# FEDERAL AVIATION ADMINISTRATION

# FLIGHT STANDARDS SERVICE RNAV (RNP) 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.

**ORIGINAL/AMENDMENT** PROCEDURE NAME **CITY STATE AIRPORT ID** RNAV (RNP) Y RWY 17R 2 **RENO** NV **KRNO AIRPORT ELEVATION TDZE SUPERSEDED ORIGINAL/AMENDMENT DATED MAG VAR EPOCH YEAR** 4415 4415 RNAV (RNP) Y RWY 16R 1B 06/23/2016 13E 2020

FACILITY COORDINATES OF FACILITIES ACTUAL EFFECTIVE DATE REQUIRED EFFECTIVE DATE CANCEL/SUSPEND

RNAV 3 NOVEMBER 2022 11/03/2022

#### **TERMINAL ROUTES**

FROM	FIX TYPE	<u>TO</u>	FIX TYPE	LEG TYPE	FO/FB	RNP	<u>COURSE</u>	DISTANCE	ALTITUDE
CANYA	IF	GOYET		TF	FB	1.00	338.64	5.64	8000
GOYET		HOMES		RF	FB	1.00	(2.90 NM RADIUS CCW (CFFKL))	1.40	7700
KLOCK	IF	ICEYA		TF	FB	1.00	311.03	3.16	9000
ICEYA		HOMES		TF	FB	1.00	310.99	4.14	7700
HOMES		ZENDO		RF	FB	0.50	(2.85 NM RADIUS CCW (CFTWX))	2.54	7000
ZENDO		% MASTR	PFAF	RF	FB	0.50	(3.04 NM RADIUS CCW (CFNWV))	2.09	6400
MASTR	PFAF	% OKITE		RF	FB	0.30	(3.05 NM RADIUS CCW (CFRQN))	2.84	
OKITE		RW17R	MAP	TF	FO	0.30	167.12	3.00	
RW17R	MAP	ZAKBI		TF	FB	1.00	167.12	8.61	
ZAKBI		USINE		TF	FB	1.00	182.59	6.69	
USINE		YARKU		TF	FO	1.00	127.37	9.36	13000

# MISSED APPROACH

MAP: RNP: DA

#### MISSED APPROACH INSTRUCTIONS:

CLIMB TO 13000 ON TRACK 167.12 TO ZAKBI AND ON TRACK 182.59 TO USINE AND ON TRACK 127.37 TO YARKU AND HOLD, CONTINUE CLIMB-IN-HOLD TO 13000.

\*\*MISSED APPROACH REQUIRES MINIMUM CLIMB OF 222 FEET PER NM TO 7220.

\*MISSED APPROACH REQUIRES MINIMUM CLIMB OF 266 FEET PER NM TO 7240.

# **ALTERNATE MISSED APPROACH INSTRUCTIONS:**



AIRPORT ID<br/>KRNOPROCEDURE NAME<br/>RNAV (RNP) Y RWY 17RORIGINAL/AMENDMENT<br/>2CITY<br/>RENOSTATE<br/>NV

PROFILE:

1. PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)

2. PROFILE STARTS AT HOMES

3. FAC: % PFAF: MASTR DIST PFAF TO MAP: DIST PFAF TO THLD:

**4. MIN ALT:** HOMES 7700, ZENDO 7000, MASTR 6400, OKITE 5471

5. DIST TO THLD FROM PFAF: 5.84 MM: IM: 150 HAT: 344 HAT: 0.82 GS ANT:

**6. MIN GP INCPT:** 6400 **GP ALT AT PFAF**: MASTR 6400, OKITE 5471 **OM**: **MM**: **IM**:

**7. GP ANGLE**: 3.08 **34:1**: IS CLEAR **20:1**: IS CLEAR **TCH**: 75.0

**8. MSA FROM:** RW17R 12000

## PBN REQUIREMENTS NOTE:

RNP AR APCH - GPS.

# NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -9°C OR ABOVE 54°C.

CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS.

CHART NOTE: FOR INOPERATIVE ALS, INCREASE RNP 0.1 DA ALL CATS VISIBILITY TO RVR 5500, INCREASE RNP 0.2 DA ALL CATS VISIBILITY TO 1 5/8 SM, INCREASE RNP 0.3 DA ALL CATS VISIBILITY TO 1 7/8 SM.

CHART SPEED ICON IN PLANVIEW AT CANYA: MAX 210 KIAS.

CHART SPEED ICON IN PLANVIEW AT KLOCK: MAX 210 KIAS.

### **ADDITIONAL FLIGHT DATA:**

CHART MANDATORY 10000 AT KLOCK.

HOLD S, RT, 349.76 INBOUND.

CHART MANDATORY 10000 AT CANYA.

