Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: IAP	Date Open: 04/28/2009	Task #: 2009042821094505006	Request #: 20090428210945
Procedure: RNAV (RNP) Z RWY 33L AMDT 2		Airport ID: KBWI	Airport: BALTIMORE-WASHINGTON INTL THURGOOD MARSHALL		Reimbursable #:
City: BALTIMORE	**ST:** MD	GPS #:		Estimated Chart Date: 01/10/2013	FICO #:
Fac ID:	**Fac. Type:** RNP	**Specialist:** HOWARD HAWKINS			

Procedure Review

	Rec'd	Rel'd	Full Name	Comments
Lead:	03/14/2012	08/21/2012	STEVEN SZUKALA	
QA:	08/21/2012	08/21/2012	STEVEN SZUKALA	
Liaison:	08/21/2012		Spurlin	

Procedure Comments: **Remark Type:** INFORMATION

pg 6 of 6

BALTIMORE, MD BALTIMORE-WASHINGTON INTL THURGOOD MARSHALL (KBWI) RNAV (RNP) Z RWY 33L, AMDT 2 (RNP) ENROUTE-NO FC: 11.27.12
PUB: 1.10.13

ATTACHED FORMS: 8260-3; 8260-10; 8260-9; 8260-2(S): CFFHN, ORIG; CFFHP, ORIG; GRAFE-INT, REV 5; JANNS-INT, REV 10; JETNA, ORIG; KEEYY, ORIG; LABPI, ORIG; LIYCO, ORIG; MILRE, ORIG; SPLAT-INT, REV 8; (INFO ONLY) BMORE-INT, REV 5.

CONTACT: DON SMITH, AJV-352 LEAD, 405.954.1036:

APP CRS	Rwy ldg	9501
335°	THRE	129
	Apt Elev	146

RNAV (RNP) Z RWY 33L

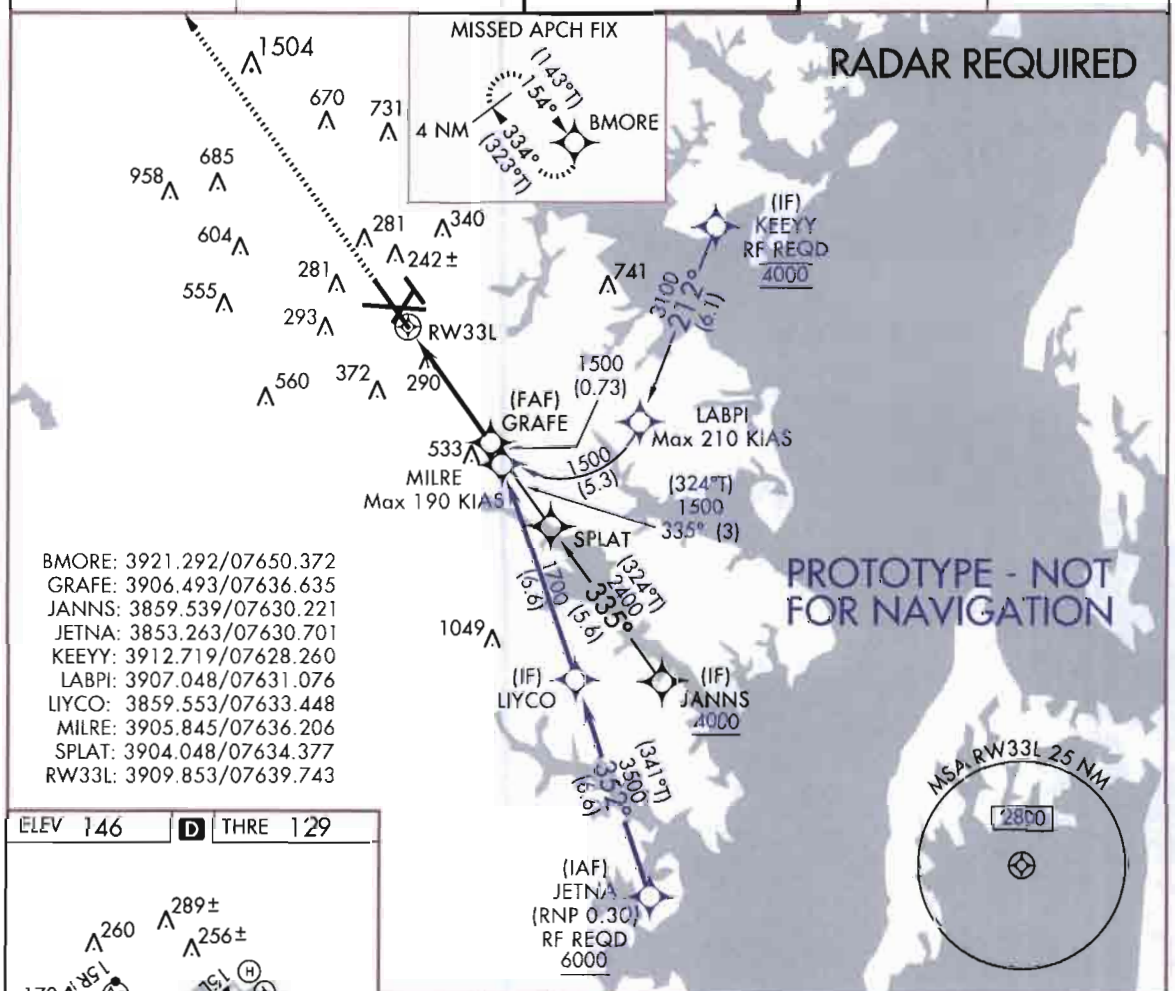
BALTIMORE/ WASHINGTON INTL THURGOOD MARSHALL (BWI)

For uncompensated Baro-VNAV systems, procedure NA below -15°C (5°F) or above 54°C (130°F). For inoperative MALSR, increase RNP 0.30 all Cats visibility to RVR 6000. GPS required.

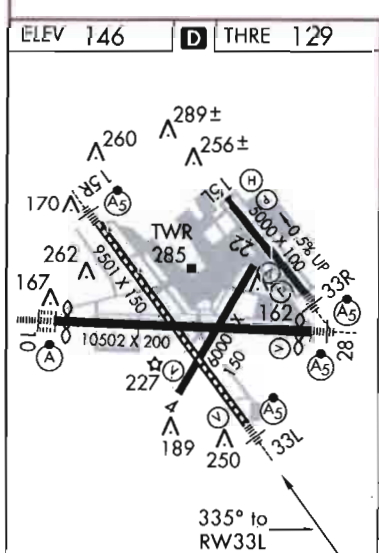
MALSR

MISSED APPROACH: Climb to 2600 on track 335° to BMORE and hold.

