

FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
LOC STANDARD INSTRUMENT APPROACH PROCEDURE  
TITLE 14 CFR PART 97.25

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> KTPA	<u>PROCEDURE NAME</u> LOC RWY 1R	<u>ORIGINAL/AMENDMENT</u> 4C	<u>CITY</u> TAMPA	<u>STATE</u> FL		
<u>AIRPORT ELEVATION</u> 26	<u>TDZE</u> 21	<u>SUPERSEDED</u> LOC RWY 1R	<u>ORIGINAL/AMENDMENT</u> 4B	<u>DATED</u> 06/17/2021	<u>MAG VAR</u> 5W	<u>EPOCH YEAR</u> 2010
<u>FACILITY</u> I-TWJ	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u>	<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>
LAL VORTAC		MUWTY INT/I-TWJ 14.33 DME					242.19	31.16	3000
MUWTY INT/I-TWJ 14.33 DME	IF/IAF	ANAZE/I-TWJ 8.32 DME					006.73	6.01 (I-TWJ)	2600

**MISSED APPROACH**

**MAP:**

LOC: 6.80 NM AFTER ANAZE/I-TWJ 8.32 DME OR AT I-TWJ 1.52 DME

**MISSED APPROACH INSTRUCTIONS:**

CLIMB TO 500 THEN CLIMBING RIGHT TURN TO 2000 DIRECT LAL VORTAC AND HOLD.

**ALTERNATE MISSED APPROACH INSTRUCTIONS:**

**PROFILE:**

1. PT      SIDE OF COURSE      OUTBOUND      FT WITHIN      MILES OF      (IAF)
2. HOLD S MUWTY, RT, 006.73 INBOUND, 2600 FT. IN LIEU OF PT (IAF), MAX 4500.
3. **FAC:** 006.73      **FAF:** ANAZE/I-TWJ 8.32 DME      **DIST FAF TO MAP:** 6.80      **DIST FAF TO THLD:** 6.80
4. **MIN ALT:** MUWTY INT/I-TWJ 14.33 DME 2600, ANAZE/I-TWJ 8.32 DME 2600, ZELTO/I-TWJ 4.83 DME 1300
8. **MSA FROM:** PIE VORTAC 2700

**EQUIPMENT REQUIREMENTS NOTES:**

DME REQUIRED.

**NOTES:**

CHART PROFILE NOTE: VGSI AND DESCENT ANGLES NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).



ADDITIONAL FLIGHT DATA:

CHART IN PLANVIEW: LAL 31.16 DME AT MUWTY.  
HOLD W, RT, 101.00 INBOUND.  
CHART FAS OBST: 155 BLDG 275719N/0823133W.  
CHART VDP AT 2.69 DME.  
DISTANCE VDP TO THLD 1.16 NM.  
CHART CIRCLING ICON.  
CHART KMCF IN PLAN AND PROFILE VIEWS.  
ANAZE TO RW01R: 3.50/55.

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

ALTERNATE: NA ☐ LOC: STANDARD - CAT D 1000-3

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
S-LOC 01R	460	5500	439	460	5500	439	460	1 1/4	439	460	1 1/4	439			
CIRCLING	560	1	534	560	1	534	680	1 3/4	654	980	3	954			

CHANGES - REASONS

1. CHANGED ANAZE FROM AN INTERSECTION TO A DME FIX - FROM ANAZE INT/I-TWJ 8.32 DME TO ANAZE/I-TWJ 8.32 DME - CROSSING RADIAL 253 IS UNUSABLE IAW WITH FLIGHT CHECK AND CANNOT BE USED AS AN INTERSECTION FIX DUE TO FREQUENCY MODULATION AND SCALLOPING.
2. PROFILE LINE 4 CHANGED ZELTO INT/I-TWJ 4.83 DME TO ZELTO/I-TWJ 4.83 DME. - DME IS NOW REQUIRED.
3. REMOVED ADDITIONAL FLIGHT DATA CHART 189 BUILDING 275301N/0823144W. - NO LONGER A 7:1 OBSTACLE.
4. ADDITIONAL FLIGHT DATA CHANGED FROM CHART VDP AT 2.74 DME, DISTANCE VDP TO THLD 1.21 NM TO CHART VDP AT 2.69 DME, DISTANCE VDP TO THLD 1.16 NM. - FIX ERROR CHANGED FROM INTERSECTION TO DME.
5. ALTERNATE MINIMUMS CHANGED FROM CAT A, B 1300-2 CAT C,D 1300-3 TO STANDARD - CAT D 1000-3. - UPDATED TO REFLECT DME REQUIRED MINIMUMS.
6. REMOVED S-01R AND CIRCLING MINS THAT DID NOT REQUIRE DME. - PROCEDURE NOW REQUIRES DME.
7. ZELTO FIX MINIMUMS CHANGED TO S-LOC 01R MINIMUMS. - DME IS NOW REQUIRED ON THE PROCEDURE.
8. ADDED EQUIPMENT REQUIREMENTS NOTE - DME REQUIRED - DME IS REQUIRED TO RECEIVE THE FAF ANAZE.
9. MINS CHANGED CAT A & B VIS FROM 1 SM TO RVR 5500 AND CAT C & D VIS FROM 1 3/8 SM TO 1 1/4 SM. - RUNWAY HAS RVR SENSORS AND UPDATED VIS IAW 8260.3E.

