

Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: STAR	Estimated Chart Date: 11/05/2020	APWS Task ID: CE5B7D1F70E54CB4B7949458A934D443	APWS Project ID: C509EB044B134929860C8310CDA83F1D
Procedure: STAR ARLFT (RNAV) ONE DOVER DE KDOV		Enroute: YES	Specialist: Zeder, Joseph		Agreement Number:
Airport ID: KDOV	Airport Name: DOVER AFB		Airport City: DOVER		State: DE
Facility ID:	Facility Type:	Flight Inspection Remark Type: New FC Slot			

Procedure Comments:

POC: JOHNNIE BAKER 405-954-5148

APPROVAL LETTER FOR DESCENT GRADIENT FORM LUNDY TO CURBY

J ZEDER 09/17/2020



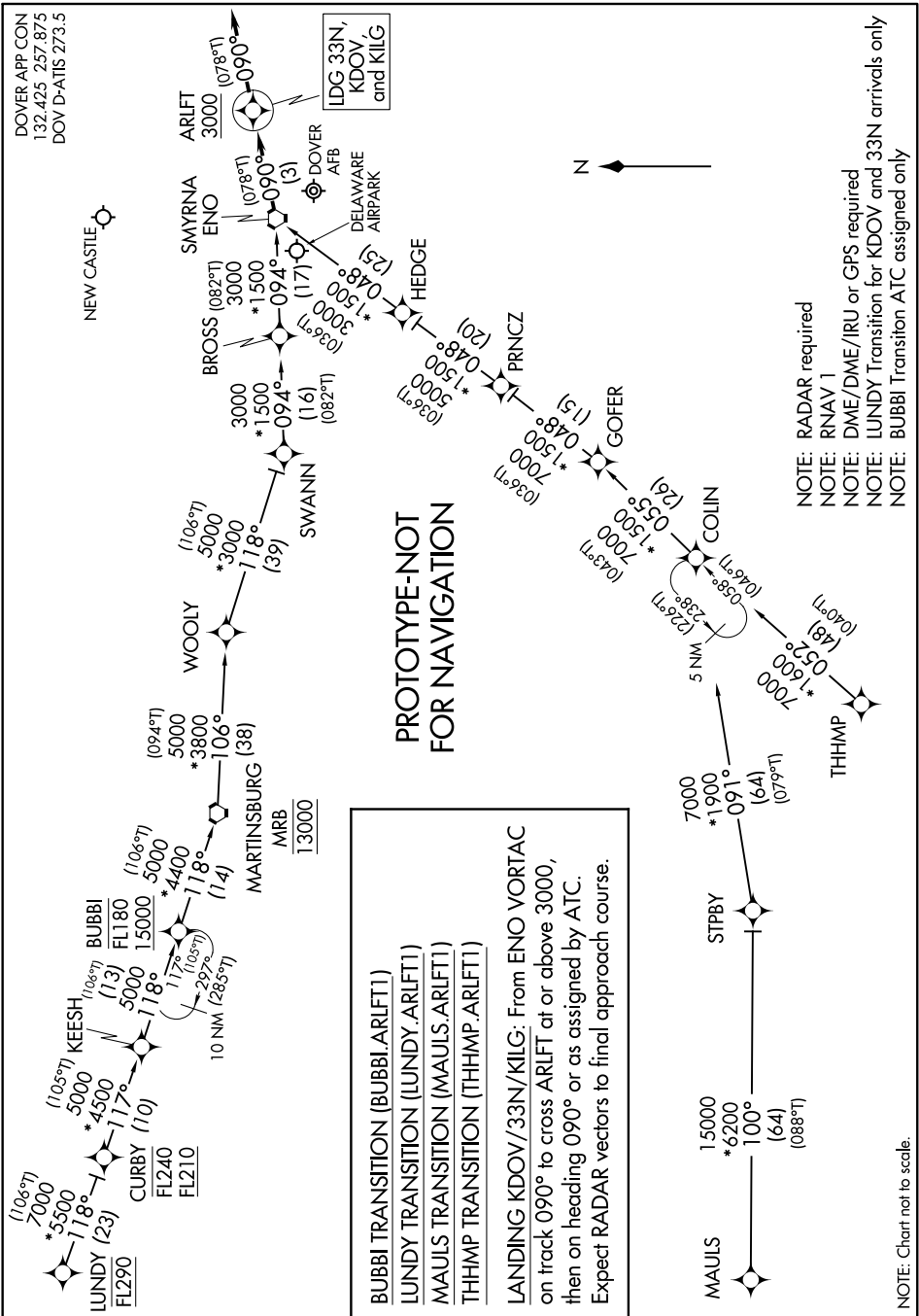
08/11/2020: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 03/12/2020.

1. ADDED SMTRNA VORTAC TO THE 8260-2 FOLDER.

09/17/2020: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 07/24/2020.

