

U.S. DEPARTMENT of TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION
GRAPHIC DEPARTURE PROCEDURE (DP)

Bearings, headings, courses, tracks, and radials are magnetic. Elevation and altitudes are in feet MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation.
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DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
FUNNL	TWO	FUNNL2.FUNNL	ONE	07/24/2014	26 MAY 2016

TYPE: RNAV SID

DP ROUTE DESCRIPTION:

WILL ROGERS WORLD (KOKC)

TAKEOFF RWY 13: CLIMB HEADING 130.06 TO 1800, THEN RIGHT TURN HEADING 175.00 OR AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO VOWED. THENCE...
TAKEOFF RWY 17L/17R: CLIMB HEADING 174.96 TO 1800, THEN HEADING 175.00 OR AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO VOWED. THENCE...
TAKEOFF RWY 18: CLIMB HEADING 174.97 TO 1800, THEN HEADING 175.00 OR AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO VOWED. THENCE...
TAKEOFF RWY 31: CLIMB HEADING 310.07 TO 1800, THEN RIGHT TURN HEADING 010.00 OR AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO VOWED. THENCE...
TAKEOFF RWY 35L/R: CLIMB HEADING 354.96 TO 1800, THEN RIGHT TURN HEADING 010.00 OR AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO VOWED. THENCE...
TAKEOFF RWY 36: CLIMB HEADING 354.97 TO 1800, THEN RIGHT TURN HEADING 010.00 OR AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO VOWED. THENCE...

...ON TRACK 079.20 TO FUNNL, THEN ON (TRANSITION). MAINTAIN 5000 OR AS ASSIGNED BY ATC. EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

UNIVERSITY OF OKLAHOMA WESTHEIMER (KOUN)

TAKEOFF RWY 3: CLIMB HEADING 031.21 TO 1700, THEN LEFT TURN HEADING 355.00 OR AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO VOWED. THENCE...
TAKEOFF RWY 18: CLIMB HEADING 174.66 TO 1700, THEN HEADING 175.00 OR AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO VOWED. THENCE...
TAKEOFF RWY 21: CLIMB HEADING 211.22 TO 1700, THEN LEFT TURN HEADING 175.00 OR AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO VOWED. THENCE...
TAKEOFF RWY 36: CLIMB HEADING 354.66 TO 1700, THEN HEADING 355.00 OR AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO VOWED. THENCE...

WILEY POST (KPWA)

TAKEOFF RWY 13: CLIMB HEADING 129.95 TO 1800, THEN RIGHT TURN HEADING 200.00 OR AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO VOWED. THENCE...
TAKEOFF RWY 17L: CLIMB HEADING 174.99 TO 1800, THEN RIGHT TURN HEADING 200.00 OR AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO VOWED. THENCE...
TAKEOFF RWY 17R: CLIMB HEADING 175.00 TO 1800, THEN RIGHT TURN HEADING 200.00 OR AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO VOWED. THENCE...
TAKEOFF RWY 31: CLIMB HEADING 309.95 TO 1800, THEN RIGHT TURN HEADING 010.00 OR AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO VOWED. THENCE...
TAKEOFF RWY 35L: CLIMB HEADING 355.00 TO 1800, THEN HEADING 010.00 OR AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO VOWED. THENCE...
TAKEOFF RWY 35R: CLIMB HEADING 354.99 TO 1800, THEN RIGHT TURN HEADING 010.00 OR AS ASSIGNED BY ATC, EXPECT RADAR VECTORS TO VOWED. THENCE...

...ON TRACK 079.20 TO FUNNL, THEN ON (TRANSITION). MAINTAIN 3000 OR AS ASSIGNED BY ATC. EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	Crossing Altitudes/Fixes
PHARA	FUNNL2.PHARA	FUNNL	PHARA	TRACK 079.25	37.82	10000	2500	

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PROCEDURAL DATA NOTES/TAKEOFF MINIMUMS:

NOTE: RADAR REQUIRED
NOTE: DME/DME/IRU OR GPS REQUIRED
NOTE: RNAV-1

TAKEOFF MINIMUMS:

WILL ROGERS WORLD (KOKC)
RWY 13, 17L/R, 18, 31, 35L/R, 36: STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 1800.

UNIVERSITY OF OKLAHOMA WESTHEIMER (KOUN)
RWY 3, 18, 21, 36: STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 1700.

WILEY POST (KPWA)
RWY 13, 17L, 17R, 31, 35L, 35R: STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 2100.

TAKEOFF OBSTACLES NOTES:

WILL ROGERS WORLD (KOKC)
NOTE: **RWY 35L**, POST 48 FT FROM DER, 495 FT LEFT OF CENTERLINE, 8 FT AGL/1287 FT MSL.
NOTE: **RWY 36**, OBSTRUCTION LIGHT ON WINDSOCK 674 FT FROM DER, 152 FT LEFT OF CENTERLINE, 25 FT AGL/1295 FT MSL.

