

## U.S. DEPARTMENT of TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION

### GRAPHIC DEPARTURE PROCEDURE (DP)

Bearings, headings, courses, tracks, and radials are magnetic. Elevation and altitudes are in feet MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation.  
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DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
AKRON	FIVE	ACO5.ACO	FOUR	05 MAR 15	30 APR 2015

**TYPE:** SID

#### DP ROUTE DESCRIPTION:

**DEPARTING DETROIT METROPOLITAN WAYNE COUNTY: TAKEOFF ALL RUNWAYS:** CLIMB ON ASSIGNED HEADING FOR RADAR VECTORS TO INTERCEPT DXO VOR/DME R-106 TO SPHRE INT, THEN ON ACO R-329 TO ACO VOR/DME. WHEN THE ATC ASSIGNED ALTITUDE IS AT OR ABOVE 5000, CROSS DXO 10 DME ARC AT OR ABOVE 5000 FOR NOISE ABATEMENT. IF UNABLE TO COMPLY, ADVISE ATC PRIOR TO DEPARTURE. EXPECT CLEARANCE TO FILED ALTITUDE/FLIGHT LEVEL TEN (10) MINUTES AFTER DEPARTURE.

**DEPARTING ANN ARBOR MUNI: TAKEOFF RUNWAYS 6/24:** CLIMB ON ASSIGNED HEADING FOR RADAR VECTORS, THENCE...

**DEPARTING OAKLAND COUNTY INTL: TAKEOFF RUNWAYS 9L/R AND 27L/R:** CLIMB ON ASSIGNED HEADING FOR RADAR VECTORS, THENCE...

**DEPARTING COLEMAN A. YOUNG MUNI: TAKEOFF RUNWAY 33:** CLIMB HEADING 328.33 TO 1800 BEFORE TURNING. EXPECT RADAR VECTORS, THENCE...  
**TAKEOFF ALL OTHER RUNWAYS:** CLIMB ON ASSIGNED HEADING FOR RADAR VECTORS, THENCE...

**DEPARTING WILLOW RUN: TAKEOFF ALL RUNWAYS:** CLIMB ON ASSIGNED HEADING FOR RADAR VECTORS, THENCE...

...TO INTERCEPT DXO VOR/DME R-106 TO SPHRE INT, THEN ON ACO R-329 TO ACO VOR/DME. MAINTAIN 3000, EXPECT CLEARANCE TO FILED ALTITUDE/FLIGHT LEVEL TEN (10) MINUTES AFTER DEPARTURE.

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

Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	Crossing Altitudes/Fixes

#### PROCEDURAL DATA NOTES/TAKEOFF MINIMUMS:

**NOTE:** RADAR REQUIRED.

**NOTE:** DME REQUIRED.

#### **SPECIAL INSTRUCTIONS:**

**ALL AIRPORTS:** WHEN USING THIS DEPARTURE, FILE THE APPROPRIATE DEPICTED FIX AND ROUTE. TURBOJET DEPARTURES AT/ABOVE 10000, MAINTAIN 280K UNTIL ADVISED BY ATC.

**DETROIT METROPOLITAN WAYNE COUNTY: RWY 3R, 3L, 4R, 4L, 9R, 9L, 21R, 21L, 22R, 22L, 27R, 27L, STANDARD.**

**ANN ARBOR MUNI: RWY 12, 30, NA - ENVIRONMENTAL. RWY 06, 24, STANDARD.**

**OAKLAND COUNTY INTL: RWY 18, 36, NA - ENVIRONMENTAL. RWY 9R, 9L, 27R, 27L, STANDARD.**

**COLEMAN A. YOUNG MUNI: RWY 7, 15, 33, STANDARD. RWY 25, STANDARD WITH A MINIMUM CLIMB OF 215 FEET PER NM TO 1400, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FEET PER NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1300 FEET PRIOR TO DEPARTURE END OF RUNWAY.**



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AKRON	FIVE	ACO5.ACO	FOUR	05 MAR 15	30 APR 2015

**WILLOW RUN: RWY 05R, 05L, 09, 23R, 23L, STANDARD. RWY 27, 300-1 1/2 OR STANDARD WITH A MINIMUM CLIMB OF 206 FEET PER NM TO 1000, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FEET PER NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1300 FEET PRIOR TO DEPARTURE END OF RUNWAY.**