1. 8260-2 HEDGE; FIX USE: ADDED WAALK (RNAV) STAR FOR KBLM, KN14, KWRI, KMJX, KWAY, KN87.

ARLFT ONE ARRIVAL (RNAV)





Federal Aviation Administration

Memorandum

Date: November 5, 2019

To: Mark Steinbicker, Manager, Flight Technologies and Procedures Div.
Thru: Wade Terrell, Flight Procedures and Airspace Group

From: Leslie Swann, Air Traffic Manager (A), Washington ARTC Center

Prepared by: Mark Thompson, Sr. ATC Specialist, NAVTAC, (404) 305-5627

Subject: Approval Request: Dover AFB Airport, Dover, DE (KDOV)

Dover AFB Airport, Dover, DE (KDOV), ARLFT (RNAV) Standard Terminal Arrival Route (STAR), LUNDY to CURBY segment.

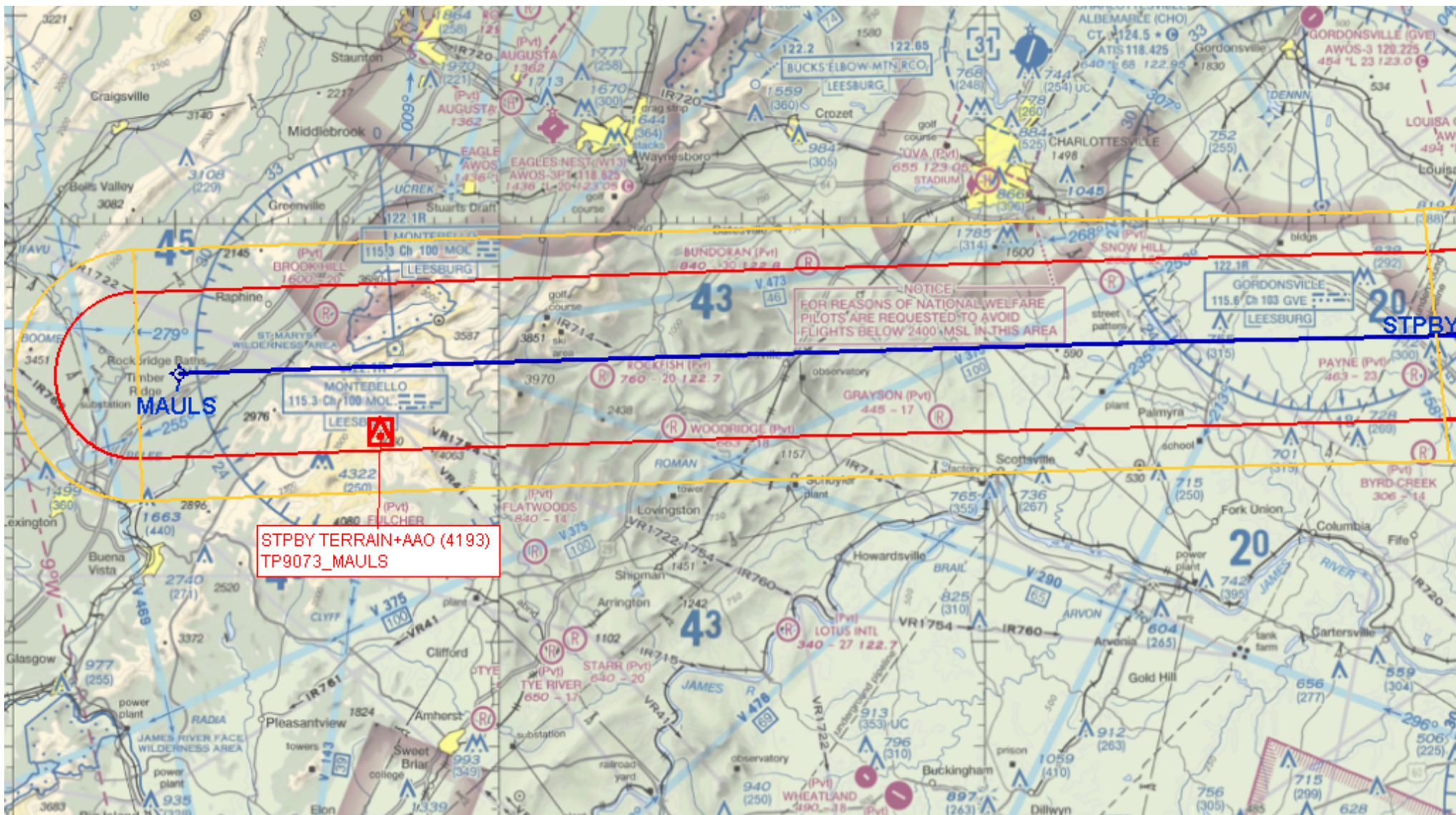
Request is for approval of the descent gradient of 343.22 ft/NM from LUNDY to CURBY.

