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General Information

Location: Westfield/Springfield MA USA
IATA Code: BAF
Lat/Long: N42° 09.5' W072° 43.0'
Elevation: 270 ft

Airport Use: Public
Magnetic Variation: 14.2°W
Sectional Chart: New York

Fuel Types: 100 Octane (LL), Jet A
Oxygen Types: High Pressure, Low Pressure
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: 1130 Z
Sunset: 2238 Z,

Runway Information

Runway: 02
Length x Width: 9000 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 264 ft
Lighting: Edge, Pilot controlled
Stopway: 200 ft

Runway: 15
Length x Width: 5000 ft x 100 ft
Surface Type: asphalt
TDZ-Elev: 267 ft
Lighting: Edge, Pilot controlled
Displaced Threshold: 491 ft

Runway: 20
Length x Width: 9000 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 270 ft
Lighting: Edge, ALS, Pilot controlled
Stopway: 200 ft

Runway: 33
Length x Width: 5000 ft x 100 ft
Surface Type: asphalt
TDZ-Elev: 266 ft

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Lighting: Edge, Pilot controlled

Communication Information

ATIS 127.1
Westfield/Springfield Tower 118.9 CTAF PCL
Westfield/Springfield Tower 123.05 Military
Westfield/Springfield Ground Control 121.7
Bradley Clearance Delivery 121.7
Bradley Approach Control 125.35
Bradley Departure Control 125.35
Burlington Flight Service Station 122.1 RCO
Burlington Flight Service Station 113.0 RCO

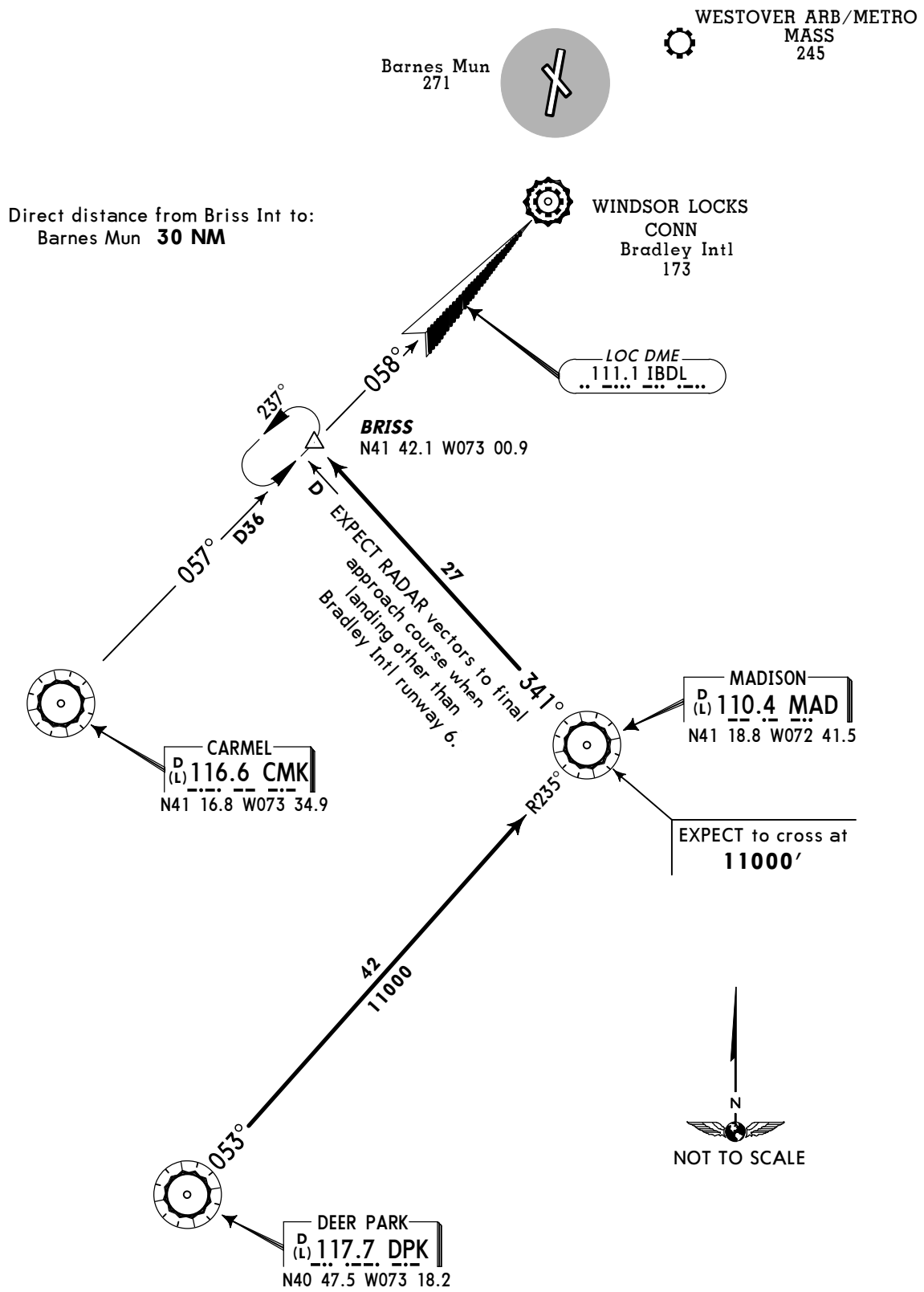
*BARNES MUN ATIS (ASOS O/T) **127.1**

DEER PARK TWO ARRIVAL (DPK.DPK2)

EXPECT to cross MAD VOR at 11000′.

ARRIVAL

From over DPK VOR via DPK R-053 and MAD R-235 to MAD VOR, then from MAD VOR via MAD R-341 to Briss Int. EXPECT RADAR vectors to final approach course prior to Briss Int when landing other than Bradley Intl runway 6.



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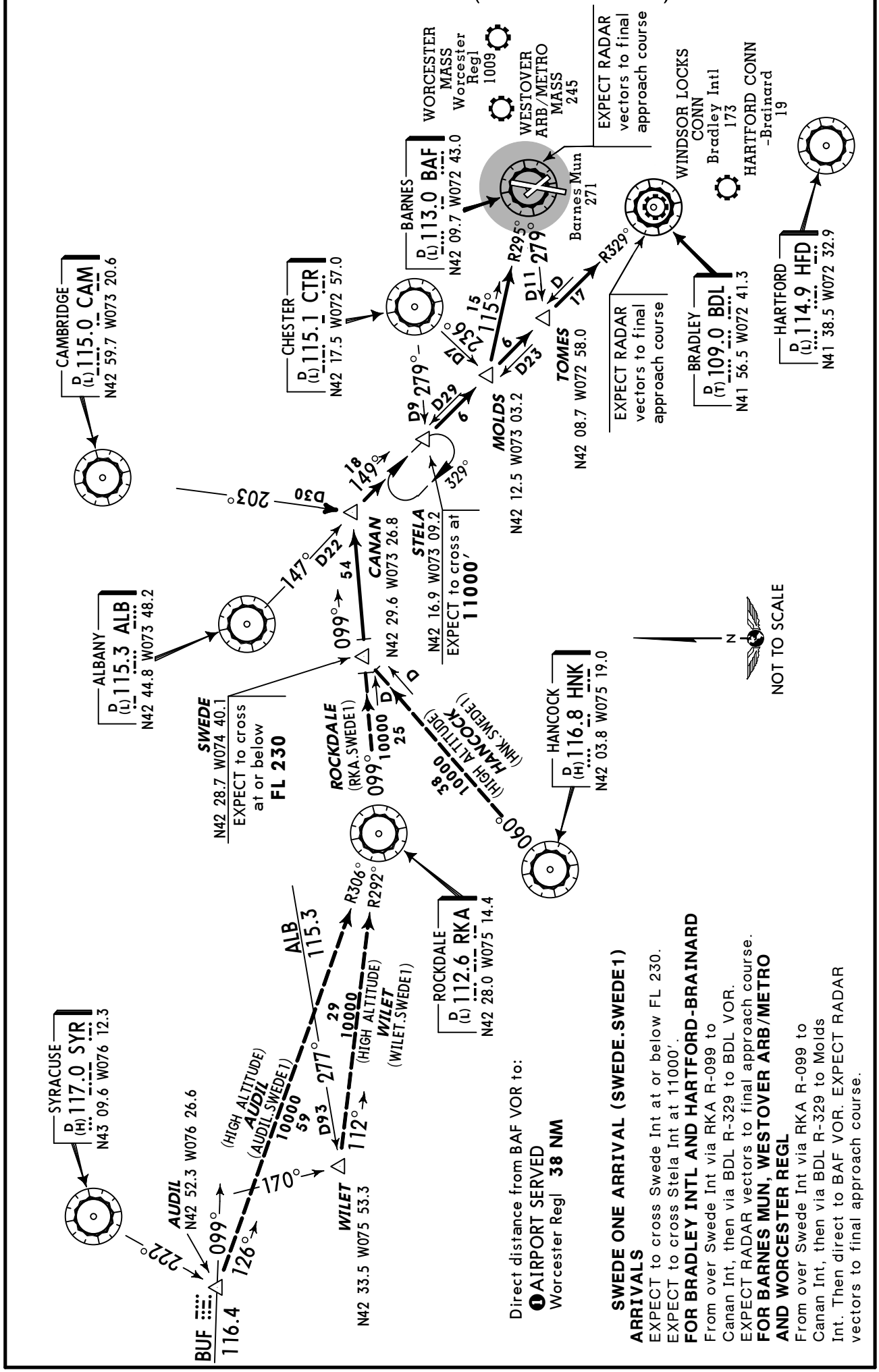
JEPPESEN 8 NOV 02 (10-2A)

WESTFIELD, MASS
BARNES MUN
(ALSO SERVES ❶)

*BARNES MUN ATIS (ASOS O/T) **127.1**

SWEDE ONE ARRIVAL (SWEDE.SWEDE1)



CHANGES: HANCOCK transition.

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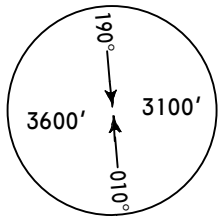
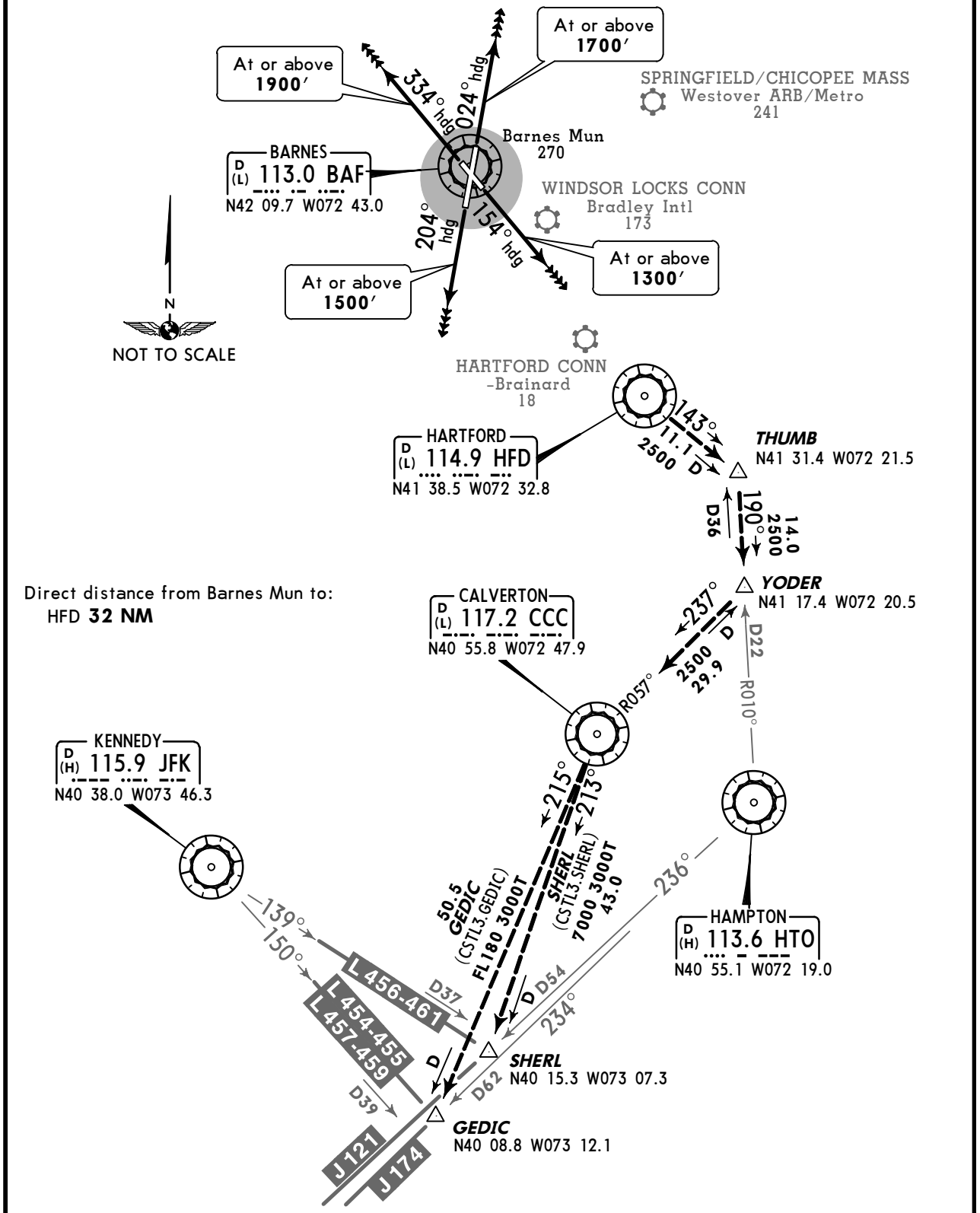
DEPARTURE CONTROL FREQUENCY TO BE ASSIGNED BY ATC.	*Apt Elev See Graphic*	Trans level: FL180 Trans alt: 18000′ 1. RADAR required. 2. Initial departure headings are predicated on avoiding noise sensitive areas. Flight crew awareness and compliance is important in minimizing noise impacts on surrounding communities.



MSA BAF VOR

COASTAL THREE DEPARTURE (CSTL3.CCC)

For Procedure Text, Takeoff Minimums and Obstacle Notes see 10-3-1



CHANGES: Procedure revised, renumbered, procedure text moved to 10-3-1.

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COASTAL THREE DEPARTURE (CSTL3.CCC)

For Procedure Graphic see 10-3

PROCEDURE TEXT

This SID requires take-off minimums (for standard minimums, refer to airport chart):
Rwy 2: 300-1 1/2 or standard (or lower than standard, if authorized) with a minimum climb of 204′ per NM to **600′**, or alternatively, with standard (or lower than standard, if authorized) take-off minimums and a normal 200′ per NM climb gradient, take-off must occur no later than 1200′ prior to departure end of runway.
Rwy 15: 400-2 or standard (or lower than standard, if authorized) with a minimum climb of 404′ per NM to **700′.**
Rwy 20: Standard (or lower than standard, if authorized).
Rwy 33: Standard (or lower than standard, if authorized) with a minimum climb of 323′ per NM to **2000′.**

Gnd speed-KT	75	100	150	200	250	300
204′ per NM	255	340	510	680	850	1020
323′ per NM	404	538	808	1077	1346	1615
404′ per NM	505	673	1010	1347	1683	2020

OBSTACLES
Rwy 2: Trees beginning 1186′ from DER, 144′ LEFT of centerline, up to 100′ AGL/385′ MSL. Trees beginning 1098′ from DER, 431′ RIGHT of centerline, up to 100′ AGL/465′ MSL.
Rwy 15: Trees beginning 245′ from DER, 74′ LEFT of centerline, up to 100′ AGL/576′ MSL. Bush 245′ from DER, 285′ LEFT of centerline, up to 20′ AGL/265′ MSL. Obstacle light on tank 4773′ from DER, 1315′ LEFT of centerline, 190′ AGL/440′ MSL. Trees beginning 360′ from DER, 8′ RIGHT of centerline, up to 100′ AGL/508′ MSL.
Rwy 20: Trees beginning 18′ from DER, 47′ LEFT of centerline, up to 100′ AGL/321′ MSL. Trees beginning 541′ from DER, 38′ RIGHT of centerline, up to 100′ AGL/329′ MSL.
Rwy 33: Trees and bushes beginning 151′ from DER, 138′ LEFT of centerline, up to 100′ AGL/483′ MSL. Obstacle light on radio towers and towers beginning 1.5 NM from DER, 2641′ LEFT of centerline, up to 305′ AGL/545′ MSL. Trees beginning 311′ from DER, 35′ RIGHT of centerline, up to 100′ AGL/513′ MSL.

RWY	INITIAL CLIMB	ALTITUDE
2	Climb heading 024° to **1700′**, EXPECT RADAR vectors to HFD.	**MAINTAIN** assigned altitude
15	Climb heading 154° to **1300′**, EXPECT RADAR vectors to HFD.	
20	Climb heading 204° to **1500′**, EXPECT RADAR vectors to HFD.	
33	Climb heading 334° to **1900′**, EXPECT RADAR vectors to HFD.	

ROUTING

From over HFD proceed via HFD R-143 to THUMB, then proceed via HTO R-010 to YODER, then proceed via CCC R-057 to CCC. Then via transition or assigned route. EXPECT clearance to requested flight level 10 minutes after departure.

CHANGES: New chart.

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KBAF/BAF

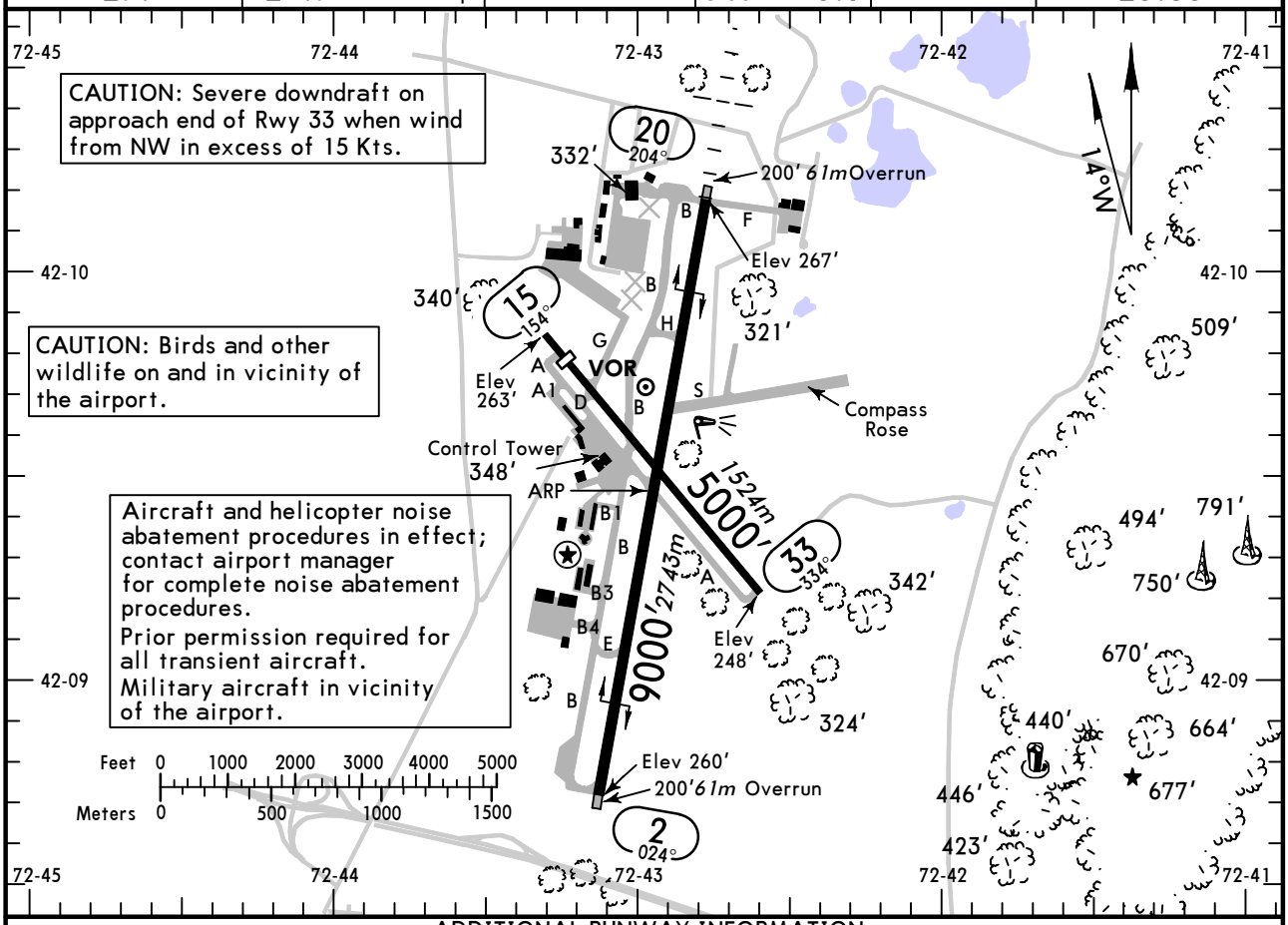
Apt Elev **270′**
N42 09.5 W072 42.9

JEPPESEN **WESTFIELD/SPRINGFIELD, MASS**

20 JAN 12 (11-1)

BARNES MUN

ATIS (ASOS when Twr inop)	BRADLEY Clearance	*WESTFIELD Ground	*Tower	UNICOM	BRADLEY Departure (R)
127.1	121.7 when Twr inop	121.7	CTAF 118.9	122.95	125.35



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
2	❶ HIRL PAPI-L (angle 3.0°) grooved				150′ *46m*
20	❶ HIRL ❶ MALSR ❷ PAPI-L grooved RVR	❸ 8919′ *2719m*	7972′ *2430m*		
15	❶ MIRL	4510′ *1375m*			100′ *30m*
33	❶ MIRL PAPI-R (angle 3.5°)				

❶ Activate on 118.9 when Twr inop.
❷ Angle 3.0°.
❸ Last 81′ (25m) is unavailable for landing distance computations.

TAKE-OFF & OBSTACLE DEPARTURE PROCEDURE

	Rwy 20		Rwy 2			Rwy 15			Rwy 33		
	Adequate Vis Ref	STD	❶ With Mim climb of 204′/NM to 600′ Adequate Vis Ref	STD	Other	With Mim climb of 404′/NM to 700′ Adequate Vis Ref	STD	Other	With Mim climb of 323′/NM to 2000′ Adequate Vis Ref	STD	Climb in Visual Conditions
1 & 2 Eng	RVR 16 or 1/4	RVR 50 or 1	1/4	1	300-1½	1/4	1	400-2	1/4	1	1500-2½
3 & 4 Eng		RVR 24 or ½		½			½			½	

❶ Alternatively, with standard take-off minimums and a normal 200′/NM climb gradient, take-off must occur no later than 1200′ prior to departure end of runway.

OBSTACLE DP: Rwy 2, climb heading 024° to 1700′ before proceeding on course. Rwy 15, climb heading 154° to 1300′ before proceeding on course. Rwy 20, climb heading 204° to 1500′ before proceeding on course. Rwy 33, climb heading 334° to 1900′ before proceeding on course, or for climb in visual conditions: cross Barnes Mun Airport at or above 1600′ MSL before proceeding on course.

FOR FILING AS ALTERNATE

	Authorized Only When Twr Operating Authorized Only When Local Weather Available ILS Rwy 20 LOC Rwy 20	Authorized Only When Twr Operating VOR Rwy 2 VOR Rwy 20	Authorized Only When Local Weather Available RNAV (GPS) Rwy 20	RNAV (GPS) Rwy 2
A	900-2	900-2	900-2	1100-2
B				
C	900-2¾	900-2¾	900-2¾	1100-3
D	900-3	900-3	900-3	

AMEND 4

CHANGES: Twys G and S revised.

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KBAF/BAF
BARNES MUN

JEPPESEN

20 JAN 12 (11-1)

WESTFIELD/SPRINGFIELD, MASS
ILS or LOC Rwy 20

ATIS (ASOS when Twr inop)	BRADLEY Approach (R)	*WESTFIELD Tower	*Ground
127.1	125.35	CTAF 118.9	121.7

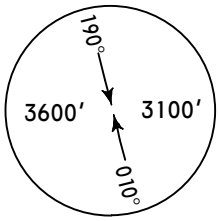
BRIEFING STRIP™

LOC IBAF	Final Apch Crs	GS WESIE	ILS DA(H) (CONDITIONAL)	Apt Elev 270′
111.9	204°	2200′ (1930′)	521′ (251′)	TDZE 270′

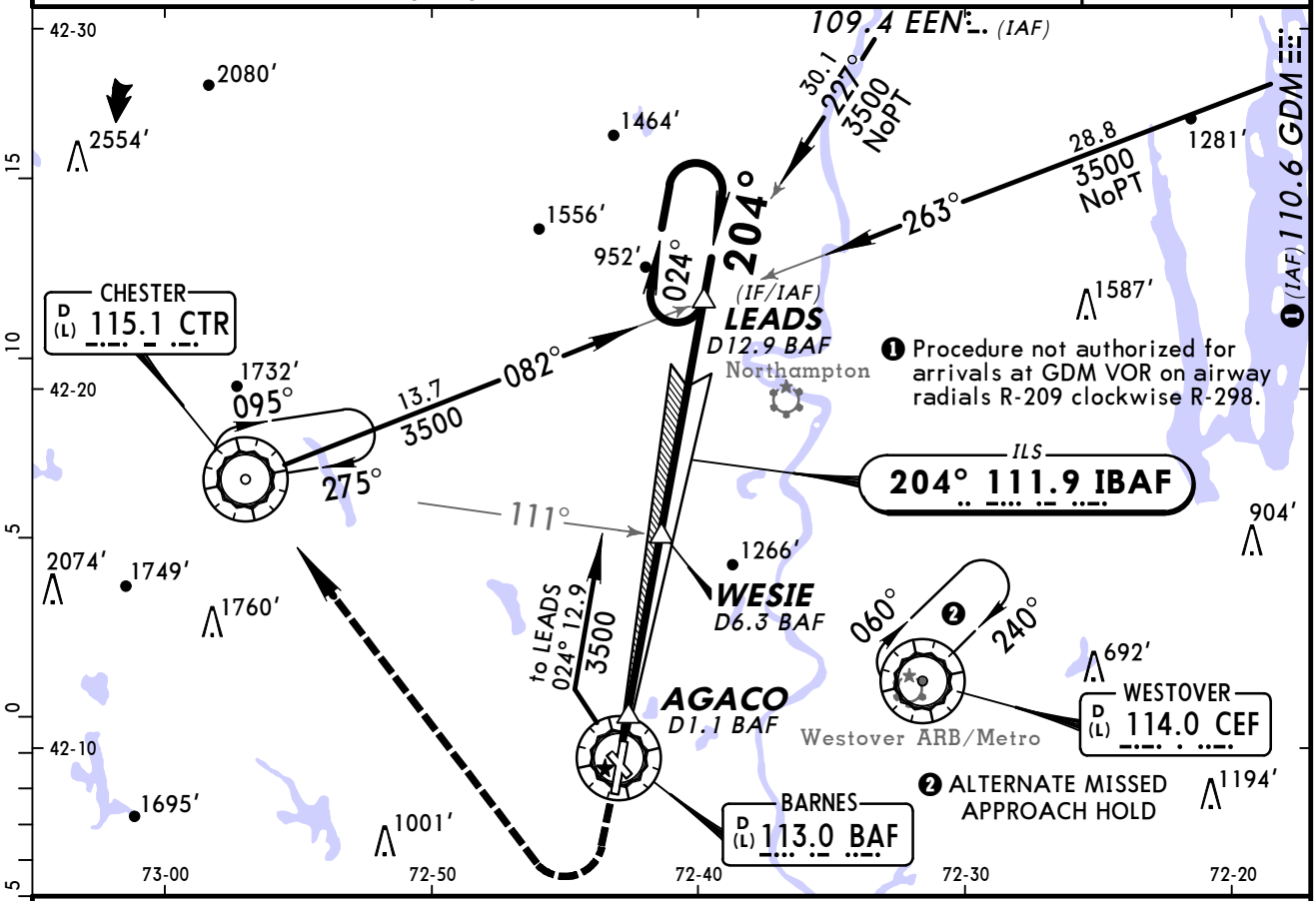
MISSED APCH: Climb to 1300′, then climbing RIGHT turn to 4000′ direct CTR VOR and hold, continue climb-in-hold to 4000′.

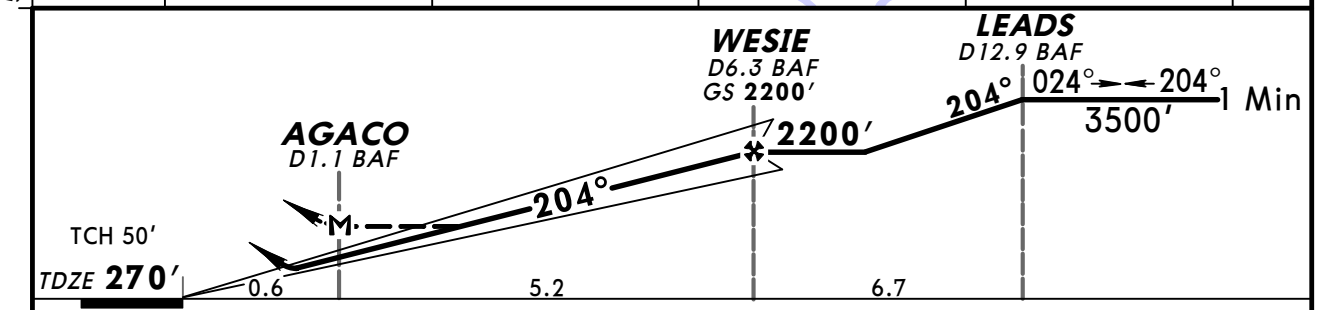
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′

1. Use local altimeter setting; if not received, use Bradley Intl altimeter setting.
2. Visibility reduction by helicopters not authorized. 3. VGSI and ILS glidepath not coincident. 4. Pilot controlled lighting 118.9.



MSA BAF VOR





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849
MAP at AGACO or WESIE to MAP	5.2	4:27	3:28	3:07	2:36	2:14	1:57

MALSR / PAPI	1300′	4000′ RT	D	CTR 115.1

STRAIGHT-IN LANDING RWY 20

	1 ILS DA(H) 521′ (251′) FULL	1 ILS DA(H) 521′ (251′) RAIL or ALS out	2 LOC (GS out) MDA(H) 800′ (530′) RAIL out	2 LOC (GS out) MDA(H) 800′ (530′) ALS out
A	RVR 40 or ¾		RVR 40 or ¾	RVR 50 or 1
B				
C			RVR 50 or 1	1½
D			RVR 60 or 1¼	1¾

CIRCLE-TO-LAND

Max Kts	With Local Altimeter Setting MDA(H)	With Bradley Intl Altimeter Setting MDA(H)
90	1160′ (890′) -1¼	1220′ (950′) -1¼
120		
140	1160′ (890′) -2¾	1220′ (950′) -2¾
165	1160′ (890′) -3	1220′ (950′) -3

AMEND 6A

TERPS

1 DA(H) 566′ (296′) with Bradley Intl altimeter setting.
2 MDA(H) 860′ (590′) with Bradley Intl altimeter setting.

CHANGES: Rate-of-descent table.

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KBAF/BAF
BARNES MUN

JEPPESEN
17 SEP 10 (12-1)

WESTFIELD/SPRINGFIELD, MASS
RNAV (GPS) Rwy 2

BRIEFING STRIP™

ATIS (ASOS when Twr inop)	BRADLEY Approach (R)	*WESTFIELD Tower	*Ground
127.1	125.35	CTAF 118.9	121.7

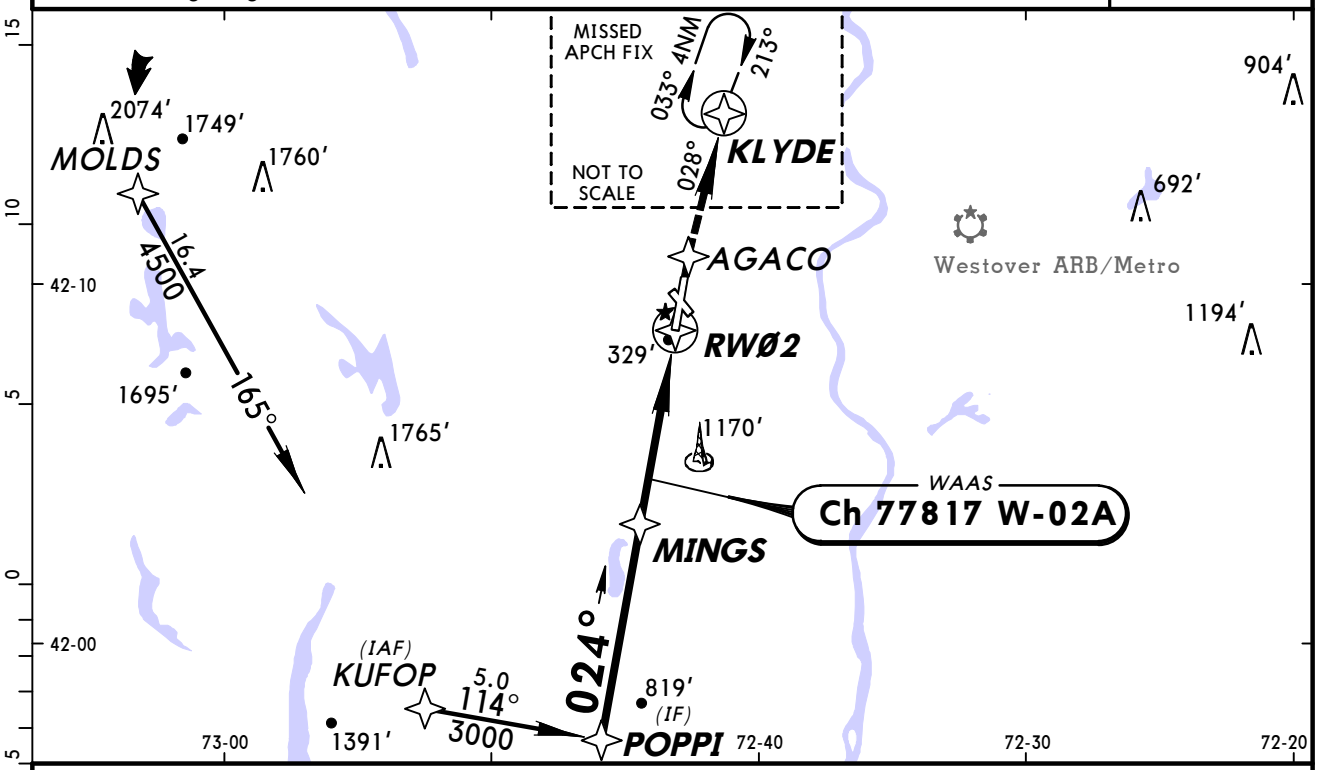
WAAS	Final Apch Crs	Minimum Alt	LPV DA(H)	Apt Elev 270′
Ch 77817 W-02A	024°	MINGS 2100′ (1836′)	(CONDITIONAL) 515′ (251′)	TDZE 264′

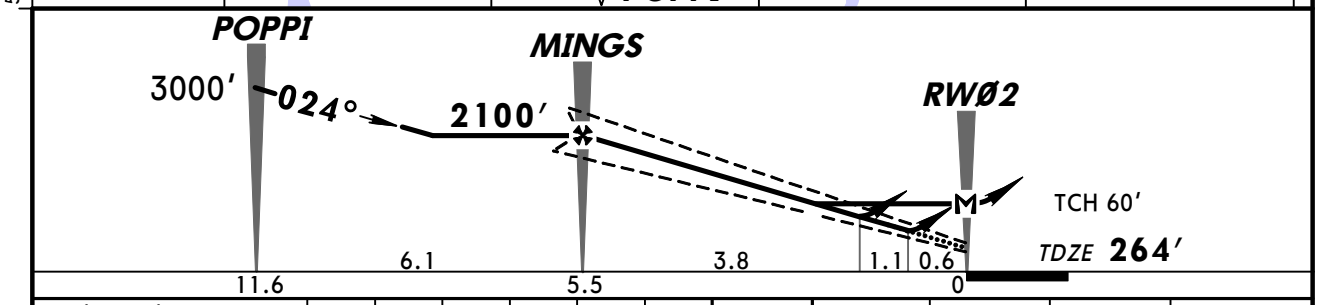
MISSED APCH: Climb to 3000′ direct AGACO and on 028° track to KLYDE and hold, continue climb-in-hold to 3000′.

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

1. Use local altimeter setting; if not received, use Bradley Intl altimeter setting. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 47°C (116°F). 3. Baro-VNAV not authorized when using Bradley Intl altimeter setting. 4. DME/DME RNP-0.30 not authorized. 5. Visibility reduction by helicopters not authorized. 6. VGSI and RNAV glidepath not coincident. 7. Pilot controlled lighting 118.9.

3600′
MSA RWØ2





Gnd speed-Kts	70	90	100	120	140	160
Glide Path Angle 3.01°	373	479	532	639	745	852
MAP at RWØ2						

PAPI-L 3000′ AGACO

STRAIGHT-IN LANDING RWY 2

With Local Altimeter Setting

	LPV DA(H) 515′(251′)	LNAV/VNAV DA(H) 858′(594′)	LNAV MDA(H) 1360′(1096′)	CIRCLE-TO-LAND Max Kts	MDA(H)
A	1	2	1¼	90	1360′(1090′)-1¼
B			1½	120	1360′(1090′)-1½
C			3	140	1360′(1090′)-3
D				165	

With Bradley Intl Altimeter Setting

	LPV DA(H) 559′(295′)	LNAV/VNAV DA(H) 902′(638′)	LNAV MDA(H) 1420′(1156)	With Bradley Intl Altimeter Setting Max Kts	MDA(H)
A	1	2¼	1¼	90	1420′(1150′)-1¼
B			1½	120	1420′(1150′)-1½
C			3	140	1420′(1150′)-3
D				165	

TERPS AMEND 0 3 JUN 2010

CHANGES: None.

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KBAF/BAF
BARNES MUN

JEPPESEN
17 SEP 10 (12-2)

WESTFIELD/SPRINGFIELD, MASS
RNAV (GPS) Rwy 20

ATIS (ASOS when Twr inop)	BRADLEY Approach (R)	*WESTFIELD Tower	*Ground
127.1	125.35	CTAF 118.9	121.7

BRIEFING STRIP™

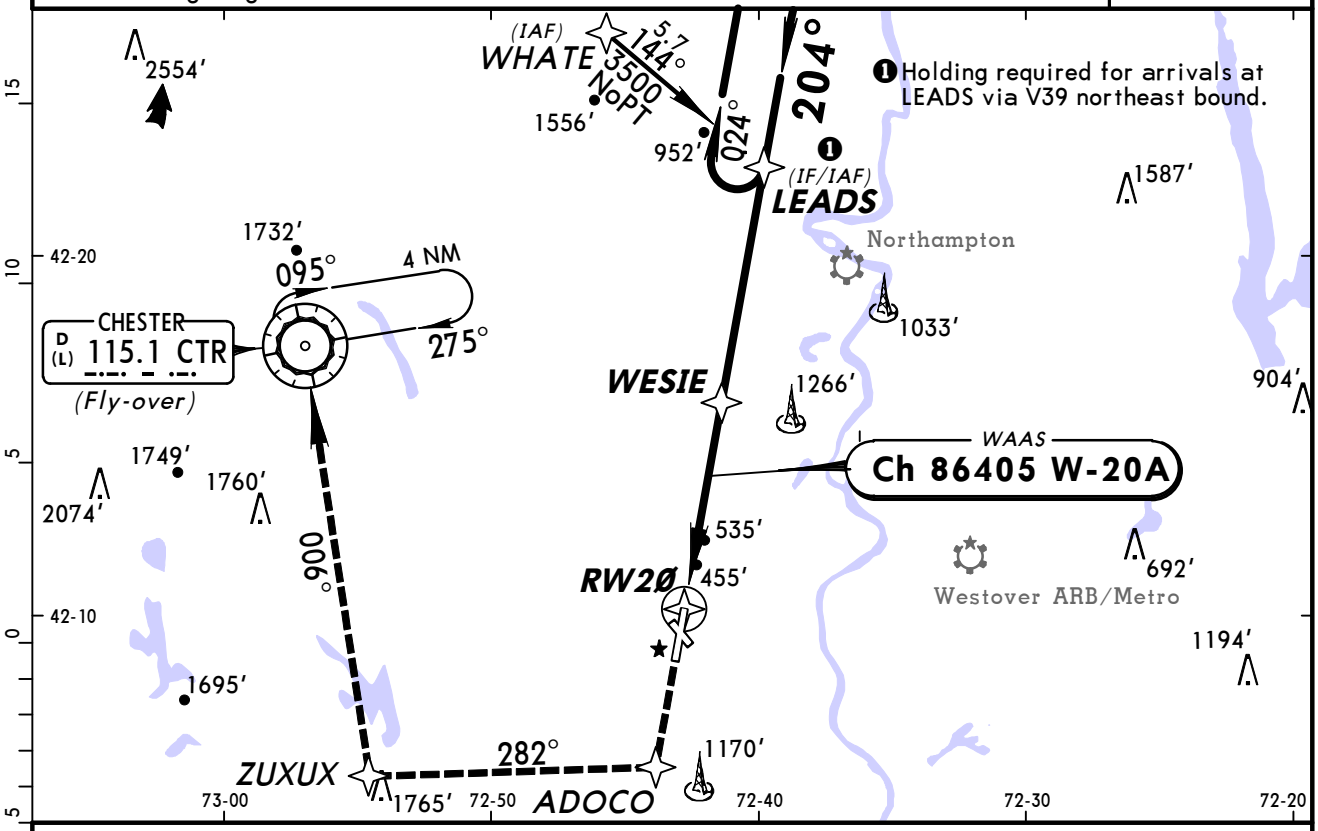
WAAS	Final Apch Crs	Minimum Alt	LPV DA(H)	Apt Elev 270′
Ch 86405 W-20A	204°	WESIE 2200′ (1930′)	(CONDITIONAL) 620′ (350′)	TDZE 270′

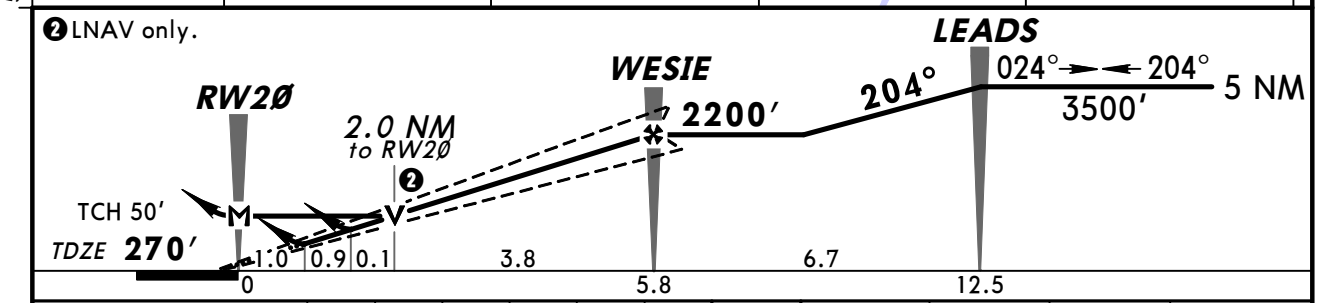
MISSED APCH: Climb to 4000′ direct ADOCO and via 282° track to ZUXUX and via 006° track to CTR VOR and hold.

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

1. Use local altimeter setting; if not received, use Bradley Intl altimeter setting.
2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 48°C (118°F). 3. Baro-VNAV and VDP not authorized when using Bradley Intl altimeter setting. 4. DME/DME RNP-0.30 not authorized. 5. Visibility reduction by helicopters not authorized. 6. VGSI and RNAV glidepath not coincident. 7. Pilot controlled lighting 118.9.

3600′
MSA RW2Ø





Gnd speed-Kts	70	90	100	120	140	160
Glide Path Angle 3.00°	372	478	531	637	743	849
MAP at RW2Ø						

MALSR
PAPI
4000′
ADOCO

STRAIGHT-IN LANDING RWY 20

	1 LPV DA(H) 620′ (350′)		2 LNAV/VNAV DA(H) 928′ (658′)		3 LNAV MDA(H) 940′ (670′)	
		RAIL or ALS out		RAIL or ALS out	RAIL out	ALS out
A	RVR 40 or ¾	RVR 60 or 1¼	1¾	2¼	RVR 40 or ¾	RVR 50 or 1
B						
C					RVR 60 or 1¼	1¾
D					1½	2

CIRCLE-TO-LAND

Max Kts	With Local Altimeter Setting MDA(H)	With Bradley Intl Altimeter Setting MDA(H)
90	1160′ (890′)-1¼	1220′ (950′)-1¼
120		
140	1160′ (890′)-2¾	1220′ (950′)-2¾
165	1160′ (890′)-3	1220′ (950′)-3

AMEND 0

TERPS

1 DA(H) 665′ (395′) with Bradley Intl altimeter setting.
2 DA(H) 973′ (703′) with Bradley Intl altimeter setting.
3 MDA(H) 1000′ (730′) with Bradley Intl altimeter setting.

CHANGES: Holding length at CTR.

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KBAF/BAF
BARNES MUN

JEPPESEN
21 JAN 11 (13-1)

WESTFIELD/SPRINGFIELD, MASS
VOR Rwy 2

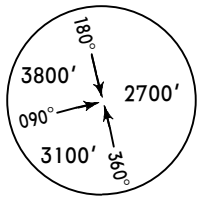
ATIS (ASOS when Twr inop)	BRADLEY Approach (R)	*WESTFIELD Tower	*Ground
127.1	125.35	CTAF 118.9	121.7

VOR	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 270′
BAF 113.0	025°	DECAR 2100′ (1836′)	780′ (516′)	TDZE 264′

MISSED APCH: Climb to 3000′ outbound via BAF VOR R-028 to KLYDE INT and hold.

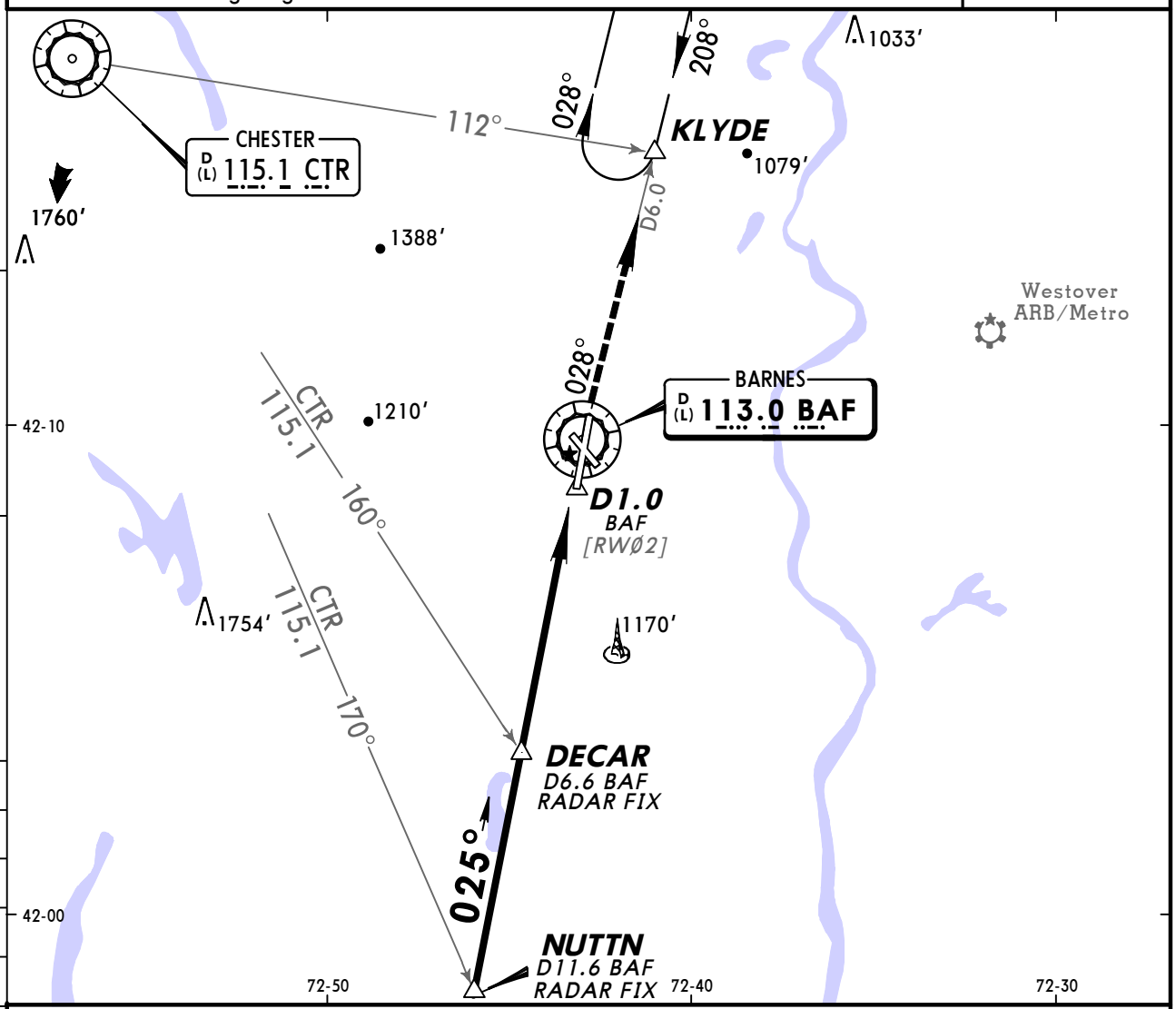
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′

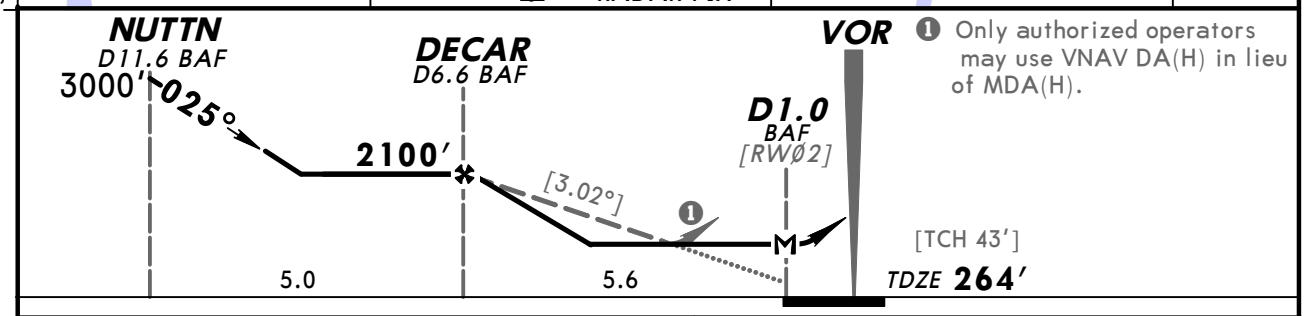
1. **RADAR required.** 2. VGSI and descent angles not coincident.
3. Pilot controlled lighting 118.9.



MSA BAF VOR

BRIEFING STRIP ™





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

Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.02°]	374	481	534	641	748	855
MAP at D1.0 BAF or DECAR to MAP 5.6	4:48	3:44	3:22	2:48	2:24	2:06

PAPI-L 3000′ ↑ via BAF 113.0 R-028 KLYDE

STRAIGHT-IN LANDING RWY2		CIRCLE-TO-LAND	
MDA(H) 780′ (516′)		Max Kts	MDA(H)
A	1	90	1160′ (890′) -1¼
B		120	
C	1½	140	1160′ (890′) -2¾
D	1¾	165	1160′ (890′) -3

TERPS AMEND 4D 6 MAY 2011

CHANGES: Airport elevation, TDZE.

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KBAF/BAF
BARNES MUN

JEPPESEN 21 JAN 11 (13-2)

WESTFIELD/SPRINGFIELD, MASS
VOR Rwy 20

BRIEFING STRIP TM

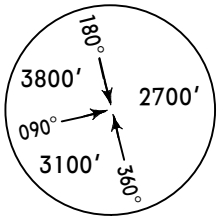
ATIS (ASOS when Twr inop)	BRADLEY Approach (R)	*WESTFIELD Tower	*Ground
127.1	125.35	CTAF 118.9	121.7

VOR	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 270′
BAF 113.0	208°	KLYDE 2100′ (1830′)	940′ (670′)	TDZE 270′

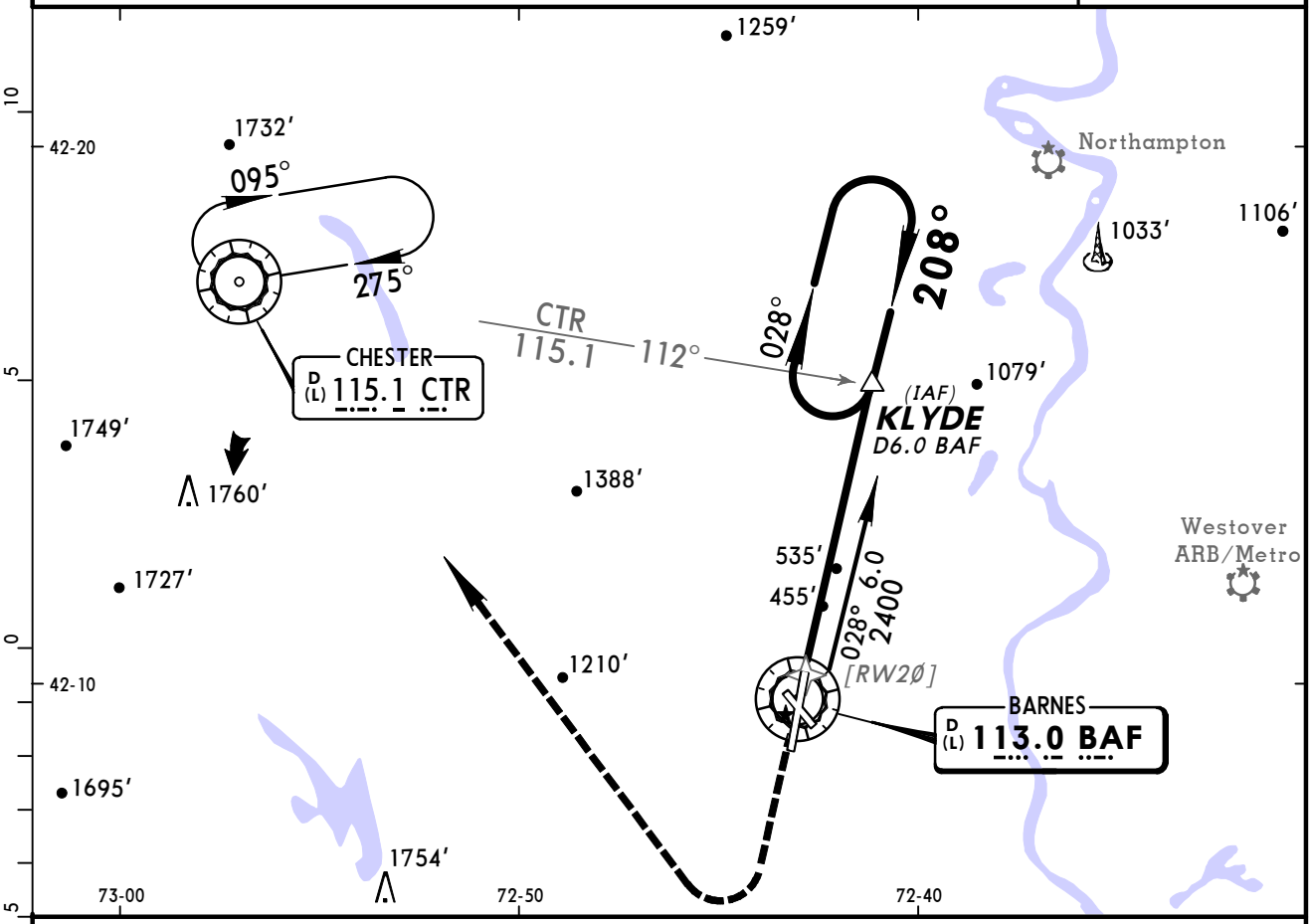
MISSED APCH: Climb to 1200′, then climbing RIGHT turn to 4000′ direct CTR VOR and hold; continue climb in hold to 4000′.

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

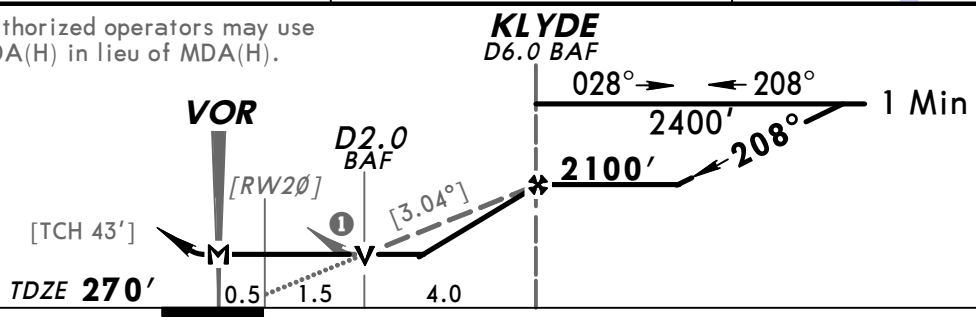
1. VGSI and descent angles not coincident. 2. Visibility reduction by helicopters not authorized. 3. Pilot controlled lighting 118.9.



MSA BAF VOR



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



Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.04°]	376	484	538	645	753	861
MAP at VOR						

MALSR PAPI | 1200′ | 4000′ RT | D | CTR 115.1

TERPS AMEND 20C 13 JAN 2011

STRAIGHT-IN LANDING RWY20

MDA(H) 940′ (670′)

	RAIL out	ALS out
A	RVR 40 or ¾	RVR 50 or 1
B		
C	RVR 60 or 1¼	1¾
D	1½	2

CIRCLE-TO-LAND

Rwy 33 Not Authorized at Night when VGSI Inoperative

Not Authorized to Rwy 15 at Night

Max Kts	MDA(H)
90	1160′ (890′) - 1¼
120	
140	1160′ (890′) - 2¾
165	1160′ (890′) - 3

CHANGES: Minimums, notes.

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General Information

Location: Bedford MA USA
IATA Code: BED
Lat/Long: N42° 28.2' W071° 17.3'
Elevation: 132 ft

Airport Use: Public
Magnetic Variation: 15.0°W
Sectional Chart: New York

Fuel Types: 100 Octane (LL), Jet A
Oxygen Types: High Pressure, Low Pressure, HP Bottle, 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: 1124 Z
Sunset: 2232 Z,

Runway Information

Runway: 05
Length x Width: 5107 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 128 ft
Lighting: Edge, REIL, Part time, Pilot controlled

Runway: 11
Length x Width: 7001 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 132 ft
Lighting: Edge, ALS, Part time, Pilot controlled

Runway: 23
Length x Width: 5107 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 128 ft
Lighting: Edge, REIL, Part time, Pilot controlled

Runway: 29
Length x Width: 7001 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 128 ft
Lighting: Edge, ALS, Part time, Pilot controlled

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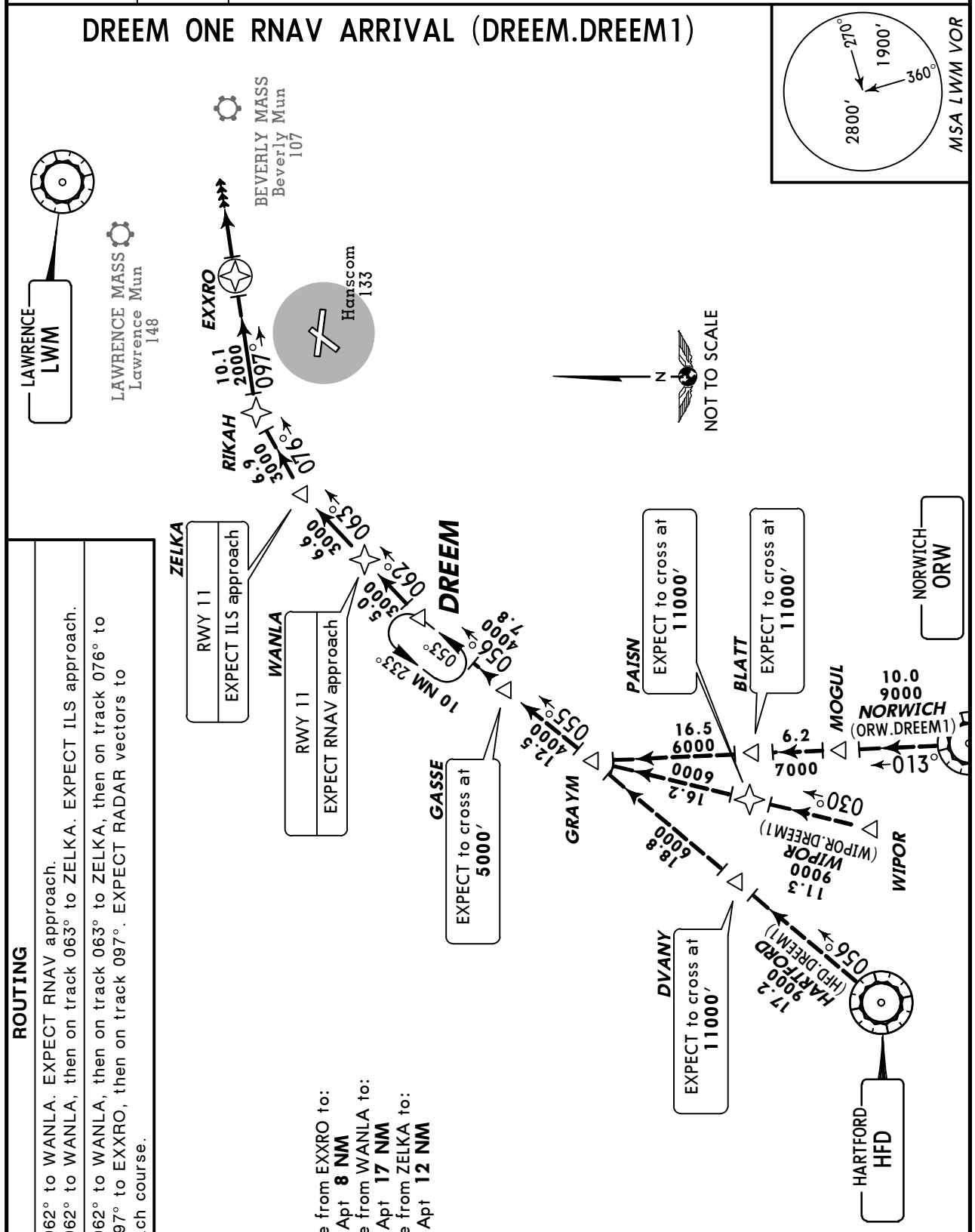
Communication Information

ATIS 124.6
ASOS 124.6
Hanscom Tower 118.5 CTAF PCL
Hanscom Ground Control 121.7
Hanscom Clearance Delivery 121.85
Boston Approach Control 124.4 Arrival Service
Boston Departure Control 124.4 Departure Service
Hanscom Unicom 122.95

ATIS (ASOS when Twr inop) 124.6	Apt Elev See Graphic	Alt Set: INCHES Trans level: FL180 Trans alt: 18000′ **1. DME/DME/IRU or GPS required. 2. RNAV 1.** **3. RADAR required.** 4. WIPOR Transition ATC assigned.

DREEM ONE RNAV ARRIVAL (DREEM.DREEM1)



ROUTING

RWY	
11	From DREEM on track 062° to WANLA. EXPECT RNAV approach. From DREEM on track 062° to WANLA, then on track 063° to ZELKA. EXPECT ILS approach.
23 29	From DREEM on track 062° to WANLA, then on track 063° to ZELKA, then on track 076° to RIKAH, then on track 097° to EXXRO, then on track 097°. EXPECT RADAR vectors to airport and final approach course.

CHANGES: New procedure at this airport.

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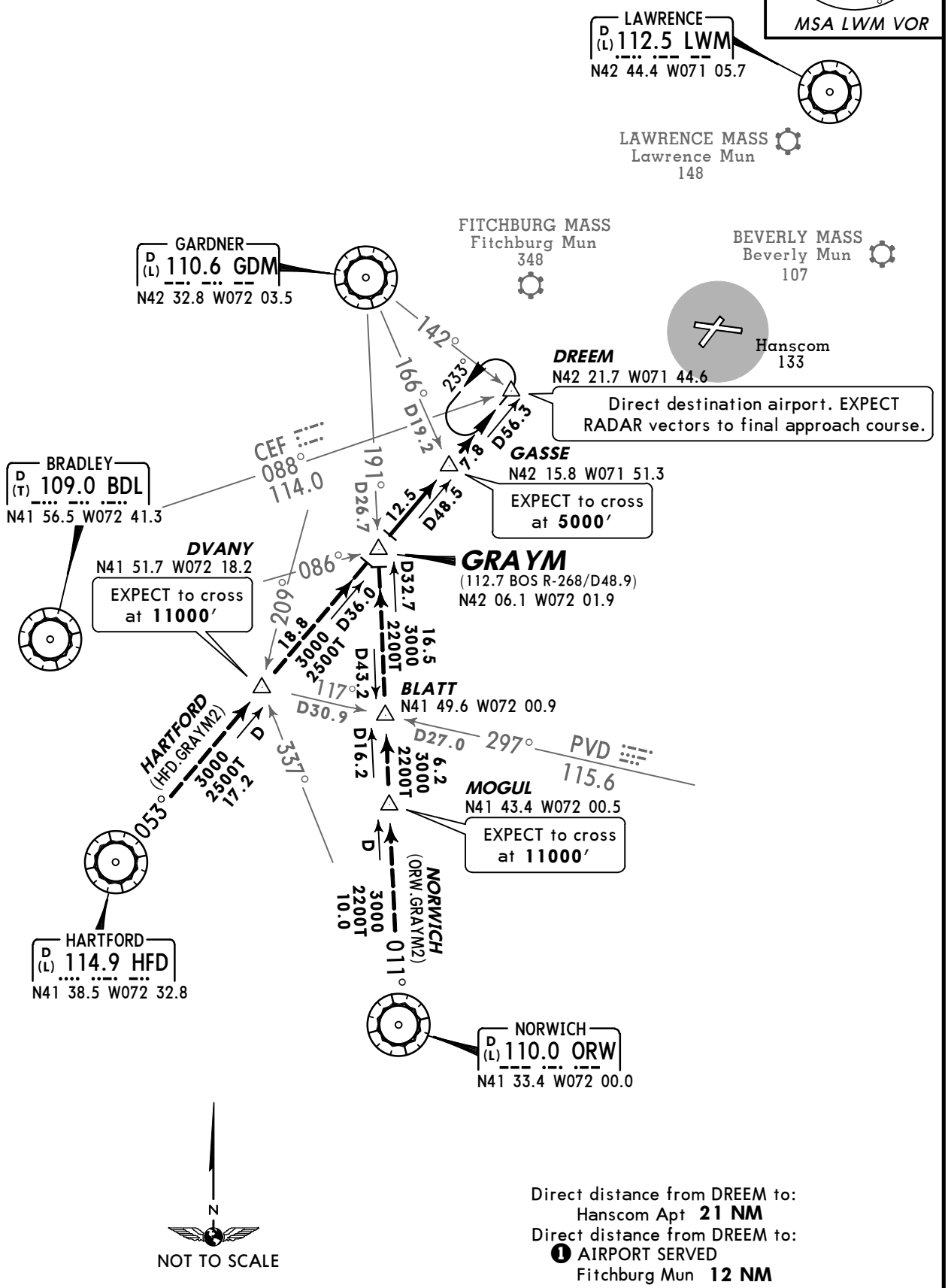
HANSCOM ATIS (ASOS when Twr inop) 124.6	Apt Elev See Graphic	Alt Set: INCHES Trans level: FL180 Trans alt: 18000′ 1. This STAR is applicable to all aircraft operating 11000′ and above. 2. Also serves ❶

GRAYM TWO ARRIVAL (GRAYM.GRAYM2)



Direct distance from DREEM to:
Hanscom Apt **21 NM**
Direct distance from DREEM to:
❶ AIRPORT SERVED
Fitchburg Mun **12 NM**

ROUTING

From over GRAYM via HFD R-053 to DREEM, then direct destination airport. EXPECT RADAR vectors to final approach course.

CHANGES: Formations, reindexed.

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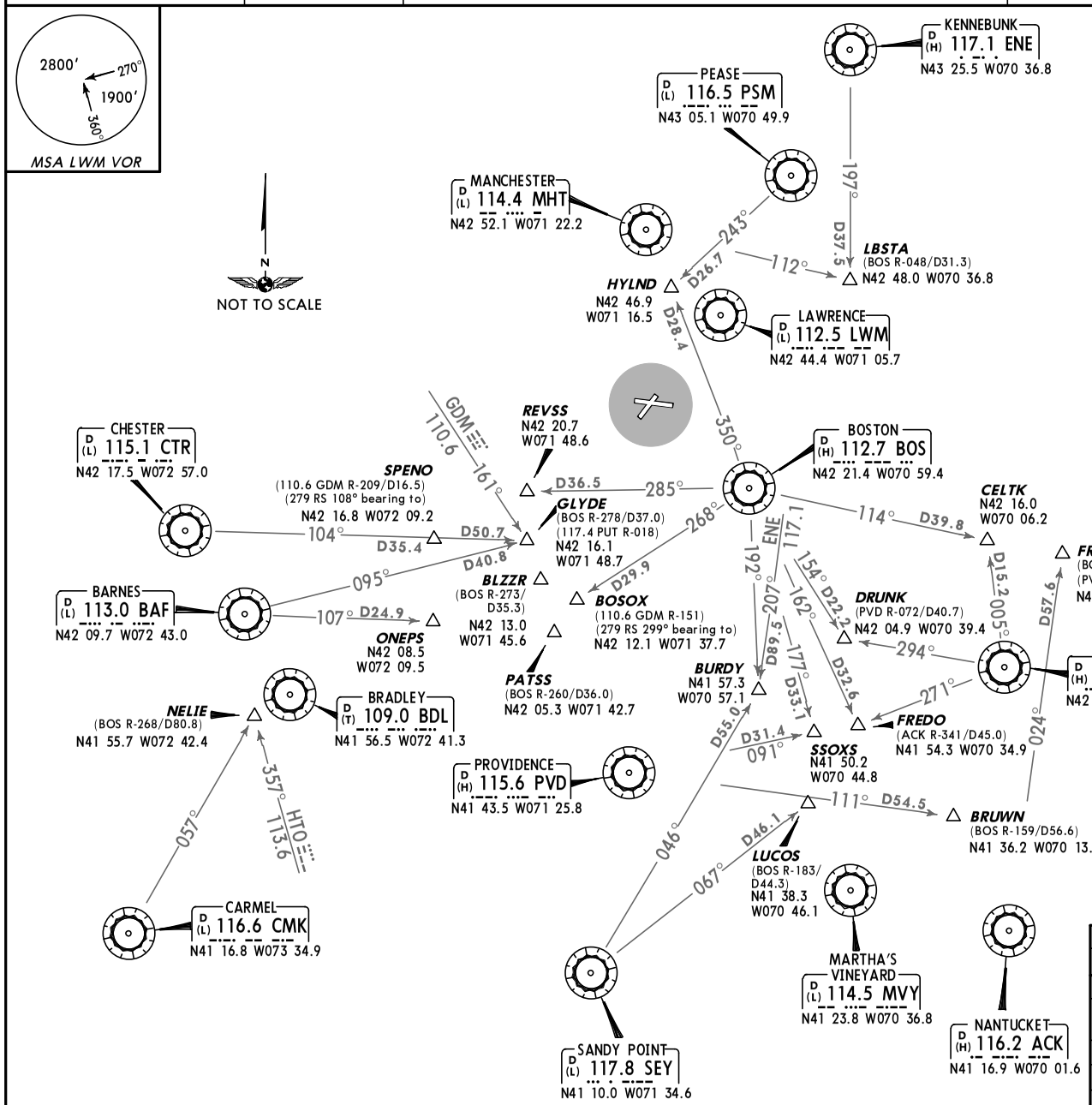
BOSTON Departure (R) 124.4	Apt Elev 133′	Trans level: FL 180 Trans alt: 18000′	**1. RADAR required.** 2. Non-RNAV equipped aircraft can EXPECT vectors on assigned route.

