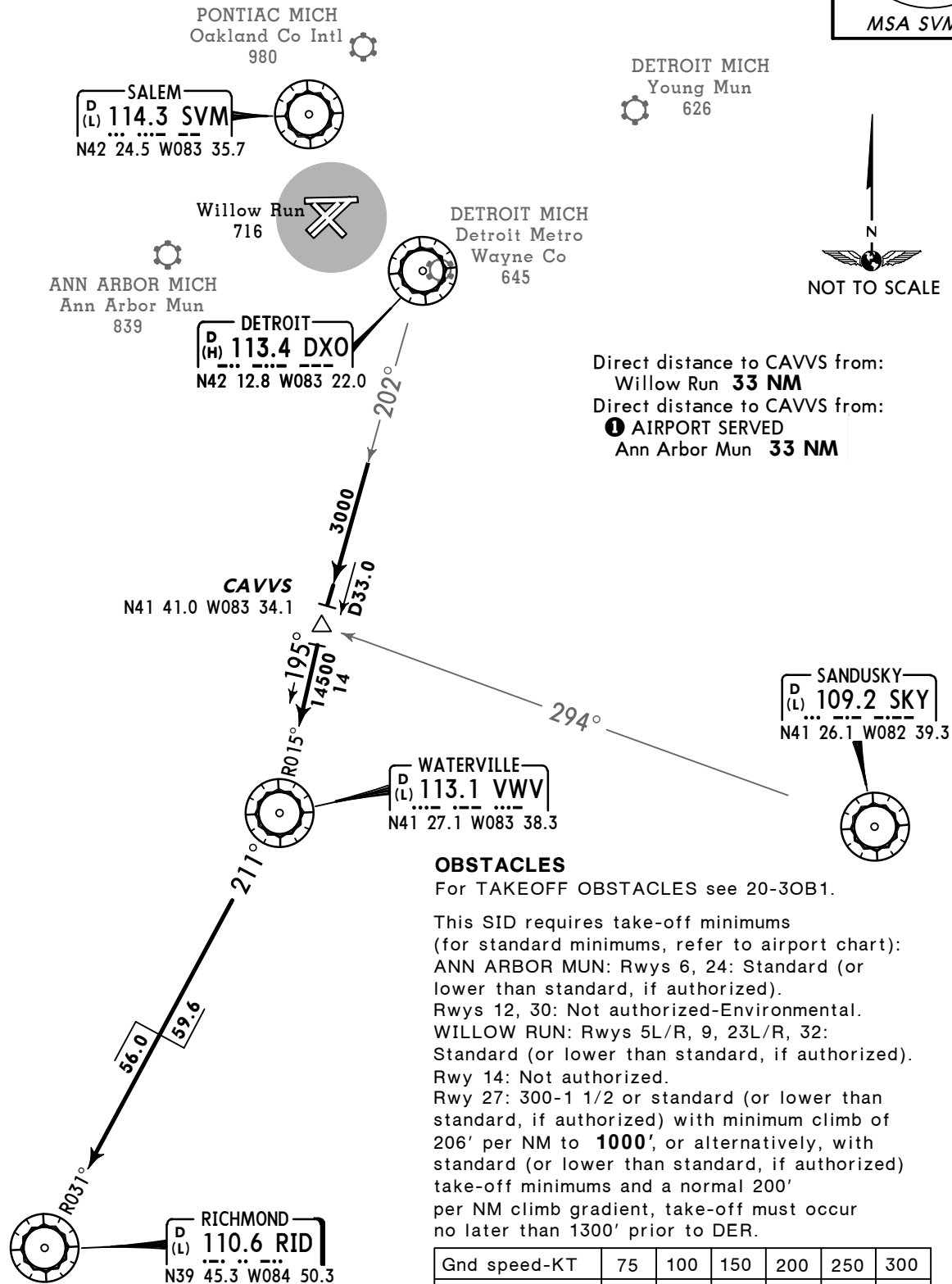
| AIRPORT                     | INITIAL CLIMB                                                                                                                                                                        | ALTITUDE          |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| ANN ARBOR MUN<br>RWYS 6, 24 | Climb via assigned heading for RADAR vectors to intercept DXO R-217 to ILLIE, then via FWA R-071 to FWA. EXPECT clearance to filed altitude/flight level 10 minutes after departure. | MAINTAIN<br>3000' |
| WILLOW RUN<br>ALL RWYS      | Climb via assigned heading for RADAR vectors to intercept DXO R-217 to ILLIE, then via FWA R-071 to FWA. EXPECT clearance to filed altitude/flight level 10 minutes after departure. |                   |





DETROIT Departure (R)  
118.95Apt Elev  
See GraphicTrans level: FL180 Trans alt: 18000'  
**1. RADAR required.** 2. Jets only.  
3. When using this departure, file the appropriate depicted fix and route.  
4. Also serves **1**

## RICHMOND FIVE DEPARTURE (RID5.RID)

Direct distance to CAVVS from:  
Willow Run **33 NM**Direct distance to CAVVS from:  
**1** AIRPORT SERVED  
Ann Arbor Mun **33 NM**

## OBSTACLES

For TAKEOFF OBSTACLES see 20-3OB1.

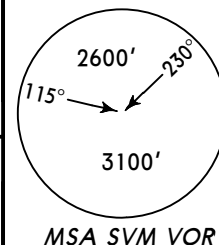
This SID requires take-off minimums (for standard minimums, refer to airport chart):

ANN ARBOR MUN: Rwy 6, 24: Standard (or lower than standard, if authorized).  
Rwys 12, 30: Not authorized-Environmental.

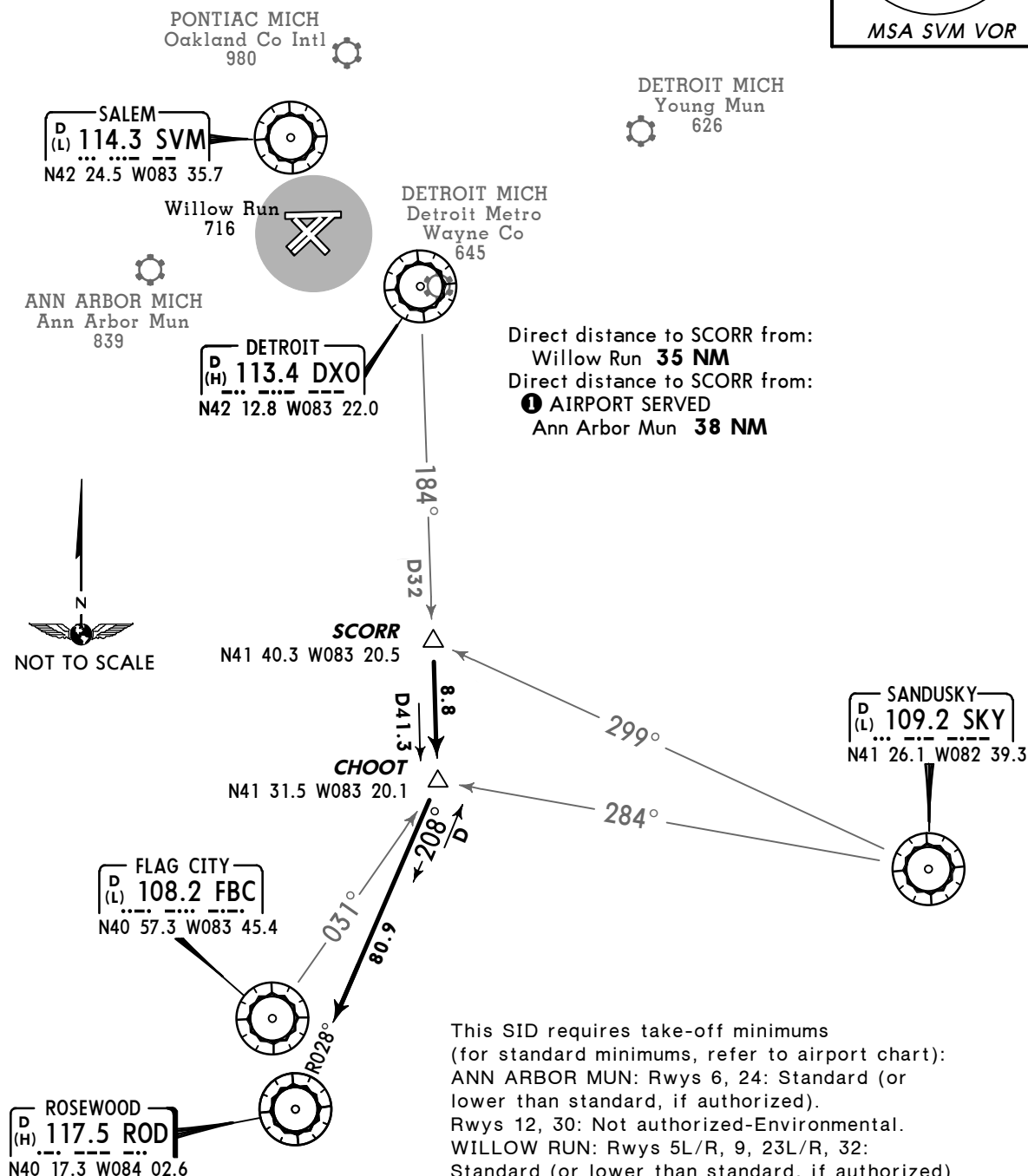
WILLOW RUN: Rwy 5L/R, 9, 23L/R, 32: Standard (or lower than standard, if authorized).  
Rwy 14: Not authorized.  
Rwy 27: 300-1 1/2 or standard (or lower than standard, if authorized) with minimum climb of 206' per NM to **1000'**, or alternatively, with standard (or lower than standard, if authorized) take-off minimums and a normal 200' per NM climb gradient, take-off must occur no later than 1300' prior to DER.

