Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: IAP	Date Open: 03/09/2011	Task #: 2011030931402502001	Request #: 20110309314025
Procedure: ILS OR LOC RWY 16R AMDT 2		Airport ID: KSEA	Airport: SEATTLE-TACOMA INTL		Reimbursable #:
City: SEATTLE	ST: WA	GPS #:		Estimated Chart Date: 03/07/2013	FICO #:
Fac ID: CJL	Fac. Type: ILS	Specialist: MARK ADAMS			

Procedure Review

P1

	Rec'd	Rel'd	Full Name	Comments
Lead:	08/17/2012	11/20/2012	STEVEN SZUKALA	
QA:	11/20/2012	11/20/2012	STEVEN SZUKALA	
Liaison:	11/20/2012		Spurlin	WAIVER

ESV REQUEST INCLUDED

Procedure Comments: ENROUTE-NON

Remark Type: INFORMATION

pkg 2 of 2

SEATTLE, WA SEATTLE-TACOMA INTL (KSEA) ILS OR LOC RWY 16R, AMDT 2 ENROUTE-NO FC: 1.22.13 PUB: 3.7.13

ATTACHED FORMS: ESV REPORTS; 8260-3; 8260-10; 8260-9; 8260-2(S): AGANE-INT, REV 2; BUGNE-INT, REV 2; CELAK-INT, REV 2; FINKA-INT, REV 1; GRIFY, REV 1;MCCHORD (TCM) VTAC, REV 3; ZERLI-INT, REV 1; (INFO ONLY) PAINE (PAE) VDME, REV 7; TECEE-INT, ORIG.

CONTACT: PETE GETZ/LONNIE EVERHART-AVN-130 LEADS, 405.954.2079/ 405.954.4576.

NEW

ILS or LOC RWY 16R

SEATTLE-TACOMA INTL (SEA)

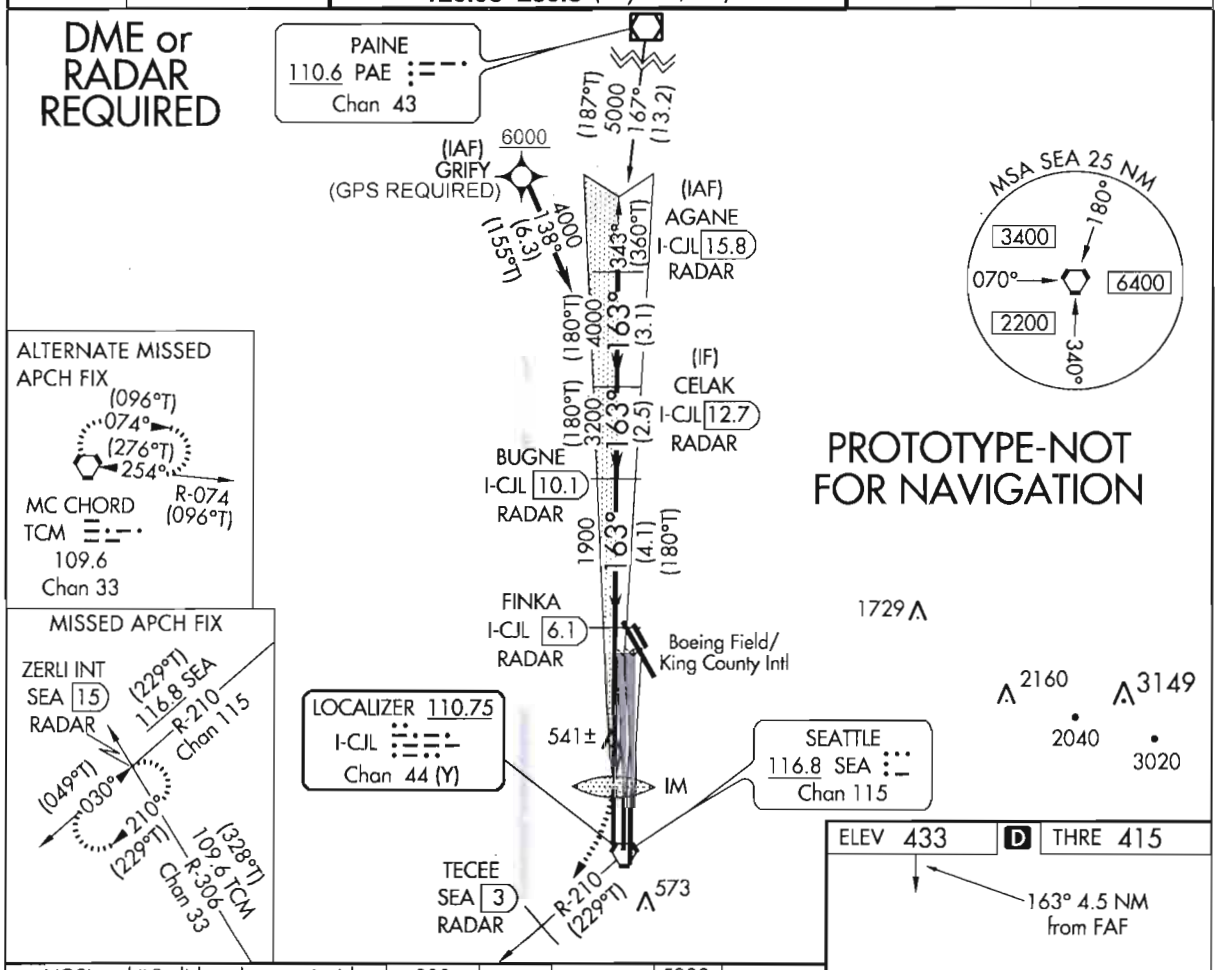
LOC/DME I-CJL	APP CRS	Rwy ldg	8500
110.75	163°	THRE	415
Chan 44 (Y)		Apt Elev	433

Simultaneous approach authorized with Rwy 16L/C. DME or Radar required.

ALSF-2

MISSED APPROACH: Climb to 900 then climb on heading 195° and on SEA VORTAC R-210 to cross TECEE/SEA 3 DME/RADAR at or below 2000, then climb to 5000 on SEA VORTAC R-210 to ZERLI INT/SEA 15 DME/RADAR and hold, continue climb-in-hold to 5000.

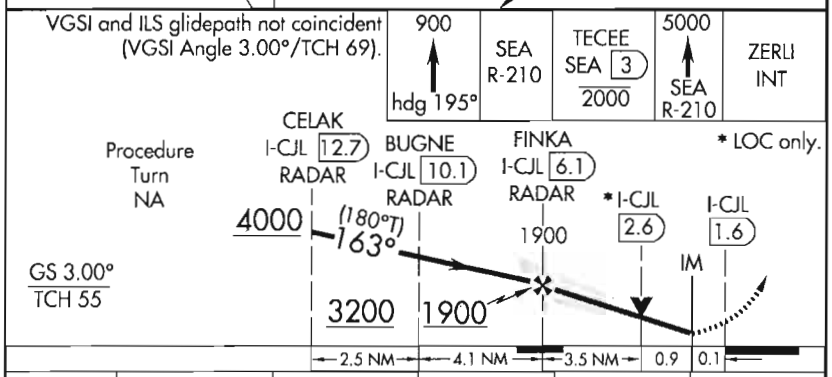
ATIS	SEATTLE APP CON	SEATTLE TOWER	GND CON	CLNC DEL
118.0	133.65 273.45	119.9 239.3 (Rwys 16C/34C, 16L/34R) 120.95 239.3 (Rwy 16R/34L)	121.7	128.0



ELEV 433 | D | THRE 415

163° 4.5 NM from FAF

VGSI and ILS glidepath not coincident (VGSI Angle 3.00°/TCH 69).



CATEGORY	A	B	C	D	E
S-ILS 16R	615/18		200 (200-½)		NA
S-LOC 16R	800/24	385 (400-½)	800/35	385 (400-¾)	NA
CIRCLING	1000-1	567 (600-1)	1000-1½ 567 (600-1½)	1000-2 567 (600-2)	NA

HIRL all Rwys
TDZ/CL Rwys 16L, 16C, 16R and 34R

FAF to MAP 4.5 NM

Knots	60	90	120	150	180
Min:Sec	4:30	3:00	2:15	1:48	1:30

N&W

ILS RWY 16R (SA CAT I)

SEATTLE-TACOMA INTL (SEA)

