

US DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION		RNAV - STANDARD INSTRUMENT APPROACH PROCEDURE TITLE 14 CFR 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		LPV: DA LNAV/VNAV: DA LNAV: RW21  CLIMB TO 8000 DIRECT DCEEE AND ON TRACK 263.14 TO TUCKB AND HOLD, CONTINUE CLIMB-IN-HOLD TO 8000.  ADDITIONAL FLIGHT DATA: HOLD SW, LT, 061.21 INBOUND. CHART FAS OBST: 3739 POLE 472922N/1112137W DISTANCE TO THLD FROM 200 HAT: 0.47 NM. CHART VDP AT 0.83 NM TO RW21* *LNAV ONLY. WAAS CHANNEL # 90221 REFERENCE PATH ID: W21A CHART CIRCLING ICON. LTP HAE: 1101.2 M						
KAVMY		SOTOW (TF) (FO) (RNP 2.00)		348.54 / 15.87				6500								
TUCKB		SOTOW (TF) (FO) (RNP 2.00)		045.00 / 24.68				6200								
PSHKN (IAF)		SOTOW (NOPT) (TF) (FB) (RNP 1.00)		211.21 / 5.01				6200								
SOTOW (IF/IAF)		DEELM (TF) (FB) (RNP 1.00)		212.17 / 5.68				5300								
DEELM (FAF)		WAGAN/2.10 NM TO RW21 (TF) (FB) (RNP 0.30)		212.09 / 2.87												
(SEE FORM 8260-10)																
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF)										MAG VAR: 13E EPOCH YEAR: 2020						
2. HOLD NE SOTOW, LT, 212.17 INBOUND, 6200 FT. IN LIEU OF PT (IAF)																
3. FAC: 212.09 FAF: DEELM DIST FAF TO MAP: 4.97 THLD: 4.97																
4. MIN. ALT: SOTOW 6200, DEELM 5300, WAGAN/2.10 NM TO RW21 4380*																
5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____																
6. MIN GS INCPT: 5300 GS ALT AT: DEELM 5300 OM: _____ MM: _____ IM: _____																
7. GS ANGLE: 3.00 TCH: 59.0 34:1 IS CLEAR																
8. MSA FROM: RW21 8500																
MINIMUMS																
TAKEOFF: 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	
LPV DA	3869	4000	200	3869	4000	200	3869	4000	200	3869	4000	200				
LNAV/VNAV DA	3927	4500	258	3927	4500	258	3927	4500	258	3927	4500	258				
LNAV MDA	4000	5500	331	4000	5500	331	4000	5000	331	4000	5000	331				
CIRCLING	4120	1	440	4140	1	460	4320	1 3/4	640	4420	2 1/4	740				
NOTES: CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -24C (-11F) OR ABOVE 49C (121F). @ CAT D 800-2 1/4 CHART NOTE: DME/DME RNP-0.3 NA. CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).																
(CONTINUED ON PAGE 2)																
CITY AND STATE GREAT FALLS, MT		ELEVATION: 3680 TDZE: 3669 AIRPORT NAME: GREAT FALLS INTL		FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (GPS) Y RWY 21, ORIG-C						SUP: AMDT: ORIG-B DATED 01/08/2015				



