US Department of Transportation
Federal Aviation Administration

STAR - Standard Terminal Arrival

1. Bearings, headings, courses and radials are listed to the nearest hundredth (e.g. 360.00)
2. Distances are in nautical miles to nearest hundredth (e.g. 00.00)
3. Altitudes are minimum altitudes unless otherwise indicated

(1) Transition Routes

(a) Transition Name	(b) Transition Computer Codes	(c) From RNAV WP / FIX / NAVAID	(d) To RNAV WP / FIX / NAVAID	(e) Mag Course / Distance	(f) MEA	(g) MOCA	(h) MAA	(i) Crossing Altitudes / Fixes
FRANKLIN	FKN.KAROO1	FKN VORTAC	***GOLLI***	247.03/10.00	FL180			
		GOLLI	DUFFI	247.02/33.56	15000			
		DUFFI	ARGAL	246.65/21.05	6000			AT/ABOVE 10000, AT/BELOW 15000
HOPEWELL	HPW.KAROO1	HPW VORTAC	***PILOE***	215.88/11.62	FL180			
		PILOE	***AGUYA***	217.56/08.06	16000			
		AGUYA	***DEMVE***	217.84/36.10	13000			
		DEMVE	ARGAL	233.84/30.93	6000			AT/ABOVE 10000, AT/BELOW 15000
SALISBURY	SBY.KAROO1	SBY VORTAC	JAMIE	213.01/49.24	FL180			
		JAMIE	***BOGPE***	238.10/32.73	17000			
		BOGPE	***CEBET***	238.34/26.87	17000			AT/ABOVE FL220, AT/BELOW FL230
		CEBET	***DOYAS***	238.03/18.10	17000			AT/ABOVE 17000, AT/BELOW FL230

(2) Arrival Route Description: FROM OVER ARGAL ON TRACK 246.40/5.81 NM TO KAROO, CROSS KAROO AT/ABOVE 8000 AT/BELOW 12000 (MEA 4000). THEN ON ASSIGNED RUNWAY TRANSITION.

...LANDING RWY 23L/23R: FROM OVER KAROO ON TRACK 257.39/5.83 NM TO LEASA, CROSS LEASA AT/ABOVE 6000 AT/BELOW 8000 (MEA 4000), THEN ON TRACK 258.95/3.00 NM TO PAINS, CROSS PAINS AT 6000 AND 230 KIAS (MEA 4000). EXPECT RNAV (RNP) APPROACH.

Continued on block 16...

(3) Procedural Data Notes: CHART NOTES: FOR TURBOJET AIRCRAFT ONLY. RNAV 1. DME/DME/IRU OR GPS REQUIRED. RWY 5L/5R, RADAR REQUIRED FOR NON-GPS EQUIPPED AIRCRAFT; RWY 23L/23R - RADAR REQUIRED. LANDING NORTHEAST: SELECT RWY 5R. LANDING SOUTHWEST: SELECT RWY 23L. EXPECT TO RECEIVE LANDING DIRECTION (NORTHEAST/SOUTHWEST) FROM WASHINGTON ARTCC; RDU APPROACH WILL ASSIGN LANDING RUNWAY.

CROSS CEBET AT/ABOVE FL220 AT/BELOW FL230. CROSS DOYAS AT/ABOVE 17000 AT/BELOW FL230. CROSS ARGAL AT/ABOVE 10000 AT/BELOW 15000. CROSS KAROO AT/ABOVE 8000 AT/BELOW 12000, CROSS NEWIE AT 8000 AT 210 KTS. CROSS LEASA AT/ABOVE 6000 AT/BELOW 8000, CROSS PAINS AT 6000 AT 230 KTS.

Continued on block 16...

(4) Fixes and/or Holding Patterns: CHART HOLDING AT ARGAL: HOLD NE, RT, 246.40 INBOUND, 10 NM LEGS.

(5) Communications: RALEIGH APP CON
ATIS

QUALITY 3 CHECKED

(6) Arrival Name	(7) Number	(8) STAR Computer Code	(9) Superseded Nr.	(10) Dated	(11) Effective Date
KAROO RNAV	ONE	ARGAL.KAROO1	NONE		

(12) Airports Served	
Airport Name RALEIGH-DURHAM INTERNATIONAL AIRPORT	City/State RALEIGH-DURHAM, NC
Airport Name	City/State
Airport Name	City/State
Airport Name	City/State
Airport Name	City/State
Airport Name	City/State

(13) Lost Communications Procedure:

(14) Remarks:

(15) Additional Flight Data: REFERENCE MAG VAR: KRDU 7W/1985
DME/DME/IRU ASSESSMENT: SAT RNP (2.0).

QUALITY CHECKED

(6) Arrival Name	(7) Number	(8) STAR Computer Code	(9) Superseded Nr.	(10) Dated	(11) Effective Date
KAROO RNAV	ONE	ARGAL.KAROO1	NONE		

(16) Continuation:

(1) Transition Routes

(a) Transition Name	(b) Transition Computer Codes	(c) From RNAV WP / FIX / NAVAID	(d) To RNAV WP / FIX / NAVAID	(e) Mag Course / Distance	(f) MEA	(g) MOCA	(h) MAA	(i) Crossing Altitudes / Fixes
		DOYAS	ARGAL	238.13/58.75	6000			AT/ABOVE 10000, AT/BELOW 15000
SNOW HILL	SWL.KAROO1	SWL VORTAC	JAMIE	228.47/35.98	FL180			
		JAMIE	***BOGPE***	238.10/32.73	17000			
		BOGPE	***CEBET***	238.34/26.87	17000			AT/ABOVE FL220, AT/BELOW FL230
		CEBET	***DOYAS***	238.03/18.10	17000			AT/ABOVE 17000, AT/BELOW FL230
		DOYAS	ARGAL	238.13/58.75	6000			AT/ABOVE 10000, AT/BELOW 15000

(2) Arrival Route Description:
...LANDING RWY 5L/5R: FROM OVER KAROO ON TRACK 246.37/14.20 NM TO MUFLY (MEA 4000), THEN ON TRACK 228.54/8.00 NM TO NEWIE, CROSS NEWIE AT 8000 AND 210 KIAS (MEA 4000), THEN ON TRACK 221.52/3.89 NM TO OCHRE (MEA 4000), THEN ON TRACK 232.22/4.12 NM TO STINT (MEA 4000), THEN ON TRACK 232.19/3.19 NM TO TOYER (MEA 4000), THEN ON TRACK 232.19/5.00 NM. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

(3) Procedural Data Notes:

LANDING RWY 23L/23R: FOR NON-RNP AIRCRAFT: EXPECT RADAR VECTORS TO FINAL APPROACH COURSE AFTER PAINS.

