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Project Name: CLE **1800 RVR: RNAV GPS RWY 24R

Project Reason: 1. LPV VISIBILITY: CHANGED FROM RVR 2400 TO RVR 1800 ALL CATS. AND ADDED CHART NOTE ** 1800 AUTHORIZED. 2. LNAV/VNAV: CHANGED DA/HAT FROM 1154/374 TO 1177/397 ALL CATS, (NEW CONTROLLING OBST: 879 MSL POLE (2C), 412513.45N/0814928.17W). 3. CIRCLING MDA/HAA: CHANGED CAT A/B FROM 1300/501 TO 1420/621, CAT C FROM 1320/521 TO 1420/621, CAT D FROM 1360/561 TO 1420/621. ADD CIRCLING ICON. 4. VISIBILITIES: CHANGED LNAV/VNAV FROM RVR 4000 TO RVR 4500, CIRCLING CAT C CHANGED FROM 1 1/2 TO 1 3/4. 5. ADD INOP ALS NOTE. 6. CHANGED FAS OBST FROM 993 ATCT TO 987 CONTROL TOWER, (987 MSL (2C) CONTROL TOWER: 412441.23N/0815019.64W).

Last Updated By: THOMAS KIRKPATRICK

Last Updated At: 2017-07-07 11:57:58.446338

Status: Verified

!FDC X/XXXX CLE IAP CLEVELAND-HOPKINS INTL, Cleveland, OH. RNAV (GPS) RWY 24R, AMDT 3C... LPV DA VISIBILITY RVR 1800 ALL CATS. LNAV/VNAV DA 1177/HAT 397 ALL CATS, VISIBILITY RVR 4500 ALL CATS. CIRCLING MDA 1420/HAA 621 ALL CATS, VISIBILITY CAT C 1 3/4 SM. CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV CAT C/D VISIBILITY TO 1 3/8 SM. CHART CIRCLING ICON. CHART FAS OBST: 987 CONTROL TOWER 412441N/0815020W. THIS IS RNAV (GPS) RWY 24R, AMDT 3D. 1707071157-PERM



RNAV - STANDARD US DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION						INSTRUMENT APPROACH PROCEDURE TITLE 14 CFR PART 97.33										Bearings, headings, courses, 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 in feet RVR.									
TERMINAL ROUTES																MISSED APPROACH									
FROM				TO				COURSE AND DISTANCE				ALTITUDE		LPV: DA LNAV/VNAV: DA LNAV: RW24R CLIMB TO 3000 DIRECT ZAPAN AND ON TRACK 272.52 TO DJB VOR/DME AND HOLD. ADDITIONAL FLIGHT DATA: HOLD W, RT, 077.04 INBOUND. CHART FAS OBST: 987 CONTROL_TOWER 412441N/0815020W DISTANCE TO THLD FROM 200 HATH: 0.47 NM. CHART VDP AT 1.30 NM TO RW24R* *LNAV ONLY. WAAS CHANNEL # 60904 REFERENCE PATH ID: W24A CHART CIRCLING ICON. LTP HAE: 203.6 M											
CXR VOR/DME				SUPME (TF) (FB) (RNP 2.00)				283.38 / 16.93				5000													
SUPME (IAF)				OGNEE (NOPT) (TF) (FB) (RNP 1.00)				283.16 / 4.11				3500													
OGNEE (IF/IAF)				JEDSU (TF) (FB) (RNP 1.00)				237.10 / 6.19				3000													
JEDSU (FAF)				FIDIN/2.42 NM TO RW24R (TF) (FB) (RNP 0.30)				237.03 / 4.39																	
FIDIN/2.42 NM TO RW24R				RW24R (MAP) (TF) (FO) (RNP 0.30)				236.98 / 2.42																	
(SEE FORM 8260-10)																									
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF) 2. HOLD NE OGNEE, RT, 237.10 INBOUND, 3500 FT. IN LIEU OF PT (IAF) 3. FAC: 237.03 FAF: JEDSU DIST FAF TO MAP: 6.81 THLD: 6.81 4. MIN. ALT: OGNEE 3500, JEDSU 3000, FIDIN/2.42 NM TO RW24R 1600* 5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____ 6. MIN GS INCPT: 3000 GS ALT AT: JEDSU 3000 OM: _____ MM: _____ IM: _____ 7. GS ANGLE: 3.00 TCH: 50.7 34:1 IS CLEAR 8. MSA FROM: RW24R 3100																MAG VAR: 7W EPOCH YEAR: 1990									
MINIMUMS																									
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT								ALTERNATE: N A		STANDARD															
CATEGORY =====>		A			B			C			D			E											
	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA										
LPV DA**	980	1800	200	980	1800	200	980	1800	200	980	1800	200													
LNAV/VNAV DA	1177	4500	397	1177	4500	397	1177	4500	397	1177	4500	397													
LNAV MDA	1260	2400	480	1260	2400	480	1260	5000	480	1260	5000	480													
CIRCLING	1420	1	621	1420	1	621	1420	1 3/4	621	1420	2	621													
NOTES: CHART NOTE: WHEN VGSI INOP, CIRCLING RWY 10 NA AT NIGHT. CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16C (4F) OR ABOVE 38C (100F). CHART NOTE: DME/DME RNP-0.3 NA. CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}). (CONTINUED ON PAGE 2)																									
CITY AND STATE				ELEVATION: 799 TDZE: 780				FACILITY IDENTIFIER: RNAV				PROCEDURE NO./AMDT NO./EFFECTIVE DATE:				SUP:									
CLEVELAND, OH				AIRPORT NAME:								RNAV (GPS) RWY 24R, AMDT 3D				AMDT: 3C									
				CLEVELAND-HOPKINS INTL												DATED 01/08/2015									

