

**U.S. DEPARTMENT of TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION**  
**GRAPHIC DEPARTURE PROCEDURE (DP)**

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DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

**TYPE:** RNAV SID

**DP ROUTE DESCRIPTION:**

**DEPARTING GEORGE BUSH INTERCONTINENTAL/HOUSTON:** CLIMB ON ASSIGNED HEADING FOR RADAR VECTORS TO VUH VORTAC, MAINTAIN 4000 OR ATC ASSIGNED ALTITUDE ON DEPICTED ROUTE TO HOODO. THEN CROSS SBIRD AT OR ABOVE 11000 ON DEPICTED ROUTE TO BOWFN. THENCE...

**DEPARTING WILLIAM P. HOBBY:** CLIMB ON ASSIGNED HEADING FOR RADAR VECTORS TO VUH VORTAC, MAINTAIN 5000 OR ATC ASSIGNED ALTITUDE ON DEPICTED ROUTE TO HOODO. THEN CROSS SBIRD AT OR ABOVE 11000 ON DEPICTED ROUTE TO BOWFN. THENCE ...

**DEPARTING ELLINGTON FIELD:** CLIMB ON ASSIGNED HEADING FOR RADAR VECTORS TO VUH VORTAC, MAINTAIN 4000 OR ATC ASSIGNED ALTITUDE ON DEPICTED ROUTE TO HOODO. THEN CROSS SBIRD AT OR ABOVE 11000 ON DEPICTED ROUTE TO BOWFN. THENCE...

**ALL OTHER AIRPORTS:** WHEN ENTERING CONTROLLED AIRSPACE, CLIMB ON ASSIGNED HEADING FOR RADAR VECTORS TO VUH VORTAC, MAINTAIN 4000 OR ATC ASSIGNED ALTITUDE ON DEPICTED ROUTE TO HOODO. THEN CROSS SBIRD AT OR ABOVE 11000 ON DEPICTED ROUTE TO BOWFN. THENCE ...

... (TRANSITION). EXPECT FILED ALTITUDE 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
LEEVILLE	BOWFN5.LEV	BOWFN	LEV VORTAC	TRACK 076.06	60.13	11000	1700	
HARVEY	BOWFN5.HRV	BOWFN	HRV VORTAC	TRACK 047.94	82.32	11000	1700	

**PROCEDURAL DATA NOTES/TAKEOFF MINIMUMS:**

NOTE: RNAV 1.

NOTE: RADAR REQUIRED.

NOTE: ATC ASSIGNED ONLY: DO NOT FILE.

NOTE: DME/DME/IRU OR GPS REQUIRED.

NOTE: FOR NON-GPS EQUIPPED AIRCRAFT, LCH, LLA, TBD, AND LEV DME'S MUST BE OPERATIONAL.

**GEORGE BUSH INTERCONTINENTAL/ HOUSTON:** RWY 8R, 8L, 9, 27, 15L, 15R, 26L, 26R, 33L, 33R; STANDARD.

**WILLIAM P. HOBBY:** RWY 12L, 12R, 30L, 30R, 35, STANDARD. RWY 4, 300-1 OR STANDARD WITH MINIMUM CLIMB OF 270 FT PER NM TO 300. RWY 17, 300-1 RWY 22; STANDARD WITH MINIMUM CLIMB OF 290 FT PER NM TO 1500.

**ELLINGTON FIELD:** RWY 4, 17R, 17L, 35R, 35L, STANDARD. RWY 22, 200-1 1/4 OR STANDARD WITH MINIMUM CLIMB OF 214 FT PER NM TO 300 OR ALTERNATIVELY WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT PER NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1400 FT PRIOR TO DER.

**LONE STAR EXECUTIVE:** RWY 1, 14, 19, 32, STANDARD.

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**DAVID WAYNE HOOKS MEMORIAL:** RWY 17R, 35L, STANDARD. RWY 17L, 35R NA - ENVIRONMENTAL. WATERWAY 17, 35 NA --AIR TRAFFIC.

**SUGAR LAND RGNL:** RWY 17, 35, STANDARD.

**HOUSTON SOUTHWEST:** RWY 9, 27, STANDARD.

**HOUSTON EXECUTIVE:** RWY 18, 36, STANDARD.

**WEST HOUSTON:** RWY 15, 33, STANDARD

**SCHOLES INTL AT GALVESTON:** RWY 14, 18, 32, 36, STANDARD.

**TEXAS GULF COAST RGNL:** RWY 17, 35, STANDARD.

**LA PORTE MUNI:** RWY 5, 12, 23, 30, STANDARD.

**TAKEOFF OBSTACLES NOTES:**

**GEORGE BUSH INTERCONTINENTAL / HOUSTON:** NOTE: RWY 8L, TREE 2866 FT FROM DER, 921 FT LEFT OF CENTERLINE, 107 FT AGL / 201 FT MSL. MULTIPLE TREES BEGINNING 2750 FT FROM DER, 106 FT RIGHT OF CENTERLINE, UP TO 80FT AGL / 174 FT MSL. NOTE: RWY 15L, MULTIPLE TREES BEGINNING 2638 FT FROM DER, 758 FT RIGHT OF CENTERLINE, UP TO 76 FT AGL / 160 FT MSL. NOTE: RWY 15R, TOWER 1431 FT FROM DER, 591 FT LEFT OF CENTERLINE, 48 FT AGL / 133 FT MSL. ANTENNA ON GLIDESLOPE 1469 FT FROM DER, 621 FT LEFT OF CENTERLINE, 49 FT AGL / 133 FT MSL. NOTE: RWY 26R, POLE 950 FT FROM DER, 660 FT RIGHT OF CENTERLINE, 40 FT AGL / 129 FT MSL. NOTE: RWY 33R, TREE 2868 FT FROM DER, 1027 FT RIGHT OF CENTERLINE, 73 FT AGL / 172 FT MSL.