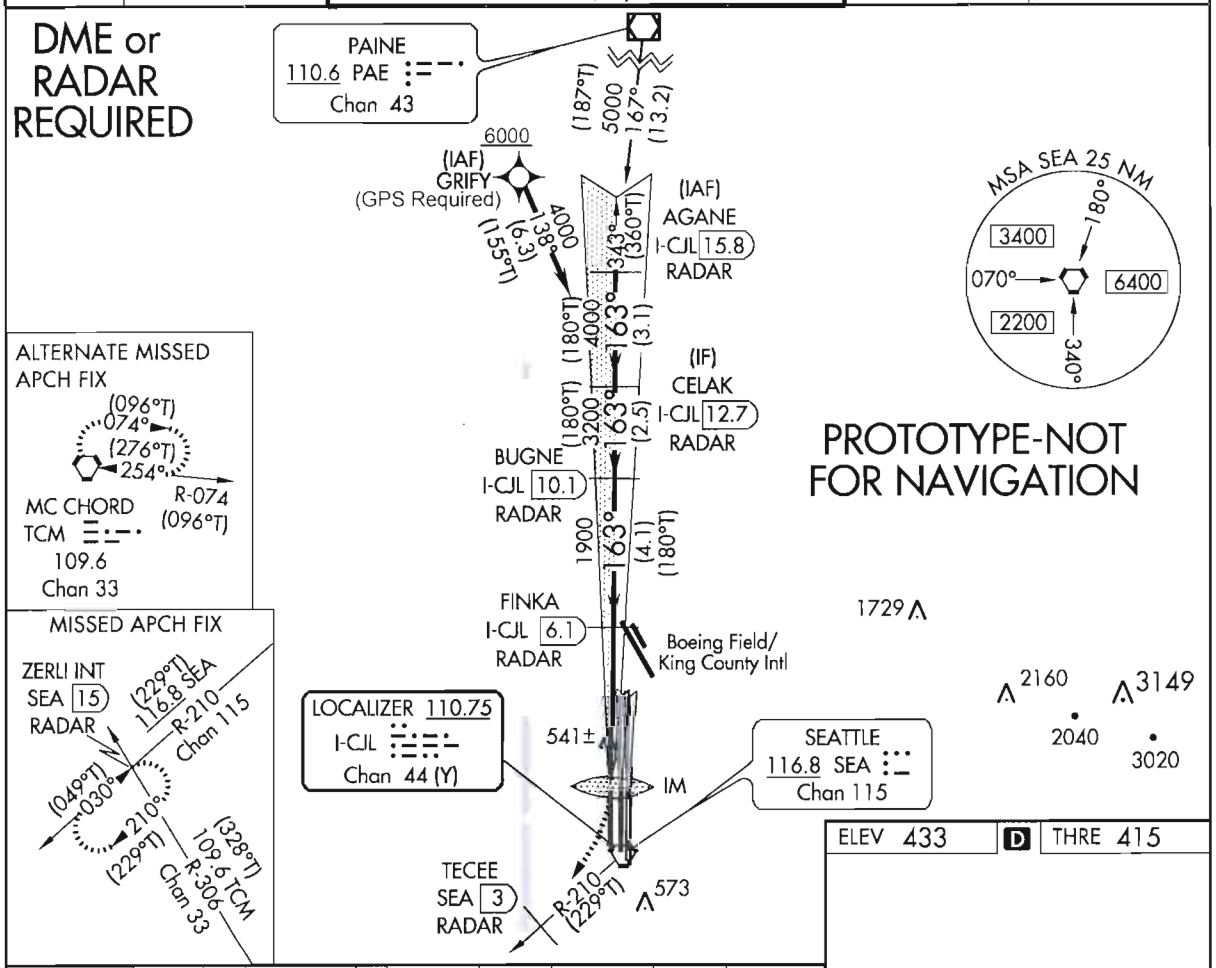
LOC/DME I-CJL	APP CRS	Rwy ldg	8500
110.75	163°	THRE	415
Chan 44 (Y)		Apt Elev	433

Simultaneous approach authorized with Rwy 16L/C. DME or Radar required. Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH.

ALSF-2

MISSED APPROACH: Climb to 900 then climb on heading 195° and on SEA VORTAC R-210 to cross TECEE/SEA 3 DME/RADAR at or below 2000, then climb to 5000 on SEA VORTAC R-210 to ZERLI INT/SEA 15 DME/RADAR and hold, continue climb-in-hold to 5000.

ATIS	SEATTLE APP CON	SEATTLE TOWER	GND CON	CLNC DEL
118.0	133.65 273.45	119.9 239.3 (Rwys 16C/34C, 16L/34R) 120.95 239.3 (Rwy 16R/34L)	121.7	128.0

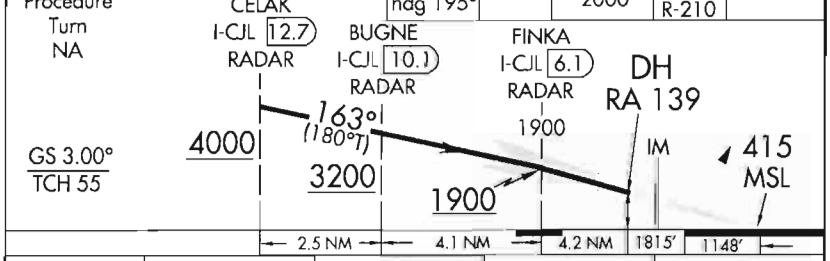


ELEV 433 | D | THRE 415

VGSI and ILS glidepath not coincident (VGSI Angle 3.00°/TCH 69).

2000	SEA R-210	TECEE SEA 3 2000	5000	ZERLI INT
hdg 195°			SEA R-210	

Procedure Turn NA



CATEGORY	A	B	C	D
S-ILS 16R	RA 176 /14 150 DA 565			

SA CAT I ILS-SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

HIRL all Rwys
TDZ/CL Rwys 16L, 16C, 16R and 34R

NEW

ILS RWY 16R (CAT II)
SEATTLE-TACOMA INTL (SEA)

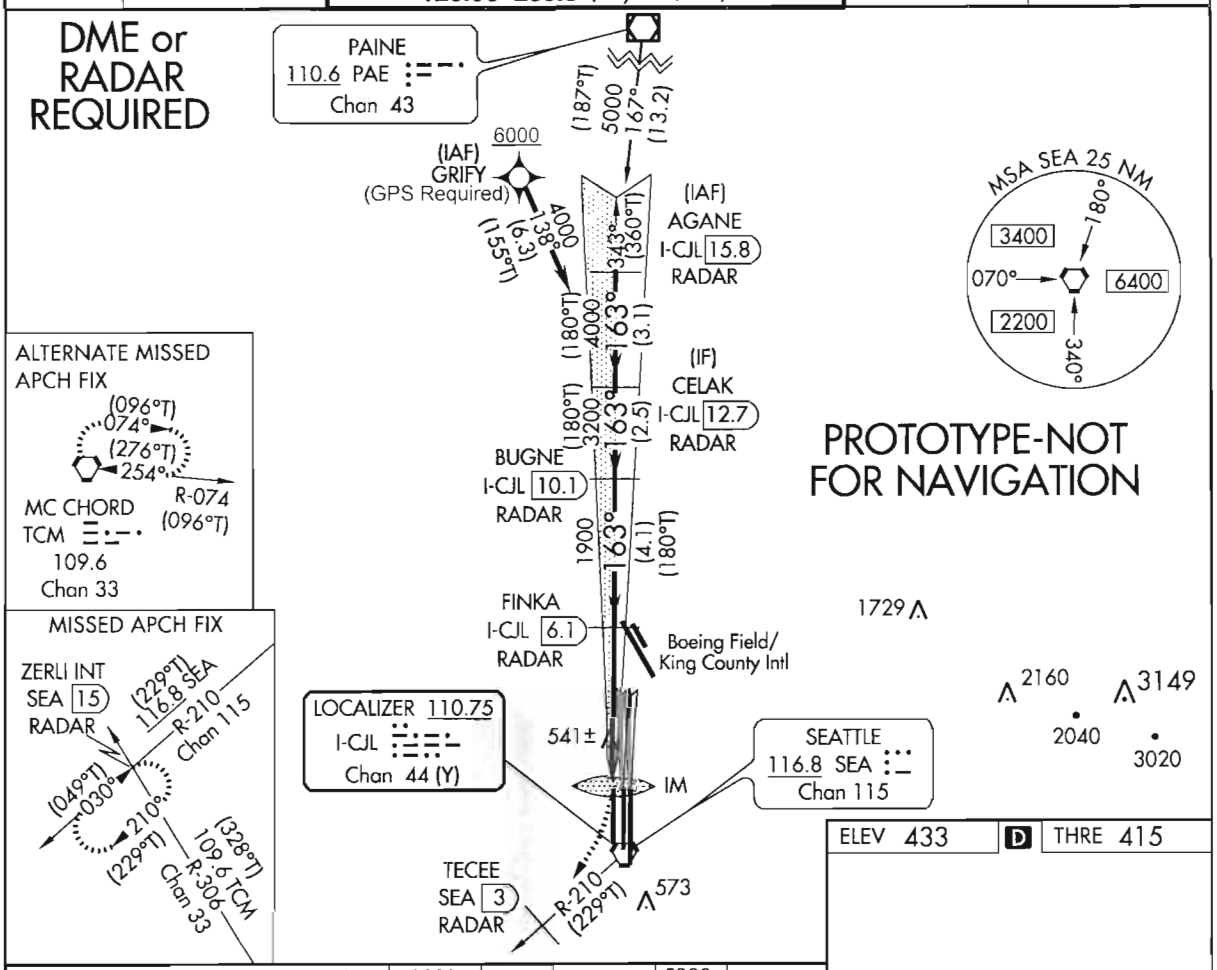
LOC/DME I-CJL	APP CRS	Rwy ldg	8500
110.75	163°	THRE	415
Chan 44 (Y)		Apt Elev	433

DME or Radar required. RVR 1000 authorized with specific OPSPEC, MSPEC, or LOA approval and use of autoland or HUD to touchdown. Simultaneous approach authorized with Rwy 16L/C.

ALSF-2

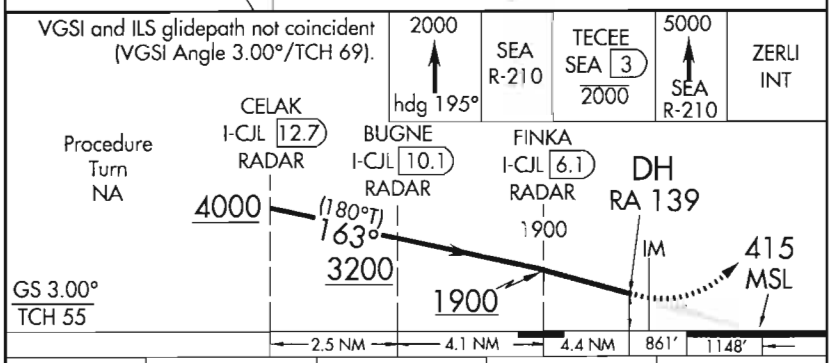
MISSED APPROACH: Climb to 900 then climb on heading 195° and on SEA VORTAC R-210 to cross TECEE/SEA 3 DME/RADAR at or below 2000, then climb to 5000 on SEA VORTAC R-210 to ZERLI INT/SEA 15 DME/RADAR and hold, continue climb-in-hold to 5000.