The requirement in Order 8260.3D, paragraph 2-2-8.a.(1): "The maximum permissible DG 10000 feet MSL and above is 330 ft/NM (approximately 3.11 degrees)".

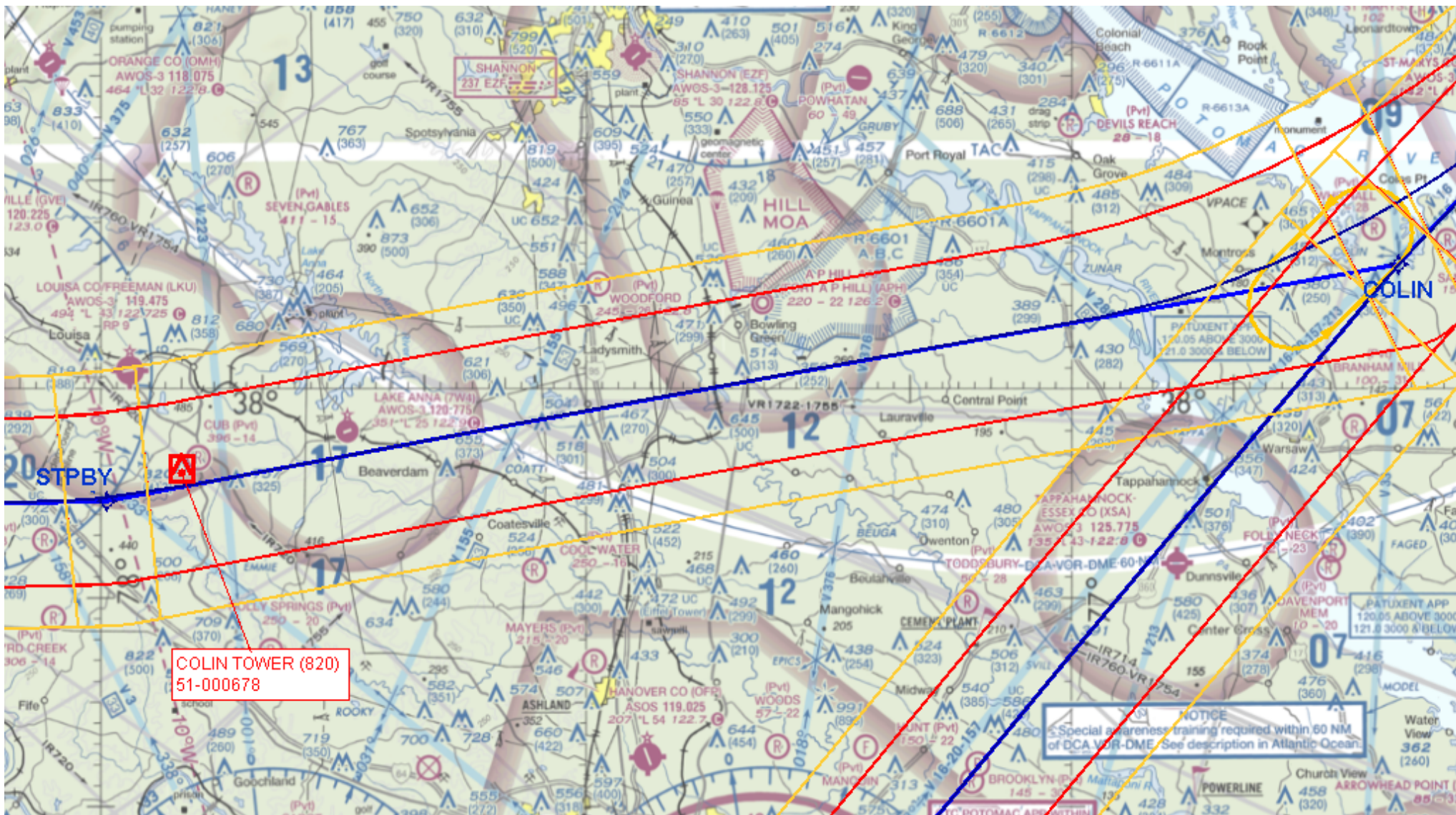
The descent gradient (DG) of 343.21 ft./NM from LUNDY to CURBY is calculated from a mandatory altitude of FL290 at LUNDY descending to a block altitude between FL240 and FL210. DG of 343.21 ft/NM to the minimum altitude of FL210 at CURBY, over a distance of 23.28 NM. The block altitude at CURBY is a window of between FL210 and FL240; aircraft are not required to cross at FL210, and setting the minimum altitude at CURBY to FL220, DG meets criteria at 330 ft/NM. The FL240 to FL210 block altitude restriction is charted in order to separate from adjacent flight paths in close proximity and adjacent airspace. Considered moving the restriction to a new position 1NM closer to KEESH as mitigation; however, an industry representative stated emphatically that the move would render the STAR un-flyable.

The current published constraints mirror the KBWI ANTHM STAR constraints along the NUSMM Transition. Using TARGETS Flight Evaluator all aircraft types passed within published constraints at CURBY.

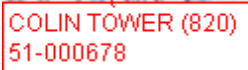
Request Flight Standards approval to continue to utilize the LUNDY to CURBY segment as designed.



ARLFT (RNAV)

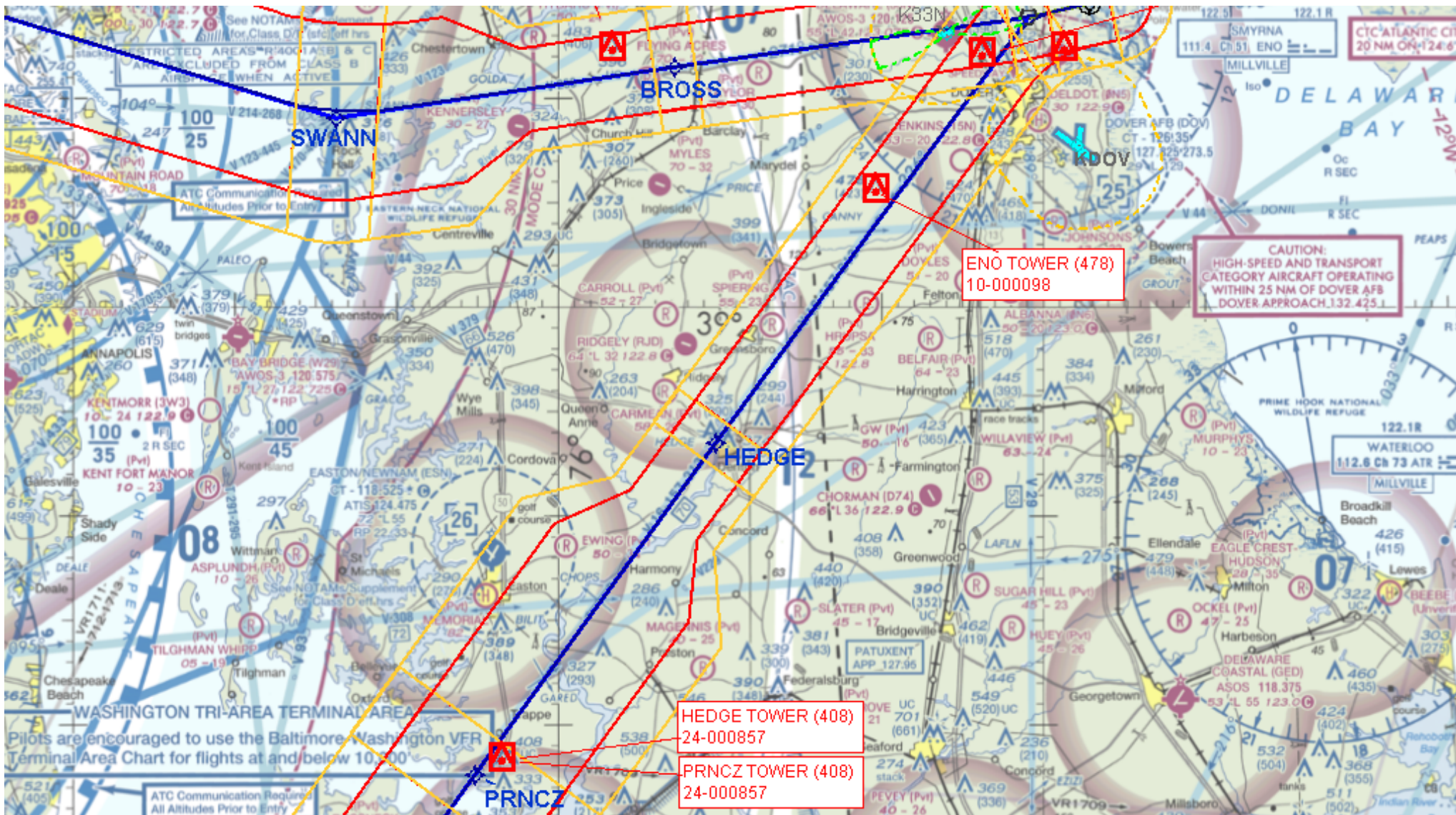


ARLFT (RNAV)