**WILLIAM P. HOBBY:** NOTE: RWY 4, POLE 4403 FT FROM DER, 1069 FT RIGHT OF CENTERLINE, 121 FT AGL / 166 FT MSL. LIGHT ON BUILDING 1562 FT FROM DER, 859 FT RIGHT OF CENTERLINE, 59 FT AGL / 103 FT MSL. BUILDING 3990 FT FROM DER, 1223 FT RIGHT OF CENTERLINE, 139 FT AGL / 174 FT MSL. LIGHT ON FLGPL 4618 FT FROM DER, 768 FT RIGHT OF CENTERLINE, 117 FT AGL / 161 FT MSL. NOTE: RWY 12L, ANTENNA ON HANGER 1548 FT FROM DER, 424 FT LEFT OF CENTERLINE, 45 FT AGL / 85 FT MSL. NOTE: RWY 12R, VEHICLE AND ROAD 514 FT FROM DER, 543 FT RIGHT OF CENTERLINE, 17 FT AGL / 55 FT MSL. TREE 1217 FT FROM DER, 756 FT RIGHT OF CENTERLINE, 43 FT AGL / 89 FT MSL. FENCE 85 FT FROM DER, 492 FT LEFT OF CENTERLINE, 4 FT AGL / 45 FT MSL. VEHICLE AND ROAD 176 FT FROM DER, 497 FT LEFT OF CENTERLINE, 17 FT AGL / 55 FT MSL. POLE 1011 FT FROM DER, 696 FT LEFT OF CENTERLINE, 33 FT AGL / 73 FT MSL. TREE 1256 FT FROM DER, 783 FT LEFT OF CENTERLINE, 38 FT AGL / 78 FT MSL. NOTE: RWY 17, MULTIPLE POLES BEGINNING 606 FT FROM DER, 393 FT RIGHT OF CENTERLINE, UP TO 79 FT AGL / 124 FT MSL. CRANE 1795 FT FROM DER, 689 FT RIGHT OF CENTERLINE, 100 FT AGL / 150 FT MSL. ANT ON BUILDING 620 FT FROM DER, 312 FT LEFT OF CENTERLINE, 27 FT AGL / 72 FT MSL. MULTIPLE TREES BEGINNING 721 FT FROM DER, 260 FT LEFT OF CENTERLINE, UP TO 71 FT AGL / 116 FT MSL. RADAR REFLECTOR 1214 FT FROM DER, 258 FT LEFT OF CENTERLINE, 32 FT AGL / 77 FT MSL. NOTE: RWY 22, POLE 727 FT FROM DER, 626 FT RIGHT OF CENTERLINE, 28 FT AGL / 77 FT MSL. TREE 1310 FT FROM DER, 679 FT RIGHT OF CENTERLINE, 27 FT AGL / 76 FT MSL. ANTENNA ON LT POLE 1805 FT FROM DER, 968 FT RIGHT OF CENTERLINE, 60 FT AGL / 109 FT MSL. NOTE: RWY 30L, ANTENNA ON BUILDING 547 FT FROM DER, 274 FT RIGHT OF CENTERLINE, 23 FT AGL / 69 FT MSL. MULTIPLE POLES BEGINNING 341 FT FROM DER, 501 FT LEFT OF CENTERLINE, UP TO 39 FT AGL / 84 FT MSL. MULTIPLE TREES BEGINNING 1392 FT FROM DER, 466 FT LEFT OF CENTERLINE, UP TO 78 FT AGL / 118 FT MSL. NOTE: RWY 30R, POLE 1096 FT FROM DER, 785 FT RIGHT OF CENTERLINE, 29 FT AGL / 75 FT MSL. ANTENNA ON BUILDING 500 FT FROM DER, 525 FT LEFT OF CENTERLINE, 33 FT AGL / 69 FT MSL. NOTE: RWY 35, ANTENNA ON L T POLE 738 FT FROM DER, 519 FT RIGHT OF CENTERLINE, 40 FT AGL / 86 FT MSL. L T POLE 1119 FT FROM DER, 353FT RIGHT OF CENTERLINE, 31 FT AGL / 77 FT MSL. ANTENNA ON BUILDING 66 FT FROM DER, 471 FT LEFT OF CENTERLINE, 33 FT AGL / 69 FT MSL.

**ELLINGTON FIELD:** NOTE: RWY 4, TREE 1526 FT FROM DER, 737 FT RIGHT OF CENTERLINE, 39 FT AGL / 69 FT MSL. NOTE: RWY 17R, POLE 1488 FT FROM DER, 817 FT RIGHT OF CENTERLINE, 40 FT AGL / 74 FT MSL. NOTE: RWY 22, OL ON GS AND EQUIPMENT 321 FT FROM DER, 544 FT LEFT OF CENTERLINE, 39 FT AGL / 68 FT MSL. SIGN 213 FT FROM DER, 472 FT RIGHT OF CENTERLINE, 6 FT AGL / 32 FT MSL. ANTENNA ON BUILDING 1998 FT FROM DER, 598 FT RIGHT OF CENTERLINE, 54 FT AGL / 83 FT MSL. OBSTRUCTION LIGHT ON COMM EQUIPMENT AND ANTENNA 1626 FT FROM DER, 837 FT RIGHT OF CENTERLINE, 88 FT AGL / 114 FT MSL. OL ON WATER TOWER AND TANK 6114 FT FROM DER, 1635 FT RIGHT OF CENTERLINE, 159 FT AGL / 192 FT MSL. NOTE: RWY 35R, TREE 1597 FT FROM DER, 32 FT LEFT OF CENTERLINE, 50 FT AGL / 80 FT MSL. TANK 2639 FT FROM DER, 1157 FT RIGHT OF CENTERLINE, 77 FT AGL / 109 FT MSL.



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**NOTE: RWY 35L**, TREES BEGINNING 1119 FT FROM DER, 679 FT RIGHT OF CENTERLINE, UP TO 37 FT AGL / 77 FT MSL. CRANE 2353 FT FROM DER, 1024 FT LEFT OF CENTERLINE, 58 FT AGL / 97 FT MSL.

**LONE STAR EXECUTIVE: NOTE: RWY 1**, TREES BEGINNING 194 FT FROM DER, 130 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL / 374 FT MSL. TREES BEGINNING 817 FT FROM DER, 15 FT LEFT OF CENTERLINE, UP TO 100 FT AGL / 359 FT MSL. **NOTE: RWY 14**, TREES AND OBSTRUCTION LIGHT ON DME BEGINNING 399 FT FROM DER, 80 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL / 329 FT MSL. TREES BEGINNING 640 FT FROM DER, 408 FT LEFT OF CENTERLINE, UP TO 100 FT AGL / 329 FT MSL. **NOTE: RWY 19**, TREES BEGINNING 68 FT FROM DER, 64 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL / 344 FT MSL. TREES BEGINNING 1 FT FROM DER, 159 FT LEFT OF CENTERLINE, UP TO 100 FT AGL / 339 FT MSL. **NOTE: RWY 32**, TREES BEGINNING 1785 FT FROM DER, 973 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL / 339 FT MSL. TREES AND VEHICLES ON ROAD BEGINNING 603 FT FROM DER, 458 FT LEFT OF CENTERLINE, UP TO 100 FT AGL / 354 FT MSL.

**DAVID WAYNE HOOKS MEMORIAL: NOTE: RWY 17R**, MULTIPLE TREES BEGINNING 708 FT FROM DER, 68 FT LEFT OF CENTERLINE, UP TO 71 FT AGL / 220 FT MSL. MULTIPLE HANGARS BEGINNING 433 FT FROM DER, 515 FT LEFT OF CENTERLINE, UP TO 37 FT AGL / 182 FT MSL. DME ANTENNA 653 FT FROM DER, 256 FT LEFT OF CENTERLINE, 13 FT AGL / 162 FT MSL. MULTIPLE TREES AND POLE BEGINNING 85 FT FROM DER, 294 FT RIGHT OF CENTERLINE, UP TO 45 FT AGL / 189 FT MSL. **NOTE: RWY 35L**, MULTIPLE TREES AND POLES BEGINNING 144 FT FROM DER, 32 FT LEFT OF CENTERLINE, UP TO 79 FT AGL / 238 FT MSL. MULTIPLE HANGARS AND BUILDINGS BEGINNING 85 FT FROM DER, 9 FT LEFT OF CENTERLINE, UP TO 53 FT AGL / 202 FT MSL. MULTIPLE TREES, TOWERS, AND POLES BEGINNING 100 FT FROM DER, 124 FT RIGHT OF CENTERLINE, UP TO 93 FT AGL / 247 FT MSL. VEHICLE ON ROAD 315 FT FROM DER, ON CENTERLINE, 15 FT AGL / 166 FT MSL. BUILDING 894 FT FROM DER, 231 FT RIGHT OF CENTERLINE, 23 FT AGL / 173 FT MSL.

