US DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

RNAV - STANDARD INSTRUMENT APPROACH PROCEDURE TITLE 14 CFR PART 97.33

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.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
TACKS	OJAWU (FB)	091.30 / 21.09	3000
BLARE	OJAWU (FB)	126.66 / 8.47	3000
BRIEF	WOVAL (FB)	237.61 / 10.98	3000
LEEAH	UFATU (FB)	284.46 / 10.00	3000
OJAWU (IAF)	SOPHY (NOPT) (FB)	175.72 / 5.01	3000
WOVAL (IAF)	SOPHY (NOPT) (FB)	237.50 / 4.00	3000
UFATU (IAF)	SOPHY (NOPT) (FB)	284.32 / 8.86	3000
(SEE FORM 8260-10)			

MISSED APPROACH

LP: RW27
LNAV: RW27

CLIMB TO 2000 DIRECT DURHM AND HOLD.

1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. HOLD E SOPHY, RT, 265.51 INBOUND, 3000 FT. IN LIEU OF PT (IAF)
3. FAC: 265.43 FAF: OZIGY DIST FAF TO MAP: 5.30 THLD: 5.30
4. MIN. ALT: SOPHY 3000, OZIGY 2100, JUNVI/2.50 NM TO RW27 1020
5. DIST TO THLD FROM OM: ____ MM: ____ IM: ____ 150 HAT: ____ 100 HAT: ____ GS ANT: ____
6. MIN GS INCPT: ____ GS ALT AT: ____ OM: ____ MM: ____ IM: ____
7. GS ANGLE: ____ TCH: 34:1 IS NOT CLEAR
8. MSA FROM: RW27 1700

ADDITIONAL FLIGHT DATA:
HOLD W, RT, 085.23 INBOUND.
CHART FAS OBST: 161 COMM TWR 391334N/0753427W
CHART FAS OBST: 192 WATER TWR 391347N/0753525W
WAAS CHANNEL # 48829
REFERENCE PATH ID: W27A
OZIGY TO RW27: 3.60/30.
LTP HAE: -21 M

MAG VAR: 12W EPOCH YEAR: 1995

MINIMUMS

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT

ALTERNATE: N A X

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
LP MDA	440	1	397	440	1	397	440	1 1/8	397		NA				
LNAV MDA	480	1	437	480	1	437	480	1 1/4	437		NA				
CIRCLING	580	1	525	580	1	525	820	2 1/4	765		NA				

NOTES:
CHART NOTE: USE DOVER AFB ALTIMETER SETTING.
CHART NOTE: DME/DME RNP-0.3 NA.
CHART NOTE: VISIBILITY REDUCTION BY HELICOPTERS NA.
CHART PLANVIEW NOTE AT OJAWU : MAX 210 KIAS.
(SEE FORM 8260-10)

QUALITY CHECKED

CITY AND STATE	ELEVATION: 55 THRE: 43 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:	SUP:
DOVER/CHESWOLD, DE	DELAWARE AIRPARK	RNAV	RNAV (GPS) RWY 27, AMDT 1	AMDT: ORIG
				DATED 06/07/2007

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] ZDC, DOV APP CON, 33N AMGR.

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME: DAVID SAUER	FIFO AJV-352	DATE: 01/20/2012
APPROVED BY		
NAME: DARRYEL ADAMS MANAGER	FIFO AJV-352	DATE:

CHANGES:

1. ADDED LP MINIMUMS.
2. RAISED LNAV MDA/HAT FROM 440/388 TO 480/437 HATH.
3. RAISED LNAV CAT C VISIBILITY FROM 1 TO 1 1/4.
4. RAISED ALL CIRCLING CATS HAA BY 1 FOOT.
5. CHANGED VDA FROM 3.67 TO 3.60.
6. MOVED JUNVI FROM 2.6 TO 2.5NM TO RW27 AND LOWERED ALTITUDE FROM 1080 TO 1020.
7. REDUCED DISTANCE FROM OZIGY TO SOPHY FROM 6.2 TO 6.1NM.
8. CHANGED MISSED APPROACH FIX FROM ZIZZO TO DURHM.
9. ADDED PLANVIEW NOTE AT OJAWU: MAX 210 KIAS.
10. CHANGED FEEDER FROM BRIEF FROM OJAWU TO NEW FIX WOVAL IAF THEN DIRECT SOPHY.
11. ADDED TO PLANVIEW PROCEDURE NA NOTE AT LEEAH TO INCLUDE V1 NORTHEAST BOUND.
12. ADDED CHART NOTE: PROCEDURE NA AT NIGHT.
13. ADDED HOLDING PATTERN AT SOPHY.

REASONS:

1. FPT REQUEST.
2. NEW CONTROLLING OBSTACLE, HATh IAW 8260.3B VOL 1, CHAP 3.
3. LNAV MDA RAISED 40 FEET.
4. NEW AIRPORT SURVEY.
5. TO ALLOW POSSIBILITY OF ADDING LPV/APV MINIMUMS AND RETAIN CAT C OPERATIONS IAW 8260.3B VOL 1, TABLE 3-4 WITHOUT M AJOR REDESIGN.
6. VDA CHANGED AND PFAF MOVED IAW 8260.54A FORMULA 2-16B.
7. PFAF MOVED IAW 8260.54A FORMULA 2-16B.
8. FPT REQUEST.
9. FPT REQUEST TO ALLOW TIGHT TURN FROM TACKS-OJAWU-SOPHY.
10. IAF OJAWU DID NOT WORK IAW 8260.54A, APPROVED BY DOV APP CON AND ACY APP CON.
11. TURN GREATER THAN 90 DEGREES.
12. UNLIT 20:1 VISUAL PENETRATIONS EXIST, NO VGSI TO MITIGATE.
13. ATC REQUEST.

