

<b>RNAV - STANDARD INSTRUMENT APPROACH PROCEDURE TITLE 14 CFR PART 97.33</b>				Bearings, headings, courses, 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 in feet RVR.													
<b>TERMINAL ROUTES</b>										<b>MISSED APPROACH</b>							
FROM	TO	COURSE AND DISTANCE				ALTITUDE		LPV: DA LNAV/VNAV: DA LNAV: RW12R  CLIMB TO 1300 THEN CLIMBING RIGHT TURN TO 3000 DIRECT FGT VORTAC AND HOLD.  ADDITIONAL FLIGHT DATA: HOLD S, RT, 358.03 INBOUND. CHART FAS OBST: 952 TREE 445416N/0931534W DISTANCE TO THLD FROM 200 HAT: 0.47 NM. CHART VDP AT 0.98 NM TO RW12R* *LNAV ONLY. WAAS CHANNEL # 50125 REFERENCE PATH ID: W12A CHART CIRCLING ICON. CHART MANDATORY 7000 AT KRUGG LTP HAE: 229.4 M									
KRUGG (IAF)	EFEXX (TF) (FB) (RNP 1.00)	042.98 / 4.85				6000											
EFEXX	ZESTY (TF) (FB) (RNP 1.00)	094.89 / 7.07				4000											
PAETN (IAF)	UTHNK (TF) (FB) (RNP 1.00)	121.06 / 3.14				6000											
UTHNK	WAYZA (TF) (FB) (RNP 1.00)	121.10 / 3.14				5000											
WAYZA	ZESTY (TF) (FB) (RNP 1.00)	121.15 / 3.14				4000											
(SEE FORM 8260-10)																	
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF) 2. PROFILE STARTS AT ZESTY 3. FAC: 121.24 FAF: KINNS DIST FAF TO MAP: 6.62 THLD: 6.62 4. MIN. ALT: ZESTY 4000, KINNS 3000, WABBS/1.70 NM TO RW12R 1420* 5. DIST TO THLD FROM OM: _____ MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____ 6. MIN GS INCPT: 3000 GS ALT AT: KINNS 3000 OM: _____ MM: _____ IM: _____ 7. GS ANGLE: 3.00 TCH: 50.1 34:1 IS CLEAR 8. MSA FROM: RW12R 3500																	
										MAG VAR: 0E EPOCH YEAR: 2015							
<b>MINIMUMS</b>																	
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT										ALTERNATE: N A		STANDARD @					
CATEGORY ==>	A			B			C			D			E				
	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA		
LPV DA	1042	2400	200	1042	2400	200	1042	2400	200	1042	2400	200	1042	2400	200		
LNAV/VNAV DA	1211	4000	369	1211	4000	369	1211	4000	369	1211	4000	369	1211	4000	369		
LNAV MDA	1220	2400	378	1220	2400	378	1220	3500	378	1220	3500	378	1220	3500	378		
CIRCLING	1360	1	518	1360	1	518	1460	1 3/4	618	1660	2 3/4	818	1800	3	958		
NOTES: CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -20C (-4F) OR ABOVE 54C @ CAT D 900-2 3/4, CAT E 1000-3 (130F). CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 12L. CHART NOTE: DME/DME RNP-0.3 NA. (CONTINUED ON PAGE 2)																	
CITY AND STATE			ELEVATION: 842 TDZE: 842			FACILITY IDENTIFIER:			PROCEDURE NO./AMDT NO./EFFECTIVE DATE:						SUP:		
MINNEAPOLIS, MN			AIRPORT NAME:			RNAV			RNAV (GPS) Z RWY 12R, AMDT 4						AMDT: 3A		
			MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN						5 JANUARY 2017						DATED 04/30/2015		



## US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

**RNAV - STANDARD  
INSTRUMENT APPROACH PROCEDURE - TITLE 14 CFR PART 97.33**

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## TERMINAL ROUTES, (CONT.):

FROM	TO	COURSE AND DISTANCE	ALTITUDE
ZESTY (IF)	KINNS (TF) (FB) (RNP 1.00)	121.18 / 3.14	3000
KINNS (FAF)	WABBS/1.70 NM TO RW12R (TF) (FB) (RNP 0.30)	121.24 / 4.92	
WABBS/1.70 NM TO RW12R	RW12R (MAP) (TF) (FO) (RNP 0.30)	121.24 / 1.70	
RW12R (MAP)	1300 MSL	121.24	1300
1300 MSL	FGT VORTAC (DF) (FO) (RNP 1.00)		3000

## NOTES, (CONT.):

CHART SPEED ICON IN PLANVIEW AT KRUGG : MAX 210 KIAS.

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

CHART NOTE: USE OF FD OR AP PROVIDING RNAV TRACK GUIDANCE REQUIRED DURING SIMULTANEOUS OPERATIONS.

CHART NOTE: FOR INOPERATIVE ALS, INCREASE LPV CAT E VISIBILITY TO RVR 4000, INCREASE LNAV/VNAV

CAT E VISIBILITY TO 1 1/4 SM, AND INCREASE LNAV CAT C/D/E VISIBILITY TO RVR 5500.

CHART NOTE: LNAV PROCEDURE NA DURING SIMULTANEOUS OPERATIONS.

QUALITY  
23  
CHECKED

CITY AND STATE

MINNEAPOLIS, MN

ELEVATION: 842

TDZE: 842

AIRPORT NAME:

 MINNEAPOLIS-ST PAUL INTL/WOLD-  
CHAMBERLAIN

 FACILITY  
IDENTIFIER:  
  
RNAV

PROCEDURE NO./AMDT NO./EFFECTIVE DATE:

RNAV (GPS) Z RWY 12R, AMDT 4

5 JANUARY 2017

SUP:

AMDT: 3A

DATED: 04/30/2015

**RNAV STANDARD INSTRUMENT APPROACH PROCEDURE  
FLIGHT STANDARDS SERVICE - FAR PART 97.33**

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**FAS DATA BLOCK INFORMATION****DATA FIELD****DATA**

OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KMSP
RUNWAY	RW12R
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	Z
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W12A
LTP/FTP LATITUDE	445316.0435N
LTP/FTP LONGITUDE	0931402.8730W
LTP/FTP ELLIPSOIDAL HEIGHT	+02294
FPAP LATITUDE	445224.6800N
FPAP LONGITUDE	0931204.2685W
THRESHOLD CROSSING HEIGHT (TCH)	00050.1
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)	35.0

**CRC REMAINDER**

D78A05F4

**ADDITIONAL PATH POINT RECORD INFORMATION**

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+02566
FPAP ORTHOMETRIC HEIGHT	+02566

QUALITY  
23  
CHECKED

CITY AND STATE  MINNEAPOLIS, MN	ELEVATION: 842      TDZE: 842 AIRPORT NAME:  MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN	FACILITY IDENTIFIER:  RNAV	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:  RNAV (GPS) Z RWY 12R, AMDT 4  5 JANUARY 2017	SUP:
				AMDT: 3A
				DATED: 04/30/2015