**SUGAR LAND RGNL: NOTE: RWY 17**, MULTIPLE POLES BEGINNING 436 FT FROM DER, 172 FT RIGHT OF CENTERLINE, UP TO 44 FT AGL / 124 FT MSL. BUILDING 1036 FT FROM DER, 743 FT RIGHT OF CENTERLINE, 26 FT AGL / 102 FT MSL. RAILROAD 110 FT FROM DER, 10 FT LEFT OF CENTERLINE, 23 FT AGL / 104 FT MSL. MULTIPLE POLES BEGINNING 135 FT FROM DER, 270 FT LEFT OF CENTERLINE, UP TO 44 FT AGL / 111 FT MSL. **NOTE: RWY 35**, VEHICLE AND ROAD 65 FT FROM DER, 2 FT RIGHT OF CENTERLINE, 15 FT AGL / 96 FT MSL. MULTIPLE TREES BEGINNING 37 FT FROM DER, 275 FT RIGHT OF CENTERLINE, UP TO 81 FT AGL / 164 FT MSL. DME ANTENNA 380 FT FROM DER, 253 FT RIGHT OF CENTERLINE, 24 FT AGL / 100 FT MSL. MULTIPLE TREES BEGINNING 83 FT FROM DER, 65 FT LEFT OF CENTERLINE, UP TO 81 FT AGL / 155 FT MSL.

**HOUSTON-SOUTHWEST: NOTE: RWY 9**, MULTIPLE HANGARS BEGINNING 239 FT FROM DER, 360 FT RIGHT OF CENTERLINE, UP TO 42 FT AGL / 106 FT MSL. MULTIPLE TREES BEGINNING 501 FT FROM DER, 355 FT RIGHT OF CENTERLINE, UP TO 43 FT AGL / 111 FT MSL. MULTIPLE HANGARS BEGINNING 119 FT FROM DER, 498 FT LEFT OF CENTERLINE, UP TO 41 FT AGL / 105 FT MSL. POLE 332 FT FROM DER, 299 FT LEFT OF CENTERLINE, 43 FT AGL / 97 FT MSL. ANTENNA 1172 FT FROM DER, 658 FT LEFT OF CENTERLINE, 51 FT AGL / 115 FT MSL. MULTIPLE TREES BEGINNING 558 FT FROM DER, 68 FT LEFT OF CENTERLINE, UP TO 58 FT AGL / 122 FT MSL. **NOTE: RWY 27**, MULTIPLE TREES BEGINNING 1050 FT FROM DER, 40 FT LEFT OF CENTERLINE, UP TO 71 FT AGL / 140 FT MSL. VEHICLE ON ROAD 99 FT FROM DER, 291 FT RIGHT OF CENTERLINE, 15 FT AGL / 83 FT MSL. MULTIPLE TREES BEGINNING 873 FT FROM DER, 514 FT RIGHT OF CENTERLINE, UP TO 59 FT AGL / 130 FT MSL. MULTIPLE TRMSN POLES BEGINNING 1304 FT FROM DER, 131 FT RIGHT OF CENTERLINE, UP TO 41 FT AGL / 110 FT MSL.

**HOUSTON EXECUTIVE: NOTE: RWY 36**, POWER POLES FROM LEFT TO RIGHT BEGINNING 703 FT FROM DER, 623 FT LEFT TO 685 FT RIGHT OF CENTERLINE, UP TO 32 FT AGL / 196 FT MSL.

**WEST HOUSTON: NOTE: RWY 15**, ROAD AND VEHICLE BEGINNING 74 FT FROM DER, 60 FT LEFT OF CENTERLINE, UP TO 15 FT AGL / 123 FT MSL. ROAD AND VEHICLE BEGINNING 342 FT FROM DER, 6 FT RIGHT OF CENTERLINE, UP TO 15 FT AGL / 123 FT MSL. BUILDING 177 FT FROM DER, 398 FT LEFT OF CENTERLINE, 18 FT AGL / 126 FT MSL. LIGHT POLE 942 FT FROM DER, 453 FT RIGHT OF CENTERLINE, 39 FT AGL / 145 FT MSL. TREES BEGINNING 307 FT FROM DER, 26 FT LEFT OF CENTERLINE, UP TO 58 FT AGL / 165 MSL. TREES BEGINNING 130 FT FROM DER, 117 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL

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/ 208 FT MSL. **NOTE: RWY 33**, TREES BEGINNING 168 FT FROM DER, 9 FT LEFT OF CENTERLINE, UP TO 70FT AGL / 179 FT MSL. TREES BEGINNING 66 FT FROM DER, 3 FT RIGHT OF CENTERLINE, UP TO 75 FT AGL / 184 FT MSL.

**SCHOLES INTL AT GALVESTON: NOTE: RWY 14**, BUILDING 2614 FT FROM DER, 376 FT RIGHT OF CENTERLINE, 76 FT AGL / 81 FT MSL. **NOTE: RWY 18**, BUILDINGS BEGINNING 2560 FT FROM DER, 284 FT LEFT OF CENTERLINE, UP TO 121 FT AGL / 178 FT MSL. T-L TOWER 636 FT FROM DER, 551 FT RIGHT OF CENTERLINE, 55 FT AGL / 60 FT MSL. TREES AND POLES BEGINNING 50 FT FROM DER, 75 FT RIGHT OF CENTERLINE, UP TO 60 FT AGL / 65 FT MSL. **NOTE: RWY 32**, CRANE 4434 FT FROM DER, 1081 FT LEFT OF CENTERLINE, 131 FT AGL / 131 FT MSL. **NOTE: RWY 36**, BUSH 419 FT FROM DER, 577 FT LEFT OF CENTERLINE, 12 FT AGL / 17 FT MSL. TREE 526 FT FROM DER, 371 FT LEFT OF CENTERLINE, 14 FT AGL / 19 FT MSL. TREES BEGINNING 713 FT FROM DER, 383 FT RIGHT OF CENTERLINE, UP TO 27 FT AGL / 32 FT MSL.

