Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: IAP	Date Open: 03/09/2011	Task #: 2011030931226102001	Request #: 20110309312261
Procedure: ILS OR LOC RWY 16 C AMDT 14		Airport ID: KSEA	Airport: SEATTLE-TACOMA INTL		Reimbursable #:
City: SEATTLE	ST: WA	GPS #:		Estimated Chart Date: 03/07/2013	FICO #:
Fac ID: SZI	Fac. Type: ILS	Specialist: AMANDA ROBBINS			

Procedure Review

	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

P1

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

pg 2 of 2

SEATTLE, WA SEATTLE-TACOMA INTL (KSEA) ILS OR LOC RWY 16C, AMDT 14 ENROUTE-YES FC: 1.8.13 PUB: 3.7.13

ATTACHED FORMS: ESV REPORTS; 8260-3; 8260-10; 8260-9; 8260-2(S): ANVIL-INT, REV 6; ERYKA-INT, REV 4; GRIFY, REV 1; MGNUM-INT, REV 5; MCCHORD (TCM) VTAC, 3; MILLT-INT, REV 11; SODOE-INT, REV 2; TEBNE-INT, REV 1; (INFO ONLY) PAINE (PAE) VDME, REV 7.

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

PROTOTYPE
NOT
FOR
NAVIGATION

SEATTLE-TACOMA INTL AIRPORT

ALERT NOTICE

ATTENTION ALL AIRCRAFT LANDING TO THE SOUTH:

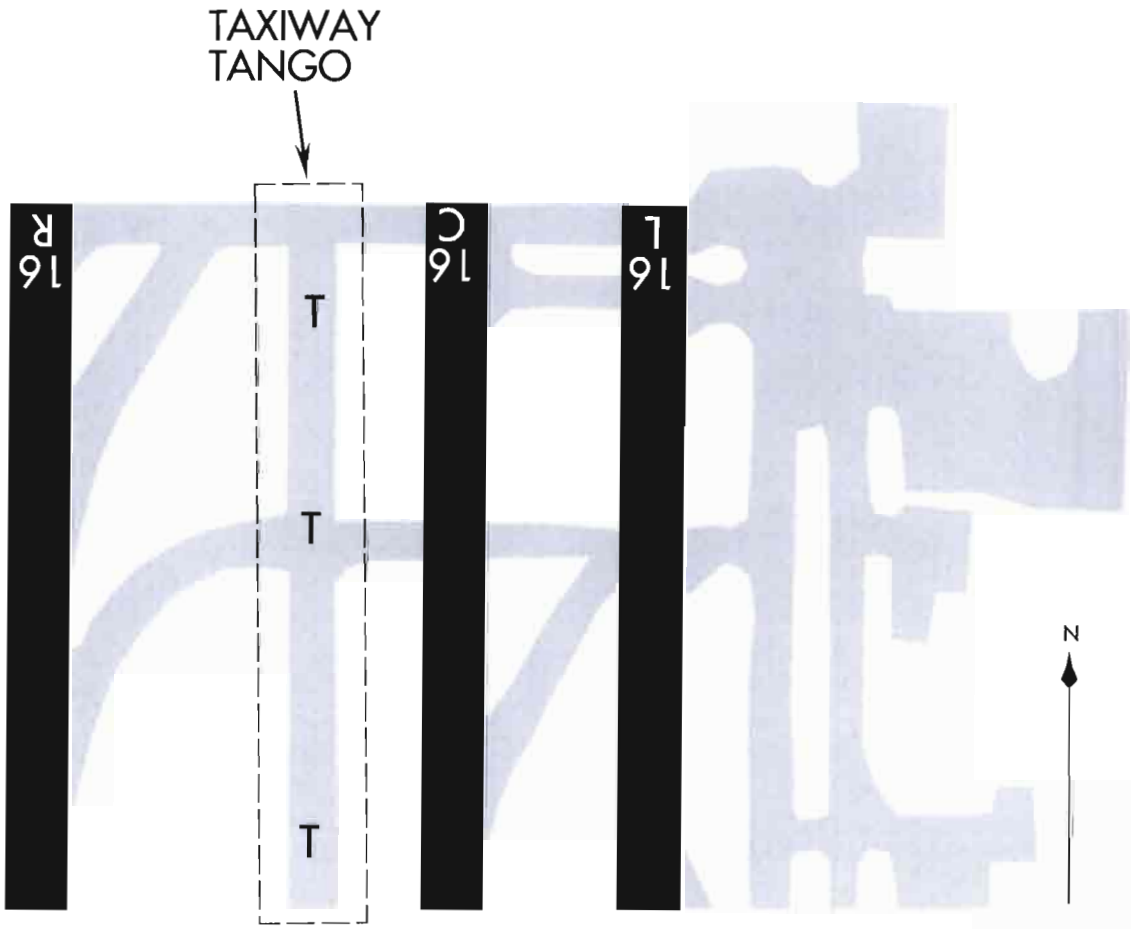
When transitioning from an instrument procedure to a visual approach to Runway 16C, verify you are aligned for the intended landing Runway, not Taxiway Tango. Taxiway Tango is west and parallel to Runway 16C.

TRANSITION TO VISUAL:

Taxiway Tango has been mistaken for Runway 16C from the air during certain visibility conditions, i.e., wet runway, low sun angle reflections. Aircrews are advised to be aware of the proximity of the taxiway to Runway 16C and its runway-like appearance while on approach.

RECOMMENDATION:

Aircrews should use visual cues, e.g., approach lighting systems, REILs, when available, to confirm alignment with Runway 16C not Taxiway Tango. Additionally, it is recommended when executing a segment of the ILS approach for a visual transition, track the localizer until the runway environment is visually verified.



NEW

PROTOTYPE NOT FOR NAVIGATION

PDF EDITED FIG

SEATTLE, WASHINGTON — AL-582 (FAA)

LOC/DME I-SZI	APP CRS	Rwy 16C ldg	Rwy 16L ldg
111.7 Chan 54	163°	9426	11901
		THRE 430	THRE 433
		Apt Elev 433	Apt Elev 433

ILS or LOC RWY 16C

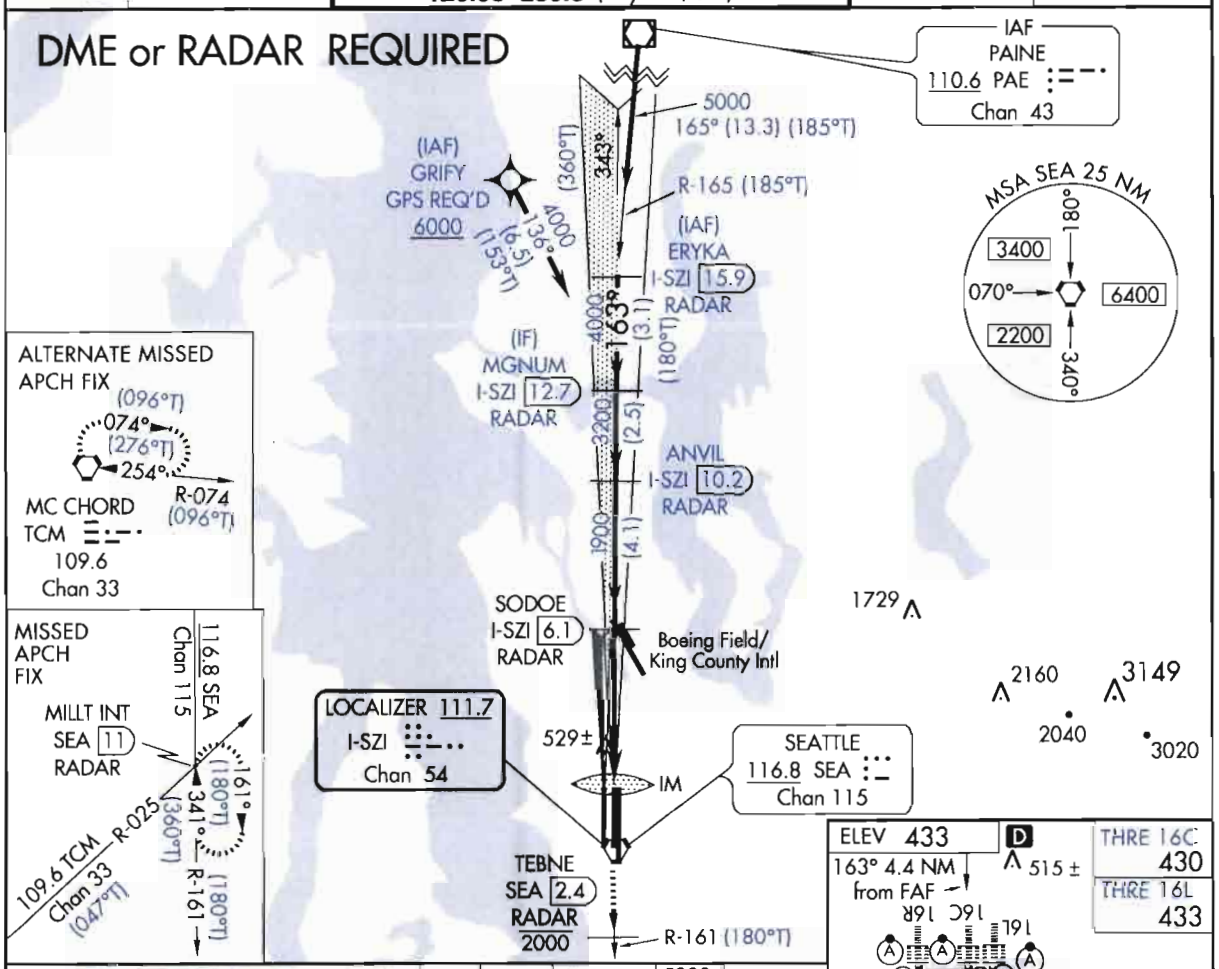
SEATTLE-TACOMA INTL (SEA)

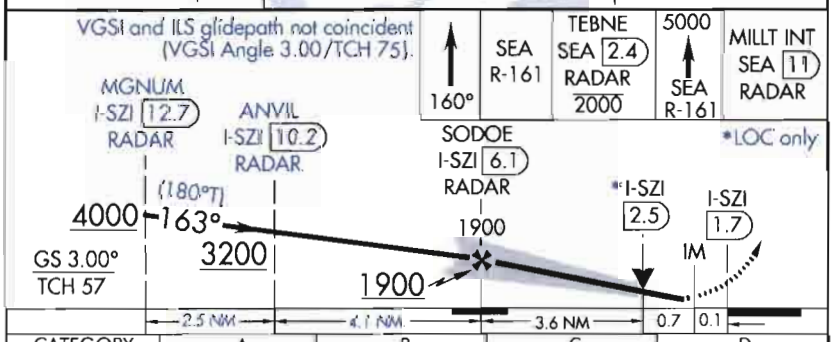
Inoperative table does not apply to SIDESTEP 16L. For inop ALSF-2, increase S-LOC 16C Cat C, D visibility to RVR 5000. Simultaneous approach authorized with Rwy 16R. DME or RADAR required. See additional requirements on adjacent information page.

