

**FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
GRAPHIC DEPARTURE PROCEDURES (DP)**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.  
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

<u>DP NAME</u>	<u>NUMBER</u>	<u>DP COMPUTER CODE</u>	<u>SUPERSEDED NUMBER</u>	<u>DATED</u>	<u>ACTUAL EFFECTIVE DATE</u>
SNDRS	THREE	SNDRS3.SNDRS	TWO	8/15/2019	
<u>TYPE:</u>	<u>OBSTACLE</u>	<u>COPTER</u>	<u>SID</u>	<u>SPECIAL</u>	<u>RNAV</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

**DP ROUTE DESCRIPTION:**  
**DETROIT METRO WAYNE COUNTY (KDTW):**

**TAKEOFF RWY 3L:** CLIMB ON HEADING 035.71 TO INTERCEPT COURSE 069.88 TO CROSS BESST AT OR ABOVE 2500 AND AT OR BELOW 230 KIAS, THEN ON TRACK 128.00 TO CROSS SWINDL AT OR BELOW 7000, THEN ON TRACK 212.11 TO WERKN, THEN ON TRACK 243.18 TO JWELS, THENCE...

**TAKEOFF RWY 3R:** CLIMB ON HEADING 035.71 TO INTERCEPT COURSE 064.45 TO CROSS BESST AT OR ABOVE 2500 AND AT OR BELOW 230 KIAS, THEN ON TRACK 128.00 TO CROSS SWINDL AT OR BELOW 7000, THEN ON TRACK 212.11 TO WERKN, THEN ON TRACK 243.18 TO JWELS, THENCE...

**TAKEOFF RWY 4L:** CLIMB ON HEADING 035.68 TO INTERCEPT COURSE 347.26 TO CROSS NITRN AT OR ABOVE 2500 AND AT OR BELOW 230 KIAS, THEN ON TRACK 304.14 TO FERRM, THEN ON TRACK 258.76 TO CROSS AVERL AT OR BELOW 7000, THEN ON TRACK 199.38 TO OGEEZ, THEN ON TRACK 195.95 TO JWELS, THENCE...

**TAKEOFF RWY 4R:** CLIMB ON HEADING 035.70 TO INTERCEPT COURSE 339.14 TO CROSS NITRN AT OR ABOVE 2500 AND AT OR BELOW 230 KIAS, THEN ON TRACK 304.14 TO FERRM, THEN ON TRACK 258.76 TO CROSS AVERL AT OR BELOW 7000, THEN ON TRACK 199.38 TO OGEEZ, THEN ON TRACK 195.95 TO JWELS, THENCE...

**TAKEOFF RWY 21L:** CLIMB ON HEADING 215.72 TO INTERCEPT COURSE 204.45 TO SERGY, THEN ON TRACK 223.17 TO CROSS HOPPZ AT OR BELOW 7000, THEN ON TRACK 224.65 TO JWELS, THENCE...

**TAKEOFF RWY 21R:** CLIMB ON HEADING 215.72 TO INTERCEPT COURSE 202.94 TO SERGY, THEN ON TRACK 223.17 TO CROSS HOPPZ AT OR BELOW 7000, THEN ON TRACK 224.65 TO JWELS, THENCE...

**TAKEOFF RWY 22L:** CLIMB ON HEADING 215.71 TO 1146, THEN DIRECT BOOSE, THEN ON TRACK 226.35 TO CROSS RATIO AT OR BELOW 7000, THEN ON TRACK 214.82 TO JWELS, THENCE...

**TAKEOFF RWY 22R:** CLIMB ON HEADING 215.69 TO 1146, THEN DIRECT EEERI, THEN ON TRACK 224.01 TO CROSS RATIO AT OR BELOW 7000, THEN ON TRACK 214.82 TO JWELS, THENCE...

**TAKEOFF RWY 27L:** CLIMB ON HEADING 275.73 OR AS ASSIGNED BY ATC, FOR RADAR VECTORS TO JWELS, THENCE...

**TAKEOFF RWY 27R:** CLIMB ON HEADING 275.72 OR AS ASSIGNED BY ATC, FOR RADAR VECTORS TO JWELS, THENCE...

...ON TRACK 218.12 TO SNDRS, THEN ON (TRANSITION). MAINTAIN 17000, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

**WILLOW RUN (KYIP):**

**TAKEOFF RWY 5:** CLIMB ON HEADING 052.70 TO 1220, THEN ON HEADING 300.00 OR AS ASSIGNED BY ATC, FOR RADAR VECTORS TO JWELS, THENCE...

**TAKEOFF RWY 9:** CLIMB ON HEADING 094.55 TO 1220, THEN ON HEADING 300.00 OR AS ASSIGNED BY ATC, FOR RADAR VECTORS TO JWELS, THENCE...

**TAKEOFF RWY 23:** CLIMB ON HEADING 232.72 OR AS ASSIGNED BY ATC, FOR RADAR VECTORS TO JWELS, THENCE...

**TAKEOFF RWY 27:** CLIMB ON HEADING 274.56 OR AS ASSIGNED BY ATC, FOR RADAR VECTORS TO JWELS, THENCE...

...ON TRACK 218.12 TO SNDRS, THEN ON (TRANSITION). MAINTAIN ATC ASSIGNED ALTITUDE, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

**ANN ARBOR MUNI (KARB):**

**TAKEOFF RWY 6:** CLIMB ON HEADING 059.53 OR AS ASSIGNED BY ATC, THENCE...

**TAKEOFF RWY 24:** CLIMB ON HEADING 239.53 OR AS ASSIGNED BY ATC, THENCE...

...FOR RADAR VECTORS TO JWELS, THEN ON TRACK 218.12 TO SNDRS, THEN ON (TRANSITION). MAINTAIN ATC ASSIGNED ALTITUDE, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

**COLEMAN A YOUNG MUNI (KDET):**

**TAKEOFF RWY 15:** CLIMB ON HEADING 148.32 OR AS ASSIGNED BY ATC, THENCE...

**TAKEOFF RWY 33:** CLIMB ON HEADING 328.33 TO 1800 THEN AS ASSIGNED BY ATC, THENCE...

...FOR RADAR VECTORS TO JWELS, THEN ON TRACK 218.12 TO SNDRS, THEN ON (TRANSITION). MAINTAIN ATC ASSIGNED ALTITUDE, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

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**CUSTER (KTTF):**

**TAKEOFF RWY 3:** CLIMB ON HEADING 027.49 OR AS ASSIGNED BY ATC, THENCE...  
**TAKEOFF RWY 21:** CLIMB ON HEADING 207.50 OR AS ASSIGNED BY ATC, THENCE...