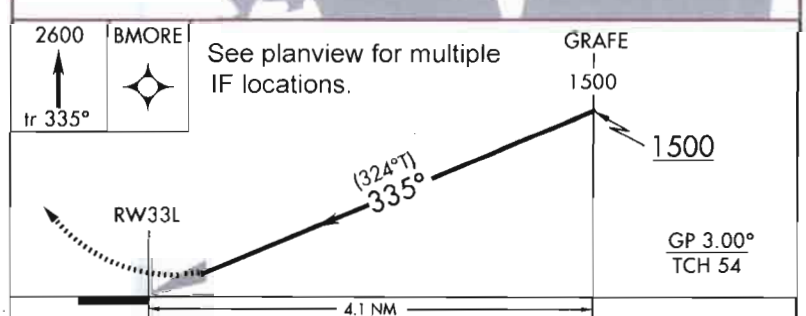
ATIS	POTOMAC APP CON	BALTIMORE TOWER	GND CON	CLNC DEL
115.1 127.8	119.7 290.475	119.4 257.8	121.9	118.05



BMORE: 3921.292/07650.372
GRAFE: 3906.493/07636.635
JANNS: 3859.539/07630.221
JETNA: 3853.263/07630.701
KEEYY: 3912.719/07628.260
LABPI: 3907.048/07631.076
LIYCO: 3859.553/07633.448
MILRE: 3905.845/07636.206
SPLAT: 3904.048/07634.377
RW33L: 3909.853/07639.743

