

**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> NORWOOD MEMORIAL	<u>AIRPORT ID</u> KOWD	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 35	<u>ORIGINAL/AMENDMENT</u> 1D	<u>CITY</u> NORWOOD	<u>STATE</u> MA
<u>AIRPORT ELEVATION</u> 49	<u>TDZE</u> 49	<u>SUPERSEDED</u> RNAV (GPS) RWY 35	<u>ORIGINAL/AMENDMENT</u> 1C	<u>DATED</u> 05/28/2015	<u>MAG VAR</u> 15W
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 26 MARCH 2020	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 1980

TERMINAL ROUTES [THIS IS A CORRECTED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 20-06.](#)

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
WOONS		DODNE		TF	FB	1.00	098.33	15.36	3000
DODNE	IAF	CURLI		TF	FB	1.00	079.77	5.00	3000
BURDY	IAF	CURLI		TF	FB	1.00	320.46	6.21	3000
CURLI	IF	CUPUG		TF	FB	1.00	349.84	6.18	1700
CUPUG	FAF	FIGOL/1.60 NM TO RW35		TF	FB	0.30	349.80	3.39	
FIGOL/1.60 NM TO RW35		RW35	MAP	TF	FO	0.30	349.80	1.60	
RW35	MAP	344 MSL		CA			349.80		
344 MSL		DEGEY		DF	FB	1.00			
DEGEY		WHYBE		TF	FO	1.00	292.84	9.64 	3000

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW35

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT DEGEY AND ON TRACK 292.84 TO WHYBE AND HOLD, CONTINUE CLIMB-IN-HOLD TO 3000.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
2. PROFILE STARTS AT CURLI
3. FAC: 349.80 FAF: CUPUG DIST FAF TO MAP: 4.99 DIST FAF TO THLD: 4.99
4. MIN ALT: CURLI 3000, CUPUG 1700, FIGOL/1.60 NM TO RW35 600*
5. DIST TO THLD FROM OM: MM: IM: 150 HAT: 295 HAT: 0.79 GS ANT: MM: IM:
6. MIN GP INCPT: 1700 GP ALT AT FAF : CUPUG 1700 OM: MM: IM:
7. GP ANGLE: 3.00 34:1: IS NOT CLEAR 20:1: IS NOT CLEAR TCH: 40.0
8. MSA FROM: RW35 3100

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING RWY 17, 28, 35 NA AT NIGHT.
CHART NOTE: RWY 35 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED.
CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO LPV AND LNAV/VNAV ALL CATS AND LNAV CATS A/B AND D.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15°C OR ABOVE 48°C.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT WOONS ON V3-16 SOUTHWEST BOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT BURDY ON V139-268 SOUTHWEST BOUND.
CHART NOTE: STRAIGHT-IN RWY 35 NA AT NIGHT.

ADDITIONAL FLIGHT DATA:

*LNAV ONLY
CHART CIRCLING ICON.
WAAS CHANNEL #86400
REFERENCE PATH ID: W35A
CHART FAS OBST: 326 TREE 420905N/0710957W.
408 TREE 420605N/0710839W.
HOLD E, RT, 268.04 INBOUND
LTP HAE: -14 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT C, D 1200-3

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	344	1	295	344	1	295	344	1	295	344	1	295			
LNAV/VNAV DA	594	2	545	594	2	545	594	2	545	594	2	545			
LNAV MDA	580	1	531	580	1	531	580	1 1/4	531	580	1 1/2	531			
CIRCLING	600	1	551	700	1	651	1220	3	1171	1220	3	1171			

