

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GRAPHIC DEPARTURE PROCEDURES (DP)**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

<u>DP NAME</u>	<u>NUMBER</u>	<u>DP COMPUTER CODE</u>	<u>SUPERSEDED NUMBER</u>	<u>DATED</u>	<u>ACTUAL EFFECTIVE DATE</u>
THUMB	ONE	THUMB1.THUMB	NONE		27 Nov 2025

<u>TYPE:</u>	<u>OBSTACLE</u>	<u>COPTER</u>	<u>SID</u>	<u>SPECIAL</u>	<u>RNAV</u>
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DP ROUTE DESCRIPTION:

BRADLEY INTL (BDL):

TAKEOFF RWY 6: CLIMB ON HEADING 058.38 TO 673, FOR RADAR VECTORS TO GOETS, THENCE...
 TAKEOFF RWY 15: CLIMB ON HEADING 148.37 TO 673, FOR RADAR VECTORS TO GOETS, THENCE...
 TAKEOFF RWY 24: CLIMB ON HEADING 238.39 TO 673, FOR RADAR VECTORS TO GOETS, THENCE...
 TAKEOFF RWY 33: CLIMB ON HEADING 328.38 TO 673, FOR RADAR VECTORS TO GOETS, THENCE...

...ON TRACK 147.11 TO THUMB, THEN ON CALVERTON TRANSITION. MAINTAIN 4000. EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

HARTFORD-BRAINARD (HFD):

TAKEOFF RWY 2: CLIMB ON HEADING 023.95 TO 2500 FOR RADAR VECTORS TO GOETS, THENCE...
 TAKEOFF RWY 20: CLIMB ON HEADING 203.95 TO 2500 FOR RADAR VECTORS TO GOETS, THENCE...

WESTFIELD-BARNES RGNL (BAF):

TAKEOFF RWY 2: CLIMB ON HEADING 024.21 TO 3000 FOR RADAR VECTORS TO GOETS, THENCE...
 TAKEOFF RWY 15: CLIMB ON HEADING 154.20 TO 2500 FOR RADAR VECTORS TO GOETS, THENCE...
 TAKEOFF RWY 20: CLIMB ON HEADING 204.22 TO 3000 FOR RADAR VECTORS TO GOETS, THENCE...
 TAKEOFF RWY 33: CLIMB ON HEADING 334.21 TO 3000 FOR RADAR VECTORS TO GOETS, THENCE...

WESTOVER ARB/METRO (CEF):

TAKEOFF RWY 5: CLIMB ON HEADING 048.19 TO 2600 FOR RADAR VECTORS TO GOETS, THENCE...
 TAKEOFF RWY 15: CLIMB ON HEADING 149.00 TO 2500 FOR RADAR VECTORS TO GOETS, THENCE...
 TAKEOFF RWY 23: CLIMB ON HEADING 228.20 TO 2500 FOR RADAR VECTORS TO GOETS, THENCE...
 TAKEOFF RWY 33: CLIMB ON HEADING 329.01 TO 3000 FOR RADAR VECTORS TO GOETS, THENCE...

...ON TRACK 147.11 TO THUMB, THEN ON CALVERTON TRANSITION. MAINTAIN 3000. EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

<u>TRANSITION NAME</u>	<u>TRANSITION COMPUTER CODE</u>	<u>FROM FIX/NAVAID</u>	<u>TO FIX/NAVAID</u>	<u>COURSE</u>	<u>DISTANCE</u>	<u>MEA</u>	<u>MOCA</u>	<u>CROSSING ALTITUDE/FIXES</u>
CALVERTON	THUMB1.CCC	THUMB	NTMEG	TRACK 214.40	15.87	5000	1900	
		NTMEG	CCC VOR/DME	TRACK 228.92	25.24	5000	1600	

PBN REQUIREMENT NOTES:

RNAV 1 - DME/DME/IRU OR GPS.

EQUIPMENT REQUIREMENT NOTES:

RADAR REQUIRED



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THUMB	ONE	THUMB1.THUMB	NONE		27 Nov 2025

PROCEDURAL DATA NOTES:

TAKEOFF MINIMUMS:

BRADLEY INTL (BDL):

RWY 6: STANDARD WITH MINIMUM CLIMB OF 235 FT/NM TO 2500.

RWY 15: STANDARD WITH MINIMUM CLIMB OF 235 FT/NM TO 2500.

RWY 24: STANDARD WITH MINIMUM CLIMB OF 235 FT/NM TO 2500.

RWY 33: STANDARD WITH MINIMUM CLIMB OF 345 FT/NM TO 2200.

HARTFORD-BRAINARD (HFD):

RWY 11, 29: NA - ENVIRONMENTAL.

RWY 2: STANDARD WITH MINIMUM CLIMB OF 250 FT/NM TO 2500.

RWY 20: STANDARD WITH MINIMUM CLIMB OF 250 FT/NM TO 2500.

WESTFIELD-BARNES RGNL (BAF):

RWY 2: STANDARD WITH MINIMUM CLIMB OF 275 FT/NM TO 3000.

RWY 15: STANDARD WITH MINIMUM CLIMB OF 460 FT/NM TO 800.

RWY 20: STANDARD WITH MINIMUM CLIMB OF 275 FT/NM TO 3000.

RWY 33: STANDARD WITH MINIMUM CLIMB OF 500 FT/NM TO 3000.

WESTOVER ARB/METRO (CEF):

RWY 5: STANDARD WITH MINIMUM CLIMB OF 240 FT/NM TO 2400.

RWY 15: STANDARD WITH MINIMUM CLIMB OF 230 FT/NM TO 2500.

RWY 23: STANDARD WITH MINIMUM CLIMB OF 230 FT/NM TO 2500.

RWY 33: STANDARD WITH MINIMUM CLIMB OF 325 FT/NM TO 2300.

TAKEOFF OBSTACLES NOTES:

BRADLEY INTL (BDL):

SEE FORM 8260-15A, TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP).

HARTFORD-BRAINARD (HFD):

SEE FORM 8260-15A, TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP).

WESTFIELD-BARNES RGNL (BAF):

SEE FORM 8260-15A, TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP).

WESTOVER ARB/METRO (CEF):

SEE FORM 8260-15A, TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP).

CONTROLLING OBSTACLES:

BRADLEY INTL (BDL):

RWY 33: 760 TREE 415739.00N/0724424.00W

WESTFIELD-BARNES RGNL (BAF):

RWY 15: 592 TREE (25-045315) 420839.66N/0724122.09W.

WESTOVER ARB/METRO (CEF):

RWY 5: 948 AAO 421451.00N/0722712.00W.



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RWY 33: 500 TREE 421315.00N/07227.00W.

MSA:

- MSA FROM KBDL - 3300.
- MSA FROM KBAF - 3600.
- MSA FROM KCEF - 3600.
- MSA FROM KHFD - 3100.

LOST COMMUNICATIONS PROCEDURES:

ADDITIONAL FLIGHT DATA:

BRADLEY INTL (BDL) - CHART: TOP ALTITUDE: 4000.
HARTFORD-BRAINARD (HFD), WESTOVER ARB/METRO (CEF) AND WESTFIELD-BARNES (BAF) - CHART: TOP ALTITUDE: 3000.
 AIRPORT MAGVAR: BDL (P) 14W/1980.
 DME/DME ASSESSMENT: SAT (RNP 2.0).

AIRPORTS SERVED:

<u>AIRPORT ID</u>	<u>CITY</u>	<u>STATE</u>
KBDL	WINDSOR LOCKS	CT
KBAF	WESTFIELD/SPRINGFIELD	MA
KCEF	CHICOPEE/SPRINGFIELD	MA
KHFD	HARTFORD	CT

COMMUNICATIONS:

- BRADLEY INT (BDL):** ATIS, CLNC DEL, GND, CPDLC, TOWER
- HARTFORD-BRAINARD (HFD):** CTAF, ATIS, GND, TOWER
- WESTFIELD-BARNES RGNL (BAF):** ATIS, GND, TOWER
- WESTOVER ARB/METRO (CEF):** CTAF, ATIS, GND, TOWER

FIXES AND/OR NAVAIDS:

REMARKS:

ATC HAS VERIFIED AIRCRAFT ARE NOT VECTORED BELOW THE MVA. PROCEDURE DEVELOPED FOR AIRCRAFT TO REACH THE MVA BEFORE TURNING WHICH ENSURES OBSTACLE CLEARANCE. AFS WAIVER TO NOT CHART IF ALTITUDE.
 PER FPT - WORST-CASE VEGETATION HEIGHT 100 FEET.
 AIRPORTS/RWYS APPLIED CLIMB GRADIENTS TO REACH THE MVA WITHIN 10NM: KBDL: RWY 6, 15, 24. KHFD: RWY 2, 20. KBAF: RWY 2, 20. KCEF: RWY 15, 23.
 AIRPORTS/RWYS APPLIED CLIMB GRADIENTS TO A HIGHER ALTITUDE THAN REQUIRED FOR OBSTACLE REQUIRED CLIMB-TO ALTITUDE TO REACH THE MVA WITHIN 10 NM: KBDL: RWY 33
 KBAF: RWY 15. KCEF: RWY 5, 33.
 AIRPORT/RWY APPLIED CLIMB GRADIENT TO REACH 3000 FOOT MVA PRIOR TO 3800 FOOT MVA: KBAF RWY 33.



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THUMB	ONE	THUMB1.THUMB	NONE		27 Nov 2025

<u>FLIGHT INSPECTED BY</u>	<u>SIGNATURE</u>	<u>OFFICE</u>	<u>DATE</u>
GALEN W COLLINS	<i>Digitally signed by</i> CASIMIR L TABAKA Aug 26, 2025	AJF	08/18/2025

<u>DEVELOPED BY</u>	<u>SIGNATURE</u>	<u>OFFICE</u>	<u>DATE</u>
BOYD L STUCKEY	<i>Digitally signed by</i> CASEY D HILL Jul 10, 2025	AJV-A421	02/18/2025

<u>APPROVED BY</u>	<u>SIGNATURE</u>	<u>OFFICE</u>	<u>DATE</u>	<u>TITLE</u>
DAVE DANNER	<i>Digitally signed by</i> CASEY D HILL Jul 10, 2025	AJV-A421		MANAGER

REQUIRED EFFECTIVE DATE
ROUTINE

COORDINATED WITH:

A4A **ALPA** **AOPA** **APA** **HAI** **NBAA** **OTHER:** ZBW, BDL APP CON, BDL ATCT, HFD ATCT, BAF ATCT, AMGR(S), CEF ATCT.

CHANGES - REASONS:

06/24/2025: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 02/8/2025. DP ROUTE DESCRIPTION: BRADLEY INTL (BDL) ADDED: "OR AS ASSIGNED BY ATC" TO EACH RUNWAY ROUTE DESCRIPTION.

07/10/2025: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 02/8/2025. DP ROUTE DESCRIPTION: BRADLEY INTL (BDL) UPDATED CLIMB-TO ALTITUDE FROM "2500/3000" TO "673".

8/21/2026: THIS IS AN UPDATD COPY OF THE FORM DEVELOPED ON 02/08/2025. REMOVED "THEN ON HEADING XXX.XX OR AS ASSIGNED BY ATC" FOR ALL KBDL DP ROUTE DESCRIPTIONS.



FEDERAL AVIATION ADMINISTRATION
 FLIGHT STANDARDS SERVICE
 DEPARTURE (DATA RECORD)

DP NAME		NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE			
THUMB		ONE	THUMB1.THUMB	NONE		27 Nov 2025			
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RW6 (AER)	415555.25N/0724147.69W	N	-	-	-	-			CG 235 FT/NM TO 2500
673 MSL	-	-	-	VA	044.38	-			
-	-	-	-	VM	044.38	-			
RW15 (AER)	415632.63N/0724135.71W	N	-	-	-	-			CG 235 FT/NM TO 2500
673 MSL	-	-	-	VA	134.37	-			
-	-	-	-	VM	134.37	-			
RW24 (AER)	415702.40N/0724019.67W	N	-	-	-	-			CG 235 FT/NM TO 2500
673 MSL	-	-	-	VA	224.39	-			
-	-	-	-	VM	224.39	-			
RW33 (AER)	415545.32N/0724030.96W	N	-	-	-	-			CG 345 FT/NM TO 2200
673 MSL	-	-	-	VA	314.38	-			
-	-	-	-	VM	314.38	-			
GOETS	414212.65N/0723652.37W	Y	-	IF	-	-			
THUMB	413123.96N/0722131.80W	Y	FB	TF	133.11	15.79			



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THUMB		ONE	THUMB1.THUMB	NONE		27 Nov 2025

<u>FIX/NAVAID</u>	<u>LAT/LONG</u>	<u>C</u>	<u>FO/ FB</u>	<u>LEG TYPE</u>	<u>TC</u>	<u>DIST (NM)</u>	<u>ALTITUDE</u>	<u>SPEED</u>	<u>REMARKS</u>
THUMB	413123.96N/0722131.80W	Y	-	IF	-	-			THUMB1.CCC
NTMEG	411630.75N/0722852.08W	Y	FB	TF	200.40	15.87			
CCC	405546.63N/0724755.89W	Y	FB	TF	214.92	25.24			

