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Revision Letter For Cycle 04-2012

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General Information

Location: Danville VA USA
IATA Code: DAN
Lat/Long: N36° 34.4' W079° 20.2'
Elevation: 571 ft

Airport Use: Public
Magnetic Variation: 8.8°W
Sectional Chart: Cincinnati

Fuel Types: 100 Octane (LL), Jet A
Repair Types: Major Airframe, Major Engine
Customs: No
Airport Type: IFR
Landing Fee: No
Control Tower: No
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 1151 Z
Sunset: 2309 Z,

Runway Information

Runway: 02
Length x Width: 6500 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 559 ft
Lighting: Edge, ALS, Pilot controlled

Runway: 13
Length x Width: 4020 ft x 100 ft
Surface Type: asphalt
TDZ-Elev: 571 ft
Lighting: Edge, REIL, Pilot controlled

Runway: 20
Length x Width: 6500 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 568 ft
Lighting: Edge, REIL, Pilot controlled
Displaced Threshold: 900 ft

Runway: 31
Length x Width: 4020 ft x 100 ft
Surface Type: asphalt
TDZ-Elev: 560 ft
Lighting: Edge, REIL, Pilot controlled

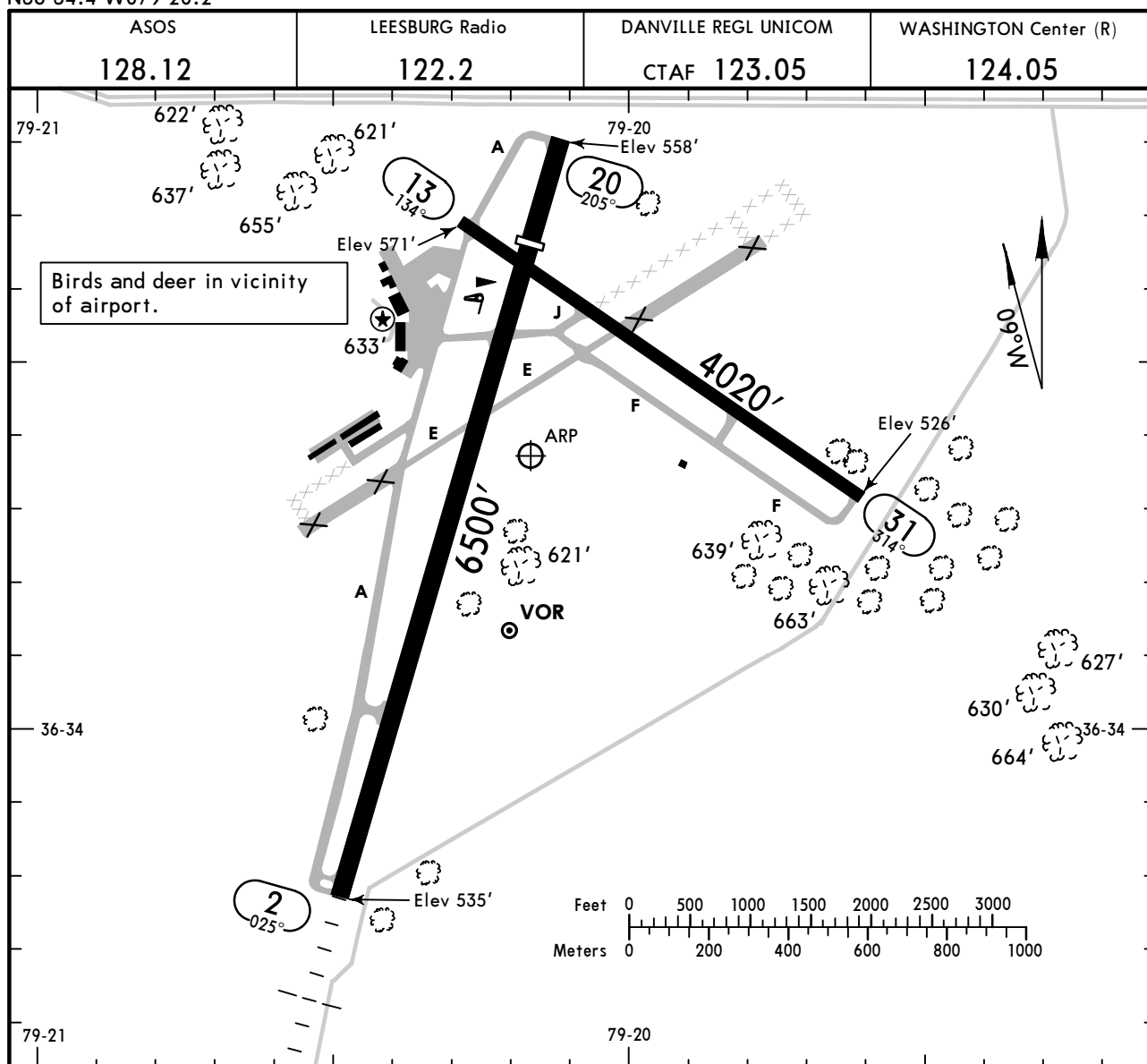
Communication Information

ASOS 128.125
Danville Regl Unicom 123.05 CTAF PCL
Leesburg Flight Service Station 122.2 RCO
Washington Center 124.05 Remote Communications Air-Ground

KDAN/DAN
Apt Elev 571'
N36 34.4 W079 20.2

JEPPESEN
28 MAY 10 11-1 Eff 3 Jun

DANVILLE, VA
DANVILLE REGL



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS			
		LANDING BEYOND		TAKE-OFF	WIDTH
		Threshold	Glide Slope		
2	① 20	② HIRL ② MALSR ② PAPI-L (angle 3.0°)	4700'		150'
		② HIRL ② REIL ② PAPI-L (angle 3.0°)	5600'		
13	31	② MIRL ② REIL ② VASI-L			100'

- ① Grooved.
② Activate on 123.05.

TAKE-OFF

	Rwys 2, 20, 31		Rwys 13		
	Adequate Vis Ref	STD	With Min climb of 299'/NM to 900'		Other
			Adequate Vis Ref	STD	
1 & 2 Eng	1/4	1	1/4	1	300-1 1/4
3 & 4 Eng		1/2		1/2	

FOR FILING AS ALTERNATE

Authorized Only When Local Weather Available.

	LOC Rwy 2 RNAV (GPS) Rwy 2 RNAV (GPS) Rwy 20 VOR Rwy 2		VOR Rwy 20
	ILS Rwy 2		
A	600-2	800-2	1000-2
B			1000-2 3/4
C			
D			1000-3

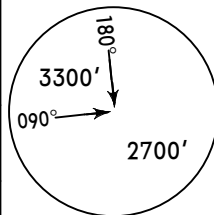
KDAN/DAN

DANVILLE REGL

28 MAY 10 **11-1** Eff 3 Jun

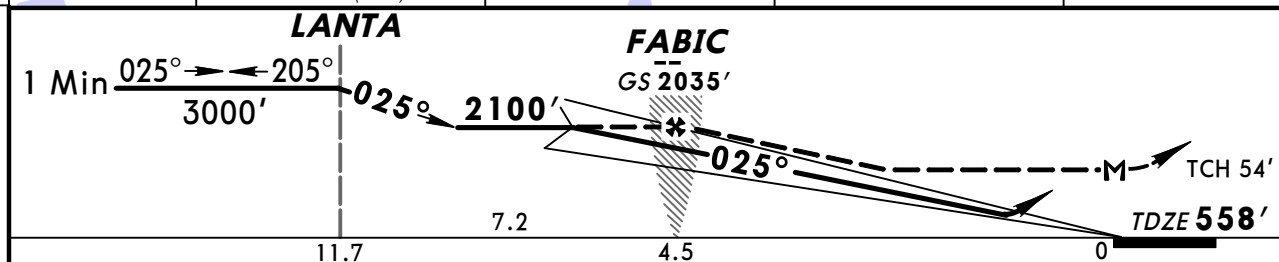
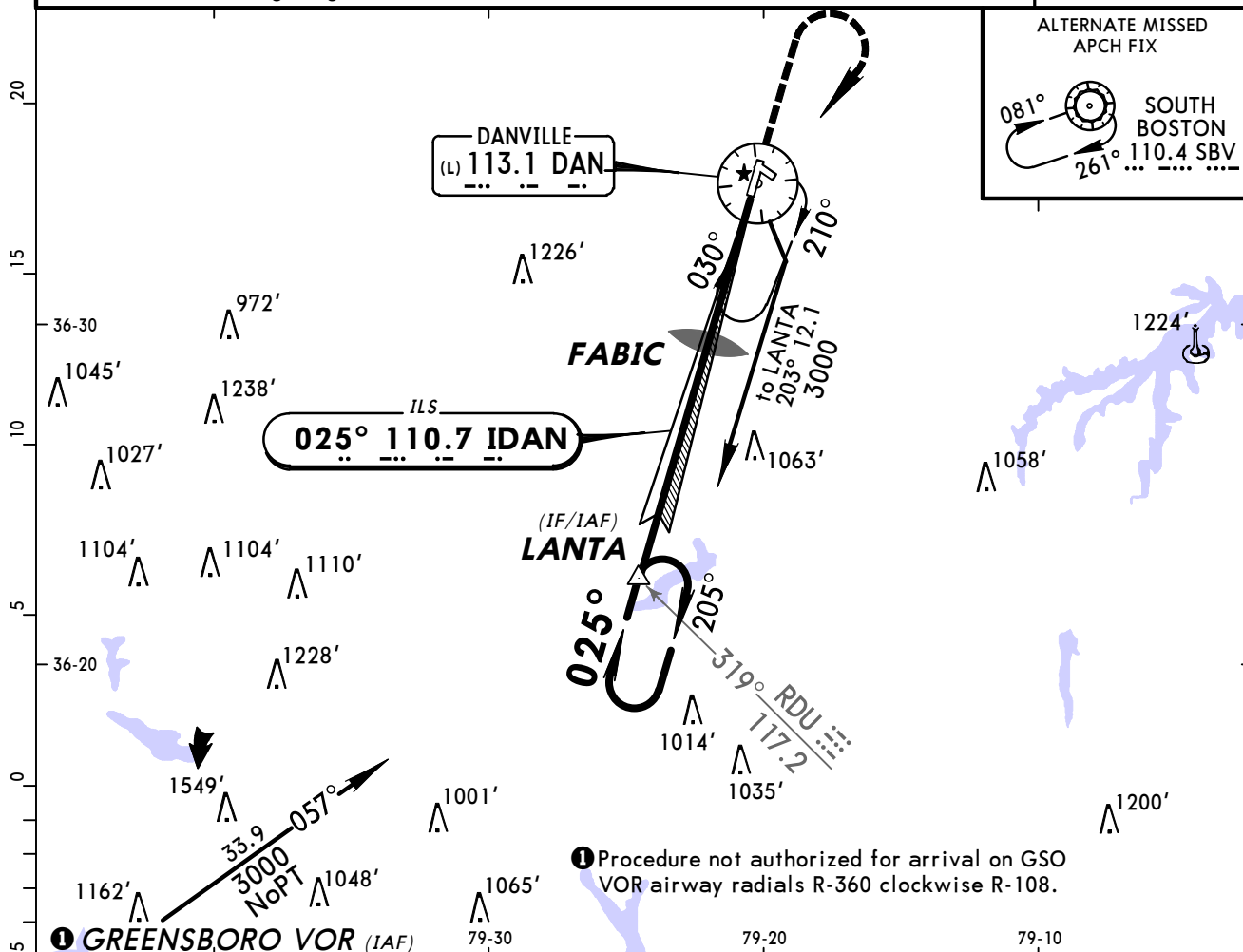
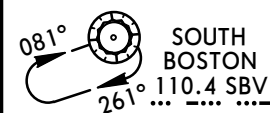
DANVILLE, VA
ILS or LOC Rwy 2

ASOS 128.12	WASHINGTON Center (R) 124.05	LEESBURG Radio 122.2	DANVILLE REGL UNICOM CTAF 123.05
LOC IDAN 110.7	Final Apch Crs 025°	GS FABIC 2035' (1477')	ILS DA(H) (CONDITIONAL) 758' (200')
Apt Elev 571'			TDZE 558'
MISSED APCH: Climb to 2300' then climbing RIGHT turn to 3000' direct DAN VOR and hold.			
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. Use local altimeter setting; if not received, use Roxboro, N Car altimeter setting. 2. Pilot controlled lighting 123.05.			



MSA DAN VOR

ALTERNATE MISSED APCH FIX



Gnd speed-Kts	70	90	100	120	140	160	MALSR	2300'	3000'	DAN 113.1
GS	3.00°	377	484	538	646	753	PAPI	↑	RT	
FABIC to MAP 4.5	3:51	3:00	2:42	2:15	1:56	1:41				

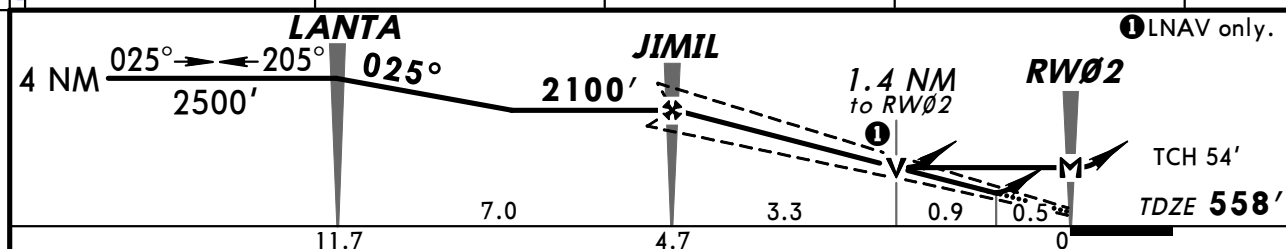
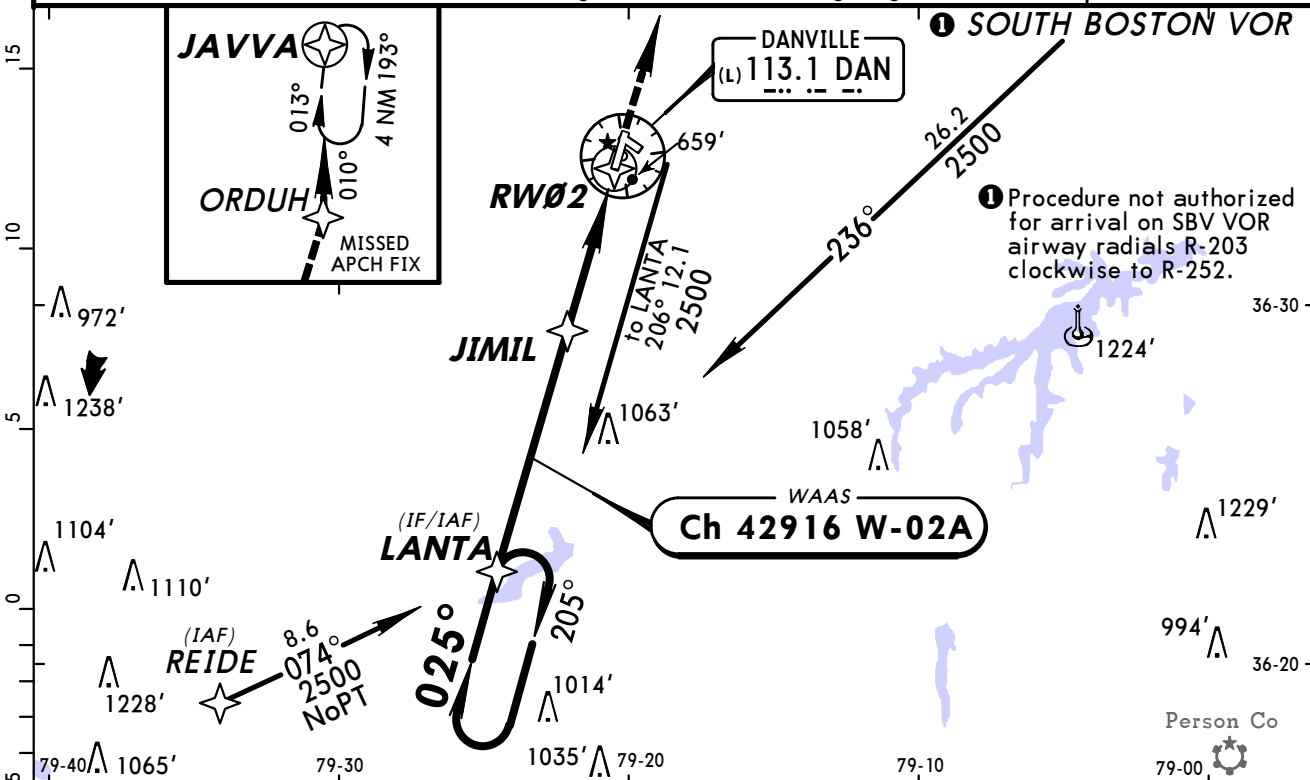
STRAIGHT-IN LANDING RWY 2										CIRCLE-TO-LAND			
With Local Altimeter Setting					With Roxboro, N Car Altimeter Setting					Not Authorized at Night to Rwy 31			
ILS DA(H)		LOC (GS out) MDA(H)			ILS DA(H)		LOC (GS out) MDA(H)			With Local Altimeter Setting		With Roxboro, N Car Altimeter Setting	
758' (200')		1040' (482')			820' (262')		1120' (562')			MDA(H)		MDA(H)	
FULL	RAIL or ALS out	RAIL out	ALS out		FULL	RAIL or ALS out	RAIL out	ALS out		Max Kts			
A										90	1080' (509')-1	1160' (589')-1	
B		1/2	3/4	1			1/2	3/4	1	120			
C	1/2	3/4	3/4	1 1/4	1/2	1	1	1 1/2		140	1080' (509')-1 1/2	1160' (589')-1 1/2	
D			1	1 1/2			1 1/4	1 3/4		165	1140' (569')-2	1220' (649')-2	

CHANGES: None.

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TERPS AMEND 4 8 APR 2010

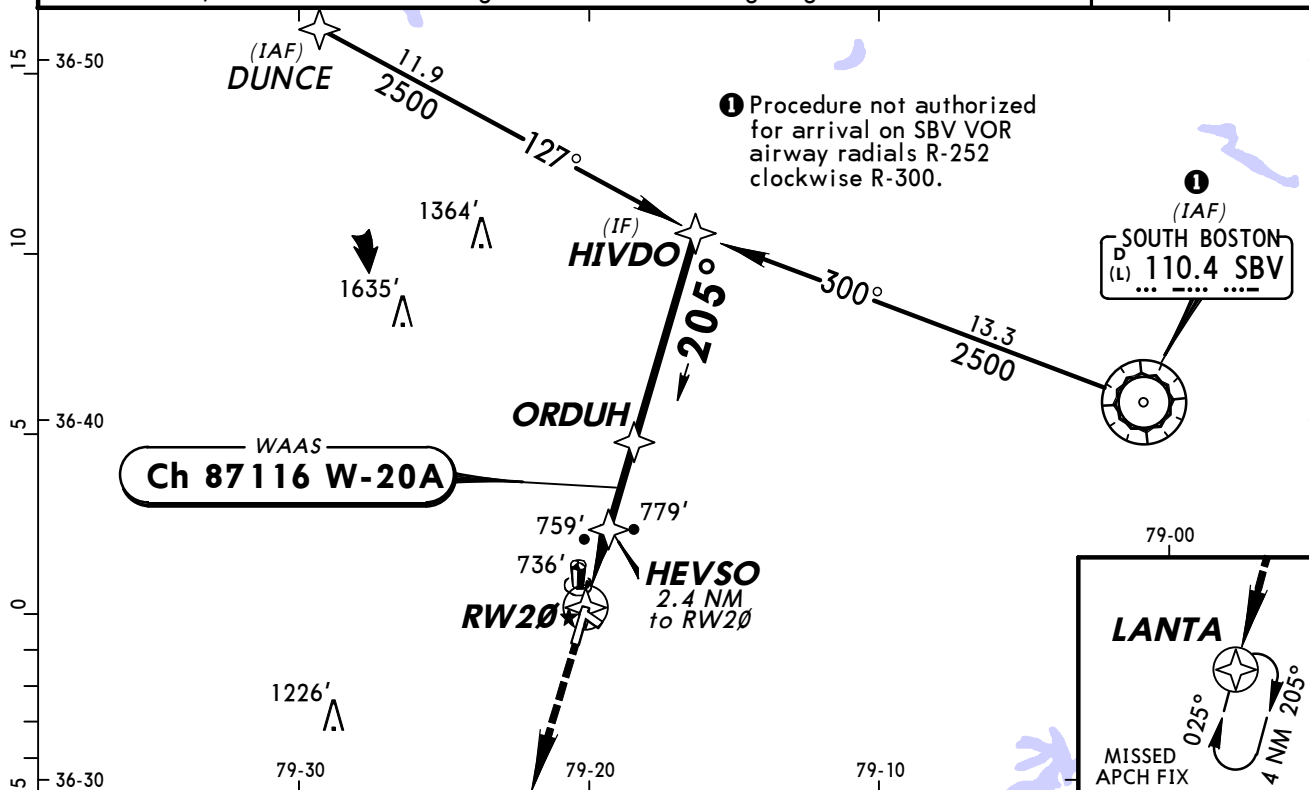
ASOS 128.12	WASHINGTON Center (R) 124.05	LEESBURG Radio 122.2	DANVILLE REGL UNICOM CTAF 123.05
WAAS Ch 42916 W-02A	Final Apch Crs 025°	Minimum Alt JIMIL 2100' (1542')	LPV DA(H) (CONDITIONAL) 758' (200')
Apt Elev 571' TDZE 558'			
MISSED APCH: Climb to 2800' direct ORDUH and via track 010° to JAVVA and hold. Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. Use local altimeter setting; if not received, use Roxboro, N Car altimeter setting. 2. Baro-VNAV not authorized when using Roxboro, N Car altimeter setting. 3. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 4. DME/DME RNP-0.30 not authorized. 5. VDP not authorized with Roxboro, N Car altimeter setting. 6. Pilot controlled lighting 123.05.			
3200' MSA RW02			



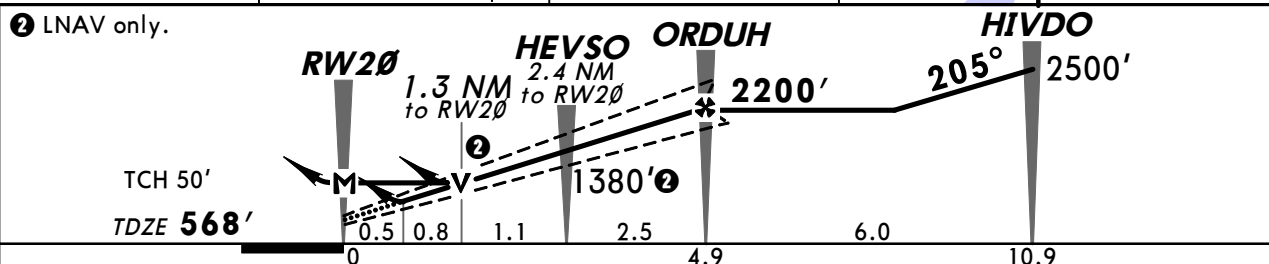
Gnd speed-Kts	70	90	100	120	140	160	MALSR	2800	ORDUH
Glide Path Angle	3.00°	372	478	531	637	743	PAPI		
MAP at RW02									

STRAIGHT-IN LANDING RWY 2 With Local Altimeter Setting								1 CIRCLE-TO-LAND With Local Altimeter Setting	
LPV DA(H) 758' (200')		LNAV/VNAV DA(H) 1036' (478')		LNAV MDA(H) 1040' (482')		Max Kts		MDA(H)	
RAIL or ALS out		RAIL or ALS out		RAIL out		ALS out			
A	1/2	3/4	1 1/4	1 3/4	1/2	3/4	1	90	1080' (509')-1
B					3/4	1 1/4	120		
C					1	1 1/2	140	1080' (509')-1 1/2	
D					1	1 1/2	165	1140' (569')-2	
With Roxboro, N Car Altimeter Setting								With Roxboro, N Car Altimeter Setting	
DA(H) 820' (262')		DA(H) 1098' (540')		MDA(H) 1120' (562')		Max Kts		MDA(H)	
RAIL or ALS out		RAIL or ALS out		RAIL out		ALS out			
A	1/2	1	1 1/2	2	1/2	3/4	1	90	1160' (589')-1
B					1	1 1/2	120		
C					1 1/4	1 3/4	140	1160' (589')-1 1/2	
D					1 1/4	1 3/4	165	1220' (649')-2	

ASOS 128.12	WASHINGTON Center (R) 124.05	LEESBURG Radio 122.2	DANVILLE REGL UNICOM CTAF 123.05
WAAS Ch 87116 W-20A	Final Apch Crs 205°	Minimum Alt ORDUH 2200' (1632')	LPV DA(H) (CONDITIONAL) 768' (200') Apt Elev 571' TDZE 568'
MISSED APCH: Climb to 2500' direct LANTA and hold. Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. Use local altimeter setting; if not received, use Roxboro, N Car altimeter setting. 2. Baro-VNAV not authorized when using Roxboro, N Car altimeter setting. 3. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 4. DME/DME RNP-0.30 not authorized. 5. VDP not authorized with Roxboro, N Car altimeter setting. 6. Pilot controlled lighting 123.05.			
			3300' MSA RW20



② LNAV only.



Gnd speed-Kts	70	90	100	120	140	160		REIL PAPI-L	2500'	D→	LANTA
Glide Path Angle 3.00°	372	478	531	637	743	849					
MAP at RW20											

STRAIGHT-IN LANDING RWY 20						1 CIRCLE-TO-LAND	
With Local Altimeter Setting						With Local Altimeter Setting	
LPV		LNAV/VNAV		LNAV		Max Kts	MDA(H)
DA(H) 768' (200')		DA(H) 1026' (458')		MDA(H) 1020' (452')		90	1080' (509')-1
A	3/4	1 1/2	1		120	1080' (509')-1 1/2	
B			1 1/4		140		
C			1 1/2		165		
D							
With Roxboro, N Car Altimeter Setting						With Roxboro, N Car Altimeter Setting	
DA(H) 830' (262')		DA(H) 1088' (520')		MDA(H) 1100' (532')		Max Kts	MDA(H)
A	1	1 3/4	1		90	1160' (589')-1	
B			1 1/2		120		
C			1 3/4		140		
D							

① Not Authorized at Night to Rwy 31.

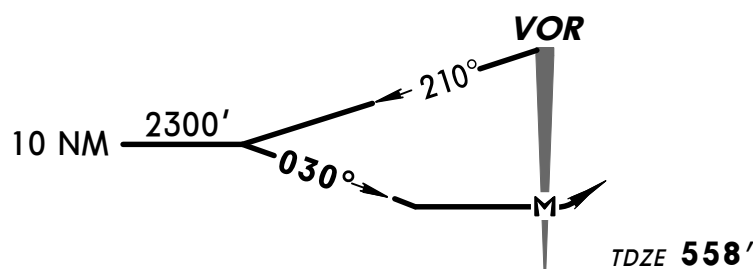
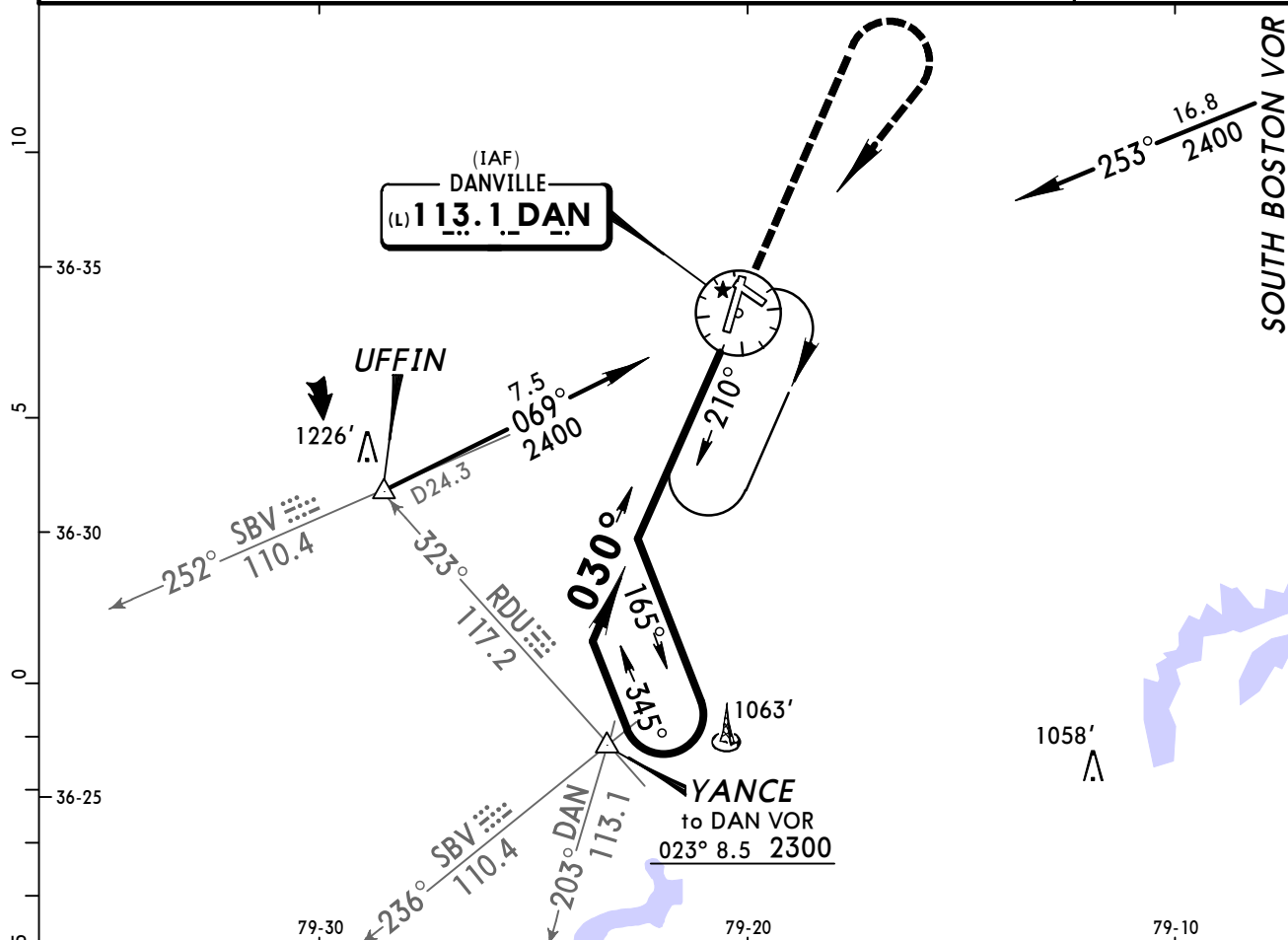
KDAN/DAN
DANVILLE REG

2 APR 10 (13-1) Eff 8 Apr

DANVILLE, VA
VOR Rwy 2

ASOS 128.12		WASHINGTON Center (R) 124.05		LEESBURG Radio 122.2		DANVILLE REGL UNICOM CTAF 123.05	
VOR DAN 113.1	Final Apch Crs 030°	No FAF		MDA(H) (CONDITIONAL) 1200' (642')	Apt Elev 571' TDZE 558'		
MISSED APCH: Climb to 2300' then RIGHT turn direct DAN VOR and hold.							
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. Use local altimeter setting; if not received, use Roxboro, N Car. altimeter setting. 2. Visibility reduction by helicopters not authorized. 3. Pilot controlled lighting 123.05.							

MSA DAN VOR



								MALSR PAPI	2300'	RT	DAN 113.1
MAP at VOR											

STRAIGHT-IN LANDING RWY 2							CIRCLE-TO-LAND			
MDA(H) 1200' (642')				MDA(H) 1280' (722')			Not Authorized at Night to Rwy 31			
With Local Altimeter Setting				With Roxboro, N Car Altimeter Setting			With Local Altimeter Setting		With Roxboro, N Car Altimeter Setting	
		RAIL out	ALS out			RAIL out	ALS out	Max Kts	MDA(H)	
A	3¼		1	3¼		1		90	1200'(629') - 1	
B								120		
C	1¼	1¾	1½	2		140	1200'(629') - 1¾		1280'(709') - 2	
D	1½	2	1¾	2¼		165	1200'(629') - 2		1280'(709') - 2¼	

CHANGES: Procedure.

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BRIEFING STRIP TM



VOR 015° →

EDWIN ① 1480'

2500' 10 NM from VOR

195°

① 1560' when using Roxboro, N Car altimeter setting.

[RW20]

② [3.14°]

2.6

MAP at VORTERPS AMEND 4 8 APR 2010

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General Information

Location: Washington VA USA
IATA Code: IAD
Lat/Long: N38° 56.8' W077° 27.6'
Elevation: 312 ft

Airport Use: Public
Magnetic Variation: 10.5°W
Sectional Chart: Washington

Fuel Types: 100 Octane (LL), Jet A
Oxygen Types: High Pressure, Low Pressure, HP Bottle
Repair Types: Major Airframe, Major Engine
Customs: Upon Prior Request
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: Yes
Beacon: Yes

Sunrise: 1146 Z
Sunset: 2300 Z,

Runway Information

Runway: 01C
Length x Width: 11501 ft x 150 ft
Surface Type: concrete
TDZ-Elev: 286 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 01L
Length x Width: 9400 ft x 150 ft
Surface Type: concrete
TDZ-Elev: 296 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 01R
Length x Width: 11500 ft x 150 ft
Surface Type: concrete
TDZ-Elev: 312 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 12
Length x Width: 10501 ft x 150 ft
Surface Type: concrete
TDZ-Elev: 310 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 19C
Length x Width: 11501 ft x 150 ft
Surface Type: concrete
TDZ-Elev: 272 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 19L
Length x Width: 11500 ft x 150 ft
Surface Type: concrete
TDZ-Elev: 302 ft
Lighting: Edge, ALS, Centerline

Runway: 19R
Length x Width: 9400 ft x 150 ft
Surface Type: concrete
TDZ-Elev: 278 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 30
Length x Width: 10501 ft x 150 ft
Surface Type: concrete
TDZ-Elev: 288 ft
Lighting: Edge, Centerline, REIL

Communication Information

ATIS 134.85
Dulles Tower 134.425 Initial Contact
Dulles Tower 120.25 Initial Contact
Dulles Tower 120.1 Initial Contact
Metering Ground Control 124.075
Dulles Ground Control 132.45 Initial Contact
Dulles Ground Control 121.9 Initial Contact
Dulles Ground Control 121.625
Dulles Ramp/Taxi Control 130.55
Dulles Ramp/Taxi Control 129.55
Dulles Ramp/Taxi Control 119.125
Dulles Clearance Delivery 135.7 Pre-Departure Clearance
Potomac Approach Control 126.1 (331 °-90 °)
Potomac Approach Control 124.65 (91 °-240 °)
Potomac Approach Control 120.45 (241 °-330 °)
Potomac App TCA 126.1 (331 °-90 °)
Potomac App TCA 124.65 (91 °-240 °)
Potomac App TCA 120.45 (241 °-330 °)
Potomac Departure Control 126.65 (121 °-299 °)
Potomac Departure Control 125.05 (300 °-120 °)
Washington Dulles Intl Unicom 122.95

- 1 WASHINGTON TRI - AREA CLASS B AIRSPACE 2 WASHINGTON D.C. FLIGHT RESTRICTED ZONE (DC FRZ) 3 WASHINGTON D.C. SPECIAL FLIGHT RULES AREA

FOR OPERATING RULES AND PILOT AND EQUIPMENT REQUIREMENTS SEE FAR 91.131, 91.117, AND 91.215

1 CLASS B FLIGHT PROCEDURES

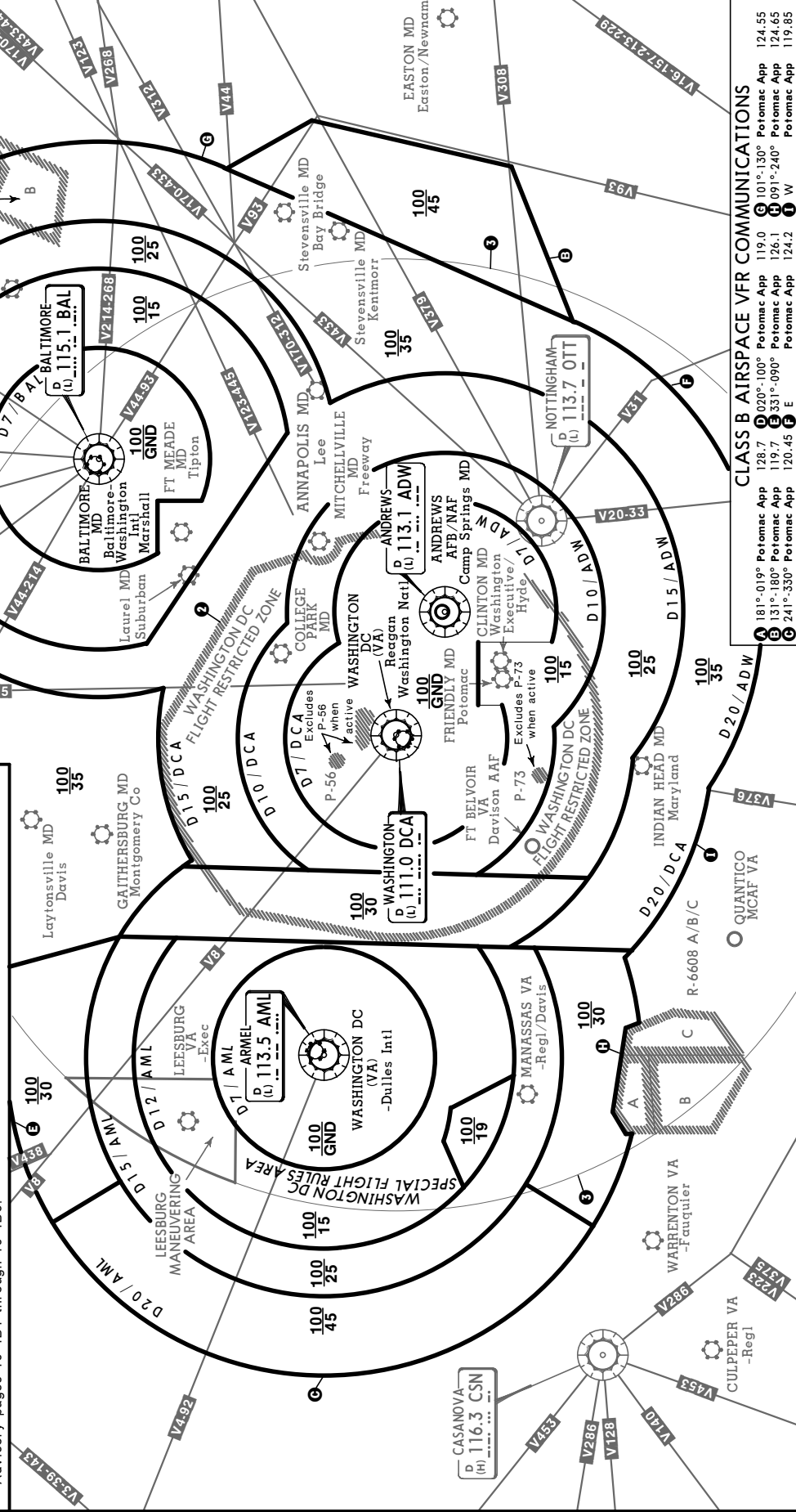
IFR Flights-Aircraft operating within the Washington Tri-Area Class B Airspace must be operated in accordance with ATC clearances and instructions.

VFR Flights-

- Arriving aircraft should contact the appropriate approach control on specified frequencies and in relation to geographic fixes shown on the accompanying chart. Although arriving aircraft may be operating beneath the floor of Class B Airspace on initial contact, communications should be established with approach control in relation to the points indicated for sequencing and spacing purposes.
- Aircraft departing the primary airports are requested to advise clearance delivery prior to taxiing of their intended altitude and direction of flight to depart the Class B Airspace. Aircraft departing from other than the primary airports whose route of flight would penetrate the Class B Airspace should give this information to ATC on the appropriate frequencies.
- Aircraft desiring to transit Class B Airspace must obtain an ATC clearance to enter the Class B Airspace and will be handled on an ATC workload permitting basis.

2 DC FRZ and 3 DC SPECIAL FLIGHT RULES AREA PROCEDURES

For operating rules, pilot and equipment requirements, see Jeppesen Washington, D.C. (VA) Advisory pages 10-1B1 through 10-1B3.



CLASS B AIRSPACE VFR COMMUNICATIONS

A	181°-019° Potomac App	128.7	D 020°-100° Potomac App	119.0	G 101°-130° Potomac App	124.55
B	131°-180° Potomac App	119.7	E 331°-090° Potomac App	126.1	F 091°-240° Potomac App	124.65
C	241°-330° Potomac App	120.45	F 331°-090° Potomac App	126.1	G 101°-130° Potomac App	124.55
D	020°-100° Potomac App	119.0	E 331°-090° Potomac App	126.1	F 091°-240° Potomac App	124.65
E	331°-090° Potomac App	126.1	F 091°-240° Potomac App	124.2	G 101°-130° Potomac App	119.85
F	091°-240° Potomac App	124.2	G 101°-130° Potomac App	124.2	H 101°-130° Potomac App	119.85

ADVISORY

Washington D.C. SFRA Special Flight Rules Area

WARNING

This document only contains an overview of the rules for the Washington, D.C. Metropolitan Area Special Flight Rules Area (DC SFRA) and the Washington, D.C. Metropolitan Flight Restricted Zone (DC FRZ). Pilots must review 14 CFR Parts 1 and 93 and published NOTAMS for exact procedures and other details.

Pursuant to 49 U.S.C 40103(b), the Federal Aviation Administration (FAA) classifies the Washington, D.C. Metropolitan Area Special Flight Rules Area (DC SFRA) and the Washington, D.C. Metropolitan Flight Restricted Zone (DC FRZ) as "National Defense Airspace". Any person who knowingly or willfully violates the rules concerning operations in this airspace is subject to certain criminal penalties under 49 USC 46307. Pilots who do not adhere to the following procedures may be intercepted, detained and interviewed by federal law enforcement/security personnel and/or DOD.

It is strongly recommended that all pilots flying under Visual Flight Rules (VFR) within 100 NM of the DCA VOR/DME complete special awareness training for the Washington DC Metropolitan Area. This training is mandatory for all pilots that fly under VFR within 60 NM of the DCA VOR/DME (14 CFR Parts 61 and 91). This training is available in the Aviation Learning Center at <http://www.faasafety.gov>.

Because identification and control of aircraft is required for reasons of national security, the areas described here constitute National Defense Airspace. The purpose of establishing this area is to facilitate the tracking of, and communication with, aircraft to deter persons who would use an aircraft as a weapon, or as a means of delivering weapons, to conduct an attack on persons, property, or buildings in the area. This applies to pilots conducting any type of flight operations in the airspace designated as the Washington, D.C. Metropolitan Area Special Flight Rules Area (DC SFRA), which includes the airspace designated as the Washington, D.C. Metropolitan Area Flight Restricted Zone (DC FRZ).

DEFINITIONS

Washington, D.C. Metropolitan Area Special Flight Rules Area (DC SFRA) is an area of airspace over the surface of the earth where the ready identification, location, and control of aircraft is required in the interest of national security. Specifically, the DC SFRA is that airspace, from the surface to, but not including, FL 180, within a 30-mile radius of Lat. 38°51'34" N., Long. 077°02'11" W., or the DCA VOR/DME. The DC SFRA includes the DC FRZ.

DC SFRA flight plan is a flight plan filed for the sole purpose of complying with the requirements for VFR operations into, out of, and through the DC SFRA. This flight plan is separate and distinct from a standard VFR flight plan, and does not include search and rescue services.

Washington, D.C. Metropolitan Area Flight Restricted Zone (DC FRZ) is a special use airspace, within which the flight of aircraft, while not wholly prohibited, is subject to restriction. This area, excluding the airspace within a one nautical mile radius of the Freeway Airport, W00, Mitchellville, MD from the surface up to but not including flight level (FL) 180. The DC FRZ is within and part of the Washington, D.C. Metropolitan Area SFRA.

DC FRZ flight plan is a flight plan filed for the sole purpose of complying with the requirements for VFR operations into, out of, and through the DC FRZ. This flight plan is separate and distinct from a standard VFR flight plan, and does not include search and rescue services.

ADVISORY**FAILURE TO COMPLY**

- (a) *Any violation:* The FAA may take civil enforcement action against a pilot for violations, weather inadvertent or intentional, including imposition of civil penalties and suspension or revocation of airmans's certificates.
- (b) *Knowing or willful violations:* The DC FRZ and DC SFRA were established for reasons of national security under the provisions of 49 U.S.C. 40103(b)(3). Areas established by the FAA under that authority constitute "National Defense Airspace" as that term is used in 49 U.S.C. 46307. In addition to being subject to the provisions of paragraph (a) of this section, persons who knowingly or willfully violate national defense airspace established pursuant to 49 U.S.C. 40103(b)(3) may be subject to criminal prosecution.

REQUIREMENTS FOR OPERATING IN THE DC SFRA, INCLUDING THE DC FRZ

- (a) Except as provided in paragraphs (b) and (c) of this section, or unless authorized by Air Traffic Control, no pilot may operate an aircraft, including an ultralight vehicle or any civil aircraft or public aircraft, in the DC SFRA, including the DC FRZ, unless-
 - (1) The aircraft is equipped with an operable two-way radio capable of communicating with Air Traffic Control on appropriate radio frequencies;
 - (2) Before operating an aircraft in the DC SFRA, including the DC FRZ, the pilot establishes two-way radio communications with the appropriate Air Traffic Control facility and maintains such communications while operating the aircraft in the DC SFRA, including the DC FRZ;
 - (3) The aircraft is equipped with an operating automatic altitude reporting transponder;
 - (4) Before operating an aircraft in the DC SFRA, including the DC FRZ, the pilot obtains and transmits a discrete transponder code from Air Traffic Control, and the aircraft's transponder continues to transmit the assigned code while operating within the DC SFRA;
 - (5) For VFR operations, the pilot must file and activate a DC FRZ or DC SFRA flight plan by obtaining a discrete transponder code. The flight plan is closed upon landing at an airport within the DC SFRA or when the aircraft exits the DC SFRA;
 - (6) Before operating the aircraft into, out of, or through the Washington, D.C. Tri-Area Class B Airspace Area, the pilot receives a specific Air Traffic Control clearance to operate in the Class B Airspace Area; and
 - (7) Before operating the aircraft into, out of, or through Class D airspace area that is within the DC SFRA, the pilot complies with FAR 91.129.
- (b) Paragraph (a)(5) of this section does not apply to operators of Department of Defense aircraft, law enforcement operations, or lifeguard or air ambulance operations under an FAA/TSA airspace authorization, if the flight crew is in contact with Air Traffic Control and is transmitting an Air Traffic Control - assigned discrete transponder code.
- (c) Pilots must transmit the assigned transponder code. No pilot may use transponder code 1200 while in the DC SFRA.

ADVISORY**AIRCRAFT OPERATING IN THE DC FRZ**

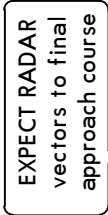
- (a) Except as provided in paragraph (b) of this section, no pilot may conduct any flight operation under part 91, 101, 103, 105, 125, 133, 135, or 137 of this chapter in the DC FRZ, unless the specific flight is operating under an FAA/TSA authorization.
- (b) Department of Defense (DOD) operations, law enforcement operations, and lifeguard or air ambulance operations under an FAA/TSA airspace authorization are excepted from the prohibition in paragraph (a) of this section if the pilot is in contact with Air Traffic Control and operates the aircraft transponder on an Air Traffic Control-assigned beacon code.
- (c) The following aircraft operations are permitted in the DC FRZ:
 - (1) Aircraft operations under the DCA Access Standard Security Program (DASSP) (49 CFR part 1562) with a Transportation Security Administration (TSA) flight authorization.
 - (2) Law enforcement and other U.S. Federal aircraft operations with prior FAA approval.
 - (3) Foreign-operated military and state aircraft operations with a State Department-authorized diplomatic clearance, with State Department notification to the FAA and TSA.
 - (4) Federal, State, Federal DOD contract, local government agency aircraft operations and part 121, 129 or 135 air carrier flights with TSA-approved full aircraft operator standard security programs/procedures, if operating with DOD permission and notification to the FAA and the National Capital Regional Coordination Center (NCRCC). These flights may land and depart Andrews Air Force Base, MD, with prior permission, if required.
 - (5) Aircraft operations maintaining radio contact with Air Traffic Control and continuously transmitting an Air Traffic Control-assigned discrete transponder code. The pilot must monitor VHF frequency 121.5 or UHF frequency 243.0.
- (d) Before departing from an airport within the DC FRZ, or before entering the DC FRZ, all aircraft, except DOD, law enforcement, and lifeguard or air ambulance aircraft operating under an FAA/TSA airspace authorization must file and activate an IFR or a DC FRZ or a DC SFRA flight plan and transmit a discrete transponder code assigned by an Air Traffic Control Facility. Aircraft must transmit the discrete transponder code at all times while in the DC FRZ or DC SFRA.

RESOURCES

Direct any questions about the DC SFRA/FRZ or JYO Maneuvering Area to the FAA Representative at the National Capitol Region Coordination Center (NCRCC), telephone 866-598-9522. Information about waiver applications and TSA security authorization is at http://www.tsa.gov/what_we_do/tsnm/general_aviation/airspace_waivers.shtm or by calling the TSA at 571-227-2071.

Alt Set: INCHES Trans level: FL 180 Trans alt: 18000
1. For aircraft capable of 180 KT or greater.
2. RADAR required.

A circular diagram representing a sewer section. A horizontal line with arrows at both ends is labeled 360° . A vertical line segment from the center to the top edge is labeled $2500'$. A vertical line segment from the center to the bottom edge is labeled $3400'$. To the right of the circle, the text "MSA AML VOR" is written vertically.



KIAD/IAD

WASHINGTON DULLES INTL

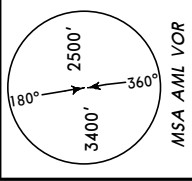
D-ATIS
134.85

Apt Elev
See graphic

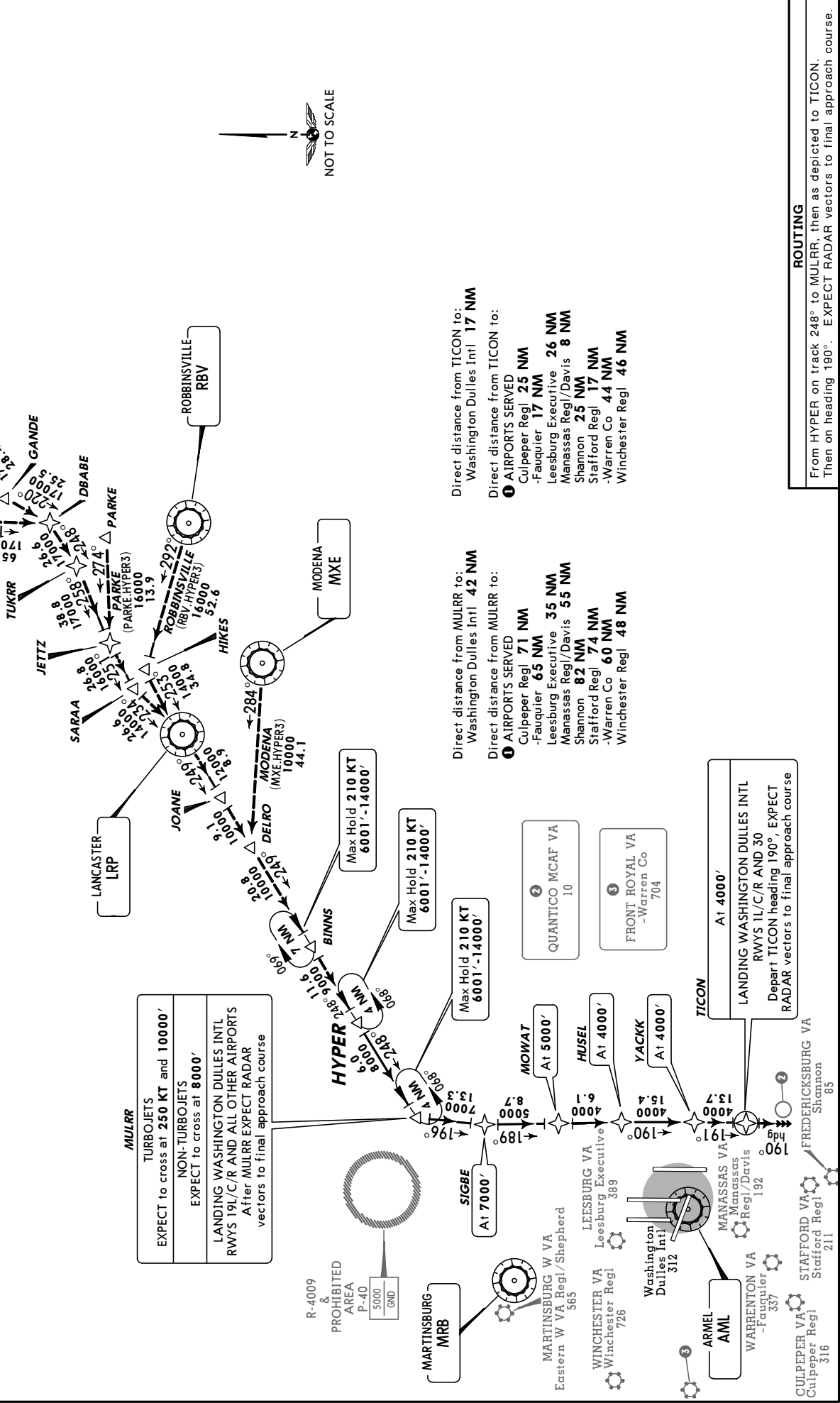
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'

1. For aircraft capable of 180 KT or greater.
2. RADAR required for non-GPS equipped aircraft.
3. DME/DME/IRU or GPS required.

4. RNAV 1.
5. Also serves



HYPER THREE
RNAV ARRIVAL
(HYPER.HYPER3)



ROUTING

From HYPER on track 248° to MULRR, then as depicted to TICON.
Then on heading 190°. EXPECT RADAR vectors to final approach course.

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MSA AML VOR

NOT TO SCALE

1 Max Hold 210 KT
6001'-14000'

Direct distance from MULRR to:
Washington Dulles Intl **42 NM**
Direct distance from TICON to:
Washington Dulles Intl **17 NM**

ROUTING	
From over SEG via 203° track to LEGGO, then as depicted to TICON.	
RWY	LANDING
1L/C/R, 30	Depart TICON heading 190°, EXPECT RADAR vectors to final approach course.
19L/C/R	After MULRR EXPECT RADAR vectors to final approach course.

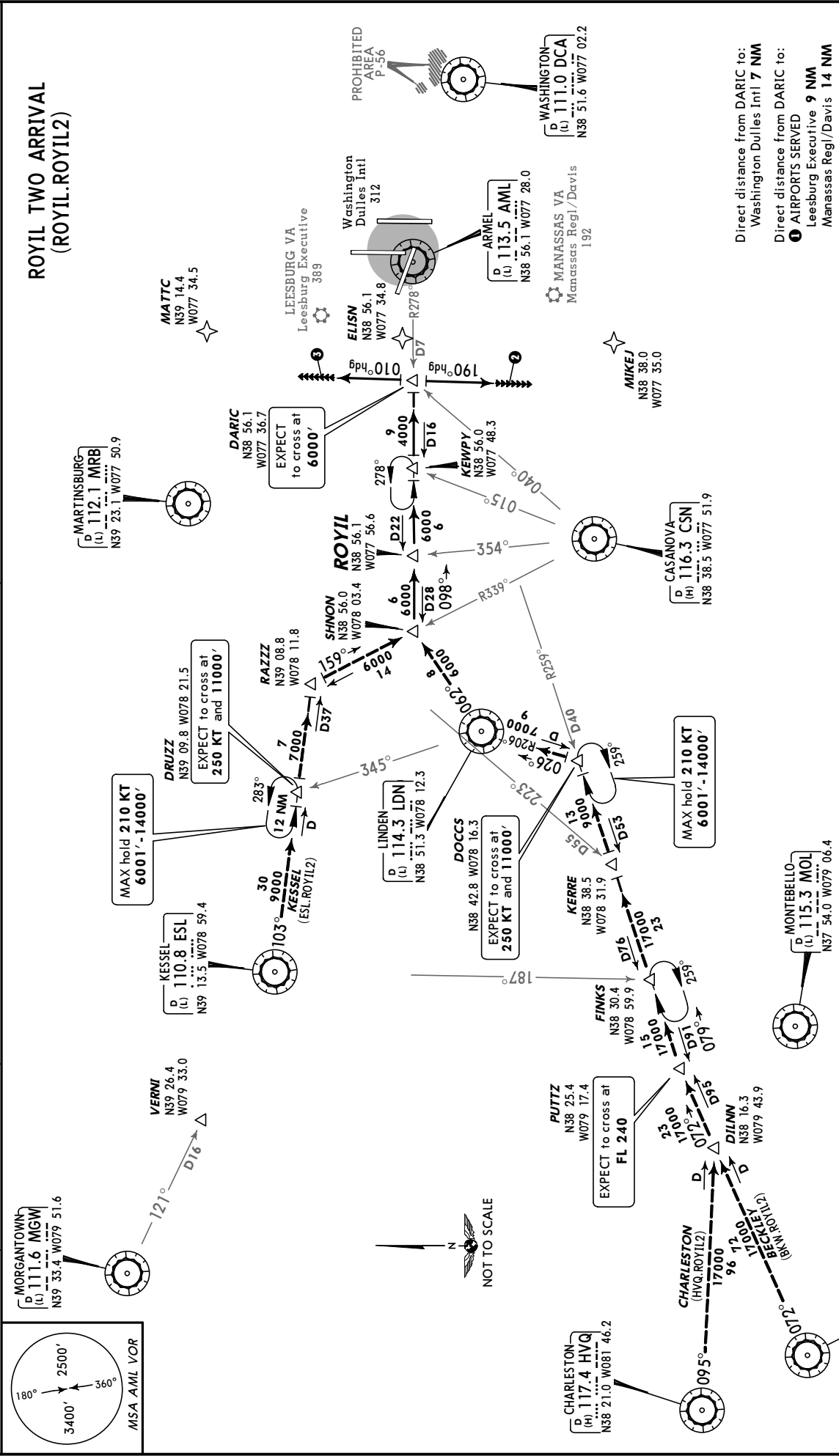
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Depart TICON heading 190°, EXPECT RADAR vectors to final approach course.

After MULRR EXPECT RADAR vectors to final approach course.

KIAD/IAD
 WASHINGTON DULLES INTL

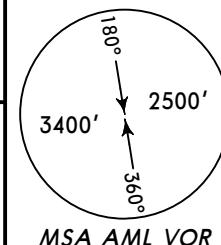
WASHINGTON DULLES INTL D-ATIS 134.85	Apt Elev See graphic	Alt Set: INCHES	Trans level: FL 180	Trans alt: 18000'
1. DME required. 2. RADAR required. 3. Avoid prohibited area (P-56) 1.5 NM NORTH of DCA - surface to 18000' MSL. 4. Also serves				



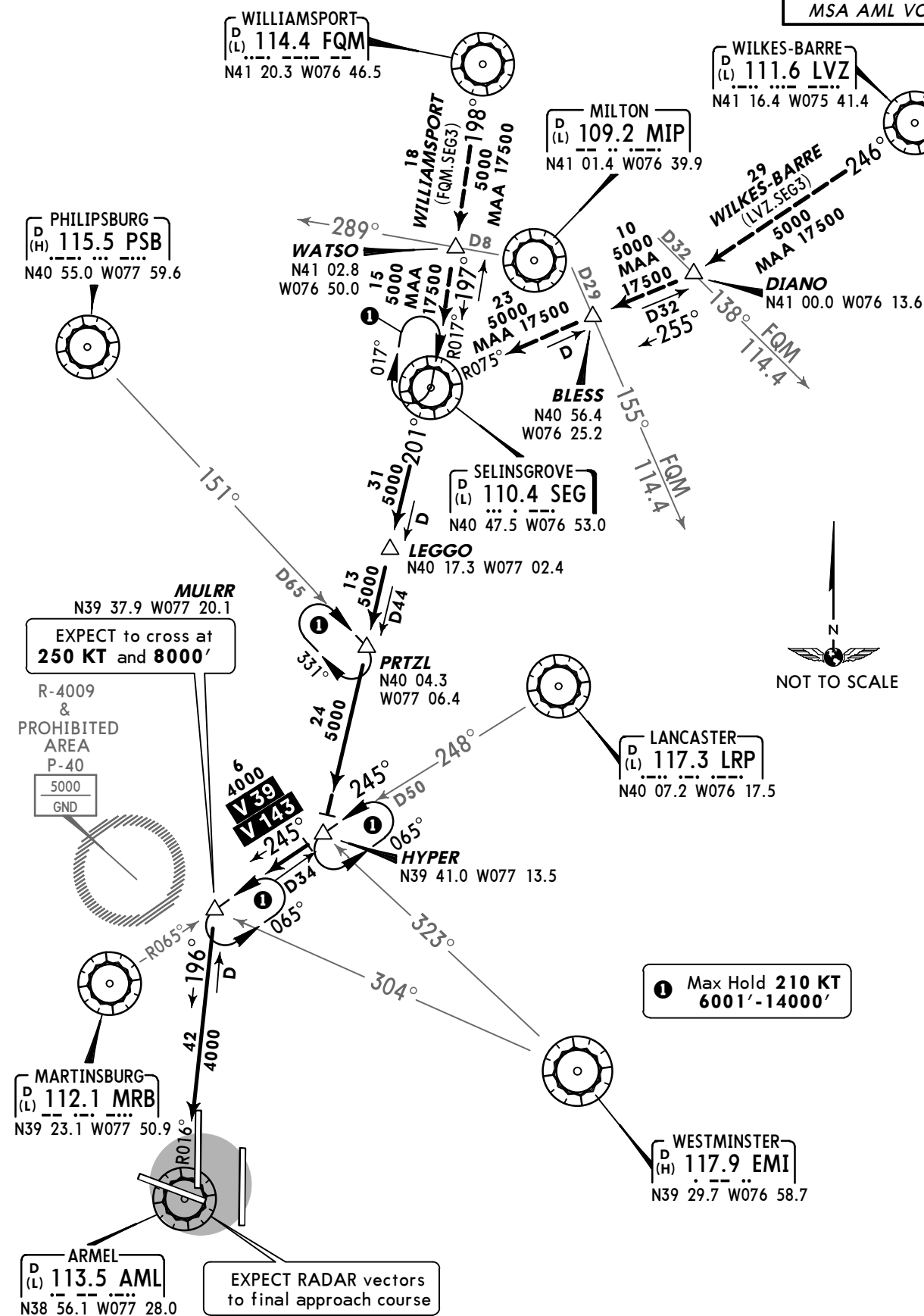
D-ATIS
134.85

Apt Elev
312'

Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'
1. For non-turbojet aircraft capable of 180 KT or greater.
2. RADAR required.



SELINGROVE THREE ARRIVAL (SEG.SEG3)



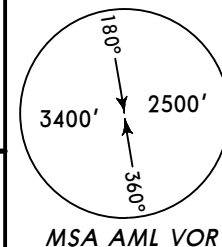
ROUTING

From over SEG via SEG R-201 to LEGGO, then via SEG R-201 to PRTZL, then via SEG R-201 to HYPER, then via MRB R-065 to MULRR, then via AML R-016 to AML. EXPECT RADAR vectors to final approach course.

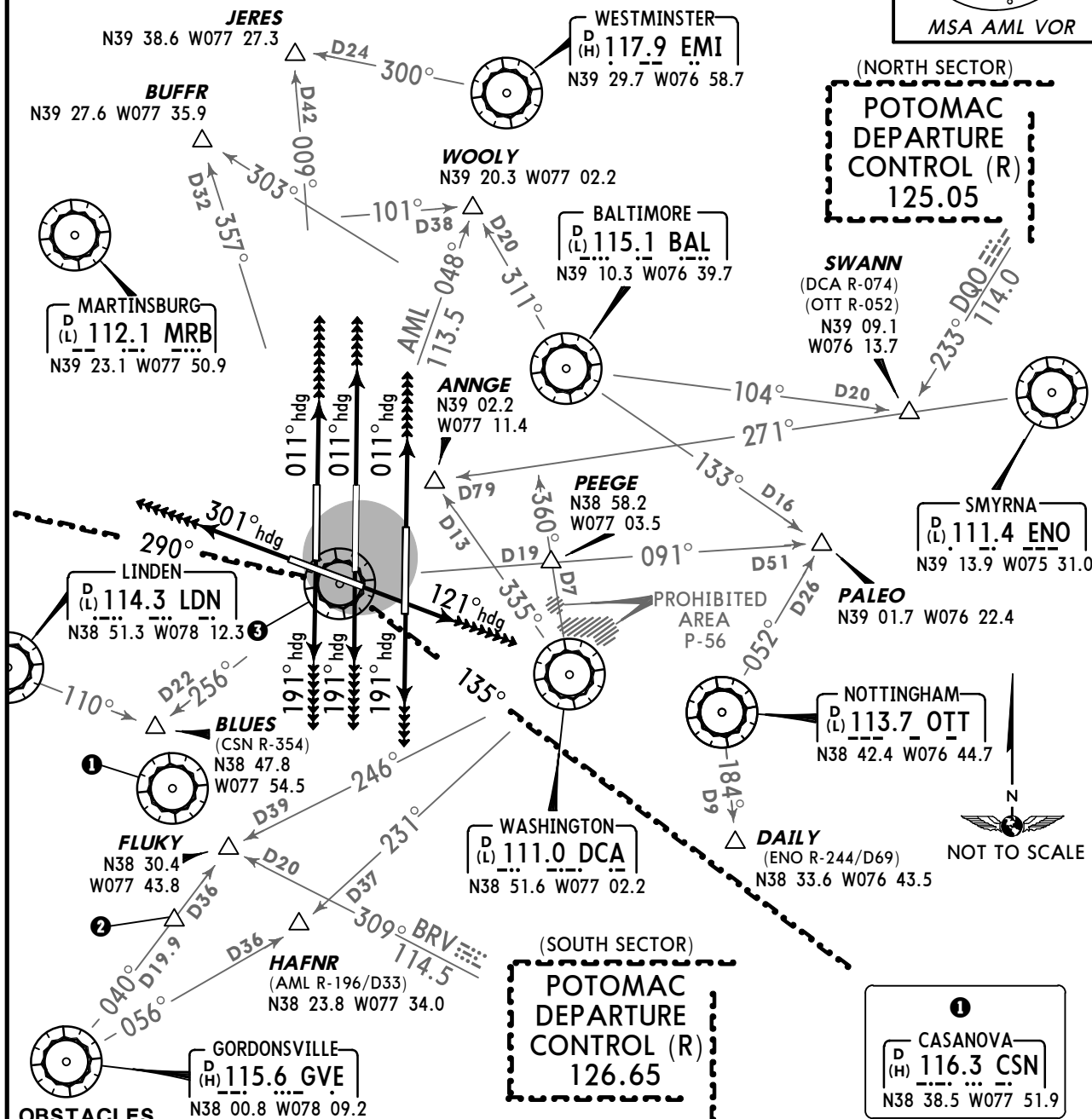
FOR DEPARTURE
CONTROL FREQ.
SEE GRAPHIC

Apt Elev
312'

Trans level: FL180 Trans alt: 18000'
1. RADAR required.
 2. For appropriate Departure Control frequency, see graphic. Use frequency depicted within sector where your first navaid/fix/route is located, or as assigned.



CAPITAL EIGHT DEPARTURE (CPTAL8.IAD)



OBSTACLES

Rwy 1L: Tower 1918' from DER, 680' LEFT of centerline, 56' AGL/330' MSL.
 Rwy 1C: Tree 2814' from DER, 1030' LEFT of centerline, 86' AGL/345' MSL.
 Rwy 1R: Post 12' from DER, 223' RIGHT of centerline, 8' AGL/294' MSL.
 Rwy 12: Tree 520' from DER, 604' LEFT of centerline, 28' AGL/307' MSL.
 Rwy 30: Trees beginning 161' from DER, 520' LEFT of centerline, up to 57' AGL/396' MSL. Trees beginning 532' from DER, 600' RIGHT of centerline, up to 64' AGL/383' MSL.

2 HANEY
 (114.5 BRV R-273)
 (113.3 FAK R-001/D45.7)
 N38 17.3 W077 55.1

1 CASANOVA
 (D(H)) 116.3 CSN
 N38 38.5 W077 51.9

3 ARNEL
 (D(L)) 113.5 AML
 N38 56.1 W077 28.0

This SID requires take-off minimums (for standard minimums, refer to airport chart):
 All Rwys: Standard (or lower than standard, if authorized).

RWY	INITIAL CLIMB	ALTITUDE
1L/C/R	Climb 011° heading or as assigned by ATC.	MAINTAIN 3000'
12	Climb 121° heading or as assigned by ATC.	
19L/C/R	Climb 191° heading or as assigned by ATC.	
30	Climb 301° heading or as assigned by ATC.	

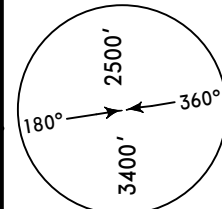
ROUTING

EXPECT RADAR vectors to filed/assigned route or depicted fix. EXPECT clearance to filed altitude/flight level 10 minutes after departure.

POTOMAC
 Departure (R)
 300°-120°
125.05

Apt Elev
312'

Trans level: FL180 Trans alt: 18000'
1. DME/DME/IRU or GPS required.
2. RNAV 1.
3. RADAR required.



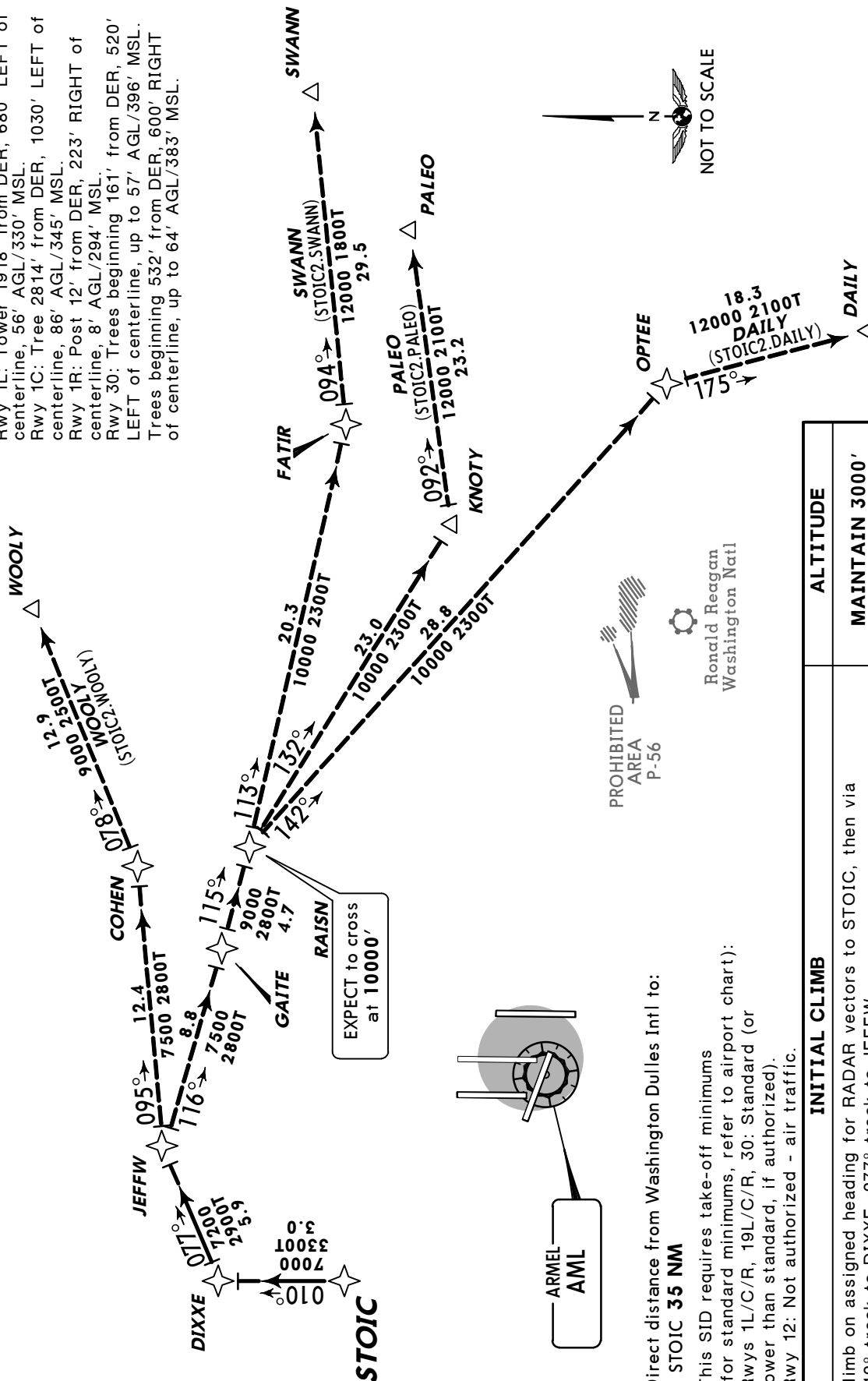
MSA AML VOR

STOIC TWO RNAV DEPARTURE (STOIC2.STOIC)

(RWYS 1L/C/R, 19L/C/R, 30)

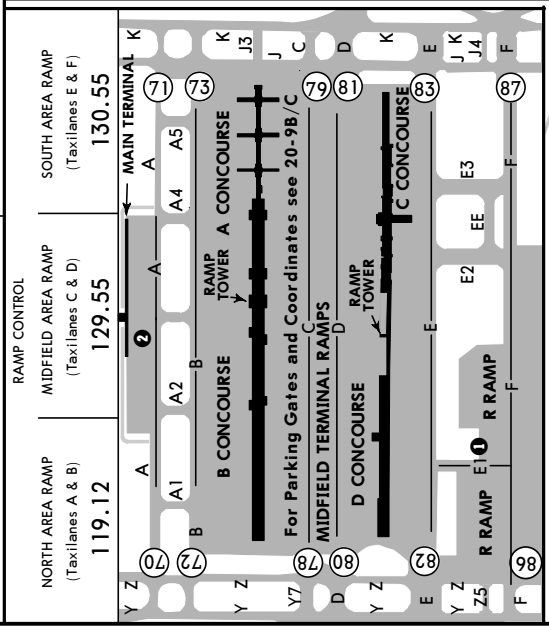
OBSTACLES

Rwy 1L: Tower 1918' from DER, 680' LEFT of centerline, 56' AGL/330' MSL.
 Rwy 1C: Tree 2814' from DER, 1030' LEFT of centerline, 86' AGL/345' MSL.
 Rwy 1R: Post 12' from DER, 223' RIGHT of centerline, 8' AGL/294' MSL.
 Rwy 30: Trees beginning 161' from DER, 520' LEFT of centerline, up to 57' AGL/396' MSL. Trees beginning 532' from DER, 600' RIGHT of centerline, up to 64' AGL/383' MSL.



INITIAL CLIMB	ALTITUDE
Climb on assigned heading for RADAR vectors to STOIC, then via 010° track to DIXXE, 077° track to JEFFW.	MAINTAIN 3000'
ROUTING	
Via transition. EXPECT clearance to filed altitude/flight level 10 minutes after departure.	

D-ATIS		ACARS: D-ATIS TWIP	DULLES Clearance	West	Ground	East
134.85			135.7	132.45		121.9
POTOMAC Departure (R)						
Rwys 1L/19R, 12/30		Rwys 1C/19C	300° 120°			121° 299°
134.42		120.25	120.1	125.05		126.65



For Parking Gates and Co
MIDFIELD TERMINAL RAMPS

D CONCOURSE

3

10

RAMP
RAMP

F

way E1 restricted to aircraft

aircraft with a wingspan

...ing 118' (36m) are restricted in using Taxilane A between & A5.

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CALLING FOR RAMP ENRY:
Control until switched to ramp
contact with ramp, advise call

(taxiway & taxilane approach
"XYZ 898, Kilo approaching

CALLING FOR THE PUSH: Pro gate, and first departure fix

All pushback operations from that will enter taxilanes req

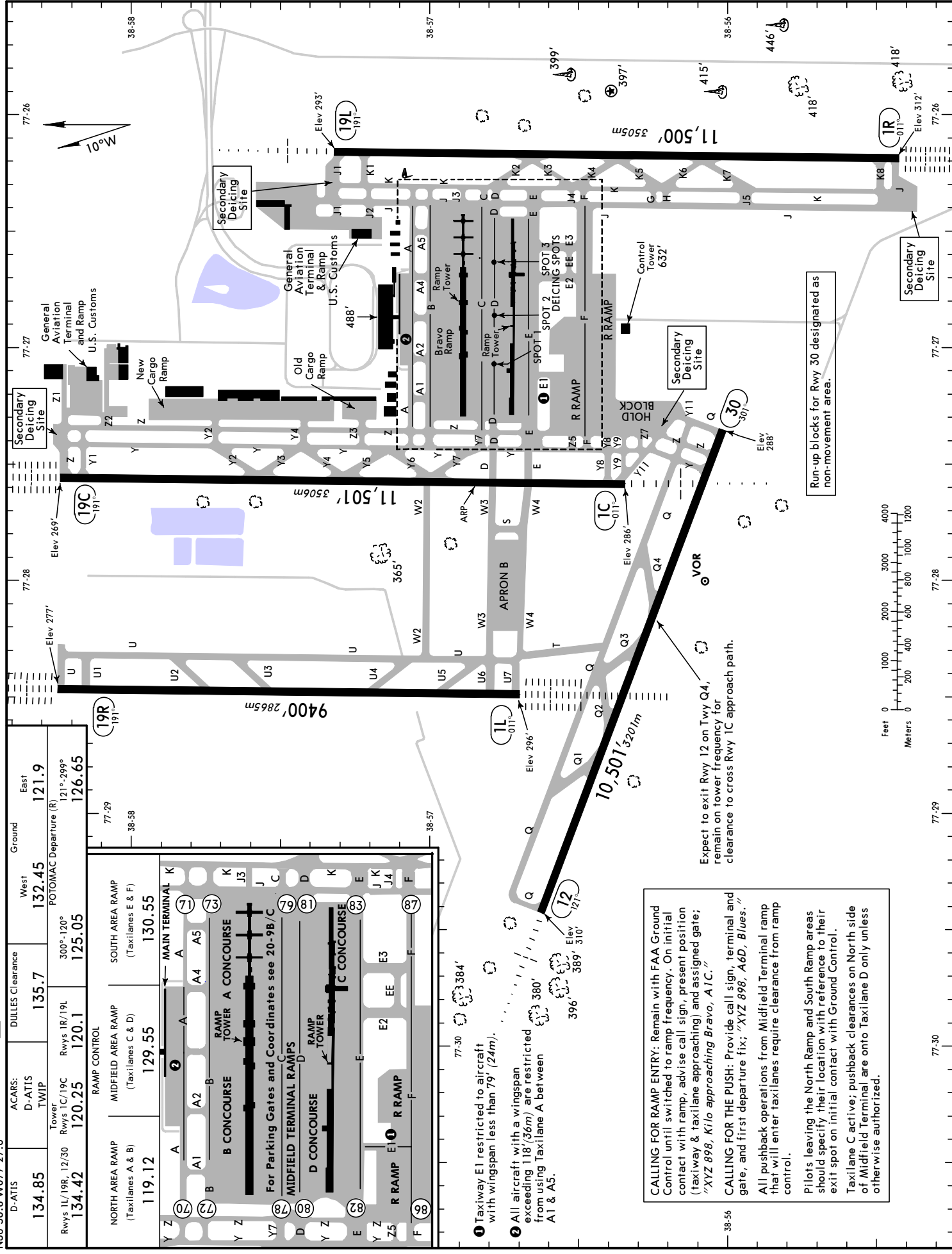
control.

should specify their location
exit spot on initial contact

laxilane C active; pushback of Midfield Terminal are on otherwise authorized.

77-3

Notes.



Expect to exit Rwy 12 on Twy Q4, remain on tower frequency for clearance to cross Rwy 1C approach path.

Run-up blocks for Rwy 30 designated as non-movement area.

CALLING FOR RAMP ENTRY: Remain with FAA Ground Control until switched to ramp frequency. On initial contact with ramp, advise call sign, present position (taxiway & taxi lane approaching) and assigned gate;

CALLING FOR THE PUSH: Provide call sign, terminal and gate, and first departure fix; "XYZ 888, A6D, Blues." All pushback operations from Midfield Terminal ramp that will enter taxiways require clearance from ramp control.

Pilots leaving the North Ramp and South Ramp areas should specify their location with reference to their exit spot on initial contact with Ground Control.

Taxilane C active; pushback clearances on North side of Midfield Terminal are onto Taxilane D only unless otherwise authorized.

77-30

Notes.

GENERAL

Deer and birds in vicinity of airport.

ASDE-X surveillance system in use. Pilots should operate transponders with Mode C on all taxiways and runways.

All 180° turns out of apron positions shall be made using minimum power.

Itinerant aircraft contact FBO on 122.95 for services.

Flight notification service (advise customs 'ADCUS') available.

Continuous backup power available.

Flight training between 2200-0700 prohibited.

Air carrier push backs and power from all apron positions require clearance from Metropolitan

Washington Airport Authority (MWAA) ramp tower.

During periods of aircraft saturation long term parking may not be available. Services for fuel and go only will be available.

Low-level wind shear alert system.

Terminal Doppler Weather Radar.

ADDITIONAL RUNWAY INFORMATION

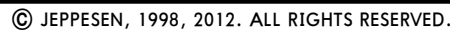
RWY		USABLE LENGTHS		TAKE-OFF	WIDTH
		Threshold	Landing Beyond Glide Slope		
1L	HIRL CL ALSF-II TDZ ① PAPI-L grooved RVR		8290' 2527m		150'
19R			8350' 2545m		46m
① Angle 3.0°.					
1C	HIRL CL MALSR TDZ ② PAPI-L grooved RVR		10,452' 3186m		150'
19C	HIRL CL ALSF-II TDZ ② PAPI-R grooved RVR		10,471' 3192m		46m
② Angle 3.0°.					
1R	HIRL CL ALSF-II TDZ ③ PAPI-R grooved RVR		10,450' 3185m		150'
19L	HIRL CL MALSR ③ PAPI-L grooved RVR		10,501' 3201m		46m
③ Angle 3.0°.					
12	HIRL CL TDZ MALSR PAPI-R grooved RVR		9501' 2896m		150'
30	HIRL CL REIL ④ PAPI-L grooved RVR				46m
④ Angle 3.0°.					