(17) Changes: ORIGINAL.

(18) Reasons for Changes: REQUESTED BY ATC.

	Name (Typed and Signed), Title and Organization		DATE
Developed By	JOE KEIMIG, SUPPORT MANAGER, AIRSPACE AND PROCEDURES, WASHINGTON ARTCC		22 JUN 2012
Approved	**AJV-352**	DARRYEL ADAMS, MANAGER	
	Reg. ATD		

QUALITY 3 CHECKED

(6) Arrival Name	(7) Number	(8) STAR Computer Code	(9) Superseded Nr.	(10) Dated	(11) Effective Date
KAROO RNAV	ONE	ARGAL.KAROO1	NONE		

US Department of Transportation
Federal Aviation Administration

RNAV STAR (Data Record)

(1) FIX/NAVAID	(2) LAT/LONG	(3) C	(4) FO/FB	(5) LEG	(6) TC	(7) DIST	(8) ALTITUDE	(9) SPEED	(10) REMARKS
En Route Transition									
FKN VORTAC	364251.25N / 0770044.56W	Y		IF					FKN.KAROO1
GOLLI	363750.61N / 0771130.31W	Y	FB	TF	240.03	10.00			
DUFFI	362057.87N / 0774729.22W	Y	FB	TF	240.02	33.56			
ARGAL	361016.63N / 0780955.31W	Y	FB	TF	239.65	21.05	+10000, -15000		HOLDING - RIGHT TURNS
En Route Transition									
HPW VORTAC	371943.93N / 0770657.40W	Y		IF					HPW.KAROO1
PILOE	370932.70N / 0771358.44W	Y	FB	TF	208.88	11.62			
AGUYA	370235.68N / 0771905.56W	Y	FB	TF	210.56	08.06			
DEMVE	363131.28N / 0774203.30W	Y	FB	TF	210.84	36.10			
ARGAL	361016.63N / 0780955.31W	Y	FB	TF	226.84	30.93	+10000, -15000		HOLDING - RIGHT TURNS
En Route Transition									
SBY VORTAC	382042.00N / 0753038.10W	Y		IF					SBY.KAROO1
JAMIE	373620.58N / 0755748.81W	Y	FB	TF	206.01	49.24			

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
KAROO RNAV	ONE	ARGAL.KAROO1	NONE		

QUALITY CHECKED 3

FAA Form 7100-3 (9/02)

US Department of Transportation
Federal Aviation Administration

RNAV STAR (Data Record)

(1) FIX/NAVAID	(2) LAT/LONG	(3) C	(4) FO/FB	(5) LEG	(6) TC	(7) DIST	(8) ALTITUDE	(9) SPEED	(10) REMARKS
BOGPE	371541.64N / 0762942.92W	Y	FB	TF	231.10	32.73			
CEBET	365850.34N / 0765554.34W	Y	FB	TF	231.34	26.87	+FL220, -FL230		
DOYAS	364725.01N / 0771325.83W	Y	FB	TF	231.03	18.10	+17000, -FL230		
ARGAL	361016.63N / 0780955.31W	Y	FB	TF	231.13	58.75	+10000, -15000		HOLDING - RIGHT TURNS
En Route Transition									
SWL VORTAC	380323.74N / 0752750.04W	Y		IF					SWL.KAROO1
JAMIE	373620.58N / 0755748.81W	Y	FB	TF	221.47	35.98			
BOGPE	371541.64N / 0762942.92W	Y	FB	TF	231.10	32.73			
CEBET	365850.34N / 0765554.34W	Y	FB	TF	231.34	26.87	+FL220, -FL230		
DOYAS	364725.01N / 0771325.83W	Y	FB	TF	231.03	18.10	+17000, -FL230		
ARGAL	361016.63N / 0780955.31W	Y	FB	TF	231.13	58.75	+10000, -15000		HOLDING - RIGHT TURNS
Common Route									
ARGAL	361016.63N / 0780955.31W	Y		IF					
KAROO	360718.90N / 0781605.35W	Y	FB	TF	239.40	05.81	+8000, -12000		

QUALITY CHECKED

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
KAROO RNAV	ONE	ARGAL.KAROO1	NONE		

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Federal Aviation Administration

RNAV STAR (Data Record)

(1) FIX/NAVAID	(2) LAT/LONG	(3) C	(4) FO/FB	(5) LEG	(6) TC	(7) DIST	(8) ALTITUDE	(9) SPEED	(10) REMARKS
Runway Transition									
KAROO	360718.90N / 0781605.35W	Y		IF					
MUFLY	360003.42N / 0783108.64W	Y	FB	TF	239.37	14.20			
NEWIE	355403.45N / 0783740.45W	Y	FB	TF	221.54	08.00	8000	210K	
OCHRE	355050.69N / 0784023.24W	Y	FB	TF	214.52	03.89			
STINT	354756.39N / 0784358.77W	Y	FB	TF	225.22	04.12			
TOYER	354541.44N / 0784645.42W	Y	FO	TF	225.19	03.19			
KRDU:RW05L				FM	225.19	05.00			
Runway Transition									
KAROO	360718.90N / 0781605.35W	Y		IF					
MUFLY	360003.42N / 0783108.64W	Y	FB	TF	239.37	14.20			
NEWIE	355403.45N / 0783740.45W	Y	FB	TF	221.54	08.00	8000	210K	
OCHRE	355050.69N / 0784023.24W	Y	FB	TF	214.52	03.89			
STINT	354756.39N / 0784358.77W	Y	FB	TF	225.22	04.12			

QUALITY CHECKED 3

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
KAROO RNAV	ONE	ARGAL.KAROO1	NONE		

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RNAV STAR (Data Record)

TOYER	354541.44N / 0784645.42W	Y	FO	TF	225.19	03.19			
KRDU:RW05R				FM	225.19	05.00			
Runway Transition									
KAROO	360718.90N / 0781605.35W	Y		IF					
LEASA	360521.08N / 0782252.22W	Y	FB	TF	250.39	05.83	+6000, -8000		
PAINS	360425.17N / 0782623.33W	Y	FB	TF	251.95	03.00	6000	230K	
KRDU:RW23L									
Runway Transition									
KAROO	360718.90N / 0781605.35W			IF					
LEASA	360521.08N / 0782252.22W	Y	FB	TF	250.39	05.83	+6000, -8000		
PAINS	360425.17N / 0782623.33W	Y	FB	TF	251.95	03.00	6000	230K	
KRDU:RW23R									

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
KAROO RNAV	ONE	ARGAL.KAROO1	NONE		

US Department of Transportation
Federal Aviation Administration

STAR (Data Record)

ARINC PACKET - 424-18 - STAR

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                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
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        SUSAD        HPW   K6011200VTLA N37194393W077065740    N37194393W077065740W0060000701     NARHOPEWELL
        SUSAD        POB   K7011380 TLW                     POB N35100655W079011081W0070002401     NARPOPE
        SUSAD        SBY   K6011120VTL  N38204200W075303810    N38204200W075303810W0120000481     NARSALISBURY
        SUSAD        SWL   K6011240VTL  N38032374W075275004    N38032374W075275004W0080000341     NARSNOW HILL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
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        SUSAEAENRT   AGUYA K60    W     N37023568W077190556                     W0102     NAR           AGUYA
        SUSAEAENRT   ARGAL K70    C   L N36101663W078095531                     W0095     NAR           ARGAL
        SUSAEAENRT   BOGPE K60    W     N37154164W076294292                     W0108     NAR           BOGPE
        SUSAEAENRT   CEBET K60    W     N36585034W076555434                     W0104     NAR           CEBET
        SUSAEAENRT   DEMVE K70    W     N36313128W077420330                     W0098     NAR           DEMVE
        SUSAEAENRT   DOYAS K60    W     N36472501W077132583                     W0102     NAR           DOYAS
        SUSAEAENRT   DUFFI K70    C   L N36205787W077472922                     W0097     NAR           DUFFI
        SUSAEAENRT   GOLLI K60    W     N36375061W077113031                     W0102     NAR           GOLLI
        SUSAEAENRT   JAMIE K60    R   L N37362058W075574881                     W0112     NAR           JAMIE
        SUSAEAENRT   KAROO K70    W     N36071890W078160535                     W0094     NAR           KAROO
        SUSAEAENRT   LEASA K70    W     N36052108W078225222                     W0093     NAR           LEASA
        SUSAEAENRT   MUFLY K70    W     N36000342W078310864                     W0092     NAR           MUFLY
        SUSAEAENRT   NEWIE K70    W     N35540345W078374045                     W0091     NAR           NEWIE
        SUSAEAENRT   OCHRE K70    W     N35505069W078402324                     W0091     NAR           OCHRE
        SUSAEAENRT   PAINS K70    W     N36042517W078262333                     W0093     NAR           PAINS
        SUSAEAENRT   PILOE K60    W     N37093270W077135844                     W0103     NAR           PILOE
        SUSAEAENRT   STINT K70    W     N35475639W078435877                     W0090     NAR           STINT
        SUSAEAENRT   TOYER K70    W     N35454144W078464542                     W0090     NAR           TOYER

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AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
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        SUSAP KRDUK7ARDU     0     100YHN35523950W078471490W007000435         1800018000C    MNAR    RALEIGH-DURHAM INTL

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SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
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        SUSAP KRDUK7EKAROO14FKN   010FKN  K6D 0V       IF                                          18000
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(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
KAROO (RNAV)	ONE	ARGAL.KAROO1	NONE		

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SUSAP KRDUK7EKAROO14FKN   020GOLLIK6EA0E    010TF                    24700100
SUSAP KRDUK7EKAROO14FKN   030DUFFIK7EA0E    010TF                    24700336
SUSAP KRDUK7EKAROO14FKN   040ARGALK7EA0EE H 010TF                    24670211    B 1500010000
SUSAP KRDUK7EKAROO14HPW   010HPW  K6D 0V       IF                                            18000
SUSAP KRDUK7EKAROO14HPW   020PILOEK6EA0E    010TF                    21590116
SUSAP KRDUK7EKAROO14HPW   030AGUYAK6EA0E    010TF                    21760081
SUSAP KRDUK7EKAROO14HPW   040DEMVEK7EA0E    010TF                    21780361
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SUSAP KRDUK7EKAROO14SBY   020JAMIEK6EA0E    010TF                    21300492
SUSAP KRDUK7EKAROO14SBY   030BOGPEK6EA0E    010TF                    23810327
SUSAP KRDUK7EKAROO14SBY   040CEBETK6EA0E    010TF                    23830269    B FL230FL220
SUSAP KRDUK7EKAROO14SBY   050DOYASK6EA0E    010TF                    23800181    B FL23017000
SUSAP KRDUK7EKAROO14SBY   060ARGALK7EA0EE H 010TF                    23810588    B 1500010000
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SUSAP KRDUK7EKAROO14SWL   030BOGPEK6EA0E    010TF                    23810327
SUSAP KRDUK7EKAROO14SWL   040CEBETK6EA0E    010TF                    23830269    B FL230FL220
SUSAP KRDUK7EKAROO14SWL   050DOYASK6EA0E    010TF                    23800181    B FL23017000
SUSAP KRDUK7EKAROO14SWL   060ARGALK7EA0EE H 010TF                    23810588    B 1500010000
SUSAP KRDUK7EKAROO15      010ARGALK7EA0E  H    IF                                            18000
SUSAP KRDUK7EKAROO15      020KAROOK7EA0EE   010TF                    24640058    B 1200008000
SUSAP KRDUK7EKAROO16RW05B 010KAROOK7EA0E       IF                                            18000
SUSAP KRDUK7EKAROO16RW05B 020MUFLYK7EA0E    010TF                    24640142
SUSAP KRDUK7EKAROO16RW05B 030NEWIEK7EA0E    010TF                    22850080      08000          210
SUSAP KRDUK7EKAROO16RW05B 040OCHREK7EA0E    010TF                    22150039
SUSAP KRDUK7EKAROO16RW05B 050STINTK7EA0E    010TF                    23220041
SUSAP KRDUK7EKAROO16RW05B 060TOYERK7EA0EY   010TF                    23220032
SUSAP KRDUK7EKAROO16RW05B 070TOYERK7EA0EE      FM POB K7      025303742322    D
SUSAP KRDUK7EKAROO16RW23B 010KAROOK7EA0E       IF                                            18000
SUSAP KRDUK7EKAROO16RW23B 020LEASAK7EA0E    010TF                    25740058    B 0800006000
SUSAP KRDUK7EKAROO16RW23B 030PAINSK7EA0EE   010TF                    25900030      06000          230
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                1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
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        SUSAP KRDUK7GRW05R   0075000521 N35515267W078475042+0400    +0089100397000059150IIRDU1
        SUSAP KRDUK7GRW23L   0075002322 N35524498W078464582-0400    +0099200431000056150IILEI1
        SUSAP KRDUK7GRW23R   0100002322 N35533776W078464092-0400    +0092500409000056150IIDMP3
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(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
KAROO (RNAV)	ONE	ARGAL.KAROO1	NONE		

US Department of Transportation
Federal Aviation Administration

STAR (Data Record)

ARINC SUMMARY - 424-18 - STAR

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	FKN	FKN	010		IF		FB					
	FKN	GOLLI	020		TF		FB	1.0	247.0()	010.0		
	FKN	DUFFI	030		TF		FB	1.0	247.0()	033.6		
	FKN	ARGAL	040		TF		FB	1.0	246.7()	021.1	BT 1500010000	
	HPW	HPW	010		IF		FB					
	HPW	PILOE	020		TF		FB	1.0	215.9()	011.6		
	HPW	AGUYA	030		TF		FB	1.0	217.6()	008.1		
	HPW	DEMVE	040		TF		FB	1.0	217.8()	036.1		
	HPW	ARGAL	050		TF		FB	1.0	233.8()	030.9	BT 1500010000	
	SBY	SBY	010		IF		FB					
	SBY	JAMIE	020		TF		FB	1.0	213.0()	049.2		
	SBY	BOGPE	030		TF		FB	1.0	238.1()	032.7		
	SBY	CEBET	040		TF		FB	1.0	238.3()	026.9	BT FL230FL220	
	SBY	DOYAS	050		TF		FB	1.0	238.0()	018.1	BT FL23017000	
	SBY	ARGAL	060		TF		FB	1.0	238.1()	058.8	BT 1500010000	
	SWL	SWL	010		IF		FB					
	SWL	JAMIE	020		TF		FB	1.0	228.5()	036.0		
	SWL	BOGPE	030		TF		FB	1.0	238.1()	032.7		
	SWL	CEBET	040		TF		FB	1.0	238.3()	026.9	BT FL230FL220	
	SWL	DOYAS	050		TF		FB	1.0	238.0()	018.1	BT FL23017000	
	SWL	ARGAL	060		TF		FB	1.0	238.1()	058.8	BT 1500010000	
		ARGAL	010		IF		FB					
		KAROO	020		TF		FB	1.0	246.4()	005.8	BT 1200008000	
	RW05B	KAROO	010		IF		FB					
	RW05B	MUFLY	020		TF		FB	1.0	246.4()	014.2		
	RW05B	NEWIE	030		TF		FB	1.0	228.5()	008.0	AT 08000	AT 210
	RW05B	OCHRE	040		TF		FB	1.0	221.5()	003.9		
	RW05B	STINT	050		TF		FB	1.0	232.2()	004.1		
	RW05B	TOYER	060		TF		FO	1.0	232.2()	003.2		
	RW05B	TOYER	070		FM		FB		232.2()			
	RW23B	KAROO	010		IF		FB					
	RW23B	LEASA	020		TF		FB	1.0	257.4()	005.8	BT 0800006000	
	RW23B	PAINS	030		TF		FB	1.0	259.0()	003.0	AT 06000	AT 230

POINT DATA

WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
FKN	N364251.25	W0770044.56	N3642.854	W07700.743
HPW	N371943.93	W0770657.40	N3719.732	W07706.957

1

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
KAROO (RNAV)	ONE	ARGAL.KAROO1	NONE		

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POB (DME)	N351006.55	W0790110.81	N3510.109	W07901.180
SBY	N382042.00	W0753038.10	N3820.700	W07530.635
SWL	N380323.74	W0752750.04	N3803.396	W07527.834
AGUYA	N370235.68	W0771905.56	N3702.595	W07719.093
ARGAL	N361016.63	W0780955.31	N3610.277	W07809.922
BOGPE	N371541.64	W0762942.92	N3715.694	W07629.715
CEBET	N365850.34	W0765554.34	N3658.839	W07655.906
DEMVE	N363131.28	W0774203.30	N3631.521	W07742.055
DOYAS	N364725.01	W0771325.83	N3647.417	W07713.431
DUFFI	N362057.87	W0774729.22	N3620.965	W07747.487
GOLLI	N363750.61	W0771130.31	N3637.844	W07711.505
JAMIE	N373620.58	W0755748.81	N3736.343	W07557.814
KAROO	N360718.90	W0781605.35	N3607.315	W07816.089
LEASA	N360521.08	W0782252.22	N3605.351	W07822.870
MUFLY	N360003.42	W0783108.64	N3600.057	W07831.144
NEWIE	N355403.45	W0783740.45	N3554.058	W07837.674
OCHRE	N355050.69	W0784023.24	N3550.845	W07840.387
PAINS	N360425.17	W0782623.33	N3604.420	W07826.389
PILOE	N370932.70	W0771358.44	N3709.545	W07713.974
STINT	N354756.39	W0784358.77	N3547.940	W07843.980
TOYER	N354541.44	W0784645.42	N3545.691	W07846.757
RW05L	N355228.02	W0784807.07	N3552.467	W07848.118
RW05R	N355152.67	W0784750.42	N3551.878	W07847.840
RW23L	N355244.98	W0784645.82	N3552.750	W07846.764
RW23R	N355337.76	W0784640.92	N3553.629	W07846.682

RUNWAY DATA

RWY	THRESHOLD ELEVATION	TCH
RW05L	00367	57
RW05R	00397	59
RW23L	00431	56
RW23R	00409	56

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
KAROO (RNAV)	ONE	ARGAL.KAROO1	NONE		

RADIO FIX AND HOLDING DATA RECORD

NAME: AGUYA **STATE:** VA **COUNTRY:** US

LATITUDE/LONGITUDE: 370235.68N/0771905.56W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 07/19/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY CHECKED 3

RADIO FIX AND HOLDING DATA RECORD

NAME: ARGAL **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 361016.63N/0780955.31W **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	RALEIGH/DURHAM	RDU	VORTAC	H	063.06	059.06	35.00	35.00		2500	17500
2	TAR RIVER	TYI	VORTAC	L	302.57	297.57	25.30	25.30		2500	17500

HOLDING: **HOLDING TYPE OF ACTION:** MODIFY

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	RDU	VORTAC	063.06	243.06	R	1		2600	14000	8	12
2	NE		WP	066.40	246.40	R		10	6000	24000	15	20

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	230	TOWER (37-001836)	360613.00N/0781127.00W	1549	2C
2	230	TOWER (37-001836)	360613.00N/0781127.00W	1549	2C

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
RALEIGH/DURHAM (FAC 1) AND TAR RIVER (FAC 2) USED TO ESTABLISH FIX COORDINATES
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
10 NM HOLDING LEGS FOR PAT 2 REQUESTED BY ATC.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V615	1, 2				(US)
EN ROUTE	V66	1, 2				(US)
STAR	NASCR			KVUJ	ALBEMARLE	NC (US)
STAR	NASCR			KJQF	CONCORD	NC (US)
STAR	ARGAL	1, 2	1	KRDU	RALEIGH/DURHAM	NC (US)
STAR	KAROO (RNAV)		2	KRDU	RALEIGH/DURHAM	NC (US)
STAR	MEYER (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	NASCR			KRUQ	SALISBURY	NC (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 5 **DATE OF REVISION:** 01/10/2013

REASON FOR REVISION:
1. ADDED PAT 2.
2. REMOVED IAP FROM REQUIRED CHARTING.
3. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 07/19/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: BOGPE **STATE:** VA **COUNTRY:** US

LATITUDE/LONGITUDE: 371541.64N/0762942.92W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 07/19/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: CEBET **STATE:** VA **COUNTRY:** US

LATITUDE/LONGITUDE: 365850.34N/0765554.34W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 07/19/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: DEMVE **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 363131.28N/0774203.30W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 07/19/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: DOYAS **STATE:** VA **COUNTRY:** US

LATITUDE/LONGITUDE: 364725.01N/0771325.83W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 07/19/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: DUFFI **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 362057.87N/0774729.22W **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	FRANKLIN	FKN	VORTAC	L	249.11	240.11	43.56	43.56		2500	17500
2	TAR RIVER	TYI	VORTAC	L	354.22	349.22	22.73	22.73		4500	17500
3	HOPEWELL	HPW	VORTAC	L	215.20	209.20	67.10	67.10		5000	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
FKN	VORTAC	R-249	44	1500	45000
HPW	VORTAC	R-215	68	5000	17500

HOLDING: **HOLDING TYPE OF ACTION:** MODIFY

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	FKN	VORTAC	249.11	249.11	R	1		2500	6000	6	7

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (37-001057)	361729.20N/0775009.40W	1427	3C

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
FRANKLIN (FAC 1) AND TAR RIVER (FAC 2) USED TO ESTABLISH FIX COORDINATES
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V157	1, 2				(US)
EN ROUTE	V615	2, 3				(US)
EN ROUTE	V66	1, 2				(US)
IAP	RNAV (GPS) RWY 2			KIXA	ROANOKE RAPIDS	NC (US)
IAP	VOR/DME RWY 02	1, 2	1	KIXA	ROANOKE RAPIDS	NC (US)
IAP	RNAV (GPS) RWY 33			KEMV	EMPORIA	VA (US)
IAP	RNAV (GPS) RWY 36			KLVL	LAWRENCEVILLE	VA (US)
STAR	ARGAL	1, 2, 3		KRDU	RALEIGH/DURHAM	NC (US)
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	MEYER (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 7 **DATE OF REVISION:** 01/10/2013

REASON FOR REVISION:
1. ADDED FAC 3 TO SUPPORT V615 AND ARGAL STAR.
2. POPULATED HPW ESV DATA.
3. AMENDED PAT 1 MAX HOLDING ALTITUDE FROM 10000 TO 6000.
4. AMENDED PAT 1 CONTROLLING OBSTACLE HEIGHT FROM 1449 MSL TO 1427 MSL.
5. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 07/19/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: GOLLI **STATE:** VA **COUNTRY:** US

LATITUDE/LONGITUDE: 363750.61N/0771130.31W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 08/02/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: HOPEWELL VORTAC **STATE:** VA **COUNTRY:** US

LATITUDE/LONGITUDE: 371943.93N/0770657.40W **TYPE:**

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** NO CHANGE

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	HOPEWELL	HPW	VORTAC	L							17500

HOLDING: **HOLDING TYPE OF ACTION:** MODIFY

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	HPW	VORTAC	025.00	205.00	L	1		2000	6000	4	5
2	E	HPW	VORTAC	072.00	252.00	L	1		2000	6000	4	5
3	S	HPW	VORTAC	183.00	003.00	R	1		2000	6000	4	5
4	S	HPW	VORTAC	197.94	017.94	L	1 1/2		21000	37000	18	26

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (51-000322)	372315.00N/0770343.00W	530	5D
2	200	TOWER (51-000322)	372315.00N/0770343.00W	530	5D
3	200	TOWER (51-000322)	372315.00N/0770343.00W	530	5D

REASON FOR NONSTANDARD HOLDING:
PAT 1 ATC REQUEST
PAT 2 ATC REQUEST
PAT 4 ATC REQUEST

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
CHART PAT 4 ON H-10 & H12 PER ATC REQUEST.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	HENRY			KPHF	NEWPORT NEWS	VA (US)
DP	KISRR			KORF	NORFOLK	VA (US)
EN ROUTE	J191					(US)
EN ROUTE	J208					(US)
EN ROUTE	J55					(US)
EN ROUTE	V189					(US)
EN ROUTE	V213					(US)
EN ROUTE	V260					(US)
EN ROUTE	V454					(US)
EN ROUTE	V615					(US)
IAP	COPTER NDB RWY 14			KFAF	FORT EUSTIS	VA (US)
IAP	COPTER RNAV (GPS) RWY 14			KFAF	FORT EUSTIS	VA (US)
IAP	NDB RWY 14			KFAF	FORT EUSTIS	VA (US)
IAP	RNAV (GPS) RWY 14			KFAF	FORT EUSTIS	VA (US)
IAP	RNAV (GPS) RWY 27			KFKN	FRANKLIN	VA (US)
IAP	ILS OR LOC RWY 7			KPHF	NEWPORT NEWS	VA (US)
IAP	NDB RWY 2			KPHF	NEWPORT NEWS	VA (US)
IAP	NDB RWY 20			KPHF	NEWPORT NEWS	VA (US)
IAP	LOC/NDB RWY 5		3	KPTB	PETERSBURG	VA (US)
IAP	RNAV (GPS) RWY 23			KPTB	PETERSBURG	VA (US)
IAP	VOR RWY 23		2	KPTB	PETERSBURG	VA (US)
IAP	RNAV (GPS) RWY 28			KW96	QUINTON	VA (US)
IAP	VOR-A		3	KW96	QUINTON	VA (US)
IAP	ILS OR LOC RWY 33			KFCI	RICHMOND	VA (US)
IAP	ILS OR LOC RWY 16		1	KRIC	RICHMOND	VA (US)
IAP	ILS OR LOC RWY 2 (ALT MA)		3	KRIC	RICHMOND	VA (US)
IAP	ILS OR LOC RWY 34		1	KRIC	RICHMOND	VA (US)
IAP	ILS RWY 34 (CAT II)		1	KRIC	RICHMOND	VA (US)
IAP	ILS RWY 34 (CAT III)		1	KRIC	RICHMOND	VA (US)
IAP	ILS RWY 34 (SA CAT 1)		1	KRIC	RICHMOND	VA (US)
IAP	RNAV (GPS) RWY 2			KRIC	RICHMOND	VA (US)
IAP	RNAV (GPS) RWY 20			KRIC	RICHMOND	VA (US)
IAP	RNAV (GPS) RWY 34			KRIC	RICHMOND	VA (US)
IAP	RNAV (GPS) RWY 7			KRIC	RICHMOND	VA (US)
IAP	VOR RWY 16		1	KRIC	RICHMOND	VA (US)
IAP	VOR RWY 2			KRIC	RICHMOND	VA (US)
IAP	VOR RWY 20			KRIC	RICHMOND	VA (US)
IAP	VOR RWY 25			KRIC	RICHMOND	VA (US)
IAP	NDB RWY 20			KAKQ	WAKEFIELD	VA (US)
IAP	RNAV (GPS) RWY 20			KAKQ	WAKEFIELD	VA (US)

QUALITY 3 CHECKED

IAP	RNAV (GPS) RWY 10	KFYJ	WEST POINT	VA (US)
IAP	RNAV (GPS) - C	KJGG	WILLIAMSBURG	VA (US)
IAP	VOR - B	KJGG	WILLIAMSBURG	VA (US)
IAP	RNAV (GPS) RWY 5	KW94	WILLIAMSBURG	VA (US)
STAR	SMYRNA	KDOV	DOVER	DE (US)
STAR	ARGAL	KRDU	RALEIGH/DURHAM	NC (US)
STAR	KAROO (RNAV)	KRDU	RALEIGH/DURHAM	NC (US)
STAR	MEYER (RNAV)	KRDU	RALEIGH/DURHAM	NC (US)
STAR	JAIKE (RNAV)	KCDW	CALDWELL	NJ (US)
STAR	JAIKE (RNAV)	KLDJ	LINDEN	NJ (US)
STAR	JAIKE (RNAV)	K47N	MANVILLE	NJ (US)
STAR	JAIKE (RNAV)	KMMU	MORRISTOWN	NJ (US)
STAR	JAIKE (RNAV)	KSMQ	SOMERVILLE	NJ (US)
STAR	JAIKE (RNAV)	KTEB	TETERBORO	NJ (US)

REQUIRED CHARTING: DP, STAR, MILITARY IAP, IAP, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 16 **DATE OF REVISION:** 01/10/2013

REASON FOR REVISION:
1. AMENDED PAT 1 MAX HOLDING ALTITUDE FROM 17500 TO 6000.
2. REPLACED 230 KIAS/265 KIAS OBSTACLE WITH 200 KIAS OBSTACLE FOR PAT 1. MILITARY PROCEDURES TIED TO THE HOLDING PATTERN HAVE BEEN CANCELLED.
3. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 07/31/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: JAMIE **STATE:** VA **COUNTRY:** US

LATITUDE/LONGITUDE: 373620.58N/0755748.81W **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	SALISBURY	SBY	VORTAC	L	218.01	206.01	49.24	49.24		2000	17500
2	HARCUM	HCM	VORTAC	L	082.00	075.00		36.91		2000	17500
3	CAPE CHARLES	CCV	VORTAC	L	016.00	006.00	15.56	15.56		2000	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
SBY	VORTAC	R-218	50	2000	17500

HOLDING: **HOLDING TYPE OF ACTION:** CANCEL

REMARKS:
HARCUM (FAC 2) AND CAPE CHARLES (FAC 3) USED TO ESTABLISH FIX COORDINATES

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	HENRY			KPHF	NEWPORT NEWS	VA (US)
EN ROUTE	V1	1, 2, 3				(US)
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 4 **DATE OF REVISION:** 01/10/2013

REASON FOR REVISION:
1. DELETED HOLD PAT 1.
2. ADDED DME VALUE FOR FAC 3.
3. ADDED DIST FROM FAC TO FAC 1, 2, 3.
4. POPULATED ESV DATA.
5. ADDED DP AND STAR TO REQUIRED CHARTING.
6. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 07/31/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: KAROO **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 360718.90N/0781605.35W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 07/31/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: LEASA **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 360521.08N/0782252.22W **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
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	MEYER (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1 **DATE OF REVISION:** 01/10/2013

REASON FOR REVISION:
1. REMOVED IAP FROM REQUIRED CHARTING.
2. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 07/31/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: NEWIE **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 355403.45N/0783740.45W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 08/01/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: OCHRE **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 355050.69N/0784023.24W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 08/01/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: PAINS **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 360425.17N/0782623.33W **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 23L			KRDU	RALEIGH/DURHAM	NC (US)
IAP	RNAV (RNP) Z RWY 23R			KRDU	RALEIGH/DURHAM	NC (US)
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 08/01/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: PILOE **STATE:** VA **COUNTRY:** US

LATITUDE/LONGITUDE: 370932.70N/0771358.44W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 08/01/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY CHECKED 3

RADIO FIX AND HOLDING DATA RECORD

NAME: STINT **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 354756.39N/0784358.77W **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 5R			KRDU	RALEIGH/DURHAM	NC (US)
STAR	BLOGS (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 07/13/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: TOYER **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 354541.44N/0784645.42W **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 5R			KRDU	RALEIGH/DURHAM	NC (US)
STAR	BLOGS (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 07/13/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

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

SIGNATURE:

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

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

PENDING EST CHART: 12/13/2012

NAME: FRANKLIN VORTAC **STATE:** VA **COUNTRY:** US

LATITUDE/LONGITUDE: 364251.25N/0770044.56W **TYPE:**

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** NO CHANGE

INFO ONLY

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	FRANKLIN	FKN	VORTAC	L							17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
FKN	VORTAC	R-249	50	1500	45000

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	FKN	VORTAC	290.00	110.00	R	1		1600	6000	4	5
2	W		WP	290.00	110.00	R		4	2000	5000	4	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (51-000975)	364118.00N/0770057.00W	529	5D
2	200	TOWER (51-000975)	364118.00N/0770057.00W	529	5D

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	MOUNTY			KFAY	FAYETTEVILLE	NC (US)
DP	RALEIGH			KRDU	RALEIGH/DURHAM	NC (US)
DP	HENRY			KPHF	NEWPORT NEWS	VA (US)
DP	KISRR			KORF	NORFOLK	VA (US)
EN ROUTE	J207					(US)
EN ROUTE	J79					(US)
EN ROUTE	N189					(US)
EN ROUTE	V260					(US)
EN ROUTE	V266					(US)
EN ROUTE	V66					(US)
IAP	RNAV (GPS) RWY 2			KIXA	ROANOKE RAPIDS	NC (US)
IAP	RNAV (GPS) RWY 20			KIXA	ROANOKE RAPIDS	NC (US)
IAP	VOR/DME RWY 2			KIXA	ROANOKE RAPIDS	NC (US)
IAP	RNAV (GPS) RWY 33			KEMV	EMPORIA	VA (US)
IAP	VOR RWY 9		1	KFKN	FRANKLIN	VA (US)
IAP	VOR/DME RWY 27		1	KFKN	FRANKLIN	VA (US)
IAP	ILS OR LOC RWY 25		1	KPHF	NEWPORT NEWS	VA (US)
IAP	ILS OR LOC RWY 7			KPHF	NEWPORT NEWS	VA (US)
IAP	LOC/DME RWY 20			KPHF	NEWPORT NEWS	VA (US)
IAP	RNAV (GPS) RWY 7			KPHF	NEWPORT NEWS	VA (US)
IAP	ILS OR LOC RWY 23		1	KORF	NORFOLK	VA (US)
IAP	RNAV (GPS) RWY 10			KPVG	NORFOLK	VA (US)
IAP	LOC/NDB RWY 5			KPTB	PETERSBURG	VA (US)
IAP	RNAV (GPS) RWY 5			KPTB	PETERSBURG	VA (US)
IAP	VOR RWY 23			KPTB	PETERSBURG	VA (US)
IAP	RNAV (GPS) RWY 2 (SPECIAL)			K31VA	SMITHFIELD	VA (US)
IAP	RNAV (GPS) RWY 25			KSFQ	SUFFOLK	VA (US)
IAP	RNAV (GPS) RWY 4			KSFQ	SUFFOLK	VA (US)
IAP	RNAV (GPS) RWY 7			KSFQ	SUFFOLK	VA (US)
IAP	RNAV (GPS) RWY 20		2	KAKQ	WAKEFIELD	VA (US)
STAR	NASCR			KVUJ	ALBEMARLE	NC (US)
STAR	NASCR			KJQF	CONCORD	NC (US)
STAR	ARGAL			KRDU	RALEIGH/DURHAM	NC (US)
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	MEYER (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	NASCR			KRUQ	SALISBURY	NC (US)
STAR	DRONE			KLFI	HAMPTON	VA (US)
STAR	DRONE			KPHF	NEWPORT NEWS	VA (US)
STAR	DRONE			KCPK	NORFOLK	VA (US)
STAR	DRONE			KNGU	NORFOLK	VA (US)
STAR	DRONE			KORF	NORFOLK	VA (US)
STAR	DRONE			KPVG	NORFOLK	VA (US)

QUALITY 3 CHECKED

REQUIRED CHARTING: DP, STAR, MILITARY IAP, IAP, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 15 **DATE OF REVISION:** 12/13/2012

REASON FOR REVISION:
REMOVED FROM HISTORY STATUS

DEVELOPED BY:	**DATE:** 07/20/2012	**OFFICE:** AJV-352	**NAME:** DONALD SMITH (ROSE BOONE)
APPROVED BY:	**DATE:**	**OFFICE:** AJV-352	**NAME:** DARRYEL ADAMS
	SIGNATURE:		

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

QUALITY CHECKED 3

RADIO FIX AND HOLDING DATA RECORD

NAME: MUFLY **STATE:** NC **COUNTRY:** US

INFO ONLY

LATITUDE/LONGITUDE: 360003.42N/0783108.64W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	MEYER (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/23/2010

DEVELOPED BY: **DATE:** 02/04/2010 **OFFICE:** AVN-110 **NAME:** JILL OLSON

APPROVED BY: **DATE:** 08/09/2010 **OFFICE:** AVN-110 **NAME:** GEORGE DAVIS

SIGNATURE:

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

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SALISBURY VORTAC **STATE:** MD **COUNTRY:** US

INFO ONLY

LATITUDE/LONGITUDE: 382042.00N/0753038.10W **TYPE:**

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FEET	MRA	MAA
1	SALISBURY	SBY	VORTAC	L							45000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
SBY	VORTAC	R-229	103	18000	45000

FIX RESTRICTIONS:
MCA V29 5000 NORTHBOUND

HOLDING: **HOLDING TYPE OF ACTION:** MODIFY

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	DME	HOLDING ALTITUDES MIN	MAX	TEMPLATES MIN	MAX
1	NE	SBY	VORTAC	039.00	219.00	L	1		2000	3500	4	4

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (24-000750)	382300.26N/0752451.85W	388	5D

REASON FOR NONSTANDARD HOLDING:
PAT 1 TO AVOID RESTRICTED AREA R-4006

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	ATLANTIC CITY			KACY	ATLANTIC CITY	NJ (US)
DP	LEEAH			KMIV	MILLVILLE	NJ (US)
DP	HENRY			KPHF	NEWPORT NEWS	VA (US)
DP	KISRR			KORF	NORFOLK	VA (US)
EN ROUTE	J209					(US)
EN ROUTE	J79					(US)
EN ROUTE	V1					(US)
EN ROUTE	V29					(US)
IAP	VOR RWY 4			KGED	GEORGETOWN	DE (US)
IAP	RNAV (GPS)-A			KN06	LAUREL	DE (US)
IAP	LOC RWY 14			KOXB	OCEAN CITY	MD (US)
IAP	RNAV (GPS) RWY 14			KOXB	OCEAN CITY	MD (US)
IAP	RNAV (GPS) RWY 2			KOXB	OCEAN CITY	MD (US)
IAP	VOR-A			KOXB	OCEAN CITY	MD (US)
IAP	ILS OR LOC RWY 32			KSBY	SALISBURY	MD (US)
IAP	RNAV (GPS) RWY 14			KSBY	SALISBURY	MD (US)
IAP	RNAV (GPS) RWY 23			KSBY	SALISBURY	MD (US)
IAP	RNAV (GPS) RWY 32			KSBY	SALISBURY	MD (US)
IAP	RNAV (GPS) RWY 5			KSBY	SALISBURY	MD (US)
IAP	VOR RWY 23		1	KSBY	SALISBURY	MD (US)
IAP	VOR RWY 32		1	KSBY	SALISBURY	MD (US)
IAP	VOR RWY 5		1	KSBY	SALISBURY	MD (US)
IAP	RNAV (GPS) RWY 17			KWAL	WALLOPS ISLAND	VA (US)
IAP	RNAV (GPS) RWY 22			KWAL	WALLOPS ISLAND	VA (US)
IAP	VOR OR TACAN RWY 17			KWAL	WALLOPS ISLAND	VA (US)
IAP	VOR/DME OR TACAN RWY 10			KWAL	WALLOPS ISLAND	VA (US)
STAR	SMYRNA			KDOV	DOVER	DE (US)
STAR	ARGAL			KRDU	RALEIGH/DURHAM	NC (US)
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	MEYER 1 (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	SEA ISLE			KBLM	BELMAR/FARMINGDALE	NJ (US)
STAR	SEA ISLE			KNEL	LAKEHURST	NJ (US)
STAR	SEA ISLE			KN14	LUMBERTON	NJ (US)
STAR	SEA ISLE			KVAY	MOUNT HOLLY	NJ (US)
STAR	SEA ISLE			KN87	ROBBINSVILLE	NJ (US)
STAR	SEA ISLE			KMJX	TOMS RIVER	NJ (US)
STAR	SEA ISLE			KWRI	WRIGHTSTOWN	NJ (US)