...FOR RADAR VECTORS TO JWELS, THEN ON TRACK 218.12 TO SNDRS, THEN ON (TRANSITION). MAINTAIN ATC ASSIGNED ALTITUDE, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

**GROSSE ILE MUNI (KONZ):**

**TAKEOFF RWY 4:** CLIMB ON HEADING 037.34 TO 1200 THEN AS ASSIGNED BY ATC, THENCE...  
**TAKEOFF RWY 17:** CLIMB ON HEADING 173.78 OR AS ASSIGNED BY ATC, THENCE...  
**TAKEOFF RWY 22:** CLIMB ON HEADING 217.34 OR AS ASSIGNED BY ATC, THENCE...  
**TAKEOFF RWY 35:** CLIMB ON HEADING 005.78 TO 1800 THEN AS ASSIGNED BY ATC, THENCE...

...FOR RADAR VECTORS TO JWELS, THEN ON TRACK 218.12 TO SNDRS, THEN ON (TRANSITION). MAINTAIN ATC ASSIGNED ALTITUDE, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

**LIVINGSTON COUNTY SPENCER J HARDY (KOZW):**

**TAKEOFF RWY 13:** CLIMB ON HEADING 132.35 OR AS ASSIGNED BY ATC, THENCE...  
**TAKEOFF RWY 31:** CLIMB ON HEADING 312.36 OR AS ASSIGNED BY ATC, THENCE...

...FOR RADAR VECTORS TO JWELS, THEN ON TRACK 218.12 TO SNDRS, THEN ON (TRANSITION). MAINTAIN ATC ASSIGNED ALTITUDE, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

**OAKLAND COUNTY INTL (KPTK):**

**TAKEOFF RWY 9L:** CLIMB ON HEADING 094.66 OR AS ASSIGNED BY ATC, THENCE...  
**TAKEOFF RWY 9R:** CLIMB ON HEADING 094.63 OR AS ASSIGNED BY ATC, THENCE...  
**TAKEOFF RWY 27L:** CLIMB ON HEADING 274.65 OR AS ASSIGNED BY ATC, THENCE...  
**TAKEOFF RWY 27R:** CLIMB ON HEADING 274.68 OR AS ASSIGNED BY ATC, THENCE...

...FOR RADAR VECTORS TO JWELS, THEN ON TRACK 218.12 TO SNDRS, THEN ON (TRANSITION). MAINTAIN ATC ASSIGNED ALTITUDE, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

**OAKLAND/TROY (KVLL):**

**TAKEOFF RWY 10:** CLIMB ON HEADING 095.71 TO 1400 THEN AS ASSIGNED BY ATC, THENCE...  
**TAKEOFF RWY 28:** CLIMB ON HEADING 275.72 TO 1500 THEN AS ASSIGNED BY ATC, THENCE...

...FOR RADAR VECTORS TO JWELS, THEN ON TRACK 218.12 TO SNDRS, THEN ON (TRANSITION). MAINTAIN ATC ASSIGNED ALTITUDE, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

**SELFRIDGE ANGB (KMTC):**

**TAKEOFF RWY 1:** CLIMB ON HEADING 007.47 OR AS ASSIGNED BY ATC, THENCE...  
**TAKEOFF RWY 19:** CLIMB ON HEADING 187.47 OR AS ASSIGNED BY ATC, THENCE...

...FOR RADAR VECTORS TO JWELS, THEN ON TRACK 218.12 TO SNDRS, THEN ON (TRANSITION). MAINTAIN ATC ASSIGNED ALTITUDE, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

**TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):**

<u>TRANSITION NAME</u>	<u>TRANSITION COMPUTER CODE</u>	<u>FROM FIX/NAVAID</u>	<u>TO FIX/NAVAID</u>	<u>COURSE</u>	<u>DISTANCE</u>	<u>MEA</u>	<u>MOCA</u>	<u>CROSSING ALTITUDE/FIXES</u>
BGHRT	SNDRS3.BGHRT	SNDRS	REEDA	TRACK 255.47	23.95	8000	2400	QUALITY 8 CHECKED
		REEDA	SEABS	TRACK 264.51	30.31	8000	2400	

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SNDRS		THREE	SNDRS3.SNDRS	TWO	8/15/2019	
	SEABS		KNRKO	TRACK 264.09	28.14	8000 2200
	KRNKO		BGHRT	TRACK 269.06	94.05	8000 2400
TORRR	SNDRS3.TORRR	SNDRS	TORRR	TRACK 208.85	32.82	8000 2400

**PBN REQUIREMENT NOTES:**

RNAV 1 - DME/DME/IRU OR GPS.

**EQUIPMENT REQUIREMENT NOTES:**

RADAR REQUIRED.

**PROCEDURAL DATA NOTES:**

**NOTE:** TURBOJET DEPARTURES AT/ABOVE 10000, MAINTAIN 280K UNTIL ADVISED BY ATC.

**NOTE:** TORRR TRANSITION: FOR USE BY KIND AND KCVG AREA ARRIVALS ONLY AND FLIGHTS FILED AT OR BELOW FL220, OR AS ASSIGNED BY ATC.

