

**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> RALEIGH-DURHAM INTL	<u>AIRPORT ID</u> KRDU	<u>PROCEDURE NAME</u> RNAV (GPS) Y RWY 5L	<u>ORIGINAL/AMENDMENT</u> 2	<u>CITY</u> RALEIGH/DURHAM	<u>STATE</u> NC
<u>AIRPORT ELEVATION</u> 435	<u>TDZE</u> 384	<u>SUPERSEDED</u> RNAV (GPS) Y RWY 5L	<u>ORIGINAL/AMENDMENT</u> 1B	<u>DATED</u> 05/24/2018	<u>MAG VAR</u> 9W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 25 FEBRUARY 2021	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

TERMINAL ROUTES

THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 21-03.

<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>
OTTOS	IAF	CHWDR		TF	FB	1.00	067.92	6.38	5000
CHWDR	IAF	BOULE		TF	FB	1.00	054.02	3.14	4000
BOULE		SCHOO		TF	FB	1.00	054.05	2.65	3000
SCHOO	IF	WEPAS		TF	FB	1.00	054.07	3.00	2200
WEPAS	FAF	RW05L	MAP	TF	FO	0.30	054.09	5.58	
RW05L	MAP	1000 MSL		CA			054.09		1000
1000 MSL		DUHAM		DF	FO	1.00			2200

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW05L

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1000 THEN CLIMBING LEFT TURN TO 2200 DIRECT DUHAM AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF	(IAF)
2. PROFILE STARTS AT CHWDR					
3. FAC:	054.09	FAF: WEPAS	DIST FAF TO MAP: 5.58	DIST FAF TO THLD: 5.58	
4. MIN ALT:	CHWDR 5000, BOULE 4000, SCHOO 3000, WEPAS 2200				
5. DIST TO THLD FROM OM:	MM:	IM:	150 HAT:	214 HAT: 0.54	GS ANT:
6. MIN GP INCPT:	2200	GP ALT AT FAF :	WEPAS 2200	OM:	MM: IM:
7. GP ANGLE:	3.00	34:1: IS CLEAR	20:1: IS CLEAR	TCH: 57.4	
8. MSA FROM:	RW05L 3400				

PBN REQUIREMENTS NOTE:

RNP APCH - GPS. 

NOTES:

CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED.
CHART NOTE: LNAV PROCEDURE NA DURING SIMULTANEOUS OPERATIONS.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -12°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 5500.
CHART NOTE: USE OF FD OR AP REQUIRED DURING SIMULTANEOUS OPERATIONS.
CHART SPEED ICON IN PLANVIEW AT OTTOS: MAX 210 KIAS.
CHART SPEED ICON IN PLANVIEW AT CHWDR: MAX 210 KIAS.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON
CHART MANDATORY 6000 AT OTTOS.
HOLD N, RT, 172.91 INBOUND.
FAS OBST: 590 AAO 354856N/0785212W.
643 AAO 354751N/0785206W.
DISTANCE TO THLD FROM 214 HAT: 0.54 NM.
CHART VDP AT 1.25 NM TO RW05L*
*LNAV ONLY.
WAAS CHANNEL # 48813
REFERENCE PATH ID: W05A
LTP HAE: 79.8 M



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

ALTERNATE: NA ☐ STANDARD - 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	598	1800	214	598	1800	214	598	1800	214	598	1800	214			
LNAV/VNAV DA	748	3500	364	748	3500	364	748	3500	364	748	3500	364			
LNAV MDA	840	2400	456	840	2400	456	840	4500	456	840	4500	456			
CIRCLING	960	1	525	960	1	525	1020	1 1/2	585	1180	2 1/2	745			

CHANGES - REASONS

1. DELETED TAA AND MUTSE (IAF)/FOGAP (IAF) - FPT REQUEST/CHECKLIST.
2. ADDED IAF TRANSITION FROM OTTOS - PER FPT CHECKLIST.
3. CHANGED INTERMEDIATE COURSE/LENGTH FROM 054.04/7.15 TO 054.07/3.00 - SCHOO (IF) MOVED 3.76 NM NE/FPT CHECKLIST.
4. CHANGED FINAL COURSE FROM 054.10 TO 054.09 - WEPAS (FAF) MOVED 0.39 NM SW/TARGETS EVALUATION.
5. CHANGED DIST FAF TO MAP/THLD FROM 5.19 TO 5.58 - WEPAS (FAF) MOVED 0.39 NM SW.
6. DELETED HOLD-IN-LIEU INFORMATION ON PROFILE 2 (8260-3) - HOLD-IN-LIEU REMOVED FROM PROCEDURE.
7. ADDED PROFILE STARTS AT SCHOO TO PROFILE 2 (8260-3) - HOLD-IN-LIEU REMOVED FROM PROCEDURE.
8. RAISED LPV DA/HAT FROM 595/211 ALL CATS TO 598/214 ALL CATS - MISSED PENETRATION ADJUSTMENT CHANGED FROM 11 FT TO 14 FT.
9. LOWERED LNAV MDA/HAT FROM 880/496 ALL CATS TO 840/456 ALL CATS - NEW OBSTACLE EVALUATION.
10. CHANGED VDP VALUE FROM "CHART VDP AT 1.39 NM TO RW05L*" TO "CHART VDP AT 1.25 NM TO RW05L*" - LNAV MDA VALUE LOWERED.
11. RAISED WEPAS (FAF) MIN ALTITUDE FROM 2100 TO 2200 - PER FPT CHECKLIST.
12. CHANGED FAS OBSTACLE FROM "567 POLE 355038N/0785059W" TO "590 AAO 354856N/0785212W" - NEW OBSTACLE EVALUATION.
13. LOWERED LNAV/VNAV DA/HAT FROM 792/408 ALL CATS TO 748/364 ALL CATS - NEW OBSTACLE EVALUATION.
14. CHANGED CRC REMAINDER FROM 6B235316 TO F67017AE - UPDATED FPAP LAT/LONG.
15. FPAP LAT/LONG CHANGED FROM "355337.7655N/0784640.9195W" TO "353307.7635N/0784640.9200W" - TARGETS EVAL RESULTS.
16. CHANGED MISSED APPROACH INSTRUCTIONS FROM "CLIMB TO 2200 DIRECT IGAYA AND ON TRACK 338.68 TO DUHAM AND HOLD" TO "CLIMB TO 1000 THEN CLIMBING LEFT TURN TO 2200 DIRECT DUHAM AND HOLD" - PER FPT CHECKLIST/DESIGN.
17. LOWERED CIRCLING CAT C MDA/HAA FROM 1040/605 TO 1020/585 - NEW OBSTACLE EVALUATION.
18. LOWERED LPV ALL CATS VISIBILITY FROM RVR 2400 TO RVR 1800 - NEW VISCHECK VALUES.
19. LOWERED LNAV/VNAV ALL CATS VISIBILITY FROM RVR 5000 TO RVR 3500 - NEW VISCHECK VALUES.
20. RAISED LNAV CAT C VISIBILITY FROM RVR 4000 TO RVR 4500 AND LOWERED CAT D VISIBILITY FROM RVR 5000 TO RVR 4500 - NEW VISCHECK VALUES.
21. LOWERED CIRCLING CAT C VISIBILITY FROM 1 3/4 TO 1 1/2 - NEW VISCHECK VALUES.
22. ADDED CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO RVR 5500.
23. CHANGED BARO-VNAV NOTE FROM "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15C (5F) OR ABOVE 48C (118F)" TO "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW 11°C OR ABOVE 54°C" - 5 YEAR HISTORY CHANGED FROM (2012-2016) TO (2014-2018).
24. CHANGED CRC REMAINDER FROM "6B235316" TO "085CBFDE" - FPAP LAT/LON CHANGED FROM "355337.7655N/0784640.9195W" TO "353307.7645N/0784640.9210W".

02/27/2020: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON: 12/16/2019:

1. CHANGED FPAP LATITUDE FROM: 353307.7645N TO: 355337.7645N.
2. CHANGED CRC REMAINDER FROM "085CBFDE" TO "95360F22".

04/28/2020: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON: 12/16/2019:

1. ADDED IAF AT CHWDR WP.
2. CHANGED PROFILE LINE 2 FROM "PROFILE STARTS AT SCHOO" TO "PROFILE STARTS AT CHWDR."
3. CHANGED PROFILE LINE 4 FROM "SCHOO 3000, WEPAS 2200" TO "CHWDR 5000, BOULE 4000, SCHOO 3000, WEPAS 2200."
4. REPLACED FIX PRANK WITH FIX BOULE.



COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZDC, AMGR, RDU ATC.

FLIGHT CHECKED BY

STEPHEN FRANCIS KOCH

Digitally signed by

WARDELL HENNING

Nov 09, 2020

OFFICE

FIOG

DATE

03/27/2020

DEVELOPED BY

WARDELL HENNING (THERON CYRUS)

Digitally signed by

WARDELL HENNING

Nov 09, 2020

OFFICE

AJV-A432

DATE

12/16/2019

APPROVED BY

LONNIE EVERHART

Digitally signed by

WARDELL HENNING

Nov 09, 2020

OFFICE

AJV-A430

DATE

TITLE

MANAGER

1/12/2021: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 11/9/2020.

1. CORRECTED PBN REQUIREMENT NOTE TO ADD "GPS".



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KRDU
RUNWAY	RW05L
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Y
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W05A
LTP/FTP LATITUDE	355228.0160N
LTP/FTP LONGITUDE	0784807.0690W
LTP/FTP ELLIPSOIDAL HEIGHT	+00798
FPAP LATITUDE	355337.7645N
FPAP LONGITUDE	0784640.9210W
THRESHOLD CROSSING HEIGHT (TCH)	00057.4
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	95360F22

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K7
LTP ORTHOMETRIC HEIGHT	+01118
FPAP ORTHOMETRIC HEIGHT	+01118

