

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE

TITLE 14 CFR PART 97.33

Bearings, headings, courses, tracks 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 feet RVR.

<u>AIRPORT ID</u> 5C1	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 17	<u>ORIGINAL/AMENDMENT</u> 1D	<u>CITY</u> SAN ANTONIO	<u>STATE</u> TX		
<u>AIRPORT ELEVATION</u> 1384	<u>TDZE</u> 1384	<u>SUPERSEDED</u> RNAV (GPS) RWY 17	<u>ORIGINAL/AMENDMENT</u> 1C	<u>DATED</u> 11/07/2019	<u>MAG VAR</u> 5E	<u>EPOCH YEAR</u> 2010
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>		

TAA

FROM	FIX TYPE	TO	FIX TYPE	ALTITUDE
1. 079/30 CW 259/30	NOPT	FIDGU	IF/IAF	4100
2. 259/30 CW 079/30		FIDGU	IF/IAF	4100

TERMINAL ROUTES

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
FIDGU	IF/IAF	CUSUL		TF	FB	1.00	169.00	5.99	2700
CUSUL	FAF	EMEGY/2.30 NM TO RW17		TF	FB	0.30	169.01	1.71	
EMEGY/2.30 NM TO RW17		RW17	MAP	TF	FO	0.30	169.01	2.30	
RW17	MAP	1900 MSL		CA			169.01		1900
1900 MSL		MEDIN		DF	FO	1.00			4100

MISSED APPROACH

MAP:

LP: RW17
LNAV: RW17

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1900 THEN CLIMBING RIGHT TURN TO 4100 DIRECT MEDIN.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF

(IAF)

2. HOLD N FIDGU, RT, 169.00 INBOUND, 4100 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAF: 169.01FAF: CUSULDIST FAF TO MAP: 4.01DIST FAF TO THLD: 4.01

4. MIN ALT: FIDGU 4100, CUSUL 2700, EMEGY/2.30 NM TO RW17 2140

5. DIST TO THLD FROM OM:MM:IM:150 HAT:GS ANT:MM:IM:

6. MIN GP INCPT:GP ALT AT FAF :OM:MM:IM:

7. GP ANGLE:34:1: IS NOT CLEAR20:1: IS NOT CLEARTCH:

8. MSA FROM:

PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: RWY 17 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE KSAT ALTIMETER SETTING AND INCREASE ALL MDAS 120 FT.

ADDITIONAL FLIGHT DATA:

CHART FAS OBST: 1586 ANTENNA (48-103185) 294529N/0984201W
HOLD W, LT, 105.14 INBOUND (DO NOT CHART).
WAAS CHANNEL # 50528
REFERENCE PATH ID: W17A
CUSUL TO RW17: 3.00/40.
LTP HAE: 396.8 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - NA WHEN LOCAL WEATHER NOT AVAILABLE.

CATEGORY:	A			B			C			D			E		
FINAL TYPE	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA
LP MDA	1840	1	456	1840	1	456		NA			NA				
LNAV MDA	1840	1	456	1840	1	456		NA			NA				

CHANGES - REASONS

1. UPDATED PBN REQUIREMENTS NOTE FROM "RNP APCH" TO "RNP APCH - GPS" - 8260.19I, 8-6-8.B (2).
2. NOTES: REMOVED CHART NOTE 'PROCEDURE NA AT NIGHT' - PER FPT REQUEST AND OBSTACLE EVALUATION, THE LISTED 20:1 PENETRATIONS HAVE BEEN MITIGATED.
3. INCORPORATED CHANGES FROM P-NOTAM FOR AMDT 1C INTO FORM - IAW 8260.19I PARA 8-3-4.C (3).



COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** ZHU, SAT APP CON, ST. AV. DIR., AMGR

FLIGHT CHECKED BY

Processed IAW Technical Support Group (AJF-17) Memo dated 07/07/2021 Guidance for Procedural Changes
Requiring Flight Inspection/Validation

DEVELOPED BY

ALLAN WILL (GREG LINDSEY)

APPROVED BY

MARLON ROBINSON

OFFICE

OFFICE
AJV-A423

OFFICE
AJV-A420

DATE

DATE
08/16/2021

DATE

Digitally signed by

ALLAN WILL

Sep 20, 2021

Digitally signed by

ALLAN WILL

Sep 20, 2021

Digitally signed by

ALLAN WILL

Sep 20, 2021

TITLE
MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	5C1
RUNWAY	RW17
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W17A
LTP/FTP LATITUDE	294342.0325N
LTP/FTP LONGITUDE	0984142.6260W
LTP/FTP ELLIPSOIDAL HEIGHT	+03968
FPAP LATITUDE	294213.2025N
FPAP LONGITUDE	0984131.9420W
THRESHOLD CROSSING HEIGHT (TCH)	00040.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1416
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	0.0
CRC REMAINDER	436E1170

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K4
LTP ORTHOMETRIC HEIGHT	+04211
FPAP ORTHOMETRIC HEIGHT	+04211



FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

<u>AIRPORT ID</u> 5C1	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 17	<u>AMDT NO.</u> 1D	<u>CITY</u> SAN ANTONIO	<u>STATE</u> TX	<u>AIRPORT ELEVATION</u> 1384	<u>FACILITY</u> RNAV
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PART A: OBSTRUCTION DATA SEGMENTS

STRAIGHT-IN AREA

FROM
079/30 CW 259/30

TO
FIDGU

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
<u>OBSTRUCTION</u>	<u>COORDINATES</u>		<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
TOWER (48-010562)	300814.00N/0983636.00W		3049	500	50	5D	1000					4100
TERRAIN	295318.00N/0991348.00W		2186 (2200)								AS1500	3700

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

STRAIGHT-IN AREA

FROM
259/30 CW 079/30

TO
FIDGU

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
<u>OBSTRUCTION</u>	<u>COORDINATES</u>		<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
TOWER (48-005142)	293639.00N/0985334.00W		3049	500	125	5E	1000					4100
TERRAIN	295045.00N/0991048.00W		2097 (2100)								AS1500	3600

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INTERMEDIATE

FROM

FIDGU (IF/IAF)

TO

CUSUL

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
	5.99											
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	295127.00N/0984448.00W		2044	50	20	2C	500					2600
TERRAIN	295127.00N/0984448.00W		1844 (1800)								AS900	2700

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE USED 900 FT AIRSPACE PER CEN FPT. ATC REQUIRES ALTITUDE OF 2700 AT FAF TO DECONFLICT WITH ILS TRACK INTO KSAT.

FINAL: LP

FROM

CUSUL

TO

EMEGY/2.30 NM TO RW17

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
	1.71											
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	294730.54N/0984140.10W		1739	50	20	2C	250				RA118 DG31	2140

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



FINAL: LP STEPDOWN

FROM
EMEGY/2.30 NM TO RW17

TO
RW17

RNP	DISTANCE 2.30	PAT	MAP RW17	HAT 456			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
ANTENNA (48-103185)	294528.67N/0984200.57W		1586	20	3	1A	250					1840

COMPUTATIONS

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL: LNAV

FROM
CUSUL

TO
EMEGY/2.30 NM TO RW17

RNP	DISTANCE 1.71	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
AAO	294733.00N/0984106.00W		1769	50	20	2C	250				RA118	2140

COMPUTATIONS

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



FINAL: LNAV STEPDOWN

FROM

EMEGY/2.30 NM TO RW17

TO

RW17

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
	2.30		RW17			456						
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
ANTENNA (48-103185)	294528.67N/0984200.57W		1586	20	3	1A	250					1840

COMPUTATIONS	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:

HOLD-IN-LIEU OF PT

FROM

FIDGU

TO

P-5

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
		P-5										
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
TOWER (48-005697)	295027.00N/0984933.00W		3048	500	125	5E	1000				SA-855 AT907	4100
TERRAIN	300239.00N/0984739.00W		1982 (2000)								AS1500	3500

COMPUTATIONS	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:



MISSED APPROACH : LP

FROM

RW17

TO

MEDIN

RNP	DISTANCE	PAT	MAP	HAT			HMAS 1740					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				4100
AAO	295006.00N/0985430.00W		2244	50	20	2C	1000					3300
TERRAIN	295012.00N/0985315.00W		2007 (2000)								AS1500	3500

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH : LNAV

FROM

RW17

TO

MEDIN

RNP	DISTANCE	PAT	MAP	HAT			HMAS 1740					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				4100
AAO	295006.00N/0985430.00W		2244	50	20	2C	1000					3300
TERRAIN	295012.00N/0985315.00W		2007 (2000)								AS1500	3500

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

CIRCLING

☐ ALL CATS

☐ CAT A

☐ CAT B

☐ CAT C

☐ CAT D

☐ CAT E

☒ NOT AUTHORIZED



<u>CENTER</u>	<u>RADIUS</u>
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REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:



PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH
SAT APP CON, ZHU ARTCC

<u>WX SERVICE</u> AWOS-3	<u>LOCATION</u> K5C1	<u>HRS OPERATION</u> 24	<u>ALTIMETER SOURCE</u> K5C1	<u>DISTANCE</u> 0	<u>SERVICE-A</u> Y	<u>ADJUSTMENTS</u> 0
<u>BACK-UP WX SERVICE</u> ASOS	<u>LOCATION</u> KSAT	<u>HRS OPERATION</u> 24	<u>ALTIMETER SOURCE</u> KSAT	<u>DISTANCE</u> 16.39	<u>SERVICE-A</u> Y	<u>ADJUSTMENTS</u> 118

WX REMARKS:
RASS PRESSURE PATTERNS THE SAME
K5C1 1384, KSAT 802
RA = 117.3.

<u>PRIMARY NAVAID</u>	<u>MONITOR POINT</u>	<u>HRS OPERATION</u>	<u>CAT</u>
<u>APPROACH AND RUNWAY LIGHTING SYSTEM</u>		<u>RUNWAY MARKINGS</u>	<u>RUNWAY VISUAL RANGE</u>
RW17 - LIRL		NPI-G	
RW35 - LIRL		NPI-G	

<u>GLIDESLOPE ANGLE</u>	<u>ELEV RWY THRESHOLD</u>	<u>TCH</u>	<u>ELEV GS ANTENNA</u>	<u>DISTANCE FROM RWY</u>	<u>VGSI ANGLE</u>	<u>TCH</u>
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FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD	<input checked="" type="checkbox"/>	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE	629
ON CENTERLINE	<input checked="" type="checkbox"/>	FT FROM CENTERLINE		

CRITICAL TEMPERATURES

<u>CRITICAL LOW</u>	<u>CRITICAL HIGH</u>	<u>ACT</u>	<u>APT ISA</u>
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CRITICAL TEMPERATURE REMARKS:



"VISUAL PORTION OF FINAL" PENETRATIONS

Final Type	LP / LNAV
20:1	
1396 BUILDING (48-027296) 294346.48N/0984140.68W (3.06)	1413 POLE (48-120014) 294349.80N/0984144.62W (1.56)
1413 POLE (48-103194) 294349.80N/0984144.98W (1.4)	
Final Type	LP / LNAV
34:1	
1428 TREE (48-103163) 294353.75N/0984146.60W (16.68)	1421 TREE (48-120012) 294352.20N/0984141.37W (15.68)
1414 TREE (48-038038) 294350.42N/0984144.06W (13.21)	1424 TREE (48-103162) 294354.42N/0984145.01W (11.13)
1410 TREE (48-102822) 294350.13N/0984140.35W (11.07)	1409 TREE (48-124492) 294349.70N/0984141.54W (11.02)
1411 TREE (48-102987) 294351.18N/0984141.99W (8.53)	1420 TREE (48-103168) 294354.40N/0984141.64W (8.11)
1416 TREE (48-103169) 294353.08N/0984142.91W (7.66)	1410 TREE (48-102862) 294351.03N/0984144.88W (7.19)
1415 TREE (48-102709) 294353.24N/0984140.29W (6.9)	1422 TREE (48-102802) 294355.20N/0984147.26W (6.22)
1408 TREE (48-102706) 294351.11N/0984140.61W (6.11)	1400 BUILDING (48-102974) 294348.51N/0984140.70W (5.76)
1414 TREE (48-102703) 294353.19N/0984141.59W (5.69)	1397 BUILDING (48-027295) 294348.51N/0984140.87W (2.72)
1422 TREE (48-103166) 294356.39N/0984148.59W (2.34)	1400 TREE (48-038039) 294349.96N/0984143.67W (0.68)

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or
5280-FT "PROCEED VFR" SEGMENT LEVEL SURFACE AREA PENETRATIONS

PENETRATIONS REMARKS:
1396 BUILDING (48-027296) 294346.48N/0984140.68W (3.06) OBSTACLE IS LIGHTED 1413 POLE (48-120014) 294349.80N/0984144.62W (1.56) OBSTACLE IS LIGHTED 1413 POLE (48-103194) 294349.80N/0984144.98W (1.4) OBSTACLE IS LIGHTED

PART C: GENERAL REMARKS:

PER FPT, PARALLEL TAXIWAY IS NOT TO BE USED AT NIGHT THEREFORE THE MINIMA SHALL RETAIN THE 1 SM VISIBILITY REQUIREMENT.

MISSED APPROACH HOLDING AT FIX MEDIN EVALUATED BUT NOT CHARTED OR CODED IN AIRINC PER ATC REQUEST.

AVERAGE TREE HEIGHT 55 FT PER CEN FPT.

VDP NOT PUBLISHABLE DUE TO 20:1 PENETRATIONS.



PART D: AIRSPACE

DOCKET #

ALL DISTANCES TO 1/100NM; ELEVATION TO NEAREST 100 FEET; COORDINATES TO 1/100 SECOND; DEG TO 1/100 DEGREE

DISTANCE FROM	THLD	TO 1000FT POINT	3.68
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.82
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	174.01
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	1600
DISTANCE FROM	THLD	TO 1500FT POINT	8.60
WIDTH OF	INTERMEDIATE	SEGMENT AT 1500FT POINT	4.00
TRUE COURSE OF	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	174.00
HIGH TERRAIN IN	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	1800

THRESHOLD
COORDINATES
(IF STR-IN) 294342.03N/0984142.63W

ARP COORDINATES 294323.59N/0984140.40W

RUNWAY APCH END
AND DIST FURTHEST
FROM ARP RUNWAY 35 DISTANCE 0.41 NM

FAF
COORDINATES 294742.16N/0984211.50W

FIX NAME
COORDINATES IF/IAF FIDGU: 295340.23N/0984254.65W

REMARKS

NO ADDITIONAL AIRSPACE REQUIRED.

TAA STRAIGHT-IN: 30NM
079/30 CW 259/30 TO FIDGU
259/30 CW 079/30 TO FIDGU
THLD DISPLACED 629FT, ACTUAL COORDINATES: 294348.23N/0984143.37W.



PART E: PREPARED BY

<u>NAME</u> ALLAN WILL (GREG LINDSEY)	<u>OFFICE</u> AJV-A423	<u>DATE</u> 08/16/2021	<u>TITLE</u> AERONAUTICAL INFORMATION SPECIALIST
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