

**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> KANE | <u>PROCEDURE NAME</u> RNAV (GPS) RWY 27 | <u>ORIGINAL/AMENDMENT</u> 1 | <u>CITY</u> MINNEAPOLIS | <u>STATE</u> MN | | |
| <u>AIRPORT ELEVATION</u> 912 | <u>TDZE</u> 910 | <u>SUPERSEDED</u> RNAV (GPS) RWY 27 | <u>ORIGINAL/AMENDMENT</u> ORIG-E | <u>DATED</u> 11/05/2020 | <u>MAG VAR</u> 2E | <u>EPOCH YEAR</u> 2000 |
| <u>FACILITY</u> RNAV | <u>COORDINATES OF FACILITIES</u> | <u>ACTUAL EFFECTIVE DATE</u> 8 SEPTEMBER 2022 | <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> |
|-----------------------|-----------------|-----------------------|-----------------|-----------------|--------------|------------|---------------|-----------------|-----------------|
| STILS | IAF | JUDAL | NOPT | TF | FB | 1.00 | 270.87 | 7.95 | 3100 |
| JUDAL | IF/IAF | BOKYA | | TF | FB | 1.00 | 268.96 | 10.52 | 2600 |
| BOKYA | FAF | KOGGE/2.58 NM TO RW27 | | TF | FB | 0.30 | 268.80 | 2.57 | |
| KOGGE/2.58 NM TO RW27 | | RW27 | MAP | TF | FO | 0.30 | 268.80 | 2.58 | |
| RW27 | MAP | 1110 MSL | | CA | | | 268.80 | | |
| 1110 MSL | | GEP VORTAC | | DF | FO | 1.00 | | | 2700 |

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW27

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 2700 DIRECT GEP VORTAC AND HOLD, CONTINUE CLIMB-IN-HOLD TO 2700.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF

(IAF)

2. HOLD E JUDAL, RT, 268.96 INBOUND, 3100 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 268.80FAF: BOKYA

DIST FAF TO MAP: 5.16DIST FAF TO THLD: 5.16

4. MIN ALT: JUDAL 3100, BOKYA 2600, KOGGE/2.58 NM TO RW27 1780

5. DIST TO THLD FROM OM:MM:IM:150 HAT:200 HAT: 0.48GS ANT:

6. MIN GP INCPT: 2600GP ALT AT PFAF : BOKYA 2600OM:MM:IM:

7. GP ANGLE: 3.0034:1: IS CLEAR20:1: IS CLEARTCH: 48.7

8. MSA FROM: RW27 3500

PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16°C OR ABOVE 54°C.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT STILS ON V78 EASTBOUND.
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE CRYSTAL ALTIMETER SETTING: INCREASE LPV DA TO 1131 FEET; INCREASE LNAV/VNAV DA TO 1361 FEET AND ALL VISIBILITIES 1/8 SM, INCREASE ALL MDA 40 FEET AND VISIBILITY CAT C/D 1/4 SM, AND CIRCLING VISIBILITY CAT D ¼ SM.
CHART NOTE: BARO-VNAV AND VDP NA WHEN USING CRYSTAL ALTIMETER SETTING.
CHART NOTE: FOR INOPERATIVE ALS WHEN USING CRYSTAL ALTIMETER SETTING, INCREASE LNAV CAT C/D VISIBILITY TO 1 3/8 SM.

ADDITIONAL FLIGHT DATA:

HOLD W, RT, 085.00 INBOUND.
CHART FAS OBST: 1082 TANK (27-001565) 450827N/0931028W.
CHART VDP AT 1.19 NM TO RW27.
WAAS CHANNEL # 78300
REFERENCE PATH ID: W27A
CHART CIRCLING ICON.
LTP HAE: 249.7 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 |
| LPV DA | 1110 | 1/2 | 200 | 1110 | 1/2 | 200 | 1110 | 1/2 | 200 | 1110 | 1/2 | 200 | | | |
| LNAV/VNAV DA | 1340 | 3/4 | 430 | 1340 | 3/4 | 430 | 1340 | 3/4 | 430 | 1340 | 3/4 | 430 | | | |
| LNAV MDA | 1340 | 1/2 | 430 | 1340 | 1/2 | 430 | 1340 | 3/4 | 430 | 1340 | 3/4 | 430 | | | |
| CIRCLING | 1400 | 1 | 488 | 1400 | 1 | 488 | 1420 | 1 1/2 | 508 | 1580 | 2 | 668 | | | |

CHANGES - REASONS

1. REMOVED BLAYN IAF SEGMENT - PER ATC REQUEST.
2. ADDED HILPT AT IF JUDAL AND CHANGED JUDAL TO IF/IAF - PER ATC REQUEST.
3. UPDATED PBN REQUIREMENT NOTE FROM RNP APCH TO RNP APCH - GPS - IAW 8260.19I, 8-6-8 B.
4. FAS DATA: CRC REMAINDER CHANGED FROM "E07DCA4E" TO "E1948E00" AND FPAP LAT/LON CHANGED FROM "450841.8060N/0931408.4050W" TO "450841.8340N/0931408.4045W"- IAW 8260.19I, 4-6-6 AND 8260.58B 3-1-5.
5. FAS DATA: VAL CHANGED FROM 50 TO 35 - IAW 8260.19I, APPENDIX K. 4. X.
6. PRIMARY MISSED APPROACH: REMOVED MISSED APPROACH FIX OCIBA AND ADDED "CONTINUE CLIMB IN HOLD TO 2700" - PER ATC REQUEST AND IAW 8260.3E.
7. FINAL APPROACH COURSE FROM BOKYA INBOUND, CHANGED FROM 269.79 TO 268.80 - FAF AND FINAL SDF MOVED PER CRITERIA.
8. DISTANCE FROM JUDAL TO BOKYA CHANGED FROM 10.60 TO 10.52 - MOVED FIX PER CRITERIA AND FINAL CALC.
9. DISTANCE FROM BOKYA TO KOGGE CHANGED FROM 2.48 TO 2.57 AND DISTANCE BETWEEN KOGGE AND RW27 CHANGED FROM 2.60 TO 2.58 - MOVED FIX PER CRITERIA AND FINAL CALC.
10. PROFILE LINE 2 CHANGED FROM "PROFILE STARTS AT JUDAL" TO HOLD E OF JUDAL, RT, 269.96 INBOUND, 3100 FT IN LIEU OF PT (IAF) MAX 6000 - PER ATC REQUEST.
11. PROFILE LINE 4, MIN ALT: REMOVED "*" - NOT REQUIRED PER CRITERIA.
12. PROFILE LINE 3: CHANGED DISTANCE FAF TO MAP FROM 5.08 TO 5.16 AND DISTANCE FAF TO THLD FROM 5.08 TO 5.16 - FAF AND SDF MOVED PER CRITERIA.
13. PROFILE LINE5 CHANGED "250 HAT: 0.64" TO "200 HAT: 0.48" - FAF AND SDF MOVED PER CRITERIA NEW.
14. LPV MINS ALL CATS CHANGED FROM 1160/250 DA/HAT TO 1110/200 DA/HAT, LNAV/VNAV ALL CATS CHANGED FROM 1371/461 DA/HAT TO 1340/430 DA/HAT AND VISIBILITY FROM 1 SM TO 3/4 SM AND LNAV CATS D FROM 1 SM TO 3/4 SM - UPDATED CONTROLLING OBS/CURRENT SURVEY.
15. CIRCLING MINS: CHANGED CAT C MDA/HAA FROM 1460 TO 1420 - AC CHANGE ON OBS.
16. FAS OBS: ADDED (27-001565) - OAS CODE.
17. ADDED "CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE CRYSTAL ALTIMETER SETTING: INCREASE LPV DA TO 1131 FEET; INCREASE LNAV/VNAV DA TO 1361 FEET AND ALL VISIBILITIES 1/8 SM, INCREASE ALL MDA 40 FEET AND VISIBILITY CAT C/D 1/4 SM, AND CIRCLING VISIBILITY CAT D 1/4 SM", "CHART NOTE: BARO-VNAV AND VDP NA WHEN USING CRYSTAL ALTIMETER SETTING", AND "CHART NOTE: FOR INOPERATIVE ALS WHEN USING CRYSTAL ALTIMETER SETTING, INCREASE LNAV CAT C/D VISIBILITY TO 1 3/8 SM" - IAW 8260.19I.

COORDINATED WITH:A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ **OTHER:** ZMP, MSP APP CON, ANE ATCT, AMGR**FLIGHT CHECKED BY**

SCOTT WIEBE

OFFICE

FPO

DATE

08/02/2022

*Digitally signed by***ALLAN WILL**

Aug 01, 2022

DEVELOPED BY

DEAN GRACEY

*Digitally signed by***DEAN GRACEY**

Jun 07, 2022

OFFICE

AJV-A423

DATE

05/19/2022

APPROVED BY

MARLON ROBINSON

OFFICE

AJV-A420

DATE*Digitally signed by***ALLAN WILL**

Aug 01, 2022

TITLE
MANAGERQUALITY
25
CHECKED

FAS DATA BLOCK INFORMATION

| <u>DATA FIELD</u> | <u>DATA</u> |
|------------------------------------------|---------------|
| OPERATION TYPE | 0 |
| SBAS SERVICE PROVIDER IDENTIFIER | 0 |
| AIRPORT IDENTIFIER | KANE |
| RUNWAY | RW27 |
| APPROACH PERFORMANCE DESIGNATOR | 0 |
| ROUTE INDICATOR | |
| REFERENCE PATH DATA SELECTOR | 0 |
| REFERENCE PATH IDENTIFIER (APPROACH ID) | W27A |
| LTP/FTP LATITUDE | 450840.7370N |
| LTP/FTP LONGITUDE | 0931202.5270W |
| LTP/FTP ELLIPSOIDAL HEIGHT | +02497 |
| FPAP LATITUDE | 450841.8340N |
| FPAP LONGITUDE | 0931408.4045W |
| THRESHOLD CROSSING HEIGHT (TCH) | 00048.7 |
| TCH UNITS SELECTOR (METERS OR FEET USED) | F |
| GLIDEPATH ANGLE (GPA) | 03.00 |
| COURSE WIDTH AT THRESHOLD | 106.75 |
| LENGTH OFFSET | 1224 |
| HORIZONTAL ALERT LIMIT (HAL) | 40.0 |
| VERTICAL ALERT LIMIT (VAL) | 35.0 |
| CRC REMAINDER | E1948E00 |

ADDITIONAL PATH POINT RECORD INFORMATION

| | |
|-------------------------|--------|
| ICAO CODE | K3 |
| LTP ORTHOMETRIC HEIGHT | +02770 |
| FPAP ORTHOMETRIC HEIGHT | +02770 |

