Flight Procedure Tracking Form

Action:	Task Type:	Date Open:	Task #:	Request #:
FLIGHT CHECK	SID	10/03/2012	2012100323937001002	20121003239370

Procedure:	Airport ID:	Airport:	Reimbursable #:
SID LEWIS THREE FORT LEWIS WA KGRF	KGRF	GRAY AAF (JOINT BASE LEWIS-MCCHORD)	

City:	ST:	GPS #:	Estimated Chart Date:	FICO #:
FORT LEWIS/TACOMA	WA		05/02/2013	

Fac ID:	Fac. Type:	Specialist:
	Proc T	ROBERT HAMILTON

Procedure Review

	Rec'd	Rel'd	Full Name	Comments
Lead:		11/14/2012	ROBERT HAMILTON	
QA:	11/14/2012	01/10/2013	SCOTT BEARD	
Liaison:	01/10/2013		Spurlin	ARMY - MAGVAR

MAG VAR

Procedure Comments: ENROUTE-NON

Remark Type: INFORMATION

MCG 10 of 10

FORT LEWIS/TACOMA, WA GRAY AAF (JOINT BASE LEWIS-MCCHORD) (KGRF) LEWIS THREE (SID) ENROUTE-NO FC: 3.19.13 PUB: 5.2.13

ATTACHED FORMS: 8260-21B; 8260-2(S): (INFO ONLY) MCCHORD (TCM) VTAC, REV 3; OLYMPIA (OLM) VTAC, REV 12; SEATTLE (SEA) VTAC, REV 16.

CONTACT: DON SMITH/MARLON ROBINSON-AJV-352 LEADS, 405.954.1036 / 405.954.3636.

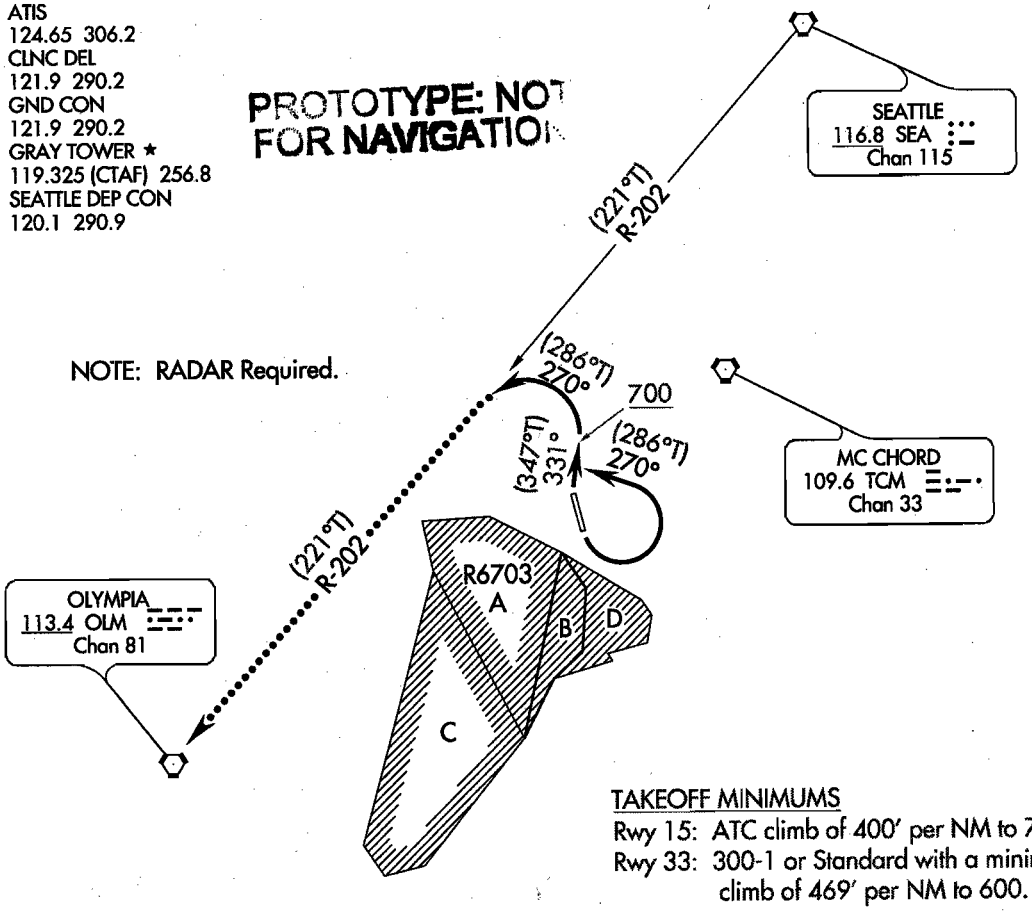
LEWIS THREE DEPARTURE

SL-413 [USA]

