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 statue miles or feet RVR unless otherwise indicated.

| TYPE: OBSTACLE COPTER SID SPECIAL RNAV | EFFECTIVE DATE 10 OCT 2019 |
|--|----------------------------|
|  |                            |

#### **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 CROSS LOALA AT OR ABOVE 4000, 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 CROSS LOALA AT OR ABOVE 4000, 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 CROSS LOALA AT OR ABOVE 4000, 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 CROSS LOALA AT OR ABOVE 4000, 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 CROSS LOALA AT OR ABOVE 4000, 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 CROSS LOALA AT OR ABOVE 4000, 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 CROSS LOALA AT OR ABOVE 4000. 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 CROSS LOALA AT OR ABOVE 4000, THENCE...

TAKEOFF RWY 27L: CLIMB ON HEADING 275.73 TO 1146, THEN ON HEADING 275.71 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

TAKEOFF RWY 27R: CLIMB ON HEADING 275.72 TO 1146, THEN ON HEADING 275.70 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

...ON TRACK 351,96 TO TRMML, THEN ON (TRANSITION), MAINTAIN 17000 OR AS ASSIGNED BY ATC, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

#### **WILLOW RUN (KYIP):**

TAKEOFF RWY 5L: CLIMB ON HEADING 053,71 TO 1220. THEN LEFT TURN HEADING 300,00 FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000. THENCE...

TAKEOFF RWY 5R: CLIMB ON HEADING 053,70 TO 1220. THEN LEFT TURN HEADING 300,00 FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000. THENCE...

TAKEOFF RWY 9: CLIMB ON HEADING 095.55 TO 1220, THEN LEFT TURN HEADING 300.00 FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

TAKEOFF RWY 23L: CLIMB ON HEADING 233,72 TO 1220. THEN ON HEADING 233,70 FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000. THENCE...

TAKEOFF RWY 23R: CLIMB ON HEADING 233.73 TO 1220, THEN ON HEADING 233.72 FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

TAKEOFF RWY 27: CLIMB ON HEADING 275.57 TO 1220. THEN ON HEADING 275.56 FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000. 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 FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...
TAKEOFF RWY 24: CLIMB ON HEADING 239.53 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

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

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| <u>DP NAME</u> | <u>NUMBER</u> | <b>DP COMPUTER CODE</b> | SUPERSEDED NUMBER | <b>DATED</b> | <b>EFFECTIVE DATE</b> |
|----------------|---------------|-------------------------|-------------------|--------------|-----------------------|
| TRMML          | THREE         | TRMML3.TRMML            | TWO               | 08/15/2019   | 10 OCT 2019           |

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

TAKEOFF RWY 7: CLIMB ON HEADING 068.30 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

TAKEOFF RWY 15: CLIMB ON HEADING 148.32 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

TAKEOFF RWY 25: CLIMB ON HEADING 248.31 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

TAKEOFF RWY 33: CLIMB ON HEADING 328.33 TO 1800 THEN AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000. THENCE...

...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 FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...
TAKEOFF RWY 21: CLIMB ON HEADING 207.50 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

...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 FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

TAKEOFF RWY 17: CLIMB ON HEADING 173.78 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

TAKEOFF RWY 22: CLIMB ON HEADING 217.34 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000. THENCE...

TAKEOFF RWY 35: CLIMB ON HEADING 005.78 TO 1800 THEN AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000. THENCE...

...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 FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

TAKEOFF RWY 31: CLIMB ON HEADING 312.36 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

...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 FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000. THENCE...

TAKEOFF RWY 9R: CLIMB ON HEADING 094.63 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

TAKEOFF RWY 27L: CLIMB ON HEADING 274.65 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

TAKEOFF RWY 27R: CLIMB ON HEADING 274.68 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

...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 9: CLIMB ON HEADING 095.71 TO 1400 THEN AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...
TAKEOFF RWY 27: CLIMB ON HEADING 275.72 TO 1500 THEN AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

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

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| <u>DP NAME</u> | NUMBER | DP COMPUTER CODE | SUPERSEDED NUMBER | DATED      | EFFECTIVE DATE |
|----------------|--------|------------------|-------------------|------------|----------------|
| TRMML          | THREE  | TRMML3.TRMML     | TWO               | 08/15/2019 | 10 OCT 2019    |

#### **SELFRIDGE ANGB (KMTC):**

TAKEOFF RWY 1: CLIMB ON HEADING 007.47 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...
TAKEOFF RWY 19: CLIMB ON HEADING 187.47 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

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

#### WINDSOR (CYQG):

TAKEOFF RWY 7: CLIMB ON HEADING 069.55 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

TAKEOFF RWY 12: CLIMB ON HEADING 122.61 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

TAKEOFF RWY 25: CLIMB ON HEADING 249.56 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000, THENCE...