SEE 8260-10

QUALITY CHECK

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TERMINAL ROUTES, (CONT.):

FROM	TO	COURSE AND DISTANCE	ALTITUDE
SOPHY (IF)	OZIGY (FB)	265.51 / 6.10	2100
OZIGY (FAF)	JUNVI/2.50 NM TO RW27 (FB)	265.43 / 2.80	
JUNVI/2.50 NM TO RW27	RW27 (MAP) (FO)	265.39 / 2.50	
RW27 (MAP)	440 MSL	265.39	
440 MSL	DURHM (FO)		2000

NOTES, (CONT.):
CHART NOTE: PROCEDURE NA AT NIGHT.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT TACKS ON V123-312 SOUTHWEST BOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT BLARE ON V29 NORTHBOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT BRIEF ON V16 NORTHEAST BOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT LEEAH ON V268 EASTBOUND, V229 NORTHEAST BOUND, AND V1 NORTHEAST BOUND.

QUALITY CHECKED

CITY AND STATE	ELEVATION: 55 THRE: 43 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:	SUP:
DOVER/CHESWOLD, DE	DELAWARE AIRPARK	RNAV	RNAV (GPS) RWY 27, AMDT 1	AMDT: ORIG
				DATED: 06/07/2007

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

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:

REASONS CONT.
PDF EDITS:
1. 8260-3 LINE 7: DELETED "3.60" NEXT TO GS ANGLE, AND "30.0" NEXT TO TCH.
2. 8260-10, TERMINAL ROUTES: ADDED "(FAF)" NEXT TO OZIGY, DELETED SDF ALTITUDE "1020", MISSED APPROACH "RW27 /", AND CHANGED ALTITUDE 440 TO 2000.
3. 8260-10, ARINC SEGMENT: IN ROW 020BLARE ADDED COLUMN 100-102 "210", AND "-" IN COLUMN 108.
4. 8260-10, ARINC SEGMENT: IN ROW 020TACKS ADDED COLUMN 100-102 "210", AND "-" IN COLUMN 108.
5. 8260-10, ARINC SEGMENT: IN ROW HM DELETED COLUMN 45-47 "020".
6. 8260-10, FLIGHT INSPECTION SUMMARY: ADDED "SPEED" COLUMN AFTER "ALTITUDE" AND ADDED "AB210" NEXT TO OJAWU 020 (TWICE).
7. 8260-10, FLIGHT INSPECTION SUMMARY: NEXT TO HM DELETED RNP "2.0".
8. 8260-9, BACK PAGE BLOCK 8: DELETED "3.60" NEXT TO GP ANGLE, "30.0" THRESHOLD CROSSING HEIGHT, AND "42.8" ELEV RWY THRESHOLD.
9. 8260-9, BACK PAGE, BLOCK 2: CHANGED FSS TO ASOS.

QUALITY CHECKED

EFFECTIVE CONCURRENT WITH: K33N RNAV (GPS) RWY 9, AMDT 2.

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FAS DATA BLOCK INFORMATION

DATA FIELD	DATA
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	33N
RUNWAY	RW27
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W27A
LTP/FTP LATITUDE	391310.0890N
LTP/FTP LONGITUDE	0753530.4120W
LTP/FTP ELLIPSOIDAL HEIGHT	-00210
FPAP LATITUDE	391244.5400N
FPAP LONGITUDE	0753720.2500W
THRESHOLD CROSSING HEIGHT (TCH)	00030.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.60
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1768
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	E80C6784

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K6
LTP ORTHOMETRIC HEIGHT	+00130
FPAP ORTHOMETRIC HEIGHT	+00130

QUALITY CHECKED 4

CITY AND STATE	ELEVATION: 55 THRE: 43 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:	SUP:
DOVER/CHESWOLD, DE	DELAWARE AIRPARK	RNAV	RNAV (GPS) RWY 27, AMDT 1	AMDT: ORIG
				DATED: 06/07/2007

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

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:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.33**

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ARINC PACKET - 424-18 - RNAV (GPS)

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        --------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   BLARE K60    C   L N39244650W075331010                      W0118     NAR           BLARE
        SUSAEAENRT   BRIEF K60    R   L N39265521W075073969                      W0121     NAR           BRIEF
        SUSAEAENRT   DURHM K60    W     N39102208W075472981                      W0116     NAR           DURHM
        SUSAEAENRT   JUNVI K60    W     N39135304W075322545                      W0118     NAR           JUNVI
        SUSAEAENRT   LEEAH K60    C   L N39153927W074571101                      W0122     NAR           LEEAH
        SUSAEAENRT   OJAWU K60    W     N39211399W075231493                      W0119     NAR           OJAWU
        SUSAEAENRT   OZIGY K60    W     N39144110W075285802                      W0118     NAR           OZIGY
        SUSAEAENRT   SOPHY K60    W     N39162529W075212648                      W0119     NAR           SOPHY
        SUSAEAENRT   TACKS K60    C   L N39172199W075495767                      W0116     NAR           TACKS
        SUSAEAENRT   UFATU K60    W     N39160431W075100249                      W0120     NAR           UFATU
        SUSAEAENRT   WOVAL K60    W     N39191372W075174605                      W0120     NAR           WOVAL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        --------------------------------------------------------------------------------------------------------------------------------
        SUSAP 33N K6A33N     0     035YHN39130600W075354800W012000055         1800018000C    MNAR    DELAWARE AIRPARK