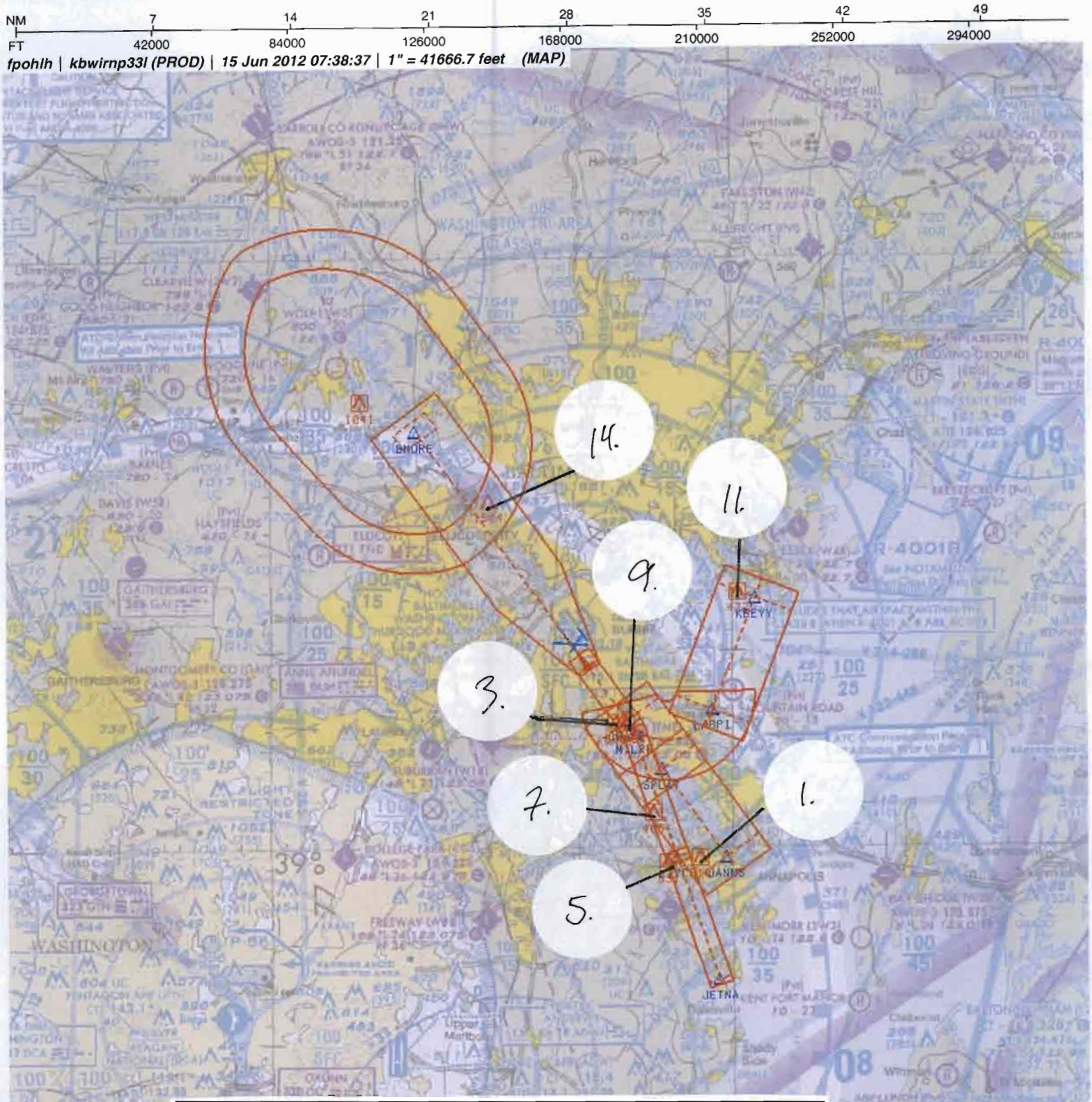


TDZ/CL Rwys 10 and 33L
REIL Rwys 15L and 33R
HIRL all Rwys

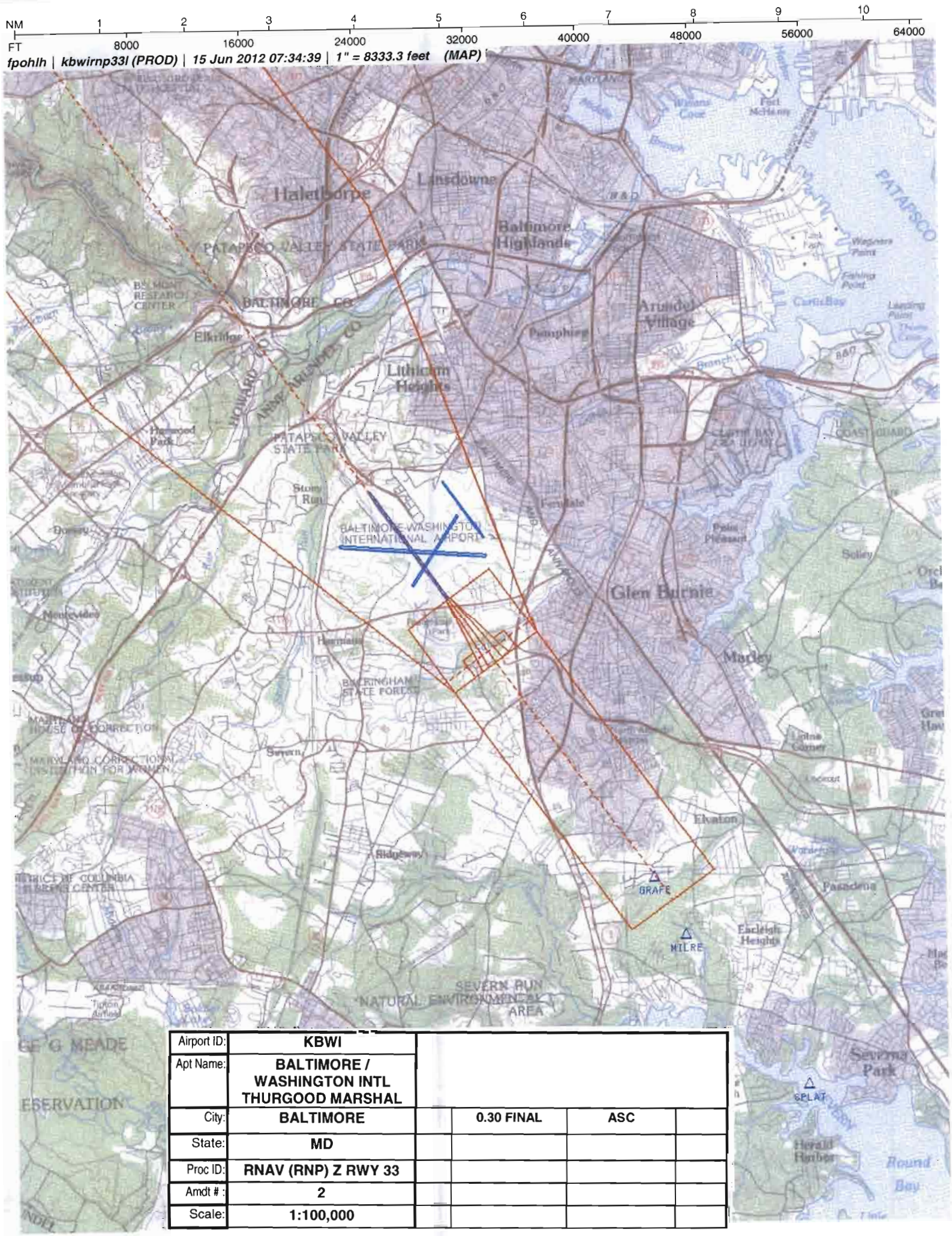


CATEGORY	A	B	C	D
RNP 0.3 DA	478/30 349 (400-⅝)			

AUTHORIZATION REQUIRED



Airport ID:	KBWI	OBSTACLE CONTAIN AC		ELEVATIONS ADJUSTMENTS	
Apt Name:	BALTIMORE / WASHINGTON INTL THURGOOD MARSHAL				
City:	BALTIMORE	1.	INTERMEDIATE	TOWER	385
State:	MD	3.	INTERMEDIATE STEPDOWN	TOWER	533
		5	INITIAL	TOWER	706
		7.	INTERMEDIATE	AAO	368
Proc ID:	RNAV (RNP) Z RWY 33	9.	INTERMEDIATE STEPDOWN	AAO	348
Amdt # :	2	11.	INTERMEDIATE	STACK	422
Scale:	1:500,000	14.	MA LVL SFC	TOWER	1504



Airport ID:	KBWI				
Apt Name:	BALTIMORE / WASHINGTON INTL THURGOOD MARSHAL				
City:	BALTIMORE		0.30 FINAL	ASC	
State:	MD				
Proc ID:	RNAV (RNP) Z RWY 33				
Amdt # :	2				
Scale:	1:100,000				

US DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

RNAV (RNP) - STANDARD, INSTRUMENT APPROACH PROCEDURE, TITLE 14 CFR PART 97.33

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TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
JANNS (IF)	SPLAT (TF) (FB) (RNP 1.00)	335.31 / 5.55	2400
SPLAT	GRAFE (TF) (FB) (RNP 1.00)	335.26 / 3.01	1500
JETNA (IAF)	LIYCO (TF) (FB) (RNP 0.30)	352.18 / 6.64	3500
LIYCO (IF)	MILRE (TF) (FB) (RNP 0.30)	352.15 / 6.64	1700
MILRE	GRAFE (RF) (FB) (RNP 0.30)	(2.48 NM RADIUS CCW CFFHP) / 0.73	1500
(SEE FORM 8260-10)			

MISSED APPROACH

RNP: DA

CLIMB TO 2600 ON TRACK 335.21 TO BMORE AND HOLD.

ADDITIONAL FLIGHT DATA:
HOLD NW, RT, 154.04 INBOUND.
#TCH: 182.7 MSL (DO NOT CHART)
DISTANCE TO THLD FROM 349 HAT: 0.93 NM.
CHART MANDATORY 4000 AT KEEYY.
CHART MINIMUM 4000 AT JANNS
CHART MINIMUM 6000 AT JETNA.
ROUTE TYPE: A, H
ROUTE TYPE QUALIFIER 1: F
ROUTE TYPE QUALIFIER 2: S

1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. PROFILE STARTS AT GRAFE
3. FAC: 335.24 FAF: ____ DIST FAF TO MAP: ____ THLD: ____
4. MIN. ALT: GRAFE 1500
5. DIST TO THLD FROM OM: 4.14 MM: ____ IM: ____ 150 HAT: ____ 100 HAT: ____ GS ANT: ____
6. MIN GS INCPT: 1500 GS ALT AT: GRAFE 1500 OM: ____ MM: ____ IM: ____
7. GS ANGLE: 3.00 TCH: 53.5 34:1 IS CLEAR
8. MSA FROM: RW33L 2800

MAG VAR: 11W EPOCH YEAR: 2000

MINIMUMS

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT | ALTERNATE: N A | STANDARD

CATEGORY =====>	A			B			C			D			E		
	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA
AUTHORIZATION REQUIRED															
RNP 0.30 DA	478	3000	349	478	3000	349	478	3000	349	478	3000	349			

NOTES:
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -15C (5F) OR ABOVE 54C (130F).
CHART NOTE: FOR INOPERATIVE MALSR, INCREASE RNP 0.30 ALL CATS VISIBILITY TO RVR 6000.
CHART NOTE: GPS REQUIRED.
CHART PLANVIEW NOTE AT MILRE : MAX 190 KIAS.
(SEE FORM 8260-10)

QUALITY 4 CHECKED

CITY AND STATE	ELEVATION: 146 THRE: 129 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:	SUP:
BALTIMORE, MD	BALTIMORE/WASHINGTON INTL THURGOOD MARSHALL	RNAV	RNAV (RNP) Z RWY 33L, AMDT 2	AMDT: 1A
				DATED 04/22/2011

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
[ ] YES [X] NO		**CONCURRENT**

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
[X]	[ ]	[X]	[X]	[X]	[X]	[X] **ZDC, PCT TRACON, BWI TOWER, AIRPORT MANAGER.**

FLIGHT CHECKED BY

NAME:	FIFO	DATE:

DEVELOPED BY

NAME:	FIFO	DATE:
HOWARD L. HAWKINS, JR.	**AJV-352**	**05/03/2012**

APPROVED BY

NAME:		FIFO	DATE:
DARRYEL ADAMS	**MANAGER**	**AJV-352**	

CHANGES:

1. REMOVED TERMINAL ROUTES FROM BILIT AND RAVNN.
2. REMOVED INTERMEDIATE STEPDOWN YARTO.
3. ADDED TERMINAL ROUTES FORM JETNA AND KEEYY AND ASSOCIATED NOTES.
4. SPLAT RELOCATED BRG/DIST TO GRAFE CHANGED TO 335.26/3.01NM, MIN ALTITUDE 2400.
5. GRAFE RELOCATED 264', DIST TO MAP/THLD CHANGED TO 4.14NM.
6. RNP 0.3 MINIMUMS CHANGED TO DA 478/HATH 349 VISIBILITY CHANGED TO RVR 3000.
7. PROCEDURE NA HIGH NOTE CHANGED TO 45C (130F).

