

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
ILS STANDARD INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.29

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 ID</u> KHAO	<u>PROCEDURE NAME</u> ILS OR LOC RWY 29	<u>ORIGINAL/AMENDMENT</u> 2A	<u>CITY</u> HAMILTON	<u>STATE</u> OH		
<u>AIRPORT ELEVATION</u> 633	<u>TDZE</u> 619	<u>SUPERSEDED</u> ILS OR LOC RWY 29	<u>ORIGINAL/AMENDMENT</u> 2	<u>DATED</u> 01/03/2019	<u>MAG VAR</u> 5W	<u>EPOCH YEAR</u> 2000
<u>FACILITY</u> I-RQF	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>		

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>
BRNIE INT/I-RQF 15.32 DME	IF/IAF	HOLGR INT/I-RQF 7.08 DME					295.39	8.23 (I-RQF)	2600

MISSED APPROACH

MAP:

ILS: DA
LOC: 5.97 NM AFTER HOLGR INT/I-RQF 7.08 DME OR AT I-RQF 1.11 DME

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 1600 THEN CLIMBING RIGHT TURN TO 2600 DIRECT HKF NDB AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

- PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)
- HOLD SE HOLGR, LT, 295.39 INBOUND, 2600 FT. IN LIEU OF PT (IAF), MAX 5100.
- FAC:** 295.39 **FAF:** HOLGR INT/I-RQF 7.08 DME **DIST FAF TO MAP:** 5.97 **DIST FAF TO THLD:** 5.97
- MIN ALT:** HOLGR INT/I-RQF 7.08 DME 2600, ARTHN INT/I-RQF 3.61 DME 1440
- DIST TO THLD FROM OM:** **MM:** **IM:** **150 HAT:** **GS ANT:** 981
- MIN GS INCPT:** 2600 **GS ALT AT FAF:** HOLGR INT/I-RQF 7.08 DME 2600 **OM:** **MM:** **IM:**
- GP ANGLE:** 3.00 **34:1:** **20:1:** **TCH:** 45.6
- MSA FROM:** HKF NDB 3100

EQUIPMENT REQUIREMENTS NOTES:

ADF REQUIRED.
DME REQUIRED FOR LOC ONLY.



NOTES:

CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO S-ILS 29.

CHART NOTE: FOR INOPERATIVE ALS, INCREASE S-LOC 29 CATS C AND D VISIBILITY TO 2 1/2 SM; ARTHN FIX MINIMUMS: FOR INOPERATIVE ALS, INCREASE S-LOC 29 CATS C AND D VISIBILITY TO 1 3/8 SM.

ADDITIONAL FLIGHT DATA:

HOLD SW, RT, 055.71 INBOUND.

CHART FAS OBST: 717 TREE (39-028747) 392126N/0843003W.

FAS OBST: 1063 AAO 392042N/0842527W.

CHART VDP AT 2.53 DME

DISTANCE VDP TO THLD 1.42 NM.

CHART CIRCLING ICON.

MINIMUMS:

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

ALTERNATE: NA ☐ ILS: STANDARD - NA WHEN LOCAL WEATHER NOT AVAILABLE.; LOC: CAT A, B 900-2, CAT C 900-2 1/2, CAT D 1200-3, NA WHEN LOCAL WEATHER NOT AVAILABLE.

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
S-ILS 29	819	3/4	200	819	3/4	200	819	3/4	200	819	3/4	200			
S-LOC 29	1440	3/4	821	1440	1	821	1440	2	821	1440	2	821			
CIRCLING	1440	1	807	1440	1 1/4	807	1440	2 1/2	807	1760	3	1127			
ARTHN FIX MINIMUMS															
S-LOC 29	1120	3/4	501	1120	3/4	501	1120	1 1/4	501	1120	1 1/4	501			
CIRCLING	1180	1	547	1260	1	627	1320	2	687	1760	3	1127			