UNIVERSITY OF OKLAHOMA WESTHEIMER (KOUN)
NOTE: **RWY 3**, TOWER AND ELEVATORS BEGINNING 1451 FT FROM DER, 359 FT RIGHT OF CENTERLINE, UP TO 59 FT AGL/1236 FT MSL.
NOTE: **RWY 18**, TREE 97 FT FROM DER, 449 FT RIGHT OF CENTERLINE, 32 FT AGL/1208 FT MSL.
NOTE: **RWY 21**, TREE 162 FT FROM DER, 461 FT RIGHT OF CENTERLINE, 25 FT AGL/1201 FT MSL. TREES BEGINNING 874 FT FROM DER, 484 FT RIGHT OF CENTERLINE, UP TO 27 FT AGL/1208 FT MSL. TREES BEGINNING 1211 FT FROM DER, 463 FT LEFT OF CENTERLINE, UP TO 39 FT AGL/1210 FT MSL. LIGHT POLE 1243 FT FROM DER, 745 FT RIGHT OF CENTERLINE, 32 FT AGL/1213 FT MSL.
NOTE: **RWY 36**, POLES BEGINNING 700 FT FROM DER, 518 FT RIGHT OF CENTERLINE, UP TO 44 FT AGL/1215 FT MSL.

WILEY POST (KPWA)
NOTE: **RWY 13**, HANGAR 467 FT FROM DER, 466 FT LEFT OF CENTERLINE, 19 FT AGL/1316 FT MSL. HANGAR 1349 FT FROM DER, 602 FT RIGHT OF CENTERLINE, 35 FT AGL/1334 FT MSL.
NOTE: **RWY 17L**, TREES BEGINNING 1292 FT FROM DER, 371 FT RIGHT OF CENTERLINE, UP TO 67 FT AGL/1348 FT MSL. TANK 4592 FT FROM DER, 1222 FT LEFT OF CENTERLINE, 148 FT AGL/1478 FT MSL. TANK 1.0 NM FROM DER, 1387 FT LEFT OF CENTERLINE, 144 FT AGL/1467 FT MSL.
NOTE: **RWY 17R**, WINDSOCK 344 FT FROM DER, 422 FT LEFT OF CENTERLINE, 20 FT AGL/1305 FT MSL.
NOTE: **RWY 35L**, TREES BEGINNING 143 FT FROM DER, 516 FT LEFT OF CENTERLINE, UP TO 50 FT AGL/1321 FT MSL. SPIRE 2441 FT FROM DER, 901 FT LEFT OF CENTERLINE, 86 FT AGL/1366 FT MSL.

CONTROLLING OBSTACLES:

WILEY POST (KPWA)
RWY 17L: 1467 FT MSL TANK 353027.00N/0973827.00W, 1478 FT MSL TANK 353043.00N/0973829.00W.

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LOST COMMUNICATIONS PROCEDURES:**ADDITIONAL FLIGHT DATA:**

CHART: MEA/MOCA FROM VOWED TO FUNNL 4200/2500.
REFERENCE MAG VAR: KOKC 5E EPOCH YR: 2010.
DME/DME ASSESSMENT: SAT (RNP 2.0).

ALL AIRPORTS – CHART: TOP ALTITUDE: ASSIGNED BY ATC.

PILOT NAVIGATION AREA.

7NM ARC CENTERED ON VOWED (IF), CW
FROM: POINT A (BEARING 034 DEGREES TO VOWED)
TO: POINT B (BEARING 124 DEGREES TO VOWED)
MINIMUM ALTITUDE - 4200

AIRPORTS SERVED:

WILL ROGERS WORLD
UNIVERSITY OF OKLAHOMA WESTHEIMER
WILEY POST

OKLAHOMA CITY, OK
NORMAN, OK
OKLAHOMA CITY, OK

COMMUNICATIONS:

ATIS: OKC, PWA. **AWOS/ASOS:** OUN. **CLNC DEL:** OKC. **GND CON:** OKC, PWA, OUN. **TWR:** OKC, PWA, OUN. **DEP CON:** OKC, PWA, OUN.

FIXES AND/OR NAVAIDS:

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REMARKS:**REQUIRED EFFECTIVE DATE:**

ROUTINE

COORDINATED WITH:

ATA, ALPA, APA, AOPA, NBAA, ZFW ARTCC, OKE CITY APP CON, OKC ATCT, PWA ATCT, OUN ATCT, AMGR: OKC, PWA, OUN.

