

**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> KLRJ	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 18	<u>ORIGINAL/AMENDMENT</u> 2	<u>CITY</u> LE MARS	<u>STATE</u> IA	
<u>AIRPORT ELEVATION</u> 1197	<u>TDZE</u> 1197	<u>SUPERSEDED</u> RNAV (GPS) RWY 18	<u>ORIGINAL/AMENDMENT</u> 1B	<u>DATED</u> 10/15/2015	<u>MAG VAR</u> 3E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> 12/31/2020	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2015

TAA

FROM	FIX TYPE	TO	FIX TYPE	ALTITUDE
1. 095/30 CW 275/30	NOPT	ETNOE	IF/IAF	4000
2. 275/30 CW 095/30		ETNOE	IAF	4400

TERMINAL ROUTES

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
ETNOE	IF/IAF	CREEC		TF	FB	1.00	185.01	6.23	3000
CREEC	FAF	ATUXE/2.09 NM TO RW18		TF	FB	0.30	184.99	3.45	
ATUXE/2.09 NM TO RW18		RW18	MAP	TF	FO	0.30	184.99	2.09	
RW18	MAP	1479 MSL		CA			184.99		
1479 MSL		JAGBU		DF	FB	1.00			
JAGBU		FEXAT		TF	FO	1.00	133.04	12.32	4500

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW18

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 4500 DIRECT JAGBU AND ON TRACK 133.04 TO FEXAT AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

- 1. PT **SIDE OF COURSE** **OUTBOUND** **FT WITHIN** **MILES OF** (IAF)
- 2. HOLD N ETNOE, RT, 185.01 INBOUND, 4000 FT. IN LIEU OF PT (IAF), MAX 6000.
- 3. **FAC:** 184.99 **FAF:** CREEC **DIST FAF TO MAP:** 5.55 **DIST FAF TO THLD:** 5.55
- 4. **MIN ALT:** ETNOE 4000, CREEC 3000, ATUXE/2.09 NM TO RW18 1900*
- 5. **DIST TO THLD FROM OM:** **MM:** **IM:** **150 HAT:** **282 HAT:** 0.77 **GS ANT:**
- 6. **MIN GP INCPT:** 3000 **GP ALT AT FAF:** CREEC 3000 **OM:** **MM:** **IM:**
- 7. **GP ANGLE:** 3.00 **34:1:** IS NOT CLEAR **20:1:** IS CLEAR **TCH:** 40.0
- 8. **MSA FROM:**

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: RWY 18 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
 CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17°C OR ABOVE 54°C.

ADDITIONAL FLIGHT DATA:

HOLD SW, RT, 043.35 INBOUND.
 CHART FAS OBST: 1392 TREE 424831N/0961140W.
 CHART 1518 TOWER 425247N/0961012W, 1480 ANTENNA 424916N/0961035W.
 CHART VDP AT 1.33 NM TO RW18*
 *LNAV ONLY.
 WAAS CHANNEL # 78415
 REFERENCE PATH ID: W18A
 CHART CIRCLING ICON.
 LTP HAE: 337.5 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												
LPV DA	1479	1	282	1479	1	282	1479	1	282		NA					
LNAV/VNAV DA	1691	1 3/8	494	1691	1 3/8	494	1691	1 3/8	494		NA					
LNAV MDA	1660	1	463	1660	1	463	1660	1 3/8	463		NA					
CIRCLING	1760	1	563	1780	1	583	1840	1 3/4	643		NA					

