

Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: SID	Estimated Chart Date: 09/05/2024	APWS Task ID: A187829E28B84E789CDE5A4857D6F851	APWS Project ID: 42465F16754147CABED308AC9737CEE6
Procedure: SID METRO FOUR DEPARTURE DETROIT MI KDTW		Enroute: YES	Specialist: Hirst, Charles		Agreement Number:
Airport ID: KDTW			Airport City: DETROIT		State: MI
Facility ID: DXO	Facility Type: VOR_DME	Flight Inspection Remark Type: New FC Slot			
<div>Procedure Comments:</div> <div>Airfield construction projects are modifying two runways at YIP. Remove RWY 7 and 25 at DET from procedure.</div> <div>8260-1 (1): WAIVER FOR ATC CLIMB GRADIENTS</div> <div>APPROVAL (2): APPROVAL FOR CLIMG GRADIENTS IN EXCESS OF 500 FT/NM APPROVAL REQUEST TO PUBLISH SPECIAL INSTRUCTIONS</div> <div>FOR ADDITIONAL QUESTIONS CONTACT ERIC SUSKI, MANAGER 405-954-7331</div> <div><div><div>3. Request Type: Waiver (DTW) DETROIT, MICHIGAN, DETROIT METROPOLITAN WAYNE COUNTY METRO FOUR DEPARTURE <a href="https://swims.faa.gov/Procedure/Edit/8531">https://swims.faa.gov/Procedure/Edit/8531</a></div><div>Requested By: FAA PRB Result: Return for Rework Waiver: No hazard identified</div><div>NON-SAFETY CRITICAL ERROR: 1. MISSING APPROVAL REQUEST FOR CLIMB GRADIENT EXCEEDING 500' PER NM REQUIRED IAW 8260.46 PARA 2-1-1D(2).</div><div>ADMINISTRATIVE COMMENT: 1. RECOMMEND CHANGING "ALL AIRCRAFT: ATC CLIMB GRADIENT..." NOTE TO READ "ALL AIRCRAFT: ATC CROSSING RESTRICTIONS AND CLIMB GRADIENTS: IF UNABLE TO ACCEPT CROSSING RESTRICTIONS AND CLIMB RATES ADVISE ATC PRIOR TO TAXI".</div></div><div><div>NON-SAFETY CRITICAL ERROR: 1. ADDED. ADMINISTRATIVE COMMENT: NOT CHANGED; ATC REQUESTED VERBIAGE. ERIC SUSKI, AJV-A431 MANAGER</div></div></div> <div><div>Digitally signed by <b>ERIC N SUSKI</b> Jun 12, 2024</div><div>QUALITY 41 CHECKED</div></div>					

[illegible]

## 1. FLIGHT PROCEDURE IDENTIFICATION:

Detroit, MI  
Detroit Metro Wayne County Airport (KDTW)  
METRO DEPARTURE

## 2. WAIVER REQUIRED AND APPLICABLE STANDARD:

FAA Order 8260.46J Departure Procedure Program. Charting Minimum Climb Gradients (CG) Para 2-1-1 (e). (3). (c). Do not chart CGs that may be needed to support airspace, navigation solution, environmental, or ATC operational limitations.

## 3. REASON FOR WAIVER (JUSTIFICATION FOR NONSTANDARD TREATMENT):

DTW ATC is requesting the crossing restriction of DXO 3.5 DME at or above 2500 MSL to ensure aircraft on the METRO SID can be vectored to the west without conflicting with Willow Run Airport (KYIP) traffic.

The KYIP VOR-A approach comes in from the NW, is CIRCLING ONLY, and has the aircraft descending to a 1420 MSL Circling MDA. If the aircraft on final circle SE of KYIP, they come within 1.85 NM of the DXO 3.5 NM DME arc. The DXO 3.5 DME crossing restriction at 2500 MSL would ensure 1000 foot separation from the KYIP VOR-A traffic with METRO SID aircraft off of KDTW.

Additionally, KYIP RNAV (GPS) RWY 23 crosses GAFFY at 1500 MSL. Crossing DXO 3.5 DME at 2500 on the METRO SID for KDTW departures will also ensure IFR separation and deconflict aircraft flying the KYIP RNAV (GPS) RWY 23 approach.

## 4. EQUIVALENT LEVEL OF SAFETY PROVIDED:

DTW runs simultaneous arrivals to the outboard runways while departing the inboards. Aircraft on RNAV SIDs have built-in separation from go-around aircraft on the parallel runways. The METRO SID does not have this built-in separation. Being able to sharply vector METRO SID aircraft to the west ensures not only separation and a great efficiency gain with other departures but get quick divergence with potential go-arounds. The vectors needed to gain this separation cannot be given without this climb restriction as it would create a potential conflict with traffic at Willow Run Airport.

All RWY climb gradients will be charted in the departure route description as a required ATC climb gradient. If the pilot cannot accept the required CG, ATC will ensure separation with other methods. Specifically, the charted departure route description will read as follows:

ALL AIRCRAFT: ATC CLIMB GRADIENT: IF UNABLE TO ACCEPT CLIMB RATE, ADVISE ATC PRIOR TO TAXI.

RWY 3R: CROSS DXO 3.5 DME AT OR ABOVE 2500 MSL, 820 FT/NM TO 2500.

RWY 3L: CROSS DXO 3.5 DME AT OR ABOVE 2500 MSL, 737 FT/NM TO 2500.

RWY 4R: CROSS DXO 3.5 DME AT OR ABOVE 2500 MSL, 856 FT/NM TO 2500.

RWY 4L: CROSS DXO 3.5 DME AT OR ABOVE 2500 MSL, 669 FT/NM TO 2500.

RWY 9R: CROSS DXO 3.5 DME AT OR ABOVE 2500 MSL, 1046 FT/NM TO 2500.

RWY 9L: CROSS DXO 3.5 DME AT OR ABOVE 2500 MSL, 988 FT/NM TO 2500.

RWY 21R: CROSS DXO 3.5 DME AT OR ABOVE 2500 MSL, 538 FT/NM TO 2500.

RWY 21L: CROSS DXO 3.5 DME AT OR ABOVE 2500 MSL, 687 FT/NM TO 2500.

RWY 22R: CROSS DXO 3.5 DME AT OR ABOVE 2500 MSL, 742 FT/NM TO 2500.

RWY 22L: CROSS DXO 3.5 DME AT OR ABOVE 2500 MSL, 661 FT/NM TO 2500.

RWY 27R: CROSS DXO 3.5 DME AT OR ABOVE 2500 MSL, 511 FT/NM TO 2500.

RWY 27L: CROSS DXO 3.5 DME AT OR ABOVE 2500 MSL, 521 FT/NM TO 2500.

## 5. ALTERNATIVE ACTIONS DEEMED NOT FEASIBLE:

Coordinating each METRO SID aircraft with Detroit Approach would either involve slowing the departures at KDTW or requiring blocking all inbound/outbound IFR traffic off KYIP if aircraft cannot be assured to at least be at 2400 MSL by the time they reach Willow Run's Class D airspace. In addition, separation with VFR pattern traffic at Willow Run would not be assured without this crossing restriction.

