

**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SUPERSEDED NUMBER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>
CAVVS	FOUR	CAVVS4.CAVVS	THREE	12/05/2019	

<u>TYPE:</u>	<u>OBSTACLE</u>	<u>COPTER</u>	<u>SID</u>	<u>SPECIAL</u>	<u>RNAV</u>
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DP ROUTE DESCRIPTION:
CLEVELAND-HOPKINS INTL:

TAKEOFF RWY 6L: CLIMB ON HEADING 057.94 TO INTERCEPT COURSE 101.51 TO NANTZ, THEN ON TRACK 143.03 TO CROSS CAHRR AT OR BELOW 6000, THEN ON TRACK 232.01 TO CROSS BIIGZ AT OR ABOVE 10000, THEN ON TRACK 231.36 TO CROSS LBRON AT OR ABOVE 10000, THENCE...

TAKEOFF RWY 6R: CLIMB ON HEADING 057.94 TO INTERCEPT COURSE 101.27 TO NANTZ, THEN ON TRACK 143.03 TO CROSS CAHRR AT OR BELOW 6000, THEN ON TRACK 232.01 TO CROSS BIIGZ AT OR ABOVE 10000, THEN ON TRACK 231.36 TO CROSS LBRON AT OR ABOVE 10000, THENCE...

TAKEOFF RWY 10: CLIMB ON HEADING 101.31 TO 3000, THEN AS ASSIGNED BY ATC FOR RADAR VECTORS TO CROSS LBRON AT OR ABOVE 10000, THENCE...

TAKEOFF RWY 24L: CLIMB ON HEADING 237.96 TO INTERCEPT COURSE 205.96 TO CROSS KYRIE AT OR BELOW 6000, THEN ON TRACK 209.89 TO CROSS LBRON AT OR ABOVE 10000, THENCE...

TAKEOFF RWY 24R: CLIMB ON HEADING 237.95 TO INTERCEPT COURSE 205.02 TO CROSS KYRIE AT OR BELOW 6000, THEN ON TRACK 209.89 TO CROSS LBRON AT OR ABOVE 10000, THENCE...

TAKEOFF RWY 28: CLIMB ON HEADING 281.32 TO 2200, THEN AS ASSIGNED BY ATC FOR RADAR VECTORS TO CROSS LBRON AT OR ABOVE 10000, THENCE...

...ON TRACK 213.13 TO CAVVS, THEN ON (TRANSITION). MAINTAIN 14000, EXPECT FILED ALTITUDE TEN MINUTES AFTER DEPARTURE.

BURKE LAKEFRONT:

TAKEOFF RWY 6L: CLIMB ON HEADING 065.91 TO 1100, THEN ON HEADING 350.00 OR AS ASSIGNED BY ATC, MAINTAIN 2000 (DO NOT CLIMB ABOVE 2000) FOR RADAR VECTORS TO CROSS LBRON AT OR ABOVE 10000, THENCE...

TAKEOFF RWY 6R: CLIMB ON HEADING 065.92 TO 1100, THEN ON HEADING 350.00 OR AS ASSIGNED BY ATC, MAINTAIN 2000 (DO NOT CLIMB ABOVE 2000) FOR RADAR VECTORS TO CROSS LBRON AT OR ABOVE 10000, THENCE...

TAKEOFF RWY 24L: CLIMB ON HEADING 245.93 TO 1100, THEN RIGHT TURN HEADING 350.00 OR AS ASSIGNED BY ATC, MAINTAIN 2000 (DO NOT CLIMB ABOVE 2000) FOR RADAR VECTORS TO CROSS LBRON AT OR ABOVE 10000, THENCE...

TAKEOFF RWY 24R: CLIMB ON HEADING 245.92 TO 1100, THEN RIGHT TURN HEADING 350.00 OR AS ASSIGNED BY ATC, MAINTAIN 2000 (DO NOT CLIMB ABOVE 2000) FOR RADAR VECTORS TO CROSS LBRON AT OR ABOVE 10000, THENCE...

CUYAHOGA COUNTY:

TAKEOFF RWY 6: CLIMB ON HEADING 057.48 TO 1900, THEN RIGHT TURN HEADING 180.00 OR AS ASSIGNED BY ATC FOR RADAR VECTORS TO CROSS LBRON AT OR ABOVE 10000, THENCE...

