

RADIO FIX AND HOLDING DATA RECORD

NAME: FARMINGTON VORTAC STATE: MN COUNTRY: US ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 443751.43N/0931055.39W 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 FEET	MRA	MAA
1	FARMINGTON	FGT	VORTAC	VH						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 DME	HOLDING ALTITUDES MIN MAX	TEMPLATES MIN MAX
1	S	FGT	VORTAC	178.03	358.03	R	1	3000 14000	4 10
2	E	FGT	VORTAC	085.00	265.00	L	1	2800 14000	4 10
3	S		WP	178.03	358.03	R		3000 6000	5 6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (27-000313)	442835.00N/0931107.00W	1474	2C
2	200	TOWER (27-001333)	443417.00N/0930441.00W	1360	5D
3	200	TOWER (27-000313)	442835.00N/0931107.00W	1474	2C

REASON FOR NONSTANDARD HOLDING:

PAT 2 ATC REQUEST

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED
ASSIGNED FACILITY MAGVAR: 6E (1965)

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	ORSKY			KANE	MINNEAPOLIS	MN (US)
DP	ROCHESTER			KANE	MINNEAPOLIS	MN (US)
DP	SCHEP			KANE	MINNEAPOLIS	MN (US)
DP	ORSKY			KFCM	MINNEAPOLIS	MN (US)
DP	ROCHESTER			KFCM	MINNEAPOLIS	MN (US)
DP	SCHEP			KFCM	MINNEAPOLIS	MN (US)
DP	COULT			KMSP	MINNEAPOLIS	MN (US)
DP	DARWIN			KMSP	MINNEAPOLIS	MN (US)
DP	KBREW			KMSP	MINNEAPOLIS	MN (US)
DP	MEADOW LAKE			KMSP	MINNEAPOLIS	MN (US)
DP	MINNEAPOLIS			KMSP	MINNEAPOLIS	MN (US)
DP	ORSKY			KMSP	MINNEAPOLIS	MN (US)
DP	ROCHESTER			KMSP	MINNEAPOLIS	MN (US)
DP	SCHEP			KMSP	MINNEAPOLIS	MN (US)
DP	WLSTN			KMSP	MINNEAPOLIS	MN (US)
DP	ZMBRO			KMSP	MINNEAPOLIS	MN (US)
DP	ORSKY			KSTP	ST PAUL	MN (US)
DP	ROCHESTER			KSTP	ST PAUL	MN (US)
DP	SCHEP			KSTP	ST PAUL	MN (US)
EN ROUTE	V13					(US)
EN ROUTE	V161					(US)
EN ROUTE	V171					(US)
EN ROUTE	V26					(US)
EN ROUTE	V82					(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 28L			KFCM	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 28R			KFCM	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 30		2	KLVN	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 30			KLVN	MINNEAPOLIS	MN (US)
IAP	VOR RWY 12		2	KLVN	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 12L			KMSP	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 12R		1	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 30R			KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (CAT II - III)			KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12L (SA CAT I)			KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12R (CAT II - III)		1	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 12R (SA CAT I)		1	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 35 (CAT II - III)			KMSP	MINNEAPOLIS	MN (US)
IAP	ILS RWY 35 (SA CAT I)			KMSP	MINNEAPOLIS	MN (US)
IAP	ILS V RWY 35 (CONVERGING)			KMSP	MINNEAPOLIS	MN (US)
IAP	ILS Z OR LOC RWY 35			KMSP	MINNEAPOLIS	MN (US)

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IAP	LOC RWY 17	1	KMSP	MINNEAPOLIS	MN (US)
IAP	LOC RWY 22	1	KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 22	3	KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) Z RWY 12R	3	KMSP	MINNEAPOLIS	MN (US)
IAP	RNAV (RNP) Y RWY 12R	3	KMSP	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 30		KOWA	OWATONNA	MN (US)
IAP	ILS OR LOC RWY 9	2	KRGK	RED WING	MN (US)
IAP	LOC RWY 34		KSGS	SOUTH ST PAUL	MN (US)
IAP	RNAV (GPS) RWY 34		KSGS	SOUTH 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)
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	AGUDE		KFCM	MINNEAPOLIS	MN (US)
STAR	AGUDE		KLVN	MINNEAPOLIS	MN (US)
STAR	AGUDE		KMIC	MINNEAPOLIS	MN (US)
STAR	KASPR		KMSP	MINNEAPOLIS	MN (US)
STAR	AGUDE		KSGS	SOUTH ST PAUL	MN (US)
STAR	AGUDE		21D	ST PAUL	MN (US)
STAR	AGUDE		KSTP	ST PAUL	MN (US)
STAR	AGUDE		KRNH	NEW RICHMOND	WI (US)
STAR	AGUDE		KOEO	OSCEOLA	WI (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 29

DATE OF REVISION: 10/05/2023

REASON FOR REVISION:

1. REMOVED K21D RNAV (GPS) RWY 32.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A432

NAME: CASEY HILL

APPROVED BY:

DATE: 10/05/2023

OFFICE: AJV-A432

NAME: CASIMIR TABAKA

Digitally signed by

SIGNATURE:

CASIMIR L TABAKA

Jun 16, 2023

QUALITY
34
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: JUGIN

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 450150.44N/0925403.70W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: CANCEL

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

FIX USE:

USE TYPE
IAP

USE TITLE
RNAV (GPS) RWY 32

FAC

PAT

AIRPORT IDENT
21D

CITY
ST PAUL

STATE
MN (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG

DATE OF REVISION: 05/05/2011

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

DEVELOPED BY:

DATE: 06/29/2010

OFFICE: AVN-120

NAME: CHRIS ZUEST

APPROVED BY:

DATE: 10/05/2023

OFFICE: AJV-A432

NAME: CASIMIR TABAKA

SIGNATURE:

Digitally signed by
CASIMIR L TABAKA

Jun 16, 2023

DISTRIBUTION:

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

QUALITY
34
CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: STILS

STATE: WI

COUNTRY: US

ICAO REGION CODE: K5

LATITUDE/LONGITUDE: 450803.82N/0923841.22W

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	MRA	MAA
1	GOPHER	GEP	VORTAC	H	085.00	091.00	30.94	30.94	3400	17500
2	FARMINGTON	FGT	VORTAC	VH	031.00	037.00		37.92	3400	17500

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

REMARKS:

GOPHER (FAC 1) AND FARMINGTON (FAC 2) USED TO ESTABLISH FIX COORDINATES.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V78	1, 2				(US)
IAP	RNAV (GPS) RWY 17			KANE	MINNEAPOLIS	MN (US)
IAP	RNAV (GPS) RWY 1			KRPD	RICE LAKE	WI (US)
STAR	AGUDE	1, 2		KCFE	BUFFALO	MN (US)
STAR	AGUDE	1, 2		KFBL	FARIBAULT	MN (US)
STAR	AGUDE	1, 2		KGYL	GLENCOE	MN (US)
STAR	AGUDE	1, 2		KMGG	MAPLE LAKE	MN (US)
STAR	AGUDE	1, 2		KANE	MINNEAPOLIS	MN (US)
STAR	AGUDE	1, 2		KFCM	MINNEAPOLIS	MN (US)
STAR	AGUDE	1, 2		KLVN	MINNEAPOLIS	MN (US)
STAR	AGUDE	1, 2		KMIC	MINNEAPOLIS	MN (US)
STAR	AGUDE	1, 2		KSGS	SOUTH ST PAUL	MN (US)
STAR	AGUDE	1, 2		21D	ST PAUL	MN (US)
STAR	AGUDE	1, 2		KSTP	ST PAUL	MN (US)
STAR	AGUDE	1, 2		KRNH	NEW RICHMOND	WI (US)
STAR	AGUDE	1, 2		KOEO	OSCEOLA	WI (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 11

DATE OF REVISION: 10/05/2023

REASON FOR REVISION:

1. REMOVED K21D RNAV (GPS) RWY 32 FROM FIX USE.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A432

NAME: CASEY HILL

APPROVED BY:

DATE: 10/05/2023

OFFICE: AJV-A432

NAME: CASIMIR TABAKA

SIGNATURE:

Digitally signed by
CASIMIR L TABAKA
Jun 16, 2023



RADIO FIX AND HOLDING DATA RECORD

NAME: WHISK

STATE: MN

COUNTRY: US

ICAO REGION CODE: K3

LATITUDE/LONGITUDE: 450823.57N/0925743.72W

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	FEET	MRA	MAA
1	GOPHER	GEP	VORTAC	H	085.00	091.00	17.46	17.46		3000	17500
2	FLYING CLOUD	FCM	VOR/DME	L	046.15	047.15		27.84		3400	17500
3	FARMINGTON	FGT	VORTAC	VH	011.00	017.00	31.95	31.95		3000	17500
4	MINNEAPOLIS	MSP	VOR/DME	L	036.55	038.55	18.70	18.70		3400	17500

HOLDING:

HOLDING TYPE OF ACTION: MODIFY

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG TIME	LENGTH DME	HOLDING ALTITUDES MIN	MAX	TEMPLATES MIN	MAX
1	E	GEP	VORTAC	085.00	265.00	R	1		3000	14000	5	11
2	E	GEP	VORTAC	085.00	265.00	R		4	3000	14000	5	11
3	N		WP	017.00	197.00	R		4	3000	14000	5	11
4	N	FGT	VORTAC	011.00	191.00	R	1		4000	14000	6	11
5	N	FGT	VORTAC	011.00	191.00	R		4	4000	14000	6	11
6	NE	MSP	VOR/DME	036.55	216.55	R	1		4000	14000	5	11
7	NE	MSP	VOR/DME	036.55	216.55	R		4	4000	14000	5	11

CONTROLLING OBSTRUCTIONS:

PAT	AIR SPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	450730.00N/0925754.00W	1250	4E
2	200	AAO	450730.00N/0925754.00W	1250	4E
3	200	AAO	450730.00N/0925754.00W	1250	4E
4	200	TOWER (27-000481)	450828.02N/0930602.27W	1426	5D
5	200	TOWER (27-000481)	450828.02N/0930602.27W	1426	5D
6	200	AAO	451506.00N/0924948.00W	1280	4E
7	200	AAO	451506.00N/0924948.00W	1280	4E

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:

GOPHER (FAC 1) AND FARMINGTON (FAC 3) USED TO ESTABLISH FIX COORDINATES.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE (US)
EN ROUTE	V78	1, 2, 3, 4				
IAP	RNAV (GPS) RWY 22			KMSP	MINNEAPOLIS	MN (US)
IAP	ILS OR LOC RWY 14	1, 2, 3	1, 2	KSTP	ST PAUL	MN (US)
IAP	ILS OR LOC RWY 14 (ALT MA)	4	6, 7	KSTP	ST PAUL	MN (US)
IAP	ILS OR LOC RWY 32	1, 4	6, 7	KSTP	ST PAUL	MN (US)
IAP	ILS OR LOC RWY 32 (ALT MA)	3	4, 5	KSTP	ST PAUL	MN (US)
IAP	RNAV (GPS) RWY 14		3	KSTP	ST PAUL	MN (US)
IAP	RNAV (GPS) RWY 32		3	KSTP	ST PAUL	MN (US)
STAR	AGUDE	1, 2, 3, 4		KCFE	BUFFALO	MN (US)
STAR	AGUDE	1, 2, 3, 4		KFBL	FARIBAULT	MN (US)
STAR	AGUDE	1, 2, 3, 4		KGYL	GLENCOE	MN (US)
STAR	AGUDE	1, 2, 3, 4		KMGG	MAPLE LAKE	MN (US)
STAR	AGUDE	1, 2, 3, 4		KANE	MINNEAPOLIS	MN (US)
STAR	AGUDE	1, 2, 3, 4		KFCM	MINNEAPOLIS	MN (US)
STAR	AGUDE	1, 2, 3, 4		KLVN	MINNEAPOLIS	MN (US)
STAR	AGUDE	1, 2, 3, 4		KMIC	MINNEAPOLIS	MN (US)
STAR	AGUDE	1, 2, 3, 4		KSGS	SOUTH ST PAUL	MN (US)
STAR	AGUDE	1, 2, 3, 4		21D	ST PAUL	MN (US)
STAR	AGUDE	1, 2, 3, 4		KSTP	ST PAUL	MN (US)
STAR	AGUDE	1, 2, 3, 4		KRNH	NEW RICHMOND	WI (US)
STAR	AGUDE	1, 2, 3, 4		KOEO	OSCEOLA	WI (US)

QUALITY
34
CHECKED

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 15

DATE OF REVISION: 10/05/2023

REASON FOR REVISION:

1. REMOVED K21D RNAV (GPS) RWY 32 FROM FIX USE.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A432

NAME: CASEY HILL

APPROVED BY:

DATE: 10/05/2023

OFFICE: AJV-A432

NAME: CASIMIR TABAKA

SIGNATURE:

Digitally signed by
CASIMIR L TABAKA
Jun 16, 2023

QUALITY
34
CHECKED