Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: IAP	Date Open: 03/13/2012	Task #: 2011063029983301006	Request #: 20110630299833
Procedure: RNAV (RNP) Z RWY 35 L ORIG		Airport ID: KHRL	Airport: VALLEY INTL		Reimbursable #:
City: HARLINGEN	ST: TX	GPS #:		Estimated Chart Date: 09/20/2012	FICO #:
Fac ID:	Fac. Type: RNP	Specialist: SCOTT CORY			

Procedure Review

	Rec'd	Rel'd	Full Name	Comments
Lead:	03/13/2012	06/05/2012	JILL OLSON	
QA:	06/05/2012	06/05/2012	SCOTT BEARD	
Liaison:	06/05/2012		Alfonso	APPROVAL REQUEST

P1

Procedure Comments:

Remark Type: INFORMATION

pg 3 of 8

HARLINGEN, TX VALLEY INTL (KHRL) RNAV (RNP) Z RWY 35L, ORIG (RNP) ENROUTE-NO FC: 8.7.12 PUB: 9.20.12

ATTACHED FORMS: 8260-3; 8260-10; 8260-9; 8260-2(S); ALUDE, ORIG; BOTVE-INT, REV 2; CFPQQ, ORIG; CFPQR, ORIG; FENKU, ORIG; KAHNS, ORIG; MINUE, ORIG; OCORA, ORIG; QUTIE, ORIG; SAZUK, ORIG; URAVE, ORIG; ZIPIV, REV 2.

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

APP CRS	Rwy ldg	8301
356°	THRE	36
	Apt Elev	36

RNAV (RNP) Z RWY 35L
HARLINGEN/VALLEY INTL (HRL)

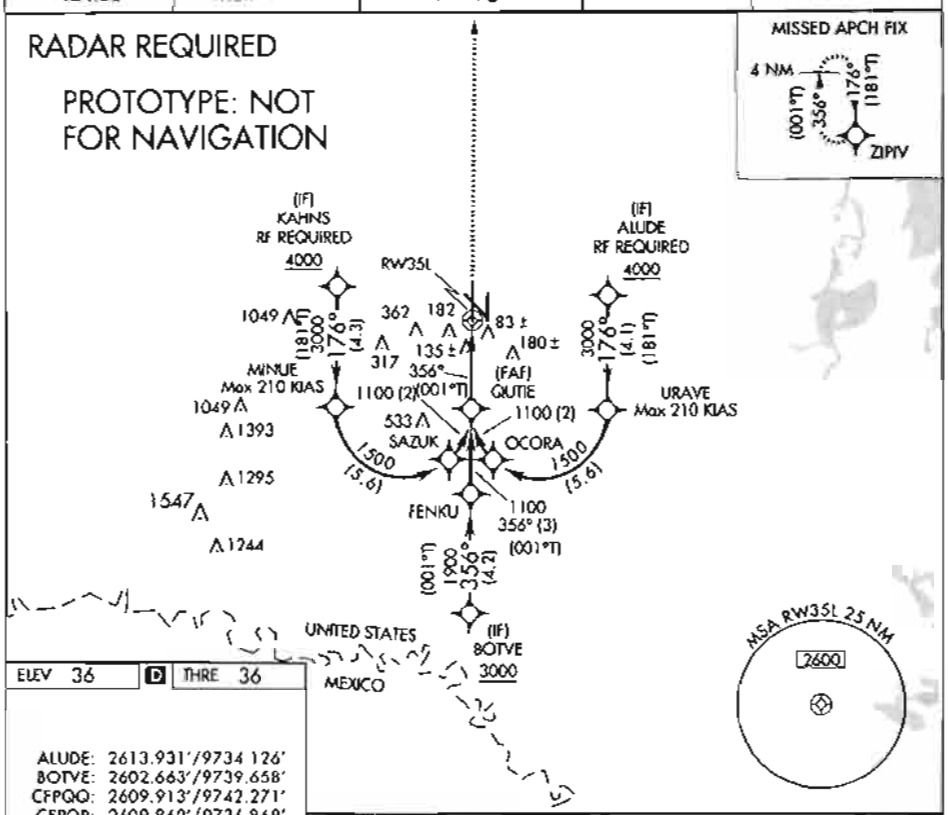
For uncompensated Baro-VNAV systems, procedure NA below 2°C (36°F) or above 54°C (130°F). When VGSI inop, procedure NA at night. GPS required.

MISSED APPROACH Climb to 2000 on track 356° to ZIPIV and hold.

ATIS	VALLEY APP CON	HARLINGEN TOWER*	GND CON	UNICOM
124.85	120.7 239.0	119.3(CTAF) 317.6	121.7	122.95

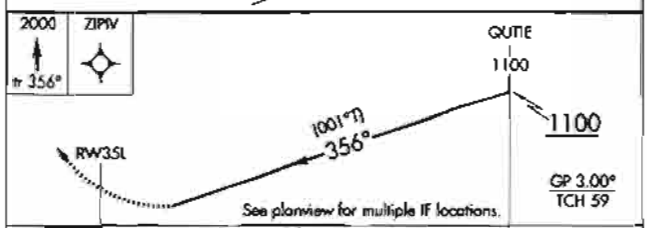
RADAR REQUIRED

PROTOTYPE: NOT FOR NAVIGATION



ELEV 36 | D | THRE 36

ALUDE: 2613.931'/9734.126'
BOTVE: 2602.663'/9739.658'
CFPQQ: 2609.913'/9742.271'
CFPQR: 2609.860'/9736.869'
FENKU: 2606.878'/9739.607'
KAHNS: 2614.269'/9744.910'
MINUE: 2609.945'/9744.971'
OCORA: 2608.081'/9738.716'
QUTIE: 2609.887'/9739.570'
SAZUK: 2608.099'/9740.468'
URAVE: 2609.837'/9734.169'
ZIPIV: 2624.833'/9739.387'
RW35L: 2613.052'/9739.530'



CATEGORY	A	B	C	D
RNP 0.14 DA		334-⅞	298 (300-⅞)	
RNP 0.29 DA		388-1⅛	352 (400-1⅛)	
RNP 0.30 DA		479-1½	443 (500-1½)	

AUTHORIZATION REQUIRED

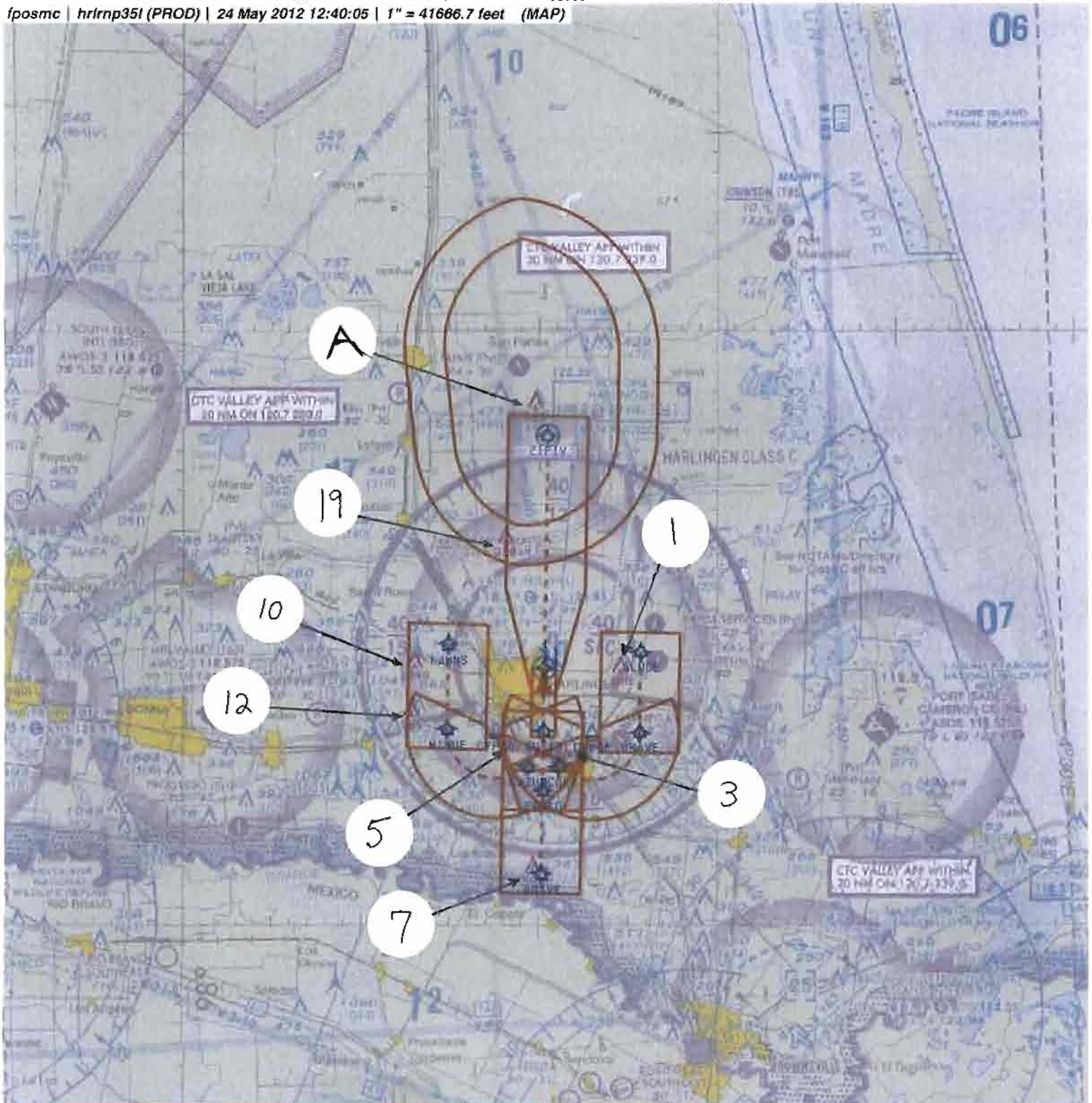
356° to RW35L

HIRL Rwy 17R-35L
REIL Rwys 13 and 17L
MIRL Rwys 13-31 and 17L-35R

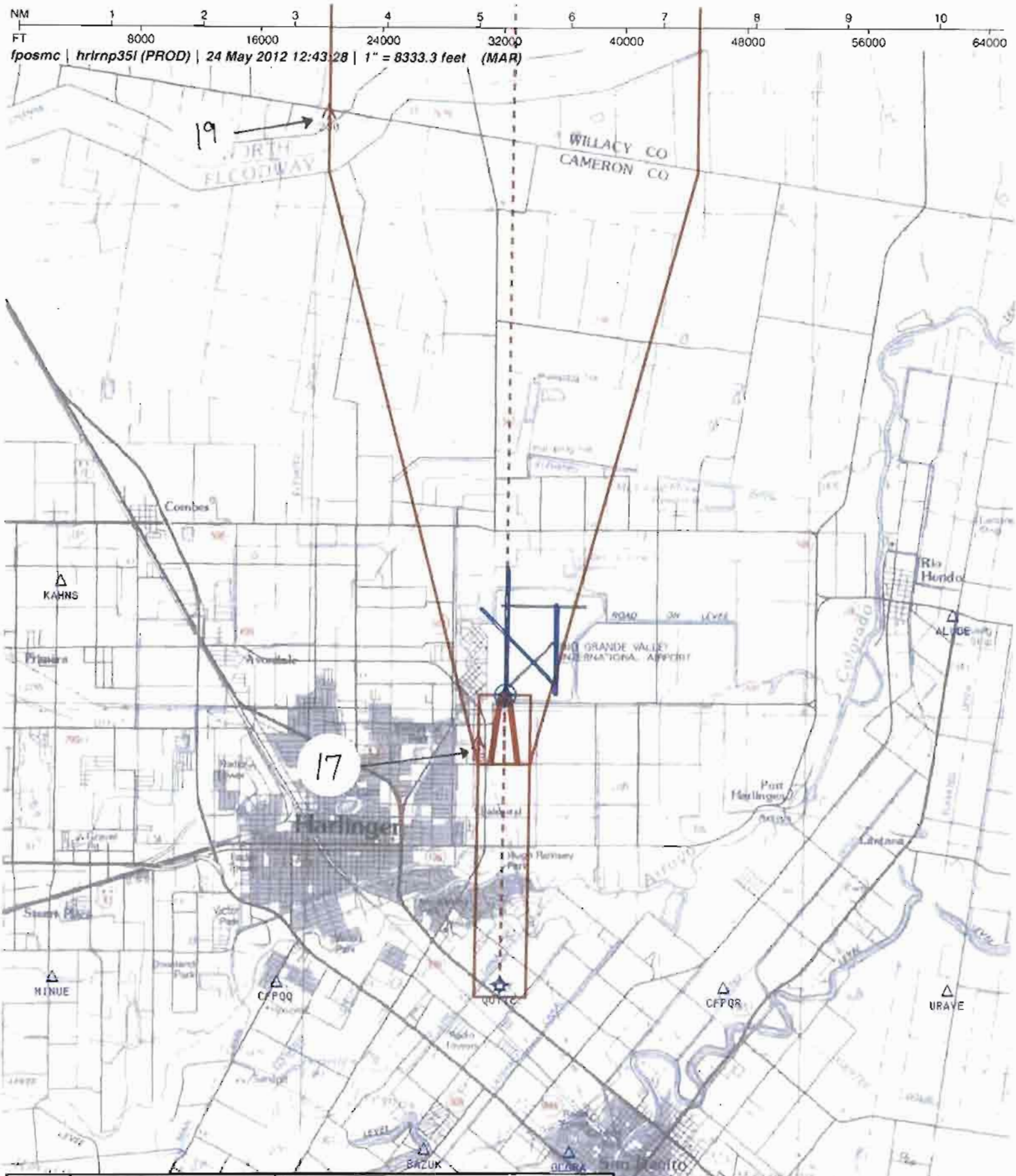
NM 7 14 21 28 35 42 49

FT 42000 84000 126000 168000 210000 252000 294000

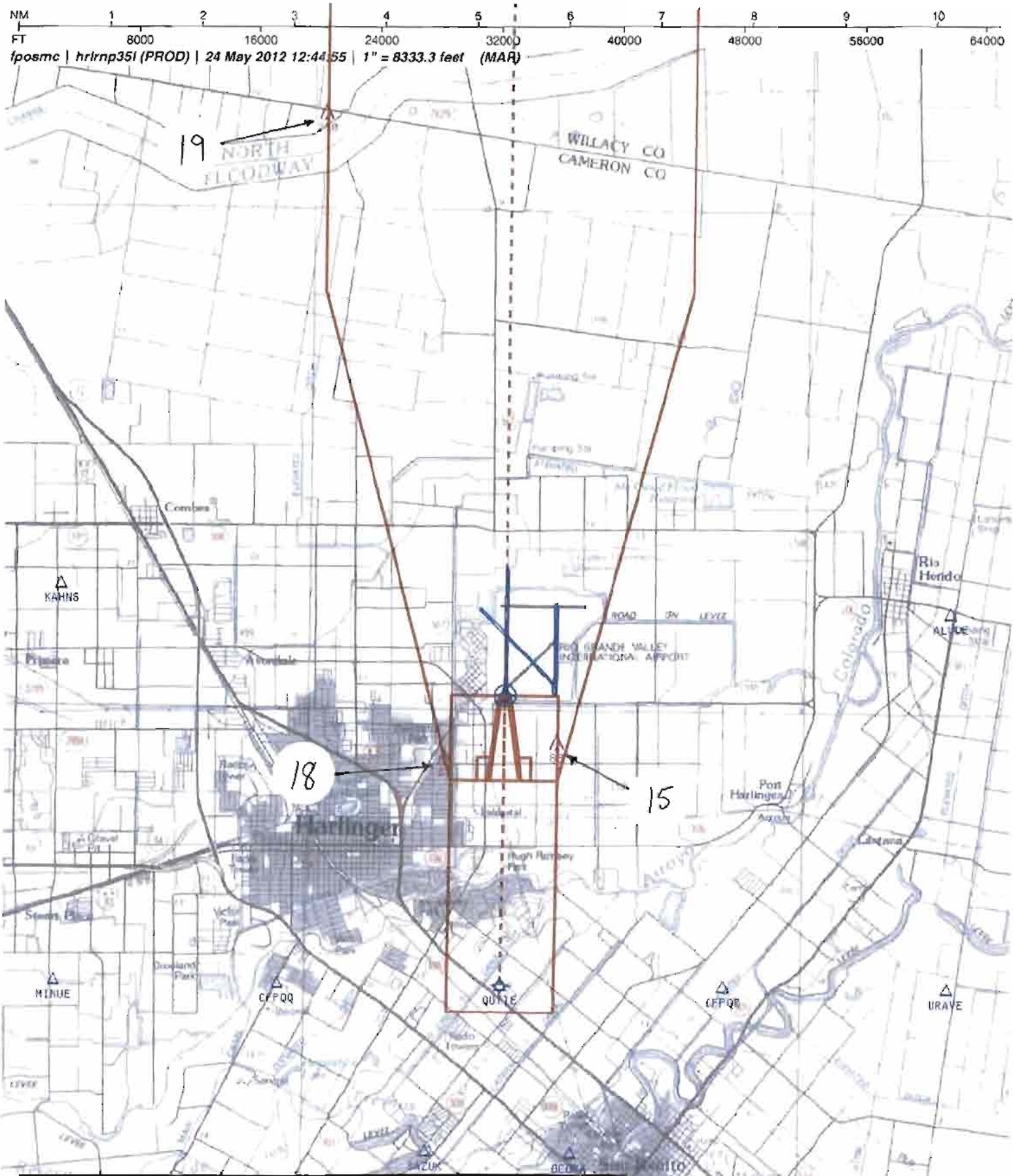
fposmc | hrlrnp35l (PROD) | 24 May 2012 12:40:05 | 1" = 41666.7 feet (MAP)



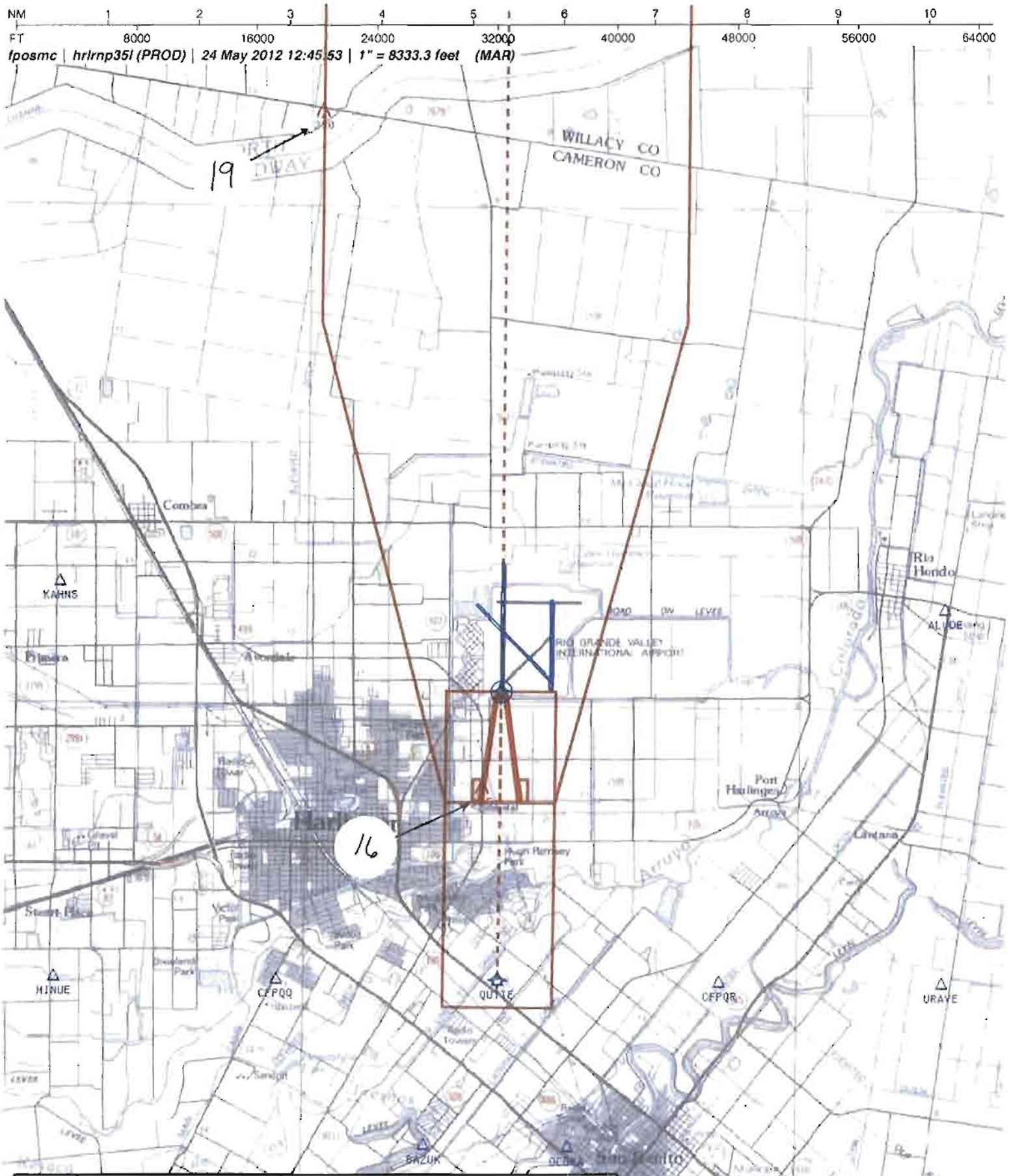
Airport ID:	KHRL	FM 9			
Apt Name:	VALLEY INTL	No	SEGMENT	OBSTRUCTION	ELEV
City:	HARLINGEN	1	INTERMEDIATE	TOWER	306
State:	TX	3	INTERMEDIATE STEPDOWN	TOWER	305
Proc ID:	RNAV (RNP) Z RWY 35L	5	INTERMEDIATE STEPDOWN(S)	TOWER	543
Amdt #:	ORIG	7	INTERMEDIATE	TOWER	363
Scale:	1:500,000	10	INTERMEDIATE	TOWER	1049
		12	INTERMEDIATE STEPDOWN	TOWER	565
		19	MISSED LEVEL SURFACE	AAO	230
		A	MISSED HOLDING	TOWER	523



Airport ID:	KHRL	FM 9			
Apt Name	VALLEY INTL	No	SEGMENT	OBSTRUCTION	ELEV
City:	HARLINGEN		RNP 0.14 FINAL		ASC
State:	TX	17	RNP 0.14 MISSED 40:1 OCS	TREE	83
Proc ID	RNAV (RNP) Z RWY 35L	19	MISSED LEVEL SURFACE	AAO	230
Amdt #:	ORIG				
Scale	1:100,000				



Airport ID:	KHRL	FM 9			
Apt Name:	VALLEY INTL	No	SEGMENT	OBSTRUCTION	ELEV
City:	HARLINGEN	15	RNP 0.29 FINAL	TREE	83
State:	TX	18	RNP 0.29 MISSED 40:1 OCS	TREE	83
Proc ID:	RNAV (RNP) Z RWY 35L	19	MISSED LEVEL SURFACE	AAO	230
Amdt #:	ORIG				
Scale:	1:100,000				



Airport ID:	KHRL	FM 9			
Apt Name.	VALLEY INTL	No	SEGMENT	OBSTRUCTION	ELEV
City	HARLINGEN	16	RNP 0.30 FINAL & MISSED 40:1 OCS	TOWER	135
State:	TX	19	MISSED LEVEL SURFACE	AAO	230
Proc ID.	RNAV (RNP) Z RWY 35L				
Amdt #	ORIG				
Scale:	1:100,000				

US DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

RNAV (RNP) - STANDARD, INSTRUMENT APPROACH PROCEDURE, TITLE 14 CFR PART 97.33

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
ALUDE (IF)	URAVE (TF) (FB) (RNP 1.00)	175.53 / 4.08	3000
URAVE	OCORA (RF) (FB) (RNP 1.00)	(2.43 NM RADIUS CW CFPQR)/5.63	1500
OCORA	QUTIE (RF) (FB) (RNP 1.00)	(2.43 NM RADIUS CW CFPQR)/2.01	1100
BOTVE (IF)	FENKU (TF) (FB) (RNP 1.00)	355.63 / 4.20	1900
FENKU	QUTIE (TF) (FB) (RNP 1.00)	355.63 / 3.00	1100
(SEE FORM 8260-10)			

MISSED APPROACH

RNP: DA

CLIMB TO 2000 ON TRACK 355.63 TO ZIPIV AND HOLD.

ADDITIONAL FLIGHT DATA:
HOLD N, RT, 175.63 INBOUND.
CHART FAS OBST: 83 TREE 261227N/0973854W
CHART FAS OBST: 135 TOWER 261156N/0973946W
DISTANCE TO THLD FROM 298 HATH: 0.75 NM.
ROUTE TYPE: A, H
ROUTE TYPE QUALIFIER 1: F
ROUTE TYPE QUALIFIER 2: S
CHART MINIMUM 4000 AT ALUDE
CHART MINIMUM 3000 AT BOTVE
CHART MINIMUM 4000 AT KAHNS
#TCH 94.7 MSL (DO NOT CHART)

1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. PROFILE STARTS AT QUTIE
3. FAC: 355.63 FAF: ____ DIST FAF TO MAP: ____ THLD: ____
4. MIN. ALT: QUTIE 1100
5. DIST TO THLD FROM OM: 3.16 MM: ____ IM: ____ 150 HAT: ____ 100 HAT: ____ GS ANT: ____
6. MIN GS INCPT: 1100 GS ALT AT: QUTIE 1100 OM: ____ MM: ____ IM: ____
7. GS ANGLE: 3.00 TCH: 59.0# 34:1 IS NOT CLEAR
8. MSA FROM: RW35L 2600

MAG VAR: 5E EPOCH YEAR: 2005

MINIMUMS

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

CATEGORY =====>	A			B			C			D			E		
	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA
AUTHORIZATION REQUIRED															
RNP 0.14 DA	334	1	298	334	1	298	334	1	298	334	1	298			
RNP 0.29 DA	388	1 1/8	352	388	1 1/8	352	388	1 1/8	352	388	1 1/8	352			
RNP 0.30 DA	479	1 1/2	443	479	1 1/2	443	479	1 1/2	443	479	1 1/2	443			

NOTES:
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW 2C (36F) OR ABOVE 54C (130F).
CHART NOTE: WHEN VGSI INOP, PROCEDURE NA AT NIGHT.
CHART NOTE: GPS REQUIRED.
CHART PLANVIEW NOTE AT MINUE : MAX 210 KIAS.
(SEE FORM 8260-10)

QUALITY CHECKED

CITY AND STATE	ELEVATION: 36 THRE: 36 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:	SUP:
HARLINGEN, TX	VALLEY INTL	RNAV	RNAV (RNP) Z RWY 35L, ORIG	AMDT: NONE
				DATED

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, VALLEY APP CON, HRL ATCT, AMGR

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:

DEVELOPED BY		
NAME: SCOTT M. CORY	FIFO AJV-353	DATE: 04/12/2012

APPROVED BY		
NAME: LARRY H STROUT MANAGER	FIFO AJV-353	DATE:

CHANGES:

1. ORIGINAL PROCEDURE.

REASONS:

1. FPT REQUEST.

08/15/2011: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 07/02/2012.
CHANGED RNP 0.14 CAT A/B VIS FROM 7/8 TO 1.

QUALITY CHECKED

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 aiport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES, (CONT.):

FROM	TO	COURSE AND DISTANCE	ALTITUDE
KAHNS (IF)	MINUE (TF) (FB) (RNP 1.00)	175.73 / 4.31	3000
MINUE	SAZUK (RF) (FB) (RNP 1.00)	(2.43 NM RADIUS CCW CFPQQ)/5.63	1500
SAZUK	QUTIE (RF) (FB) (RNP 1.00)	(2.43 NM RADIUS CCW CFPQQ)/2.01	1100
QUTIE (FAF)	RW35L (MAP) (TF) (FO)	355.63 / 3.16	
RW35L (MAP)	ZIPIV (TF) (FO) (RNP 1.00)	355.63 / 11.75	2000

NOTES, (CONT.):
CHART PLANVIEW NOTE AT URAVE : MAX 210 KIAS.
CHART PLANVIEW NOTE: RADAR REQUIRED.
CHART PLANVIEW NOTE ADJACENT TO ALUDE: RF REQUIRED.
CHART PLANVIEW NOTE ADJACENT TO KAHNS: RF REQUIRED.
CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS.

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	FIFO	DATE:
APPROVED BY		
NAME:	FIFO	DATE:

CHANGES:

REASONS:

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.

ARINC PACKET - 424-18 - RNAV (RNP)

```
                1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   ALUDE K40    W     N26135587W097340758                    E0044     NAR           ALUDE
        SUSAEAENRT   BOTVE K40    C     N26023976W097393946                    E0044     NAR           BOTVE
        SUSAEAENRT   CFPQQ K40    W     N26095479W097421623                    E0045     NAR           CNF(CFPQQ)
        SUSAEAENRT   CFPQR K40    W     N26095157W097365215                    E0044     NAR           CNF(CFPQR)
        SUSAEAENRT   FENKU K40    W     N26065267W097393639                    E0044     NAR           FENKU
        SUSAEAENRT   KAHNS K40    W     N26141613W097445462                    E0045     NAR           KAHNS
        SUSAEAENRT   MINUE K40    W     N26095667W097445827                    E0045     NAR           MINUE
        SUSAEAENRT   OCORA K40    W     N26080487W097384295                    E0044     NAR           OCORA
        SUSAEAENRT   QUTIE K40    W     N26095321W097393419                    E0044     NAR           QUTIE
        SUSAEAENRT   SAZUK K40    W     N26080592W097402806                    E0045     NAR           SAZUK
        SUSAEAENRT   URAVE K40    W     N26095024W097341011                    E0044     NAR           URAVE
        SUSAEAENRT   ZIPIV K40    W     N26244998W097392323                    E0044     NAR           ZIPIV

                1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KHRLK4AHPL     0     083YHN26133760W097391850E005000036         1800018000C    MNAR    VALLEY INTL

                1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KHRLK4FH35LZ AALUDE 010ALUDEK4EA0E  B    IF                                  - 04000     18000                A FS
        SUSAP KHRLK4FH35LZ AALUDE 020URAVEK4EA0E    010TF                                  + 03000          210             A-FS
        SUSAP KHRLK4FH35LZ AALUDE 030OCORAK4EA0E   R010RF       0024301755    30820056     - 01500                CFPQR K4EAA FS
        SUSAP KHRLK4FH35LZ AALUDE 040QUTIEK4EA0EE  R010RF       0024303082    35560020     + 01100                CFPQR K4EAA FS
        SUSAP KHRLK4FH35LZ ABOTVE 010BOTVEK4EA0E  B    IF                                  + 03000     18000                A FS
        SUSAP KHRLK4FH35LZ ABOTVE 020FENKUK4EA0E    010TF                                  - 01900                          A FS
        SUSAP KHRLK4FH35LZ ABOTVE 030QUTIEK4EA0EE   010TF                                  + 01100                          A FS
        SUSAP KHRLK4FH35LZ AKAHNS 010KAHNSK4EA0E  B    IF                                  + 04000     18000                A FS
        SUSAP KHRLK4FH35LZ AKAHNS 020MINUEK4EA0E    010TF                                  + 03000          210             A-FS
        SUSAP KHRLK4FH35LZ AKAHNS 030SAZUKK4EA0E   L010RF       0024301757    04310056     + 01500                CFPQQ K4EAA FS
        SUSAP KHRLK4FH35LZ AKAHNS 040QUTIEK4EA0EE  L010RF       0024300431    35560020     - 01100                CFPQQ K4EAA FS
        SUSAP KHRLK4FH35LZ H      020QUTIEK4EA1E  F    IF                                  + 01100     18000       RW35L K4PGA FS
        SUSAP KHRLK4FH35LZ H      020QUTIEK4EA2W                                               A031A292A142                    FS
        SUSAP KHRLK4FH35LZ H      030RW35LK4PG0GY M 031TF                                    00095            -300          A FS
        SUSAP KHRLK4FH35LZ H      040ZIPIVK4EA0EYM  010TF                                  + 02000                          A FS
        SUSAP KHRLK4FH35LZ H      050ZIPIVK4EA0EE  R   HM                     17560040     + 02000                          A FS

                1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
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CITY AND STATE	ELEVATION: 36 THRE: 36	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
HARLINGEN, TX	AIRPORT NAME: VALLEY INTL	RNAV	RNAV (RNP) Z RWY 35L, ORIG	AMDT: NONE
				DATED:

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

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```
SUSAP KHRLK4GRW35L   0083013556 N26130317W097393187+0000    -0011800036000059150R

              1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KHRLK4SRW35LK4PG                0   18018002625                                                                          M
```

QUALITY CHECKED

CITY AND STATE	ELEVATION: 36 THRE: 36	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
HARLINGEN, TX	AIRPORT NAME: VALLEY INTL	RNAV	RNAV (RNP) Z RWY 35L, ORIG	AMDT: NONE
				DATED:

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

RNAV (RNP) STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.33**

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ARINC SUMMARY - 424-18 - RNAV (RNP)

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	ALUDE	ALUDE	010		IF		FB				AA 04000	
	ALUDE	URAVE	020		TF		FB	1.0			AA 03000	AB 210
	ALUDE	OCORA	030		RF	R	FB	1.0		005.6	AA 01500	
	ALUDE	QUTIE	040		RF	R	FB	1.0		002.0	AA 01100	
	BOTVE	BOTVE	010		IF		FB				AA 03000	
	BOTVE	FENKU	020		TF		FB	1.0			AA 01900	
	BOTVE	QUTIE	030		TF		FB	1.0			AA 01100	
	KAHNS	KAHNS	010		IF		FB				AA 04000	
	KAHNS	MINUE	020		TF		FB	1.0			AA 03000	AB 210
	KAHNS	SAZUK	030		RF	L	FB	1.0		005.6	AA 01500	
	KAHNS	QUTIE	040		RF	L	FB	1.0		002.0	AA 01100	
		QUTIE	020	FAF	IF		FB				AA 01100	
		RW35L	030	MAP	TF		FO	0.3			AT 00095	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	ZIPIV	040		TF		FO	1.0			AA 02000	
	ZIPIV	050		HM	R	FO		175.6(180.6T)	004.0	AA 02000	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	ALUDE	N261355.87	W0973407.58	N2613.931	W09734.126
	BOTVE	N260239.76	W0973939.46	N2602.663	W09739.658
	CFPQQ	N260954.79	W0974216.23	N2609.913	W09742.271
	CFPQR	N260951.57	W0973652.15	N2609.860	W09736.869
	FENKU	N260652.67	W0973936.39	N2606.878	W09739.607
	KAHNS	N261416.13	W0974454.62	N2614.269	W09744.910
	MINUE	N260956.67	W0974458.27	N2609.945	W09744.971
	OCORA	N260804.87	W0973842.95	N2608.081	W09738.716
	QUTIE	N260953.21	W0973934.19	N2609.887	W09739.570
	SAZUK	N260805.92	W0974028.06	N2608.099	W09740.468
	URAVE	N260950.24	W0973410.11	N2609.837	W09734.169
	ZIPIV	N262449.98	W0973923.23	N2624.833	W09739.387
	RW35L	N261303.17	W0973931.87	N2613.053	W09739.531

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW35L	00036	59

CITY AND STATE	ELEVATION: 36 THRE: 36	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
HARLINGEN, TX	AIRPORT NAME: VALLEY INTL	RNAV	RNAV (RNP) Z RWY 35L, ORIG	AMDT: NONE
				DATED:

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

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	ALUDE	URAVE	1. TOWER (48-011491)	261245.00N/0973517.00W	306 (5D)	500	AC50 AT2144	3000
(RNP 1.00)			2. TERRAIN	260851.00N/0973551.00W	33 (0)		AS1500	1500
INTERMEDIATE: STEPDOWN	URAVE	OCORA	3. TOWER (48-007748)	260828.00N/0973826.00W	305 (5D)	500	AC50	900
(RNP 1.00)			4. TERRAIN	260606.00N/0973927.00W	49 (0)		AS1500	1500
INTERMEDIATE: STEPDOWN	OCORA	QUTIE	5. TOWER (48-009045)	260920.00N/0974131.00W	543 (5D)	500	AC50	1100
(RNP 1.00)			6. TERRAIN	260545.00N/0973842.00W	49 (0)		AS1000	1000
INTERMEDIATE	BOTVE	FENKU	7. TOWER (48-010465)	260240.00N/0974009.00W	363 (2C)	500	AC20 AT1017	1900
(RNP 1.00)			8. TERRAIN	260145.00N/0974121.00W	69 (100)		AS1500	1600
INTERMEDIATE: STEPDOWN	FENKU	QUTIE	5. TOWER (48-009045)	260920.00N/0974131.00W	543 (5D)	500	AC50	1100
(RNP 1.00)			9. TERRAIN	260554.00N/0974148.00W	49 (0)		AS1000	1000
INTERMEDIATE	KAHNS	MINUE	10. TOWER (48-005372)	261301.00N/0974649.00W	1049 (5D)	500	AC50 AT1401	3000
(RNP 1.00)			11. TERRAIN	261221.00N/0974709.00W	49 (0)		AS1500	1500
INTERMEDIATE: STEPDOWN	MINUE	SAZUK	12. TOWER (48-005124)	261035.00N/0974700.00W	565 (5D)	500	AC50	1200
(RNP 1.00)			13. TERRAIN	260530.00N/0974248.00W	49 (0)		AS1500	1500

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: RW35L

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A
360-360	TWR (48-004005)	229/ 12.0	1547 (1A)	2600					

CITY AND STATE	ELEVATION: 36 / AIRPORT NAME:	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
HARLINGEN, TX	VALLEY INTL	RNAV	RNAV (RNP) Z RWY 35L, ORIG	ASW

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE		3. ALTIMETER SETTING
ZHU ARTCC VALLEY APP CON HRL TOWER	N W S F A A A / C	OTHER: ASOS	SOURCE: KHRL DISTANCE: 0 HOURS REMOTE OPERATION: 24
SATISFACTORY ON: X VHF X UHF HF	LOCATION: KHRL		ADJUSTMENT: 0

4. MONITOR STATUS	PRIMARY NAVAID:	
	MONITOR POINT:	
	HRS OPTN:	CAT 1
		CAT 3
5. APPROACH & RUNWAY LIGHTING		ALS
		(S) SALS
	X	MALSR 17R (PCL)
	X	HIRL 17R, 35L
	X	MIRL 31, 35R, 13, 17L
	X	REIL 13, 17L
		TDZ
		C/LINE
	X	OTHER (SPECIFY) VASI-4L 31, 13, 35L
6. RUNWAY MARKINGS	BASIC	
	ALL WEATHER	PIR-G 17R, 35L
	INSTRUMENT	NPI-G 31, 35R, 13, 17L
7. RUNWAY VISUAL RANGE	APPROACH	17R
	MIDFIELD	
	ROLL OUT	
8. GLIDE PATH	GP ANGLE: 3.00	ELEV RWY THRESHOLD: 35.7
	DISTANCE FROM RWY:	ELEV GP ANTENNA:
		THRESHOLD CROSSING HEIGHT: 59.0
9. FINAL APPROACH COURSE AIMING	X	RUNWAY THRESHOLD FT. FROM THRESHOLD
	X	ON CENTERLINE FT. FROM CENTERLINE

10. WAIVERS: NONE

PART D - PREPARED BY: SCOTT M. CORY	DATE: 04/12/2012
TITLE: AERONAUTICAL INFORMATION SPECIALIST	OFFICE: AJV-353

PART C - REMARKS:

MAX SPEED URAVE TO OCORA - 210 KIAS.

MAX SPEED MINUE TO SAZUK - 210 KIAS.

PARA 251, 20:1 PENETRATION.

PARA 251, 34:1 PENETRATION.

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

3. KHRL ASOS ON SERVICE A.

SEE ATTACHED AIRSPACE LETTER.

AUTHORIZATION REQUIRED (AR). FAAO 8260.52 CRITERIA USED; IPDS USED FOR PROCEDURE EVALUATION.

BARO-VNAV NA BELOW 2C (36F) OR ABOVE 44C (111F).

ISA DEVIATION USED: -12.93C (8.73F)

AVERAGE COLD TEMPERATURE BASED ON 5-YEAR HISTORY (2006-2010); ACT: 2C.

ORDER 8260.3, VOLUME 1, "VISUAL PORTION OF FINAL" PENETRATIONS:
20:1 34 GRD (KHRLT0079) (20/3) 261301.29N/0973934.60W (1.30).

135 MSL TOWER (48-025724) 261155.50N/0973945.70W PENETRATES RNP VISUAL OIS BUFFER AREA BY 6.69'; OBSTACLE CHARTED IAW FAAO 8260.52 PARA 3.6.

POFZ PENETRATIONS:
36 SIGN (KHRLT0071) (20/3) 261302.92N/0973929.07W (3.30)
34 GRD (KHRLT0079) (20/3) 261301.29N/0973934.60W (1.30)
DUE TO POFZ PENETRATIONS, PROCEDURE LIMITED TO 250' HATH AND 3/4 SM VIS.

PROCEDURE ENTRY TRANSITIONS NOT CONNECTED TO ENOUTE STRUCTURE PER AIR TRAFFIC/LEAD CARRIER REQUEST; RADAR REQUIRED FOR PROCEDURE ENTRY.

PROCEDURE ENTRY INITIAL SEGMENTS (AT ALUDE, BOTVE, AND KAHNS) EVALUATED FOR MINIMUM SEGMENT LENGTH FOR WORST-CASE 90 DEGREE TURN (RADAR VECTORS); SEGMENT LENGTHS MEET CRITERIA IAW AFS MEMO DATED 2/6/2012 (PERFORMANCE BASED NAVIGATION (PBN) INSTRUMENT PROCEDURE MINIMUM SEGMENT LENGTH STANDARD); SEGMENT LENGTHS ALSO GREATER THAN DTA.

210 KIAS MAX USED IN INTERMEDIATE RF SEGMENTS (URAVE-OCORA, OCORA-QUTIE, MINUE-SAZUK, SAZUK-QUTIE) PER FPT/LEAD CARRIER REQUEST TO REDUCE TURN RADIUS AND MAINTAIN LESS THAN 25 DEGREE BANK ANGLE IAW AFS MEMO DATED 10/3/2011.

50' VEGETATION USED PER FPT AND EXISTING PROCEDURES.

VEB DATA: SEE ATTACHED SPREADSHEETS.

MISSED APPROACH: FAAO 8260.52 PARA 4.2 (STANDARD RNP MA); IPDS USED FOR EVALUATION.

RF SEGMENT RADIUS/BANK ANGLE COMPUTATIONS:

CONT.

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: STEPDOWN	SAZUK	QUTIE	5. TOWER (48-009045)	260920.52N/0974129.16W	533 (2C)	500	AC20	1100
(RNP 1.00)			14. TERRAIN	260545.00N/0974042.00W	49 (0)		AS1000	1000
FINAL: RNP 0.14	QUTIE	RW35L				ASC	MA48	334/298
FINAL: RNP 0.29	QUTIE	RW35L	15. TREE	261227.00N/0973854.00W	83 (4C)	20.09:1	AC20 MA50	388/352
FINAL: RNP 0.30	QUTIE	RW35L	16. TOWER (48-025724)	261155.50N/0973945.70W	135 (5D)	20.09:1	AC50 MA50	479/443
MISSED APPROACH	*DA*	*RW35L*	17. TREE	261227.00N/0973951.00W	83 (4C)	ASC	AC20	
(RNP 0.14-1.00)		*(40:1)*						
MISSED APPROACH	*DA*	*RW35L*	18. TREE	261218.00N/0974015.00W	83 (4C)	ASC	AC20	
(RNP 0.29-1.00)		*(40:1)*						
MISSED APPROACH	*DA*	*RW35L*	16. TOWER (48-025724)	261155.50N/0973945.70W	135 (5D)	ASC	AC50	
(RNP 0.30-1.00)		*(40:1)*						
MISSED APPROACH	*RW35L*	*ZIPIV*				*ASC*		
(RNP 0.14-1.00)		*(40:1)*						
MISSED APPROACH	*RW35L*	*ZIPIV*				*ASC*		
(RNP 0.29-1.00)		*(40:1)*						
3. MISSED APPROACH — MAP:								
ELEV:								

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	HT. ABV. ARPT. ACTUAL
CATEGORY A	1.3 NM	350	
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

CITY AND STATE	ELEVATION: 36 / AIRPORT NAME:	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
HARLINGEN, TX	VALLEY INTL	RNAV	RNAV (RNP) Z RWY 35L, ORIG	ASW

PART B - SUPPLEMENTAL DATA

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

SEGMENT	ALT	KIAS	KTAS	HAA	VKTW	TR	BA
URAVE-OCORA	3010	210	225.3	2973.7	43@	2.43	23.35
OCORA-QUTIE	1604	210	220.6	1567.7	30&	2.43	22.62
MINUE-SAZUK	3010	210	225.3	2973.7	43@	2.43	23.35
SAZUK-QUTIE	1604	210	220.6	1567.7	30&	2.43	22.62

@VKTW OBTAINED FROM 99% HISTORICAL WIND DATA (MITRE).
&VKTW OBTAINED IAW AFS MEMO DATED 10/3/2011.

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
MISSED APPROACH	RW35L	ZIPIV				ASC		
(RNP 0.30-1.00)		(40:1)						
MISSED APPROACH	DA/DA/DA	ZIPIV				ASC		2000
(RNP 1.00)		LEVEL SURFACE	19. AAO	261918.00N/0974142.00W	230 (4C)	1000	AC20	1300
ELEV:	103/103/185	AIRSPACE	20. TERRAIN	261918.00N/0974142.00W	30 (0)		AS1500	1500

3. MISSED APPROACH									
	MAP:								
	ELEV:								

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	HT. ABV. ARPT. ACTUAL
CATEGORY A	1.3 NM	350	
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

CITY AND STATE		FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
HARLINGEN, TX	ELEVATION: 36 AIRPORT NAME: VALLEY INTL	RNAV	RNAV (RNP) Z RWY 35L, ORIG	ASW

PART B - SUPPLEMENTAL DATA

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

RADIO FIX AND HOLDING DATA RECORD

NAME: ALUDE **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 261355.87N/0973407.58W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 35L			KHRL	HARLINGEN	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

DEVELOPED BY: **DATE:** 04/04/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: VALLEY APP CON, HRL ATCT
OTHER:

QUALITY CHECKED 1

RADIO FIX AND HOLDING DATA RECORD

NAME: BOTVE **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 260239.76N/0973939.46W **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	HARLINGEN	I-HRL	LOC/DME		175.63	180.63	10.12	10.13		1500	4500
2	BROWNSVILLE	BRO	VORTAC	H	286.04	295.04	17.04	17.04		1500	17500

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

REMARKS:
HARLINGEN (FAC 1) USED TO ESTABLISH FIX COORDINATES
I-HRL DME COORDINATES: 261248.64N/0973934.55W

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	LOC/DME BC RWY 35L	1, 2		KHRL	HARLINGEN	TX (US)
IAP	RNAV (GPS) Y RWY 35L			KHRL	HARLINGEN	TX (US)
IAP	RNAV (RNP) Z RWY 35L			KHRL	HARLINGEN	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 09/20/2012

REASON FOR REVISION:
DELETED FAC 1.
UPDATED FAC 2 (NEW FAC 1) MAG BRG FROM 173.63 TO 175.63.
UPDATED FAC 2 (NEW FAC 1) MAA FROM 6000 TO 4500.
ADDED DIST FROM FAC (NM) TO FAC 2 (NEW FAC 1) AND FAC 3 (NEW FAC 2).
ADDED FIX COORDINATE ESTABLISHMENT REMARK.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 04/03/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZHU
ATC FACILITY: HRL ATCT
OTHER: VALLEY APP CON

QUALITY CHECKED 1

RADIO FIX AND HOLDING DATA RECORD

NAME: CFPQQ **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 260954.79N/0974216.23W **TYPE:** CNF

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 35L			KHRL	HARLINGEN	TX (US)

COMPULSORY REPORTING POINT: NO

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

DEVELOPED BY: **DATE:** 04/03/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: VALLEY APP CON, HRL ATCT
OTHER:

QUALITY CHECKED 1

RADIO FIX AND HOLDING DATA RECORD

NAME: CFPQR **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 260951.57N/0973652.15W **TYPE:** CNF

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 35L			KHRL	HARLINGEN	TX (US)

COMPULSORY REPORTING POINT: NO

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

DEVELOPED BY: **DATE:** 04/04/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: VALLEY APP CON, HRL ATCT
OTHER:

QUALITY CHECKED 1

RADIO FIX AND HOLDING DATA RECORD

NAME: FENKU **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 260652.67N/0973936.39W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 35L			KHRL	HARLINGEN	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

DEVELOPED BY: **DATE:** 04/03/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: VALLEY APP CON, HRL ATCT
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: KAHNS **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 261416.13N/0974454.62W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 35L			KHRL	HARLINGEN	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

DEVELOPED BY: **DATE:** 04/03/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: VALLEY APP CON, HRL ATCT
OTHER:

QUALITY RECORD

RADIO FIX AND HOLDING DATA RECORD

NAME: MINUE **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 260956.67N/0974458.27W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 35L			KHRL	HARLINGEN	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

DEVELOPED BY: **DATE:** 04/03/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: VALLEY APP CON, HRL ATCT
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: OCORA **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 260804.87N/0973842.95W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 35L			KHRL	HARLINGEN	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

DEVELOPED BY: **DATE:** 04/04/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: VALLEY APP CON, HRL ATCT
OTHER:

QUALITY 1 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: QUTIE **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 260953.21N/0973934.19W **TYPE:** WP

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

REMARKS:
PFAF LOCATION ESTABLISHED WITH 8260.54A FORMULA 2-16B.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 35L			KHRL	HARLINGEN	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

DEVELOPED BY: **DATE:** 04/03/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: VALLEY APP CON, HRL ATCT
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: SAZUK **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 260805.92N/0974028.06W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 35L			KHRL	HARLINGEN	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

DEVELOPED BY: **DATE:** 04/03/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: VALLEY APP CON, HRL ATCT
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: URAVE **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 260950.24N/0973410.11W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 35L			KHRL	HARLINGEN	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

DEVELOPED BY: **DATE:** 04/04/2012 **OFFICE:** AJV-353 **NAME:** SCOTT CORY

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZHU
ATC FACILITY: VALLEY APP CON, HRL ATCT
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: ZIPIV **STATE:** TX **COUNTRY:** US

LATITUDE/LONGITUDE: 262449.98N/0973923.23W **TYPE:** WP

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

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	N		WP	355.63	175.63	R		4	2000	6000	4	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (48-012875)	262609.00N/0974003.00W	523	2C

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
NAME CHANGED FROM BOMVE TO ZIPIV.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) Y RWY 17R		1	KHRL	HARLINGEN	TX (US)
IAP	RNAV (GPS) Y RWY 35L		1	KHRL	HARLINGEN	TX (US)
IAP	RNAV (RNP) Z RWY 17R			KHRL	HARLINGEN	TX (US)
IAP	RNAV (RNP) Z RWY 35L		1	KHRL	HARLINGEN	TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 09/20/2012

REASON FOR REVISION:
CHANGED FIX NAME FROM BOMVE TO ZIPIV.
REMOVED FAC 1.
CHANGED PAT 1 MIN/MAX TEMPLATES FROM 5/7 TO 4/6.
UPDATED PAT 1 OBSTACLE NUMBER TO CURRENT FORMAT (OBSTACLE SAME AS PREVIOUS).
MOVED LIMITED HOLDING NOTE FROM REMARKS TO HOLDING RESTRICTIONS.
ADDED PRECIPITOUS TERRAIN NOTE.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 03/23/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (STEPHEN PETERSON)

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

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZHU
ATC FACILITY: VALLEY APP CON/HRL TOWER
OTHER:

TERMINAL AIRSPACE DATA REQUIREMENTS

CITY: **HARLINGEN** STATE: **TX**

AIRPORT NAME: **VALLEY INTL** ID: **KHRL**

PROCEDURE: **RNAV (RNP) Z RWY 35L** AMDT: **ORIG**

DOCKET#: **NOT REQUIRED**
(96-AXX-X/Required/Not Required)

ALL DIST TO 1/100 NM; ELEV TO NEAREST FT; COORD TO 1/100 SEC; DEG TO 1/100 DG.

1. Distance from **THLD** to 1000' point **2.84**
   (Enter THLD, FAF, ARP, FACILITY, as appropriate)
2. Width of **FINAL** segment at 1000' point **1.20**
   (Enter appropriate segment, final, intermediate, etc.)
3. True Course of **FINAL** segment containing 1000' point **360.63**
4. High Terrain in **FINAL** segment containing 1000' point **33**
5. Distance from **THLD** to 1500' point **4.41**
   (If 1500' point in PT maneuvering area or holding pattern note in remarks)
6. Width of **INTERMEDIATE** segment at 1500' point **4.00**
7. True Course of **INTERMEDIATE** segment containing 1500' point **360.63***
8. High Terrain in **INTERMEDIATE** segment containing 1500' point **49**
9. Threshold Coordinates (if straight-in) ... **261303.17N** / **0973931.87W**
10. ARP Coordinates ..... **261337.60N** / **0973918.50W**
11. Runway Approach End and distance furthest from ARP ..... RWY **17R**
    Distance **0.82** NM
12. FAF Coordinates ..... **260953.21N** / **0973934.19W**

REMARKS: Approach/Drawing attached.

***1500' POINT LOCATED/DOCUMENTED IN STRAIGHT INTERMEDIATE SEGMENT (FENKU-QUTIE); RF INTERMEDIATE SEGMENTS (OCORA-QUTIE, SAZUK-QUTIE) ALSO CONTAIN 1500' POINTS BUT ARE FULLY CONTAINED WITHIN STRAIGHT INTERMEDIATE SEGMENT AREA**

Do not remove from package.

PFAF Calculations

Min Intermediate Segment Alt (a):	
LTP MSL Elevation (b):	
TCH:	
Glidepath Angle (Θ):	
Distance from LTP to PFAF (D):	**0.00**
	0.00 NM
LTP/FTP Latitude:	
LTP/FTP Longitude:	
True RWY Bearing/True Course:	
PFAF Latitude:	**000° 00' 00.00"**
PFAF Longitude:	**000° 00' 00.00"**

Latitude/Longitude valid for straight segment only

VEB OCS Origin & Slope

Intermediate Segment Altitude:	1100
LTP Elevation:	35.7
Glidepath Angle:	3
TCH:	59
RNP Value:	0.30
Δ ISA:	-12.93
Straight In Segment	
(*Wingspan =<262*) LTP to Origin:	**3,371.28'**
(*Wingspan =<136*) LTP to Origin:	**3,170.35'**
OCS Slope Ratio:	**20.09 : 1**
RF Turn Segment | Bank angle:	
(*Wingspan =<262*) LTP to Origin:	**NA**
(*Wingspan =<136*) LTP to Origin:	**NA**
OCS Slope Ratio:	**NA**

Version 2.0

VEB Temperature Limits

Glidepath Angle:	3.00°	
Max Glidepath Angle:	3.50°	
PFAF Elevation:	1100	
LTP Elevation:	35.7	
ACT:	2.00°C	
Min Glidepath Angle	**2.96°**	
NA Below	**2.00°C**	**35.60°F**
NA Above	**47.72°C**	**117.89°F**

Intermediate Segment VEB ROC

Glidepath Angle	3.00°
LTP MSL Elevation	35.70
TCH (ft)	59.00
OCS Slope	20.09
OCS Origin Distance (ft) *(measured along-track from LTP)*	3,371.28
Obstacle Distance (ft) *(measured along-track from LTP)*	29,215.35
VEB ROC *(at obstacle)*	**308**
Glidepath MSL altitude at Obstacle	1,646.26
OCS MSL altitude at Obstacle	1,338.12

SAZUK - QLDWW

PFAF Calculations

Min Intermediate Segment Alt (a):	
LTP MSL Elevation (b):	
TCH:	
Glidepath Angle (Θ):	
Distance from LTP to PFAF (D):	0.00
	0.00 NM
LTP/FTP Latitude:	
LTP/FTP Longitude:	
True RWY Bearing/True Course:	
PFAF Latitude:	000° 00' 00.00"
PFAF Longitude:	000° 00' 00.00"

Latitude/Longitude valid for straight segment only

VEB OCS Origin & Slope

Intermediate Segment Altitude:	1100
LTP Elevation:	35.7
Glidepath Angle:	3
TCH:	59
RNP Value:	0.29
Δ ISA:	-12.93

Straight In Segment	
(*Wingspan =<262*) LTP to Origin:	3,290.12'
(*Wingspan =<136*) LTP to Origin:	3,089.17'
OCS Slope Ratio:	20.09 : 1
RF Turn Segment | Bank angle:	
(*Wingspan =<262*) LTP to Origin:	NA
(*Wingspan =<136*) LTP to Origin:	NA
OCS Slope Ratio:	NA

Version 2.0

VEB Temperature Limits

Glidepath Angle:	3.00°	
Max Glidepath Angle:	3.50°	
PFAF Elevation:	1100	
LTP Elevation:	35.7	
ACT:	2.00°C	
Min Glidepath Angle	2.96°	
NA Below	2.00°C	35.60°F
NA Above	47.72°C	117.89°F

Intermediate Segment VEB ROC

Glidepath Angle	3.00°
LTP MSL Elevation	35.70
TCH (ft)	59.00
OCS Slope	20.09
OCS Origin Distance (ft) *(measured along-track from LTP)*	3,290.12
Obstacle Distance (ft) *(measured along-track from LTP)*	29,215.35
VEB ROC *(at obstacle)*	**304**
Glidepath MSL altitude at Obstacle	1,646.26
OCS MSL altitude at Obstacle	1,342.26

Do not remove from package.

PFAF Calculations

Min Intermediate Segment Alt (a):	
LTP MSL Elevation (b):	
TCH:	
Glidepath Angle (Θ):	
Distance from LTP to PFAF (D):	0.00
	0.00 NM
LTP/FTP Latitude:	
LTP/FTP Longitude:	
True RWY Bearing/True Course:	
PFAF Latitude:	000° 00' 00.00"
PFAF Longitude:	000° 00' 00.00"

Latitude/Longitude valid for straight segment only

VEB OCS Origin & Slope

Intermediate Segment Altitude:	1100
LTP Elevation:	35.7
Glidepath Angle:	3
TCH:	59
RNP Value:	0.14
Δ ISA:	-12.93

Straight In Segment

(Wingspan =<262) **LTP to Origin:**	2,256.85'
(Wingspan =<136) **LTP to Origin:**	2,055.66'
OCS Slope Ratio:	20.12 : 1

RF Turn Segment | Bank angle:	
(Wingspan =<262) **LTP to Origin:**	NA
(Wingspan =<136) **LTP to Origin:**	NA
OCS Slope Ratio:	NA

Version 2.0

VEB Temperature Limits

Glidepath Angle:	3.00°	
Max Glidepath Angle:	3.50°	
PFAF Elevation:	1100	
LTP Elevation:	35.7	
ACT:	2.00°C	
Min Glidepath Angle	2.96°	
NA Below	2.00°C	35.60°F
NA Above	47.72°C	117.89°F

Intermediate Segment VEB ROC

Glidepath Angle	3.00°
LTP MSL Elevation	35.70
TCH (ft)	59.00
OCS Slope	20.12
OCS Origin Distance (ft) *(measured along-track from LTP)*	2,256.85
Obstacle Distance (ft) *(measured along-track from LTP)*	29,215.35
VEB ROC *(at obstacle)*	**253**
Glidepath MSL altitude at Obstacle	1,646.26
OCS MSL altitude at Obstacle	1,393.00

SAZUK - QLOWW