

CUURT ONE (RNAV) STAR

4/18/2023

PRB RESULT: **AFS SIGNED AND COMPLETE**

Division Manager Signed. Status changed to Signed and Complete.

Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: STAR	Estimated Chart Date: 06/15/2023	APWS Task ID: 21EB607A957E4F74BB8FAF6AD9C189CD	APWS Project ID: 84C1ADB73E614117A24F3050000B0D45
Procedure: CUURT 1 RNAV STAR		Enroute: YES	Specialist: Brandenburg, Phillip		Agreement Number:
Airport ID: KOPF			Airport City: MIAMI		State: FL
Facility ID:	Facility Type:	Flight Inspection Remark Type: New FC Slot			
<div>Procedure Comments:</div> <div>LOA'S (3): STAR TERMINATION ALT, DG, ASSIGNED BY ATC.</div> <div>CONTACT ALLAN WILL 4059546103</div> <div>3/8/23. THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 9/13/22.</div> <div>S FILE</div> <div>1. UPDATED APPROVAL REQUEST FOR DESCENT GRADIENT.</div> <div>8260-2 NON-NFDC FILE, FIX BROMO</div> <div>1. ADDED PAT 1 USE FOR CUURT (RNAV) STAR</div> <div>03/13/2023</div> <div>QUALITY 14 CHECKED</div>					

Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: STAR	Estimated Chart Date: 04/20/2023	APWS Task ID: 21EB607A957E4F74BB8FAF6AD9C189CD	APWS Project ID: 84C1ADB73E614117A24F3050000B0D45
Procedure: CUURT 1 RNAV STAR		Enroute: YES	Specialist: Brandenburg, Phillip		Agreement Number:
Airport ID: KOPF			Airport City: MIAMI		State: FL
Facility ID:	Facility Type:	Flight Inspection Remark Type: New FC Slot			
<div>Procedure Comments:</div> <div>LOA'S (3): STAR TERMINATION ALT, DG, ASSIGNED BY ATC.</div> <div>CONTACT ALLAN WILL 4059546103</div> <div><div>01/10/2023</div><div>QUALITY 14 CHECKED</div><div>QUALITY 41 CHECKED</div></div>					

<b>FIPC DME/DME FORM</b>						
<b>PROCEDURE:</b> CUURT 1 RNAV STAR			<b>AIRPORT NAME:</b> MIAMI-OPA LOCKA EXEC		<b>AIRPORT ID:</b> KOPF	<b>SPECIAL CONTROL NO:</b> AG-03-137-23
<b>FAC ID:</b> CUURT1		<b>CITY:</b> MIAMI			<b>ST:</b> FL	<b>ORIG CHART DATE:</b> 06/15/2023
<b>DFL TYPE:</b> PROC/D	<b>THIRD PARTY:</b> <input type="checkbox"/> YES	<b>EST. TIME ON SITE:</b> 1.0	<b>REIMB. NUMBER:</b>	<b>PTS TASK ID:</b> 21EB607A957E4F74BB8FAF6AD9C189CD		
<b>PREFLIGHT NOTES</b>						
<b>REVIEWER:</b> jordan rolih					<b>DATE:</b> 04/04/2023	
<b>COMMENTS:</b>					<b>CHECK ONE:</b>	
					<input checked="" type="checkbox"/> FLT CK REQ <input type="checkbox"/> NFCR <input type="checkbox"/> REJECT	
						<b>YES</b>
					<b>CPV COMPLETE?</b>	<b>X</b>
<b>PROCEDURE RESULTS</b>						
<b>INSPECTION DATE:</b> 04/04/2023	<b>CREW #:</b> VN408	<b>N #:</b> N89	<b>INSTRUMENT PROCEDURE STATUS:</b> <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT W/CHANGES <input type="checkbox"/> UNSAT		<b>ARINC CODING:</b> <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT/GOLD <input type="checkbox"/> UNSAT	
<b>FLIGHT INSPECTOR SIGNATURE:</b> jordan rolih @ 04/04/2023 19:45			<b>PRINTED NAME:</b> ROLIH, JORDAN ALEXANDER			<b>NOTAM INITIATED?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<b>FLIGHT INSPECTOR REMARKS:</b>						
<b>DME/DME STATUS:</b> <input checked="" type="checkbox"/> SAT <input type="checkbox"/> UNSAT	<b>SPECIALIST SIGNATURE:</b> lisa a-ctr thrysoe @ 04/11/2023 10:28				<b>PRINTED NAME:</b> Lisa Thrysoe	
<b>SPECIALIST REMARKS:</b> Procedure SAT for DME/DME/IRU NAV. All DME ESV's for legs flown recorded by Inspection Aircraft all other ESV's certified by TARGETS						
<b>IN-FLIGHT OBSTACLE REPORT</b>						
<b>OBSTRUCTION ID #:</b>	<b>COORDINATES OR LOCATION:</b>	<b>GNSS ALTITUDE (MSL):</b>	<b>BAROMETRIC ALTITUDE (MSL):</b>	<b>HEIGHT ABOVE GROUND LEVEL:</b>		

