

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> ESTHERVILLE MUNI	<u>AIRPORT ID</u> KEST	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 34	<u>ORIGINAL/AMENDMENT</u> 1A	<u>CITY</u> ESTHERVILLE	<u>STATE</u> IA
<u>AIRPORT ELEVATION</u> 1319	<u>TDZE</u> 1319	<u>SUPERSEDED</u> RNAV (GPS) RWY 34	<u>ORIGINAL/AMENDMENT</u> 1	<u>DATED</u> 07/05/2007	<u>MAG VAR</u> 1E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 8 NOVEMBER 2018	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

TAA

<u>FROM</u>	<u>FIX TYPE</u>	<u>TO</u>	<u>FIX TYPE</u>	<u>ALTITUDE</u>
1. 259/30 CW 079/30	NOPT	OHYEQ	IF/IAF	3400
2. 079/30 CW 169/30		UBMUW	IAF	3400
3. 169/30 CW 259/30		ETGIQ	IAF	3400

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>
ETGIQ	IAF	OHYEQ	NOPT	TF	FB	1.00	258.70	5.00	3400
UBMUW	IAF	OHYEQ	NOPT	TF	FB	1.00	078.54	5.00	3400
OHYEQ	IF/IAF	IGPUQ		TF	FB	1.00	348.62	6.10	3000
IGPUQ	FAF	RW34	MAP	TF	FO	0.30	348.60	5.08	
RW34	MAP	1569 MSL		CA			348.60		
1569 MSL		UYJOR		DF	FO	1.00			3400

MISSED APPROACH

MAP:

LPV: DA
 LNAV/VNAV: DA
 LNAV: RW34

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 3400 DIRECT UYJOR AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF (IAF)

2. HOLD S OHYEQ, RT, 348.62 INBOUND, 3400 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 348.60FAF: IGPUQDIST FAF TO MAP: 5.08DIST FAF TO THLD: 5.08

4. MIN ALT: OHYEQ 3400, IGPUQ 3000

5. DIST TO THLD FROM OM:MM:IM:150 HAT:250 HAT: 0.65GS ANT:

6. MIN GP INCPT: 3000GP ALT AT FAF : IGPUQ 3000OM:MM:IM:

7. GP ANGLE: 3.0034:1: IS CLEAR20:1: IS CLEARTCH: 42.0

8. MSA FROM:

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: CIRCLING NA TO RWYS 6 AND 24.
CHART NOTE: BARO-VNAV AND VDP NA WHEN USING JACKSON ALTIMETER SETTING.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17C OR ABOVE 54C.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: WHEN LOCAL ALTIMETER NOT RECEIVED, USE JACKSON ALTIMETER SETTING AND INCREASE ALL DA/MDA 60 FEET.

ADDITIONAL FLIGHT DATA:

CHART: CRYPT NORTH MOA
CHART CIRCLING ICON.
CHART VDP AT 1.08 NM TO RW34*
*LNAV ONLY
WAAS CHANNEL #82304
REFERENCE PATH ID: W34A
CHART FAS OBST: 1400 TREE 432122N/0944345W.
HOLD N, RT, 168.56 INBOUND
LTP HAE: 373.2 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD - 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	1569	1	250	1569	1	250		NA			NA				
LNAV/VNAV DA	1629	1	310	1629	1	310		NA			NA				
LNAV MDA	1700	1	381	1700	1	381		NA			NA				
CIRCLING	1720	1	401	1840	1	521		NA			NA				



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CHANGES - REASONS

1. MAGVAR UPDATED FROM 6E/1980 TO 1E/2020 - MAGVAR OUT OF TOLERANCE.
2. ADDED 20:1 IS CLEAR - IAW CURRENT DOCUMENTATION POLICY.
3. TAA 1 BEARING CHANGED FROM "074/30 CW 259/30" TO "259/30 CW 079/30" - AIRPORT MAGVAR CHANGED FROM 6E TO 1E/NO CHANGE TO GROUND TRACK.
4. TAA 2 BEARING CHANGED FROM "074/30 CW 164/30" TO "079/30 CW 169/30" - AIRPORT MAGVAR CHANGED FROM 6E TO 1E/NO CHANGE TO GROUND TRACK.
5. TAA 3 BEARING CHANGED FROM "164/30 CW 254/30" TO "169/30 CW 259/30" - AIRPORT MAGVAR CHANGED FROM 6E TO 1E/NO CHANGE TO GROUND TRACK.
6. TERMINAL ROUTE (UBMUW-OHYEQ) CHANGED FROM 073.54/5.00 TO 078.54/5.00 - AIRPORT MAGVAR CHANGED FROM 6E TO 1E/NO CHANGE TO GROUND TRACK.
7. TERMINAL ROUTE (ETGIQ-OHYEQ) CHANGED FROM 253.70/5.00 TO 258.70/5.00 - AIRPORT MAGVAR CHANGED FROM 6E TO 1E/NO CHANGE TO GROUND TRACK.
8. TERMINAL ROUTE (OHYEQ-IGPUQ) CHANGED FROM (RNP 0.5.) TO (RNP 1.00) - IAW FAAO 8260.19H.
9. INTERMEDIATE SEGMENT CHANGED FROM 343.62/6.10 TO 348.62/6.10 - AIRPORT MAGVAR CHANGED FROM 6E TO 1E/NO CHANGE TO GROUND TRACK.
10. FAC CHANGED FROM 343.60 TO 348.60 - AIRPORT MAGVAR CHANGED FROM 6E TO 1E/NO CHANGE TO GROUND TRACK.
11. CIRCLING CAT A MDA CHANGED FROM 1700/HAA 381 TO 1720/HAA 401 - NEW CIRCLING CRITERIA, NEW CONTROLLING OBSTACLE.
12. CIRCLING CAT B MDA CHANGED FROM 1780/HAA 461 TO 1840/HAA 521 - NEW CIRCLING CRITERIA, NEW CONTROLLING OBSTACLE.
13. ADDED PBN EQUIPMENT REQUIREMENTS NOTE: RNP APCH - IAW FAAO 8260.19H 8-6-8.
14. DELETED DME/DME RNP-0.3 NA - REPLACED BY PBN EQUIPMENT REQUIREMENTS NOTE.
15. ADDED "CHART CIRCLING ICON" TO ADDITIONAL FLT DATA - ADDED NEW CIRCLING CRITERIA.
16. LINE 2 CHANGED FROM "HOLD S OHYEQ, RT, 343.62 INBOUND, 3400 FT IN LIEU OF PT (IAF)" TO "HOLD S OHYEQ, RT, 348.62 INBOUND, 3400 FT IN LIEU OF PT (IAF)" - AIRPORT MAGVAR CHANGED FROM 6E TO 1E/NO CHANGE TO GROUND TRACK.
17. ADDITIONAL FLT DATA: CHANGED FROM "HOLD N, RT, 163.56 INBOUND." TO "HOLD N, RT, 168.56 INBOUND." - AIRPORT MAGVAR CHANGED FROM 6E TO 1E/NO CHANGE TO GROUND TRACK.
18. CHANGED 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 8260.19H 8-6-9 S. FAHRENHEIT IS NO LONGER REQUIRED ON THIS NOTE.
19. ADDED MISSED APCH CA LEG - AS REQUIRED.
20. UPDATED INTERMEDIATE SEGMENT CONTROLLING OBSTACLE ID FROM (16-1779) TO (19-001779) - NEW SURVEY, NO IMPACT TO CURRENT ALTITUDES.
21. ADDED LPV CONTROLLING OBSTACLE (19-052327) - NEW SURVEY, NO IMPACT TO DA.
22. REMOVED LNAV/VNAV CONTROLLING OBSTACLE - NOT REQUIRED, ALL SURFACES CLEAR, NO IMPACT TO DA.
23. CHANGED LNAV FINAL CONTROLLING OBSTACLE FROM 1359' TREE TO 1400' TREE (19-052345) - PROCEDURE EVALUATION.
24. UPDATED LTP LAT/LONGS FROM "432406.4275N/0944441.9550W" TO "432406.4263N/0944441.9638W" - NEW SURVEY.
25. UPDATED FPAP LAT/LONGS FROM "432534.0800N/0944504.0500W" TO "432534.0735N/0944504.0580W" - PROCEDURE EVALUATION.
26. CRC REMAINDER CHANGED FROM "4CED1030" TO "4671CD8A" - LTP AND FPAP LAT/LONGS CHANGED.
27. ADDED "BARO-VNAV AND VDP NA WHEN USING JACKSON ALTIMETER SETTING." NOTE - IAW CURRENT DOCUMENTATION POLICY.
28. REMOVED "VDP NA WHEN USING JACKSON ALTIMETER SETTING." - REPLACED BY "BARO-VNAV AND VDP NA WHEN USING JACKSON ALTIMETER SETTING."
29. REMOVED "BARO-VNAV NA WHEN USING JACKSON ALTIMETER SETTING." - REPLACED BY "BARO-VNAV AND VDP NA WHEN USING JACKSON ALTIMETER SETTING."



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<u>COORDINATED WITH:</u>					
A4A <input type="checkbox"/> ALPA <input checked="" type="checkbox"/> AOPA <input checked="" type="checkbox"/> APA <input type="checkbox"/> HAI <input type="checkbox"/> NBAA <input checked="" type="checkbox"/> OTHER: ZMP, AMGR					
<u>FLIGHT CHECKED BY</u>		<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>	
SCOTT WIEBE		DEZ SILAGYI	FICO	8/22/18	
		Aug 27, 2018			
<u>DEVELOPED BY</u>		<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>	
CHRIS O'BRIEN		CHRISTOPHER P O'BRIEN	AJV-5421	07/20/2018	
		Jul 23, 2018			
<u>APPROVED BY</u>		<i>Digitally signed by</i>	<u>OFFICE</u>	<u>DATE</u>	<u>TITLE</u>
JULIE MORGAN		DEZ SILAGYI	AJV-5420		MANAGER
		Aug 27, 2018			



FAS DATA BLOCK INFORMATION

DATA FIELD	DATA
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KEST
RUNWAY	RW34
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W34A
LTP/FTP LATITUDE	432406.4260N
LTP/FTP LONGITUDE	0944441.9635W
LTP/FTP ELLIPSOIDAL HEIGHT	+03732
FPAP LATITUDE	432534.0735N
FPAP LONGITUDE	0944504.0580W
THRESHOLD CROSSING HEIGHT (TCH)	00042.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1288
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	4671CD8A
ADDITIONAL PATH POINT RECORD INFORMATION	
ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+04016
FPAP ORTHOMETRIC HEIGHT	+04016