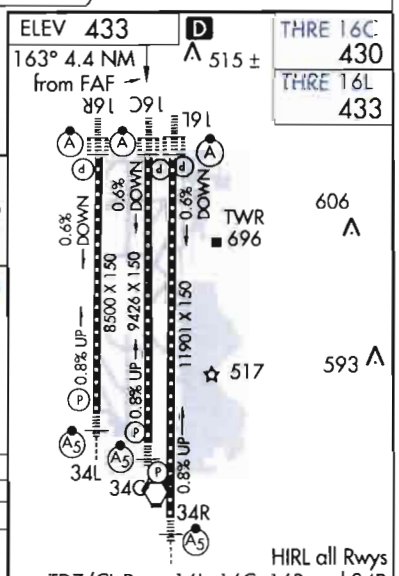
ALSF-2 Rwy 16C/L

MISSED APPROACH: Climb on heading 160° and SEA VORTAC R-161 to cross TEBNE/SEA 2.4 DME/RADAR at or below 2000, then climb to 5000 on SEA VORTAC R-161 to MILLT INT/SEA 11 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







CATEGORY	A	B	C	D
S-ILS 16C	630/18	200 (200-½)		
S-LOC 16C	760/24	330 (400-½)	760/26	330 (400-⅝)
SIDESTEP 16L	780/50	347 (400-1)	780-1½ 347 (400-1½)	780-2 347 (400-2)
CIRCLING	1000-1	567 (600-1)	1000-1½ 567 (600-1½)	1000-2 567 (600-2)

FAF to MAP 4.4 NM

Knots	60	90	120	150	180
Min:Sec	4:24	2:56	2:12	1:46	1:28

NEW

PROTOTYPE NOT FOR NAVIGATION

PDF EDITED

LOC/DME I-SZI	APP CRS	Rwy ldg	9426
111.7	163°	THRE	430
Chan 54		Apt Elev	433

ILS RWY 16C (SA CAT I)

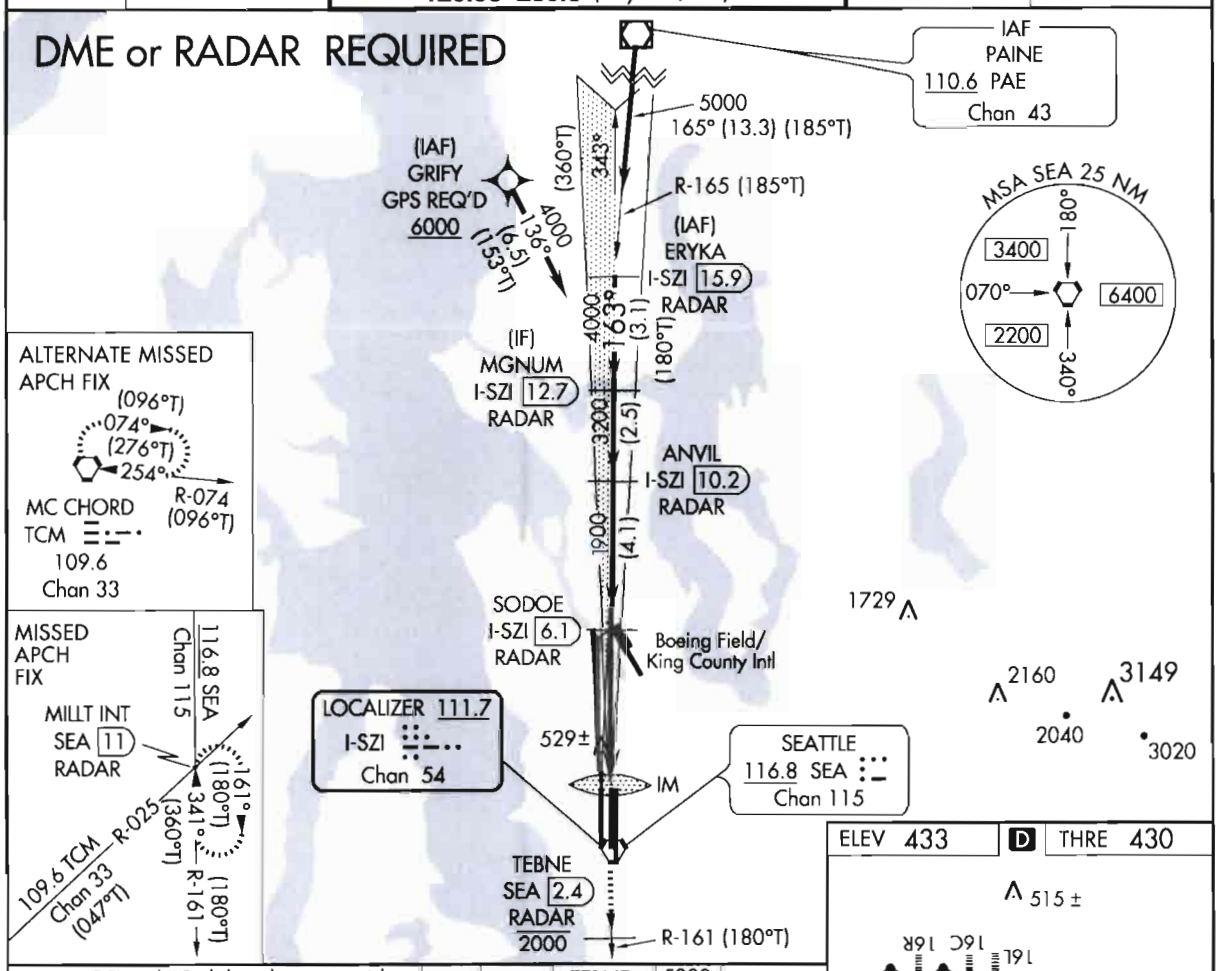
SEATTLE-TACOMA INTL (SEA)

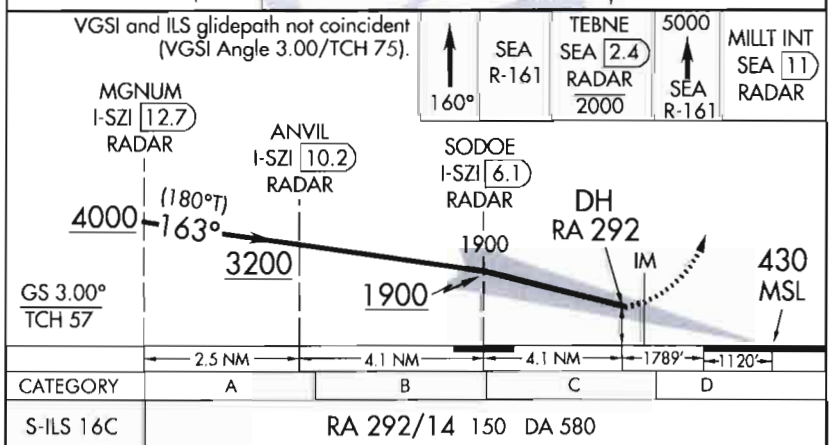
DME or RADAR required. Simultaneous approach authorized with Rwy 16R. Requires specific OPSEPC, MSPEC, or LOA approval and use of HUD to DH.

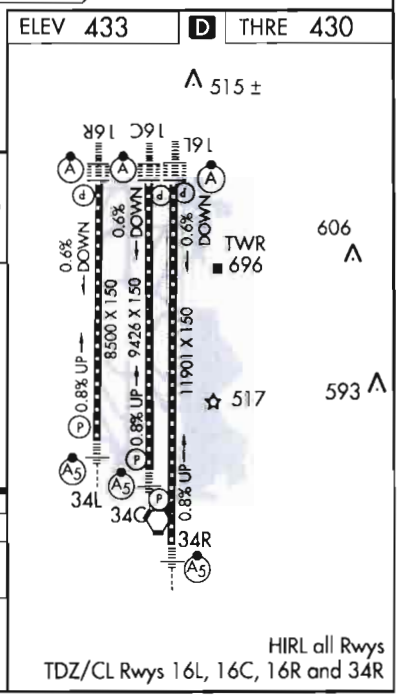
ALSF-2

MISSED APPROACH: Climb on heading 160° and SEA VORTAC R-161 to cross TEBNE/SEA 2.4 DME/RADAR at or below 2000, then climb to 5000 on SEA VORTAC R-161 to MILLT INT/SEA 11 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







CATEGORY	A	B	C	D
S-ILS 16C	RA 292/14 150 DA 580			

SA CATEGORY I ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

NEW

PROTOTYPE NOT FOR NAVIGATION

SEATTLE, WASHINGTON — AL-582 (FAA) — FIG PDF EDITED

ILS RWY 16C (CAT II)

SEATTLE-TACOMA INTL (SEA)

