Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: IAP	Date Open: 08/21/2012	Task #: 2011072926923409007	Request #: 20110729269234
Procedure: RNAV (GPS) Y RWY 30R AMDT 2		Airport ID: KMSP	Airport: MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN		Reimbursable #:
City: MINNEAPOLIS	ST: MN	GPS #:		Estimated Chart Date: 05/02/2013	FICO #:
Fac ID:	Fac. Type: LPV	Specialist: STEVE NELSON			

Procedure Review

MAG VAR

	Rec'd	Rel'd	Full Name	Comments
Lead:	09/05/2012	01/11/2013	JILL OLSON	
QA:	01/11/2013	01/11/2013	SCOTT BEARD	
Liaison:	01/11/2013		Spurlin	REPLACEMENT 1/11/13 - MAGVAR

Procedure Comments: ENROUTE **Remark Type:** INFORMATION

MINNEAPOLIS, MN MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (KMSP) RNAV (GPS) Y RWY 30R, AMDT 2 (LPV) ENROUTE-YES FC: 3.19.13 PUB: 5.2.13

ATTACHED FORMS: 8260-3; 8260-10; 8260-9; 8260-2(S): BONNA-INT, REV 10; CIJOT-INT, REV 1; DIYEV, ORIG; ELIKE-INT, REV 1; GOPHER (GEP) VTAC, REV 14; GROVZ-INT, REV 4; JACKO-INT, REV 8; SAMMZ-INT, REV 3; WULAM-INT, REV 3; (INFO ONLY) PRESS-INT, REV 12.

CONTACT: JILL OLSON/STEVE BARNETT -AVJ-353 LEADS, 405.954.4014 / 405.954.9307.

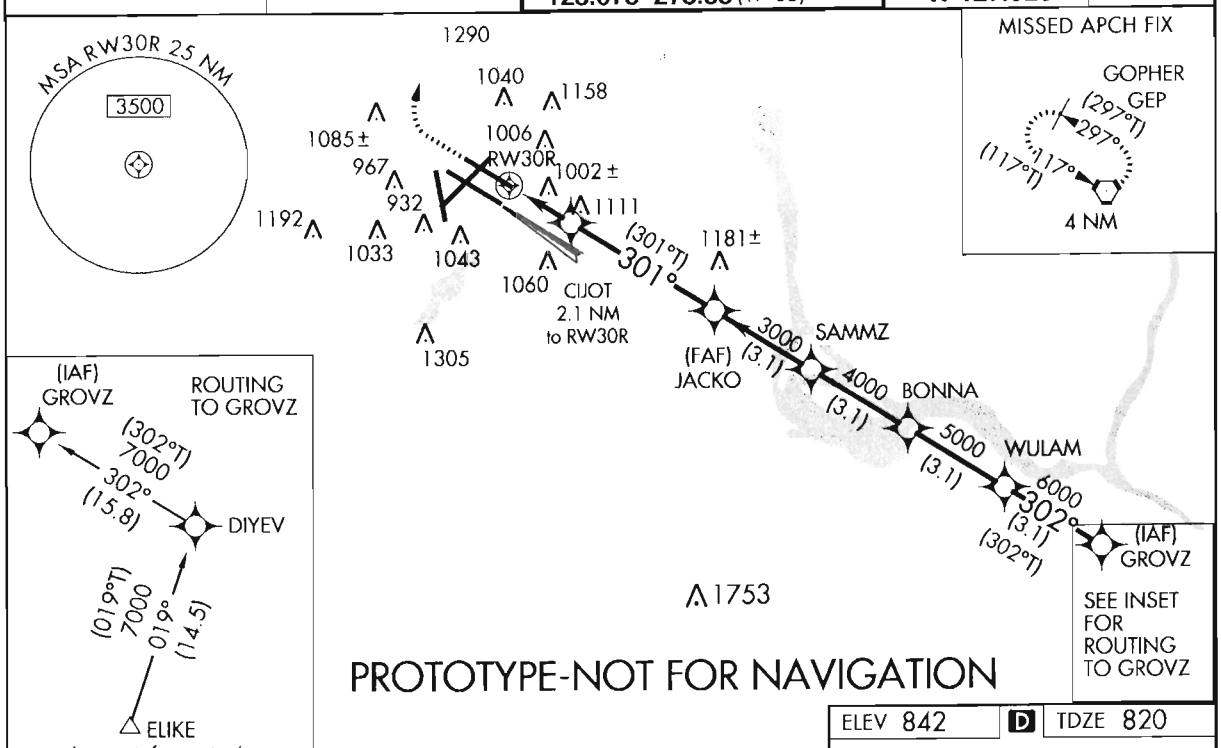
WAAS CH 60925 W30B	APP CRS 299°	Rwy ldg 8000 TDZE 820 Apt Elev 842

RNAV (GPS) Y RWY 30R
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

DME/DME RNP- 0.3 NA. Simultaneous approach authorized with Rwy 30L. LNAV procedure NA during simultaneous operations. Use of FD or AP providing RNAV track guidance required during simultaneous operations. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -27°C (-16°F) or above 54°C (130°F). Inop table does not apply to LPV all Cats. For inoperative MALSF, increase LNAV/VNAV all Cats visibility to 1⅝ mile, LNAV Cat A/B visibility to RVR 5000 and Cat C/D/E visibility to 1⅝mile.

MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct GEP VORTAC and hold.

ATIS	MINNEAPOLIS APP CON	MINNEAPOLIS TOWER	GND CON	CLNC DEL
ARR 135.35 239.275 DEP 120.8	119.3 335.5	123.95 273.55 (12L-30R) 126.7 273.55 (12R-30L, 4-22) 123.675 273.55 (17-35)	N 121.8 348.6 S 121.9 348.6 W 127.925	133.2

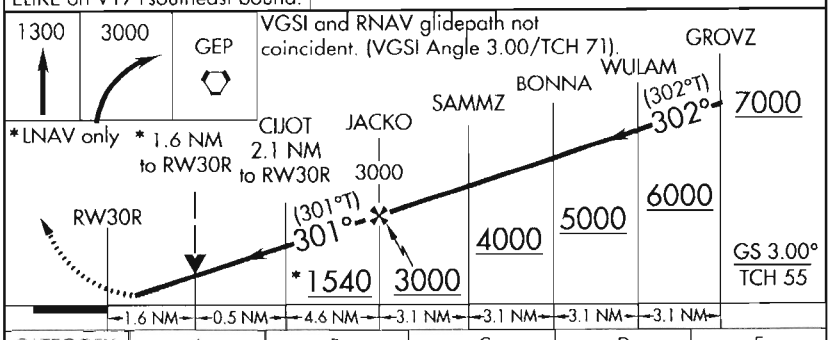


Procedure NA for arrivals at ELIKE on V171southeast bound.