### TAKEOFF OBSTACLES NOTES:

**DETROIT METROPOLITAN WAYNE COUNTY: NOTE: RWY 3R, HEADWALL 399 FT FROM DER, 566 FT RIGHT OF CENTERLINE, 17 FT AGL/647 FT MSL. NOTE: RWY 3L, TREE 3794 FT FROM DER, 1441 FT LEFT OF CENTERLINE, 100 FT AGL/734 FT MSL. NOTE: RWY 4R, TREES BEGINNING 2850 FT FROM DER, 1058 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/744 FT MSL. ANTENNA ON BUILDING 3348 FT FROM DER, 1301 FT LEFT OF CENTERLINE, 100 FT AGL/736 FT MSL. NOTE: RWY 4L, TRANSMISSION TOWERS BEGINNING 1516 FT FROM DER, 827 FT LEFT OF CENTERLINE, UP TO 60 FT AGL/690 FT MSL. RODS ON TOWERS BEGINNING 2751 FT FROM DER, 762 FT RIGHT OF CENTERLINE, UP TO 41 FT AGL/714 FT MSL. NOTE: RWY 9R, TREES BEGINNING 1172 FT FROM DER, 686 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/729 FT MSL. NOTE: RWY 9L, TREES BEGINNING 968 FT FROM DER, 461 FT LEFT OF CENTERLINE, UP TO 15 FT AGL/682 FT MSL. TREES BEGINNING 987 FT FROM DER, 607 FT RIGHT OF CENTERLINE, UP TO 45 FT AGL/715 FT MSL. NOTE: RWY 21R, TREE 1963 FT FROM DER, 554 FT LEFT OF CENTERLINE, 100 FT AGL/739 FT MSL. TREES BEGINNING 2468 FT FROM DER, 721 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/739 FT MSL. NOTE: RWY 21L, TREES BEGINNING 1079 FT FROM DER, 586 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/ 739 FT MSL. TREE 3910 FT FROM DER, 1188 FT RIGHT OF CENTERLINE, 101 FT AGL/733 FT MSL. NOTE: RWY 22R, TREES BEGINNING 1014 FT FROM DER, 729 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/749 FT MSL. TREES BEGINNING 1039 FT FROM DER, 680 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/749 FT MSL. NOTE: RWY 22L, BUSH 514 FT FROM DER, 619 FT RIGHT OF CENTERLINE, 17 FT AGL/652 FT MSL. TREES BEGINNING 794 FT FROM DER, 611 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/739 FT MSL. TREES BEGINNING 1726 FT FROM DER, 921 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/744 FT MSL. NOTE: RWY 27R, TREES BEGINNING 2998 FT FROM DER, 949 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/754 FT MSL. ROD ON OL ASR 4461 FT FROM DER, 464 FT LEFT OF CENTERLINE, 106 FT AGL/756 FT MSL. TREES BEGINNING 3289 FT FROM DER, 1239 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/744 FT MSL. NOTE: RWY 27L, TREES BEGINNING 2623 FT FROM DER, 693 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/744 FT MSL. TREE 3589 FT FROM DER, 777 FT RIGHT OF CENTERLINE, 100 FT AGL/739 FT MSL.**

**ANN ARBOR MUNI: NOTE: RWY 6, BUILDING AND MULTIPLE POLES BEGINNING 312 FT FROM DER, 385 FT RIGHT OF CENTERLINE, UP TO 24 FT AGL/853 FT MSL. MULTIPLE TREES BEGINNING 538 FT FROM DER, 47 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/929 FT MSL. BUILDING 99 FT FROM DER, 351 FT LEFT OF CENTERLINE, 22 FT AGL/849 FT MSL. MULTIPLE TREES BEGINNING 634 FT FROM DER, 182 FT LEFT OF CENTERLINE, UP TO 58 FT AGL/887 FT MSL. NOTE: RWY 24, TERRAIN 138 FT FROM DER, 475 FT RIGHT OF CENTERLINE, 837 FT MSL. MULTIPLE TREES BEGINNING 462 FT FROM DER, 486 FT RIGHT OF CENTERLINE, UP TO 50 FT AGL/885 FT MSL. MULTIPLE TREES BEGINNING 479 FT FROM DER, 473 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/926 FT MSL.**