REASONS:

1, 2, 3, 4. ATC REQUEST.
5. IAW 8260.54.
6. DIFFERENCE BETWEEN TDZE AND THLD ELEVATION/NEW VISIBILITY TABLE.
7. AFS 420 MEMO.

EFFECTIVE CONCURRENT WITH: KBWI ILS OR LOC RWY 33L, AMDT 11

TERMINAL ROUTES, (CONT.):

FROM	TO	COURSE AND DISTANCE	ALTITUDE
KEEYY (IF)	LABPI (TF) (FB) (RNP 1.00)	212.15 / 6.07	3100
LABPI	GRAFE (RF) (FB) (RNP 1.00)	(2.48 NM RADIUS CW CFFHN) / 5.33	1500
GRAFE (FAF)	RW33L (MAP) (TF) (FO)	335.24 / 4.14	
RW33L	BMORE (TF) (FO) (RNP 1.00)	335.21 / 14.10	2600

NOTES, (CONT.):
CHART PLANVIEW NOTE AT LABPI : MAX 210 KIAS.
CHART PLANVIEW NOTE: RADAR REQUIRED.
CHART PLANVIEW NOTE ADJACENT TO JETNA IAF: RF REQUIRED.
CHART PLANVIEW NOTE ADJACENT TO KEEYY: RF REQUIRED.
CHART PLANVIEW NOTE AT JETNA: (RNP 0.30).
CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS.

QUALITY CHECKED

CITY AND STATE	ELEVATION: 146 THRE: 129	FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:	SUP:
BALTIMORE, MD	AIRPORT NAME: BALTIMORE/WASHINGTON INTL THURGOOD MARSHALL	RNAV	RNAV (RNP) Z RWY 33L, AMDT 2	AMDT: 1A
				DATED: 04/22/2011

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	FIFO	DATE:
APPROVED BY		
NAME:	FIFO	DATE:

CHANGES:

REASONS:

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ARINC PACKET - 424-18 - RNAV (RNP)

```
                1         2         3         4         5         6         7         8         9         0         1         2         3
WP      12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   BMORE K60    C     N39211749W076502233                    W0111     NAR           BMORE
        SUSAEAENRT   CFFHN K60    W     N39075660W076340292                    W0112     NAR           CNF(CFFHN)
        SUSAEAENRT   CFFHP K60    W     N39050252W076391317                    W0111     NAR           CNF(CFFHP)
        SUSAEAENRT   GRAFE K60    C     N39062959W076363810                    W0111     NAR           GRAFE
        SUSAEAENRT   JANNS K60    C     N38593232W076301323                    W0112     NAR           JANNS
        SUSAEAENRT   JETNA K60    W     N38531575W076304204                    W0111     NAR           JETNA
        SUSAEAENRT   KEEYY K60    W     N39124316W076281562                    W0112     NAR           KEEYY
        SUSAEAENRT   LABPI K60    W     N39070290W076310458                    W0112     NAR           LABPI
        SUSAEAENRT   LIYCO K60    W     N38593318W076332688                    W0111     NAR           LIYCO
        SUSAEAENRT   MILRE K60    W     N39055070W076361233                    W0111     NAR           MILRE
        SUSAEAENRT   SPLAT K60    C     N39040288W076342259                    W0111     NAR           SPLAT

                1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAP KBWIK6ABWI     0     105YHN39103130W076400600W011000146         1800018000C    MNAR    BALTIMORE/WASHINGTON INTL THUR

                1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAP KBWIK6FH33LZ AJANNS 010JANNSK6EA0E  B    IF                                  + 04000     18000                A FS
        SUSAP KBWIK6FH33LZ AJANNS 020SPLATK6EA0E    010TF                                 + 02400                          A FS
        SUSAP KBWIK6FH33LZ AJANNS 030GRAFEK6EA0EE   010TF                                 + 01500                          A FS
        SUSAP KBWIK6FH33LZ AJETNA 010JETNAK6EA0E  A    IF                                  + 06000     18000                A FS
        SUSAP KBWIK6FH33LZ AJETNA 020LIYCOK6EA0E  B 031TF                                  + 03500                          A FS
        SUSAP KBWIK6FH33LZ AJETNA 030MILREK6EA0E    031TF                                 + 01700          190             A-FS
        SUSAP KBWIK6FH33LZ AJETNA 040GRAFEK6EA0EE  L031RF       0024803522    33520007    + 01500                CFFHP K6EAA FS
        SUSAP KBWIK6FH33LZ AKEEYY 010KEEYYK6EA0E  B    IF                                    04000     18000                A FS
        SUSAP KBWIK6FH33LZ AKEEYY 020LABPIK6EA0E    010TF                                 + 03100          210             A-FS
        SUSAP KBWIK6FH33LZ AKEEYY 030GRAFEK6EA0EE  R010RF       0024802122    33520053    + 01500                CFFHN K6EAA FS
        SUSAP KBWIK6FH33LZ H      020GRAFEK6EA1E  F    IF                                  + 01500     18000      RW33LBK6PGA FS
        SUSAP KBWIK6FH33LZ H      020GRAFEK6EA2W                                             A031                          FS
        SUSAP KBWIK6FH33LZ H      030RW33LK6PG0GY M 031TF                                    00183          -300           A FS
        SUSAP KBWIK6FH33LZ H      040BMOREK6EA0EYM  010TF                                 + 02600                          A FS
        SUSAP KBWIK6FH33LZ H      050BMOREK6EA0EE  R   HM                     15400040    + 02600                          A FS

                1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAP KBWIK6GRW33L   0095013352 N39095115W076394458+0100     +00067001290000541501IRUX1
```

CITY AND STATE	ELEVATION: 146 THRE: 129	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
BALTIMORE, MD	AIRPORT NAME: **BALTIMORE/WASHINGTON INTL THURGOOD MARSHALL**	**RNAV**	**RNAV (RNP) Z RWY 33L, AMDT 2**	AMDT: **1A**
				DATED: **04/22/2011**

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

```
                1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAP KBWIK6SRW33LK6PGB              0   18018002825                                                                   M
```