CHANGES - REASONS

1. REMOVED "CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET})" -- VGSI AND ILS GLIDEPATH ARE WITHIN 0.20 DEGREES AND TCH 3 FEET; 8260.19I, 8-6-9.M.
2. REMOVED "" FROM 1440 MINIMUM ALTITUDE ON PROFILE LINE 4 AND FROM CHART VDP NOTE IN ADDITIONAL FLIGHT DATA -- NO LONGER REQUIRED PER 8260.19I, 1-1-5.F(12).
3. REMOVED ""LOC ONLY" FROM ADDITIONAL FLIGHT DATA -- NO LONGER REQUIRED PER 8260.19I, 1-1-5.F(12).
4. REMOVED "5.97" FROM DIST TO THLD FROM OM: IN PROFILE LINE 5 -- UPDATED IAW 8260.19I, 8-6-7.E.
5. ADDED OBSTACLE ID TO CHART FAS OBST -- UPDATED IAW 8260.19I, 8-6-10.C.
6. ADDED "FAS OBST: 1063 AAO 392042N/0842527W" TO ADDITIONAL FLIGHT DATA -- CONTROLLING OBSTACLE FOR PRIMARY LOC MINIMUMS; 8260.19I, 8-6-10.C, NOTE.
7. INCREASED PRIMARY CIRCLING VISIBILITY CAT B FROM "1" TO "1 1/4" -- UPDATED IAW 8260.3D, TABLE 3-3-4.
8. INCREASED SECONDARY CIRCLING MDA/HAA CAT A FROM "1160/527" TO "1180/547" AND CAT C FROM "1300/667" TO "1320/687"; INCREASED SECONDARY CIRCLING VISIBILITY CAT C FROM "1 3/4" TO "2" -- NEW CONTROLLING OBSTACLES.



COORDINATED WITH:

A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: CVG APP CON, DAY APP CON, ZID, AMGR

FLIGHT CHECKED BY

PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJF-1000) MEMO, DATED JUNE 4, 2020,
SUBJECT: FLIGHT INSPECTION OF NEW CONTROLLING OBSTACLES

DEVELOPED BY

JASON KRETSCHMER (DANIEL C JOHNSEN)

Digitally signed by

JASON KRETSCHMER

Jul 15, 2021

Digitally signed by

JASON KRETSCHMER

Jul 15, 2021

OFFICE

Digitally signed by

DATE

JASON KRETSCHMER

Jul 15, 2021

OFFICE

AJV-A421

DATE

04/02/2021

OFFICE

AJV-A420

DATE

TITLE

MANAGER

APPROVED BY

MARLON ROBINSON

FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

<u>AIRPORT ID</u> KHAO	<u>PROCEDURE NAME</u> ILS OR LOC RWY 29	<u>AMDT NO.</u> 2A	<u>CITY</u> HAMILTON	<u>STATE</u> OH	<u>AIRPORT ELEVATION</u> 633	<u>FACILITY</u> I-RQF
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PART A: OBSTRUCTION DATA SEGMENTS

INTERMEDIATE

FROM
BRNIE INT/I-RQF 15.32 DME (IF/IAF)

TO
HOLGR INT/I-RQF 7.08 DME

<u>RNP</u>	<u>DISTANCE</u> 8.23	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>			<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
										1.TOWER (39-004435)	391857.97N/0842210.98W	1245	50	20	2C	500				AT855	2600
										2.TERRAIN	391911.00N/0842204.00W	974 (1000)								AS1500	2500

COMPUTATIONS

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL: ILS

FROM
HOLGR INT/I-RQF 7.08 DME

TO
RW29

<u>RNP</u>	<u>DISTANCE</u> 5.97	<u>PAT</u>	<u>MAP</u> DA	<u>HAT</u> 200			<u>HMAS</u>			<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
																	ASC				819

COMPUTATIONS

ALT KIAS KTAS HAA VKTW TR BA DTA COURSE CHANGE DVEB VEB OCS RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



FINAL: LOC

FROM

HOLGR INT/I-RQF 7.08 DME

TO

ARTHN INT/I-RQF 3.61 DME

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
	3.47			821								
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
3.AAO	392042.00N/0842527.00W		1063	164	98	4E	250				DG22 AC98	1440

