



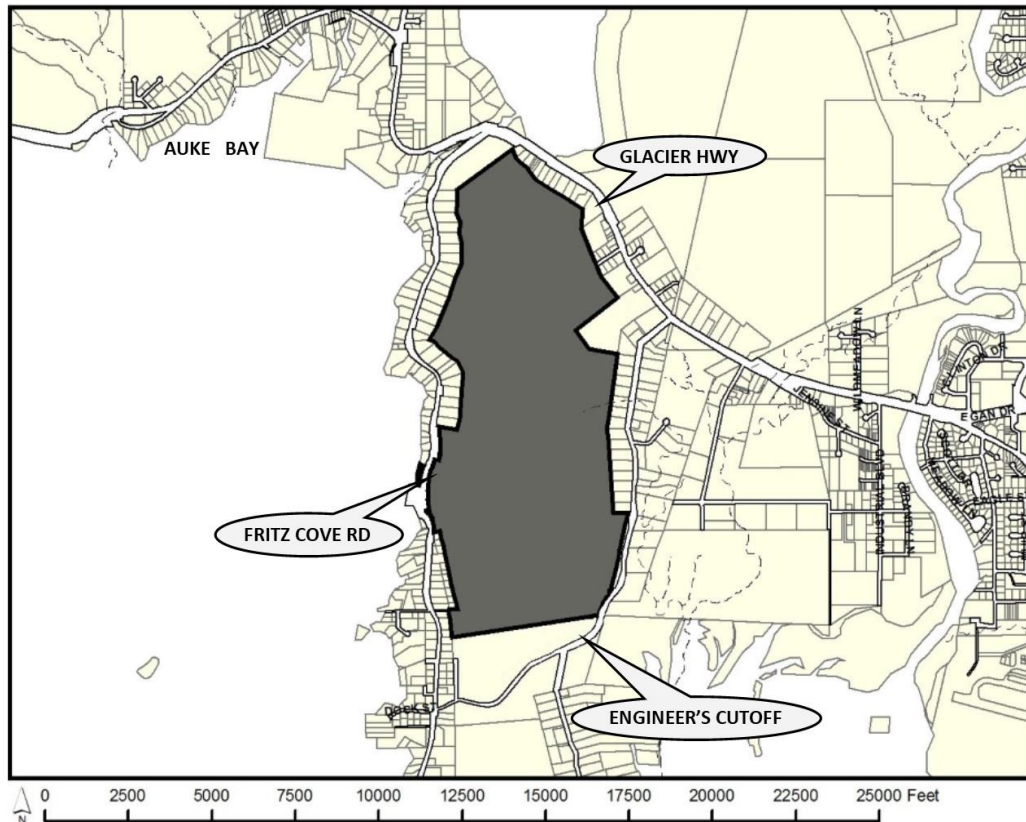
(907) 586-0715  
CDD\_Admin@juneau.org  
www.juneau.org/CDD  
155 S. Seward Street • Juneau, AK 99801

**DATE:** July 12, 2019  
**TO:** Planning Commission  
**FROM:** Amy Liu, Planner *Amy Liu*  
Community Development Department  
**FILE NO.:** WCF2019 0007  
**PROPOSAL:** A Wireless Communications Facility Permit to replace an existing communications tower

**GENERAL INFORMATION**

**Applicant:** CBJ Engineering and Public Works Department  
**Property Owner:** City and Borough of Juneau  
**Legal Description:** USS 3817 Lot 1  
**Parcel Code Number:** 4B2301010170  
**Site Size:** 416.66 acres  
**Comprehensive Plan Future Land Use Designation:** Urban Low Density Residential  
**Zoning:** Rural Reserve / D1  
**Utilities:** City water  
**Access:** Engineers Cutoff  
**Existing Land Use:** Cell Towers  
**Surrounding Land Use:**  
North - Residential  
South - Federal Aviation Administration (FAA) tower  
East - Residential  
West - Residential

### **VICINITY MAP**



### **ATTACHMENTS**

Attachment A – Application  
Attachment B – FAA determination  
Attachment C – Public comment

### **PROJECT DESCRIPTION**

The applicant requests a Special Use Permit (SUP) for the development of a Wireless Communication Facility (WCF) to replace a 40-foot tall, guyed cell tower with a 40-foot tall, self-supporting cell tower. Antennas and other radio equipment adding no more than 20 feet of height may be installed on the tower. The exact height of this equipment is undetermined at this time. Additionally, the applicant proposes an 8 foot x 8 foot generator shed. The existing WCF is identified in the Wireless Telecommunications Master Plan (WMP) as Site 20. The existing tower will be completely removed, and the new tower will be located on the same site approximately 50 feet from the existing tower location. The existing and proposed tower serves the Juneau

Police Department (JPD) and Capital City Fire and Rescue (CCFR).

The applicant requests approval for the 40-foot tower. During review, staff clarified that in addition to the tower, there is potential for the addition of up to 20 feet in antennas and other radio equipment.

A SUP is required for WCF that do not fall under the categories of 49.65.930, Table 1.

This application requires a SUP per the following requirements:

1. *The proposed antennas are not flush-mounted, per the requirements of 49.65.930.*
2. *The proposed antennas are not flush-mounted and thus are not concealed per the definition found in 49.80.120.*
  - a. *A Concealed WCF is defined as a “WCF equipment compound that is not readily identifiable as such (emphasis added), and is designed to be aesthetically compatible with existing and proposed building(s), vegetation, natural features, and uses on the site.”*
    - i. *The proposed WCF may be appropriate to the site, but due to the non-flush mounted antennas it is readily identifiable as a WCF.*
3. *The proposed project exceeds the “eligible facility request” standards as shown in 49.65.950 Table 1.*
  - a. *No substantial change as provided in 49.65.950 (b)—there is substantial change in the height of the existing and proposed towers (30 foot increase); and*
  - b. *New non-concealed tower in an Industrial zone measuring over 60 feet in height—the proposed tower is non-concealed and measures 120 feet in height.*

## **BACKGROUND**

The purpose of *Specified Use Provisions Article IX. Wireless Communication Facilities*, CBJ 49.65.900, is to establish reasonable regulations for the placement, construction, and modification of WCF consistent with the Telecommunications Act of 1996, applicable law, and to:

- (a) *Promote the health, safety, and general welfare of the public and the City and Borough;*
- (b) *Minimize the impacts of WCFs by establishing standards for siting, design and screening and by requiring consistency with the City and Borough’s wireless telecommunications master plan;*
- (c) *Encourage the collocation of antennas on existing structures thereby minimizing new visual impacts and reducing the need for new towers;*

- (d) Maintain the natural surroundings and character of the City and Borough;*
- (e) Preserve neighborhood harmony and scenic viewsheds and corridors as indicated in the Comprehensive Plan of the City and Borough of Juneau;*
- (f) Accommodate the growing need and demand for wireless communications services;*
- (g) Respond to the policies embodied in the Telecommunications Act of 1996 in such a manner as not to unreasonably discriminate between providers of functionally equivalent personal wireless services or to prohibit or have the effect of prohibiting personal wireless services; and*
- (h) Respond to the policies embodied in Section 6409(a) of the Spectrum Act (P.L. 112-96).*

Because the Director has found that the project is not an Eligible Facility Request per CBJ 49.65.950 Table 1, the project must demonstrate compliance with the requirements of a Special Use Permit

#### **PUBLIC COMMENT**

One resident submitted written comment prior to July 1. He expressed agreement with an unlit tower and disagreement with the FAA lighting requirement (see Attachment C). This requirement is specified as FAA Style E – Medium Intensity Dual Lighting (see Attachment B). This is characterized as blinking medium intensity white light during day and twilight and a blinking red light at night. No marking is required for the proposed tower.

This lighting determination is in part based off a request for a 60-foot obstruction, which would include the 40-foot tower and up to 20 feet of antennas and other radio equipment. The applicant requested review for a higher tower in anticipation of the antennas, which are likely to add approximately 10 feet in height.

Staff contacted FAA to clarify whether the 40-foot obstruction would be required to provide the same lighting required for a 60-foot obstruction. FAA stated that within five days after construction of the tower, the applicants may request a new determination if the height is different from the initial proposal. Depending on other factors, a lower height may have a lesser lighting requirement.

## **AGENCY REVIEW**

Staff requested review from the CBJ Assessor's Office, CBJ Building Division, CCFR, and the Juneau International Airport (JIA). The Assessor's Office and CCFR did not provide comments. The Building Division stated that it had no issues with the project.

JIA noted that FAA Form 7460 for replacement of the tower and any construction equipment would be required. The applicant anticipates submitting this form prior to beginning construction as well as during construction. This is because the FAA Notice of No Hazard to Air Navigation requires the applicant to submit the form to the local FAA office at least 48 hours before starting construction and within five days of the structure reaching its greatest height.

## **ANALYSIS**

**Project Site** - The project site is a 416.66-acre parcel located in Rural Reserve (RR) and D1 zoning districts. Approximately the north half of the parcel is zoned RR and the southern half is zoned D1. According to the CBJ parcel viewer, the tower site is in the area zoned RR. Per CBJ 49.25.300, towers and antennas 35 feet to 50 feet are allowed outright in RR. The site currently accommodates one 35-foot guyed tower that will be replaced by the proposed tower, one 7.24 square foot JPD radio shack, three 40-foot tall, guyed cell towers, one approximately 4.5-foot x 3-foot KTOO shack, and several radio cabinets. Note that all of the existing cabinets and shacks will remain in addition to the proposed generator shed.