QUALITY

CITY AND STATE	ELEVATION: 146 THRE: 129	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
BALTIMORE, MD	AIRPORT NAME: BALTIMORE/WASHINGTON INTL THURGOOD MARSHALL	RNAV	RNAV (RNP) Z RWY 33L, AMDT 2	AMDT: 1A
				DATED: 04/22/2011

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

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ARINC SUMMARY - 424-18 - RNAV (RNP)

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	JANNS	JANNS	010		IF		FB				AA 04000	
	JANNS	SPLAT	020		TF		FB	1.0			AA 02400	
	JANNS	GRAFE	030		TF		FB	1.0			AA 01500	
	JETNA	JETNA	010	IAF	IF		FB				AA 06000	
	JETNA	LIYCO	020		TF		FB	0.3			AA 03500	
	JETNA	MILRE	030		TF		FB	0.3			AA 01700	AB 190
	JETNA	GRAFE	040		RF	L	FB	0.3		000.7	AA 01500	
	KEEYY	KEEYY	010		IF		FB				AT 04000	
	KEEYY	LABPI	020		TF		FB	1.0			AA 03100	AB 210
	KEEYY	GRAFE	030		RF	R	FB	1.0		005.3	AA 01500	
		GRAFE	020	FAF	IF		FB				AA 01500	
		RW33L	030	MAP	TF		FO	0.3			AT 00183	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	BMORE	040		TF		FO	1.0			AA 02600	
	BMORE	050		HM	R	FO		154.0(143.0T)	004.0	AA 02600	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	BMORE	N392117.49	W0765022.33	N3921.292	W07650.372
	CFFHN	N390756.60	W0763402.92	N3907.943	W07634.049
	CFFHP	N390502.52	W0763913.17	N3905.042	W07639.220
	GRAFE	N390629.59	W0763638.10	N3906.493	W07636.635
	JANNS	N385932.32	W0763013.23	N3859.539	W07630.221
	JETNA	N385315.75	W0763042.04	N3853.263	W07630.701
	KEEYY	N391243.16	W0762815.62	N3912.719	W07628.260
	LABPI	N390702.90	W0763104.58	N3907.048	W07631.076
	LIYCO	N385933.18	W0763326.88	N3859.553	W07633.448
	MILRE	N390550.70	W0763612.33	N3905.845	W07636.206
	SPLAT	N390402.88	W0763422.59	N3904.048	W07634.377
	RW33L	N390951.15	W0763944.58	N3909.853	W07639.743

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW33L	00129	54

ALL AFFECTED PROCEDURES REVIEWED? ☐ YES ☐ NO	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
INTERMEDIATE: RNP (1.00)	JANNS	SPLAT	1. TOWER (24-000334)	385907.00N/0763156.00W	385 (5E)	500	AC125 AT1390	2400
			2. TERRAIN	390124.00N/0763457.00W	168 (200)		AS1500	1700
INTERMEDIATE:	SPLAT	GRAFE	3. TOWER (24-000454)	390558.00N/0763721.00W	533 (5E)	500	AC125 DG342	1500
STEPDOWN RNP (1.00)			4. TERRAIN	390523.00N/0763749.00W	182 (200)		AS1000	1200
INITIAL RNP (0.30)	JETNA	LIYCO	5. TOWER (24-000540)	385849.00N/0763400.00W	706 (5E)	1000	AC125 AT1669	3500
			6. TERRAIN	385849.00N/0763400.00W	105 (100)		AS1500	1600
INTERMEDIATE: RNP (0.30)	LIYCO	MILRE	7. AAO	390124.00N/0760124.00W	368 (4E)	500	AC98	1000
			8. TERRAIN	390124.00N/0760124.00W	168 (200)		AS1500	1700
INTERMEDIATE:	MILRE	GRAFE	9. AAO	390557.00N/0763642.00W	348 (4E)	500	AC98 DG554	1500
STEPDOWN RNP (0.30)			10. TERRAIN	390624.00N/0763651.00W	148 (100)		AS1000	1100
INTERMEDIATE: RNP (1.00)	KEEYY	LABPI	11. STACK (24-000381)	391238.00N/0762921.00W	422 (5D)	500	AC50 DG2128	3100
			12. TERRAIN	390736.00N/0763130.00W	115 (100)		AS1500	1600
INTERMEDIATE:	LABPI	GRAFE	3. TOWER (24-000454)	390558.00N/0763721.00W	533 (5E)	500	AC125 DG342	1500
STEPDOWN RNP (1.00)			4. TERRAIN	390523.00N/0763749.00W	182 (200)		AS1000	1200
FINAL: RNP 0.30	GRAFE	RW33L				ASC	MA44	478/349
MISSED APPROACH:	DA	RW33L	13. TOWER (24-001040)	390931.29N/0763959.88W	250 (2B)	ASC	AC10	2600
(RNP 0.30 - 1.00)		(40:1)						
2. PROCEDURE TURN	NA							
3. MISSED APPROACH MAP:	RW33L	BMORE						
			14. TOWER (24-000450)	391716.23N/0764537.03W	1504 (1A)	1000	AC3	2600
ELEV:	169		15. TERRAIN	392254.00N/0764939.00W	640 (600)		AS1500	2100

4. CIRCLING AREA	DISTANCE	REQUIRED	ACTUAL
CATEGORY A	1.3 NM	350	
CATEGORY B	1.5 NM	450	
CATEGORY C	1.7 NM	450	
CATEGORY D	2.3 NM	550	
CATEGORY E	4.5 NM	550	

HT. ABV. ARPT.

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID: RW33L

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A
360-360	TWR (24-000503)	352/ 28.6	1599 (5E)	2800					

QUALITY CHECKED

CITY AND STATE	ELEVATION: 146 AIRPORT NAME:	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
BALTIMORE, MD	BALTIMORE/WASHINGTON INTL THURGOOD MARSHALL	RNAV	RNAV (RNP) Z RWY 33L, AMDT 2	AEA

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE	3. ALTIMETER SETTING
ZDC ARTCC PCT TRACON BWI TOWER	N W S / F A A / A / C — OTHER: ASOS	SOURCE: KBWI DISTANCE: HOURS REMOTE OPERATION:
SATISFACTORY ON:		
X V H F X U H F H F	LOCATION: KBWI	ADJUSTMENT: 0

4. MONITOR STATUS	PRIMARY NAVAID:	
	MONITOR POINT:	
	HRS OPTN:	CAT 1
		CAT 3

5. APPROACH & RUNWAY LIGHTING		
	X	ALSF-2 10
		(S) SALS
	X	MALSR 15R, 33L, 28, 33R
	X	HIRL 15R, 33L, 10, 28, 22, 04, 15L, 33R
		MIRL
	X	REIL 22, 15L, 33R
	X	TDZ 33L, 10
	X	C/L 15R, 33L, 10, 28
	X	OTHER (SPECIFY) PAPI-4L 15L, 33R VASI-4L 33L, 28, 22, 04

