

Flight Procedure Tracking Form		Action: FLIGHT CHECK	Task Type: SID	Date Open: 04/10/2012	Task #: 2012041024608401001	Request #: 20120410246084
Procedure: SID SCUTA (RNAV) ONE ROANOKE VA KROA			Airport ID: KROA	Airport: ROANOKE RGNL/WOODRUM FIELD		Reimbursable #:
City: ROANOKE		ST: VA		GPS #:	Estimated Chart Date: 11/15/2012	FICO #:
Fac ID: ROA	Fac. Type: Proc D		Specialist: DAN POWELL			

Procedure Review

	Rec'd	Rel'd	Full Name	Comments
Lead:	04/20/2012	06/26/2012	MARLON ROBINSON	DME / DME
QA:	06/26/2012	07/26/2012	DAVID PUGLISI	
Liaison:	07/26/2012		K. Spurlin	

Procedure Comments: ENROUTE **Remark Type:** INFORMATION PKG 1 of 2

ROANOKE, VA ROANOKE RGNL/WOODRUM FIELD (KROA) SID SCUTA (RNAV) ONE ENROUTE- YES FC BY 9/18/12 PUB 11/15/12

ATTACHED FORMS: CLIMB GRADIENT APPROVAL REQUEST; 8260-15B; 8260-15C; 8260-2 (4): FANBO, ORIG; GERMS, ORIG; MASSY, ORIG; SCUTA, ORIG.

CONTACT: DON SMITH/MARLON ROBINSON-AJV-352 LEADS, 405.954.1036/405.954.3636.

(SCUTA1.SCUTA) FIG

SCUTA ONE DEPARTURE (RNAV)

ROANOKE RGNL/ WOODRUM FIELD (ROA)

SL-349 (FAA)

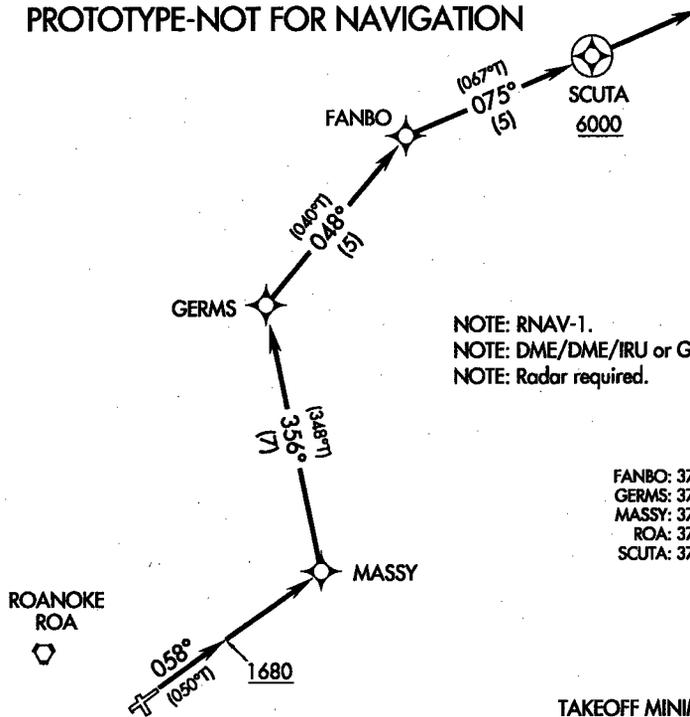
ROANOKE, VIRGINIA

ROANOKE ATIS
132.375
ROANOKE CLNC DEL
119.7
ROANOKE GND CON
121.9
ROANOKE DEP CON
118.15 126.9
ROANOKE TOWER
118.3 257.8

TAKEOFF OBSTACLE NOTES:

Rwy 6: Trees beginning 82' from DER, 448' left of centerline, up to 100' AGL/1179' MSL. Trees and bushes beginning 87' from DER, 339' right of centerline, up to 100' AGL/1199' MSL.

PROTOTYPE-NOT FOR NAVIGATION



NOTE: RNAV-1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Radar required.

