

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> STC	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 13	<u>ORIGINAL/AMENDMENT</u> 2	<u>CITY</u> ST CLOUD	<u>STATE</u> MN
<u>AIRPORT ELEVATION</u> 1031	<u>TDZE</u> 1031	<u>SUPERSEDED</u> RNAV (GPS) RWY 13	<u>ORIGINAL/AMENDMENT</u> 1B	<u>DATED</u> 08/10/2023
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 21 MARCH 2024	<u>REQUIRED EFFECTIVE DATE</u> 03/21/2024	<u>MAG VAR</u> 3E
				<u>EPOCH YEAR</u> 1995
				<u>CANCEL/SUSPEND</u>

TERMINAL ROUTES

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
GOLLF		YOGUN		TF	FB	1.00	266.30	19.88	3300
YOGUN	IAF	WELOK	NOPT	TF	FB	1.00	222.92	5.00	3000
OKEYA	IAF	WELOK	NOPT	TF	FB	1.00	042.80	5.00	3000
WELOK	IF/IAF	OSACA		TF	FB	1.00	132.86	6.02	2800
OSACA	FAF	TUYUB/2.51 NM TO RW13		TF	FB	0.30	132.93	2.89	
TUYUB/2.51 NM TO RW13		RW13	MAP	TF	FO	0.30	132.93	2.51	
RW13	MAP	1231 MSL		CA			132.93		
1231 MSL		ZUXAL		DF	FO	1.00			3000

MISSED APPROACH

MAP:
LPV: DA
LNAV/VNAV: DA
LNAV: RW13

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT ZUXAL AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF

(IAF)
2. HOLD NW WELOK, RT, 132.86 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 6000.

FAC: 132.93

FAF: OSACA

DIST FAF TO MAP: 5.40

DIST FAF TO THLD: 5.40
3. MIN ALT: WELOK 3000, OSACA 2800, TUYUB/2.51 NM TO RW13 1880

MM: MM:

IM: IM:
4. DIST TO THLD FROM OM:

150 HAT:

200 HAT: 0.48

GS ANT:
5. MIN GP INCPT: 2800

GP ALT AT PFAF: OSACA 2800

OM:

MM:

IM:
6. GP ANGLE: 3.00

34:1: IS CLEAR

20:1: IS CLEAR

TCH: 48.7
7. MSA FROM: RW13 3500

PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: BARO-VNAV AND VDP NA WHEN USING LITTLE FALLS ALTIMETER SETTING.

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -21°C OR ABOVE 54°C.

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT GOLLF ON T383 SOUTHBOUND.

CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE LITTLE FALLS ALTIMETER SETTING, INCREASE LPV DA TO 1307 FEET; INCREASE LNAV/VNAV DA TO 1516 FEET AND ALL VISIBILITIES 1/4 SM; INCREASE ALL MDAS 80 FEET AND LNAV VISIBILITY CAT C AND D 1/4 SM, AND CIRCLING VISIBILITY CAT C AND D 1/4 SM.

CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV/VNAV VISIBILITY ALL CATS AND LNAV CAT C AND D VISIBILITY TO 1 1/8 SM.

CHART NOTE: WHEN LOCAL ALTIMETER NOT RECIEVED AND ALS INOPERATIVE, INCREASE LPV VISIBILITY ALL CATS TO 7/8 SM, LNAV/VNAV VISIBILITY ALL CATS AND LNAV CAT C AND D TO 1 3/8 SM.

CHART SPEED ICON IN PLANVIEW AT YOGUN: MAX 210 KIAS.

CHART SPEED ICON IN PLANVIEW AT OKEYA: MAX 210 KIAS.

ADDITIONAL FLIGHT DATA:

HOLD SE, LT, 321.00 INBOUND.

CHART FAS OBST: 1183 TREE 453418N/0940457W.

CHART VDP AT 1.13 NM TO RW13.

WAAS CHANNEL # 82013

REFERENCE PATH ID: W13A

LTP HAE: 286.8 M

MINIMUMS:**TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT****ALTERNATE:** NA ☐ STANDARD - CAT D 900-2 3/4, NA WHEN LOCAL WEATHER NOT AVAILABLE.

<u>CATEGORY:</u>	<u>A</u>			<u>B</u>			<u>C</u>			<u>D</u>			<u>E</u>		
<u>FINAL TYPE</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>	<u>DA/MDA</u>	<u>VIS</u>	<u>HAT/HAA</u>
LPV DA	1231	1/2	200	1231	1/2	200	1231	1/2	200	1231	1/2	200			
LNAV/VNAV DA	1440	3/4	409	1440	3/4	409	1440	3/4	409	1440	3/4	409			
LNAV MDA	1440	1/2	409	1440	1/2	409	1440	3/4	409	1440	3/4	409			
CIRCLING	1500	1	469	1500	1	469	1620	1 1/2	589	1860	2 3/4	829			

CHANGES - REASONS

1. TERMINAL ROUTES: REMOVED "DWN VORTAC TO OKEYA (FB) 005.10/133.05 3000" - DWN VOR MON.
2. TERMINAL ROUTES: UPDATED WELOK IF/IAF OSACA DISTANCE FROM "6.10" TO "6.02" - PFAF LOCATION ADJUSTED FOR 3.00 VDA.
3. TERMINAL ROUTES: ADDED LEGS "OSACA" TO "TUYUB/2.51 NM TO RW13" AND "TF FB 0.30 132.93 2.89" - IAW 8260.19 8-6-4.
4. TERMINAL ROUTES: ADDED LEGS "TUYUB/2.51 NM TO RW13" TO "RW13" AND "MAP TF FO 0.30 132.93 2.51" - IAW 8260.19 8-6-4.
5. TERMINAL ROUTES: ADDED LEGS "RW13" TO "1231 MSL" AND "CA 132.93" - IAW 8260.19 8-6-4.
6. TERMINAL ROUTES: ADDED LEGS "1231 MSL" TO "ZUXAL" AND "DF FO 1.00 3000" - IAW 8260.19 8-6-4.
7. PROFILE LINE 2: UPDATED "HOLD NW WELOK, RT, 132.86 INBOUND, 3000 FT. IN LIEU OF PT (IAF)" TO "HOLD NW WELOK, RT, 132.85 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 6000" - IAW 8260.19 8-6-7B.
8. PROFILE LINE 3: UPDATED DISTANCE FAF TO MAP AND FAF TO THLD FROM "5.32" TO "5.40" - PFAF LOCATION ADJUSTED FOR 3.00 VDA.
9. PROFILE LINE 5: ADDED DISTANCE TO THLD FROM 200 HAT: 0.48 – IAW 8260.19I 8-6-7 E. (3).
10. PROFILE LINE 7: ADDED "20:1 IS CLEAR" – NO 20:1 PENETRATIONS AND IAW 8260.19I 8-6-7 G. (3).
11. NOTES: UPDATED "CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17C OR ABOVE 47C" TO "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -21°C OR ABOVE 54°C" - DERIVED FROM 5-YEAR HISTORY (2017-2022).
12. NOTES: DELETED "PROCEDURE NA FOR ARRIVALS AT DWN VORTAC VIA V171 SOUTHEAST BOUND" - DWN VOR MON.
13. NOTES: UPDATED "WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE LITTLE FALLS ALTIMETER SETTING: INCREASE LPV DA TO 1307 FEET, LNAV/VNAV DA TO 1531 FEET AND VISIBILITY LNAV/VNAV 1/4 SM ALL CATS; INCREASE ALL MDAS 80 FEET AND VISIBILITY CIRCLING CAT C AND D 1/4 SM." TO "WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE LITTLE FALLS ALTIMETER SETTING, INCREASE LPV DA TO 1307 FEET; INCREASE LNAV/VNAV DA TO 1516 FEET AND ALL VISIBILITIES 1/4 SM; INCREASE ALL MDAS 80 FEET AND LNAV VISIBILITY CAT C AND D 1/4 SM, AND CIRCLING VISIBILITY CAT C AND D 1/4 SM" - UPDATED EVALUATION.
14. NOTES: UPDATED "FOR INOPERATIVE MALSR, INCREASE LNAV CAT D VISIBILITY 1/4 MILE" TO "FOR INOPERATIVE ALS, INCREASE LNAV/VNAV VISIBILITY ALL CATS AND LNAV CAT C AND D VISIBILITY TO 1 1/8 SM." - IAW 8260.19I 8-6-11 O(3)(D).
15. NOTES: ADDED "WHEN LOCAL ALTIMETER NOT RECIEVED AND ALS INOPERATIVE, INCREASE LPV VISIBILITY ALL CATS TO 7/8 SM, LNAV/VNAV VISIBILITY ALL CATS AND LNAV CAT C AND D TO 1 3/8 SM" - IAW 8260.3 TABLE 3-3-1.
16. NOTES: ADDED "CHART SPEED ICON IN PLANVIEW AT YOGUN: MAX 210 KIAS" AND "CHART SPEED ICON IN PLANVIEW AT OKEYA: MAX 210 KIAS" – PER FPT TO MEET LEG LENGTH REQUIREMENTS AND AVOID MOVEMENT OF FIXES.
17. NOTES: ADDED "CHART IN PLANVIEW AT GOLLF: PROCEDURE NA FOR ARRIVALS AT GOLLF ON T383 SOUTHBOUND" - 8260.58B 1-2-5 A(3).
18. ADDITIONAL FLIGHT DATA: UPDATED "CHART FAS OBST: 1175 TRMSN TWR 45341 3N/0940545W AND 1156 TRMSN TWR 453413N/0940458W" TO "1183 AAO 453418N/0940457W" - IAW 8260.19I 8-6-10(D).
19. ADDITIONAL FLIGHT DATA: REMOVED "DISTANCE TO THLD FROM 200 HAT: 0.48 NM" - PLACED ON PROFILE LINE 5.
20. MINIMUMS: LOWERED LNAV/VNAV ALL CATS DA/HAT FROM "1455/424" TO "1440/409" AND VISIBILITY FROM "1" SM TO "3/4" SM – IAW 8260.58C 3-3-5 AND NEW VISIBILITY EVALUATION AND IAW 8260.3 3-3-1.
21. MINIMUMS: LOWERED LNAV CAT D VISIBILITY FROM "1" SM TO "3/4" SM – IAW 8260.3 TABLE 3-3-1.
22. CRC REMAINDER CHANGED FROM "3235CFBF" TO "9C335CA5" - LTP/FTP ELLIPSOIDAL HEIGHT CHANGED FROM "+02869" TO "+02868" AND FPAP LAT/LONG UPDATED FROM "453223.4000N/0940259.8100W" TO "453210.0975N/0940241.5445W" AND LTP LONG CHANGED FROM "0940409.6120W" TO "0940409.6110W" AND COURSE WIDTH AT THLD CHANGED FROM "101.75" TO "106.75".

COORDINATED WITH:

A4A☒ALPA☒AOPA☒APA☐HAI☐NBAA☒OTHER:ZMP, AMGR

FLIGHT CHECKED BY

PENDING

Digitally signed by
DAVID DANNER

Jan 04, 2024

Digitally signed by

DAVID DANNER

Jan 04, 2024

OFFICE

AJV-A421

DATE

09/20/2023

DEVELOPED BY

DAVID DANNER (MATTHEW W.TOWNSEND)

Digitally signed by

DAVID DANNER

Jan 04, 2024

OFFICE

AJV-A421

DATE

03/21/2024

TITLE

MANAGER

APPROVED BY

DAVID DANNER



AIRPORT ID
STC

PROCEDURE NAME
RNAV (GPS) RWY 13

ORIGINAL/AMENDMENT
2

CITY
ST CLOUD

STATE
MN

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KSTC
RUNWAY	RW13
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W13A
LTP/FTP LATITUDE	453314.1775N
LTP/FTP LONGITUDE	0940409.6110W
LTP/FTP ELLIPSOIDAL HEIGHT	+02868
FPAP LATITUDE	453210.0975N
FPAP LONGITUDE	0940241.5445W
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	0464
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0

CRC REMAINDER	9C335CA5
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ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+03141
FPAP ORTHOMETRIC HEIGHT	+03141

