

**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> KALS	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 20	<u>ORIGINAL/AMENDMENT</u> 2	<u>CITY</u> ALAMOSA	<u>STATE</u> CO		
<u>AIRPORT ELEVATION</u> 7540	<u>TDZE</u> 7540	<u>SUPERSEDED</u> RNAV (GPS) RWY 20	<u>ORIGINAL/AMENDMENT</u> 1	<u>DATED</u> 03/12/2009	<u>MAG VAR</u> 9E	<u>EPOCH YEAR</u> 2010
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 24 MARCH 2022	<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>
ICORY		LUYEL		TF	FB	1.00	094.33	11.58	11300
ALS VORTAC		JADGU		TF	FO	1.00	005.00	15.83	11300
GEMKY		HOPOR		TF	FB	1.00	041.06	17.03	12400
HOPOR		JADGU		TF	FO	1.00	041.23	18.78	11300
LUYEL	IAF	JADGU	NOPT	TF	FB	1.00	152.70	9.98	11300
JADGU	IF/IAF	KABPE		TF	FB	1.00	202.84	5.87	9600
KABPE	FAF	RW20	MAP	TF	FO	0.30	202.82	5.44	
RW20	MAP	7810 MSL		CA			202.82		
7810 MSL		RODDS		DF	FO	1.00			11500

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: RW20

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 11500 DIRECT RODDS AND HOLD, CONTINUE CLIMB-IN-HOLD TO 11500.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

QUALITY
8
CHECKED

PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF

(IAF)

2. HOLD N JADGU, RT, 188.84 INBOUND, 11300 FT. IN LIEU OF PT (IAF), MAX 12000.

3. FAF: 202.82FAF: KABPEDIST FAF TO MAP: 5.44DIST FAF TO THLD: 5.44

4. MIN ALT: JADGU 11300, KABPE 9600

5. DIST TO THLD FROM OM:MM:IM:150 HAT:267 HAT: 0.57GS ANT:

6. MIN GP INCPT: 9600GP ALT AT PFAF : KABPE 9600OM:MM:IM:

7. GP ANGLE: 3.4634:1: IS NOT CLEAR20:1: IS CLEARTCH: 60.0

8. MSA FROM: RW20 15600

PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: RWY 20 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -31°C OR ABOVE 54°C.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT ALS VORTAC ON V83-210 SOUTHWEST BOUND.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).

ADDITIONAL FLIGHT DATA:

HOLD NE, LT, 202.65 INBOUND.
FAS OBST: 7739 AAO 372937N/1054939W.
CHART VDP AT 1.31 NM TO RW20.
WAAS CHANNEL # 93500
REFERENCE PATH ID: W20A
CHART CIRCLING ICON.
LTP HAE: 2281.1 M

MINIMUMS:

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

ALTERNATE: NA ☐ STANDARD



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	7812	7/8	272	7812	7/8	272	7812	7/8	272	7812	7/8	272			
LNAV/VNAV DA	7810	7/8	270	7810	7/8	270	7810	7/8	270	7810	7/8	270			
LNAV MDA	8000	1	460	8000	1	460	8000	1 3/8	460	8000	1 3/8	460			
CIRCLING	8040	1	500	8040	1	500	8080	1 1/2	540	8100	2	560			

