

Flight Procedures Cover Page	Task Action: Abbreviated Amendment	Task Type: IAP	Estimated Chart Date: 04/17/2025	APWS Task ID: F186D77E5791449CBFC973B0452CB7D2	APWS Project ID: 4199AB23CFAE4C879611484C4180DAD7
Procedure: ILS Z OR LOC Z RWY 11 AMDT 2A		Enroute: NO	Specialist: Johnson, Raymond		Agreement Number:
Airport ID: PAKT			Airport City: KETCHIKAN		State: AK
Facility ID: ECH	Facility Type: ILS	Flight Inspection Remark Type:			
<p>Procedure Comments:</p> <p>PROCEDURE COMPLETED USING CURRENT AIRNAV DATA</p> <p>CANCELS T-NOTAM FDC 4/6882.</p> <p>PROCESSED IAW TECHNICAL SUPPORT GROUP (AJF-17) MEMO DATED 07/07/2021, SUBJECT: GUIDANCE FOR PROCEDURAL CHANGES REQUIRING FLIGHT INSPECTION VALIDATION.</p> <p>CONTACT: ALLAN WILL, AJV-A423 MANAGER, 405.954.6103</p> <p>02/24/25: THIS IS A CORRECTED COPY OF THE FORM APPROVED ON 01/31/25</p> <p>1. ADDED REFERENCE REMARK '#' TO S-LOC 11 MINIMUMS IN TYPE COLUMN AND TO THE ASSOCIATED MISSED APPROACH INSTRUCTIONS TO INDICATE A MISSED APPROACH CLIMB GRADIENT IS REQUIRED.</p> <div><div>QUALITY 9 CHECKED BEGUE</div><div>QUALITY 10 CHECKED</div></div>					



# Federal Aviation Administration

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## Memorandum

Date:

To: Wade Terrell, Manager, Flight Technologies and Procedures Division THRU:  
Wayne Radicke, Manager, Flight Procedures and Airspace Group

From: Julie Morgan, Manager, Team 1, AJV-A41

Subject: Approval Request: KETCHIKAN INTL (PAKT), ILS Z OR LOC Z RWY 11

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ILS Z OR LOC Z RWY 11  
KETCHIKAN INTL KETCHIKAN AK (PAKT)

FAA 8260.3 Para 3-2-2b(3) Precipitous Point Value (PPV).

Request the use of PPV evaluation results for the above procedure. The adjustment will allow for the airport to keep the lowest minima which is needed during the low weather conditions.

AFS provided Precipitous Point Value (PPV) .

Segment Type: LOC Final

Beginning Point: OYECU

End Point: FEP

Results: (PPVmax Value  $78 \times \text{Non-Precision Final modifier } 0.4 = 31.2$ . PR Value 32')

INFO

**1. FLIGHT PROCEDURE IDENTIFICATION:**

KETCHIKAN, AK (PAKT) KETCHIKAN INTL  
ILS Z OR LOC Z RWY 11

**2. WAIVER REQUIRED AND APPLICABLE STANDARD:**

Order 8260.3D, Chapter 3, Section 3-3 Visibility Minimums, Table 3-3-6 Minimum Visibility Based on Airport Conditions. Minimum visibility for a runway that does not have a full length parallel taxiway required for visibility less than RVR 5000/1 statute mile.

**3. REASON FOR WAIVER (JUSTIFICATION FOR NONSTANDARD TREATMENT):**

1. Ketchikan is extremely remote with no road access and is one the main airports serving the Alaska Southcoast Region. The airport receives scheduled cargo, medevac, Coast Guard, passenger flights and the Alaska Airlines Milk Run Route. Additionally, the airport is also used as an emergency divert airport for passenger flights traveling the Southcoast Region experiencing weather difficulty at primary landing airport.
2. Ketchikan has a partial parallel taxiway that is 750 feet short of full length.
3. Inclement weather is prevalent at the airport, and there are a significant number of days where observed visibility is less than 1 statute mile.
4. The inability for scheduled cargo and passenger flights to land at Ketchikan during visibility conditions less than 1 statute mile would have an economic impact and cause undue hardship for the surrounding community.

