

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>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>	
CHARLOTTE/DOUGLAS INTL	KCLT	RNAV (GPS) Y RWY 18R	2	CHARLOTTE	NC	
<u>AIRPORT ELEVATION</u>	<u>TDZE</u>	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
748	744	RNAV (GPS) Y RWY 18R	1A	10/12/2017	7W	2000
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u>	<u>CANCEL/SUSPEND</u>		
RNAV			ROUTINE			

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>
RUDKY	IAF	NELLA		TF	FB	1.00	182.94	3.15	6000
NELLA		WOVEN		TF	FB	1.00	182.95	3.15	5000
WOVEN	IF	EMERS		TF	FB	1.00	182.95	3.15	4000
EMERS		JHUNT		TF	FB	1.00	182.95	3.15	3000
JHUNT		AUDD		TF	FB	1.00	182.96	1.89	2400
AUDD	FAF	UJAHU/2.80 NM TO RW18R		TF	FB	0.30	182.96	2.23	
UJAHU/2.80 NM TO RW18R		RW18R	MAP	TF	FO	0.30	182.96	2.80	
RW18R	MAP	1200 MSL		CA			182.96		1200
1200 MSL		STULL		DF	FO	1.00			4000

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW18R

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1200 THEN CLIMBING RIGHT TURN TO 4000 DIRECT STULL AND HOLD, CONTINUE CLIMB-IN-HOLD TO 4000.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF	(IAF)
2.	PROFILE STARTS AT RUDKY				
3. FAC:	182.96	FAF: AUUDD	DIST FAF TO MAP: 5.03	DIST FAF TO THLD: 5.03	
4. MIN ALT:	RUDKY 7000, NELLA 6000, WOVEN 5000, EMERS 4000, JHUNT 3000, AUUDD 2400, UJAHU/2.80 NM TO RW18R 1680*				
5. DIST TO THLD FROM OM:	MM:	IM:	150 HAT:	200 HAT: 0.46	GS ANT:
6. MIN GP INCPT: 2400	GP ALT AT FAF : AUUDD 2400		OM:	MM:	IM:
7. GP ANGLE: 3.00	34:1: IS CLEAR	20:1: IS CLEAR	TCH: 55.1		
8. MSA FROM:	RW18R 3800				

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING NA AT NIGHT.
CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED.
CHART NOTE: LNAV PROCEDURE NA DURING SIMULTANEOUS OPERATIONS.
CHART NOTE: USE OF FD OR AP PROVIDING RNAV TRACK GUIDANCE REQUIRED DURING SIMULTANEOUS OPERATIONS.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -11°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: FOR INOPERATIVE ALS, INCREASE LNAV CAT C/D VISIBILITY TO RVR 5500.

ADDITIONAL FLIGHT DATA:

CHART 913 TOWER 351636N/0805821W.
CHART CIRCLING ICON.
CHART VDP AT 1.04 NM TO RW18R*
*LNAV ONLY
WAAS CHANNEL #82415
REFERENCE PATH ID: W18D
CHART FAS OBST: 857 TREE 351322N/0805727W.
HOLD W, RT, 072.00 INBOUND
LTP HAE: 196.1 M



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

ALTERNATE: NA ☐ STANDARD - CAT C 800-2 1/4, CAT D 800-2 1/2

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	944	1800	200	944	1800	200	944	1800	200	944	1800	200			
LNAV/VNAV DA	1018	2400	274	1018	2400	274	1018	2400	274	1018	2400	274			
LNAV MDA	1120	2400	376	1120	2400	376	1120	4000	376	1120	4000	376			
CIRCLING	1380	1	632	1380	1	632	1500	2 1/4	752	1500	2 1/2	752			

CHANGES - REASONS

1. DELETED NOTE: DME/DME RNP-0.3 NA. - NOTE NO LONGER REQUIRED
2. DELETED NOTE: BARO-VNAV NA BELOW -10C(14F) OR ABOVE 54C(130F). ADDED NOTE: BARO-VNAV NA BELOW -11C OR ABOVE 54C. - NEW NOTE FORMAT/NEW 5 YR WX HISTORY.
3. ADDED PBN EQUIPEMENT REQUIREMENT NOTE: RNP APCH. - REQUIRED NOTE
4. ADDED NEW FAF, WUTRA AT 2400 FT MSL. - ATC REQUEST
5. CHANGED FIX JHUNT FROM FAF TO IF STEPDOWN. - ATC REQUEST
6. LOWERED LNAV MDA FROM 1160 TO 1120. - OBSTACLE EVALUATION.
7. UPDATED DIST FAF TO MAP FROM 6.92 TO 5.03. - NEW FAF LOCATION.
8. UPDATED GS ALT FROM 3000 TO 2400 - ATC REQUEST.
9. UPDATED FAC FROM 182.95 TO 182.96 - RWY/ILS ALIGNMENT.
10. UPDATED FAS DATA BLOCK INFORMATION- MATCH AIRNAV DATA/SYSTEM GENERATED.
11. ADDED CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO RVR 4500 - CHART INOP NOTE.
12. ADDED CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV ALL CATS VISIBILITY TO RVR 5500 - CHART INOP NOTE.
13. REMOVED FROM ADDITIONAL FLIGHT DATA, CHART LOC 18C/L - NO LONGER REQUIRED.

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZTL, CLT TRACON, AMGR, CLT ATCT

FLIGHT CHECKED BY

OFFICE

DATE

DEVELOPED BY Digitally signed by
HEIDI SNIDER **HEIDI SNIDER**

OFFICE
AJV-A422

DATE
04/23/2019

APPROVED BY Apr 23, 2019
JULIE MORGAN

OFFICE
AJV-A420

TITLE
MANAGER



FAS DATA BLOCK INFORMATION**DATA FIELD****DATA**

OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KCLT
RUNWAY	RW18R
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Y
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W18D
LTP/FTP LATITUDE	351331.0180N
LTP/FTP LONGITUDE	0805802.7070W
LTP/FTP ELLIPSOIDAL HEIGHT	+01961
FPAP LATITUDE	351201.9990N
FPAP LONGITUDE	0805755.0470W
THRESHOLD CROSSING HEIGHT (TCH)	00055.1
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0008
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0

CRC REMAINDER	B5EDA32F
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ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K7
LTP ORTHOMETRIC HEIGHT	+02268
FPAP ORTHOMETRIC HEIGHT	+02268



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

AIRPORT	AIRPORT ID	PROCEDURE NAME	AMDT NO.	CITY	STATE	AIRPORT ELEVATION	FACILITY
CHARLOTTE/DOUGLAS INTL	KCLT	RNAV (GPS) Y RWY 18R	2	CHARLOTTE	NC	748	RNAV

PART A: OBSTRUCTION DATA SEGMENTS

INITIAL

FROM
RUDKY

TO
NELLA

RNP

DISTANCE
3.15

PAT

MAP

HAT

HMAS

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
1.AAO	353336.00N/0810054.00W	1152	164	98	4E	1000				AT3848	6000
2.TERRAIN	353206.00N/0810133.00W	945 (900)								AS1500	2400

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INITIAL: STEPDOWN

FROM
NELLA

TO
WOVEN

RNP

DISTANCE
3.15

PAT

MAP

HAT

HMAS

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
3.AAO	353036.00N/0810018.00W	1106	164	98	4E	1000				AT2894	5000
4.TERRAIN	352706.00N/0810027.00W	890 (900)								AS1500	2400

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



INTERMEDIATE

FROM
WOVEN

TO
EMERS

<u>RNP</u>	<u>DISTANCE</u> 3.15	<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>
5.AAO	352706.00N/0810127.00W		1090	164	98	4E	500				DG2312 AC98	4000
6.TERRAIN	352339.00N/0810042.00W		854 (900)								AS1500	2400

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: STEPDOWN

FROM
EMERS

TO
JHUNT

<u>RNP</u>	<u>DISTANCE</u> 3.15	<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>
7.AAO	352251.00N/0810036.00W		1073	164	98	4E	500				DG1329 AC98	3000
8.TERRAIN	352251.00N/0810036.00W		873 (900)								AS1500	2400

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: STEPDOWN

FROM
JHUNT

TO
AUDD

RNP	DISTANCE 1.89	PAT	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
9.AAO	352018.00N/0805845.00W		994	164	98	4E	500				AC98 DG808	2400
10.TERRAIN	352018.00N/0805845.00W		794 (800)								AS1500	2300

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: LPV

FROM
AUDD

TO
RW18R

RNP	DISTANCE 5.03	PAT	MAP DA	HAT 200			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				944

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/VNAV

FROM

AUDD

TO

RW18R

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
	5.03		DA		274							
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
11.TREE (37-024999)	351321.60N/0805726.55W		857	20	3	1A	161					1018

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

AUDD

TO

UJAHU/2.80 NM TO RW18R

RNP	DISTANCE	PAT	MAP	HAT			HMAS					
	2.23											
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
12.AAO	351653.22N/0805804.61W		949	50	20	2C	250				DG481	1680

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 STEPDOWN

FROM

UJAHU/2.80 NM TO RW18R

TO

RW18R

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
	2.80		RW18R	376								
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT	
11.TREE (37-024999)	351321.60N/0805726.55W	857	20	3	1A	250					1120	

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

STULL

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
					776							
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT	
							ASC				4000	
13.AAO	350524.00N/0810800.00W	1050	164	98	4E	1000					2100	
14.TERRAIN	351015.00N/0810845.00W	862 (900)								AS1500	2400	

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

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											
15.CONTROL_TOWER (37-117734)	351214.28N/0805635.76W	1.30	632	1068	20	3	1A	300			1380
CATEGORY B											
15.CONTROL_TOWER (37-117734)	351214.28N/0805635.76W	1.83	632	1068	20	3	1A	300			1380
CATEGORY C											
16.TOWER (37-002817)	351156.31N/0805235.71W	2.88	752	1190	20	3	1A	300			1500
CATEGORY D											
16.TOWER (37-002817)	351156.31N/0805235.71W	3.76	752	1190	20	3	1A	300			1500

CIRCLING REMARKS:

MSA

CENTER	RADIUS
RW18R	25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	TWR (37-001173)	352049.00N/0811014.00W	313	12.4	2754	500	125	5E	1000			3800

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

CIRCLING NA AT NIGHT FOR NOISE ABATEMENT.

4D FLIGHT CHECK VERIFICATION REQUESTED FOR OBSTACLE 37-001173 AT 352049.00N/0811014.00W - 2754 TOWER. THIS IS THE CONTROLLING OBSTACLE FOR MSA BUT THE 4D IS REQUIRED FOR THE RNAV (RNP) Z RWY 36L RNP 0.11 MISSED APPROACH.



COMMUNICATIONS WITH
CLT TRACON, ZTL ARTCC, CLT TOWER

WX REMARKS:

<u>APPROACH AND RUNWAY LIGHTING SYSTEM</u>	<u>RUNWAY MARKINGS</u>	<u>RUNWAY VISUAL RANGE</u>
RW05 - MALSR, HIRL, C/LINE, PAPI-4L	PIR-G	APPROACH
RW18C - MALSR, HIRL, C/LINE, PAPI-4R	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW18L - HIRL, REIL, C/LINE, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW18R - TDZ, ALSF-2, HIRL, C/LINE, PAPI-4R	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW23 - HIRL, REIL, C/LINE, PAPI-4R	PIR-G	MIDPOINT
RW36C - TDZ, ALSF-2, HIRL, C/LINE, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW36L - TDZ, ALSF-2, HIRL, C/LINE, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW36R - TDZ, ALSF-2, HIRL, C/LINE, PAPI-4R	PIR-G	APPROACH, MIDPOINT, ROLL OUT

FINAL APPROACH COURSE AIMING

CRITICAL TEMPERATURES

CRITICAL TEMPERATURE REMARKS:

AVERAGE COLD TEMPERATURE DERIVED FROM 5-YEAR HISTORY (2014-2018).
CRITICAL LOW TEMPERATURE BASED ON ACT.
DESCENT RATE (FPM): STANDARD TEMP 965 HIGH TEMP 1273.

AIRPORT	AIRPORT ID	PROCEDURE NAME	AMDT NO.	CITY	STATE	AIRPORT ELEVATION	FACILITY
CHARLOTTE/DOUGLAS INTL	KCLT	RNAV (GPS) Y RWY 18R	2	CHARLOTTE	NC	748	RNAV

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	3.14
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	175.96
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	803
DISTANCE FROM	THLD	TO 1500FT POINT	1.83
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	1.95
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	175.96
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	803

THRESHOLD COORDINATES (IF STR-IN)

351331.02N/0805802.71W

ARP COORDINATES

351249.50N/0805656.60W

RUNWAY APCH END AND DIST FURTHEST FROM ARP

RUNWAY 18R DISTANCE 1.14 NM

FAF COORDINATES

351832.36N/0805828.67W

FIX NAME COORDINATES

REMARKS

NO ADDITIONAL AIRSPACE REQUIRED.

QUALITY
25
CHECKED

FAA Form 8260-9 / (11/16) Supersedes Previous Edition

Electronic Version

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