

**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> KRNO	<u>PROCEDURE NAME</u> RNAV (GPS) X RWY 17L	<u>ORIGINAL/AMENDMENT</u> 3	<u>CITY</u> RENO	<u>STATE</u> NV	
<u>AIRPORT ELEVATION</u> 4415	<u>TDZE</u> 4415	<u>SUPERSEDED</u> RNAV (GPS) X RWY 16L	<u>ORIGINAL/AMENDMENT</u> 2	<u>DATED</u> 03/26/2020	<u>MAG VAR</u> 13E
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 3 NOVEMBER 2022	<u>REQUIRED EFFECTIVE DATE</u> 11/03/2022	<u>CANCEL/SUSPEND</u>	<u>EPOCH YEAR</u> 2020

**TERMINAL ROUTES**

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
CAXIL		NUKOE		TF	FB	1.00	340.65	27.81	10000
FMG VORTAC		NUKOE		TF	FB	1.00	355.92	10.21	10000
NUKOE		ROXJO		TF	FB	1.00	340.60	7.00	10000
ROXJO	IAF	TEBOY		TF	FB	1.00	257.19	5.88	8600
HALLE	IAF	TEBOY		TF	FB	1.00	113.05	10.58	8600
LIBGE	IAF	KIGKY		TF	FB	1.00	166.21	5.08	9700
KIGKY		TEBOY		TF	FB	1.00	166.21	2.20	8600
TEBOY	IF	SEKAW		TF	FB	1.00	167.10	7.00	7800
SEKAW		BADPE		TF	FB	1.00	167.12	3.47	6900
BADPE	FAF	WARAX/5.24 NM TO RW17L		TF	FB	0.30	167.11	2.39	
WARAX/5.24 NM TO RW17L		RW17L	MAP	TF	FO	0.30	167.11	5.24	
RW17L	MAP	4815 MSL		CA			167.11		
4815 MSL		WEDMO		DF	FB	1.00			
WEDMO		MARRI		TF	FO	1.00	161.16	31.00	13000



**MISSED APPROACH**

**MAP:**

LPV: DA  
LNAV/VNAV: DA  
LNAV: RW17L

**MISSED APPROACH INSTRUCTIONS:**

CLIMB TO 13000 DIRECT WEDMO AND ON TRACK 161.16 TO MARRI AND HOLD.

**ALTERNATE MISSED APPROACH INSTRUCTIONS:**

**PROFILE:**

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF	(IAF)
2. PROFILE STARTS AT TEBOY					
3. FAC:	167.11	FAF: BADPE	DIST FAF TO MAP: 7.63	DIST FAF TO THLD: 7.63	
4. MIN ALT: TEBOY 8600, SEKAW 7800, BADPE 6900, WARAX/5.24 NM TO RW17L 6140					
5. DIST TO THLD FROM OM:	MM:	IM:	150 HAT:	679 HAT: 1.96	GS ANT:
6. MIN GP INCPT: 6900	GP ALT AT PFAF :	BADPE 6900	OM:	MM:	IM:
7. GP ANGLE: 3.00	34:1: IS NOT CLEAR	20:1: IS CLEAR	TCH: 55.0		
8. MSA FROM: RW17L 12000					

**PBN REQUIREMENTS NOTE:**

RNP APCH - GPS.

**NOTES:**

CHART NOTE: CIRCLING RWY 8 NA AT NIGHT.  
CHART NOTE: RWY 17L HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.  
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -9°C OR ABOVE 54°C.  
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).  
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS ON FMG VORTAC AIRWAY RADIALS 314 CW 075.  
CHART SPEED ICON IN PLANVIEW AT ROXJO: MAX 220 KIAS.  
CHART SPEED ICON IN PLANVIEW AT TEBOY: MAX 210 KIAS.  
CHART SPEED ICON IN PLANVIEW AT LIBGE: MAX 230 KIAS.

**ADDITIONAL FLIGHT DATA:**

CHART AT OR ABOVE 12000 AT LIBGE.  
HOLD S, RT, 351.00 INBOUND.  
CHART FAS OBST: 5101 VEGETATION (32-064569) 393449N/1194532W.  
CHART 6080 AAO 393843N/1164635W.  
CHART VDP AT 2.71 NM TO RW17L.  
WAAS CHANNEL # 72909  
REFERENCE PATH ID: W17A  
CHART CIRCLING ICON.  
LTP HAE: 1321.5 M



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

**ALTERNATE:** NA  CAT A, B 1000-2, CAT C, D 2100-3

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	5109	2	694	5109	2	694	5109	2	694	5109	2	694				
LNAV/VNAV DA	5094	1 7/8	679	5094	1 7/8	679	5094	1 7/8	679	5094	1 7/8	679				
LNAV MDA	5360	1 1/4	945	5360	1 1/4	945	5360	2 1/2	945	5360	2 1/2	945				
CIRCLING	5360	1 1/4	945	5360	1 1/2	945	6460	3	2045	6460	3	2045				

