

US DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION				RNAV (RNP) - STANDARD, INSTRUMENT APPROACH PROCEDURE, TITLE 14 CFR PART 97.33				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										MISSED APPROACH					
FROM		TO		COURSE AND DISTANCE				ALTITUDE		RNP: DA					
SONDR (IAF)		HIPRO (TF) (FB) (RNP 1.00)		358.39 / 4.75				5000		CLIMB TO 900 THEN CLIMBING LEFT TURN TO 5000 DIRECT LOFAL AND HOLD.					
HIPRO (IF)		BAKMN (TF) (FB) (RNP 0.30)		344.33 / 6.28				3000							
SHIPZ (IF)		BELNE (TF) (FB) (RNP 1.00)		164.34 / 3.14				6000							
BELNE		LANGL (RF) (FB) (RNP 1.00)		(3.00 NM RADIUS CCW (CFBRP))/3.14				5000							
LANGL		BAKMN (RF) (FB) (RNP 1.00)		(3.00 NM RADIUS CCW (CFBRP))/6.29				3000		ADDITIONAL FLIGHT DATA: HOLD NW, RT, 143.59 INBOUND. DISTANCE TO THLD FROM 316 HAT: 0.69 NM. #TCH 411.2 MSL (DO NOT CHART) CHART MANDATORY 6000 AT SONDR. ROUTE TYPE: A, H ROUTE TYPE QUALIFIER 1: F ROUTE TYPE QUALIFIER 2: S CHART MANDATORY 7000 AT SHIPZ. CHART PLANVIEW NOTE: RADAR REQUIRED.					
(SEE FORM 8260-10)															
1. PT _____ SIDE OF COURSE _____ OUTBOUND _____ FT WITHIN _____ MILES OF _____ (IAF)										MAG VAR: 16E EPOCH YEAR: 2020					
2. PROFILE STARTS AT BAKMN															
3. FAC: 344.33 FAF: _____ DIST FAF TO MAP: _____ THLD: _____															
4. MIN. ALT: BAKMN 3000, JALON 2400															
5. DIST TO THLD FROM OM: 6.25 MM: _____ IM: _____ 150 HAT: _____ 100 HAT: _____ GS ANT: _____															
6. MIN GS INCPT: 2400 GS ALT AT: JALON 2400 OM: _____ MM: _____ IM: _____															
7. GS ANGLE: 3.00 TCH: 54.9# 34:1 IS CLEAR															
8. MSA FROM: RW34L 6400															
MINIMUMS															
TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT								ALTERNATE: N A		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		DH/MDA VIS HAT/HAA			
AUTHORIZATION REQUIRED															
RNP 0.15 DA		695 2400 316		695 2400 316		695 4000 316		695 4000 316		695 4000 316					
RNP 0.30 DA		787 5000 408		787 5000 408		787 5000 408		787 5000 408		787 5000 408					
NOTES: CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, PROCEDURE NA BELOW -6C (22F) OR ABOVE 54C (130F). CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 34R EXCEPT FOR ARRIVALS AT SHIPZ. CHART NOTE: GPS REQUIRED. CHART SPEED ICON IN PLANVIEW AT SONDR : MAX 230 KIAS. (CONTINUED ON PAGE 2)															
CITY AND STATE SEATTLE, WA		ELEVATION: 433 TDZE: 379 AIRPORT NAME: SEATTLE-TACOMA INTL				FACILITY IDENTIFIER: RNAV		PROCEDURE NO./AMDT NO./EFFECTIVE DATE: RNAV (RNP) Z RWY 34L, AMDT 2A				SUP: AMDT: 2 DATED 10/15/2015			

ALL AFFECTED PROCEDURES REVIEWED? <div><input type="checkbox"/> YES</div> <div><input type="checkbox"/> NO</div>		COORDINATES OF FACILITIES		REQUIRED EFFECTIVE DATE	
ROUTINE					
COORDINATED WITH:					
ATA <div><input checked="" type="checkbox"/></div>		AAT <div><input type="checkbox"/></div>		ALPA <div><input checked="" type="checkbox"/></div>	
APA <div><input checked="" type="checkbox"/></div>		AOPA <div><input checked="" type="checkbox"/></div>		NBAA <div><input checked="" type="checkbox"/></div>	
OTHER (specify) <div><input checked="" type="checkbox"/></div>		ZSE, SEA APP CON, APT MGR			
FLIGHT CHECKED BY					
NAME: PROCESSED IAW FLIGHT INSPECTION TEAM (AJW-333) MEMO, 5/30/17, SUBJECT: FLIGHT INSPECTION REVIEW NOT REQUIRED.				Digitally signed by JACOB POWERS Aug 17, 2017 FIFO	
DATE:					
DEVELOPED BY					
NAME: PHILLIP BRANDENBURG				Digitally signed by PHILLIP BRANDENBURG Jul 20, 2017 FIFO	
PHILLIP BRANDENBURG				AJV-5412	
DATE: 03/30/2017					
APPROVED BY					
NAME: Digitally signed by JACOB POWERS Aug 17, 2017 GEORGE DAVIS				FIFO AJV-5410 MANAGER	
DATE:					
CHANGES:					
1. ALL MAG COURSES INCREASE 1 DEG.					
REASONS:					
1. KSEA MAGVAR FROM 17E TO 16E.					

US DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION			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.	
RNAV (RNP) - STANDARD, INSTRUMENT APPROACH PROCEDURE, - TITLE 14 CFR PART 97.33				
TERMINAL ROUTES, (CONT.):				
FROM	TO	COURSE AND DISTANCE	ALTITUDE	
BAKMN	JALON (TF) (FB) (RNP 0.30)	344.33 / 1.89	2400	
JALON (FAF)	RW34L (MAP) (TF) (FO) (RNP 0.30)	344.33 / 6.25		
RW34L (MAP)	900 MSL (CA)	344.33	900	
900 MSL	LOFAL (DF) (FO) (RNP 1.00)		5000	
NOTES, (CONT.): CHART SPEED ICON IN PLANVIEW AT SHIPZ : MAX 210 KIAS. CHART PLANVIEW NOTE ADJACENT TO SHIPZ: RF REQUIRED. CHART PLANVIEW NOTE AT SONDR: (RNP 0.30). CHART PLANVIEW NOTE AT SHIPZ: (RNP 0.30). CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT (VGSI ANGLE {ANGLE}/TCH {FEET}). CHART PLANVIEW NOTE ADJACENT SHIPZ: MAX 210 KTS. CHART NOTE: USE OF FD OR AP PROVIDING RNAV TRACK GUIDANCE REQUIRED DURING SIMULTANEOUS OPERATIONS. CHART NOTE: FOR INOPERATIVE ALS, RNP 0.15 ALL CATS VISIBILITY TO RVR 5000 AND RNP 0.30 ALL CATS VISIBILITY TO 1 3/8 MILE. CHART PROFILE NOTE: SEE PLANVIEW FOR MULTIPLE IF LOCATIONS.				
CITY AND STATE	ELEVATION: 433 TDZE: 379	FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:	SUP:
SEATTLE, WA	AIRPORT NAME:	RNAV	RNAV (RNP) Z RWY 34L, AMDT 2A	AMDT: 2
	SEATTLE-TACOMA INTL			DATED: 10/15/2015



ALL AFFECTED PROCEDURES REVIEWED? <input type="checkbox"/> YES <input type="checkbox"/> NO		COORDINATES OF FACILITIES		REQUIRED EFFECTIVE DATE	
COORDINATED WITH:					
ATA <input type="checkbox"/>	AAT <input type="checkbox"/>	ALPA <input type="checkbox"/>	APA <input type="checkbox"/>	AOPA <input type="checkbox"/>	NBAA <input type="checkbox"/>
OTHER (specify) <input type="checkbox"/> _____					
FLIGHT CHECKED BY					
NAME:				FIFO	DATE:
DEVELOPED BY					
NAME:				FIFO	DATE:
APPROVED BY					
NAME:				FIFO	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.		
INITIAL: RNP 1.00	SONDR	HIPRO	1. TOWER (53-021120)	471102.55N/1222224.40W	627 (5E)	1000	AC125 AT3248	5000		
			2. TERRAIN	470906.00N/1221742.00W	489 (500)		AS1500	2000		
INTERMEDIATE: RNP 1.00	HIPRO	BAKMN	3. AAO	471833.00N/1221924.00W	611	500	AC79 AT1810	3000		
			4. TERRAIN	471833.00N/1221924.00W	420 (400)		AS1500	1900		
INTERMEDIATE: RNP 1.00	SHIPZ	BELNE	5. AAO	471824.00N/1222503.00W	695	500	AC79 AT4726	6000		
			6. TERRAIN	471824.00N/1222503.00W	495 (500)		AS1500	2000		
INTERMEDIATE: STEPDOWN RNP 1.00	BELNE	LANGL	7. BLDG (53-000224)	471444.00N/1222652.00W	654 (5E)	500	AC125 AT3721	5000		
			6. TERRAIN	471824.00N/1222503.00W	495 (500)		AS1500	2000		
INTERMEDIATE: STEPDOWN RNP 1.00	LANGL	BAKMN	8. TOWER (53-000786)	471640.00N/1221729.00W	694 (5E)	500	AC125 AT1681	3000		
			9. TERRAIN	471718.00N/1222200.00W	465 (500)		AS1500	2000		
INTERMEDIATE: STEPDOWN RNP 0.30	BAKMN	JALON	10. AAO	472009.00N/1221827.00W	699	500	AT1122 AC79	2400		
			11. TERRAIN	472009.00N/1221827.00W	499 (500)		AS1500	2000		
FINAL: RNP 0.15	JALON	RW34L	12. TREE (KSEA0065)	472555.15N/1221922.13W	468 (1A)	20.75:1	MA3 AC3	695/316		
FINAL: RNP 0.30	JALON	RW34L	13. TREE (KSEA0039)	472528.75N/1221859.16W	504 (1A)	20.72:1	AC3	787/408		
2. PROCEDURE TURN										
3. MISSED APPROACH	MAP:	DA / DA	LOFAL			ASC		5000		
	ELEV:	511/603		14. TOWER (53-001007)	474535.10N/1223103.60W	725 (5E)	1000	AC125		
				15. TERRAIN	474800.00N/1223654.00W	519 (500)		AS1500		
4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT.								
CATEGORY A	1.3 NM	REQUIRED	350	ACTUAL						
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: RW34L										
SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)		
360-360	AAO	077/28.5	5362 (6C)	6400						
CITY AND STATE										
SEATTLE, WA		ELEVATION: 433		FACILITY		PROCEDURE AND AMENDMENT NO:		REGION		
		AIRPORT NAME:		RNAV		RNAV (RNP) Z RWY 34L, AMDT 2A		ANM		
		SEATTLE-TACOMA INTL								

PART B - SUPPLEMENTAL DATA										PART C - REMARKS: VDP NOT ESTABLISHED - VERTICAL GUIDANCE ONLY PROCEDURE. PRECIPITOUS TERRAIN EVALUATION COMPLETED. NO ADDITIONAL AIRSPACE REQUIRED. MISSED APPROACH IAW 8260.54A. CLIMB TO ALTITUDE USED IN MISSED APPROACH TO ALLOW FOR IMMEDIATE DIVERGENCE OF SIMULTANEOUS APPROACHES ON RWY 34C/R. CRITICAL TEMPERATURES CRITICAL LOW CRITICAL HIGH ACT APT ISA DELTA ISA LOW -6C (22F) +54C (130F) -6C +14.14 -20.14C CRITICAL LOW TEMP BASED ON ACT DESCENT RATE: STANDARD TEMP 959 HIGH TEMP 1119 TEMPERATURE LIMITS, DELTA ISA LOW, AND DESCENT VALUES DERIVED FROM AFS-400 CALCULATOR BACK-UP ALTIMETER NOT PUBLISHED. REDUNDANT REPORTING ON AIRPORT. SPECIAL AIRCRAFT AND AIRCREW AUTHORIZATION REQUIRED (SAAAR) FAO 8260.52 CRITERIA USED. VGS I DATA: 3.00/75.1 MAXIMUM TREE HEIGHT WITHIN 5NM OF KSEA IS 100FT AGL, PER FPT. RF SEGMENT RADIUS/BANK ANGLE COMPUTATIONS: SEGMENT ALT KIAS KTAS HAA VKTW TR BA BELNE-LANGL 6000 210 236 5567.5 48.5 3.00 21 LANGL-BAKMN 5000 210 232 4567.5 49.9 3.00 21 MAX SPEED SHIPZ TO BAKMN - 210 KIAS MITRE 99 PERCENTILE WINDS USED FOR RF SEGMENTS. TF TURN FIX ALT KIAS KTAS HAA VKTW TR BA DTA CRS CHANGE HIPRO 5000 230 254.4 4567.5 57 11.41 7.04 1.41 14.08 MAX SPEED SONDR TO BAKMN - 230 KIAS PROCEDURE DESIGN INCLUDING REDUCED RNP LEVELS, AIRSPEED LIMITATIONS, AND BANK ANGLES REQUIRED BY FPT DUE TO GREENER SKIES INITIATIVE. PROCEDURE CONNECTED TO RNAV STARS, RADAR REQUIRED NOTE PER ATC REQUEST. INTERMEDIATE OBSTACLES (#3, #5 AND #10) UTILIZE IPDS PROVIDED ACCURACY.
1. COMMUNICATIONS WITH:			2. WEATHER SERVICE			3. ALTIMETER SETTING				
SEA TOWER SEA APP CON ZSE ARTCC			X	N W S	OTHER: ASOS	SOURCE:KSEA				
						DISTANCE:				
						HOURS REMOTE OPERATION:				
SATISFACTORY ON:						LOCATION: KSEA/KSEA			ADJUSTMENT: 0	
4. MONITOR STATUS	PRIMARY NAVAID:									
	MONITOR POINT:									
	HRS OPTN:	CAT 1								
5. APPROACH & RUNWAY LIGHTING	X	ALSF-2 16C, 16L, 16R								
		(S) SALS								
	X	MALSR 34C, 34L, 34R								
	X	HIRL 16C, 16L, 16R, 34C, 34L, 34R								
		MIRL								
		REIL								
	X	TDZ 16C, 16L, 16R, 34R								
	X	C/L 16C, 16L, 16R, 34C, 34L, 34R								
6. RUNWAY MARKINGS	BASIC									
	ALL WEATHER PIR-G 16C, 16L, 16R, 34C, 34L, 34R									
	INSTRUMENT									
7. RUNWAY VISUAL RANGE	APPROACH 16C, 16L, 16R, 34C, 34L, 34R									
	MIDFIELD 16C, 16L, 16R, 34C, 34L, 34R									
	ROLL OUT 16C, 16L, 16R, 34C, 34L, 34R									
8. GLIDE PATH	GP ANGLE: 3.00				ELEV RWY THRESHOLD:356.3					
	DISTANCE FROM RWY:				ELEV GP ANTENNA:					
					THRESHOLD CROSSING HEIGHT:54.9					
9. FINAL APPROACH COURSE AIMING		X	RUNWAY THRESHOLD						FT. FROM THRESHOLD	
		X	ON CENTERLINE						FT. FROM CENTERLINE	
10. WAIVERS: NONE										
PART D - PREPARED BY: PHILLIP BRANDENBURG						DATE: 03/30/2017				
TITLE: AERONAUTICAL INFORMATION SPECIALIST						OFFICE: AJV-5412				



STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD		
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PART - A OBSTRUCTION DATA

[illegible]

PART B - SUPPLEMENTAL DATA										PART C - REMARKS: CONTINUED.		
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									
			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:		