

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

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
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|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|
| MMALT | THREE | MMALT3.MMALT | TWO | 01/08/2015 | 22 JUN 2017 |
| <u>TYPE:</u> | <u>OBSTACLE</u> | <u>COPTER</u> | <u>SID</u> | <u>SPECIAL</u> | <u>RNAV</u> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

DP ROUTE DESCRIPTION:

CONROE-NORTH HOUSTON RGNL (KCXO)

TAKEOFF RWY 1: CLIMB ON HEADING 012.17 TO 760, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 14: CLIMB ON HEADING 140.48 TO 760, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 19: CLIMB ON HEADING 192.17 TO 760, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 32: CLIMB ON HEADING 320.49 TO 760, EXPECT RADAR VECTORS TO MMALT, THENCE...

RWJ AIRPARK (K54T)

TAKEOFF RWY 8: CLIMB ON HEADING 084.03 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 14: CLIMB ON HEADING 142.55 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 26: CLIMB ON HEADING 264.03 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKOFF RWY 32: CLIMB ON HEADING 322.55 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...

CLEVELAND MUNI (K6R3)

TAKEOFF RWY 16: CLIMB ON HEADING 156.75 TO 1400, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 34: CLIMB ON HEADING 336.75 TO 2000, EXPECT RADAR VECTORS TO MMALT, THENCE...

WHARTON RGNL (KARM)

TAKEOFF RWY 14: CLIMB HEADING 144.80 TO 600, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 32: CLIMB HEADING 324.81 TO 600, EXPECT RADAR VECTORS TO MMALT, THENCE...

HOUSTON-SOUTHWEST (KAXH)

TAKEOFF RWY 9: CLIMB ON HEADING 089.24 TO 2000, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 27: CLIMB ON HEADING 269.24 TO 2200, EXPECT RADAR VECTORS TO MMALT, THENCE...

BAY CITY RGNL (KBYY)

TAKEOFF RWY 13: CLIMB HEADING 130.57 TO 560, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 31: CLIMB HEADING 310.57 TO 560, EXPECT RADAR VECTORS TO MMALT, THENCE...

DAVID WAYNE HOOKS MEMORIAL (KDWL)

TAKEOFF RWY 17R: CLIMB ON HEADING 167.76 TO 660, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 35L: CLIMB ON HEADING 347.76 TO 660, EXPECT RADAR VECTORS TO MMALT, THENCE...

ELLINGTON (KEFD)

TAKEOFF RWY 4: CLIMB ON HEADING 038.85 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 17L: CLIMB ON HEADING 173.85 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 17R: CLIMB ON HEADING 173.84 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 22: CLIMB ON HEADING 218.86 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 35L: CLIMB ON HEADING 353.84 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 35R: CLIMB ON HEADING 353.85 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...



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SCHOLES INTL AT GALVESTON (KGLS)

TAKEOFF RWY 14: CLIMB ON HEADING 138.11 TO 520, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 18: CLIMB ON HEADING 178.86 TO 520, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 32: CLIMB ON HEADING 318.12 TO 520, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 36: CLIMB ON HEADING 358.86 TO 520, EXPECT RADAR VECTORS TO MMALT, THENCE...

BAYTOWN (KHPY)

TAKEOFF RWY 14: CLIMB ON HEADING 139.75 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 32: CLIMB ON HEADING 319.75 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...

WEST HOUSTON (KIWS)

TAKEOFF RWY 15: CLIMB ON HEADING 149.68 TO 620, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 33: CLIMB ON HEADING 329.68 TO 620, EXPECT RADAR VECTORS TO MMALT, THENCE...

TEXAS GULF COAST RGNL (KLBX)

TAKEOFF RWY 17: CLIMB ON HEADING 174.93 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 35: CLIMB ON HEADING 354.93 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...

PEARLAND RGNL (KLVJ)

TAKEOFF RWY 14: CLIMB ON HEADING 141.67 TO 1600, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 32: CLIMB ON HEADING 321.67 TO 900, EXPECT RADAR VECTORS TO MMALT, THENCE...

SUGAR LAND RGNL (KSGR)

TAKEOFF RWY 17: CLIMB ON HEADING 170.28 TO 1500, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 35: CLIMB ON HEADING 350.28 TO 1100, EXPECT RADAR VECTORS TO MMALT, THENCE...

CHAMBERS COUNTY (KT00)

TAKEOFF RWY 12: CLIMB ON HEADING 123.74 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 30: CLIMB ON HEADING 303.74 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...

LA PORTE MUNI (KT41)

TAKEOFF RWY 5: CLIMB ON HEADING 046.34 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 12: CLIMB ON HEADING 121.17 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 23: CLIMB ON HEADING 226.35 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 30: CLIMB ON HEADING 301.18 TO 540, EXPECT RADAR VECTORS TO MMALT, THENCE...

LIBERTY MUNI (KT78)

TAKEOFF RWY 16: CLIMB ON HEADING 160.77 TO 1700, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 34: CLIMB ON HEADING 340.78 TO 1000, EXPECT RADAR VECTORS TO MMALT, THENCE...

HOUSTON EXECUTIVE (KTME)

TAKEOFF RWY 18: CLIMB ON HEADING 175.25 TO 680, EXPECT RADAR VECTORS TO MMALT, THENCE...
TAKEOFF RWY 36: CLIMB ON HEADING 355.25 TO 680, EXPECT RADAR VECTORS TO MMALT, THENCE...

