

DEPARTURE PROCEDURE (DP) PROGRAM



August 5, 2005

**U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

Distribution: A-W(SY/PO/UA/AR/ND/AS/FS/AT/AF)-3; ATA-100 (15 Cys); AVN-100 (200 Cys); AVN-500 (50 Cys); AOS-200 (10 Cys); AMA-200 (80 Cys); A-X(FS/AT/AF/AS)-3; A-FFS-4 (ALL); A-FFS-7 (STD); A-FAT-0 (STD); A-FAF-0 (STD); ZVN-826; Special Military and Public Addressees

Initiated By: AFS-420

FOREWORD

This order provides the policy, guidance, and standardization for initiating, developing, processing, and managing the Departure Procedure (DP) Program. The original order combined into a single product textual IFR departure procedures that were developed by the National Flight Procedures Office (NFPO) under the guidance of the Flight Standards Service (AFS), and graphical Standard Instrument Departures (SIDs) that were designed and produced under the direction of the Air Traffic Organization (ATO). The original order also provided for the graphic publication of complex IFR departure procedures to facilitate pilot understanding of the procedure as well as all area navigation (RNAV) DPs, both those developed solely for obstruction clearance and those developed for system enhancement. Also, the term Obstacle Departure Procedure (ODP) is introduced to describe certain procedures. This document defines two separate types of DPs: SIDs and ODPs.

James J. Ballough
Director, Flight Standards Service

TABLE OF CONTENTS

Page

DEPARTURE PROCEDURE (DP) PROGRAM

1.	Purpose -----	1
2.	Distribution -----	1
3.	Background -----	1
4.	Cancellation-----	1
5.	Effective Date-----	1
6.	Explanation of Changes -----	1
7.	Definitions -----	3
8.	Forms and Reports-----	3
9.	Related Publications -----	3
10.	Departure Procedure Guidelines -----	4
11.	Responsibilities -----	10
12.	Accuracy Verification and Responsibilities-----	14
13.	Military Departure Procedures -----	14
14.	FAA 8260-15 Series Forms-----	15
15.	Information Update-----	16

APPENDIX 1. ABBREVIATIONS, TERMS AND DEFINITIONS (3 pages)

APPENDIX 2. GUIDELINES FOR THE DESIGN OF GRAPHIC INSTRUMENT DEPARTURE PROCEDURES (DPs) (10 pages)

APPENDIX 3. GRAPHIC DEPARTURE PROCEDURE (DP) REQUIREMENTS WORKSHEET (5 pages)

APPENDIX 4. 8260-2 DATA WORKSHEET (2 pages)

APPENDIX 5. INSTRUCTIONS FOR COMPLETING FAA FORM 8260-15A, TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP) (pages 1 – 16)

INSTRUCTIONS FOR COMPLETING FAA FORM 8260-15B, GRAPHIC DEPARTURE PROCEDURE (DP) (NON-RNAV DEPARTURE PROCEDURES) (pages 17 – 34)

INSTRUCTIONS FOR COMPLETING FAA FORM 8260-15D, DEPARTURE PROCEDURE (CONTINUATION) (pages 35 – 40)

APPENDIX 6. INSTRUCTIONS FOR COMPLETING FAA FORM 8260-15B, GRAPHIC DEPARTURE PROCEDURE (DP) (RNAV DEPARTURE PROCEDURES) (pages 1 – 22)

INSTRUCTIONS FOR COMPLETING FAA FORM 8260-15C, DEPARTURE (DATA RECORD) (pages 23 – 32)

INSTRUCTIONS FOR COMPLETING FAA FORM 8260-15D, DEPARTURE PROCEDURE (CONTINUATION) (pages 33 - 36)

DEPARTURE PROCEDURE (DP) PROGRAM

- 1. PURPOSE.** This order provides policy, guidance, and standardization for initiating, developing, processing, and managing the DP program.
- 2. DISTRIBUTION.** This order is distributed in Washington headquarters to the branch level in the Offices of System Safety; Aviation Policy and Plans; Air Traffic Systems Development; Aviation Research; Communications, Navigation, and Surveillance Systems; and Airport Safety and Standards; to Flight Standards, Air Traffic, and Airway Facilities Services; to the Aeronautical Information Services Division (System Operations Services); to the National Flight Procedures Office (NFPO), AVN-100, to the National Aeronautical Charting Office (NACO), Requirements and Technology Staff, AVN-503; to the National Airway Systems Engineering and Regulatory Standards Divisions at the Mike Monroney Aeronautical Center; to the branch level in the regional Flight Standards, Air Traffic, Airway Facilities, and Airports Divisions; to all Flight Inspection Field Offices; to the Flight Standards District Offices (FSDO); to all Air Traffic Field Offices and Facilities; to all Airway Facilities Field Offices; special mailing list ZVN-826; and Special Military and Public Addressees.
- 3. BACKGROUND.** The original order combined into a single product textual IFR departure procedures that were developed by the National Flight Procedures Office (NFPO) under the guidance of the Flight Standards Service (AFS), and graphical Standard Instrument Departures (SIDs) that were designed and produced under the direction of the Air Traffic Organization (ATO). This combined product introduced the new acronym, Departure Procedures (DP), to the pilot/controller community and the aforementioned terms of "instrument flight rule (IFR) departure procedure" and "SID" were eliminated. The original order also provided for the graphic publication of IFR departure procedures to facilitate pilot understanding of the procedure as well as all area navigation (RNAV) DPs, both those developed solely for obstruction clearance and those developed for system enhancement. Elimination of the term "SID" created undue confusion in both the domestic and international aviation communities. Therefore, in the interest of international harmonization, the FAA reintroduced the term "SID" in Order 8260.46B while also using the term "Obstacle Departure Procedures (ODP)" to describe certain procedures. This order defines two separate types of DPs: SIDs and ODPs.
- 4. CANCELLATION.** Order 8260.46B, Departure Procedure (DP) Program, dated January 2, 2003, is canceled.
- 5. EFFECTIVE DATE.** September 9, 2005
- 6. EXPLANATION OF CHANGES.**
 - a. Paragraph 10, table 1.** Expanded guidance to mitigate obstacles greater than 3 SM from departure end of runway (DER). Guidance that a visual climb over airport (VCOA) may not be used for RNAV ODPs. The option to raise the obstacle clearance surface (OCS) is no longer an option and is replaced by the reduced takeoff length option.
 - b. Paragraph 10b(1).** Provides guidance not to publish text that allows an option to use alternative maneuvers.

- c. **Paragraph 10b(2).** Explains that before rounding, values will be applied to each obstacle situation in table 1 to determine required action.
- d. **Paragraph 10b(6).** Points out that transitions are not permitted on ODPs.
- e. **Paragraph 10b(7).** Specifies that radar vectors must not be required as the navigation source in ODP development.
- f. **Paragraph 10d(3).** Provides guidance for SID design using radar as the navigation source.
- g. **Paragraph 10e(5).** States the primary goal in ODP development.
- h. **Paragraph 10e(6).** Prohibits use of a VCOA in SID design.
- i. **Paragraph 10e(8).** Provides guidance for radar use to support SIDs
- j. **Paragraph 10f(4).** Adds requirement for a graphic ODP to support only one airport.
- k. **Paragraph 10g(2).** Provides terminology for ATC heading assignment.
- l. **Paragraph 10g(5).** Prohibits use of the word “immediate” in departure instructions
- m. **Paragraph 11c(5).** Adds requirement for ATC to ensure that distance measuring equipment (DME)/DME screening model has been run on RNAV SIDs.
- n. **Paragraph 11e(4).** Adds requirement for the NFPO to ensure that DME/DME screening model has been run on ODPs.
- o. **Paragraph 11e(7).** Adds requirement for NFPO to forward copies of applicable 8260-series forms to NACO and affected ATC facilities.
- p. **Paragraph 11e(10).** Adds requirement to process SIAP amendments when an 8260-5 cancellation is processed.
- q. **Paragraph 13a.** Changes National Imagery and Mapping Agency (NIMA) to National Geospatial Intelligence Agency (NGA).
- r. **Paragraph 14a(1).** Form 8260-15A is now required for all airports.
- s. **Paragraph 14a(4).** Explains the use of Form 8260-15D as a continuation sheet for Forms 8260-15A/B.
- t. **Paragraph 14d.** Expands guidance on canceling Forms 8260-15A/B.
- u. **Appendix 1.** Updates the abbreviations, terms, and definitions used in this directive.
- v. **Appendix 2.** Clarifies and expands DP guidelines, and adds more detailed examples.
- w. **Appendix 3.** Adds information concerning Block 6.2. Initial Route from Runway.

x. **Appendix 5.** Adds new FAA Form 8260-15D, Departure Procedure (Continuation) form and provides completion instructions. Also modifies Forms 8260-15A and 8260-15B and revises completion instructions accordingly.

y. **Appendix 6.** Adds new FAA Form 8260-15D, Departure Procedure (Continuation) form and provides completion instructions. Also modifies Forms 8260-15 and revises completion instructions accordingly.

7. DEFINITIONS. As used in this order, *shall or must* means compliance is mandatory. Appendix 1 contains a glossary of additional terms, abbreviations, and acronyms used in this order.

8. FORMS AND REPORTS. Appendices 3, 4, 5, and 6 contain requirements data, applicable forms, and associated instructions.

9. RELATED PUBLICATIONS (latest editions).

- a. **Order 1050.1**, Policies and Procedures for Considering Environmental Impacts.
- b. **Order 7100.9**, Standard Terminal Arrival.
- c. **Order 7400.2**, Procedures for Handling Airspace Matters.
- d. **Order 8260.3**, United States Standard for Terminal Instrument Procedures (TERPS).
- e. **Order 8260.19**, Flight Procedures and Airspace.
- f. **Order 8260.26**, Establishing and Scheduling Standard Instrument Procedure Effective Dates.
- g. **Order 8260.40**, Flight Management System (FMS) Instrument Procedure Development.
- h. **Order 8260.43**, Flight Procedures Management Program.
- i. **Order 8260.44**, Civil Utilization of Area Navigation (RNAV) Departure Procedures.
- j. **Advisory Circular 90-100**, U.S. Terminal and En route Area Navigation (RNAV) Operations.
- k. **RTCA DO-187**, Minimum Operational Performance Standards for Airborne Area Navigation Equipment Using Multi-Sensor Inputs.
- l. **ARINC Specification 424**, Navigation System Data Base.
- m. **IACC No. 4**, Interagency Air Cartographic Committee Chart Specification for Low Altitude Instrument Approach Procedures.
- n. **IACC No. 7**, Interagency Air Cartographic Committee Chart Specification for Standard Instrument Departure Charts.

o. IACC No. 17, Interagency Air Cartographic Committee Chart Specification for Terminal Procedures Publications.

10. DEPARTURE PROCEDURE GUIDELINES.

a. General. There are two types of DPs; those developed to assist pilots in obstruction avoidance, referred to as "Obstacle DP (ODP)," and those developed to communicate air traffic control clearances, referred to as "Standard Instrument Departure (SID)." DPs and/or takeoff minimums must be established for those airports with approved instrument approach procedures. ODPs are developed by the NFPO at locations where they have instrument procedure development responsibility. ODPs may also be required at private airports where the FAA does not have instrument procedure development responsibility. It is the responsibility of non-FAA proponents to ensure a TERPS Diverse Departure obstacle assessment has been accomplished and an ODP developed, where applicable.

b. Obstacle DPs. An ODP must be developed when obstructions penetrate the 40:1 departure OCS as described in Order 8260.3, Volume 4. Use Table 1 to determine each situation and required action for each.

Table 1. ODP Development Combinations

SITUATION	ACTION
<p>1) TERPS diverse departure obstacle assessment does not identify any obstacle penetrations.</p>	<p>Complete Form 8260-15A documenting standard takeoff minimums apply.</p>
<p>2) TERPS diverse departure obstacle assessment identifies obstacles within the initial climb area (ICA) that require a CG greater than 200 ft/NM to an altitude of 200 ft or less, above DER (commonly referred to as “low, close-in obstacles”).</p>	<p>Establish a DP that provides the pilot a NOTE identifying the obstacle(s) type, location relative to DER, height (AGL), and elevation (MSL). See appendix 5 for the various publication text methods available.</p>
<p>3) TERPS diverse departure obstacle assessment identifies obstacles that require a CG greater than 200 ft/ NM, to an altitude greater than 200 ft above DER.</p>	<p>A) Obstacles located within the ICA (extended) 3 SM or less from DER: Establish a DP using one of the following options (listed in order of preference):</p> <ol style="list-style-type: none"> 1) Publish a textual or graphic route/sector to avoid the obstacle with standard takeoff minimums and standard CG, <u>OR</u> 2) Publish a ceiling and visibility to see and avoid the obstacle with the option of standard takeoff minimums with a minimum CG to a specified fix or altitude that provides obstacle clearance with a standard CG, <u>AND</u>: <ol style="list-style-type: none"> a) Provide a NOTE identifying the controlling obstacle, which specifies the obstacle description, location relative to the DER, height (AGL), and elevation (MSL), <u>AND</u> b) For obstacles that penetrate the 40:1 OCS by 35 ft or less, provide an option to reduce takeoff runway length to accommodate the most penetrating obstacle based on a standard 200 ft/NM climb gradient, OR 3) A combination of options 1) and 2) above. <p>B) All Other Obstacles: Establish a DP using one of the following options (listed in order of preference):</p> <ol style="list-style-type: none"> 1) Publish a graphic or textual route/sector to avoid the obstacle with standard takeoff minimums and standard climb, <u>OR</u> 2) Publish standard takeoff minimums with a minimum CG to a specified fix or altitude that provides obstacle clearance with a standard CG, <u>AND</u> <ol style="list-style-type: none"> a) For obstacles that penetrate the 40:1 OCS by 35 ft or less, provide an option to reduce takeoff runway length to accommodate the most penetrating obstacle based on a standard 200 ft/NM CG, <u>AND</u> b) Provide a ceiling and visibility sufficient to allow a visual climb over the airport (VCOA) to an altitude that will provide obstacle clearance, OR <p><i>NOTE: Do not establish a VCOA in conjunction with an RNAV DP.</i></p>

	<p>3) A combination of options 1 and 2 above.</p> <p>C) Both Action A) and B) Obstacles:</p> <p>1) If the DP highest CG is based on an obstacle ≤3 SM from DER (Action A), establish a DP using one of the following options (listed in order of preference):</p> <p>a) Publish a graphic or textual route/sector to avoid the obstacle with standard takeoff minimums and standard climb, <u>OR</u></p> <p>b) Publish standard takeoff minimums <u>and</u> the minimum CG required to clear the ≤3 SM obstacle to a specified fix or altitude that will provide subsequent obstacle clearance above all DP obstacles based on a standard 200 ft/NM CG, <u>AND</u></p> <p>1) Provide a ceiling and visibility to see and avoid the ≤3 SM obstacle <u>and</u> the minimum CG required to clear all other obstacles outside the ICA (extended) to a specified fix or altitude that provides obstacle clearance, <u>AND</u></p> <p>2) Provide a ceiling and visibility sufficient to allow a VCOA to an altitude that will provide obstacle clearance.</p> <p>2) If the DP highest CG is based on all other obstacles (Action B), then Action B above applies.</p> <p>3) For obstacles that penetrate the 40:1 OCS by 35 ft or less, provide an option to reduce takeoff runway length to accommodate the most penetrating obstacle based on a standard 200 ft/NM climb gradient.</p> <p><i>NOTE: Where a graphic route/sector is published, include on the chart: takeoff minimums, required CGs, and applicable obstacle data for each runway using the DP.</i></p> <p>D) If none of the above actions are feasible, an IFR departure must not be authorized.</p>
<p>4) TERPS diverse departure obstacle assessment identifies obstacles requiring a CG to 200 ft or less above DER and additional obstacles that require a CG to an altitude greater than 200 ft above DER.</p>	<p>Apply a combination of action items from situations 2) and 3).</p>

(1) Establish only one ODP for a Runway. This will be considered the default IFR departure procedure for a given runway and is intended for pilot awareness and use in the absence of ATC radar vectors or SID assignment. **Do not** publish text that allows an option to use either an alternative maneuver; e.g., "Climb runway heading to 1200 before turning or use Manchester Departure."

(2) Table 1 outlines allowable development combinations relating to specific obstacle situations. "Before rounding" values will be applied to each situation to determine required action.

(3) An ODP may be either textually or graphically depicted within the following guidelines.

(a) Textual ODP. A relatively simple ODP may be published textually unless a graphical depiction is required for clarity. Textual ODPs may include a climb gradient when required for obstruction avoidance; but must not include ATC related climb gradients. Textual ODP instructions must not exceed a maximum of one turn, one altitude change, and one climb gradient.

(b) Graphic ODP. Complex ODPs are those that require a visual presentation to clearly communicate the departure instructions and desired flight paths. If the ODP is depicted graphically, it must be stated on Form 8260-15A, Takeoff Minimums and Textual Departure Procedures (DP), in the "DEPARTURE PROCEDURE" section; e.g. "USE JONES DEPARTURE." The decision to graphically publish ODPs rests within the NFPO. When determining the need for a graphic DP, the NFPO must, in addition to the textual DP restrictions noted in paragraph 10b(3)(a), consider:

- 1 The number of ground-based NAVAIDs and fixes.
- 2 Whether graphical depiction will enhance pilot comprehension of the procedure.
- 3 The proximity and effect of precipitous or significant terrain.

(4) ODPs must be developed with primary emphasis given to using the least onerous route (see appendix 1) to the en route structure or at an altitude that will allow random (diverse) IFR flight, while accommodating commonly used routings out of each airport to the maximum extent practicable. ODPs must be coordinated with ATC to ensure flight safety and compatibility with the en route structure. ATC altitude restrictions and/or climb gradients must not be included in ODP development.

(5) Naming conventions and computer code assignments for graphic ODPs must follow the guidance specified for SIDs in appendix 2 to ensure controller awareness of route flown.

(6) Transitions are not permitted on ODPs.

(7) ODPs must be developed using ground based NAVAIDs, RNAV, or dead reckoning guidance wherever possible. Radar vectors must not be used for navigation in ODP development. At those locations served by RNAV approaches exclusively, every effort must

first be made to develop an ODP that accommodates conventional (preferably VOR) navigation systems. Only if this effort fails, should an RNAV ODP be developed.

c. Standard Instrument Departures (SIDs). SIDs are developed to assist in meeting environmental, capacity, and air traffic control requirements. SIDs may be requested by specific ATC facilities, the military services, or other proponents to enhance operations. SIDs also provide protection from obstacles and are depicted graphically; however, they will not contain the "(OBSTACLE)" designation following the procedure title on the chart, and may not be flown unless approved by ATC.

d. Equipment Requirements. DPs are also categorized by equipment requirements as follows:

(1) Non-RNAV DP. A DP established for aircraft equipped with conventional avionics using ground-based NAVAIDs; e.g., nondirectional beacon (NDB), very high frequency omnidirectional range (VOR), VHF omni-directional range/tactical air navigation (VORTAC), localizer (LOC), etc. These DPs may also be designed using dead reckoning navigation.

(2) RNAV DP. A DP established for aircraft equipped with RNAV avionics; e.g., global positioning system (GPS), FMS, etc. Automated vertical navigation must not be required. All RNAV procedures not requiring GPS must be annotated with the note: "RADAR REQUIRED."

(3) Radar DP. Radar may be used for navigation guidance for SID design. Radar SIDs are established when ATC has a need to vector aircraft on departure to a particular ATS Route, NAVAID, or Fix. Radar vectors may also be used to join conventional or RNAV navigation SIDs. SIDs requiring radar vectors must be annotated "RADAR REQUIRED."

e. Design Constraints. The following design constraints apply to all DPs:

(1) DPs must not require a turn prior to reaching 400 feet above the departure end of runway (DER) elevation. See Order 8260.3, Volume 4, and Order 8260.44 when a turn is required within 2 NM of DER.

(2) DPs requiring a climb gradient (CG) in excess of 500 feet/NM, either for obstacle clearance or air traffic control restrictions, need approval from Flight Standards Service. All approval requests will be assessed by the FAA Flight Technologies and Procedures Division, AFS-400, Procedures Review Board (PRB). Consideration for approval will be based on, but not limited to, potential users/aircraft capability of meeting such a CG, and location of the obstruction along the projected flight track that is causing the CG.

NOTES:

1. When Flight Standards Service will not approve a climb gradient (CG) in excess of 500 ft/NM and the obstacle forcing such a CG is located inside the ICA (extended) 3 SM or less from DER, a ceiling and visibility may be applied to see and avoid the obstruction(s) as the only option available.

2. When Flight Standards will not approve a climb gradient (CG) in excess of 500 ft/NM and the obstacle forcing such a CG is located outside the ICA (extended) 3 SM from DER, a stand-alone VCOA procedure may be used as the only option available for obstacle avoidance.

(3) **Fan markers** must not be used as a fix to designate a turning point.

(4) **Textual and graphic ODPs** must be designed to terminate at a fix/NAVAID located within the IFR en route structure or at an altitude that will allow random IFR flight.

(5) **The primary goal in ODP development** is to retain standard takeoff minimums with standard climb to the extent possible. See table 1 for possible development combinations.

(6) **Do not establish VCOA procedures** in conjunction with a SID or RNAV ODP.

(7) **SIDs must be designed** to terminate at a fix/NAVAID depicted on an IFR en route chart, at an altitude that will allow random IFR flight, or at a position and altitude where ATC radar service is provided. When a SID is designed to incorporate radar vectors at the termination point, provide a heading for incorporation into the avionics database in the event ATC instructions are not received prior to or at the termination fix.

(8) **Radar Departures (designed to support conventional/RNAV SIDs)** must be designed based on information provided by the Air Traffic Control facility requesting the procedure. Some or all of the following items are design constraints that may need consideration when developing a vector area.

(a) **The range of initial departure headings.**

(b) **Minimum turn altitudes.**

(c) **Vectoring area boundaries.**

(d) **Description of vectoring prohibited areas/sectors.**

(e) **Data on obstacles/areas to be avoided.**

(f) **Distance and angle to allow for pilot navigation leading to the first fix.**

This is required for RNAV radar departures and is known as the Pilot Navigation Area (PNA). The PNA must be described on Form 8260-15B (See appendix 6 for documentation instructions).

(g) **Distance after that first fix to protect for turn completion** (this applies to RNAV radar departures).

f. **Charting Constraints.** The following charting constraints apply to all DPs:

(1) **Charting Minimum Altitudes.** Graphic DPs must depict minimum altitudes for obstruction clearance; and, where appropriate, any required minimum ATC altitudes. When different obstacle and ATC altitudes are required, document both values. Enter minimum altitudes to be charted on the appropriate 8260-15 series form (see appendix 5 or 6).