**TEXAS GULF COAST RGNL: NOTE: RWY 35**, TREE 1510 FT FROM DER, 721 FT LEFT OF CENTERLINE, 48 FT AGL/68 FT MSL.

**LA PORTE MUNI: NOTE: RWY 12**, TREES AND POLES BEGINNING 128FT FROM DER, 42FT LEFT OF CENTERLINE, UP TO 50FT AGL/74 FT MSL. TREES AND POLES BEGINNING 131 FT FROM DER, 114FT RIGHT OF CENTERLINE, UP TO 39FT AGL/63 FT MSL. CHIMNEY 676FT FROM DER, 412FT RIGHT OF CENTERLINE, 31FT AGL/55 FT MSL. **NOTE: RWY 23**, TREES BEGINNING 1320 FT FROM DER, 43FT LEFT OF CENTERLINE, UP TO 63FT AGL/87 FT MSL. HANGARS BEGINNING 233 FT FROM DER, 288 FT RIGHT OF CENTERLINE, UP TO 35 FT AGL / 59 FT MSL. VEHICLE ON ROAD, 594 FT FROM DER, 513 FT LEFT OF CENTERLINE, 15 FT AGL / 39 FT MSL. TREES 1010 FT FROM DER, 1010 FT RIGHT OF CENTERLINE, UP TO 63 FT AGL / 87 FT MSL. **NOTE: RWY 30**, TREES AND POLES BEGINNING 114FT FROM DER, 67 FT LEFT OF CENTERLINE, UP TO 63FT AGL / 87 FT MSL. BUILDINGS 335 FT FROM DER, 356 FT LEFT OF CENTERLINE, 25 FT AGL/50 FT MSL. TREES AND POLES BEGINNING 44 FT FROM DER, 35 FT RIGHT OF CENTERLINE, UP TO 52 FT AGL / 76 FT MSL.

**CONTROLLING OBSTACLES:**

**WILLIAM P. HOBBY:** RWY 4: 174 FT MSL BUILDING 293935.00N/0951526.00W, RWY 17: 150 FT MSL CRANE 293751 .23N/0951710.97W, 2049 FT MSL TOWER 293430.00N/0952938.00W. RWY 22, 30L, 30R: 2049 FT MSL TOWER 293430.00N/0952938.00W.

**ELLINGTON FIELD:** RWY 22: 192 FT MSL WATER TOWER, 293521.00N/0951048.09W.

**SUGAR LAND RGNL:** RWY 17: 2049 FT MSL TOWER 293415.70N/0953038.30W, RWY 35: 2049 FT MSL TOWER 293435.00N/0953037.00W.

**HOUSTON-SOUTHWEST:** RWY 9, 27: 2049 FT MSL TOWER 293341.00N/0953005.00W.

**HOUSTON EXECUTIVE:** RWY 36: 546 FT MSL TOWER 295050.00N/0955259.00W.

**LA PORTE MUNI:** RWY 12: 499 FT MSL STACK 293747.00N/0950316.00W, RWY 30: 589FT MSL TOWER 294252.00N/0950543.00W.

**LOST COMMUNICATIONS PROCEDURES:**

**ADDITIONAL FLIGHT DATA:**

REFERENCE MAG VAR: KIAH 3E / EPOCH YEAR: 2015

DME/DME ASSESSMENT: SAT (RNP 2.0)

PILOT NAVIGATION AREA: 10 NM ARC CENTERED ON VUH VORTAC (IF), CW  
 FROM: POINT A (BEARING 073 DEGREES TO VUH VORTAC)  
 TO: POINT B (BEARING 163 DEGREES TO VUH VORTAC)  
 MINIMUM ALTITUDE 4000.

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**AIRPORTS SERVED:**

GEORGE BUSH INTERCONTINENTAL/HOUSTON  
WILLIAM P HOBBY  
ELLINGTON FIELD  
LONE STAR EXECUTIVE  
DAVID WAYNE HOOKS MEMORIAL  
SUGAR LAND RGNL  
HOUSTON-SOUTHWEST  
HOUSTON EXECUTIVE  
WEST HOUSTON  
SCHOLES INTL AT GALVESTON  
TEXAS GULF RGNL  
LA PORTE MUNI

HOUSTON, TX  
HOUSTON, TX  
HOUSTON, TX  
HOUSTON, TX  
HOUSTON, TX  
HOUSTON, TX  
HOUSTON, TX  
HOUSTON, TX  
HOUSTON, TX  
HOUSTON, TX  
GALVESTON, TX  
ANGLETON/LAKE JACKSON, TX  
LA PORTE, TX

**COMMUNICATIONS:**

ATIS: IAH, HOU, EFD, CXO, DWH. AWOS/ASOS: IAH, HOU, EFD, DWH, SGR, AXH, TME, GLS, LBX. CLNC DEL: IAH, HOU, CXO, DWH, SGR, AXH, TME, IWS, GLS, LBX, T41. GND CON: IAH, HOU, EFD, CXO, DWH, SGR, GLS. TWR: IAH, HOU, EFD, CXO, DWH, SGR, GLS. CTAF: CXO, DWH, SGR, AXH, TME, IWS, GLS, LBX, T41. DEP CON: IAH, HOU, EFD, CXO, DWH, SGR, AXH, TME, IWS, GLS, LBX, T41.

**FIXES AND/OR NAVAIDS:**

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**REMARKS:**

**CHANGES:**

1. ALL COURSES CHANGED BY 2 DEGREES.
2. CHANGED REFERENCE MAGVAR NOTE IN ADDITIONAL FLIGHT DATA TO INCORPORATE NEW MAGVAR OF 3E.
3. UPDATED PNA AREA RADIALS.

**REASONS:**

- 1, 2, 3. KIAH MAGVAR UPDATE FROM 5E TO 3E.



## DEPARTURE (DATA RECORD)

DP Name		Number		DP Computer Code			Superseded Number		Dated	Effective Date
BOWFN		FIVE		BOWFN5.BOWFN			FOUR		08/22/2013	29 MAY 2014
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS	
VUH VORTAC	291609.60N-0945203.81W	Y	-	IF	-	-	AT/ABOVE 11000			
HOODO	285948.51N-0942009.10W	Y	FB	TF	120.94	31.60				
SBIRD	290000.00N-0934000.00W	Y	FB	TF	089.53	36.09				
BOWFN	285921.00N-0911341.00W	Y	FB	TF	089.70	128.31				
BOWFN	285921.00N-0911341.00W	Y	-	IF	-	-			BOWFN5.LEV	
LEV VORTAC	291030.81N-0900614.47W	Y	FB	TF	079.06	60.13				
BOWFN	285921.00N-0911341.00W	Y	-	IF	-	-			BOWFN5.HRV	
HRV VORTAC	295100.70N-0900010.74W	Y	FB	TF	050.94	82.32				

QUALITY  
3  
CHECKED



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ARINC PACKET - 424-18 - SID

NAVAID	1	2	3	4	5	6	7	8	9	0	1	2	3
	12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAD	HRV	K4011410VTHW	N29510070W090001074	N29510070W090001074	E00200000022	NARHARVEY							
SUSAD	LEV	K4011350VTH	N29103083W090061447	N29103083W090061447	E00200000022	NARLEEVILLE							
SUSAD	VUH	K4011300VTLW	N29160960W094520381	N29160960W094520381	E00600000041	NARSCHOLES							

WP	1	2	3	4	5	6	7	8	9	0	1	2	3
	12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSABEAENRT	BOWFN	K40	W	H	N28592100W091134100	E0004	NAR	BOWFN					
SUSABEAENRT	HOODO	K40	W	L	N28594851W094210910	E0023	NAR	HOODO					
SUSABEAENRT	SBIRD	K40	W	L	N29000000W093400000	E0019	NAR	SBIRD					