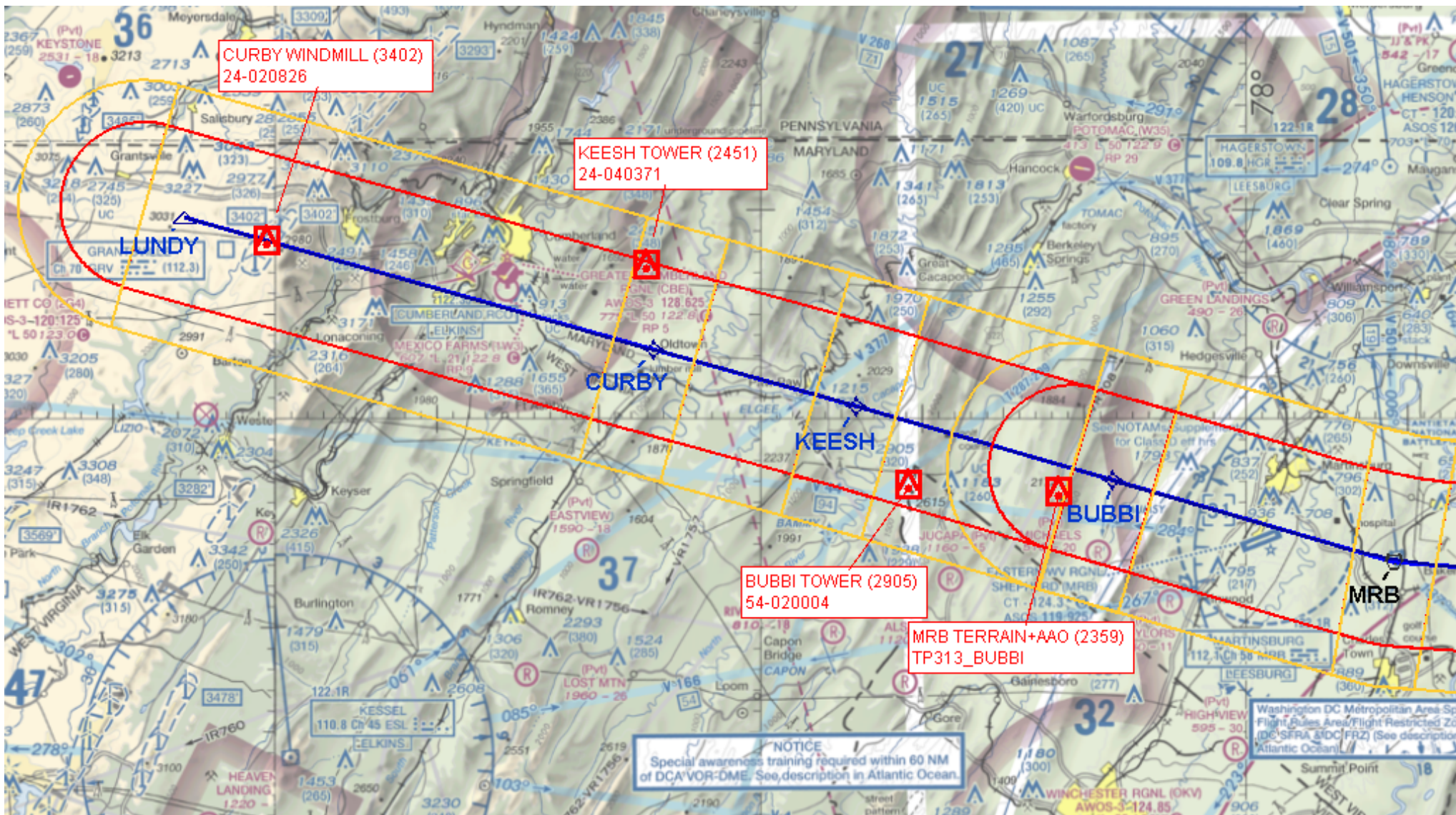


COLIN TOWER (588)
51-020308

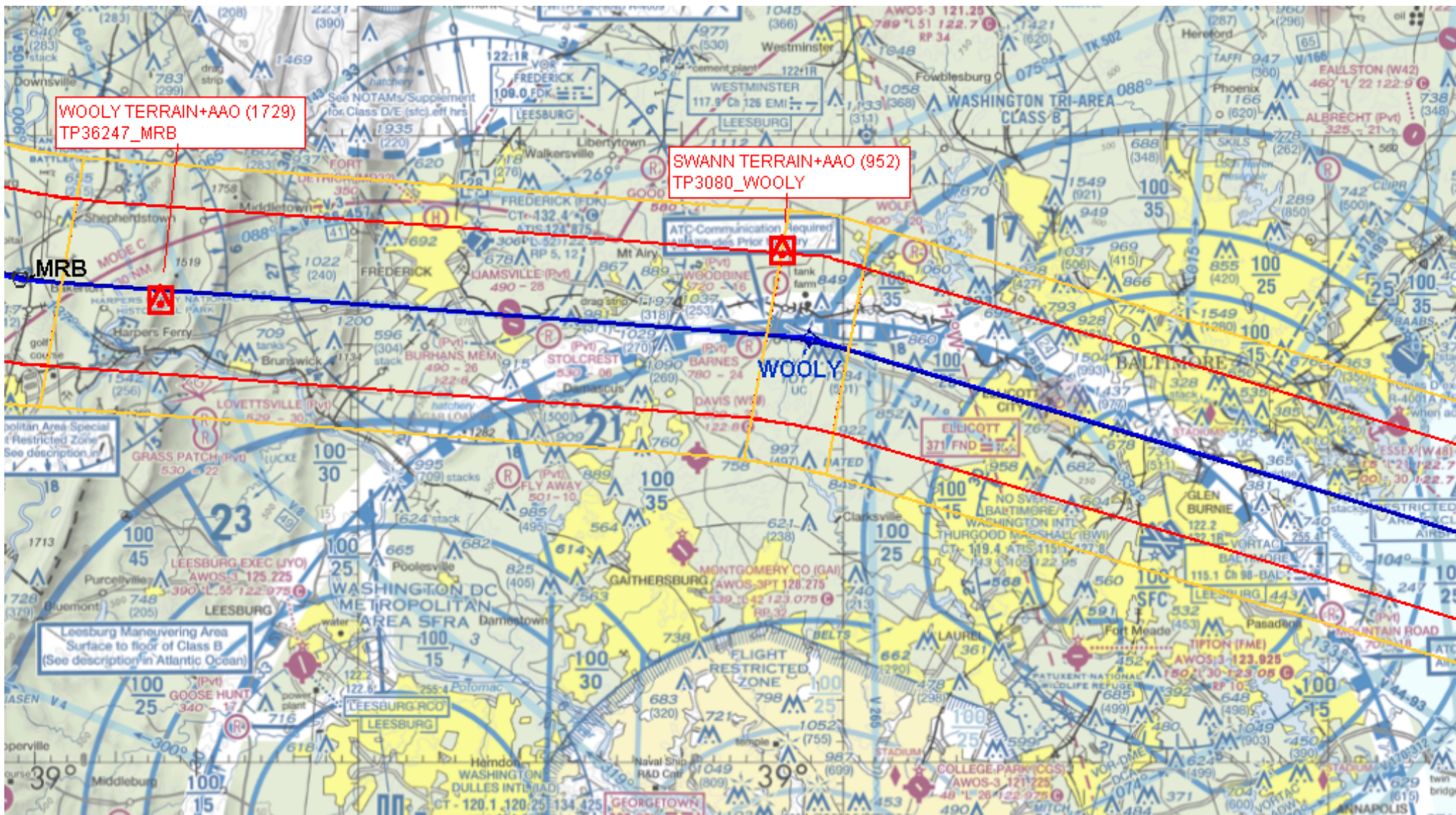
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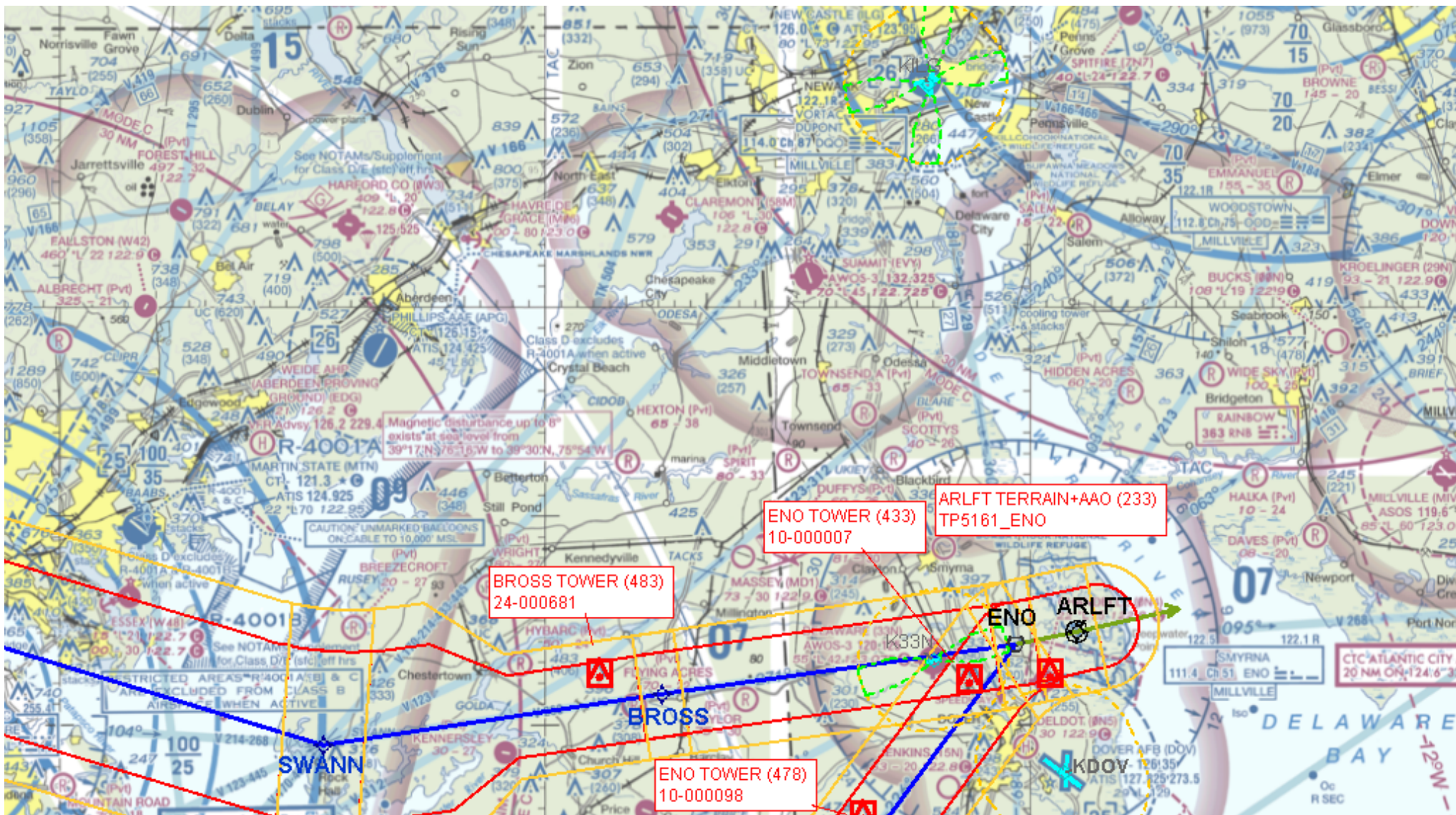
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ARLFT (RNAV)



