

**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.

DP NAME PPOINT	NUMBER FOUR	DP COMPUTER CODE PPOINT4.PPOINT	SUPERSEDED NUMBER THREE	DATED 08/17/2017	ACTUAL EFFECTIVE DATE 7 OCT 2021
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TYPE:	OBSTACLE	COPTER	SID	SPECIAL	RNAV
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DP ROUTE DESCRIPTION:

TAKEOFF RWY 6: CLIMBING LEFT TURN ON HEADING 039.00, THENCE...
TAKEOFF RWY 17: CLIMBING RIGHT TURN ON HEADING 219.00, THENCE...
TAKEOFF RWY 24: CLIMB ON HEADING 237.43, THENCE...
TAKEOFF RWY 35: CLIMB ON HEADING 351.53, THENCE...

... EXPECT VECTORS TO CROSS TYLIR AT OR ABOVE 3000, THEN ON TRACK 091.52 TO PPOINT, THEN ON ASSIGNED TRANSITION. EXPECT CLEARANCE TO FILED ALTITUDE/FLIGHT LEVEL WITHIN FIVE (5) MINUTES AFTER DEPARTURE.

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

TRANSITION NAME	TRANSITION COMPUTER CODE	FROM FIX/NAVAID	TO FIX/NAVAID	COURSE	DISTANCE	MEA	MOCA	CROSSING ALTITUDE/FIXES
BARNES	PPOINT4.BAF	PPOINT	SHOEL	TRACK 154.91	7.76	5000	1600	
		SHOEL	RBELA	TRACK 214.75	10.07	6800	1600	
		RBELA	COTEE	TRACK 214.76	21.52	9300	1700	
		COTEE	BAF VORTAC	TRACK 269.84	73.84	16800	3100	
CALVERTON	PPOINT4.CCC	PPOINT	SHOEL	TRACK 154.91	7.76	5000	1600	
		SHOEL	RBELA	TRACK 214.75	10.07	6800	1600	
		RBELA	JJIMY	TRACK 214.79	26.44	9900	1700	
		JJIMY	YANTC	TRACK 231.41	63.96	16300	2500	
		YANTC	CCC VOR/DME	TRACK 239.19	52.18	17000	2600	
NELIE	PPOINT4.NELIE	PPOINT	SHOEL	TRACK 154.91	7.76	5000	1600	
		SHOEL	RBELA	TRACK 214.75	10.07	6800	1600	
		RBELA	JJIMY	TRACK 214.79	26.44	9900	1700	
		JJIMY	NELIE	TRACK 262.81	74.09	17000	2900	



<u>DP NAME</u>	<u>NUMBER</u>	<u>DP COMPUTER CODE</u>	<u>SUPERSEDED NUMBER</u>	<u>DATED</u>	<u>ACTUAL EFFECTIVE DATE</u>
PPORT	FOUR	PPORT4.PPORT	THREE	08/17/2017	7 OCT 2021

PROCEDURAL DATA NOTES:

- NOTE: FOR TURBOJETS ONLY.
- NOTE: DME/DME/IRU OR GPS REQUIRED.
- NOTE: RADAR REQUIRED.
- NOTE: RNAV 1.

TAKEOFF MINIMUMS:

- RWY 6, 17, 35, STANDARD WITH MINIMUM CLIMB OF 325 FT PER NM TO 3000.
- RWY 24, STANDARD WITH MINIMUM CLIMB OF 335 FT PER NM TO 3000.

TAKEOFF OBSTACLES NOTES:

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

CONTROLLING OBSTACLES:

- RWY 6: 1060 FT MSL TOWER 430349.00N/0711847.00W.
- RWY 17: 1025 FT MSL TETHERED BALLOON 425843.17N/0710644.76W.
- RWY 24: 547 FT MSL TOWER 425426.98N/0712740.95 (CLIMB GRADIENT), 1523 FT MSL TOWER 425854.70N/0713519.50W (CLIMB-TO ALTITUDE).
- RWY 35: 1060 FT MSL TOWER 430349.00N/0711847.00W (CLIMB GRADIENT), 1523 FT MSL TOWER 425854.70N/0713519.50W (CLIMB-TO ALTITUDE).

