

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.
 Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated. Graphic depictions attached.

| DP Name | Number | DP Computer Code | Superseded Number | Dated | Effective Date |
|---------|--------|------------------|-------------------|------------|----------------|
| SMERF | SIX | SMERF6.SMERF | FIVE | 05/02/2013 | 22 AUG 2013 |

TYPE: RNAV SID

DP ROUTE DESCRIPTION:

TAKEOFF RWY 22, 35: CLIMB ON ASSIGNED HEADING FOR RADAR VECTORS THENCE ...

TAKEOFF RWY 12L/12R: FOR ASSIGNED HEADINGS FROM 060 CW TO 100, CROSS MSP VOR/DME 7.00 DME ARC AT OR ABOVE 3500, MAINTAIN ASSIGNED ALTITUDE. IF UNABLE TO COMPLY, ADVISE ATC AS SOON AS POSSIBLE PRIOR TO DEPARTURE THENCE ...

TAKEOFF RWY 17: FOR ASSIGNED HEADINGS FROM 230 CW TO 285, CROSS MSP VOR/DME 7.00 DME ARC AT OR ABOVE 3500, MAINTAIN ASSIGNED ALTITUDE. IF UNABLE TO COMPLY, ADVISE ATC AS SOON AS POSSIBLE PRIOR TO DEPARTURE THENCE ...

TAKEOFF RWY 30 L/R: FOR ASSIGNED HEADINGS FROM 220 CW TO 360, CROSS MSP VOR/DME 7.00 DME ARC AT OR ABOVE 3500, MAINTAIN ASSIGNED ALTITUDE. IF UNABLE TO COMPLY, ADVISE ATC AS SOON AS POSSIBLE PRIOR TO DEPARTURE THENCE ...

TAKEOFF RWY 4: CLIMB HEADING 045.00 TO 2100 THENCE ...

... EXPECT RADAR VECTORS TO ZOGAP, THEN ON TRACK 289.11 TO PAGOZ AND ON TRACK 288.80 TO SMERF, TURBOJET AIRCRAFT MAINTAIN 7000 OR LOWER ASSIGNED ALTITUDE, ALL OTHER AIRCRAFT MAINTAIN 5000 OR LOWER ASSIGNED ALTITUDE. EXPECT FILED ALTITUDE/FLIGHT LEVEL 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: DME/DME/IRU OR GPS REQUIRED.

NOTE: RNAV 1.

NOTE: RADAR REQUIRED.

NOTE: FOR NON GPS EQUIPPED AIRCRAFT, FCM, DWN, BRD, AXN, ABR, ATY DME's MUST BE OPERATIONAL.

DEPARTURE CROSSING RESTRICTIONS: RWY 12 L/R REQUIRES AN ATC CLIMB GRADIENT OF 546 FT PER NM TO 3500. RWY 17 REQUIRES AN ATC CLIMB GRADIENT OF 465 FT PER NM TO 3500. RWY 30 L/R REQUIRES AN ATC CLIMB GRADIENT OF 380 FT PER NM TO 3500. CROSS PAGOZ AT OR ABOVE 5000.

TAKEOFF MINIMUMS:

RWY 4, 12R, 17, 22, 30L, 30R, STANDARD.

RWY 12L, 300-1 1/2 OR STANDARD WITH MINIMUM CLIMB OF 207 FT PER NM TO 1100, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT PER NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1300 FT PRIOR TO DER

RWY 35, STANDARD WITH MINIMUM CLIMB OF 219 FT PER NM TO 2100.

QUALITY
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TAKEOFF OBSTACLES NOTES:

NOTE: RWY 4, TREES BEGINNING 800 FT FROM DER, 301 FT LEFT OF CENTERLINE, UP TO 75 FT AGL/925 FT MSL. ROD ON BUILDING 2528 FT FROM DER, 1174 FT LEFT OF CENTERLINE, 78 FT AGL/922 FT MSL. FENCE BEGINNING 13 FT FROM DER, 486 FT LEFT OF CENTERLINE, UP TO 6 FT AGL/860 FT MSL. STACK 4535 FT FROM DER, 480 FT LEFT OF CENTERLINE, 139 FT AGL/949 FT MSL.