**OAKLAND COUNTY INTL: NOTE: RWY 9R, ANTENNA ON HANGER 870 FT FROM DER, 732 FT RIGHT OF CENTERLINE, 36 FT AGL/1006 FT MSL. TREES BEGINNING 1136 FT FROM DER, 480 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/1079 FT MSL. TREES BEGINNING 1383 FT FROM DER, 646 FT LEFT OF CENTERLINE, UP TO 41 FT AGL/1011 FT MSL. NOTE: RWY 9L, HANGARS BEGINNING 203 FT FROM DER, 510 FT LEFT OF CENTERLINE, UP TO 30 FT AGL/1000 FT MSL. TREES BEGINNING 3347 FT FROM DER, 1252 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/1089 FT MSL. NOTE: RWY 27R, VEHICLE ON ROAD 416 FT FROM DER, 24 FT RIGHT OF CENTERLINE, 15 FT AGL/992 FT MSL. TREES BEGINNING 451 FT FROM DER, 2 FT RIGHT OF CENTERLINE, UP TO 62 FT AGL/1041 FT MSL. TREES BEGINNING 1234 FT FROM DER, 19 FT LEFT OF CENTERLINE, UP TO 36 FT AGL/1015 FT MSL. NOTE: RWY 27L, VEHICLE ON ROAD 401 FT FROM DER, 539 FT LEFT OF CENTERLINE, 15 FT AGL/991 FT MSL. VEHICLE ON ROAD 417 FT FROM DER, 574 FT RIGHT OF CENTERLINE, 15 FT AGL/992 FT MSL. TREES BEGINNING 452 FT FROM DER, 552 FT RIGHT OF CENTERLINE, UP TO 23 FT AGL/1002 FT MSL. TREES BEGINNING 565 FT FROM DER, 521 FT LEFT OF CENTERLINE, UP TO 76 FT AGL/1046 FT MSL.**

**COLEMAN A. YOUNG MUNI: NOTE: RWY 7, MULTIPLE POLES, LIGHTS AND TREES, STACK AND ANTENNA BEGINNING 132 FT FROM DER, FROM 405 FT LEFT TO 314 FT RIGHT OF CENTERLINE, UP TO 60 FT AGL/687 FT MSL. NOTE: RWY 15, TREES, ANTENNA ON BLDG, AND OB LIGHT ON BLDG BEGINNING 299 FT FROM DER, 289 FT RIGHT OF CENTERLINE, UP TO 68 FT AGL/692 FT MSL. TREES AND ROD, ANTENNA, PIPE AND FLOODLIGHT ON BUILDINGS, BEGINNING 450 FT FROM DER, 221 FT LEFT OF CENTERLINE, UP TO 78 FT AGL/692 FT MSL. TOWER 3375 FT FROM DER, 1117 FT RIGHT OF CENTERLINE, 103 FT AGL/723 FT MSL. BUILDING 3748 FT FROM DER, 569 FT LEFT OF CENTERLINE, 114 FT AGL/723 FT MSL. NOTE: RWY 25, RAILROAD, OBSTRUCTION LIGHTS ON BUILDINGS AND STACKS, TREES AND STACK BEGINNING 1 FT FROM DER, 12 FT LEFT OF CENTERLINE, UP TO 76 FT AGL/703 FT MSL. TREES AND LIGHT BEGINNING 334 FT FROM DER, 132 FT RIGHT OF CENTERLINE, UP TO 58 FT AGL/685 FT MSL. TOWER 2827 FT FROM DER, 1225 FT LEFT OF CENTERLINE, 141 FT AGL/770 FT MSL. STACK 1.5 NM FROM DER, 2,414 FT LEFT OF CENTERLINE, 241 FT AGL/872 FT MSL. NOTE: RWY 33, TREES BEGINNING 113 FT FROM DER, 118 FT LEFT OF CENTERLINE, UP TO 73 FT AGL/694 FT MSL. TREES BEGINNING 572 FT FROM DER, 84 FT RIGHT OF CENTERLINE, UP TO 92 FT AGL/709 FT MSL. FLAG POLE 963 FT FROM DER, 379 FT LEFT OF CENTERLINE, 28 FT AGL/658 FT MSL.**

QUALITY  
17  
CHECKED

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AKRON	FIVE	ACO5.ACO	FOUR	05 MAR 15	<b>30 APR 2015</b>