ARLFT (RNAV)

DME ESVs

#	Name	Lat/Lon	MAGVAR	Range	Elevation [ft]	Frequency	Replaces	Status
1	UDT ESV CSN CSN [IFPA]	N38° 38' 28.33", W077° 51' 55.80"	6.0 W	130	441.8	116.3	UDT ESV CSN	
Restriction:		Bearing [True]: 304.0° to 344.0° Bearing [Mag]: 310.0° to 350.0°				Distance: Beyond 10.0 NM Altitude: Below 11000.0 ft		
ESV:		Bearing [True]: 44.0° to 154.0° Bearing [Mag]: 50.0° to 160.0°				Arc Distance: Out to 82.0 NM Altitude: 7000.0 to 16000.0 ft		
2	UDT ESV EMI EMI [IFPA]	N39° 29' 42.03", W076° 58' 42.86"	8.0 W	130	830.1	117.9	UDT ESV EMI	
Restriction:		Bearing [True]: 273.0° to 47.0° Bearing [Mag]: 281.0° to 55.0°				Distance: Beyond 35.0 NM Altitude: Below 3000.0 ft		
ESV:		Bearing [True]: 112.0° to 192.0° Bearing [Mag]: 120.0° to 200.0°				Arc Distance: Out to 80.0 NM Altitude: 6900.0 to 16000.0 ft		
3	UDT ESV FAK FAK [IFPA]	N37° 31' 42.63", W077° 49' 41.59"	6.0 W	130	460	113.3	UDT ESV FAK	
ESV:		Bearing [True]: 4.0° to 104.0° Bearing [Mag]: 10.0° to 110.0°				Arc Distance: Out to 82.0 NM Altitude: 7000.0 to 16000.0 ft		

FAA EASTERN SERVICE CENTER, AIR TRAFFIC DIVISION
CATEGORICAL EXCLUSION

Description of Federal Action: The Federal Aviation Administration (FAA) will replace the Dover (KDOV), Delaware SMYRNA THREE ARRIVAL procedure with the ARLFT ONE RNAV procedure and implement the following changes;

Description of Changes:

ARLFT ONE RNAV will:

Have a procedural note: RADAR REQUIRED.

Have a procedural note: RNAV 1.

Have a procedural note: DME/DME/IRU OR GPS REQUIRED.

Have a procedural note: LUNDY TRANSITION FOR KDOV/K33N ARRIVALS ONLY.

Have a procedural note: BUBBI TRANSITION ATC ASSIGNED ONLY.

Have an en route transition beginning at waypoint (wp) LUNDY, then proceeding east to waypoints (wps) CURBY, KEESH, BUBBI, Martinsburg (MRB), West Virginia Very High Frequency Omnidirectional Range (VOR), wps WOOLY, SWANN, BROSS, and terminating at Kenton (ENO), Delaware VOR

Have a fixed altitude requirement of FL290 beginning at the LUNDY transition.

Have an altitude requirement FL210BFL240 (at or above FL210 at or below FL240) at wp CURBY.

Have an en route transition beginning at wp BUBBI, then proceeding east to MRB VOR, wps WOOLY, SWANN, BROSS, and terminating at ENO VOR.

Have an altitude requirement FL150BFL180 at wp BUBBI.

Have a charted right turn holding pattern at wp BUBBI with 10 nautical mile (nm) leg lengths.