HANSCOM SEVEN DEPARTURE (HNSCM7.BED)



OBSTACLES

Rwy 5: Bush and trees beginning 44′ from DER, 10′ LEFT of centerline, up to 88′ AGL/214′ MSL. Fence, poles, and trees beginning 152′ from DER, 113′ RIGHT of centerline, up to 91′ AGL/217′ MSL.
Rwy 11: Trees 2694′ from DER, 924′ LEFT of centerline, up to 65′ AGL/192′ MSL. Tower 5040′ from DER, 1682′ LEFT of centerline, 155′ AGL/282′ MSL.
Rwy 23: Trees beginning 1081′ from DER, 161′ LEFT of centerline, up to 86′ AGL/252′ MSL. Terrain, vehicles on road, and trees beginning 534′ from DER, 4′ RIGHT of centerline, up to 81′ AGL/228′ MSL. Trees 1.1 NM from DER, 372′ LEFT of centerline, up to 60′ AGL/364′ MSL. Trees 1.4 NM from DER, 976′ LEFT of centerline, up to 70′ AGL/379′ MSL.
Rwy 29: Pole and trees beginning 388′ from DER, 323′ LEFT of centerline, up to 62′ AGL/240′ MSL. Trees beginning 2675′ from DER, 228′ RIGHT of centerline, up to 60′ AGL/246′ MSL.

This SID requires take-off minimums (for standard minimums, refer to airport chart):
Rwys 5, 29: Standard (or lower than standard, if authorized).
Rwy 11: 300-1 1/4 or standard (or lower than standard, if authorized) with minimum climb of 245′ per NM to **400′**, or alternatively, with standard (or lower than standard, if authorized) take-off minimums and a normal 200′ per NM climb gradient, take-off must occur not later than **2000′** prior to DER.
Rwy 23: 300-1 3/4 or standard (or lower than standard, if authorized) with minimum climb of 286′ per NM to **500′.**

Gnd speed-KT	75	100	150	200	250	300
245′ per NM	306	408	613	817	1021	1225
286′ per NM	358	477	715	953	1192	1430

INITIAL CLIMB	ALTITUDE
Climb heading as asssigned by ATC.	**MAINTAIN 2000′**

ROUTING

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

BLZZR Departures	EXPECT vectors on BOS R-273. **DME required.**
BRUWN Departures	EXPECT vectors on BOS R-159. **DME required.**
CELTK Departures	EXPECT vectors on BOS R-114.
HYLND Departures	EXPECT vectors on BOS R-350.
PATSS Departures	EXPECT vectors on BOS R-260. **DME required.**
REVSS Departures	EXPECT vectors on BOS R-285. **DME required.**
SSOXS Departures	EXPECT vectors on BOS R-177.

CHANGES: Procedure renumbered, revised, new format.

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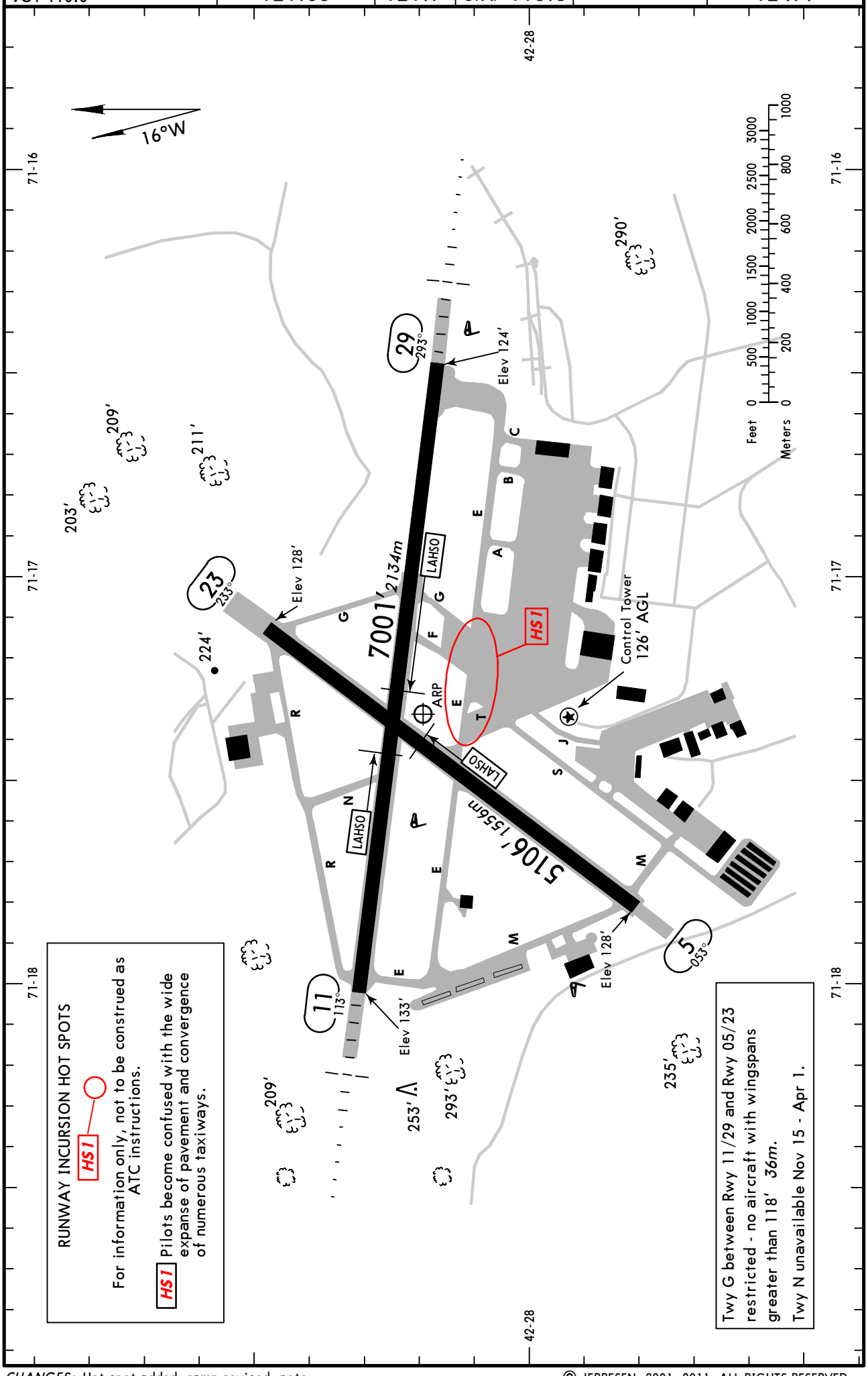
ATIS (ASOS when Twr inop)	*HANSCOM Clearance	*Ground	*Tower	UNICOM 122.95	BOSTON Departure (R)
124.6 VOT 110.0	121.85	121.7	CTAF 118.5		124.4



CHANGES: Hot spot added, ramp revised, note.

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GENERAL

Birds and wildlife in vicinity of airport.

No practice low approaches or touch and go landings for aircraft 12,500 lbs and over.

No practice low approaches or touch and go landings for aircraft under 12,500 lbs between 2300-0700 LT.

Closed to Part 121 air carrier operations with over 60 seats except 24 hr PPR.

Rwy 29 right traffic for aircraft over 12500 lbs.

ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS: LANDING BEYOND Threshold	Glide Slope	LAHSO Distance	TAKE-OFF	WIDTH
5	❶MIRL REIL VASI-L (angle 3.75°) grooved			11/29 3000′ *914m*		150′ *46m*
23	❶MIRL REIL VASI-R (angle 3.25°) grooved					

❶ Activate on 118.5 when Twr inop.

11	❷HIRL ❷MALSR PAPI-L (angle 3.0°) grooved RVR		5958′ *1816m*	5/23 2650′ *808m*		150′ *46m*
29	❷HIRL ❷MALSR PAPI-R (angle 3.0°) grooved		6052′ *1845m*	5/23 3650′ *1113m*		

❷ Activate on 118.5 when Twr inop.

TAKE-OFF

	Rwy 5, 29		❶ Rwy 11		
	Adequate Vis Ref	STD	With Mim climb of 245′/NM to 400′: Adequate Vis Ref	With Mim climb of 245′/NM to 400′: STD	Other
1 & 2 Eng	1/4	1	RVR 16 or 1/4	RVR 50 or 1	300 -1 1/4
3 & 4 Eng		1/2		RVR 24 or 1/2	

❶ Or alternatively, with standard takeoff minimums and a normal 200′/NM climb gradient, takeoff must occur no later than 2000′ prior to departure end of runway.

	Rwy 23		
	With Mim climb of 288′/NM to 500′: Adequate Vis Ref	With Mim climb of 288′/NM to 500′: STD	Other
1 & 2 Eng	1/4	1	300 -1 3/4
3 & 4 Eng		1/2	

FOR FILING AS ALTERNATE

	Authorized Only When Twr Operating and Local Weather Available: ILS Rwy 11	LOC Rwy 11	ILS Rwy 29 LOC Rwy 29	Authorized Only When Twr Operating: VOR Rwy 23	Authorized Only When Local Weather Available: RNAV (GPS) Rwy 11 RNAV (GPS) Rwy 23 RNAV (GPS) Rwy 29	NDB Rwy 29
A	600-2	800-2	800-2	800-2	800-2	NA
B						
C			800-2 1/4			
D	700-2		800-2 1/2			

AMEND 5

CHANGES: Notes, take-off minimums.

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ATIS (ASOS when Twr inop)	BOSTON Approach (R)	*HANSCOM Tower	*Ground
124.6	124.4	CTAF 118.5	121.7

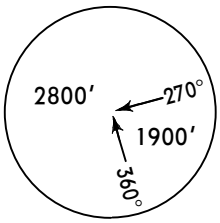
BRIEFING STRIP™

LOC IBED	Final Apch Crs	GS TAYUB	ILS DA(H) (CONDITIONAL)	Apt Elev 133′
111.15	113°	1900′ (1767′)	383′ (250′)	TDZE 133′

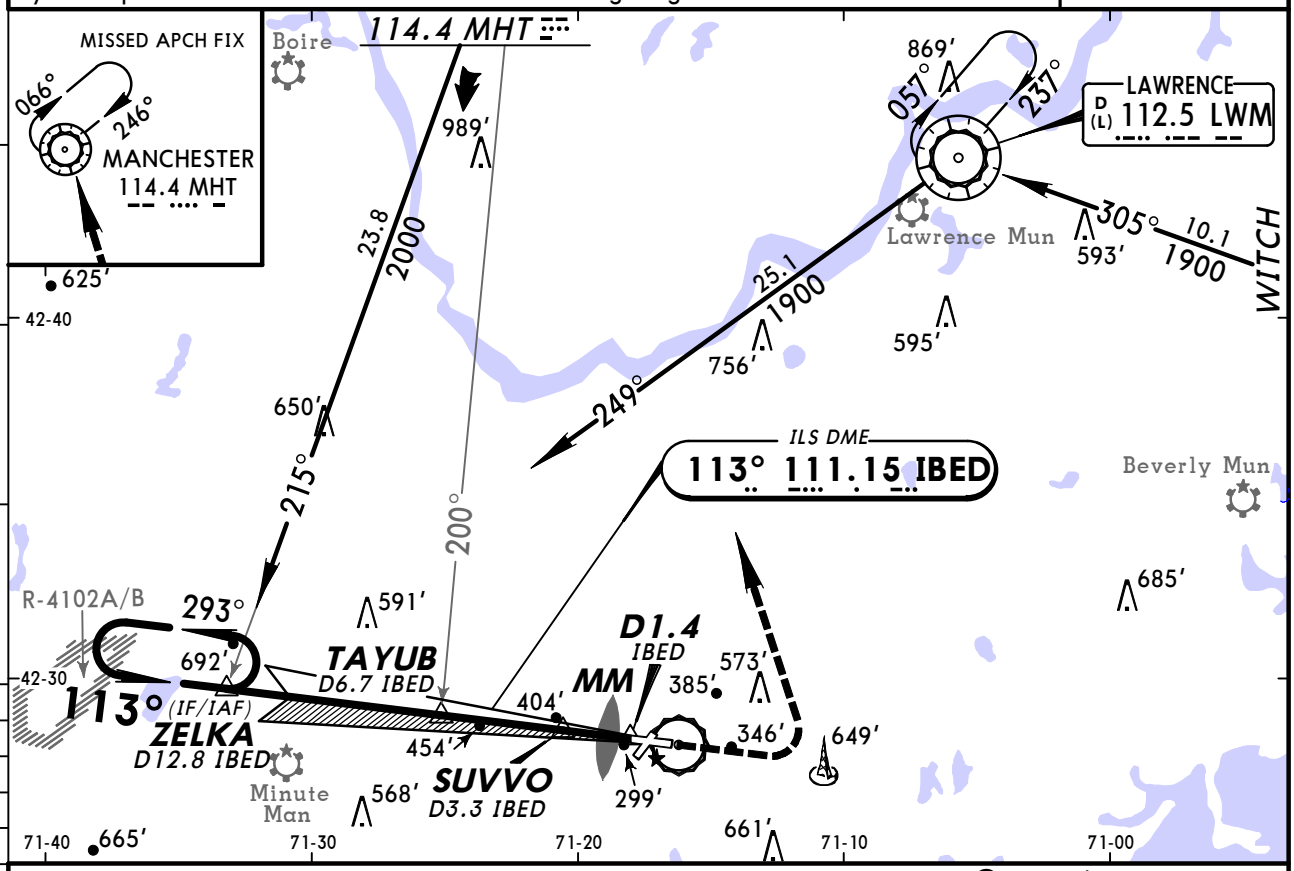
MISSED APCH: Climb to 800′, then climbing LEFT turn to 2000′ direct MHT VOR and hold.

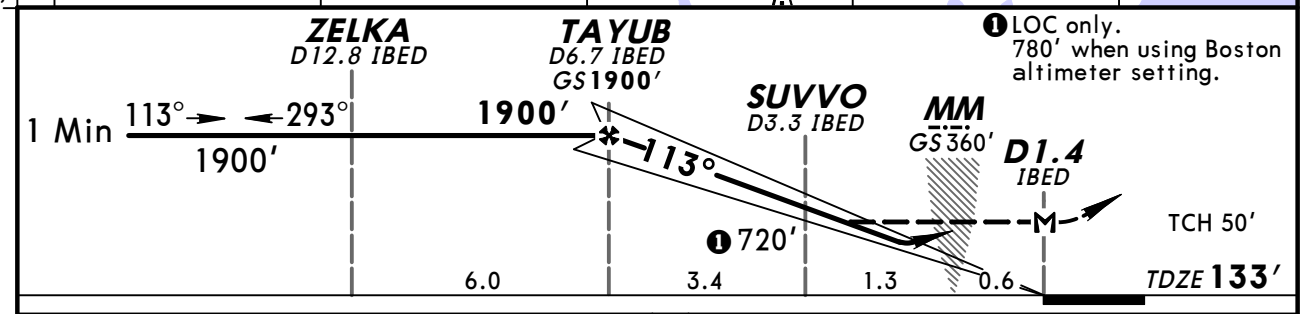
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′

1. RADAR required. 2. Use local altimeter setting; if not received, use Boston altimeter setting. 3. VGSI and ILS glidepath not coincident. 4. Visibility reduction by helicopters not authorized. 5. Pilot controlled lighting 118.5.



MSA LWM VOR





❶ LOC only. 780′ when using Boston altimeter setting.

Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	484	538	646	753	861
MAP at D1.4 IBED or TAYUB to MAP 5.3	4:33	3:32	3:11	2:39	2:16	1:59

MALSR / PAPI	800′	2000′ LT	D	MHT 114.4

STRAIGHT-IN LANDING RWY 11

ILS	LOC (GS out) With Suvvo	LOC (GS out) Without Suvvo
With Local Altimeter Setting		
DA(H) 383′ (250′)	MDA(H) 660′ (527′)	MDA(H) 720′ (587′)
With Boston Altimeter Setting		
DA(H) 443′ (310′)	MDA(H) 720′ (587′)	MDA(H) 780′ (647′)

		FULL	RAIL or ALS out	RAIL out	ALS out	RAIL out	ALS out
AMEND 25 TERPS	A	RVR 50 or 1		RVR 50 or 1		RVR 50 or 1	
	B						
	C			RVR 50 or 1	1½	RVR 50 or 1	1½
	D			RVR 60 or 1¼	1¾	RVR 60 or 1¼	1¾

CIRCLE-TO-LAND

Max Kts	With Suvvo MDA(H)	Without Suvvo MDA(H)
With Local Altimeter Setting		
90	680′ (547′)-1	720′ (587′)-1
120		
140	700′ (567′)-1½	720′ (587′)-1½
165	780′ (647′)-2	780′ (647′)-2
With Boston Altimeter Setting		
90	740′ (607′)-1	780′ (647′)-1
120		
140	760′ (627′)-1½	780′ (647′)-1½
165	840′ (707′)-2	840′ (707′)-2

CHANGES: None.

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BRIEFING STRIP™

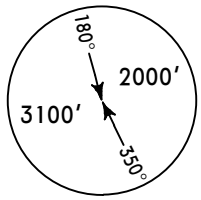
ATIS (ASOS when Twr inop)	BOSTON Approach (R)	*HANSCOM Tower	*Ground
124.6	124.4	CTAF 118.5	121.7

LOC IULJ	Final Apch Crs	GS JAYSE	ILS DA(H) (CONDITIONAL)	Apt Elev 133′
111.15	293°	1800′ (1672′)	328′ (200′)	TDZE 128′

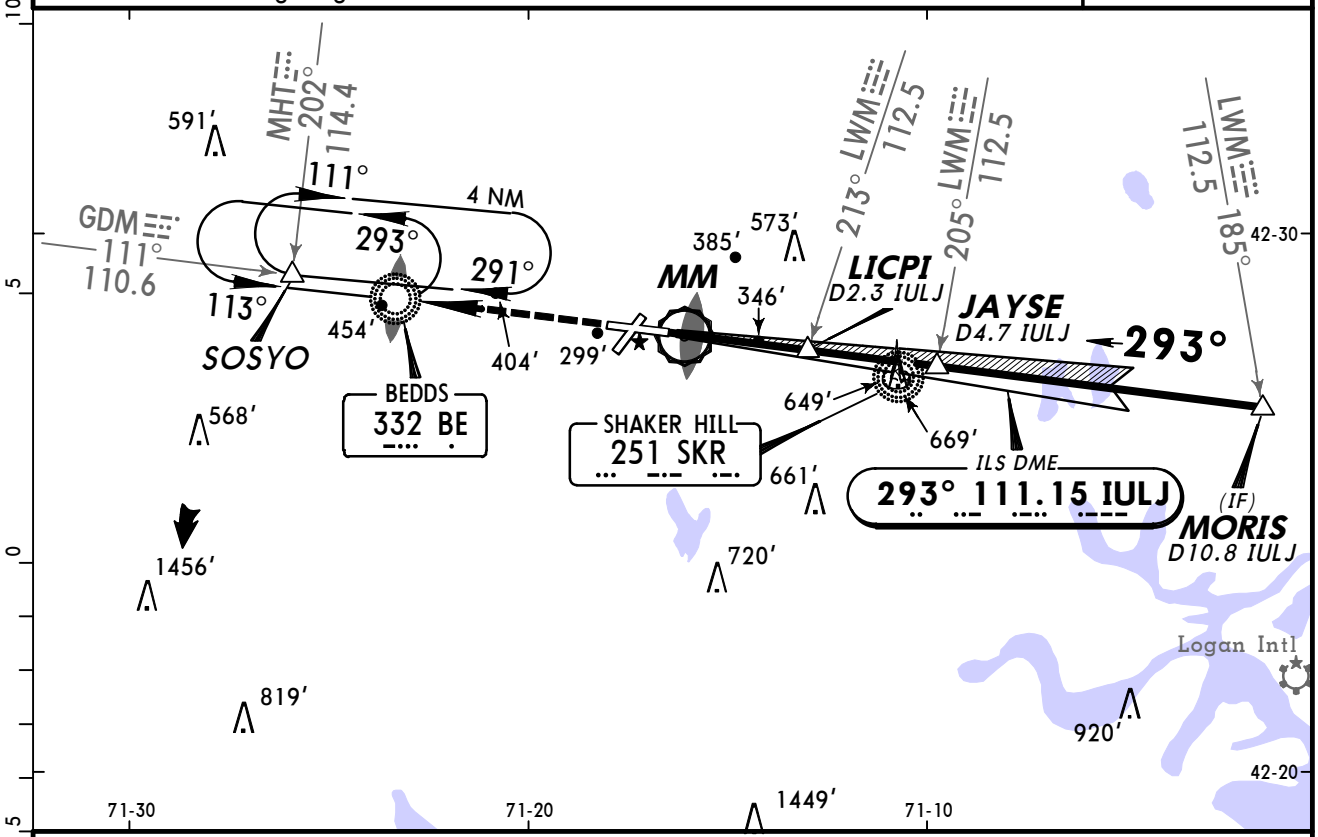
MISSED APCH: Climb to 2000′ direct BE LOM and hold.

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

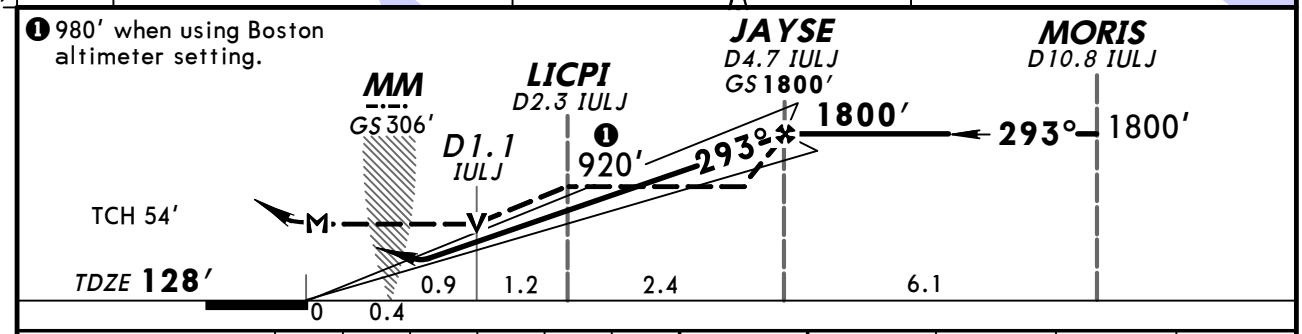
1. RADAR and ADF required. 2. Use local altimeter setting; if not received, use Boston altimeter setting. 3. VDP not authorized when using Boston altimeter setting. 4. Pilot controlled lighting 118.5.



MSA SKR NDB



❶ 980′ when using Boston altimeter setting.



Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	484	538	646	753	661
JAYSE to MAP	4.6	3:57	3:04	2:46	2:18	1:58	1:43

MALSR
PAPI
2000′
D
BE 332

STRAIGHT-IN LANDING RWY 29

ILS	LOC (GS out) With Licpi	LOC (GS out) Without Licpi
With Local Altimeter Setting		
DA(H) 328′ (200′)	MDA(H) 600′ (472′)	MDA(H) 920′ (792′)
With Boston Altimeter Setting		
DA(H) 377′ (249′)	MDA(H) 660′ (532′)	MDA(H) 980′ (852′)

TERPS AMEND 6	FULL	RAIL or ALS out		RAIL out	ALS out		RAIL out	ALS out
A	1/2		1/2	3/4	1	1/2	3/4	1
B						3/4	1 1/4	
C			3/4	1 1/4		1 3/4	2 1/4	
D			1	1 1/2		2	2 1/2	

CIRCLE-TO-LAND

Max Kts	With Licpi MDA(H)	Without Licpi MDA(H)
With Local Altimeter Setting		
90	680′ (547′)-1	920′ (787′)-1
120		920′ (787′)-1 1/4
140	700′ (567′)-1 1/2	920′ (787′)-2 1/4
165	780′ (647′)-2	920′ (787′)-2 1/2
With Boston Altimeter Setting		
90	740′ (607′)-1	980′ (847′)-1
120		980′ (847′)-1 1/4
140	760′ (627′)-1 1/2	980′ (847′)-2 1/4
165	840′ (707′)-2	980′ (847′)-2 1/2

CHANGES: Printing sequence.

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BRIEFING STRIP™

ATIS (ASOS when Twr inop)	BOSTON Approach (R)	*HANSCOM Tower	*Ground
124.6	124.4	CTAF 118.5	121.7

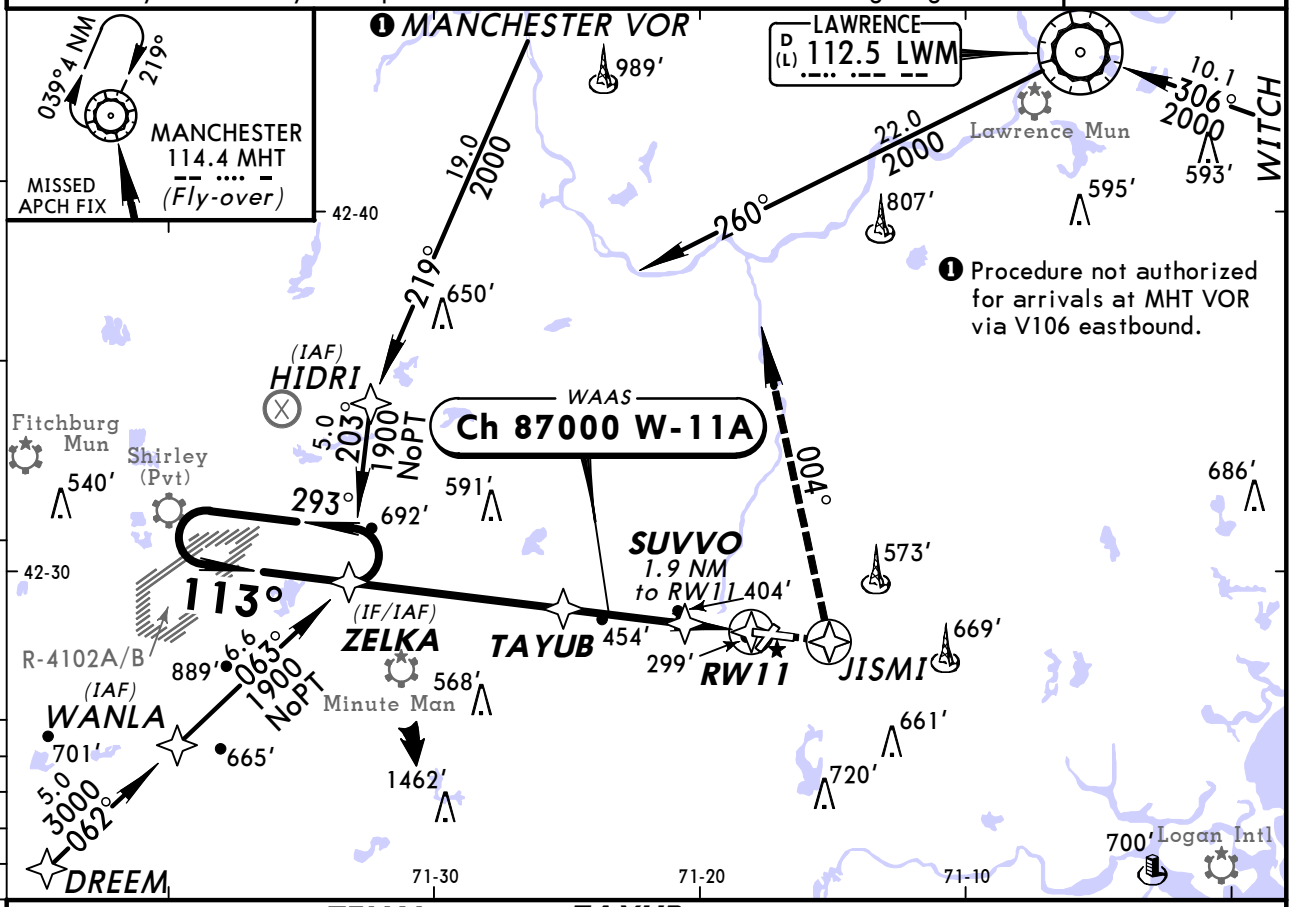
WAAS	Final Apch Crs	Minimum Alt	LPV DA(H) (CONDITIONAL)	Apt Elev 133'
Ch 87000 W-11A	113°	TAYUB 1900' (1767')	479' (346')	TDZE 133'

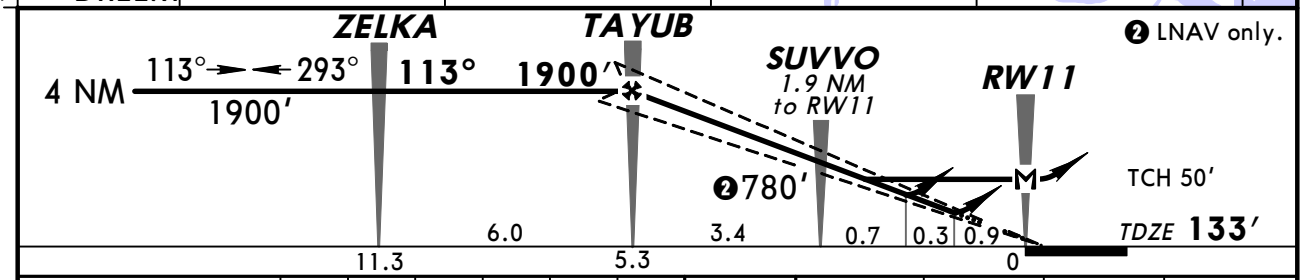
MISSED APCH: Climb to 2000' direct JISMI and LEFT turn via 004° track to MHT VOR and hold.

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

1. Use local altimeter setting; if not received, use Boston altimeter setting. 2. For uncompensated Baro-VNAV systems, LNAV-VNAV not authorized below -15°C (5°F) or above 48°C (119°F). 3. VGSI and RNAV glidepath not coincident. 4. DME/DME RNP-0.30 not authorized. 5. Baro-VNAV not authorized when using Boston altimeter setting. 6. Visibility reduction by helicopters not authorized. 7. Pilot controlled lighting 118.5.

3300'
MSA RW11





Gnd speed-Kts	70	90	100	120	140	160
Glide Path Angle 3.00°	372	478	531	637	743	849
MAP at RW11						

MALSR
PAPI
2000'
D
JISMI

STRAIGHT-IN LANDING RWY 11

	1 LPV DA(H) 479'(346') With Local Altimeter Setting		2 LNAV/VNAV DA(H) 576'(443') With Local Altimeter Setting		3 LNAV MDA(H) 660'(527') With Local Altimeter Setting	
		RAIL or ALS out		RAIL out	ALS out	RAIL out	ALS out
A	RVR 50 or 1	RVR 60 or 1¼	RVR 50 or 1	1½	RVR 50 or 1	
B						
C					RVR 50 or 1	1½
D					RVR 60 or 1¼	1¾

CIRCLE-TO-LAND

Max Kts	With Local Altimeter Setting MDA(H)	With Boston Altimeter Setting MDA(H)
90	680'(547')-1	740'(607')-1
120		
140	700'(567')-1½	760'(627')-1½
165	780'(647')-2	840'(707')-2

TERPS AMEND 0

1 DA(H) 539'(406') with Boston altimeter setting.
2 DA(H) 636'(503') with Boston altimeter setting.
3 MDA(H) 720'(587') with Boston altimeter setting.

CHANGES: ZELKA hold length, obstructions.

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BRIEFING STRIP ™

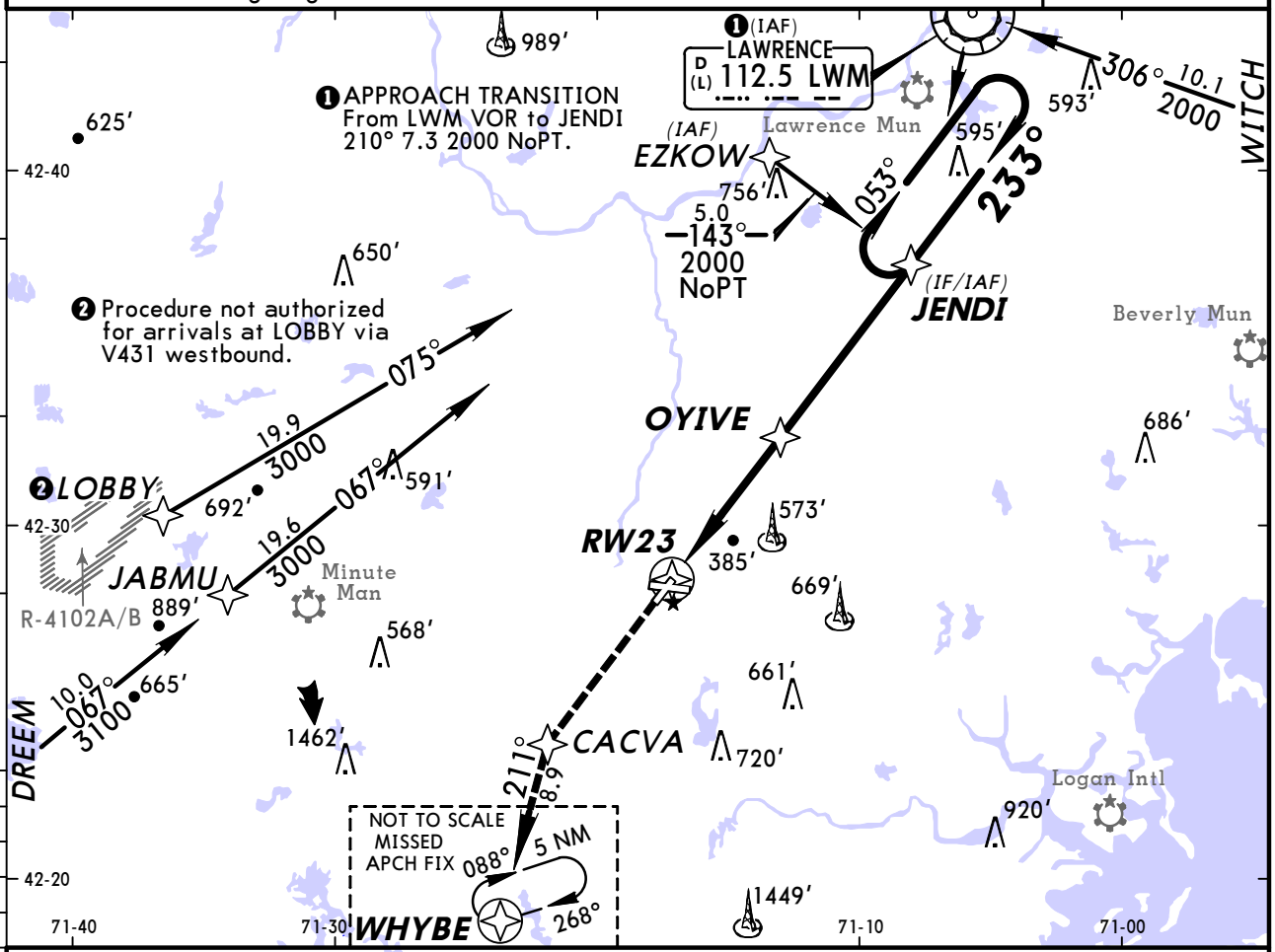
ATIS (ASOS when Twr inop)	BOSTON Approach (R)	*HANSCOM Tower	*Ground
124.6	124.4	CTAF 118.5	121.7

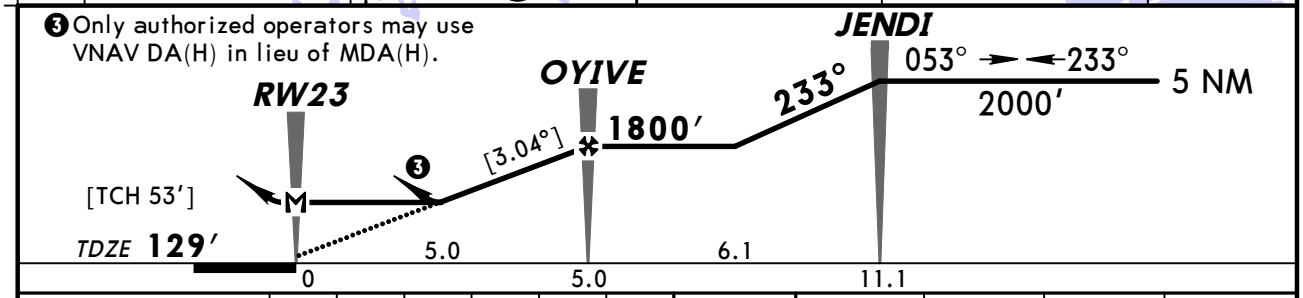
RNAV	Final Apch Crs	Minimum Alt OYIVE	LNAV MDA(H) (CONDITIONAL)	Apt Elev 133'
	233°	1800' (1671')	640' (511')	TDZE 129'

MISSED APCH: Climb to 3000' direct CACVA and via 211° track to WHYBE and hold.

Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'
1. Use local altimeter setting; if not received, use Boston altimeter setting.
2. DME/DME RNP-0.30 not authorized. 3. VGSI and descent angles not coincident.
4. Pilot controlled lighting 118.5.

3300'
MSA RW23





Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.04°]	376	484	538	645	753	861
MAP at RW23						

REIL
VASI-R
3000'
CACVA

STRAIGHT-IN LANDING RWY 23
LNAV

	MDA(H) 640' (511') With Local Altimeter Setting	MDA(H) 700' (571') With Boston Altimeter Setting
A	1	1
B		
C	1½	1½
D		

CIRCLE-TO-LAND

Max Kts	With Local Altimeter Setting MDA(H)	With Boston Altimeter Setting MDA(H)
90	680' (547')-1	740' (607')-1
120		
140	700' (567')-1½	760' (627')-1½
165	780' (647')-2	840' (707')-2

AMEND TERPS

CHANGES: Obstructions.

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BRIEFING STRIP™

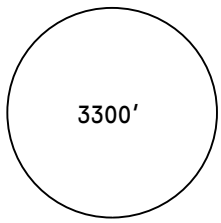
ATIS (ASOS when Twr inop)	BOSTON Approach (R)	*HANSCOM Tower	*Ground
124.6	124.4	CTAF 118.5	121.7

WAAS	Final Apch Crs	Minimum Alt	LPV DA(H) (CONDITIONAL)	Apt Elev 133′
Ch 86612 W-29A	293°	JAYSE 1800′ (1672′)	328′ (200′)	TDZE 128′

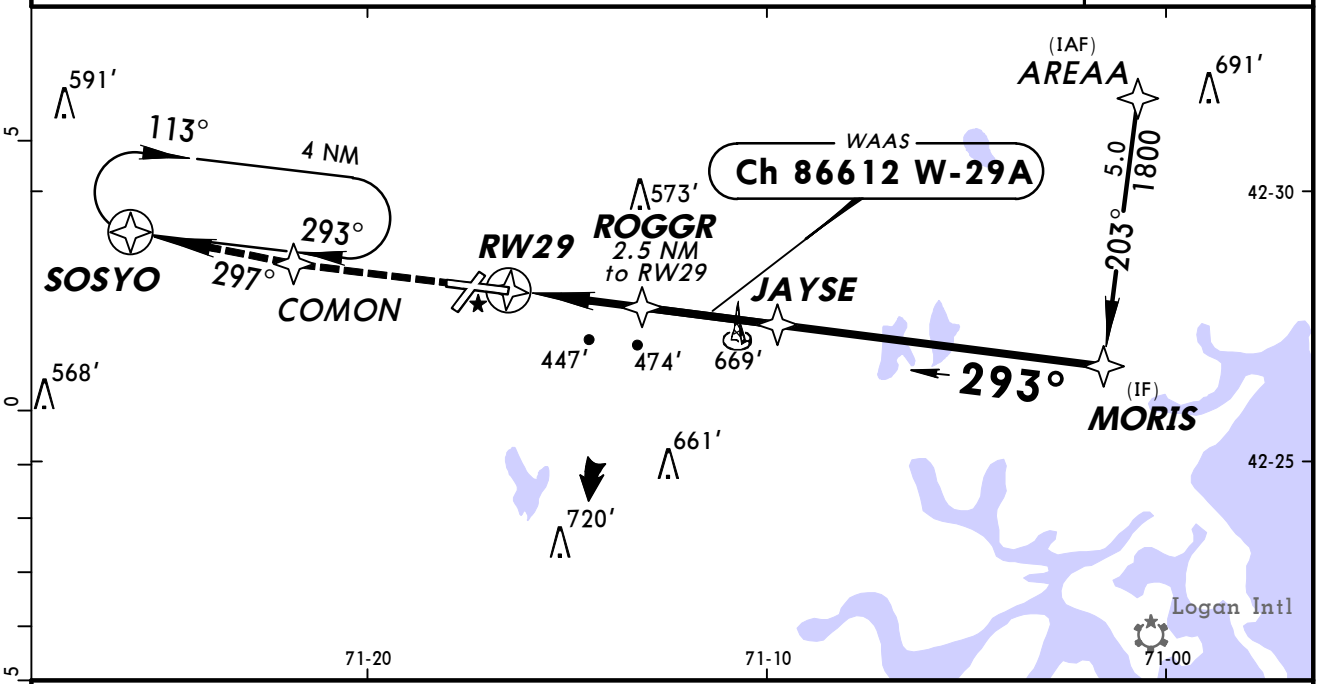
MISSED APCH: Climb to 2000′ direct COMON and via 297° track to SOSYO and hold.

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

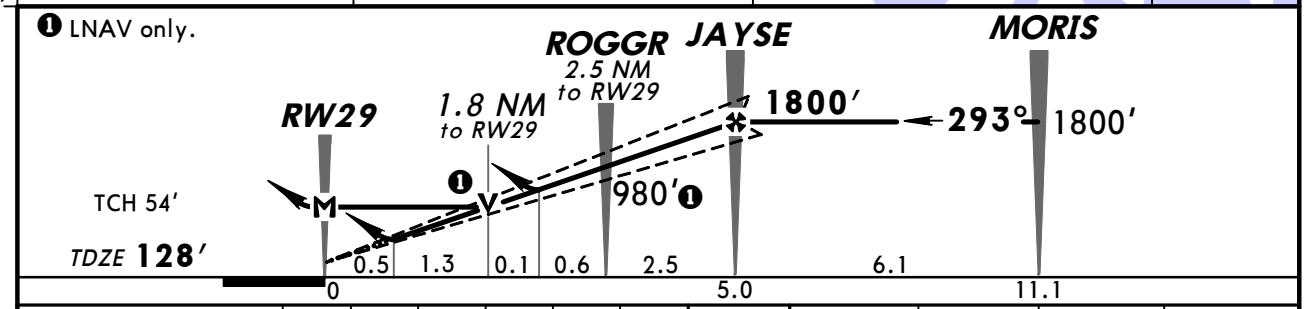
1. Radar required. 2. Use local altimeter setting; if not received, use Boston altimeter setting. 3. Baro-VNAV not authorized when using Boston altimeter setting. 4. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -15°C (5°F) or above 48°C (118°F). 5. DME/DME RNP-0.30 not authorized. 6. VDP not authorized when using Boston altimeter setting. 7. Pilot controlled lighting 118.5.



MSA RW29



❶ LNAV only.



Gnd speed-Kts	70	90	100	120	140	160
Glide Path Angle 3.00°	372	478	531	637	743	849
MAP at RW29						

MALSR
PAPI
2000′
COMON

STRAIGHT-IN LANDING RWY 29
With Local Altimeter Setting

	LPV DA(H) 328′ (200′)		LNAV/VNAV DA(H) 793′ (665′)		LNAV MDA(H) 740′ (612′)		
	RAIL or ALS out		RAIL out	ALS out	RAIL out	ALS out	
A	½	¾	1¾	2¼	½	¾	1
B							
C					1¼	1¾	
D					1½	2	

CIRCLE-TO-LAND
With Local Altimeter Setting

Max Kts	MDA(H)
90	740′ (607′) -1
120	
140	780′ (647′) -1¾
165	800′ (667′) -2

With Boston Altimeter Setting

	LPV DA(H) 376′ (248′)		LNAV/VNAV DA(H) 841′ (713′)		LNAV MDA(H) 800′ (672′)		
	RAIL or ALS out		RAIL out	ALS out	RAIL out	ALS out	
A	½	¾	2	2½	½	¾	1
B							
C					1½	2	
D					1¾	2¼	

With Boston Altimeter Setting

Max Kts	MDA(H)
90	800′ (667′) -1
120	
140	840′ (707′) -2
165	860′ (727′) -2¼

AMENDO TERPS

CHANGES: New procedure.

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BRIEFING STRIP™

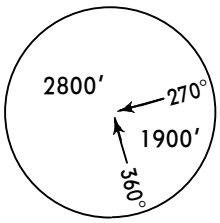
ATIS (ASOS when Twr inop)	BOSTON Approach (R)	*HANSCOM Tower	*Ground
124.6	124.4	CTAF 118.5	121.7

VOR	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 133′
LWM 112.5	223°	HOWDI 1500′ (1371′)	680′ (551′)	TDZE 129′

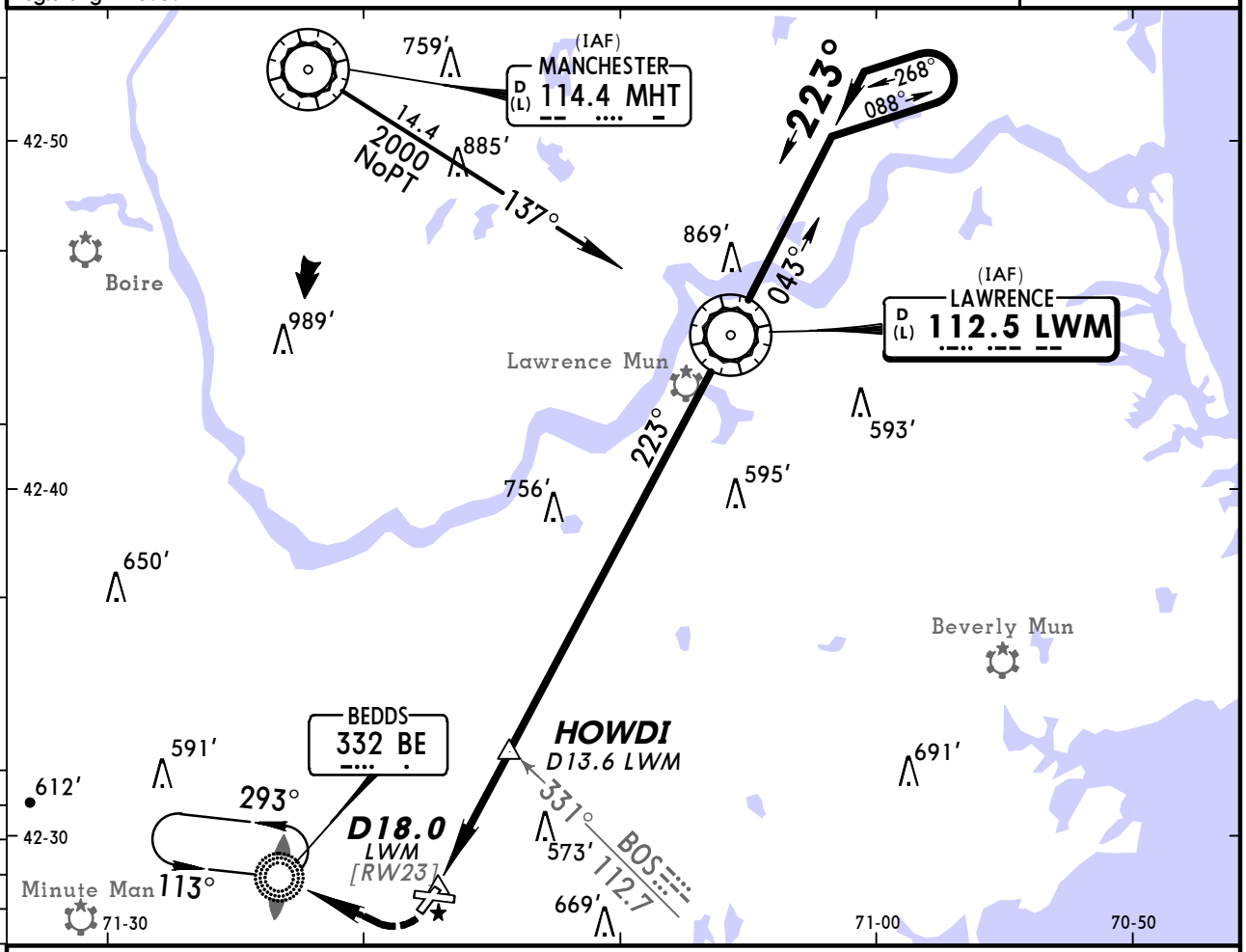
MISSED APCH: Climbing RIGHT turn to 2000′ direct BE LOM and hold.

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

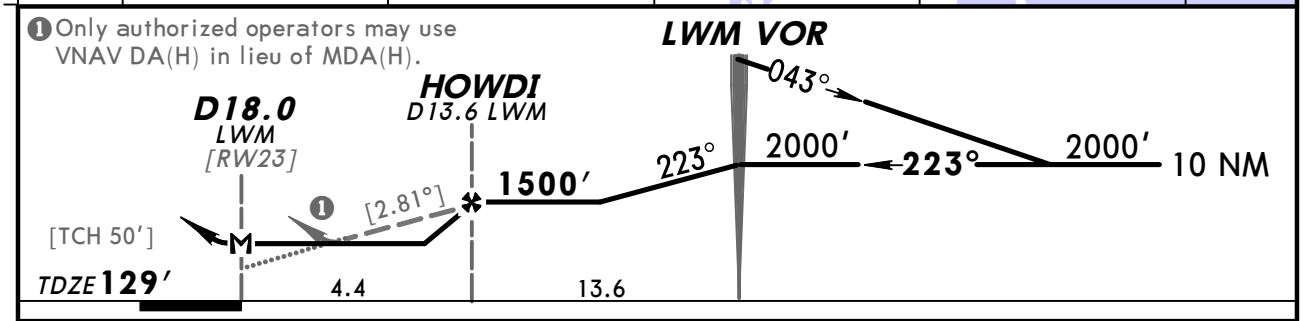
1. ADF required. 2. VGSI and descent angles not coincident. 3. Pilot controlled lighting 118.5.



MSA LWM VOR



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



Gnd speed-Kts	70	90	100	120	140	160
Descent angle [2.81°]	348	447	497	596	696	795
MAP at D18.0 LWM or HOWDI to MAP 4.4	3:46	2:56	2:38	2:12	1:53	1:39

REIL	2000′		BE
VASI-R	RT	D	332

STRAIGHT-IN LANDING RWY23		CIRCLE-TO-LAND	
MDA(H) 680′ (551′)		Max Kts	MDA(H)
A	1	90	700′ (567′)-1
B		120	720′ (587′)-1
C	1½	140	720′ (587′)-1½
D	1¾	165	780′ (647′)-2

AMENDED TERPS

CHANGES: Printing sequence.

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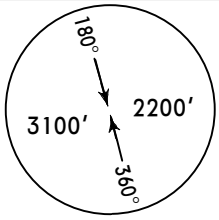
BRIEFING STRIP™

ATIS (ASOS when Twr inop)	BOSTON Approach (R)	*HANSCOM Tower	*Ground
124.6	124.4	CTAF 118.5	121.7

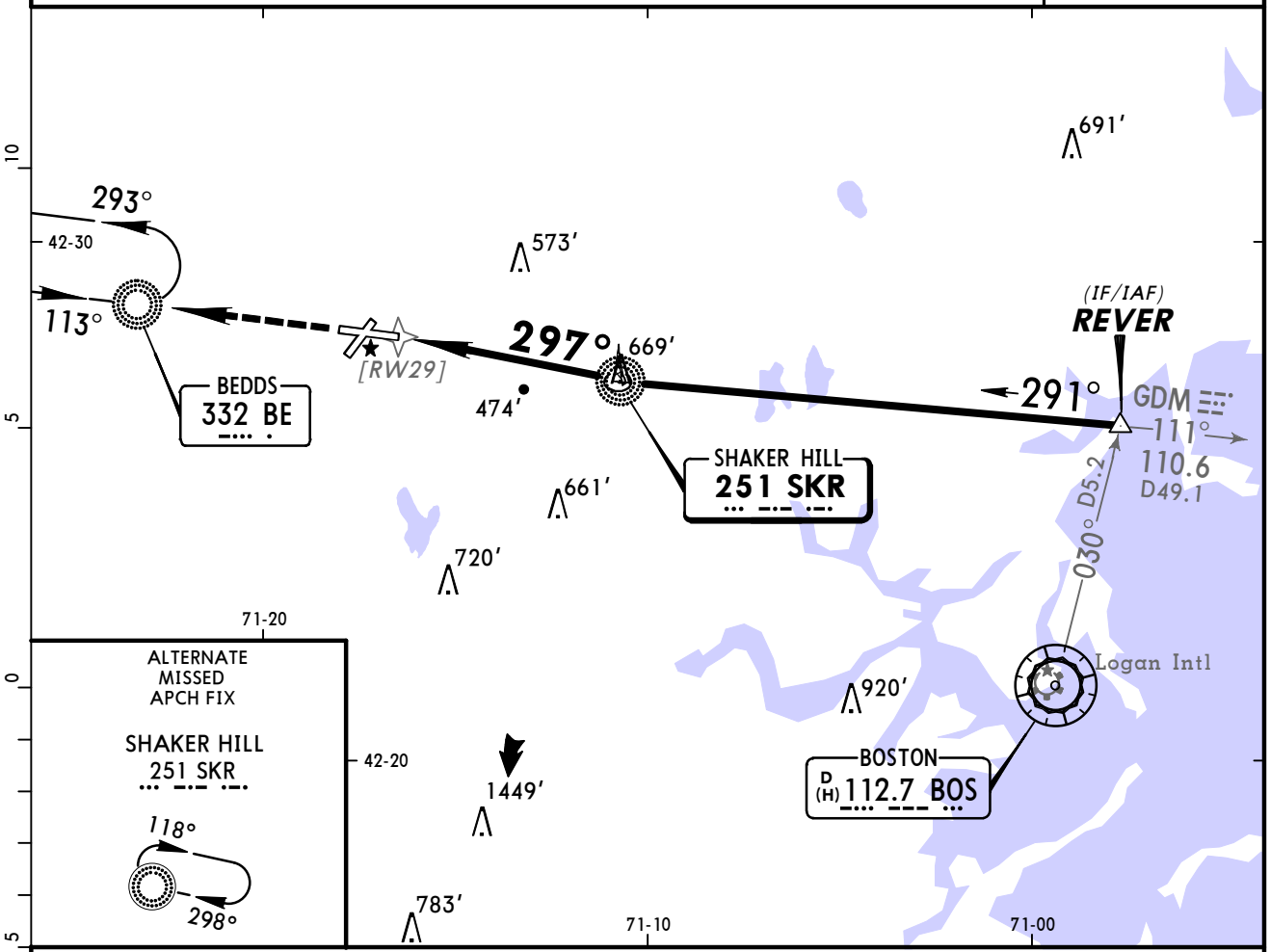
NDB SKR	Final Apch Crs	Minimum Alt NDB	MDA(H) (CONDITIONAL)	Apt Elev 133′
251	297°	1700′ (1572′)	780′ (652′)	TDZE 128′

MISSED APCH: Climb to 2000′ direct BE LOM and hold.

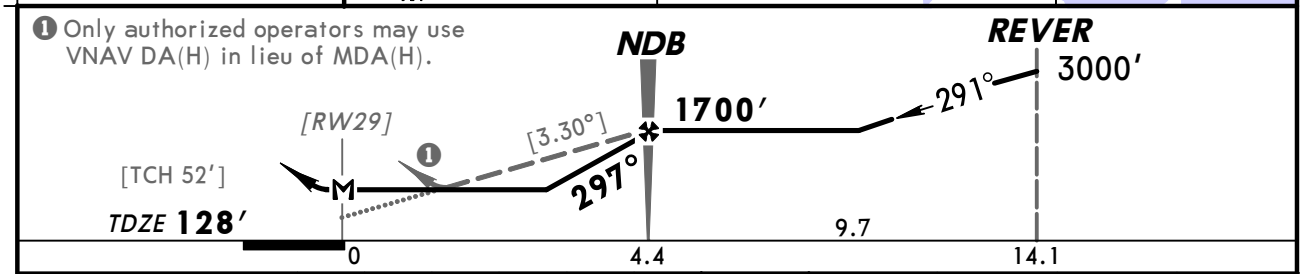
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′
1. Use local altimeter setting; if not received, use Boston altimeter setting. 2. VGSI and descent angles not coincident. 3. Pilot controlled lighting 118.5.



MSA SKR NDB



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



Gnd speed-Kts		70	90	100	120	140	160
Descent angle	[3.30°]	409	526	584	701	817	934
NDB to MAP	4.4	3:46	2:56	2:38	2:12	1:53	1:39

MALSR
PAPI
2000′
D
BE
332

STRAIGHT-IN LANDING RWY 29

	With Local Altimeter Setting MDA(H) 780′(652′)		With Boston Altimeter Setting MDA(H) 840′(712′)	
	RAIL out	ALS out	RAIL out	ALS out
A	3/4	1	3/4	1
B				
C	1 1/4	1 3/4	1 1/2	2
D	1 3/4	2	2	2 1/4

CIRCLE-TO-LAND

Max Kts.	With Local Altimeter Setting MDA(H)	With Boston Altimeter Setting MDA(H)
90	780′(647′)-1	840′(707′)-1
120		
140	780′(647′)-1 3/4	840′(707′)-2
165	800′(667′)-2	860′(727′)-2 1/4

AMEND 7
TERPS

CHANGES: Procedure, printing sequence.

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General Information

Location: Boston MA USA
IATA Code: BOS
Lat/Long: N42° 21.8' W071° 00.4'
Elevation: 20 ft

Airport Use: Public
Magnetic Variation: 15.1°W
Sectional Chart: New York

Fuel Types: 100 Octane (LL), Jet A
Oxygen Types: High Pressure, Low Pressure, 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: Yes
Beacon: Yes

Sunrise: 1123 Z
Sunset: 2231 Z,

Runway Information

Runway: 04L
Length x Width: 7861 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 14 ft
Lighting: Edge, REIL

Runway: 04R
Length x Width: 10005 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 18 ft
Lighting: Edge, ALS, Centerline, TDZ
Displaced Threshold: 1155 ft

Runway: 09
Length x Width: 7000 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 17 ft
Lighting: Edge, Centerline

Runway: 14
Length x Width: 5000 ft x 100 ft
Surface Type: asphalt
TDZ-Elev: 17 ft
Lighting: Edge

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Runway: 15L
Length x Width: 2557 ft x 100 ft
Surface Type: asphalt
TDZ-Elev: 15 ft
Lighting: Edge

Runway: 15R
Length x Width: 10083 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 17 ft
Lighting: Edge, ALS, Centerline, TDZ
Displaced Threshold: 881 ft

Runway: 22L
Length x Width: 10005 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 16 ft
Lighting: Edge, ALS, Centerline
Displaced Threshold: 1199 ft

Runway: 22R
Length x Width: 7861 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 15 ft
Lighting: Edge
Displaced Threshold: 815 ft

Runway: 27
Length x Width: 7000 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 17 ft
Lighting: Edge, Centerline, REIL

Runway: 32
Length x Width: 5000 ft x 100 ft
Surface Type: asphalt
TDZ-Elev: 20 ft
Lighting: Edge, REIL

Runway: 33L
Length x Width: 10083 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 16 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 33R
Length x Width: 2557 ft x 100 ft
Surface Type: asphalt
TDZ-Elev: 15 ft
Lighting: Edge

Communication Information

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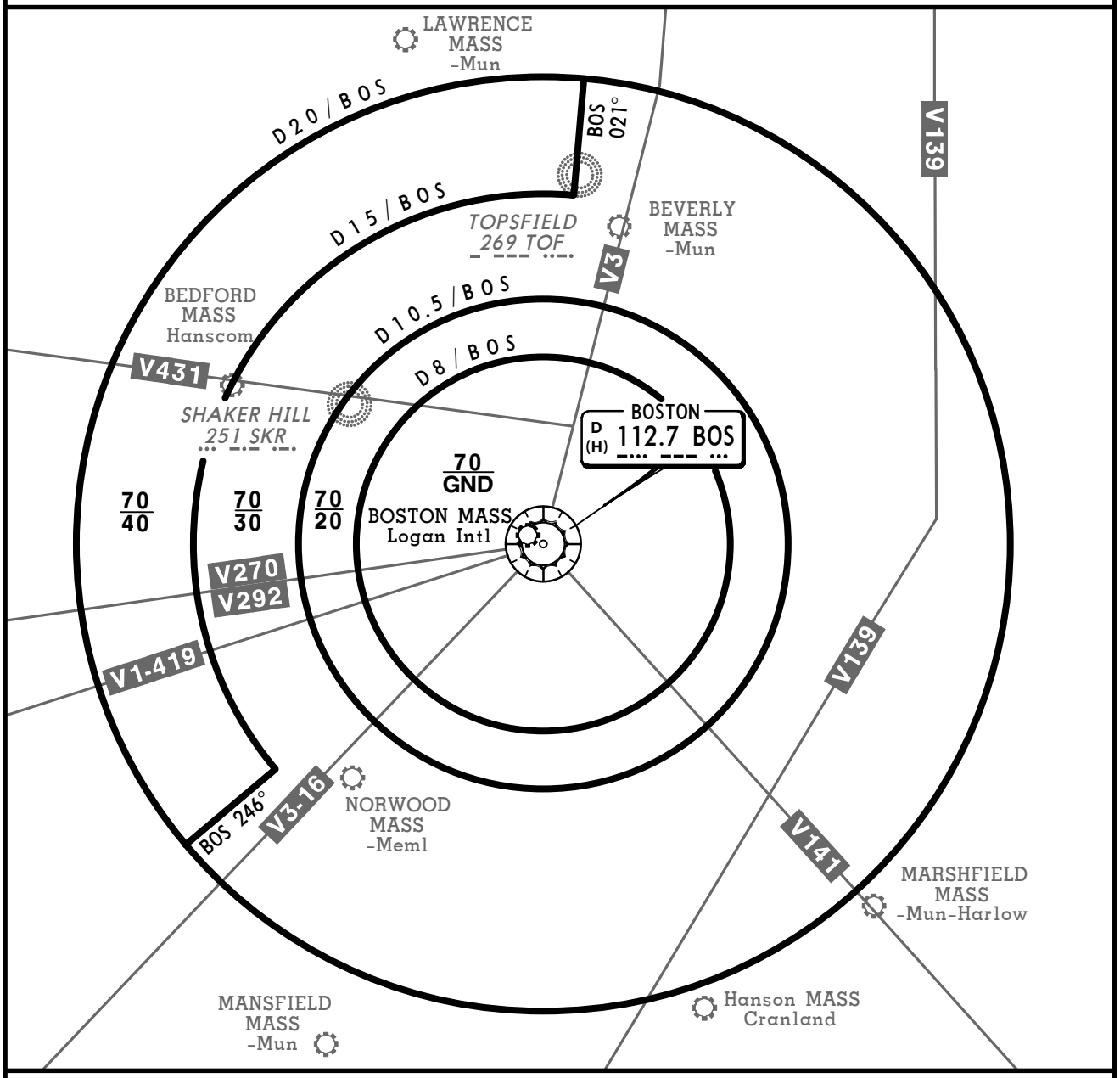
ATIS 127.875
ATIS 135.0
Boston Tower 132.225 Secondary
Boston Tower 128.8
Boston Ground Control 121.9
Boston Ground Control 121.75 Secondary
Boston Clearance Delivery 121.65 Pre-Departure Clearance
Boston Pre-Taxi Clearance 121.65 Pre-Departure Clearance
Boston Approach Control 120.6 Initial Contact
Boston Approach Control 127.2 Arrival Service
Boston Approach Control 118.25 Arrival Service
Boston TCA 124.4 (270°-90°)
Boston TCA 124.1 (91°-269°)
Boston Departure Control 133.0 Departure Service
Logan Intl Unicom 122.95
Boston Tower Helicopter frequency 124.725
Boston Gate Control 134.05
Bridgeport Flight Service Station 122.4 RCO
Bridgeport Flight Service Station 122.1 RCO
Bridgeport Flight Service Station 112.7 RCO

BOSTON CLASS B AIRSPACE

CLASS B AIRSPACE VFR COMMUNICATIONS

Boston App (091° - 269° 124.1) (270°-090° 124.4).



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

FLIGHT PROCEDURES

IFR Flights-Aircraft within Class B airspace are required to operate in accordance with current IFR procedures.

VFR Flights-

a. Arriving aircraft, or aircraft desiring to transit Class B airspace, should contact Boston Approach Control on the frequency depicted. Pilots on initial contact should state their position, direction of flight and destination. If holding of VFR aircraft is required, the holding point will be specified by ATC and will be a prominent geographical fix, landmark or VOR radials.

b. Aircraft departing the primary airport prior to taxiing are requested to advise the Boston clearance delivery position of the intended route of flight and altitude. Aircraft departing from other than Logan International Airport whose route of flight would penetrate Class B airspace should give this information to ATC on appropriate frequencies.

c. Aircraft desiring to transit Class B airspace may obtain an ATC clearance to transit Class B airspace when traffic conditions permit and will be handled on an equitable "first-come, first-served basis, "provided the requirements of FAR 91 are met.

CHANGES: Reissue.

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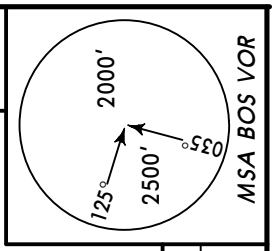
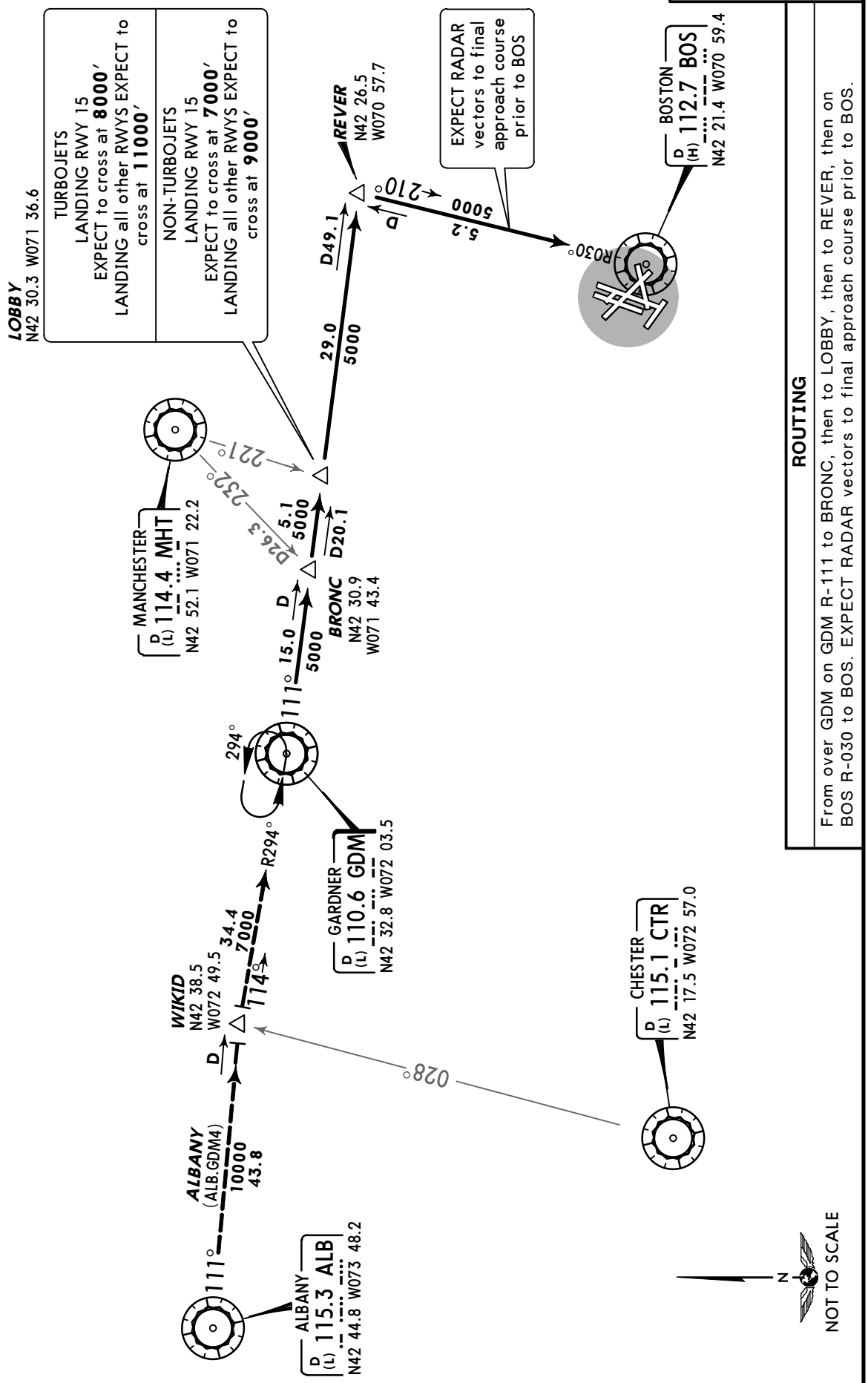
D-ATIS Arrival	Apt Elev	
135.0	20′	Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′ **RADAR required.**

GARDNER FOUR ARRIVAL (GDM.GDM4)





ROUTING

From over GDM on GDM R-111 to BRONC, then to LOBBY, then to REVER, then on BOS R-030 to BOS. EXPECT RADAR vectors to final approach course prior to BOS.

CHANGES: Procedure renumbered, revised.

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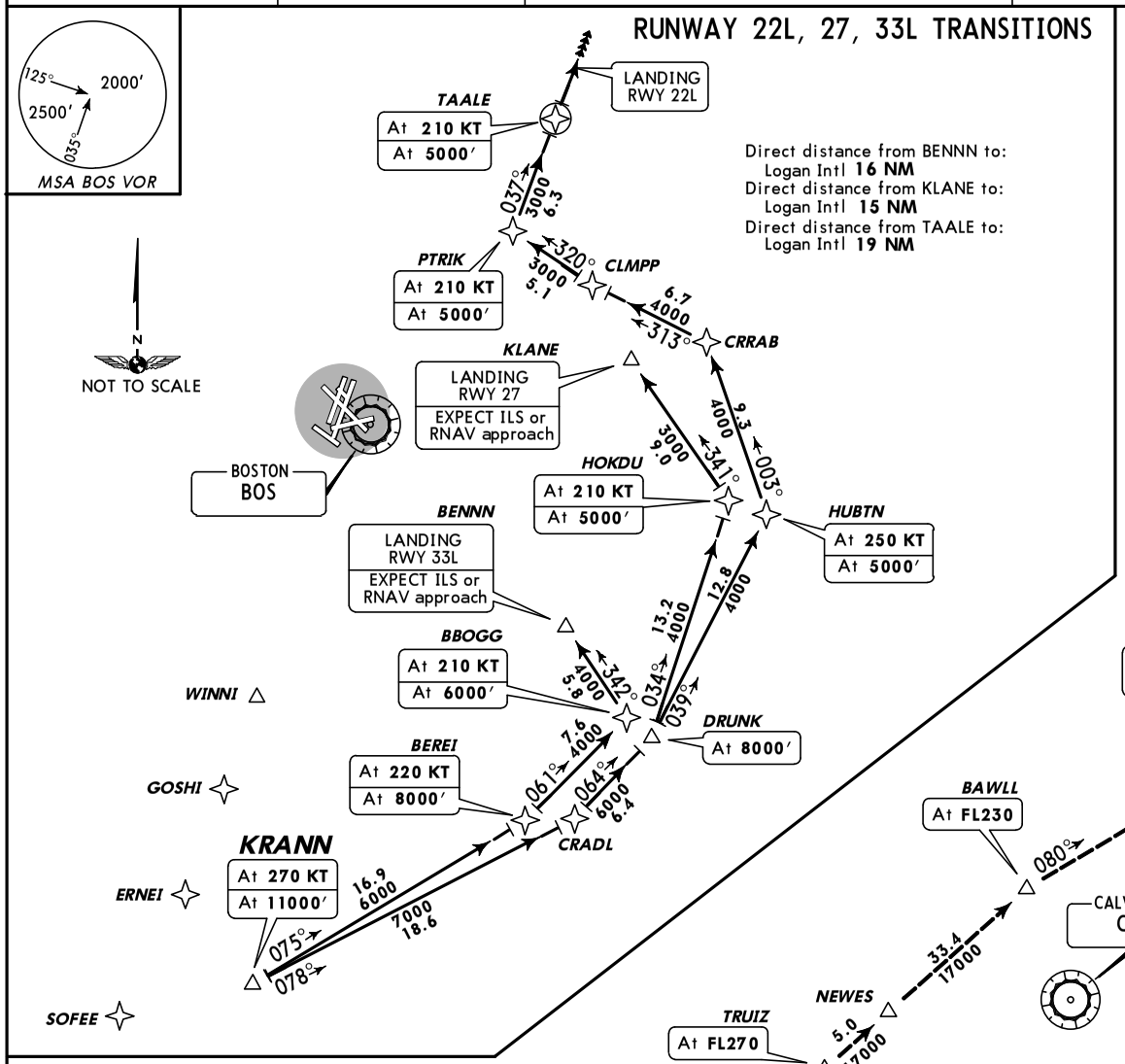
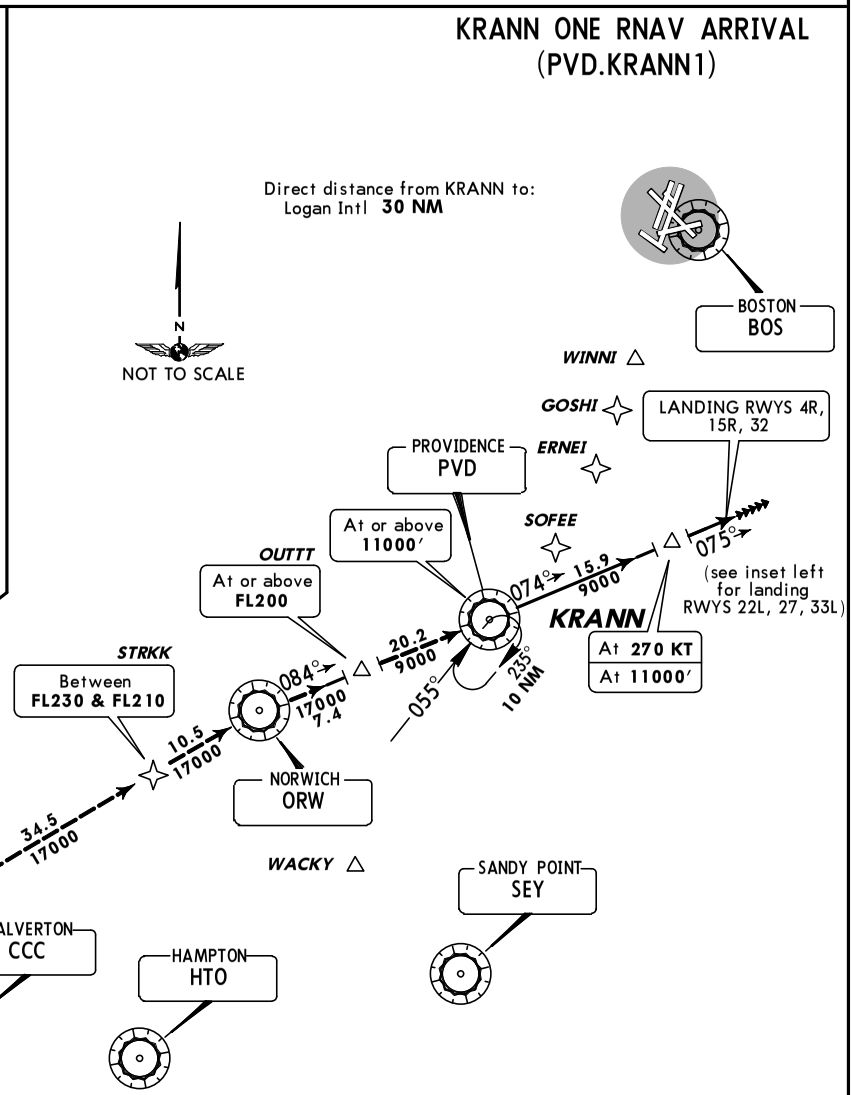
D-ATIS Arrival 135.0	Apt Elev 20′	Alt Set: INCHES Trans level: FL180 Trans alt: 18000′	**1. DME/DME/IRU or GPS required. 2. RADAR required. 3. RNAV 1.** 4. Turbojet aircraft only. 5. Landing Rwys 22L, 27, 33L: EXPECT Boston Approach to issue runway transition not less than 10 NM prior to KRANN. ALL other runways EXPECT vectors to final.





ROUTING	
From PVD on track 074° to cross KRANN at 270 KT.	
RWY	**LANDING**
4R, 15R, 32	From KRANN on track 075°. EXPECT RADAR vectors to final approach course.
22L	From KRANN on track 078° to CRADL, then on track 064° to DRUNK, then on track 039° to cross HUBTN at 250 KT, then on track 003° to CRRAB, then on track 313° to CLMPP, then on track 320° to cross PTRIK at 210 KT, then on track 037° to cross TAALE at 210 KT, then on track 037°. EXPECT RADAR vectors to final approach course.
27	From KRANN on track 078° to CRADL, then on track 064° to DRUNK, then on track 034° to cross HOKDU at 210 KT, then on track 341° to KLANE. EXPECT ILS or RNAV approach.
33L	From KRANN on track 075° to cross BEREI at 220 KT, then on track 061° to cross BBOGG at 210 KT, then on track 342° to BENNN. EXPECT ILS or RNAV approach.

CHANGES: New procedure at this airport (INNDY STAR cancelled).

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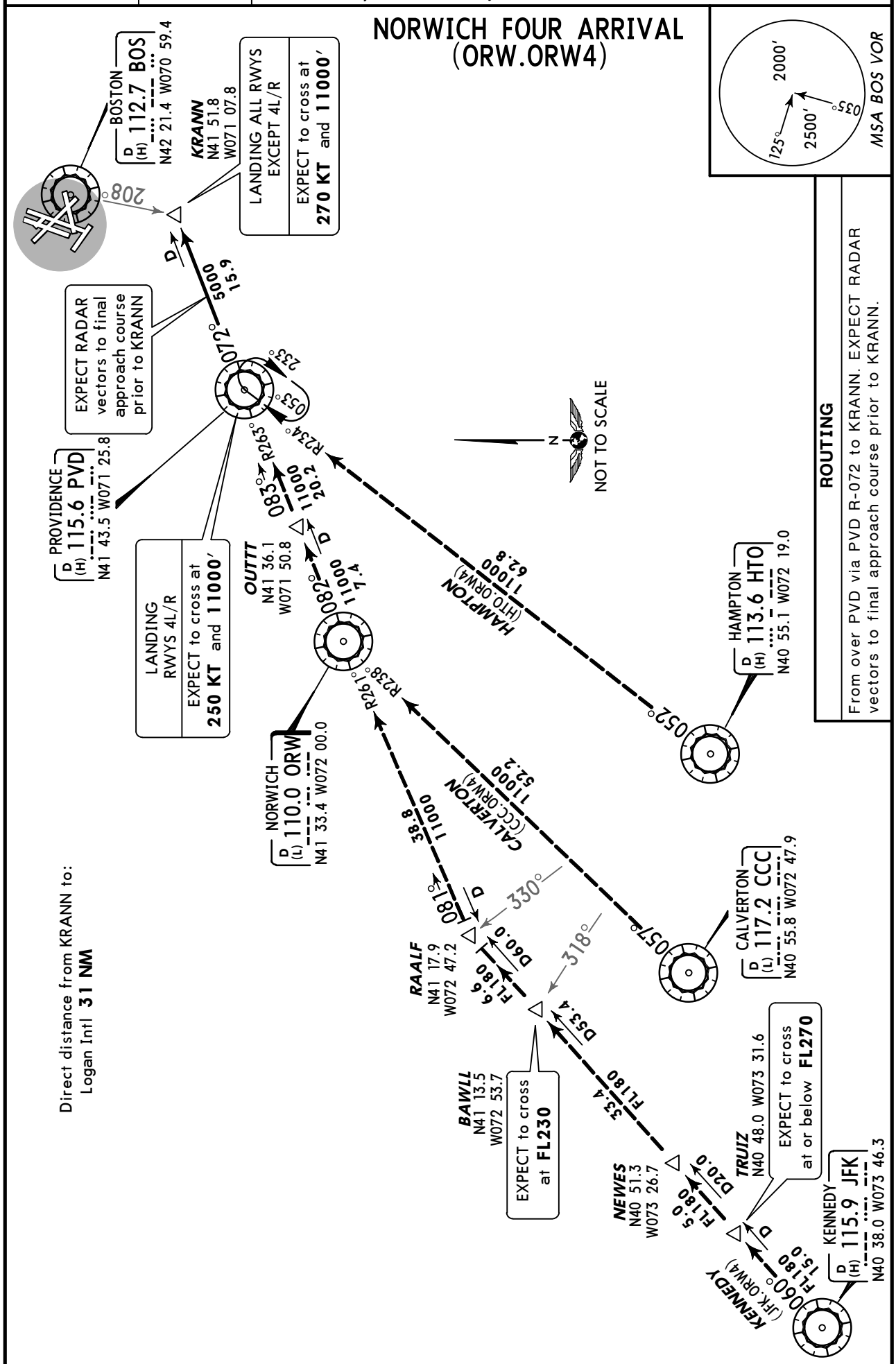
D-ATIS Arrival	Apt Elev	
135.0	20′	Alt Set: INCHES Trans level: FL180 Trans alt: 18000′ **1. DME and RADAR required.** 2. For turbojet aircraft only.

NORWICH FOUR ARRIVAL (ORW.ORW4)



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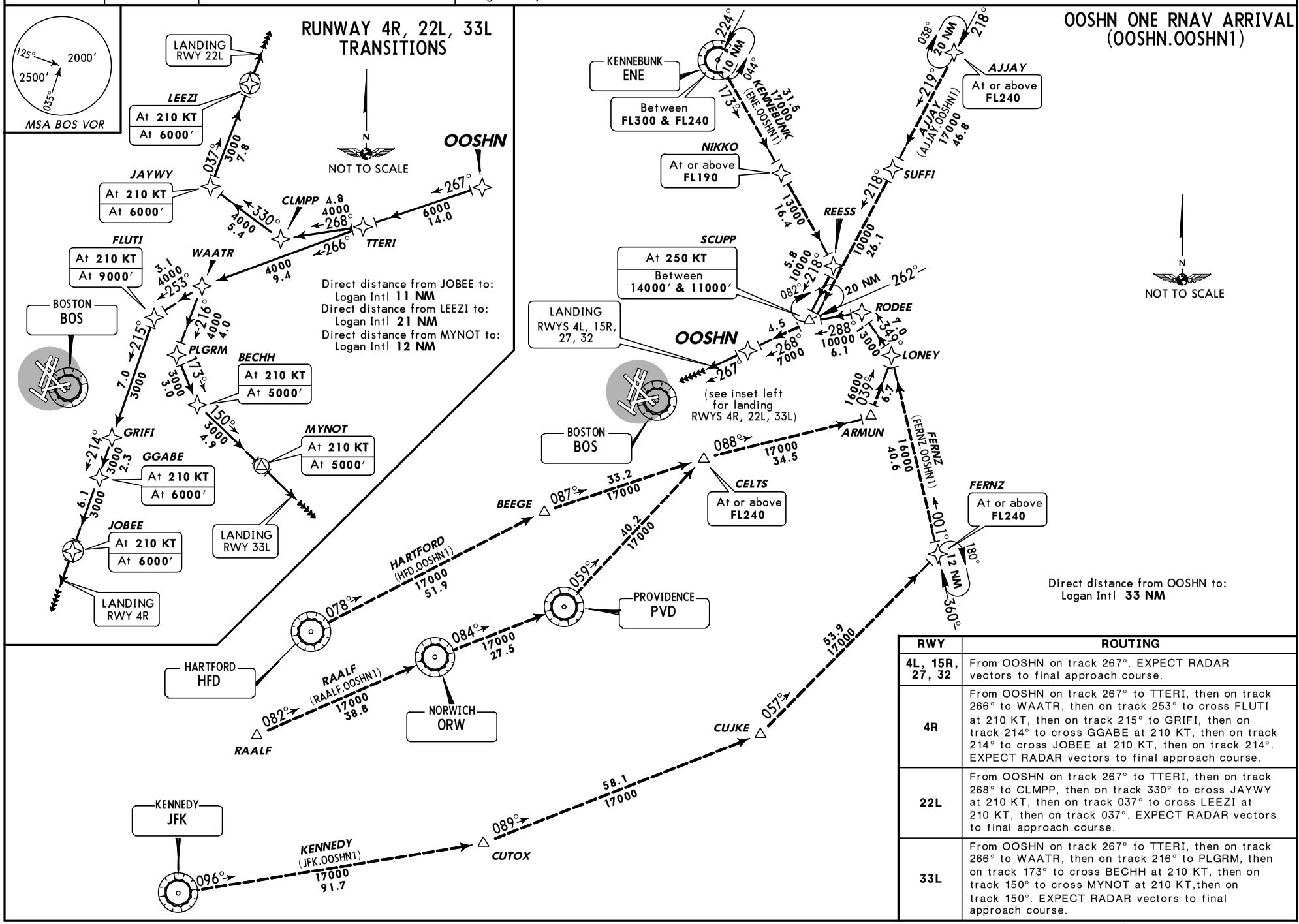
D-ATIS Arrival	Apt Elev		
135.0	20′	Alt Set: INCHES Trans level: FL180 Trans alt: 18000′	**1. DME/DME/IRU or GPS required. 2. RADAR required. 3. RNAV 1.** 4. Turbojet aircraft only. 5. Landing Rwys 4R, 22L, 33L: EXPECT Boston Approach to issue runway transition not later than 10 NM prior to TTERI. All other runways EXPECT vectors after OOSHN. 6. HARTFORD, KENNEDY, and RAALF enroute Transitions are ATC assigned only.



RWY	ROUTING
4L, 15R, 27, 32	From OOSHN on track 267°. EXPECT RADAR vectors to final approach course.
4R	From OOSHN on track 267° to TTERI, then on track 266° to WAATR, then on track 253° to cross FLUTI at 210 KT, then on track 215° to GRIFI, then on track 214° to cross GGABE at 210 KT, then on track 214° to cross JOBEE at 210 KT, then on track 214°. EXPECT RADAR vectors to final approach course.
22L	From OOSHN on track 267° to TTERI, then on track 268° to CLMPP, then on track 330° to cross JAYWY at 210 KT, then on track 037° to cross LEEZI at 210 KT, then on track 037°. EXPECT RADAR vectors to final approach course.
33L	From OOSHN on track 267° to TTERI, then on track 266° to WAATR, then on track 216° to PLGRM, then on track 173° to cross BECHH at 210 KT, then on track 150° to cross MYNOT at 210 KT,then on track 150°. EXPECT RADAR vectors to final approach course.

CHANGES: New procedure at this airport.

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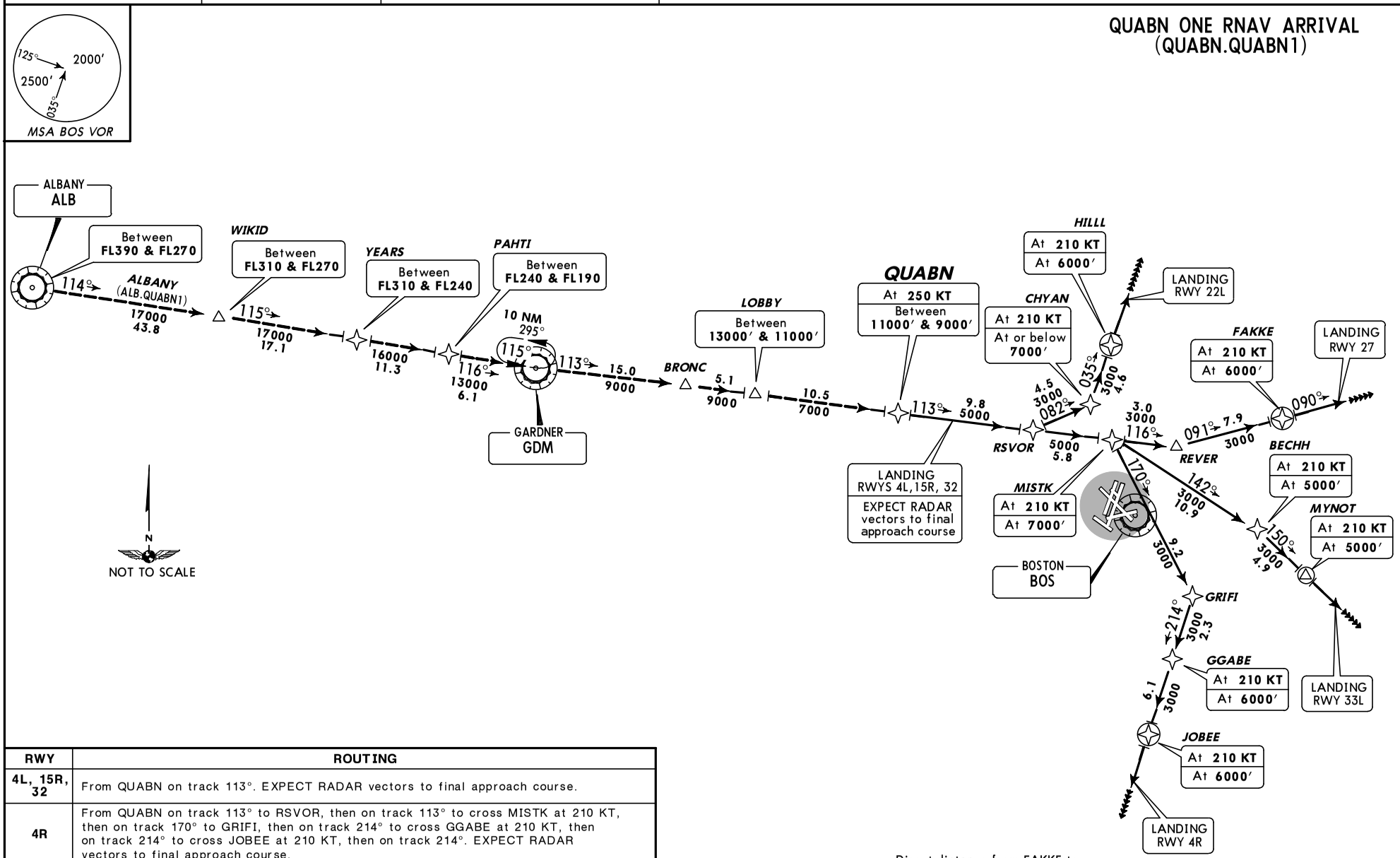
D-ATIS Arrival 135.0	Apt Elev 20′	Alt Set: INCHES Trans level: FL180 Trans alt: 18000′	**1. DME/DME/IRU or GPS required. 2. RADAR required. 3. RNAV 1.** 4. Turbojet aircraft only. 5. Landing Rwys 4R, 22L, 27, 33L: EXPECT Boston Approach to issue runway transition prior to crossing QUABN. All other runways EXPECT vectors to final.

QUABN ONE RNAV ARRIVAL (QUABN.QUABN1)



RWY	ROUTING
4L, 15R, 32	From QUABN on track 113°. EXPECT RADAR vectors to final approach course.
4R	From QUABN on track 113° to RSVOR, then on track 113° to cross MISTK at 210 KT, then on track 170° to GRIFI, then on track 214° to cross GGABE at 210 KT, then on track 214° to cross JOBEE at 210 KT, then on track 214°. EXPECT RADAR vectors to final approach course.
22L	From QUABN on track 113° to RSVOR, then on track 082° to cross CHYAN at 210 KT, then on track 035° to cross HILLL at 210 KT, then on track 035°. EXPECT vectors to final approach course.
27	From QUABN on track 113° to RSVOR, then on track 113° to cross MISTK at 210 KT, then on track 116° to REVER, then on track 091° to cross FAKKE at 210 KT, then on track 090°. EXPECT vectors to final approach.
33L	From QUABN on track 113° to RSVOR, then on track 113° to cross MISTK at 210 KT, then on track 142° to cross BECHH at 210 KT, then on track 150° to cross MYNOT at 210 KT, then on track 150°. EXPECT RADAR vectors to final approach course.

Direct distance from FAKKE to:
Logan Intl **12 NM**
Direct distance from JOBEE to:
Logan Intl **11 NM**
Direct distance from HILLL to:
Logan Intl **12 NM**
Direct distance from MYNOT to:
Logan Intl **12 NM**
Direct distance from QUABN to:
Logan Intl **18 NM**

CHANGES: New procedure at this airport.

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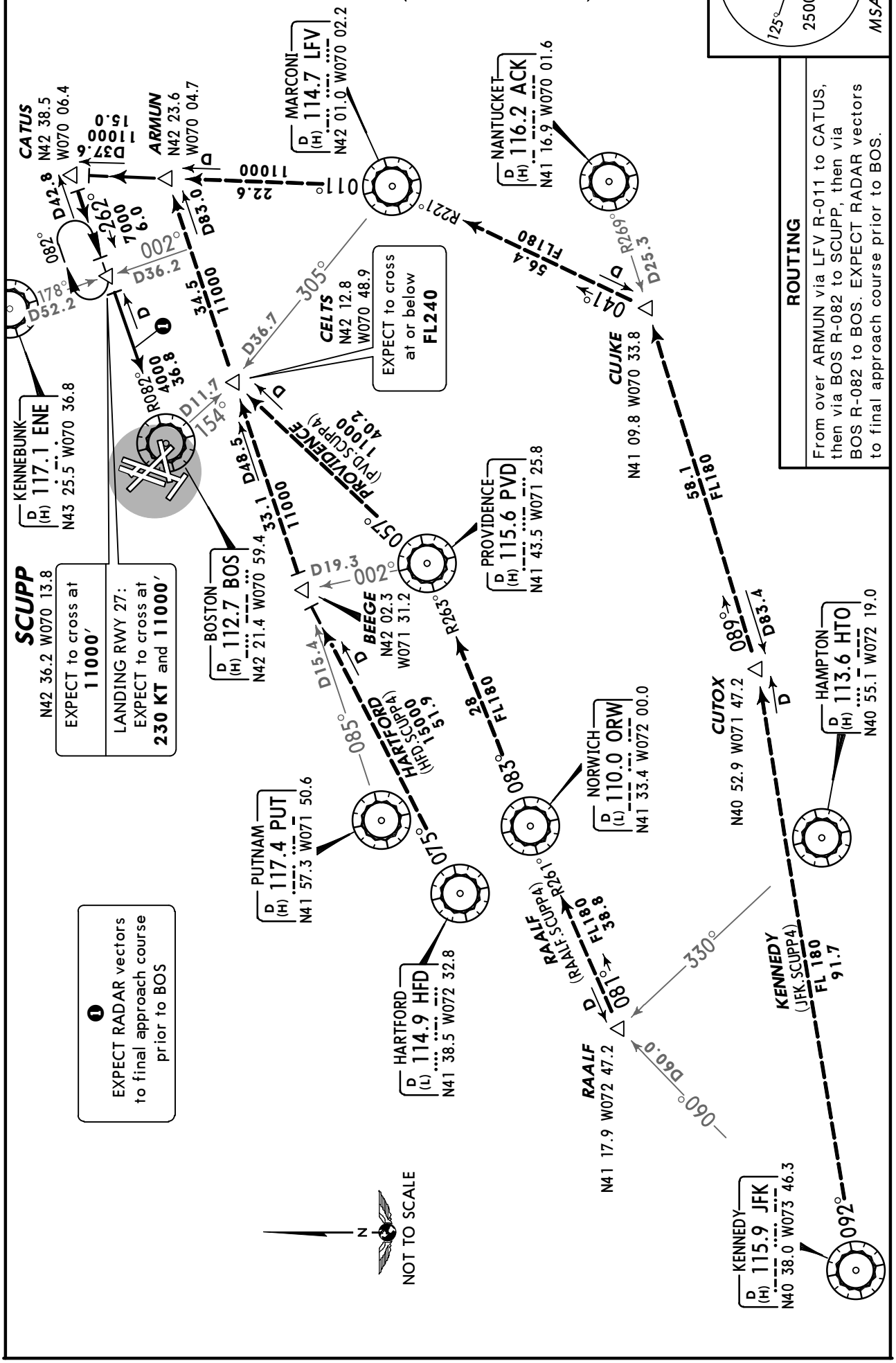
D-ATIS Arrival	Apt Elev	
135.0	20′	Alt Set: INCHES Trans level: FL180 Trans alt: 18000′ For turbojets only.

SCUPP FOUR ARRIVAL (SCUPP.SCUPP4)



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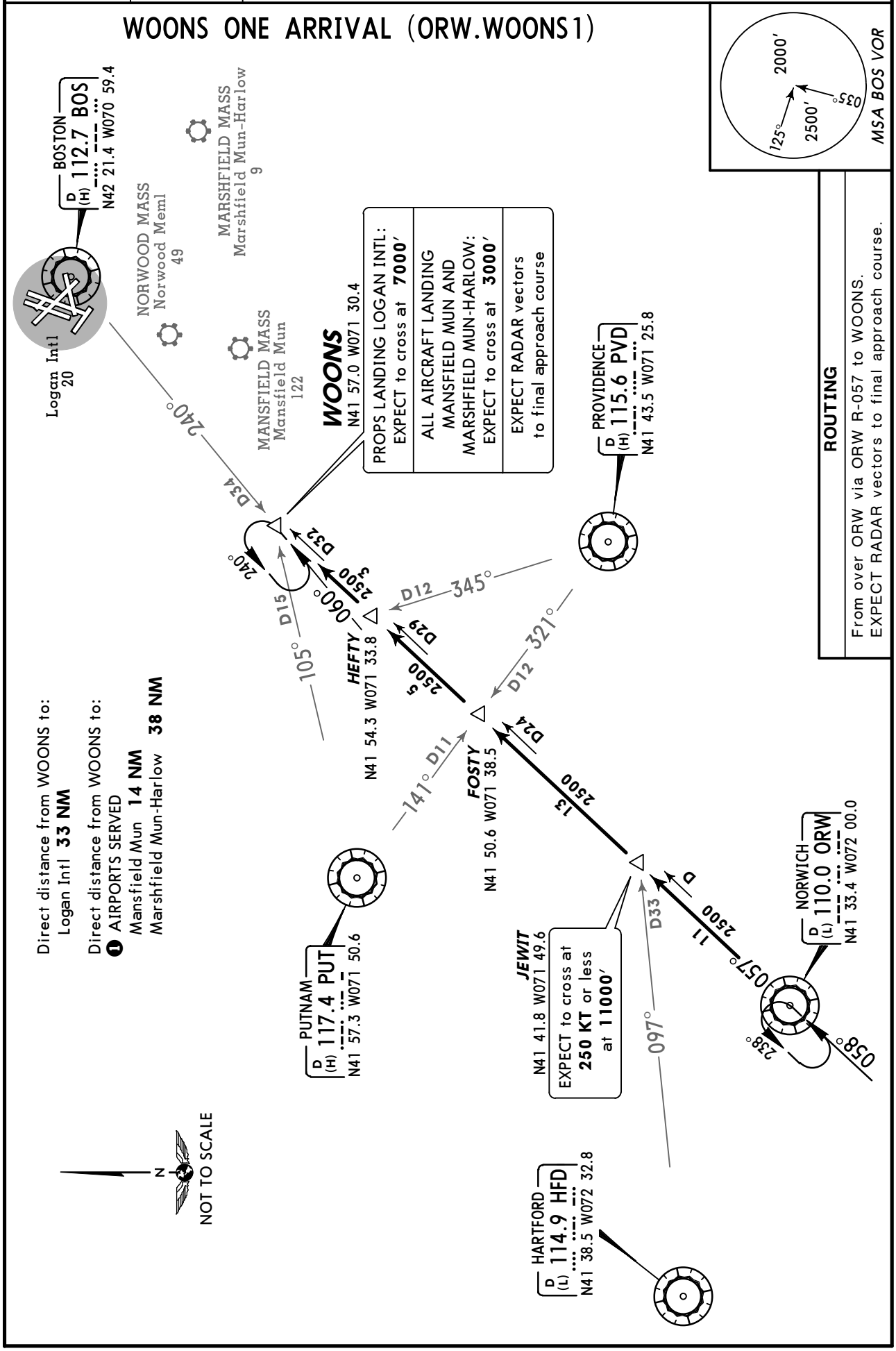
LOGAN INTL D-ATIS Arrival 135.0	*Apt Elev See graphic*	Alt Set: INCHES Trans level: FL180 Trans alt: 18000′ 1. Applicable to prop aircraft landing Logan Intl, and to all aircraft landing Norwood Meml, Mansfield Mun and Marshfield Mun-Harlow. 2. Applicable 11000′ and above. 3. Also serves ❶

WOONS ONE ARRIVAL (ORW.WOONS1)



CHANGES: Chart reindexed, Marshfield Mun-Harlow airport elevation.

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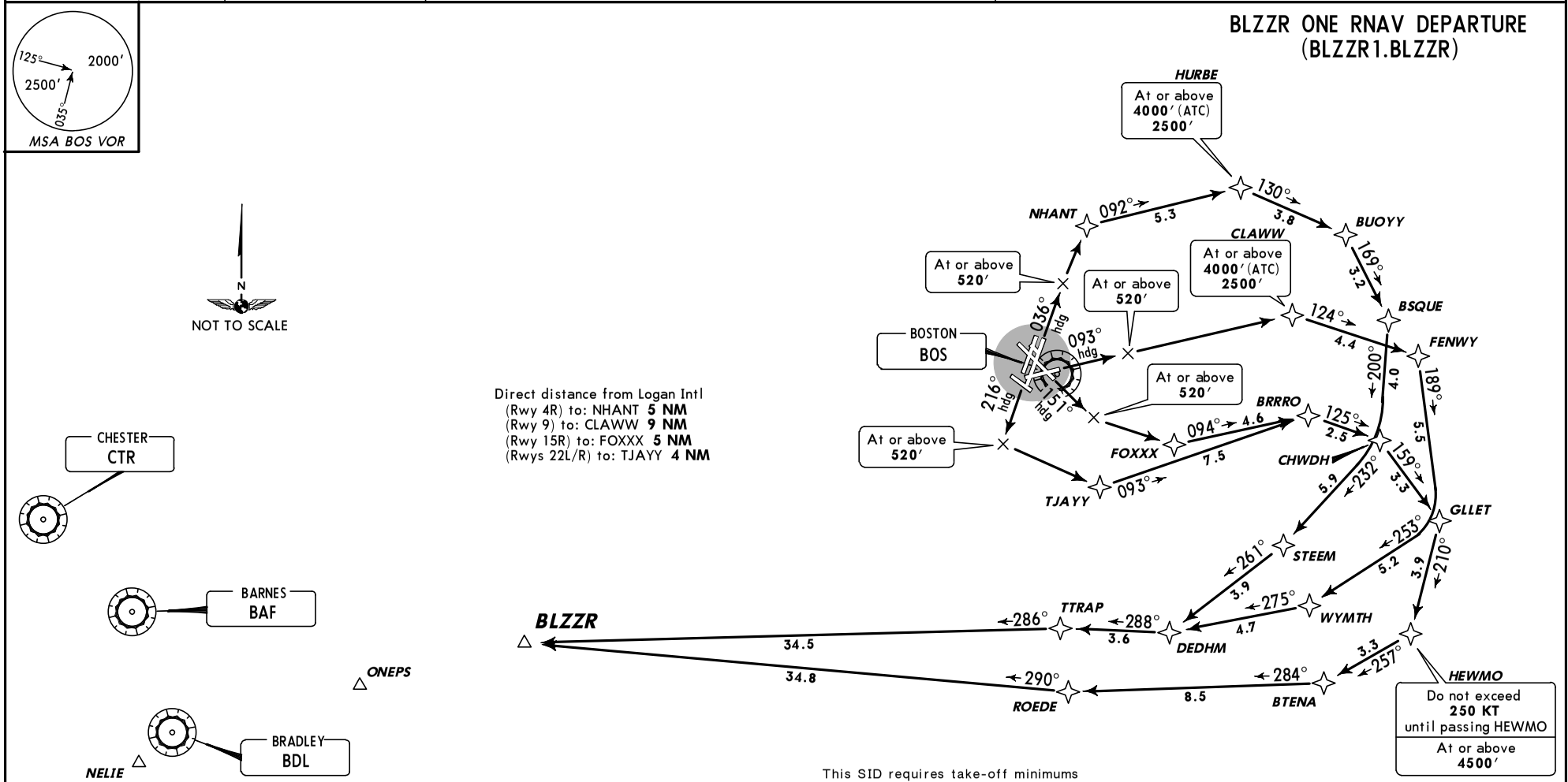
BOSTON Departure (R) 133.0	Apt Elev 20′	Trans level: FL 180 Trans alt: 18000′ **1. DME/DME/IRU or GPS required.** **2. RNAV 1.** **3. RADAR required for non-GPS equipped aircraft.**	4. For turbojets only. 5. Departure heading/RNAV tracks/vectors are predicated on avoiding noise sensitive areas. Flight crew awareness and compliance is important in minimizing noise impacts on surrounding communities. 6. Do not exceed 250 KT until passing HEWMO.

BLZZR ONE RNAV DEPARTURE (BLZZR1.BLZZR)



RWY	INITIAL CLIMB	ALTITUDE
4R	Climb heading 036° to **520′,** then direct NHANT, then on track 092° to cross HURBE at or above **4000′**(ATC)/at or above **2500′**, then on track 130° to BUOYY, then on track 169° to BSQUE, then on track 200° to CHWDH, then on track 232° to STEEM, then on depicted route to BLZZR.	**MAINTAIN 5000′** or lower assigned altitude
9	Climb heading 093° to **520′,** then direct CLAWW, cross CLAWW at or above **4000′**(ATC)/at or above **2500′**, then on track 124° to FENWY, then on track 189° to GLLET, then on track 253° to WYMTH, then on depicted route to BLZZR.	
15R	Climb heading 151° to **520′,** then LEFT turn direct FOXXX, then on track 094° to BRRRO, then on track 125° to CHWDH, then on track 159° to GLLET, then on track 210° to cross HEWMO at or above **4500′**, then on depicted route to BLZZR.	
22L/R	Climb heading 216° to **520′,** then LEFT turn direct TJAYY, then on track 093° to BRRRO, then on track 125° to CHWDH, then on track 159° to GLLET, then on track 210° to cross HEWMO at or above **4500′**, then on depicted route to BLZZR.	

ROUTING

From BLZZR, EXPECT clearance to filed altitude/flight level within ten minutes after departure.

This SID requires take-off minimums (for standard minimums, refer to airport chart):
Rwys 4L, 14, 15L, 27, 32, 33L/R: Not authorized - ATC.
Rwy 4R: Standard (or lower than standard, if authorized) with minimum climb of 268′ per NM to **5000′.** ATC climb of 430′ per NM to **4000′.**
Rwy 9: Standard (or lower than standard, if authorized) with minimum climb of 313′ per NM to **4700′.** ATC climb of 500′ per NM to **4000′.**
Rwy 15R: Standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **1100′.**
Rwy 22L: 300-1 with minimum climb of 400′ per NM to **520′,** or standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **520′** if tower reports no tall vessels in the departure area.
Rwy 22R: Standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **520′.**

OBSTACLES
For TAKEOFF OBSTACLES see 10-3OB1.

Gnd speed-KT	75	100	150	200	250	300
268′ per NM	335	447	670	893	1117	1340
313′ per NM	391	522	783	1043	1304	1565
400′ per NM	500	667	1000	1333	1667	2000
430′ per NM	538	717	1075	1433	1792	2150
500′ per NM	625	833	1250	1667	2083	2500

CHANGES: New procedure at this airport.

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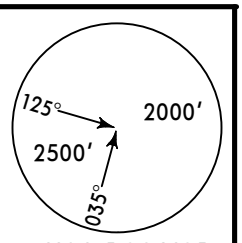
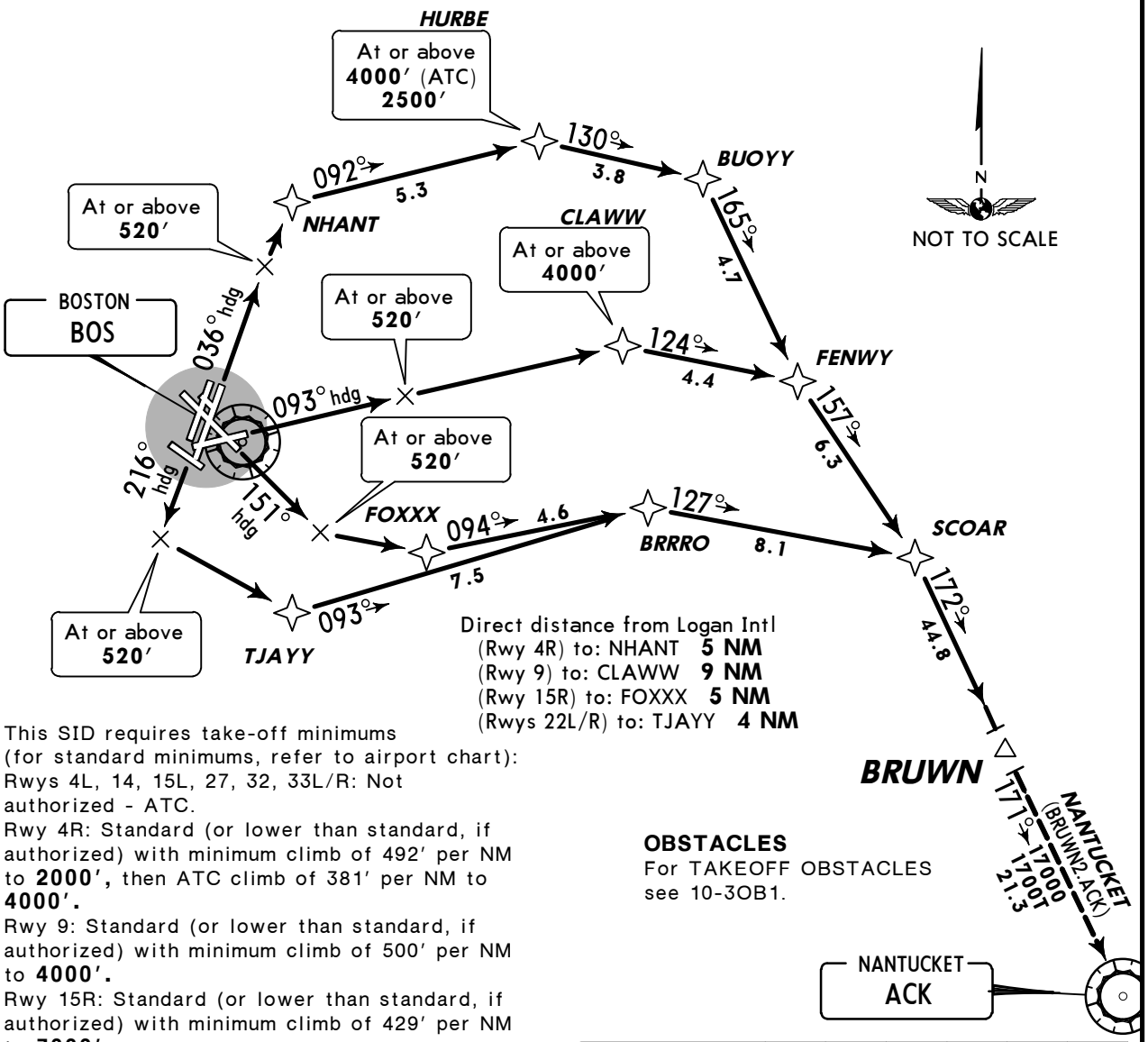
BOSTON Departure (R) 133.0	Apt Elev 20′	Trans level: FL 180 Trans alt: 18000′ **1. DME/DME/IRU or GPS required. 2. RNAV 1.** **3. RADAR required for non-GPS equipped aircraft.** 4. Turbojet aircraft only. 5. Departure heading/RNAV tracks/vectors are predicated on avoiding noise sensitive areas. Flight crew awareness and compliance is important in minimizing noise impacts on surrounding communities.



MSA BOS VOR

BRUWN TWO RNAV DEPARTURE (BRUWN2.BRUWN)



This SID requires take-off minimums (for standard minimums, refer to airport chart):
Rwys 4L, 14, 15L, 27, 32, 33L/R: Not authorized - ATC.
Rwy 4R: Standard (or lower than standard, if authorized) with minimum climb of 492′ per NM to **2000′,** then ATC climb of 381′ per NM to **4000′.**
Rwy 9: Standard (or lower than standard, if authorized) with minimum climb of 500′ per NM to **4000′.**
Rwy 15R: Standard (or lower than standard, if authorized) with minimum climb of 429′ per NM to **3000′.**
Rwy 22L: 300-1 with minimum climb of 400′ per NM to **1500′,** or standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **1500′** if tower reports no tall vessels in the departure area.
Rwy 22R: Standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **1500′.**

OBSTACLES
For TAKEOFF OBSTACLES see 10-3OB1.

Gnd speed-KT	75	100	150	200	250	300
381′ per NM	476	635	953	1270	1588	1905
400′ per NM	500	667	1000	1333	1667	2000
429′ per NM	536	715	1073	1430	1788	2145
492′ per NM	615	820	1230	1640	2050	2460
500′ per NM	625	833	1250	1667	2083	2500

RWY	INITIAL CLIMB	ALTITUDE
4R	Climb heading 036° to **520′,** then direct NHANT, then on track 092° to cross HURBE at or above **4000′** (ATC)/at or above **2500′**, then on depicted route to SCOAR.	**MAINTAIN 5000′** or lower assigned altitude
9	Climb heading 093° to **520′,** then direct CLAWW, cross CLAWW at or above **4000′,** then on depicted route to SCOAR.	
15R	Climb heading 151° to **520′,** then turn LEFT direct FOXXX, then on depicted route to SCOAR.	
22L/R	Climb heading 216° to **520′,** then turn LEFT direct TJAYY, then on depicted route to SCOAR.	

ROUTING

From SCOAR, on depicted route to BRUWN. EXPECT clearance to filed alititude/flight level within ten minutes after departure.

CHANGES: Procedure reindexed.

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BOSTON Departure (R) 133.0	Apt Elev 20′	Trans level: FL 180 Trans alt: 18000′ **1. DME/DME/IRU or GPS required. 2. RADAR required for non-GPS equipped aircraft.** 3. Turbojet aircraft only. **4. RNAV 1.** 5. Departure heading/RNAV tracks/vectors are predicated on avoiding noise sensitive areas. Flight crew awareness and compliance is important in minimizing noise impacts on surrounding communities.

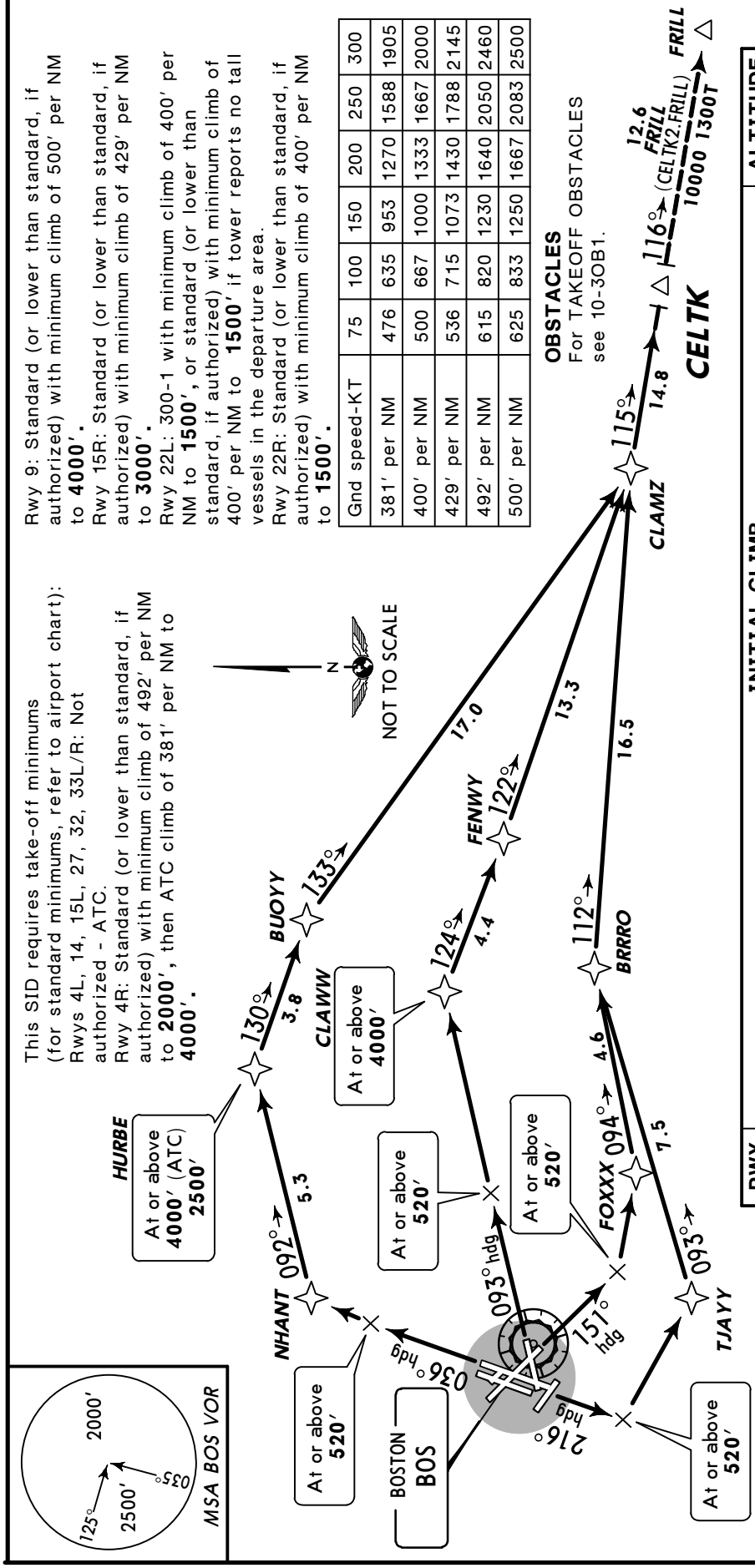
CELTK TWO RNAV DEPARTURE (CELTK2.CELTK)

This SID requires take-off minimums (for standard minimums, refer to airport chart): Rwys 4L, 14, 15L, 27, 32, 33L/R: Not authorized - ATC.
Rwy 4R: Standard (or lower than standard, if authorized) with minimum climb of 492′ per NM to **2000′**, then ATC climb of 381′ per NM to **4000′**.

Rwy 9: Standard (or lower than standard, if authorized) with minimum climb of 500′ per NM to **4000′**.
Rwy 15R: Standard (or lower than standard, if authorized) with minimum climb of 429′ per NM to **3000′**.
Rwy 22L: 300-1 with minimum climb of 400′ per NM to **1500′**, or standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **1500′** if tower reports no tall vessels in the departure area.
Rwy 22R: Standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **1500′**.

Gnd speed-KT	75	100	150	200	250	300
381′ per NM	476	635	953	1270	1588	1905
400′ per NM	500	667	1000	1333	1667	2000
429′ per NM	536	715	1073	1430	1788	2145
492′ per NM	615	820	1230	1640	2050	2460
500′ per NM	625	833	1250	1667	2083	2500

OBSTACLES
For TAKEOFF OBSTACLES see 10-3OB1.



Direct distance from Logan Intl
(Rwy 4R) to: NHANT **5 NM**
(Rwy 9) to: CLAWW **9 NM**
(Rwy 15R) to: FOXXX **5 NM**
(Rwys 22L/R) to: TJAYY **4 NM**

RWY	INITIAL CLIMB	ALTITUDE
4R	Climb heading 036° to **520′**, then direct NHANT, then on track 092° to cross HURBE at or above **4000′** (ATC)/at or above **2500′**, then on depicted route to CLAMZ.	**MAINTAIN 5000′** or lower assigned altitude
9	Climb heading 093° to **520′**, then direct CLAWW, cross CLAWW at or above **4000′**, then on depicted route to CLAMZ.	
15R	Climb heading 151° to **520′**, then turn LEFT direct FOXXX, then on depicted route to CLAMZ.	
22L/R	Climb heading 216° to **520′**, then turn LEFT direct TJAYY, then on depicted route to CLAMZ.	

ROUTING

From CLAMZ, on depicted route to CELTK. EXPECT clearance to filed altitude/flight level within ten minutes after departure.

CHANGES: Procedure reindexed.

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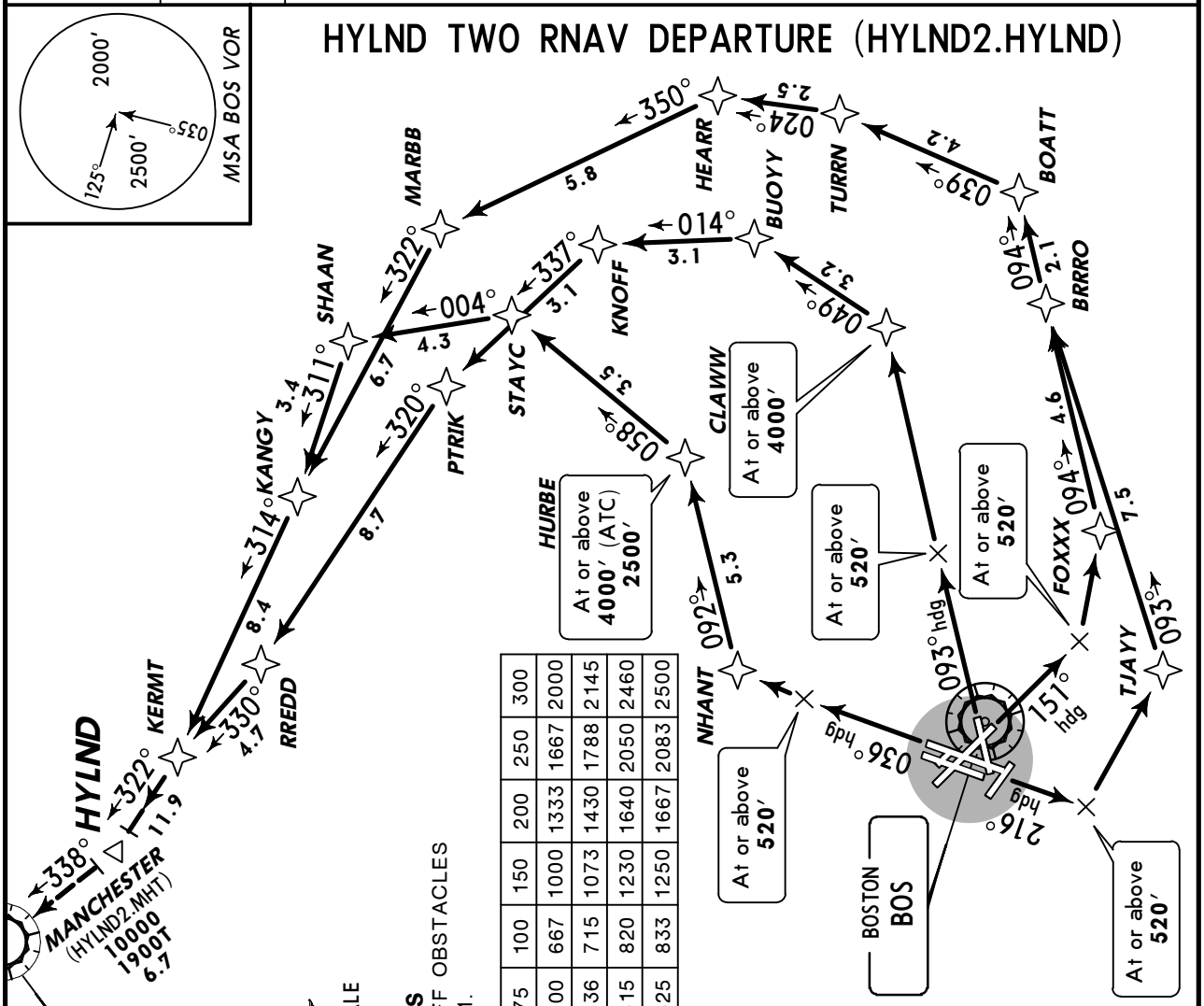
BOSTON Departure (R) 133.0	Apt Elev 20′	Trans level: FL 180 Trans alt: 18000′ **1. DME/DME/IRU or GPS required. 2. RNAV 1. 3. RADAR required for non-GPS equipped aircraft.** 4. Turbojet aircraft only. 5. Departure heading/RNAV tracks/vectors are predicated on avoiding noise sensitive areas. Flight crew awareness and compliance is important in minimizing noise impacts on surrounding communities.

HYLND TWO RNAV DEPARTURE (HYLND2.HYLND)



Gnd speed-KT	75	100	150	200	250	300
400′ per NM	500	667	1000	1333	1667	2000
429′ per NM	536	715	1073	1430	1788	2145
492′ per NM	615	820	1230	1640	2050	2460
500′ per NM	625	833	1250	1667	2083	2500

OBSTACLES
For TAKEOFF OBSTACLES see 10-3OB1.

Direct distance from Logan Intl
(Rwy 4R) to: NHANT **5 NM**
(Rwy 9) to: CLAWW **9 NM**
(Rwy 15R) to: FOXXX **5 NM**
(Rwys 22L/R) to: TJAYY **4 NM**

This SID requires take-off minimums (for standard minimums, refer to airport chart): Rwys 4L, 14, 15L, 27, 32, 33L/R: Not authorized - ATC.
Rwy 4R: Standard (or lower than standard, if authorized) with minimum climb of 492′ per NM to **4000′**.
Rwy 9: Standard (or lower than standard, if authorized) with minimum climb of 500′ per NM to **4000′**.
Rwy 15R: Standard (or lower than standard, if authorized) with minimum climb of 429′ per NM to **3300′**.
Rwy 22L: 300-1 with minimum climb of 400′ per NM to **2500′**, or standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **2500′** if tower reports no tall vessels in the departure area.
Rwy 22R: Standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **2500′**.

RWY	INITIAL CLIMB	ALTITUDE
4R	Climb heading 036° to **520′**, then direct NHANT, then on track 092° to cross HURBE at or above **4000′**(ATC)/at or above **2500′** then on depicted route to KERMT.	**MAINTAIN 5000′** or lower assigned altitude
9	Climb heading 093° to **520′**, then direct CLAWW, cross CLAWW at or above **4000′**, then on depicted route to KERMT.	
15R	Climb heading 151° to **520′**, then turn LEFT direct FOXXX, then on depicted route to KERMT.	
22L/R	Climb heading 216° to **520′**, then turn LEFT direct TJAYY, then on depicted route to KERMT.	

ROUTING

From KERMT, on depicted route to HYLND. EXPECT clearance to filed altitude/flight level within ten minutes after departure.

CHANGES: Procedure reindexed.

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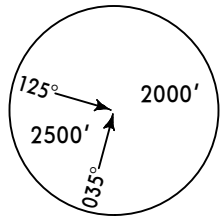
BOSTON Departure (R) 133.0	Apt Elev 20′	Trans level: FL 180 Trans alt: 18000′ **1. DME/DME/IRU or GPS required. 2. RNAV 1.** **3. RADAR required for non-GPS equipped aircraft.** 4. Turbojet aircraft only. 5. Departure heading/RNAV tracks/vectors are predicated on avoiding noise sensitive areas. Flight crew awareness and compliance is important in minimizing noise impacts on surrounding communities.



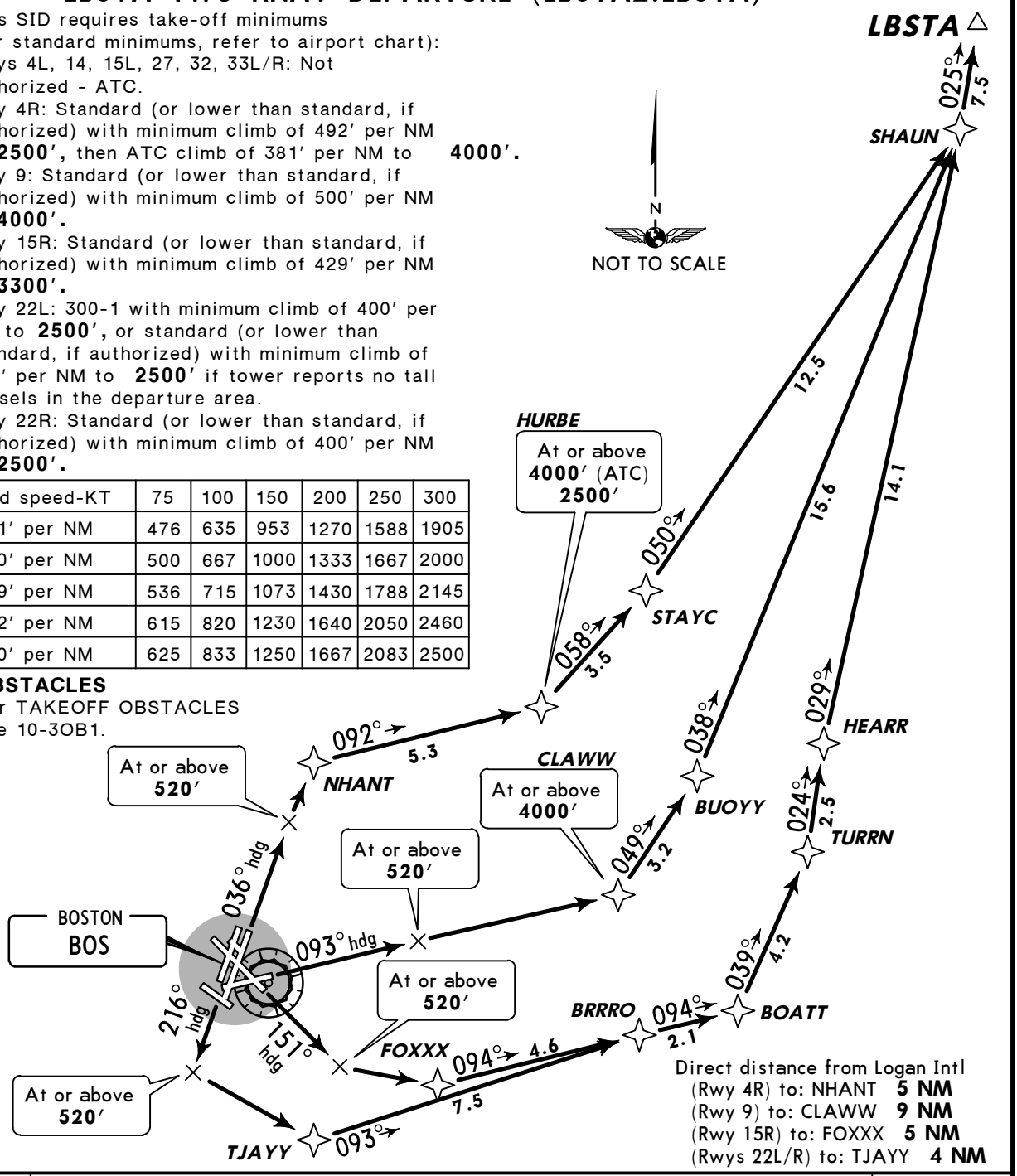
MSA BOS VOR

LBSTA TWO RNAV DEPARTURE (LBSTA2.LBSTA)

This SID requires take-off minimums (for standard minimums, refer to airport chart):
Rwys 4L, 14, 15L, 27, 32, 33L/R: Not authorized - ATC.
Rwy 4R: Standard (or lower than standard, if authorized) with minimum climb of 492′ per NM to **2500′,** then ATC climb of 381′ per NM to **4000′.**
Rwy 9: Standard (or lower than standard, if authorized) with minimum climb of 500′ per NM to **4000′.**
Rwy 15R: Standard (or lower than standard, if authorized) with minimum climb of 429′ per NM to **3300′.**
Rwy 22L: 300-1 with minimum climb of 400′ per NM to **2500′,** or standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **2500′** if tower reports no tall vessels in the departure area.
Rwy 22R: Standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **2500′.**

Gnd speed-KT	75	100	150	200	250	300
381′ per NM	476	635	953	1270	1588	1905
400′ per NM	500	667	1000	1333	1667	2000
429′ per NM	536	715	1073	1430	1788	2145
492′ per NM	615	820	1230	1640	2050	2460
500′ per NM	625	833	1250	1667	2083	2500

OBSTACLES
For TAKEOFF OBSTACLES see 10-3OB1.



Direct distance from Logan Intl
(Rwy 4R) to: NHANT **5 NM**
(Rwy 9) to: CLAWW **9 NM**
(Rwy 15R) to: FOXXX **5 NM**
(Rwys 22L/R) to: TJAYY **4 NM**

RWY	INITIAL CLIMB	ALTITUDE
4R	Climb heading 036° to **520′,** then direct NHANT, then on track 092° to cross HURBE at or above **4000′** (ATC)/at or above **2500′**, then on depicted route to SHAUN.	**MAINTAIN 5000′** or lower assigned altitude
9	Climb heading 093° to **520′,** then direct CLAWW, cross CLAWW at or above **4000′,** then on depicted route to SHAUN.	
15R	Climb heading 151° to **520′,** then turn LEFT direct FOXXX, then on depicted route to SHAUN.	
22L/R	Climb heading 216° to **520′,** then turn LEFT direct TJAYY, then on depicted route to SHAUN.	

ROUTING

From SHAUN, on depicted route to LBSTA. EXPECT clearance to filed altitude/flight level within ten minutes after departure.

CHANGES: Procedure reindexed.

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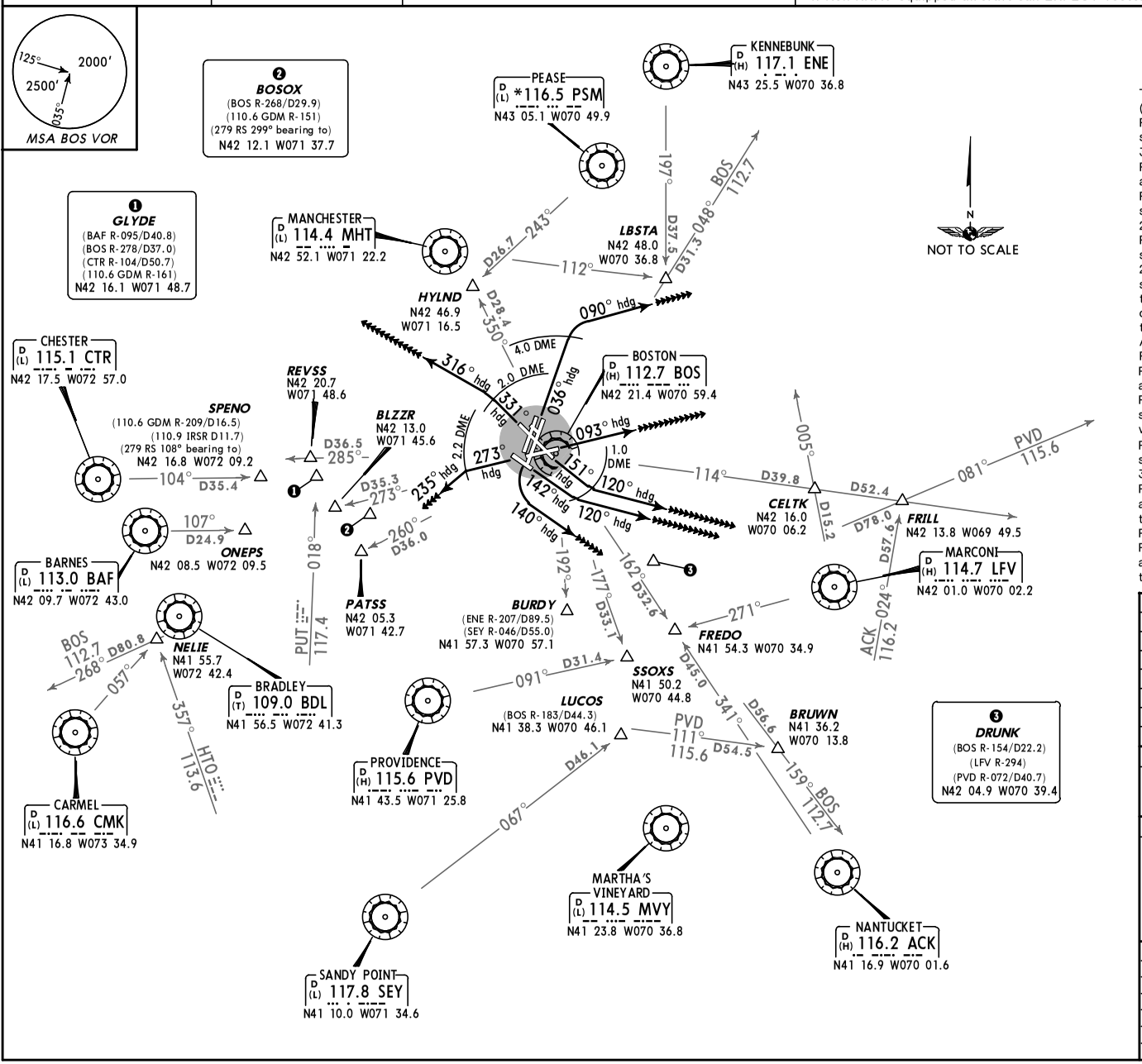
BOSTON Departure (R)	Apt Elev		
133.0	20′	Trans level: FL 180 Trans alt: 18000′	1. RADAR required. 2. DME required for jet aircraft departing runways 4L/R, 14, 15R, 27, 33L. 3. BLZZR, BRUWN, PATSS, REVSS departures: DME required. 4. Non RNAV equipped aircraft can EXPECT vectors on assigned route.



LOGAN SIX DEPARTURE (LOGAN6.LOGAN)

This SID requires take-off minimums (for standard minimums, refer to airport chart):
Rwy 4L: 300-1 or standard (or lower than standard, if authorized) with minimum climb of 358′ per NM to **300′.**
Rwy 4R: Standard (or lower than standard, if authorized).
Rwy 9: 300-1 1/4 or standard (or lower than standard, if authorized) with minimum climb of 257′ per NM to **300′.**
Rwy 14: 500-3 or standard (or lower than standard, if authorized) with minimum climb of 223′ per NM to **600′,** or alternatively, with standard (or lower than standard, if authorized) take-off minimums and a normal 200′ per NM climb gradient, take-off must occur no later than 1900′ prior to departure end of runway. ATC climb of 500′ per NM to **420′.**
Rwy 15L: Not authorized - ATC.
Rwy 15R: Standard (or lower than standard, if authorized). ATC climb of 431′ per NM to **420′.**
Rwy 22L: 300-1 or standard (or lower than standard, if authorized) if tower reports no tall vessels in the departure area.
Rwy 22R: 400-2 or standard (or lower than standard, if authorized) with minimum climb of 320′ per NM to **500′.**
Rwy 27: Standard (or lower than standard, if authorized) with minimum climb of 474′ per NM to **1300′.**
Rwys 32, 33R: Not authorized - Environmental.
Rwy 33L: Standard (or lower than standard, if authorized) with minimum climb of 276′ per NM to **700′.** ATC climb of 465′ per NM to **400′.**

OBSTACLES
For TAKEOFF OBSTACLES see 10-3OB1.

Gnd speed-KT	75	100	150	200	250	300
223′ per NM	279	372	558	743	929	1115
257′ per NM	321	428	643	857	1071	1285
276′ per NM	345	460	690	920	1150	1380
320′ per NM	400	533	800	1067	1333	1600
358′ per NM	448	597	895	1193	1492	1790
431′ per NM	539	718	1078	1437	1796	2155
465′ per NM	581	775	1163	1550	1938	2325
474′ per NM	593	790	1185	1580	1975	2370
500′ per NM	625	833	1250	1667	2083	2500

RWY	INITIAL CLIMB - JET AIRCRAFT	ALTITUDE
4L/R	Climb heading 036° to BOS 4.0 DME, then turn RIGHT heading 090°.	MAINTAIN 5000′ or lower assigned altitude
9	Climb heading 093°.	
14	Climb heading 142° to BOS 1.0 DME, then turn LEFT heading 120°.	
15R	Climb heading 151° to BOS 1.0 DME, then turn LEFT heading 120°.	
22L/R	Climbing LEFT turn heading 140°.	
27	Climb heading 273° to BOS 2.2 DME, then turn LEFT heading 235°.	
33L	Climb heading 331° to BOS 2.0 DME, then turn LEFT heading 316°.	

