

**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</u> MC CARRAN INTL	<u>AIRPORT ID</u> KLAS	<u>PROCEDURE NAME</u> RNAV (GPS) Y RWY 19L	<u>ORIGINAL/AMENDMENT</u> 3	<u>CITY</u> LAS VEGAS	<u>STATE</u> NV	
<u>AIRPORT ELEVATION</u> 2181	<u>TDZE</u> 2112	<u>SUPERSEDED</u> RNAV (GPS) RWY 19L	<u>ORIGINAL/AMENDMENT</u> 2	<u>DATED</u> 08/17/2017	<u>MAG VAR</u> 11E	<u>EPOCH YEAR</u> 2020
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 25 FEBRUARY 2021	<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>
LAPIN		STORA		TF	FO	1.00	302.44	15.75	6000
SUVIE	IAF	STORA	NOPT	TF	FB	1.00	241.78	9.85	6000
STORA	IF/IAF	MOZOS		TF	FB	1.00	203.98	4.30	5300
MOZOS		DIRDE		TF	FB	1.00	204.51	3.88	4300
DIRDE	FAF	JABNA	MAP	TF	FO	0.30	193.96	6.28	
JABNA	MAP	2600 MSL		CA			193.96		2600
2600 MSL		LAPIN		DF	FO	1.00			6000

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: JABNA

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 2600 THEN CLIMBING LEFT TURN TO 6000 DIRECT LAPIN AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:



PROFILE:

1. PT

SIDE OF COURSE

OUTBOUND

FT WITHIN

MILES OF

(IAF)

2. HOLD NE STORA, LT, 203.98 INBOUND, 6000 FT. IN LIEU OF PT (IF/IAF), MAX 6000.

3. FAF: 193.96FAF: DIRDEDIST FAF TO MAP: 6.28DIST FAF TO THLD: 6.78

4. MIN ALT: STORA 6000, MOZOS 5300, DIRDE 4300

5. DIST TO THLD FROM OM:MM:IM:150 HAT:200 HAT: 0.54GS ANT:

6. MIN GP INCPT: 4300GP ALT AT FAF : DIRDE 4300OM:MM:IM:

7. GP ANGLE: 3.0034:1: IS CLEAR20:1: IS CLEARTCH: 60.0

8. MSA FROM: JABNA 12900

PBN REQUIREMENTS NOTE:

RNP APCH.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW 0°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 AT LAPIN ON V21 NORTH BOUND AND ON V237-562 NORTHEAST BOUND.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT SUVIE ON V394 NORTHEAST BOUND.

ADDITIONAL FLIGHT DATA:

HOLD W, RT, 070.15 INBOUND.
CHART FAS OBST: 2590 BUILDING 360624N/1150959W.
CHART VDP AT 1.33 NM TO JABNA*
*LNAV ONLY.
WAAS CHANNEL # 45542
REFERENCE PATH ID: W19A
CHART CIRCLING ICON.
LTP HAE: 606 M

MINIMUMS:

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

ALTERNATE: NA

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CAT A, B 900-2, CAT C 1000-2 3/4, CAT D 1400-3



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	2312	3/4	200	2312	3/4	200	2312	3/4	200	2312	3/4	200			
LNAV/VNAV DA	2677	1 5/8	565	2677	1 5/8	565	2677	1 5/8	565	2677	1 5/8	565			
LNAV MDA	2740	1	628	2740	1	628	2740	1 3/4	628	2740	1 3/4	628			
CIRCLING	3020	1 1/4	839	3060	1 1/4	879	3100	2 3/4	919	3540	3	1359			

