

**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.

AIRPORT FERGUS FALLS MUNI-EINAR MICKELSON FLD	AIRPORT ID KFFM	PROCEDURE NAME RNAV (GPS) RWY 31	ORIGINAL/AMENDMENT ORIG-A	CITY FERGUS FALLS	STATE MN
AIRPORT ELEVATION 1183	TDZE 1182	SUPERSEDED RNAV (GPS) RWY 31	ORIGINAL/AMENDMENT ORIG	DATED 08/27/2009	MAG VAR 5E
FACILITY RNAV	COORDINATES OF FACILITIES	ACTUAL EFFECTIVE DATE 15 AUGUST 2019	REQUIRED EFFECTIVE DATE ROUTINE	CANCEL/SUSPEND	EPOCH YEAR 1995

TAA THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 19-15.

FROM	FIX TYPE	TO	FIX TYPE	ALTITUDE
1. 218/30 CW 038/30	NOPT	218/4 CW 038/4		3300
2. 218/4 CW 038/4		IGAKE	IF/IAF	2900
3. 038/30 CW 128/30		AVAXE	IAF	2900
4. 128/30 CW 218/30		CIRTI	IAF	3600

TERMINAL ROUTES

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
AVAXE	IAF	IGAKE	NOPT	TF	FB	1.00	038.30	5.00	2900
CIRTI	IAF	IGAKE	NOPT	TF	FB	1.00	218.42	5.00	2900
IGAKE	IF/IAF	FAPOS		TF	FB	1.00	308.36	6.09	2900
FAPOS	FAF	RW31	MAP	TF	FO	0.30	308.28	5.18	
RW31	MAP	1382 MSL		CA			308.28		
1382 MSL		GOGNY		DF	FB	1.00			
GOGNY		PANIC		TF	FO	1.00	342.67	8.90	3000



AIRPORT

FERGUS FALLS MUNI-EINAR MICKELSON
FLD

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PROCEDURE NAME

RNAV (GPS) RWY 31

ORIGINAL/AMENDMENT

ORIG-A

CITY

FERGUS FALLS

STATE

MN

MISSED APPROACH

MAP:


LPV: DA
LNAV/VNAV: DA
LNAV: RW31

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT GOGNY AND ON TRACK 342.67 TO PANIC AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF (IAF)			
2.	HOLD SE IGAKE, RT, 308.36 INBOUND, 2900 FT. IN LIEU OF PT (IAF), MAX 6000.						
3. FAC:	308.28	FAF: FAPOS	DIST FAF TO MAP: 5.18	DIST FAF TO THLD: 5.18			
4. MIN ALT:	IGAKE 2900, FAPOS 2900						
5. DIST TO THLD FROM OM:	MM:	IM:	150 HAT:	200 HAT: 0.48	GS ANT:		
6. MIN GP INCPT: 2900	GP ALT AT FAF : FAPOS 2900		OM:		MM:	IM:	
7. GP ANGLE: 3.00	34:1: IS CLEAR	20:1: IS CLEAR	TCH: 52.2				
8. MSA FROM:							

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17°C OR ABOVE 54°C.
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO 1 SM AND LNAV CAT D VISIBILITY TO 1 3/8 SM.

ADDITIONAL FLIGHT DATA:

CHART VDP AT 1.29 NM TO RW31*
*LNAV ONLY
WAAS CHANNEL #42614
REFERENCE PATH ID: W31A
CHART FAS OBST: 1411 TRANSMISSION LINE 461508N/0960440W.
HOLD SE, RT, 300.75 INBOUND
LTP HAE: 331.5 M



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	1382	1/2	200	1382	1/2	200	1382	1/2	200	1382	1/2	200				
LNAV/VNAV DA	1545	3/4	363	1545	3/4	363	1545	3/4	363	1545	3/4	363				
LNAV MDA	1640	1/2	458	1640	1/2	458	1640	7/8	458	1640	1	458				
CIRCLING	1640	1	457	1740	1	557	1740	1 1/2	557	1880	2 1/4	697				

