

US DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

**RNAV (GPS) - STANDARD
INSTRUMENT APPROACH PROCEDURE
FAR PART 97.33**

Bearings, headings, courses, 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 in feet RVR.

TERMINAL ROUTES				MISSED APPROACH
FROM	TO	COURSE AND DISTANCE	ALTITUDE	
GUERN (IAF)	PICRA (NOPT) (FB)	246.24 / 14.98	3000	LNAV: RW31 CLIMB TO 3000 DIRECT BAXKO AND HOLD. ADDITIONAL FLIGHT DATA: HOLD NW, RT, 128.90 INBOUND. CHART FAS OBST: 1260 TOWER 414116N/0924334W IMOGE TO RW31: 3.04/40.
NASAL (IAF)	PICRA (NOPT) (FB)	033.99 / 7.52	3000	
PICRA (IF/IAF)	IMOGE (FB)	309.16 / 6.32	2600	

- PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
- HOLD SE PICRA, RT, 309.16 INBOUND, 3000 FT. IN LIEU OF PT (IAF)
- FAC: 309.09 FAF: IMOGE DIST FAF TO MAP: 4.81 THLD: 4.81
- MIN. ALT: PICRA 3000, IMOGE 2600
- DIST TO THLD FROM OM: MM: IM: 150 HAT: 100 HAT: GS ANT:
- MIN GS INCPT: GS ALT AT: OM: MM: IM:
- GS ANGLE: TCH: 34:1 IS NOT CLEAR
- MSA FROM: RW31 2900

MAG VAR: 2E EPOCH YEAR: 2000

MINIMUMS																
TAKEOFF:	STANDARD	X	SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A	STANDARD		
CATEGORY	A			B			C			D			E			
	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	
LNAV MDA	1560	1	552	1560	1	552	1560	1 1/2	552							
CIRCLING	1620	1	612	1620	1	612	1620	1 3/4	612							

NOTES:
 CHART NOTE: DME/DME RNP-0.3 NA.
 CHART NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA.
 CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT NASAL VIA V6-8 WESTBOUND.
 CHART PROFILE NOTE: VGS1 AND DESCENT ANGLES NOT COINCIDENT.
 SEE 8260-10

⊗ NA WHEN LOCAL WEATHER NOT AVAILABLE.

CITY AND STATE GRINNELL, IA	ELEVATION: 1008 TDZE: 1008 AIRPORT NAME: GRINNELL REGIONAL	FACILITY IDENTIFIER: RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 31, AMDT 1 JUN 5 2008	SUP: AMDT: ORIG DATED 02/16/2006
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NOTES CONT.

CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE NEWTON ALTIMETER SETTING AND INCREASE ALL MDAS 40 FEET.

CITY AND STATE
GRINNELL, IA

ELEVATION: 1008 TDZE: 1008
AIRPORT NAME:
GRINNELL REGIONAL

FACILITY
IDENTIFIER:
RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:
RNAV (GPS) RWY 31, AMDT 1
JUN 5 2008

SUP:
AMDT: ORIG
DATED: 02/16/2006

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ARINC FLIGHT INSPECTION SUMMARY - VERSION 424-18

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE
	GUERN	GUERN	010	IAF	IF		FB				
	GUERN	PICRA	020		TF		FB	1.0	246.2(248T)	015.0	03000
	NASAL	NASAL	010	IAF	IF		FB				
	NASAL	PICRA	020		TF		FB	1.0	034.0(036T)	007.5	03000
	PICRA	PICRA	010		HF	R	FB		309.2(311T)	004.0	03000
		PICRA	010	FACF	IF		FB				03000
		IMOG	020	FAF	TF		FB	0.5	309.2(311T)	006.3	02600
		RW31	030	MAP	TF		FO	0.3	309.1(311T)	004.8	01048

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE
	BAXKO	040		DF		FO	1.0			03000
	BAXKO	050		HM	R	FO	2.0	128.9(131T)	004.0	03000

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	BAXKO	N415015.51	W0925557.03	N4150.259	W09255.951
	GUERN	N414035.42	W0921402.23	N4140.590	W09214.037
	IMOG	N413910.38	W0923855.29	N4139.173	W09238.922
	NASAL	N412855.64	W0923827.56	N4128.927	W09238.459
	PICRA	N413500.72	W0923234.29	N4135.012	W09232.572
	RW31	N414220.06	W0924345.66	N4142.334	W09243.761

