

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> KLWD	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 18	<u>ORIGINAL/AMENDMENT</u> 1	<u>CITY</u> LAMONI	<u>STATE</u> IA		
<u>AIRPORT ELEVATION</u> 1131	<u>TDZE</u> 1131	<u>SUPERSEDED</u> RNAV (GPS) RWY 18	<u>ORIGINAL/AMENDMENT</u> ORIG-A	<u>DATED</u> 06/08/2006	<u>MAG VAR</u> 3E	<u>EPOCH YEAR</u> 2000
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 2 DECEMBER 2021	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>		

**TAA**

FROM	FIX TYPE	TO	FIX TYPE	ALTITUDE
1. 088/30 CW 268/30	NOPT	TOQIC	IF/IAF	3000
2. 268/30 CW 358/30		VUGHO	IAF	3000
3. 358/30 CW 088/30		XERMY	IAF	3000

**TERMINAL ROUTES**

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
VUGHO	IAF	TOQIC	NOPT	TF	FB	1.00	268.31	6.46	3000
XERMY	IAF	TOQIC	NOPT	TF	FB	1.00	088.13	6.46	3000
TOQIC	IF/IAF	QUTMU		TF	FB	1.00	178.22	4.91	2800
QUTMU	FAF	RW18	MAP	TF	FO	0.30	178.23	5.09	
RW18	MAP	2000 MSL		CA			178.23		2000
2000 MSL		TOQIC		DF	FO	1.00			3000

**MISSED APPROACH**

**MAP:**

LPV: DA  
LNAV/VNAV: DA  
LNAV: RW18

**MISSED APPROACH INSTRUCTIONS:**

CLIMB TO 2000, THEN CLIMBING LEFT TURN 3000 DIRECT TOQIC AND HOLD.

**ALTERNATE MISSED APPROACH INSTRUCTIONS:**



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF

(IAF)
2. HOLD N TOQIC, RT, 178.22 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 6000.
3. FAF: 178.23FAF: QUTMUDIST FAF TO MAP: 5.09DIST FAF TO THLD: 5.09
4. MIN ALT: TOQIC 3000, QUTMU 2800
5. DIST TO THLD FROM PFAF: 5.09MM:IM:150 HAT:250 HAT: 0.63GS ANT:
6. MIN GP INCPT: 2800GP ALT AT FAF : QUTMU 2800OM:MM:IM:
7. GP ANGLE: 3.0034:1: IS NOT CLEAR20:1: IS CLEARTCH: 50.0
8. MSA FROM:

PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: CIRCLING NA W OF RWY 18-36.  
CHART NOTE: RWY 18 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.  
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -21°C OR ABOVE 54°C.

ADDITIONAL FLIGHT DATA:

FAS OBST: 1240 AAO 404130N/0935442W.  
1270 AAO 404306N/0935427W.  
CHART VDP AT 1.01 NM TO RW18.  
WAAS CHANNEL # 65645  
REFERENCE PATH ID: W18A  
CHART CIRCLING ICON.  
LTP HAE: 312.6 M

MINIMUMS:

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

ALTERNATE: NA

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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	1381	1	250	1381	1	250	1381	1	250	1381	1	250			
LNAV/VNAV DA	1381	1	250	1381	1	250	1381	1	250	1381	1	250			
LNAV MDA	1500	1	369	1500	1	369	1500	1	369	1500	1	369			
CIRCLING	1520	1	389	1720	1	589	1720	1 1/2	589	1720	2	589			