**CHANGES - REASONS**

- PROCEDURE HEADING: CHANGED AIRPORT MAGVAR FROM 16E (1985) TO 13E (2020). - MAGVAR UPDATED WITHIN TOLERANCE.
- PROCEDURE HEADING: CHANGED PROCEDURE NAME RWY FROM 16L TO 17L. - MAGVAR UPDATED FROM 16E TO 13E AND RUNWAY NUMBERS CHANGED.
- TERMINAL ROUTES: ADDED INITIALS FROM HALLE AND LIBGE - PER AIR TRAFFIC/IFP CHECKLIST REQUEST.
- TERMINAL ROUTES: ADDED STEPDOWN KIGKY FROM LIBGE TO TEBOY - PER AIR TRAFFIC/IFP CHECKLIST REQUEST.
- WHOLE PROCEDURE: ALL COURSES INCREASED BY 3 IN TERMINAL ROUTES, PROFILE LINE 3 FAC, AND ADDITIONAL FLIGHT DATA HOLD. - MAGVAR UPDATED FROM 16E TO 13E.
- WHOLE PROCEDURE: RWY DESCRIPTION CHANGED FROM 16L TO 17L IN TERMINAL ROUTES, LNAV MAP, PROFILE LINE 4 AND 8, NOTES, ADDITIONAL FLIGHT DATA, AND FAS DATA. - MAGVAR UPDATED FROM 16E TO 13E AND RUNWAY NUMBERS CHANGED.
- MISSED APPROACH INSTRUCTIONS: UPDATED FROM 'CLIMB TO 13000 DIRECT WEDMO AND ON TRACK 158.16 TO MARRI AND HOLD' TO 'CLIMB TO 13000 DIRECT WEDMO AND ON TRACK 161.16 TO MARRI AND HOLD' - MAGVAR UPDATED FROM 16E TO 13E.
- PBN REQUIREMENTS NOTE: UPDATED 'RNP APCH' TO 'RNP APCH - GPS' - IAW 8260.19I, 8-6-8.B(2).
- PROFILE LINE 4: REMOVED ASTERISK AT WARAX/5.24 NM TO RW17L 6140 - UPDATED IAW 8260.19I, 1-1-5.F(12).
- PROFILE LINE 5: CHANGED FROM '683 HAT: 1.97' TO '679 HAT: 1.96' - UPDATED IAW 8260.19I, 8-6-7.E(3), LNAV/VNAV HAT LOWERED 4 FEET AFTER REMOVAL OF MISSED ADJUSTMENT, DIST UPDATED IAW TARGETS EVALUATION.
- NOTES: ADDED 'CHART SPEED ICON IN PLANVIEW AT LIBGE: MAX 230 KIAS' - PER AIR TRAFFIC/IFP CHECKLIST REQUEST.
- ADDITIONAL FLIGHT DATA: ADDED CHART AT OR ABOVE 12000 AT LIBGE - IAW 8260.19I, 8-6-10.N.
- ADDITIONAL FLIGHT DATA: CHANGED 'CHART 5908 VEGETATION 393842N/1194554W' TO 'CHART 6080 AAO 393843N/1164635W' - NEW MAP STUDY AND EVALUATION/NEW 7:1 EXCLUDED OBSTACLE IAW 8260.19I 8-6-10.E.
- ADDITIONAL FLIGHT DATA: CHANGED 'REFERENCE PATH ID: W16A' TO 'REFERENCE PATH ID: W17A' - MAGVAR UPDATED FROM 16E TO 13E, RUNWAY NUMBERS CHANGED AND RUNWAY CHANGED FROM RW16L TO RW17L.
- LOWERED LPV DA/HAT ALL CATS FROM 5149/734 TO 5109/694 - NEW MAP STUDY/NEW CONTROLLING OBSTACLES, PER FPT COORDINATION.
- LOWERED LNAV/VNAV MDA/HAT ALL CATS FROM 5098/683 TO 5094/679 - NEW MAP STUDY/NEW CONTROLLING OBSTACLES, PER FPT COORDINATION.
- LOWERED LNAV/VNAV VISIBILITY ALL CATS FROM 2 SM TO 1 7/8 SM - IAW 8260.3E TABLE 3-3-1.
- RAISED CIRCLING VISIBILITY CAT B FROM 1 1/4 SM TO 1 1/2 SM - IAW 8260.3E TABLE 3-3-1.
- FAS DATA: CHANGED FPAP LONGITUDE FROM 1194600.4970W TO 1194600.4975W - MAGVAR UPDATED FROM 16E TO 13E, RUNWAY NUMBERS CHANGED AND RUNWAY CHANGED FROM RW16L TO RW17L.
- FAS DATA: CHANGED CRC REMAINDER FROM 6A476F33 TO 847DA5A5 - MAGVAR UPDATED FROM 16E TO 13E, RUNWAY NUMBERS CHANGED AND RUNWAY CHANGED FROM RW16L TO RW17L.



**COORDINATED WITH:**

**A4A**    **ALPA**    **AOPA**    **APA**    **HAI**    **NBAA**    **OTHER:** ZOA, RNO APP CON, RNO ATCT, AMGR, NV AERO

**FLIGHT CHECKED BY**

PENDING

*Digitally signed by*  
**DAVID TEFFETELLER**  
Aug 16, 2022

**OFFICE**

**DATE**

**DEVELOPED BY**

RAFAEL A MARTINEZ

*Digitally signed by*  
**RAFAEL A MARTINEZ**  
Aug 15, 2022

**OFFICE**

AJV-A433

**DATE**

06/06/2022

**APPROVED BY**

CASIMIR TABAKA

*Digitally signed by*  
**DAVID TEFFETELLER**  
Aug 16, 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	KRNO
RUNWAY	RW17L
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	X
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W17A
LTP/FTP LATITUDE	393049.8255N
LTP/FTP LONGITUDE	1194600.2660W
LTP/FTP ELLIPSOIDAL HEIGHT	+13215
FPAP LATITUDE	392920.6500N
FPAP LONGITUDE	1194600.4975W
THRESHOLD CROSSING HEIGHT (TCH)	00055.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0008
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	847DA5A5

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K2
LTP ORTHOMETRIC HEIGHT	+13456
FPAP ORTHOMETRIC HEIGHT	+13456

