

Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: IAP	Estimated Chart Date: 07/09/2026	APWS Task ID: 14E2B60A25204B8EAEABCA708C1DF0	APWS Project ID: 685E5D639041498F87F26F363B42B42D
Procedure: RNAV (GPS) U RWY 28R ORIG		Enroute: NO	Specialist: Kercher, Devon		Agreement Number:
Airport ID: KSFO			Airport City: SAN FRANCISCO		State: CA
Facility ID:	Facility Type:	Flight Inspection Remark Type: New FC Slot			

Procedure Comments:
ORIGINAL PROCEDURE.

WAIVERS REQUESTED FOR TURN IN FINAL SEGMENT AND VISUAL SEGMENT CONSTRUCTION.

PROCEDURE BUILT AND DOCUMENTED IAW AFS INFO PAPER REGARDING VGFS.

CONTACT ROBERT HAMILTON (AJV-A431) 405-954-4608.



1. FLIGHT PROCEDURE IDENTIFICATION:

RNAV (GPS) U RWY 28R
San Francisco International (KSFO)
San Francisco, California

2. WAIVER REQUIRED AND APPLICABLE STANDARD:

8260.58 paragraph 3-1-5: TF turns are not authorized in the final segment

3. REASON FOR WAIVER (JUSTIFICATION FOR NONSTANDARD TREATMENT):

This RNAV (GPS) ExVS design with a turn in the visual portion of the final approach segment provides air traffic with a public IFR instrument approach procedure that can support landing on RWY 28R while additional aircraft are landing on RWY 28L.

The design of the procedure is meant to alleviate TCAS RAs that the industry has responded to for aircraft that are aligned with the straight in procedures during periods of heavy traffic. Currently, the ability to support staggered arrivals landing RWY 28R has been tested with the industry and the ability to alleviate the TCAS RA(s) has been proven effective. An alternative public procedure is needed that offers an advisory glidepath, reduces minima, is publicly available, provides lateral guidance to the RWY, and requires LNAV which serves the highest percentage of KSFO arrivals based on aircraft capabilities.

4. EQUIVALENT LEVEL OF SAFETY PROVIDED:

- a. Profile view note states that "turns in visual segment required".
- b. Minimums provide ample obstacle clearance, and obstacles in the visual segment are mitigated by obstacle lighting and an operable VGSI: the 900 MDA/887 HAT provides 440 ft of obstacle clearance over the highest obs to the primary area of final (FAF to VGF) [AAO 200' MSL 37°35'10.80"N/122°16'15.00"W]. The highest obstacle in the visual maneuvering area is a [TREE (06-103160) 203' MSL 37°35'25.47"N/122°19'18.53"W].
- c. Per SFO TWR, air traffic will coordinate runway and flow of traffic changes when the weather is below those stated in SFO'S SOP.
- d. The procedure will be compliant with emerging criteria supporting RNAV (GPS) with ExVS.

5. ALTERNATIVE ACTIONS DEEMED NOT FEASIBLE:

- a. Utilization of the Quiet Bridge (CVFP): This procedure is allowed RWY 28R. The Quiet Bridge procedure is being amended to follow the same flight path as this procedure design, but will remain in force. Therefore a published public procedure dedicated to RWY 28R was developed. Furthermore, the Quiet Bridge Visual minimums are higher than the proposed RGU28R procedure.
- b. Redesign of the current RNAV (GPS) Z RWY 28R procedure: This procedure satisfies the needs of the airport, however it does not help to curb the TCAS RAs. A third party procedure, requested by industry, mirroring this procedure development proved that the TCAS RAs decreased exponentially.

6. COORDINATION WITH USER ORGANIZATIONS (SPECIFY):

SFO ATCT, NCT, AFS-400, Industry, WFPT

7. SUBMITTED BY:

DATE	OFFICE IDENTIFICATION	TITLE
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SIGNATURE

Digitally signed by
ROBERT G HAMILTON

Apr 14, 2026

8. AFS ACTIONS:

APPROVED DISAPPROVED NOT REQUIRED

COMMENTS:

DATE **ROUTING SYMBOL** **SIGNATURE**

1. FLIGHT PROCEDURE IDENTIFICATION:

RNAV (GPS) U RWY 28R
San Francisco International (KSFO)
San Francisco, California

2. WAIVER REQUIRED AND APPLICABLE STANDARD:

8260.3 para 3-3-2 c: Determine visibility based on evaluation of the visual portion of the final approach segment. Apply the offset visual area to evaluate the visual portion of a straight-in approach that is not aligned with the runway centerline (more than ± 0.03 degrees). These evaluations determine if visibility minimums and/or night operations must be restricted. a modification of this visual area construction with an offset final is required.

3. REASON FOR WAIVER (JUSTIFICATION FOR NONSTANDARD TREATMENT):

Chapter 3 of the 8260.3 does not address the ExVS design scenario, where only the last part of the final's visual segment aligns with the runway. This waiver bridges the gap between emerging criteria and what is currently available.

4. EQUIVALENT LEVEL OF SAFETY PROVIDED:

a. The construction of the procedure's visual portion of final from RWY 28R THLD to the MDA is accomplished as described by 8260.3g, 3-3-2 c (2) but also includes an expanded area that accounts for inside turn expansion.

i. The beginning width of the area is in accordance with standard criteria. (200 left and right of runway center line)

ii. The north side of the splay is the inside-of-turn (or right side as the aircraft flies) and includes early turn expansion. It is also based per the Formula 3-3-1. Thus, the primary and secondary areas of the Visual portion of flight are accounted for as the fall in line with the extended runway centerline OEAs.

