Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: IAP	Date Open: 04/03/2006	Task #: 2002101012384901003	Request #: 20021010123849
Procedure: VOR-D AMDT 1		Airport ID: KIWS	Airport: WEST HOUSTON		Reimbursable #:
City: HOUSTON	ST: TX	GPS #:		Estimated Chart Date: 09/20/2012	FICO #:
Fac ID: IAH	Fac. Type: VORTAC	Specialist: ROSS BARTO			

Procedure Review

	Rec'd	Rel'd	Full Name	Comments
Lead:	02/14/2012	05/03/2012	JEREL PAWLEY	
QA:	05/03/2012	05/14/2012	STEVEN SZUKALA	
Liaison:	05/14/2012		Alfonso	

PV

Procedure Comments:

Remark Type: INFORMATION

pg 4 of 4

HOUSTON, TX WEST HOUSTON (KIWS) VOR-D, AMDT 1 ENROUTE-NO FC: 8.7.12 PUB: 9.20.12

ATTACHED FORMS: 8260-5; 8260-9; 8260-2(S): ATILA-INT, REV 3; OZEFY-INT, ORIG; SEALY-INT, REV 13; (INFO ONLY) HUMBLE (IAH) VTAC, REV 6.
FLCK NOTE: OBST #3: REQUEST 4D AC FROM FLIGHT CHECK FOR 325 TOWER, 295024.00N/0953432.00W.

CONTACT: JILL OLSON, AJV-353 LEAD, 405.954.9568:

VORTAC IAH	APP CRS	Rwy ldg	N/A
116.6	239°	TDZE	N/A
Chan 113		Apt Elev	111

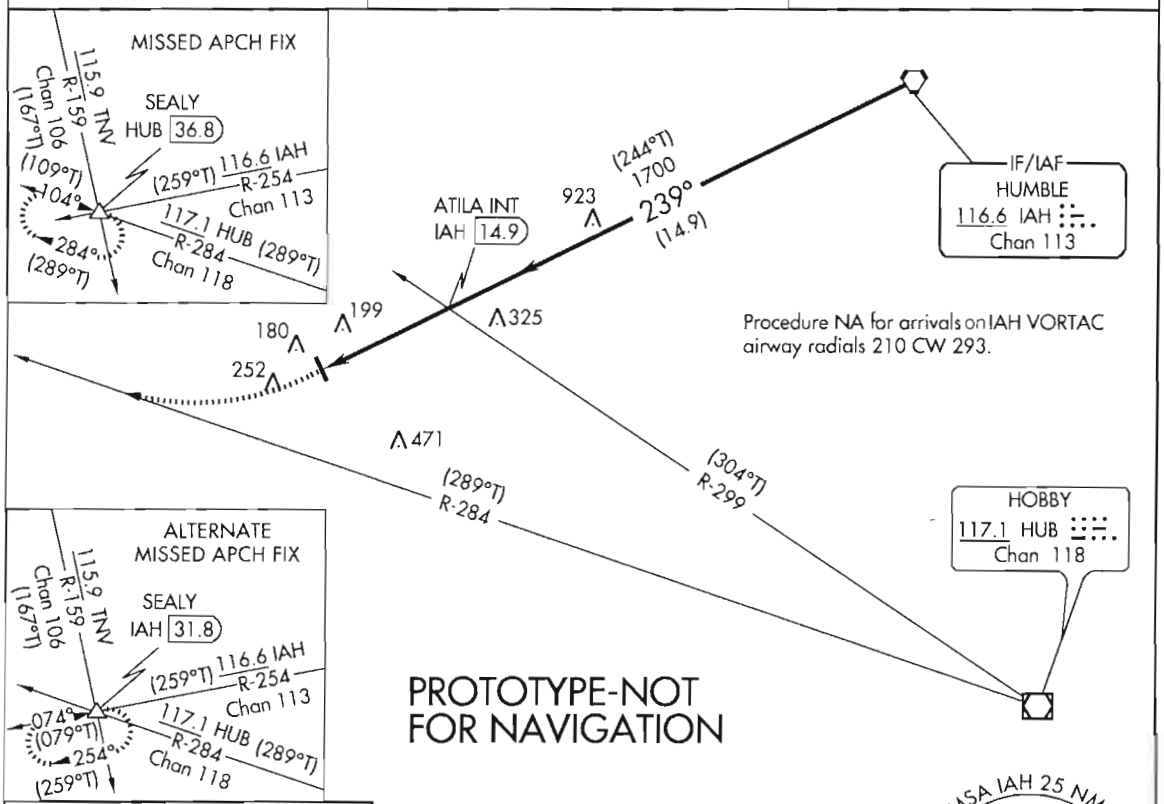
VOR-D

HOUSTON/WEST HOUSTON (IWS)

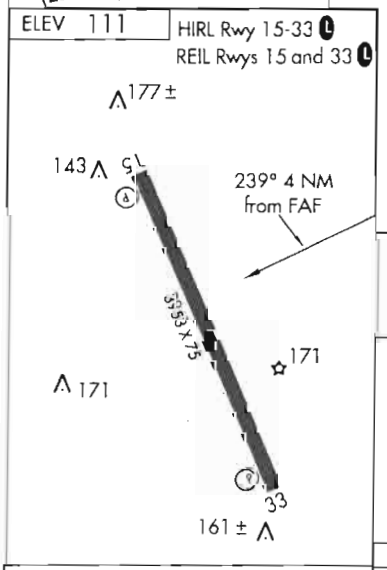
When VGSI inop, procedure NA at night. Visibility reduction by helicopters NA. Obtain local altimeter setting on CTAF; when not received, use George Bush Intercontinental/Houston altimeter setting and increase all MDA 60 feet.

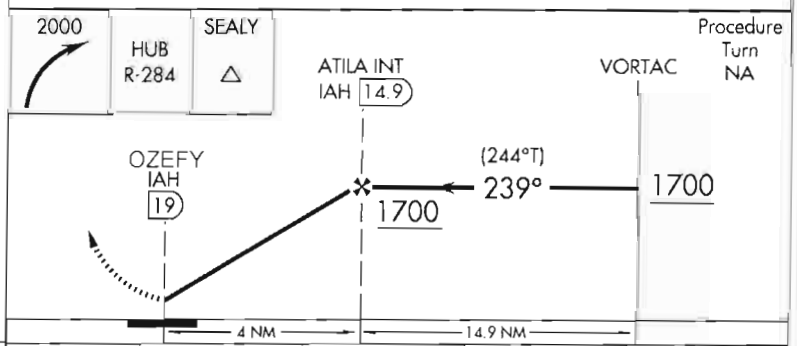
MISSED APPROACH: Climbing right turn to 2000 and HUB VOR/DME R-284 to SEALY INT/HUB 36.8 DME and hold.