AIRPORT	1	2	3	4	5	6	7	8	9	0	1	2	3
	12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAP	KIAHK4AIAH	0	120YHN29590400W095202920E0030000096	1800018000C	MNAR	GEORGE BUSH INTERCONTINENTAL/H							

SEGMENT	1	2	3	4	5	6	7	8	9	0	1	2	3
	12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAP	KIAHK4DBOWFN55ALL	010VUH	K4D 0V	IF						18000			
SUSAP	KIAHK4DBOWFN55ALL	020HOODOK4EA0E	010TF										
SUSAP	KIAHK4DBOWFN55ALL	030SBIRDK4EA0E	010TF					+ 11000					
SUSAP	KIAHK4DBOWFN55ALL	040BOWFNK4EA0EE	010TF										
SUSAP	KIAHK4DBOWFN56HRV	010BOWFNK4EA0E	IF							18000			
SUSAP	KIAHK4DBOWFN56HRV	020HRV	K4D 0VE	010TF									
SUSAP	KIAHK4DBOWFN56LEV	010BOWFNK4EA0E	IF							18000			
SUSAP	KIAHK4DBOWFN56LEV	020LEV	K4D 0VE	010TF									

RUNWAY	1	2	3	4	5	6	7	8	9	0	1	2	3
	12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAP	KIAHK4GRW08L	0090000869	N30002578W095213165+0000	+0000500091000055150IIBZU3									
SUSAP	KIAHK4GRW08R	0094020869	N29593630W095211787+0000	+0001600095000055150IIIAH1									
SUSAP	KIAHK4GRW09	0100000870	N29583934W095200279-0100	+0000300091000050150IIUYO1									
SUSAP	KIAHK4GRW15L	0120011490	N29591640W095212833-0100	+0001700095000058150V									
SUSAP	KIAHK4GRW15R	0100001490	N29591611W095214104-0100	+0001700096000054150IILKM1									
SUSAP	KIAHK4GRW26L	0094022670	N29593638W095193096+0000	+0001000093000056150IIJYV3									
SUSAP	KIAHK4GRW26R	0090002670	N30002586W095194929+0000	+0001600095000055150IIOND3									
SUSAP	KIAHK4GRW27	0100002670	N29583941W095180909+0100	-0001500085000055150IIGHI3									
SUSAP	KIAHK4GRW33L	0100003290	N29574875W095204758+0100	-0000800087000059150V									
SUSAP	KIAHK4GRW33R	0120013290	N29573155W095202419+0100	-0001300086000049150IICDG1									



## DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	ALL	VUH	010		IF		FB				AA 11000	
	ALL	HOODO	020		TF		FB	1.0				
	ALL	SBIRD	030		TF		FB	1.0				
	ALL	BOWFN	040		TF		FB	1.0				
	HRV	BOWFN	010		IF		FB					
	HRV	HRV	020		TF		FB	1.0				
	LEV	BOWFN	010		IF		FB					
	LEV	LEV	020		TF		FB	1.0				

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	HRV	N295100.70	W0900010.74	N2951.012	W09000.179
	LEV	N291030.83	W0900614.47	N2910.514	W09006.241
	VUH	N291609.60	W0945203.81	N2916.160	W09452.064
	BOWFN	N285921.00	W0911341.00	N2859.350	W09113.683
	HOODO	N285948.51	W0942109.10	N2859.809	W09421.152
	SBIRD	N290000.00	W0934000.00	N2900.000	W09340.000
	RW08L	N300025.78	W0952131.65	N3000.430	W09521.528
	RW08R	N295936.30	W0952117.87	N2959.605	W09521.298
	RW09	N295839.34	W0952002.79	N2958.656	W09520.047
	RW15L	N295916.40	W0952128.33	N2959.273	W09521.472
	RW15R	N295916.11	W0952141.04	N2959.269	W09521.684
	RW26L	N295936.38	W0951930.96	N2959.606	W09519.516
	RW26R	N300025.86	W0951949.29	N3000.431	W09519.822
	RW27	N295839.41	W0951809.09	N2958.657	W09518.152
	RW33L	N295748.75	W0952047.58	N2957.813	W09520.793
	RW33R	N295731.55	W0952024.19	N2957.526	W09520.403

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW08L	00091	55
	RW08R	00095	55
	RW09	00091	50
	RW15L	00095	58
	RW15R	00096	54
	RW26L	00093	56
	RW26R	00095	55
	RW27	00085	55
	RW33L	00087	59
	RW33R	00086	49



## DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

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	1	2	3	4	5	6	7	8	9	0	1	2	3
NAVAID	12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAD	HRV	K4011410VTHW	N29510070W090001074	N29510070W090001074E00200000022	NARHARVEY								
SUSAD	LEV	K4011350VTH	N29103083W090061447	N29103083W090061447E00200000022	NARLEEVILLE								
SUSAD	VUH	K4011300VTLW	N29160960W094520381	N29160960W094520381E00600000041	NARSCHOLIS								

	1	2	3	4	5	6	7	8	9	0	1	2	3
WP	12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAEAENRT	BOWFN	K40	W	H	N28592100W091134100	E0004	NAR	BOWFN					
SUSAEAENRT	HOODO	K40	W	L	N28594851W094210910	E0023	NAR	HOODO					
SUSAEAENRT	SBIRD	K40	W	L	N29000000W093400000	E0019	NAR	SBIRD					

	1	2	3	4	5	6	7	8	9	0	1	2	3
AIRPORT	12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAP	KAXHK4AAXH	0	050YHN29302210W095283690E005000069	1800018000C	MNAR	HOUSTON-SOUTHWEST							

	1	2	3	4	5	6	7	8	9	0	1	2	3
SEGMENT	12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAP	KAXHK4DBOWFN55ALL	010VUH	K4D	0V	IF					18000			
SUSAP	KAXHK4DBOWFN55ALL	020HOODO	K4E	0A0E	010TF								
SUSAP	KAXHK4DBOWFN55ALL	030SBIRD	K4E	0A0E	010TF					+ 11000			
SUSAP	KAXHK4DBOWFN55ALL	040BOWFNK4E	0A0EE	010TF									
SUSAP	KAXHK4DBOWFN56HRV	010BOWFNK4E	0A0E	IF						18000			
SUSAP	KAXHK4DBOWFN56HRV	020HRV	K4D	0VE	010TF								
SUSAP	KAXHK4DBOWFN56LEV	010BOWFNK4E	0A0E	IF						18000			
SUSAP	KAXHK4DBOWFN56LEV	020LEV	K4D	0VE	010TF								

	1	2	3	4	5	6	7	8	9	0	1	2	3
RUNWAY	12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAP	KAXHK4GRW09	0050020892	N29302391W095290510+0000	-0006200069000047100RIAXH0									
SUSAP	KAXHK4GRW27	0050022692	N29302025W095280865+0000	-0007000066000045100R									

## DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	ALL	VUH	010		IF		FB					
	ALL	HOODO	020		TF		FB	1.0				
	ALL	SBIRD	030		TF		FB	1.0			AA 11000	
	ALL	BOWFN	040		TF		FB	1.0				
	HRV	BOWFN	010		IF		FB					
	HRV	HRV	020		TF		FB	1.0				
	LEV	BOWFN	010		IF		FB					
	LEV	LEV	020		TF		FB	1.0				

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	HRV	N295100.70	W0900010.74	N2951.012	W09000.179
	LEV	N291030.83	W0900614.47	N2910.514	W09006.241
	VUH	N291609.60	W0945203.81	N2916.160	W09452.064
	BOWFN	N285921.00	W0911341.00	N2859.350	W09113.683
	HOODO	N285948.51	W0942109.10	N2859.809	W09421.152
	SBIRD	N290000.00	W0934000.00	N2900.000	W09340.000
	RW09	N293023.91	W0952905.10	N2930.399	W09529.085
	RW27	N293020.25	W0952808.65	N2930.338	W09528.144

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW09	00069	47
	RW27	00066	45

## DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

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



## DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	ALL	VUH	010		IF		FB				AA 11000	
	ALL	HOODO	020		TF		FB	1.0				
	ALL	SBIRD	030		TF		FB	1.0				
	ALL	BOWFN	040		TF		FB	1.0				
	HRV	BOWFN	010		IF		FB					
	HRV	HRV	020		TF		FB	1.0				
	LEV	BOWFN	010		IF		FB					
	LEV	LEV	020		TF		FB	1.0				

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
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HRV	N295100.70	W0900010.74	N2951.012	W09000.179
LEV	N291030.83	W0900614.47	N2910.514	W09006.241
VUH	N291609.60	W0945203.81	N2916.160	W09452.064
BOWFN	N285921.00	W0911341.00	N2859.350	W09113.683
HOODO	N285948.51	W0942109.10	N2859.809	W09421.152
SBIRD	N290000.00	W0934000.00	N2900.000	W09340.000
RW01	N302044.23	W0952510.12	N3020.737	W09525.169
RW14	N302145.72	W0952513.62	N3021.762	W09525.227
RW19	N302131.51	W0952453.28	N3021.525	W09524.888
RW32	N302044.54	W0952425.10	N3020.742	W09524.418

RUNWAY DATA

RWY	THRESHOLD ELEVATION	TCH
RW01	00230	49
RW14	00234	47
RW19	00229	49
RW32	00241	45



DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	8/22/2013	29 MAY 2014

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## DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	8/22/2013	29 MAY 2014

ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	RW17R	VUH	010		IF		FB					
	RW17R	HOODO	020		TF		FB	1.0			AA 11000	
	RW17R	SBIRD	030		TF		FB	1.0				
	RW17R	BOWFN	040		TF		FB	1.0				
	RW35L	VUH	010		IF		FB					
	RW35L	HOODO	020		TF		FB	1.0			AA 11000	
	RW35L	SBIRD	030		TF		FB	1.0				
	RW35L	BOWFN	040		TF		FB	1.0				
	HRV	BOWFN	010		IF		FB					
	HRV	HRV	020		TF		FB	1.0				
	LEV	BOWFN	010		IF		FB					
	LEV	LEV	020		TF		FB	1.0				

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	HRV	N295100.70	W0900010.74	N2951.012	W09000.179
	LEV	N291030.83	W0900614.47	N2910.514	W09006.241
	VUH	N291609.60	W0945203.81	N2916.160	W09452.064
	BOWFN	N285921.00	W0911341.00	N2859.350	W09113.683
	HOODO	N285948.51	W0942109.10	N2859.809	W09421.152
	SBIRD	N290000.00	W0934000.00	N2900.000	W09340.000
	RW17R	N300414.04	W0953315.88	N3004.234	W09533.265
	RW35L	N300315.10	W0953307.27	N3003.252	W09533.121

RUNWAY DATA	THRESHOLD		
	RWY	ELEVATION	TCH
	RW17R	00152	52
	RW35L	00145	45

## DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

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NAVAID	1	2	3	4	5	6	7	8	9	0	1	2	3
	12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAD	HRV	K4011410VTHW	N29510070W090001074	N29510070W090001074E00200000022	NARHARVEY								
SUSAD	LEV	K4011350VTH	N29103083W090061447	N29103083W090061447E00200000022	NARLEEVILLE								
SUSAD	VUH	K4011300VTLW	N29160960W094520381	N29160960W094520381E00600000041	NARSCHOLIS								

WP	1	2	3	4	5	6	7	8	9	0	1	2	3
	12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAEAENRT	BOWFN	K40	W	H	N28592100W091134100	E0004	NAR	BOWFN					
SUSAEAENRT	HOODO	K40	W	L	N28594851W094210910	E0023	NAR	HOODO					
SUSAEAENRT	SBIRD	K40	W	L	N29000000W093400000	E0019	NAR	SBIRD					

AIRPORT	1	2	3	4	5	6	7	8	9	0	1	2	3
	12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAP	KEFDK4AEFD	0	090YHN29362640W095093150E005000033	1800018000C	MNAR	ELLINGTON							

SEGMENT	1	2	3	4	5	6	7	8	9	0	1	2	3
	12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAP	KEFDK4DBOWFN55ALL	010VUH	K4D 0V	IF	18000								
SUSAP	KEFDK4DBOWFN55ALL	020HOODOK4EA0E	010TF										
SUSAP	KEFDK4DBOWFN55ALL	030SBIRDK4EA0E	010TF	+ 11000									
SUSAP	KEFDK4DBOWFN55ALL	040BOWFNK4EA0EE	010TF										
SUSAP	KEFDK4DBOWFN56HRV	010BOWFNK4EA0E	IF	18000									
SUSAP	KEFDK4DBOWFN56HRV	020HRV	K4D 0VE	010TF									
SUSAP	KEFDK4DBOWFN56LEV	010BOWFNK4EA0E	IF	18000									
SUSAP	KEFDK4DBOWFN56LEV	020LEV	K4D 0VE	010TF									

RUNWAY	1	2	3	4	5	6	7	8	9	0	1	2	3
	12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAP	KEFDK4GRW04	0080010389	N29355343W095094676+0100	-0019200026000050150R									
SUSAP	KEFDK4GRW17L	0046091739	N29370649W095092235+0000	-0017600031000050080D									
SUSAP	KEFDK4GRW17R	0090001738	N29370599W095095182+0000	-0017400032000051150IILPV1									
SUSAP	KEFDK4GRW22	0080012189	N29365054W095084397-0100	-0017900030000054150IIFNF1									
SUSAP	KEFDK4GRW35L	0090003538	N29353691W095094975+0000	-0018800028000054150IIEFD1									
SUSAP	KEFDK4GRW35R	0046093539	N29362088W095092130+0000	-0018000030000050080D									



## DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	ALL	VUH	010		IF		FB				AA 11000	
	ALL	HOODO	020		TF		FB	1.0				
	ALL	SBIRD	030		TF		FB	1.0				
	ALL	BOWFN	040		TF		FB	1.0				
	HRV	BOWFN	010		IF		FB					
	HRV	HRV	020		TF		FB	1.0				
	LEV	BOWFN	010		IF		FB					
	LEV	LEV	020		TF		FB	1.0				

