

**FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
ILS STANDARD INSTRUMENT APPROACH PROCEDURE  
TITLE 14 CFR PART 97.29**

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><b>AIRPORT ID</b></u><br>KSAT       | <u><b>PROCEDURE NAME</b></u><br>ILS OR LOC RWY 31L | <u><b>ORIGINAL/AMENDMENT</b></u><br>11                 | <u><b>CITY</b></u><br>SAN ANTONIO                | <u><b>STATE</b></u><br>TX         |                             |                                  |
| <u><b>AIRPORT ELEVATION</b></u><br>809 | <u><b>TDZE</b></u><br>31L 790<br>31R 788           | <u><b>SUPERSEDED</b></u><br>ILS OR LOC RWY 31L         | <u><b>ORIGINAL/AMENDMENT</b></u><br>10D          | <u><b>DATED</b></u><br>11/04/2021 | <u><b>MAG VAR</b></u><br>4E | <u><b>EPOCH YEAR</b></u><br>2020 |
| <u><b>FACILITY</b></u><br>I-IZR        | <u><b>COORDINATES OF FACILITIES</b></u>            | <u><b>ACTUAL EFFECTIVE DATE</b></u><br>2 DECEMBER 2021 | <u><b>REQUIRED EFFECTIVE DATE</b></u><br>ROUTINE | <u><b>CANCEL/SUSPEND</b></u>      |                             |                                  |

**TERMINAL ROUTES**

| <u><b>FROM</b></u>        | <u><b>FIX TYPE</b></u> | <u><b>TO</b></u>          | <u><b>FIX TYPE</b></u> | <u><b>LEG TYPE</b></u> | <u><b>FO/FB</b></u> | <u><b>RNP</b></u> | <u><b>COURSE</b></u> | <u><b>DISTANCE</b></u> | <u><b>ALTITUDE</b></u> |
|---------------------------|------------------------|---------------------------|------------------------|------------------------|---------------------|-------------------|----------------------|------------------------|------------------------|
| SAT VORTAC                |                        | ROTTS INT/I-IZR 12.88 DME |                        |                        |                     |                   | 140.66               | 18.33                  | 3100                   |
| ROTTS INT/I-IZR 12.88 DME | IF/IAF                 | ROWAK INT/I-IZR 5.37 DME  |                        |                        |                     |                   | 307.61               | 7.52 (I-IZR)           | 2600                   |

**MISSED APPROACH**

**MAP:**

ILS: DA  
LOC: 5.53 NM AFTER ROWAK INT/I-IZR 5.37 DME OR AT I-IZR 0.17 DME

**MISSED APPROACH INSTRUCTIONS:**

CLIMB TO 3200 DIRECT ALAMO LOM AND HOLD. CONTINUE CLIMB-IN-HOLD TO 3200.

**ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):**

CLIMB TO 1500 THEN CLIMBING LEFT TURN TO 4000 ON HEADING 214 AND CSI VORTAC R-138 TO TRAGO INT/46.89 DME AND HOLD.

**PROFILE:**

- PT      SIDE OF COURSE      OUTBOUND      FT WITHIN      MILES OF      (IAF)
- HOLD SE ROTTS, LT, 307.61 INBOUND, 3100 FT. IN LIEU OF PT (IAF), MAX 5300.
- FAC:** 307.61      **FAF:** ROWAK INT/I-IZR 5.37 DME      **DIST FAF TO MAP:** 5.53      **DIST FAF TO THLD:** 5.53
- MIN ALT:**    ROTTS INT/I-IZR 12.88 DME 3100, ROWAK INT/I-IZR 5.37 DME 2600, CIBUS/I-IZR 1.80 DME 1360
- DIST TO THLD FROM FAF:** 5.53      **MM:**      **IM:**      **150 HAT:**      **GS ANT:** 1055
- MIN GS INCPT:** 2600      **GS ALT AT FAF :** ROWAK INT/I-IZR 5.37 DME 2600      **OM:**      **MM:**      **IM:**
- GP ANGLE:** 3.00      **34:1:**      **20:1:**      **TCH:** 59.9
- MSA FROM:**    SAT VORTAC 225-315 4100, 315-225 3300

**EQUIPMENT REQUIREMENTS NOTES:**

ADF REQUIRED.



**NOTES:**

CHART NOTE: CIRCLING NA W OF RWYS 4 AND 13R.

CHART NOTE: CHART NOTE: \*\* RVR 1800 AUTHORIZED WITH USE OF FD OR AP OR HUD TO DA.

CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).

CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-LOC 31L CATS C/D VISIBILITY TO 1 5/8 SM.

**ADDITIONAL FLIGHT DATA:**

HOLD NW, RT, 127.60 INBOUND.

CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD NW TRAGO INT/46.89 DME, RT, 138.34 INBOUND.

CHART FAS OBST: 1098 TOWER (48-014294) 292942N/0982455W, 915 BUILDING (48-030233) 293055N/0982655W.

CHART A-635.

CHART VDP AT 0.96 DME

DISTANCE VDP TO THLD 1.12 NM.

CHART IN PLANVIEW: TRAGO INT/46.89 DME.

CHART CIRCLING ICON.

CHART IN PROFILE VIEW: I-IZR DME ANTENNA.

**MINIMUMS:**

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

**ALTERNATE:** NA ☐ ILS: STANDARD; LOC: STANDARD - CAT D 800-2 1/4

| <b>CATEGORY:</b>   | <b>A</b>      |            |                | <b>B</b>      |            |                | <b>C</b>      |            |                | <b>D</b>      |            |                | <b>E</b>      |            |                |
|--------------------|---------------|------------|----------------|---------------|------------|----------------|---------------|------------|----------------|---------------|------------|----------------|---------------|------------|----------------|
| <b>FINAL TYPE</b>  | <b>DA/MDA</b> | <b>VIS</b> | <b>HAT/HAA</b> | <b>DA/MDA</b> | <b>VIS</b> | <b>HAT/HAA</b> | <b>DA/MDA</b> | <b>VIS</b> | <b>HAT/HAA</b> | <b>DA/MDA</b> | <b>VIS</b> | <b>HAT/HAA</b> | <b>DA/MDA</b> | <b>VIS</b> | <b>HAT/HAA</b> |
| S-ILS 31L**        | 990           | 2400       | 200            | 990           | 2400       | 200            | 990           | 2400       | 200            | 990           | 2400       | 200            |               |            |                |
| S-LOC 31L          | 1360          | 2400       | 570            | 1360          | 2400       | 570            | 1360          | 1 1/4      | 570            | 1360          | 1 1/4      | 570            |               |            |                |
| SIDESTEP 31R       | 1360          | 1          | 572            | 1360          | 1          | 572            | 1360          | 1 1/2      | 572            | 1360          | 2          | 572            |               |            |                |
| CIRCLING           | 1360          | 1          | 551            | 1360          | 1          | 551            | 1420          | 1 3/4      | 611            | 1520          | 2 1/4      | 711            |               |            |                |
| CIBUS FIX MINIMUMS |               |            |                |               |            |                |               |            |                |               |            |                |               |            |                |
| S-LOC 31L          | 1220          | 2400       | 430            | 1220          | 2400       | 430            | 1220          | 4000       | 430            | 1220          | 4000       | 430            |               |            |                |