**TAKEOFF MINIMUMS:**

**DETROIT METRO WAYNE COUNTY (KDTW):**

**RWY 27L, 27R:** STANDARD.

**RWY 3L, 3R, 4L, 4R, 21L, 21R, 22L, 22R:** STANDARD WITH MINIMUM CLIMB OF 500 FT/NM TO 1146.

**WILLOW RUN (KYIP):**

**RWY 23:** STANDARD.

**RWY 5, 9:** STANDARD WITH MINIMUM CLIMB OF 500 FT/NM TO 1220.

**RWY 27:** STANDARD WITH MINIMUM CLIMB OF 209 FT/NM TO 1000.

**ANN ARBOR MUNI (KARB):**

**RWY 12, 30:** NA - ENVIRONMENTAL.

**RWY 6, 24:** STANDARD.

**COLEMAN A YOUNG MUNI (KDET):**

**RWY 15, 33:** STANDARD.

**CUSTER (KTTF):**

**RWY 3, 21:** STANDARD.

**GROSSE ILE MUNI (KONZ):**

**RWY 4, 17, 22:** STANDARD.

**RWY 35:** STANDARD WITH MINIMUM CLIMB OF 500 FT/NM TO 1100.

**LIVINGSTON COUNTY SPENCER J HARDY (KOZW):**

**RWY 13, 31:** STANDARD.

**OAKLAND COUNTY INTL (KPTK):**

**RWY 18, 36:** NA - ENVIRONMENTAL.

**RWY 9L, 9R, 27L, 27R:** STANDARD.

**OAKLAND/TROY (KVLL):**

**RWY 10:** STANDARD.

**RWY 28:** STANDARD WITH MINIMUM CLIMB OF 476 FT/NM TO 1500.



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**SELFRIDGE ANGB (KMTC):**

**RWY 1:** STANDARD.

**RWY 19:** STANDARD WITH MINIMUM CLIMB OF 235 FT/NM TO 1500.

**TAKEOFF OBSTACLES NOTES:**

SEE FORM 8260-15A TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP).

**CONTROLLING OBSTACLES:**

**WILLOW RUN (KYIP):**

**RWY 27:** 903 FT MSL TOWER 421431.80N/0833411.49W.

**COLEMAN A YOUNG MUNI (KDET):**

OBSTACLES MANDATING ODP ROUTE DEVELOPMENT:

**RWY 33:** 1749 FT MSL TOWER 422653.00N/0831023.00W.

**GROSSE ILE MUNI (KONZ):**

**RWY 35:** 1146 FT MSL STACK 420718.61N/0831050.62W.

**OAKLAND/TROY (KVLL):**

**RWY 28:** 905 FT MSL BUILDING 423232.54N/0831234.07W.

OBSTACLES MANDATING ODP ROUTE DEVELOPMENT:

**RWY 10, 28:** 1724 FT MSL TOWER 422858.46N/0831218.94W.

**SELFRIDGE ANGB (KMTC):**

**RWY 19:** 1246 FT MSL TOWER 423312.00N/0825315.00W

**MSA:**

KDTW: MSA FROM KDTW, 2800.

KYIP: MSA FROM KYIP, 3000.

KARB: MSA FROM KARB, 3000.

KDET: MSA FROM KDET, 2800.

KTTF: MSA FROM KTTF, 3100.

KONZ: MSA FROM KONZ, 3100.

KOZW: MSA FROM KOZW, 3000.

KPTK: MSA FROM KPTK, 2900.

KVLL: MSA FROM KVLL, 2900.

KMTC: MSA FROM KMTC, 2800.

**LOST COMMUNICATIONS PROCEDURES:**

**ADDITIONAL FLIGHT DATA:**

**DME/DME ASSESSMENT:** SAT (RNP 2.0)

**AIRPORT MV:** DTW (P) 7W/2020, ARB 5W/1985, DET 5W/1980, MTC 6W/1985, ONZ 7W/2010, OZW 5W/1990, PTK 7W/2020, TTF 5W/1980, VLL 6W/1995, YIP 6W/1995.

**DETROIT METRO WAYNE COUNTY** - CHART: TOP ALTITUDE: 17000.

**ALL OTHER AIRPORTS - CHART:** TOP ALTITUDE: ASSIGNED BY ATC.

**CHART SPEED ICON** MAXIMUM 230 KIAS AT NITRN.

**CHART SPEED ICON** MAXIMUM 230 KIAS AT BESST.

**AIRPORTS SERVED:**

<u>AIRPORT ID</u>	<u>CITY</u>	<u>STATE</u>
KDTW	DETROIT	MI
KYIP	DETROIT	MI

QUALITY  
8  
CHECKED

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SNDRS	THREE	SNDRS3.SNDRS	TWO	8/15/2019	
KARB		ANN ARBOR			MI
KDET		DETROIT			MI
KTTF		MONROE			MI
KONZ		DETROIT/GROSSE ILE			MI
KOZW		HOWELL			MI
KPTK		PONTIAC			MI
KVLL		TROY			MI
KMTC		MOUNT CLEMENS			MI