ALL AFFECTED PROCEDURES REVIEWED? <div><input type="checkbox"/> YES</div> <div><input type="checkbox"/> NO</div>		COORDINATES OF FACILITIES		REQUIRED EFFECTIVE DATE	
ROUTINE					
COORDINATED WITH:					
ATA <div><input checked="" type="checkbox"/></div>		AAT <div><input type="checkbox"/></div>		ALPA <div><input checked="" type="checkbox"/></div>	
APA <div><input checked="" type="checkbox"/></div>		AOPA <div><input checked="" type="checkbox"/></div>		NBAA <div><input checked="" type="checkbox"/></div>	
OTHER (specify)		<div><input checked="" type="checkbox"/> ZLC, GTF ATCT, GTF APP CON, AFLD MGR</div>			
FLIGHT CHECKED BY					
NAME:				FIFO	DATE:
DEVELOPED BY					
NAME: <div>Digitally signed by DEANNA M. FIELDS</div> <div>DEANNA M. FIELDS</div> <div>May 15, 2017</div>				FIFO AJV-5432	DATE: 04/09/2017
APPROVED BY					
NAME: <div>PATRICK MULQUEEN</div> <div>MANAGER</div>				FIFO AJV-5430	DATE:
CHANGES:					
<div>1. KAVMY TO SOTOW COURSE CHANGED FROM 345.54 TO 348.54. 2. TUCKB TO SOTOW COURSE CHANGED FROM 042.00 TO 045.00. 3. PSHKN TO SOTOW COURSE CHANGED FROM 208.21 TO 211.21. 4. SOTOW TO DEELM COURSE CHANGED FROM 209.17 TO 212.17. 5. DEELM TO WAGAN/2.10 NM TO RW21 COURSE CHANGED FROM 209.09 TO 212.09. 6. WAGAN/2.10 NM TO RW21 TO RW21 (MAP) (FO) COURSE CHANGED FROM 209.09 TO 212.09. 7. RW21 (MAP) TO 3869 MSL COURSE CHANGED FROM 209.09 TO 212.09. 8. DCEEE TO TUCKB COURSE CHANGED FROM 260.14 TO 263.14. 9. FAC CHANGED FROM 209.09 TO 212.09. 10. MISSED APPROACH - TRACK 260.14 CHANGED TO 263.14. 11. MISSED APPROACH HOLDING INBOUND COURSE 058.21 CHANGED TO 061.21. 12. HOLD-IN-LIEU-OF-PT COURSE INBOUND CHANGED FROM 209.17 TO 212.17. 13. CHART FAS OBST CHANGED FROM 3738 BLDG-TWR 472908N/1112116W TO 3739 POLE 472922N/1112137W. 14. ADDED CHART CIRCLING ICON. (SEE FORM 8260-10)</div>					
REASONS:					
<div>1-12. AIRPORT MAG VAR CHANGED FROM16E/1990 TO 13E/2020. 13. NEW LNAV CONTROLLING OBSTACLE. 14. NEW CIRCLING RADII. 15-17. LARGER CIRCLING RADII AND NEW OBSTACLES. 18. NEW SURVEY.</div>					



**US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION**  
**RNAV - STANDARD**  
**INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.33**

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**TERMINAL ROUTES, (CONT.):**

FROM	TO	COURSE AND DISTANCE	ALTITUDE
WAGAN/2.10 NM TO RW21	RW21 (MAP) (TF) (FO) (RNP 0.30)	212.09 / 2.10	
RW21 (MAP)	3869 MSL (CA)	212.09	
3869 MSL	DCEEE (DF) (FB) (RNP 1.00)		
DCEEE	TUCKB (TF) (FO) (RNP 1.00)	263.14 / 7.23	8000

**NOTES, (CONT.):**

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT TUCKB ON V187 SOUTHWEST BOUND

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT KAVMY ON V187 EASTBOUND

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT PSHKN ON V257 NORTHEAST BOUND

QUALITY  
25  
CHECKED

CITY AND STATE  
GREAT FALLS, MT

ELEVATION: 3680 TDZE: 3669  
 AIRPORT NAME:  
 GREAT FALLS INTL

FACILITY  
IDENTIFIER:  
RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:  
RNAV (GPS) Y RWY 21, ORIG-C

SUP:  
 AMDT: ORIG-B  
 DATED: 01/08/2015

ALL AFFECTED PROCEDURES REVIEWED? <div><input type="checkbox"/> YES</div> <div><input type="checkbox"/> NO</div>		COORDINATES OF FACILITIES		REQUIRED EFFECTIVE DATE	
COORDINATED WITH:					
ATA <div><input type="checkbox"/></div>		AAT <div><input type="checkbox"/></div>	ALPA <div><input type="checkbox"/></div>	APA <div><input type="checkbox"/></div>	AOPA <div><input type="checkbox"/></div>
NBAA <div><input type="checkbox"/></div>		OTHER (specify) <div><input type="checkbox"/></div>			
FLIGHT CHECKED BY					
NAME:				FIFO	DATE:
DEVELOPED BY					
NAME:				FIFO	DATE:
APPROVED BY					
NAME:				FIFO	DATE:
CHANGES: CHANGES CONT. 15. CIRCLING CAT B MDA/HAT CHANGED FROM 4140/460 TO 4140/460. 16. CIRCLING CAT C MDA/HAT CHANGED FROM 4140/460 TO 4320/640. VIS CHANGED FROM 1 1/2 TO 1 3/4. 17. CIRCLING CAT D MDA/HAT CHANGED FROM 4240/560 TO 4420/740. VIS CHANGED FROM 2 TO 2 1/4. 18. LNAV FINAL OBSTACLE CHANGED FROM 3738 BLDG-TWR TO 3739 POLE, NO CHANGE IN MINIMUMS.					
REASONS:					



**RNAV STANDARD INSTRUMENT APPROACH PROCEDURE  
FLIGHT STANDARDS SERVICE - 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.