6. RUNWAY MARKINGS	BASIC	
	ALL WEATHER	PIR-G 15R, 33L, 10, 28, 15L, 33R
	INSTRUMENT	NPI-G 22, 04
7. RUNWAY VISUAL RANGE	APPROACH	15R, 33L, 10, 28, 15L, 33R
	MIDFIELD	33L, 10, 28
	ROLL OUT	15R, 33L, 10, 28

8. GLIDE PATH	GP ANGLE: 3.00	ELEV RWY THRESHOLD: 129.2
	DISTANCE FROM RWY:	ELEV GP ANTENNA:
		THRESHOLD CROSSING HEIGHT: 53.5

9. FINAL APPROACH COURSE AIMING	X	RUNWAY THRESHOLD	FT. FROM THRESHOLD
	X	ON CENTERLINE	FT. FROM CENTERLINE

10. WAIVERS: NONE

PART D - PREPARED BY: HOWARD L. HAWKINS, JR.	DATE: 05/03/2012
TITLE: AERONAUTICAL INFORMATION SPECIALIST	OFFICE: AJV-352

PART C - REMARKS:

MAX SPEED LABPI TO GRAFE - 210 KIAS.

MAX SPEED MILRE TO GRAFE - 190 KIAS.

ACTUAL HIGH TEMP: 54C (130F)

ISA DEVIATION USED: -30C (-22F)

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

SECONDARY WEATHER SOURCE NOT REQUIRED DUE TO 24 HOUR TOWER WITH ALTIMETER READING EQUIPMENT AND NATIONAL WEATHER SERVICE (24HRS).

VGSI DATA: 3.00/55.

SEE ATTACHED AIRSPACE LETTER.

RF TURN RADIUS/BANK ANGLE COMPUTATIONS:

SEGMENT: LABPI- GRAFE, ALT: 3100, KIAS 210.
KTAS: 221.90, HAA: 3854, VKTW: 53.2, TR: 2.48NM, BA: 24.50
RF CENTER POINT: CFFHN 390756.60N / 0763402.92W

SEGMENT: MILRE - GRAFE. ALT 1700, KIAS 190.
KTAS: 196.39, HAA: 1554 VKTW 30, TR 2.48NM, BA: 16.78
RF CENTER POINT: CFFHP 390502.52N / 0763913.17W.

AFS 420 MEMO USED FOR BANK ANGLE CACULATIONS.

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: CFFHN **STATE:** MD **COUNTRY:** US

LATITUDE/LONGITUDE: 390756.60N/0763402.92W **TYPE:** CNF

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 33L			KBWI	BALTIMORE	MD (US)

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/20/2012

DEVELOPED BY: **DATE:** 05/01/2012 **OFFICE:** AJV-352 **NAME:** HOWARD HAWKINS

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: PCT TRACON, KBWI TWR
OTHER:

QUALITY CHECKED 4

RADIO FIX AND HOLDING DATA RECORD

NAME: CFFHP **STATE:** MD **COUNTRY:** US

LATITUDE/LONGITUDE: 390502.52N/0763913.17W **TYPE:** CNF

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 33L			KBWI	BALTIMORE	MD (US)

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/20/2012

DEVELOPED BY: **DATE:** 05/01/2012 **OFFICE:** AJV-352 **NAME:** HOWARD HAWKINS

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: PCT TRACON, KBWI TWR
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: GRAFE **STATE:** MD **COUNTRY:** US

LATITUDE/LONGITUDE: 390629.59N/0763638.10W **TYPE:** WP, RADAR, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	BALTIMORE	I-RUX	LOC		155.21	144.21		5.77	35067	1500	4600
2	BALTIMORE	BAL	VORTAC	L			4.45	4.45		4000	4600

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
FAC 1 USED TO ESTABLISH COORDINATES.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 33L	1, 2		KBWI	BALTIMORE	MD (US)
IAP	RNAV (GPS) Y RWY 33L			KBWI	BALTIMORE	MD (US)
IAP	RNAV (RNP) Z RWY 33L			KBWI	BALTIMORE	MD (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 5 **DATE OF REVISION:** 11/15/2012

REASON FOR REVISION:
FIX RELOCATED 284'
FAC 1 DME/DIST FROM FAC CHANGED TO 5.77/35067FT.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 04/24/2012 **OFFICE:** AJV-352 **NAME:** HOWARD HAWKINS

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: PCT TRACON, BWI TWR
OTHER:

QUALITY 4 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: JANNS **STATE:** MD **COUNTRY:** US

LATITUDE/LONGITUDE: 385932.32N/0763013.23W **TYPE:** WP, RADAR, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	BALTIMORE	I-RUX	LOC		155.21	144.21		14.33		2500	4600
2	BALTIMORE	BAL	VORTAC	L			13.00	13.00		2000	4600

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	SE		WP	155.31	335.31	L		4	2500	6000	5	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (24-000913)	390036.77N/0763631.88W	1049	1A

REASON FOR NONSTANDARD HOLDING:
PAT 1 REDUCE IMPACT ON HOLDING AT BOAST INT.

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
FAC 1 USED TO ESTABLISH COORDINATES.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 33L	1, 2		KBWI	BALTIMORE	MD (US)
IAP	RNAV (GPS) Y RWY 15R		1	KBWI	BALTIMORE	MD (US)
IAP	RNAV (GPS) Y RWY 33L			KBWI	BALTIMORE	MD (US)
IAP	RNAV (RNP) Z RWY 15R		1	KBWI	BALTIMORE	MD (US)
IAP	RNAV (RNP) Z RWY 33L			KBWI	BALTIMORE	MD (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 10 **DATE OF REVISION:** 11/15/2012

REASON FOR REVISION:
FAC 1 MAG/TRUE BRG CHANGED TO 155.21/144.21.
DIST TO FAC CHANGED TO 14.33.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 04/24/2012 **OFFICE:** AJV-352 **NAME:** HOWARD HAWKINS

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: PCT TRACON, BWI ATCT
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: JETNA **STATE:** MD **COUNTRY:** US

LATITUDE/LONGITUDE: 385315.75N/0763042.04W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 33L			KBWI	BALTIMORE	MD (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/20/2012

DEVELOPED BY: **DATE:** 05/01/2012 **OFFICE:** AJV-352 **NAME:** HOWARD HAWKINS

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: PCT TRACON, KBWI TWR
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: KEEYY **STATE:** MD **COUNTRY:** US

LATITUDE/LONGITUDE: 391243.16N/0762815.62W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 33L			KBWI	BALTIMORE	MD (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 05/01/2012 **OFFICE:** AJV-352 **NAME:** HOWARD HAWKINS

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: PCT TRACON, KBWI TWR
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: LABPI **STATE:** MD **COUNTRY:** US

LATITUDE/LONGITUDE: 390702.90N/0763104.58W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 33L			KBWI	BALTIMORE	MD (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 06/15/2012 **OFFICE:** AJV-352 **NAME:** HOWARD HAWKINS

