To: Flight Procedures & Airspace Group (AFS-420)
From: Alec Seybold – Flight Tech Engineering
Date: 02/06/2026

Portland Internation Jetport (KPWM) Portland, ME, RNAV (RNP) Z RWY 29 ORIG is submitted for processing and submission to AMC-AJV-IFP-ProdCoordTeam@faa.gov and 9-AMC-AJW-TL@faa.gov for publication.

Request publication in **May 14th, 2026 (Cycle 2606)** Terminal Procedures Publication.

Sincerely,
Alec Seybold
Chief Designer
Flight Tech Engineering
Mobile: 720-465-6170
aseybold@flight-tech.aero

Enclosures:
ME_KPWM_RNAV (RNP) Z RWY 29_ORIG_F
ME_KPWM_RNAV (RNP) Z RWY 29_ORIG_S_W
ME_KPWM_RNAV (RNP) Z RWY 29_ORIG_8260-2
ME_KPWM_RNAV (RNP) Z RWY 29_ORIG_AFS
ARI CODING FILE

US Department of Transportation
Federal Aviation Administration

FLIGHT PROCEDURE STANDARDS WAIVER

FLIGHT STANDARDS USE ONLY
CONTROL NO.

1. FLIGHT PROCEDURE IDENTIFICATION:

Portland, ME
PWM
RNAV (RNP) Z RWY 29

2. WAIVER REQUIRED AND APPLICABLE STANDARD:

Bank limited turns [assumed altitude at turn point/fix <500 feet above airport elevation (rounded to nearest foot)]: 3 degrees.
FAA Order 8260.58D, 1-2-5.c(3)(a)

3. REASON FOR WAIVER (JUSTIFICATION FOR NONSTANDARD TREATMENT):

Utilizing the 3 degree bank angle, does not allow a turn radius that would support the procedure. The bank angle for OVAYA to FAWER RF turn is 25.05 and the FROP is located in the visual segment. The glidepath altitude at FAWER is 444 AGL.

4. EQUIVALENT LEVEL OF SAFETY PROVIDED:

1. The maximum bank angle is 25.05 degrees utilizing a 29.92 kts tailwind component. The maximum tailwind component for aircraft is 10 kts. The maximum bank angle with 10 kts tailwind is 21 degrees. The FROP is located 411 ft from the D500 point and the aircraft would be rolling wings level for the TF segment with less than 10 degrees angle of bank.
2. Modern aircraft can support turns above 200 AGL in excess of 25.49 degrees angle of bank and up to 30 degrees of course correction. The FROP altitude is 520 MSL and 444 AGL based on airport elevation.
3. The visual segment OEAs have been evaluated to include the RF turn area from the FROP to the DA point.
4. At DA, the aircraft is within coverage of the VGSI. VGSI and procedure glidepath are coincident.
5. RNP special aircraft and aircrew authorization are required.

5. ALTERNATIVE ACTIONS DEEMED NOT FEASIBLE:

The City of Portland has repeatedly asked to keep aircraft flight tracks over the water. With this in mind, the area over the water is too tight to allow any other design and have usable minimums.

6. COORDINATION WITH USER ORGANIZATIONS (SPECIFY):

7. SUBMITTED BY:

DATE	OFFICE IDENTIFICATION	TITLE	SIGNATURE
10/31/25	Flight Tech Engineering	IFP Manager	Alec Seybold Digitally signed by Alec Seybold Date: 2025.10.31 06:37:49 -07'00'

8. FLIGHT STANDARDS ACTIONS:

☑ **APPROVED** ☐ **DISAPPROVED** ☐ **NOT REQUIRED**

COMMENTS:

APPROVED BASED ON THE EQUIVALENT LEVEL OF SAFETY IN BLICK 4.

DATE	ROUTING SYMBOL	SIGNATURE
		Jim Rose Signed By: Jim Rose Thu Feb 5 2026 08:13:10 GMT-06:00:00 (Central Standard Time)

US Department of Transportation
Federal Aviation Administration

FLIGHT PROCEDURE STANDARDS WAIVER

FLIGHT STANDARDS USE ONLY
CONTROL NO.