**COMMUNICATIONS:**

**CHART:** ATIS, AWOS/ASOS, CLNC DEL, GND CON, TWR, CTAF, CPDLC.

**FIXES AND/OR NAVAIDS:**

**REMARKS:**

1. 100 FT MAXIMUM VEGETATION HEIGHT UTILIZED PER FPT CHECKLIST.
2. WAIVER ON FILE: TO NOT CHART MINIMUM CROSSING ALTITUDE AT IF FOR RADAR VECTORS.
3. WAIVER ON FILE: AFS-420 MEMORANDUM "WAIVER TO FAA ORDER 8260.58C PARAGRAPH 1-2-5.C.(3), MAXIMUM BANK ANGLE" DATED 01/31/2023 - 16 DEGREE BANK ANGLE APPLIED AT SNDRS; REQUIRED FOR KDET, KOZW, KPTK, KVLL AND KMTC.
4. CHANGES TO THIS PROCEDURE MUST BE COORDINATED WITH NAVCANADA, AERONAUTICAL INFORMATION MANAGEMENT (AIM), AIMDATA@NAVCANADA.CA (CURRENT POC IS CHARLES SIMARD, 613-248-3819, SIMACHA@NAVCANADA.CA).
5. **KDTW CHART NOTE:** SEE ADDITIONAL REQUIREMENTS ON AAUP.
6. KDTW RWY 3L, 3R, 4L, 4R, 21L, 21R, 22L, 22R DEPARTURES EARLY TURN AND SHORTENED ICA REQUIRED DUE TO SIMULTANEOUS DEPARTURES.
7. KYIP RWY 5, 9 DEPARTURES EARLY TURN AND SHORTENED ICA REQUIRED DUE TO KDTW AIR TRAFFIC FLOW.
8. MEA BASED ON LOWEST DME/DME COVERAGE.

**FLIGHT INSPECTED BY**

SCOTT WIEBE

*Digitally signed by*  
**CASIMIR L TABAKA**

Mar 15, 2024

**SIGNATURE**

**SIGNATURE**

*Digitally signed by*  
**APRIL T SARMENTO**  
Jan 23, 2024

**OFFICE**

FPO

**OFFICE**

AJV-A432

**DATE**

03/07/2024

**DATE**

11/15/2023

**APPROVED BY**

CASIMIR TABAKA

**SIGNATURE**

*Digitally signed by*  
**CASIMIR L TABAKA**  
Jan 26, 2024

**OFFICE**

AJV-A432

**DATE**

**TITLE**

MANAGER

**REQUIRED EFFECTIVE DATE**

ROUTINE

**COORDINATED WITH:**



DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
SNDRS	THREE	SNDRS3.SNDRS	TWO	8/15/2019	

**A4A** ☒
**ALPA** ☒
**AOPA** ☒
**APA** ☒
**HAI** ☐
**NBAA** ☒
**OTHER:**ZOB, DTW APP CON, AMGR(S), NAVCANADA (AIMDAT@NAVCANADA.CA)