**4. EQUIVALENT LEVEL OF SAFETY PROVIDED:**

1. Class E surface airspace is in place at Ketchikan Intl. Anchorage Center (ZAN) provides approach and departure clearances through the Ketchikan Flight Service Station (FSS), and Juneau FSS when Ketchikan FSS is closed. The majority of cargo and passenger operations occur during the operating hours of Ketchikan FSS.
2. Special Rule Area FAR PART 93 (SFAR) airspace in place at Ketchikan Intl. regardless of whether Class E surface is in effect. SFAR notice advises pilots on communication procedures for when Ketchikan FSS is in operation and when Ketchikan FSS is closed. Additionally, SFAR provides operational procedures to both IFR and VFR arriving and departing aircraft. See Attachment A.
3. Prior Permission Required for all arrivals outside of published operating hours per Chart Supplement.
4. The ILS procedure has had a minimum visibility of 2400 RVR, in addition to the option for 1800 RVR (with flight director, autopilot, or HUD to DA) since 2008. The ILS has had visibility below 1 SM since at least 1995.
5. Ketchikan is a designated CTAF area. The Aeronautical Information Manual (AIM) has specific recommended communication procedures in Table 4-1-1 specifically for Alaska operations with no Tower and FSS open/closed. These procedures include communicating with FSS on CTAF before taxiing and before entering the designated CTAF area.

**5. ALTERNATIVE ACTIONS DEEMED NOT FEASIBLE:**

1. Construction of a full length parallel taxiway: Lack of suitable land limit taxiway to current length.
2. Increase minimum visibility to 1 SM.

**6. COORDINATION WITH USER ORGANIZATIONS (SPECIFY):**

**7. SUBMITTED BY:**

DATE	OFFICE IDENTIFICATION	TITLE
	AJV-A423	MGR

**SIGNATURE**  
*Digitally signed by*  
**ALLAN WILL**  
Aug 15, 2024

**8. AFS ACTIONS:**

☐ APPROVED ☐ DISAPPROVED ☐ NOT REQUIRED

COMMENTS:

INFO

DATE	ROUTING SYMBOL	SIGNATURE
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MAR 02 RECD

US Department of Transportation  
Federal Aviation Administration

## FLIGHT PROCEDURES STANDARDS WAIVER

FLIGHT STANDARDS USE ONLY

CONTROL NO:

1. Flight Procedure Identification:  
KETCHIKAN INTL  
KETCHIKAN, AK  
ILS OR LOC/DME Z RWY 11

2. Waiver Required and Applicable Standard: 8260.19D, PARAGRAPH 856E(2) STATES: IN ADDITION TO THE LOWER MINIMA THAT REQUIRES THE CG, MINIMA WILL BE PUBLISHED TO SUPPORT A STANDARD 200 FT PER NM CG.

3. Reason for Waiver (*Justification for nonstandard treatment*):

MISSED APPROACH ADJUSTMENTS APPLIED TO CLEAR OBSTACLES DURING THE ILS PROCEDURE DEVELOPMENT CAUSED THE DA POINT TO MOVE BACK AND TO INCREASE TO AN ALTITUDE EQUALED THE PFAF ALTITUDE. DUE TO THE EXAGGERATED DA ALTITUDES A SEPARATE PROCEDURE HAD TO BE DEVELOPED IN ORDER TO NOT REQUIRE A CLIMB GRADIENT.

4. Equivalent Level of Safety Provided:

1. CHARTED PLANVIEW NOTES STATING THE REQUIRED CLIMB GRADIENTS.
2. CHARTED PLANVIEW NOTE: "IF UNABLE TO COMPLY WITH CLIMB GRADIENTS USE LOC/DME X RWY 11", TO INFORM PILOTS WHICH PROCEDURE TO USE IF UNABLE TO MEET CLIMB GRADIENTS.
3. DEVELOPED LOC/DME X RWY 11 WITH NO CLIMB GRADIENT.

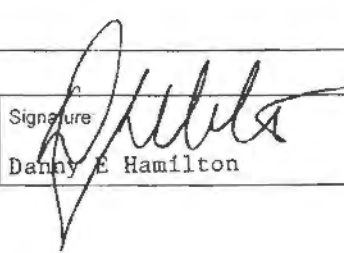
5. How Relocation or Additional Facilities Will Affect Waiver Requirement:

HIGH TERRAIN IN THE SURROUNDING AREAS OF THE AIRPORT RESTRICTS THE USEFULNESS OF THE APPROACH REGARDLESS OF NAVIGATIONAL FACILITY OR EQUIPMENT MODIFICATIONS.

6. Coordination With User Organizations (*Specify*):

AVN-101 MLAVN-130 2

7. SUBMITTED BY

DATE MAR 02 2009	Office Identification: AVN-100	Title: MANAGER, NATIONAL FLIGHT PROCEDURES OFFICE	Signature  Danny E. Hamilton
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## 8. CONTINUATION

Comments:

INFO

## 9. AFS ACTION

X	Approved
	Disapproved
	Not Required

Comments: Approved Based on the Equivalent Level of Safety in Block 4.

DATE ROUTING SYMBOL SIGNATURE

This waiver is canceled effective 10/31/24. 8260.19 TABLE 3-3-6 Waiver  
Publishing approach without standard missed approach climb gradients no  
longer required. *Digitally signed by*

**ALLAN WILL**

Signature) \_\_\_\_\_ Aug 19, 2024

Title, Office Symbol \_\_\_\_\_

Date:

MAR 20 2009

Routing Symbol:

AFS-400

Signature:  Michael J. Zenkovich

Manager, Flight Technologies Division

INFO

MAR 02 REC'D

US Department of Transportation  
Federal Aviation Administration

## FLIGHT PROCEDURES STANDARDS WAIVER

FLIGHT STANDARDS USE ONLY

CONTROL NO:

## 1. Flight Procedure Identification:

KETCHIKAN INTL  
KETCHIKAN, AK  
ILS OR LOC/DME Z RWY 11

## 2. Waiver Required and Applicable Standard:

A CLIMB GRADIENT IS REQUIRED TO CLEAR OBSTACLES IN THE MISSED APPROACH SEGMENT. FAA 8260.3B PARA 276. STATES: THE METHODS OF DETERMINING THE HEIGHT OF THE 40:1 MISSED APPROACH SURFACE OVER OBSTACLES IN THE TURNING MISSED APPROACH AREA VARY WITH THE AMOUNT OF TURN INVOLVED. EVALUATE THE MISSED APPROACH SEGMENT TO ENSURE THE 40:1 OIS IS NOT PENETRATED.

3. Reason for Waiver (*Justification for nonstandard treatment*):

IN ORDER TO SAFELY PROVIDE A WORKABLE INSTRUMENT PROCEDURE WITH REALISTIC MINIMUMS, A MISSED APPROACH CLIMB GRADIENT OF 305 AND 270FT/NM TO 4000 IS REQUIRED FOR THE S-ILS 11 AND A CLIMB GRADIENT OF 235FT/NM TO 4000 IS REQUIRED FOR THE S-LOC 11.

WITH THESE CLIMB GRADIENTS ON THE MISSED APPROACH SEGMENTS A 288 AND 477 DA FOR THE ILS AND A 900 MDA FOR THE LOCALIZER CAN BE ACHIEVED, WITHOUT THE CLIMB GRADIENTS THE DA WOULD CHANGE TO OVER 1000 AND THE MDA TO OVER 1500.

KETCHIKAN INTERNATIONAL EXPERIENCES MANY LOW VISIBILITY DAYS MAKING LOWER MINIMUMS HIGHLY DESIRABLE TO THE FLYING COMMUNITY.

## 4. Equivalent Level of Safety Provided:


1. PROCEDURE CHART NOTE: "S-ILS 11 MISSED APPROACH OBSTRUCTIONS REQUIRE A MINIMUM CLIMB GRADIENT OF 305FT/NM TO 4000, AND S-LOC 11 MISSED APPROACH OBSTRUCTIONS REQUIRE A MINIMUM CLIMB GRADIENT OF 235FT/NM TO 4000," INFORMS PILOTS THAT A CLIMB GRADIENT IS REQUIRED TO USE THE PROCEDURE.

2. CHARTED PLANVIEW NOTE: "IF UNABLE TO COMPLY WITH CLIMB GRADIENTS USE LOC/DME X RWY 11", TO INFORM PILOTS WHICH PROCEDURE TO USE IF UNABLE TO MEET CLIMB GRADIENTS.

3. DEVELOPED LOC/DME X RWY 11 WITH NO CLIMB GRADIENT.

## 5. How Relocation or Additional Facilities Will Affect Waiver Requirement:

HIGH TERRAIN IN THE SURROUNDING AREAS OF THE AIRPORT RESTRICTS THE USEFULNESS OF THE APPROACH REGARDLESS OF NAVIGATIONAL FACILITY OR EQUIPMENT MODIFICATIONS.

6. Coordination With User Organizations (*Specify*):AVN-101 AVN-130 

## 7. SUBMITTED BY

DATE: MAR 02 2009	Office Identification: AVN-100	Title: MANAGER, NATIONAL FLIGHT PROCEDURES OFFICE	Signature:  DANNY E. HAMILTON
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INFO

8. CONTINUATION

Comments:

9. AFS ACTION

X

Approved

Disapproved

Not Required

Comments: Approved Based on the Equivalent Level of Safety in Block 4.