 AIRPORT ID
 PROCEDURE NAME
 ORIGINAL/AMENDMENT
 CITY
 STATE

 KRNO
 RNAV (RNP) Y RWY 17R
 2
 RENO
 NV

MINIMUMS:

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

ALTERNATE: NA STANDARD

CATEGORY:		Α			В			С			D			E	
FINAL TYPE	DA/MDA	<u>VIS</u>	HAT/HAA	DA/MDA	<u>VIS</u>	HAT/HAA	DA/MDA	<u>VIS</u>	HAT/HAA	DA/MDA	<u>VIS</u>	HAT/HAA	DA/MDA	<u>VIS</u>	HAT/HAA
	AUTHORIZATION REQUIRED														
RNP 0.10 DA*	4759	3000	344	4759	3000	344	4759	3000	344	4759	3000	344			
RNP 0.20 DA**	4985	1 1/4	570	4985	1 1/4	570	4985	1 1/4	570	4985	1 1/4	570			
RNP 0.30 DA	5091	1 1/2	676	5091	1 1/2	676	5091	1 1/2	676	5091	1 1/2	676			



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 2
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## **CHANGES - REASONS**

-THIS AMENDMENT INCORPORATES P-NOTAM AMDT 1B AND ALL IT'S CHANGES IAW 8260.19I.

- 1. AIRPORT MAGVAR UPDATED FROM EPOCH YEAR 1985/16E TO 2020/13E. ATC REQUEST.
- 2. PROCEDURE NAME CHANGE FROM RNAV (RNP) Y RWY 16R TO RNAV (RNP) Y RWY 17R RUNWAY NUMBER CHANGED DUE TO AIRPORT MAGVAR.
- 3. TERMINAL ROUTES FROM VIKES REMOVED, ALL REFERANCES TO WP VIKES REMOVED. VIKES INITIAL REMOVED PER FWG CONSENSUS.
- 4. TERMINAL ROUTE FROM CANYA TO GOYET COURSE AN DISTANCE CHANGED FROM 335.64/5.00 TO 338.64/5.64. CANYA MOVED TO RESOLVE EXCESSIVE DESCENT GRADIENT.
- 5. TERMINAL ROUTE FROM GOYET TO HOMES RNP CHANGED FROM 0.70 TO 1.00. ATC REQUEST.
- 6. TERMINAL ROUTE FROM KLOCK TO ICEYA CHANGED COURSE FROM 308.03 TO 311.03. AIRPORT MAGVAR UPDATED.
- 7. TERMINAL ROUTE FROM ICEYA TO HOMES CHANGED COURSE FROM 307.99 TO 310.99. AIRPORT MAGVAR UPDATED.
- 8. TERMINAL ROUTE FROM HOMES TO ZENDO CHANGED RNP VALUE FROM 0.70 TO 0.50 ATC REQUEST.
- 9. TERMINAL ROUTE FROM ZENDO TO MASTR CHANGED RNP VALUE FROM 0.70 TO 0.50 ATC REQUEST.
- 10. TERMINAL ROUTE FROM OKITE TO RWY 17R CHANGED COURSE FROM 164.12 TO 167.12 AND UPDATED RUNWAY NUMBER FROM RWY 16R TO RWY 17R. AIRPORT MAGVAR UPDATED AND RUNWAY NUMBER UPDATED.
- 11. TERMINAL ROUTE FROM RWY 17R TO ZAKBI CHANGED COURSE FROM 164.12 TO 167.12 AND UPDATED RUNWAY NUMBER FROM RWY 16R TO RWY 17R. AIRPORT MAGVAR UPDATED AND RUNWAY NUMBER UPDATED.
- 12. TERMINAL ROUTE FROM ZAKBI TO USINE CHANGED COURSE FROM 179.59 TO 182.59. AIRPORT MAGVAR UPDATED.
- 13. TERMINAL ROUTE FROM USINE TO YARKU CHAGED COURSE FROM 124.37 TO 127.37. AIRPORT MAGVAR UPDATED.
- 14. MISSED APPROACH INSTRUCTIONS CHANGED TO INCREASE ALL COURSES BY +3 DEGREES, AND ADDED \*\*MISSED APPROACH REQUIRES MINIMUM CLIMB OF 222 FEET PER NM TO 7220.