**6. COORDINATION WITH USER ORGANIZATIONS (SPECIFY):**

Central Service Center PBN NATCA and FAA Leads  
Cleveland Center (ZOB)  
Detroit TRACON (D21)  
Detroit Metro Tower

**7. SUBMITTED BY:**

DATE	OFFICE IDENTIFICATION	TITLE
5/8/2024	AJV_A	IFP Team 3 Manager

**SIGNATURE**

*Digitally signed by*  
**BEV L BORDY**  
May 09, 2024

**8. AFS ACTIONS:**

☐ APPROVED ☐ DISAPPROVED ☐ NOT REQUIRED

**COMMENTS:**

DATE	ROUTING SYMBOL	SIGNATURE
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TO: AFS-460

FROM:

SUBJECT: APPROVAL: DETROIT METRO WAYNE COUNTY (KDTW).

DETROIT METRO FOUR SID

**ISSUE: CLIMB GRADIENT EXCEEDS 500 FEET PER NM, 8260.46J PARA 2-1-1D(2)**

The ATC required climb gradient for all runways at KDTW exceed 500 FT/NM and are as follows:

RWY 3L: 737 FT/NM TO 2500

RWY 3R: 820 FT/NM TO 2500

RWY 4L: 669 FT/NM TO 2500

RWY 4R: 856 FT/NM TO 2500

RWY 9L: 988 FT/NM TO 2500

RWY 9R: 1046 FT/NM TO 2500

RWY 21L: 687 FT/NM TO 2500

RWY 21R: 538 FT/NM TO 2500

RWY 22L: 661 FT/NM TO 2500

RWY 22R: 742 FT/NM TO 2500

RWY 27L: 521 FT/NM TO 2500

RWY 27R: 511 FT/NM TO 2500

Request approval to publish a climb gradient in excess of 500 FT/NM to 2500 for all of the runways at KDTW listed above. This request is to facilitate the separate waiver for ATC climb gradients at KDTW to allow a safe, orderly, and expeditious flow of traffic for conventional departures at KDTW, reduce ATC workload and to deconflict with traffic at Willow Run (KYIP) airport.

These requested climb gradients are not unduly onerous for KDTW departures using the METRO SID. Aircraft flying the current METRO THREE departing RWY 21 L/R and 22L/R westbound already must comply with the crossing restriction and have been routinely demonstrating an ability to comply with the requirement.

TO: AFS-460

FROM:

SUBJECT: APPROVAL: DETROIT METRO WAYNE COUNTY (KDTW).

DETROIT METRO FOUR SID

**ISSUE: PRINT SPECIAL INSTRUCTIONS, KDTW METRO SID**

ATC is requesting approval to print special instructions on the METRO SID to segment the departure via a dashed line between the Detroit West and Detroit East Departure Control sectors.

The Detroit Metro area is a high congestion area of airspace along an international border. Having the appropriate departure frequencies already printed and presented on the METRO SID graphic will help reduce pilot confusion, improve efficiency, reduce frequency change errors, and reduce controller workload.

The Detroit Departure Control East sector 134.3 VHF/284.0 UHF will handle eastbound traffic on the MAARS transition. The Detroit Departure Control West sector 118.95 VHF/284.0 UHF will handle all of the remaining transitions: PISTN for northbound departures, DUNKS & HARWL transitions for westbound, and the ILLIE transition for southbound departures.

D-ATIS 118.125  
CLNC DEL 120.65  
CPDLC  
GND CON  
121.8 (NW) 119.45 (NE)  
132.725 (SW) 119.25 (SE)  
METRO TOWER  
118.4 317.725 (Rwys 3L/R, 21L/R, 27R)  
128.75 317.725 (Rwy 27L)  
135.0 317.725 (Rwy 4L/R, 22L/R)

# TAKEOFF MINIMUMS

Rwys 3L/R, 4L/R, 9L/R, 21L/R, 22L/R, 27L/R: Standard.

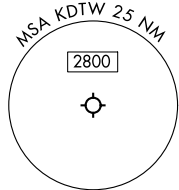
**TOP ALTITUDE:  
ASSIGNED BY ATC**

RADAR required.  
DME required.

NOTE: For use by non-RNAV equipped aircraft only.  
NOTE: When using this departure, file the appropriate depicted departure fix and route. Aircraft over HARWL must file FL220 and below. Aircraft landing Cleveland (CLE) must file MAARS transition. Turbojet departures at/above 10000, maintain 280K until advised by ATC. If unable, advise ATC prior to departure.

## SPECIAL INSTRUCTIONS:

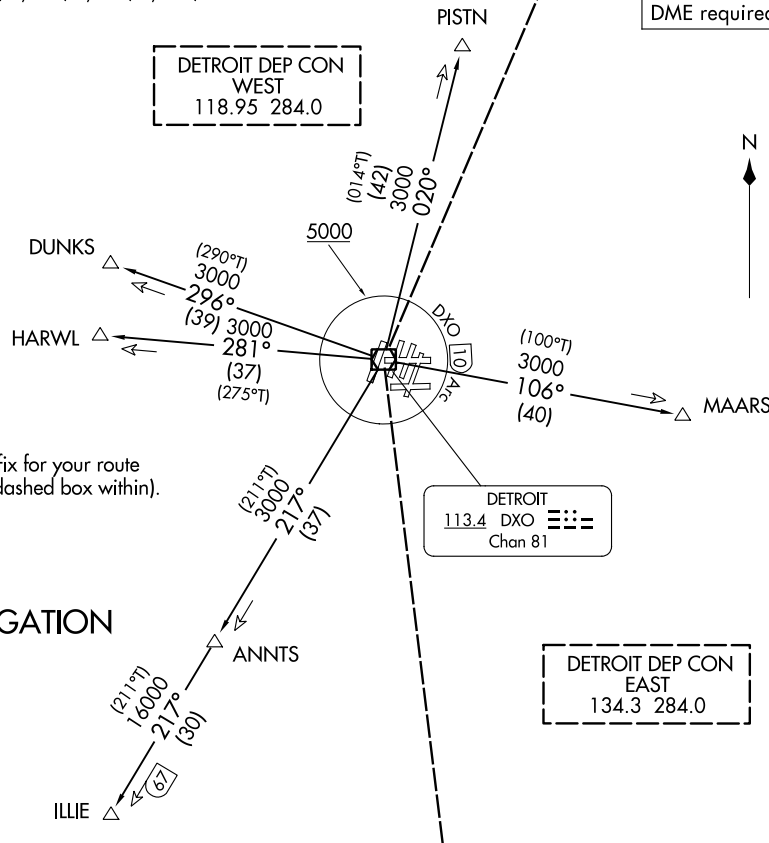
For appropriate departure control frequency, see graphic.  
Use frequency depicted within the sector where first navaid/fix for your route is located (sectors indicated by dashed lines; frequencies in dashed box within).



**PROTOTYPE-  
NOT FOR NAVIGATION**

(CONTINUED ON FOLLOWING PAGE)

NOTE: Chart not to scale.





## DEPARTURE ROUTE DESCRIPTION

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

ALL AIRCRAFT: ATC climb gradient: If unable to accept climb rate, advise ATC prior to taxi.

RUNWAY 3R: Cross DXO 3.5 DME at or above 2500 MSL, 820' /NM to 2500.

RUNWAY 3L: Cross DXO 3.5 DME at or above 2500 MSL, 737' /NM to 2500.

RUNWAY 4R: Cross DXO 3.5 DME at or above 2500 MSL, 856' /NM to 2500.

RUNWAY 4L: Cross DXO 3.5 DME at or above 2500 MSL, 669' /NM to 2500.

RUNWAY 9R: Cross DXO 3.5 DME at or above 2500 MSL, 1046' /NM to 2500.