TAKE-OFF

Rwys 1L/C/R, 12, 19L/C/R					Rwy 30				
2 operating RVRs are required. All operating RVRs are controlling.			STD		Both RVRs are required & controlling.			STD	
CL & HIRL	CL, or RCLM & HIRL	Adequate Vis Ref	3 & 4 Eng	1 & 2 Eng	CL & HIRL	CL, or RCLM & HIRL	Adequate Vis Ref	3 & 4 Eng	1 & 2 Eng
TDZ RVR 5	TDZ RVR 10	RVR 16 or 1/4	RVR 24 or 1/2	RVR 50 or 1	TDZ RVR 5	TDZ RVR 10	RVR 16 or 1/4	RVR 24 or 1/2	RVR 50 or 1
Mid RVR 5	Mid RVR 10								
Rollout RVR 5	Rollout RVR 10				Rollout RVR 5	Rollout RVR 10			

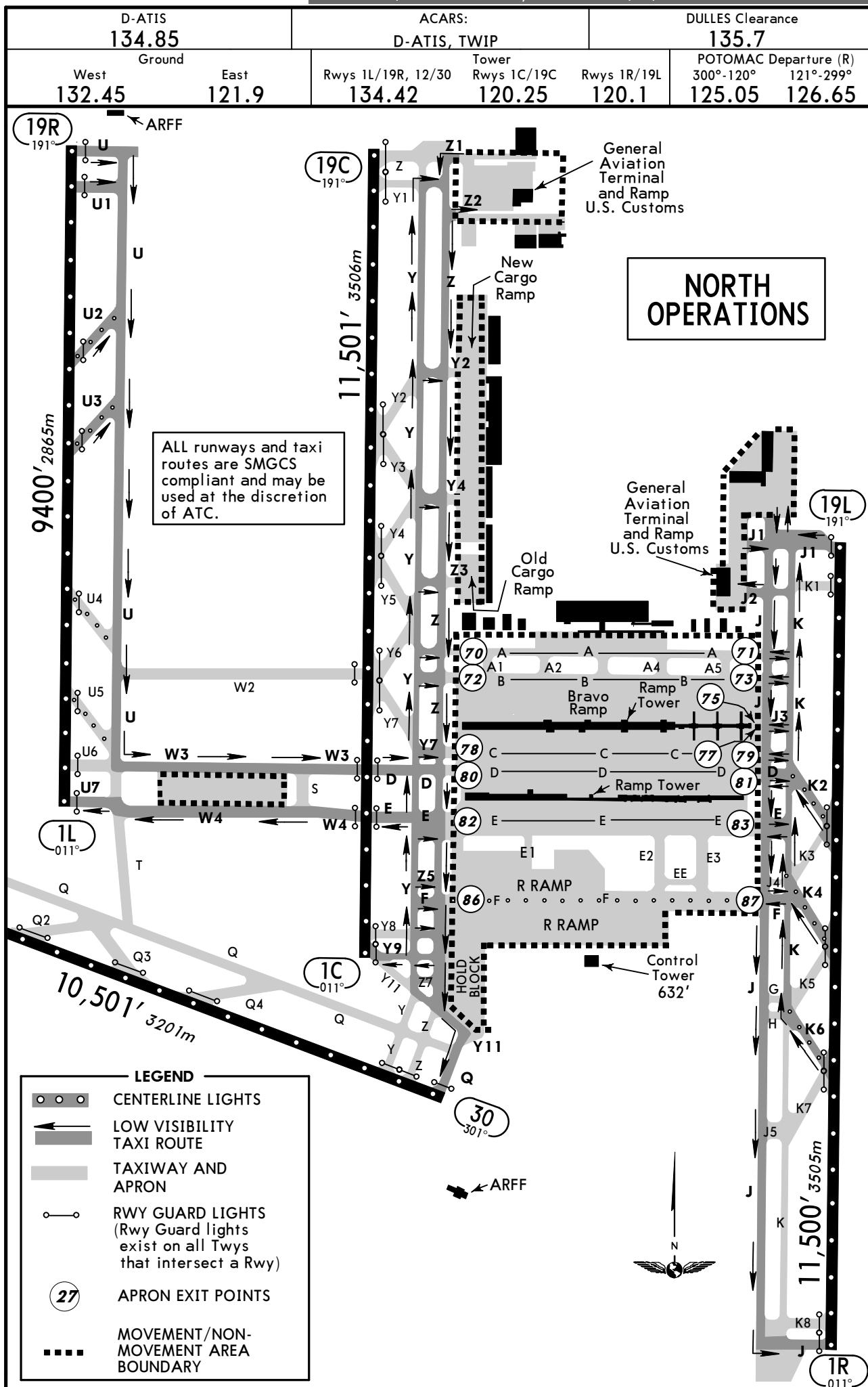
FOR FILING AS ALTERNATE

		FOR FILING AS ALTERNATE			
		ILS Rwy 1L ILS Rwy 1C ILS Rwy 1R ILS Rwy 12 ILS Rwy 19L ILS Rwy 19C ILS Rwy 19R	LOC DME Rwy 1L LOC DME Rwy 1C LOC Rwy 1R LOC DME Rwy 12 LOC Rwy 19L LOC DME Rwy 19C LOC DME Rwy 19R	RNAV (GPS) Rwy 1L RNAV (GPS) Rwy 12 RNAV (GPS) Rwy 19R RNAV (GPS) Y Rwy 1C RNAV (GPS) Y Rwy 1R RNAV (GPS) Y Rwy 19L	RNAV (GPS) Y Rwy 19C RNAV (RNP) Z Rwy 1C RNAV (RNP) Z Rwy 1R RNAV (RNP) Z Rwy 19C RNAV (RNP) Z Rwy 19L VOR DME Rwy 12
A	700-2	800-2			
B					
C					
D					



PARKING GATE COORDINATES

GATE No.	COORDINATES
A CONCOURSE	
1A thru 1C	N38 56.9 W077 26.5
1E, 1F	N38 56.9 W077 26.5
1G	N38 56.9 W077 26.4
2A thru 2C	N38 56.9 W077 26.5
2E, 2F	N38 56.9 W077 26.5
2G	N38 56.9 W077 26.4
3A thru 3G	N38 56.9 W077 26.5
4A thru 4G	N38 56.9 W077 26.5
5A thru 5G	N38 56.9 W077 26.6
6A thru 6E, 6G	N38 56.9 W077 26.6
A14 thru A16, A19, A20, A22, A23	N38 56.9 W077 26.7
A24 thru A26, A31, A32	N38 56.9 W077 26.8
B CONCOURSE	
B37, B38, B40 thru B42	N38 56.9 W077 26.9
B43 thru B48	N38 56.9 W077 27.0
B49 thru B51, B62 thru B65	N38 56.9 W077 27.1
B66, B67, B70 thru B72	N38 56.9 W077 27.2
B73 thru B76, B78, B79	N38 56.9 W077 27.3
C CONCOURSE	
C1 thru C4	N38 56.7 W077 26.5
C5 thru C9	N38 56.7 W077 26.6
C11	N38 56.7 W077 26.7
C12	N38 56.7 W077 26.6
C14, C17, C18, C18R	N38 56.7 W077 26.7
C19	N38 56.7 W077 26.8
C20, C20R	N38 56.7 W077 26.7
C22, C22R, C23, C24, C24R, C26, C26R, C27, C28	N38 56.7 W077 26.8
C28R, C28X	N38 56.7 W077 26.9
D CONCOURSE	
D1, D2	N38 56.7 W077 26.9
D3	N38 56.7 W077 27.0
D4	N38 56.7 W077 26.9
D5 thru D8, D10	N38 56.7 W077 27.0
D11, D12, D14 thru D16, D18	N38 56.7 W077 27.1
D19 thru D21, D23, D24, D26	N38 56.7 W077 27.2
D29, D30, D32	N38 56.7 W077 27.3
R RAMP	
R3, R5, R7	N38 56.5 W077 26.8
R9	N38 56.5 W077 26.9
R11	N38 56.5 W077 27.0
R12	N38 56.6 W077 27.0
R13	N38 56.5 W077 27.1
R14	N38 56.6 W077 27.1
R15	N38 56.5 W077 27.1
R16	N38 56.6 W077 27.1
R17, R19	N38 56.5 W077 27.2
R22	N38 56.6 W077 27.2
R24, R26, R28	N38 56.6 W077 27.3
Z GATES	
Z6, Z7	N38 57.1 W077 26.7
Z9, Z10	N38 57.1 W077 26.8



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SMGCS

WASHINGTON DULLES INTL

14 MAY 10

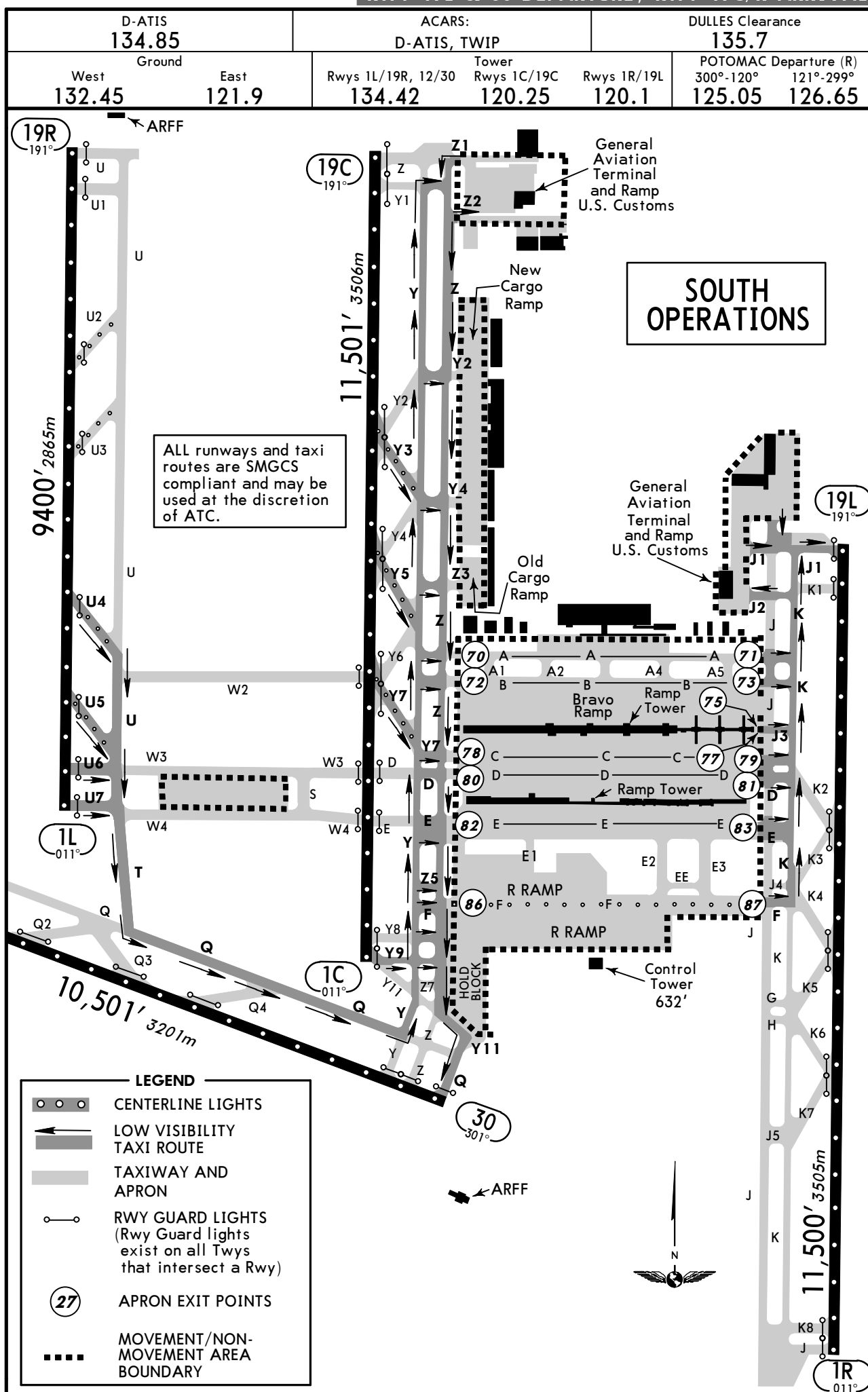
20-9E

WASHINGTON, DC (VA)

LESS THAN RVR 1200 TO 600

LOW VISIBILITY TAXI ROUTES

RWY 19L & 30 DEPARTURE, RWY 19C/R ARRIVAL



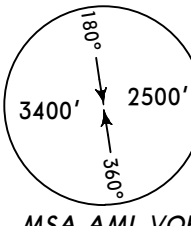
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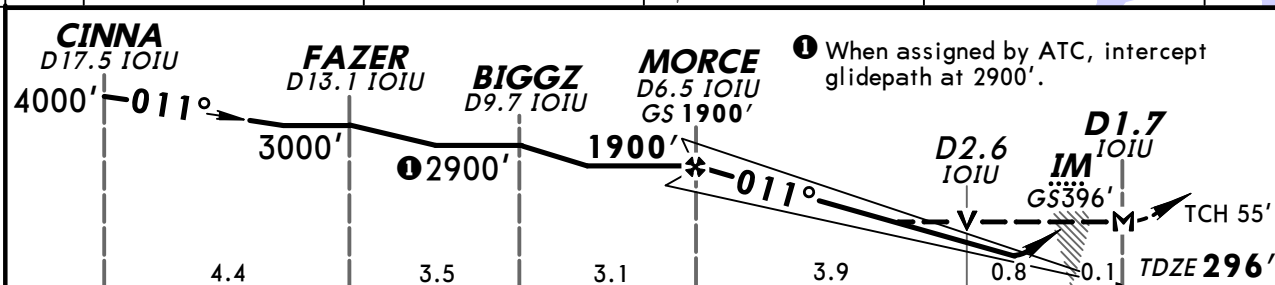
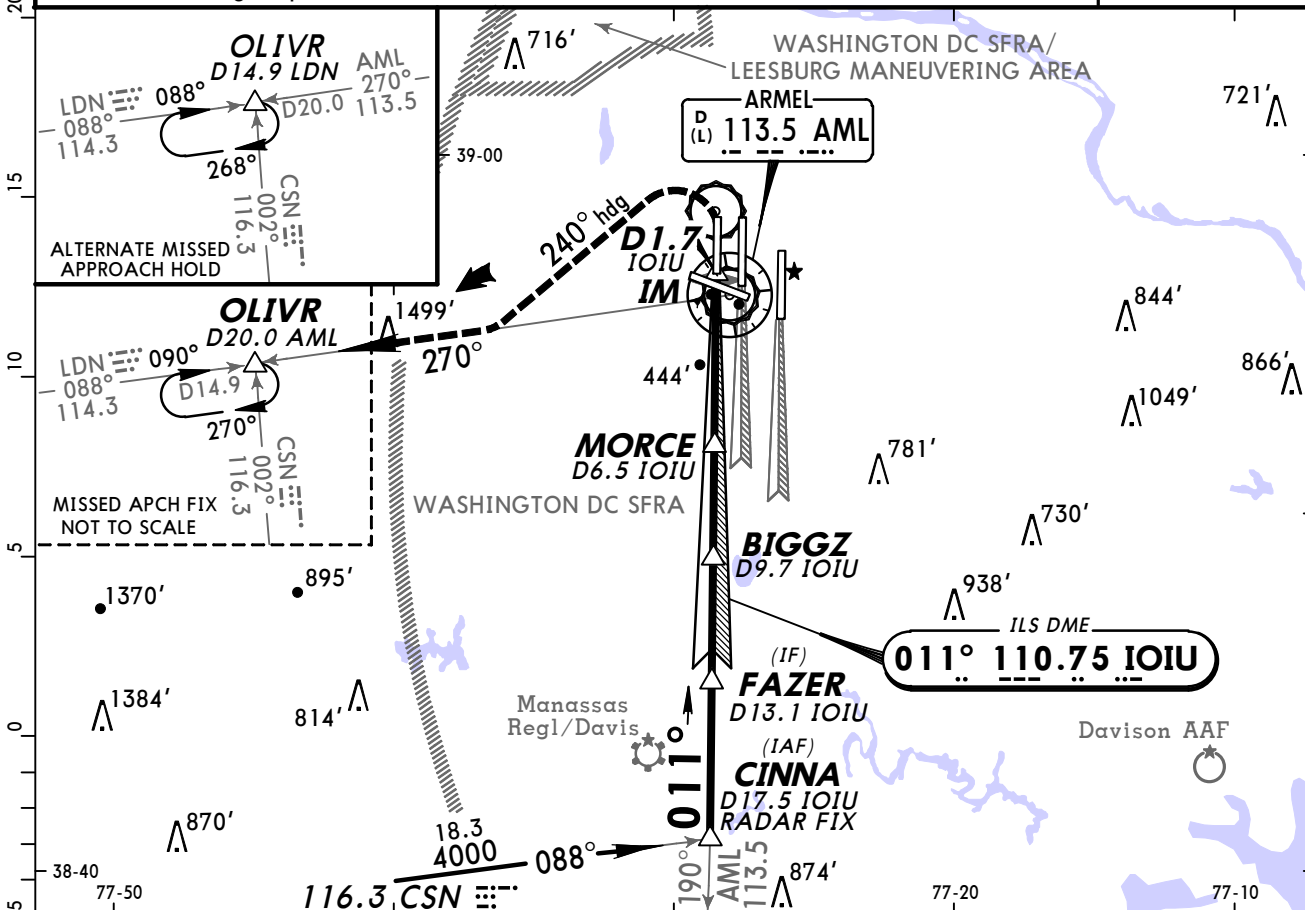
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KIAD/IAD WASHINGTON DULLES INTL 14 MAY 10 (21-1) ILS or LOC DME Rwy 1L

BRIEFING STRIP™

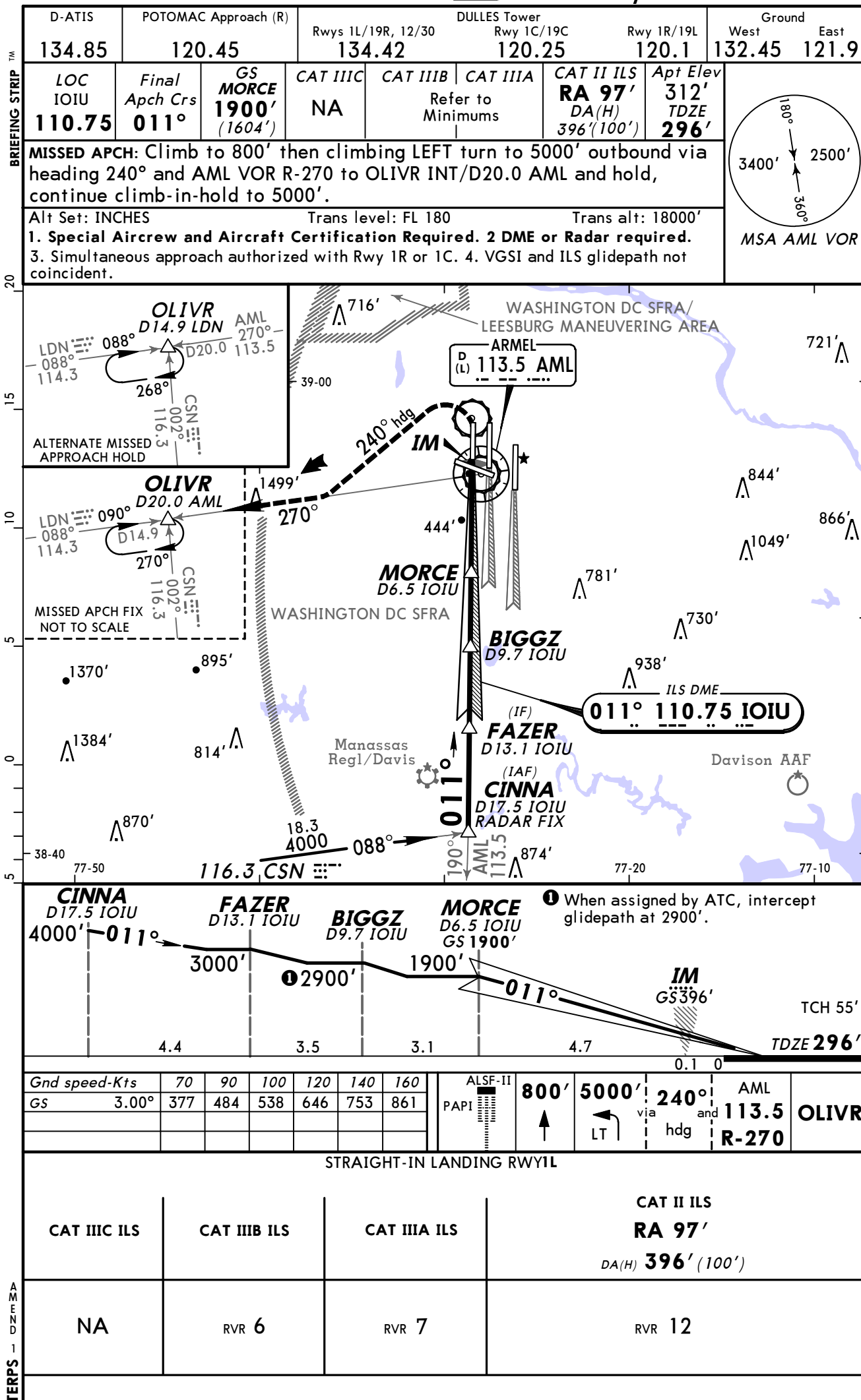
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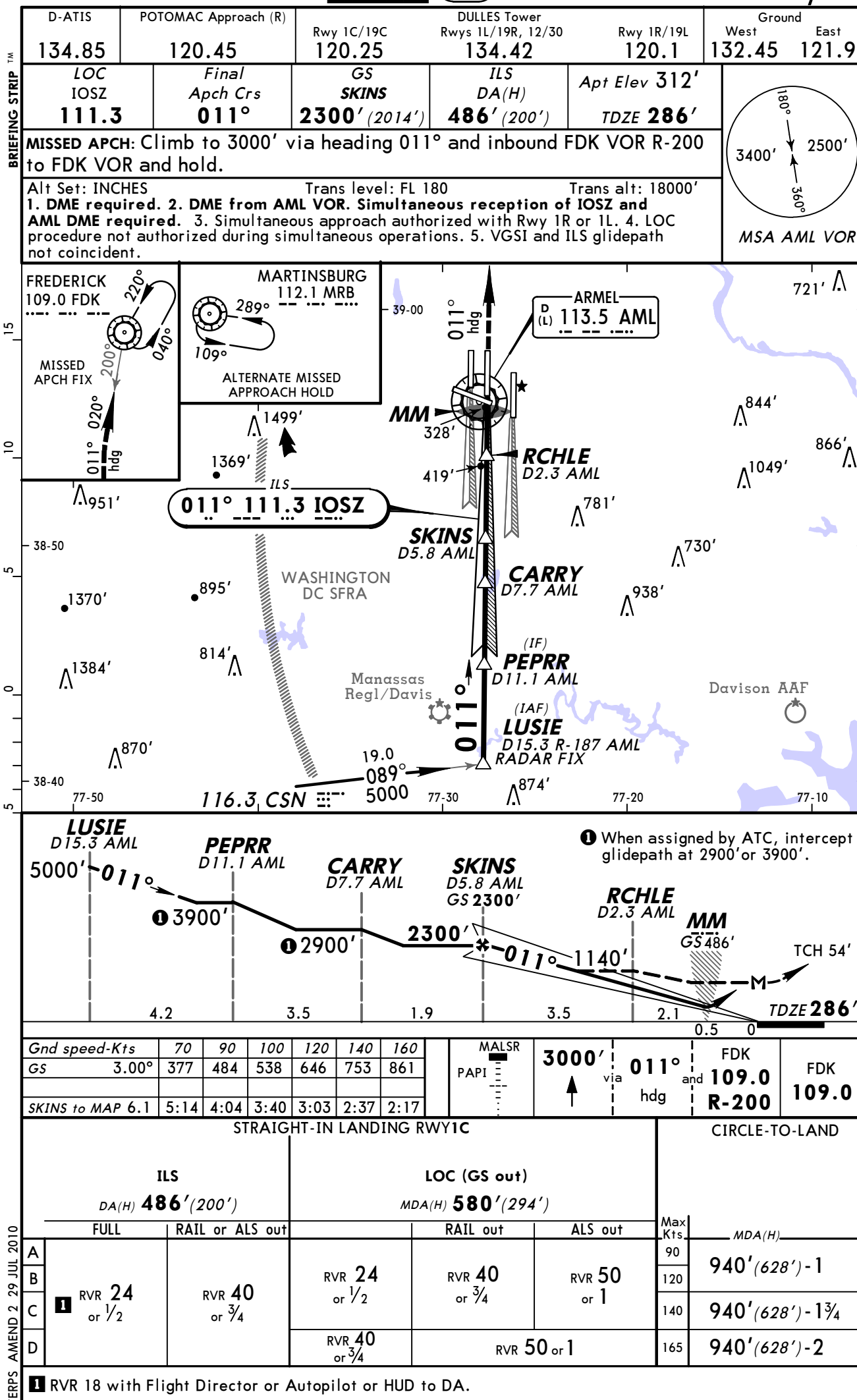
D-ATIS	POTOMAC Approach (R)	Rwys 1L/19R, 12/30	DULLES Tower Rwy 1C/19C	Rwy 1R/19L	Ground West	East
134.85	120.45	134.42	120.25	120.1	132.45	121.9
LOC IOIU 110.75	Final Apch Crs 011°	GS MORCE 1900' (1604')	ILS DA(H) 496' (200')	Apt Elev 312' TDZE 296'	 MSA AML VOR	
MISSED APCH: Climb to 800' then climbing LEFT turn to 5000' outbound via heading 240° and AML VOR R-270 to OLIVR INT/D20.0 AML and hold, continue climb-in-hold to 5000'.						
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. DME or Radar required. 2. Simultaneous approach authorized with Rwy 1R or 1C. 3. LOC procedure not authorized during simultaneous operations. 4. VGSI and ILS glidepath not coincident.						



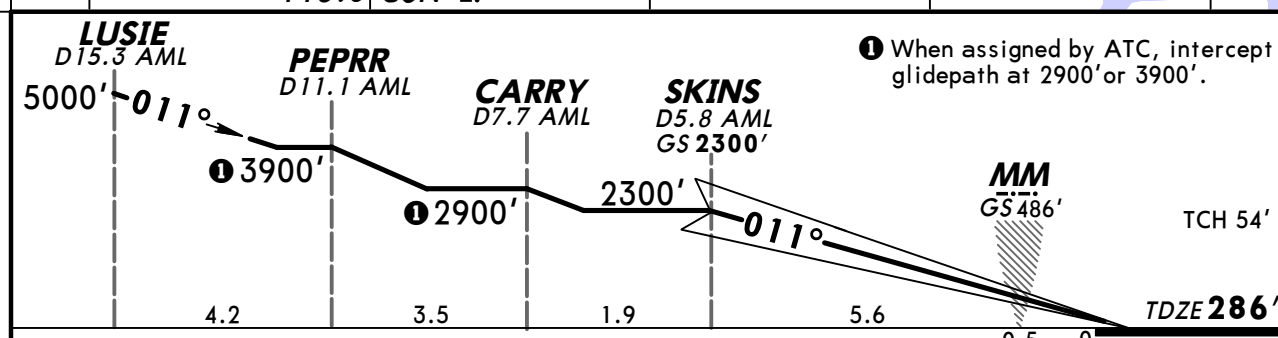
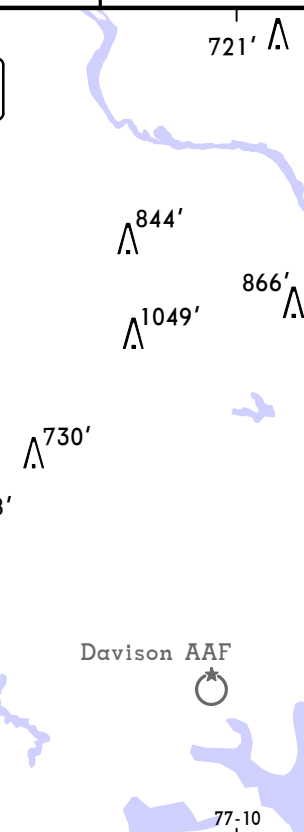
Gnd speed-Kts	70	90	100	120	140	160	ALSF-II PAPI 800' 5000' 240° AML via LT and 113.5 OLIVR hdg R-270	
GS	3.00°	377	484	538	646	753		
MAP at D1.7 IOIU								

STRAIGHT-IN LANDING RWY1L						CIRCLE-TO-LAND	
ILS				LOC (GS out)		Max Kts	MDA(H)
DA(H) 496' (200')				MDA(H) 660' (364')			
FULL		TDZ or CL out	ALS out	ALS out			
A	RVR 18 or 1/2	RVR 24 or 1/2	RVR 40 or 3/4	RVR 24 or 1/2	RVR 50 or 1	90	940' (628') - 1
B						120	
C				140	940' (628') - 1 3/4		
D				RVR 40 or 3/4		RVR 60 or 1 1/4	165



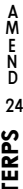


MSA AML VOR



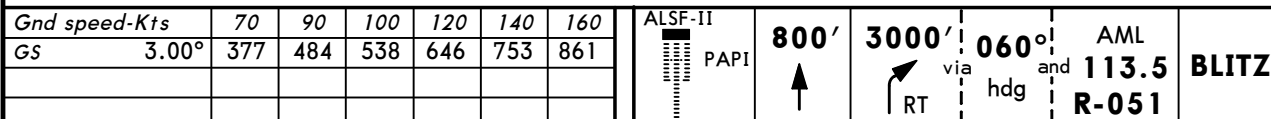
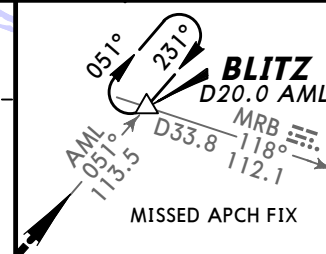
MALSR  PAPI  	3000' 	0.5 0 011° hdg and	FDK 109.0 R-200	FDK 109.0
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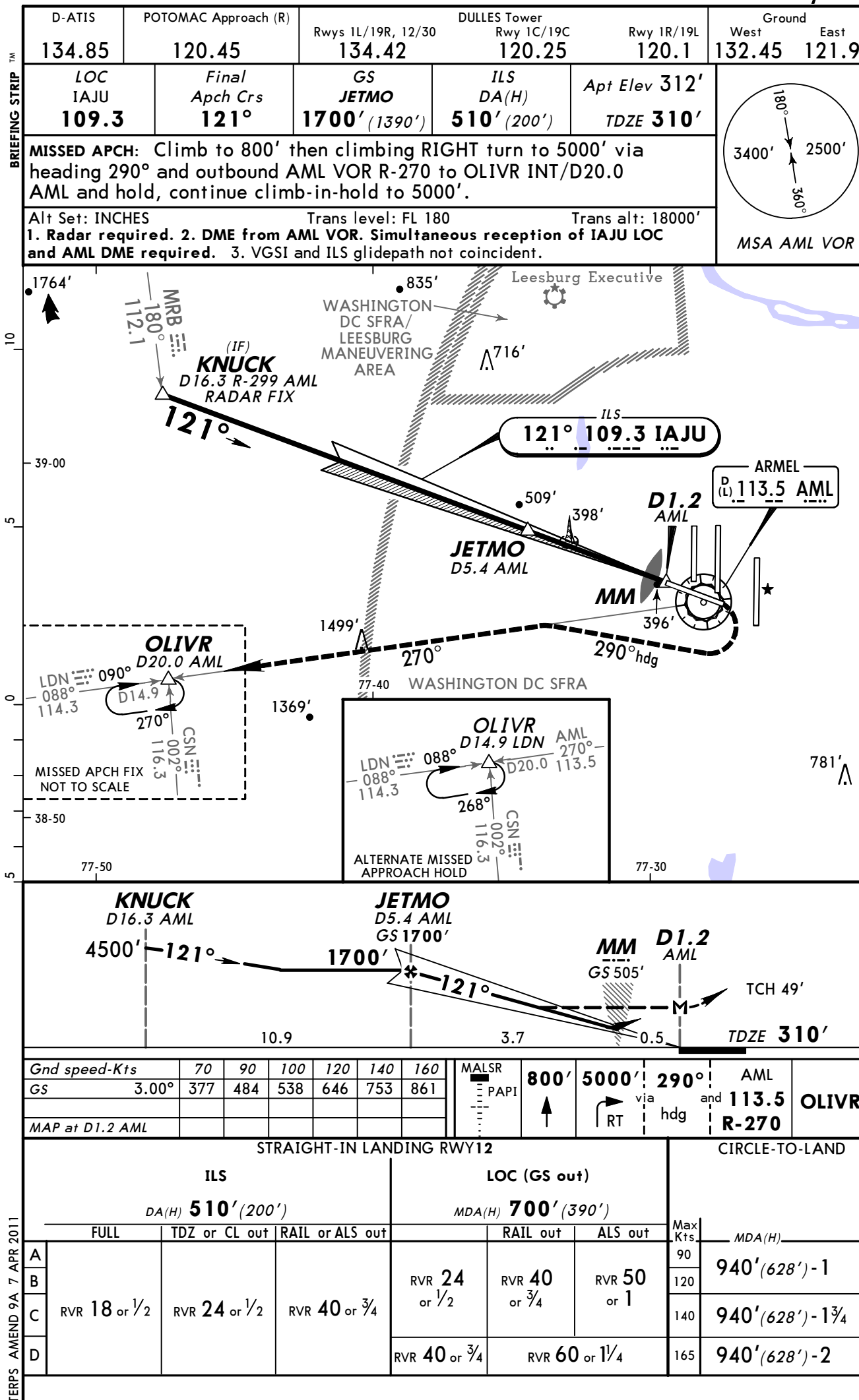
RVR 12

MSA AML VOR

ILS Rwy 1R CAT II & III

Alt Set: INCHES	Trans level: FL 180	Trans alt: 18000
1. Special Aircrew & Aircraft Certification required.		
2. Simultaneous approach authorized with Rwy 1C or 1L.		
3. VGSI and ILS glidepath not coincident.		

TERPS
AMEND
24



KIAD/IAD

WASHINGTON DULLES INTL

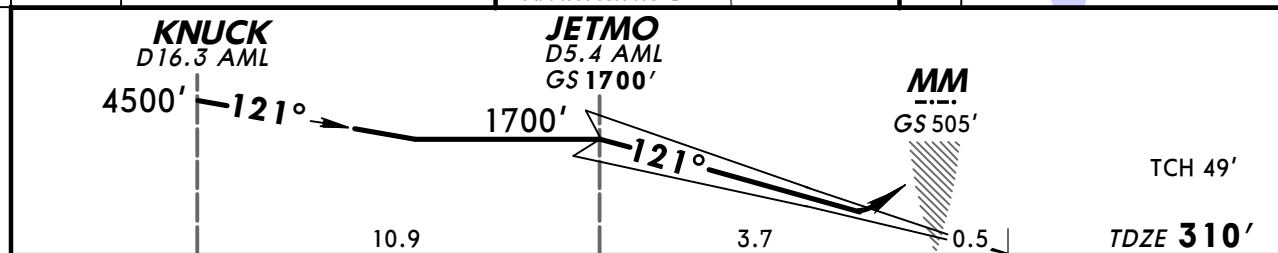
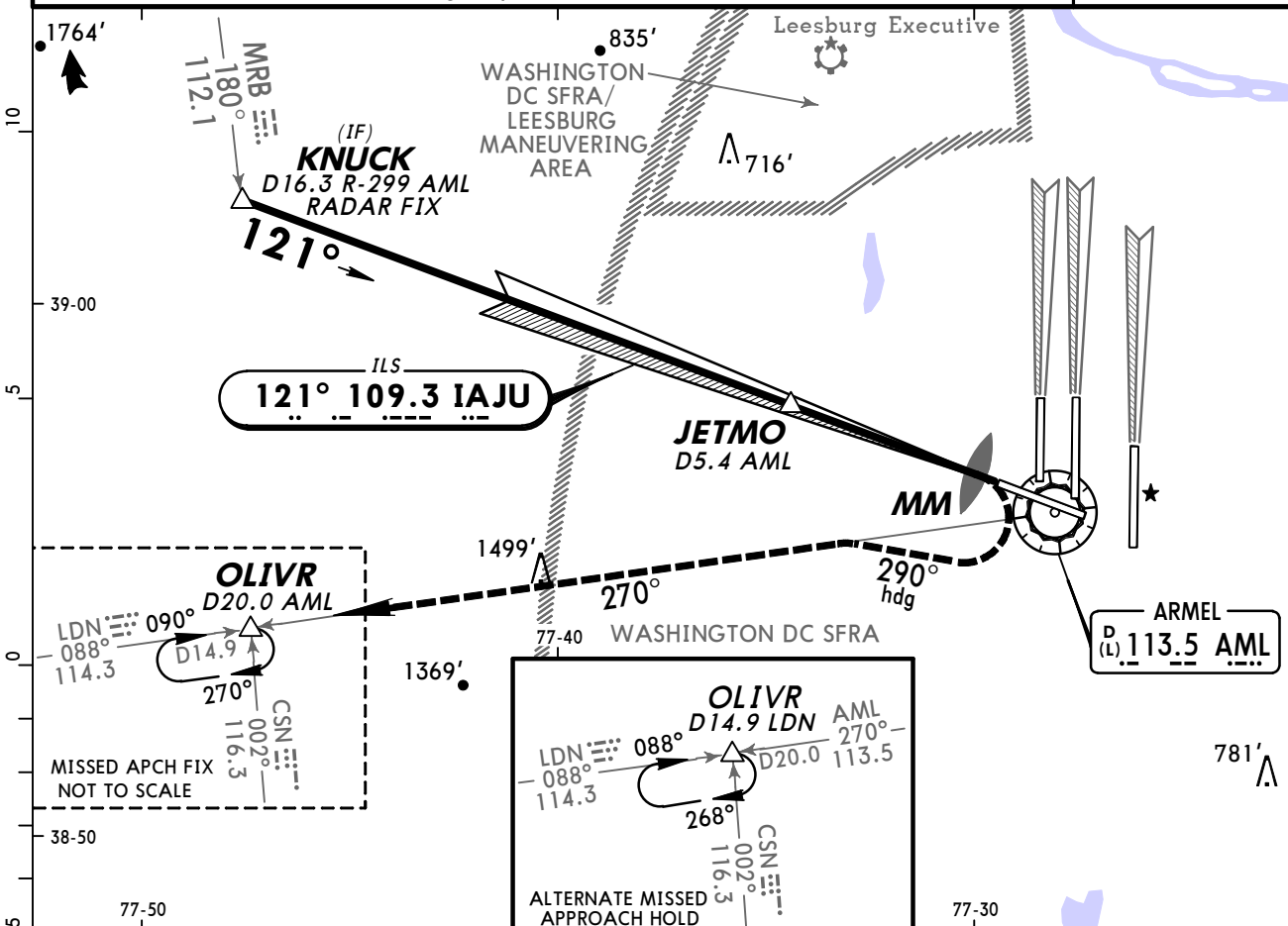
1 APR 11

(21-5)

JEPPESSEN WASHINGTON, DC (VA)

CONVERGING ILS Rwy 12

D-ATIS	POTOMAC Approach (R)	Rwys 1L/19R, 12/30	DULLES Tower Rwy 1C/19C	Rwy 1R/19L	Ground West East
134.85	120.45	134.42	120.25	120.1	132.45 121.9
LOC IAJU	Final Apth Crs	GS JETMO	ILS DA(H)	Apt Elev 312'	
109.3	121°	1700' (1390')	910' (600')	TDZE 310'	
MISSED APCH: Climbing RIGHT turn to 5000' via heading 290° and outbound AML VOR R-270 to OLIVR INT/D20.0 AML and hold, continue climb-in-hold to 5000'.					
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. Radar required. 2. Simultaneous converging approaches authorized with Rwys 19L or 19C or 19R. 3. VGSI and ILS glidepath not coincident.					MSA AML VOR



Gnd speed-Kts	70	90	100	120	140	160	MALSR	5000'	290°	AML	
GS	3.00°	377	484	538	646	753	PAPI	via	hdg	and	OLIVR
								RT			

STRAIGHT-IN LANDING RWY12

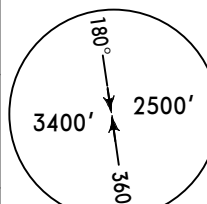
ILS

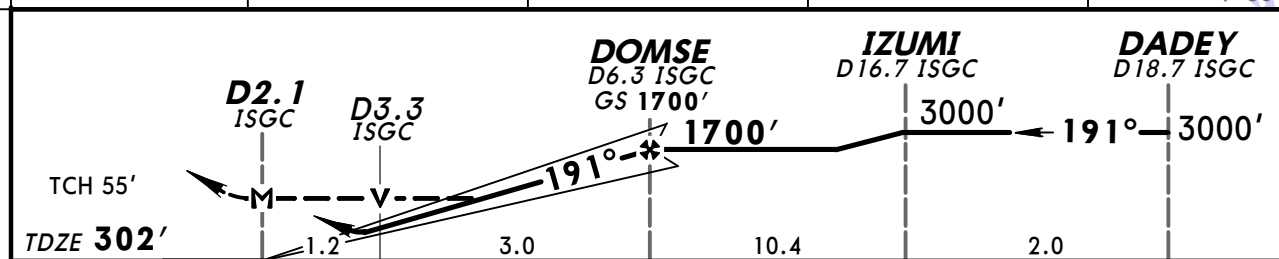
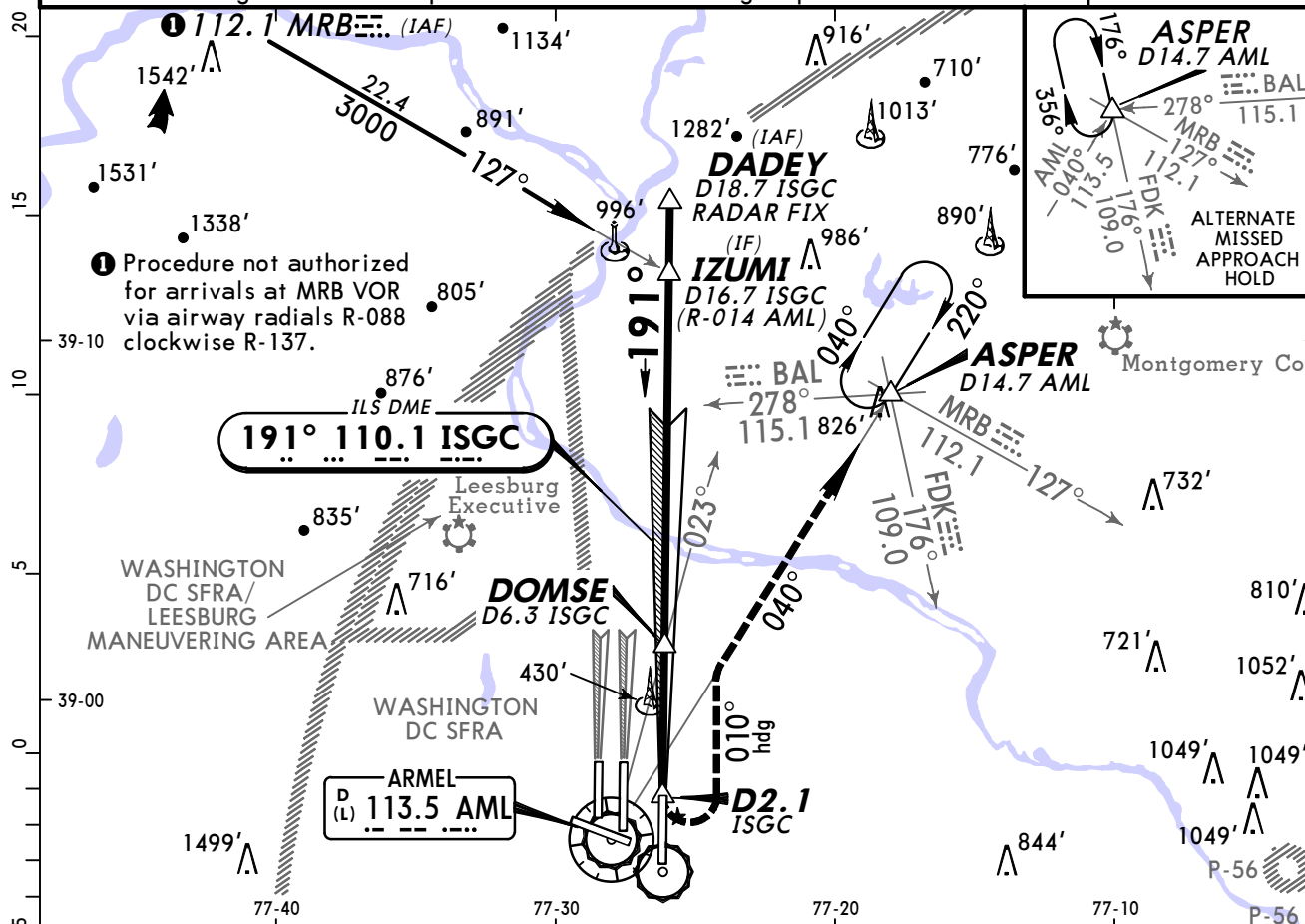
DA(H) 910' (600')

FULL

RAIL or ALS out

A		
B		
C	1½	2
D		

D-ATIS 134.85	POTOMAC Approach (R) 120.45	Rwy 1R/19L 120.1	DULLES Tower Rwy 1C/19C 120.25	Rwys 1L/19R, 12/30 134.42	Ground West East 132.45 121.9
LOC ISGC 110.1	Final Apch Crs 191°	GS DOMSE 1700' (1398')	ILS DA(H) 502' (200')	Apt Elev 312' TDZE 302'	
MISSED APCH: Climb to 800' then climbing LEFT turn to 3000' via heading 010° and outbound AML VOR R-040 to ASPER INT/D14.7 AML and hold.					
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. Simultaneous approach authorized with Rwy 19C or 19R. 2. LOC procedure not authorized during simultaneous operations. 3. VGSI and ILS glidepath not coincident.					
					MSA AML VOR

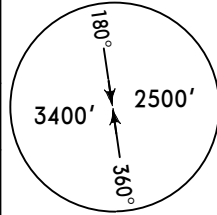


Gnd speed-Kts	70	90	100	120	140	160	MALSR	800'	3000'	010°	AML	ASPER R-040
GS	3.00°	377	484	538	646	753	PAPI	↑	LT	via	hdg	
MAP at D2.1 ISGC or DOMSE to MAP	4.2	3:36	2:48	2:31	2:06	1:48	1:35					

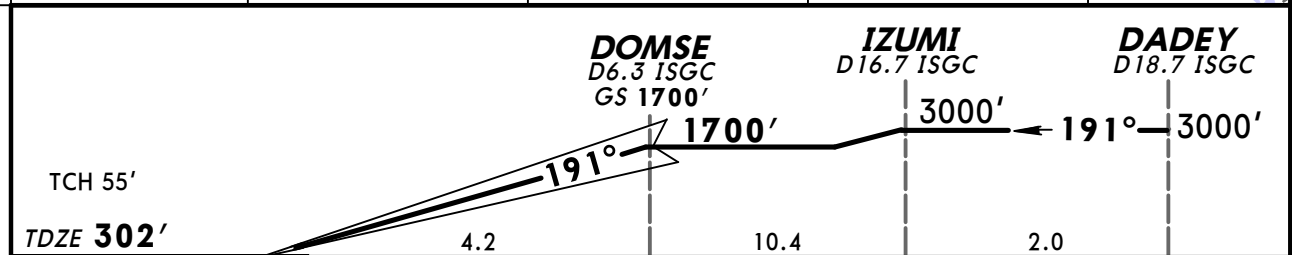
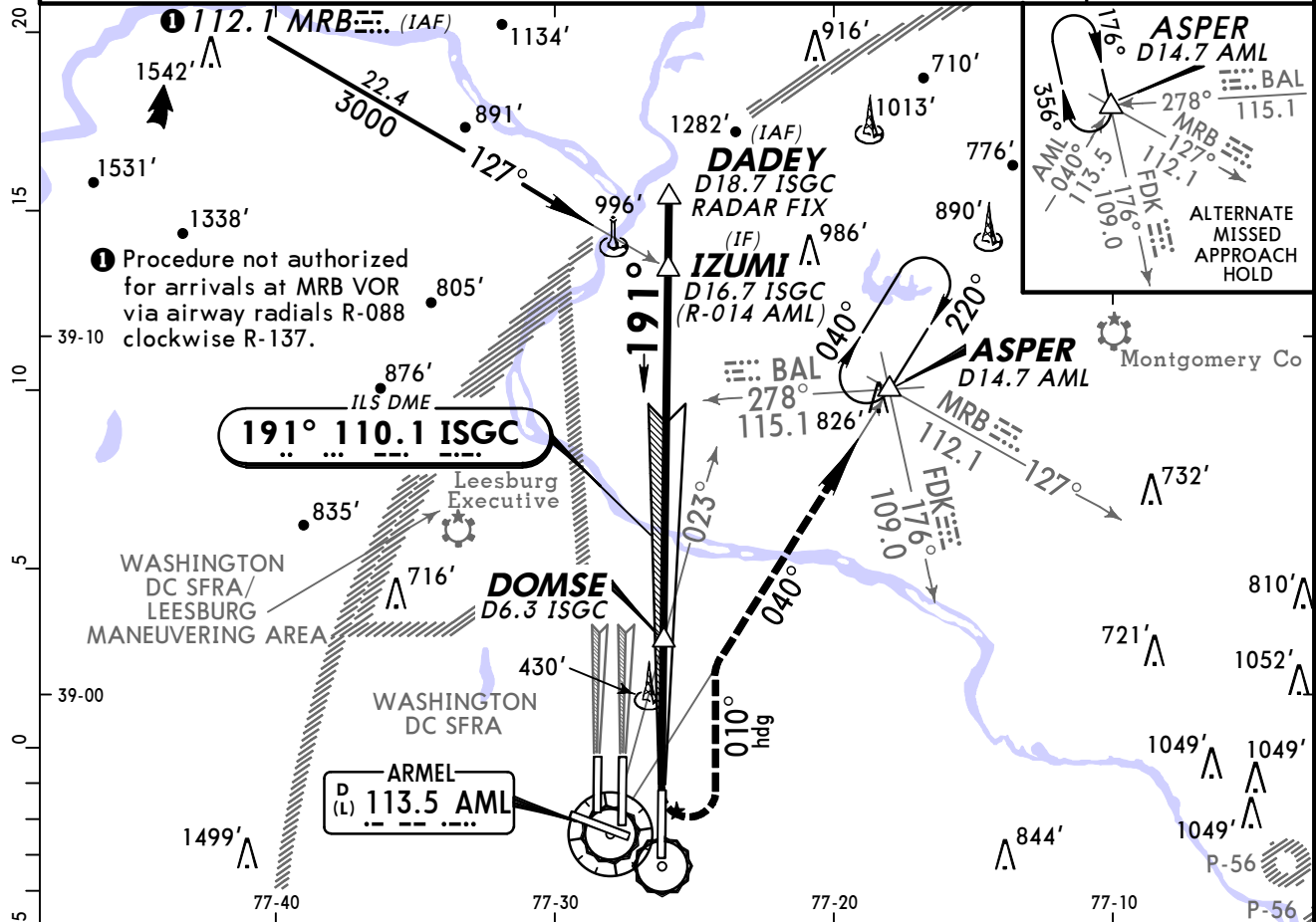
STRAIGHT-IN LANDING RWY 19L						CIRCLE-TO-LAND	
ILS			LOC (GS out)			Max Kts	MDA(H)
DA(H) 502' (200')			MDA(H) 740' (438')				
FULL		RAIL or ALS out		RAIL out	ALS out		
A	1 RVR 24 or 1/2	RVR 40 or 3/4	RVR 24 or 1/2	RVR 40 or 3/4	RVR 50 or 1	90	940' (628') - 1
B						120	
C			RVR 40 or 3/4	RVR 60 or 1 1/4		140	940' (628') - 1 3/4
D			RVR 50 or 1	1 1/2		165	940' (628') - 2

1 RVR 18 with Flight Director or Autopilot or HUD to DA.

D-ATIS	POTOMAC Approach (R)	DULLES Tower	Ground
134.85	120.45	Rwy 1R/19L 120.1 Rwy 1C/19C 120.25 Rwys 1L/19R, 12/30 134.42	West 132.45 East 121.9
LOC ISGC 110.1	Final Apch Crs 191°	GS DOMSE 1700' (1398')	CAT II ILS RA 102' DA(H) 402' (100') Apt Elev 312' TDZE 302'
MISSED APCH: Climb to 800' then climbing LEFT turn to 3000' via heading 010° and outbound AML VOR R-040 to ASPER INT/D14.7 AML and hold.			
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. Special Aircrew and Aircraft Certification Required. 2. Simultaneous approach authorized with Rwy 19C or 19R. 3. VGSI and ILS glidepath not coincident. 4. Reduced Lighting: Requires specific OPSPEC, MSPEC, or LOA approval and use of Autoland or HUD to touchdown.			



MSA AML VOR



							MALSR		800'		3000'		010°		AML		ASPER
Gnd speed-Kts							PAPI	↑	LT	via	hdg	and	113.5	R-040			
GS 3.00°																	
70	90	100	120	140	160												
377	484	538	646	753	861												

STRAIGHT-IN LANDING RWY 19L
 CAT II ILS
 RA 102'
 DA(H) 402' (100')

A	
B	
C	
D	

RVR 12

KIAD/IAD

WASHINGTON DULLES INTL

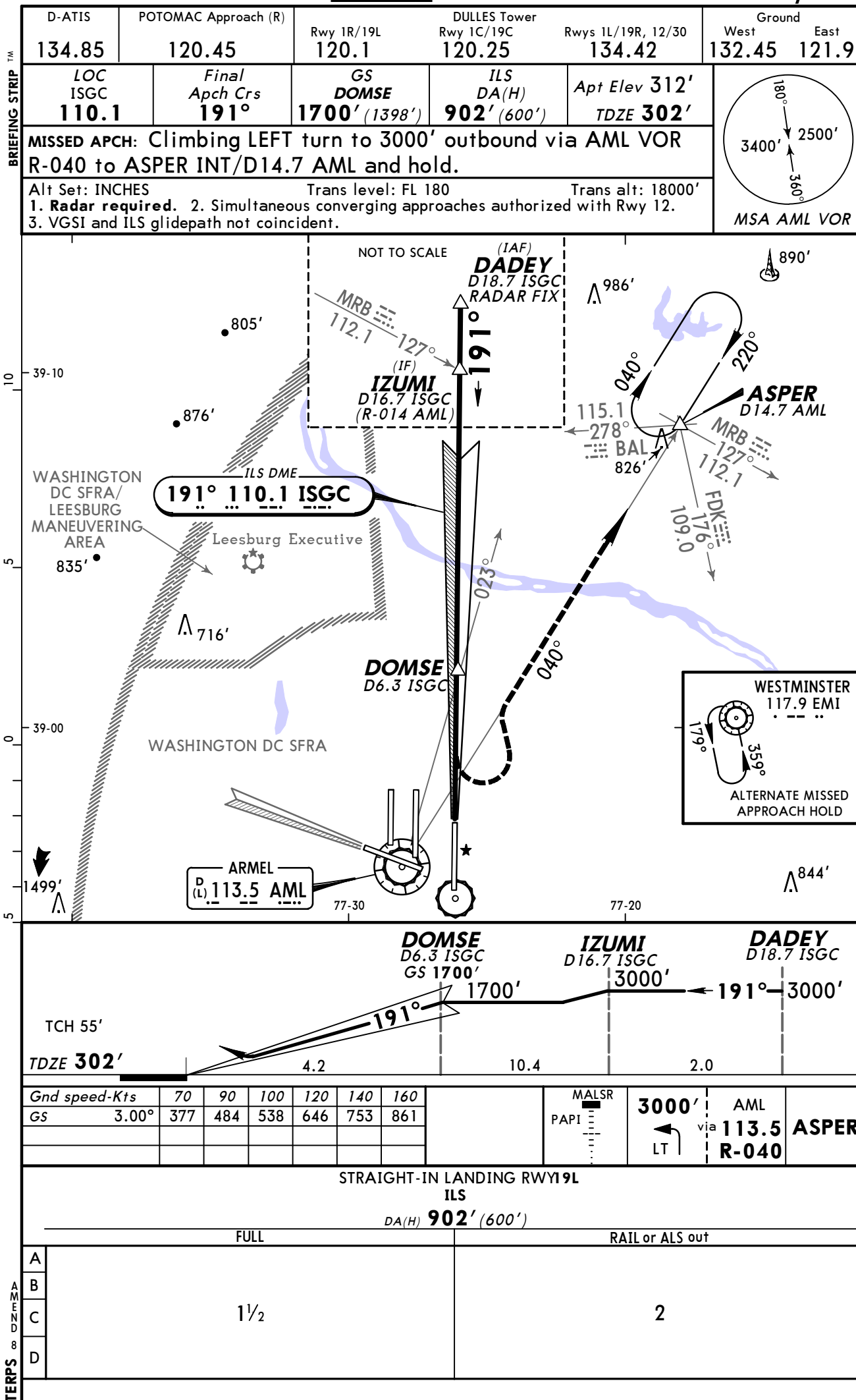
23 JUL 10

Eff 29 Jul

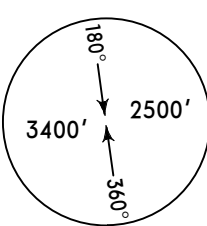
(21-7)

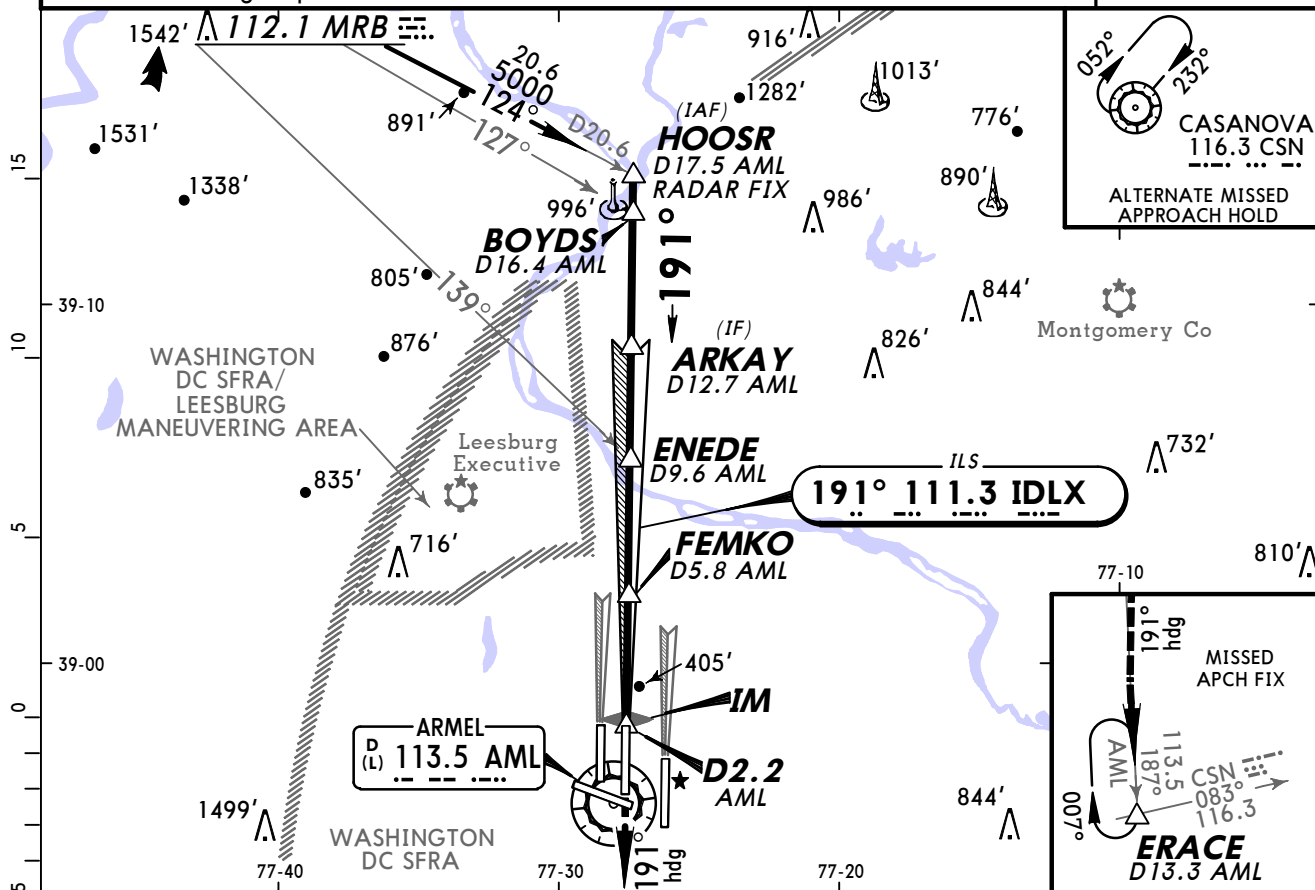
WASHINGTON, DC (VA)

CONVERGING ILS Rwy 19L

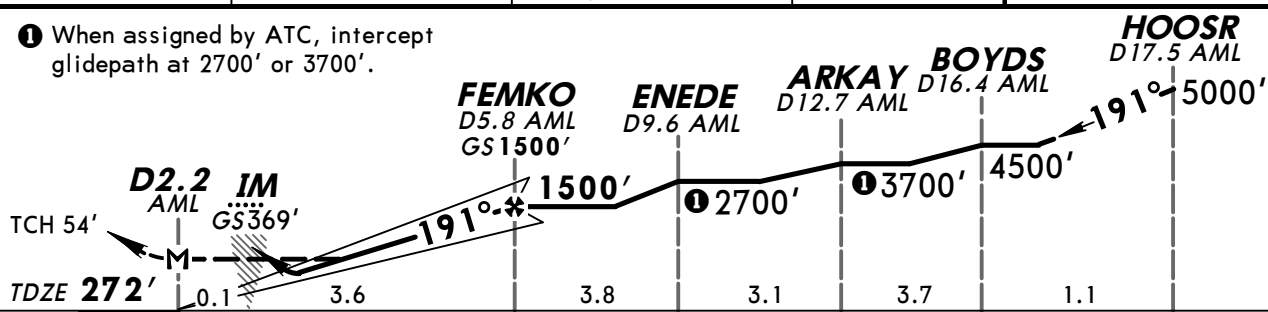


KIAD/IAD JEPPESEN WASHINGTON, DC (VA) WASHINGTON DULLES INTL 14 MAY 10 (21-8) ILS or LOC DME Rwy 19C

D-ATIS 134.85	POTOMAC Approach (R) 120.45	Rwy 1C/19C 120.25	DULLES Tower Rwy 1R/19L 120.1	Rwys 1L/19R, 12/30 134.42	Ground West East 132.45 121.9
LOC IDLX 111.3	Final Apch Crs 191°	GS FEMKO 1500' (1228')	ILS DA(H) 472' (200')	Apt Elev 312' TDZE 272'	 MSA AML VOR
MISSED APCH: Climb to 3000' via heading 191° and outbound AML VOR R-187 to ERACE INT/13.3 AML and hold.					
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. DME or Radar required. 2. DME from AML VOR; simultaneous reception of IDLX LOC and AML DME required. 3. LOC procedure not authorized during simultaneous operations. 4. Simultaneous approach authorized with Rwy 19L or 19R. 5. VGS and ILS glidepath not coincident.					



① When assigned by ATC, intercept glidepath at 2700' or 3700'.



Gnd speed-Kts	70	90	100	120	140	160	ALS-II	3000'	via 191°	AML	ERACE
GS	3.00°	377	484	538	646	753	PAPI	↑	hdg	and 113.5	R-187
MAP at D2.2 AML											

STRAIGHT-IN LANDING RWY19C

CIRCLE-TO-LAND

ILS				LOC (GS out)		Max Kts	MDA(H)
DA(H) 472' (200')				MDA(H) 660' (388')			
	FULL	TDZ or CL out	ALS out		ALS out		
A	RVR 18 or 1/2	RVR 24 or 1/2	RVR 40 or 3/4	RVR 24 or 1/2	RVR 50 or 1	90	940' (628') - 1
B						120	
C				140	940' (628') - 1 3/4		
D				165		940' (628') - 2	

KIAD/IAD WASHINGTON, DC (VA) WASHINGTON DULLES INTL 14 MAY 10 (21-8A) ILS Rwy 19C CAT II & III

BRIEFING STRIP™

D-ATIS		POTOMAC Approach (R)		DULLES Tower		Ground	
134.85		120.45		Rwy 1C/19C	Rwy 1R/19L	Rwys 1L/19R, 12/30	West East
120.25		120.1		134.42		132.45	121.9
LOC IDLX 111.3	Final Apch Crs 191°	GS FEMKO 1500' (1228')	CAT IIIC NA	CAT IIIB	CAT IIIA	CAT II ILS RA 108' DA(H) 372'(100')	Apt Elev 312' TDZE 272'
MISSED APCH: Climb to 3000' via heading 191° and outbound AML VOR R-187 to ERACE INT/13.3 AML and hold.							
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. Special Aircrew and Aircraft Certification Required. 2. DME from AML VOR; Simultaneous reception of IDLX LOC and AML DME required. 3. Simultaneous approach authorized with Rwy 19L or 19R. 4. VGSI and ILS glidepath not coincident.							

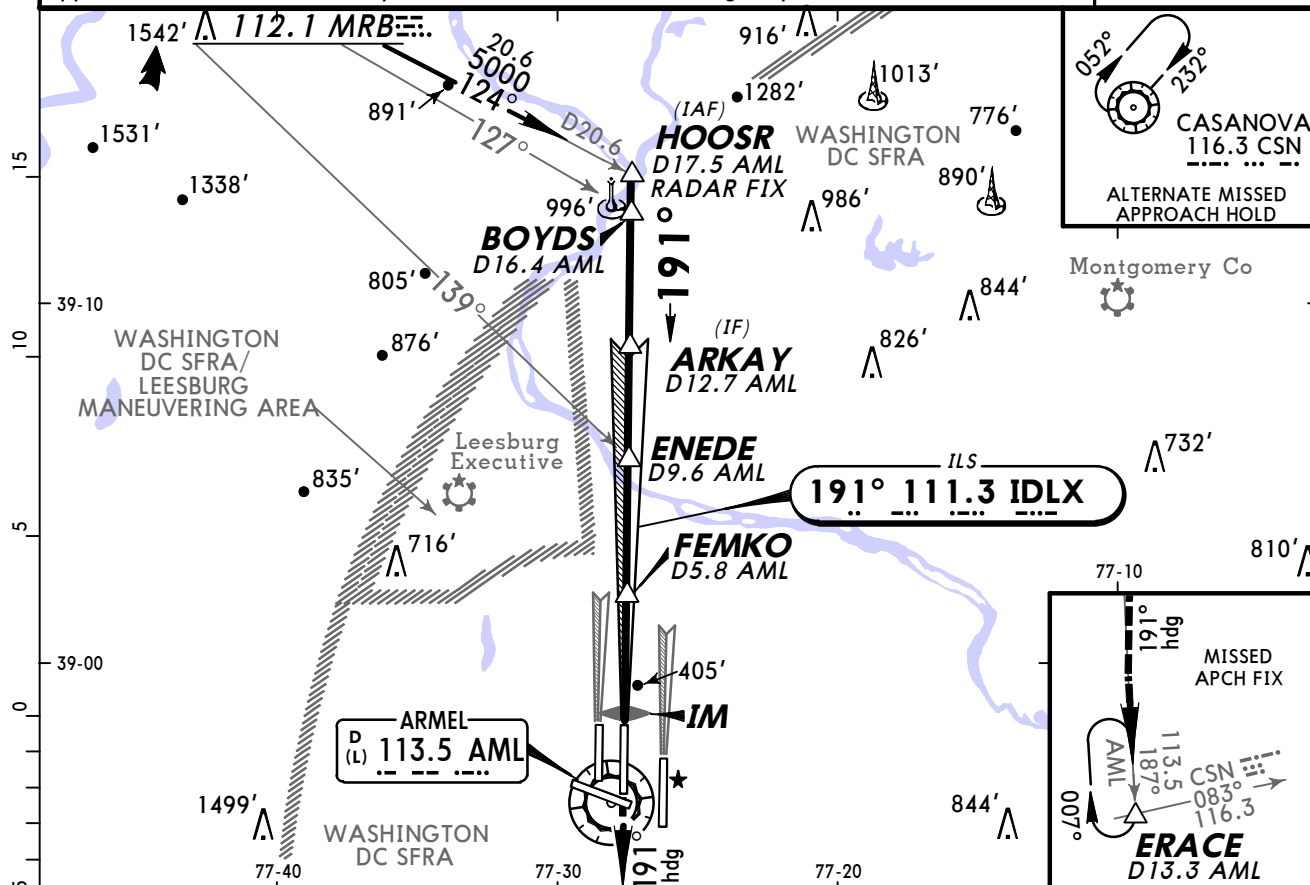
180°

2500'

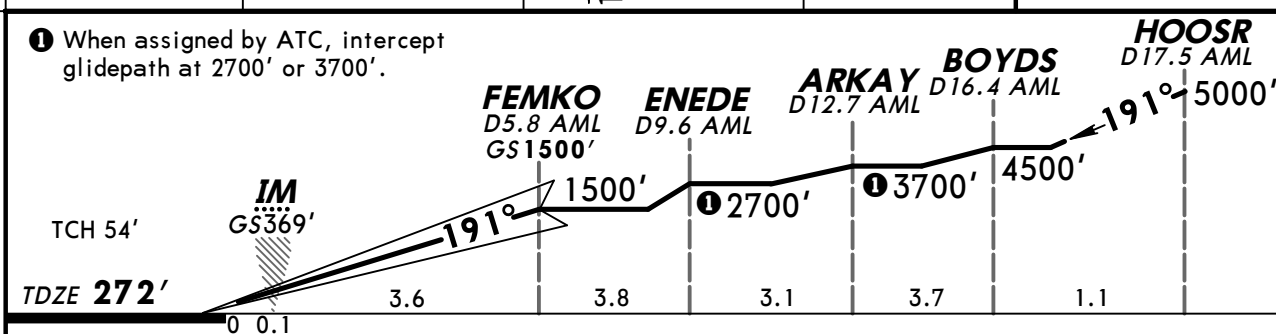
3400'

360°

MSA AML VOR



① When assigned by ATC, intercept glidepath at 2700' or 3700'.



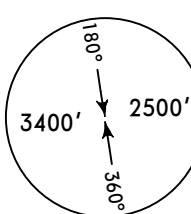
Gnd speed-Kts	70	90	100	120	140	160	ALSF-II PAPI		3000'	via 191° hdg	AML 113.5 R-187	ERACE
GS	3.00°	377	484	538	646	753	861					

STRAIGHT-IN LANDING RWY19C

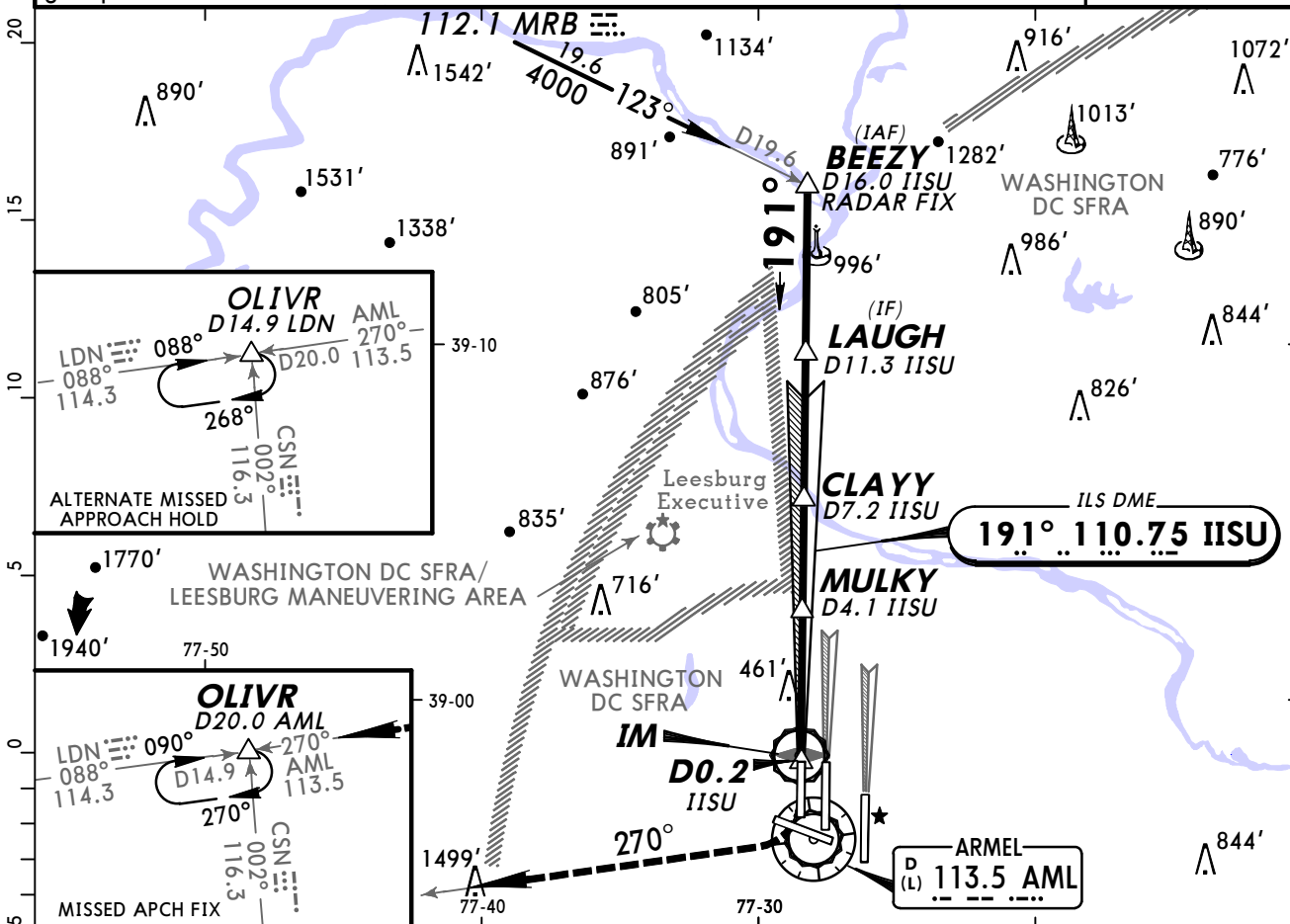
CAT IIIC ILS	CAT IIIB ILS	CAT IIIA ILS	CAT II ILS RA 108' DA(H) 372'(100')
NA	RVR 6	RVR 7	RVR 12

KIAD/IAD WASHINGTON DULLES INTL 14 MAY 10 (21-10) ILS or LOC DME Rwy 19R

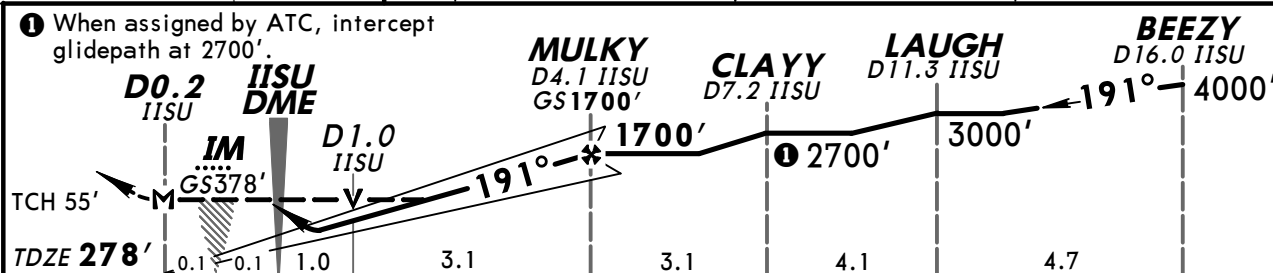
BRIEFING STRIP™

D-ATIS	POTOMAC Approach (R)	Rwys 1L/19R, 12/30	DULLES Tower Rwy 1C/19C	Rwy 1R/19L	Ground West	East
134.85	120.45	134.42	120.25	120.1	132.45	121.9
LOC IISU 110.75	Final Apch Crs 191°	GS MULKY 1700' (1422')	ILS DA(H) 478' (200')	Apt Elev 312' TDZE 278'		
MISSED APCH: Climb to 800' then climbing RIGHT turn to 5000' outbound via AML VOR R-270 to OLIVR INT/D20.0 AML and hold. Continue climb-in-hold to 5000'.						
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. DME or Radar required. 2. Simultaneous approach authorized with Rwy 19C or 19L. 3. LOC procedure not authorized during simultaneous operations. 4. VGSI and ILS glidepath not coincident.						

MSA AML VOR



① When assigned by ATC, intercept glidepath at 2700'.



Gnd speed-Kts	70	90	100	120	140	160	ALSIF-II		800'	5000'	AML	OLIVR
GS	3.00°	377	484	538	646	753	PAPI		↑	↗	via 113.5 R-270	
MAP at D0.2 IISU												

STRAIGHT-IN LANDING RWY19R

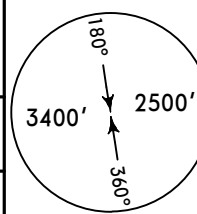
CIRCLE-TO-LAND

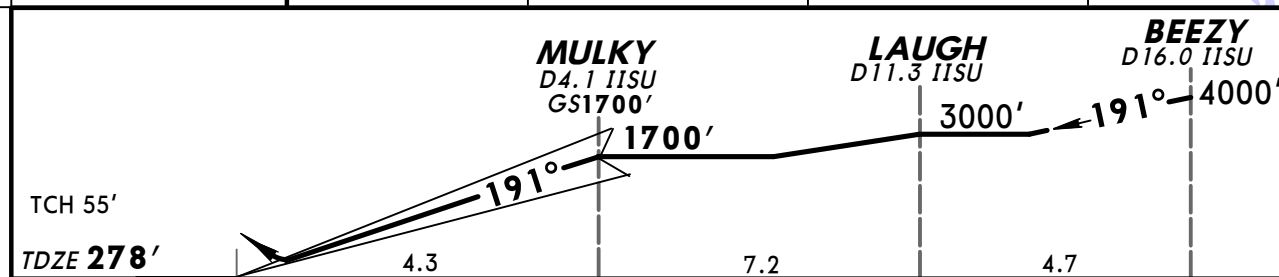
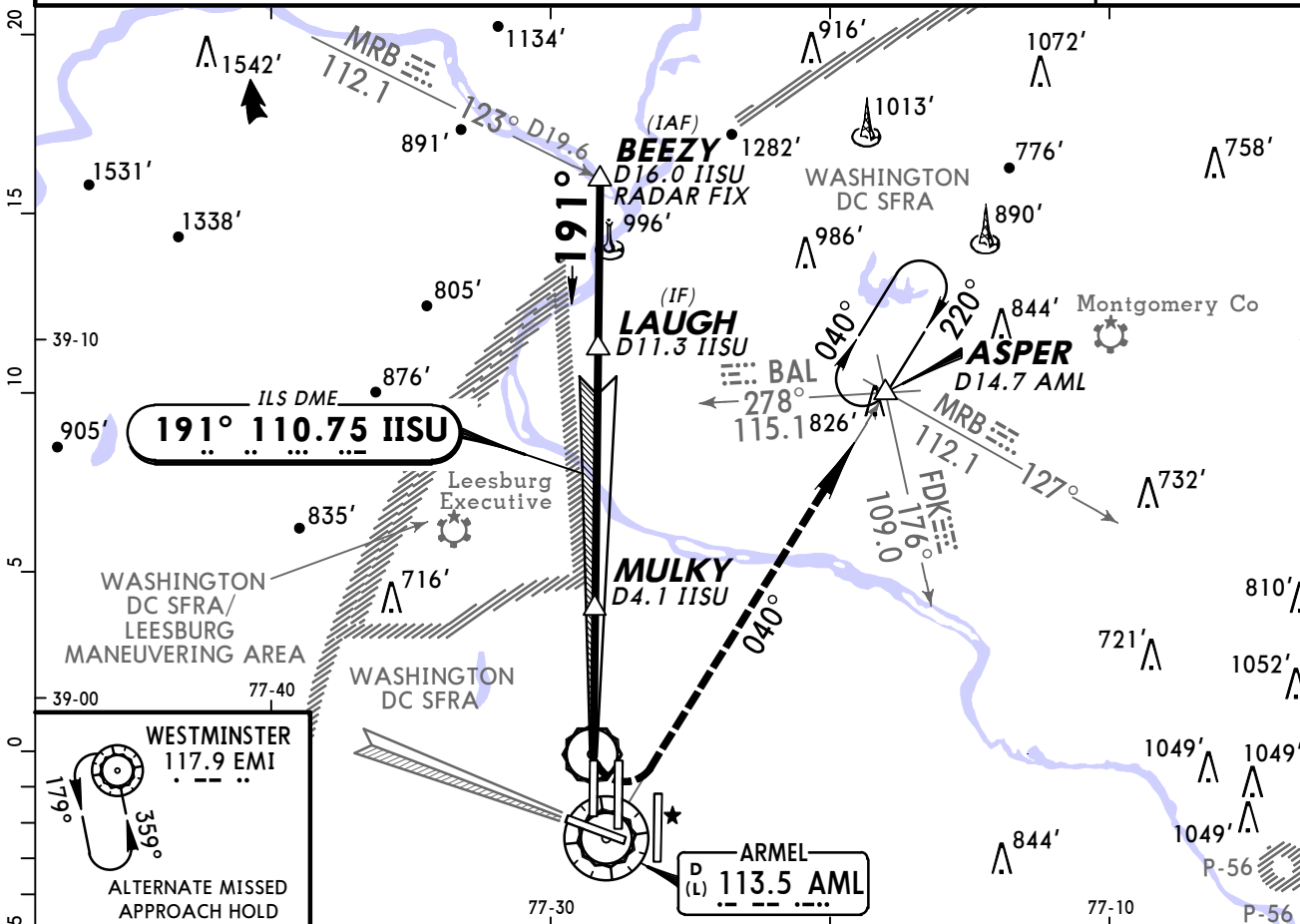
ILS				LOC (GS out)		Max Kts	CIRCLE TO LAND		
DA(H) 478' (200')				MDA(H) 720' (442')					
FULL		TDZ or CL out	ALS out		ALS out		MDA(H)		
A	RVR 18 or 1½	RVR 24 or 1½	RVR 40 or ¾	RVR 24 or 1½	RVR 50 or 1	90	940' (628')-1		
B						120			
C						RVR 40 or ¾	RVR 60 or 1¼	140	940' (628')-1¾
D						RVR 50 or 1	1½	165	940' (628')-2

KIAD/IAD WASHINGTON DULLES INTL 14 MAY 10 (21-11) WASHINGTON, DC (VA) CONVERGING ILS Rwy 19R

BRIEFING STRIP

TM

D-ATIS	POTOMAC Approach (R)	DULLES Tower		Ground	
		Rwys 1L/19R, 12/30	Rwy 1C/19C	Rwy 1R/19L	West East
134.85	120.45	134.42	120.25	120.1	132.45 121.9
LOC IISU	Final Apch Crs	GS MULKY	ILS DA(H)	Apt Elev 312'	
110.75	191°	1700' (1422')	1078' (800')	TDZE 278'	
MISSED APCH: Climbing LEFT turn to 3000' outbound via AML VOR R-040 to ASPER INT/D14.7 AML and hold.					
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'					
1. Radar required. 2. Simultaneous converging approaches authorized with Rwy 12.					
3. VGSI and ILS glidepath not coincident.					