  \*MISSED APPROACH REQUIRES MINIMUM CLIMB OF 266 FEET PER NM TO 7240. AIRPORT MAGVAR UPDARED, \* NOTE RELOCATED FROM NOTES SECTION IAW 8260.19I, AND \*\* ADDED WITH NEW LINE OF MINIMA.
- 15. PROFILE LINE 5 CHANGED DIST TO THLD FROM OM TO DIST TO THLD FROM PFAF. 8260.19I
- 16. PROFILE LINE 7 CHANGED GP ANGLE: 3.10 AND TCH: 63.0 TO 3.08 AND 75.0 AND ADDED 20:1 & 34:1 IS CLEAR. ANGLE AND TCH CHANGED TO MATCH ILS PER ATC REQUEST. 20:1 & 34:1 VISUAL AREA IS CLEAR.
- 17. PROFILE LINE 8 CHANGED FROM MSA FROM RW16R 12000 TO RW17R 12000. RUNWAY RENUMBERED.
- 18. ADDED PBN REQUIREMENTS NOTE: RNP AR APCH GPS. ADDED IAW 8260.19I.
- 19. CHART NOTE CHANGED FROM FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -14C (7F) OR ABOVE 36C (98F) TO FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -9°C OR ABOVE 54°C. UPDATED TEMPERATURE DATA AND NOTE IAW 8260.19I.
- 20. CHANGED NOTE FROM FOR INOPERATIVE MALSR, INCREASE RNP 0.17 ALL CATS VISIBILITY TO 1 1/4 AND RNP 0.30 ALL CATS VISIBILITY TO 2 1/2 TO FOR INOPERATIVE ALS, INCREASE RNP 0.1 DA ALL CATS VISIBILITY TO RVR 5500, INCREASE RNP 0.2 DA ALL CATS VISIBILITY TO 1 5/8 SM, INCREASE RNP 0.3 DA ALL CATS VISIBILITY TO 1 7/8 SM. DA'S CHANGED AND VISIBILITY UPDATED, NEW INOP NOTE IAW 8260.19I.
- 21. REMOVED CHART NOTE RF REQUIRED AND GPS REQUIRED. NOW ADDRESSED WITH THE PBN REQUIREMENTS NOTE IAW 8260.19I.
- 22. REMOVED CHART PLANVIEW NOTE AT HOMES AND GOYET: MAX 210 KIAS. SPEED RESTRICITION NO LONGER REQUESTED BY ATC.
- 23. CHANGED CHART NOTE FROM CHART PLANVIEW AT KLOCK TO CHART SPEED ICON AT KLOCK AND ADDED IDENTICAL NOTE FOR CHART SPEED ICON IN PLANVIEW AT CANYA: MAX 210 KIAS.
   UPDATED NOTE IAW 8260.19I AND SPEED RESTRICTION AT CANYA PER ATC REQUEST.
- 24. REMOVED NOTE VGSI AND RNAV GLIDEPATH NOT COINCCIDENT. VGSI AND PROCEDURE NOW COINCIDENT.
- 25. REMOVED NOTE PROCEDURE NA FOR ARRIVALS AT VIKES ON V494 SOUTHWEST BOUND. VIKES INITIAL REMOVED FROM PROCEDURE.
- 26. ADDITIONAL FLIGHT DATA REMOVED ROUTE TYPE QUALIFIER 1: F, QUALIFIER 2: S, ROUTE TYPE: A, H AND #TCH 4477.9 MSL (DO NOT CHART) NOT REQUIRED IAW 8260.19I.
- 27. ADDITIONAL FLIGHT DATA MOVED DISTANCE FROM 402 HATH: 1.03 NM TO PROFILE LINE 6 AND CHANGED TO 344 HAT: 0.82. 8260.191
- 28. ADDITIONAL FLIGHT DATA ADDED CHART MANDATORY 10000 AT CANYA. MANDATORY ALTITUDE DUE TO STAR TERMINUS FIX.
- 29. ALTERNATE MINIMUMS CHANGED FROM "CAT A, B, C, D 800-2 1/2" TO "STANDARD" MINIMUMS UPDATED, ALTERNATE MINS NOW STANDARD.
- 30. RNP 0.17 DA CHANGED TO RNP 0.1 DA\* WITH DA/HAT AND VIS OF 4759/344 AND RVR 3000. UPDATED TO LOWER RNP VALUE PER ATC. NEW TRAP.
- 31. ADDED RNP 0.20 DA\*\* WITH DA/HAT AND VISIBILITY OF 4985/570 AND 1 1/4 SM. NEW LINE OF MINIMA PER ATC REQUEST.
- 32. RNP 0.3 DA CHANGED FROM DA/HAT AND VIS OF 5132/717 AND 1 7/8 SM TO 5091/676 AND 1 1/2 SM. NEW FINAL CONTROLLING OBSTACLE.
- 33. ADDITIONAL FLIGHT DATA CHANGED FROM HOLD S, RT, 346.76 INBOUND TO 349.76 INBOUND. AIRPORT MAGVAR UPDATED.

ONALITY 10 CHECKED

COORDINATED WITH:  A4A X ALPA X	AOPA X APA X HAI	NBAA X	OTHER: ZOA, RNO APP CON, RNO ATCT, AMG	R	
FLIGHT CHECKED BY	Digitally signed by  ERIC N SUSKI		OFFICE	DATE	
PENDING	Aug 19, 2022				
DEVELOPED BY TYLER MITCHELL	Digitally signed by  TYLER D MITCHELL  Aug 05, 2022		OFFICE AJV-A432	<b>DATE</b> 06/23/2022	
APPROVED BY JOHNNIE BAKER	Digitally signed by		OFFICE AJV-A430	DATE	<u>TITLE</u> MANAGER
	<b>ERIC N SUSKI</b> Aug 19, 2022				
	Aug 19, 2022				

ORIGINAL/AMENDMENT
2

<u>CITY</u> RENO STATE NV

PROCEDURE NAME RNAV (RNP) Y RWY 17R



AIRPORT ID KRNO