1. FLIGHT PROCEDURE IDENTIFICATION:

Portland, ME
PWM
RNAV (RNP) Z RWY 29

2. WAIVER REQUIRED AND APPLICABLE STANDARD:

Turns in the FAS and final rollout point (FROP). The RF leg must terminate and be followed by a TF leg meeting FAS alignment at or prior to reaching the minimum FROP distance. The minimum FROP is the greater of the point on the vertical path 500 feet above LTP/FTP elevation (rounded to the nearest foot) or the point in the FAS at a distance equal to 0.5 NM prior to the DA point. If an RF is the last leg in the intermediate segment, the PFAF must meet the minimum FROP distance.

FAA Order 8260.58D, 4-2-2.b.

3. REASON FOR WAIVER (JUSTIFICATION FOR NONSTANDARD TREATMENT):

The airport and air traffic have been asked by the city and surrounding communities for decades to help reduce the noise over the school on 3 NM final and the residential areas. Although the current charted visual "HARBOR VISUAL" helps to reduce the noise, pilot paths are very inconsistent and the waypoints on the procedure must be manually brought up in the FMS which requires pilots to be heads down. This RNP procedure will allow for corporate jets and airlines to maintain a consistent path over the water and avoid noise sensitive areas and help air traffic better manage departures from the crossing runways. The airport expects 30-35 aircraft a day will utilize this procedure.

The FROP altitude is 520 MSL and 444 AGL (based on airport elevation).

4. EQUIVALENT LEVEL OF SAFETY PROVIDED:

1. The altitude on the path at the FROP is 520 ft MSL, the closest obstacle abeam the FROP is a 429 ft MSL Tower.
3. The visual segment OEAs have been evaluated to include the RF turn area from the FROP to the DA point.
2. At DA, the aircraft is within coverage of the VGSI. VGSI and procedure glidepath are coincident.
3. RNP special aircraft and aircrew authorization are required.

5. ALTERNATIVE ACTIONS DEEMED NOT FEASIBLE:

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7. SUBMITTED BY:

DATE	OFFICE IDENTIFICATION	TITLE	SIGNATURE
10/31/25	Flight Tech Engineering	IFP Manager	Alec Seybold Digitally signed by Alec Seybold Date: 2025.10.31 06:38:35 -07'00'

8. FLIGHT STANDARDS ACTIONS:

☑ **APPROVED** ☐ **DISAPPROVED** ☐ **NOT REQUIRED**

COMMENTS:

APPROVED BASED ON THE EQUIVALENT LEVEL OF SAFETY IN BLICK 4.

DATE	ROUTING SYMBOL	SIGNATURE
		Jim Rose Signed By: Jim Rose Thu Feb 5 2026 08:13:10 GMT-06:00:00 (Central Standard Time)

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
FLIGHT VALIDATION CHECKLIST

1. DATE 07/09/2025 **2. ORGANIZATION** Flight Tech Engineering

3. AIRPORT KPWM **4. PROCEDURE** RNAV (RNP) Z RWY 29 **5. AMEND #** ORIG

6. AIRCRAFT TYPE PA46-301P **7. FMS / SOFTWARE** GTN750Xi / 21.02

8. PIC NAME / PHONE Jordan Schmalenberger / 770 842-4618 **9. EVALUATOR NAME / PHONE** Richard Johnson / 719 964-5891

FLIGHT VALIDATION TASKS

10. FMS NAV DATA AND SOURCE COMPARISON SAT	YES	43. SIMULATOR AND OBSTACLE NOTES REVIEWED	NA
11. IAP ASSESSED TO DA / MDA	YES	44. AIR / GROUND COMMUNICATIONS SATISFACTORY	YES
12. DP / MISSED APPROACH ASSESSED AT MINIMUM CLIMB GRADIENTS	YES	45. RADAR COVERAGE ADEQUATE	YES
15. FLYABILITY SATISFACTORY	YES	46. ADEQUATE NAVIGATION PERFORMANCE ACHIEVED	YES
33. EQUIPMENT ACCURACY VERIFIED	YES	47. RUNWAY MARKINGS / FEATURES VERIFIED	YES
35. DOCUMENTED CONTROLLING OBSTACLE MOST ADVERSE	YES	48. FAS DATA BLOCK SATISFACTORY	N/A