#### CHANGES - REASONS:

1. AIRPORT NAME, CHANGED ALL KDTW AIRPORT NAME REFERENCES FROM DETROIT METROPOLITAN WAYNE COUNTY TO DETROIT METRO WAYNE COUNTY - OFFICIAL NASR NAME.
2. DELETED ALL CYQG DATA FROM DP ROUTE DESCRIPTION, TAKEOFF MINIMUMS, AND AIRPORTS SERVED - AIRPORT REMOVED FROM SID PER NAVCANADA REQUEST.
3. DELETED KYIP RWY 5L, 23R REFERENCES AND CHANGED RUNWAY NUMBERS FROM RWY 5R TO RWY 5 AND FROM RWY 23L TO RWY 23 IN DP ROUTE DESCRIPTION AND TAKEOFF MINIMUMS - RUNWAY 5L, 23R DECOMMISSIONED AND RWY 5R, 23L RENUMBERED ON 10/06/2022.
4. DELETED KDET RWY 7, 25 REFERENCES IN DP ROUTE DESCRIPTION, TAKEOFF MINIMUMS AND RWY 25 CONTROLLING OBSTACLE - RUNWAY IS GOING TO BE DECOMMISSIONED.
5. CHANGED KVLL RWYS FROM RWY 9, 27 TO RWY 10, 28 - RUNWAYS WERE RENUMBERED ON 02/10/2021.
6. DP ROUTE DESCRIPTION, ALL RUNWAY TRANSITIONS, DELETED FIX JWELS MINIMUM CROSSING ALTITUDE AND CHANGED VERBIAGE FROM "TO CROSS JWELS AT OR ABOVE 4000" TO "TO JWELS" - CROSSING ALTITUDE REMOVED PER ATC REQUEST AND WAIVER ON FILE TO NOT CHART IF ALTITUDE AT IF FIX FOR RADAR VECTORS.
7. DP ROUTE DESCRIPTION, CHANGED KDTW RWY 3L, 3R TRANSITION TRACK ON FIX SWNDL TO FIX WERKN SEGMENT FROM TRACK 212.12 TO TRACK 212.11 - UPDATED EVALUATION.
8. DP ROUTE DESCRIPTION, DELETED KDTW RWY 4L, 4R MINIMUM CROSSING ALTITUDE 6000 AT FIX FERRM AND UPDATED VERBIAGE FROM "THEN ON TRACK 304.14 TO CROSS FERRM AT OR BELOW 6000" TO "THEN ON TRACK 304.14 TO FERRM" - ATC REQUESTED AND NO LONGER NEEDED.
9. DP ROUTE DESCRIPTION, CHANGED KDTW RWY 27L FROM "CLIMB ON HEADING 275.73 TO 1146, THEN ON HEADING 275.71 OR AS ASSIGNED FOR RADAR VECTORS" TO "CLIMB ON HEADING 275.73 OR AS ASSIGNED BY ATC, FOR RADAR VECTORS" - EARLY TURN AND LNAV ENGAGEMENT ALTITUDE NOT REQUIRED, SEGMENTS CHANGED FROM VA-VM LEGS TO VM LEG; VERBIAGE IAW FAAO 8260.46J APPENDIX E. SECTION 1.2.C.(7).
10. DP ROUTE DESCRIPTION, CHANGED KDTW RWY 27R FROM "CLIMB ON HEADING 275.72 TO 1146, THEN ON HEADING 275.70 OR AS ASSIGNED FOR RADAR VECTORS" TO "CLIMB ON HEADING 275.72 OR AS ASSIGNED BY ATC, FOR RADAR VECTORS" - EARLY TURN AND LNAV ENGAGEMENT ALTITUDE NOT REQUIRED, SEGMENTS CHANGED FROM VA-VM LEGS TO VM LEG; VERBIAGE IAW FAAO 8260.46J APPENDIX E. SECTION 1.2.C.(7).
11. DP ROUTE DESCRIPTION, DELETED KDTW TOP ALTITUDE VERBIAGE "OR AS ASSIGNED BY ATC" - KDTW HAS A NUMERIC TOP ALTITUDE 17000 CHARTED FOR ALL RUNWAYS.
12. DP ROUTE DESCRIPTION, CHANGED KYIP TAKEOFF RWY 5 FROM "CLIMB ON HEADING 053.70 TO 1220, THEN LEFT TURN HEADING 300.00 FOR RADAR VECTORS TO" TO "CLIMB ON HEADING 052.70 TO 1220, THEN ON HEADING 300.00 OR AS ASSIGNED BY ATC, FOR RADAR VECTORS TO" - CLIMB ON HEADING MAG VAR CHANGED FROM KDTW (7W/2020) TO KYIP (6W/1995) IAW AJV-A MEMO "MAGNETIC VARIATION DOCUMENTATION FOR STANDARD INSTRUMENT DEPARTURES AND GRAPHIC OBSTACLE DEPARTURE PROCEDURES" DATED 07/15/2022; ATC REQUESTED TO ADD ATC ASSIGNED HEADINGS ON VM LEG; IAW FAAO 8260.46J APPENDIX E. SECTION 1.2.C.(7).
13. DP ROUTE DESCRIPTION, CHANGED KYIP TAKEOFF RWY 9 FROM "CLIMB ON HEADING 095.55 TO 1220, THEN LEFT TURN HEADING 300.00 FOR RADAR VECTORS TO" TO "CLIMB ON HEADING 094.55 TO 1220, THEN ON HEADING 300.00 OR AS ASSIGNED BY ATC, FOR RADAR VECTORS TO" - CLIMB ON HEADING MAG VAR CHANGED FROM KDTW (7W/2020) TO KYIP (6W/1995) IAW AJV-A MEMO "MAGNETIC VARIATION DOCUMENTATION FOR STANDARD INSTRUMENT DEPARTURES AND GRAPHIC OBSTACLE DEPARTURE PROCEDURES" DATED 07/15/2022; ATC REQUESTED TO ADD ATC ASSIGNED HEADINGS ON VM LEG; IAW FAAO 8260.46J APPENDIX E. SECTION 1.2.C.(7).
14. DP ROUTE DESCRIPTION, CHANGED KYIP TAKEOFF RWY 23 FROM "CLIMB ON HEADING 233.72 TO 1220, THEN ON HEADING 233.70 FOR RADAR VECTORS TO" TO "CLIMB ON HEADING 232.72 OR AS ASSIGNED BY ATC, FOR RADAR VECTORS TO" - EARLY TURN AND LNAV ENGAGEMENT ALTITUDE NOT REQUIRED, SEGMENT CHANGED FROM VA-VM TO VM LEG; CLIMB ON HEADING MAG VAR CHANGED FROM KDTW (7W/2020) TO KYIP (6W/1995) IAW AJV-A MEMO "MAGNETIC VARIATION DOCUMENTATION FOR STANDARD INSTRUMENT DEPARTURES AND GRAPHIC OBSTACLE DEPARTURE PROCEDURES" DATED 07/15/2022; ATC REQUESTED TO ADD ATC ASSIGNED HEADINGS ON VM LEG; VERBIAGE IAW FAAO 8260.46J APPENDIX E. SECTION 1.2.C.(7).
15. DP ROUTE DESCRIPTION, CHANGED KYIP TAKEOFF RWY 27 FROM "CLIMB ON HEADING 275.57 TO 1220, THEN ON HEADING 275.56 FOR RADAR VECTORS TO" TO "CLIMB ON HEADING 274.56 OR AS ASSIGNED BY ATC, FOR RADAR VECTORS TO" - EARLY TURN AND LNAV ENGAGEMENT ALTITUDE NOT REQUIRED, SEGMENT CHANGED FROM VA-VM TO VM LEG; CLIMB ON HEADING MAG VAR CHANGED FROM KDTW (7W/2020) TO KYIP (6W/1995) IAW AJV-A MEMO "MAGNETIC VARIATION DOCUMENTATION FOR STANDARD INSTRUMENT DEPARTURES AND GRAPHIC OBSTACLE DEPARTURE PROCEDURES" DATED 07/15/2022; ATC REQUESTED TO ADD ATC ASSIGNED HEADINGS ON VM LEG; VERBIAGE IAW FAAO 8260.46J APPENDIX E. SECTION 1.2.C.(7).
16. DP ROUTE DESCRIPTION, KARB, KDET, KONZ, KOZW, KTTF, KPTK, KVLL AND KMTC, CHANGED ATC ASSIGNED HEADING VERBIAGE FROM "OR AS ASSIGNED" TO "OR AS ASSIGNED BY ATC", MOVED "FOR RADAR VECTORS" FROM THE INDIVIDUAL RUNWAY DESCRIPTIONS TO THE SHARED ROUTE DESCRIPTIONS - UPDATED VERBIAGE AND DETAILED TEXTUAL ROUTE DESCRIPTION NOT NECESSARY IF CLEARLY UNDERSTOOD FROM GRAPHIC DEPICTION.
17. TRANSITION ROUTES, LOWERED MEA FROM 10000 TO 8000 - LOWEST USABLE NAVAID RECEPTION.
18. TRANSITION ROUTES, ADDED MOCAS AND DELETED REMARK "MOCA(S) NOT CHARTED PER ATC REQUEST TO REDUCE CHART CLUTTER" - MOCA REQUIRED IAW FAAO 8260.46J APPENDIX E. SECTION 1.2.D.(8).
19. MOVED PBN NAV SPEC/SENSORS FROM PROCEDURAL DATA NOTES TO PBN REQUIREMENT NOTES AND UPDATED VERBIAGE FROM "NOTE: RNAV 1" AND "NOTE: DME/DME/IRU OR GPS REQUIRED" TO "RNAV 1 - DME/DME/IRU OR GPS" - IAW 8260.46J, 2-1-1.F.(6).(C).1.
20. MOVED "NOTE: RADAR REQUIRED" FROM PROCEDURAL DATA NOTES TO EQUIPMENT REQUIREMENT NOTES AND DELETED "NOTE:" - NEW DOCUMENTATION FORMAT.
21. PROCEDURAL DATA NOTES, DELETED "NOTE: KDTW/KYIP DEPARTURES: IF UNABLE TO ACCEPT 500 FT PER NM CLIMB RATE, ADVISE CLEARANCE DELIVERY ON INITIAL CONTACT" - REDUNDANT AND NOT NEEDED.
22. TAKEOFF MINIMUMS, CHANGED ALL CLIMB GRADIENT FORMATS FROM "FT PER NM" TO "FT/NM" - NEW FORMAT.
23. TAKEOFF MINIMUMS, CHANGED KDTW RWY 27L AND 27R FROM "500 FT PER NM TO 1146" TO "STANDARD" - EARLY TURN AND LNAV ENGAGEMENT CG NOT REQUIRED; LOWERED TO OBSTACLE-BASED CG.
24. TAKEOFF MINIMUMS, CHANGED KYIP RWY 23 FROM "500 FT PER NM TO 1220" TO "STANDARD" AND RWY 27 FROM "500 FT PER NM TO 1220" TO "209 FT/NM TO 1000" - EARLY TURN AND LNAV ENGAGEMENT CG NOT REQUIRED; LOWERED TO OBSTACLE-BASED CG.
25. TAKEOFF MINIMUMS, KTTF, ADDED "RWY 3, 21:" - LISTED RUNWAYS AUTHORIZED STANDARD TAKEOFF MINIMUMS.