**FAS DATA BLOCK INFORMATION**

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KGTF
RUNWAY	RW21
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Y
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W21A
LTP/FTP LATITUDE	472922.8935N
LTP/FTP LONGITUDE	1112113.6635W
LTP/FTP ELLIPSOIDAL HEIGHT	+11012
FPAP LATITUDE	472809.6300N
FPAP LONGITUDE	1112301.7800W
THRESHOLD CROSSING HEIGHT (TCH)	00059.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0000
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0
 <u>CRC REMAINDER</u>	 C18166E3

**ADDITIONAL PATH POINT RECORD INFORMATION**

ICAO CODE	K1
LTP ORTHOMETRIC HEIGHT	+11154
FPAP ORTHOMETRIC HEIGHT	+11154

QUALITY  
25  
CHECKED

CITY AND STATE  GREAT FALLS, MT	ELEVATION: 3680 AIRPORT NAME:  GREAT FALLS INTL	TDZE: 3669  RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:  RNAV (GPS) Y RWY 21, ORIG-C	SUP:
				AMDT: ORIG-B
				DATED: 01/08/2015

ALL AFFECTED PROCEDURES REVIEWED?		COORDINATES OF FACILITIES		REQUIRED EFFECTIVE DATE	
<input type="checkbox"/> YES <input type="checkbox"/> NO					
COORDINATED WITH:					
ATA	AAT	ALPA	APA	AOPA	NBAA      OTHER (specify)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> _____
FLIGHT CHECKED BY					
NAME:				FIFO	DATE:
DEVELOPED BY					
NAME:				FIFO	DATE:
APPROVED BY					
NAME:				FIFO	DATE:
CHANGES:					
REASONS:					

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD																			
PART - A OBSTRUCTION DATA																			
1. APP SEGMENT		FROM		TO		OBSTRUCTION		COORDINATES		ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.						
FEEDER		KAVMY		SOTOW		1. AAO		472045.00N/1111330.00W		4472 (4E)	2000		6500						
						2. TERRAIN		472151.00N/1111330.00W		4164 (4200)		AS1500	5700						
FEEDER		TUCKB		SOTOW		3. AAO		472503.00N/1114348.00W		4187 (4E)	2000		6200						
						4. TERRAIN		472942.00N/1113215.00W		3839 (3800)		AS1500	5300						
INITIAL		PSHKN		SOTOW		5. AAO		473742.00N/1111209.00W		3836 (4E)	1000	AT1364	6200						
						6. TERRAIN		473833.00N/1111148.00W		3616 (3600)		AS1500	5100						
INTERMEDIATE		SOTOW (IF/IAF)		DEELM		7. TOWER (30-000449)		473219.00N/1111544.00W		4010 (5E)	500	AC125 AT665	5300						
						8. TERRAIN		473448.00N/1111327.00W		3711 (3700)		AS1500	5200						
FINAL: LPV		DEELM		RW21							ASC		3869/200						
FINAL: LNAV/VNAV		DEELM		RW21							ASC	MA8	3927/258						
FINAL: LNAV		DEELM		WAGAN/2.10 NM TO		9. TOWER (30-000084)		473207.00N/1111706.00W		4117 (3B)	250		4380						
				RW21															
FINAL: LNAV STEPDOWN		WAGAN/2.10 NM TO		RW21		10. POLE (KGTFT000316)		472922.11N/1112136.63W		3739 (1A)	250		4000						
		RW21																	
2. HOLD-IN-LIEU-OF-PT		SOTOW		P-9		11. AAO		473657.00N/1111815.00W		4046 (4E)	1000	AT1154	6200						
						12. TERRAIN		473703.00N/1111812.00W		3846 (3800)		AS1500	5300						
3. MISSED APPROACH		MAP: DA / DA / RW21		TUCKB		13. TWR (30-000307)		472848.25N/1112134.69W		3818 (1A)	ASC		8000						
						14. AAO		472454.00N/1113721.00W		3939 (4E)	1000		5000						
		ELEV: 3689/3766/3900				15. TERRAIN		472634.59N/1112546.27W		3759 (3800)		AS1500	5300						
4. CIRCLING AREA		DISTANCE		HT. ABV. ARPT.															
CATEGORY A		1.3 NM		REQUIRED	350	ACTUAL	440	16. TOWER (30-000307)		472848.25N/1112134.69W		3818 (1A)	300		4120				
CATEGORY B		1.5 NM			450		460	16. TOWER (30-000307)		472848.25N/1112134.69W		3818 (1A)	300	HAA	4140				
CATEGORY C		1.7 NM			450		640	17. WMILL (30-000620)		473021.99N/1112621.03W		4017 (2C)	300		4320				
CATEGORY D		2.3 NM			550		740	18. TOWER (30-000084)		473207.50N/1111705.50W		4117 (3C)	300		4420				
CATEGORY E		4.5 NM			550														
5. MINIMUM SAFE ALTITUDES																			
PRIMARY NAVAID: RW21																			
SECTOR		OBSTRUCTION		BRG/DIST		ELEVATION (MSL)		M S A		SECTOR		OBSTRUCTION		BRG/DIST		ELEVATION (MSL)		M S A	
360-360		AAO		142/26.2		7415 (4E)		8500											
CITY AND STATE				ELEVATION: 3680				FACILITY				PROCEDURE AND AMENDMENT NO:				REGION			
GREAT FALLS, MT				AIRPORT NAME: GREAT FALLS INTL				RNAV				RNAV (GPS) Y RWY 21, ORIG-C				ANM			

PART B - SUPPLEMENTAL DATA										PART C - REMARKS: <b>PRECIPITOUS TERRAIN EVALUATION COMPLETED.</b>  <b>CRITICAL TEMPERATURES:</b> CRITICAL LOW :-24C (-11F) CRITICAL HIGH :+49C (+121F) ACT :-31C APT ISA :+7.71C  <b>CRITICAL TEMPERATURE REMARKS</b> AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2012-2016). CRITICAL LOW TEMPERATURE BASED ON EFFECTIVE GPA. DESCENT RATE (FPM): STANDARD TEMP 1005 HIGH TEMP 1173.  <b>ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.</b> CAT A: 1.36NM CAT B: 1.94NM CAT C: 3.07NM CAT D: 4.02NM  <b>NO ADDITIONAL AIRSPACE REQUIRED.</b>  <b>KGTF ASOS ON WMSCR.</b>  <b>NO SUITABLE BACKUP ALTIMETER AVAILABLE.</b>  <b>LPV: SURFACE 34:1.</b>  <b>LNAV/VNAV: SURFACE 23.63:1.</b>  <b>VGSI DATA: 3.00/TCH 75.</b>  <b>PER ATC: VEGETATION 100 FT USED.</b>																			
1. COMMUNICATIONS WITH:					2. WEATHER SERVICE															3. ALTIMETER SETTING									
GTF APP CON GTF TOWER ZLC ARTCC						N W S		OTHER: <b>ASOS</b>												SOURCE:KGTF									
						F A A														DISTANCE:									
						A / C														HOURS REMOTE OPERATION:									
SATISFACTORY ON:																				LOCATION: <b>KGTF</b>					ADJUSTMENT: <b>0</b>				
4. MONITOR STATUS		PRIMARY NAVAID:																											
		MONITOR POINT:																											
		HRS OPTN:		CAT 1																									
				CAT 3																									
5. APPROACH & RUNWAY LIGHTING		<b>X</b>	<b>ALSF-2 03</b>																										
			<b>(S) SALS</b>																										
			<b>MALS</b>																										
		<b>X</b>	<b>HIRL 03, 17, 21, 35</b>																										
			<b>MIRL</b>																										
		<b>X</b>	<b>REIL 21</b>																										
		<b>X</b>	<b>TDZ 03</b>																										
		<b>X</b>	<b>C/L 03, 21</b>																										
		<b>X</b>	<b>OTHER (SPECIFY)</b> <b>PAPI-4R 21 PAPI-4L 03, 17, 35</b>																										
6. RUNWAY MARKINGS		BASIC																											
		ALL WEATHER <b>PIR-G 03, 21</b>																											
		INSTRUMENT <b>NPI-G 17, 35</b>																											
7. RUNWAY VISUAL RANGE		APPROACH <b>03, 21</b>																											
		MIDFIELD <b>03, 21</b>																											
		ROLL OUT <b>03, 21</b>																											
8. GLIDE PATH		GP ANGLE: <b>3.00</b>						ELEV RWY THRESHOLD: <b>3659.3</b>																					
		DISTANCE FROM RWY:						ELEV GP ANTENNA:																					
								THRESHOLD CROSSING HEIGHT: <b>59.0</b>																					
9. FINAL APPROACH COURSE AIMING				<b>X</b>	RUNWAY THRESHOLD					FT. FROM THRESHOLD																			
				<b>X</b>	ON CENTERLINE					FT. FROM CENTERLINE																			
10. WAIVERS: <b>NONE</b>																													
PART D - PREPARED BY: <b>DEANNA M. FIELDS</b>										DATE: <b>04/09/2017</b>																			
TITLE: <b>AERONAUTICAL INFORMATION SPECIALIST</b>										OFFICE: <b>AJV-5432</b>																			