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        --------------------------------------------------------------------------------------------------------------------------------
        SUSAP 33N K6FR27   ABLARE 010BLAREK6EA0E       IF                                          18000                 A JS
        SUSAP 33N K6FR27   ABLARE 020OJAWUK6EA0E  A 020TF                    12670085    + 03000          210              A JS
        SUSAP 33N K6FR27   ABLARE 030SOPHYK6EA0EE B 010TF                    17570050    + 03000                           A JS
        SUSAP 33N K6FR27   ABRIEF 010BRIEFK6EA0E       IF                                          18000                 A JS
        SUSAP 33N K6FR27   ABRIEF 020WOVALK6EA0E  A 020TF                    23760110    + 03000                           A JS
        SUSAP 33N K6FR27   ABRIEF 030SOPHYK6EA0EE B 010TF                    23750040    + 03000                           A JS
        SUSAP 33N K6FR27   ALEEAH 010LEEAHK6EA0E       IF                                          18000                 A JS
        SUSAP 33N K6FR27   ALEEAH 020UFATUK6EA0E  A 020TF                    28450100    + 03000                           A JS
        SUSAP 33N K6FR27   ALEEAH 030SOPHYK6EA0EE B 010TF                    28430089    + 03000                           A JS
        SUSAP 33N K6FR27   ASOPHY 010SOPHYK6EA0EE AR   HF                    26550040    + 03000     18000                 A JS
        SUSAP 33N K6FR27   ATACKS 010TACKSK6EA0E       IF                                          18000                 A JS
        SUSAP 33N K6FR27   ATACKS 020OJAWUK6EA0E  A 020TF                    09130211    + 03000          210              A JS
        SUSAP 33N K6FR27   ATACKS 030SOPHYK6EA0EE B 010TF                    17570050    + 03000                           A JS
        SUSAP 33N K6FR27   R      010SOPHYK6EA0E  I    IF                                + 03000     18000                 A JS
        SUSAP 33N K6FR27   R      020OZIGYK6EA1E  F 051TF                    26550061    + 02100                RW27  K6PGA JS
        SUSAP 33N K6FR27   R      020OZIGYK6EA2WALP        N          ALNAV                                                JS
        SUSAP 33N K6FR27   R      021JUNVIK6EA0E S  031TF                    26540028    V 0102001029        -360          A JS
        SUSAP 33N K6FR27   R      030RW27 K6PG0GY M 031TF                    26540025      00073             -360          A JS
        SUSAP 33N K6FR27   R      040         0  M     CA                    2654        + 00440                           A JS
        SUSAP 33N K6FR27   R      050DURHMK6EA0EY      DF                                + 02000                           A JS
        SUSAP 33N K6FR27   R      060DURHMK6EA0EE  R   HM                    08520040    + 02000                           A JS
```

QUALITY CHECKED 4

CITY AND STATE	ELEVATION: 55 THRE: 43	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
DOVER/CHESWOLD, DE	AIRPORT NAME: **DELAWARE AIRPARK**	**RNAV**	**RNAV (GPS) RWY 27, AMDT 1**	AMDT: **ORIG**
				DATED: **06/07/2007**

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

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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```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        --------------------------------------------------------------------------------------------------------------------------------
        SUSAP 33N K6GRW27    0035822654 N39131009W075353041+0300    -002100004303493006 0R

                 1         2         3         4         5         6         7         8         9         0         1         2         3
PP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        --------------------------------------------------------------------------------------------------------------------------------
        SUSAP 33N K6PR27   RW27 001 0000W27A0N3913100890W07535304120-002100360N3912445400W07537202500106751768000300F400500E80C6784
        SUSAP 33N K6PR27   RW27 002E      +00130+00130LP        48829

                 1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        --------------------------------------------------------------------------------------------------------------------------------
        SUSAP 33N K6SRW27 K6PG               0   18018001725                                                                          M
```

QUALITY 4 CHECKED

CITY AND STATE	ELEVATION: 55 THRE: 43	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
DOVER/CHESWOLD, DE	AIRPORT NAME: DELAWARE AIRPARK	RNAV	RNAV (GPS) RWY 27, AMDT 1	AMDT: ORIG
				DATED: 06/07/2007

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

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:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.33**

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ARINC SUMMARY - 424-18 - RNAV (GPS)

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	BLARE	BLARE	010		IF		FB					
	BLARE	OJAWU	020	IAF	TF		FB	2.0	126.7(114.7T)	008.5	AA 03000	AT 210
	BLARE	SOPHY	030		TF		FB	1.0	175.7(163.7T)	005.0	AA 03000	
	BRIEF	BRIEF	010		IF		FB					
	BRIEF	WOVAL	020	IAF	TF		FB	2.0	237.6(225.6T)	011.0	AA 03000	
	BRIEF	SOPHY	030		TF		FB	1.0	237.5(225.5T)	004.0	AA 03000	
	LEEAH	LEEAH	010		IF		FB					
	LEEAH	UFATU	020	IAF	TF		FB	2.0	284.5(272.5T)	010.0	AA 03000	
	LEEAH	SOPHY	030		TF		FB	1.0	284.3(272.3T)	008.9	AA 03000	
	SOPHY	SOPHY	010	IAF	HF	R	FO		265.5(253.5T)	004.0	AA 03000	
	TACKS	TACKS	010		IF		FB					
	TACKS	OJAWU	020	IAF	TF		FB	2.0	091.3(079.3T)	021.1	AA 03000	AT 210
	TACKS	SOPHY	030		TF		FB	1.0	175.7(163.7T)	005.0	AA 03000	
		SOPHY	010	FACF	IF		FB				AA 03000	
		OZIGY	020	FAF	TF		FB	0.5	265.5(253.5T)	006.1	AA 02100	
		JUNVI	021	SDF	TF		FB	0.3	265.4(253.4T)	002.8	AA 01020 GS 01029	
		RW27	030	MAP	TF		FO	0.3	265.4(253.4T)	002.5	AT 00073	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		265.4(253.4T)		AA 00440	
	DURHM	050		DF		FO				AA 02000	
	DURHM	060		HM	R	FO		085.2(073.2T)	004.0	AA 02000	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	BLARE	N392446.50	W0753310.10	N3924.775	W07533.168
	BRIEF	N392655.21	W0750739.69	N3926.920	W07507.662
	DURHM	N391022.08	W0754729.81	N3910.368	W07547.497
	JUNVI	N391353.04	W0753225.45	N3913.884	W07532.424
	LEEAH	N391539.27	W0745711.01	N3915.655	W07457.184
	OJAWU	N392113.99	W0752314.93	N3921.233	W07523.249
	OZIGY	N391441.10	W0752858.02	N3914.685	W07528.967
	SOPHY	N391625.29	W0752126.48	N3916.422	W07521.441
	TACKS	N391721.99	W0754957.67	N3917.367	W07549.961
	UFATU	N391604.31	W0751002.49	N3916.072	W07510.042
	WOVAL	N391913.72	W0751746.05	N3919.229	W07517.768
	RW27	N391310.09	W0753530.41	N3913.168	W07535.507