RUNWAY 9L: Cross DXO 3.5 DME at or above 2500 MSL, 988' /NM to 2500.

RUNWAY 21 R: Cross DXO 3.5 DME at or above 2500 MSL, 538' /NM to 2500.

RUNWAY 21 L: Cross DXO 3.5 DME at or above 2500 MSL, 687' /NM to 2500.

RUNWAY 22R: Cross DXO 3.5 DME at or above 2500 MSL, 742' /NM to 2500.

RUNWAY 22L: Cross DXO 3.5 DME at or above 2500 MSL, 661' /NM to 2500.

RUNWAY 27R: Cross DXO 3.5 DME at or above 2500 MSL, 511' /NM to 2500.

RUNWAY 27L: Cross DXO 3.5 DME at or above 2500 MSL, 521' /NM to 2500.

DUNKS TRANSITION (METRO4.DUNKS): From over DXO VOR/DME on DXO R-296 to DUNKS.

HARWL TRANSITION (METRO4.HARWL): From over DXO VOR/DME on DXO R-281 to HARWL.

ILLIE TRANSITION (METRO4.ILLIE): From over DXO VOR/DME on DXO R-217 to ILLIE.

MAARS TRANSITION (METRO4.MAARS): From over DXO VOR/DME on DXO R-106 to MAARS.

PISTN TRANSITION (METRO4.PISTN): From over DXO VOR/DME on DXO R-020 to PISTN.

PROTOTYPE-NOT FOR NAVIGATION



EC-1, 3

DETROIT, MICHIGAN  
DETROIT METRO WAYNE COUNTY (DTW)

NOTE: Chart not to scale.

Rwys 3L/R, 4L/R, 9L/R, 21L/R, 22L/R, 27L/R: Standard.

HARWL

5000

P|STN

(42)

1

217°-  
371

ANNTS

ILLIE

MAARS

DETROIT  
113.4 DXO  $\equiv :: \equiv$   
Chan 81

DETROIT DEP CON  
EAST  
134.3 284.0

DETROIT METRO WAYNE COUNTY (DTW)  
DETROIT, MICHIGAN



DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Climb on assigned heading, thence....

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

DUNKS TRANSITION (METRO3.DUNKS): From over DXO VOR/DME on DXO R-296 to DUNKS.

HARWL TRANSITION (METRO3.HARWL): From over DXO VOR/DME on DXO R-281 to HARWL.

ILLIE TRANSITION (METRO3.ILLIE): From over DXO VOR/DME on DXO R-217 to ILLIE.

MAARS TRANSITION (METRO3.MAARS): From over DXO VOR/DME on DXO R-106 to MAARS.

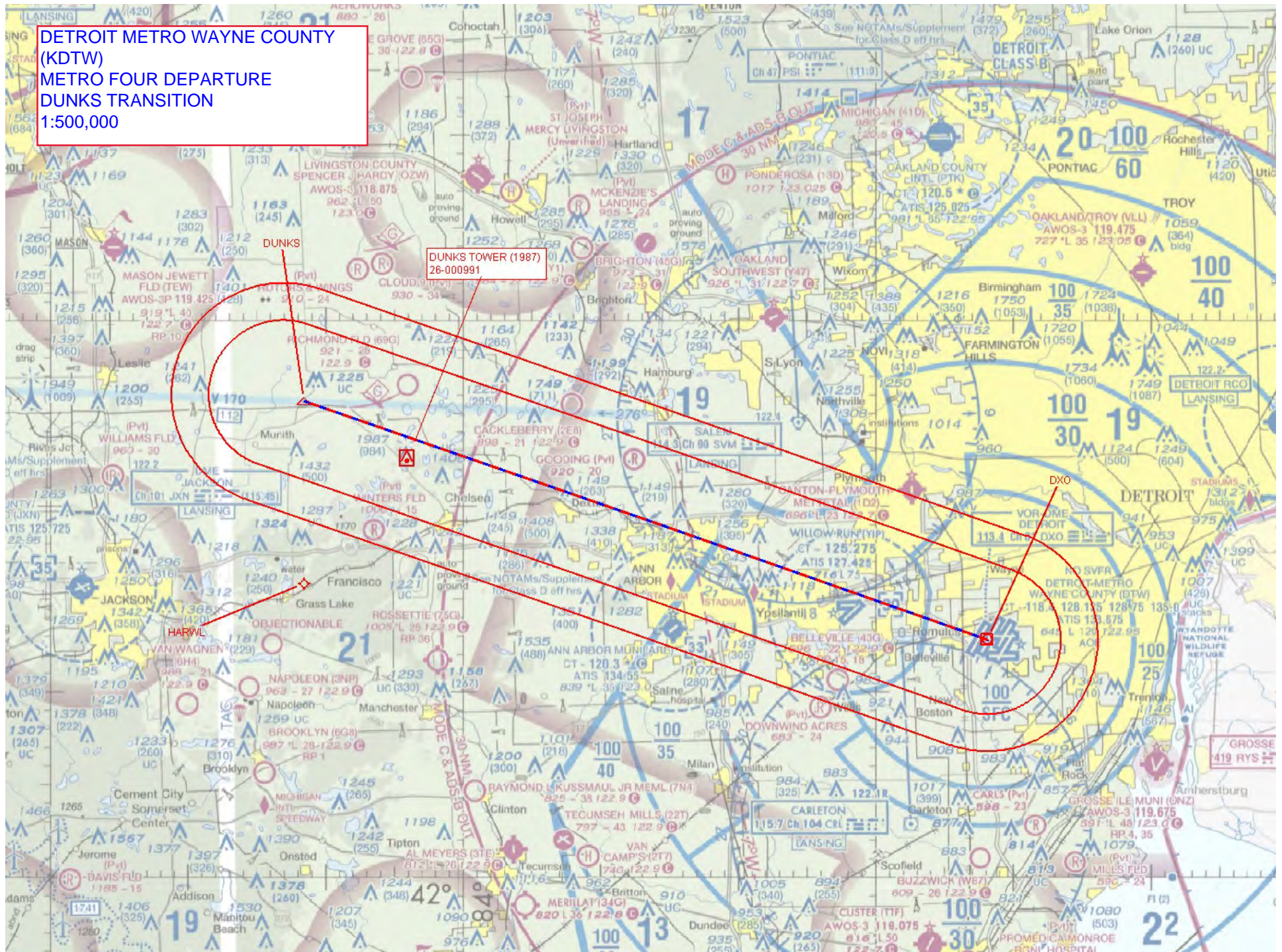
PISTN TRANSITION (METRO3.PISTN): From over DXO VOR/DME on DXO R-020 to PISTN.

