

**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SUPERSEDED NUMBER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>
TRMML	FOUR	TRMML4.TRMML	THREE	10/10/2019	<b>16 May 2024</b>
<b>TYPE:</b>	<b>OBSTACLE</b>	<b>COPTER</b>	<b>SID</b>	<b>SPECIAL</b>	<b>RNAV</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**This is a corrected copy of the procedure published in NFDD 064. See page 7.**

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

**TAKEOFF RWY 3L:** CLIMB ON HEADING 035.71 TO 1146, THEN DIRECT TO CROSS DCATS AT OR BELOW 7000, THEN ON TRACK 347.82 TO CROSS EERNY AT OR BELOW 11000, THEN ON TRACK 349.25 TO LOALA, THENCE...

**TAKEOFF RWY 3R:** CLIMB ON HEADING 035.71 TO 1146, THEN DIRECT BURPZ, THEN ON TRACK 034.39 TO CROSS DCATS AT OR BELOW 7000, THEN ON TRACK 347.82 TO CROSS EERNY AT OR BELOW 11000, THEN ON TRACK 349.25 TO LOALA, THENCE...

**TAKEOFF RWY 4L:** CLIMB ON HEADING 035.68 TO 1146, THEN DIRECT MINDY, THEN ON TRACK 037.88 TO CROSS KKELL AT OR BELOW 7000, THEN ON TRACK 350.49 TO CROSS EERNY AT OR BELOW 11000, THEN ON TRACK 349.25 TO LOALA, THENCE...

**TAKEOFF RWY 4R:** CLIMB ON HEADING 035.70 TO 1146, THEN DIRECT TO CROSS KKELL AT OR BELOW 7000, THEN ON TRACK 350.49 TO CROSS EERNY AT OR BELOW 11000, THEN ON TRACK 349.25 TO LOALA, THENCE...

**TAKEOFF RWY 21L:** CLIMB ON HEADING 215.72 TO INTERCEPT COURSE 172.93 TO CROSS WINRS AT OR ABOVE 2500 AND AT OR BELOW 230 KIAS, THEN ON TRACK 093.68 TO CROSS USSIE AT OR ABOVE 4000, THEN ON TRACK 083.76 TO CROSS SUURF AT OR BELOW 7000, THEN ON TRACK 036.34 TO TUURF, THEN ON TRACK 344.60 TO LOALA, THENCE...

**TAKEOFF RWY 21R:** CLIMB ON HEADING 215.72 TO INTERCEPT COURSE 174.91 TO CROSS WINRS AT OR ABOVE 2500 AND AT OR BELOW 230 KIAS, THEN ON TRACK 093.68 TO CROSS USSIE AT OR ABOVE 4000, THEN ON TRACK 083.76 TO CROSS SUURF AT OR BELOW 7000, THEN ON TRACK 036.34 TO TUURF, THEN ON TRACK 344.60 TO LOALA, THENCE...

**TAKEOFF RWY 22L:** CLIMB ON HEADING 215.71 TO INTERCEPT COURSE 251.44 TO CROSS FORDZ AT OR ABOVE 4000, THEN ON TRACK 314.11 TO CROSS CORVE AT OR BELOW 7000, THEN ON TRACK 027.07 TO LOALA, THENCE...

**TAKEOFF RWY 22R:** CLIMB ON HEADING 215.69 TO INTERCEPT COURSE 249.57 TO CROSS FORDZ AT OR ABOVE 4000, THEN ON TRACK 314.11 TO CROSS CORVE AT OR BELOW 7000, THEN ON TRACK 027.07 TO LOALA, THENCE...

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

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

...ON TRACK 351.96 TO TRMML, 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 LOALA, 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 LOALA, THENCE...

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

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

...ON TRACK 351.96 TO TRMML, 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 LOALA, THEN ON TRACK 351.96 TO TRMML, 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...