CHARTING CHECKLIST

16. CHART DETAIL SATISFACTORY	YES	20. TEMPERATURE LIMIT NOTED	YES
17. RNP < 1.0 IN MISSED APPROACH NOTED	NA	21. AIRCRAFT SIZE NOTED	YES
18. RF LEGS NOTED	YES	22. CHART MATCHES FLIGHT TRACK	YES
19. NON-STANDARD SPEED / CLIMB NOTED	NA		

IAP SEGMENT CHECKS

TRANS **NAXIE**

24. COURSES P 25. DISTANCES P 27. TAWS P

28. CONSTRAINTS MET YES 29. WIND COMP 010/20 30. RF BANK ANGLE 0

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
FLIGHT VALIDATION CHECKLIST

TRANS TATTE

24. COURSES P | 25. DISTANCES P | 27. TAWS P

28. CONSTRAINTS MET YES | 29. WIND COMP 308/28 | 30. RF BANK ANGLE 10

TRANS SLAMZ

24. COURSES P | 25. DISTANCES P | 27. TAWS P

28. CONSTRAINTS MET YES | 29. WIND COMP 335/13 | 30. RF BANK ANGLE 8

FINAL

24. COURSES P | 25. DISTANCES P | 26. FPA P | 27. TAWS P

28. CONSTRAINTS MET YES | 29. WIND COMP 040/16 | 30. RF BANK ANGLE 6

MISSED APPROACH

24. COURSES P | 25. DISTANCES P | 27. TAWS P

28. CONSTRAINTS MET YES | 29. WIND COMP 090/15 | 30. RF BANK ANGLE 5

HOLDING

24. COURSES P | 25. DISTANCES P | 27. TAWS P

28. CONSTRAINTS MET YES | 29. WIND COMP 090/15 | 30. RF BANK ANGLE 12

49. VISUAL SEGMENT SAT | 50. NIGHT EVALUATION NA

STAR SEGMENT CHECKS

EN ROUTE TRANS

24. COURSES | 25. DISTANCES | 27. TAWS

28. CONSTRAINTS MET | 29. WIND COMP | 30. RF BANK ANGLE

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
FLIGHT VALIDATION CHECKLIST

COMMON ROUTE

24. COURSES _____ 25. DISTANCES _____ 27. TAWS _____

28. CONSTRAINTS MET _____ 29. WIND COMP _____ 30. RF BANK ANGLE _____

+

-

RWY TRANS _____

24. COURSES _____ 25. DISTANCES _____ 27. TAWS _____

28. CONSTRAINTS MET _____ 29. WIND COMP _____ 30. RF BANK ANGLE _____

DEPARTURE SEGMENT CHECKS

ICA OR COPTER PROCEED VISUALLY

24. COURSES _____ 25. DISTANCES _____ 27. TAWS _____

28. CONSTRAINTS MET _____ 29. WIND COMP _____ 30. RF BANK ANGLE _____

RWY TRANS _____

24. COURSES _____ 25. DISTANCES _____ 27. TAWS _____

28. CONSTRAINTS MET _____ 29. WIND COMP _____ 30. RF BANK ANGLE _____

COMMON ROUTE

24. COURSES _____ 25. DISTANCES _____ 27. TAWS _____

28. CONSTRAINTS MET _____ 29. WIND COMP _____ 30. RF BANK ANGLE _____

TRANS _____

24. COURSES _____ 25. DISTANCES _____ 27. TAWS _____

28. CONSTRAINTS MET _____ 29. WIND COMP _____ 30. RF BANK ANGLE _____

51. EVALUATOR NOTES

Radar and Comm checks satisfactory at all fixes.