**WILLOW RUN: NOTE: RWY 5R**, TREES BEGINNING 1877 FT FROM DER, 803 FT RIGHT OF CENTERLINE, UP TO 78 FT AGL/763 FT MSL. TREES BEGINNING 2028 FT FROM DER, 134 FT LEFT OF CENTERLINE, UP TO 80 FT AGL/777 FT MSL. **NOTE: RWY 5L**, TREES BEGINNING 2091 FT FROM DER, 224 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/809 FT MSL. **NOTE: RWY 23R**, SIGN 73 FT FROM DER, 255 FT LEFT OF CENTERLINE, 10 FT AGL/718 FT MSL. VEHICLE ON ROAD, 587 FT FROM DER, 294 FT RIGHT OF CENTERLINE, 15 FT AGL/732 FT MSL. TREES BEGINNING 1020 FT FROM DER, 281 FT RIGHT OF CENTERLINE, UP TO 60 FT AGL/793 FT MSL. TREE 1333 FT FROM DER, 316 FT LEFT OF CENTERLINE, 55 FT AGL/757 FT MSL. **NOTE: RWY 23L**, SIGN 44 FT FROM DER, 499 FT RIGHT OF CENTERLINE, 8 FT AGL/718 FT MSL. TREE 1304 FT FROM DER, 438 FT RIGHT OF CENTERLINE, 42 FT AGL/757 FT MSL. TREE 2457 FT FROM DER, 720 FT LEFT OF CENTERLINE, 66 FT AGL/781 FT MSL. **NOTE: RWY 27**, TREE AND POLES BEGINNING 102 FT FROM DER, 353 FT RIGHT OF CENTERLINE, UP TO 56 FT AGL/771 FT MSL. RAILROAD AND LIGHTS BEGINNING 564 FT FROM DER, 4 FT LEFT OF CENTERLINE, UP TO 55 FT AGL/770 FT MSL. LIGHT ON BUILDING 724 FT FROM DER, 333 FT LEFT OF CENTERLINE, 35 FT AGL 746 FT MSL. TOWER 7161 FT FROM DER, 502 FT LEFT OF CENTERLINE, 162 FT AGL/900 FT MSL.

**CONTROLLING OBSTACLES:**

**COLEMAN A. YOUNG MUNI: RWY 25:** 1143 FT MSL BUILDING 422209.00N/0830437.00W. **RWY 33:** 1749 FT MSL TOWER 422653.00N/0831023.00W.MSL.

**WILLOW RUN: RWY 27:** 900 FT MSL TOWER 421431.51N/0833410.97W.

**LOST COMMUNICATIONS PROCEDURES:**

**ADDITIONAL FLIGHT DATA:**

CHART: VEELA DXO R-106/28 DME AND MAARS DXO R-106/40 DME.  
 CHART: DXO 59 DME AND ACO 68 DME AT SPHRE.  
 CHART: MEA FROM MAARS TO SPHRE, 9000. MEA FROM SPHRE TO ACO VOR/DME, 9000.  
 DETROIT METROPOLITAN WAYNE COUNTY: CHART: DXO 10 DME ARC AROUND DXO VOR/DME.  
ANN ARBOR MUNI - CHART: TOP ALTITUDE: 3000  
DETROIT METROPOLITAN WAYNE COUNTY- CHART: TOP ALTITUDE: ASSIGNED BY ATC  
COLEMAN A. YOUNG MUNI - CHART: TOP ALTITUDE: 3000  
OAKLAND COUNTY INTL - CHART: TOP ALTITUDE: 3000  
WILLOW RUN - CHART: TOP ALTITUDE: 3000

**AIRPORTS SERVED:**

DETROIT METROPOLITAN WAYNE COUNTY	DETROIT, MI
COLEMAN A. YOUNG MUNI	DETROIT, MI
WILLOW RUN	DETROIT, MI
ANN ARBOR MUNI	ANN ARBOR, MI
OAKLAND COUNTY INTL	PONTIAC, MI

**COMMUNICATIONS:**

**ATIS:** DTW, ARB, PTK, DET, YIP. **CLNC DEL:** DTW, ARB, PTK. **GND CON:** DTW (EAST, WEST), ARB, PTK, DET, YIP. **TOWER:** DTW (EAST, WEST), ARB, PTK, DET, YIP. **DETROIT DEP CON:** ARB 118.95, 239.275, PTK 127.5, 239.275, DET 126.85, 239.275, YIP 118.95, 239.275, **CTAF:** ARB, PTK.

**FIXES AND/OR NAVAIDS:**

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**REMARKS:**



**COORDINATED WITH:**

ATA, ALPA, APA, AOPA, NBAA, DTW APP CON, ZOB, AMGR

**CHANGES:**

1. REMOVED ALL REFERENCE TO KYIP RUNWAY 14/32.

**REASONS:**

1. RUNWAY REMOVED PER FPT.