INITIAL CLIMB - NON-JET AIRCRAFT	ALTITUDE
Climb on assigned heading.	MAINTAIN 3000′ or lower assigned altitude

ROUTING

EXPECT RADAR vectors to assigned route/navaid/fix. EXPECT clearance to filed altitude/flight level within ten minutes after departure.

NOTE: Jet Aircraft - Departure headings/vectors are predicated on avoiding noise sensitive areas. Flight crew awareness and compliance is important in minimizing noise impacts on surrounding communities. Aircraft that are initially vectored over water can EXPECT to cross the coastline above **6000′** before proceeding on course.

BLZZR Departures	EXPECT vectors on BOS R-273, DME required.
BRUWN Departures	EXPECT vectors on BOS R-159, DME required.
CELTK Departures	EXPECT vectors on BOS R-114.
HYLND Departures	EXPECT vectors on BOS R-350.
PATSS Departures	EXPECT vectors on BOS R-260, DME required.
REVSS Departures	EXPECT vectors on BOS R-285, DME required.
SSOXS Departures	EXPECT vectors on BOS R-177.

CHANGES: Ballflags.

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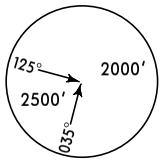
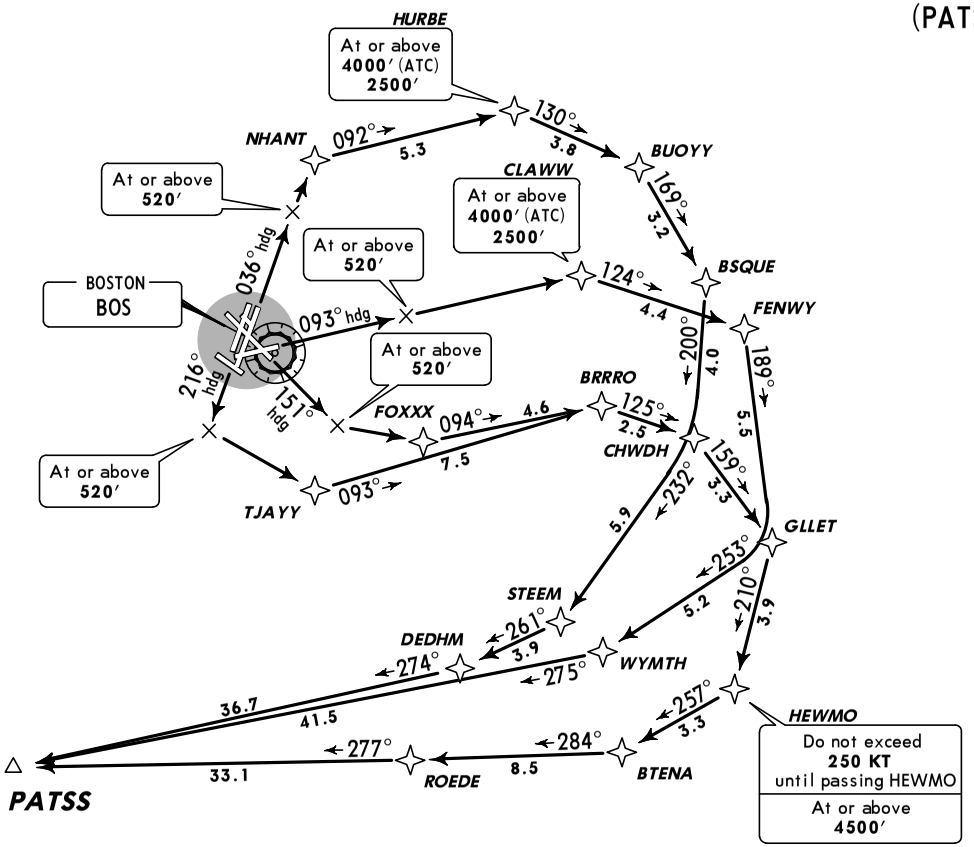
BOSTON Departure (R) 133.0	Apt Elev 20′	Trans level: FL 180 Trans alt: 18000′ **1. DME/DME/IRU or GPS required.** **2. RNAV 1.** **3. RADAR required for non-GPS equipped aircraft.** 4. For turbojets only.	5. Departure headings/RNAV tracks/vectors are predicated on avoiding noise sensitive areas. Flight crew awareness and compliance is important in minimizing noise impacts on surrounding communities. 6. Do not exceed 250 KT until passing HEWMO.

PATSS TWO RNAV DEPARTURE (PATSS2.PATSS)





NOT TO SCALE

Direct distance from Logan Intl
(Rwy 4R) to: NHANT **5 NM**
(Rwy 9) to: CLAWW **9 NM**
(Rwy 15R) to: FOXXX **5 NM**
(Rwys 22L/R) to: TJAYY **4 NM**

RWY	INITIAL CLIMB	ALTITUDE
4R	Climb heading 036° to **520′**, then direct NHANT, then on track 092° to cross HURBE at or above **4000′** (ATC)/at or above **2500′**, then on track 130° to BUOYY, then on track 169° to BSQUE, then on track 200° to CHWDH, then on track 232° to STEEM, then on depicted route to PATSS.	**MAINTAIN 5000′** or lower assigned altitude
9	Climb heading 093° to **520′**, then direct CLAWW, cross CLAWW at or above **4000′** (ATC)/at or above **2500′**, then on track 124° to FENWY, then on track 189° to GLLET, then on track 253° to WYMTH, then on depicted route to PATSS.	
15R	Climb heading 151° to **520′**, then LEFT turn direct FOXXX, then on track 094° to BRRRO, then on track 125° to CHWDH, then on track 159° to GLLET, then on track 210° to cross HEWMO at or above **4500′**, then on depicted route to PATSS.	
22L/R	Climb heading 216° to **520′**, then LEFT turn direct TJAYY, then on track 093° to BRRRO, then on track 125° to CHWDH, then on track 159° to GLLET, then on track 210° to cross HEWMO at or above **4500′**, then on depicted route to PATSS.	

ROUTING

From PATSS, EXPECT clearance to filed altitude/flight level ten minutes after departure.

This SID requires take-off minimums (for standard minimums, refer to airport chart): Rwys 4L, 14, 15L, 27, 32, 33L/R: Not authorized - ATC.
Rwy 4R: Standard (or lower than standard, if authorized) with a minimum climb of 268′ per NM to **4000′.** ATC climb of 430′ per NM to **4000′.**
Rwy 9: Standard (or lower than standard, if authorized) with a minimum climb of 313′ per NM to **3800′.** ATC climb of 500′ per NM to **4000′.**
Rwy 15R: Standard (or lower than standard, if authorized) with a minimum climb of 400′ per NM to **1100′.**
Rwy 22L: 300-1 with a minimum climb of 400′ per NM to **520′** or standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **520′** if tower reports no tall vessels in the departure area.
Rwy 22R: Standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **520′.**

OBSTACLES
For TAKEOFF OBSTACLES see 10-3OB1.

Gnd speed-KT	75	100	150	200	250	300
268′ per NM	335	447	670	893	1117	1340
313′ per NM	391	522	783	1043	1304	1565
400′ per NM	500	667	1000	1333	1667	2000
430′ per NM	538	717	1075	1433	1792	2150
500′ per NM	625	833	1250	1667	2083	2500

CHANGES: None.

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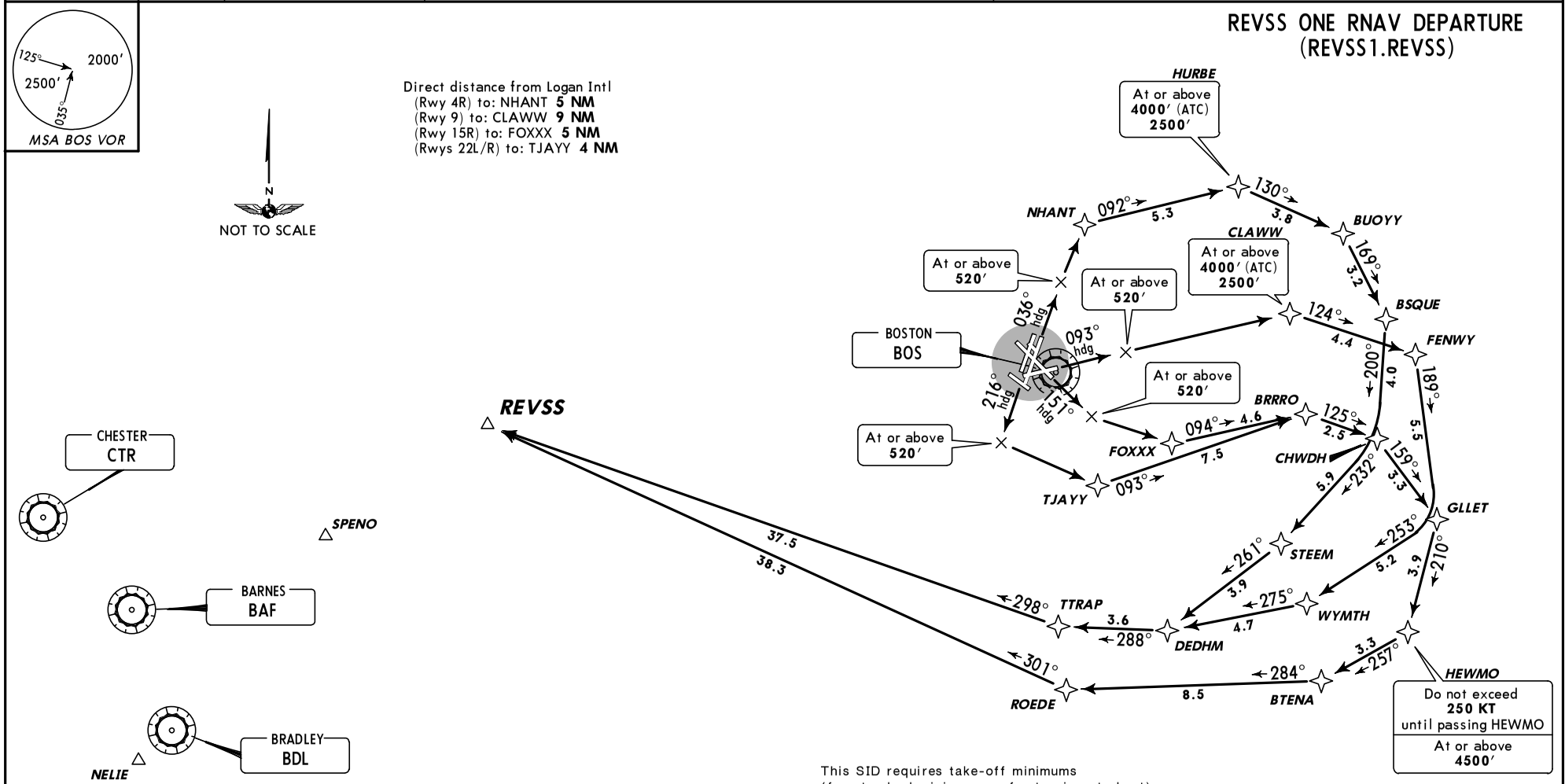
BOSTON Departure (R) 133.0	Apt Elev 20′	Trans level: FL 180 Trans alt: 18000′ **1. DME/DME/IRU or GPS required.** **2. RNAV 1.** **3. RADAR required for non-GPS equipped aircraft.**	4. For turbojets only. 5. Departure heading/RNAV tracks/vectors are predicated on avoiding noise sensitive areas. Flight crew awareness and compliance is important in minimizing noise impacts on surrounding communities. 6. Do not exceed 250 KT until passing HEWMO.

REVSS ONE RNAV DEPARTURE (REVSS1.REVSS)



RWY	INITIAL CLIMB	ALTITUDE
4R	Climb heading 036° to **520′**, then direct NHANT, then on track 092° to cross HURBE at or above **4000′** (ATC)/at or above **2500′**, then on track 130° to BUOYY, then on track 169° to BSQUE, then on track 200° to CHWDH, then on track 232° to STEEM, then on depicted route to REVSS.	**MAINTAIN 5000′** or lower assigned altitude
9	Climb heading 093° to **520′**, then direct CLAWW, cross CLAWW at or above **4000′** (ATC)/at or above **2500′**, then on track 124° to FENWY, then on track 189° to GLLET, then on track 253° to WYMTH, then on depicted route to REVSS.	
15R	Climb heading 151° to **520′**, then LEFT turn direct FOXXX, then on track 094° to BRRRO, then on track 125° to CHWDH, then on track 159° to GLLET, then on track 210° to cross HEWMO at or above **4500′**, then on depicted route to REVSS.	
22L/R	Climb heading 216° to **520′**, then LEFT turn direct TJAYY, then on track 093° to BRRRO, then on track 125° to CHWDH, then on track 159° to GLLET, then on track 210° to cross HEWMO at or above **4500′**, then on depicted route to REVSS.	

ROUTING

From REVSS, EXPECT clearance to filed altitude/flight level within ten minutes after departure.

This SID requires take-off minimums (for standard minimums, refer to airport chart):
Rwys 4L, 14, 15L, 27, 32, 33L/R: Not authorized - ATC.
Rwy 4R: Standard (or lower than standard, if authorized) with minimum climb of 268′ per NM to **5000′.** ATC climb of 430′ per NM to **4000′.**
Rwy 9: Standard (or lower than standard, if authorized) with minimum climb of 313′ per NM to **4700′.** ATC climb of 500′ per NM to **4000′.**
Rwy 15R: Standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **1100′.**
Rwy 22L: 300-1 with minimum climb of 400′ per NM to **520′,** or standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **520′** if tower reports no tall vessels in the departure area.
Rwy 22R: Standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **520′.**

OBSTACLES
For TAKEOFF OBSTACLES see 10-3OB1.

Gnd speed-KT	75	100	150	200	250	300
268′ per NM	335	447	670	893	1117	1340
313′ per NM	391	522	783	1043	1304	1565
400′ per NM	500	667	1000	1333	1667	2000
430′ per NM	538	717	1075	1433	1792	2150
500′ per NM	625	833	1250	1667	2083	2500

CHANGES: New procedure at this airport.

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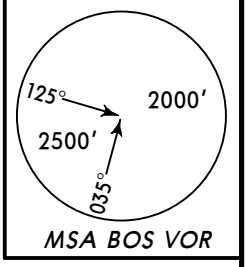
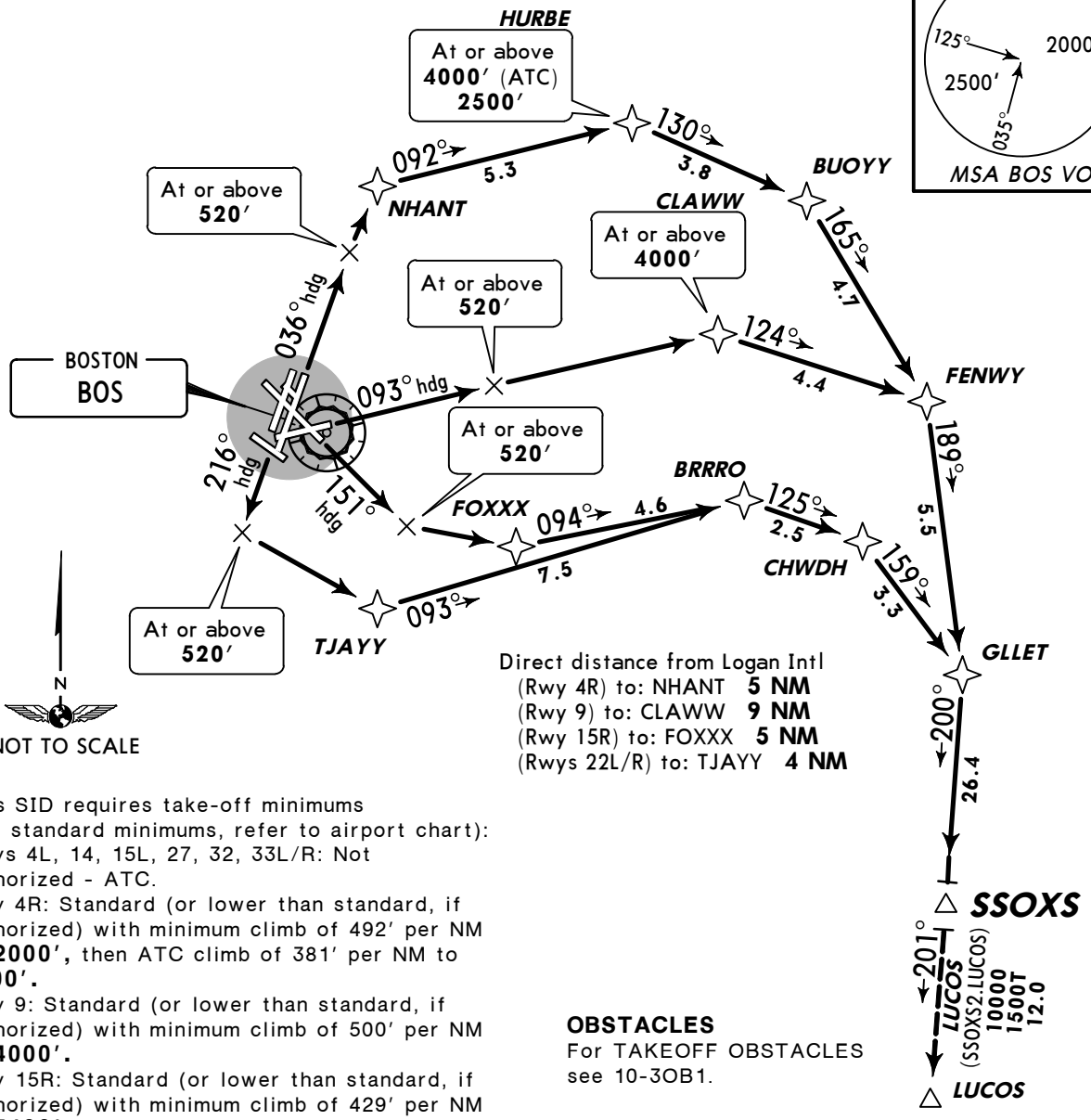
BOSTON Departure (R) 133.0	Apt Elev 20′	Trans level: FL 180 Trans alt: 18000′ **1. DME/DME/IRU or GPS required. 2. RNAV-1.** **3. RADAR required for non-GPS equipped aircraft.** 4. For turbojets only. 5. Departure heading/RNAV tracks/vectors are predicated on avoiding noise sensitive areas. Flight crew awareness and compliance is important in minimizing noise impacts on surrounding communities.

SSOXS TWO RNAV DEPARTURE (SSOXS2.SSOXS)





Direct distance from Logan Intl
(Rwy 4R) to: NHANT **5 NM**
(Rwy 9) to: CLAWW **9 NM**
(Rwy 15R) to: FOXXX **5 NM**
(Rwys 22L/R) to: TJAYY **4 NM**

This SID requires take-off minimums (for standard minimums, refer to airport chart):
Rwys 4L, 14, 15L, 27, 32, 33L/R: Not authorized - ATC.
Rwy 4R: Standard (or lower than standard, if authorized) with minimum climb of 492′ per NM to **2000′,** then ATC climb of 381′ per NM to **4000′.**
Rwy 9: Standard (or lower than standard, if authorized) with minimum climb of 500′ per NM to **4000′.**
Rwy 15R: Standard (or lower than standard, if authorized) with minimum climb of 429′ per NM to **3100′.**
Rwy 22L: 300-1 with minimum climb of 400′ per NM to **2500′,** or standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **2500′** if tower reports no tall vessels in the departure area.
Rwy 22R: Standard (or lower than standard, if authorized) with minimum climb of 400′ per NM to **2500′.**

OBSTACLES
For TAKEOFF OBSTACLES see 10-3OB1.

Gnd speed-KT	75	100	150	200	250	300
381′ per NM	476	635	953	1270	1588	1905
400′ per NM	500	667	1000	1333	1667	2000
429′ per NM	536	715	1073	1430	1788	2145
492′ per NM	615	820	1230	1640	2050	2460
500′ per NM	625	833	1250	1667	2083	2500

RWY	INITIAL CLIMB	ALTITUDE
4R	Climb heading 036° to **520′**, then direct NHANT, then on track 092° to cross HURBE at or above **4000′** (ATC)/at or above **2500′**, then on depicted route to GLLET.	**MAINTAIN 5000′** or lower assigned altitude
9	Climb heading 093° to **520′**, then direct CLAWW, cross CLAWW at or above **4000′,** then on depicted route to GLLET.	
15R	Climb heading 151° to **520′**, then turn LEFT direct FOXXX, then on depicted route to GLLET.	
22L/R	Climb heading 216° to **520′**, then turn LEFT direct TJAYY, then on depicted route to GLLET.	

ROUTING

From GLLET, on depicted route to SSOXS. EXPECT clearance to filed altitude/flight level within ten minutes after departure.

CHANGES: Procedure reindexed.

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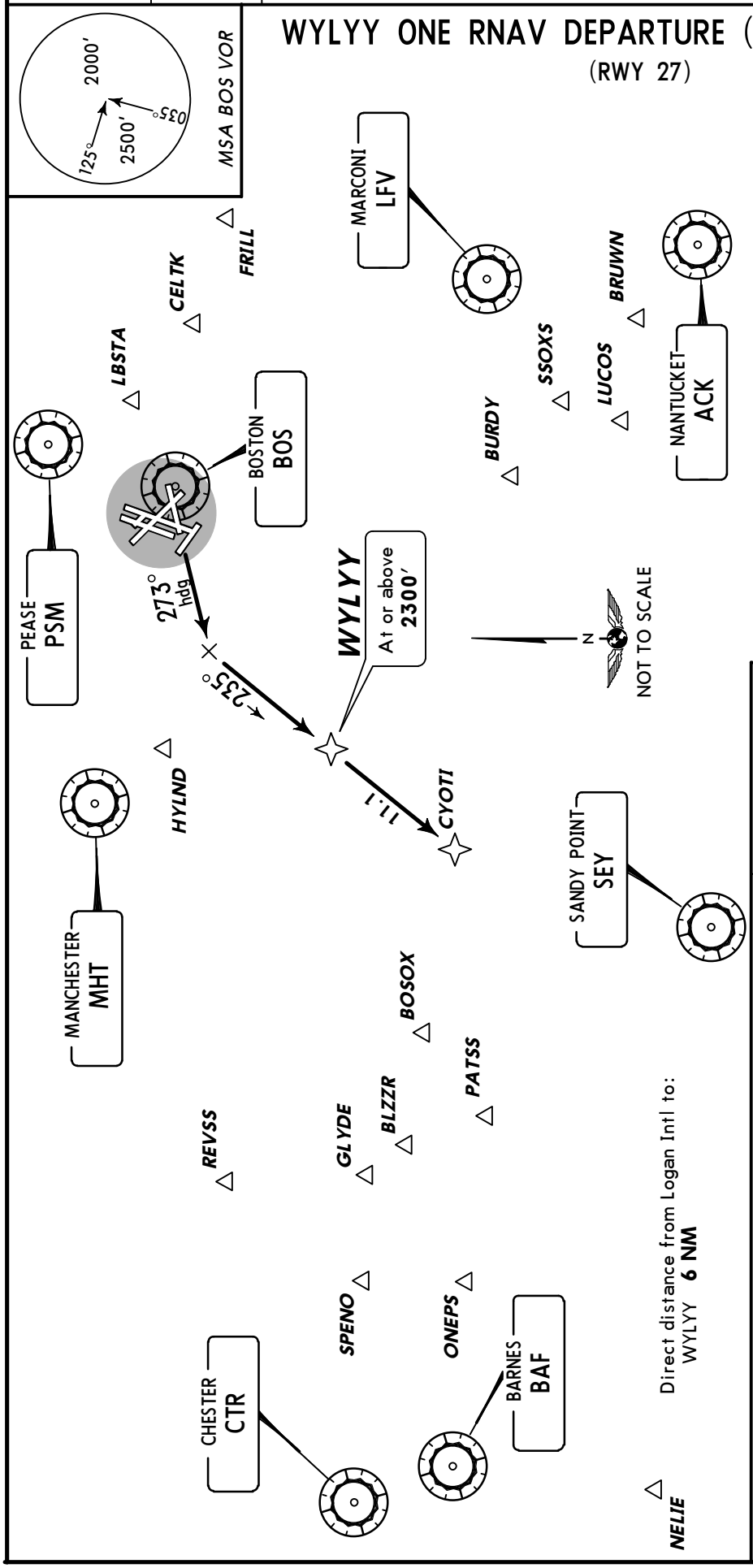
BOSTON Departure (R) 133.0	Apt Elev 20′	Trans level: FL180 Trans alt: 18000′ **1. DME/DME/IRU or GPS required. 2. RNAV 1.** **3. RADAR required.** 4. For turbojets only. 5. Departure heading/RNAV tracks/vectors are predicated on avoiding noise sensitive areas. Flight crew awareness and compliance is important in minimizing noise impacts on surrounding communities. 6. ATC assigned. Do not file.

WYLYY ONE RNAV DEPARTURE (WYLYY1.WYLYY)

(RWY 27)



OBSTACLES
For TAKEOFF OBSTACLES see 10-3OB1.

This SID requires take-off minimums (for standard minimums, refer to airport chart):
Rwys 4L/R, 9, 14, 15L/R, 22L/R, 32, 33L/R:
Not authorized - ATC.
Rwy 27: Standard (or lower than standard, if authorized) with a minimum climb of 474′ per NM to **2300′.**

Gnd speed-KT	75	100	150	200	250	300
474′ per NM	593	790	1185	1580	1975	2370

INITIAL CLIMB

Climb heading 273° to intercept course 235° to cross WYLYY at or above **2300′**, then on depicted route to CYOTI.

ALTITUDE

MAINTAIN 5000′ or lower assigned altitude

ROUTING

EXPECT vectors to assigned fix/navaid. EXPECT clearance to filed altitude/flight level within ten minutes after departure.
Departures assigned routing via LBSTA, PSM, MHT, HYLND, or REVSS direct to SPENO; BLZZR direct ONEPS; PATSS, GLYDE, or BOSOX EXPECT RADAR vectors to the RIGHT to assigned route/fix.
Departures assigned routing via CELTK, FRILL, LFV, ACK, BRUWN, SSOXS, LUCOS, SEY, or BURDY EXPECT RADAR vectors to the LEFT to assigned route/fix.

CHANGES: Procedure renumbered, routing, ACK added, notes.

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TAKEOFF OBSTACLE NOTES

◦ RWY 4L:
SHIPS BEGINNING 693' FROM DER, ON CENTERLINE, UP TO 50' AGL/50' MSL. TREES BEGINNING 2094' FROM DER, 91' LEFT OF CENTERLINE, UP TO 46' AGL/143' MSL. POLE AND TREES BEGINNING 1806' FROM DER, 740' RIGHT OF CENTERLINE, UP TO 51' AGL/79' MSL. TREES 3975' FROM DER, 1486' LEFT OF CENTERLINE, UP TO 71' AGL/198' MSL.

◦ RWY 4R:
SHIPS BEGINNING 579' FROM DER, ON CENTERLINE, UP TO 50' AGL/50' MSL. POLE AND TREES BEGINNING 1806' FROM DER, 403' LEFT OF CENTERLINE, UP TO 51' AGL/79' MSL.

◦ RWY 9:
SHIPS 762' FROM DER, ON CENTERLINE, UP TO 65' AGL/65' MSL. TANK 5904' FROM DER, 1453' LEFT OF CENTERLINE, 109' AGL/206' MSL.

◦ RWY 14:
SHIP RIG 5439' FROM DER, 1824' RIGHT OF CENTERLINE, 176' AGL/176' MSL. WINDMILL 2.5 NM FROM DER, 2997' RIGHT OF CENTERLINE, 394' AGL/434' MSL.

◦ RWY 15R:
SIGN 45' FROM DER, 267' RIGHT OF CENTERLINE, 6' AGL/16' MSL.

◦ RWY 22L:
POLE 394' FROM DER, ON CENTERLINE, 15' AGL/31' MSL. TOWER 3585' FROM DER, 926' LEFT OF CENTERLINE, 108' AGL/128' MSL. MOBILE CRANE 3675' FROM DER, 439' RIGHT OF CENTERLINE, 122' AGL/145' MSL. SHIP RIG 2440' FROM DER, 34' LEFT OF CENTERLINE, 176' AGL/176' MSL.

◦ RWY 22R:
SHIP RIG 4064' FROM DER, 8' RIGHT OF CENTERLINE, 176' AGL/176' MSL. STACK 1.4 NM FROM DER, 2795' RIGHT OF CENTERLINE, 320' AGL/335' MSL.

◦ RWY 27:
LIGHT POLE AND ROD BEGINNING 1690' FROM DER, 759' RIGHT OF CENTERLINE, UP TO 60' AGL/100' MSL.

◦ RWY 33L:
ELECTRICAL SYSTEMS, BUILDINGS, CHIMNEY ON BUILDING, AND TANK BEGINNING 796' FROM DER, 603' LEFT OF CENTERLINE, UP TO 40' AGL/149' MSL. SIGN, WIND INDICATOR ON TOWER, AND TREES BEGINNING 248' FROM DER, 51' RIGHT OF CENTERLINE, UP TO 35' AGL/101' MSL. BRIDGE 1.4 NM FROM DER, 2568' LEFT OF CENTERLINE, 262' AGL/262' MSL.

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PILOT GUIDE TO RUNWAY STATUS LIGHTS (RWSL)
LOGAN INTERNATIONAL AIRPORT (BOS)

The FAA is implementing Runway Status Lights (RWSL) at BOS to reduce the frequency and severity of runway incursions. RWSL is a fully automatic, surveillance-driven lighting system that monitors runway usage and directly indicates runway occupancy status to pilots. Initial testing of RWSL at BOS will consist of Runway Entrance Lights (RELs) which illuminate red when it is unsafe to cross or enter a runway, Takeoff Hold Lights (THLs) which illuminate red to indicate when it is unsafe to depart from a runway, and NEW Runway Intersection Lights (RILs) which illuminate red to indicate when it is unsafe to enter or cross the runway/runway intersection ahead. RWSL is not controlled by ATC and indicate status only, never clearance.

BOS Runway Entrance Lights (RELs)

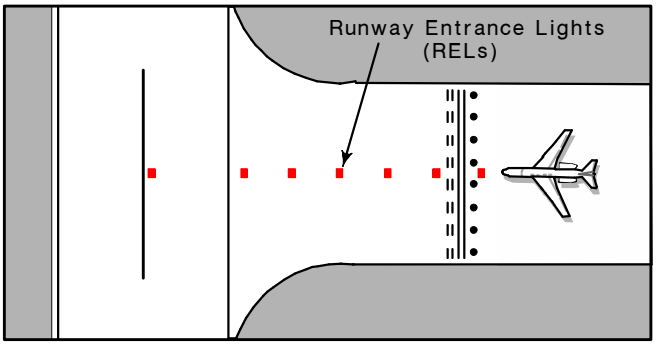


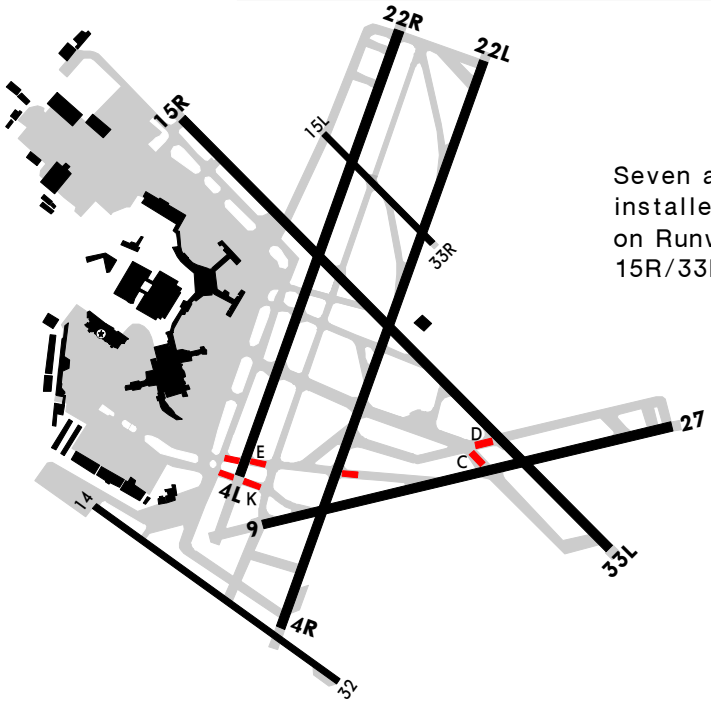
Figure 1. Runway Entrance Lights (RELs)

RELs consist of a series of red in-pavement lights spaced evenly along the taxiway centerline from the taxiway hold line to the runway edge. One additional REL is located near the runway centerline. RELs are directed toward the taxiway hold line and are oriented to be visible only to pilots and vehicle operators entering or crossing the runway from that location.

RED MEANS STOP!

- When the RELs illuminate, you should remain clear of the runway.
- When cleared to either "cross the runway, position and hold, or immediate takeoff," and RELs are illuminated, STOP the aircraft and indicate to ATC that you are stopped with red lights and wait for further clearance.
- If your aircraft crosses the hold line and you subsequently observe illuminated lights, STOP the airplane and notify ATC that you are stopped across the hold line because of red lights.
- If remaining clear of the runway is impractical for safety reasons, you should proceed according to your best judgment of safety (understanding that the illuminated RELs indicate the runway is unsafe to cross or enter) and contact ATC at the earliest opportunity.

RELs TURNING OFF DOES NOT CONSTITUTE CLEARANCE TO CROSS OR ENTER A RUNWAY!



Seven arrays of RELs have been installed at selected intersections on Runways 4L/22R, 4R/22L, 15R/33L, and 9/27.

Figure 2. BOS REL locations (shown as red bars)

CHANGES: Runway Entrance Lights section added.

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BOS Takeoff Hold Lights (THLs)

RED Takeoff Hold Lights (THLs) indicate a runway is unsafe for departing aircraft!

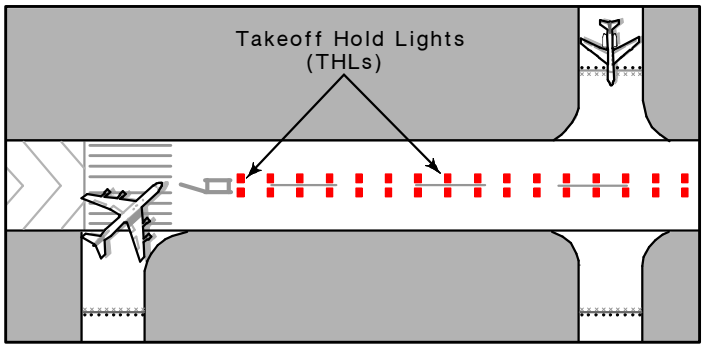


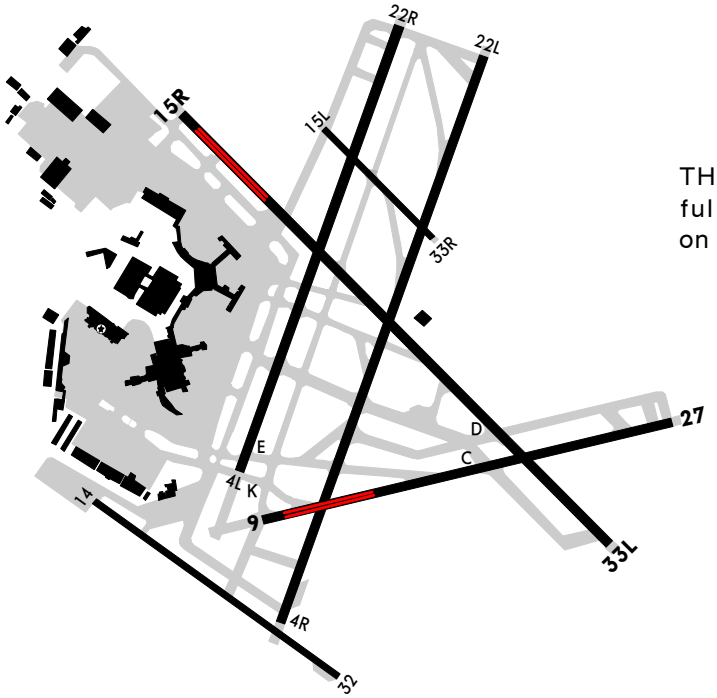
Figure 3. Takeoff Hold Lights (THLs)

THLs at BOS are comprised of two rows of in-pavement red lights on either side of the centerline. THLs begin 375′ (114m) from the runway takeoff threshold and extend for a length of 1500′ (457m). THLs are directed toward the approach end of the runway and are visible to pilots in position for takeoff, during initial takeoff roll, and on final approach to land.

RED MEANS STOP!

- If in position and hold on the runway and THLs illuminate, remain in position for takeoff.
- If you begin your takeoff roll and subsequently observe illuminated THLs, STOP the airplane and notify ATC that you are stopped because of red lights.
- If aborting the takeoff is impractical for safety reasons, proceed according to your best judgment of safety (understanding that the illuminated THLs indicate the runway is unsafe for departure) and contact ATC at the earliest opportunity.
- If on short final and THLs illuminate, you should inform ATC you are going around because of red lights on the runway.

THLs TURNING OFF DOES NOT CONSTITUTE A CLEARANCE TO DEPART FROM A RUNWAY!



THLs have been installed at the full-length departure positions on Runways 15R and 9.

Figure 4. BOS with THLs locations on Runways 15R and 9 (shown as red bars)

CHANGES: None.

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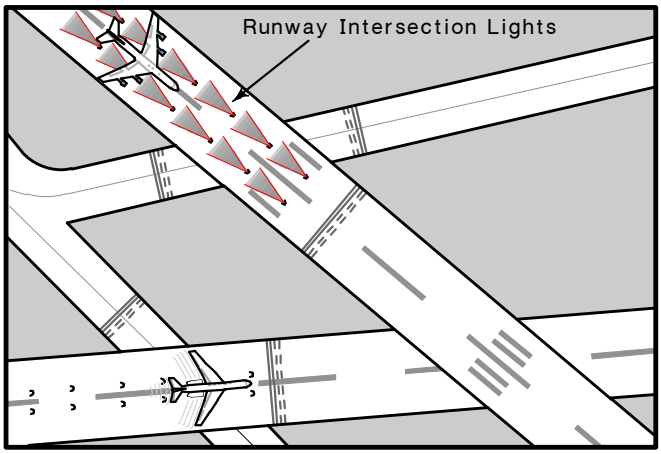
NEW! BOS Runway Intersection Lights (RILs)

RED Runway Intersection Lights (RILs) indicate the runway/runway intersection ahead is unsafe!



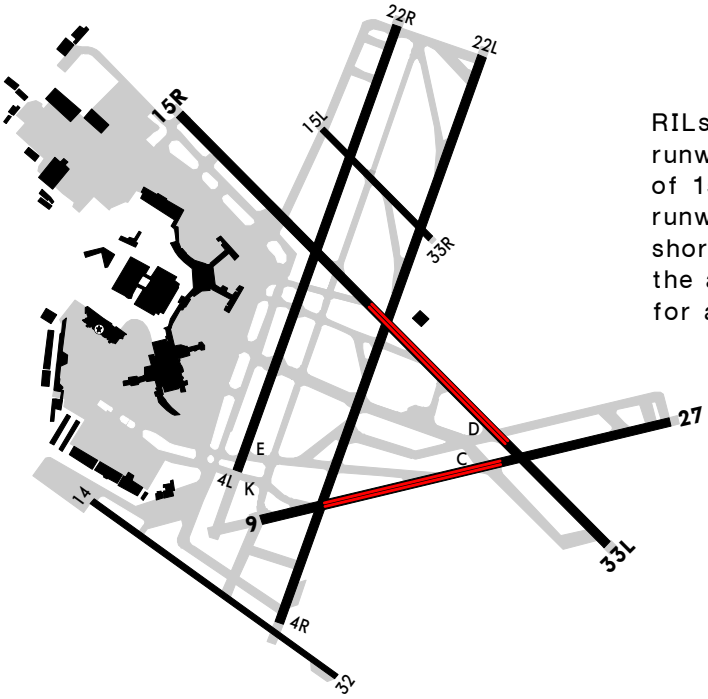
RILs at BOS are comprised of two rows of in-pavement red lights on either side of the centerline extending back 3000′ (914m) from the intersection hold short line. RILs are directed toward the approach end of the runway and are visible to pilots in takeoff or landing roll or to aircraft or vehicles taxiing on the runway.

Figure 5. Runway Intersection Lights (RILs)

RED MEANS STOP!

- If you are in your takeoff roll and observe illuminated RILs, STOP the aircraft and notify ATC that you are stopped because of red lights.
- If in landing roll and RILs illuminate, STOP the aircraft or exit the runway prior to the runway/runway intersection ahead.
- If taxiing on the runway and RILs illuminate, STOP the aircraft or do not enter or cross the runway/runway intersection ahead.
- If stopping is impractical for safety reasons, proceed according to your best judgment of safety (understanding that the illuminated RILs indicate the runway/runway intersection is unsafe for entry or crossing) and contact ATC at the earliest opportunity.

RILs TURNING OFF DOES NOT CONSTITUTE A CLEARANCE TO PROCEED THROUGH A RUNWAY/RUNWAY INTERSECTION!



RILs have been installed at the runway/runway intersection of 15R and 9. RILs start at the runway/runway intersection hold short line and extend back toward the approach end of the runways for a length of 3000′ (914m).

Figure 6. BOS with RILs locations on Runways 15R and 9 (shown as red bars)

An ATIS message will broadcast the current operational status of RWSL.

An operational evaluation of RELs, THLs and RILs at BOS is scheduled to commence on or about May 24th, 2010 and will last approximately 3 months with an option to extend it if successful. During this time, pilot feedback is essential to assess system acceptability. To participate, please visit: **www.RWSL.net**

CHANGES: New chart.

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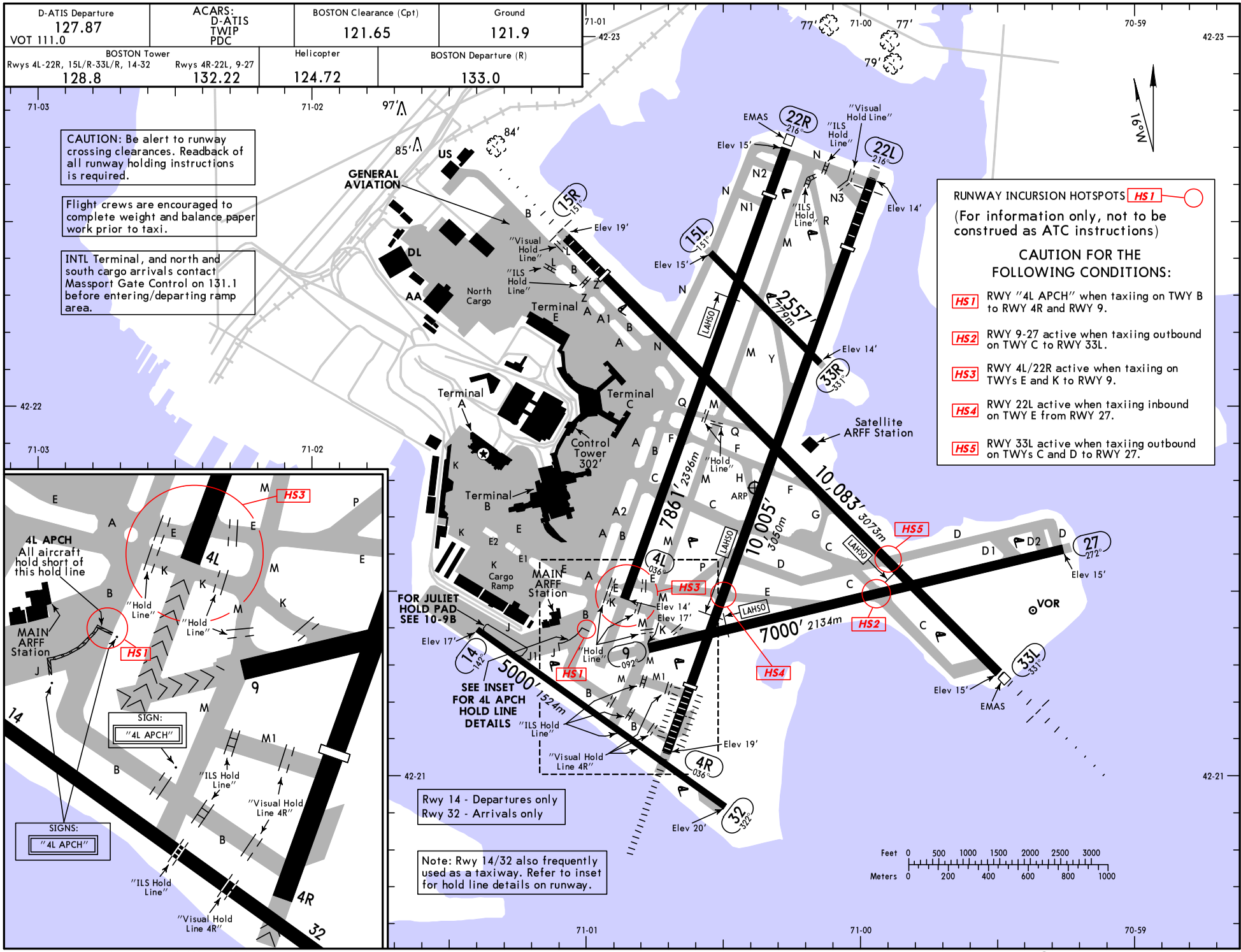
D-ATIS Departure	ACARS: D-ATIS TWIP PDC	BOSTON Clearance (Cpt)	Ground
127.87 VOT 111.0		121.65	121.9

BOSTON Tower Rwys 4L-22R, 15L/R-33L/R, 14-32	BOSTON Tower Rwys 4R-22L, 9-27	Helicopter	BOSTON Departure (R)
128.8	132.22	124.72	133.0



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GENERAL

ASDE-X surveillance system in use. Operate transponders with Mode C on all taxiways and runways.
Low-level wind shear alert system. Terminal Doppler Weather Radar. Birds in vicinity of airport.

ADDITIONAL RUNWAY INFORMATION

RWY			USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	LAHSO Distance	WIDTH
4R	HIRL CL ALSF-II TDZ ❶PAPI-L	grooved RVR	8850′ 2697m	7834′ 2388m			150′ 46m
22L	HIRL CL MALSF PAPI-R (angle 3.0°)	grooved RVR	8806′ 2684m	7745′ 2361m		9/27 6400′ 1951m	
❶ Angle 3.0°							
4L	HIRL REIL PAPI-L (angle 3.0°)	grooved RVR				15L/33R 5250′ 1600m	150′ 46m
22R	HIRL PAPI-L (angle 3.0°)	grooved RVR	7046′ 2148m				
9	HIRL CL	grooved RVR					150′ 46m
27	HIRL CL REIL PAPI-L (angle 3.0°)	grooved RVR		5948′ 1813m		4R/22L 5650′ 1722m	
14	HIRL	grooved					100′ 30m
32	HIRL REIL PAPI-L (angle 3.0°)	grooved					
15R	HIRL CL MALSR TDZ PAPI-L(angle 3.0°)	grooved RVR	9202′ 2805m	8009′ 2441m		9/27 6800′ 2073m	150′ 46m
33L	HIRL CL MALSR TDZ PAPI-R(angle 3.0°)	grooved RVR		9108′ 2776m			
15L 33R	MIRL						100′ 30m

TAKE-OFF AND OBSTACLE DEPARTURE PROCEDURE

Rwys 4R, 15R

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 Mid RVR 5 Rollout RVR 5	TDZ RVR 10 Mid RVR 10 Rollout RVR 10	RVR 16 or 1/4	RVR 24 or 1/2	RVR 50 or 1

Rwy 22L

If tower reports no tall vessels in departure area.

2 operating RVRs are required. All operating RVRs are controlling.		Adequate Vis Ref	STD		Other CEIL-VIS
CL & HIRL	CL, or RCLM & HIRL		3 & 4 Eng	1 & 2 Eng	
TDZ RVR 5 Mid RVR 5 Rollout RVR 5	TDZ RVR 10 Mid RVR 10 Rollout RVR 10	RVR 16 or 1/4	RVR 24 or 1/2	RVR 50 or 1	300- RVR 50 or 1

Rwy 33L

❶ With Mim climb of 224′/NM to 400′

2 operating RVRs are required. All operating RVRs are controlling.		Adequate Vis Ref	STD		Other
CL & HIRL	CL, or RCLM & HIRL		3 & 4 Eng	1 & 2 Eng	
TDZ RVR 5 Mid RVR 5 Rollout RVR 5	TDZ RVR 10 Mid RVR 10 Rollout RVR 10	RVR 16 or 1/4	RVR 24 or 1/2	RVR 50 or 1	300-1¾

❶ Alternatively, with standard take-off minimums and a normal 200′/NM climb gradient, take-off must occur no later than 1900′ prior to departure end of runway.

TAKE-OFF AND OBSTACLE DEPARTURE PROCEDURE

Rwy 9

With Mim climb of 257′/NM to 300′

Both RVRS are required and controlling.		Adequate Vis Ref	STD		Other CEIL-VIS
CL & HIRL	CL, or RCLM & HIRL		3 & 4 Eng	1 & 2 Eng	
TDZ RVR 5 Rollout RVR 5	TDZ RVR 10 Rollout RVR 10	RVR 16 or 1/4	RVR 24 or 1/2	RVR 50 or 1	300- RVR 60 or 1¼

Rwy 27

With Mim climb of 474′/NM to 1300′

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

Rwy 22R

With Mim climb of 320′/NM to 500′

Both RVRs are required and controlling.	Adequate Vis Ref	STD		Other
RCLM & HIRL		3 & 4 Eng	1 & 2 Eng	
TDZ RVR 10 Rollout RVR 10	RVR 16 or 1/4	RVR 24 or 1/2	RVR 50 or 1	400-2

Rwy 4L

With Mim climb of 358′/NM to 300′

Both RVRs are required and controlling.	Adequate Vis Ref	STD		Other CEIL-VIS
RCLM & HIRL		3 & 4 Eng	1 & 2 Eng	
TDZ RVR 10 Rollout RVR 10	RVR 16 or 1/4	RVR 24 or 1/2	RVR 50 or 1	300- RVR 50 or 1

Rwy 14

❷ With Mim climb of 223′/NM to 600′

Adequate Vis Ref	STD		Other
	3 & 4 Eng	1 & 2 Eng	
1/4	1/2	1	500-3

Rwy 15L

Adequate Vis Ref	STD		Rwys 32, 33R
	3 & 4 Eng	1 & 2 Eng	
1/4	1/2	1	NA

❷ Alternatively, with standard take-off minimums and a normal 200′/NM climb gradient, take-off must occur no later than 1900′ prior to departure end of runway.

OBSTACLE DP

Rwy 4L: Climb on a heading between 292° clockwise to 215° from departure end of runway, or minimum climb of 210′ per NM to 1100′ for all other courses.
Rwy 14: Climb on a heading between 322° clockwise to 258° from departure end of runway, or minimum climb of 236′ per NM to 1100′ for all other courses.
Rwy 15R: Climb heading 151° to 600′ before turning Right.
Rwy 22L: Climb heading 216° to 800′ before turning Right.
Rwy 22R: Climb heading 216° to 900′ before turning Right.
Rwy 33L: Climb heading 331° to 700′ before turning Left.

FOR FILING AS ALTERNATE

	ILS Rwy 4R ILS Rwy 15R ILS Rwy 22L ILS Rwy 27 ILS Rwy 33L	LOC Rwy 4R LOC DME Rwy 15R LOC Rwy 22L LOC Rwy 27 LOC Rwy 33L RNAV (GPS) Rwy 4R RNAV (GPS) Rwy 15R	RNAV (GPS) Rwy 22L RNAV (GPS) Rwy 27 RNAV (GPS) Rwy 33L VOR DME Rwy 27 VOR DME Rwy 33L VOR DME-A	VOR DME Rwy 15R RNAV (GPS) Rwy 32
A	1000-2	1000-2		1000-2
B				
C	700-2	800-2		800-2¼
D				800-2½

AMEND 13

CHANGES: Rwy 4R usable lengths, alternate minimums.

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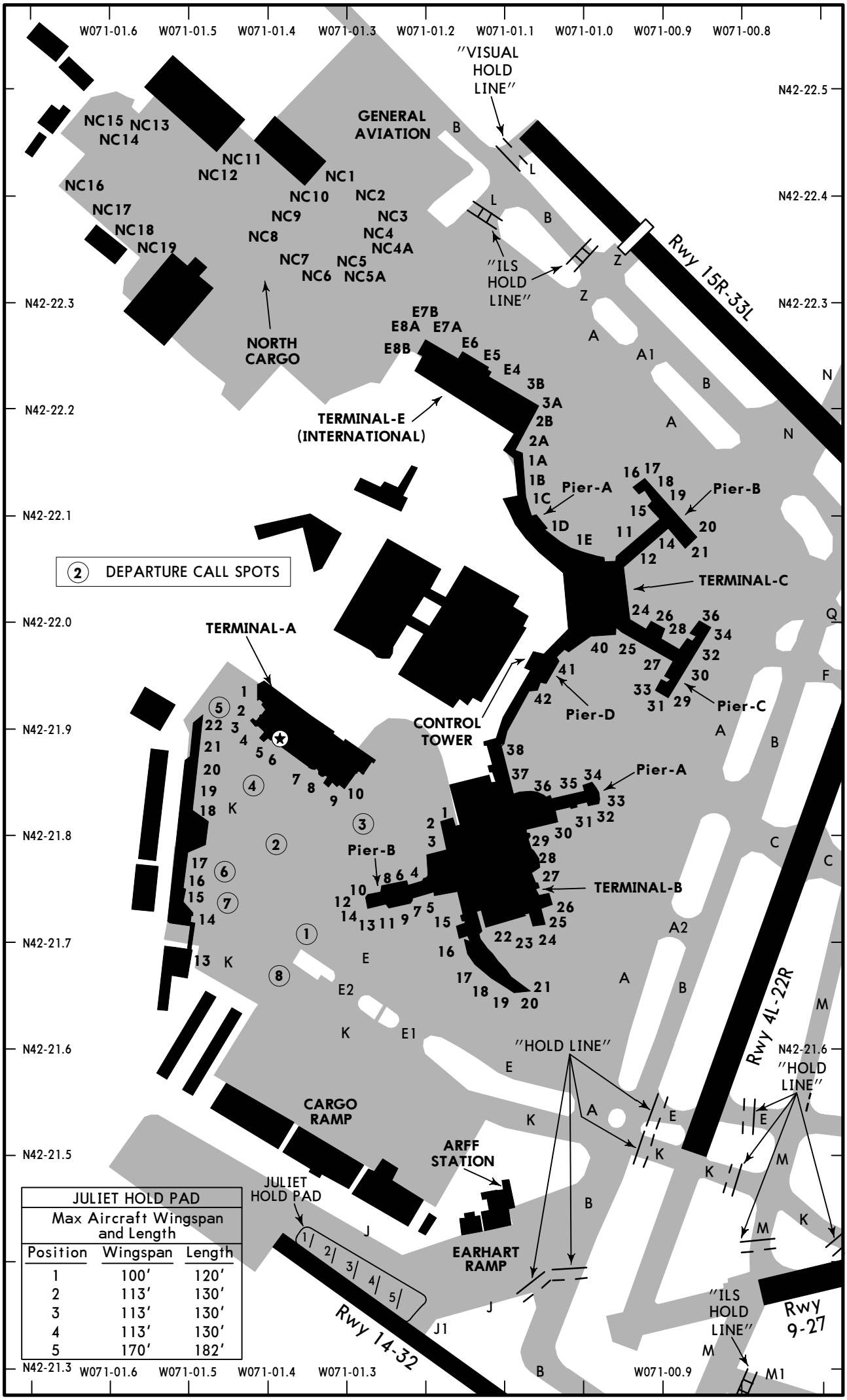

JULIET HOLD PAD		
Max Aircraft Wingspan and Length		
Position	Wingspan	Length
1	100′	120′
2	113′	130′
3	113′	130′
4	113′	130′
5	170′	182′

CHANGES: Taxiways revised.

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PARKING GATE COORDINATES

GATE NO.	COORDINATES
TERMINAL-A	
1 thru 6	N42 21.9 W071 01.4
7	N42 21.8 W071 01.4
8 thru 10	N42 21.8 W071 01.3
13 thru 16	N42 21.7 W071 01.5
17 thru 19	N42 21.8 W071 01.5
20 thru 22	N42 21.9 W071 01.5
TERMINAL-B	
1 thru 3	N42 21.8 W071 01.2
15, 16	N42 21.7 W071 01.2
17	N42 21.7 W071 01.1
18 thru 21	N42 21.6 W071 01.1
22 thru 24	N42 21.7 W071 01.1
25, 26	N42 21.7 W071 01.0
27	N42 21.7 W071 01.1
28, 29	N42 21.8 W071 01.1
37	N42 21.8 W071 01.1
38	N42 21.9 W071 01.1
Pier-A	
30 thru 36	N42 21.8 W071 01.0
Pier-B	
4 thru 9	N42 21.7 W071 01.2
10	N42 21.7 W071 01.3
11	N42 21.7 W071 01.2
12 thru 14	N42 21.7 W071 01.3
TERMINAL-C	
24	N42 22.0 W071 00.9
Pier-A	
1C	N42 22.1 W071 01.1
1D, 1E	N42 22.1 W071 01.0
Pier-B	
11	N42 22.1 W071 00.9
12	N42 22.0 W071 00.9
14 thu 21	N42 22.1 W071 00.9
Pier-C	
25 thru 28	N42 22.0 W071 00.9
29 thru 31	N42 21.9 W071 00.9
32	N42 22.0 W071 00.9
33	N42 21.9 W071 00.9
34, 36	N42 22.0 W071 00.8
Pier-D	
40	N42 22.0 W071 01.0
41	N42 21.9 W071 01.0
42	N42 21.9 W071 01.1
TERMINAL-E (INTERNATIONAL)	
1A, 1B	N42 22.1 W071 01.1
2A, 2B, 3A, 3B	N42 22.2 W071 01.1
E4, E5, E6	N42 22.2 W071 01.1
E7A, E7B, E8A	N42 22.3 W071 01.2
E8B	N42 22.2 W071 01.2
NORTH CARGO	
NC1 thru NC4A	N42 22.4 W071 01.3
NC5, NC5A, NC6	N42 22.3 W071 01.3
NC7	N42 22.3 W071 01.4
NC8, NC9	N42 22.4 W071 01.4
NC10	N42 22.4 W071 01.3
NC11, NC12	N42 22.4 W071 01.5
NC13 thru NC15	N42 22.5 W071 01.6
NC16 thru NC18	N42 22.4 W071 01.6
NC19	N42 22.3 W071 01.6

CHANGES: None.

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Less than RVR 1200 to 600

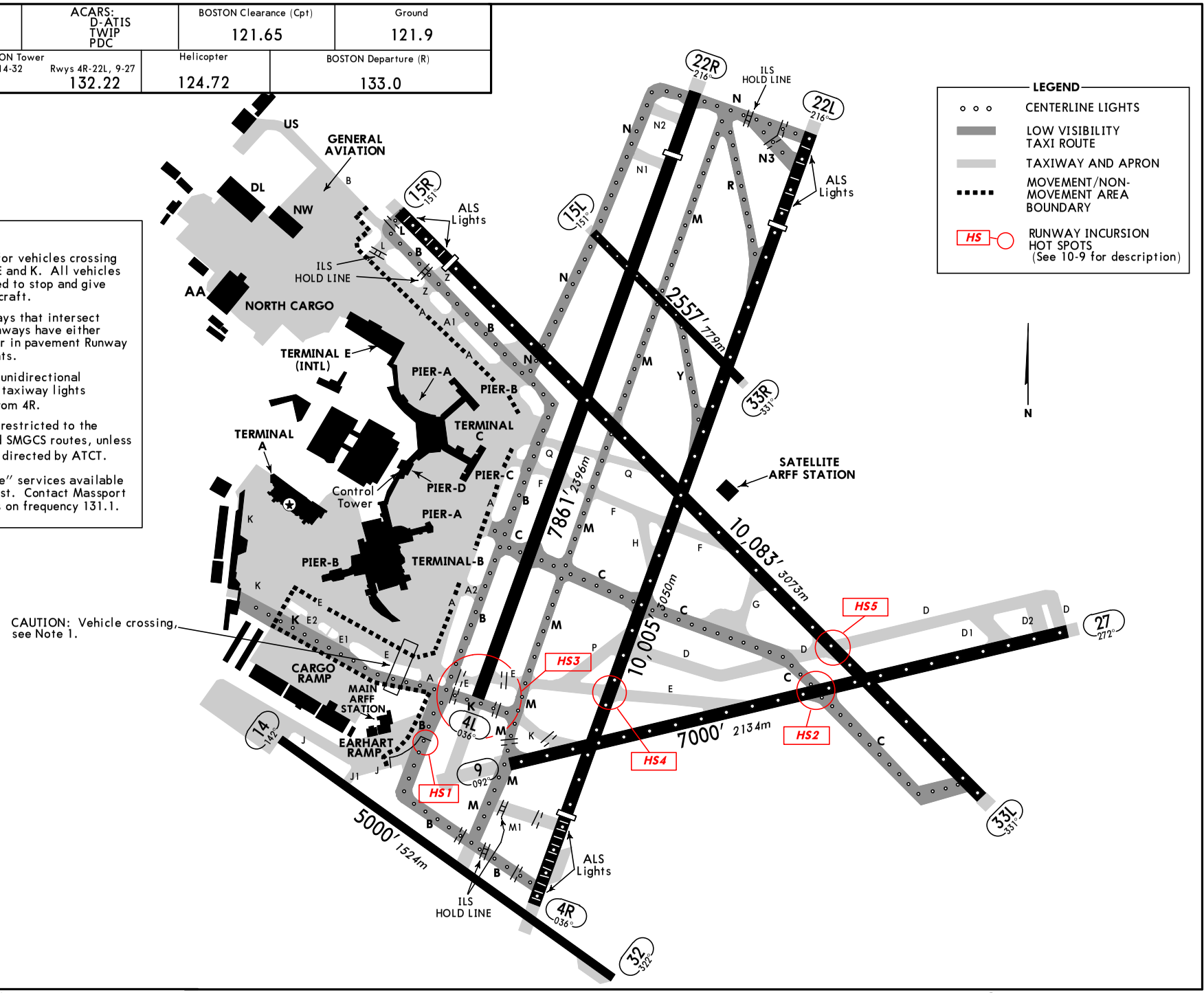
BOSTON, MASS
LOW VISIBILITY TAXI ROUTES

D-ATIS Departure	ACARS:	BOSTON Clearance (Cpt)	Ground
127.87 VOT 111.0	D-ATIS TWIP PDC	121.65	121.9

BOSTON Tower		Helicopter	BOSTON Departure (R)
Rwys 4L-22R, 15L/R-33L/R, 14-32	Rwys 4R-22L, 9-27		
128.8	132.22	124.72	133.0

NOTES:

1. CAUTION for vehicles crossing Taxiways E and K. All vehicles are required to stop and give way to aircraft.
2. All taxiways that intersect SMGCS runways have either elevated or in pavement Runway Guard Lights.
3. Twy R has unidirectional centerline taxiway lights in-bound from 4R.
4. Pilots are restricted to the designated SMGCS routes, unless otherwise directed by ATCT.
5. "Follow Me" services available upon request. Contact Massport Operations on frequency 131.1.



CHANGES: Taxiway M and K routing.

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DEICING PROCEDURES

GENERAL PROCEDURES:

Runway 14/32 will be closed but available for taxi during deicing operations.

Deicing location of category 4 and 5 aircraft shall be coordinated with Boston Air Traffic Control.

Taxiway J1 will be considered closed when being used to deice a Group 4 or 5 aircraft.

Category 4 and 5 aircraft shall be escorted to the J pad for deicing if Taxiway J is not available.

Jet Blue aircraft that request off-gate deicing shall be routed to their designated deicing area located in South Cargo.

SEQUENCING:

Aircraft will be directed to a staging position by Boston Air Traffic Control. This will determine sequencing for deicing spots.

Aircraft will be routed to the approach end of Runway 14 via Taxiway J.

When space becomes available, aircraft should proceed from Taxiway J on to Runway 14 and the J pad in a timely manner.

STAGING:

Up to 3 aircraft can be staged on Taxiway J approaching the departure end of Runway 14. Staged aircraft will proceed to the J pad for deicing in sequence.

Jet Blue aircraft will be routed to spots 1 through 4 in the Jet Blue deicing area. Spots 5 and 6 are designated "ON-DECK" and in most cases, one aircraft will be staged in the Jet Blue area.

To the extent practical, aircraft on the J pad should ensure they are facing northeast so they may exit the area via Taxiway J.

COMMUNICATIONS:

Aircraft that will be deicing on the J pad or Taxiway J1 should proceed on Taxiway J to the approach end of Runway 14 and contact ServiceAir.

Aircraft that will be deicing in the Jet Blue area should proceed to "ON DECK 6" and contact company.

Airline escort vehicles shall be equipped with a two-way radio and monitor appropriate appropriate Boston Air Traffic Control frequencies. Escort vehicles will yeild to aircraft at all times and are responsible for safety when crossing Taxiway J.

Airline escort vehicles adhering to the above procedures are permitted to operate without communications only on the portion of Taxiway J that is west of Taxiway J1.

After deicing is complete, aircraft should notify Boston Air Traffic Control of readiness to taxi on 121.9 unless otherwise instructed.

CHANGES: New chart.

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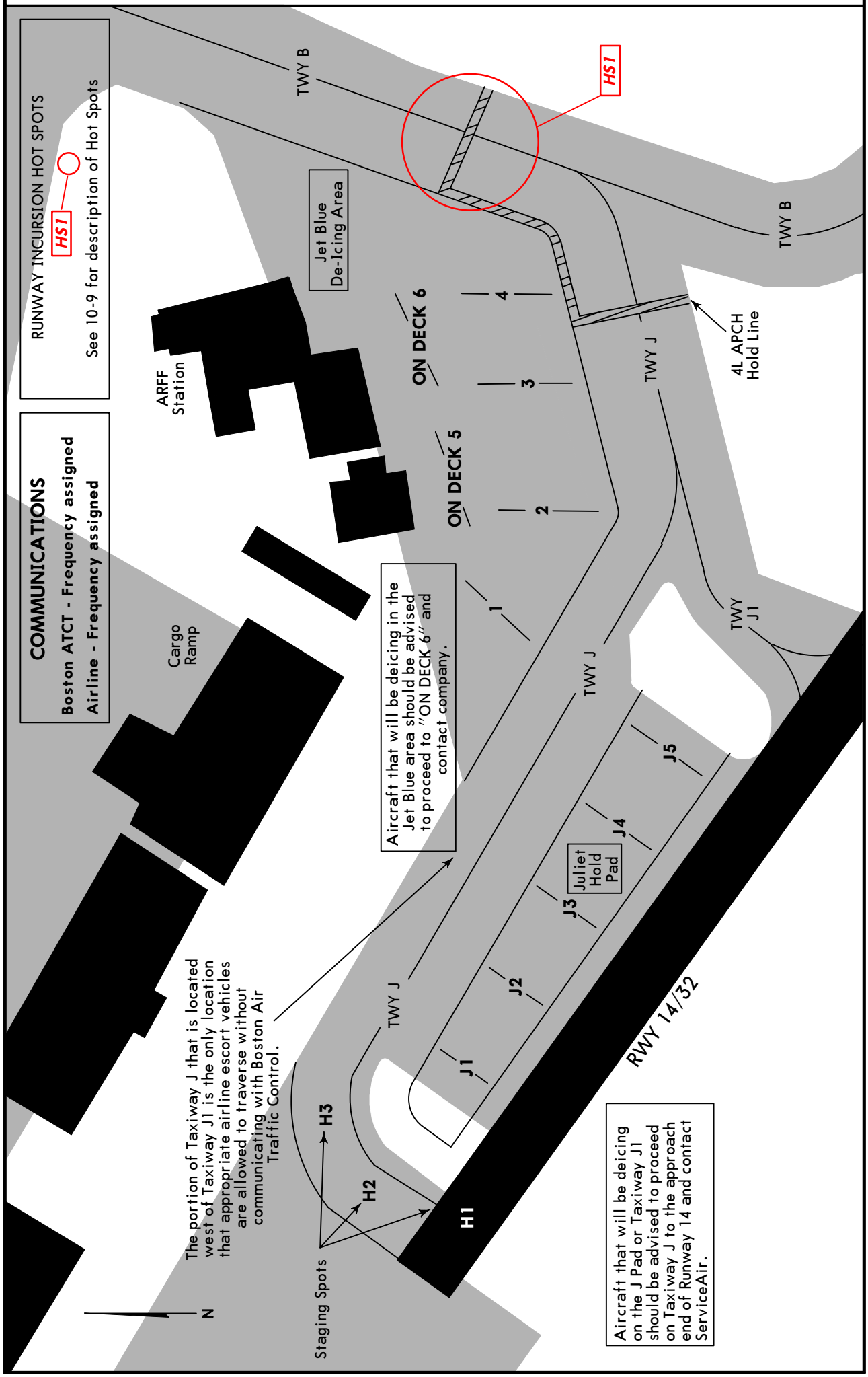
DEICING PROCEDURES CONTINUED



CHANGES: New chart.