### **Project Design -**

- **Security**: The proposed security is consistent with the requirements of CBJ 49.65.930(b). The proposed tower's design is not climbable and will have a locked trapdoor. Appurtenant facilities are locked.
- **Signage**: The application does not indicate plans to install signage consistent with CBJ 49.65.930(c), which states:

*WCFs shall contain a sign no larger than four square feet with text in a sufficient font size to provide adequate notification to persons in the immediate area of the presence of an antenna that has transmission capabilities. The sign shall contain the name(s) of the owner(s) and operator(s) of the facility, an emergency phone number(s), and FCC registration number, if applicable. The sign shall be on the equipment shelter or cabinet and be visible from the access point of the site. The sign shall not be lighted unless authorized by the City and Borough or unless applicable provisions of law require such lighting. No other signage, including advertising, shall be permitted on any WCF, unless required by law.*

Staff recommends as a condition of approval that signage shall be installed prior to a final certificate of occupancy to meet the requirements of CBJ 49.65.930(c).

- Lighting: The proposed WCF will be lit. On June 17, 2019, the applicants received an FAA determination requiring FAA Style E – Medium Intensity Dual Lighting (Attachment B). This is characterized as blinking medium intensity white light during the day and twilight and a blinking red light at night.
- Setbacks: The tower will be more than 1000 feet from any of the site's lot lines. The tower meets setbacks prescribed in CBJ 49.65.930(f), which would be equal to the height of the proposed tower, which in this proposal is 60 feet.
- Structural assessment: CBJ Engineering confirmed that the development meets the requirements of CBJ 49.65.930(j). The tower is not constructed using breakpoint design, as it is not a monopole. The dishes and antenna will be non-concealed.
- Visual Impact Assessment:
  - *Zone of Visibility Map*: The application includes a zone of visibility map that meets the requirements of CBJ 49.65.970(c)(2)(B)(i) (Attachment A, page 12).
  - *Siting for Least Adverse Impact*: The development meets the requirements of CBJ 49.65.930(i) and minimizes adverse effects on the surrounding landscape, as it is located at least a quarter mile from residences. The tower consists of a galvanized steel, which appears mottled grey, and lattice that allows the surroundings to show through while matching a characteristically overcast sky (Attachment A, pages 15-18).
  - *Simulated Renderings of Existing, Proposed and Full Buildout of WCF*: The photo simulation provided in the application meets the requirements of CBJ 49.65.970(b)(2)(B)(iii) (Attachment A, page 15).
  - *Screening of Base*: The development meets the requirements of CBJ 49.65.930(e) and is screened by site-obscuring foliage that is as tall as the appurtenant facilities (Attachment A, page 15).
  - *Balloon Test*: The balloon test was not required because the proposed tower is not new. It replaces a currently existing tower of the same height.
- Radio Frequency Emissions: The submitted statement confirming that radio frequency emissions will comply with Federal Communication Commission (FCC) standards is consistent with the requirements of CBJ 49.65.960(d) (Attachment A, page 7).

- Certification by a professional engineer licensed in the State of Alaska: The application was completed and submitted by a professional engineer in the CBJ Engineering Department, and it states in the application that CBJ's practice is to retain the services of a licensed professional engineer to provide all necessary inspections to certify that the contractor has constructed in compliance with relevant laws of CBJ, the State of Alaska, and the Federal government. The applicant states that a professional engineer will prepare construction drawings.

Staff recommends as a condition of approval that prior to issuance of a building permit, the applicant shall provide a signed and stamped letter indicating the proposed WCF complies with industry practices of the National Association of Tower Erectors and local building code requirements for loads.

**Traffic** – Staff does not anticipate the proposed use to add traffic to the existing site, excluding the limited traffic during construction and periodic maintenance.

**Parking and Circulation** – The site has parking and is accessed from Engineer's Cutoff Road.

**Noise** – Staff does not anticipate that the tower will generate noise. The site is, at a minimum, separated by a quarter mile of dense vegetation from the nearest dwelling.

**Public Health or Safety** - No evidence indicates that there are any public health or safety impacts from the proposed project. If construction of new and improved towers reach above the tree line, the FAA and the Juneau International Airport will be notified to ensure aviation safety and compliance with aviation regulations.

**Habitat** – The proposal does not affect habitat protected by Title 49.

**Property Value or Neighborhood Harmony** – The proposed tower will not generate noise, traffic, or visual impact that is inconsistent with existing towers or neighboring residential uses.

### **Conformity with Adopted Plans**

#### 2013 Comprehensive Plan:

*POLICY 12.11. TO PLAN FOR AND TO ESTABLISH LAND USE CONTROLS ON WIRELESS COMMUNICATIONS FACILITIES IN A MANNER THAT IS APPROPRIATE FOR THE COMMUNITY AND WITHIN THE PARAMETERS ESTABLISHED BY FEDERAL LAW.*

The subject property has a Comprehensive Land Use designation of Urban Low Density Residential (ULDR). WCFs are deemed appropriate to the zoning due to their low noise and traffic impact. While the tower is not similarly scaled to single-family residential development, the

tower's isolation is anticipated to mitigate conflicts with neighborhood harmony. The ULDR land use designation is defined as follows:

*These lands are characterized by urban or suburban residential lands with detached single-family units, duplex, cottage or bungalow housing, zero-lot-line dwelling units and manufactured homes on permanent foundations at densities of one to six units per acre. Any commercial development should be of a scale consistent with a single-family residential neighborhood, as regulated in the Table of Permissible Uses (CBJ 49.25.300).*

**Wireless Telecommunications Master Plan (WMP):**

The WMP is a document that guides future development of wireless telecommunication facilities. The project generally complies with the Wireless Telecommunications Master Plan.

*POLICY 1. TO ENSURE THE PROTECTION OF THE HEALTH AND SAFETY OF THE PUBLIC WITH THE DEVELOPMENT OF WIRELESS COMMUNICATION FACILITIES.*

*POLICY 2. TO PROTECT AVIATION SAFETY BY COORDINATING WITH FEDERAL AVIATION ADMINISTRATION (FAA) WITH THE DEVELOPMENT OF WIRELESS COMMUNICATION FACILITIES.*

*POLICY 3. TO PROTECT THE NATURAL ENVIRONMENT WITH THE DEVELOPMENT OF WIRELESS COMMUNICATION FACILITIES.*

*POLICY 5. PROMOTE LAND USE EFFICIENCY WITH THE COLLOCATION OF WIRELESS COMMUNICATION FACILITIES TO EXISTING STRUCTURES.*

*POLICY 6. TO PRESERVE THE SCENIC VIEWSHEDS AND CORRIDORS LISTED IN THE 2013 COMPREHENSIVE PLAN WITH THE DEVELOPMENT OF WIRELESS COMMUNICATION FACILITIES.*

**FINDINGS**

CBJ 49.65.970(d) and (e), Director's Review, states that the director shall review the application for completeness.

1. The director shall review the application for completeness.
2. Incomplete applications shall be rejected and the applicant notified in writing within 30 days of receipt of the initial submission. If rejected, the director's decision shall identify the deficiencies in the application, which, if cured, would make the application complete.
3. Once an application is deemed complete, the director shall schedule it for a hearing before the planning commission, and shall give notice to the applicant and the public in accordance with subsection (e).



CBJ 49.65.970(f), Planning Commission Determination, states that the Planning Commission is authorized to review, analyze, evaluate and make decisions with respect to reviewing special use permits for WCFs.

- The Planning Commission may impose any conditions on a special use permit:
  - Required to ensure compliance with the design criteria specified in section 49.65.930; and
  - That are consistent with the purposes of this article, which may include conditions related to the aesthetic effect of the WCF and compatibility with the surrounding area. Factors relevant to aesthetic effects are: the protection of the view in sensitive or particularly scenic areas, scenic corridors/viewsheds identified in the Comprehensive Plan of the City and Borough of Juneau and in the historic district; the concentration of WCFs in the proposed area; and whether the height, design, placement or other characteristics of the proposed facility could be modified to have a less intrusive visual impact.
- The Planning Commission may deny an application for any of the following reasons:
  - Conflict with safety and safety-related codes and requirements;
  - Conflict with the purpose of a specific zoning, overlay, or land use designation;
  - Presence of another approved WCF or WCF application within the geographic search area that is available to the applicant;
  - The proposed site is on, or eligible to be on, the National Register of Historic Places;
  - The proposed site is in an area commonly valued by the community as a whole for its natural or scenic properties;
  - For a proposed freestanding tower, the applicant fails to demonstrate that no existing structure or tower can accommodate the applicant's proposed use without increasing the height of the existing tower or structure or otherwise creating a greater visual impact; or that use of such existing facilities is technically infeasible or commercially impracticable; and
  - Conflicts with the provisions of this article.
- The Planning Commission shall deny any application for WCF in the following locations:
  - State or local wildlife refuges;
  - In any area designated as a public park, unless screened so as to minimize visual and noise impacts, and as long as public use will not be disrupted;
  - In any area designated as a scenic corridor/viewshed identified in the Comprehensive Plan of the City and Borough of Juneau; and

- In any area that fully or partially obstructs the view of the Mendenhall Glacier from the waterfront roadway from the North Douglas boat launch facility to False Outer Point.
- The Planning Commission shall condition a permit on a requirement to construct the WCF within a reasonable period of time, which may not exceed 18 months.

Per CBJ 49.65.970(d) and (f), Review of Director's and Commission's Determinations, the Director makes the following findings on the proposed development:

**1. *Is the application for the requested special use permit complete?***

**Yes.** The application contains the information necessary to conduct a full review of the proposed wireless communications facility. The proposal consists of a narrative, visual impact assessment, confirmation that the facility will serve a necessary function for the provider's network, and confirmation that emitted electromagnetic radiation will meet FCC requirements. The proposal was preceded by a pre-application meeting, summarized in PAC2019 0035. The application submittal by the applicant, including the appropriate fees, substantially conforms to the requirements of CBJ Chapter 49.65.900.

**2. *Is the proposed project consistent with safety and safety-related codes and requirements?***

**Yes.** The permit does not conflict with safety and safety-related codes and requirements.

**3. *Is the proposed use appropriate according to the Table of Permissible Uses and other specific zoning, overlay, or land use designation?***

**Yes.** The requested permit is appropriate according to the Table of Permissible Uses. The permit is listed at CBJ 49.25.300, Section 18.500 and CBJ 49.65.950 for the RR / D1 zoning district. The development is not located in an overlay district.

**4. *Is the presence of another approved WCF or WCF application within the geographic search area that is available to the applicant?***

**No.** As this is a replacement of an existing WCF, this is not applicable.

**5. *Was Public Notice of the Planning Commission consideration in compliance with CBJ 49.65.970(e)?***

**Yes.** Public notice of this project was provided in the July 12, 2019, and July 21, 2019, issues of the Juneau Empire's "Your Municipality" section, and a Notice of Public Hearing was mailed to all property owners within 1500 feet of the subject parcel as well as all neighborhood associations. Three public notice signs were posted on July 5, one at the trailhead to the tower site, one at the intersection of Glacier Highway and Fritz Cove Road, and one at the intersection of Glacier Highway and Engineers Cutoff. The signs were posted to be visible from the public right-of-way.

**6. *Is the presence of another approved WCF or WCF application within the geographic search area that is available to the applicant?***

**Yes.** The applicant is replacing the existing WCF with an upgraded WCF in the same location.

**7. *Is the proposed site on, or eligible to be on, the National Register of Historic Places?***

**No.** The development site does not meet the National Register of Historic Places criteria for evaluation.

**8. *Is the proposed site in an area commonly valued by the community as a whole for its natural or scenic properties?***

**No.** The development site is located in a developed industrial area.

**9. *For a proposed freestanding tower, did the applicant demonstrate that no existing structure or tower can accommodate the applicant's proposed use without increasing the height of the existing tower or structure or otherwise creating a greater visual impact; or that use of such existing facilities is technically infeasible or commercially impracticable?***

**Yes.** The applicant has demonstrated that the existing structure cannot accommodate the proposed use, and that the tower's appearance will mitigate visual impact while meeting FAA's minimum requirements.

**10. *Will the proposed development be in general conformity with the land use plan, thoroughfare plan, or other officially adopted plans?***

**Yes.** The development is in general conformity with Title 49, the 2013 Comprehensive Plan, and the Wireless Telecommunications Master Plan.

**11. *Is the proposed development located on State or local wildlife refuges?***

**No.** The proposed development is located on CBJ property in an RR / D1 zoning district.

**12. *Is the proposed development in any area designated as a public park, unless screened so as to minimize visual and noise impacts, and as long as public use will not be disrupted?***

**No.** The proposed development is located on CBJ property in an RR / D1 zoning district.

**13. *Is the development in any area designated as a scenic corridor/viewshed identified in the Comprehensive Plan of the City and Borough of Juneau?***

**No.** The proposed development is not located any area designated as a scenic corridor or viewshed.

***14. Is the development in any area that fully or partially obstructs the view of the Mendenhall Glacier from the waterfront roadway from the North Douglas boat launch facility to False Outer Point?***

**No.** The proposed development would not visually impact views of the Mendenhall Glacier.

The Planning Commission may deny a Special Use Permit according to the process pursuant to 49.65.970(f)(2). The Planning Commission shall deny a Special Use Permit for a project listed in areas of the borough that are indicated in 49.65.970(f)(3). The Commission cannot deny the permit outside of those listed items.

**RECOMMENDATION**

Staff recommends that the Planning Commission adopt the Director's analysis and findings and grant the requested Conditional Use Permit. The permit would allow replacement of an existing communication tower with a 40-foot tall, self-supporting tower and up to 20 feet of antennas and other radio equipment.

The approval is subject to the following conditions:

1. Prior to final certificate of occupancy, signage shall be installed to meet the requirements of CBJ 49.65.930(c).
2. Prior to issuance of a building permit, the applicant shall provide a signed and stamped letter indicating the proposed WCF complies with industry practices of the National Association of Tower Erectors and local building code requirements for loads.



# DEVELOPMENT PERMIT APPLICATION

NOTE: Development Permit Application forms must accompany all other Community Development Department land use applications.

To be completed by Applicant	<b>PROPERTY LOCATION</b>		
	Physical Address <u>Engineers Cutoff.</u>		
	Legal Description(s) (Subdivision, Survey, Block, Tract, Lot) <u>USS 3817 Lot 1</u>		
	Parcel Number(s) <u>4B2301010170</u>		
	<input type="checkbox"/> This property located in the downtown historic district <input type="checkbox"/> This property located in a mapped hazard area, if so, which <u>NA</u>		
	<b>LANDOWNER/ LESSEE</b>		
	Property Owner <u>CBS Lands &amp; Resources</u>	Contact Person <u>Greg Chaney</u>	
	Mailing Address <u>155 S. Seward St.</u>	Phone Number(s) <u>586-0205</u>	
	E-mail Address <u>Greg.Chaney@Juneau.org</u>		
	<b>LANDOWNER/ LESSEE CONSENT</b> Required for Planning Permits, not needed on Building/ Engineering Permits		
I am (we are) the owner(s) or lessee(s) of the property subject to this application and I (we) consent as follows:			
A. This application for a land use or activity review for development on my (our) property is made with my complete understanding and permission.			
B. I (we) grant permission for officials and employees of the City and Borough of Juneau to inspect my property as needed for purposes of this application.			
X <u>Greg P. Chaney</u>		<u>May 29 2019</u>	
Landowner/Lessee Signature		Date	
X _____		_____	
Landowner/Lessee Signature		Date	
NOTICE: The City and Borough of Juneau staff may need access to the subject property during regular business hours and will attempt to contact the landowner in addition to the formal consent given above. Further, members of the Planning Commission may visit the property before the scheduled public hearing date.			
<b>APPLICANT</b> If the same as OWNER, write "SAME"			
Applicant <u>CBS Eng / JPD / CCFR</u>	Contact Person <u>Alicia Steffert</u>		
Mailing Address <u>155 S. Seward St.</u>	Phone Number(s) <u>586-0481</u>		
E-mail Address <u>Alicia.Steffert@Juneau.org</u>			
X <u>Alicia Steffert</u>	<u>5-29-2018</u>		
Applicant's Signature	Date of Application		

DEPARTMENT USE ONLY BELOW THIS LINE

## Attachment A - Application

This form and all documents associated with it are public record once submitted.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

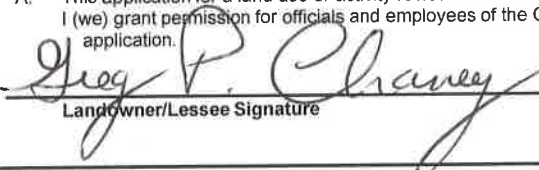
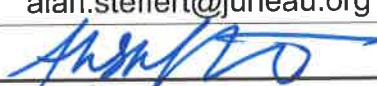
Intake Initials  
TJR  
1 of 19

Case Number  
16E70190003

Date Received  
5/29/19

# Wireless Communication Facility Application

Project Number <u>WCF20190007</u>	CITY and BOROUGH of JUNEAU	Date Received: <u>5/29/19</u>
Project Name (City Staff to Assign Name)		

<div style="writing-mode: vertical-rl; transform: rotate(180deg);">PROJECT / APPLICANT INFORMATION</div>	<b>Project Description</b> Replacement tower for existing JDP/CCFR communications at the Pederson Hill communications site		
	<b>PROPERTY LOCATION</b>		
	Street Address <u>Engineers Cutoff</u>	City/Zip <u>Juneau 99801</u>	
	Legal Description(s) of Parcel(s) (Subdivision, Survey, Block, Tract, Lot) <u>Lot 1 USS 3817</u>		
	Assessor's Parcel Number(s) <u>4B2301010170</u>		
	<b>LANDOWNER/ LESSEE</b>		
	Property Owner's Name <u>City &amp; Borough of Juneau Lands Division</u>	Contact Person: <u>Greg Chaney</u>	Work Phone: <u>586-0205</u>
	Mailing Address <u>155 South Seward St</u>	Home Phone:	Fax Number:
	E-mail Address <u>Greg.Chaney@Juneau.org</u>	Other Contact Phone Number(s):	
	<b>LANDOWNER/ LESSEE CONSENT</b>		
	I am (we are) the owner(s) or lessee(s) of the property subject to this application and I (we) consent as follows: A. This application for a land use or activity review for development on my (our) property is made with my complete understanding and permission. B. I (we) grant permission for officials and employees of the City and Borough of Juneau to inspect my property as needed for purposes of this application.		
	X <u></u> Landowner/Lessee Signature		<u>May 29 2019</u> Date
	X _____ Landowner/Lessee Signature		_____ Date
	NOTICE: The City and Borough of Juneau staff may need access to the subject property during regular business hours and will attempt to contact the landowner in addition to the formal consent given above. Further, members of the Planning Commission may visit the property before the scheduled public hearing date.		
	<b>APPLICANT</b> <small>If the same as OWNER, write "SAME" and sign and date at X below</small>		
Applicant's Name <u>CBJ Engineering/JDP/CCFR</u>	Contact Person: <u>Alan Steffert</u>	Work Phone: <u>586-0481</u>	
Mailing Address <u>155 South Seward St</u>	Home Phone:	Fax Number:	
E-mail Address <u>alan.steffert@juneau.org</u>	Other Contact Phone Number(s): <u>cell 789-4743</u>		
X <u></u> Applicant's Signature		<u>5/29/2019</u> Date of Application	

<b>Mark Proposed WCF Type</b> Collocation <input type="checkbox"/> New Tower <input checked="" type="checkbox"/> Attached WCF <input type="checkbox"/> Eligible Facility Request Facility <input type="checkbox"/>		<b>Required Permit</b> <input type="checkbox"/> BUILDING PERMIT <small>Project falls under Table 1 (49.65.950)</small> <input checked="" type="checkbox"/> SPECIAL USE PERMIT <small>Project does not fall under Table 1</small>
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<b>Complete WCF Submittal Checklist</b> <input checked="" type="checkbox"/> Turn over for checklist
---

<b>Lighting</b> Proposed: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> Existing: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	<b>STRUCTURE HEIGHT</b> <u>40</u> FT
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PLEASE NOTE: INCOMPLETE APPLICATIONS WILL NOT BE SCHEDULED FOR PLANNING COMMISSION ACTION AND WILL BE RETURNED TO THE APPLICATION FOR COMPLETION.

<b>REVIEW APPROVALS</b>		<b>FEES</b>	
	<u>Initials</u>	<u>Date</u>	
Building			Application Fee \$ <u>850 (350 WCF fee + 500 Special Use)</u>
Engineering			Adjustment \$ <u>150 (\$50 sign + \$100 deposit)</u>
Planning			Total Fee \$ <u>1000</u>





# WIRELESS COMMUNICATION FACILITY CHECKLIST



Juneau Permit Center • 230 S. Franklin Street • (907) 586-0770

This checklist is required to complete an application for a Wireless Communication Facility (WCF) permit. There are two types of WCF permits. See below.

- A. WCF qualifies as Eligible Facility Request (**Streamlined Review**)  
a. Submit items 1-12

- B. WCF requires Special Use permit  
a. Submit items 2-21

## Required Items (please label each item with the corresponding number on plans)

- ☐ 1) ~~Completed Building Permit Application~~
- ☒ 2) Completed WCF Application
- ☒ 3) Completed Development Permit Application
- ☒ 4) Fees (contact the Permit Center at (907) 586-0770 to determine amount)
- ☒ 5) A statement certifying that radio frequency emissions from the antenna array(s), both individually and cumulatively, will comply with FCC standards (considering any other WCF located on or immediately adjacent to the proposed WCF). This statement must be signed by a qualified person and accompanied with a statement of that person's professional qualifications
- ☒ 6) Site address and CBJ Parcel Identification Number (tax ID number)
- ☒ 7) Site size and dimensions
- ☒ 8) Site plan showing all existing and proposed structures, buildings, fences (their height) and landscaping
- ☒ 9) Proposed WCF type and design, lighting, height above grade, material, number of, color, any accessory structures, and number of collocations it can accommodate, if applicable
- ☒ 10) Certification that proposal complies with applicable laws pertaining to service offered
- ☐ 11) The following documents from a licensed Alaska Professional Engineer:
  - ☐ Signed and stamped letter indicating the proposed WCF will be constructed, repaired, modified or restored in compliance with all current applicable technical, safety, and safety-related laws of the CBJ, State of Alaska, and Federal government
  - ☐ Signed and stamped letter indicating the proposed WCF is in compliance with industry practices of the National Association of Tower Erectors
  - ☐ Letter indicating compliance with FAA regulations in 14 CFR Part 77 (if applicable)
- ☒ 12) Location of any dwelling(s) within distance of tower equal to the height of tower (if applicable), disclosure of any agreements which limit and/or preclude the proposed WCF from being shared with new WCFs

*See attached*

# WIRELESS COMMUNICATION FACILITY CHECKLIST



- ☐ 13) Signed and stamped letter from a licensed Alaska Professional Engineer indicating the foundation and attachments meet EIA/TIA 222 G and local building code structure requirements for loads, including wind, snow, and ice (this shall also address the total number of required accommodated collocations, when applicable)

*See attached*

- ☒ 14) A narrative describing compliance with subsections under 49.65.930:

☒ Concealed & Non-concealed antenna

☒ Security

☒ Signage

☒ Lighting

☒ Design Criteria

☒ Setbacks

☒ Affects to mapped

☒ Viewsheds

☒ WCF Master Plan

☒ Structural Assessment

- ☒ 15) Visual Impact Study consisting of:

Zone of Visibility Map

Analysis demonstrating how the proposed WCF will be sited to be of least adverse impact on environment and its character while meeting applicant's network objectives

Illustration showing before and after views of proposed WCF from roadways, parks, public lands, historic districts and any other location where the site is visible to many people

Description of visual impact

Narrative or drawing describing how the base of the tower and accessory structures will be screened from view

- ☐ 16) For lighted towers:

Description of type of light and how it complies with 49.65.930(d) (if required by FAA, the minimum intensity allowed by FAA)

How it will not project directly onto adjacent surrounding property (use of buffers, louvers, etc.)

- ☒ 17) Narrative indicating that the design height is the minimum necessary for effective functioning of provider's network

- ☒ 18) Visual impact assessment according to 49.65.970(c)(2)(B)

- ☒ 19) Balloon Test according to 49.65.970(c)(2)(D)

- ☐ 20) Propagation study *NA.*

*NA.*



Wireless Communication Facility Application  
for  
JPD/CCFR Tower at Pederson Hill Communications Site

RECEIVED  
MAY 29 2019  
PERMIT CENTER/CDD

Reference Numbers refer to WCF Checklist

1. Building Permit Application Form: – *Not required for Special Use Permit but will be submitted upon completion of plans*
2. WCF Application Form: – *Attached*
3. Development Permit Application Form: – *Attached*
4. Fees: – *to be paid by draw on CIP fund*
5. Statement certifying that radio frequency emissions from the antenna array(s), both individually and cumulatively, will comply with FCC standards (considering any other WCF located on or immediately adjacent to the proposed WCF). This statement must be signed by a qualified person and accompanied with a statement. – *See attached letter by Erik Gazdig, JPD/CCFR Radio & Electronics Specialist.*
6. Site Address and CBJ Parcel Identification Number (tax ID)
  - a. Address: *Engineers Cutoff*
  - b. Tax ID: *4B2301010170*
7. Site size and dimensions: – *416.6600 acres, 2500' x 7400' (scaled from parcel viewer)*
8. Site plan: – *see attached*
9. Proposed WCF type and design, lighting, height above grade, material, number of, color, any accessory structures, and number of collocations it can accommodate, if applicable.
  - a. WCF type and design: *Self-supporting 6' x 6' square lattice radio communication tower*
  - b. Lighting: *to be determined by FAA requirements. Adjacent towers are unlit. CBJ prefers to not light new tower.*
  - c. Height above grade: *40 ft*
  - d. Material: *Galvanized steel, with concrete foundation*
  - e. Number of: *One tower*
  - f. Color: *Galvanized – grey*
  - g. Any accessory structures: *Yes. A standby emergency generator in a protective structure will be constructed nearby the existing JPD radio shack.*
  - h. Number of collocations: *None*
10. Certification that proposal complies with applicable laws pertaining to service offered – *Tower will provide public safety communications to JPD and CCFR. No radio service is provided to general public. – See attached letter by Erik Gazdig, JPD/CCFR Radio & Electronics Specialist.*
11. The following documents from a licensed Alaska Professional Engineer:
  - a. Signed and stamped letter indicating the proposed WCF will be constructed, repaired, modified or restored in compliance with all current applicable technical, safety, and safety-related laws of the CBJ, State of Alaska, and Federal government. – *To be supplied after construction (if required). The CBJ's practice is to retain the services of a licensed professional engineering Consultant to provide contract administration and all necessary inspection to certify that the Contractor constructs the work in accordance with the authorized Drawings and Specifications.*

- b. Signed and stamped letter indicating the proposed WCF is in compliance with industry practices of the National Association of Tower Erectors. – *The CBJ's drawings and specifications for the proposed WCF will be prepared by a licensed Alaska Professional Engineer.*
  - c. 11a (there are two number 11s on the checklist). Letter indicating compliance with FAA regulations in 14 CFR Part 77 (if applicable). – *We have applied for FAA approval and are awaiting expected determination of No Hazard to Aerial Navigation, based on previous FAA approval for a taller KTOO tower on same site (but will not now be constructed).*
- 12. Location of any dwelling(s) within distance of tower equal to the height of tower (if applicable), disclosure of any agreements which limit and/or preclude the proposed WCF from being shared with new WCFs. – *No dwellings within parcel. Nearest residential property is over a quarter mile from tower site. Tower will be for CBJ use only. JPD policy is NO colocation of private equipment on JPD towers due to Homeland Security concerns.*
- 13. Signed and stamped letter from a licensed Alaska Professional Engineer indicating the foundation and attachments meet EIA/TIA 222 G and local building code structure requirements for loads, including wind, snow, and ice (this shall also address the total number of required accommodated collocations, when applicable). – *Design will be stamped by licensed Alaska Professional Engineer. Specifications for tower and foundation will require compliance with applicable codes. Building permits will be obtained prior to construction.*
- 14. A narrative describing compliance with subsections under 49.65.930: - *see attached*
- 15. Visual Impact Study. – *see attached*
- 16. For lighted towers:
  - a. Description of type of light and how it complies with 49.65.930(d) (if required by FAA, the minimum intensity allowed by FAA) – *No lighting anticipated*
  - b. How it will not project directly onto adjacent surrounding property (use of buffers, louvers, etc.) – *No lighting anticipated*
- 17. Narrative indicating that the design height is the minimum necessary for effective functioning of provider's network. - *JPD has estimated that a 40 ft high, by 6 ft square tower will meet the current and future needs while maintaining line of sight required for public safety communications. Current tower capacity is maxed out. Adjacent towers are 40 ft high.*
- 18. Visual impact assessment according to 49.65.970(c)(2)(B) – *see attached.*
- 19. Balloon Test according to 49.65.970(c)(2)(D) – *Existing 40 ft high towers on site already demonstrate tower visual impact and there are safety concerns with flying balloons close to existing antennas/towers - Balloon test not required at this site. See attached email from Director Maclean.*
- 20. Propagation study – *This is not a cell tower. Existing antenna are being relocated to new tower. No propagation study supplied.*

Erik Gazdig  
Juneau Police Department  
6255 Alaway Avenue  
Juneau, AK 99801  
5/24/2019

To whom it may concern:

I hereby certify that the radio frequency emissions from the JPD/CCFR's Pederson Hill Communication site antenna array(s), both individually and cumulatively, will comply with FCC standards. The proposed relocation of existing JPD/CCFR antennas on the new tower will comply with applicable laws pertaining to the service offered.