GRAY AAF (KGRF)
FORT LEWIS, WASHINGTON

ATIS
124.65 306.2
CLNC DEL
121.9 290.2
GND CON
121.9 290.2
GRAY TOWER ★
119.325 (CTAF) 256.8
SEATTLE DEP CON
120.1 290.9

PROTOTYPE: NOT FOR NAVIGATION



NOTE: RADAR Required.

TAKEOFF MINIMUMS
Rwy 15: ATC climb of 400′ per NM to 700.
Rwy 33: 300-1 or Standard with a minimum climb of 469′ per NM to 600.

TAKEOFF OBSTACLE NOTES
Rwy 15: Trees 1823′ from DER, 750′ right of centerline, up to 100′ AGL/439′ MSL.
Rwy 33: Trees 2482′ from DER, 1163′ left of centerline, up to 100′ AGL/479′ MSL.

NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 15:
Turn left as soon as practicable, thence...

TAKEOFF RUNWAY 33:
Climb heading 331° to 700, thence...

...Turn left (unless otherwise directed by ATC) heading 270° for RADAR vectors to assigned route. Maintain altitude as assigned by ATC. Expect filed altitude within 5 minutes after departure.

LOST COMMUNICATIONS:
If no transmissions are received within three minutes after departure, continue climb to assigned altitude, intercept and proceed via SEA R-202 to the OLM VORTAC, then via assigned route.

Federal Aviation Administration

Memorandum

FEB 14 2013

Date:

To: Mike Foster
HQ USAASA, ATAS-AI
9325 Gunston, Suite N 319
Fort Belvoir, VA 22060-5582

From: Susan L W Crumb, Manager, Eastern Products Team AJV-352

Reply To Attn Of: (405) 954-8830
FAX (405) 954-9530

Subject: **ACTION:** Transmittal of Data

The attached Army Form(s) for Gray AAF (Joint Base Lewis-MCChord), Fort Lewis/Tocoma, WA (KGRF) are forwarded for further processing.

8260-11	COPTER RNAV (GPS) RWY 15, AMDT 2 ILS OR LOC RWY 15, AMDT 7 RNAV (GPS) RWY 15, AMDT 1 RNAV (GPS) RWY 33, AMDT 1
8260-12	RADAR 1, AMDT 2
8260-13	COPTER NDB RWY 15, AMDT 2 NDB RWY 15, AMDT 21 NDB RWY 33, AMDT 7
8260-21B	LEWIS THREE
8260-21	TAKEOFF MINIMUMS, AMDT 3

The following FAA forms have been forwarded to NFDC:

8260-2	CFBMH, WA ORIG*	CIKRI, WA REV *
	CODGU, WA REV 3*	ECEKO, WA REV 1*
	EMOFO, WA REV 1*	ETAHO, WA REV 1*
	GRAYE NDB, WA REV 11*	
	HUMUT, WA REV 1*	LACOMAS NDB, WA REV 1*
	UGVIF, WA ORIG*	VOPUY, WA REV 1*

Attachment

UNITED STATES
ARMY

GRAPHIC DEPARTURE PROCEDURE (DP)

☐ OBSTACLE ☒ SID ☐ RNAV

1. Bearings, headings, courses, tracks, and radials are magnetic.
2. Distances are in nautical miles.
3. Altitudes are minimum altitudes unless otherwise indicated.
4. Graphic depiction attached.

(1) DP Route Description:
TAKEOFF RWY 15: TURN LEFT AS SOON AS PRACTICABLE, THENCE...

TAKEOFF RWY 33: CLIMB HEADING 331.07 TO 700, THENCE...

...TURN LEFT (UNLESS OTHERWISE DIRECTED BY ATC) HEADING 270 FOR RADAR VECTORS TO ASSIGNED ROUTE. MAINTAIN ALTITUDE AS ASSIGNED BY ATC. EXPECT FILED ALTITUDE WITHIN 5 MINUTES AFTER DEPARTURE.