<b>FIPC DME/DME FORM</b>							
<b>PROCEDURE:</b> CUURT 1 RNAV STAR			<b>AIRPORT NAME:</b> MIAMI-OPA LOCKA EXEC		<b>AIRPORT ID:</b> KOPF	<b>SPECIAL CONTROL NO:</b> AG-03-137-23	
<b>FAC ID:</b> CUURT1		<b>CITY:</b> MIAMI			<b>ST:</b> FL	<b>ORIG CHART DATE:</b> 06/15/2023	
<b>DFL TYPE:</b> PROC/D	<b>THIRD PARTY:</b> <input type="checkbox"/> YES	<b>EST. TIME ON SITE:</b> 1.0	<b>REIMB. NUMBER:</b>		<b>PTS TASK ID:</b> 21EB607A957E4F74BB8FAF6AD9C189CD		
<b>PREFLIGHT NOTES</b>							
<b>REVIEWER:</b> jordan rolih					<b>DATE:</b> 04/04/2023		
<b>COMMENTS:</b>					<b>CHECK ONE:</b>		
					<input checked="" type="checkbox"/> FLT CK REQ <input type="checkbox"/> NFCR <input type="checkbox"/> REJECT		
							YES
					<b>CPV COMPLETE?</b>		X
<b>PROCEDURE RESULTS</b>							
<b>INSPECTION DATE:</b> 04/04/2023		<b>CREW #:</b> VN408	<b>N #:</b> N89	<b>INSTRUMENT PROCEDURE STATUS:</b> <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT W/CHANGES <input type="checkbox"/> UNSAT		<b>ARINC CODING:</b> <input checked="" type="checkbox"/> SAT <input type="checkbox"/> SAT/GOLD <input type="checkbox"/> UNSAT	
<b>FLIGHT INSPECTOR SIGNATURE:</b> jordan rolih @ 04/04/2023 19:45			<b>PRINTED NAME:</b> ROLIH, JORDAN ALEXANDER				<b>NOTAM INITIATED?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
<b>FLIGHT INSPECTOR REMARKS:</b>							
<b>DME/DME STATUS:</b> <input type="checkbox"/> SAT <input type="checkbox"/> UNSAT		<b>SPECIALIST SIGNATURE:</b>			<b>PRINTED NAME:</b>		
<b>SPECIALIST REMARKS:</b>							
<b>IN-FLIGHT OBSTACLE REPORT</b>							
<b>OBSTRUCTION ID #:</b>	<b>COORDINATES OR LOCATION:</b>		<b>GNSS ALTITUDE (MSL):</b>		<b>BAROMETRIC ALTITUDE (MSL):</b>		<b>HEIGHT ABOVE GROUND LEVEL:</b>

## CUURT ONE (RNAV) STAR

REQUESTED BY: AJV-A

PRB RESULTS: RETURN FOR REWORK

APPROVAL REQUEST:

- ORDER 8260.3E PARA, 2-2-8A - DESCENT GRADIENT: CHANGE "(JAMES TO HATUG)" TO "(NAGIE TO WESTN)" – TYPO.

8260-17.1, PAGE 3 OF 5:

- PROCEDURAL DATA NOTES – ADD SPEED RESTRICTIONS FOR NAGIE, MARCI, AND SABEE (I.E. "CROSS NAGIE AT 280 KIAS") – IAW 4-5-12.D(1)

8260-2:

- BROMO – FIX USE – ADD PAT 1 TO THE CUURT STAR – IAW 8260.19I, 8-5-2.J

MISSING DOCUMENTATION:

- SAT FLIGHT INSPECTION PC

**From:** [Powell, Dan \(FAA\)](#)  
**To:** [Danner, David \(FAA\)](#)  
**Cc:** [Anderson, Jeff A \(FAA\)](#); [Barnett, Georgetown P \(FAA\)](#)  
**Subject:** FW: REQUEST INPUT OF PRB COMMENT  
**Date:** Wednesday, March 1, 2023 6:28:00 AM  
**Attachments:** [image004.png](#)  
[image007.png](#)  
[PRB\\_VISITTOF.pdf](#)  
[PRB\\_FI\\_XTYPE\\_STAR\\_CIRRT\\_CNF\\_RNAV\\_F.pdf](#)

Thanks Jeff!

Dave, suggest we get this info to the branch ref KOPF RNAV STAR CUURT ONE. (Proj 84C1ADB73E614117A24F3050000B0D45).

To recap, Dev is not to input PRB expect speed notes (for RNAV STARS).

Thanks,  
Dan Powell  
Aeronautical Information Specialist, AIV-A442  
Instrument Flight Procedures QC, Sub-Team B  
6500 South MacArthur Blvd. ANF-1, Bldg 5, Room 115  
Oklahoma City, OK 73169  
Office: (405) 954-4506  
[Visit Aeronautical Information Services Here](#)

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**From:** Anderson, Jeff A (FAA) <[Jeff.A.Anderson@faa.gov](mailto:Jeff.A.Anderson@faa.gov)>  
**Sent:** Tuesday, February 28, 2023 1:27 PM  
**To:** Powell, Dan (FAA) <[Dan.Powell@faa.gov](mailto:Dan.Powell@faa.gov)>  
**Cc:** Danner, David (FAA) <[David.Danner@faa.gov](mailto:David.Danner@faa.gov)>  
**Subject:** RE: REQUEST INPUT OF PRB COMMENT

As you know, Procedural Data Notes is where you “enter any information that **will appear in note form** on the published chart.” On an RNAV STAR the speeds are obtained from the 8260-17.2. For a conventional STAR Additional Flight Data is the most appropriate section of the form to add them.

AFS is actually directing the misapplication of speed data based on flawed example forms. 8260.19, 4-5-12.d.(1) is only a reference to charting “Expect” speeds which are not coded altitudes therefore need to be added to the chart as notes; through documentation within Procedural Data Notes.

Thank you,

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**Jeff A Anderson**  
Instrument Flight Procedures (IFP), Criteria Review Team, AIV-A440  
Mission Support Services | Air Traffic Organization (ATO)  
**Federal Aviation Administration**

**Office:** 405.954.5440  
**Email:** [jeff.a.anderson@faa.com](mailto:jeff.a.anderson@faa.com)  
**Web:** [www.faa.gov/go/missionsupport](http://www.faa.gov/go/missionsupport)  
cid:image002.png@01D94878.551887D0



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**From:** Powell, Dan (FAA) <[Dan.Powell@faa.gov](mailto:Dan.Powell@faa.gov)>  
**Sent:** Tuesday, February 28, 2023 11:15 AM  
**To:** Anderson, Jeff A (FAA) <[Jeff.A.Anderson@faa.gov](mailto:Jeff.A.Anderson@faa.gov)>  
**Cc:** Danner, David (FAA) <[David.Danner@faa.gov](mailto:David.Danner@faa.gov)>  
**Subject:** REQUEST INPUT OF PRB COMMENT

Jeff,

Please take a quick peek at this PRB comment on an RNAV STAR.

I was under the impression only conventional stars (that do not have a 17.2 get an expected speed).