Gnd speed-Kts	70	90	100	120	140	160	ALS-II		3000'	AML	
GS	3.00°	377	484	538	646	753	861	PAPI	LT	via 113.5 R-040	ASPER

STRAIGHT-IN LANDING RWY19R											
ILS											
DA(H) 1078' (800')											
FULL						ALS out					

TERPS	A								
	B								
	C	2 1/4				2 3/4			
	D								

KIAD/IAD

WASHINGTON DULLES INTL

29 APR 11

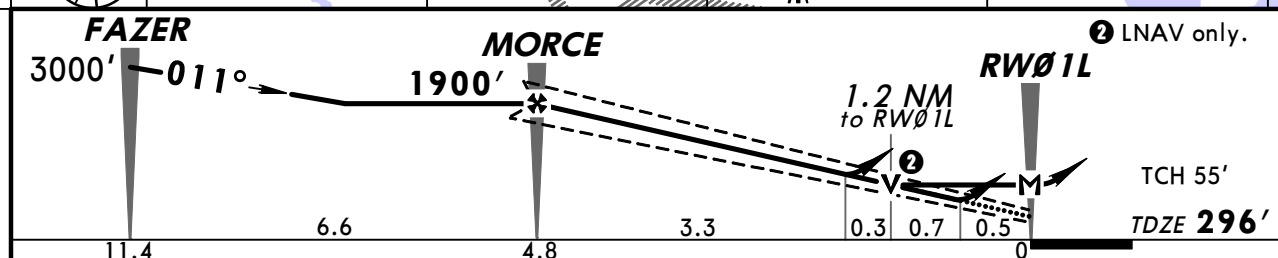
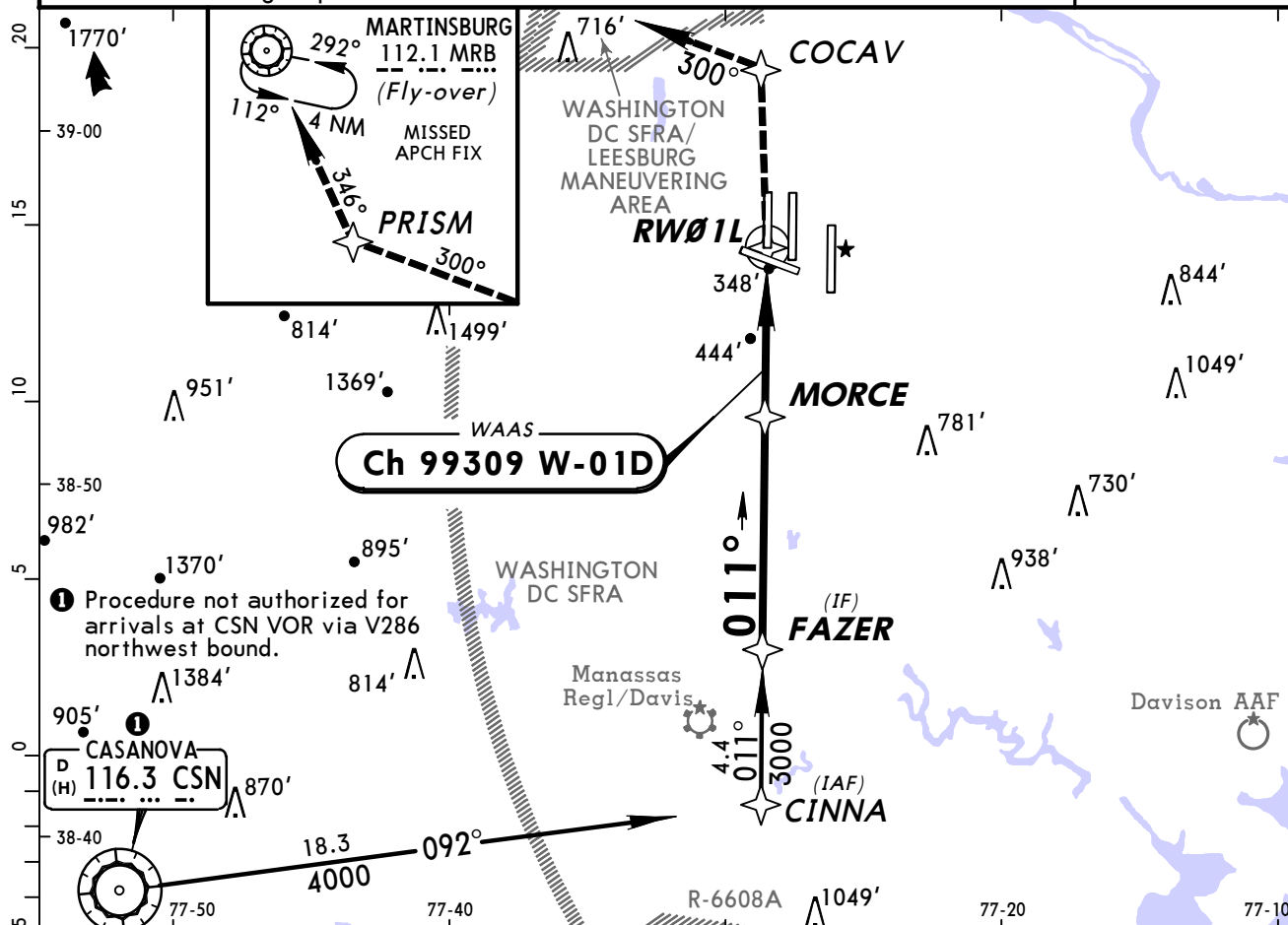
(22-1)

WASHINGTON, DC (VA)

RNAV (GPS) Rwy 1L

BRIEFING STRIP™

D-ATIS	POTOMAC Approach (R)	Rwys 1L/19R, 12/30	DULLES Tower Rwy 1C/19C	Rwy 1R/19L	Ground West East
134.85	120.45	134.42	120.25	120.1	132.45 121.9
WAAS Ch 99309 W-01D	Final Apch Crs 011°	Minimum Alt MORCE 1900' (1604')	LPV DA(H) 496' (200')	Apt Elev 312' TDZE 296'	3400' MSA RW01L
MISSED APCH: Climb to 4000' direct COCAV and via 300° track to PRISM and via 346° track to MRB VOR and hold.					
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 48°C (118°F). 2. DME/DME RNP-0.30 not authorized. 3. VGSI and RNAV glidepath not coincident.					



Gnd speed-Kts	70	90	100	120	140	160	ALSF-II	4000'	COCAV
Glide Path Angle	3.00°	372	478	531	637	743	PAPI		
MAP at RW01L									

STRAIGHT-IN LANDING RWY1L						CIRCLE-TO-LAND	
LPV		LNAV/VNAV		LNAV		Max Kts	MDA(H)
DA(H) 496' (200')		DA(H) 828' (532')		MDA(H) 740' (444')			
ALS out		ALS out		ALS out			
A				RVR 24 or 1/2	RVR 50 or 1	90	940' (628') - 1
B						120	
C	RVR 24 or 1/2	RVR 40 or 3/4	RVR 60 or 1/4	1 3/4	RVR 40 or 3/4	140	940' (628') - 1 3/4
D					RVR 50 or 1	165	940' (628') - 2

CHANGES: Profile, minimums.

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KIAD/IAD

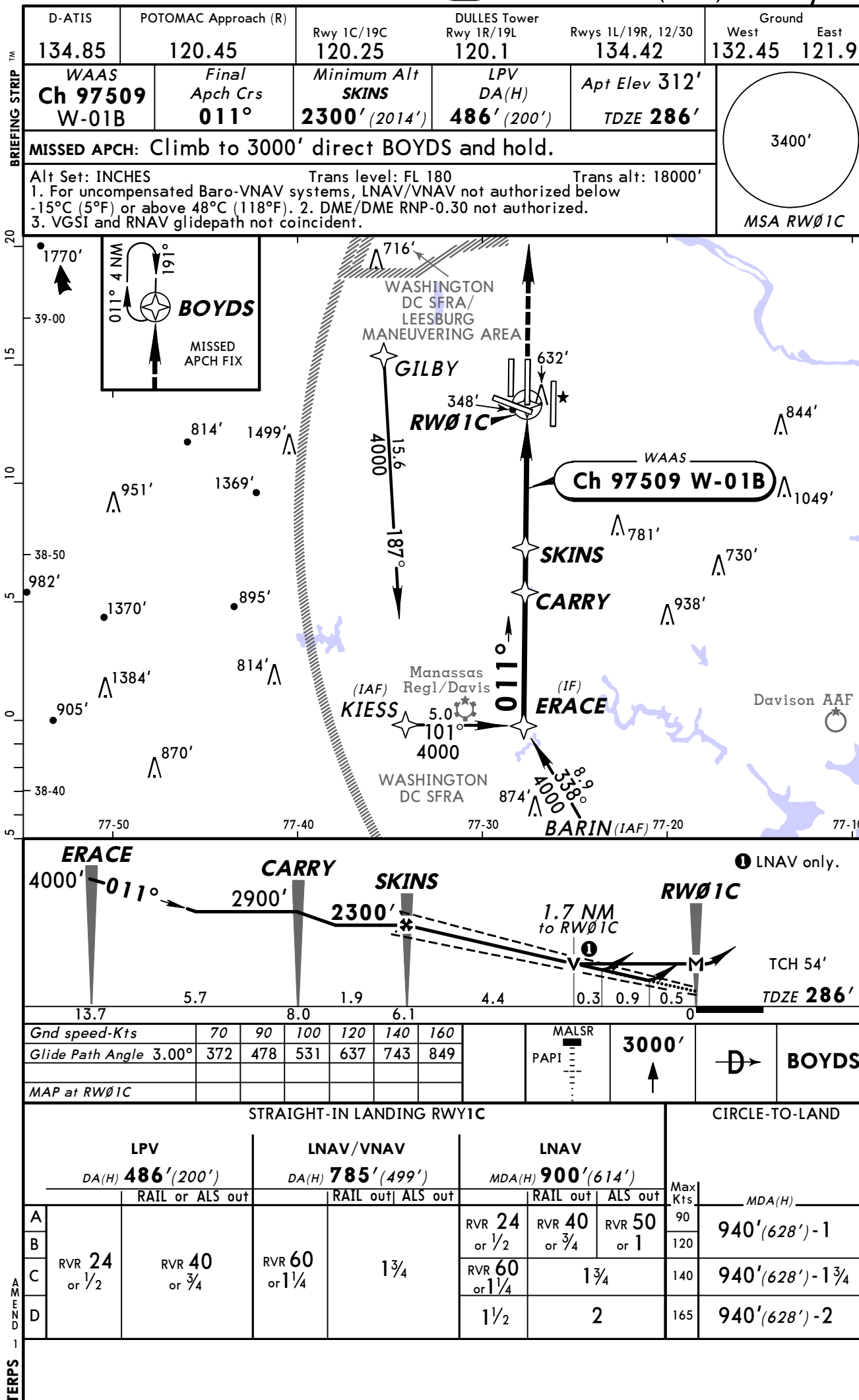
WASHINGTON DULLES INTL

29 APR 11

(22-2)

WASHINGTON, DC (VA)

RNAV (GPS) Y Rwy 1C



KIAD/IAD

WASHINGTON DULLES INTL

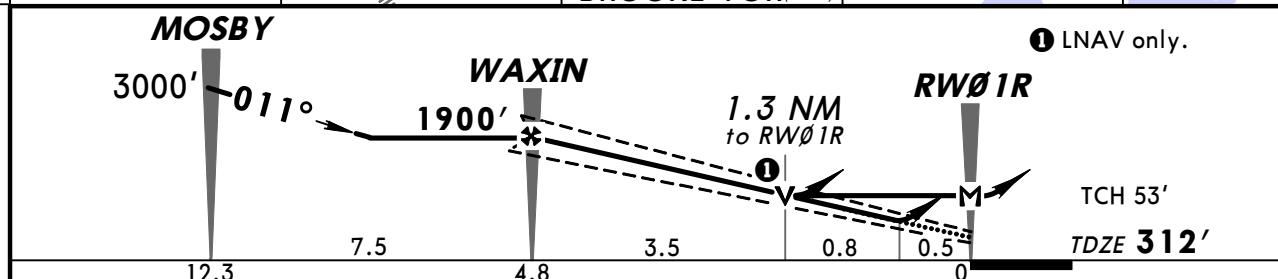
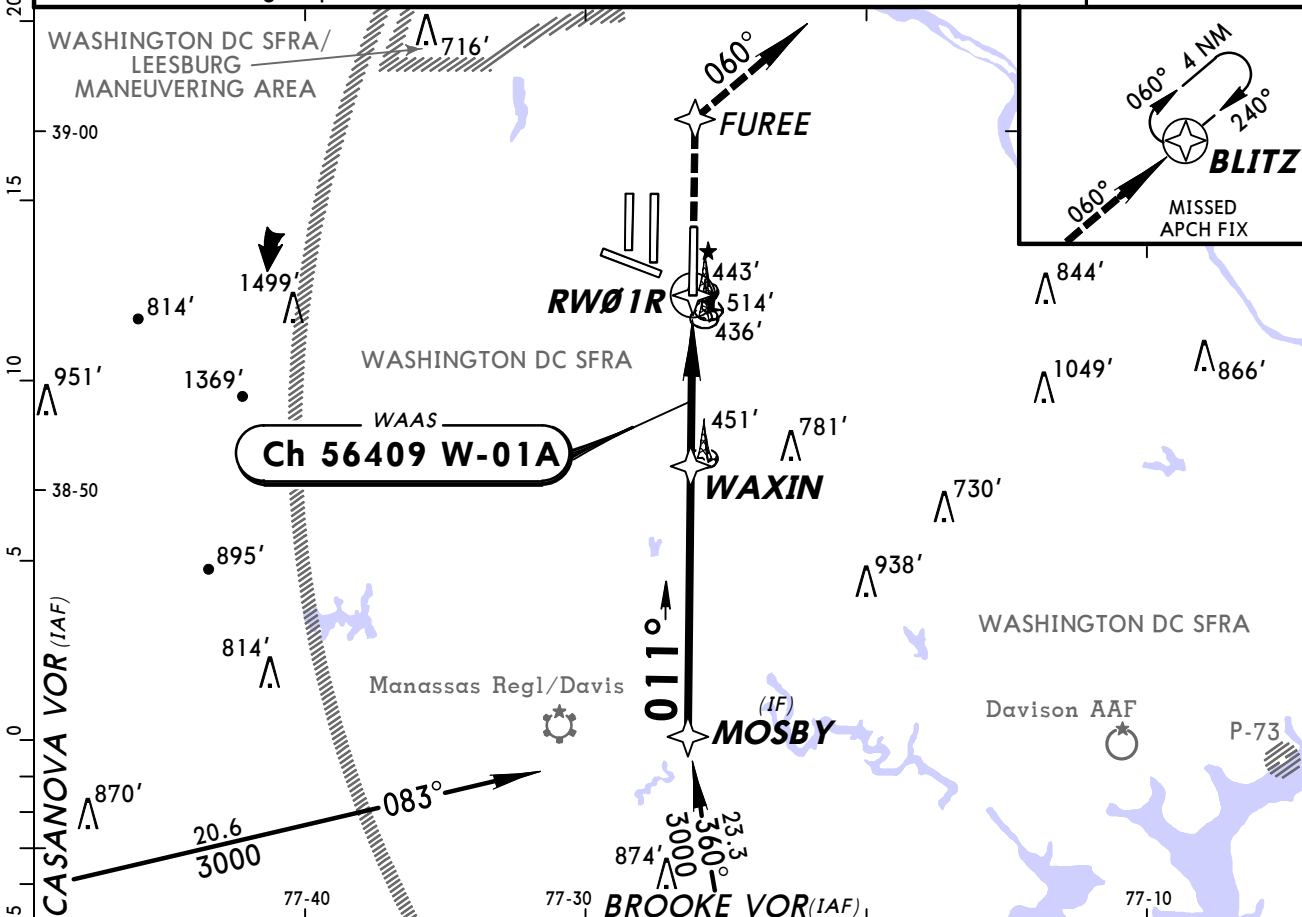
29 APR 11

(22-3)

WASHINGTON, DC (VA)

RNAV (GPS) Y Rwy 1R

BRIEFING STRIP TM	D-ATIS	POTOMAC Approach (R)	Rwy 1R/19L	DULLES Tower Rwy 1C/19C	Rwys 1L/19R, 12/30	Ground West East
	134.85	120.45	120.1	120.25	134.42	132.45 121.9
	WAAS Ch 56409 W-01A	Final Apch Crs 011°	Minimum Alt WAXIN 1900' (1588')	LPV DA(H) 512' (200')	Apt Elev 312' TDZE 312'	3400' MSA RW01R
MISSED APCH: Climb to 3000' direct FUREE and via 060° track to BLITZ and hold.						
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 48°C (118°F). 2. DME/DME RNP-0.30 not authorized. 3. VGSI and RNAV glidepath not coincident.						



Gnd speed-Kts	70	90	100	120	140	160	ALSF-II	3000'	PAPI	FUREE
Glide Path Angle 3.00°	372	478	531	637	743	849				
MAP at RW01R										

STRAIGHT-IN LANDING RWY1R						CIRCLE-TO-LAND	
LPV		LNAV/VNAV		LNAV			
DA(H) 512' (200')		DA(H) 764' (452')		MDA(H) 800' (488')			
ALS out		ALS out		ALS out		Max Kts	MDA(H)
						90	940' (628') - 1
						120	
RVR 24 or 1/2		RVR 50 or 1		RVR 24 or 1/2		140	940' (628') - 1 3/4
						165	940' (628') - 2

CHANGES: None.

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KIAD/IAD

WASHINGTON DULLES INTL

29 APR 11

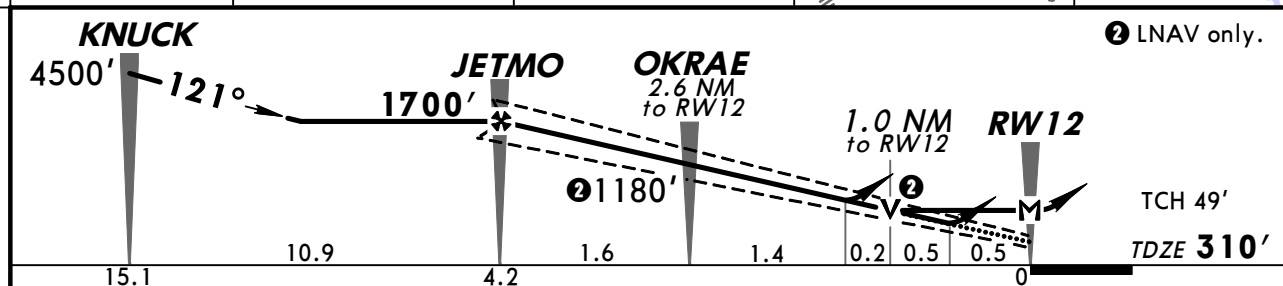
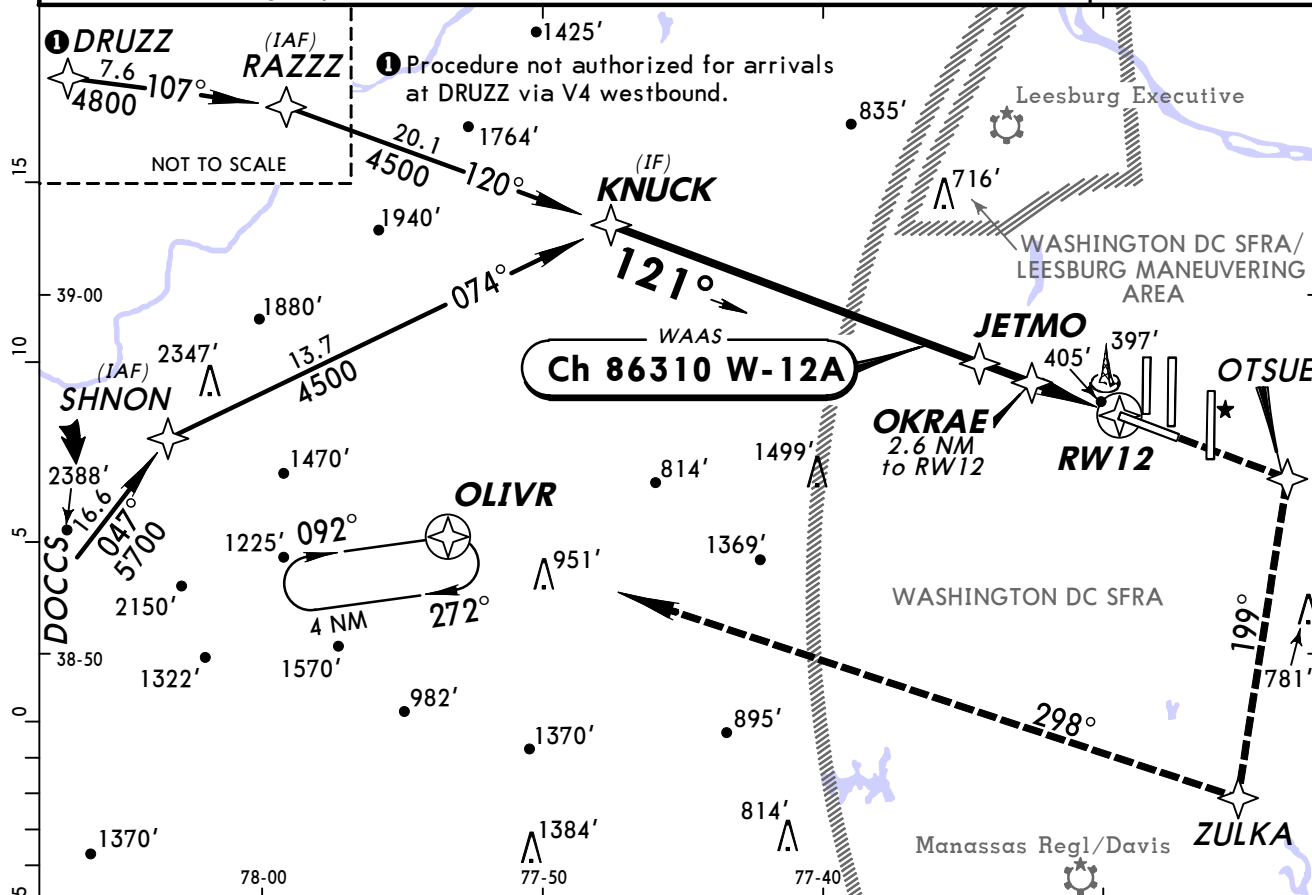
22-4

WASHINGTON, DC (VA)

RNAV (GPS) Rwy 12

BRIEFING STRIP™

D-ATIS	POTOMAC Approach (R)	Rwys 1L/19R, 12/30	DULLES Tower Rwy 1C/19C	Rwy 1R/19L	Ground West	East
134.85	120.45	134.42	120.25	120.1	132.45	121.9
WAAS Ch 86310 W-12A	Final Apch Crs 121°	Minimum Alt JETMO 1700' (1390')	LPV DA(H) 510' (200')	Apt Elev 312' TDZE 310'	3400' MSA RW12	
MISSED APCH: Climb to 4000' direct OTSUE and via 199° track to ZULKA and RIGHT turn via 298° track to OLIVR and hold.						
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 48°C (118°F). 2. DME/DME RNP-0.30 not authorized. 3. VGSI and RNAV glidepath not coincident.						



Gnd speed-Kts	70	90	100	120	140	160	MALSR PAPI 4000' ↑ OTSUE	D→	TDZE 310'
Glide Path Angle	3.00°	372	478	531	637	849			
MAP at RW12									

STRAIGHT-IN LANDING RWY12								CIRCLE-TO-LAND	
LPV		LNAV/VNAV		LNAV			Max Kts	MDA(H)	
DA(H) 510'(200')		DA(H) 729'(419')		MDA(H) 680'(370')					
RAIL or ALS out		RAIL out ALS out		RAIL out		ALS out			
A							90	940'(628') - 1	
B	RVR 24	RVR 40	RVR 50	1½	RVR 24 or ½	RVR 40 or ¾	120		
C	or ½	or ¾	or 1		RVR 50 or 1	140	940'(628') - 1¾		
D				RVR 50 or 1	RVR 60 or 1¼		165	940'(628') - 2	

CHANGES: Profile, minimums.

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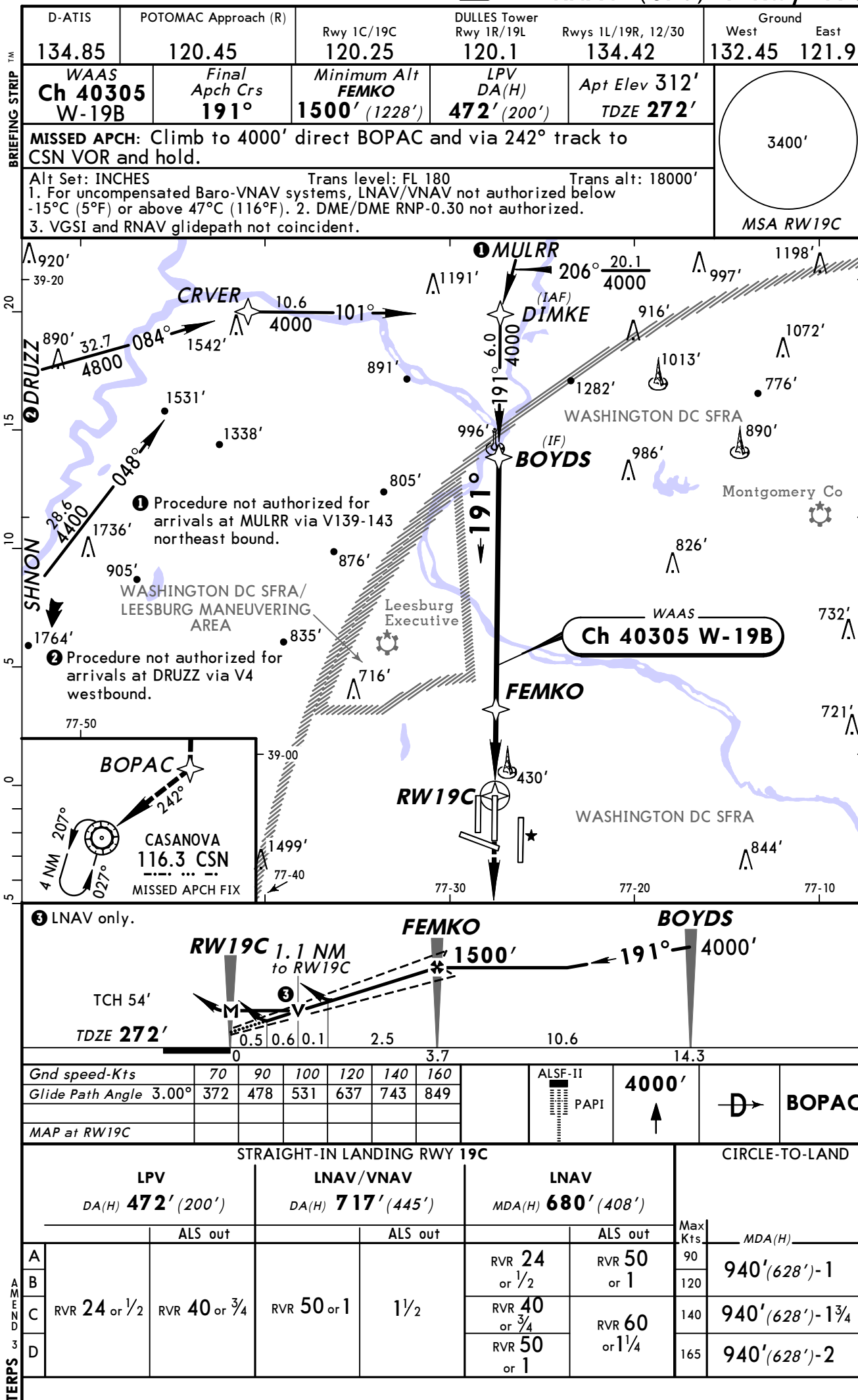
BRIFFING STRIP TM

MSA RW19L



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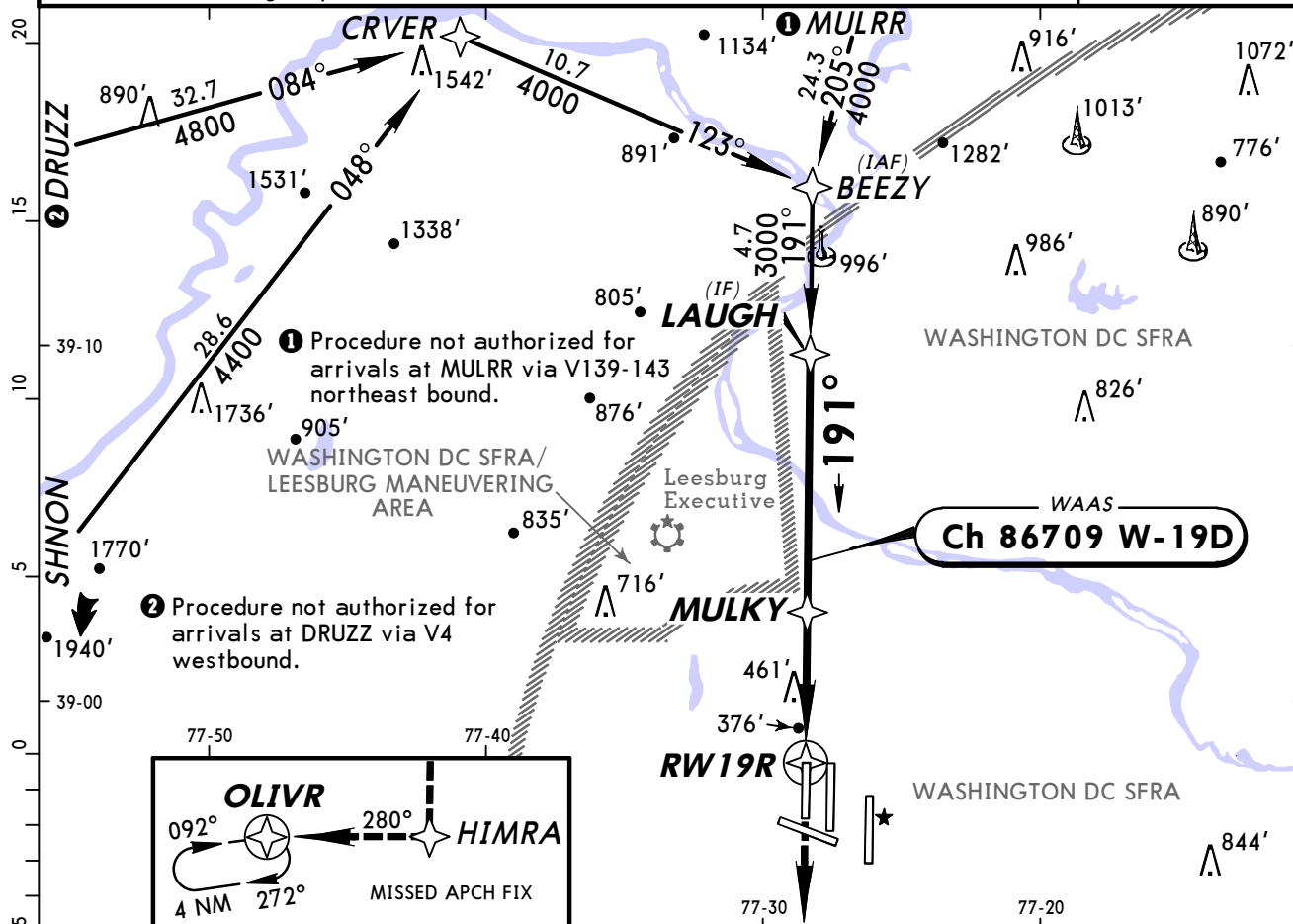
KIAD/IAD

WASHINGTON DULLES INTL

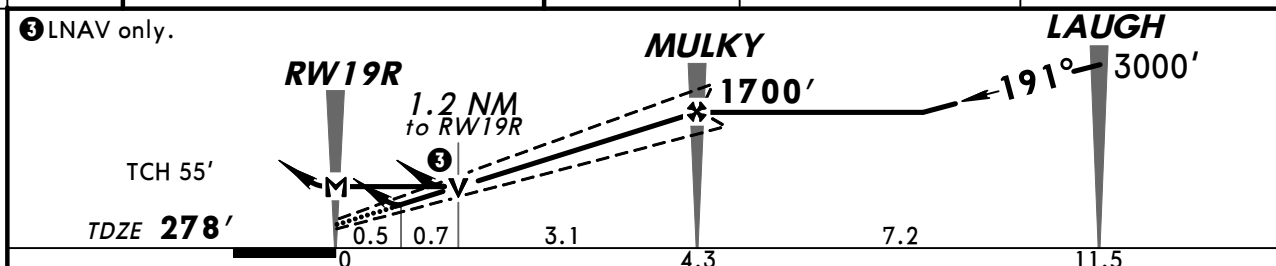
JEPPESEN
14 MAY 10 (22-7)

WASHINGTON, DC (VA)
RNAV (GPS) Rwy 19R

D-ATIS 134.85	POTOMAC Approach (R) 120.45	Rwys 1L/19R, 12/30 134.42	DULLES Tower Rwy 1C/19C 120.25	Rwy 1R/19L 120.1	Ground West East 132.45 121.9
WAAS Ch 86709 W-19D	Final Apch Crs 191°	Minimum Alt MULKY 1700' (1422')	LPV DA(H) 478' (200')	Apt Elev 312' TDZE 278'	3400' MSA RW19R
MISSED APCH: Climb to 5000' direct HIMRA and via 280° track to OLIVR and hold, continue climb-in-hold to 5000'. Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 48°C (118°F). 2. DME/DME RNP-0.30 not authorized. 3. VGSI and RNAV glidepath not coincident.					



③ LNAV only.



Gnd speed-Kts	70	90	100	120	140	160	ALSF-II	5000'	HIMRA
Glide Path Angle 3.00°	372	478	531	637	743	849	PAPI		
MAP at RW19R									

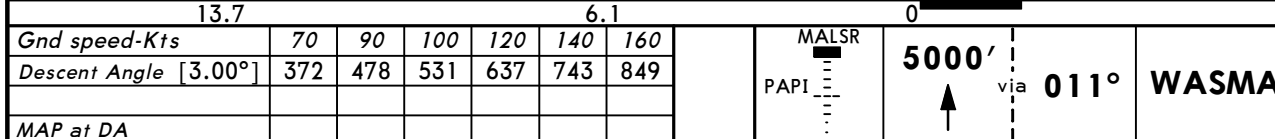
STRAIGHT-IN LANDING RWY19R

CIRCLE-TO-LAND

LPV <i>DA(H)</i> 478' (200')			LNAV/VNAV <i>DA(H)</i> 714' (436')		LNAV <i>MDA(H)</i> 720' (442')		Max Kts	<i>MDA(H)</i>		
		ALS out		ALS out		ALS out				
A	RVR 24 or $\frac{1}{2}$	RVR 40 or $\frac{3}{4}$	RVR 50 or 1	$1\frac{1}{2}$	RVR 24 or $\frac{1}{2}$	RVR 50 or 1	90	940' (628') - 1		
B							120			
C							RVR 40 or $\frac{3}{4}$	RVR 60 or $1\frac{1}{4}$	140	940' (628') - 1 $\frac{3}{4}$
D								RVR 50 or 1	$1\frac{1}{2}$	165

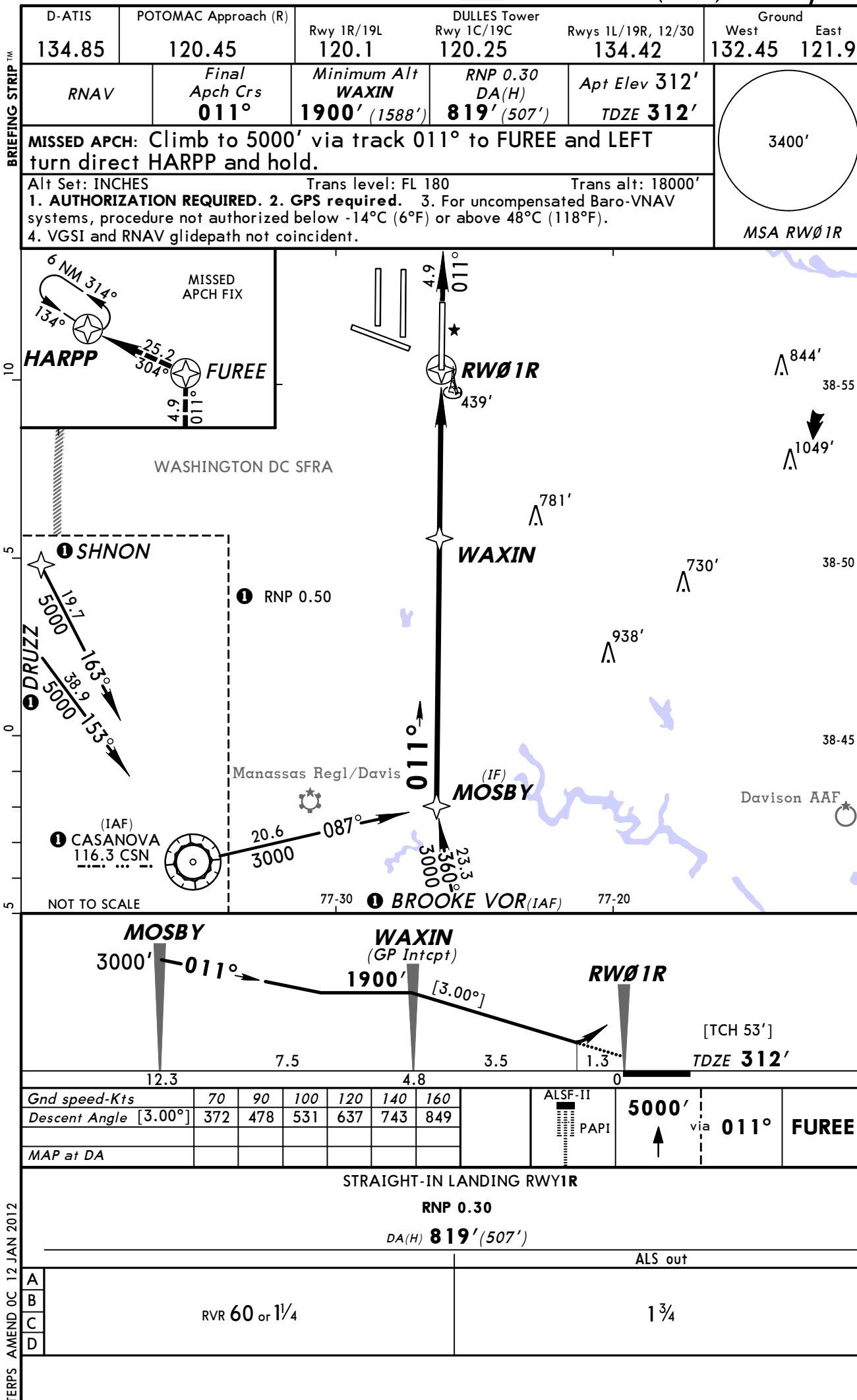
CHANGES: Communications, airspace.

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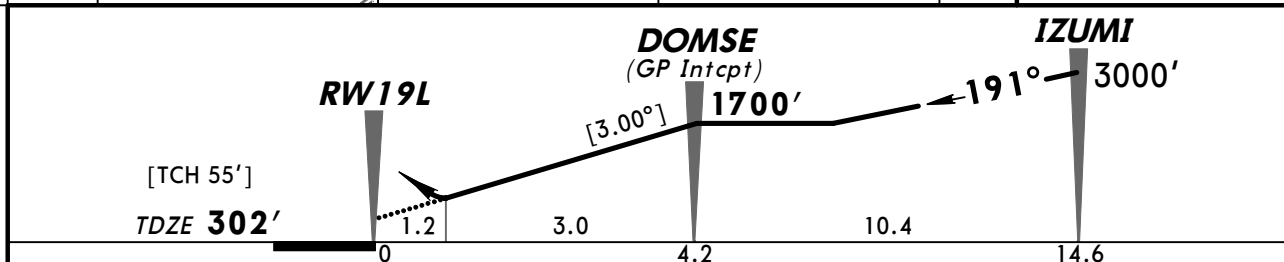
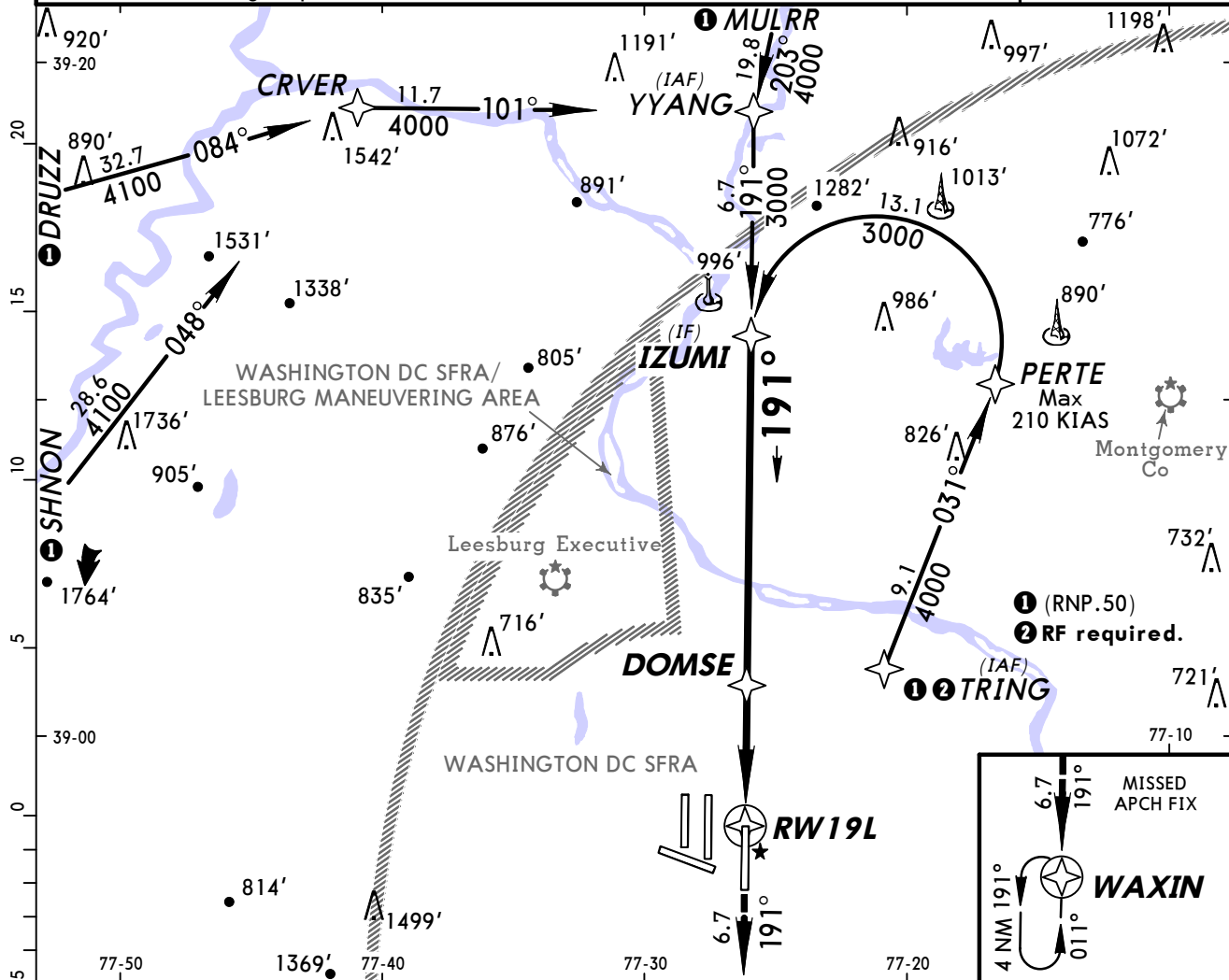
BRIEFING STRIP™

RAIL or ALS out

A		
B		
C	$1\frac{1}{2}$	$1\frac{3}{4}$
D		



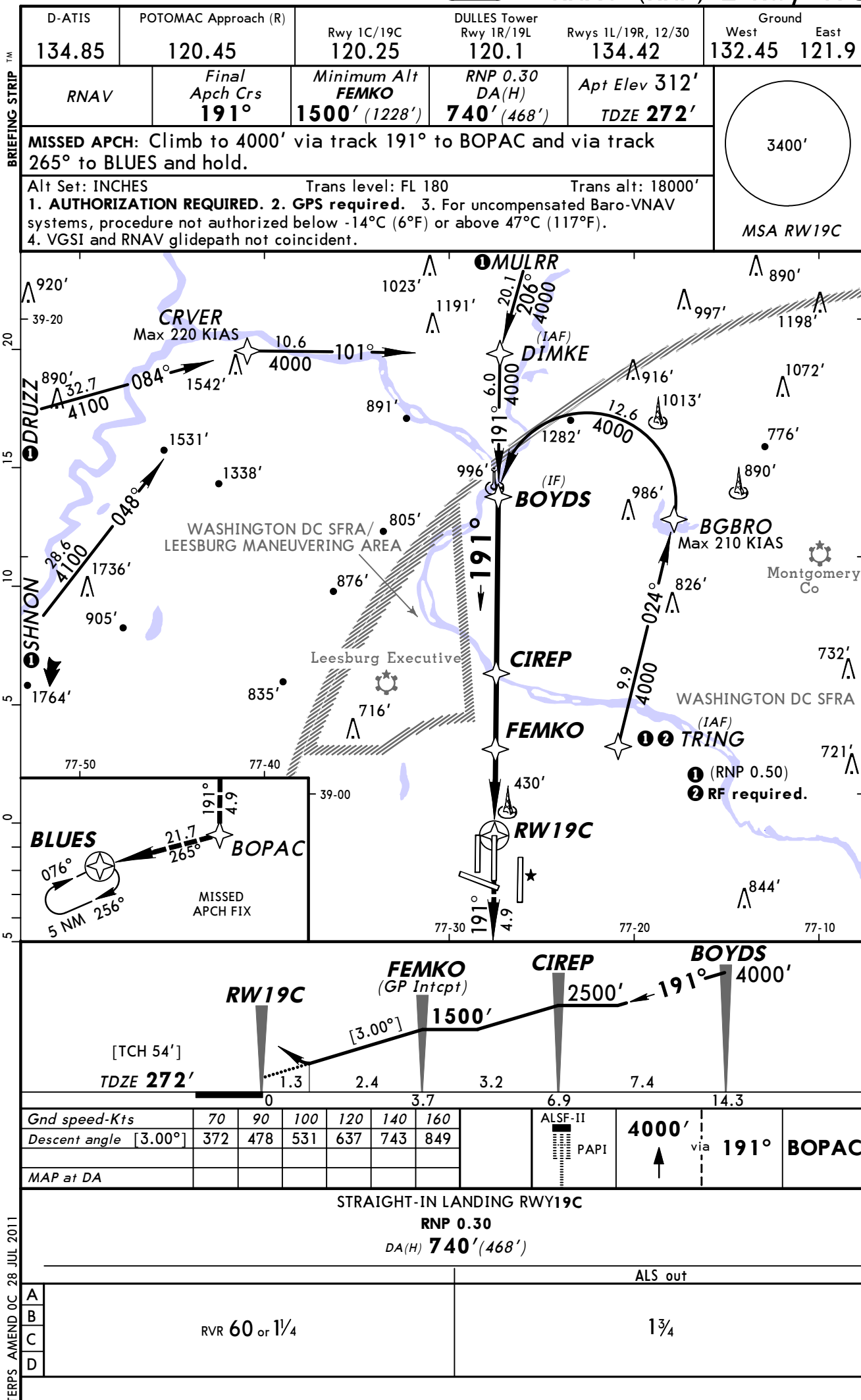
D-ATIS 134.85	POTOMAC Approach (R) 120.45	Rwy 1R/19L 120.1	DULLES Tower Rwy 1C/19C 120.25	Rwys 1L/19R, 12/30 134.42	Ground West East 132.45 121.9
RNAV	Final Apch Crs 191°	Minimum Alt DOMSE 1700' (1398')	RNP 0.30 DA(H) 743' (441')	Apt Elev 312' TDZE 302'	3400'
MISSED APCH: Climb to 2000' via track 191° to WAXIN and hold. Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. AUTHORIZATION REQUIRED. 2. GPS required. 3. For uncompensated Baro-VNAV systems, procedure not authorized below -14°C (6°F) or above 47°C (118°F). 4. VGSI and RNAV glidepath not coincident.					MSA RW19L

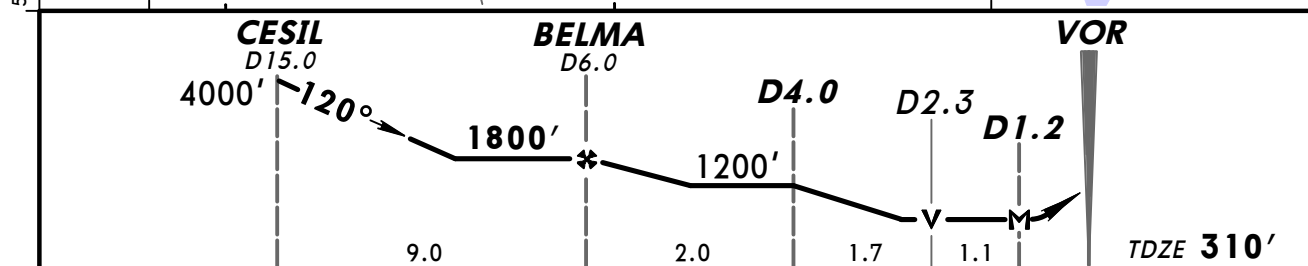


Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.00°]	372	478	531	637	743	849
MAP at DA						

STRAIGHT-IN LANDING RWY 19L					
RNP 0.30					
DA(H) 743' (441')					
RAIL or ALS out					

A	RVR 50 or 1	1½
B		
C		
D		





							MALSR PAPI	4000' via RT	AML 113.5 R-256	BLUES
<i>MAP at D1.2</i>										

STRAIGHT-IN LANDING RWY 12				CIRCLE-TO-LAND	
MDA(H) 700' (390')					
		RAIL out	ALS out	Max Kts	MDA(H)
A	RVR 24 or 1/2	RVR 40 or 3/4	RVR 50 or 1	90	820' (508') - 1
B				120	
C				140	840' (528') - 1 1/2
D	RVR 50 or 1	RVR 60 or 1 1/4		165	880' (568') - 2

General Information

Location: Hampton VA USA
IATA Code: LFI
Lat/Long: N37° 05.0' W076° 21.6'
Elevation: 11 ft

Airport Use: Military
Magnetic Variation: 10.8°W
Sectional Chart: Washington

Fuel Types: 115-145 Octane, Jet 4
Repair Types: Major Airframe, Major Engine
Customs: No
Airport Type: IFR
Landing Fee: No
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: No
Beacon: Yes

Sunrise: 1140 Z
Sunset: 2257 Z,

Runway Information

Runway: 08
Length x Width: 10000 ft x 150 ft
Surface Type: concrete
TDZ-Elev: 9 ft
Lighting: Edge, ALS
Stopway: 1000 ft

Runway: 26
Length x Width: 10000 ft x 150 ft
Surface Type: concrete
TDZ-Elev: 10 ft
Lighting: Edge, ALS, REIL
Stopway: 1000 ft

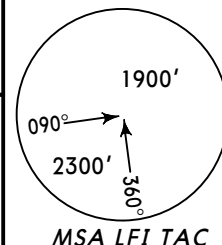
Communication Information

Langley Tower 125.0
Langley Ground Control 121.7
Langley Clearance Delivery 118.85
Norfolk Approach Control 127.9 (180°-310°)
Norfolk Approach Control 126.05 (10°-80°)
Norfolk Approach Control 125.7
Norfolk Approach Control 124.9 (311°-9°)
Norfolk Departure Control 127.9 (180°-310°)
Norfolk Departure Control 126.05 (10°-80°)

Norfolk Departure Control 125.7
Norfolk Departure Control 124.9 (311 °-9 °)
Langley Radar 127.6
Langley Radar 120.3
Nasa Operations 123.375
Langley Operations 122.9 Military

Apt Elev
See
graphic

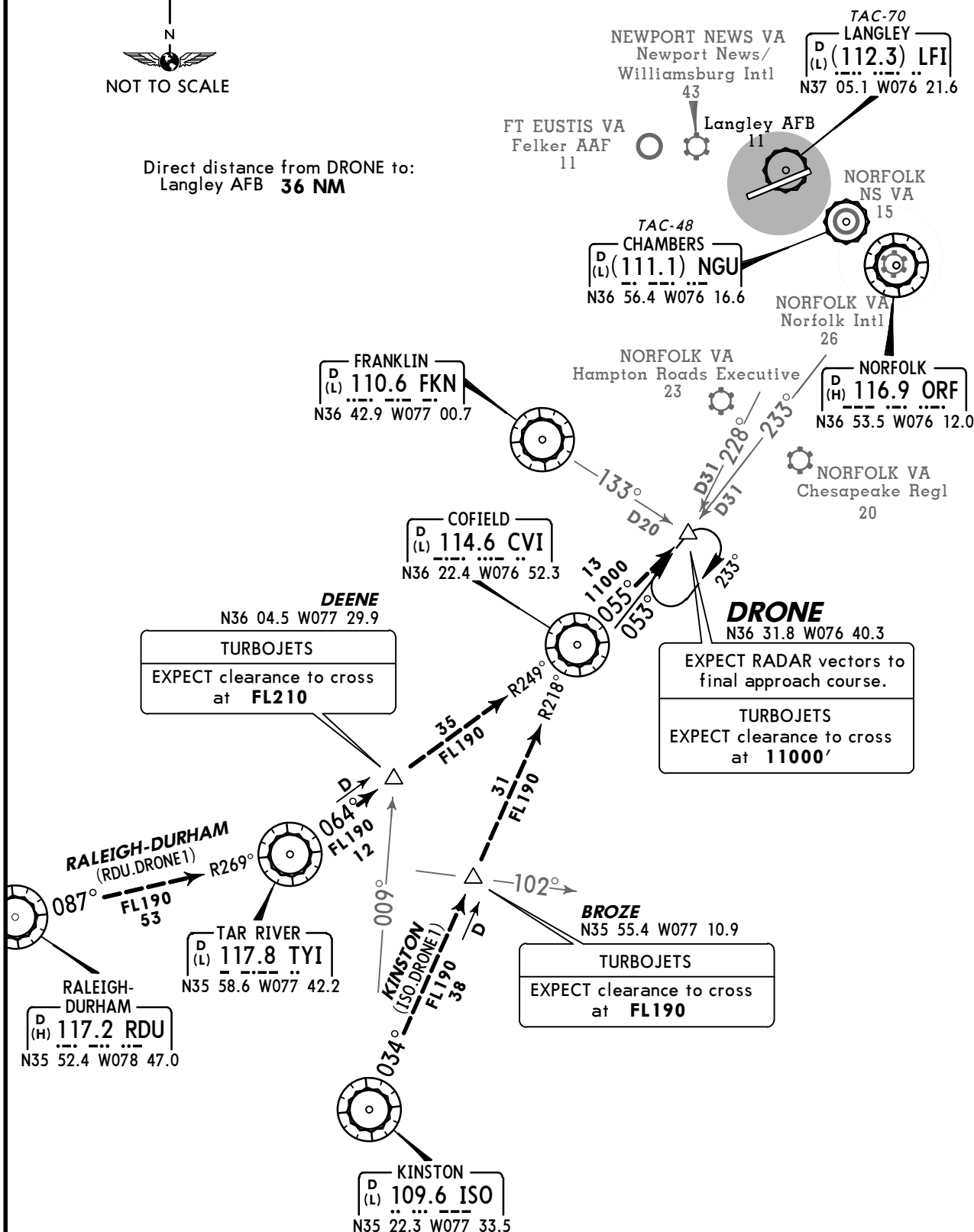
Alt set: INCHES
Trans level: FL 180 Trans alt: 18000'



DRONE ONE ARRIVAL (DRONE.DRONE1)



Direct distance from DRONE to:
Langley AFB **36 NM**



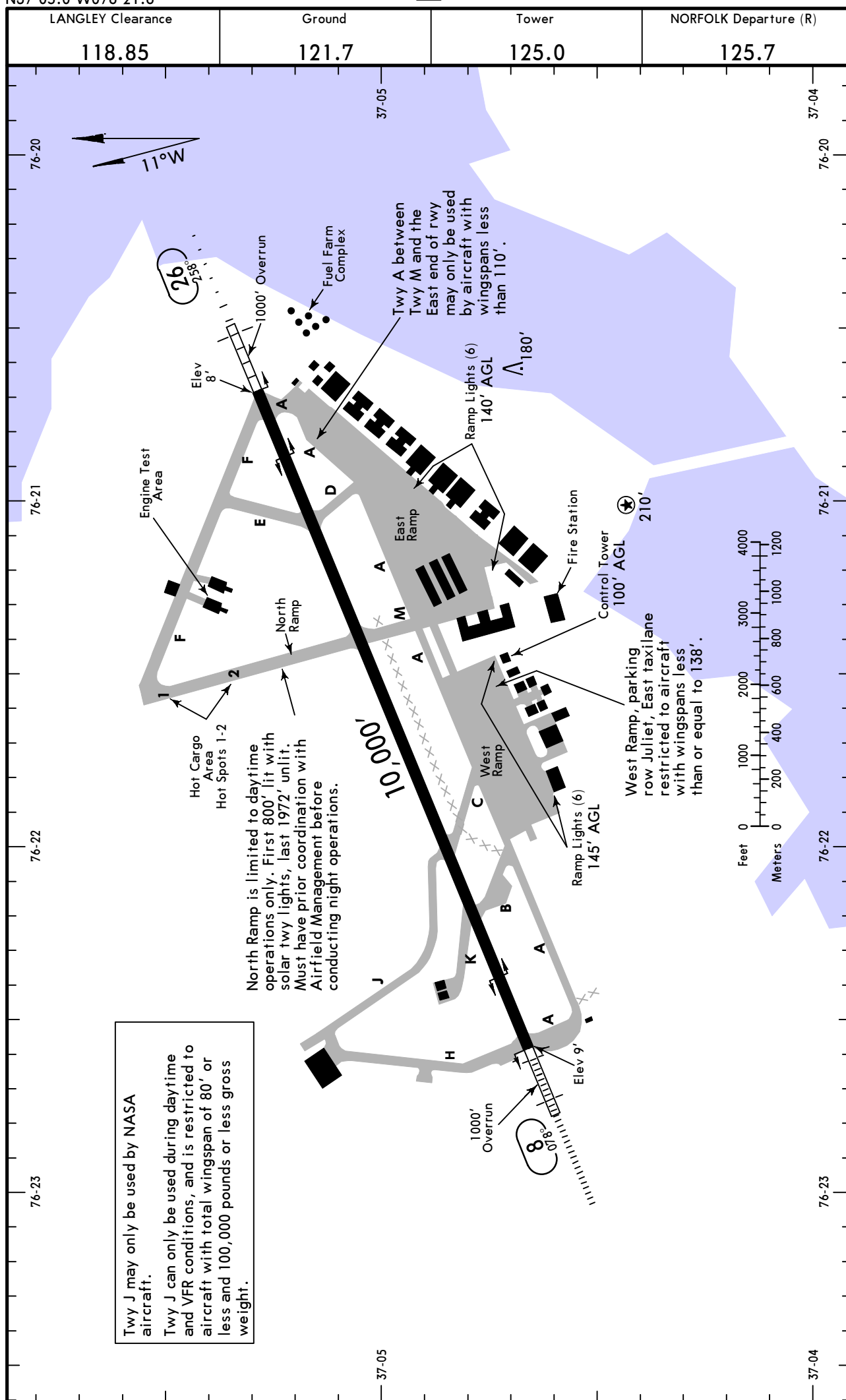
ROUTING

From over DRONE EXPECT RADAR vectors to final approach course.

KLFI/LFI
Apt Elev 11'
N37 05.0 W076 21.6

JEPPesen
2 SEP 11 30-9

LANGLEY AFB
HAMPTON, VA



GENERAL

CAUTION: Intensive IFR and VFR high performance fighter traffic within the Class D airspace:
Extensive uncontrolled general aviation traffic below 3000' over James River and Chesapeake Bay.

CAUTION: Departing traffic do not exceed 1000' on climb out until departure end of rwy.

CAUTION: Laser light beam hazard to direct visual observation will be conducted at NASA Langley research center within 1/2 NM radius of N37 06.3 W076 22.7. Strong caution is advised.

CAUTION: Weather observation site limited 080° - 250° due to building. ATC will relay tower prevailing visibility, sector visibility, local PIREPs or an occurrence of previous unreported weather conditions that could affect operations to weather flight.

CAUTION: Wind shear conditions may exist on Rwy 26 through short final and touchdown, that are prevalent, undetectable and often unreported.

CAUTION: Increased potential for hydroplaning due to excessive rubber build-up.

CAUTION: Airfield grass cutting conducted from Mar-Nov, expect increased bird activity in vicinity of mowers.

RESTRICTED: Prior permission required, contact Base Ops. Quiet hours weekdays 0330-1000Z, weekends and holidays 0330-1200Z.

Large concentration of birds in vicinity of airfield during inclement weather and migratory seasons. Fall migration South begins in Oct with the peak period between Nov-Feb. Peak Spring migration North runs from Feb-Apr.

Wind speed increases down the runway when landing or departing Rwy 8.

Rwy 26 and Rwy 8 partially restricted from view due to parked aircraft; night observation limited due to high intensity security lights.

No engine start, take-off or landing prior to 1100Z on weekdays and 1300Z on weekends and holidays. Additionally, all landings will be to a full stop, except Aero Club may conduct practice approaches.

All jet aircraft are prohibited from taxiing or conducting engine runs on the asphalt portion of the East and West ramps due to the deteriorating pavement.

WIDE BODY AIRCRAFT-Large aircraft (C-5, KC-10, C-17, C/KC-135) are restricted to two practice approaches. Touch-and-go landings are not authorized. All transient aircraft avoid landing on the BAK-12.

Expect progressive taxi to parking. Follow-me available upon request.

ADDITIONAL RUNWAY INFORMATION

RWY					USABLE LENGTHS		TAKE-OFF	WIDTH
					LANDING	BEYOND		
					Threshold	Glide Slope		
8 ① 26	HIRL ALSF-I PAPI-L	grooved	RVR			8964'		150'
	HIRL MALSR REIL PAPI-L	grooved	RVR			8839'		

① Threshold lights gated, mid 70' inoperative/removed.

TAKE-OFF & OBSTACLE DEPARTURE PROCEDURE

PART OFF & OBSOLETE DEPARTURE PROCEDURES						
Rwy 26			Rwy 8			
Adequate Vis Ref		STD	With Min climb of 240' /NM to 700'		Other	
			Adequate Vis Ref	STD		
1 & 2 Eng	RVR 16 or 1/4	RVR 50 or 1	RVR 16 or 1/4	RVR 50 or 1	500-3	
3 & 4 Eng		RVR 24 or 1/2		RVR 24 or 1/2		

TAKE-OFF OBSTACLES: Rwy 8, Boat 2261' from DER, 779' left of centerline, 60' AGL/80' MSL. Boat 2500' from DER, 59' left of centerline, 60' AGL/70' MSL. Vehicle on road 1051' from DER, 702' right of centerline, 15' AGL/43' MSL. Boat 2841' from DER, 641' right of centerline, 60' AGL/80' MSL. Multiple towers 2.0 NM from DER, 1.7 NM right of centerline, 503' AGL/511' MSL. Rwy 26, Tree 4050' from DER, 685' left of centerline, 100' AGL/120' MSL. Tree

4840' from DER, 687' left of centerline, 100' AGL/136' MSL. Tree 4044' from DER, 31' left of centerline, 101' AGL/113' MSL. Tree 4153' from DER, 342' right of centerline, 101' AGL/114' MSL. Tree 4037' from DER, 623' right of centerline, 101' AGL/110' MSL. Tree 4377' from DER, 435' right of centerline, 100' AGL/121' MSL. Tree 3805' from DER, 1184' right of centerline, 100' AGL/133' MSL.

OBSTACLE DP

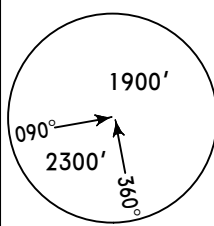
Rwy 26, cross departure end of runway at or above 10' AGL/18' MSL.

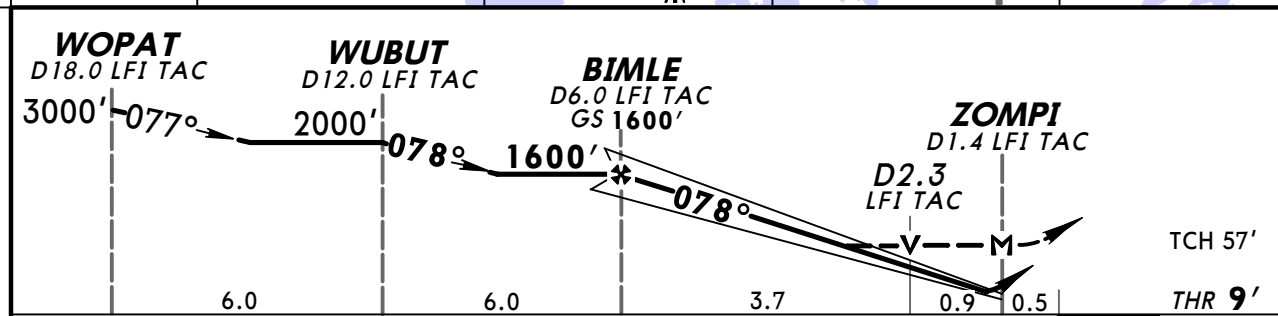
KLFI/LFI
HAMPTON, VA

JEPPESSEN
2 SEP 11 **(31-1)**

LANGLEY AFB
ILS or LOC DME Rwy 8

BRIEFING STRIP

NORFOLK Approach (R)		LANGLEY Tower		Ground	
125.7		125.0		121.7	
LOC ILFI 109.9	Final Apch Crs 078°	GS BIMLE 1600' (1591')	ILS DA(H) 209' (200')	Apt Elev 11' THR 9'	
MISSED APCH: Climb to 3000' outbound via LFI TAC R-073 to JRAYE/D20.0 LFI TAC.					
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'					
1. RADAR or DME required. 2. EMERG SAFE ALT 100 NM 2700'. 3. Expect RADAR vectors to IAF or Final Approach course. 4. VGS and ILS glide path not coincident. 5. Glideslope unusable for coupled approach below 750' MSL.					
					MSA LFI TAC



Gnd speed-Kts	70	90	100	120	140	160	ALSF-I PAPI 	LFI TAC-70 via (112.3) R-073	JRAYE
GS	2.80°	347	446	495	594	693			
MAP at ZOMPI or									
BIMLE to MAP	4.6	3:57	3:04	2:46	2:18	1:58			

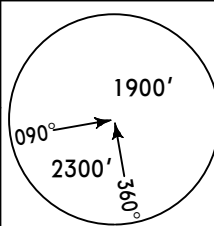
STRAIGHT-IN LANDING RWY 8				CIRCLE-TO-LAND	
ILS		LOC (GS out)		Not Authorized South of Rwy 8-26	
DA(H) 209' (200')		MDA(H) 480' (471')		MDA(H)	
FULL	ALS out		ALS out	Max Kts	
RVR 24 or 1/2	RVR 40 or 3/4	RVR 24 or 1/2	RVR 55 or 1	90	540' (529') - 1
				120	
		RVR 50 or 1	1 3/8	140	580' (569') - 1 1/2
				165	580' (569') - 2

KLFI/LFI
HAMPTON, VA

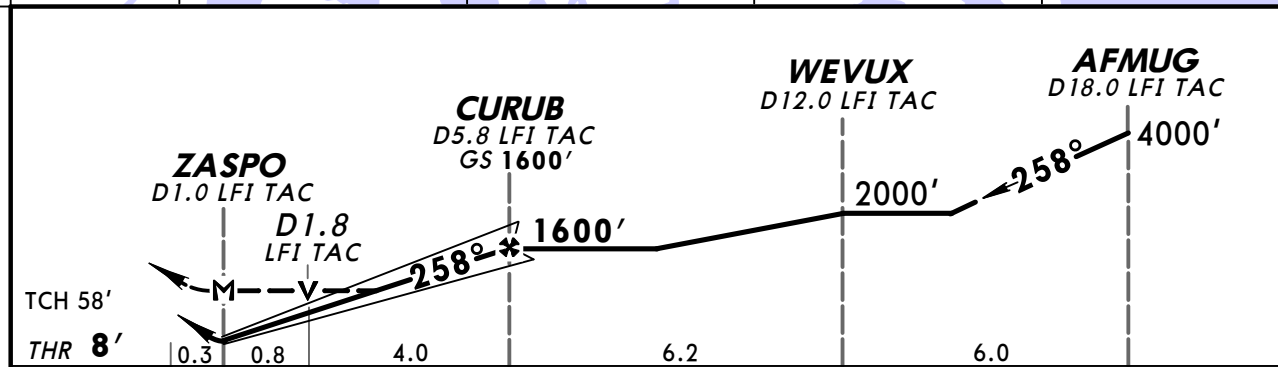
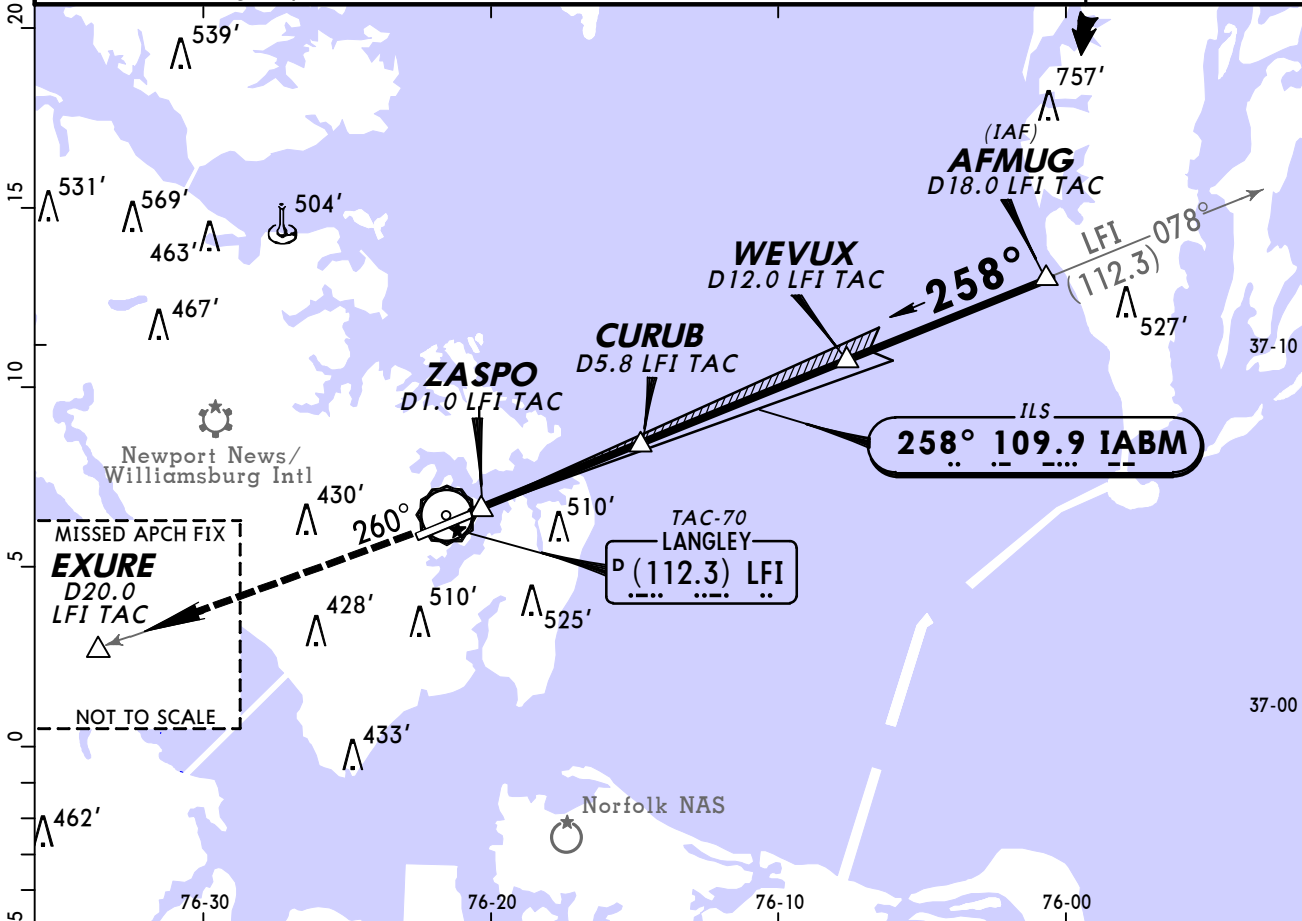
JEPPESEN
2 SEP 11 (31-2)

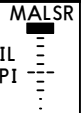
LANGLEY AFB
ILS or LOC DME Rwy 26

BRIEFING STRIP™

NORFOLK Approach (R) 125.7		LANGLEY Tower 125.0		Ground 121.7	
LOC IABM 109.9	Final Apch Crs 258°	GS CURUB 1600' (1592')	ILS DA(H) 210' (202')	Apt Elev 11' THR 8'	
MISSED APCH: Climb to 3000' outbound via LFI TAC R-260 to EXURE/D20.0 LFI TAC.					
Alt Set: INCHES 1. RADAR or DME required. 2. EMERG SAFE ALT 100 NM 2700'. 3. VGSI and ILS glidepath not coincident.					
Trans level: FL 180					Trans alt: 18000'

MSA LFI TAC



Gnd speed-Kts	70	90	100	120	140	160		3000' via (112.3) R-260	LFI TAC-70 EXURE
GS	2.80°	347	446	495	594	693			
MAP to ZASPO or									
CURUB to MAP	4.8	4:07	3:12	2:53	2:24	2:03			

STRAIGHT-IN LANDING RWY 26				CIRCLE-TO-LAND	
ILS		LOC (GS out)		Not Authorized South of Rwy 8-26	
DA(H) 210' (202')		MDA(H) 400' (392')		MDA(H)	
FULL		RAIL out		Max Kts	
RAIL or ALS out		ALS out		90	540' (529') - 1
RVR 40 or 3/4		RVR 40 or 3/4		120	580' (569') - 1 1/2
RVR 40 or 3/4		RVR 45 or 7/8		140	580' (569') - 2
RVR 40 or 3/4		RVR 60 or 1 1/8		165	580' (569') - 2

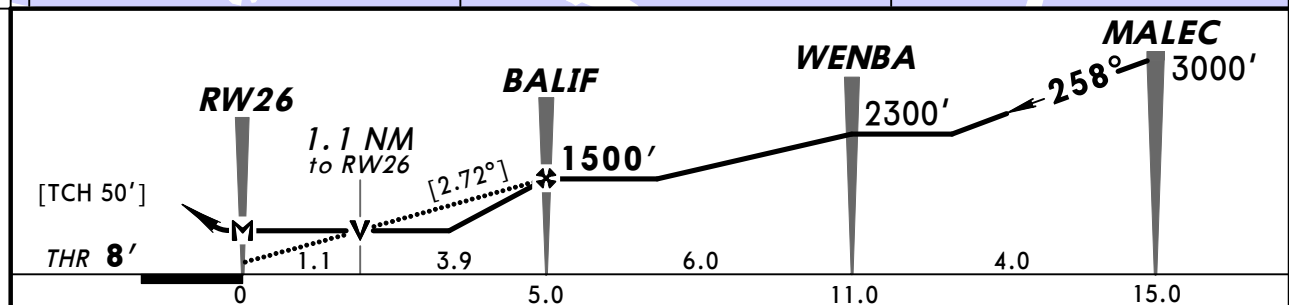
KLFI/LFI
HAMPTON, VA

JEPPESEN
2 SEP 11 **(32-1)**

LANGLEY AFB
RNAV (GPS) Rwy 26

BRIEFING STRIP™

NORFOLK Approach (R)		LANGLEY Tower		Ground	
125.7		125.0		121.7	
RNAV	Final Apch Crs 258°	Minimum Alt BALIF 1500' (1492')	LNAV MDA(H) 520' (512')	Apt Elev 11' THR 8'	2300' MSA RW26
MISSED APCH: Climb to 3000' on course 258° to CAGER and hold.					
Alt Set: INCHES 1. EMERG SAFE ALT 100 NM 2700'. 2. DME/DME RNP-0.30 not authorized.					
Trans level: FL 180		Trans alt: 18000'			



Gnd speed-Kts	70	90	100	120	140	160	MALSR REIL PAPI 3000' on 258° CAGER
Descent Angle [2.72°]	337	433	481	577	674	770	
MAP at RW26							

STRAIGHT-IN LANDING RWY 26				CIRCLE-TO-LAND			
LNAV							
MDA(H) 520' (512')							
		RAIL out	ALS out	Max Kts	MDA(H)		
A	RVR 40 or 3/4		RVR 55 or 1	90	540' (529') - 1		
B				120			
C	RVR 55 or 1		1 1/4	140	580' (569') - 1 1/2		
D				165	580' (569') - 2		

CHANGES: Printing sequence.

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General Information

Location: Lynchburg VA USA
IATA Code: LYH
Lat/Long: N37° 19.6' W079° 12.1'
Elevation: 938 ft

Airport Use: Public
Magnetic Variation: 9.0°W
Sectional Chart: Cincinnati

Fuel Types: 80-87 Octane, 100 Octane (LL), Jet A
Repair Types: Major Airframe, Major Engine
Customs: No
Airport Type: IFR
Landing Fee: No
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: No
Beacon: Yes

Sunrise: 1151 Z
Sunset: 2308 Z,

Runway Information

Runway: 04
Length x Width: 7100 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 905 ft
Lighting: Edge, ALS, Pilot controlled

Runway: 17
Length x Width: 3386 ft x 75 ft
Surface Type: asphalt
TDZ-Elev: 933 ft
Lighting: Edge, REIL

Runway: 22
Length x Width: 7100 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 938 ft
Lighting: Edge, REIL, Pilot controlled

Runway: 35
Length x Width: 3386 ft x 75 ft
Surface Type: asphalt
TDZ-Elev: 933 ft
Lighting: Edge, REIL

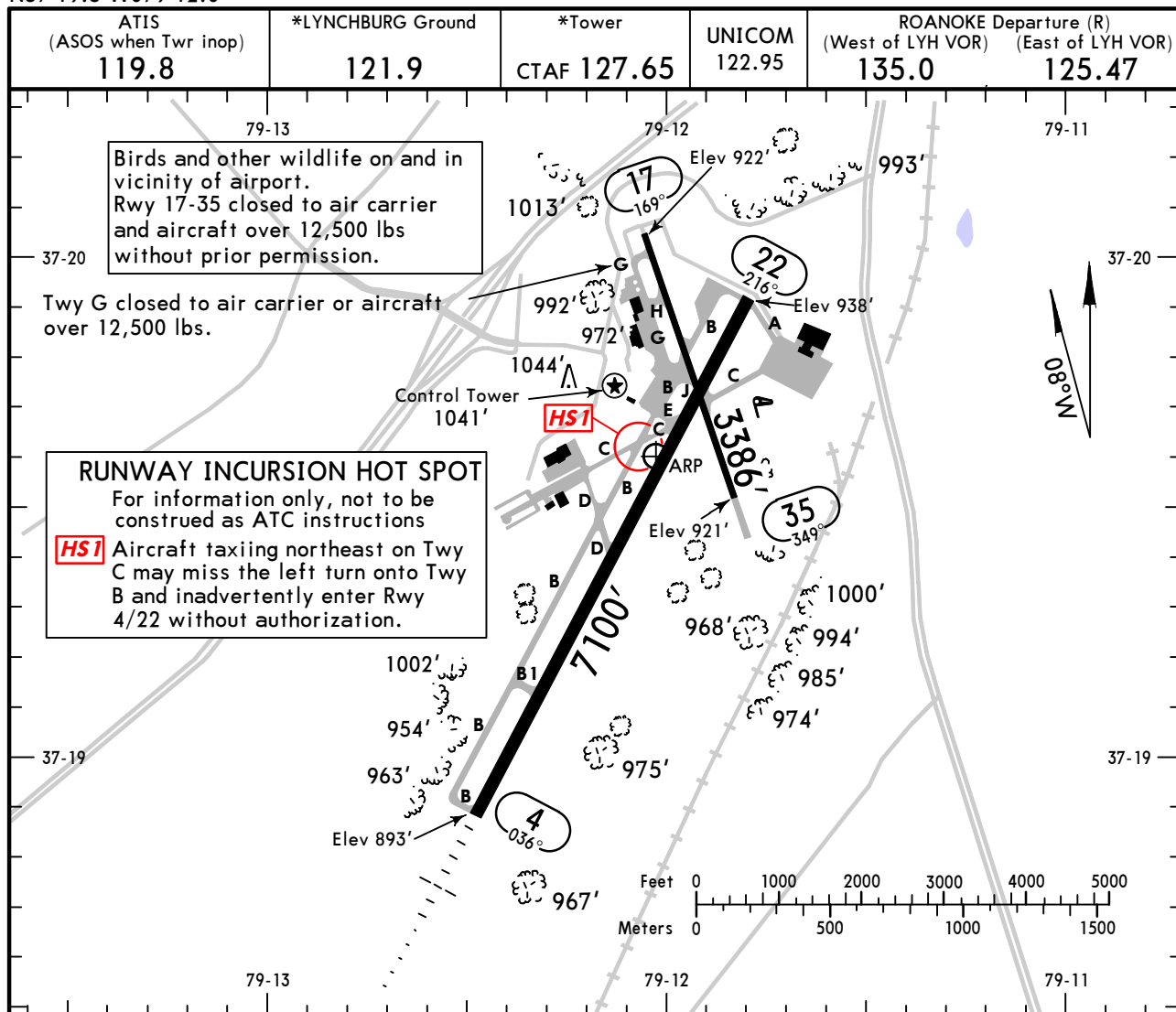
Communication Information

ATIS 119.8
ASOS 119.8
Lynchburg Tower 127.65 CTAF PCL
Lynchburg Ground Control 121.9
Roanoke Approach Control 135.0 Initial Contact
Roanoke Approach Control 125.475
Roanoke Departure Control 135.0
Roanoke Departure Control 125.475
Lynchburg Regl-Glenn Unicom 122.95
Leesburg Flight Service Station 122.1 RCO
Leesburg Flight Service Station 109.2 RCO

KLYH/LYH
Apt Elev 938'
N37 19.5 W079 12.0

JEPPesen
29 APR 11 11-1 Eff 5 May

LYNCHBURG, VA
LYNCHBURG REGL-GLENN



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS			TAKE-OFF	WIDTH
		Threshold	LANDING BEYOND Glide Slope			
4	① HIRL ① MALSR PAPI-L (angle 3.0°) grooved RVR	② 6800'	② 5816'			150'
22	① HIRL REIL PAPI-L (angle 3.0°) grooved					
17	③ MIRL ③ REIL ③ PAPI-L (angle 4.0°, TCH 20')					75'
35						

- ① Activate on 127.65 when Twr inop. ② Last 300' is unavailable for landing distance computations.
③ Unavailable when Twr inop.