NOTE: RWY 12L, TREE 1.1 NM FROM DER, 1691 FT LEFT OF CENTERLINE, 92 FT AGL/991 FT MSL. LT POLE AND CAMERA ON WALL BEGINNING 398 FT FROM DER, 561 FT RIGHT OF CENTERLINE, UP TO 23 FT AGL/832 FT MSL.

NOTE: RWY 12R, TREE 1479 FT FROM DER, 561 FT LEFT OF CENTERLINE, 86 FT AGL/855 FT MSL. OL ON POLE 1002 FT FROM DER, 753 FT LEFT OF CENTERLINE, 53 FT AGL/852 FT MSL.

NOTE: RWY 17, POLE 409 FT FROM DER, 530 FT RIGHT OF CENTERLINE, 29 FT AGL/866 FT MSL. BUILDING 2619 FT FROM DER, 881 FT LEFT OF CENTERLINE, 97 FT AGL/918 FT MSL. BUILDING 1956 FT FROM DER, 904 FT LEFT OF CENTERLINE, 61 FT AGL/866 FT MSL. TREE 2619 FT FROM DER, ON CENTERLINE, 79 FT AGL/900 FT MSL.

NOTE: RWY 22, TREES BEGINNING 2659 FT FROM DER, 867 FT RIGHT OF CENTERLINE, 94 FT AGL/934 FT MSL.

NOTE: RWY 30L, ANTENNA ON TOWER 3555 FT FROM DER, 1334 FT LEFT OF CENTERLINE, 116 FT AGL/935 FT MSL.

NOTE: RWY 30R, BILLBOARD SIGN 1463 FT FROM DER, 848 FT RIGHT OF CENTERLINE, 31 FT AGL/880 FT MSL.

NOTE: RWY 35, TREES BEGINNING 2553 FT FROM DER, 770 FT RIGHT OF CENTERLINE, 100 FT AGL/919 FT MSL. TREES BEGINNING 1989 FT FROM DER, 194 FT LEFT OF CENTERLINE, UP TO 87 FT AGL/906 FT MSL. BUILDINGS BEGINNING 5.4 NM FROM DER, 1781 FT LEFT OF CENTERLINE, UP TO 889 FT AGL/1743 FT MSL.

PILOT NAVIGATION AREA

10 NM ARC CENTERED ON ZOGAP (IF) CW
FROM: POINT A (BEARING 244 DEGREES TO ZOGAP)
TO: POINT B (BEARING 334 DEGREES TO ZOGAP)
MINIMUM ALTITUDE 2900

CONTROLLING OBSTACLES:

RWY 12L: 991 FT MSL TREE 445233.26N/0931008.66W

RWY 35: 1743 FT MSL BLDG 445834.00N/0931621.00W

LOST COMMUNICATIONS PROCEDURES:**ADDITIONAL FLIGHT DATA:**

REFERENCE MAG VAR: KMSP 0E EPOCH YR: 2015
DME/DME/IRU ASSESSMENT: SAT (RNP 2.0)

AIRPORTS SERVED:

MINNEAPOLIS-ST PAUL INTERNATIONAL/WOLD CHAMBERLAIN

MINNEAPOLIS, MN.

COMMUNICATIONS:

ATIS, CLEARANCE DELIVERY, DEPARTURE CONTROL SOUTH OR EAST, DEPARTURE CONTROL NORTH OR WEST, ZMP, ATCT.