Thanks,

cid:image004.png@01D94876.1239C3E0



Dan Powell  
Aeronautical Information Specialist, AIV-A442  
Instrument Flight Procedures QC, Sub-Team B  
6500 South MacArthur Blvd. ANF-1, Bldg 5, Room 115  
Oklahoma City, OK 73169  
Office: (405) 954-4506  
[Visit Aeronautical Information Services Here](#)



# Federal Aviation Administration

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## Memorandum

Date: September 14, 2022

To: Christopher Hope, Manager, Flight Technologies and  
Procedures Division  
THRU: Romana Wolf, Manager, Flight Procedures and Airspace Group

From: Bev Bordy, Manager, Instrument Flight Procedures (IFP) Coordination Team, AJV-A45

Prepared by: Jefferson Rutledge, Sr. ATC Specialist, NAVTAC CTR Support

Subject: Approval Request: Miami, FL (KOPF) CUURT (RNAV) STAR  
No altitude at Terminus Fix

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The termination fixes for the CUURT Standard Terminal Arrival Route (STAR) are DGNRO on an east operation and BOOZR on a west operation.

Currently, FAAO 8260.3E, PARA 2-2-7.f. requires an altitude at the termination fix and that altitude must be at or above the minimum vectoring altitude (MVA) and/or minimum IFR altitude (MIA) (as applicable).

The KOPF CUURT (RNAV) STAR has no published/coded terminus altitude for the MIAMI-OPA LOCKA EXEC (KOPF) Common Route and will not be a Descend Via STAR. The STAR delivers aircraft at various altitudes at BOOZR/DGNRO from MIA TRACON and is based on the operation at KMIA, East or West. This is covered in the MIA Letter of Agreement. With varying altitude restrictions in use the coding of a single altitude at BOOZR/DGNRO is impractical for Air Traffic and would be misleading, adding possible confusion and distraction to both Air Traffic and the Flight crews utilizing the arrival. FAAO 7110.65 PARA 4-5-6 and 5-6-1 requires altitude assignments above the minimum IFR altitude / minimum vectoring altitude (MIA/MVA). The absence of an altitude at the terminus fixes will not introduce any new risk into the system.

Therefore, the Miami District is requesting an Approval to continue to utilize the CUURT (RNAV) STAR without a published terminus altitude for KOPF arrivals.





# Federal Aviation Administration

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## Memorandum

Date: March 7, 2023

To: Christopher Hope, Manager, Flight Technologies and Procedures  
Division  
THRU: Romana Wolf, Manager, Flight Procedures and Airspace Group

From: Bev Bordy, Manager, Instrument Flight Procedures (IFP) Coordination Team, AJV-A45  
Jefferson Rutledge, Sr. ATC Specialist, NAVTAC CTR Support

Prepared by:

Subject: Approval Request: Miami, FL (KOPF) CUURT (RNAV) STAR  
Descent Gradient Approval Request (NAGIE to WESTN)

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The requirements stated in Order 8260.3E, (United States Standard for Terminal Instrument Procedures (TERPS) ), paragraph 2-2-8.a. are:

“(1) the maximum permissible gradient 10000 MSL and above is 330 ft/NM (approximately 3.11 degrees).

“(2) **The maximum permissible DG below 10000 feet MSL is 318 ft. /NM (approximately 3.0 degrees).**

“(3) When a STAR contains a descent between fixes that passes through 10000 feet MSL, the maximum permissible DG is between 318 ft. /NM and 330 ft. /NM and is in proportion to the amount of the altitude change that is below/above 10000 feet MSL. Use formula 2-2-1 to determine the maximum DG (DGmax) between fixes that contain a descent that passes through 10000 feet MSL.”

“Formula 2-2-1. Maximum DG Passing through 10000 Feet MSL (ft/NM)  
 $DB_{max} = (Alt_1 - 10000) \times 12 / (Alt_1 - Alt_2) + 318$

Paragraph 2-2-8.a states:

**“When a gradient exceeds the maximum DG allowed in paragraph 2-2-8a, the STAR requires approval.”**

Paragraph 1-4-2. ...states in part:

**“Nonstandard IFP.** ...obstacles, navigation information, or traffic congestion may require special consideration where justified by operational requirements. In such cases, nonstandard IFPs that deviate from these criteria may be approved, provided they are documented and an equivalent level of safety exists...”

RSO144: [Approval Required] The Descent Gradient (472.3239083634153) from NAGIE to WESTN is greater than the Maximum Permissible Descent Gradient (330.0). Flight Standards approval is required.

A computed descent gradient value from NAGIE to WESTN of 242.866 ft./nm resulted from the descent gradient being calculated from descending from 23000 at NAGIE (bottom of block), then crossing WESTN AT 11000 over a distance of 52.41nm.

Route Evaluation for HONID:CUURT:KOPF:RW09L,RW09R,RW12											
HONID:CUURT:KOPF:RW09L,RW09R,RW12 Evaluation Results Part 1/2											
Leg Tp	End Pt	Turn Tp	Alt Restr	Alt Restr 2	Spd Restr	Turn Ang	Leg Length	Min Seg Length	Descent Gradient	Max Descent Grad	Min Decel Dist
IF	HONID [IFPA r1 05-19-22 TO UNK]						0.0	0.0	0.0	0.0	0.0
TF	IPOKE [IFPA r2 05-19-22 TO UNK]	FLY_BY				0.0	49.21	1.0	0.0	0.0	0.0
TF	BULZI [IFPA r6 05-19-22 TO UNK]	FLY_BY				17.89	28.8	8.52	0.0	0.0	0.0
TF	SNAPY [IFPA r1 05-19-22 TO UNK]	FLY_BY				0.0	38.62	8.52	0.0	0.0	0.0
TF	NICKI [IFPA r1 05-19-22 TO UNK]	FLY_BY				5.58	38.49	1.0	0.0	0.0	0.0
TF	BROMO [IFPA r0 05-19-22 TO UNK]	FLY_BY				13.77	81.48	6.54	0.0	0.0	0.0
TF	SCURF [IFPA r0 05-19-22 TO UNK]	FLY_BY				4.79	29.13	6.54	0.0	0.0	0.0
TF	PLOWS [IFPA r0 05-19-22 TO UNK]	FLY_BY	+34000.00			42.99	38.1	20.0	0.0	0.0	0.0
TF	EEVEN	FLY_BY				1.29	20.77	20.0	229.39	330.0	0.0
TF	NAGIE	FLY_BY	+23000.00	-28000.0	280.0	2.3	27.12	1.0	229.39	330.0	0.0
TF	WESTN	FLY_BY	+11000.00			0.01	25.39	1.0	472.32	330.0	0.0
TF	CUURT	FLY_BY	6000.00			15.6	21.37	1.68	233.83	320.4	0.0
TF	RAZLE	FLY_BY				14.72	13.01	3.36	0.0	0.0	0.0
TF	DGNRO	FLY_OVER					11.67	1.68	0.0	0.0	0.0
FM							0.0	0.0	0.0	0.0	0.0