(2) **Charting Minimum Climb Gradients.** Graphic DPs must depict minimum climb gradient(s) that exceed 200 feet/NM, required for either obstruction clearance or ATC purposes. Only one obstacle climb gradient is permitted by TERPS. Multiple ATC climb gradients are permitted. When both ATC and obstacle climb gradients are required, the ATC

climb gradient must not be less than that required for obstruction clearance. Enter minimum climb gradients for charting on the appropriate 8260-15 series form (see appendix 5 or 6).

(3) ODPs that are depicted graphically must have the term "(OBSTACLE)" printed on the graphic (see appendix 5 or 6). This will be indicated by marking the obstacle box on Form 8260-15B. U.S. Government charts will include this immediately following the procedure title; e.g., TETON ONE DEPARTURE (OBSTACLE).

(4) A graphic ODP may serve one or more runways at a single airport; e.g., a graphic departure may contain initial departure instructions for both Runways 9 and 27 on the same chart.

(5) Graphic DPs must include applicable takeoff minimums, climb gradients, and obstacle data (see table 1) on the graphic chart, even if redundant to information published textually.

(6) ODPs developed for RNAV use must be published graphically and contain "(OBSTACLE) (RNAV)" after the procedure title. Marking both the obstacle and RNAV boxes on Form 8260-15B will indicate this.

g. Terminology. The following terminology should be used for initial climb instructions:

(1) When required, departure instructions should specify the actual heading to be flown after takeoff. Example: "Climb heading 350.10..." Some existing procedures specify "Climb runway heading." Over time, these procedures will be updated, changing the terminology to specify the actual heading being flown.

(2) If departure instructions require a heading to be assigned by ATC, use: "**Climb on assigned heading for radar vectors to (name of fix/airway, etc.).**"

(3) If departure instructions require a specific altitude to climb to after takeoff, do not use the terminology "Climb to (altitude) ..." without including a heading to fly. Example: "**Climb heading 310.25 to 1500 ...**"

(4) Do not use the terminology "Climb straight ahead..." or "Maintain runway track..." as there is no guidance or reference definition of this phraseology for the pilot to apply.

(5) A departure procedure requiring a turn upon reaching 400 feet above the departure end of runway (DER) elevation does not require an initial climb heading to be specified. For example, "Climbing right turn direct XYZ VOR..."

NOTE: Do not use the word "immediate/immediately" in any type of departure instructions; e.g., turning instruction or speed restrictions. Old "early turn" departure procedures may contain instructions to "Turn left (right) as soon as practicable." This terminology is only to be used on non-standard departure procedures approved by Flight Standards or the appropriate military authority.

11. RESPONSIBILITIES.

a. General. The following guidance outlines procedures for DP requests, processing, and cancellation.

(1) Procedure Requests. SIDs are normally requested by the ATC facility responsible for departure control at the airport where the procedure is proposed, or by another proponent. All requests for new or amended SIDs must be forwarded to the appropriate Regional Airspace and Procedures Team (RAPT) under Order 8260.43A.

(2) Requirements. ATC must provide the RAPT detailed operational requirements and restrictions for inclusion in the SID design. AVN must make every effort to meet ATC identified operational requirements and constraints using current criteria and policy. When current criteria and policy will not support a design to meet ATC requirements, AVN, AAT, AFS-420, and other interested parties must work together to find an acceptable solution.

(3) Cancellation. All proposed SID cancellations must be approved by the RAPT. The NFPO has sole responsibility for canceling ODPs.

b. Proponent. A proponent's request for a DP must include the information in appendices 2 and 3 and must be completed and forwarded to the ATC facility providing departure control service to the airport. The DP request package must include the following:

(1) An outline of the type of procedure and expected benefits.

(2) A proposed ground track, including associated fixes and any proposed altitude or speed restrictions.

(3) A request (if required) for development assistance from the servicing ATC facility.

c. ATC. When assisting a proponent or requesting a SID, the ATC facility providing departure control service must:

(1) Evaluate the proponent's request to ascertain preliminary operational feasibility and to determine/verify that significant benefits (see appendix 1) will be derived.

(2) Assist in designing the procedure by providing the proponent with information pertaining to traffic flow and operational constraints; e.g., routes, minimum IFR altitudes, facility/sector lateral and vertical airspace boundaries, special use airspace, etc.

NOTE: When an ATC facility proposes SID development from an airport served primarily by air carriers, it may attempt to solicit the assistance of a "lead carrier" in the design and flyability of the proposed procedure.

(3) Coordinate with other ATC facilities affected by the procedure.

(4) Act as the focal point for all ATC coordination and provide appropriate assistance in resolving any problems identified during the development process.

(5) Ensure that a DME/DME screening model has been run on RNAV SIDs to determine if the procedure is useable by suitably equipped aircraft, prior to submission.

NOTE: The DME/DME assessment process is contained in separate guidance.

(6) Contact System Operations Services, Environmental Program Division, for assistance/guidance to conduct a noise screening.

NOTE: Notice 7210.360, Noise Screening Criteria for Certain Air Traffic Actions Above 3,000 feet, has expired; however, noise screening is still required. The requirement will be re-established in a proposed Air Traffic environment order.

(7) Conduct an environmental review under Order 1050.1 for all DPs (SIDs and ODPs) to ensure that the requirements of the National Environmental Policy Act have been met.

NOTE: The following information is extracted from Order 1050.1: "When an FAA action is requested from the public, there may be particular situations such as issuance of various certificates, approval of airline operating specifications or amendments, establishment of new or revised instrument approaches/DPs affecting noise sensitive areas, etc., which will require the FAA to perform an environmental assessment. Whenever this situation occurs, FAA action may be delayed unless the applicant or other interested persons furnish assistance in the development of pertinent environmental data."

(8) Coordinate with the servicing ARTCC to obtain a 5-letter pronounceable name for all fixes in the graphic DP. Complete Form 8260-2 data worksheet for each fix being established, modified, or canceled (see appendix 4). Include the worksheet(s) as part of the graphic DP request package. Existing fixes/NAVAIDs should be used where conveniently located.

(9) Complete the DP requirements data worksheet (see appendix 3).

(10) Forward the requested package to the appropriate RAPT (see Order 8260.43A). The package must contain worksheets for all fixes, the DP requirements data worksheet, and a sketch of procedures requiring graphic publication (see appendix 5 or 6).

(11) Upon receipt from the FPO, forward one copy of each 8260-2 and 8260-15 series form(s) to affected ATC facilities.

(12) Review SIDs at least biennially for continued need. Coordinate requested changes through the Regional Airspace and Procedures Team (RAPT).

d. The FPO must:

(1) Review the DP package for completeness.

(2) Review DPs for impact by current or proposed Obstacle Evaluation/Airport Airspace Analysis (OE/AAA), Facilities and Equipment, National Change Proposal (NCP), or other applicable projects.

NOTE: The point-of-contact (POC) and telephone number for the ATC facility is listed on the Graphic DP requirements worksheet. The FPO must contact the POC to resolve any problems in developing the requested procedure and provide appropriate alternatives. The POC must be responsible for additional coordination of changes required for development. The FPO should coordinate with the regional Flight Standards All Weather Operations/Program Manager (AWO/PM) for assistance where necessary.

(3) Facilitate discussion of the procedure at the RAPT.

(4) Forward the DP package to the NFPO.

(5) Provide one copy of each 8260-2 and 8260-15 series form(s) to the ATC facility providing departure control service.

e. The NFPO must:

(1) Develop and process textual ODPs on Form 8260-15A, Takeoff Minimums and Obstacle Departure Procedures, under applicable directives.

(2) Develop and process graphic ODPs and SIDs on Form 8260-15B, Graphic Departure Procedure.

(3) Develop and process a Form 8260-15C, Departure Data Record, for all RNAV DPs.

(4) Ensure that a DME/DME screening model has been run on RNAV “obstacle” departures (ATC is responsible for DME/DME screening of SIDs) to determine if the procedure is useable by suitably equipped aircraft, prior to submission for flight inspection.

NOTE: The DME/DME assessment process is contained in separate guidance.

(5) Submit DPs to Flight Inspection Operations Division, AVN 200, for necessary action.

(6) Ensure that textual ODPs submitted “concurrent” with a “proposed” SIAP are flight inspected prior to assigning an effective date for the SIAP via .26 messages.

(7) After satisfactory flight inspection, forward the original Form(s) 8260-2, Radio Fix and Holding Data Record, and original 8260-15 series forms to NFDC. Copies will be provided to AVN-512 and all affected ATC facilities.

(8) Develop, review, track, and cancel NOTAMs relating to ODPs and SIDs.

(9) Review ODPs periodically for continued need, obstacle clearance, and compliance with current criteria and policy; and coordinate proposed changes with the appropriate ATC facility. When application of new criteria or a new obstacle affects an ODP/SID that requires adjustment to an obstacle-driven CG, all DPs must be evaluated to determine if other CGs require adjustment. If CG adjustments are required, they must be updated simultaneously in the same charting cycle.

(10) When a location currently has standard takeoff minimums and circumstances now require non-standard takeoff minimums and/or an ODP development, cancel the Original Form 8260-15A (that identified takeoff minimums as Standard) and generate a new, Original Form 8260-15A with the non-standard takeoff minimums and/or an ODP.

(11) When it is necessary to cancel a DP, process the appropriate Form 8260-15 as directed in paragraph 15c.

f. The NFDC must:

(1) Conduct a pre-publication review of submitted forms to ensure compatibility with the National Airspace System Resources, National Database, and compliance with applicable directives relative to form entries.

(2) Assign an effective date and publish textual ODPs in the transmittal letter (TL) authorizing charting agencies to publish the procedure.

(3) Assign an effective date and publish graphic DPs, and associated fixes, in the daily National Flight Data Digest (NFDD) authorizing charting agencies to publish the procedure.

(4) Monitor and track the status of concurrent instrument approach procedure (IAP) packages to ensure that the entire package is published with the same effective date.

(5) Notify the NFPO of delays in publication if the associated proposed procedures have not been flight checked or the associated docket has not received a final date by the applicable cutoff.

(6) Resolve data conflicts, form discrepancies, etc., with the NFPO.

(7) Review and track FDC NOTAMs relating to textual ODPs.

(8) File and maintain the original signed copy of the forms.

12. ACCURACY VERIFICATION AND RESPONSIBILITIES. Any ATC facility, DOD, proponent, charting agency, procedure user, concerned individual, organization, or office should:

a. Notify the NFPO of published errors (including omissions) that affect safety of flight by the fastest means available. The NFPO must take appropriate NOTAM action under Order 8260.19C.

b. Notify the NFDC whenever pre-publication errors are discovered in the TL or NFDD. NFDC should also be notified of charting errors in published aeronautical products; the NFDC will take appropriate corrective action in concert with the NFPO.

13. MILITARY DEPARTURE PROCEDURES.

a. Military DPs are not handled or published in the same manner as civil DPs. Approval authority for DPs at military airports rests with the military. The FAA develops U.S. Army DPs under the latest edition of Order 8260.15, U.S. Army Terminal Instrument Procedures Service. The FAA develops U.S. Air Force DPs at domestic civil airports under the latest edition of Order 8260.32, U.S. Air Force Terminal Instrument Procedures Service. The National Geospatial-Intelligence Agency (NGA) publishes all military DPs.

NOTE: Military DPs must be named and numbered in accordance with the criteria outlined in this order.

b. The FAA requires that all military DPs be coordinated with FAA ATC facilities or regions when such DPs affect the NAS. The applicable ARTCC or regional Air Traffic Divisions must assist the military in coordinating the procedures and in obtaining computer codes to ensure that the procedures are properly interfaced with the NAS. U.S. Air Force and Navy procedures are NOT sent to NFDC.

c. When military DPs affect airspace under the jurisdiction of FAA facilities, those affected ATC facilities/ARTCCs must maintain copies of the applicable military or FAA 8260-series forms.

d. When a military DP has a climb gradient established to clear obstruction(s) that uses the "DOD Option" provision (see Order 8260.3B, Volume 4, paragraph 1.4), the procedure must be annotated "NOT FOR CIVIL USE."

14. FAA 8260-15 SERIES FORMS (see appendices 5 and 6).

a. The 8260-15 series forms document and facilitate transmittal of nonstandard takeoff minimums and/or departure procedures. These forms will be the basis for charting agencies to publish non-standard takeoff minimums, departure procedures, and/or to add/delete charting icons used to denote that other than standard takeoff minimums and/or specific obstacle departure procedures are published.

(1) Use Form 8260-15A.

(a) To document standard takeoff minimums.

(b) To document nonstandard takeoff minimums and/or higher than standard climb gradients for a runway.

(c) To document textual ODPs.

(d) To document that the ODP for a runway is published graphically.

(e) To document other pertinent textual data for publication; e.g., obstacle data notes, VCOA data, etc.

(2) Use Form 8260-15B.

(a) To document graphically depicted complex obstacle ODPs and SIDs.

(b) To document other pertinent procedural data; e.g., fixes, NAVAIDs, routes, vectoring areas, altitudes, etc. required for charting database development on RNAV DPs.

(3) Use Form 8260-15C to document RNAV DPs in a manner consistent with and which aids in charting and database coding. Specifically use 8260-15C to document:

(a) The RNAV route of flight in terms of a series of segments defined by fix name, positions, waypoint type, leg types, course, and distance.

(b) Altitude and airspeed restrictions associated with fixes.

(4) Continuation of FAA Forms 8260-15A/B. Use Form 8260-15D as a continuation sheet for Forms 8260-15A/B. In all cases, clearly identify by name or format what section or information is being presented on the continuation sheet. When this continuation sheet is used, approvals/signatures will be made to the last page. See additional instructions specified in appendices 5 and 6.

b. Use Form 8260-15A/B to deny lower than standard takeoff minimums. When touchdown and rollout runway visual range (RVR) are available on runways with centerline lights and either RVR is installed on a baseline GREATER than 250 feet, deny takeoff minimums lower than RVR 1200 by adding the following example standard NOTE on Form 8260-15:

“RWY 27R, Air Carrier reduction below RVR 1200 NA.”

c. Administratively process the 8260-15 series forms as specified in Order 8260.19, chapter 8.

d. Cancellation of Form 8260-15(s). Cancel specific takeoff minimums for an airport or cancel any textual or graphical DP(s) no longer required, as follows:

(1) Enter the current information from the bottom line of page 1 of Form 8260-15A and both pages 1 and 2 of the Form 8260-15B into the corresponding blocks on blank Forms 8260-15A and/or B. Additionally, on page 2 of Form 8260-15B, complete Block 13 (Airports Served).

(2) Enter/Overprint “Canceled effective _____” in Block (1) on Forms 8260-15A and/or B (a stamp may be used for this purpose). This effective date will “normally” be entered by NFDC. The only time the “cancelled effective” date must be entered by AVN-100 is when a specific effective date is required.

e. NACO will add the "T" symbol to the instrument approach procedure (IAP) charts, based on an original Form 8260-15A.

f. NACO will delete the “T” symbol from the IAP charts based on receipt of a Form 8260-15A that identifies Standard takeoff minimums apply for all runways.

15. INFORMATION UPDATE. For your convenience, FAA Form 1320-19, Directive Feedback Information, is included at the end of this order to note any deficiencies found, clarifications needed, or suggested improvements regarding the contents of this order. When forwarding your comments to the originating office for consideration, please provide a complete explanation of why the suggested change is necessary.

APPENDIX 1. ABBREVIATIONS, TERMS, AND DEFINITIONS

1. **Air Route Traffic Control Center (ARTCC).**
2. **Air Traffic Control (ATC).**
3. **Approach End of Runway (AER).** The first portion of the runway available for landing. If the runway threshold is displaced, use the displaced threshold Lat/Long as the AER.
4. **Area Navigation (RNAV).** A system of enhanced navigational capability that can compute aircraft position, actual track and ground speed, and then provide meaningful information relative to the route of flight selected by the pilot.
5. **Climb Gradient (CG).** A climb requirement expressed in ft/NM (gradient greater than 200 ft/NM).
6. **Controller Chart.** An aeronautical chart developed for internal air traffic controller reference in specific ATC facilities. These charts may also be used to design instrument procedures to support ATC operations.
7. **Departure End of Runway (DER).** The end of the runway that is opposite the landing threshold. It is sometimes referred to as the stop end of the runway.
8. **Department of Defense (DOD).**
9. **Departure Procedure (DP).** A preplanned instrument flight rule (IFR) departure procedure published for pilot use, in graphic or textual format, that provides obstruction clearance from the terminal area to the en route structure. There are two types of DP - Obstacle Departure Procedures (ODP) printed either textually or graphically, and Standard Instrument Departure (SID) which is always printed graphically.
10. **Electronic Transmission.** Transmittal via electronic mail (e-mail) or facsimile (FAX).
11. **Fix.** A generic term used to define a predetermined geographical position used for route definition. A fix may be a ground-based NAVAID, a waypoint, or defined by reference to one or more radio NAVAIDs.
12. **Flight Procedures Office (FPO).** An element of the National Flight Procedures Office, AVN-100, geographically located at each FAA regional headquarters.
13. **Fly-By Waypoint.** A fly-by waypoint requires the use of turn anticipation to avoid overshoot of the next flight segment.
14. **Fly-Over Waypoint.** A fly-over waypoint precludes any turn until the waypoint is overflown and is followed either by an intercept maneuver of the next flight segment or direct flight to the next waypoint.
15. **Initial Climb Area (ICA).** An area beginning at the departure end of runway (DER) to provide unrestricted climb to at least 400 ft above DER elevation.

16. Initial Departure Fix (IDF). The first published fix/waypoint used for the departure. The IDF denotes the beginning of the RNAV portion of the SID.

NOTE: "IF" is used for coding (per ARINC 424) of the IDF. "IF" or "IDF" will not be placed on a departure chart in order to prevent confusion. The "IF" acronym is also used in conjunction with the intermediate fix of an instrument approach procedure.

17. Lead Carrier. An air carrier or operator that has agreed to serve as the focal point for the development of DPs at a specific airport. The lead carrier agrees to help develop the DP and conducts initial flyability evaluations by all RNAV-equipped aircraft expected to use the DP.

18. Least Onerous Route. The obstacle DP route established over terrain or other obstacles that result in the lowest possible climb gradient for that runway.

19. National Aeronautical Charting Office (NACO). The FAA office responsible for the publication of U.S. Government aeronautical charts and related products.

20. National Flight Data Center (NFDC). The FAA office responsible for the collection, validation, and dissemination of all aeronautical information relating to the NAS.

21. National Flight Data Digest (NFDD). A daily publication, prepared by the NFDC to promulgate non-regulatory changes to the NAS.

22. National Flight Procedures Office (NFPO). The FAA office responsible for the development, maintenance, quality control, technical approval, and cancellation of public use instrument procedures.

23. Navigational Aid (NAVAID). See Aeronautical Information Manual (AIM). Any visual or electronics device airborne or on the surface which provides point-to-point guidance information or position data to aircraft in flight.

24. Non-RNAV DP. A DP whose ground track is based on ground-based NAVAIDs and/or dead reckoning navigation.

25. Obstacle Clearance Surface (OCS). An inclined surface associated with a defined area for obstruction evaluation.

26. Obstacle Departure Procedure (ODP). A preplanned instrument flight rule (IFR) departure procedure printed for pilot use in textual or graphic form to provide obstruction clearance via the least onerous route from the terminal area to the appropriate en route structure. ODPs provide obstruction clearance and may be flown without ATC clearance unless an alternate departure procedure (SID or radar vector) has been specifically assigned by ATC.

27. Proponent. The originator of a DP requirement. This may include an individual user group, ATC, NFPO, or other appropriate government agency.

- 28. Regional Airspace and Procedures Team (RAPT).** A team established at each FAA Region for the purpose of coordinating and processing requests for new or modified flight procedures and related airspace matters (see latest edition of Order 8260.43).
- 29. RNAV DP.** A DP developed for RNAV-equipped aircraft whose ground track is based on satellite or DME/DME navigation systems.
- 30. Required Navigation Performance (RNP).** A statement of the navigational performance accuracy necessary for operation within defined airspace. See the AIM for current definition.
- 31. Runway Heading.** The magnetic direction that corresponds with the runway centerline extended, not the painted runway numbers on the runway. Pilots cleared to "fly or maintain runway heading" are expected to fly or maintain the **published** heading that corresponds with the extended centerline of the departure runway (until otherwise instructed by ATC), and are not to apply drift correction; e.g., RWY 4, actual magnetic heading of the runway centerline 044.22°, fly 044°.
- 32. SID Transition.** A published segment used to connect the SID to one or several en route airways/jet routes.
- 33. Significant Benefits.** Tangible or intangible advantages resulting from the implementation of a DP such as fuel savings from reduced flight tracks and time, reduced inter-/intra-facility coordination, reduced communications between ATC and pilots, increased flexibility of airspace management and sectorization due to more predictable ground tracks, or other similar benefits to users or providers.
- 34. Standard Instrument Departure (SID).** A preplanned IFR ATC departure procedure printed in graphic form for pilot/controller use to provide obstacle clearance and a transition from the terminal area to the appropriate en route structure. SIDs are primarily designed for system enhancement to expedite traffic flow and to reduce pilot/controller workload. ATC clearance must be received prior to flying a SID.
- 35. Terminal Area Route Generation Evaluation and Traffic Simulation (TARGETS).** An air traffic tool for RNAV DP design.
- 36. TERPS. Order 8260.3,** United States Standard for Terminal Instrument Procedures.
- 37. Transmittal Letter (TL).** A biweekly publication, prepared by the NFDC, used as the medium to promulgate instrument approach procedures and textual ODPs and their effective dates for publication.
- 38. Visual Climb over the Airport (VCOA).** Option to allow an aircraft to climb over the airport with visual reference to obstacles to attain a suitable altitude from which to proceed with an IFR departure.
- 39. Waypoint (WP).** A predetermined geographical position used for route definition and/or progress-reporting purposes defined by latitude/longitude and may include elevation.

