

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
GRAPHIC DEPARTURE PROCEDURES (DP)**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL. Altitudes are minimum altitudes unless otherwise indicated.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

<u>DP NAME</u>	<u>NUMBER</u>	<u>DP COMPUTER CODE</u>	<u>SUPERSEDED NUMBER</u>	<u>DATED</u>	<u>ACTUAL EFFECTIVE DATE</u>
RETYR	EIGHT	RETYR8.RETYR	SEVEN	09/08/2022	03 NOV 2022

<u>TYPE:</u>	<u>OBSTACLE</u>	<u>COPTER</u>	<u>SID</u>	<u>SPECIAL</u>	<u>RNAV</u>
	☐	☐	☒	☐	☒

DP ROUTE DESCRIPTION:

TAKEOFF RWY 4: CLIMB ON HEADING 040.95 TO 560, EXPECT RADAR VECTORS TO RETYR, THENCE...
TAKEOFF RWY 13L: CLIMB ON HEADING 130.95 TO 560, EXPECT RADAR VECTORS TO RETYR, THENCE...
TAKEOFF RWY 13R: CLIMB ON HEADING 130.95 TO 560, EXPECT RADAR VECTORS TO RETYR, THENCE...
TAKEOFF RWY 22: CLIMB ON HEADING 220.96 TO 560, EXPECT RADAR VECTORS TO RETYR, THENCE...
TAKEOFF RWY 31L: CLIMB ON HEADING 310.96 TO 560, EXPECT RADAR VECTORS TO RETYR, THENCE...
TAKEOFF RWY 31R: CLIMB ON HEADING 310.95 TO 560, EXPECT RADAR VECTORS TO RETYR, THENCE...

...ON TRACK 297.97/5.15 NM TO MNNKE, THEN ON (TRANSITION). MAINTAIN 16000, EXPECT FILED ALTITUDE 10 MINUTES AFTER DEPARTURE.

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

<u>TRANSITION NAME</u>	<u>TRANSITION COMPUTER CODE</u>	<u>FROM FIX/NAVAID</u>	<u>TO FIX/NAVAID</u>	<u>COURSE</u>	<u>DISTANCE</u>	<u>MEA</u>	<u>MOCA</u>	<u>CROSSING ALTITUDE/FIXES</u>
CRGER	RETYR8.CRGER	MNNKE	ZUUUU	TRACK 313.51	27.31	9400	1700	
			PUFER	TRACK 277.06	44.15	12000	2100	
			PSTUR	TRACK 276.78	34.30	12000	2400	
			CRGER	TRACK 280.77	32.91	12000	3100	
JUNCTION	RETYR8.JCT	MNNKE	BOCCK	TRACK 297.62	19.96	7900	1600	
			MNURE	TRACK 277.31	18.98	10800	2100	
			HAYYY	TRACK 277.05	62.34	12000	2100	
			FOWLR	TRACK 280.43	33.11	12000	2900	
			JCT VORTAC	TRACK 280.85	77.40	12000	3700	
MNURE	RETYR8.MNURE	MNNKE	BOCCK	TRACK 297.62	19.96	7900	1600	
			MNURE	TRACK 277.31	18.98	10800	2100	
SAN ANTONIO	RETYR8.SAT	MNNKE	BOCCK	TRACK 297.62	19.96	7900	1600	
			MNURE	TRACK 277.31	18.98	10800	2100	



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RETYR			EIGHT	RETYR8.RETYR	SEVEN	09/08/2022	03 NOV 2022
			MARCS		TRACK 262.50	67.76	12000 2600
			SAT VORTAC		TRACK 241.29	34.82	12000 2800
WAILN	RETYR8.WAILN	MNNKE	WEEED		TRACK 269.64	15.88	7100 1700
			WAILN		TRACK 271.98	20.41	10100 1800

PROCEDURAL DATA NOTES:

NOTE: CRGER TRANSITION ATC ASSIGNED ONLY.

PBN REQUIREMENTS NOTES:

RNAV 1 - DME/DME/IRU OR GPS.

EQUIPMENT REQUIREMENT NOTES:

RADAR REQUIRED.

TAKEOFF MINIMUMS:

RWY 4, 13L, 13R, 31L, 31R: STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 560.

RWY 22: STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 800.

TAKEOFF OBSTACLES NOTES:

SEE FORM 8260-15A, TAKEOFF MINIMUMS AND OBSTACLE DEPARTURE PROCEDURES (ODP).

CONTROLLING OBSTACLES:

RWY 22, 31L, 31R: 2049 FT MSL TOWER 293430.00N/0952938.00W.

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

DME/DME ASSESSMENT: SAT (RNP 2.0).

CHART: MEA/MOCA FROM RETYR TO MNNKE, 6000/1500.

CHART: TOP ALTITUDE: 16000.

AIRPORTS SERVED:

<u>AIRPORT ID</u>	<u>CITY</u>	<u>STATE</u>
KHOU	HOUSTON	TX

COMMUNICATIONS:

CHART: ATIS, CLNC DEL, HOU GND CON, HOU ATCT, CPDLC.