| Gnd speed-KT | 75  | 100 | 150 | 200 | 250 | 300  |
|--------------|-----|-----|-----|-----|-----|------|
| 206' per NM  | 258 | 343 | 515 | 687 | 858 | 1030 |

| AIRPORT                                                                                                                                                             | INITIAL CLIMB                                                                 | ALTITUDE          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------|
| ANN ARBOR MUN<br>RWYS 6, 24                                                                                                                                         | Climb via assigned heading for RADAR vectors to intercept DXO R-202 to CAVVS. | MAINTAIN<br>3000' |
| WILLOW RUN<br>ALL RWYS                                                                                                                                              | Climb via assigned heading for RADAR vectors to intercept DXO R-202 to CAVVS. |                   |
| ROUTING                                                                                                                                                             |                                                                               |                   |
| From CAVVS via VWV R-015 to VWV, then RIGHT turn via VWV R-211 and RID R-031 to RID.<br>EXPECT clearance to filed altitude/flight level 10 minutes after departure. |                                                                               |                   |

DETROIT Departure (R)  
**118.95**Apt Elev  
See GraphicTrans level: FL180 Trans alt: 18000'  
1. RADAR required.  
2. When using this departure, file the appropriate depicted fix and route.  
3. Also serves **1**

## ROSEWOOD THREE DEPARTURE (ROD3.ROD)



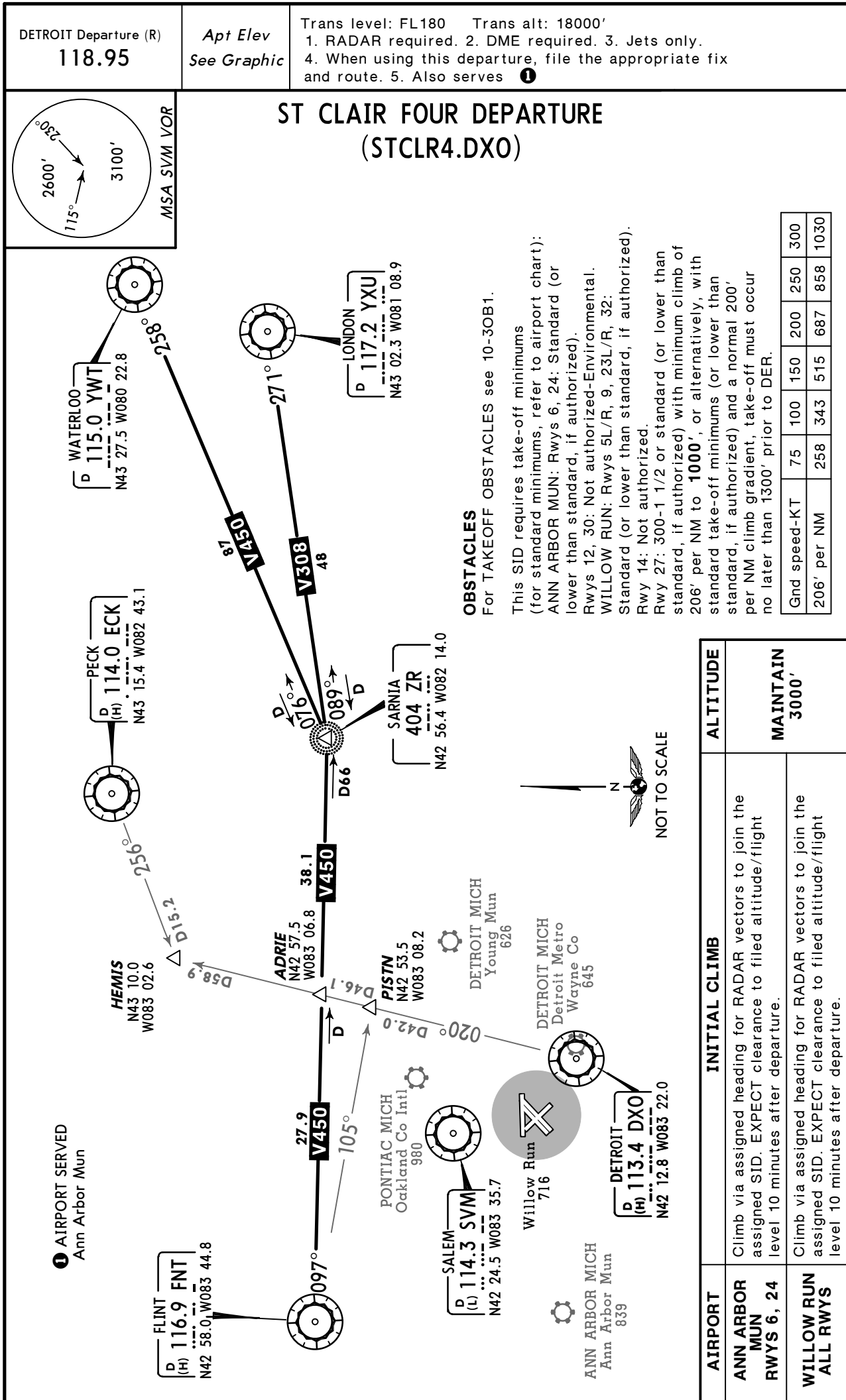
This SID requires take-off minimums (for standard minimums, refer to airport chart):  
ANN ARBOR MUN: Rwy 6, 24: Standard (or lower than standard, if authorized).  
Rwys 12, 30: Not authorized-Environmental.  
WILLOW RUN: Rwy 5L/R, 9, 23L/R, 32: Standard (or lower than standard, if authorized).  
Rwy 14: Not authorized.  
Rwy 27: 300-1 1/2 or standard (or lower than standard, if authorized) with minimum climb of 206' per NM to **1000'**, or alternatively, with standard take-off minimums (or lower than standard, if authorized) and a normal 200' per NM climb gradient, take-off must occur no later than 1300' prior to DER.

## OBSTACLES

For TAKEOFF OBSTACLES see 10-3OB1.

| Gnd speed-KT | 75  | 100 | 150 | 200 | 250 | 300  |
|--------------|-----|-----|-----|-----|-----|------|
| 206' per NM  | 258 | 343 | 515 | 687 | 858 | 1030 |

| AIRPORT                     | INITIAL CLIMB                                                                                                                                      | ALTITUDE          |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| ANN ARBOR MUN<br>RWYS 6, 24 | Climb via assigned heading for RADAR vectors to join the assigned SID. EXPECT clearance to filed altitude/flight level 10 minutes after departure. | MAINTAIN<br>3000' |
| WILLOW RUN<br>ALL RWYS      | Climb via assigned heading for RADAR vectors to join the assigned SID. EXPECT clearance to filed altitude/flight level 10 minutes after departure. |                   |



**TAKEOFF OBSTACLE NOTES****ANN ARBOR MUN:**

- RWY 6:  
BUILDING AND MULTIPLE POLES BEGINNING 312' FROM DER, 385' RIGHT OF CENTERLINE, UP TO 24' AGL/853' MSL. MULTIPLE TREES BEGINNING 538' FROM DER, 47' RIGHT OF CENTERLINE, UP TO 100' AGL/929' MSL. BUILDING 99' FROM DER, 351' LEFT OF CENTERLINE, 22' AGL/849' MSL. MULTIPLE TREES BEGINNING 634' FROM DER, 182' LEFT OF CENTERLINE, UP TO 58' AGL/887' MSL.
- RWY 24:  
TERRAIN 138' FROM DER, 475' RIGHT OF CENTERLINE, 837' MSL. MULTIPLE TREES BEGINNING 462' FROM DER, 486' RIGHT OF CENTERLINE, 50' AGL/885' MSL. MULTIPLE TREES BEGINNING 479' FROM DER, 473' LEFT OF CENTERLINE, UP TO 100' AGL/926' MSL.