...ON TRACK 085.67 TO MOOKI, THEN ON (TRANSITION). MAINTAIN ATC ASSIGNED ALTITUDE. EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

QUALITY
21
CHECKED

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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> |
|------------------------|-------------------------------------|----------------------------|--------------------------|---------------|-----------------|------------|-------------|------------------------------------|
| GUSTI | MMALT3.GUSTI | MOOKI | JAAYE | TRACK 086.32 | 15.12 | 10600 | 3100 | |
| | | JAAYE | SPINY | TRACK 086.95 | 14.46 | 12000 | 1700 | |
| | | SPINY | GUSTI | TRACK 077.95 | 59.59 | 12000 | 1500 | |
| LAKE CHARLES | MMALT3.LCH | MOOKI | HOURN | TRACK 059.39 | 17.73 | 8200 | 3100 | |
| | | HOURN | BLING | TRACK 077.03 | 15.05 | 10600 | 1600 | |
| | | BLING | LCH VORTAC | TRACK 076.82 | 47.97 | 12000 | 1700 | |
| WHITE LAKE | MMALT3.LLA | MOOKI | YOKEM | TRACK 117.10 | 16.59 | 8000 | 3100 | |
| | | YOKEM | SBI VOR/DME | TRACK 092.24 | 16.04 | 10600 | 1300 | |
| | | SBI VOR/DME | LLA VOR/DME | TRACK 085.51 | 87.00 | 12000 | 1700 | |

PROCEDURAL DATA NOTES:

NOTE: DME/DME/IRU OR GPS REQUIRED.

NOTE: RADAR REQUIRED.

NOTE: RNAV 1.

NOTE: GUSTI AND LCH TRANSITIONS ATC ASSIGNED ONLY FOR AIRCRAFT DEPARTING AXH, EFD, GLS, HPY, IWS, LBX, LVJ, SGR, TME, T00, T41 AND 54T.

TAKEOFF MINIMUMS:

CONROE-NORTH HOUSTON RGNL (KCXO)

RWY 1, 14, 19, 32 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 760.

RWJ AIRPARK (K54T)

RWY 8, 26 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 540.

RWY 14, 32 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 540 - NA AT NIGHT.

CLEVELAND MUNI (K6R3)

RWY 16, 34 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 660.

WHARTON RGNL (KARM)

RWY 14, 32 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 600.

QUALITY
21
CHECKED

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HOUSTON-SOUTHWEST (KAXH)

RWY 9, 27 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 580.

BAY CITY RGNL (KBYY)

RWY 13, 31 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 560.

DAVID WAYNE HOOKS MEMORIAL (KDWH)

RWY 17L, 35R NA-ENVIRONMENTAL

WATERWAY 17, 35 NA-AIR TRAFFIC.

RWY 17R, 35L STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 660.

ELLINGTON (KEFD)

RWY 4, 17L, 17R, 22, 35L, 35R STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 540.

SCHOLES INTL AT GALVESTON (KGLS)

RWY 14, 18, 32, 36 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 520.

BAYTOWN (KHPY)

RWY 14, 32 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 540.

WEST HOUSTON (KIWS)

RWY 15, 33 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 620.

TEXAS GULF COAST RGNL (KLBX)

RWY 17, 35 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 540.

PEARLAND RGNL (KLVJ)

RWY 14, 32 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 560.

SUGAR LAND RGNL (KSGR)

RWY 17, 35 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 600.

CHAMBERS COUNTY (KT00)

RWY 17, 35 NA-ENVIRONMENTAL.

RWY 12, 30 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 540.

LA PORTE MUNI (KT41)

RWY 5, 12, 23, 30 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 540.

LIBERTY MUNI (KT78)

RWY 16, 34 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 580.

HOUSTON EXECUTIVE (KTME)

RWY 18, 36 STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 680.

QUALITY
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CHECKED

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TAKEOFF OBSTACLES NOTES:

CONROE-NORTH HOUSTON RGNL (KCXO)

NOTE: RWY 01: TREE 829 FT FROM DER, 548 FT RIGHT OF CENTERLINE, 297 FT MSL. TREE 1252 FT FROM DER, 553 FT RIGHT OF CENTERLINE, 312 FT MSL. TREES BEGINNING 1609 FT FROM DER, 300 FT LEFT OF CENTERLINE, UP TO 322 FT MSL. TREES BEGINNING 3635 FT FROM DER, 464 FT LEFT OF CENTERLINE, UP TO 327 FT MSL. TREE 3830 FT FROM DER, 580 FT RIGHT OF CENTERLINE, 347 FT MSL. TREE 4658 FT FROM DER, 135 FT RIGHT OF CENTERLINE, 348 FT MSL.

NOTE: RWY 14: NAVAID 399 FT FROM DER, 266 FT RIGHT OF CENTERLINE, 20 FT AGL/255 FT MSL. TREE 1478 FT FROM DER, 691 FT RIGHT OF CENTERLINE, 291 FT MSL. TREE 1653 FT FROM DER, 682 FT LEFT OF CENTERLINE, 294 FT MSL. TREE 2129 FT FROM DER, 80 FT RIGHT OF CENTERLINE, 306 FT MSL. TREE 2153 FT FROM DER, 407 FT LEFT OF CENTERLINE, 300 FT MSL.