QUALITY
29
CHECKED

CHANGES - REASONS

- AMDT 1A:
1. ADDED TO ADDITIONAL FLIGHT DATA CHART WAAS SYMBOL - REVISED CRITERIA.
- AMDT 1B:
1. CHANGED CIRCLING CAT C/D MDA TO 700/HAA 651, VISIBILITY CAT A/B TO 1, CAT C 1 3/4 - REVISED CONTROLLING OBSTACLE 386 MSL ANTENNA 421136.55N/0711258.00W, AC 1A.
2. CHANGED BARO-VNAV NOTE TO READ: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15C (5F) OR ABOVE 48C (118F) - REVISED CRITERIA.
3. ADDED NOTE VISIBILITY REDUCTION BY HELICOPTERS NA - REVISED CRITERIA.
4. DELETED WAAS SYMBOL - REVISED CRITERIA.
- AMDT 1C:
1. DELETED NOTE CIRCLING TO RWY 28 NA AT NIGHT AND ADDED NOTE NIGHT LANDING: RWY 10, 28 NA - REVISED CRITERIA.
2. CHANGED HELICOPTER VISIBILITY REDUCTION NOTE TO READ: HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NA - REVISED CRITERIA.
- AMDT 1D:
1. LNAV MDA/HAT CHANGED FROM 540/491 ALL CATS TO 580/531 ALL CATS, VISIBILITY CHANGED FROM 3/4 SM CAT A/B TO 1 SM CAT A/B. - NEW CONTROLLING OBSTACLE TREE 334 MSL (25-061903), T-NOTAM 9/1550.
2. DELETED CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15C (5F) OR ABOVE 48C (118F) - IAW 8260.19H 8-6-9 S.
3. ADDED CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -15C OR ABOVE 48C - IAW 8260.19H 8-6-9 S.
4. ADDED PBN REQUIREMENTS NOTE: RNP APCH - IAW 8260.19H 8-6-8 B. (1)
5. DELETED CHART NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NA - IAW 8260.19H 8-6-11 K. (3)
6. ADDED CHART NOTE: RWY 35 HELICOPTER VISIBILITY REDUCTION BELOW 1 SM NOT AUTHORIZED - IAW 8260.19H 8-6-11 K. (3)
7. INOPERATIVE COMPONENTS NOTE CHANGED FROM INOPERATIVE TABLE DOES NOT APPLY TO LPV, LNAV/VNAV ALL CATS, AND LNAV CAT C TO INOPERATIVE TABLE DOES NOT APPLY TO LPV AND LNAV/VNAV ALL CATS AND LNAV CAT A/B AND D - IAW 8260.3D TABLE 3-3-1, 3-3-3, 3-3-4 AND AJV VISIBILITY CHECK CALCULATOR.
8. CHANGED NOTE FROM NIGHT LANDING: RWY 10, 28 NA TO CIRCLING RWY 17, 28, 35 NA AT NIGHT - RWY 17/28/35 20:1 PENETRATIONS.
9. ADDED CHART CIRCLING ICON - EXPANDED CIRCLING AREAS TO MATCH LOC RWY 35 AMDT 10D PUBLISHED 6/23/16.
10. CHANGED CIRCLING CAT B MDA/HAA FROM 600/551 TO 700/651, CAT C MDA/VIS/HAA FROM 700/1 3/4/651 TO 1220/3/1171 AND CAT D FROM 700/2/651 TO 1220/3/1171 - EXPANDED CIRCLING AREAS AND REVISED OBSTACLES.
11. DELETED NOTE DME/DME RNP-0.3 NA - REVISED CRITERIA.
12. CHANGED FAS OBST FROM 287 TREE 420910N/0710955W AND 257 TREE 421019N/0710903W TO 326 TREE 420905N/0710957W - REVISED FIGOL TO MAP CONTROLLING OBSTACLE.
13. REMOVED 7:1 OBSTACLE 316 TREE 420904N/0710958W - REVISED OBSTACLE DATA.
14. CHANGED PLANVIEW NOTE FROM PROCEDURE NA FOR ARRIVALS AT WOONS VIA V3-16 SOUTHWEST BOUND TO PROCEDURE NA FOR ARRIVALS AT WOONS ON V3-16 SOUTHWEST BOUND - REVISED CRITERIA.
15. CRC REMAINDER CHANGED FROM 095EC593 TO 3899B317 - FTP INSTEAD OF LTP LOCATION WAS USED ON PREVIOUS SIAP DOCUMENTATION.
16. ADDED TERMINAL ROUTE CUPUG (FIX TYPE) FAF TO FIGOL/1.60 NM TO RW35 (LEG TYPE) TF, (FO/FB) FB, (RNP VALUE) 0.30, (COURSE) 349.80, (DISTANCE) 3.39 AND TERMINAL ROUTE FIGOL/1.60 NM TO RW35 TO RW35 (FIX TYPE) MAP (LEG TYPE) TF, (FO/FB) FO, (RNP VALUE) 0.30, (COURSE) 349.80, (DISTANCE) 1.60 - DOCUMENTATION ERROR FROM AMDT 1.
17. CHANGED MISSED APPROACH INSTRUCTIONS FROM CLIMB TO 3000 DIRECT DEGEY WP AND VIA 292.84 TRACK TO WHYBE WP AND HOLD, CONTINUE CLIMB-IN-HOLD TO 3000 TO CLIMB TO 3000 DIRECT DEGEY AND ON 292.84 TRACK TO WHYBE AND HOLD, CONTINUE CLIMB-IN-HOLD TO 3000 - REVISED CRITERIA.
18. LINE 6 ADD TO GS ALT AT CUPUG 1700 - DOCUMENTATION ERROR FROM AMDT 1.
19. LINE 7 ADDED 20:1 IS NOT CLEAR - REVISED CRITERIA.
20. CHANGED ALTERNATE MINIMUMS FROM STANDARD TO STANDARD, CAT C, D 1200-3 - INCREASED HAA'S REFERENCE EXPANDED CIRCLING AREAS.
21. ADDED PLANVIEW NOTE PROCEDURE NA FOR ARRIVALS AT BURDY ON V139-268 SOUTHWEST BOUND - REVISED CRITERIA.
22. ADDED NOTE STRAIGHT-IN RWY 35 NA AT NIGHT - REVISED CRITERIA AND 20:1 PENS TO RWY 35.
23. CHANGED FAS DATA BLOCK LTP/FTP FROM 421101.8310N/0711017.6405W TO 421101.8350N/0711017.6415W - REVISED AIRNAV DATA.
24. CHANGED FAS DATA BLOCK FPAP FROM 421222.4600N/0711108.7400W TO 421222.4630N/0711108.7435W - CHANGED LTP/FTP LAT/LONG.
25. CHANGED LINE 4 FROM CURLI 3000, CUPUG 1700, FIGOL/1.60 NM 600 TO CURLI 3000, CUPUG 1700, FIGOL/1.60 NM 600* AND ADDED NOTE: *LNAV ONLY - ERROR FROM PREVIOUS DOCUMENTATION.

02/06/20: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 01/13/20.
1. CHANGED DISTANCE DEGEY TO WHYBE FROM 9.84NM TO 9.64NM.



COORDINATED WITH:

A4A ☐ ALPA ☐ AOPA ☒ APA ☐ HAI ☐ NBAA ☒

OTHER: ZBW ARTCC, BOS APCH, OWD ATCT, AMGR, MASSACHUSETTS AERO

FLIGHT CHECKED BY

JORGE ALBERTO MALCUN

Digitally signed by

DONALD H LANIER

Feb 14, 2020

OFFICE

FIOG

DATE

1/9/2020

DEVELOPED BY

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Feb 06, 2020

OFFICE

AJV-A431

DATE

10/23/2019

APPROVED BY

LONNIE EVERHART

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Feb 14, 2020

OFFICE

AJV-A430

DATE

TITLE

MANAGER

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

OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KOWD
RUNWAY	RW35
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W35A
LTP/FTP LATITUDE	421101.8350N
LTP/FTP LONGITUDE	0711017.6415W
LTP/FTP ELLIPSOIDAL HEIGHT	-00140
FPAP LATITUDE	421222.4630N
FPAP LONGITUDE	0711108.7435W
THRESHOLD CROSSING HEIGHT (TCH)	00040.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1528
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	3899B317

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K6
LTP ORTHOMETRIC HEIGHT	+00144
FPAP ORTHOMETRIC HEIGHT	+00144