ALL AFFECTED PROCEDURES REVIEWED? <div><input type="checkbox"/> YES</div> <div><input type="checkbox"/> NO</div>		COORDINATES OF FACILITIES		REQUIRED EFFECTIVE DATE	
				ROUTINE	
COORDINATED WITH:					
ATA <div><input checked="" type="checkbox"/></div>	AAT <div><input type="checkbox"/></div>	ALPA <div><input checked="" type="checkbox"/></div>	APA <div><input checked="" type="checkbox"/></div>	AOPA <div><input checked="" type="checkbox"/></div>	NBAA <div><input checked="" type="checkbox"/></div>
OTHER (specify)				<div>ZOB, CLE APP CON, CLE ATCT, AMGR</div>	
FLIGHT CHECKED BY					
NAME:				FIFO	DATE:
DEVELOPED BY					
NAME:				FIFO	DATE:
THOMAS L KIRKPATRICK				AJV-5423	06/26/2017
APPROVED BY					
NAME:				FIFO	DATE:
JULIE A. MORGANMANAGER				AJV-5420	
CHANGES:					
<div>1. LPV VISIBILITY: CHANGED FROM RVR 2400 TO RVR 1800 ALL CATS. AND ADDED CHART NOTE ** 1800 AUTHORIZED.</div> <div>2. LNAV/VNAV: CHANGED DA/HAT FROM 1154/374 TO 1177/397 ALL CATS.</div> <div>3. CIRCLING MDA/HAA: CHANGED CAT A/B FROM 1300/501 TO 1420/621, CAT C FROM 1320/521 TO 1420/621, CAT D FROM 1360/561 TO 1420/621. ADD CIRCLING ICON.</div> <div>4. VISIBILITIES: CHANGED LNAV/VNAV FROM RVR 4000 TO RVR 4500, CIRCLING CAT C CHANGED FROM 1 1/2 TO 1 3/4.</div> <div>5. ADD INOP ALS NOTE.</div> <div>6. CHANGED FAS OBST FROM 993 ATCT TO 987 CONTROL_TOWER.</div>					
REASONS:					
<div>1. THIS IS IAW MEMORANDUM FROM AFS-400 AUTHORIZING 1800 RVR FOR LPV AND GLS APPROACH PROCEDURES.</div> <div>2, 6. NEW CONTROLLING OBSTACLE.</div> <div>3. NEW CIRCLING AREA ADDED TO MATCH OTHER SIAPS.</div> <div>4, 5. NEW VISIBILITY TABLE APPLIED.</div>					

US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
RNAV - STANDARD
INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.33

Bearings, headings, courses, 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 in feet RVR.