TAKEOFF RWY 30: CLIMB ON HEADING 302.60 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS LOALA AT OR ABOVE 4000. THENCE...

...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):

| TRANSITION NAME | TRANSITION COMPUTER CODE | FROM<br>FIX/NAVAID | <u>TO</u><br><u>FIX/NAVAID</u> | COURSE       | DISTANCE | MEA   | MOCA | CROSSING<br>ALTITUDE/FIXES |
|-----------------|--------------------------|--------------------|--------------------------------|--------------|----------|-------|------|----------------------------|
| GNZOE           | TRMML3.GNZOE             | TRMML              | DDEEZ                          | TRACK 352.32 | 20.91    | 10000 |      |                            |
|                 |                          | DDEEZ              | GNZOE                          | TRACK 352.06 | 10.82    | 10000 |      |                            |

#### PROCEDURAL DATA NOTES:

NOTE: RNAV 1

**NOTE:** RADAR REQUIRED

NOTE: DME/DME/IRU OR GPS REQUIRED.

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

NOTE: KDTW/KYIP DEPARTURES: IF UNABLE TO ACCEPT 500 FT PER NM CLIMB RATE, ADVISE CLEARANCE DELIVERY ON INITIAL CONTACT.

#### **TAKEOFF MINIMUMS:**

#### **DETROIT METROPOLITAN WAYNE COUNTY (KDTW):**

RWY 3L, 3R, 4L, 4R, 21L, 21R, 22L, 22R, 27L, 27R: STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 1160.

#### WILLOW RUN (KYIP):

RWY 5L, 5R, 9, 23L, 23R, 27: STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 1220.

#### ANN ARBOR MUNI (KARB):

RWY 6, 24: STANDARD.

RWY 12, 30: NA - ENVIRONMENTAL

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

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DP NAMENUMBERDP COMPUTER CODESUPERSEDED NUMBERDATEDEFFECTIVE DATETRMMLTHREETRMML3.TRMMLTWO08/15/201910 OCT 2019

RWY 7, 15, 33; STANDARD.

RWY 25: STANDARD WITH MINIMUM CLIMB OF 210 FEET PER NM TO 1000.

CUSTER (KTTF):

STANDARD.

**GROSSE ILE MUNI (KONZ):** 

RWY 4, 17, 22: STANDARD.

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

LIVINGSTON COUNTY SPENCER J HARDY (KOZW):

STANDARD.

OAKLAND COUNTY INTL (KPTK):

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

RWY 18, 36: NA - ENVIRONMENTAL.

OAKLAND/TROY (KVLL):

RWY 9: STANDARD.

RWY 27: STANDARD WITH MINIMUM CLIMB OF 476 FT PER NM TO 1500.

SELFRIDGE ANGB (KMTC):

RWY 1: STANDARD.

RWY 19: STANDARD WITH MINIMUM CLIMB OF 234 FT PER NM TO 1500.

WINDSOR (CYQG):

RWY 7. 12. 25: STANDARD.

RWY 30: STANDARD WITH MINIMUM CLIMB OF 210 FT PER NM TO 1300.

**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 421431.78N/0833411.47W

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

RWY 25: 871 FT MSL STACK 422307.00N/0830235.00W 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 27: 940 FT MSL BLDG 423234.20N/0831235.50W (CG), 1749 FT MSL TOWER 422858.00N/0831219.00W (CGTA)

**SELFRIDGE ANGB (KMTC):** 

RWY 19: 1246 FT MSL TOWER 423315.00N/0825315.00W

18
CHECKED

08/14/2019

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

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| <u>DP NAME</u> | <u>NUMBER</u> | <b>DP COMPUTER CODE</b> | SUPERSEDED NUMBER | <b>DATED</b> | <b>EFFECTIVE DATE</b> |
|----------------|---------------|-------------------------|-------------------|--------------|-----------------------|
| TRMML          | THREE         | TRMML3.TRMML            | TWO               | 08/15/2019   | 10 OCT 2019           |

#### **LOST COMMUNICATIONS PROCEDURES:**

**ADDITIONAL FLIGHT DATA:** 

CHART: TOP ALTITUDE: KDTW 17000.

CHART: TOP ALTITUDE: ALL OTHER AIRPORTS ASSIGNED BY ATC

REFERENCE MAG VAR; KDTW 7W/2020 DME/DME ASSESSMENT: SAT (RNP 2.0)

KDTW CHART: SEE ADDITIONAL REQUIREMENTS IN RNAV DEPARTURE AAUP.

#### **AIRPORTS SERVED:**

| AIRPORT NAME                             | CITY                     | STATE |
|--|--------------------------|-------|
| DETROIT METROPOLITAN WAYNE COUNTY (KDTW) | DETROIT                  | MI    |
| WILLOW RUN (KYIP)                        | DETROIT                  | MI    |
| ANN ARBOR MUNI (KARB)                    | ANN ARBOR                | MI    |
| COLEMAN A YOUNG MUNI (KDET)              | DETROIT                  | MI    |
| CUSTER (KTTF)                            | MONROE                   | MI    |
| GROSSE ILE MUNI (KONZ)                   | DETROIT/GROSSE ILE       | MI    |
| LIVINGSTON COUNTY SPENCER J HARDY (KOZW) | HOWELL                   | MI    |
| OAKLAND COUNTY INTL (KPTK)               | PONTIAC                  | MI    |
| OAKLAND/TROY (KVLL)                      | TROY                     | MI    |
| SELFRIDGE ANGB (KMTC)                    | MOUNT CLEMENS            | MI    |
| WINDSOR (CYQG)                           | WINDSOR, ONTARIO, CANADA |       |

#### **COMMUNICATIONS:**

ATIS, AWOS/ASOS, CLNC DEL, GND CON, TWR, CTAF, DEP CON, CPDLC

**FIXES AND/OR NAVAIDS:** 



08/14/2019

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

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DP NAME **DP COMPUTER CODE SUPERSEDED NUMBER DATED EFFECTIVE DATE NUMBER TRMML** THREE TRMML3.TRMML TWO 08/15/2019 10 OCT 2019 **REMARKS:** MOCA(S) NOT CHARTED PER ATC REQUEST TO REDUCE CHART CLUTTER. 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). ABBREVIATED AMENDMENT **FLIGHT INSPECTED BY: OFFICE SYMBOL:** DATE: Digitally signed by PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJW-33) MEMO, OCTOBER 3, 2018, WARDELL HENNING SUBJET: FLIGHT INSPECTION REVIEW NOT REQUIRED. Aug 08, 2019 **DEVELOPED BY: OFFICE SYMBOL:** DATE: Digitally signed by CHRISTINE BAYSE **CHRISTINE BAYSE** AJV-A432 07/29/2019 Aug 01, 2019 **APPROVED BY: OFFICE SYMBOL:** DATE: Digitally signed by WARDELL HENNING **GEORGE DAVIS** AJV-A430 Aug 08, 2019 REQUIRED EFFECTIVE DATE: **ROUTINE** 

**COORDINATED WITH:** 

| <u>A4A</u>  | <u>ALPA</u> | <u>AOPA</u> | <u>APA</u>  | HAI | <b>NBAA</b> |
|-------------|-------------|-------------|-------------|-----|-------------|
| $\boxtimes$ | $\boxtimes$ | $\boxtimes$ | $\boxtimes$ |     | $\boxtimes$ |

OTHER:

ZOB, DTW APP CON, AMGR

#### **CHANGES - REASONS:**

1. CHANGED DISTANCE ON RWY 4R ON LEG FROM EERNY TO LOALA FROM 26.03 TO 18.92 ON THE 8260-15C.- TYPO.

# FEDERAL AVIATION ADMINISTRATION **FLIGHT STANDARDS SERVICE**

| DEPARTURE | (DATA RECORD) |
|-----------|---------------|

| DP NAME     |   |          |       |             |           |              | NUMBER   |         | MPUTER CODE | SUPERSEDED NUMBER    | DATED      | EFFECTIVE DATE |
|-------------|---|----------|-------|-------------|-----------|--------------|----------|---------|-------------|----------------------|------------|----------------|
| TRMML       |   |          |       |             |           |              | THREE    | TRM     | ML3.TRMML   | TWO                  | 08/15/2019 | 10 OCT 2019    |
| FIX/NAVAID  | LAT/LONG                                    | <u>C</u> | FO/FB | LEG<br>TYPE | <u>TC</u> | DIST<br>(NM) | ALTITU   | JDE .   | SPEED       |                      | REMARKS    |                |
|             | DETROIT METROPOLITAN<br>WAYNE COUNTY (KDTW) |          |       |             |           |              |          |         |             |                      |            |                |
| RW03L (AER) | 421228.21N/0832104.39W                      | N        | -     | -           | -         | -            |          |         |             |                      |            |                |
| 1146 MSL    | -   | -        | -     | VA          | 028.71    | -            |          |         |             | CG 500 FT/NM TO 1146 |            |                |
| DCATS       | 442712.00N/0831009.17W                      | Υ        | FB    | DF          | -         | -            | AT/BELOV | V 7000  |             |                      |            |                |
| EERNY       | 423600.37N/0831417.98W                      | Υ        | FB    | TF          | 340.82    | 9.32         | AT/BELOW | / 11000 |             |                      |            |                |
| LOALA       | 425401.32N/0832208.62W                      | Υ        | FB    | TF          | 342.25    | 18.92        | AT/ABOVE | E 4000  |             |                      |            |                |
|             |   |          |       |             |           |              |          |         |             |                      |            |                |
| RW03R (AER) | 421144.21N/0832106.49W                      | N        | -     | -           | -         | -            |          |         |             |                      |            |                |
| 1146 MSL    | -   | -        | -     | VA          | 028.71    | -            |          |         |             | CG 500 FT/NM TO 1146 |            |                |
| BURPZ       | 421517.69N/0831829.10W                      | Υ        | FB    | DF          | -         | -            |          |         |             |                      |            |                |
| DCATS       | 442712.00N/0831009.17W                      | Υ        | FB    | TF          | 027.39    | 13.41        | AT/BELOV | V 7000  |             |                      |            |                |
| EERNY       | 423600.37N/0831417.98W                      | Υ        | FB    | TF          | 340.82    | 9.32         | AT/BELOW | / 11000 |             |                      |            |                |
| LOALA       | 425401.32N/0832208.62W                      | Υ        | FB    | TF          | 342.25    | 18.92        | AT/ABOV  | ≣ 4000  |             |                      |            |                |
|             |   |          |       |             |           |              |          |         |             |                      |            |                |
| RW04L (AER) | 421207.82N/0832302.40W                      | Ν        | -     | -           | -         | -            |          |         |             |                      |            |                |
| 1146 MSL    | -   | -        | -     | VA          | 028.68    | -            |          |         |             | CG 500 FT/NM TO 1146 |            |                |
| MINDY       | 421559.47N/0832011.78W                      | Υ        | FB    | DF          | -         | -            |          |         |             |                      |            |                |
| KKELL       | 422730.48N/0831053.34W                      | Υ        | FB    | TF          | 030.88    | 13.42        | AT/BELOV | V 7000  |             |                      |            |                |
| EERNY       | 423600.37N/0831417.98W                      | Υ        | FB    | TF          | 343.49    | 8.86         | AT/BELOW | / 11000 |             |                      |            |                |
| LOALA       | 425401.32N/0832208.62W                      | Υ        | FB    | TF          | 342.25    | 18.92        | AT/ABOV  | E 4000  |             |                      |            |                |
|             |   |          |       |             |           |              |          |         |             |                      |            |                |

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

| DP NAME<br>TRMML |                         |          |       |             |        |              | NUMBER<br>THREE | DP COI | MPUTER CODE<br>ML3.TRMML | SUPERSEDED NUMBER<br>TWO | <b>DATED</b> 08/15/2019 | EFFECTIVE DAT |
|------------------|-------------------------|----------|-------|-------------|--------|--------------|-----------------|--------|--------------------------|--------------------------|-------------------------|---------------|
| FIX/NAVAID       | LAT/LONG                | <u>C</u> | FO/FB | LEG<br>TYPE | TC     | DIST<br>(NM) | ALTITUD         | E      | SPEED                    |                          | REMARKS                 |               |
| RW04R (AER)*     | 421212.78N/0832213.32W* | N        | -     | -           | -      | -            |                 |        |                          | *DISPL THLD (509 FT)     |                         |               |
| 1146 MSL         | -                       | -        | -     | VA          | 028.70 | -            |                 |        |                          | CG 500 FT/NM TO 1146     |                         |               |
| KKELL            | 422800.67N/0832028.12W  | Υ        | FB    | DF          | -      | -            | AT/BELOW        | 7000   |                          |                          |                         |               |
| EERNY            | 423600.37N/0831417.98W  | Υ        | FB    | TF          | 343.49 | 8.86         | AT/BELOW 1      | 1000   |                          |                          |                         |               |
| LOALA            | 425401.32N/0832208.62W  | Υ        | FB    | TF          | 342.25 | 18.92        | AT/ABOVE 4      | 1000   |                          |                          |                         |               |
| RW21L (AER)      | 421310.86N/0832002.65W  | N        | -     | _           | -      | -            |                 |        |                          |                          |                         |               |
| -                | 421050.18N/0832146.27W  | -        | -     | VI          | 208.72 | 2.67         |                 |        |                          | CG 500 FT/NM TO 1146     |                         |               |
| WINRS            | 420542.02N/0832002.39W  | Υ        | FB    | CF          | 165.93 | 5.29         | AT/ABOVE 2      | 2500   | AT/BELOW 230K            | RECOMMENDED NAVAID:      | ECK TACAN               |               |
| USSIE            | 420556.34N/0831427.74W  | Υ        | FB    | TF          | 086.68 | 4.16         | AT/ABOVE 4      | 1000   |                          |                          |                         |               |
| SUURF            | 420657.51N/0830837.76W  | Υ        | FB    | TF          | 076.76 | 4.46         | AT/BELOW        | 7000   |                          |                          |                         |               |
| TUURF            | 421644.40N/0830113.28W  | Υ        | FB    | TF          | 029.34 | 11.22        |                 |        |                          |                          |                         |               |
| LOALA            | 425401.32N/0832208.62W  | Υ        | FB    | TF          | 337.60 | 40.35        | AT/ABOVE 4      | 1000   |                          |                          |                         |               |
| RW21R (AER)      | 421341.85N/0832010.12W  | N        | -     | _           | -      | -            |                 |        |                          |                          |                         |               |
| -                | 421134.48N/0832143.96W  | -        | -     | VI          | 208.72 | 2.42         |                 |        |                          | CG 500 FT/NM TO 1146     |                         |               |
| WINRS            | 420542.02N/0832002.39W  | Υ        | FB    | CF          | 167.91 | 6.01         | AT/ABOVE 2      | 2500   | AT/BELOW 230K            | RECOMMENDED NAVAID:      | ECK TACAN               |               |
| USSIE            | 420556.34N/0831427.74W  | Υ        | FB    | TF          | 086.68 | 4.16         | AT/ABOVE 4      | 1000   |                          |                          |                         |               |
| SUURF            | 420657.51N/0830837.76W  | Υ        | FB    | TF          | 076.76 | 4.46         | AT/BELOW        | 7000   |                          |                          |                         |               |
| TUURF            | 421644.40N/0830113.28W  | Υ        | FB    | TF          | 029.34 | 11.22        |                 |        |                          |                          |                         |               |
| LOALA            | 425401.32N/0832208.62W  | Υ        | FB    | TF          | 337.60 | 40.35        | AT/ABOVE 4      | 1000   |                          |                          |                         | OUALITY       |

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

|                        |  |   |  |   |                          | NUMBER<br>THREE   | DP COMP   | UTER CODE  | SUPERSEDED NUMBER TWO   | <b>DATED</b> 08/15/2019  | EFFECTIVE DATE 10 OCT 2019 |
|------------------------|--|---|--|---|--------------------------|---|---|--|---|--|----------------------------|
| LAT/LONG               | <u>C</u>   | FO/FB   | LEG<br>TYPE  | TC  | DIST<br>(NM)             | ALTITU  | <u>DE</u>   | SPEED  |   | REMARKS  |                            |
| 421352.37N/0832059.97W | N  | -   | -  | -   | -                        |   |   |  |   |  |                            |
| 421114.77N/0832256.02W | -  | -   | VI   | 208.71  | 2.99                     |   |   |  | CG 500 FT/NM TO 1146  |  |                            |
| 420747.33N/0833240.34W | Υ  | FB  | CF   | 244.44  | 8.03                     | AT/ABOVE  | 4000  |  | RECOMMENDED NAVAID: E   | ECK TACAN  |                            |
| 421315.71N/0834224.97W | Υ  | FB  | TF   | 307.11  | 9.08                     | AT/BELOW  | <i>l</i> 7000   |  |   |  |                            |
| 425401.32N/0832208.62W | Υ  | FB  | TF   | 020.07  | 43.41                    | AT/ABOVE  | 4000  |  |   |  |                            |
|                        |  |   |  |   |                          |   |   |  |   |  |                            |
| 421334.48N/0832158.61W | N  | -   | -  | -   | -                        |   |   |  |   |  |                            |
| 421115.08N/0832341.20W | -  | -   | VI   | 208.69  | 2.65                     |   |   |  | CG 500 FT/NM TO 1146  |  |                            |
| 420747.33N/0833240.34W | Υ  | FB  | CF   | 242.57  | 7.53                     | AT/ABOVE  | 4000  |  | RECOMMENDED NAVAID: E   | ECK TACAN  |                            |
| 421315.71N/0834224.97W | Υ  | FB  | TF   | 307.11  | 9.08                     | AT/BELOW  | V 7000  |  |   |  |                            |
| 425401.32N/0832208.62W | Υ  | FB  | TF   | 020.07  | 43.41                    | AT/ABOVE  | 4000  |  |   |  |                            |
|                        |  |   |  |   |                          |   |   |  |   |  |                            |
| 421158.34N/0831949.33W | N  | -   | -  | -   | -                        |   |   |  |   |  |                            |
| -                      | -  | -   | VA   | 268.73  | -                        |   |   |  | CG 500 FT/NM TO 1146  |  |                            |
| -                      | -  | -   | VM   | 268.71  | -                        |   |   |  |   |  |                            |
|                        |  |   |  |   |                          |   |   |  |   |  |                            |
| 421303.02N/0831951.72W | N  | -   | -  | -   | -                        |   |   |  |   |  |                            |
| -                      | -  | -   | VA   | 268.72  | -                        |   |   |  | CG 500 FT/NM TO 1146  |  |                            |
| -                      | -  | -   | VM   | 268.70  | -                        |   |   |  |   |  |                            |
|                        | 421352.37N/0832059.97W 421114.77N/0832256.02W 420747.33N/0833240.34W 421315.71N/0834224.97W 425401.32N/0832208.62W  421334.48N/0832158.61W 421115.08N/0832341.20W 420747.33N/0833240.34W 421315.71N/0834224.97W 425401.32N/0832208.62W  421158.34N/0831949.33W - | 421352.37N/0832059.97W N 421114.77N/0832256.02W - 420747.33N/0833240.34W Y 421315.71N/0834224.97W Y 425401.32N/0832208.62W Y  421115.08N/0832341.20W - 420747.33N/0833240.34W Y 421315.71N/0834224.97W Y 425401.32N/0832208.62W Y  421315.71N/0834224.97W Y 425401.32N/0832208.62W Y  421158.34N/0831949.33W N 421303.02N/0831951.72W N | 421352.37N/0832059.97W       N       -         421114.77N/0832256.02W       -       -         420747.33N/0833240.34W       Y       FB         421315.71N/0834224.97W       Y       FB         425401.32N/0832208.62W       Y       FB         421334.48N/0832158.61W       N       -         420747.33N/0833240.34W       Y       FB         421315.71N/0834224.97W       Y       FB         425401.32N/0832208.62W       Y       FB         421158.34N/0831949.33W       N       -         -       -       -         421303.02N/0831951.72W       N       -         -       -       -         -       -       -         -       -       -         -       -       -         -       -       -         -       -       -         -       -       -         -       -       -         -       -       -         -       -       -         -       -       -         -       -       -         -       -       -         -       - | 421352.37N/0832059.97W       N       -       -         421114.77N/0832256.02W       -       -       VI         420747.33N/0833240.34W       Y       FB       CF         421315.71N/0834224.97W       Y       FB       TF         425401.32N/0832208.62W       Y       FB       TF         421334.48N/0832158.61W       N       -       -         421115.08N/0832341.20W       -       -       VI         420747.33N/0833240.34W       Y       FB       CF         421315.71N/0834224.97W       Y       FB       TF         425401.32N/0832208.62W       Y       FB       TF         421158.34N/0831949.33W       N       -       -         -       -       -       VA         421303.02N/0831951.72W       N       -       -         -       -       -       VA | 421352.37N/0832059.97W N | 421352.37N/0832059.97W       N       - <td>LAT/LONG  C FO/FB LEG TYPE  12 114.77N/0832059.97W  N VI 208.71 2.99  420747.33N/0833240.34W  Y FB CF 244.44 8.03 AT/ABOVE 421315.71N/0834224.97W  Y FB TF 307.11 9.08 AT/BELOW 425401.32N/0832158.61W  N VI 208.69 2.65  420747.33N/0833240.34W  Y FB CF 242.57 7.53 AT/ABOVE 421315.71N/0834224.97W  Y FB TF 307.11 9.08 AT/BELOW 421315.71N/0834224.97W  Y FB CF 242.57 7.53 AT/ABOVE 421315.71N/0834224.97W  Y FB TF 307.11 9.08 AT/BELOW 421315.71N/0834224.97W  Y FB TF 307.11 9.08 AT/BELOW 421315.71N/0834224.97W  Y FB TF 307.11 9.08 AT/BELOW 425401.32N/0832208.62W  Y FB TF 307.11 9.08 AT/BELOW 425401.32N/0831949.33W  N VA 268.73 -  - VA 268.73 -  421303.02N/0831951.72W  N VA 268.72 -  421303.02N/0831951.72W  N VA 268.72 -</td> <td>LAT/LONG C FO/FB TYPE TC NM ALTITUDE  421352.37N/0832059.97W N</td> <td>LAT/LONG         C         FO/FB         LEG         TC         DIST (NM)         ALTITUDE         SPEED           421352.37N/0832059.97W         N         -</td> <td>  LATILONG   C   FOFF   TYPE   TC   NM   N   ALTITUDE   SPEED   CG 500 FT/NM TO 1146   CG 500 FT/M TO 1146   CG 500 FT</td> <td>  THREE</td> | LAT/LONG  C FO/FB LEG TYPE  12 114.77N/0832059.97W  N VI 208.71 2.99  420747.33N/0833240.34W  Y FB CF 244.44 8.03 AT/ABOVE 421315.71N/0834224.97W  Y FB TF 307.11 9.08 AT/BELOW 425401.32N/0832158.61W  N VI 208.69 2.65  420747.33N/0833240.34W  Y FB CF 242.57 7.53 AT/ABOVE 421315.71N/0834224.97W  Y FB TF 307.11 9.08 AT/BELOW 421315.71N/0834224.97W  Y FB CF 242.57 7.53 AT/ABOVE 421315.71N/0834224.97W  Y FB TF 307.11 9.08 AT/BELOW 421315.71N/0834224.97W  Y FB TF 307.11 9.08 AT/BELOW 421315.71N/0834224.97W  Y FB TF 307.11 9.08 AT/BELOW 425401.32N/0832208.62W  Y FB TF 307.11 9.08 AT/BELOW 425401.32N/0831949.33W  N VA 268.73 -  - VA 268.73 -  421303.02N/0831951.72W  N VA 268.72 -  421303.02N/0831951.72W  N VA 268.72 - | LAT/LONG C FO/FB TYPE TC NM ALTITUDE  421352.37N/0832059.97W N | LAT/LONG         C         FO/FB         LEG         TC         DIST (NM)         ALTITUDE         SPEED           421352.37N/0832059.97W         N         - | LATILONG   C   FOFF   TYPE   TC   NM   N   ALTITUDE   SPEED   CG 500 FT/NM TO 1146   CG 500 FT/M TO 1146   CG 500 FT | THREE                      |

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

| DP NAME     |                         |          |       |             |        |              | TURE (DAT |      | IPUTER CODE | SUPERSEDED NUMBER    | DATED      | <b>EFFECTIVE DATE</b> |
|-------------|-------------------------|----------|-------|-------------|--------|--------------|-----------|------|-------------|----------------------|------------|-----------------------|
| TRMML       |                         |          |       |             |        |              | THREE     |      | ML3.TRMML   | TWO                  | 08/15/2019 | 10 OCT 2019           |
| FIX/NAVAID  | LAT/LONG                | <u>C</u> | FO/FB | LEG<br>TYPE | TC     | DIST<br>(NM) | ALTITU    | JDE_ | SPEED       |                      | REMARKS    |                       |
|             | WILLOW RUN (KYIP)       |          |       |             |        |              |           |      |             |                      |            |                       |
| RW05L (AER) | 421355.86N/0833230.06W  | N        | -     | -           | -      | -            |           |      |             |                      |            |                       |
| 1220 MSL    | -                       | -        | -     | VA          | 046.71 | -            |           |      |             | CG 500 FT/NM TO 1220 |            |                       |
| -           | -                       | -        | -     | VM          | 293.00 | -            |           |      |             | LEFT TURN            |            |                       |
| RW05R (AER) | 421350.25N/0833223.46W  | N        | -     | -           | -      | -            |           |      |             |                      |            |                       |
| 1220 MSL    | -                       | -        | -     | VA          | 046.70 | -            |           |      |             | CG 500 FT/NM TO 1220 |            |                       |
| -           | -                       | -        | -     | VM          | 293.00 | -            |           |      |             | LEFT TURN            |            |                       |
|             |                         |          |       |             |        |              |           |      |             |                      |            |                       |
| RW09 (AER)* | 421438.37N/0833228.33W* | N        | -     | -           | -      | -            |           |      |             | *DISPL THLD (576 FT) |            |                       |
| 1220 MSL    | -                       | -        | -     | VA          | 088.55 | -            |           |      |             | CG 500 FT/NM TO 1220 |            |                       |
| -           | -                       | -        | -     | VM          | 293.00 | -            |           |      |             | LEFT TURN            |            |                       |
|             |                         |          |       |             |        |              |           |      |             |                      |            |                       |
| RW23L (AER) | 421441.34N/0833110.47W  | N        | -     | -           | -      | -            |           |      |             |                      |            |                       |
| 1220 MSL    | -                       | -        | -     | VA          | 226.72 | -            |           |      |             | CG 500 FT/NM TO 1220 |            |                       |
| -           | -                       | -        | -     | VM          | 226.70 | -            |           |      |             |                      |            |                       |
|             |                         |          |       |             |        |              |           |      |             |                      |            |                       |
| RW23R (AER) | 421436.47N/0833132.03W  | N        | -     | -           | -      | -            |           |      |             |                      |            |                       |
| 1220 MSL    | -                       | -        | -     | VA          | 226.73 | -            |           |      |             | CG 500 FT/NM TO 1220 |            |                       |
| -           | -                       | -        | -     | VM          | 226.72 | -            |           |      |             |                      |            |                       |
|             |                         |          |       |             |        |              |           |      |             |                      |            |                       |
| RW27 (AER)  | 421440.03N/0833059.06W  | N        | -     | -           | -      | -            |           |      |             |                      |            | OUAL/7_               |
| 1220 MSL    | -                       | -        | -     | VA          | 268.57 | -            |           |      |             | CG 500 FT/NM TO 1220 |            | 05 17                 |
|             |                         |          |       |             |        |              |           |      |             |                      |            |                       |

CHECKED

# 08/14/2019

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

| DP NAME    |                        |          |       |             |           |              | NUMBER  | DP COMPUT  | ER CODE | SUPERSEDED NUMBER | DATED          | EFFECTIVE DATE |
|------------|------------------------|----------|-------|-------------|-----------|--------------|---------|------------|---------|-------------------|----------------|----------------|
| TRMML      |                        |          |       |             |           |              | THREE   | TRMML3.T   | RMML    | TWO               | 08/15/2019     | 10 OCT 2019    |
| FIX/NAVAID | LAT/LONG               | <u>C</u> | FO/FE | LEG<br>TYPE | <u>TC</u> | DIST<br>(NM) | ALTITU  | <u>UDE</u> | SPEED   |                   | <u>REMARKS</u> |                |
| -          | -                      | -        | -     | VM          | 268.56    | -            |         |            |         |                   |                |                |
|            |                        |          |       |             |           |              |         |            |         |                   |                |                |
| LOALA      | 425401.32N/0832208.62W | Υ        | -     | IF          | -         | -            | AT/ABOV | E 4000     |         |                   |                |                |
| TRMML      | 431218.76N/0832851.90W | Υ        | FB    | TF          | 344.96    | 18.94        |         |            |         |                   |                |                |
|            |                        |          |       |             |           |              |         |            |         |                   |                |                |
| TRMML      | 431218.76N/0832851.90W | Υ        | -     | IF          | -         | -            |         |            |         | TRMML2.GNZOE      |                |                |
| DDEEZ      | 433232.50N/0833609.08W | Υ        | FB    | TF          | 345.32    | 20.91        |         |            |         |                   |                |                |
| GNZOE      | 434300.00N/0834000.00W | Υ        | FB    | TF          | 345.06    | 10.82        |         |            |         |                   |                |                |