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

FINAL: LOC STEPDOWN

FROM

ARTHN INT/I-RQF 3.61 DME

TO

5.97 NM AFTER HOLGR INT/I-RQF 7.08 DME OR AT I-RQF 1.11 DME

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
	2.50		5.97 NM AFTER HOLGR INT/I-RQF 7.08 DME OR AT I-RQF 1.11 DME	501								
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
4.TREE (39-028747)	392126.40N/0843003.49W		717	20	3	1A	250				XP153	1120

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

XP 153 FEET TO RETAIN CURRENT MINIMA.



HOLD-IN-LIEU OF PT

FROM

HOLGR

TO

P-5

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
5.TOWER (39-000020)	392111.00N/0841931.00W		1569	100	20	3C	1000					2600
6.TERRAIN	391911.00N/0842204.00W		974 (1000)								AS1500	2500

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

MISSED APPROACH : ILS

FROM

DA

TO

HKF NDB

RNP	DISTANCE	PAT	MAP	HAT	HMAS							
					654							
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				2600
7.TOWER (39-001590)	392541.20N/0843745.82W		1255	500	50	5D	1000					2300
8.TERRAIN	393248.82N/0843045.87W		995 (1000)								AS1500	2500

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



MISSED APPROACH : LOC

FROM

5.97 NM AFTER HOLGR INT/I-RQF 7.08 DME OR AT I-RQF 1.11 DME

TO

HKF NDB

RNP	DISTANCE	PAT	MAP	HAT			HMAS 870				
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
							ASC				2600
7.TOWER (39-001590)	392541.20N/0843745.82W	1255	500	50	5D	1000					2300
8.TERRAIN	393248.82N/0843045.87W	995 (1000)								AS1500	2500

COMPUTATIONS	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:

CIRCLING

☐ ALL CATS

☒ CAT A

☒ CAT B

☒ CAT C

☒ CAT D

☐ CAT E

☐ NOT AUTHORIZED

OBSTRUCTION	COORDINATES	RADIUS	HAA	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
CATEGORY A											
10.TOWER (39-002434)	392303.92N/0843201.31W	1.30	807/547	877	20	3	1A	300		SI	1440/1180
CATEGORY B											
11.TOWER (39-003545)	392312.00N/0843025.00W	1.83	807/627	947	50	20	2C	300		SI	1440/1260
CATEGORY C											
12.TOWER (39-000030)	392412.20N/0843149.81W	2.87	807/687	967	250	50	4D	300		SI/AC50	1440/1320
CATEGORY D											
13.TOWER (39-000062)	391841.70N/0843045.85W	3.76	1127/1127	1404	250	50	4D	300		AC50	1760/1760

CIRCLING REMARKS:



MSA

CENTER

HKF NDB

RADIUS

25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	TOWER (39-001362)	394328.61N/0841517.58W	037	16.2	2049	100	20	3C	1000			3100

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

VEGETATION HEIGHT 100 FEET.



PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH

ZID ARTCC, DAY FSS, CVG APP CON

<u>WX SERVICE</u>	<u>LOCATION</u>	<u>HRS OPERATION</u>	<u>ALTIMETER SOURCE</u>	<u>DISTANCE</u>	<u>SERVICE-A</u>	<u>ADJUSTMENTS</u>
ASOS	KHAO	24	KHAO	0	Y	0
<u>BACK-UP WX SERVICE</u>	<u>LOCATION</u>	<u>HRS OPERATION</u>	<u>ALTIMETER SOURCE</u>	<u>DISTANCE</u>	<u>SERVICE-A</u>	<u>ADJUSTMENTS</u>
ASOS	KLUK	24	KLUK	16.22	Y	60

WX REMARKS:

RASS PRESSURE PATTERNS THE SAME
KHAO 633, KLUK 476
RA = 59.4.