Tool for Establishing Altitude and Speed Restrictions		
Enter distance between waypoints (D)	52.410	NM
Enter beginning altitude (a)	23000	FT
Enter ending altitude (b)	11000	FT
Enter beginning speed	280	KIAS
Enter ending speed	250	KIAS
Calculated Descent Gradient (DG)	228.964	FT / NM
Calculated speed loss (x)	30	Knots
Calculated Speed Adjusted Descent Gradient (SADG)	242.866	FT / NM

Consideration was given to removing and or changing the restrictions at NAGIE. However, to prevent aircraft from entering adjacent airspace above the CUURT STAR, the requirement to provide de-confliction from the KFLB BHHIA STAR below the CUURT STAR, and to reduce ATC workload due to required coordination, (point outs) it was decided that the restrictions are necessary.



# Federal Aviation Administration

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## Memorandum

Date: September 13, 2022

To: Christopher Hope, Manager, Flight Technologies and  
Procedures Division  
THRU: Romana Wolf, Manager, Flight Procedures and Airspace Group

From: Bev Bordy, Manager, Instrument Flight Procedures (IFP) Coordination Team, AJV-A45

Prepared by: Jefferson Rutledge, Sr. ATC Specialist, NAVTAC CTR Support

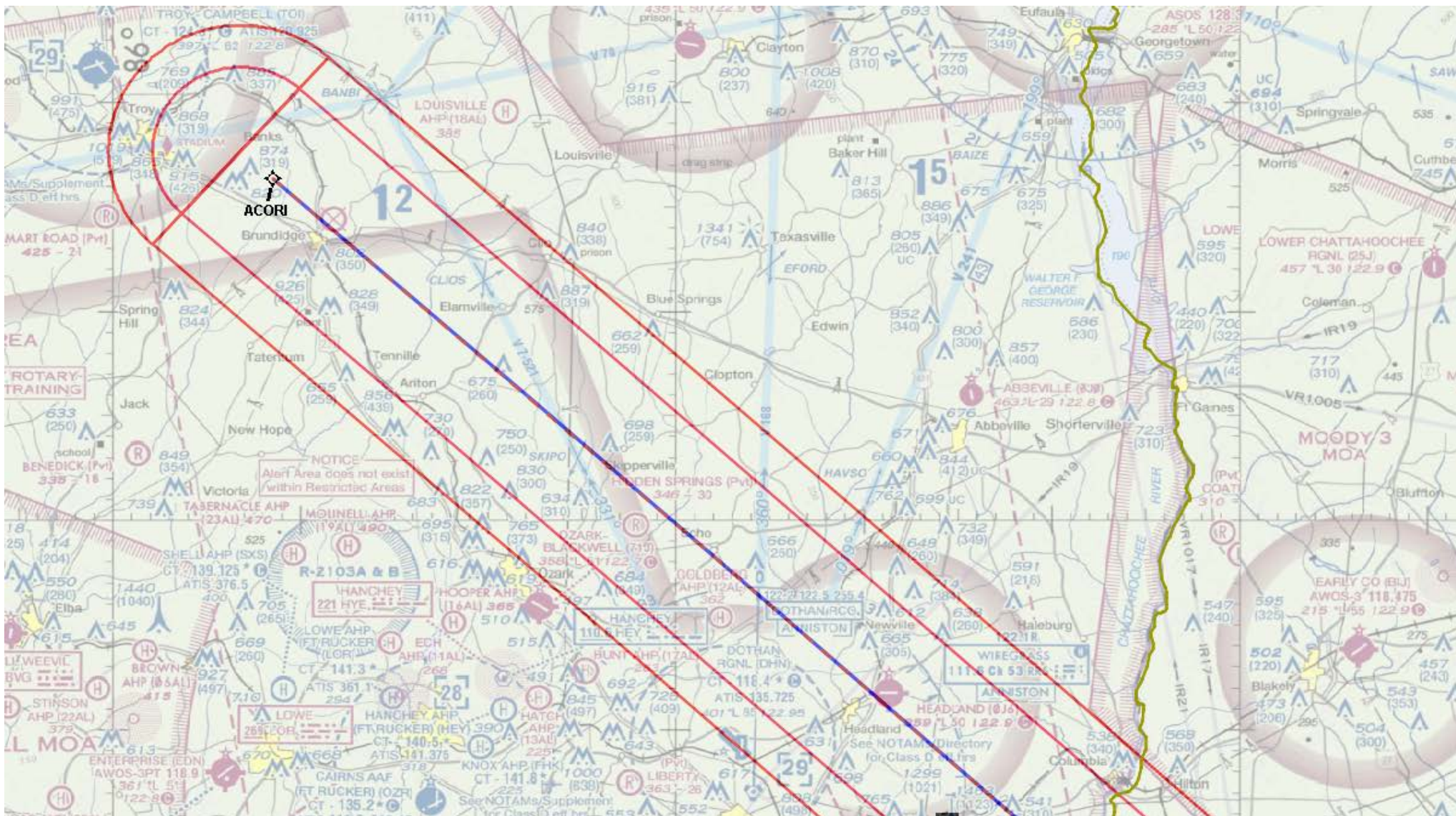
Subject: Approval Request: Miami, FL (KOPF) CUURT (RNAV) STAR  
Non- standard Chart Notes

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FAAO 8260.19I para 4-5-2 w. When ATC has determined that they do not want pilots to "Flight Plan" or file a particular STAR (i.e., use will be determined by ATC), ATC will request that a chart note be placed on the STAR. In the "Procedural Data Notes" section of Form 8260-17.1, use: "Chart Note: Do Not File – To Be Assigned by ATC."