SPECIAL TRAINING RECOMMENDATION FROM DEVELOPER

53. PROCEDURE SAT

54. EVALUATOR SIGNATURE Richard G Johnson Jr Digitally signed by Richard G Johnson Jr Date: 2025.07.13 18:56:28 -06'00'

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
OBSTACLE ASSESSMENT CHECKLIST

1. DATE	**Jul 9, 2025**	**2. ORGANIZATION**	**Flight Tech Engineering**		
3. AIRPORT	**KPWM**	**4. PROCEDURE**	**RNAV (RNP) Z RWY 29**	**5. AMEND #**	**ORIG**
6. AIRCRAFT TYPE	**PA46-301P**	**7. FMS / SOFTWARE**	**GTN750Xi/ 21.02**		
8. PIC NAME / PHONE	**Jordan Schmalenberger / 770 842-4618**	**9. EVALUATOR NAME / PHONE**	**Richard Johnson / 719 964-5891**		

TERPS BIENNIAL REVIEW

31. BIENNIAL	NA	32. DATE BIENNIAL COMPLETE	

OBSTACLE ASSESSMENT TASKS

33 EQUIPMENT ACCURACY VERIFIED	YES

IAP SEGMENT CHECKS

TRANS **NAXIE**

34. DOCUMENTED CONTROLLING OBSTACLE VERIFIED	YES	35. CONTROLLING OBSTACLE MOST ADVERSE	YES

TRANS **TATTE**

34. DOCUMENTED CONTROLLING OBSTACLE VERIFIED	YES	35. CONTROLLING OBSTACLE MOST ADVERSE	YES

TRANS **SLAMZ**

34. DOCUMENTED CONTROLLING OBSTACLE VERIFIED	YES	35. CONTROLLING OBSTACLE MOST ADVERSE	YES

FINAL

34. DOCUMENTED CONTROLLING OBSTACLE VERIFIED	YES	35. CONTROLLING OBSTACLE MOST ADVERSE	YES

MISSED APPROACH

34. DOCUMENTED CONTROLLING OBSTACLE VERIFIED	YES	35. CONTROLLING OBSTACLE MOST ADVERSE	YES

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
OBSTACLE ASSESSMENT CHECKLIST

HOLDING

34. DOCUMENTED CONTROLLING OBSTACLE VERIFIED	YES	35. CONTROLLING OBSTACLE MOST ADVERSE	YES

IAP VISUAL SEGMENT

VISUAL SEGMENT OR COPTER PROCEED VISUALLY/VFR AREA

36. VERIFIED CLEAR	YES	37. APPROPRIATE MITIGATIONS IN PLACE IF NOT CLEAR	YES

STAR SEGMENT CHECKS

EN ROUTE TRANS

34. DOCUMENTED CONTROLLING OBSTACLE VERIFIED		35. CONTROLLING OBSTACLE MOST ADVERSE	

COMMON ROUTE

34. DOCUMENTED CONTROLLING OBSTACLE VERIFIED		35. CONTROLLING OBSTACLE MOST ADVERSE	

RWY TRANS

34. DOCUMENTED CONTROLLING OBSTACLE VERIFIED		35. CONTROLLING OBSTACLE MOST ADVERSE	

DEPARTURE SEGMENT CHECKS

ICA OR COPTER PROCEED VISUALLY

34. DOCUMENTED CONTROLLING OBSTACLE VERIFIED		36. VERIFIED CLEAR	
35. CONTROLLING OBSTACLE MOST ADVERSE		37. APPROPRIATE MITIGATIONS IN PLACE IF NOT CLEAR	

RWY TRANS

34. DOCUMENTED CONTROLLING OBSTACLE VERIFIED		36. VERIFIED CLEAR	
35. CONTROLLING OBSTACLE MOST ADVERSE		37. APPROPRIATE MITIGATIONS IN PLACE IF NOT CLEAR	

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
OBSTACLE ASSESSMENT CHECKLIST