(2) Transition Routes (Graphic Depiction Only)

(a) Transition Name	(b) Transition Computer Codes	(c) From FIX/NAVAID	(d) To FIX/NAVAID	(e) Course / Distance	(f) MEA / MOCA	(g) Crossing Altitudes/Fixes

(3) Procedural Data Notes / Takeoff Minimums:
RWY 15: ATC CLIMB OF 400 FT PER NM TO 700.
RWY 33: 300-1 OR STANDARD WITH A MINIMUM CLIMB OF 469 FT PER NM TO 600 (NOT FOR CIVIL USE).
CHART NOTE: RADAR REQUIRED.

(4) Takeoff Obstacle Notes:
NOTE: RWY 15, TREES 1823 FT FROM DER, 750 FT RIGHT OF CENTERLINE, UP TO 100 FT AGL/439 FT MSL.
NOTE: RWY 33, TREES 2482 FT FROM DER, 1163 FT LEFT OF CENTERLINE, UP TO 100 FT AGL/479 FT MSL.

(5) Controlling Obstacles: RWY 33: 479 FT MSL TREE 470538.41N/1223526.64W.
OBSTACLES MANDATING ODP ROUTE DEVELOPMENT: RWY 15, 33 - 14610 FT MSL AAO 465107.40N/1214521.90W, 6842 FT MSL TERRAIN 473919.50N/1230822.50W.

(6) Fixes and/or NAVAID'S : CHART NAVAIDS: OLM VORTAC, TCM VORTAC, SEA VORTAC.

(7) DP Name	(8) Number	(9) DP Computer Code	(10) Superseded Number	(11) Dated	(12) Effective Date
LEWIS	THREE	GRAY3.GRAY	TWO	6 Sep 01	

FAA Form 8260-21B (computer generated)

(13) Airports Served

Airport Name	City/State/Country
GRAY AAF (JOINT BASE LEWIS-MCCHORD)	**FORT LEWIS / TACOMA, WA**

(14) Lost Communications Procedures:

IF NO TRANSMISSIONS ARE RECEIVED WITHIN THREE MINUTES AFTER DEPARTURE, CONTINUE CLIMB TO ASSIGNED ALTITUDE, INTERCEPT AND PROCEED VIA SEA VORTAC R-202 TO THE OLM VORTAC, THEN VIA ASSIGNED ROUTE.

(15) Communications: ATIS, CLEARANCE DELIVERY, GROUND CONTROL, ATCT, SEATTLE DEPARTURE

(16) Additional Flight Data:

CHART RESTRICTED AREAS: R-6703A, B, C, D.

(16A) TA:

(17) Continuation:

(7) DP Name	(8) Number	(9) DP Computer Code	(10) Superseded Number	(11) Dated	(12) Effective Date
LEWIS	THREE	GRAY3.GRAY	TWO	6 Sep 01	

(18) Remarks:

DOD FORMULA USED TO CALCULATE RWY 33 CLIMB GRADIENT.

CONCURRENT WITH KGRF ILS OR LOC RWY 15, AMDT 7

(19) Changes:
1. AIRPORT MAGVAR UPDATE.
2. RWY 33 CLIMB RWY HEADING TO CLIMB HEADING 331.07.
3. RWY 15 CLIMB RWY HEADING TO TURN LEFT AS SOON...
4. RWY 15 ATC CLIMB OF 400' TO 700.
5. CHART RADAR REQUIRED.
6. RAISED RWY 33 CLIMB-TO FROM 600' TO 700'.
7. UPDATED AIRPORT NAME/CITY.

(20) Reasons:
1. 2015 MAGVAR 16E.
2. 331.07 IS RWY HEADING, PER CRITERIA.
3,4. ATC REQUEST, USAASA APPROVED, TO STAY CLEAR OF RESTRICTED AREAS.
5. RADAR REQUIRED.
6. TO MATCH RWY 15.
7. JOINT BASE

(21) Coordinated with: AIR TRAFFIC ☑	(22) RECOMMENDED BY Signature: Susan R W Crumb Date: SUSAN CRUMB	(23) Required Effective Date: CONCURRENT

(24) FLIGHT INSPECTED BY	(25) DEVELOPED BY	(26) APPROVED BY ARMY
Name: Charles Cunningham Date: 2/6/13 for Susan R W Crumb	Signature: Susan R W Crumb Date: for ROBERT HAMILTON 10/10/12	Signature: Date: FEB 14 2013

(7) DP Name	(8) Number	(9) DP Computer Code	(10) Superseded Number	(11) Dated	(12) Effective Date
LEWIS	THREE	GRAY3.GRAY	TWO	6 Sep 01	

RADIO FIX AND HOLDING DATA RECORD

INFO ONLY

NAME: MCCHORD VORTAC **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 470851.60N/1222830.10W **TYPE:**

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	MCCHORD	TCM	VORTAC	T							20000

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	E	TCM	VORTAC	074.00	254.00	R	1		5000	10000	5	9

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	470645.00N/1221457.00W	847	4E
1	310	AAO	470242.00N/1220745.00W	2146	4E

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	ILS OR LOC RWY 16C (ALT MISS)	KSEA	SEATTLE	WA (US)
1	ILS RWY 16C (SA CAT I, CAT II/III) (ALT MISS)	KSEA	SEATTLE	WA (US)
1	ILS RWY 16L (SA CAT I, CAT II/III) (ALT MISS)	KSEA	SEATTLE	WA (US)
1	ILS OR LOC RWY 16R (ALT MISS)	KSEA	SEATTLE	WA (US)
1	ILS RWY 16R (SA CAT I, CAT II/III) (ALT MISS)	KSEA	SEATTLE	WA (US)
1	ILS OR LOC RWY 16L (ALT MISS)	KSEA	SEATTLE	WA (US)

REMARKS:
USED TEMPLATE #13 TO EVALUATE C-I-H.
PRIOR COORDINATION REQUIRED WITH SEA APP FOR HOLDING OVER R-6703A/B/C/D.
PRECIPITOUS TERRAIN EVAL COMPLETE.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	AUBURN			KS50	AUBURN	WA (US)
DP	PAINE			KPAE	EVERETT	WA (US)
DP	YELM			KOLM	OLYMPIA	WA (US)
DP	KENT			KBFI	SEATTLE	WA (US)
DP	ALDER			KTCM	TACOMA	WA (US)
DP	OLYMPIC			KTCM	TACOMA	WA (US)
DP	NARROWS			KTIW	TACOMA	WA (US)
IAP	GPS RWY 34			KPLU	PUYALLUP	WA (US)
IAP	NDB RWY 16			KRNT	RENTON	WA (US)
IAP	ILS RWY 13R			KBFI	SEATTLE	WA (US)
IAP	LOC/DME RWY 13R			KBFI	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 16C (ALT MISS)		1	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 16L (ALT MISS)		1	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 16R (ALT MISS)		1	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16C (SA CAT I, CAT II/III) (ALT MISS)		1	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16L (SA CAT I, CAT II/III) (ALT MISS)		1	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16R (SA CAT I, CAT II/III) (ALT MISS)		1	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 16			KTCM	TACOMA	WA (US)
IAP	ILS Y RWY 34			KTCM	TACOMA	WA (US)
IAP	ILS Y RWY 34 (CAT II)			KTCM	TACOMA	WA (US)
IAP	ILS Z RWY 34			KTCM	TACOMA	WA (US)
IAP	TACAN OR ILS X RWY 34			KTCM	TACOMA	WA (US)
IAP	TACAN RWY 16			KTCM	TACOMA	WA (US)
STAR	OLYMPIA			KPAE	EVERETT	WA (US)
STAR	OLYMPIA			KRNT	RENTON	WA (US)
STAR	OLYMPIA			KBFI	SEATTLE	WA (US)
STAR	JAWBN			KSEA	SEATTLE	WA (US)
STAR	OLYMPIA			KSEA	SEATTLE	WA (US)
STAR	ARRIE			KTCM	TACOMA	WA (US)
STAR	JAWBN			KTCM	TACOMA	WA (US)

QUALITY CHECKED

STAR	PUGET	KTCM	TACOMA	WA (US)
STAR	WHYTE	KTCM	TACOMA	WA (US)

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

COMPULSORY REPORTING POINT: NO

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

REASON FOR REVISION:
ADDED STAR TO CHART PUB.

DEVELOPED BY: **DATE:** 08/30/2012 **OFFICE:** AJV-354 **NAME:** MARK ADAMS

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEZ SILAGYI

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: SEA APP/DEP CON
OTHER: MCCHORD AFB ATC

QUALITY 5 CHECKED

INFO ONLY

RADIO FIX AND HOLDING DATA RECORD

NAME: OLYMPIA VORTAC **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 465817.90N/1225406.60W **TYPE:**

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	OLYMPIA	OLM	VORTAC	H							45000

FIX RESTRICTIONS:
MCA V204 3200 WESTBOUND

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	S	OLM	VORTAC	176.00	356.00	R	1		3100	10000	4	9
2	SE	OLM	VORTAC	151.00	331.00	L	1-1 1/2		4000	17500	4	16
3	S	OLM	VORTAC	176.00	356.00	L	1		4000	14000	4	10

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	465039.00N/1225006.00W	1113	4E
1	310	AAO	470012.00N/1230309.00W	1995	4E
2	200	AAO	465039.00N/1225006.00W	1113	4E
3	200	AAO	470009.00N/1230312.00W	2002	4E
3	310	TOWER (53-000907)	465831.00N/1230821.00W	2972	5E

REASON FOR NONSTANDARD HOLDING:
PAT 2 TO AVOID R-6703
PAT 3 TO AVOID R-6703

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.
PRIOR COORDINATION REQUIRED WITH CONTROLLING AGENCY FOR HOLDING OVER R-6703, AND RAINER MOA, PAT 1 ALL ALTITUDES.
PAT 2 ABOVE 6000', PAT 3 ABOVE 8000'.
ADDITIONAL AIRSPACE REQUIRED FOR HOLDING PATTERN 1, P-12.

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	TAKE-OFF MINIMUMS	KOLM	OLYMPIA	WA (US)
3	YELM	KOLM	OLYMPIA	WA (US)

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
PAT 3 200K OBSTACLE 1.80 NM INTO SECONDARY.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	PORTLAND	1		KPDX	PORTLAND	OR (US)
DP	PAINE	1		KPAE	EVERETT	WA (US)
DP	LEWIS	1		KGRF	FORT LEWIS	WA (US)
DP	TAKE-OFF MINIMUMS	1	1	KOLM	OLYMPIA	WA (US)
DP	YELM	1	3	KOLM	OLYMPIA	WA (US)
DP	KENT	1		KBFI	SEATTLE	WA (US)
DP	NEEDLE	1		KBFI	SEATTLE	WA (US)
DP	HAROB (RNAV)			KSEA	SEATTLE	WA (US)
DP	SEATTLE	1		KSEA	SEATTLE	WA (US)
DP	SUMMA	1		KSEA	SEATTLE	WA (US)
DP	ALDER	1		KTCM	TACOMA	WA (US)
DP	OLYMPIC	1		KTCM	TACOMA	WA (US)
DP	PUGET	1		KTCM	TACOMA	WA (US)
DP	NARROWS	1		KTIW	TACOMA	WA (US)
DP	TAKE-OFF MINIMUMS	1		KTIW	TACOMA	WA (US)
EN ROUTE	J126	1				(US)
EN ROUTE	J34	1				(US)
EN ROUTE	J54	1				(US)
EN ROUTE	V165	1				(US)
EN ROUTE	V187	1				(US)
EN ROUTE	V204	1				(US)
EN ROUTE	V287	1	2			(US)
IAP	RNAV (GPS) RWY 26			KAST	ASTORIA	OR (US)
IAP	ILS OR LOC RWY 19	1		KPWT	BREMERTON	WA (US)
IAP	RNAV (GPS) RWY 1			KPWT	BREMERTON	WA (US)
IAP	RNAV (GPS) RWY 16			KCLS	CHEHALIS	WA (US)
IAP	COPTER NDB 15	1		KGRF	FORT LEWIS	WA (US)
IAP	ILS OR LOC RWY 15	1		KGRF	FORT LEWIS	WA (US)

QUALITY CHECKED

IAP	NDB RWY 15	1		KGRF	FORT LEWIS	WA (US)
IAP	NDB RWY 33	1		KGRF	FORT LEWIS	WA (US)
IAP	RNAV (GPS) RWY 15			KGRF	FORT LEWIS	WA (US)
IAP	RNAV (GPS) RWY 33			KGRF	FORT LEWIS	WA (US)
IAP	ILS OR LOC RWY 17	1		KOLM	OLYMPIA	WA (US)
IAP	RNAV (GPS) RWY 17			KOLM	OLYMPIA	WA (US)
IAP	RNAV (GPS) RWY 35			KOLM	OLYMPIA	WA (US)
IAP	VOR-A	1	3	KOLM	OLYMPIA	WA (US)
IAP	VOR/DME RWY 35	1	3	KOLM	OLYMPIA	WA (US)
IAP	ILS RWY 31L	1		KBFI	SEATTLE	WA (US)
IAP	GPS RWY 23			KSHN	SHELTON	WA (US)
IAP	NDB OR GPS-A	1		KSHN	SHELTON	WA (US)
IAP	NDB RWY 35	1		KTIW	TACOMA	WA (US)
IAP	RNAV (GPS) RWY 35			KTIW	TACOMA	WA (US)
STAR	OLYMPIA	1	2	KPAE	EVERETT	WA (US)
STAR	OLYMPIA	1	2	KRNT	RENTON	WA (US)
STAR	OLYMPIA	1	2	KBFI	SEATTLE	WA (US)
STAR	OLYMPIA	1	2	KSEA	SEATTLE	WA (US)
STAR	ARRIE	1		KTCM	TACOMA	WA (US)
STAR	WHYTE	1		KTCM	TACOMA	WA (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 12 **DATE OF REVISION:** 05/02/2013

REASON FOR REVISION:
UPDATED FIX USE.
UPDATED PAT 3 310 KNOT CONTROLLING OBSTACLE ALTITUDE AND ACCURACY CODE. NEW SURVEY FOR OBSTACLE.

DEVELOPED BY: **DATE:** 10/29/2012 **OFFICE:** AJV-354 **NAME:** LONNIE EVERHART (DUSTIN DAVIDSON)

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: SEA APP CON
OTHER: OLM ATCT

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SEATTLE VORTAC **STATE:** WA **COUNTRY:** US

INFO ONLY

LATITUDE/LONGITUDE: 472607.34N/1221834.62W **TYPE:**

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	SEATTLE	SEA	VORTAC	H							45000

FIX RESTRICTIONS:
MCA V120 6300 EASTBOUND
MCA V4 5200 EASTBOUND
MCA V2-298 4300 EASTBOUND

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	SEA	VORTAC	104.00	284.00	R	1-1 1/2		4700	28000	5	21
2	E	SEA	VORTAC	110.00	290.00	L	1-1 1/2		3000	18000	4	16
3	SE	SEA	VORTAC	130.00	310.00	L	1-1 1/2		3000	18000	4	16
4	E	SEA	VORTAC	104.00	284.00	R	1		3000	3000	4	4

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	472709.00N/1220657.00W	870	4E
1	310	AAO	472024.00N/1215139.00W	3117	4E
2	200	AAO	472357.00N/1220809.00W	765	4E
2	310	AAO	471854.00N/1215815.00W	1368	4E
3	200	AAO	472712.00N/1221709.00W	725	4E
3	310	AAO	470754.00N/1221003.00W	1073	4E
4	200	AAO	472709.00N/1220606.57W	870	4E

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	AUBURN	KS50	AUBURN	WA (US)
2	RENTN	KRNT	RENTON	WA (US)
2	TAKEOFF MINIMUMS	KRNT	RENTON	WA (US)
2	TAKEOFF MINIMUMS	KBFI	SEATTLE	WA (US)
2	KENT	KBFI	SEATTLE	WA (US)
2	NEEDLE	KBFI	SEATTLE	WA (US)
3	TAKEOFF MINIMUMS	KSEA	SEATTLE	WA (US)