TERMINAL ROUTES, (CONT.):

FROM	TO	COURSE AND DISTANCE	ALTITUDE
RW24R (MAP)	980 MSL (CA)	236.98	
980 MSL	ZAPAN (DF) (FB) (RNP 1.00)		
ZAPAN	DJB VOR/DME (TF) (FO) (RNP 1.00)	272.52 / 11.14	3000

NOTES, (CONT.):

CHART NOTE: FOR INOPERATIVE ALS, INCREASE LNAV CAT C/D VISIBILITY TO 1 3/8 SM.

CHART NOTE: ** 1800 RVR AUTHORIZED.

CITY AND STATE

CLEVELAND, OH

ELEVATION: 799

TDZE: 780

AIRPORT NAME:

CLEVELAND-HOPKINS INTL

FACILITY
IDENTIFIER:
RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:

RNAV (GPS) RWY 24R, AMDT 3D

SUP:

AMDT: 3C

DATED: 01/08/2015

ALL AFFECTED PROCEDURES REVIEWED? <div><input type="checkbox"/> YES</div> <div><input type="checkbox"/> NO</div>		COORDINATES OF FACILITIES		REQUIRED EFFECTIVE DATE	
COORDINATED WITH:					
ATA <div><input type="checkbox"/></div>		AAT <div><input type="checkbox"/></div>	ALPA <div><input type="checkbox"/></div>	APA <div><input type="checkbox"/></div>	AOPA <div><input type="checkbox"/></div>
NBAA <div><input type="checkbox"/></div>		OTHER (specify) <div><input type="checkbox"/></div>			
FLIGHT CHECKED BY					
NAME:				FIFO	DATE:
DEVELOPED BY					
NAME:				FIFO	DATE:
APPROVED BY					
NAME:				FIFO	DATE:
CHANGES:					
REASONS:					

**RNAV STANDARD INSTRUMENT APPROACH PROCEDURE
FLIGHT STANDARDS SERVICE - FAR PART 97.33**

Bearings, headings, courses, 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 in feet RVR.

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	
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	412359.3800N
FPAP LONGITUDE	0815224.7800W
THRESHOLD CROSSING HEIGHT (TCH)	00050.7
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.50
LENGTH OFFSET	0008
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0

CRC REMAINDER

50FEE100

ADDITIONAL PATH POINT RECORD INFORMATION

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

CITY AND STATE

CLEVELAND, OH

ELEVATION: 799

TDZE: 780

AIRPORT NAME:

CLEVELAND-HOPKINS INTL

FACILITY
IDENTIFIER:

RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:

RNAV (GPS) RWY 24R, AMDT 3D

SUP:

AMDT: 3C

DATED: 01/08/2015

ALL AFFECTED PROCEDURES REVIEWED? <div><input type="checkbox"/> YES</div> <div><input type="checkbox"/> NO</div>		COORDINATES OF FACILITIES		REQUIRED EFFECTIVE DATE	
COORDINATED WITH:					
ATA <div><input type="checkbox"/></div>		AAT <div><input type="checkbox"/></div>	ALPA <div><input type="checkbox"/></div>	APA <div><input type="checkbox"/></div>	AOPA <div><input type="checkbox"/></div>
NBAA <div><input type="checkbox"/></div>		OTHER (specify) <div><input type="checkbox"/></div>			
FLIGHT CHECKED BY					
NAME:				FIFO	DATE:
DEVELOPED BY					
NAME:				FIFO	DATE:
APPROVED BY					
NAME:				FIFO	DATE:
CHANGES:					
REASONS:					

