

**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</u> GREENVILLE SPARTANBURG INTL	<u>AIRPORT ID</u> KGSP	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 22	<u>ORIGINAL/AMENDMENT</u> 2	<u>CITY</u> GREER	<u>STATE</u> SC
<u>AIRPORT ELEVATION</u> 964	<u>TDZE</u> 964	<u>SUPERSEDED</u> RNAV (GPS) RWY 22	<u>ORIGINAL/AMENDMENT</u> 1	<u>DATED</u> 05/10/2007	<u>MAG VAR</u> 6W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2010

**TAA**

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>ALTITUDE</u>
1. 128/30 CW 238/30	NOPT	128/8 CW 238/8		6700
2. 128/8 CW 238/8		RAYCE	IF/IAF	3000
3. 238/30 CW 308/30	NOPT	RAYCE	IF/IAF	3000
4. 308/30 CW 038/30		IROPY	IAF	3000
5. 038/30 CW 128/30		038/15 CW 128/15		7600
6. 038/15 CW 128/15		NAGRY	IAF	6000

**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>
NAGRY	IAF	RAYCE	NOPT	TF	FB	1.00	128.20	7.00	3000
IROPY	IAF	RAYCE	NOPT	TF	FB	1.00	308.34	7.00	3000
RAYCE	IF/IAF	LYMEN		TF	FB	1.00	218.27	4.43	2300
LYMEN	FAF	RW22	MAP	TF	FO	0.30	218.24	4.00	
RW22	MAP	1164 MSL		CA			218.24		
1164 MSL		OXABY		DF	FO	1.00			3000

QUALITY  
10  
CHECKED

MISSED APPROACH

MAP:  
LPV: DA  
LNAV/VNAV: DA  
LNAV: RW22

MISSED APPROACH INSTRUCTIONS:  
CLIMB TO 3000 DIRECT OXABY AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF (IAF)					
2. HOLD NE RAYCE, LT, 218.27 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 6000.									
3. FAC:	218.24	FAF: LYMEN	DIST FAF TO MAP: 4.00		DIST FAF TO THLD: 4.00				
4. MIN ALT: RAYCE 3000, LYMEN 2300									
5. DIST TO THLD FROM OM:		MM:	IM:	150 HAT:	200 HAT: 0.44	GS ANT:			
6. MIN GP INCPT: 2300		GP ALT AT FAF : LYMEN 2300			OM:		MM:	IM:	
7. GP ANGLE: 3.00		34:1: IS CLEAR	20:1: IS CLEAR		TCH: 61.1				
8. MSA FROM:									

PBN REQUIREMENTS NOTE:

RNP APCH

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -10°C OR ABOVE 54°C.  
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).  
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO RVR 4500.  
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE GREENVILLE DOWNTOWN ALTIMETER SETTING: INCREASE LPV DA TO 1193 FEET; INCREASE LNAV/VNAV DA TO 1267 FEET; INCREASE ALL MDA 40 FEET AND LNAV CAT C/D VISIBILITY TO RVR 4000; INCREASE CIRCLING CAT D VISIBILITY TO 2 1/2 SM.  
CHART NOTE: FOR INOPERATIVE ALS, WHEN USING GREENVILLE DOWNTOWN ALTIMETER SETTING, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO RVR 4500  
CHART NOTE: VDP AND BARO-VNAV NA WHEN USING GREENVILLE DOWNTOWN ALTIMETER SETTING.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.  
CHART VDP AT 1.00 NM TO RW22\*  
\*LNAV ONLY  
WAAS CHANNEL #99602  
REFERENCE PATH ID: W22A  
FAS OBST: 1105 AAO 345706N/0821001W.  
1144 AAO 345715N/0820958W.  
HOLD SW, RT, 038.14 INBOUND  
LTP HAE: 262.3 M



**AIRPORT**

GREENVILLE SPARTANBURG INTL

**AIRPORT ID**

KGSP

**PROCEDURE NAME**

RNAV (GPS) RWY 22

**ORIGINAL/AMENDMENT**

2

**CITY**

GREER

**STATE**

SC

**MINIMUMS:**

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT

**ALTERNATE:** NA ☐ STANDARD - CAT D 800-2 1/4, NA WHEN LOCAL WEATHER NOT AVAILABLE.

<b><u>CATEGORY:</u></b>	<b>A</b>			<b>B</b>			<b>C</b>			<b>D</b>			<b>E</b>		
<b><u>FINAL TYPE</u></b>	<b><u>DA/MDA</u></b>	<b><u>VIS</u></b>	<b><u>HAT/HAA</u></b>	<b><u>DA/MDA</u></b>	<b><u>VIS</u></b>	<b><u>HAT/HAA</u></b>	<b><u>DA/MDA</u></b>	<b><u>VIS</u></b>	<b><u>HAT/HAA</u></b>	<b><u>DA/MDA</u></b>	<b><u>VIS</u></b>	<b><u>HAT/HAA</u></b>	<b><u>DA/MDA</u></b>	<b><u>VIS</u></b>	<b><u>HAT/HAA</u></b>
LPV DA	1164	2400	200	1164	2400	200	1164	2400	200	1164	2400	200			
LNAV/VNAV DA	1238	2400	274	1238	2400	274	1238	2400	274	1238	2400	274			
LNAV MDA	1360	2400	396	1360	2400	396	1360	3500	396	1360	3500	396			
CIRCLING	1440	1	476	1440	1	476	1480	1 1/2	516	1700	2 1/4	736			



**CHANGES - REASONS**

1. CHANGED ALL REFERENCES OF IMUPY TO RAYCE AND ALL REFERENCES OF CEVVY TO LYMEN - ALIGNED RNAV AND ILS WITH CO-LOCATED FIXES.
2. CHANGED STRAIGHT-IN SECTOR 1 FROM "128/30 CW 232/30 (NOPT) TO 128/9 CW 232/9 ALTITUDE 6600" TO "128/30 CW 238/30 (NOPT) TO 128/8 CW 238/8 ALTITUDE 6700" - MOVED RAYCE SW 2.48 NM; SHORTENED STEPDOWN ARC AND MOVED SECTOR RADIAL TO 238 TO ACHIEVE ATC REQUESTED CROSSING ALTITUDE AT RAYCE; LOWERED ALTITUDE DUE TO NEW CONTROLLING OBSTACLE.
3. CHANGED STRAIGHT-IN SECTOR 3 FROM "232/30 CW 308/30 (NOPT) TO IMUPY (IF/IAF) (FB)" TO "238/30 CW 308/30 (NOPT) TO RAYCE (IF/IAF)" - MOVED SECTOR RADIAL TO 238 TO ACHIEVE ATC REQUESTED CROSSING ALTITUDE AT RAYCE.
4. CHANGED STRAIGHT-IN STEP DOWN ARC FROM "128/9 CW 232/9 TO IMUPY (IF/IAF) (FB)" TO "128/8 CW 238/8 TO RAYCE (IF/IAF)" - SHORTENED STEPDOWN ARC AND MOVED SECTOR RADIAL TO 238 TO ACHIEVE ATC REQUESTED CROSSING ALTITUDE AT RAYCE.
5. CHANGED RIGHT BASE OUTER SECTOR ALTITUDE FROM 7000 TO 7600 - NEW CONTROLLING OBSTACLE.
6. CHANGED RIGHT BASE STEPDOWN ARC ALTITUDE FROM 4700 TO 6000 - NEW CONTROLLING OBSTACLE.
7. ADDED LEG TYPES AND RNP VALUES TO TERMINAL ROUTES - IAW 8260.19H 8-6-4.A.(6).
8. CHANGED NAGRY TO RAYCE COURSE AND DISTANCE FROM 128.24/5.00 TO 128.20/7.00 - MOVED NAGRY WSW 3.41 NM AND RAYCE SW 2.48 NM; EXTENDED INITIAL SEGMENT TO MEET MINIMUM LEG LENGTH REQUIREMENTS.
9. CHANGED IROPY TO RAYCE COURSE AND DISTANCE FROM 308.34/5.00 TO 308.34/7.00 - MOVED IROPY S 3.41 NM AND RAYCE SW 2.48 NM; EXTENDED INITIAL SEGMENT TO MEET MINIMUM LEG LENGTH REQUIREMENTS.
10. CHANGED RAYCE TO LYMEN COURSE AND DISTANCE FROM 218.29/6.02 TO 218.27/4.43 AND ALTITUDE FROM 2700 TO 2300 - MOVED RAYCE SW 2.48 NM AND MOVED FAF SW 1.18 NM TO CO-LOCATE WITH ILS PROCEDURE; SHORTENED INTERMEDIATE SEGMENT TO ACHIEVE ATC REQUESTED CROSSING ALTITUDE AT RAYCE.
11. ADDED FINAL SEGMENT AND MISSED CA AND DF LEGS TO TERMINAL ROUTES - IAW 8260.19H 8-6-4.
12. CHANGED H-I-L FROM "HOLD NE IMUPY, RT, 218.29 INBOUND, 3000 FT. IN LIEU OF PT (IAF)" TO "HOLD NE RAYCE, LT, 218.27 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 6000" - ATC REQUESTED LEFT TURN TO AVOID AVL AIRSPACE; INBOUND COURSE CHANGED DUE TO MOVING RAYCE SW 2.48 NM; ADDED MAX ALTITUDE IAW 8260.19H 8-6-7.B.(2).
13. CHANGED FAC FROM 218.25 TO 218.24; CHANGED FAF MIN. ALT AND MIN GS INCPT FROM 2700 TO 2300; CHANGED DIST FAF TO MAP AND DIST FAF TO THLD FROM 5.18 TO 4.00 - MOVED FAF SW 1.18 NM TO CO-LOCATE WITH ILS PROCEDURE.
14. ADDED GP ALT AT FAF: LYMEN 2300" - IAW 8260.19H 8-6-7.F.(1)
15. ADDED "20:1 IS CLEAR" TO LINE 7 - IAW 8260.19H 8-6-7.G.(3)
16. DELETED "FAS OBST: 1002 TREE 345427N/0821225W" - DOCUMENTATION OF PRECISION CONTROLLING OBSTACLE NOT REQUIRED; IAW 8260.19H 8-6-10.C.
17. DELETED "CHART: 1170 TANK 345910N/0821011W" - NO LONGER 7:1 OBSTACLE.
18. CHANGED VDP DISTANCE FROM 1.07 TO 1.00 - NEW MDA AND NEW AIRPORT DATA.
19. DELETED "CHART: ASR" FROM ADDITIONAL FLIGHT DATA - NOTE NO LONGER REQUIRED; RADAR MINS NO LONGER PUBLISHED AT KGSP.
20. CHANGED LNAV/VNAV DA/HAT FROM 1357/403 TO 1238/274; CHANGED VIS FROM 4000 TO 2400- NEW CONTROLLING OBSACLE; IAW VIS CHECK CALCULATOR.
21. CHANGED LNAV CAT C VIS FROM 2400 TO 3500 AND CAT D FROM 5000 TO 3500 - NEW CONTROLLING OBSTACLE; IAW VIS CHECK CALCULATOR.
22. CHANGED CIRCLING CATS A/B MDA/HAA FROM 1420/456 TO 1440/476, CAT C MDA/HAA FROM 1420/456 TO 1480/516, AND CAT D MDA/VIS/HAA FROM 1520/2/736 TO 1700/2 1/4/736 - APPLIED NEW CIRCLING CRITERIA.
23. CHANGED INOP NOTE FROM "FOR INOPERATIVE MALSR, INCREASE LNAV CAT D VISIBILITY TO RVR 6000" TO "FOR INOPERATIVE ALS, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO RVR 4500" - IAW VIS CHECK CALCULATOR.
24. CHANGED BACK-UP ALTIMETER NOTE FROM "IF LOCAL ALTMETER SETTING NOT RECEIVED, USE GREENVILLE DOWNTOWN ALTIMETER SETTING AND INCREASE ALL DAS/MDAS 40 FEET" TO "WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE GREENVILLE DOWNTOWN ALTIMETER SETTING: INCREASE LPV DA TO 1193 FEET; INCREASE LNAV/VNAV DA TO 1267 FEET; INCREASE ALL MDA 40 FEET AND LNAV CAT C/D VISIBILITY TO RVR 4000; INCREASE CIRCLING CAT D VISIBILITY TO 2 1/2." - APPLIED NEW CIRCLING CRITERIA; IAW VIS CHECK CALCULATOR.
25. CHANGED CRITICAL TEMP NOTE FROM "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW - 16C (4F) OR ABOVE 47C (116F)" TO "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -10C OR ABOVE 54C" - UPDATED USING 5 YEAR TEMPERATURE TABLES..
26. DELETED "DME/DME RNP - 0.3 NA" AND ADDED PBN REQUIREMENTS NOTE RNP APCH - 8260.19H 6-6-8.B AND 8260.58A TABLE 1-2-1.
27. CHANGED VGSI NOTE FROM "VGSI AND RNAV GLIDEPATH NOT COINCIDENT" TO VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET})" - 8260.19H 8-6-9.M.(1).
28. CHANGED CRC REMAINDER FROM 5F68B349 TO 21D60204 - NEW AIRPORT DATA.
29. ADDED "CHART CIRCLING ICON" TO ADDITIONAL FLIGHT DATA - APPLIED NEW CIRCLING CRITERIA.
30. LTP/FTP LAT/LONG CHANGED FROM 345430.4440N/0821232.6900W TO 345430.4420N/0821232.6895W - UPDATED AIRPORT SURVEY SINCE LAST PROCEDURE AMENDMENT.
31. FPAP LAT/LONG CHANGED FROM 345258.3900N/0821343.0900W TO 345258.3820N/0821343.0895W - UPDATED AIRPORT SURVEY SINCE LAST PROCEDURE AMENDMENT.



AIRPORT

GREENVILLE SPARTANBURG INTL

AIRPORT ID

KGSP

PROCEDURE NAME

RNAV (GPS) RWY 22

ORIGINAL/AMENDMENT

2

CITY

GREER

STATE

SC

COORDINATED WITH:

A4A ☒

ALPA ☒

AOPA ☒

APA ☒

HAI ☐

NBAA ☒

OTHER: GSP ATCT, GSP APP CON, ZTL, AIRPORT MANAGER

FLIGHT CHECKED BY

STEPHEN F KOCH

*Digitally signed by*

**WARDELL HENNING**

Sep 20, 2019

OFFICE

FICO

DATE

9/6/19

DEVELOPED BY

JACOB MAXFIELD

*Digitally signed by*

**JACOB MAXFIELD**

Jul 29, 2019

OFFICE

AJV-A431

DATE

03/18/2019

APPROVED BY

GEORGE DAVIS

*Digitally signed by*

**WARDELL HENNING**

Sep 20, 2019

OFFICE

AJV-A430

DATE

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KGSP
RUNWAY	RW22
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W22A
LTP/FTP LATITUDE	345430.4420N
LTP/FTP LONGITUDE	0821232.6895W
LTP/FTP ELLIPSOIDAL HEIGHT	+02623
FPAP LATITUDE	345258.3815N
FPAP LONGITUDE	0821343.0895W
THRESHOLD CROSSING HEIGHT (TCH)	00061.1
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
CRC REMAINDER	21D60204

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K7
LTP ORTHOMETRIC HEIGHT	+02937
FPAP ORTHOMETRIC HEIGHT	+02937



FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

AIRPORT	AIRPORT ID	PROCEDURE NAME	AMDT NO.	CITY	STATE	AIRPORT ELEVATION	FACILITY
GREENVILLE SPARTANBURG INTL	KGSP	RNAV (GPS) RWY 22	2	GREER	SC	964	RNAV

PART A: OBSTRUCTION DATA SEGMENTS

STRAIGHT-IN AREA

FROM  
128/30 CW 238/30

TO  
128/8 CW 238/8

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
1.AAO	353000.49N/0821957.89W	4612	50	20	2C	2000					6700
2.TERRAIN	352739.00N/0822127.00W	4187 (4200)								AS1500	5700

COMPUTATIONS

ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:  
SPOT ELEVATION - 7 1/2 MINUTE QUADS USED TO VERIFY TERRAIN ELEVATION.

STRAIGHT-IN AREA

FROM  
128/8 CW 238/8

TO  
RAYCE

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
3.TREE	350818.00N/0821609.00W	1472	250	125	4E	2000				MT-472	3000
4.TERRAIN	350409.00N/0820624.00W	1185 (1200)								AS1500	2700

COMPUTATIONS

ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:



STRAIGHT-IN AREA

FROM

238/30 CW 308/30

TO

RAYCE

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
5.TREE	350248.00N/0821045.00W		1216	250	125	4E	2000				MT-216	3000
6.TERRAIN	350648.00N/0814609.00W		1214 (1200)								AS1500	2700

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

LEFT BASE AREA

FROM

308/30 CW 038/30

TO

IROPY

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
5.TREE	350248.00N/0821045.00W		1216	250	125	4E	2000				MT-216	3000
7.TERRAIN	345342.00N/0821136.00W		1004 (1000)								AS1500	2500

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:





RIGHT BASE AREA

FROM

038/30 CW 128/30

TO

038/15 CW 128/15

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
8.AAO	352427.00N/0824445.00W		5522	164	98	4E	2000					7600
9.TERRAIN	351942.00N/0824403.00W		4134 (4100)								AS1500	5600

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

RIGHT BASE AREA

FROM

038/15 CW 128/15

TO

NAGRY

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
10.AAO	351348.00N/0823218.00W		3905	164	98	4E	2000					6000
11.TERRAIN	350921.00N/0823136.00W		3219 (3200)								AS1500	4700

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

7 1/2 MINUTE QUADS USED TO VERIFY TERRAIN ELEVATION.



INITIAL

FROM  
NAGRY

TO  
RAYCE

RNP	DISTANCE 7.00	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
12.TOWER (45-000914)	350336.00N/0821123.00W		1495	50	20	2C	1000				AT505	3000
13.TERRAIN	350154.00N/0820909.00W		1138 (1100)								AS1500	2600

COMPUTATIONS

ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:

INITIAL

FROM  
IROPY

TO  
RAYCE

RNP	DISTANCE 7.00	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
14.TOWER (45-054085)	345852.39N/0815910.02W		1336	250	50	4D	1000				AT664	3000
15.TERRAIN	350315.00N/0820727.00W		1131 (1100)								AS1500	2600

COMPUTATIONS

ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:



INTERMEDIATE

FROM

RAYCE (IF/IAF)

TO

LYMEN

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
	4.43											
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT	
16.TOWER (45-001009)	345954.00N/0820816.00W	1401	250	50	4D	500				AT399	2300	
13.TERRAIN	350154.00N/0820909.00W	1138 (1100)								AS1000	2100	

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL: LPV

FROM

LYMEN

TO

RW22

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
	4.00		DA	200								
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT	
							ASC				1164	

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



FINAL: LNAV/VNAV

FROM

LYMEN

TO

RW22

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
	4.00		DA		274							
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
17.TOWER (45-064429)	345427.28N/0821201.76W		1077	20	3	1A	161					1238

COMPUTATIONS	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:

FINAL: LNAV

FROM

LYMEN

TO

RW22

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
	4.00		RW22		396							
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
18.AAO	345705.96N/0821001.41W		1105	50	20	2C	250					1360

COMPUTATIONS	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:



HOLD-IN-LIEU OF PT

FROM

RAYCE

TO

P-5

RNP	DISTANCE	PAT P-5	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
16.TOWER (45-001009)	345954.00N/0820816.00W		1401	250	50	4D	1000				AT599	3000
19.TERRAIN	350409.00N/0820624.00W		1184 (1200)								AS1500	2700

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH : LPV

FROM

DA

TO

OXABY

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u> 992					
<u>OBSTRUCTION</u>	<u>COORDINATES</u>		<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
								ASC				3000
20.TOWER (45-000988)	344909.00N/0821749.00W		1256	50	20	2C	1000					2300
21.TERRAIN	345018.00N/0821821.00W		1102 (1100)								AS1500	2600

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



MISSED APPROACH : LNAV/VNAV

FROM

DA

TO

OXABY

RNP	DISTANCE	PAT	MAP	HAT			HMAS 1077					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				3000
20.TOWER (45-000988)	344909.00N/0821749.00W		1256	50	20	2C	1000					2300
21.TERRAIN	345018.00N/0821821.00W		1102 (1100)								AS1500	2600

COMPUTATIONS

ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:

MISSED APPROACH : LNAV

FROM

RW22

TO

OXABY

RNP	DISTANCE	PAT	MAP	HAT			HMAS 1260					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				3000
20.TOWER (45-000988)	344909.00N/0821749.00W		1256	50	20	2C	1000					2300
21.TERRAIN	345018.00N/0821821.00W		1102 (1100)								AS1500	2600

COMPUTATIONS

ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:



CIRCLING

☐ ALL CATS

☒ CAT A

☒ CAT B

☒ CAT C

☒ CAT D

☐ CAT E

☐ NOT AUTHORIZED

OBSTRUCTION	COORDINATES	RADIUS	HAA	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
CATEGORY A											
22.WATER_TOWER (45-064680)	345420.42N/0821344.89W	1.30	476	1121	20	10	1B	300			1440
CATEGORY B											
22.WATER_TOWER (45-064680)	345420.42N/0821344.89W	1.84	476	1121	20	10	1B	300			1440
CATEGORY C											
23.TOWER (45-001708)	345608.00N/0821337.00W	2.89	516	1170	50	20	2C	300			1480
CATEGORY D											
24.AAO	345657.00N/0821530.00W	3.78	736	1382	50	20	2C	300			1700

CIRCLING REMARKS:

CENTER

RADIUS

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

WAIVERS:1  
ORDER 8260.3D 10-1-4 B. (1).; MAXIMUM TCH EXCEEDS 60 FEET.



PART B: SUPPLEMENTAL DATA

**COMMUNICATIONS WITH**  
ZTL ARTCC, GSP APP CON, GSP TOWER, AND FSS

<u>WX SERVICE</u> ASOS	<u>LOCATION</u> KGSP	<u>HRS OPERATION</u> 24	<u>ALTIMETER SOURCE</u> KGSP	<u>DISTANCE</u> 0	<u>SERVICE-A</u> Y	<u>ADJUSTMENTS</u> 0
<u>BACK-UP WX SERVICE</u> ASOS	<u>LOCATION</u> KGMU	<u>HRS OPERATION</u> 24	<u>ALTIMETER SOURCE</u> KGMU	<u>DISTANCE</u> 7.07	<u>SERVICE-A</u> Y	<u>ADJUSTMENTS</u> 29

**WX REMARKS:**  
RASS PRESSURE PATTERNS THE SAME KGSP 964, KGMU 1048 RA = 28.1.

<u>PRIMARY NAVAID</u>	<u>MONITOR POINT</u>	<u>HRS OPERATION</u>	<u>CAT</u>
<u>APPROACH AND RUNWAY LIGHTING SYSTEM</u>		<u>RUNWAY MARKINGS</u>	<u>RUNWAY VISUAL RANGE</u>
RW04 - TDZ, ALSF-2 (PCL), HIRL (PCL), C/LINE, PAPI-4L		PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW22 - MALSR (PCL), HIRL (PCL), C/LINE (PCL), PAPI-4R		PIR-G	APPROACH, MIDPOINT, ROLL OUT

<u>GLIDESLOPE ANGLE</u> 3.00	<u>ELEV RWY THRESHOLD</u> 963.6	<u>TCH</u> 61.1	<u>ELEV GS ANTENNA</u>	<u>DISTANCE FROM RWY</u>	<u>VGSI ANGLE</u> 3.00	<u>TCH</u> 76.3
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<u>FINAL APPROACH COURSE AIMING</u>			
RUNWAY THRESHOLD	<input checked="" type="checkbox"/>	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE
ON CENTERLINE	<input checked="" type="checkbox"/>	FT FROM CENTERLINE	

<u>CRITICAL TEMPERATURES</u>			
<u>CRITICAL LOW</u> -10C	<u>CRITICAL HIGH</u> +54C	<u>ACT</u> -10C	<u>APT ISA</u> +13.09C

**CRITICAL TEMPERATURE REMARKS:**  
AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2014-2018). CRITICAL LOW TEMPERATURE BASED ON ACT. DESCENT RATE (FPM): STANDARD TEMP 968 HIGH TEMP 1277.

**"VISUAL PORTION OF FINAL" PENETRATIONS**

**HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS**

and/or  
**5280-FT "PROCEED VFR" SEGMENT LEVEL SURFACE AREA PENETRATIONS**







PART D: AIRSPACE

DOCKET #

ALL DISTANCES TO 1/100NM; ELEVATION TO NEAREST 100 FEET; COORDINATES TO 1/100 SECOND; DEG TO 1/100 DEGREE

DISTANCE FROM	THLD	TO 1000FT POINT	3.06
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.26
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	212.24
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	980
DISTANCE FROM	THLD	TO 1500FT POINT	7.83
WIDTH OF	INTERMEDIATE	SEGMENT AT 1500FT POINT	4.00
TRUE COURSE OF	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	212.24
HIGH TERRAIN IN	INTERMEDIATE	SEGMENT CONTAINING 1500FT POINT	1138

THRESHOLD  
COORDINATES  
(IF STR-IN)345430.44N/0821232.69W

ARP COORDINATES345344.42N/0821307.89W

RUNWAY APCH END  
AND DIST FURTHEST  
FROM ARPRUNWAY 22 DISTANCE 0.91 NM

FAF  
COORDINATES345754.02N/0820956.82W

FIX NAME  
COORDINATESIAF IROPY: 345754.33N/0815952.06W, IF/IAF RAYCE: 350139.16N/0820704.15W, IAF NAGRY: 350523.56N/0821416.89W

REMARKS  
TAA 30NM RADIUS



PART E: PREPARED BY

<u>NAME</u> JACOB MAXFIELD	<u>OFFICE</u> AJV-A431	<u>DATE</u> 03/18/2019	<u>TITLE</u> AERONAUTICAL INFORMATION SPECIALIST
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