PROTOTYPE-NOT FOR NAVIGATION

ELEV 842 | D | TDZE 820

ELIKE: 4420.823 / 09236.426
DIYEV:4434.556 / 09229.860
GROVZ: 4442.849 / 9248.645
WULAM: 4444.493 / 09252.396
JACKO: 4449.416 / 09303.670
BONNA: 4446.136 / 09256.150
SAMMZ: 4447.777 / 09259.909
CIJOT: 4451.852 / 09309.276
RW30R: 4452.892 / 09311.678



CATEGORY	A	B	C	D	E
LPV DA	1070/40 250 (300-¾)				
LNAV/VNAV DA	1316-1⅜ 496 (500-1⅜)				
LNAV MDA	1400/40 580 (600-1)		1400-1⅜ 580 (600-1⅜)		
CIRCLING	1400-1 558 (600-1)		1400-1⅝ 558 (600-1⅝)	1460-2 618 (700-2)	1660-3 818 (900-3)

301° to RW30R

HIRL all Rwys
REIL Rwys 17 and 30R
TDZ/CL Rwys 12L, 12R, 30L, and 35

US DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

RNAV - STANDARD
INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.33

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.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
ELIKE	DIYEV (FB)	018.86 / 14.52	7000
DIYEV	GROVZ (FB)	301.84 / 15.77	7000
GROVZ (IAF)	WULAM (FB)	301.62 / 3.14	6000
WULAM	BONNA (FB)	301.58 / 3.14	5000
BONNA (IF)	SAMMZ (FB)	301.53 / 3.14	4000
SAMMZ	JACKO (FB)	301.49 / 3.14	3000
JACKO (FAF)	CIJOT/2.10 NM TO RW30R (FB)	301.44 / 4.57	
(SEE FORM 8260-10)			

MISSED APPROACH

LPV: DA
LNAV/VNAV: DA
LNAV: RW30R

CLIMB TO 1300, THEN CLIMBING RIGHT TURN TO 3000 DIRECT GEP VORTAC AND HOLD.

1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. PROFILE STARTS AT GROVZ
3. FAC: 301.44 FAF: JACKO DIST FAF TO MAP: 6.67 THLD: 6.67
4. MIN. ALT: GROVZ 7000, WULAM 6000, BONNA 5000, SAMMZ 4000, JACKO 3000, CIJOT/2.10 NM TO RW30R 1540*
5. DIST TO THLD FROM OM: ____ MM: ____ IM: ____ 150 HAT: ____ 100 HAT: ____ GS ANT: ____
6. MIN GS INCPT: 3000 GS ALT AT: JACKO 3000 OM: ____ MM: ____ IM: ____
7. GS ANGLE: 3.00 TCH: 54.9 34:1 IS CLEAR
8. MSA FROM: RW30R 3500

ADDITIONAL FLIGHT DATA:
HOLD NW, LT, 117.00 INBOUND.
CHART FAS OBST: 1111 TANK 445208N/0930852W
DISTANCE TO THLD FROM 250 HATH: 0.61 NM.
CHART VDP AT 1.60 MILES TO RW30R*
*LNAV ONLY.
WAAS CHANNEL # 60925
REFERENCE PATH ID: W30B
CHART LOC RWY 30L.
LTP HAE: 222.6 M

MAG VAR: 0E EPOCH YEAR: 2015

MINIMUMS

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	1070	4000	250	1070	4000	250	1070	4000	250	1070	4000	250	1070	4000	250
LNAV/VNAV DA	1316	1 3/8	496	1316	1 3/8	496	1316	1 3/8	496	1316	1 3/8	496	1316	1 3/8	496
LNAV MDA	1400	4000	580	1400	4000	580	1400	1 3/8	580	1400	1 3/8	580	1400	1 3/8	580
CIRCLING	1400	1	558	1400	1	558	1400	1 5/8	558	1460	2	618	1660	3	818

NOTES:
CHART NOTE: DME/DME RNP-0.3 NA.
CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 30L.
CHART NOTE: LNAV PROCEDURE NA DURING SIMULTANEOUS OPERATIONS.
CHART NOTE: USE OF FD OR AP PROVIDING RNAV TRACK GUIDANCE REQUIRED DURING SIMULTANEOUS OPERATIONS.
(SEE FORM 8260-10)

@ CAT E 900-3

QUALITY CHECKED 4

CITY AND STATE	ELEVATION: 842 THRE: 820	FACILITY IDENTIFIER:	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:	SUP:
MINNEAPOLIS, MN	AIRPORT NAME: MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN	RNAV	RNAV (GPS) RWY 30R, AMDT 2	AMDT: 1B
				DATED 03/08/2012

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
[X] YES [ ] NO		ROUTINE

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
[X]	[ ]	[X]	[X]	[X]	[X]	[X] ZMP, MSP APP CON, MSP ATCT, AMGR

FLIGHT CHECKED BY		
NAME: JAMES LEROY KRENEK	FIFO FIOG	DATE: 02/08/2013

DEVELOPED BY		
NAME: STEVE NELSON	FIFO AJV-353	DATE: 10/16/2012

APPROVED BY		
NAME: LARRY H STROUT MANAGER	FIFO AJV-353	DATE:

CHANGES:

1. PROCEDURE WAS REDESIGNED TO INCORPORATE THE FIXES UTILIZED ON THE ILS PROCEDURE TO RWY 30R (CIJOT, SAMMZ, BONNA, GROVZ).
2. ADDED A FEEDER ROUTE FROM ELIKE TO A FIX 35NM FROM RWY TO IAF (GROVZ).
3. CHANGED MISSED APPROACH FROM CLIMB TO 5000 DIRECT FASRO AND VIA 343 TRACK TO GEP VORTAC AND HOLD TO CLIMB TO 1300, THEN CLIMBING RIGHT TURN TO 3000 DIRECT GEP VORTAC AND HOLD.
4. CHANGED BARO-VNAV NA BELOW -16C (4F) TO FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -27C (-16F) OR ABOVE 54C (130F).
5. CHANGED SIMULTANEOUS APPROACH AUTHORIZED WITH RNAV (GPS) RWY 30L TO SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 30L.
6. ADDED FOR INOPERATIVE MALSF.
7. ADDED INOPERATIVE TABLE DOES NOT APPLY TO LPV NOTE.
8. CHANGED LNAV/VNAV ALL CATS VISIBILITY FROM 1 3/4 TO 1 3/8, LNAV CAT A/B VISIBILITY FROM RVR 5000 TO RVR 4000 AND CAT C FROM 1 1/2 TO 1 3/8 AND CAT D FROM 1 3/4 TO 1 3/8 AND CAT E FROM 2 TO 1 3/8.
9. CHANGED VDP FROM 1.59 MILES TO 1.60 MILES.
10. CHANGED FAC FROM 299.43 TO 301.44.
11. CHANGED DIST FAF TO MAP/THLD FROM 6.55 TO 6.67.
12. CHANGED LPV DA FROM 1073 TO 1070 AND LNAV HAT FROM 577 TO HATH 580 AND DISTANCE TO THLD FROM 250 HAT 0.62 TO DISTANCE FROM 250 HATH 0.61.

SEE 8260-10

REASONS:

1-3. FPT REQUEST.
4. 8260.19E, PARA 4-97 AND AFS MEMO/FORMULA DATED MAY 30, 2012.
5. THIS AMENDMENT COINCIDES WITH AMENDMENTS TO THE PROCEDURES TO RWY 30L ALLOWING FOR SIMULTANEOUS OPS FOR THE ENTIRE RWY.
6-8. INSTALLATION OF MALFS SERVING RWY 30R.
9. VGSI TCH CHANGED FROM 73 FT TO 71.30 FT.
10. KMSP MAG VAR CHANGE FROM 2E TO 0E.
11. UTILIZED CURRENT PFAF FORMULA.
12. APPLICATION OF THRE INSTEAD OF TDZE.
13. APPLICATION OF ACT -27C AND NEW FINAL CONTROLLING OBSTACLE.
14. APT ELEV CHANGED FROM 841 TO 842.
15. UTILIZED CURRENT AIRPORT DATA.
16. (RNP) PROCEDURE IN DEVELOPMENT.