FANBO: 3732.770'/07951.531'
GERMS: 3728.634'/07955.851'
MASSY: 3722.150'/07954.099'
ROA: 3720.608'/08004.224'
SCUTA: 3734.724'/07945.741'

TAKEOFF MINIMUMS:

Rwy 16, 24, 34: NA - Air Traffic.
Rwy 6: Standard with minimum climb of 560' per NM to 2900.



DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 6: Climb heading 058° to 1680, then direct MASSY. Then on depicted route to cross SCUTA at or above 6000 on heading 075° for radar vectors. Maintain 6000 or assigned altitude, expect filed altitude 10 minutes after departure

SCUTA ONE DEPARTURE (RNAV)
(SCUTA1.SCUTA) FIG

ROANOKE, VIRGINIA

ROANOKE RGNL/ WOODRUM FIELD (ROA)

**U.S. DEPARTMENT of TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION
GRAPHIC DEPARTURE PROCEDURE (DP)**

Bearings, headings, courses, tracks, and radials are magnetic. Elevation 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. Graphic depictions attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
SCUTA	ONE	SCUTA1.SCUTA	NONE		

TYPE: RNAV SID

DP ROUTE DESCRIPTION:

TAKEOFF RWY 6: CLIMB HEADING 057.72 TO 1680, THEN DIRECT MASSY. THEN ON DEPICTED ROUTE TO CROSS SCUTA AT OR ABOVE 6000 ON HEADING 075.00 FOR RADAR VECTORS. MAINTAIN 6000 OR ASSIGNED ALTITUDE, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	Crossing Altitudes/Fixes

PROCEDURAL DATA NOTES/TAKEOFF MINIMUMS:

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

TAKEOFF MINIMUMS:

RWY 16, 24, 34: NA - AIR TRAFFIC
RWY 6: STANDARD WITH MINIMUM CLIMB OF 560 FT PER NM TO 2900.

TAKEOFF OBSTACLES NOTES:

NOTE: RWY 6, TREES BEGINNING 82 FT FROM DER, 448 FT LEFT OF CENTERLINE, UP TO 100FT AGL/1179 FT MSL. TREES AND BUSHES BEGINNING 87 FT FROM DER, 339 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/1199 FT MSL.

CONTROLLING OBSTACLES:

RWY 6: 2407 MSL TOWER 372224.64N/0795535.79W

LOST COMMUNICATIONS PROCEDURES:

**U.S. DEPARTMENT of TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION
GRAPHIC DEPARTURE PROCEDURE (DP)**

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Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated. Graphic depictions attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
SCUTA	ONE	SCUTA1.SCUTA	NONE		

ADDITIONAL FLIGHT DATA:

DME/DME ASSESMENT: SAT (RNP 2.0)
REFERENCE MAG VAR: KROA 8W EPOCH YEAR: 2010

AIRPORTS SERVED:

ROANOKE RGNL/WOODRUM FIELD

ROANOKE, VA

COMMUNICATIONS:

ATIS, CLNC DEL, GND CON, DEP CON, TOWER,

FIXES AND/OR NAVAIDS:

FANBO, GERMS, ROA VORTAC

REMARKS:

RAPIDLY-RISING / PRECIPITOUS TERRAIN NEAR VICINITY OF AIRPORT.

**U.S. DEPARTMENT of TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION
GRAPHIC DEPARTURE PROCEDURE (DP)**

Bearings, headings, courses, tracks, and radials are magnetic. Elevation 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. Graphic depictions attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
SCUTA	ONE	SCUTA1.SCUTA	NONE		

FLIGHT INSPECTED BY:

REQUIRED EFFECTIVE DATE:

ROUTINE

DEVELOPED BY:

DON SMITH
(DAN POWELL)

AJV-352

05/21/2012

APPROVED BY:

DARRYEL ADAMS

AJV-352

COORDINATED WITH:

ATA, ALPA, APA, AOPA, NBAA, ROA APP CON, ROA ATCT, AMGR

CHANGES:

ORIGINAL.

REASONS:

PER EASTERN FPT REQUEST.

01/08/13: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 05/21/2012.
1. REMOVED DIST 5.00 AFTER SCUTA / UPDATED ARINC CODING.

03/25/13: THIS IS A CORRECTED COPY OF THE FOR DEVELOPED ON 05/21/13
1. CORRECTED 01/08/13 UPDATED COPY REMARK TO SAY REMOVED 5.00 FROM VM LEG OF THE 8260-15C.

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
SCUTA	ONE	SCUTA1.SCUTA			09/20/2012

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RW06 (AER)	371920.05N/0795902.40W	N	-	-	-	-			
1680 MSL			-	VA	049.72	-	AT/ABOVE 1680		
MASSY	372208.97N/0795405.92W	Y	FB	DF	-	-			
GERMS	372838.02N/0795551.07W	Y	FB	TF	347.84	6.63			
FANBO	373246.19N/0795131.88W	Y	FB	TF	039.74	5.37			
SCUTA	373443.41N/0794544.48W	Y	FO	TF	067.00	5.00	AT/ABOVE 6000		
				VM	067.00				

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
SCUTA	ONE	SCUTA1.SCUTA	NONE		

ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG (TRUE)	DISTANCE	ALTITUDE	SPEED
	RW06		010		VA		FB		057.7()		AA 01680	
	RW06	MASSY	020		DF		FB	1.0				
	RW06	GERMS	030		TF		FB	1.0				
	RW06	FANBO	040		TF		FB	1.0				
	RW06	SCUTA	050		TF		FO	1.0			AA 06000	
	RW06		060		VM		FB		075.0()			

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	FANBO	N373246.19	W0795131.88	N3732.770	W07951.531
	GERMS	N372838.02	W0795551.07	N3728.634	W07955.851
	MASSY	N372208.97	W0795405.92	N3722.150	W07954.099
	SCUTA	N373443.41	W0794544.48	N3734.724	W07945.741
	RW06	N371920.05	W0795902.40	N3719.334	W07959.040

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW06	01152	58

QUALITY
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: FANBO

STATE: VA

COUNTRY: US

LATITUDE/LONGITUDE: 373246.19N/0795131.88W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

FIX USE:

USE TYPE
DP

USE TITLE
SCUTA (RNAV)

FAC

PAT

AIRPORT IDENT
KROA

CITY
ROANOKE

STATE
VA (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 11/15/2012

DEVELOPED BY:

DATE: 05/17/2012

OFFICE: AJV-352

NAME: DONALD SMITH (DAN POWELL)

APPROVED BY:

DATE:

OFFICE: AJV-352

NAME: DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:

NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: ROA APP CON
OTHER:

QUALITY
4
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: GERMS

STATE: VA

COUNTRY: US

LATITUDE/LONGITUDE: 372838.02N/0795551.07W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

FIX USE:

USE TYPE
DP

USE TITLE
SCUTA (RNAV)

FAC PAT

AIRPORT IDENT
KROA

CITY
ROANOKE

STATE
VA (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 11/15/2012

DEVELOPED BY:

DATE: 05/17/2012

OFFICE: AJV-352

NAME: DONALD SMITH (DAN POWELL)

APPROVED BY:

DATE:

OFFICE: AJV-352

NAME: DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:

NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: ROA APP CON
OTHER:



RADIO FIX AND HOLDING DATA RECORD

NAME: MASSY

STATE: VA

COUNTRY: US

LATITUDE/LONGITUDE: 372208.97N/0795405.92W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

FIX USE:

USE TYPE
DP

USE TITLE
SCUTA (RNAV)

FAC PAT AIRPORT IDENT CITY
KROA ROANOKE

STATE
VA (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 11/15/2012

DEVELOPED BY:

DATE: 05/17/2012

OFFICE: AJV-352

NAME: DONALD SMITH (DAN POWELL)

APPROVED BY:

DATE:

OFFICE: AJV-352

NAME: DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:

NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: ROA APP CON, ROA ATCT
OTHER:

QUALITY
4
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SCUTA

STATE: VA

COUNTRY: US

LATITUDE/LONGITUDE: 373443.41N/0794544.48W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: ESTABLISH