EC-1, 30 NOV 2023 to 28 DEC 2023

EC-1, 30 NOV 2023 to 28 DEC 2023

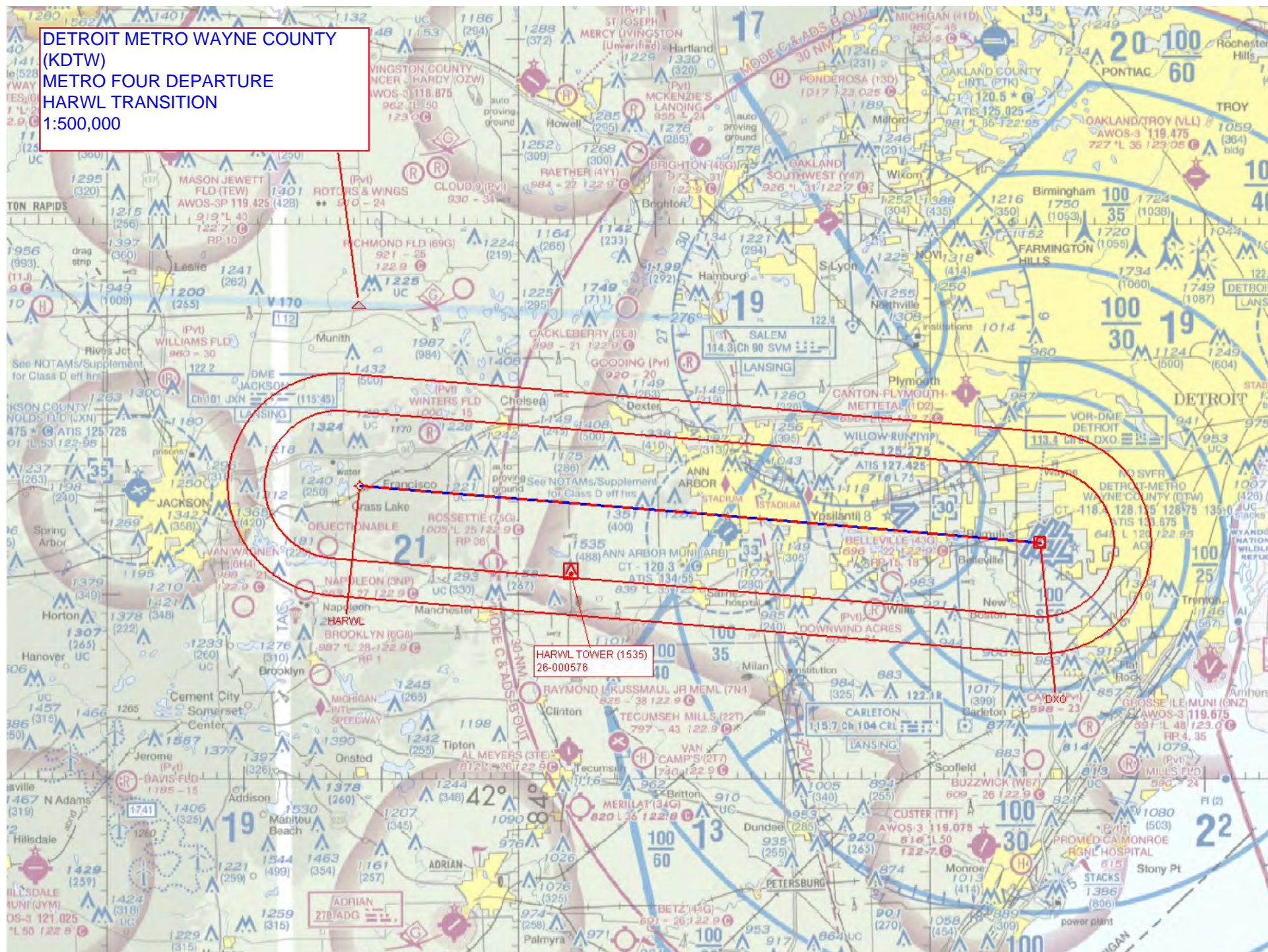


DETROIT METRO WAYNE COUNTY  
(KDTW)  
METRO FOUR DEPARTURE  
DUNKS TRANSITION  
1:500,000



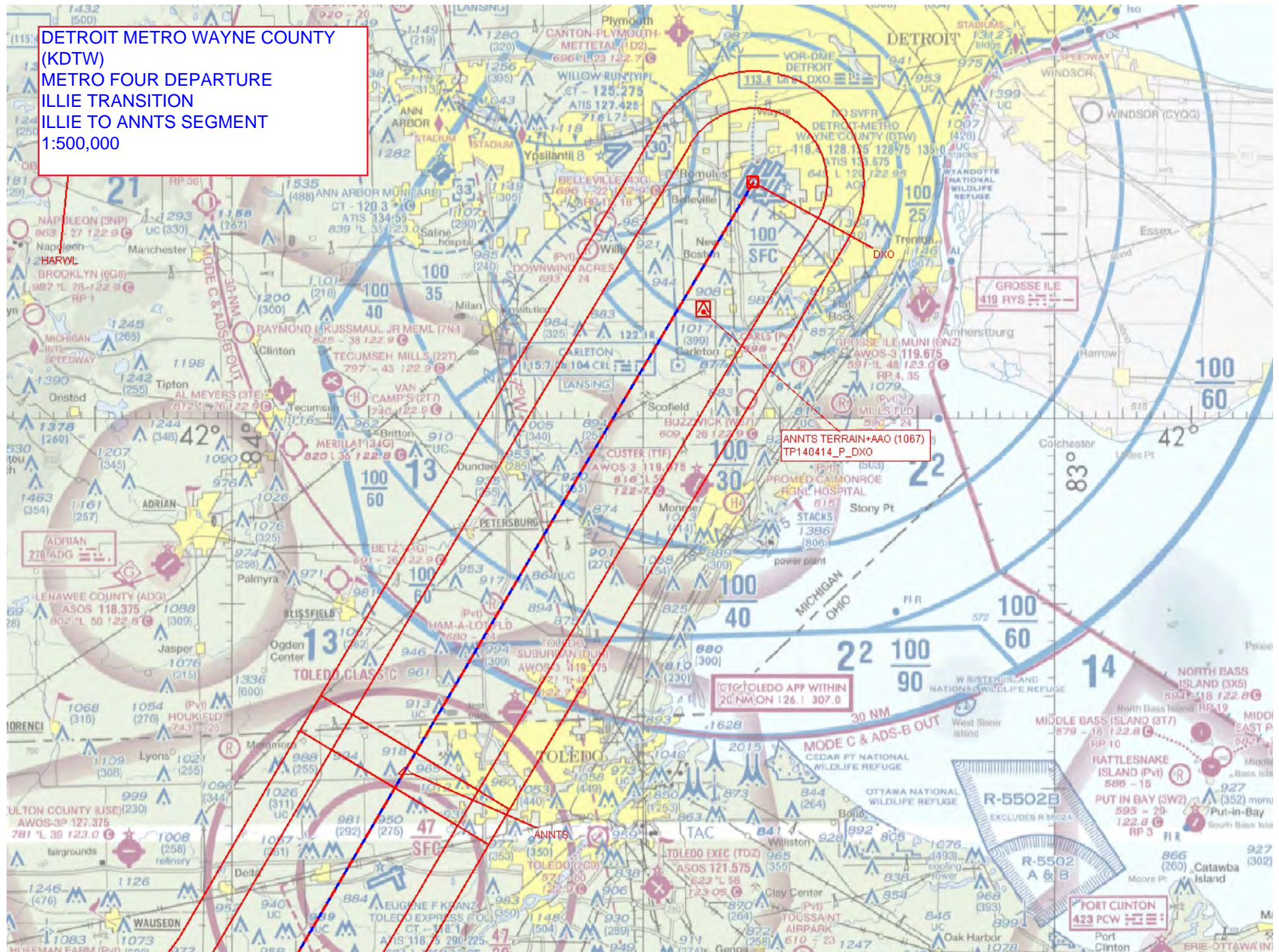


DETROIT METRO WAYNE COUNTY  
(KDTW)  
METRO FOUR DEPARTURE  
HARWL TRANSITION  
1:500,000





DETROIT METRO WAYNE COUNTY  
(KDTW)  
METRO FOUR DEPARTURE  
ILLIE TRANSITION  
ILLIE TO ANNTS SEGMENT  
1:500,000





DETROIT METRO WAYNE COUNTY (KDTW)  
METRO FOUR DEPARTURE  