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...FOR RADAR VECTORS TO LOALA, THEN ON TRACK 351.96 TO TRMML, THEN ON (TRANSITION). MAINTAIN ATC ASSIGNED ALTITUDE, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

**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 LOALA, THEN ON TRACK 351.96 TO TRMML, 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 LOALA, THEN ON TRACK 351.96 TO TRMML, 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 LOALA, THEN ON TRACK 351.96 TO TRMML, 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 LOALA, THEN ON TRACK 351.96 TO TRMML, 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 LOALA, THEN ON TRACK 351.96 TO TRMML, THEN ON (TRANSITION). MAINTAIN ATC ASSIGNED ALTITUDE, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

**SELFRIDGE ANGB (KMTG):**

**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 LOALA, THEN ON TRACK 351.96 TO TRMML, 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>
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TRMML	FOUR	TRMML4.TRMML	THREE	10/10/2019	<b>16 May 2024</b>
GNZOE	TRMML4.GNZOE	TRMML	DDEEZ	TRACK 352.32	20.91 10000 2700
		DDEEZ	GNZOE	TRACK 352.06	10.82 10000 2700

**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.

**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.

**SELFRIDGE ANGB (KMTC):**

**RWY 1:** STANDARD.

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



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**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 WINRS.**

**AIRPORTS SERVED:**

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



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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:**

- 100 FT MAXIMUM VEGETATION HEIGHT UTILIZED PER FPT CHECKLIST.
- WAIVER ON FILE: TO NOT CHART MINIMUM CROSSING ALTITUDE AT IF FOR RADAR VECTORS.
- 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 TRMML; REQUIRED FOR KONZ AND KTTF.
- 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).
- KDTW CHART NOTE:** SEE ADDITIONAL REQUIREMENTS ON AAUP.
- KDTW RWY 3L, 3R, 4L, 4R, 21L, 21R, 22L, 22R DEPARTURES EARLY TURN AND SHORTENED ICA REQUIRED DUE TO SIMULTANEOUS DEPARTURES.
- KYIP RWY 5, 9 DEPARTURES EARLY TURN AND SHORTENED ICA REQUIRED DUE TO KDTW AIR TRAFFIC FLOW.
- MEA BASED ON LOWEST DME/DME COVERAGE.

**FLIGHT INSPECTED BY**

SCOTT WIEBE

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

Mar 15, 2024

**SIGNATURE**

**OFFICE**

FPO

**DATE**

03/08/2024

**DEVELOPED BY**

APRIL SARMENTO

**SIGNATURE**

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

**OFFICE**

AJV-A432

**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
TRMML	FOUR	TRMML4.TRMML	THREE	10/10/2019	16 May 2024

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

**CHANGES - REASONS:**

- AIRPORT NAME, CHANGED ALL KDTW AIRPORT NAME REFERENCES FROM DETROIT METROPOLITAN WAYNE COUNTY TO DETROIT METRO WAYNE COUNTY - OFFICIAL NASR NAME.
- DELETED ALL CYQG DATA FROM DP ROUTE DESCRIPTION, TAKEOFF MINIMUMS, AND AIRPORTS SERVED - AIRPORT REMOVED FROM SID PER NAVCANADA REQUEST.
- 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.
- DELETED KDET RWY 7, 25 REFERENCES IN DP ROUTE DESCRIPTION, TAKEOFF MINIMUMS AND RWY 25 CONTROLLING OBSTACLE - RUNWAY IS GOING TO BE DECOMMISSIONED.
- CHANGED KVLL RWYS FROM RWY 9, 27 TO RWY 10, 28 - RUNWAYS WERE RENUMBERED ON 02/10/2021.
- DP ROUTE DESCRIPTION, ALL RUNWAY TRANSITIONS, DELETED FIX LOALA MINIMUM CROSSING ALTITUDE AND CHANGED VERBIAGE FROM "TO CROSS LOALA AT OR ABOVE 4000" TO "TO LOALA" - CROSSING ALTITUDE REMOVED PER ATC REQUEST AND WAIVER ON FILE TO NOT CHART IF ALTITUDE AT IF FIX FOR RADAR VECTORS.
- DP ROUTE DESCRIPTION, CHANGED DTW RWY 22L FROM "CLIMB ON HEADING 215.71" TO "CLIMB ON HEADING 215.69" - NEW EVALUATION.
- 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).
- 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).
- DP ROUTE DESCRIPTION, DELETED KDTW TOP ALTITUDE VERBIAGE "OR AS ASSIGNED BY ATC" - KDTW HAS A NUMERIC TOP ALTITUDE 17000 CHARTED FOR ALL RUNWAYS.
- DP ROUTE DESCRIPTION, CHANGED KYIP TAKEOFF RWY 5 FROM "CLIMB ON HEADING 053.71 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" - 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 AND CHANGED ALTITUDE; IAW FAAO 8260.46J APPENDIX E. SECTION 1.2.C.(7).
- 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 AND CHANGED ALTITUDE; IAW FAAO 8260.46J APPENDIX E. SECTION 1.2.C.(7).
- 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 AND CHANGED ALTITUDE; VERBIAGE IAW FAAO 8260.46J APPENDIX E. SECTION 1.2.C.(7).
- 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).
- DP ROUTE DESCRIPTION, KARB, KDET, KONZ, KOZW, KTF, 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.
- TRANSITION ROUTES, ADDED MOCAS - MOCA REQUIRED IAW FAAO 8260.46J APPENDIX E. SECTION 1.2.D.(8).
- 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" - NEW PBN DOCUMENTATION FORMAT IAW IAW 8260.46J, 2-1-1.F.(6).(C).1.
- MOVED "NOTE: RADAR REQUIRED" FROM PROCEDURAL DATA NOTES TO EQUIPMENT REQUIREMENT NOTES AND DELETED "NOTE:" - NEW DOCUMENTATION FORMAT.
- 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.
- TAKEOFF MINIMUMS, CHANGED ALL CLIMB GRADIENT FORMATS FROM "FT PER NM" TO "FT/NM" - NEW FORMAT.
- 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.
- 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.
- TAKEOFF MINIMUMS, KTF, ADDED "RWY 3, 21:" - LISTED RUNWAYS AUTHORIZED STANDARD TAKEOFF MINIMUMS.
- TAKEOFF MINIMUMS, KOZW, ADDED "RWY 13, 31:" - LISTED RUNWAYS AUTHORIZED STANDARD TAKEOFF MINIMUMS.
- 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.