**CHANGES - REASONS**

1. ALL CHANGES FROM AMENDMENT 10D HAVE BEEN INCORPORATED INTO THIS PROCEDURE. - 8260.19H 8-3-4-C(1).
2. TERMINAL ROUTES: CHANGED FAF DESCRIPTION FROM WAKKS OM/INT/I-IZR 5.18 DME/RADAR TO ROWAK INT/I-IZR 5.37 DME AND CHANGED DIST FROM 7.70 TO 7.52. - REPLACED FAF WITH ROWAK AND WAKKS OM DECOM.
3. MAP: CHANGED LOC FROM "5.35 NM AFTER WAKKS OM/INT/I-IZR 5.18 DME/RADAR OR AT I-IZR 0.17 DME" TO "5.53 NM AFTER ROWAK INT/I-IZR 5.37 DME OR AT I-IZR 0.17 DME". - REPLACED FAF WITH ROWAK AND WAKKS OM DECOM.
4. MA INSTRUCTIONS: CHANGED ALTITUDE FROM 3000 TO 3200 AND ADDED "CONTINUE CLIMB-IN-HOLD TO 3200". - NEW EVAL REQUIRES C-I-H WITH OBST THAT RAISES THE ALT.
5. ALTERNATE MA INSTRUCTIONS: CHANGED TRAGO INT DME VALUE FROM 46.88 TO 46.89. - AIRNAV DATA HAS CHANGED.
6. PROFILE: LINE 2- ADDED "MAX 5300". LINE 3- CHANGED FAF FROM WAKKS TO ROWAK AND DIST FAF TO MAP/THLD FROM 5.35 TO 5.53. LINE 5- CHANGED DIST TO THLD FROM OM FROM "OM: 5.35" TO "FAF: 5.53". LINE 6- ADDED ROWAK INT/I-IZR 5.37 DME 2600 AND REMOVED OM: 2566. - IAW 8260.19I 8-6-7, REPLACED FAF WITH ROWAK AND WAKKS OM DECOM.
7. EQUIPMENT REQUIREMENTS NOTES: ADD ADF REQUIRED. - IAW 8260.19I 8-6-8.
8. NOTES: REMOVED ADF REQUIRED AND REMOVED INOP ALS NOTE FOR CIBUS MINS. - IAW 8260.19I 8-6-9 AND IAW 8260.3D 3-3-2.
9. ADDITIONAL FLIGHT DATA: CHANGED TRAGO INT DME VALUE FROM 46.88 TO 46.89, CHANGED FAS OBST DESCRIPTION FROM OL ON BLDG TO BUILDING AND ADDED (48-030233), CHANGED 1098 TOWER FAS OBST COORDS FROM 292953N/0982500W TO 292942N/0982455W, REMOVED \*LOC ONLY, AND CHANGED VDP VALUES FROM 0.90 DME/1.06 NM TO 0.96 DME/1.12 NM. - IAW 8260.19I 8-6-10, AIRNAV DATA CHANGED, AND NEW FAF/EVAL COMPLETED.
10. CIRCLING MINS: CHANGED CAT B FROM 1400/591 TO 1360/551. - IAW 8260.3D 3-3-2, VEGETATION HEIGHT LOWERED FROM 100 TO 55, AND NEW EVAL YIELDED NEW OBST.
11. S-LOC 31L CIBUS MINS: CHANGED ALL CATS FROM 1200/410 TO 1220/430. - NEW EVAL YIELDED NEW OBST.
12. UPDATED SIDESTEP 31R CATS C/D VISIBILITY FROM 1 5/8 SM TO CAT C 1 1/2 SM, CAT D 2 SM. - IAW 8260.3D 3-3-2.

**COORDINATED WITH:**

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

*Digitally signed by*

**FLIGHT CHECKED BY**

CRAIG LARSON

**JOHN BORDY**

Oct 12, 2021

**OFFICE**

FPO

**DATE**

10/07/2021

**DEVELOPED BY**

JOHN BORDY (ANDRE TUCKER)

*Digitally signed by*

**JOHN BORDY**

Oct 12, 2021

**OFFICE**

AJV-A422

**DATE**

07/28/2021

**APPROVED BY**

MARLON ROBINSON

*Digitally signed by*

**JOHN BORDY**

Oct 12, 2021

**OFFICE**

AJV-A420

**DATE**

**TITLE**  
MANAGER