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH

QUALITY CHECKED 4

CITY AND STATE	ELEVATION: 55	THRE: 43	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
DOVER/CHESWOLD, DE	AIRPORT NAME: DELAWARE AIRPARK		RNAV	RNAV (GPS) RWY 27, AMDT 1	AMDT: ORIG
					DATED: 06/07/2007

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

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.

RW27 00043 30

QUALITY CHECKED

CITY AND STATE	ELEVATION: 55 THRE: 43	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
DOVER/CHESWOLD, DE	AIRPORT NAME: DELAWARE AIRPARK	RNAV	RNAV (GPS) RWY 27, AMDT 1	AMDT: ORIG
				DATED: 06/07/2007

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

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.
FEEDER	TACKS	OJAWU	1. TOWER (24-020024)	391910.44N/0755043.23W	425 (5D)	1000	AT1575	3000
			2. TERRAIN	391851.00N/0754245.00W	86 (100)		AS1500	1600
FEEDER	BLARE	OJAWU	3. AAO	392303.00N/0752218.00W	220 (4E)	1000	AT1780	3000
			4. TERRAIN	392306.00N/0753409.00W	20 (0)		AS1500	1500
FEEDER	BRIEF	WOVAL	5. TOWER (34-000761)	392534.00N/0751202.00W	392 (5D)	1000	AT1608	3000
			6. TERRAIN	392451.00N/0750845.00W	115 (100)		AS1500	1600
FEEDER	LEEAH	UFATU	7. AAO	391742.00N/0745442.00W	260 (4E)	1000	AT1740	3000
			8. TERRAIN	391842.00N/0745709.00W	56 (100)		AS1500	1600
INITIAL	OJAWU	SOPHY	3. AAO	392303.00N/0752218.00W	220 (4E)	1000	AT1780	3000
			4. TERRAIN	392306.00N/0753409.00W	20 (0)		AS1500	1500
INITIAL	WOVAL	SOPHY	9. AAO	391915.00N/0751906.00W	214 (4E)	1000	AT1786	3000
			10. TERRAIN	392036.00N/0751936.00W	14 (0)		AS1500	1500
INITIAL	UFATU	SOPHY	11. AAO	391751.00N/0750915.00W	220 (4E)	1000	AT1780	3000
			12. TERRAIN	391803.00N/0751021.00W	17 (0)		AS1500	1500
2. HOLD-IN-LIEU-OF-PT	SOPHY	P-5	18. AAO	392130.00N/0751057.00W	289 (4E)	1000	AT1711	3000
			19. TERRAIN	392130.00N/0751057.00W	89 (100)		AS1500	1600
3. MISSED APPROACH — MAP:	RW27 / RW27	DURHM				ASC		2000
			20. TOWER (10-000155)	391004.00N/0754248.00W	292 (4D)	1000		1300
ELEV:	317/357		21. TERRAIN	391224.00N/0754733.00W	79 (100)		AS1500	1600

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	HT. ABV. ARPT. ACTUAL							
CATEGORY A	1.3 NM	350	525	22. TOWER (10-000030)	391215.00N/0753417.00W	192 (5D)	300	RA23 AC50	580
CATEGORY B	1.5 NM	450	525	22. TOWER (10-000030)	391215.00N/0753417.00W	192 (5D)	300	RA23 AC50	580
CATEGORY C	1.7 NM	450	765	23. TOWER (10-000007)	391202.00N/0753352.00W	434 (4D)	300	RA23 AC50	820
CATEGORY D	2.3 NM	550							
CATEGORY E	4.5 NM	550							

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID: RW27

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A
360-360	TWR (24-001011)	337/ 26.4	647 (5D)	1700					

CITY AND STATE	ELEVATION: 55 / AIRPORT NAME:	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
DOVER/CHESWOLD, DE	DELAWARE AIRPARK	RNAV	RNAV (GPS) RWY 27, AMDT 1	AEA

QUALITY CHECKED

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE		3. ALTIMETER SETTING
ZDC ARTCC DOV APP CON	N W S	OTHER: ASOS	SOURCE: KDOV
	F A A		DISTANCE: 8.10
	A / C		HOURS REMOTE OPERATION: 24
SATISFACTORY ON: X V H F X U H F H F	LOCATION: KDOV		ADJUSTMENT: 23

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

5. APPROACH & RUNWAY LIGHTING	
	ALS
	(S) SALS
	MALS
	HIRL
X	MIRL 27 (PCL), 09 (PCL)
	REIL
	TDZ
	C/LINE
	OTHER (SPECIFY)

6. RUNWAY MARKINGS	BASIC	
	ALL WEATHER	
	INSTRUMENT	NPI-G 27, 09
7. RUNWAY VISUAL RANGE	APPROACH	
	MIDFIELD	
	ROLL OUT	
8. GLIDE PATH	GP ANGLE:	ELEV RWY THRESHOLD:
	DISTANCE FROM RWY:	ELEV GP ANTENNA:
		THRESHOLD CROSSING HEIGHT:

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

10. WAIVERS: NONE

QUALITY CHECKED

PART D - PREPARED BY: DAVID SAUER	DATE: 01/20/2012
TITLE: AERONAUTICAL INFORMATION SPECIALIST	OFFICE: AJV-352

PART C - REMARKS:

THRESHOLD DISPLACED 349.

VDP NOT ESTABLISHED - ALTIMETER ADJUSTMENT IN USE.
OBSTACLES PENETRATE 20:1.

PARA 251, 20:1 PENETRATION.

PARA 251, 34:1 PENETRATION.

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

K33N DOES NOT HAVE WX REPORTING.
KDOV HAS A 24 HOUR FSS, ASOS.
NO VGSI.

SEE ATTACHED AIRSPACE LETTER.

PRESSURE PATTERNS SAME
K33N 54.9 KDOV 24
RA = 23.0

KDOV HAS REDUNDANT ALTIMETER SOURCES, NO BACKUP ALTIMETER REQUIRED.

TAA NOT DEVELOPED PER FPT.

LPV AND LNAV/VNAV NOT DEVELOPED DUE TO GQS PENETRATIONS: K33NT1167, 1113, 1106, 1087, 1076, 1070, 1062, 1037, 1022, 1013, 1012, 1004, 0097, 0076, 0063.

FAF HIGH ALTITUDE/DG PER ATC REQUEST TO PROCEDURALLY SEPARATE 33N ARRIVALS FROM DOC RWY 1 MISSED APPROACHES.

OBS #20 ACCURACY CODE VERIFIED BY FLIGHT INSPECTION.

TALLEST SHIP IN THE DELAWARE RIVER 188 FEET PER FPT.

HOLDING AT SOPHY ADDED BY ATC REQUEST.

TF LEG LENGTH BEWTEEN OZIGY AND SOPHY VERIFIED USING PBN FORMULA B USING 25 DEGREE BANK ANGLE.

LNAV AND LP INTERMEDIATE SEGMENTS SHARE SAME CONTROLLING OBSTACLE/TERRAIN.

TERPS, VOLUME 1, "VISUAL PORION OF FINAL" RWY 27
PENETRATIONS:
20:1
126 TREE (K33NT0032) 391313.46N/0753526.39W (73.17)
116 TREE (K33NT0065) 391312.34N/0753528.03W (70.97)
116 TREE (K33NT0064) 391313.03N/0753528.27W (70.88)
120 TREE (K33NT0046) 391312.67N/0753526.71W (69.52)
103 TREE (K33NT0056) 391314.25N/0753528.44W (56.75)
108 TREE (K33NT0036) 391314.47N/0753526.99W (55.97)
109 TREE (K33NT0015) 391313.93N/0753525.47W (52.02)
100 TREE (K33NT0016) 391314.84N/0753525.88W (43.25)
119 TREE (K33NT0957) 391308.59N/0753516.19W (34.78)
115 TREE (K33NT0974) 391309.38N/0753515.36W (26.51)
106 TREE (K33NT0986) 391309.01N/0753514.70W (15.55)
103 TRMSN TWR (K33NT0984) 391317.51N/0753517.99W (12.65)
107 TREE (K33NT1015) 391310.95N/0753513.83W (10.47)
93 TREE (K33NT0954) 391308.96N/0753516.54W (9.56)
102 TRMSN TWR (K33NT1004) 391315.72N/0753516.35W (8.06)

98 TREE (K33NT1012) 391315.80N/0753516.04W (2.78)
CONT.

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	SOPHY	OZIGY	13. AAO	391500.00N/0752903.00W	227 (4E)	500	AT1373	2100
			14. TERRAIN	391500.00N/0752903.00W	27 (0)		AS1500	1500
FINAL: LP	OZIGY	JUNVI/2.50 NM TO	15. AAO	391354.00N/0753058.00W	219 (2C)	250	RA23 DG528	1020
		RW27						
FINAL: LP STEPDOWN	JUNVI/2.50 NM TO	RW27	16. COMM TWR	391333.86N/0753426.57W	161 (1A)	250	RA23	440
	RW27		(K33NT1252)					
FINAL: LNAV	OZIGY	JUNVI/2.50 NM TO	15. AAO	391354.00N/0753058.00W	219 (2C)	250	RA23 DG528	1020
		RW27						
FINAL: LNAV STEPDOWN	JUNVI/2.50 NM TO	RW27	17. WATER TWR	391346.60N/0753525.22W	192 (2C)	250	RA23	480
	RW27		(K33NT1365)					

3. MISSED APPROACH	
MAP:	
ELEV:	

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	HT. ABV. ARPT. 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	

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID:

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A

CITY AND STATE	ELEVATION: 55 / AIRPORT NAME:	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
DOVER/CHESWOLD, DE	DELAWARE AIRPARK	RNAV	RNAV (GPS) RWY 27, AMDT 1	AEA

QUALITY CHECKED

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE			3. ALTIMETER SETTING
SATISFACTORY ON:		N W S	OTHER:	SOURCE:
		F A A		DISTANCE:
		A / C		HOURS REMOTE OPERATION:
V H F / U H F / H F	LOCATION:			ADJUSTMENT:

4. MONITOR STATUS	PRIMARY NAVAID:	
	MONITOR POINT:	
	HRS OPTN:	CAT 1
		CAT 3
5. APPROACH & RUNWAY LIGHTING		ALS
		(S) SALS
		MALS
		HIRL
		MIRL
		REIL
		TDZ
		C/LINE
		OTHER (SPECIFY)
6. RUNWAY MARKINGS	BASIC	
	ALL WEATHER	
	INSTRUMENT	
7. RUNWAY VISUAL RANGE	APPROACH	
	MIDFIELD	
	ROLL OUT	
8. GLIDE PATH	GP ANGLE:	ELEV RWY THRESHOLD:
	DISTANCE FROM RWY:	ELEV GP ANTENNA:
		THRESHOLD CROSSING HEIGHT:
9. FINAL APPROACH COURSE AIMING	RUNWAY THRESHOLD	FT. FROM THRESHOLD
	ON CENTERLINE	FT. FROM CENTERLINE

10. WAIVERS:

QUALITY CHECK

PART D - PREPARED BY:	DATE:
TITLE:	OFFICE:

PART C - REMARKS:

CONTINUED.
97 TREE (K33NT1007) 391309.43N/0753513.77W (2.44)
47 GRD (K33NT0063) 391309.91N/0753527.01W (1.65)
99 TREE (K33NT1020) 391309.46N/0753512.98W (1.42)
99 TRSMN TWR (K33NT1022) 391313.79N/0753514.60W (1.26)
47 GRD (K33NT0058) 391307.16N/0753525.85W (1.26)
112 TREE (K33NT1076) 391315.80N/0753511.92W (1.25)
46 GRD (K33NT0066) 391308.72N/0753526.68W (1.13)
118 TREE (K33NT1106) 391314.49N/0753509.67W (0.66)

34:1
130 TREE (K33NT1148) 391318.86N/0753507.45W (34.71)
128 TREE (K33NT1145) 391310.57N/0753504.75W (33.79)
127 TREE (K33NT1149) 391321.13N/0753508.20W (31.44)
ADDITIONALLY PENETRATIONS:
K33NT1186, 1184, 1183, 1182, 1180, 1179, 1176, 1174, 1172, 1170, 1168, 1167, 1161, 1160, 1159, 1158, 1154, 1153, 1147, 1144, 1141, 1138, 1137, 1136, 1133, 1132, 1131, 1129, 1128, 1121, 1115, 1113, 1111, 1109, 1108, 1107, 1097, 1095, 1093, 1089, 1087, 1085, 1084, 1081, 1077, 1074, 1070, 1068, 1066, 1063, 1062, 1059, 1058, 1054, 1050, 1047, 1043, 1037, 1034, 1033, 1029, 1027, 1023, 1021, 1018, 1016, 1013, 1011, 1002, 0999, 0995, 0979, 0975, 0969, 0965, 0947, 0933, 0924, 0052.

TERPS, VOLUME 1, "VISUAL PORION OF FINAL" RWY 9 PENETRATIONS:
20:1
145 TREE (K33NT0695) 391253.41N/0753626.07W (28.62)
147 TREE (K33NT0710) 391253.36N/0753627.54W (25.01)
153 TREE (K33NT0730) 391252.31N/0753629.25W (23.04)
152 TREE (K33NT0744) 391251.55N/0753630.54W (16.08)
128 TREE (K33NT0681) 391253.65N/0753625.01W (15.96)
151 TREE (K33NT0760) 391257.36N/0753634.46W (8.73)
151 TREE (K33NT0762) 391259.36N/0753635.49W (7.74)
140 TREE (K33NT0748) 391253.10N/0753631.44W (2.93)
147 TREE (K33NT0766) 391253.81N/0753633.95W (1.50)

FPT NOTIFIED OF PENETRATIONS.

RADIO FIX AND HOLDING DATA RECORD

NAME: BLARE **STATE:** DE **COUNTRY:** US

LATITUDE/LONGITUDE: 392446.50N/0753310.10W **TYPE:** WP, RADAR, INT, 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	SMYRNA	ENO	VORTAC	L	000.04	351.04	11.00	11.00		10000	17500
2	CEDAR LAKE	VCN	VORTAC	L	264.82	254.82		28.22		10000	17500

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

REMARKS:
CEDAR LAKE (FAC 2) AND SMYRNA (FAC 1) USED TO ESTABLISH FIX COORDINATES

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V29	1, 2				(US)
IAP	RNAV (GPS) RWY 27			K33N	DOVER/CHESWOLD	DE (US)
IAP	RNAV (GPS) RWY 9			K33N	DOVER/CHESWOLD	DE (US)
IAP	RNAV (GPS) RWY 35			KEVY	MIDDLETOWN	DE (US)
IAP	ILS OR LOC RWY 1			KILG	WILMINGTON	DE (US)

REQUIRED CHARTING: IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 9 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
1. CHANGED FAC 1 TRUE BRG FROM 351.03 TO 351.04.
2. ADDED REMARK, CEDAR LAKE (FAC 2) AND SMYRNA (FAC 1) USED TO ESTABLISH FIX COORDINATES.

DEVELOPED BY: **DATE:** 01/11/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: PHL APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: BRIEF **STATE:** NJ **COUNTRY:** US

LATITUDE/LONGITUDE: 392655.21N/0750739.69W **TYPE:** INT, 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	SMYRNA	ENO	VORTAC	L	063.13	054.13	22.27	22.27		1800	17500
2	WOODSTOWN	OOD	VORTAC	L	154.02	144.02		13.87		1800	17500

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

REMARKS:
WOODSTOWN (FAC 2) AND SMYRNA (FAC 1) USED TO ESTABLISH FIX COORDINATES

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V16	1, 2				(US)
EN ROUTE	V166	1, 2				(US)
IAP	RNAV (GPS) RWY 27			K33N	DOVER/CHESWOLD	DE (US)

REQUIRED CHARTING: IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 9 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
1. ADDED FAC 1 AND 2 DIST FROM FAC IN NM.
2. DELETED REMARK, MAG VAR: ENO VORTAC 9W, OOD VORTAC 10W, SIE VORTAC 9W, VCN VORTAC 10W.
3. ADDED REMARK, WOODSTOWN (FAC 2) AND SMYRNA (FAC 1) USED TO ESTABLISH FIX COORDINATES.
4. LOWERED FAC 2 MRA FROM 1900 TO 1800.

DEVELOPED BY: **DATE:** 01/11/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: PHL APPC ON, DOV APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: DURHM **STATE:** MD **COUNTRY:** US

LATITUDE/LONGITUDE: 391022.08N/0754729.81W **TYPE:** WP

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

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	W		WP	265.23	085.23	R		4	2000	6000	4	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (24-000859)	391031.40N/0755505.50W	396	4D

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETE.
NAME CHANGED FROM ZIZZO TO DURHM.
OBSTACLE 24-000859 ACCURACY CODE VERIFIED BY FLIGHT INSPECTION.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) RWY 27		1	K33N	DOVER/CHESWOLD	DE (US)
IAP	RNAV (GPS) RWY 9		1	K33N	DOVER/CHESWOLD	DE (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 4 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
1. MOVED FIX 1.81 NM EAST.
2. CHANGED FIX NAME FROM ZIZZO TO DURHM.
3. ADDED REMARK, NAME CHANGED FROM ZIZZO TO DURHM.
4. CHANGED PAT 1 CONTROLLING OBSTRUCTION NUMBER FROM 21-0859 TO 24-000859.
5. CHANGED PAT 1 ACCURACY CODE FROM A 6F TO A 4D.
6. ADDED REMARK, OBSTACLE 24-000859 ACCURACY CODE VERIFIED BY FLIGHT INSPECTION.

DEVELOPED BY: **DATE:** 01/11/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: DOV APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: JUNVI **STATE:** DE **COUNTRY:** US

LATITUDE/LONGITUDE: 391353.04N/0753225.45W **TYPE:** WP

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

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) RWY 27			K33N	DOVER/CHESWOLD	DE (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
1. MOVED FIX 608.50 FEET WEST.
2. DELETED FAC 1, K33N R27.
3. DELETED REMARK, K33N RWY 27 DISPLACED THRESHOLD COORDINATES: 391310.09N-0753530.40W.

DEVELOPED BY: **DATE:** 01/11/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: DOV APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: LEEAH **STATE:** NJ **COUNTRY:** US

LATITUDE/LONGITUDE: 391539.27N/0745711.01W **TYPE:** WP, INT, 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	WATERLOO	ATR	VOR/DME	L	032.98	023.98	29.61	29.61		1800	17500
2	SMYRNA	ENO	VORTAC	L	095.00	086.00	26.30	26.30		1800	17500
3	WOODSTOWN	OOD	VORTAC	L	154.01	144.01	27.75	27.75		7000	17500
4	ATLANTIC CITY	ACY	VORTAC	L	246.43	236.43		21.07		2000	17500
5	SEA ISLE	SIE	VORTAC	H	333.35	324.35		12.21		3000	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	NE		WP	046.00	226.00	R		4	2000	6000	4	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (34-000694)	392233.00N/0745746.00W	305	5D

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
SMYRNA (FAC 2) AND WATERLOO (FAC 1) USED TO ESTABLISH FIX COORDINATES
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	ATLANTIC CITY	3, 4		KACY	ATLANTIC CITY	NJ (US)
DP	LEEAH	1, 2, 3, 4		KMIV	MILLVILLE	NJ (US)
DP	CRESI	1, 5		KWRI	WRIGHTSTOWN	NJ (US)
EN ROUTE	V1	1				(US)
EN ROUTE	V166	1, 3				(US)
EN ROUTE	V229	3, 4				(US)
EN ROUTE	V268	3, 4				(US)
IAP	RNAV (GPS) RWY 27			K33N	DOVER/CHESWOLD	DE (US)
IAP	VOR-B	3, 4		K19N	BERLIN	NJ (US)
IAP	RNAV (GPS) RWY 1		1	KOBI	WOODBINE	NJ (US)
IAP	RNAV (GPS) RWY 19		1	KOBI	WOODBINE	NJ (US)

REQUIRED CHARTING: DP, IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 13 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
1. CHANGED FAC 2 DME/DIST FROM FAC FROM 26.29 TO 26.30.
2. ADDED FAC 4 DIST FROM FAC IN NM.
3. ADDED REMARK, PRECIPITOUS TERRAIN EVALUATION COMPLETED.
4. ADDED REMARK, SMYRNA (FAC 2) AND WATERLOO (FAC 1) USED TO ESTABLISH FIX COORDINATES.
5. ADDED FAC 5, SIE VORTAC.
6. CHANGED FAC 3 MRA FROM 1800 TO 7000.
7. CHANGED FAC 4 MRA FROM 1800 TO 2000.

DEVELOPED BY: **DATE:** 01/11/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: EST
ARTCC: ZDC
ATC FACILITY: ACY APP CON, DOV APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: OJAWU **STATE:** NJ **COUNTRY:** US

LATITUDE/LONGITUDE: 392113.99N/0752314.93W **TYPE:** WP

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

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) RWY 27			K33N	DOVER/CHESWOLD	DE (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
1. DELETED FAC 1, SOPHY.

DEVELOPED BY: **DATE:** 01/11/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: DOV APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: OZIGY **STATE:** DE **COUNTRY:** US

LATITUDE/LONGITUDE: 391441.10N/0752858.02W **TYPE:** WP

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

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

REMARKS:
COORDINATES ESTABLISHED USING 8260.54A FORMULA 2-16B.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) RWY 27			K33N	DOVER/CHESWOLD	DE (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
1. MOVED FIX 623.88 FEET WEST.
2. DELETED FAC 1, K33N R27.
3. DELETED REMARK, K33N RWY 27 DISPLACED THRESHOLD COORDINATES: 391310.09N-0753530.40W.
4. ADDED REMARK, COORDINATES ESTABLISHED USING 8260.54A FORMULA 2-16B.

DEVELOPED BY: **DATE:** 01/11/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: DOV APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SOPHY **STATE:** DE **COUNTRY:** US

LATITUDE/LONGITUDE: 391625.29N/0752126.48W **TYPE:** WP

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

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	E		WP	085.51	265.51	R		4	3000	6000	5	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	392130.00N/0751057.00W	289	4E

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) RWY 27		1	K33N	DOVER/CHESWOLD	DE (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
1. DELETED FAC 1, K33N R27.
2. DELETED REMARK, K33N RWY 27 DISPLACED THRESHOLD COORDINATES: 391310.09N-0753530.40W.
3. ADDED PAT 1.
4. ADDED REMARK, PRECIPITOUS TERRAIN EVALUATION COMPLETED.
5. ADDED HOLDING RESTRICTION, HOLDING LIMITED TO ESTABLISHED PATTERN.

DEVELOPED BY: **DATE:** 01/11/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: EST
ARTCC: ZDC
ATC FACILITY: DOV APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: TACKS **STATE:** MD **COUNTRY:** US

LATITUDE/LONGITUDE: 391721.99N/0754957.67W **TYPE:** WP, INT, 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	WOODSTOWN	OOD	VORTAC	L	240.00	230.00	32.21	32.21		2000	17500
2	SMYRNA	ENO	VORTAC	L	292.31	283.31		15.16		2000	17500

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

REMARKS:
SMYRNA (FAC 2) AND WOODSTOWN (FAC 1) USED TO ESTABLISH FIX COORDINATES

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V123	1, 2				DE (US)
EN ROUTE	V312	1, 2				DE (US)
IAP	RNAV (GPS) RWY 27			K33N	DOVER/CHESWOLD	DE (US)
IAP	RNAV (GPS) RWY 35			KEVY	MIDDLETOWN	DE (US)

REQUIRED CHARTING: IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 5 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
1. CHANGED FAC 2 TRUE BRG FROM 283.30 TO 283.31.
2. ADDED REMARK, SMYRNA (FAC 2) AND WOODSTOWN (FAC 1) USED TO ESTABLISH FIX COORDINATES.

DEVELOPED BY: **DATE:** 01/11/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZNY, ZDC
ATC FACILITY: DOV APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: UFATU **STATE:** NJ **COUNTRY:** US

LATITUDE/LONGITUDE: 391604.31N/0751002.49W **TYPE:** WP

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

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) RWY 27			K33N	DOVER/CHESWOLD	DE (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
1. DELETED FAC 1, SOPHY.

DEVELOPED BY: **DATE:** 01/11/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: DOV APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: WOVAL **STATE:** NJ **COUNTRY:** US

LATITUDE/LONGITUDE: 391913.72N/0751746.05W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) RWY 27			K33N	DOVER/CHESWOLD	DE (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 07/26/2012

DEVELOPED BY: **DATE:** 01/12/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: DOV APP CON
OTHER:

QUALITY CHECKED

TERMINAL AIRSPACE DATA REQUIREMENTS

CITY: **DOVER/CHESWOLD** STATE: **DE**

AIRPORT NAME: **DELAWARE AIRPARK** ID: **K33N**

PROCEDURE: **RNAV (GPS) RWY 27** AMDT: **1**

DOCKET # :
(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 **THLD** to 1000' point **1.64**
   (Enter THLD, FAF, ARP, FACILITY, as appropriate)
2. Width of **FINAL** segment at 1000' point **1.20**
   (Enter appropriate segment , final, intermediate, etc.)
3. True Course of **FINAL** segment containing 1000' point **253.43**
4. High Terrain in **FINAL** segment containing 1000' point **46**
5. Distance from **THLD** to 1500' point **4.10**
   (If 1500' point in PT maneuvering area or holding pattern note in remarks)
6. Width of **FINAL** segment at 1500' point **1.20**
7. True Course of **FINAL** segment containing 1500' point **253.43**
8. High Terrain in **FINAL** segment containing 1500' point **46**
9. Threshold Coordinates (if straight-in) ... **391310.09N** / **0753530.41W**
10. ARP Coordinates ..... **391306.00N** / **0753548.00W**
11. Runway Approach End and distance furthest from ARP.....RWY **27**
    Distance **0.30** NM
12. FAF Coordinates ..... **391441.10N** / **0752858.02W**
    (Click to Select)

REMARKS: Approach/Drawing attached. THLD COORDINATES ARE DISPLACED THLD.