01/08/13: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 10/16/12.
SEE 8260-10

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TERMINAL ROUTES, (CONT.):

FROM	TO	COURSE AND DISTANCE	ALTITUDE
CIJOT/2.10 NM TO RW30R	RW30R (MAP) (FO)	301.44 / 2.10	
RW30R (MAP)	1300 MSL	301.44	1300
1300 MSL	GEP VORTAC (FO)		3000

NOTES, (CONT.):

CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -27C (-16F) OR ABOVE 54C (130F).
CHART NOTE: FOR INOPERATIVE MALSF, INCREASE LNAV/VNAV ALL CATS VISIBILITY TO 1 5/8 MILE, LNAV CAT A/B VISIBILITY TO RVR 5000 AND CAT C/D/E VISIBILITY TO 1 5/8 MILE.
CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO LPV ALL CATS.
CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVAL AT ELIKE ON V171 SOUTHEAST BOUND.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT.

QUALITY 4

CITY AND STATE	ELEVATION: 842 THRE: 820	FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:	SUP:
MINNEAPOLIS, MN	AIRPORT NAME: MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN	RNAV	RNAV (GPS) RWY 30R, AMDT 2	AMDT: 1B
				DATED: 03/08/2012

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
☐	☐	☐	☐	☐	☐	☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	FIFO	DATE:
APPROVED BY		
NAME:	FIFO	DATE:

CHANGES:

CHANGES CONT.
13. CHANGED LNAV/VNAV DA/HAT FROM 1294/471 TO 1316/496. 14. CHANGED CIRCLING CAT A/B/C HAA FROM 559 TO 558, CAT D FROM 619 TO 618, AND CAT E FROM 819 TO 818. 15. CHANGED TCH FROM 55.0 TO 54.9.
16. CHANGED PROCEDURE NAME TO RNAV (GPS) Y RWY 30R.

REASONS:

REASONS CONT.
1. REVERSING CHANGES REQUESTED BY THE FPT, TO THE ORIGINAL DEVELOPED VALUES, AT THE REQUEST OF THE FPT.
2. CHANGED ALTITUDE ELIKE TO DIYEV AND DIYEV TO GROVZ FROM 5000 TO 7000; GROVZ TO WULAM FROM 5000 TO 6000.
3. CHANGED PROFILE STARTS AT BONNA TO GROVZ.
4. READDED MIN ALT GROVZ 7000 AND WULAM 6000.

3/18/2013: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 10/16/2012.
1. CHANGED PROCEDURE NAME FROM RNAV (GPS) Y RWY 30R BACK TO RNAV (GPS) RWY 30R.

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FAS DATA BLOCK INFORMATION

DATA FIELD	DATA
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KMSP
RUNWAY	RW30R
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W30B
LTP/FTP LATITUDE	445253.5425N
LTP/FTP LONGITUDE	0931140.6680W
LTP/FTP ELLIPSOIDAL HEIGHT	+02226
FPAP LATITUDE	445339.8800N
FPAP LONGITUDE	0931327.7100W
THRESHOLD CROSSING HEIGHT (TCH)	00054.9
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	0312
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	28316E0B

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+02499
FPAP ORTHOMETRIC HEIGHT	+02499

QUALITY 4

CITY AND STATE	ELEVATION: 842 THRE: 820	FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:	SUP:
MINNEAPOLIS, MN	AIRPORT NAME: MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN	RNAV	RNAV (GPS) RWY 30R, AMDT 2	AMDT: 1B
				DATED: 03/08/2012

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
☐	☐	☐	☐	☐	☐	☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	FIFO	DATE:
APPROVED BY		
NAME:	FIFO	DATE:

CHANGES:

REASONS:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.33**

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ARINC PACKET - 424-18 - RNAV (GPS)

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAD        GEP   K3011730VTHA N45084447W093222345    N45084447W093222345E0060008772     NARGOPHER

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   BONNA K30    C     N44460817W092560902                      E0002     NAR           BONNA
        SUSAEAENRT   CIJOT K30    C     N44514796W093090938                      E0004     NAR           CIJOT
        SUSAEAENRT   DIYEV K30    W     N44343337W092295161                      W0001     NAR           DIYEV
        SUSAEAENRT   ELIKE K30    R   L N44204939W092362556                      E0000     NAR           ELIKE
        SUSAEAENRT   GROVZ K30    C     N44425091W092483871                      E0001     NAR           GROVZ
        SUSAEAENRT   JACKO K30    C     N44492496W093034022                      E0003     NAR           JACKO
        SUSAEAENRT   SAMMZ K30    C     N44474662W092595451                      E0003     NAR           SAMMZ
        SUSAEAENRT   WULAM K30    C     N44442960W092522375                      E0002     NAR           WULAM

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAP KMSPK3AMSP     0     110YHN44525510W093131840E000000842         1800018000C    MNAR    MINNEAPOLIS-ST PAUL INTL/WOLD-

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAP KMSPK3FR30R  ADIYEV 010DIYEVK3EA0E       IF                                                18000                A JS
        SUSAP KMSPK3FR30R  ADIYEV 020GROVZK3EA0E  A 020TF                      30180158    + 07000                            A JS
        SUSAP KMSPK3FR30R  ADIYEV 030WULAMK3EA0E    010TF                      30160031    + 06000                            A JS
        SUSAP KMSPK3FR30R  ADIYEV 040BONNAK3EA0EE B 010TF                      30160031    + 05000                            A JS
        SUSAP KMSPK3FR30R  AELIKE 010ELIKEK3EA0E       IF                                                18000                A JS
        SUSAP KMSPK3FR30R  AELIKE 020DIYEVK3EA0E    020TF                      01890145    + 07000                            A JS
        SUSAP KMSPK3FR30R  AELIKE 030GROVZK3EA0E  A 020TF                      30180158    + 07000                            A JS
        SUSAP KMSPK3FR30R  AELIKE 040WULAMK3EA0E    010TF                      30160031    + 06000                            A JS
        SUSAP KMSPK3FR30R  AELIKE 050BONNAK3EA0EE B 010TF                      30160031    + 05000                            A JS
        SUSAP KMSPK3FR30R  R      010BONNAK3EA0E  I    IF                                  + 05000     18000                  A JS
        SUSAP KMSPK3FR30R  R      011SAMMZK3EA0E S  051TF                      30150031    + 04000                            A JS
        SUSAP KMSPK3FR30R  R      020JACKOK3EA1E  F 051TF                      30150031    + 03000                  RW30R K3PGA JS
        SUSAP KMSPK3FR30R  R      020JACKOK3EA2WALPV       ALNAV/VNAV ALNAV                                                      JS
        SUSAP KMSPK3FR30R  R      021CIJOTK3EA0E S  031TF                      30140046    V 0154001543        -300           A JS
        SUSAP KMSPK3FR30R  R      030RW30RK3PG0GY M 031TF                      30140021      00875             -300           A JS
        SUSAP KMSPK3FR30R  R      040          0  M     CA                     3014        + 01300                            A JS
        SUSAP KMSPK3FR30R  R      050GEP  K3D 0VY  R   DF                                  + 03000                            A JS
        SUSAP KMSPK3FR30R  R      060GEP  K3D 0VE  L   HM                      11700040    + 03000                            A JS
```

QUALITY 4 CHECKED

CITY AND STATE	ELEVATION: 842 THRE: 820	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
MINNEAPOLIS, MN	AIRPORT NAME: **MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN**	**RNAV**	**RNAV (GPS) RWY 30R, AMDT 2**	AMDT: **1B**
				DATED: **03/08/2012**

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

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```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        --------------------------------------------------------------------------------------------------------------------------------
        SUSAP KMSPK3GRW30R   0082003014 N44525354W093114067+0200    +0222600820020055150I

                 1         2         3         4         5         6         7         8         9         0         1         2         3
PP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        --------------------------------------------------------------------------------------------------------------------------------
        SUSAP KMSPK3PR30R  RW30R001 0000W30B0N4452535425W09311406680+022260300N4453398800W09313277100106750312000549F40050028316E0B
        SUSAP KMSPK3PR30R  RW30R002E      +02499+02499LPV       60925

                 1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        --------------------------------------------------------------------------------------------------------------------------------
        SUSAP KMSPK3SRW30RK3PG               0   18018003525                                                                        M
```

QUALITY 4 CHECKED

CITY AND STATE	ELEVATION: 842 THRE: 820	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
MINNEAPOLIS, MN	AIRPORT NAME: MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN	RNAV	RNAV (GPS) RWY 30R, AMDT 2	AMDT: 1B
				DATED: 03/08/2012

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.33**

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.