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| SMERF | SIX | SMERF6.SMERF | FIVE | 05/02/2013 | 22 AUG 2013 |

FIXES AND/OR NAVAIDS:

FCM VOR/DME

REMARKS:**REQUIRED EFFECTIVE DATE:**

ROUTINE

CHANGES:

1. TAKEOFF MINIMUMS: ADDED RWY 22, STANDARD.

REASONS:

1. TO MATCH FORM 8260.15A

QUALITY
9
CHECKED

DEPARTURE (DATA RECORD)

| DP Name | Number | DP Computer Code | Superseded Number | Dated | Effective Date |
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| SMERF | SIX | SMERF6.SMERF | FIVE | 05/02/2013 | 22 AUG 2013 |

| FIX/NAVAID | LAT/LONG | C | FO/FB | LEG TYPE | TC | DIST (NM) | ALTITUDE | SPEED | REMARKS |
|------------|------------------------|---|-------|-------------|--------|--------------|---------------|-------|---------|
| ZOGAP | 450517.00N/0935233.00W | Y | | IF | | | | | |
| PAGOZ | 451117.56N/0941715.85W | Y | FB | TF | 289.11 | 18.50 | AT/ABOVE 5000 | | |
| SMERF | 455515.82N/0973408.26W | Y | FB | TF | 288.80 | 145.15 | | | |

DEPARTURE (DATA RECORD)

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| SMERF | SIX | SMERF6.SMERF | FIVE | 05/02/2013 | 22 AUG 2013 |

ARINC PACKET - 424-18 - SID

[illegible][illegible][illegible][illegible]

QUALITY
1
CHECKED

DEPARTURE (DATA RECORD)

| DP Name | Number | DP Computer Code | Superseded Number | Dated | Effective Date |
|---------|--------|------------------|-------------------|------------|----------------|
| SMERF | SIX | SMERF6.SMERF | FIVE | 05/02/2013 | 22 AUG 2013 |

ARINC SUMMARY - 424-18 - SID

| ROUTES | TRANSITION | FIX | SEQ | USE | PATH | TURN | FO/FB | RNP | MAG (TRUE) | DISTANCE | ALTITUDE | SPEED |
|--------|------------|-------|-----|-----|------|------|-------|-----|------------|----------|----------|-------|
| | ALL | ZOGAP | 010 | | IF | | FB | | | | | |
| | ALL | PAGOZ | 020 | | TF | | FB | 1.0 | | | AA 05000 | |
| | ALL | SMERF | 030 | | TF | | FB | 1.0 | | | | |

| POINT DATA | WAYPOINT | LAT IN SECS | LONG IN SECS | LAT IN MINS | LONG IN MINS |
|------------|----------|-------------|--------------|-------------|--------------|
| | PAGOZ | N451117.56 | W0941715.85 | N4511.293 | W09417.264 |
| | SMERF | N455515.82 | W0973408.26 | N4555.264 | W09734.138 |
| | ZOGAP | N450517.00 | W0935233.00 | N4505.283 | W09352.550 |
| | RW04 | N445230.98 | W0931402.73 | N4452.516 | W09314.046 |
| | RW12L | N445334.63 | W0931315.57 | N4453.577 | W09313.260 |
| | RW12R | N445316.04 | W0931402.87 | N4453.267 | W09314.048 |
| | RW17 | N445315.91 | W0931432.11 | N4453.265 | W09314.535 |
| | RW22 | N445330.01 | W0931239.67 | N4453.500 | W09312.661 |
| | RW30L | N445224.68 | W0931204.27 | N4452.411 | W09312.071 |
| | RW30R | N445253.54 | W0931140.67 | N4452.892 | W09311.678 |
| | RW35 | N445158.24 | W0931411.92 | N4451.971 | W09314.199 |

RUNWAY DATA

| RWY | THRESHOLD ELEVATION | TCH |
|-------|------------------------|-----|
| RW04 | 00832 | 55 |
| RW12L | 00839 | 52 |
| RW12R | 00842 | 56 |
| RW17 | 00840 | 60 |
| RW22 | 00828 | 55 |
| RW30L | 00814 | 58 |
| RW30R | 00820 | 55 |
| RW35 | 00833 | 53 |

QUALITY
1
CHECKED