

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.33

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated.
 Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or feet RVR.

<u>AIRPORT</u>	<u>AIRPORT ID</u>	<u>PROCEDURE NAME</u>	<u>ORIGINAL/AMENDMENT</u>	<u>CITY</u>	<u>STATE</u>	
CLEVELAND-HOPKINS INTL	KCLE	RNAV (GPS) Y RWY 24R	5	CLEVELAND	OH	
<u>AIRPORT ELEVATION</u>	<u>TDZE</u>	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u>	<u>DATED</u>	<u>MAG VAR</u>	<u>EPOCH YEAR</u>
799	780	RNAV (GPS) Y RWY 24R	4	05/24/2018	8W	2020
<u>FACILITY</u>	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u>	<u>CANCEL/SUSPEND</u>		
RNAV		15 AUGUST 2019	08/15/2019			

TERMINAL ROUTES

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>LEG TYPE</u>	<u>FO/FB</u>	<u>RNP</u>	<u>COURSE</u>	<u>DISTANCE</u>	<u>ALTITUDE</u>
BUDRW	IAF	WIINR		TF	FB	1.00	279.82	6.83	5000
WIINR		ANJEY		TF	FB	1.00	279.72	3.74	4000
ANJEY		SHERK		TF	FB	1.00	260.29	3.39	3000
LLROY	IAF	BORNY		TF	FB	1.00	176.22	5.57	4000
BORNY		SHERK		TF	FB	1.00	218.12	3.15	3000
PAULB	IAF	GRHMM		TF	FB	1.00	238.10	3.14	4000
GRHMM		SHERK		TF	FB	1.00	238.06	3.14	3000
SHERK	IF	GROZA		TF	FB	1.00	238.03	3.15	2000
GROZA	FAF	RW24R	MAP	TF	FO	0.30	237.99	3.66	
RW24R	MAP	980 MSL		CA			237.99		
980 MSL		ZAPAN		DF	FB	1.00			
ZAPAN		DJB VOR/DME		TF	FO	1.00	273.52	11.14	3000



MISSED APPROACH

MAP:
LPV: DA
LNAV/VNAV: DA
LNAV: RW24R

MISSED APPROACH INSTRUCTIONS:
CLIMB TO 3000 DIRECT ZAPAN AND ON TRACK 273.52 TO DJB VOR/DME AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF (IAF)					
2.	PROFILE STARTS AT SHERK								
3. FAC:	237.99	FAF: GROZA	DIST FAF TO MAP: 3.66	DIST FAF TO THLD: 3.66					
4. MIN ALT:	SHERK 3000, GROZA 2000								
5. DIST TO THLD FROM OM:	MM:	IM:	150 HAT:	200 HAT: 0.45	GS ANT:				
6. MIN GP INCPT: 2000	GP ALT AT FAF : GROZA 2000			OM:	MM:		IM:		
7. GP ANGLE: 3.00	34:1: IS CLEAR	20:1: IS CLEAR	TCH: 54.7						
8. MSA FROM:	RW24R 3100								

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING RWY 10 NA AT NIGHT.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -19°C OR ABOVE 54°C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART SPEED ICON IN PLANVIEW AT BUDRW: MAX 240 KIAS.
CHART SPEED ICON IN PLANVIEW AT WIINR: MAX 210 KIAS.
CHART SPEED ICON IN PLANVIEW AT LLROY: MAX 210 KIAS.

ADDITIONAL FLIGHT DATA:

CHART MANDATORY 6000 AT BUDRW.
CHART MANDATORY 5000 AT LLROY.
CHART MINIMUM 5000 AT PAULB.
CHART CIRCLING ICON.
CHART VDP AT 1.35 NM TO RW24R*
*LNAV ONLY
WAAS CHANNEL #60904
REFERENCE PATH ID: W24A
CHART FAS OBST: 987 ATCT 412441N/0815020W.
HOLD W, RT, 077.04 INBOUND
LTP HAE: 203.6 M



MINIMUMS:
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT

ALTERNATE: NA ☐ STANDARD

CATEGORY:	A			B			C			D			E		
FINAL TYPE	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA	DA/MDA	VIS	HAT/HAA
LPV DA	980	1800	200	980	1800	200	980	1800	200	980	1800	200			
LNAV/VNAV DA	1168	3500	388	1168	3500	388	1168	3500	388	1168	3500	388			
LNAV MDA	1240	2400	460	1240	2400	460	1240	4500	460	1240	4500	460			
CIRCLING	1420	1	621	1420	1	621	1420	1 3/4	621	1420	2	621			

CHANGES - REASONS

1. CHANGED INITIAL SEGMENT COURSE/DISTANCE LLROY TO BORNLY FROM 179.58M/5.97NM TO 176.22M/5.57NM - FIX BORNLY MOVED PER ATC REQUEST TO PROCEDURALLY SEPARATE DEPARTURES FROM KBKL.
2. CHANGED INITIAL STEPDOWN SEGMENT COURSE/DISTANCE BORNLY TO SHERK FROM 218.05M/2.63NM TO 218.12/3.15NM - FIX BORNLY MOVED PER ATC REQUEST TO PROCEDURALLY SEPARATE DEPARTURES FROM KBKL.
3. CHANGED FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -18°C (0°F) OR ABOVE 54°C (130°F) TO FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -19°C OR ABOVE 54°C - NEW FORMAT AND UPDATE 5-YEAR ANNUAL WEATHER DATA.
4. CHANGED LLROY TO BORNLY ALTITUDE FROM 3800 TO 4000 - ATC REQUEST.
5. CHANGED LNAV MDA/HAT FROM 1260/480 TO 1240/460 - PER FPT APPROVAL EMAIL LNAV MDA/HAT LOWERED, VIS LOWERED ACCORDINGLY.
6. CHANGED LNAV CAT C/D VISIBILITIES FROM RVR 5000 TO 4500 - PER FPT APPROVAL EMAIL LNAV MDA/HAT LOWERED, VIS LOWERED ACCORDINGLY.
7. REMOVED CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV CATS C/D VISIBILITY TO 1 3/8 SM - VISIBILITIES LOWERED, NOTE NO LONGER REQUIRED.

05/07/2019: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON: 11/05/2018:
1. CHANGED REQUIRED EFFECTIVE DATE FROM: ROUTINE TO: 08/15/2019.

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZOB, CLE APP CON, CLE ATCT, AMGR

FLIGHT CHECKED BY

SCOTT WIEBE

Digitally signed by
WARDELL HENNING
May 08, 2019

OFFICE

FICO

DATE

5/1/2019

DEVELOPED BY

WARDELL HENNING (ANDRE MARSH)

Digitally signed by
WARDELL HENNING
May 08, 2019

OFFICE

AJV-A432

DATE

11/05/2018

APPROVED BY

PATRICK MULQUEEN

Digitally signed by
WARDELL HENNING
May 08, 2019

OFFICE

AJV-A430

DATE

TITLE
MANAGER



FAS DATA BLOCK INFORMATION

DATA FIELD	DATA
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KCLE
RUNWAY	RW24R
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Y
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W24A
LTP/FTP LATITUDE	412456.7480N
LTP/FTP LONGITUDE	0815054.1465W
LTP/FTP ELLIPSOIDAL HEIGHT	+02036
FPAP LATITUDE	412359.3765N
FPAP LONGITUDE	0815224.7760W
THRESHOLD CROSSING HEIGHT (TCH)	00054.7
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0008
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0

CRC REMAINDER	DCF1F2AE
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ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K5
LTP ORTHOMETRIC HEIGHT	+02378
FPAP ORTHOMETRIC HEIGHT	+02378