HOUSTON APP CON	CLNC DEL	UNICOM
123.8 257.7	121.15	123.05 (CTAF)



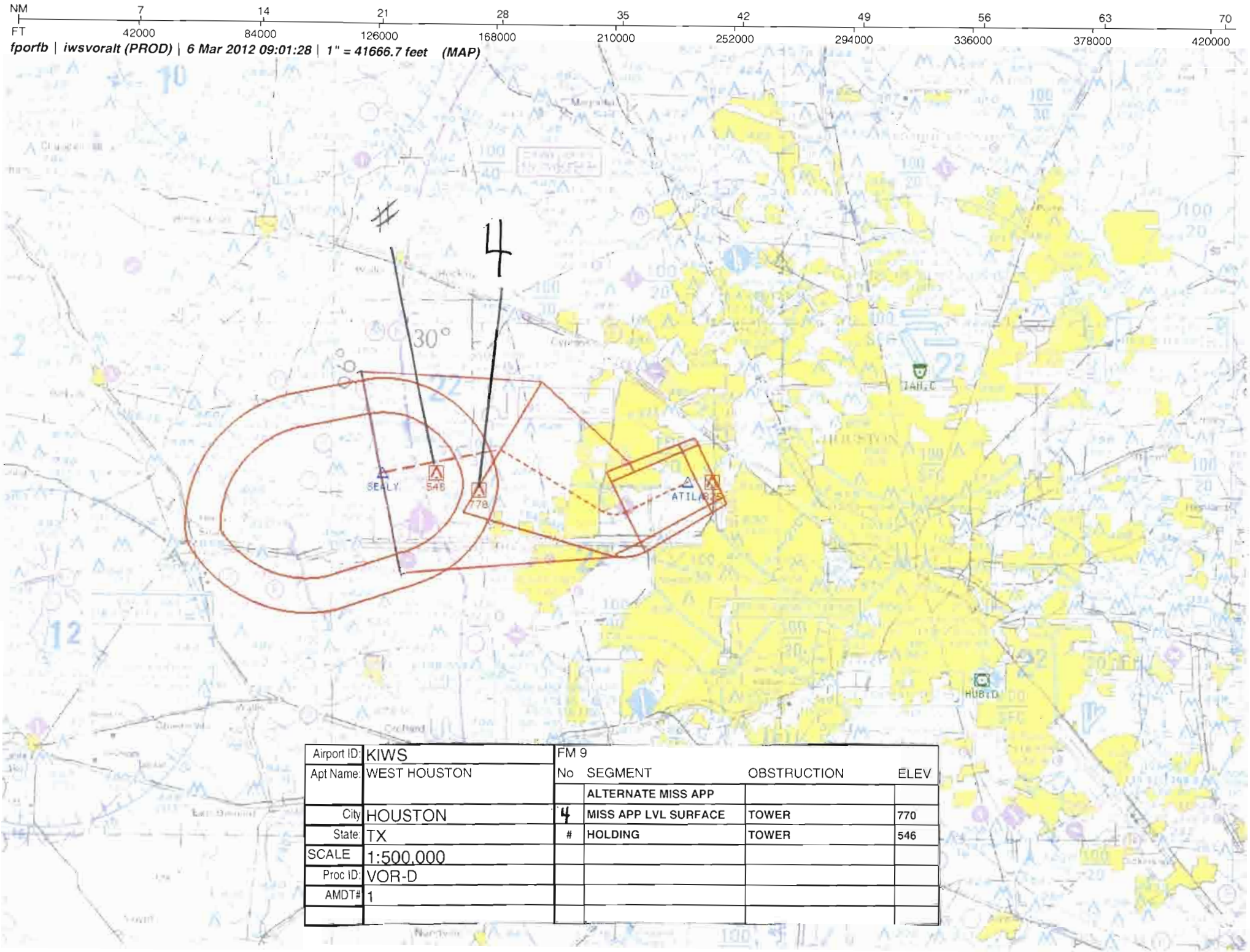
Procedure NA for arrivals on IAH VORTAC airway radials 210 CW 293.





FAF to MAP 4 NM					
Knots	60	90	120	150	180
Min:Sec	4:00	2:40	2:00	1:36	1:20

CATEGORY	A	B	C	D
CIRCLING	640-1 529 (600-1)		640-1½ 529 (600-1½)	NA

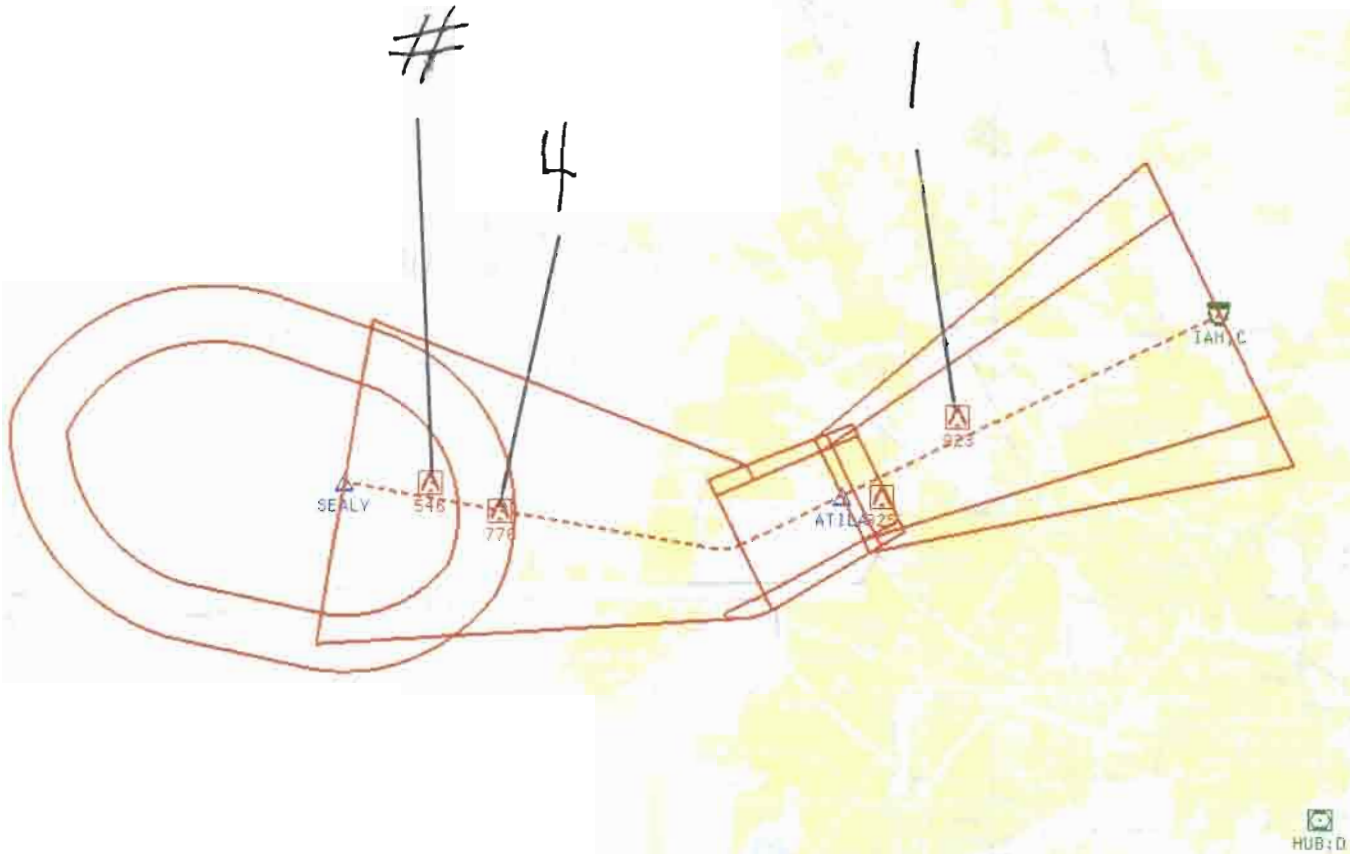


Airport ID:	KIWS	FM 9			
Apt Name:	WEST HOUSTON	No	SEGMENT	OBSTRUCTION	ELEV
			ALTERNATE MISS APP		
City	HOUSTON	4	MISS APP LVL SURFACE	TOWER	770
State:	TX	#	HOLDING	TOWER	546
SCALE	1:500,000				
Proc ID:	VOR-D				
AMDT#	1				