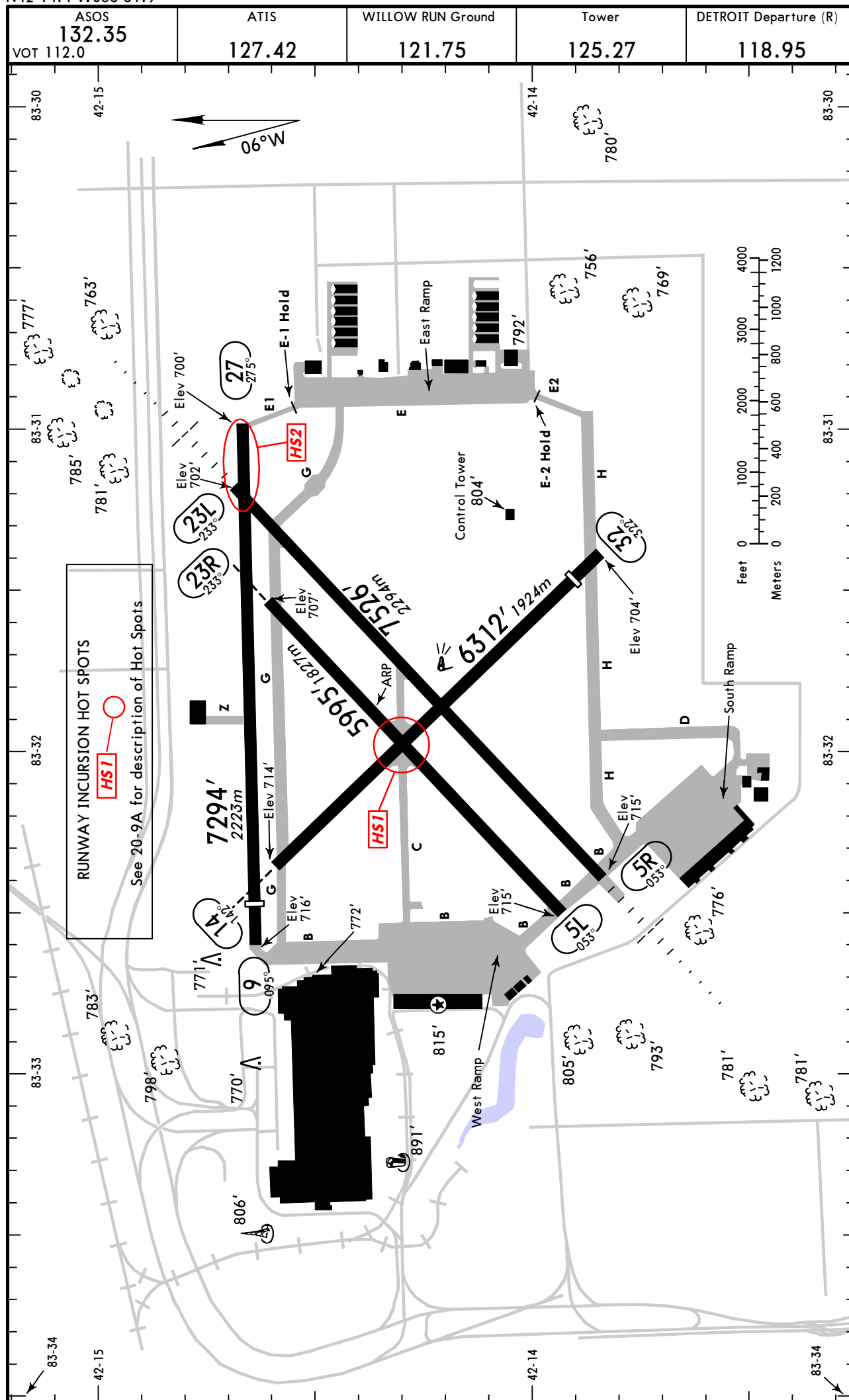
**WILLOW RUN:**

- RWY 5L:  
TREES BEGINNING 2091' FROM DER, 224' LEFT OF CENTERLINE, UP TO 100' AGL/809' MSL.
- RWY 5R:  
TREES BEGINNING 1877' FROM DER, 803' RIGHT OF CENTERLINE, UP TO 78' AGL/763' MSL. TREES BEGINNING 2028' FROM DER, 134' LEFT OF CENTERLINE, UP TO 80' AGL/777' MSL.
- RWY 23L:  
SIGN 44' FROM DER, 499' RIGHT OF CENTERLINE, 8' AGL/718' MSL. TREE 1304' FROM DER, 438' RIGHT OF CENTERLINE, 42' AGL/757' MSL. TREE 2457' FROM DER, 720' LEFT OF CENTERLINE, 66' AGL/781' MSL.
- RWY 23R:  
SIGN 73' FROM DER, 255' LEFT OF CENTERLINE, 10' AGL/718' MSL. VEHICLE ON ROAD, 587' FROM DER, 294' RIGHT OF CENTERLINE, 15' AGL/732' MSL. TREES BEGINNING 1020' FROM DER, 281' RIGHT OF CENTERLINE, UP TO 60' AGL/793' MSL. TREE 1333' FROM DER, 316' LEFT OF CENTERLINE, 55' AGL/757' MSL.
- RWY 27:  
TREE AND POLES BEGINNING 102' FROM DER, 353' RIGHT OF CENTERLINE, UP TO 56' AGL/771' MSL. RAILROAD AND LIGHTS BEGINNING 564' FROM DER, 4' LEFT OF CENTERLINE, UP TO 55' AGL/770' MSL. LIGHT ON BUILDING 724' FROM DER, 333' LEFT OF CENTERLINE, 35' AGL/746' MSL. TOWER 7161' FROM DER, 502' LEFT OF CENTERLINE, 162' AGL/900' MSL.
- RWY 32:  
POLES AND TREES BEGINNING 1302' FROM DER, 79' LEFT OF CENTERLINE, UP TO 84' AGL/798' MSL. TREE 1758' FROM DER, 125' RIGHT OF CENTERLINE, 70' AGL/780' MSL.

KYIP/YIP  
Apt Elev **716'**  
N42 14.4 W083 31.9

JEPPesen  
10 JUN 11 **(20-9)**

**DETROIT, MICH**  
WILLOW RUN



CHANGES: None.

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GENERAL

48 hour prior permission required for unscheduled aircraft operations with more than 30 passenger seats requiring index C or greater.

Helicopter takeoffs and landings on the south ramp prohibited, taxi only.

Birds in vicinity of airport.

ADDITIONAL RUNWAY INFORMATION

| RWY |                   |     | USABLE LENGTHS |             | TAKE-OFF | WIDTH |
|-----|-------------------|-----|----------------|-------------|----------|-------|
|     |                   |     | LANDING        | BEYOND      |          |       |
|     |                   |     | Threshold      | Glide Slope |          |       |
| 5R  | HIRL MALSR        | RVR |                | 6414' 1955m |          | 150'  |
| 23L | HIRL MALSR VASI-L |     |                | 6501' 1982m |          | 46m   |

|     |      |         |  |  |  |      |
|-----|------|---------|--|--|--|------|
| 5L  | MIRL | grooved |  |  |  | 160' |
| 23R |      |         |  |  |  | 49m  |

|   |      |      |         |               |  |      |
|---|------|------|---------|---------------|--|------|
| 9 | ① 27 | MIRL | grooved | 6720' 2048m   |  | 160' |
|   |      |      |         | ② 6720' 2048m |  | 49m  |

① Center 80' portion of runway grooved.

② Last 574' unavailable for landing distance computations.

|    |                                |         |               |  |  |      |
|----|--------------------------------|---------|---------------|--|--|------|
| 14 | MIRL                           | grooved | ③ 5787' 1764m |  |  | 160' |
| 32 | MIRL REIL PAPI-L (angle 3.50°) | grooved | 5787' 1764m   |  |  | 49m  |

③ Last 525' unavailable for landing distance computations.

RUNWAY INCURSION HOT SPOTS

For information only, not to be construed as ATC instructions.