TAKEOFF RWY 24: CLIMB ON HEADING 237.49 TO 1900, THEN ON HEADING 180.00 OR AS ASSIGNED BY ATC FOR RADAR VECTORS TO CROSS LBRON AT OR ABOVE 10000, THENCE...

LORAIN COUNTY RGNL:

TAKEOFF RWY 7: CLIMB ON HEADING 073.01 TO 1300, THEN ON HEADING 360.00 OR AS ASSIGNED BY ATC FOR RADAR VECTORS TO CROSS LBRON AT OR ABOVE 10000, THENCE...

TAKEOFF RWY 25: CLIMB ON HEADING 253.02 TO 1300, THEN RIGHT TURN HEADING 360.00 OR AS ASSIGNED BY ATC FOR RADAR VECTORS TO CROSS LBRON AT OR ABOVE 10000, THENCE...

LAKE COUNTY EXECUTIVE:

TAKEOFF RWY 5: CLIMB ON HEADING 052.59 TO 1140, THEN RIGHT TURN HEADING 180.00 OR AS ASSIGNED BY ATC FOR RADAR VECTORS TO CROSS LBRON AT OR ABOVE 10000, THENCE...

TAKEOFF RWY 10: CLIMB ON HEADING 098.51 TO 1140, THEN ON HEADING 180.00 OR AS ASSIGNED BY ATC FOR RADAR VECTORS TO CROSS LBRON AT OR ABOVE 10000, THENCE...

TAKEOFF RWY 23: CLIMB ON HEADING 232.60 TO 1140, THEN ON HEADING 180.00 OR AS ASSIGNED BY ATC FOR RADAR VECTORS TO CROSS LBRON AT OR ABOVE 10000, THENCE...

TAKEOFF RWY 28: CLIMB ON HEADING 278.52 TO 1140, THEN LEFT TURN HEADING 180.00 OR AS ASSIGNED BY ATC FOR RADAR VECTORS TO CROSS LBRON AT OR ABOVE 10000, THENCE...

...ON TRACK 213.13 TO CAVVS, THEN ON (TRANSITION). MAINTAIN ALTITUDE ASSIGNED BY ATC, EXPECT FILED ALTITUDE TEN 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>
APPLETON	CAVVS4.APE	CAVVS	APE VORTAC	TRACK 213.03	31.50	14000	2800	

PROCEDURAL DATA NOTES:

RADAR REQUIRED

RNAV 1

DME/DME/IRU OR GPS REQUIRED

QUALITY
3
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>
CAVVS	FOUR	CAVVS4.CAVVS	THREE	12/05/2019	

TAKEOFF MINIMUMS:

CLEVELAND-HOPKINS INTL: RWY 6L, 24R, 24L, 28 STANDARD WITH A MINIMUM CLIMB OF 500 FT PER NM TO 1300. **RWY 6R**, STANDARD WITH A MINIMUM CLIMB OF 500 TO 1400. **RWY 10**, STANDARD WITH A MINIMUM CLIMB OF 500 FT PER NM TO 1600.

BURKE LAKEFRONT: RWY 6R, 6L, 24R STANDARD WITH A MINIMUM CLIMB OF 500 FT PER NM TO 1100. **RWY 24L** 400-1 3/8 OR STANDARD WITH MINIMUM CLIMB OF 757 FT PER NM TO 1000.

CUYAHOGA COUNTY: RWY 6, 24 STANDARD WITH A MINIMUM CLIMB OF 500 FT PER NM TO 1400.

LORAIN COUNTY RGNL: RWY 7, 25 STANDARD WITH A MINIMUM CLIMB OF 500 FT PER NM TO 1300.

LAKE COUNTY EXECUTIVE: RWY 5, 10, 23, 28 STANDARD WITH A MINIMUM CLIMB OF 500 FT PER NM TO 1140.

