

**UNITED STATES ARMY**  
**FLIGHT STANDARDS SERVICE**  
**ILS STANDARD INSTRUMENT APPROACH PROCEDURE**  
**TITLE 14 CFR PART 97.29**

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> RAY S MILLER AAF	<u>AIRPORT ID</u> KRYM	<u>PROCEDURE NAME</u> ILS OR LOC RWY 31	<u>ORIGINAL/AMENDMENT</u> 6A	<u>CITY</u> CAMP RIPLEY	<u>STATE</u> MN	
<u>AIRPORT ELEVATION</u> 1150	<u>TDZE</u> 1146	<u>SUPERSEDED</u> ILS OR LOC RWY 31	<u>ORIGINAL/AMENDMENT</u> 6	<u>DATED</u> 07/19/2018	<u>MAG VAR</u> 3E	<u>EPOCH YEAR</u> 1995
<u>FACILITY</u> I-RYM	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>CANCEL/SUSPEND</u>		

**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>
STC VOR/DME		TODEE/I-RYM 15.80 DME					351.76	21.84	3300
AXN VOR/DME		XCR NDB					071.64	37.88	3500
XCR NDB		PEGGO/I-RYM 7.49 DME					132.29	5.82	3300
TODEE/I-RYM 15.80 DME	IF	PEGGO/I-RYM 7.49 DME	NOPT				312.29	8.31 (I-RYM)	3200

**MISSED APPROACH**

**MAP:**

ILS: DA  
LOC: RW31 OR AT I-RYM 1.16 DME

**MISSED APPROACH INSTRUCTIONS:**

CLIMB TO 2000 THEN CLIMBING LEFT TURN TO 3500 DIRECT XCR NDB AND HOLD, CONTINUE CLIMB-IN-HOLD TO 3500.

**ALTERNATE MISSED APPROACH INSTRUCTIONS (DO NOT CHART):**

CLIMB TO 1600 THEN CLIMBING LEFT TURN TO 3300 DIRECT URHIL AND HOLD (RNAV 1-GPS REQUIRED).

**PROFILE:**

1. PT L SIDE OF COURSE 132.29 OUTBOUND 3300 FT WITHIN 10 MILES OF PEGGO/I-RYM 7.49 DME (IAF)

2.

3. FAC: 312.29 FAF: PEGGO/I-RYM 7.49 DME DIST FAF TO MAP: DIST FAF TO THLD: 6.33

4. MIN ALT: TODEE/I-RYM 15.80 DME 3300, PEGGO/I-RYM 7.49 DME 3200, ZAKPI/I-RYM 3.66 DME 1980\*

5. DIST TO THLD FROM OM: MM: 0.51 IM: 150 HAT: GS ANT: 699

6. MIN GS INCPT: 3200 GS ALT AT FAF : PEGGO/I-RYM 7.49 DME 3200 OM: MM: 1344 IM:

7. GP ANGLE: 3.00 34:1: 20:1: TCH: 39.6

8. MSA FROM: XCR NDB 3300



EQUIPMENT REQUIREMENTS NOTES:

ADF AND DME REQUIRED, RADAR REQUIRED FOR PROCEDURE ENTRY AT STC VOR/DME.

NOTES:

CHART NOTE: VDP NA WITH LITTLE FALLS ALTIMETER SETTING.  
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL ON AXN VOR/DME AIRWAY RADIALS I03 CW 114.  
CHART PLANVIEW NOTE: PROCEDURE NA WHEN R-4301 IS ACTIVE.  
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE LITTLE FALLS ALTIMETER SETTING AND INCREASE DA TO 1370 AND ALL MDAS 40 FT, AND INCREASE S-LOC 31 VISIBILITY CATS C/D 1/8 MILE AND CIRCLING CAT C 1/4 MILE.  
CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO S-ILS AND S-LOC CATS A/B.

ADDITIONAL FLIGHT DATA:

CHART CIRCLING ICON.  
CHART IN PLANVIEW: URHIL  
CHART R-4301  
CHART VDP AT 2.40 DME\*  
DISTANCE VDP TO THLD 1.24 NM  
\* LOC ONLY  
CHART FAS OBST: 1289 TREE 460320N/0941816W.  
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD SE URHIL, RT, 312.45 INBOUND.  
HOLD SE, RT, 312.29 INBOUND

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

ALTERNATE: NA ☐ ILS: STANDARD; LOC: STANDARD - CAT D 1000-3. ILS AND LOC: NA WHEN CONTROL TOWER CLOSED.

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
S-ILS 31	1346	1	200	1346	1	200	1346	1	200	1346	1	200			
S-LOC 31	1580	1	434	1580	1	434	1580	1	434	1580	1	434			
CIRCLING	1640	1	490	1660	1	510	1720	1 1/2	570	2080	3	930			

CHANGES - REASONS

1. REMOVED CHART NOTE: AUTOPILOT COUPLED APPROACH NA BELOW 1660 - FC IMPOSED RESTRICTION NO LONGER REQUIRED.
2. CHANGED S-ILS 31 VISIBILITIES ALL CATS FROM 3/4 SM TO 1 SM AND S-LOC 31 VISIBILITIES CAT A/B FROM 3/4 SM TO 1 SM - NEW VISIBILITY TABLE.
3. CHANGED RASS S-ILS 31 VISIBILITIES ALL CATS FROM 3/4 SM TO 1 SM AND RASS S-LOC 31 VISIBILITIES CATS A/B FROM 3/4 SM TO 1 SM, CATS C/D FROM 1 SM TO 1 1/8 SM - NEW VISIBILITY TABLE.
4. CHANGED RASS CIRCLING VISIBILITIES CAT C FROM 1 1/2 SM TO 1 3/4 SM - NEW VISIBILITY TABLE.
5. CHANGED MIN ALT AT MM FROM 1245 TO 1344 - AIRNAV DATA UPDATE.
6. CHANGED EQUIPMENT REQUIREMENT NOTES FROM "ADF OR RADAR REQUIRED FOR PROCEDURE ENTRY, DME REQUIRED" TO "ADF AND DME REQUIRED, RADAR REQUIRED FOR PROCEDURE ENTRY AT STC VOR/DME." - ADF AND DME REQUIRED, RADAR REQUIRED FOR PROCEDURE ENTRY AT STC VOR/DME. ADF IS MANDATORY FOR PRIMARY MISSED APPROACH.
7. CHANGED CHART NOTE FROM "INOPERATIVE TABLE DOES NOT APPLY TO S-ILS 31" TO "INOPERATIVE TABLE DOES NOT APPLY TO S-ILS AND S-LOC CATS A/B AND ALL CIRCLING CATS" - NEW VISIBILITY TABLE.
8. UPDATED ALTERNATE MINS NOTE WITH "ILS AND LOC: NA WHEN CONTROL TOWER CLOSED. - I-RYM IS CAT 3 WHEN TWR/FLT OPS CLSD.



COORDINATED WITH:

A4A ☐ ALPA ☐ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER:

FLIGHT CHECKED BY

PROCESSED IAW AIRCRAFT OPERATIONS GROUP (AJW-33) MEMO, OCTOBER 3, 2018, SUBJECT:  
FLIGHT INSPECTION REVIEW NOT REQUIRED

OFFICEDATEDEVELOPED BY

WARDELL HENNING (GORDON LEMON)

*Digitally signed by*

**DONALD H LANIER**

*Digitally signed by*

**DONALD H LANIER**

Jun 14, 2019

OFFICE

AJV-A432

DATE

06/10/2019

RECOMMENDED BY

LONNIE EVERHART

*Digitally signed by*

**DONALD H LANIER**

Jun 14, 2019

OFFICE

AJV-A430

DATE

TITLE  
MANAGER

APPROVED BY

Jun 14, 2019

OFFICEDATETITLE

QUALITY  
24  
CHECKED

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

AIRPORT	AIRPORT ID	PROCEDURE NAME	AMDT NO.	CITY	STATE	AIRPORT ELEVATION	FACILITY
RAY S MILLER AAF	KRYM	ILS OR LOC RWY 31	6A	CAMP RIPLEY	MN	1150	I-RYM

