

# RADIO FIX AND HOLDING DATA RECORD

NAME: CUGRR

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 292348.30N/0981752.54W

TYPE: WP, DME

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

## FIX MAKE-UP FACILITIES:

| FAC | NAME        | IDENT | TYPE    | CLASS | MAG<br>BRG | TRUE<br>BRG | DME   | DIST FROM FAC<br>NM | FAC<br>FEET | MRA  | MAA  |
|-----|-------------|-------|---------|-------|------------|-------------|-------|---------------------|-------------|------|------|
| 1   | SAN ANTONIO | I-IZR | LOC/DME |       | 127.61     | 131.61      | 11.59 | 13.38               |             | 3900 | 5300 |

HOLDING:

HOLDING TYPE OF ACTION:

## FIX USE:

| USE TYPE | USE TITLE            | FAC | PAT | AIRPORT IDENT | CITY        | STATE   |
|----------|----------------------|-----|-----|---------------|-------------|---------|
| IAP      | ILS OR LOC RWY 31L   | 1   |     | SAT           | SAN ANTONIO | TX (US) |
| IAP      | RNAV (GPS) Y RWY 31L |     |     | SAT           | SAN ANTONIO | TX (US) |
| IAP      | RNAV (RNP) Z RWY 31L |     |     | SAT           | SAN ANTONIO | TX (US) |

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: TODD DAMRON

APPROVED BY:

DATE: 01/25/2024

OFFICE: AJV-A423

NAME: MICHAEL GARRITY

SIGNATURE:

# RADIO FIX AND HOLDING DATA RECORD

NAME: DEFIX

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 292847.17N/0982416.24W

TYPE: WP, DME

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

## FIX MAKE-UP FACILITIES:

| FAC | NAME        | IDENT | TYPE    | CLASS | MAG<br>BRG | TRUE<br>BRG | DME  | DIST FROM FAC<br>NM | FAC<br>FEET | MRA  | MAA  |
|-----|-------------|-------|---------|-------|------------|-------------|------|---------------------|-------------|------|------|
| 1   | SAN ANTONIO | I-IZR | LOC/DME |       | 127.61     | 131.61      | 4.11 | 5.91                | 35885       | 2200 | 5300 |

HOLDING:

HOLDING TYPE OF ACTION:

## FIX USE:

| USE TYPE | USE TITLE            | FAC | PAT | AIRPORT IDENT | CITY        | STATE   |
|----------|----------------------|-----|-----|---------------|-------------|---------|
| IAP      | ILS OR LOC RWY 31L   | 1   |     | SAT           | SAN ANTONIO | TX (US) |
| IAP      | RNAV (GPS) Y RWY 31L |     |     | SAT           | SAN ANTONIO | TX (US) |
| IAP      | RNAV (RNP) Z RWY 31L |     |     | SAT           | SAN ANTONIO | TX (US) |

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A421

NAME: CHRISTOPHER MENDENHALL

APPROVED BY:

DATE: 10/05/2023

OFFICE: AJV-A421

NAME: JASON KRETSCHMER

SIGNATURE:

# RADIO FIX AND HOLDING DATA RECORD

NAME: HASDO

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 294036.69N/0983931.18W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

HOLDING:

HOLDING TYPE OF ACTION: MODIFY

## FIX USE:

### USE TYPE

### USE TITLE

### FAC

### PAT

### AIRPORT IDENT

### CITY

### STATE

IAP

ILS OR LOC RWY 31L

SAT

SAN ANTONIO

TX (US)

IAP

RNAV (GPS) Y RWY 31L

SAT

SAN ANTONIO

TX (US)