TAKEOFF OBSTACLES NOTES:

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

CONTROLLING OBSTACLES:

CLEVELAND-HOPKINS INTL: RWY 6R: 1998 FT MSL TOWER 412245.00N/0814311.00W RWY 10: 2048 FT MSL TOWER 412254.00N/0814157.00W

BURKE LAKEFRONT: RWY 24L: 740 FT MSL BUILDING 413031.10N/0814144.07W (CLIMB GRADIENT), 896 FT MSL BUILDING 413004.41N/0814214.10W (CEILING/CLIMB-TO ALTITUDE), 787 FT MSL BRIDGE 412953.73N/0814231.66W (VISIBILITY).

LOST COMMUNICATIONS PROCEDURES:

ADDITIONAL FLIGHT DATA:

REFERENCE MAG VAR: KCLE 8W EPOCH YEAR: 2020

CLEVELAND-HOPKINS INTL - CHART: TOP ALTITUDE: 14000.

BURKE LAKEFRONT, CUYAHOGA COUNTY, LORAIN COUNTY RGNL, LAKE COUNTY EXECUTIVE: CHART: TOP ALTITUDE: ASSIGNED BY ATC.

CHART: MINIMUM CROSSING ALTITUDE AT LBRON - 10000.

DME/DME/IRU ASSESSMENT: SAT (RNP 2.0)

AIRPORTS SERVED:

<u>AIRPORT NAME</u>	<u>AIRPORT ID</u>	<u>CITY</u>	<u>STATE</u>
CLEVELAND-HOPKINS INTL	KCLE	CLEVELAND	OH
BURKE LAKEFRONT	KBKL	CLEVELAND	OH
CUYAHOGA COUNTY	KCGF	CLEVELAND	OH
LORAIN COUNTRY RGNL	KLPR	LORAIN/ELYRIA	OH
LAKE COUNTY EXECUTIVE	KLNN	WILLOUGHBY	OH

COMMUNICATIONS:

CLEVELAND-HOPKINS INTL: ATIS, CLNC DEL, CPDLC, GND CON, CLE ATCT, CLE APP CON, CLE DEP CON.

BURKE LAKEFRONT: ATIS, AWOS/ASOS, CLNC DEL, GND CON, BKL ATCT, CTAF DEPARTURE CONTROL.

CUYAHOGA COUNTY: ATIS, AWOS/ASOS, CLNC DEL, GND CON, CGF ATCT, CTAF DEPARTURE CONTROL.

LORAIN COUNTY RGNL: ATIS, AWOS/ASOS, CLNC DEL, CTAF DEPARTURE CONTROL.

LAKE COUNTY EXECUTIVE: ATIS, AWOS/ASOS, CTAF DEPARTURE CONTROL.

FIXES AND/OR NAVAIDS:



<u>DP NAME</u>	<u>NUMBER</u>	<u>DP COMPUTER CODE</u>	<u>SUPERSEDED NUMBER</u>	<u>DATED</u>	<u>ACTUAL EFFECTIVE DATE</u>
CAVVS	FOUR	CAVVS4.CAVVS	THREE	12/05/2019	

REMARKS:

THE ENVIRONMENTAL REVIEW UNDER ORDER 1050.1F AND THE NOISE SCREENING HAVE BEEN ACCOMPLISHED.
 CATEGORICAL EXCLUSION ISSUED.
 MOCA(S) NOT CHARTED PER ATC REQUEST TO REDUCE CHART CLUTTER.
 LETTER OF APPROVAL ON FILE FOR KBKL RWY 24L MINIMUM CLIMB OF 757 FT PER NM TO 1000.
 ABBREVIATED AMENDMENT.

FLIGHT INSPECTED BY

OFFICE

DATE

Digitally signed by

DAVID DANNER

PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJW-33) MEMO, OCTOBER 3, 2018, SUBJECT: FLIGHT INSPECTION REVIEW NOT REQUIRED.