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D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4R-22L, 9-27	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	Ground	Helicopter
135.0	120.6	132.22	128.8	121.9	124.72

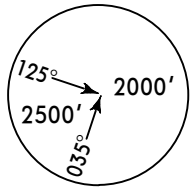
BRIEFING STRIP ™

LOC IBOS	Final Apch Crs	GS MILTT	ILS DA(H) (CONDITIONAL)	Apt Elev 20'
110.3	036°	1700' (1682')	218' (200')	Rwy 4R 18'

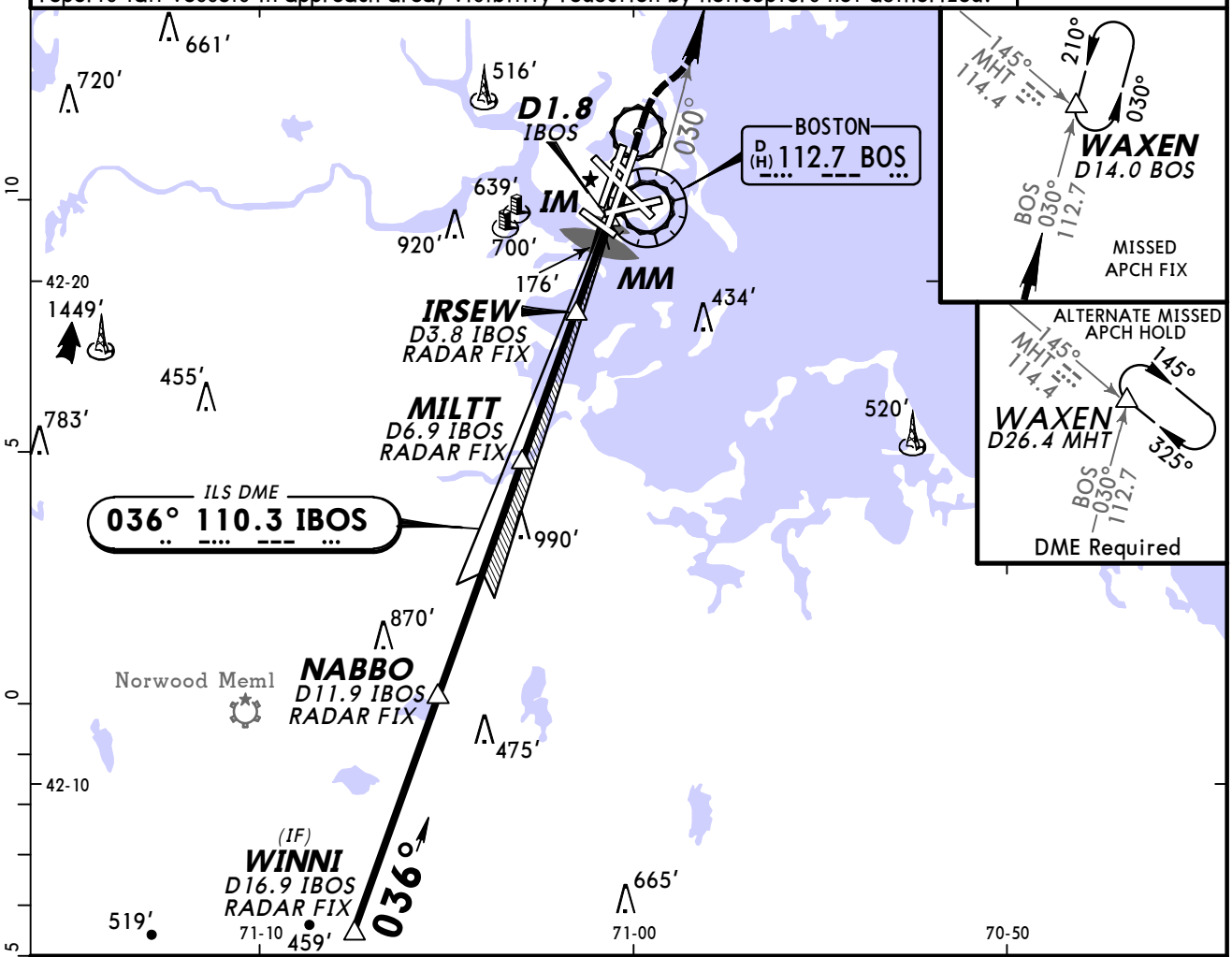
MISSED APCH: Climb to 3000' on BOS VOR R-030 outbound to WAXEN INT/D14.0 BOS and hold, or as directed by ATC.

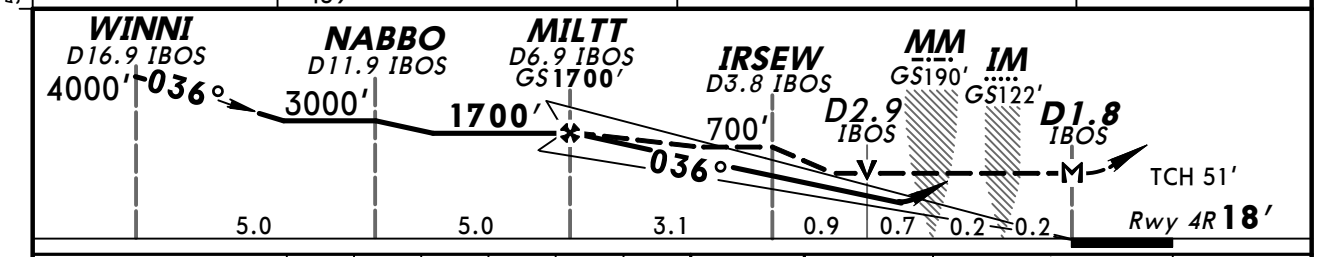
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000'

1. RADAR required. 2. VGSI and ILS glidepath not coincident. 3. When Control Tower reports tall vessels in approach area, visibility reduction by helicopters not authorized.



MSA BOS VOR





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	372	478	531	637	743	849
MAP at D1.8 IBOS or MILTT to MAP 5.1	4:22	3:24	3:04	2:33	2:11	1:55

ALSF-II
PAPI

3000' on BOS 112.7 R-030 WAXEN

TERPS STRAIGHT-IN LANDING RWY 4R

	ILS DA(H) 218' (200') FULL	ILS TDZ or CL out	ILS ALS out	LOC (GS out) MDA(H) 440' (422')	LOC (GS out) ALS out	ILS DA(H) 374' (356') FULL	ILS TDZ or CL out	ILS ALS out	LOC (GS out) MDA(H) 440' (422')	LOC (GS out) ALS out
A	RVR 18 or ½	RVR 24 or ½	RVR 40 or ¾	RVR 24 or ½	RVR 55 or 1	RVR 40 or ¾	RVR 60 or 1⅛	RVR 40 or ¾	RVR 55 or 1	
B										
C				RVR 40 or ¾	RVR 60 or 1⅛				RVR 60 or 1⅛	
D										

When Control Tower Reports Tall Vessels in Approach Area

CIRCLE-TO-LAND
Not Authorized to Rwy 14

Max Kts	MDA(H)
90	940' (920')-1¼
120	1000' (980')-1½
140	[2] 640' (620')-1¾
165	[2] 640' (620')-2

[1] Not authorized when vessels taller than 144' present. [2] Not Authorized West of Rwys 4L and 15R.

TERPS AMEND 10 15 DEC 2011

CHANGES: Procedure.

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D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4R-22L, 9-27	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	Ground	Helicopter
135.0	120.6	132.22	128.8	121.9	124.72

LOC	Final Apch Crs	GS	CAT IIIC	CAT IIIB	CAT IIIA	CAT II ILS	Apt Elev
IBOS 110.3	036°	MILTT 1700′ (1682′)	NA	Refer to Minimums		RA 99′ DA(H) 118′ (100′)	20′ Rwy 4R 18′

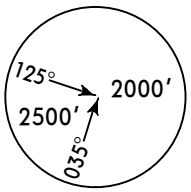
MISSED APCH: Climb to 3000′ on BOS VOR R-030 outbound to WAXEN INT/D14.0 BOS and hold, or as directed by ATC.

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

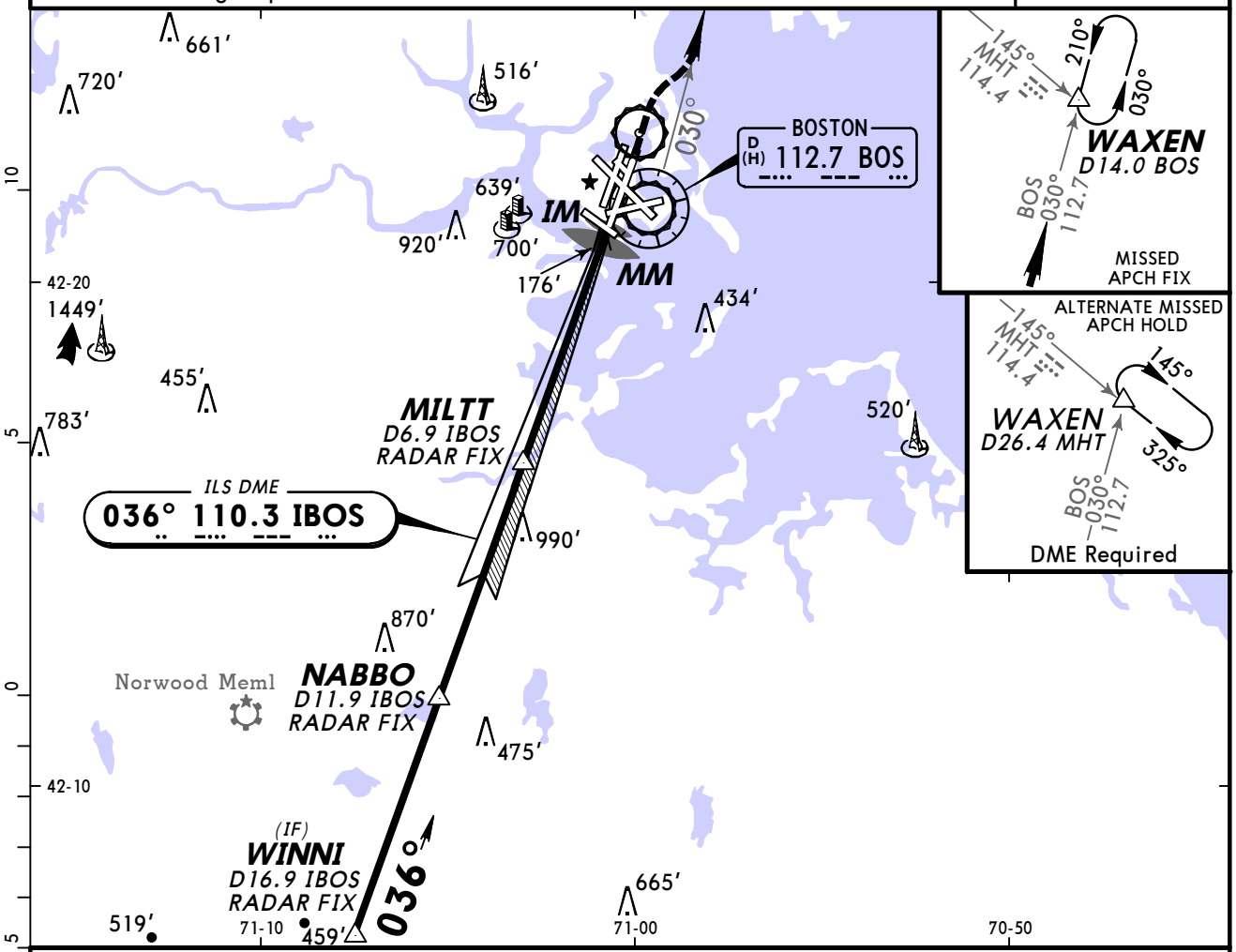
1. Special Aircrew and Aircraft Certification Required. 2. RADAR required.

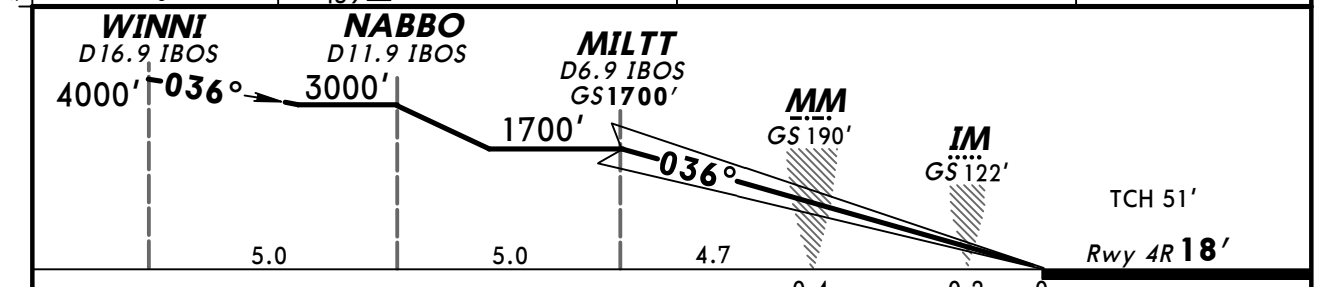
3. When Control Tower reports tall vessels in approach area, procedure not authorized.

4. VGSI and ILS glidepath not coincident.



MSA BOS VOR





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	372	478	531	637	743	849

PAPI ALSF-II 3000′ BOS on 112.7 R-030 WAXEN

TERPS

STRAIGHT-IN LANDING RWY 4R

CAT IIIC ILS	CAT IIIB ILS	CAT IIIA ILS	CAT II ILS RA 99′ DA(H) 118′ (100′)
NA	RVR 6	RVR 7	1 RVR 12

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

BRIEFING STRIP ™

TERPS AMEND 10 15 DEC 2011

CHANGES: Procedure.

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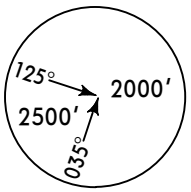
D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4R-22L, 9-27	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	Ground	Helicopter
135.0	120.6	132.22	128.8	121.9	124.72

LOC	Final Apch Crs	GS	SA CAT I ILS	Apt Elev 20′
IBOS 110.3	036°	MILTT 1700′ (1682′)	RA 168′ DA(H)168′(150′)	Rwy 4R 18′

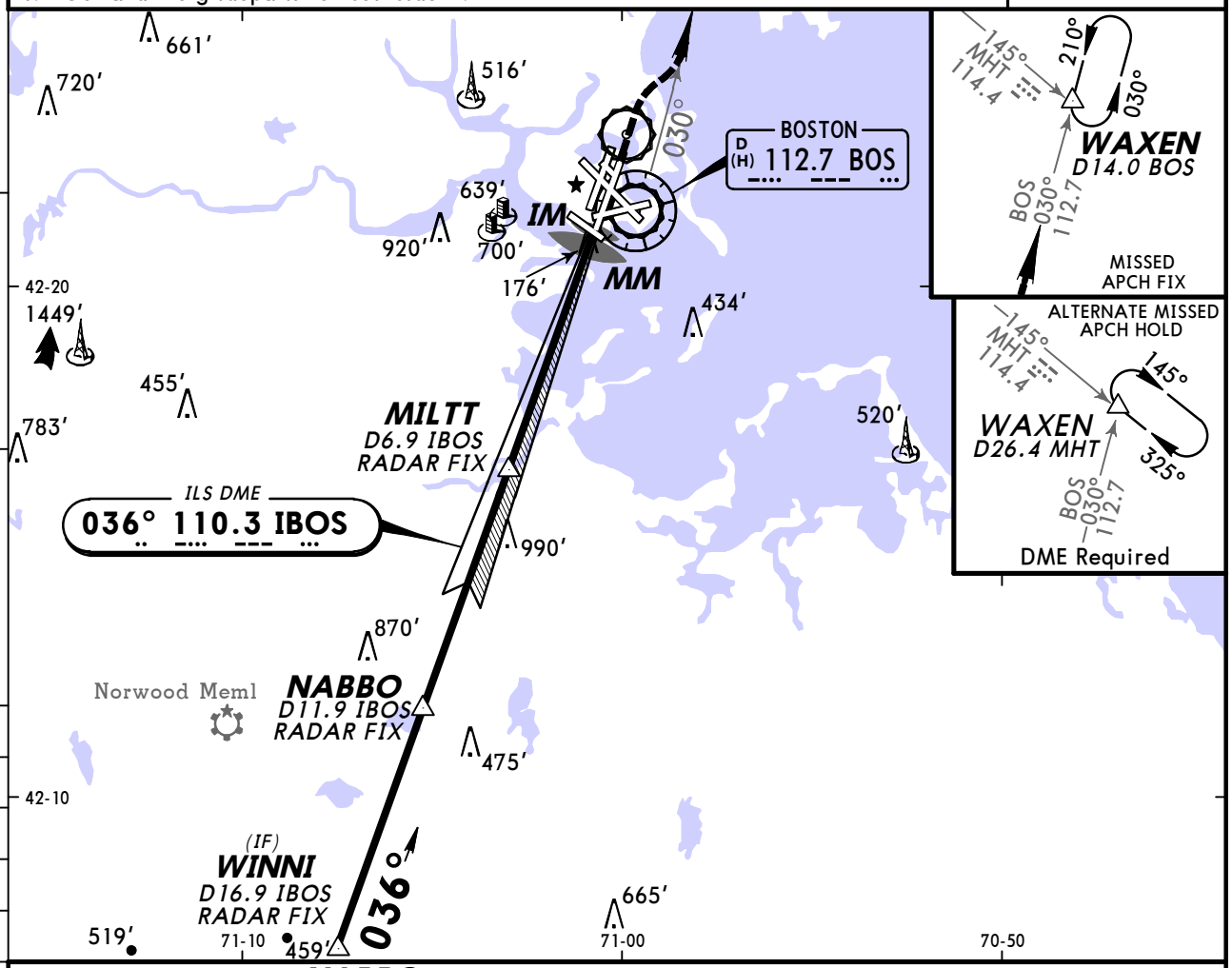
MISSED APCH: Climb to 3000′ on BOS VOR R-030 outbound to WAXEN INT/D14.0 BOS and hold, or as directed by ATC.

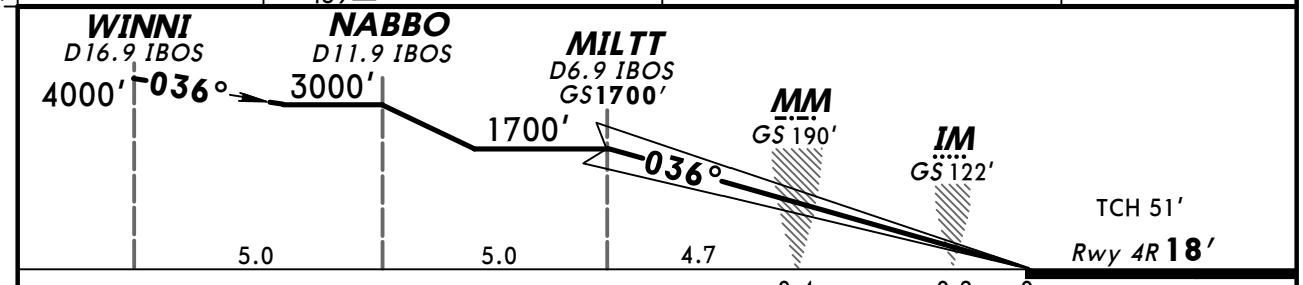
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′

1. Special Aircrew and Aircraft Certification Required. 2. RADAR required.
3. When Control Tower reports tall vessels in approach area, procedure not authorized.
4. VGSI and ILS glidepath not coincident.



MSA BOS VOR





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	372	478	531	637	743	849

ALSF-II PAPI 3000′ BOS on 112.7 R-030 WAXEN

TERPS

STRAIGHT-IN LANDING RWY4R
1 SA CAT I ILS
RA 168′
DA(H) **168′** (150′)

A	
B	RVR 14
C	
D	

1 Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH.

BRIEFING STRIP ™

TERPS AMEND 10 15 DEC 2011

CHANGES: New procedure.

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BRIEFING STRIP ™

D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	BOSTON Tower Rwys 4R-22L, 9-27	Ground	Helicopter
135.0	120.6	128.8	132.22	121.9	124.72

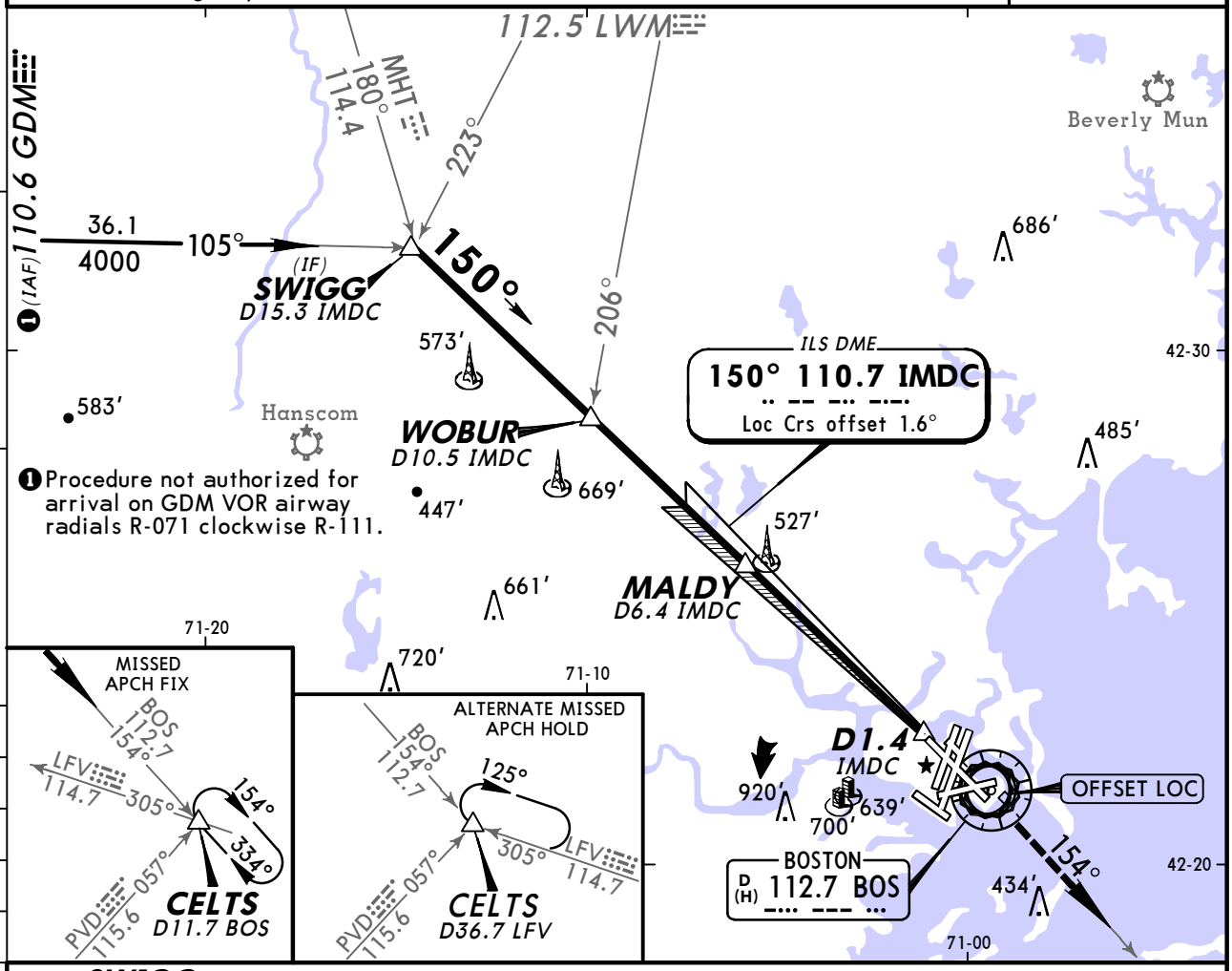
LOC IMDC	Final Apch Crs	GS MALDY	ILS DA(H)	Apt Elev 20′
110.7	150°	1700′ (1683′)	267′ (250′)	TDZE 17′

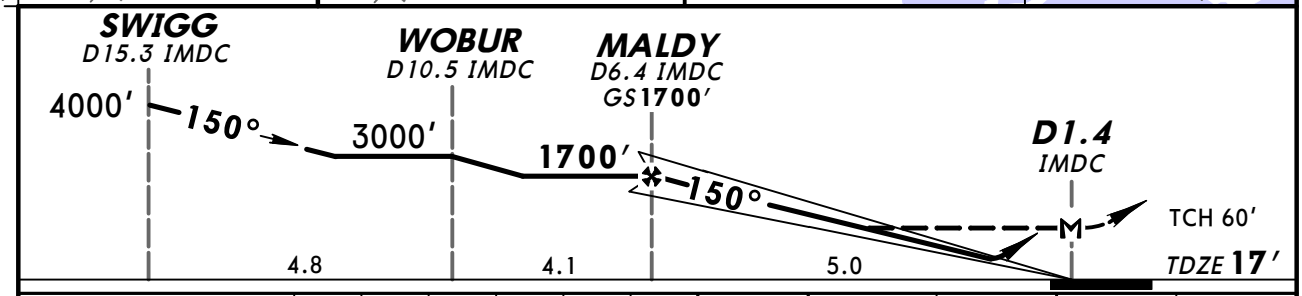
MISSED APCH: Climb to 3000′ on BOS VOR R-154 outbound to CELTS INT/D11.7 BOS and hold, or as directed by ATC.

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

1. VGSI and ILS glidepath not coincident.

MSA BOS VOR: 125° 2000′; 2500′; 035°





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849
MAP at D1.4 IMDC							

MALSR
PAPI

3000′ on BOS 112.7 R-154

CELTS

STRAIGHT-IN LANDING RWY 15R

	ILS DA(H) 267′ (250′) FULL	ILS DA(H) 267′ (250′) RAIL or ALS out	LOC (GS out) MDA(H) 600′ (583′)	LOC (GS out) RAIL out	LOC (GS out) ALS out
A	RVR 24 or ½	RVR 40 or ¾	RVR 24 or ½	RVR 40 or ¾	RVR 50 or 1
B					
C			1¼	1½	
D				1¾	

CIRCLE-TO-LAND

Not Authorized to Rwy 14

Max Kts.	MDA(H)
90	940′ (920′) - 1¼
120	1000′ (980′) - 1½
140	[1] 640′ (620′) - 1¾
165	[1] 640′ (620′) - 2

[1] Not Authorized West of Rwys 4L and 15R.

TERPS AMEND 1C 15 DEC 2011

CHANGES: Procedure.

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KBOS/BOS
LOGAN INTL

JEPPESEN

9 DEC 11 (11-3) **Eff 15 Dec**

BOSTON, MASS
ILS or LOC Rwy 22L

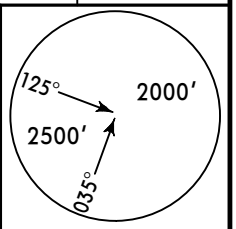
D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4R-22L, 9-27	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	Ground	Helicopter
135.0	120.6	132.22	128.8	121.9	124.72

LOC ILQN	Final Apch Crs	GS VOCUS	ILS DA(H)	Apt Elev 20′
110.3	216°	1700′ (1684′)	216′ (200′)	Rwy 22L 16′

MISSED APCH: Climb to 3000′ outbound on BOS VOR R-219 to WINNI/D15.6 BOS/RADAR and hold, or as directed by ATC.

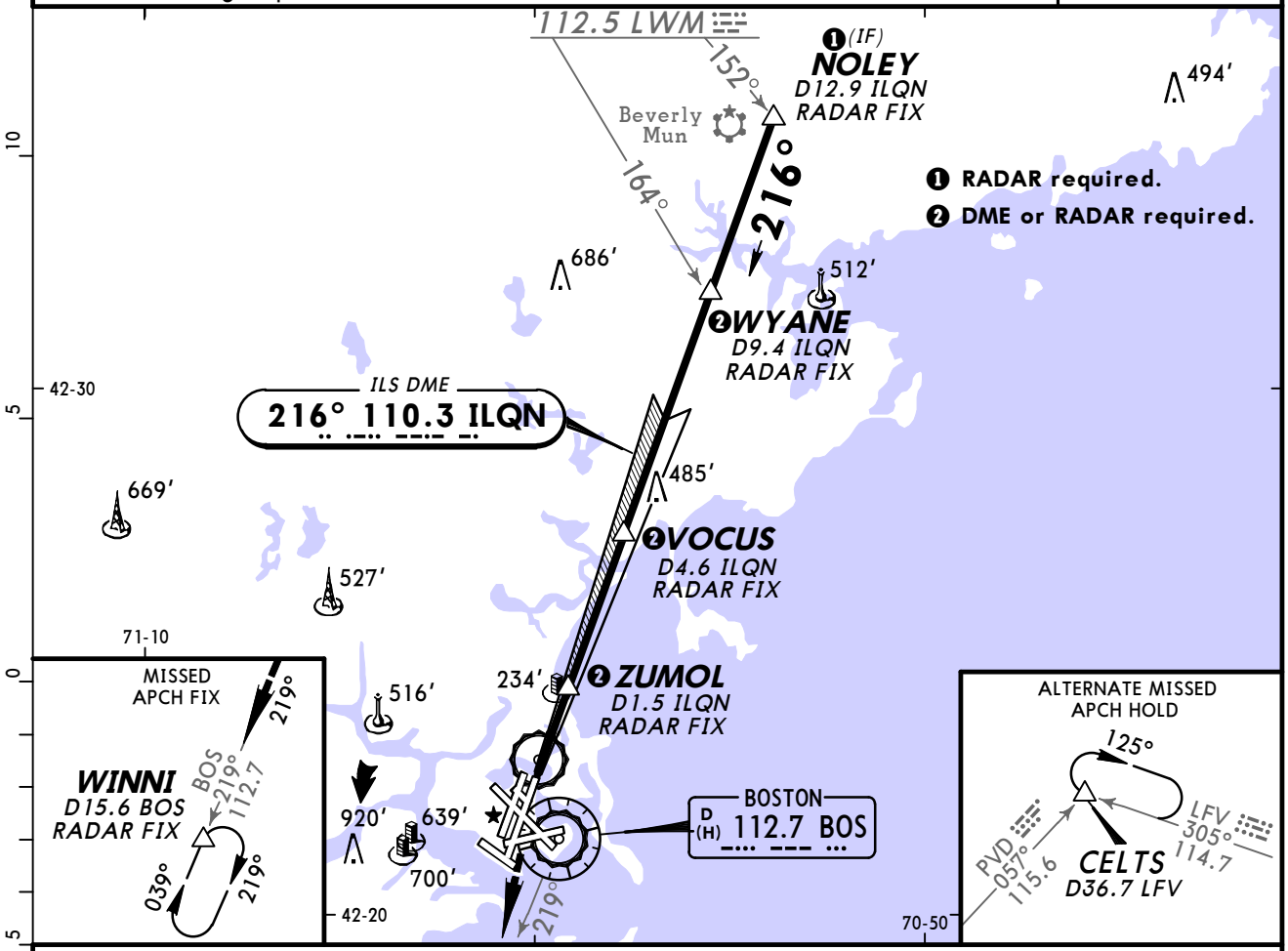
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′

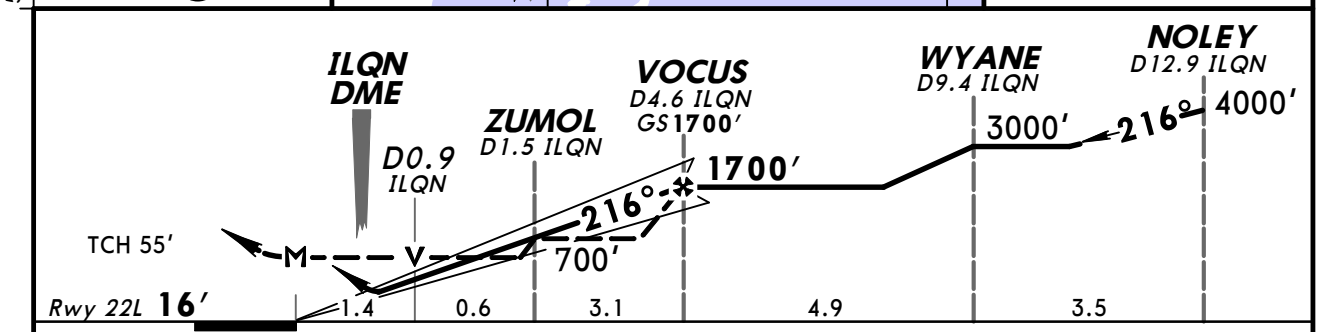
1. VGSI and ILS glidepath not coincident.



MSA BOS VOR

BRIEFING STRIP ™





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	372	478	531	637	743	849
VOCUS to MAP 5.1	4:22	3:24	3:04	2:33	2:11	1:55

MALSF PAPI

3000′ on BOS 112.7 R-219

WINNI

TERPS

STRAIGHT-IN LANDING RWY22L

	ILS DA(H) 216′(200′) FULL	ILS DA(H) 216′(200′) ALS out	LOC (GS out) MDA(H) 540′(524′)	LOC (GS out) MDA(H) 540′(524′) ALS out
A	RVR 40 or ¾		RVR 40 or ¾	RVR 55 or 1
B				
C			1¼	1½
D				

CIRCLE-TO-LAND

Not Authorized to Rwy 14

Max Kts	MDA(H)
90	940′(920′) - 1¼
120	1000′(980′) - 1½
140	❷ 640′(620′) - 1¾
165	❷ 640′(620′) - 2

❷ Not Authorized West of Rwy 4L and Rwy 15R.

TERPS AMEND 8 15 DEC 2011

CHANGES: Procedure.

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BRIEFING STRIP ™

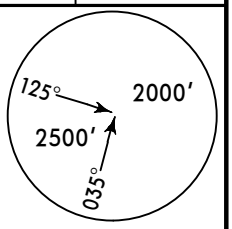
D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4R-22L, 9-27	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	Ground	Helicopter
135.0	120.6	132.22	128.8	121.9	124.72

LOC IDGU	Final Apch Crs	GS RIPIT	ILS DA(H)	Apt Elev 20′
111.3	273°	1700′ (1683′)	460′ (443′)	TDZE 17′

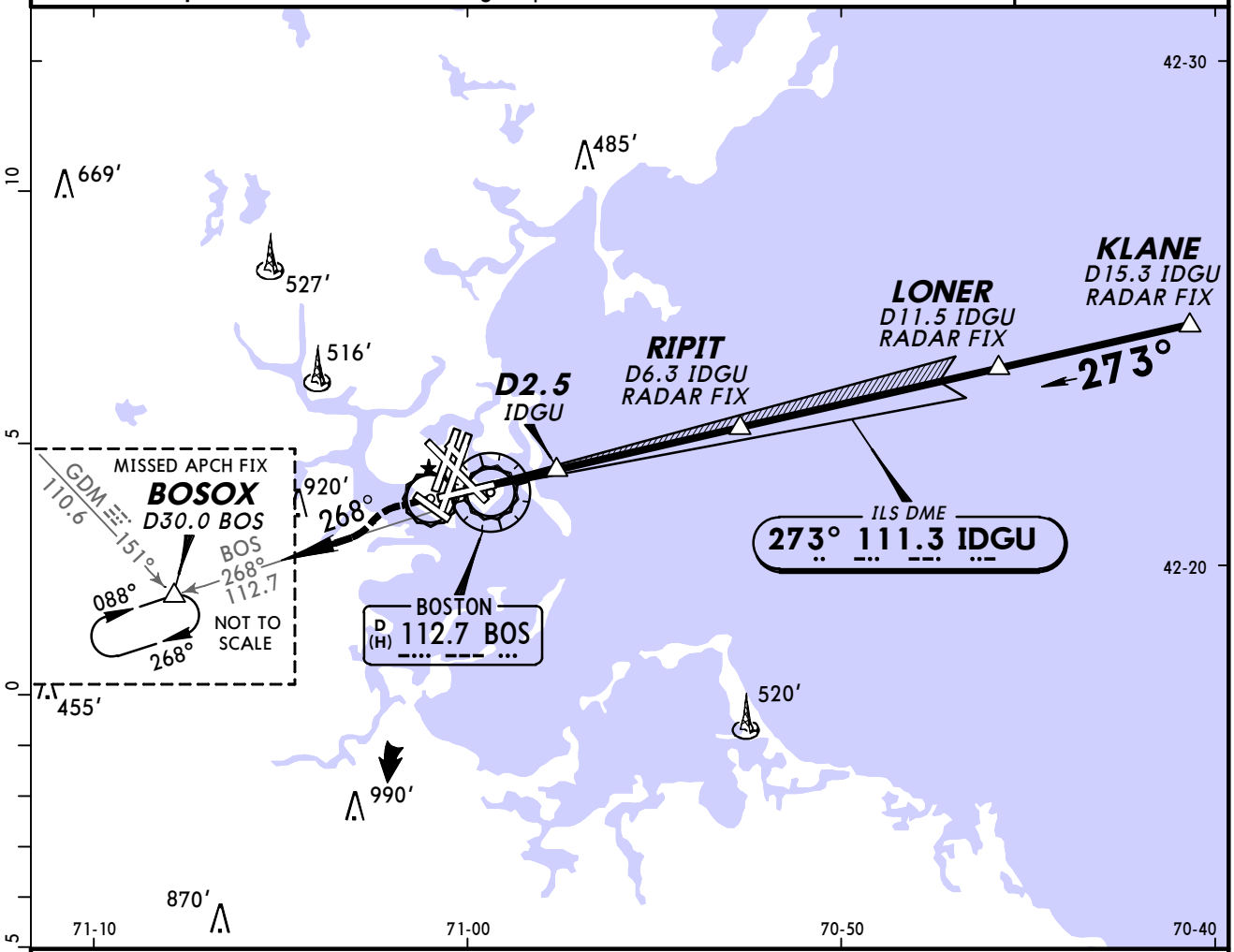
MISSED APCH: Climb to 3000′ outbound via BOS VOR R-268 to BOSOX INT/D30.0 BOS and hold.

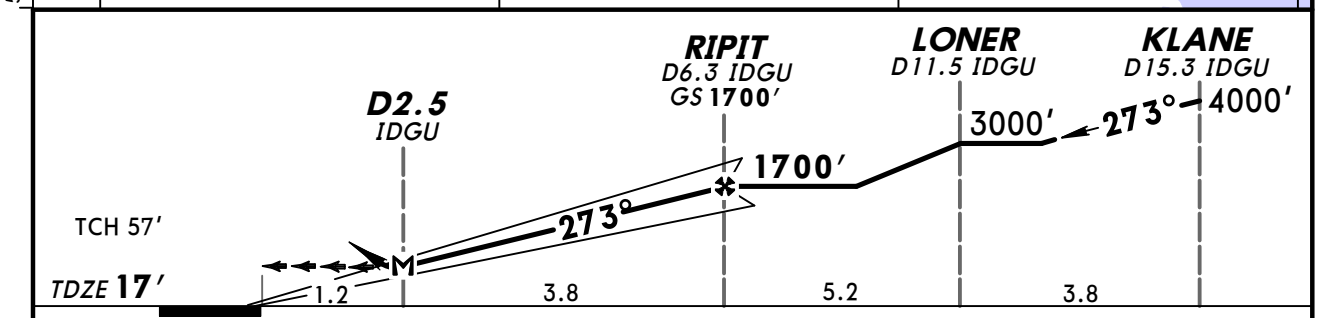
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′

1. RADAR required. 2. VGSI and ILS glidepath not coincident.



MSA BOS VOR





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849
MAP at D2.5 IDGU or RIPIT to MAP	3.8	3:15	2:32	2:17	1:54	1:38	1:26

REIL
PAPI-L

3000′

BOS via 112.7 R-268

BOSOX

STRAIGHT-IN LANDING RWY27

	ILS DA(H) 460′ (443′)	1 LOC (GS out) MDA(H) 460′ (443′)
A	1½	1½
B		
C		
D		

CIRCLE-TO-LAND
Not Authorized to Rwy 14 at Night

Max Kts	MDA(H)
90	940′ (920′) - 1½
120	1000′ (980′) - 1½
140	2 640′ (620′) - 1¾
165	2 640′ (620′) - 2

1 RADAR or DME required. 2 Not Authorized West of Rwys 4L and 15R.

TERPS AMEND 2A 21 OCT 2010

CHANGES: None.

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D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	BOSTON Tower Rwys 4R-22L, 9-27	Ground	Helicopter
135.0	120.6	128.8	132.22	121.9	124.72

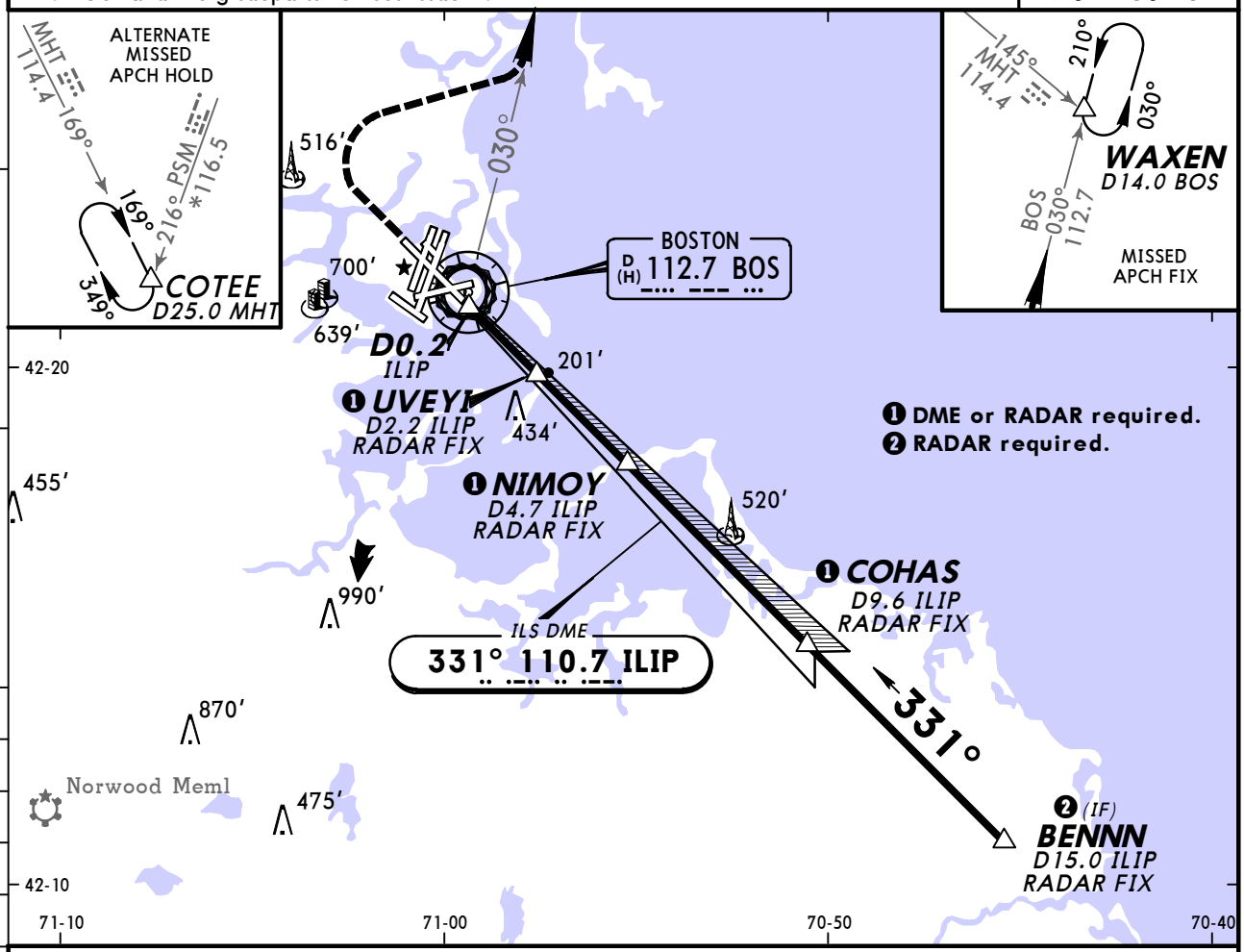
LOC ILIP	Final Apch Crs	GS NIMOY	ILS DA(H)	Apt Elev 20′
110.7	331°	1500′ (1485′)	215′ (200′)	Rwy 33L 15′

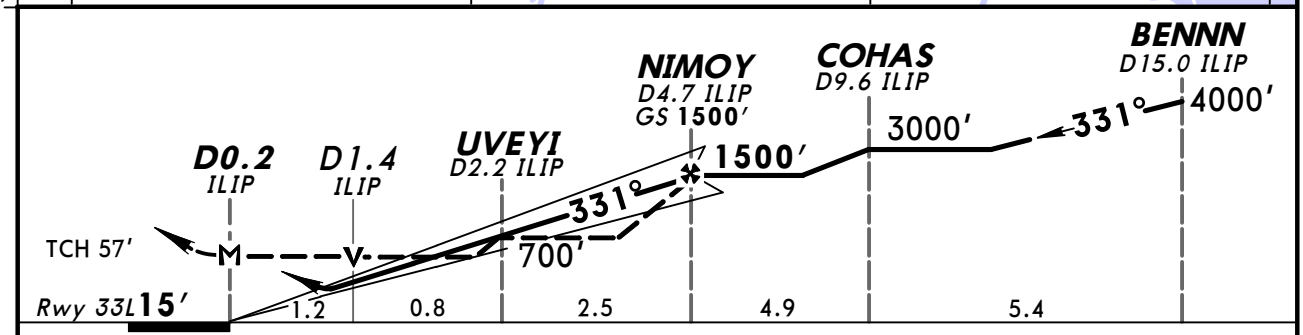
MISSED APCH: Climb to 1500′ then climbing RIGHT turn to 3000′ outbound on BOS VOR R-030 to WAXEN and hold, or as directed by ATC.

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

1. VGSI and ILS glidepath not coincident.

MSA BOS VOR: 125° 2000′; 2500′; 035°





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849
MAP at D0.2 ILIP or NIMOY to MAP	4.5	3:51	3:00	2:42	2:15	1:56	1:41

MALSR, PAPI | 1500′ ↑ | 3000′ RT on BOS 112.7 R-030 | WAXEN

TERPS STRAIGHT-IN LANDING RWY 33L

	ILS DA(H) 215′ (200′) FULL	TDZ or CL out	RAIL or ALS out	LOC (GS out) MDA(H) 460′ (445′)	RAIL out	ALS out
A	RVR 18 or ½	RVR 24 or ½	RVR 40 or ¾	RVR 24 or ½	RVR 40 or ¾	RVR 55 or 1
B						
C				RVR 45 or ⅞	RVR 55 or 1	1⅜
D						

CIRCLE-TO-LAND
Not Authorized to Rwy 14

Max Kts	MDA(H)
90	940′ (920′) - 1¼
120	1000′ (980′) - 1½
140	[1] 640′ (620′) - 1¾
165	[1] 640′ (620′) - 2

[1] Not Authorized West of Rwy 4L and Rwy 15R.

BRIEFING STRIP ™

TERPS AMEND 4 15 DEC 2011

CHANGES: Procedure.

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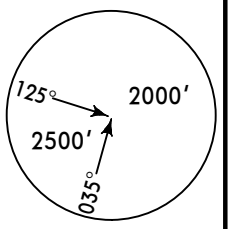
D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	BOSTON Tower Rwys 4R-22L, 9-27	Ground	Helicopter
135.0	120.6	128.8	132.22	121.9	124.72

LOC ILIP	Final Apch Crs	GS NIMOY	SA CAT I ILS	Apt Elev 20′
110.7	331°	1500′ (1485′)	RA 166′ DA(H)165′(150′)	Rwy 33L 15′

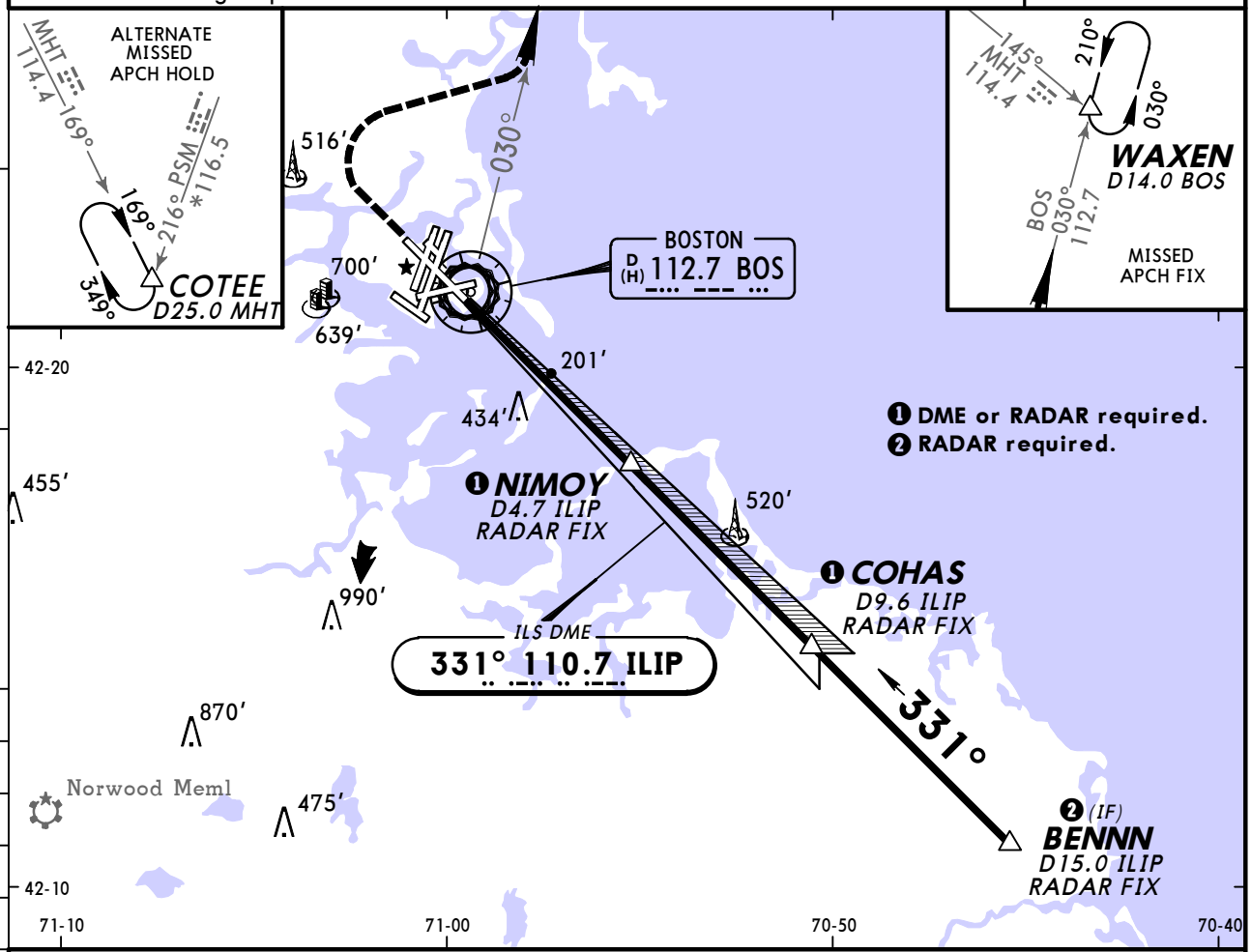
MISSED APCH: Climb to 1500′ then climbing RIGHT turn to 3000′ outbound on BOS VOR R-030 to WAXEN and hold, or as directed by ATC.

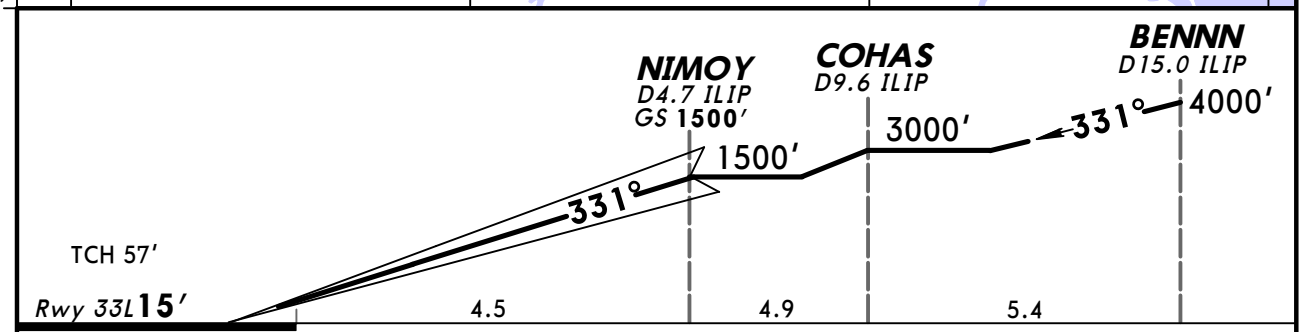
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′

1. **Special Aircrew & Acft certification required.**
2. VGSI and ILS glidepath not coincident.



MSA BOS VOR





Gnd speed-Kts	70	90	100	120	140	160	MALSR / PAPI	1500′	3000′	BOS	WAXEN
GS 3.00°	372	478	531	637	743	849		↑	RT	on 112.7 R-030	

TERPS

STRAIGHT-IN LANDING RWY **33L**

1 SA CAT I ILS

RA 166′

DA(H) **165′** (150′)

A	RVR 14
B	
C	
D	

1 Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH.

CHANGES: New procedure.

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D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	BOSTON Tower Rwys 4R-22L, 9-27	Ground	Helicopter
135.0	120.6	128.8	132.22	121.9	124.72

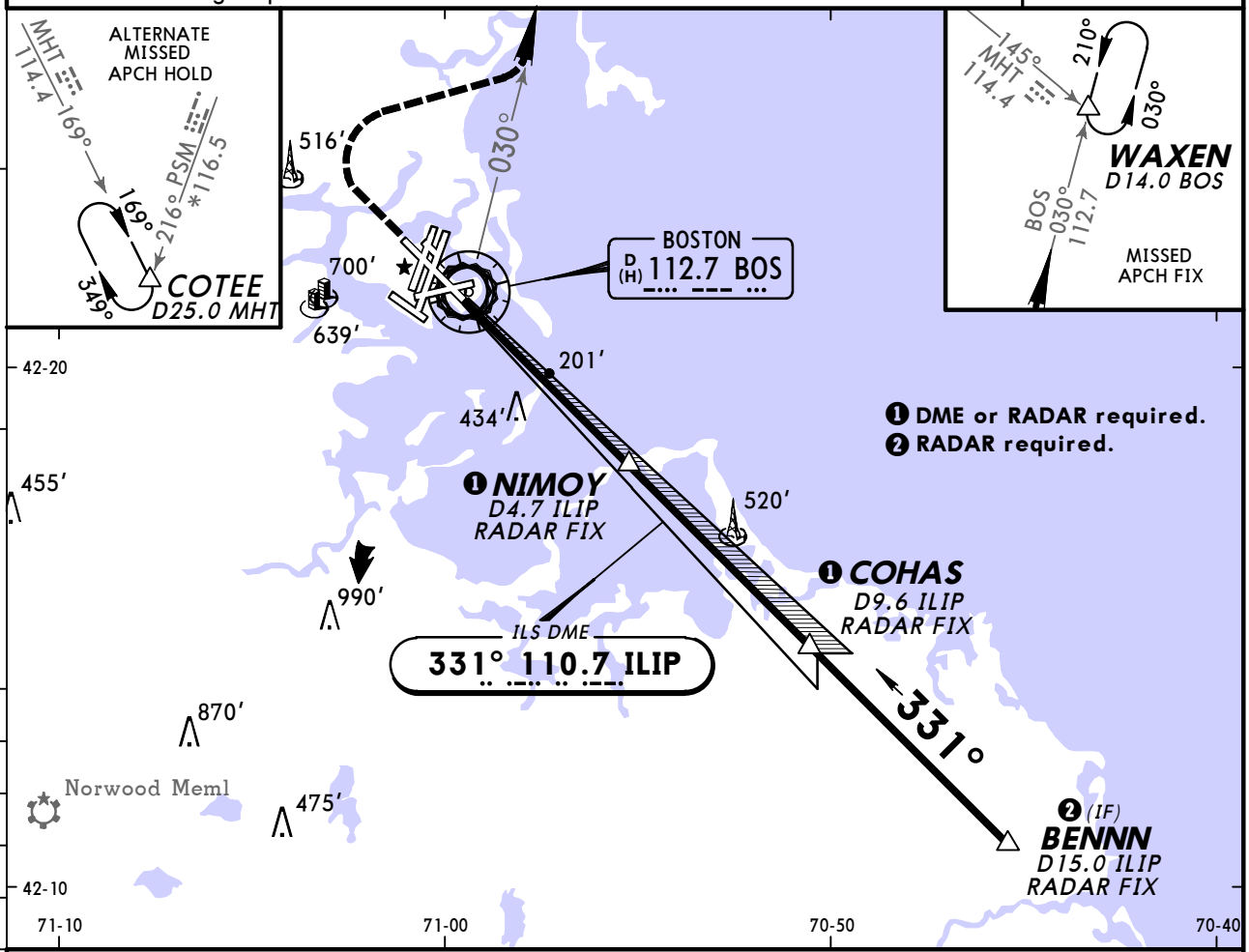
LOC ILIP	Final Apch Crs	GS NIMOY	SA CAT II ILS	Apt Elev 20′
110.7	331°	1500′ (1485′)	RA 116′ DA(H)115′(100′)	Rwy 33L 15′

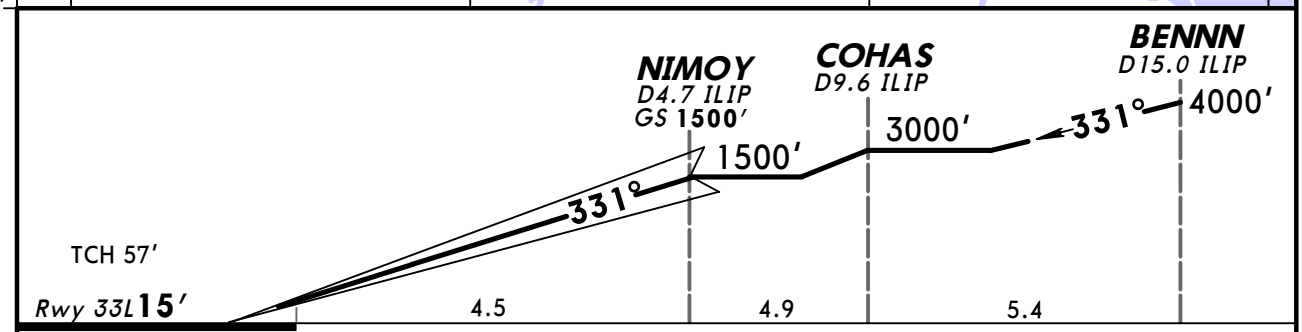
MISSED APCH: Climb to 1500′ then climbing RIGHT turn to 3000′ outbound on BOS VOR R-030 to WAXEN and hold, or as directed by ATC.

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

1. **Special Aircrew & Acft certification required.**
2. VGSI and ILS glidepath not coincident.

MSA BOS VOR: 125° 2000′; 2500′; 035°





Gnd speed-Kts	70	90	100	120	140	160	MALSR / PAPI	1500′	3000′ RT	BOS on 112.7 R-030	WAXEN
GS 3.00°	372	478	531	637	743	849					

TERPS

STRAIGHT-IN LANDING RWY **33L**
1 SA CAT II ILS
RA 116′
DA(H) **115′** (100′)

A	
B	RVR 12
C	
D	

1 Reduced lighting. Requires specific OPSPEC, MSPEC, or LOA approval and use of AUTOLAND or HUD to touchdown.

BRIEFING STRIP ™

TERPS AMEND 4 15 DEC 2011

CHANGES: Procedure.

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KBOS/BOS
LOGAN INTL

JEPPESEN

9 DEC 11 (12-1) Eff 15 Dec

BOSTON, MASS
RNAV (GPS) Rwy 4R

BRIEFING STRIP™

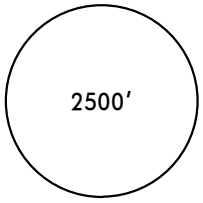
D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4R-22L, 9-27	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	Ground	Helicopter
135.0	120.6	132.22	128.8	121.9	124.72

WAAS	Final Apch Crs	Minimum Alt MILTT	LPV DA(H) (CONDITIONAL)	Apt Elev 20′
Ch 50124 W-04A	036°	1700′ (1682′)	218′ (200′)	Rwy 4R 18′

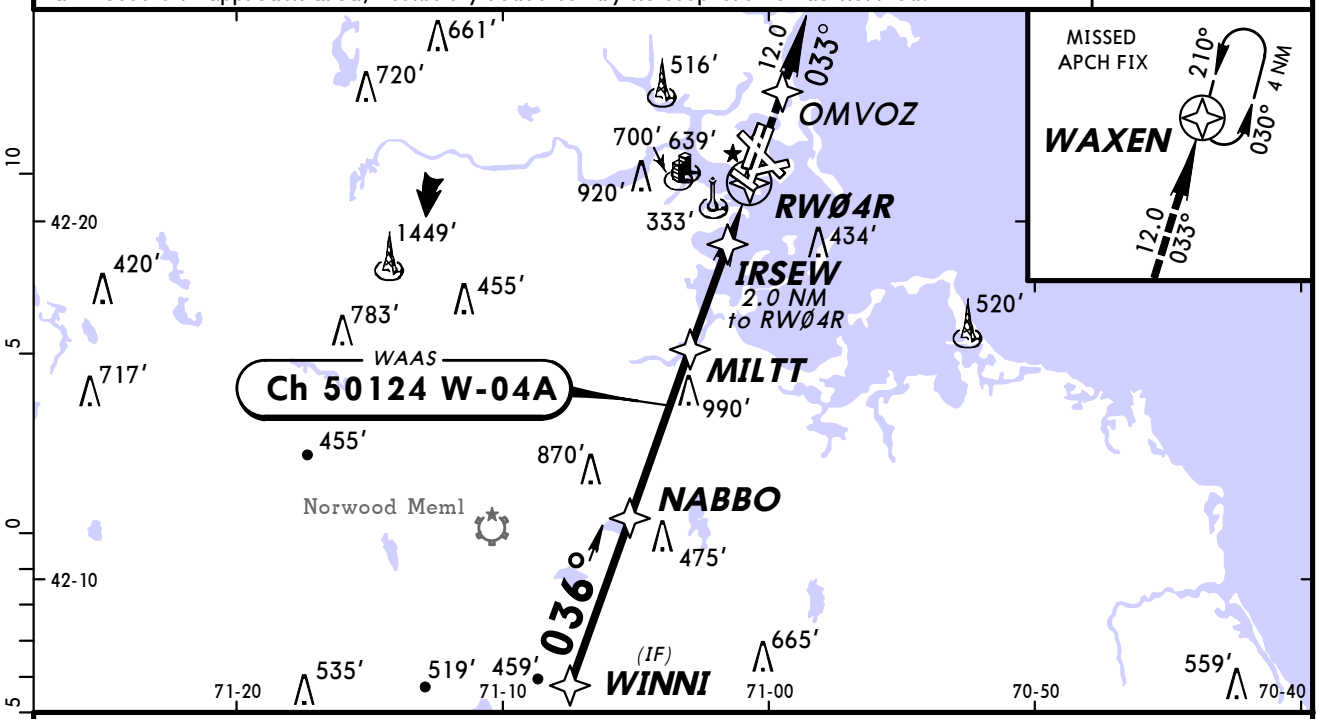
MISSED APCH: Climb to 3000′ direct OMVOZ and on track 033° to WAXEN and hold.

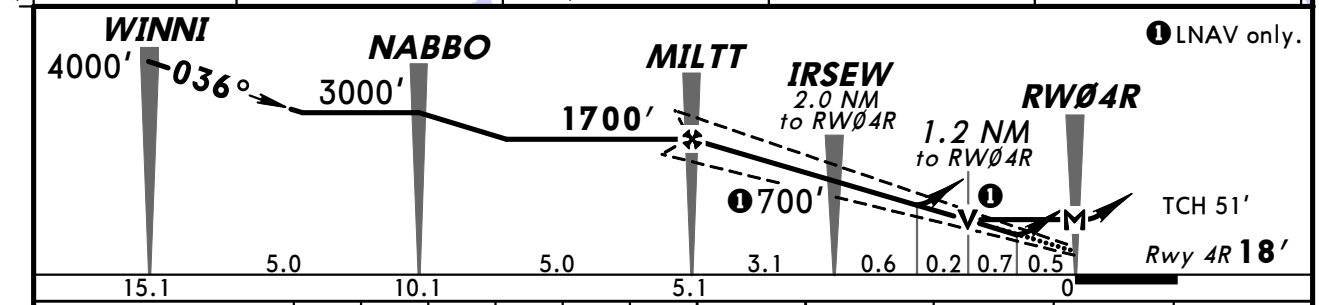
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′

1. RADAR required. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -13°C (9°F) or above 43°C (109°F). 3. DME/DME RNP-0.30 not authorized. 4. VGSI and RNAV glidepath not coincident. 5. When Control Tower reports tall vessels in approach area, visibility reduction by helicopters not authorized.



MSA RWØ4R





Gnd speed-Kts	70	90	100	120	140	160
Glide Path Angle 3.00°	372	478	531	637	743	849
MAP at RWØ4R						

ALSF-II PAPI 3000′ OMVOZ

TERPS

STRAIGHT-IN LANDING RWY 4R

When No Tall Vessels Reported In Approach Area

	LPV DA(H) 218′ (200′)		LNAV/VNAV DA(H) 511′ (493′)		LNAV MDA(H) 480′ (462′)	
		ALS out		ALS out		ALS out
A	RVR 24 or ½	RVR 40 or ¾	RVR 60 or 1⅛	1⅝	RVR 24 or ½	RVR 55 or 1
B						
C					RVR 50 or 1	1⅜
D						

When Control Twr Reports Tall Vessels In Approach Area

	❶ LPV DA(H) 374′ (356′)		❶ LNAV/VNAV DA(H) 511′ (493′)		LNAV MDA(H) 480′ (462′)	
		ALS out		ALS out		ALS out
A	RVR 40 or ¾	RVR 60 or 1⅛	RVR 60 or 1⅛	1⅝	RVR 40 or ¾	RVR 55 or 1
B						
C					RVR 50 or 1	1⅜
D						

CIRCLE-TO-LAND

Not Authorized to Rwy 14

Max Kts	MDA(H)
90	940′ (920′)-1¼
120	1000′ (980′)-1½
140	❷640′ (620′)-1¾
165	❷640′ (620′)-2

❶ Not authorized when vessels taller than 144′ present. ❷ Not authorized West of Rwy 4L and Rwy 15R.

TERPS AMEND 1 15 DEC 2011

CHANGES: Procedure.

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LOGAN INTL

JEPPESEN

9 DEC 11 (12-2) **Eff 15 Dec**

BOSTON, MASS
RNAV (GPS) Rwy 15R

BRIEFING STRIP ™

D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	BOSTON Tower Rwys 4R-22L, 9-27	Ground	Helicopter
135.0	120.6	128.8	132.22	121.9	124.72

WAAS	Final Apch Crs	Minimum Alt EMMEL	LPV DA(H)	Apt Elev 20′
Ch 42925 W-15A	151°	1700′ (1683′)	217′ (200′)	Rwy 15R 17′

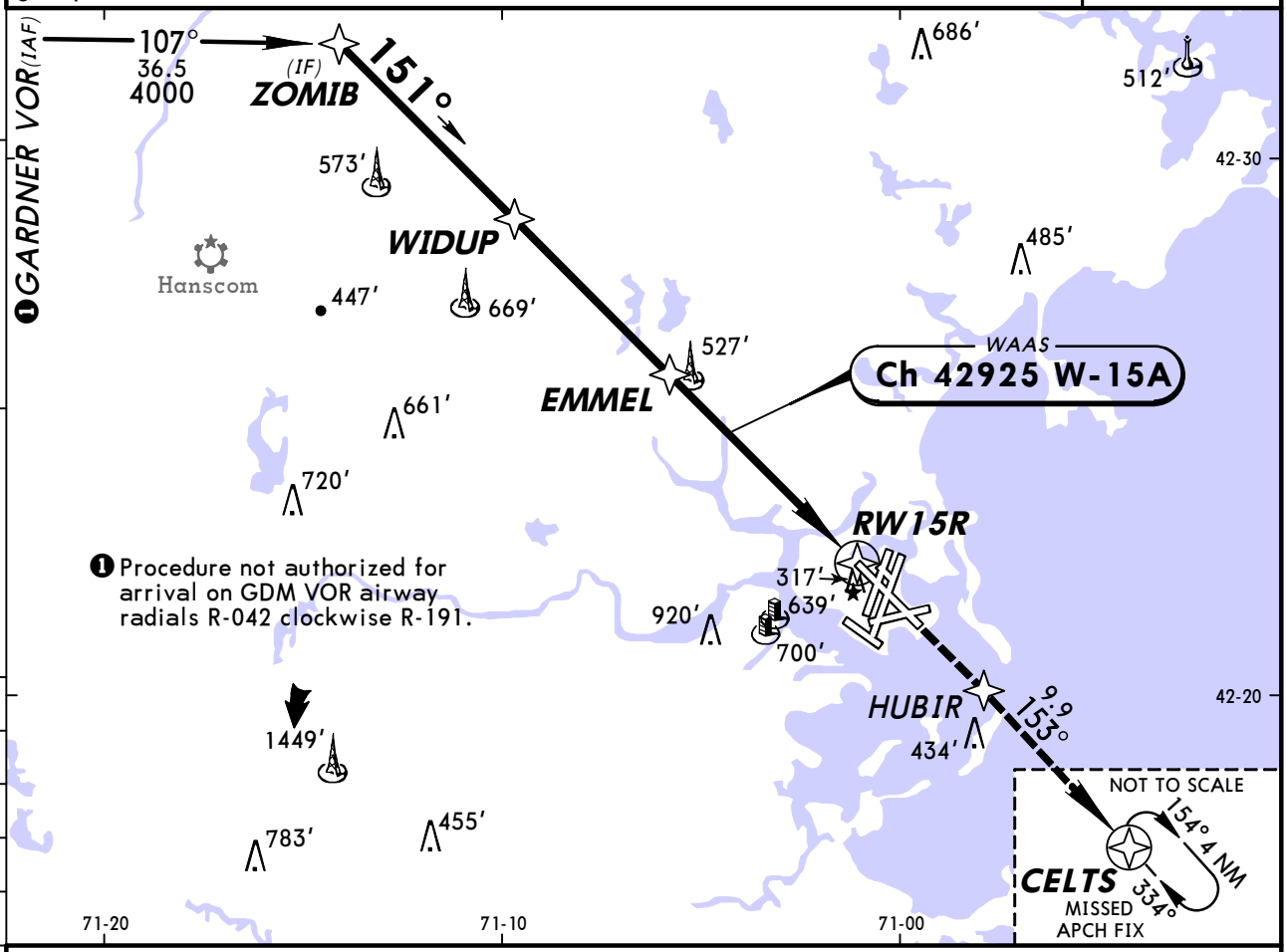
MISSED APCH: Climb to 3000′ direct HUBIR and on track 153° to CELTS and hold.

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

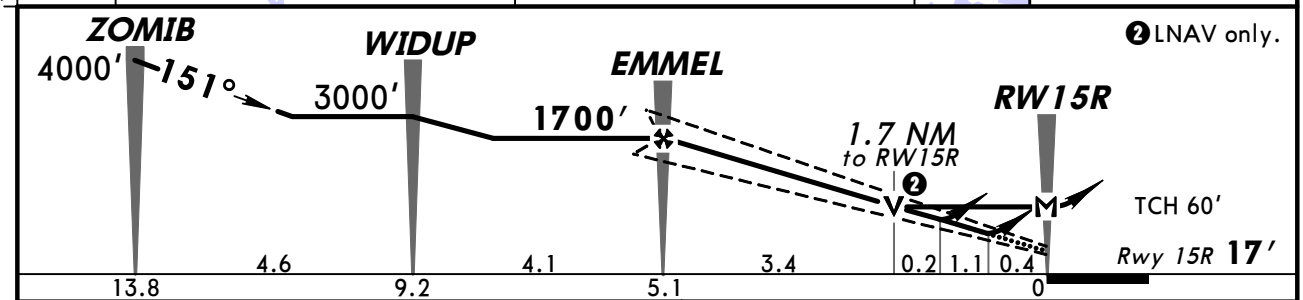
1. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -13°C (9°F) or above 43°C (109°F). 2. DME/DME RNP-0.30 not authorized. 3. VGSI and RNAV glidepath not coincident.

2500′

MSA RW15R



❶ Procedure not authorized for arrival on GDM VOR airway radials R-042 clockwise R-191.



❷ LNAV only.

Gnd speed-Kts	70	90	100	120	140	160
Glide Path Angle 3.00°	372	478	531	637	743	849
MAP at RW15R						

MALSR PAPI 3000′ HUBIR

TERPS STRAIGHT-IN LANDING RWY **15R**

	LPV DA(H) 217′ (200′)		LNAV/VNAV DA(H) 567′ (550′)		LNAV MDA(H) 620′ (603′)		
		RAIL or ALS out		RAIL out	ALS out	RAIL out	ALS out
A	RVR 24 or ½	RVR 40 or ¾	1⅜	1¾	RVR 24 or ½	RVR 40 or ¾	RVR 55 or 1
B							
C					1⅜	1½	1¾
D							

CIRCLE-TO-LAND
Not Authorized to Rwy 14

Max Kts	MDA(H)
90	940′ (920′)-1¼
120	1000′ (980′)-1½
140	❶640′ (620′)-1¾
165	❶640′ (620′)-2

❶ Not Authorized West of Rwy 4L and Rwy 15R.

TERPS AMEND 1 15 DEC 2011

CHANGES: Procedure.

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KBOS/BOS
LOGAN INTL

JEPPESEN

9 DEC 11 (12-3) Eff 15 Dec

BOSTON, MASS
RNAV (GPS) Rwy 22L

D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4R-22L, 9-27	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	Ground	Helicopter
135.0	120.6	132.22	128.8	121.9	124.72

WAAS	Final Apch Crs	Minimum Alt VOCUS	LPV DA(H)	Apt Elev 20′
Ch 45925 W-22A	216°	1700′ (1684′)	216′ (200′)	Rwy 22L 16′

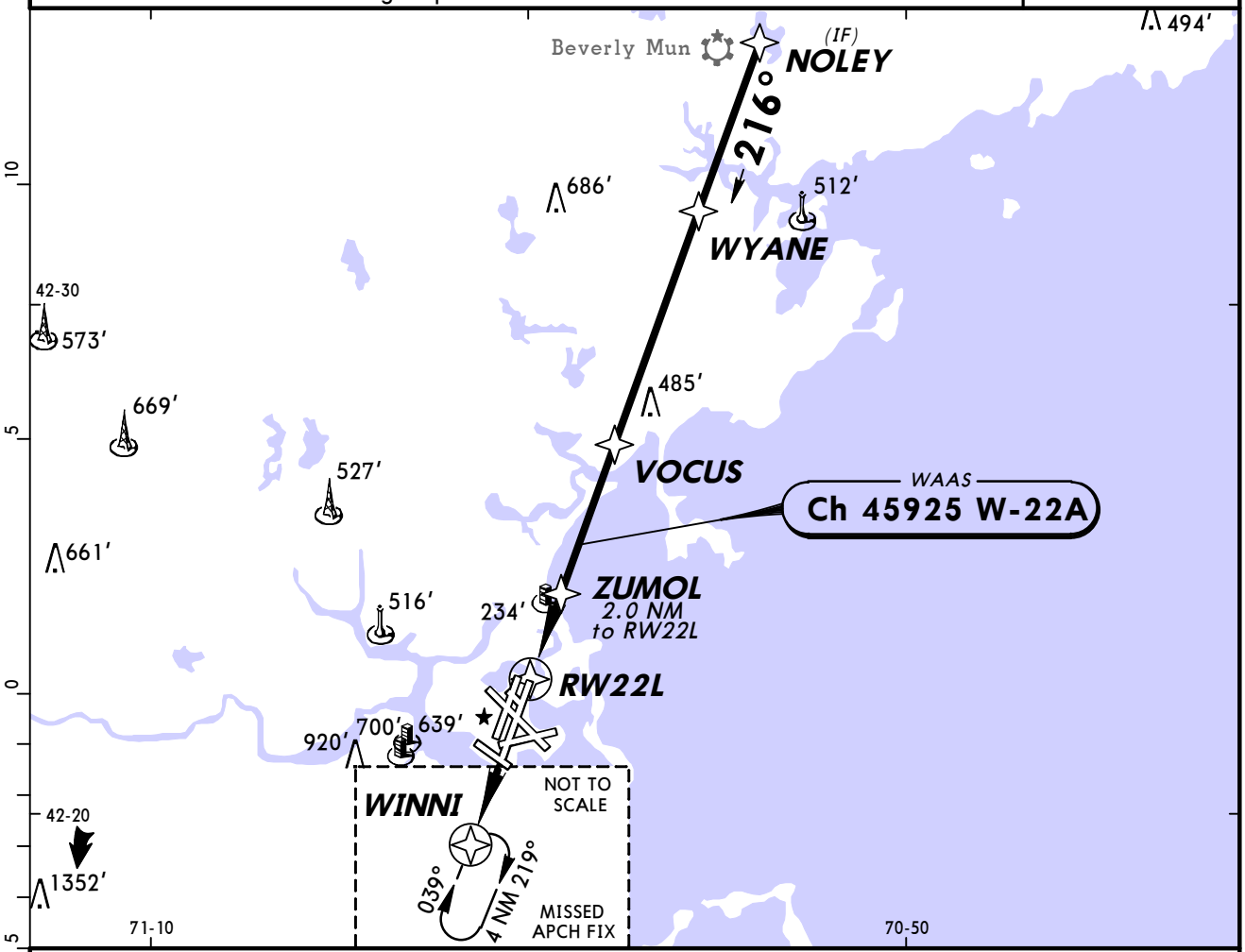
MISSED APCH: Climb to 3000′ direct WINNI and hold.

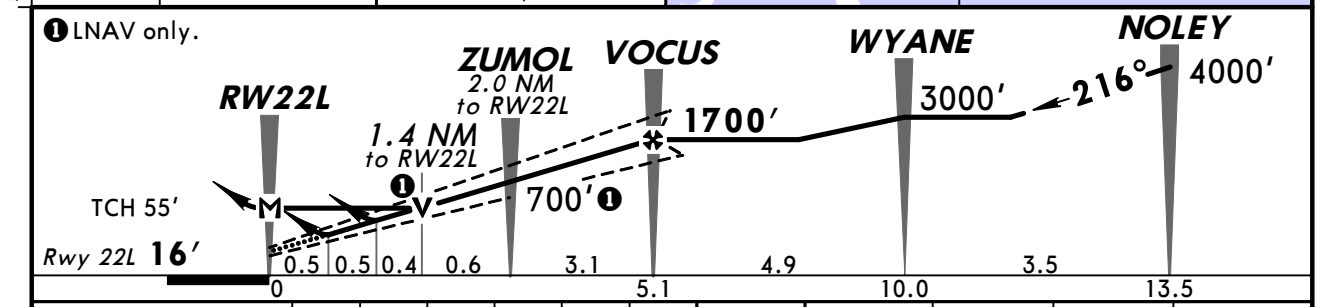
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′

1. RADAR required. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -13°C (9°F) or above 43°C (109°F). 3. DME/DME RNP-0.30 not authorized. 4. VGSI and RNAV glidepath not coincident.

MSA RW22L: 2500′

BRIEFING STRIP ™





Gnd speed-Kts	70	90	100	120	140	160
Glide Path Angle 3.00°	372	478	531	637	743	849
MAP at RW22L						

MALSF PAPI 3000′ WINNI

TERPS STRAIGHT-IN LANDING RWY 22L

	LPV DA(H) 216′ (200′) ALS out	LNAV/VNAV DA(H) 392′ (376′)		LNAV MDA(H) 540′ (524′)	
			ALS out		ALS out
A	RVR 40 or ¾	RVR 50 or 1	RVR 60 or 1⅛	RVR 40 or ¾	RVR 55 or 1
B					
C				1¼	1½
D					

CIRCLE-TO-LAND
Not Authorized to Rwy 14

Max Kts	MDA(H)
90	940′ (920′)-1¼
120	1000′ (980′)-1½
140	1 640′ (620′)-1¾
165	1 640′ (620′)-2

1 Not Authorized West of Rwy 4L and Rwy 15R.

TERPS AMEND 1 15 DEC 2011

CHANGES: Procedure.

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D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4R-22L, 9-27	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	Ground	Helicopter
135.0	120.6	132.22	128.8	121.9	124.72

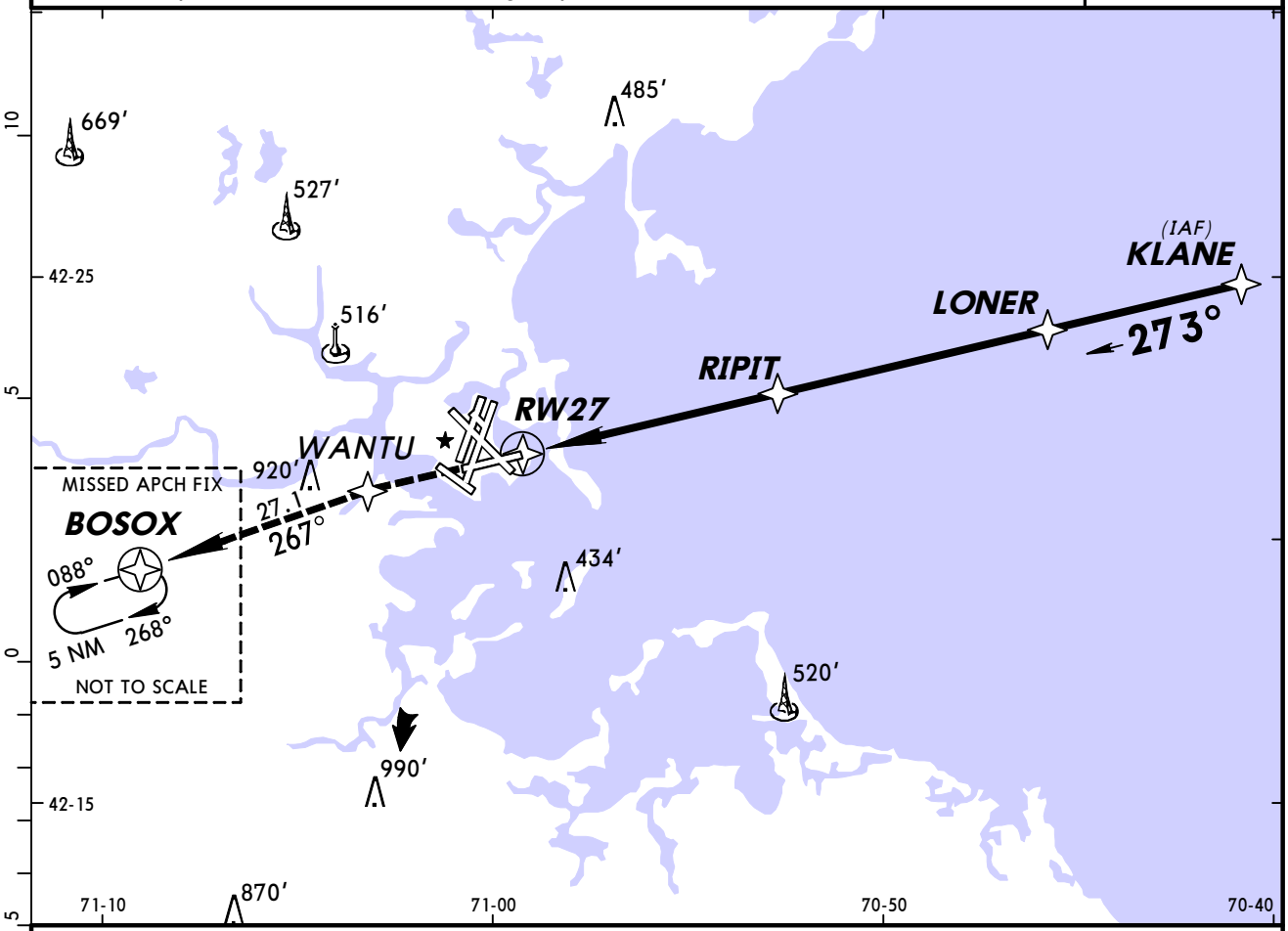
RNAV	Final Apch Crs	Minimum Alt RIPIT	LNAV/VNAV DA(H)	Apt Elev 20′
	273°	1700′ (1683′)	504′ (487′)	TDZE 17′

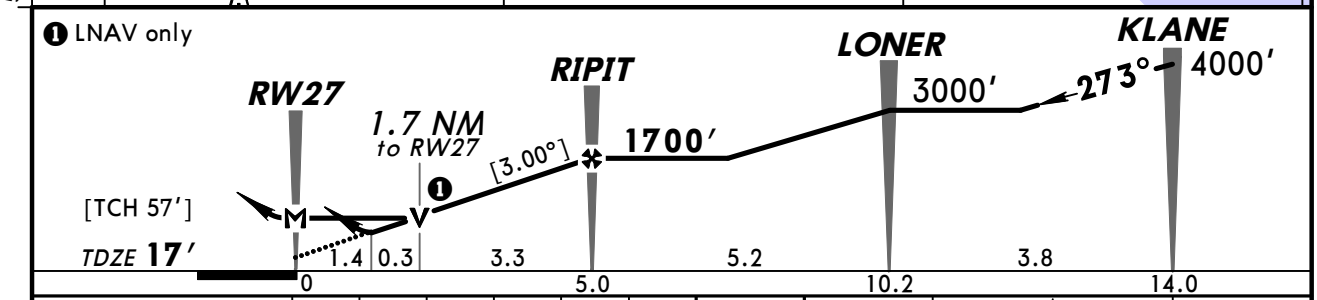
MISSED APCH: Climb to 3000′ direct WANTU and 267° track to BOSOX and hold.

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

1. RADAR required. 2. Baro-VNAV not authorized below -15°C (5°F). 3. DME/DME RNP-0.30 not authorized. 4. WAAS VNAV outages may occur. WAAS VNAV NOTAM service not provided. 5. VGSI and RNAV glidepath not coincident.

2500′
MSA RW27





Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.00°]	372	478	531	637	743	849
MAP at RW27						

REIL
PAPI-L
3000′
WANTU

STRAIGHT-IN LANDING RWY 27			CIRCLE-TO-LAND
	LNAV/VNAV DA(H) 504′ (487′)	LNAV MDA(H) 640′ (623′)	Not Authorized to Rwy 14
A	1¾	1	
B			
C		1¾	
D		2	

Max Kts	MDA(H)
90	940′ (920′) - 1¼
120	1000′ (980′) - 1½
140	1 640′ (620′) - 1¾
165	1 640′ (620′) - 2

1 Not Authorized West of Rwy 4L and Rwy 15R

CHANGES: Hold distance at BOSOX.

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KBOS/BOS
LOGAN INTL

JEPPESEN

9 DEC 11 (12-5) Eff 15 Dec

BOSTON, MASS
RNAV (GPS) Rwy 32

BRIEFING STRIP ™

D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	BOSTON Tower Rwys 4R-22L, 9-27	Ground	Helicopter
135.0	120.6	128.8	132.22	121.9	124.72

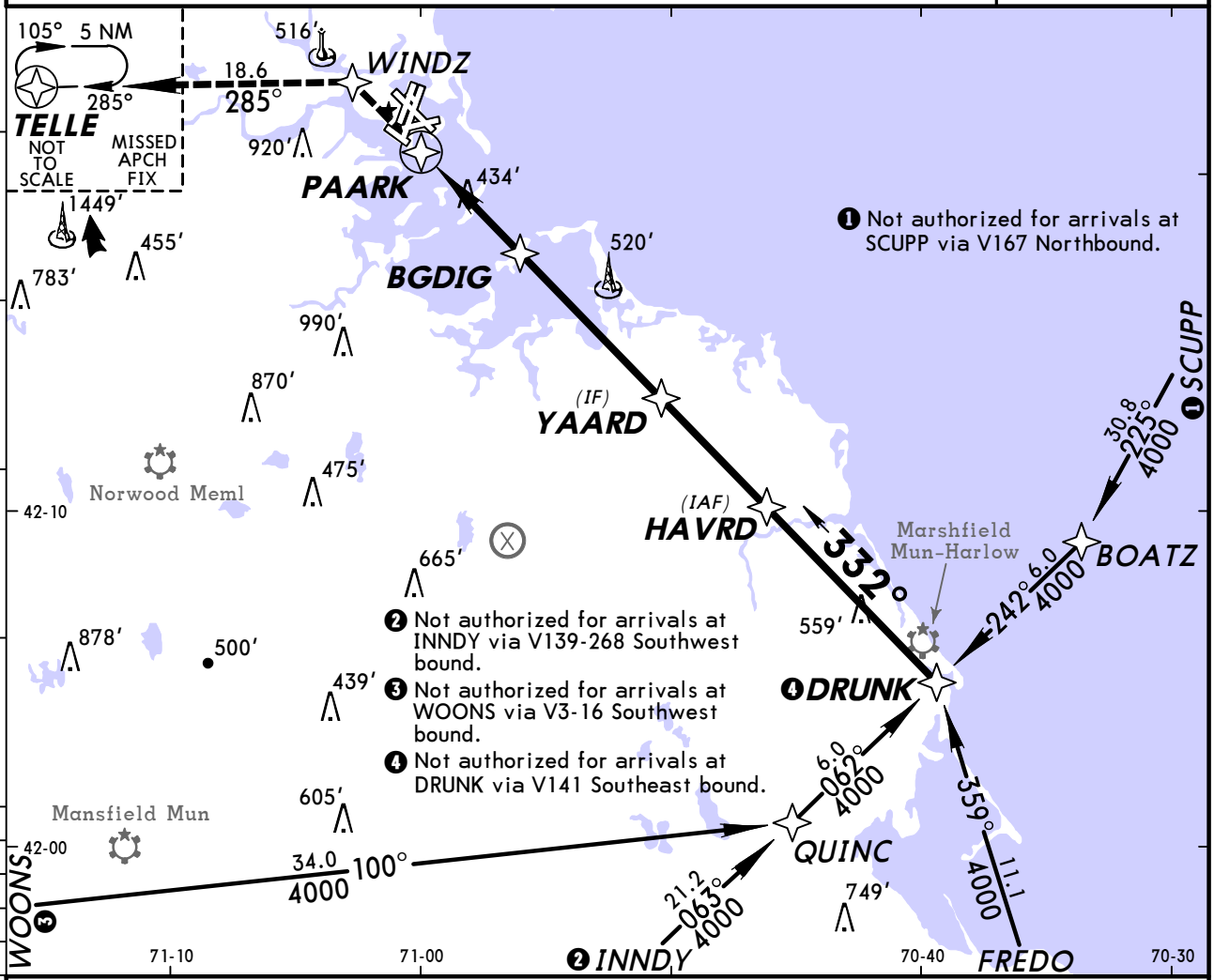
RNAV	Final Apch Crs	Minimum Alt BGDIG	LNAV MDA(H)	Apt Elev 20′
	332°	1500′ (1480′)	820′ (800′)	TDZE 20′

MISSED APCH: Climb to 3000′ direct WINDZ and via 285° track to TELLE and hold.

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

1. DME/DME RNP-0.30 not authorized.

2500′ MSA PAARK

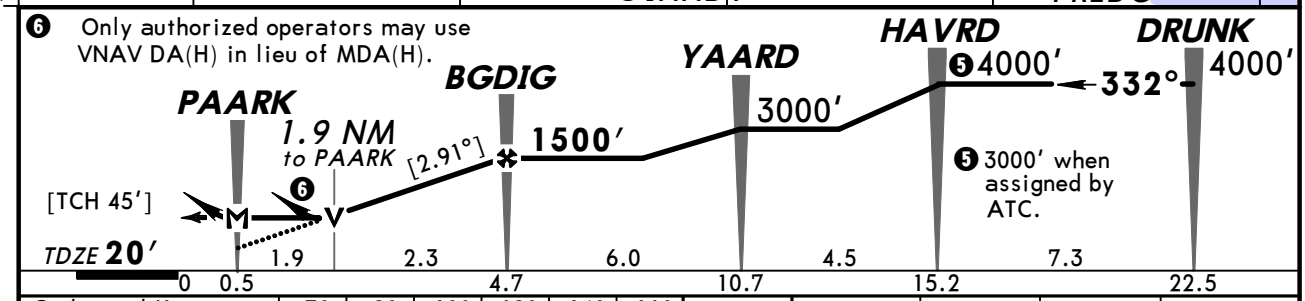


❶ Not authorized for arrivals at SCUPP via V167 Northbound.

❷ Not authorized for arrivals at INNDY via V139-268 Southwest bound.

❸ Not authorized for arrivals at WOONS via V3-16 Southwest bound.

❹ Not authorized for arrivals at DRUNK via V141 Southeast bound.



Gnd speed-Kts	70	90	100	120	140	160
Descent angle [2.91°]	360	463	515	618	721	824
MAP at PAARK						

REIL PAPI-L 3000′ D WINDZ

STRAIGHT-IN LANDING RWY 32 LNAV MDA(H) 820′(800′)		CIRCLE-TO-LAND Not Authorized to Rwy 14 Max Kts	MDA(H)
A	1	90	940′(920′) - 1¼
B	1¼	120	1000′(980′) - 1½
C	2¼	140	❶ 820′(800′) - 2¼
D	2½	165	❶ 820′(800′) - 2½

❶ Not Authorized West of Rwy 4L and Rwy 15R.

TERPS AMEND OB 23 SEP 2010

CHANGES: None.

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KBOS/BOS
LOGAN INTL

JEPPESEN

9 DEC 11 (12-6) Eff 15 Dec

BOSTON, MASS
RNAV (GPS) Rwy 33L

D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	BOSTON Tower Rwys 4R-22L, 9-27	Ground	Helicopter
135.0	120.6	128.8	132.22	121.9	124.72

WAAS	Final Apch Crs	Minimum Alt NIMOY	LPV DA(H)	Apt Elev 20′
Ch 69525 W-33A	331°	1500′ (1485′)	215′ (200′)	Rwy 33L 15′

MISSED APCH: Climb to 600′ then climbing RIGHT turn to 3000′ direct WAXEN and hold.

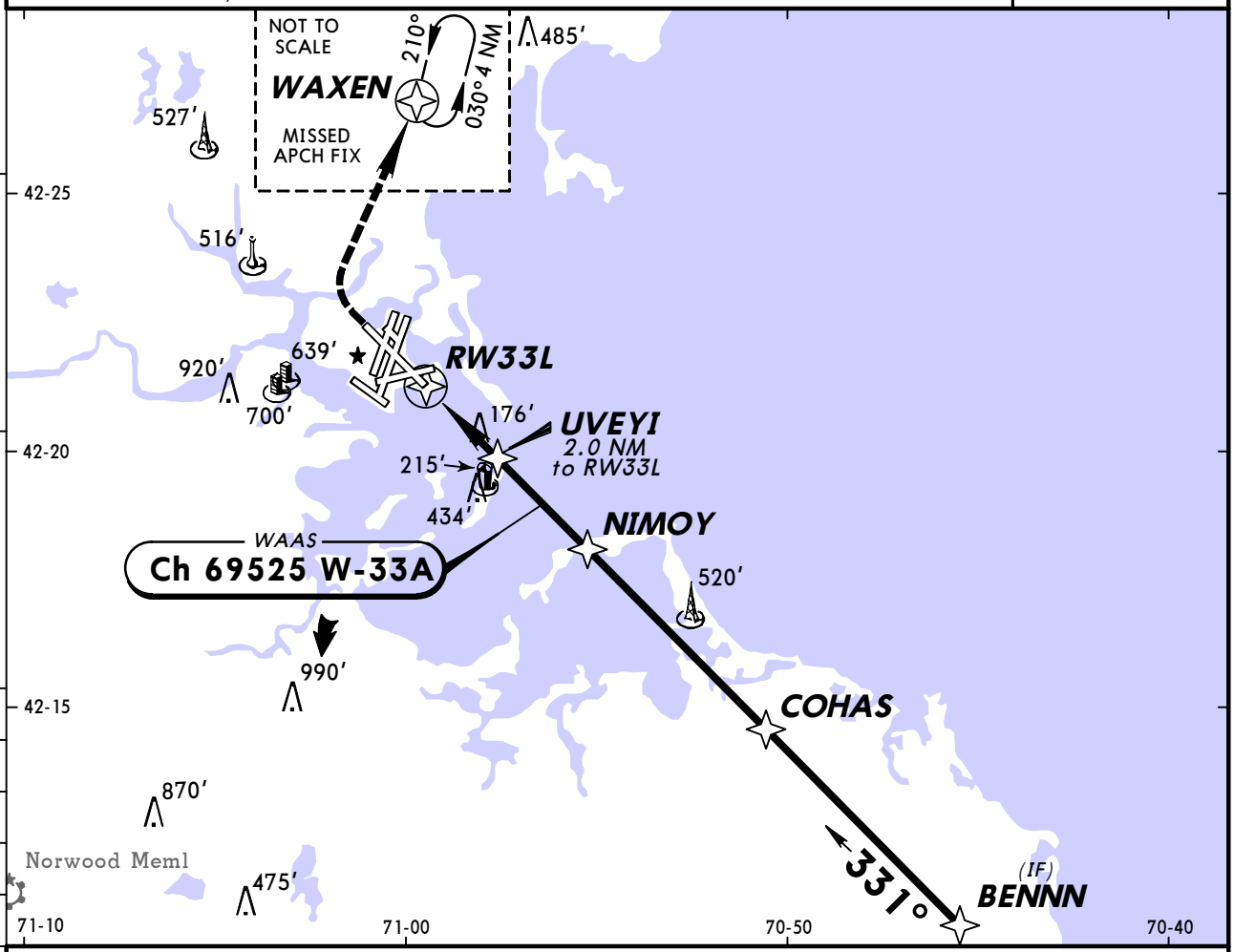
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′

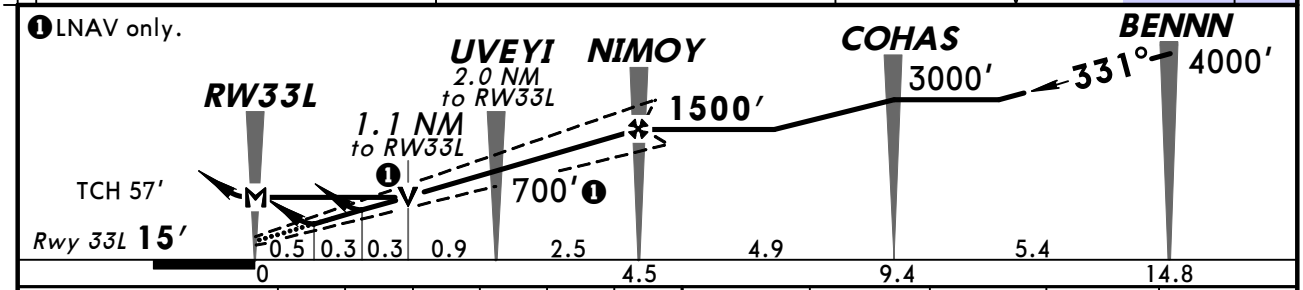
1. RADAR required. 2. For uncompensated Baro-VNAV systems, LNAV/VNAV not authorized below -13°C (9°F) or above 43°C (109°F). 3. VGSI and RNAV glidepath not coincident. 4. DME/DME RNP-0.30 not authorized.

2500′

MSA RW33L

BRIEFING STRIP™





Gnd speed-Kts	70	90	100	120	140	160
Glide Path Angle 3.00°	372	478	531	637	743	849
MAP at RW33L						

MALSR PAPI | 600′ | 3000′ RT | D | WAXEN

TERPS STRAIGHT-IN LANDING RWY **33L**

	LPV DA(H) 215′ (200′)		LNAV/VNAV DA(H) 323′ (308′)			LNAV MDA(H) 440′ (425′)		
		RAIL or ALS out		RAIL out	ALS out		RAIL out	ALS out
A	RVR 24 or ½	RVR 40 or ¾	RVR 24 or ½	RVR 40 or ¾	RVR 45 or ⅞	RVR 24 or ½	RVR 40 or ¾	RVR 55 or 1
B								
C						RVR 40 or ¾	RVR 50 or 1	1¼
D								

CIRCLE-TO-LAND

Not Authorized to Rwy 14

Max Kts	MDA(H)
90	940′ (920′) - 1¼
120	1000′ (980′) - 1½
140	❶640′ (620′) - 1¾
165	❶640′ (620′) - 2

❶ Not Authorized West of Rwy 4L and Rwy 15R.

TERPS AMEND 1 15 DEC 2011

CHANGES: Procedure.

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BRIEFING STRIP ™

D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	BOSTON Tower Rwys 4R-22L, 9-27	Ground	Helicopter
135.0	120.6	128.8	132.22	121.9	124.72

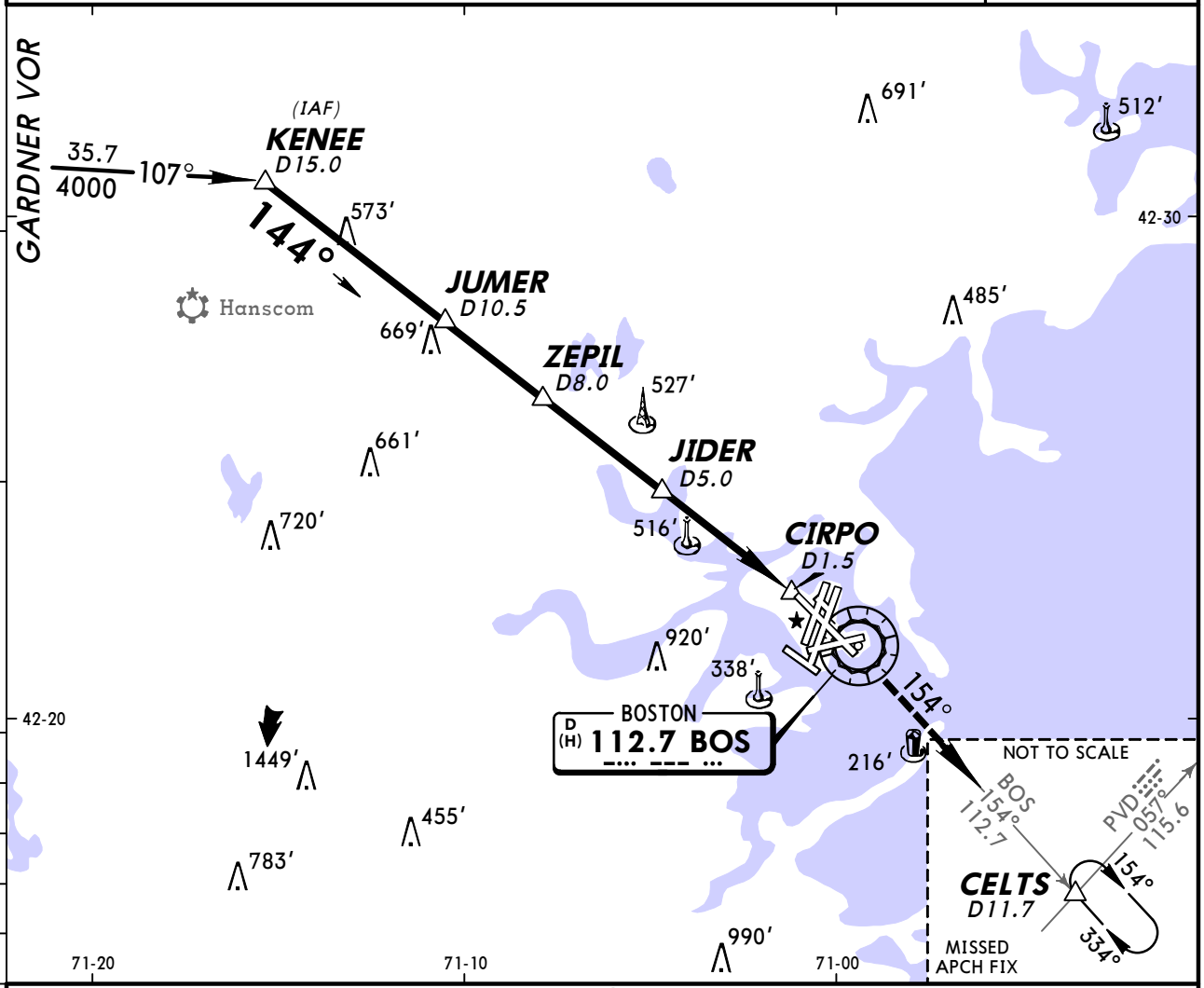
VOR	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 20'
BOS 112.7	144°	JIDER 1400' (1383')	780' (763')	TDZE 17'

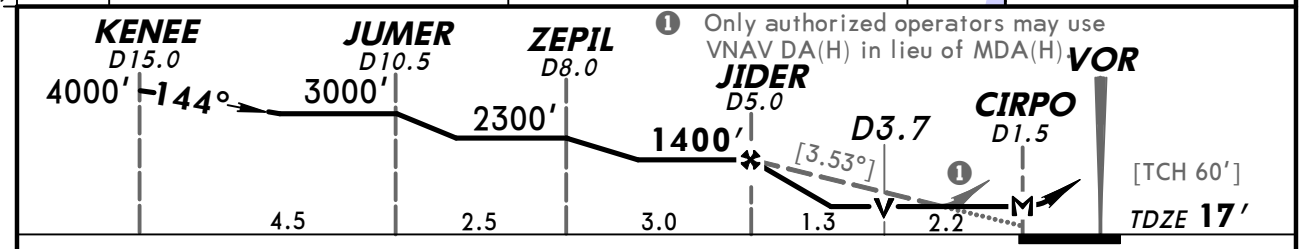
MISSED APCH: Climb to 3000' outbound via BOS VOR R-154 to CELTS INT/D11.7 and hold.

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

1. VGSI and descent angles not coincident.

MSA BOS VOR: 125° 2000', 2500', 035°





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

Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.53°]	437	562	625	750	875	1000
MAP at CIRPO						

MALSR PAPI 3000' via BOS 112.7 R-154 CELTS

STRAIGHT-IN LANDING RWY 15R

MDA(H) 780' (763')

	RAIL out		ALS out
A	RVR 40 or ¾		RVR 50 or 1
B	RVR 40 or ¾	RVR 60 or 1¼	
C	1¾	2¼	
D	2	2½	

CIRCLE-TO-LAND

Not Authorized to Rwy 14

Max Kts	MDA(H)
90	940' (920') - 1¼
120	1000' (980') - 1½
140	❶ 780' (760') - 2¼
165	❶ 780' (760') - 2½

❶ Not Authorized West of Rwys 4L and 15R.

TERPS AMEND 2B 21 OCT 2010

CHANGES: Minimums, notes.

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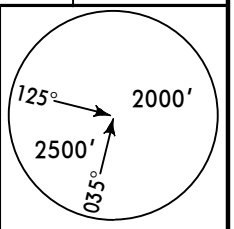
D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4R-22L, 9-27	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	Ground	Helicopter
135.0	120.6	132.22	128.8	121.9	124.72

VOR	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 20′
BOS 112.7	260°	BLEAK 1500′ (1483′)	480′ (463′)	TDZE 17′

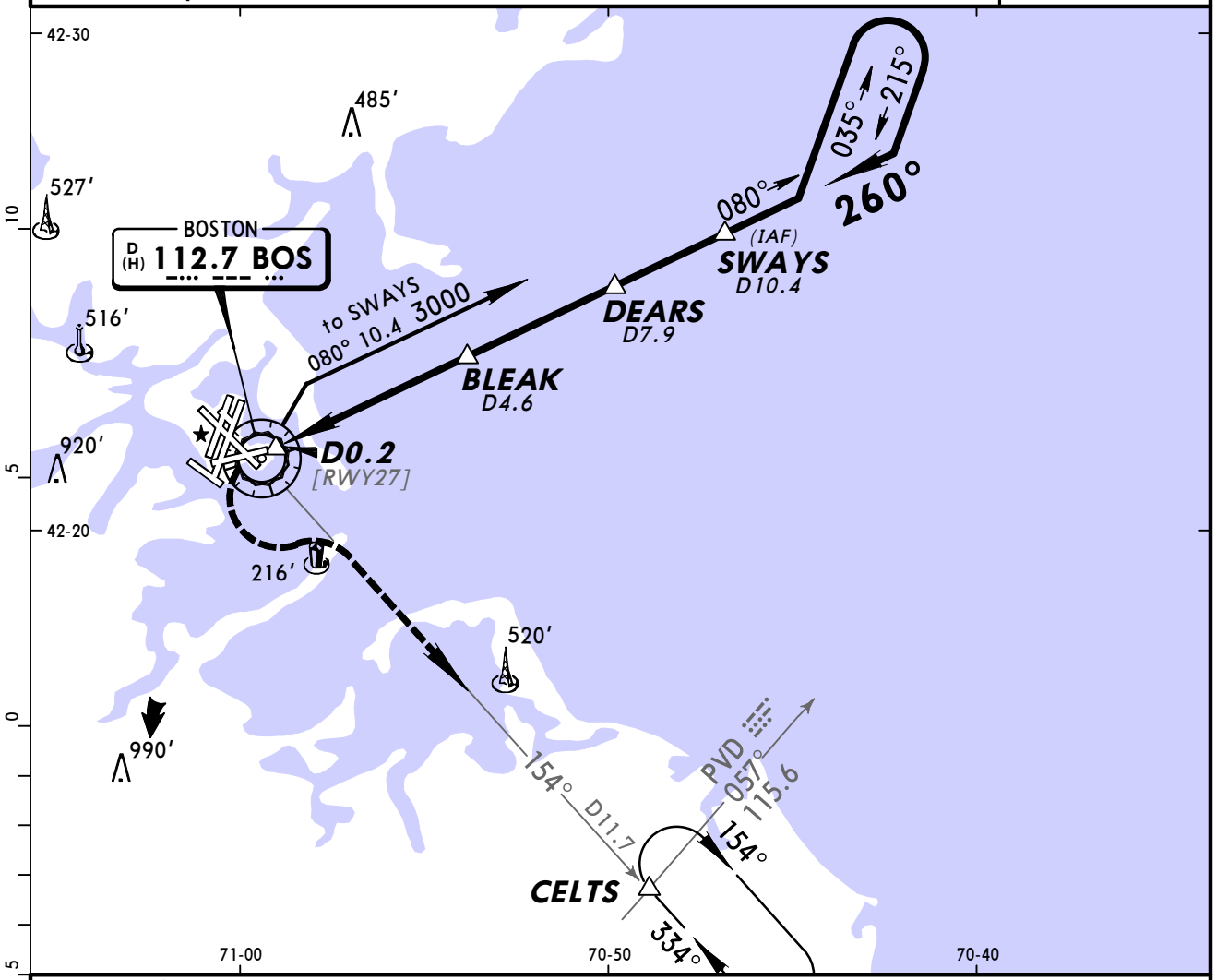
MISSED APCH: Climbing LEFT turn to 3000′ outbound via BOS VOR R-154 to CELTS INT and hold.

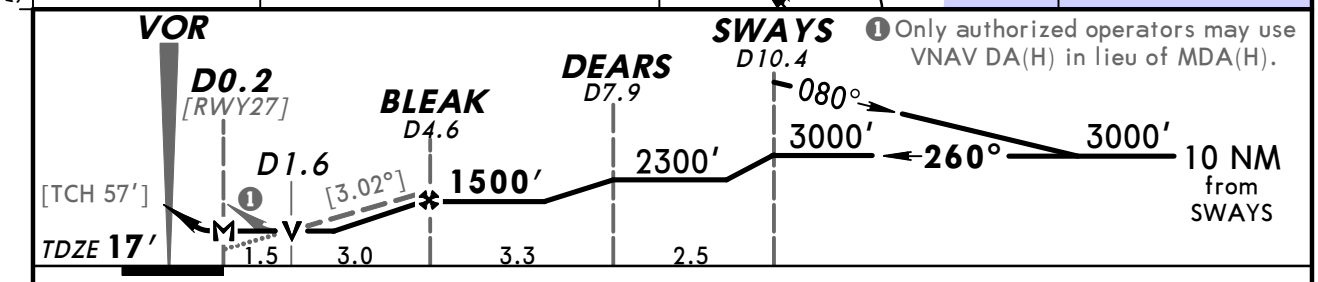
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′

1. RADAR Required.



MSA BOS VOR





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

Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.02°]	374	481	534	641	748	855
MAP at D0.2						

REIL PAPI-L	3000′ LT	BOS via 112.7 R-154	CELTS

STRAIGHT-IN LANDING RWY 27		CIRCLE-TO-LAND Not Authorized to Rwy 14	
MDA(H) 480′ (463′)		Max Kts	MDA(H)
A	1½	90	940′ (920′) - 1¼
B		120	1000′ (980′) - 1½
C		140	❶ 640′ (620′) - 1¾
D		165	❶ 640′ (620′) - 2

❶ Not Authorized West of Rwy 4L and Rwy 15R.

TERPS AMEND 2C 21 OCT 2010

CHANGES: Minimums, notes.

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BRIEFING STRIP ™

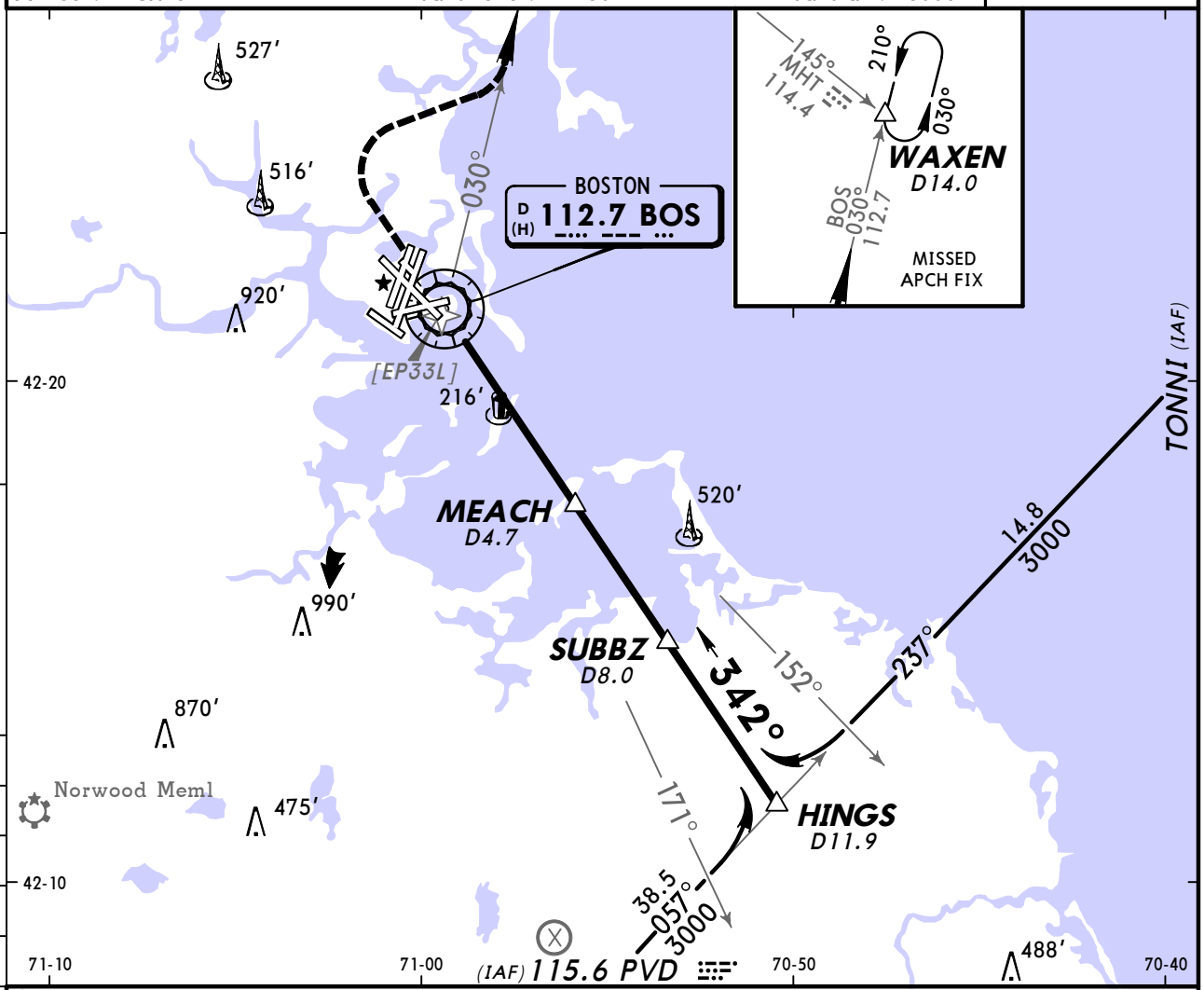
D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	BOSTON Tower Rwys 4R-22L, 9-27	Ground	Helicopter
135.0	120.6	128.8	132.22	121.9	124.72

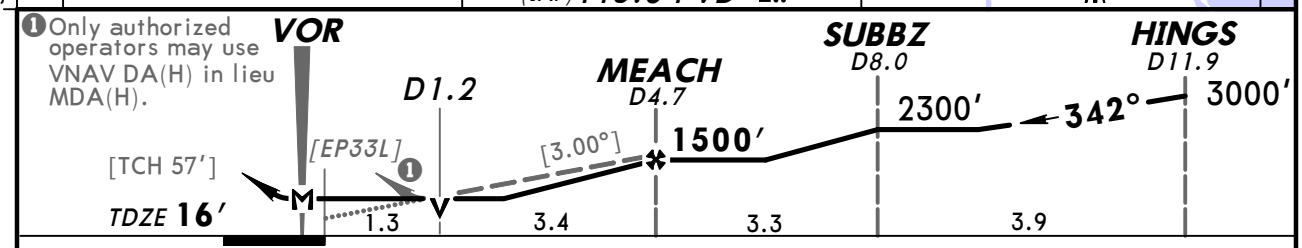
VOR	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 20'
BOS 112.7	342°	MEACH 1500' (1484')	480' (464')	TDZE 16'

MISSED APCH: Climb to 1500' then climbing RIGHT turn to 3000' outbound via BOS VOR R-030 to WAXEN INT/D14.0 BOS and hold.

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

MSA BOS VOR: 125° 2000', 2500', 035°





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

MALSR PAPI | 1500' | 3000' RT via BOS 112.7 R-030 | WAXEN

STRAIGHT-IN LANDING RWY 33L

MDA(H) 480' (464')

		RAIL out	ALS out
A	RVR 24 or ½	RVR 40 or ¾	RVR 50 or 1
B			
C	RVR 40 or ¾	RVR 60 or 1¼	
D	RVR 50 or 1	1½	

CIRCLE-TO-LAND

Not Authorized to Rwy 14

Max Kts	MDA(H)
90	940' (920') - 1¼
120	1000' (980') - 1½
140	[1] 640' (620') - 1¾
165	[1] 640' (620') - 2

[1] Not Authorized West of Rwy 4L and Rwy 15R.

TERPS AMEND 2D 21 OCT 2010

CHANGES: None.

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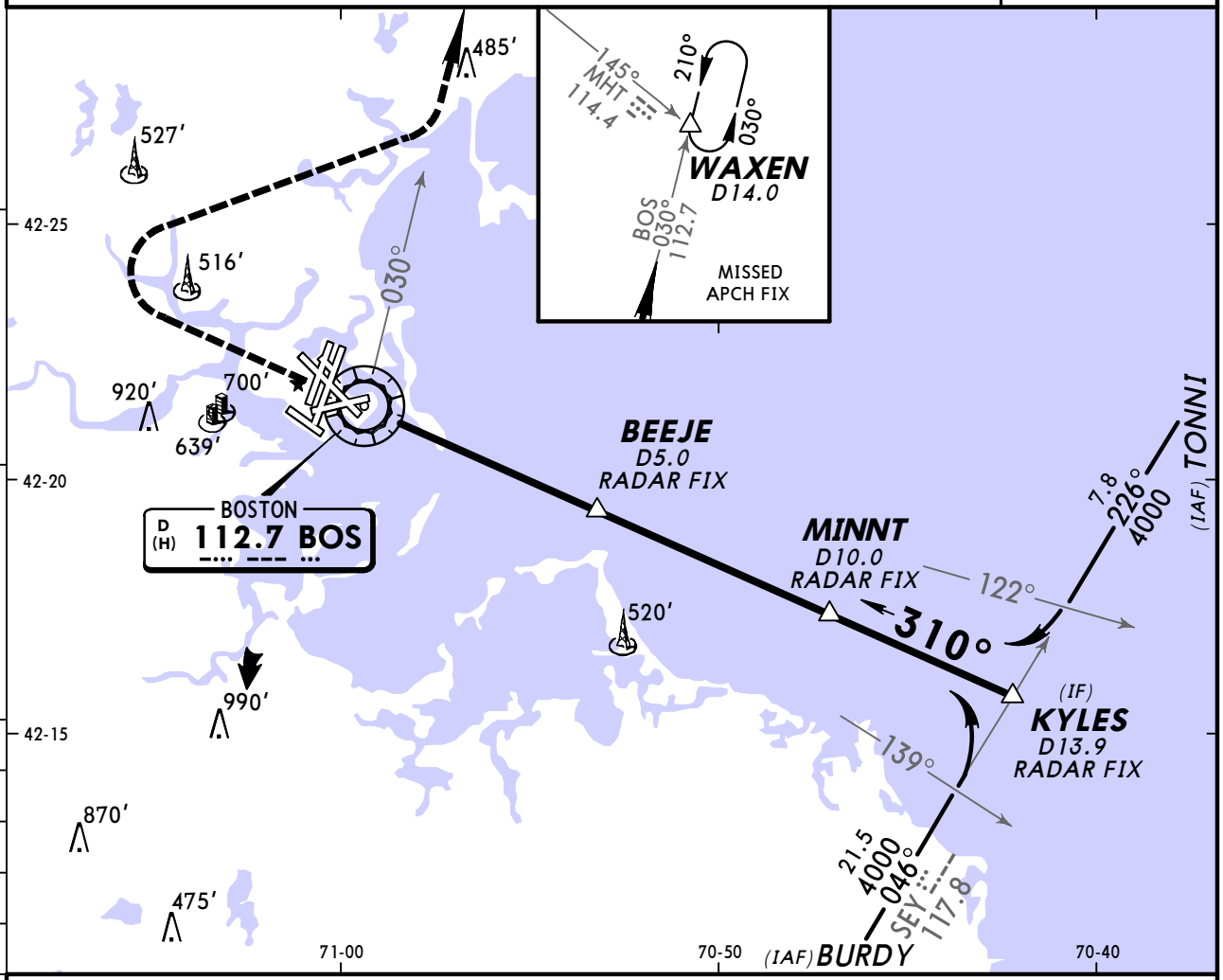
D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower Rwys 4L-22R, 14-32, 15L/R, 33L/R	BOSTON Tower Rwys 4R-22L, 9-27	Ground	Helicopter
135.0	120.6	128.8	132.22	121.9	124.72

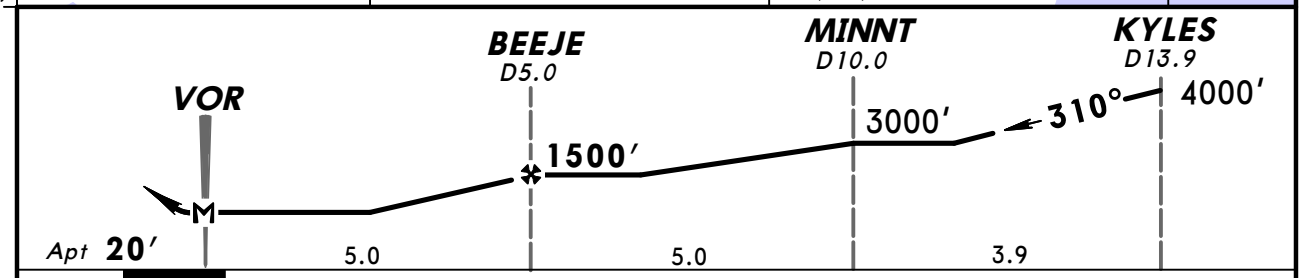
VOR	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev
BOS 112.7	310°	BEEJE 1500′ (1480′)	Refer to Minimums	20′

MISSED APCH: Climb to 1500′ then climbing RIGHT turn to 3000′ outbound on BOS VOR R-030 to WAXEN INT/D14.0 and hold.

Alt Set: INCHES | Trans level: FL 180 | Trans alt: 18000′

MSA BOS VOR: 125° 2000′; 2500′; 035°





MAP at VOR	Lighting - Refer to Airport Chart	1500′	3000′ RT on BOS 112.7 R-030	WAXEN

CIRCLE-TO-LAND

Not Authorized to Rwy 14

	Max Kts	MDA(H)
A	90	940′ (920′) - 1¼
B	120	1000′ (980′) - 1½
C	140	[1] 640′ (620′) - 1¾
D	165	[1] 640′ (620′) - 2

[1] Not Authorized West of Rwy 4L and Rwy 15R.

CHANGES: Missed approach, transitions.

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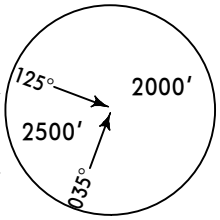
D-ATIS Arrival	BOSTON Approach (R)	BOSTON Tower		Ground	Helicopter
		Rwys 4L-22R, 14-32, 15L/R, 33L/R	Rwys 4R-22L, 9-27		
135.0	120.6	128.8	132.22	121.9	124.72

NAVAIDS- See Planview	Final Apch Crs 331°	No FAF	CEIL-VIS 3000′-5	Apt Elev 20′

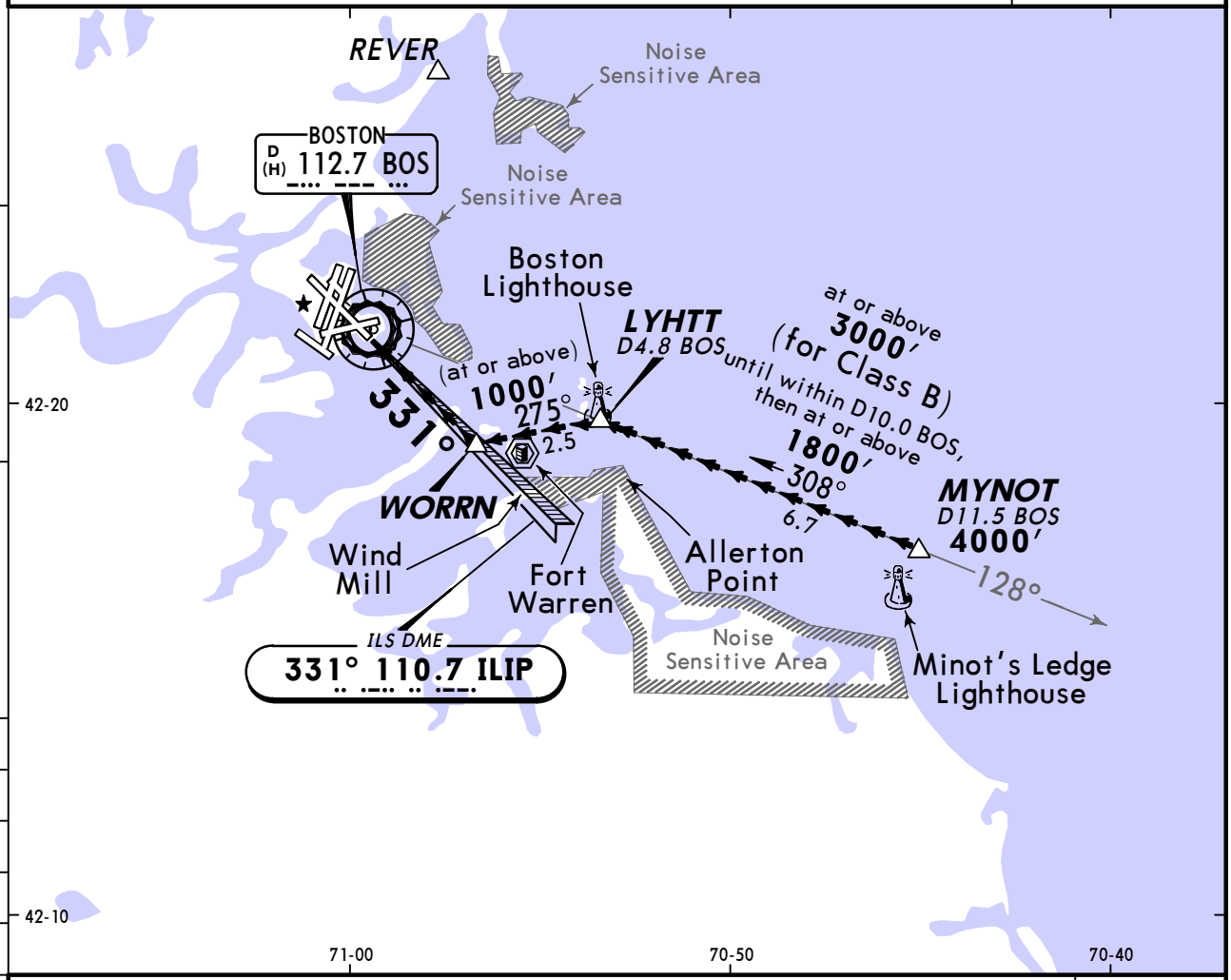
MISSED APCH: No missed approach procedure.

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

1. RADAR REQUIRED. 2. Vertical Guidance Navaid and Angle: LOC ILIP (GS 3.00°), PAPI-R 3.00°.



MSA BOS VOR



MALSR
PAPI

LIGHT VISUAL RWY 33L

From SCUPP, REVER, and DRUNK: expect radar vectors to intercept the BOS VOR R-128 inbound.

When cleared for the visual, proceed via the BOS VOR 308° course to Boston Light.

WEATHER MINIMUMS

Ceiling **3000′** - VIS **5**

CHANGES: Noise sensitive areas and mileages added.

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General Information

Location: Springfield/Chicopee MA USA
IATA Code: CEF
Lat/Long: N42° 11.6' W072° 32.1'
Elevation: 241 ft

Airport Use: Joint
Magnetic Variation: 14.3°W
Sectional Chart: New York

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

Sunrise: 1129 Z
Sunset: 2237 Z,

Runway Information

Runway: 05
Length x Width: 11596 ft x 300 ft
Surface Type: asphalt
TDZ-Elev: 237 ft
Lighting: Edge, ALS
Displaced Threshold: 1201 ft
Stopway: 1000 ft

Runway: 15
Length x Width: 7082 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 241 ft
Lighting: Edge

Runway: 23
Length x Width: 11596 ft x 300 ft
Surface Type: asphalt
TDZ-Elev: 241 ft
Lighting: Edge, ALS
Stopway: 1000 ft

Runway: 33
Length x Width: 7082 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 240 ft
Lighting: Edge

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Communication Information

ATIS 138.1
ATIS 114.0 Secondary
Westover Arb/Metro Tower Tower 134.85 ATF
Westover Arb/Metro Ground Ground Control 118.35
Bradley Approach Control 125.35
Bradley Departure Control 125.35
Westover Arb/Metro Unicom Unicom 123.0

*WESTOVER ARB/METRO ATIS **114.0 138.1**

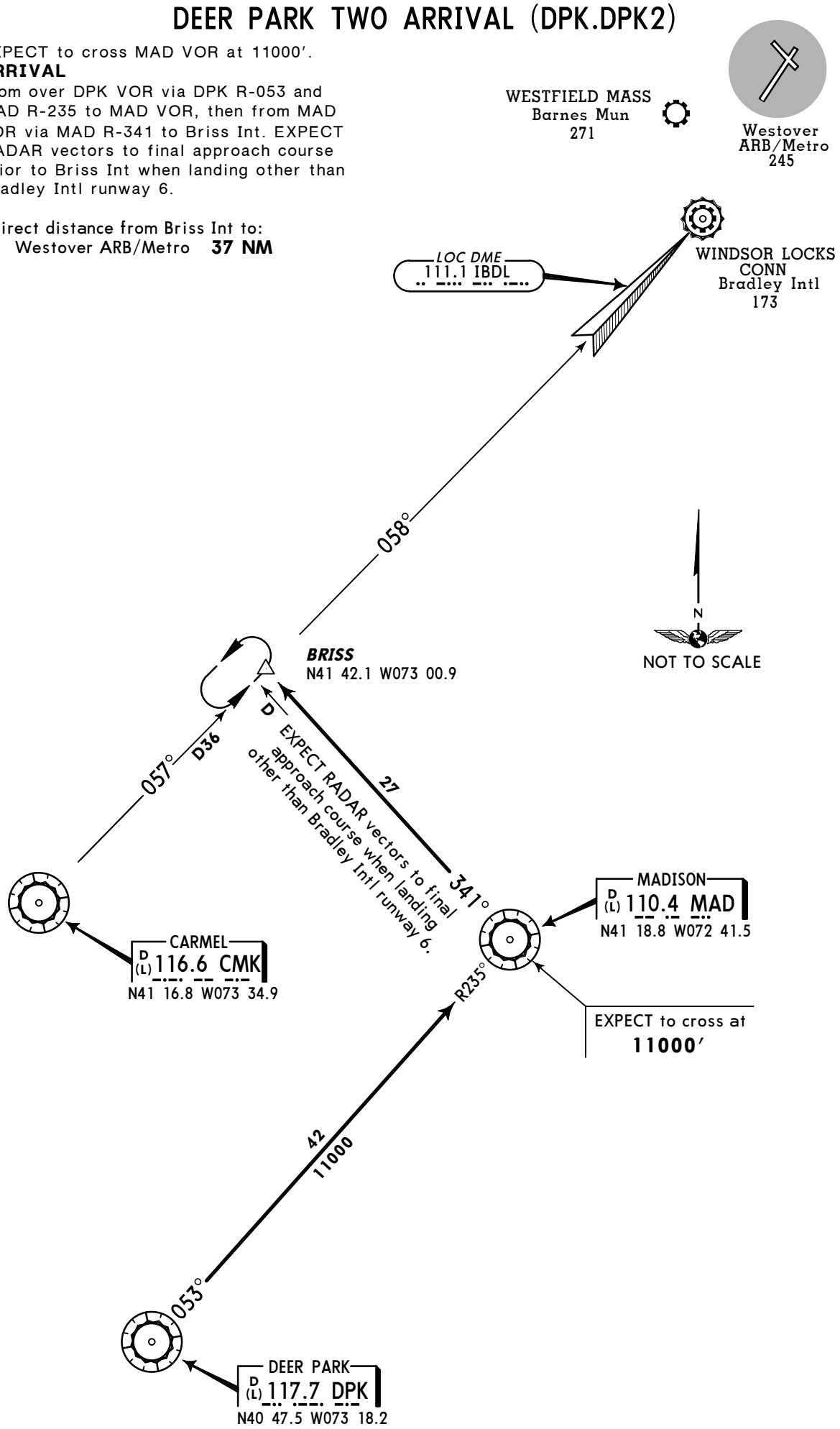
DEER PARK TWO ARRIVAL (DPK.DPK2)

EXPECT to cross MAD VOR at 11000′.

ARRIVAL

From over DPK VOR via DPK R-053 and MAD R-235 to MAD VOR, then from MAD VOR via MAD R-341 to Briss Int. EXPECT RADAR vectors to final approach course prior to Briss Int when landing other than Bradley Intl runway 6.

Direct distance from Briss Int to:
Westover ARB/Metro **37 NM**



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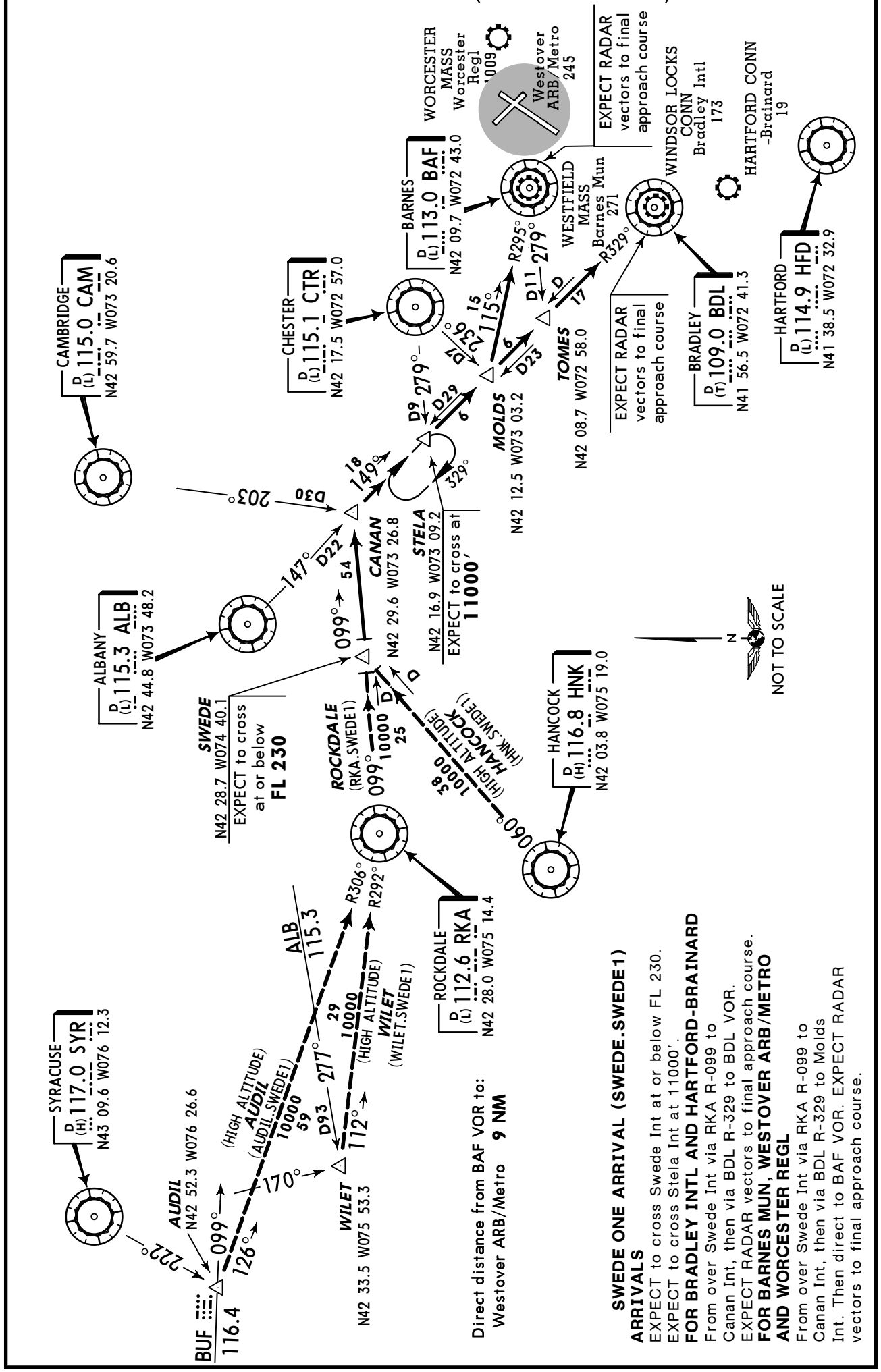
*WESTOVER ARB/METRO ATIS **114.0 138.1**

SWEDE ONE ARRIVAL (SWEDE.SWEDE1)



SWEDE ONE ARRIVAL (SWEDE.SWEDE1)

ARRIVALS

EXPECT to cross Swede Int at or below FL 230.
EXPECT to cross Stela Int at 11000'.

FOR BRADLEY INTL AND HARTFORD-BRAINARD

From over Swede Int via RKA R-099 to Canan Int, then via BDL R-329 to BDL VOR. EXPECT RADAR vectors to final approach course.

FOR BARNES MUN, WESTOVER ARB/METRO AND WORCESTER REGL

From over Swede Int via RKA R-099 to Canan Int, then via BDL R-329 to Molds Int. Then direct to BAF VOR. EXPECT RADAR vectors to final approach course.

CHANGES: HANCOCK transition.

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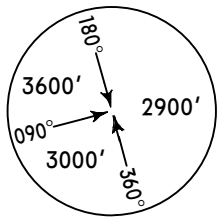
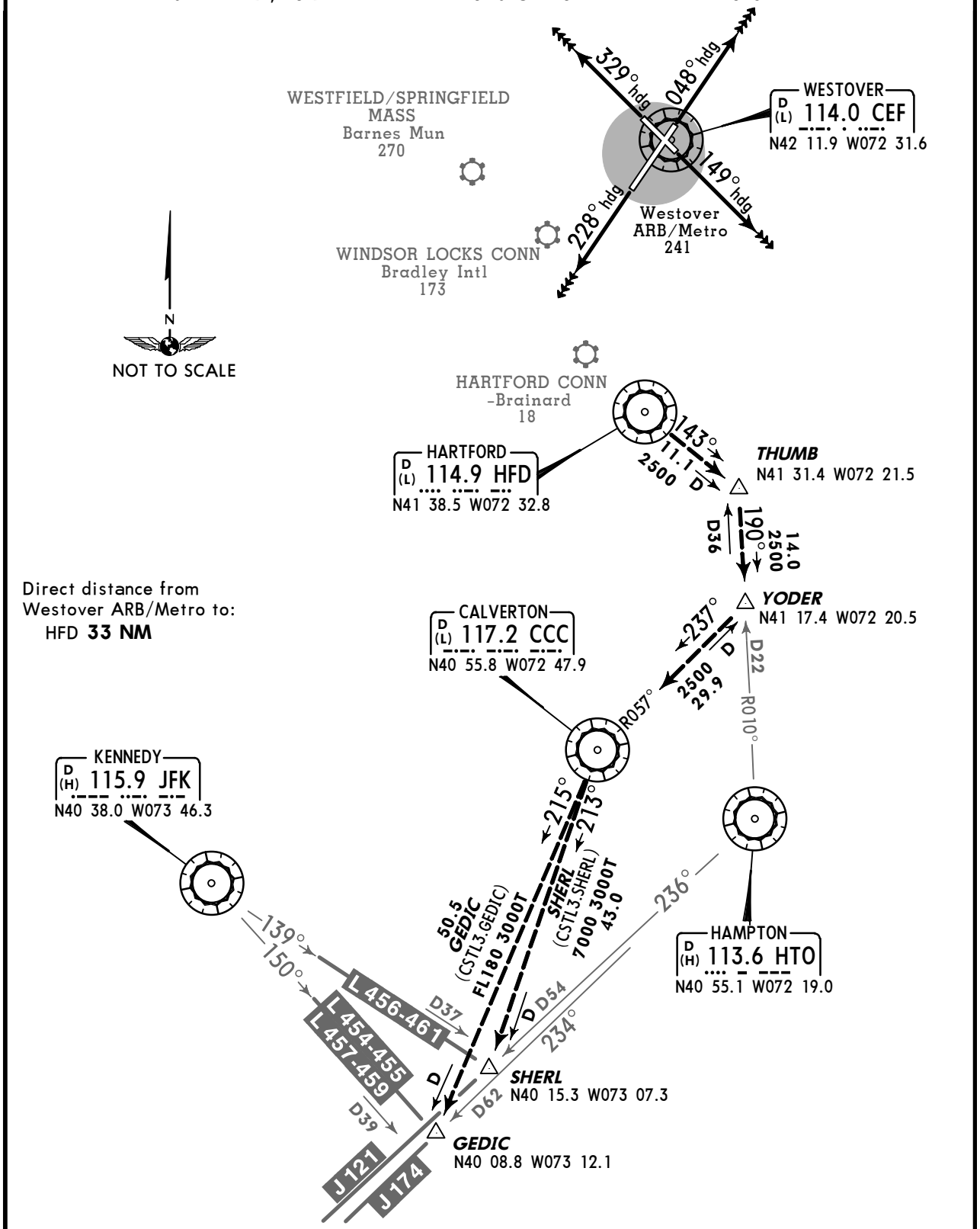
DEPARTURE CONTROL FREQUENCY TO BE ASSIGNED BY ATC.	*Apt Elev See Graphic*	Trans level: FL180 Trans alt: 18000′ 1. RADAR required. 2. Initial departure headings are predicated on avoiding noise sensitive areas. Flight crew awareness and compliance is important in minimizing noise impacts on surrounding communities.



MSA CEF VOR

COASTAL THREE DEPARTURE (CSTL3.CCC)

For Procedure Text, Takeoff Minimums and Obstacle Notes see 10-3-1



CHANGES: Procedure revised, renumbered, procedure text moved to 10-3-1.

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COASTAL THREE DEPARTURE (CSTL3.CCC)

For Procedure Graphic see 10-3

PROCEDURE TEXT

OBSTACLES

Rwy 15: 307′ tree 1013′ from DER, 526′ LEFT of extended centerline, 294′ tree 1268′ from DER, 619′ LEFT of extended centerline, 317′ tree 1340′ from DER, 686′ LEFT of extended centerline, 318′ tree 1686′ from DER, 911′ LEFT of extended centerline, 305′ tree 1911′ from DER, 832′ LEFT of extended runway centerline, 321′ tree 2104′ from DER, 942′ LEFT of extended centerline, 329′ tree 2959′ from DER, 1277′ LEFT of extended centerline, 334′ tree 3236′ from DER, 1278′ LEFT of extended centerline, 343′ tree 3515′ from DER, 1287′ LEFT of extended centerline, 310′ tree 2421′ from DER, 1062′ LEFT of extended centerline, 323′ tree 2695′ from DER, 369′ RIGHT of extended centerline, 321′ tree 2796′ from DER, 608′ RIGHT of extended centerline, 321′ tree 2945′ from DER, 909′ RIGHT of extended centerline, 335′ tree 3567′ from DER, 1320′ LEFT of extended centerline.
Rwy 33: 296′ tree 1191′ from DER, 726′ LEFT of extended centerline, 289′ tree 1704′ from DER, 202′ RIGHT of extended centerline, 291′ tree 1737′ from DER, 205′ LEFT of extended centerline.

This SID requires take-off minimums (for standard minimums, refer to airport chart):
Rwy 5: 900-3 or standard (or lower than standard, if authorized) with a minimum climb of 250′ per NM to **900′.**
Rwy 33: 1400-3 or standard (or lower than standard, if authorized) with a minimum climb of 320′ per NM to **1400′.**

Gnd speed-KT	75	100	150	200	250	300
250′ per NM	313	417	625	833	1042	1250
320′ per NM	400	533	800	1067	1333	1600

RWY	INITIAL CLIMB	ALTITUDE
5	Climb heading 048° or as assigned for RADAR vectors to HFD.	**MAINTAIN** assigned altitude
15	Climb heading 149° or as assigned for RADAR vectors to HFD.	
23	Climb heading 228° or as assigned for RADAR vectors to HFD.	
33	Climb heading 329° or as assigned for RADAR vectors to HFD.	

ROUTING

From over HFD proceed via HFD R-143 to THUMB, then proceed via HTO R-010 to YODER, then proceed via CCC R-057 to CCC. Then via transition or assigned route. EXPECT clearance to requested flight level 10 minutes after departure.

CHANGES: New chart.

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KCEF/CEF

Apt Elev **241′**

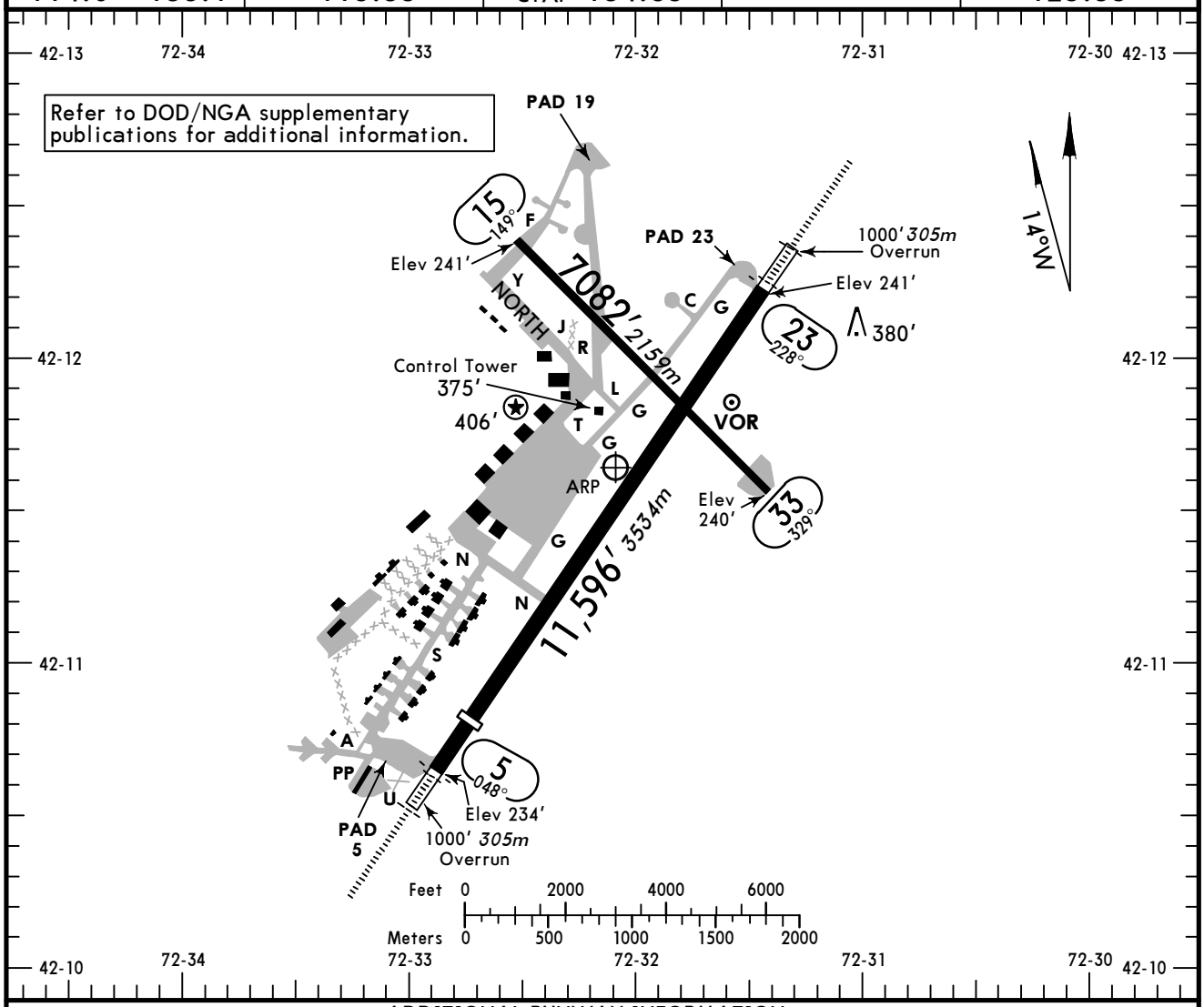
N42 11.6 W072 32.1

JEPPESEN 9 DEC 11 (10-9) **Eff 15 Dec**

SPRINGFIELD/CHICOPEE, MASS

WESTOVER ARB/METRO

*ATIS	*WESTOVER Ground	*Tower	*UNICOM 123.0	BRADLEY Departure (R)
114.0 138.1	118.35	CTAF 134.85		125.35



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
5 ❶ 23	HIRL ALSF-I PAPI-L (angle 3.0°) RVR	10395′ *3168m*	9267′ *2825m*		300′ *91m*
			10582′ *3225m*		
15 33	HIRL PAPI-L (angle 3.0°)				150′ *46m*

❶ First 1000′ of each end of Rwy 5/23 is concrete, the mid 9600′ is porous friction surface.

TAKE-OFF

	Rwy 23		❶ Rwys 15			❷ Rwy 5			❸ Rwy 33		
	Adequate Vis Ref	STD	With Mim climb of 210′/NM to 1800′ Adequate Vis Ref	STD	For Climb in Visual Conditions	With Mim climb of 240′/NM to 1600′ Adequate Vis Ref	STD	For Climb in Visual Conditions	With Mim climb of 300′/NM to 1800′ Adequate Vis Ref	STD	For Climb in Visual Conditions
1 & 2 Eng	RVR 16 or 1/4	RVR 50 or 1	1/4	1	1100′-2½	RVR 16 or 1/4	RVR 50 or 1	1200′-2½	1/4	1	1300′-2½
3 & 4 Eng		RVR 24 or ½		½			RVR 24 or ½			½	

❶ Rwy 15, With standard take-off minimums and a standard 200′ per NM climb gradient, take-off must occur no later than 1400′ prior to departure end of runway: Cross CEF VOR at or above 1200′ MSL before proceeding on course.

❷ Rwy 5, Cross CEF VOR at or above 1300′ MSL before proceeding on course.

❸ Rwy 33, Cross CEF VOR at or above 1400′ MSL before proceeding on course.

TAKE-OFF OBSTACLES: Rwy 15, Trees 1151′ from departure end of runway 118′ left of centerline, 100′ AGL/319′ MSL to 3516′ from departure end of runway 1285′ left of centerline, 100′ AGL/357′ MSL. Rwy 23, Taxiing aircraft 87′ from departure end of runway 467′ right of centerline, 32′ AGL/267′ MSL. Trees 1740′ from departure end of runway, 199′ right of centerline, 45′ AGL/291′ MSL. Rwy 33, Road/vehicle 1104′ from departure end of runway 272′ right of centerline, 15′ AGL/255′ MSL. Trees 2793′ from departure end of runway 218′ left of centerline, 99′ AGL/348′ MSL.

CHANGES: Twy U closed, notes, closed twys removed.

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BRIEFING STRIP™

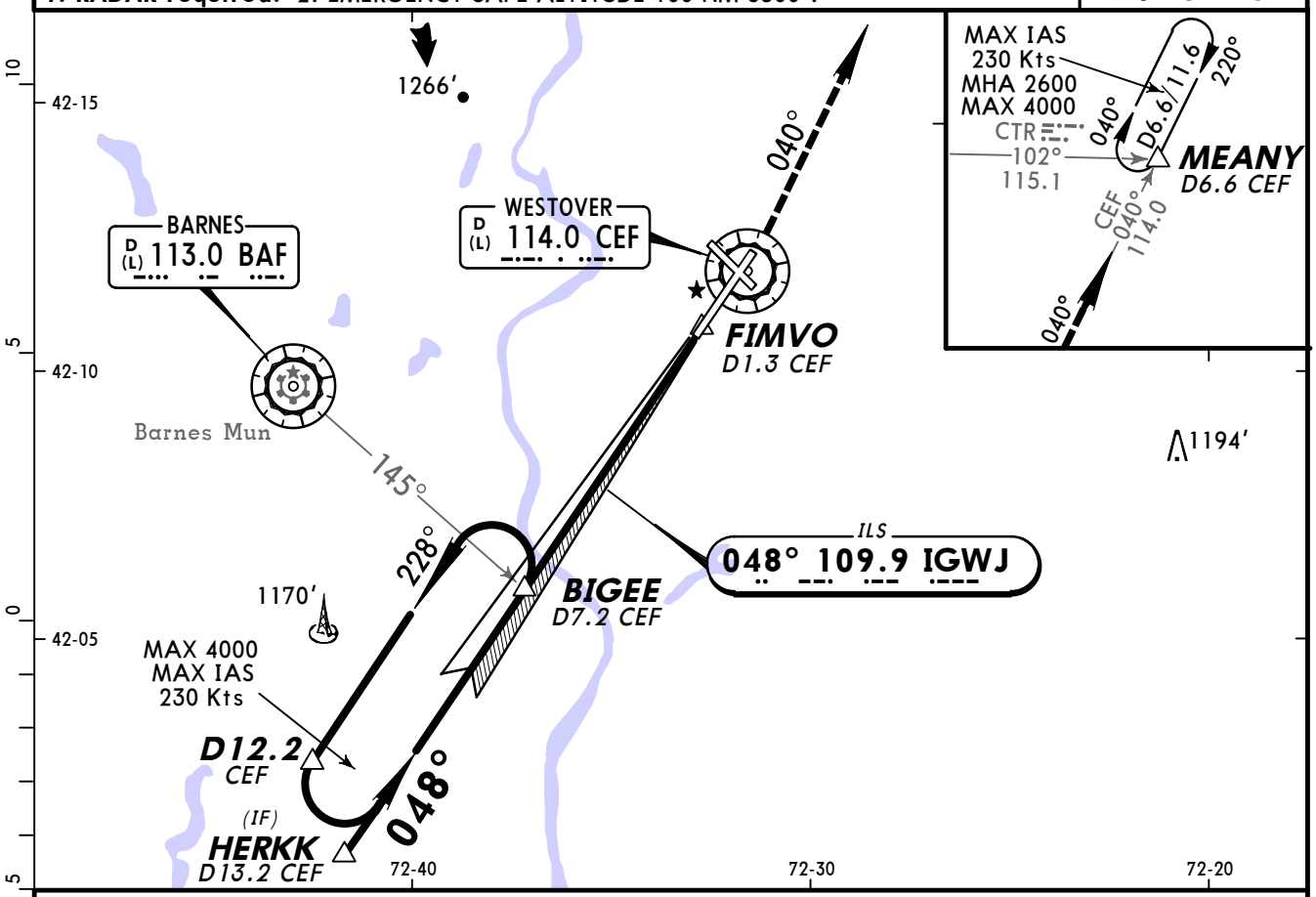
*ATIS		BRADLEY Approach (R)	*WESTOVER Tower	*Ground
114.0	138.1	125.35	CTAF 134.85	118.35

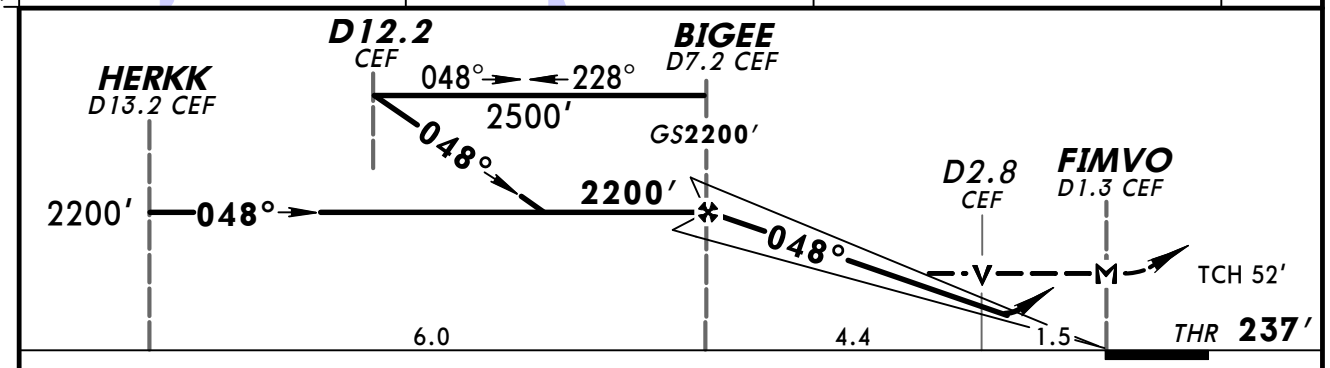
LOC	Final Apch Crs	GS	ILS DA(H)	Apt Elev 241′
IGWJ 109.9	048°	BIGEE 2200′ (1963′)	487′ (250′)	THR 237′

MISSED APCH: Climb to 2600′ outbound via CEF VOR R-040 to MEANY and hold. Expect radar vectors.
Missed approach requires use of RNAV or ATC RADAR monitoring.

Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′
1. RADAR required. 2. EMERGENCY SAFE ALTITUDE 100 NM 6300′.

MSA CEF VOR: 180° 3700′; 090° 3000′





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	484	538	646	753	861
MAP at FIMVO or BIGEE to MAP 5.9	5:03	3:56	3:32	2:57	2:32	2:13

ALSF-I
PAPI

2600′ via CEF 114.0 R-040 — MEANY

STRAIGHT-IN LANDING RWY 5

	ILS DA(H) 487′ (250′) FULL	ILS DA(H) 487′ (250′) ALS out	LOC (GS out) MDA(H) 760′ (523′)	LOC (GS out) ALS out
A	RVR 24 or ½	RVR 40 or ¾	RVR 24 or ½	RVR 55 or 1
B				
C			RVR 55 or 1	1½
D				

1 CIRCLE-TO-LAND
Not Authorized Southwest of Rwy 15/33.
Not Authorized to Rwy 5

Max Kts	MDA(H)
90	800′ (559′) - 1
120	820′ (579′) - 1
140	820′ (579′) - 1½
165	820′ (579′) - 2

1 CAUTION: When Rwy 33 VGSI inop, circling to Rwy 33 not authorized at night.

TERPS AMEND 0

CHANGES: Procedure.

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KCEF/CEF
WESTOVER ARB/METRO

JEPPESEN 4 MAR 11 (11-2) Eff 10 Mar

SPRINGFIELD/CHICOPEE, MASS
ILS or LOC DME Rwy 23

BRIEFING STRIP™

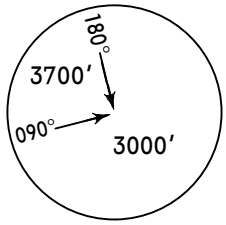
*ATIS		BRADLEY Approach (R)	*WESTOVER Tower	*Ground
114.0	138.1	125.35	CTAF 134.85	118.35

LOC ICEF	Final Apch Crs	GS BELCH	ILS DA(H)	Apt Elev 241′
109.9	228°	2300′ (2059′)	441′ (200′)	THR 241′

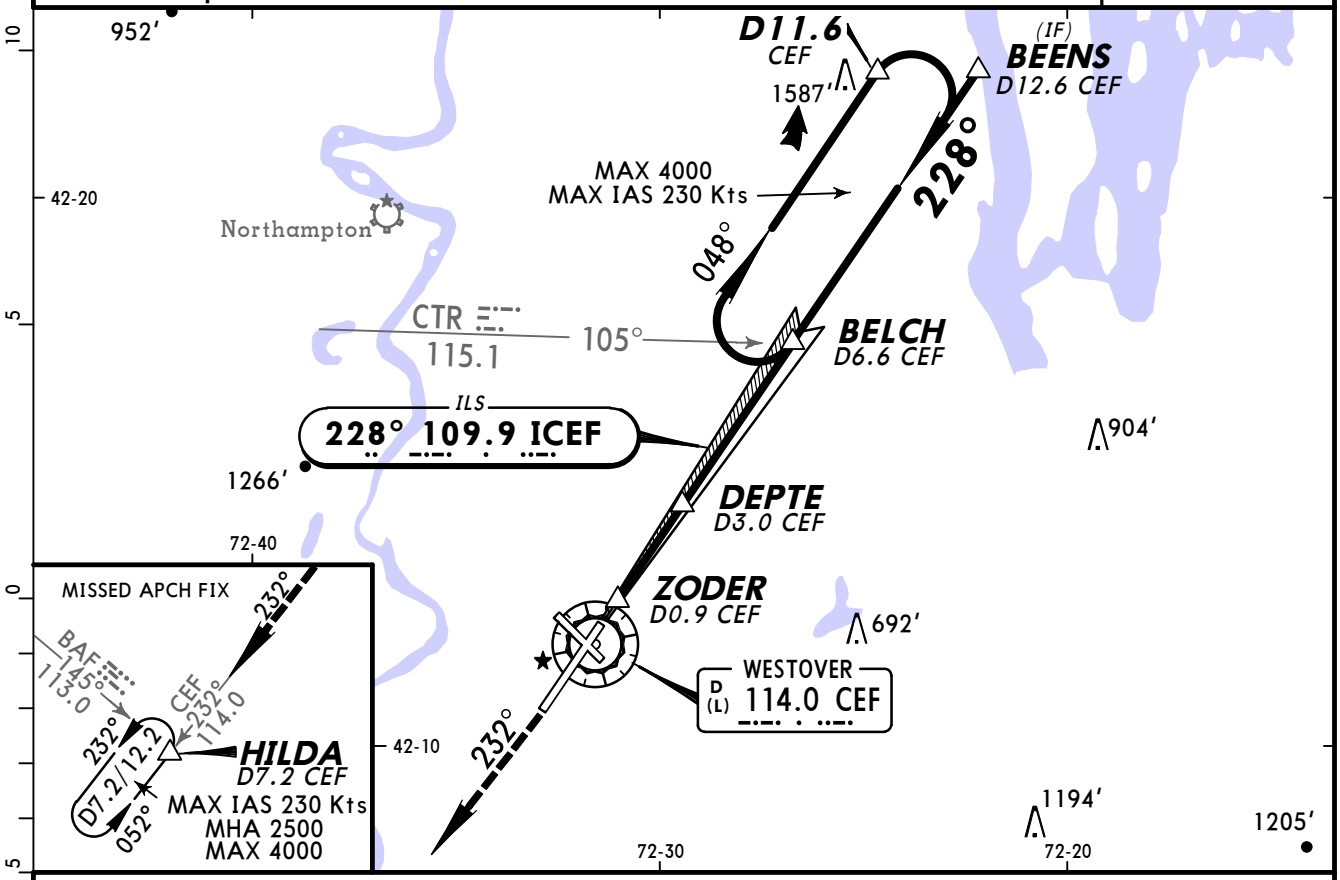
MISSED APCH: Climb to 2500′ outbound via CEF VOR R-232 to HILDA and hold. Expect radar vectors.
Missed approach requires use of RNAV or ATC RADAR monitoring.

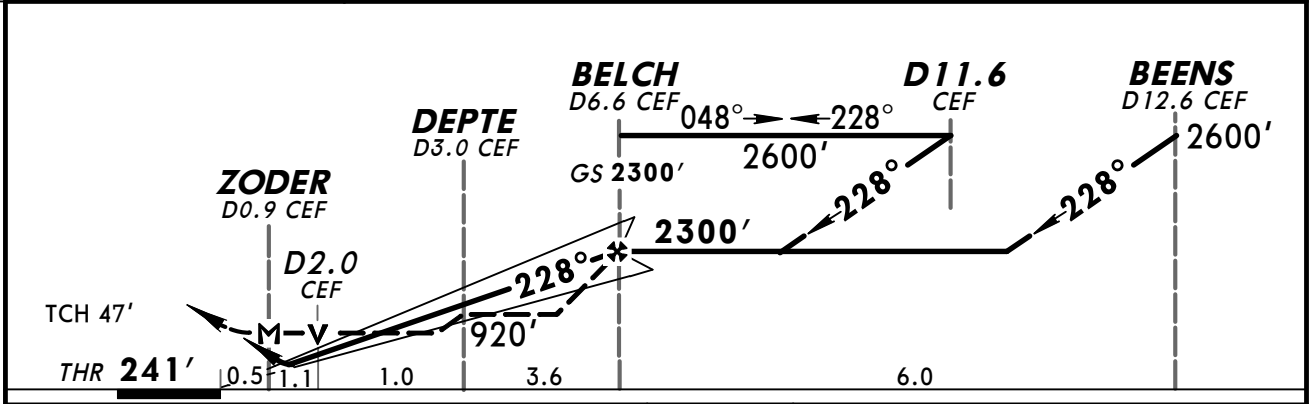
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′

1. RADAR required. 2. EMERGENCY SAFE ALTITUDE 100 NM 6300′.



MSA CEF VOR





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	377	484	538	646	753	861
MAP at ZODER or BELCH to MAP	5.7	4:53	3:48	3:25	2:51	2:27	2:08

ALSF-I
PAPI

2500′ via CEF 114.0 R-232 — HILDA

STRAIGHT-IN LANDING RWY23

	ILS DA(H) 441′ (200′) FULL	ILS DA(H) 441′ (200′) ALS out	LOC (GS out) MDA(H) 820′ (579′) With DEPTE	LOC (GS out) MDA(H) 820′ (579′) ALS out	LOC (GS out) MDA(H) 920′ (679′) Without DEPTE	LOC (GS out) MDA(H) 920′ (679′) ALS out
A	RVR 24 or ½	RVR 40 or ¾	RVR 24 or ½	RVR 55 or 1	RVR 24 or ½	RVR 55 or 1
B						
C			RVR 60 or 1¼	1⅝	1½	1⅞
D						

1 CIRCLE-TO-LAND
Not Authorized Southwest of Rwy 15/33.
Not Aurthorized to Rwy 5.

Max Kts	With DEPTE MDA(H)	Without DEPTE MDA(H)
90	820′ (579′)-1	920′ (679′)-1
120		
140	820′ (579′)-1⅝	920′ (679′)-2
165	820′ (579′)-2	920′ (679′)-2¼

TERPS AMEND 0

1 CAUTION: When Rwy 33 VGSI inop, circling to Rwy 33 not authorized at night.

CHANGES: Procedure.

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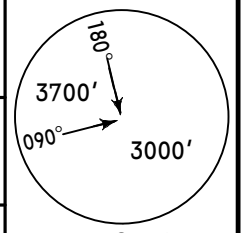
BRIEFING STRIP™

*ATIS		BRADLEY Approach (R)	*WESTOVER Tower	*Ground
114.0	138.1	125.35	CTAF 134.85	118.35

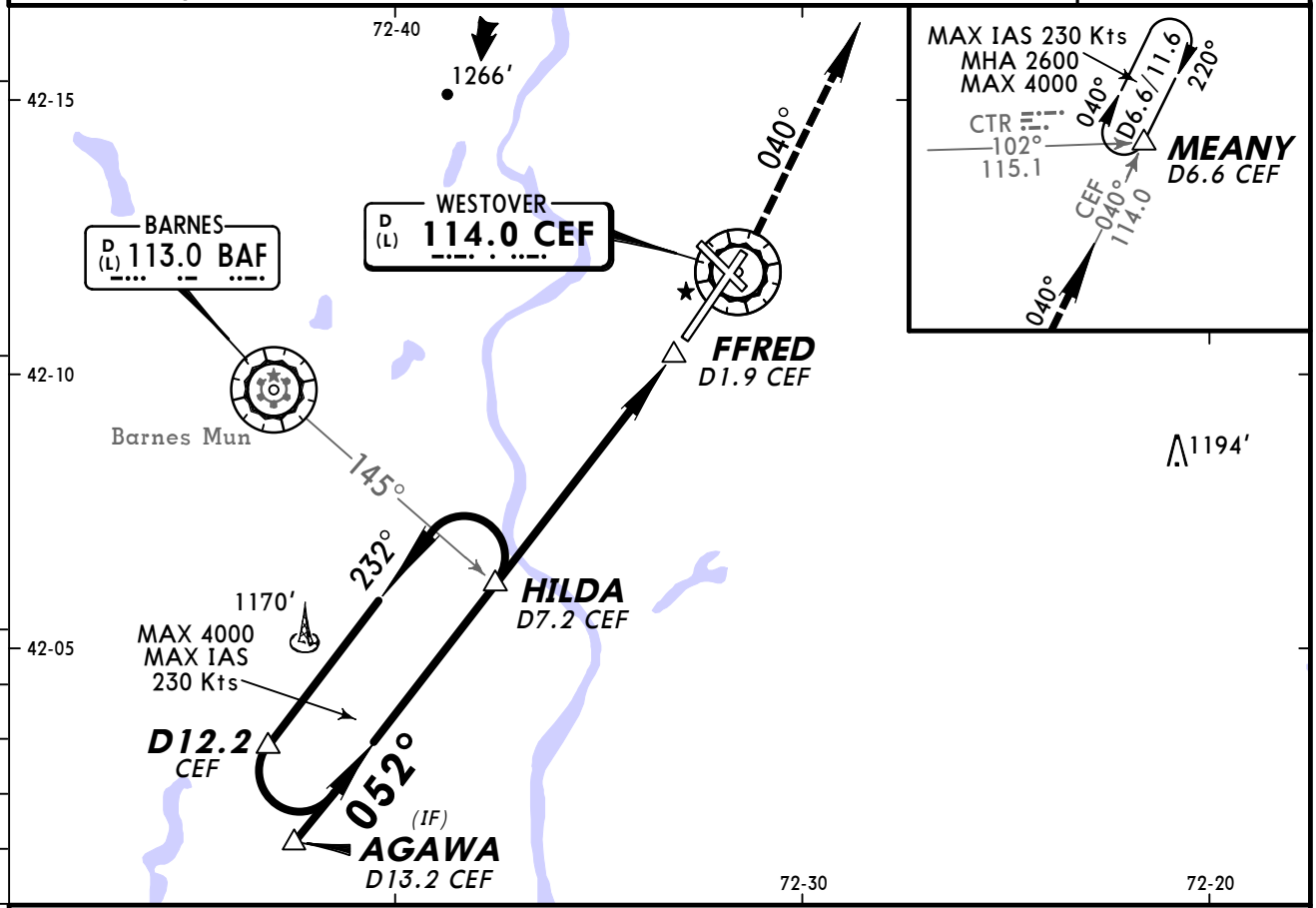
VOR	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 241′
CEF 114.0	052°	HILDA 2200′(1963′)	820′(583′)	THR 237′

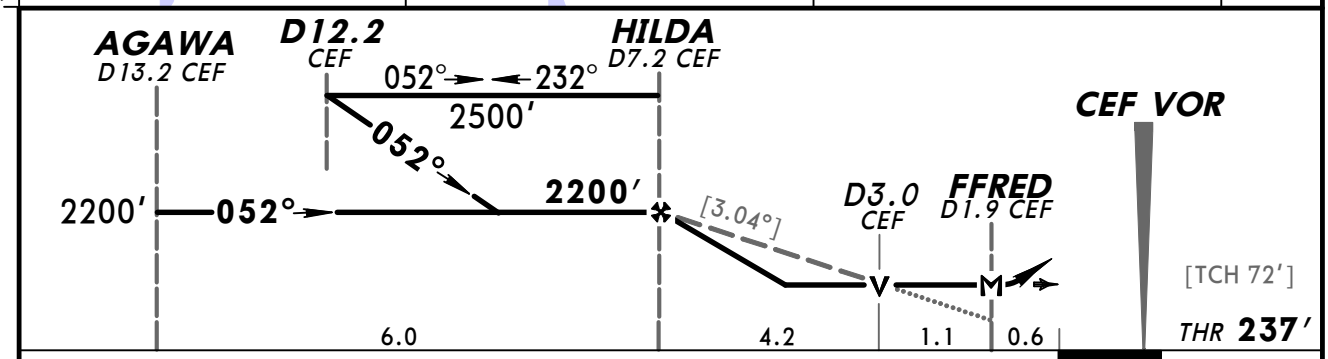
MISSED APCH: Climb to 2600′ outbound via CEF VOR R-040 to MEANY and hold. Expect radar vectors.
Missed approach requires use of RNAV or ATC RADAR monitoring.

Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′
1. RADAR required. 2. EMERGENCY SAFE ALTITUDE 100 NM 6300′.



MSA CEF VOR





Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.04°]	376	484	538	645	753	861
MAP at FFRED or HILDA to MAP 5.3	4:33	3:32	3:11	2:39	2:16	1:59

ALSF-I
PAPI

2600′ CEF via 114.0 R-040 MEANY

STRAIGHT-IN LANDING RWY 5

MDA(H) 820′ (583′)

		ALS out
A	RVR 40 or ¾	RVR 55 or 1
B		
C	RVR 60 or 1¼	1¾
D		

1 CIRCLE-TO-LAND
Not Authorized Southwest of Rwy 15/33.
Not Authorized to Rwy 5

Max Kts	MDA(H)
90	820′(579′)-1
120	
140	820′(579′)-1¾
165	820′(579′)-2

1 CAUTION: When Rwy 33 VGSI inop, circling to Rwy 33 not authorized at night.

TERPS AMEND 0

CHANGES: Procedure.

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KCEF/CEF — SPRINGFIELD/CHICOPEE, MASS

WESTOVER ARB/METRO 4 MAR 11 (13-2) Eff 10 Mar

JEPPESEN

VOR DME Rwy 23

BRIEFING STRIP™

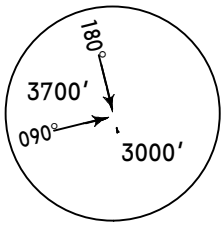
*ATIS		BRADLEY Approach (R)	*WESTOVER Tower	*Ground
114.0	138.1	125.35	CTAF 134.85	118.35

VOR	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 241′
CEF 114.0	220°	MEANY 2300′ (2059′)	820′ (579′)	THR 241′

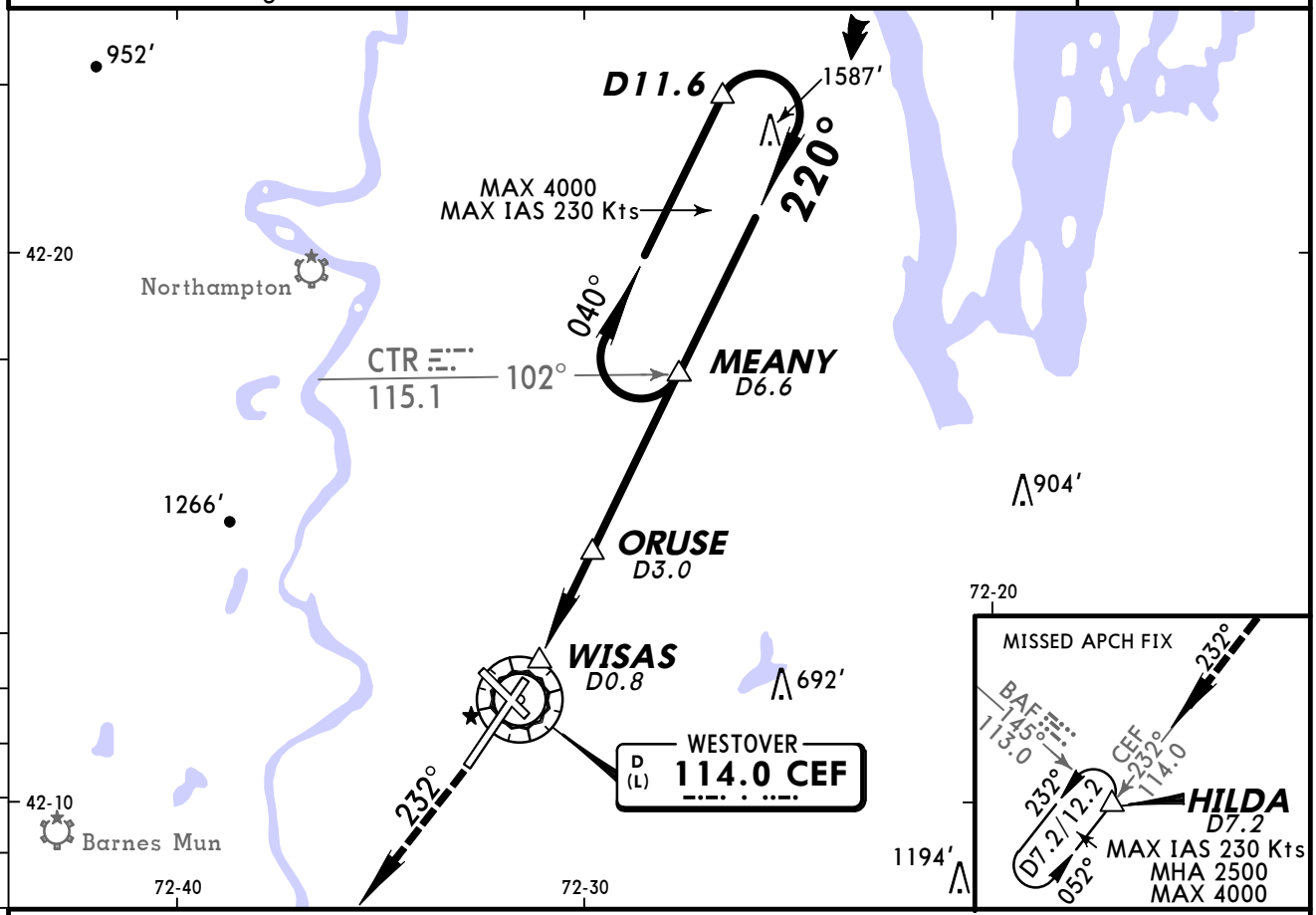
MISSED APCH: Climb to 2500′ outbound via CEF VOR R-232 to HILDA and hold. Expect RADAR vectors.
Missed approach requires use of RNAV or ATC RADAR monitoring.

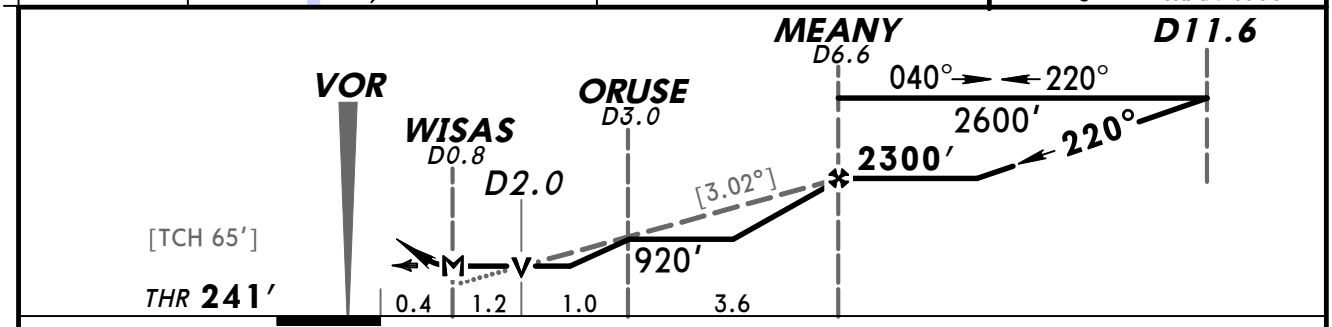
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′

1. **RADAR required.** 2. EMERGENCY SAFE ALTITUDE 100 NM 6300′.
3. VGSI and descent gradient not coincident.



MSA CEF VOR





Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.02°]	374	481	534	641	748	855
MAP at WISAS						

ALSF-I PAPI

2500′ ↑ via CEF 114.0 R-232 — HILDA

TERPS AMEND 0

STRAIGHT-IN LANDING RWY 23

MDA(H) 820′ (579′)

		ALS out
A	RVR 24 or ½	RVR 55 or 1
B		
C	RVR 60 or 1¼	1⅝
D		

1 CIRCLE-TO-LAND
Not Authorized Southwest of Rwy 15/33.
Not Aurthorized to Rwy 5.

Max Kts	MDA(H)
90	820′(579′)-1
120	
140	820′(579′)-1⅝
165	820′(579′)-2

1 CAUTION: When Rwy 33 VGSI inop, circling to Rwy 33 not authorized at night.

CHANGES: Procedure.

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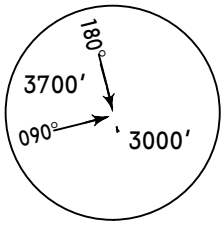
BRIEFING STRIP™

*ATIS		BRADLEY Approach (R)	*WESTOVER Tower	*Ground
114.0	138.1	125.35	CTAF 134.85	118.35

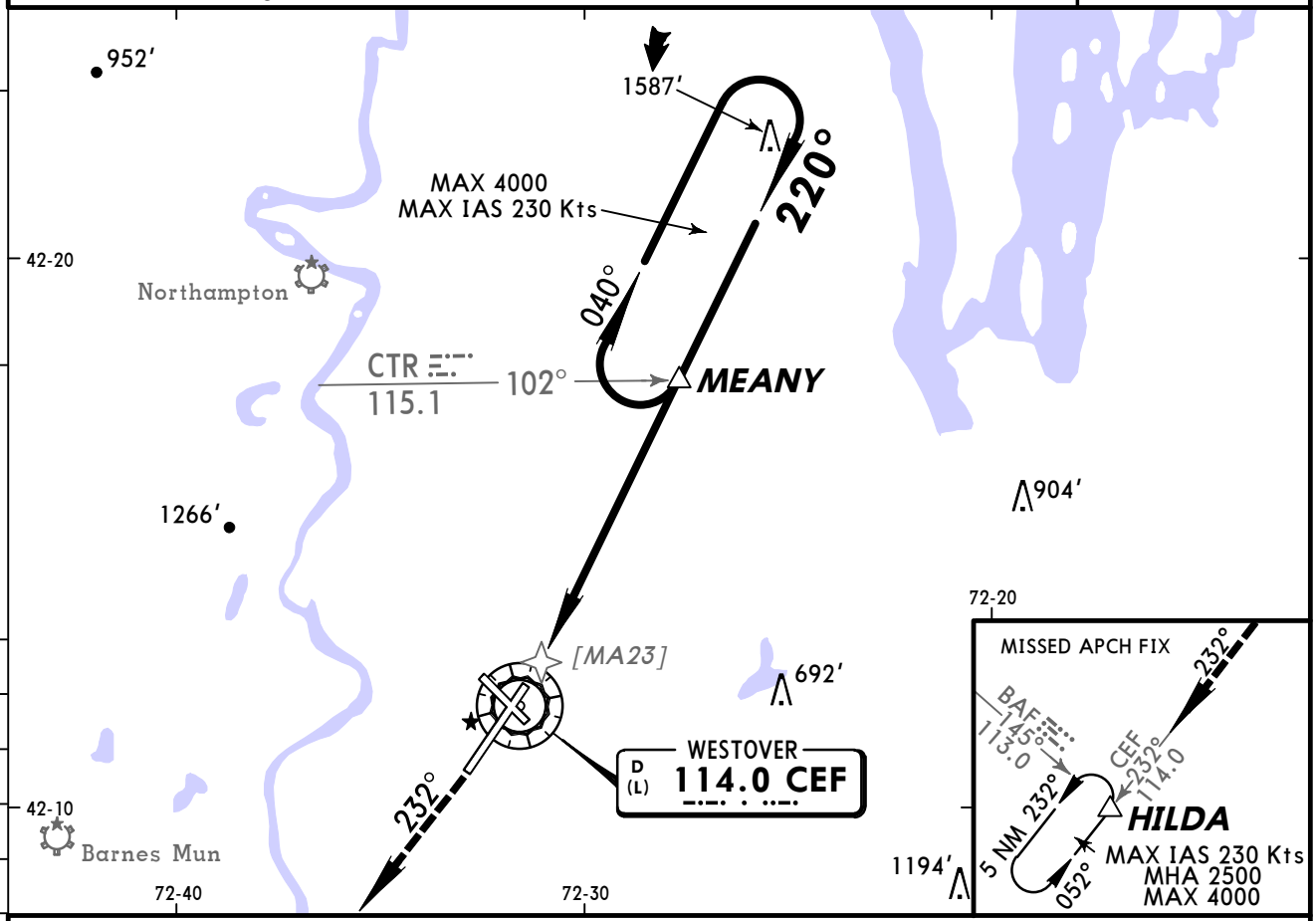
VOR	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 241′
CEF 114.0	220°	MEANY 2300′ (2059′)	1280′ (1039′)	THR 241′

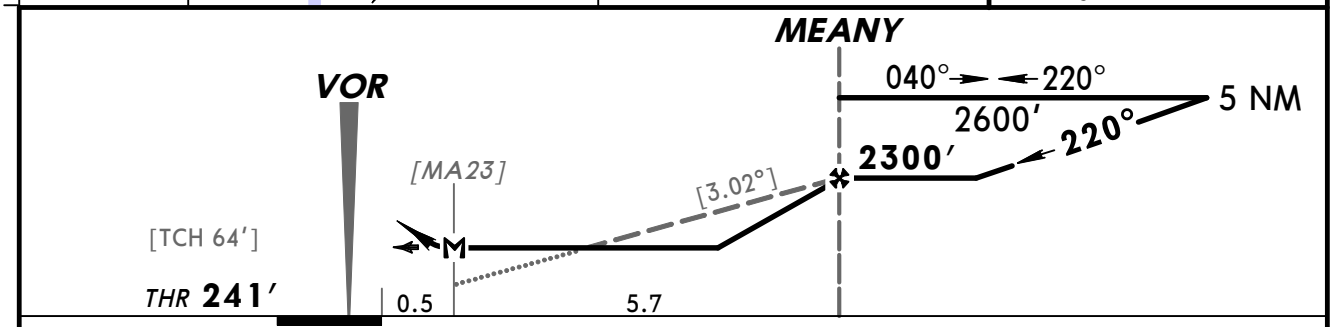
MISSED APCH: Climb to 2500′ outbound via CEF VOR R-232 to HILDA and hold. Expect RADAR vectors.
Missed approach requires use of RNAV or ATC RADAR monitoring.

Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′
1. **RADAR Required.** 2. EMERGENCY SAFE ALTITUDE 100 NM 6300′.
3. VGSI and descent gradient not coincident.



MSA CEF VOR





Gnd speed-Kts		70	90	100	120	140	160
Descent angle	[3.02°]	374	481	534	641	748	855
MEANY to MAP	5.7	4:53	3:48	3:25	2:51	2:27	2:08

ALSF-I PAPI 2500′ CEF via 114.0 R-232 HILDA

STRAIGHT-IN LANDING RWY 23
MDA(H) 1280′ (1039′)

		ALS out
A	RVR 40 or ¾	RVR 60 or 1¼
B	RVR 55 or 1	1½
C	2½	3
D		

1 CIRCLE-TO-LAND
Not Authorized Southwest of Rwy 15/33.
Not Aurthorized to Rwy 5.

Max Kts	MDA(H)
90	1280′ (1039′)-1¼
120	1280′ (1039′)-1½
140	1280′ (1039′)-3
165	

TERPS AMEND 0

1 CAUTION: When Rwy 33 VGSI inop, circling to Rwy 33 not authorized at night.

CHANGES: Procedure.

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General Information

Location: Falmouth MA USA
IATA Code: FMH
Lat/Long: N41° 39.5' W070° 31.4'
Elevation: 130 ft

Airport Use: Military
Magnetic Variation: 15.1°W
Sectional Chart: New York

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

Sunrise: 1121 Z
Sunset: 2229 Z,

Runway Information

Runway: 05
Length x Width: 8000 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 117 ft
Lighting: Edge, ALS
Stopway: 1000 ft

Runway: 14
Length x Width: 9501 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 130 ft
Lighting: Edge
Stopway: 1000 ft

Runway: 23
Length x Width: 8000 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 125 ft
Lighting: Edge, ALS
Stopway: 1000 ft

Runway: 32
Length x Width: 9501 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 117 ft
Lighting: Edge, ALS
Stopway: 1000 ft

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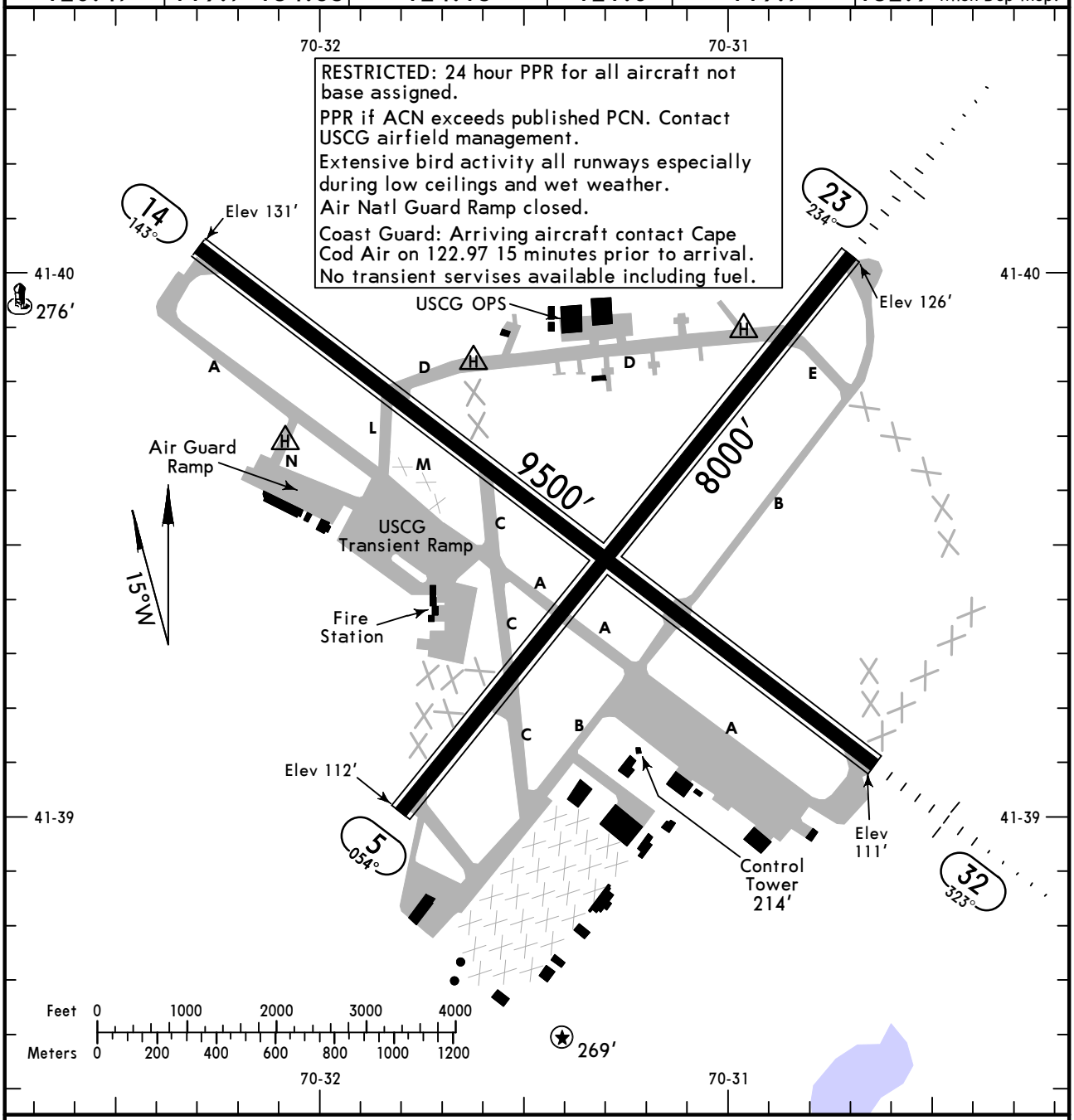
Communication Information

ATIS 120.475
Coast Guard Tower 121.0
Coast Guard Ground Control 124.15
Cape Approach Control 126.3
Cape Approach Control 118.75
Cape Approach Control 118.2 Initial Contact
Cape Radar 118.2
Cape Cod AIR Radio 1120.1
Cape Cod AIR Radio 898.4
Cape Cod AIR Radio 569.6
Cape Cod AIR Radio 312.3
Boston Center 132.9 Remote Communications Air-Ground

ATIS	CAPE Clearance	COAST GUARD Ground	Tower	*CAPE Departure (R)	BOSTON Center
120.47	119.7 134.65	124.15	121.0	119.7	132.9 when Dep inop.



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
5 ❶	HIRL PAPI-L RVR				150′
23	HIRL MALSR PAPI-L RVR		6949′		
14 ❷	HIRL PAPI-L (angle 2.5°)				150′
32	HIRL MALSR PAPI-L		8568′		

❶ First 350′ of Rwy 5 is concrete, remaining 7650′ is asphalt.
❷ First 2800′ of Rwy 14 and first 500′ of Rwy 32 is concrete, mid portion is asphalt.

TAKE-OFF	All Rwys		FOR FILING AS ALTERNATE		
	Adequate Vis Ref	STD	ILS Rwy 23 ILS Rwy 32	LOC Rwy 23 LOC Rwy 32 NDB Rwy 23	Other
1 & 2 Eng	RVR 16 or 1/4	RVR 50 or 1	A B C D: 600-2	800-2	NA
3 & 4 Eng		RVR 24 or 1/2			

AMEND 0

CHANGES: Airport revised, ATIS frequency, lighting, notes.

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ATIS	*CAPE Approach (R)	BOSTON Center	COAST GUARD Tower	Ground
120.47	118.2	132.9 when App inop.	121.0	124.15

BRIEFING STRIP™

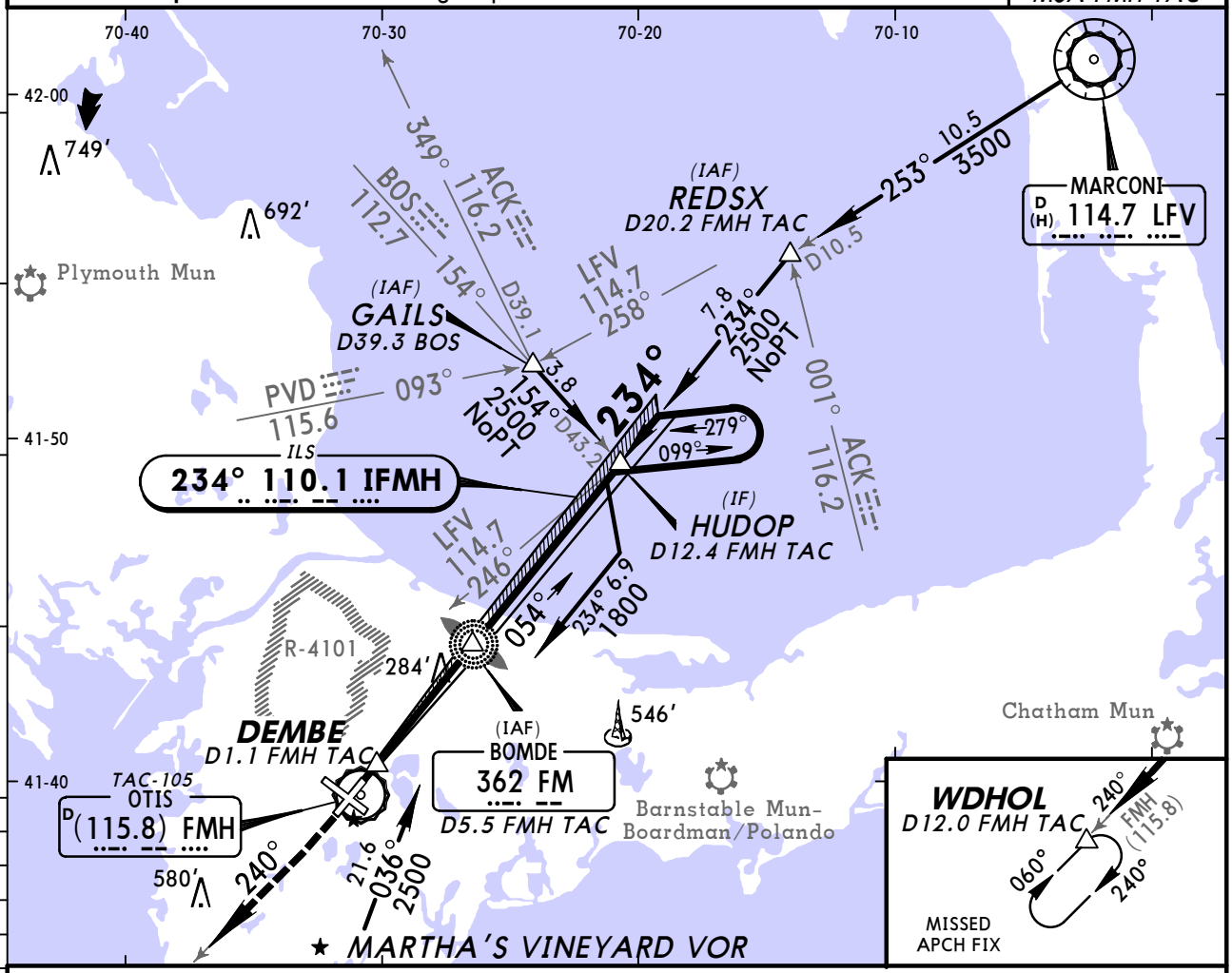
LOC IFMH	Final Apch Crs	GS BOMDE	ILS DA(H)	Apt Elev 130′
110.1	234°	1799′ (1674′)	325′ (200′)	TDZE 125′

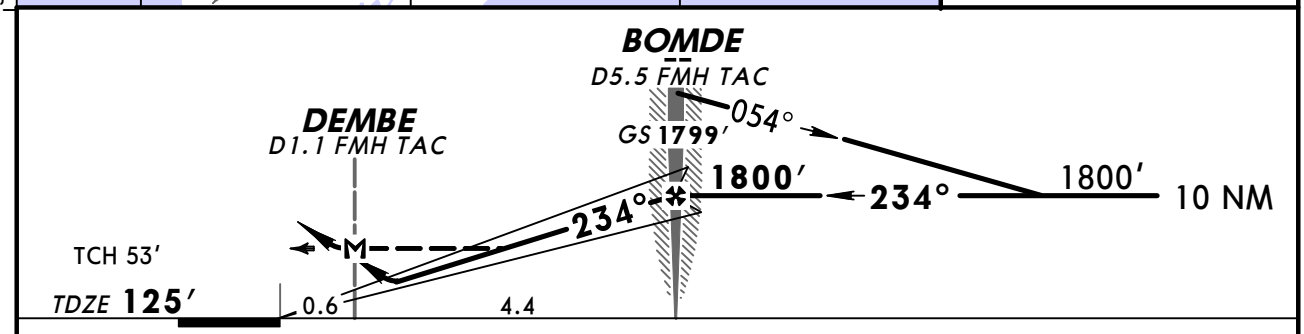
MISSED APCH: Climb to 1400′, then climbing RIGHT turn to 3000′ outbound via FMH TAC R-240 to WDHOL/D12.0 FMH TAC and hold.

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

1. TACAN required. 2. VGSI and ILS glidepath not coincident.

MSA FMH TAC: 2200′ (270°–090°), 1800′





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	484	538	646	753	861
MAP at DEMBE or BOMDE to MAP 4.4	3:46	2:56	2:38	2:12	1:53	1:39

MALSR / PAPI | 1400′ | 3000′ via RT | FMH TAC-105 (115.8) R-240 | WDHOL

STRAIGHT-IN LANDING RWY 23

TERPS	ILS DA(H) 325′ (200′) FULL	ILS DA(H) 325′ (200′) RAIL or ALS out	LOC (GS out) MDA(H) 640′ (515′)	LOC RAIL out	LOC ALS out	Max Kts	CIRCLE-TO-LAND MDA(H)
A	RVR 24 or ½	RVR 40 or ¾	RVR 24 or ½	RVR 40 or ¾	RVR 50 or 1	90	640′ (510′) -1
B						120	
C			RVR 50 or 1	1½		140	640′ (510′) -1½
D			RVR 60 or 1¼	1¾		165	680′ (550′) -2

CIRCLE-TO-LAND: Not Authorized Northeast of Rwy 14 and Northwest of Rwy 23

AMEND 0

CHANGES: ATIS frequency, lighting.

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KFMH/FMH
CAPE COD CGAS

JEPPESEN

13 MAY 11 (11-2)

FALMOUTH, MASS
COPTER ILS or LOC DME Rwy 23

BRIEFING STRIP™

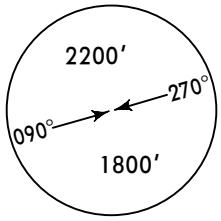
ATIS	*CAPE Approach (R)	BOSTON Center	COAST GUARD Tower	Ground
120.47	118.2	132.9 when App inop.	121.0	124.15

LOC IFMH	Final Apch Crs	GS ZAMIX	ILS DA(H)	Apt Elev 130′
110.1	234°	1300′ (1175′)	225′ (100′)	TDZE 125′

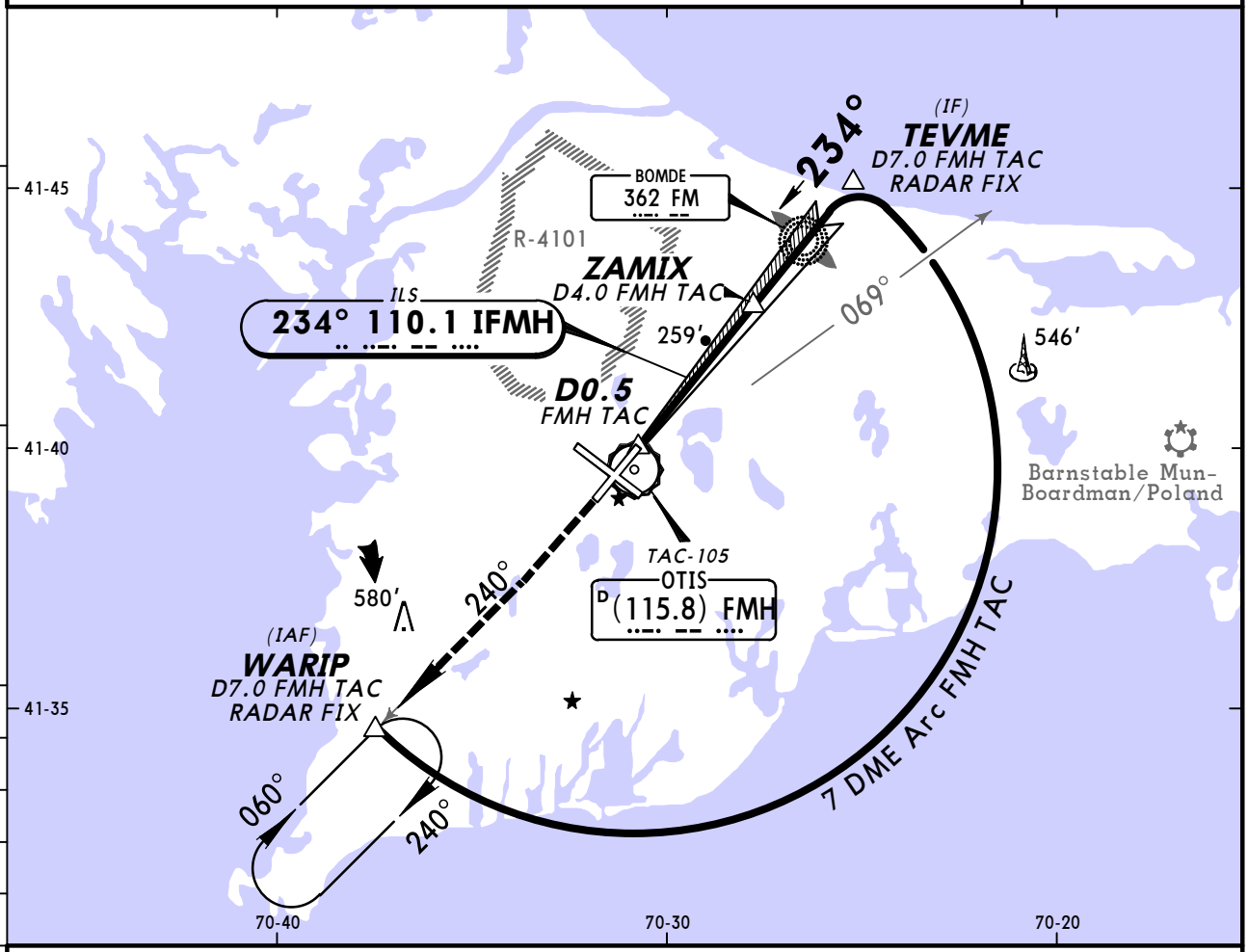
MISSED APCH: Climb to 1600′ outbound via FMH TAC R-240 to WARIP/D7.0 FMH TAC and hold.

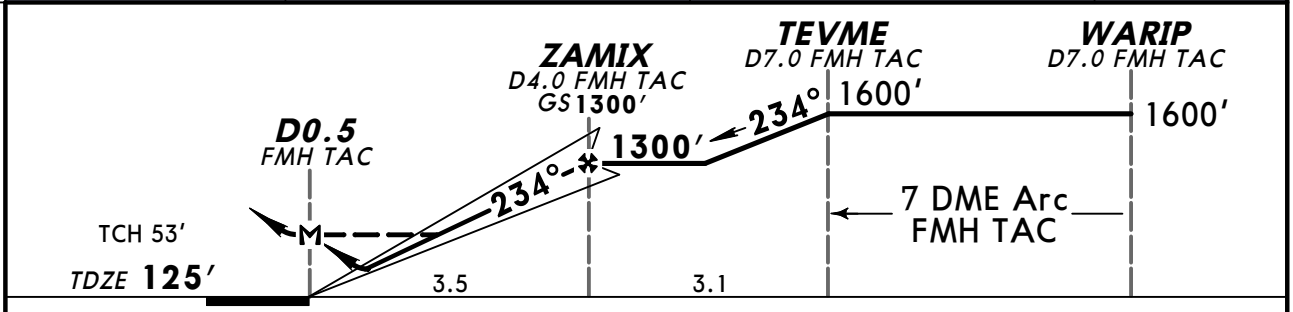
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′

1. TACAN required. 2. DME or Radar required. 3. Simultaneous reception of IFMH and FMH DME required. 4. United States Coast Guard use only.
5. DME from FMH TAC.



MSA FMH TAC





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	372	478	531	637	743	849
MAP at D0.5 FMH TAC						

MALSR
PAPI

1600′ via FMH TAC-105 (115.8) R-240

WARIP

STRAIGHT-IN LANDING RWY23

	ILS DA(H) 225′ (100′)		LOC (GS out) MDA(H) 520′ (395′)		
	FULL	RAIL or ALS out		RAIL out	ALS out
COPTER	RVR 12 or 1/4	RVR 24 or 1/2	RVR 12 or 1/4	RVR 24 or 1/2	

TERPS AMEND 0

CHANGES: None.

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KFMH/FMH
CAPE COD CGAS

JEPPESEN
13 MAY 11 (11-3)

FALMOUTH, MASS
ILS or LOC Rwy 32

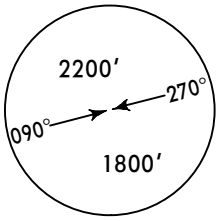
BRIEFING STRIP ™

ATIS	*CAPE Approach (R)	BOSTON Center	COAST GUARD Tower	Ground
120.47	118.2	132.9 when App inop.	121.0	124.15

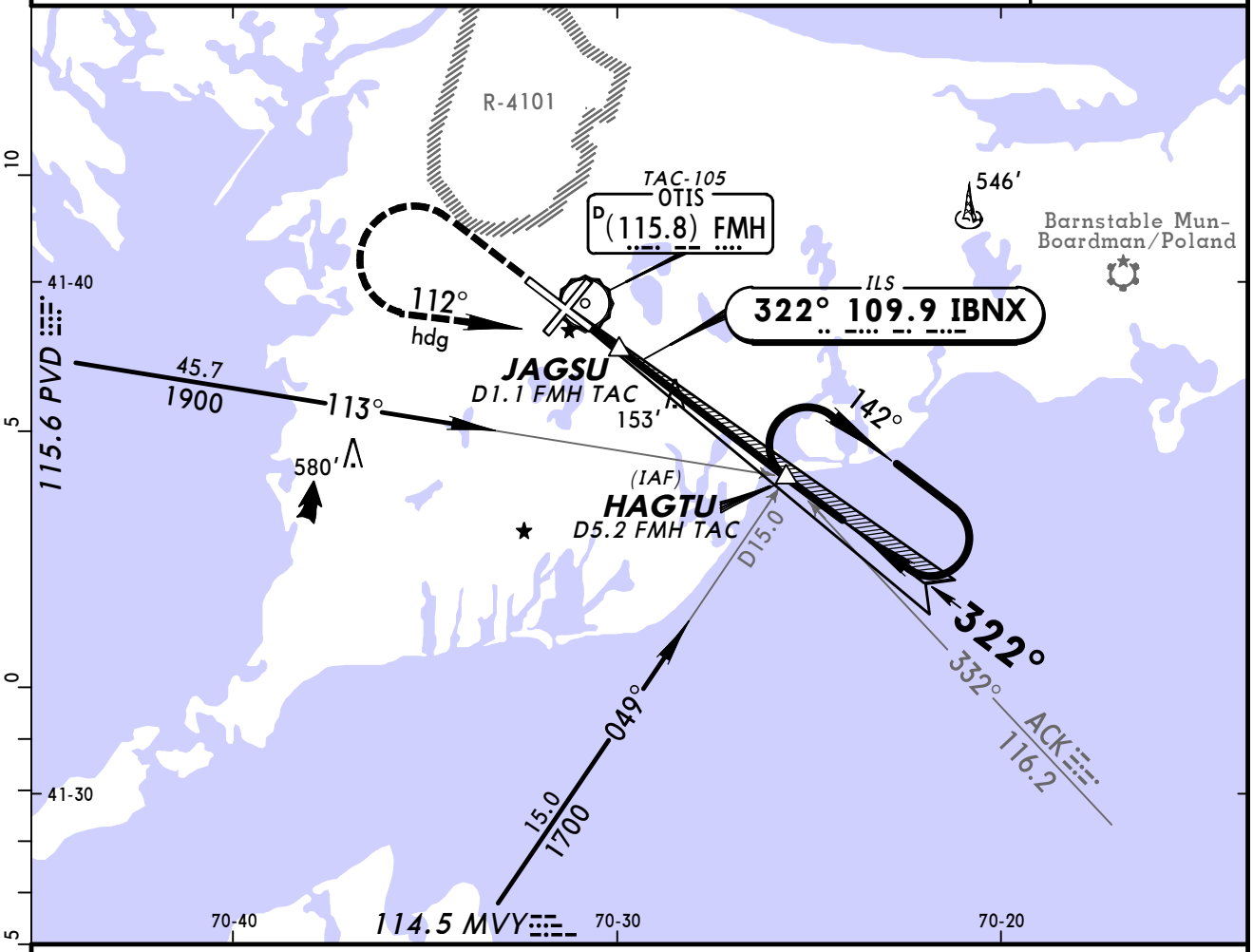
LOC IBNX	Final Apch Crs	GS HAGTU	ILS DA(H)	Apt Elev 130′
109.9	322°	1700′ (1583′)	317′ (200′)	TDZE 117′

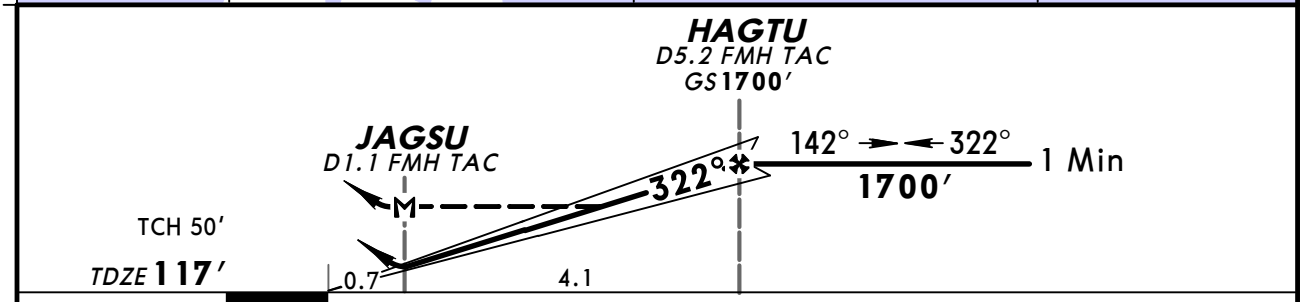
MISSED APCH: Climb to 1400′, then climbing LEFT turn to 2000′ via 112° heading and IBNX SOUTHEAST course to HAGTU INT/ D5.2 FMH TAC and hold.