ARINC SUMMARY - 424-18 - RNAV (GPS)

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	DIYEV	DIYEV	010		IF		FB					
	DIYEV	GROVZ	020	IAF	TF		FB	2.0	301.8(301.8T)	015.8	AA 07000	
	DIYEV	WULAM	030		TF		FB	1.0	301.6(301.6T)	003.1	AA 06000	
	DIYEV	BONNA	040		TF		FB	1.0	301.6(301.6T)	003.1	AA 05000	
	ELIKE	ELIKE	010		IF		FB					
	ELIKE	DIYEV	020		TF		FB	2.0	018.9(018.9T)	014.5	AA 07000	
	ELIKE	GROVZ	030	IAF	TF		FB	2.0	301.8(301.8T)	015.8	AA 07000	
	ELIKE	WULAM	040		TF		FB	1.0	301.6(301.6T)	003.1	AA 06000	
	ELIKE	BONNA	050		TF		FB	1.0	301.6(301.6T)	003.1	AA 05000	
		BONNA	010	FACF	IF		FB				AA 05000	
		SAMMZ	011	SDF	TF		FB	0.5	301.5(301.5T)	003.1	AA 04000	
		JACKO	020	FAF	TF		FB	0.5	301.5(301.5T)	003.1	AA 03000	
		CIJOT	021	SDF	TF		FB	0.3	301.4(301.4T)	004.6	AA 01540 GS 01543	
		RW30R	030	MAP	TF		FO	0.3	301.4(301.4T)	002.1	AT 00875	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		301.4(301.4T)		AA 01300	
	GEP	050		DF	R	FO				AA 03000	
	GEP	060		HM	L	FO		117.0(117.0T)	004.0	AA 03000	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	GEP	N450844.47	W0932223.45	N4508.741	W09322.391
	BONNA	N444608.17	W0925609.02	N4446.136	W09256.150
	CIJOT	N445147.96	W0930909.38	N4451.799	W09309.156
	DIYEV	N443433.37	W0922951.61	N4434.556	W09229.860
	ELIKE	N442049.39	W0923625.56	N4420.823	W09236.426
	GROVZ	N444250.91	W0924838.71	N4442.849	W09248.645
	JACKO	N444924.96	W0930340.22	N4449.416	W09303.670
	SAMMZ	N444746.62	W0925954.51	N4447.777	W09259.909
	WULAM	N444429.60	W0925223.75	N4444.493	W09252.396
	RW30R	N445253.54	W0931140.67	N4452.892	W09311.678

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW30R	00820	55

QUALITY CHECKED

CITY AND STATE	ELEVATION: **842** THRE: **820**	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
MINNEAPOLIS, MN	AIRPORT NAME: **MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN**	**RNAV**	**RNAV (GPS) RWY 30R, AMDT 2**	AMDT: **1B**
				DATED: **03/08/2012**

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
FEEDER	ELIKE	DIYEV	1. TOWER (27-002489)	442034.10N/0923832.60W	1559 (5D)	1000	AT4441	7000
			2. TERRAIN	442142.00N/0923330.00W	1273 (1300)		AS1500	2800
FEEDER: STEPDOWN	DIYEV	GROVZ	3. TOWER (27-001816)	443225.00N/0923051.00W	1443 (6F)	1000	AT4307 AC250	7000
			4. TERRAIN	443806.00N/0922800.00W	1149 (1100)		AS1500	2600
INITIAL	GROVZ	WULAM	5. AAO	444254.00N/0924818.00W	1162 (4E)	1000	AT3838	6000
			6. TERRAIN	444609.00N/0925057.00W	942 (900)		AS1500	2400
INITIAL: STEPDOWN	WULAM	BONNA	7. AAO	444421.00N/0925418.00W	1178 (4E)	1000	AT2822	5000
			8. TERRAIN	444421.00N/0925418.00W	978 (1000)		AS1500	2500
INTERMEDIATE	BONNA	SAMMZ	9. AAO	444648.00N/0930221.00W	1178 (4E)	500	AT2197 AC125	4000
			10. TERRAIN	444600.00N/0930112.00W	913 (900)		AS1500	2400
INTERMEDIATE: STEPDOWN	SAMMZ	JACKO	9. AAO	444648.00N/0930221.00W	1178 (4E)	500	AT1197 AC125	3000
			11. TERRAIN	444906.00N/0930209.00W	978 (1000)		AS1500	2500
FINAL: LPV	JACKO	RW30R				ASC		1070/250
FINAL: LNAV/VNAV	JACKO	RW30R	12. TREE (KMSP0255)	445242.41N/0931003.43W	1010 (1A)	24.63:1		1316/496
2. PROCEDURE TURN	NA							
3. MISSED APPROACH MAP:	DA / DA / RW30R	GEP VORTAC				ASC		3000
			15. BLDG (27-000387)	445834.00N/0931621.00W	1743 (3C)	1000		2800
ELEV:	880/1155/1300		16. TERRAIN	450230.00N/0931424.00W	1024 (1000)		AS1500	2500

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	HT. ABV. ARPT. ACTUAL							
CATEGORY A	1.3 NM	350	558	17. BLDG (27-000367)	445120.51N/0931334.62W	1043 (1A)	300	SI	1400
CATEGORY B	1.5 NM	450	558	17. BLDG (27-000367)	445120.51N/0931334.62W	1043 (1A)	300	SI	1400
CATEGORY C	1.7 NM	450	558	17. BLDG (27-000367)	445120.51N/0931334.62W	1043 (1A)	300	SI	1400
CATEGORY D	2.3 NM	550	618	18. TANK (27-001379)	445503.51N/0930959.71W	1158 (1A)	300		1460
CATEGORY E	4.5 NM	550	818	19. STACK (27-000479)	444839.00N/0931457.00W	1305 (5D)	300	AC50	1660

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID: RW30R

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A
360-360	TWR (27-000499)	012/ 11.1	2438 (1D)	3500					

CITY AND STATE	ELEVATION: 842 / AIRPORT NAME:	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
MINNEAPOLIS, MN	MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN	RNAV	RNAV (GPS) RWY 30R, AMDT 2	AGL

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE			3. ALTIMETER SETTING
MSP APP CON MSP TOWER		N W S	OTHER: ASOS	SOURCE: KMSP
		F A A		DISTANCE:
SATISFACTORY ON:		A / C		HOURS REMOTE OPERATION:
X V H F X U H F H F	LOCATION: KMSP			ADJUSTMENT: 0