COMMON ROUTE

34. DOCUMENTED CONTROLLING OBSTACLE VERIFIED		35. CONTROLLING OBSTACLE MOST ADVERSE	

TRANS

34. DOCUMENTED CONTROLLING OBSTACLE VERIFIED		35. CONTROLLING OBSTACLE MOST ADVERSE	

OBSTRUCTION DISCREPENCIES

38. OBSTACLE IN DATABASE DOES NOT EXIST

OBSTACLE ID		HEIGHT MSL/AGL	
COORDINATES		SUPPORTING DOC	

39. OBSTACE NOT IN DATABASE

OBSTACLE ID		HEIGHT MSL/AGL	
COORDINATES		SUPPORTING DOC	

40. OBSTACLE DATA INCORRECT

OBSTACLE ID		HEIGHT MSL/AGL	
COORDINATES		SUPPORTING DOC	

OBSTRUCTION NOTIFICATION

41. OBSTACLE DATA DISCREPENCIES SENT TO NFDC		42. DATE SENT	

51. EVALUATOR NOTES

Procedure flown to 306 DH and 521 LNAV MDA.

53. PROCEDURE	SAT	54. EVALUATOR SIGNATURE	Richard G Johnson Jr Digitally signed by Richard G Johnson Jr Date: 2025.07.13 18:36:48 -06'00'

Portland, Maine

RNAV (RNP) Z RWY 29

PORTLAND INTL JETPORT (KPWM)

APCH CRS	Rwy ldg	7200
290°	TDZE	56
	Arpt Elev	76

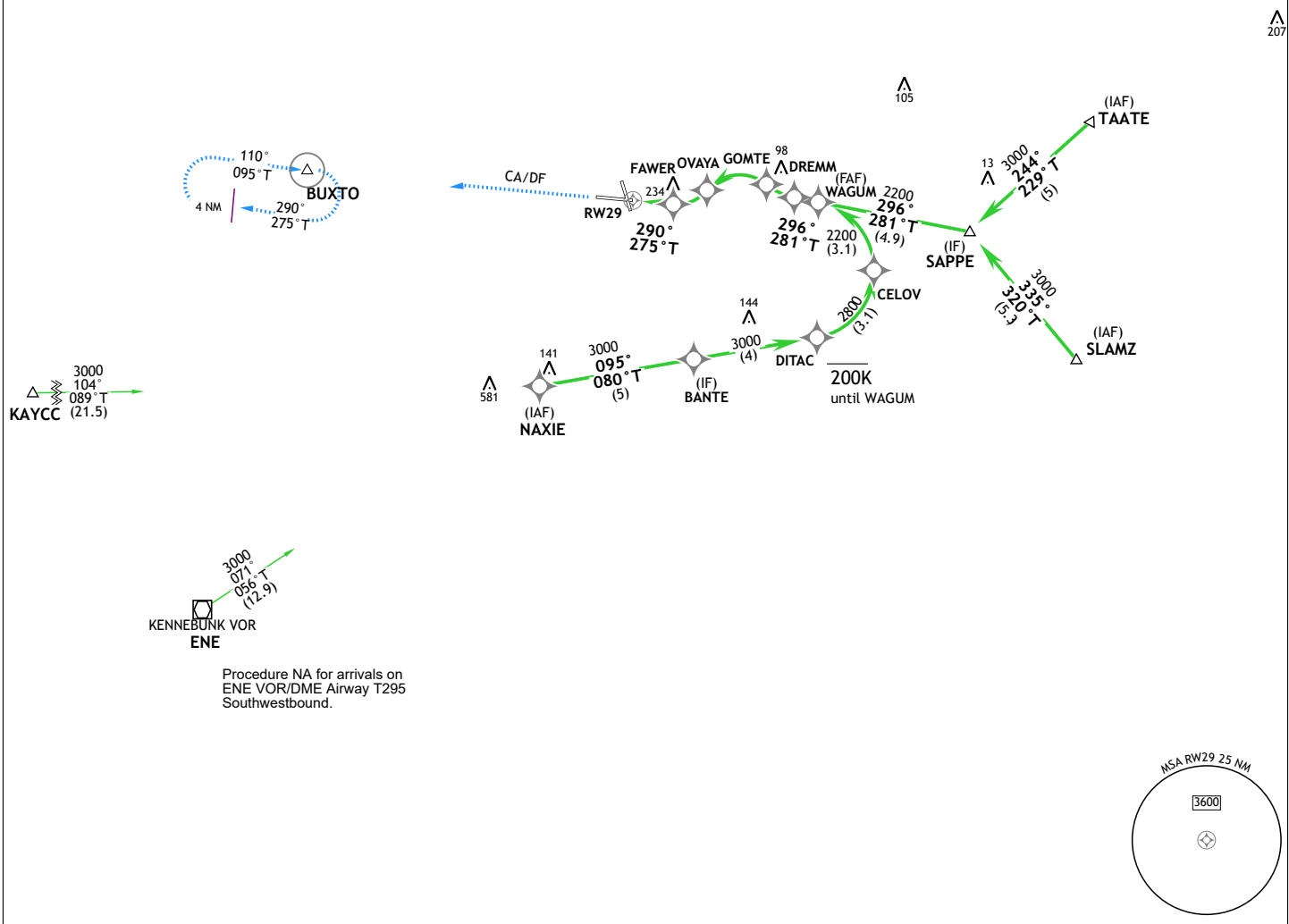
For uncompensated Baro-VNAV systems, Procedure NA below -15°C or above 54°C. For inoperative ALS, increase RNP 0.10 all CATs visibility to 4000. For inoperative ALS, increase RNP 0.13 all CATs visibility to 6000. For inoperative ALS, increase RNP 0.30 all CATs to 1 3/8 miles. When local altimeter setting not received, Procedure NA. Procedure NA for aircraft with wingspan greater than 136 Ft.