ATC request to use the following Procedural Data Note: "Chart Note: Do Not File BROMO, SCURF Transitions – To Be Assigned by ATC." This is to support ATC assigned transitions which are required to prevent users from filing Flight Plans that are non- standard routing for arrivals into the South Florida Metroplex area. These ATC assigned transitions will be Data Comm, ERAM, and FMC compliant to allow users to utilize these routes when necessary.



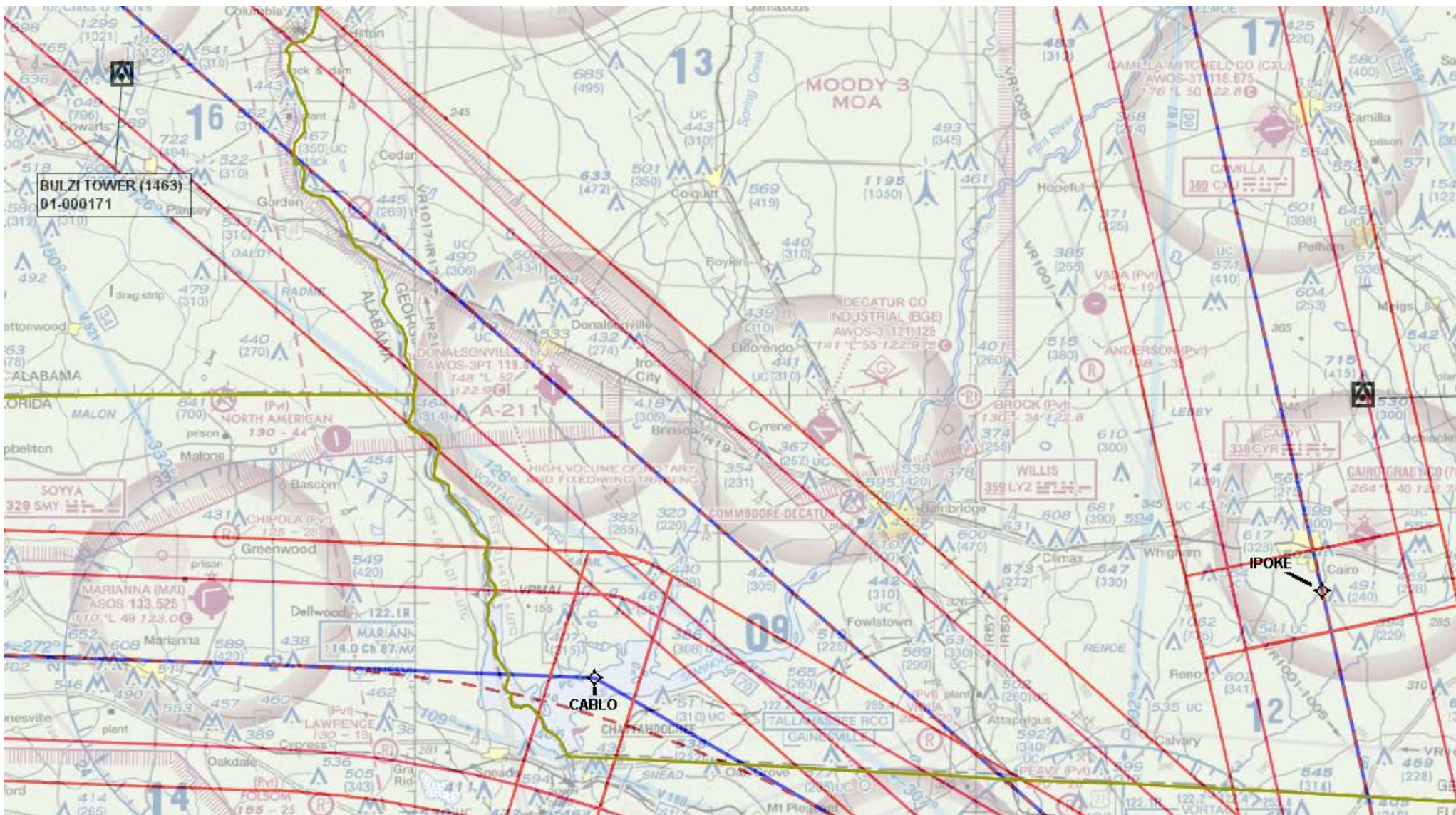


CUURT (RNAV)