CHANGES - REASONS

1. TERMINAL ROUTES: INTERMEDIATE RNP UPDATED FROM 0.50 TO 1.00. - IAW 8260.19H PARA 4-6-10 F.
2. TERMINAL ROUTES: MISSED APPROACH CA LEG ADDED. - 8260.58A 3-5-2.
3. TERMINAL ROUTES: MISSED APPROACH GOGNY TO PANIC DISTANCE 8.90 NM ADDED. - IAW 8260.19H.
4. LINE 2: HOLD-IN-LIEU MAX ALTITUDE 6000 ADDED. - IAW 8260.19H PARA 8-6-7 B(2).
5. LINE 7: 20:1 IS CLEAR ADDED. - NO 20:1 PENETRATIONS PRESENT.
6. MISSED APPROACH INSTRUCTIONS CHANGED "VIA" TO "ON" TRACK. - VIA NO LONGER USED.
7. ADDITIONAL FLIGHT DATA: CHART FAS OBST UPDATED FROM 1251 TREE 461609N/0960801W TO 1411 TRANSMISSION LINE 461508N/0960440W. - NEW LNAV FINAL CONTROLLING OBSTACLE.
8. ADDITIONAL FLIGHT DATA: CHART VDP AT 1.29 NM TO RW31 ADDED. - NO 20:1 PENETRATIONS PRESENT.
9. CHART NOTE: "INOPERATIVE TABLE DOES NOT APPLY TO LNAV CAT D" REMOVED. - NEW INOPERATIVE TABLE USED.
10. CHART NOTE: DME/DME RNP-0.3 NA REMOVED. PBN REQUIREMENTS NOTE: RNP APCH ADDED. - IAW 8260.19H.
11. CHART PROFILE NOTE: "VGS1 AND RNAV GLIDEPATH NOT COINCIDENT" REMOVED. - UPDATED AIRNAV DATA.
12. CHART NOTE: "BARO-VNAV NA WHEN USING WHEATON ALTIMETER SETTING" REMOVED. - ALL REFERENCES TO SECONDARY ALTIMETER REMOVED.
13. CHART NOTE: "WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE WHEATON ALTIMETER SETTING AND INCREASE ALL DA 102 FEET AND ALL MDA 120 FEET, LNAV/VNAV ALL CATS AND CIRCLING CATS C AND D VISIBILITY 1/2 MILE AND LNAV CAT C 1/4 MILE" REMOVED. - MOVED TO 8260-9 PART C REMARKS IAW 8260.19H 8-6-9 F(4).
14. CHART NOTE: "FOR INOPERATIVE MALSR WHEN USING WHEATON ALTIMETER SETTING, INCREASE LPV ALL CATS VISIBILITY TO 1/2 MILE" REMOVED. - ALL REFERENCES TO SECONDARY ALTIMETER HAVE BEEN REMOVED.
15. NA WHEN LOCAL WEATHER NOT AVAILABLE REMOVED. - ALL REFERENCES TO SECONDARY ALTIMETER HAVE BEEN REMOVED.
16. CHART PROFILE NOTE: "FOR INOPERATIVE ALS, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO 1 SM AND LNAV CAT D VISIBILITY TO 1 3/8 SM" ADDED - NEW INOPERATIVE TABLE USED.
17. CHART NOTE: "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17C OR ABOVE 54C" ADDED. - IAW 8260.19H 8-7-1 C(10).
18. LNAV MDA INCREASED FROM 1520/338 TO 1640/458; CAT C VISIBILITY INCREASED FROM 1/2 SM TO 7/8 SM. - NEW LNAV CONTROLLING OBSTACLE; REMOVE NOTAM 8/1989.
19. FAS DATA: FPAP LATITUDE/LONGITUDE UPDATED FROM 461721.4400N/0960944.1500W TO 461744.3115N/0961019.2850W. - NEW FPAP LOCATION.
20. FAS DATA: COURSE WIDTH AT THRESHOLD UPDATED FROM 102.75 TO 106.75; LENGTH OFFSET UPDATED FROM 0 TO 1032. - 8260.58A.
21. FAS DATA: CRC REMAINDER UPDATED FROM 6DCE20C5 TO C31E076D. - NEW FPAP LATITUDE AND LONGITUDE AND COURSE WIDTH.

6/10/2019: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON: 04/24/2019:

1. CHANGED IN PROFILE #6: "GP ALT AT FAF: FAPOS" TO "GP ALT AT FAF: FAPOS 2900"



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FERGUS FALLS MUNI-EINAR MICKELSON
FLD

AIRPORT ID

KFFM

PROCEDURE NAME

RNAV (GPS) RWY 31

ORIGINAL/AMENDMENT

ORIG-A

CITY

FERGUS FALLS

STATE

MN

COORDINATED WITH:

A4A ALPA AOPA APA HAI NBAA OTHER: ZMP ARTCC, APT MGR

FLIGHT CHECKED BY

SCOTT WEIBE

Digitally signed by

DONALD H LANIER

OFFICE

DATE

04/19/19

Jun 12, 2019

DEVELOPED BY

WARDELL HENNING (BARBARA GORMAN)

Digitally signed by

DONALD H LANIER

OFFICE

AJV-A432

DATE

02/19/2019

APPROVED BY

PATRICK MULQUEEN

Digitally signed by

DONALD H LANIER

Jun 12, 2019

OFFICE

A43

DATE

TITLE

MANAGER

Jun 12, 2019



AIRPORTFERGUS FALLS MUNI-EINAR MICKELSON
FLDAIRPORT ID

KFFM

PROCEDURE NAME

RNAV (GPS) RWY 31

ORIGINAL/AMENDMENT

ORIG-A

CITY

FERGUS FALLS

STATE

MN

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KFFM
RUNWAY	RW31
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W31A
LTP/FTP LATITUDE	461643.3280N
LTP/FTP LONGITUDE	0960845.6430W
LTP/FTP ELLIPSOIDAL HEIGHT	+03315
FPAP LATITUDE	461744.3115N
FPAP LONGITUDE	0961019.2850W
THRESHOLD CROSSING HEIGHT (TCH)	00052.2
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1032
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0
CRC REMAINDER	C31E076D

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+03583
FPAP ORTHOMETRIC HEIGHT	+03583

