

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> SFO	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 10L	<u>ORIGINAL/AMENDMENT</u> 3	<u>CITY</u> SAN FRANCISCO	<u>STATE</u> CA
<u>AIRPORT ELEVATION</u> 13	<u>TDZE</u> 7	<u>SUPERSEDED</u> RNAV (GPS) RWY 10L	<u>ORIGINAL/AMENDMENT</u> 2A	<u>DATED</u> 06/26/2014
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 11 JULY 2024	<u>REQUIRED EFFECTIVE DATE</u> ROUTINE	<u>MAG VAR</u> 14E
				<u>EPOCH YEAR</u> 2015
				<u>CANCEL/SUSPEND</u>

TERMINAL ROUTES

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
STINS	IAF	ILUDY		TF	FB	1.00	114.48	9.04	3500
ILUDY	IF	XATTU		TF	FB	1.00	106.66	6.42	1800
XATTU	FAF	APODE/3.39 NM TO TUZCU		TF	FB	0.30	106.73	2.07	
APODE/3.39 NM TO TUZCU		TUZCU	MAP	TF	FO	0.30	106.73	3.39	
TUZCU	MAP	500 MSL		CA			106.73		500
500 MSL		DUMBA		DF	FO	1.00			3000

MISSED APPROACH

MAP:

LPV: DA
LNAV/VNAV: DA
LNAV: TUZCU

MISSED APPROACH INSTRUCTIONS:

CLIMB TO 500, THEN CLIMB TO 3000 DIRECT DUMBA AND HOLD.

ALTERNATE MISSED APPROACH INSTRUCTIONS:

PROFILE:

1. PT	SIDE OF COURSE	OUTBOUND	FT WITHIN	MILES OF	(IAF)
2. PROFILE STARTS AT ILUDY					
3. FAC: 106.73	FAF: XATTU		DIST FAF TO MAP: 5.46	DIST FAF TO THLD: 5.46	
4. MIN ALT: ILUDY 3500, XATTU 1800, APODE/3.39 NM TO TUZCU 1140					
5. DIST TO THLD FROM OM: MM: IM:			150 HAT:	250 HAT: 0.62	GS ANT:
6. MIN GP INCPT: 1800 GP ALT AT PFAF: XATTU 1800			OM:	MM:	IM:
7. GP ANGLE: 3.00 34:1: IS NOT CLEAR 20:1: IS CLEAR			TCH: 55.0		
8. MSA FROM: TUZCU 5100					



PBN REQUIREMENTS NOTE:

RNP APCH - GPS.

NOTES:

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW 4°C OR ABOVE 54°C.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT STINS ON V25, V27 AND V199 NORTHWEST BOUND.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).
CHART NOTE: RWY 10L HELICOPTER VISIBILITY REDUCTION BELOW RVR 4000 NOT AUTHORIZED.

ADDITIONAL FLIGHT DATA:

FICTITIOUS THRESHOLD POINT TUZCU.
CHART PLANVIEW NOTE: FINAL APPROACH COURSE OFFSET 3.00 DEGREES.
HOLD E, LT, 283.98 INBOUND.
FAS OBST: 820 AAO 373911N/1222748W.
840 AAO 373911N/1222751W.
WAAS CHANNEL # 93946
REFERENCE PATH ID: W10A
FAC CROSSES RWY C/L EXTENDED 2544 FT FROM THLD.
FTP HAE: -30.9 M

MINIMUMS:

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

ALTERNATE: NA ☐ CAT A, B 1100-2, CAT C, D 1100-3

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	257	4000	250	257	4000	250	257	4000	250	257	4000	250			
LNAV/VNAV DA	494	1 3/8	487	494	1 3/8	487	494	1 3/8	487	494	1 3/8	487			
LNAV MDA	1080	1 1/4	1073	1080	1 1/2	1073	1080	3	1073	1080	3	1073			