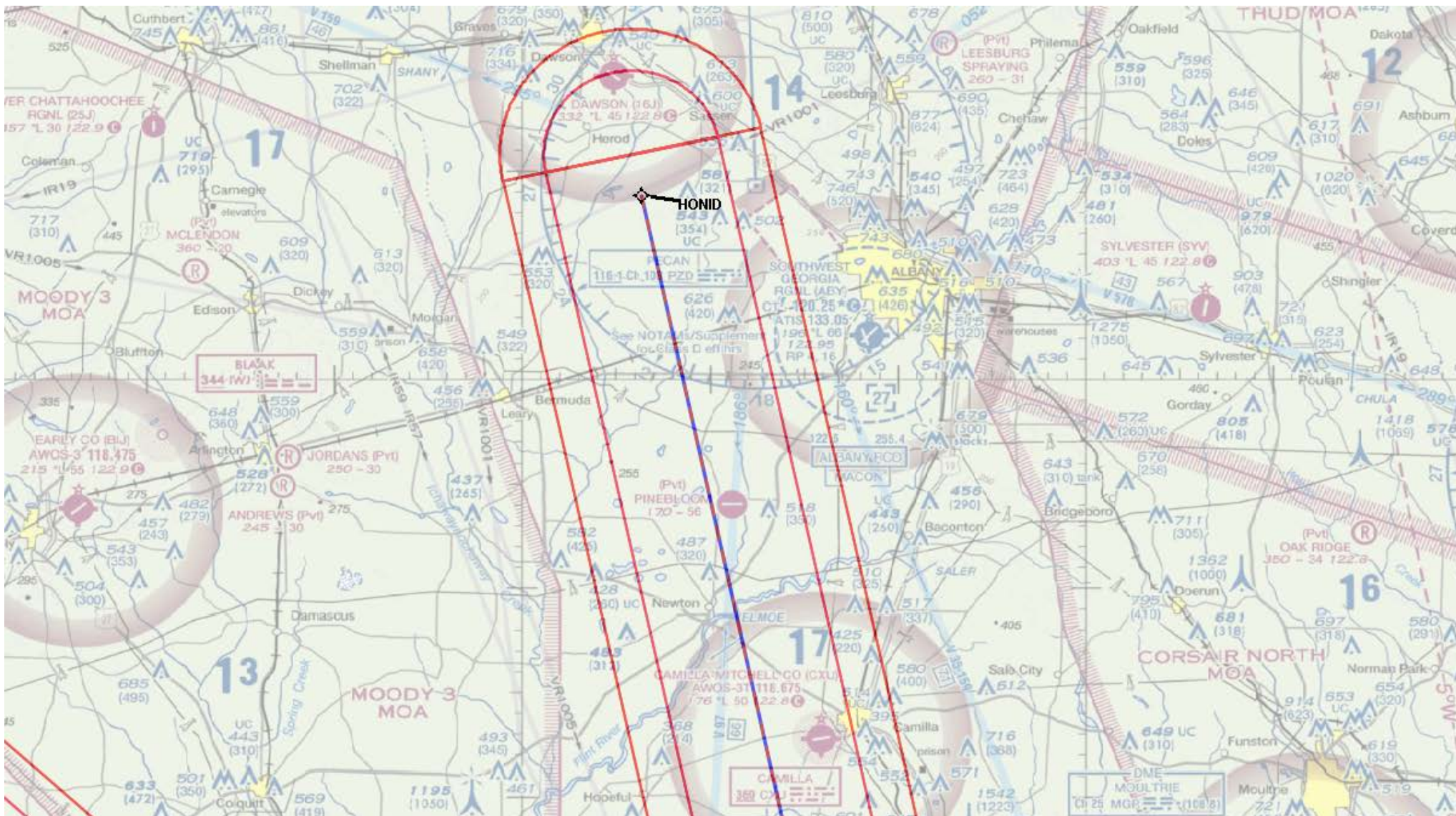






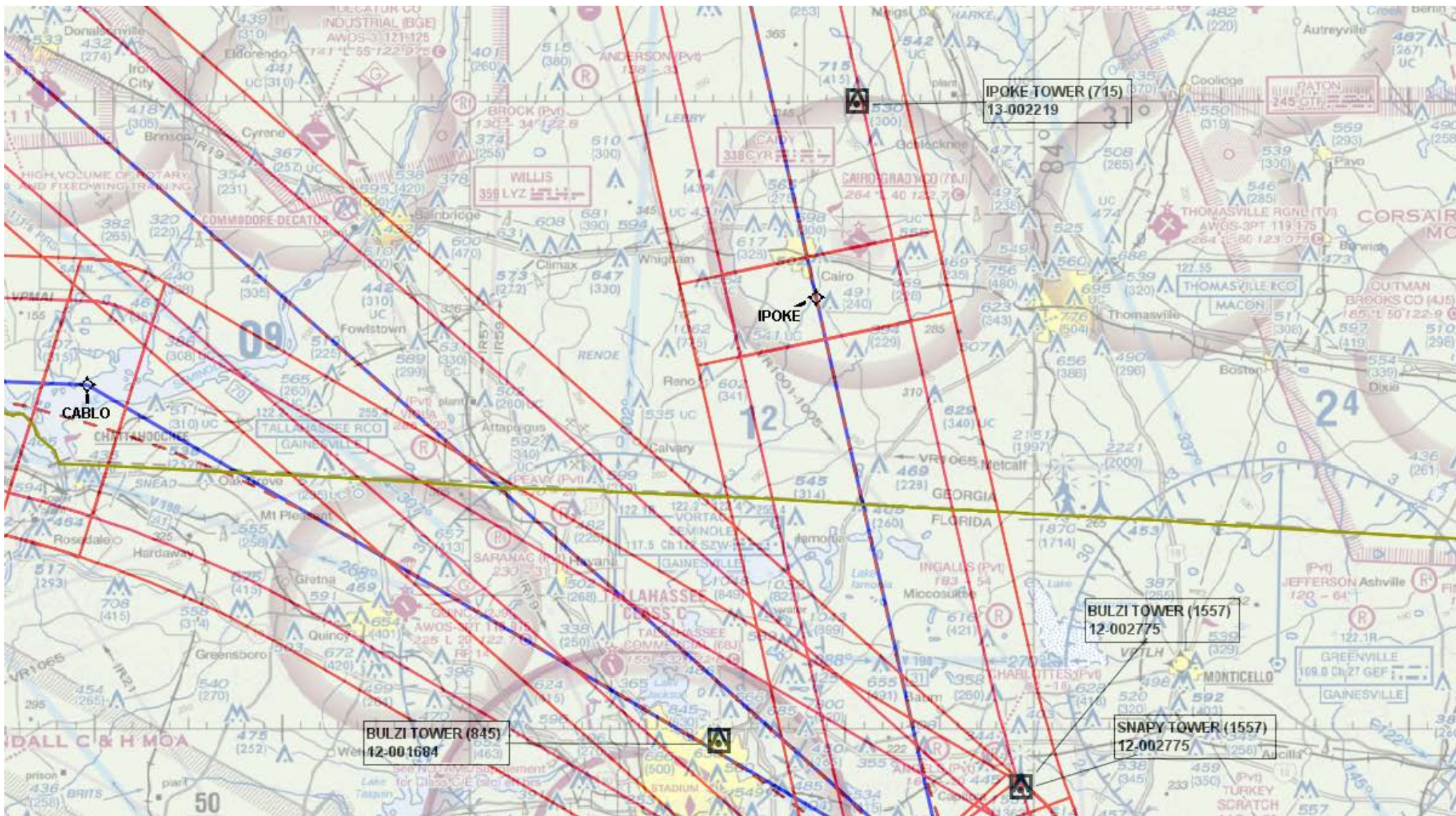
CUURT (RNAV)