ATIS	SEATTLE APP CON	SEATTLE TOWER	GND CON	CLNC DEL
118.0	133.65 273.45	119.9 239.3 (Rwys 16C/34C, 16L/34R) 120.95 239.3 (Rwy 16R/34L)	121.7	128.0



ELEV 433 | D | THRE 415

VGSI and ILS glidepath not coincident (VGSI Angle 3.00°/TCH 69).



CATEGORY	A	B	C	D
S-ILS 16R	RA 139/12 100 DA 515			

CATEGORY II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

HIRL all Rwys
TDZ/CL Rwys 16L, 16C, 16R and 34R

NEW

ILS RWY 16R (CAT III)
SEATTLE-TACOMA INTL (SEA)

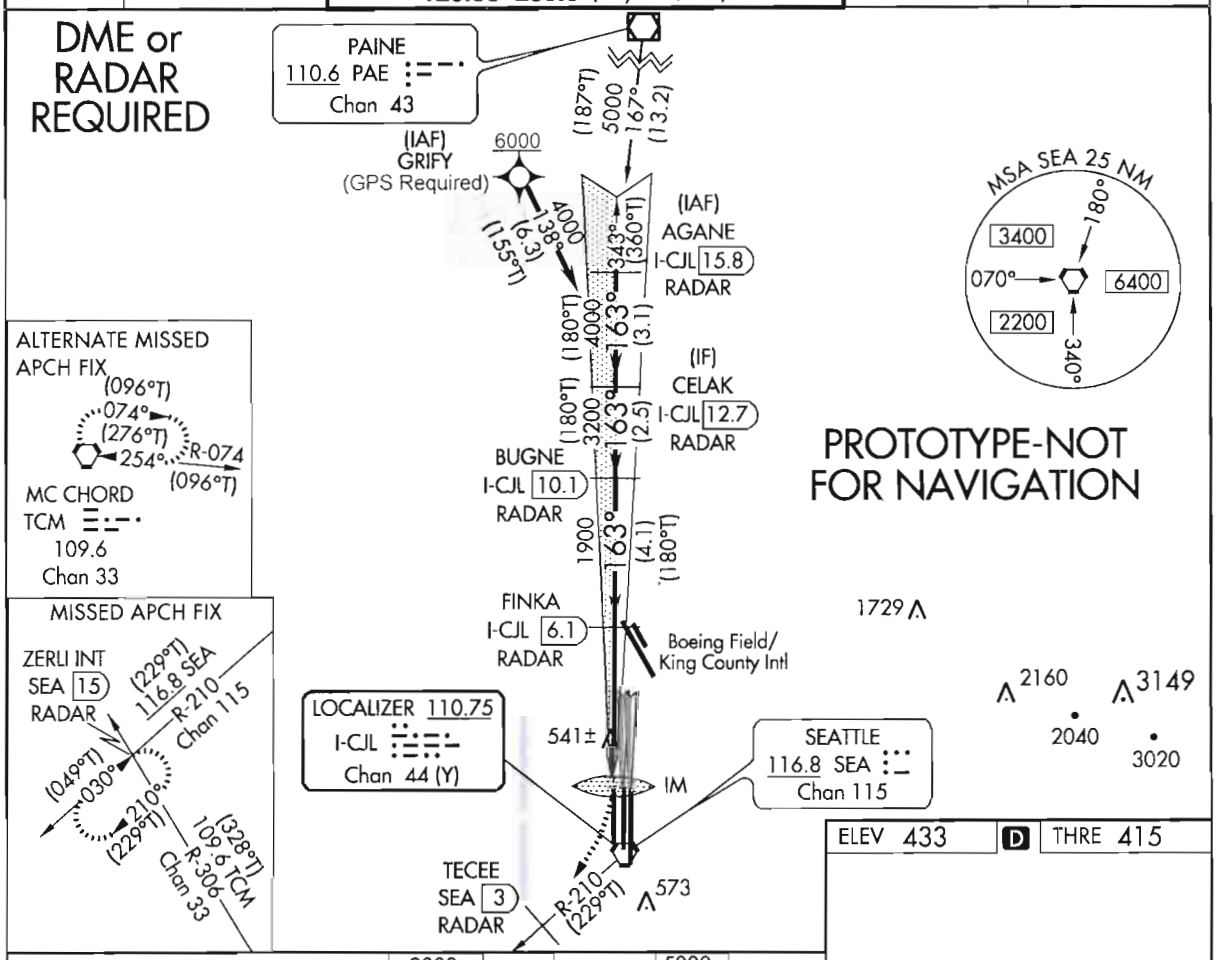
LOC/DME I-CJL	APP CRS	Rwy ldg	8500
110.75	163°	THRE	415
Chan 44 (Y)		Apt Elev	433

Simultaneous approach authorized with Rwy 16L/C. DME or Radar required.

ALSF-2

MISSED APPROACH: Climb to 900 then climb on heading 195° and on SEA VORTAC R-210 to cross TECEE/SEA 3 DME/RADAR at or below 2000, then climb to 5000 on SEA VORTAC R-210 to ZERLI INT/SEA 15 DME/RADAR and hold, continue climb-in-hold to 5000.

ATIS	SEATTLE APP CON	SEATTLE TOWER	GND CON	CLNC DEL
118.0	133.65 273.45	119.9 239.3 (Rwys 16C/34C, 16L/34R) 120.95 239.3 (Rwy 16R/34L)	121.7	128.0

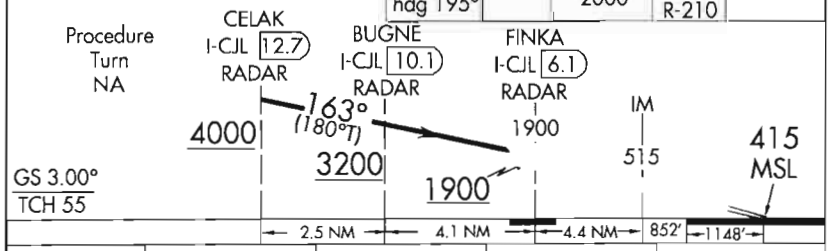


ELEV 433 | D | THRE 415

VGSI and ILS glidepath not coincident (VGSI Angle 3.00°/TCH 69).

2000	SEA R-210	TECEE SEA 3 / 2000	5000 SEA R-210	ZERLI INT
hdg 195°				

Procedure Turn NA



CATEGORY	A	B	C	D
S-ILS 16R	CAT IIIa RVR 07			
S-ILS 16R	CAT IIIa RVR 06			
S-ILS 16R	CAT IIIa NA			

CATEGORY III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

HIRL all Rwys
TDZ/CL Rwys 16L, 16C, 16R and 34R

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : CJL	City : SEATTLE	Ident : CJL	State : WA
Type/Class : GS	Frequency : M330.05	Reference No.: 12109720	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 070475-005	343	0	15	50	50

Requirement: EXISTING FIX AGANE MOVED 3297 FT @ 0.32T. CURRENT ESV: R-343/14NM/5000.

Signature: adams mark	Routing Symbol: AJV-354	Date: 10/30/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 070475-005	343	0	15	50	50	APPROVE

Requirement/Remarks: EXISTING FIX AGANE MOVED 3297 FT @ 0.32T. CURRENT ESV: R-343/14NM/5000.APPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 10/30/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 070475-005	343	0	15	50	50	APPROVE

Requirement/Remarks: EXISTING FIX AGANE MOVED 3297 FT @ 0.32T. CURRENT ESV: R-343/14NM/5000.APPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 10/30/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 070475-005	343	0				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : CJL	City : SEATTLE	Ident : CJL	State : WA
Type/Class : GS	Frequency : M330.05	Reference No.: 12109721	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 070475-006	343	0	12	40	40

Requirement: EXISTING FIX CELAK MOVED 2048 FT @ 0.31T. CURRENT ESV: R-343/11NM/4000.

Signature: adams mark	Routing Symbol: AJV-354	Date: 10/30/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 070475-006	343	0	12	40	40	APPROVE

Requirement/Remarks: EXISTING FIX CELAK MOVED 2048 FT @ 0.31T. CURRENT ESV: R-343/11NM/4000.APPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 10/30/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 070475-006	343	0	12	40	40	APPROVE

Requirement/Remarks: EXISTING FIX CELAK MOVED 2048 FT @ 0.31T. CURRENT ESV: R-343/11NM/4000.APPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 10/30/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 070475-006	343	0				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

US DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

ILS - STANDARD
INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.29

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
PAE VOR/DME	AGANE/I-CJL 15.79 DME/RADAR	166.68 / 13.24	5000
AGANE/I-CJL 15.79 DME/RADAR (IAF)	CELAK/I-CJL 12.65 DME/RADAR	163.33 / 3.14 (I-CJL)	4000
GRIFY (IAF)	CELAK/I-CJL 12.65 DME/RADAR	138.44 / 6.31	4000
CELAK/I-CJL 12.65 DME/RADAR (IF)	BUGNE/I-CJL 10.14 DME/RADAR	163.33 / 2.51 (I-CJL)	3200
BUGNE/I-CJL 10.14 DME/RADAR	FINKA/I-CJL 6.06 DME/RADAR	163.33 / 4.08 (I-CJL)	1900

MISSED APPROACH

ILS: DA
LOC: 4.49 MILES AFTER FINKA/I-CJL 6.06 DME/RADAR OR AT I-CJL 1.57 DME FIX

CLIMB TO 900 THEN CLIMB ON HEADING 195 AND ON SEA VORTAC R-210 TO CROSS TECEE/SEA 3.00 DME/RADAR AT OR BELOW 2000, THEN CLIMB TO 5000 ON SEA VORTAC R-210 TO ZERLI INT/SEA 15.00 DME/RADAR AND HOLD, CONTINUE CLIMB-IN -HOLD TO 5000, OR AS DIRECTED BY ATC.
(SEE FORM 8260-10)

1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. PROFILE STARTS AT CELAK/I-CJL 12.65 DME/RADAR
3. FAC: 163.33 FAF: FINKA/I-CJL 6.06 DME/RADAR DIST FAF TO MAP: 4.49 THLD: 4.49
4. MIN. ALT: CELAK 4000, BUGNE 3200, FINKA 1900
5. DIST TO THLD FROM OM: - MM: - IM: 852 150 HAT: 1815 100 HAT: 861 GS ANT: 1148
6. MIN GS INCPT: 1900 GS ALT AT: FINKA 1900 OM: - MM: - IM: 515
7. GS ANGLE: 3.00 TCH: 54.9
8. MSA FROM: SEA VORTAC 360-160 6400, 160-250 2200, 250-360 3400

ADDITIONAL FLIGHT DATA:

HOLD SW, RT, 030.00 INBOUND.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD E TCM VORTAC, RT, 254.00 INBOUND.
CHART: TCM R-306 AT ZERLI
CHART FAS OBST: 541 TREE 472905N/1221911W
CHART VDP AT 2.56 DME*;
DISTANCE VDP TO THLD 0.99 MILES.
*LOC ONLY.
CHART IN PLANVIEW: TCM VORTAC.
CHART: KBFI
CHART AT/ABOVE 6000 AT GRIFY.
CHART LOC RWY 16C
CHART LOC RWY 16L

MAG VAR: 17E EPOCH YEAR: 2010

MINIMUMS

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT ALTERNATE: N A ILS: STANDARD LOC: 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
S-ILS 16R	615	1800	200	615	1800	200	615	1800	200	615	1800	200		NA	
S-LOC 16R	800	2400	385	800	2400	385	800	3500	385	800	3500	385		NA	
CIRCLING	1000	1	567	1000	1	567	1000	1 1/2	567	1000	2	567		NA	

NOTES:
SA CATEGORY I ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED. S-ILS 16R: CAT A, B, C, D, RA 176, RVR 1400, HATh 150, DA 565 MSL.
CATEGORY II ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED. S-ILS 16R: CAT A, B, C, D, RA 139, RVR 1200, HATh 100, DA 515 MSL.
(SEE FORM 8260-10)

QUALITY CHECKED 4

CITY AND STATE	ELEVATION: 433 THRE: 415 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:	SUP:
SEATTLE, WA	SEATTLE-TACOMA INTL	I-CJL	ILS OR LOC RWY 16R, AMDT 2 ILS RWY 16R (SA CAT I), ILS RWY 16R (CAT II), ILS RWY 16R (CAT III)	AMDT: 1A DATED 03/08/2012

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

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
X		X	X	X	X	X ZSE, SEA APP CON, SEA ATCT, AMGR, WA AERO

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME: MARK D. ADAMS	FIFO AJV-354	DATE: 09/18/2012
APPROVED BY		
NAME: DEBORAH COPELAND MANAGER	FIFO AJV-354	DATE:

CHANGES:

1. ADDED GPS TRANSITION INITIAL FROM GRIFY.
2. REPLACED WATEL WITH AGANE AS AN IAF.
3. REPLACED OPVEE WITH FINKA AS THE FAF.
4. ADDED "AT OR BELOW" ALTITUDE TO TECEE IN THE MISSED APPROACH.
5. ALL FIXES ON THE FAC WERE MOVED TO "ON-GLIDEPATH" LOCATIONS.
6. ADDED 6000 FT MIN ALT RESTRICTION AT GRIFY.

REASONS:

1, 2. PER CHECKLIST.
3. PER CHECKLIST AND TO HAVE THE FAF IN COMMON WITH THE RNAV (GPS) AND RNAV (RNP) APPROACHES TO RWY 16R.
4. ATC REQUEST IN ORDER TO PROVIDE VERTICAL SEPARATION FOR AIRCRAFT OVERFLYING AIRPORT.
5. TO SUPPORT SIMULTANEOUS DEPENDENT APPROACHES WITH RWY 16 L/C.
6. ATC REQUEST.

01/25/2013:THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 12/17/2012
1. CORRECTED SUPPERCEDED PROCEDURE DATE FROM 03/08/2013 TO 03/08/2012 ON DASH 10 CODED PAGES.

QUALITY 4 CHECKED

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 aiport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

MISSED APPROACH INSTRUCTIONS, (CONT.):
ALTERNATE MA: (SIMULTANEOUS OPERATIONS NA) CLIMB TO 2000 THEN CLIMBING RIGHT TURN DIRECT TCM VORTAC AND HOLD, CONTINUE CLIMB-IN-HOLD TO 5000.

NOTES, (CONT.):
CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 16 L/C.
CHART NOTE: DME OR RADAR REQUIRED.
CHART PLANVIEW NOTE: DME OR RADAR REQUIRED.
CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT.
CHART IN PLANVIEW ADJACENT TO GRIFY: GPS REQUIRED.

CATEGORY III ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED. S-ILS-16R: CAT IIIa CAT A,B,C,D, RVR 700. CAT IIIb CAT A,B,C,D, RVR 600. CAT IIIc NA.

CAT II CHART NOTE: RVR 1000 AUTHORIZED WITH SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF AUTOLAND OR HUD TO TOUCHDOWN.
SA CAT I CHART NOTE: REQUIRES SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF HUD TO DH.

QUALITY CHECKED

CITY AND STATE	ELEVATION: 433 THRE: 415	FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:	SUP:
SEATTLE, WA	AIRPORT NAME: SEATTLE-TACOMA INTL	I-CJL	ILS OR LOC RWY 16R, AMDT 2 ILS RWY 16R (SA CAT I), ILS RWY 16R (CAT II), ILS RWY 16R (CAT III)	AMDT: 1A 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:

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 PACKET - 424-18 - ILS

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAD        PAE   K1011060VDLW N47551140W122164020    N47551210W122164180E0200006741     NARPAINE
        SUSAD        SEA   K1011680VTHW N47260734W122183462    N47260851W122183597E0190003542     NARSEATTLE
        SUSAD KSEAK1 ICJL  K1011075 IT                     ICJLN47261562W122185994     003640     NARSEATTLE-TACOMA INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   AGANE K10    C     N47420277W122185701                     E0165     NAR           AGANE
        SUSAEAENRT   BUGNE K10    C     N47362388W122185991                     E0165     NAR           BUGNE
        SUSAEAENRT   CELAK K10    C     N47385450W122185863                     E0165     NAR           CELAK
        SUSAEAENRT   FINKA K10    C     N47321910W122190200                     E0165     NAR           FINKA
        SUSAEAENRT   GRIFY K10    W     N47443841W122225233                     E0165     NAR           GRIFY
        SUSAEAENRT   TECEE K10    R     N47240926W122215460                     E0164     NAR           TECEE
        SUSAEAENRT   ZERLI K10    C     N47161599W122351206                     E0164     NAR           ZERLI

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSEAK1ASEA     0     119YHN47265960W122184240E017000433         1800018000C    MNAR    SEATTLE-TACOMA INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSEAK1FI16R  AGRIFY 010GRIFYK1EA0E  A    IF                                  + 06000     18000                 0 NS
        SUSAP KSEAK1FI16R  AGRIFY 020CELAKK1EA0E  B    TF                                  + 04000                           0 NS
        SUSAP KSEAK1FI16R  AGRIFY 030BUGNEK1EA0EE      CF ICJLK1      3433010116330025PI  + 03200                           0 NS
        SUSAP KSEAK1FI16R  APAE   010PAE  K1D 0V       IF                                                 18000            0 NS
        SUSAP KSEAK1FI16R  APAE   020AGANEK1EA0E  A    TF                                  + 05000                           0 NS
        SUSAP KSEAK1FI16R  APAE   030CELAKK1EA0E  B    TF                                  + 04000                           0 NS
        SUSAP KSEAK1FI16R  APAE   040BUGNEK1EA0EE      CF ICJLK1      3433010116330025PI  + 03200                           0 NS
        SUSAP KSEAK1FI16R  I      010BUGNEK1EA0E  I    IF ICJLK1      34330101        PI  J 032000190018000                 0 NS
        SUSAP KSEAK1FI16R  I      020FINKAK1EA0E  F    CF ICJLK1      3433006116300041PI  H 0190001900        -300SEA   K1D 0 NS
        SUSAP KSEAK1FI16R  I      030RW16RK1PG0GY M    CF ICJLK1      3433001616300045PI    00470            -300          0 NS
        SUSAP KSEAK1FI16R  I      040         0  M     CA                      1633        + 00900                           0 NS
        SUSAP KSEAK1FI16R  I      050         0        VI                      1950                                          0 NS
        SUSAP KSEAK1FI16R  I      060TECEEK1EA0E        CF SEA K1      2100003021000030D   - 02000                           0 NS
        SUSAP KSEAK1FI16R  I      070ZERLIK1EA0EY       TF                                  + 05000                           0 NS
        SUSAP KSEAK1FI16R  I      080ZERLIK1EA0EE  R    HM                      0300T010    + 05000                           0 NS

                 1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
```

QUALITY CHECKED

4

CITY AND STATE	ELEVATION: 433 THRE: 415	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
SEATTLE, WA	AIRPORT NAME: **SEATTLE-TACOMA INTL**	**I-CJL**	**ILS OR LOC RWY 16R, AMDT 2** **ILS RWY 16R (SA CAT I), ILS RWY 16R (CAT II)** **ILS RWY 16R (CAT III)**	AMDT: **1A** 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:

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.

```
                    ----------------------------------------------------------------------------------------------------------------------
                    SUSAP KSEAK1GRW16R   0085001633 N47274981W122190429-0700    +0103500415000055150IICJL3
                    ----------------------------------------------------------------------------------------------------------------------
                              1         2         3         4         5         6         7         8         9         0         1         2         3
ILS                 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
                    ----------------------------------------------------------------------------------------------------------------------
                    SUSAP KSEAK1IICJL3   011075RW16RN47261592W1221905101633N47273846W1221900601013 11480422300E01705500406
                    ----------------------------------------------------------------------------------------------------------------------
                              1         2         3         4         5         6         7         8         9         0         1         2         3
MSA                 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
                    ----------------------------------------------------------------------------------------------------------------------
                    SUSAP KSEAK1SSEA  K1D                0   0701800342518034006425340070022 25                                                  M
```

CITY AND STATE	ELEVATION: 433 THRE: 415	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
SEATTLE, WA	AIRPORT NAME: SEATTLE-TACOMA INTL	I-CJL	ILS OR LOC RWY 16R, AMDT 2 ILS RWY 16R (SA CAT I), ILS RWY 16R (CAT II) ILS RWY 16R (CAT III)	AMDT: 1A DATED: 03/08/2012

QUALITY CHECKED 4

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

ILS STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.29**

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 - ILS

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	GRIFY	GRIFY	010	IAF	IF		FB				AA 06000	
	GRIFY	CELAK	020		TF		FB				AA 04000	
	GRIFY	BUGNE	030		CF		FB		163.3()	002.5	AA 03200	
	PAE	PAE	010		IF		FB					
	PAE	AGANE	020	IAF	TF		FB				AA 05000	
	PAE	CELAK	030		TF		FB				AA 04000	
	PAE	BUGNE	040		CF		FB		163.3()	002.5	AA 03200	
		BUGNE	010	FACF	IF		FB				AA 03200 GI 01900	
		FINKA	020	FAF	CF		FB		163.0()	004.1	GI 01900 GS 01900	
		RW16R	030	MAP	CF		FO		163.0()	004.5	AT 00470	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		163.3()		AA 00900	
		050		VI		FB		195.0()			
	TECEE	060		CF		FB		210.0()	003.0	AB 02000	
	ZERLI	070		TF		FO				AA 05000	
	ZERLI	080		HM	R	FO		030.0()	T01.0	AA 05000	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	PAE	N475511.40	W1221640.20	N4755.190	W12216.670
	SEA	N472607.34	W1221834.62	N4726.122	W12218.577
	ICJL (DME)	N472615.62	W1221859.94	N4726.260	W12218.999
	AGANE	N474202.77	W1221857.01	N4742.046	W12218.950
	BUGNE	N473623.88	W1221859.91	N4736.398	W12218.999
	CELAK	N473854.50	W1221858.63	N4738.908	W12218.977
	FINKA	N473219.10	W1221902.00	N4732.318	W12219.033
	GRIFY	N474438.41	W1222252.33	N4744.640	W12222.872
	TECEE	N472409.26	W1222154.60	N4724.154	W12221.910
	ZERLI	N471615.99	W1223512.06	N4716.267	W12235.201
	RW16R	N472749.81	W1221904.29	N4727.830	W12219.072
	ICJL (LOC)	N472615.92	W1221905.10	N4726.265	W12219.085

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW16R	00415	55

CITY AND STATE	ELEVATION: 433 THRE: 415	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
SEATTLE, WA	AIRPORT NAME: **SEATTLE-TACOMA INTL**	**I-CJL**	**ILS OR LOC RWY 16R, AMDT 2** **ILS RWY 16R (SA CAT I), ILS RWY 16R (CAT II)** **ILS RWY 16R (CAT III)**	AMDT: **1A** 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

LOC STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.25**

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 PACKET - 424-18 - LOC

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAD        PAE   K1011060VDLW N47551140W122164020    N47551210W122164180E0200006741     NARPAINE
        SUSAD        SEA   K1011680VTHW N47260734W122183462    N47260851W122183597E0190003542     NARSEATTLE
        SUSAD KSEAK1 ICJL  K1011075 IT                     ICJLN47261562W122185994     003640     NARSEATTLE-TACOMA INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   AGANE K10    C     N47420277W122185701                      E0165     NAR           AGANE
        SUSAEAENRT   BUGNE K10    C     N47362388W122185991                      E0165     NAR           BUGNE
        SUSAEAENRT   CELAK K10    C     N47385450W122185863                      E0165     NAR           CELAK
        SUSAEAENRT   FINKA K10    C     N47321910W122190200                      E0165     NAR           FINKA
        SUSAEAENRT   GRIFY K10    W     N47443841W122225233                      E0165     NAR           GRIFY
        SUSAEAENRT   TECEE K10    R     N47240926W122215460                      E0164     NAR           TECEE
        SUSAEAENRT   ZERLI K10    C     N47161599W122351206                      E0164     NAR           ZERLI

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSEAK1ASEA     0     119YHN47265960W122184240E017000433         1800018000C    MNAR    SEATTLE-TACOMA INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSEAK1FL16R  AGRIFY 010GRIFYK1EA0E  A    IF                                + 06000     18000                 0 NS
        SUSAP KSEAK1FL16R  AGRIFY 020CELAKK1EA0E  B    TF                                + 04000                           0 NS
        SUSAP KSEAK1FL16R  AGRIFY 030BUGNEK1EA0EE      CF ICJLK1      3433010116330025PI  + 03200                           0 NS
        SUSAP KSEAK1FL16R  APAE   010PAE  K1D 0V       IF                                     18000                        0 NS
        SUSAP KSEAK1FL16R  APAE   020AGANEK1EA0E  A    TF                                + 05000                           0 NS
        SUSAP KSEAK1FL16R  APAE   030CELAKK1EA0E  B    TF                                + 04000                           0 NS
        SUSAP KSEAK1FL16R  APAE   040BUGNEK1EA0EE      CF ICJLK1      3433010116330025PI  + 03200                           0 NS
        SUSAP KSEAK1FL16R  L      010BUGNEK1EA0E  I    IF ICJLK1      34330101        PI  + 03200     18000                 0 NS
        SUSAP KSEAK1FL16R  L      020FINKAK1EA0E  F    CF ICJLK1      3433006116300041PI  + 01900                 SEA   K1D 0 NS
        SUSAP KSEAK1FL16R  L      030RW16RK1PG0GY M    CF ICJLK1      3433001616300045PI    00470             -301          0 NS
        SUSAP KSEAK1FL16R  L      040         0  M     CA                      1633      + 00900                           0 NS
        SUSAP KSEAK1FL16R  L      050         0        VI                      1950                                        0 NS
        SUSAP KSEAK1FL16R  L      060TECEEK1EA0E         CF SEA K1      2100003021000030D   - 02000                           0 NS
        SUSAP KSEAK1FL16R  L      070ZERLIK1EA0EY        TF                                + 05000                           0 NS
        SUSAP KSEAK1FL16R  L      080ZERLIK1EA0EE  R     HM                      0300T010  + 05000                           0 NS

                 1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
```

QUALITY CHECKED

CITY AND STATE	ELEVATION: 433 THRE: 415	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
SEATTLE, WA	AIRPORT NAME: **SEATTLE-TACOMA INTL**	**I-CJL**	**ILS OR LOC RWY 16R, AMDT 2** **ILS RWY 16R (SA CAT I), ILS RWY 16R (CAT II)** **ILS RWY 16R (CAT III)**	AMDT: **1A** 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:

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.

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
ILS     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        SUSAP KSEAK1GRW16R   0085001633 N47274981W122190429-0700    +0103500415000055150IICJL3

                 1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        SUSAP KSEAK1IICJL3   011075RW16RN47261592W1221905101633N47273846W1221900601013 11480422300E01705500406