PART A: OBSTRUCTION DATA SEGMENTS

FEEDER

FROM  
STC VOR/DME

TO  
TODEE/I-RYM 15.80 DME

<u>RNP</u>	<u>DISTANCE</u> 21.84	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
<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>
1.TOWER (27-001094)	454852.00N/0940139.00W		2246	500	50	5D	100				AT954	3300
2.TERRAIN	455515.00N/0940048.00W		1362 (1400)								AS1500	2900

COMPUTATIONS

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

FEEDER

FROM  
AXN VOR/DME

TO  
XCR NDB

<u>RNP</u>	<u>DISTANCE</u> 37.88	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
<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>
3.TOWER (27-001286)	455933.94N/0944956.78W		1835	500	50	5D	1000				AT665	3500
4.TERRAIN	455845.00N/0945951.00W		1500 (1500)								AS1500	3000

COMPUTATIONS

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



**FACILITY**  
I-RYM

HMAS

RF CENTER FIX/DISTANCE

HMAS

RF CENTER FIX/DISTANCE

QUALITY  
24  
CHECKED

INTERMEDIATE: PT

FROM

10 NM

TO

PEGGO/I-RYM 7.49 DME

<u>RNP</u>	<u>DISTANCE</u> 10.00	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>					
<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>
9.AAO	455612.00N/0940054.00W		1559	164	98	4E	500				AT1143 AC98	3300
10.TERRAIN	455612.00N/0940054.00W		1359 (1400)								AS1500	2900

<u>COMPUTATIONS</u>	<u>ALT</u>	<u>KIAS</u>	<u>KTAS</u>	<u>HAA</u>	<u>VKTW</u>	<u>TR</u>	<u>BA</u>	<u>DTA</u>	<u>COURSE CHANGE</u>	<u>DVEB</u>	<u>VEB OCS</u>	<u>RF CENTER FIX/DISTANCE</u>
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SEGMENT REMARKS:

FINAL: ILS

FROM

PEGGO/I-RYM 7.49 DME

TO

DA

<u>RNP</u>	<u>DISTANCE</u> 6.33	<u>PAT</u>	<u>MAP</u> DA	<u>HAT</u> 200			<u>HMAS</u>					
<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>
								ASC				1346

<u>COMPUTATIONS</u>	<u>ALT</u>	<u>KIAS</u>	<u>KTAS</u>	<u>HAA</u>	<u>VKTW</u>	<u>TR</u>	<u>BA</u>	<u>DTA</u>	<u>COURSE CHANGE</u>	<u>DVEB</u>	<u>VEB OCS</u>	<u>RF CENTER FIX/DISTANCE</u>
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SEGMENT REMARKS:



**FACILITY**  
I-RYM

XP41 PREVIOUS MINS



PROCEDURE TURN

FROM

PEGGO

TO

10 NM

RNP	DISTANCE	PAT	MAP	HAT			HMAS				
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
1.TOWER (27-001094)	454852.00N/0940139.00W	2246	500	50	5D	1000					3300
13.TERRAIN	460236.00N/0940003.00W	1398 (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 : ILS

FROM

DA

TO

XCR NDB

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u>				
1180											
<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>
							ASC				3500
14.AAO	460931.77N/0942326.67W	1573	50	3	2A	1000					2600
15.TERRAIN	460931.77N/0942326.67W	1373 (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 : LOC

FROM

I-RYM 1.16 DME

TO

XCR NDB

RNP	DISTANCE	PAT	MAP	HAT			HMAS				
							1330				
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
							ASC				3500
14.AAO	460931.77N/0942326.67W	1573	50	3	2A	1000					2600
15.TERRAIN	460931.77N/0942326.67W	1373 (1400)								AS1500	2900

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

MISSED APPROACH ALTERNATE : ILS

FROM

DA

TO

URHIL

RNP	DISTANCE	PAT	MAP	HAT			HMAS				
							1180				
OBSTRUCTION	COORDINATES	ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
							ASC				3500
20.TOWER (27-001742)	460048.56N/0940441.09W	1642	250	50	4D	1000					2700
21.TERRAIN	460430.00N/0941351.00W	1333 (1300)								AS1500	2800

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



MISSED APPROACH ALTERNATE : LOC

FROM

I-RYM 1.16 DME

TO

URHIL

<u>RNP</u>	<u>DISTANCE</u>	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>			<u>HMAS</u> 1330				
<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>
							ASC				3500
20.TOWER (27-001742)	460048.56N/0940441.09W	1642	250	50	4D	1000					2700
21.TERRAIN	460430.00N/0941351.00W	1333 (1300)								AS1500	2800

COMPUTATIONS

ALT

KIAS

KTAS

HAA

VKTW

TR

BA

DTA

COURSE CHANGE

DVEB

VEB OCS

RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

CIRCLING

☐ ALL CATS

☒ CAT A

☒ CAT B

☒ CAT C

☒ CAT D

☐ CAT E

☐ NOT AUTHORIZED

OBSTRUCTION	COORDINATES	RADIUS	HAA	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
CATEGORY A											
16.TREE	460706.21N/0942159.07W	1.30	490	1339	50	20	2C	300			1640
CATEGORY B											
17.TOWER (27-026320)	460608.51N/0941926.71W	1.85	510	1343	20	3	1A	300			1660
CATEGORY C											
18.TREE	460730.00N/0942500.00W	2.90	570	1419	50	20	2C	300			1720
CATEGORY D											
19.TOWER (27-001469)	460857.30N/0942000.80W	3.80	930	1640	500	125	5E	300		AC125	2080

CIRCLING REMARKS:



<u>AIRPORT</u> RAY S MILLER AAF	<u>AIRPORT ID</u> KRYM	<u>PROCEDURE NAME</u> ILS OR LOC RWY 31	<u>AMDT NO.</u> 6A	<u>CITY</u> CAMP RIPLEY	<u>STATE</u> MN	<u>AIRPORT ELEVATION</u> 1150	<u>FACILITY</u> I-RYM
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MSA

CENTER  
XCR NDB

RADIUS  
25

<u>SECTOR</u>	<u>OBSTRUCTION</u>	<u>COORDINATES</u>	<u>BEARING</u>	<u>DISTANCE</u>	<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
360-360	TWR (27-001094)	454852.00N/0940139.00W	137	20.7	2245	500	50	5D	1000			3300

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:  
VEGETATION 100' PER USAASA.

QUALITY  
24  
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RWY 13R/31L USED AS ASSAULT STRIP.  
BACK-TAXI USED TO POSITION AIRCRAFT TO/FROM RWY31.  
IAP REQUIRES ADF, SECONDARY NAVAID (NDB XCR) MUST BE OPERATIONAL. XCR MONITOR POINT: MAIN GATE24HRS, CAT 1.  
ORDER 8260.3, VOLUME 1, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.



<u>AIRPORT</u> RAY S MILLER AAF	<u>AIRPORT ID</u> KRYM	<u>PROCEDURE NAME</u> ILS OR LOC RWY 31	<u>AMDT NO.</u> 6A	<u>CITY</u> CAMP RIPLEY	<u>STATE</u> MN	<u>AIRPORT ELEVATION</u> 1150	<u>FACILITY</u> I-RYM
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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	3.25
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	0.92
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	315.29
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	1219
DISTANCE FROM	THLD	TO 1500FT POINT	5.37
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	1.38
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	315.29
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	1219

THRESHOLD COORDINATES (IF STR-IN)

460506.95N/0942107.53W

ARP COORDINATES

460523.92N/0942135.51W

RUNWAY APCH END AND DIST FURTHEST FROM ARP

RUNWAY 31 DISTANCE 0.50 NM

FAF COORDINATES

460036.79N/0941443.96W

FIX NAME COORDINATES

REMARKS

NO ADDITIONAL AIRSPACE REQUIRED.

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24  
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AIRPORT	AIRPORT ID	PROCEDURE NAME	AMDT NO.	CITY	STATE	AIRPORT ELEVATION	FACILITY
RAY S MILLER AAF	KRYM	ILS OR LOC RWY 31	6A	CAMP RIPLEY	MN	1150	I-RYM

PART E: PREPARED BY

NAME	OFFICE	DATE	TITLE
WARDELL HENNING (GORDON LEMON)	AJV-A432	06/10/2019	AERONAUTICAL INFORMATION SPECIALIST

QUALITY  
24  
CHECKED

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