CHANGES:

1. KOUN: CHANGED ALL RWY 17/35 REFERENCES TO RWY 18/36.
2. ADDED TOP ALTITUDE NOTE TO ADDITIONAL FLIGHT DATA.

REASONS:

1. KOUN MAGVAR CHANGE.
2. AFS-400 MEMO, "TOP ALTITUDE" INTERIM GUIDANCE, DATED SEPTEMBER 26, 2014.

DEPARTURE (DATA RECORD)

DP Name		Number		DP Computer Code		Superseded Number		Dated	Effective Date
FUNNL		TWO		FUNNL2.FUNNL		ONE		07/24/2014	26 MAY 2016
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
WILL ROGERS WORLD (KOKC)									
RW13 (AER)	352416.59N/0973657.27W	N	-	-	-	-			
1800 MSL		-	-	VA	135.06	-			CG 500 FT/NM TO 1800
		-	-	VM	180.00	-			RIGHT TURN
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			
RW17L (AER)	352418.58N/0973520.21W	N	-	-	-	-			
1800 MSL		-	-	VA	179.96	-			CG 500 FT/NM TO 1800
		-	-	VM	180.00	-			
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			
RW17R (AER)	352421.42N/0973620.62W	N	-	-	-	-			
1800 MSL		-	-	VA	179.96	-			CG 500 FT/NM TO 1800
		-	-	VM	180.00	-			
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			
RW18 (AER)	352336.76N/0973627.82W	N	-	-	-	-			
1800 MSL		-	-	VA	179.97	-			CG 500 FT/NM TO 1800
		-	-	VM	180.00	-			
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			
RW31 (AER)	352321.98N/0973550.73W	N	-	-	-	-			
1800 MSL		-	-	VA	315.07	-			CG 500 FT/NM TO 1800
		-	-	VM	015.00	-			RIGHT TURN
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			
RW35L (AER)	352244.49N/0973620.53W	N	-	-	-	-			
1800 MSL		-	-	VA	359.96	-			CG 500 FT/NM TO 1800
		-	-	VM	015.00	-			RIGHT TURN
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			

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FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RW35R (AER)	352241.63N/0973520.13W	N	-	-	-	-			
1800 MSL		-	-	VA	359.96	-			CG 500 FT/NM TO 1800
		-	-	VM	015.00	-			RIGHT TURN
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			
RW36 (AER)	352306.31N/0973627.80W	N	-	-	-	-			
1800 MSL		-	-	VA	359.97	-			CG 500 FT/NM TO 1800
		-	-	VM	015.00	-			RIGHT TURN
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			
	WILEY POST (KPWA)								
RW13 (AER)	353206.36N/0973907.90W	N	-	-	-	-			
1800 MSL		-	-	VA	134.95	-			CG 500 FT/NM TO 2100
		-	-	VM	205.00	-			RIGHT TURN
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			
RW17L (AER)	353239.61N/0973843.81W	N	-	-	-	-			
1800 MSL		-	-	VA	179.99	-			CG 500 FT/NM TO 2100
		-	-	VM	205.00	-			RIGHT TURN
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			
RW17R (AER)	353235.86N/0973857.10W	N	-	-	-	-			
1800 MSL		-	-	VA	180.00	-			CG 500 FT/NM TO 2100
		-	-	VM	205.00	-			RIGHT TURN
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			
RW31 (AER)	353136.92N/0973831.82W	N	-	-	-	-			
1800 MSL		-	-	VA	314.95	-			CG 500 FT/NM TO 2100
		-	-	VM	015.00	-			RIGHT TURN
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			

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FUNNL		TWO		FUNNL2.FUNNL		ONE		07/24/2014	26 MAY 2016
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RW35L (AER)	353146.40N/0973857.10W	N	-	-	-	-			
1800 MSL		-	-	VA	360.00	-			CG 500 FT/NM TO 2100
		-	-	VM	015.00	-			
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			
RW35R (AER)*	353131.93N/0973843.79W*	N	-	-	-	-			*DISPL THLD (355 FT)
1800 MSL		-	-	VA	359.99	-			CG 500 FT/NM TO 2100
		-	-	VM	015.00	-			RIGHT TURN
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			
UNIVERSITY OF OKLAHOMA WESTHEIMER (KOUN)									
RW03 (AER)	351410.37N/0972832.88W	N	-	-	-	-			
1700 MSL		-	-	VA	036.21	-			CG 500 FT/NM TO 1700
		-	-	VM	360.00	-			LEFT TURN
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			
RW18 (AER)	351523.18N/0972823.21W	N	-	-	-	-			
1700 MSL		-	-	VA	179.66	-			CG 500 FT/NM TO 1700
		-	-	VM	180.00	-			
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			
RW21 (AER)	351448.26N/0972759.06W	N	-	-	-	-			
1700 MSL		-	-	VA	216.22	-			CG 500 FT/NM TO 1700
		-	-	VM	180.00	-			LEFT TURN
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			
RW36 (AER)	351431.77N/0972822.84W	N	-	-	-	-			
1700 MSL		-	-	VA	359.66	-			CG 500 FT/NM TO 1700
		-	-	VM	360.00	-			
VOWED	352348.76N/0965511.59W	Y	FB	DF	-	-			

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FUNNL		TWO	FUNNL2.FUNNL				ONE	07/24/2014	26 MAY 2016
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
VOWED	352348.76N/0965511.59W	Y	-	IF	-	-			
FUNNL	352412.93N/0965019.59W	Y	FB	TF	084.20	4.00			
FUNNL	352412.93N/0965019.59W	Y	-	IF	-	-			FUNNL2.PHARA
PHARA	352751.86N/0960415.50W	Y	FB	TF	084.25	37.82			