QUALITY 3 CHECKED

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 12 **DATE OF REVISION:** 09/23/2010

REASON FOR REVISION:
UPDATED HOLDING PAT 1 CONTROLLING OBSTRUCTION.
ADDED ESV INFORMATION.
UPDATED FIX USE.
UPDATED SIGNATURE BLOCKS.

THIS IS A CORRECTED COPY OF THE FORM DATED 3/15/10.
ADDED MCA V29 5000 NORTHBOUND.

DEVELOPED BY:	**DATE:** 07/17/2010	**OFFICE:** AVN-110	**NAME:** JILL OLSON
APPROVED BY:	**DATE:** 08/09/2010	**OFFICE:** AVN-110	**NAME:** GEORGE DAVIS
	SIGNATURE:		

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

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SNOW HILL VORTAC **STATE:** MD **COUNTRY:** US

LATITUDE/LONGITUDE: 380323.74N/0752750.04W **TYPE:**

INFO ONLY

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	SNOW HILL	SWL	VORTAC	L							45000

HOLDING: **HOLDING TYPE OF ACTION:** MODIFY

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	SW	SWL	VORTAC	219.05	039.05	L	1		2000	5000	4	5
2	E	SWL	VORTAC	090.57	270.57	R	1		2000	6000	4	5
3	NE		WP	052.00	232.00	R		4	2000	6000	4	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (24-000639)	380436.36N/0753216.74W	438	1A
2	200	TOWER (24-000639)	380436.36N/0753216.74W	438	1A
3	200	TOWER (24-000639)	380436.36N/0753216.74W	438	1A

REASON FOR NONSTANDARD HOLDING:
PAT 1 TO AVOID RESTRICTED AREA R-6604

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	HENRY			KPHF	NEWPORT NEWS	VA (US)
DP	KISRR			KORF	NORFOLK	VA (US)
EN ROUTE	J121					(US)
EN ROUTE	J174					(US)
EN ROUTE	V139					(US)
EN ROUTE	V29					(US)
IAP	RNAV (GPS) RWY 32		3	KW41	CRISFIELD	MD (US)
IAP	VOR/DME-A		2	KW41	CRISFIELD	MD (US)
IAP	RNAV (GPS) RWY 2			KOXB	OCEAN CITY	MD (US)
IAP	RNAV (GPS) RWY 32			KOXB	OCEAN CITY	MD (US)
IAP	VOR-A			KOXB	OCEAN CITY	MD (US)
IAP	ILS OR LOC RWY 32			KSBY	SALISBURY	MD (US)
IAP	RNAV (GPS) RWY 32			KSBY	SALISBURY	MD (US)
IAP	RNAV (GPS) RWY 21			KMFV	MELFA	VA (US)
IAP	RNAV (GPS) RWY 28			KWAL	WALLOPS ISLAND	VA (US)
IAP	VOR OR TACAN RWY 17		1	KWAL	WALLOPS ISLAND	VA (US)
STAR	SMYRNA			KDOV	DOVER	DE (US)
STAR	CEDAR LAKE			KILG	WILMINGTON	DE (US)
STAR	JIIMS (RNAV)			KILG	WILMINGTON	DE (US)
STAR	ARGAL			KRDU	RALEIGH/DURHAM	NC (US)
STAR	KAROO (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	MEYER (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	SEA ISLE			KBLM	BELMAR/FARMINGDALE	NJ (US)
STAR	SEA ISLE			KNEL	LAKEHURST	NJ (US)
STAR	SEA ISLE			KN14	LUMBERTON	NJ (US)
STAR	SEA ISLE			KVAY	MOUNT HOLLY	NJ (US)
STAR	SEA ISLE			KN87	ROBBINSVILLE	NJ (US)
STAR	SEA ISLE			KMJX	TOMS RIVER	NJ (US)
STAR	CEDAR LAKE			KTTN	TRENTON	NJ (US)
STAR	DUPONT			KTTN	TRENTON	NJ (US)
STAR	JIIMS (RNAV)			KTTN	TRENTON	NJ (US)
STAR	SEA ISLE			KWRI	WRIGHTSTOWN	NJ (US)
STAR	KORRY			KLGA	NEW YORK	NY (US)
STAR	CEDAR LAKE			KMQS	COATESVILLE	PA (US)
STAR	DUPONT			KMQS	COATESVILLE	PA (US)
STAR	JIIMS (RNAV)			KMQS	COATESVILLE	PA (US)
STAR	CEDAR LAKE			KPHL	PHILADELPHIA	PA (US)
STAR	DUPONT			KPHL	PHILADELPHIA	PA (US)
STAR	JIIMS (RNAV)			KPHL	PHILADELPHIA	PA (US)
STAR	CEDAR LAKE			KPNE	PHILADELPHIA	PA (US)
STAR	DUPONT			KPNE	PHILADELPHIA	PA (US)
STAR	JIIMS (RNAV)			KPNE	PHILADELPHIA	PA (US)

QUALITY 3 CHECKED

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 9 **DATE OF REVISION:** 04/05/2012

REASON FOR REVISION:
UPDATED LAT/LONG TO MATCH FACILITY
UPDATED PAT 3 INBOUND COURSE FROM 231.73
UPDATED FIX USE

DEVELOPED BY:	**DATE:** 07/28/2011	**OFFICE:** AJV-352	**NAME:** DONALD SMITH (DANA MITCHELL)
APPROVED BY:	**DATE:** 12/15/2011	**OFFICE:** AJV-352	**NAME:** DARRYEL ADAMS
	SIGNATURE:		

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: PXT APCH
OTHER: WAL ATCT

QUALITY CHECKED 3