Alt Set: INCHES | Trans level: FL 180 | Trans alt: 18000′



MSA FMH TAC





Gnd speed-Kts		70	90	100	120	140	160
GS	3.00°	372	478	531	637	743	849
MAP at JAGSU or HAGTU to MAP	4.1	3:31	2:44	2:28	2:03	1:45	1:32

MALSR / PAPI | 1400′ | 2000′ LT via 112° hdg and IBNX 109.9 SOUTHEAST COURSE

STRAIGHT-IN LANDING RWY32

	ILS DA(H) 317′(200′) FULL	ILS DA(H) 317′(200′) RAIL or ALS out	LOC (GS out) MDA(H) 540′(423′)	LOC (GS out) MDA(H) 540′(423′) RAIL out	LOC (GS out) MDA(H) 540′(423′) ALS out	Max Kts	CIRCLE-TO-LAND Not Authorized Northeast of Rwy 14 and Northwest of Rwy 23 MDA(H)
A	3/4		3/4	1		90	580′(450′)-1
B						120	
C			1 1/4			140	580′(450′)-1 1/2
D						165	680′(550′)-2

TERPS AMEND 0A 5 MAY 2011

CHANGES: VGSI note deleted.

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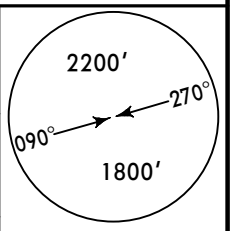
ATIS	*CAPE Approach (R)	BOSTON Center	COAST GUARD Tower	Ground
120.47	118.2	132.9 when App inop.	121.0	124.15

LOM FM	Final Apch Crs	Minimum Alt LOM	MDA(H)	Apt Elev 130′
362	234°	1800′ (1675′)	780′ (655′)	TDZE 125′

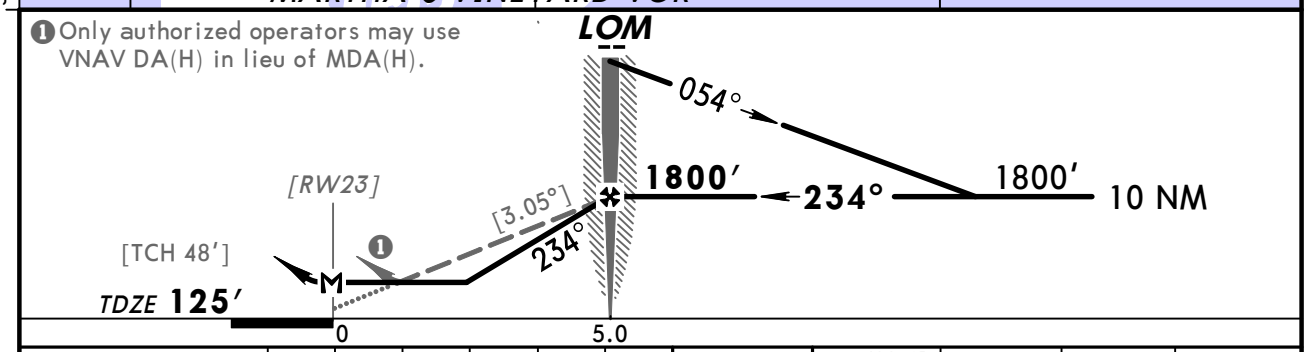
MISSED APCH: Climbing LEFT turn to 3000′ direct FM LOM and hold.

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



MSA FM LOM

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



Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.05°]	378	486	540	648	755	863
LOM to MAP 5.0	4:17	3:20	3:00	2:30	2:09	1:53

MALSR
PAPI

3000′
LT

FM
362

STRAIGHT-IN LANDING RWY 23

MDA(H) 780′(655′)

	RAIL out	ALS out
A	RVR 40 or ¾	RVR 50 or 1
B		
C	RVR 60 or 1¼	1¾
D	1¾	2

CIRCLE-TO-LAND
Not Authorized
Northeast of Rwy 14 and
Northwest of Rwy 23

Max Kts	MDA(H)
90	780′ (650′) -1
120	
140	780′ (650′) -1¾
165	780′ (650′) -2

AMEND 0 TERPS

CHANGES: ATIS frequency, lighting.

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General Information

Location: Worcester MA USA
IATA Code: ORH
Lat/Long: N42° 16.0' W071° 52.5'
Elevation: 1010 ft

Airport Use: Public
Magnetic Variation: 14.6°W
Sectional Chart: New York

Fuel Types: 100 Octane (LL), Jet A
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: 1127 Z
Sunset: 2234 Z,

Runway Information

Runway: 11
Length x Width: 7000 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 981 ft
Lighting: Edge, ALS, Centerline, TDZ, Pilot controlled

Runway: 15
Length x Width: 5000 ft x 100 ft
Surface Type: asphalt
TDZ-Elev: 1005 ft
Lighting: Edge, REIL, Pilot controlled

Runway: 29
Length x Width: 7000 ft x 150 ft
Surface Type: asphalt
TDZ-Elev: 991 ft
Lighting: Edge, Centerline, REIL, Pilot controlled

Runway: 33
Length x Width: 5000 ft x 100 ft
Surface Type: asphalt
TDZ-Elev: 999 ft
Lighting: Edge, REIL, Pilot controlled

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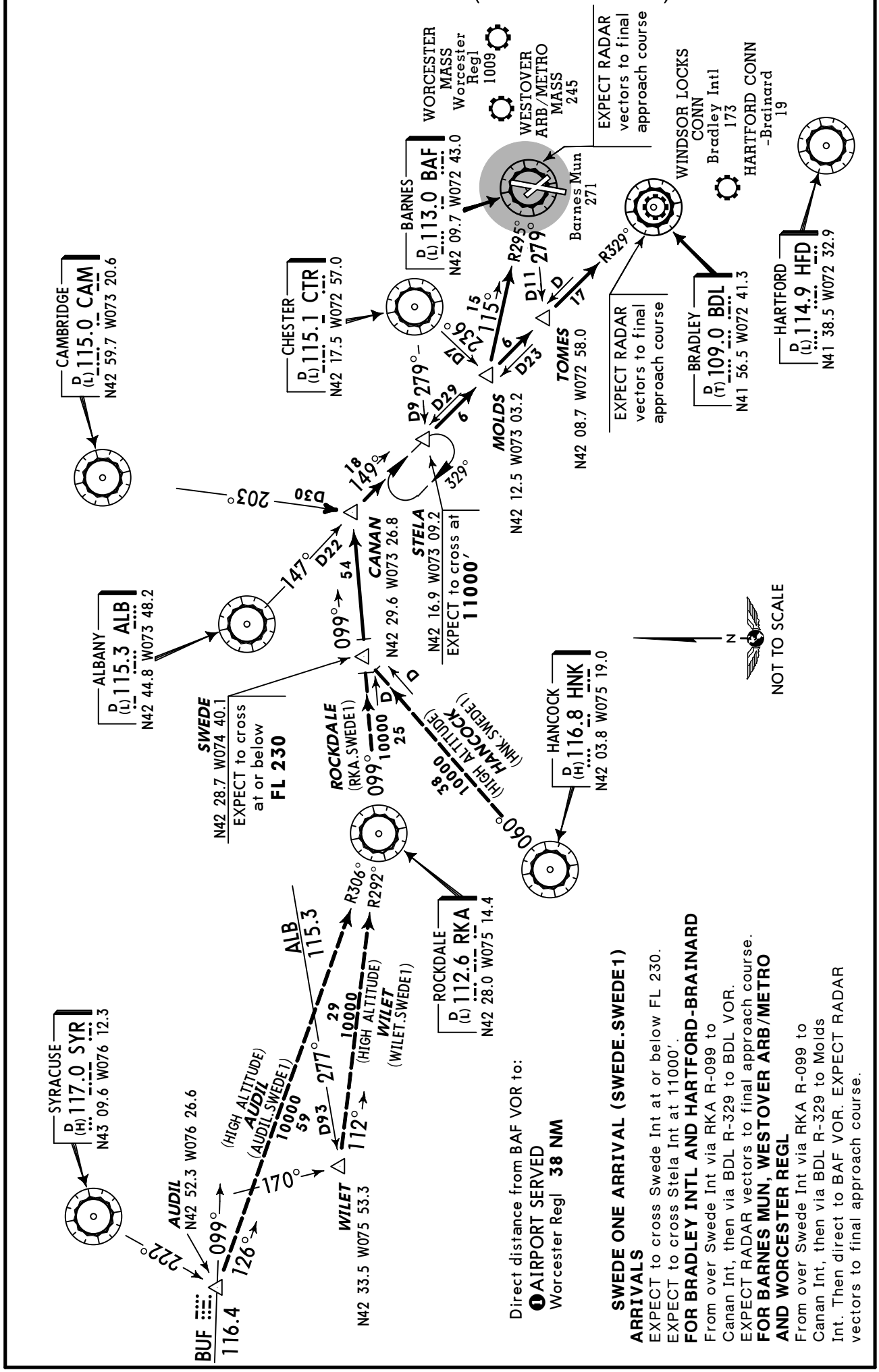
Communication Information

ATIS 126.55
Worcester Tower 120.5 CTAF PCL
Worcester Ground Control 123.85
Worcester Regl Clearance Delivery 128.65
Bradley Clearance Delivery 119.0
Bradley Approach Control 119.0
Bradley Departure Control 119.0
Worcester Mun Unicom 122.95
Bridgeport Flight Service Station 122.2 RCO

*BARNES MUN ATIS (ASOS O/T) **127.1**

SWEDE ONE ARRIVAL (SWEDE.SWEDE1)



CHANGES: HANCOCK transition.

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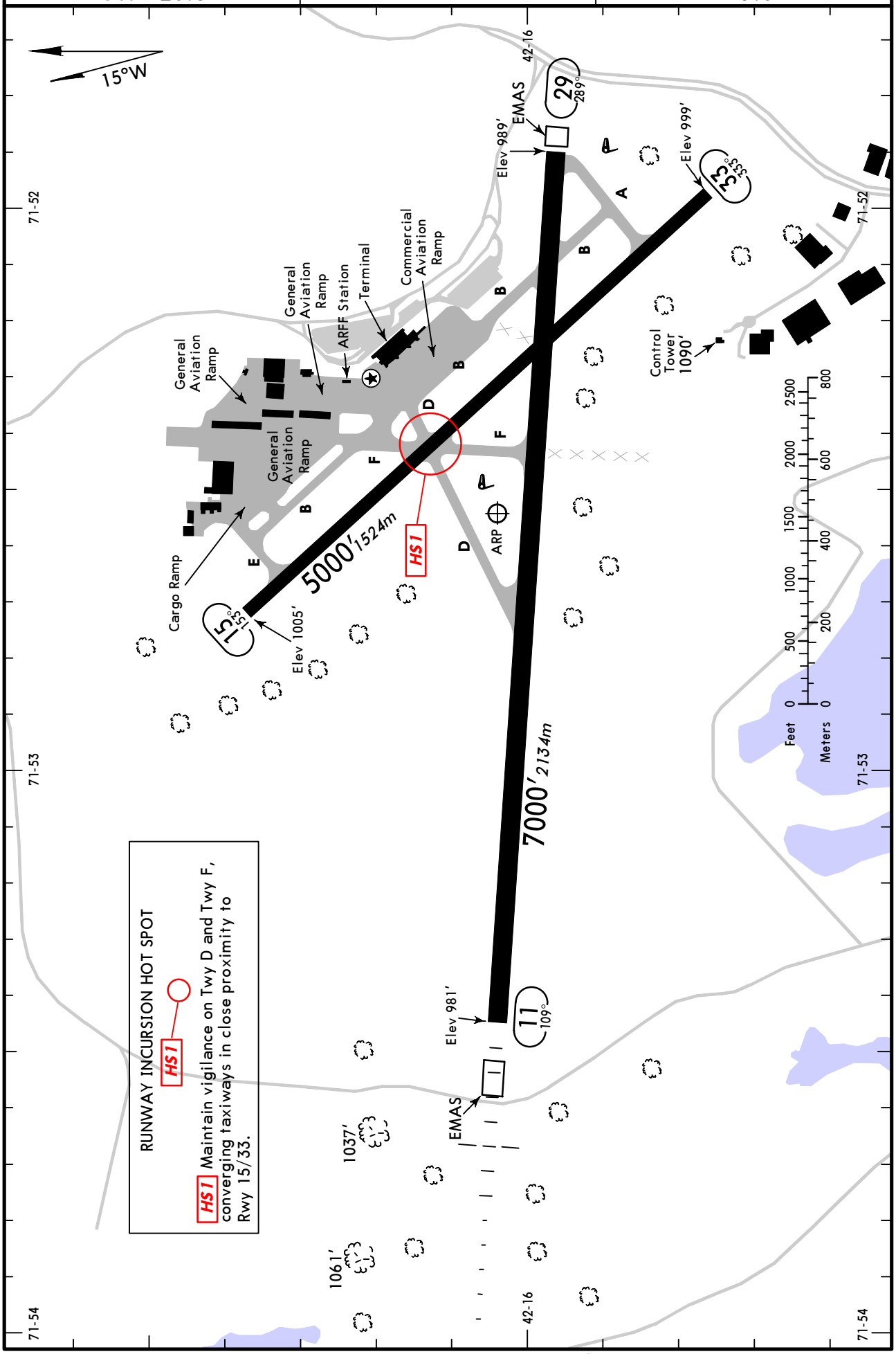
ATIS (ASOS when Twr Inop) 126.55 VOT 108.2	*WORCESTER Clearance 128.65 119.0 when Twr inop.	*Ground 123.85
*Tower CTAF 120.5	UNICOM 122.95	BRADLEY Departure (R) 119.0



CHANGES: Airport rescaled, taxiways, ramps, Twy C closed, Rwy 33 elevation.

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GENERAL
For STAR, see Westfield, Mass (Barnes Mun).
Wildlife and birds in vicinity of airport.

ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
11	❶ HIRL CL ❶ MALSR TDZ grooved RVR		6150′ *1875m*		150′ *46m*
29	❶ HIRL CL ❶ REIL ❶ PAPI-L (angle 3.0°) grooved RVR		6017′ *1834m*		
❶ Activate on 120.5.					
15	❷ MIRL ❷ REIL VASI-L grooved				100′ *30m*
33	❷ MIRL ❷ REIL ❷ PAPI-L (angle 3.0°) grooved				
❷ Activate on 120.5.					

TAKE-OFF & OBSTACLE DEPARTURE PROCEDURE

Rwy 11

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

Rwy 29

With Mim climb of 323′/NM to 1300′: Both RVRs are required & controlling: CL & HIRL	Both RVRs are required & controlling: CL, or RCLM & HIRL	Adequate Vis Ref	STD: 3 & 4 Eng	STD: 1 & 2 Eng	Other
TDZ RVR 5 Rollout RVR 5	TDZ RVR 10 Rollout RVR 10	RVR 16 or 1/4	RVR 24 or 1/2	RVR 50 or 1	300-1

Rwy 15: Adequate Vis Ref	Rwy 15: STD 3 & 4 Eng	Rwy 15: STD 1 & 2 Eng	Rwy 33: With Mim climb of 394′/NM to 2000′: Adequate Vis Ref	Rwy 33: STD 3 & 4 Eng	Rwy 33: STD 1 & 2 Eng	Rwy 33: Other
1/4	1/2	1	1/4	1/2	1	700-3

OBSTACLE DP
Rwy 29, climb heading 289° to 1600′ before turning RIGHT.
Rwy 33, climb heading 333° to 2000′ before turning RIGHT.

FOR FILING AS ALTERNATE

	Authorized Only When Twr Operating & When Local Weather Available: ILS Rwy 11, ILS Rwy 29	Authorized Only When Twr Operating & When Local Weather Available: LOC Rwy 11, LOC Rwy 29, NDB Rwy 11	Authorized Only When Twr Operating: VOR DME Rwy 33	Authorized Only When Local Weather Available: RNAV (GPS) Rwy 11, RNAV (GPS) Rwy 29, RNAV (GPS) Rwy 33
A	600-2	800-2	800-2	800-2
B	700-2			
C	800-2			
D	1000-3	1000-3	1000-3	1000-3

AMEND 8

CHANGES: None.

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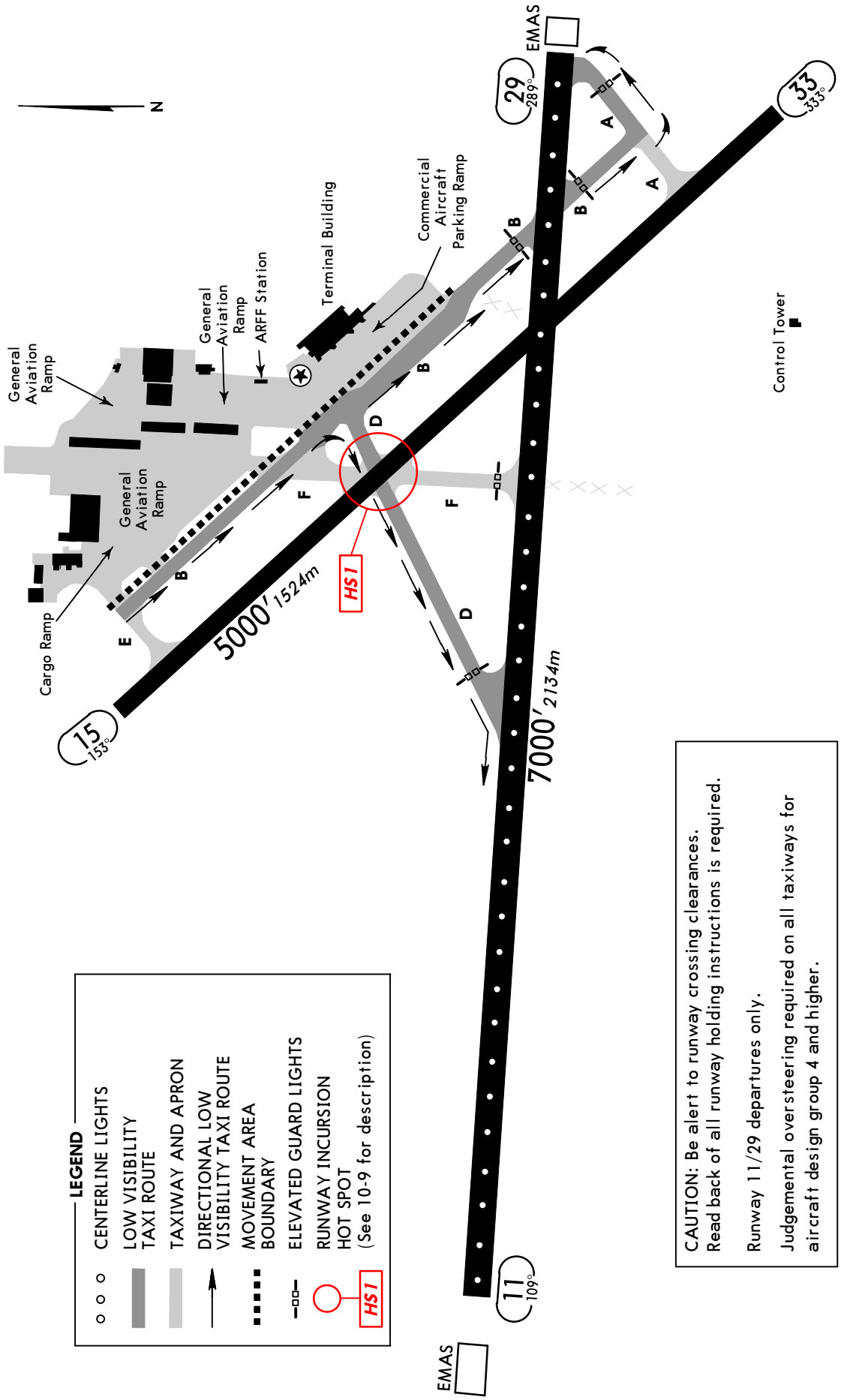
WORCESTER, MASS
LESS THAN RVR 1200 TO 600
LOW VISIBILITY TAXI ROUTES

ATIS (ASOS when Twr Inop)	*WORCESTER Clearance	*Ground
126.55 VOT 108.2	128.65 119.0 when Twr inop.	123.85
*Tower	UNICOM 122.95	BRADLEY Departure (R)
CTAF 120.5		119.0



CHANGES: New chart.

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BRIEFING STRIP™

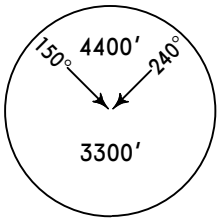
ATIS (ASOS when Twr Inop)	BRADLEY Approach (R)	*WORCESTER Tower	*Ground
126.55	119.0	CTAF 120.5	123.85

LOC	Final Apch Crs	GS	ILS DA(H)	Apt Elev 1010′
IRSR 110.9	109°	RILOC 2800′ (1819′)	(CONDITIONAL) 1181′ (200′)	TDZE 981′

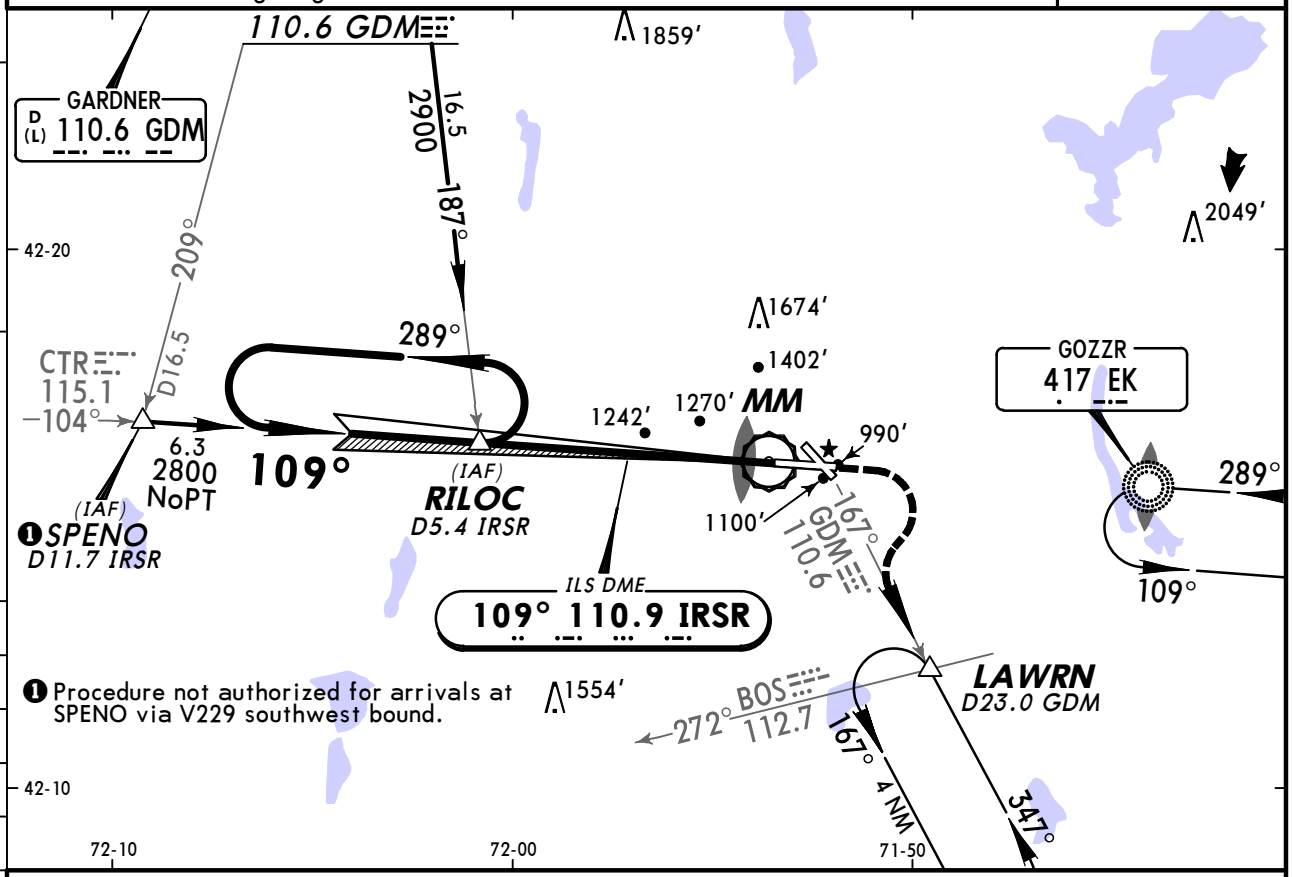
MISSED APCH: Climb to 1400′ then climbing RIGHT turn to 3000′ outbound via GDM VOR R-167 to LAWRN INT/D23.0 GDM and hold.

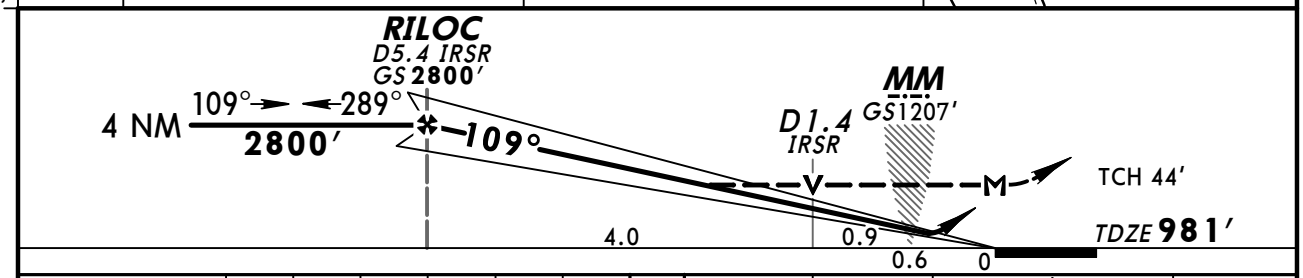
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′

1. Use local altimeter setting; if not received, use Hanscom altimeter setting.
2. VDP not authorized when using Hanscom altimeter setting.
3. Pilot controlled lighting 120.5.



MSA GDM VOR





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	484	538	646	753	861
RILOC to MAP 5.5	4:43	3:40	3:18	2:45	2:21	2:04

MALSR | 1400′ | 3000′ RT via GDM 110.6 R-167 | LAWRN

STRAIGHT-IN LANDING RWY 11

	ILS DA(H) 1181′ (200′) With Local Altimeter Setting			ILS DA(H) 1381′ (400′) With Hanscom Altimeter Setting			LOC (GS out) [1] MDA(H) 1500′ (519′) With Local Altimeter Setting		
	FULL	TDZ or CL out	RAIL or ALS out	FULL	TDZ or CL out	RAIL or ALS out		RAIL out	ALS out
A	RVR 18 or 1/2	RVR 24 or 1/2	RVR 40 or 3/4	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 50 or 1
B									
C							RVR 50 or 1	1 1/2	
D							RVR 60 or 1 1/4	1 3/4	

[1] MDA(H) 1700′ (719′) with Hanscom Altimeter Setting.

CIRCLE-TO-LAND

Max Kts	With Local Altimeter Setting MDA(H)	With Hanscom Altimeter Setting MDA(H)
90	1540′ (530′)-1	1740′ (730′)-1
120	1640′ (630′)-1	1840′ (830′)-1
140	1720′ (710′)-2	1920′ (910′)-2
165	2000′ (990′)-3	2200′ (1190′)-3

TERPS AMEND 22

CHANGES: None.

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BRIEFING STRIP™

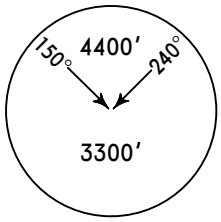
ATIS (ASOS when Twr Inop)	BRADLEY Approach (R)	*WORCESTER Tower	*Ground
126.55	119.0	CTAF 120.5	123.85

LOC	Final Apch Crs	GS	ILS DA(H) (CONDITIONAL)	Apt Elev 1010′
IEKW 110.9	289°	PUMPP 2700′ (1709′)	1191′ (200′)	TDZE 991′

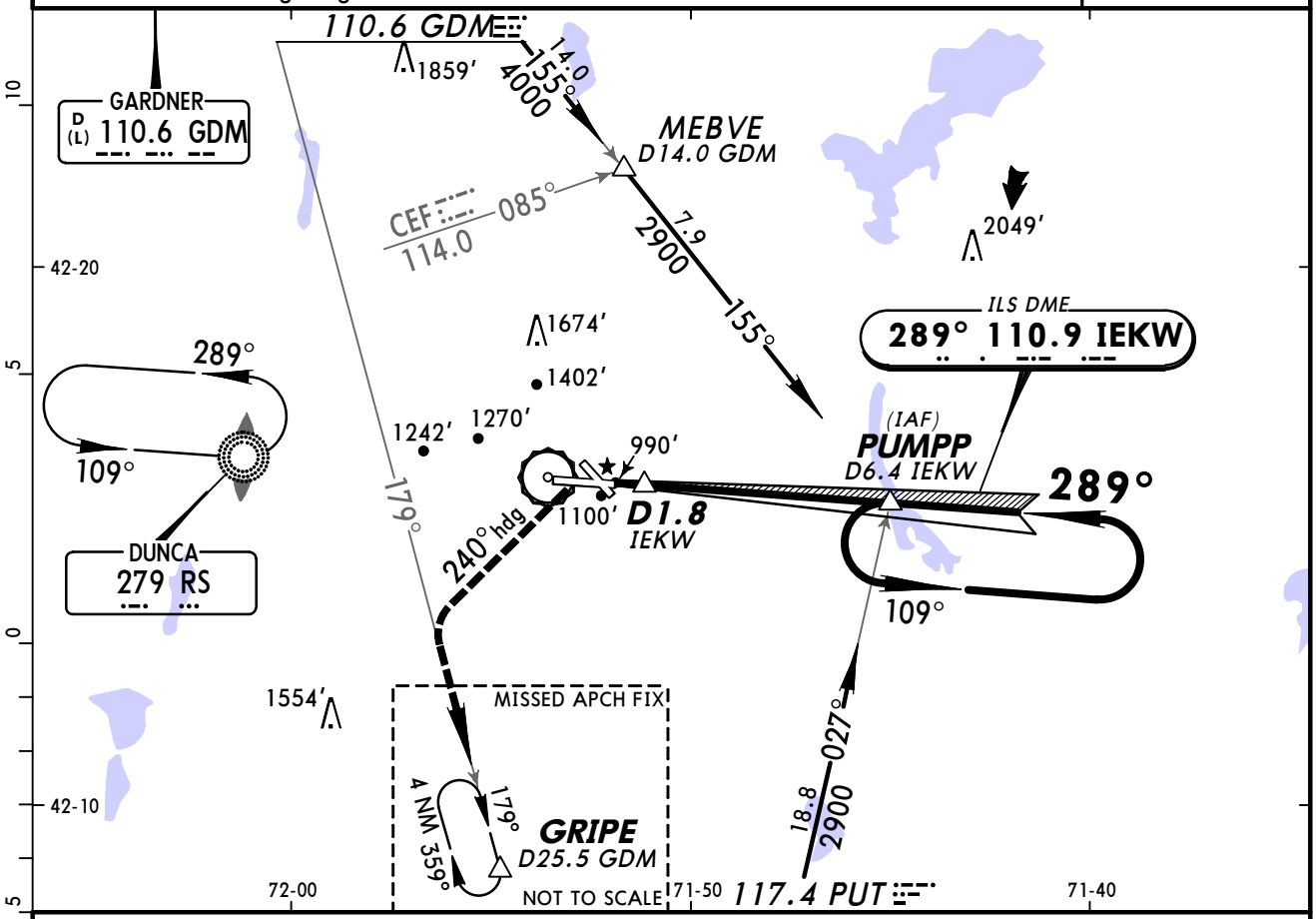
MISSED APCH: Climb to 1600′ then climbing LEFT turn to 3000′ via heading 240° and outbound on GDM VOR R-179 to GRIPE/D25.5 GDM and hold.

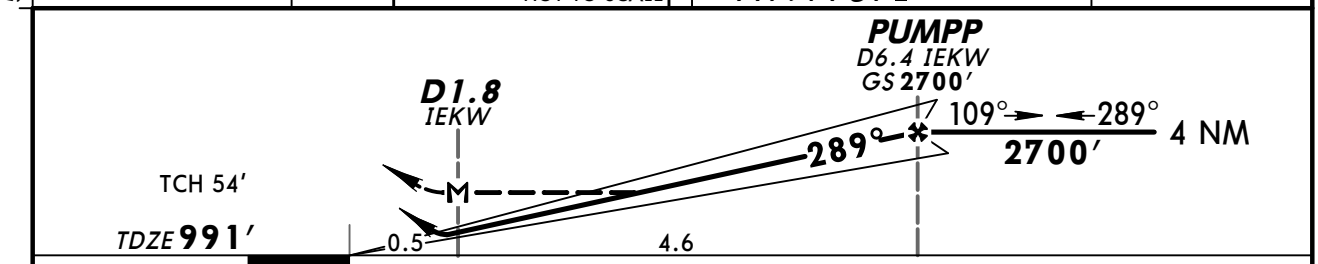
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′

1. Use local altimeter setting; if not received, use Hanscom altimeter setting.
2. DME required. 3. Glideslope unusable for coupled approaches below 1226′ (0.7 NM).
4. Pilot controlled lighting 120.5.



MSA GDM VOR





Gnd speed-Kts	70	90	100	120	140	160
GS 3.00°	377	484	538	646	753	861
MAP at D1.8 IEKW or PUMPP to MAP 4.6	3:57	3:04	2:46	2:18	1:58	1:43

REIL PAPI-L	1600′	3000′ via LT	240° hdg

STRAIGHT-IN LANDING RWY 29

	ILS DA(H) 1191′(200′) With Local Altimeter Setting	ILS DA(H) 1391′(400′) With Hanscom Altimeter Setting	LOC (GS out) [1] MDA(H) 1260′(269′) With Local Altimeter Setting
A	RVR 40 or ¾	RVR 40 or ¾	RVR 50 or 1
B			
C			
D			

CIRCLE-TO-LAND

Max Kts	With Local Altimeter Setting MDA(H)	With Hanscom Altimeter Setting MDA(H)
90	1540′(530′)-1	1740′(730′)-1
120	1640′(630′)-1	1840′(830′)-1
140	1720′(710′)-2	1920′(910′)-2
165	2000′(990′)-3	2200′(1190′)-3

[1] MDA(H) 1460′ (469′) with Hanscom Altimeter Setting.

TERPS AMEND 3

CHANGES: Lighting.

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BRIEFING STRIP™

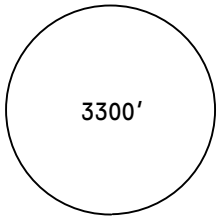
ATIS (ASOS when Twr Inop)	BRADLEY Approach (R)	*WORCESTER Tower	*Ground
126.55	119.0	CTAF 120.5	123.85

WAAS	Final Apch Crs	Minimum Alt RILOC	LPV DA(H) (CONDITIONAL)	Apt Elev 1010′
Ch 77999 W-11A	109°	2800′ (1819′)	1334′ (353′)	TDZE 981′

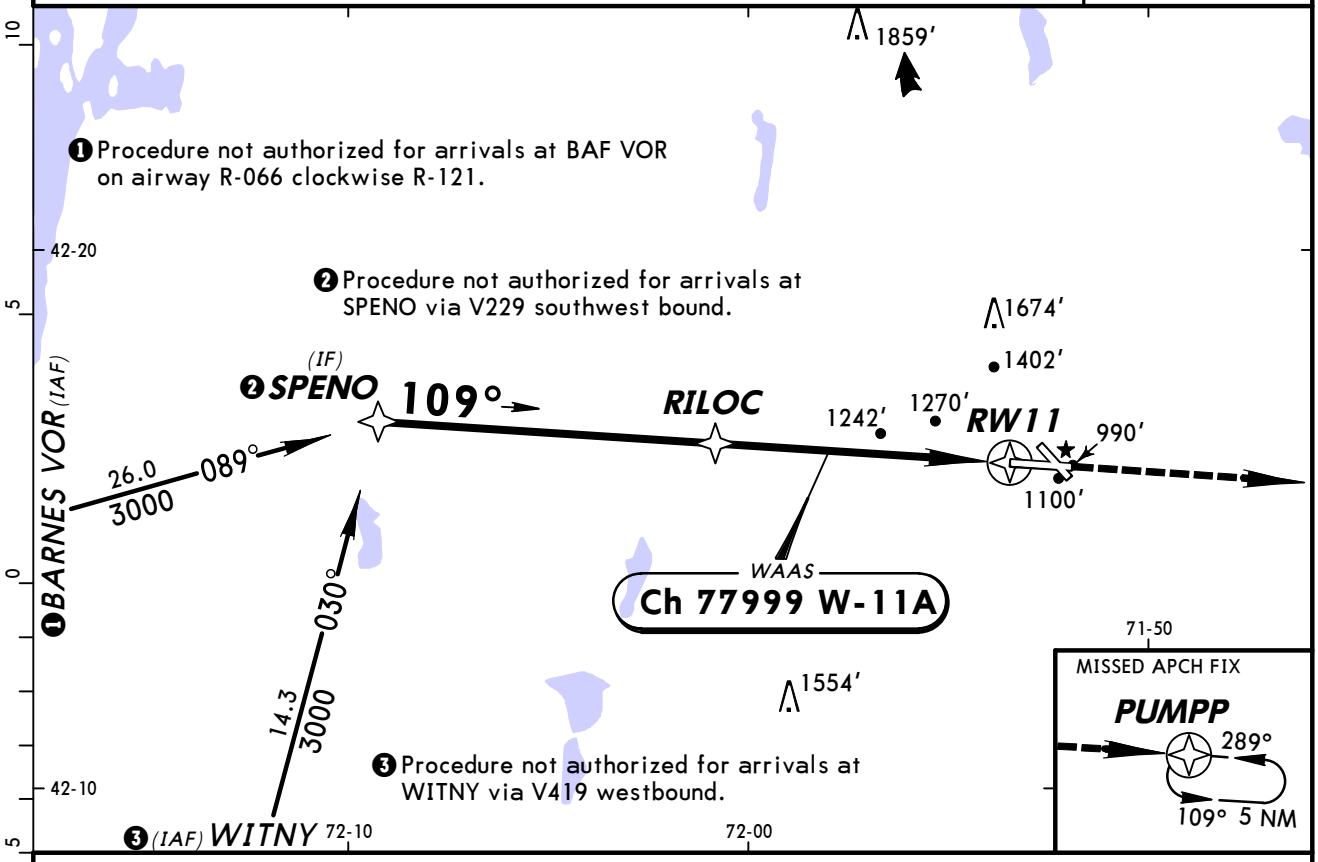
MISSED APCH: Climb to 2700′ direct PUMPP and hold. When authorized by ATC, continue climb-in-hold to 3000′.

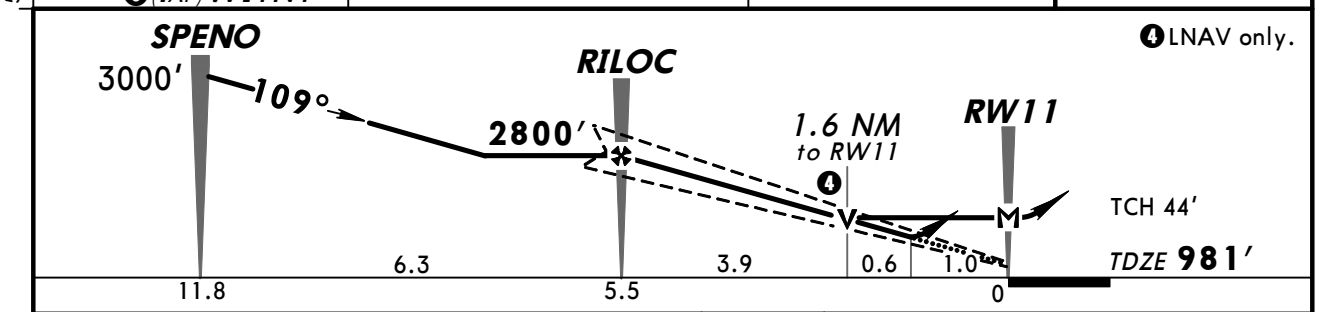
Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′

1. Use local altimeter setting; if not recieved, use Hanscom altimeter setting. 2. DME/DME RNP-0.3 not authorized. 3. VDP not authorized when using Hanscom altimeter setting. 4. WAAS VNAV outages may occur daily. WAAS VNAV NOTAM service is not provided. 5. Pilot controlled lighting 120.5.



MSA RW11





Gnd speed-Kts	70	90	100	120	140	160
Glide Path Angle 3.00°	372	478	531	637	743	849
MAP at RW11						

MALSR 2700′ D PUMPP

STRAIGHT-IN LANDING RWY 11

	LPV DA(H) 1334′ (353′) With Local Altimeter Setting			LPV DA(H) 1534′ (553′) With Hanscom Altimeter Setting			LNAV ❶ MDA(H) 1520′ (539′) With Local Altimeter Setting		
		RAIL out	ALS out		RAIL out	ALS out		RAIL out	ALS out
A	RVR 40 or ¾	RVR 60 or 1¼		RVR 40 or ¾	RVR 60 or 1¼		RVR 24 or ½	RVR 40 or ¾	RVR 50 or 1
B									
C							RVR 50 or 1	1½	
D							RVR 60 or 1¼	1¾	

CIRCLE-TO-LAND

Max Kts	With Local Altimeter Setting MDA(H)	With Hanscom Altimeter Setting MDA(H)
90	1540′ (530′)-1¼	1740′ (730′)-1¼
120	1640′ (630′)-1¼	1840′ (830′)-1¼
140	1720′ (710′)-2	1920′ (910′)-2
165	2000′ (990′)-3	2200′ (1190′)-3

AMEND TERPS

❶ MDA(H) 1720′ (739′) with Hanscom Altimeter Setting.

CHANGES: None.

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KORH/ORH
WORCESTER REGL

JEPPESEN
25 AUG 06 (12-2)

WORCESTER, MASS
RNAV (GPS) Rwy 29

BRIEFING STRIP™

ATIS (ASOS when Twr Inop)	BRADLEY Approach (R)	*WORCESTER Tower	*Ground
126.55	119.0	CTAF 120.5	123.85

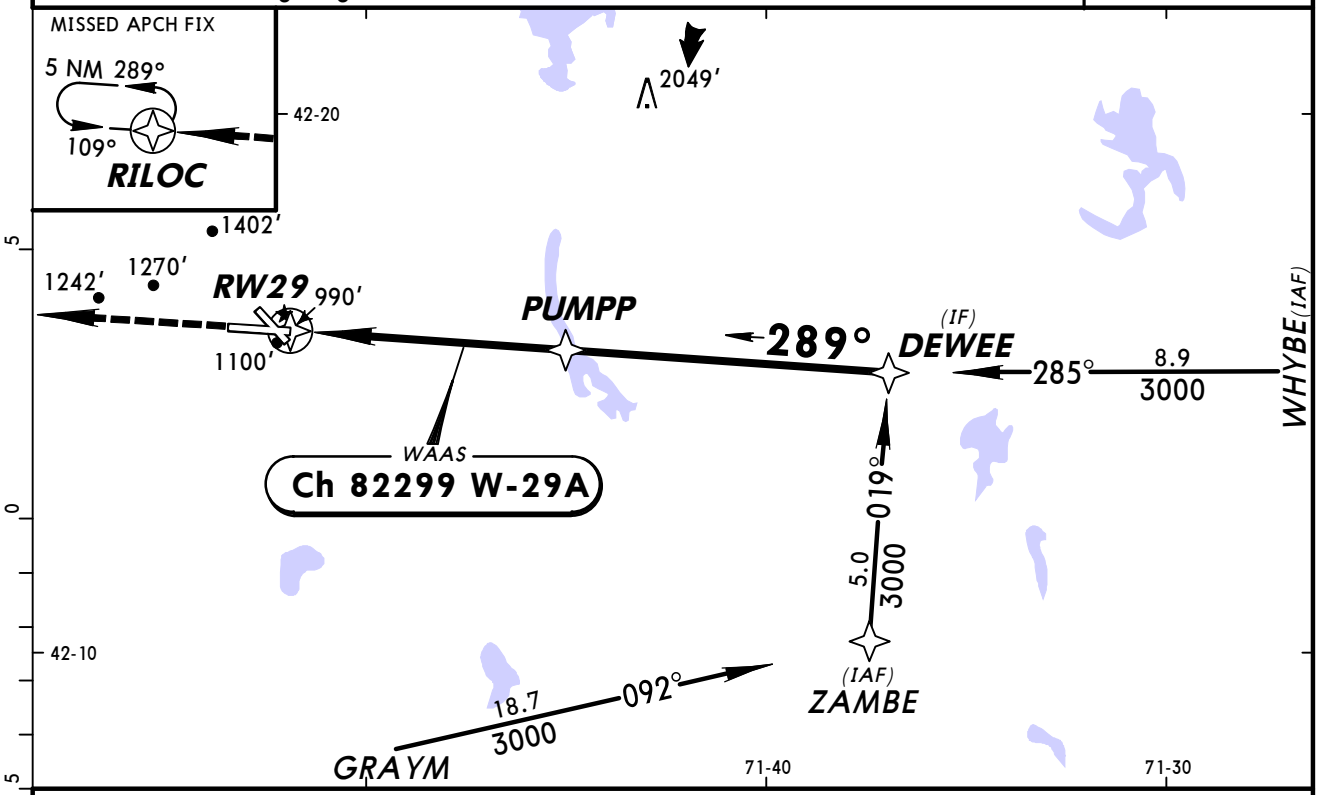
WAAS	Final Apch Crs	Minimum Alt	LPV DA(H) (CONDITIONAL)	Apt Elev 1010′
Ch 82299 W-29A	289°	PUMPP 2700′ (1709′)	1241′ (250′)	TDZE 991′

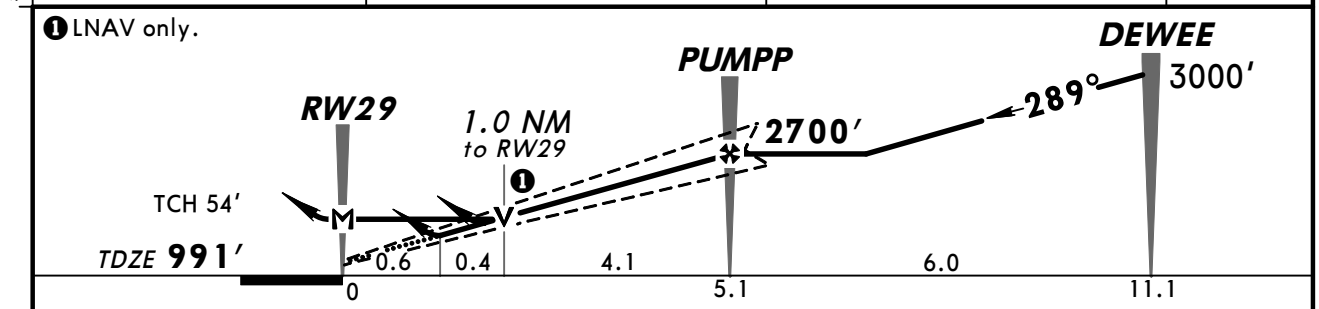
MISSED APCH: Climb to 3000′ direct RILOC and hold, continue climb-in-hold to 3000′.

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

1. Use local altimeter setting; if not recieved, use Hanscom altimeter setting.
2. Baro-VNAV not authorized below -17°C (2°F). 3. DME/DME RNP-0.3 not authorized.
4. VDP and Baro-VNAV not authorized when using Hanscom altimeter setting.
5. WAAS VNAV outages may occur daily. WAAS VNAV NOTAM service is not provided.
6. Pilot controlled lighting 120.5.

3300′
MSA RW29





Gnd speed-Kts	70	90	100	120	140	160
Glide Path Angle 3.00°	372	478	531	637	743	849
MAP at RW29						

REIL
PAPI-L

3000′

RILOC

STRAIGHT-IN LANDING RWY 29
With Local Altimeter Setting

	LPV ❶ DA(H) 1241′(250′)	LNAV/VNAV ❷ DA(H) 1361′(370′)	LNAV ❸ MDA(H) 1360′(369′)
A	RVR 40 or ¾	RVR 60 or 1¼	RVR 50 or 1
B			
C			
D			RVR 60 or 1¼

CIRCLE-TO-LAND

Max Kts	With Local Altimeter Setting MDA(H)	With Hanscom Altimeter Setting MDA(H)
90	1540′(530′)-1¼	1740′(730′)-1¼
120	1640′(630′)-1¼	1840′(830′)-1¼
140	1720′(710′)-2	1920′(910′)-2
165	2000′(990′)-3	2200′(1190′)-3

❶ DA(H) 1441′ (450′) with Hanscom Altimeter Setting.
❷ DA(H) 1561′ (570′) with Hanscom Altimeter Setting.
❸ MDA(H) 1560′ (569′) with Hanscom Altimeter Setting.

TERPS AMEND 0A

CHANGES: Lighting.

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KORH/ORH
WORCESTER REGL

JEPPESEN

28 MAY 10 (12-3) Eff 3 Jun

WORCESTER, MASS
RNAV (GPS) Rwy 33

BRIEFING STRIP ™

ATIS (ASOS when Twr Inop)	BRADLEY Approach (R)	*WORCESTER Tower	*Ground
126.55	119.0	CTAF 120.5	123.85

RNAV	Final Apch Crs	Minimum Alt	LNAV MDA(H) (CONDITIONAL)	Apt Elev 1010′
	333°	SLOWW 2400′ (1401′)	1400′ (401′)	TDZE 999′

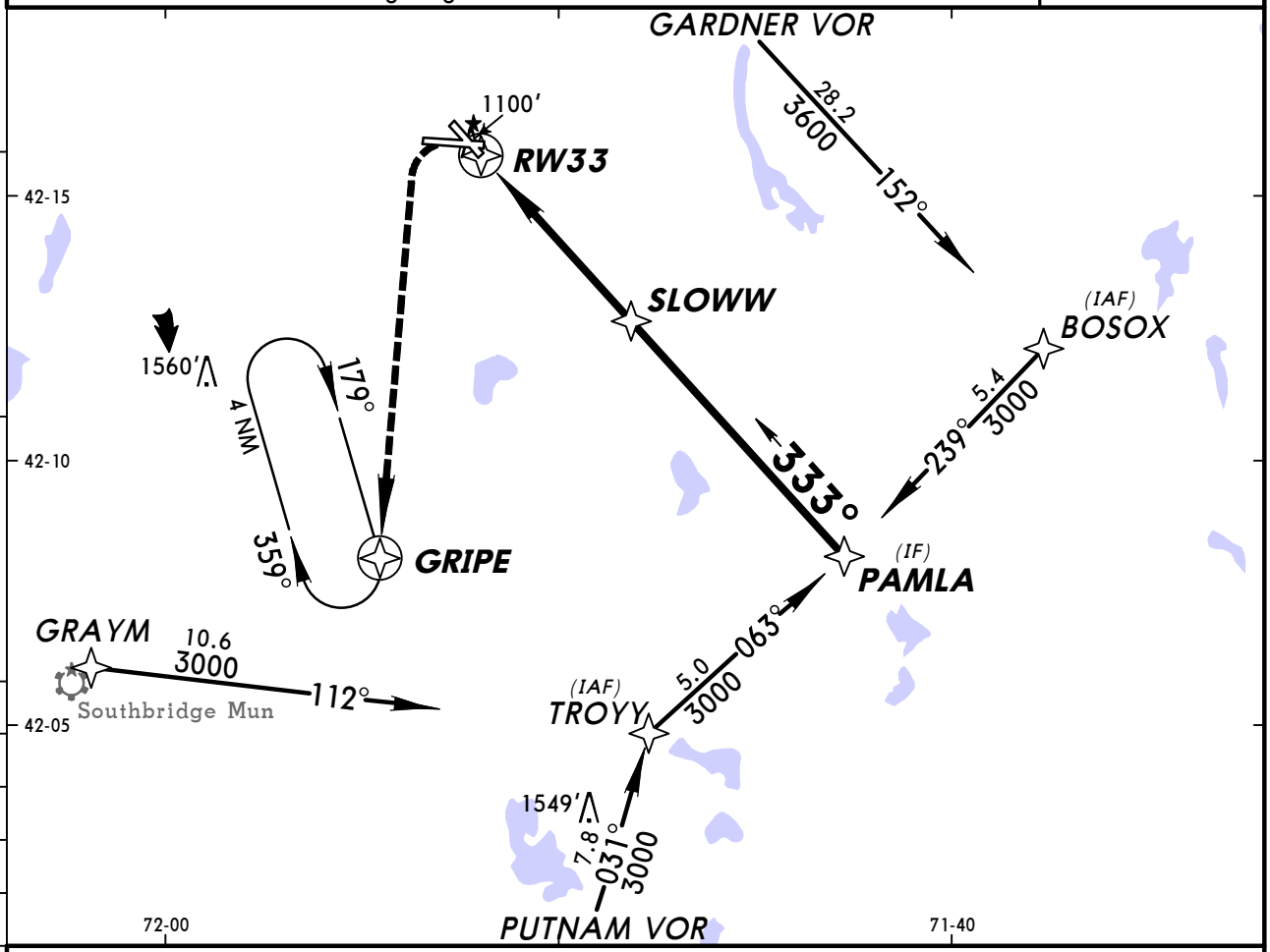
MISSED APCH: Climbing LEFT turn to 3000′ direct GRIPE and hold.

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

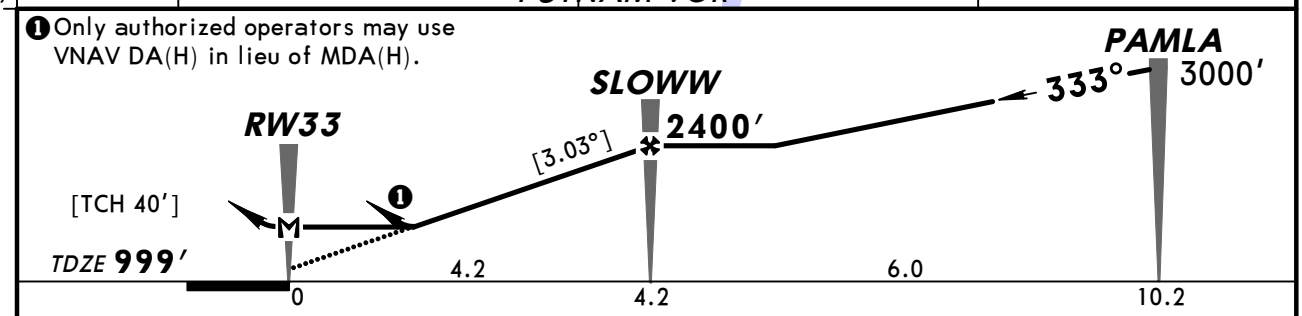
1. Use local altimeter setting; if not received, use Hanscom altimeter setting.
2. DME/DME RNP-0.30 not authorized. 3. Visibility reduction by helicopters not authorized. 4. Pilot controlled lighting 120.5.

3300′

MSA RW33



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



Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.03°]	375	482	536	643	750	858
MAP at RW33						

REIL
PAPI-L

3000′ LT

GRIPE

STRAIGHT-IN LANDING RWY 33 LNAV			CIRCLE-TO-LAND		
	MDA(H) 1400′(401′) With Local Altimeter Setting	MDA(H) 1600′(601′) With Hanscom Altimeter Setting	Max Kts	With Local Altimeter Setting MDA(H)	With Hanscom Altimeter Setting MDA(H)
A	1	1	90	1540′(530′)-1	1740′(730′)-1
B			120	1640′(630′)-1	1840′(830′)-1¼
C	1¼	1¾	140	1720′(710′)-2	1920′(910′)-2¾
D		2	165	2000′(990′)-3	2200′(1190′)-3

TERPS AMEND 0 3 JUN 2010

CHANGES: New procedure.

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BRIEFING STRIP™

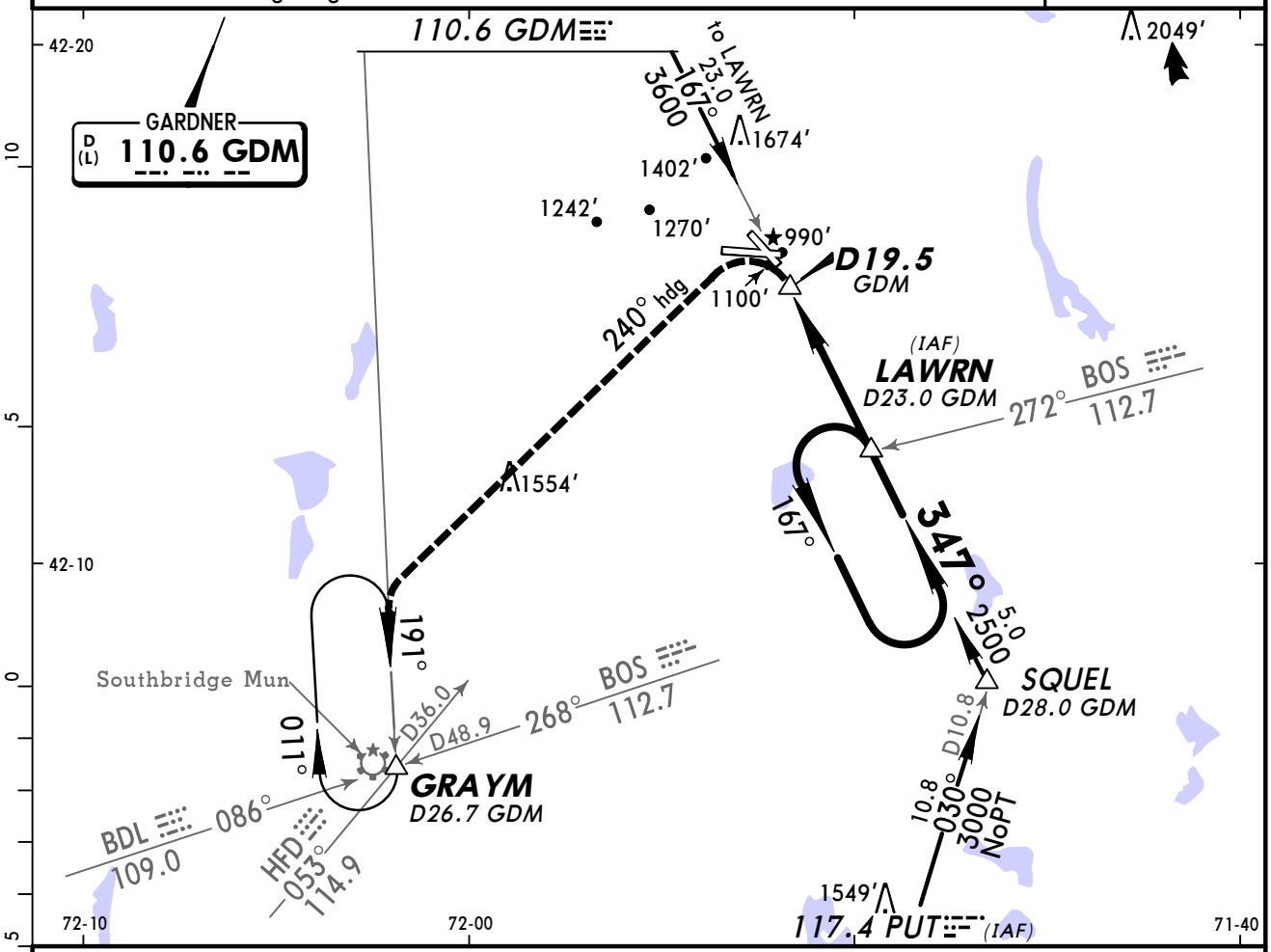
ATIS (ASOS when Twr Inop)	BRADLEY Approach (R)	*WORCESTER Tower	*Ground
126.55	119.0	CTAF 120.5	123.85

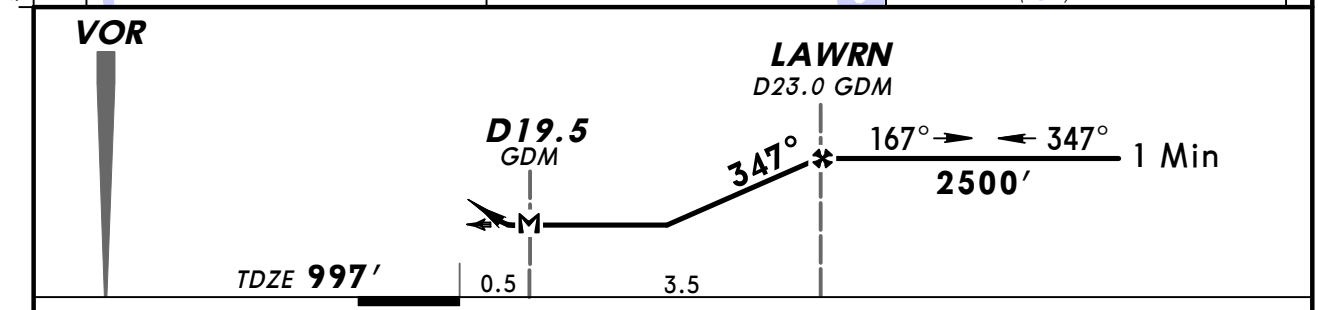
VOR	Final Apch Crs	Minimum Alt	MDA(H)	Apt Elev 1010′
GDM 110.6	347°	LAWRN 2500′ (1503′)	1520′ (523′)	TDZE 997′

MISSED APCH: Climbing LEFT turn to 3000′ via 240° heading and outbound on GDM VOR R-191 to GRAYM INT/D26.7 GDM and hold.

Alt Set: INCHES Trans level: FL 180 Trans alt: 18000′
1. Pilot controlled lighting 120.5.

MSA GDM VOR: 150° 4400′, 240° 3300′





MAP at D19.5 GDM								REIL VASI-L	3000′ LT	240° hdg	via	GDM 110.6 R-191	and	GRAYM

STRAIGHT-IN LANDING RWY 33		CIRCLE-TO-LAND	
MDA(H) 1520′ (523′)		Max Kts	MDA(H)
A	1	90	1540′(530′)-1
B		120	1640′(630′)-1
C	1½	140	1720′(710′)-2
D	1¾	165	1960′(950′)-3

TERPS AMENDED

CHANGES: MSA.

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BRIEFING STRIP™

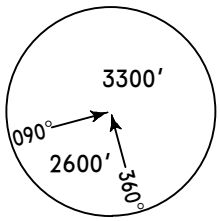
ATIS (ASOS when Twr Inop)	BRADLEY Approach (R)	*WORCESTER Tower	*Ground
126.55	119.0	CTAF 120.5	123.85

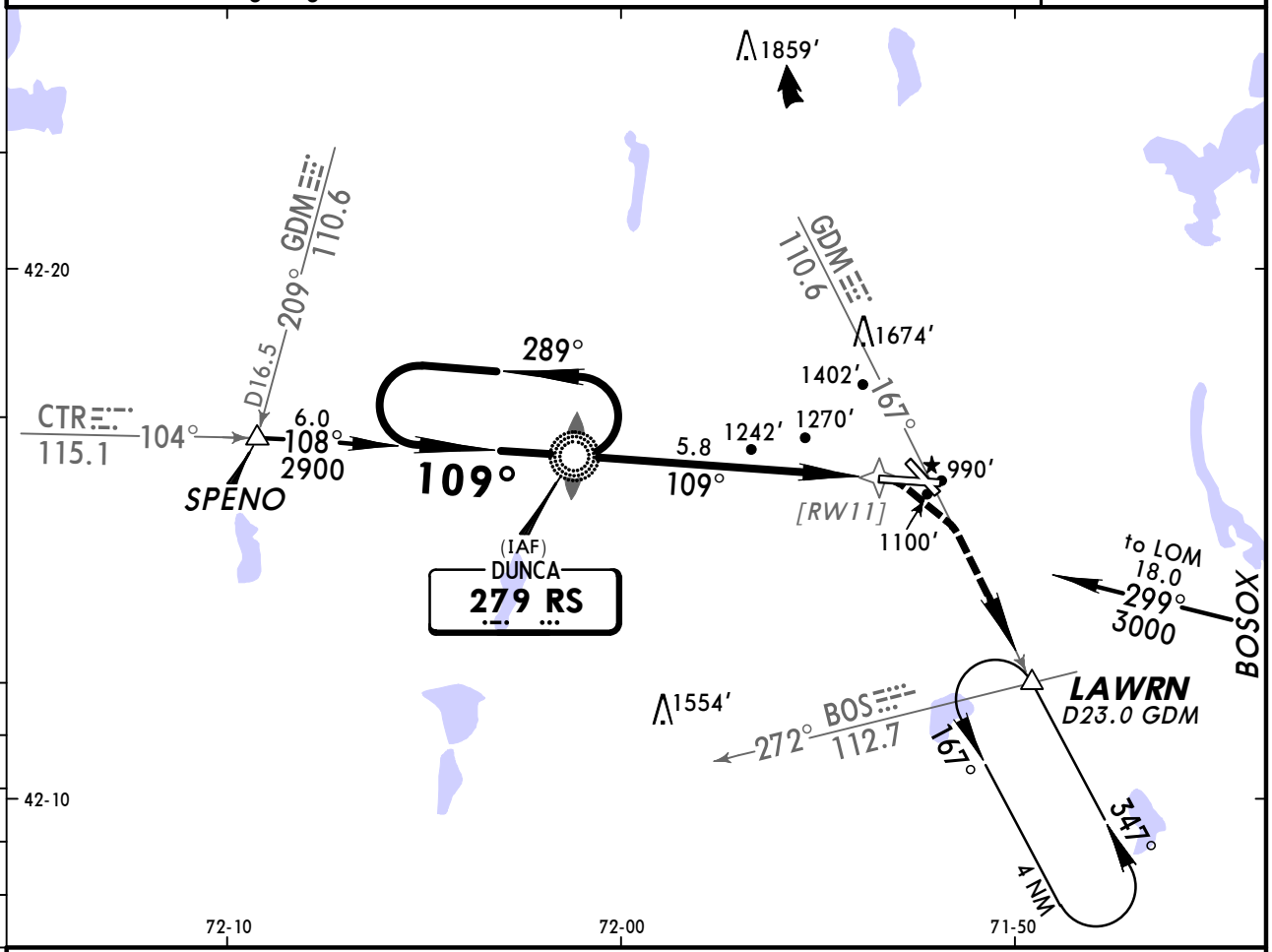
LOM RS	Final Apch Crs	Minimum Alt LOM	MDA(H) (CONDITIONAL)	Apt Elev 1010′
279	109°	2900′ (1919′)	1680′ (699′)	TDZE 981′

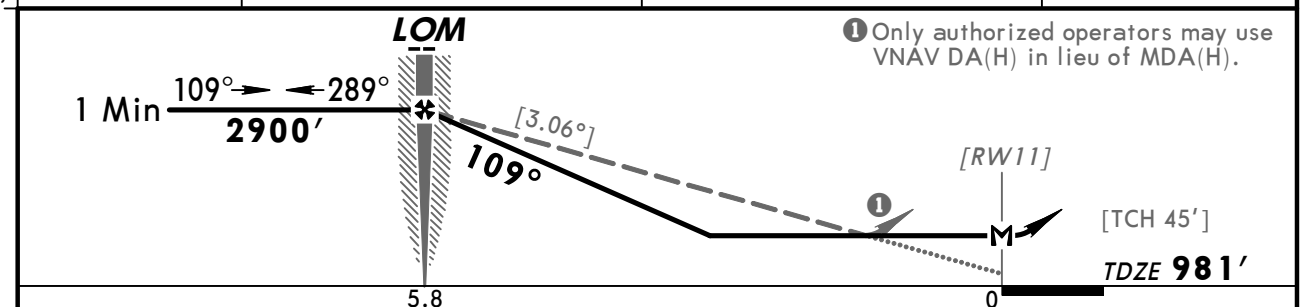
MISSED APCH: Climbing RIGHT turn to 3000′ outbound via GDM VOR R-167 to LAWRN INT/D23.0 GDM and hold.

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

1. Use local altimeter setting; if not received, use Hanscom altimeter setting.
2. Pilot controlled lighting 120.5.







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

Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.06°]	379	487	541	650	758	866
LOM to MAP 5.8	4:58	3:52	3:29	2:54	2:29	2:10

MALSR

3000′ via RT — GDM 110.6 R-167 — LAWRN

	STRAIGHT-IN LANDING RWY 11				CIRCLE-TO-LAND		
	MDA(H) 1680′(699′) With Local Altimeter Setting		MDA(H) 1880′(899′) With Hanscom Altimeter Setting			With Local Altimeter Setting	With Hanscom Altimeter Setting
	RAIL out	ALS out	RAIL out	ALS out	Max Kts	MDA(H)	MDA(H)
A	RVR 40 or ¾	RVR 50 or 1	RVR 40 or ¾	RVR 50 or 1	90	1680′(670′)-1	1880′(870′)-1
B					120		
C	1½	2	1½	2	140	1720′(710′)-2	1920′(910′)-2
D	2	2¼	2	2¼	165	2000′(990′)-3	2200′(1190′)-3

AMEND 21 TERPS

CHANGES: None.

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Chart changes since cycle 03-2012

ADD = added chart, REV = revised chart, DEL = deleted chart.

ACT	PROCEDURE IDENT	INDEX	REV DATE	EFF DATE

WESTFIELD/SPRINGFIELD, MA (BARNES MUN - KBAF)

BEDFORD, MA (HANSCOM - KBED)

BOSTON, MA (LOGAN INTL - KBOS)

SPRINGFIELD/CHICOPEE, MA (WESTOVER ARB/METRO - KCEF)

FALMOUTH, MA (CAPE COD COAST GUARD AIR STATI - KFMH)

WORCESTER, MA (WORCESTER REGL - KORH)

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TERMINAL CHART CHANGE NOTICES

Chart Change Notices for Airport KBAF

Type: Terminal
Effectivity: Permanent
Begin Date: 20100506
End Date: No end date

(13-1) VOR Rwy 2 Amendment 4C changed to 4D. Amendment reference date 6 May 2010.

Chart Change Notices for Airport KBED

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

(11-2) ILS or LOC Rwy 29 MM decmsnd.

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

(11-1) ILS or LOC Rwy 11 MM decmsnd.

Chart Change Notices for Airport KBOS

Type: Terminal
Effectivity: Permanent
Begin Date: 20120112
End Date: No end date

(12-2) RNAV (GPS) RWY 15R AMEND 1A

No Chart Change Notices for Airport KCEF

Chart Change Notices for Airport KFMH

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

RWY 05 PAPI VGA: 3.00 DEGREES ADDED RWY 23 PAPI VGA: 3.00 DEGREES ADDED RWY 14 PAPI VGA CHANGED TO 3.00 DEGREES RWY 32 PAPI VGA: 3.00 DEGREES ADDED

Chart Change Notices for Airport KORH

Type: Terminal
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

(11-1) ILS or LOC Rwy 11 MM decmsnd.

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