<u>DP NAME</u>	<u>NUMBER</u>	<u>DP COMPUTER CODE</u>	<u>SUPERSEDED NUMBER</u>	<u>DATED</u>	<u>ACTUAL EFFECTIVE DATE</u>
TRMML	FOUR	TRMML4.TRMML	THREE	10/10/2019	<b>16 May 2024</b>

- 26. 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.
- 27. CONTROLLING OBSTACLES, KDET, ADDED VERBIAGE TO RWY 33 "OBSTACLES MANDATING ODP ROUTE DEVELOPMENT" - CG IS STANDARD/OBSTACLE IS REASON FOR EXTENDED ICA/IAW FAAO 8260.46J APPENDIX E. SECTION 1.2.J.(3).
- 28. CONTROLLING OBSTACLES, KONZ, DELETED COMMA BETWEEN "STACK" AND LAT/LONG - FIXED TYPO.
- 29. CONTROLLING OBSTACLES, KVLL RWY 10, DELETED CONTROLLING OBSTACLE - CG IS STANDARD.
- 30. 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.
- 31. 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 FAAO 8260.46J APPENDIX E. SECTION 1.2.J.(3).
- 32. ADDED MSA AT ALL AIRPORTS - REQUIRED IAW FAAO 8260.46J APPENDIX E. SECTION 1.2.K.
- 33. 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.
- 34. 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 FAAO 8260.46J APPENDIX E. SECTION 1.2. M.(B).
- 35. AIRPORTS SERVED, DELETED AIRPORT NAMES - NAMES NO LONGER REQUIRED.
- 36. COMMUNICATIONS, ADDED "CHART:" AND DELETED "DEP CON" - VERBIAGE REQUIRED AND DEP CON CHARTED AUTOMATICALLY IAW 8260.46J APPENDIX E. SECTION 1.2.O.
- 37. REMARKS, ADDED "100 FT MAXIMUM VEGETATION HEIGHT UTILIZED PER FPT CHECKLIST" - IAW 8260.46J, APPENDIX E, 2.Q.(3).
- 38. REMARKS, ADDED "KDTW CHART NOTE: SEE ADDITIONAL REQUIREMENTS ON AAUP" AND REMOVED FROM ADDITIONAL FLIGHT DATA - IAW 8260.46J, APPENDIX E, 2.Q.(3).
- 39. REMARKS: DELETED "MOCA(S) NOT CHARTED PER ATC REQUEST TO REDUCE CHART CLUTTER" - INFORMATION ONLY IAW 8260.46J, APPENDIX E, 2.Q.
- 40. REMARKS, ADDED "WAIVER ON FILE: TO NOT CHART MINIMUM CROSSING ALTITUDE AT IF FOR RADAR VECTORS" - INFORMATION ONLY IAW 8260.46J, APPENDIX E, 2.Q.
- 41. 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 TRMML; REQUIRED FOR KONZ AND KTTF" - INFORMATION ONLY IAW 8260.46J, APPENDIX E, 2.Q.
- 42. REMARKS, ADDED "KDTW CHART NOTE: SEE ADDITIONAL REQUIREMENTS ON AAUP" - INFORMATION ONLY IAW 8260.46J, APPENDIX E, 2.Q.
- 43. REMRKS, 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 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. ADDITIONAL FLIGHT DATA, ADDED "CHART SPEED ICON MAXIMUM 230 KIAS AT WINRS" - IAW 8260.46J, 2-1-1.E.(4).(B).

04/08/2024: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 01/26/2024.

1. ADDED TRANSITION NAME GNZOE TO THE TRANSITION.
2. GNZOE TRANSITION: CORRECTED TRMML TO DDEEZ TRACK FROM 353.32 TO 352.32.



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

<u>DP NAME</u>	<u>NUMBER</u>	<u>DP COMPUTER CODE</u>	<u>SUPERSEDED NUMBER</u>	<u>DATED</u>	<u>ACTUAL EFFECTIVE DATE</u>
TRMML	FOUR	TRMML4.TRMML	THREE	10/10/2019	<b>16 May 2024</b>

<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>
DETROIT METRO WAYNE COUNTY (KDTW)									
RW03L (AER)	421228.21N/0832104.39W	N	-	-	-	-			
1146 MSL	-	-	-	VA	028.71		AT/ABOVE 1146		CG 500 FT PER NM TO 1146
DCATS	422712.00N/0831009.17W	Y	FB	DF			AT/BELOW 7000		
EERNY	423600.37N/0831417.98W	Y	FB	TF	340.82	9.32	AT/BELOW 11000		
LOALA	425401.32N/0832208.62W	Y	FB	TF	342.25	18.92			
RW03R (AER)	421144.21N/0832106.49W	N	-	-	-	-			
1146 MSL	-	-	-	VA	028.71		AT/ABOVE 1146		CG 500 FT PER NM TO 1146
BURPZ	421517.69N/0831829.10W	Y	FB	DF					
DCATS	422712.00N/0831009.17W	Y	FB	TF	027.39	13.41	AT/BELOW 7000		
EERNY	423600.37N/0831417.98W	Y	FB	TF	340.82	9.32	AT/BELOW 11000		
LOALA	425401.32N/0832208.62W	Y	FB	TF	342.25	18.92			
RW04L (AER)	421207.82N/0832302.40W	N	-	-	-	-			
1146 MSL	-	-	-	VA	028.68		AT/ABOVE 1146		CG 500 FT PER NM TO 1146
MINDY	421559.47N/0832011.78W	Y	FB	DF					
KKELL	422730.48N/0831053.34W	Y	FB	TF	030.88	13.42	AT/BELOW 7000		
EERNY	423600.37N/0831417.98W	Y	FB	TF	343.49	8.86	AT/BELOW 11000		
LOALA	425401.32N/0832208.62W	Y	FB	TF	342.25	18.92			





<b>DP NAME</b>	<b>NUMBER</b>	<b>DP COMPUTER CODE</b>	<b>SUPERSEDED NUMBER</b>	<b>DATED</b>	<b>ACTUAL EFFECTIVE DATE</b>
TRMML	FOUR	TRMML4.TRMML	THREE	10/10/2019	<b>16 May 2024</b>