NM 7 14 21 28 35 42 49 56 63 70

FT 42000 84000 126000 168000 210000 252000 294000 336000 378000 420000

fporfb | iswvord (PROD) | 6 Mar 2012 11:25:00 | 1" = 41666.7 feet (MAP)

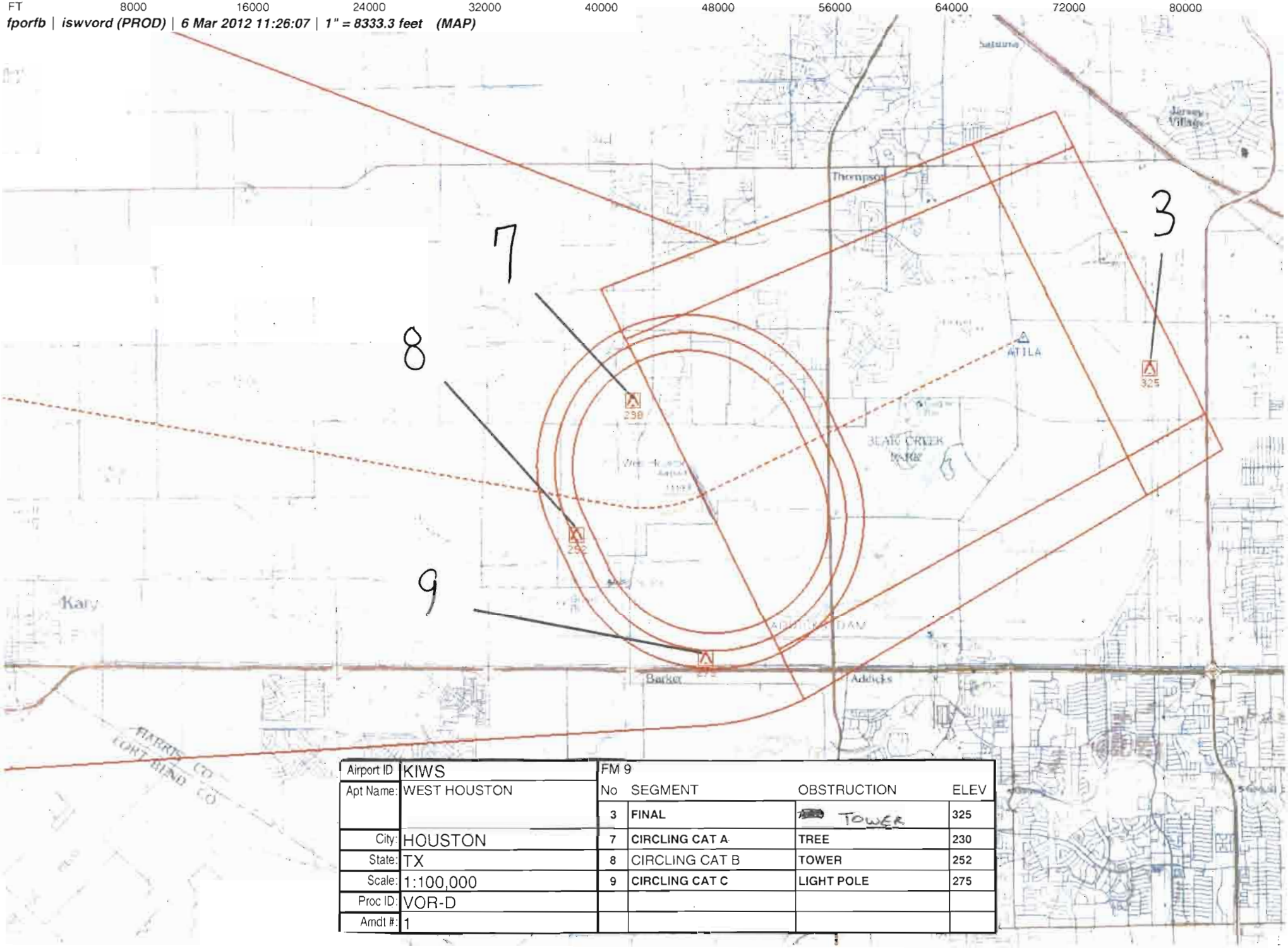


Airport ID:	KIWS	FM 9			
Apt Name:	WEST HOUSTON	No	SEGMENT	OBSTRUCTION	ELEV
		1	INITIAL/INTERMEDIATE	TOWER	923
City	HOUSTON	4	MISS APP LVL SURFACE	TOWER	770
State:	TX	#	HOLDING	TOWER	546
SCALE	1:500,000				
Proc ID:	VOR-D				
AMDT#	1				

NM 1 2 3 4 5 6 7 8 9 10 11 12 13 14

FT 8000 16000 24000 32000 40000 48000 56000 64000 72000 80000

fporfb | iswword (PROD) | 6 Mar 2012 11:26:07 | 1" = 8333.3 feet (MAP)



Airport ID	KIWS
Apt Name:	WEST HOUSTON
City:	HOUSTON
State:	TX
Scale:	1:100,000
Proc ID:	VOR-D
Amdt #:	1

FM 9

No	SEGMENT	OBSTRUCTION	ELEV
3	FINAL	[redacted] TOWER	325
7	CIRCLING CAT A	TREE	230
8	CIRCLING CAT B	TOWER	252
9	CIRCLING CAT C	LIGHT POLE	275

NM 1 2 3 4 5 6 7 8 9 10 11 12 13 14

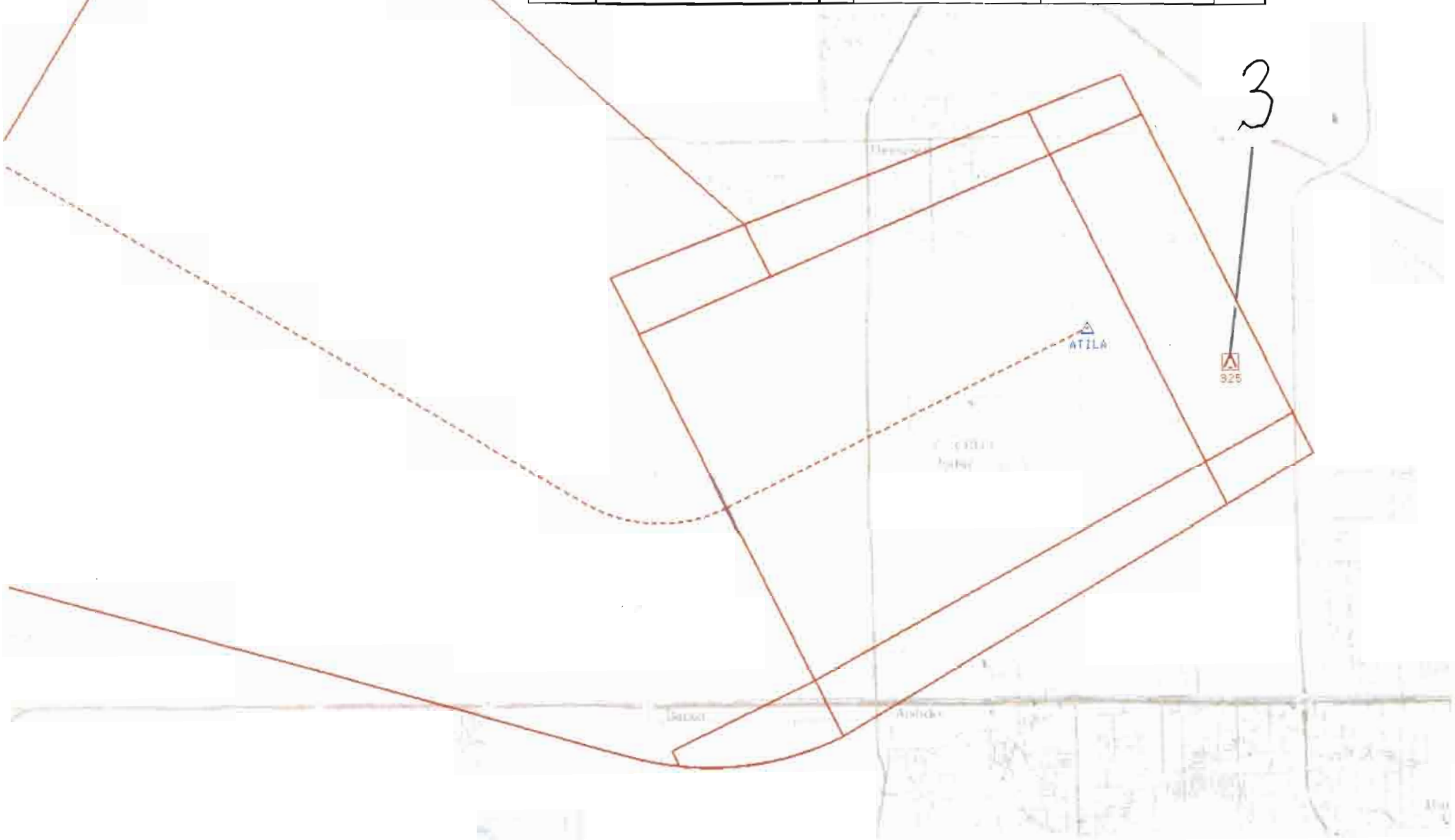
FT 8000 16000 24000 32000 40000 48000 56000 64000 72000 80000

fporfb | iwsvoralt (PROD) | 6 Mar 2012 09:00:48 | 1" = 8333.3 feet (MAP)

Airport ID	KIWS
Apt Name:	WEST HOUSTON
City:	HOUSTON
State:	TX
Scale:	1:100,000
Proc ID:	VOR-D
Amdt #:	1

FM 9

No	SEGMENT	OBSTRUCTION	ELEV
	ALTERNATE MISS APP		
3	FINAL	TOWER	325



U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

VOR STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICE - TITLE 14 CFR PART 97.23

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
IAH VORTAC (IF/IAF)	ATILA INT/IAH 14.92 DME	239.01 / 14.92	1700

MISSED APPROACH

MAP: 4.04 MILES AFTER ATILA INT/IAH 14.92 DME OR AT OZEFY/ 18.96 DME FIX

CLIMBING RIGHT TURN TO 2000 AND HUB VOR/DME R-284 TO SEALY INT/HUB 36.80 DME AND HOLD, OR AS DIRECTED BY ATC.

ALTERNATE MA: CLIMBING RIGHT TURN TO 2000 HEADING 330 AND IAH VORTAC R-254 TO SEALY INT/IAH 31.77 DME AND HOLD.

ADDITIONAL FLIGHT DATA:

HOLD W, RT, 104.02 INBOUND.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD W SEALY INT/IAH 31.77 DME, RT, 074.00 INBOUND.
CHART FAS OBST: 325 TWR 295024N/0953432W
FAC CROSSES MID POINT OF RWY 15-33.

1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. PROFILE STARTS AT IAH VORTAC
3. FAC 239.01 FAF ATILA INT/IAH 14.92 DME DIST FAF TO MAP 4.04 THLD ____
4. MIN. ALT IAH VORTAC 1700, ATILA 1700
8. MSA FROM: IAH VORTAC 015-230 3100, 230-015 2400

MAG VAR: 5E EPOCH YEAR:2000

MINIMUMS

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT ALTERNATE: N A X

CATEGORY =====>	A			B			C			D			E		
	MDA	VIS	HAT/HAA	MDA	VIS	HAT/HAA	MDA	VIS	HAT/HAA	MDA	VIS	HAT/HAA	MDA	VIS	HAT/HAA
CIRCLING	640	1	529	640	1	529	640	1 1/2	529		NA				

NOTES:

CHART NOTE: WHEN VGSI INOP, PROCEDURE NA AT NIGHT.
CHART NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS ON IAH VORTAC AIRWAY RADIALS 210 CW 293.
CHART NOTE: OBTAIN LOCAL ALTIMETER SETTING ON CTAF; WHEN NOT RECEIVED, USE GEORGE BUSH INTERCONTINENTAL/HOUSTON ALTIMETER SETTING AND INCREASE ALL MDA 60 FT.

QUALITY 2 CHECKED

CITY AND STATE	ELEVATION: 111 TDZE:	FACILITY IDENTIFIER:	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:	SUP
HOUSTON, TX	AIRPORT NAME: WEST HOUSTON	IAH	VOR-D, AMDT 1	AMDT ORIG-A
				DATE 11/01/2001

FAA FORM 8260-5 / April 2006 (computer generated)

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
[ ] YES [X] NO		ROUTINE

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
[ ]	[ ]	[X]	[ ]	[X]	[X]	[X] ZHU, IAH ATCT, AIRPORT MANAGER, STATE AVIATION DIRECTOR

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME: JILL OLSON (ROSS F. BARTO)	FIFO AJV-353	DATE: 03/07/2012
APPROVED BY		
NAME: LARRY H STROUT MANAGER	FIFO AJV-353	DATE:

CHANGES:

1. ADDED ALTERNATE MISSED APPROACH AND HOLDING.
2. REMOVED GEORGE BUSH INTERCONTINENTAL/HOUSTON ALTIMETER SETTING MINIMUMS.
3. RAISED MDA ALL CATS FROM CAT A 540 AND CATS B/C 580 TO 640.
4. ADDED DME TO FAF AND MISSED APPROACH CLEARANCE LIMIT.
5. ADDED FINAL AIMING POINT.
6. NAMED MISSED APPROACH POINT (OZEFY).
7. ADDED NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA.
8. ADDED NOTE: WHEN VGSI INOP, PROCEDURE NA AT NIGHT.
9. CHANGED MSA RADIALS FROM 018-208 TO 015-230.
10. ADDED PROCEDURE ENTRY NOTE FOR ARRIVALS AT IAH VORTAC.

REASONS:

1. REQUIRED.
2. REMOTE ALTIMETER MINIMUMS VIA NOTE.
3. NEW CONTROLLING OBSTACLE AND AC ADJUSTMENT.
4. TO KEEP FROM LOSING PROCEDURE IF GOVERNING FACILITY GOES DOWN.
5. REQUIRED.
6. CODING.
7/8. VISUAL SURFACE PENETRATIONS.
9. TO MATCH OTHER PROCEDURES.
10. TURNS IN EXCESS OF 120 DEGREES.

QUALITY 2 CHECKED

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
INTERMEDIATE	IAH VORTAC	ATILA INT/IAH	1. TOWER (48-004102)	295316.00N/0953123.00W	923 (2C)	500	AT277	1700
	(IF/IAF)	14.92 DME	2. TERRAIN	295624.00N/0952521.00W	122 (100)		AS1500	1600
FINAL	ATILA INT/IAH	4.04 MILES AFTER	3. TWR (48-009068)	295024.00N/0953432.00W	325 (4D)	250	AC50	640
	14.92 DME	ATILA INT/IAH						
		14.92 DME OR AT						
		OZEFY/ 18.96						
		DME FIX						
2. PROCEDURE TURN	NA							
3. MISSED APPROACH MAP:	4.04 MILES AFTER	SEALY INT/HUB				ASC		2000
	ATILA INT/IAH	36.80 DME	4. TOWER (48-008098)	294949.86N/0955007.80W	770 (2C)	1000		1800
ELEV:	390		5. TERRAIN	295436.00N/0955557.00W	194 (200)		AS1500	1700

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	HT. ABV. ARPT. ACTUAL							
CATEGORY A	1.3 NM	350	529	7. TREE (KIWST0204)	295002.13N/0954113.06W	230 (1A)	300	SI	640
CATEGORY B	1.5 NM	450	529	8. TOWER (48-012550)	294831.20N/0954157.10W	252 (2C)	300	SI	640
CATEGORY C	1.7 NM	450	529	9. POLE (KIWST0592)	294707.24N/0954017.14W	275 (1B)	300	SI	640
CATEGORY D	2.3 NM	550							
CATEGORY E	4.5 NM	550							

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID: IAH VORTAC

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A
015-230	TWR (48-004048)	194/ 24.1	2049 (5D)	3100					
230-015	TWR (48-007922)	012/ 23.6	1349 (5D)	2400					

QUALITY CHECKED

CITY AND STATE	ELEVATION: 111 / AIRPORT NAME:	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
HOUSTON, TX	WEST HOUSTON	IAH VORTAC	VOR-D, AMDT 1	ASW

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE			3. ALTIMETER SETTING
IAH APP CON		N W S	OTHER: CTAF	SOURCE: KIWS / KIAH
		F A A		DISTANCE: 0 / 19.93
		A / C		HOURS REMOTE OPERATION: 0 / 24
SATISFACTORY ON: X V H F X U H F H F	LOCATION: KIWS			ADJUSTMENT: 0 / 48

4. MONITOR STATUS	PRIMARY NAVAID:	IAH VORTAC
	MONITOR POINT:	MOCC
	HRS OPTN: CAT 1	24
	HRS OPTN: CAT 3	

5. APPROACH & RUNWAY LIGHTING	
	ALS
	(S) SALS
	MALS
X	HIRL 33 (PCL), 15 (PCL)
	MIRL
X	REIL 33 (PCL), 15 (PCL)
	TDZ
	C/LINE
X	OTHER (SPECIFY) PAPI-2L 33 PAPI-2R 15

6. RUNWAY MARKINGS	BASIC	15 NSTD-G, 33 NSTD-F
	ALL WEATHER	
	INSTRUMENT	
7. RUNWAY VISUAL RANGE	APPROACH	
	MIDFIELD	
	ROLL OUT	

8. GLIDE PATH		
	GP ANGLE:	ELEV RWY THRESHOLD:
	DISTANCE FROM RWY:	ELEV GP ANTENNA:
		THRESHOLD CROSSING HEIGHT:

9. FINAL APPROACH COURSE AIMING			
		RUNWAY THRESHOLD	FT. FROM THRESHOLD
		ON CENTERLINE	FT. FROM CENTERLINE

10. WAIVERS: NONE

PART D - PREPARED BY:	DATE:
JILL OLSON (ROSS F. BARTO)	03/07/2012
TITLE: AERONAUTICAL INFORMATION SPECIALIST	OFFICE: AJV-353

PART C - REMARKS:

VDP NOT ESTABLISHED - FINAL IS CIRCLING ONLY.

PARA 251, 20:1 PENETRATION.

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

TREE HEIGHT 75 FT PER FPT.

KIAH ASOS IS ON SERVICE A.

OBST #3: REQUEST (4D) AC FROM FLIGHT CHECK FOR 325 TOWER, 295024.00N/0953432.00W.

TERPS, VOLUME 1, VISUAL PORTION OF FINAL PENETRATIONS:
RWY 15:
20:1 PENETRATIONS:
117 TREE (KIWST0052) 294924.65N/0954033.47W (5.04)
146 TREE (KIWST0056) 294926.81N/095403031W (30.13)
143 TREE (KIWST0057) 294926.88N/0954030.77W (25.94)
143 TREE (KIWST0061) 294928.21N/0954031.23W (19.01)
144 TREE (KIWST0063) 294926.66N/0954035.62W (18.82)
148 TREE (KIWST0067) 294927.40N/0954035.06W (20.49)
149 TREE (KIWST0072) 294928.68N/0954033.35W (18.87)
151 TREE (KIWST0073) 294928.85N/0954033.52W (19.78)
145 TREE (KIWST0074) 294929.77N/0954031.58W (13.23)
152 TREE (KIWST0075) 294929.91N/0954031.31W (20.10)
155 TREE (KIWST0076) 294929.68N/0954032.00W (22.85)
142 TREE (KIWST0084) 294928.79N/0954036.99W (4.51)
152 TREE (KIWST0088) 294931.41N/0954032.49W (11.03)
147 TREE (KIWST0096) 294930.76N/0954035.92W (2.54)
156 TREE (KIWST0099) 294931.76N/0954034.42W (9.80)
169 TREE (KIWST0101) 294930.57N/0954038.32W (20.89)
159 TREE (KIWST0102) 294931.31N/0954037.31W (9.41)
167 TREE (KIWST0107) 294931.10N/0954039.37W (14.49)
163 TREE (KIWST0110) 294931.66N/0954038.84W (8.93)
159 TREE (KIWST0111) 294932.23N/0954037.54W (4.78)
165 TREE (KIWST0119) 294933.75N/0954036.67W (5.48)
161 TREE (KIWST0120) 294934.67N/0954034.73W (0.93)
165 TREE (KIWST0123) 294934.86N/0954034.86W (3.82)
176 TREE (KIWST0145) 294934.92N/0954041.03W (2.93)
RWY 33:
20:1 PENETRATIONS:
122 RD (KIWST0214) 294845.77N/0954009.93W (10.35)
123 RD (KIWST0218) 294843.86N/0954012.26W (7.02)
122 RD (KIWST0221) 294843.76N/0954012.20W (5.45)
122 RD (KIWST0223) 294843.66N/0954012.16W (4.92)
122 RD (KIWST0224) 294843.66N/0954011.88W (4.39)
122 RD (KIWST0225) 294843.76N/0954011.63W (4.38)
123 RD (KIWST0226) 294844.18N/0954010.31W (4.81)
122 RD (KIWST0229) 294843.87N/0954010.95E (3.60)
123 RD (KIWST0230) 294844.24N/0954009.93W (4.37)
123 RD (KIWST0231) 294843.76N/0954010.27W (2.82)
128 TREE (KIWST0236) 294844.43N/0954007.16W (5.02)
136 TREE (KIWST0238) 294842.30N/0954011.56W (11.58)
139 TREE (KIWST0250) 294842.15N/0954006.13W (3.67)
164 TREE (KIWST0262) 294841.06N/0954004.44W (20.52)
162 TREE (KIWST0269) 294840.38N/0954004.58W (15.68)

NO ADDITIONAL AIRSPACE REQUIRED.
RASS PRESSURE PATTERNS SAME
KIWS 111, KIAH 97
RA = 47.79.

MISSED APPROACH OBSTACLES CONT.
ALTERNATE:
ASC 2000
4. TWR (48-008098) 294949.86N/0955007.80W 770 (2C) 1000
CONT.

QUALITY 2 CHECKED

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
3. MISSED APPROACH	MAP:							
	ELEV:							

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT.								
CATEGORY A	1.3 NM	REQUIRED	350	ACTUAL						
CATEGORY B	1.5 NM		450							
CATEGORY C	1.7 NM		450							
CATEGORY D	2.3 NM		550							
CATEGORY E	4.5 NM		550							

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID:

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A

QUALITY CHECKED

CITY AND STATE		FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
HOUSTON, TX	**ELEVATION: 111** AIRPORT NAME: **WEST HOUSTON**	**IAH VORTAC**	**VOR-D, AMDT 1**	**ASW**

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE			3. ALTIMETER SETTING
SATISFACTORY ON:		N W S	OTHER:	SOURCE:
				DISTANCE:
		F A A		HOURS REMOTE OPERATION:
		A / C		
V H F / U H F / H F	LOCATION:			ADJUSTMENT:

4. MONITOR STATUS		
PRIMARY NAVAID:		
MONITOR POINT:		
HRS OPTN:	CAT 1	
	CAT 3	

5. APPROACH & RUNWAY LIGHTING		
		ALS
		(S) SALS
		MALS
		HIRL
		MIRL
		REIL
		TDZ
		C/LINE
		OTHER (SPECIFY)

6. RUNWAY MARKINGS	
BASIC	
ALL WEATHER	
INSTRUMENT	

7. RUNWAY VISUAL RANGE	
APPROACH	
MIDFIELD	
ROLL OUT	

8. GLIDE PATH		
GP ANGLE:		ELEV RWY THRESHOLD:
DISTANCE FROM RWY:		ELEV GP ANTENNA:
		THRESHOLD CROSSING HEIGHT:

9. FINAL APPROACH COURSE AIMING			
		RUNWAY THRESHOLD	FT. FROM THRESHOLD
		ON CENTERLINE	FT. FROM CENTERLINE

10. WAIVERS:

PART D - PREPARED BY:	DATE:
TITLE:	OFFICE:

PART C - REMARKS:

CONTINUED.
1800
6. TERRAIN 295606.00N/0955700.00W 210 (200) AS1500
1700

9. FINAL COURSE ALIGNED WITH MID POINT OF RWY 15-33.

QUALITY CHECK

RADIO FIX AND HOLDING DATA RECORD

NAME: ATILA **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 295050.81N/0953609.60W **TYPE:** INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	HUMBLE	IAH	VORTAC	H	239.01	244.01	14.92	14.92		1700	17500
2	HOBBY	HUB	VOR/DME	H	299.07	304.07		20.54		1700	17500

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
HUMBLE (FAC 1) AND HOBBY (FAC 2) USED TO ESTABLISH FIX COORDINATES

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	VOR-D	1, 2		KIWS	HOUSTON	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 **DATE OF REVISION:** 09/20/2012

REASON FOR REVISION:
1. ADDED DIST FROM FAC FOR FAC 1 AND FAC 2.
2. UPDATE FIX USE.

DEVELOPED BY: **DATE:** 03/02/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (ROSS BARTO)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: HOU APP CON
OTHER:

QUALITY 2 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: OZEFY **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 294903.67N/0954019.99W **TYPE:** DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FEET	MRA	MAA
1	HUMBLE	IAH	VORTAC	H	239.01	244.01	18.96	18.96		540	6000

REMARKS:
HUMBLE (FAC 1) USED TO ESTABLISH FIX COORDINATES

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	VOR-D	1		KIWS	HOUSTON	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/20/2012

DEVELOPED BY: **DATE:** 04/24/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (ROSS BARTO)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: HOU APP CON
OTHER:

QUALITY 2 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SEALY **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 295115.54N/0955636.33W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	HOBBY	HUB	VOR/DME	H	284.02	289.02	36.80	36.80		2000	17500
2	NAVASOTA	TNV	VORTAC	H	159.02	167.02		26.67		2000	17500
3	HUMBLE	IAH	VORTAC	H	254.00	259.00	31.77	31.77		2000	17500

HOLDING: **HOLDING TYPE OF ACTION:** MODIFY

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	W	HUB	VOR/DME	284.02	104.02	R	1-1 1/2		2000	17500	5	18
2	W		WP	284.02	104.02	R		4	2000	6000	4	6
3	W	IAH	VORTAC	254.00	074.00	R	1		2000	6000	5	7

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	310	TOWER (48-008098)	294949.86N/0955007.80W	770	2C
1	200	TOWER (48-002862)	295050.00N/0955259.00W	546	2C
2	200	TOWER (48-002862)	295050.00N/0955259.00W	546	2C
3	200	TOWER (48-002862)	295050.00N/0955259.00W	546	2C

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
HOBBY (FAC 1) USED TO ESTABLISH FIX COORDINATES
UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 2200.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V68-76-194-548, V68-76-222, V194-548, V222	1, 2, 3				(US)
IAP	VOR-D	1, 2, 3	1, 3	KIWS	HOUSTON	TX (US)

REQUIRED CHARTING: IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 13 **DATE OF REVISION:** 09/20/2012

REASON FOR REVISION:
1. REMOVED FAC 4.
2. ADDED DIST FROM FAC FOR FAC 1/2/3 AND INCREASED FAC 3 MRA FROM 1000 TO 2000.
3. ADDED PAT 3 (VOR-D ALTERNATE MISSED APPROACH).
4. REVISED FIX USE.
5. REVISED HOLDING CONTROLLING OBSTACLES.
6. REVISED PAT 3 HOLDING TEMPLATE FROM 4/6 TO 5/7.
7. ADDED FAC 1 AS FACILITY USED TO ESTABLISH FIX COORDINATES.
8. REMOVED DEGREE OF DIVERGENCE FROM REMARKS.

DEVELOPED BY: **DATE:** 03/06/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (ROSS BARTO)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZHU
ATC FACILITY: HOU APP CON
OTHER:

QUALITY 2 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: HUMBLE VORTAC **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 295724.90N/0952044.59W **TYPE:**

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FEET	MRA	MAA
1	HUMBLE	IAH	VORTAC	H							45000

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	TOWER (48-004102)	295316.00N/0953123.00W	923	2C

HOLDING RESTRICTIONS:
UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 3000.

INFO ONLY

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	JACKSON			KJAN	JACKSON	MS (US)
DP	ALEXANDRIA			KLBX	ANGLETON/LAKE JACKSON	TX (US)
DP	CRIED			KLBX	ANGLETON/LAKE JACKSON	TX (US)
DP	EL DORADO			KLBX	ANGLETON/LAKE JACKSON	TX (US)
DP	INDUSTRY			KLBX	ANGLETON/LAKE JACKSON	TX (US)
DP	LEONA			KLBX	ANGLETON/LAKE JACKSON	TX (US)
DP	LUFKIN			KLBX	ANGLETON/LAKE JACKSON	TX (US)
DP	GIFFA			K54T	BAYTOWN	TX (US)
DP	GIFFA			KHPY	BAYTOWN	TX (US)
DP	ALEXANDRIA			KGLS	GALVESTON	TX (US)
DP	CRIED			KGLS	GALVESTON	TX (US)
DP	EL DORADO			KGLS	GALVESTON	TX (US)
DP	GIFFA			KGLS	GALVESTON	TX (US)
DP	INDUSTRY			KGLS	GALVESTON	TX (US)
DP	LEONA			KGLS	GALVESTON	TX (US)
DP	LUFKIN			KGLS	GALVESTON	TX (US)
DP	ALEXANDRIA			KAXH	HOUSTON	TX (US)
DP	CRIED			KAXH	HOUSTON	TX (US)
DP	EL DORADO			KAXH	HOUSTON	TX (US)
DP	GIFFA			KAXH	HOUSTON	TX (US)
DP	INDUSTRY			KAXH	HOUSTON	TX (US)
DP	LEONA			KAXH	HOUSTON	TX (US)
DP	LUFKIN			KAXH	HOUSTON	TX (US)
DP	ALEXANDRIA			KCXO	HOUSTON	TX (US)
DP	CRIED			KCXO	HOUSTON	TX (US)
DP	EL DORADO			KCXO	HOUSTON	TX (US)
DP	GIFFA			KCXO	HOUSTON	TX (US)
DP	INDUSTRY			KCXO	HOUSTON	TX (US)
DP	JUNCTION			KCXO	HOUSTON	TX (US)
DP	LAKE CHARLES			KCXO	HOUSTON	TX (US)
DP	LEONA			KCXO	HOUSTON	TX (US)
DP	LUFKIN			KCXO	HOUSTON	TX (US)
DP	ALEXANDRIA			KDWH	HOUSTON	TX (US)
DP	CRIED			KDWH	HOUSTON	TX (US)
DP	DAISETTA			KDWH	HOUSTON	TX (US)
DP	EL DORADO			KDWH	HOUSTON	TX (US)
DP	GIFFA			KDWH	HOUSTON	TX (US)
DP	INDUSTRY			KDWH	HOUSTON	TX (US)
DP	JUNCTION			KDWH	HOUSTON	TX (US)
DP	LAKE CHARLES			KDWH	HOUSTON	TX (US)
DP	LEONA			KDWH	HOUSTON	TX (US)
DP	LUFKIN			KDWH	HOUSTON	TX (US)
DP	ALEXANDRIA			KEFD	HOUSTON	TX (US)
DP	CRIED			KEFD	HOUSTON	TX (US)
DP	EL DORADO			KEFD	HOUSTON	TX (US)
DP	GIFFA			KEFD	HOUSTON	TX (US)
DP	INDUSTRY			KEFD	HOUSTON	TX (US)
DP	LEONA			KEFD	HOUSTON	TX (US)
DP	LUFKIN			KEFD	HOUSTON	TX (US)
DP	ALEXANDRIA			KEYQ	HOUSTON	TX (US)
DP	CRIED			KEYQ	HOUSTON	TX (US)
DP	EL DORADO			KEYQ	HOUSTON	TX (US)
DP	GIFFA			KEYQ	HOUSTON	TX (US)
DP	INDUSTRY			KEYQ	HOUSTON	TX (US)
DP	LEONA			KEYQ	HOUSTON	TX (US)
DP	LUFKIN			KEYQ	HOUSTON	TX (US)
DP	ALEXANDRIA			KHOU	HOUSTON	TX (US)

QUALITY 2 CHECKED

DP	CRIED	KHOU	HOUSTON	TX (US)
DP	EL DORADO	KHOU	HOUSTON	TX (US)
DP	GIFFA	KHOU	HOUSTON	TX (US)
DP	INDUSTRY	KHOU	HOUSTON	TX (US)
DP	LEONA	KHOU	HOUSTON	TX (US)
DP	LUFKIN	KHOU	HOUSTON	TX (US)
DP	ALEXANDRIA	KIAH	HOUSTON	TX (US)
DP	CRIED	KIAH	HOUSTON	TX (US)
DP	EL DORADO	KIAH	HOUSTON	TX (US)
DP	GIFFA	KIAH	HOUSTON	TX (US)
DP	INDUSTRY	KIAH	HOUSTON	TX (US)
DP	JUNCTION	KIAH	HOUSTON	TX (US)
DP	LAKE CHARLES	KIAH	HOUSTON	TX (US)
DP	LEONA	KIAH	HOUSTON	TX (US)
DP	LUFKIN	KIAH	HOUSTON	TX (US)
DP	ALEXANDRIA	KIWS	HOUSTON	TX (US)
DP	CRIED	KIWS	HOUSTON	TX (US)
DP	EL DORADO	KIWS	HOUSTON	TX (US)
DP	GIFFA	KIWS	HOUSTON	TX (US)
DP	INDUSTRY	KIWS	HOUSTON	TX (US)
DP	LEONA	KIWS	HOUSTON	TX (US)
DP	LUFKIN	KIWS	HOUSTON	TX (US)
DP	ALEXANDRIA	KSGR	HOUSTON	TX (US)
DP	CRIED	KSGR	HOUSTON	TX (US)
DP	EL DORADO	KSGR	HOUSTON	TX (US)
DP	GIFFA	KSGR	HOUSTON	TX (US)
DP	INDUSTRY	KSGR	HOUSTON	TX (US)
DP	LEONA	KSGR	HOUSTON	TX (US)
DP	LUFKIN	KSGR	HOUSTON	TX (US)
DP	ALEXANDRIA	KTME	HOUSTON	TX (US)
DP	CRIED	KTME	HOUSTON	TX (US)
DP	EL DORADO	KTME	HOUSTON	TX (US)
DP	GIFFA	KTME	HOUSTON	TX (US)
DP	INDUSTRY	KTME	HOUSTON	TX (US)
DP	LEONA	KTME	HOUSTON	TX (US)
DP	LUFKIN	KTME	HOUSTON	TX (US)
DP	ALEXANDRIA	KT41	LA PORTE	TX (US)
DP	CRIED	KT41	LA PORTE	TX (US)
DP	EL DORADO	KT41	LA PORTE	TX (US)
DP	GIFFA	KT41	LA PORTE	TX (US)
DP	INDUSTRY	KT41	LA PORTE	TX (US)
DP	LEONA	KT41	LA PORTE	TX (US)
DP	LUFKIN	KT41	LA PORTE	TX (US)
DP	HUBEE (RNAV)	KSAT	SAN ANTONIO	TX (US)
DP	HUBEE (RNAV)	KSSF	SAN ANTONIO	TX (US)
EN ROUTE	J101			(US)
EN ROUTE	J15			(US)
EN ROUTE	J177			(US)
EN ROUTE	J180			(US)
EN ROUTE	J2			(US)
EN ROUTE	J29			(US)
EN ROUTE	J33			(US)
EN ROUTE	J86			(US)
EN ROUTE	J87			(US)
EN ROUTE	V13			(US)
EN ROUTE	V222			(US)
EN ROUTE	V407-574			(US)
EN ROUTE	V477			(US)
EN ROUTE	V571-574			(US)
IAP	RNAV (GPS) RWY 32	KCXO	HOUSTON	TX (US)
IAP	LOC RWY 17R	KDWH	HOUSTON	TX (US)
IAP	ILS RWY 22	KEFD	HOUSTON	TX (US)
IAP	ILS OR LOC RWY 12R	KHOU	HOUSTON	TX (US)
IAP	ILS RWY 30L	KHOU	HOUSTON	TX (US)
IAP	LOC RWY 22	KHOU	HOUSTON	TX (US)
IAP	VOR/DME RWY 30L	KHOU	HOUSTON	TX (US)
IAP	ILS OR LOC RWY 15R	KIAH	HOUSTON	TX (US)
IAP	ILS OR LOC RWY 26L	KIAH	HOUSTON	TX (US)
IAP	ILS OR LOC RWY 26R	KIAH	HOUSTON	TX (US)
IAP	ILS OR LOC RWY 27	KIAH	HOUSTON	TX (US)
IAP	ILS OR LOC RWY 33R	KIAH	HOUSTON	TX (US)
IAP	ILS OR LOC RWY 8L	KIAH	HOUSTON	TX (US)
IAP	ILS OR LOC RWY 8R	KIAH	HOUSTON	TX (US)
IAP	ILS OR LOC RWY 9	KIAH	HOUSTON	TX (US)
IAP	ILS RWY 26L (CAT II)	KIAH	HOUSTON	TX (US)
IAP	ILS RWY 26L (CAT III)	KIAH	HOUSTON	TX (US)
IAP	ILS RWY 26R (CAT II)	KIAH	HOUSTON	TX (US)
IAP	ILS RWY 26R (CAT III)	KIAH	HOUSTON	TX (US)
IAP	ILS RWY 27 (CAT II)	KIAH	HOUSTON	TX (US)
IAP	ILS RWY 27 (CAT III)	KIAH	HOUSTON	TX (US)
IAP	ILS RWY 8L (CAT II)	KIAH	HOUSTON	TX (US)
IAP	ILS RWY 8L (CAT III)	KIAH	HOUSTON	TX (US)
IAP	VOR-D	KIWS	HOUSTON	TX (US)
IAP	NDB RWY 17	KSGR	HOUSTON	TX (US)
STAR	CARNE	KT00	ANAHUAC	TX (US)
STAR	DAISETTA	KT00	ANAHUAC	TX (US)
STAR	DOCCC	KT00	ANAHUAC	TX (US)
STAR	CARNE	KLBX	ANGLETON/LAKE JACKSON	TX (US)
STAR	DAISETTA	KLBX	ANGLETON/LAKE JACKSON	TX (US)
STAR	DOCCC	KLBX	ANGLETON/LAKE JACKSON	TX (US)

QUALITY 2 CHECKED

STAR	BITER	K3R9	AUSTIN	TX (US)
STAR	WLEEE (RNAV)	K3R9	AUSTIN	TX (US)
STAR	BITER	K6R4	AUSTIN	TX (US)
STAR	WLEEE (RNAV)	K6R4	AUSTIN	TX (US)
STAR	BITER	KAUS	AUSTIN	TX (US)
STAR	WLEEE (RNAV)	KAUS	AUSTIN	TX (US)
STAR	CARNE	K54T	BAYTOWN	TX (US)
STAR	DAISETTA	K54T	BAYTOWN	TX (US)
STAR	DOCCC	K54T	BAYTOWN	TX (US)
STAR	CARNE	KHPY	BAYTOWN	TX (US)
STAR	DAISETTA	KHPY	BAYTOWN	TX (US)
STAR	DOCCC	KHPY	BAYTOWN	TX (US)
STAR	CEDAR CREEK	KDFW	DALLAS-FORT WORTH	TX (US)
STAR	DUMPY	KDFW	DALLAS-FORT WORTH	TX (US)
STAR	DODJE	KAFW	FORT WORTH	TX (US)
STAR	CARNE	KGLS	GALVESTON	TX (US)
STAR	DAISETTA	KGLS	GALVESTON	TX (US)
STAR	DOCCC	KGLS	GALVESTON	TX (US)
STAR	BITER	KGTU	GEORGETOWN	TX (US)
STAR	WLEEE (RNAV)	KGTU	GEORGETOWN	TX (US)
STAR	CARNE	KAXH	HOUSTON	TX (US)
STAR	DAISETTA	KAXH	HOUSTON	TX (US)
STAR	DOCCC	KAXH	HOUSTON	TX (US)
STAR	CARNE	KCXO	HOUSTON	TX (US)
STAR	DAISETTA	KCXO	HOUSTON	TX (US)
STAR	GILCO	KCXO	HOUSTON	TX (US)
STAR	RIICE	KCXO	HOUSTON	TX (US)
STAR	CARNE	KDWH	HOUSTON	TX (US)
STAR	GILCO	KDWH	HOUSTON	TX (US)
STAR	RIICE	KDWH	HOUSTON	TX (US)
STAR	CARNE	KEFD	HOUSTON	TX (US)
STAR	DAISETTA	KEFD	HOUSTON	TX (US)
STAR	DOCCC	KEFD	HOUSTON	TX (US)
STAR	CARNE	KEYQ	HOUSTON	TX (US)
STAR	DAISETTA	KEYQ	HOUSTON	TX (US)
STAR	DOCCC	KEYQ	HOUSTON	TX (US)
STAR	CARNE	KHOU	HOUSTON	TX (US)
STAR	DAISETTA	KHOU	HOUSTON	TX (US)
STAR	DOCCC	KHOU	HOUSTON	TX (US)
STAR	RIICE	KHOU	HOUSTON	TX (US)
STAR	CARNE	KIAH	HOUSTON	TX (US)
STAR	DAISETTA	KIAH	HOUSTON	TX (US)
STAR	GILCO	KIAH	HOUSTON	TX (US)
STAR	RIICE	KIAH	HOUSTON	TX (US)
STAR	CARNE	KIWS	HOUSTON	TX (US)
STAR	DAISETTA	KIWS	HOUSTON	TX (US)
STAR	DOCCC	KIWS	HOUSTON	TX (US)
STAR	CARNE	KLVJ	HOUSTON	TX (US)
STAR	DAISETTA	KLVJ	HOUSTON	TX (US)
STAR	DOCCC	KLVJ	HOUSTON	TX (US)
STAR	CARNE	KSGR	HOUSTON	TX (US)
STAR	DAISETTA	KSGR	HOUSTON	TX (US)
STAR	DOCCC	KSGR	HOUSTON	TX (US)
STAR	CARNE	KTME	HOUSTON	TX (US)
STAR	DAISETTA	KTME	HOUSTON	TX (US)
STAR	DOCCC	KTME	HOUSTON	TX (US)
STAR	CARNE	KT41	LA PORTE	TX (US)
STAR	DAISETTA	KT41	LA PORTE	TX (US)
STAR	DOCCC	KT41	LA PORTE	TX (US)
STAR	BITER	KRYW	LAGO VISTA	TX (US)
STAR	WLEEE (RNAV)	KRYW	LAGO VISTA	TX (US)
STAR	RODIO (RNAV)	KSAT	SAN ANTONIO	TX (US)
STAR	RODIO (RNAV)	KSKF	SAN ANTONIO	TX (US)
STAR	RODIO (RNAV)	KSSF	SAN ANTONIO	TX (US)
STAR	BITER	KHYI	SAN MARCOS	TX (US)
STAR	WLEEE (RNAV)	KHYI	SAN MARCOS	TX (US)
STAR	RODIO (RNAV)	KRND	UNIVERSAL CITY	TX (US)

REQUIRED CHARTING: DP, STAR, IAP, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 6 **DATE OF REVISION:** 07/29/2010

REASON FOR REVISION:
ADDED "PRECIPITOUS TERRAIN EVALUATION COMPLETED" TO REMARKS.

DEVELOPED BY: **DATE:** 07/17/2009 **OFFICE:** AVN-120 **NAME:** THOMAS KIRKPATRICK

APPROVED BY: **DATE:** 02/26/2010 **OFFICE:** AVN-120 **NAME:** SUE CRUMB

SIGNATURE:

QUALITY 2 CHECKED

DISTRIBUTION:

NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: IAH
OTHER:

QUALITY 2 CHECKED