4. MONITOR STATUS	PRIMARY NAVAID:	
	MONITOR POINT:	
	HRS OPTN: CAT 1	
	HRS OPTN: CAT 3	
5. APPROACH & RUNWAY LIGHTING	X	ALSF-1 12R ALSF-2 12L, 30L, 35
		(S) SALS
	X	MALSR 22, 04 MALSF 30R
	X	HIRL 12L, 30R, 17, 22, 30L, 04, 12R, 35
		MIRL
	X	REIL 30R, 17
	X	TDZ 12L, 30L, 12R, 35
	X	C/L 12L, 30R, 17, 30L, 12R, 35
	X	OTHER (SPECIFY) PAPI-4R 17 PAPI-4L 12L, 30R, 22, 30L, 04, 12R, 35
6. RUNWAY MARKINGS	BASIC	
	ALL WEATHER	PIR-G 12L, 30R, 22, 30L, 04, 12R, 35
	INSTRUMENT	NPI-G 17
7. RUNWAY VISUAL RANGE	APPROACH	12L, 30R, 17, 22, 30L, 04, 12R, 35
	MIDFIELD	12L, 30R, 17, 30L, 12R, 35
	ROLL OUT	12L, 30R, 17, 22, 30L, 04, 12R, 35
8. GLIDE PATH	GP ANGLE: 3.00	ELEV RWY THRESHOLD: 819.8
	DISTANCE FROM RWY:	ELEV GP ANTENNA:
		THRESHOLD CROSSING HEIGHT: 54.9
9. FINAL APPROACH COURSE AIMING	X	RUNWAY THRESHOLD — FT. FROM THRESHOLD
	X	ON CENTERLINE — FT. FROM CENTERLINE

10. WAIVERS: NONE

PART D - PREPARED BY: STEVE NELSON	DATE: 10/16/2012
TITLE: AERONAUTICAL INFORMATION SPECIALIST	OFFICE: AJV-353

PART C - REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

NO ADDITIONAL AIRSPACE REQUIRED.

BACKUP ALTIMETER SOURCE NOT UTILIZED. KMSP HAS REDUNDANT WEATHER SOURCING.

ACT = -27C
ISA DEVIATION = -40.33
AVERAGE COLD TEMPERATURE BASED ON 5-YEAR HISTORY (2007-2011).
BARO VNAV HIGH TEMP CALCULATED PER AFS MEMO/FORMULA DATED MAY 30, 2012.

TAA NOT DEVELOPED PER FPT.

JACKO TO GROVZ FIX PLACEMENT DEVELOPED UTILIZING 8260.54A, FORMULA 2-16B AT 1000' INTERVALS.

250 FT LPV HATH PER AIRPORT REQUEST DUE TO RUNWAY SURFACE AREA CONCERNS WITH DISPLACED RUNWAY THRESHOLD AND A TAXIWAY THAT ACCESSES THE RUNWAY END.

LPV SURFACE 34:1
LNAV/VNAV SURFACE 24.63:1

VGSI DATA: 3.00/71.30.

OBS 14: XP TO MAINTAIN CURRENT MDA.

QUALITY CHECKED

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
FINAL: LNAV	JACKO	CIJOT/2.10 NM TO	13. AAO	445007.44N/0930353.57W	1209 (2C)	250	XL34 DG47	1540
		RW30R						
FINAL: LNAV STEPDOWN	CIJOT/2.10 NM TO	RW30R	14. TANK (KMSP0268)	445208.30N/0930852.29W	1111 (1A)	250	XP39	1400
	RW30R							

3. MISSED APPROACH									
	MAP:								
	ELEV:								

4. CIRCLING AREA	DISTANCE		HT. ABV. ARPT.						
CATEGORY A	1.3 NM	REQUIRED	350	ACTUAL					
CATEGORY B	1.5 NM		450						
CATEGORY C	1.7 NM		450						
CATEGORY D	2.3 NM		550						
CATEGORY E	4.5 NM		550						

5. MINIMUM SAFE ALTITUDES PRIMARY NAVAID:

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A

CITY AND STATE		FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
MINNEAPOLIS, MN	ELEVATION: 842 AIRPORT NAME: MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN	RNAV	RNAV (GPS) RWY 30R, AMDT 2	AGL

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE			3. ALTIMETER SETTING
		N W S	OTHER:	SOURCE:
		F A A		DISTANCE:
		A / C		HOURS REMOTE OPERATION:
SATISFACTORY ON:				
V H F / U H F / H F	LOCATION:			ADJUSTMENT:

4. MONITOR STATUS	PRIMARY NAVAID:	
	MONITOR POINT:	
	HRS OPTN:	CAT 1
		CAT 3

5. APPROACH & RUNWAY LIGHTING		**ALS**
		(S) SALS
		MALS
		HIRL
		MIRL
		REIL
		TDZ
		C/LINE
		OTHER (SPECIFY)

6. RUNWAY MARKINGS	BASIC	
	ALL WEATHER	
	INSTRUMENT	
7. RUNWAY VISUAL RANGE	APPROACH	
	MIDFIELD	
	ROLL OUT	
8. GLIDE PATH	GP ANGLE:	ELEV RWY THRESHOLD:
	DISTANCE FROM RWY:	ELEV GP ANTENNA:
		THRESHOLD CROSSING HEIGHT:
9. FINAL APPROACH COURSE AIMING	RUNWAY THRESHOLD	FT. FROM THRESHOLD
	ON CENTERLINE	FT. FROM CENTERLINE

10. WAIVERS:

PART D - PREPARED BY:	DATE:
TITLE:	OFFICE:

PART C - REMARKS:

RADIO FIX AND HOLDING DATA RECORD

NAME: BONNA **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 444608.17N/0925609.02W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	MINNEAPOLIS	I-INN	LOC/DME		121.35	121.35	13.12	14.47		5000	6000
2	FARMINGTON	FGT	VORTAC	H	045.75	051.75		13.40		5000	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-INN	LOC/DME	R-121	14	5000	6000

REMARKS:
MINNEAPOLIS (FAC 1) USED TO ESTABLISH FIX COORDINATES
I-INN DME: 445303.68N/0931148.87W.
LOCATION IAW 8260.54A FORMULA 2-16B.
ESTABLISHED ESV IS FOR GS.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	CONVERGING ILS RWY 30R	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 30R	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Y RWY 30R			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Z RWY 30R			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: MILITARY IAP, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 10 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
1. RELOCATED FIX 0.45NM (2711.28') SOUTHEAST.
2. ADDED FIX TYPES WP.
3. CHANGED FAC 1 MAG/TRUE BRG FROM 120.34/121.34 TO 121.35/121.35, DME FROM 12.68 TO 13.12, DIST FROM FAC NM FROM 14.02 TO 14.47.
4. CHANGED FAC 2 MAG/TRUE BRG FROM 043.94/049.94 TO 045.75/051.75, DIST FROM FAC NM FROM 13.25 TO 13.40.
5. CHANGED ESV I-INN RADIAL FROM 120 TO 121, DISTANCE FROM 13 TO 14.
6. ADDED FACILITY USED TO ESTABLISH FIX COORDINATE NOTE.
7. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 09/17/2012 **OFFICE:** AJV-353 **NAME:** STEVE NELSON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON
OTHER:

QUALITY 4 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: CIJOT **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 445147.96N/0930909.38W **TYPE:** WP, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FEET	MRA	MAA
1	MINNEAPOLIS	I-INN	LOC/DME		121.35	121.35	2.27	3.62		1400	5300

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
I-INN DME: 445303.68N/0931148.87W.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 30R	1		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Y RWY 30R			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: MILITARY IAP, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
1. RELOCATED FIX 0.10NM (606.41') SOUTHEAST.
2. ADDED FIX TYPE WP.
3. CHANGED FAC 1 MAG/TRUE BRG FROM 120.34/121.34 TO 121.35/121.35, DME FROM 2.17 TO 2.27, AND DIST FROM FAC NM FROM 3.52 TO 3.62.
4. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 09/13/2012 **OFFICE:** AJV-353 **NAME:** STEVE NELSON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON, MSP ATCT
OTHER:

QUALITY A CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: DIYEV **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 443433.37N/0922951.61W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) Y RWY 30R			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: MILITARY IAP, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 03/07/2013

DEVELOPED BY: **DATE:** 10/11/2012 **OFFICE:** AJV-353 **NAME:** STEVE NELSON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: ELIKE **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 442049.39N/0923625.56W **TYPE:** DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	FARMINGTON	FGT	VORTAC	H	118.40	124.40	30.00	30.00		5500	17500

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V171	1				(US)
IAP	RNAV (GPS) Y RWY 30L			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Y RWY 30R			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: MILITARY IAP, IAP, AREA, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
1. CHANGED MAG/TRUE BRG FROM 118.39/124.39 TO 118.40/124.40 MRA FROM 3000 TO 5500.
2. ADDED DIST FROM FAC NM 30.
3. UPDATED FIX USE.
4. ADDED REQUIRED CHARTING IAP AND MILITARY IAP.

DEVELOPED BY: **DATE:** 10/12/2012 **OFFICE:** AJV-353 **NAME:** STEVE NELSON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: GOPHER VORTAC **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 450844.47N/0932223.45W **TYPE:**

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	GOPHER	GEP	VORTAC	H							45000

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	NW	GEP	VORTAC	297.00	117.00	L	1		3000	14000	4	10
2	N	GEP	VORTAC	346.00	166.00	L	1		2600	14000	4	10
3	W	GEP	VORTAC	264.00	084.00	R	1		2700	14000	4	10
4	NW		WP	297.00	117.00	L		4	3000	14000	5	11
5	N		WP	346.00	166.00	L		4	2700	14000	5	11
6	W		WP	265.00	085.00	R		4	2700	14000	5	11

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
1	265	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
2	200	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
3	200	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
4	200	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
4	265	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
5	200	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D
5	265	TOWER (27-000990)	452012.00N/0932329.00W	2049	5D
6	200	TOWER (27-000032)	451043.00N/0932100.00W	1530	4D

REASON FOR NONSTANDARD HOLDING:
PAT 1 ATC REQUEST
PAT 2 ATC REQUEST
PAT 4 ATC REQUEST
PAT 5 ATC REQUEST

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
HOLDING PATTERN 1 AND 4 EVALUATED FOR MILITARY AIRCRAFT AT KMSP.
HOLDING PATTERN 5 EVALUATED FOR MILITARY AIRCRAFT AT KMIC.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	DES MOINES			KDSM	DES MOINES	IA (US)
DP	COULT			KANE	MINNEAPOLIS	MN (US)
DP	KBREW			KANE	MINNEAPOLIS	MN (US)
DP	ORSKY			KANE	MINNEAPOLIS	MN (US)
DP	WLSTN			KANE	MINNEAPOLIS	MN (US)
DP	COULT			KFCM	MINNEAPOLIS	MN (US)
DP	KBREW			KFCM	MINNEAPOLIS	MN (US)
DP	ORSKY			KFCM	MINNEAPOLIS	MN (US)
DP	WLSTN			KFCM	MINNEAPOLIS	MN (US)
DP	COULT			KMSP	MINNEAPOLIS	MN (US)
DP	KBREW			KMSP	MINNEAPOLIS	MN (US)
DP	ORSKY			KMSP	MINNEAPOLIS	MN (US)
DP	WLSTN			KMSP	MINNEAPOLIS	MN (US)
DP	COULT			KSTP	ST PAUL	MN (US)
DP	KBREW			KSTP	ST PAUL	MN (US)
DP	ORSKY			KSTP	ST PAUL	MN (US)
DP	WLSTN			KSTP	ST PAUL	MN (US)
DP	BLUFS			KOMA	OMAHA	NE (US)
EN ROUTE	J106					(US)
EN ROUTE	J114					(US)
EN ROUTE	J21					(US)
EN ROUTE	J25					(US)
EN ROUTE	J36					(US)
EN ROUTE	J68-70					(US)
EN ROUTE	J70					(US)
EN ROUTE	Q501					(US)
EN ROUTE	Q501-502					(US)
EN ROUTE	Q502					(US)
EN ROUTE	V148					(US)
EN ROUTE	V2					(US)

QUALITY A CHECKED

EN ROUTE	V2-97				(US)
EN ROUTE	V218				(US)
EN ROUTE	V413-510				(US)
EN ROUTE	V505				(US)
EN ROUTE	V78				(US)
EN ROUTE	V82-161				(US)
IAP	VOR -B		KCFE	BUFFALO	MN (US)
IAP	NDB RWY 34		KCBG	CAMBRIDGE	MN (US)
IAP	RNAV (GPS) RWY 34		KCBG	CAMBRIDGE	MN (US)
IAP	RNAV (GPS) RWY 28		KMGG	MAPLE LAKE	MN (US)
IAP	VOR-A		KMGG	MAPLE LAKE	MN (US)
IAP	ILS OR LOC/DME RWY 27	3	KANE	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 18		KANE	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 27	6	KANE	MINNEAPOLIS	MN (US)
IAP	VOR RWY 9	3	KANE	MINNEAPOLIS	MN (US)
IAP	VOR/DME RWY 27	3	KANE	MINNEAPOLIS	MN (US)
IAP	COPTER ILS OR LOC RWY 10R		KFCM	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 10R		KFCM	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 10L		KFCM	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 10R		KFCM	MINNEAPOLIS	MN (US)
IAP	VOR RWY 10R		KFCM	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 14L	5	KMIC	MINNEAPOLIS	MN (US)
IAP	VOR OR GPS-A	2	KMIC	MINNEAPOLIS	MN (US)
IAP	CONVERGING ILS RWY 30L	1	KMSP	MINNEAPOLIS	MN (US)
IAP	CONVERGING ILS RWY 30R	1	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 30R	1	KMSP	MINNEAPOLIS	MN (US)
IAP	LOC RWY 17		KMSP	MINNEAPOLIS	MN (US)
IAP	LOC RWY 22		KMSP	MINNEAPOLIS	MN (US)
IAP	LOC RWY 4	1	KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 4	4	KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Y RWY 30R	4	KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Y RWY 35	4	KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Z RWY 30R	4	KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Z RWY 35	4	KMSP	MINNEAPOLIS	MN (US)
IAP	NDB RWY 15		KPNM	PRINCETON	MN (US)
IAP	ILS OR LOC RWY 9		KRGK	RED WING	MN (US)
IAP	GPS RWY 34		KROS	RUSH CITY	MN (US)
IAP	LOC RWY 34		KSGS	SOUTH ST PAUL	MN (US)
IAP	NDB OR GPS-B		KSGS	SOUTH ST PAUL	MN (US)
IAP	ILS OR LOC RWY 31		KSTC	ST CLOUD	MN (US)
IAP	VOR RWY 31		KSTC	ST CLOUD	MN (US)
IAP	VOR/DME RWY 13		KSTC	ST CLOUD	MN (US)
IAP	NDB RWY 4		K21D	ST PAUL	MN (US)
IAP	COPTER ILS OR LOC RWY 32		KSTP	ST PAUL	MN (US)
IAP	ILS OR LOC RWY 14		KSTP	ST PAUL	MN (US)
IAP	ILS OR LOC RWY 32		KSTP	ST PAUL	MN (US)
IAP	NDB RWY 31		KSTP	ST PAUL	MN (US)
IAP	RNAV (GPS) RWY 14		KSTP	ST PAUL	MN (US)
STAR	AGUDE		KCFE	BUFFALO	MN (US)
STAR	AGUDE		KFBL	FARIBAULT	MN (US)
STAR	AGUDE		KGYL	GLENCOE	MN (US)
STAR	AGUDE		KMGG	MAPLE LAKE	MN (US)
STAR	AGUDE		KANE	MINNEAPOLIS	MN (US)
STAR	ENCEE		KANE	MINNEAPOLIS	MN (US)
STAR	GOPHER		KANE	MINNEAPOLIS	MN (US)
STAR	TWOLF		KANE	MINNEAPOLIS	MN (US)
STAR	AGUDE		KFCM	MINNEAPOLIS	MN (US)
STAR	ENCEE		KFCM	MINNEAPOLIS	MN (US)
STAR	GOPHER		KFCM	MINNEAPOLIS	MN (US)
STAR	TWOLF		KFCM	MINNEAPOLIS	MN (US)
STAR	AGUDE		KLVN	MINNEAPOLIS	MN (US)
STAR	ENCEE		KLVN	MINNEAPOLIS	MN (US)
STAR	GOPHER		KLVN	MINNEAPOLIS	MN (US)
STAR	TWOLF		KLVN	MINNEAPOLIS	MN (US)
STAR	AGUDE		KMIC	MINNEAPOLIS	MN (US)
STAR	ENCEE		KMIC	MINNEAPOLIS	MN (US)
STAR	GOPHER		KMIC	MINNEAPOLIS	MN (US)
STAR	TWOLF		KMIC	MINNEAPOLIS	MN (US)
STAR	EAU CLAIRE		KMSP	MINNEAPOLIS	MN (US)
STAR	GOPHER		KMSP	MINNEAPOLIS	MN (US)
STAR	SAUGR (FMS)		KMSP	MINNEAPOLIS	MN (US)
STAR	TWOLF		KMSP	MINNEAPOLIS	MN (US)
STAR	WILDD		KMSP	MINNEAPOLIS	MN (US)
STAR	AGUDE		KRGK	RED WING	MN (US)
STAR	AGUDE		KSGS	SOUTH ST PAUL	MN (US)
STAR	AGUDE		K21D	ST PAUL	MN (US)
STAR	AGUDE		KSTP	ST PAUL	MN (US)
STAR	ENCEE (RNAV)		KSTP	ST PAUL	MN (US)
STAR	GOPHER		KSTP	ST PAUL	MN (US)
STAR	AGUDE		KRNH	NEW RICHMOND	WI (US)
STAR	TWOLF		KRNH	NEW RICHMOND	WI (US)
STAR	AGUDE		KOEO	OSCEOLA	WI (US)
STAR	TWOLF		KOEO	OSCEOLA	WI (US)

