

**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> KARB	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 24	<u>ORIGINAL/AMENDMENT</u> 2F	<u>CITY</u> ANN ARBOR	<u>STATE</u> MI		
<u>AIRPORT ELEVATION</u> 839	<u>TDZE</u> 831	<u>SUPERSEDED</u> RNAV (GPS) RWY 24	<u>ORIGINAL/AMENDMENT</u> 2E	<u>DATED</u> 07/18/2019	<u>MAG VAR</u> 5W	<u>EPOCH YEAR</u> 1985
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 11 AUGUST 2022	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>		

TAA

FROM	FIX TYPE	TO	FIX TYPE	ALTITUDE
1. 150/30 CW 330/30	NOPT	VAQOL	IF/IAF	3000
2. 330/30 CW 150/30		VAQOL	IAF	3100

TERMINAL ROUTES

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
VAQOL	IF/IAF	WUVRU		TF	FB	1.00	239.68	6.93	2500
WUVRU	FAF	ISPIW/2.50 NM TO RW24		TF	FB	0.30	239.59	2.63	
ISPIW/2.50 NM TO RW24		RW24	MAP	TF	FO	0.30	239.59	2.50	
RW24	MAP	1132 MSL		CA			239.59		
1132 MSL		YACNU		DF	FO	1.00			3000

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW24

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3000 DIRECT YACNU AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF

(IAF)

2. HOLD NE VAQOL, RT, 239.68 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 8000.

3. FAC: 239.59FAF: WUVRU

DIST FAF TO MAP: 5.13

DIST FAF TO THLD: 5.13

4. MIN ALT: VAQOL 3000, WUVRU 2500, ISPIW/2.50 NM TO RW24 1660

5. DIST TO THLD FROM OM:MM:IM:150 HAT:301 HAT: 0.83GS ANT:

6. MIN GP INCPT: 2500GP ALT AT PFAF : WUVRU 2500OM:MM:IM:

7. GP ANGLE: 3.0034:1: IS NOT CLEAR20:1: IS CLEARTCH: 40.0

8. MSA FROM:

PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: CIRCLING NA TO RWYS 12 AND 30.
CHART NOTE: RWY 24 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16°C OR ABOVE 38°C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).

ADDITIONAL FLIGHT DATA:

HOLD SW, RT, 059.37 INBOUND.
CHART FAS OBST: 989 TREE 421349N/0834259W.
WAAS CHANNEL # 61120
REFERENCE PATH ID: W24A
LTP HAE: 217.6 M

MINIMUMS:

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

ALTERNATE: NA ☐ 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	1132	1	301	1132	1	301	1132	1	301	1132	1	301			
LNAV/VNAV DA	1170	1	339	1170	1	339	1170	1	339	1170	1	339			
LNAV MDA	1300	1	469	1300	1	469	1300	1 3/8	469	1300	1 3/8	469			



CHANGES - REASONS

1. RAISED PRIMARY/SECONDARY LPV DA FROM 1081/1119 TO 1132/1174 - NEW MA CONTROLLING OBSTACLE: 912 TRANSMISSION LINE (26-128998) 421347.33N/0834347.00W.
2. RAISED PRIMARY/SECONDARY LNAV/VNAV DA FROM 1155/1195 TO 1170/1212 - ADDED AC ADJUSTMENT FOR EXISTING UD OBSTACLE.
3. THLD TO HAT DISTANCE CHANGED FROM 0.66 TO 0.83 NM - HAT CHANGED FROM 250 TO 301.
4. MA CA LEG INCREASED FROM 1076 TO 1132 - LPV DA INCREASE.
5. INCREASED CAT C/D LNAV VISIBILITY FROM 1 1/4 TO 1 3/8 - BASED ON CURRENT VISIBILITY CRITERIA.
6. CHANGED NOTE "RNP APCH" TO "RNP APCH - GPS" -- IAW 8260.19I 8-6-8(B)2.
7. REMOVED ALL REFERENCE TO "*" TO INDICATE LNAV ONLY - IAW 8260.19I 8-6-10(M).
8. REMOVED "CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE WILLOW RUN ALTIMETER SETTING AND INCREASE ALL DA/MDA 40 FEET" - MOVED SECONDARY ALTIMETER INFORMATION TO 8260-9 FORM IAW 8260.19I 8-6-9(F)3.

THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 6/21/2022.

1. TERMINAL ROUTE VAQOL TO WUVRU: RNP VALUE CHANGED FROM 0.5 TO 1.0.
2. ADDED "VAQOL 3000" TO PROFILE LINE 4.
3. ADDED CHART NOTE "CIRCLING NA TO RWYS 12 AND 30".

COORDINATED WITH:

A4A ☒ **ALPA** ☒ **AOPA** ☒ **APA** ☒ **HAI** ☐ **NBAA** ☒ **OTHER:** ZOB, AMGR, ARB ATCT, DTW APP CON, STATE AVIATION.

FLIGHT CHECKED BY
BRIAN PETER CARSON

Digitally signed by
CASIMIR L TABAKA

OFFICE
FIOG

DATE
06/16/2022

DEVELOPED BY
KARLIE BUNTIN

Digitally signed by
KARLIE B BUNTIN

Jul 07, 2022

OFFICE
AJV-A432

DATE
03/18/2022

APPROVED BY
LONNIE EVERHART

Jul 06, 2022

Digitally signed by
CASIMIR L TABAKA

Jul 07, 2022

OFFICE
AJV-A430

DATE

TITLE
MANAGER

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KARB
RUNWAY	RW24
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W24A
LTP/FTP LATITUDE	421332.9680N
LTP/FTP LONGITUDE	0834422.4465W
LTP/FTP ELLIPSOIDAL HEIGHT	+02176
FPAP LATITUDE	421241.2400N
FPAP LONGITUDE	0834600.1000W
THRESHOLD CROSSING HEIGHT (TCH)	00040.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1680
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	F15FFE25

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K5
LTP ORTHOMETRIC HEIGHT	+02518
FPAP ORTHOMETRIC HEIGHT	+02518