APPENDIX 2. GUIDELINES FOR THE DESIGN OF GRAPHIC INSTRUMENT DEPARTURE PROCEDURES (DPs)

1. GENERAL.

a. **Safety is a primary concern** and DPs must be designed so that they provide obstacle clearance, least onerous routing (where possible), and can be confidently and consistently flown by all aircraft expected to use the procedure.

b. **A SID should provide** for a significant user/system benefit.

c. **A SID should reduce** pilot/controller communications and workload.

d. **A DP should be relatively simple and easily understood.** To avoid chart complexity and human factors concerns, limit the number of airports and/or runways from which a particular DP may be used to only those necessary to support operations.

e. **A DP should use** only the minimum number of fixes, turns, or altitude changes necessary to depict the route.

f. **A DP must be developed** to accommodate as many different types of aircraft as possible.

g. **A SID must be designed** to terminate at a fix/NAVAID depicted on an IFR en route chart, at an altitude that will allow random IFR flight, or at a position where ATC radar service is provided.

h. **Textual and graphic ODPs** must be designed to terminate at a fix/NAVAID located within the IFR en route structure or at an altitude that will allow random IFR flight.

i. **A DP should avoid the use** of distance measuring equipment (DME) arcs.

j. **Speed.**

(1) **Avoid Speed Restrictions Whenever Possible.** Specify aircraft speed restrictions and/or ambient wind conditions only when necessary to achieve an operational advantage. If speed restrictions are required, they must be limited to one restriction per fix/waypoint. When this occurs, a minimum altitude based on the minimum required climb gradient must be specified at the fix/waypoint. Annotate the DP accordingly; e.g., "Do not exceed 200 KIAS until passing ALPHA."

(2) **Avoid using multiple speed restrictions at the same fix** for different aircraft types; e.g., "Turbo-props do not exceed 160 KIAS until passing GRAVY; Turbo-jets do not exceed 230 KIAS until passing GRAVY."

(3) **The AVN-100 procedure specialist** may recommend or impose a speed restriction to ensure obstacle clearance or airspace efficiency during turns. Refer to applicable DP criteria directives.

k. Altitude.

(1) **Limit the number of altitude requirements to the minimum necessary.** ATC operational restrictions are not permitted on ODPs.

(2) **Do not combine minimum and maximum altitudes for the same waypoint in the same DP;** e.g., "Cross WAPNT at or above 5000 and at or below 7000."

(3) **Avoid using multiple altitude restrictions at the same fix** for different aircraft types or departure runways; e.g., "Turbo-props cross GRAVY at-or-below 5000, Turbo-jets cross GRAVY at-or-above 6000" or "RWY 9: Cross XRRAY at 9000; RWY 27: Cross XRRAY at 11000."

(4) **Define crossing altitude restrictions** as "At", "At or Above," "At or Below." or "Expect." Avoid "At" and "At-or-Below" altitudes whenever possible.

NOTE: "Expect" altitude restrictions will not be coded.

(5) **Procedure designers must use good judgement** and common sense, coupled with operational input where available, to restrict procedural altitudes due to precipitous terrain.

l. Climb Gradient (CG). DPs are designed assuming a minimum standard CG of 200 ft per nautical mile (ft/NM) to ensure required obstacle clearance is achieved. Higher CGs must be published when required for obstruction clearance and ATC altitude requirements.

2. NAMING OF DPs (see pages 5, 6, and 7 for examples).

a. Textual ODPs are not named, while all graphic ODPs and SIDs must be named as described in this section.

b. SIDs, designed using radar vectors as the primary navigation source, are normally named to correspond with the terminal control facility name. For example, the SID from Tampa International Airport is named the TAMPA THREE; the SID from Greater Cincinnati Airport is named the CINCINNATI EIGHT. If the terminal control facility name is already in use, use a fix, city, airport, or geographical area name in that order.

c. DPs designed using conventional or RNAV guidance must be named to correspond with the en route fix/NAVAID name where the DP ends. For example, a DP from Altoona-Blair County Airport that ends at the TATES fix is named the TATES TWO. If the DP is an RNAV procedure, the "(RNAV)" must be included in the name; for example, TATES TWO (RNAV).

d. If two or more DPs end at the same fix/NAVAID, the second and subsequent procedures must be named for the city, airport, or geographical area in that order. For example, a SID from Greater Cincinnati Airport that ends at the REDSS fix is named the REDSS FOUR. A SID from Cincinnati-Lunken Airport that also ends at the REDSS fix is called the LUNKEN SEVEN.

e. Number Each Original DP “ONE.” Number subsequent revisions in numerical sequence through NINE and then start over with ONE. Renumber ODPs/SIDs whenever a revised FAA 8260-series form is required.

3. TRANSITION NAMING. DP transition names must always correspond with the fix/NAVAID where the transition ends. For example, the FORT LAUDERDALE SEVEN DEPARTURE termination fix is the Fort Lauderdale VORTAC (FLL) and it has a transition to the ZAPPA intersection; the transition name is ZAPPA. The REDSS FOUR DEPARTURE terminates at the REDSS fix and it has a transition to the Johnstown VORTAC (JTS); the transition name is JOHNSTOWN.

4. COMPUTER CODES (see pages 5, 6, and 7 for examples).

a. Textual ODPs will not receive a computer code, while all graphic DPs must receive a computer code as described in this section.

b. Instrument Departure Procedure. Computer codes are assigned to graphic DPs (including radar vector DPs) by using the abbreviated name of the DP; e.g., a NAVAID **3-letter** identifier, a **5-letter** fix name, or other **5-letter** code, followed by the current DP number, then a dot, followed by the fix/NAVAID identifier where the DP ends. For example, the CINCINNATI EIGHT DEPARTURE in paragraph 2a is coded “CVG8.CVG;” the FORT LAUDERDALE SEVEN DEPARTURE in paragraph 3 is coded “FLL7.FLL;” and the “TATES TWO DEPARTURE in paragraph 2c is coded “TATES2.TATES.”

c. SID Transition. SID transition computer codes are assigned by using the SID identifier and number as noted in paragraph 4b, followed by a dot, followed by the identifier of the en route fix where the transition ends. Using the Fort Lauderdale example in paragraph 3, the ZAPPA transition is coded “FLL7.ZAPPA.” Using the REDSS example, the Johnstown transition is coded “REDSS4.JTS.”

5. RNAV DPs. The following general criteria and guidelines apply only to DPs designed for exclusive use by certain RNAV-equipped aircraft. See the latest edition of Order 8260.44 for specific guidance and criteria.

a. Waypoints. Specify all waypoints as either fly-by or fly-over.

(1) **Use fly-by waypoints** whenever possible.

(2) **Use fly-over waypoints** only when operationally necessary or for obstacle clearance.

(3) **Design procedures** using the fewest number of waypoints.

b. Leg Types. Table A2-1 shows permissible leg types for use with RNAV DPs. See Order 8260.44 for leg type definitions and examples.

Table A2-1. Permissible Leg Types

FROM	VIA (leg type)	TO
AER	VA ¹	ALT
AER	VM ⁶	HDG
ALT	CF ² , DF ³	FB/FO
AER	CF ² , DF ³	FB/FO
FB	TF ⁴	FB/FO
FO	DF ³ , TF ⁴	FB/FO
IF ⁴	DF ³ , TF ⁴	FB/FO
FO	VM ⁶	HDG

1. VA (Heading-to-an-altitude) may only be used as the first leg of a departure and must be followed by either a CF or DF leg.
2. CF (Course-to-fix) may only be used as the first leg of a departure or as the leg following a departure VA leg.
3. DF (Direct-to-fix) may be used as the first leg of a departure, the leg following a departure VA leg, and for any leg thereafter preceded by a FO WP only.
4. TF (Track-to-fix) is not used as the first leg of a departure. TF is the preferred leg after the first leg of a departure.
5. IF (initial fix) is used to designate the first fix of a departure transition, i.e., the IF is coincident with the DP termination fix. IF is also used to designate the point at which RNAV begins when used in conjunction with radar vectors.
6. VM legs are only to be used in conjunction with **ATC radar vectoring**.

(NOTE: AER - approach end of runway, ALT - altitude, FB/FO – fly-by fix/fly-over fix.)

c. Leg Length.

(1) Use the Longest Legs possible. The designer must consider speed and course changes when determining minimum leg length. See Order 8260.44 for specific minima.

(2) There is no maximum leg length for straight-line paths. Exception: Do not develop leg lengths in the en route environment exceeding 260 miles to ensure the geodesic path does not exceed the protected airspace for a great circle path.

d. Levels of Criteria and Standard Required Navigation Performance (RNP) Levels.

Order 8260.44 criteria are divided into three classifications: Levels 1, 2, and 3. Each level is associated with an RNP value: 1.0, 2.0, and 0.3 respectively. Use of the various levels is described below.

(1) Level 3 criteria. Do not use these criteria for “public” RNAV DP development (i.e., procedures developed using Level 3 criteria will become Special procedures). This level of criteria is designed to support RNP 0.3.

(2) Level 2 criteria are the standard for RNAV DP development and correspond to an en route level of aircraft **navigation** performance. **This level of criteria is designed to support RNP 2.0.**

(3) Level 1 criteria apply narrower obstacle clearance areas than Level 2 and correspond to a terminal level of aircraft **navigation** performance. **This level of criteria is**

designed to support RNP 1.0. Level 1 criteria is used only under one of the following conditions:

(a) **The proponent can show** that environmental conditions or obstacles require the use of more stringent criteria than Level 2.

(b) **As missed approach criteria** for RNAV instrument approach procedures developed in accordance with latest edition of Order 8260.3.

e. Chart Annotation.

(1) **All RNAV DPs will be designated as Type B or Type A.** Use the following guidelines to determine proper use of the Type B or Type A designation:

(a) **Designate procedures with any of these attributes as Type B:**

1 DME/DME Gaps. Any procedure with DME/DME assessment gaps but still within allowable parameters for DME/DME/IRU systems.

2 RNAV Navigation Height. Any procedure that requires RNAV path guidance below 2,000 ft above airport elevation.

Note: For the purposes of this section, RNAV path guidance consists of direct-, track-, and course-type legs but not heading-type legs such as VM or VA.

3 Level 1 Criteria. Any procedure that uses Level 1 criteria.

4 Air Traffic Request. Any procedure that Air Traffic requests be designated as a Type B procedure (for greater path repeatability and compliance).

(b) **If none of the above attributes in paragraph 5e(1) apply,** the procedure must be designated as Type A

(c) **Annotate Type A and Type B procedures** with a standard note: "Type B" or "Type A" respectively on FAA Form 8260-15B (see appendix 6).

(2) **All RNAV DPs will contain an RNP value** that is based on the level of criteria used in the development of the procedure (see paragraph 5d). The RNP will be identified in a separate note as follows: "**Pilots of RNP Capable Aircraft Use RNP 2.0**" for procedures developed using Level 2 criteria; or "**Pilots of RNP Capable Aircraft Use RNP 1.0**" for procedures developed using Level 1 criteria.

(3) **All RNAV DPs will contain a note** that describes the equipment sensor limitations. Notes, as appropriate, are as follows:

NOTE: DME/DME, DME/DME/IRU, or GPS Required

NOTE: DME/DME/IRU, or GPS Required

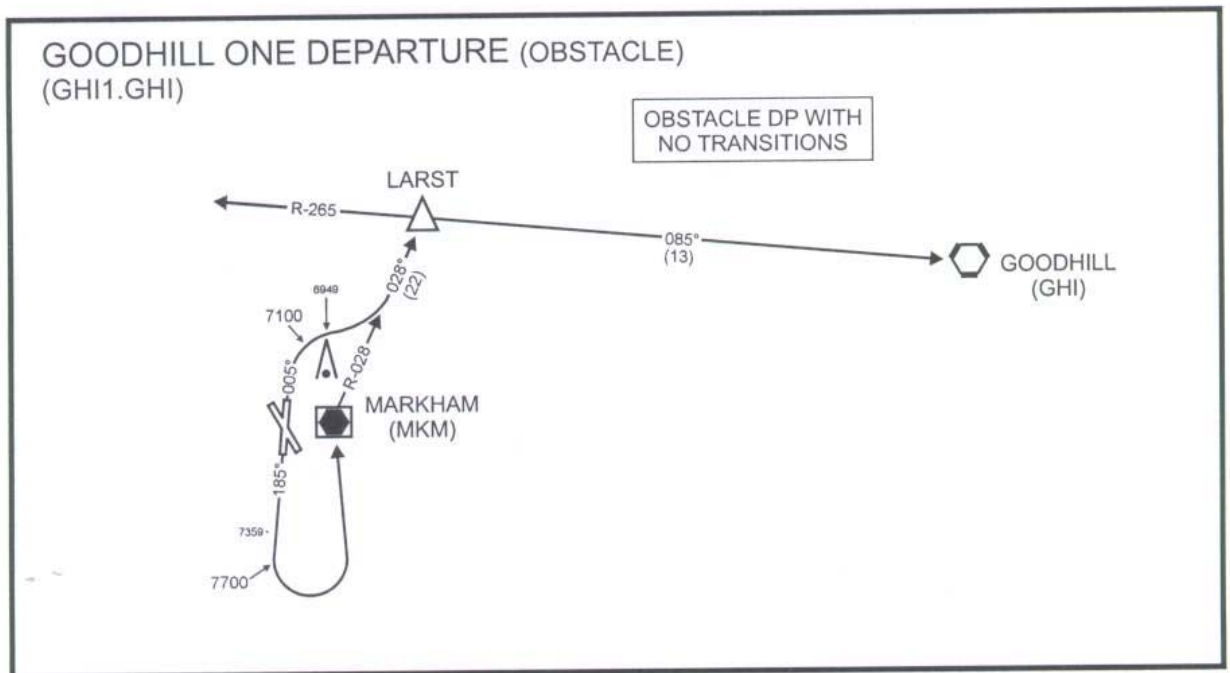
NOTE: GPS Required

(4) A note may be required to address the need for specific DME facilities to be operational. These are referred to as “critical DME facilities.” Example:

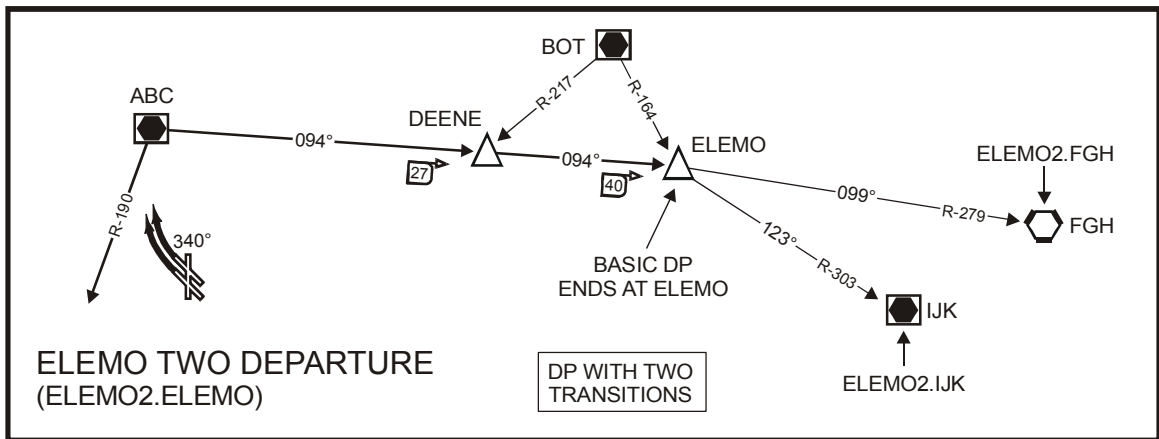
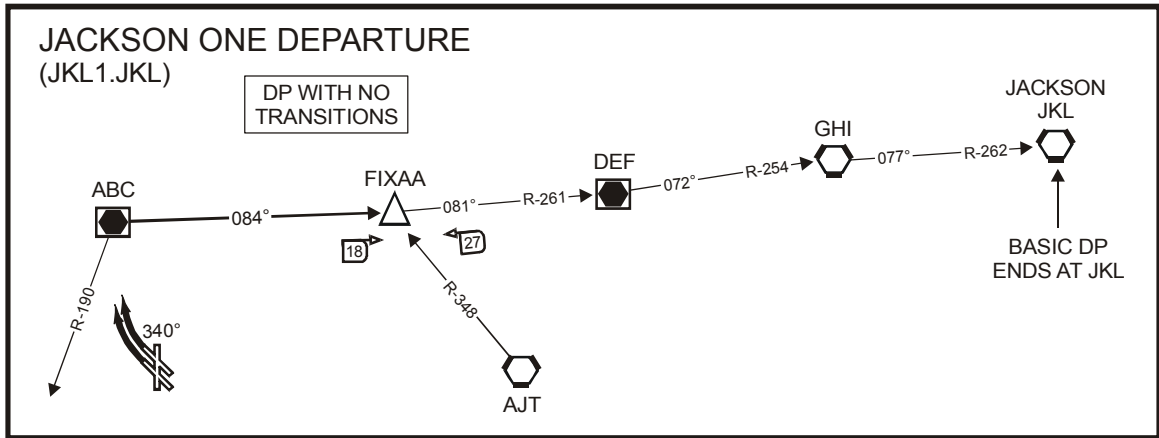
NOTE: For Non-GPS Equipped aircraft, ABC and XYZ Must Be Operational.

(5) A note may be required to address a situation when the RNAV lateral guidance must start at altitudes other than the standard 2,000 ft above airport elevation for Type A procedures or 500 ft above airport elevation for Type B procedures. This type of situation may occur when an RNAV-Pro DME/DME assessment detects navigation limitations due to lack of DME coverage at lower altitudes.

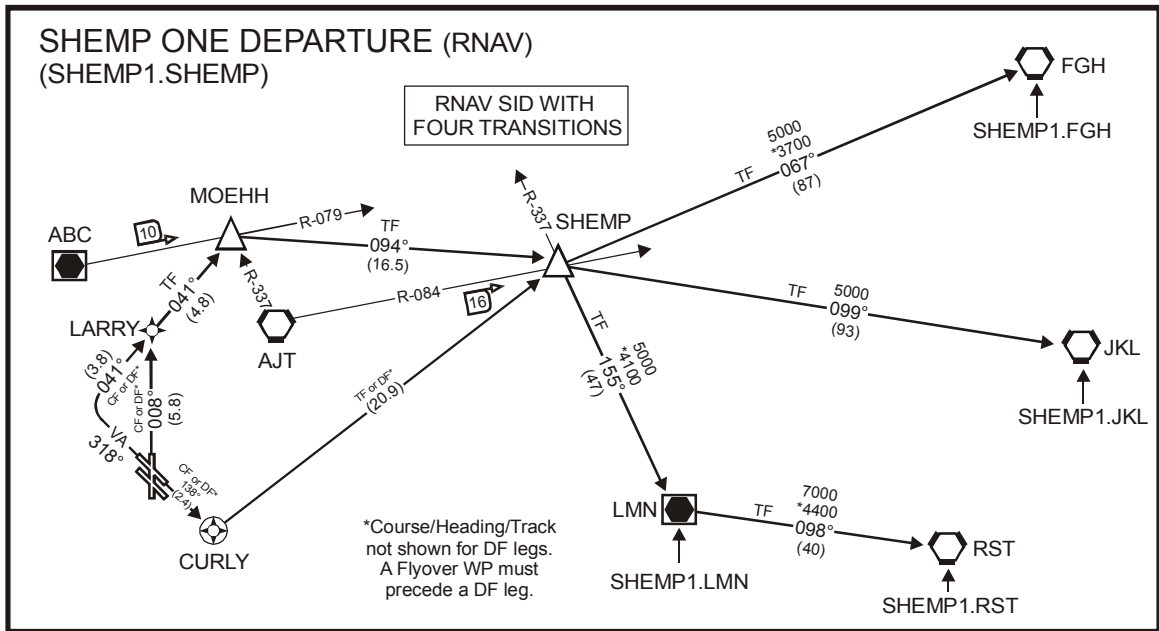
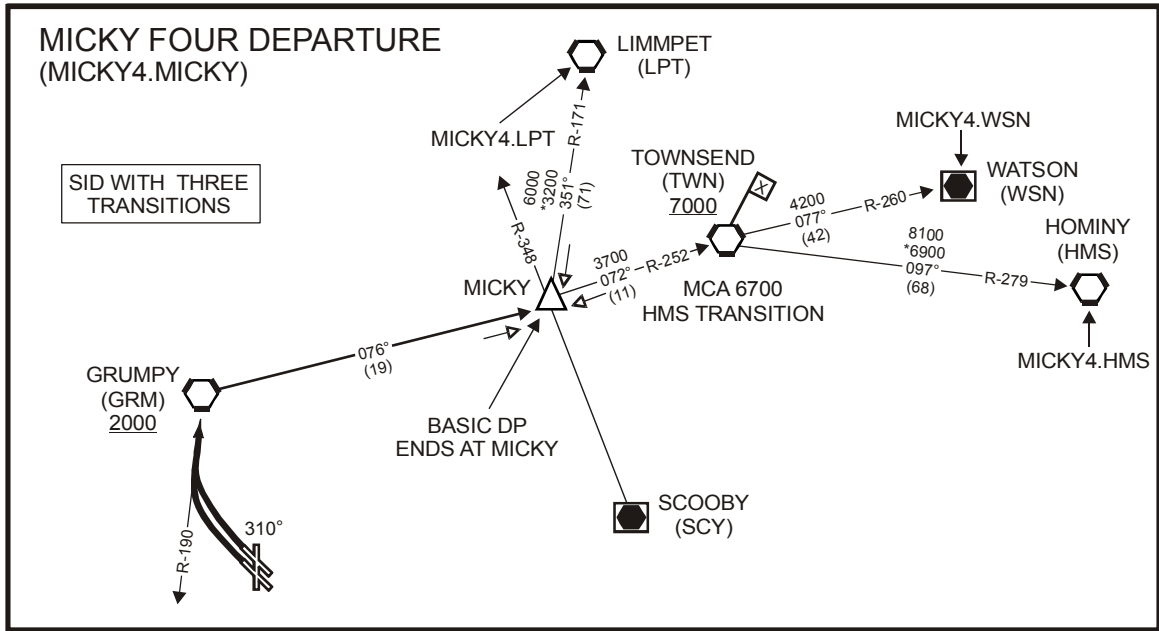
EXAMPLES:



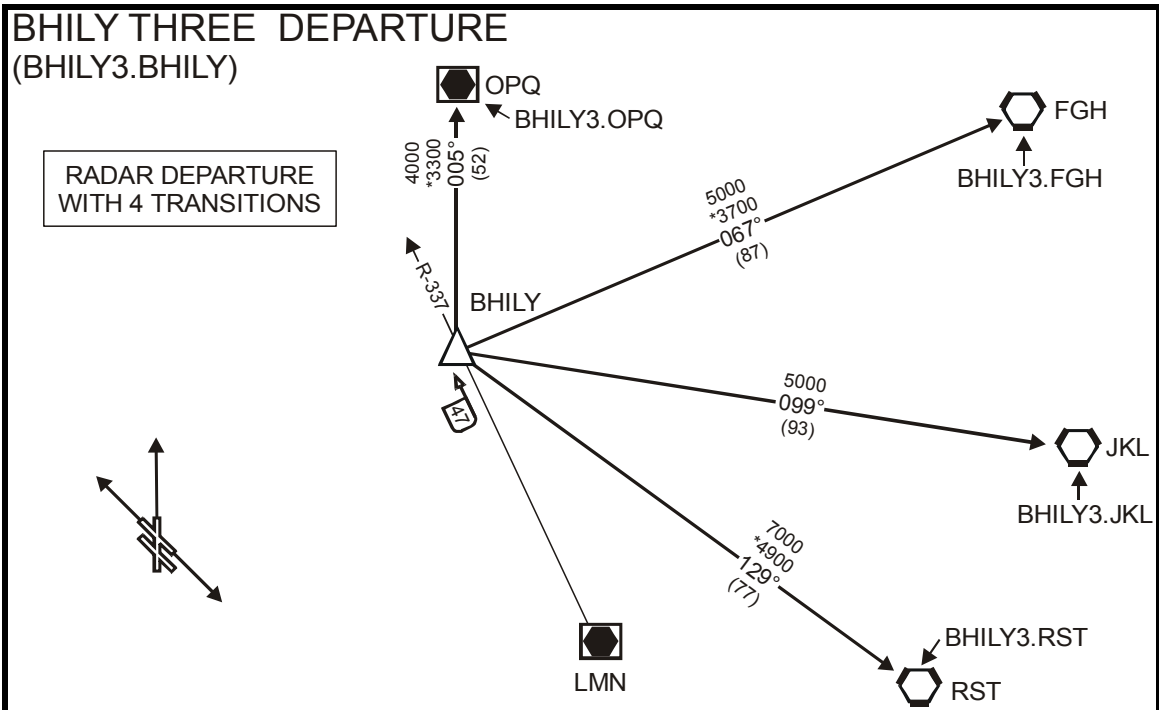
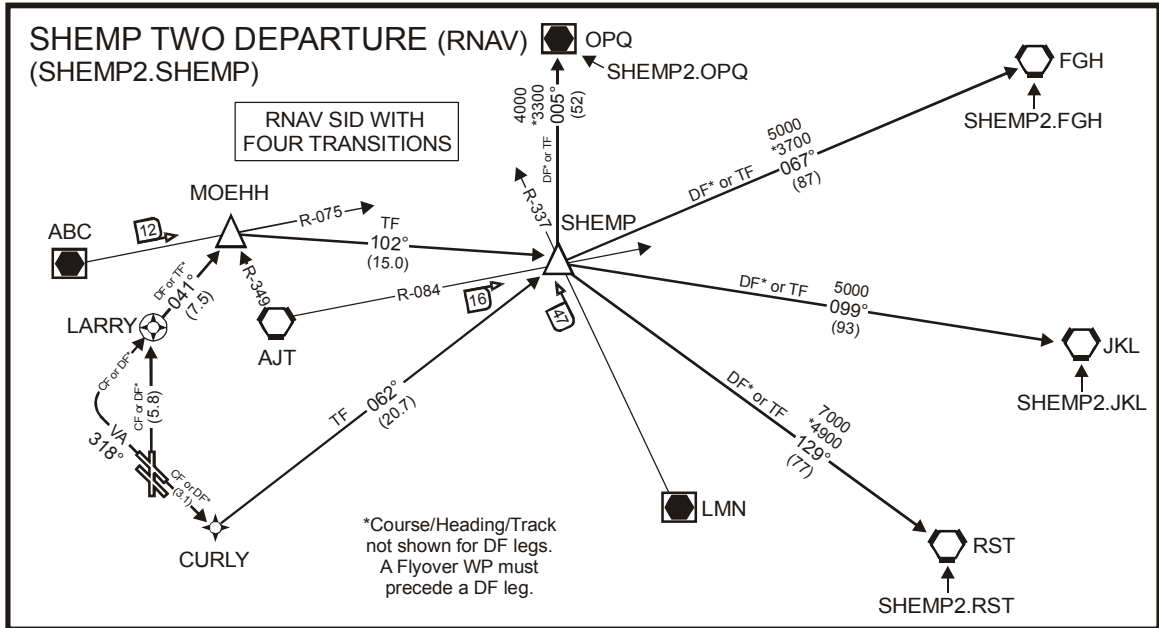
EXAMPLES (Continued):



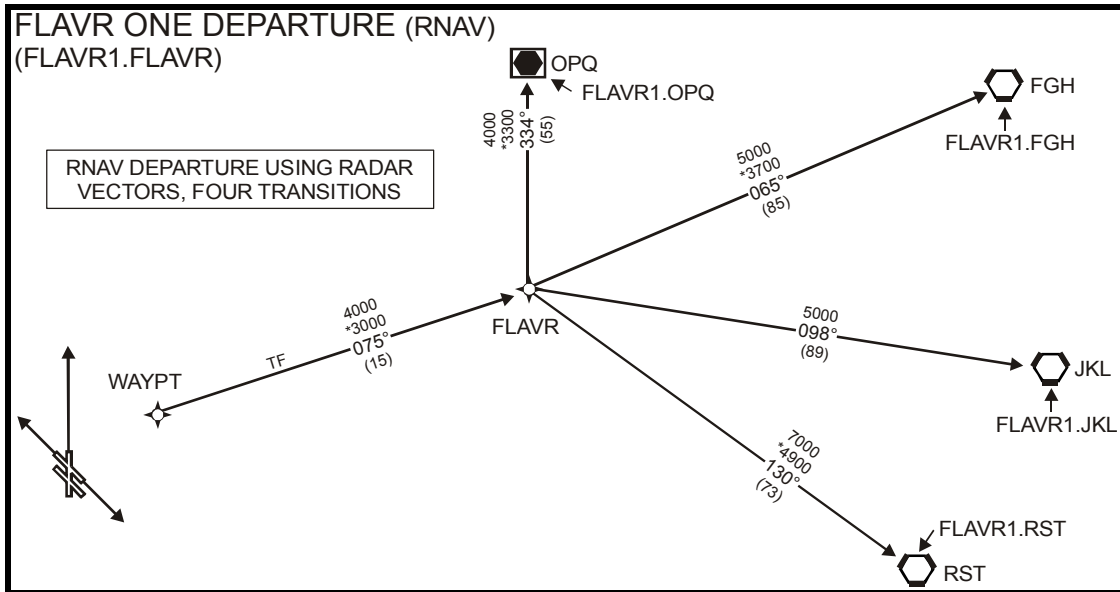
EXAMPLES (Continued):



EXAMPLES (Continued):



EXAMPLES (Continued):



APPENDIX 3. GRAPHIC DEPARTURE PROCEDURE (DP) REQUIREMENTS WORKSHEET

Instructions for completing the graphic DP requirements worksheet by other than NFPO personnel.

NOTE: Proponents with the capability may use electronically generated 8260-15 series forms (with graphic depiction included) instead of the Graphic DP Requirements Worksheet.

This worksheet may be used to process changes to existing DPs. In such cases, only complete those BLOCKS needed to convey the request/recommendation.

BLOCK 1. AIRPORT(S). Enter the name(s) of the airport(s) and the ICAO identifier(s) of each.

BLOCK 2. CITY AND STATE. Self-explanatory.

BLOCK 3. DP NAME AND COMPUTER CODES. Enter the proposed name of the DP and computer code. Use the naming and computer code conventions as outlined in appendix 2. Coordinate the proposed name(s) and code(s) with the servicing ARTCC to ensure there are no duplications.

BLOCK 4. ACTION REQUIRED. Indicate whether a new procedure is being established or modifying an existing DP.

BLOCK 5. COMMUNICATIONS. Indicate the communications functions to be charted; e.g., ATIS, AWOS/ASOS, CTAF, clearance delivery, departure control, etc. List frequency(ies) only if different than what is currently published for the facility or unique to the procedure. Coordinate with ATC as necessary.

BLOCK 6. ROUTE.

6.1. RUNWAY(S)/HELIPADS/VERTIPOINTS. Indicate the runway number(s) or helipads/vertiports the DP will serve.

6.2. INITIAL ROUTE FROM RUNWAY. Indicate the desired initial route(s) that is required. If known, specify the single heading/course, or range of headings (e.g., DVA headings) for each runway authorized for the SID.

6.3. ATC REQUESTED ROUTING/OPERATIONAL PARAMETERS. Enter any information that would assist the procedure developer by providing flexibility in ground tracks. For example, if ATC needs the departure track to go generally south and join a route at a specified point and the exact ground track is not important, so state. Conversely, if there is flexibility to the east but there is an operational constraint to the west, that should be indicated. In extraordinary cases, when exact ground track is the primary concern in RNAV DPs, specify desired routing. ATC should specify the routing based on ATC needs.

6.4. FIX(ES). Enter each fix in the order flown. For the Departure IF, indicate either a specific point or at least describe the factors constraining the placement of the fix. Enter coordinates to the nearest 0.01 arc second when known. The TARGETS distribution package will satisfy this requirement. If used, enter the statement "See attached (DP name) TARGETS distribution package dated (date)."

NOTE: If an existing fix/NAVAID is used, enter only the fix name/facility type and ID, and any altitude restriction at the fix.

6.5. ATC REQUIRED ALTITUDES. Enter any altitude restrictions associated with each fix.

BLOCK 7. TRANSITIONS. (NA for Obstacle Departure Procedures (ODPs))

7.1 IDENTIFICATION. Enter the proposed name and computer code of each transition (see BLOCK 3).

7.2. TRANSITION FIX(ES). See BLOCK 6.4.

7.3. ATC REQUIRED ALTITUDES. See BLOCK 6.5.

7.4. ATC OPERATIONAL PARAMETERS. See BLOCK 6.3.

BLOCK 8. LOST COMMUNICATIONS. List specific lost communications instructions if other than 14 CFR Part 91.185 (standard).

BLOCK 9. GRAPHIC DEPICTION. Provide a basic sketch of the procedure. The sketch may be hand drawn, computer generated, or overlaid on the appropriate portion of a controller chart. It is not necessary for the sketch to be to an exact scale. The intent here is to provide the procedure developer with a visual correlation of the textual route description.

BLOCK 10. REQUESTED PUBLICATION DATE OR AIRSPACE DOCKET NUMBER. Enter the desired effective date that coincides with the charting cycle. If the DP effective date is to be concurrent with an airspace action, enter the docket number, which may be obtained from the regional Airspace Branch (AXX-520). See Order 8260.26, appendix 1 for chart dates and lead-time for submission.

BLOCK 11. REMARKS.

11.1. Indicate that the environmental review under Order 1050.1 (latest edition) and the noise screening have been accomplished.

NOTE: Notice 7210.360, Noise Screening Criteria for Certain Air Traffic Actions Above 3,000 Feet, has expired; however, the noise screening is still required. The requirement will be re-established in a proposed Air Traffic environment order.

11.2. Enter appropriate information to clarify a data entry; e.g., airspeed restriction for air traffic, maximum altitude for aircraft performance, etc.

11.3. If the proposed DP does not meet the criteria requirements in paragraph 10 of the basic order, a statement of justification is necessary to explain why a DP is required. Avoid publication of unnecessary DPs.

BLOCK 12. POINT-OF-CONTACT (POC). Self-explanatory.

GRAPHIC DP REQUIREMENTS WORKSHEET

1. AIRPORT(S) _____

2. CITY AND STATE _____

3. DP NAME _____ COMPUTER CODE _____

4. ACTION REQUIRED: ESTABLISH ___ AMEND ___

5. **COMMUNICATIONS:** Enter an X in the space provided next to the communications function listed. Enter the frequency when a nonstandard frequency has been specified.

ATIS _____ AWOS/ASOS _____ CLEARANCE DELIVERY _____ GROUND _____

TOWER _____ CTAF _____ DEPARTURE CONTROL _____ ARTCC _____

6. ROUTE:

6.1. RUNWAY(S) _____ HELIPADS/VERTIPOINTS _____

6.2. INITIAL ROUTE FROM RUNWAY _____

6.3. ATC REQUESTED ROUTING/OPERATIONAL PARAMETERS _____

6.4. FIX(ES):

NAME _____ NAVAID _____ LAT/LONG _____ ALT _____

NAME _____ NAVAID _____ LAT/LONG _____ ALT _____

NAME _____ NAVAID _____ LAT/LONG _____ ALT _____

NAME _____ NAVAID _____ LAT/LONG _____ ALT _____

NAME _____ NAVAID _____ LAT/LONG _____ ALT _____

NAME _____ NAVAID _____ LAT/LONG _____ ALT _____

NAME _____ NAVAID _____ LAT/LONG _____ ALT _____

6.5. ATC REQUIRED ALTITUDES: _____

GRAPHIC DP REQUIREMENTS WORKSHEET (Continued)

7. TRANSITIONS: (NA for Obstacle Departure Procedures (ODPs))

7.1 IDENTIFICATION:

NAME _____ COMPUTER CODE _____

NAME _____ COMPUTER CODE _____

NAME _____ COMPUTER CODE _____

NAME _____ COMPUTER CODE _____

NAME _____ COMPUTER CODE _____

7.2 TRANSITION FIX(ES): *NOTE: If fix/NAVAID is currently published on an en route chart, enter only the fix name and/or facility ID, and required altitude.*

NAME _____ NAVAID _____ LAT/LONG _____ ALT _____

NAME _____ NAVAID _____ LAT/LONG _____ ALT _____

NAME _____ NAVAID _____ LAT/LONG _____ ALT _____

NAME _____ NAVAID _____ LAT/LONG _____ ALT _____

NAME _____ NAVAID _____ LAT/LONG _____ ALT _____

NAME _____ NAVAID _____ LAT/LONG _____ ALT _____

NAME _____ NAVAID _____ LAT/LONG _____ ALT _____

7.3. ATC REQUIRED ALTITUDES: _____

7.4. ATC OPERATIONAL PARAMETERS: _____

8. LOST COMMUNICATIONS: _____

GRAPHIC DP REQUIREMENTS WORKSHEET (Continued)

9. GRAPHIC DEPICTION: *(NOTE: Depiction should clearly portray intended routing, fixes, NAVAIDs, and altitudes to be used in the DP. A separate sheet may be used.)*

10. REQUESTED PUBLICATION DATE OR AIRSPACE DOCKET NUMBER_____

11. REMARKS:

12. POINT-OF-CONTACT:_____

ATC Facility Name.

POC's Name.

Telephone Number.

FAX Number.

E-Mail Address.

APPENDIX 4. 8260-2, DATA WORKSHEET

Instructions for completing 8260-2, Data Worksheet, for proponents OTHER than the NFPO.

BLOCK 1. REQUESTED PUBLICATION DATE. Enter the desired effective date that coincides with the charting cycle (see the latest edition of Order 8260.26, appendix 1). If the Form 8260-2 request is to be in conjunction with an airspace action, obtain the docket number from the regional Airspace Branch (AXX-520). For Form 8260-2 requests associated with a DP request, allow at least 20 weeks lead-time from the desired effective date.

BLOCK 2. FIX NAME. Enter the 5-character pronounceable name obtained from ARTCC. Do not include "WP" as part of the name.

BLOCK 3. FIX TYPE. Indicate the type of fix; e.g. radar, WP (a geographical position), DME (fixes made up of a single radial/bearing and DME, or multiple DMEs), VHF (fixes made up of 2 VOR radials), VHF/LF (fixes made up of a VOR radial and an NDB bearing). Indicate all combinations that make up the fix.

BLOCK 4. STATE. Enter the state in which the fix is located.

BLOCK 5. LOCATION. Latitude and longitude accurate to the hundredth of a second; e.g., 09.25 sec. NAVAID radial/bearing/distance values must also be entered to the appropriate hundredth value; e.g., 347.23°; 08.37NM.

BLOCK 6. TYPE OF ACTION REQUIRED. Check applicable box to Establish, Modify, or Cancel the fix.

BLOCK 7. HOLDING. List holding patterns required at fix. Include minimum and maximum altitude required. Include speed if other than standard.

BLOCK 8. CHARTING. Indicate required charting; i.e., terminal, en route, SID, STAR, etc.

BLOCK 9. REMARKS. Other airports/procedures associated with fix (if known). Justify the requirement for other than routine processing and charting. Include any other information that may assist in developing the fix.

BLOCK 10. POINT-OF-CONTACT (POC). Self-explanatory.

Form 8260-2, DATA Worksheet

- 1. REQUESTED PUBLICATION DATE: _____
- 2. FIX NAME: _____
- 3. FIX TYPE: _____
- 4. STATE: _____
- 5. LOCATION: _____
- 6. TYPE OF ACTION REQUIRED: Establish Modify Cancel
- 7. HOLDING: _____
- 8. CHARTING: _____
- 9. REMARKS (Use additional paper if required):

10. POINT OF CONTACT (POC):

ATC Facility Name.

POC's Name.

Telephone Number.

FAX Number.

E-Mail Address.

APPENDIX 5

**INSTRUCTIONS FOR COMPLETING FAA FORM 8260-15A,
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)**

**INSTRUCTIONS FOR COMPLETING FAA FORM 8260-15B,
GRAPHIC DEPARTURE PROCEDURE (DP)
(Non-RNAV Departure Procedures)**

**INSTRUCTIONS FOR COMPLETING FAA FORM 8260-15D,
DEPARTURE PROCEDURE (CONTINUATION)**

**INSTRUCTIONS FOR COMPLETING
FAA FORM 8260-15A
TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)**

PAGE 1.

Develop a separate Form 8260-15A for each airport with approved instrument procedures. If all runways are standard, then state "STANDARD." The form must encompass all runways for that airport. Use table 1 as a guide to initiate the required "Action" to support the "Situation" for a specific airport.

BLOCK (1). TAKEOFF MINIMUMS.

NOTE: Do not list Take-off Minimums for the runway(s) served by a graphic default Obstacle DP as described in BLOCK 2(1e) instructions.

1. List the runway(s) that are not authorized for IFR departures. If none of the actions listed in table 1 are feasible, or if another reason(s) precludes DP development (noise abatement, environmental, etc.), an IFR departure must not be authorized.

Examples:

**RWY 27, NA - Obstacles.
RWY 35, NA - Environmental.
RWY 17, NA - Obstacles and noise abatement.**

Followed by:

2. List the runway(s) authorized standard takeoff minimums.

Example:

RWY 09, 31 Standard.

Followed by:

3. List the runway(s) that have any *deviations* from standard minimums and/or restrictions;

Example:

TAKEOFF MINIMUMS: RWY 13, 400-2 or standard with minimum climb of 310 ft per NM to 900. Alternatively, with standard takeoff minimums and a normal 200 ft/NM climb gradient, takeoff must occur no later than 1,800 ft prior to departure end of runway.

a. When obstacles in the initial climb area (ICA) cause a climb gradient to an altitude 200 ft or less above DER, **before rounding**, do not publish takeoff minimums or a climb gradient. Instead, identify the obstacle data by note for publication in the TAKEOFF OBSTACLE NOTES BLOCK (see BLOCK 3 for example).

b. When obstacles 3 SM or less from DER preclude standard takeoff minimums:

NOTE: The obstacle may be within or beyond ICA extended to 3 SM.

(1) Provide a **NOTE identifying the obstacle(s)** in the TAKEOFF OBSTACLE NOTES BLOCK (see BLOCK 3 for example).

(2) Provide **higher than standard takeoff minimums** followed by the alternative of standard minimums with a specified climb gradient. Use standard NOTE in paragraph 3.

(3) Identify the obstacle data in the **CONTROLLING OBSTACLES BLOCK** (see BLOCK 4 for example).

c. **When obstacles beyond 3 SM** of DER preclude standard takeoff minimums:

(1) Provide **standard takeoff minimums** with minimum climb gradient requirements. Use standard NOTE in paragraph 3.

(2) Provide **higher than standard takeoff minimums** to allow a visual climb over the airport (VCOA). Use standard NOTE in the following format: RWY XX, (CIG/VSBY) for climb in visual conditions.

Example:

TAKEOFF MINIMUMS: RWY 9, Standard with minimum climb of 310 ft per NM to 1400 or alternatively, with standard takeoff minimums and a normal 200 ft/NM climb gradient, takeoff must occur no later than 1,800 ft prior to departure end of runway or 1100-2½ for climb in visual conditions.

BLOCK (2). DEPARTURE PROCEDURE.

1. **When a specific departure route is necessary**, provide the complete text, by runway, for required DPs.

a. **When a DP routing is required** and VOR or TACAN is used to define the route, use the format: **RWY 9 - CLIMBING LEFT TURN TO INTERCEPT ABC VORTAC R-310 TO 6000 BEFORE PROCEEDING ON COURSE.**

b. **When a DP routing is required** and NDB is used to define the route, use course to or bearing from the NDB; e.g., **RWY 35 - CLIMB HEADING 350..., THEN CLIMBING RIGHT TURN ON 020 BEARING FROM ABC NDB TO 6000 BEFORE PROCEEDING ON COURSE;** or **RWY 35 - CLIMB HEADING 030..., THEN ON 015 BEARING FROM ABC NDB TO 4000 BEFORE PROCEEDING ON COURSE.**

c. **When a ODP routing permits a climb within a sector**, define the courses to remain within in a clockwise fashion; e.g., **“RWY 12 – CLIMB ON A HEADING BETWEEN 061° CW TO 228° FROM DEPARTURE END OF RUNWAY, OR MINIMUM CLIMB OF 260 ft PER NM TO 8700 FOR ALL OTHER COURSES.”**

d. **When a DP routing is required** and a localizer course is used to define the route, use **magnetic** direction of localizer course to be flown; e.g., **“RWY 5 - CLIMB ON I-XXX LOCALIZER NE COURSE (047 DEGREES) TO 3000 BEFORE TURNING.”**

e. When the departure instructions must be graphically depicted, inform the pilot of the name of the default Obstacle DP, and submit an accompanying Form 8260-15B; e.g., Use standard NOTE: “**USE JONES DEPARTURE**” when the graphic obstacle DP serves all runways or use “**RWY 27 – USE SMITH DEPARTURE**” when the graphic obstacle DP serves only a specific runway.

f. When the departure instructions must include directions to visually climb over the airport, provide specific guidance that includes a reference point, direction of flight (if applicable), and a minimum climb to altitude. Examples:

(1) RWY 19 – For Climb in Visual Conditions: Cross Hickory Regional Airport at or above 1,200 MSL before proceeding on course.

(2) RWY 32 – For Climb in Visual Conditions: Cross XYZ VOR southeast bound at or above 4,200 MSL then proceed on XYZ R-150 to HAMET.

2. It is not appropriate to use the wording "Comply with DP or...." This could be confusing and cause the pilot to use a different routing than was expected by ATC.

3. Do not use the phrase "...or comply with ATC instructions." The pilot is aware that ATC instructions are to be complied with, when possible, and safety of flight is not compromised.

4. Specify a single obstacle DP. Do not provide an option to use a SID as the default ODP. For example, **do not use** “Climb runway heading to 1200 before turning or use Manchester Departure.”

BLOCK (3). TAKEOFF OBSTACLE NOTES.

1. Enter a NOTE regarding obstacles found as a result of applying Table 1, Situation 2 action and Situation 3, action "A." Do not list Take-off Obstacle Notes for the runway(s) served by a graphic default Obstacle DP as described in BLOCK 2(1e) instructions.

2. The note must include the runway affected and inform the pilot of the obstacle(s) type and location relative to the DER, and height (AGL/elevation (MSL)). When there are obstacles on both sides of the runway centerline extended, note the most significant obstacles left and right of the runway centerline. Phrases such as “multiple antennas, numerous trees, etc.” are acceptable. Specify distances in the nearest .1 NM increments (specify distances less than 1 NM in feet). Use standard NOTE:

NOTE: RWY 35, trees 1,280' from DER, 120' left of centerline, 50' AGL/1,527' MSL.

NOTE: RWY 35, Building 2.1 NM from DER, 160' left of centerline, 350' AGL/1,927' MSL.

NOTE: RWY 17, multiple buildings 500' from DER 350' right of centerline, 50' AGL/1,107' MSL. Antenna 6,000' from DER, 1,235' left of centerline, 200' AGL/1,257' MSL.

NOTE: RWY 27, multiple trees and antennas beginning 500' from DER, 350' right of centerline, up to 110' AGL/1,307' MSL.

3. These obstacle NOTES must be published by charting agents.

BLOCK (4). CONTROLLING OBSTACLES.

1. Document the controlling obstacle(s) found as a result of applying Table 1, Situation 3 and/or Situation 4. Do not list Controlling Obstacles for the runway(s) served by a graphic default Obstacle DP as described in BLOCK 2(1e) instructions.

NOTE: For all DPs, the controlling obstacle is that obstacle which, having penetrated the 40:1 Obstacle Clearance Surface (OCS), causes the most adverse climb gradient and/or ceiling and visibility to be published.

2. Use the following format to list the runway affected, elevation and type of obstacle, the coordinates to the nearest 0.01 second; e.g., "**RWY 32: 2,049 MSL Terrain 341548.01N/0862101.05W**" or "**RWY 32: 2,049 MSL Terrain 341548.01N/0862101.05W.**"

BLOCK (5). CITY AND STATE. Complete this BLOCK with the same location data as on the associated approach procedure(s).

BLOCK (6). AIRPORT. Complete this BLOCK with the same airport name data as on the associated approach procedure(s).

BLOCK (7). EFFECTIVE DATE. Leave blank. The effective date will normally be added by NFDC. Enter an effective date only when a specific effective date is required; e.g., Mag Var rotation.

BLOCK 8. AMDT NO. Enter standard entry as on SIAPs.

PAGE 2.

BLOCK (9). CHANGES. List changes relating to data entries on page 1.

BLOCK (10). REASONS. List reasons for changes relating to data entries on page 1.

BLOCK (11). COORDINATED WITH. Enter "X" in the appropriate boxes. Specify other required coordination. DP coordination must be identical with the approach procedure coordination as outlined in Order 8260.19 (latest edition), Chapter 8.

BLOCK (12). REQUIRED EFFECTIVE DATE.

1. Enter the effective date as noted in Order 8260.19 (latest edition), **chapter 8**, except that "Proposed" dates may not be used for DPs. Optimally, submit as routine.

NOTE: En route submission cutoff dates apply to graphic DPs.

2. If the Form 8260-15A represents a concurrent action, place an attention symbol and the letter "C" (*C) in the required effective date space and enter the following standard NOTE in Block 10 (above the required effective date) of the form:

***Concurrent with (Airport ID, IAP name and amendment number; airspace action or other event).**

NOTE: If a Form 8260-15D (Departure Procedure Continuation) is used, this information will be placed on that form.

BLOCK 13. FLIGHT INSPECTED BY. Enter the name of the airspace system inspection pilot who conducted the flight inspection, and the date.

BLOCK 14. DEVELOPED BY. Enter the name of the procedure specialist name and the NFPO branch. This individual must sign in the “developed by” space, and enter the date signed.

BLOCK (15). APPROVED BY. Enter the name of the AVN-100 Manager, or his/her delegated representative. This individual must sign in the “approved by” space, and enter the date signed.

THIS PAGE INTENTIONALLY LEFT BLANK

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)			
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>(1) TAKEOFF MINIMUMS:</u> STANDARD			
<u>(2) TEXTUAL DEPARTURE PROCEDURE:</u>			
<u>(3) TAKEOFF OBSTACLE NOTES:</u>			
<u>(4) CONTROLLING OBSTACLES:</u>			
(5) City, State MILES CITY, MT	(6) Airport MILES CITY/FRANK WILEY FIELD	(7) Effective Date	(8) Amdt. No. ORIG

<p>(9) Changes:</p>	<p>(12) Required Effective Date: N/A</p>	
<p>(10) Reasons:</p>	<p>(11) Coordinated With: ATA <input type="checkbox"/> ALPA <input type="checkbox"/> APA <input type="checkbox"/> AOPA <input type="checkbox"/> NBAA <input type="checkbox"/> OTHER (specify) <input type="checkbox"/> N/A</p>	
<p>(13) Name: N/A</p>	<p>(14) DEVELOPED BY Signature: _____ Date: _____</p>	<p>(15) APPROVED BY Signature: _____ Date: _____</p>

U.S. DEPARTMENT of TRANSPORTATION FEDERAL AVIATION ADMINISTRATION TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)	
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.	
(1) TAKEOFF MINIMUMS: RWY 1, NA - OBSTACLES RWY 32, STANDARD RWY 14, 500-2 1/2 or STANDARD WITH MINIMUM CLIMB OF 330 FEET PER NM TO 1200. RWY 19, STANDARD WITH MINIMUM CLIMB OF 214 FEET PER NM TO 1100, OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FT/NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 2000 FEET PRIOR TO DEPARTURE END OF RUNWAY OR 1000-2 FOR CLIMB IN VISUAL CONDITIONS.	
(2) TEXTUAL DEPARTURE PROCEDURE: RWY 19 - FOR CLIMB IN VISUAL CONDITIONS CROSS HICKORY REGIONAL AIRPORT AT OR ABOVE 1300 BEFORE PROCEEDING ON COURSE. RWY 32 - CLIMB HEADING 317.66 TO 1200 BEFORE TURNING LEFT.	
(3) TAKEOFF OBSTACLE NOTES: NOTE: RWY 14, BUILDING 1.96 NM FROM DER, ON RWY CENTERLINE, 478 FEET AGL/974 FEET MSL. NOTE: RWY 32, TREES 143 FEET LEFT OF DER, 21 FEET AGL/498 FEET MSL.	
(4) CONTROLLING OBSTACLES: RWY 14: 974 MSL BUILDING 324911.09N-0964838.62W RWY 19: 922 MSL TOWER, 324748.00N-0965137.00W RWY 32: 1049 MSL TOWER, 325216.19N-0965523.02W RWY 19 (VCOA): 974 MSL BUILDING 324911.09N/0964838.62W	
(5) City, State DANVILLE, TX	(6) Airport HICKORY REGIONAL
(7) Effective Date	(8) Amdt. No. ORIG

<p>(9) Changes:</p>	<p>(10) Reasons:</p> <p style="text-align: center;">*CONCURRENT WITH KHCK RNAV (GPS) RWY 14, ORIG</p>																							
<p>(11) Coordinated With:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 15%; border: none;">ATA</td> <td style="width: 15%; border: none;"><input checked="" type="checkbox"/></td> <td style="width: 15%; border: none;">ALPA</td> <td style="width: 15%; border: none;"><input checked="" type="checkbox"/></td> <td style="width: 15%; border: none;">APA</td> <td style="width: 15%; border: none;"><input checked="" type="checkbox"/></td> <td style="width: 15%; border: none;">AOPA</td> <td style="width: 15%; border: none;"><input checked="" type="checkbox"/></td> <td style="width: 15%; border: none;">NBAA</td> <td style="width: 15%; border: none;"><input checked="" type="checkbox"/></td> <td style="width: 15%; border: none;">OTHER (specify)</td> <td style="width: 15%; border: none;"><input checked="" type="checkbox"/></td> </tr> <tr> <td colspan="11" style="border: none;">AMGR, FCR, ATCT, ZFW</td> </tr> </table>		ATA	<input checked="" type="checkbox"/>	ALPA	<input checked="" type="checkbox"/>	APA	<input checked="" type="checkbox"/>	AOPA	<input checked="" type="checkbox"/>	NBAA	<input checked="" type="checkbox"/>	OTHER (specify)	<input checked="" type="checkbox"/>	AMGR, FCR, ATCT, ZFW										
ATA	<input checked="" type="checkbox"/>	ALPA	<input checked="" type="checkbox"/>	APA	<input checked="" type="checkbox"/>	AOPA	<input checked="" type="checkbox"/>	NBAA	<input checked="" type="checkbox"/>	OTHER (specify)	<input checked="" type="checkbox"/>													
AMGR, FCR, ATCT, ZFW																								
<p>(12) Required Effective Date: *C</p>																								
<p>(13) FLIGHT INSPECTED BY</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Name:</td> <td style="width: 50%; border: none;">Date:</td> </tr> <tr> <td style="border: none;">Signature:</td> <td style="border: none;">Date:</td> </tr> </table>		Name:	Date:	Signature:	Date:																			
Name:	Date:																							
Signature:	Date:																							
<p>(14) DEVELOPED BY</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Name:</td> <td style="width: 50%; border: none;">Date:</td> </tr> <tr> <td style="border: none;">Signature:</td> <td style="border: none;">Date:</td> </tr> </table>		Name:	Date:	Signature:	Date:																			
Name:	Date:																							
Signature:	Date:																							
<p>(15) APPROVED BY</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Name:</td> <td style="width: 50%; border: none;">Date:</td> </tr> <tr> <td style="border: none;">Signature:</td> <td style="border: none;">Date:</td> </tr> </table>		Name:	Date:	Signature:	Date:																			
Name:	Date:																							
Signature:	Date:																							

U.S. DEPARTMENT of TRANSPORTATION FEDERAL AVIATION ADMINISTRATION TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)		
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.		
(1) TAKEOFF MINIMUMS: RWY 16, 34, NA - OBSTACLES.		
(2) TEXTUAL DEPARTURE PROCEDURE: RWY 18, 36 - USE GOODHILL DEPARTURE.		
(3) TAKEOFF OBSTACLE NOTES:		
(4) CONTROLLING OBSTACLES:		
(5) City, State LASKY, WY	(6) Airport LASKY REGIONAL	(7) Effective Date (8) Amdt. No. ORIG

(9) Changes:

(10) Reasons:

(11) Coordinated With:		(12) Required Effective Date:	
ATA <input checked="" type="checkbox"/>	ALPA <input checked="" type="checkbox"/>	APAA <input checked="" type="checkbox"/>	ROUTINE
APA <input checked="" type="checkbox"/>	AOPA <input checked="" type="checkbox"/>	NBAA <input checked="" type="checkbox"/>	
OTHER (specify) <input checked="" type="checkbox"/> AMGR, LSK ATCT, ZLC			
(13) FLIGHT INSPECTED BY		(15) APPROVED BY	
Name:	Date:	Signature:	Date:

U.S. DEPARTMENT of TRANSPORTATION FEDERAL AVIATION ADMINISTRATION			TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP)		
<small>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.</small>					
(1) TAKEOFF MINIMUMS:					
PROCEDURE CANCELED EFFECTIVE _____					
(2) TEXTUAL DEPARTURE PROCEDURE:					
(3) TAKEOFF OBSTACLE NOTES:					
(4) CONTROLLING OBSTACLES:					
(5) City, State LASKY, WY	(6) Airport LASKY REGIONAL	(7) Effective Date 18 APR 02	(8) Amdt. No. ORIG		

<p>(9) Changes:</p> <p>PROCEDURE CANCELED.</p>																																					
<p>(10) Reasons:</p> <p>OBSTACLE DATA REVIEW - ODP NO LONGER REQUIRED.</p>																																					
<p>(11) Coordinated With:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">ATA</td> <td style="width: 15%;"><input checked="" type="checkbox"/></td> <td style="width: 15%;">ALPA</td> <td style="width: 15%;"><input checked="" type="checkbox"/></td> <td style="width: 15%;">APA</td> <td style="width: 15%;"><input checked="" type="checkbox"/></td> <td style="width: 15%;">AOPA</td> <td style="width: 15%;"><input checked="" type="checkbox"/></td> <td style="width: 15%;">NBAA</td> <td style="width: 15%;"><input checked="" type="checkbox"/></td> <td style="width: 15%;">OTHER</td> <td style="width: 15%;"><input checked="" type="checkbox"/></td> </tr> <tr> <td colspan="11"></td> <td style="font-size: small;">(specify)</td> </tr> <tr> <td colspan="11"></td> <td>AMGR, LSK ATCT, ZLC</td> </tr> </table>	ATA	<input checked="" type="checkbox"/>	ALPA	<input checked="" type="checkbox"/>	APA	<input checked="" type="checkbox"/>	AOPA	<input checked="" type="checkbox"/>	NBAA	<input checked="" type="checkbox"/>	OTHER	<input checked="" type="checkbox"/>												(specify)												AMGR, LSK ATCT, ZLC	<p>(12) Required Effective Date:</p> <p style="text-align: center;">ROUTINE</p>
ATA	<input checked="" type="checkbox"/>	ALPA	<input checked="" type="checkbox"/>	APA	<input checked="" type="checkbox"/>	AOPA	<input checked="" type="checkbox"/>	NBAA	<input checked="" type="checkbox"/>	OTHER	<input checked="" type="checkbox"/>																										
											(specify)																										
											AMGR, LSK ATCT, ZLC																										
<p>(13) Name:</p>	<p>(14) DEVELOPED BY</p> <p>Signature: _____ Date: _____</p>	<p>(15) APPROVED BY</p> <p>Signature: _____ Date: _____</p>																																			

**INSTRUCTIONS FOR COMPLETING FAA FORM 8260-15B
GRAPHIC DEPARTURE PROCEDURE (DP)
(Non-RNAV Departure Procedures)**

PAGE 1.

NOTE: Attach an up-to-date, clear graphic depiction of the procedure. DO NOT include a textual description of transitions or departure route text.

TITLE LINE: Check "OBSTACLE" when the procedure is the default obstacle departure procedure (see paragraph 10b) or check "SID" when the procedure is initiated by ATC (see paragraph 10c).

BLOCK (1). DP ROUTE DESCRIPTION. Provide the initial climb out instructions for each runway and a textual description of the departure route to the DP termination fix. Include only information pertinent to the departure procedure. *If the DP route can be clearly understood from a graphic depiction, a complete textual description is not necessary. Simply state, "...then via depicted route."*

BLOCK (2). TRANSITION ROUTES. (N/A for ODP)

(a) Transition Name. Name each transition according to the name of the fix at the transition termination point entered in BLOCK 2(d). Do not include the word "TRANSITION."

(b) Transition Computer Codes. Enter computer code furnished by ATC (see appendix 2).

(c) From FIX/NAVAID. Fix/NAVAID *where the basic DP ends*; e.g., **DANNY INT, BICKR.**

(d) To FIX/NAVAID. En route fix/NAVAID where each transition ends; e.g., **DANNY, BICKR.**

NOTE: If a transition has multiple segments, enter one line for each segment.

(e) Course/Distance. Specify the course and distance for each transition segment. Enter the actual magnetic *course* to the hundredth of a degree, and distance to the hundredth of a mile (see Order 8260.19, chapter 8). *When documenting the course/distance between facilities, provide this information for both facilities.*

Example:

076.56 & 080.47/41.61
(TWN R-077 & WSN R-260)

NOTE: NACO will round for publication.

(f) MEA/MOCA. Enter MEA/MOCA along transition route. By definition, the MEA also encompasses the MRA. To reduce chart clutter, MOCAs less than 500 below MEAs should not be published. If transitions share a common segment, make sure the MEA for that segment is the same for each transition.

(g) Crossing Altitudes/Fixes. DPs must accommodate ATC and obstacle clearance requirements with regard to minimum fix crossing altitudes and climb gradients. Document the ATC altitude, followed by the altitude required for obstacle clearance; e.g., **BECKY at/above 9000 (ATC)/6500 (MCA)**. Charting agencies must depict the obstacle clearance altitude as a minimum crossing altitude (MCA). ATC and obstacle altitude values must be charted regardless of separation. **The ATC altitude must not be lower than the MCA.**

NOTE: To determine the MCA, assume 200'/NM aircraft climb capability until reaching an altitude suitable for en route flight (refer to 14 CFR Part 91.177); then apply the provisions of TERPS Volume 1, paragraph 1730.

BLOCK (3). PROCEDURAL DATA NOTES/TAKEOFF MINIMUMS.

1. List any procedural data information that is to appear in note form on the graphic depiction; e.g., DME required, minimum climb rate information, etc. Also, depict all restrictions and performance requirements to fly the procedure.

Followed by:

2. List the runway(s) that are not authorized for IFR departures. If none of the actions listed in Table 1 are feasible, or if another reason(s) precludes DP development (noise abatement, environmental, etc.), an IFR departure must not be authorized.

Examples:

- RWY 27, NA - Obstacles.**
- RWY 35, NA - Environmental.**
- RWY 17, NA - Obstacles and noise abatement.**

Followed by:

3. List the runway(s) authorized standard takeoff minimums.

Example:

RWY 09, 31 Standard.

Followed by:

4. List the runway(s) that have any *deviations* from standard minimums and/or restrictions.

Examples:

a. TAKEOFF MINIMUMS: RWY 13, 400-2 or standard with minimum climb of 310 ft per NM to 900, or alternatively, with standard takeoff minimums and normal 200 ft/NM climb gradient, takeoff must occur no later than 1,800 feet prior to departure end of runway.

b. "TAKEOFF MINIMUMS: RWY 27, Standard with minimum climb of 280' per NM to 2500, or alternatively, with standard takeoff minimums and normal 200 ft/NM climb

gradient, takeoff must occur no later than 1,800 ft prior to departure end of runway. ATC climb of 310' per NM to 4000."

c. "TAKEOFF MINIMUMS: RWY 36, ATC climb of 340' per NM to 8000."

NOTE: The option to reduce available runway length for takeoff is only applicable to obstacle driven climb gradient and not applied for ATC climb gradients.

BLOCK (4). TAKEOFF OBSTACLE NOTES.

1. Enter a NOTE regarding obstacles found as a result of applying Table 1, Situation 2 action and Situation 3, action "A".

2. The note must include the runway affected and inform the pilot of the obstacle(s) type and location relative to the DER, and height (AGL/elevation (MSL)). When there are obstacles on both sides of the runway centerline extended, note the most significant obstacles left and right of the runway centerline. Phrases such as "multiple antennas, numerous trees, etc." are acceptable. Specify distances in the nearest .1 NM increments (specify distances less than 1 NM in feet). Use standard NOTE:

NOTE: RWY 35, trees 1,280' from DER, 120' left of centerline, 50' AGL/1,527' MSL.

NOTE: RWY 35, Building 2.1 NM from DER, 160' left of centerline, 350' AGL/1,927' MSL.

NOTE: RWY 17, multiple buildings 500' from DER 350' right of centerline, 50' AGL/1,107' MSL. Antenna 6,000' from DER, 1,235' left of centerline, 200' AGL/1,257' MSL.

NOTE: RWY 27, multiple trees and antennas beginning 500' from DER, 350' right of centerline, up to 110' AGL/1,307' MSL.

3. These obstacle NOTES must be published by charting agents.

BLOCK (5). CONTROLLING OBSTACLES.

1. Document the controlling obstacle(s) found as a result of applying Table 1, Situation 3 and/or Situation 4.

NOTE: For all DPs, the controlling obstacle is that obstacle which, having penetrated the 40:1 Obstacle Clearance Surface (OCS), causes the most adverse climb gradient and/or ceiling and visibility to be published.

2. Document the controlling obstacle(s) when development of a departure routing is required. This documentation must include those (avoided) obstacles that forced the development of a departure route. This information will not be charted on the procedure.

3. Use the following format to list the runway affected, elevation and type of obstacle, the coordinates to the nearest 0.01 second; e.g., "RWY 32: 2,049 MSL Terrain 341548.01N/0862101.05W" or "RWY 32: 2,049 MSL Terrain 341548.01N/0862101.05W."

(See – Form 8260-15A, Block 4)

BLOCK (6). FIXES AND/OR NAVAIDS. Enter only those fixes and/or NAVAIDs for which charting is requested but is not included in the DP route description of the departure or transition routes.

BLOCK (7). DP NAME. Enter name of departure procedure. For example: the CATHEDRAL SEVEN DEPARTURE is entered as CATHEDRAL.

BLOCK (8). NUMBER. Enter departure procedure number (spelled out); e.g. EIGHT.

BLOCK (9). DP COMPUTER CODE. Enter computer identification code furnished by ATC (see appendix 2).

BLOCK (10). SUPERSEDED NUMBER. Departure procedure number (spelled out) superseded by this procedure. Enter "None" for a new procedure.

BLOCK (11). DATED. Date of superseded procedure. Format: DD MMM YY.

BLOCK (12). EFFECTIVE DATE. Leave blank. The effective date will normally be added by NFDC. Enter an effective date only when a specific effective date is required; e.g., Mag Var rotation.

PAGE 2.

BLOCK (13). AIRPORTS SERVED. List the *official airport name(s), city, and 2-letter state code served by the departure procedure.*

NOTE: An obstacle DP may only serve one airport.

BLOCK (14). LOST COMMUNICATIONS PROCEDURES. ATC is responsible for determining the need and content of lost communications instructions. Leave blank when procedures are the same as in 14 CFR Part 91.185 (standard).

BLOCK (15). COMMUNICATIONS. Enter name of radio "primary" communications to be charted; e.g., ATIS, CTAF, Clearance Delivery, Departure Control, etc. Specify frequency only if different than what is currently published for the facility, or unique to the procedure.

BLOCK (16). ADDITIONAL FLIGHT DATA. List any additional charting instructions, items essential to clarify charting or information a specialist has determined needs charting as other than a NOTE. Examples of data may include: terrain features, airports, **Special Use Airspace (SUA)**, holding patterns, or takeoff and departure obstacles; e.g., **Chart _____ MOA; Chart holding at ICT VORTAC, Hold NE, RT, 222.03 Inbound.** Ensure that the accompanying Form 8260-2 contains the appropriate charting instructions for holding patterns supporting the departure procedure.

BLOCK (17). CONTINUATION. Use this area of the sheet to complete any data BLOCKS from previous pages. Indicate BLOCK number and title being **continued**.

PAGE 3.

BLOCK (18). REMARKS. List information/data that is NOT to be charted; e.g., administrative data or notes for controller information (requested by ATC). These items will not be **published** in the TL/NFDD.

BLOCK (19). CHANGES. List changes relating to data entries.