Have a fixed altitude requirement of FL130 at MRB VOR.

Have an en route transition beginning at wp MAULS, then proceeding east/northeast to wps STPB, COLIN, GOFER, PRNCZ, HEDGE and terminating at ENO VOR

Replace the existing SMYRNA THREE charted left turn 10nm holding pattern at wp COLIN with a charted left turn holding pattern with 5 nm leg lengths.

Have an en route transition beginning at wp THUMP, then proceeding north/northeast to wps COLIN, GOFER, PRNCZ, HEDGE and terminating at ENO VOR

Have an common route beginning at ENO VOR and terminating at wp ARLFT.

FAA EASTERN SERVICE CENTER, AIR TRAFFIC DIVISION
CATEGORICAL EXCLUSION

Description of Changes: (Continued)

Have four en route transitions and a common route as part of the legal description of the route from west to east and south to north. The LUNDY transition will begin at wp LUNDY, proceed east to waypoints (wps) CURBY, KEESH, BUBBI, MRB VOR, wps WOOLY, SWANN, BROSS, and terminate at ENO VOR. The BUBBI transition will begin at wp BUBBI, proceed west to MRB VOR, wps WOOLY, SWANN, BROSS and terminate at ENO VOR. The MAULS transition will begin at wp MAULS, proceed northeast to wps STPBY, COLIN, GOFER, PRNCZ, HEDGE and terminate at ENO VOR. The THUMP transition will begin at wp THUMP, proceed north/northeast to wps COLIN, GOFER, PRNCZ, HEDGE and terminate at ENO VOR. The common route will begin at ENO VOR and terminate at wp ARLFT.

Basis for this Determination:

An environmental review was conducted to ensure that the federal action is in compliance with the National Environmental Policy Act and its implementing regulations. This review was conducted in accordance with policies and procedures in FAA Order 1050.1F, "Environmental Impacts: Policies and Procedures".

Declaration of Exclusion:

The FAA has reviewed the above referenced proposed action and it has been determined by the undersigned to be categorically excluded from further environmental documentation and will not result in any extraordinary circumstances according to FAA Order 1050.1F.

The Applicable Categorical Exclusion Is:

§5-6.5(g): Establishment of Global Positioning System (GPS), Flight Management System (FMS), Area Navigation/Required Navigation Performance (RNAV/RNP), or essentially similar systems that use overlay of existing flight tracks. For these types of actions, the Noise Integrated Routing System (NIRS) Noise Screening Tool (NST) or other FAA-approved environmental screening methodology should be applied. (ATO, AVS)

§5-6.5(i): Establishment of new or revised air traffic control procedures conducted at 3,000 feet or more above ground level (AGL); procedures conducted below 3,000 feet AGL that do not cause traffic to be routinely routed over noise sensitive areas; modifications to currently approved procedures conducted below 3,000 feet AGL that do not significantly increase noise over noise sensitive areas; and increases in minimum altitudes and landing minima. For modifications to air traffic procedures at or above 3,000 feet AGL, the Noise Screening Tool (NST) or other FAA approved environmental screening methodology should be applied. (ATO, AVS)

After review of the MITRE Guidance for Noise Screening Air Traffic Actions and review of the amended procedures presented on Google Earth (with and without tracks), it was determined that the changes would not present a significant noise increase. Therefore, noise modeling was not recommended for this project. Additionally, based on the environmental review of the proposed action, there are no adverse impacts associated with the proposed action on any communities located beneath the proposed route path.

**FAA EASTERN SERVICE CENTER, AIR TRAFFIC DIVISION
CATEGORICAL EXCLUSION**

Reviewed by:



Date April 7, 2020

Chuck Armstead

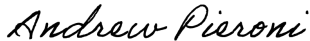
NISCIH Contract Support - Environmental Engineer

Environmental, Community Involvement and NAS Analytics (ECINA)

Eastern Service Center Operations Support Group (AJV-E25)

Phone: Office: (404)-305-6692

Concurrence by:



Date April 7, 2020

Andrew Pieroni

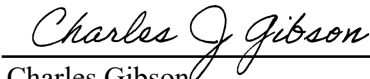
Environmental Protection Specialist

Environmental, Community Involvement and NAS Analytics (ECINA)

Eastern Service Center Operations Support Group (AJV-E25)

Phone: Office: (404)-305-5586

Approved by:



Date 04/07/2020

Charles Gibson

Manager

Environmental, Community Involvement and NAS Analytics (ECINA)

Eastern Service Center Operations Support Group (AJV-E25)

Phone: Office: (404)-305-5618

ATTACHMENTS

Figure 1: SMYRNA THREE Existing

Figure 2-3: ARLFT ONE (Proposed) Overlay/Replacement of SMYRNA THREE Existing

Figure 4-5: ARLFT ONE (Proposed) and existing KDOV Arrival Traffic

Figure 6: ARLFT ONE Final