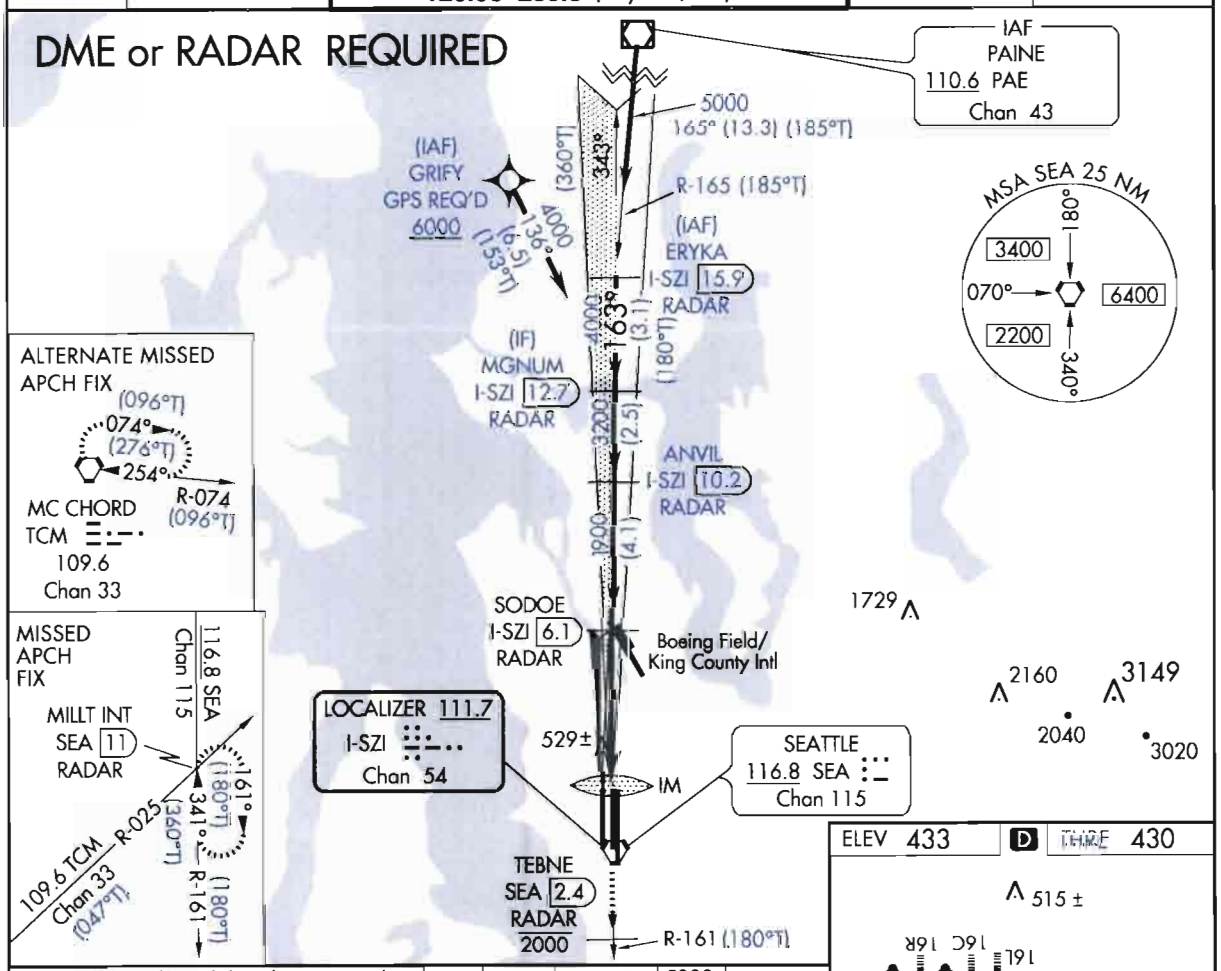
LOC/DME I-SZI	APP CRS	Rwy ldg	9426
111.7	163°	THRE	430
Chan 54		Apt Elev	433

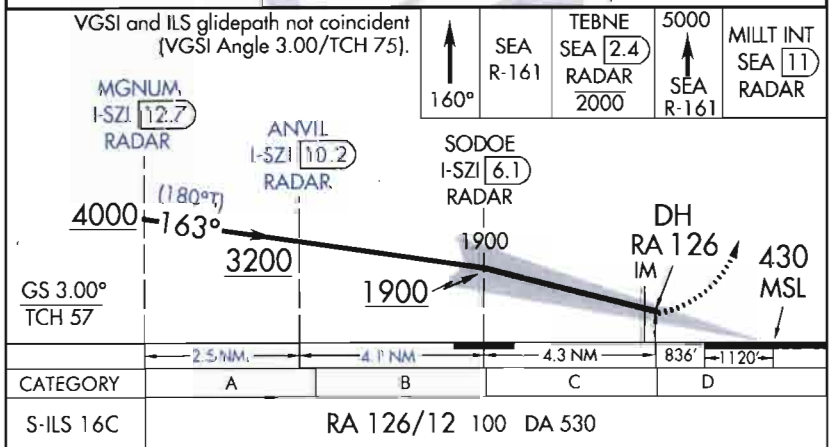
DME or RADAR required. Simultaneous approach authorized with Rwy 16R. RVR 1000 authorized with specific OPSEPC, MSPEC, or LOA approval and use of autoland or HUD to touchdown.

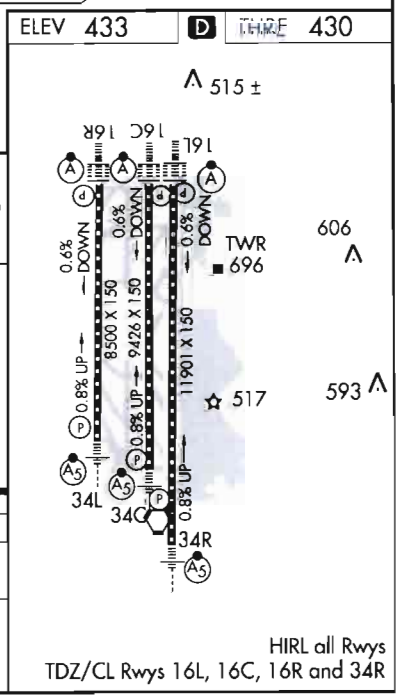
ALSF-2

MISSED APPROACH: Climb on heading 160° and SEA VORTAC R-161 to cross TEBNE/SEA 2.4 DME/RADAR at or below 2000, then climb to 5000 on SEA VORTAC R-161 to MILLT INT/SEA 11 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







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

CATEGORY II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

PROTOTYPE NOT FOR NAVIGATION

SEATTLE, WASHINGTON

AL-582 (FAA)

FIG

PDF EDITED

ILS RWY 16C (CAT III)

SEATTLE-TACOMA INTL (SEA)

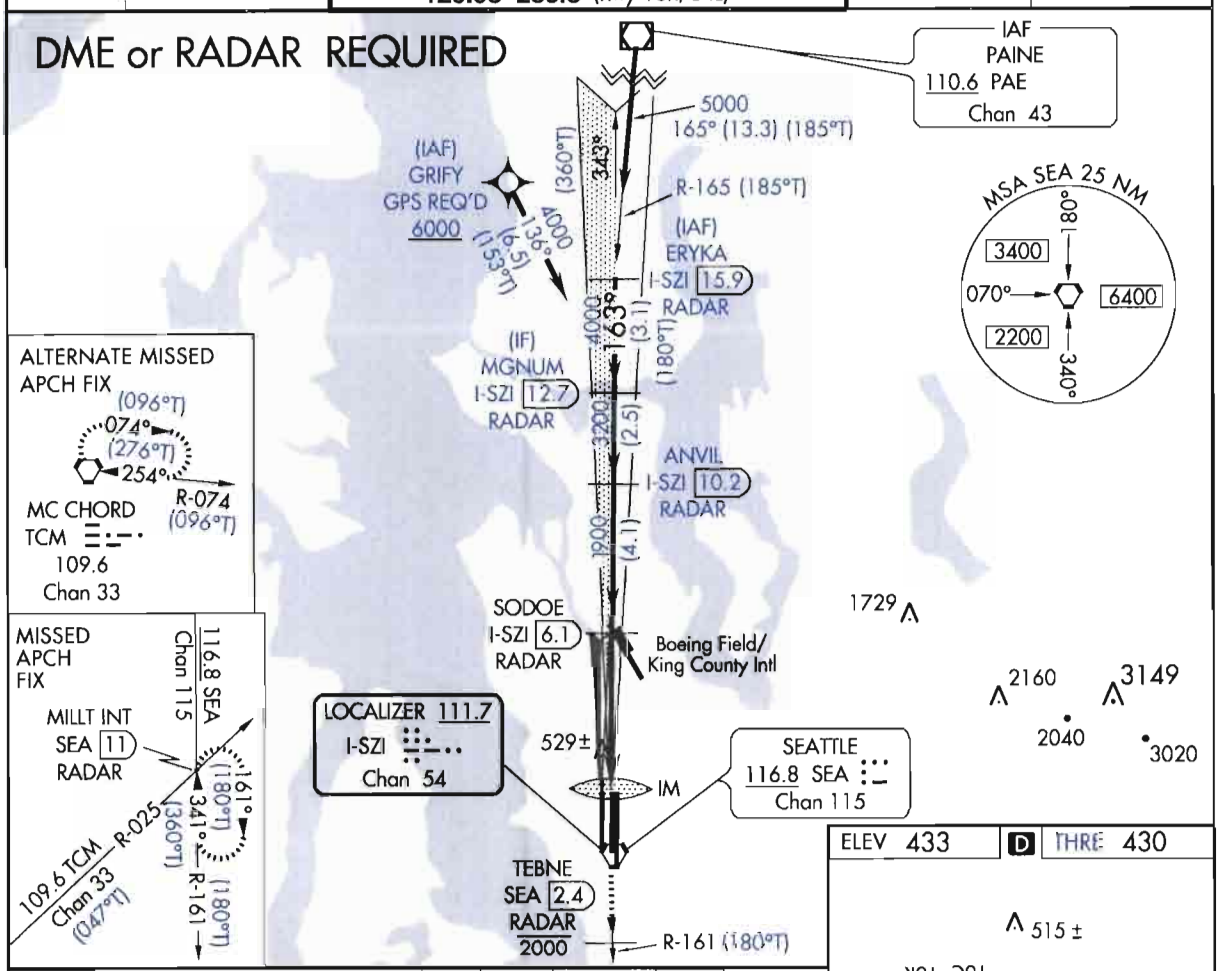
LOC/DME I-SZI	APP CRS	Rwy ldg	9426
111.7	163°	THRE	430
Chan 54		Apt Elev	433

DME or RADAR required. Simultaneous approach authorized with Rwy 16R.

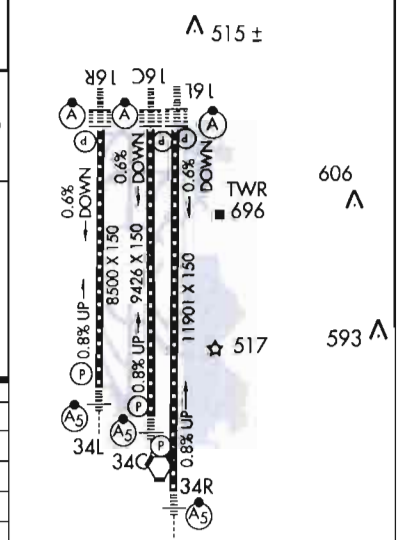
ALSF-2

MISSED APPROACH: Climb on heading 160° and SEA VORTAC R-161 to cross TEBNE/SEA 2.4 DME/RADAR at or below 2000, then climb to 5000 ON SEA VORTAC R-161 to MILLT INT/SEA 11 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



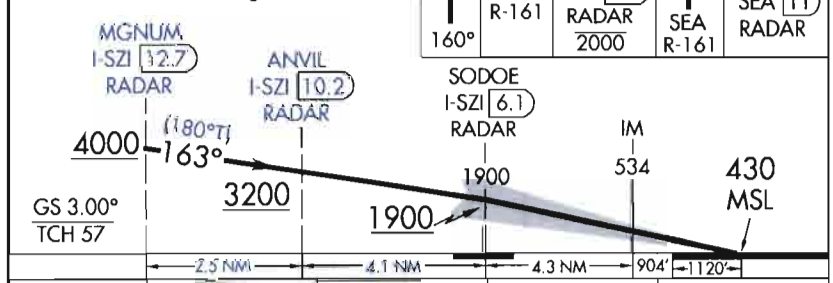
ELEV 433 | D | THRE 430



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

VGSI and ILS glidepath not coincident
(VGSI Angle 3.00/TCH 75).