                 1         2         3         4         5         6         7         8         9         0         1         2         3
        123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        SUSAP KSEAK1SSEA  K1D                 0   07018003425180340064253400700222 5                                                    M
```

CITY AND STATE	ELEVATION: 433 THRE: 415	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
SEATTLE, WA	AIRPORT NAME: SEATTLE-TACOMA INTL	I-CJL	ILS OR LOC RWY 16R, AMDT 2 ILS RWY 16R (SA CAT I), ILS RWY 16R (CAT II) ILS RWY 16R (CAT III)	AMDT: 1A DATED: 03/08/2012

QUALITY CHECKED 4

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

LOC STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.25**

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 - LOC

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	GRIFY	GRIFY	010	IAF	IF		FB				AA 06000	
	GRIFY	CELAK	020		TF		FB				AA 04000	
	GRIFY	BUGNE	030		CF		FB		163.3()	002.5	AA 03200	
	PAE	PAE	010		IF		FB					
	PAE	AGANE	020	IAF	TF		FB				AA 05000	
	PAE	CELAK	030		TF		FB				AA 04000	
	PAE	BUGNE	040		CF		FB		163.3()	002.5	AA 03200	
		BUGNE	010	FACF	IF		FB				AA 03200	
		FINKA	020	FAF	CF		FB		163.0()	004.1	AA 01900	
		RW16R	030	MAP	CF		FO		163.0()	004.5	AT 00470	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		163.3()		AA 00900	
		050		VI		FB		195.0()			
	TECEE	060		CF		FB		210.0()	003.0	AB 02000	
	ZERLI	070		TF		FO				AA 05000	
	ZERLI	080		HM	R	FO		030.0()	T01.0	AA 05000	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	PAE	N475511.40	W1221640.20	N4755.190	W12216.670
	SEA	N472607.34	W1221834.62	N4726.122	W12218.577
	ICJL (DME)	N472615.62	W1221859.94	N4726.260	W12218.999
	AGANE	N474202.77	W1221857.01	N4742.046	W12218.950
	BUGNE	N473623.88	W1221859.91	N4736.398	W12218.999
	CELAK	N473854.50	W1221858.63	N4738.908	W12218.977
	FINKA	N473219.10	W1221902.00	N4732.318	W12219.033
	GRIFY	N474438.41	W1222252.33	N4744.640	W12222.872
	TECEE	N472409.26	W1222154.60	N4724.154	W12221.910
	ZERLI	N471615.99	W1223512.06	N4716.267	W12235.201
	RW16R	N472749.81	W1221904.29	N4727.830	W12219.072
	ICJL (LOC)	N472615.92	W1221905.10	N4726.265	W12219.085

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW16R	00415	55

QUALITY 4 CHECKED

CITY AND STATE	ELEVATION: 433 THRE: 415	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
SEATTLE, WA	AIRPORT NAME: SEATTLE-TACOMA INTL	I-CJL	ILS OR LOC RWY 16R, AMDT 2 ILS RWY 16R (SA CAT I), ILS RWY 16R (CAT II) ILS RWY 16R (CAT III)	AMDT: 1A 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	PAE VOR/DME	AGANE/I-CJL	1. TOWER (53-000084)	474605.00N/1222110.00W	920 (1D)	1000	DG3080	5000
		15.79 DME/RADAR	2. TERRAIN	475138.00N/1221657.00W	635 (600)		AS1500	2100
INITIAL	AGANE/I-CJL	CELAK/I-CJL	3. AAO	474142.00N/1221909.00W	683 (4E)	1000	DG2317	4000
	15.79 DME/RADAR	12.65 DME/RADAR	4. TERRAIN	474142.00N/1221909.00W	483 (500)		AS1500	2000
INITIAL	GRIFY	CELAK/I-CJL	5. AAO	474427.00N/1222133.00W	748 (4E)	1000	DG2252	4000
		12.65 DME/RADAR	6. TERRAIN	474427.00N/1222133.00W	548 (500)		AS1500	2000
INTERMEDIATE	CELAK/I-CJL	BUGNE/I-CJL	7. TOWER (53-000500)	473656.35N/1221830.45W	1092 (4D)	500	DG1608	3200
	12.65 DME/RADAR	10.14 DME/RADAR	8. TERRAIN	473757.00N/1222115.00W	466 (500)		AS1500	2000
INTERMEDIATE:	BUGNE/I-CJL	FINKA/I-CJL 6.06	9. BLDG (53-000455)	473616.80N/1221951.08W	1075 (1A)	500		1600
STEPDOWN	10.14 DME/RADAR	DME/RADAR	10. TERRAIN	473357.00N/1221824.00W	365 (400)		AS1500	1900
FINAL: ILS	FINKA/I-CJL 6.06	RW16R				ASC		615/200
	DME/RADAR							
2. PROCEDURE TURN	NA							
3. MISSED APPROACH MAP:	DA / 4.49 MILES	ZERLI INT/SEA				ASC		5000
	AFTER FINKA/CJL	15.00 DME/RADAR	12. TOWER (53-000029)	471643.50N/1223046.38W	918 (1D)	1000		2000
ELEV:	447/550		13. TERRAIN	472303.00N/1222427.00W	453 (500)		AS1500	2000

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	HT. ABV. ARPT. ACTUAL							
CATEGORY A	1.3 NM	350	567	16. CTWR (53-001394)	472720.55N/1221805.18W	696 (1A)	300		1000
CATEGORY B	1.5 NM	450	567	16. CTWR (53-001394)	472720.55N/1221805.18W	696 (1A)	300		1000
CATEGORY C	1.7 NM	450	567	16. CTWR (53-001394)	472720.55N/1221805.18W	696 (1A)	300		1000
CATEGORY D	2.3 NM	550	567	16. CTWR (53-001394)	472720.55N/1221805.18W	696 (1A)	300		1000
CATEGORY E	4.5 NM	550							

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID: SEA VORTAC

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A
360-160	AAO	074/ 28.1	5362 (2A)	6400	250-360	TWR (53-000358)	270/ 21.4	2395 (5E)	3400
160-250	AAO	160/ 24.4	1172 (4E)	2200					

CITY AND STATE	ELEVATION: 433 AIRPORT NAME:	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
SEATTLE, WA	SEATTLE-TACOMA INTL	I-CJL	ILS OR LOC RWY 16R, AMDT 2 ILS RWY 16R (SA CAT I), ILS RWY 16R (CAT II), ILS RWY 16R (CAT III)	ANM

PART B - SUPPLEMENTAL DATA

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

4. MONITOR STATUS	PRIMARY NAVAID: I-CJL	
	MONITOR POINT: ATCT	
	HRS OPTN: CAT 1	24
	CAT 3	
5. APPROACH & RUNWAY LIGHTING	X	ALSF-2 16C, 16L, 16R
		(S) SALS
	X	MALSR 34L, 34C, 34R
	X	HIRL 16C, 16L, 34L, 34C, 16R, 34R
		MIRL
		REIL
	X	TDZ 16C, 16L, 16R, 34R
	X	C/L 16C, 16L, 34L, 34C, 16R, 34R
	X	OTHER (SPECIFY) PAPI-4R 16R PAPI-4L 16C, 16L, 34L, 34C, 34R
6. RUNWAY MARKINGS	BASIC	
	ALL WEATHER	PIR-G 16C, 16L, 34L, 34C, 16R, 34R
	INSTRUMENT	
7. RUNWAY VISUAL RANGE	APPROACH	16C, 16L, 34L, 34C, 16R, 34R
	MIDFIELD	16C, 16L, 34L, 34C, 16R, 34R
	ROLL OUT	16C, 16L, 34L, 34C, 16R, 34R
8. GLIDE PATH	GP ANGLE: 3.00	ELEV RWY THRESHOLD: 415.0
	DISTANCE FROM RWY: 1148	ELEV GP ANTENNA: 409.7
		THRESHOLD CROSSING HEIGHT: 54.9
9. FINAL APPROACH COURSE AIMING	X	RUNWAY THRESHOLD — FT. FROM THRESHOLD
	X	ON CENTERLINE — FT. FROM CENTERLINE

10. WAIVERS: 1

ORDER 8260.3B, VOLUME 1, PARAGRAPH 274; THE USE OF AN "AT OR BELOW" ALTITUDE IN THE MISSED APPROACH.

PART D - PREPARED BY: MARK D. ADAMS	DATE: 09/18/2012
TITLE: AERONAUTICAL INFORMATION SPECIALIST	OFFICE: AJV-354

PART C - REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.

KSEA ASOS ON SERVICE A / 24 HRS.

BACKUP ALTIMETER NOT REQUIRED DUE TO REDUNDANT LOCAL SOURCES.

VGSI DATA: 3.00 / 69.3

VEGETATION HEIGHT 100 FT PER CHECKLIST.

INITIAL, INTERMEDIATE, AND INTERMEDIATE STEPDOWN FIX ALTITUDES AND LOCATIONS PER ATC REQUEST FOR SEPARATION AND AIRSPACE PURPOSES.

USED 8260.54A L-V PFAF FORMULA TO ESTABLISH LOCATIONS OF FIXES ON LOCALIZER COURSE; PUBLISHED RNAV PROCEDURES TO RWY 16R SHARE THESE FIXES.

CONTROLLING OBSTRUCTIONS AND TERRAIN THE SAME FOR ALL INTERMEDIATE SEGMENTS.

GRIFY PROCEDURE ENTRY CONNECTS TO MARNR (RNAV) STAR.

WAIVER: FAAO 8260.3B VOL 1 PARA 274 THE USE OF AN "AT OR BELOW" ALTITUDE IN THE MISSED APPROACH.

SEE ATTACHED AIRSPACE LETTER.

MISSED APPROACH OBSTACLES CONT.
ALTERNATE:
ASC 5000
14. TOWER (53-000694) 471813.81N/1222347.84W 955 (4D) 1000(ROC) 2000(MIN ALT.)
15. TERRAIN 471815.00N/1222442.00W 539 (500) AS1500 2000(MIN ALT.)

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: LOC	FINKA/I-CJL 6.06	4.49 MILES AFTER	11. TREE (KSEA0014)	472905.10N/1221911.43W	541 (1A)	250		800
	DME/RADAR	FINKA/CJL 6.06						
		DME/RADAR OR AT						
		I-CJL 1.57 DME						
		FIX						
FINAL: ILS CAT II	FINKA/I-CJL 6.06	RW16R				ASC		515/100
	DME/RADAR							
FINAL: ILS SA CAT I	FINKA/I-CJL 6.06	RW16R				ASC		565/150
	DME/RADAR							

3. MISSED APPROACH										
	MAP:									
	ELEV:									

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	HT. ABV. ARPT. ACTUAL
CATEGORY A	1.3 NM	350	
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
SEATTLE, WA	ELEVATION: 433 AIRPORT NAME: SEATTLE-TACOMA INTL	I-CJL	ILS OR LOC RWY 16R, AMDT 2 ILS RWY 16R (SA CAT I), ILS RWY 16R (CAT II), ILS RWY 16R (CAT II)	ANM

PART B - SUPPLEMENTAL DATA

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

4. MONITOR STATUS	PRIMARY NAVAID:	
	MONITOR POINT:	
	HRS OPTN: CAT 1	
	HRS OPTN: 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: AGANE **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 474202.77N/1221857.01W **TYPE:** WP, RADAR, 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	SEATTLE	I-CJL	LOC/DME		343.33	000.33	15.79	15.79		5000	5000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-CJL	LOC/DME	BRG-343	16	5000	5000

FIX RESTRICTIONS:
SPECIAL RNAV (RNP) M RWY 16R, KSEA, SEATTLE, WA

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

REMARKS:
DME ANTENNA COORDINATES: 472615.62N/1221859.94W
I-CJL GS ESV BEARING 343/15NM/5000.
I-CJL GS ANTENNA L/L: 472738.46N-1221900.60W.
FIX LOCATED AT PFAF LOCATION USING AFS SPREADSHEET.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 16R	1		KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16R (SA CAT I, CAT II/III)	1		KSEA	SEATTLE	WA (US)
IAP	RNAV (GPS) Y RWY 16R			KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) M RWY 16R			KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) Z RWY 16R			KSEA	SEATTLE	WA (US)

REQUIRED CHARTING: IAP, SPECIAL IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
MOVED FIX 3297.24 FT @ 0.33T.
CHANGED DME AND DIST FROM FAC FROM 15.27/15.27 TO 15.79/15.79 RESPECTIVELY.
ADDED "SPECIAL" TO CHART PUB.
ADDED I-CJL GS ESV REMARK.

DEVELOPED BY: **DATE:** 09/01/2012 **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:

RADIO FIX AND HOLDING DATA RECORD

NAME: BUGNE **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 473623.88N/1221859.91W **TYPE:** WP, RADAR, 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	SEATTLE	I-CJL	LOC/DME		343.33	000.33	10.14	10.14		3200	4800

FIX RESTRICTIONS:
SPECIAL RNAV (RNP) M RWY 16R, KSEA, SEATTLE, WA

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

REMARKS:
DME ANTENNA COORDINATES: 472615.62N/1221859.94W
FIX LOCATED AT PFAF LOCATION USING AFS SPREADSHEET.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 16R	1		KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16R (SA CAT I, CAT II/III)	1		KSEA	SEATTLE	WA (US)
IAP	RNAV (GPS) Y RWY 16R			KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) M RWY 16R			KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) Z RWY 16R			KSEA	SEATTLE	WA (US)

REQUIRED CHARTING: IAP, SPECIAL IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
MOVED FIX 1227.07' @ 0.29T.
CHANGED FAC 1 DME AND DISTANCE FROM FAC FROM 9.95/9.94 TO 10.14/10.14 RESPECTIVELY.
ADDED "SPECIAL" 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:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: CELAK **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 473854.50N/1221858.63W **TYPE:** WP, RADAR, 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	SEATTLE	I-CJL	LOC/DME		343.33	000.33	12.65	12.65		4000	4800

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-CJL	LOC/DME	BRG-343	12	4000	4000

FIX RESTRICTIONS:
SPECIAL RNAV (RNP) M RWY 16R, KSEA, SEATTLE, WA

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

REMARKS:
DME ANTENNA COORDINATES: 472615.62N/1221859.94W
I-CJL ESV IS FOR THE GLIDESLOPE.
I-CJL GS ANTENNA L/L: 472738.46N-1221900.60W.
FIX LOCATED AT PFAF LOCATION USING AFS SPREADSHEET.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 16R	1		KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16R (SA CAT I, CAT II/III)	1		KSEA	SEATTLE	WA (US)
IAP	RNAV (GPS) Y RWY 16R			KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) M RWY 16R			KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) Z RWY 16R			KSEA	SEATTLE	WA (US)

REQUIRED CHARTING: IAP, SPECIAL IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
MOVED FIX 2048.85' @ 000.33T.
CHANGED DME AND DISTANCE FROM FAC FROM 12.33NM TO 12.65NM.
ADDED "SPECIAL" TO CHART PUB.
ADDED I-CJL GS ESV IN REMARKS.

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:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: FINKA **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 473219.10N/1221902.00W **TYPE:** WP, RADAR, 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	SEATTLE	I-CJL	LOC/DME		343.33	000.33	6.06	6.06	27286	1900	4800

FIX RESTRICTIONS:
SPECIAL RNAV (RNP) M RWY 16R, KSEA, SEATTLE, WA

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

REMARKS:
DME ANTENNA COORDINATES: 472615.62N/1221859.94W
USED .54A PFAF FORMULA (IPDS & IAPA); IPDS L/L ARE 473219.104N-1221901.995.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 16R	1		KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16R (SA CAT I, CAT II/III)	1		KSEA	SEATTLE	WA (US)
IAP	RNAV (GPS) Y RWY 16R			KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) M RWY 16R			KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) Z RWY 16R			KSEA	SEATTLE	WA (US)

REQUIRED CHARTING: IAP, SPECIAL IAP

COMPULSORY REPORTING POINT: NO

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

REASON FOR REVISION:
MOVED FIX 331.34' @ 000.33T TO CURRENT PFAF LOCATION FOR RWY 16R.
REMOVED KSEA RWY16R FROM FACILITIES.
UPDATED FAC 1 (CJL) FROM A HISTORY REVISION TO AN ACTIVE REVISION.
CHANGED DME DISTANCE AND DISTANCE FROM FACILITY FROM 6.01 TO 6.06 FOR FAC 1.
UPDATED FIX USE.
ADDED "SPECIAL" TO CHART PUB.

DEVELOPED BY: **DATE:** 08/28/2012 **OFFICE:** AJV-354 **NAME:** MARK ADAMS

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

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: WST
ARTCC: ZSE
ATC FACILITY: KSEA ATCT, SEATTLE APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: GRIFY **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 474438.41N/1222252.33W **TYPE:** WP

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

FIX RESTRICTIONS:
SPECIAL RNAV (RNP) M RWY 16R, KSEA, SEATTLE, WA

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 16C (SA CAT I, CAT II, III)			KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 16L (SA CAT I, CAT II, III)			KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 16R (SA CAT I, CAT II, III)			KSEA	SEATTLE	WA (US)
IAP	RNAV (GPS) Y RWY 16C			KSEA	SEATTLE	WA (US)
IAP	RNAV (GPS) Y RWY 16L			KSEA	SEATTLE	WA (US)
IAP	RNAV (GPS) Y RWY 16R			KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) M RWY 16R			KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) Z RWY 16C			KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) Z RWY 16L			KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) Z RWY 16R			KSEA	SEATTLE	WA (US)
STAR	MARNR (RNAV)			KSEA	SEATTLE	WA (US)

REQUIRED CHARTING: STAR, IAP, SPECIAL IAP

COMPULSORY REPORTING POINT: NO

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

REASON FOR REVISION:
CHANGED SPECIAL FIX RESTRICTION TO RNAV (RNP) M RWY 16R VICE MARNR RNAV STAR.
ADDED IAP TO REQUIRED CHARTING.
UPDATED FIX USE, CONVERTED MARNR STAR FROM SPECIAL TO PUBLIC USE AND ADDED ALL OTHER PROCEDURES.

DEVELOPED BY: **DATE:** 09/13/2012 **OFFICE:** AJV-354 **NAME:** DION LANCIA

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

SIGNATURE:

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

QUALITY 4 CHECKED

RADIO FIX AND HOLDING DATA RECORD

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	JAWBN			KSEA	SEATTLE	WA (US)
STAR	OLYMPIA			KSEA	SEATTLE	WA (US)
STAR	ARRIE			KTCM	TACOMA	WA (US)
STAR	JAWBN			KTCM	TACOMA	WA (US)
STAR	PUGET			KTCM	TACOMA	WA (US)
STAR	WHYTE			KTCM	TACOMA	WA (US)

QUALITY CHECKED

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 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: ZERLI **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 471615.99N/1223512.06W **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	SEATTLE	SEA	VORTAC	H	210.00	229.00	15.00	15.00		5000	17500
2	MCCHORD	TCM	VORTAC	T	306.39	328.39	8.70	8.70		5000	12200

FIX RESTRICTIONS:
SPECIAL RNAV (RNP) M RWY 16R, KSEA, SEATTLE, WA

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	SW	SEA	VORTAC	210.00	030.00	R	1		5000	10000	6	10
2	SW		WP	210.00	030.00	R		4	2000	10000	4	10

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (53-000029)	471643.50N/1223046.38W	918	1D
1	310	TOWER (53-000694)	471813.81N/1222347.84W	955	4D
2	200	TOWER (53-000029)	471643.50N/1223046.38W	918	1D
2	310	TOWER (53-000694)	471813.81N/1222347.84W	955	4D

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	ILS OR LOC RWY 16R	KSEA	SEATTLE	WA (US)
1	ILS RWY 16R (SA CAT I, CAT II/III)	KSEA	SEATTLE	WA (US)
2	RNAV (RNP) M RWY 16R	KSEA	SEATTLE	WA (US)
2	RNAV (RNP) Z RWY 16R	KSEA	SEATTLE	WA (US)
2	RNAV (GPS) Y RWY 16R	KSEA	SEATTLE	WA (US)

REMARKS:
SEATTLE (FAC 1) USED TO ESTABLISH FIX COORDINATES
USED TEMPLATE #14 TO EVALUATE PAT 1 & PAT 2 C-I-H.
PRECIPITOUS TERRAIN EVAL COMPLETE.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 16R	1, 2	1	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16R (SA CAT I, CAT II/III)	1, 2	1	KSEA	SEATTLE	WA (US)