**HS1** Complex Rwys/Twy intersection.

**HS2** Twy E1 to Rwy 27 or Rwy 23L wrong runway departure risk.

TAKE-OFF

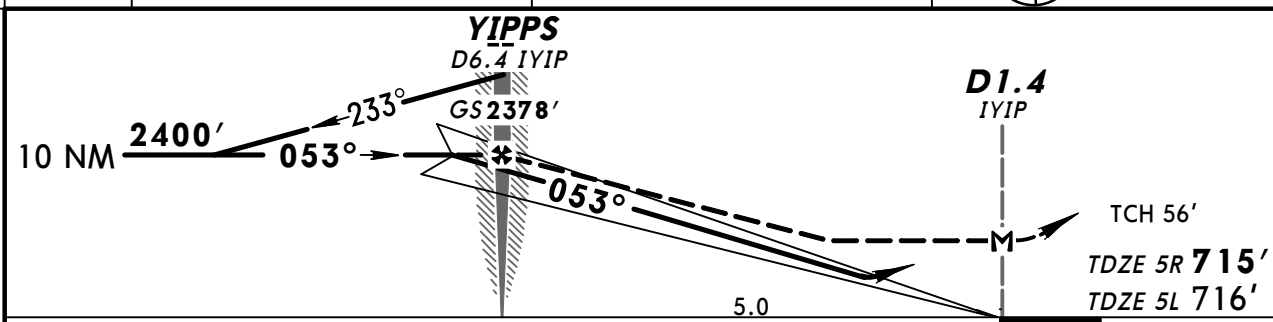
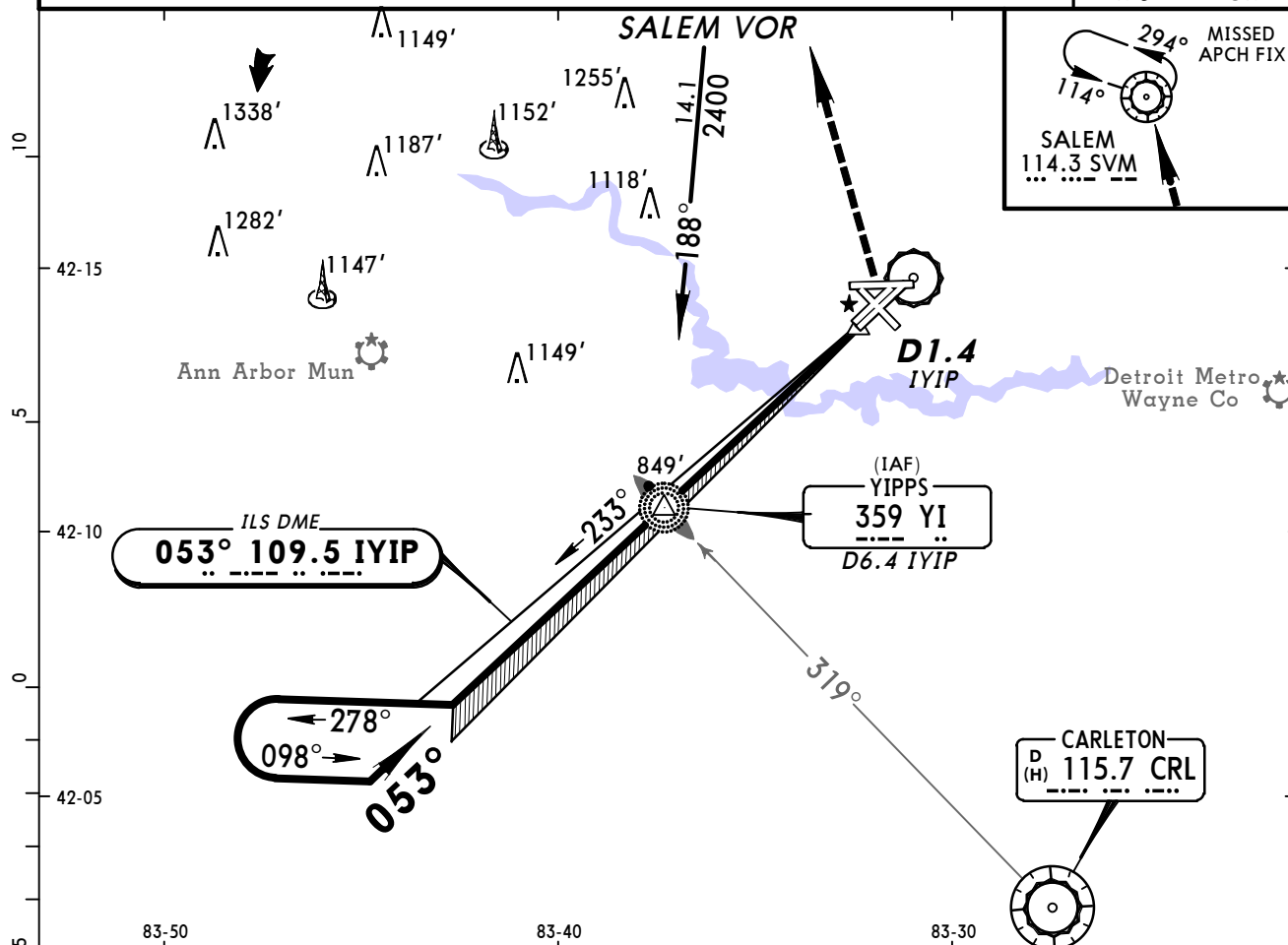
| Rwys 5L, 5R, 9, 23L, 23R, 32 |               | Rwy 27                               |     |       |           | Rwy 14 |
|------------------------------|---------------|--------------------------------------|-----|-------|-----------|--------|
| Adequate<br>Vis Ref          | STD           | 1 With Mim climb of 206'/NM to 1000' |     | Other |           |        |
|                              |               | Adequate<br>Vis Ref                  | STD |       |           |        |
| 1 & 2<br>Eng                 | RVR 16 or 1/4 | RVR 50 or 1                          | 1/4 | 1     | 300-1 1/2 | NA     |
| 3 & 4<br>Eng                 |               |                                      |     | 1/2   |           |        |

① or alternatively, with standard take-off minimums and a normal 200'/NM climb gradient, take-off must occur no later than 1300' prior to departure end of runway.

FOR FILING AS ALTERNATE

|                           |       | FOR FILING AS ALTERNATE                                                                                       |           |       |  |
|---------------------------|-------|---------------------------------------------------------------------------------------------------------------|-----------|-------|--|
|                           |       | LOC Rwy 5R<br>LOC Rwy 23L<br>RNAV (GPS) Rwy 5R<br>RNAV (GPS) Rwy 9<br>RNAV (GPS) Rwy 14<br>RNAV (GPS) Rwy 23L |           |       |  |
| ILS Rwy 5R<br>ILS Rwy 23L |       |                                                                                                               | VOR-A     | Other |  |
| A                         | 600-2 | 800-2                                                                                                         | 800-2     | NA    |  |
| B                         |       |                                                                                                               |           |       |  |
| C                         |       |                                                                                                               | 800-2 1/4 |       |  |
| D                         |       |                                                                                                               |           |       |  |

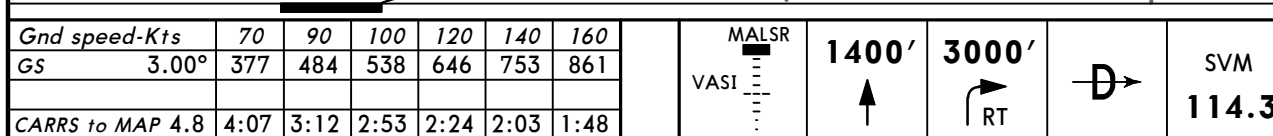
|                      |                                                                                        |                   |                     |               |                      |              |                   |               |        |                  |
|----------------------|----------------------------------------------------------------------------------------|-------------------|---------------------|---------------|----------------------|--------------|-------------------|---------------|--------|------------------|
| BRIEFING STRIP<br>TM | ASOS                                                                                   |                   | ATIS                |               | DETROIT Approach (R) |              | WILLOW RUN Tower  |               | Ground |                  |
|                      | 132.35                                                                                 |                   | 127.42              |               | 118.95               |              | 125.27            |               | 121.75 |                  |
|                      | LOC<br>IYIP                                                                            | Final<br>Apch Crs |                     | GS<br>YIPPS   |                      | ILS<br>DA(H) |                   | Apt Elev 716' |        | <div>3100'</div> |
|                      | 109.5                                                                                  | 053°              |                     | 2378' (1663') |                      | 965' (250')  |                   | TDZE 5R 715'  |        |                  |
|                      | MISSED APCH: Climb to 1200', then climbing LEFT turn to 3000' direct SVM VOR and hold. |                   |                     |               |                      |              |                   |               |        |                  |
| Alt Set: INCHES      |                                                                                        |                   | Trans level: FL 180 |               |                      |              | Trans alt: 18000' |               |        | MSA YI LOM       |



| Gnd speed-Kts                    | 70    | 90   | 100  | 120  | 140  | 160  | MALS | 1200' | 3000' | LT | SVM   |
|----------------------------------|-------|------|------|------|------|------|------|-------|-------|----|-------|
| GS                               | 3.00° | 377  | 484  | 538  | 646  | 753  | 861  |       |       |    | 114.3 |
| MAP at D1.4 IYIP or YIPPS to MAP | 5.0   | 4:17 | 3:20 | 3:00 | 2:30 | 2:09 | 1:53 |       |       |    |       |

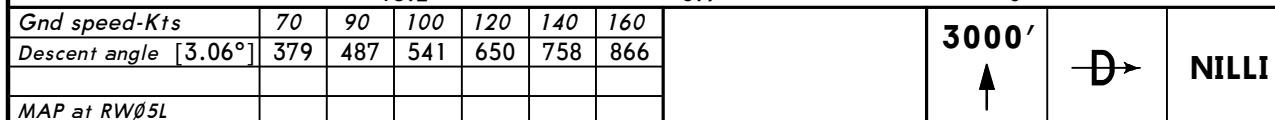
| STRAIGHT-IN LANDING RWY 5R      |                 |                                            |          | SIDESTEP LANDING RWY 5L    | CIRCLE-TO-LAND |
|---------------------------------|-----------------|--------------------------------------------|----------|----------------------------|----------------|
| ILS<br>DA(H) <b>965'</b> (250') |                 | LOC (GS out)<br>MDA(H) <b>1120'</b> (405') |          | MDA(H) <b>1120'</b> (404') |                |
| FULL                            | RAIL or ALS out |                                            | RAIL out | ALS out                    | Max Kts        |
| RVR 40 or 3/4                   |                 | RVR 40 or 3/4                              |          | RVR 50 or 1                | 90             |
|                                 |                 |                                            |          |                            | 120            |
| RVR 40 or 3/4                   |                 | RVR 40 or 3/4                              |          | RVR 60 or 1 1/4            | 140            |
|                                 |                 |                                            |          |                            | 165            |
|                                 |                 |                                            |          |                            |                |

**BRIEFING STRIP™**



| STRAIGHT-IN LANDING RWY 23L     |                    |                                            |          |         | SIDESTEP LANDING RWY 23R   |            | CIRCLE-TO-LAND |                    |
|---------------------------------|--------------------|--------------------------------------------|----------|---------|----------------------------|------------|----------------|--------------------|
| ILS<br><i>DA(H)</i> 958' (250') |                    | LOC (GS out)<br><i>MDA(H)</i> 1140' (432') |          |         | <i>MDA(H)</i> 1140' (429') | Max<br>Kts | <i>MDA(H)</i>  |                    |
| FULL                            | RAIL or<br>ALS out |                                            | RAIL out | ALS out |                            |            |                |                    |
| A                               | 3/4                |                                            | 3/4      |         | 1                          | 1          | 90             | 1200'(484')- 1     |
| B                               |                    |                                            |          |         |                            |            | 120            |                    |
| C                               |                    |                                            | 3/4      | 1 1/4   |                            | 1 1/2      | 140            | 1200'(484')- 1 1/2 |
| D                               |                    |                                            | 1        | 1 1/2   |                            | 2          | 165            | 1280'(564')- 2     |