02/13/2023: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 10/12/2022.  
1. PROFILE LINE 4 CHANGED FROM MUWTY INT/I-TWJ 14.33 DME 3000 TO MUWTY INT/I-TWJ 14.33 DME 2600.

COORDINATED WITH:

A4A ☒ ALPA ☒ AOPA ☒ APA ☒ HAI ☐ NBAA ☒ OTHER: ZMA, ZJX, TPA ATCT, TPA APP CON, APT MGR

FLIGHT CHECKED BY  
PROCESSED IAW TECHNICAL SUPPORT GROUP (AJF-17) MEMO DATED 07/07/2021 GUIDANCE  
FOR PROCEDURAL CHANGES REQUIRING FLIGHT INSPECTION/VALIDATION

OFFICE *Digitally signed by* DATE  
CASIMIR L TABAKA  
Feb 14, 2023

DEVELOPED BY  
TYLER MITCHELL  
*Digitally signed by*  
TYLER D MITCHELL

OFFICE DATE  
AJV-A432 04/09/2022

APPROVED BY  
CASIMIR TABAKA  
Feb 14, 2023  
*Digitally signed by*  
CASIMIR L TABAKA  
Feb 14, 2023

OFFICE DATE  
AJV-A430  
TITLE  
MANAGER  
QUALITY  
16  
CHECKED

FEDERAL AVIATION ADMINISTRATION  
FLIGHT STANDARDS SERVICE  
STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

<u>AIRPORT ID</u> KTPA	<u>PROCEDURE NAME</u> LOC RWY 1R	<u>AMDT NO.</u> 4C	<u>CITY</u> TAMPA	<u>STATE</u> FL	<u>AIRPORT ELEVATION</u> 26	<u>FACILITY</u> I-TWJ
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PART A: OBSTRUCTION DATA SEGMENTS

FEEDER

FROM  
LAL VORTAC

TO  
MUWTY INT/I-TWJ 14.33 DME

<u>RNP</u>	<u>DISTANCE</u> 31.16	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>							
<u>OBSTRUCTION</u>	<u>COORDINATES</u>		<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
1.TOWER (12-004378)	274910.84N/0821538.00W		1667	20	3	1A	1000				AT333	3000
2.TERRAIN	275942.00N/0820939.00W		155 (200)								AS1500	1700

COMPUTATIONS

ALT      KIAS      KTAS      HAA      VKTW      TR      BA      DTA      COURSE CHANGE      DVEB      VEB OCS      RF CENTER FIX/DISTANCE

SEGMENT REMARKS:

INTERMEDIATE

FROM  
MUWTY INT/I-TWJ 14.33 DME (IF/IAF)

TO  
ANAZE/I-TWJ 8.32 DME

<u>RNP</u>	<u>DISTANCE</u> 6.01	<u>PAT</u>	<u>MAP</u>	<u>HAT</u>	<u>HMAS</u>							
<u>OBSTRUCTION</u>	<u>COORDINATES</u>		<u>ELEV MSL</u>	<u>HORZ</u>	<u>VERT</u>	<u>AC</u>	<u>ROC</u>	<u>OCS</u>	<u>CG</u>	<u>CGTA</u>	<u>ADJUSTMENTS</u>	<u>MIN ALT</u>
AAO	274318.00N/0822836.00W		207	164	98	4E	500				AC98 AT1795	2600
4.TERRAIN	275041.00N/0823057.00W		14 (0)								AS1500	1500

COMPUTATIONS

ALT      KIAS      KTAS      HAA      VKTW      TR      BA      DTA      COURSE CHANGE      DVEB      VEB OCS      RF CENTER FIX/DISTANCE

SEGMENT REMARKS:



FINAL: LOC

FROM

ANAZE/I-TWJ LOC 8.32 DME

TO

ZELTO/I-TWJ 4.83 DME

RNP	DISTANCE 3.50	PAT	MAP	HAT	HMAS							
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
5.BUILDING (12-182011)	275322.47N/0823152.84W		212	20	3	1A	250				XL41 DG797	1300