Therefore, a much larger evaluation area was utilized to determine the sanctity of this flying procedure.

b. This procedure will be compliant with emerging criteria.

5. ALTERNATIVE ACTIONS DEEMED NOT FEASIBLE:

Standard criteria does not allow for a turn within the design of this instrument approach with extended visual segments. The distance from RWY 28R threshold and the only TF (SAPPP) is 0.9505 NM, but the length of the visual segment is 1.6167 NM.

6. COORDINATION WITH USER ORGANIZATIONS (SPECIFY):

AFS-420, NCT, WFPT

7. SUBMITTED BY:

DATE OFFICE IDENTIFICATION TITLE

SIGNATURE

Digitally signed by
ROBERT G HAMILTON
Apr 14, 2026

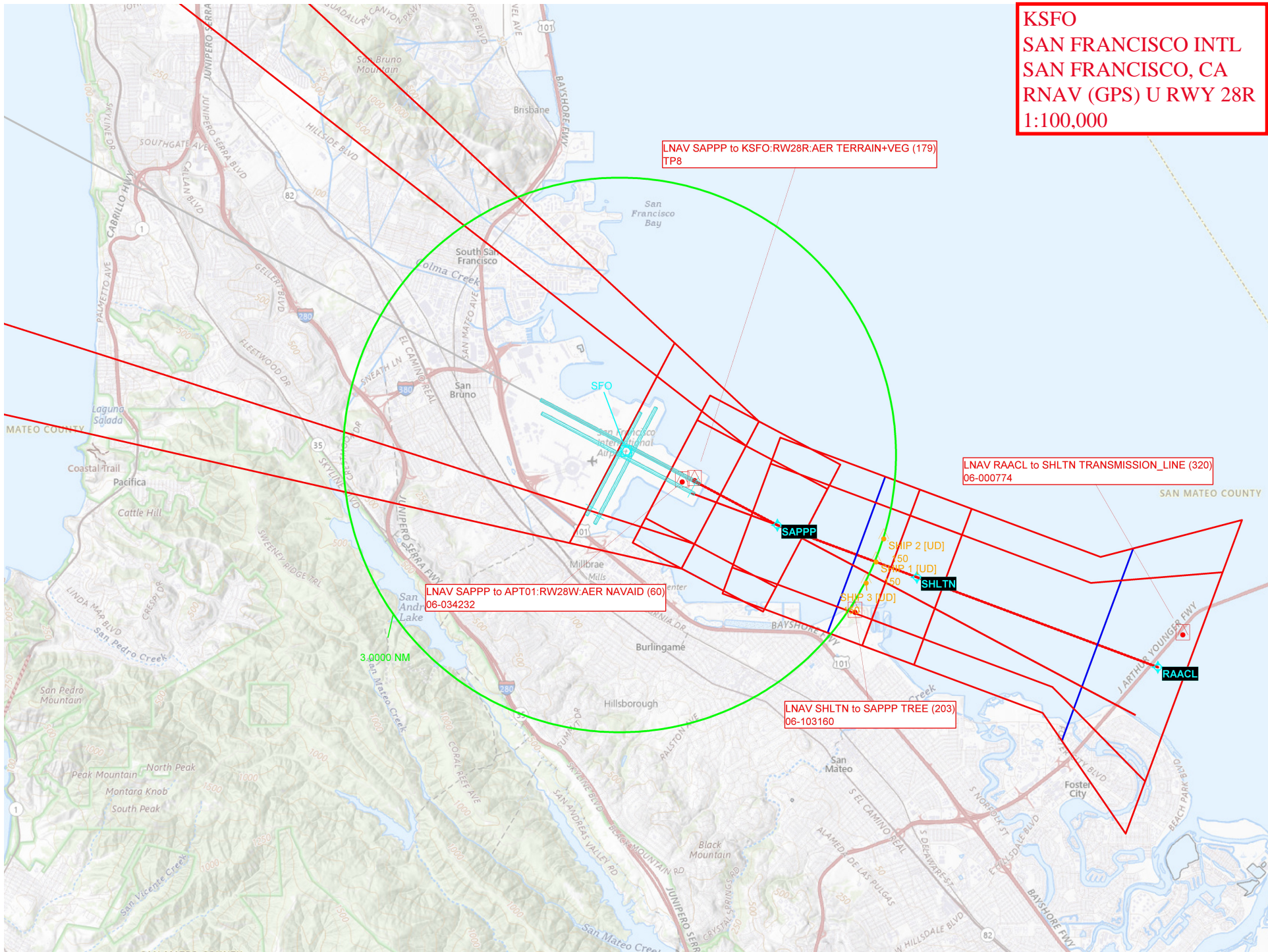
8. AFS ACTIONS:

APPROVED DISAPPROVED NOT REQUIRED

COMMENTS:

DATE ROUTING SYMBOL SIGNATURE

**KSFO
SAN FRANCISCO INTL
SAN FRANCISCO, CA
RNAV (GPS) U RWY 28R
1:100,000**



LNAV SAPP to KSFO:RW28R:AER TERRAIN+VEG (179)
TP8

LNAV RAACL to SHLTN TRANSMISSION_LINE (320)
06-000774

LNAV SAPP to APT01:RW28W:AER NAVAID (60)
06-034232

LNAV SHLTN to SAPP TREE (203)
06-103160

3.0000 NM

SAPP
SHLTN
RAACL
SMIP 2 [UD]
SMIP 1 [UD]
SMIP 3 [UD]