IAP	RNAV (GPS) Y RWY 16R		2	KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) M RWY 16R		2	KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) Z RWY 16R		2	KSEA	SEATTLE	WA (US)

REQUIRED CHARTING: IAP, SPECIAL IAP

COMPULSORY REPORTING POINT: NO

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

REASON FOR REVISION:
ADDED "INT" AND "WP" TO FIX TYPE.
CHANGED PAT 1 RAD/CRS INBOUND FROM 209.80/029.80 TO 210.0/30.0 RESPECTIVELY.
ADDED WP HOLDING PAT 2.
ADDED "SPECIAL" TO CHART PUB.

DEVELOPED BY: **DATE:** 09/01/2012 **OFFICE:** AJV-354 **NAME:** MARK ADAMS

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

QUALITY CHECKED 1

SIGNATURE:

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

INFO ONLY

RADIO FIX AND HOLDING DATA RECORD

NAME: PAINE VOR/DME **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 475511.40N/1221640.20W **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	PAINE	PAE	VOR/DME	L							17500

FIX RESTRICTIONS:
SPECIAL RNAV (RNP) M RWY 16R, KSEA, SEATTLE, WA

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	NW	PAE	VOR/DME	329.04	149.04	R	1-1 1/2		2000	17500	4	16

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	200' AAO	475148.00N/1221706.00W	814	4E
1	310	200' AAO	475148.00N/1221706.00W	814	4E

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	BELLEVUE (LOST COMMUNICATIONS)	KRNT	RENTON	WA (US)

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED: NO ADJUSTMENT

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	ARLINGTON			KAWO	ARLINGTON	WA (US)
DP	KIENO (OBSTACLE)			KBLI	BELLINGHAM	WA (US)
DP	PAINE			KPAE	EVERETT	WA (US)
DP	TAKE-OFF MINIMUMS			KPAE	EVERETT	WA (US)
DP	YELM			KOLM	OLYMPIA	WA (US)
DP	BELLEVUE (LOST COMMUNICATIONS)		1	KRNT	RENTON	WA (US)
DP	KENT			KBFI	SEATTLE	WA (US)
DP	NEEDLE			KBFI	SEATTLE	WA (US)
DP	BANGR (RNAV)			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)
EN ROUTE	V23					(US)
EN ROUTE	V287					(US)
IAP	LOC RWY 34			KAWO	ARLINGTON	WA (US)
IAP	NDB RWY 34			KAWO	ARLINGTON	WA (US)
IAP	RNAV (GPS) RWY 34			KAWO	ARLINGTON	WA (US)
IAP	RNAV (GPS) RWY 29			KBVS	BURLINGTON/MOUNT VERNON	WA (US)
IAP	ILS OR LOC/DME Y RWY 16R			KPAE	EVERETT	WA (US)
IAP	ILS OR LOC/DME Z RWY 16R			KPAE	EVERETT	WA (US)
IAP	ILS Z RWY 16R (SA CAT II)			KPAE	EVERETT	WA (US)
IAP	RNAV (GPS) RWY 34L			KPAE	EVERETT	WA (US)
IAP	RNAV (GPS) Y RWY 16R			KPAE	EVERETT	WA (US)
IAP	RNAV (GPS) Z RWY 16R			KPAE	EVERETT	WA (US)
IAP	VOR RWY 16R		1	KPAE	EVERETT	WA (US)
IAP	VOR/DME RWY 16R		1	KPAE	EVERETT	WA (US)
IAP	RNAV (GPS) Y RWY 16			KRNT	RENTON	WA (US)
IAP	RNAV (GPS) Z RWY 16			KRNT	RENTON	WA (US)
IAP	ILS OR LOC RWY 31L			KBFI	SEATTLE	WA (US)
IAP	RNAV (GPS) Y RWY 13R			KBFI	SEATTLE	WA (US)
IAP	RNAV (RNP) Z RWY 13R			KBFI	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		1	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 34L		1	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 34R		1	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16C (CAT II/III)			KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16L (CAT II/III)			KSEA	SEATTLE	WA (US)

IAP	ILS RWY 16R (CAT II/III)		KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16R (SA CAT 1)		KSEA	SEATTLE	WA (US)
IAP	ILS RWY 34C (CAT II)	1	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 34L (CAT II)	1	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 34R (CAT II)	1	KSEA	SEATTLE	WA (US)
IAP	RNAV (GPS) Y RWY 16C		KSEA	SEATTLE	WA (US)
IAP	RNAV (GPS) Y RWY 16L		KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) M RWY 16R		KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) Z RWY 16C		KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) Z RWY 16L		KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) Z RWY 16R		KSEA	SEATTLE	WA (US)
IAP	RNAV (GPS)-A		KS43	SNOHOMISH	WA (US)
STAR	MADEE (RNAV)		CYXX	ABBOTSFORD, BRITISH COLUMBIA	(CA)
STAR	MADEE (RNAV)		KBLI	BELLINGHAM	WA (US)
STAR	EPHRATA		KSEA	SEATTLE	WA (US)
STAR	GLASR		KSEA	SEATTLE	WA (US)
STAR	JAWBN		KSEA	SEATTLE	WA (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 7 **DATE OF REVISION:** 05/05/2011

REASON FOR REVISION:
UPDATE HOLDING RESTRICTIONS
UPDATE FIX USE
UPDATE REQUIRED CHARTING

DEVELOPED BY: **DATE:** 10/06/2010 **OFFICE:** AVN-130 **NAME:** JOHN WALKER

APPROVED BY: **DATE:** 03/01/2011 **OFFICE:** AVN-130 **NAME:** DEZ SILAGYI

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: WST
ARTCC: ZSE
ATC FACILITY: SEA
OTHER: PAE ATCT

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

INFO ONLY

NAME: TECEE **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 472409.26N/1222154.60W **TYPE:** RADAR, DME

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

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	210.00	229.00	3.00	3.00		1100	2000

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 16R	1		KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16R (SA CAT I, CAT II/III)	1		KSEA	SEATTLE	WA (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 05/05/2011

DEVELOPED BY: **DATE:** 12/09/2010 **OFFICE:** AVN-130 **NAME:** VICTOR NASO

APPROVED BY: **DATE:** 05/05/2011 **OFFICE:** AVN-130 **NAME:** DEZ SILAGYI

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: WST
ARTCC: ZSE
ATC FACILITY: SEA/SEA
OTHER:

TERMINAL AIRSPACE DATA REQUIREMENTS

CITY: **SEATTLE** STATE: **WA**

AIRPORT NAME: **SEATTLE-TACOMA INTL** ID: **KSEA**

PROCEDURE: **ILS OR LOC RWY 16R** AMDT: **2**

DOCKET#: **NOT REQUIRED**
(96-AXX-X/Required/Not Required)

ALL DIST TO 1/100 NM; ELEV TO NEAREST FT; COORD TO 1/100 SEC; DEG TO 1/100 DG.

1. Distance from **THLD** to 1000' point **2.92**
   (Enter THLD, FAF, ARP, FACILITY, as appropriate)
2. Width of **FINAL** segment at 1000' point **0.85**
   (Enter appropriate segment, final, intermediate, etc.)
3. True Course of **FINAL** segment containing 1000' point **180.33**
4. High Terrain in **FINAL** segment containing 1000' point **436**
5. Distance from **THLD** to 1500' point **4.49**
   (If 1500' point in PT maneuvering area or holding pattern note in remarks)
6. Width of **FINAL** segment at 1500' point **1.19**
7. True Course of **FINAL** segment containing 1500' point **180.33**
8. High Terrain in **FINAL** segment containing 1500' point **436**
9. Threshold Coordinates (if straight-in) ... **472749.81N** / **1221904.29W**
10. ARP Coordinates ..... **472659.60N** / **1221842.40W**
11. Runway Approach End and distance furthest from ARP ..... RWY **34R**
    Distance **1.13** NM
12. FAF Coordinates ..... **473219.10N** / **1221902.00W**

REMARKS: Approach/Drawing attached.

US Department of Transportation
Federal Aviation Administration

FLIGHT PROCEDURES STANDARDS WAIVER

FLIGHT STANDARDS USE ONLY

CONTROL NO:

1. Flight Procedure Identification:
SEATTLE-TACOMA INTL
Seattle, WA
ILS OR LOC RWY 16R
ILS RWY 16R (SA CAT I & III)

2. Waiver Required and Applicable Standard:
Waiver Required: To use an "at or below" altitude in the missed approach.
Applicable Standard: FAAO 8260.3B, Volume 1, Para 274 (Straight Missed Approach Obstacle Clearance).

3. Reason for Waiver *(Justification for nonstandard treatment)*:
Air traffic has a need to keep aircraft that are executing a missed approach at or below 2000 ft while they are within 1 NM of the airport due to other traffic overflying the airport at 3000 ft. .

4. Equivalent Level of Safety Provided:
1. 40:1 OCS and Level surface evaluations were done from DA/MAP to TECEE and from TECEE to the clearance limit. The At or Below altitude of 2000' MSL provides 1000' of ROC for aircraft who level off at 2000. From TECEE to the clearance limit the OCS was evaluated beginning at 1000' MSL (2000' MSL less 1000' ROC) at TECEE to simulate the first level surface portion of the missed approach.

5. How Relocation or Additional Facilities Will Affect Waiver Requirement:
Relocation or additional facilities will have no affect on waiver requirement.

6. Coordination With User Organizations (Specify):
AJV-354:_____

7. SUBMITTED BY

DATE:	Office Identification:	Title:	Signature:
10/11/2012	AJV-35	Gregory Yamamoto, Manager, Terminal Products Group.	

8. CONTINUATION
Comments:

9. AFS ACTION	☐ Approved ☐ Disapproved ☐ Not Required

Comments:

Date:	Routing Symbol:	Signature: