

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

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CCOBB	TWO	CCOBB2.CCOBB	ONE	07/19/2018	15 AUG 2019
<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"/>

**DP ROUTE DESCRIPTION:**

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

**TAKEOFF RWY 3L:** CLIMB ON HEADING 035.71 TO INTERCEPT COURSE 334.68 TO CROSS NITRN AT OR ABOVE 2500 AND AT OR BELOW 230 KIAS, THEN ON TRACK 304.14 TO CROSS FERRM AT OR BELOW 6000, THEN ON TRACK 258.76 TO CROSS AVERL AT OR BELOW 7000, THEN ON TRACK 261.59 TO CROSS BROZZ AT OR ABOVE 4000, THENCE...

**TAKEOFF RWY 3R:** CLIMB ON HEADING 035.71 TO INTERCEPT COURSE 336.41 TO CROSS NITRN AT OR ABOVE 2500 AND AT OR BELOW 230 KIAS, THEN ON TRACK 304.14 TO CROSS FERRM AT OR BELOW 6000, THEN ON TRACK 258.76 TO CROSS AVERL AT OR BELOW 7000, THEN ON TRACK 261.59 TO CROSS BROZZ AT OR ABOVE 4000, 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 CROSS FERRM AT OR BELOW 6000, THEN ON TRACK 258.76 TO CROSS AVERL AT OR BELOW 7000, THEN ON TRACK 261.59 TO CROSS BROZZ AT OR ABOVE 4000, 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 CROSS FERRM AT OR BELOW 6000, THEN ON TRACK 258.76 TO CROSS AVERL AT OR BELOW 7000, THEN ON TRACK 261.59 TO CROSS BROZZ AT OR ABOVE 4000, THENCE...

**TAKEOFF RWY 21L:** CLIMB ON HEADING 215.72 TO INTERCEPT COURSE 242.73 TO CROSS SAAMS AT OR BELOW 7000, THEN ON TRACK 313.00 TO CROSS BSLNE AT OR BELOW 9000, THEN ON TRACK 312.87 TO FDRCH, THEN ON TRACK 278.51 TO CROSS BROZZ AT OR ABOVE 4000, THENCE...

**TAKEOFF RWY 21R:** CLIMB ON HEADING 215.72 TO INTERCEPT COURSE 240.34 TO CROSS SAAMS AT OR BELOW 7000, THEN ON TRACK 313.00 TO CROSS BSLNE AT OR BELOW 9000, THEN ON TRACK 312.87 TO FDRCH, THEN ON TRACK 278.51 TO CROSS BROZZ AT OR ABOVE 4000, THENCE...

**TAKEOFF RWY 22L:** CLIMB ON HEADING 215.71 TO INTERCEPT COURSE 239.20 TO CROSS SAAMS AT OR BELOW 7000, THEN ON TRACK 313.00 TO CROSS BSLNE AT OR BELOW 9000, THEN ON TRACK 312.87 TO FDRCH, THEN ON TRACK 278.51 TO CROSS BROZZ AT OR ABOVE 4000, THENCE...

**TAKEOFF RWY 22R:** CLIMB ON HEADING 215.69 TO INTERCEPT COURSE 237.67 TO CROSS SAAMS AT OR BELOW 7000, THEN ON TRACK 313.00 TO CROSS BSLNE AT OR BELOW 9000, THEN ON TRACK 312.87 TO FDRCH, THEN ON TRACK 278.51 TO CROSS BROZZ 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 BROZZ 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 BROZZ AT OR ABOVE 4000, THENCE...

...ON TRACK 278.63 TO CCOBB, 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 BROZZ 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 BROZZ 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 BROZZ 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 BROZZ 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 BROZZ 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 BROZZ AT OR ABOVE 4000, THENCE...

...ON TRACK 278.63 TO CCOBB, 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 BROZZ AT OR ABOVE 4000, THENCE...

**TAKEOFF RWY 24:** CLIMB ON HEADING 239.53 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS BROZZ AT OR ABOVE 4000, THENCE...

...ON TRACK 278.63 TO CCOBB, THEN ON (TRANSITION). MAINTAIN ATC ASSIGNED ALTITUDE, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.



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

- TAKEOFF RWY 7: CLIMB ON HEADING 068.30 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS BROZZ AT OR ABOVE 4000, THENCE...
- TAKEOFF RWY 15: CLIMB ON HEADING 148.32 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS BROZZ AT OR ABOVE 4000, THENCE...
- TAKEOFF RWY 25: CLIMB ON HEADING 248.31 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS BROZZ AT OR ABOVE 4000, THENCE...
- TAKEOFF RWY 33: CLIMB ON HEADING 328.33 TO 1800 THEN AS ASSIGNED FOR RADAR VECTORS TO CROSS BROZZ AT OR ABOVE 4000, THENCE...

...ON TRACK 278.63 TO CCOBB, 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 BROZZ AT OR ABOVE 4000, THENCE...
- TAKEOFF RWY 21: CLIMB ON HEADING 207.50 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS BROZZ AT OR ABOVE 4000, THENCE...

...ON TRACK 278.63 TO CCOBB, 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 BROZZ AT OR ABOVE 4000, THENCE...
- TAKEOFF RWY 17: CLIMB ON HEADING 173.78 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS BROZZ AT OR ABOVE 4000, THENCE...
- TAKEOFF RWY 22: CLIMB ON HEADING 217.34 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS BROZZ AT OR ABOVE 4000, THENCE...
- TAKEOFF RWY 35: CLIMB ON HEADING 005.78 TO 1800 THEN AS ASSIGNED FOR RADAR VECTORS TO CROSS BROZZ AT OR ABOVE 4000, THENCE...

...ON TRACK 278.63 TO CCOBB, 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 BROZZ AT OR ABOVE 4000, THENCE...
- TAKEOFF RWY 31: CLIMB ON HEADING 312.36 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS BROZZ AT OR ABOVE 4000, THENCE...

...ON TRACK 278.63 TO CCOBB, 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 BROZZ AT OR ABOVE 4000, THENCE...
- TAKEOFF RWY 9R: CLIMB ON HEADING 094.63 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS BROZZ AT OR ABOVE 4000, THENCE...
- TAKEOFF RWY 27L: CLIMB ON HEADING 274.65 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS BROZZ AT OR ABOVE 4000, THENCE...
- TAKEOFF RWY 27R: CLIMB ON HEADING 274.68 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS BROZZ AT OR ABOVE 4000, THENCE...

...ON TRACK 278.63 TO CCOBB, 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 BROZZ AT OR ABOVE 4000, THENCE...
- TAKEOFF RWY 27: CLIMB ON HEADING 275.72 TO 1500 THEN AS ASSIGNED FOR RADAR VECTORS TO CROSS BROZZ AT OR ABOVE 4000, THENCE...

...ON TRACK 278.63 TO CCOBB, THEN ON (TRANSITION). MAINTAIN ATC ASSIGNED ALTITUDE, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.



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**SELFRIDGE ANGB (KMTG):**

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

...ON TRACK 278.63 TO CCOBB, 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 BROZZ AT OR ABOVE 4000, THENCE...  
**TAKEOFF RWY 12:** CLIMB ON HEADING 122.61 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS BROZZ AT OR ABOVE 4000, THENCE...  
**TAKEOFF RWY 25:** CLIMB ON HEADING 249.56 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS BROZZ AT OR ABOVE 4000, THENCE...  
**TAKEOFF RWY 30:** CLIMB ON HEADING 302.60 OR AS ASSIGNED FOR RADAR VECTORS TO CROSS BROZZ AT OR ABOVE 4000, THENCE...

...ON TRACK 278.63 TO CCOBB, 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>
ZEGBI	CCOBB2.ZEGBI	CCOBB	ZEGBI	TRACK 278.40	31.33	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:** FOR USE BY AIRCRAFT FILED AT OR BELOW FL220, OR AS ASSIGNED BY ATC.
- NOTE:** CAUTION: PARACHUTE JUMPING 6 NM SW OF BROZZ, 3 NM RADIUS OF NAPOLEON AIRPORT (3NP) AT OR BELOW 17,999 (SR-SS).
- 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.



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**COLEMAN A YOUNG MUNI (KDET):**  
RWY 7, 15, 33: STANDARD.  
RWY 25: STANDARD WITH MINIMUM CLIMB OF 210 FEET PER NM TO 1000.

**CUSTER (KTF):**  
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)



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**SELFRIDGE ANGB (KMTC):**  
RWY 19: 1246 FT MSL TOWER 423315.00N/0825315.00W

**LOST COMMUNICATIONS PROCEDURES:**

**ADDITIONAL FLIGHT DATA:**

CHART: TOP ALTITUDE: KDTW 17000.  
CHART: TOP ALTITUDE: ALL OTHER AIRPORTS ASSIGNED BY ATC  
**KDTW CHART:** SEE ADDITIONAL REQUIREMENTS IN RNAV DEPARTURE AAUP.  
REFERENCE MAG VAR; KDTW 7W/2020  
DME/DME ASSESSMENT: SAT (RNP 2.0)  
CHART: 3NP AS STANDALONE AIRPORT. (REF: CHART NOTE).

**AIRPORTS SERVED:**

<b>AIRPORT NAME</b>	<b>CITY</b>	<b>STATE</b>
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:**



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**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).

**FLIGHT INSPECTED BY:** *Digitally signed by*  
BRYAN VEIT **DONALD H LANIER**  
Jun 11, 2019

**OFFICE SYMBOL:** FICO  
**DATE:** 6/4/19

**DEVELOPED BY:** *Digitally signed by*  
CHRISTINE BAYSE **DONALD H LANIER**  
Jun 11, 2019

**OFFICE SYMBOL:** AJV-A432  
**DATE:** 03/07/2019

**APPROVED BY:** *Digitally signed by*  
LONNIE EVERHART **DONALD H LANIER**  
Jun 11, 2019

**OFFICE SYMBOL:** AJV-A430  
**DATE:**

**REQUIRED EFFECTIVE DATE:**

ROUTINE

**COORDINATED WITH:**

<b>A4A</b>	<b>ALPA</b>	<b>AOPA</b>	<b>APA</b>	<b>HAI</b>	<b>NBAA</b>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**OTHER:**

ZOB, DTW APP CON, AMGR

**CHANGES - REASONS:**

1. CHANGED TOP ALTITUDE TO 17000 FOR KDTW. - INDUSTRY REQUEST TO REDUCE CONFUSION.
2. CHANGED KDTW DEPARTURE ROUTE DESCRIPTION FROM "MAINTAIN ATC ASSIGNED ALTITUDE..." TO "MAINTAIN 17000 OR AS ASSIGNED BY ATC...". - INDUSTRY REQUEST TO REDUCE CONFUSION.
3. MOVE SAAMS FIX 2.59 NM SW. - DECONFLICT SID FROM OTHER PROCEDURES.
4. ADD SAAMS- BROZZ TF LEG TO RWY 21L/R AND 22L/R TRANSITIONS. - DECONFLICT SID FROM OTHER PROCEDURES.
5. ADD BSLNE AT OR ABOVE 9000 AND FDRCH WAYPOINTS. - DECONFLICT SID FROM OTHER OPERATIONS.
6. MOVE BROZZ 1.36 NM N. - DECONFLICT SID FROM PARACHUTE OPERATIONS.
7. MOVE CCOBB 1.49 NM N. - DECONFLICT FROM PARACHUTE OPERATIONS.
8. DELETE TYGRS AND BLURZ TRANSITIONS AND ADDED ZEGBI TRANSITION. - DECONFLICT SID FROM PARACHUTE OPERATIONS.
9. ADD CHART NOTE: "FOR USE BY AIRCRAFT FILED AT OR BELOW FL220, OR AS ASSIGNED BY ATC". - RESTRICT USE OF PROCEDURE TO AIRCRAFT FILED FL220 AND BELOW.
10. ADD CHART NOTE: CAUTION: PARACHUTE JUMPING 6 NM SW OF BROZZ, 3 NM RADIUS OF NAPOLEON AIRPORT (3NP) AT OR BELOW 17,999 (SR-SS). - ALERT PILOTS TO NEARBY PARACHUTE OPERATIONS.
11. CHANGE ALL VI LEGS TO MINIMUM ALLOWABLE LENGTH. - REDUCE DRIFT ON INITIAL CLIMB OUT.
12. MOVE NITRN 0.8 NM N. - REDUCE DRIFT ON INITIAL CLIMB OUT.
13. ADD AT OR ABOVE 2500 AND AT OR BELOW 230 KIAS RESTRICTION AT NITRN. - REDUCE DRIFT ON INITIAL CLIMB OUT.
14. ADD CHART NOTE: KDTW/KYIP DEPARTURES: IF UNABLE TO ACCEPT 500 FT PER NM CLIMB RATE, ADVISE CLEARANCE DELIVERY ON INITIAL CONTACT. - ENSURE PILOTS ARE AWARE OF REQUIREMENTS.
15. ADD KDTW CHART: SEE ADDITIONAL REQUIREMENTS IN RNAV DEPARTURE AAUP. - ENSURE PILOTS ARE AWARE OF REQUIREMENTS.



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16. ADD CHART: 3NP AS STANDALONE AIRPORT (REF: CHART NOTE) IN ADDITIONAL FLIGHT DATA. -ENSURE AIRPORT IS CHARTED. 17. UPDATED DP ROUTE DESCRIPTION KDTW RWY 3L INTERCEPT COURSE FROM "322.95 TO NITRN" TO "334.68 TO CROSS NITRN".- NITRN MOVED AND VI-CF MINIMUM. 18. UPDATED DP ROUTE DESCRIPTION KDTW RWY 3R INTERCEPT COURSE FROM "326.00 TO NITRN" TO "336.41 TO CROSS NITRN".- NITRN MOVED AND VI-CF MINIMUM. 19. UPDATED DP ROUTE DESCRIPTION KDTW RWY 4L INTERCEPT COURSE FROM "337.25 TO NITRN" TO "347.26 TO CROSS NITRN".- NITRN MOVED AND VI-CF MINIMUM. 20. UPDATED DP ROUTE DESCRIPTION KDTW RWY 4R INTERCEPT COURSE FROM "327.10 TO NITRN" TO "339.14 TO CROSS NITRN".- NITRN MOVED AND VI-CF MINIMUM. 21. UPDATED DP ROUTE DESCRIPTION KDTW RWY 3L, 3R, 4L, 4R FROM "TRACK 309.54 TO CROSS FERRM... ON TRACK 258.61 TO CROSS BROZZ" TO "TRACK 304.14 TO CROSS FERRM... ON TRACK 261.59 TO CROSS BROZZ". - NITRN AND BROZZ MOVED. 22. UPDATED DP ROUTE DESCRIPTION KDTW RWY 21L INTERCEPT COURSE FROM "245.60 TO CROSS SAAMS" TO "242.73 TO CROSS SAAMS". - SAAMS MOVED AND VI-CF MINIMUM. 23. UPDATED DP ROUTE DESCRIPTION KDTW RWY 21R INTERCEPT COURSE FROM "242.36 TO CROSS SAAMS" TO "240.34 TO CROSS SAAMS".- SAAMS MOVED AND VI-CF MINIMUM. 24. UPDATED DP ROUTE DESCRIPTION KDTW RWY 22L INTERCEPT COURSE FROM "241.00 TO CROSS SAAMS" TO "239.20 TO CROSS SAAMS".- SAAMS MOVED AND VI-CF MINIMUM. 25. UPDATED DP ROUTE DESCRIPTION KDTW RWY 22R INTERCEPT COURSE FROM "239.05 TO CROSS SAAMS" TO "237.67 TO CROSS SAAMS".- SAAMS MOVED AND VI-CF MINIMUM. 26. UPDATED DP ROUTE DESCRIPTION KDTW RWY 27L AND 27R CLIMB TO ALTITUDE FROM "1160" TO "1146". - UPDATED CLIMB GRADIENT TERMINATION ALTITUDE. 27. UPDATED DP ROUTE DESCRIPTION ALL AIRPORTS FROM "...ON TRACK 277.84 TO CCOBB, THEN ON (TRANSITION)" TO "...ON TRACK 278.63 TO CCOBB, THEN ON (TRANSITION)". - CCOBB MOVED. 28. UPDATED TAKEOFF MINIMUMS KDTW FROM "RWY 3L, 3R, 4L, 4R, 21L, 21R: STANDARD" AND "RWY 22L, 22R, 27L, 27R: STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 1160" TO "RWY 3L, 3R, 4L, 4R, 21L, 21R, 22L, 22R, 27L, 27R: STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 1146". - ALL RUNWAYS ARE 500 FT PER NM TO 500 FT ABOVE FOR LNAV ENGAGEMENT. 29. UPDATED RECOMMENDED NAVAID FROM AIR VOR/DME TO ECK TACAN ON 8260-15C. - NAVAID CLOSER TO AIRPORT.					



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<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 METROPOLITAN WAYNE COUNTY (KDTW)								
RW03L (AER)	421228.21N/0832104.39W	N	-	-	-	-			CG 500 FT/NM TO 1146.
-	421436.02N/0831930.16W	-	-	VI	028.71	2.43			
NITRN	421943.95N/0832352.28W	Y	FB	CF	327.68	6.07	AT/ABOVE 2500	AT/BELOW 230K	RECOMMENDED NAVAID: ECK TACAN
FERRM	422158.09N/0832945.62W	Y	FB	TF	297.14	4.91	AT/BELOW 6000		
AVERL	421955.54N/0833805.48W	Y	FB	TF	251.76	6.51	AT/BELOW 7000		
BROZZ	421327.81N/0840917.61W	Y	FB	TF	254.59	24.05	AT/ABOVE 4000		
RW03R (AER)	421144.21N/0832106.49W	N	-	-	-	-			CG 500 FT/NM TO 1146.
-	421404.99N/0831922.74W	-	-	VI	028.71	2.67			
NITRN	421943.95N/0832352.28W	Y	FB	CF	329.41	6.56	AT/ABOVE 2500	AT/BELOW 230K	RECOMMENDED NAVAID: ECK TACAN
FERRM	422158.09N/0832945.62W	Y	FB	TF	297.14	4.91	AT/BELOW 6000		
AVERL	421955.54N/0833805.48W	Y	FB	TF	251.76	6.51	AT/BELOW 7000		
BROZZ	421327.81N/0840917.61W	Y	FB	TF	254.59	24.05	AT/ABOVE 4000		
RW04L (AER)	421207.82N/0832302.40W	N	-	-	-	-			CG 500 FT/NM TO 1146.
-	421427.54N/0832119.53W	-	-	VI	028.68	2.65			
NITRN	421943.95N/0832352.28W	Y	FB	CF	340.26	5.60	AT/ABOVE 2500	AT/BELOW 230K	RECOMMENDED NAVAID: ECK TACAN
FERRM	422158.09N/0832945.62W	Y	FB	TF	297.14	4.91	AT/BELOW 6000		
AVERL	421955.54N/0833805.48W	Y	FB	TF	251.76	6.51	AT/BELOW 7000		
BROZZ	421327.81N/0840917.61W	Y	FB	TF	254.59	24.05	AT/ABOVE 4000		

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CCOBB		TWO	CCOBB2.CCOBB	ONE	07/19/2018	15 AUG 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>
RW04R (AER)*	421212.78N/0832213.32W*	N	-	-	-	-			*DISPL THLD (509 FT)
-	421446.08N/0832020.37W	-	-	VI	028.70	2.91			CG 500 FT/NM TO 1146.
NITRN	421943.95N/0832352.28W	Y	FB	CF	332.14	5.61	AT/ABOVE 2500	AT/BELOW 230K	RECOMMENDED NAVAID: ECK TACAN
FERRM	422158.09N/0832945.62W	Y	FB	TF	297.14	4.91	AT/BELOW 6000		
AVERL	421955.54N/0833805.48W	Y	FB	TF	251.76	6.51	AT/BELOW 7000		
BROZZ	421327.81N/0840917.61W	Y	FB	TF	254.59	24.05	AT/ABOVE 4000		
RW21L (AER)	421310.86N/0832002.65W	N	-	-	-	-			CG 500 FT/NM TO 1146.
-	421050.18N/0832146.27W	-	-	VI	208.72	2.67			
SAAMS	420303.12N/0833709.78W	Y	FB	CF	235.73	13.85	AT/BELOW 7000		RECOMMENDED NAVAID: ECK TACAN
BSLNE	420911.22N/0834831.76W	Y	FB	TF	306.00	10.45	AT/BELOW 9000		
FDRCH	421313.04N/0835602.14W	Y	FB	TF	305.87	6.88			
BROZZ	421327.81N/0840917.61W	Y	FB	TF	271.51	9.85	AT/ABOVE 4000		
RW21R (AER)	421341.85N/0832010.12W	N	-	-	-	-			CG 500 FT/NM TO 1146.
-	421134.48N/0832143.96W	-	-	VI	208.72	2.42			
SAAMS	420303.12N/0833709.78W	Y	FB	CF	233.34	14.30	AT/BELOW 7000		RECOMMENDED NAVAID: ECK TACAN
BSLNE	420911.22N/0834831.76W	Y	FB	TF	306.00	10.45	AT/BELOW 9000		
FDRCH	421313.04N/0835602.14W	Y	FB	TF	305.87	6.88			
BROZZ	421327.81N/0840917.61W	Y	FB	TF	271.51	9.85	AT/ABOVE 4000		

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<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)	421352.37N/0832059.97W	N	-	-	-	-			CG 500 FT/NM TO 1146.
-	421114.77N/0832256.02	-	-	VI	208.71	2.99			
SAAMS	420303.12N/0833709.78W	Y	FB	CF	232.20	13.39	AT/BELOW 7000		RECOMMENDED NAVAID: ECK TACAN
BSLNE	420911.22N/0834831.76W	Y	FB	TF	306.00	10.45	AT/BELOW 9000		
FDRCH	421313.04N/0835602.14W	Y	FB	TF	305.87	6.88			
BROZZ	421327.81N/0840917.61W	Y	FB	TF	271.51	9.85	AT/ABOVE 4000		
RW22R (AER)	421334.48N/0832158.61W	N	-	-	-	-			CG 500 FT/NM TO 1146.
-	421115.08N/0832341.20W	-	-	VI	208.69	3.65			
SAAMS	420303.12N/0833709.78W	Y	FB	CF	230.67	12.95	AT/BELOW 7000		RECOMMENDED NAVAID: ECK TACAN
BSLNE	420911.22N/0834831.76W	Y	FB	TF	306.00	10.45	AT/BELOW 9000		
FDRCH	421313.04N/0835602.14W	Y	FB	TF	305.87	6.88			
BROZZ	421327.81N/0840917.61W	Y	FB	TF	271.51	9.85	AT/ABOVE 4000		
RW27L (AER)	421158.34N/0831949.33W	N	-	-	-	-			
1146 MSL	-	-	-	VA	268.73	-			CG 500 FT/NM TO 1146.
-	-	-	-	VM	268.71	-			
RW27R (AER)	421303.02N/0831951.72W	N	-	-	-	-			
1146 MSL	-	-	-	VA	268.72	-			CG 500 FT/NM TO 1146.
-	-	-	-	VM	268.70	-			

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FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	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	-			

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<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>
RW27 (AER)	421440.03N/0833059.06W	N	-	-	-	-			
1220 MSL	-	-	-	VA	268.57	-			CG 500 FT/NM TO 1220
-	-	-	-	VM	268.56	-			
BROZZ	421327.81N/0840917.61W	Y	-	IF	-	-	AT/ABOVE 4000		
CCOBB	421344.05N/0842244.76W	Y	FB	TF	271.63	10.00			
CCOBB	421344.05N/0842244.76W	Y	-	IF	-	-			CCOBB2.ZEGBI
ZEGBI	421422.22N/0850455.14W	Y	FB	TF	271.40	31.33			