Sincerely,



Erik Gazdig  
Juneau Police Department and Capital City Fire/Rescue  
Radio/Electronics Specialist  
(907) 500-0629  
ejgazdig@juneaupolice.com

## Pederson Hill Tower Site Existing & Proposed Structures



14. A narrative describing compliance with subsections under 49.65.930:

49.65.930 – General requirements.

(a) Concealed and Non-concealed antenna.

(1) New tower will be sized to accommodate relocated microwave dishes and radio antenna, currently located on existing tower. Dishes and antenna will be **non-concealed**. They will be located on the new tower in positions that provide line-of-sight connectivity to other JDP/CCFR communication facilities.

(2) Feed lines will be run along cable raceways up the side of the new tower and along structural members of the tower. Cable will be non-concealed, but their appearance will be in character with the existing ambience of this communication tower site.

(b) Security of WCFs.

(1) It is in JPD/CCFR's best interest to prevent unauthorized access and tampering with their communication facilities. The proposed tower will be designed to prevent unauthorized access to tower and attached antenna. The existing FAA square tower adjacent to site incorporates a locked trapdoor to restrict access. It is anticipated that the new tower will be similarly equipped. Note, all four existing triangular lattice towers on the site are climbable due to the inherent nature of their design.

(2) The existing on-site radio sheds and communication equipment pedestals are locked. The proposed generator shed will also be locked to restrict unauthorized access.

(c) Signage.

The existing JPD radio shack does not have any signage to indicate it is a JPD facility. The tower site is relatively remote with access via helicopter to the on-site helipad (FAA helipad) or via the Blueberry Trail, a 15 minute uphill walk from Engineers Cut-Off.

(d) Lighting.

Lighting of the tower is not intended unless required by the FAA. FAA have been advised of our intention to construct the tower and we have applied for a Notice of No Hazard to Air Navigation. The adjacent (and much higher) FAA tower is lit. The closer and lower existing communication towers at the site are not lit. It is likely the FAA will not require lighting on the new tower given its location and height above ground.

(e) Design criteria.

(1) Proposed tower is below 60 ft in height, thus does not need to be designed to accommodate any minimum number of antenna array under this section.

(2) Underground AELP power is already supplied to site and to individual radio shacks (FAA, KTOO, and JPD). The new generator shack will be wired according to National Electric Code. A cable race way will be constructed between the existing JPD radio shack and the relocated antenna on the new tower.

(3) The new tower will be galvanized grey color which will more often than not match the typical Juneau sky (grey cloud) on this hill top location and blend in with the other galvanized towers. The new generator shack will be painted in subdued earth tones, matching the look of the existing JPD radio shack (brown on brown) or the adjacent KTOO radio shack (brown roof, green walls). Eventually regenerating trees and bushes are expected to grow taller and surround the new structures, providing partial camouflage when viewed from ground level.

(4) Tower will be free standing.

(f) Setbacks.

(1) (2) & (3) The closest property line is over 1,200 ft from the tower site. Setback distance is met for 40 ft high towers constructed using and not using breakpoint design technology, and for the zoning.

(g) The proposed tower and generator shed does not significantly affect the natural area or land designated as natural area park or scenic corridor or viewshed as identified in the CBJ's Comprehensive Plan.

(h) The CBJ's wireless telecommunication master plan does not specifically address public safety communication facilities. However, the proposed JPD tower is not inconsistent with the masterplan.

(i) Visibility.

(A) The antenna on the new tower must have line-of-sight connectivity with other JPD/CCFR communication sites on Saddle Mountain, the airport area, and Lemon Creek valley. The new tower will be located in on a ridge crest in proximity to the existing JPD tower and amongst a cluster of existing towers of similar height. After relocation of existing JPD/CCFR antenna, the old JPD tower will be removed.

(B) The proposed tower will be a 40 ft high free-standing square steel lattice structure. The existing towers on the ridge crest in the immediate vicinity are of similar height and of lattice construction, but are triangular shaped and are guyed. The proposed and existing towers are (and the new one will be) galvanized grey colored. The site is an established tower communication site with five existing towers (including the larger and higher FAA tower 130 ft to the south). The replacement JPD tower will be in harmony with the architectural character, height, scale, color and texture of the site.

(j) Structural assessment.

The proposed tower will not be within 40 ft (the tower height) of a dwelling, parking lot, playground, or right-of-way.

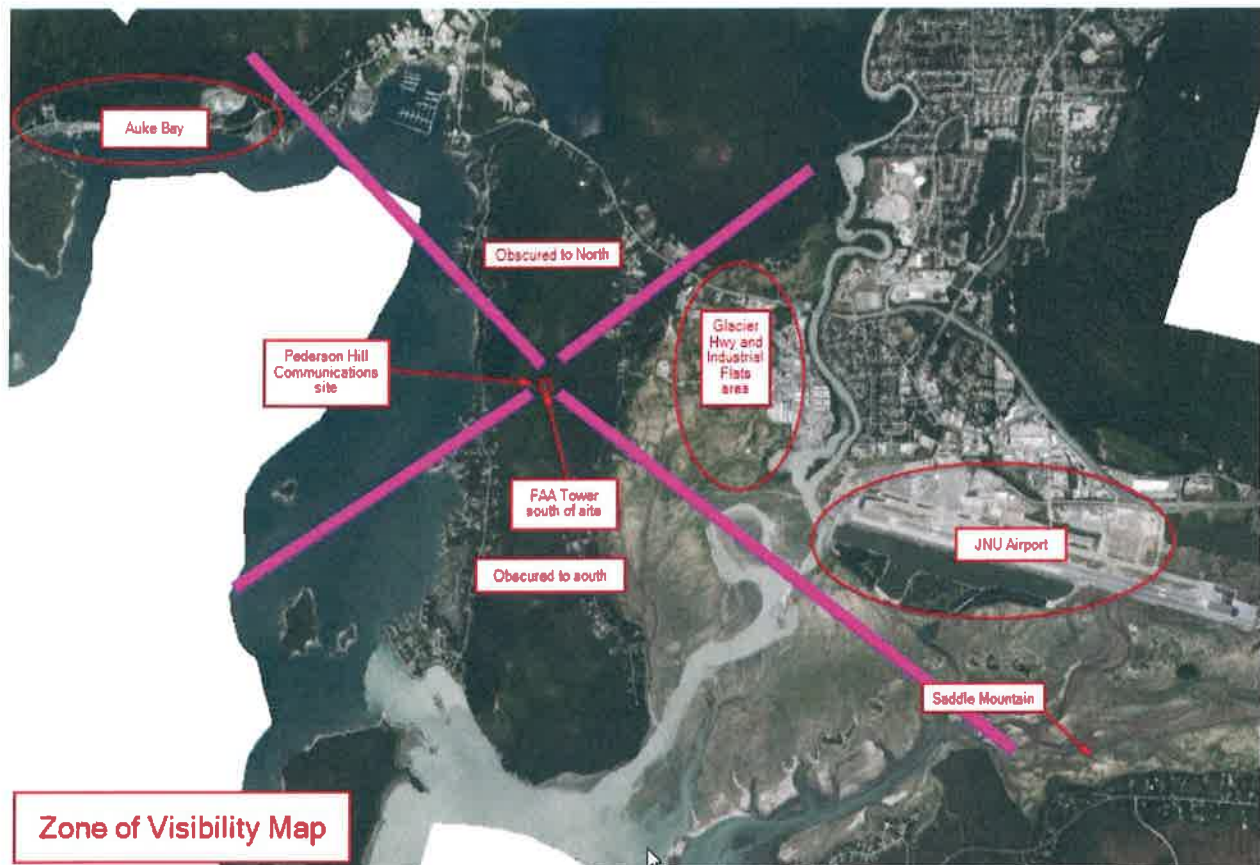
Wireless Communication Facility Application  
for  
JPD/CCFR Tower at Pederson Hill Communications Site

15. Visual Impact Study

a) Zone of Visibility. The proposed JPD/CCFR radio communication tower will be located at the existing Pederson Hill Tower site on the spine of Mendenhall Peninsular at 505 ft elevation. The site provides direct line-of-sight communications to the public safety radio site at Saddle Mountain on Douglas Island and to JPD/CCFR communication facilities located near the airport and Lemon Ck valley. Rising terrain and the massive FAA tower immediately south of the tower site blocks visibility from the south (tower site not visible from North Douglas scenic view shed), and terrain and vegetation blocks visibility from the north. The tower site, but not necessarily the towers themselves, is discernable on the skyline, if you know where to look, from the north at Auke Bay in the vicinity of the ferry terminal, and from the south in the vicinity of the airport and from Glacier Hwy and the end of Industrial Blvd in areas where buildings or vegetation do not obstruct the view. The tower is not visible from closer in, e.g. on Fritz Cove road and Engineers Cut Off, due to obscuring terrain and vegetation. The tower site is visible from the air and surrounding high ground...







Zone of Visibility Map. Tower site is visible from red circled areas in Auke Bay, Glacier Hwy/Industrial, and Airport. Site is obscured to the south and north and close in to the base of the hill to east and west.

In addition to the Zone of Visibility Map, web cam are mounted on the FAA tower located at a higher elevation and south of the proposed tower, and on a tower at the same elevation and location as the proposed tower. Selected images from the cams are copied below.



View from adjacent and much higher FAA tower, with base elevation 25 ft higher than proposed tower base elevation.



Northeast camera



Southeast camera



Southwest camera



West camera

View from Webcams on existing tower within 20 ft of proposed tower location. Note how vegetation obscures visibility of Auke Bay and airport foreground.

2019-05-24 12:30:10  
TheSnowCloud - PDH-N



North view

2019-05-24 14:02:55  
TheSnowCloud - PDH-S



South View

b) Analysis of WCF siting.

The proposed location of the new radio tower is between existing towers already occupying the ridge top site. The relatively flat location on the ridge crest is presently occupied by a wooden platform, which will be demolished to make room for the new tower. A “flat” site is preferred for constructing the large concrete foundation needed for a free standing radio tower. The location maintains the direct line of site requirement for JPD/CCFR radio communications to Saddle Mountain and other JPD/CCFR radio facilities.