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	HRV	N295100.70	W0900010.74	N2951.012	W09000.179
	LEV	N291030.83	W0900614.47	N2910.514	W09006.241
	VUH	N291609.60	W0945203.81	N2916.160	W09452.064
	BOWFN	N285921.00	W0911341.00	N2859.350	W09113.683
	HOODO	N285948.51	W0942109.10	N2859.809	W09421.152
	SBIRD	N290000.00	W0934000.00	N2900.000	W09340.000
	RW04	N293553.43	W0950946.76	N2935.891	W09509.779
	RW17L	N293706.49	W0950922.35	N2937.108	W09509.373
	RW17R	N293705.99	W0950951.82	N2937.100	W09509.864
	RW22	N293650.54	W0950843.97	N2936.842	W09508.733
	RW35L	N293536.91	W0950949.75	N2935.615	W09509.829
	RW35R	N293620.88	W0950921.30	N2936.348	W09509.355

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW04	00026	50
	RW17L	00031	50
	RW17R	00032	51
	RW22	00030	54
	RW35L	00028	54
	RW35R	00030	50

## DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

ARINC PACKET - 424-18 - SID

[illegible]

	1			2			3			4			5			6			7			8			9			0			1			2			3		
WP	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3						
	SUSAE	AEN	R	T																																			
	BOW	F	N		K	4	0																																
	W				H		N	2	8	5	9	2	1	0	0	W	0	9	1	1	3	4	1	0															
	SUSAE	AEN	R	T																																			
	HOOD				K	4	0																																
	W				L		N	2	8	5	9	4	8	5	1	W	0	9	4	2	1	0	9	1	0														
	SUSAE	AEN	R	T																																			
	S	B	I	R	D		K	4	0																														
	W				L		N	2	9	0	0	0	0	0	0	W	0	9	3	4	0	0	0	0															

[illegible][illegible][illegible]

## DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	ALL	VUH	010		IF		FB				AA 11000	
	ALL	HOODO	020		TF		FB	1.0				
	ALL	SBIRD	030		TF		FB	1.0				
	ALL	BOWFN	040		TF		FB	1.0				
	HRV	BOWFN	010		IF		FB					
	HRV	HRV	020		TF		FB	1.0				
	LEV	BOWFN	010		IF		FB					
	LEV	LEV	020		TF		FB	1.0				

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	HRV	N295100.70	W0900010.74	N2951.012	W09000.179
	LEV	N291030.83	W0900614.47	N2910.514	W09006.241
	VUH	N291609.60	W0945203.81	N2916.160	W09452.064
	BOWFN	N285921.00	W0911341.00	N2859.350	W09113.683
	HOODO	N285948.51	W0942109.10	N2859.809	W09421.152
	SBIRD	N290000.00	W0934000.00	N2900.000	W09340.000
	RW14	N291618.18	W0945203.53	N2916.303	W09452.059
	RW18	N291624.61	W0945132.65	N2916.410	W09451.544
	RW32	N291532.60	W0945120.09	N2915.543	W09451.335
	RW36	N291525.21	W0945133.67	N2915.420	W09451.561

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW14	00005	53
	RW18	00006	44
	RW32	00005	46
	RW36	00005	45

### DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN RNAV	FIVE	BOWFN5.VUH	NONE		29 MAY 2014

ARINC PACKET - 424-18 - SID

NAVAID	1	2	3	4	5	6	7	8	9	0	1	2	3
	123456789012345												

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



## DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN RNAV	FIVE	BOWFN5.VUH	NONE		29 MAY 2014

ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	ALL	VUH	010		IF		FB				AA 11000	
	ALL	HOODO	020		TF		FB	1.0				
	ALL	SBIRD	030		TF		FB	1.0				
	ALL	BOWFN	040		TF		FB	1.0				
	HRV	BOWFN	010		IF		FB					
	HRV	HRV	020		TF		FB	1.0				
	LEV	BOWFN	010		IF		FB					
	LEV	LEV	020		TF		FB	1.0				

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	HRV	N295100.70	W0900010.74	N2951.012	W09000.179
	LEV	N291030.83	W0900614.47	N2910.514	W09006.241
	VUH	N291609.60	W0945203.81	N2916.160	W09452.064
	BOWFN	N285921.00	W0911341.00	N2859.350	W09113.683
	HOODO	N285948.51	W0942109.10	N2859.809	W09421.152
	SBIRD	N290000.00	W0934000.00	N2900.000	W09340.000
	RW04	N293820.80	W0951707.16	N2938.347	W09517.119
	RW12L	N293909.38	W0951701.94	N2939.156	W09517.032
	RW12R	N293856.26	W0951659.41	N2938.938	W09516.990
	RW17	N293908.50	W0951704.80	N2939.142	W09517.080
	RW22	N293914.97	W0951607.36	N2939.250	W09516.123
	RW30L	N293811.13	W0951605.82	N2938.186	W09516.097
	RW30R	N293834.02	W0951619.93	N2938.567	W09516.332
	RW35	N293809.12	W0951703.54	N2938.152	W09517.059

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW04	00042	58
	RW12L	00045	60
	RW12R	00046	49
	RW17	00045	40
	RW22	00039	52
	RW30L	00042	58
	RW30R	00040	50
	RW35	00043	41

## DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

ARINC PACKET - 424-18 - SID

NAVAID	1	2	3	4	5	6	7	8	9	0	1	2	3
	1234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAD	HRV	K4011410VTHW	N29510070W090001074	N29510070W090001074E0020000022	NARHARVEY								
SUSAD	LEV	K4011350VTH	N29103083W090061447	N29103083W090061447E0020000022	NARLEEVILLE								
SUSAD	VUH	K4011300VTLW	N29160960W094520381	N29160960W094520381E0060000041	NARSCHOLES								

WP	1	2	3	4	5	6	7	8	9	0	1	2	3
	1234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAEAENRT	BOWFN	K40	W	H	N28592100W091134100	E0004	NAR	BOWFN					
SUSAEAENRT	HOODO	K40	W	L	N28594851W094210910	E0023	NAR	HOODO					
SUSAEAENRT	SBIRD	K40	W	L	N29000000W093400000	E0019	NAR	SBIRD					

AIRPORT	1	2	3	4	5	6	7	8	9	0	1	2	3
	1234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAP	KIWSK4AIWS	0	039YHN29490550W095402140E005000111	1800018000C	MNAR	WEST HOUSTON							

SEGMENT	1	2	3	4	5	6	7	8	9	0	1	2	3
	1234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAP	KIWSK4DBOWFN55ALL	010VUH	K4D	0V	IF	18000							
SUSAP	KIWSK4DBOWFN55ALL	020HOODO	K4E	0E	010TF								
SUSAP	KIWSK4DBOWFN55ALL	030SBIRD	K4E	0E	010TF	+ 11000							
SUSAP	KIWSK4DBOWFN55ALL	040BOWFN	K4E	0EE	010TF								
SUSAP	KIWSK4DBOWFN56HRV	010BOWFN	K4E	0A	IF	18000							
SUSAP	KIWSK4DBOWFN56HRV	020HRV	K4D	0VE	010TF								
SUSAP	KIWSK4DBOWFN56LEV	010BOWFN	K4E	0A	IF	18000							
SUSAP	KIWSK4DBOWFN56LEV	020LEV	K4D	0VE	010TF								