REQUIRED CHARTING: DP, STAR, MILITARY IAP, IAP, AREA, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

QUALITY CHECKED

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 14 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
ADDED HOLDING PATTERN REMARK FOR KMIC.
REMOVED HOLDING PATTERN 5 REMARK FOR KMSP.
CHANGED HOLDING PATTERN 1 MIN ALTITUDE FROM 4000 TO 3000.
CHANGED HOLDING PATTERN 4 MIN ALTITUDE FROM 4000 TO 3000.

DEVELOPED BY:	**DATE:** 09/18/2012	**OFFICE:** AJV-353	**NAME:** JILL OLSON (KISSY MAXFIELD)
APPROVED BY:	**DATE:**	**OFFICE:** AJV-353	**NAME:** LARRY STROUT
	SIGNATURE:		

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON, MSP ATCT
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: GROVZ **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 444250.91N/0924838.71W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	MINNEAPOLIS	I-INN	LOC/DME		121.35	121.35	19.40	20.75		5000	8000
2	FARMINGTON	FGT	VORTAC	H	066.44	072.44		16.66		5000	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-INN	LOC/DME	R-121	21	5000	8000

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
MINNEAPOLIS (FAC 1) USED TO ESTABLISH FIX COORDINATES
I-INN DME: 445303.68N/0931148.87W.
LOCATION IAW 8260.54A FORMULA 2-16B.
ESTABLISHED ESV IS FOR LOC/GS.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	CONVERGING ILS RWY 30R	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 30R	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Y RWY 30R			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Z RWY 30R			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: MILITARY IAP, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 4 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
1. RELOCATED FIX 0.95NM (5753.02') SOUTHEAST.
2. ADDED FIX TYPES WP.
3. CHANGED FAC 1 MAG/TRUE BRG FROM 120.34/121.34 TO 121.35/121.35, DME FROM 18.46 TO 19.40, DIST FROM FAC NM FROM 19.80 TO 20.75, MRA FROM 7000 TO 5000.
4. CHANGED FAC 2 MAG/TRUE BRG FROM 063.88/069.88 TO 066.44/072.44, DIST FROM FAC NM FROM 16.06 TO 16.66, MRA FROM 7000 TO 5000.
5. CHANGED ESV I-INN RADIAL FROM 120 TO 121, DISTANCE FROM 19 TO 21, MIN ALTITUDE FROM 7000 TO 5000.
6. ADDED FACILITY USED TO ESTABLISH FIX COORDINATE NOTE.
7. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 09/17/2012 **OFFICE:** AJV-353 **NAME:** STEVE NELSON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: JACKO **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 444924.96N/0930340.22W **TYPE:** WP, RADAR, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	MINNEAPOLIS	I-INN	LOC/DME		121.35	121.35	6.85	8.19	49759	3000	5300
2	FARMINGTON	FGT	VORTAC	H	018.06	024.06		12.66		3000	17500

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
MINNEAPOLIS (FAC 1) USED TO ESTABLISH FIX COORDINATES
LOCATION IAW 8260.54A FORMULA 2-16B.
I-INN DME LAT/LONG: 445303.68N/0931148.87W.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	CONVERGING ILS RWY 30R	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 30R	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Y RWY 30R			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Z RWY 30R			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: MILITARY IAP, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 8 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
1. RELOCATED FIX 0.12NM (758.29') SOUTHEAST.
2. CHANGED FAC 1 MAG/TRUE BRG FROM 120.34/121.34 TO 121.35/121.35, DME FROM 6.72 TO 6.85, DIST FROM FAC NM/FEET FROM 8.06/48999 TO 8.19/49759.
3. CHANGED FAC 2 MAG/TRUE BRG FROM 017.50/023.50 TO 018.06/024.06, DIST FROM FAC NM FROM 12.68 TO 12.66.
4. ADDED FACILITY USED TO ESTABLISH FIX COORDINATE NOTE.
5. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 09/12/2012 **OFFICE:** AJV-353 **NAME:** STEVE NELSON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON, MSP ATCT
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SAMMZ **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 444746.62N/0925954.51W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	MINNEAPOLIS	I-INN	LOC/DME		121.35	121.35	9.98	11.33		4000	5300
2	FARMINGTON	FGT	VORTAC	H	032.30	038.30		12.65		4000	17500

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
MINNEAPOLIS (FAC 1) USED TO ESTABLISH FIX COORDINATES
I-INN DME: 445303.68N/0931148.87W.
LOCATION IAW 8260.54A FORMULA 2-16B.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	CONVERGING ILS RWY 30R	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 30R	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Y RWY 30R			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Z RWY 30R			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: MILITARY IAP, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
1. RELOCATED FIX 0.26NM (1592.59') SOUTHEAST.
2. ADDED FIX TYPE WP.
3. CHANGED FAC 1 MAG/TRUE BRG FROM 120.34/121.34 TO 121.35/121.35, DME FROM 9.72 TO 9.98, DIST FROM FAC NM FROM 11.07 TO 11.33.
4. CHANGED FAC 2 MAG/TRUE BRG FROM 031.12/037.12 TO 032.30/038.30, DIST FROM FAC NM FROM 12.63 TO 12.65.
5. ADDED FACILITY USED TO ESTABLISH FIX COORDINATE NOTE.
6. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 09/17/2012 **OFFICE:** AJV-353 **NAME:** STEVE NELSON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: WULAM **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 444429.60N/0925223.75W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	MINNEAPOLIS	I-INN	LOC/DME		121.35	121.35	16.26	17.61		5000	7000
2	FARMINGTON	FGT	VORTAC	H	057.23	063.23		14.79		5000	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-INN	LOC/DME	R-121	17	5000	7000