LOST COMMUNICATIONS PROCEDURES:

ADDITIONAL FLIGHT DATA:

- REFERENCE MAG VAR: KMHT 15W EPOCH YEAR: 2020.
- DME/DME ASSESSMENT: SAT (RNP 2.0)
- CHART: TOP ALTITUDE: 3000
- CHART: MINIMUM CROSSING ALTITUDE AT TYLIR - 3000

AIRPORTS SERVED:

<u>AIRPORT NAME</u>	<u>AIRPORT ID</u>	<u>CITY</u>	<u>STATE</u>
MANCHESTER	KMHT	MANCHESTER	NH

COMMUNICATIONS:

ATIS, CLEARANCE DEL, GROUND CONTROL, TOWER, BOS DEP CON

FIXES AND/OR NAVAIDS:

REMARKS:

- CLIMB GRADIENTS FOR RWY 6, 17, AND 35 ESTABLISHED TO REACH MVA AND ALLOW FOR EFFECTIVE VECTORING TO THE IF. CLIMB GRADIENT CONTROLLING OBSTACLES ARE MVA CONTROLLING OBSTACLES. CLIMB GRADIENT TERMINATION ALTITUDES ENSURE OBSTACLE CLEARANCE AND ALSO ENSURE 3000 CROSSING ALTITUDE IS REACHED AT TYLIR AND ENSURES DME/DME RECEPTION PRIOR TO THE FIX.
- MINIMUM CLIMB GRADIENT FOR TAKEOFF RWY 24 MITIGATES 547 MSL TOWER (36-000006) AND ALSO ENSURES MINIMUM DME/DME RECEPTION ALTITUDE OF 3000 AT TYLIR. ENABLES ATC TO USE DESIRED TAKEOFF COURSE VICE AIRPORT 8260-15A WHICH USES OFFSET COURSE TO ACCOUNT FOR 2007 FLIGHT INSPECTION RECOMMENDATION TO INCREASE SAFETY MARGIN FOR LIGHT AIRCRAFT ENCOUNTERING CROSS WIND CONDITIONS.



<u>DP NAME</u>		<u>NUMBER</u>	<u>DP COMPUTER CODE</u>	<u>SUPERSEDED NUMBER</u>	<u>DATED</u>	<u>ACTUAL EFFECTIVE DATE</u>
PPORT		FOUR	PPORT4.PPORT	THREE	08/17/2017	7 OCT 2021

FLIGHT INSPECTED BY

DANIEL KIRBY

Digitally signed by
JOHN BORDY
Jun 17, 2021

OFFICE **DATE**

FICO 06/09/2021

DEVELOPED BY

ANTHONY CAPPABIANCO

Digitally signed by
ANTHONY J CAPPABIANCO
Apr 15, 2021

OFFICE **DATE**

AJV-A422 01/04/2021

APPROVED BY

MARLON ROBINSON

Digitally signed by
JOHN BORDY
Jun 17, 2021

OFFICE **DATE**

AJV-A420

TITLE
MANAGER

REQUIRED EFFECTIVE DATE

ROUTINE

COORDINATED WITH:

A4A **ALPA** **AOPA** **APA** **HAI** **NBAA** **OTHER:** ZBW, BOS APP CON, MHT ATCT, ARPT MGR



DP NAME	NUMBER	DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
PPORT	FOUR	PPORT4.PPORT	THREE	08/17/2017	7 OCT 2021

CHANGES - REASONS:

1. CHANGED RWY 6 ROUTE DESCRIPTION FROM "CLIMBING LEFT TURN HEADING 039.00, THENCE..." TO "CLIMBING LEFT TURN ON HEADING 039.00, THENCE..." - 8260.46G 1-1-5.A(3).
2. CHANGED RWY 17 ROUTE DESCRIPTION FROM "CLIMBING RIGHT TURN HEADING 219.00, THENCE..." TO "CLIMBING RIGHT TURN ON HEADING 219.00, THENCE..." - 8260.46G 1-1-5.A(3).
3. CHANGED RWY 24 ROUTE DESCRIPTION FROM "CLIMB HEADING 237.43, THENCE..." TO "CLIMB ON HEADING 237.43, THENCE..." - 8260.46G 1-1-5.A(3).
4. CHANGED RWY 35 ROUTE DESCRIPTION FROM "CLIMB HEADING 351.53, THENCE..." TO "CLIMB ON HEADING 351.53, THENCE..." - 8260.46G 1-1-5.A(3).
5. CHANGED ROUTE DESCRIPTION FROM "... EXPECT VECTORS TO RAYMY, THEN ON DEPICTED ROUTE TO PPORT. MAINTAIN 3000 OR AS ASSIGNED BY ATC. EXPECT CLEARANCE TO FILED ALTITUDE/FLIGHT LEVEL WITHIN FIVE (5) MINUTES AFTER DEPARTURE" TO "... EXPECT VECTORS TO CROSS TYLIR AT OR ABOVE 3000, THEN ON TRACK 091.52 TO PPORT, THEN ON ASSIGNED TRANSITION. EXPECT CLEARANCE TO FILED ALTITUDE/FLIGHT LEVEL WITHIN FIVE (5) MINUTES AFTER DEPARTURE" - RAYMY REPLACED WITH TYLIR DUE TO LEG LENGTH ISSUES, 8260.58B 5-6-2. A, 8260.46G APPENDIX E SECTION 1.3.C.
6. CHANGED ORW VOR/DME TO YANTC IN CALVERTON TRANSITION - ORW VOR/DME TO BE DECOMMISSIONED, ATC REQUEST.
7. MEA FROM SHOEL TO RBELA CHANGED FROM 7000 TO 6800 - COMPLIANT WITH ENROUTE CLIMB RATES IAW 8260.3D 15-3-1.
8. MEA FROM RBELA TO COTEE CHANGED FROM 11000 TO 9300 - COMPLIANT WITH ENROUTE CLIMB RATES IAW 8260.3D 15-3-1.
9. MEA FROM COTEE TO BAF VORTAC CHANGED FROM 17000 TO 16800 - COMPLIANT WITH ENROUTE CLIMB RATES IAW 8260.3D 15-3-1.
10. MEA FROM RBELA TO JJIMY CHANGED FROM 11000 TO 9900 - COMPLIANT WITH ENROUTE CLIMB RATES IAW 8260.3D 15-3-1.
11. MOCA FROM JJIMY TO NELIE CHANGED FROM 2600 TO 2900 - NEW OBSTACLE EVALUATION.
12. RWY 6 TAKEOFF MINIMUMS CHANGED FROM "STANDARD WITH MINIMUM CLIMB OF 321 FT PER NM TO 3000" TO "STANDARD WITH MINIMUM CLIMB OF 325 FT PER NM TO 3000" - ROUNDED TO NEXT HIGHER 5 FT INCREMENT FOR EASIER USE AND STANDARDIZATION OF CLIMB GRADIENTS, AND TO PROVIDE A BUFFER FOR FUTURE CRITERIA.
13. RWY 17, 35 TAKEOFF MINIMUMS CHANGED FROM "STANDARD WITH MINIMUM CLIMB OF 320 FT PER NM TO 3000" TO "STANDARD WITH MINIMUM CLIMB OF 325 FT PER NM TO 3000" - ROUNDED TO NEXT HIGHER 5 FT INCREMENT FOR EASIER USE AND STANDARDIZATION OF CLIMB GRADIENTS, AND TO PROVIDE A BUFFER FOR FUTURE CRITERIA.
14. RWY 24 TAKEOFF MINIMUMS CHANGED FROM "STANDARD WITH MINIMUM CLIMB OF 320 FT PER NM TO 3000" TO "STANDARD WITH MINIMUM CLIMB OF 335 FT PER NM TO 3000" - NEW OBSTACLE EVALUATION.
15. REPLACED ALL TAKEOFF OBSTACLE NOTES WITH "SEE FORM 8260-15A, TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)" - 8260.46G APPENDIX E, SECTION 1.7.A.