FIX USE:

USE TYPE
DP

USE TITLE
SCUTA (RNAV)

FAC

PAT

AIRPORT IDENT
KROA

CITY
ROANOKE

STATE
VA (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 11/15/2012

DEVELOPED BY:

DATE: 05/18/2012

OFFICE: AJV-352

NAME: DONALD SMITH (DAN POWELL)

APPROVED BY:

DATE:

OFFICE: AJV-352

NAME: DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:

NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: ROA APP CON
OTHER:

QUALITY
4
CHECKED



Federal Aviation Administration

Memorandum

Date:

To: Manager, Flight Procedure Standards

From: Gregory Yamamoto
Manager, Aeronav Services Products Group

Subject: **ACTION:** Approval Request

SCUTA ONE RNAV SID, Orig. Roanoke Rgnl/Woodrum Field, Roanoke, VA.

Climb gradient exceeds 500 feet per NM, 8260.46d, Para. 2d(2).

The computed climb gradient is 560 feet per NM to an altitude 1749.30 feet above DER elevation for the RNAV departure on RWY 6. The obstacle driving this climb gradient is a 2407 MSL communication tower.

Request approval to publish a minimum climb gradient of 560 feet per NM to 2900 to allow 40:1 obstacle penetrations to be avoided.

Level of Safety:

The departure end of runway has an ANALPV survey. In addition, Roanoke Tower is a 24 hr facility, and departing aircraft will be radar monitored to assist with terrain avoidance. For aircraft unable to comply with the required CG, they will have the choice of flying the VCOA or will be offered IFR departures from runways 16 or 24.

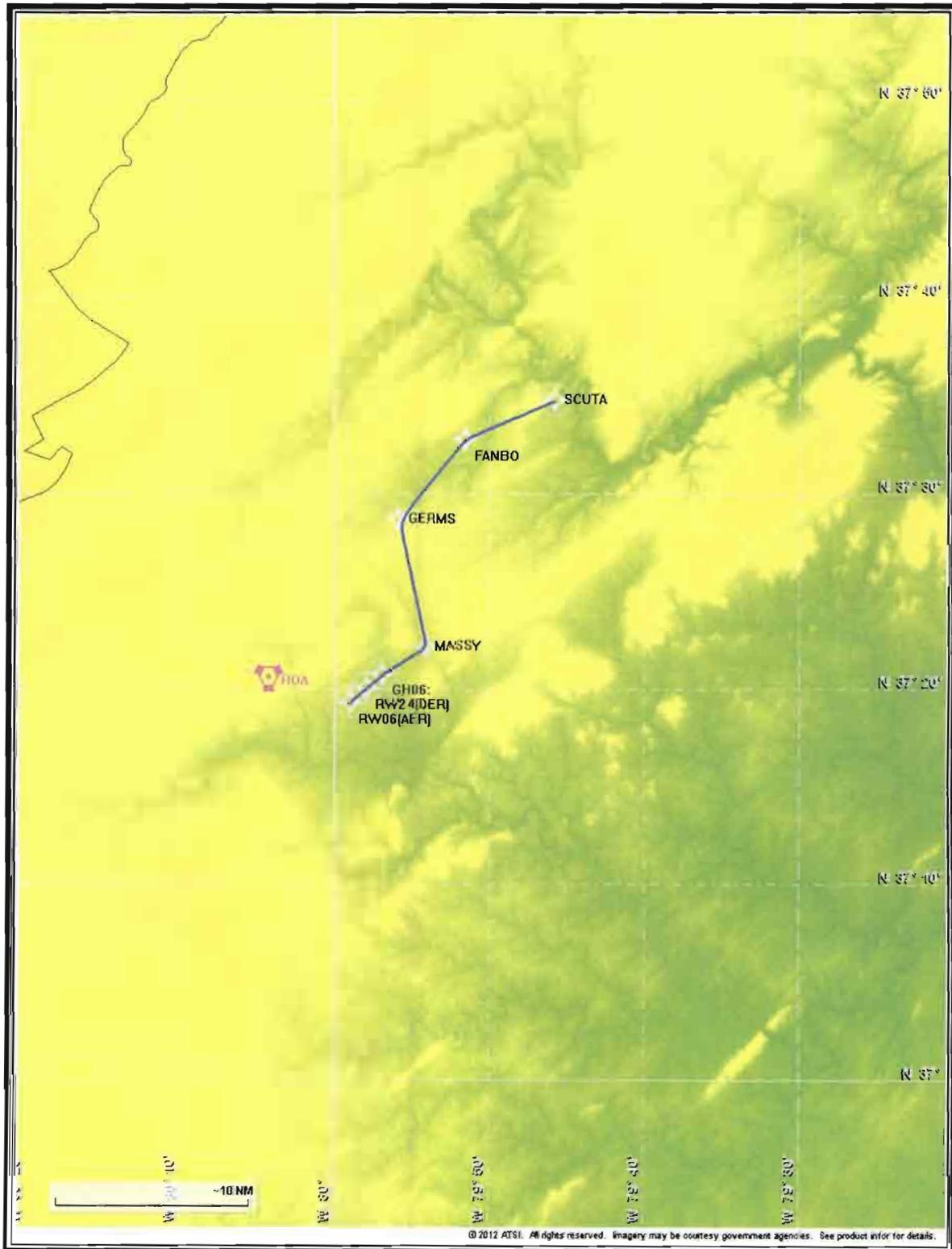
Attachments: (1): DEP 99 window.



Name: James M. Kelly
Project Name: SCUTA
Output File: KROA SCUTA ONE SID
RW06 SCUTA
20120517_1353
Procedure Name: SCUTA ONE
Software: RNAV-Pro™
Version: 2.36
Date/Time: 5/17/2012 1:53:38 PM
Input File: [KROA SCUTA SID RW06
SCUTA 20120517_1328.txt](#)
Databases: AVNIS Date: 02/07/2012
Obstacle Date: 08/26/2011
NFD Date: 09/30/2010
DTED® (MAX) Date: 2002

Results Summary:

- Flyability Please Check **Flyability** Results
- DME/DME
- Radars Please Check **Radar** Results
- Comms
- TERPS



Flight Plan

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Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW06(A...)	WP	N 37° 19' 20.05" W 79° 59' 2.40"	1152.0	VNAV	0.0	Fly Over	TF
RW24(D...)	WP	N 37° 20' 3.51" W 79° 57' 58.17"	1185.7	VNAV	130.0	Fly Over	VA
GH06:	WP	N 37° 20' 44.61" W 79° 56' 57.39"	1680.0	VNAV	145.0	Fly Over	DF
MASSY	WP	N 37° 22' 8.97" W 79° 54' 5.92"	2215.3	VNAV	180.0	Fly By	TF
GERMS	WP	N 37° 28' 38.02" W 79° 55' 51.07"	3540.3	VNAV	180.0	Fly By	TF
FANBO	WP	N 37° 32' 46.19" W 79° 51' 31.88"	4615.1	VNAV	180.0	Fly By	TF
SCUTA	WP	N 37° 34' 43.41" W 79° 45' 44.48"	5615.1	VNAV	180.0	Fly Over	TF

Climb Gradient: 560.0 Ft/NM up to 1680.0 Ft MSL

Flyability

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Settings:

- Flight Type:** Runway Departure
- Selected Airport:** KROA
- Aircraft Category:** Cat D
- Climb Gradient:** 560.0 Ft/NM up to 1680.0 Ft MSL
- Ground Speeds:**
 - Departure: **120.0 Kts** out to **10.0 NM**
 - Table:
 - 200.0 Kts** up to **11000.0 Ft.**
 - 240.0 Kts** up to **18000.0 Ft.**
 - 260.0 Kts** up to **24000.0 Ft.**
 - 340.0 Kts** up to **99900.0 Ft.**
- Wind Settings:** *None assigned*
- Descent During a Turn:** Allowed
- VNAV Mode:** Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -124.25 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