NOTE: RWY 19: TREE 1 FT FROM DER, 474 FT LEFT OF CENTERLINE, 292 FT MSL. TREES BEGINNING 16 FT FROM DER, 264 FT LEFT OF CENTERLINE, UP TO 295 FT MSL. TREE 67 FT FROM DER, 322 FT RIGHT OF CENTERLINE, 263 FT MSL. TREES BEGINNING 855 FT FROM DER, 324 FT RIGHT OF CENTERLINE, UP TO 303 FT MSL. TREES BEGINNING 2139 FT FROM DER, 65 FT RIGHT OF CENTERLINE, UP TO 316 FT MSL. TREES BEGINNING 2365 FT FROM DER, 331 FT LEFT OF CENTERLINE, UP TO 312 FT MSL. TREES BEGINNING 2475 FT FROM DER, 158 FT LEFT OF CENTERLINE, UP TO 315 FT MSL. TREE 3423 FT FROM DER, 123 FT RIGHT OF CENTERLINE, 323 FT MSL.

RWJ AIRPARK (K54T)

NOTE: RWY 8: TREES BEGINNING 21 FT FROM DER, 152 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/129 FT MSL. VEHICLE ON ROAD BEGINNING 100 FT FROM DER, CROSSING CENTERLINE, UP TO 15 FT AGL/44 FT MSL. FENCE BEGINNING ABEAM DER, 115 FT RIGHT OF CENTERLINE, UP TO 6 FT AGL/35 FT MSL. TREES BEGINNING 133 FT FROM DER, 333 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/129 FT MSL. BUILDINGS BEGINNING 266 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 30 FT AGL/59 FT MSL. POWER LINES BEGINNING 356 FT FROM DER, 460 FT LEFT OF CENTERLINE, UP TO 32 FT AGL/61 FT MSL. POLE 663 FT FROM DER, 188 FT RIGHT OF CENTERLINE, 100 FT AGL/129 FT MSL.

NOTE: RWY 14: VEHICLE ON ROAD BEGINNING 10 FT FROM DER, CROSSING CENTERLINE, UP TO 15 FT AGL/44 FT MSL. BUILDINGS BEGINNING 35 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 30 FT AGL/59 FT MSL. TREES BEGINNING 30 FT FROM DER, CROSSING CENTERLINE, UP TO 100 FT AGL/129 FT MSL. POWER LINES BEGINNING 341 FT FROM DER, CROSSING CENTERLINE, UP TO 32 FT AGL/61 FT MSL.

NOTE: RWY 26: BUILDINGS BEGINNING 47 FT FROM DER, 118 FT RIGHT OF CENTERLINE, UP TO 30 FT AGL/64 FT MSL. BUILDINGS BEGINNING 187 FT FROM DER, 85 FT LEFT OF CENTERLINE, UP TO 30 FT AGL/64 FT MSL. POWER LINES BEGINNING 407 FT FROM DER, CROSSING CENTERLINE, UP TO 32 FT AGL/66 FT MSL. VEHICLE ON ROAD BEGINNING 448 FT FROM DER, CROSSING CENTERLINE, UP TO 15 FT AGL/49 FT MSL. TREES BEGINNING 619 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 100 FT AGL/134 FT MSL. QUARRY EQUIPMENT 2800 FT FROM DER, 193 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/134 FT MSL.

NOTE: RWY 32: VEHICLE ON ROAD BEGINNING 10 FT FROM DER, CROSSING CENTERLINE, UP TO 15 FT AGL/49 FT MSL. FENCE BEGINNING 30 FT FROM DER, CROSSING CENTERLINE, UP TO 6 FT AGL/40 FT MSL. BUILDINGS BEGINNING 29 FT FROM DER, 223 FT LEFT OF CENTERLINE, UP TO 30 FT AGL/64 FT MSL. BUILDINGS BEGINNING 31 FT FROM DER, 146 FT RIGHT OF CENTERLINE, UP TO 30 FT AGL/64 FT MSL. POWERLINES BEGINNING 259 FT FROM DER, 139 FT LEFT OF CENTERLINE, UP TO 32 FT AGL/66 FT MSL. TREES BEGINNING 620 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 100 FT AGL/139 FT MSL.

CLEVELAND MUNI (K6R3)

NOTE: RWY 16: TREES BEGINNING ABEAM DER, RIGHT AND LEFT OF CENTERLINE, UP TO 100 FT AGL/239 FT MSL.

NOTE: RWY 34: TREES BEGINNING 120 FT FROM DER, 243 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/259 FT MSL. TREES AND POLES BEGINNING 225 FT FROM DER, 363 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/220 FT MSL. VEHICLES ON ROAD 738 FT FROM DER, RIGHT AND LEFT OF CENTERLINE, UP TO 19 FT AGL/169 FT MSL.

WHARTON RGNL (KARM)

NOTE: RWY 32: VEHICLE ON ROADS BEGINNING 26 FT FROM DER, 312 FT RIGHT OF CENTERLINE, UP TO 17 FT AGL/113 FT MSL. BUILDINGS BEGINNING 40 FT FROM DER, 338 FT RIGHT OF CENTERLINE, UP TO 26 FT AGL/125 FT MSL. POLES BEGINNING 140 FT FROM DER, 467 FT RIGHT OF CENTERLINE, UP TO 43 FT AGL/142 FT MSL. TREE 828 FT FROM DER, 509 FT RIGHT OF CENTERLINE, 28 FT AGL/127 FT MSL. FENCE 24 FT FROM DER, 288 FT LEFT OF CENTERLINE, 4 FT AGL/103 FT MSL. TREE 1147 FT FROM DER, 425 FT LEFT OF CENTERLINE, 41 FT AGL/140 FT MSL.