**BRIEFING STRIP** <sup>TM</sup>

TERPS AMEND 0A 18 NOV 2010

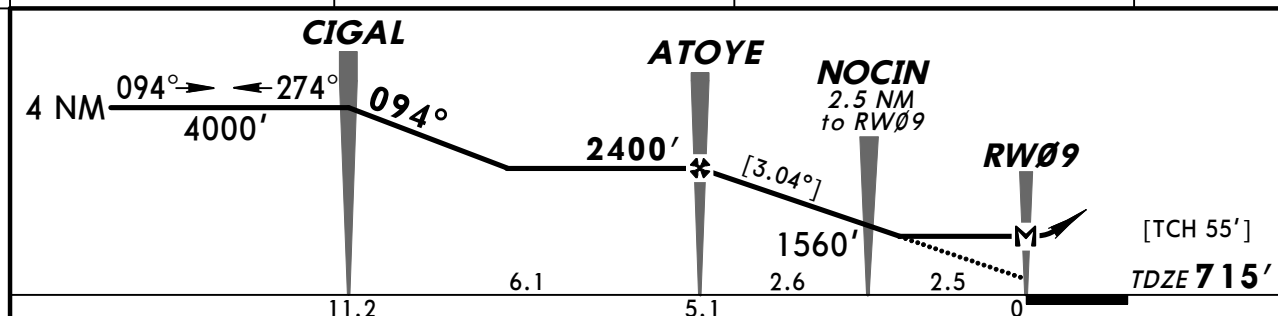
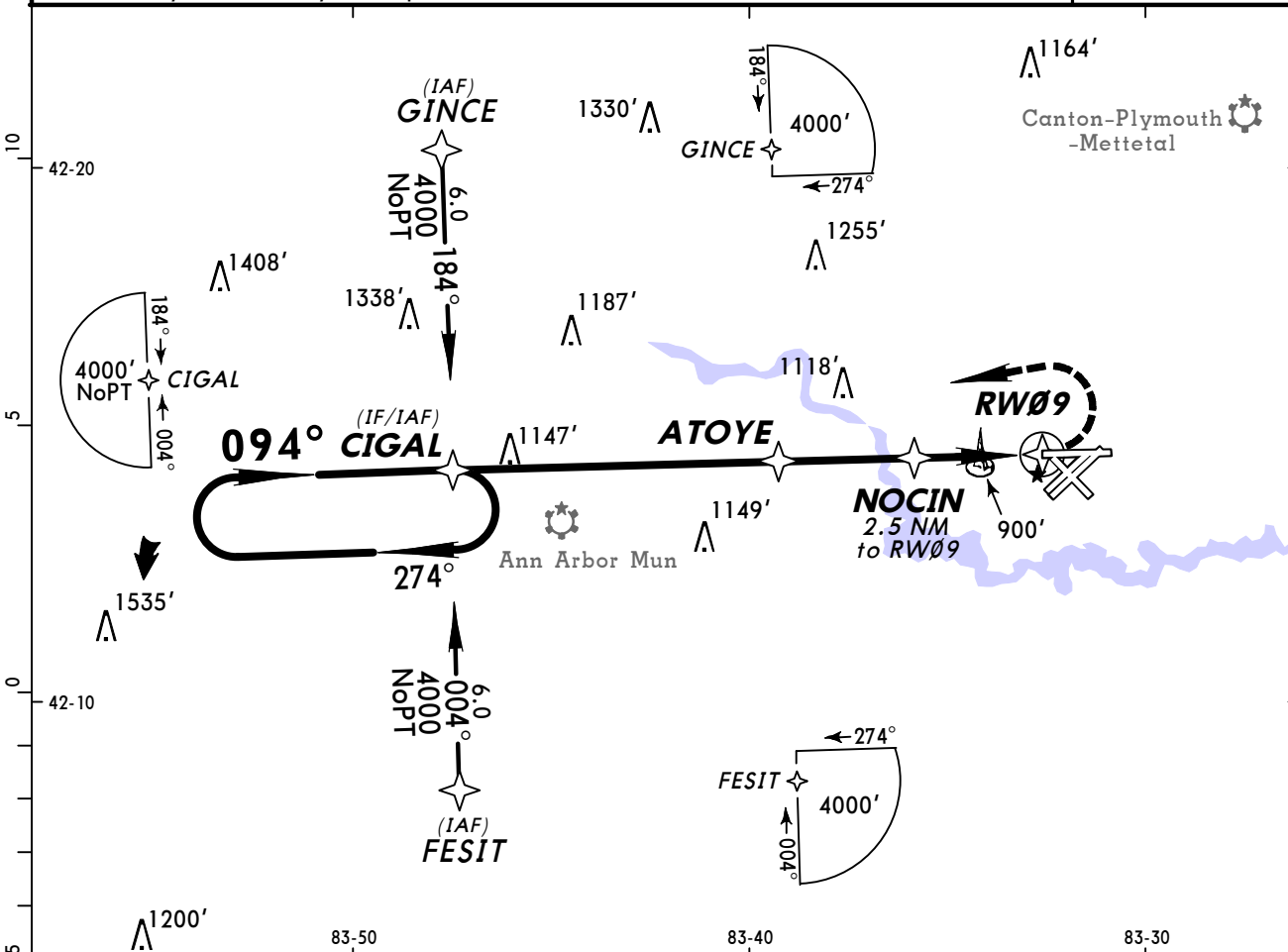
**BRIEFING STRIP** <sup>TM</sup>



MALSR

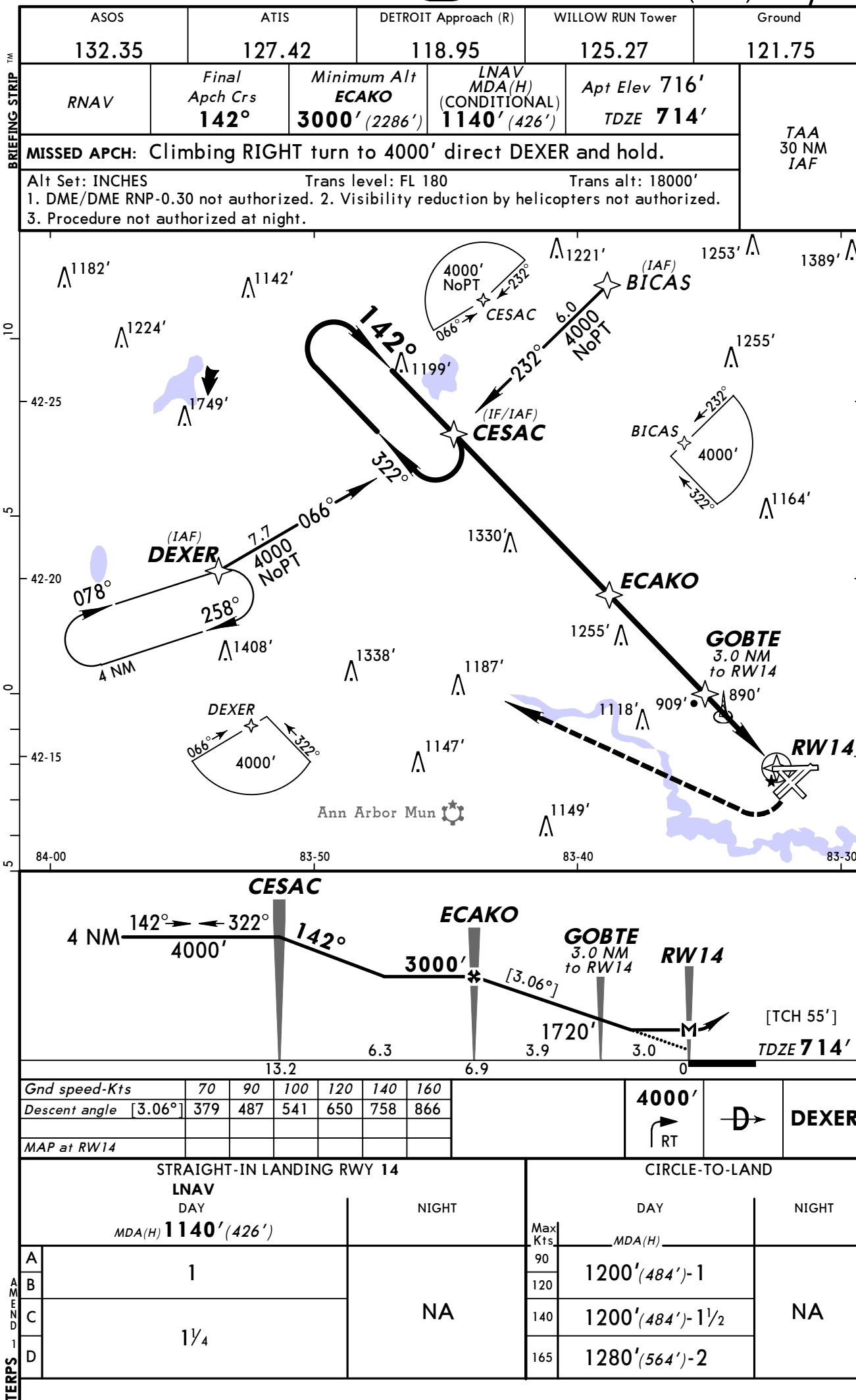
ERPS AMEND 1 23 SEP 2010

|                                                                                                                                     |                                  |                                                     |                                                        |                                          |
|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------|--------------------------------------------------------|------------------------------------------|
| ASOS<br>132.35                                                                                                                      | ATIS<br>127.42                   | DETROIT Approach (R)<br>118.95                      | WILLOW RUN Tower<br>125.27                             | Ground<br>121.75                         |
| RNAV                                                                                                                                | Final<br>Apch Crs<br><b>094°</b> | Minimum Alt<br><b>ATOYE</b><br><b>2400'</b> (1685') | LNAV<br>MDA(H)<br>(CONDITIONAL)<br><b>1160'</b> (445') | Apt Elev <b>716'</b><br>TDZE <b>715'</b> |
| <b>MISSED APCH:</b> Climbing LEFT turn to 4000' direct CIGAL and hold.                                                              |                                  |                                                     |                                                        |                                          |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                                               |                                  |                                                     |                                                        |                                          |
| 1. DME/DME RNP-0.30 not authorized. 2. Procedure not authorized at night.<br>3. Visibility reduction by helicopters not authorized. |                                  |                                                     |                                                        |                                          |