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
PAT 1 MAX ALTITUDE AT ATC REQUEST.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	TAKEOFF MINIMUMS			KIOW	IOWA CITY	IA (US)
DP	PORTLAND			KPDX	PORTLAND	OR (US)
DP	AUBURN		1, 4	KS50	AUBURN	WA (US)
DP	PAINE			KPAE	EVERETT	WA (US)
DP	YELM			KOLM	OLYMPIA	WA (US)
DP	WATTR			KCLM	PORT ANGELES	WA (US)
DP	TAKEOFF MINIMUMS			KPLU	PUYALLUP	WA (US)
DP	RENTN		2	KRNT	RENTON	WA (US)
DP	TAKEOFF MINIMUMS		2	KRNT	RENTON	WA (US)
DP	KENT		2	KBFI	SEATTLE	WA (US)
DP	NEEDLE		2	KBFI	SEATTLE	WA (US)
DP	TAKEOFF MINIMUMS		2	KBFI	SEATTLE	WA (US)
DP	BANGR (RNAV)			KSEA	SEATTLE	WA (US)
DP	ELMAA			KSEA	SEATTLE	WA (US)
DP	HAROB (RNAV)			KSEA	SEATTLE	WA (US)
DP	MOUNTAIN			KSEA	SEATTLE	WA (US)
DP	SEATTLE			KSEA	SEATTLE	WA (US)
DP	SUMMA			KSEA	SEATTLE	WA (US)
DP	TAKEOFF MINIMUMS		3	KSEA	SEATTLE	WA (US)
DP	NARROWS			KTIW	TACOMA	WA (US)
DP	TAKEOFF MINIMUMS			KTIW	TACOMA	WA (US)
DP	NACHES			KYKM	YAKIMA	WA (US)
EN ROUTE	J1					(US)
EN ROUTE	J12					(US)
EN ROUTE	J12-70-90					(US)
EN ROUTE	J189					(US)

CITY
5
CHECKED

EN ROUTE	J20			(US)
EN ROUTE	J5			(US)
EN ROUTE	J502			(US)
EN ROUTE	J503			(US)
EN ROUTE	J505			(US)
EN ROUTE	J523			(US)
EN ROUTE	J65			(US)
EN ROUTE	J70			(US)
EN ROUTE	V120			(US)
EN ROUTE	V2-298			(US)
EN ROUTE	V23			(US)
EN ROUTE	V27			(US)
EN ROUTE	V4			(US)
EN ROUTE	V495			(US)
IAP	ILS OR LOC RWY 19	KPWT	BREMERTON	WA (US)
IAP	RNAV (GPS) RWY 34L	KPAE	EVERETT	WA (US)
IAP	RNAV (GPS) RWY 15	KGRF	FORT LEWIS	WA (US)
IAP	RNAV (GPS) RWY 17	KOLM	OLYMPIA	WA (US)
IAP	ILS OR LOC RWY 8	KCLM	PORT ANGELES	WA (US)
IAP	HARBOR VISUAL RWY 13R	KBFI	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 31L	KBFI	SEATTLE	WA (US)
IAP	ILS RWY 13R	KBFI	SEATTLE	WA (US)
IAP	LOC/DME RWY 13R	KBFI	SEATTLE	WA (US)
IAP	BAY VISUAL RWY 16C	KSEA	SEATTLE	WA (US)
IAP	HUSKY VISUAL RWY 16C	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 16C	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 16L	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 16R	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 34C	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 34L	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 34R	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16C (CAT II)	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16C (CAT III)	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16L (CAT II)	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16L (CAT III)	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16R (CAT II)	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16R (CAT III)	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16R (SA CAT I)	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 34C (CAT II)	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 34L (CAT II)	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 34R (CAT II)	KSEA	SEATTLE	WA (US)
IAP	MALL VISUAL RWY 34C	KSEA	SEATTLE	WA (US)
IAP	ILS RWY17	KTIW	TACOMA	WA (US)
IAP	NDB RWY 35	KTIW	TACOMA	WA (US)
STAR	HELNS	KUAO	AURORA	OR (US)
STAR	HELNS	KHIO	PORTLAND	OR (US)
STAR	HELNS	KPDX	PORTLAND	OR (US)
STAR	HELNS	KTTD	PORTLAND	OR (US)
STAR	CHINS	KPAE	EVERETT	WA (US)
STAR	OLYMPIA	KPAE	EVERETT	WA (US)
STAR	CHINS	KRNT	RENTON	WA (US)
STAR	GLASR	KRNT	RENTON	WA (US)
STAR	OLYMPIA	KRNT	RENTON	WA (US)
STAR	CHINS	KBFI	SEATTLE	WA (US)
STAR	EPHRATA	KBFI	SEATTLE	WA (US)
STAR	GLASR	KBFI	SEATTLE	WA (US)
STAR	JAWBN	KBFI	SEATTLE	WA (US)
STAR	OLYMPIA	KBFI	SEATTLE	WA (US)
STAR	CHINS	KSEA	SEATTLE	WA (US)
STAR	EPHRATA	KSEA	SEATTLE	WA (US)
STAR	GLASR	KSEA	SEATTLE	WA (US)
STAR	JAWBN	KSEA	SEATTLE	WA (US)
STAR	OLYMPIA	KSEA	SEATTLE	WA (US)
STAR	ARRIE	KTCM	TACOMA	WA (US)
STAR	GLASR	KTCM	TACOMA	WA (US)
STAR	JAWBN	KTCM	TACOMA	WA (US)
STAR	WHYTE	KTCM	TACOMA	WA (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 16 **DATE OF REVISION:** 05/02/2013

REASON FOR REVISION:
CHANGED MINIMUM HOLDING PAT 1 FROM 4000 TO 4700.
CHANGED MINIMUM TEMPLATE PAT 1 FROM 4 TO 5.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 11/13/2012 **OFFICE:** AJV-354 **NAME:** LONNIE EVERHART (DUSTIN DAVIDSON)

APPROVED BY: **DATE:** **OFFICE:** AJV-354 **NAME:** DEBORAH COPELAND

SIGNATURE:

QUALITY CHECKED

DISTRIBUTION: **NFDC**
FPO: WST
ARTCC: ZSE
ATC FACILITY: SEA APP CON
OTHER:

QUALITY CHECKED

Federal Aviation Administration

Memorandum

CONCURRENCES	
ROUTING SYMBOL	AJV-34
	SBaker
INITIALS/SIG	
DATE	
ROUTING SYMBOL	AJV-354
	PGetz/LEverha
INITIALS/SIG	
DATE	
ROUTING SYMBOL	AJV-354
	DCopeland
INITIALS/SIG	
DATE	
ROUTING SYMBOL	AJV-341
	JAlfonso
INITIALS/SIG	
DATE	
ROUTING SYMBOL	
INITIALS/SIG	
DATE	

Date:

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

From: Deborah L. Copeland, Manager, Western Products Team, AJV-354

Subject: **ACTION:** Magnetic Variation Change for Gray AAF (Joint Base Lewis-McChord), Fort Lewis/Tacoma, WA (KGRF)

This rescinds the previously submitted letter on OCT 22 2012 same subject. It changes Estimated Chart Date : 03/07/2013 to read Estimated Chart Date: 05/02/2013.

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.

GRAY AAF (JOINT BASE LEWIS-MCCHORD), LEWIS/TACOMA, WA, (KGRF)

COPTER NDB RWY 15, AMDT 2
COPTER RNAV (GPS) RWY 15, AMDT 2
ILS OR LOC RWY 15, AMDT 7
NDB RWY 15, AMDT 21
NDB RWY 33, AMDT 7
RADAR 1, AMDT 2
RNAV (GPS) RWY 15, AMDT 1
RNAV (GPS) RWY 33, AMDT 1
TAKEOFF MINIMUMS AND OBSTACLE DP, AMDT 3
LEWIS TWO DEPARTURE (VECTOR), AMDT 3

TACOMA NARROW, TACOMA, WA (KTIW)

NDB RWY 35, AMDT 8

Estimated Chart Date: 05/02/2013

Please publish these changes in the National Flight Data Digest.

WASHINGTON

Location	Name	Airport /Facility	Identifier	Assigned Magnetic Variation Is	Epoch Year
Fort Lewis/Tacoma	Gray AAF (Joint Base Lewis-McChord)	Airport	KGRF / GRF	Old 20° East New 16° East	2015
Tacoma		ILS	GRF	Old 20° East New 16° East	2015
Fort Lewis/Tacoma	GRAYE	NDB/M	GRF	Old 20° East New 16° East	2015
Fort Lewis	LACOMAS	NDB/M	LAC	Old 20° East New 16° East	2015

If you have any questions please notify Deborah L. Copeland, deborah.l.copeland@faa.gov (301) 427-5070.

CC AJV-3rf
sjb:x7537:11/27/2012: (U:\AVN100\PIT\MAGVAR\MAGVAR\MAGVAR Letters 2013\ MV Change for Fort Lewis/Tacoma, WA (KGRF) 11-27-12 Requestor:DSmith, Evaluated By: LFortier