Dec 06, 2019

DEVELOPED BY

Digitally signed by

OFFICE

DATE

DAVID DANNER (RALPH P. MILLER)

DAVID DANNER

AJV-A421

11/05/2019

Dec 06, 2019

Digitally signed by

APPROVED BY

DAVID DANNER

OFFICE

DATE

TITLE

MARLON ROBINSON

Dec 06, 2019

AJV-A420

MANAGER

REQUIRED EFFECTIVE DATE

ROUTINE

COORDINATED WITH:

A4A ☒

ALPA ☒

AOPA ☒

APA ☒

HAI ☐

NBAA ☒

OTHER: ZOB, CLE APP CON, CLE ATCT, CGF ATCT, BKL ATCT, CFPT, AMGR

CHANGES - REASONS:

1. UPDATED DP NUMBER FROM THREE TO FOUR.
2. UPDATED DP COMPUTER CODE FROM CAVVS3.CAVVS TO CAVVS4.CAVVS.
3. UPDATED TRANSITION COMPUTER CODE FROM CAVVS3.APE TO CAVVS4.APE.
4. AIRPORT NAME CHANGE FROM WILLOUGHBY LOST NATION MUNI TO LAKE COUNTY EXECUTIVE IN DP ROUTE DESCRIPTION, TAKEOFF MINIMUMS, AIRPORTS SERVED AND COMMUNICATIONS.



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

DP NAME				NUMBER		DP COMPUTER CODE		SUPERSEDED NUMBER		DATED		ACTUAL EFFECTIVE DATE	
CAVVS				FOUR		CAVVS4.CAVVS		THREE		12/05/2019			
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS				
	CLEVELAND-HOPKINS INTL (KCLE)												
RW06L (AER)	412359.53N/0815224.55W	N	-	-	-	-							
-	412536.89N/0814950.69W	-	-	VI	049.94	1.04			CG 500 FT/NM TO 1300				
NANTZ	412521.14N/0814406.56W	Y	FB	CF	093.51	4.32							
CAHRR	412008.43N/0813712.43W	Y	FB	TF	135.03	7.36	AT/BELOW 6000						
BIIGZ	411157.81N/0814739.45W	Y	FB	TF	224.01	11.35	AT/ABOVE10000						
LBRON	405724.62N/0820545.34W	Y	FB	TF	223.36	19.97	AT/ABOVE 10000						
RW06R (AER)*	412404.10N/0815152.03W*	N	-	-	-	-			*DISPL THLD (1926 FEET)				
-	412535.74N/0814927.17W	-	-	VI	049.94	1.05			CG 500 FT/NM TO1400				
NANTZ	412521.14N/0814406.56W	Y	FB	CF	093.27	4.04							
CAHRR	412008.43N/0813712.43W	Y	FB	TF	135.03	7.36	AT/BELOW 6000						
BIIGZ	411157.81N/0814739.45W	Y	FB	TF	224.01	11.35	AT/ABOVE 10000						
LBRON	405724.62N/0820545.34W	Y	FB	TF	223.36	19.97	AT/ABOVE 10000						
RW10 (AER)	412501.26N/0815115.28W	N	-	-	-	-							
3000 MSL	-	-	-	VA	093.31	-			CG 500 FT/NM TO 1600				
-	-	-	-	VM	093.31	-							
RW24L (AER)	412455.14N/0815031.37W	N	-	-	-	-							
-	412311.33N/0815315.36W	-	-	VI	229.96	1.06			CG 500 FT/NM TO 1300				
KYRIE	411130.78N/0815816.93W	Y	FB	CF	197.96	12.27	AT/BELOW 6000						

QUALITY

3

CHECKED

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>
CAVVS		FOUR		CAVVS4.CAVVS		THREE		12/05/2019	
<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>
LBRON	405724.62N/0820545.34W	Y	FB	TF	201.89	15.19	AT/ABOVE 10000		
RW24R (AER)	412456.75N/0815054.15W	N	-	-	-	-			
-	412318.61N/0815329.17W	-	-	VI	229.95	1.05			CG 500 FT/NM TO 1300
KYRIE	411130.78N/0815816.93W	Y	FB	CF	197.02	12.33	AT/BELOW 6000		
LBRON	405724.62N/0820545.34W	Y	FB	TF	201.89	15.19	AT/ABOVE 10000		
RW28 (AER)	412457.82N/0814956.44W	N	-	-	-	-			
2200 MSL	-	-	-	VA	273.32	-			CG 500 FT/NM TO 1300
-	-	-	-	VM	273.32	-			
BURKE LAKEFRONT (KBKL)									
RW06L (AER)*	413051.82N/0814129.42W*	N	-	-	-	-			*DISPL THLD (178 FEET)
1100 MSL	-	-	-	VA	057.91	-			CG 500 FT/NM TO 1100
-	-	-	-	VM	342.00	-			
RW06R (AER)*	413047.12N/0814127.01W*	N	-	-	-	-			*DISPL THLD (275 FEET)
1100 MSL	-	-	-	VA	057.92	-			CG 500 FT/NM TO 1100
-	-	-	-	VM	342.00	-			
RW24L (AER)	413112.95N/0814032.20W	N	-	-	-	-			
1100 MSL	-	-	-	VA	237.93	-			CG 757 FT/NM TO 1000
-	-	-	-	VM	342.00	-			RIGHT TURN