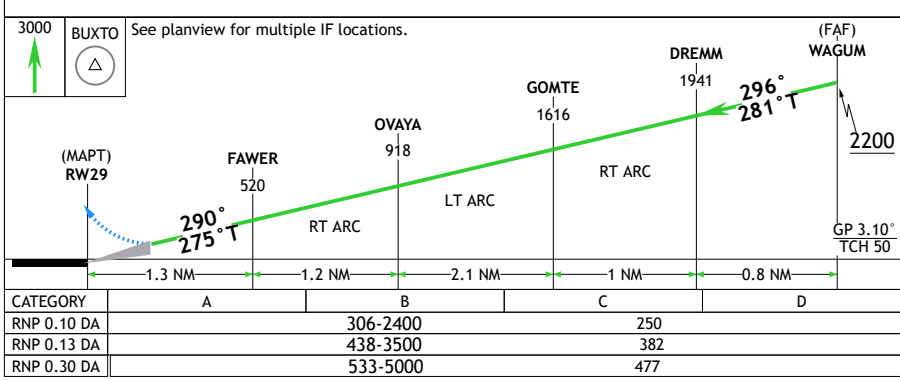
MALSR (A5)

MISSED APPROACH: Climb to 3000 direct BUXTO and hold, continue climb-in-hold to 3000.

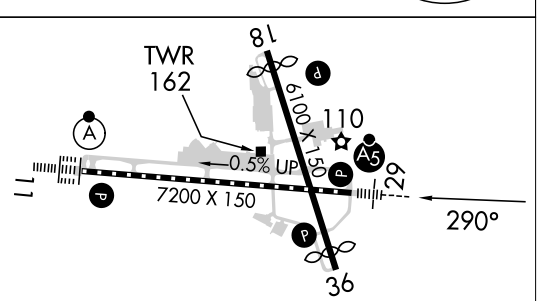
ATIS	PORTLAND APP CON/DEP CON	PORTLAND TOWER
119.05	120.9	120.9

PBN REQUIREMENTS: RNP AR APCH-GPS, RF. Authorization Required.