1. TERMINAL ROUTES: SEGMENT STINS TO NORMM, CHANGED FROM "NORMM" TO "ILUDY", CHANGED COURSE AND DISTANCE FROM "118.20/9.22" TO "114.48/9.04" – IF FIX MOVED AND RENAMED ILUDY BY ATC.
2. TERMINAL ROUTES: SEGMENT NORMM TO XATTU, CHANGED FROM "ILUDY" TO "XATTU", CHANGED COURSE AND DISTANCE FROM "103.50/6.36" TO "106.66/6.42" – IF AND FAF FIXES MOVED BY ATC.
3. TERMINAL ROUTES: ADDED SEGMENT XATTU TO APODE/3.39 NM TO TUZCU – INSERTED SDF FOR LOWER MINS/ATC REQUEST TO OFFSET BY 3.00 DEGREES.
4. TERMINAL ROUTES: ADDED SEGMENT APODE/3.39 NM TO TUZCU TO TUZCU – ADDED SDF/ALIGNMENT CHANGED FROM STRAIGHT IN TO LTP TO OFFSET WITH FTP.
5. TERMINAL ROUTES: ADDED SEGMENT TUZCU TO 500 MSL - ALIGNMENT CHANGED FROM STRAIGHT IN TO LTP TO OFFSET WITH FTP.
6. TERMINAL ROUTES: SEGMENT 413 MSL TO DUMBA, CHANGED FROM "413 MSL" TO "500 MSL", CHANGED ALTITUDE FROM "4000" TO "3000" – TURN IN MISSED APPROACH/ATC REQUEST.
7. MISSED APPROACH: ADDED "LPV: DA" AND "LNAV/VNAV: DA" AND CHANGED FROM "LNAV: RW10L" TO "LNAV: TUZCU", – ATC REQUEST TO ADD LINES OF MINIMA/OFFSET FINAL.
8. MISSED APPROACH: CHANGED INSTRUCTIONS FROM "CLIMB TO 4000 DIRECT DUMBA AND HOLD" TO "CLIMB TO 500, THEN CLIMB TO 3000 DIRECT DUMBA AND HOLD" – TURN IN FINAL/ATC REQUEST.
9. PROFILE LINE 2: CHANGED FROM "PROFILE STARTS AT NORMM" TO "PROFILE STARTS ILUDY" – INTERMEDIATE FIX NORMM MOVED AND RENAMED.
10. PROFILE LINE 3: FAC CHANGED FROM "103.73" TO "106.73" – FAC CHANGED FROM STRAIGHT IN TO OFFSET.
11. PROFILE LINE 4: MIN ALT CHANGED FROM "NORMM 3500, XATTU 1800" TO "ILUDY 3500, XATTU 1800, APODE/3.39 NM TO TUZCU 1140" – NORMM MOVED AND WAS RENAMED/ADDED SDF.
12. PROFILE LINE 5: ADDED "250 HAT: 0.62" – ADDED LPV LINE OF MINIMA.
13. PROFILE LINE 6: ADDED "MIN GP INCPT: 1800" AND "GP ALT AT FAF: XATTU 1800" – ADDED LPV/LNAV/VNAV LINES OF MINIMA.
14. PROFILE LINE 7: ADDED "GP ANGLE: 3.00" AND "TCH: 55" – ADDED LPV/LAV/VNAV LINES OF MINIMA.
15. PROFILE LINE 8: MSA, CHANGED FROM "RW10L 5100" TO "TUZCU 5100" – NEW NAMED MAP/IAW 8260.19 8-6-7. H. (1).
16. PBN REQUIREMENTS NOTE: ADDED "RNP APCH – GPS" AND REMOVED NOTE "DME/DME RNP-0.3 NA" – NEW PBN NAVSPECS.
17. NOTES: ADDED "FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW 4°C OR ABOVE 54°C" – ADDED VNAV LINE OF MINIMA.
18. NOTES: REMOVED "VGSI AND DESCENT ANGLES NOT COINCIDENT" AND ADDED "VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET})" – ADDED LPV/VNAV LINES OF MINIMA.
19. ADDITIONAL FLIGHT DATA: CHANGED FROM "FAS OBST: 949 AAO 373907N/1222821W" TO "FAS OBST: 820 AAO 373911N/1222748W" AND ADDED 7:1 "840 AAO 373911N/1222751W" – NEW MAP STUDY.
20. ADDITIONAL FLIGHT DATA: ADDED "FAC CROSSES RWY C/L EXTENDED 2544 FT FROM THLD", ADDED "FICTITIOUS THRESHOLD POINT TUZCU", ADDED "CHART PLANVIEW NOTE: FINAL APPROACH COURSE OFFSET 3.00 DEGREES" – OFFSET IAP TO ALLOW BETTER MINS FOR LPV/VNAV.
21. ADDITIONAL FLIGHT DATA: REMOVED "XATTU TO RW10L: 3.00/55" – NO VDP.
22. ADDITIONAL FLIGHT DATA: ADDED "WAAS CHANNEL # 93946", "REFERENCE PATH ID: W10A", AND "FTP HAE: -30.9 M" – ADDED LPV/LNAV LINES OF MINIMA.
23. ALTERNATE MINIMUMS: CHANGED FROM "CAT A, B 1200-2, CAT C, D 1200-3" TO "CAT A, B 1100-2, CAT C, D 1100-3" – NEW MDAS.
24. MINIMUMS: ADDED LPV AND LNAV/VNAV LINES OF MINIMA – ATC REQUEST.
25. MINIMUMS: LNAV: CHANGED CAT A MDA/HAT/VIS FROM "1200/1194/6000" TO "1080/1073/1 1/4", CAT B/C/D MDA/HATS CHANGED FROM "1200/1194" TO "1080/1073" – NEW CONTROLLING OBSTACLES.
26. NOTES: CHANGED NOTE FROM "HELICOPTER VISIBILITY REDUCTION BELOW RVR 4000 NOT AUTHORIZED" TO "RWY 10L HELICOPTER VISIBILITY REDUCTION BELOW RVR 4000 NOT AUTHORIZED" – NEW FORMAT.
27. NOTES: CHANGED NOTE FROM "PROCEDURE NA FOR ARRIVALS AT STINS ON V25-199 AND V27 NORTHWEST BOUND" TO "PROCEDURE NA FOR ARRIVALS AT STINS ON V25, V27 AND V199 NORTHWEST BOUND" – NEW FORMAT.