CHANGES - REASONS

1. REMOVED LAS VORTAC TO HAMIG FEEDER SEGMENT - FPT REQUEST PER IFPR.
2. CHANGED IF/IAF FROM HAMIG TO STORA AND ALTITUDE FROM 5800 TO 6000 - COORDINATES UPDATED PER FPT REQUEST ON IFPR/FIX MOVED IN EXCESS OF 1NM.
3. CHANGED INTERMEDIATE SEGMENT STEPDOWN FIX FROM JOGMU TO MOZOS - COORDINATES UPDATED PER FPT REQUEST ON IFPR/FIX MOVED IN EXCESS OF 1NM.
4. CHANGED FAF FROM RANVE TO DIRDE - 3.0 GPA/60 FT TCH REQUESTED BY FPT ON IFPR/FIX MOVED IN EXCESS OF 1NM/FAC NOW ALIGNED WITH RUNWAY.
5. CHANGED ALTITUDE FROM 2581 TO 2600 FOR CA LEG - ALTITUDE MUST BY PUBLISHED IN 100, 50, OR 20 FOOT INCREMENTS PER CURRENT CRITERIA.
6. REMOVED LP MINIMA. ADDED LPV AND LNAV/VNAV MINIMA - FPT REQUEST PER IFPR/OFFSET FAC REMOVED.
7. CHANGED "CLIMBING LEFT TURN TO 6000 DIRECT LAPIN AND HOLD" TO "CLIMB TO 2600 THEN CLIMBING LEFT TURN TO 6000 DIRECT LAPIN AND HOLD" - CLIMB TO ALTITUDE REQUIRED TO BE PUBLISHED PER CURRENT CRITERIA.
8. CHANGED HIL INBOUND COURSE FROM 203.71 TO 203.98, CHANGED ALTITUDE FROM 5800 TO 6000, AND ADDED MAX ALTITUDE 6000 - COORDINATES UPDATED PER FPT REQUEST ON IFPR/TERRAIN TO THE NORTH WEST DOES NOT ALLOW FOR LARGER HOLDING PATTERNS.
9. CHANGED FAC FROM 203.68 TO 193.96, DIST FAF TO MAP FROM 6.12 TO 6.28, AND DIST FAF TO THLD FROM 6.61 TO 6.78 - FAF COORDINATES UPDATED PER WFPT REQUEST ON IFPR/FIX MOVED IN EXCESS OF 1NM.
10. ADDED 0.54 TO DIST TO THLD FROM 200 HAT - REQUIRED DOCUMENTATION BY CRITERIA/LPV MINIMA ADDED PER FPT REQUEST IN IFPR.
11. ADDED 4300 TO MIN GP INCPT AND DIRDE 4300 TO GP ALT AT FAF - REQUIRED DOCUMETATION BY CRITERIA/LPV MINIMA ADDED PER FPT REQUEST IN IFPR.
12. ADDED 3.00 TO GP ANGLE, "IS CLEAR" TO 20:1, AND 60.0 TO TCH/FPT REQUEST PER IFPT/REQUIRED DOCUMENTATION BY CRITERIA/LPV MINIMA ADDED.
13. CHANGED MSA ALTITUDE FROM 13200 TO 12900 - NEW CONTROLLING OBSTACLE.
14. ADDED RNP APCH - REQUIRED DOCUMENTATION BY CRITERIA.
15. REMOVED CHART NOTE: DME/DME RNP-0.3 NA - NO LONGER REQUIRED BY CRITERIA.
16. ADDED CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW 0°C OR ABOVE 54°C - REQUIRED DOCUMENTATION BY CRITERIA/LNAV/VNAV MINIMUMS ADDED PER FPT REQUEST ON IFPR.
17. ADDED CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT LAPIN ON V21 NORTH BOUND AND ON V237-562 NORTHEAST BOUND AND CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT SUVIE ON V394 NORTHEAST BOUND - REQUIRED DOCUMENTATION BY CRITERIA/COURSE CHANGE EXCEEDS 90 DEGREES.
18. REMOVED FAS OBSTACLE 2147 TRMSN TWR, FICTITIOUS THRESHOLD POINT (CFVPC) DO NOT CHART, RANVE TO RW19L: 3.08/60, FAC CROSSES RWY C/L EXTENDED 3003 FT FROM THLD, AND CHART PLANVIEW NOTE: FINAL APPROACH COURSE OFFSET 9.71 DEGREES - LP MINIMA REMOVED PER FPT REQUEST IN IFPR/OFFSET FAC REMOVED.
19. CHANGED VDP DISTANCE FROM 1.02 TO 1.33 - FAF COORDINATES UPDATED PER FPT REQUEST ON IFPR.
20. CHANGED LNAV MDA/HAT ALL CATS FROM 2760/648 TO 2740/628. CHANGED LNAV CAT C/D VIS FROM 1 7/8 TO 1 3/4 - ADJUSTMENTS UPDATED FOR NEW FAF LOCATION AND MISSED APPROACH PENETRATION.
21. CHANGED CIRCLING CAT B CMDA/HAA FROM 3040/859 TO 3060/879 - NEW CONTROLLING OBSTACLE.
22. CHANGED LTP LATITUDE FROM 360549.8530N TO 360547.0075N AND LTP LONGITUDE FROM 1150922.3880W TO 1150917.3135W - FAC NOW ALIGNED WITH RUNWAY/FTP NO LONGER IN USE.
23. CHANGED FPAP LATITUDE FROM 360436.4295N TO 360426.0870N AND FPAF LONGITUDE FROM 1151024.8515W TO 1151003.6315W - FAC NOW ALIGNED WITH RUNWAY.
24. CHANGED GLIDEPATH ANGLE FROM 3.08 TO 3.00 - FPT REQUEST PER IFPR.
25. CHANGED LENGTH OFFSET FROM 0000 TO 0040 - TARGETS CALCULATION/FAC NOW ALIGNED WITH RUNWAY.
26. CHANGED VERTICAL ALERT LIMIT FROM 0.0 TO 35.0 - LPV 200 HAT MINIMA ADDED PER FPT REQUEST IN IFPR.
27. CHANGED CRC REMAINDER FROM 8E085986 TO READ 4F8128A7 - FAC IS NO LONGER OFFSET/FAF COORDINATES UPDATED PER FPT REQUEST ON IFPR.