16. CHANGED REMARKS BLOCK REMARK #1 FROM "MINIMUM CLIMB GRADIENTS FOR RWY 6, 17, AND 35 ESTABLISHED TO ENSURE MINIMUM DME/DME RECEPTION ALTITUDE OF 3000 REACHED AT RAYMY" TO "CLIMB GRADIENTS FOR RWY 6, 17, AND 35 ESTABLISHED TO REACH MVA AND ALLOW FOR EFFECTIVE VECTORING TO THE IF. CLIMB GRADIENT CONTROLLING OBSTACLES ARE MVA CONTROLLING OBSTACLES. CLIMB GRADIENT TERMINATION ALTITUDES ENSURE OBSTACLE CLEARANCE AND ALSO ENSURE 3000 CROSSING ALTITUDE IS REACHED AT TYLIR AND ENSURES DME/DME RECEPTION PRIOR TO THE FIX" IN REMARKS - RAYMY REPLACED WITH TYLIR DUE TO LEG LENGTH ISSUES, CLIMB GRADIENTS BASED ON MVA OBSTACLES TO ALLOW VECTORING AND CLIMB GRADIENT TERMINATION ALTITUDE OF 3000 FOR DME/DME RECEPTION.
17. RWY 6 CONTROLLING OBSTACLE CHANGED FROM "789 FT MSL AAO 425822.72N/0712137.11W" TO "1060 FT MSL TOWER 430349.00N/0711847.00W" - MVA AREA CONTROLLER.
18. RWY 17 CONTROLLING OBSTACLE CHANGED FROM "457 FT MSL POLE 425416.52N/0712501.99W" TO "1025 FT MSL TETHERED BALLOON 425843.17N/0710644.76W" - MVA AREA CONTROLLER.
19. RWY 24 CONTROLLING OBSTACLE CHANGED FROM "547 FT MSL TOWER 425426.98N/0712740.95. 1523 FT MSL TOWER 425854.70N/0713519.50W" TO "547 FT MSL TOWER 425426.98N/0712740.95 (CLIMB GRADIENT), 1523 FT MSL TOWER 425854.70N/0713519.50W (CLIMB-TO ALTITUDE)" - 8260.46G APPENDIX E, SECTION 1.8.A.
20. RWY 35 CONTROLLING OBSTACLE CHANGED FROM "409 FT MSL TREES 425716.44N/0712718.29W. 414 FT MSL TREES 425720.64N/0712715.36W. 407 FT MSL TREES 425729.22N/0712725.78W. 1523 FT MSL TOWER 425854.70N/0713519.50W" TO "1060 FT MSL TOWER 430349.00N/0711847.00W (CLIMB GRADIENT), 1523 FT MSL TOWER 425854.70N/0713519.50W (CLIMB-TO ALTITUDE)" - MVA AREA CONTROLLER, 8260.46G APPENDIX E SECTION 1.8.A.
21. REMOVED "CHART: MEA/MOCA FROM RAYMY TO PPORT, 4000/2100" FROM ADDITIONAL FLIGHT DATA - MEA NOT APPLICABLE IN COMMON ROUTE WITHOUT WAIVER, 8260.46G 1-1-5.H(4).
22. REMOVED "PILOT NAVIGATION AREA: 7 NM ARC CENTERED ON RAYMY (IF), CW FROM: POINT A (BEARING 041 TO RAYMY) TO: POINT B (BEARING 131 TO RAYMY) MINIMUM ALTITUDE - 3000" FROM ADDITIONAL FLIGHT DATA - 8260.46G 1-1-5.H(4).
23. REMOVED "PSM VOR/DME" FROM FIXES AND/OR NAVAIDS - PSM VOR/DME BEING DECOMMISSIONED.
24. CHANGED REMARKS BLOCK REMARK #2 FROM "MINIMUM CLIMB GRADIENT FOR TAKEOFF RWY 24 MITIGATES 547 MSL TOWER (36-000006) 80 FEET OUTSIDE ICA OIS AND ALSO ENSURES MINIMUM DME/DME RECEPTION ALTITUDE OF 3000 AT RAYMY. ENABLES ATC TO USE DESIRED TAKEOFF COURSE VICE AIRPORT 8260-15A WHICH USES OFFSET COURSE TO ACCOUNT FOR 2007 FLIGHT INSPECTION RECOMMENDATION TO INCREASE SAFETY MARGIN FOR LIGHT AIRCRAFT ENCOUNTERING CROSS WIND CONDITIONS" TO "MINIMUM CLIMB GRADIENT FOR TAKEOFF RWY 24 MITIGATES 547 MSL TOWER (36-000006) AND ALSO ENSURES MINIMUM DME/DME RECEPTION ALTITUDE OF 3000 AT TYLIR. ENABLES ATC TO USE DESIRED TAKEOFF COURSE VICE AIRPORT 8260-15A WHICH USES OFFSET COURSE TO ACCOUNT FOR 2007 FLIGHT INSPECTION RECOMMENDATION TO INCREASE SAFETY MARGIN FOR LIGHT AIRCRAFT ENCOUNTERING CROSS WIND CONDITIONS" - RAYMY REPLACED WITH TYLIR, MEASUREMENT NO LONGER ACCURATE WITH RIASED CLIMB GRADIENT.
25. ADDED "CHART: MINIMUM CROSSING ALTITUDE AT TYLIR - 3000" TO ADDITIONAL FLIGHT DATA - 8260.46G APPENDIX E, SECTION 1.10.C.



FEDERAL AVIATION ADMINISTRATION
 FLIGHT STANDARDS SERVICE
 DEPARTURE (DATA RECORD)

<u>DP NAME</u>	<u>NUMBER</u>	<u>DP COMPUTER CODE</u>	<u>SUPERSEDED NUMBER</u>	<u>DATED</u>	<u>ACTUAL EFFECTIVE DATE</u>				
PPORT	FOUR	PPORT4.PPORT	THREE	08/17/2017	7 OCT 2021				
<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>
TYLIR	430332.93N/0711001.62W	Y	-	IF	-	-	AT/ABOVE 3000		
PPORT	430523.59N/0705929.08W	Y	FB	TF	76.52	7.94			
PPORT	430523.59N/0705929.08W	Y	-	IF	-	-			PPORT4.BAF
SHOEL	425927.00N/0705240.39W	Y	FB	TF	139.91	7.76			
RBELA	424957.99N/0705717.96W	Y	FB	TF	199.75	10.07			
COTEE	422942.23N/0710707.92W	Y	FB	TF	199.76	21.52			
BAF VORTAC	420943.05N/0724258.32W	Y	FB	TF	254.84	73.84			
PPORT	430523.59N/0705929.08W	Y	-	IF	-	-			PPORT4.CCC
SHOEL	425927.00N/0705240.39W	Y	FB	TF	139.91	7.76			
RBELA	424957.99N/0705717.96W	Y	FB	TF	199.75	10.07			
JJIMY	422504.09N/0710923.06W	Y	FB	TF	199.79	26.44			
YANTC	413322.81N/0715956.95W	Y	FB	TF	216.41	63.96			
CCC VOR/DME	405546.65N/0724755.90W	Y	FB	TF	224.19	52.18			
PPORT	430523.59N/0705929.08W	Y	-	IF	-	-			PPORT4.NELIE
SHOEL	425927.00N/0705240.39W	Y	FB	TF	139.91	7.76			
RBELA	424957.99N/0705717.96W	Y	FB	TF	199.75	10.07			
JJIMY	422504.09N/0710923.06W	Y	FB	TF	199.79	26.44			
NELIE	415627.64N/0724118.88W	Y	FB	TF	247.81	74.09			