Date:

MAR 20 2009

Routing Symbol:

AFS-400

Signature: Michael J. Zenkovich

Manager, Flight Technologies Division



INFO  
amendment to previous waiver

MAR 02 REC'D

US Department of Transportation  
Federal Aviation Administration

## FLIGHT PROCEDURES STANDARDS WAIVER

FLIGHT STANDARDS USE ONLY

CONTROL NO:

1. Flight Procedure Identification:

KETCHIKAN INTL  
KETCHIKAN, AK  
ILS OR LOC/DME Z RWY 11

2. Waiver Required and Applicable Standard: Relief required from provisions of 8260.19D, paragraph 274. CONTROLLING OBSTACLES, for obstacles in the missed approach area. Pursuant to the provisions of Part 77.13, an Adverse Assumption Obstacle (AAO) of 200 ft AGL is assumed to exist at and beyond a specified distance (radius) from the nearest landing surface at a given airport/helipad. As applied to runways, the specified distance is dependent upon runway length.  
274 a (2) (b) One runway longer than 3,200 ft: 20,000 ft radius from all runway ends.

3. Reason for Waiver (Justification for nonstandard treatment): 1. Standard missed approach application causes a climb gradient of 325 feet per NM to the ILS and 255 feet per NM to the LOC/DME due to 2268 MSL (Red Mountain) AAO spot 8.76 NM from RWY 11 THLD. If the 200 FT AAO is waived, the result is a 305 feet per NM climb gradient to the ILS and 235 feet per NM climb gradient to the LOC/DME due to 2081 MSL (Anvil Mountain) tree 8.50 NM from RWY 11 THLD.

2. Current ILS/DME-2 RWY 11 procedure has a 250 feet per NM climb gradient.

3. Ketchikan is a very remote community in southeastern Alaska. Transportation to and from Ketchikan is only possible by air and infrequent ferry boats. Southeast Alaska weather is predominantly cloudy and rainy. Usually numerous layers of stratus results in fairly low ceilings and visibilities much of the time.

4. Equivalent Level of Safety Provided:

1. The following notes are on the procedure: S-ILS 11 MISSED APPROACH OBSTRUCTIONS REQUIRE A MINIMUM CLIMB GRADIENT OF 305 FT/NM TO 4000 and S-LOC 11 MISSED APPROACH OBSTRUCTIONS REQUIRE A MINIMUM CLIMB GRADIENT OF 235 FT/NM TO 4000.

2. The 1999 MSL Anvil Mountain and 2068 MSL Red Mountain are located in the Tongass National Forest. According to the ANC AWO, building a man-made tower is virtually impossible due to the inaccessibility to power and and the land is controlled by the Alaska State Forestry Department.

3. The Alaska State Forestry Department provided the following tree height data which was used in place of AAO:


500' elevation - 148 ft (45 meters)	1000' elevation - 115 ft (35 meters)	1500' elevation - 82 ft (25 meters)
2000' elevation - 49 ft (15 meters)	2500' elevation - 16 ft (5 meters)	3000' elevation - No trees


Therefore,  $1999 + 82 = 2081$  MSL and  $2068 + 49 = 2117$  MSL were used to compute the climb gradient. The tree on Anvil mountain became the controlling obstacle due to it's proximity to the airport.

5. How Relocation or Additional Facilities Will Affect Waiver Requirement.

High terrain in the surrounding areas of the airport restricts the usefulness of the approach regardless of navigational facility or equipment modifications.

6. Coordination With User Organizations (Specify):

AVN-130 

AVN-101 

7. SUBMITTED BY

DATE:

MAR 02 2009

Office Identification:

AVN-100

Title:

Manager, National Flight Procedures  
Office

Signature:

  
Danny E. Hamilton

## 8. CONTINUATION

Comments:

INFO

9. AFS ACTION

<input checked="" type="checkbox"/>	Approved
<input type="checkbox"/>	Disapproved
<input type="checkbox"/>	Not Required

Comments:

Approved Based on the Equivalent Level of Safety in Block 4.


Date:

MAR 20 2009

Routing Symbol

AFS-400

Signature

for   
Michael J. Zenovich  
Manager, Flight Technologies Division



**AIRPORT ID:** PAKT  
**AIRPORT NAME:** KETCHIKAN INTL  
**CITY:** KETCHIKAN  
**STATE:** AK  
**PROC ID:** ILS Z OR LOC Z RWY 11 AMDT: 2A  
ILS  
**SCALE:** 1:100K

PFAF GS INCPT [UD]

WETOL

OYECU

ECH

CM.

ENSUS AREA