

**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 17R	<u>ORIGINAL/AMENDMENT</u> 2	<u>CITY</u> RENO	<u>STATE</u> NV		
<u>AIRPORT ELEVATION</u> 4415	<u>TDZE</u> 4415	<u>SUPERSEDED</u> RNAV (GPS) X RWY 16R	<u>ORIGINAL/AMENDMENT</u> 1E	<u>DATED</u> 08/15/2019	<u>MAG VAR</u> 13E	<u>EPOCH YEAR</u> 2020
<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>		

**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	ECOLO		TF	FB	1.00	254.37	6.00	8600
HALLE	IAF	ECOLO		TF	FB	1.00	114.68	10.67	8600
LIBGE	IAF	CEROX		TF	FB	1.00	166.98	5.43	9500
CEROX		ECOLO		TF	FB	1.00	167.36	2.15	8600
ECOLO	IF	ETARE		TF	FB	1.00	167.12	8.77	7200
ETARE		UDADY		TF	FB	1.00	167.12	1.98	6900
UDADY	FAF	RW17R	MAP	TF	FO	0.30	167.12	7.22	
RW17R	MAP	4815 MSL		CA			167.12		
4815 MSL		ZEXUT		DF	FB	1.00			
ZEXUT		MARRI		TF	FO	1.00	160.94	31.01	13000



**MISSED APPROACH**

**MAP:**

LPV: DA  
LNAV: RW17R

**MISSED APPROACH INSTRUCTIONS:**

CLIMB TO 13000 DIRECT ZEXUT AND ON TRACK 160.94 TO MARRI AND HOLD.

**ALTERNATE MISSED APPROACH INSTRUCTIONS:**

**PROFILE:**

<b>1. PT</b>	<b>SIDE OF COURSE</b>	<b>OUTBOUND</b>	<b>FT WITHIN</b>	<b>MILES OF</b>	<b>(IAF)</b>
<b>2. PROFILE STARTS AT ECOLO</b>					
<b>3. FAC:</b>	167.12	<b>FAF:</b>	UDADY	<b>DIST FAF TO MAP:</b>	7.22
				<b>DIST FAF TO THLD:</b>	7.22
<b>4. MIN ALT:</b>	ECOLO 8600, ETARE 7200, UDADY 6900				
<b>5. DIST TO THLD FROM OM:</b>	<b>MM:</b>	<b>IM:</b>	<b>150 HAT:</b>	<b>824 HAT:</b>	2.27
				<b>GS ANT:</b>	
<b>6. MIN GP INCPT:</b>	6900	<b>GP ALT AT PFAF:</b>	UDADY 6900	<b>OM:</b>	
				<b>MM:</b>	
<b>7. GP ANGLE:</b>	3.16	<b>34:1:</b>	IS CLEAR	<b>20:1:</b>	IS CLEAR
				<b>TCH:</b>	59.0
<b>8. MSA FROM:</b>	RW17R 12000				

**PBN REQUIREMENTS NOTE:**

RNP APCH - GPS.

**NOTES:**

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 332 CW 075.  
CHART NOTE: FOR INOPERATIVE ALS, INCREASE LPV ALL CATS VISIBILITY TO 2 1/2 SM.  
CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO LNAV ALL CATS.  
CHART SPEED ICON IN PLANVIEW AT ROXJO: MAX 220 KIAS.  
CHART SPEED ICON IN PLANVIEW AT LIBGE: MAX 230 KIAS.

**ADDITIONAL FLIGHT DATA:**

CHART AT OR ABOVE 12000 AT LIBGE.  
FAS OBST: 5820 AAO 393728N/1194749W.  
HOLD S, RT, 351.00 INBOUND.  
FAS OBST: 5440 AAO 393711N/1194704W.  
CHART VDP AT 5.17 NM TO RW17R.  
WAAS CHANNEL # 78309  
REFERENCE PATH ID: W17B  
LTP HAE: 1321.5 M



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

**ALTERNATE:** NA  CAT A, B 1800-2, CAT C, D 1800-3

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	5239	1 7/8	824	5239	1 7/8	824	5239	1 7/8	824	5239	1 7/8	824				
LNAV MDA	6200	4000	1785	6200	5500	1785	6200	3	1785	6200	3	1785				