COMPUTATIONS	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:

FINAL: LOC STEPDOWN

FROM

ZELTO/I-TWJ 4.83 DME

TO

6.80 NM AFTER ANAZE/I-TWJ 8.32 DME OR AT I-TWJ 1.52 DME

RNP	DISTANCE 3.30	PAT	MAP 6.80 NM AFTER ANAZE/I-TWJ 8.32 DME OR AT I-TWJ 1.52 DME	HAT 439	HMAS							
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
6.BLDG (12-023420)	275718.72N/0823132.54W		155	20	3	1A	250				SA-18 XP60	460

COMPUTATIONS	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:

XP=60 TO RETAIN CURRENT MINIMUM.



HOLD-IN-LIEU OF PT

FROM  
MUWTY

TO  
P-10

RNP	DISTANCE	PAT P-10	MAP	HAT			HMAS					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
7.TOWER (12-001740)	273243.70N/0823427.10W		619	20	3	1A	1000				AT981	2600
8.TERRAIN	273402.00N/0822609.00W		49 (0)								AS1500	1500

COMPUTATIONS	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:

MISSED APPROACH : LOC

FROM  
6.80 NM AFTER ANAZE/I-TWJ 8.32 DME OR AT I-TWJ 1.52 DME

TO  
LAL VORTAC

RNP	DISTANCE	PAT	MAP	HAT			HMAS 210					
OBSTRUCTION	COORDINATES		ELEV MSL	HORZ	VERT	AC	ROC	OCS	CG	CGTA	ADJUSTMENTS	MIN ALT
								ASC				2000
15.TOWER (12-002011)	275641.42N/0822150.72W		632	20	10	1B	1000					1700
16.TERRAIN	275945.00N/0820942.00W		155 (200)								AS1500	1700

COMPUTATIONS	ALT	KIAS	KTAS	HAA	VKTW	TR	BA	DTA	COURSE CHANGE	DVEB	VEB OCS	RF CENTER FIX/DISTANCE
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SEGMENT REMARKS:



CIRCLING

☐ ALL CATS

☒ CAT A

☒ CAT B

☒ CAT C

☒ CAT D

☐ CAT E

☐ NOT AUTHORIZED

OBSTRUCTION	COORDINATES	RADIUS	HAA	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
CATEGORY A											
12.TOWER (12-001402)	275841.00N/0823015.00W	1.81	534	253	20	3	1A	300			560
CATEGORY B											
TOWER (12-001402)	275841.00N/0823015.00W	1.81	534	253	20	3	1A	300			560
CATEGORY C											
13.TOWER (12-002120)	280030.00N/0822847.00W	2.84	654	316	500	50	5D	300		AC50	680
CATEGORY D											
14.BUILDING (12-001620)	275648.00N/0822726.00W	3.70	954	621	500	50	5D	300		AC50	980

CIRCLING REMARKS:

MSA

CENTER  
PIE VORTAC

RADIUS  
25

SECTOR	OBSTRUCTION	COORDINATES	BEARING	DISTANCE	ELEV MSL	HORZ	VERT	AC	ROC	OCS	ADJUSTMENTS	MIN ALT
360-360	TOWER (12-004378)	274910.84N/0821538.00W	108	23.1	1667	20	3	1A	1000			2700

MSA REMARKS:

NOTES/EXPLANATIONS FROM PROCEDURE SEGMENTS:

SDF AT 3.3NM DEVELOPED PER FPT CHECKLIST.

100 FT MAXIMUM ADVERSE VEGETATION PER FPT CHECKLIST.

3.50 VDA FROM 2600 FAF AT ANAZE DUE TO MACDILL AFB PER FPT CHECKLIST.

43 FT MAX SHIP HEIGHT NORTH OF GANDY BRIDGE PER FPT EMAIL 02/03/2014.

182.5 FT MAX SHIP HEIGHT SOUTH OF GANDY BRIDGE PER FPT EMAIL 01/31/2014.

OBS #6 LIES 129.36 FEET INTO SECONDARY OF FINAL STEPDOWN SEGMENT.



PART B: SUPPLEMENTAL DATA

COMMUNICATIONS WITH  
TPA TOWER, TPA APP CON, ZMA ARTCC, ZJX ARTCC

<u>WX SERVICE</u> ASOS	<u>LOCATION</u> KTPA	<u>HRS OPERATION</u> 24	<u>ALTIMETER SOURCE</u> KTPA	<u>DISTANCE</u> 0	<u>SERVICE-A</u> Y	<u>ADJUSTMENTS</u> 0
<u>BACK-UP WX SERVICE</u>	<u>LOCATION</u>	<u>HRS OPERATION</u>	<u>ALTIMETER SOURCE</u>	<u>DISTANCE</u>	<u>SERVICE-A</u>	<u>ADJUSTMENTS</u>

WX REMARKS:  
NO BACKUP ALTIMETER SOURCE NEEDED; REDUNDANT SOURCES AVAILABLE.