CHANGES - REASONS

1. AIRPORT ELEVATION AND TOUCHDOWN ZONE ELEVATION CHANGED FROM 7539 TO 7540 - NEW SURVEY.
2. TERMINAL ROUTES: CHANGED INITIAL SEGMENT LUYEL TO JADGU - COURSE CHANGED FROM 152.70 TO 161.70 - NEW SURVEY/NEW COURSE.
3. TERMINAL ROUTES: CHANGED INTERMEDIATE SEGMENT JADGU TO KABPE - COURSE/DISTANCE/ALTITUDE CHANGED FROM "202.85/6.03/9300" TO "202.84/5.87/9600" - MOVED WAYPOINT KABPE (COURSE/DISTANCE) AND NEW OBSTACLES/MAINTAIN CONTINUOUS DESCENT ANGLE (ALTITUDE).
4. TERMINAL ROUTES: CHANGED FINAL SEGMENT KABPE TO RW20 - COURSE/DISTANCE CHANGED FROM "202.81/5.29" TO "202.82/5.44" - MOVED FIX KABPE/NEW SURVEY.
5. TERMINAL ROUTES: CHANGED MISSED APPROACH/CA SEGMENT BASE DA/MDA FROM 7591 TO 7768 MSL - NEW AIRPORT SURVEY.
6. PROFILE LINE 2: CHANGED INBOUND COURSE FROM 187.85 TO 188.84, CHANGED ALTITUDE FROM 10800 TO 11300, AND ADDED MAX 12000 - ALIGNED WITH INTERMEDIATE SEGMENT/CRITERIA UPDATE .19I 8-6-7. B. (2)
7. PROFILE LINE 3: FAC CHANGED FROM 202.81 TO 202.82, AND DISTANCE FAF TO MAP AND FAF TO THRESHOLD CHANGED FROM 5.29 TO 5.44 - FAF RE-ALIGNED.
8. PROFILE LINE 4: MINIMUM ALTITUDES CHANGED FROM "JADGU 10800, KABPE 9300" TO "JADGU 11300, KABPE 9600" - INCREASED DESCENT ANGLE/ALTITUDE TO ELIMINATE VERTICALLY GUIDED SURVEY AREA OBSTACLES.
9. PROFILE LINE 5: CHANGED DIST TO THLD FROM 328 HAT: 0.87 TO 267 HAT: 0.57 AND REMOVED FROM ADDITIONAL FLIGHT DATA - NEW CRITERIA FORMAT.
10. PROFILE LINE 6: CHANGED MINIMUM GLIDESLOPE INTERCEPT FROM 9300 TO 9600 AND CHANGED GLIDESLOPE ALTITUDE AT KABPE FROM 9300 TO 9600 - INCREASED DESCENT ANGLE/ALTITUDE TO ELIMINATE VERTICALLY GUIDED SURVEY AREA OBSTACLES.
11. PROFILE LINE 7: CHANGED GLIDESLOPE ANGLE/TCH FROM 3.00/52 TO 3.46/60 AND ADDED 20:1 IS CLEAR - INCREASED DESCENT ANGLE/ALTITUDE TO ELIMINATE VERTICALLY GUIDED SURVEY AREA OBSTACLES.
12. PBN REQUIREMENTS NOTE: ADDED "RNP APCH - GPS" AND REMOVED "CHART NOTE: DME/DME RNP-0.3 NA" - 8260.19I 8-6-8. B. (2)
13. NOTES: CHANGED FROM "CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -31°C OR ABOVE 54°C" - NEW CRITERIA REMOVED FAHRENHEIT.
14. NOTES: REMOVED "VISIBILITY REDUCTION BY HELICOPTERS NA" AND ADDED "RWY 20 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED" - INCORPORATED NOTAM 0/0563/34:1 PENETRATIONS.
15. ADDITIONAL FLIGHT DATA: CHANGED "HOLD, N, LT, 202.66 INBOUND" TO "HOLD, NE, LT, 202.65 INBOUND" - NEW SURVEY/NEW TARGETS RESULTS SET.
16. ADDITIONAL FLIGHT DATA: CHANGED FAS OBSTACLE FROM "CHART FAS OBST: 7638 WNDGEN 372719N/1055103W, FAS OBST: 7738 AAO 372953N/1054956W" TO "FAS OBST: 7739 AAO 372937N/1054939W." - NEW CONTROLLING OBSTACLE/SURVEY.
17. ADDITIONAL FLIGHT DATA: CHANGED VDP FROM "CHART VDP AT 1.28 NM TO RW20* *LNAV ONLY" TO "CHART VDP AT 1.31 NM TO RW20" - NEW TARGETS RESULTS SET/NEW CRITERIA 8260.19I 8-6-10. M. (2)
18. ADDITIONAL FLIGHT DATA: ADDED VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}) - RAISED ANGLE AND TCH TO CLEAR VGS OBSTACLES.
19. ADDITIONAL FLIGHT DATA: ADDED CHART CIRCLING ICON - 8260.19I, 8-6-10. S.
20. LANDING MINIMUMS: LPV - ALL CATS DA/HAT/VIS CHANGED FROM "7867/328/1" TO "7812/272/ 7/8" - NEW SURVEY/OBSTACLES/VIS CHECKS.
21. LANDING MINIMUMS: LNAV/VNAV - ALL CATS DA/HAT/VIS CHANGED FROM "8002/463/1 1/2" TO "7810/270/ 7/8" - NEW SURVEY/OBSTACLES/VISIBILITY CHECKS.
22. LANDING MINIMUMS: LNAV - CHANGED ALL CATS HAT FROM 461 TO 460, CAT C VIS CHANGED FROM 1 1/4 TO 1 3/8, AND CAT D VIS CHANGED FROM 1 1/2 TO 1 3/8 - NEW SURVEY/OBSTACLES/VIS CHECKS.
23. LANDING MINIMUMS: CIRCLING - CHANGED CATS A/B HAA FROM 501 TO 500, CHANGED CAT C MDA/HAA FROM 8040/501 TO 8080/540, AND CHANGED CAT D HAA FROM 561 TO 560 - NEW SURVEY/OBSTACLES.
24. CRC REMAINDER CHANGED FROM E107CF03 TO 88D3198E - LTP/FTP LAT/LONG CHANGED FROM 372642.2400N/1055136.5600W TO 372642.2455N/1055136.5405, FPAP LAT/LONG CHANGED FROM 372526.3900N/1055235.4500W TO 372526.4085N/1055235.4495W AND THE LTP AND FPAP ORTHOMETRIC HEIGHTS CHANGED FROM 22979 TO 22980.
25. NOTES: REMOVED CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, PROCEDURE NA - LOCAL WEATHER ON WMSCR.
26. NOTES: ADDED CHART PLANVIEW NOTE: "PROCEDURE NA FOR ARRIVALS AT ALS VORTAC ON V83-210 SOUTHWEST BOUND" - DIVERGENCE ANGLE EXCEEDS 90 DEGREES