The existing radio towers either side of the new tower site are nominally the same height as the proposed tower (40 ft) so it is doubtful that the distant view of the skyline will noticeably change after the construction of the new tower. The existing towers already blend into the treed skyline.

The proposed tower will be a self-supporting 6 ft by 6 ft square steel lattice design, unlike the four triangular (18” sides) steel lattice guy-supported towers already on site. The new tower will be of lattice construction and should exhibit a similar “airiness” to the existing towers. “Airiness” will allow the tower to be less visible on the skyline when viewed from afar.

The new tower will be galvanized, as are the existing towers. The grey color of weathered galvanizing will blend into the typical grey skies of Juneau, similar to the way grey painted Air Force planes are camouflaged in the sky.

Site photo – existing conditions with proposed tower location graphic



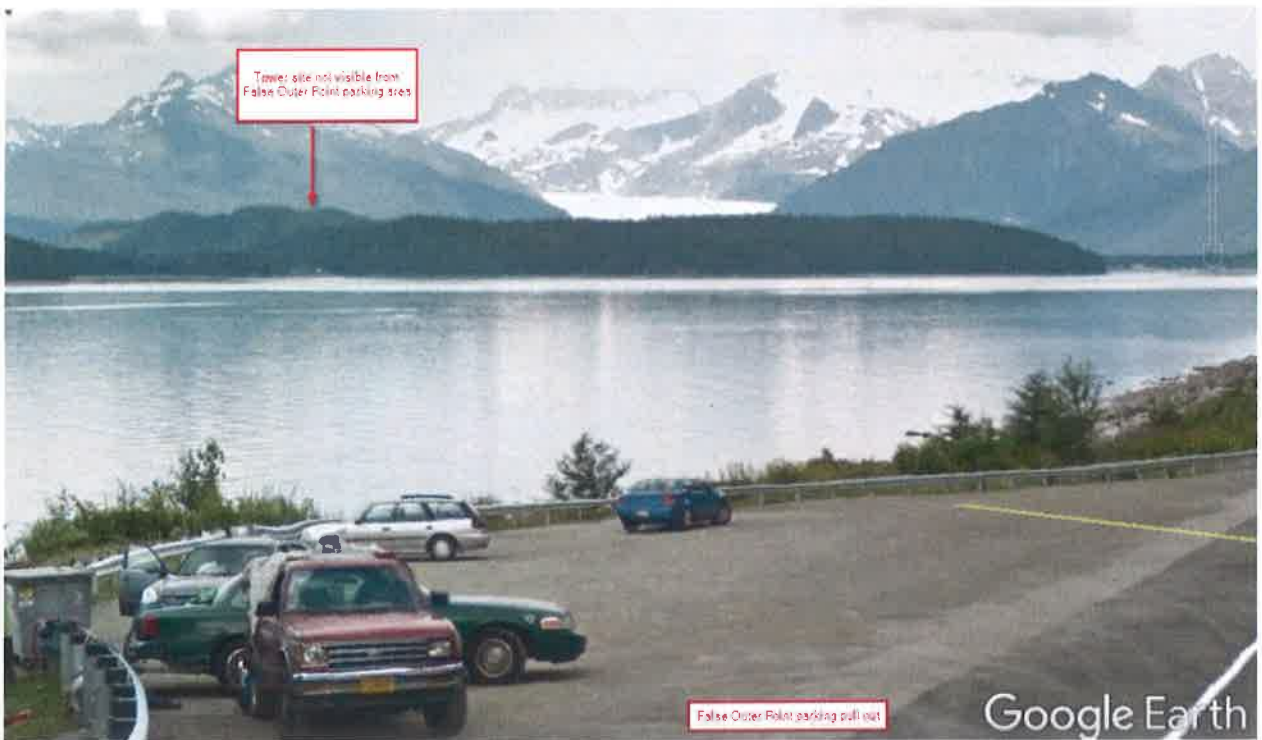
Note: proposed tower will not be red. Tower will be galvanized steel which will weather to a dull grey color and will match color of existing (galvanized steel) towers on site. Proposed emergency generator shed will be smaller than existing radio shed structures and be obscured by vegetation. Likewise, base of tower will be obscured from view by vegetation.



c) Illustration of WCF location from selected view sites on Juneau road system (from Google Street View)



North Douglas boat ramp



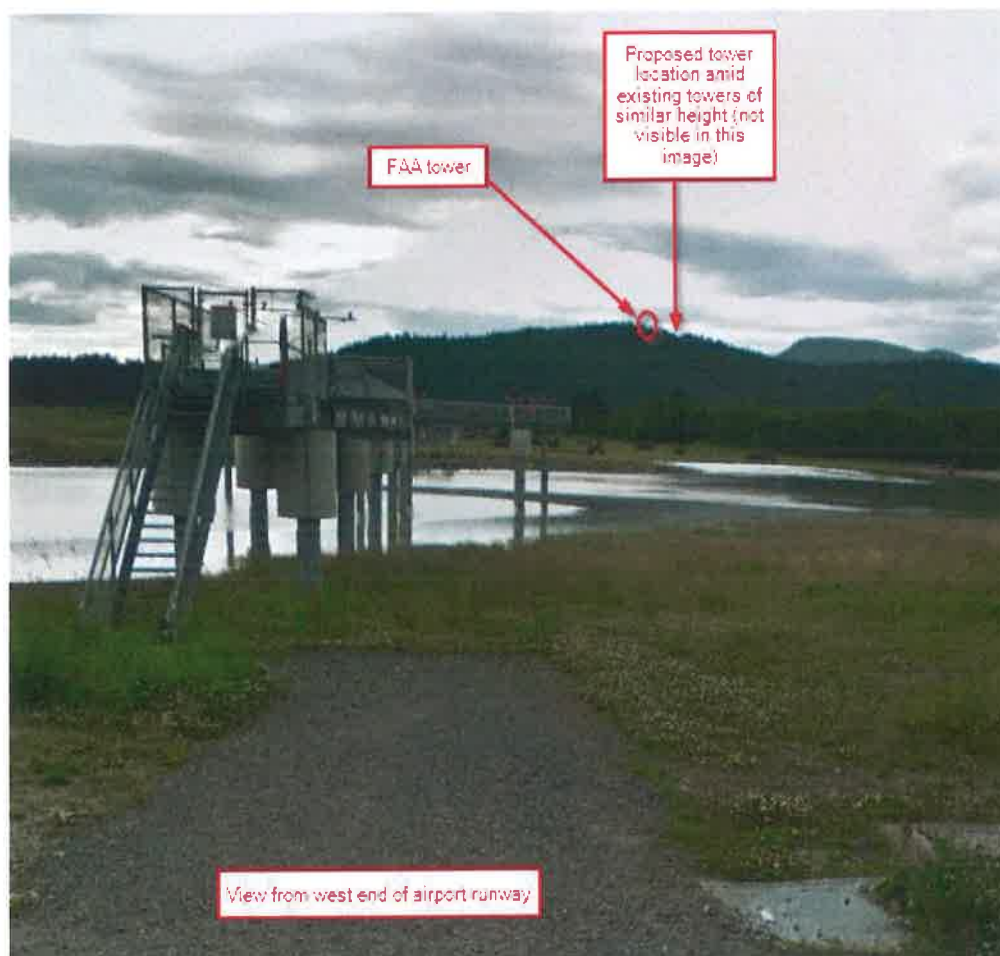
False Outer Point parking area, North Douglas Hwy.



Zoomed image from Auke Bay ferry terminal



Zoomed image from Temsco access road at east end of airport



View across Mendenhall River from west end of JNU runway





View from Glacier hwy, south of Sherwood Lane intersection. Note: this is most likely the “best” place on the road system for the clearest view of the tower site.

## Alan Steffert

---

**From:** Jill Maclean  
**Sent:** Monday, May 27, 2019 3:33 PM  
**To:** Alan Steffert  
**Cc:** Alexandra Pierce  
**Subject:** RE: Visible impact study question

Hi,

I think we can make the argument that it's a safety concern and that the existing tower replaces the need to use the balloon test.

Thanks,

Jill

---

**From:** Alan Steffert <Alan.Steffert@juneau.org>  
**Sent:** Friday, May 24, 2019 4:45 PM  
**To:** Jill Maclean <Jill.Maclean@juneau.org>  
**Subject:** Visible impact study question

Jill, please look at the attached and required visual impact study for the new JPD tower on Pederson Hill tower site, and especially note the images of views from the road system. Please tell me that a balloon study is a complete waste of time in this instance:

1. You can barely see the 4 towers already up there (not counting the big FAA tower which dominates the skyline), and can't make out the 3 ft diameter microwave dishes already mounted on the old tower.
2. The close proximity of the towers either side of my proposed location will make flying a balloon hazardous, with likely hood of the balloon tangling up on a tower or antenna.

Let me know.

Thanks,

Alan

Alan Steffert PE  
Project Engineer  
City & Borough of Juneau  
155 South Seward Street  
Juneau, AK 99801  
Ph: (907) 586-0481  
Mobile: (907) 789-4743  
Email: [alan.steffert@juneau.org](mailto:alan.steffert@juneau.org)



Mail Processing Center  
Federal Aviation Administration  
Southwest Regional Office  
Obstruction Evaluation Group  
10101 Hillwood Parkway  
Fort Worth, TX 76177

Aeronautical Study No.  
2019-AAL-133-OE  
Prior Study No.  
2017-AAL-186-OE

Issued Date: 06/17/2019

Erik Gazdig  
City and Borough of Juneau  
6255 Alaway Ave  
Juneau, AK 99801

**\*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\***

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Antenna Tower Pederson Hill New JPD Tower
Location:	Juneau, AK
Latitude:	58-21-57.46N NAD 83
Longitude:	134-38-04.06W
Heights:	505 feet site elevation (SE) 60 feet above ground level (AGL) 565 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure would have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities. Therefore, pursuant to the authority delegated to me, it is hereby determined that the structure would not be a hazard to air navigation provided the following condition(s) is(are) met:

As a condition to this Determination, the structure is to be marked/lighted in accordance with FAA Advisory circular 70/7460-1 L Change 2, Obstruction Marking and Lighting, a med-dual system - Chapters 4,8(M-Dual),&12.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (800) 478-3576 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

\_\_\_\_ At least 10 days prior to start of construction (7460-2, Part 1)  
\_\_X\_\_ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

See attachment for additional condition(s) or information.

This determination expires on 12/17/2020 unless:



- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

**NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.**

This determination is subject to review if an interested party files a petition that is received by the FAA on or before July 17, 2019. In the event a petition for review is filed, it must contain a full statement of the basis upon which it is made and be submitted to the Manager of the Airspace Policy Group. Petitions can be submitted via mail to Federal Aviation Administration, 800 Independence Ave, SW, Room 423, Washington, DC 20591, via email at [OEPetitions@faa.gov](mailto:OEPetitions@faa.gov), or via facsimile (202) 267-9328.

This determination becomes final on July 27, 2019 unless a petition is timely filed. In which case, this determination will not become final pending disposition of the petition. Interested parties will be notified of the grant of any review. For any questions regarding your petition, please contact Airspace Policy Group via telephone – 202-267-8783.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

This aeronautical study considered and analyzed the impact on existing and proposed arrival, departure, and en route procedures for aircraft operating under both visual flight rules and instrument flight rules; the impact on all existing and planned public-use airports, military airports and aeronautical facilities; and the cumulative impact resulting from the studied structure when combined with the impact of other existing or proposed

structures. The study disclosed that the described structure would have no substantial adverse effect on air navigation.

An account of the study findings, aeronautical objections received by the FAA during the study (if any), and the basis for the FAA's decision in this matter can be found on the following page(s).

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact Robert van Haastert, at (907) 271-5863, or robert.van.haastert@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2019-AAL-133-OE.

**Signature Control No: 406926203-408640883**

( DNH )

Mike Helvey

Manager, Obstruction Evaluation Group

Attachment(s)

Additional Information

Frequency Data

Map(s)

cc: FCC

**AERONAUTICAL STUDY NO. 2019-AAL-133-OE**

**Abbreviations**

AGL - above ground level

MSL - mean sea level

RWY - runway

IFR - instrument flight rules

VFR - visual flight rules

nm - nautical mile

Part 77 - Title 14 CFR Part 77, Safe, Efficient Use and Preservation of the Navigable Airspace

**1. LOCATION OF PROPOSED CONSTRUCTION**

This proposed 60 AGL / 565 MSL antenna would be located approximately 7,602 feet west of the RWY 08 threshold at Juneau International (JNU) Airport, AK. The JNU elevation is 25 MSL. It would be located near the apex of Pederson Hill, one (1) kilometer north northeast of the intersection at Engineer's Cutoff Road and Fritz Cove Road, Juneau.

**2. OBSTRUCTION STANDARDS EXCEEDED**

The proposed structure is identified as an obstruction under these Part 77 standards:

- a. Section 77.19(a) - A height exceeding a horizontal plane 150 feet above the established airport elevation. This antenna would exceed the VFR maneuvering areas for Category A and Category B aircraft (horizontal surface) at JNU by 390 feet;
- b. Section 77.19(d) -- the approach surface area designated to protect aircraft during the final approach phase of flight at an airport. This antenna would exceed JNU RWY 08 approach surface area by 397 feet; and
- c. Section 77.17(a)(3) -- A structure that causes less than the required obstacle clearance within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area resulting in an increase to an IFR terminal minimum altitude. This proposed antenna will exceed the RWY 26 departure surface in the 40:1 initial climb area (ICA) by 380 feet.

**3. EFFECT ON AERONAUTICAL OPERATIONS**

- a. The impact on arrival, departure, and en route procedures for aircraft operating under VFR follows: None.

The JNU Airport Master Record can be viewed/downloaded at <http://www.gcr1.com/5010web/airport.cfm?Site=JNU>. It states there are 239 single-engine, four (4) multi-engine, one (1) jet, and 28 helicopter aircraft based there with 108,885 total operations for the 12 months ending 31 December 2016 (latest information). RWY 08 is designated Right Traffic.

**FAA Findings**

There are no effects on any existing or proposed arrival, departure, or en route IFR operations or procedures.

There are no effects on any existing or proposed arrival, departure, or en route VFR operations.

There are no effects on any existing or proposed arrival, departure, or en route IFR/VFR minimum flight altitudes.

There are no physical or electromagnetic effects on the operation of air navigation and communications facilities.

There are no effects on any airspace and routes used by the military.

The Juneau Wide Area Multilateration (WAM) System sensors will not be impacted.

The Juneau Airport Wind System (JAWS) sensors will not be impacted.

The JNU VFR Traffic Pattern Airspace is penetrated by 267 feet where the terrain also penetrates the traffic pattern airspace penetrating by 207 feet.

b. The impact on arrival, departure, and en route procedures for aircraft operating under IFR follows: None. At 565 MSL, there are no impacts to the current JNU IFR departure climb out gradients as published departure procedures mitigate the impact. At 565 MSL, there are no impacts to the Delta Airlines RNAV (RNP) N RWY 8 arrival procedure and no impacts to the Alaska Airlines RNAV (RNP) M RWY 08 arrival procedure. Structure will require obstruction lighting during night IFR operations.

c. The impact on all planned public-use airports and aeronautical facilities follow: None.

d. The cumulative impact resulting from the proposed construction or alteration of a structure when combined with the impact of other existing or proposed structures follows: None.

#### 4. CIRCULATION AND COMMENTS RECEIVED

This proposal was earlier circularized for public comment at 598 MSL on 9 September 2017 and no comments objecting to the proposal were received. The 598 MSL structure was abandoned and this 565 MSL structure replaced it. No comments objecting to this proposal are anticipated.

This does not affect the public's right to petition for review determinations regarding structures, which exceed the subject obstruction standards.

#### DETERMINATION - NO HAZARD TO AIR NAVIGATION

It is determined that the proposed construction would not have a substantial adverse effect on the safe and efficient use of navigable airspace by aircraft.

#### 6. BASIS FOR DECISION

This proposed antenna at the 565 MSL height would exceed the horizontal surface by 390 feet, however, it is on rising terrain that also exceeds the horizontal surface by 330 feet. Structure would exceed the approach surface by 397 feet, however, there are no IFR impacts to any current departure procedure climb gradients and no impacts to any arrival procedures. The Juneau WAM and JAWS sensors will not be impacted. No other VFR issues were identified. The VFR Traffic Pattern airspace is impacted, however, nearby terrain also exceeds the VFR Traffic Pattern Airspace. FAA Order 7400.2, Procedures for Handling Airspace Matters, allows for a traffic pattern airspace penetration exception on a case-by-case basis where the terrain is significantly higher than the airport elevation. There were no letters received objecting to the 2017 proposal and this proposal is lower. The incorporation of obstruction marking and lighting would provide additional conspicuity for IFR and VFR pilots flying in this vicinity and provide the necessary marking and lighting for night IFR procedures.

#### 7. CONDITIONS

This structure shall be marked and lighted as outlined in chapters 4, 8(M-Duals), and 12, of Advisory Circular AC 70/7460-1L. The advisory circular is available online at [http://www.faa.gov/documentLibrary/media/Advisory\\_Circular/AC\\_70\\_7460-1L\\_Change\\_1\\_Obstruction\\_Marking\\_and\\_Lighting\\_10062016.pdf](http://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_70_7460-1L_Change_1_Obstruction_Marking_and_Lighting_10062016.pdf)

Within five days after the structure reaches its greatest height, proponent is required to file online the Supplemental Notice, FAA form 7460-2, with the actual construction details, at the OE/AAA website (<https://oeaaa.faa.gov/oeaaa>). This Supplemental Notice will be the source document detailing the site location, site

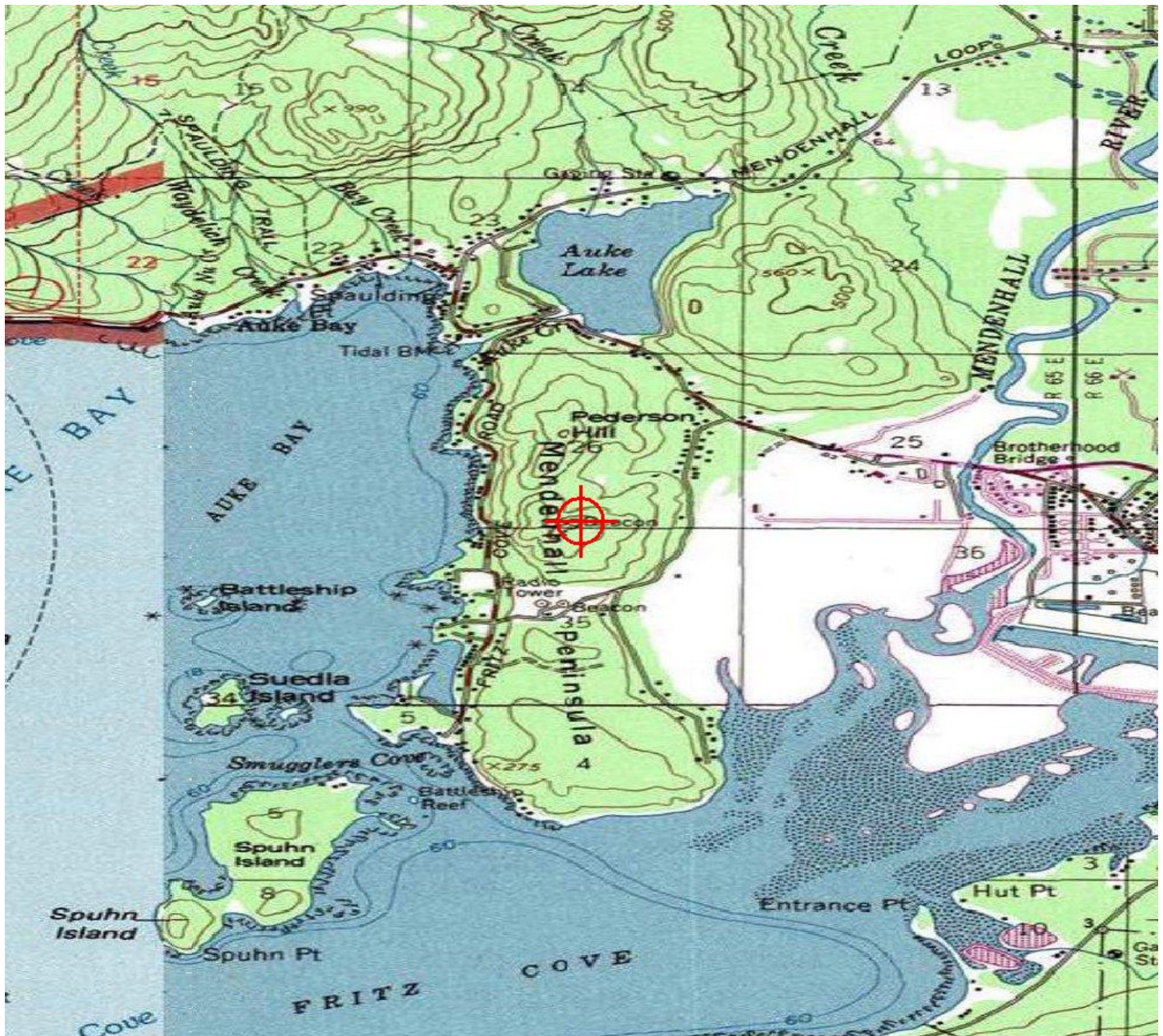
elevation, structure height, and date structure was built for the FAA to map the structure on aeronautical charts and update the national obstruction database.