04/10/20: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 12/26/19.

1. CHANGED PROCEDURE NAME FROM RNAV (GPS) RWY 19L TO RNAV (GPS) Y RWY 19L.
2. ADDED Y TO ROUTE INDICATOR.
3. CHANGED CRC REMAINDER FROM 4F8128A7 TO 5FC2E2BD.

01/15/21: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 05/27/20.

1. CHANGED DESCENT ANGLES TO RNAV GLIDEPATH IN VGSI NOT CONCIDENT CHART PROFILE NOTE.



AIRPORT ID
KLAS

PROCEDURE NAME
RNAV (GPS) Y RWY 19L

ORIGINAL/AMENDMENT
3

CITY
LAS VEGAS

STATE
NV

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZLA, LAS APP CON, LAS ATCT, NV AERO, AMGR
Digitally signed by

FLIGHT CHECKED BY
DANIEL CHARLES FAVORITE

ALLAN WILL
Jan 15, 2021

OFFICE
FIOG

DATE
05/20/2020

DEVELOPED BY
MICHAEL R. GARRITY JR. *Digitally signed by* **MICHAEL GARRITY**
Jan 15, 2021

Digitally signed by

ALLAN WILL
Jan 15, 2021

OFFICE
AJV-A423

DATE
12/26/2019

APPROVED BY
MARLON ROBINSON

OFFICE
AJV-A420

DATE

TITLE
MANAGER

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KLAS
RUNWAY	RW19L
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Y
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W19A
LTP/FTP LATITUDE	360547.0075N
LTP/FTP LONGITUDE	1150917.3135W
LTP/FTP ELLIPSOIDAL HEIGHT	+06060
FPAP LATITUDE	360426.0870N
FPAP LONGITUDE	1151003.6315W
THRESHOLD CROSSING HEIGHT (TCH)	00060.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0040
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	35.0
CRC REMAINDER	5FC2E2BD

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K2
LTP ORTHOMETRIC HEIGHT	+06340
FPAP ORTHOMETRIC HEIGHT	+06340