11/15/21: THIS IS AN UPDATED COPY OF THE FORM APPROVED ON 11/10/2021.

1. ADDED CHART PLANVIEW NOTE: "PROCEDURE NA FOR ARRIVALS AT ALS VORTAC ON V83-210 SOUTHWEST BOUND"

COORDINATED WITH:A4A ☐ ALPA ☒ AOPA ☒ APA ☐ HAI ☐ NBAA ☒ OTHER: ZDV, AMGR**FLIGHT CHECKED BY**
JEFFREY JAMES SCORSEDigitally signed by
JON DENTON
Nov 16, 2021**OFFICE**
FIOG**DATE**
11/09/2021**DEVELOPED BY**
APRIL SARMENTODigitally signed by
APRIL T SARMENTO
Nov 16, 2021**OFFICE**
AJV-A432**DATE**
07/28/2021**APPROVED BY**
LONNIE EVERHARTDigitally signed by
JON DENTON
Nov 16, 2021**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	KALS
RUNWAY	RW20
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W20A
LTP/FTP LATITUDE	372642.2455N
LTP/FTP LONGITUDE	1055136.5405W
LTP/FTP ELLIPSOIDAL HEIGHT	+22811
FPAP LATITUDE	372526.4085N
FPAP LONGITUDE	1055235.4495W
THRESHOLD CROSSING HEIGHT (TCH)	00060.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.46
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0152
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	88D3198E

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K2
LTP ORTHOMETRIC HEIGHT	+22980
FPAP ORTHOMETRIC HEIGHT	+22980