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: PCT TRACON, BWI TWR
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: LIYCO **STATE:** MD **COUNTRY:** US

LATITUDE/LONGITUDE: 385933.18N/0763326.88W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 33L			KBWI	BALTIMORE	MD (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 06/14/2012 **OFFICE:** AJV-352 **NAME:** HOWARD HAWKINS

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: PCT TRACON, BWI TWR
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: MILRE **STATE:** MD **COUNTRY:** US

LATITUDE/LONGITUDE: 390550.70N/0763612.33W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 33L			KBWI	BALTIMORE	MD (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/20/2012

DEVELOPED BY: **DATE:** 05/04/2012 **OFFICE:** AJV-352 **NAME:** HOWARD HAWKINS

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: PCT TRACON, BAL TWR
OTHER:

QUALITY 4 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SPLAT **STATE:** MD **COUNTRY:** US

LATITUDE/LONGITUDE: 390402.88N/0763422.59W **TYPE:** WP, RADAR, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	BALTIMORE	I-RUX	LOC		155.21	144.21		8.78		2400	4600
2	BALTIMORE	BAL	VORTAC	L			7.45	7.45		2400	4600

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
FAC 1 USED TO ESTABLISH COORDINATES.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 33L	1, 2		KBWI	BALTIMORE	MD (US)
IAP	RNAV (GPS) Y RWY 33L			KBWI	BALTIMORE	MD (US)
IAP	RNAV (RNP) Z RWY 33L.			KBWI	BALTIMORE	MD (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 8 **DATE OF REVISION:** 11/15/2012

REASON FOR REVISION:
FIX RELOCATED 936 FT.
FAC 1 & 2 ADDED.
ADDED RADAR/DME TO FIX TYPE.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 04/24/2012 **OFFICE:** AJV-352 **NAME:** HOWARD HAWKINS

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: PCT TRACON, BWI ATCT
OTHER:

QUALITY CHECKED

INFO ONLY

RADIO FIX AND HOLDING DATA RECORD

NAME: BMORE **STATE:** MD **COUNTRY:** US

LATITUDE/LONGITUDE: 392117.49N/0765022.33W **TYPE:** WP, RADAR, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	BALTIMORE	I-FND	LOC		335.20	324.20		14.39		2500	4600
2	BALTIMORE	BAL	VORTAC	L	334.04	323.04	13.80	13.80		2500	17500

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	NW	BAL	VORTAC	334.04	154.04	R	1		3000	6000	4	5
2	NW		WP	334.04	154.04	R		4	2600	6000	5	6
3	NW		WP	335.10	155.10	R		4	3000	6000	5	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (24-000339)	392224.00N/0765356.00W	1041	5E
2	200	TOWER (24-000339)	392224.00N/0765356.00W	1041	5E
3	200	TOWER (24-000339)	392224.00N/0765356.00W	1041	5E

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 33L	2	1	KBWI	BALTIMORE	MD (US)
IAP	ILS RWY 15R	1, 2		KBWI	BALTIMORE	MD (US)
IAP	RNAV (GPS) Y RWY 15R			KBWI	BALTIMORE	MD (US)
IAP	RNAV (GPS) Y RWY 33L		3	KBWI	BALTIMORE	MD (US)
IAP	RNAV (RNP) Z RWY 15R			KBWI	BALTIMORE	MD (US)
IAP	RNAV (RNP) Z RWY 33L		2	KBWI	BALTIMORE	MD (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 5 **DATE OF REVISION:** 12/16/2010

REASON FOR REVISION:
DELETED FACILITY 3 (KBWI R15R) FROM FIX MAKE-UP.
ADDED DISTANCE FROM FACILITY FOR FIX MAKE-UP FACILITIES.
UPDATED HOLDING RESTRICTIONS AND REMARKS NOTES.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 06/16/2010 **OFFICE:** AVN-110 **NAME:** FRANK JACKSON

APPROVED BY: **DATE:** 10/22/2010 **OFFICE:** AVN-110 **NAME:** GEORGE DAVIS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: PCT TRACON, BWI ATCT
OTHER:

QUALITY A CHECKED

TERMINAL AIRSPACE DATA REQUIREMENTS

CITY: **BALTIMORE** STATE: **MD**

AIRPORT NAME: **BALTIMORE/WASHINGTON INTL THURGOOD MARSHALL** ID: **KBWI**

PROCEDURE: **RNAV (RNP) Z RWY 33L** AMDT: **2**

DOCKET#: **NOT REQUIRED**
(96-AXX-X/Required/Not Required)

ALL DIST TO 1/100 NM; ELEV TO NEAREST FT; COORD TO 1/100 SEC; DEG TO 1/100 DG.

1. Distance from (Enter THLD, FAF, ARP, FACILITY, as appropriate)	**THLD**	to 1000' point	**3.16**
2. Width of (Enter appropriate segment, final, intermediate, etc.)	**FINAL**	segment at 1000' point	**1.20**
3. True Course of	**FINAL**	segment containing 1000' point	**324.24**
4. High Terrain in	**FINAL**	segment containing 1000' point	**197**
5. Distance from (If 1500' point in PT maneuvering area or holding pattern note in remarks)	**FAF**	to 1500' point	**8.56**
6. Width of	**INTERMEDIATE**	segment at 1500' point	**4.00**
7. True Course of	**INTERMEDIATE**	segment containing 1500' point	**335.31**
8. High Terrain in	**INTERMEDIATE**	segment containing 1500' point	**168**

9. Threshold Coordinates (if straight-in) ... **390951.15N** / **0763944.58W**

10. ARP Coordinates ..... **391031.30N** / **0764006.00W**

11. Runway Approach End and distance furthest from ARP ..... RWY **10**

Distance **0.90** NM

12. FAF Coordinates ..... **391046.52N** / **0764630.51W**

REMARKS: Approach/Drawing attached.

JANNS INTERMEDIATE: 1500' POINT OCCURS AT JANNS.

TERMINAL AIRSPACE DATA REQUIREMENTS

CITY: **BALTIMORE** STATE: **MD**

AIRPORT NAME: **BALTIMORE/WASHINGTON INTL THURGOOD MARSHALL** ID: **KBWI**

PROCEDURE: **RNAV (RNP) Z RWY 33L** AMDT: **2**

DOCKET#: **NOT REQUIRED**
(96-AXX-X/Required/Not Required)

ALL DIST TO 1/100 NM; ELEV TO NEAREST FT; COORD TO 1/100 SEC; DEG TO 1/100 DG.