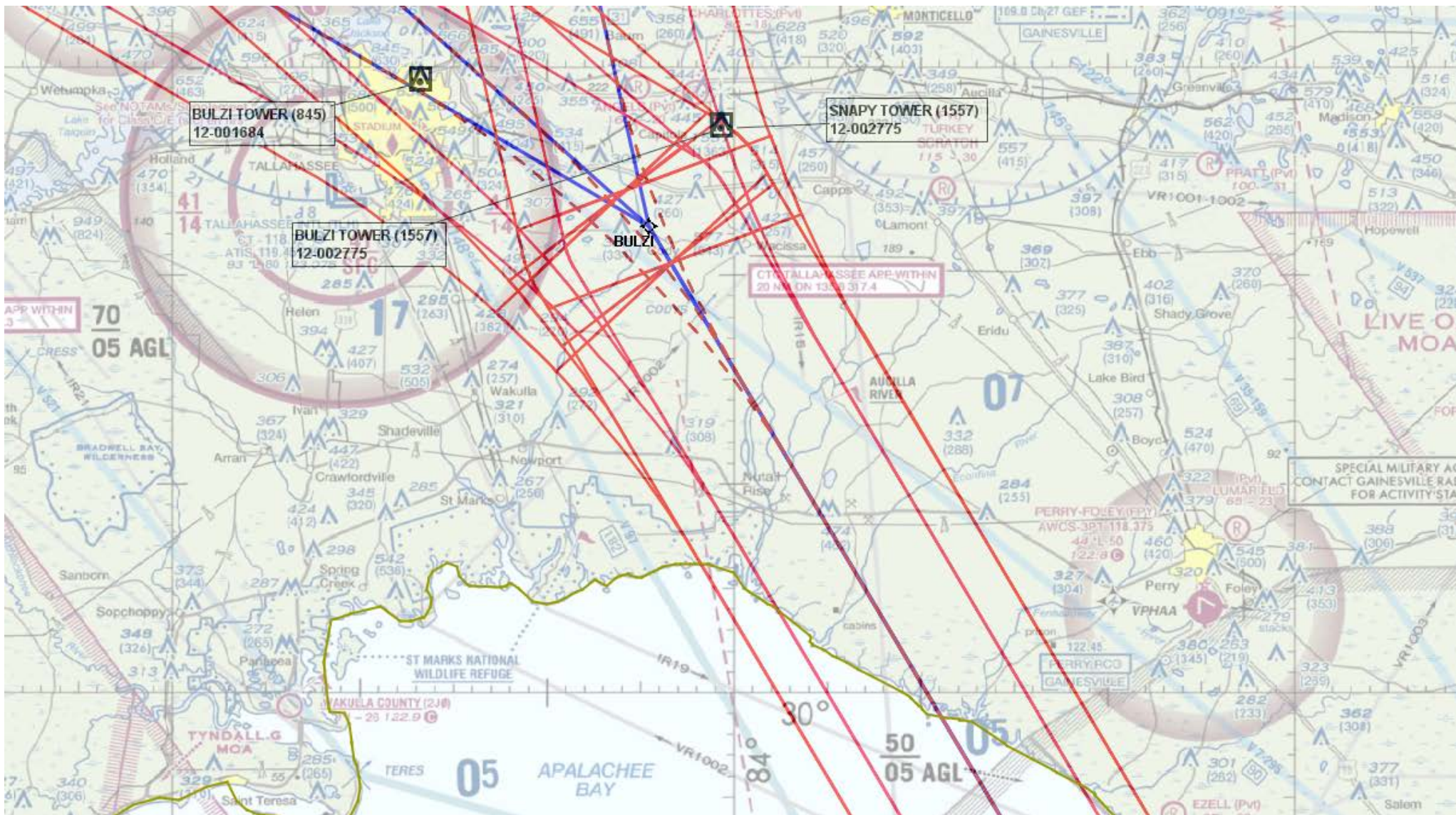
CUURT (RNAV)





CUURT (RNAV)





CUURT (RNAV)

