

# RADIO FIX AND HOLDING DATA RECORD

**NAME:** WATERLOO VOR/DME      **STATE:** IA      **COUNTRY:** US      **ICAO REGION CODE:** K3  
**LATITUDE/LONGITUDE:** 423323.39N/0922356.13W      **TYPE:**  
**AIRSPACE DOCKET:** 19-AGL-16      **FIX TYPE OF ACTION:** NO CHANGE

## FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	MRA FEET	MAA
1	WATERLOO	ALO	VOR/DME	L						27000

## EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
ALO	VOR/DME	R-184	67	18000	27000

## 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	SE	ALO	VOR/DME	157.00	337.00	R	1		4000	6000	4	5

## CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (19-000022)	422958.00N/0921551.00W	1540	4D
UPN	200	TOWER (19-000022)	422958.00N/0921551.00W	1540	4D

## HOLDING RESTRICTIONS:

UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 3000.

## REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.  
 ASSIGNED FACILITY MAGVAR: E0/2020.  
 ALO R-184 ESV ALLOWS FACILITY TO SUPPORT J233 AS A LOW FACILITY.

## FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	DES MOINES			KDSM	DES MOINES	IA (US)
DP	ROCHESTER			KANE	MINNEAPOLIS	MN (US)
DP	ROCHESTER			KFCM	MINNEAPOLIS	MN (US)
DP	ROCHESTER			KMSP	MINNEAPOLIS	MN (US)
DP	ROCHESTER			KSTP	ST PAUL	MN (US)
EN ROUTE	T389					(US)
EN ROUTE	J233					IA (US)
EN ROUTE	V100					IA (US)
EN ROUTE	V120					IA (US)
EN ROUTE	V67					IA (US)
EN ROUTE	V77					IA (US)
IAP	LOC RWY 12			KCCY	CHARLES CITY	IA (US)
IAP	ILS OR LOC RWY 12			KALO	WATERLOO	IA (US)
IAP	LOC BC RWY 30			KALO	WATERLOO	IA (US)
IAP	VOR RWY 12			KALO	WATERLOO	IA (US)
IAP	VOR RWY 18			KALO	WATERLOO	IA (US)
IAP	VOR RWY 24			KALO	WATERLOO	IA (US)
IAP	VOR RWY 6			KALO	WATERLOO	IA (US)
IAP	VOR-A		1	KC25	WAVERLY	IA (US)
STAR	KASPR			KMSP	MINNEAPOLIS	MN (US)

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

**COMPULSORY REPORTING POINT:** NO

**RECORD REVISION NUMBER:** 16

**DATE OF REVISION:** 07/16/2020

## REASON FOR REVISION:

- AIRSPACE DOCKET: ADDED 19-AGL-16.
- EXPANDED SERVICE VOLUME (ESV) SECTION: ADDED ALO R-184.
- REMARKS SECTION: CHANGED APPROVED ESV FOR ALO R-184, 67NM, MIN ALT 18000 TO MAX ALT 27000 ALLOWS FACILITY TO SUPPORT J233 AS A LOW FACILITY TO READ ALO R-184 ESV ALLOWS FACILITY TO SUPPORT J233 AS A LOW FACILITY.
- FIX USE SECTION: ADDED T389 EN ROUTE.

**INITIATED BY:**

**DATE:**

**ORGANIZATION:**

**NAME:**

**OFFICE OF PRIMARY RESPONSIBILITY:**

AJV-A423

**NAME:** MICHAEL GARRITY

**APPROVED BY:**

**DATE:**

**OFFICE:** AJV-A420

**NAME:** MARLON ROBINSON

**SIGNATURE:**

**DISTRIBUTION:**

**NFDC**  
**FPO:** CEN  
**ARTCC:** ZAU  
**ATC FACILITY:** ALO APP CON  
**OTHER:** ZMP