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
MINNEAPOLIS (FAC 1) USED TO ESTABLISH FIX COORDINATES
I-INN DME: 445303.68N/0931148.87W.
LOCATION IAW 8260.54A FORMULA 2-16B.
ESTABLISHED ESV IS FOR GS.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	CONVERGING ILS RWY 30R	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 30R	1, 2		KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Y RWY 30R			KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Z RWY 30R			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: MILITARY IAP, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
1. RELOCATED FIX 0.68NM (4102.71') SOUTHEAST.
2. CHANGED FAC 1 MAG/TRUE BRG FROM 120.34/121.34 TO 121.35/121.35, DME FROM 15.59 TO 16.26, DIST FROM FAC NM FROM 16.93 TO 17.61, MRA FROM 6000 TO 5000.
3. CHANGED FAC 2 MAG/TRUE BRG FROM 054.95/060.95 TO 057.23/063.23, DIST FROM FAC NM FROM 14.45 TO 14.79, MRA FROM 6000 TO 5000.
4. CHANGED ESV I-INN RADIAL FROM 120 TO 121, DISTANCE FROM 16 TO 17, MIN ALTITUDE FROM 6000 TO 5000.
5. ADDED FACILITY USED TO ESTABLISH FIX COORDINATE NOTE.
6. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 09/17/2012 **OFFICE:** AJV-353 **NAME:** STEVE NELSON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON
OTHER:

QUALITY CHECKED

"INFO ONLY"

RADIO FIX AND HOLDING DATA RECORD

NAME: PRESS **STATE:** WI **COUNTRY:** US

LATITUDE/LONGITUDE: 444240.72N/0924113.52W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	GOPHER	GEP	VORTAC	H	125.47	131.47	39.18	39.18		3400	17500
2	FARMINGTON	FGT	VORTAC	H	071.01	077.01	21.73	21.73		3500	17500

HOLDING: **HOLDING TYPE OF ACTION:** MODIFY

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	E	FGT	VORTAC	071.01	251.01	R	1		3000	6000	6	7

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	TOWER (55-001228)	444501.00N/0923021.00W	1550	5E
1	200	TOWER (55-001228)	444501.00N/0923021.00W	1550	5E

HOLDING RESTRICTIONS:
UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 5500.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V2-97	1, 2				(US)
EN ROUTE	V26	1, 2				(US)
IAP	RNAV (GPS) RWY 30			KLVN	MINNEAPOLIS	MN (US)
IAP	LOC RWY 34	1, 2	1	KSGS	SOUTH ST PAUL	MN (US)
IAP	RNAV (GPS) RWY 34			KSGS	SOUTH ST PAUL	MN (US)
IAP	RNAV (GPS) RWY 32			KSTP	ST PAUL	MN (US)
IAP	RNAV (GPS) RWY 32			KRNH	NEW RICHMOND	WI (US)
STAR	WILDD	1, 2		KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: STAR, IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 12 **DATE OF REVISION:** 05/03/2012

REASON FOR REVISION:
CHANGED MIN/MAX TEMPLATE SIZES FROM 4/5 TO 6/7.
CHANGED CONTROLLING OBSTACLE FOR PAT 1 AND UNPLANNED HOLDING, HOLDING ALTITUDES DID NOT CHANGE.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 10/19/2011 **OFFICE:** AJV-353 **NAME:** JOSE ALFONSO (KISSY MAXFIELD)

APPROVED BY: **DATE:** 02/28/2012 **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON, MSP ATCT
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: FASRO **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 445514.69N/0931707.09W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** CANCEL

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) RWY 30R			KMSP	MINNEAPOLIS	MN (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1 **DATE OF REVISION:** 09/29/2005

REASON FOR REVISION:

DEVELOPED BY: **DATE:** 10/22/2012 **OFFICE:** AJV-353 **NAME:** STEVE NELSON

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP
OTHER:

QUALITY A CHECKED

Federal Aviation Administration

Memorandum

Date:

To: Dick Powell Manager, National Flight Data Center, AJV-21

From: Larry H. Strout, Manager, Central Products Team, AJV-353

Subject: **ACTION:** Magnetic Variation Change for Minneapolis-St Paul Intl/Wold-Chamberlain (KMSP)

The Magnetic Variation (MV) data for the airport(s) and/or facility(s) listed under the 'Airport/Facility" column will be revised effective concurrent with the publication of the procedure(s) listed below.

CONVERGING ILS RWY 30L, AMDT 1
CONVERGING ILS RWY 30R, AMDT 2
CONVERGING ILS RWY 35, AMDT 3
ILS OR LOC RWY 12L, ILS RWY 12L (CAT II), ILS RWY 12L (CAT III), AMDT 9
ILS OR LOC RWY 12R, ILS RWY 12R (CAT II), ILS RWY 12R (CAT III), AMDT 10
ILS OR LOC RWY 30L, ILS RWY 30L (CAT II), AMDT 45
ILS OR LOC RWY 30R, AMDT 14
ILS OR LOC RWY 35, ILS RWY 35 (CAT II), ILS RWY 35 (CAT III), AMDT 3
LOC RWY 4, AMDT 2
LOC RWY 17, AMDT 2
LOC RWY 22, AMDT 2
RNAV (GPS) Y RWY 12L, AMDT 3
RNAV (GPS) Y RWY 12R, AMDT 2
RNAV (GPS) Y RWY 30L, AMDT 3
RNAV (GPS) Y RWY 30R, AMDT 2
RNAV (GPS) Y RWY 35, AMDT 2
RNAV (GPS) Z RWY 12L, ORIG
RNAV (GPS) Z RWY 12R, ORIG
RNAV (GPS) Z RWY 30L, ORIG
RNAV (GPS) Z RWY 30R, ORIG
RNAV (GPS) Z RWY 35, AMDT 1

STARS:
ARCHS (RNAV) ONE
BAINY (RNAV) ONE
CLFAX (RNAV) ONE
DOWNZ (RNAV) ONE

FEINT (RNAV) ONE
HHOGS (RNAV) ONE

STARS:
HORML (RNAV) ONE
KKILR (RNAV) ONE
MORSS (RNAV) ONE
MUSCL (RNAV) ONE
NITZR (RNAV) ONE
TORGY (RNAV) ONE

GRAPHIC DP:
HESTIN TWO
LEINY FOUR
SLAYER TWO
SMERF FIVE

Estimated Chart Date: 03/07/2013

Please publish these changes in the National Flight Data Digest.

MINNESOTA

Location	Name	Airport /Facility	Identifier	Assigned Magnetic Variation Is	Epoch Year
Minneapolis	Minneapolis-St Paul Intl/Wold-Chamberlain	Airport	KMSP / MSP	Old 2° East New 0° East	2015
Minneapolis		ILS (CAT III)	BMA	Old 1° East New 0° East	2015
Minneapolis		ILS (CAT III)	HKZ	Old 2° East New 0° East	2015
Minneapolis		ILS	INN	Old 1° East New 0° East	2015
Minneapolis		ILS (CAT II)	MSP	Old 0° East New 0° East	2015
Minneapolis		ILS (CAT III)	PJL	Old 1° East New 0° East	2015
Minneapolis		LOC	APL	Old 1° East New 0° East	2015
Minneapolis		LOC	SIJ	Old 1° East New 0° East	2015
Minneapolis		LOC	TJZ	Old 1° East New 0° East	2015
Minneapolis	Minneapolis APP CON	ASR-9	MSP	Old 3° East New 0° East	2015

If you have any questions please notify Larry H. Strout, larry.h.strout@faa.gov (405-954-5070).