<b>FIX/NAVAID</b>	<b>LAT/LONG</b>	<b>C</b>	<b>FO/FB</b>	<b>LEG TYPE</b>	<b>TC</b>	<b>DIST (NM)</b>	<b>ALTITUDE</b>	<b>SPEED</b>	<b>REMARKS</b>
RW04R (AER)*	421212.78N/0832213.32W*	N	-	-	-	-			*DISPL THLD (509 FT)
1146 MSL	-	-	-	VA	028.70		AT/ABOVE 1146		CG 500 FT PER NM TO 1146
KKELL	422730.48N/0831053.34W	Y	FB	DF			AT/BELOW 7000		
EERNY	423600.37N/0831417.98W	Y	FB	TF	343.49	8.86	AT/BELOW 11000		
LOALA	425401.32N/0832208.62W	Y	FB	TF	342.25	18.92			
RW21L (AER)	421310.86N/0832002.65W	N	-	-	-	-			
-	421050.18N/0832146.27W	-	-	VI	208.72	2.67			CG 500 FT PER NM TO 1146
WINRS	420542.02N/0832002.39W	Y	FB	CF	165.93	5.29	AT/ABOVE 2500	AT/BELOW 230K	
USSIE	420556.34N/0831427.74W	Y	FB	TF	086.68	4.16	AT/ABOVE 4000		
SUURF	420657.51N/0830837.76W	Y	FB	TF	076.76	4.46	AT/BELOW 7000		
TURFF	421644.40N/0830113.28W	Y	FB	TF	029.34	11.22			
LOALA	425401.32N/0832208.62W	Y	FB	TF	337.60	40.35			
RW21R (AER)	421341.86N/0832010.11W	N	-	-	-	-			
-	421134.48N/0832143.96W	-	-	VI	208.72	2.42			CG 500 FT PER NM TO 1146
WINRS	420542.02N/0832002.39W	Y	FB	CF	167.91	6.01	AT/ABOVE 2500	AT/BELOW 230K	
USSIE	420556.34N/0831427.74W	Y	FB	TF	086.68	4.16	AT/ABOVE 4000		
SUURF	420657.51N/0830837.76W	Y	FB	TF	076.76	4.46	AT/BELOW 7000		
TUURF	421644.40N/0830113.28W	Y	FB	TF	029.34	11.22			
LOALA	425401.32N/0832208.62W	Y	FB	TF	337.60	40.35			



<b>DP NAME</b> TRMML	<b>NUMBER</b> FOUR	<b>DP COMPUTER CODE</b> TRMML4.TRMML	<b>SUPERSEDED NUMBER</b> THREE	<b>DATED</b> 10/10/2019	<b>ACTUAL EFFECTIVE DATE</b> <b>16 May 2024</b>
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<b>FIX/NAVAID</b>	<b>LAT/LONG</b>	<b>C</b>	<b>FO/FB</b>	<b>LEG TYPE</b>	<b>TC</b>	<b>DIST (NM)</b>	<b>ALTITUDE</b>	<b>SPEED</b>	<b>REMARKS</b>
RW22L (AER)	421352.36N/0832059.97W	N	-	-	-	-			
-	421114.77N/0832256.02W	-	-	VI	208.71	2.99			CG 500 FT PER NM TO 1146
FORDZ	420747.33N/0833240.34W	Y	FB	CF	244.44	8.03	AT/ABOVE 4000		
CORVE	421315.71N/0834224.97W	Y	FB	TF	307.11	9.08	AT/BELOW 7000		
LOALA	425401.32N/0832208.62W	Y	FB	TF	020.07	43.41			
RW22R (AER)	421334.48N/0832158.61W	N	-	-	-	-			
-	421115.08N/0832341.19W	-	-	VI	208.69	2.65			CG 500 FT PER NM TO 1146
FORDZ	420747.33N/0833240.34W	Y	FB	CF	242.57	7.53	AT/ABOVE 4000		
CORVE	421315.71N/0834224.97W	Y	FB	TF	307.11	9.08	AT/BELOW 7000		
LOALA	425401.32N/0832208.62W	Y	FB	TF	020.07	43.41			
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	-			



<u>DP NAME</u>		<u>NUMBER</u>	<u>DP COMPUTER CODE</u>	<u>SUPERSEDED NUMBER</u>	<u>DATED</u>	<u>ACTUAL EFFECTIVE DATE</u>			
TRMML		FOUR	TRMML4.TRMML	THREE	10/10/2019	<b>16 May 2024</b>			
<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
LOALA	425401.32N/0832208.62W	Y	-	IF	-	-			
TRMML	431218.76N/0832851.90W	Y	FB	TF	344.96	18.94			
TRMML	431218.76N/0832851.90W	Y	-	IF	-	-			TRMML4.GNZOE
DDEEZ	433232.50N/0833609.08W	Y	FB	TF	345.32	20.91			
GNZOE	434300.00N/0834000.00W	Y	FB	TF	345.06	10.82			

