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
FLAT ROCK	FAK.PHLBO3	FAK VORTAC	SHONA	48.69/20.00	17000		45000	
			OTT VORTAC	48.83/67.24	17000		45000	
			PALEO	54.96/26.01	17000			
			PEEDS	55.19/09.20	17000			
			FUBRR	55.28/10.07	17000			AT FL270
			DQO VORTAC	55.37/33.53	10000			AT/ABOVE FL200
GORDONSVILLE	GVE.PHLBO3	GVE VORTAC	OTT VORTAC	70.59/78.35	17000		45000	
			PALEO	54.96/26.01	17000			
			PEEDS	55.19/09.20	17000			
			FUBRR	55.28/10.07	17000			AT FL270
			DQO VORTAC	55.37/33.53	10000			AT/ABOVE FL200
PATUXENT	PXT.PHLBO3	PXT VORTAC	PEEDS	21.30/51.73	17000		23000	
			FUBRR	55.28/10.07	17000			
			DQO VORTAC	55.37/33.53	10000			AT/ABOVE FL200

(2) Arrival Route Description: FROM DQO VORTAC ON TRACK 055.87/23.53 TO CROSS STEFE AT/ABOVE 13000 (MEA 10000), THEN ON TRACK 056.10/13.22 TO CROSS SOMTO AT 11000 (MEA 5000), THEN ON TRACK 056.22/10.47 TO ARD VOR/DME (MEA 5000), THEN ON TRACK 060.01/3.00 TO CROSS DYLIN AT 8000 (MEA 5000), THEN ON TRACK 060.04/1.99 TO MERSR (MEA 5000), THEN ON TRACK 060.06/9.92 TO METRO (MEA 5000), THEN ON TRACK 024.52/11.27 TO MARRT (MEA 4000), THEN ON TRACK 024.54/13.67 TO PHLBO (MEA 2500), THEN ON TRACK 024.54. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

(3) Procedural Data Notes:
CHART NOTE: Radar required.
CHART NOTE: Turbojet aircraft only.
CHART NOTE: DME/DME/IRU or GPS required.
CHART NOTE: RNAV 1.
CHART NOTE: Maintain last assigned altitude until cleared to "Descend via the PHLBO3". Then comply with altitude restrictions as published.
CHART NOTE AT FUBRR: CROSS AT FL270 EXCEPT FOR PXT TRANSITION.

(4) Fixes and/or Holding Patterns:
CHART HOLDING AT PALEO (HOLD SW, LT 054.96 INBOUND, 10NM LEGS).
CHART HOLDING AT ARD VOR/DME (HOLD SW, RT, 056.22 INBOUND, 4NM LEGS, 210K).
CHART HOLDING AT STEFE (HOLD SW, RT, 055.87 INBOUND, 4NM LEGS, 210K).
CHART HOLDING AT MERSR (HOLD SW, RT, 060.04 INBOUND, 4NM LEGS, 210K).
CHART HOLDING AT METRO (HOLD SW, LT, 060.06 INBOUND, 4NM LEGS, 210K).
CHART FIX GRITY.

(5) Communications: EWR ATIS 115.7 134.82 ZDC 132.52 307.25, NY APP CON 128.55 379.9.

(6) Arrival Name	(7) Number	(8) STAR Computer Code	(9) Superseded Nr.	(10) Dated	(11) Effective Date
PHLBO THREE (RNAV)	THREE	DQO.PHLBO3	TWO	10MARCH2011	31 MAY 2012

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(12) Airports Served

Airport Name NEWARK LIBERTY INTL (KEWR)	**City/State** NEWARK, NJ
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:

The depiction of fixes on the amended procedure should remain unchanged from the existing PHLBO TWO.

(15) Additional Flight Data:
REFERENCE MAGNETIC VARIATION = KEWR 13W/1985
DME/DME ASSESSMENT: SAT (RNP 2.0).

(6) Arrival Name	(7) Number	(8) STAR Computer Code	(9) Superseded Nr.	(10) Dated	(11) Effective Date
PHLBO THREE (RNAV)	THREE	DQO.PHLBO3	TWO	10MARCH2011	31 MAY 2012