CHANGES - REASONS

1. REMOVED CHART NOTE: DME/DME RNP-0.3 NA AND ADDED PBN REQUIREMENTS NOTE: RNP APCH - 8260.19H
2. UPDATED AND MOVED BACK-UP ALTIMETER NOTE TO THE -9 - 8260.19H
3. CHANGED CHART NOTE FROM: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17°C (2°F) OR ABOVE 54°C (130°F). TO FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17°C OR ABOVE 54°C. - UPDATED NOTE IAW 8260.19H
4. ADDED CHART NOTE: RUNWAY 18 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NA - 34:1 IS PENETRATED.
5. CIRCLING CAT B MINS CHANGED FROM CMDA/HAA OF 1820/623 TO 1780/583 - NEW CAT B CIRC CONTROLLER.
6. CIRCLING CAT C MINS CHANGED FROM CMDA/HAA OF 1820/623 TO 1840/643 - CIRCLING EXPANDED.
7. ADDED CHART CIRCLING ICON - EXPANDED CIRCLING APPLIED.
8. CHANGED ADDITIONAL FLIGHT DATA FROM CHART VDP AT 1.38 MILES TO RW18* TO CHART VDP AT 1.33 NM TO RW18* - FAF AND STEPDOWN FIX MOVED FOR ALIGNMENT.
9. COURSE DISTANCE FOR TERMINAL ROUTE FROM ETNOE TO CREEC CHANGED FROM 185.00/6.30 TO 185.01 AND 6.23 - FAF MOVED.
10. ATUXE/2.10 NM TO RW18 CHANGED TO ATUXE/2.09 NM TO RW18, TERMINAL ROUTE FOR ATUXE TO RW18 DISTANCE CHANGED AS WELL. - FIX ATUXE MOVED FOR ALIGNMENT.
11. CRC REMAINDER CHANGED FROM B2681980 TO 7818F4DE - FAF MOVED FOR ALIGNMENT AND THRESHOLD DISPLACED.
12. LPV MINS CHANGED FROM HAT 250/DA 1447 TO HAT 282/DA 1479 - MISSED APPROACH PENETRATOR.
13. LNAV/VNAV MINS CHANGED FROM HAT 514/DA 1711 AND VISIBILITY ALL CATS 1 3/4 SM TO HAT 494/DA 1691 AND VISIBILITY ALL CATS 1 3/8 SM. - NEW LNAV/VNAV CONTROLLING OBSTACLE.
14. ADDED CHART 1518 TOWER 425247N/0961012W, 1480 ANTENNA 424916N/0961035W TO ADDITIONAL FLIGHT DATA - OBSTACLES ARE 7:1 EXCLUDED.
15. REMOVED CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}). - VGSI REMOVED FROM RUNWAY.

11/23/2020: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 9/11/2020.

1. REQUIRED EFFECTIVE DATE CHANGED FROM ROUTINE TO 12/31/2020.

COORDINATED WITH:

A4A **ALPA** **AOPA** **APA** **HAL** **NBAA** **OTHER:** ZMP, SUX APP CON, AMGR

FLIGHT CHECKED BY

MICHAEL A. GREENWOOD
Digitally signed by

DEVELOPED BY **TYLER D MITCHELL**
TYLER MITCHELL Nov 23, 2020

APPROVED BY
LONNIE EVERHART

Digitally signed by
DAVID TEFFETELLER
Nov 23, 2020

OFFICE

FICO

OFFICE

AJV-A432

OFFICE

AJV-A430

DATE

01/20/2021

DATE

08/11/2020

DATE

TITLE
MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KLRJ
RUNWAY	RW18
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W18A
LTP/FTP LATITUDE	424704.6165N
LTP/FTP LONGITUDE	0961132.7325W
LTP/FTP ELLIPSOIDAL HEIGHT	+03375
FPAP LATITUDE	424531.9600N
FPAP LONGITUDE	0961150.3600W
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	1440
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	7818F4DE

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+03638
FPAP ORTHOMETRIC HEIGHT	+03638



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

<u>AIRPORT ID</u> KLRJ	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 18	<u>AMDT NO.</u> 2	<u>CITY</u> LE MARS	<u>STATE</u> IA	<u>AIRPORT ELEVATION</u> 1197	<u>FACILITY</u> RNAV
---------------------------	--	----------------------	------------------------	--------------------	----------------------------------	-------------------------

PART A: OBSTRUCTION DATA SEGMENTS

STRAIGHT-IN AREA

FROM 095/30 CW 275/30 **TO** ETNOE

RNP DISTANCE PAT MAP HAT HMAS

<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>
TOWER (46-000134)	430301.47N/0964702.20W	2164	20	3	1A	1000				AT836	4000
TERRAIN	432112.00N/0955021.00W	1656 (1700)								AS1500	3200

COMPUTATIONS

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

SEGMENT REMARKS:

STRAIGHT-IN AREA

FROM 275/30 CW 095/30 **TO** ETNOE

RNP DISTANCE PAT MAP HAT HMAS

<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>
TOWER (19-000403)	423512.00N/0961358.00W	3370	500	125	5E	1000					4400
TERRAIN	424315.00N/0963315.00W	1522 (1500)								AS1500	3000

COMPUTATIONS

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

SEGMENT REMARKS:



AIRPORT ID
KLRJ

PROCEDURE NAME
RNAV (GPS) RWY 18

AMDT NO.
2

CITY
LE MARS

STATE
IA

AIRPORT ELEVATION
1197

FACILITY
RNAV

FINAL: LNAV/VNAV

FROM CREEC **TO** RW18

RNP **DISTANCE** **PAT** **MAP** **HAT** **HMAS**
5.55 DA 494

<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>
TREE (19-044069)	424831.44N/0961139.78W	1392	20	3	1A		23.40:1				1691

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

SEGMENT REMARKS:

FINAL: LNAV

FROM CREEC **TO** ATUXE/2.09 NM TO RW18

RNP **DISTANCE** **PAT** **MAP** **HAT** **HMAS**
3.45

<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>
AAO	425040.14N/0961031.06W	1550	50	20	2C	250				RA59 DG41	1900

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

SEGMENT REMARKS:



AIRPORT ID
KLRJ

PROCEDURE NAME
RNAV (GPS) RWY 18

AMDT NO.
2

CITY
LE MARS

STATE
IA

AIRPORT ELEVATION
1197

FACILITY
RNAV

MISSED APPROACH : LPV

FROM DA **TO** FEXAT

RNP **DISTANCE** **PAT** **MAP** **HAT** **HMAS**
1276

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
TREE (19-057490)	424734.38N/0961134.09W	1285	20	3	1A		ASC				4500
AAO	423657.00N/0960148.00W	1638	164	98	4E	1000					2700
TERRAIN	423657.00N/0960148.00W	1437 (1400)								AS1500	2900

COMPUTATIONS

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

SEGMENT REMARKS:

MISSED APPROACH : LNAV/VNAV

FROM DA **TO** FEXAT

RNP **DISTANCE** **PAT** **MAP** **HAT** **HMAS**
1541

OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
							ASC				4500
AAO	423657.00N/0960148.00W	1638	164	98	4E	1000					2700
TERRAIN	423657.00N/0960148.00W	1437 (1400)								AS1500	2900

COMPUTATIONS

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

SEGMENT REMARKS:



AIRPORT ID
KLRJ

PROCEDURE NAME
RNAV (GPS) RWY 18

AMDT NO.
2

CITY
LE MARS

STATE
IA

AIRPORT ELEVATION
1197

FACILITY
RNAV

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

VEGETATION 80 FT PER FPT



AIRPORT ID
KLRJ

PROCEDURE NAME
RNAV (GPS) RWY 18

AMDT NO.
2

CITY
LE MARS

STATE
IA

AIRPORT ELEVATION
1197

FACILITY
RNAV

PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH

ZMP ARTCC, SUX APP CON, FOD FSS

WX SERVICE

AWOS-3P

LOCATION

KLRJ

HRS OPERATION

24

ALTIMETER SOURCE

KLRJ

DISTANCE

0

SERVICE-A

Y

ADJUSTMENTS

0

BACK-UP WX SERVICE

AWOS-3P

LOCATION

KSXK

HRS OPERATION

24

ALTIMETER SOURCE

KSXK

DISTANCE

12.715

SERVICE-A

Y

ADJUSTMENTS

59

WX REMARKS:

RASS PRESSURE PATTERNS THE SAME
KLRJ 1197, KSXK 1409
RA = 59.0.