<u>DP NAME</u>	<u>NUMBER</u>	<u>DP COMPUTER CODE</u>	<u>SUPERSEDED NUMBER</u>	<u>DATED</u>	<u>ACTUAL EFFECTIVE DATE</u>
SNDRS	THREE	SNDRS3.SNDRS	TWO	8/15/2019	
26. TAKEOFF MINIMUMS, KOZW, ADDED "RWY 13, 31:" - LISTED RUNWAYS AUTHORIZED STANDARD TAKEOFF MINIMUMS.					
27. TAKEOFF MINIMUMS, CHANGED KMTC RWY 19 CLIMB GRADIENT FROM 234 FT PER NM TO 235 FT/NM - UPDATED CALCULATIONS/CONTROLLING OBSTACLE SAME - CHANGED FROM 5D TO 4D BY OBSTACLE DATA TEAM.					
28. CONTROLLING OBSTACLES, KYIP RWY 27, CHANGED CONTROLLING OBSTRUCTION LAT/LONG FROM 421431.78N/0833411.47W TO 421431.80N/0833411.49W (MOVED 2.52 FT NORTHWEST) - UPDATED OBSTACLE DATA.					
29. CONTROLLING OBSTACLES, KDET, ADDED VERBIAGE TO RWY 33 "OBSTACLES MANDATING ODP ROUTE DEVELOPMENT" - CG IS STANDARD/OBSTACLE IS REASON FOR EXTENDED ICA/IAW FAO 8260.46J APPENDIX E. SECTION 1.2.J.(3).					
30. CONTROLLING OBSTACLES, KONZ, DELETED COMMA BETWEEN "STACK" AND LAT/LONG - FIXED TYPO.					
31. CONTROLLING OBSTACLES, KVLL RWY 10, DELETED CONTROLLING OBSTACLE - CG IS STANDARD.					
32. CONTROLLING OBSTACLES, KVLL RWY 28, CHANGED CONTROLLING OBSTACLES FROM 940 FT MSL BLDG 423234.20N/0831235.50 (CG), 1749 FT MSL TOWER 422858.00N/0831219.00W (CGTA) TO 905 FT MSL BUILDING 423232.54N/0831234.07W - UPDATED OBSTACLE EVALUATION AND RETAINED CG AND CGTA TO MATCH PUBLISHED ODP AND REDUCE PILOT CONFUSION.					
33. CONTROLLING OBSTACLES, KVLL, ADDED "OBSTACLES MANDATING ODP ROUTE DEVELOPMENT: RWY 10, 28: 1724 FT MSL TOWER 422858.46N/0831218.94W" - THIS OBSTACLE IS REASON FOR EXTENDED ICA/IAW FAO 8260.46J APPENDIX E. SECTION 1.2.J.(3).					
34. ADDED MSA AT ALL AIRPORTS - REQUIRED IAW FAO 8260.46J APPENDIX E. SECTION 1.2.K.					
35. ADDITIONAL FLIGHT DATA, MAGNETIC VARIATION ADDED FOR ALL AIRPORTS AND UPDATED KDTW FORMAT FROM "REFERENCE MAG VAR; KDTW 7W/2020" TO "AIRPORT MV: DTW (P) 7W/2020" - REQUIRED ALL AIRPORTS AND DOCUMENTED IAW AJV-A MEMO "MAGNETIC VARIATION DOCUMENTATION FOR STANDARD INSTRUMENT DEPARTURES AND GRAPHIC OBSTACLE DEPARTURE PROCEDURES" DATED 07/15/2022.					
36. ADDITIONAL FLIGHT DATA, UPDATED TOP ALTITUDE FORMAT FROM "KDTW CHART: TOP ALTITUDE 17000" TO "DETROIT METRO WAYNE COUNTY - CHART: TOP ALTITUDE: 17000" AND FROM "ALL OTHER AIRPORTS CHART: TOP ALTITUDE: ASSIGNED BY ATC" TO "ALL OTHER AIRPORTS - CHART: TOP ALTITUDE: ASSIGNED BY ATC" FORMAT IAW FAO 8260.46J APPENDIX E. SECTION 1.2. M.(B).					
37. AIRPORTS SERVED, DELETED AIRPORT NAMES - NAMES NO LONGER REQUIRED.					
38. COMMUNICATIONS, ADDED "CHART:" AND DELETED "DEP CON" - VERBIAGE REQUIRED AND DEP CON CHARTED AUTOMATICALLY IAW 8260.46J APPENDIX E. SECTION 1.2.O.					
39. REMARKS, ADDED "100 FT MAXIMUM VEGETATION HEIGHT UTILIZED PER FPT CHECKLIST" - IAW 8260.46J, APPENDIX E, 2.Q.(3).					
40. REMARKS, ADDED "KDTW CHART NOTE: SEE ADDITIONAL REQUIREMENTS ON AAUP" AND REMOVED FROM ADDITIONAL FLIGHT DATA - IAW 8260.46J, APPENDIX E, 2.Q.(3).					
41. REMARKS, ADDED "WAIVER ON FILE: TO NOT CHART MINIMUM CROSSING ALTITUDE AT IF FOR RADAR VECTORS" - INFORMATION ONLY IAW IAW 8260.46J, APPENDIX E, 2.Q.					
42. REMARKS, ADDED "WAIVER ON FILE: AFS-420 MEMORANDUM "WAIVER TO FAA ORDER 8260.58C PARAGRAPH 1-2-5.C.(3), MAXIMUM BANK ANGLE" DATED 01/31/2023 - 16 DEGREE BANK ANGLE APPLIED AT SNDRS; REQUIRED FOR KDET, KOZW, KPTK, KVLL AND KMTC." - INFORMATION ONLY IAW IAW 8260.46J, APPENDIX E, 2.Q.					
43. REMARKS, ADDED "KDTW RWY 3L, 3R, 4L, 4R, 21L, 21R, 22L, 22R DEPARTURES EARLY TURN AND SHORTENED ICA REQUIRED DUE TO SIMULTANEOUS DEPARTURES" - INFORMATION ONLY IAW 8260.46J, APPENDIX E, 2.Q.					
44. REMARKS, ADDED "KYIP RWY 5, 9 DEPARTURES EARLY TURN AND SHORTENED ICA REQUIRED DUE TO KDTW AIR TRAFFIC FLOW" - INFORMATION ONLY IAW IAW 8260.46J, APPENDIX E, 2.Q.					
45. REMARKS, ADDED "MEA BASED ON LOWEST DME/DME COVERAGE" - INFORMATION ONLY IAW 8260.46J, APPENDIX E, 2.Q.					
46. REMARKS: DELETED "MOCA(S) NOT CHARTED PER ATC REQUEST TO REDUCE CHART CLUTTER" - INFORMATION ONLY IAW IAW 8260.46J, APPENDIX E, 2.Q.					
47. ADDITIONAL FLIGHT DATA: ADDED "CHART SPEED ICON MAXIMUM 230 KIAS AT BESST" AND "CHART SPEED ICON MAXIMUM 230 KIAS AT NITRN" - IAW 8260.46J, 2-1-1.E.(4).(B).					





**FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
DEPARTURE (DATA RECORD)**

DP NAME				NUMBER		DP COMPUTER CODE		SUPERSEDED NUMBER		DATED		ACTUAL EFFECTIVE DATE	
SNDRS				THREE		SNDRS3.SNDRS		TWO		8/15/2019			
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS				
	DETROIT METRO WAYNE COUNTY (KDTW)												
RW03L (AER)	421228.21N/0832104.39W	N	-	-	-	-							
-	421436.03N/0831930.16W	-	-	VI	028.71	2.43			CG 500 FT PER NM TO 1146				
BESST	421656.69N/0831321.04W	Y	FB	CF	062.88	5.13	AT/ABOVE 2500	AT/BELOW 230K					
SWNDL	421255.80N/0830422.44W	Y	FB	TF	121.00	7.78	AT/BELOW 7000						
WERKN	415920.13N/0831254.75W	Y	FB	TF	205.11	15.00							
JWELS	414156.62N/0834723.00W	Y	FB	TF	236.18	31.08							
RW03(R)	421144.21N/0832106.49W	N	-	-	-	-							
-	421404.99N/0831922.74W	-	-	VI	028.71	2.67			CG 500 FT PER NM TO 1146				
BESST	421656.69N/0831321.04W	Y	FB	CF	057.45	5.31	AT/ABOVE 2500	AT/BELOW 230K					
SWNDL	421255.80N/0830422.44W	Y	FB	TF	121.00	7.78	AT/BELOW 7000						
WERKN	415920.13N/0831254.75W	Y	FB	TF	205.11	15.00							
JWELS	414156.62N/0834723.00W	Y	FB	TF	236.18	31.08							
RW04L (AER)	421207.82N/0832302.40W	N	-	-	-								
-	421427.54N/0832119.53W	-	-	VI	028.68	2.65			CG 500 FT PER NM TO 1146				
NITRN	421943.95N/0832352.28W	Y	FB	CF	340.26	5.60	AT/ABOVE 2500	AT/BELOW 230K					
FERRM	422158.09N/0832945.62W	Y	FB	TF	297.14	4.91							
AVERL	421955.54N/0833805.48W	Y	FB	TF	251.76	6.51	AT/BELOW 7000						
OGEEZ	420423.55N/0834240.04W	Y	FB	TF	192.38	15.90							
JWELS	414156.62N/0834723.00W	Y	FB	TF	188.95	22.71							

QUALITY

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DP NAME		NUMBER		DP COMPUTER CODE		SUPERSEDED NUMBER		DATED	ACTUAL EFFECTIVE DATE
SNDRS		THREE		SNDRS3.SNDRS		TWO		8/15/2019	
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RW04R (AER)*	421212.78N/0832213.32W*	N	-	-	-	-			*DISPL THLD (509 FT)
-	421446.08N/0832020.37W	-	-	VI	028.70	2.91			CG 500 FT PER NM TO 1146
NITRN	421943.95N/0832352.28W	Y	FB	CF	332.14	5.61	AT/ABOVE 2500	AT/BELOW 230K	
FERMM	422158.09N/0832945.62W	Y	FB	TF	297.14	4.91			
AVERL	421955.54N/0833805.48W	Y	FB	TF	251.76	6.51	AT/BELOW 7000		
OGEEZ	420423.55N/0834240.04W	Y	FB	TF	192.38	15.90			
JWELS	414156.62N/0834723.00W	Y	FB	TF	188.95	22.71			
RW21L (AER)	421310.86N/0832002.65W	N	-	-	-	-			
-	421050.18N/0832146.27W	-	-	VI	208.72	2.67			CG 500 FT PER NM TO 1146
SERGY	420429.17N/0832427.29W	Y	FB	CF	197.45	06.55			
HOPPZ	415921.28N/0832928.92W	Y	FB	TF	216.17	6.35	AT/BELOW 7000		
JWELS	414156.62N/0834723.00W	Y	FB	TF	217.65	21.95			
RW21R (AER)	421341.86N/0832010.11W	N	-	-	-	-			
-	421134.49N/0832143.95W	-	-	VI	208.72	2.42			CG 500 FT PER NM TO 1146
SERGY	420429.17N/0832427.29W	Y	FB	CF	195.94	7.37			
HOPPZ	415921.28N/0832928.92W	Y	FB	TF	216.17	6.35	AT/BELOW 7000		
JWELS	414156.62N/0834723.00W	Y	FB	TF	217.65	21.95			



<u>DP NAME</u>		<u>NUMBER</u>		<u>DP COMPUTER CODE</u>		<u>SUPERSEDED NUMBER</u>		<u>DATED</u>	<u>ACTUAL EFFECTIVE DATE</u>
SNDRS		THREE		SNDRS3.SNDRS		TWO		8/15/2019	
<u>FIX/NAVAID</u>	<u>LAT/LONG</u>	<u>C</u>	<u>FO/FB</u>	<u>LEG TYPE</u>	<u>TC</u>	<u>DIST (NM)</u>	<u>ALTITUDE</u>	<u>SPEED</u>	<u>REMARKS</u>
RW22L (AER)	421352.36N/0832059.97W	N	-	-	-	-			
1146 MSL	-	-	-	VA	208.71	-	AT/ABOVE 1146		CG 500 FT PER NM TO 1146
BOOSE	421002.00N/0832349.56W	Y	FB	DF	-	-			
RATIO	420025.84N/0833422.45W	Y	FB	TF	219.35	12.40	AT/BELOW 7000		
JWELS	414156.62N/0834723.00W	Y	FB	TF	207.82	20.88			
RW22R (AER)	421334.48N/0832158.61W	N	-	-	-	-			
1146 MSL	-	-	-	VA	208.69	-	AT/ABOVE 1146		CG 500 FT PER NM TO 1146
EEERI	421022.39N/0832419.94W	Y	FB	DF	-	-			
RATIO	420025.84N/0833422.45W	Y	FB	TF	217.01	12.44	AT/BELOW 7000		
JWELS	414156.62N/0834723.00W	Y	FB	TF	207.82	20.88			
RW27L (AER)	421158.34N/0831949.33W	N	-	-	-	-			
-	-	-	-	VM	268.73	-			
RW27R (AER)	421303.02N/0831951.71W	N	-	-	-	-			
-	-	-	-	VM	268.72	-			
WILLOW RUN (KYIP)									
RW05 (AER)	421350.25N/0833223.46W	N	-	-	-	-			
1220 MSL	-	-	-	VA	046.70	-	AT/ABOVE 1220		CG 500 FT PER NM TO 1220
-	-	-	-	VM	294.00	-			

QUALITY  
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<u>DP NAME</u>		<u>NUMBER</u>		<u>DP COMPUTER CODE</u>		<u>SUPERSEDED NUMBER</u>		<u>DATED</u>	<u>ACTUAL EFFECTIVE DATE</u>
SNDRS		THREE		SNDRS3.SNDRS		TWO		8/15/2019	
<u>FIX/NAVAID</u>	<u>LAT/LONG</u>	<u>C</u>	<u>FO/FB</u>	<u>LEG TYPE</u>	<u>TC</u>	<u>DIST (NM)</u>	<u>ALTITUDE</u>	<u>SPEED</u>	<u>REMARKS</u>
RW09 (AER)	421438.22N/0833235.98W	N	-	-	-	-			
1220 MSL	-	-	-	VA	088.55	-	AT/ABOVE 1220		CG 500 FT PER NM TO 1220
-	-	-	-	VM	294.00				
RW23 (AER)	421441.34N/0833110.47W	N	-	-	-	-			
-	-	-	-	VM	226.72	-			
RW27 (AER)	421439.47N/0833129.51W	N	-	-	-	-			
-	-	-	-	VM	268.56	-			CG 209 FT PER NM TO 1000
JEWLS	414156.62N/0834723.00W	Y	-	IF	-	-			
SNDRS	411459.96N/0840854.44W	Y	FB	TF	211.12	31.42			
SNDRS	411459.96N/0840854.44W	Y	-	IF	-	-			SNDRS3.BGHRT
REEDA	410608.57N/0843822.83W	Y	FB	TF	248.47	23.95			
SEABS	405928.30N/0851727.28W	Y	FB	TF	257.51	30.31			
KNRKO	405305.22N/0855336.95W	Y	FB	TF	257.09	28.14			
BGHRT	403900.00N/0875600.00W	Y	FB	TF	262.06	94.05			
SNDRS	411459.96N/0840854.44W	Y	-	IF	-	-			SNDRS3.TORRR
TORRR	404429.77N/0842458.89W	Y	FB	TF	201.85	32.82			