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									
FAK VORTAC	373142.63N / 0774941.59W	Y		IF					FAK.PHLBO3
SHONA	374757.54N / 0773458.40W	Y	FB	TF	035.69	20.00			
OTT VORTAC	384221.14N / 0764441.09W	Y	FB	TF	035.83	67.24			
PALEO	390140.78N / 0762221.81W	Y	FB	TF	041.96	26.01			HOLDING - LEFT TURNS
PEEDS	390830.07N / 0761425.12W	Y	FB	TF	042.19	09.20			
FUBRR	391557.35N / 0760541.59W	Y	FB	TF	042.28	10.07	AT FL270		
DQO VORTAC	394041.30N / 0753625.49W	Y	FB	TF	042.37	33.53	AT/ABOVE FL200		
En Route Transition									
GVE VORTAC	380048.96N / 0780910.89W	Y		IF					GVE.PHLBO3
OTT VORTAC	384221.14N / 0764441.09W	Y	FB	TF	057.59	78.35			
PALEO	390140.78N / 0762221.81W	Y	FB	TF	041.96	26.01			HOLDING - LEFT TURNS
PEEDS	390830.07N / 0761425.12W	Y	FB	TF	042.19	09.20			
FUBRR	391557.35N / 0760541.59W	Y	FB	TF	042.28	10.07	AT FL270		
DQO VORTAC	394041.30N / 0753625.49W	Y	FB	TF	042.37	33.53	AT/ABOVE FL200		

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
PHLBO THREE (RNAV)	THREE	DQO.PHLBO3	TWO	10MARCH2011	31 MAY 2012

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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									
PXT VORTAC	381716.25N / 0762400.81W	Y	FB	IF					PXT.PHLBO3
PEEDS	390830.07N / 0761425.12W	Y	FB	TF	008.30	51.73			
FUBRR	391557.35N / 0760541.59W	Y	FB	TF	042.28	10.07			
DQO VORTAC	394041.30N / 0753625.49W	Y		TF	042.37	33.53	AT/ABOVE FL200		
Common Route									
DQO VORTAC	394041.30N / 0753625.49W	Y	FB	IF			AT/ABOVE FL200		
STEFE	395755.05N / 0751536.04W	Y	FB	TF	042.87	23.53	AT/ABOVE 13000		HOLDING - RIGHT TURNS, MAX 210 KIAS
SOMTO	400734.20N / 0750349.42W	Y	FB	TF	043.10	13.22	AT 11000		
ARD VOR/DME	401512.03N / 0745427.42W	Y	FB	TF	043.22	10.47			HOLDING - RIGHT TURNS, MAX 210 KIAS
DYLIN	401714.89N / 0745135.25W	Y	FB	TF	047.01	03.00	AT 8000		
MERSR	401836.44N / 0744940.84W	Y	FB	TF	047.04	01.99			HOLDING - RIGHT TURNS, MAX 210 KIAS
METRO	402521.77N / 0744010.30W	Y	FB	TF	047.06	09.92			HOLDING - LEFT TURNS, MAX 210 KIAS
MARRT	403625.03N / 0743712.97W	Y	FB	TF	011.52	11.27			
PHLBO	404949.39N / 0743336.68W	Y	FO	TF	011.54	13.67			
EWR ALL RWYS				FM	011.54	05.00			

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
PHLBO THREE (RNAV)	THREE	DQO.PHLBO3	TWO	10MARCH2011	31 MAY 2012

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STAR (Data Record)

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ARINC PACKET - 424-18 - STAR

                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAD        ARD   K6010 0VDLW N40151203W074542742    N40151203W074542742W0100003001     NARYARDLEY
        SUSAD        DQO   K6011 00VTLW N39404130W075362549    N39404130W075362549W0100000701     NARDUPONT
        SUSAD        FAK   K6011 00VTH  N37314263W077494159    N37314263W077494159W0060004602     NARFLAT ROCK
        SUSAD        GVE   K6011 00VTHA N38004896W078091089    N38004896W078091089W0060003822     NARGORDONSVILLE
        SUSAD        OTT   K6011 00VTLA N38422114W076444109    N38422114W076444109W0100002101     NARNOTTINGHAM
        SUSAD        PXT   K6011 00VTLW N38171625W076240081    N38171625W076240081W0100000201     NARPATUXENT

                 1         2         3         4         5         6         7         8         9         0         1         2         3
VP      12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   DYLIN K60    C     N40171489W074513525                      W0125     NAR           DYLIN
        SUSAEAENRT   FUBRR K60    C     N39155735W076054159                      W0115     NAR           FUBRR
        SUSAEAENRT   MARRT K60    W     N40362503W074371297                      W0127     NAR           MARRT
        SUSAEAENRT   MERSR K60    C   L N40183644W074494084                      W0125     NAR           MERSR
        SUSAEAENRT   METRO K60    C   L N40252177W074401030                      W0126     NAR           METRO
        SUSAEAENRT   PALEO K60    C   B N39014078W076222181                      W0112     NAR           PALEO
        SUSAEAENRT   PEEDS K60    C     N39083007W076142512                      W0114     NAR           PEEDS
        SUSAEAENRT   PHLBO K60    W     N40494939W074333668                      W0128     NAR           PHLBO
        SUSAEAENRT   SHONA K60    C   H N37475754W077345840                      W0102     NAR           SHONA
        SUSAEAENRT   SOMTO K60    C   L N40073420W075034942                      W0123     NAR           SOMTO
        SUSAEAENRT   STEFE K60    C   L N39575505W075153604                      W0122     NAR           STEFE