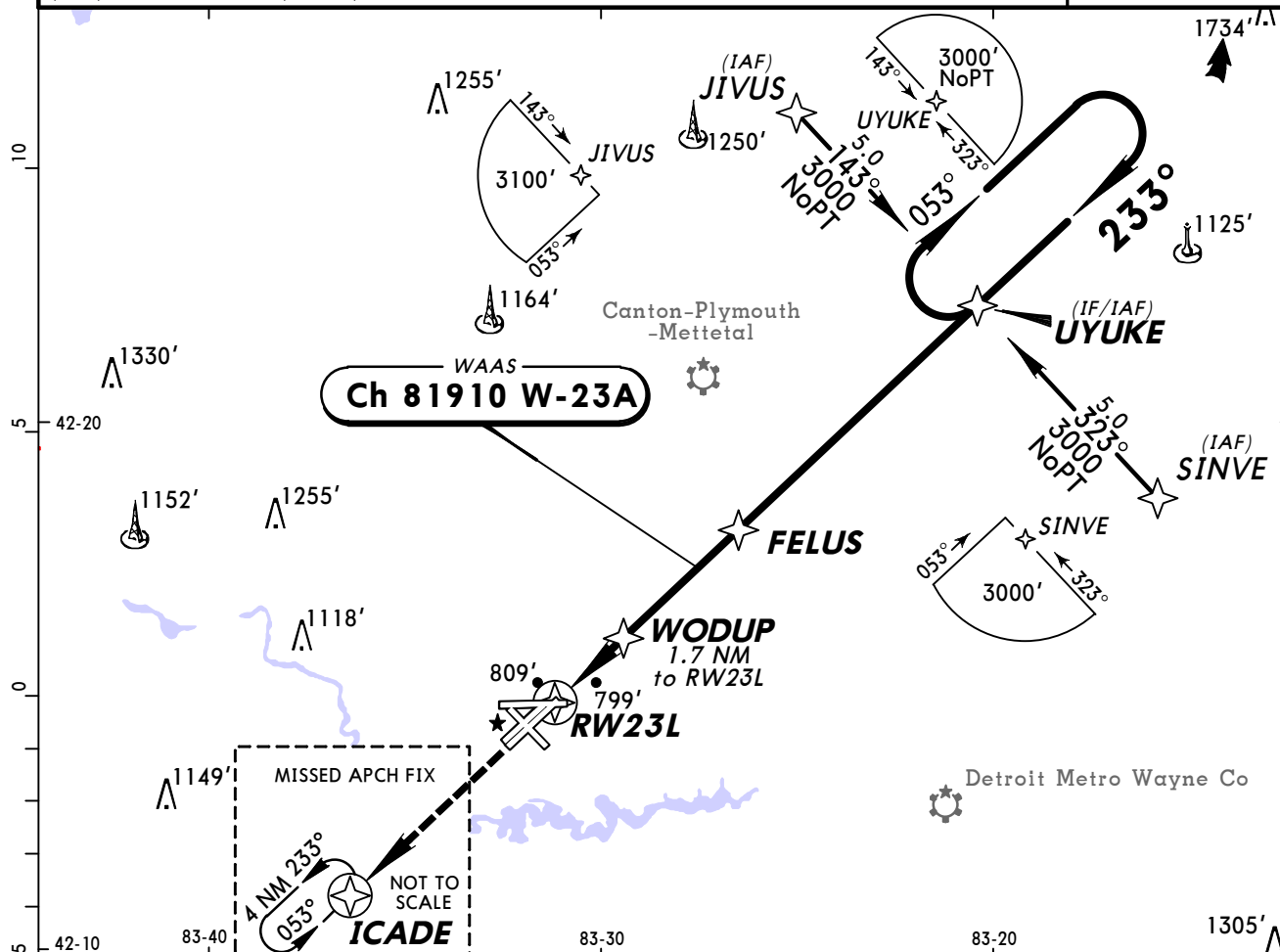
|                       |     |     |     |     |     |     |  |       |    |       |
|-----------------------|-----|-----|-----|-----|-----|-----|--|-------|----|-------|
| Gnd speed-Kts         | 70  | 90  | 100 | 120 | 140 | 160 |  | 4000' | LT | CIGAL |
| Descent angle [3.04°] | 376 | 484 | 538 | 645 | 753 | 861 |  |       |    |       |
| MAP at RW09           |     |     |     |     |     |     |  |       |    |       |

| STRAIGHT-IN LANDING RWY 9 |    |  |  | CIRCLE-TO-LAND |         |                  |       |
|---------------------------|----|--|--|----------------|---------|------------------|-------|
| LNAV                      |    |  |  |                |         |                  |       |
| MDA(H) 1160' (445')       |    |  |  |                |         |                  |       |
| DAY                       |    |  |  | NIGHT          |         |                  |       |
| A                         | 1  |  |  | NA             | Max Kts | MDA(H)           | NIGHT |
| B                         |    |  |  |                | 90      | 1200' (484')- 1  | NA    |
| C                         | 1¼ |  |  |                | 120     | 1200' (484')- 1½ |       |
| D                         | 1½ |  |  |                | 140     | 1200' (484')- 1½ |       |
|                           |    |  |  |                | 165     | 1280' (564')- 2  |       |

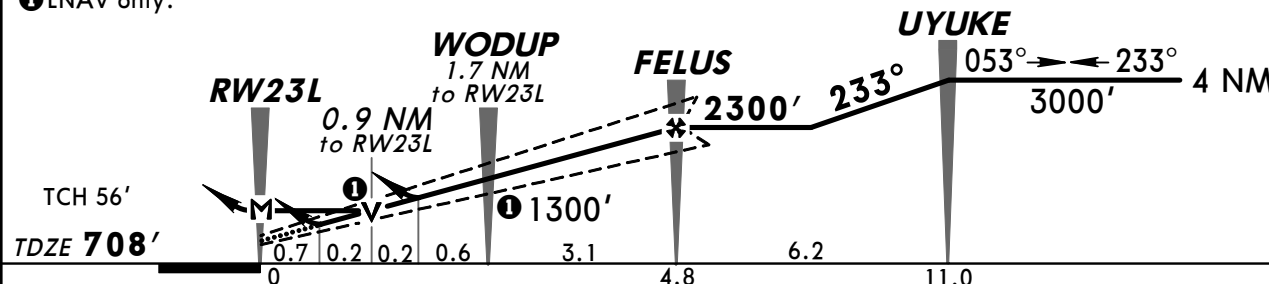




| ASOS                                                                                                                                          | ATIS                             | DETROIT Approach (R)                                | WILLOW RUN Tower                   | Ground                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------|------------------------------------|------------------------------------------|
| 132.35                                                                                                                                        | 127.42                           | 118.95                                              | 125.27                             | 121.75                                   |
| WAAS<br><b>Ch 81910</b><br>W-23A                                                                                                              | Final<br>Apch Crs<br><b>233°</b> | Minimum Alt<br><b>FELUS</b><br><b>2300'</b> (1592') | LPV<br>DA(H)<br><b>980'</b> (272') | Apt Elev <b>716'</b><br>TDZE <b>708'</b> |
| <b>MISSED APCH: Climb to 3000' direct ICADE and hold.</b>                                                                                     |                                  |                                                     |                                    | TAA<br>30 NM<br>IAF                      |
| Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'                                                                                         |                                  |                                                     |                                    |                                          |
| 1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 2. DME/DME RNP-0.30 not authorized. |                                  |                                                     |                                    |                                          |