TAKE-OFF & OBSTACLE DEPARTURE PROCEDURE

	Rwys 4, 22		Rwy 17			Rwy 35		
	Adequate Vis Ref	STD	With Mim climb of 232' /NM to 1500'		Other	With Mim climb of 350' /NM to 3000'		For Climb In Visual Conditions
			Adequate Vis Ref	STD		Adequate Vis Ref	STD	
1 & 2 Eng	RVR 16 or 1/4	RVR 50 or 1	1/4	1	300-2 1/4	1/4	1	1700-3
3 & 4 Eng		RVR 24 or 1/2		1/2			1/2	

OBSTACLE DP: Rwy 4, climb on runway heading to 2200', before proceeding on course.
Rwy 17, climb on runway heading to 1800' before turning right. Rwy 22, climb on runway heading to 1800', before turning right.

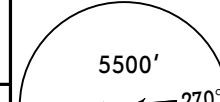
Rwy 35, climb on runway heading to 3000' before turning left, or for climb in visual conditions: Cross Lynchburg Regl-Glenn at or above 2500' MSL before proceeding on course.

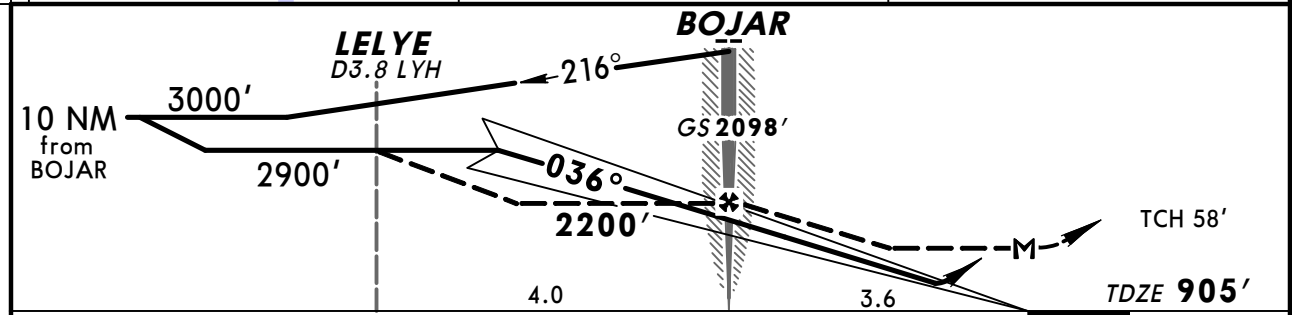
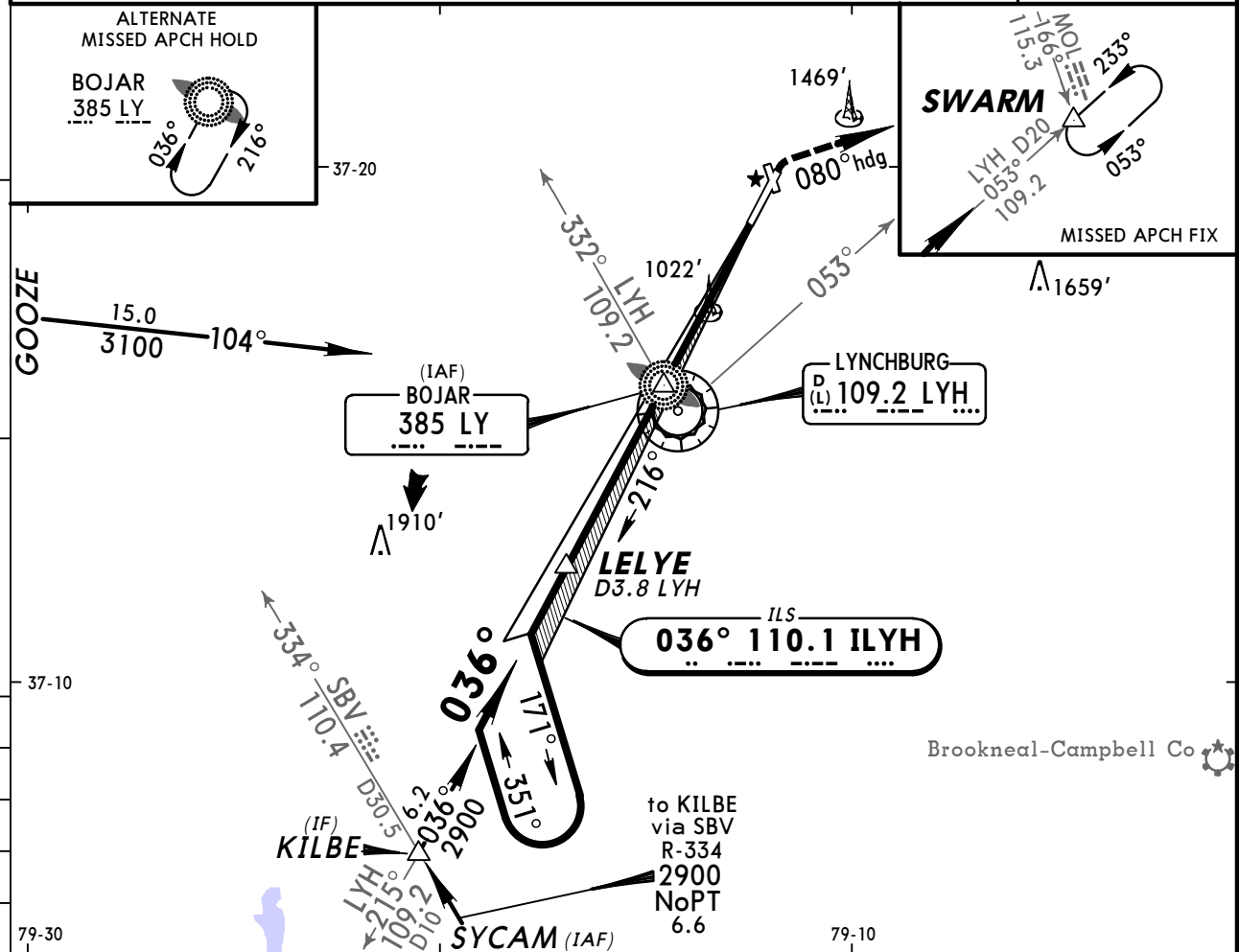
FOR FILING AS ALTERNATE

	RNAV (GPS) Rwy 4 RNAV (GPS) Rwy 22 VOR Rwy 4		Authorized Only When Twr Operating ILS Rwy 4 LOC Rwy 4		VOR DME Rwy 22
A	800-2		800-2		900-2
B					
C	900-2 1/2		900-2 1/2		900-2 1/2
D	900-2 3/4		900-2 3/4		900-2 3/4

CHANGES: Hot spot added, airport diagram, usable lengths.

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ATIS (ASOS when Twr inop)		ROANOKE Approach (R)		*LYNCHBURG Tower		*Ground	
119.8		135.0		CTAF 127.65		121.9	
LOC ILYH 110.1	Final Apch Crs 036°	GS BOJAR 2098' (1193')	ILS DA(H) 1105' (200')	Apt Elev 938' TDZE 905'			
MISSED APCH: Climb to 1800' then climbing RIGHT turn to 3500' via 080° heading and outbound on LYH VOR R-053 to SWARM INT and hold.							
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'							
1. Pilot controlled lighting 127.65.							



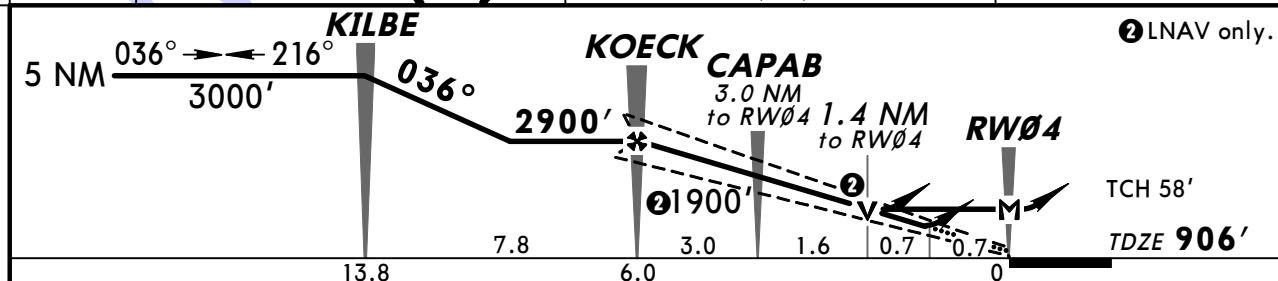
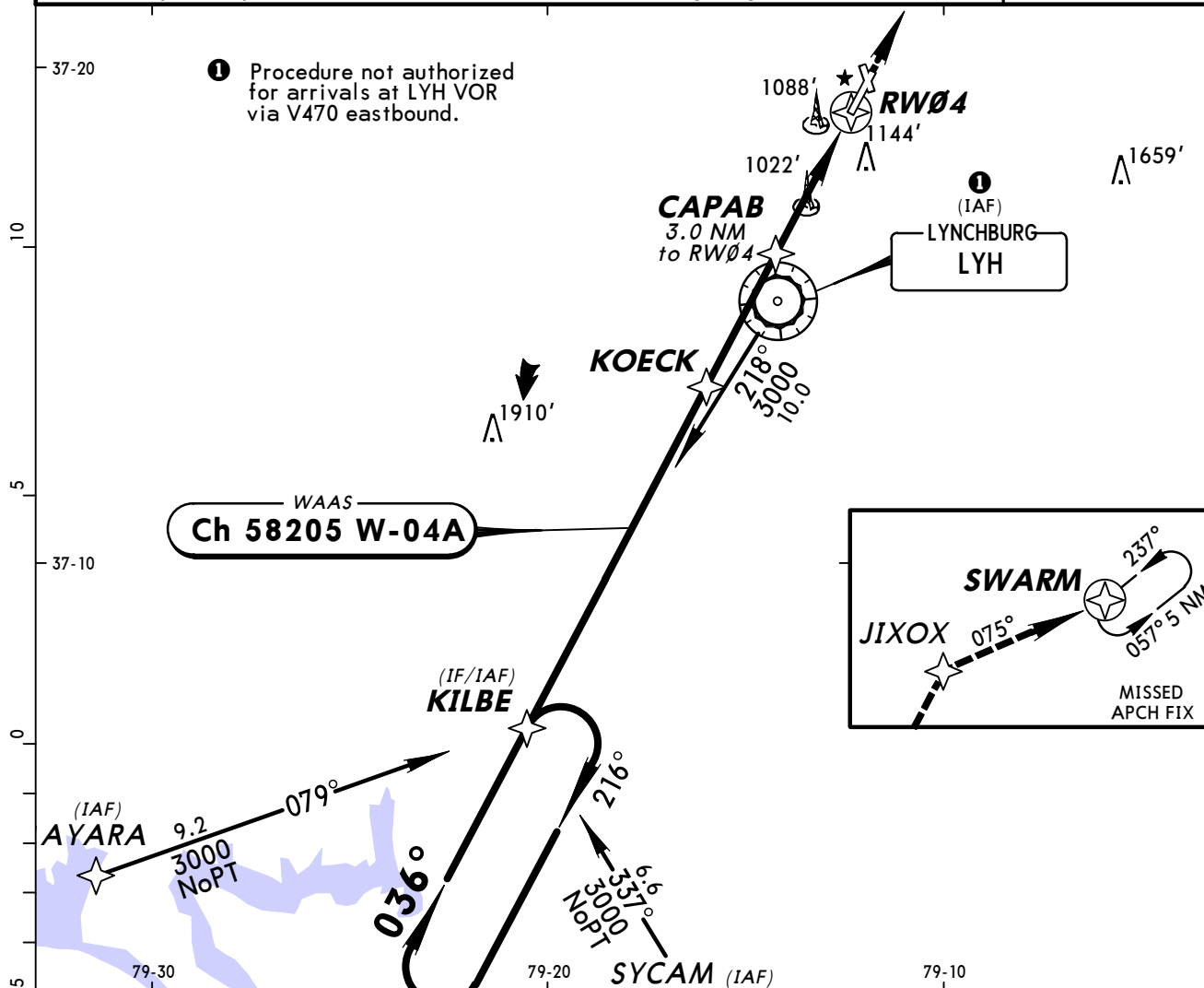
Gnd speed-Kts	70	90	100	120	140	160	MALSR		1800'	3500'	080°	LYH
GS	3.00°	377	484	538	646	753	PAPI		↑	↑	via	109.2
BOJAR to MAP	3.6	3:05	2:24	2:10	1:48	1:33				RT	hdg	R-053

STRAIGHT-IN LANDING RWY 4					CIRCLE-TO-LAND		
ILS DA(H) 1105' (200')		2 LOC (GS out) MDA(H) 1320' (415')					
FULL	RAIL or ALS out	RAIL out		ALS out	Max Kts	MDA(H)	
A	1 RVR 24 or 1/2	RVR 40 or 3/4	RVR 24 or 1/2	RVR 40 or 3/4	90	1640' (702')-1	
B			RVR 40 or 3/4	RVR 50 or 1	120	1700' (762')-1 1/4	
C			RVR 40 or 3/4	RVR 60 or 1 1/4	140	1800' (862')-2 1/2	
D					165	1800' (862')-2 3/4	

1 RVR 18 with Flight Director or Autopilot or HUD to DA.

2 DME required.

ATIS (ASOS when Twr inop) 119.8	ROANOKE Approach (R) 135.0	*LYNCHBURG Tower CTAF 127.65	*Ground 121.9
WAAS Ch 58205 W-04A	Final Apch Crs 036°	Minimum Alt KOECK 2900' (1994')	LPV DA(H) 1176' (270')
Apt Elev 938' TDZE 906'			
MISSED APCH: Climb to 3500' direct JIXOX and via 075° track to SWARM and hold.			
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'			
1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 2. DME/DME RNP-0.3 not authorized. 3. Visibility reduction by helicopters not authorized. 4. Pilot controlled lighting 127.65.			
5500'			
MSA RW04			

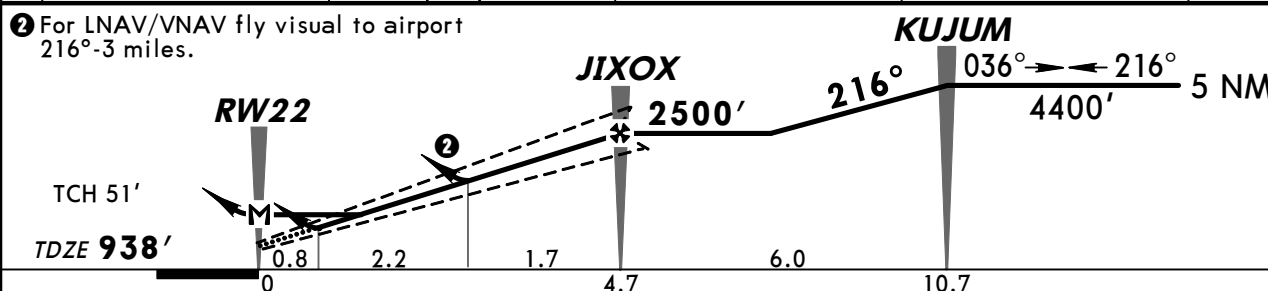
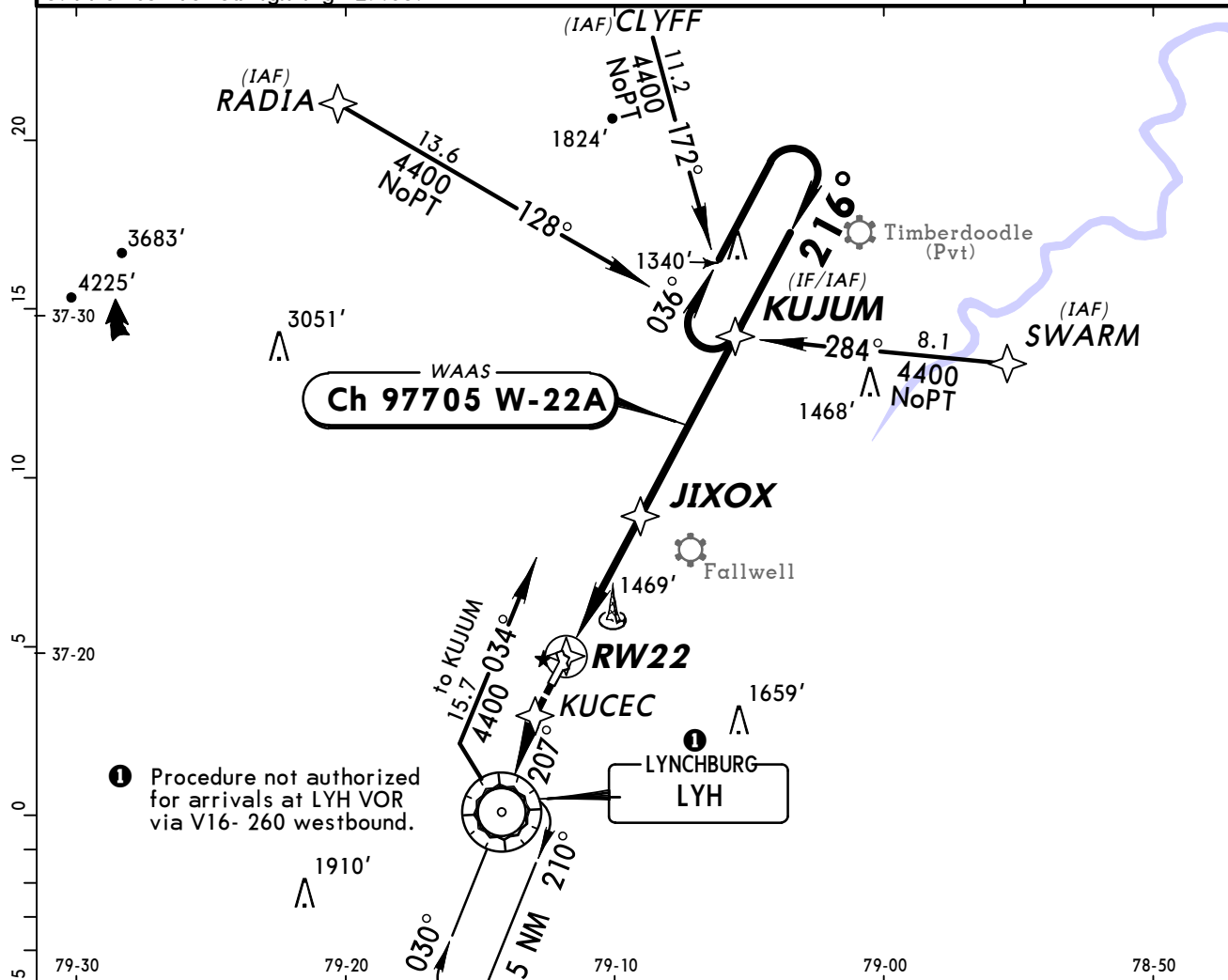


Gnd speed-Kts	70	90	100	120	140	160	MALSR	3500'	D	JIXOX
Glide Path Angle 3.00°	372	478	531	637	743	849	PAPI			
MAP at RW04										

STRAIGHT-IN LANDING RWY 4						CIRCLE-TO-LAND		
LPV DA(H) 1176' (270')		LNAV/VNAV DA(H) 1395' (489')		LNAV MDA(H) 1400' (494')		Max Kts	MDA(H)	
RAIL or ALS out		RAIL or ALS out		RAIL out ALS out				
A	RVR 40 or 3/4		RVR 60 or 1 1/4		1 3/4		90	1640' (702')-1
120							1700' (762')-1 1/4	
140							1800' (862')-2 1/2	
165							1800' (862')-2 3/4	
B								
C								
D								

BRIEFING STRIP™

ATIS (ASOS when Twr inop) 119.8		ROANOKE Approach (R) 135.0		*LYNCHBURG Tower CTAF 127.65		*Ground 121.9	
WAAS Ch 97705 W-22A		Final Apch Crs 216°	Minimum Alt JIXOX 2500' (1562')	LPV DA(H) 1250' (312')	Apt Elev 938' TDZE 938'		5500' MSA RW22
MISSED APCH: Climb to 3000' direct KUCEC and via 207° track to LYH VOR and hold, continue climb-in-hold to 3000'.							
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -16°C (4°F) or above 47°C (116°F). 2. VGSI and RNAV glidepath not coincident. 3. DME/DME RNP-0.3 not authorized. 4. Visibility reduction by helicopters not authorized. 5. Pilot controlled lighting 127.65.							

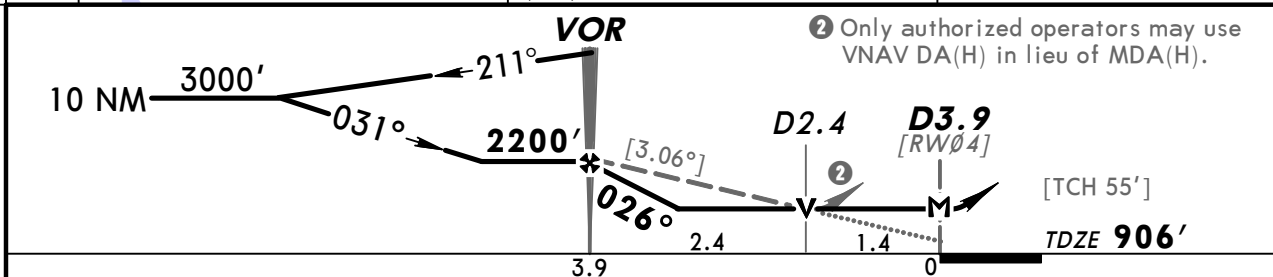
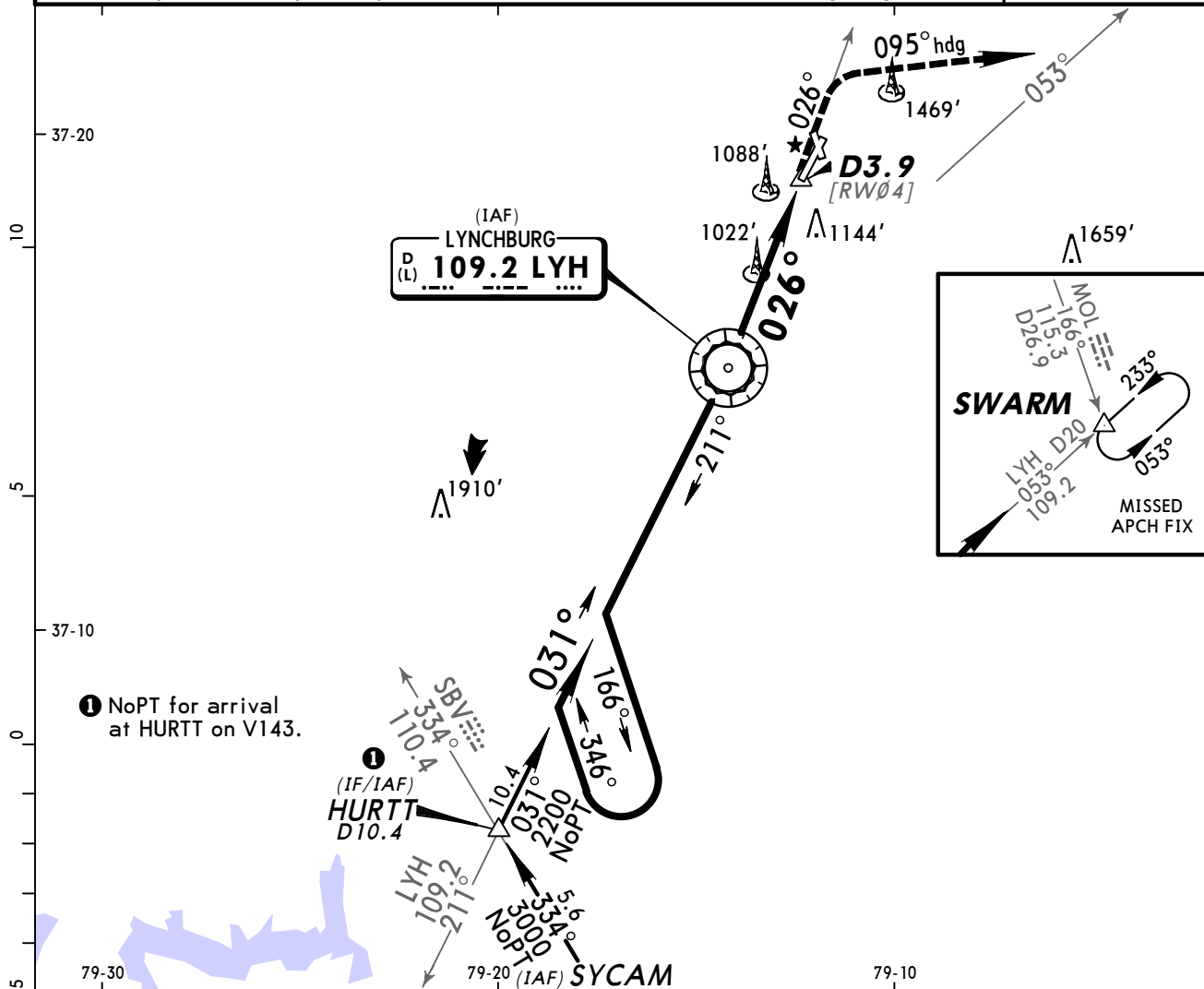


Gnd speed-Kts	70	90	100	120	140	160	REIL PAPI-L	3000' ↑	D→	KUCEC
Glide Path Angle 3.00°	372	478	531	637	743	849				
MAP at RW22										

STRAIGHT-IN LANDING RWY 22				CIRCLE-TO-LAND	
LPV DA(H) 1250' (312')	LNAV/VNAV DA(H) 1939' (1001')	LNAV MDA(H) 1720' (782')	Max Kts	MDA(H)	
1	2	1	90	1720'(782')-1	
		1 1/4	120	1720'(782')-1 1/4	
	3	2 1/4	140	1800'(862')-2 1/2	
		2 1/2	165	1800'(862')-2 3/4	

BRIEFING STRIP

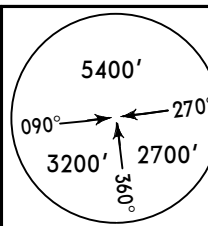
ATIS (ASOS when Twr inop)	ROANOKE Approach (R)	*LYNCHBURG Tower	*Ground
119.8	135.0	CTAF 127.65	121.9
VOR LYH 109.2	Final Apch Crs 026°	Minimum Alt VOR 2200' (1294')	MDA(H) 1400' (494')
		Apt Elev 938'	TDZE 906'
MISSED APCH: Climb to 2000' via LYH VOR R-026 then climbing RIGHT turn to 3500' via 095° heading and outbound on LYH VOR R-053 to SWARM INT and hold.			
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'			MSA LYH VOR
1. Visibility reduction by helicopters not authorized. 2. Pilot controlled lighting 127.65.			

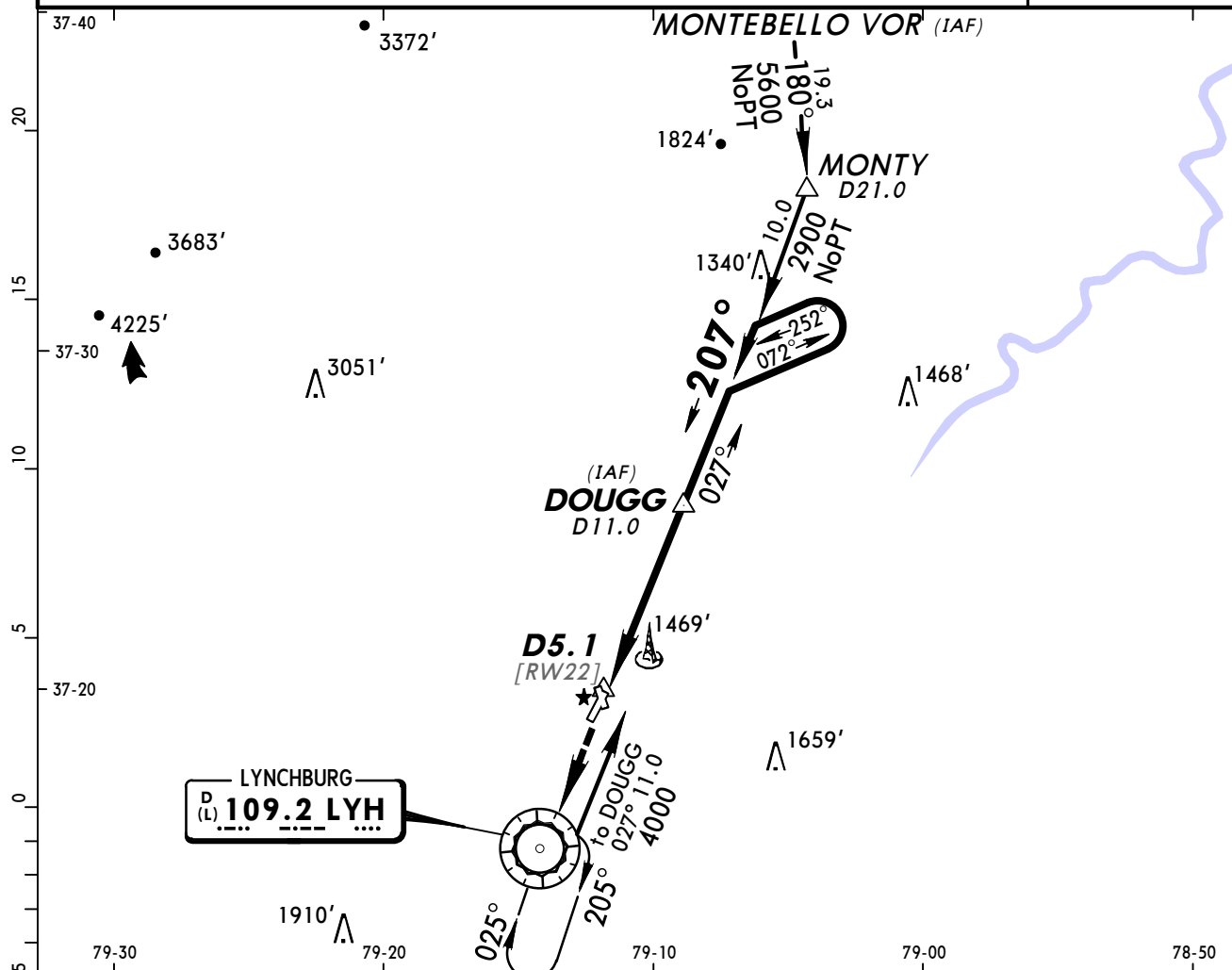


Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.06°]	379	487	541	650	758	866
MAP at D3.9 or VOR to MAP	3.9	3:21	2:36	2:20	1:57	1:40
				1:28		

STRAIGHT-IN LANDING RWY4				CIRCLE-TO-LAND	
MDA(H) 1400' (494')				Max Kts	MDA(H)
		RAIL out	ALS out	90	1640' (702')-1
		RVR 40 or 3/4	RVR 50 or 1	120	1700' (762')-1 1/4
		RVR 60 or 1 1/4		140	1800' (862')-2 1/2
		1 1/2		165	1800' (862')-2 3/4

BRIEFING STRIP™

ATIS (ASOS when Twr inop)		ROANOKE Approach (R)		*LYNCHBURG Tower		*Ground	
119.8		135.0		CTAF 127.65		121.9	
VOR LYH 109.2	Final Apch Crs 207°	Minimum Alt DOUGG 2900' (1962')	MDA(H) 1740' (802')	Apt Elev 938' TDZE 938'			
MISSED APCH: Climb to 2900' direct LYH VOR and hold.							MSA LYH VOR
Alt Set: INCHES		Trans level: FL 180		Trans alt: 18000'			
1. Pilot controlled lighting 127.65.							



① Only authorized operators may use VNAV DA(H) in lieu of MDA(H).



Gnd speed-Kts	70	90	100	120	140	160	REIL PAPI-L	2900' ↑	D→	LYH 109.2
Descent angle [3.02°]	374	481	534	641	748	855				
MAP at D5.1										

STRAIGHT-IN LANDING RWY 22			CIRCLE-TO-LAND		
MDA(H) 1740' (802')			MDA(H)		
A	1	90	1740' (802') - 1		
B	1 ¼	120	1740' (802') - 1 ¼		
C	2 ¼	140	1800' (862') - 2 ½		
D	2 ½	165	1800' (862') - 2 ¾		

General Information

Location: Norfolk VA USA
IATA Code: NGU
Lat/Long: N36° 56.3' W076° 17.4'
Elevation: 17 ft

Airport Use: Military
Magnetic Variation: 10.8°W
Sectional Chart: Washington

Fuel Types: 100 Octane (LL), Jet 5
Repair Types: Major Airframe, Major Engine
Customs: Upon Prior Request
Airport Type: IFR
Landing Fee: No
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: No
Beacon: Yes

Sunrise: 1139 Z
Sunset: 2257 Z,

Runway Information

Runway: 10
Length x Width: 8371 ft x 200 ft
Surface Type: asphalt
TDZ-Elev: 17 ft
Lighting: Edge, ALS, Centerline, REIL
Displaced Threshold: 304 ft

Runway: 28
Length x Width: 8371 ft x 200 ft
Surface Type: asphalt
TDZ-Elev: 15 ft
Lighting: Edge, Centerline, REIL
Displaced Threshold: 995 ft
Stopway: 700 ft

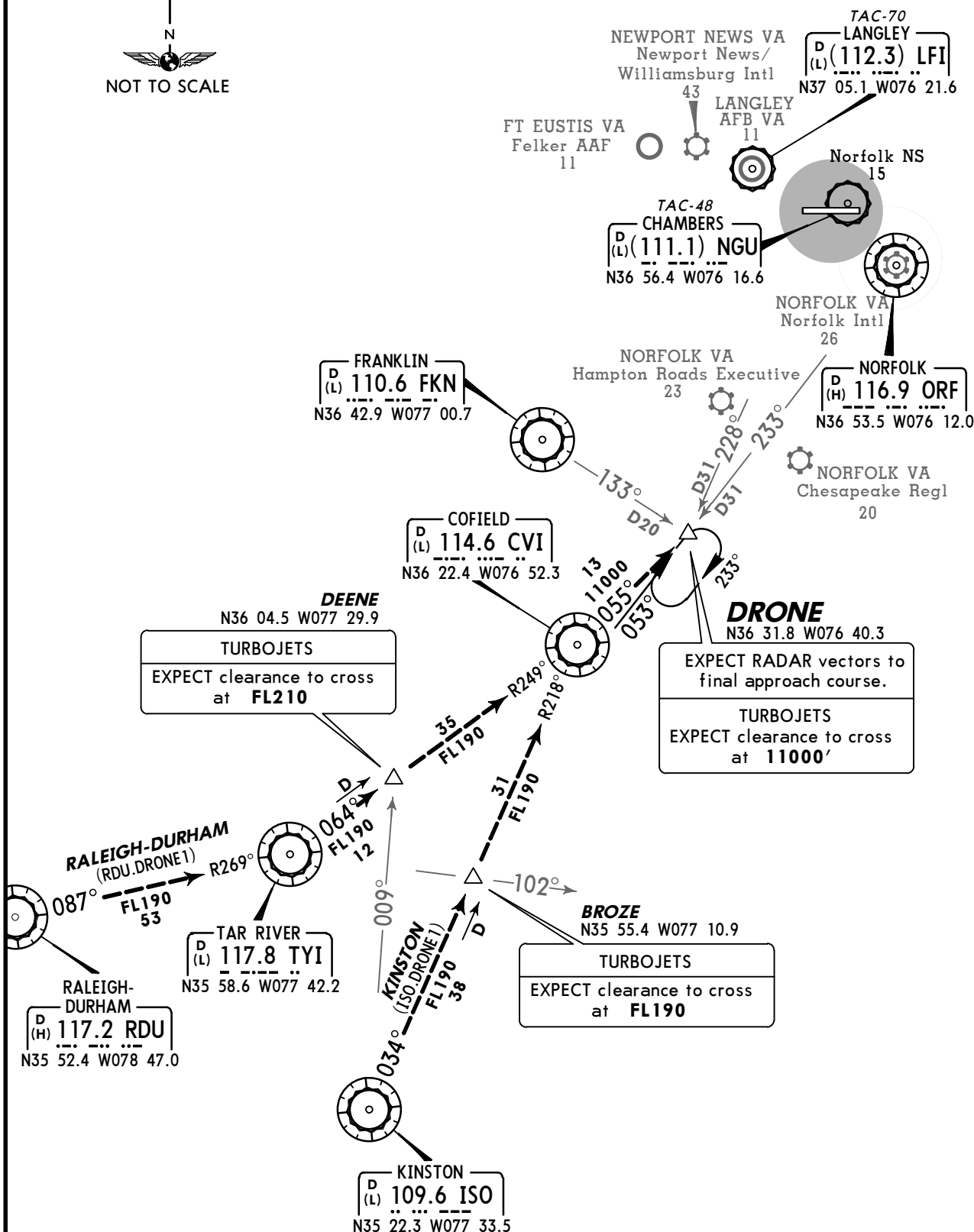
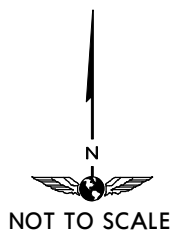
Communication Information

ATIS 118.425
Chambers Tower 126.375 Secondary
Chambers Tower 124.3
Chambers Ground Control 121.8
Chambers Clearance Delivery 120.7
Norfolk Approach Control 125.7 (311°-9°)
Norfolk Approach Control 118.9
Norfolk Departure Control 125.2

Norfolk TML 130.65 Military
Chambers Radar 120.2
Chambers Radar 119.2
Norfolk Operations 126.375
Chambers Base Ops Operations 131.525
Chambers Helicopter frequency 126.375

ATIS
118.42Apt Elev
See
graphicAlt set: INCHES
Trans level: FL 180 Trans alt: 18000'

DRONE ONE ARRIVAL (DRONE.DRONE1)

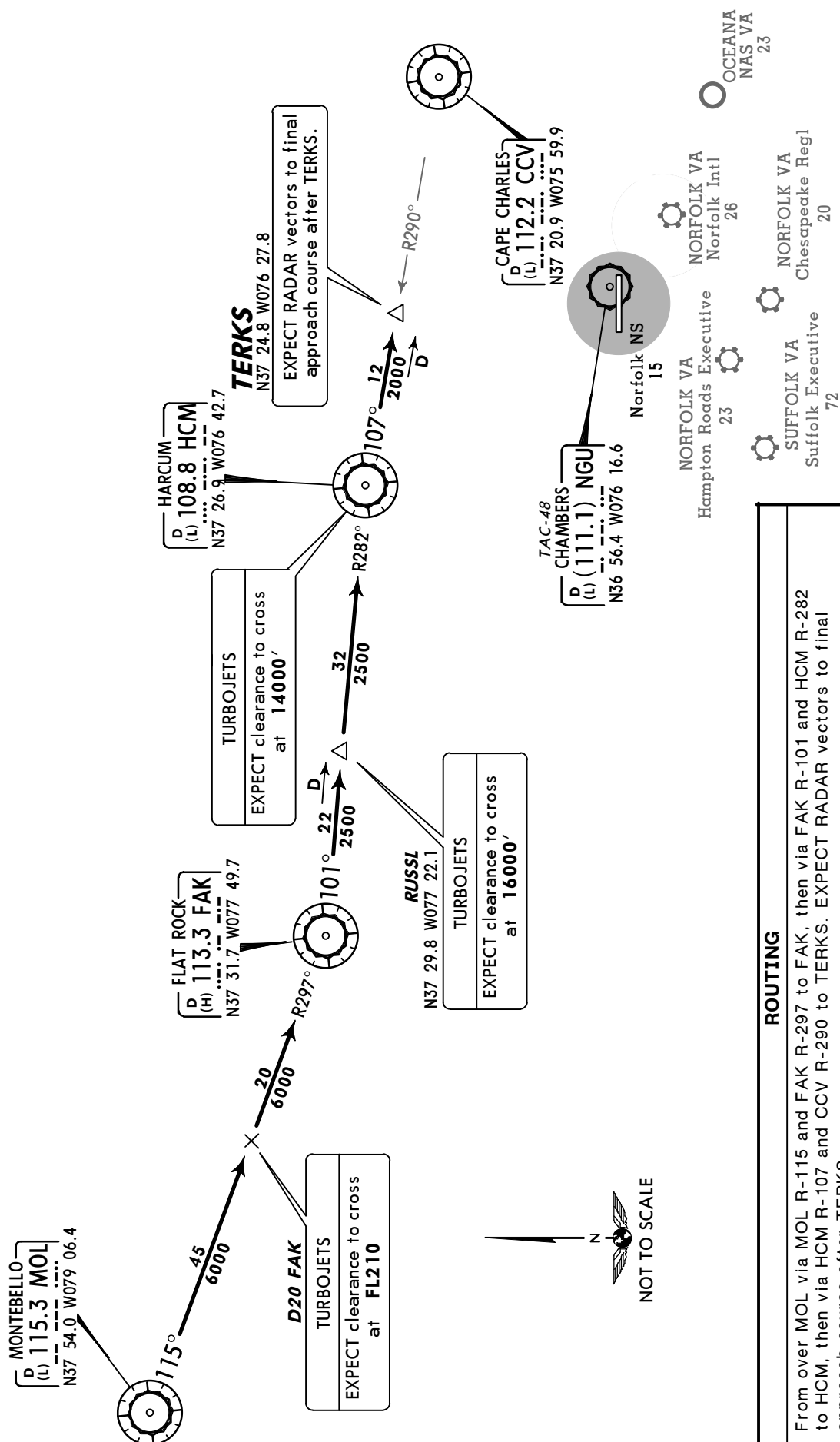


ROUTING

From over DRONE EXPECT RADAR vectors to final approach course.

ATIS
118.42Apt Elev
See
graphicAlt set: INCHES Trans level: FL 180 Trans alt: 18000'
For aircraft at or above 14000' only.

TERKS TWO ARRIVAL (TERKS.TERKS2)

Direct distance from TERKS to:
Norfolk NS **30 NM**

2. Transitions are part of the Preferred Departure Route (PDR) system and established as Air Traffic flow procedures from the Norfolk terminal area. These fixes are to be used as the initial filing point out of Norfolk NS.

**For TAKEOFF MINIMUMS and
PROCEDURE TEXT see 30-3-1.**



CHAMBERS EIGHT DEPARTURE (NGU8.NGU)

For Procedure Graphic see 30-3

PROCEDURE TEXT

Minimum Climb Rate to **300'**

Rwy	Gnd speed-KT	75	100	150	200	250	300
Military 28	V/V (fpm)	300	400	600	800	1000	1200
Civil 28	V/V (fpm)	319	425	638	850	1063	1275

300-1 1/2 authorized in lieu of Minimum Climb Rate.

RWY	INITIAL CLIMB	ALTITUDE
10	Climbing LEFT turn heading 050°. Cross DER at or above 35' AGL/ 48' MSL.	MAINTAIN 2000' or assigned altitude.
28	Climb via heading 280°.	

ROUTING

Fly RADAR vectors to assigned transition. EXPECT clearance to requested altitude/flight level 10 minutes after departure.

TRANSITIONS

ATLIC (NGU8.ATLIC)	Fly vectors to ATLIC.
CAPE CHARLES (NGU8.CCV)	Fly vectors to CCV (for altitudes 5000' and below).
ELIZABETH CITY (NGU8.ECG)	Fly vectors to SWOPE, then fly ORF R-201 to VISOW (ORF R-201/D33), then direct ECG.
FLAT ROCK (NGU8.FAK)	Fly vectors to WAIKS, then fly ORF R-290 to KELLE, then direct FAK.
FRANKLIN (NGU8.FKN)	Fly vectors to FKN. For routing to GSO, RDU, TYI.
HARCUM (NGU8.HCM)	Fly vectors to HCM. For routing to Patuxent River NAS (NHK), Baltimore-Washington Intl/Marshall (BWI), Martin State (MTN) or DCA metro area fly the following: Patuxent River NAS (NHK): V-33, COLIN, V-213, PXT (for altitudes 7000' or 9000' only). Baltimore-Washington Intl/Marshall (BWI) or Martin State (MTN): V-33, COLIN, V-213, PXT, V-93, GRACO (for altitudes 7000' or 9000' only). Ronald Reagan Washington Natl (DCA), Andrews AFB/NAF (ADW) or Davison AAF (DAA): HCM R-330, V-376, IRONS (for altitude 8000' only).
HOPEWELL (NGU8.HPW)	Fly vectors to HPW.
MONTEBELLO (NGU8.MOL)	Fly vectors to WAIKS, then fly ORF R-290 to KELLE, then intercept MOL R-129 to MOL.
SALISBURY (NGU8.SBY)	Fly vectors to SCHOL, then SBY R-200 to SBY.
SNOW HILL (NGU8.SWL)	Fly vectors to SCHOL, then SBY R-200 to V-139 to SWL.
V-139 (NGU8.ORF)	Fly vectors to V-139.
J-174 (NGU8.ORF)	Fly vectors to J-174.

KNGU/NGU

Apt Elev 17'

N36 56.3 W076 17.4

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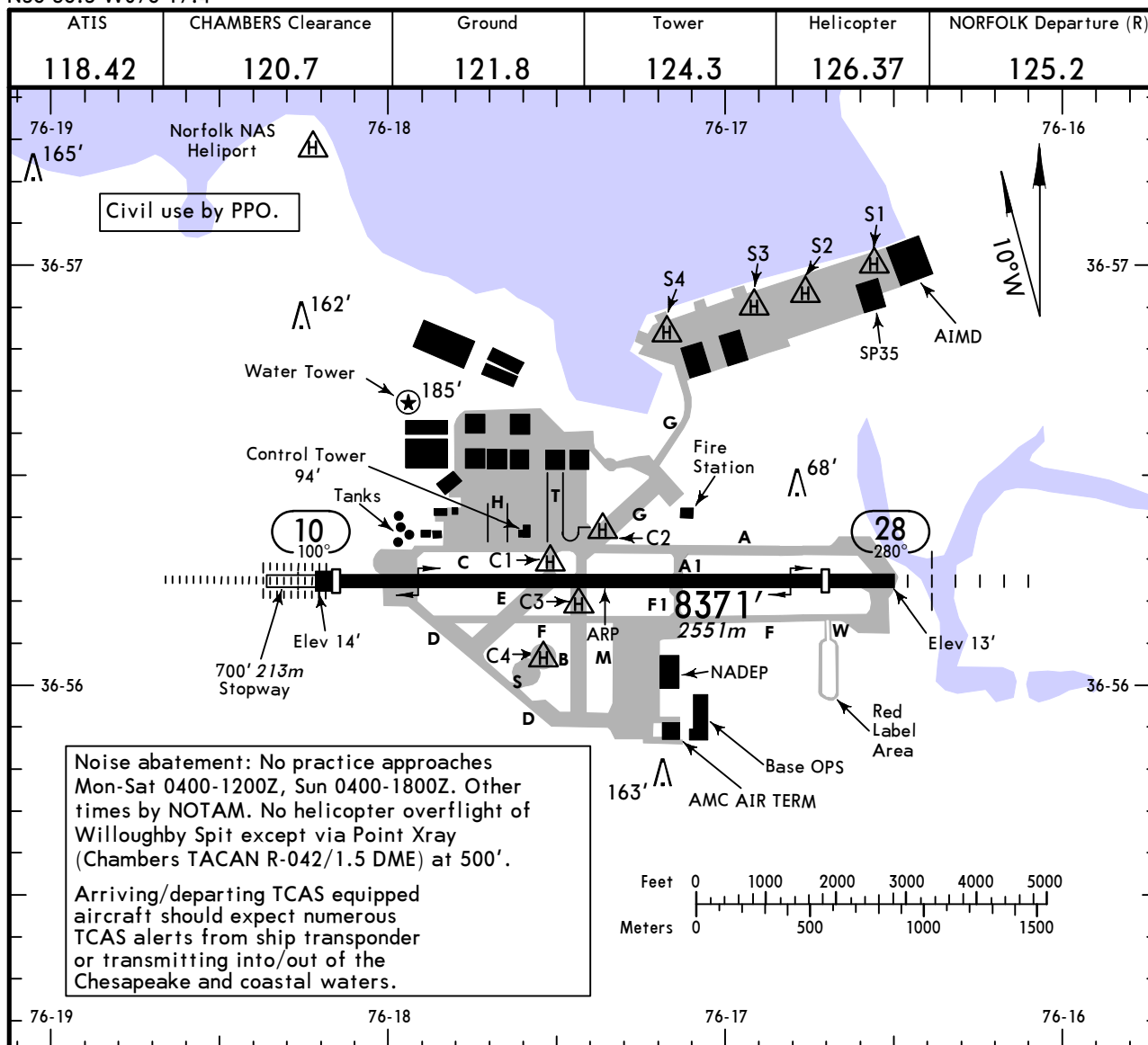
12 NOV 10

(31-1)

Eff 18 Nov

NORFOLK NS

NORFOLK, VA



ADDITIONAL RUNWAY INFORMATION

							USABLE LENGTHS		TAKE-OFF	WIDTH		
							LANDING BEYOND					
RWY								Threshold	Glide Slope			
10	TDZ	HIRL	CL	ALSF-II	REIL	①	PAPI-R	grooved	8067' 2459m	7122' 2171m		200'
28	TDZ	HIRL	CL	SSALS	REIL	①	PAPI-R	grooved	7376' 2248m			61m

① Angle 3.0°

① TAKE-OFF

	Rwy 10		Rwy 28				
	Adequate Vis Ref	STD	With Min climb of 240' /NM (DoD) or 255' /NM (civil) to 300'		Other		
			Adequate Vis Ref	STD			
1 & 2 Eng	1/4	1	1/4	1	300-1 1/2		
3 & 4 Eng		1/2		1/2			

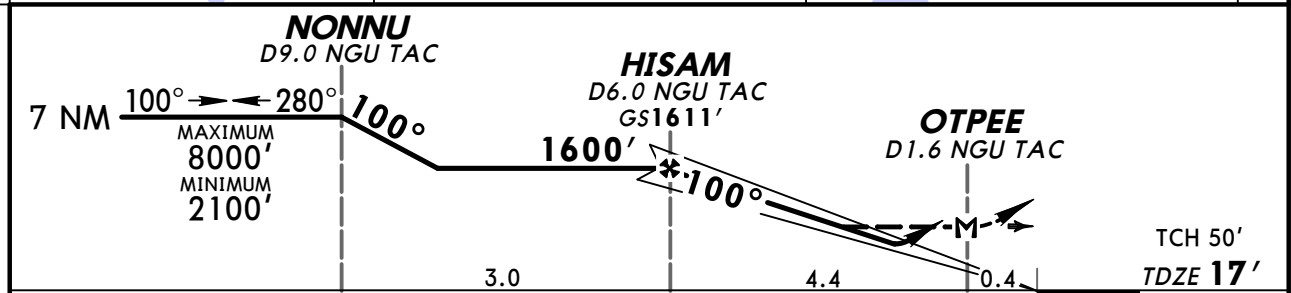
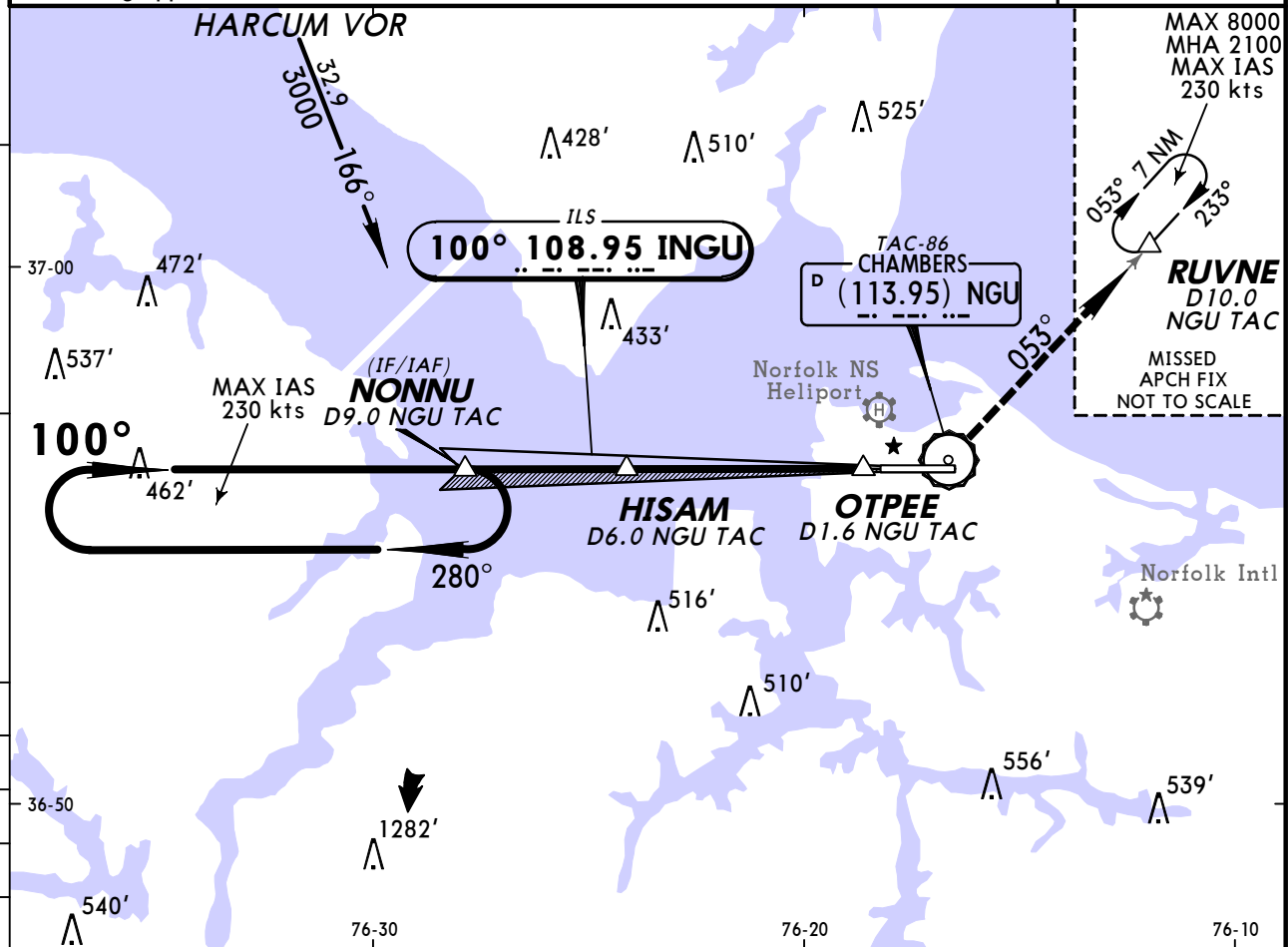
① Diverse departure not authorized.

TAKE-OFF OBSTACLES: Rwy 10, trees with a maximum height of 100' within 1500' of departure end of rwy. Cross departure end of rwy at or above 35' AGL/48' MSL.

CHANGES: Take-off note, take-off obstacles, airport buildings.

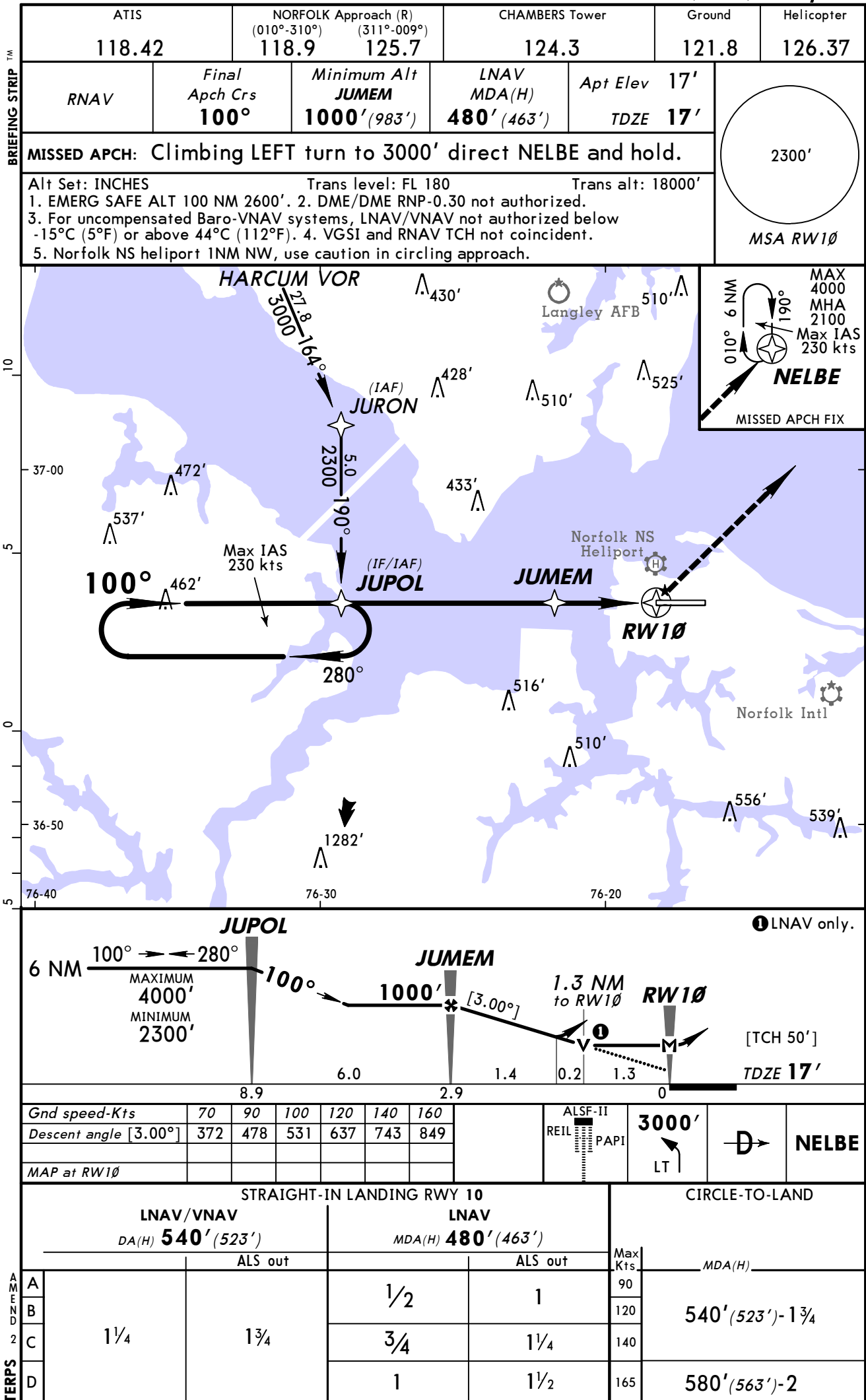
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ATIS	NORFOLK Approach (R)		CHAMBERS Tower		Ground	Helicopter
118.42	(010°-310°) 118.9 125.7		124.3		121.8	126.37
LOC INGU 108.95	Final Apch Crs 100°	GS HISAM 1600' (1583')	ILS DA(H) 217' (200')	Apt Elev 17' TDZE 17'		
MISSED APCH: Climbing LEFT turn to 2100' outbound via NGU TAC R-053 to RUVNE and hold.						
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. EMERG SAFE ALT 100NM 2600'. 2. Norfolk NS heliport 1 NM northwest. Use caution in circling approach.						MSA NGU TAC



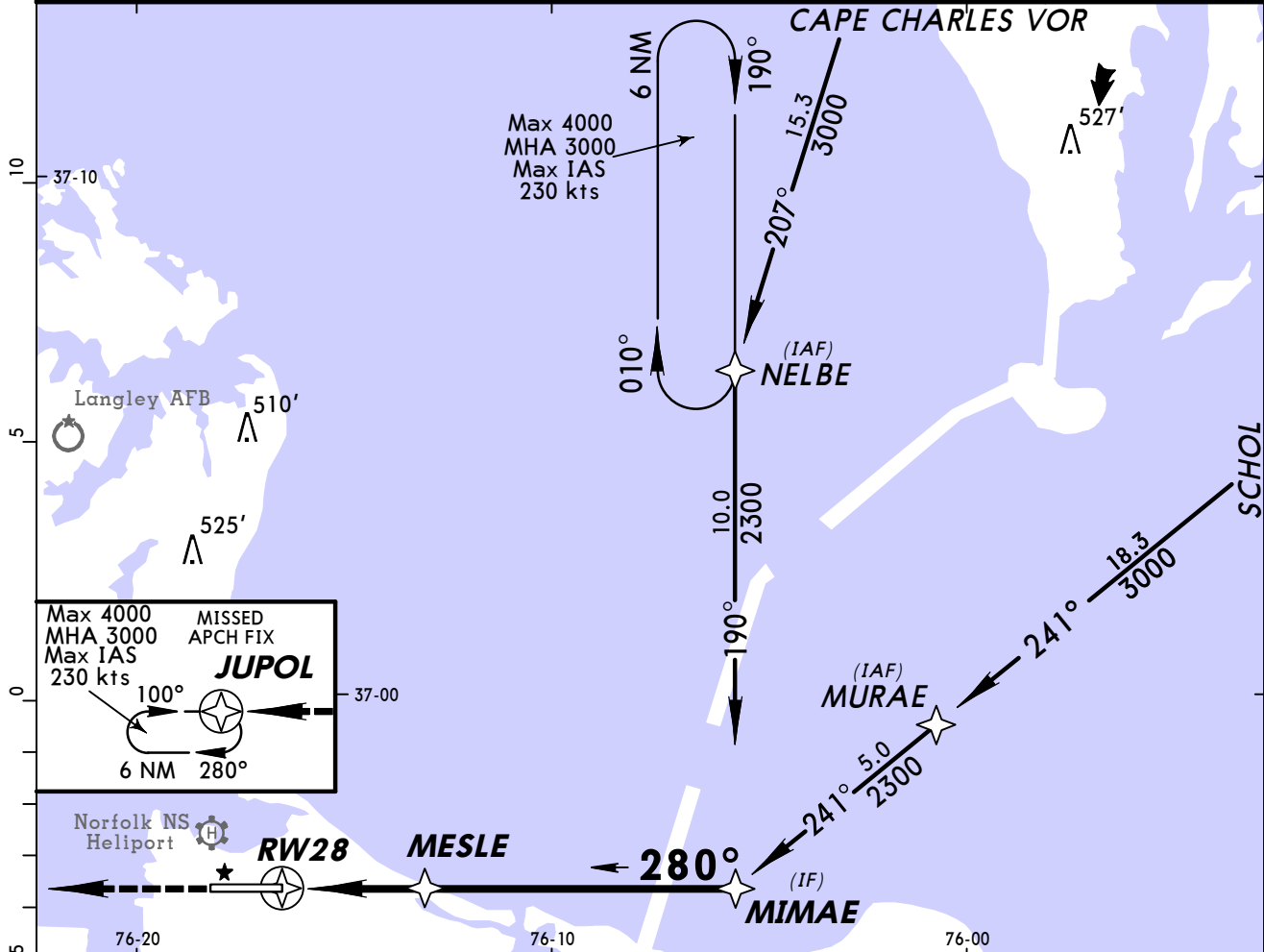
Gnd speed-Kts	70	90	100	120	140	160	ALSIF-II		2100'		NGU	RUVNE
GS	3.00°	377	484	538	646	753	861	REIL	PAPI	LT	(113.95) R-053	
MAP at OTPEE												

STRAIGHT-IN LANDING RWY 10				CIRCLE-TO-LAND			
ILS DA(H) 217' (200')		LOC (GS out) MDA(H) 460' (443')		Max Kts		MDA(H)	
FULL	ALS out	FULL	ALS out	90	120	520' (503')-1	
A		1/2	1				
B							
C	1/2	3/4	1 1/4	140		520' (503')-1 1/2	
D		1	1 1/2	165		580' (563')-2	

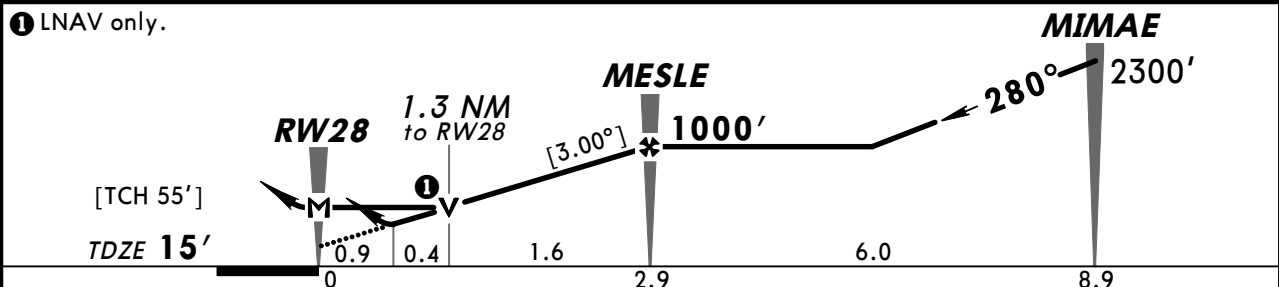


BRIEFING STRIP™

ATIS 118.42		NORFOLK Approach (R) (010°-310°) 118.9 (311°-009°) 125.7		CHAMBERS Tower 124.3		Ground 121.8		Helicopter 126.37	
RNAV	Final Apch Crs 280°	Minimum Alt MESLE 1000' (985')	LNAV/VNAV DA(H) 340' (325')	Apt Elev 17' TDZE 15'	2300' MSA RW28				
MISSED APCH: Climb to 3000' direct JUPOL and hold.									
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. EMERG ALT 100 NM 2600'. 2. DME/DME RNP-0.30 not authorized. 3. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 44°C (112°F). 4. VGSI and RNAV TCH not coincident. 5. Norfolk NS Heliport 1 NM NW, use caution in circling approach.									



① LNAV only.



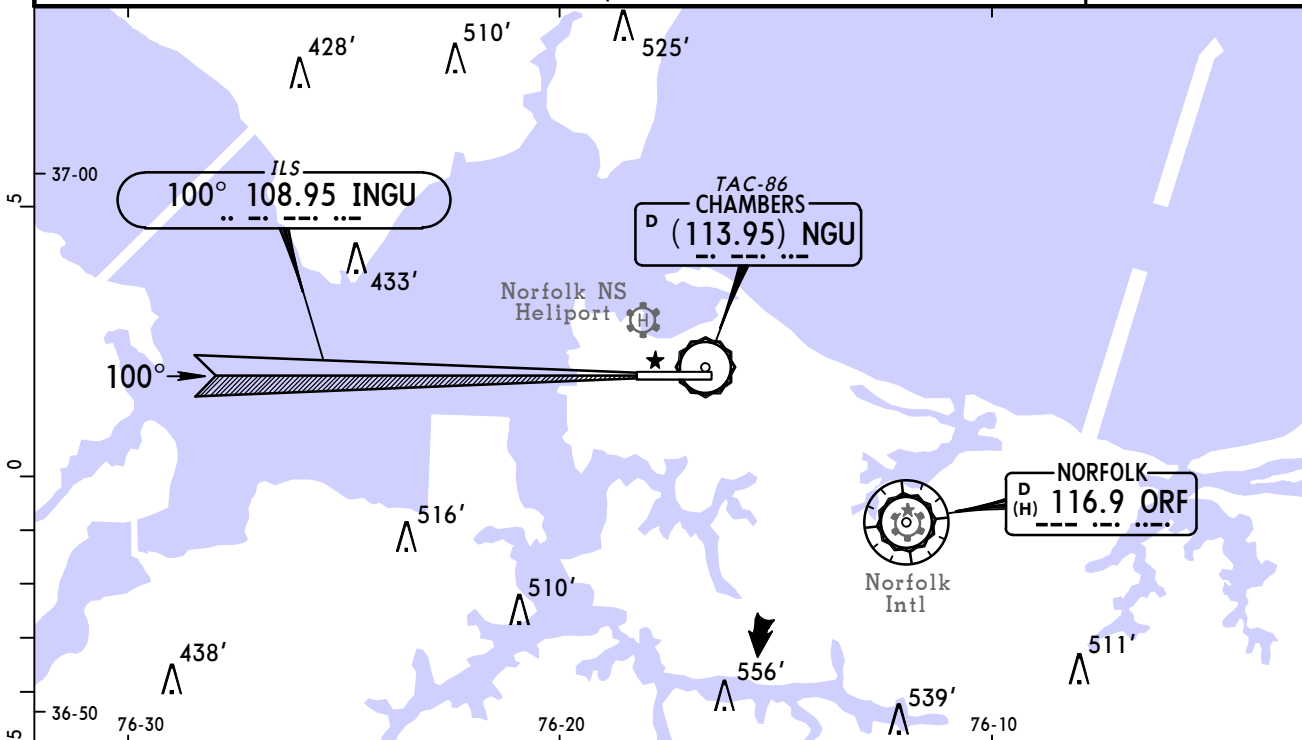
Gnd speed-Kts	70	90	100	120	140	160	SSALS REIL PAPI 3000'	D	JUPOL
Descent angle [3.00°]	372	478	531	637	743	849			
MAP at RW28									

STRAIGHT-IN LANDING RWY 28					CIRCLE-TO-LAND	
LNAV/VNAV DA(H) 340' (325')		LNAV MDA(H) 460' (445')		Max Kts	MDA(H)	
ALS out		ALS out		90	520' (503') - 1	
A		3/4	1	120	520' (503') - 1 1/2	
B		1	1 1/4	140	580' (563') - 2	
C	3/4	1	1 1/4	165		
D		1 1/4	1 1/2			

NORFOLK, VA

BRIEFING STRIP™

ATIS	NORFOLK Approach (R) (010°-310°) (311°-009°)		NORFOLK Radar		CHAMBERS Tower	Ground	Helicopter
118.42	118.9	125.7	119.2X	120.2X	124.3	121.8	126.37
RADAR	Final Apch Crs By ATC	Minimum Alt No FAF	DA(H)/MDA(H) Refer to Minimums	Apt Elev 17' TDZE -See below		No MSA published	
Missed Approach-See Below							
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'							
1. CAUTION: PAR Rwy 10 runway point of intercept and PAPI runway reference point are not coincident. 2. CAUTION: Norfolk NS Heliport located 1.0 NM northwest.							

**MISSED APPROACH:**

PAR Rwy 10: Climb to 420', then climbing LEFT turn to 1600' via heading 050°.

Copter PAR Rwy 10: Climb to 1600' via heading 100°.

PAR, Copter PAR, PAR w/o GS, ASR Rwy 28: Climb to 1600' via heading 280°.

PAR w/o GS, ASR Rwy 10: Climbing LEFT turn to 1600' via heading 050°.

RWY 10	RWY 28
PAR TCH 36'	PAR TCH 36'
TDZE 17'	TDZE 15'

Gnd speed-Kts	70	90	100	120	140	160	Lighting - Refer to Airport Chart
Rwy 10,28 PAR GS	3.00°	377	484	538	646	753	
ASR Rws 10, 28: MAP 1 NM from Threshold.							

STRAIGHT-IN LANDING				STRAIGHT-IN LANDING			
PAR 10		PAR 28		PAR 10		PAR 28	
DA(H) 217' (200')		DA(H) 265' (250')		DA(H) 217' (200')		DA(H) 265' (250')	
ALS out		ALS out		ALS out		ALS out	
A				COPTER			
B	1/2	3/4	3/4		1/2	3/4	3/4
C							
D							

STRAIGHT-IN LANDING										CIRCLE-TO-LAND	
PAR w/o GS 10			PAR w/o GS 28		ASR 10		ASR 28		Max Kts	MDA(H)	
MDA(H) 460'(443')			MDA(H) 460'(445')		MDA(H) 520'(503')		MDA(H) 460'(445')				
ALS out			ALS out		ALS out		ALS out		90	520'(503')-1¼	
A	¾	1¼	1	1¼	¾	1¼	1	1¼	120		
B									140	520'(503')-1½	
C			1	1½	1¼	1	1½	1¼	165		580'(563')-2

General Information

Location: Oceana VA USA
IATA Code: NTU
Lat/Long: N36° 49.2' W076° 02.0'
Elevation: 23 ft

Airport Use: Military
Magnetic Variation: 10.9°W
Sectional Chart: Washington

Fuel Types: Jet 5
Repair Types: Major Airframe, Major Engine
Customs: No
Airport Type: IFR
Landing Fee: No
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: No
Beacon: Yes

Sunrise: 1138 Z
Sunset: 2256 Z,

Runway Information

Runway: 05L
Length x Width: 8001 ft x 150 ft
Surface Type: concrete
TDZ-Elev: 21 ft
Lighting: Edge
Stopway: 1000 ft

Runway: 05R
Length x Width: 12000 ft x 200 ft
Surface Type: asphalt
TDZ-Elev: 20 ft
Lighting: Edge
Stopway: 1000 ft

Runway: 14L
Length x Width: 8001 ft x 150 ft
Surface Type: concrete
TDZ-Elev: 20 ft
Lighting: Edge
Stopway: 1000 ft

Runway: 14R
Length x Width: 8000 ft x 200 ft
Surface Type: asphalt
TDZ-Elev: 20 ft
Lighting: Edge, Centerline

Stopway: 1000 ft

Runway: 23L

Length x Width: 12000 ft x 200 ft

Surface Type: asphalt

TDZ-Elev: 22 ft

Lighting: Edge

Runway: 23R

Length x Width: 8001 ft x 150 ft

Surface Type: concrete

TDZ-Elev: 21 ft

Lighting: Edge

Runway: 32L

Length x Width: 8000 ft x 200 ft

Surface Type: asphalt

TDZ-Elev: 22 ft

Lighting: Edge, ALS, Centerline

Runway: 32R

Length x Width: 8001 ft x 150 ft

Surface Type: concrete

TDZ-Elev: 21 ft

Lighting: Edge

Communication Information

Oceana Tower 120.875

Oceana Approach Control 123.9 Secondary

Norfolk Approach Control 126.05

Oceana Departure Control 123.9

Norfolk Departure Control 125.2

Oceana Radar 134.1

Atcom Operations 672.3 Military

TERKS TWO ARRIVAL (TERKS.TERKS2) (FOR AIRCRAFT AT OR ABOVE 14000' ONLY)

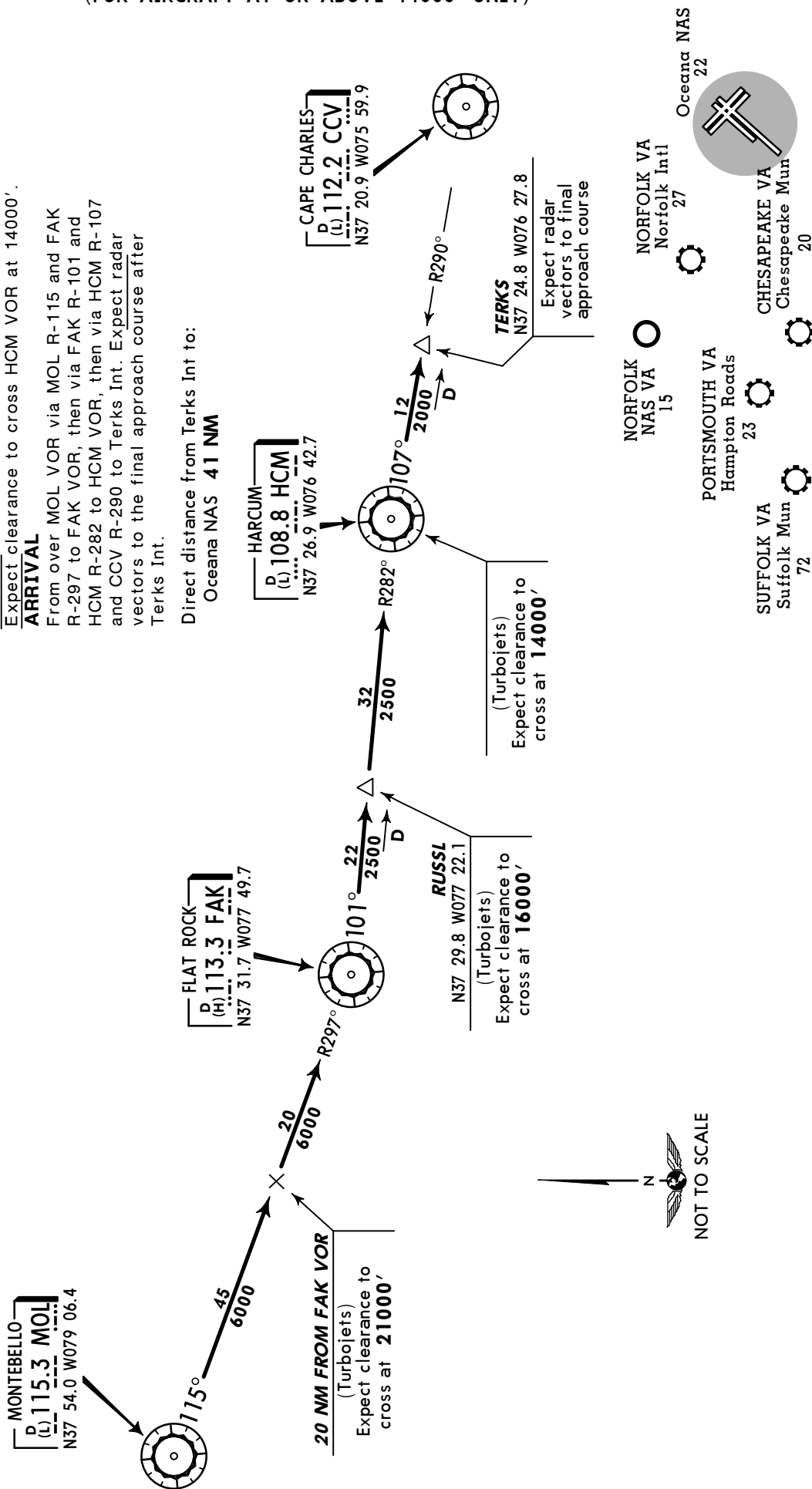
TERKS TWO ARRIVAL (TERKS.TERKS2) (FOR AIRCRAFT AT OR ABOVE 14000' ONLY) TURBOJET VERTICAL NAVIGATION PLANNING INFORMATION

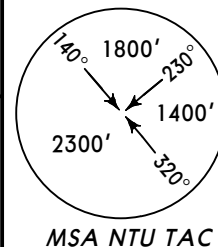
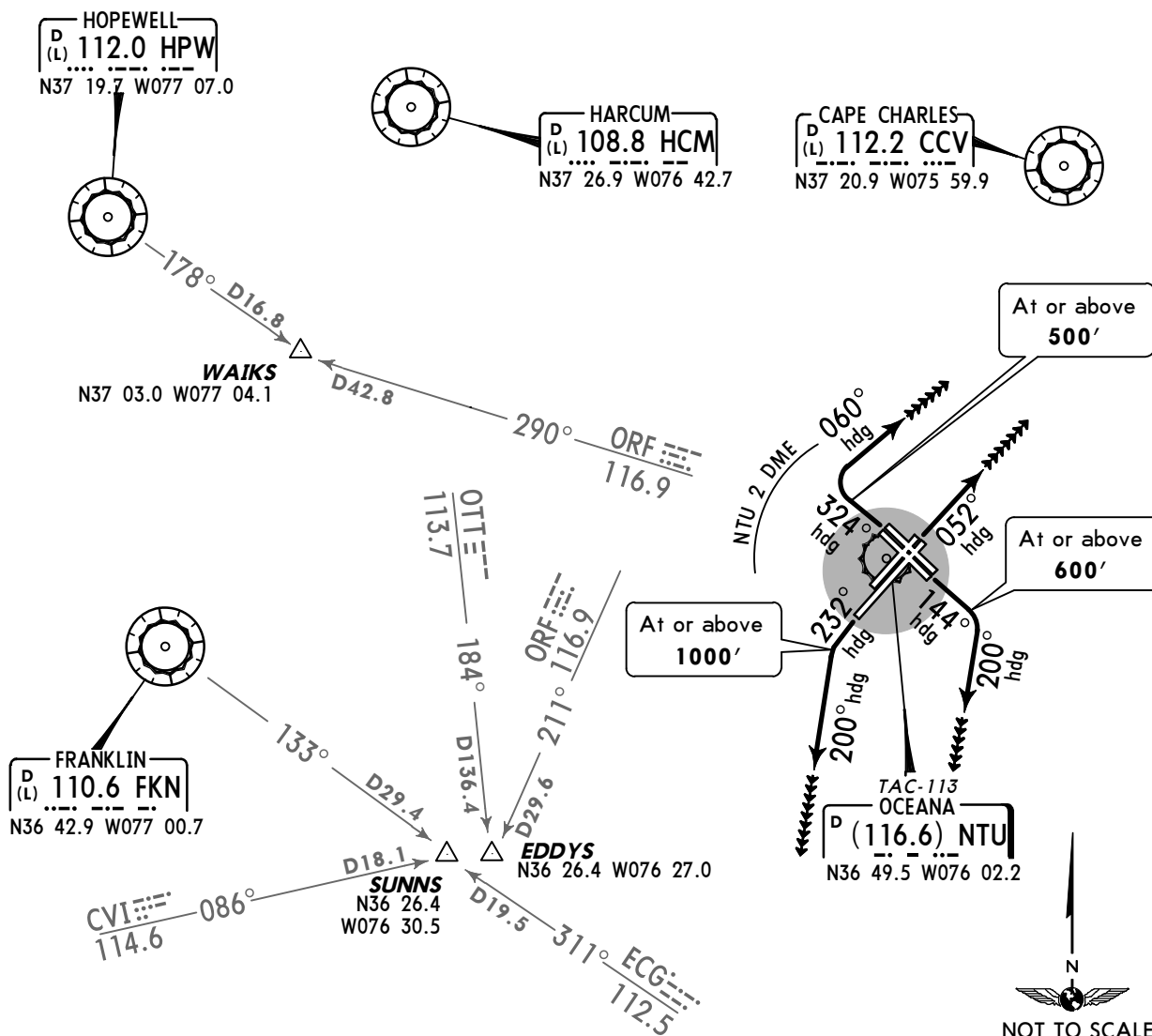
Expect clearance to cross 20 NM WEST of FAK
VOR at 21000'.
Expect clearance to cross Russl Int at 16000'.
Expect clearance to cross HCM VOR at 14000'.

ARRIVAL

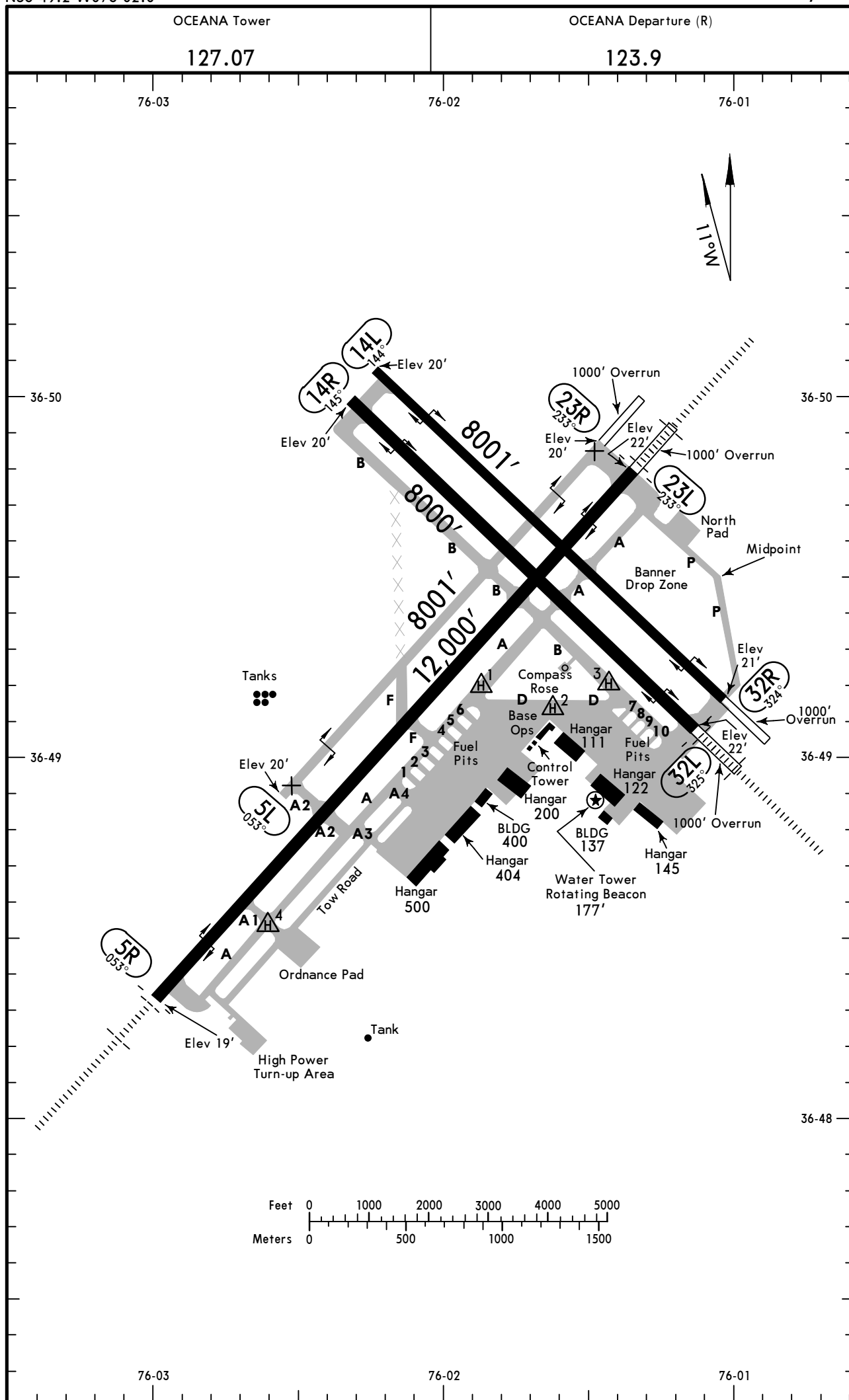
From over MOL VOR via MOL R-115 and FAK
R-297 to FAK VOR, then via FAK R-101 and
HCM R-282 to HCM VOR, then via HCM R-107
and CCV R-290 to Terks Int. Expect radar
vectors to the final approach course after
Terks Int.

Direct distance from Terks Int to:
Oceana NAS 41 NM



OCEANA Departure (R)
123.9Apt Elev
23'Trans level: FL180 Trans alt: 18000'
RADAR required.**OCEANA THREE DEPARTURE (NTU3.NTU)**

RWY	INITIAL CLIMB	ALTITUDE
5L/R	Climb via heading 052°.	MAINTAIN 4000' or assigned lower altitude
14L/R	Climb via heading 144°. Leaving 600' , turn RIGHT heading 200°.	
23L/R	Climb via heading 232°. Leaving 1000' , turn LEFT heading 200°.	
32L/R	Climb via heading 324° to assigned altitude, turn RIGHT heading 060° within NTU 2 DME.	
TRANSITIONS		
CAPE CHARLES (NTU3.CCV)	Via RADAR vectors to CCV.	
EDDYS (NTU3.EDDYS)	Via RADAR vectors to EDDYS.	
FRANKLIN (NTU3.FKN)	Via RADAR vectors to FKN.	
HARCUM (NTU3.HCM)	Via RADAR vectors to HCM.	
HOPEWELL (NTU3.HPW)	Via RADAR vectors to HPW. (At or below 17000' only.)	
SUNNS (NTU3.SUNNS)	Via RADAR vectors to SUNNS. (At or below 17000' only.)	
WAIKS (NTU3.WAIKS)	Via RADAR vectors to WAIKS.	



CHANGES: Rwy 5R/23L re-opened, Rwy 5L/23R closed.

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Refer to DOD/NGA supplementary publications for additional information.

ADDITIONAL RUNWAY INFORMATION					
RWY		USABLE LENGTHS		TAKE-OFF	WIDTH
		LANDING BEYOND			
		Threshold	Glide Slope		
5R 23L	HIRL ALSF-I CL (White)				200'
5L 23R	HIRL				150'
14R 32L	HIRL CL HIRL ALSF-I CL				200'
14L 32R	HIRL				150'

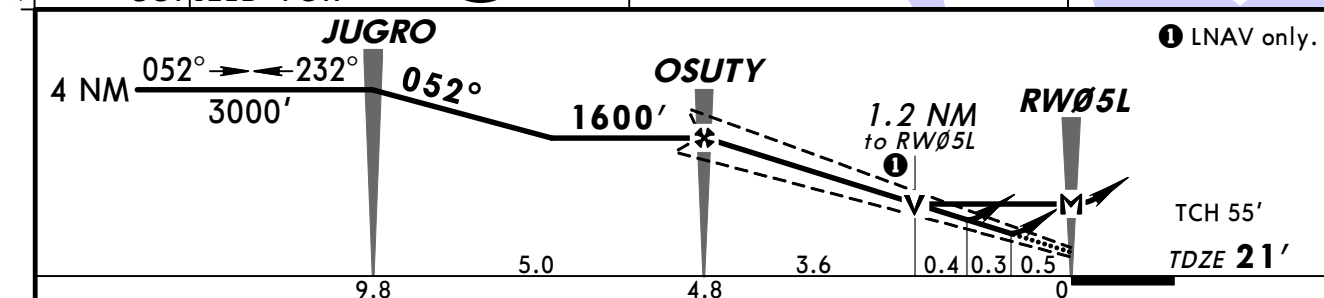
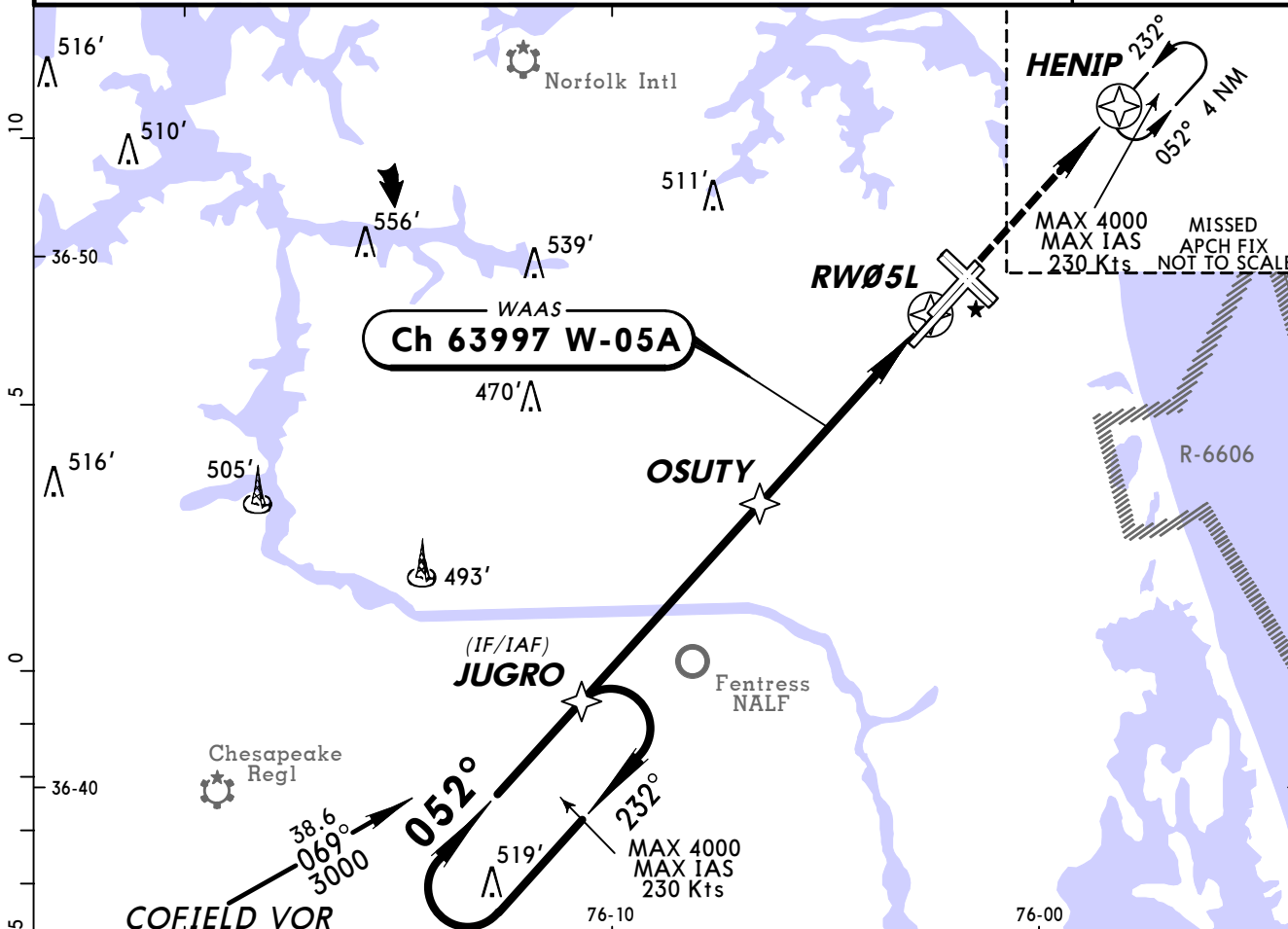
Radar reflectors on all runways except 14L/32R.

TAKE-OFF		
	All Rwys	
	Adequate Vis Ref	STD
	1/4	1
		1/2
1 & 2 Eng		
3 & 4 Eng		

Rwy 5L: Trees 115' MSL, 3706' from DER, 97' right of centerline.
Rwy 5R: Trees 115' MSL, 3706' from DER, 603' left of centerline.
Rwy 14L: Trees 105' MSL, 2792' from DER, 7' left of centerline.
Rwy 14R: Trees 105' MSL, 2792' from DER, 708' left of centerline.

BRIEFING STRIP™

OCEANA Approach (R)		OCEANA Radar		OCEANA Tower	
123.9		124.82		127.07	
WAAS Ch 63997 W-05A	<i>Final</i> <i>Apch Crs</i> 052°	<i>Minimum Alt</i> OSUTY 1600' (1579')	<i>LPV</i> <i>DA(H)</i> 221' (200')	<i>Apt Elev</i> 23' <i>TDZE</i> 21'	2300' MSA RW05L
MISSED APCH: Climb to 3000' direct HENIP and hold.					
Alt set: INCHES		Trans level: FL180		Trans alt: 18000'	
1. EMERG SAFE ALT 100 NM 4100'. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 42°C (107°F). 3. DME/DME RNP-0.30 not authorized.					

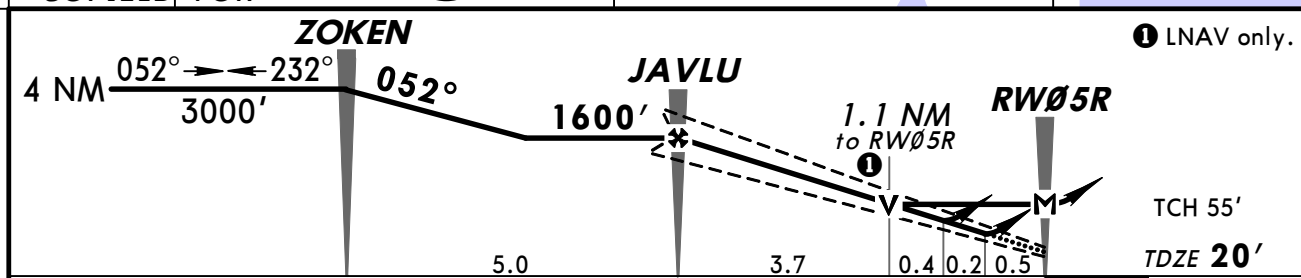
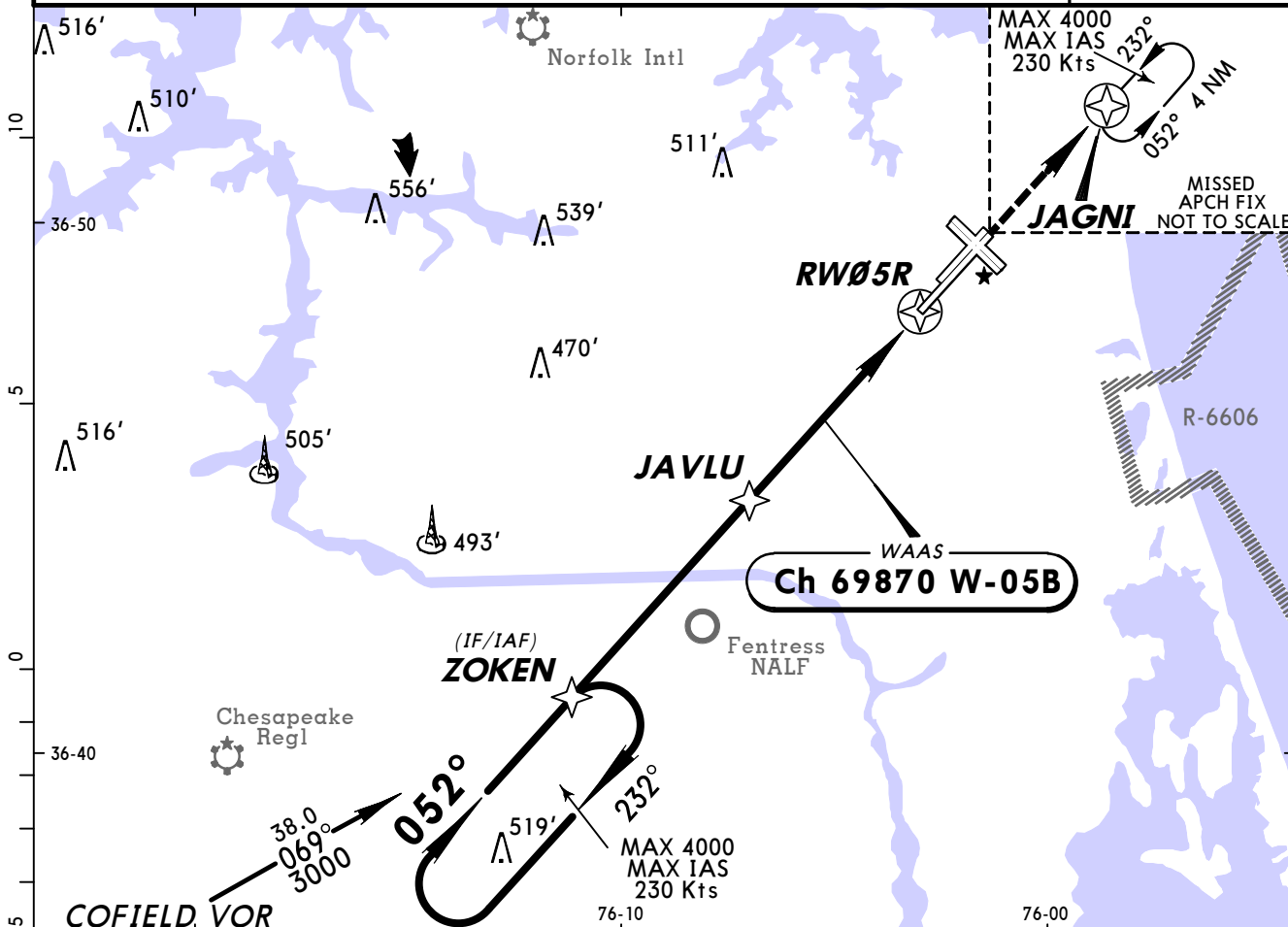


Gnd speed-Kts	70	90	100	120	140	160	3000'		HENIP	
Glide Path Angle	3.00°	372	478	531	637	743	849			
MAP at RW05L										

STRAIGHT-IN LANDING RWY 5L				CIRCLE-TO-LAND	
LPV		LNAV/VNAV		LNAV	
DA(H) 221' (200')		DA(H) 334' (313')		MDA(H) 440' (419')	
A				Max Kts	MDA(H)
B				90	480' (457') - 1
C	1	1		120	480' (457') - 1½
D			1¼	140	480' (457') - 1½
				165	580' (557') - 2

BRIEFING STRIP™

OCEANA Approach (R)		OCEANA Radar		OCEANA Tower	
123.9		124.82		127.07	
WAAS Ch 69870 W-05B	<i>Final</i> <i>Apch Crs</i> 052°	<i>Minimum Alt</i> JAVLU 1600' (1580')	<i>LPV</i> <i>DA(H)</i> 220' (200')	<i>Apt Elev</i> 23' <i>TDZE</i> 20'	2300' MSA RW05R
MISSED APCH: Climb to 3000' direct JAGNI and hold.					
Alt set: INCHES Trans level: FL180 Trans alt: 18000' 1. EMERG SAFE ALT 100 NM 4100'. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 42°C (108°F). 3. DME/DME RNP-0.30 not authorized.					



Gnd speed-Kts	70	90	100	120	140	160	ALSFI	3000'	JAGNI
Glide Path Angle	3.00°	372	478	531	637	743	849		
MAP at RW05R									

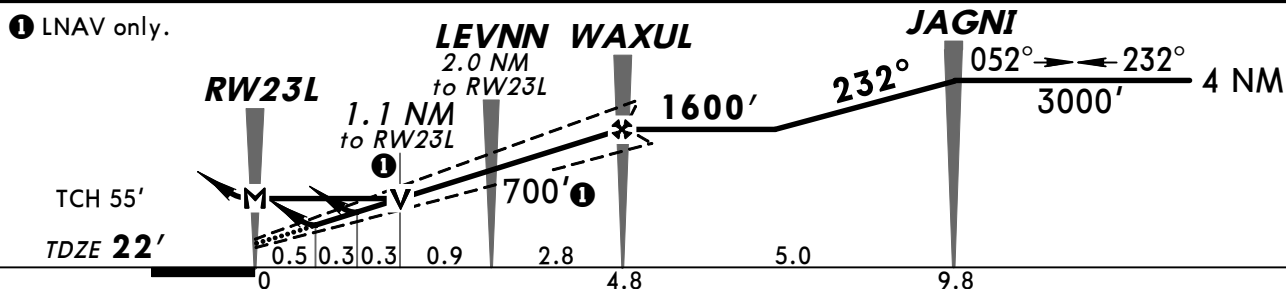
STRAIGHT-IN LANDING RWY 5R						CIRCLE-TO-LAND	
LPV		LNAV/VNAV		LNAV		Max Kts	MDA(H)
DA(H) 220' (200')		DA(H) 303' (283')		MDA(H) 420' (400')			
ALS out		ALS out		ALS out			
A	1/2	1/2	1/2	1/2	1	90	480' (457')-1
B						120	
C	3/4	3/4	3/4	3/4	1 1/4	140	480' (457')-1 1/2
D						165	580' (557')-2

BRIEFING STRIP™

OCEANA Approach (R)		OCEANA Radar		OCEANA Tower	
123.9		124.82		127.07	
WAAS Ch 67300 W-23A	<i>Final</i> <i>Apch Crs</i> 232°	<i>Minimum Alt</i> WAXUL 1600' (1578')	<i>LPV</i> <i>DA(H)</i> 222' (200')	<i>Apt Elev</i> 23' <i>TDZE</i> 22'	2300' MSA RW23L
MISSED APCH: Climb to 3000' direct ZOKEN and hold.					
Alt set: INCHES Trans level: FL180 Trans alt: 18000' 1. EMERG SAFE ALT 100 NM 4100'. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 42°C (107°F). 3. DME/DME RNP-0.30 not authorized.					

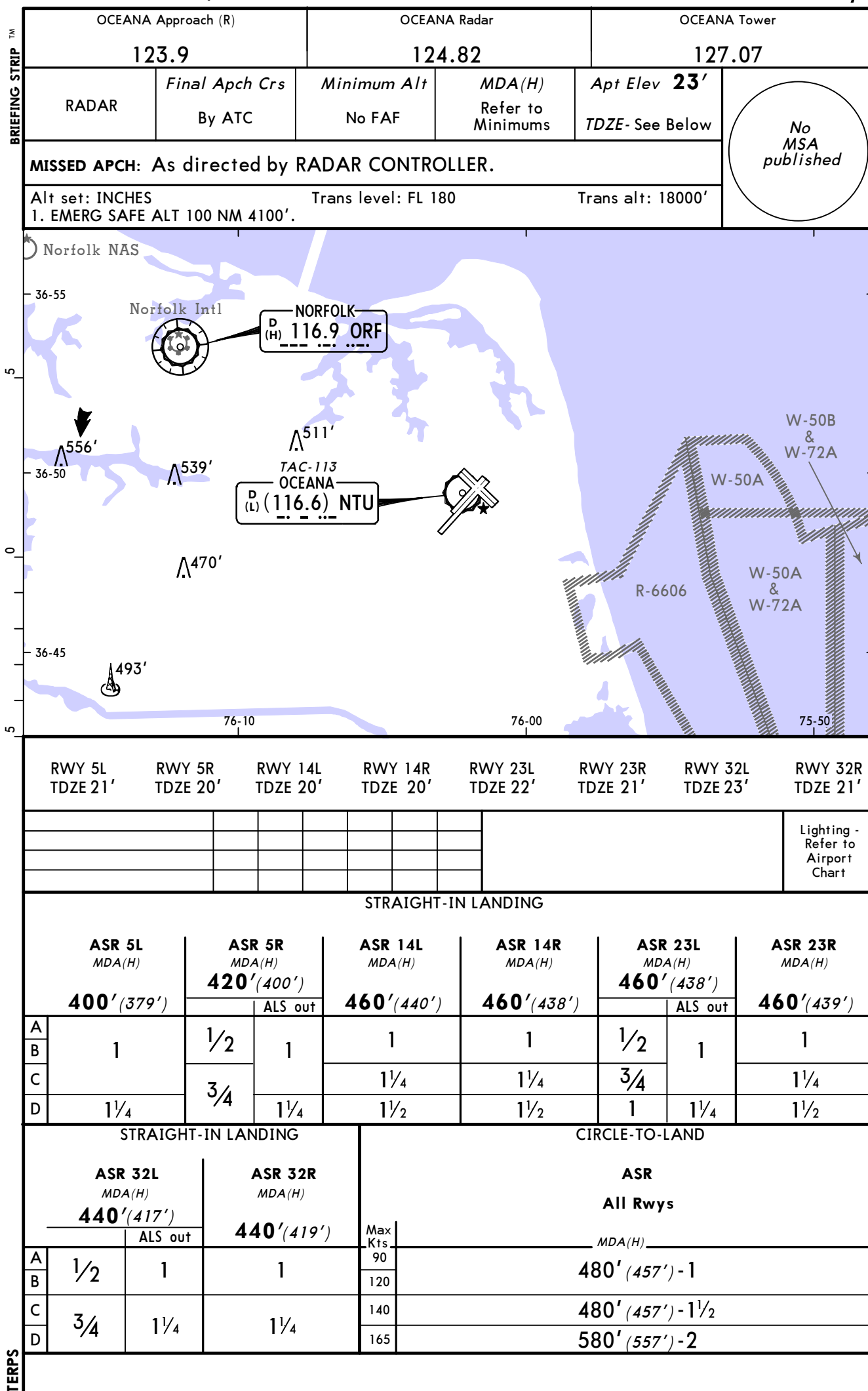


① LNAV only.



Gnd speed-Kts	70	90	100	120	140	160	ALSF-1 	3000' 	ZOKEN
Glide Path Angle	3.00°	372	478	531	637	743			
MAP at RW23L									

STRAIGHT-IN LANDING RWY 23L						CIRCLE-TO-LAND	
LPV DA(H) 222' (200')		LNAV/VNAV DA(H) 316' (294')		LNAV MDA(H) 440' (418')		Max Kts	MDA(H)
ALS out		ALS out		ALS out		90	480' (457') - 1
A	1/2	1/2		1/2	1	120	
B							
C	3/4	3/4	1	3/4	1 1/4	140	480' (457') - 1 1/2
D						165	580' (557') - 2



General Information

Location: Norfolk VA USA
IATA Code: ORF
Lat/Long: N36° 53.7' W076° 12.1'
Elevation: 27 ft

Airport Use: Public
Magnetic Variation: 10.8°W
Sectional Chart: Washington

Fuel Types: 100 Octane (LL), Jet A
Oxygen Types: High Pressure, Low Pressure, LP Bottle
Repair Types: Major Airframe, Major Engine
Customs: Upon Prior Request
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: Yes
Beacon: Yes

Sunrise: 1139 Z
Sunset: 2257 Z,

Runway Information

Runway: 05
Length x Width: 9001 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 26 ft
Lighting: Edge, ALS, Centerline, TDZ
Displaced Threshold: 1000 ft

Runway: 14
Length x Width: 4875 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 25 ft
Lighting: Edge, REIL
Displaced Threshold: 213 ft

Runway: 23
Length x Width: 9001 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 26 ft
Lighting: Edge, ALS, Centerline

Runway: 32
Length x Width: 4875 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 25 ft
Lighting: Edge, REIL

Communication Information

ATIS 127.15

Norfolk Tower 120.8

Norfolk Ground Control 121.9

Norfolk Clearance Delivery 118.5

Norfolk Approach Control 118.9 Initial Contact

Norfolk App ARSA 118.9

Norfolk App ARSA 125.7 (311 °-9 °)

Norfolk Departure Control 125.2

Leesburg Flight Service Station 122.1 RCO

Leesburg Flight Service Station 116.9 RCO

Alt set: INCHES
Trans level: FL 180 Trans alt: 18000'
Also serves **1**

Direct distance from DRONE to:

① AIRPORTS SERVED

Chesapeake Regl	19 NM
Hampton Roads Executive	18 NM
Felker AAF	36 NM

NEWPORT NEWS VA
Newport News/
Williamsburg Intl
43

TAC-70
LANGLEY
D (L) (112.3) LFI
N37 05.1 W076 21.6

FT EUSTIS VA
Felker AAF
11

LANGLEY
AFB VA
11

NORFOLK
NS VA
15

TAC-48
CHAMBERS
D
(L) (111.1) NGU
N36 56.4 W076 16.6

Norfolk I
26

FRANKLIN
D
(L) 110.6 FKN
... ..
N36 42.9 W077 00.7

NORFOLK VA
Hampton Roads Executive
23 

NORFOLK
D
(H) 116.9 ORF
--- .-. ---
N36 53.5 W076 12.0

NORFOLK VA
Chesapeake Regl
20

COFIELD
D
(L) 114.6 CVI
N36 22.4 W076 52.3

DEENE
N36 04.5 W077 29.9

TURBOJET
EXPECT clearance to cross
at **FL210**

DRONE
N36 31.8 W076 40.3

EXPECT RADAR vectors to
final approach course.

TURBOJETS
EXPECT clearance to cross
at **11000'**

RALEIGH-DURHAM
 (DRONE1) B2

TAR RIVER
 (L) 117.8 TYI
 N35 58.6 W077 42.2

RALEIGH-
DURHAM
D
(H) 117.2 RDU
... ..
N35 52.4 W078 47.0

BROZE
N35 55.4 W077 10.9

TURBOJETS
EXPECT clearance to cross at FL190

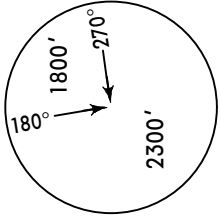
KINSTON
D
(L) 109.6 ISO
N35 22.3 W077 33.5

From over DRONE EXPECT RADAR vectors to final approach course.

NORFOLK INTL
ATIS
127.15

Apt Elev
See
graphic

Alt set: INCHES Trans level: FL 180 Trans alt: 18000'
1. For aircraft at or above 14000' only.
2. Also serves **1**

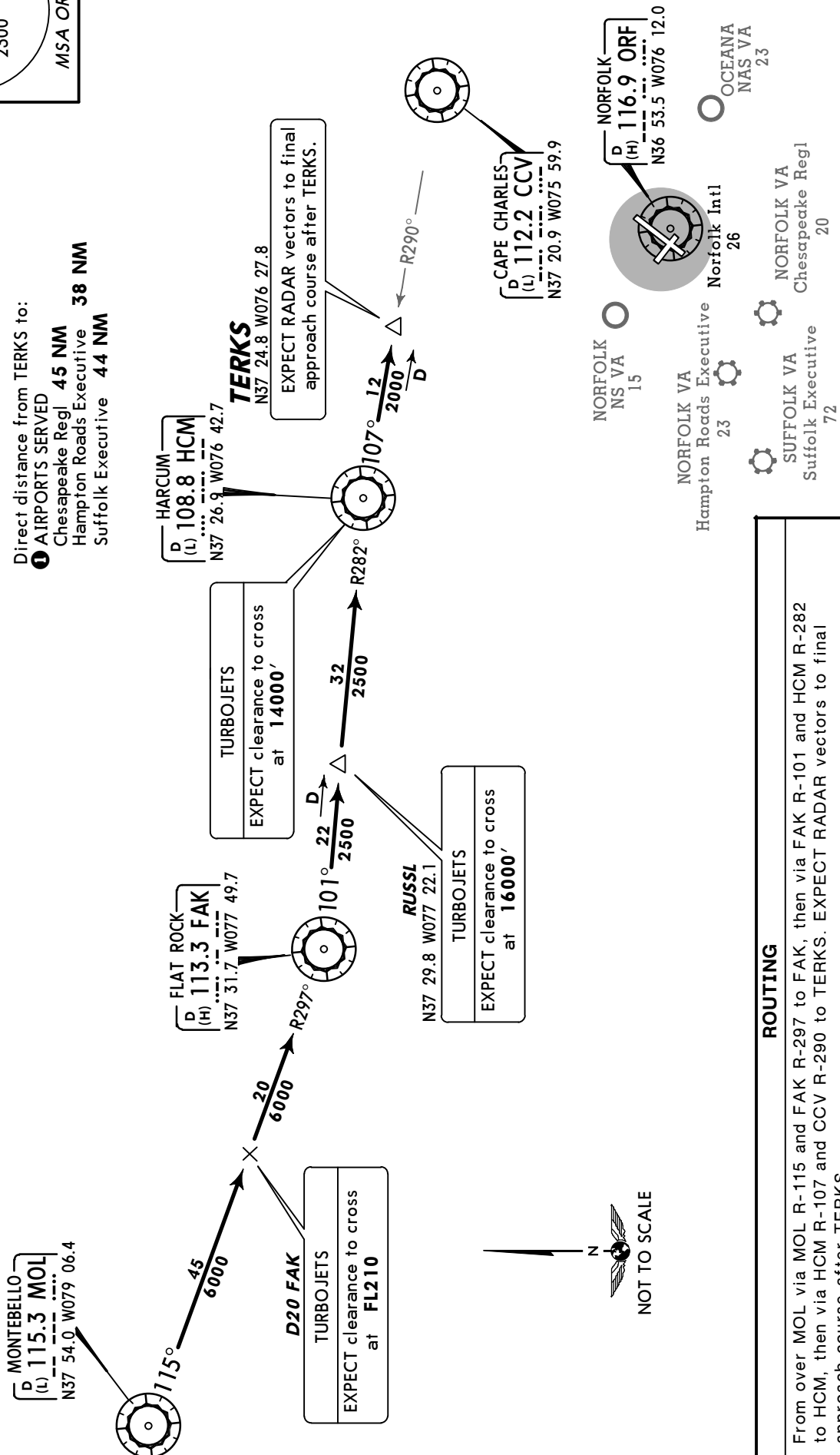


MSA ORF VOR

TERKS TWO ARRIVAL (TERKS.TERKS2)

Direct distance from TERKS to:
Norfolk Intl **34 NM**

Direct distance from TERKS to:
1 AIRPORTS SERVED
Chesapeake Regl **45 NM**
Hampton Roads Executive **38 NM**
Suffolk Executive **44 NM**



ROUTING

From over MOL via MOL R-115 and FAK R-297 to FAK, then via FAK R-101 and HCM R-282 to HCM, then via HCM R-107 and CCV R-290 to TERKS. EXPECT RADAR vectors to final approach course after TERKS.

NORFOLK Departure (R)

125.2

Apt Elev

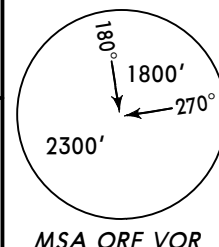
26'

Trans level: FL 180

Trans alt: 18000'

RADAR required.

KISRR ONE DEPARTURE (KISRR1.ORF)



SALISBURY
D (L) 111.2 SBY
N38 20.7 W075 30.6

SNOW HILL
D (L) 112.4 SWL
N38 03.4 W075 27.8

FLAT ROCK
D (H) 113.3 FAK
N37 31.7 W077 49.7

HARCUM
D (L) 108.8 HCM
N37 26.9 W076 42.7

CAPE CHARLES
D (L) 112.2 CCV
N37 20.9 W075 59.9

HOPEWELL
D (L) 112.0 HPW
N37 19.7 W077 07.0

WAIKS
N37 03.0
W077 04.1

FRANKLIN
D (L) 110.6 FKN
N36 42.9 W077 00.7

NORFOLK
D (H) 116.9 ORF
N36 53.5 W076 12.0

SWOPE
(112.5 ECG R-178/D17)
N36 31.1
W076 18.9

This SID requires take-off minimums
(for standard minimums, refer to airport chart):
Rwys 5, 14, 23, 32: Standard (or lower than
standard, if authorized).

OBSTACLE: For TAKEOFF OBSTACLE
NOTES see 10-3OB1.

RWY	INITIAL CLIMB	
5	Climb heading 047°.	
14	Climb heading 137°.	
23	Climb heading 227°.	
32	Climb heading 317°.	
ROUTING		ALTITUDE
EXPECT RADAR vectors to assigned departure route or fix. EXPECT clearance to requested altitude 10 minutes after departure.		MAINTAIN 4000'

TAKEOFF OBSTACLE NOTES

◦ RWY 5:

MOBILE CRANE 4091' FROM DER, 1249' RIGHT OF CENTERLINE, 150' AGL/163' MSL. MULTIPLE SHIP MASTS BEGINNING 2761' FROM DER, 22' RIGHT OF CENTERLINE, UP TO 100' AGL/100' MSL. MULTIPLE SHIP MASTS BEGINNING 2564 FROM DER, 133' LEFT OF CENTERLINE, UP TO 100' AGL/100' MSL. OBSTRUCTION LIGHT ON POLE 3978' FROM DER, 931' LEFT OF CENTERLINE, 138' AGL/146' MSL. MULTIPLE TOWERS BEGINNING 4045' FROM DER, 982' LEFT OF CENTERLINE, UP TO 138' AGL/146' MSL. OBSTRUCTION LIGHT ON POLE 2898' FROM DER, 811' RIGHT OF CENTERLINE, 84' AGL/98' MSL. ANTENNA 4115' FROM DER, 1585' RIGHT OF CENTERLINE, 117' AGL/131' MSL. TOWER 2974' FROM DER, 772' RIGHT OF CENTERLINE, 90' AGL/98' MSL. OBSTRUCTION LIGHT ON POLE 2696' FROM DER, 1063' LEFT OF CENTERLINE, 84' AGL/91' MSL. BUSH 29' FROM DER, 307' RIGHT OF CENTERLINE, 6' AGL/20' MSL. TREE 1459' FROM DER, 159' LEFT OF CENTERLINE, 41' AGL/55' MSL. TOWER 2938' FROM DER, 1254' LEFT OF CENTERLINE, 89' AGL/94' MSL. TREE 1399' FROM DER, 201' RIGHT OF CENTERLINE, 38' AGL/52' MSL. SIGN 82' FROM DER, 301' LEFT OF CENTERLINE, 2' AGL/19' MSL. TERRAIN 23' FROM DER, 227' LEFT OF CENTERLINE, 0' AGL/17 MSL.

◦ RWY 14:

TREE 2541' FROM DER, 432' RIGHT OF CENTERLINE, 101' AGL/121' MSL. MULTIPLE TREES BEGINNING 443' FROM DER, 398' LEFT OF CENTERLINE, UP TO 75' AGL/95' MSL. POLE 1410' FROM DER, 254' RIGHT OF CENTERLINE, 45' AGL/62' MSL.

◦ RWY 23:

ROD ON OBSTRUCTION LIGHT POLE 1012' FROM DER, 650' RIGHT OF CENTERLINE, 56' AGL/73' MSL. MULTIPLE TREES BEGINNING 619' FROM DER, 584' LEFT OF CENTERLINE, UP TO 81' AGL/98' MSL. OBSTRUCTION LIGHT ON POLE 1433' FROM DER, 738' LEFT OF CENTERLINE, 54' AGL/71' MSL. MULTIPLE TREES BEGINNING 323' FROM DER, 504' RIGHT OF CENTERLINE, UP TO 26' AGL/43' MSL. POLE 2165' FROM DER, 840' RIGHT OF CENTERLINE, 57' AGL/74' MSL.

◦ RWY 32:

MULTIPLE TREES BEGINNING 17' FROM DER, 460' RIGHT OF CENTERLINE, UP TO 81' AGL/98' MSL. MULTIPLE TREES AND POLES BEGINNING 60' FROM DER, 333' LEFT OF CENTERLINE, UP TO 87' AGL/92' MSL. ROAD 207' FROM DER, 231' RIGHT OF CENTERLINE, 12' AGL/29' MSL. MULTIPLE OBSTRUCTION LIGHTS ON TOWERS 201' FROM DER, 135' LEFT OF CENTERLINE, UP TO 12' AGL/27' MSL.

NORFOLK, VA
NORFOLK INTL

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GENERAL

Birds in vicinity of airport.
 Low level wind shear alert system.

ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS			WIDTH
		LANDING Threshold	BEYOND Glide Slope	LAHSO Distance	
5	HIRL CL MALSR TDZ ❶ PAPI-L grooved RVR	8001' 2439m	6967' 2124m		150' 46m
23	HIRL CL MALSR ❶ PAPI-L grooved		7992' 2436m	14/32 6300' 1920m	
14	MIRL REIL ❷ PAPI-L grooved	4662' 1421m		5/23 2850' 869m	150' 46m
32					

❶ Angle 3.0°.

❷ Angle 3.0°.

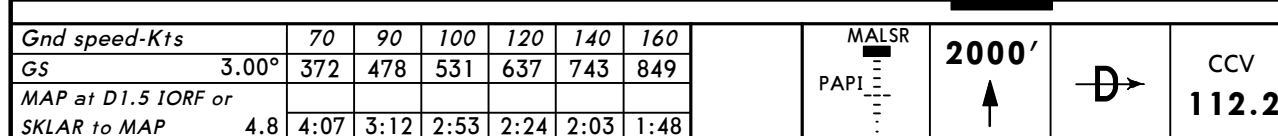
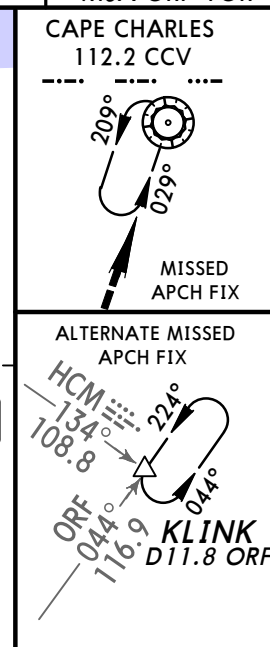
TAKE-OFF

	All Rwys	
	Adequate Vis Ref	STD
1 & 2 Eng	RVR 16 or 1/4	RVR 50 or 1
3 & 4 Eng		RVR 24 or 1/2

FOR FILING AS ALTERNATE

	ILS Rwy 5 ILS Rwy 23	LOC Rwy 5 LOC Rwy 23 RNAV (RNP) Y Rwy 5 RNAV (GPS) Z Rwy 5 RNAV (GPS) Rwy 14 RNAV (RNP) Y Rwy 23	RNAV (GPS) Z Rwy 23 RNAV (GPS) Rwy 32 VOR DME Rwy 5 VOR DME Rwy 14 VOR Rwy 23 VOR DME Rwy 32
A	600-2	800-2	
B			
C			
D			

NORFOLK, VA
ILS or LOC Rwy 5



STRAIGHT-IN LANDING RWY 5										1 CIRCLE-TO-LAND	
ILS DA(H) 221' (200')					LOC (GS out) MDA(H) 440' (419')			Max Kts	MDA(H)		
FULL		TDZ or CL out	RAIL out	ALS out		RAIL out	ALS out				
A	RVR 18 or 1/2	RVR 24 or 1/2	RVR 40 or 3/4	RVR 24 or 1/2		RVR 40 or 3/4	RVR 55 or 1	90	480' (453') - 1		
B								120			
C						RVR 40 or 3/4	RVR 50 or 1	RVR 60 or 1 1/8	140	540' (513') - 1 1/2	
D									165	580' (553') - 2	

CHANGES: Procedure.

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TERPS AMEND 25 25 AUG 2011

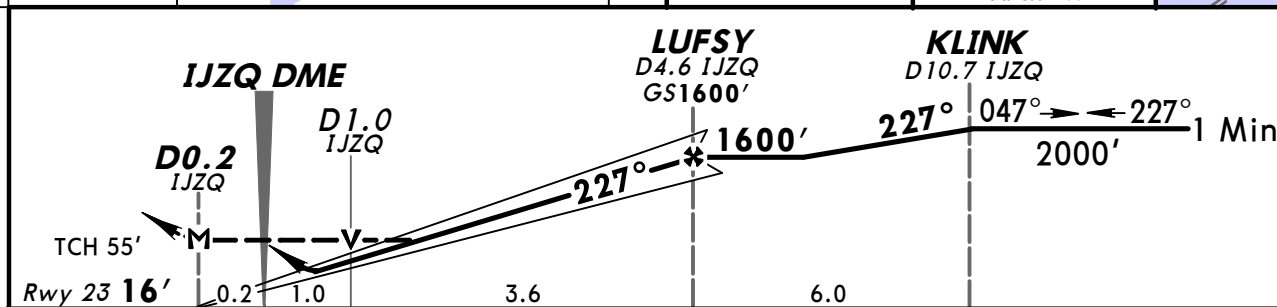
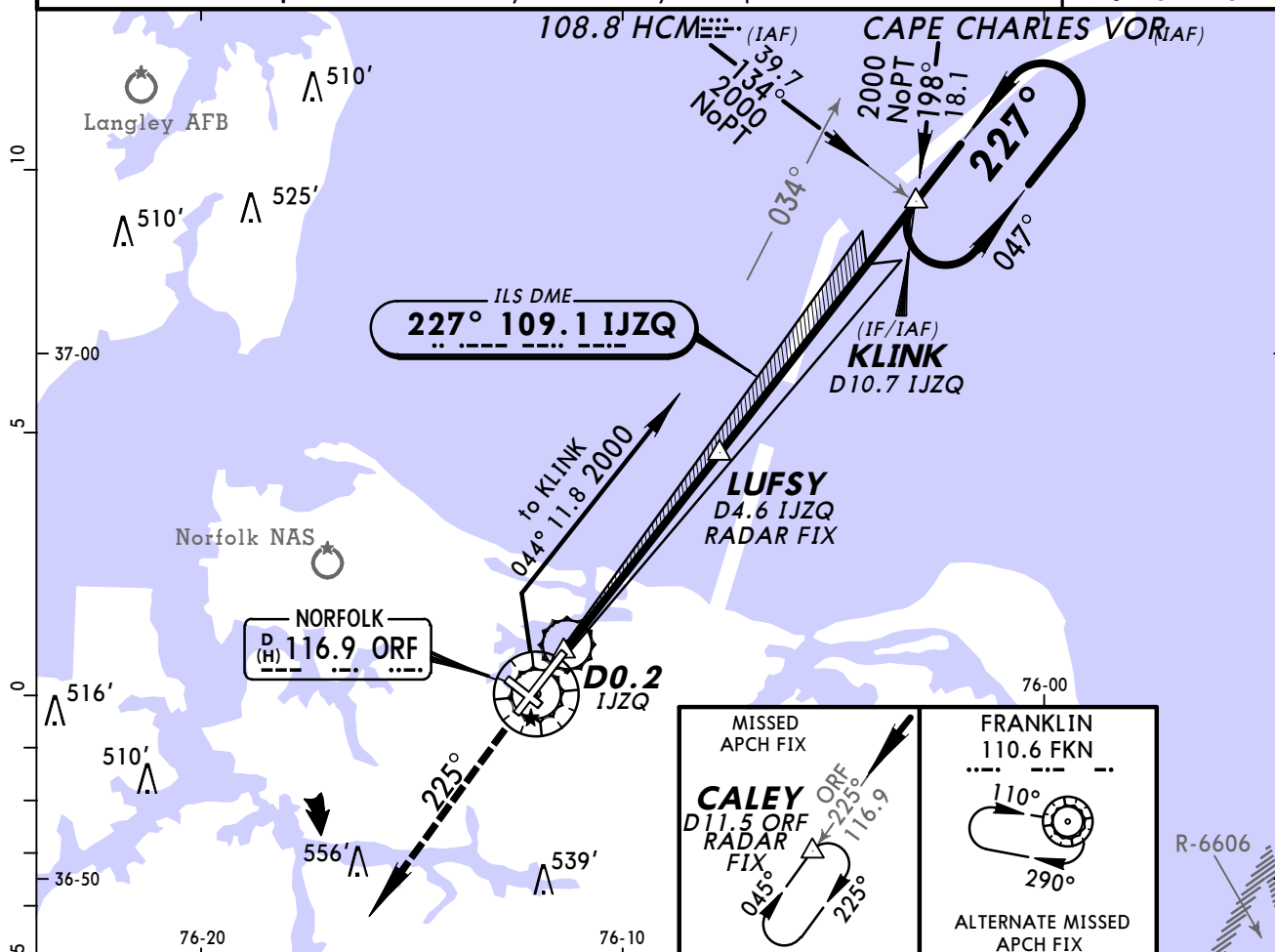
KORF/ORF NORFOLK INTL

19 AUG 11 **11-2** Eff 25 Aug

NORFOLK, VA
ILS or LOC Rwy 23

BRIEFING STRIP™

ATIS 127.15		NORFOLK Approach (R) 118.9		NORFOLK Tower 120.8		Ground 121.9	
LOC IJZQ 109.1	Final Apch Crs 227°	GS LUSFY 1600' (1584')	ILS DA(H) 216' (200')	Apt Elev 27' Rwy 23 16'		180° 1800' 270° 2300'	
MISSED APCH: Climb to 2000' on ORF VOR R-225 to CALEY/D11.5 ORF and hold.							
Alt Set: INCHES		Trans level: FL 180		Trans alt: 18000'			
1. DME or Radar required. 2. Visibility reduction by helicopters not authorized.							
MSA ORF VOR							



Gnd speed-Kts	70	90	100	120	140	160	MALSR PAPI 2000' on 116.9 ORF R-225 CALEY
GS	3.00°	372	478	531	637	743	
MAP at D0.2 IJZQ or LUSY to MAP	4.8	4:07	3:12	2:53	2:24	1:48	

STRAIGHT-IN LANDING RWY23						CIRCLE-TO-LAND	
ILS DA(H) 216' (200')			LOC (GS out) MDA(H) 440' (424')			Max Kts	MDA(H)
FULL	RAIL out	ALS out	RAIL out	ALS out		90	480' (453') - 1
1/2	3/4	3/4	3/4	1		120	
			1	1 1/4		140	540' (513') - 1 1/2
						165	580' (553') - 2

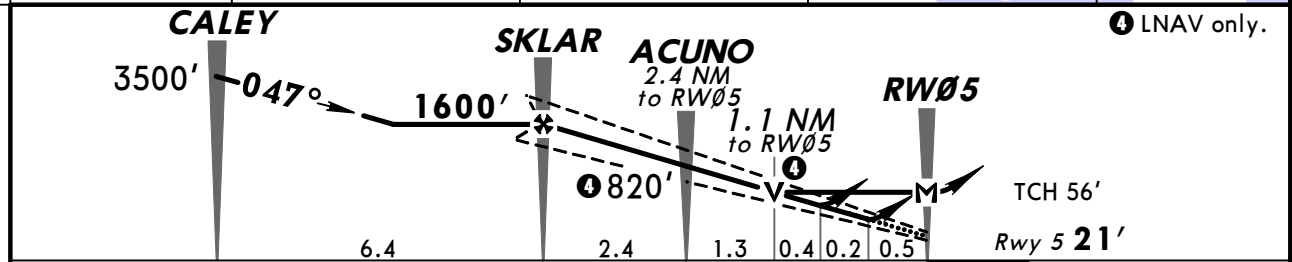
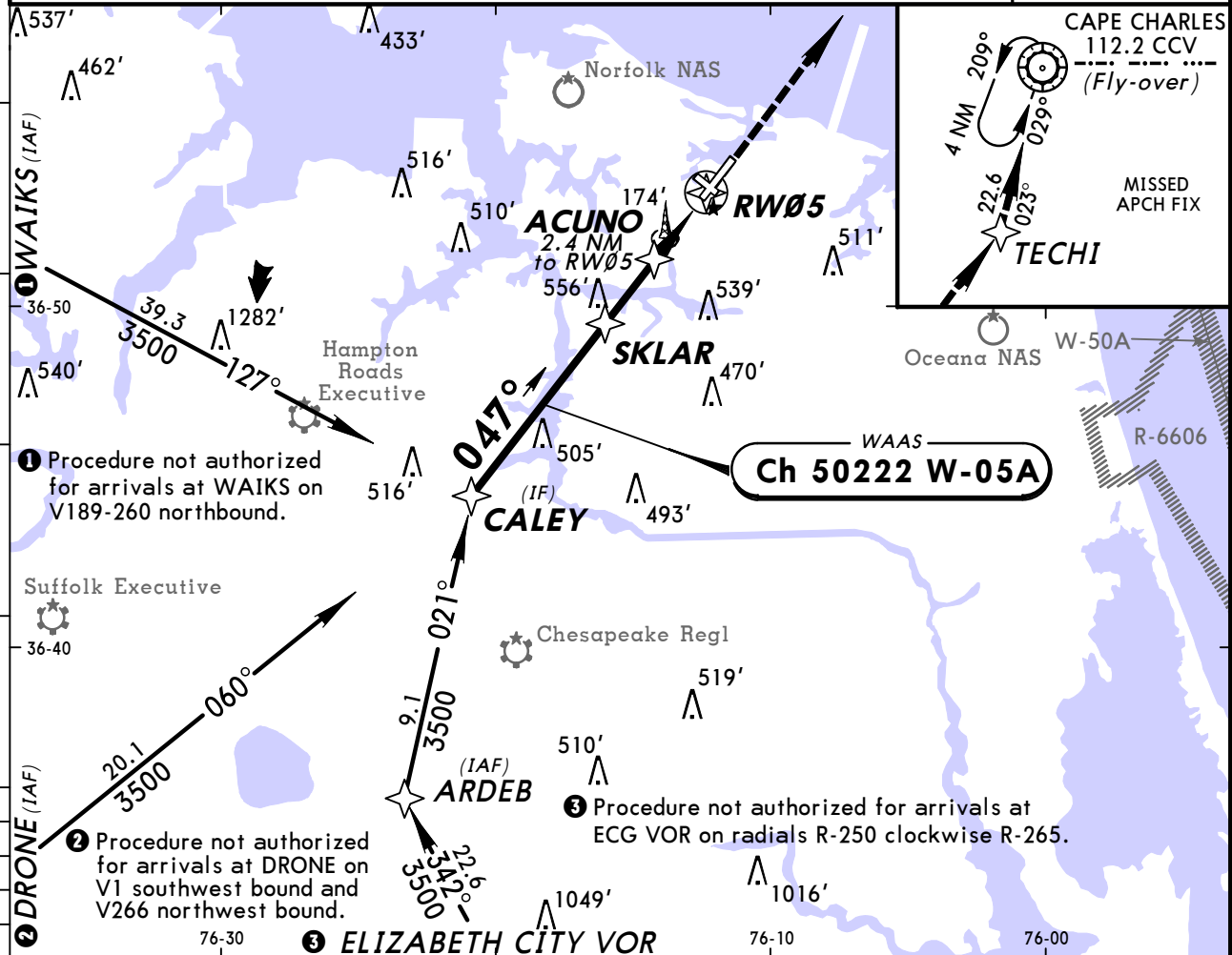
1 When VGSI inop, circling Rwy 14 not authorized at night.

CHANGES: Procedure.

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TERPS AMEND 7 25 AUG 2011

ATIS 127.15		NORFOLK Approach (R) 118.9		NORFOLK Tower 120.8		Ground 121.9
WAAS Ch 50222 W-05A	Final Apch Crs 047°	Minimum Alt SKLAR 1600' (1579')	LPV DA(H) 226' (205')	Apt Elev 27' Rwy 5 21'		2300' MSA RW05
MISSED APCH: Climb to 2000' direct TECHI and on track 023° to CCV VOR and hold.						
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. DME/DME RNP-0.30 not authorized. 2. VGSI and RNAV glidepath not coincident. 3. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 43°C (109°F).						



11.2			4.8				0			
Gnd speed-Kts	70	90	100	120	140	160	MALSR PAPI <			

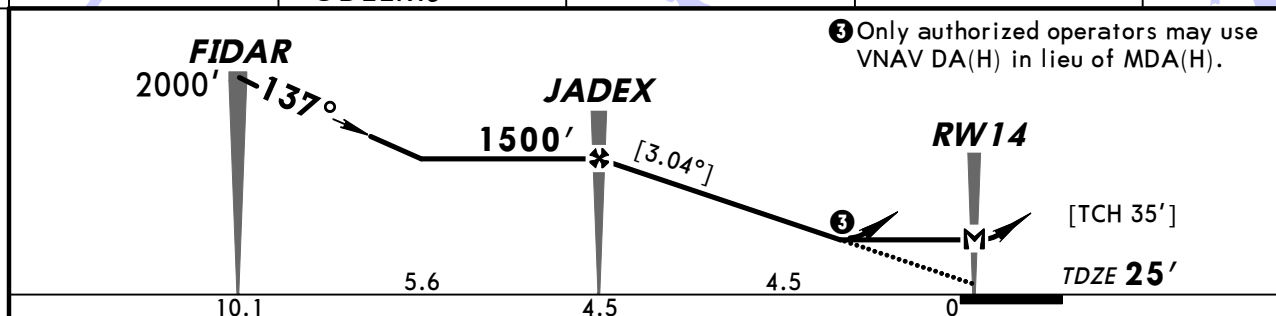
STRAIGHT-IN LANDING RWY 5						1 CIRCLE-TO-LAND		
LPV DA(H) 226' (205')		LNAV/VNAV DA(H) 306' (285')			LNAV MDA(H) 440' (419')		Max Kts	MDA(H)
RAIL out	ALS out	RAIL out	ALS out	RAIL out	ALS out	RAIL out		
A						RVR 24	90	480' (453') - 1
B						or 1/2	120	
C	RVR 24 or 1/2	RVR 40 or 3/4	RVR 24 or 1/2	RVR 40 or 3/4	RVR 45 or 7/8	RVR 40 or 3/4	140	540' (513') - 1 1/2
D						RVR 40 or 3/4	165	580' (553') - 2

KORF/ORF NORFOLK INTL

JEPPesen
19 AUG 11 (12-2) Eff 25 Aug

NORFOLK, VA
RNAV (GPS) Rwy 14

BRIEFING STRIP TM	ATIS 127.15		NORFOLK Approach (R) 118.9		NORFOLK Tower 120.8		Ground 121.9	
	RNAV	Final Apch Crs 137°	Minimum Alt JADEX 1500'(1475')	LNAV MDA(H) 440'(415')	Apt Elev 27' TDZE 25'		2300' MSA RW14	
	MISSED APCH: Climb to 2000' via 137° course to WARIV then LEFT turn direct JIMMY and hold.							
	Alt Set: INCHES							



Gnd speed-Kts	70	90	100	120	140	160	REIL PAPI-L	2000' ↑ via 137°	WARIV
Descent angle [3.04°]	376	484	538	645	753	861			
MAP at RW14									

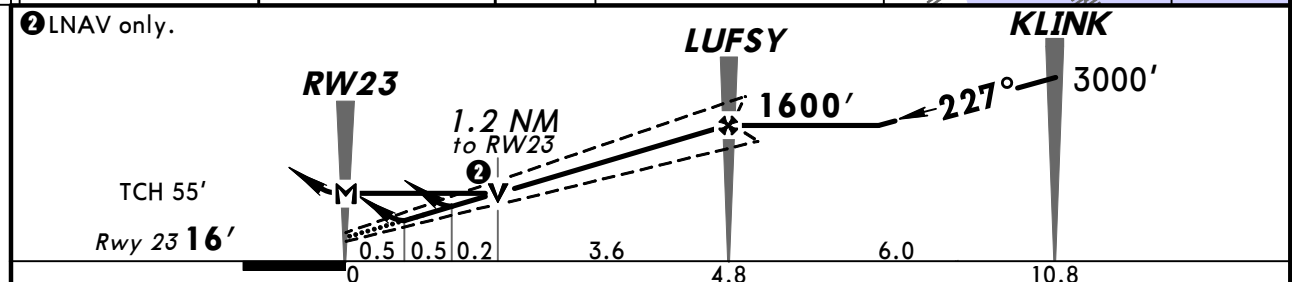
STRAIGHT-IN LANDING RWY 14 LNAV MDA(H) 440' (415')				CIRCLE-TO-LAND	
A	1			Max Kts	MDA(H)
B				90	520' (493')-1
C				120	
D	1 1/4			140	540' (513')-1 1/2
				165	580' (553')-2

CHANGES: Airport elevation.

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TERPS AMEND 08 18 NOV 2010

ATIS 127.15		NORFOLK Approach (R) 118.9		NORFOLK Tower 120.8		Ground 121.9
WAAS Ch 56322 W-23A	Final Apch Crs 227°	Minimum Alt LUSY 1600' (1584')	LPV DA(H) 216' (200')	Apt Elev 27' Rwy 23 16'		2300' MSA RW23
MISSED APCH: Climb to 2000' direct CALEY and hold.						
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 43°C (109°F). 2. DME/DME RNP-0.30 not authorized. 3. Visibility reduction by helicopters not authorized.						



Gnd speed-Kts	70	90	100	120	140	160	MALSR		2000'	D	CALEY
Glide Path Angle 3.00°	372	478	531	637	743	849	PAPI		↑		
MAP at RW23											

STRAIGHT-IN LANDING RWY 23							1 CIRCLE-TO-LAND		
LPV DA(H) 216' (200')		LNAV/VNAV DA(H) 374' (358')		LNAV MDA(H) 440' (424')			Max Kts	MDA(H)	
RAIL out ALS out		RAIL out ALS out		RAIL out ALS out					
A						3/4	1	90	480' (453')-1
B								120	
C	1/2	3/4	3/4	1 1/4	3/4	1	1 1/4	140	540' (513')-1 1/2
D								165	580' (553')-2

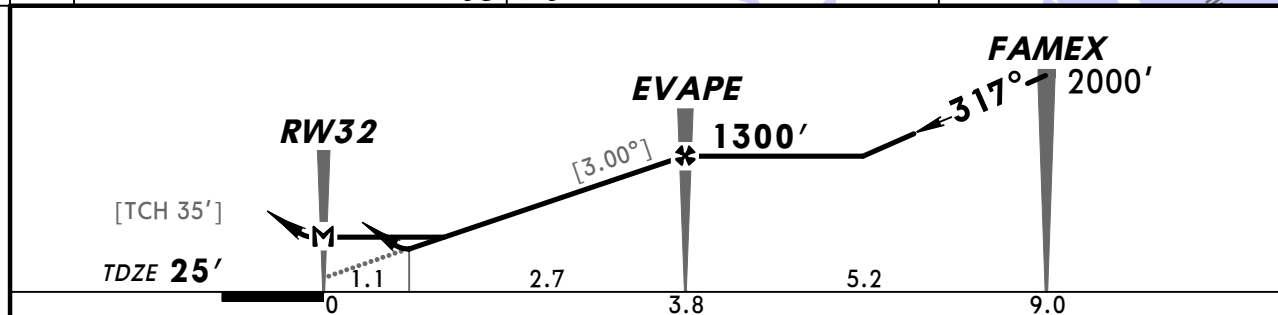
KORF/ORF NORFOLK INTL

JEPPESSEN
19 AUG 11 (12-4) Eff 25 Aug

NORFOLK, VA
RNAV (GPS) Rwy 32

BRIEFING STRIP™

ATIS 127.15		NORFOLK Approach (R) 118.9		NORFOLK Tower 120.8		Ground 121.9	
RNAV		Final Apch Crs 317°	Minimum Alt EVAPE 1300' (1275')	LNAV/VNAV DA(H) 420' (395')		Apt Elev 27' TDZE 25'	
MISSED APCH: Climb to 2000' via 317° course to CERIN then RIGHT turn direct JIMMY and hold.							2300'
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 48°C (118°F). 2. DME/DME RNP 0.30 not authorized. 3. Visibility reduction by helicopters not authorized.							
MSA RW32							



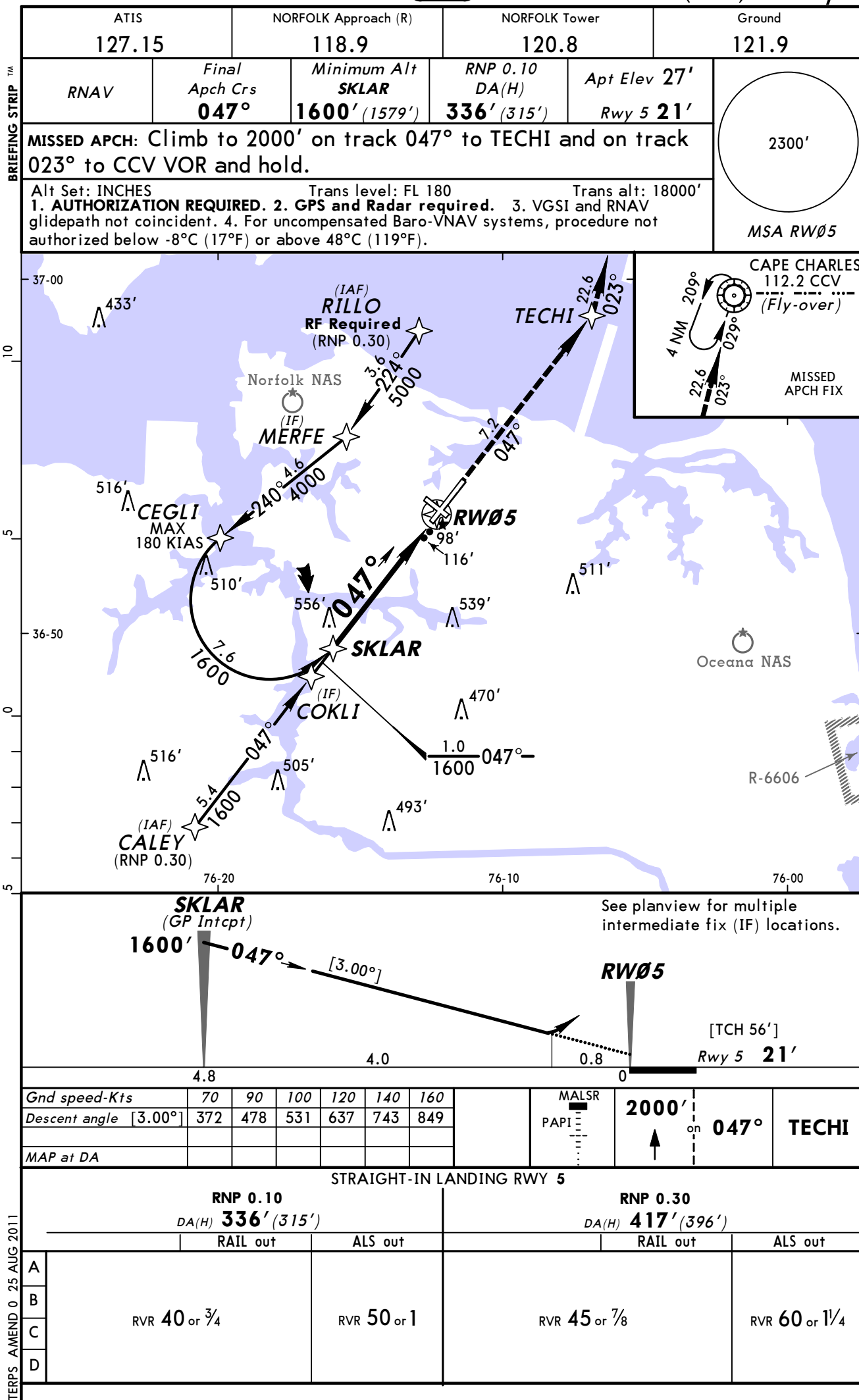
REIL	2000'	via 317°	CERIN
PAPI-L			

STRAIGHT-IN LANDING RWY 32			CIRCLE-TO-LAND	
LNAV/VNAV	LNAV		Max Kts	MDA(H)
DA(H) 420' (395')	MDA(H) 440' (415')		90	520' (493')-1
1½	1		120	
			140	540' (513')-1½
	1¼		165	580' (553')-2

TERPS AMEND 0B 18 NOV 2010

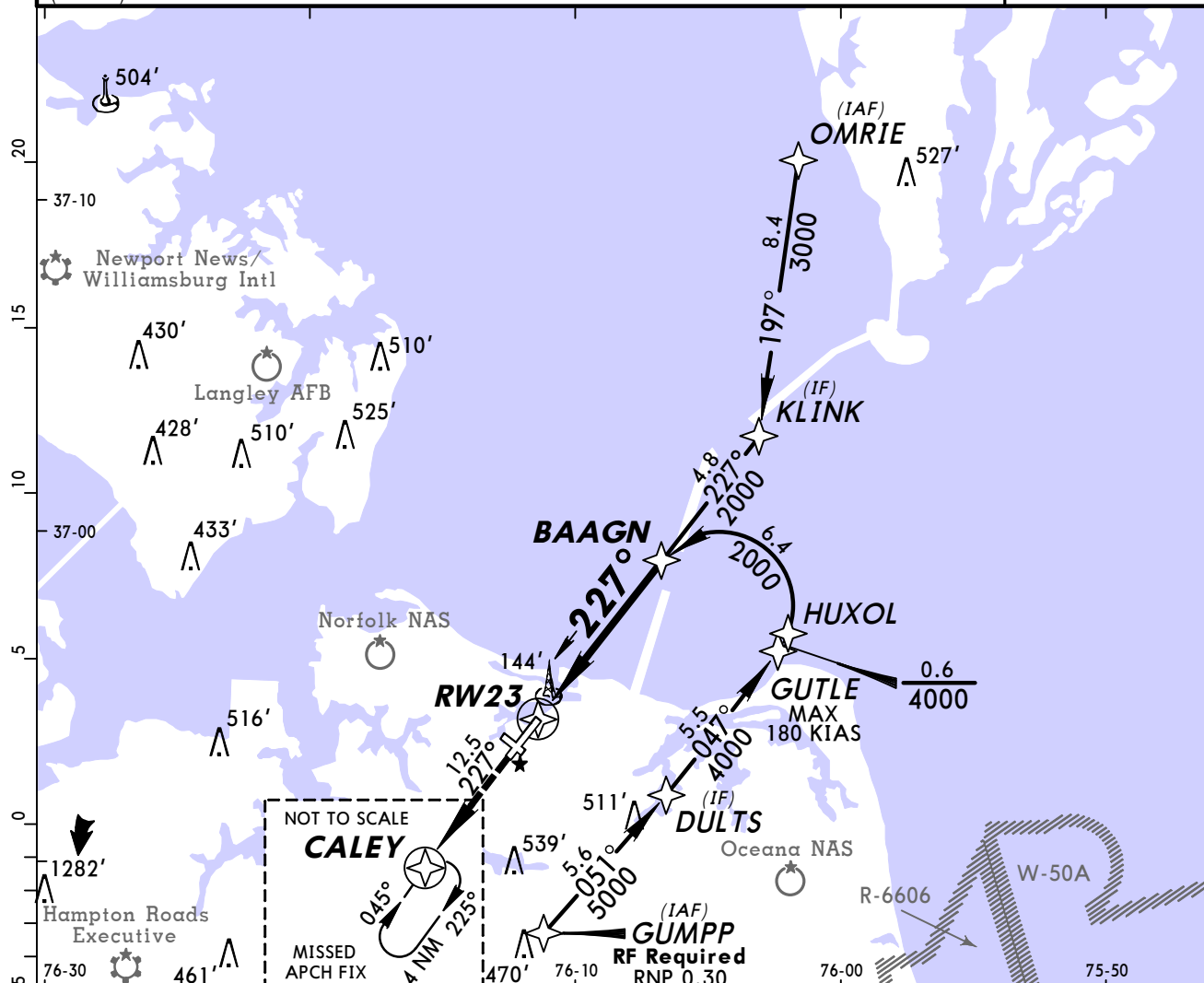
CHANGES: Airport elevation.

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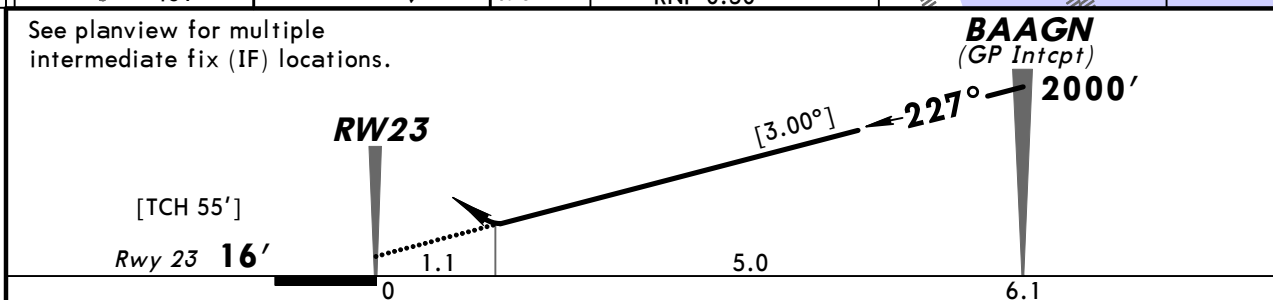


BRIEFING STRIP

ATIS 127.15		NORFOLK Approach (R) 118.9		NORFOLK Tower 120.8		Ground 121.9	
RNAV	Final Apch Crs 227°	Minimum Alt BAAGN 2000' (1984')	RNP 0.10 DA(H) 417' (401')	Apt Elev 27' Rwy 23 16'		2300' MSA RW23	
MISSED APCH: Climb to 2000' on track 227° to CALEY and hold.							
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. AUTHORIZATION REQUIRED. 2. GPS and Radar required. 3. For uncompensated Baro-VNAV systems, procedure not authorized below -8°C (17°F) or above 49°C (120°F).							



See planview for multiple intermediate fix (IF) locations.



Gnd speed-Kts	70	90	100	120	140	160	MALSR		2000'		227°		CALEY	
Descent angle [3.00°]	372	478	531	637	743	849	PAPI		↑		↑			
MAP at DA														

STRAIGHT-IN LANDING RWY 23					
RNP 0.10			RNP 0.30		
DA(H) 417' (401')			DA(H) 467' (451')		
RAIL out		ALS out	RAIL out		ALS out
A					
B					
C	7/8	1	1 1/4	1	1 1/2
D					

KORF/ORF NORFOLK INTL

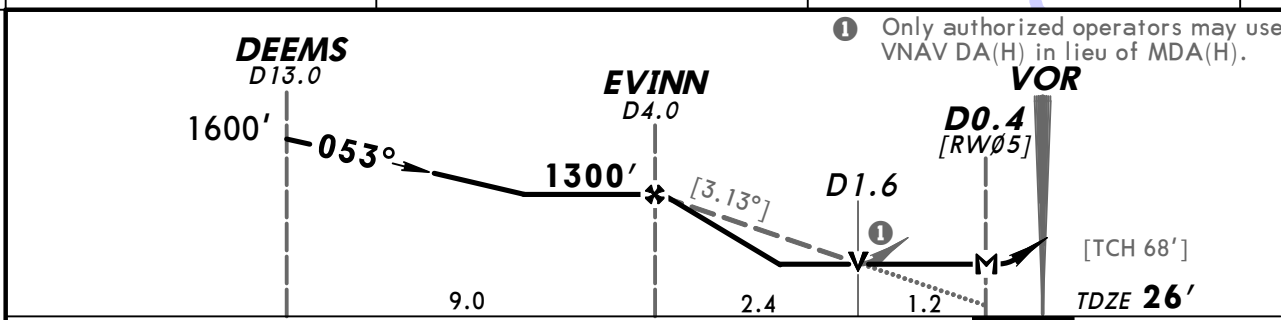
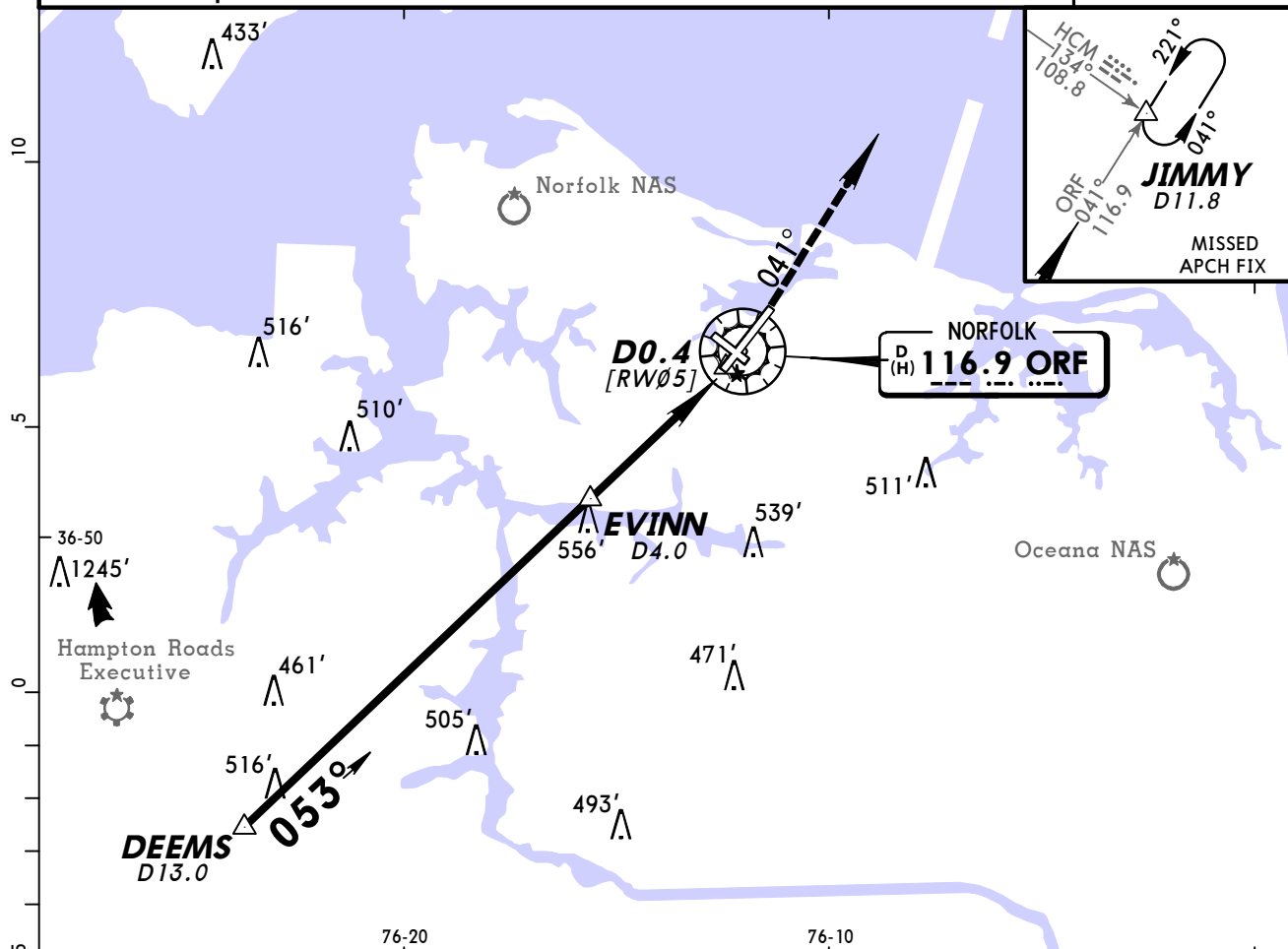
JEPPESSEN
12 NOV 10 (13-1)

NORFOLK, VA
VOR DME Rwy 5

BRIEFING STRIP™

ATIS 127.15		NORFOLK Approach (R) 118.9		NORFOLK Tower 120.8		Ground 121.9	
VOR ORF 116.9	Final Apch Crs 053°	Minimum Alt EVINN 1300' (1274')	MDA(H) 480' (454')	Apt Elev 26' TDZE 26'		A circular diagram with a center point. A vertical line points down to 180° and 1800'. A horizontal line points left to 270° and 2300'.	
MISSED APCH: Climb to 2000' outbound via ORF VOR R-041 to JIMMY INT/D11.8 and hold.							
Alt Set: INCHES 1. RADAR required.		Trans level: FL 180		Trans alt: 18000'			

MSA ORF VOR



Gnd speed-Kts	70	90	100	120	140	160		2000'	ORF	
Descent angle [3.13°]	388	498	554	665	775	886		via 116.9		
MAP at D0.4								R-041		

STRAIGHT-IN LANDING RWY 5					CIRCLE-TO-LAND				
MDA(H) 480' (454')									
		RAIL out	ALS out	Max Kts		MDA(H)			
A	RVR 24 or 1/2	RVR 40 or 3/4	RVR 50 or 1	90		520' (494') - 1			
B				120					
C	RVR 40 or 3/4	RVR 60 or 1 1/4		140		540' (514') - 1 1/2			
D	RVR 50 or 1	1 1/2		165		580' (554') - 2			

CHANGES: VDP added, minimums.

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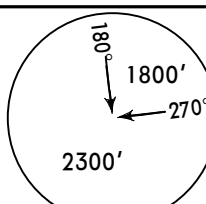
TERPS AMEND 4D 18 NOV 2010

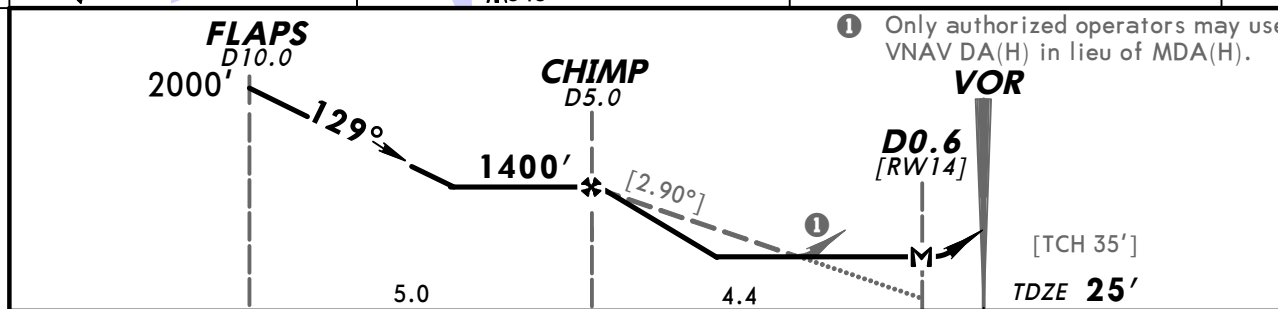
KORF/ORF NORFOLK INTL

JEPPESEN
12 NOV 10 (13-2)

NORFOLK, VA
VOR DME Rwy 14

BRIEFING STRIP™

ATIS 127.15		NORFOLK Approach (R) 118.9		NORFOLK Tower 120.8		Ground 121.9	
VOR ORF 116.9	Final Apch Crs 129°	Minimum Alt CHIMP 1400' (1375')	MDA(H) 440' (415')	Apt Elev 26' TDZE 25'			
MISSED APCH: Climbing LEFT turn to 2000' outbound via ORF VOR R-041 to JIMMY INT/D11.8 and hold.							
Alt Set: INCHES		Trans level: FL 180		Trans alt: 18000'			
1. RADAR required. 2. Visibility reduction by helicopters not authorized.						MSA ORF VOR	



Gnd speed-Kts	70	90	100	120	140	160		REIL	2000'	ORF	
Descent angle [2.90°]	359	462	513	616	718	821		PAPI-L	LT	via 116.9	JIMMY
MAP at D0.6										R-041	

STRAIGHT-IN LANDING RWY 14				CIRCLE-TO-LAND			
MDA(H) 440' (415')							
A				Max Kts	MDA(H)		
B	1			90	520' (494') - 1		
C	1¼			120			
D				140	540' (514') - 1½		
				165	580' (554') - 2		

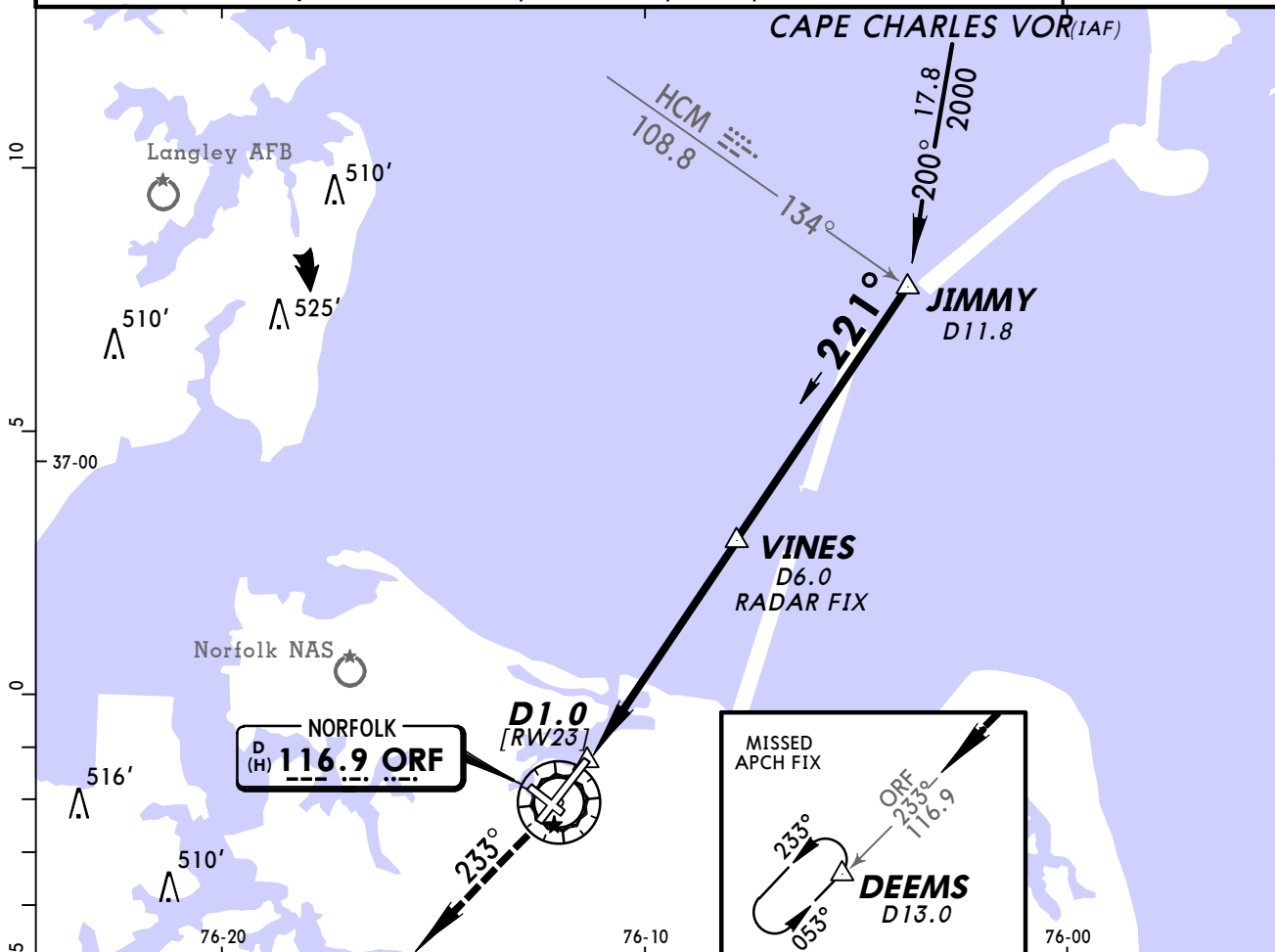
TERPS AMEND 2E 18 NOV 2010

CHANGES: Notes.

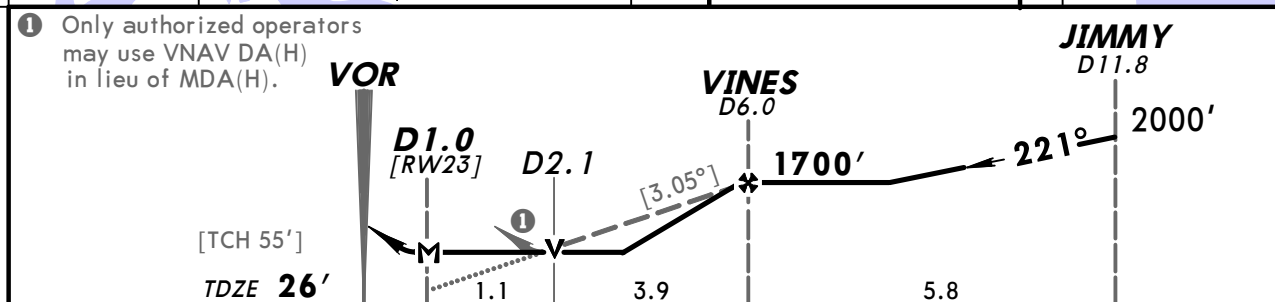
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BRIEFING STRIP™

ATIS 127.15		NORFOLK Approach (R) 118.9		NORFOLK Tower 120.8		Ground 121.9	
VOR ORF 116.9	Final Apch Crs 221°	Minimum Alt VINES 1700' (1674')	MDA(H) 420' (394')	Apt Elev 26' TDZE 26'			
MISSED APCH: Climb to 2000' outbound via ORF VOR R-233 to DEEMS INT/D13.0 and hold.							
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. DME or RADAR required. 2. Visibility reduction by helicopters not authorized.							



① Only authorized operators may use VNAV DA(H) in lieu of MDA(H).



Gnd speed-Kts	70	90	100	120	140	160	MALSR PAPI 2000' via 116.9 ORF R-233 DEEMS
Descent angle [3.05°]	378	486	540	648	755	863	
MAP at D1.0 or VINES to MAP	5.0	4:17	3:20	3:00	2:30	2:09 1:53	

STRAIGHT-IN LANDING RWY 23				CIRCLE-TO-LAND			
MDA(H) 420' (394')				MDA(H)			
RAIL out		ALS out		Max Kts			
A	3/4	1		90	520' (494') - 1		
B				120			
C				140	540' (514') - 1 1/2		
D	1	1 1/4		165	580' (554') - 2		

KORF/ORF NORFOLK INTL

12 NOV 10 **13-4**

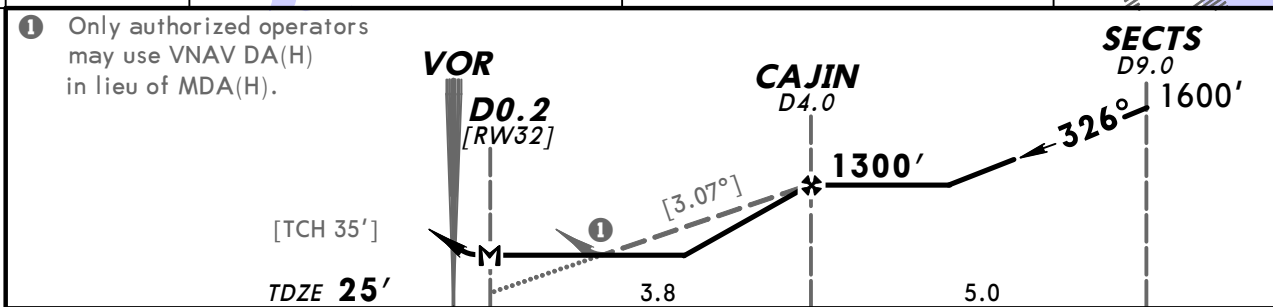
NORFOLK, VA
VOR DME Rwy 32

BRIEFING STRIP™

ATIS		NORFOLK Approach (R)		NORFOLK Tower		Ground	
127.15		118.9		120.8		121.9	
VOR ORF 116.9	Final Apch Crs 326°	Minimum Alt CAJIN 1300' (1275')	MDA(H) 460' (435')	Apt Elev 26'	TDZE 25'		 MSA ORF VOR
MISSED APCH: Climbing RIGHT turn to 2000' outbound via ORF VOR R-041 to JIMMY INT/D11.8 and hold.							
Alt Set: INCHES		Trans level: FL 180		Trans alt: 18000'			
1. RADAR required. 2. Visibility reduction by helicopters not authorized.							



① Only authorized operators may use VNAV DA(H) in lieu of MDA(H).



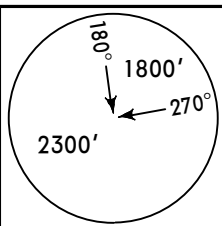
Gnd speed-Kts	70	90	100	120	140	160				
Descent angle [3.07°]	380	489	543	652	760	869				
MAP at D0.2										

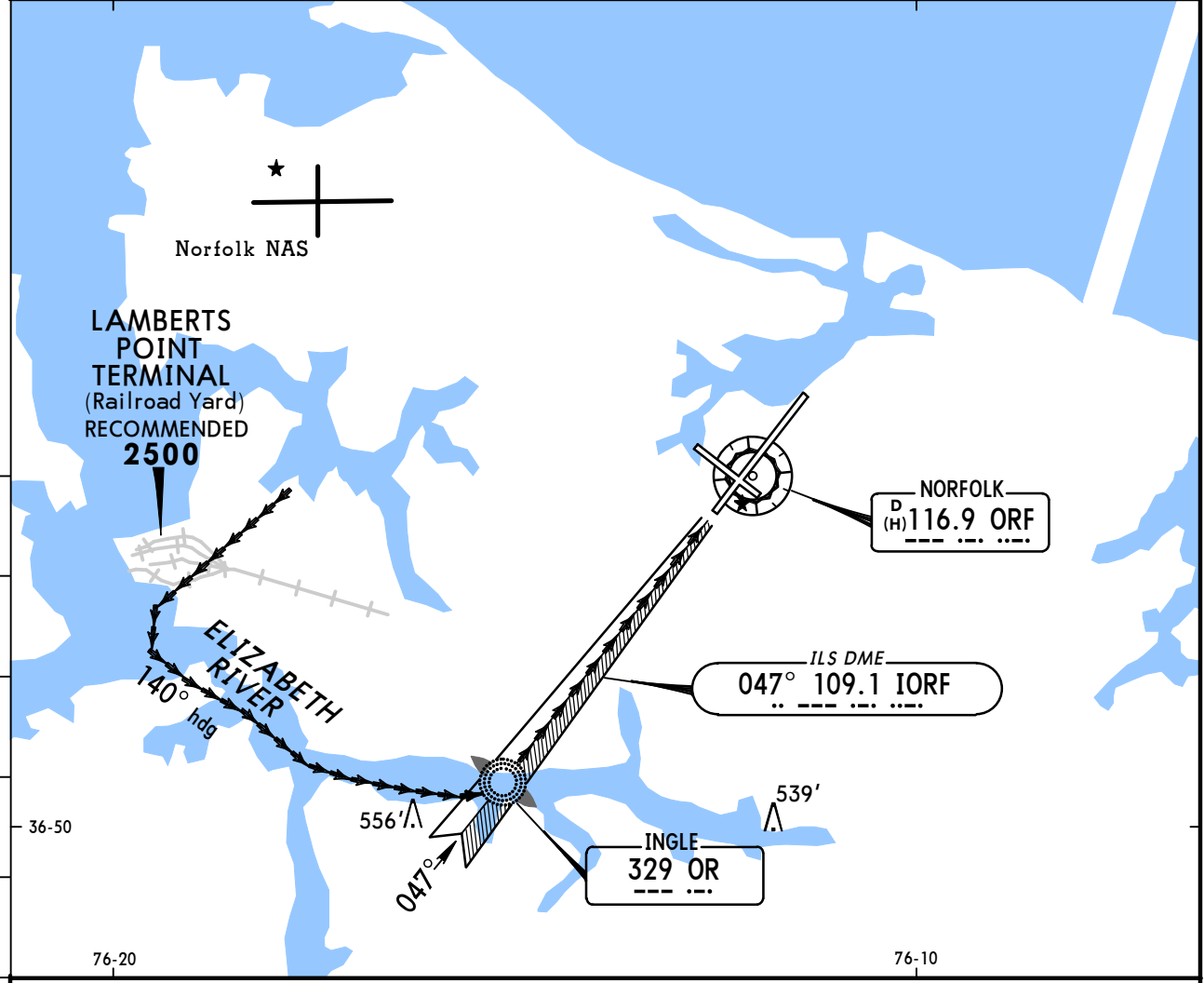
STRAIGHT-IN LANDING RWY 32				CIRCLE-TO-LAND			
MDA(H) 460' (435')							
A				Max Kts			
B	1			90	520' (494') - 1		
C	1 1/4			140	540' (514') - 1 1/2		
D	1 1/2			165	580' (554') - 2		

CHANGES: Notes, minimums.

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TERPS AMEND 4E 18 NOV 2010

ATIS 127.15		NORFOLK Approach (R) 118.9		NORFOLK Tower 120.8		Ground 121.9	
NAVAIDS- Refer to Planview	Final Apch Crs Refer to Planview	No FAF		CEIL-VIS 2100'-5	Apt Elev 26'		 MSA ORF VOR
MISSED APCH: No missed approach procedure.							
1. RADAR required. 2. Procedure not authorized at night. 3. Vertical guidance Navaid and Angle: LOC IORF (GS 3.00°)							



WEATHER MINIMUMS Ceiling 2100' - VIS 5		MALSR PAPI
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General Information

Location: Newport News VA USA

IATA Code: PHF

Lat/Long: N37° 07.9' W076° 29.6'

Elevation: 42 ft

Airport Use: Public

Magnetic Variation: 10.7°W

Sectional Chart: Washington

Fuel Types: 100 Octane (LL), Jet A

Oxygen Types: LP Bottle

Repair Types: Major Airframe, Major Engine

Customs: ADCUS

Airport Type: IFR

Landing Fee: Yes

Control Tower: Yes

Jet Start Unit: Yes

LLWS Alert: No

Beacon: Yes

Sunrise: 1140 Z

Sunset: 2258 Z,

Runway Information

Runway: 02

Length x Width: 6526 ft x 150 ft

Surface Type: concrete

TDZ-Elev: 38 ft

Lighting: Edge

Runway: 07

Length x Width: 8003 ft x 150 ft

Surface Type: asphalt

TDZ-Elev: 40 ft

Lighting: Edge, ALS

Runway: 20

Length x Width: 6526 ft x 150 ft

Surface Type: concrete

TDZ-Elev: 42 ft

Lighting: Edge, REIL

Runway: 25

Length x Width: 8003 ft x 150 ft

Surface Type: asphalt

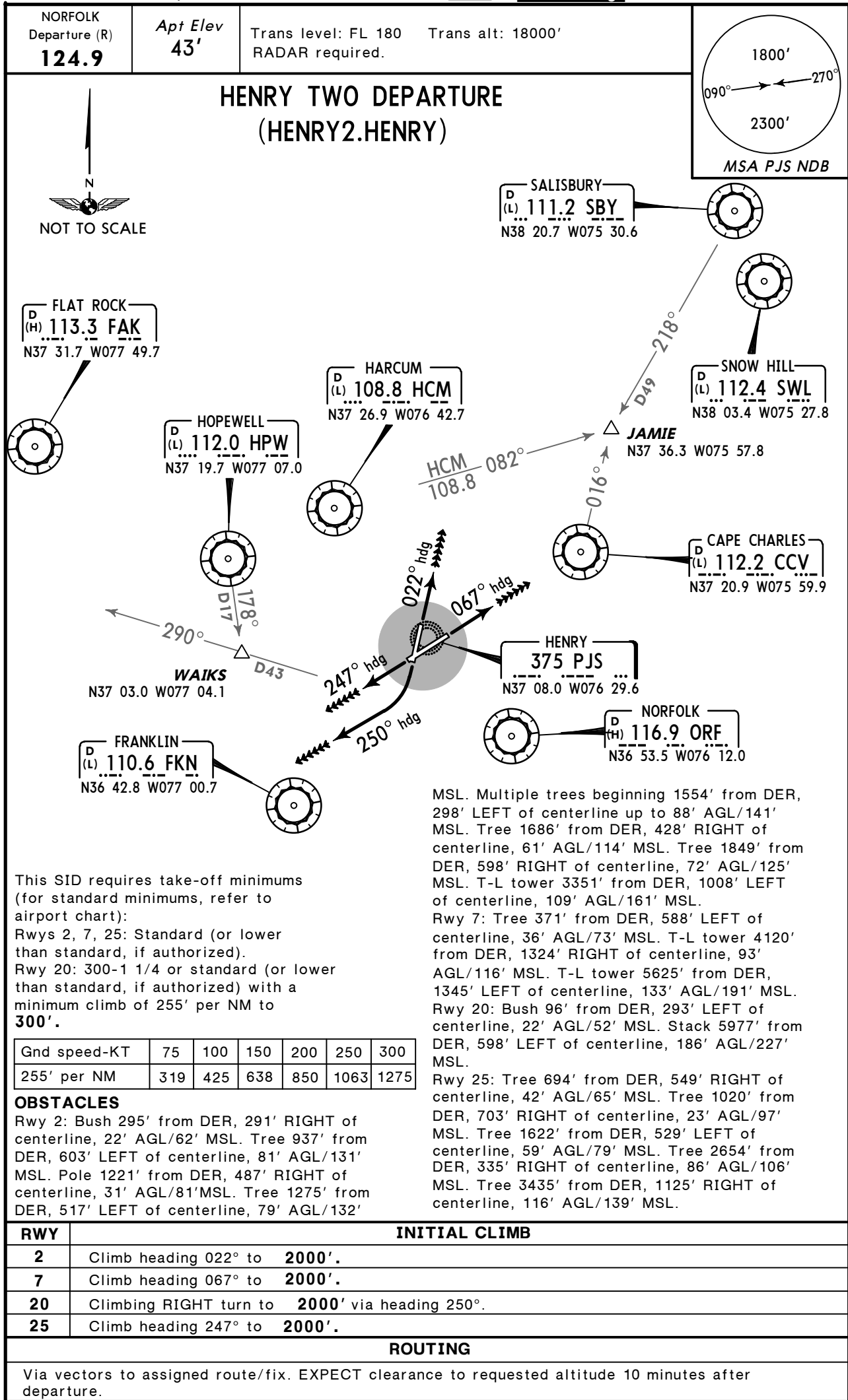
TDZ-Elev: 41 ft

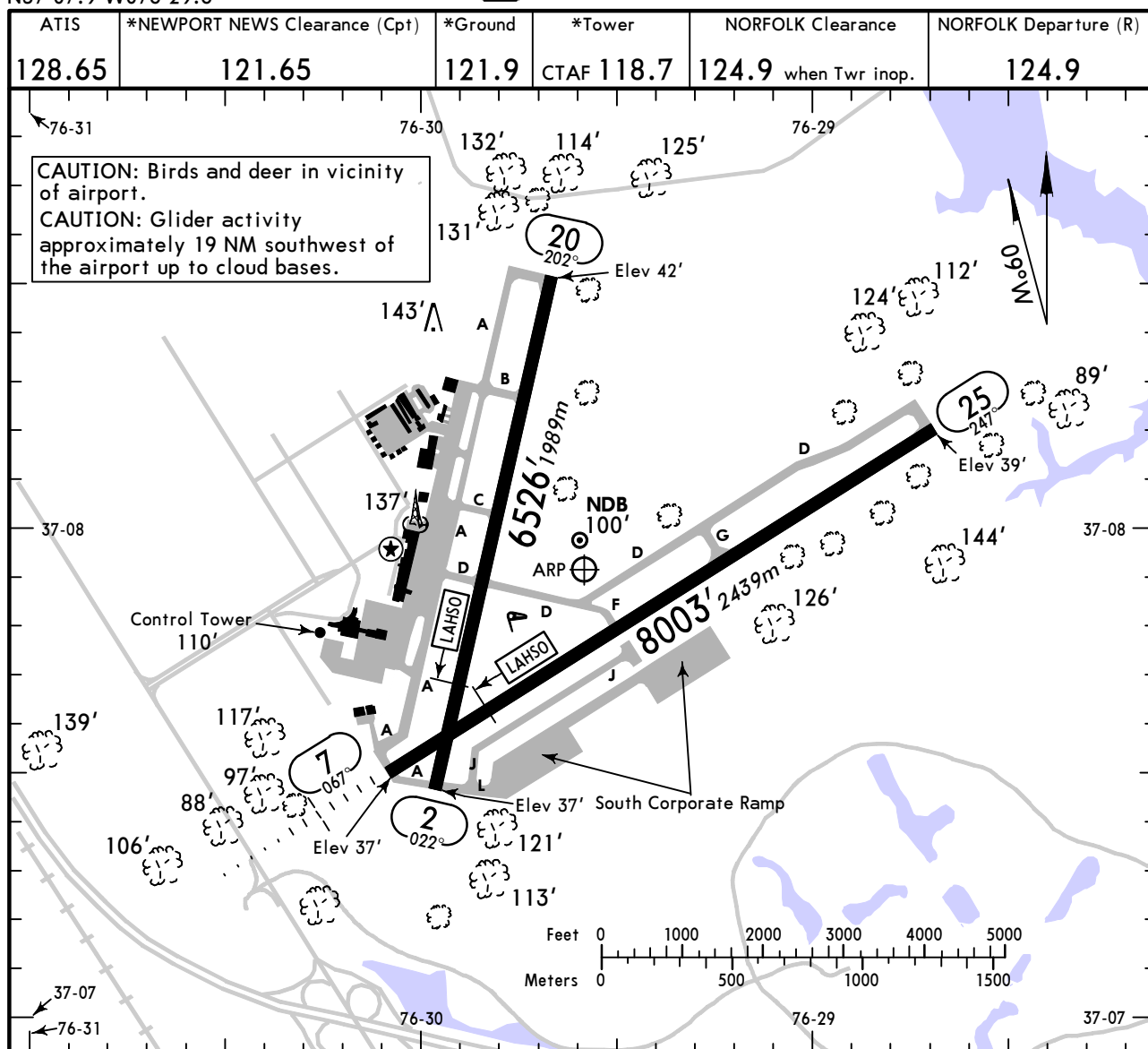
Lighting: Edge, REIL

Communication Information

ATIS 128.65
Newport News Tower 118.7 CTAF
Newport News Ground Control 121.9
Norfolk Clearance Delivery 124.9
Newport News Clearance Delivery 121.65
Newport News Pre-Taxi Clearance 121.65
Norfolk Approach Control 125.7
Norfolk Departure Control 124.9
Newport News Unicom 122.95
Leesburg Flight Service Station 122.65 RCO
Leesburg Flight Service Station 122.2 RCO
Leesburg Flight Service Station 116.9 RCO

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ADDITIONAL RUNWAY INFORMATION

RWY				USABLE LENGTHS		WIDTH
				LANDING BEYOND	LAHSO Distance	
2	HIRL VASI-L	grooved				150'
	HIRL REIL AVASI-L	grooved			7/25 5200' 1585m	46m
7	HIRL ② MALSR	RVR		6903' 2104m		150'
	HIRL ② REIL VASI-L			6963' 2122m	2/20 6550' 1996m	46m

① Spalling, weeds and pavement cracks.

② Activate on 118.7 when Twr inop.

TAKE-OFF

	Rwys 2, 7, 25		Rwy 20		
	Adequate Vis Ref	STD	With Min climb of 255'/NM to 300'		Other
			Adequate Vis Ref	STD	
1 & 2 Eng	RVR 16 or 1/4	RVR 50 or 1	1/4	1	300-1 1/4
3 & 4 Eng		RVR 24 or 1/2		1/2	

FOR FILING AS ALTERNATE

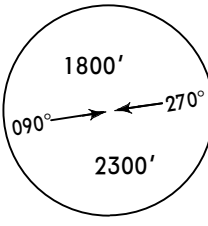
Authorized Only When Local Weather Available.

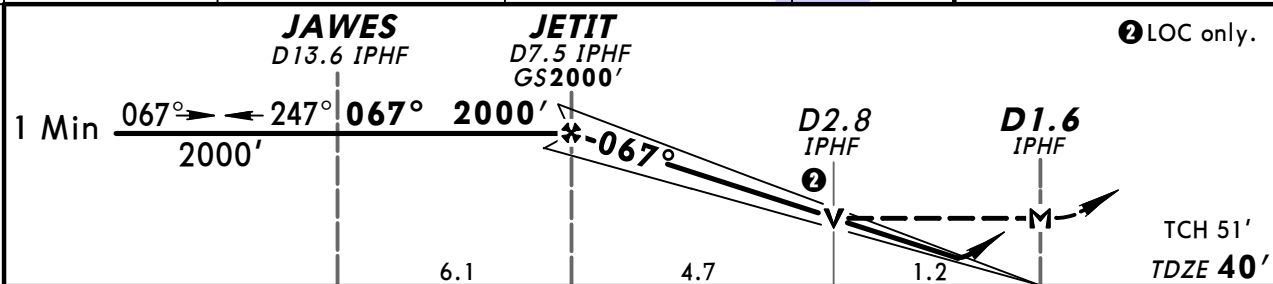
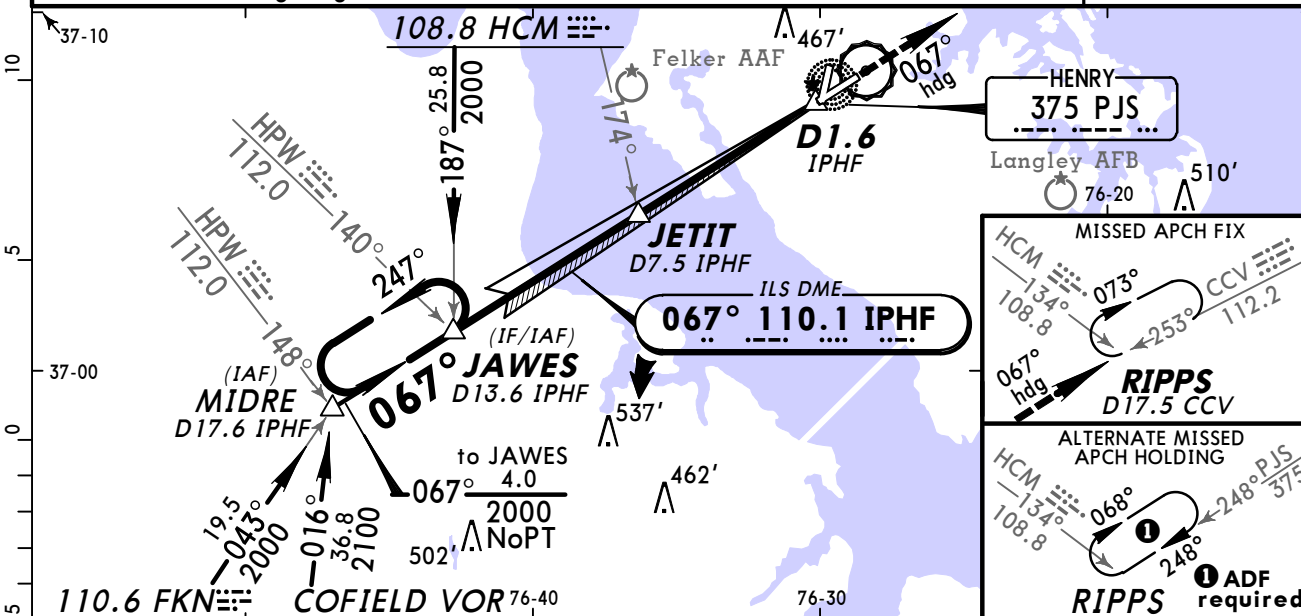
	Authorized Only When Twr Operating		RNAV (GPS) Rwy 2 RNAV (GPS) Rwy 7 RNAV (GPS) Rwy 20 RNAV (GPS) Rwy 25 NDB Rwy 2	NDB Rwy 20
	ILS Rwy 7 ILS Rwy 25	LOC Rwy 7 LOC DME Rwy 20 LOC Rwy 25		
A	600-2	800-2	800-2	900-2
B				900-2 1/2
C				900-2 3/4
D				

CHANGES: Ramp and taxiway designations.

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BRIEFING STRIP™

ATIS 128.65		NORFOLK Approach (R) 125.7		*NEWPORT NEWS Tower CTAF 118.7		*Ground 121.9			
LOC IPHF 110.1		Final Apch Crs 067°		GS JETIT 2000' (1960')		ILS DA(H) (CONDITIONAL) 240' (200')		Apt Elev 42' TDZE 40'	
MISSED APCH: Climb to 2500' on 067° heading and inbound on CCV VOR R-253 to RIPPS INT/D17.5 CCV and hold, or as directed by ATC.									
Alt Set: INCHES									



Gnd speed-Kts	70	90	100	120	140	160	MALS	2500'	067°	CCV	RIPPS
GS	3.00°	372	478	531	637	743	849				
MAP at D1.6 IPHF or JETIT to MAP	5.9	5:03	3:56	3:32	2:57	2:32	2:13				

STRAIGHT-IN LANDING RWY 7 With Local Altimeter Setting						CIRCLE-TO-LAND With Local Altimeter Setting	
ILS DA(H) 240' (200')			LOC (GS out) MDA(H) 480' (440')			Max Kts	MDA(H)
FULL	RAIL or ALS out		RAIL out	ALS out		90	520' (478')-1
A			RVR 24 or 1/2	RVR 40 or 3/4	RVR 50 or 1	120	
B						140	520' (478')-1 1/2
C	RVR 24 or 1/2	RVR 40 or 3/4	RVR 40 or 3/4	RVR 60 or 1 1/4		165	600' (558')-2
D			RVR 50 or 1	1 1/2			
With Norfolk Intl Altimeter Setting						With Norfolk Intl Altimeter Setting	
ILS DA(H) 289' (249')			LOC (GS out) MDA(H) 540' (500')			Max Kts	MDA(H)
FULL	RAIL or ALS out		RAIL out	ALS out		90	580' (538')-1
A			RVR 24 or 1/2	RVR 40 or 3/4	RVR 50 or 1	120	
B						140	580' (538')-1 1/2
C	RVR 24 or 1/2	RVR 40 or 3/4	RVR 40 or 3/4	RVR 60 or 1 1/4		165	660' (618')-2
D			RVR 50 or 1	1 1/2			

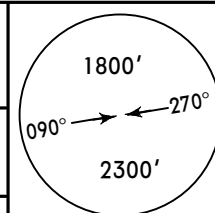
1 RVR 18 with Flight Director or Autopilot or HUD to DA.

CHANGES: TDZE.

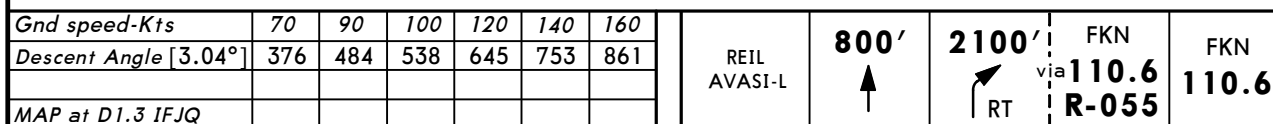
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TERPS AMEND 33 13 JAN 2011

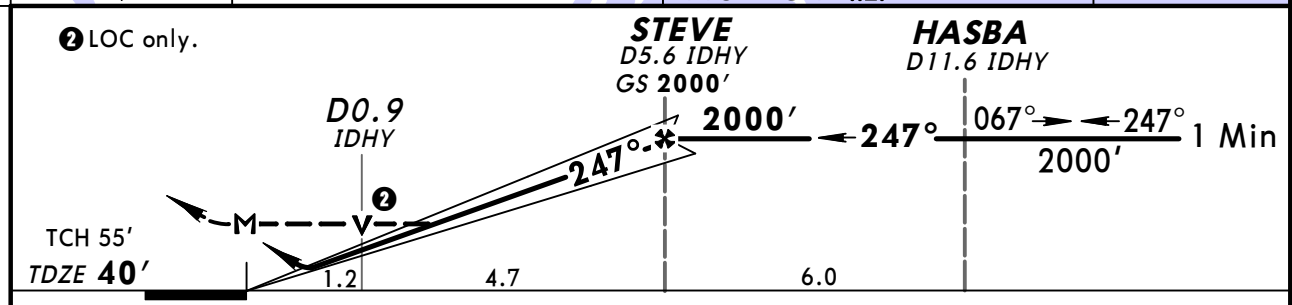
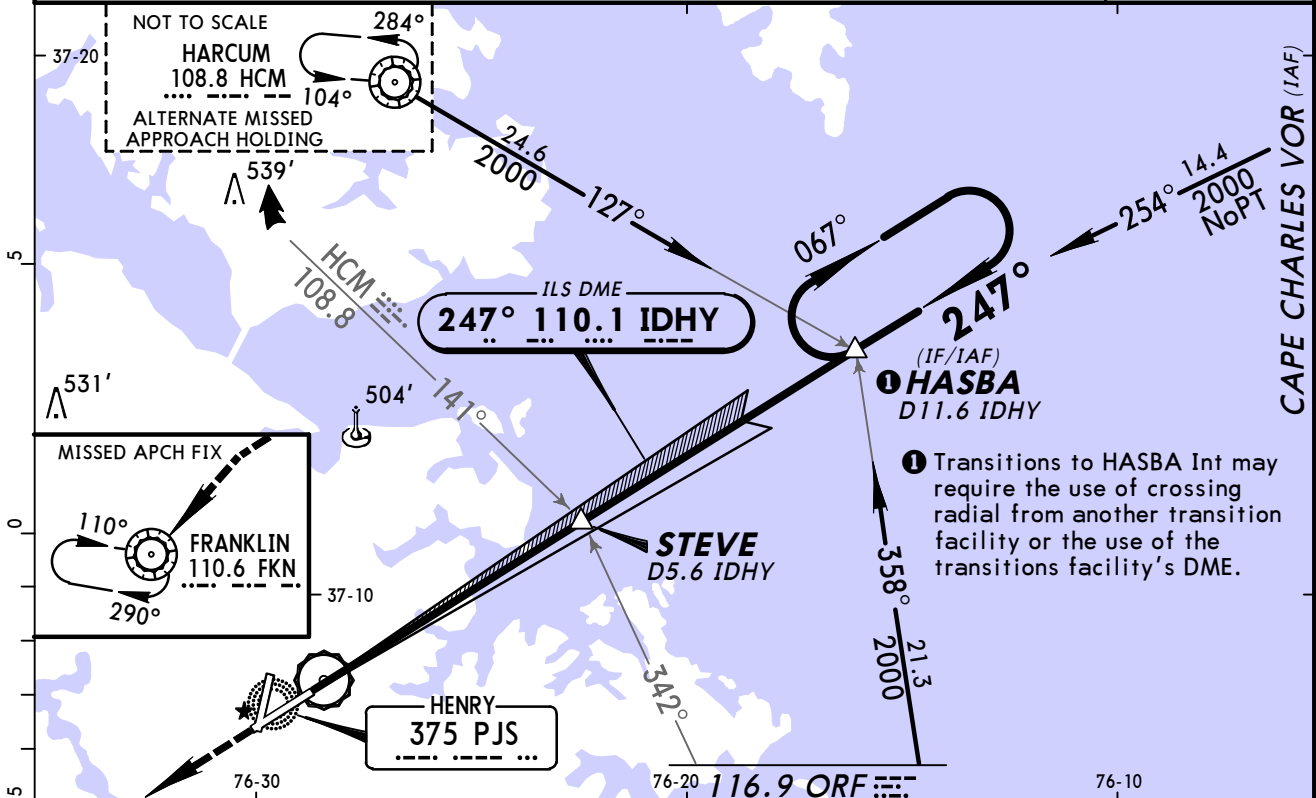
BRIEFING STRIP™



MSA PJS NDB

TERPS AMEND 1 13 JAN 2011

ATIS 128.65	NORFOLK Approach (R) 125.7	*NEWPORT NEWS Tower CTAF 118.7	*Ground 121.9
LOC IDHY 110.1	Final Apch Crs 247°	GS STEVE 2000' (1960')	ILS DA(H) (CONDITIONAL) 240' (200')
Apt Elev 42'			TDZE 40'
MISSED APCH: Climb to 2100' then LEFT turn direct FKN VOR and hold, or as directed by ATC.			
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. Use local altimeter setting; if not received, use Norfolk Intl altimeter setting. 2. VDP not authorized with Norfolk Intl altimeter setting. 3. Pilot controlled lighting 118.7.			
			MSA PJS NDB

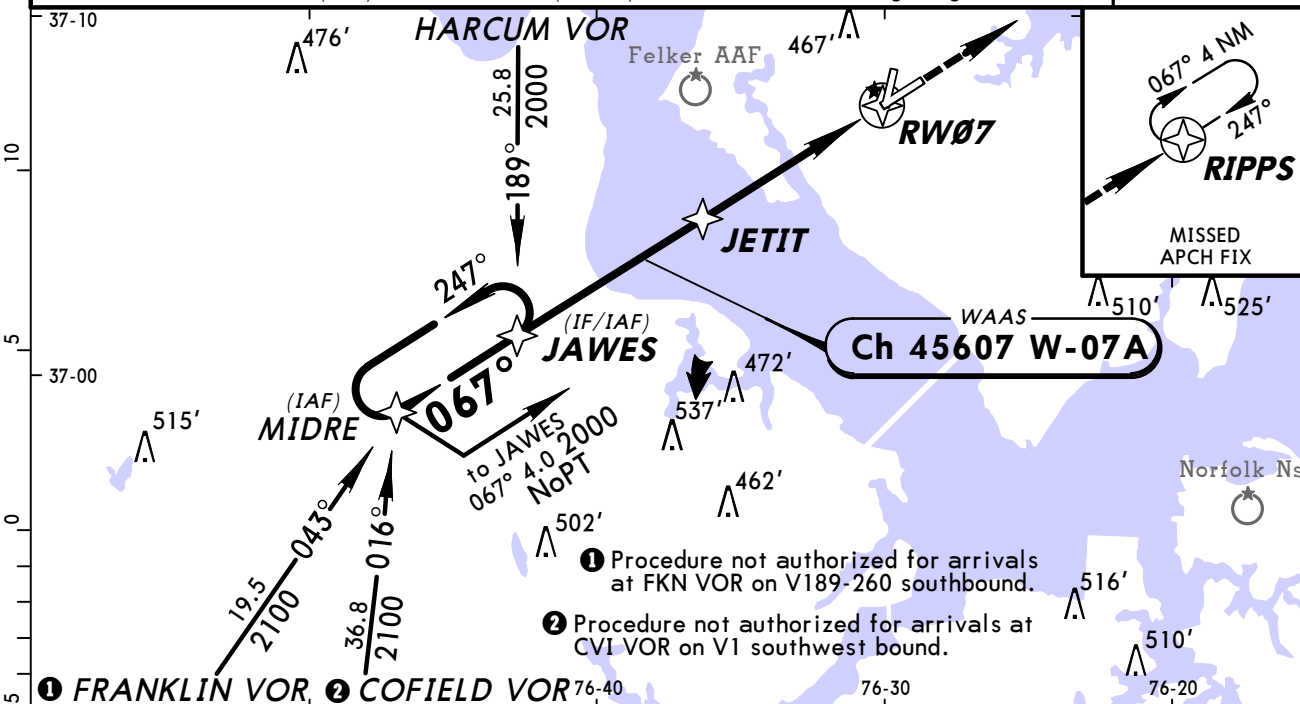


Gnd speed-Kts	70	90	100	120	140	160	REIL VASI-L		2100'	LT	→	FKN 110.6
GS	3.00°	377	484	538	646	753						
STEVE to MAP	5.9	5:03	3:56	3:32	2:57	2:32						

STRAIGHT-IN LANDING RWY 25						CIRCLE-TO-LAND			
With Local Altimeter Setting						With Local Altimeter Setting			
ILS			LOC (GS out)			Max Kts	MDA(H)		
DA(H) 240' (200')			MDA(H) 480' (440')						
A	3/4			1			90	520' (478') - 1	
B							120		
C							140	520' (478') - 1 1/2	
D							165		
With Norfolk Intl Altimeter Setting						With Norfolk Intl Altimeter Setting			
ILS			LOC (GS out)			Max Kts	MDA(H)		
DA(H) 289' (249')			MDA(H) 540' (500')						
A	3/4			1			90	580' (538') - 1	
B							120		
C							140	580' (538') - 1 1/2	
D							165		

BRIEFING STRIP™

ATIS 128.65		NORFOLK Approach (R) 125.7		*NEWPORT NEWS Tower CTAF 118.7		*Ground 121.9	
WAAS Ch 45607 W-07A	Final Apch Crs 067°	Minimum Alt JETIT 2000' (1961')	LPV DA(H) (CONDITIONAL) 239' (200')	Apt Elev 42' TDZE 39'		2300' MSA RW07	
MISSED APCH: Climb to 2500' direct RIPPS and hold.							
Alt Set: INCHES							

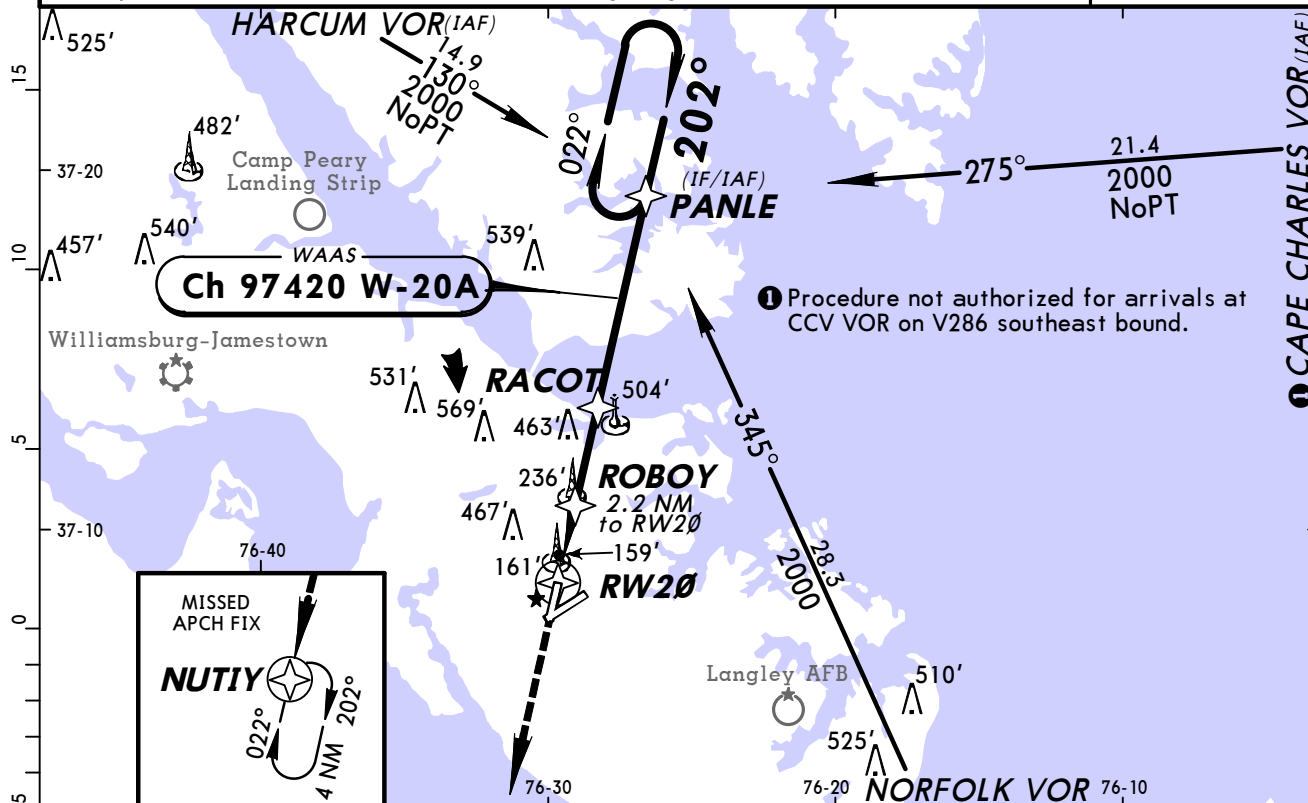


JAWES		JETIT		RW07		③ LNAV only.	
4 NM 067° → 247°		2000'		1.2 NM to RW07		TCH 51'	
067°		2000'		0.7		TDZE 39'	
12.0		6.1		5.9		0	
Gnd speed-Kts	70	90	100	120	140	160	MALSR 2500' ↑ D → RIPPS
Glide Path Angle 3.00°	372	478	531	637	743	849	
MAP at RW07							

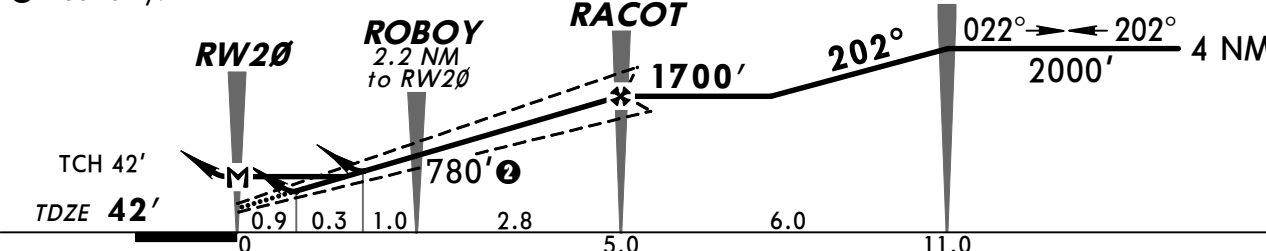
STRAIGHT-IN LANDING RWY 7							CIRCLE-TO-LAND	
With Local Altimeter Setting							With Local Altimeter Setting	
LPV DA(H) 239' (200')		LNAV/VNAV DA(H) 474' (435')		LNAV MDA(H) 480' (441')			Max Kts	MDA(H)
RAIL or ALS out		RAIL or ALS out		RAIL out	ALS out		90	520' (478')-1
A				RVR 24 or 1/2	RVR 40 or 3/4	RVR 50 or 1	120	520' (478')-1
B								
C	RVR 24 or 1/2	RVR 40 or 3/4	RVR 50 or 1	1 1/2	RVR 40 or 3/4	RVR 60 or 1 1/4	140	520' (478')-1 1/2
D					RVR 50 or 1	1 1/2	165	600' (558')-2
With Norfolk Intl Altimeter Setting							With Norfolk Intl Altimeter Setting	
LPV DA(H) 288' (249')		LNAV/VNAV DA(H) 523' (484')		LNAV MDA(H) 540' (501')			Max Kts	MDA(H)
RAIL or ALS out		RAIL or ALS out		RAIL out	ALS out		90	580' (538')-1
A				RVR 24 or 1/2	RVR 40 or 3/4	RVR 50 or 1	120	580' (538')-1
B								
C	RVR 24 or 1/2	RVR 40 or 3/4	RVR 60 or 1 1/4	1 3/4	RVR 50 or 1	1 1/2	140	580' (538')-1 1/2
D							165	660' (618')-2

BRIEFING STRIP

ATIS 128.65		NORFOLK Approach (R) 125.7		*NEWPORT NEWS Tower CTAF 118.7		*Ground 121.9				
WAAS Ch 97420 W-20A		Final Apch Crs 202°		Minimum Alt RACOT 1700' (1658')		LPV DA(H) (CONDITIONAL) 379' (337')		Apt Elev 42' TDZE 42'		2300' MSA RW20
MISSED APCH: Climb to 2300' direct NUTII and hold.										
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. Use local altimeter setting; if not received, use Norfolk Intl altimeter setting. 2. Baro-VNAV not authorized when using Norfolk Intl altimeter setting. 3. DME/DME RNP-0.30 not authorized. 4. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 48°C (118°F). 5. Visibility reduction by helicopters not authorized. 6. Pilot controlled lighting 118.7.										



② LNAV only.



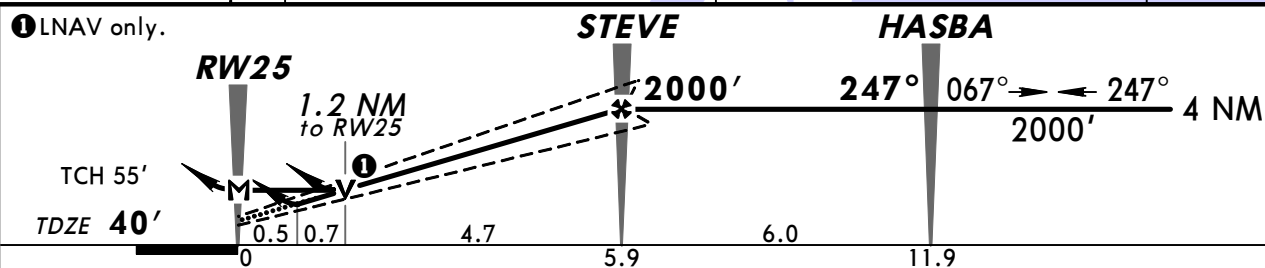
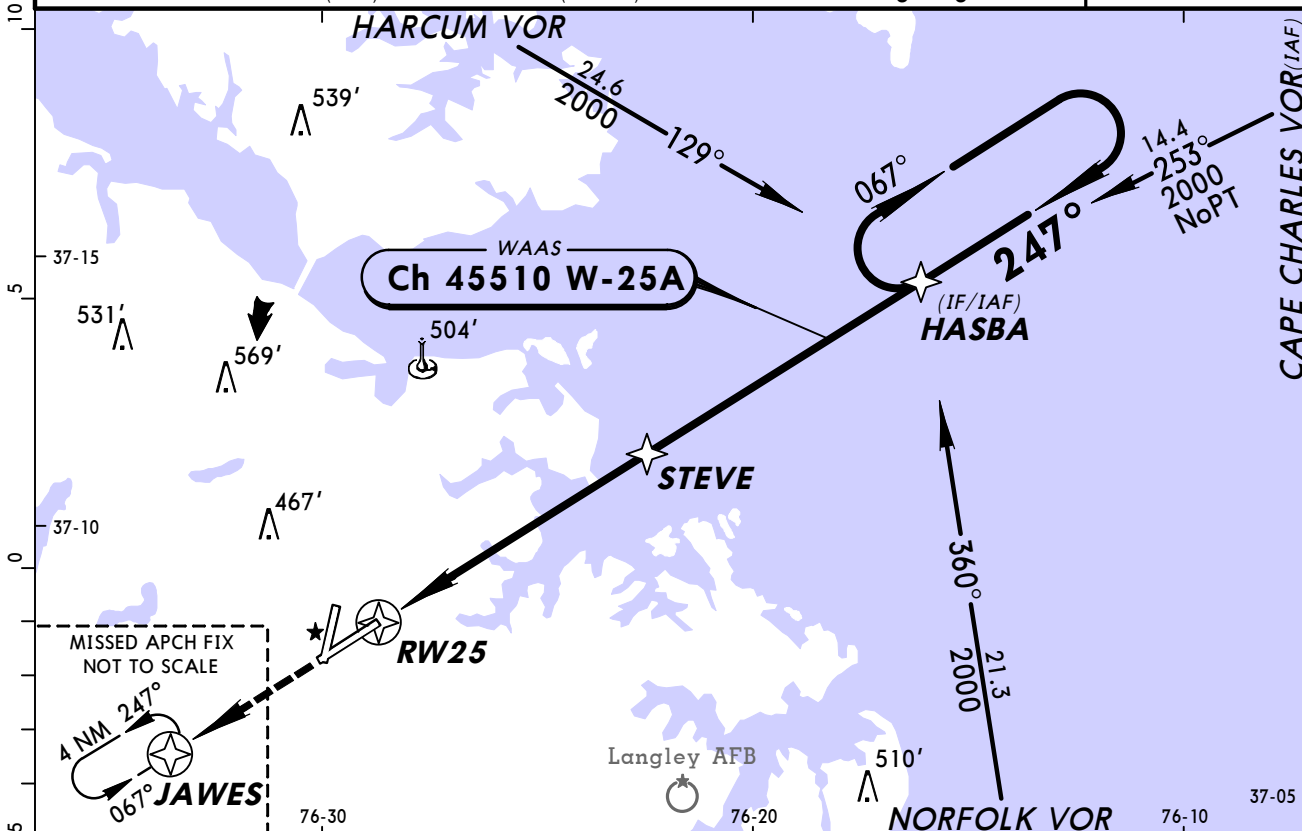
Gnd speed-Kts	70	90	100	120	140	160		REIL	2300'		NUTII
Glide Path Angle	3.00°	372	478	531	637	743	849	AVASI-L	↑	→	
MAP at RW20											

STRAIGHT-IN LANDING RWY 20					CIRCLE-TO-LAND	
With Local Altimeter Setting					With Local Altimeter Setting	
LPV DA(H) 379' (337')		LNAV/VNAV DA(H) 474' (432')		LNAV MDA(H) 440' (398')		
A	1 1/4	1 1/2	1	Max Kts 90	520' (478')-1	
B				120		
C				140		
D			165	1 1/4	520' (478')-1 1/2	
					165	600' (558')-2
With Norfolk Intl Altimeter Setting					With Norfolk Intl Altimeter Setting	
LPV DA(H) 428' (386')		LNAV/VNAV DA(H) 523' (481')		LNAV MDA(H) 500' (458')		
A	1 1/4	1 3/4	1	Max Kts 90	580' (538')-1	
B				120		
C				140		
D			165	1 1/2	580' (538')-1 1/2	
					165	660' (618')-2

TM

BRIEFING STRIP

ATIS		NORFOLK Approach (R)		*NEWPORT NEWS Tower		*Ground	
128.65		125.7		CTAF 118.7		121.9	
WAAS Ch 45510 W-25A	Final Apch Crs 247°	Minimum Alt STEVE 2000' (1960')	LPV DA(H) (CONDITIONAL) 240' (200')	Apt Elev 42' TDZE 40'	2300' MSA RW25		
MISSED APCH: Climb to 2000' direct JAWES and hold.							
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'							
1. Use local altimeter setting; if not received, use Norfolk Intl altimeter setting. 2. Baro-VNAV and VDP not authorized with Norfolk Intl altimeter setting. 3. DME/DME RNP-0.30 not authorized. 4. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 49°C (120°F). 5. Pilot controlled lighting 118.7.							



Gnd speed-Kts	70	90	100	120	140	160		REIL	2000'		JAWES
Glide Path Angle	3.00°	372	478	531	637	743	849	VASI-L	↑	→	
MAP at RW25											

STRAIGHT-IN LANDING RWY 25						CIRCLE-TO-LAND			
With Local Altimeter Setting			With Local Altimeter Setting			With Local Altimeter Setting			
LPV	DA(H)	240' (200')	LNAV/VNAV	DA(H)	486' (446')	LNAV	MDA(H)	480' (440')	Max Kts
A						1			90
B									120
C						1 1/4			140
D						1 1/2			165
With Norfolk Intl Altimeter Setting			With Norfolk Intl Altimeter Setting			With Norfolk Intl Altimeter Setting			
LPV	DA(H)	289' (249')	LNAV/VNAV	DA(H)	535' (495')	LNAV	MDA(H)	540' (500')	Max Kts
A						1			90
B									120
C						1 1/4			140
D						1 1/2			165

A diagram of a circular sector. The radius is labeled as 1800'. The central angle is labeled as 90°. The arc length is labeled as 2300'.

Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'

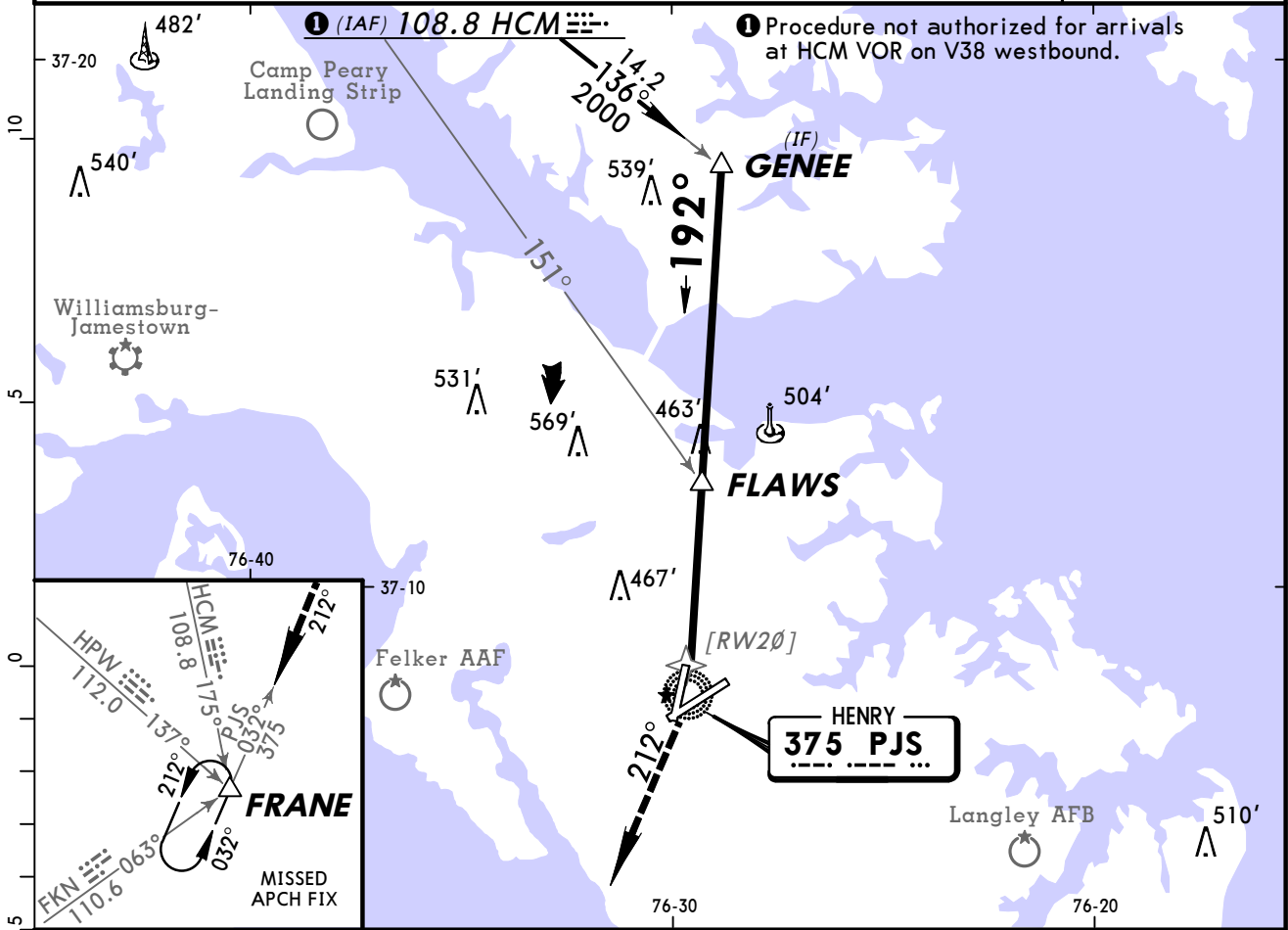
1. Use local altimeter setting; if not received, use Norfolk Intl altimeter setting.

2. Pilot controlled lighting 118.7.

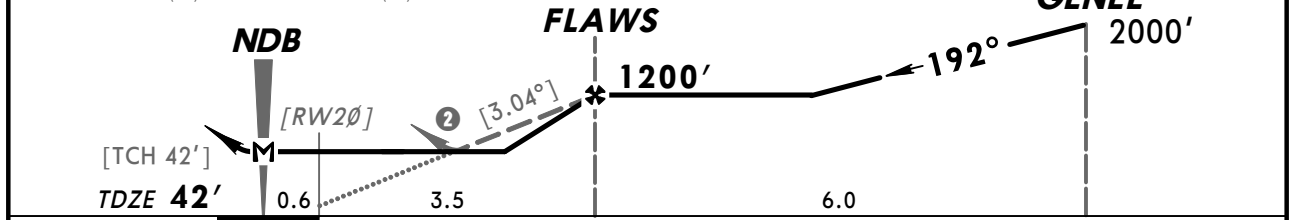
VASI-LCIRCLE-TO-LAND

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ATIS 128.65		NORFOLK Approach (R) 125.7		*NEWPORT NEWS Tower CTAF 118.7		*Ground 121.9	
NDB PJS 375	Final Apch Crs 192°	Minimum Alt FLAWS 1200' (1158')	MDA(H) (CONDITIONAL) 860' (818')	Apt Elev 42' TDZE 42'		1800' 090° → ← 270° 2300' MSA PJS NDB	
MISSED APCH: Climb to 2000' on PJS NDB bearing 212° to FRANE INT and hold.							
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. Use local altimeter setting; if not received, use Norfolk Intl altimeter setting. 2. Visibility reduction by helicopters not authorized. 3. Pilot controlled lighting 118.7.							



② Only authorized operators may use VNAV DA(H) in lieu of MDA(H).



Gnd speed-Kts	70	90	100	120	140	160	REIL AVASI-L	2000' ↑ on	PJS 375 212°	FRANE
Descent Angle [3.04°]	376	484	538	645	753	861				
MAP at NDB										

STRAIGHT-IN LANDING RWY 20				CIRCLE-TO-LAND			
MDA(H) 860' (818')		MDA(H) 920' (878')		With Local Altimeter Setting		With Norfolk Intl Altimeter Setting	
With Local Altimeter Setting		With Norfolk Intl Altimeter Setting		Max Kts	MDA(H)	MDA(H)	
A	1	1	1	90	860' (818')-1	920' (878')-1	
B	1¼	1¼	1¼	120	860' (818')-1¼	920' (878')-1¼	
C	2½	2½	2½	140	860' (818')-2½	920' (878')-2½	
D	2¾	2¾	2¾	165	860' (818')-2¾	920' (878')-2¾	

General Information

Location: Richmond VA USA
IATA Code: RIC
Lat/Long: N37° 30.3' W077° 19.2'
Elevation: 167 ft

Airport Use: Public
Magnetic Variation: 10.3°W
Sectional Chart: Washington

Fuel Types: 100 Octane (LL), Jet A
Oxygen Types: HP Bottle, LP Bottle
Repair Types: Major Airframe, Major Engine
Customs: Upon Prior Request
Airport Type: IFR
Landing Fee: Yes
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: No
Beacon: Yes

Sunrise: 1144 Z
Sunset: 2300 Z,

Runway Information

Runway: 02
Length x Width: 6607 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 162 ft
Lighting: Edge, ALS, REIL

Runway: 07
Length x Width: 5326 ft x 100 ft
Surface Type: asphalt
TDZ-Elev: 158 ft
Lighting: Edge

Runway: 16
Length x Width: 9003 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 167 ft
Lighting: Edge, ALS, Centerline

Runway: 20
Length x Width: 6607 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 167 ft
Lighting: Edge, REIL

Runway: 25
Length x Width: 5326 ft x 100 ft
Surface Type: asphalt
TDZ-Elev: 160 ft
Lighting: Edge, REIL

Runway: 34
Length x Width: 9003 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 161 ft
Lighting: Edge, ALS, Centerline, TDZ

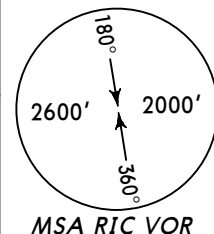
Communication Information

ATIS 119.15
Richmond Tower 121.1
Richmond Ground Control 121.9
Richmond Clearance Delivery 127.55
Potomac Approach Control 134.7 (171°-320°) Initial Contact
Potomac Approach Control 126.8 (321°-30°) Initial Contact
Potomac Approach Control 126.4 (31°-170°) Initial Contact
Potomac Approach Control 118.2 Initial Contact Secondary
Potomac App ARSA 134.7 (171°-320°)
Potomac App ARSA 126.8 (321°-30°)
Potomac App ARSA 126.4 (31°-170°)
Potomac Departure Control 134.7 (171°-320°)
Potomac Departure Control 126.8 (321°-30°)
Potomac Departure Control 126.4 (31°-170°)
Richmond Intl Unicom 122.95
Leesburg Flight Service Station 122.4 At or above 18000 ft RCO
Leesburg Flight Service Station 122.2 RCO
Leesburg Flight Service Station 122.1 RCO
Leesburg Flight Service Station 114.1 RCO
Leesburg Flight Service Station 113.3 RCO

POTOMAC Departure (R)
126.4

Apt Elev
167'

Trans level: FL 180 Trans alt: 18000'
RADAR required.



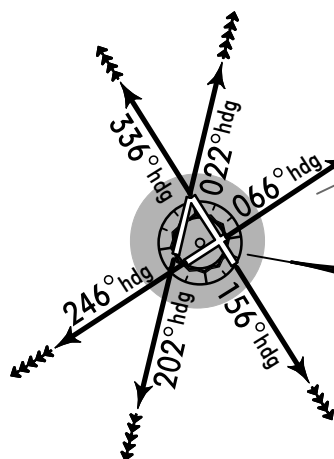
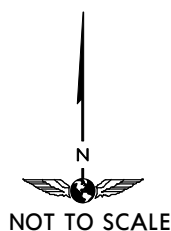
COLIN FIVE DEPARTURE (COLIN5.COLIN)

This SID requires take-off minimums (for standard minimums, refer to airport chart):
Rwy 2: 200-1 1/4 or standard (or lower than standard, if authorized) with minimum climb of 230' per NM to **400'**, or alternatively, with standard take-off minimums (or lower than standard, if authorized) and a normal 200' per NM climb gradient, take-off must occur no later than 1600' prior to departure end of runway. Minimum ATC climb of 300' per NM to **2000'**.
Rwys 7, 16, 20, 25: Standard (or lower than standard, if authorized) with ATC climb of 300' per NM to **2000'**.
Rwy 34: Standard (or lower than standard, if authorized) with ATC climb of 300' per NM to **2100'**.

Gnd speed-KT	75	100	150	200	250	300
230' per NM	288	383	575	767	958	1150
300' per NM	375	500	750	1000	1250	1500

OBSTACLES

For TAKEOFF OBSTACLES see 10-3OB1.



RICHMOND
D (H) 114.1 RIC
N37 30.1 W077 19.2

NOTTINGHAM
D (L) 113.7 OTT
N38 42.4 W076 44.7

PATUXENT
D (L) 117.6 PXT
N38 17.3 W076 24.0

COLIN
N38 06.0
W076 39.8

MODEL
N37 44.0
W076 41.4

HARCUM
D (L) 108.8 HCM
N37 26.9 W076 42.7

RWY	INITIAL CLIMB	ALTITUDE
2	Climb heading 022° or as assigned for RADAR vectors.	Climb and MAINTAIN 3000' or as assigned
7	Climb heading 066° or as assigned for RADAR vectors.	
16	Climb heading 156° or as assigned for RADAR vectors.	
20	Climb heading 202° or as assigned for RADAR vectors.	
25	Climb heading 246° or as assigned for RADAR vectors.	
34	Climb heading 336° or as assigned for RADAR vectors.	

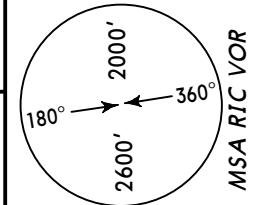
ROUTING

Intercept RIC R-074 to MODEL. Then via HCM R-010 to COLIN. Climb and **MAINTAIN 3000'** or as assigned. EXPECT clearance to filed altitude/flight level ten minutes after departure.

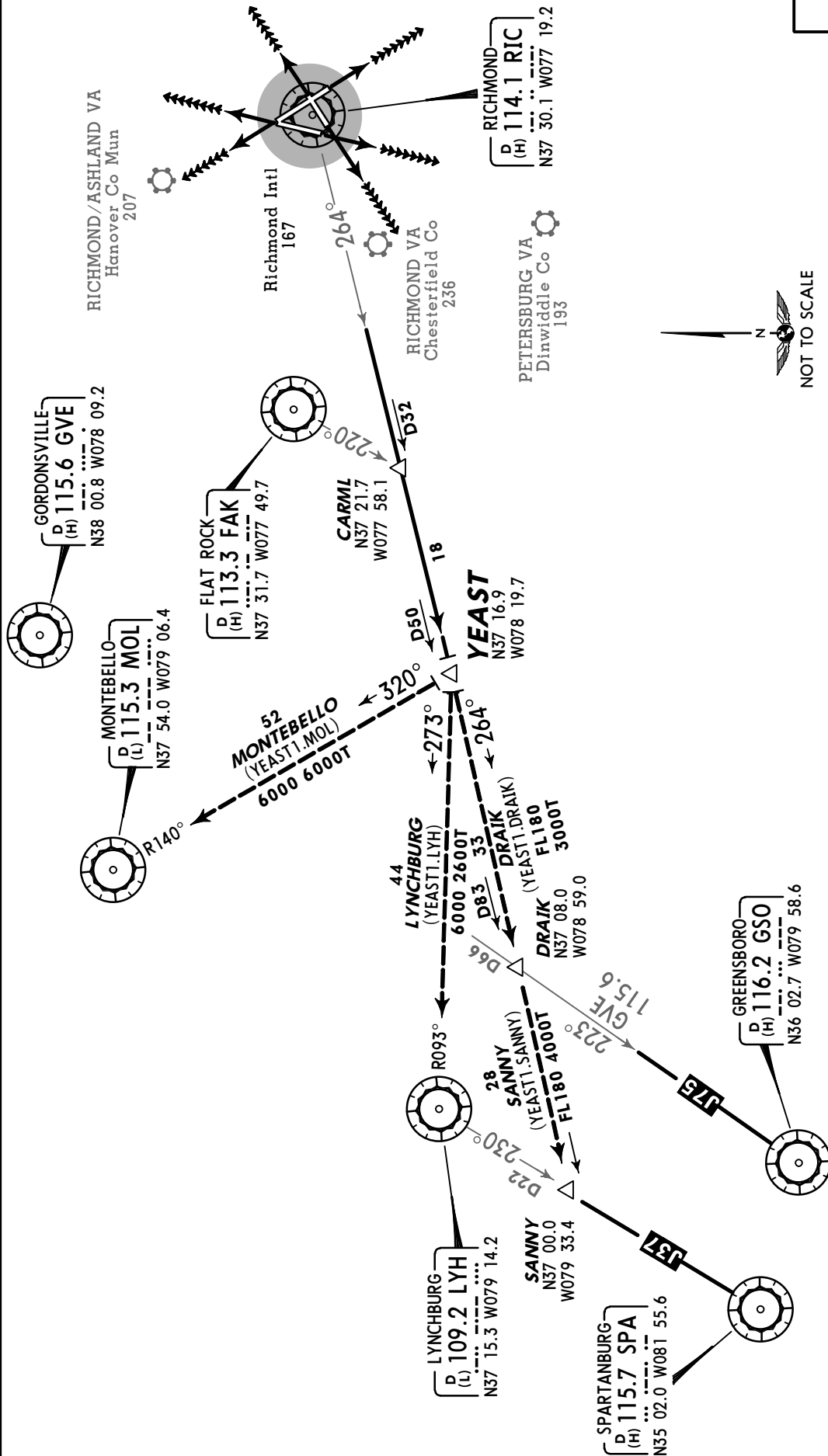
POTOMAC Departure (R)
134.7

Apt Elev
See graphic

Trans level: FL 180 Trans alt: 18000'



YEAST ONE DEPARTURE (YEAST1.RIC)



INITIAL CLIMB		ALTIMETER
Fly runway heading or as assigned for RADAR vectors to intercept the RIC R-264 to YEAST then via assigned transition.		Climb and MAINTAIN 3000' or assigned altitude
ROUTING		
EXPECT clearance to requested altitude/flight level ten minutes after departure.		

TAKEOFF OBSTACLE NOTES

◦ RWY 2:

AIRCRAFT ON SURFACE BEGINNING 3' FROM DER, 202' RIGHT OF CENTERLINE, UP TO 65' AGL/232' MSL. TREES AND BUSHES BEGINNING 104' FROM DER, 223' LEFT OF CENTERLINE, UP TO 100' AGL/251' MSL. TREES BEGINNING 2918' FROM DER, 367' RIGHT OF CENTERLINE, UP TO 100' AGL/260' MSL.

◦ RWY 7:

TREES BEGINNING 1208' FROM DER, 798' RIGHT OF CENTERLINE, UP TO 100' AGL/259' MSL. TREES BEGINNING 1347' FROM DER, 283' LEFT OF CENTERLINE, UP TO 100' AGL/259' MSL.

◦ RWY 20:

HANGAR 817' FROM DER, 665' RIGHT OF CENTERLINE, 43' AGL/212' MSL. TREES BEGINNING 2307' FROM DER, 1065' LEFT OF CENTERLINE, UP TO 100' AGL/235' MSL. TREES BEGINNING 2645' FROM DER, 759' RIGHT OF CENTERLINE, UP TO 100' AGL/255' MSL. POLE 3226' FROM DER, 424' RIGHT OF CENTERLINE, 79' AGL/248' MSL.

◦ RWY 25:

VEHICLES ON ROAD BEGINNING 390' FROM DER, ON CENTERLINE, UP TO 15' AGL /184' MSL. TRAIN ON RAILROAD BEGINNING 545' FROM DER, ON CENTERLINE, UP TO 23' AGL/ 192' MSL. TOWER 799' FROM DER, 562' LEFT OF CENTERLINE, 16' AGL/185' MSL. TREES BEGINNING 2414' FROM DER, 285' RIGHT OF CENTERLINE, UP TO 100' AGL/279' MSL. MULTIPLE POLES BEGINNING 3056' FROM DER, 565' LEFT OF CENTERLINE UP TO 83' AGL/ 252' MSL. TREES BEGINNING 3176' FROM DER, 357' LEFT OF CENTERLINE, UP TO 100' AGL/269' MSL.

◦ RWY 34:

AIRCRAFT ON SURFACE BEGINNING 12' FROM DER, 192' LEFT OF CENTERLINE, UP TO 65' AGL/230' MSL. HANGAR AND LIGHT POLE BEGINNING 1103' FROM DER, 732' LEFT OF CENTERLINE, UP TO 41' AGL/200' MSL. TREES BEGINNING 2202' FROM DER, 1052' RIGHT OF CENTERLINE, UP TO 100' AGL/232' MSL. TREES BEGINNING 2689' FROM DER, 998' LEFT OF CENTERLINE, UP TO 100' AGL/ 237' MSL.

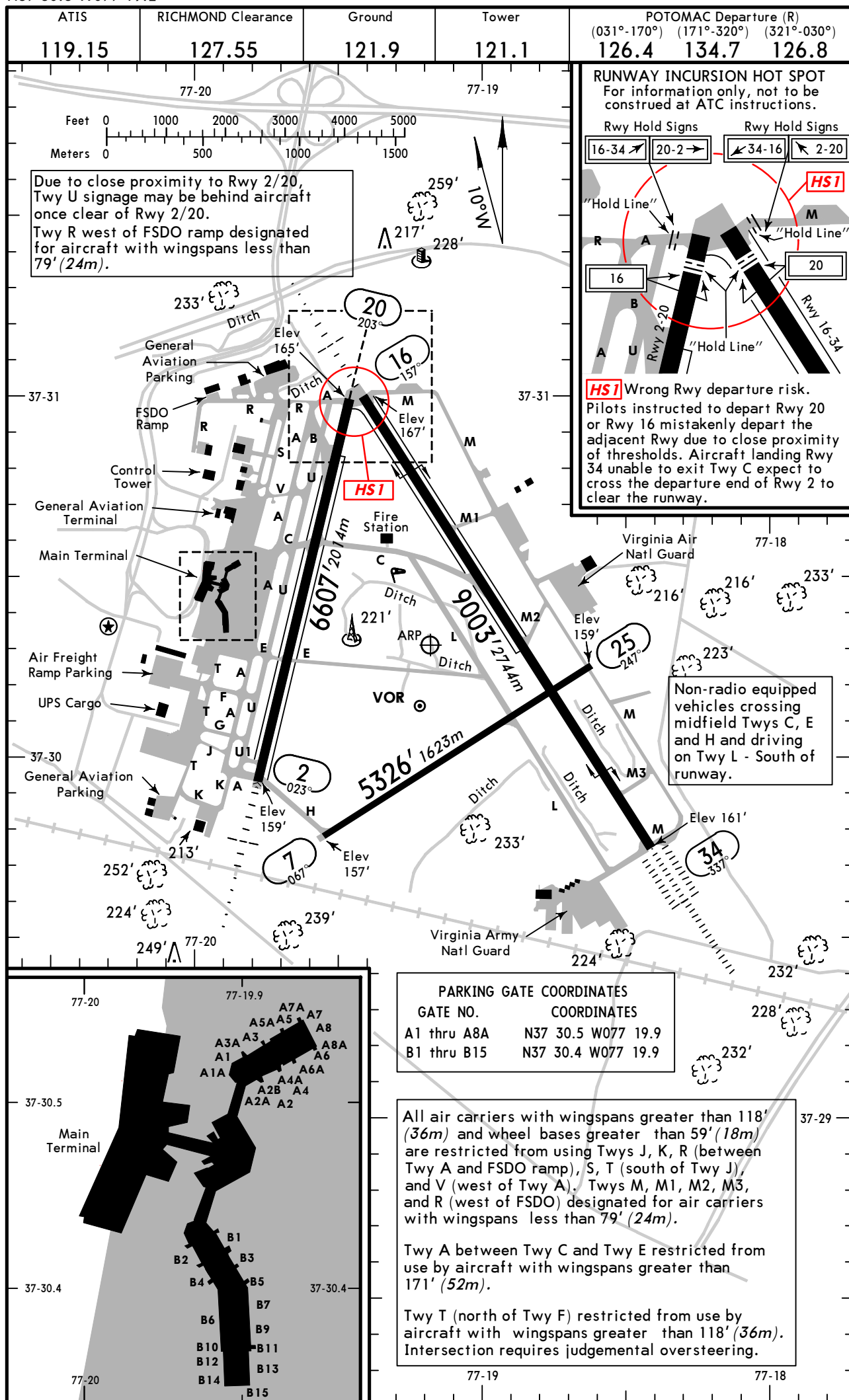
KRIC/RIC
Apt Elev 167'
N37 30.3 W077 19.2

29 APR 11

10-9

Eff 5 May

RICHMOND, VA
RICHMOND INTL



CHANGES: Hot spot description added.

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GENERAL

Birds in vicinity of airport.

ATC clearance required for pushbacks onto movement areas.

No practice landings 2200-0700 local time.

ADDITIONAL RUNWAY INFORMATION

					USABLE LENGTHS			
					LANDING BEYOND			
RWY					Threshold	Glide Slope	TAKE-OFF	WIDTH
2	HIRL	MALSR	REIL	① PAPI-L ② grooved		5631' 1716m		150'
20	HIRL	REIL	PAPI-L (angle 3.00°) grooved					46m

① Angle 3.00°.

② Last 200' (61m) of Rwy 2 is not grooved.

7	HIRL			grooved				100'
25	HIRL	REIL	VASI-L	grooved RVR				30m

16	HIRL	CL	MALSR	VASI-L	grooved RVR	7953' 2424m		150'
34	HIRL	CL	ALSF-II	TDZ	grooved RVR	7874' 2400m		46m

TAKE-OFF

Rwys 16, 34

2 operating RVRs are required All operating RVRs are controlling		Adequate Vis Ref	STD	
CL & HIRL	CL, or RCLM & HIRL		3 & 4 Eng	1 & 2 Eng
TDZ RVR 5	TDZ RVR 10	RVR 16 or 1/4	RVR 24 or 1/2	RVR 50 or 1
Mid RVR 5	Mid RVR 10			
Rollout RVR 5	Rollout RVR 10			

① Rwy 2

Rwys 7, 20, 25

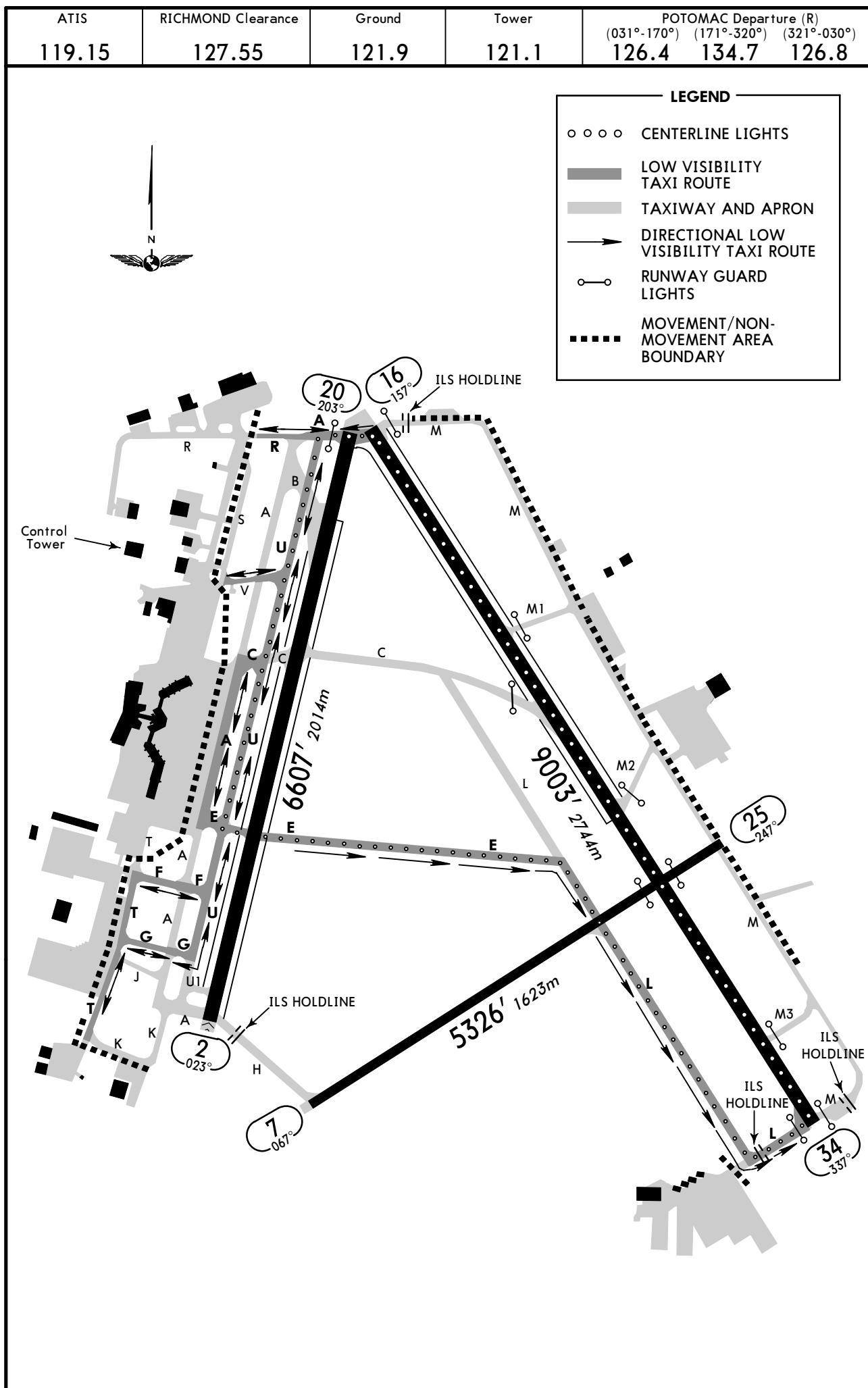
With Min climb of 230'/NM to 400'			Other	Adequate Vis Ref	STD	
Adequate Vis Ref	STD				3 & 4 Eng	1 & 2 Eng
	3 & 4 Eng	1 & 2 Eng				
1/4	1/2	1	200-1 1/4	RVR 16 or 1/4	RVR 24 or 1/2	RVR 50 or 1

① Alternatively, with standard take-off minimums and a normal 200'/NM climb gradient, take-off must occur no later than 1600' prior to departure end of runway.

FOR FILING AS ALTERNATE

ILS Rwy 2 ILS Rwy 34		LOC Rwy 2 LOC Rwy 34 VOR Rwy 2 VOR Rwy 16 VOR Rwy 20 VOR Rwy 25 VOR Rwy 34	RNAV (GPS) Rwy 2 RNAV (GPS) Rwy 7 RNAV (GPS) Rwy 16 RNAV (GPS) Rwy 20 RNAV (GPS) Rwy 25 RNAV (GPS) Rwy 34	ILS Rwy 16 LOC Rwy 16
A	600-2	800-2		800-2
B				
C				800-2 1/4
D				800-2 1/2

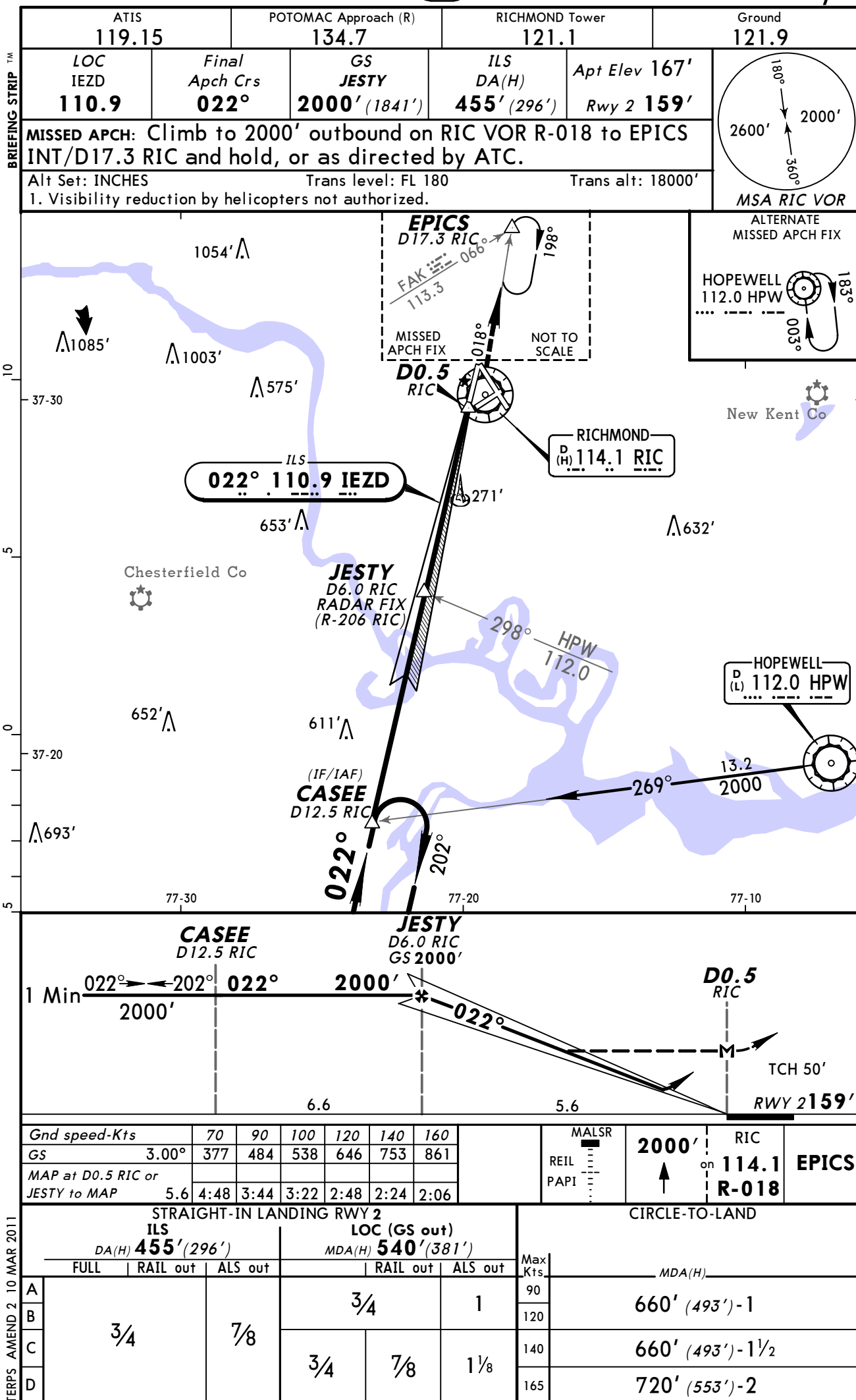
AMEND 1



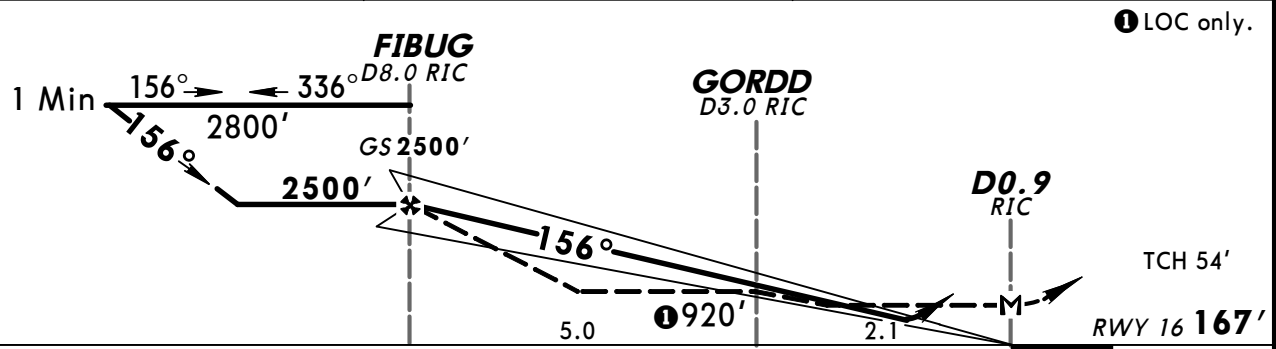
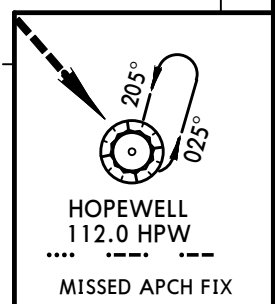
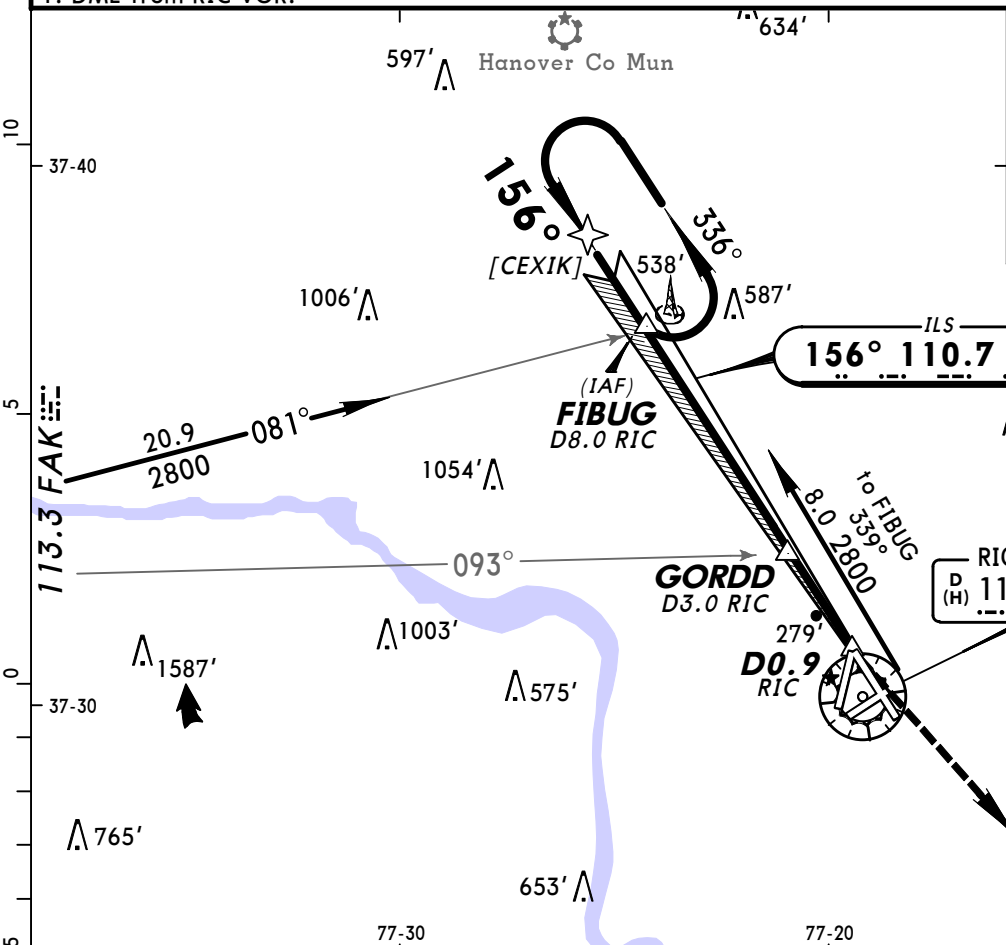
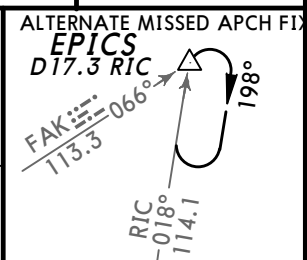
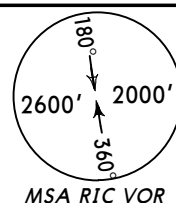
KRIC/RIC RICHMOND INTL

4 MAR 11 **11-1** Eff 10 Mar

RICHMOND, VA
ILS or LOC Rwy 2



ATIS 119.15	POTOMAC Approach (R) 134.7	RICHMOND Tower 121.1	Ground 121.9
LOC IRGJ 110.7	Final Apch Crs 156°	GS FIBUG 2500' (2333')	ILS DA(H) 367' (200')
Apt Elev 167' Rwy 16 167'			
MISSED APCH: Climb to 2000' direct HPW VOR and hold, or as directed by ATC.			
Alt Set: INCHES 1. DME from RIC VOR.		Trans level: FL 180	Trans alt: 18000'

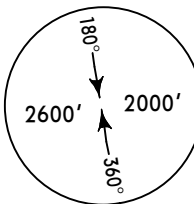


Gnd speed-Kts	70	90	100	120	140	160	MALSR	2000'	HPW
GS	3.00°	377	484	538	646	753	VASI	↑	112.0
MAP at D0.9 RIC or FIBUG to MAP	7.2	6:10	4:48	4:19	3:36	3:05			

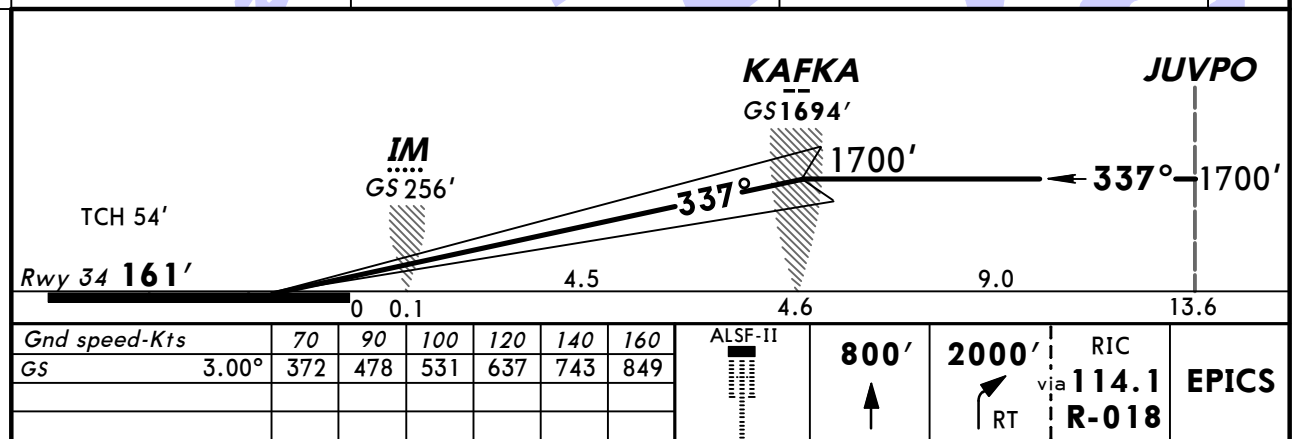
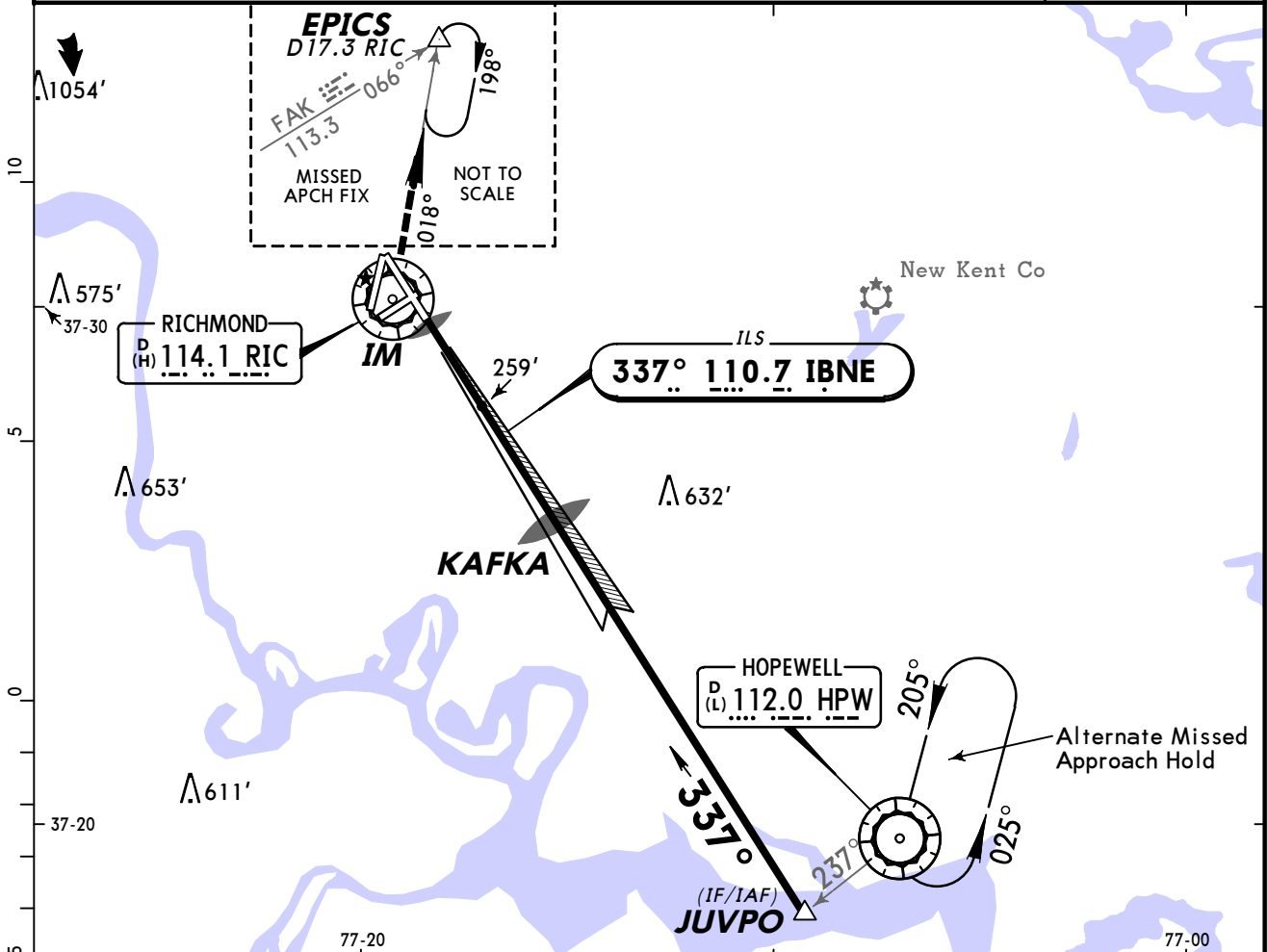
STRAIGHT-IN LANDING RWY 16									CIRCLE-TO-LAND		
ILS			LOC (GS out)			MDA(H) 920' (753')			With Gorrdd		Without Gorrdd
DA(H) 367' (200')			MDA(H) 580' (413')			With Gorrdd			MDA(H)		MDA(H)
FULL	RAIL out	ALS out	RAIL out	ALS out	RAIL out	RAIL out	ALS out	Max Kts			
A			RVR 24	RVR 40	RVR 55	RVR 24 or 1/2	RVR 40 or 3/4	RVR 55 or 1	90	660' (493')-1	920' (753')-1
B	RVR 24 or 1/2	RVR 26 or 1/2	RVR 40 or 3/4	RVR 50 or 1	RVR 60 or 1 1/8	1 3/4	1 7/8	2	120	660' (493')-1 1/2	920' (753')-2 1/4
C									140	660' (493')-2	920' (753')-2 1/2
D									165	720' (553')-2	920' (753')-2 1/2

1 RVR 18 with Flight Director or Autopilot or HUD to DA.

TERPS AMEND 9 10 MAR 2011

ATIS 119.15			POTOMAC Approach (R) 134.7			RICHMOND Tower 121.1		Ground 121.9	
LOC IBNE 110.7	Final Apch Crs 337°	GS KAFKA 1694' (1533')	CAT IIIC NA	CAT IIIB Refer to Minimums	CAT II ILS RA 101' DA(H) 261' (100')	Apt Elev 167' Rwy 34 161'			
MISSED APCH: Climb to 800', then climbing RIGHT turn to 2000' outbound via RIC VOR R-018 to EPICS INT/D17.3 RIC and hold, or as directed by ATC.									
Alt Set: INCHES		Trans level: FL 180				Trans alt: 18000'			
1. Special Aircrew and Acft Certification Required.									

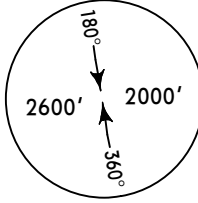
MSA RIC VOR

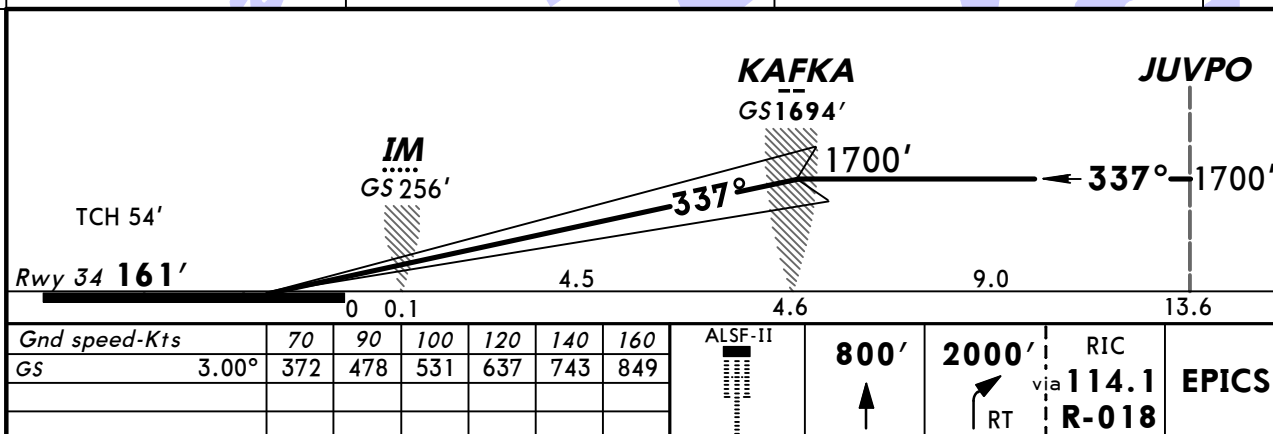
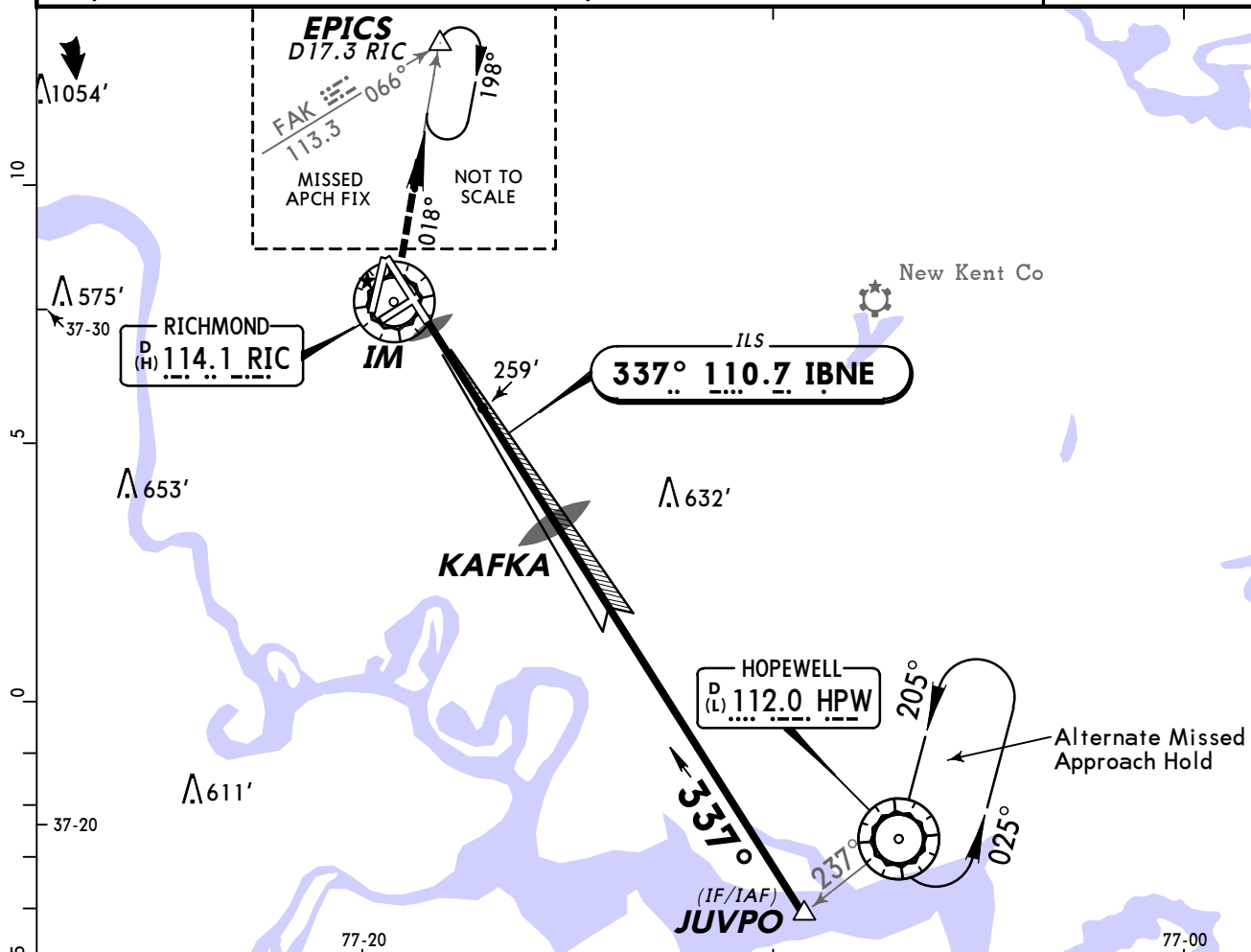


TERPS			
STRAIGHT-IN LANDING RWY34			
CAT IIIC ILS	CAT IIIB ILS	CAT IIIA ILS	1 CAT II ILS RA 101' DA(H) 261' (100')
NA	RVR 6	RVR 7	RVR 12

1 RVR 10 authorized with specific OPSEC, MSPEC, or LOA approval and use of Autoland or HUD to touchdown.

BRIEFING STRIP™

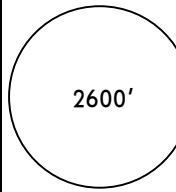
ATIS 119.15		POTOMAC Approach (R) 134.7		RICHMOND Tower 121.1		Ground 121.9	
LOC IBNE 110.7	Final Apch Crs 337°	GS KAFKA 1694' (1533')	SA CAT I ILS RA 156' DA(H) 311' (150')		Apt Elev 167' Rwy 34 161'		
MISSED APCH: Climb to 800', then climbing RIGHT turn to 2000' outbound via RIC VOR R-018 to EPICS INT/D17.3 RIC and hold, or as directed by ATC.							
Alt Set: INCHES		Trans level: FL 180		Trans alt: 18000'		MSA RIC VOR	
1. Special Aircrew and Acft Certification Required.							

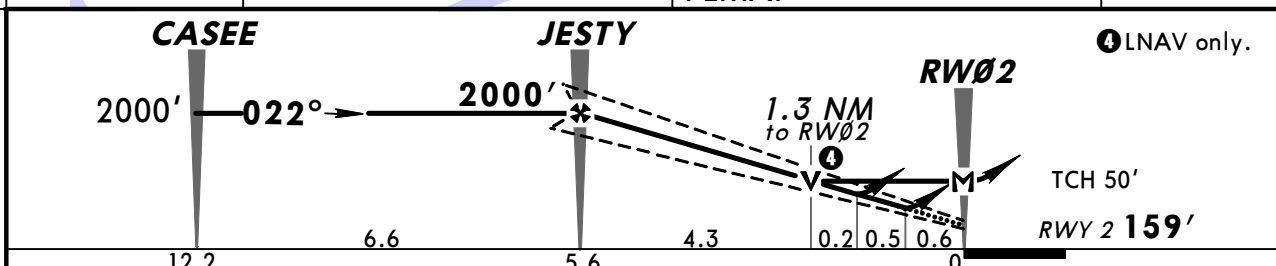
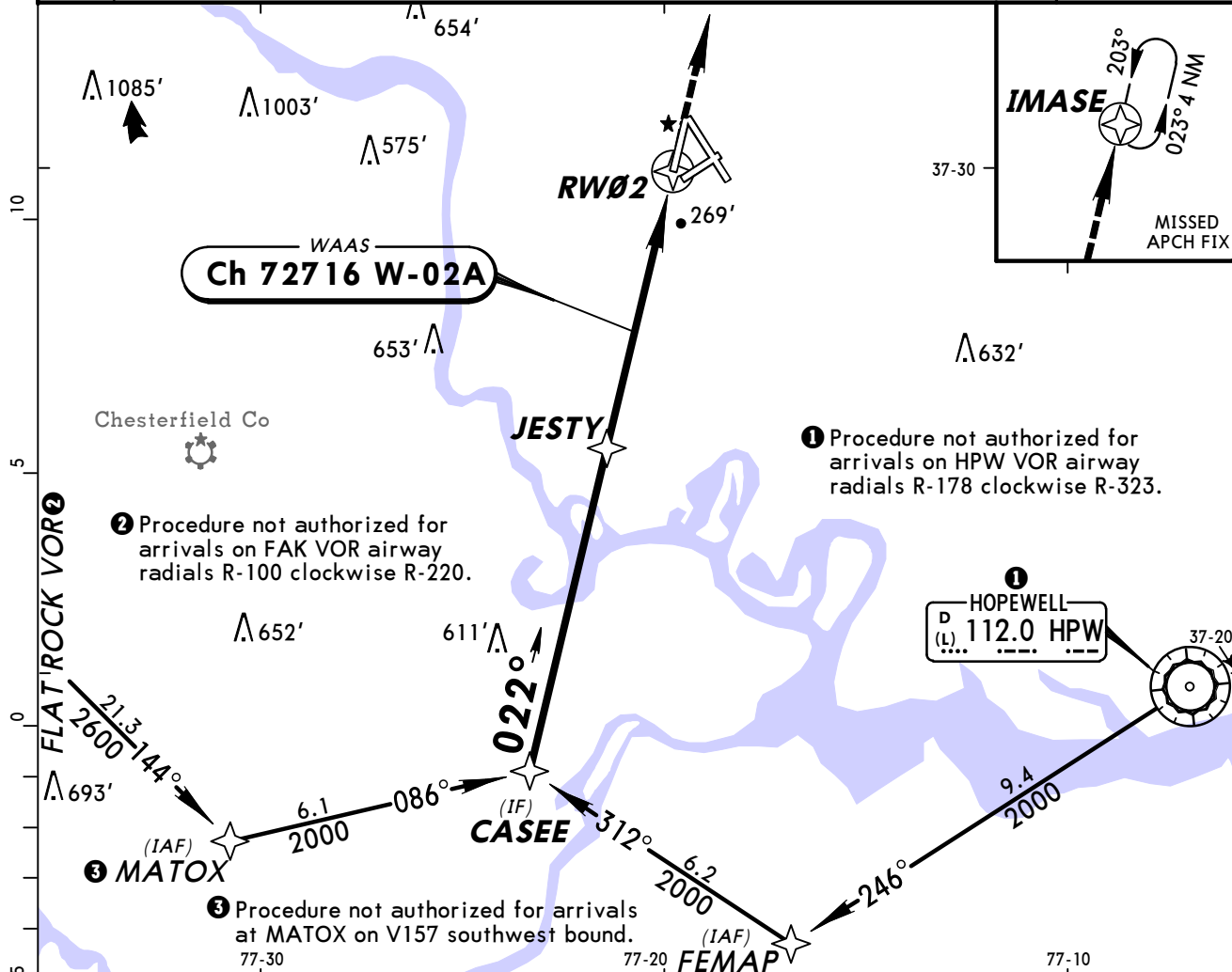


TERPS STRAIGHT-IN LANDING RWY34
1 SA CAT I ILS
RA 156'
 DA(H) **311'** (150')

A	RVR 14
B	
C	
D	

1 Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DA(H).

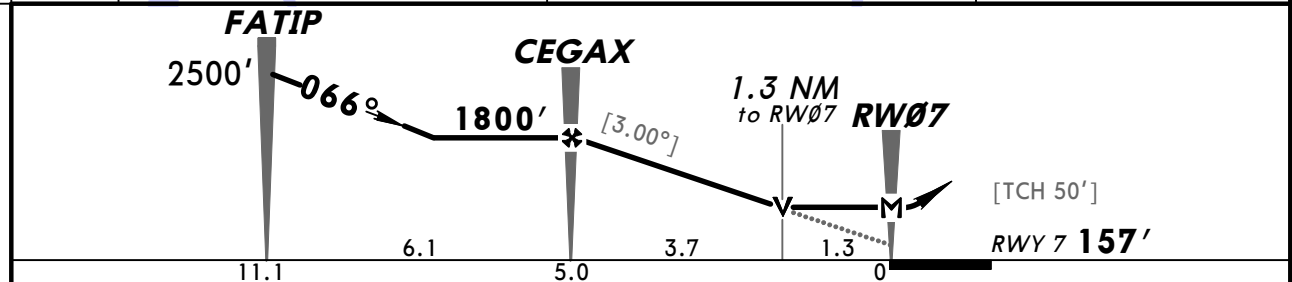
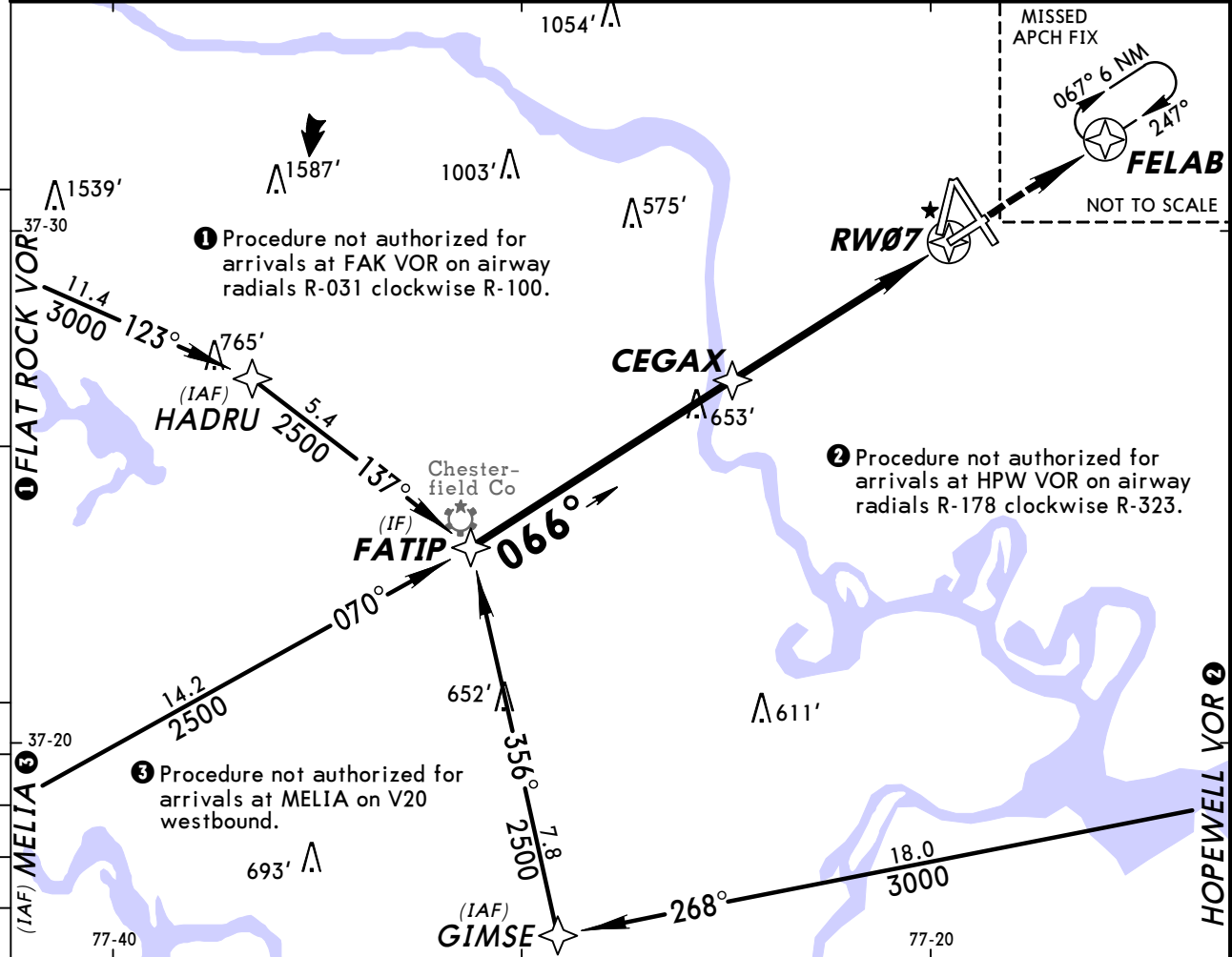
ATIS 119.15		POTOMAC Approach (R) 134.7		RICHMOND Tower 121.1		Ground 121.9
WAAS Ch 72716 W-02A	Final Apch Crs 022°	Minimum Alt JESTY 2000' (1841')	LPV DA(H) 409' (250')	Apt Elev 167' Rwy 2 159'		
MISSED APCH: Climb to 2000' direct IMASE and hold. Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 42°C (107°F). 2. DME/DME RNP-0.30 not authorized. 3. Visibility reduction by helicopters not authorized.						2600'
						MSA RWØ2



Gnd speed-Kts	70	90	100	120	140	160	 MALSR REIL PAPI	2000'		IMASE
Glide Path Angle	3.00°	372	478	531	637	743				
MAP at RWØ2										

STRAIGHT-IN LANDING RWY 2								CIRCLE-TO-LAND		
LPV DA(H) 409' (250')		LNAV/VNAV DA(H) 569' (410')		LNAV MDA(H) 620' (461')						
RAIL or ALS out		RAIL out	ALS out	RAIL out		ALS out	Max Kts	MDA(H)		
A	3/4	7/8	1	1 1/8	3/4		1	90	660' (493') - 1	
B								120		
C					1		1 1/8	1 3/8	140	660' (493') - 1 1/2
D									165	720' (553') - 2

ATIS 119.15		POTOMAC Approach (R) 134.7		RICHMOND Tower 121.1		Ground 121.9	
RNAV	Final Apch Crs 066°	Minimum Alt CEGAX 1800' (1643')	LNAV MDA(H) (CONDITIONAL) 620' (463')	Apt Elev 167' Rwy 7 157'		2600' MSA RW07	
MISSED APCH: Climb to 3000' direct FELAB and hold.							
Alt Set: INCHES 1. DME/DME RNP-0.30 not authorized. 2. Visibility reduction by helicopters not authorized.							
Trans level: FL 180 Trans alt: 18000'							



Gnd speed-Kts	70	90	100	120	140	160	3000' ↑		FELAB
Descent angle [3.00°]	372	478	531	637	743	849			
MAP at RW07									

STRAIGHT-IN LANDING RWY 7				CIRCLE-TO-LAND			
DAY				NIGHT			
MDA(H) 620' (463')				NA			
A	1			Max Kts	MDA(H)		
B				90	660' (493') -1		
C				120			
D	1 3/8			140	660' (493') -1 1/2		
				165	720' (553') -2		

BRIEFING STRIP™

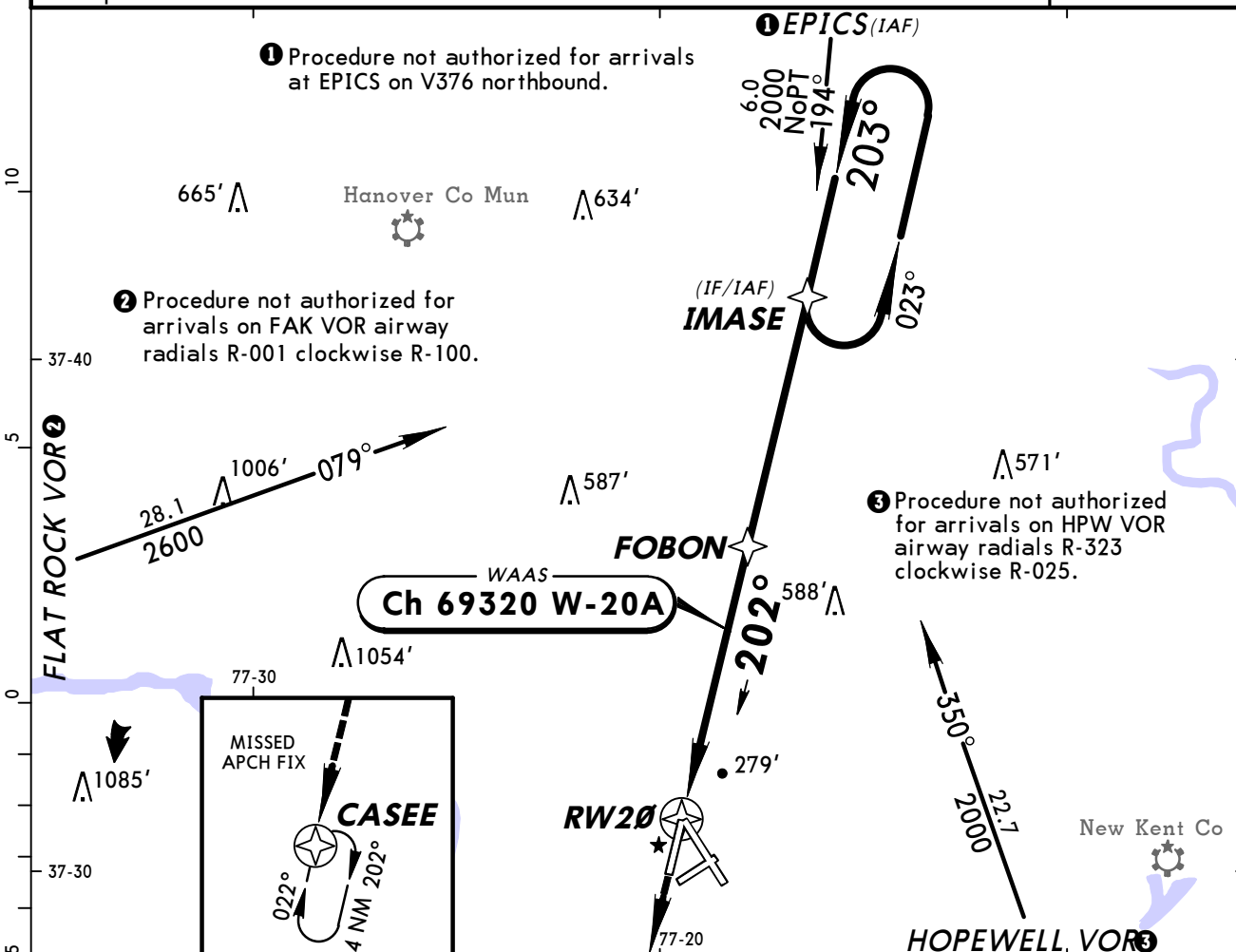


MALSR
 SI

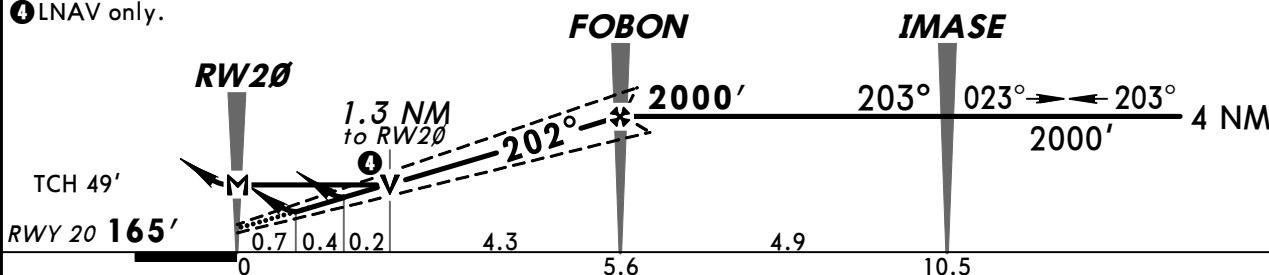
TERPS AMEND 1 10 MAR 2011

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ATIS 119.15	POTOMAC Approach (R) 134.7	RICHMOND Tower 121.1	Ground 121.9
WAAS Ch 69320 W-20A	Final Apch Crs 202°	Minimum Alt FOBON 2000' (1835')	LPV DA(H) 445' (280')
Apt Elev 167' Rwy 20 165'			2600'
MISSED APCH: Climb to 2000' direct CASEE and hold.			
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'			
1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 42°C (107°F). 2. DME/DME RNP-0.30 not authorized. 3. Visibility reduction by helicopters not authorized.			
MSA RW20			



① LNAV only.

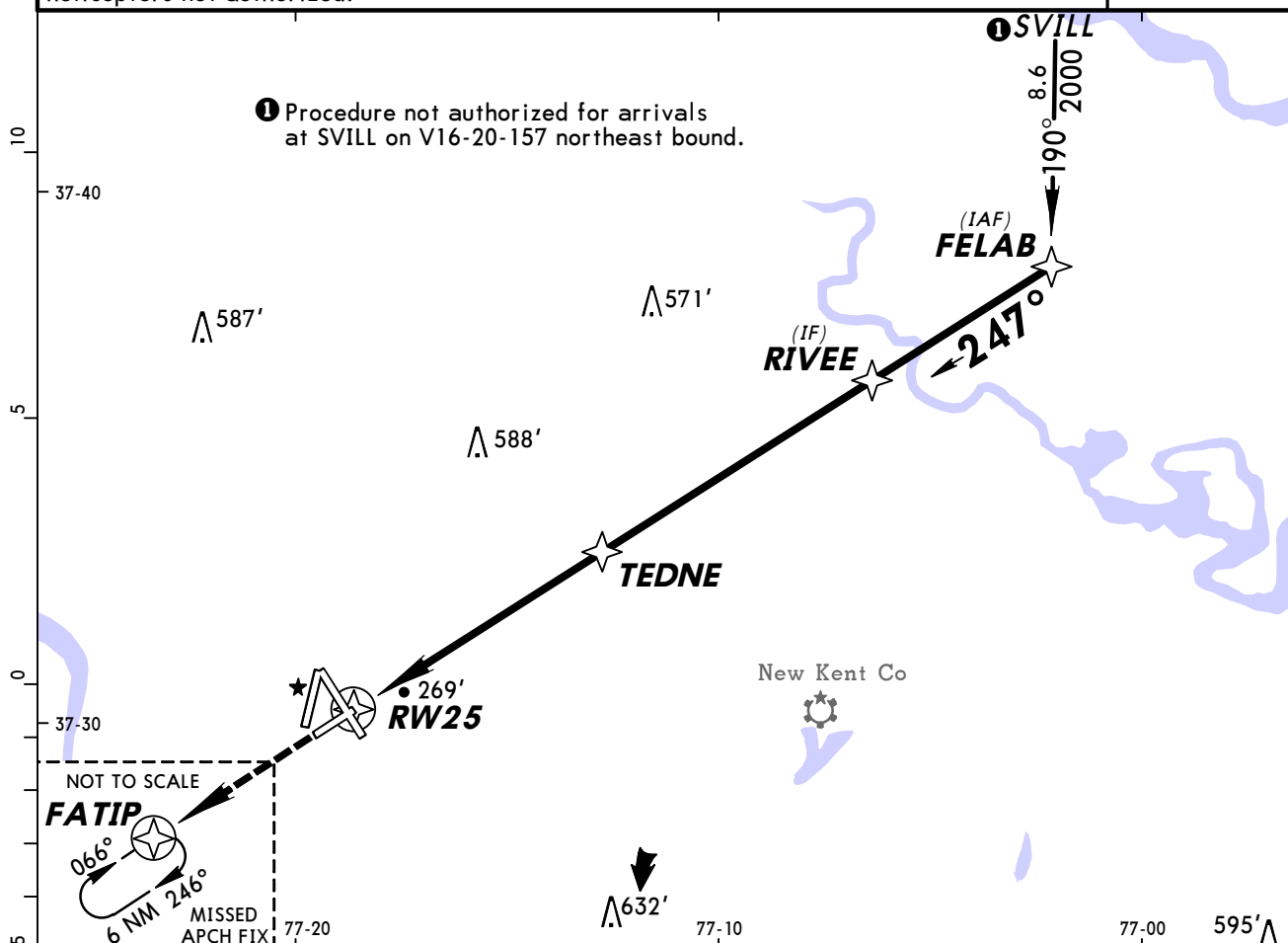


Gnd speed-Kts	70	90	100	120	140	160		REIL PAPI-L	2000'	→	CASEE
Glide Path Angle 3.00°	372	478	531	637	743	849					
MAP at RW20											

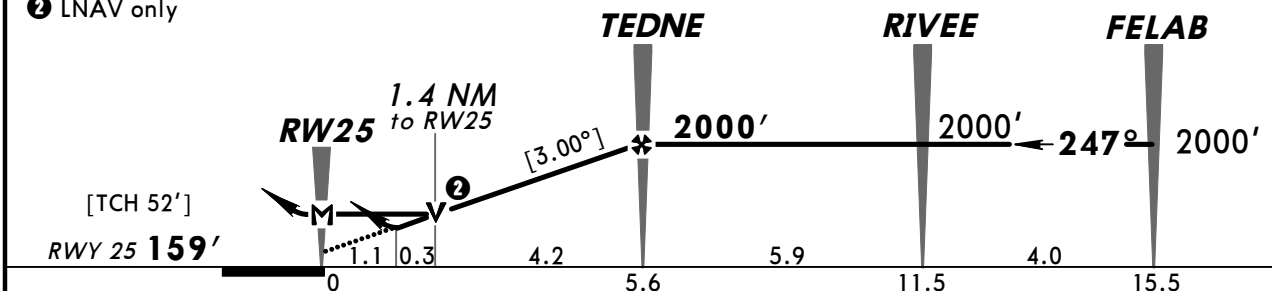
STRAIGHT-IN LANDING RWY 20				CIRCLE-TO-LAND	
LPV DA(H) 445' (280')	LNAV/VNAV DA(H) 580' (415')	LNAV MDA(H) 640' (475')		Max Kts	MDA(H)
A	1	1 3/8	1	90	660' (493') - 1
				120	
				140	660' (493') - 1 1/2
				165	720' (553') - 2

BRIEFING STRIP™

ATIS 119.15		POTOMAC Approach (R) 134.7		RICHMOND Tower 121.1		Ground 121.9	
RNAV	Final Apch Crs 247°	Minimum Alt TEDNE 2000' (1841')	LNAV/VNAV DA(H) 569' (410')	Apt Elev 167' Rwy 25 159'		2600' MSA RW25	
MISSED APCH: Climb to 3000' direct FATIP and hold.							
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 42°C (107°F). 2. DME/DME RNP-0.30 not authorized. 3. Visibility reduction by helicopters not authorized.							



② LNAV only

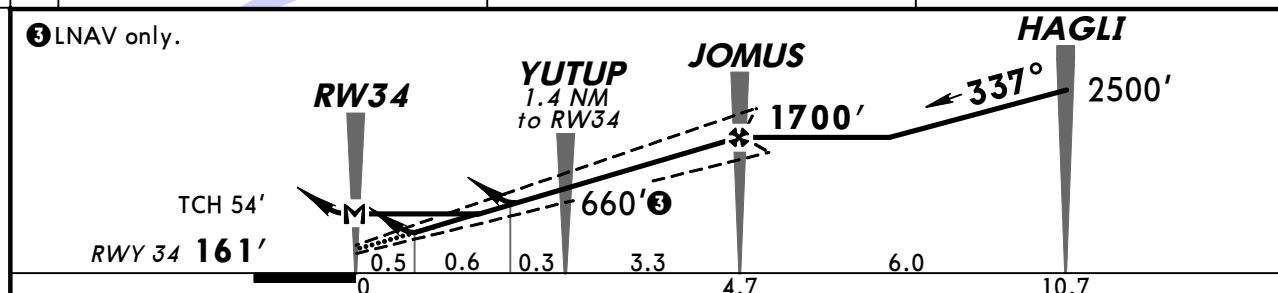
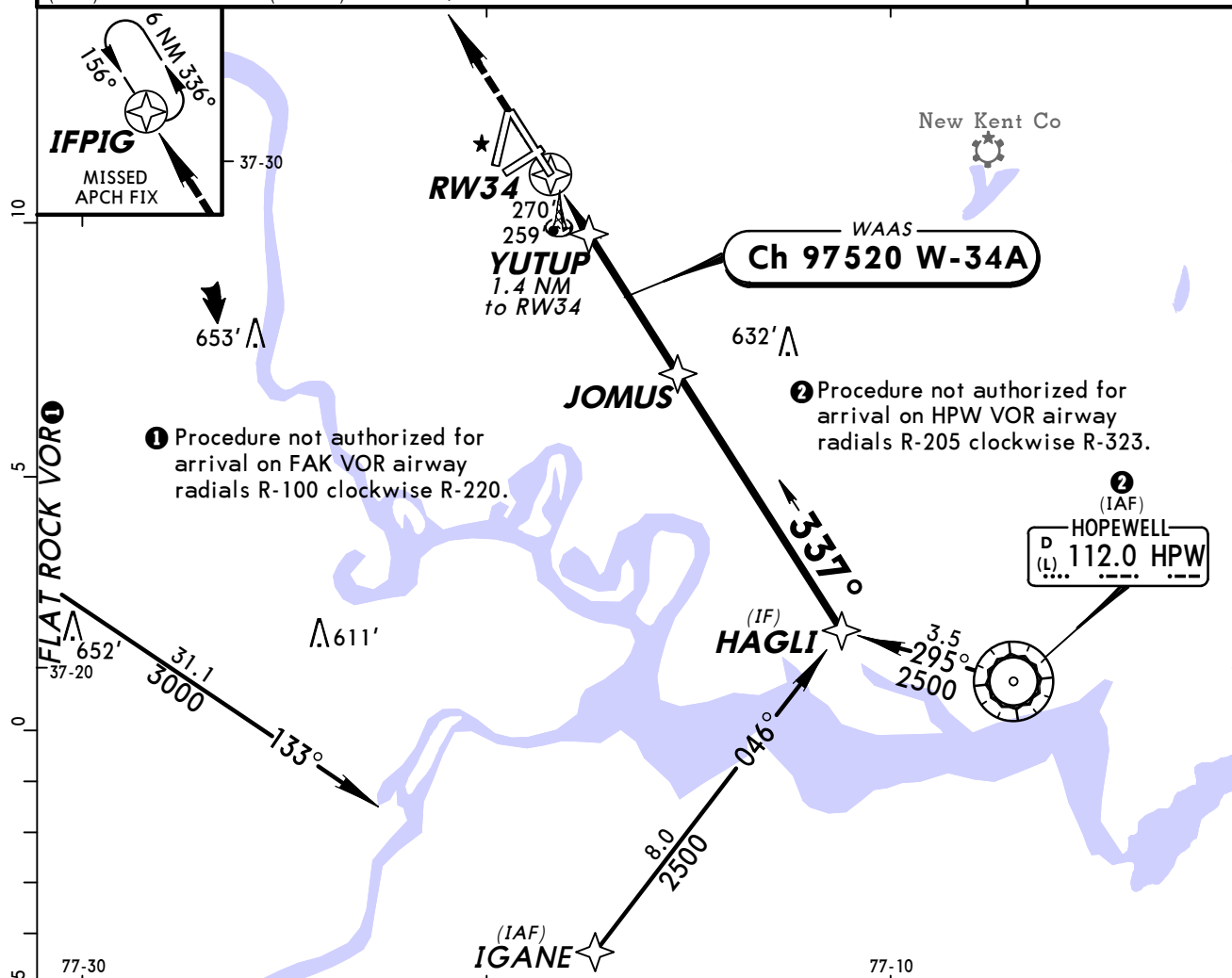


Gnd speed-Kts	70	90	100	120	140	160	REIL VASI-L	3000' ↑	→	FATIP
Descent angle [3.00°]	372	478	531	637	743	849				
MAP at RW25										

STRAIGHT-IN LANDING RWY 25				CIRCLE-TO-LAND	
LNAV/VNAV		LNAV		Max Kts	MDA(H)
DA(H) 569' (410')		MDA(H) 640' (481)			
A	1 3/8	RVR 55 or 1		90	660' (493') - 1
B				120	
C		1 3/8		140	660' (493') - 1 1/2
D				165	720' (553') - 2

BRIEFING STRIP™

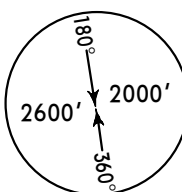
ATIS 119.15		POTOMAC Approach (R) 134.7		RICHMOND Tower 121.1		Ground 121.9	
WAAS Ch 97520 W-34A	Final Apch Crs 337°	Minimum Alt JOMUS 1700' (1539')	LPV DA(H) 361' (200')	Apt Elev 167' Rwy 34 161'		2600' MSA RW34	
MISSED APCH: Climb to 2500' direct IFPIG and hold.							
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'							
1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 42°C (107°F). 2. DME/DME RNP-0.30 not authorized.							

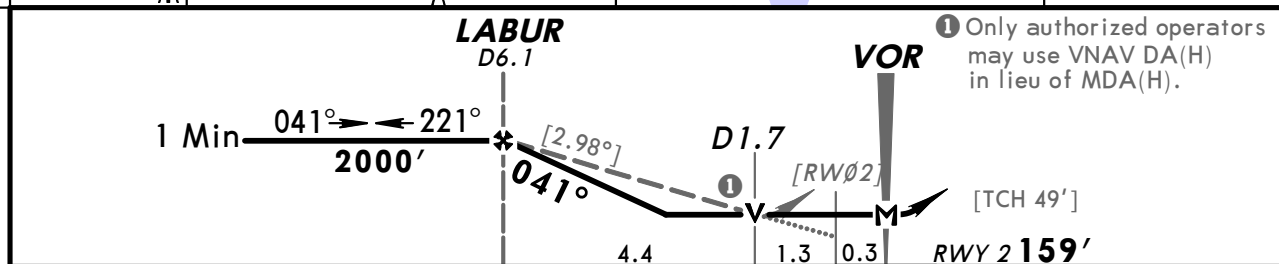
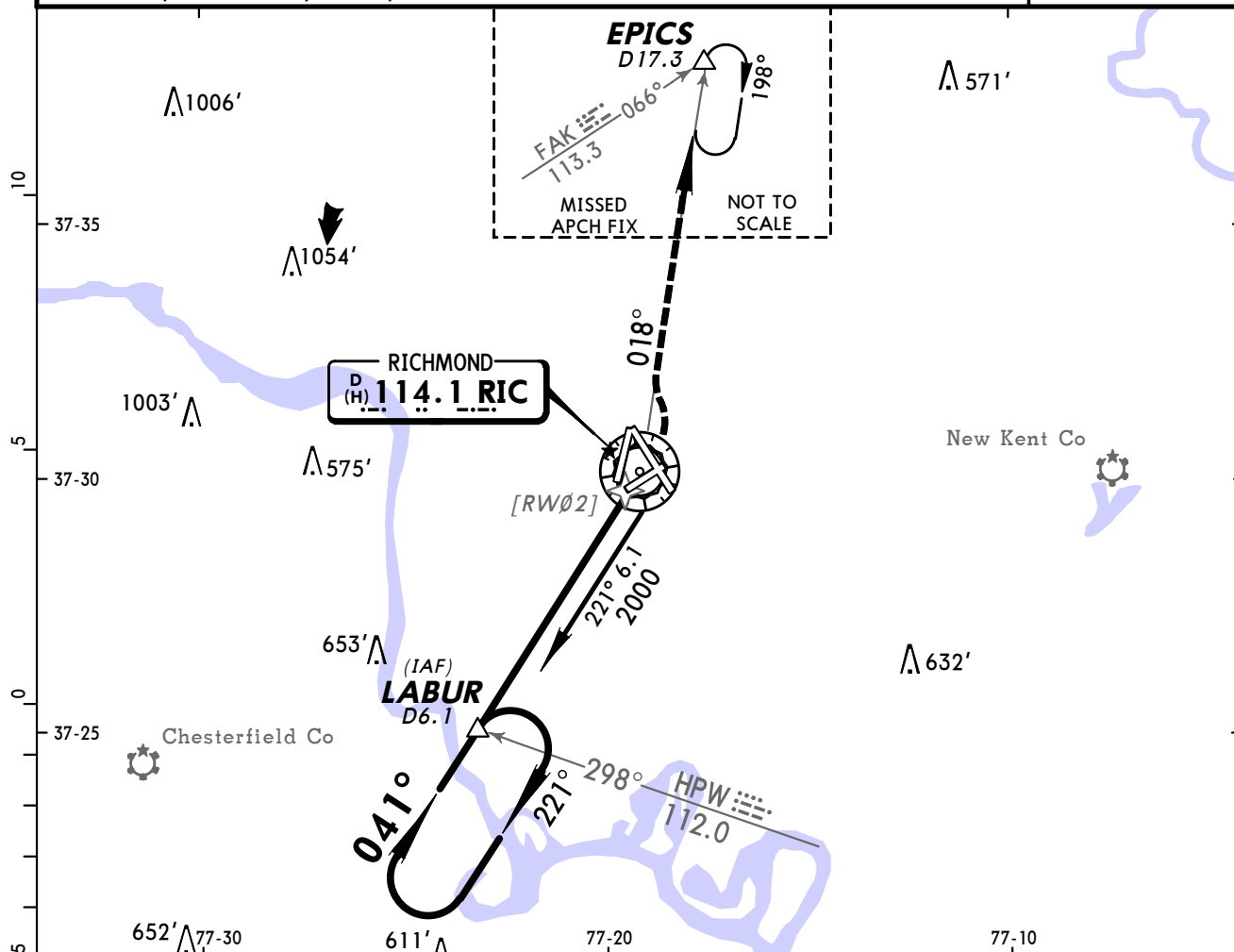


Gnd speed-Kts	70	90	100	120	140	160	ALSF-II 2500'	IFPIG
Glide Path Angle	3.00°	372	478	531	637	849		
MAP at RW34								

STRAIGHT-IN LANDING RWY 34						CIRCLE-TO-LAND	
LPV DA(H) 361' (200')		LNAV/VNAV DA(H) 556' (395')		LNAV MDA(H) 520' (359')		Max Kts	MDA(H)
ALS out		ALS out		ALS out		90	660' (493') - 1
RVR 24 or 1/2		RVR 45 or 7/8		RVR 30 or 5/8		120	660' (493') - 1 1/2
RVR 40 or 3/4		1 1/4		RVR 55 or 1		140	660' (493') - 1 1/2
						165	720' (553') - 2

BRIEFING STRIP™

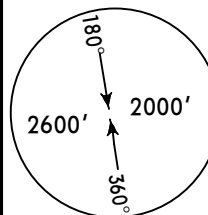
ATIS 119.15		POTOMAC Approach (R) 134.7		RICHMOND Tower 121.1		Ground 121.9
VOR RIC 114.1	Final Apch Crs 041°	Minimum Alt LABUR 2000' (1841')	MDA(H) 640' (481')	Apt Elev 167' Rwy 2 159'		 MSA RIC VOR
MISSED APCH: Climbing LEFT turn to 2000' outbound on RIC VOR R-018 to EPICS INT/D17.3 and hold.						
Alt Set: INCHES		Trans level: FL 180		Trans alt: 18000'		
1. Visibility reduction by helicopters not authorized.						

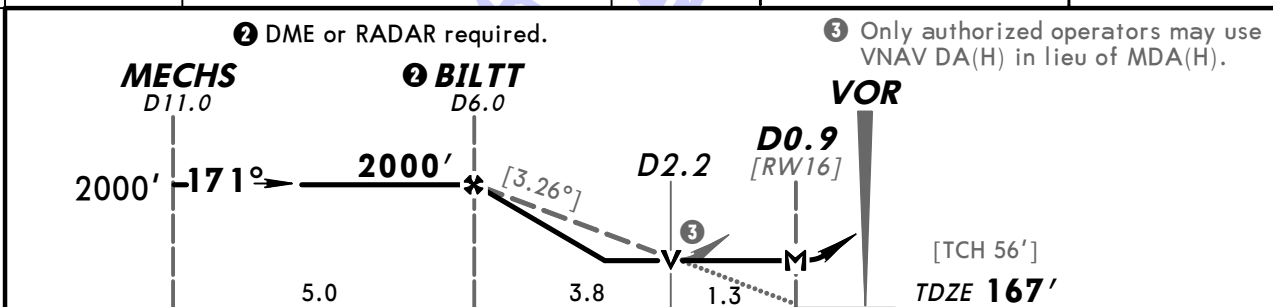
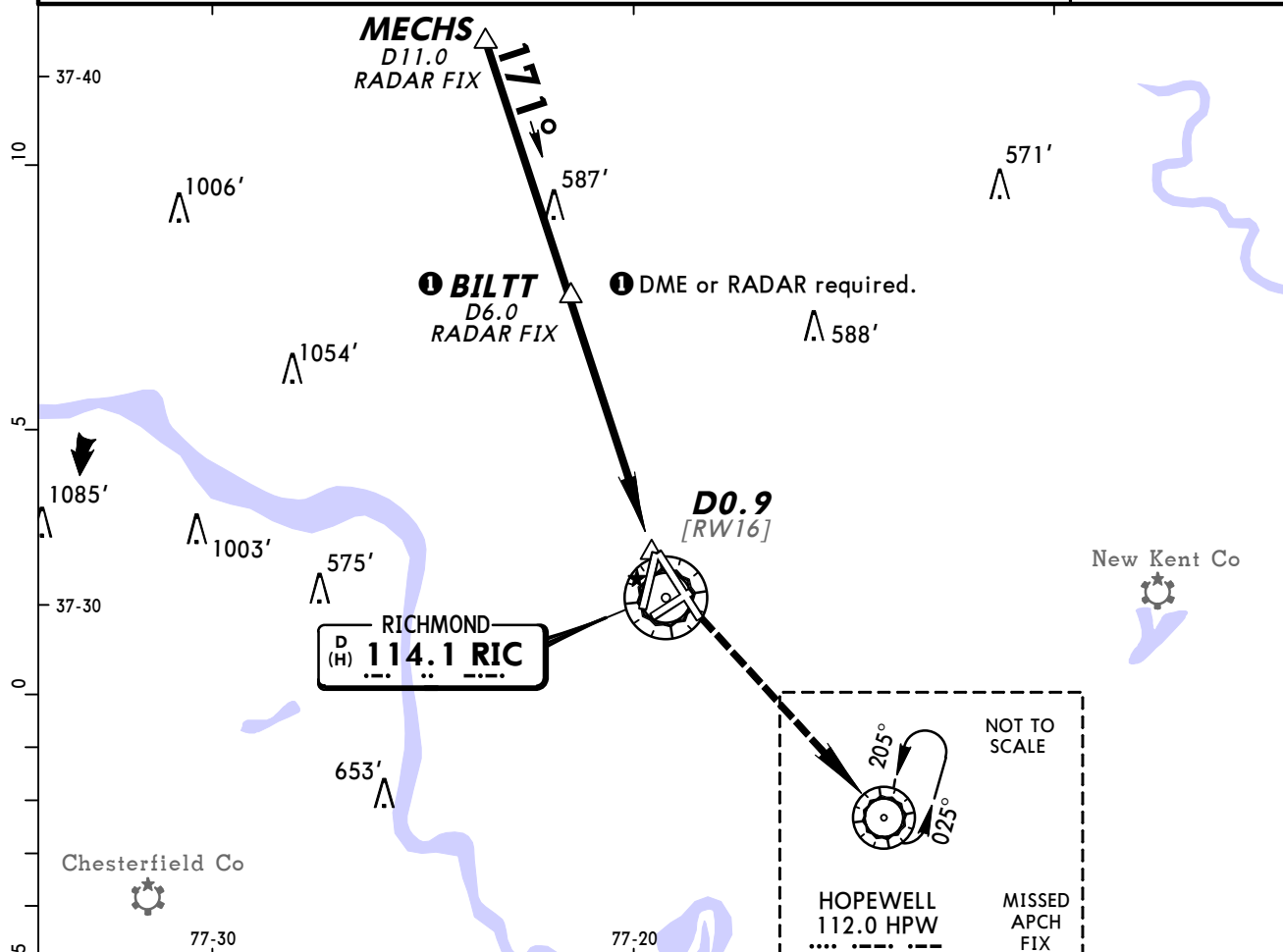


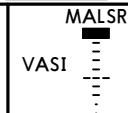
Gnd speed-Kts	70	90	100	120	140	160	MALSR REIL PAPI	2000' via LT	RIC 114.1 R-018	EPICS
Descent angle [2.98°]	369	474	527	633	738	843				
MAP at VOR										

STRAIGHT-IN LANDING RWY 2					CIRCLE-TO-LAND	
MDA(H) 640' (481')						
		RAIL out	ALS out	Max Kts	MDA(H)	
A	3/4		1	90	660' (493') - 1	
B				120		
C	1		1 1/8	140	660' (493') - 1 1/2	
D				165		

BRIEFING STRIP™

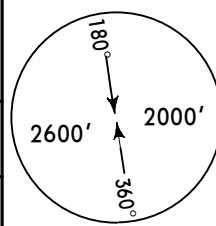
ATIS 119.15		POTOMAC Approach (R) 134.7		RICHMOND Tower 121.1		Ground 121.9				
VOR RIC 114.1		Final Apch Crs 171°		Minimum Alt BILTT 2000' (1833')		MDA(H) 640' (473')		Apt Elev 167' TDZE 167'		 MSA RIC VOR
MISSED APCH: Climbing LEFT turn to 2000' direct HPW VOR and hold.										
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. RADAR required. 2. VGSI and descent angles not coincident. 3. Visibility reduction by helicopters not authorized.										

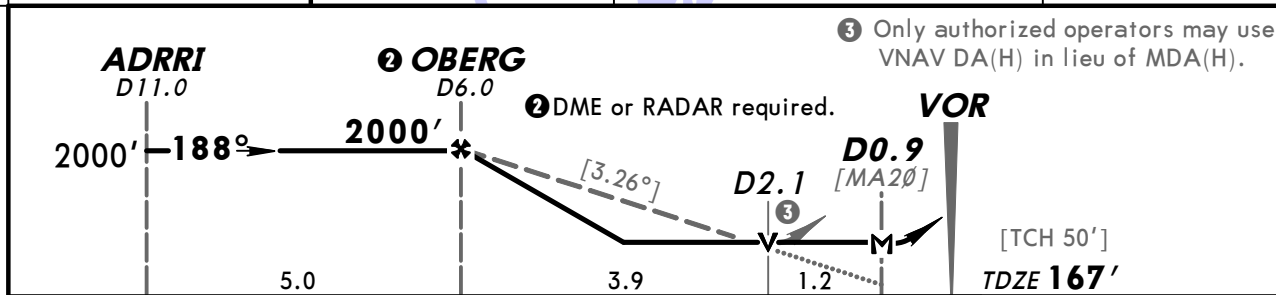
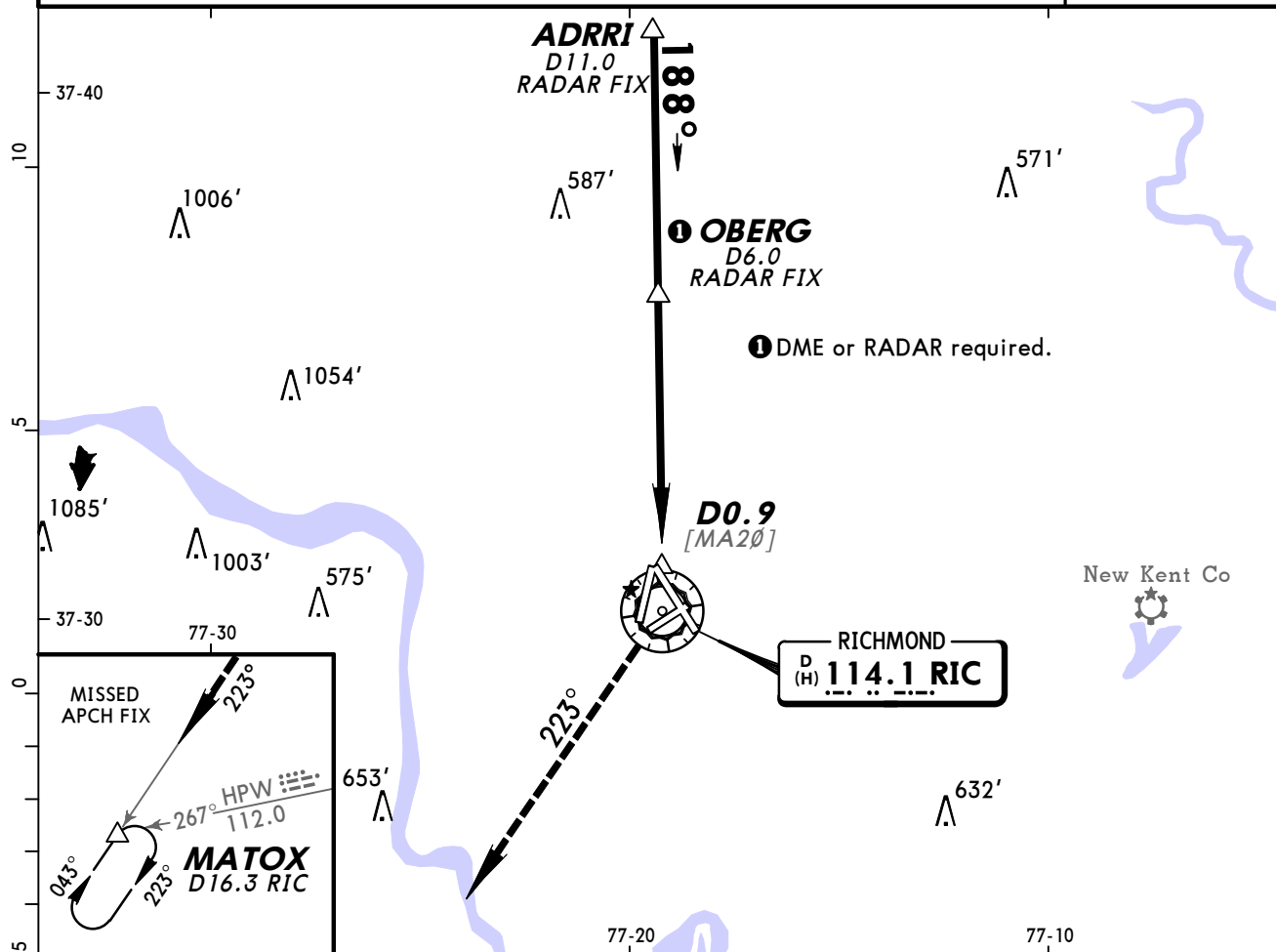


Gnd speed-Kts	70	90	100	120	140	160		2000' LT		HPW 112.0
Descent angle [3.26]	404	519	577	692	808	923				
MAP at D0.9 or BILTT to MAP	5.1	4:22	3:24	3:04	2:33	2:11				

STRAIGHT-IN LANDING RWY16					CIRCLE-TO-LAND				
MDA(H) 640' (473')									
A	RAIL out	ALS out	Max Kts	MDA(H)					
B	RVR 40 or 3/4	RVR 40 or 3/4	90	660' (493') - 1					
C			120	660' (493') - 1 1/2					
D	RVR 50 or 1	1 1/2	140	720' (553') - 2					

BRIEFING STRIP™

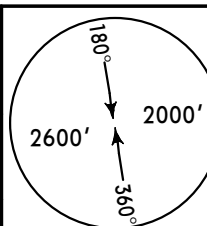
ATIS 119.15		POTOMAC Approach (R) 134.7		RICHMOND Tower 121.1		Ground 121.9
VOR RIC 114.1	Final Apch Crs 188°	Minimum Alt OBERG 2000' (1833')	MDA(H) 640' (473')	Apt Elev 167' TDZE 167'		 MSA RIC VOR
MISSED APCH: Climbing RIGHT turn to 2000' outbound via RIC VOR R-223 to MATOX INT/D16.3 and hold.						
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. RADAR required. 2. VGSI and descent angles not coincident. 3. Visibility reduction by helicopters not authorized.						

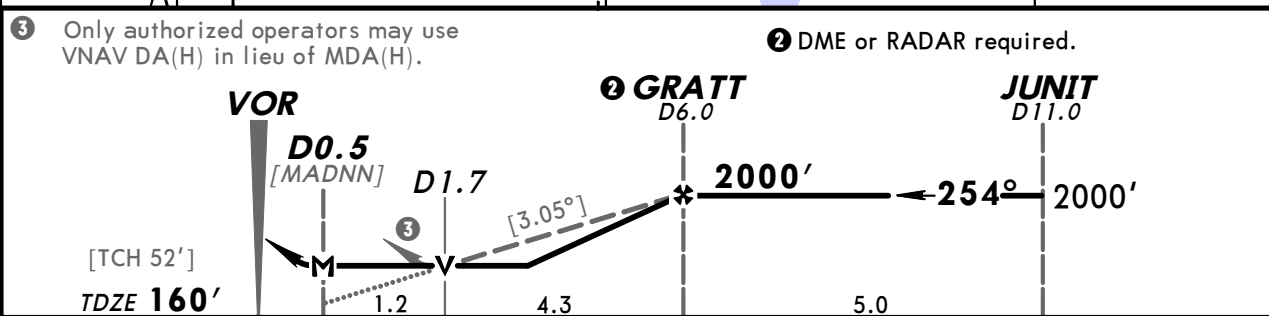
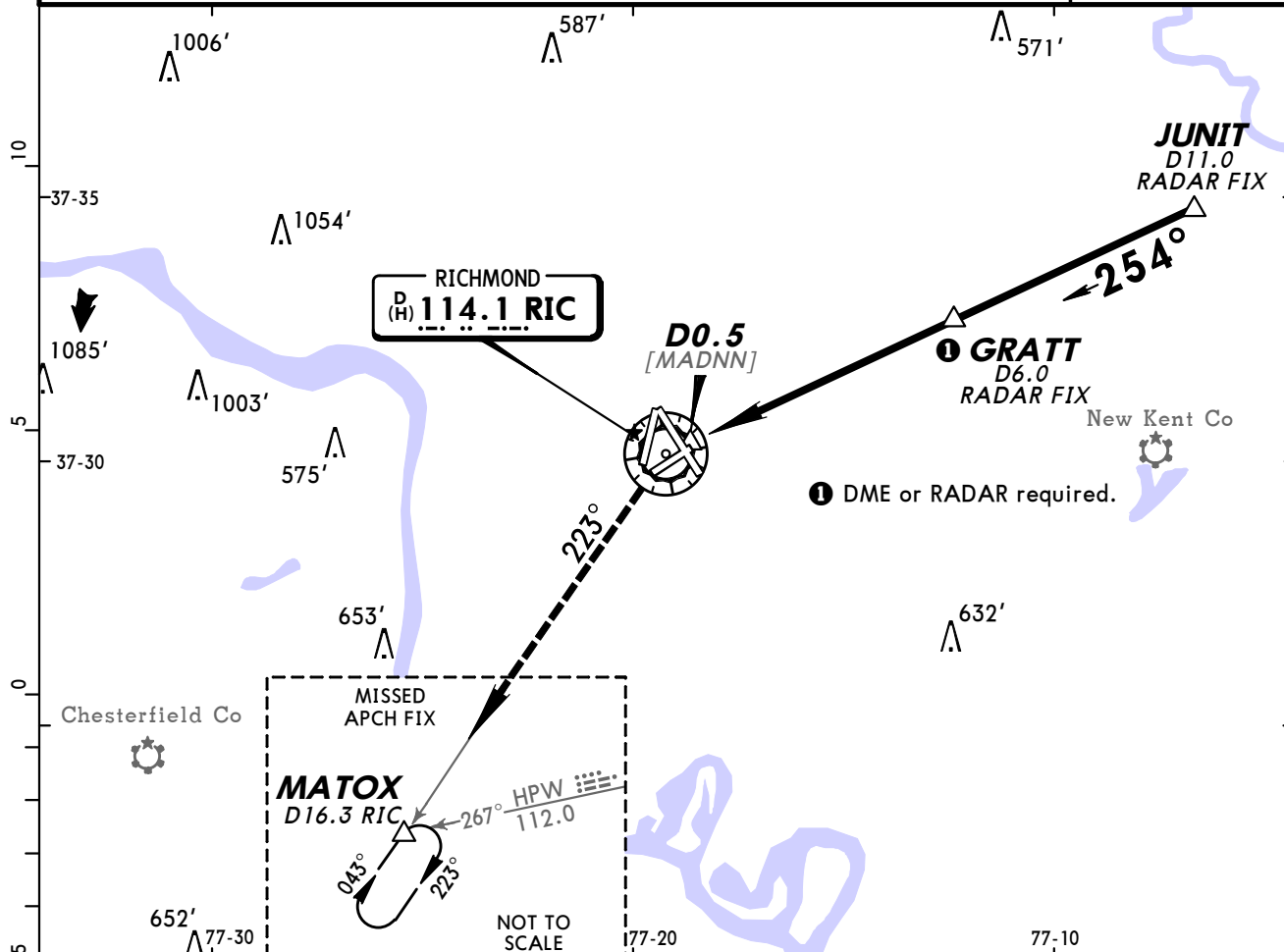


Gnd speed-Kts	70	90	100	120	140	160	REIL VASI-L	2000' via 114.1 RT R-223 MATOX
Descent angle [3.26°]	404	519	577	692	808	923		
MAP at D0.9 or OBERG to MAP	5.2	4:27	3:28	3:07	2:36	2:14		

STRAIGHT-IN LANDING RWY20				CIRCLE-TO-LAND	
MDA(H) 640' (473')				Max Kts	MDA(H)
A	1			90	660' (493') - 1
B				120	
C	1 1/4			140	660' (493') - 1 1/2
D	1 1/2			165	720' (553') - 2

BRIEFING STRIP™

ATIS 119.15		POTOMAC Approach (R) 134.7		RICHMOND Tower 121.1		Ground 121.9	
VOR RIC 114.1	Final Apch Crs 254°	Minimum Alt GRATT 2000' (1840')	MDA(H) 600' (440')	Apt Elev 167' TDZE 160'			
MISSED APCH: Climbing LEFT turn to 2000' outbound via RIC VOR R-223 to MATOX INT and hold.							
Alt Set: INCHES							

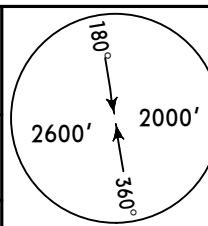


Gnd speed-Kts	70	90	100	120	140	160	REIL VASI-L	2000' via 114.1 R-223 LT	RIC MATOX
Descent angle [3.05°]	378	486	540	648	755	863			
MAP at D0.5 or GRATT to MAP	5.5	4:43	3:40	3:18	2:45	2:21			

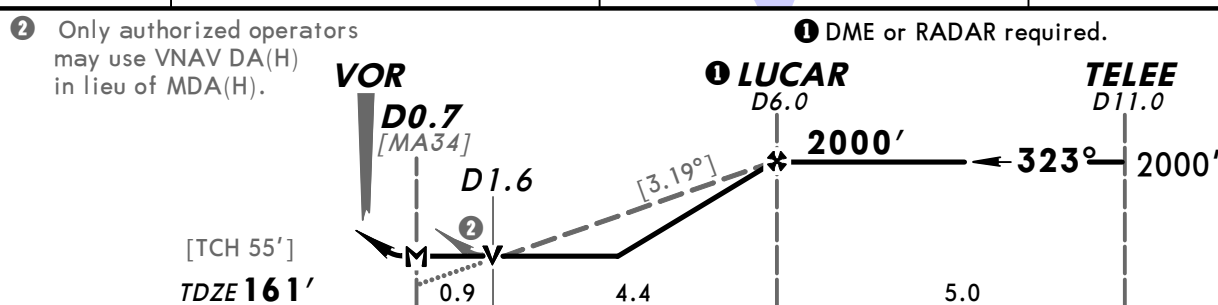
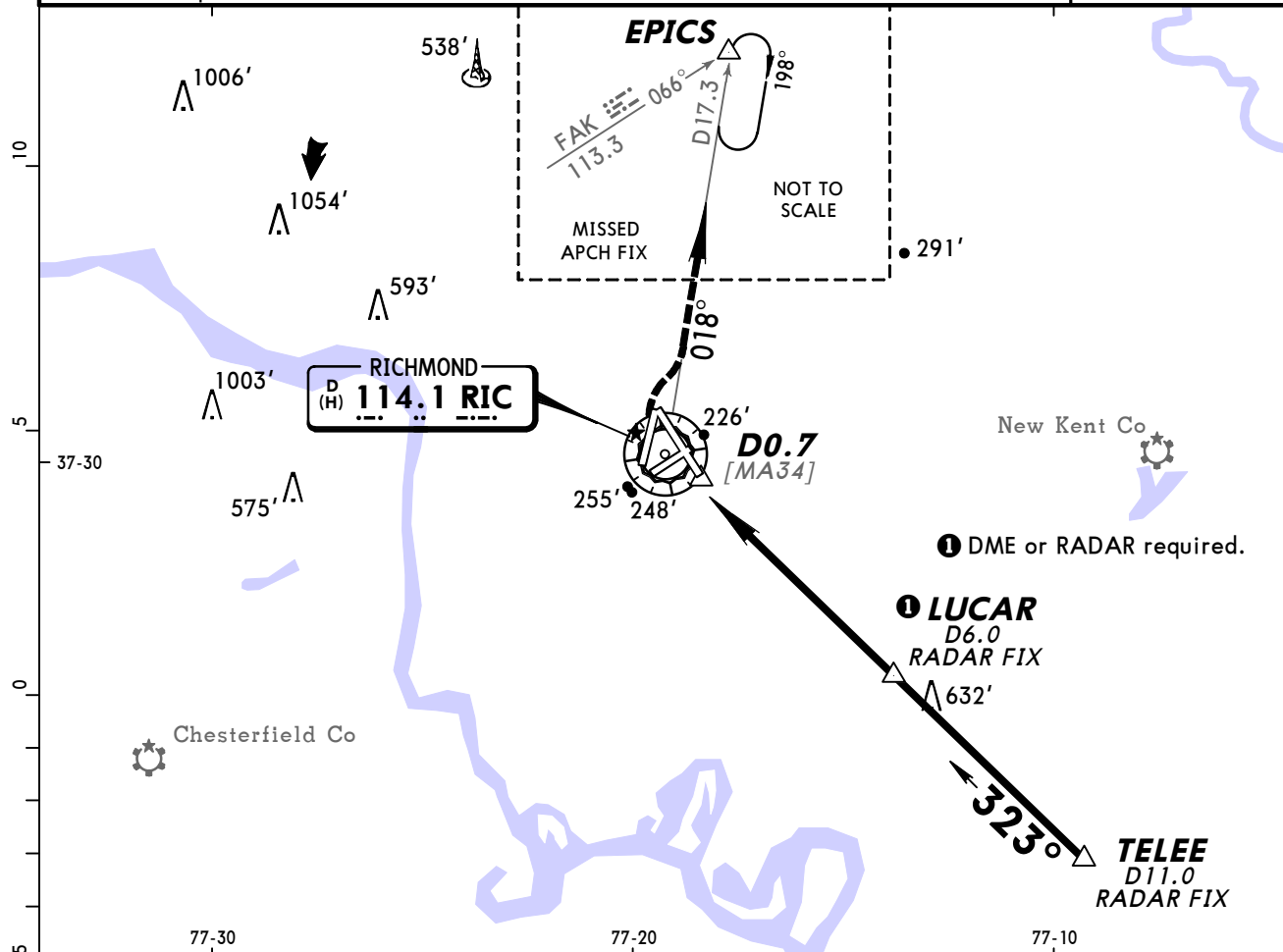
STRAIGHT-IN LANDING RWY25			CIRCLE-TO-LAND		
MDA(H) 600' (440')			MDA(H)		
A	1		Max Kts	90	
B	1			120	
C	1 1/4			140	
D	1 1/2			165	

TERPS AMEND 16B 21 OCT 2010

BRIEFING STRIP TM

ATIS 119.15		POTOMAC Approach (R) 134.7		RICHMOND Tower 121.1		Ground 121.9
VOR RIC 114.1	Final Apch Crs 323°	Minimum Alt LUCAR 2000' (1839')	MDA(H) 540' (379')	Apt Elev 167' TDZE 161'		
MISSED APCH: Climbing RIGHT turn to 2000' outbound via RIC VOR R-018 to EPICS INT and hold.						
Alt Set: INCHES 1. RADAR required.		Trans level: FL 180		Trans alt: 18000'		

MSA RIC VOR



Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.19°]	395	508	564	677	790	903
MAP at D0.7 or LUCAR to MAP	5.3	4:33	3:32	3:11	2:39	2:16
					1:59	

ALS-F-II	2000'	via RIC 114.1	EPICS
	RT	R-018	

STRAIGHT-IN LANDING RWY34			CIRCLE-TO-LAND		
MDA(H) 540' (379')					
ALS out			Max Kts	MDA(H)	
A			90	660' (493')-1	
B	RVR 24 or 1/2	RVR 50 or 1	120		
C			140	660' (493')-1 1/2	
D	RVR 50 or 1	RVR 60 or 1 1/4	165	720' (553')-2	

General Information

Location: Roanoke VA USA
IATA Code: ROA
Lat/Long: N37° 19.5' W079° 58.5'
Elevation: 1175 ft

Airport Use: Public
Magnetic Variation: 8.5°W
Sectional Chart: Cincinnati

Fuel Types: 100 Octane (LL), Jet A
Oxygen Types: High Pressure, Low Pressure
Repair Types: Major Airframe, Major Engine
Customs: No
Airport Type: IFR
Landing Fee: No
Control Tower: Yes
Jet Start Unit: Yes
LLWS Alert: Yes
Beacon: Yes
Pattern Altitude: 800 ft AGL

Sunrise: 1154 Z
Sunset: 2311 Z,

Runway Information

Runway: 06
Length x Width: 6800 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 1175 ft
Lighting: Edge, ALS

Runway: 16
Length x Width: 5810 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 1173 ft
Lighting: Edge

Runway: 24
Length x Width: 6800 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 1170 ft
Lighting: Edge, REIL
Displaced Threshold: 790 ft

Runway: 34
Length x Width: 5810 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 1159 ft
Lighting: Edge, ALS

Communication Information

ATIS 134.95

Roanoke Tower 118.3

Roanoke Ground Control 121.9

Roanoke Clearance Delivery 119.7

Roanoke Approach Control 126.9

Roanoke Approach Control 118.15

Roanoke App ARSA 126.9 Initial Contact

Roanoke App ARSA 118.15

Roanoke Departure Control 126.9

Roanoke Departure Control 118.15

Roanoke Regl/Woodrum Unicom 122.95

Leesburg Flight Service Station 122.6 RCO

Leesburg Flight Service Station 122.2 RCO

ROANOKE Departure (R)

Rwy 6 235°-074°,
Rwy 16/34 360°-150°
118.15

Rwy 6 075°-234°,
Rwy 16/34 151°-359°
126.9

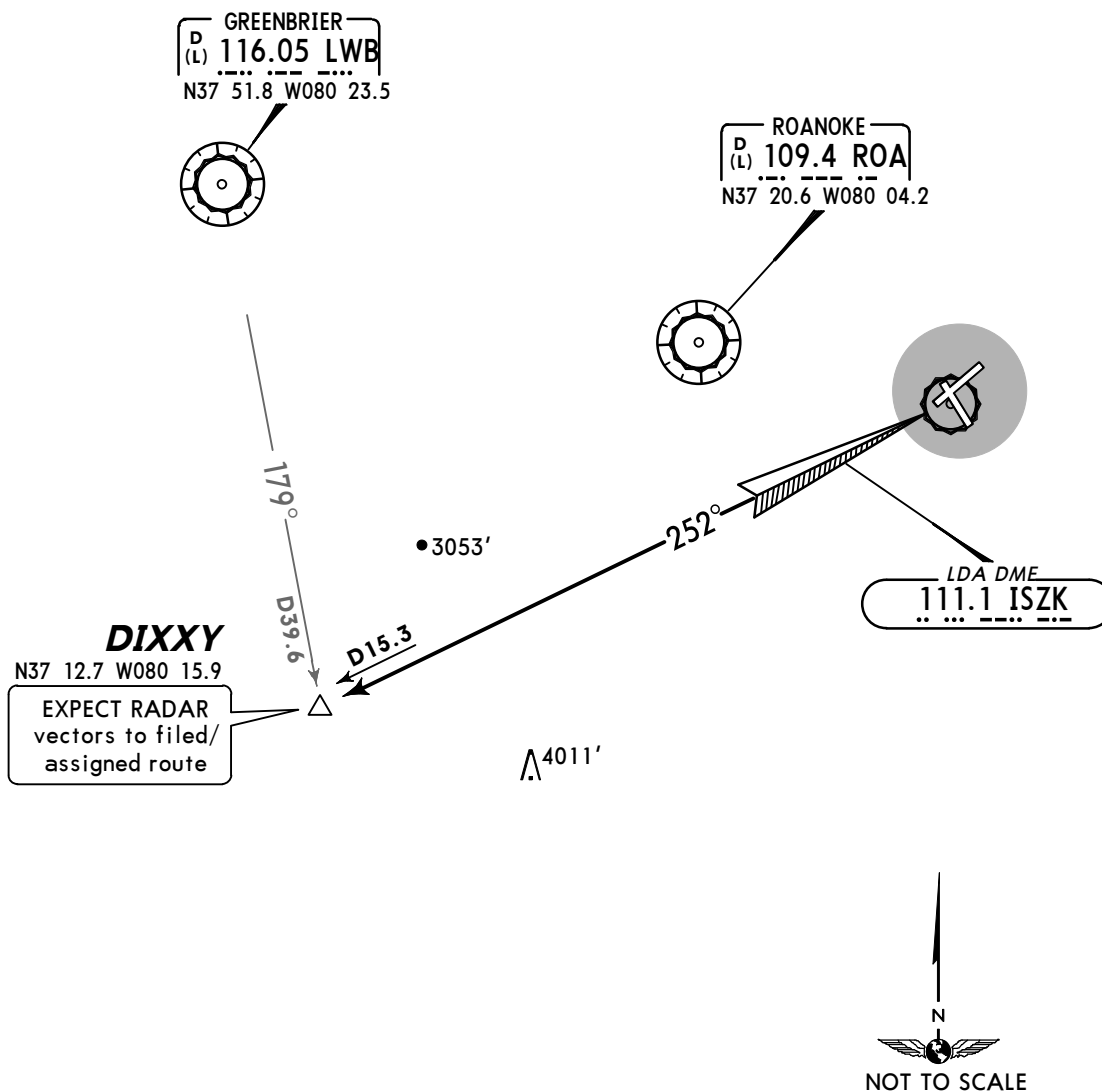
Apt Elev
1175'

Trans level: FL180
Trans alt: 18000'
RADAR required.

5700'

MSA ROA VOR

DIXXY SIX DEPARTURE (DIXXY6.DIXXY)
(RWY 24)



This SID requires take-off minimums
(for standard minimums, refer to airport chart):
Rwys 6, 16, 34: Not authorized-ATC.
Rwy 24: Standard (or lower than standard, if
authorized) with a minimum climb of 242'
per NM to **2800'**.

Gnd speed-KT	75	100	150	200	250	300
242' per NM	303	403	605	807	1008	1210

OBSTACLES

Rwy 24: Trees beginning 150' from DER, 414'
RIGHT of centerline, up to 67' AGL/1206' MSL.
Bush, sign, trees beginning 41' from DER, 248'
LEFT of centerline, up to 100' AGL/1259' MSL.

INITIAL CLIMB

Climb on ISZK LDA Localizer WEST course to **4200'**, to DIXXY. EXPECT RADAR vectors to
filed/assigned route.

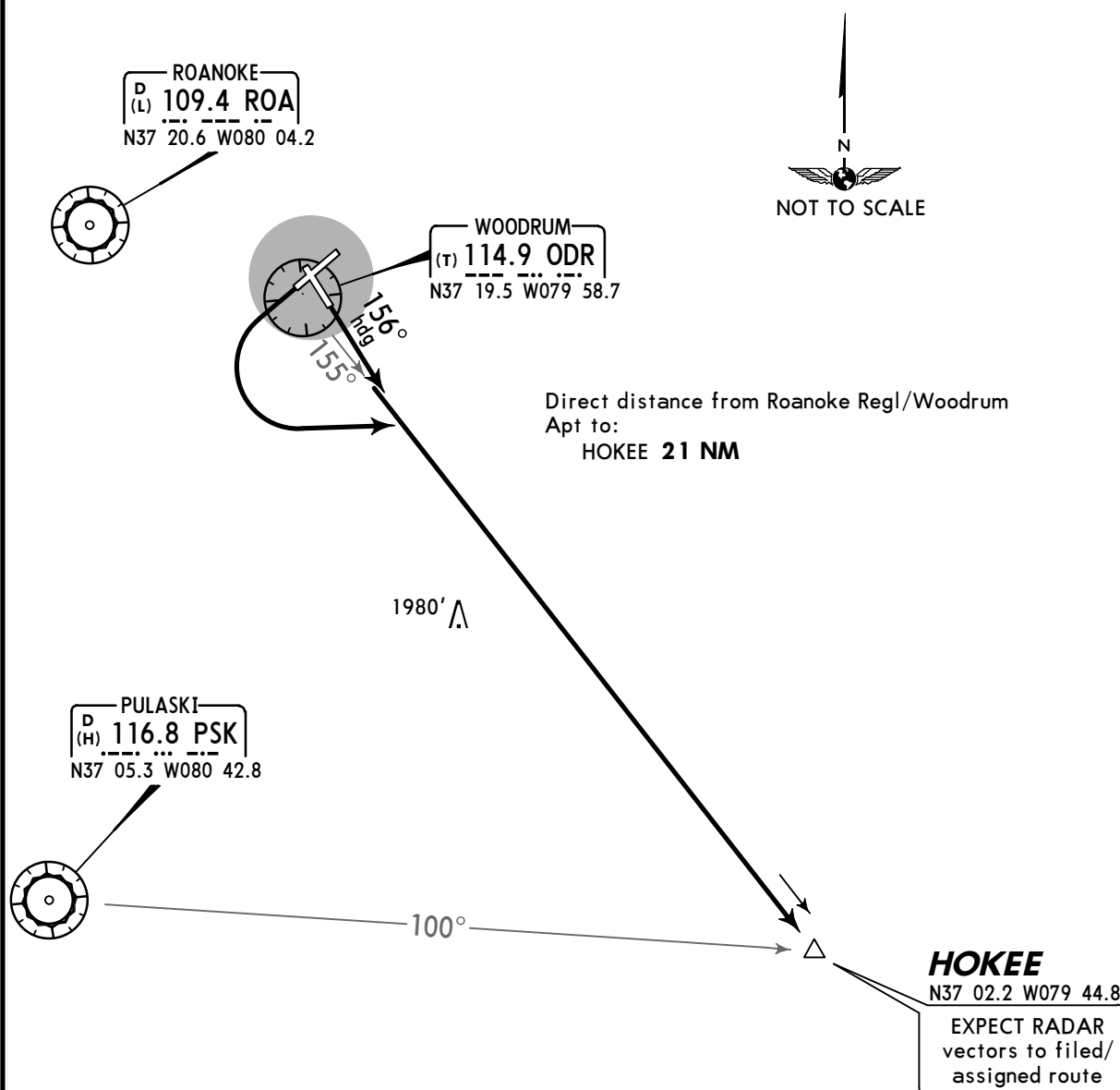
ROANOKE Departure (R)

Rwy 6 235°-074°,
Rwy 16/34 360°-150°
118.15Rwy 6 075°-234°,
Rwy 16/34 151°-359°
126.9Apt Elev
1175'Trans level: FL180
Trans alt: 18000'

5700'

MSA ROA VOR

HOKEE TWO DEPARTURE (HOKEE2.HOKEE)



This SID requires take-off minimums
(for standard minimums, refer to airport chart):

Rwys 6, 34: Not authorized- Obstacles.

Rwy 16: Standard (or lower than standard, if
authorized) with a minimum climb of 260' per NM to **2300'**.

Rwy 24: Standard (or lower than standard, if
authorized) with a minimum climb of 205' per NM to **2800'**.

Gnd speed-KT	75	100	150	200	250	300
205' per NM	256	342	513	683	854	1025
260' per NM	325	433	650	867	1083	1300

OBSTACLES

Rwy 16: Sign 39' from DER, 251' LEFT of centerline, 24' AGL/1144' MSL. Trees beginning 1.12 NM from DER, 2122' LEFT of centerline, up to 76' AGL/1336' MSL.

Rwy 24: Trees beginning 150' from DER, 414' RIGHT of centerline, up to 67' AGL/1206' MSL. Bush, sign, trees beginning 41' from DER, 248' LEFT of centerline, up to 100' AGL/1259' MSL.

RWY

INITIAL CLIMB

16Climb to **5000'** on heading 156° to intercept ODR R-155 to HOKEE.**24**Climbing LEFT turn to **5000'** to intercept ODR R-155 to HOKEE.

ROUTING

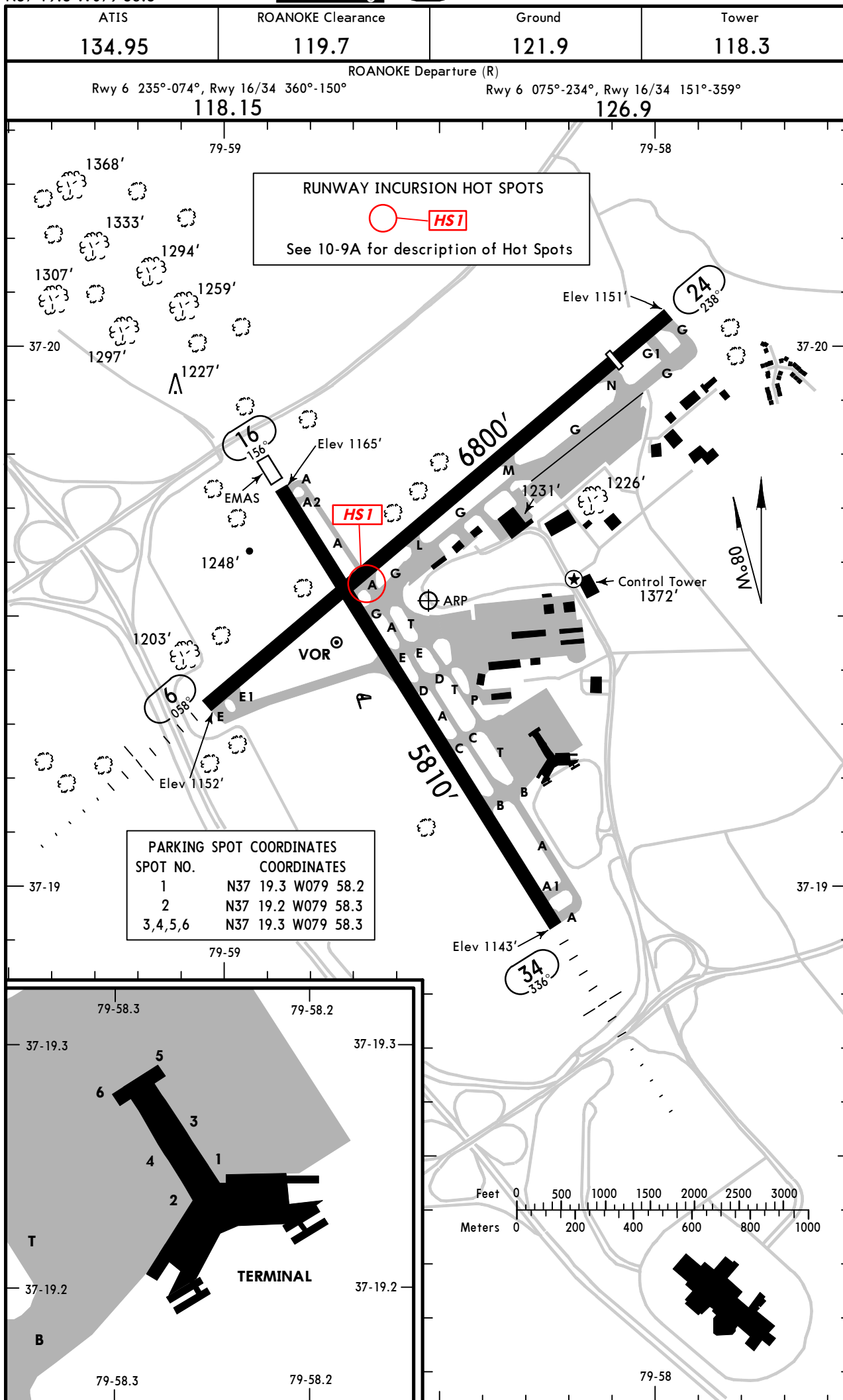
At HOKEE, EXPECT RADAR vectors to filed/assigned route.

KROA/ROA
Apt Elev **1175'**
N37 19.5 W079 58.5

19 AUG 11
Eff 25 Aug

10-9

ROANOKE, VA
ROANOKE REGL/WOODRUM



CHANGES: None.

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GENERAL

Low-level wind shear alert system.
Birds in vicinity of airport.

ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS		TAKE-OFF		WIDTH
		Threshold	Glide Slope	DAY	NIGHT	
6	HIRL MALSR VASI-L grooved		5879'	①	①	150'
24	HIRL REIL grooved	6012'				

① VFR only.

16	HIRL grooved					150'
② 34	HIRL MALSR PAPI-L (angle 3.0°) grooved		4869'	③	NA	

② Take off Rwy 34 and landing Rwy 16 not authorized at night or during IFR conditions due to terrain.

③ VFR only.

RUNWAY INCURSION HOT SPOTS

For information only, not to be construed as ATC instructions.

HSI Northbound traffic on Twy A for Rwy 24 sometimes fail to make the turn at Twy G and enter Rwy 6/24 without a clearance.

TAKE-OFF & OBSTACLE DEPARTURE PROCEDURE

	① Rwy 16			Rwy 24			Rwys 6, 34
	With Min climb of 220'/NM to 1400'		Other	With Min climb of 242'/NM to 2800'		For Climb In Visual Conditions	
	Adequate Vis Ref	STD		Adequate Vis Ref	STD		
1 & 2 Eng	1/4	1	300-1 1/2	1/4	1	2500-3	NA
3 & 4 Eng		1/2			1/2		

① Alternatively, with standard takeoff minimums and a normal 200'/NM climb gradient, takeoff must occur no later than 1600' prior to departure end of runway.

OBSTACLE DP

Rwy 16, climb heading 156° to intercept the ROA VOR R-124 to 4000' before proceeding on course.

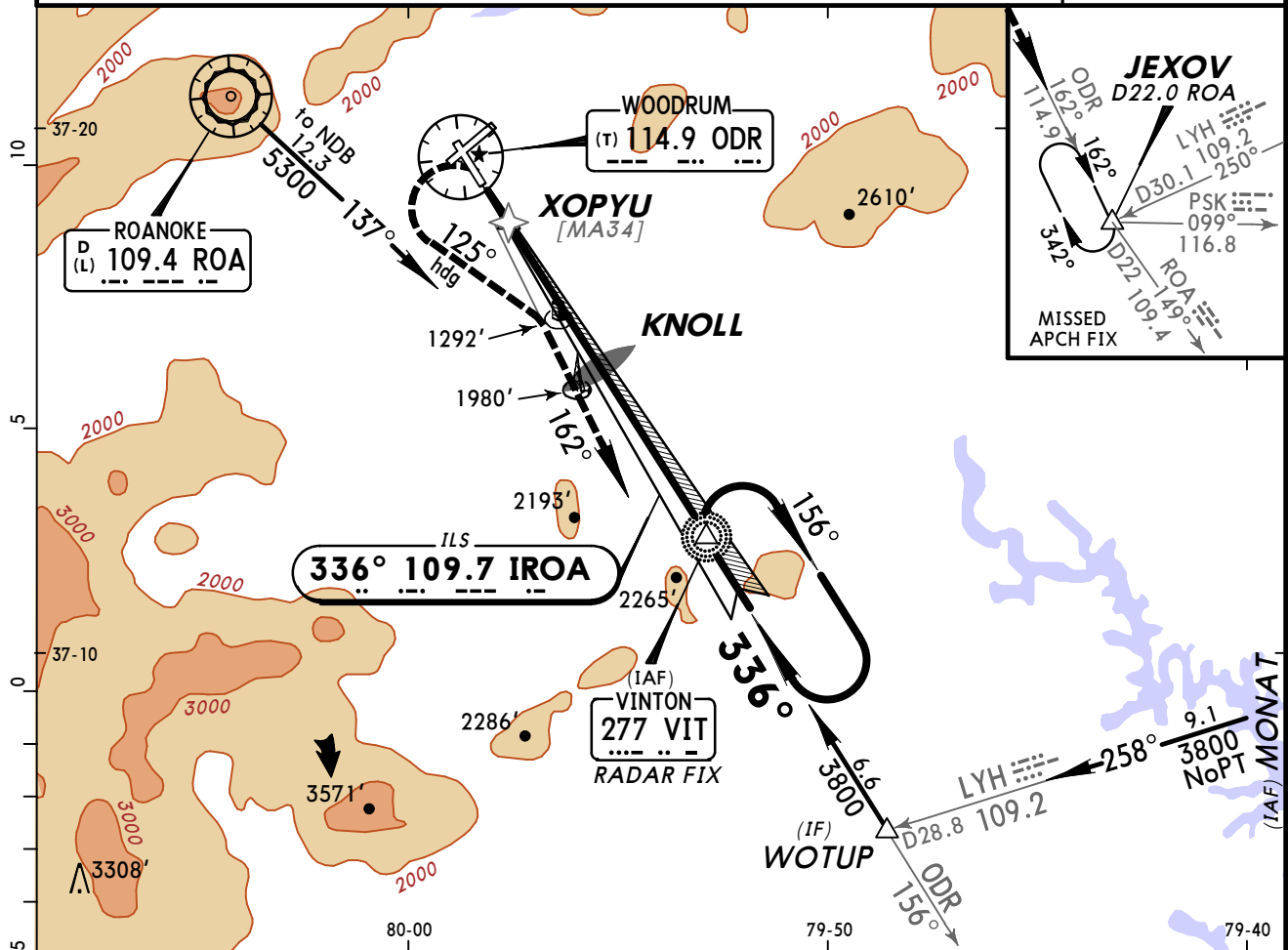
Rwy 24, climb on I-SZK LDA localizer west course to 4200' to DIXXY INT/I-SZK 15.3 DME before proceeding on course.

Rwy 24, for climb in visual conditions, cross Roanoke Regl/Woodrum field at or above 3500' MSL before proceeding on course.

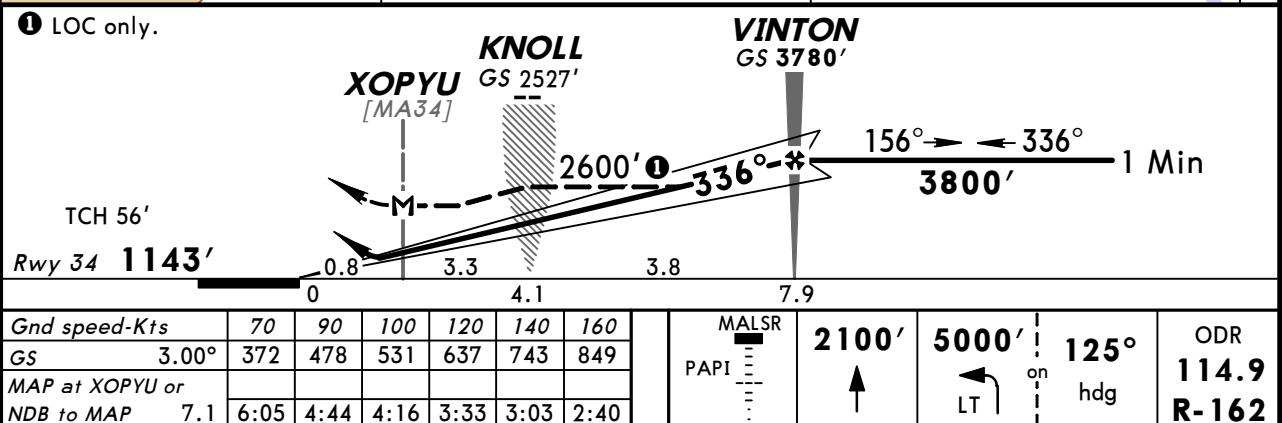
FOR FILING AS ALTERNATE

	VOR DME-A	ILS Rwy 34 LOC Rwy 34	RNAV (GPS) Rwy 6	RNAV (GPS) Rwy 34	VOR NDB Rwy 34	LDA Rwy 6	RNAV (GPS) Rwy 24
A	800-2	900-2	900-2	1200-2	1400-2	1600-2	1900-2
B							
C		900-2 1/2	900-2 1/2	1200-3	1400-3	1600-3	1900-3
D			900-2 3/4				

ATIS		ROANOKE Approach (R)		ROANOKE Tower		Ground	
134.95		126.9		118.3		121.9	
LOC IROA 109.7	Final Apch Crs 336°	GS VINTON 3780' (2637')	ILS DA(H) Refer to Minimums	Apt Elev 1175' Rwy 34 1143'		5700' MSA ROA VOR	
MISSED APCH: Climb to 2100' then climbing LEFT turn to 5000' on heading 125° and outbound ODR VOR R-162 to JEXOV INT/D22.0 ROA and hold.							
Alt Set: INCHES		Trans level: FL 180		Trans alt: 18000'			
1. ADF or Radar required.							

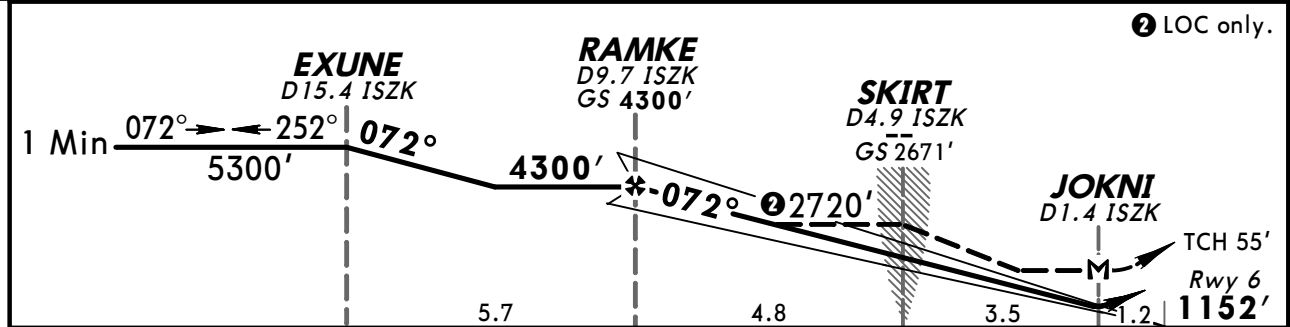
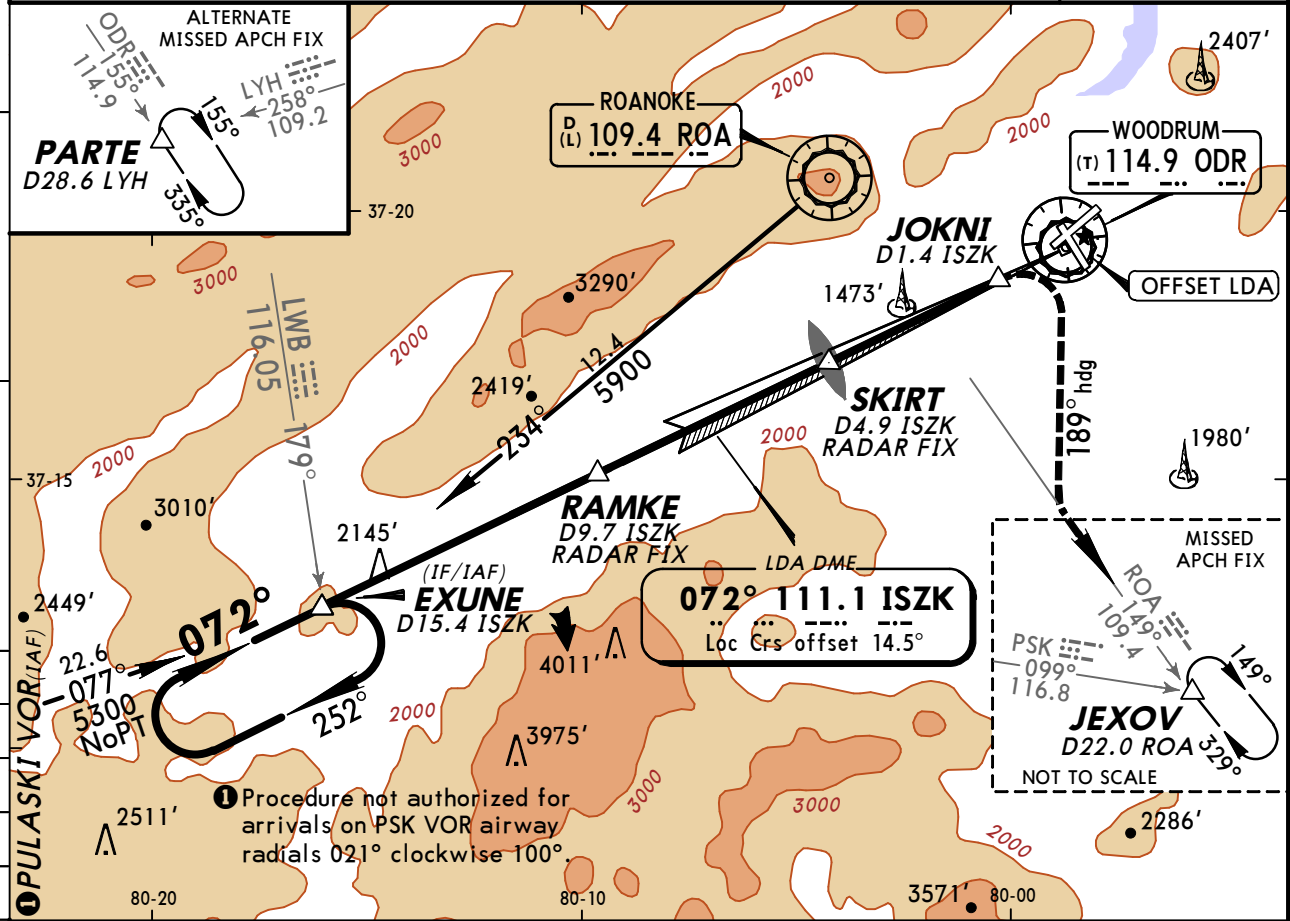


① LOC only.



STRAIGHT-IN LANDING RWY 34						CIRCLE-TO-LAND	
ILS A,B,C: 1793' (650') DA(H) D: 1896' (753')			LOC (GS out) MDA(H) 1980' (837')			Not Authorized Northwest of Rwy 6-24 Not Authorized to Rwy 16	
FULL		RAIL or ALS out		RAIL out	ALS out	Max Kts.	MDA(H)
A	1¾	2¼	5/8	¾	1	90	1980' (805') - 1
B			¾	1	1¼	120	1980' (805') - 1¼
C			1⅞	2	2½	140	1980' (805') - 2½
D	2¼	2¾				165	

ATIS 134.95		ROANOKE Approach (R) 126.9		ROANOKE Tower 118.3		Ground 121.9
LDA ISZK 111.1	Final Apch Crs 072°	GS RAMKE 4300' (3148')	LDA with GS DA(H) 1605' (453')	Apt Elev 1175' Rwy 6 1152'		
MISSED APCH: Climb to 1820' then climbing RIGHT turn to 5000' on heading 189° and outbound on ROA VOR R-149 to JEXOV INT/D22.0 ROA and hold, or as directed by ATC.						5700'
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. DME or Radar required. 2. LDA/GLIDESLOPE. 3. VGSI and LDA glidepath not coincident.						MSA ROA VOR



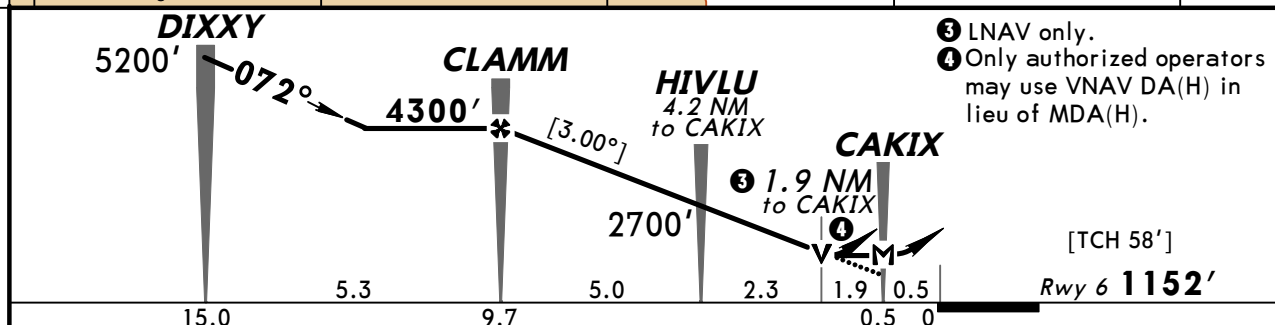
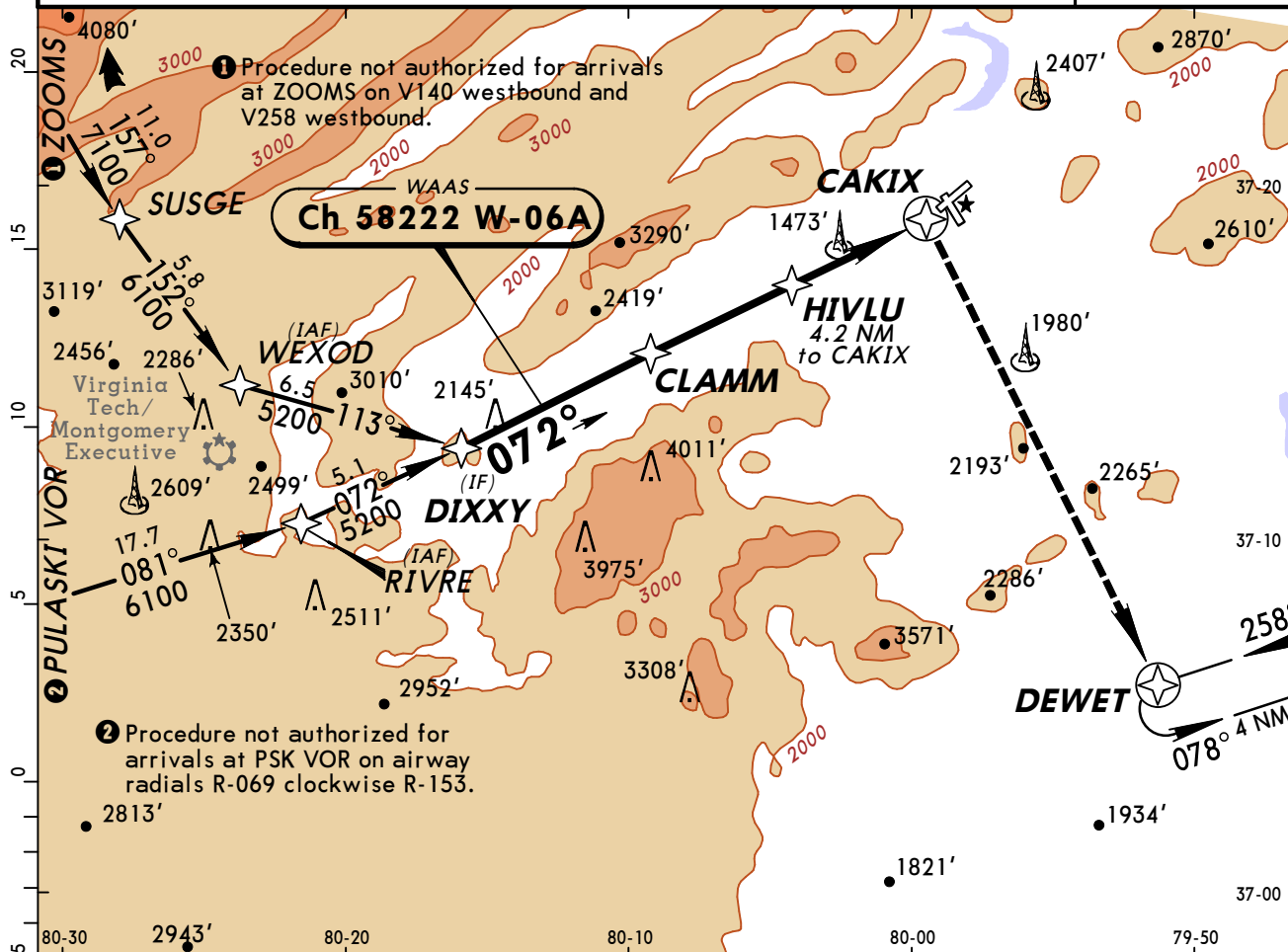
Gnd speed-Kts	70	90	100	120	140	160	MALSR		1820'	5000'	189°	ROA
GS	3.00°	372	478	531	637	743	VASI		↑	RT	hdg	109.4
MAP at JOKNI or RAMKE to MAP	8.3	7:07	5:32	4:59	4:09	3:33						R-149

STRAIGHT-IN LANDING RWY 6						CIRCLE-TO-LAND			
LDA with GS			LDA without GS			Not Authorized Northwest of Rwy 6-24 Not Authorized to Rwy 16			
DA(H)			With Skirt						
1605' (453')			MDA(H) 1780' (628')						
FULL	RAIL out	ALS out	RAIL out	ALS out	RAIL out	MDA(H)	Without Skirt	MDA(H)	
A			1	1½	1½	90	1780' (605')-1½	2720' (1545')-1½	
B						120			
C	1	1½	1¾	1½	1¾	140	1780' (605')-1¾	2720' (1545')-3	
D					3	165	1780' (605')-2		



5700'

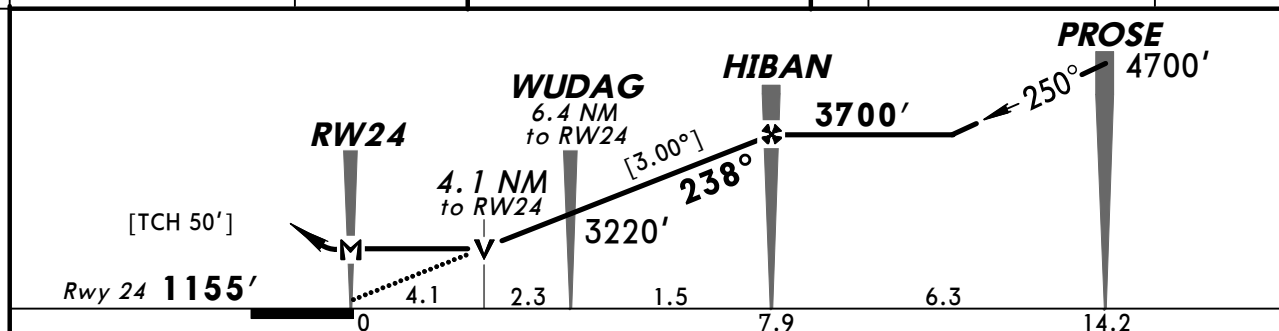
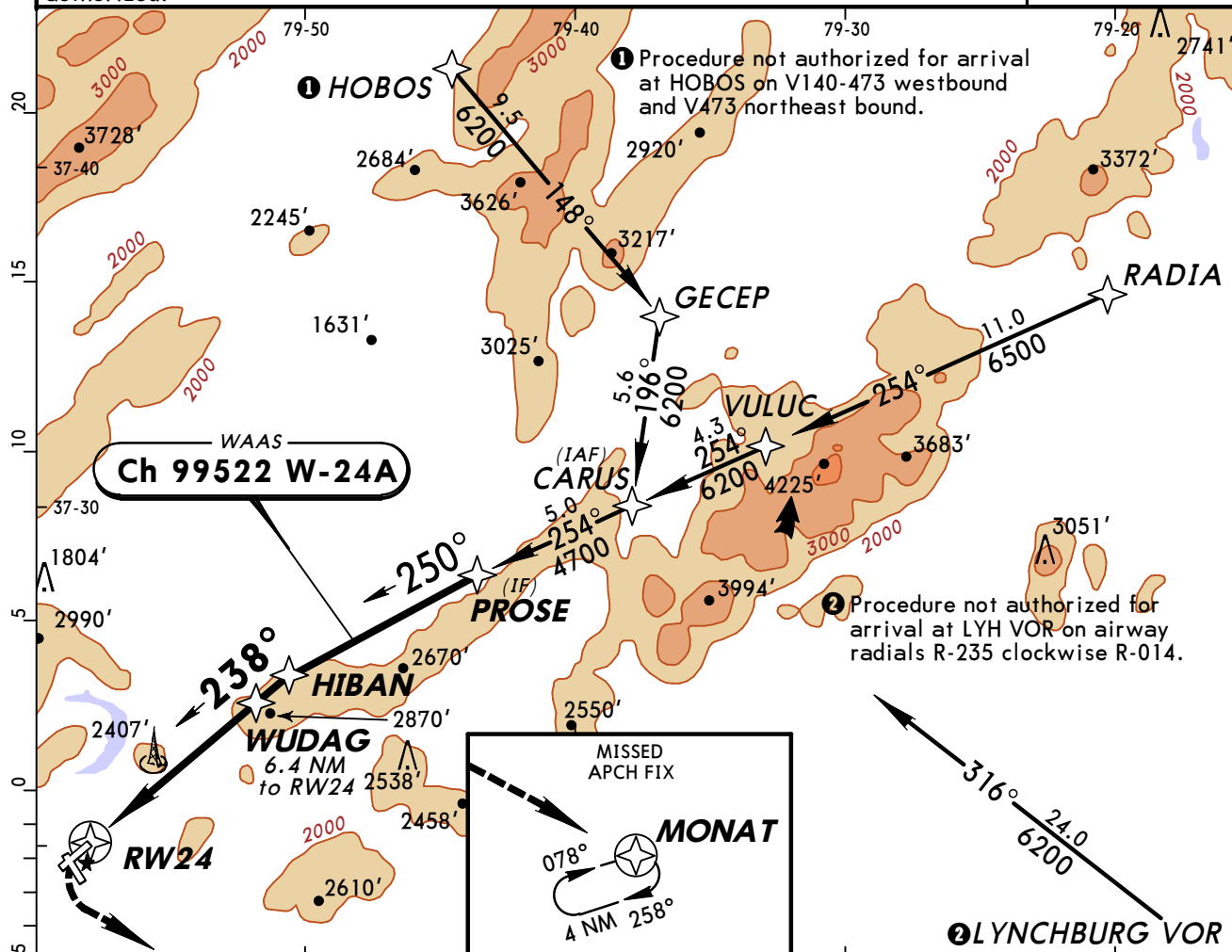
MSA CAKIX



<i>Gnd speed-Kts</i>	70	90	100	120	140	160	
<i>Descent angle</i> [3.00°]	372	478	531	637	743	849	
<i>MAP at CAKIX</i>							

STRAIGHT-IN LANDING RWY 6							CIRCLE-TO-LAND	
LP <i>MDA(H)</i> 1960' (808')				LNNAV <i>MDA(H)</i> 2000' (848')			Not Authorized Northwest of Rwy 6-24 Not Authorized to Rwy 16	
	RAIL out		ALS out		RAIL out		ALS out	Max Kts
A	3/4		1	3/4		1		90
B	3/4	1	1 1/4	3/4	1	1 1/4		120
C	1 7/8	2	2 1/2	1 7/8	2	2 1/2		140
D								165
								<i>MDA(H)</i> _____ 2000' (825') - 1 1/4 2000' (825') - 2 1/2 2000' (825') - 2 3/4

ATIS 134.95	ROANOKE Approach (R) 126.9	ROANOKE Tower 118.3	Ground 121.9
WAAS Ch 99522 W-24A	Final Apch Crs 238°	Minimum Alt HIBAN 3700' (2545')	LP MDA(H) 2500' (1345')
Apt Elev 1175' Rwy 24 1155'			5700'
MISSED APCH: Climbing LEFT turn to 4000' direct MONAT and hold.			
Alt Set: INCHES 1. DME/DME RNP-0.30 not authorized. 2. Visibility reduction by helicopters not authorized.			
Trans level: FL 180 Trans alt: 18000'			MSA RW24

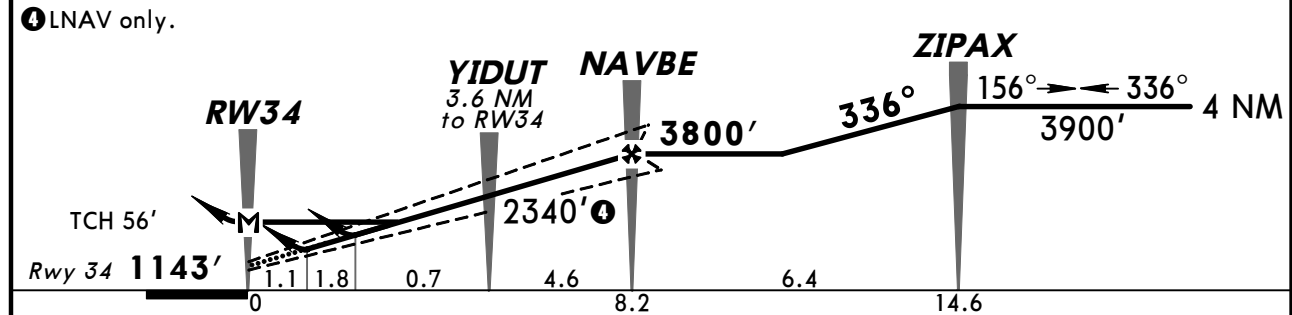
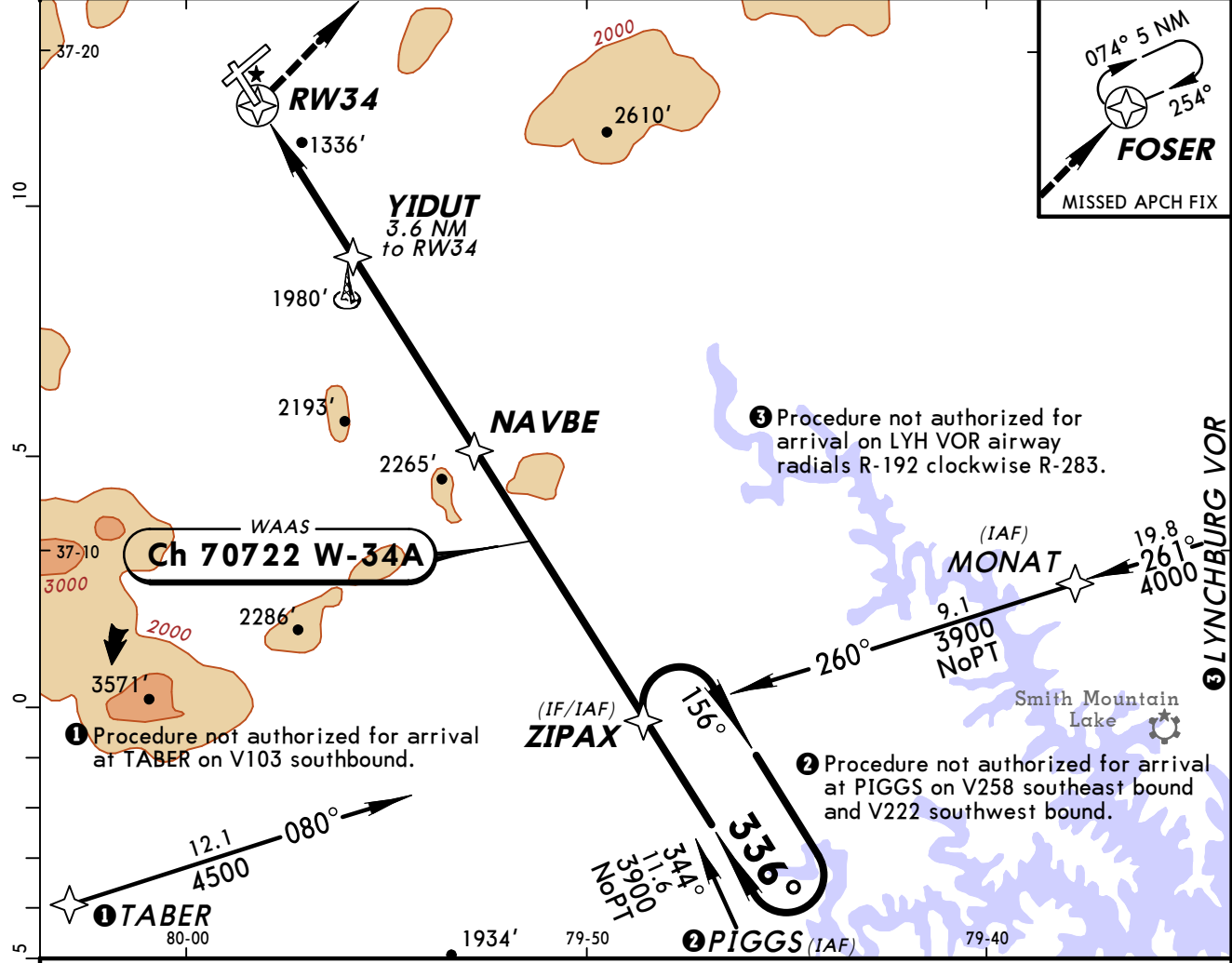


Gnd speed-Kts	70	90	100	120	140	160				
Descent angle [3.00°]	372	478	531	637	743	849				
MAP at RW24										

STRAIGHT-IN LANDING RWY 24				CIRCLE-TO-LAND			
LP		LNAV		Not Authorized Northwest of Rwy 6-24 Not Authorized to Rwy 16			
MDA(H) 2500' (1345')		MDA(H) 3000' (1845')		Max Kts	MDA(H)		
A	1 1/4		1 1/4	90	3000' (1825')-1 1/4		
B	1 1/2		1 1/2	120	3000' (1825')-1 1/2		
C				140	3000' (1825')-3		
D	3		3	165			

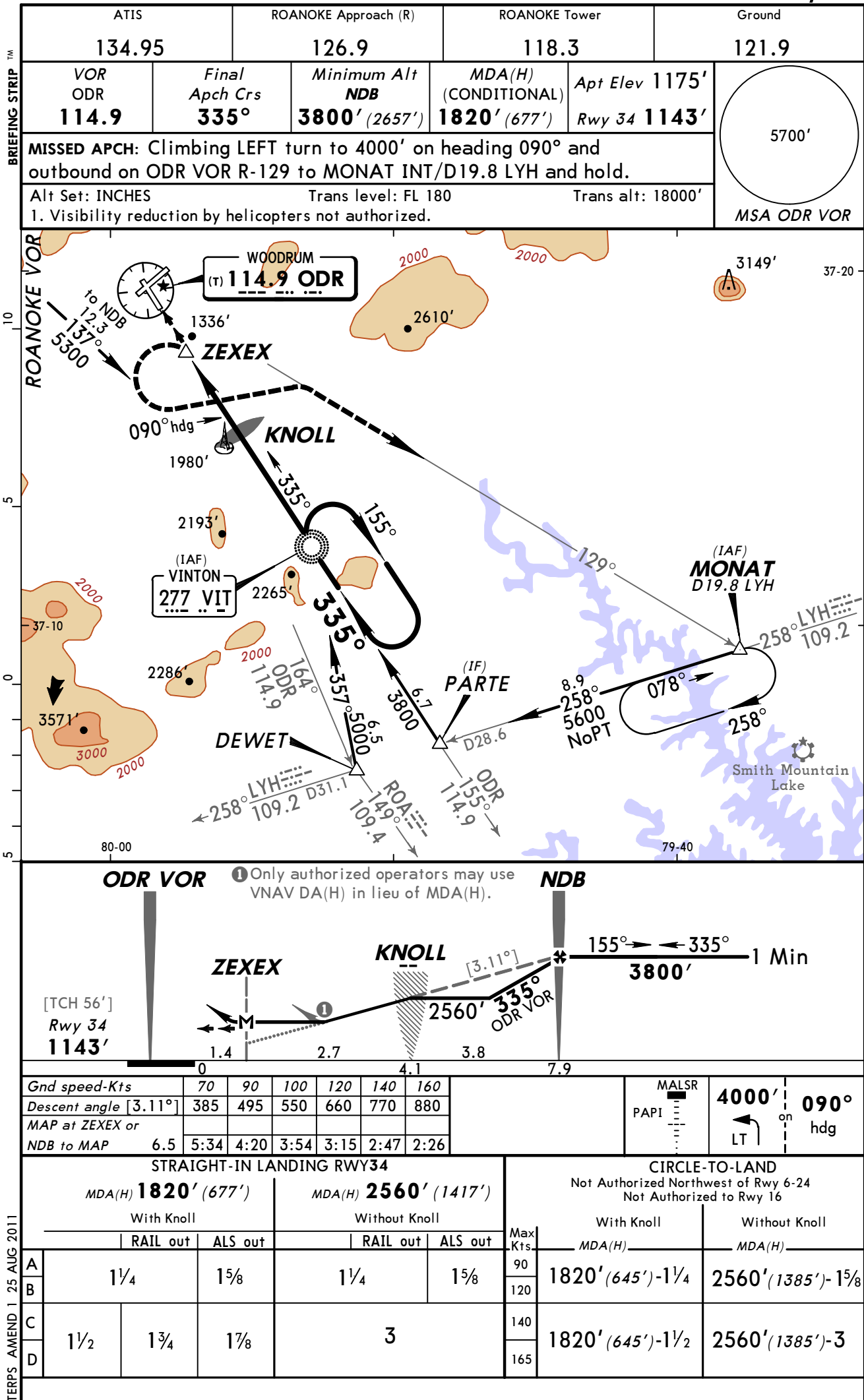
KROA/ROA ROANOKE REGL/WOODRUM 19 AUG 11 (12-3) Eff 25 Aug RNAV (GPS) Rwy 34

ATIS 134.95		ROANOKE Approach (R) 126.9		ROANOKE Tower 118.3		Ground 121.9	
DEPARTING STRIP	WAAS Ch 70722 W-34A	Final Apch Crs 336°	Minimum Alt NAVBE 3800' (2657')	LPV DA(H) (CONDITIONAL) 1543' (400')	Apt Elev 1175' Rwy 34 1143'	5700'	
	MISSED APCH: Climbing RIGHT turn to 6000' direct FOSER and hold.						
	Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'					MSA RW34	
	1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -17°C (2°F) or above 36°C (96°F). 2. DME/DME RNP-0.30 not authorized.						



Gnd speed-Kts	70	90	100	120	140	160	MALSR	6000'	RT	FOSER
Glide Path Angle 3.00°	372	478	531	637	743	849	PAPI			
MAP at RW34										

1 LPV DA(H) 1543' (400')		STRAIGHT-IN LANDING RWY 34 LPV DA(H) 2138' (995')		LNAV/VNAV DA(H) 2129' (986')		LNAV MDA(H) 2280' (1137')		CIRCLE-TO-LAND Not Authorized Northwest of Rwy 6-24 Not Authorized to Rwy 16	
RAIL out	ALS out	RAIL out	ALS out	RAIL out	ALS out	RAIL out	ALS out	Max Kts	MDA(H)
A						3/4	1	1 1/4	90
B	7/8	1 1/4	4	4		1	1 1/4	1 1/2	120
C						3		140	2280' (1105')-1 1/4
D								165	2280' (1105')-3



WOODRUM

(T) 114.9 ODR

ZEXEX

1336'

KNOLL

1980'

VINTON

(IAF)

277 VIT

2265'

DEWET

2286'

PARTE

(IF)

258°

5600

NoPT

MONAT

(IAF)

D19.8 LYH

258°

109.2

ROANOKE VOR

12.3

5300

37-10

3571'

3000

37-20

3149'

80-00

79-40

Smith Mountain Lake

ODR VOR

NDB

Only authorized operators may use
VNAV DA(H) in lieu of MDA(H).

ZEXEX

KNOLL

155°

335°

3800'

1 Min

[TCH 56']

Rwy 34

1143'

1.4

2.7

4.1

3.8

7.9

Gnd speed-Kts	70	90	100	120	140	160	
Descent angle [3.11°]	385	495	550	660	770	880	
MAP at ZEXEX or NDB to MAP	6.5	5:34	4:20	3:54	3:15	2:47	2:26

MALSR

PAPI

4000'

090°

LT

on

hdg

STRAIGHT-IN LANDING RWY34

MDA(H) 1820' (677')

With Knoll

Without Knoll

RAIL out

ALS out

RAIL out

ALS out

Max Kts

90

120

140

165

1820' (645')-1¼

2560' (1385')-1⅝

CIRCLE-TO-LAND

Not Authorized Northwest of Rwy 6-24

Not Authorized to Rwy 16

With Knoll

Without Knoll

MDA(H)

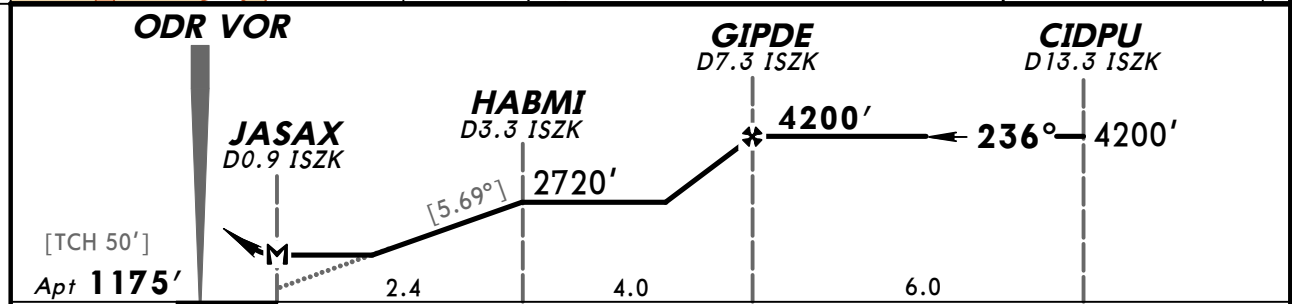
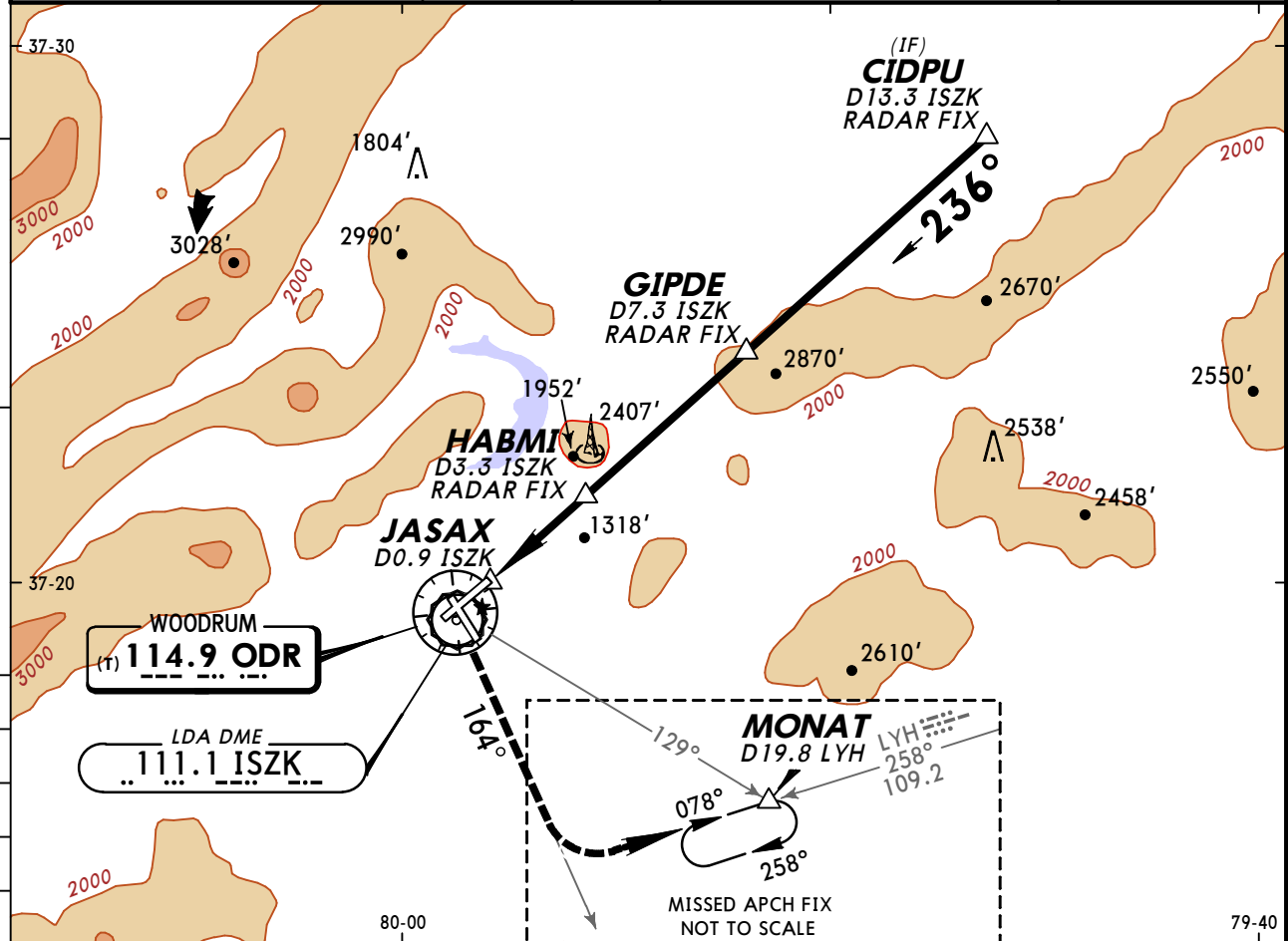
MDA(H)

1820' (645')-1½

2560' (1385')-3

TERPS AMEND 1 25 AUG 2011

ATIS 134.95	ROANOKE Approach (R) 126.9	ROANOKE Tower 118.3	Ground 121.9
VOR ODR 114.9	Final Apch Crs 236°	Minimum Alt GIPDE 4200' (3025')	MDA(H) Refer to Minimums
Apt Elev 1175'			
MISSED APCH: Climbing LEFT turn to 4000' outbound on ODR VOR R-164 and inbound LYH VOR R-258 to MONAT/D19.8 LYH and hold.			
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'			
1. Radar required. 2. Simultaneous reception of ODR VOR and ISZK DME required. 3. DME from ISZK LDA. 4. Visibility reduction by helicopters not authorized.			
5700' MSA ODR VOR			



Gnd speed-Kts	70	90	100	120	140	160	Lighting - Refer to Airport Chart	4000' ODR on 114.9 R-164
Descent angle [5.69°]	706	908	1009	1211	1413	1614		
MAP at JASAX/D0.9 ISZK								

		CIRCLE-TO-LAND		
		Not Authorized Northwest of Rwy 6-24 Not Authorized to Rwy 16		
			Max Kts	_____ MDA(H) _____
		A	90	1740' (565') - 1
		B	120	
		C	140	1740' (565') - 1½
		D	165	1800' (625') - 2

General Information

Location: Wallops I VA USA
IATA Code: WAL
Lat/Long: N37° 56.4' W075° 28.0'
Elevation: 41 ft

Airport Use: Military
Magnetic Variation: 11.5°W
Sectional Chart: Washington

Customs: No
Airport Type: IFR
Landing Fee: No
Control Tower: Yes
Jet Start Unit: No
LLWS Alert: No
Beacon: Yes

Sunrise: 1137 Z
Sunset: 2253 Z,

Runway Information

Runway: 04
Length x Width: 8749 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 34 ft
Lighting: Edge, REIL

Runway: 10
Length x Width: 8000 ft x 200 ft
Surface Type: asphalt
TDZ-Elev: 20 ft
Lighting: Edge, REIL

Runway: 17
Length x Width: 4820 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 31 ft
Lighting: Edge, REIL

Runway: 22
Length x Width: 8749 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 34 ft
Lighting: Edge, REIL

Runway: 28
Length x Width: 8000 ft x 200 ft
Surface Type: asphalt

TDZ-Elev: 35 ft
Lighting: Edge, REIL

Runway: 35
Length x Width: 4820 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 35 ft
Lighting: Edge, REIL

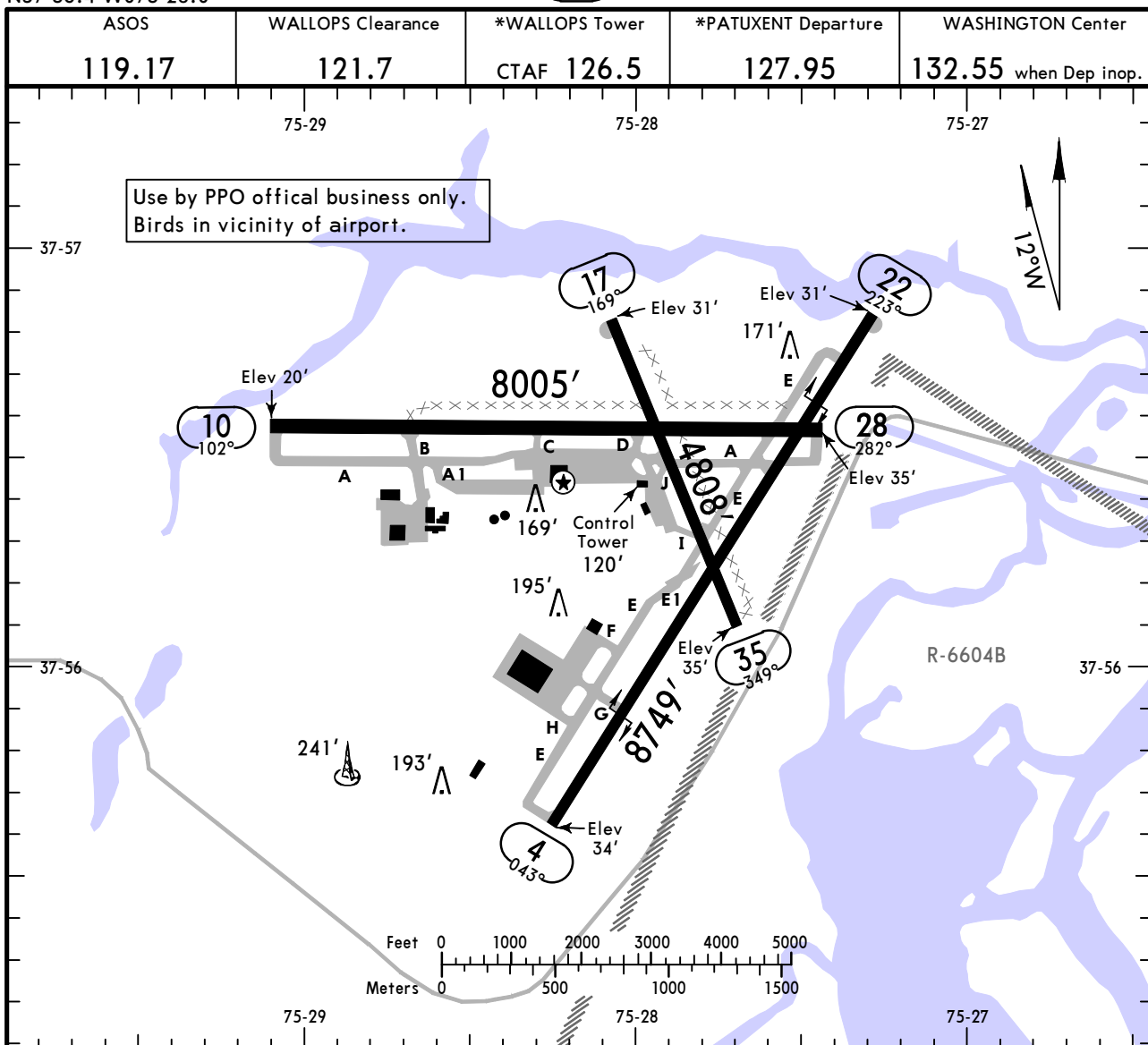
Communication Information

ASOS 119.175
Wallops I Tower 126.5 PCL
Patuxent Clearance Delivery 121.7
Patuxent Approach Control 127.95
Patuxent Departure Control 127.95
Wallops Information 126.5 PCL
Washington Center 132.55 Remote Communications Air-Ground

KWAL/WAL
 Apt Elev **40'**
 N37 56.4 W075 28.0

JEPPesen
 23 MAR 07 **(10-9)**

WALLOPS ISLAND, VA
WALLOPS FLIGHT FACILITY



ADDITIONAL RUNWAY INFORMATION

RWY			USABLE LENGTHS		TAKE-OFF	WIDTH
			— LANDING BEYOND —			
			Threshold	Glide Slope		
4	22	HIRL REIL PAPI-L				150'
10	28	HIRL REIL PAPI-L				200'
17	35	HIRL REIL PAPI-L				150'

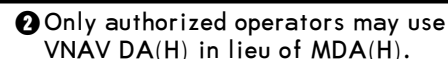
TAKE-OFF			FOR FILING AS ALTERNATE		
	All Rwy's		VOR Rwy 17	VOR DME Rwy 10	Other
	Adequate Vis Ref	STD			
1 & 2 Eng	1/4	1	1 800-2	900-2	NA
3 & 4 Eng		1/2		900-2 1/2	
				900-2 3/4	

1 CAT D Straight-in NA.

12-1

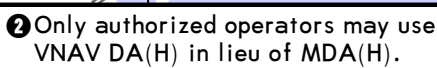
RNAV (GPS) Rwy 4

BRIFFING STRIP TM

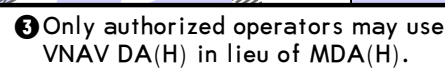
TERPS
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BRIEFING STRIP TM

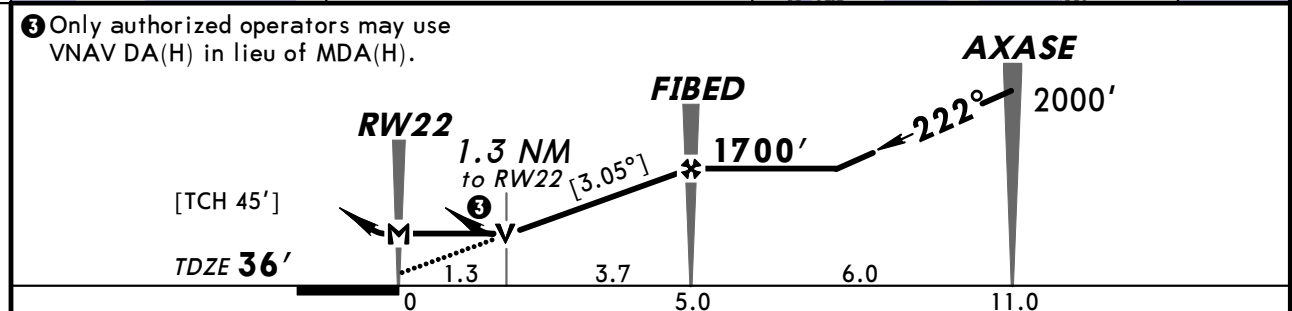
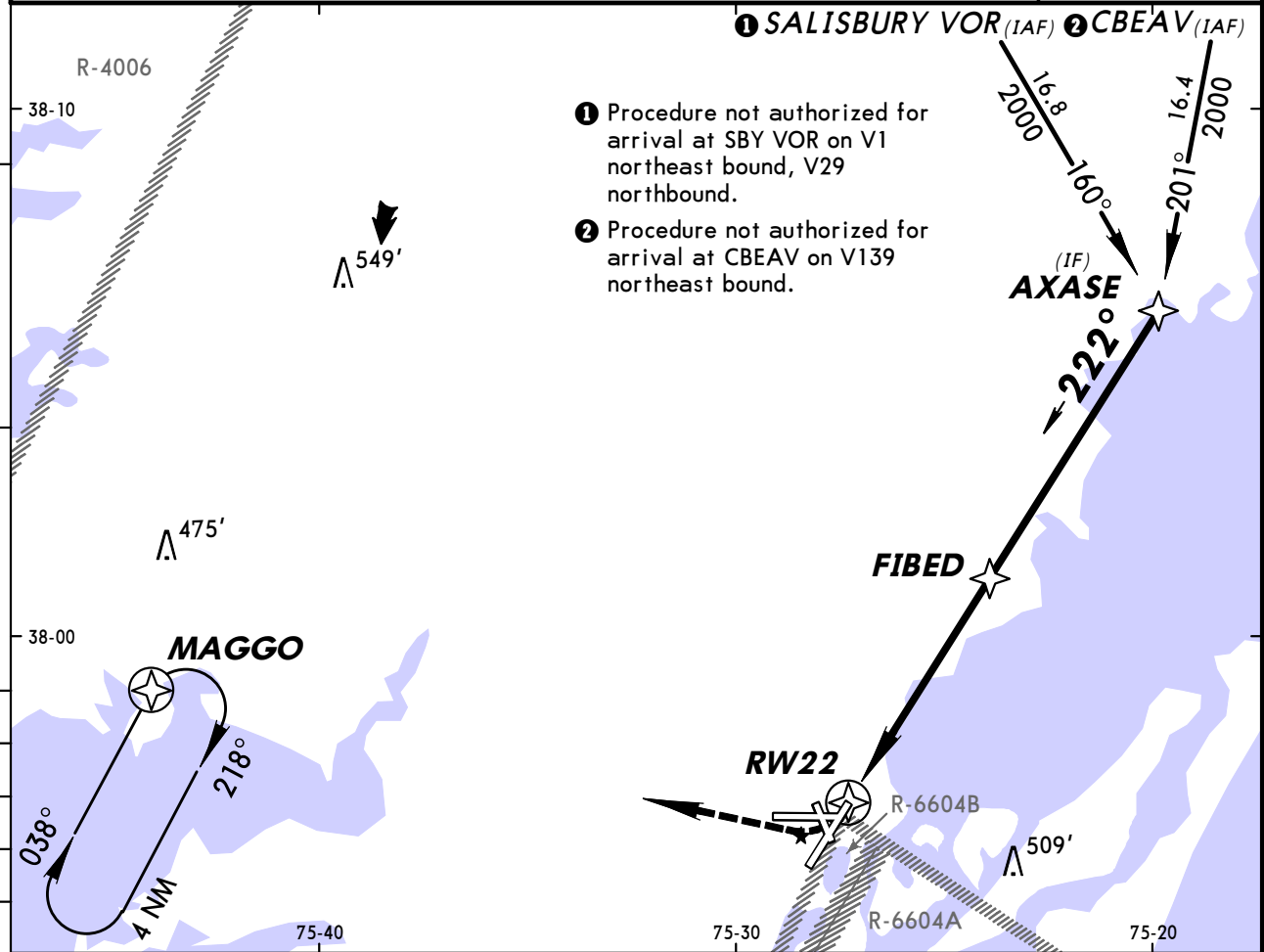
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BRIEFING STRIP™

TERPS

Max Kts.	90
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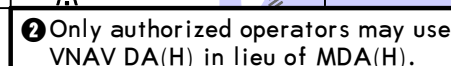
ASOS 119.17		*PATUXENT Approach 127.95		WASHINGTON Center 132.55 when App inop.		*WALLOPS Tower CTAF 126.5	
RNAV	Final Apch Crs 222°	Minimum Alt FIBED 1700' (1664')	LNAV MDA(H) (CONDITIONAL) 480' (444')	Apt Elev 40' TDZE 36'		1700' MSA RW22	
MISSED APCH: Climbing RIGHT turn to 2000' direct MAGGO and hold.							
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000' 1. GPS or RNP-0.3 required. 2. DME/DME RNP-0.3 not authorized. 3. VGSI and descent angles not coincident. 4. Straight-in minimums not authorized at night.							



Gnd speed-Kts	70	90	100	120	140	160			REIL	2000'	→	MAGGO
Descent angle [3.05°]	378	486	540	648	755	863			PAPI-L	RT	→	
MAP at RW22												

STRAIGHT-IN LANDING RWY 22				CIRCLE-TO-LAND			
DAY		NIGHT					
MDA(H) 480' (444')				Max Kts		MDA(H)	
A	1	NA		90		600' (560') - 1	
B				120			
C	1¼			140		600' (560') - 1½	
D	1½			165		600' (560') - 2	

BRIEFING STRIP™



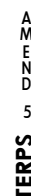
Gnd speed-Kts

<i>Descent angle</i> [3.05°]	378	486	540	648	755	863
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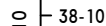
	C	F	J						
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[illegible]TERPS
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BRIEFING STRIP™

TERPS
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5

BRIEFING STRIP TM



VOR

REIL
PAPI-L

→ R

~~D:~~

SWL
112.4

CIRCLE-TO-LAND

Max
Kts $MDA(H).$ TERPS
6B
AMEND
D

WALLOPS I, VA (WALLOPS FLIGHT FACILITY - KWAL)

TERMINAL CHART CHANGE NOTICES

Chart Change Notices for Airport KDAN

Type: Terminal

Effectivity: Temporary

Begin Date: Immediately

End Date: Until Further Notice

(11-1) ILS or LOC Rwy 2 Amend 4 chgd to 4A, Reference date 8 APR 2010 chgd to 30 JUN 2011.

Chart Change Notices for Airport KIAD

Type: Terminal

Effectivity: Temporary

Begin Date: Immediately

End Date: Until Further Notice

(21-2) ILS or LOC DME Rwy 1C and (21-2A) ILS Rwy 1C CAT II MM decmsnd.

Type: Terminal

Effectivity: Temporary

Begin Date: Immediately

End Date: Until Further Notice

(21-3 ILS or LOC Rwy 1R, (21-3A) ILS Rwy 1R CAT II & III MM decmsnd.

Type: Terminal

Effectivity: Permanent

Begin Date: Immediately

End Date: No end date

Rwy 12 PAPI-R changed to PAPI-L.

No Chart Change Notices for Airport KLFI

No Chart Change Notices for Airport KLYH

No Chart Change Notices for Airport KNGU

No Chart Change Notices for Airport KNTU

Chart Change Notices for Airport KORF

Type: Terminal

Effectivity: Temporary

Begin Date: Immediately

End Date: Until Further Notice

(11-1) ILS or LOC Rwy 5 Amend 25 chgd to 25A, Reference date 25 AUG 2011 chgd to 17 NOV 2011.

Chart Change Notices for Airport KPHF

Type: Terminal

Effectivity: Permanent

Begin Date: 20080731

End Date: No end date

(10-3) Henry 2 Dep computer code (HENRY2.HENRY) changed to (HENRY2.PHF).

No Chart Change Notices for Airport KRIC

No Chart Change Notices for Airport KROA

No Chart Change Notices for Airport KWAL