160°	SEA R-161	TEBNE SEA 2.4 RADAR 2000	5000 SEA R-161	MILLT INT SEA 11 RADAR



CATEGORY	A	B	C	D
S-ILS 16C		CAT IIIa	RVR 07	
S-ILS 16C		CAT IIIb	RVR 03	
S-ILS 16C		CAT IIIc	NA	

CATEGORY III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

SEATTLE, WASHINGTON

Amdt 14 FIG

47°27'N-122°19'W

SEATTLE-TACOMA INTL (SEA)

ILS RWY 16C (CAT III)

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : SEATTLE	City : SEATTLE	Ident : SZI	State : WA
Type/Class : GS	Frequency : M333.5	Reference No.: 12108960	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 772262-006	343	0	12	40	48

Requirement: MGNUM FIX ON RWY KSEA RWY 16C GS.

Signature: Denton Jon	Routing Symbol: AJV-354	Date: 10/12/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 772262-006	343	0	12	40	48	APPROVE

Requirement/Remarks: MGNUM FIX ON RWY KSEA RWY 16C GS.APPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: ORear Daniel	Routing Symbol:	Date: 10/12/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 772262-006	343	0	12	40	48	APPROVE

Requirement/Remarks: MGNUM FIX ON RWY KSEA RWY 16C GS.APPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 10/12/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 772262-006	343	0				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : SEATTLE	City : SEATTLE	Ident : SZI	State : WA
Type/Class : GS	Frequency : M333.5	Reference No.: 12108940	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 772262-005	343	0	15	50	50

Requirement: ERYKA FIX ON RWY KSEA RWY 16C GS.

Signature: Denton Jon	Routing Symbol: AJV-354	Date: 10/12/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 772262-005	343	0	15	50	50	APPROVE

Requirement/Remarks: ERYKA FIX ON RWY KSEA RWY 16C GS.APPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: ORear Daniel	Routing Symbol:	Date: 10/12/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 772262-005	343	0	15	50	50	APPROVE

Requirement/Remarks: ERYKA FIX ON RWY KSEA RWY 16C GS.APPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 10/12/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 772262-005	343	0				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

for 16C.

Approved ESVs Report

Approved.

SZI

Region - NM

Ident - SZI **City - SEATTLE, WA** **Frequency - 111.7-MHz** **Facility - LOC**

ESV ID	Radial 1	Radial 2	Distance	Alt Min	Alt Max	Flight Check Date
FAA 772256-003	343	0	30	30	100	

Requirement : ILS Rwy 16C

FAA 772256-004	343	0	30	50	100	

Requirement : ILS Rwy 16C

FAA 772256-005	343	0	16	19	50	

Requirement : 080612E FIX (ERYKA) DIST FROM GS ANT 14NM, DIST FROM DME ANT 1080623 Approved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT. 080904 AVN-150

FAA 772256-006	343	0	19	20	60	

Requirement : 080612E FIX (WEMAT) DIST FROM GS ANT 17NM, DIST FROM DME ANT 1080623 Approved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT. 080904 AVN-150 SAT AT 20

Ident - SZI **City - SEATTLE, WA** **Frequency - 333.5-MHz** **Facility - GS**

ESV ID	Radial 1	Radial 2	Distance	Alt Min	Alt Max	Flight Check Date
FAA 772262-001	343	0	18	50	100	

Requirement : ILS Rwy 16C

FAA 772262-002	343	0	11	40	40	

Requirement : 080612E FIX (MGNUM) DIST FROM LOC ANT 13NM, DIST FROM DME ANT 080623 Approved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT. 080926

FAA 772262-003	343	0	14	50	50	

Requirement : 080612E FIX (ERYKA) DIST FROM LOC ANT 16NM, DIST FROM DME ANT 080623 Approved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT. 080926

FAA 772262-004	343	0	17	60	60	

Requirement : 080612E FIX (WEMAT) DIST FROM LOC ANT 19NM, DIST FROM DME ANT 080623 Approved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT. 080925

Ident - SZI **City - SEATTLE, WA** **Frequency - 1015-MHz** **Facility - DME**

ESV ID	Radial 1	Radial 2	Distance	Alt Min	Alt Max	Flight Check Date
FAA 840814-001	343	0	25	50	100	

Requirement : ILS Rwy 16C

FAA 840814-002	343	0	16	19	50	

Requirement : 080612E FIX (ERYKA) DIST FROM GS ANT 14NM, DIST FROM LOC ANT 1080612 Approved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT. 080904 AVN-150

FAA 840814-003	343	0	19	20	60	

Requirement : 080612E FIX (WEMAT) DIST FROM GS ANT 17NM, DIST FROM LOC ANT 1080612 Approved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT. 080904 AVN-150 SAT AT 20

FAA 840814-004	163	0	14	50	70	

Requirement : 080613E FIX LORIE *DIST. FROM (I-TUC) LOC ANT. 16NM, DIST. FRQ080616 Approved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT. 080926

FAA 840814-005	163	0	23	50	70	

Requirement : 080613E CNF FIX DIYVE. LOC INTERCEPT POINT. *DIST. (I-TUC) LOC080616 Approved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT. 080926

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	ERYKA/I-SZI 15.86 DME/RADAR	165.45 / 13.26 (PAE)	5000
ERYKA/I-SZI 15.86 DME/RADAR (IAF)	MGNUM/I-SZI 12.72 DME/RADAR	163.34 / 3.14 (I-SZI)	4000
GRIFY (IAF)	MGNUM/I-SZI 12.72 DME/RADAR	136.27 / 6.48	4000
MGNUM/I-SZI 12.72 DME/RADAR (IF)	ANVIL/I-SZI 10.20 DME/RADAR	163.34 / 2.51 (I-SZI)	3200
ANVIL/I-SZI 10.20 DME/RADAR	SODOE/I-SZI 6.12 DME/RADAR	163.34 / 4.08 (I-SZI)	1900

MISSED APPROACH

ILS: DA
LOC: 4.44 MILES AFTER SODOE/SZI 6.12 DME/RADAR OR AT I-SZI 1.68 DME FIX

CLIMB ON HEADING 160 AND SEA VORTAC R-161 TO CROSS TEBNE/SEA 2.40 DME/RADAR AT OR BELOW 2000, THEN CLIMB TO 5000 ON SEA VORTAC R-161 TO MILLT INT/SEA 11.00 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 MGNUM/I-SZI 12.72 DME/RADAR
3. FAC: 163.34 FAF: SODOE/I-SZI 6.12 DME/RADAR DIST FAF TO MAP: 4.44 THLD: 4.44
4. MIN. ALT: MGNUM 4000, ANVIL 3200, SODOE 1900
5. DIST TO THLD FROM OM: - MM: - IM: 904 150 HAT: 1789 100 HAT: 836 GS ANT: 1120
6. MIN GS INCPT: 1900 GS ALT AT: SODOE 1900 OM: - MM: - IM: 534
7. GS ANGLE: 3.00 TCH: 56.6
8. MSA FROM: SEA VORTAC 360-160 6400, 160-250 2200, 250-360 3400

ADDITIONAL FLIGHT DATA:
HOLD S, RT, 340.66 INBOUND.
CHART IN PLANVIEW: ALTERNATE MA HOLDING, HOLD E TCM VORTAC, RT, 254.00 INBOUND.
CHART FAS OBST: 529 TREE 472853N/1221901W
528 AAO 473245N/1221803W
CHART VDP AT 2.48 DME*;
DISTANCE VDP TO THLD 0.80 MILES.
*LOC ONLY.
CHART IN PLANVIEW: TCM VORTAC.
CHART AT OR ABOVE 6000 AT GRIFY.
CHART MAXIMUM 2000 AT TEBNE.
CHART LOC RWY 16R.
CHART TCM R-025 AT MILLT
CHART KBFI

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 16C	630	1800	200	630	1800	200	630	1800	200	630	1800	200			
S-LOC 16C	760	2400	330	760	2400	330	760	2600	330	760	2600	330			
SIDESTEP 16L	780	5000	347	780	5000	347	780	1 1/2	347	780	2	347			
CIRCLING	1000	1	567	1000	1	567	1000	1 1/2	567	1000	2	567			

NOTES:
SA CATEGORY I ILS: SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED. S-ILS 16C: CAT A, B, C, D, RA 292, RVR 1400, HATh 150, DA 580 MSL.
CATEGORY II ILS SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED S-ILS 16C: CAT A, B, C, D, RA 126, RVR 1200, HATh 100, DA 530 MSL.
CATEGORY III ILS SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION REQUIRED. S-ILS-16C: CAT IIIa CAT A,B,C,D, RVR 700. CAT IIIb CAT A,B,C,D, RVR 300. CAT IIIc NA.
(SEE FORM 8260-10)

QUALITY 4 CHECKED

CITY AND STATE	ELEVATION: 433 THRE: 16C 430 THRE: 16L 433 AIRPORT NAME:	FACILITY IDENTIFIER:	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:	SUP:
SEATTLE, WA	SEATTLE-TACOMA INTL	I-SZI	ILS OR LOC RWY 16C, AMDT 14 ILS RWY 16C (SA CAT I) ILS RWY 16C (CAT II) , ILS RWY 16C (CAT III)	AMDT: 13B 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 APCH, SEA ATCT, AMGR

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME: AMANDA ROBBINS	FIFO AJV-354	DATE: 11/07/2012
APPROVED BY		
NAME: DEBORAH COPELAND MANAGER	FIFO AJV-354	DATE:

CHANGES:

1.UPDATE ALL INSTANCES OF TDZ 430 TO THRE 430.
2.UPDATED S-ILS 16C, AND S-LOC 16C HAT ALL CATS TO HATH, ALL NUMBERS STAYED THE SAME.
3.UPDATED ONE WORD EACH IN PRIMARY AND ALTERNATE MISSED APPROACHES, CHANGE REFERENCES OF VIA TO ON.
4.UPDATED ALTERNATE MISSED TO INCLUDE (SIMULTANEOUS OPERATIONS NA) IN FRONT OF ALTERNATE MISSED INSTRUCTIONS.
5.CHANGED PAE VOR/DME FROM IAF TO FEEDER.
6.REMOVED PLANVIEW CHART NOTE: PROCEDURE NA FOR ARRIVALS AT PAE VOR/DME VIA V23 NORTHBOUND.
7.REMOVE WEMAT FIX COMPLETELY FROM PROCEDURE, AND CHANGE INTERMEDIATE REFERENCE FROM WEMAT TO MGNUM.
8.CHANGED PAE VOR/DME TO WEMAT AND WEMAT TO ERYKA TO BE PAE VOR/DME TO ERYKA.
9.ADD GPS TRANSITION INITIAL GRIFY TO IF MGNUM.
10.ADDED REQUIRED AT OR ABOVE 6000 FT ALTITUDE AT IAF GRIFY.
11.UPDATE LOC MAP FROM: 4.39 MILES AFTER SODOE/6.07 DME/RADAR OR AT I-SZI 1.68 DME FIX TO: 4.44 MILES AFTER SODOE/SZI 6.12 DME/RADAR OR AT I-SZI 1.68 DME FIX.
12.DISTANCE FAF TO MAP/THLD CHANGED FROM 4.39 NM TO 4.44 NM.
13.UPDATE FROM: CHART VDP AT 2.47 DME; DISTANCE VDP TO THLD 0.79 MILES TO: CHART VDP AT 2.48 DME*; DISTANCE VDP TO THLD 0.80 MILES.
SEE 8260-10