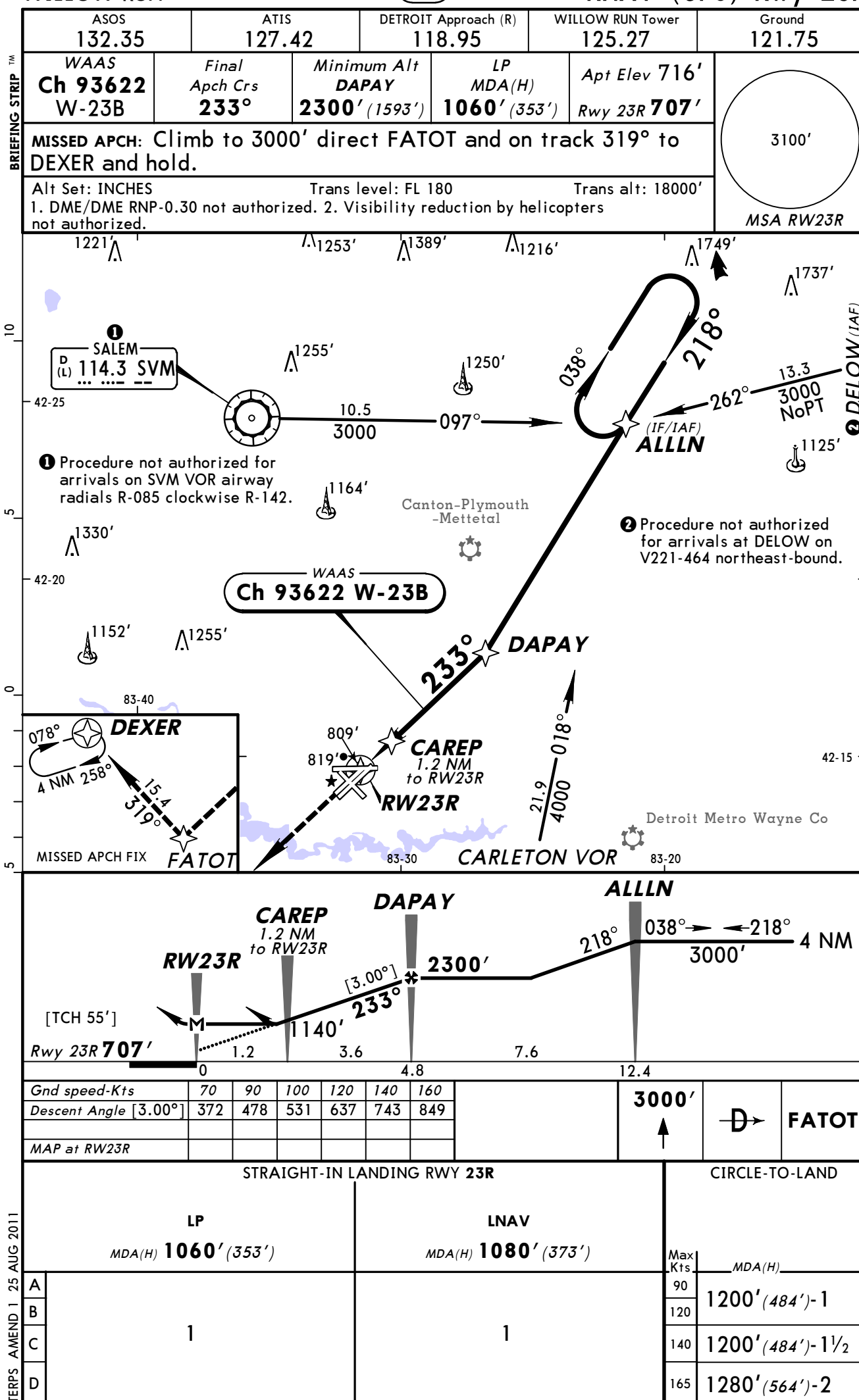
① LNAV only.

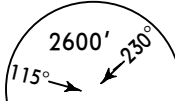


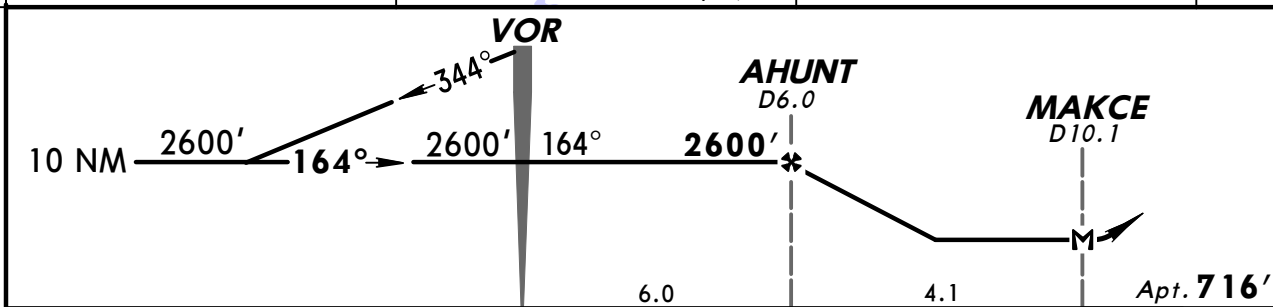
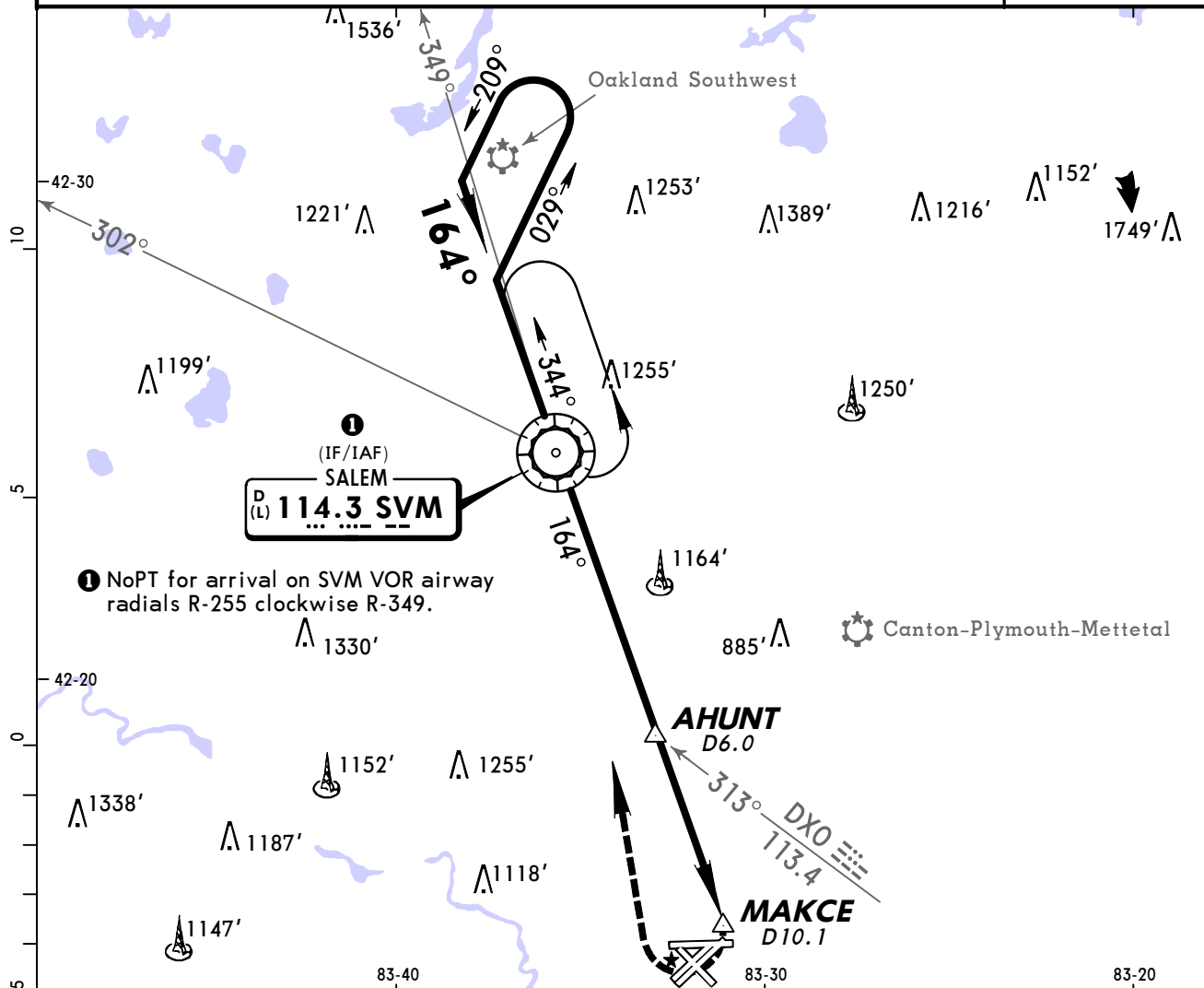
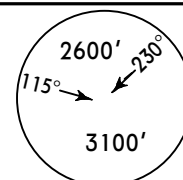
| Gnd speed-Kts          | 70  | 90  | 100 | 120 | 140 | 160 | MALSR | 3000' | ICADE |
|------------------------|-----|-----|-----|-----|-----|-----|-------|-------|-------|
| Glide Path Angle 3.00° | 372 | 478 | 531 | 637 | 743 | 849 | VASI  | ↑     | →     |
| MAP at RW23L           |     |     |     |     |     |     |       |       |       |

| STRAIGHT-IN LANDING RWY 23L |  |                    |  |                     |  | CIRCLE-TO-LAND                                |  |
|-----------------------------|--|--------------------|--|---------------------|--|-----------------------------------------------|--|
| LPV                         |  | LNAV/VNAV          |  | LNAV                |  | Not Authorized at Night to Rwy 5L, 9, 14, 23R |  |
| DA(H) 980' (272')           |  | DA(H) 1096' (388') |  | MDA(H) 1060' (352') |  | Max Kts                                       |  |
| RAIL or ALS out             |  | RAIL or ALS out    |  | RAIL out ALS out    |  | MDA(H)                                        |  |
| A                           |  |                    |  |                     |  | 90                                            |  |
| B                           |  |                    |  |                     |  | 120                                           |  |
| C                           |  |                    |  |                     |  | 140                                           |  |
| D                           |  |                    |  |                     |  | 165                                           |  |





|                     |                                                                    |                           |                |                                       |                                |                                |                            |               |                  |                                                                                                    |  |
|---------------------|--------------------------------------------------------------------|---------------------------|----------------|---------------------------------------|--------------------------------|--------------------------------|----------------------------|---------------|------------------|----------------------------------------------------------------------------------------------------|--|
| BRIEFING STRIP<br>™ | ASOS<br>132.35                                                     |                           | ATIS<br>127.42 |                                       | DETROIT Approach (R)<br>118.95 |                                | WILLOW RUN Tower<br>125.27 |               | Ground<br>121.75 |                                                                                                    |  |
|                     | VOR<br>SVM<br>114.3                                                | Final<br>Apch Crs<br>164° |                | Minimum Alt<br>AHUNT<br>2600' (1884') |                                | MDA(H)<br>Refer to<br>Minimums |                            | Apt Elev 716' |                  |                                                                                                    |  |
|                     | MISSED APCH: Climbing RIGHT turn to 2600' direct SVM VOR and hold. |                           |                |                                       |                                |                                |                            |               |                  | <br>MSA SVM VOR |  |
|                     | Alt Set: INCHES                                                    |                           |                | Trans level: FL 180                   |                                |                                | Trans alt: 18000'          |               |                  |                                                                                                    |  |
|                     |                                                                    |                           |                |                                       |                                |                                |                            |               |                  |                                                                                                    |  |