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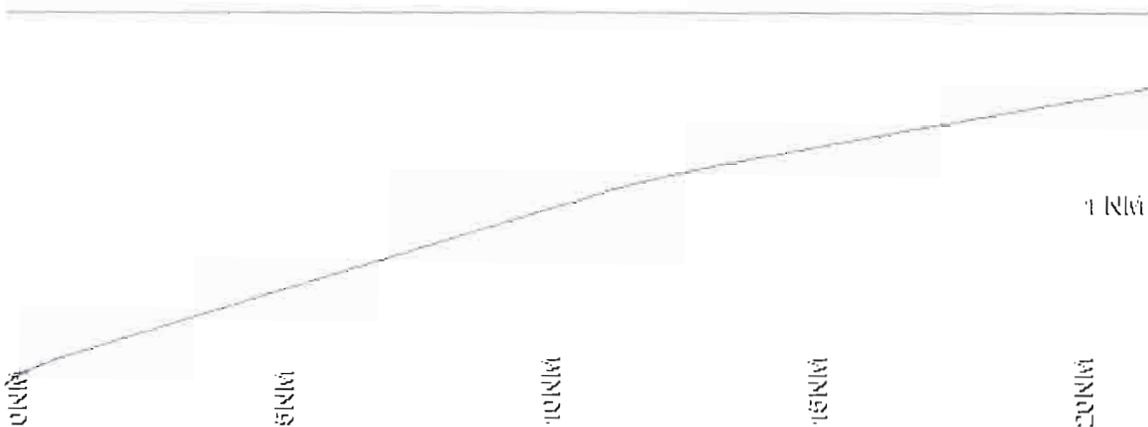
- Settings:**
- RNP: 2.0
 - Flight Mode: Manual
 - Line of Sight (DTED Level 0 Max): Evaluated
 - DME Restrictions: Evaluated
 - Inertial Drift: Enabled
 - Initial Drift: 0.165 NM
 - INS Drift Rate: 8.000 NM/Hour
 - Range Mode: OSV
 - Co-Frequencies: Evaluated
 - RNP Edges: Evaluated
 - Min DME Range: 3.0 NM
 - Allowed Gap Length: 4.0 NM
 - DME Types: VOR/DME , VORTAC , TACAN , and User
 - DME Include Angles: 30 to 150
 - Critical DMEs: Allowed
 - DoD Facilities: Not included
 - Foreign Facilities: Not included
 - Low & Terminal DMEs: Included
 - Flight Check DMEs: Selected
 - Higher Altitudes: Evaluated
 - Near Maximum Altitude: Evaluated
 - Automatic ESVs: Enabled w/ limit Alt/Distance (Reduce Criticals)

Total Number of DMEs Used: 0

Maximum DME Error Could not be Derived with < 2 DMEs.

No Critical DMEs were found.

Available DMEs: ROA, MOL



DME/DME (Continued.)

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Flight Check DME Selection

Distance [NM]	Selected DMEs	Alternate
0.0		
1.1		
2.0		
4.4	ROA	
10.6	ROA	
16.1	ROA	MOL

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 37° 19' 20.05" W 79° 59' 2.40"	N 37° 34' 42.59" W 79° 45' 46.92"	21.6
	VOR: LWB	Available from N 37° 19' 20.05" W 79° 59' 2.40" to N 37° 34' 42.59" W 79° 45' 46.92"	
	VOR: LYH	Available from N 37° 19' 20.05" W 79° 59' 2.40" to N 37° 34' 42.59" W 79° 45' 46.92"	
	VOR: ODR	Available from N 37° 19' 20.05" W 79° 59' 2.40" to N 37° 34' 42.59" W 79° 45' 46.92"	
	VOR: PSK	Available from N 37° 19' 20.05" W 79° 59' 2.40" to N 37° 20' 52.71" W 79° 56' 40.89"	
	VOR: ROA	Available from N 37° 19' 20.05" W 79° 59' 2.40" to N 37° 34' 42.59" W 79° 45' 46.92"	
	VOR: MOL	Available from N 37° 33' 25.82" W 79° 49' 34.71" to N 37° 34' 42.59" W 79° 45' 46.92"	

Radar Analysis

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Settings: Radar Types: ARSR and ASR