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KEWRK6AEWR     0     110YHN40413300W074100720W013000018         1800018000C    MNAR    NEWARK LIBERTY INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KEWRK6EPHLBO34FAK   010FAK  K6D 0V       IF                                                18000
        SUSAP KEWRK6EPHLBO34FAK   020SHONAK6EA0E    010TF                    04870200
        SUSAP KEWRK6EPHLBO34FAK   030OTT  K6D 0V    010TF                    04880672
        SUSAP KEWRK6EPHLBO34FAK   040PALEOK6EA0E  H 010TF                    05500260
        SUSAP KEWRK6EPHLBO34FAK   050PEEDSK6EA0E    010TF                    05520092
        SUSAP KEWRK6EPHLBO34FAK   060FUBRRK6EA0E    010TF                    05530101      FL270
        SUSAP KEWRK6EPHLBO34FAK   070DQO  K6D 0VE   010TF                    05540335    + FL200
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QUALITY 1 CHECKED

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
PHLBO RNAV	THREE	DQO.PHLBO3	TWO	10 MARCH 2011	31 MAY 2012

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SUSAP KEWRK6EPHLBO34GVE   010GVE  K6D 0V       IF                                          18000
SUSAP KEWRK6EPHLBO34GVE   020OTT  K6D 0V    010TF                  07060784
SUSAP KEWRK6EPHLBO34GVE   030PALEOK6EA0E  H 010TF                  05500260
SUSAP KEWRK6EPHLBO34GVE   040PEEDSK6EA0E    010TF                  05520092
SUSAP KEWRK6EPHLBO34GVE   050FUBRRK6EA0E    010TF                  05530101      FL270
SUSAP KEWRK6EPHLBO34GVE   060DQO  K6D 0VE   010TF                  05540335    + FL200
SUSAP KEWRK6EPHLBO34PXT   010PXT  K6D 0V       IF                                          18000
SUSAP KEWRK6EPHLBO34PXT   020PEEDSK6EA0E    010TF                  02130517
SUSAP KEWRK6EPHLBO34PXT   030FUBRRK6EA0E    010TF                  05530101
SUSAP KEWRK6EPHLBO34PXT   040DQO  K6D 0VE   010TF                  05540335    + FL200
SUSAP KEWRK6EPHLBO35ALL   010DQO  K6D 0V       IF                              + FL200     18000
SUSAP KEWRK6EPHLBO35ALL   020STEFEK6EA0E  H 010TF                  05590235    + 13000
SUSAP KEWRK6EPHLBO35ALL   030SOMTOK6EA0E    010TF                  05610132      11000
SUSAP KEWRK6EPHLBO35ALL   040ARD  K6D 0V  H 010TF                  05620105
SUSAP KEWRK6EPHLBO35ALL   050DYLINK6EA0E    010TF                  06000030      08000
SUSAP KEWRK6EPHLBO35ALL   060MERSRK6EA0E  H 010TF                  06000020
SUSAP KEWRK6EPHLBO35ALL   070METROK6EA0E  H 010TF                  06010099
SUSAP KEWRK6EPHLBO35ALL   080MARRTK6EA0E    010TF                  02450113
SUSAP KEWRK6EPHLBO35ALL   090PHLBOK6EA0EY   010TF                  02450137
SUSAP KEWRK6EPHLBO35ALL   100PHLBOK6EA0EE      FM ARD K6      034603810245    D

                1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAP KEWRK6GRW04L   011[illegible]00388 N40405396W074103166+0000    -0029300010254052150IIEWR1
        SUSAP KEWRK6GRW04R   010[illegible]00388 N40404989W074102055+0000    -0029100011119055150IIEZA3
        SUSAP KEWRK6GRW11    006[illegible]01080 N40421010W074105055-0100    -0027000018000057150IIGPR1
        SUSAP KEWRK6GRW22L   010[illegible]02188 N40415230W074094087+0000    -0029200010179340150IILSQ1
        SUSAP KEWRK6GRW22R   011[illegible]02188 N40415640W074095197+0000    -0029300010144046150IIJNN1
        SUSAP KEWRK6GRW29    006[illegible]02880 N40420451W074092645+0100    -0029400010029860150R
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QUALITY CHECKED

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
PHLBO RNAV	THREE	DQO.PHLBO3	TWO	10 MARCH 2011	31 MAY 2012

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STAR (Data Record)

ARINC SUMMARY - 424-18 - STAR

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	PAK	PAK	010		IF		FB					
	PAK	SHO[illegible]	020		TF		FB	1.0	048.7()	020.0		
	PAK	OTT	030		TF		FB	1.0	048.8()	067.2		
	PAK	PAL[illegible]	040		TF		FB	1.0	055.0()	026.0		
	PAK	PEE[illegible]	050		TF		FB	1.0	055.2()	009.2		
	PAK	FUB[illegible]	060		TF		FB	1.0	055.3()	010.1	AT FL270	
	PAK	DQO	070		TF		FB	1.0	055.4()	033.5	AA FL200	
	GVE	GVE	010		IF		FB					
	GVE	OTT	020		TF		FB	1.0	070.6()	078.4		
	GVE	PAL[illegible]	030		TF		FB	1.0	055.0()	026.0		
	GVE	PEE[illegible]	040		TF		FB	1.0	055.2()	009.2		
	GVE	FU[illegible]	050		TF		FB	1.0	055.3()	010.1	AT FL270	
	GVE	DQO	060		TF		FB	1.0	055.4()	033.5	AA FL200	
	PXT	PXT	010		IF		FB					
	PXT	PEE[illegible]	020		TF		FB	1.0	021.3()	051.7		
	PXT	FUB[illegible]	030		TF		FB	1.0	055.3()	010.1		
	PXT	DQO	040		TF		FB	1.0	055.4()	033.5	AA FL200	
	ALL	DQO	010		IF		FB				AA FL200	
	ALL	STE[illegible]	020		TF		FB	1.0	055.9()	023.5	AA 13000	
	ALL	SOM[illegible]	030		TF		FB	1.0	056.1()	013.2	AT 11000	
	ALL	ARD	040		TF		FB	1.0	056.2()	010.5		
	ALL	DYL[illegible]	050		TF		FB	1.0	060.0()	003.0	AT 08000	
	ALL	MEP[illegible]	060		TF		FB	1.0	060.0()	002.0		
	ALL	MET[illegible]	070		TF		FB	1.0	060.1()	009.9		
	ALL	MAR[illegible]	080		TF		FB	1.0	024.5()	011.3		
	ALL	PHL[illegible]	090		TF		FO	1.0	024.5()	013.7		
	ALL	PHL[illegible]	100		FM		FB		024.5()			

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	ARD	N401512.03	W0745427.42	N4015.201	W07454.457
	DQO	N394041.30	W0753625.49	N3940.688	W07536.425
	PAK	N373142.63	W0774941.59	N3731.711	W07749.693
	GVE	N380048.96	W0780910.89	N3800.816	W07809.182
	OTT	N384221.14	W0764441.09	N3842.352	W07644.685
	PXT	N381716.25	W0762400.81	N3817.271	W07624.014
	DYL[illegible]	N401714.89	W0745135.25	N4017.248	W07451.588
	FUB[illegible]	N391557.35	W0760541.59	N3915.956	W07605.693

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
PHLBO RNAV	THREE	DQO.PHLBO3	TWO	10 MARCH 2011	31 MAY 2012

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MA[illegible]	N403625.03	W0743712.97	N4036.417	W07437.216
ME[illegible]	N401836.44	W0744940.84	N4018.607	W07449.681
ME[illegible]	N402521.77	W0744010.30	N4025.363	W07440.172
PA[illegible]	N390140.78	W0762221.81	N3901.680	W07622.364
PE[illegible]	N390830.07	W0761425.12	N3908.501	W07614.419
PH[illegible]	N404949.39	W0743336.68	N4049.823	W07433.611
SH[illegible]	N374757.54	W0773458.40	N3747.959	W07734.973
SO[illegible]	N400734.20	W0750349.42	N4007.570	W07503.824
ST[illegible]	N395755.05	W0751536.04	N3957.918	W07515.601
RW[illegible]	N404053.96	W0741031.66	N4040.899	W07410.528
RW[illegible]	N404049.89	W0741020.55	N4040.832	W07410.343
RW[illegible]	N404210.10	W0741050.55	N4042.168	W07410.843
RW[illegible]	N404152.30	W0740940.87	N4041.872	W07409.681
RW[illegible]	N404156.40	W0740951.97	N4041.940	W07409.866
RW[illegible]	N404204.51	W0740926.45	N4042.075	W07409.441

RUNWAY DATA

RWY	THRESHOLD ELEVATION	TCH
RW[illegible]	00010	52
RW[illegible]	00011	55
RW[illegible]	00018	57
RW[illegible]	00010	40
RW[illegible]	00010	46
RW[illegible]	00010	60

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
PHLBO RNAV	THREE	DQO.PHLBO3	TWO	10 MARCH 2011	31 MAY 2012

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