ILLIE TRANSITION  
ANNTS TO ILLIE SEGMENT  
1:500,000

CTC TOLEDO APP WITHIN  
20 NM ON 126.1 307.0

ILLIE TOWER (1068)  
39-001096

CTC TOLEDO APP WITHIN  
20 NM ON 124.35 347.55



**DETROIT METRO WAYNE COUNTY (KDTW)**  
**METRO FOUR DEPARTURE**  
**MAARS TRANSITION**  
**1:500,000**

**MAARS TOWER (1340)**  
**CA-000379**

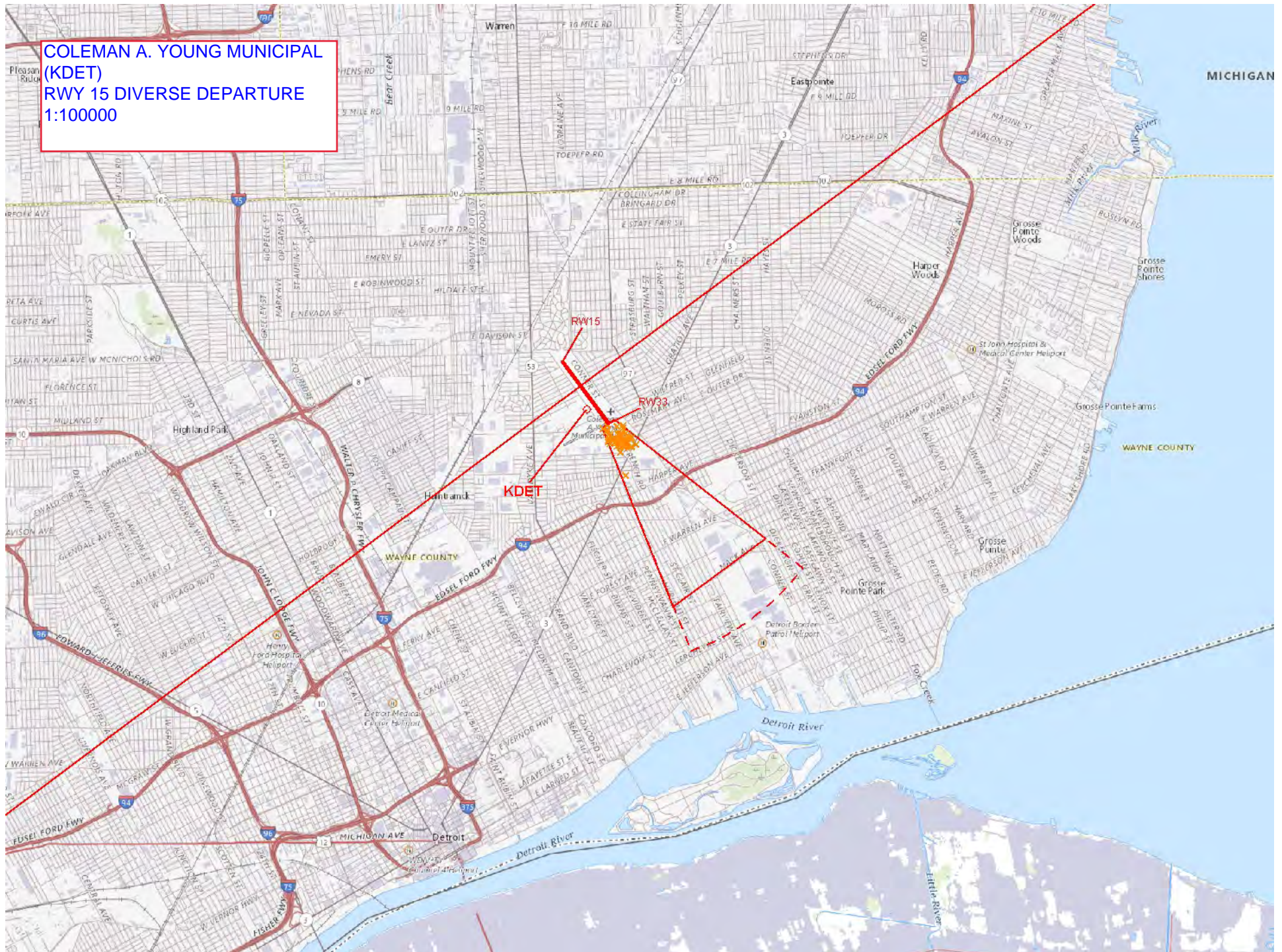
**NOTE:** Limited chart information provided for U.S. airspace. Refer to DoD (NGA) or flight information publications outside U.S. airspace.



