

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)
TITLE 14 CFR PART 97.37**

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>CITY, STATE</u>	<u>AIRPORT</u>	<u>EFFECTIVE DATE</u>	<u>AMDT NO</u>
HARTFORD, CT	HARTFORD-BRAINARD		6

TAKEOFF MINIMUMS:

RWY 11, 29, NA - ENVIRONMENTAL.

RWY 2, STANDARD.

RWY 20, 200-1 3/8 OR STANDARD WITH MINIMUM CLIMB OF 220 FT PER NM TO 300, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT PER NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1500 FT PRIOR TO DER.

TEXTUAL DEPARTURE PROCEDURES:

RWY 2: CLIMB HEADING 023.95 TO 900 BEFORE TURNING LEFT.

RWY 20: CLIMBING LEFT TURN HEADING 175.00 TO 1300 BEFORE TURNING RIGHT.

VISUAL CLIMB OVER AIRPORT:

TAKEOFF OBSTACLE NOTES:

**NOTE: RWY 2, DAM AND TREES BEGINNING 57 FT FROM DER, ON CENTERLINE, UP TO 94 FT AGL/101 FT MSL.
BUILDING 376 FT FROM DER, 593 FT LEFT OF CENTERLINE, 26 FT AGL/57 FT MSL.
VEGETATION AND TREES BEGINNING 765 FT FROM DER, 72 FT LEFT OF CENTERLINE, UP TO 50 FT AGL/84 FT MSL.
TREE 1073 FT FROM DER, 172 FT LEFT OF CENTERLINE, 93 FT AGL/98 FT MSL.
TREE 1483 FT FROM DER, 594 FT LEFT OF CENTERLINE, 95 FT AGL/124 FT MSL.
BUILDING AND TREES BEGINNING 2047 FT FROM DER, 476 FT RIGHT OF CENTERLINE, UP TO 79 FT AGL/119 FT MSL.
TREE 2386 FT FROM DER, 47 FT RIGHT OF CENTERLINE, 96 FT AGL/124 FT MSL.
BUILDING AND TREES BEGINNING 2418 FT FROM DER, 416 FT RIGHT OF CENTERLINE, UP TO 87 FT AGL/125 FT MSL.
TREE 2458 FT FROM DER, 59 FT LEFT OF CENTERLINE, 116 FT AGL/133 FT MSL.
TREE 2544 FT FROM DER, 193 FT LEFT OF CENTERLINE, 122 FT AGL/134 FT MSL.**

**NOTE: RWY 20: POLES BEGINNING 196 FT FROM DER, 400 FT RIGHT OF CENTERLINE, UP TO 12 FT AGL/42 FT MSL.
TREE 365 FT FROM DER, 423 FT LEFT OF CENTERLINE, 49 FT AGL/85 FT MSL.
DAM, VEGETATION, AND TREES BEGINNING 582 FT FROM DER, 52 FT LEFT OF CENTERLINE, UP TO 62 FT AGL/89 FT MSL.
BUILDING 649 FT FROM DER, 665 FT RIGHT OF CENTERLINE, 45 FT AGL/58 FT MSL.
TREES BEGINNING 798 FT FROM DER, 395 FT RIGHT OF CENTERLINE, UP TO 23 FT AGL/65 FT MSL.
TREE 1137 FT FROM DER, 228 FT RIGHT OF CENTERLINE, 37 FT AGL/85 FT MSL.
TREE 1292 FT FROM DER, 494 FT RIGHT OF CENTERLINE, 59 FT AGL/103 FT MSL.
TREES BEGINNING 1322 FT FROM DER, 207 FT RIGHT OF CENTERLINE, UP TO 67 FT AGL/119 FT MSL.
TREE 1836 FT FROM DER, 172 FT LEFT OF CENTERLINE, 97 FT AGL/97 FT MSL.
TREES BEGINNING 2505 FT FROM DER, 28 FT RIGHT OF CENTERLINE, UP TO 119 FT AGL/138 FT MSL.
TREE 3953 FT FROM DER, 200 FT LEFT OF CENTERLINE, 50 FT AGL/119 FT MSL.
TREE 4639 FT FROM DER, 136 FT RIGHT OF CENTERLINE, 69 FT AGL/142 FT MSL.
SPIRE 1.1 NM FROM DER, 431 FT LEFT OF CENTERLINE, 150 FT AGL/195 FT MSL.**

CONTROLLING OBSTACLES:

RWY 20: 195 FT MSL SPIRE 414246.60N/0723907.70W.

OBSTACLES MANDATING ODP ROUTE DEVELOPMENT:

RWY 2, 20: 2032 FT MSL TOWER 414213.27N/0724954.38W.



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REMARKS:

1. RWY 20 TEXTUAL DEPARTURE HEADING 175.00 REQUESTED BY ATC SO AIRCRAFT WILL TRACK OVER THE CONNECTICUT RIVER AND AVOID NOISE SENSITIVE AREAS.
2. RWY 20 CLIMB GRADIENT ROUNDED TO 220 FT PER NM FOR PUBLICATION (COMPUTED VALUE 215.59 FT PER NM).

FLIGHT INSPECTED BY:

OFFICE SYMBOL:

DATE:

DEVELOPED BY:

Digitally signed by
PETER R GUIMOND
Nov 28, 2018

OFFICE SYMBOL:
AJV-5442

DATE:
11/28/2018

APPROVED BY:

MARLON ROBINSON

OFFICE SYMBOL:
AJV-5440

DATE:

REQUIRED EFFECTIVE DATE:

ROUTINE

COORDINATED WITH:

A4A	ALPA	AOPA	APA	HAI	NBAA
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

OTHER:

ZBW, BDL APP CON, HFD ATCT, AMGR.

CHANGES - REASONS:

1. AMENDED RWY 20 TAKEOFF MINIMUMS FROM 300-1 1/2 OR STANDARD WITH MINIMUM CLIMB OF 217 FT PER NM TO 300, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT/NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1500 FT PRIOR TO DEPARTURE END OF RUNWAY TO READ 200-1 3/8 OR STANDARD WITH MINIMUM CLIMB OF 220 FT PER NM TO 300, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT PER NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 1500 FT PRIOR TO DER - NEW OBSTACLE STUDY AND FORMATTED IN ACCORDANCE WITH FAAO 8260.46F, APPENDIX D, PARA 6C.
2. AMENDED RWY 2 TEXTUAL DEPARTURE PROCEDURE FROM CLIMB HEADING 023.95 TO 1000 BEFORE TURNING LEFT TO READ CLIMB HEADING 023.95 TO 900 BEFORE TURNING LEFT - NEW OBSTACLE STUDY.
3. ADDED CLIMBING LEFT TURN TO RWY 20 TEXTUAL DP INSTRUCTIONS - TURN EXCEEDS 15 DEGREES.
4. AMENDED TAKEOFF OBSTACLE NOTES FOR RWY 2 AND RWY 20 - GROUPED AND FORMATTED IN ACCORDANCE WITH DEPARTURE OBSTACLES GROUPE SOP (1.0).
5. AMENDED RWY 2 AND RWY 20 CONTROLLING OBSTACLE FROM 2049 MSL TOWER TO 2032 MSL TOWER AND MOVED IT TO OBSTACLE MANDATING ODP ROUTE DEVELOPMENT - SAME CONTROLLING OBSTACLE WITH UPDATED AIRNAV DATA. DOCUMENTED IN ACCORDANCE WITH FAAO 8260.46F, APPENDIX D, PARA 10C.

QUALITY
3
CHECKED