REASONS:

1., 2.PER CRITERIA, HAT IS NOW REPLACED BY HATH (8260.54A PARA 1.4.1 C, REF PARA 1.6).
3.CRITERIA INDICATES WHEN SIMULTANEOUS OPERATIONS ARE IN EFFECT MISSED APPROACHES MUST DIVERGE, ALL PRIMARY MISSED APPROACHES USE SEA VTAC, AND ALL 16 ALTERNATE MISSED APPROACHES GO TO PAE VOR/DME AND HOLD ON SAME HOLDING PATTERN, IF SEA VTAC IS OUT, ALL 16 ILS OR LOC PROCEDURES WILL CONVERGE.
4.PER CRITERIA IN MISSED APPROACH USE ON AS OPPOSED TO PREVIOUS USE OF VIA.
5. PER FPT CHECKLIST.
6.PER CRITERIA FOR CONVENTIONAL PROCEDURES THIS NOTE IS APPLIED WHEN THE TURN IS OVER AN IAF, SINCE THIS IS NO LONGER AN IAF THE NOTE NO LONGER APPLIES.
7., 8. PER FPT CHECKLIST, NO LONGER ON APPROACH.
9.PER FPT CHECKLIST, TO TIE PROCEDURE TO (RNAV) STAR.
10.PER ATC AND PBN OFFICE REQUEST.
11., 12. FAF MOVED DUE TO CRITERIA (8260.54A PARA 2.13, FORMULA 2-16B L-V).
13.PAPI INSTALLED, AND NEW VGSI TCH IS 75.3, VERSUS PREVIOUS PROCEDURE VGSI TCH OF 78.7.
14.PER CRITERIA INDICATION VDP IS FOR LOC ONLY (8260.19 PARA 8-57 R).
15., 16.,17. TO SUPPORT SIMULTANEOUS DEPENDENT APPROACHES WITH RWY 16R, IN COORDINATION WITH (8260.54A PARA 2.13, FORMULA 2-16B L-V).
18.SIMULTANEOUS PROCEDURES NOW AUTHORIZED WITH RNAV GPS AND RNAV RNP PROCEDURES.
SEE 8260-10

QUALITY 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 ON HEADING 163, THEN CLIMBING RIGHT TURN TO 5000 DIRECT TCM VORTAC AND HOLD.

NOTES, (CONT.):
CHART NOTE: INOPERATIVE TABLE DOES NOT APPLY TO SIDESTEP 16L.
CHART NOTE: FOR INOPERATIVE ALSF-2, INCREASE S-LOC 16C CAT C, D VISIBILITY TO RVR 5000.
CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 16R.
CHART NOTE: DME OR RADAR REQUIRED.
CHART PLANVIEW NOTE: DME OR RADAR REQUIRED.
CHART PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT.
CHART PLANVIEW NOTE ADJACENT TO GRIFY IAF: GPS REQUIRED.

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

CHART NOTE: SEE ADDITIONAL REQUIREMENTS ON ADJACENT INFORMATION PAGE.

PUBLISH BRIEFING PAGE SHOWING GRAPHIC OF THE RELATIONSHIP OF RUNWAY 16C AND TAXIWAY T FOR ALL RUNWAY 16C APPROACHES, AND INCLUDE THE FOLLOWING ALERT:
SEATTLE-TACOMA INTERNATIONAL AIRPORT
ALERT NOTICE
ATTENTION ALL AIRCRAFT LANDING TO THE SOUTH:
WHEN TRANSITIONING FROM AN INSTRUMENT PROCEDURE TO A VISUAL APPROACH TO RUNWAY 16C, VERIFY YOU ARE ALIGNED FOR THE INTENDED LANDING RUNWAY, NOT TAXIWAY TANGO. TAXIWAY TANGO IS WEST AND PARALLEL TO RUNWAY 16C.
TRANSITION TO VISUAL:
TAXIWAY TANGO HAS BEEN MISTAKEN FOR RUNWAY 16C FROM THE AIR DURING CERTAIN VISIBILITY CONDITIONS, I.E. WET RUNWAY, LOW SUN ANGLE REFLECTIONS. AIRCREWS ARE ADVISED TO BE AWARE OF THE PROXIMITY OF THE TAXIWAY TO RUNWAY 16C AND ITS RUNWAY-LIKE APPEARANCE WHILE ON APPROACH.
RECOMMENDATION:
AIRCREWS SHOULD USE VISUAL CUES, E.G., APPROACH LIGHTING SYSTEMS, REILS, WHEN AVAILABLE, TO CONFIRM ALIGNMENT WITH RUNWAY 16C NOT TAXIWAY TANGO. ADDITIONALLY, IT IS RECOMMENDED WHEN EXECUTING A SEGMENT OF THE ILS APPROACH FOR A VISUAL TRANSITION, TRACK THE LOCALIZER UNTIL THE RUNWAY ENVIRONMENT IS VISUALLY VERIFIED.
INSERT SEGMENTED AIRPORT DIAGRAM DEPICTING RUNWAY 16C AND TAXIWAY T.

QUALITY 1 CHECKED

CITY AND STATE	ELEVATION: 433 THRE: 16C 430 THRE: 16L 433	FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:	SUP:
SEATTLE, WA	AIRPORT NAME: SEATTLE-TACOMA INTL	I-SZI	ILS OR LOC RWY 16C, AMDT 14 ILS RWY 16C (SA CAT I) ILS RWY 16C (CAT II) , ILS RWY 16C (CAT III)	AMDT: 13B DATED: 03/08/2012

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

COORDINATED WITH:

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

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

CHANGES:

CHANGES CONT.

14. ADD PROFILE VIEW NOTE: *LOC ONLY. 15. ALL FIXES ON THE FAC THROUGH THE STRAIGHT INITIAL WERE ADJUSTED TO "ON-GLIDEPATH" LOCATIONS. 16. UPDATE DME: ERYKA 15.34 TO 15.86; MGNUM 12.40 TO 12.72; ANVIL 10.01 TO 10.20; SODOE 6.07 TO 6.12. 17. UPDATED SEG DIST: ERYKA TO MGNUM 2.94 TO 3.14; MGNUM TO ANVIL 2.39 TO 2.51; ANVIL TO SODOE 3.94 TO 4.08. 18. REPLACED PLANVIEW NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH ILS OR LOC RWY 16R, ILS RWY 16R (SA CAT I), ILS RWY 16R (CAT II), ILS RWY 16R (CAT III), WITH CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 16R. 19. ADDED SA CAT 1 MINIMA, PLATE, AND SA CAT I CHART NOTE: REQUIRES SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF HUD TO DH. 20. ADDED CAT II CHART NOTE:RVR 1000 AUTHORIZED WITH SPECIFIC OPSPEC, MSPEC, OR LOA APPROVAL AND USE OF AUTOLAND OR HUD TO TOUCHDOWN. 21. REMOVED CHART PLANVIEW NOTE (FOR CAT III ONLY): CATEGORY III SPECIAL AUTOLAND EVALUATION REQUIRED. 22. UPDATED CHART NOTE FROM: FOR INOPERATIVE ALSF-2, INCREASE S-LOC 16C CAT D VISIBILITY TO RVR 5000, TO FOR IN OPERATIVE ALSF-2, INCREASE S-LOC 16C CAT C, D VISIBILITY TO RVR 5000. 23. UPDATE S-LOC 16C VISIBILITY CAT C FROM 2400 TO 2600, AND CAT D FROM 4000 TO 2600. 24. CHANGE PROFILE START FROM WEMAT TO MGNUM.

REASONS:

REASONS CONT.

19., 20., 21. PER GUIDANCE IN 10/27/2010 MEMO, "IMPLEMENTATION OF AFS 400 MEMO, SPECIAL AUTHORIZATION CATEGORY I AND II INSTRUMENT PROCEDURE CHARTS, DATED APRIL 22, 2010."

22., 23. APPLICATION OF 8260.3B CHANGE 20 VISIBILITY UPDATES (8260.3B CH 20, CH 3).

24. MGNUM THE IF IS THE BEGINNING OF COMMON ROUTES.

QUALITY CHECKED

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 PACKET - 424-18 - ILS

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                 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 ISZI  K1011170 IT                     ISZIN47260883W122184423     003700     NARSEATTLE-TACOMA INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   ANVIL K10    C     N47362071W122183507                     E0165     NAR           ANVIL
        SUSAEAENRT   ERYKA K10    C     N47415960W122183208                     E0165     NAR           ERYKA
        SUSAEAENRT   GRIFY K10    W     N47443841W122225233                     E0165     NAR           GRIFY
        SUSAEAENRT   MGNUM K10    C     N47385133W122183374                     E0165     NAR           MGNUM
        SUSAEAENRT   MILLT K10    C     N47150775W122182881                     E0164     NAR           MILLT
        SUSAEAENRT   SODOE K10    C     N47321593W122183722                     E0165     NAR           SODOE
        SUSAEAENRT   TEBNE K10    R     N47234344W122183338                     E0164     NAR           TEBNE

                 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 KSEAK1FI16C  AGRIFY 010GRIFYK1EA0E  A    IF                                  + 06000     18000                 0 NS
        SUSAP KSEAK1FI16C  AGRIFY 020MGNUMK1EA0E  B    TF                                  + 04000                           0 NS
        SUSAP KSEAK1FI16C  AGRIFY 030ANVILK1EA0EE      CF ISZIK1      3433010216330025PI  + 03200                           0 NS
        SUSAP KSEAK1FI16C  APAE   010PAE  K1D 0V       IF                                             18000                 0 NS
        SUSAP KSEAK1FI16C  APAE   020ERYKAK1EA0E  A    TF                                  + 05000                           0 NS
        SUSAP KSEAK1FI16C  APAE   030MGNUMK1EA0E  B    TF                                  + 04000                           0 NS
        SUSAP KSEAK1FI16C  APAE   040ANVILK1EA0EE      CF ISZIK1      3433010216330025PI  + 03200                           0 NS
        SUSAP KSEAK1FI16C  I      010ANVILK1EA0E  I    IF ISZIK1      34330102        PI  J 032000190018000                 0 NS
        SUSAP KSEAK1FI16C  I      020SODOEK1EA0E  F    CF ISZIK1      3433006216300041PI  H 0190001900        -300SEA   K1D 0 NS
        SUSAP KSEAK1FI16C  I      030RW16CK1PG0GY M    CF ISZIK1      3433001716300044PI    00486             -300          0 NS
        SUSAP KSEAK1FI16C  I      040         0  M     VI                     1600                                           0 NS
        SUSAP KSEAK1FI16C  I      050TEBNEK1EA0E       CF SEA K1      1607002416070030D   - 02000                           0 NS
        SUSAP KSEAK1FI16C  I      060MILLTK1EA0EY      TF                                  + 05000                           0 NS
        SUSAP KSEAK1FI16C  I      070MILLTK1EA0EE  R   HM                      3407T010    + 05000                           0 NS

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

CITY AND STATE	ELEVATION: 433 THRE: 16C 430	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
SEATTLE, WA	AIRPORT NAME: **SEATTLE-TACOMA INTL** THRE: 16L 433	**I-SZI**	**ILS OR LOC RWY 16C, AMDT 14** **ILS RWY 16C (SA CAT I)** **ILS RWY 16C (CAT II), ILS RWY 16C (CAT III)**	AMDT: **13B** 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 KSEAK1GRW16C   0094261633 N47274971W122183955-0700    +0108000430000057150IISZI3
                  1         2         3         4         5         6         7         8         9         0         1         2         3
ILS     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSEAK1IISZI3   011170RW16CN47260672W1221840451633N47273869W1221845461010 11200384300E01705700418
                  1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSEAK1SSEA  K1D                 0   070180034251803400642534007002225                                                  M
```

QUALITY 1 CHECKED

CITY AND STATE	ELEVATION: 433 THRE: 16C 430	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
SEATTLE, WA	AIRPORT NAME: THRE: 16L 433 SEATTLE-TACOMA INTL	I-SZI	ILS OR LOC RWY 16C, AMDT 14 ILS RWY 16C (SA CAT I) ILS RWY 16C (CAT II), ILS RWY 16C (CAT III)	AMDT: 13B 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

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	MGNUM	020		TF		FB				AA 04000	
	GRIFY	ANVIL	030		CF		FB		163.3()	002.5	AA 03200	
	PAE	PAE	010		IF		FB					
	PAE	ERYKA	020	IAF	TF		FB				AA 05000	
	PAE	MGNUM	030		TF		FB				AA 04000	
	PAE	ANVIL	040		CF		FB		163.3()	002.5	AA 03200	
		ANVIL	010	FACF	IF		FB				AA 03200 GI 01900	
		SODOE	020	FAF	CF		FB		163.0()	004.1	GI 01900 GS 01900	
		RW16C	030	MAP	CF		FO		163.0()	004.4	AT 00486	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		VI		FB		160.0()			
	TEBNE	050		CF		FB		160.7()	003.0	AB 02000	
	MILLT	060		TF		FO				AA 05000	
	MILLT	070		HM	R	FO		340.7()	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
ISZI (DME)	N472608.83	W1221844.23	N4726.147	W12218.737
ANVIL	N473620.71	W1221835.07	N4736.345	W12218.585
ERYKA	N474159.60	W1221832.08	N4741.993	W12218.535
GRIFY	N474438.41	W1222252.33	N4744.640	W12222.872
MGNUM	N473851.33	W1221833.74	N4738.856	W12218.562
MILLT	N471507.75	W1221828.81	N4715.129	W12218.480
SODOE	N473215.93	W1221837.22	N4732.266	W12218.620
TEBNE	N472343.44	W1221833.38	N4723.724	W12218.556
RW16C	N472749.71	W1221839.55	N4727.829	W12218.659
ISZI (LOC)	N472606.72	W1221840.45	N4726.112	W12218.674

RUNWAY DATA

RWY	THRESHOLD ELEVATION	TCH
RW16C	00430	57

QUALITY CHECKED 1

CITY AND STATE	ELEVATION: 433	THRE: 16C 430	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
SEATTLE, WA	AIRPORT NAME: SEATTLE-TACOMA INTL	THRE: 16L 433	I-SZI	ILS OR LOC RWY 16C, AMDT 14 ILS RWY 16C (SA CAT I) ILS RWY 16C (CAT II), ILS RWY 16C (CAT III)	AMDT: 13B 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 ISZI  K1011170 IT                     ISZIN47260883W122184423     003700     NARSEATTLE-TACOMA INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   ANVIL K10    C     N47362071W122183507                     E0165     NAR           ANVIL
        SUSAEAENRT   ERYKA K10    C     N47415960W122183208                     E0165     NAR           ERYKA
        SUSAEAENRT   GRIFY K10    W     N47443841W122225233                     E0165     NAR           GRIFY
        SUSAEAENRT   MGNUM K10    C     N47385133W122183374                     E0165     NAR           MGNUM
        SUSAEAENRT   MILLT K10    C     N47150775W122182881                     E0164     NAR           MILLT
        SUSAEAENRT   SODOE K10    C     N47321593W122183722                     E0165     NAR           SODOE
        SUSAEAENRT   TEBNE K10    R     N47234344W122183338                     E0164     NAR           TEBNE

                 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 KSEAK1FL16C  AGRIFY 010GRIFYK1EA0E  A    IF                                + 06000     18000                0 NS
        SUSAP KSEAK1FL16C  AGRIFY 020MGNUMK1EA0E  B    TF                                + 04000                          0 NS
        SUSAP KSEAK1FL16C  AGRIFY 030ANVILK1EA0EE      CF ISZIK1      3433010216330025PI  + 03200                          0 NS
        SUSAP KSEAK1FL16C  APAE   010PAE  K1D 0V       IF                                     18000                       0 NS
        SUSAP KSEAK1FL16C  APAE   020ERYKAK1EA0E  A    TF                                + 05000                          0 NS
        SUSAP KSEAK1FL16C  APAE   030MGNUMK1EA0E  B    TF                                + 04000                          0 NS
        SUSAP KSEAK1FL16C  APAE   040ANVILK1EA0EE      CF ISZIK1      3433010216330025PI  + 03200                          0 NS
        SUSAP KSEAK1FL16C  L      010ANVILK1EA0E  I    IF ISZIK1      34330102        PI  + 03200     18000                0 NS
        SUSAP KSEAK1FL16C  L      020SODOEK1EA0E  F    CF ISZIK1      3433006216300041PI  + 01900                 SEA   K1D 0 NS
        SUSAP KSEAK1FL16C  L      030RW16CK1PG0GY M    CF ISZIK1      3433001716300044PI    00486            -300          0 NS
        SUSAP KSEAK1FL16C  L      040         0  M     VI                      1600                                        0 NS
        SUSAP KSEAK1FL16C  L      050TEBNEK1EA0E       CF SEA K1      1607002416070030D   - 02000                          0 NS
        SUSAP KSEAK1FL16C  L      060MILLTK1EA0EY      TF                                + 05000                          0 NS
        SUSAP KSEAK1FL16C  L      070MILLTK1EA0EE  R   HM                      3407T010    + 05000                          0 NS

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

CHECKED

CITY AND STATE	ELEVATION: 433	THRE: 16C 430	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
SEATTLE, WA	AIRPORT NAME: **SEATTLE-TACOMA INTL**	THRE: 16L 433	**I-SZI**	**ILS OR LOC RWY 16C, AMDT 14** **ILS RWY 16C (SA CAT I)** **ILS RWY 16C (CAT II), ILS RWY 16C (CAT III)**	AMDT: **13B** 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 KSEAK1GRW16C   0094261633 N47274971W122183955-0700    +0108000430000057150IISZI3
                 1         2         3         4         5         6         7         8         9         0         1         2         3
ILS     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        SUSAP KSEAK1IISZI3   011170RW16CN47260672W1221840451633N47273869W1221845461010 11200384300E01705700418
                 1         2         3         4         5         6         7         8         9         0         1         2         3
MSA     123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        SUSAP KSEAK1SSEA  K1D                 0   070180034251803400642534007002225                                                M
```

QUALITY CHECKED

CITY AND STATE	ELEVATION: 433 THRE: 16C 430	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
SEATTLE, WA	AIRPORT NAME: THRE: 16L 433 SEATTLE-TACOMA INTL	I-SZI	ILS OR LOC RWY 16C, AMDT 14 ILS RWY 16C (SA CAT I) ILS RWY 16C (CAT II), ILS RWY 16C (CAT III)	AMDT: 13B 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 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	MGNUM	020		TF		FB				AA 04000	
	GRIFY	ANVIL	030		CF		FB		163.3()	002.5	AA 03200	
	PAE	PAE	010		IF		FB					
	PAE	ERYKA	020	IAF	TF		FB				AA 05000	
	PAE	MGNUM	030		TF		FB				AA 04000	
	PAE	ANVIL	040		CF		FB		163.3()	002.5	AA 03200	
		ANVIL	010	FACF	IF		FB				AA 03200	
		SODOE	020	FAF	CF		FB		163.0()	004.1	AA 01900	
		RW16C	030	MAP	CF		FO		163.0()	004.4	AT 00486	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		VI		FB		160.0()			
	TEBNE	050		CF		FB		160.7()	003.0	AB 02000	
	MILLT	060		TF		FO				AA 05000	
	MILLT	070		HM	R	FO		340.7()	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
	ISZI (DME)	N472608.83	W1221844.23	N4726.147	W12218.737
	ANVIL	N473620.71	W1221835.07	N4736.345	W12218.585
	ERYKA	N474159.60	W1221832.08	N4741.993	W12218.535
	GRIFY	N474438.41	W1222252.33	N4744.640	W12222.872
	MGNUM	N473851.33	W1221833.74	N4738.856	W12218.562
	MILLT	N471507.75	W1221828.81	N4715.129	W12218.480
	SODOE	N473215.93	W1221837.22	N4732.266	W12218.620
	TEBNE	N472343.44	W1221833.38	N4723.724	W12218.556
	RW16C	N472749.71	W1221839.55	N4727.829	W12218.659
	ISZI (LOC)	N472606.72	W1221840.45	N4726.112	W12218.674

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW16C	00430	57

QUALITY CHECKED

CITY AND STATE	ELEVATION: 433	THRE: 16C 430	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
SEATTLE, WA	AIRPORT NAME: SEATTLE-TACOMA INTL	THRE: 16L 433	I-SZI	ILS OR LOC RWY 16C, AMDT 14 ILS RWY 16C (SA CAT I) ILS RWY 16C (CAT II), ILS RWY 16C (CAT III)	AMDT: 13B 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	ERYKA/I-SZI	1. TWR (53-000084)	474605.00N/1222110.00W	920 (1D)	2000	AT2080	5000
		15.86 DME/RADAR	2. TERRAIN	475138.00N/1221657.00W	635 (600)		AS1500	2100
INITIAL	ERYKA/I-SZI	MGNUM/I-SZI	3. AAO	474142.00N/1221909.00W	683 (4E)	1000	AT2317	4000
	15.86 DME/RADAR	12.72 DME/RADAR	4. TERRAIN	474142.00N/1221909.00W	483 (500)		AS1500	2000
INITIAL	GRIFY LOM	MGNUM/I-SZI	5. TWR (53-000053)	473755.00N/1222114.00W	1015 (4D)	1000	AT1985	4000
		12.72 DME/RADAR	6. TERRAIN	474427.00N/1222133.00W	548 (500)		AS1500	2000
INTERMEDIATE	MGNUM/I-SZI	ANVIL/I-SZI	7. TWR (53-000500)	473656.35N/1221830.45W	1092 (4D)	500	AT1608	3200
	12.72 DME/RADAR	10.20 DME/RADAR	8. TERRAIN	473757.00N/1222115.00W	466 (500)		AS1500	2000
INTERMEDIATE:	ANVIL/I-SZI	SODOE/I-SZI 6.12	9. BLDG (53-000455)	473616.80N/1221951.08W	1075 (1A)	500	AT325	1900
STEPDOWN	10.20 DME/RADAR	DME/RADAR	10. TERRAIN	473357.00N/1221824.00W	365 (400)		AS1500	1900
FINAL: ILS	SODOE/I-SZI 6.12	RW16C				ASC		630/200
	DME/RADAR							
2. PROCEDURE TURN	NA							
3. MISSED APPROACH — MAP:	DA / 4.44 MILES	MILLT INT/SEA				ASC		5000
	AFTER SODOE/SZI	11.00 DME/RADAR	11. TWR (53-000694)	471813.81N/1222347.84W	955 (4D)	1000		2000
ELEV:	461/510		12. TERRAIN	471515.00N/1221254.00W	598 (600)		AS1500	2100

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	HT. ABV. ARPT. ACTUAL							
CATEGORY A	1.3 NM	350	567	13. CTWR (53-001394)	472720.55N/1221805.18W	696 (1A)	300		1000
CATEGORY B	1.5 NM	450	567	13. CTWR (53-001394)	472720.55N/1221805.18W	696 (1A)	300		1000
CATEGORY C	1.7 NM	450	567	13. CTWR (53-001394)	472720.55N/1221805.18W	696 (1A)	300		1000
CATEGORY D	2.3 NM	550	567	13. 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 (6C)	6400	250-360	TWR (53-000358)	270/ 21.4	2395 (5E)	3400
160-250	AAO	160/ 24.4	1172 (4E)	2200					4

CITY AND STATE	ELEVATION: 433 / AIRPORT NAME:	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
SEATTLE, WA	SEATTLE-TACOMA INTL	I-SZI	ILS OR LOC RWY 16C, AMDT 14 ILS RWY 16C (CAT II) , ILS RWY 16C (CAT III)	ANM

QUALITY CHECKED

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:
		A / C		HOURS REMOTE OPERATION: 24
SATISFACTORY ON: X VHF X UHF HF	LOCATION: KSEA			ADJUSTMENT: 0

4. MONITOR STATUS	PRIMARY NAVAID: I-SZI		
	MONITOR POINT: SEA 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, 16R, 34C, 34R
		MIRL
		REIL
	X	TDZ 16C, 16L, 16R, 34R
	X	C/L 16C, 16L, 34L, 16R, 34C, 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, 16R, 34C, 34R
	INSTRUMENT	
7. RUNWAY VISUAL RANGE	APPROACH	16C, 16L, 34L, 16R, 34C, 34R
	MIDFIELD	16C, 16L, 34L, 16R, 34C, 34R
	ROLL OUT	16C, 16L, 34L, 16R, 34C, 34R

8. GLIDE PATH	GP ANGLE: 3.00	ELEV RWY THRESHOLD: 429.6
	DISTANCE FROM RWY: 1120	ELEV GP ANTENNA: 427.5
		THRESHOLD CROSSING HEIGHT: 56.6

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; TO USE AN "AT OR BELOW" ALTITUDE IN THE MISSED APPROACH.

PART D - PREPARED BY: AMANDA ROBBINS	DATE: 11/07/2012
TITLE: AERONAUTICAL INFORMATION SPECIALIST	OFFICE: AJV-354

PART C - REMARKS:

SEE ATTACHED AIRSPACE LETTER.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
KSEA ASOS ON SERVICE A / 24 HRS.
BACKUP ALTIMETER NOT REQUIRED DUE TO REDUNDANT LOCAL SOURCES.

VGSI DATA: 3.00/75.3
VEGETATION HEIGHT 100FT PER CHECKLIST.
300FT SHIPMAST PER FPT.

INITIAL, INTERMEDIATE, AND INTERMEDIATE STEPDOWN FIX ALTITUDES AND LOCATIONS PER ATC REQUEST FOR SEPARATION AND AIRPSACE PURPOSES.
USED 8260.54A L-V PFAF FORMULA TO ESTABLISH LOCATIONS OF FIXES ON LOCALIZER COURSE; PUBLISHED RNAV PROCEDURES TO RWY 16C SHARE THESE FIXES.

ILS AND LOC INTERMEDIATE SEGMENTS HAVE THE SAME CONTROLLING OBSTACLES.

GRIFY PROCEDURE ENTRY CONNECTS TO MARNR (RNAV) STAR.

ILS SA CAT I, CAT II/III HMAS 414 (RUNWAY CROWN ELEVATION AT 3000' FROM THRESHOLD).
ALL RUNWAY ELEVATION POINTS FOR OBSTACLE CLEARANCE AND HMAS INTERPOLATED FROM 0712008 SURVEY DATA SHEET.

PER PREVIOUS REVISION FLIGHT CHECKED RDH IS 56.60'.

100' HATH CALCULATION: [DA 530-(429.6 THRE+ 56.6 TCH)]/TAN(3) = 835.7537' FROM THLD
RA TERRAIN ELEVATION AT 835.8' FROM THLD IS 404.8'.
RA:530-404.8=125.2' ~126'
RA 126 CONCURS WITH PREVIOUS REVISION 126FT RA.

150' HATH CALCULATION: [DA 580-(429.6 THRE+ 56.6 TCH)]/TAN(3) = 1789.81' FROM THLD
RA TERRAIN ELEVATION AT 1789.81' FROM THLD IS APPROX. 288'.
RA:580-288=292'

SIDESTEP DESCENT 2.99, BELOW MAXIMUM ALLOWED DESCENT ANGLE.

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

TERPS 289 APPLIED TO 528 AAO 473245N/1221803.

PRIMARY MISSED APPROACH LEVEL SURFACE OBSTACLE FROM MAP TO TEBNE:
16. TREE 472439.33N/1221742.35W 574 (2C) 1000 1600
17. TERRAIN 472439.33N/1221742.35W 474 (500) AS1500 2000

SA CAT I, CAT II, AND CAT III: 40:1 MISSED APPROACH: ASC.
SA CAT I, CAT II, AND CAT III: MISSED APPROACH LEVEL SURFACE AND TERRAIN EVALUATION: SAME AS CAT I EVALUATION.

FOR GPS REQUIRED INITIAL GRIFY TO MGNUM, IAPA SHOWS TWR 53-000036 ELEV 1014 AS CONTROLLER, BUT IT DOES NOT TAKE INTO ACCOUNT THE PROPER GPS TRAP, IPDS EVALUATION SHOWS THE CONTROLLER RIGHT NEXT TO THIS TOWER AS 53-000053 ELEV 1015, THIS IS THE CORRECT CONTROLLER.

CONT.

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	**SODOE/I-SZI 6.12**	**4.44 MILES AFTER**	**14. TREE (KSEA0013)**	**472853.29N/1221901.17W**	**529 (1A)**	**250**	**SA-21**	**760**
	DME/RADAR	**SODOE/SZI 6.12**						
		DME/RADAR OR AT						
		I-SZI 1.68 DME						
		FIX						
FINAL: LOC SIDESTEP	**SODOE/I-SZI 6.12**	**RW16L**	**15. TREE (KSEAC019)**	**472835.87N/1221818.26W**	**514 (1A)**	**250**		**780**
	DME/RADAR							
FINAL: ILS CAT II	**SODOE/I-SZI 6.12**	**RW16C**				**ASC**		**530/100**
	DME/RADAR							
FINAL: ILS CAT II	**SODOE/I-SZI 6.12**	**RW16C**				**ASC**		**580/150**
	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

QUALITY CHECKED 4

CITY AND STATE		FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
SEATTLE, WA	**ELEVATION: 433** AIRPORT NAME: **SEATTLE-TACOMA INTL**	**I-SZI**	**ILS OR LOC RWY 16C, AMDT 14** **ILS RWY 16C (CAT II) , ILS RWY 16C (CAT III)**	**ANM**

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE	3. ALTIMETER SETTING
SATISFACTORY ON:	N W S / F A A / A / C — OTHER:	SOURCE:
		DISTANCE:
		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:

CONTINUED.
MISSED APPROACH OBSTACLES CONT.
ALTERNATE:
ASC 5000
18. TWR (53-000694) 471813.81N/1222347.84W 955 (4D) 1000 2000
19. TERRAIN 471815.00N/1222442.00W 539 (500) AS1500 2000

RADIO FIX AND HOLDING DATA RECORD

NAME: ANVIL **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 473620.71N/1221835.07W **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-SZI	LOC/DME		343.34	000.34	10.20	10.24		3200	4800

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

REMARKS:
DME ANTENNA COORDINATES: 472608.83N/1221844.23W
FIX LOCATION DETERMINED IAW 8260.54A, FORMULA 2-16B.

FIX USE:

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

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 6 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
FIX MOVED 1171.34 FT NORTH.
UPDATED FIX COORDINATES.
CHANGED FAC 1 DME FROM 10.01 TO 10.20.
ADDED DISTANCE FROM FAC FOR FAC 1, 10.24.
DELETED FAC 2 DATA.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 10/12/2012 **OFFICE:** AJV-354 **NAME:** JON DENTON

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

SIGNATURE:

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

QUALITY 4 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: ERYKA **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 474159.60N/1221832.08W **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-SZI	LOC/DME		343.34	000.34	15.86	15.89		5000	5000

EXPANDED SERVICE VOLUME (ESV):

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

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

REMARKS:
DME ANTENNA COORDINATES: 472608.83N/1221844.23W
FIX LOCATION DETERMINED IAW FAAO 8260.54A FORMULA 2-16B
ESV: SZI GS R343/15/50/50

FIX USE:

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

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

REASON FOR REVISION:
FIX MOVED 3150.32 FT NORTH.
UPDATED FIX COORDINATES.
CHANGED FAC 1 DME FROM 15.34 TO 15.86.
ADDED DIST FROM FAC TO FAC 1, 15.86.
DELETED FAC 2 DATA.
CHANGED GS ESV DISTANCE FROM 14 TO 15 NM.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 10/12/2012 **OFFICE:** AJV-354 **NAME:** JON DENTON

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

SIGNATURE:

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

QUALITY 4 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 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: MGNUM **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 473851.33N/1221833.74W **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-SZI	LOC/DME		343.34	000.34	12.72	12.75		4000	4800
2	SEATTLE	SEA	VORTAC	H	341.04	000.04	12.74	12.74		4000	4800
3	PAINE	PAE	VOR/DME	L	164.48	184.48	16.39	16.39		4000	4800

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	N	SEA	VORTAC	341.04	161.04	R	1		5000	10000	5	9
2	N		WP	343.04	163.04	R		5	5000	10000	6	10

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (53-000500)	473656.35N/1221830.45W	1092	4D
1	310	TOWER (53-000500)	473656.35N/1221830.45W	1092	4D
2	200	TOWER (53-000500)	473656.35N/1221830.45W	1092	4D
2	310	TOWER (53-000500)	473656.35N/1221830.45W	1092	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 34R	KSEA	SEATTLE	WA (US)
1	ILS RWY 34R (SA CAT I, SA CAT II)	KSEA	SEATTLE	WA (US)
1	ILS OR LOC RWY 34C	KSEA	SEATTLE	WA (US)
1	ILS RWY 34C (SA CAT I, SA CAT II)	KSEA	SEATTLE	WA (US)
2	RNAV (GPS) Y RWY 34R	KSEA	SEATTLE	WA (US)
2	RNAV (GPS) Y RWY 34C	KSEA	SEATTLE	WA (US)
2	RNAV (RNP) Z RWY 34C	KSEA	SEATTLE	WA (US)
2	RNAV (RNP) Z RWY 34R	KSEA	SEATTLE	WA (US)

REMARKS:
SEATTLE (FAC 1) USED TO ESTABLISH FIX COORDINATES
DME COORDINATES: 472608.83N/1221844.23W
FIX LOCATION DETERMINED IAW 8260.54A, FORMULA 2-16B.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
CLIMB IN HOLD EVALUATED TO 10000.
ESV: SZI GS 343/12/40/48

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 16C	1		KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 34C	1, 2, 3	1	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 34R	1, 2, 3	1	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16C (SA CAT I,CAT II,III)	1		KSEA	SEATTLE	WA (US)
IAP	ILS RWY 34C (SA CAT I, SA CAT II)	1, 2, 3	1	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 34R (SA CAT I, SA CAT II)	1, 2, 3	1	KSEA	SEATTLE	WA (US)
IAP	RNAV (GPS) Y RWY 16C			KSEA	SEATTLE	WA (US)
IAP	RNAV (GPS) Y RWY 34C		2	KSEA	SEATTLE	WA (US)
IAP	RNAV (GPS) Y RWY 34R		2	KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) Z RWY 16C			KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) Z RWY 34C		2	KSEA	SEATTLE	WA (US)
IAP	RNAV (RNP) Z RWY 34R		2	KSEA	SEATTLE	WA (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 5 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:

QUALITY 4 CHECKED

FIX MOVED 1939.43 FT NORTH.
UPDATED FIX COORDINATES.
ADDED DISTANCE FROM FAC FOR FACS 1, 2 AND 3.
DELETED FAC 4 DATA.
CHANGED FAC 1 DME FROM 12.40 TO 12.72.
CHANGED FAC 2 DME FROM 12.42 TO 12.74.
CHANGED FAC 3 BRG/DME FROM 184.40/16.71 TO 184.48/16.39.
CHANGED GS ESV DME FROM 11 TO 12NM.
UPDATED FIX USE.

DEVELOPED BY:	**DATE:** 10/12/2012	**OFFICE:** AJV-354	**NAME:** JON DENTON
APPROVED BY:	**DATE:**	**OFFICE:** AJV-354	**NAME:** DEBORAH COPELAND
	SIGNATURE:		

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

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: MILLT **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 471507.75N/1221828.81W **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	160.66	179.66	11.00	11.00		3000	17500
2	MCCHORD	TCM	VORTAC	T	025.39	047.39		9.28		3000	12200

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	S	SEA	VORTAC	160.66	340.66	R	1		5000	10000	5	9
2	S		WP	162.66	342.66	R		5	5000	10000	6	10

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	470800.00N/1221048.00W	1037	4E
1	310	AAO	465851.00N/1220545.00W	2792	4E
2	200	AAO	470739.00N/1220954.00W	1076	4E
2	310	AAO	465830.00N/1220448.00W	3002	4E

PRECIPITOUS TERRAIN ADDITIONS:

PAT	SPEED	ADDITION
2	310	170

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

PROCEDURES REQUIRING CLIMB-IN-HOLD:

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

REMARKS:
SEATTLE (FAC 1) AND MCCHORD (FAC 2) USED TO ESTABLISH FIX COORDINATES
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
CLIMB IN HOLD EVALUATED TO 10000.

FIX USE:

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

REQUIRED CHARTING: MILITARY IAP, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 11 **DATE OF REVISION:** 03/07/2013

REASON FOR REVISION:
DELETED FAC 3 DATA.
ADDED DIST FROM FAC FOR FAC 1 AND 2.
UPDATED FIX USE.

QUALITY CHECKED

DEVELOPED BY:	**DATE:** 09/12/2012	**OFFICE:** AJV-354	**NAME:** JON DENTON
APPROVED BY:	**DATE:**	**OFFICE:** AJV-354	**NAME:** DEZ SILAGYI
	SIGNATURE:		

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

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SODOE **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 473215.93N/1221837.22W **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-SZI	LOC/DME		343.34	000.34	6.12	6.16	37410	1900	4800
2	SEATTLE	SEA	VORTAC	H	340.73	359.73	6.15	6.15		1900	17500

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

REMARKS:
SEATTLE (FAC 1) USED TO ESTABLISH FIX COORDINATES
I-SZI DME COORDINATES: 472608.83N/1221844.23W
PFAF DETERMINED IAW FAAO 8260.54A FORMULA 2-16B.

FIX USE:

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

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

REASON FOR REVISION:
FIX MOVED 324.24 FT NORTH.
DELETED FAC 3 DATA.
CHANGED FAC 1 DME FROM 6.07 TO 6.12, AND ADDED DIST FROM FAC IN FT.
CHANGED FAC 2 DME FROM 6.09 TO 6.15, AND ADDED DIST FROM FAC IN NM.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 09/12/2012 **OFFICE:** AJV-354 **NAME:** JON DENTON

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

SIGNATURE:

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

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: TEBNE **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 472343.44N/1221833.38W **TYPE:** 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	SEA	VORTAC	H	160.66	179.66	2.40	2.40		1100	2000

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	1		KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 16L	1		KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16C (SA CAT I/ CAT II/III)	1		KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16L (SA CAT I / CAT II/III)	1		KSEA	SEATTLE	WA (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

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

REASON FOR REVISION:
REMOVE FAC2 KSEA R34R.
ADD FAC1 DIST FROM FAC.
UPDATE FIX USE.

DEVELOPED BY: **DATE:** 11/07/2012 **OFFICE:** AJV-354 **NAME:** AMANDA ROBBINS

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

SIGNATURE:

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

QUALITY CHECKED

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 (SA CAT I, CAT II/III)			KSEA	SEATTLE	WA (US)

QUALITY CHECKED 4

IAP	ILS RWY 16L (SA CAT I, 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 (SA CAT I, CAT II)	1	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 34L (SA CAT I, CAT II)	1	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 34R (SA CAT I, 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

TERMINAL AIRSPACE DATA REQUIREMENTS

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

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

PROCEDURE: **ILS OR LOC RWY 16C, SA CAT I, CAT II/III** AMDT: **14**

DOCKET # :
(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 **2.87**
   (Enter THLD, FAF, ARP, FACILITY, as appropriate)
2. Width of **FINAL** segment at 1000' point **0.84**
   (Enter appropriate segment , final, intermediate, etc.)
3. True Course of **FINAL** segment containing 1000' point **180.34**
4. High Terrain in **FINAL** segment containing 1000' point **240**
5. Distance from **THLD** to 1500' point **4.44**
   (If 1500' point in PT maneuvering area or holding pattern note in remarks)
6. Width of **FINAL** segment at 1500' point **1.18**
7. True Course of **FINAL** segment containing 1500' point **180.34**
8. High Terrain in **FINAL** segment containing 1500' point **240**
9. Threshold Coordinates (if straight-in) ... **472749.71N** / **1221839.55W**
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 ..... **473215.93N** / **1221837.22W**
    (Click to Select)

REMARKS: Approach/Drawing attached.

RADIO FIX AND HOLDING DATA RECORD

CANCEL

NAME: WEMAT **STATE:** WA **COUNTRY:** US

LATITUDE/LONGITUDE: 474422.17N/1221830.82W **TYPE:** WP, RADAR, DME

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

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-SZI	LOC		343.34	000.34	18.23			6000	6000
2	PAINE	PAE	VOR/DME	L	166.56	186.56	10.90			6000	17500
3	KSEA R16C					000.34	16.55				17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-SZI GS, 17 NM, 6000, ON FILE					
I-SZI LOC, 19 NM, 6000, ON FILE					
I-SZI DME, 19 NM, 6000, ON FILE					

REMARKS:
I-SZI DME COORDINATES: 472608.83N/1121844.23W
FIX PLACED 100563.74' FROM R16C THRESHOLD, USED RNP PFAF FORMULA

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	SEATTLE-TACOMA INTL - ILS OR LOC RWY 16C, ILS RWY 16C (CAT II/III), RNAV (GPS) RWY 16C			KSEA	SEATTLE	WA (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/20/2008

DEVELOPED BY: **DATE:** 06/06/2008 **OFFICE:** AVN-130 **NAME:** DEZ SILAGYI (RUSS ROSLEWSKI)

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

SIGNATURE:

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

QUALITY CHECKED

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 16C
ILS RWY 16R (SA CAT I, CAT II & 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 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 TEBNE AND FROM TEBNE TO THE CLEARANCE LIMIT. THE AT OR BELOW ALTITUDE OF 2000' MSL PROVIDES 1000' OF ROC FOR AIRCRAFT WHO LEVEL OFF AT 2000'. FROM TEBNE TO THE CLEARANCE LIMIT THE OCS WAS EVALUTED BEGINNING AT 1000' MSL (2000' MSL LESS 1000' ROC) AT TEBNE 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:
11/09/2012	AJV-35	Gregory Yamamoto, Manager, Terminal Products Group.	

8. CONTINUATION
Comments:

9. AFS ACTION	☐ Approved ☐ Disapproved ☐ Not Required

Comments:		
Date:	Routing Symbol:	Signature: