

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> KSAT	<u>PROCEDURE NAME</u> RNAV (GPS) Y RWY 4	<u>ORIGINAL/AMENDMENT</u> 4	<u>CITY</u> SAN ANTONIO	<u>STATE</u> TX		
<u>AIRPORT ELEVATION</u> 809	<u>TDZE</u> 786	<u>SUPERSEDED</u> RNAV (GPS) Y RWY 4	<u>ORIGINAL/AMENDMENT</u> 3C	<u>DATED</u> 11/04/2021	<u>MAG VAR</u> 4E	<u>EPOCH YEAR</u> 2020
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 25 JANUARY 2024	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>		

TERMINAL ROUTES

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>LEG TYPE</u>	<u>FO/FB</u>	<u>RNP</u>	<u>COURSE</u>	<u>DISTANCE</u>	<u>ALTITUDE</u>
TRAGO		HARDD		TF	FB	1.00	036.63	6.84	5000
FOALL		PICLO		TF	FB	1.00	266.87	2.24	5000
HARDD	IAF	AVREE		TF	FB	1.00	036.67	4.68	3500
PICLO	IAF	AVREE		TF	FB	1.00	356.85	4.71	3500
FRIZA	IAF	AVREE		TF	FB	1.00	126.72	4.89	3500
AVREE	IF	NADBE		TF	FB	1.00	036.75	4.89	2000
NADBE	FAF	RW04	MAP	TF	FO	0.30	036.76	3.63	
RW04	MAP	986 MSL		CA			036.76		
986 MSL		BISGE		DF	FB	1.00			
BISGE		SHEPE		TF	FO	1.00	029.53	17.39	3500

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW04

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3500 DIRECT BISGE AND TRACK 029.53 TO SHEPE AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

QUALITY
12
CHECKED

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT D 800-2 1/4

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
LPV DA	986	4000	200	986	4000	200	986	4000	200	986	4000	200			
LNAV/VNAV DA	1201	5000	415	1201	5000	415	1201	5000	415	1201	5000	415			
LNAV MDA	1280	4000	494	1280	4000	494	1280	6000	494	1280	6000	494			
CIRCLING	1280	1	471	1340	1	531	1420	1 3/4	611	1520	2 1/4	711			

CHANGES - REASONS

1. TERMINAL ROUTES: CHANGED IF FROM HARDD TO AVREE. REMOVED SDF RESOC FROM INTERMEDIATE SEGMENT. ADDED TRAGO TO HARDD AND FOALL TO PICLO FEEDER SEGMENTS. ADDED HARDD TO AVREE, PICLO TO AVREE, AND FRIZA TO AVREE INITIAL SEGMENTS - PROCEDURE REDESIGN/ATC REQUEST PER FPT CHECKLIST.
2. TERMINAL ROUTES: CHANGED NADBE TO RWY 04 FINAL APPROACH SEGMENT COURSE FROM 036.75 TO 036.76 AND DISTANCE FROM 5.20 TO 3.63 - NADBE COORDINATES MOVED/PROCEDURE REDESIGN/ATC REQUEST PER FPT CHECKLIST.
3. LINE 2: REMOVED HIL AT HARDD - IF CHANGED TO AVREE/PROCEDURE REDESIGN/ATC REQUEST PER FPT CHECKLIST.
4. LINE 3: FAC CHANGED FROM 036.75 TO 036.76 AND DISTANCES CHANGED FROM 5.20 TO 3.63 - NADBE COORDINATES MOVED/PROCEDURE REDESIGN/ATC REQUEST PER FPT CHECKLIST.
5. LINE 4: REMOVED 3500 MIN ALTITUDES AT HARDD AND RESOC. ADDED 3500 MIN ALTITUDE AT AVREE. CHANGED NADBE MIN ALTITUDE FROM 2500 TO 2000 - RESOC SDF REMOVED/HARDD REPLACED BY AVREE AS IF/NADBE COORDINATES MOVED/PROCEDURE REDESIGN/ATC REQUEST PER FPT CHECKLIST.
6. LINE 6: CHANGED MIN GS INCPNT FROM 2500 TO 2000 AND GS ALT AT NADBE FROM 2500 TO 2000 - NADBE COORDINATES MOVED/PROCEDURE REDESIGN/ATC REQUEST PER FPT CHECKLIST.
7. LINE 7: ADDED IS CLEAR TO 20:1 - REQUIRED DOCUMENTATION PER FAAO 8260.19I, PARA 8-6-7G(3)(A) CRITERIA.
8. LINE 8: ADDED 4100 FOOT MSA CENTERED ON RWY 04 - TAA REMOVED/PROCEDURE REDESIGN/ATC REQUEST PER FPT CHECKLIST/REQUIRED DOCUMENTATION PER FAAO 8260.19I, PARA 8-6-7H(1) CRITERIA.
9. PBN REQUIREMENTS NOTE: ADDED "RNP APCH - GPS" - REQUIRED DOCUMENTATION PER FAAO 8260.19I, PARA 8-6-8B(2) CRITERIA.
10. NOTES: CHANGED LOW TEMPERATURE FROM -4C TO -5C AND REMOVED FARENHEIT TEMPERATURE VALUES FROM UNCOMPENSATED BARO-VNAV SYSTEMS CHART NOTE - NEW TEMPERATURE CALCULATION BASED ON MOST CURRENT 5 YEAR HISTORICAL DATA SPAN/FARENHEIT TEMPERATURE VALUES NO LONGER CHARTED PER FAAO 8260.19I, PARA 8-6-9R CRITERIA.
11. NOTES: CHANGED CIRCLING DIRECTION FROM W TO NW IN CIRCLING NA CHART NOTE - STANDARDIZATION OF NOTE FOR ALL KSAT PROCEDURES.
12. NOTES: REMOVED DME/DME RNP-0.3 NA - NO LONGER REQUIRED PER FAAO 8260.19I, PARA 1-1-5F(18) CRITERIA.
13. NOTES: CHANGED LNAV/VNAV ALL CATS VISIBILITY INCREASE FROM 1 3/8 SM TO RVR 6000 IN INOPERATIVE ALS CHART NOTE AND ADDED LNAV CATS A/B INCREASE TO RVR 5500 - NEW TARGETS EVALUATION/FAAO 8260.3E, TABLE 3-3-1.
14. NOTES: ADDED CHART PLANVIEW NOTE TO NA ARRIVALS AT TRAGO ON V161 SE BOUND - REQUIRED DOCUMENTATION PER FAAO 8160.19I, PARA 8-2-5E(2) CRITERIA.
15. NOTES: ADDED CHART SPEED ICONS FOR TRAGO, AVREE, FOALL, HARDD, PICLO, AND FRIZA - PROCEDURE REDESIGN/ATC REQUEST PER FPT CHECKLIST.
16. ADDITIONAL FLIGHT DATA: REMOVED "*" LNAV ONLY" REFERENCE TO CHART VDP - NO LONGER REQUIRED PER 8260.19I IMPLEMENTATION MEMO, ATTCH 3, PARA 4 CRITERIA.
17. MINIMUMS: CHANGED LNAV/VNAV ALL CATS VISIBILITY FROM RVR 6000 TO RVR 5000 - NEW TARGETS EVALUATION/FAAO 8260.3E, TABLE 3-3-1.
18. MINIMUMS: CHANGED CIRCLING CAT A CMDA/HAA FROM 1300/491 TO 1280/471 - NEW TARGETS EVALUATION.
19. MINIMUMS: CHANGED CIRCLING CAT B CMDA/HAA FROM 1400/591 TO 1340/531 - NEW TARGETS EVALUATION/MAP CONTOUR LINE MISSING FROM PREVIOUS EVALUATION.
20. FAS DATA BLOCK: CHANGED DECIMAL PORTION OF LTP LATITUDE FROM .6405 TO .6420 AND DECIMAL PORTION OF LTP LONGITUDE FROM .6565 TO .6560 - NEW AIRNAV SURVEY DATA.
21. FAS DATA BLOCK: CHANGED LTP ELLIPSOIDAL HEIGHT FROM +02142 TO +02141 - UPDATED WGS-84 DATUM.
22. FAS DATA BLOCK: CHANGED FPAP LATITUDE DECIMAL PORTION FROM .2700 TO .2745 AND FPAP LONGITUDE DECIMAL PORTION FROM .9400 TO .9410 - NEW SURVEY DATA.
23. FAS DATA BLOCK: CHANGED CRC REMAINDER FROM DCBD96B8 TO E1D8F8FE - UPDATED LTP AND FPAP COORDINATES/NEW AIRNAV SURVEY DATA.
24. INCORPORATED CHANGES FROM PREVIOUS P-NOTAMS INTO FORM.



COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZHU ARTCC, SAT APP CON, AMGR

FLIGHT CHECKED BY

TERRY HESTER

Digitally signed by

MICHAEL GARRITY

OFFICE

FPO

DATE

11/07/2023

DEVELOPED BY

MICHAEL R. GARRITY JR.

Digitally signed by

MICHAEL GARRITY

Nov 13, 2023

OFFICE

AJV-A423

DATE

04/05/2023

APPROVED BY

ALLAN WILL

Aug 29, 2023

Digitally signed by

MICHAEL GARRITY

Sep 01, 2023

OFFICE

AJV-A423

DATE

10/05/2023

TITLE

MANAGER

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KSAT
RUNWAY	RW04
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Y
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W04A
LTP/FTP LATITUDE	293123.6405N
LTP/FTP LONGITUDE	0982811.6560W
LTP/FTP ELLIPSOIDAL HEIGHT	+02141
FPAP LATITUDE	293231.2745N
FPAP LONGITUDE	0982704.9410W
THRESHOLD CROSSING HEIGHT (TCH)	00056.4
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0160
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0
CRC REMAINDER	E1D8F8FE

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K4
LTP ORTHOMETRIC HEIGHT	+02396
FPAP ORTHOMETRIC HEIGHT	+02396