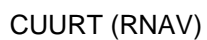




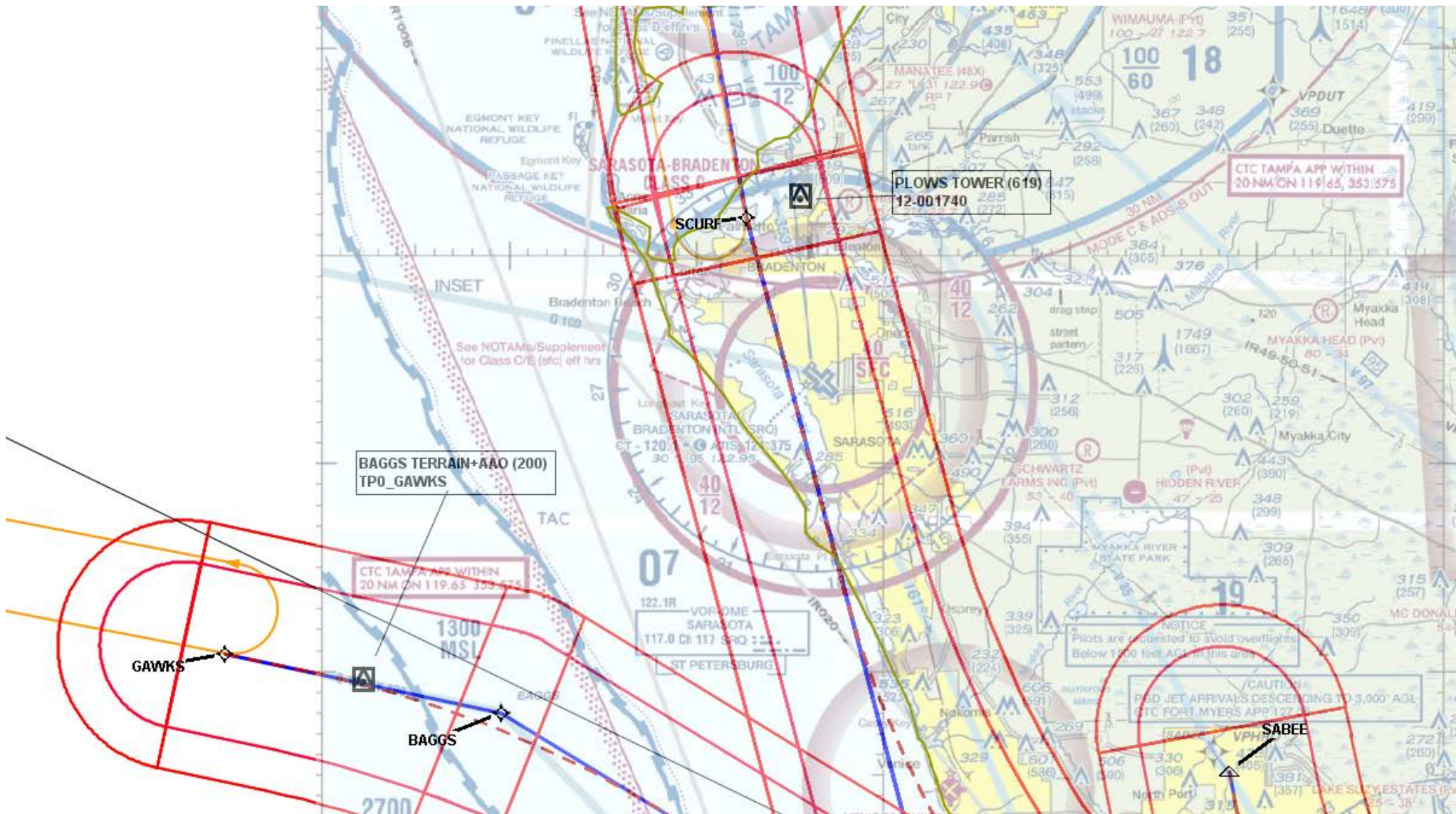












CUURT (RNAV)







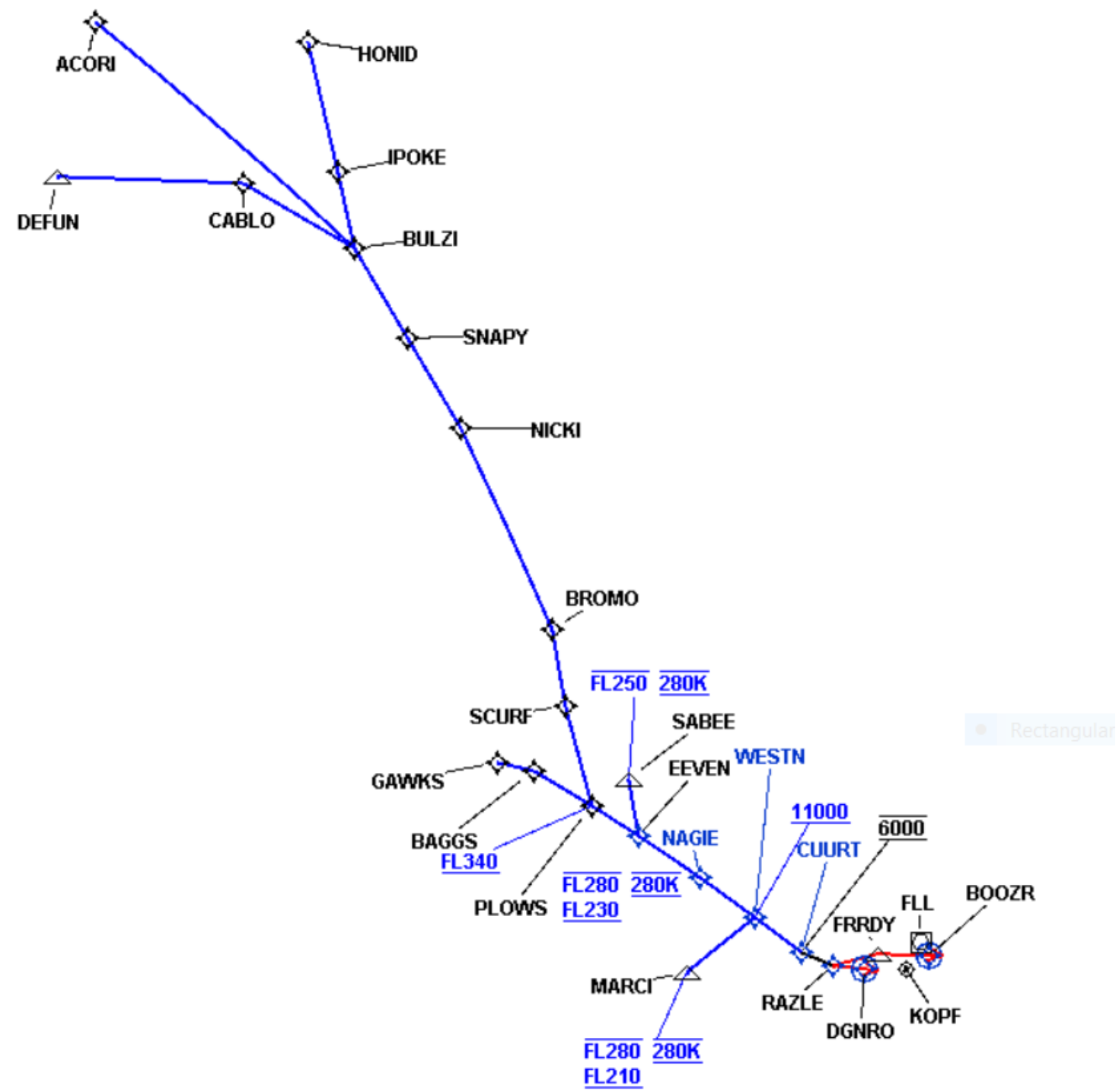












# KMIA CUURT STAR