|                                 |     |      |      |      |      |      |      |                                            |       |   |              |
|---------------------------------|-----|------|------|------|------|------|------|--------------------------------------------|-------|---|--------------|
| Gnd speed-Kts                   | 70  | 90   | 100  | 120  | 140  | 160  |      | Lighting -<br>Refer to<br>Airport<br>Chart | 2600' | → | SVM<br>114.3 |
| MAP at MAKCE or<br>AHUNT to MAP | 4.1 | 3:31 | 2:44 | 2:28 | 2:03 | 1:45 | 1:32 |                                            | RT    |   |              |

|   |            |                                                                                |  |
|---|------------|--------------------------------------------------------------------------------|--|
|   |            | CIRCLE-TO-LAND<br>Not Authorized to Rwy's<br>5L, 9, 14, 23R at Night<br>MDA(H) |  |
|   | Max<br>Kts |                                                                                |  |
| A | 90         | 1420' (704')-1                                                                 |  |
| B | 120        | 1420' (704')-2                                                                 |  |
| C | 140        | 1420' (704')-2                                                                 |  |
| D | 165        | 1420' (704')-2 1/4                                                             |  |

TERPS AMEND 1 9 FEB 2012

## Chart changes since cycle 03-2012

ADD = added chart, REV = revised chart, DEL = deleted chart.

| ACT                                                        | PROCEDURE IDENT              | INDEX   | REV DATE    | EFF DATE |
|------------------------------------------------------------|------------------------------|---------|-------------|----------|
| <b>ALPENA, MI (ALPENA CO REGL - KAPN)</b>                  |                              |         |             |          |
| <b>KALAMAZOO, MI (KALAMAZOO/BATTLE CREEK INTL - KAZO)</b>  |                              |         |             |          |
| <b>BATTLE CREEK, MI (KELLOGG - KBTL)</b>                   |                              |         |             |          |
| <b>SAULT STE MARIE, MI (CHIPPEWA CO INTL - KCIU)</b>       |                              |         |             |          |
| <b>HANCOCK, MI (HOUGHTON CO MEML - KCMX)</b>               |                              |         |             |          |
| <b>DETROIT, MI (DETROIT METRO WAYNE CO - KDTW)</b>         |                              |         |             |          |
| REV                                                        | AIRPORT, AIRPORT INFO        | 10-9    | 17 Feb 2012 |          |
| REV                                                        | AIRPORT INFO (CONTD), TAK... | 10-9A   | 17 Feb 2012 |          |
| REV                                                        | ILS Y RWY 22R                | 11-12   | 17 Feb 2012 |          |
| REV                                                        | ILS Z OR LOC RWY 22R         | 11-13   | 17 Feb 2012 |          |
| REV                                                        | ILS Y PRM RWY 22R TEXT AP... | 11-14   | 17 Feb 2012 |          |
| REV                                                        | ILS Y PRM RWY 22R            | 11-14AA | 17 Feb 2012 |          |
| REV                                                        | RNAV (GPS) RWY 22L           | 12-5    | 17 Feb 2012 |          |
| REV                                                        | RNAV (GPS) RWY 22R           | 12-6    | 17 Feb 2012 |          |
| <b>FLINT, MI (BISHOP INTL - KFNT)</b>                      |                              |         |             |          |
| <b>GAYLORD, MI (GAYLORD REGL - KGLR)</b>                   |                              |         |             |          |
| <b>GRAND RAPIDS, MI (GERALD R. FORD INTL - KGRR)</b>       |                              |         |             |          |
| <b>IRON MT-KINGSFORD, MI (FORD - KIMT)</b>                 |                              |         |             |          |
| <b>IRONWOOD, MI (GOGEBIC-IRON CO - KIWD)</b>               |                              |         |             |          |
| <b>LANSING, MI (CAPITAL REGION INTL - KLAN)</b>            |                              |         |             |          |
| REV                                                        | AIRPORT, AIRPORT INFO, TA... | 10-9    | 17 Feb 2012 |          |
| REV                                                        | ILS OR LOC RWY 10R           | 11-1    | 17 Feb 2012 |          |
| REV                                                        | ILS OR LOC RWY 28L           | 11-2    | 17 Feb 2012 |          |
| REV                                                        | RNAV (GPS) RWY 24            | 12-3    | 17 Feb 2012 |          |
| REV                                                        | RNAV (GPS) RWY 28L           | 12-4    | 17 Feb 2012 |          |
| <b>SAGINAW, MI (MBS INTL - KMBS)</b>                       |                              |         |             |          |
| <b>MUSKEGON, MI (MUSKEGON CO - KMKG)</b>                   |                              |         |             |          |
| <b>MT CLEMENS, MI (SELFRIDGE ANGB - KMTC)</b>              |                              |         |             |          |
| <b>OSCODA, MI (OSCODA-WURTSMITH - KOSC)</b>                |                              |         |             |          |
| REV                                                        | ILS OR LOC DME RWY 24        | 11-1    | 17 Feb 2012 |          |
| REV                                                        | RNAV (GPS) RWY 6             | 12-1    | 17 Feb 2012 |          |
| REV                                                        | RNAV (GPS) RWY 24            | 12-2    | 17 Feb 2012 |          |
| REV                                                        | VOR RWY 6                    | 13-1    | 17 Feb 2012 |          |
| REV                                                        | AIRPORT, AIRPORT INFO, TA... | APT     | 17 Feb 2012 |          |
| <b>PELLSTON, MI (PELLSTON REGL APT OF EMMET CO - KPLN)</b> |                              |         |             |          |
| <b>PONTIAC, MI (OAKLAND CO INTL - KPTK)</b>                |                              |         |             |          |
| REV                                                        | LOC (BACK CRS) RWY 27L       | 11-2    | 17 Feb 2012 |          |
| REV                                                        | RNAV (GPS) RWY 9R            | 12-1    | 17 Feb 2012 |          |

**MARQUETTE, MI (SAWYER INTL - KSAW)**

**TRAVERSE CITY, MI (CHERRY CAPITAL - KTVC)**

|     |                              |      |             |
|-----|------------------------------|------|-------------|
| REV | ILS OR LOC RWY 28            | 11-1 | 17 Feb 2012 |
| REV | AIRPORT, AIRPORT INFO, TA... | APT  | 17 Feb 2012 |

**DETROIT, MI (WILLOW RUN - KYIP)**

## TERMINAL CHART CHANGE NOTICES

### No Chart Change Notices for Airport KAPN

### No Chart Change Notices for Airport KAZO

### No Chart Change Notices for Airport KBTL

### No Chart Change Notices for Airport KCIU

### Chart Change Notices for Airport KCMX

**Type:** Terminal

**Effectivity:** Permanent

**Begin Date:** Immediately

**End Date:** No end date

(12-2) RNAV (GPS) Rwy 13, (12-3) RNAV (GPS) Rwy 25, (13-1) VOR Rwy 13, (13-2) VOR Rwy 25 VASI-L changed to PAPI-L.

### Chart Change Notices for Airport KDTW

**Type:** Terminal

**Effectivity:** Permanent

**Begin Date:** Immediately

**End Date:** No end date

10-9A, 11-12, 11-13, 11-14AA and 12-6 have PAPI-R on Rwy 22R.

**Type:** Terminal

**Effectivity:** Permanent

**Begin Date:** Immediately

**End Date:** No end date

Metro Tower frequency 128.12 for runway 4L-22R added.

### No Chart Change Notices for Airport KFNT

### No Chart Change Notices for Airport KGLR

### No Chart Change Notices for Airport KGRR

### No Chart Change Notices for Airport KIMT

### No Chart Change Notices for Airport KIWD

**No Chart Change Notices for Airport KLAN**

**Chart Change Notices for Airport KMBS**

**Type:** Terminal

**Effectivity:** Temporary

**Begin Date:** Immediately

**End Date:** Until Further Notice

(11-2) ILS or LOC Rwy 23 MM decmsnd.

**No Chart Change Notices for Airport KMKG**

**Chart Change Notices for Airport KMTC**

**Type:** Terminal

**Effectivity:** Permanent

**Begin Date:** 20100729

**End Date:** No end date

(30-2A) SPRTN 3 Arrival private airport Tecumseh Products removed.

**No Chart Change Notices for Airport KOSC**

**No Chart Change Notices for Airport KPLN**

**Chart Change Notices for Airport KPTK**

**Type:** Terminal

**Effectivity:** Permanent

**Begin Date:** 20100729

**End Date:** No end date

(10-2B) SPRTN 3 Arrival private airport Tecumseh Products removed.

**No Chart Change Notices for Airport KSAW**

**No Chart Change Notices for Airport KTVC**

**Chart Change Notices for Airport KYIP**

**Type:** Terminal

**Effectivity:** Permanent

**Begin Date:** 20100729

**End Date:** No end date

(20-2C) SPRTN 3 Arrival private airport Tecumseh Products removed.