CATEGORY	A	B	C	D
RNP 0.10 DA		306-2400	250	
RNP 0.13 DA		438-3500	382	
RNP 0.30 DA		533-5000	477	



HIRL Rwy 11-29 (L)
REIL Rwys 18 and 36 (L)
TDZ/CL Rwy 11 (L)
MIRL Rwy 18-36 (L)

Portland, Maine

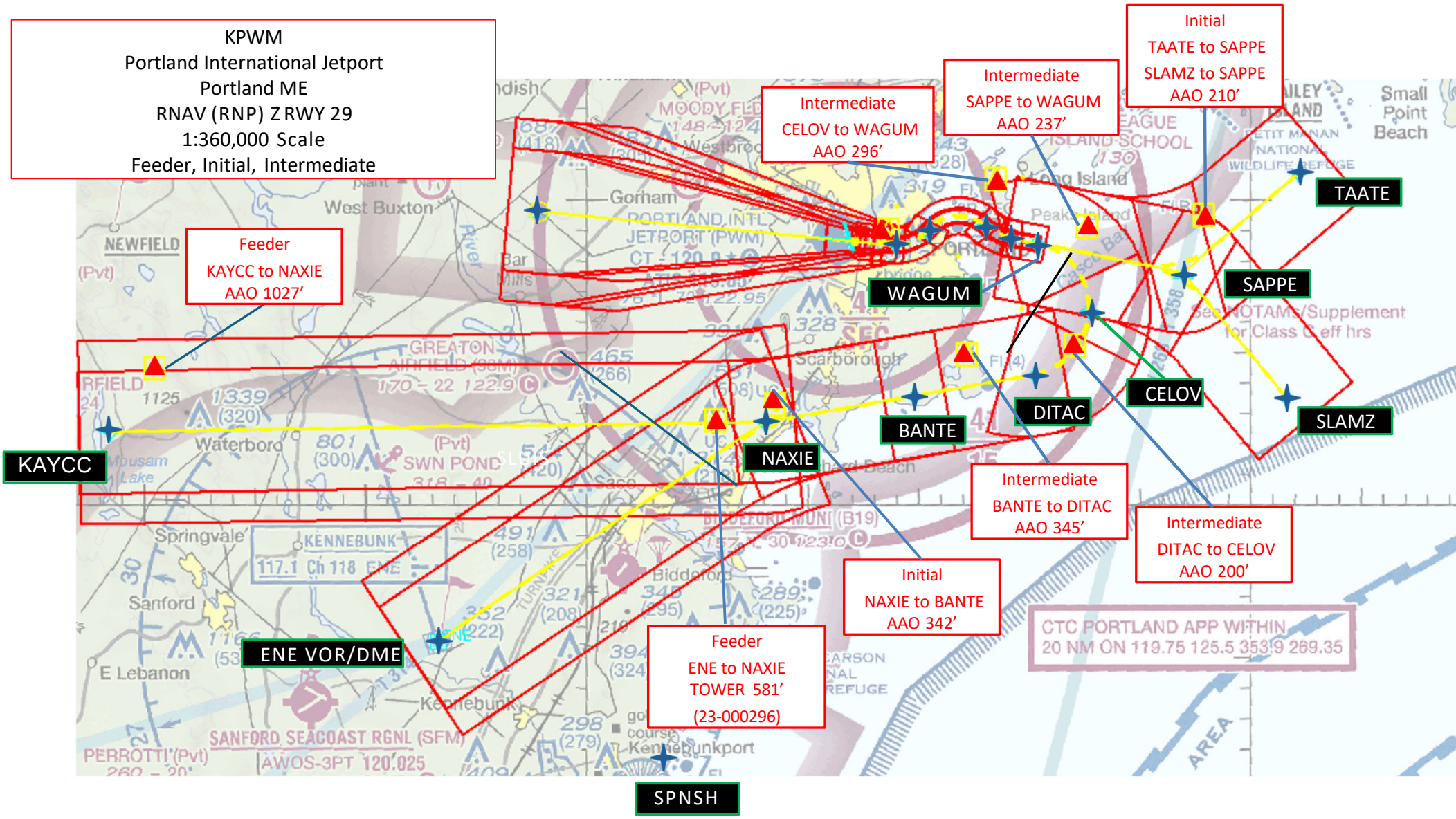
43°39'N - 70°19'W

PORTLAND INTL JETPORT (KPWM)