1. Distance from (Enter THLD, FAF, ARP, FACILITY, as appropriate)	**THLD**	to 1000' point	**3.16**
2. Width of (Enter appropriate segment, final, intermediate, etc.)	**FINAL**	segment at 1000' point	**1.20**
3. True Course of	**FINAL**	segment containing 1000' point	**324.24**
4. High Terrain in	**FINAL**	segment containing 1000' point	**197**
5. Distance from (If 1500' point in PT maneuvering area or holding pattern note in remarks)	**FAF**	to 1500' point	**0.73**
6. Width of	**INTERMEDIATE**	segment at 1500' point	**1.20**
7. True Course of	**INTERMEDIATE**	segment containing 1500' point	**##**
8. High Terrain in	**INTERMEDIATE**	segment containing 1500' point	**168**

9. Threshold Coordinates (if straight-in) ... **390951.15N** / **0763944.58W**

10. ARP Coordinates ..... **391031.30N** / **0764006.00W**

11. Runway Approach End and distance furthest from ARP ..... RWY **10**

Distance **0.90** NM

12. FAF Coordinates ..... **391046.52N** / **0764630.51W**

REMARKS: Approach/Drawing attached.

JETNA INTERMEDIATE: 1500' POINT OCCURS AT MILRE RE SEGMENT 2.48 NM RADIUS SOUTHWEST

FROM 391411.27N / 0765310.99W

TERMINAL AIRSPACE DATA REQUIREMENTS

CITY: **BALTIMORE** STATE: **MD**

AIRPORT NAME: **BALTIMORE/WASHINGTON INTL THURGOOD MARSHALL** ID: **KBWI**

PROCEDURE: **RNAV (RNP) Z RWY 33L** AMDT: **2**

DOCKET#: **NOT REQUIRED**
(96-AXX-X/Required/Not Required)

ALL DIST TO 1/100 NM; ELEV TO NEAREST FT; COORD TO 1/100 SEC; DEG TO 1/100 DG.

1. Distance from (Enter THLD, FAF, ARP, FACILITY, as appropriate)	**THLD**	to 1000' point	**2.84**
2. Width of (Enter appropriate segment, final, intermediate, etc.)	**FINAL**	segment at 1000' point	**1.20**
3. True Course of	**FINAL**	segment containing 1000' point	**201.15**
4. High Terrain in	**FINAL**	segment containing 1000' point	**115**
5. Distance from (If 1500' point in PT maneuvering area or holding pattern note in remarks)	**FAF**	to 1500' point	**11.40**
6. Width of	**INTERMEDIATE**	segment at 1500' point	**4.00**
7. True Course of	**INTERMEDIATE**	segment containing 1500' point	**335.31**
8. High Terrain in	**INTERMEDIATE**	segment containing 1500' point	**168**

9. Threshold Coordinates (if straight-in) ... **390951.15N** / **0763944.58W**

10. ARP Coordinates ..... **391031.30N** / **0764006.00W**

11. Runway Approach End and distance furthest from ARP ..... RWY **10**

Distance **0.90** NM

12. FAF Coordinates ..... **391046.52N** / **0764630.51W**

REMARKS: Approach/Drawing attached.

KEEEYY INTERMEDIATE: 1500' POINT OCCURS AT KEEYY.

DO NOT REMOVE FROM PACKAGE

SEGMENTS GRAFE - SPLAT GRAFE - LABPI

PFAF Calculations

Min Intermediate Segment Alt (a):	
LTP MSL Elevation (b):	
TCH:	
Glidepath Angle (Θ):	
Distance from LTP to PFAF (D):	0.00
	0.00 NM
LTP/FTP Latitude:	
LTP/FTP Longitude:	
True RWY Bearing/True Course:	
PFAF Latitude:	000° 00' 00.00"
PFAF Longitude:	000° 00' 00.00"

Latitude/Longitude valid for straight segment only

VEB OCS Origin & Slope

Intermediate Segment Altitude:	1500
LTP Elevation:	129.2
Glidepath Angle:	3
TCH:	53.5
RNP Value:	0.30
Δ ISA:	-29.708

Straight In Segment

(*Wingspan =<262*) **LTP to Origin:**	3,829.90'
(*Wingspan =<136*) **LTP to Origin:**	3,613.31'
OCS Slope Ratio:	21.66 : 1

RF Turn Segment | Bank angle:	
(*Wingspan =<262*) **LTP to Origin:**	NA
(*Wingspan =<136*) **LTP to Origin:**	NA
OCS Slope Ratio:	NA

Version 20

VEB Temperature Limits

Glidepath Angle:		
Max Glidepath Angle:		
PFAF Elevation:		
LTP Elevation:		
ACT:		
Min Glidepath Angle	#DIV/0!	
NA Below	#DIV/0!	#DIV/0!
NA Above	#DIV/0!	#DIV/0!

Intermediate Segment VEB ROC

Glidepath Angle	3.00°
LTP MSL Elevation	129.20
TCH (ft)	53.50
OCS Slope	21.66
OCS Origin Distance (ft) *(measured along-track from LTP)*	3,829.90
Obstacle Distance (ft) *(measured along-track from LTP)*	25,751.95
VEB ROC *(at obstacle)*	**395**
Glidepath MSL altitude at Obstacle	1,548.19
OCS MSL altitude at Obstacle	1,152.81

DO NOT REMOVE FROM PACKAGE

SEGMENTS GRAFE - MILRE

PFAF Calculations

Min Intermediate Segment Alt (a):	
LTP MSL Elevation (b):	
TCH:	
Glidepath Angle (Θ):	
Distance from LTP to PFAF (D):	0.00
	0.00 NM
LTP/FTP Latitude:	
LTP/FTP Longitude:	
True RWY Bearing/True Course:	
PFAF Latitude:	000° 00' 00.00"
PFAF Longitude:	000° 00' 00.00"

Latitude/Longitude valid for straight segment only

VEB OCS Origin & Slope

Intermediate Segment Altitude:	1500
LTP Elevation:	129.2
Glidepath Angle:	3
TCH:	53.5
RNP Value:	0.30
Δ ISA:	-29.708

Straight In Segment

(*Wingspan =<262*) **LTP to Origin:**	3,829.90'
(*Wingspan =<136*) **LTP to Origin:**	3,613.31'
OCS Slope Ratio:	21.66 : 1

RF Turn Segment | Bank angle:

(*Wingspan =<262*) **LTP to Origin:**	NA
(*Wingspan =<136*) **LTP to Origin:**	NA
OCS Slope Ratio:	NA

Version 2.0

VEB Temperature Limits

Glidepath Angle:		
Max Glidepath Angle:		
PFAF Elevation:		
LTP Elevation:		
ACT:		
Min Glidepath Angle	#DIV/0!	
NA Below	#DIV/0!	#DIV/0!
NA Above	#DIV/0!	#DIV/0!

Intermediate Segment VEB ROC

Glidepath Angle	3.00
LTP MSL Elevation	129.20
TCH (ft)	53.50
OCS Slope	21.66
OCS Origin Distance (ft) *(measured along-track from LTP)*	3,829.90
Obstacle Distance (ft) *(measured along-track from LTP)*	28,018.64
VEB ROC *(at obstacle)*	**410**
Glidepath MSL altitude at Obstacle	1,669.91
OCS MSL altitude at Obstacle	1,259.97