<u>PRIMARY NAVAID</u>	<u>MONITOR POINT</u>	<u>HRS OPERATION</u>	<u>CAT</u>
I-RQF	FBO BUILDING	24	1

<u>APPROACH AND RUNWAY LIGHTING SYSTEM</u>	<u>RUNWAY MARKINGS</u>	<u>RUNWAY VISUAL RANGE</u>
RW11 - MIRL (PCL), REIL (PCL), PAPI-4L (PCL)	NPI-G	
RW29 - MALS (PCL), MIRL (PCL), REIL (PCL), PAPI-4L (PCL)	NPI-G	

<u>GLIDESLOPE ANGLE</u>	<u>ELEV RWY THRESHOLD</u>	<u>TCH</u>	<u>ELEV GS ANTENNA</u>	<u>DISTANCE FROM RWY</u>	<u>VGSI ANGLE</u>	<u>TCH</u>
3.00	618.9	45.6	612.3	981	3.00	47.3

FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD	<input checked="" type="checkbox"/>	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE
ON CENTERLINE	<input checked="" type="checkbox"/>	FT FROM CENTERLINE	

CRITICAL TEMPERATURES

<u>CRITICAL LOW</u>	<u>CRITICAL HIGH</u>	<u>ACT</u>	<u>APT ISA</u>
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CRITICAL TEMPERATURE REMARKS:

"VISUAL PORTION OF FINAL" PENETRATIONS

HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS

and/or
5280-FT "PROCEED VFR" SEGMENT LEVEL SURFACE AREA PENETRATIONS



PENETRATIONS REMARKS:

PART C: GENERAL REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FOR CONTINGENCY PURPOSES: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE CINCINNATI MUNI/LUNKEN FLD ALTIMETER SETTING AND INCREASE ILS DA TO 879 FEET AND ALL MDAS 60 FEET; INCREASE S-LOC 29 CAT A VISIBILITY 1/4 SM, CATS C AND D VISIBILITY 1/2 SM, AND INCREASE CIRCLING CAT A VISIBILITY 1/4 SM; ARTHN FIX MINIMUMS: INCREASE S-LOC 29 CATS C AND D VISIBILITY 1/8 SM, AND INCREASE CIRCLING CAT C VISIBILITY 1/4 SM. INOPERATIVE TABLE DOES NOT APPLY TO S-LOC 29 CATS C AND D WHEN USING CINCINNATI MUNI/LUNKEN FLD ALTIMETER SETTING. VDP NA WHEN USING CINCINNATI MUNI/LUNKEN FLD ALTIMETER SETTING.

ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.



AIRPORT ID KHAO	PROCEDURE NAME ILS OR LOC RWY 29	AMDT NO. 2A	CITY HAMILTON	STATE OH	AIRPORT ELEVATION 633	FACILITY I-RQF
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PART D: AIRSPACE

DOCKET #

ALL DISTANCES TO 1/100NM; ELEVATION TO NEAREST 100 FEET; COORDINATES TO 1/100 SECOND; DEG TO 1/100 DEGREE

DISTANCE FROM	THLD	TO 1000FT POINT	3.88
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.05
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	290.39
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	900
DISTANCE FROM	THLD	TO 1500FT POINT	5.57
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	1.42
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	290.39
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	900

THRESHOLD
COORDINATES
(IF STR-IN)

392140.07N/0843046.18W

ARP COORDINATES

392149.50N/0843119.00W

RUNWAY APCH END
AND DIST FURTHEST
FROM ARP

RUNWAY 11 DISTANCE 0.45 NM

FAF
COORDINATES

391934.86N/0842333.22W

FIX NAME
COORDINATES

REMARKS

NO ADDITIONAL AIRSPACE REQUIRED.

QUALITY
26
CHECKED

FAA Form 8260-9 / (11/16) Supersedes Previous Edition

Electronic Version

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PART E: PREPARED BY

<u>NAME</u> JASON KRETSCHMER (DANIEL C JOHNSEN)	<u>OFFICE</u> AJV-A421	<u>DATE</u> 04/02/2021	<u>TITLE</u> AERONAUTICAL INFORMATION SPECIALIST
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