BLOCK (20). REASONS. List reasons for changes relating to data entries.

BLOCK (21). COORDINATED WITH. Enter “X” in the appropriate boxes. Specify other required coordination. DP coordination must be identical with the approach procedure coordination as outlined in Order 8260.19 (latest edition), chapter 8.

BLOCK (22). REQUIRED EFFECTIVE DATE.

1. Enter the effective date as noted in Order 8260.19 (latest edition), chapter 8, except that “Proposed” dates may not be used for graphic DPs. Optimally, submit as “routine.”

NOTE: En route data submission cutoff dates must apply for graphic DPs.

2. If the Form 8260-15B represents a concurrent action, place an attention symbol and the letter “C” (*C) in the required effective date space and enter the following standard NOTE in Block 10 (above the required effective date) of the form:

***Concurrent with (Airport ID) (Takeoff Minimums and Textual Departure Procedures FAA Form 8260-15A, airspace action or other event).**

NOTE: If a Form 8260-15D (Departure Procedure Continuation) is used, this information will be placed on that form.

BLOCK (23). FLIGHT INSPECTED BY. Enter the name of the airspace system inspection pilot who conducted the flight inspection, and date.

BLOCK (24). DEVELOPED BY. Enter the name of the procedure specialist developing the data, and the NFPO branch. This individual must sign in the “developed by” space, and enter the date signed.

BLOCK (25). APPROVED BY. Enter the name of the AVN-100 Manager, or his/her delegated representative. This individual must sign in the “approved by” space and enter the date signed.

THIS PAGE INTENTIONALLY LEFT BLANK

US Department of Transportation Federal Aviation Administration	GRAPHIC DEPARTURE PROCEDURE (DP) <input checked="" type="checkbox"/> OBSTACLE <input type="checkbox"/> SID <input type="checkbox"/> RNAV	1. Bearings, headings, courses, tracks, and radials are magnetic. 2. Distances are in nautical miles. 3. Altitudes are minimum altitudes unless otherwise indicated. 4. Graphic depiction attached.				
(1) DP Route Description: TAKEOFF RWY 18: CLIMB HEADING 185.22 TO 7700, THEN CLIMBING LEFT TURN DIRECT MKM VOR/DME, THEN ON MKM R-028 TO LARST, THENCE... OR, CLIMB IN VISUAL CONDITIONS TO CROSS MKM VOR/DME NORTHEASTBOUND AT OR ABOVE 8100, THEN ON MKM R-028 TO LARST, THENCE... TAKEOFF RWY 36: CLIMB HEADING 005.22 TO 7100, THEN CLIMBING RIGHT TURN TO INTERCEPT MKM R-028 TO LARST, THENCE... ...RIGHT TURN TO INTERCEPT GHI R-265 TO GHI VORTAC. CROSS GHI VORTAC AT OR ABOVE MEAMCA FOR ASSIGNED ROUTE OF FLIGHT.						
(2) Transition Routes (Graphic Depiction Only)						
(a) Transition Name	(b) Transition Computer Codes	(c) From FIX/NAVAID	(d) To FIX/NAVAID	(e) Course / Distance	(f) MEA / MOCA	(g) Crossing Altitudes/Fixes
(3) Procedural Data Notes / Takeoff Minimums: TAKEOFF MINIMUMS: RWY 16, 34 NA - OBSTACLES. RWY 36 STANDARD. RWY 18 STANDARD WITH MINIMUM CLIMB OF 380 FEET PER NM TO 7700 OR 1800-3 FOR CLIMB IN VISUAL CONDITIONS.						
(4) Takeoff Obstacle Notes:						
(5) Controlling Obstacles: RWY 18: 7359 MSL TREES, 433303.44N/1104648.03W RWY 18 (VCOA): 7751 TREES, 433807.67N/1104133.89W RWY 36: 6949 MSL TOWER, 433801.40N/1104220.06W						
(6) Fixes and/or NAVAID'S:						
(7) DP Name GOODHILL	(8) Number ONE	(9) DP Computer Code GHI1.GHI	(10) Superseded Number NONE	(11) Dated	(12) Effective Date	
FAA Form 8260-15B / February 2003 (computer generated)						

(13) Airports Served					
Airport Name	LASKY REGIONAL	City/State	LASKY, WY	(11) Dated	(12) Effective Date
Airport Name		City/State			
Airport Name		City/State			
Airport Name		City/State			
Airport Name		City/State			
Airport Name		City/State			
(14) Lost Communications Procedures:					
(15) Communications: ATIS, GRN CON, TWR, ZLC					
(16) Additional Flight Data:					
(17) Continuation:					
(7) DP Name	GOODHILL	(8) Number	ONE	(9) DP Computer Code	GHI1.GHI
		(10) Superseded Number	NONE		

(18) Remarks:

(19) Changes:

(20) Reasons:

(21) Coordinated with:

ATA	ALPA	APA	AOPA	NBAA	OTHER (specify)	(22) Required Effective Date:
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> AMGR, LSK ATCT, ZLC	ROUTINE

(23) APPROVED BY

Name:		Signature:		Date:	

(7) DP Name: GOODHILL

(8) Number: ONE

(9) DP Computer Code: GH11.GHI

(10) Superseded Number: NONE

(11) Dated

(12) Effective Date

THIS PAGE INTENTIONALLY LEFT BLANK

US Department of Transportation
Federal Aviation Administration

GRAPHIC DEPARTURE PROCEDURE (DP)

OBSTACLE SID RNAV

1. Bearings, headings, courses, tracks, and radials are magnetic.
 2. Distances are in nautical miles.
 3. Altitudes are minimum altitudes unless otherwise indicated.
 4. Graphic depiction attached.

(1) DP Route Description: **TAKEOFF RWYS 31L/R:** CLIMB HEADING 309.71 AND GRM R-190 TO CROSS GRM VORTAC AT OR ABOVE 2000, THEN RIGHT TURN TO INTERCEPT GRM R-076 TO MICKY. MAINTAIN 9000, EXPECT CLEARANCE TO FILED ALTITUDE AT MICKY.

(2) Transition Routes (Graphic Depiction Only)

(a) Transition Name	(b) Transition Computer Codes	(c) From FIX/NAVAID	(d) To FIX/NAVAID	(e) Course / Distance	(f) MEA / MOCA	(g) Crossing Altitudes/Fixes
HOMINY	MICKY4.HMS	MICKY TWN VORTAC	TWN VORTAC HMS VORTAC	071.64/10.89 (TWN R-072) 097.22 & 098.54/68.47 (TWN R-097 & HMS R-279)	3700 8100/6900	TWN AT/ABOVE 7000 (ATC)/6700 (MCA)
LIMPET	MICKY4.LPT	MICKY	LPT VORTAC	351.19/70.98 (LPT R-171)	6000/3200	
WATSON	MICKY4.WSN	MICKY TWN VORTAC	TWN VORTAC WSN VORTAC	071.64/10.89 (TWN R-072) 076.56 & 080.47/41.61 (TWN R-077 & WSN R-260)	3700 4200	TWN AT/ABOVE 7000 (ATC)

(3) Procedural Data Notes / Takeoff Minimums:
NOTE: THIS DP TO BE USED ONLY UPON ASSIGNMENT BY METRO TOWER, NORMALLY BETWEEN THE HOURS OF 2100-0600 LOCAL TIME.
TAKEOFF MINIMUMS:
 RWY 13L, 13R, 18, 36 NA FOR THIS DP - NOISE ABATEMENT.
 RWY 31L: OBSTACLE CLIMB OF 253 FT PER NM TO 1300, ATC CLIMB OF 310 FT PER NM TO 2000.
 RWY 31R: 300-1 3/4 OR STANDARD WITH MINIMUM OBSTACLE CLIMB OF 228 FT PER NM TO 900 OR ALTERNATIVELY, WITH STANDARD TAKEOFF MINIMUMS AND A NORMAL 200 FEET/NM CLIMB GRADIENT, TAKEOFF MUST OCCUR NO LATER THAN 2,100 FEET PRIOR TO DEPARTURE END OF RUNWAY. MINIMUM ATC CLIMB OF 310 FT PER NM TO 2000.

(4) Takeoff Obstacle Notes:

(5) Controlling Obstacles: **RWY 31L:** 1049 MSL TOWER 325304.00N/0965428.00W **RWY 31R:** 739 MSL BUILDING, 325245.67N/0965221.00W

(6) Fixes and/or NAVAID'S : SCY VOR/DME

(7) DP Name	(8) Number	(9) DP Computer Code	(10) Superseded Number	(11) Dated	(12) Effective Date
MICKY	FOUR	MICKY4.MICKY	THREE		

(13) Airports Served			
Airport Name	METRO JETPORT	City/State	DALLAS, TX
Airport Name		City/State	
Airport Name		City/State	
Airport Name		City/State	
Airport Name		City/State	
Airport Name		City/State	
(14) Lost Communications Procedures:			
(15) Communications: ATIS, CLNC DEL, GND CON, TWR, DEP CON			
(16) Additional Flight Data:			
(17) Continuation:			
(7) DP Name	MICKY	(8) Number	FOUR
(9) DP Computer Code	MICKY4.MICKY	(10) Superseded Number	THREE
(11) Dated	18 Apr 02	(12) Effective Date	

(18) Remarks:

(19) Changes:
ADDED HMS TRANSITION.

(20) Reasons:
RAPT REQUEST.

(21) Coordinated with:

ATA

ALPA

APA

AOPA

NBAA

OTHER

(specify)

AMGR, MET ATCT, REG ATCT, ZFW

(22) Required Effective Date:

ROUTINE

(23) FLIGHT INSPECTED BY

Date:

Signature:

(24)

DEVELOPED BY

Date:

Signature:

(25)

APPROVED BY

Date:

(7) DP Name

MICKY

(8) Number

FOUR

(9) DP Computer Code

MICKY4.MICKY

(10) Superseded Number

THREE

(11) Dated

18 Apr 02

(12) Effective Date

THIS PAGE INTENTIONALLY LEFT BLANK

US Department of Transportation
Federal Aviation Administration

GRAPHIC DEPARTURE PROCEDURE (DP)

OBSTACLE SID RNAV

1. Bearings, headings, courses, tracks, and radials are magnetic.
2. Distances are in nautical miles.
3. Altitudes are minimum altitudes unless otherwise indicated.
4. Graphic depiction attached.

(1) DP Route Description:

PROCEDURE CANCELED _____

(2) Transition Routes (Graphic Depiction Only)

(a) Transition Name	(b) Transition Computer Codes	(c) From FIX/NAVAID	(d) To FIX/NAVAID	(e) Course / Distance	(f) MEA / MOCA	(g) Crossing Altitudes/Fixes

(3) Procedural Data Notes / Takeoff Minimums:

(4) Takeoff Obstacle Notes:

(5) Controlling Obstacles:

(6) Fixes and/or NAVAID'S :

(7) DP Name: GOODHILL

(8) Number: ONE

(9) DP Computer Code: GHI1.GHI

(10) Superseded Number: NONE

(11) Dated: 18 APR 02

(12) Effective Date: 18 APR 02

(13) Airports Served			
Airport Name		City/State	
Airport Name		City/State	
Airport Name		City/State	
Airport Name		City/State	
Airport Name		City/State	
Airport Name		City/State	
(14) Lost Communications Procedures:			
(15) Communications:			
(16) Additional Flight Data:			
(17) Continuation:			
(7) DP Name	(8) Number	(9) DP Computer Code	(10) Superseded Number
GOODHILL	ONE	GHI1.GHI	NONE
		(11) Dated	(12) Effective Date
			18 APR 02

(18) Remarks:

(19) Changes:
PROCEDURE CANCELED.

(20) Reasons:
OBSTACLE DATA REVIEW - ODP NO LONGER REQUIRED.

* CONCURRENT WITH CANCELATION OF KLSK, TAKEOFF MINIMUMS AND TEXTUAL DEPARTURE PROCEDRES (DP), ORIG.

(22) Required Effective Date:

*C

(21) Coordinated with:

ATA

ALPA

APA

AOPA

NBAA

OTHER (specify)

AMGR, LSK ATCT, ZLC

(23) Name: _____

Date: _____

(24) Signature: _____

Date: _____

(25) DEVELOPED BY

(25) APPROVED BY

Signature: _____

Date: _____

(7) DP Name
GOODHILL

(8) Number
ONE

(9) DP Computer Code
GHI1.GHI

(10) Superseded Number
NONE

(11) Dated

(12) Effective Date
18 APR 02

THIS PAGE INTENTIONALLY LEFT BLANK

**INSTRUCTIONS FOR COMPLETING
FAA FORM 8260-15D
DEPARTURE PROCEDURE (CONTINUATION)**

1. Use. Form 8260-15D is used as a continuation sheet for Forms 8260-15A/15B. In all cases, clearly identify by name or format what section or information is being presented on the continuation sheet. The Form 8260-15D must be completed as follows:

(1) Enter the necessary data in the space provided.

(2) Enter the “Lower Blocks” identical to the information presented on the pages of the Forms 8260-15A/15B. There are two lines of lower blocks to match the lower blocks of the Form 8260-15A or Form 8260-15B. Only fill in the line that matches the form of which the continuation sheet applies to. The other line will be left blank.

(3) Enter the page number and number of pages required for the procedure in the lower right-hand corner; e.g., Page **3 of 3 pages**. The basic Forms 8260-15A/15B must be page number one, with additional Form 8260-15D numbered sequentially.

2. Certification. The last page must be the only page certified with the required signatures.

THIS PAGE INTENTIONALLY LEFT BLANK

**U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
DEPARTURE PROCEDURE (CONTINUATION FAA FORM 8260-15A)
FLIGHT STANDARDS SERVICE**

Bearings, headings, courses, 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 unless otherwise indicated, except visibilities which are in
statute miles or in feet RVR.

(1) TAKEOFF MINIMUMS: (CONTD)
RWY 35R 400-2 OR STANDARD WITH MINIMUM CLIMB OF 324 FEET PER NM TO 2800.

City, State	HAMMETT, VA		Airport	HAMMETT METRO		Effective Date	Amdt. No.
DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date	ORIG	

<p>Coordinated with:</p> <p>ATA <input type="checkbox"/> ALPA <input type="checkbox"/> APA <input checked="" type="checkbox"/> AOPA <input checked="" type="checkbox"/> NBAA <input checked="" type="checkbox"/> OTHER (specify) <input type="checkbox"/> AMGR, HMT ATCT</p>		<p>Required Effective Date:</p> <p>ROUTINE</p>
<p>FLIGHT INSPECTED BY</p>		<p>DEVELOPED BY</p>
<p>Name:</p>	<p>Signature:</p>	<p>Date:</p>
<p>City, State</p> <p>HAMMETT, VA</p>	<p>Airport</p> <p>HAMMETT METRO</p>	<p>Effective Date</p> <p>ORIG</p>
<p>DP Name</p>	<p>Number</p>	<p>Dated</p> <p>Effective Date</p>
		<p>Superseded Number</p>

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
DEPARTURE PROCEDURE (CONTINUATION FAA FORM 8260-15B)
FLIGHT STANDARDS SERVICE

Bearings, headings, courses, 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 unless otherwise indicated, except visibilities which are in
statute miles or in feet RVR.

(15) COMMUNICATIONS: (CONT'D FROM BLOCK 17)
RGH ATIS, YUL TWR/GND CON/CLNC DEL/ATIS

City, State		Airport		Effective Date	Amdt. No.
DP Name	MOOCH	Number	ONE	Dated	Effective Date
		Superseded Number	NONE		

<p>Coordinated with:</p> <p>ATA <input checked="" type="checkbox"/> ALPA <input checked="" type="checkbox"/> APA <input checked="" type="checkbox"/> AOPA <input checked="" type="checkbox"/> NBAA <input checked="" type="checkbox"/> OTHER (specify) <input checked="" type="checkbox"/> <u>AMGR, VTU ATCT, UAV ATCT, ZOA</u></p>		<p>Required Effective Date:</p> <p>ROUTINE</p>
<p>FLIGHT INSPECTED BY</p>		<p>DEVELOPED BY</p>
<p>Name:</p>	<p>Signature:</p>	<p>Date:</p>
<p>City, State</p>	<p>Airport</p>	<p>Effective Date</p>
<p>DP Name</p>	<p>Number</p>	<p>Superseded Number</p>
<p>MOOCH</p>	<p>ONE</p>	<p>MOOCH1.MOOCH NONE</p>
		<p>Dated</p>
		<p>Effective Date</p>
		<p>Amdt. No.</p>

APPENDIX 6

**INSTRUCTIONS FOR COMPLETING FAA FORM 8260-15B,
GRAPHIC DEPARTURE PROCEDURE (DP)
(RNAV Departure Procedures)**

**INSTRUCTIONS FOR COMPLETING FAA FORM 8260-15C,
DEPARTURE (DATA RECORD)**

**INSTRUCTIONS FOR COMPLETING FAA FORM 8260-15D,
DEPARTURE PROCEDURE (CONTINUATION)**

**INSTRUCTIONS FOR COMPLETING FAA FORM 8260-15B
GRAPHIC DEPARTURE PROCEDURE (DP)
(RNAV Departure Procedures)**

PAGE 1.

NOTE: Attach an up-to-date, clear graphic depiction of the procedure. DO NOT include a textual description of transitions or departure route text.

TITLE LINE: Check the "RNAV" box. Additionally, check "OBSTACLE" when the procedure is the default obstacle departure procedure (see paragraph 10b), **or** check "SID" when the procedure is initiated by ATC (see paragraph 10c).

BLOCK (1). DP ROUTE DESCRIPTION. Provide the initial climb out instructions for each runway and a textual description of the departure route to the DP termination fix. Include only information pertinent to the departure procedure.

1. If the DP route can be clearly understood from a graphic depiction, a complete textual description is not necessary. Simply state, "...then via depicted route."

2. See Table 1 for specific wording and required information. Specify the turn direction as either "Left/Right" as follows: 1. DF legs: For all course changes. 2. CF and TF legs: For all course changes exceeding 90 degrees.

NOTE: If the DP route becomes a series of consecutive TF legs with turns less than or equal to 90°, a complete textual description from that point is not necessary. Simply state, "...then via depicted route." (See example, "TAKEOFF RWY 1").

3. Document all courses, headings, tracks, and distances to the nearest hundredth unit of measurement.

NOTE: BLOCK (1) entries will be published verbatim on the NACO chart, with the exception of courses, headings, and tracks, which will be rounded by NACO to the nearest whole degree.

4. When using a VA or VM leg, specify the actual heading to be flown (e.g., do not use "climb via runway heading"). Ensure courses, tracks, headings, and distances entered on Form 8260-15B match the equivalent true values and distances entered on Form 8260-15C as appropriate.

Table 1. Leg Type Wording and Required Information

8260-15C Leg Type	8260.15B Wording	8260.15B Required Information
VA	"heading"	heading/altitude
DF	"direct"	turn direction*/distance**
CF	"course"	course/distance/turn direction***
TF	"track"	course/distance/turn direction***
VM	"heading"	Heading/altitude

- * Do not specify turn direction when a DF leg is used as the first leg of a DP.
- ** Do not specify distance when part of a VA-DF leg combination.
- ***Only specify turn direction for CF or TF legs when amount of turn exceeds 90°

Examples:

VA leg followed by DF leg – "Takeoff RWY 32R: Climb heading 317.66 to 1000', then right turn direct LARRY."

VA leg followed by CF leg – "Takeoff RWY 32R: Climb heading 317.66 to at or above 1000', then on 041.20 course to LARRY."

NOTE: Unlike VA/DF, the VA/CF combination requires the climb-to altitude to be stated as an "at or above" altitude. This is a design requirement exclusive to the VA/CF combination.

CF leg - "Takeoff RWY 1: Climb on 007.52 course to LARRY, thence..."

DF leg - "Takeoff RWY 14L: Climb direct CURLY, thence..."

CF leg followed by TF legs (less than 90 degree course changes) – "Takeoff RWY 1: Climb on 007.52 course to LARRY, then via depicted route to SHEMP, thence..."

CF leg followed by DF leg – "Takeoff RWY 14L: Climb on 137.64 course to cross CURLY at or above 1000, then left turn direct SHEMP, thence..."

VM leg – "Takeoff RWY 35C: Climb heading 350.11 or as assigned by ATC to 3000, expect vectors to AIMEE, thence..."

BLOCK (2). TRANSITION ROUTES. (NA for ODP)

(a) **Transition Name.** Name each transition according to the name of the fix at the transition termination point entered in BLOCK 2(d). Do not include the word "TRANSITION."

(b) **Transition Computer Codes.** Enter computer code furnished by ATC (see appendix 2).

(c) **From FIX/NAVAID.** Fix/NAVAID where each transition begins (normally, the en route fix where the DP ends); e.g., **DANNY, BICKR.**

(d) **To FIX/NAVAID.** En route fix/NAVAID where each transition ends; e.g., **DANNY, BICKR.** If a transition has multiple segments, enter one line for each segment.

(e) **Course/Distance.** Specify the course and distance for each transition segment. Enter the actual magnetic course to the hundredth of a degree, and distance to the hundredth of a mile (see Order 8260.19 (latest edition), chapter 8). NACO will round for publication.

(f) **MEA/MOCA.** Enter MEA/MOCA along transition route. By definition, the MEA also encompasses the MRA. To reduce chart clutter, MOCAs less than 500 below MEAs should not be published. If transitions share a common segment, make sure the MEA for that segment is the same for each transition.

(g) Crossing Altitudes/Fixes. DPs must accommodate ATC and obstacle clearance requirements with regard to minimum waypoint/fix crossing altitudes and climb gradients. Document the ATC altitude, followed by the altitude required for obstacle clearance; e.g., **BECKY at/above 9000 (ATC)/6500 (MCA)**. Charting agencies must depict the obstacle clearance altitude as a minimum crossing altitude (MCA). ATC and obstacle altitude values must be charted regardless of separation. **The ATC altitude must not be lower than the MCA.** Information in this BLOCK should match the corresponding information in BLOCK (8) of 8260-15C.

NOTE: To determine the MCA, assume 200 feet/NM aircraft climb capability until reaching an altitude suitable for en route flight (refer to 14 CFR Part 91.177); then apply the provisions of TERPS Volume 1, paragraph 1730.

Examples:

NOTE: The VA leg, when used, will be used only on the first leg of a departure and as such a VA leg should not appear in the transition route.

DF leg – "Right turn direct", "Left turn direct" - include distance.

CF leg – Not used for transition routing.

TF leg – "067.11 **TRACK**/87.24" or "Right turn, 54.94 **TRACK**/47.23."

BLOCK (3). PROCEDURAL DATA NOTES/TAKEOFF MINIMUMS.

