

**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> 21D	<u>PROCEDURE NAME</u> RNAV (GPS) RWY 14	<u>ORIGINAL/AMENDMENT</u> ORIG	<u>CITY</u> ST PAUL	<u>STATE</u> MN		
<u>AIRPORT ELEVATION</u> 933	<u>TDZE</u> 930	<u>SUPERSEDED</u>	<u>ORIGINAL/AMENDMENT</u> NONE	<u>DATED</u>	<u>MAG VAR</u> 1E	<u>EPOCH YEAR</u> 2010
<u>FACILITY</u> RNAV	<u>COORDINATES OF FACILITIES</u>	<u>ACTUAL EFFECTIVE DATE</u> 5 OCTOBER 2023	<u>REQUIRED EFFECTIVE DATE</u> CONCURRENT WITH 21D RNAV (GPS) RWY 32 ORIG	<u>CANCEL/SUSPEND</u>		

**TERMINAL ROUTES**

FROM	FIX TYPE	TO	FIX TYPE	LEG TYPE	FO/FB	RNP	COURSE	DISTANCE	ALTITUDE
LLIAM	IF/IAF	CYOST		TF	FB	1.00	136.46	6.00	2600
CYOST	FAF	HOPSA/2.62 NM TO RW14		TF	FB	0.30	136.53	2.51	
HOPSA/2.62 NM TO RW14		RW14	MAP	TF	FO	0.30	136.53	2.62	
RW14	MAP	1180 MSL		CA			136.53		
1180 MSL		TIMTE		DF	FO	1.00			3000

**MISSED APPROACH**

**MAP:**  
 LPV: DA  
 LNAV/VNAV: DA  
 LNAV: RW14

**MISSED APPROACH INSTRUCTIONS:**  
 CLIMB 3000 DIRECT TIMTE AND HOLD.

**ALTERNATE MISSED APPROACH INSTRUCTIONS:**



**PROFILE:**

1. PT SIDE OF COURSE OUTBOUND FT WITHIN MILES OF (IAF)

2. HOLD NW LLIAM, RT, 136.46 INBOUND, 3000 FT. IN LIEU OF PT (IAF), MAX 6000.

3. FAC: 136.53 FAF: CYOST DIST FAF TO MAP: 5.13 DIST FAF TO THLD: 5.13

4. MIN ALT: LLIAM 3000, CYOST 2600, HOPSA/2.62 NM TO RW14 1800

5. DIST TO THLD FROM OM: MM: IM: 150 HAT: 250 HAT: 0.67 GS ANT:

6. MIN GP INCPT: 2600 GP ALT AT PFAF: CYOST 2600 OM: MM: IM:

7. GP ANGLE: 3.00 34:1: IS NOT CLEAR 20:1: IS CLEAR TCH: 40.0

8. MSA FROM: RW14 3500

**PBN REQUIREMENTS NOTE:**

RNP APCH - GPS.

**NOTES:**

CHART NOTE: RWY 14 HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.  
 CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -16°C OR ABOVE 54°C.  
 CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}).  
 CHART NOTE: CIRCLING RWY 4, 22 NA AT NIGHT.

**ADDITIONAL FLIGHT DATA:**

CHART VDP AT 1.10 NM TO RW14.  
 HOLD SE, RT, 316.72 INBOUND.  
 CHART FAS OBST: 1110 TRANSMISSION\_LINE (27-050502) 450202N/0925417W.  
 WAAS CHANNEL # 56345  
 REFERENCE PATH ID: W14A  
 LTP HAE: 253.9 M

**MINIMUMS:**

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

**ALTERNATE:** NA  STANDARD - NA WHEN LOCAL WEATHER NOT AVAILABLE.

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	1180	1	250	1180	1	250		NA			NA					
LNAV/VNAV DA	1257	1	327	1257	1	327		NA			NA					
LNAV MDA	1360	1	430	1360	1	430		NA			NA					
CIRCLING	1440	1	507	1500	1	567		NA			NA					

**CHANGES - REASONS**

ORIGINAL



**COORDINATED WITH:**

**A4A**  **ALPA**  **AOPA**  **APA**  **HAI**  **NBAA**  **OTHER:** ZMP, MSP APP CON, AMGR

**FLIGHT CHECKED BY**

GLEN B FREEMAN

*Digitally signed by*

**DEVELOPED BY** **CASEY D HILL**

CASEY HILL

Jun 14, 2023

**APPROVED BY**

CASIMIR TABAKA

*Digitally signed by*

**CASIMIR L TABAKA**

Jun 16, 2023

*Digitally signed by*

**CASIMIR L TABAKA**

Aug 17, 2023

**OFFICE**

FPO

**OFFICE**

AJV-A432

**OFFICE**

AJV-A432

**DATE**

08/15/2023

**DATE**

05/01/2023

**DATE**

10/05/2023

**TITLE**

MANAGER



FAS DATA BLOCK INFORMATION

<u>DATA FIELD</u>	<u>DATA</u>
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	21D
RUNWAY	RW14
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W14A
LTP/FTP LATITUDE	445959.5825N
LTP/FTP LONGITUDE	0925128.8330W
LTP/FTP ELLIPSOIDAL HEIGHT	+02539
FPAP LATITUDE	445853.7995N
FPAP LONGITUDE	0925004.1650W
THRESHOLD CROSSING HEIGHT (TCH)	00040.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1680
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	2C7EEDAB

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+02819
FPAP ORTHOMETRIC HEIGHT	+02819