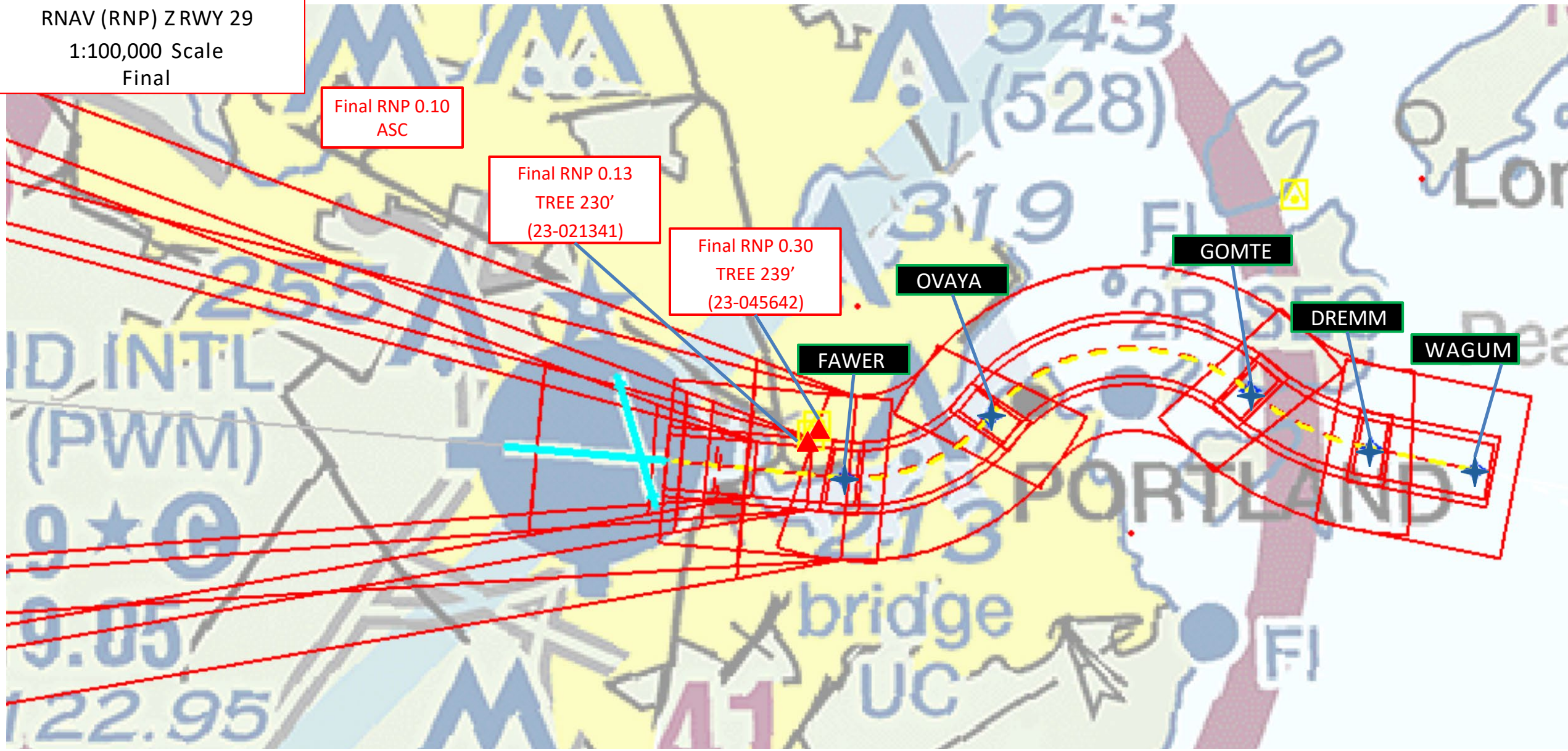
Orig
TERPS

RNAV (RNP) Z RWY 29

KPWM
Portland International Jetport
Portland ME
RNAV (RNP) Z RWY 29
1:360,000 Scale
Feeder, Initial, Intermediate



KPWM
Portland International Jetport
Portland ME
RNAV (RNP) Z RWY 29
1:100,000 Scale
Final



KPWM
Portland International Jetport
Portland ME
RNAV (RNP) Z RWY 29
1:700,000 Scale
Missed Approach Level Surface, MSA, Holding