-X-

# Frequency Data for ASN 2019-AAL-133-OE

<b>LOW FREQUENCY</b>	<b>HIGH FREQUENCY</b>	<b>FREQUENCY UNIT</b>	<b>ERP</b>	<b>ERP UNIT</b>
154	157	MHz	150	W
10855	11055	GHz	65	dBm









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**From:** Frank Rue <frankrue44@gmail.com>  
**Sent:** Thursday, July 11, 2019 11:52 AM  
**To:** Amy Liu <Amy.Liu@juneau.org>

**Subject:** Re: CDD Follow-Up on WCF20190007

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Thanks for the clarification.

On Thu, Jul 11, 2019 at 3:06 PM Amy Liu <[Amy.Liu@juneau.org](mailto:Amy.Liu@juneau.org)> wrote:

Frank,

I should clarify this point: the FAA determination was for a 60 feet obstruction, which would include a tower and potential antennas, the latter of which are not specified at this time. The tower being proposed is 40 feet, but the height of radio equipment is undetermined. More to follow.

Amy Liu

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**From:** Amy Liu  
**Sent:** Thursday, July 11, 2019 10:33 AM  
**To:** 'Frank Rue' <[frankrue44@gmail.com](mailto:frankrue44@gmail.com)>  
**Cc:** Brooke Daly <[brookeydaly@yahoo.com](mailto:brookeydaly@yahoo.com)>; Fritz Moser <[takufritz@msn.com](mailto:takufritz@msn.com)>; Heather Brandon <[or\\_seastar@yahoo.com](mailto:or_seastar@yahoo.com)>; Jackie Honeywell-Walden <[jackiehoneywald@hotmail.com](mailto:jackiehoneywald@hotmail.com)>; James King <[jameskingak@gmail.com](mailto:jameskingak@gmail.com)>; Jim and Mary Lou King <[kingfarm@ptialaska.net](mailto:kingfarm@ptialaska.net)>; Jim Isturis <[jim.isturis jr@gmail.com](mailto:jim.isturis jr@gmail.com)>; Jon Ahlgren <[ahlgren@ptialaska.net](mailto:ahlgren@ptialaska.net)>; Justin Parish <[justin.parish@gmail.com](mailto:justin.parish@gmail.com)>; Lois Abel <[loisabel@gei.net](mailto:loisabel@gei.net)>; Nancy Mundy <[nanmundy@gei.net](mailto:nanmundy@gei.net)>; Patty Moser <[patty.moser1@gmail.com](mailto:patty.moser1@gmail.com)>; Paul Paramore <[ppparamore@gmail.com](mailto:ppparamore@gmail.com)>; Phil Mundy <[proymundy@gmail.com](mailto:proymundy@gmail.com)>; Rachel Trapp <[racheltrapp1985@gmail.com](mailto:racheltrapp1985@gmail.com)>; Randy Host <[host\\_randy@yahoo.com](mailto:host_randy@yahoo.com)>; Sally Rue <[sarjesrue@gmail.com](mailto:sarjesrue@gmail.com)>; Sherrie Chrysler <[dlanegan@gei.net](mailto:dlanegan@gei.net)>; Steve Sorenson <[ssoren@gei.net](mailto:ssoren@gei.net)>; Tristan <[tristan\\_r@hotmail.com](mailto:tristan_r@hotmail.com)>  
**Subject:** RE: CDD Follow-Up on WCF20190007

Frank,

Sorry for my late written reply. I had left a voicemail last week but just remember now to follow-up again.

The FAA determination is based on several factors, which are outlined on page 4 in the Determination of No Hazard I sent earlier and have attached again. While the applicant has made clear that the current tower design reaches only 40 feet, he requested the FAA to make a determination for a 60 feet tower in anticipation of potential future height increase. From what I understand, that potential future height increase is very tentative.

An FAA staff person I spoke with said that within five days of the tower being confirmed at its actual height, in this case 40 feet, the applicant may request the FAA to make a new lighting determination. The FAA staff person said that it is possible that a lower tower would warrant a lesser lighting requirement, but that this decision would ultimately be made during a more official and thorough evaluation of the construction again. I believe the applicant plans to request a new lighting determination.

**Amy Liu | Planner**

[Community Development Department](#) | City & Borough of Juneau, AK

Location: [230 S. Franklin Street](#), 4<sup>th</sup> Floor Marine View Building

Office: 907.586.0764

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**From:** Frank Rue <[frankrue44@gmail.com](mailto:frankrue44@gmail.com)>  
**Sent:** Thursday, June 27, 2019 10:03 AM  
**To:** Amy Liu <[Amy.Liu@juneau.org](mailto:Amy.Liu@juneau.org)>  
**Cc:** Brooke Daly <[brookeydaly@yahoo.com](mailto:brookeydaly@yahoo.com)>; Fritz Moser <[takufritz@msn.com](mailto:takufritz@msn.com)>; Heather Brandon <[or\\_seastar@yahoo.com](mailto:or_seastar@yahoo.com)>; Jackie Honeywell Walden <[jackiehoneywald@hotmail.com](mailto:jackiehoneywald@hotmail.com)>; James King <[jameskingak@gmail.com](mailto:jameskingak@gmail.com)>; Jim and Mary Lou King <[kingfarm@ptialaska.net](mailto:kingfarm@ptialaska.net)>; Jim Isturis <[jim.isturis.jr@gmail.com](mailto:jim.isturis.jr@gmail.com)>; Jon Ahlgren <[ahlgren@ptialaska.net](mailto:ahlgren@ptialaska.net)>; Justin Parish <[justin.parish@gmail.com](mailto:justin.parish@gmail.com)>; Lois Abel <[loisabel@gci.net](mailto:loisabel@gci.net)>; Nancy Mundy <[nanmundy@gci.net](mailto:nanmundy@gci.net)>; Patty Moser <[patty.moser1@gmail.com](mailto:patty.moser1@gmail.com)>; Paul Paramore <[ppparamore@gmail.com](mailto:ppparamore@gmail.com)>; Phil Mundy <[proymundy@gmail.com](mailto:proymundy@gmail.com)>; Rachel Trapp <[racheltrapp1985@gmail.com](mailto:racheltrapp1985@gmail.com)>; Randy Host <[host\\_randy@yahoo.com](mailto:host_randy@yahoo.com)>; Sally Rue <[sarjesrue@gmail.com](mailto:sarjesrue@gmail.com)>; Sherrie Chrysler <[dlanegan@gci.net](mailto:dlanegan@gci.net)>; Steve Sorenson <[ssoren@gci.net](mailto:ssoren@gci.net)>; Tristan <[tristan\\_r@hotmail.com](mailto:tristan_r@hotmail.com)>  
**Subject:** Re: CDD Follow-Up on WCF20190007

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Hi Amy, The unlit tower as proposed makes total sense and is not an issue for me. However, the FAA requirement that the tower be lit is a game changer and the project is now a new project that has a much greater chance of impacting the neighbors and should be re-advertised and the public given a chance to see this new proposal.

Will FAA now require ALL of the similar towers on that site be lit with medium intensity lights??? It could look like a Christmas display. It seems like the FAA is not being reasonable here, especially given the fact that there is a nearby FAA tower that is higher and already lit. Perhaps a call to FAA will resolve the issue. Do they really need this tower lit given its low height? Will all the surrounding 40 foot towers need to be lit when their permits are amended or renewed??? Does the adjacent higher FAA tower provide adequate lighting for these lower towers? Are the trees adjacent to this tower high enough that lighting is irrelevant?

Thanks for sending me the information and I hope you can get FAA to reconsider their requirement.

Sincerely, Frank Rue

On Thu, Jun 27, 2019 at 9:03 AM Amy Liu <[Amy.Liu@juneau.org](mailto:Amy.Liu@juneau.org)> wrote:

Frank,

Thanks for following up on our public notice for WCF2019-0007. Please see the attached application and let me know if you have any questions.

Regards,

**Amy Liu | Planner**

Community Development Department | City & Borough of Juneau, AK  
Location: 230 S. Franklin Street, 4<sup>th</sup> Floor Marine View Building

Office: 907.586.0764