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW31	01008	40

CITY AND STATE GRINNELL, IA	ELEVATION: 1008 TDZE: 1008 AIRPORT NAME: GRINNELL REGIONAL	FACILITY IDENTIFIER: RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) RWY 31, AMDT 1 JUN 5 2008	SUP:
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- MIN. ALT: PICRA 3000, IMOGI 2600
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- MIN GS INCPT: GS ALT AT: OM: MM: IM:
- GS ANGLE: TCH: 34:1 IS NOT CLEAR
- MSA FROM: RW31 2800

MAG VAR: 2E EPOCH YEAR: 2000

MINIMUMS

TAKEOFF:	STANDARD	X	SEE FAA FORM 8260-15A FOR THIS AIRPORT	ALTERNATE: NA	STANDARD @										
CATEGORY =====>	A			B			C			D			E		
	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA
LNAV MDA	1560	1	552	1560	1	552	1560	1 1/2	552	NA					
CIRCLING	1620	1	612	1620	1	612	1620	1 3/4	612	NA					

NOTES:
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CITY AND STATE GRINNELL, IA	ELEVATION: 1008 TDZE: 1008 AIRPORT NAME: GRINNELL REGIONAL	FACILITY IDENTIFIER: RNAV	PROCEDURE NO./AMD NO./EFFECTIVE DATE: RNAV (GPS) RWY 31, AMDT 1	SUP: AMD: ORIG DATED 02/16/2006
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QUALITY CHECKED

ALL AFFECTED PROCEDURES REVIEWED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE ROUTINE
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COORDINATED WITH:						
ATA <input type="checkbox"/>	AAT <input type="checkbox"/>	ALPA <input checked="" type="checkbox"/>	APA <input type="checkbox"/>	AOPA <input checked="" type="checkbox"/>	NBAA <input checked="" type="checkbox"/>	OTHER (specify) <u>ZAU, AMGR</u>

FLIGHT CHECKED BY		
NAME: <i>Robert F Staake</i>	FIFO AVN	DATE: 2/29/08

DEVELOPED BY		
NAME: <i>JON DENTON</i>	FIFO AVN-120	DATE: 01/23/2008

APPROVED BY		
NAME: <i>JOHN BICKERSTAFF</i> <i>John Bickerstaff</i> MANAGER	FIFO AVN-120	DATE: MAR 05 2008

CHANGES:

1. DELETED HISOK, REMOVED FEEDER FROM GUERN TO HISOK.
2. TERMINAL ROUTE NASAL INT TO PICRA WP CHANGED FROM 033.02/6.81 TO 033.99/7.52.
3. TERMINAL ROUTE PICRA WP TO IMOGE WP CHANGED FROM 312.80/6.29 TO 309.16/6.32.
4. HOLD IN LIEU OF PT INBOUND COURSE CHANGED FROM 312.80 TO 309.16.
5. FAC CHANGED TO 309.09.
6. 34:1 SLOPE IS CHANGED FROM CLEAR TO NOT CLEAR.
7. MISSED APPROACH INSTRUCTIONS CHANGED.
8. REMOVED NEWTON ALTIMETER SETTING MINIMUMS.
9. CHANGED BACKUP ALTIMETER NOTE.
10. VDP REMOVED.
11. ADDED HELICOPTER NA NOTE.
12. ADDED ALTERNATE MINS.

REASONS:

1. CREATED INITIAL FROM ENROUTE AIRWAY.
- 2, 3, 4, PICRA RELOCATED TO EXTENDED FINAL.
5. PFAF ESTABLISHED WITH RNP FORMULA, AND ALIGNED WITH RUNWAY ALIGNMENT..
6. NO SURVEY, 50 FT TREES LOCATED IN FINAL BASED ON MAP STUDY.
7. NEW MISSED APPROACH HOLDING WAYPOINT ESTABLISHED OVER INTERMEDIATE FIX FOR RNAV PROCEDURE TO OPPOSITE RUNWAY.
8. BACKUP ALTIMETER MINIMUMS PUBLISHED BY NOTE.
9. AWOS-3 FREQUENCY PUBLISHED ON AIRFIELD, CTAF NOTE, NOT REQUIRED.
10. 20:1 PENETRATION OF PSUEDO TREES CAUSE REMOVAL OF VDP, NO SURVEY.
11. PENETRATIONS TO VISIBILITY SURFACES.
12. AWOS-3 ON SERVICE A.