CHANGES - REASONS

1. TERMINAL ROUTES: UPDATED VUGHO TO TOQIC COURSE/DISTANCE FROM “268.95/5” TO “268.31/6.46” - LENGTHENED INITIAL SEGMENT TO COMPLY WITH 8260.58A 1-2-5. B (1).
2. TERMINAL ROUTES: UPDATED XERMY TO TOQIC COURSE/DISTANCE FROM “88.15/5” TO “88.13/6.46” - LENGTHENED INITIAL SEGMENT TO COMPLY WITH 8260.58.A 1-2-5. B (1).
3. TERMINAL ROUTES: UPDATED TOQIC TO QUTMU DISTANCE FROM “5” TO “4.91” - PFAF REALIGNED TO 3.0 GPA AND 50 FT TCH PER FPT.
4. TERMINAL ROUTES: UPDATED QUTMU TO RWY 18 COURSE/DISTANCE FROM “178.22/5” TO “178.23/5.09” - NEW TARGETS EVALUATION.
5. TERMINAL ROUTES: CHANGED QUTMU FAC TO RWY 18 FROM “178.22” TO “178.23” - NEW TARGETS EVALUATION.
6. CHART NOTE: DELETED DME/DME RNP-0.3 NA" AND ADDED "RNP APCH - GPS" TO PBN REQUIREMENTS NOTE - IAW 8260.19I PARA 8-6-8.B (2).
7. NOTES: ADDED CHART NOTE: CIRCLING NA W OF RWY 18-36 - PER FPT REQUEST.
8. NOTES: ADDED CHART NOTE: RWY 18 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 NOT AUTHORIZED - NEW 34:1 PENETRATIONS 8260.19I, 8-6-11.K (3).
9. ADDED “CHART VDP AT 1.01 NM TO RW18” TO ADDITIONAL FLIGHT DATA - 8260.19I, 8-6-10M.
10. NOTES: ADDED CHART CIRCLING ICON - NEW CIRCLING CRITERIA APPLIED PER 8260.3D.
11. ADDED "LTP HAE: 312.6 M" TO ADDITIONAL FLIGHT DATA -- NEW FAS DATA FOR LPV MINIMUMS.
12. NOTES: ADDED CAT C AND D MINIMUMS - PER IFP CHECKLIST.
13. ADDITIONAL FLIGHT DATA: FAS OBS CHANGED FROM 1270 AAO 404306N/0935427W TO 1240 AAO 404130N/0935442W - NEW TARGETS EVAL 8260.19I 8-6-10 C.
14. ADDITIONAL FLIGHT DATA: ADDED NEW 7:1 OBST, 1270 AAO 404306N/0935427W - NEW TARGETS EVAL
15. ADDITIONAL FLIGHT DATA: REMOVED CHART ASOS FREQUENCY - 8260.19I, 8-2-4. B (3).
16. UPDATED ALTERNATE MINIMUMS FROM “NA TO STANDARD” - NA WHEN LOCAL WEATHER NOT AVAILABLE - ADDED CAT C AND D MINIMUMS PER FPT.
17. MINIMUMS: ADDED CIRCLING-LNAV CATS C AND D AND ADDED LPV-LNAV/VNAV CAT A - D - PER FPT REQUEST.
18. MINIMUMS: CHANGED LNAV MDA/HAA FROM “1480/350” TO “1500/369” - PER FPT REQUEST.
19. MINIMUMS: CHANGED CIRCLING CAT A MDA/HAA FROM “1600/470” TO “1520/389” AND CAT B MDA/HAA FROM “1600/470” TO “1720/589” - CIRCLING MINS RAISED DUE TO NEW EVALUATION AND LNAV MINS.

COORDINATED WITH:

A4A ☐

ALPA ☒

AOPA ☒

APA ☐

HAI ☐

NBAA ☒

OTHER: ZMP, AMGR

FLIGHT CHECKED BY

CLINT PALMER

Digitally signed by

ALLAN WILL

Sep 21, 2021

OFFICE

FPO

DATE

09/08/2021

DEVELOPED BY

ALLAN WILL (GREG LINDSEY)

Digitally signed by

ALLAN WILL

Sep 21, 2021

OFFICE

AJV-A423

DATE

07/01/2021

APPROVED BY

MARLON ROBINSON

Digitally signed by

ALLAN WILL

Sep 21, 2021

OFFICE

AJV-A420

DATE

07/01/2021

TITLE

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KLWD
RUNWAY	RW18
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W18A
LTP/FTP LATITUDE	403813.4065N
LTP/FTP LONGITUDE	0935407.5425W
LTP/FTP ELLIPSOIDAL HEIGHT	+03126
FPAP LATITUDE	403644.2680N
FPAP LONGITUDE	0935410.0420W
THRESHOLD CROSSING HEIGHT (TCH)	00050.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1712
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	1185F65E

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+03440
FPAP ORTHOMETRIC HEIGHT	+03440