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT		FROM		TO		OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.								
FEEDER		CXR VOR/DME		SUPME		1. TOWER (39-001483)	412858.20N/0811157.40W	1624 (5D)	1000	AT2376	5000								
						2. TERRAIN	412906.00N/0811221.00W	1375 (1400)		AS1500	2900								
INITIAL		SUPME		OGNEE		3. AAO	413048.00N/0813133.00W	1247 (4E)	1000	AT1253	3500								
						4. TERRAIN	413054.00N/0813245.00W	1018 (1000)		AS1500	2500								
INTERMEDIATE		OGNEE (IF/IAF)		JEDSU		5. BLDG (39-001844)	413003.75N/0814137.82W	1603 (1A)	500	AT897	3000								
						6. TERRAIN	413048.00N/0813639.00W	696 (700)		AS1500	2200								
FINAL: LPV		JEDSU		RW24R					ASC		980/200								
FINAL: LNAV/VNAV		JEDSU		RW24R		7. POLE (39-022865)	412513.45N/0814928.17W	879 (2C)	PDA	AC20	1177/397								
FINAL: LNAV		JEDSU		FIDIN/2.42 NM TO RW24R		8. TOWER (39-002119)	412652.00N/0814645.00W	969 (5D)	250	AC50 XL41 DG290	1600								
FINAL: LNAV STEPDOWN		FIDIN/2.42 NM TO RW24R		RW24R		9. CONTROL_TOWER (39-001755)	412441.23N/0815019.64W	987 (2C)	250	XP23	1260								
2. HOLD-IN-LIEU-OF-PT		OGNEE		P-5		5. BLDG (39-001844)	413003.75N/0814137.82W	1603 (1A)	1000	AT897	3500								
						8. TERRAIN	413121.00N/0813254.00W	991 (1000)		AS1500	2500								
3. MISSED APPROACH	MAP:		DA / DA / RW24R		DJB VOR/DME				ASC		3000								
	ELEV:		814/1016/1160				9. TOWER (39-002665)	412327.00N/0820912.00W	1070 (5D)	1000	2100								
						10. TERRAIN	412251.00N/0821051.00W	824 (800)		AS1500	2300								
4. CIRCLING AREA		DISTANCE		HT. ABV. ARPT.															
CATEGORY A		1.3 NM		REQUIRED	ACTUAL	350	621	11. CONTROL_TOWER	412407.22N/0815054.10W	1110 (1A)	300	1420							
CATEGORY B		1.5 NM				450	621	11. CONTROL_TOWER	412407.22N/0815054.10W	1110 (1A)	300	1420							
CATEGORY C		1.7 NM				450	621	11. CONTROL_TOWER	412407.22N/0815054.10W	1110 (1A)	300	1420							
CATEGORY D		2.3 NM				550	621	11. CONTROL_TOWER	412407.22N/0815054.10W	1110 (1A)	300	1420							
CATEGORY E		4.5 NM				550													
5. MINIMUM SAFE ALTITUDES						PRIMARY NAVAID: RW24R													
SECTOR		OBSTRUCTION		BRG/DIST		ELEVATION (MSL)		M S A		SECTOR		OBSTRUCTION		BRG/DIST		ELEVATION (MSL)		M S A	
360-360		TWR (39-000134)		125/06.8		2049 (4D)		3100											
CITY AND STATE		ELEVATION: 799				FACILITY				PROCEDURE AND AMENDMENT NO:				REGION					
CLEVELAND, OH		AIRPORT NAME: CLEVELAND-HOPKINS INTL				RNAV				RNAV (GPS) RWY 24R, AMDT 3D				AGL					

PART B - SUPPLEMENTAL DATA										PART C - REMARKS: PRECIPITOUS TERRAIN EVALUATION COMPLETED. FPT INFORMED OF 20:1 PENETRATIONS. TERPS, VOLUME 1, "VISUAL PORTION OF FINAL" PENETRATIONS: RWY 10 - 20:1: 811 TREE (39-027731) 412503.02N/0815128.85W (1.69) 803 TREE (39-033941) 412503.93N/0815126.78W (1.30) ALTERNATE ALTIMETER SOURCE NOT USED, REDUNDANT SOURCES ON AIRPORT. VGSI DATA: 3.00/TCH 48.5 FLIGHT CHECK RDH 50.7 FT (ORDER 8260.3B CHG 19) CRITICAL TEMPERATURES: CRITICAL LOW :-16C (+4F) CRITICAL HIGH :+38C (+100F) CRITICAL TEMPERATURE REMARKS AVERAGE COLD TEMPERATURE DERIVED FROM STANDARD -30C ISA DEVIATION CRITICAL LOW TEMPERATURE BASED ON ACT. ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED. CAT A: 1.30NM CAT B: 1.83NM CAT C: 2.88NM CAT D: 3.77NM NO ADDITIONAL AIRSPACE REQUIRED. ALL INTERMEDIATE CONTROLLING OBSTRUCTIONS ARE THE SAME. TAA NOT DEVELOPED PER FPO. ATC REQUEST TO RETAIN SDF, AND MINIMIZE PROCEDURAL CHANGES. FIDIN LOCATION DETERMINED FROM ILS PRM RWY 24R REQUIREMENTS. INTERMEDIATE DOES NOT MATCH ILS INTERMEDIATE, ATC REQUEST, IAW 8260.19D PARA 491B, IT IS RECOMMENDED, BUT NOT REQUIRED TO MATCH. XP23: SAME MDA																													
1. COMMUNICATIONS WITH:				2. WEATHER SERVICE				3. ALTIMETER SETTING																															
ZOB ARTCC CLE TOWER CLE APP CON						N W S		OTHER: ASOS												SOURCE:KCLE																			
						F A A														DISTANCE:																			
						A / C														HOURS REMOTE OPERATION:																			
SATISFACTORY ON:																				LOCATION: KCLE										ADJUSTMENT: 0									
4. MONITOR STATUS		PRIMARY NAVAID:																																					
		MONITOR POINT:																																					
		HRS OPTN:		CAT 1																																			
				CAT 3																																			
5. APPROACH & RUNWAY LIGHTING		X		ALSF-2 06L, 24R																																			
				(S) SALS																																			
		X		MALSF 28 MALSR 06R, 24L																																			
		X		HIRL 06L, 06R, 10, 24L, 24R, 28																																			
				MIRL																																			
		X		REIL 10, 24L, 24R, 28																																			
		X		TDZ 06L, 06R, 24L, 24R																																			
		X		C/L 06L, 06R, 24L, 24R																																			
		X		OTHER (SPECIFY) PAPI-4R 24L, 24R, 28 PAPI-4L 06L, 06R, 10																																			
6. RUNWAY MARKINGS		BASIC																																					
		ALL WEATHER				PIR-G 06R, 24L, 28																																	
		INSTRUMENT				NPI-G 10																																	
7. RUNWAY VISUAL RANGE		APPROACH				06L, 06R, 24L, 24R, 28																																	
		MIDFIELD				06L, 06R, 24L, 24R																																	
		ROLL OUT				06L, 06R, 10, 24L, 24R																																	
8. GLIDE PATH		GP ANGLE: 3.00						ELEV RWY THRESHOLD:780.3																															
		DISTANCE FROM RWY:						ELEV GP ANTENNA:																															
								THRESHOLD CROSSING HEIGHT:50.7																															
9. FINAL APPROACH COURSE AIMING				X		RUNWAY THRESHOLD														FT. FROM THRESHOLD																			
				X		ON CENTERLINE														FT. FROM CENTERLINE																			
10. WAIVERS: NONE																																							
PART D - PREPARED BY: THOMAS L KIRKPATRICK										DATE: 06/26/2017																													
TITLE: AERONAUTICAL INFORMATION SPECIALIST										OFFICE: AJV-5423																													