RUNWAY	1	2	3	4	5	6	7	8	9	0	1	2	3
	1234567890123456789012345678901234567890123456789012345678901234567890123456789012												
SUSAP	KIWSK4GRW15	0039531497	N29492317W095403097+0000	+0006100111000045075R									
SUSAP	KIWSK4GRW33	0039533297	N29484780W095401178+0000	+0005500109000045075R									

## DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG (TRUE)	DISTANCE	ALTITUDE	SPEED
	ALL	VUH	010		IF		FB				AA 11000	
	ALL	HOODO	020		TF		FB	1.0				
	ALL	SBIRD	030		TF		FB	1.0				
	ALL	BOWFN	040		TF		FB	1.0				
	HRV	BOWFN	010		IF		FB					
	HRV	HRV	020		TF		FB	1.0				
	LEV	BOWFN	010		IF		FB					
	LEV	LEV	020		TF		FB	1.0				

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	HRV	N295100.70	W0900010.74	N2951.012	W09000.179
	LEV	N291030.83	W0900614.47	N2910.514	W09006.241
	VUH	N291609.60	W0945203.81	N2916.160	W09452.064
	BOWFN	N285921.00	W0911341.00	N2859.350	W09113.683
	HOODO	N285948.51	W0942109.10	N2859.809	W09421.152
	SBIRD	N290000.00	W0934000.00	N2900.000	W09340.000
	RW15	N294923.17	W0954030.97	N2949.386	W09540.516
	RW33	N294847.80	W0954011.78	N2948.797	W09540.196

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW15	00111	45
	RW33	00109	45

### DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

ARINC PACKET - 424-18 - SID

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## DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	ALL	VUH	010		IF		FB				AA 11000	
	ALL	HOODO	020		TF		FB	1.0				
	ALL	SBIRD	030		TF		FB	1.0				
	ALL	BOWFN	040		TF		FB	1.0				
	HRV	BOWFN	010		IF		FB					
	HRV	HRV	020		TF		FB	1.0				
	LEV	BOWFN	010		IF		FB					
	LEV	LEV	020		TF		FB	1.0				

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	HRV	N295100.70	W0900010.74	N2951.012	W09000.179
	LEV	N291030.83	W0900614.47	N2910.514	W09006.241
	VUH	N291609.60	W0945203.81	N2916.160	W09452.064
	BOWFN	N285921.00	W0911341.00	N2859.350	W09113.683
	HOODO	N285948.51	W0942109.10	N2859.809	W09421.152
	SBIRD	N290000.00	W0934000.00	N2900.000	W09340.000
	RW17	N290705.76	W0952743.59	N2907.096	W09527.727
	RW35	N290556.47	W0952743.49	N2905.941	W09527.725

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW17	00025	52
	RW35	00024	50



### DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

ARINC PACKET - 424-18 - SID

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## DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	ALL	VUH	010		IF		FB					
	ALL	HOODO	020		TF		FB	1.0				
	ALL	SBIRD	030		TF		FB	1.0			AA 11000	
	ALL	BOWFN	040		TF		FB	1.0				
	HRV	BOWFN	010		IF		FB					
	HRV	HRV	020		TF		FB	1.0				
	LEV	BOWFN	010		IF		FB					
	LEV	LEV	020		TF		FB	1.0				

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	HRV	N295100.70	W0900010.74	N2951.012	W09000.179
	LEV	N291030.83	W0900614.47	N2910.514	W09006.241
	VUH	N291609.60	W0945203.81	N2916.160	W09452.064
	BOWFN	N285921.00	W0911341.00	N2859.350	W09113.683
	HOODO	N285948.51	W0942109.10	N2859.809	W09421.152
	SBIRD	N290000.00	W0934000.00	N2900.000	W09340.000
	RW17	N293755.81	W0953926.90	N2937.930	W09539.448
	RW35	N293700.21	W0953921.64	N2937.004	W09539.361

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW17	00082	52
	RW35	00075	56

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

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## DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.BOWFN	FOUR	08/22/2013	29 MAY 2014

## ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	ALL	VUH	010		IF		FB					
	ALL	HOODO	020		TF		FB	1.0				
	ALL	SBIRD	030		TF		FB	1.0			AA 11000	
	ALL	BOWFN	040		TF		FB	1.0				
	HRV	BOWFN	010		IF		FB					
	HRV	HRV	020		TF		FB	1.0				
	LEV	BOWFN	010		IF		FB					
	LEV	LEV	020		TF		FB	1.0				

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	HRV	N295100.70	W0900010.74	N2951.012	W09000.179
	LEV	N291030.83	W0900614.47	N2910.514	W09006.241
	VUH	N291609.60	W0945203.81	N2916.160	W09452.064
	BOWFN	N285921.00	W0911341.00	N2859.350	W09113.683
	HOODO	N285948.51	W0942109.10	N2859.809	W09421.152
	SBIRD	N290000.00	W0934000.00	N2900.000	W09340.000
	RW18	N294850.85	W0955352.86	N2948.848	W09553.881
	RW36	N294745.40	W0955351.88	N2947.757	W09553.865

RUNWAY DATA	THRESHOLD		
RWY	ELEVATION	TCH	
RW18	00166	40	
RW36	00163	40	

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.VUH	FOUR	08/22/2013	29 MAY 2014

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## DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
BOWFN	FIVE	BOWFN5.VUH	FOUR	08/22/2013	29 MAY 2014

ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	ALL	VUH	010		IF		FB				AA 11000	
	ALL	HOODO	020		TF		FB	1.0				
	ALL	SBIRD	030		TF		FB	1.0				
	ALL	BOWFN	040		TF		FB	1.0				
	HRV	BOWFN	010		IF		FB					
	HRV	HRV	020		TF		FB	1.0				
	LEV	BOWFN	010		IF		FB					
	LEV	LEV	020		TF		FB	1.0				

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	HRV	N295100.70	W0900010.74	N2951.012	W09000.179
	LEV	N291030.83	W0900614.47	N2910.514	W09006.241
	VUH	N291609.60	W0945203.81	N2916.160	W09452.064
	BOWFN	N285921.00	W0911341.00	N2859.350	W09113.683
	HOODO	N285948.51	W0942109.10	N2859.809	W09421.152
	SBIRD	N290000.00	W0934000.00	N2900.000	W09340.000
	RW05	N294000.36	W0950403.90	N2940.006	W09504.065
	RW12	N294020.07	W0950408.82	N2940.335	W09504.147
	RW23	N294018.90	W0950337.36	N2940.315	W09503.623
	RW30	N293959.19	W0950336.12	N2939.987	W09503.602

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW05	00023	50
	RW12	00025	45
	RW23	00024	50
	RW30	00024	40