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZOA ARTCC, NORCAL APP CON, SFO ATCT, AMGR

FLIGHT CHECKED BY

THOMAS E MOLOKIE

Digitally signed by
CASIMIR L TABAKA
May 22, 2024

OFFICE

FPO

DATE _____

05/21/2024

DEVELOPED BY

APRIL SARMENTO

Digitally signed by
APRIL T SARMENTO
Jan 16, 2024

OFFICE

AJV-A432

DATE _____

12/27/2023

APPROVED BY

CASIMIR L. TABAKA

Digitally signed by
CASIMIR L TABAKA
Jan 25, 2024

OFFICE

AJV-A432

DATE _____

TITLE
MANAGER

QUALITY
34
CHECKED

AIRPORT ID
SFO

PROCEDURE NAME
RNAV (GPS) RWY 10L

ORIGINAL/AMENDMENT
3

CITY
SAN FRANCISCO

STATE
CA

FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KSFO
RUNWAY	RW10L
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W10A
LTP/FTP LATITUDE	373742.3105N
LTP/FTP LONGITUDE	1222337.0210W
LTP/FTP ELLIPSOIDAL HEIGHT	-00309
FPAP LATITUDE	373656.6300N
FPAP LONGITUDE	1222200.6910W
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	0000
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0

CRC REMAINDER	8E88E337
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ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K2
LTP ORTHOMETRIC HEIGHT	+00017
FPAP ORTHOMETRIC HEIGHT	+00017

