

**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 ID</u> KAIO	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 20	<u>ORIGINAL/AMENDMENT</u> 1D	<u>CITY</u> ATLANTIC	<u>STATE</u> IA		
<u>AIRPORT ELEVATION</u> 1165	<u>TDZE</u> 1151	<u>SUPERSEDED</u> RNAV (GPS) RWY 20	<u>ORIGINAL/AMENDMENT</u> 1C	<u>DATED</u> 05/19/2022	<u>MAG VAR</u> 4E	<u>EPOCH YEAR</u> 1995
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 23 FEBRUARY 2023	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>		

TERMINAL ROUTES [THIS IS A CORRECETED COPY OF A PROCEDURE ORIGINALLY PUBLISHED IN TL 23-03.](#)

<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>
LINDE	IAF	VAKUC	NOPT	TF	FB	1.00	258.41	31.72	4000
MADUP	IAF	VAKUC	NOPT	TF	FB	1.00	159.28	22.59	4000
VAKUC	IF/IAF	OYOLU		TF	FB	1.00	197.85	6.04	2800
OYOLU	FAF	PUYIG/2.50 NM TO RW20		TF	FB	0.30	197.82	2.56	
PUYIG/2.50 NM TO RW20		RW20	MAP	TF	FO	0.30	197.82	2.50	
RW20	MAP	1447 MSL		CA			197.82		
1447 MSL		YODUG		DF	FO	1.00			4000

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW20

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 4000 DIRECT YODUG AND HOLD, CONTINUE CLIMB-IN-HOLD TO 4000.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF

(IAF)

2. HOLD N VAKUC, RT, 197.85 INBOUND, 4000 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 197.82FAF: OYOLUDIST FAF TO MAP: 5.06DIST FAF TO THLD: 5.06

4. MIN ALT: VAKUC 4000, OYOLU 2800, PUYIG/2.50 NM TO RW20 1980

5. DIST TO THLD FROM OM:MM:IM:150 HAT:296 HAT: 0.81GS ANT:

6. MIN GP INCPT: 2800GP ALT AT PFAF : OYOLU 2800OM:MM:IM:

7. GP ANGLE: 3.0034:1: IS CLEAR20:1: IS CLEARTCH: 39.0

8. MSA FROM: RW20 3900

PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: CIRCLING RWY 12, 30 NA AT NIGHT.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17°C OR ABOVE 54°C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT LINDE ON V172 NORTHEAST BOUND.



ADDITIONAL FLIGHT DATA:

HOLD S, RT, 017.72 INBOUND.
CHART FAS OBST: 1365 ELEVATOR (19-020226) 412519N/0950145W.
CHART VDP AT 1.56 NM TO RW20.
WAAS CHANNEL # 82528
REFERENCE PATH ID: W20A
LTP HAE: 322.6 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - CAT C 800-2 1/4, 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
LPV DA	1447	1	296	1447	1	296	1447	1	296		NA				
LNAV/VNAV DA	1733	1 3/4	582	1733	1 3/4	582	1733	1 3/4	582		NA				
LNAV MDA	1680	1	529	1680	1	529	1680	1 1/2	529		NA				
CIRCLING	1760	1	595	1920	1	755	1920	2 1/4	755		NA				