DETROIT METRO WAYNE COUNTY  
(KDTW)  
METRO FOUR DEPARTURE  
PISTN TRANSITION  
1:500,000



**COLEMAN A. YOUNG MUNICIPAL  
(KDET)  
RWY 15 DIVERSE DEPARTURE  
1:100000**





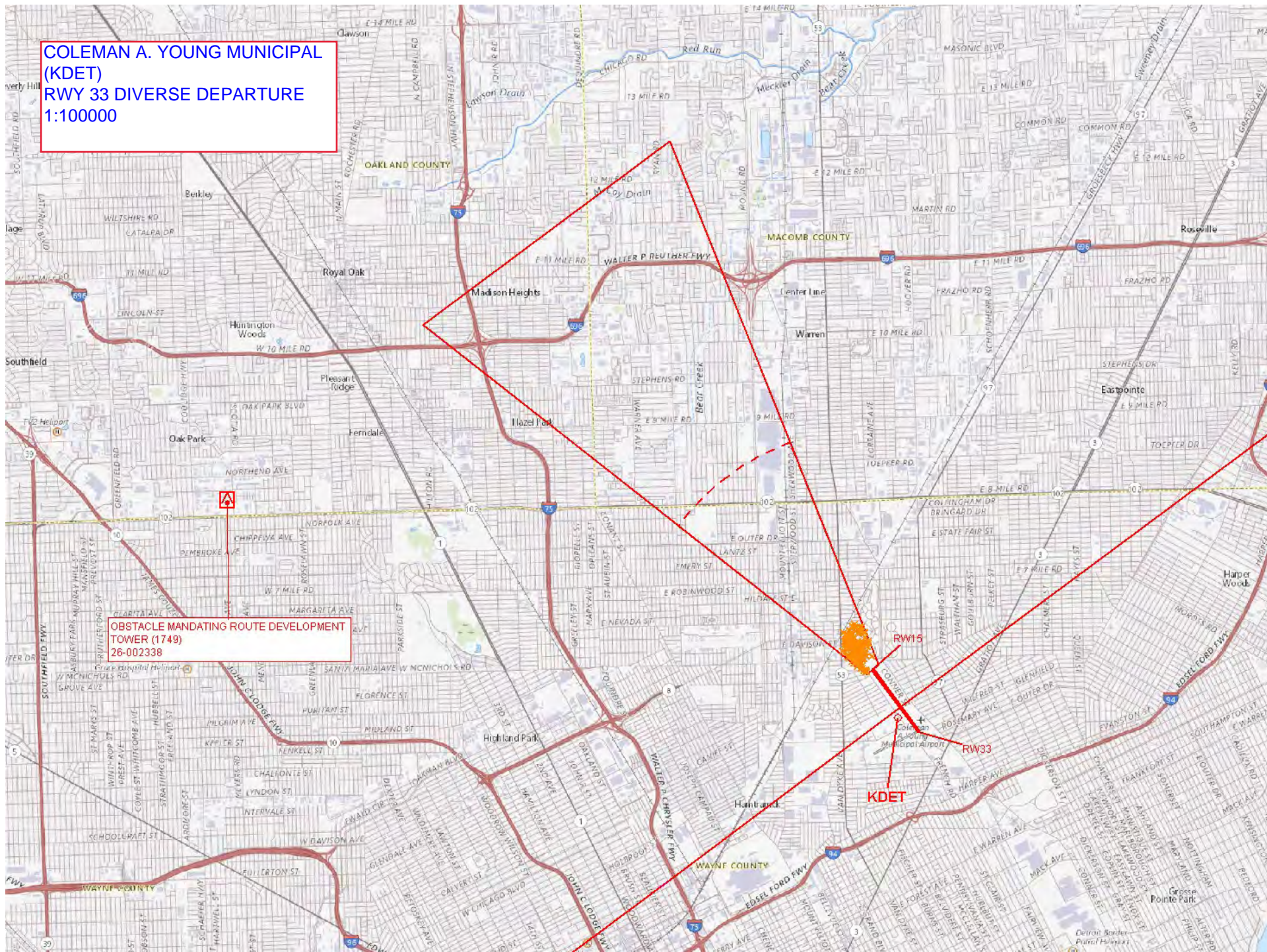
COLEMAN A. YOUNG MUNICIPAL  
(KDET)  
RWY 15 DIVERSE DEPARTURE  
1:500000





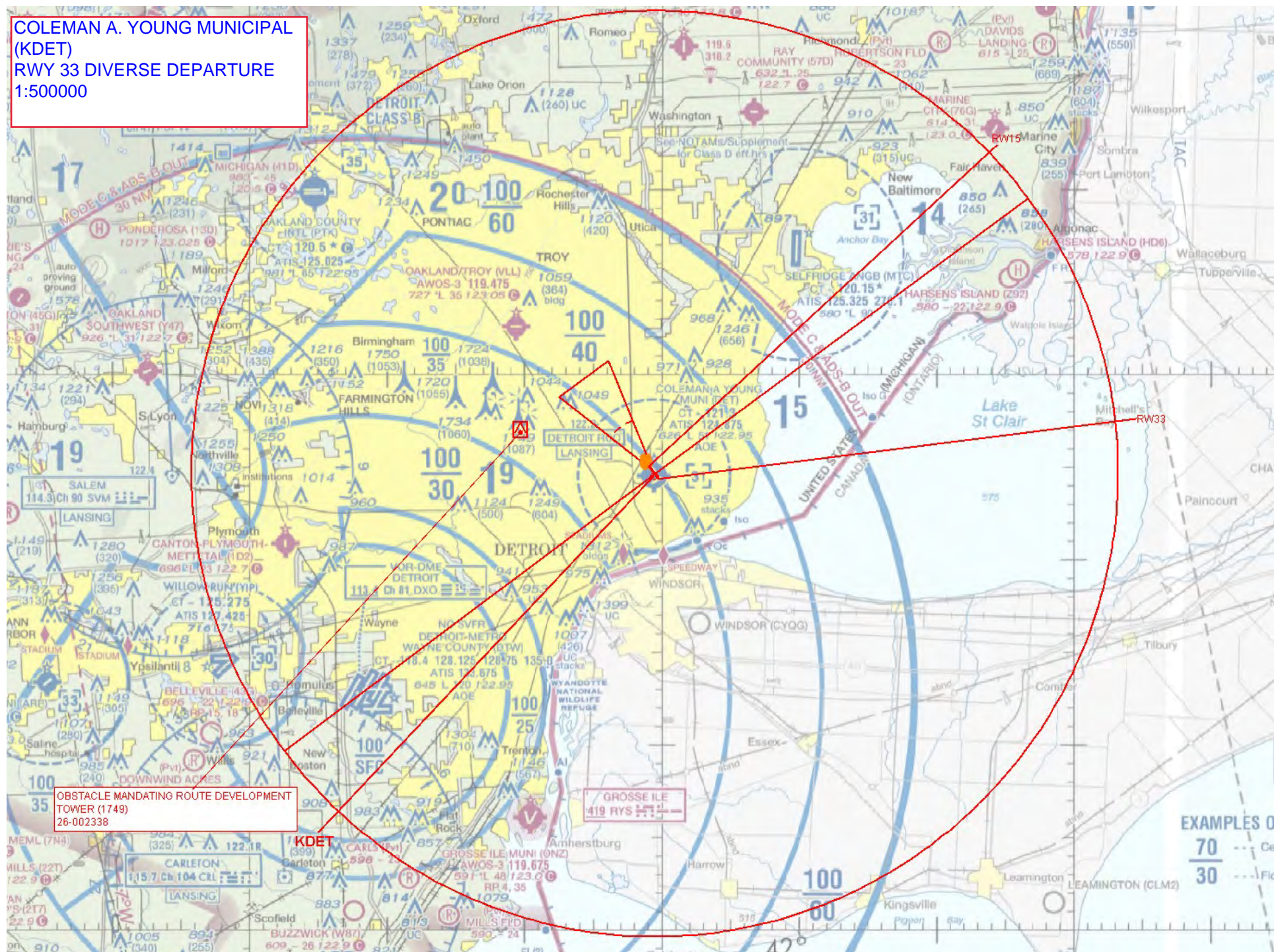
COLEMAN A. YOUNG MUNICIPAL  
(KDET)  
RWY 33 DIVERSE DEPARTURE  
1:100000

OBSTACLE MANDATING ROUTE DEVELOPMENT  
TOWER (1749)  
26-002338



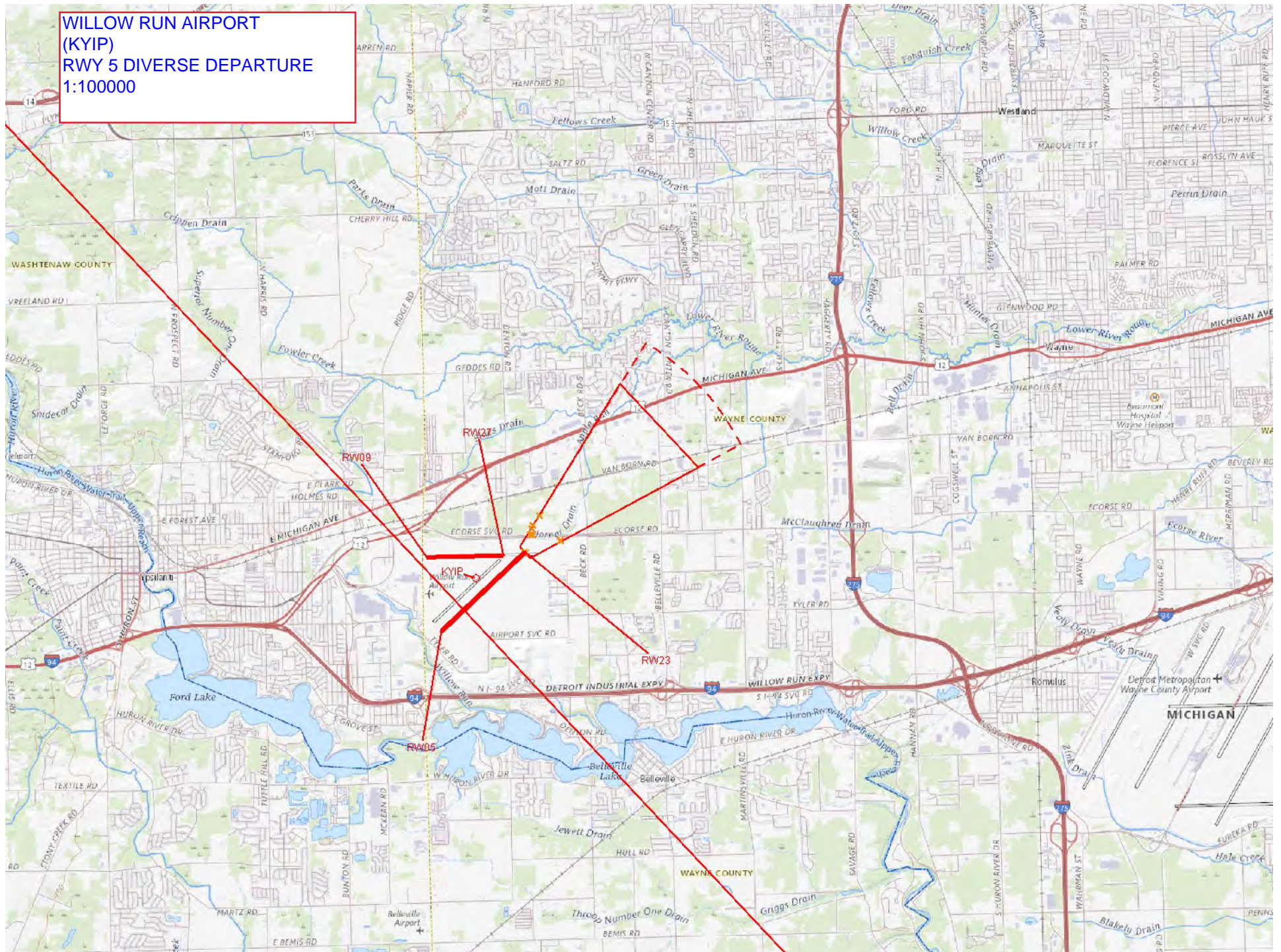


COLEMAN A. YOUNG MUNICIPAL  
(KDET)  
RWY 33 DIVERSE DEPARTURE  
1:500000



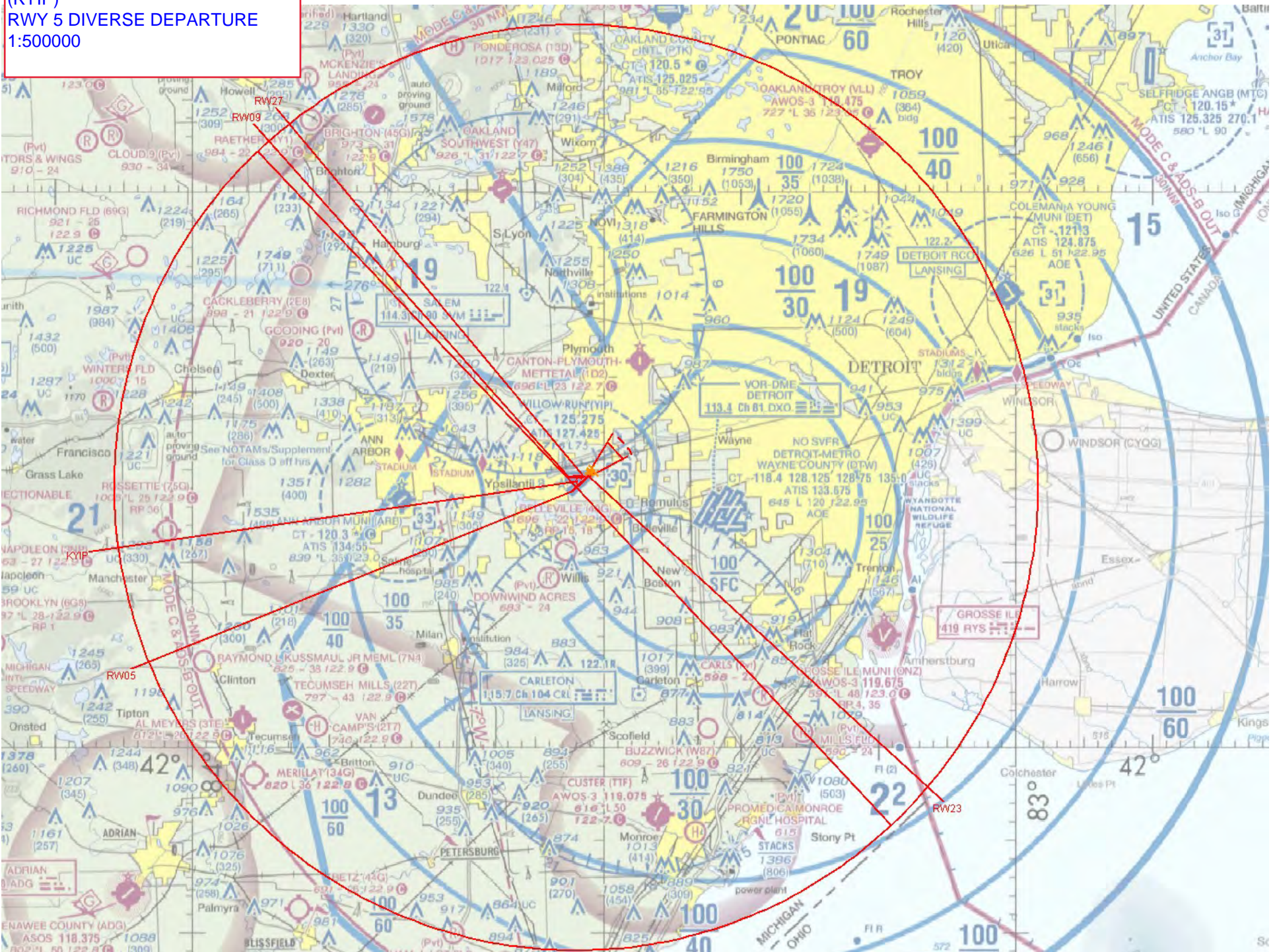


**WILLOW RUN AIRPORT  
(KYIP)  