**CHANGES - REASONS**

1. CHANGED PROCEDURE NAME FROM RNAV (GPS) X RWY 16R TO RNAV (GPS) X RWY 17R - MAGNETIC VARIATION CHANGED FROM 16 E TO 13 E.
2. REMOVED FEEDER FROM TRUCK - FPT DIRECTED PROCEDURE REDESIGN.
3. REMOVED INITIAL FROM FITUN - FPT DIRECTED PROCEDURE REDESIGN.
4. REMOVED INITIAL FROM PYRAM - FPT DIRECTED PROCEDURE REDESIGN.
5. ADDED INITIAL FROM HALLE - FPT DIRECTED PROCEDURE REDESIGN.
6. ADDED INITIAL FROM LIBGE - FPT DIRECTED PROCEDURE REDESIGN.
7. REMOVED FEEDER FROM CAXIL TO ROXJO AND REPLACED WITH FEEDER FROM CAXIL TO NUKOE TO ROXJO - FPT DIRECTED PROCEDURE REDESIGN.
8. REMOVED FEEDER FROM FMG VORTAC TO ROXJO AND REPLACED WITH FEEDER FROM FMG VORTAC TO NUKOE TO ROXJO - FPT DIRECTED PROCEDURE REDESIGN.
9. ADDED 220K SPEED RESTRICTION AT ROXJO - FPT DIRECTED PROCEDURE REDESIGN.
10. ADDED ADDITIONAL FLIGHT DATA NOTE "FAS OBST: 5820 AAO 393728N/1194749W" - 7:1 EXCLUDED OBSTACLE DOCUMENTED IAW 8260.19I 8-6-7(D).
11. COURSE FROM ROXJO TO ECOLO CHANGED FROM 251.37 TO 254.37 -- MAGNETIC VARIATION CHANGED FROM 16 E TO 13 E.
12. COURSE FROM ECOLO TO ETARE CHANGED FROM 164.12 TO 167.12 -- MAGNETIC VARIATION CHANGED FROM 16 E TO 13 E.
13. COURSE FROM ETARE TO UDADY CHANGED FROM 164.12 TO 167.12 -- MAGNETIC VARIATION CHANGED FROM 16 E TO 13 E.
14. FINAL APPROACH COURSE CHANGED FROM 164.12 TO 167.12 -- MAGNETIC VARIATION CHANGED FROM 16 E TO 13 E.
15. TCH CHANGED FROM 63 TO 59 - TO ALIGN WITH ILS TCH AS ORIGINALLY DESIGNED.
16. GPA CHANGED FROM 3.10 TO 3.16 - TCH LOWERED FROM 63 TO 59.
17. ADDED VDP AT 5.17 NM TO RWY 17R - VDP IS NOW A PUBLISHABLE VALUE, IAW 8260.3E 2-6-5A.
18. MISSED APPROACH CA LEG COURSE CHANGED FROM 164.12 167.12 -- MAGNETIC VARIATION CHANGED FROM 16 E TO 13 E.
19. MISSED APPROACH TF LEG FROM ZEXUT TO MARRI CHANGED FROM 157.94 TO 160.94 -- MAGNETIC VARIATION CHANGED FROM 16 E TO 13 E.
20. LPV VISIBILITY CHANGED FROM 2 1/4 TO 1 7/8 SM - IAW 8260.3E TABLE 3-3-1.
21. CHANGED PBN REQUIREMENTS NOTE FROM "RNP APCH" TO "RNP APCH - GPS" - IAW 8260.19I 8-6-8B(2).
22. ADDED "20:1 IS CLEAR" NOTE - 8260.19I 8-9-7G(3)A.
23. CHANGED REFERENCE PATH ID FROM W16B TO W17B - RUNWAY NUMBER CHANGED AND IAW 8260.19I APPENDIX K SECTION 4(I).
24. REMOVED NOTE "INOPERATIVE TABLE DOES NOT APPLY TO LNAV ALL CATS" AND ADDED NOTE "CHART NOTE: FOR INOPERATIVE ALS, INCREASE LPV ALL CATS VISIBILITY TO 2 1/2 SM" AND "CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO LNAV ALL CATS." - IAW 8260.19I 8-6-110(3)E.
25. FAS DATA CHANGED: FPAP CHANGED FROM 392859.4000N/194609.4900W TO 392901.1203N/1194609.4750W AND CRC REMAINDER CHANGED FROM B091A0F1 TO 73921047 - TCH AND GPA CHANGED.

**COORDINATED WITH:**

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

**FLIGHT CHECKED BY**

TODD D HAIFLEY

*Digitally signed by*  
**CASIMIR L TABAKA**  
Aug 24, 2022

**OFFICE**

FPO

**DATE**

09/13/2022

**DEVELOPED BY**

KARLIE BUNTIN

*Digitally signed by*  
**KARLIE B BUNTIN**  
Jul 20, 2022

**OFFICE**

AJV-A432

**DATE**

06/16/2022

**APPROVED BY**

CASIMIR TABAKA

*Digitally signed by*  
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Aug 24, 2022

**OFFICE**

AJV-A430

**DATE**



**TITLE**  
MANAGER

**AIRPORT ID**  
KRNO

**PROCEDURE NAME**  
RNAV (GPS) X RWY 17R

**ORIGINAL/AMENDMENT**  
2

**CITY**  
RENO

**STATE**  
NV

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FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KRNO
RUNWAY	RW17R
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	X
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W17B
LTP/FTP LATITUDE	393039.9615N
LTP/FTP LONGITUDE	1194609.2205W
LTP/FTP ELLIPSOIDAL HEIGHT	+13215
FPAP LATITUDE	392901.1200N
FPAP LONGITUDE	1194609.4975W
THRESHOLD CROSSING HEIGHT (TCH)	00059.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.16
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0056
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	73921047

ADDITIONAL PATH POINT RECORD INFORMATION

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