CHANGES - REASONS

1. INCORPORATED CHANGES FROM PREVIOUS P-NOTAM INTO FORM.
2. ADDED MAXIMUM HOLDING ALTITUDE AT VAKUC ON LINE 2 - IAW 8260.19 PARA 8-6-7 B (2).
3. ADDED 20:1 CLEAR ON LINE 7 - IAW 8260.19 PARA 8-6-7 G (3).
4. DELETED ASTERISK "*" AND "**LNAV ONLY" FROM LINE 4 AND ADDITIONAL FLIGHT DATA - IAW 8260.19 PARA 8-6-10 M AND PARA 8-6-7 D.
5. DISTANCE TO THLD FROM 296 HAT MOVED FROM "ADDITIONAL FLIGHT DATA" TO "LINE 5" - IAW 8260.19 PARA 8-6-7 E (3).
6. UPDATED FAS OBSTACLE FROM "1369 ELEVATOR 412519N/0950145W" TO "1365 ELEVATOR (19-020226) 412519N/0950145W" - UPDATED OBSTACLE DATABASE AND IAW 8260.19 PARA 8-6-10 C.
7. DELETED CHART NOTE: DME/DME RNP -0.3 NA AND ADDED PBN REQUIREMENTS NOTE RNP APCH - GPS - IAW 8260.19 PARA 8-6-8 B (2).
8. UPDATED CHART NOTE FROM "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17C (2F) OR ABOVE 54C (130F)" TO "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17C OR ABOVE 54C" - IAW 8260.19 PARA 8-6-9 R.
9. DELETED CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT MADUP ON V138 NORTHEAST BOUND - VOR MON CANCELLING SEGMENTS OF V138.
10. CHANGED MISSED APPROACH INSTRUCTION FROM "CLIMB TO 4000 DIRECT YODUG AND HOLD" TO "CLIMB TO 4000 DIRECT YODUG AND HOLD, CONTINUE CLIMB-IN-HOLD TO 4000" - IAW 8260.3 PARA 16-7-3.
11. UPDATED LNAV/VNAV VISIBILITY FROM "2 SM" TO "1 3/4 SM" ALL CATS - IAW 8260.3 SECTION 3-3 TABLE 3-3-1.
12. MOVED ALL BACKUP ALTIMETER NOTES TO 8260-9 FORM - AIRPORT WEATHER INFORMATION AVAILABLE ON WMSCR.

11/07/22: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 09/27/22.

1. ADDED TO FLIGHT CHECKED BY SIGNATURE BLOCK: "PROCESSED IAW TECHNICAL SUPPORT GROUP (AJF-17) MEMO DATED 07/07/2021 GUIDANCE FOR PROCEDURAL CHANGES REQUIRING FLIGHT INSPECTION/VALIDATION".

12/09/22: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 11/07/22.

1. UPDATED CHART NOTE "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW 17°C OR ABOVE 54°C" TO "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17°C OR ABOVE 54°C".
2. UPDATED CHANGES-REASONS #8 TO REFLECT CHANGING TO -17C.

COORDINATED WITH:

A4A ☐ **ALPA** ☒ **AOPA** ☒ **APA** ☐ **HAI** ☐ **NBAA** ☒ **OTHER:** AMGR, ZMP

FLIGHT CHECKED BY

PROCESSED IAW TECHNICAL SUPPORT GROUP (AJF-17) MEMO DATED 07/07/2021 GUIDANCE
FOR PROCEDURAL CHANGES REQUIRING FLIGHT INSPECTION/VALIDATION

OFFICE**DATE**

Digitally signed by

DEVELOPED BY

FRANK JACKSON JR

Digitally signed by

CASIMIR L TABAKA

CASIMIR L TABAKA

Dec 09, 2022

OFFICE

AJV-A431

DATE

09/27/2022

APPROVED BY

JOHNNIE BAKER

Digitally signed by

CASIMIR L TABAKA

Dec 09, 2022

OFFICE

AJV-A430

DATE

TITLE
MANAGER

QUALITY
16
CHECKED

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KAIO
RUNWAY	RW20
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W20A
LTP/FTP LATITUDE	412428.4390N
LTP/FTP LONGITUDE	0950250.3550W
LTP/FTP ELLIPSOIDAL HEIGHT	+03226
FPAP LATITUDE	412305.6600N
FPAP LONGITUDE	0950334.3000W
THRESHOLD CROSSING HEIGHT (TCH)	00039.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1224
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	FA5D739F

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+03502
FPAP ORTHOMETRIC HEIGHT	+03502