<u>PRIMARY NAVAID</u> I-TWJ	<u>MONITOR POINT</u> TPA ATCT	<u>HRS OPERATION</u> 24	<u>CAT</u> 1
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<u>APPROACH AND RUNWAY LIGHTING SYSTEM</u>	<u>RUNWAY MARKINGS</u>	<u>RUNWAY VISUAL RANGE</u>
RW10 - HIRL, PAPI-4L	NPI-G	
RW28 - HIRL, PAPI-4L	NPI-G	
RW01L - TDZ, ALSF-2, HIRL, C/LINE, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW01R - HIRL, REIL, C/LINE, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW19L - TDZ, ALSF-2, HIRL, C/LINE, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT
RW19R - MALSR, HIRL, C/LINE, PAPI-4L	PIR-G	APPROACH, MIDPOINT, ROLL OUT

<u>GLIDESLOPE ANGLE</u>	<u>ELEV RWY THRESHOLD</u>	<u>TCH</u>	<u>ELEV GS ANTENNA</u>	<u>DISTANCE FROM RWY</u>	<u>VGSI ANGLE</u> 3.00	<u>TCH</u> 70.8
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FINAL APPROACH COURSE AIMING

RUNWAY THRESHOLD	<input checked="" type="checkbox"/>	FT FROM THRESHOLD	DISPLACED THRESHOLD DISTANCE
ON CENTERLINE	<input checked="" type="checkbox"/>	FT FROM CENTERLINE	

CRITICAL TEMPERATURES

<u>CRITICAL LOW</u>	<u>CRITICAL HIGH</u>	<u>ACT</u>	<u>APT ISA</u>
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CRITICAL TEMPERATURE REMARKS:



**"VISUAL PORTION OF FINAL" PENETRATIONS**

**HELICOPTER 'VISUAL PORTION OF FINAL' PENETRATIONS**

and/or  
**5280-FT "PROCEED VFR" SEGMENT LEVEL SURFACE AREA PENETRATIONS**

<b><u>PENETRATIONS REMARKS:</u></b>

**PART C: GENERAL REMARKS:**  
PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
APPROVAL LETTER FOR GPA OF 3.5 AND VGSI OF 3.0.  
ORDER 8260.3, CHAPTER 2, NEW CIRCLING CRITERIA APPLIED.





<u>AIRPORT ID</u> KTPA	<u>PROCEDURE NAME</u> LOC RWY 1R	<u>AMDT NO.</u> 4C	<u>CITY</u> TAMPA	<u>STATE</u> FL	<u>AIRPORT ELEVATION</u> 26	<u>FACILITY</u> I-TWJ
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PART D: AIRSPACE

DOCKET #

ALL DISTANCES TO 1/100NM; ELEVATION TO NEAREST 100 FEET; COORDINATES TO 1/100 SECOND; DEG TO 1/100 DEGREE

DISTANCE FROM	THLD	TO 1000FT POINT	1.47
WIDTH OF	FINAL	SEGMENT AT 1000FT POINT	0.54
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1000FT POINT	001.73
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1000FT POINT	0
DISTANCE FROM	THLD	TO 1500FT POINT	4.60
WIDTH OF	FINAL	SEGMENT AT 1500FT POINT	1.21
TRUE COURSE OF	FINAL	SEGMENT CONTAINING 1500FT POINT	001.73
HIGH TERRAIN IN	FINAL	SEGMENT CONTAINING 1500FT POINT	0

THRESHOLD  
COORDINATES  
(IF STR-IN)

275751.52N/0823144.37W

ARP COORDINATES

275831.70N/0823159.70W

RUNWAY APCH END  
AND DIST FURTHEST  
FROM ARP

RUNWAY 19R DISTANCE 1.16 NM

FAF  
COORDINATES

275102.55N/0823158.27W

FIX NAME  
COORDINATES

REMARKS

NO ADDITIONAL AIRSPACE REQUIRED

QUALITY  
25  
CHECKED

FAA Form 8260-9 / (11/16) Supersedes Previous Edition

Electronic Version

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PART E: PREPARED BY

<u>NAME</u> TYLER MITCHELL	<u>OFFICE</u> AJV-A432	<u>DATE</u> 04/09/2022	<u>TITLE</u> AERONAUTICAL INFORMATION SPECIALIST
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