1. List any procedural data information that is to appear in note form on the graphic depiction; e.g., minimum climb rate information, etc. Also, depict all restrictions and performance requirements to fly the procedure. **See appendix 2, paragraph 5e, for specific information that must be charted and entered in this block.**

Followed by:

2. List the runway(s) that are not authorized for IFR departures. If none of the actions listed in Table 1 are feasible, or if another reason(s) precludes DP development (noise abatement, environmental, etc.), an IFR departure must not be authorized.

Examples:

RWY 27, NA - Obstacles.

RWY 35, NA - Environmental.

RWY 17, NA - Obstacles and noise abatement.

Followed by:

3. List the runway(s) authorized standard takeoff minimums.

Example:

RWY 09, 31 Standard.

Followed by:

4. List the runway(s) that have any *deviations* from standard minimums and/or restrictions;

Examples:

a. TAKEOFF MINIMUMS: RWY 13, 400-2 or standard with minimum climb of 310 ft per NM to 900, or alternatively, with standard takeoff minimums and a normal 200 ft/NM climb gradient, takeoff must occur no later than 1,800 ft prior to departure end of runway.

b. “TAKEOFF MINIMUMS: RWY 27, Standard with minimum climb of 280’ per NM to 2500, or alternatively, with standard takeoff minimums and a normal 200 ft/NM climb gradient, takeoff must occur no later than 1,800 ft prior to departure end of runway. ATC climb of 310’ per NM to 4000”

c. “TAKEOFF MINIMUMS: RWY 36, ATC climb of 340’ per NM to 8000”

NOTE: The option to reduce available runway length for takeoff is only applicable to obstacle driven climb gradient and not applied for ATC climb gradients.

BLOCK (4). TAKEOFF OBSTACLE NOTES.

1. Enter a NOTE regarding obstacles found as a result of applying Table 1, Situation 2 action and Situation 3, action "A".

2. The note must include the runway affected and inform the pilot of the obstacle(s) type and location relative to the DER, and height (AGL/elevation (MSL)). When there are obstacles on both sides of the runway centerline extended, note the most significant obstacles left and right of the runway centerline. Phrases such as “multiple antennas, numerous trees, etc.” are acceptable. Specify distances in the nearest .1 NM increments (specify distances less than 1 NM in feet). Use standard NOTE:

NOTE: RWY 35, trees 1,280’ from DER, 120’ left of centerline, 50’ AGL/1,527’ MSL.

NOTE: RWY 35, Building 2.1 NM from DER, 160’ left of centerline, 350’ AGL/1,927’ MSL.

NOTE: RWY 17, multiple buildings 500’ from DER 350’ right of centerline, 50’ AGL/1,107’ MSL. Antenna 6,000’ from DER, 1,235’ left of centerline, 200’ AGL/1,257’ MSL.

NOTE: RWY 27, multiple trees and antennas beginning 500’ from DER, 350’ right of centerline, up to 110’ AGL/1,307’ MSL.

3. These obstacle NOTES must be published by charting agents.

BLOCK (5). CONTROLLING OBSTACLES.

1. Document the controlling obstacle(s) found as a result of applying Table 1, Situation 3 and/or Situation 4.

NOTE: For all DPs, the controlling obstacle is that obstacle which, having penetrated the 40:1 Obstacle Clearance Surface (OCS), causes the most adverse climb gradient and/or ceiling and visibility to be published.

2. Document the controlling obstacle(s) when development of a departure routing is required and/or when the OCS is raised (up to 35') above DER elevation to account for an existing obstacle. When the OCS is raised, document the OCS height used to avoid or reduce the CG required to clear the obstacle. This documentation must include those (avoided) obstacles that forced the development of a departure route.

3. Use the following format to list the runway affected, elevation and type of obstacle, the coordinates to the nearest 0.01 second, and if applicable, OCS height above DER elevation; e.g., "RWY 32: 2,049 MSL Terrain 341548.01N/0862101.05W" or "RWY 32: 2,049 MSL Terrain 341548.01N/0862101.05W - OCS 14' above DER ELEVATION."

BLOCK (6). FIXES AND/OR NAVAIDS. Enter only those fixes and/or NAVAIDs for which charting is requested but are not included in the textual description of the departure or entered in the transition route data.

BLOCK (7). DP NAME. Enter name of departure procedure. For example: the CATHEDRAL SEVEN DEPARTURE is entered as CATHEDRAL; the JONES SIX DEPARTURE (RNAV) is entered as JONES.

BLOCK (8). NUMBER. Enter departure procedure number (spelled out); e.g. EIGHT.

BLOCK (9). DP COMPUTER CODE. Enter computer identification code furnished by ATC (see appendix 2).

BLOCK (10). SUPERSEDED NUMBER. Departure procedure number (spelled out) superseded by this procedure. Enter "NONE" if a new procedure.

BLOCK (11). DATED. Date of superseded procedure. Format: DD MMM YY.

BLOCK (12). EFFECTIVE DATE. Leave blank. The effective date will normally be added by NFDC. Enter an effective date only when a specific effective date is required; e.g., Mag Var rotation.

PAGE 2.

BLOCK (13). AIRPORTS SERVED. Except for RDVAs, RNAV DPs may only serve one airport. List the airport, city, and 2-letter state code served by the departure procedure.

BLOCK (14). LOST COMMUNICATIONS PROCEDURES. ATC is responsible for determining the need and content of lost communications instructions. Leave blank when procedures are the same as in 14 CFR Part 91.185 (standard).

BLOCK (15). COMMUNICATIONS. Enter name of radio communications to be charted; e.g., ATIS, CTAF, Clearance Delivery, Departure Control, etc. Specify frequency only if different than what is currently published for the facility, or unique to the procedure.

BLOCK (16). ADDITIONAL FLIGHT DATA. List any additional charting instructions, items essential to clarify charting or information a specialist has determined needs charting as other than a NOTE. Examples of data may include: terrain features, airports, Military Operating Areas (MOA), holding patterns, or takeoff and departure obstacles; e.g., **Chart: _____ MOA; Chart: holding pattern at (location).** Document the MEA/MOCA for the segment between the IF and Basic DP fix on RNAV Radar departure procedures as follows: **Chart: MEA/MOCA from (RNAV IF) to (Basic DP Fix), (Altitude).** Ensure that the accompanying Form 8260-2 contains the appropriate charting instructions for holding patterns supporting the departure procedure. Place the reference (departure airport) magnetic variation of record used to develop the procedure in this BLOCK. Include the point of reference and the epoch year. Example: "REFERENCE MAG VAR: KFCR 2W EPOCH YR:00"

DME assessment (Enter one of the following):

1. "DME/DME Assessment: SAT (RNP 1.0 or 2.0 as appropriate)." Indicates a successful assessment to the RNP value specified.
2. "DME/DME Assessment: UNSAT (RNP 1.0), SAT (RNP 2.0)." Indicates an unsuccessful assessment to RNP 1.0, but returned a successful assessment to RNP 2.0.
3. "DME/DME Assessment: UNSAT." Indicates an unsuccessful assessment to RNP 2.0.
4. "DME/DME Assessment: NOT CONDUCTED."

If the DME/DME assessment indicates "UNSAT" or "NOT CONDUCTED," the note "GPS Required" must be entered in BLOCK (3).

NOTE: The DME/DME assessment process is covered in separate guidance.

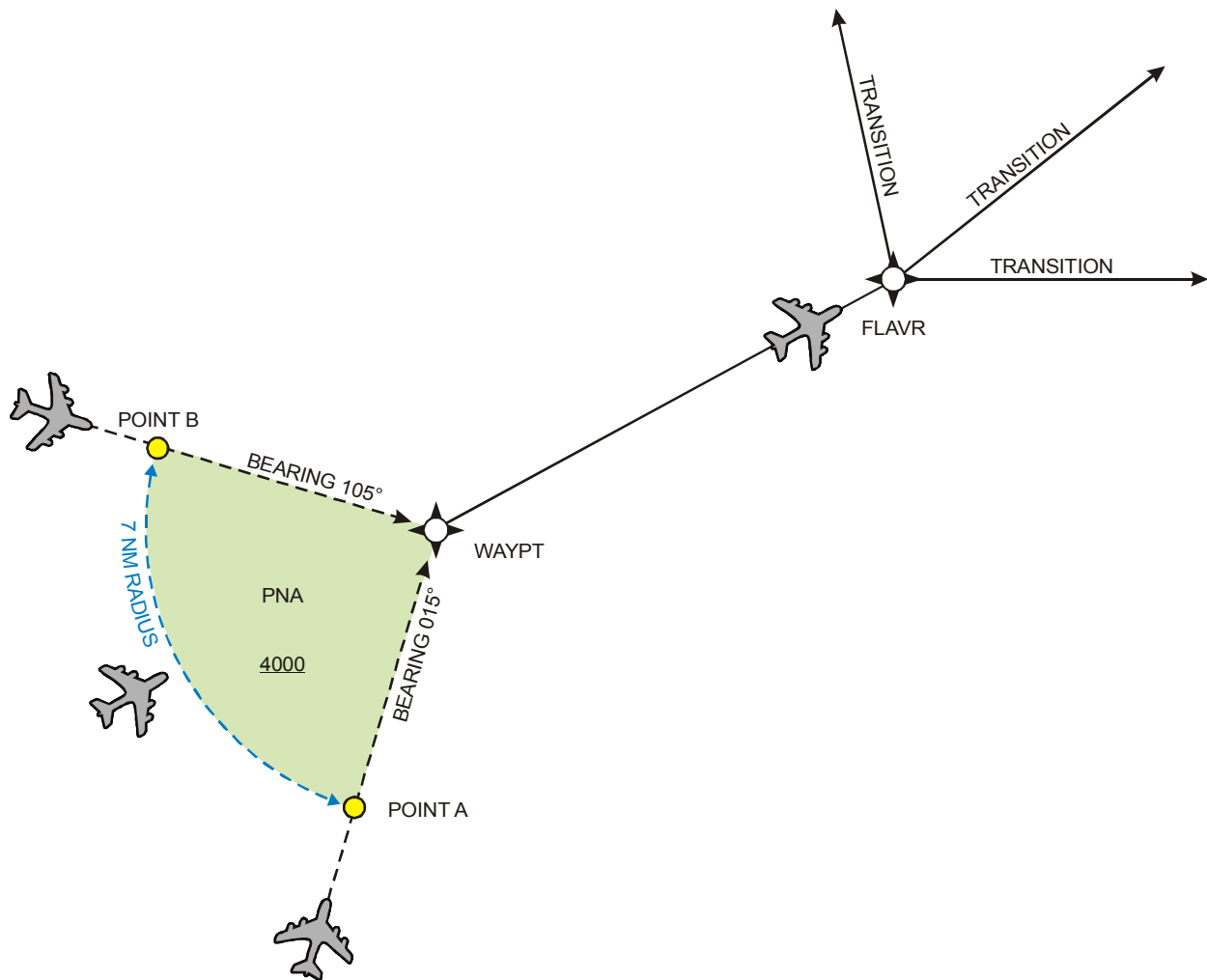
BLOCK (17). CONTINUATION. Use this area of the sheet to complete any data BLOCKS from previous pages. Indicate BLOCK number and title being contained. **Additionally, use this block to describe the Pilot Navigation Area (PNA) for RNAV Radar departures. The description will be in the following manner:**

PILOT NAVIGATION AREA:

**7 NM ARC CENTERED ON WAYPT (IF), CW
FROM: POINT A (BEARING 015 DEGREES TO WAYPT)
TO: POINT B (BEARING 105 DEGREES TO WAYPT)
MINIMUM ALTITUDE - 4000**

NOTE: The illustration in figure 1 is provided as an example of what this text is describing. An illustration may be provided but is not required on the form.

Figure 1. Illustration



PAGE 3.

BLOCK (18). REMARKS. List information/data which is NOT to be charted; e.g., administrative data or notes for controller information (requested by ATC). These items will not be seen in the TL/NFDD.

BLOCK (19). CHANGES. List changes relating to data entries.

BLOCK (20). REASONS. List reasons for changes relating to data entries.

BLOCK (21). COORDINATED WITH. Enter "X" in the appropriate boxes. Specify other required coordination. DP coordination must be identical with the approach procedure coordination as outlined in Order 8260.19 (latest edition), chapter 8.

BLOCK (22). REQUIRED EFFECTIVE DATE.

1. Enter the effective date as noted in Order 8260.19 (latest edition), chapter 8, except that "Proposed" dates may not be used for graphic DPs. Optimally, submit as "routine." En route data submission cutoff dates must apply for graphic DPs.

2. If the Form 8260-15B represents a concurrent action, place an attention symbol and the letter "C" (*C) in the required effective date space and enter the following standard NOTE in Block 10 (above the required effective date) of the form:

***Concurrent with (Airport ID) (Takeoff Minimums and Textual Departure Procedures FAA Form 8260-15A, airspace action or other event).**

NOTE: If a Form 8260-15D (Departure Procedure Continuation) is used, this information will be placed on that form.

BLOCK (23). FLIGHT INSPECTED BY. Enter the name of the airspace system inspection pilot who conducted the flight inspection, and date.

BLOCK (24). DEVELOPED BY. Enter the name of the procedure specialist and the NFPO branch. This individual must sign in the "developed by" space, and enter the date signed.

BLOCK (25). APPROVED BY. Enter the name of the AVN-100 Manager, or his/her delegated representative. This individual must sign in the "approved by" space and enter the date signed.

US Department of Transportation
Federal Aviation Administration

GRAPHIC DEPARTURE PROCEDURE (DP)

OBSTACLE SID RNAV

1. Bearings, headings, courses, tracks, and radials are magnetic.
 2. Distances are in nautical miles.
 3. Altitudes are minimum altitudes unless otherwise indicated.
 4. Graphic depiction attached.

(1) DP Route Description: TAKEOFF RWY 1: CLIMB ON 007.52 COURSE TO LARRY, THEN ON DEPICTED ROUTE TO SHEMP, THENCE...
 TAKEOFF RWY 14L: CLIMB ON 137.64 COURSE TO CROSS CURLY AT OR ABOVE 1000, THEN CLIMBING LEFT TURN DIRECT SHEMP, THENCE...
 TAKEOFF RWY 32R: CLIMB ON 317.66 HEADING TO AT OR ABOVE 1000, THEN CLIMB ON 041.20 COURSE TO LARRY, THEN ON DEPICTED ROUTE TO SHEMP, THENCE...
 ...((TRANSITION). MAINTAIN 5000, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

(2) Transition Routes (Graphic Depiction Only)

(a) Transition Name	(b) Transition Computer Codes	(c) From FIX/NAVAID	(d) To FIX/NAVAID	(e) Course / Distance	(f) MEA / MOCA	(g) Crossing Altitudes/Fixes
FOGART	SHEMP1.FGH	SHEMP	FGH VORTAC	067.11 TRACK/87.24	5000/3700	
JENKO	SHEMP1.JKL	SHEMP	JKL VORTAC	098.77 TRACK/92.51	5000	
LAYMAN	SHEMP1.LMN	SHEMP	LMN VOR/DME	RIGHT TURN 154.94 TRACK/47.23	5000/4100	
ROOSTER	SHEMP1.RST	SHEMP	LMN VOR/DME RST VORTAC	RIGHT TURN 154.94 TRACK/47.23 098.38 TRACK/39.79	5000/4100 7000/4400	

(3) Procedural Data Notes / Takeoff Minimums:
TAKEOFF MINIMUMS: RWY 14R, 19, 32L NA - AIR TRAFFIC. RWY 1, 32R STANDARD. RWY 14L 500 - 2 1/2 OR STANDARD WITH MINIMUM CLIMB OF 330 FEET PER NM TO 1200.
NOTE: DME/DME/IRU OR GPS REQUIRED
NOTE: PILOTS OF RNP AIRCRAFT USE RNP 1.0
NOTE: TYPE B

(4) Takeoff Obstacle Notes: **NOTE:** RWY 1, OBSTRUCTION LIGHT 1022 FEET FROM DER, 672 FEET RIGHT OF CENTERLINE, 73 FEET AGL/543 FEET MSL.
NOTE: RWY 14L, BUILDING 1.96 NM FROM DER, 575 FEET RIGHT OF CENTERLINE, 478 FEET AGL/974 FEET MSL.
NOTE: RWY 32R, TREES 143 FEET LEFT OF DER, 21 FEET AGL/498 FEET MSL.

(5) Controlling Obstacles: **RWY 1:** 543 MSL OBSTRUCTION LIGHT, 325141.44N/0965102.87W **RWY 14L:** 974 MSL BUILDING 324911.09N/0964838.62W
RWY 32R: 1049 MSL TOWER, 325216.19N/0965523.02W, 498 MSL TREES, 325125.20N/0965125.68W

(6) Fixes and/or NAVAID'S :

(7) DP Name SHEMP	(8) Number ONE	(9) DP Computer Code SHEMP1.SHEMP	(10) Superseded Number NONE	(11) Dated	(12) Effective Date
----------------------	-------------------	--------------------------------------	--------------------------------	------------	---------------------

(13) Airports Served			
Airport Name	FOURCLOWNS REGIONAL	City/State	VICTORVECTORVILLE, TX
Airport Name		City/State	
Airport Name		City/State	
Airport Name		City/State	
Airport Name		City/State	
Airport Name		City/State	
(14) Lost Communications Procedures:			
(15) Communications: ATIS, CLNC DEL, GND CON, TWR, ARCON DEP CON			
(16) Additional Flight Data: REFERENCE MAG VAR: KFCR 2W EPOCH YR: 00 DME/DME ASSESSMENT: UNSAT			
(17) Continuation:			
(7) DP Name	(8) Number	(9) DP Computer Code	(10) Superseded Number
SHEMP	ONE	SHEMP1.SHEMP	NONE
			(11) Dated
			(12) Effective Date

(18) Remarks:

(19) Changes:

(20) Reasons:

(21) Coordinated with:		(22) Required Effective Date:	
ATA <input checked="" type="checkbox"/>	ALPA <input checked="" type="checkbox"/>	APRPT MGR, FCR ATCT, ZFW	ROUTINE
NBAA <input checked="" type="checkbox"/>	AOPA <input checked="" type="checkbox"/>		
OTHER <input checked="" type="checkbox"/>			
(23) FLIGHT INSPECTED BY		APPROVED BY	
Name:	Signature:	Name:	Signature:
Date:	Date:	Date:	Date:
(8) Number	(9) DP Computer Code	(10) Superseded Number	(11) Dated
ONE	SHEMP1.SHEMP	NONE	
(7) DP Name	(12) Effective Date		
SHEMP			

THIS PAGE INTENTIONALLY LEFT BLANK

US Department of Transportation
Federal Aviation Administration

GRAPHIC DEPARTURE PROCEDURE (DP)

OBSTACLE SID RNAV

1. Bearings, headings, courses, tracks, and radials are magnetic.
2. Distances are in nautical miles.
3. Altitudes are minimum altitudes unless otherwise indicated.
4. Graphic depiction attached.

(1) DP Route Description: TAKEOFF RWY 1: CLIMB DIRECT LARRY, THEN VIA DEPICTED ROUTE TO SHEMP, THENCE...
TAKEOFF RWY 14L: CLIMB DIRECT CURLY, THEN VIA 061.62 TRACK TO SHEMP, THENCE...
TAKEOFF RWY 32R: CLIMB VIA 317.66 HEADING TO 1000, THEN CLIMBING RIGHT TURN DIRECT LARRY, THEN VIA DEPICTED ROUTE TO SHEMP, THENCE...
...VIA (TRANSITION). MAINTAIN 5000, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

(2) Transition Routes (Graphic Depiction Only)

(a) Transition Name	(b) Transition Computer Codes	(c) From FIX/NAVAID	(d) To FIX/NAVAID	(e) Course / Distance	(f) MEA / MOCA	(g) Crossing Altitudes/Fixes
FOGART	SHEMP2.FGH	SHEMP	FGH VORTAC	067.11 TRACK/87.24	5000/3700	
JENKO	SHEMP2.JKL	SHEMP	JKL VORTAC	088.77 TRACK/92.51	5000	
OPAKE	SHEMP2.OPQ	SHEMP	OPQ VOR/DME	LEFT TURN 005.19 TRACK/52.21	4000/3300	
ROOSTER	SHEMP2.RST	SHEMP	RST VORTAC	129.19 TRACK/76.63	7000/4900	

(3) Procedural Data Notes / Takeoff Minimums:
TAKEOFF MINIMUMS: RWY 14R, 19, 32L NA - AIR TRAFFIC. RWY 1, 32R STANDARD. RWY 14L 500 - 2 1/2 OR STANDARD WITH MINIMUM CLIMB OF 330 FEET PER NM TO 1200.
NOTE: DME/DME/IRU OR GPS REQUIRED
NOTE: PILOTS OF RNP CAPABLE AIRCRAFT USE RNP 1.0
NOTE: TYPE B
 TAKEOFF RWY 1, 32R: DO NOT EXCEED 220 KTS UNTIL MOEHH.

(4) Takeoff Obstacle Notes: **NOTE:** RWY 1, OBSTRUCTION LIGHT 1022 FEET FROM DER, 672 FEET RIGHT OF CENTERLINE, 73 FEET AGL/543 FEET MSL.
NOTE: RWY 14L, BUILDING 1.96 NM FROM DER, 575 FEET RIGHT OF CENTERLINE, 478 FEET AGL/974 FEET MSL.
NOTE: RWY 32R, TREES 143 FEET LEFT OF DER, 21 FEET AGL/498 FEET MSL.

(5) Controlling Obstacles: **RWY 1:** 543 MSL OBSTRUCTION LIGHT, 325141.44N/0965102.87W **RWY 14L:** 974 MSL BUILDING 324911.09N/0964838.62W
RWY 32R: 1049 MSL TOWER, 325216.19N/0965523.02W, 498 MSL TREES, 325125.20N/0965125.68W

(6) Fixes and/or NAVAID'S :

(7) DP Name	(8) Number	(9) DP Computer Code	(10) Superseded Number	(11) Dated	(12) Effective Date
SHEMP	TWO	SHEMP2.SHEMP	ONE		

(13) Airports Served			
Airport Name	FOURCLOWNS REGIONAL	City/State	VICTORVECTORVILLE, TX
Airport Name		City/State	
Airport Name		City/State	
Airport Name		City/State	
Airport Name		City/State	
Airport Name		City/State	
(14) Lost Communications Procedures:			
(15) Communications: ATIS, CLNC DEL, GND CON, TWR, ARCON DEP CON			
(16) Additional Flight Data: REFERENCE MAG VAR: KFCR 2W EPOCH YR: 00 DME/DME ASSESSMENT: SAT (RNP 1.0)			
(17) Continuation:			
(7) DP Name	(8) Number	(9) DP Computer Code	(10) Superseded Number
SHEMP	TWO	SHEMP2.SHEMP	ONE
			(11) Dated
			18 Apr 02
			(12) Effective Date

(18) Remarks:

(19) Changes:
 1. ADDED OPQ TRANSITION.
 2. REMOVED LMN VOR/DME FROM RST TRANSITION.
 3. RELOCATED MOEHH AND ADDED SPEED RESTRICTION.