RWY 5 DIVERSE DEPARTURE  
1:100000**



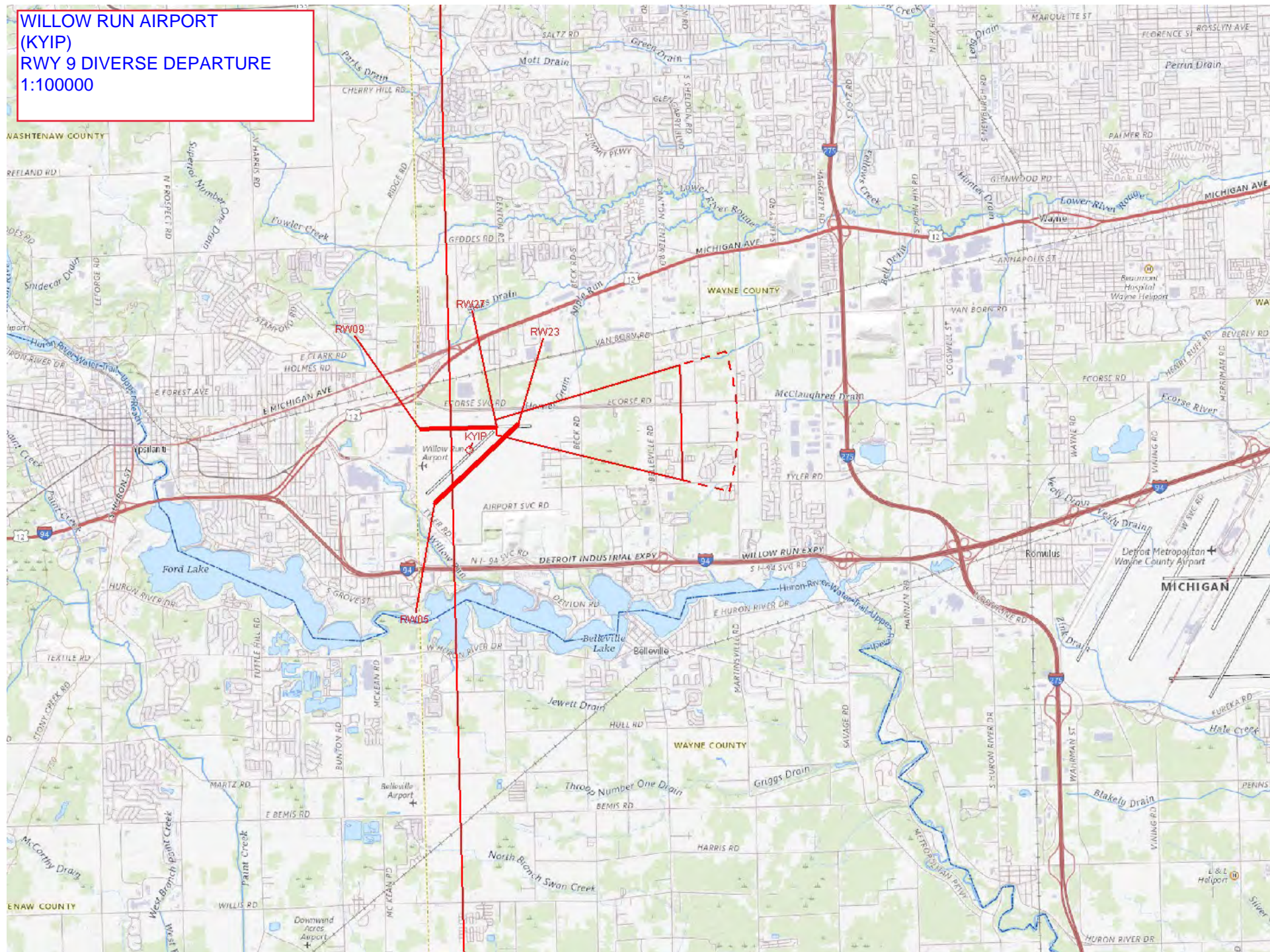


WILLOW RUN AIRPORT  
(KYIP)  
RWY 5 DIVERSE DEPARTURE  
1:500000

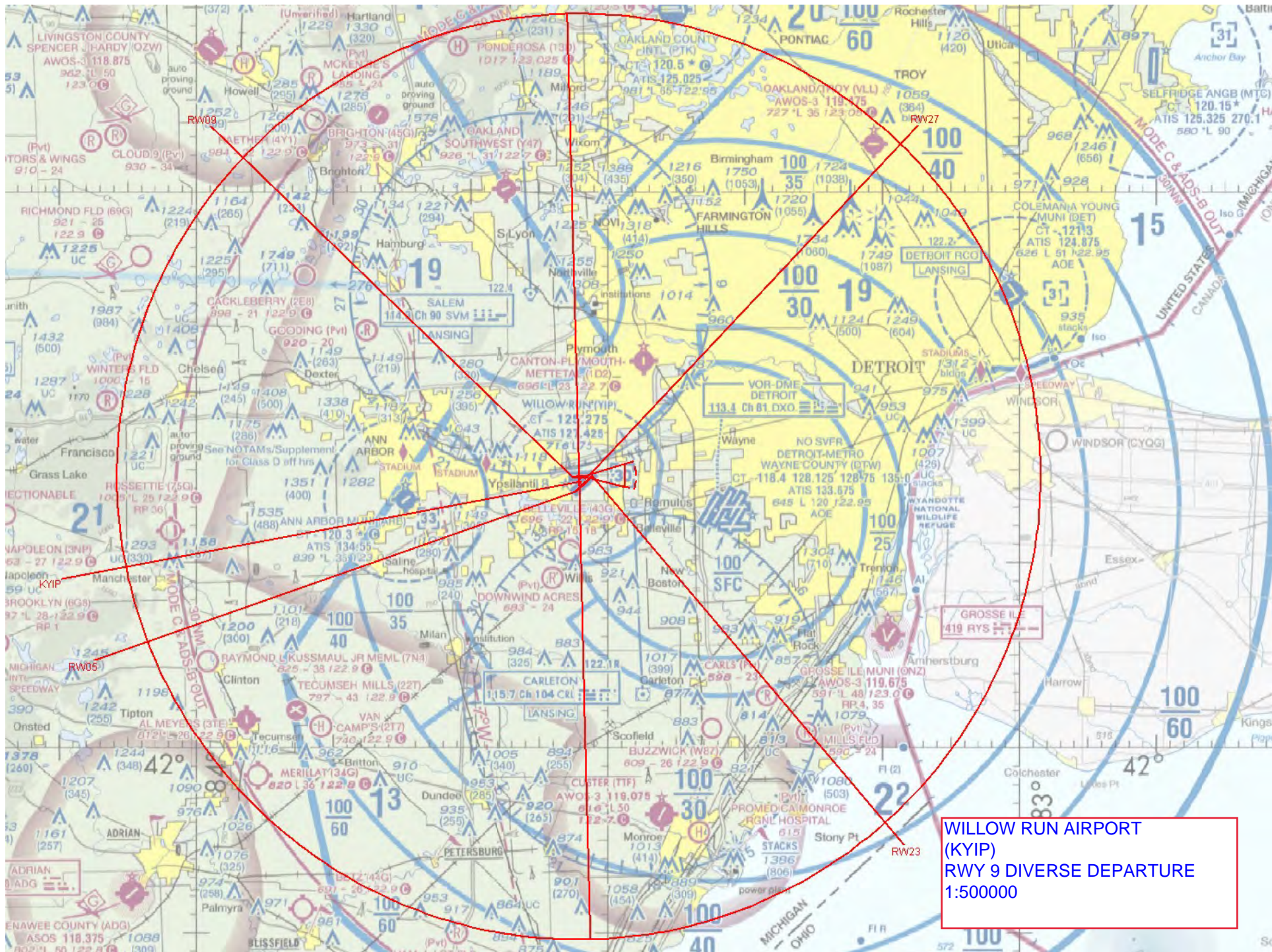




**WILLOW RUN AIRPORT  
(KYP)**  
**RWY 9 DIVERSE DEPARTURE**  
**1:100000**







WILLOW RUN AIRPORT  
(KYIP)  
RWY 9 DIVERSE DEPARTURE  
1:500000