QUALITY
7 2

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				AMDT: ORIG
				DATED: 02/16/2006

QUALITY
CHECKED

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				AMDT: ORIG
				DATED: 02/16/2006

CHECKED

NOTES / EXPLANATIONS FROM OPPOSITE SIDE OF FORM:

NO ADDITIONAL AIRSPACE REQUIRED.

NO TAA PER ZAU ARTCC.

RASS (PRESSURE PATTERNS SAME):

KGGI 1008 MSL

KTNU 952 MSL

BACKUP ALTIMETER SOURCE MINIMUMS PUBLISHED BY NOTE, ALL MDAS RAISED 40 FT.

GUERN: 4140.590N/09214.037W

NASAL: 4128.927N/09238.459W

PICRA: 4135.012N/09232.572W

IMOGE: 4139.173N/09238.922W

DISPLACED RWY31: 4142.334N/09243.761W

BAXKO: 4150.259N/09255.951W

6. 200 FT TOWER IDENTIFIED DURING FLIGHT CHECK SPECTION.

PART C - REMARKS CONT.

KGGI AWOS-3 AND KTNU AWOS-3 IS ON SERVICE-A.

PART B:

BLOCK 2: KGGI AWOS-3 ON AIRPORT, HRS OPTN: 24

BLOCK 3: KGGI/KTNU, 13.02 NM, 24 HRS, 37.79 FT

VGSI DATA: 3.30/34

LPV AND LNAV/VNAV MINIMUMS NOT PUBLISHED, NO SURVEY.

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:		2. WEATHER SERVICE		3. ALTIMETER SETTING		
ZAU ARTCC FOD FSS		NWS	OTHER: AWOS-3		SOURCE:	
		FAA			DISTANCE:	
		A/C			HOURS REMOTE OPERATION:	
SATISFACTORY ON:		LOCATION: KGGI		ADJUSTMENT:		
<input checked="" type="checkbox"/> VHF <input checked="" type="checkbox"/> UHF <input type="checkbox"/> HF		HRS OPTN:				
4. MONITOR STATUS	PRIMARY			SECONDARY		
	NAVAID:			NAVAID:		
	MONITOR POINT:			MONITOR POINT:		
	HRS	CAT 1		HRS	CAT 1	
	OPTN:	CAT 3		OPTN:	CAT 3	
5. AIRSPACE	FLOOR OF CONTROLLED AIRSPACE UNDER FAC				CONTROL AREA	
	CONTROL ZONE:		HOURS OPTN	TRANSITION AREA		
6. APPROACH & RUNWAY LIGHTING	ALS		<input checked="" type="checkbox"/>	REIL 31, 13 (PCL)		
	(S) SALS			TDZ		
	MALS			C/LINE		
	HIRL			OTHER (SPECIFY)		
	<input checked="" type="checkbox"/>	MIRL 31, 13 (PCL)		<input checked="" type="checkbox"/>	PAPI-2L 31, 13 (PCL)	
7. RUNWAY MARKINGS			8. RUNWAY VISUAL RANGE			
ALL WEATHER			APPROACH			
INSTRUMENT NPI-F 31, 13			ROLL OUT			
9. GLIDE SLOPE	G S ANGLE:		ELEV RWY THRESHOLD:			
	DISTANCE FROM RWY:		ELEV GS ANTENNA:			
			THRESHOLD CROSSING HEIGHT:			
10. FINAL APPROACH COURSE AIMING		<input checked="" type="checkbox"/>	RUNWAY THRESHOLD		FT. FROM THRESHOLD	
		<input checked="" type="checkbox"/>	ON CENTERLINE		FT. FROM CENTERLINE	
11. WAIVERS OF STANDARDS		NUMBER OF WAIVERS ON FILE		DATES OF APPROVAL		
		NONE				

PART C - REMARKS:
VDP NOT ESTABLISHED - OBSTACLES PENETRATE 20:1.
THRESHOLD DISPLACED 200 FEET.
PARA 251, 20:1 PENETRATION.
PARA 251, 34:1 PENETRATION.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

TERPS, VOLUME 1, PARAGRAPH 251 PENETRATIONS:
20:1
1059 TREE (50 FT TREE) 414214.96N/0924331.33W (3.28)
34:1
1059 TREE (50 FT TREE) 414210.65N/0924331.24W (14.44)
CONT.

PART D - PREPARED BY: JON DENTON DATE: 01/23/2008

TITLE: AERONAUTICAL INFORMATION SPECIALIST OFFICE: AVN-120

QUALITY CHECKED