(20) Reasons:
 1-3. RAPT REQUEST.

(21) Coordinated with:
 ATA ALPA APA AOPA NBAA OTHER (specify) ARPT MGR, FCR ATCT, ZFW

(22) Required Effective Date:
 ROUTINE

(23) APPROVED BY

Name:		Signature:		Date:	
FLIGHT INSPECTED BY		DEVELOPED BY		APPROVED BY	
Date:		Date:		Date:	

(7) DP Name	SHEMP	(8) Number	TWO	(9) DP Computer Code	SHEMP2.SHEMP	(10) Superseded Number	ONE	(11) Dated	18 Apr 02	(12) Effective Date
-------------	-------	------------	-----	----------------------	--------------	------------------------	-----	------------	-----------	---------------------

THIS PAGE INTENTIONALLY LEFT BLANK

US Department of Transportation
Federal Aviation Administration

GRAPHIC DEPARTURE PROCEDURE (DP)

OBSTACLE SID RNAV

1. Bearings, headings, courses, tracks, and radials are magnetic.
2. Distances are in nautical miles.
3. Altitudes are minimum altitudes unless otherwise indicated.
4. Graphic depiction attached.

(1) DP Route Description: **TAKEOFF RWY 1, 14L, 32R: CLIMB ON ASSIGNED HEADING FOR RADAR VECTORS TO WAYPT, THEN VIA 075.33 TRACK TO FLAVR, THENCE...**

...VIA (TRANSITION). MAINTAIN 5000, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

(2) Transition Routes (Graphic Depiction Only)

(a) Transition Name	(b) Transition Computer Codes	(c) From FIX/NAVAID	(d) To FIX/NAVAID	(e) Course / Distance	(f) MEA / MOCA	(g) Crossing Altitudes/Fixes
FOGART	FLAVR1.FGH	FLAVR	FGH VORTAC	065.16 TRACK/84.74	5000/3700	
JENKO	FLAVR1.JKL	FLAVR	JKL VORTAC	098.06 TRACK/88.80	5000	
OPAKE	FLAVR1.OPQ	FLAVR	OPQ VOR/DME	LEFT TURN 333.87 TRACK/55.23	4000/3300	
ROOSTER	FLAVR1.RST	FLAVR	RST VORTAC	129.92 TRACK/72.85	7000/4900	

(3) Procedural Data Notes / Takeoff Minimums:
TAKEOFF MINIMUMS: RWY 14R, 19, 32L NA - AIR TRAFFIC. RWY 14L 500 - 2 1/2 OR STANDARD WITH MINIMUM CLIMB OF 330 FEET PER NM TO 1200.
NOTE: DME/DME/IRU OR GPS REQUIRED
NOTE: PILOTS OF RNP CAPABLE AIRCRAFT USE RNP 2.0
NOTE: TYPE A
NOTE: RADAR REQUIRED.

(4) Takeoff Obstacle Notes: **NOTE:** RWY 1, OBSTRUCTION LIGHT 1022 FEET FROM DER, 672 FEET RIGHT OF CENTERLINE, 73 FEET AGL/543 FEET MSL.
NOTE: RWY 14L, BUILDING 1.96 NM FROM DER, 575 FEET RIGHT OF CENTERLINE, 478 FEET AGL/974 FEET MSL.
NOTE: RWY 32R, TREES 143 FEET LEFT OF DER, 21 FEET AGL/498 FEET MSL.

(5) Controlling Obstacles: **RWY 1:** 543 MSL OBSTRUCTION LIGHT, 325141.44N/0965102.87W **RWY 14L:** 974 MSL BUILDING 324911.09N/0964838.62W
RWY 32R: 1049 MSL TOWER, 325216.19N/0965523.02W, 498 MSL TREES, 325125.20N/0965125.68W

(6) Fixes and/or NAVAID'S :

(7) DP Name	(8) Number	(9) DP Computer Code	(10) Superseded Number	(11) Dated	(12) Effective Date
FLAVR	ONE	FLAVR1.FLAVR	NONE		

(13) Airports Served			
Airport Name	FOURCLOWNS REGIONAL	City/State	VICTORVECTORVILLE, TX
Airport Name		City/State	
Airport Name		City/State	
Airport Name		City/State	
Airport Name		City/State	
Airport Name		City/State	
(14) Lost Communications Procedures:			
(15) Communications: ATIS, CLNC DEL, GND CON, TWR, ARCON DEP CON			
(16) Additional Flight Data: REFERENCE MAG VAR: KFCR 2W EPOCH YR: 00 DME/DME ASSESSMENT: SAT (RNP 2.0) CHART: MEA/MOCA FROM WAYPT TO FLAVR, 4000/3000			
(17) Continuation: PILOT NAVIGATION AREA: 7 NM ARC CENTERD ON WAYPT (IF), CW FROM: POINT A (BEARING 030 DEGREES TO WAYPT) TO: POINT B (BEARING 120 DEGREES TO WAYPT) MINIMUM ALTITUDE: 4000			
(7) DP Name	FLAVR	(8) Number	ONE
(9) DP Computer Code	FLAVR1.FLAVR	(10) Superseded Number	NONE
(11) Dated		(12) Effective Date	

(18) Remarks:

(19) Changes:

(20) Reasons:

(21) Coordinated with: ATA <input checked="" type="checkbox"/> ALPA <input checked="" type="checkbox"/> APA <input checked="" type="checkbox"/> AOPA <input checked="" type="checkbox"/> NBAA <input checked="" type="checkbox"/> OTHER (specify) <input checked="" type="checkbox"/> ARPT MGR, FCR ATCT, ZFW		(22) Required Effective Date: ROUTINE
(23) FLIGHT INSPECTED BY Name: _____ Date: _____ Signature: _____		(24) DEVELOPED BY Name: _____ Date: _____ Signature: _____
(7) DP Name FLAVR	(8) Number ONE	(9) DP Computer Code FLAVR1.FLAVR
(10) Superseded Number NONE	(11) Dated	(12) Effective Date

THIS PAGE INTENTIONALLY LEFT BLANK

**INSTRUCTIONS FOR COMPLETING
FAA FORM 8260-15C, DEPARTURE (DATA RECORD)**

1. Basic instructions for completing Form 8260-15C. Detailed instructions are contained in paragraphs 2 through 5. Enter a dash (e.g., "-") in BLOCKS 4-7 when they are intentionally left blank.

BLOCK (1). FIX/NAVAID. Enter the name of the fix/NAVAID in one of the following formats: (5-letter pronounceable name; (NAVAID) 3-letter facility ID and type (e.g., ABC VORTAC).

BLOCK (2). LAT/LONG. Enter the latitude and longitude, separated by a "slant(/)" to the nearest hundredth of a second.

BLOCK (3). C (Chart). Enter a Y (yes) if a fix is to be charted. Enter an N (no) if a fix does not require charting. Any fix where a change in altitude, course, or speed, including WPs where turns or transitions begin and end, require charting.

BLOCK (4). FO/FB. Enter the FO (Fly-over) or FB (Fly-by) as appropriate to indicate desired use. FB is the normal designation. Determination is based on operational or obstacle requirements.

BLOCK (5). LEG TYPE. Enter the two-letter ARINC-24 code for leg-type; e.g., IF, TF, RF, etc.

BLOCK (6). TC. Enter the true course (TC) to the nearest hundredth of a degree. The charting agency will apply magnetic variation, if necessary, and round for publication.

BLOCK (7). DIST. Enter the distance to the nearest hundredth of a NM. The charting agency will round for publication.

BLOCK (8). ALTITUDE. Enter the minimum, mandatory, or maximum altitude in 100-ft increments (or Flight Levels in 1,000-ft increments) and label each altitude/flight level as "at/above," "at," or "at/below."

BLOCK (9). SPEED. Enter the minimum, mandatory, or maximum airspeed(s) in KIAS. Optionally, the airspeed may be entered as ground speed (GS). Label airspeed restrictions as "at/above," "at," or "at/below," as appropriate. Following the numerical value, add "K" for KIAS, or "G" for ground speed. Enter restrictions only where necessary for procedural containment, or for traffic flow requirements.

BLOCK (10). REMARKS. Enter any pertinent information that would clarify a data entry; e.g., airspeed restriction for turn radius. Additionally, such items as CG restrictions, displaced threshold information, transition computer code, etc, are also placed in this BLOCK.

2. The departure routing from each authorized runway to the DP fix (i.e., the DP termination fix) is documented first, followed by the routing from the DP fix to each transition fix as appropriate.

3. Departure Routing to DP Fix (see examples). The initial departure routing represents the most complex portion of documenting the RNAV DP. The first three lines of the 8260-15C are typically the most problematic, largely due to the variables associated with permissible leg

types and waypoint sequencing. The following line-by-line explanation used in conjunction with guidance in appendix 2, paragraph 5b, outlines the departure sequence element (i.e., from AER to DP fix) beginning at the AER*, with each succeeding line representing a permissible option until reaching the DP fix. BLOCKS (1) thru (7) are required entries except as noted. BLOCKS (8) & (9): Enter restrictions associated with BLOCK (1) as appropriate.

**Note: WP placement is computed from DER as outlined in Order 8260.44 (latest edition); AER is a required coding element used for course/heading and distance computations.*

4. For each authorized runway:

a. First line (of each element):

BLOCK (1): Enter the AER. Example: "RW14L (AER)".

BLOCK (2): Enter the AER lat/long. If the runway threshold is displaced, enter the displaced AER lat/long and note the amount of displacement in BLOCK (10). Example: "RW 14L (AER)*, 325117.19/965114.05*, *Displ thld (1273)."

BLOCK (3): Enter "N."

BLOCKS (4) thru (9): Leave blank.

b. Second line options:

(1) **CF leg** from AER to FB/FO: **BLOCKS (6) & (7):** Enter true course/distance from AER to the next fix (see example SHEMP ONE, RW01).

(2) **DF leg** from AER to FB/FO: **BLOCK (6):** Leave blank. **BLOCK (7):** Enter distance from AER to the next fix (see example SHEMP TWO, RW01).

(3) **VA to CF leg** (See third line options for required **CF** entries): **BLOCK (1):** Enter the climb-to MSL altitude. **BLOCK (2):** Enter the computed lat/long of the VA/CF intersect point. **BLOCKS (3) & (4):** Leave blank. **BLOCK (6):** Enter the true heading to be flown as computed from AER to VA/CF intersect point. **BLOCK (7):** Enter distance from AER to VA/CF intersect point. **BLOCKS (8) and (9):** Leave blank. (See example SHEMP ONE, RW32R.)

(4) **VA to DF leg** (See third line options for required **DF** entries): **BLOCK (1):** Enter the climb-to MSL altitude. **BLOCKS (2) thru (4):** Leave blank. **BLOCK (6):** Enter the true azimuth of the takeoff runway. **BLOCKS (7) thru (9):** Leave blank. (See example for SHEMP TWO, RW32R.)

c. Third line options (if required; third line required for VA combinations):

(1) **DF leg** (preceded by FO WP): **BLOCK (6):** Leave blank. **BLOCK (7):** Enter the distance between the plotted position of fixes. **BLOCK (10):** Specify turn direction as either "Left/Right Turn" (see example SHEMP ONE, RW14L).

(2) TF leg: BLOCKS (6) & (7): Enter the true course and distance between the plotted position of fixes. **BLOCK (10):** Specify turn direction as described above only if course change exceeds 90 degrees.

(3) CF leg (VA/CF combination): BLOCKS (6) & (7): Enter the true course and distance from the VA/CF intersect point to the next fix (CF termination fix). **BLOCK (10):** Specify turn direction as described above only if course change exceeds 90 degrees (see example SHEMP ONE, RW32R).

(4) DF leg (VA/DF combination): BLOCKS (6) & (7): Leave blank. **BLOCK (10):** Specify turn direction as either "Left/Right Turn" (see example SHEMP TWO, RW32R).

d. Fourth and subsequent lines (DF or TF only):

Same as third line (1) & (2) entries.

e. The DP routing concludes with the DP fix data entered on the last line of each routing element. Repeat this process until all authorized runways have been entered.

5. Transition Routing (see examples).

a. For each transition:

(1) First line (of each element):

BLOCKS (1) & (2): Enter the DP fix name and lat/long.

BLOCK (3): Enter "Y".

BLOCK (4): Leave blank.

BLOCK (5): Enter "IF".

BLOCKS (6) thru (9): Leave blank.

BLOCK (10): Enter the transition computer code.

(2) Second and subsequent lines (DF or TF only): Same as departure routing element third line (1) and (2) entries. Enter the transition fix data on the last line of the transition routing element.

THIS PAGE INTENTIONALLY LEFT BLANK

DEPARTURE (Data Record)

(1) FIX/NAVAID	(2) LAT/LONG	(3) C	(4) FO/FB	(5) LEG TYPE	(6) TC	(7) DIST (NM)	(8) ALTITUDE	(9) SPEED	(10) REMARKS
RW01 (AER)	325030.65N-0965118.52W	N							
LARRY	325615.86N-0965038.96W	Y	FB	CF	005.52	5.77			
MOEHH	330002.41N-0964701.80W	Y	FB	TF	038.92	4.84			
SHEMP	325932.61N-0962728.24W	Y	FB	TF	091.64	16.46			
RW14L (AER)*	325117.19N-0965114.05W*	N							*DISPL THLD (1273 FT)
CURLY	324935.46N-0964916.24W	Y	FO	CF	135.64	2.37	AT/ABOVE 1000		CG 330 FT/NM TO 1200
SHEMP	325932.61N-0962728.24W	Y	FB	DF		20.87			LEFT TURN
RW32R (AER)	325031.35N-0965020.95W	N							
1000 MSL	325316.57N-0965332.39W			VA	315.66	3.84			
LARRY	325615.86N-0965038.96W	Y	FB	CF	039.20	3.84			
MOEHH	330002.41N-0964701.80W	Y	FB	TF	038.92	4.84			
SHEMP	325932.61N-0962728.24W	Y	FB	TF	091.64	16.46			
SHEMP	325932.61N-0962728.24W	Y		IF					SHEMP1.FGH
FGH VORTAC	333543.94N-0945243.79W	Y	FB	TF	065.11	87.24			
SHEMP	325932.61N-0962728.24W	Y		IF					SHEMP1.JKL
JKL VORTAC	324749.41N-0943828.97W	Y	FB	TF	096.77	92.52			
SHEMP	325932.61N-0962728.24W	Y		IF					SHEMP1.LMN
LMN VOR/DME	321721.40N-0960207.48W	Y	FB	TF	152.94	47.23			
DP Name	SHEMP	Number	ONE	DP Computer Code	SHEMP1.SHEMP	Superseded Number	NONE	Dated	Effective Date

(1) FIX/NAVAID	(2) LAT/LONG	(3) C	(4) FO/FB	(5) LEG TYPE	(6) TC	(7) DIST (NM)	(8) ALTITUDE	(9) SPEED	(10) REMARKS	Effective Date
SHEMP	325932.61N-0962728.24W	Y	IF						SHEMP1.RST	
LMN VOR/DME	321721.40N-0960207.48W	Y	FB	TF	152.94	47.23				
RST VORTAC	321246.96N-0951530.88W	Y	FB	TF	096.38	39.79				
DP Name	SHEMP	Number	ONE	DP Computer Code	SHEMP1.SHEMP	Superseded Number	NONE	Dated		

DEPARTURE (Data Record)

(1) FIX/NAVAID	(2) LAT/LONG	(3) C	(4) FO/FB	(5) LEG TYPE	(6) TC	(7) DIST (NM)	(8) ALTITUDE	(9) SPEED	(10) REMARKS	
RW01 (AER)	325030.65N-0965118.52W	N								
LARRY	325615.86N-0965038.96W	Y	FO	DF		5.77				
MOEHH	330205.91N-0964502.64W	Y	FO	TF	038.97	7.49		AT/BELOW 220K		
SHEMP	325932.61N-0962728.24W	Y	FO	TF	099.71	15.00				
RW14L (AER)*	325117.19N-0965114.05W*	N							*DISPL THLD (1273 FT)	
CURLY	324905.36N-0964841.41W	Y	FB	DF		3.07			CG 330 FT/NM TO 1200	
SHEMP	325932.61N-0962728.24W	Y	FO	TF	059.62	20.69				
RW32R (AER)	325031.35N-0965020.95W	N								
1000 MSL										
LARRY	325615.86N-0965038.96W	Y	FO	DF					RIGHT TURN	
MOEHH	330205.91N-0964502.64W	Y	FO	TF	038.97	7.49		AT/BELOW 220K		
SHEMP	325932.61N-0962728.24W	Y	FO	TF	099.71	15.00				
SHEMP	325932.61N-0962728.24W	Y								
FGH VORTAC	333543.94N-0945243.79W	Y	FB	TF	065.11	87.24			SHEMP2.FGH	
SHEMP	325932.61N-0962728.24W	Y								
SHEMP	325932.61N-0962728.24W	Y								
JKL VORTAC	324749.41N-0943828.97W	Y	FB	TF	096.77	92.51			SHEMP2.JKL	
SHEMP	325932.61N-0962728.24W	Y								
OPQ VOR/DME	334641.06N-0965429.57W	Y	FB	TF	003.19	52.21			SHEMP2.OPQ	
DP Name	SHEMP	Number	TWO	DP Computer Code	SHEMP2.SHEMP	Superseded Number	ONE	Dated	18 APR 02	Effective Date

(1) FIX/NAVAID	(2) LAT/LONG	(3) C	(4) FO/FB	(5) LEG TYPE	(6) TC	(7) DIST (NM)	(8) ALTITUDE	(9) SPEED	(10) REMARKS				
SHEMP	325932.61N-0962728.24W	Y		IF					SHEMP2.RST				
RST VORTAC	321246.96N-0951530.88W	Y	FB	TF	127.19	76.63							
DP Name	SHEMP	Number	TWO		DP Computer Code	SHEMP2.SHEMP		Superseded Number	ONE	Dated	18 APR 02	Effective Date	

**INSTRUCTIONS FOR COMPLETING
FAA FORM 8260-15D
DEPARTURE PROCEDURE (CONTINUATION)**

1. Use. Form 8260-15D is used as a continuation sheet for Forms 8260-15A/15B. In all cases, clearly identify by name or format what section or information is being presented on the continuation sheet. The Form 8260-15D must be completed as follows:

a. Enter the necessary data in the space provided.

b. Enter the “Lower Blocks” identical to the information presented on the pages of the Forms 8260-15A/15B. There are two lines of lower blocks to match the lower blocks of the Form 8260-15A or Form 8260-15B. Only fill in the line that matches the form of which the continuation sheet applies to. The other line will be left blank.

(3) Enter the page number and number of pages required for the procedure in the lower right-hand corner; e.g., **Page 3 of 3 pages**. The basic Forms 8260-15A/15B must be page number one, with additional Form 8260-15D numbered sequentially.

2. Certification. The last page must be the only page certified with the required signatures.

THIS PAGE INTENTIONALLY LEFT BLANK

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
DEPARTURE PROCEDURE (CONTINUATION FAA FORM 8260-15B)
FLIGHT STANDARDS SERVICE

Bearings, headings, courses, 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 unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

(3) PROCEDURAL DATA NOTES/TAKEOFF MINIMUMS: (CONTD)

NOTE: GPS REQUIRED. FOR USE BY TYPE A (RNP 2.0) CERTIFIED AIRCRAFT ONLY.

(16) ADDITIONAL FLIGHT DATA: (CONTD)

CHART: R-2708A & B.



City, State		Airport		Effective Date	Amdt. No.
DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
HOWDO	ONE	HOWDO1.HOWDO	NONE		

<p style="font-size: small; color: gray;"> This form is used to record the results of a flight inspection. It is to be completed by the flight inspector and the pilot. The flight inspector should complete this form before the flight. The pilot should complete this form after the flight. The flight inspector should sign and date this form. The pilot should sign and date this form. The flight inspector should submit this form to the flight inspection office. The pilot should submit this form to the flight inspection office. </p>		Required Effective Date: ROUTINE						
Coordinated with: <table style="display: inline-table; border: none;"> <tr> <td style="padding: 0 10px;">ATA <input checked="" type="checkbox"/></td> <td style="padding: 0 10px;">ALPA <input checked="" type="checkbox"/></td> <td style="padding: 0 10px;">APA <input checked="" type="checkbox"/></td> <td style="padding: 0 10px;">AOPA <input checked="" type="checkbox"/></td> <td style="padding: 0 10px;">NBA <input checked="" type="checkbox"/></td> <td style="padding: 0 10px;">OTHER (specify) <input checked="" type="checkbox"/> AMGR, RBC ATCT, ZFW, ZAB</td> </tr> </table>		ATA <input checked="" type="checkbox"/>	ALPA <input checked="" type="checkbox"/>	APA <input checked="" type="checkbox"/>	AOPA <input checked="" type="checkbox"/>	NBA <input checked="" type="checkbox"/>	OTHER (specify) <input checked="" type="checkbox"/> AMGR, RBC ATCT, ZFW, ZAB	
ATA <input checked="" type="checkbox"/>	ALPA <input checked="" type="checkbox"/>	APA <input checked="" type="checkbox"/>	AOPA <input checked="" type="checkbox"/>	NBA <input checked="" type="checkbox"/>	OTHER (specify) <input checked="" type="checkbox"/> AMGR, RBC ATCT, ZFW, ZAB			
DEVELOPED BY		APPROVED BY						
Name:	Signature:	Date:						
City, State		Effective Date						
DP Name	Number	Effective Date						
HOWDO	ONE							
DP Computer Code		Dated						
HOWDO1.HOWDO		Effective Date						
Superseded Number		Amdt. No.						
NONE								



U.S. Department
of Transportation

**Federal Aviation
Administration**

Directive Feedback Information

Please submit any written comments or recommendations for improving this directive, or suggest new items or subjects to be added to it. Also, if you find an error, please tell us about it.

Subject: Order 8260.46C, Departure Procedure (DP) Program

To: DOT/FAA
Flight Procedure Standards Branch, AFS-420
P.O. Box 25082
Oklahoma City, OK 73125

(Please check all appropriate line items)

An error (procedural or typographical) has been noted in paragraph _____ on page _____.

Recommend paragraph _____ on page _____ be changed as follows:
(attach separate sheet if necessary)

In a future change to this directive, please include coverage on the following subject:
(briefly describe what you want added):

Other comments:

I would like to discuss the above. Please contact me.

Submitted by: _____ Date: _____

FTS Telephone Number: _____ Routing Symbol: _____