PRIMARY NAVAID

MONITOR POINT

HRS OPERATION

CAT

APPROACH AND RUNWAY LIGHTING SYSTEM

RUNWAY MARKINGS

RUNWAY VISUAL RANGE

RW18 - MIRL (PCL), REIL

NPI-G

RW36 - MIRL (PCL), REIL (PCL)

NPI-G

GLIDESLOPE ANGLE
3.00

ELEV RWY THRESHOLD
1193.7

TCH
40.0

ELEV GS ANTENNA

DISTANCE FROM RWY

VGSI ANGLE

TCH

FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD

FT FROM THRESHOLD

DISPLACED THRESHOLD DISTANCE 300

ON CENTERLINE

FT FROM CENTERLINE

CRITICAL TEMPERATURES

CRITICAL LOW
-17C

CRITICAL HIGH
+54C

ACT
-17C

APT ISA
+12.63C

CRITICAL TEMPERATURE REMARKS:

AVERAGE COLD TEMPERATURE DERIVED FROM STANDARD -30C ISA DEVIATION.
CRITICAL LOW TEMPERATURE BASED ON ACT.
DESCENT RATE (FPM): STANDARD TEMP 832 HIGH TEMP 1183.



AIRPORT ID
KLRJ

PROCEDURE NAME
RNAV (GPS) RWY 18

AMDT NO.
2

CITY
LE MARS

STATE
IA

AIRPORT ELEVATION
1197

FACILITY
RNAV

"VISUAL PORTION OF FINAL" PENETRATIONS

Final Type	RWY 18		
34:1			
1285 TREE (19-057490) 424734.38N/0961134.09W (9.83)		1261 TREE (19-057244) 424729.27N/0961133.85W (0.82)	

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.

CONTINGENCY NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE MAURICE ALTIMETER SETTING AND INCREASE LPV DA TO 1538 FEET, LNAV/VNAV DA TO 1750 FEET AND INCREASE LNAV/VNAV VISIBILITY ALL CATS TO 1 5/8 SM ; INCREASE ALL MDA 60 FEET, INCREASE LNAV CAT C VISIBILITY TO 1 1/2 SM, INCREASE CIRCLING CAT C VISIBILITY TO 2 SM. BARO-VNAV AND VDP NA WHEN USING MAURICE ALTIMETER SETTING.

ORDER 8260.3 CHAPTER 2 APPLIED TO 1518 TOWER (19-050432) 425247.06N/0961011.76W.
ORDER 8260.3 CHAPTER 2 APPLIED TO 1480 ANTENNA (19-042983) 424916.38N/0961034.83W.

ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.



AIRPORT ID
KLRJ

PROCEDURE NAME
RNAV (GPS) RWY 18

AMDT NO.
2

CITY
LE MARS

STATE
IA

AIRPORT ELEVATION
1197

FACILITY
RNAV

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	3.66
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	1.20
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	187.99
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	1400
DISTANCE FROM	THLD	TO 1500FT POINT	5.35
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	1.95
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	187.99
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	1400

THRESHOLD COORDINATES (IF STR-IN) 424704.62N/0961132.73W

ARP COORDINATES 424642.83N/0961136.88W

RUNWAY APCH END AND DIST FURTHEST FROM ARP RUNWAY 18 DISTANCE 0.42 NM

FAF COORDINATES 425234.26N/0961029.94W

FIX NAME COORDINATES IF/IAF ETNOE: 425844.51N/0960919.14W

REMARKS

30 NM TAA FROM ETNOE
THLD DISPLACED 300FT, ACTUAL COORDINATES: 424707.55N/0961132.17W.



AIRPORT ID
KLRJ

PROCEDURE NAME
RNAV (GPS) RWY 18

AMDT NO.
2

CITY
LE MARS

STATE
IA

AIRPORT ELEVATION
1197

FACILITY
RNAV

PART E: PREPARED BY

<u>NAME</u>	<u>OFFICE</u>	<u>DATE</u>	<u>TITLE</u>
TYLER MITCHELL	AJV-A432	08/11/2020	AERONAUTICAL INFORMATION SPECIALIST