QUALITY
3
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DP NAME		NUMBER		DP COMPUTER CODE		SUPERSEDED NUMBER		DATED	ACTUAL EFFECTIVE DATE
CAVVS		FOUR		CAVVS4.CAVVS		THREE		12/05/2019	
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RW24R (AER)*	413122.39N/0814024.54W*	N	-	-	-	-			DISPL THLD (600 FEET)
1100 MSL	-	-	-	VA	237.92	-			CG 500 FT/NM TO 1100
-	-	-	-	VM	342.00	-			
CUYAHOGA COUNTY (KCGF)									
RW06 (AER)	413336.83N/0812938.32W*	N	-	-	-	-			DISPL THLD (318 FEET)
1900 MSL	-	-	-	VA	049.48	-			CG 500 FT/NM TO 1400
-	-	-	-	VM	172.00				RIGHT TURN
RW24 (AER)									
RW24 (AER)	413406.89N/0812851.49W*	N	-	-	-	-			DISPL THLD (500 FEET)
1900 MSL	-	-	-	VA	229.49				CG 500 FT/NM TO 1400
-	-	-	-	VM	172.00				
LORAIN COUNTY RGNL (KLPR)									
RW07 (AER)	412028.96N/0821109.17W	N	-	-	-	-			
1300 MSL	-	-	-	VA	065.01	-			CG 500 FT/NM TO 1300
-	-	-	-	VM	352.00				
RW25 (AER)									
RW25 (AER)	412049.83N/0821009.74W	N	-	-	-	-			
1300 MSL	-	-	-	VA	245.02	-			CG 500 FT/NM TO 1300
-	-	-	-	VM	352.00				RIGHT TURN

QUALITY
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DP NAME		NUMBER					DP COMPUTER CODE	SUPERSEDED NUMBER	DATED	ACTUAL EFFECTIVE DATE
CAVVS		FOUR					CAVVS4.CAVVS	THREE	12/05/2019	
FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS	
LAKE COUNTY EXECUTIVE (KLNN)										
RW05 (AER)*	414052.54N/0812346.84W*	N	-	-	-	-			*DISPL THLD (428 FEET)	
1140 MSL	-	-	-	VA	044.59	-			CG 500 FT/NM TO 1140	
-	-	-	-	VM	172.00	-			RIGHT TURN	
RW10 (AER)	414057.07N/0812346.05W	N	-	-	-	-				
1140 MSL	-	-	-	VA	090.51	-			CG 500 FT/NM TO 1140	
-	-	-	-	VM	172.00	-				
RW23 (AER)	414124.90N/0812304.28W	N	-	-	-	-				
1140 MSL	-	-	-	VA	224.60	-			CG 500 FT/NM TO 1140	
-	-	-	-	VM	172.00	-				
RW28 (AER)*	414056.79N/0812304.56W*	N	-	-	-	-			*DISPL THLD (1124 FEET)	
1140 MSL	-	-	-	VA	270.52	-			CG 500 FT/NM TO 1140	
-	-	-	-	VM	172.00				LEFT TURN	
LBRON	405724.62N/0820545.34W	Y	-	IF	-	-	AT/ABOVE 10000			
CAVVS	403738.64N/0821755.19W	Y	FB	TF	205.13	21.81				
CAVVS	403738.64N/0821755.19W	Y	-	IF	-	-	CAVVS4.APE			
APE VORTAC	400903.83N/0823517.88W	Y	FB	TF	205.03	31.50				

QUALITY

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