HOUSTON-SOUTHWEST (KAXH)

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 TRANSMISSION POLES BEGINNING 1304 FT FROM DER, 131 FT RIGHT OF CENTERLINE, UP TO 41 FT AGL/110 FT MSL.

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BAY CITY RGNL (KBYY)

NOTE: RWY 13: TREES AND POLES BEGINNING 51 FT FROM DER, 306 FT LEFT OF CENTERLINE, UP TO 91 FT MSL. TREE 337 FT FROM DER, 442 FT RIGHT OF CENTERLINE, 79 FT MSL. TREE 478 FT FROM DER, 473 FT RIGHT OF CENTERLINE, 83 FT MSL. TREES BEGINNING 714 FT FROM DER, 496 FT RIGHT OF CENTERLINE, UP TO 86 FT MSL.

NOTE: RWY 31: TREE 102 FT FROM DER, 340 FT RIGHT OF CENTERLINE, 61 FT MSL. TREE 548 FT FROM DER, 272 FT LEFT OF CENTERLINE, 59 FT MSL. TREE 944 FT FROM DER, 272 FT RIGHT OF CENTERLINE, 70 FT MSL. TREES BEGINNING 1002 FT FROM DER, 255 FT RIGHT OF CENTERLINE, UP TO 78 FT MSL. TREE 1139 FT FROM DER, 750 FT RIGHT OF CENTERLINE, 80 FT MSL.

DAVID WAYNE HOOKS MEMORIAL (KDWI)

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 AND 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.

ELLINGTON (KEFD)

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 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.

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.

SCHOLES INTL AT GALVESTON (KGLS)

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.

BAYTOWN (KHPY)

NOTE: RWY 14: MULTIPLE TREES, POWER POLES, AND HOUSES BEGINNING AT DER, LEFT AND RIGHT OF CENTERLINE, UP TO 60 FT AGL/89 FT MSL. VEHICLE 187 FT FROM DER, 47 FT RIGHT OF CENTERLINE, 15 FT AGL/44 FT MSL. TOWER 4066 FT FROM DER, 1217 FT RIGHT OF CENTERLINE, 156 FT AGL/180 FT MSL.

NOTE: RWY 32: VEHICLE 53 FT FROM DER, 23 FT RIGHT OF CENTERLINE, 15 FT AGL/49 FT MSL. BUILDINGS BEGINNING 104 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 30 FT AGL/59 FT MSL. TREES BEGINNING 116 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 60 FT AGL/94 FT MSL.

WEST HOUSTON (KIWS)

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 FT MSL. TREES BEGINNING 130 FT FROM DER, 117 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/208 FT MSL.

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

TEXAS GULF COAST RGNL (KLBX)

NOTE: RWY 35: TREE 1330 FT FROM DER, 797 FT LEFT OF CENTERLINE, 71 FT MSL. TREE 1404 FT FROM DER, 796 FT LEFT OF CENTERLINE, 73 FT MSL. TREES BEGINNING 1467 FT FROM DER, 788

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FLIGHT STANDARDS SERVICE
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FT LEFT OF CENTERLINE, UP TO 75 FT MSL. TREE 1474 FT FROM DER, 670 FT RIGHT OF CENTERLINE, 72 FT MSL. TREE 1516 FT FROM DER, 684 FT RIGHT OF CENTERLINE, 73 FT MSL. TREE 1578 FT FROM DER, 759 FT RIGHT OF CENTERLINE, 74 FT MSL.

PEARLAND RGNL (KLVJ)

NOTE: RWY 14: VEHICLES ON ROAD BEGINNING 11 FT FROM DER, 450 FT RIGHT OF CENTERLINE, UP TO 15 FT AGL/54 FT MSL. HANGERS 99 FT FROM DER, 521 FT LEFT OF CENTERLINE, UP TO 13 FT AGL/53 FT MSL. TREES BEGINNING 102 FT FROM DER, 328 FT LEFT OF CENTERLINE, UP TO 27 FT AGL/71 FT MSL. TREES BEGINNING 199 FT FROM DER, 307 FT RIGHT OF CENTERLINE, UP TO 64 FT AGL/98 FT MSL. VEHICLES ON ROAD BEGINNING 364 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 15 FT AGL/59 FT MSL. TREES BEGINNING 618 FT FROM DER, 331 FT LEFT OF CENTERLINE, UP TO 32 FT AGL/71 FT MSL. TREES BEGINNING 983 FT FROM DER, 94 FT RIGHT OF CENTERLINE, UP TO 20 FT AGL/90 FT MSL. TREES BEGINNING 1251 FT FROM DER, 72 FT LEFT OF CENTERLINE, UP TO 60 FT AGL/94 FT MSL.

NOTE: RWY 32: MULTIPLE TREES BEGINNING 30 FT FROM DER, 142 FT RIGHT OF CENTERLINE, UP TO 59 FT AGL/100 FT MSL. MULTIPLE TREES BEGINNING 41 FT FROM DER, 200 FT LEFT OF CENTERLINE, UP TO 74 FT AGL/118 FT MSL. POLE 68 FT FROM DER, 107 FT RIGHT OF CENTERLINE, 26 FT AGL/70 FT MSL. MULTIPLE BUILDINGS AND POLES BEGINNING 103 FT FROM DER, 235 FT RIGHT OF CENTERLINE, UP TO 34 FT AGL/78 FT MSL. VEHICLES ON ROAD 513 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, 15 FT AGL/59 FT MSL. MULTIPLE POLES AND TREES BEGINNING 605 FT FROM DER, LEFT AND RIGHT OF CENTERLINE UP TO 84 FT AGL/128 FT MSL.

SUGAR LAND RGNL (KSGR)

NOTE: RWY 17: MULTIPLE POLES BEGINNING 436 FT FROM DER, 172 FT RIGHT OF CENTERLINE, UP TO 44 FT AGL/124 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. BUILDING 1036 FT FROM DER, 743 FT RIGHT OF CENTERLINE, 26 FT AGL/102 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.

CHAMBERS COUNTY (KT00)

NOTE: RWY 12: VEHICLES ON ROADWAY BEGINNING 19 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 15 FT AGL/34 FT MSL. TREES BEGINNING 986 FT FROM DER, 732 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/119 FT MSL.

NOTE: RWY 30: TREES BEGINNING 60 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 100 FT AGL/124 FT MSL. VEHICLES ON ROADWAY 121 FT FROM DER, 512 FT RIGHT OF CENTERLINE, UP TO 17 FT AGL/36 FT MSL. TOWER 2152 FT FROM DER, 593 FT RIGHT OF CENTERLINE, 60 FT AGL/83 FT MSL.

LA PORTE MUNI (KT41)

NOTE: RWY 5: TREES BEGINNING 334 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 67 FT AGL/91 FT MSL. POLES BEGINNING 973 FT FROM DER, 387 FT LEFT OF CENTERLINE, UP TO 40 FT AGL/64 FT MSL. BUILDINGS BEGINNING 319 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 30 FT AGL/54 FT MSL. STACK 2.3 NM FROM DER, 3296 FT LEFT OF CENTERLINE, 300 FT AGL/334 FT MSL.

NOTE: RWY 12: POLES BEGINNING 127 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 54 FT AGL/74 FT MSL. TREES BEGINNING 183 FT FROM DER, 446 FT RIGHT OF CENTERLINE, UP TO 40 FT AGL/60 FT MSL. BUILDING 675 FT FROM DER, 411 FT RIGHT OF CENTERLINE, UP TO 32 FT AGL/55 FT MSL. TREES BEGINNING 888 FT FROM DER, 113 FT RIGHT OF CENTERLINE, UP TO 43 FT AGL/63 FT MSL.

NOTE: RWY 23: BUILDINGS BEGINNING 30 FT FROM DER, 242 FT LEFT OF CENTERLINE, UP TO 30 FT AGL/54 FT MSL. BUILDINGS BEGINNING 231 FT FROM DER, 134 FT RIGHT OF CENTERLINE, UP TO 30 FT AGL/54 FT MSL. TREES BEGINNING 243 FT FROM DER, 494 FT RIGHT OF CENTERLINE, UP TO 67 FT AGL/91 FT MSL. POLES BEGINNING 363 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 40 FT AGL/64 FT MSL. VEHICLE ON ROAD BEGINNING 493 FT FROM DER, 562 FT LEFT OF CENTERLINE, UP TO 15 FT AGL/39 FT MSL. TREES BEGINNING 573 FT FROM DER, 292 FT LEFT OF CENTERLINE, UP TO 67 FT AGL/91 FT MSL. TREES BEGINNING 1123 FT FROM DER, 69 FT RIGHT OF CENTERLINE, UP TO 67 FT AGL/91 FT MSL.

NOTE: RWY 30: TREES BEGINNING 44 FT FROM DER, 331 FT RIGHT OF CENTERLINE, UP TO 51 FT AGL/71 FT MSL. POLE 114 FT FROM DER, 500 FT LEFT OF CENTERLINE, 37 FT AGL/60 FT MSL. BUILDINGS BEGINNING 334 FT FROM DER, 355 FT LEFT OF CENTERLINE, UP TO 25 FT AGL/50 FT MSL. TREES BEGINNING 367 FT FROM DER, 471 FT LEFT OF CENTERLINE, UP TO 37 FT AGL/57 FT MSL. BUILDING 669 FT FROM DER, 415 FT RIGHT OF CENTERLINE, 30 FT AGL/55 FT MSL. POLES BEGINNING 768 FT FROM DER, 427 FT RIGHT OF CENTERLINE, UP TO 50 FT AGL/74 FT MSL. TREES BEGINNING 1048 FT FROM DER, LEFT AND RIGHT OF CENTERLINE, UP TO 67 FT AGL/87 FT MSL.

LIBERTY MUNI (KT78)

NOTE: RWY 16: HANGARS BEGINNING 4 FT FROM DER, 340 FT RIGHT OF CENTERLINE, UP TO 21 FT AGL/91 FT MSL. TREE 273 FT FROM DER, 401 FT RIGHT OF CENTERLINE, 28 FT AGL/96 FT MSL. TREES BEGINNING 1067 FT FROM DER, 122 FT LEFT OF CENTERLINE, UP TO 76 FT AGL/146 FT MSL. TREES AND POLES BEGINNING 1166 FT FROM DER, 48 FT RIGHT OF CENTERLINE, UP TO 85 FT AGL/155 FT MSL.

NOTE: RWY 34: TREES BEGINNING 176 FT FROM DER, 262 FT LEFT OF CENTERLINE, UP TO 52 FT AGL/117 FT MSL. POLES BEGINNING 427 FT FROM DER, 318 FT RIGHT OF CENTERLINE, UP TO 40

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FT AGL/105 FT MSL. POLES BEGINNING 451 FT FROM DER, 236 FT LEFT OF CENTERLINE, UP TO 39 FT AGL/106 FT MSL. TREES BEGINNING 758 FT FROM DER, 101 FT RIGHT OF CENTERLINE, UP TO 101 FT AGL/166 FT MSL. TREES BEGINNING 1953 FT FROM DER, 40 FT LEFT OF CENTERLINE, UP TO 96 FT AGL/161 FT MSL.

HOUSTON EXECUTIVE (KTME)

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.

CONTROLLING OBSTACLES:

CLEVELAND MUNI (K6R3)

OBSTACLES MANDATING ODP ROUTE DEVELOPMENT: RWY 16: 2049 FT MSL TOWER 301351.00N/0950726.00W. RWY 34: 2049 FT MSL TOWER 303207.00N/0950105.00W.

HOUSTON-SOUTHWEST (KAXH)

RWY 9, 27: 2049 FT MSL TOWERS 293341.00N/0953005.00W.

ELLINGTON (KEFD)

RWY 22: 192 FT MSL WATER TOWER 293521.00N/0951048.09W.

SCHOLES INTL AT GALVESTON (KGLS)

OBSTACLES MANDATING ODP ROUTE DEVELOPMENT: RWY 32: 2013 FT MSL TOWER 291800.65N/0950640.27W.

BAYTOWN (KHPY)

RWY 14: 180 FT MSL TOWER 294613.50N/0945637.80W.

PEARLAND RGNL (KLVJ)

OBSTACLES MANDATING ODP ROUTE DEVELOPMENT: RWY 14, 32: 1200 FT MSL TOWER 292757.00N/0951324.00W.

SUGAR LAND RGNL (KSGR)

RWY 17: 2049 FT MSL TOWER 293415.70N/0953038.30W.

RWY 35: 2049 FT MSL TOWER 293435.00N/0953037.00W.

LA PORTE MUNI (KT41)

OBSTACLES MANDATING ODP ROUTE DEVELOPMENT: RWY 05: 334 FT MSL STACK 294201.00N/0950211.00W. RWY 12: 499 FT MSL STACK 293747.00N/0950316.00W. RWY 30: 584 FT MSL TOWER 294253.26N/0950540.31W.

LIBERTY MUNI (KT78)

OBSTACLES MANDATING ODP ROUTE DEVELOPMENT: RWY 16: 2049 FT MSL TOWER 300102.20N/0943247.89W, 2042 FT MSL TOWER 300306.00N/0943138.00W, 2040 FT MSL TOWER 295609.78N/0943039.38W. RWY 34: 2049 FT MSL TOWER 300102.20N/0943247.89W, 2042 FT MSL TOWER 300306.00N/0943138.00W.

HOUSTON EXECUTIVE (KTME)

RWY 36: 546 MSL TOWER 295050.00N/0955259.00W.

LOST COMMUNICATIONS PROCEDURES:

ADDITIONAL FLIGHT DATA:

REFERENCE MAG VAR: KCXO 5E EPOCH YR: 2000. DME/DME ASSESSMENT: SAT (RNP 2.0)

CONROE-NORTH HOUSTON RGNL (KCXO) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.

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RWJ AIRPARK (K54T) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.
CLEVELAND MUNI (K6R3) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.
WHARTON RGNL (KARM) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.
HOUSTON-SOUTHWEST (KAXH) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.
BAY CITY RGNL (KBYY) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.
DAVID WAYNE HOOKS MEMORIAL (KDWH) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.
ELLINGTON (KEFD) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.
SCHOLLES INTL AT GALVESTON (KGLS) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.
BAYTOWN (KHPY) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.
WEST HOUSTON (KIWS) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.
TEXAS GULF COAST RGNL (KLBX) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.
PEARLAND RGNL (KLVJ) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.
SUGAR LAND RGNL (KSGR) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.
CHAMBERS COUNTY (KT00) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.
LA PORTE MUNI (KT41) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.
LIBERTY MUNI (KT78) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.
HOUSTON EXECUTIVE (KTME) - CHART: TOP ALTITUDE: ASSIGNED BY ATC.

CHART: MEA/MOCA FROM MMALT TO MOOKI, 4700/1600.

PILOT NAVIGATION AREA:

10 NM ARC CENTERED ON MMALT (IF), CW
FROM: POINT A (BEARING 041 DEGREES TO MMALT)
TO: POINT B (BEARING 131 DEGREES TO MMALT)
MINIMUM ATC ALTITUDE AT MMALT - 3000
MAXIMUM ATC ALTITUDE AT MMALT - 16000

DEPARTURE FREQUENCIES: CXO/DWH/6R3/T78 - 119.7/281.4; AXH/IWS/SGR/TME - 123.8/257.7; EFD/GLS/HPY/LBX/LVJ/54T/T00/T41 - 134.45/284.0.

AIRPORTS SERVED:

| <u>AIRPORT NAME</u> | <u>CITY</u> | <u>STATE</u> |
|-----------------------------------|-------------|--------------|
| CONROE-NORTH HOUSTON RGNL (KCXO) | HOUSTON | TX |
| RWJ AIRPARK (K54T) | BAYTOWN | TX |
| CLEVELAND MUNI (K6R3) | CLEVELAND | TX |
| WHARTON RGNL (KARM) | WHARTON | TX |
| HOUSTON-SOUTHWEST (KAXH) | HOUSTON | TX |
| BAY CITY RGNL (KBYY) | BAY CITY | TX |
| DAVID WAYNE HOOKS MEMORIAL (KDWH) | HOUSTON | TX |

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| ELLINGTON (KEFD) | | | HOUSTON | | TX |
| SCHOLES INTL AT GALVESTON (KGLS) | | | GALVESTON | | TX |
| BAYTOWN (KHPY) | | | BAYTOWN | | TX |
| WEST HOUSTON (KIWS) | | | HOUSTON | | TX |
| TEXAS GULF COAST RGNL (KLBX) | | | ANGLETON/LAKE JACKSON | | TX |
| PEARLAND RGNL (KLVJ) | | | HOUSTON | | TX |
| SUGAR LAND RGNL (KSGR) | | | HOUSTON | | TX |
| CHAMBERS COUNTY (KT00) | | | ANAHUAC | | TX |
| LA PORTE MUNI (KT41) | | | LA PORTE | | TX |
| LIBERTY MUNI (KT78) | | | LIBERTY | | TX |
| HOUSTON EXECUTIVE (KTME) | | | HOUSTON | | TX |

COMMUNICATIONS:**ATIS:** EFD, CXO, DWH.**AWOS/ASOS:** CXO, EFD, DWH, SGR, AXH, TME, GLS, LBX, 6R3, LVJ.**CTAF:** CXO, DWH, SGR, AXH, TME, IWS, GLS, LBX, T41, 54T, 6R3, HPY, LVJ, T00, T78.**CLNC DEL:** CXO, DWH, SGR, AXH, TME, IWS, GLS, LBX, T41, LVJ.**GND CON:** EFD, CXO, DWH, SGR, GLS.**TWR:** EFD, CXO, DWH, SGR, GLS.**DEP CON:** CXO/DWH/6R3/T78 - 119.7/281.4**DEP CON:** AXH/IWS/SGR/TME - 123.8/257.7**DEP CON:** EFD/GLS/HPY/LBX/LVJ/54T/T00/T41 - 134.45/284.0**DEP CON:** ARM/BYY - HOUSTON CENTER 128.6/360.8**FIXES AND/OR NAVAIDS:****REMARKS:**

FOR CONTINUITY, ON RUNWAYS WHERE 500 FT PER NM TO 500 FT ABOVE APT ELEV WAS NOT SUFFICIENT TO CLEAR DIVERSE A/B OBSTACLES, THE ALTITUDE OF THE TEXTUAL DEPARTURE PROCEDURE ON ODP WAS UTILIZED.

ABBREVIATED AMENDMENT



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|----------------|---------------|-------------------------|--------------------------|--------------|-----------------------|
| MMALT | THREE | MMALT3.MMALT | TWO | 01/08/2015 | 22 JUN 2017 |

FLIGHT INSPECTED BY:

MARC J HINCK

Digitally signed by
JOHNNIE BAKER
Apr 04, 2017

OFFICE SYMBOL:

FICO

DATE:

03/02/2017

DEVELOPED BY:

BRIAN J BICKETT

Digitally signed by
BRIAN J BICKETT
Feb 14, 2017

OFFICE SYMBOL:

AJV-5442

DATE:

02/14/2017

APPROVED BY:

JULIE MORGAN

Digitally signed by
STEVEN A VARGAS
Feb 16, 2017

OFFICE SYMBOL:

AJV-5420

DATE:**REQUIRED EFFECTIVE DATE:**

ROUTINE

COORDINATED WITH:

| | | | | | |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| <u>A4A</u> | <u>ALPA</u> | <u>AOPA</u> | <u>APA</u> | <u>HAI</u> | <u>NBAA</u> |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

OTHER:

ZHU ARTCC, HOU DEP CON, DWH ATCT, EFD ATCT, SGR ATCT, CXO ATCT. AMGR: 54T, 6R3, AXH, CXO, DWH, GLS, HPY, IWS, LBX, LVJ, SGR, T00, T41, T78, TME, EFD, ARM, BYY.

CHANGES - REASONS:

- AIRPORT NAME CHANGED FROM LONE STAR EXECUTIVE TO CONROE-NORTH HOUSTON RGNL (KCXO) - TEXAS DEPARTMENT OF TRANSPORTATION REQUEST.
- AIRPORT NAME CHANGED FROM BAY CITY MUNI TO BAY CITY RGNL (KBYY) - TEXAS DEPARTMENT OF TRANSPORTATION REQUEST.
- DP ROUTE DESCRIPTION AT BAY CITY RGNL (KBYY): CHANGED RWY 13/31 CLIMB HEADINGS FROM 127.57 / 307.57 TO 130.57 / 310.57 - AIRPORT MAG VAR CHANGED FROM E6 TO E3.
- DP ROUTE DESCRIPTION: CHANGED FROM "MAINTAIN 4000 OR AS ASSIGNED BY ATC" TO "MAINTAIN ATC ASSIGNED ALTITUDE" - TOP ALTITUDE CHANGED TO ASSIGNED BY ATC.
- TAKEOFF MINIMUMS AT ELLINGTON (KEFD): CHANGED RWY ORDER FROM "RWY 4, 17R, 17L, 22, 35R, 35L" TO " RWY 4, 17L, 17R, 22, 35L, 35R" - PER 8260.46F DOCUMENTATION CRITERIA.
- TAKEOFF OBSTACLE NOTES AT CONROE-NORTH HOUSTON RGNL (KCXO): UPDATED RWY 1, 14, 19 OBSTACLES - NEW SURVEY DATA.
- TAKEOFF OBSTACLE NOTES AT CONROE-NORTH HOUSTON RGNL (KCXO): REMOVED RWY 32 NOTE - NO OBSTACLES PENETRATE THE ICA.
- TAKEOFF OBSTACLE NOTES AT BAY CITY RGNL (KBYY): UPDATED RWY 13/31 OBSTACLES - NEW PROCEDURE EVALUATION USING TARGETS AND DEPARTURE OBSTACLE GROUPER.
- TAKEOFF OBSTACLE NOTES AT ELLINGTON (KEFD): REVERSED ORDER OF NOTES FROM RWY 35R, 35L TO 35L, 35R - PER 8260.46F DOCUMENTATION CRITERIA.
- TAKEOFF OBSTACLE NOTES AT TEXAS GULF COAST RGNL (KLBX): UPDATED RWY 35 OBSTACLES - NEW SURVEY DATA.
- TAKEOFF OBSTACLE NOTES AT PEARLAND RGNL (KLVJ): UPDATED RWY 14, 32 OBSTACLES - TO MATCH DOCUMENTATION ON 8260-15A. .
- CONTROLLING OBSTACLE AT HOUSTON-SOUTHWEST (KAXH): CHANGED FROM TOWER TO TOWERS - TO MATCH DOCUMENTATION ON 8260-15A.
- ADDED CONTROLLING OBSTACLES / OBSTACLES MANDATING ROUTE DEVELOPMENT TO CLEVELAND MUNI (K6R3), ELLINGTON (KEFD), SCHOLES INTL AT GALVESTON (KGLS), BAYTOWN (KHPY), PEARLAND RGNL (KLVJ), LA PORTE MUNI (KT41), LIBERTY MUNI (KT78) AND HOUSTON EXECUTIVE (KTME) - TO MATCH DOCUMENTATION ON 8260-15A'S.
- ADDITIONAL FLIGHT DATA: TOP ALTITUDES AT ALL AIRPORTS CHANGED FROM 4000 TO "ASSIGNED BY ATC" - PER AIR TRAFFIC REQUEST.
- COMMUNICATIONS: ADDED CXO TO AWOS/ASOS - CXO HAS ASOS.

**FEDERAL AVIATION ADMINISTRATION
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DEPARTURE (DATA RECORD)**

| DP NAME | | | | | | | NUMBER | DP COMPUTER CODE | SUPERSEDED NUMBER | DATED | EFFECTIVE DATE |
|-------------|------------------------|---|-------|----------|--------|-----------|----------|------------------|-------------------|--------------|----------------|
| MMALT | | | | | | | THREE | MMALT3.MMALT | TWO | 01/08/2015 | 22 JUN 2017 |
| FIX/NAVAID | LAT/LONG | C | FO/FB | LEG TYPE | TC | DIST (NM) | ALTITUDE | SPEED | | REMARKS | |
| MMALT | 295212.75N/0944701.01W | Y | - | IF | - | - | | | | | |
| MOOKI | 295206.07N/0943641.19W | Y | FB | TF | 090.67 | 8.98 | | | | | |
| | | | | | | | | | | | |
| MOOKI | 295206.07N/0943641.19W | Y | - | IF | - | - | | | | MMALT3.GUSTI | |
| JAAYE | 295144.00N/0941918.00W | Y | FB | TF | 091.32 | 15.12 | | | | | |
| SPINY | 295113.29N/0940240.80W | Y | FB | TF | 091.95 | 14.46 | | | | | |
| GUSTI | 295815.34N/0925435.29W | Y | FB | TF | 082.95 | 59.59 | | | | | |
| | | | | | | | | | | | |
| MOOKI | 295206.07N/0943641.19W | Y | - | IF | - | - | | | | MMALT3.LCH | |
| HOURN | 295945.76N/0941816.28W | Y | FB | TF | 064.39 | 17.73 | | | | | |
| BLING | 300150.16N/0940105.75W | Y | FB | TF | 082.03 | 15.05 | | | | | |
| LCH VORTAC | 300829.45N/0930620.05W | Y | FB | TF | 081.82 | 47.97 | | | | | |
| | | | | | | | | | | | |
| MOOKI | 295206.07N/0943641.19W | Y | - | IF | - | - | | | | MMALT3.LLA | |
| YOKEM | 294315.00N/0942033.00W | Y | FB | TF | 122.10 | 16.59 | | | | | |
| SBI VOR/DME | 294112.19N/0940216.72W | Y | FB | TF | 097.24 | 16.04 | | | | | |
| LLA VOR/DME | 293947.61N/0922225.11W | Y | FB | TF | 090.51 | 87.00 | | | | | |