FIXES AND/OR NAVAIDS:**REMARKS:**

ABBREVIATED AMENDMENT



<u>DP NAME</u>	<u>NUMBER</u>	<u>DP COMPUTER CODE</u>	<u>SUPERSEDED NUMBER</u>	<u>DATED</u>	<u>ACTUAL EFFECTIVE DATE</u>
RETYR	EIGHT	RETYR8.RETYR	SEVEN	09/08/2022	03 NOV 2022

FLIGHT INSPECTED BY

BRIAN HARRELSON

Digitally signed by
CASIMIR L TABAKA

Jul 20, 2022

OFFICE

FPO

DATE

07/19/2022

DEVELOPED BY

KARLIE BUNTIN

Digitally signed by
KARLIE B BUNTIN
 May 17, 2022

OFFICE

AJV-A432

DATE

03/18/2022

APPROVED BY

LONNIE EVERHART

Digitally signed by
CASIMIR L TABAKA
 Jun 01, 2022

OFFICE

AJV-A430

DATETITLE

MANAGER

REQUIRED EFFECTIVE DATE

ROUTINE

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZHU ARTCC, HOU DEP CON, HOU ATCT, AMGR.

CHANGES - REASONS:

1. MOCA FROM PUFR TO PSTUR CHANGED FROM 2100 TO 2400 - NEW CONTROLLING OBSTACLE 1336 BLDG 301609.00N/0974447.00W (48-166738).
2. CHANGED PROCEDURAL DATA NOTE OF "RNAV 1" AND "DME/DME/IRU OR GPS REQUIRED" TO PBN REQUIREMENTS NOTE OF "RNAV 1 - DME/DME/IRU OR GPS" -- IAW 8260.46H 2-1-1 (F)6(C)5.
3. ADDED DISTANCE INFORMATION TO TF LEG ROUTE DESCRIPTION FROM RETYR TO MNNKE -- IAW 8260.46H APPENDIX E TABLE E-1.
4. REMOVED HOU DEP CON FROM COMMUNICATIONS SECTION -- IAW 8260.46H APPENDIX E PARA 14.
5. REMOVED OBSTACLE MANDATING ODP ROUTE DEVELOPMENT FROM CONTROLLING OBSTACLES SECTION -- IAW 8260.46H APPENDIX D PARA 10(A).



**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
DEPARTURE (DATA RECORD)**

DP NAME				NUMBER		DP COMPUTER CODE		SUPERSEDED NUMBER		DATED		ACTUAL EFFECTIVE DATE		
RETYR				EIGHT		RETYR8.RETYR		SEVEN		09/08/2022		03 NOV 2022		
FIX/NAVAID		LAT/LONG		C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE		SPEED		REMARKS	
RETYR		294323.15N/0954736.87W		Y	-	IF	-	-						
MNNKE		294602.38N/0955241.21W		Y	FB	TF	300.97	5.15						
MNNKE		294602.38N/0955241.21W		Y	-	IF	-	-					RETYR8.CRGER	
ZUUUU		300552.42N/0961421.48W		Y	FB	TF	316.51	27.31						
PUFER		301326.48N/0970432.09W		Y	FB	TF	280.06	44.15						
PSTUR		301911.13N/0974335.19W		Y	FB	TF	279.78	34.30						
CRGER		302657.12N/0982034.26W		Y	FB	TF	283.77	32.91						
MNNKE		294602.38N/0955241.21W		Y	-	IF	-	-					RETYR8.JCT	
BOCCK		295612.26N/0961227.32W		Y	FB	TF	300.62	19.96						
MNURE		295934.88N/0963357.84W		Y	FB	TF	280.31	18.98						
HAYYY		301010.16N/0974446.53W		Y	FB	TF	280.05	62.34						
FOWLR		301747.44N/0982158.72W		Y	FB	TF	283.43	33.11						
JCT VORTAC		303552.88N/0994902.93W		Y	FB	TF	283.85	77.40						
MNNKE		294602.38N/0955241.21W		Y	-	IF	-	-					RETYR8.MNURE	
BOCCK		295612.26N/0961227.32W		Y	FB	TF	300.62	19.96						
MNURE		295934.88N/0963357.84W		Y	FB	TF	280.31	18.98						
MNNKE		294602.38N/0955241.21W		Y	-	IF	-	-					RETYR8.SAT	
BOCCK		295612.26N/0961227.32W		Y	FB	TF	300.62	19.96						

QUALITY
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QUALITY
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CHECKED

<u>DP NAME</u>							<u>NUMBER</u>	<u>DP COMPUTER CODE</u>	<u>SUPERSEDED NUMBER</u>	<u>DATED</u>	<u>ACTUAL EFFECTIVE DATE</u>
RETYR							EIGHT	RETYR8.RETYR	SEVEN	09/08/2022	03 NOV 2022
<u>FIX/NAVAID</u>	<u>LAT/LONG</u>	<u>C</u>	<u>FO/FB</u>	<u>LEG TYPE</u>	<u>TC</u>	<u>DIST (NM)</u>	<u>ALTITUDE</u>	<u>SPEED</u>	<u>REMARKS</u>		
MNURE	295934.88N/0963357.84W	Y	FB	TF	280.31	18.98					
MARCS	295352.04N/0975140.70W	Y	FB	TF	265.50	67.76					
SAT VORTAC	293838.51N/0982740.73W	Y	FB	TF	244.29	34.82					
MNNKE	294602.38N/0955241.21W	Y	-	IF	-	-			RETYR8.WAILN		
WEEED	294645.14N/0961054.94W	Y	FB	TF	272.64	15.88					
WAILN	294829.63N/0963417.12W	Y	FB	TF	274.98	20.41					