IAP

RNAV (RNP) Z RWY 31L

SAT

SAN ANTONIO

TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 5

DATE OF REVISION: 01/25/2024

## REASON FOR REVISION:

1. TYPE - REMOVED INT AND DME.
2. FIX MAKE-UP FACILITIES - REMOVED ALL FACILITIES.
3. HOLDING PATTERNS - REMOVED ALL HOLDING PATTERNS AND ALL ASSOCIATIONS.
4. REMARKS - REMOVED ALL REMARKS.
5. FIX USE IAP - REMOVED ALL REFERENCE TO RWY 13R AT KSAT.
6. FIX USE IAP - ADDED RNAV (GPS) Y RWY 31L AND ILS OR LOC RWY 31L AT KSAT.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: RAYMOND JOHNSON

APPROVED BY:

DATE: 10/05/2023

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

# RADIO FIX AND HOLDING DATA RECORD

NAME: REUBE

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 294517.74N/0984535.67W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: MODIFY

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

## PATTERNS:

| PAT | DIR | IDENT | TYPE | RAD/CRS/BRG | CRS<br>INBOUND | TURN<br>(L OR R) | LEG LENGTH<br>TIME DME | HOLDING<br>MIN | ALTITUDES<br>MAX | TEMPLATES<br>MIN | MAX |
|-----|-----|-------|------|-------------|----------------|------------------|------------------------|----------------|------------------|------------------|-----|
| 1   | NW  |       | WP   | 296.77      | 116.77         | R                | 4                      | 4200           | 6000             | 5                | 6   |

## CONTROLLING OBSTRUCTIONS:

| PAT | AIRSPEED | OBSTRUCTION       | COORDINATES            | ELEVATION | ACCURACY CODE |
|-----|----------|-------------------|------------------------|-----------|---------------|
| 1   | 200      | TOWER (48-005697) | 295027.00N/0984933.00W | 3048      | 5E            |

## HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

## REMARKS:

ATC REQUEST EN ROUTE LOW CHARTING.  
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

## FIX USE:

| USE TYPE | USE TITLE            | FAC | PAT | AIRPORT IDENT | CITY        | STATE   |
|----------|----------------------|-----|-----|---------------|-------------|---------|
| IAP      | ILS OR LOC RWY 31L   |     | 1   | SAT           | SAN ANTONIO | TX (US) |
| IAP      | RNAV (GPS) Y RWY 31L |     | 1   | SAT           | SAN ANTONIO | TX (US) |
| IAP      | RNAV (RNP) Z RWY 31L |     | 1   | SAT           | SAN ANTONIO | TX (US) |
| IAP      | RNAV (GPS) RWY 16    |     |     | SKF           | SAN ANTONIO | TX (US) |

REQUIRED CHARTING: IAP, EN ROUTE LOW, CONTROLLER LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 10

DATE OF REVISION: 08/07/2025

## REASON FOR REVISION:

REMOVED INT AND DME FROM FIX TYPE.  
REMOVED FAC 1 CSI VORTAC, FAC 2 STV VORTAC, FAC 3 SAT VORTAC AND FAC 4 I-ANT LOC/DME FROM FIX MAKE-UP FACILITIES AND ASSOCIATED ESV AND NOTES.  
REMOVED "ILS DME COORDINATES: 293129.09N/0982749.96W" FROM REMARKS.  
REMOVED STAR CENTERPOINT FOR KSAT, KSKF, KSSF AND KRND AIRPORTS IN FIX USE.  
REMOVED STAR FROM REQUIRED CHARTING.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A432

NAME: SILVIA YOUNG

APPROVED BY:

DATE: 07/03/2025

OFFICE: AJV-A432

NAME: JOSEPH ZEDER

SIGNATURE:

# RADIO FIX AND HOLDING DATA RECORD

NAME: SLOW

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 292608.28N/0982052.13W

TYPE: WP, 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   | SAN ANTONIO | I-IZR | LOC/DME |       | 127.61  | 131.61   | 8.09 | 9.88             |      | 2700 | 5300 |

HOLDING:

HOLDING TYPE OF ACTION: ESTABLISH

## PATTERNS:

| PAT | DIR | IDENT | TYPE | RAD/CRS/BRG | CRS INBOUND | TURN (L OR R) | LEG LENGTH TIME DME | HOLDING ALTITUDES MIN MAX | TEMPLATES MIN MAX |
|-----|-----|-------|------|-------------|-------------|---------------|---------------------|---------------------------|-------------------|
| 1   | SE  |       | WP   | 127.61      | 307.61      | R             | 5                   | 4000 7000                 | 5 9               |

## CONTROLLING OBSTRUCTIONS:

| PAT | AIRSPEED | OBSTRUCTION       | COORDINATES            | ELEVATION | ACCURACY CODE |
|-----|----------|-------------------|------------------------|-----------|---------------|
| 1   | 200      | TOWER (48-007712) | 291739.00N/0981532.00W | 2043      | 5D            |

## HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN.

## REMARKS:

DME COORDINATES: 293129.09N/0982749.96  
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

## FIX USE:

| USE TYPE | USE TITLE            | FAC | PAT | AIRPORT IDENT | CITY        | STATE   |
|----------|----------------------|-----|-----|---------------|-------------|---------|
| IAP      | ILS OR LOC RWY 31L   | 1   |     | SAT           | SAN ANTONIO | TX (US) |
| IAP      | RNAV (GPS) Y RWY 31L |     |     | SAT           | SAN ANTONIO | TX (US) |
| IAP      | RNAV (RNP) Z RWY 31L |     |     | SAT           | SAN ANTONIO | TX (US) |
| STAR     | CRVZA (RNAV)         |     | 1   | SAT           | SAN ANTONIO | TX (US) |
| STAR     | DNKIN (RNAV)         |     | 1   | SAT           | SAN ANTONIO | TX (US) |
| STAR     | POPPA (RNAV)         |     | 1   | SAT           | SAN ANTONIO | TX (US) |
| STAR     | QERVO (RNAV)         |     | 1   | SAT           | SAN ANTONIO | TX (US) |

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

## REASON FOR REVISION:

8/16/2023: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 04/17/2023.  
1. FIX MAKE-UP: UPDATED MAA FROM 4500 TO 5200.

8/29/2023: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 04/17/2023.  
1. FIX MAKE-UP: UPDATED MAA FROM 5200 TO 5300.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: PATRICK COMBS

APPROVED BY:

DATE: 01/25/2024

OFFICE: AJV-A423

NAME: MICHAEL GARRITY

SIGNATURE:

# RADIO FIX AND HOLDING DATA RECORD

NAME: TRNKS

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 292236.79N/0982426.77W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

## FIX USE:

### USE TYPE

IAP

IAP

STAR

STAR

### USE TITLE

ILS OR LOC RWY 31L

RNAV (GPS) Y RWY 31L

DNKIN (RNAV)

POPPO (RNAV)

### FAC

### PAT

### AIRPORT IDENT

SAT

SAT

SAT

SAT

### CITY

SAN ANTONIO

SAN ANTONIO

SAN ANTONIO

SAN ANTONIO

### STATE

TX (US)

TX (US)

TX (US)

TX (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: WILLIAM MELTON

APPROVED BY:

DATE: 08/10/2023

OFFICE: AJV-A420

NAME: MARLON ROBINSON

SIGNATURE:

# RADIO FIX AND HOLDING DATA RECORD

NAME: TRSMO

STATE: TX

COUNTRY: US

ICAO REGION CODE: K4

LATITUDE/LONGITUDE: 292939.48N/0981717.38W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

HOLDING:

HOLDING TYPE OF ACTION:

FIX USE:

USE TYPE

IAP

IAP

USE TITLE

ILS OR LOC RWY 31L

RNAV (GPS) Y RWY 31L

FAC

PAT

AIRPORT IDENT

SAT

SAT

CITY

SAN ANTONIO

SAN ANTONIO

STATE

TX (US)

TX (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 01/25/2024

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A421

NAME: CHRISTOPHER MENDENHALL

APPROVED BY:

DATE: 10/05/2023

OFFICE: AJV-A421

NAME: JASON KRETSCHMER

SIGNATURE: