

Agenda

Planning Commission - Regular Meeting City and Borough of Juneau

April 27, 2021
Virtual Meeting Only
7:00 PM

This virtual meeting will be by video and telephonic participation only. To join the webinar, paste this URL into your browser: <https://juneau.zoom.us/j/91269731818>. To participate telephonically, call: 1-346-248-7799 or 1-669-900-6833 or 1-253-215-8782 or 1-312-626-6799 or 1-929-436-2866 or 1-301-715-8592 and enter Webinar ID: 912 6973 1818.

I. ROLL CALL

II. REQUEST FOR AGENDA CHANGES AND APPROVAL OF AGENDA

III. APPROVAL OF MINUTES

A. March 23, 2021 Draft Minutes, Regular Planning Commission - APPROVED

IV. BRIEF REVIEW OF THE RULES FOR PUBLIC PARTICIPATION

V. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS

VI. ITEMS FOR RECONSIDERATION

VII. CONSENT AGENDA

A. USE2021 0003: Conditional Use Permit for commercial use in an Industrial Zone - APPROVED

VIII. UNFINISHED BUSINESS

IX. REGULAR AGENDA

A. WCF2021 0001: A new 100-foot Wireless Communications Facility Monopole - APPROVED WITH AMENDMENTS

X. BOARD OF ADJUSTMENT

XI. OTHER BUSINESS

A. Legal Opinion: Subdivisions, variances, and nonconforming situations

XII. STAFF REPORTS

XIII. COMMITTEE REPORTS

XIV. LIAISON REPORT

XV. CONTINUATION OF PUBLIC PARTICIPATION ON NON-AGENDA ITEMS

XVI. PLANNING COMMISSION COMMENTS AND QUESTIONS

XVII. EXECUTIVE SESSION

XVIII. ADJOURNMENT

**PLANNING COMMISSION AGENDA
THE CITY AND BOROUGH OF JUNEAU, ALASKA**

March 23, 2021 Draft Minutes, Regular Planning Commission - APPROVED

ATTACHMENTS:

	Description	Upload Date	Type
▣	March 23, 2021 Draft Minutes, Regular Planning Commission	4/7/2021	Minutes

Minutes
Planning Commission
Regular Meeting
 CITY AND BOROUGH OF JUNEAU
Michael LeVine, Chairman
 March 23, 2021

I. ROLL CALL

Michael LeVine, Chairman, called the Regular Meeting of the City and Borough of Juneau (CBJ) Planning Commission (PC), held virtually via Zoom Webinar and telephonically, to order at 7:03 p.m.

Commissioners present: All Commissioners present via video conferencing – Michael LeVine, Chairman; Nathaniel Dye, Vice Chairman; Paul Voelckers, Clerk; Ken Alper; Mandy Cole; Erik Pedersen

Commissioners absent: Travis Arndt, Deputy Clerk; Josh Winchell; Dan Hickok

Staff present: Jill Maclean, CDD Director; Irene Gallion, CDD Senior Planner; Sherri Layne, LAW; Dan Bleidorn, Lands Manager

Assembly members: Loren Jones

II. REQUEST FOR AGENDA CHANGES AND APPROVAL OF AGENDA - None

III. APPROVAL OF MINUTES

A. Draft Minutes February 23, 2021 Planning Commission Regular Meeting

MOTION: *by Mr. Voelckers to approve the Planning Commission Regular Meeting February 23, 2021 minutes with minor correction for clarification.*

IV. BRIEF REVIEW OF THE RULES FOR PUBLIC PARTICIPATION - Chairman LeVine briefly explained the rules and procedures for conducting meetings and public participation via Zoom format.

V. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS – None

VI. ITEMS FOR RECONSIDERATION - None

VII. CONSENT AGENDA

Prior to presentation of **CSP2021 0001**, Mr. Voelckers disclosed a conflict as his firm is on the design team for the project and asked to recuse himself. Mr. Alper disclosed he lives across the street from the Capital School Park. He has no monetary interest and felt he can remain impartial. Mr. Alper was allowed to remain.

CSP2021 0001: Retaining structure replacement, site grading, and new equipment, with possible electrical and landscaping work at Capital School Park
Applicant: City and Borough of Juneau
Location: Capital School Park

Staff Recommendation

Staff recommends the Planning Commission adopt the Director's analysis and findings and forward a recommendation of APPROVAL to the CBJ Assembly for the "Capital School Park: Retaining structure replacement, site grading, and new equipment."

MOTION: *by Mr. Dye to accept staff's findings, analysis and recommendations and approve CSP2021 0001.*

The motion passed with no objection.

VIII. UNFINISHED BUSINESS - None

IX. REGULAR AGENDA

Prior to presentation of **SMF2021 0001**, Mr. Pedersen disclosed a potential conflict as he used to work on the project. He has no monetary interest in the project and he was off the project before it reached its final version. Mr. Pedersen felt he could remain impartial and was allowed to remain.

SMF2021 0001: Remove a plat note that limits the driveway development onto Karl Reishus Blvd.
Applicant: City and Borough of Juneau; Gary and Kathleen Miller
Location: 3028, 3031, 3032 Karl Reishus Blvd.

Staff Recommendation

Staff recommends the Planning Commission adopt the Director's analysis and findings and

APPROVE the requested amendment to the final plat. The amendment approves the removal of the plat note that limits driveway development onto Karl Reishus Boulevard at 3028, and 3032 Karl Reishus Boulevard in a D10SF Zone.

The approval is subject to the following conditions:

1. Limit plat note modification to allow driveways to lots privately owned, Lots 8 and 10.

Additional findings:

1. *Final construction drawings for Pederson Hill and construction work created driveways serving lots 8 and 10 from Karl Reishus Boulevard in violation of the plat note.*
2. *This error was inadvertent and is relatively cumbersome to remedy after the fact.*
3. *The threat to public health, safety and welfare from retaining the two driveways is minimal.*
4. *Retaining the driveways as constructed has multiple benefits, including efficient development and cost savings.*

STAFF PRESENTATION – By Planner Irene Gallion

QUESTIONS FOR STAFF

Mr. Voelckers asked Ms. Gallion to elaborate on the technicalities concerning the topography in the area. Ms. Gallion explained there were issues regarding the steepness and terrain in portions of lots 8, 10 and 11.

Mr. Dye asked about equal protection, asking if lot 11 and 12 can be merged without a plat change, but other lots do need a plat change, how does that affect the other property owners.

Ms. Layne explained the equal protection issue is a concern that has come up. She explained that if the Commission were to approve the plat change, then they need to be very specific about what makes these lots special and why the change is necessary only to these specific lots. As long as there are very specific details, then it can be defensible in the future. Ms. Maclean added compared to other subdivisions approved by the PC, there are several subdivisions where the plat notes do not address driveway accesses. Using that comparison, it would appear this subdivision is being held to a higher standard than others are.

Ms. Cole asked why the recommendation is not to remove the plat note altogether. Ms. Maclean said it was because she had only just realized it. Ms. Cole asked if there are any reasons to keep the plat note modified as opposed to removing it altogether. Ms. Maclean said that comes back to Ms. Layne's comments regarding equality of why certain lots are affected and others are not.

Mr. Dye asked if it is the steepness of the lots that makes them unique, and if they are steeper

than the other lots. Ms. Gallion said the steepness is not the problem but the steepness does make the driveways unattractive. The real issue is there is not any other roadway already developed around those lots to provide the access.

Mr. Dye asked if Phase II was built and the lots were undeveloped and Yahn Street was extended at that time, would this be an issue. Ms. Gallion explained if Yahn Street had been constructed and extended to the east to a point where the lots could be combined with a more reasonable approach, then they would be in a similar situation to lot 11.

Mr. Dye asked if staff thinks there are sufficient defects in the original findings from **SNP2016 0002** that installed the plat note. Ms. Maclean said it is hard to say because she is not sure what the thought process was at the time. She continued to explain now CDD is working more closely with CBJ Engineering so this does not happen again in future projects.

Mr. LeVine asked Ms. Maclean if she felt there is sufficient support in the staff report to justify striking the plat note in its entirety now. Ms. Maclean felt the information as it stands supports removing the plat note.

Mr. Dye asked how this subdivision compares to other subdivisions with regard to density. Ms. Maclean said this would be comparable to Chilkat Vistas and Ridgeview Subdivision.

APPLICANT PRESENTATION –

Gary Miller presented showing photographs of the property and explaining the issues with access to the property.

QUESTIONS FOR APPLICANT

Mr. Dye asked what Mr. Miller meant that there are two curb cuts to his property. Mr. Bleidorn explained at the end of Karl Reishus Boulevard there is a driveway cut and further up the boulevard, where the road and curb ends, there is another access to his property. However, the road does not go to the very end of his property.

Mr. Voelckers asked for clarification of if the utilities have been constructed within the right of way. Mr. Miller explained the proposed access would put the driveway over the utilities. If there were ever a problem it would require tearing out the driveway to service the utilities.

Mr. Dye asked to see the plat drawing so he could see the two cutouts. Ms. Gallion pulled up that slide. Based on the plat drawing, Mr. Dye asked Mr. Miller where he would prefer his driveway. Mr. Miller would prefer it be moved further up Karl Reishus Boulevard beyond where the pavement currently ends, as it is flatter there and would not require a steep driveway or crossing the utilities.

PUBLIC COMMENT

Rich Peterson, owner, Low Pete Construction, testified on behalf of his client, the neighboring property owner. His client purchased their property with the understanding that they were going to be able to use an existing access only to learn later that it is not allowed. If it is not allowed, why was it put in? Without that access, the property is not accessible.

Mr. Dye asked about if there is anything unique or different about the lots in question as compared to others in the subdivision. Mr. Peterson said the difference were mostly terrain issues.

Mr. Dye asked if access had been put into lots 8 and 10 and Yahn St. was built, would they be unusually steep for Juneau. Mr. Miller said yes.

Additional QUESTIONS FOR applicant

Mr. Dye asked Mr. Bleidorn if he knew any background about how the plat decisions had been made. Mr. Bleidorn has done extensive research and did not find an answer.

Mr. Dye asked if phases 2 and 3 would continue with the same intent for Karl Reishus to be a busy road. Mr. Bleidorn answered future phases would necessitate secondary access routes. Mr. Dye asked if the additional access points might be for emergency vehicles only. Mr. Bleidorn does not believe that is the case.

Ms. Cole asked Mr. Bleidorn's thought regarding modifying versus removing the plat note. Mr. Bleidorn felt it desirable to keep the plat note in there as it leaves the intent in place.

COMMISSIONER DISCUSSION

Mr. Dye said he wondered if there is a way to increase findings in order to justify removal of the plat note. Mr. Voelckers also said he believes there is a need for more findings.

MOTION: *by Mr. Voelckers to accept staff's findings, analysis and recommendations and approve **SMF2021 0001** with additional findings and approve the requested amendment to the final plat.*

Additional findings:

5. *Final construction drawings for Pederson Hill and construction work created driveways serving lots 8 and 10 from Karl Reishus Boulevard in violation of the plat note.*
6. *This error was inadvertent and is relatively cumbersome to remedy after the fact.*
7. *The threat to public health, safety and welfare from retaining the two driveways is minimal.*
8. *Retaining the driveways as constructed has multiple benefits, including efficient development and cost savings.*

Ms. Cole asked for some clarity regarding Mr. Voelckers' motion. Her understanding is this motion will modify, not remove, the plat note. Mr. LeVine answered the motion modifies the plat notes as they apply only to lots 8 and 10.

Mr. Dye asked if we using a finding of 'construction violated' would establish a precedence such that someone else could violate a plat note and use this as a 'get out of jail free' card. Ms. Layne said that is a possibility.

Mr. Dye spoke with concerns to Mr. Voelckers' first two proposed findings saying he did not think they were sufficiently defensible. He added without the first two findings, the last two are not necessarily applicable.

Ms. Cole said she could support the motion. She sees the possible options being the modifications proposed, removing the plat note altogether, or doing nothing. Doing nothing was her least favorite option because the property owners bought in good faith and they would be 'stuck.'

Mr. Dye asked for Ms. Cole to explain the difference between 'developer' and 'CBJ as developer'. Ms. Cole explained the owner bought the property in good faith that the construction plans were accurate and he would be able to build according to that.

Mr. Pedersen said he is generally supportive of the motion saying he could support eliminating the two lots in question and limiting driveway access to Karl Reishus in the future lots.

Mr. LeVine asked Mr. Voelckers if he thought the geographic features in lots 8 and 10 were unique. Mr. Voelckers did think so saying the testimony supported that.

Mr. Dye did not think the topography was that extreme compared to other area constructed in southeast.

Mr. LeVine said he shares Mr. Dye's concerns about precedence and wants to be clear that this is not a 'get out of jail free' for developers. He believes the topography is sufficiently unique to justify supporting the motion even without the first two findings and will, therefore, support the motion.

Roll Call Vote

YES: Mr. Voelckers, Mr. Alper, Mr. Pedersen, Ms. Cole, Mr. LeVine

NO: Mr. Dye

The motion passed on Roll Call Vote.

X. BOARD OF ADJUSTMENT – None

XI. OTHER BUSINESS – None

XII. STAFF REPORTS

Ms. Maclean reported:

- Work is ongoing on Downtown Parking and getting a packet out to Title 49
- The Floodplain Ordinance should be before Assembly on April 5th for the first reading
- April Meetings are April 13 and 27 with Committee of the Whole proposed both nights.
 - April 13 COW will be at 6 pm to discuss rules of order and a presentation by Mr. Hudson
 - April 27 COW to discuss accessory apartments ordinance
- Commissioners need to respond and let staff know if they will be able to attend the COW meetings
- The Court sided with CBJ over Harris Homes LLC

XIII. COMMITTEE REPORTS

- Mr. Voelckers reported the Assembly Public Works & Facilities Committee met. CIP and long-range lists were discussed.
- Mr. Pedersen reported the Douglas/West Juneau Steering committee met and discussed neighborhood connectivity and public transit.

XIV. LIAISON REPORTS

Deputy Mayor Jones reported:

- The Assembly met and moved the Calhoun project based on PC recommendations.
- The Assembly has dismissed the Sealaska Heritage appeal.
- The Willy and Weldon vs Planning Commission and Central Council public hearing was March 8th. The Assembly expects a report in coming weeks.
- The next Assembly meeting will be April 4. Budgets will be introduced at that meeting and referred to the Finance Committee.

Mr. Voelckers asked Mr. Jones for his sense of the coming Federal COVID support. What is the timing of the funding and how does it affect the budget process? Mr. Jones explained it is not yet clear when the funds will be provided or how they can be used. It is possible that it can be used to cover lost revenues. It may come over two years or come all at once with two years allowed to expend it.

XV. CONTINUATION OF PUBLIC PARTICIPATION ON NON-AGENDA ITEMS – None

XVI. PLANNING COMMISSION COMMENTS AND QUESTIONS – None

XVII. EXECUTIVE SESSION – None

XVIII. ADJOURNMENT – 8:28 p.m.

**PLANNING COMMISSION AGENDA
THE CITY AND BOROUGH OF JUNEAU, ALASKA**

USE2021 0003: Conditional Use Permit for commercial use in an Industrial Zone - APPROVED

AGENDA ITEM:

Case No.: USE2021 0003
Applicant: Hugo & Tenaya Miramontes
Location: 1880 Crest Street
Proposal: Conditional Use Permit for commercial use in an Industrial Zone

RECOMMENDATION:

Staff recommends the Planning Commission adopt the Director's analysis and findings and APPROVE the requested Conditional Use Permit. The permit would allow the development of miscellaneous retail in the industrial zoning district.

ATTACHMENTS:

Description	Upload Date	Type
☐ Staff Report for USE2021 0003	4/16/2021	Staff Report
☐ Presentation for USE2021 0003	4/26/2021	Presentation
☐ Notice of Decision for USE2021 0003	5/3/2021	Notice of Decision



(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD

155 S. Seward Street • Juneau, AK 99801

DATE: April 16, 2021
TO: Michael LeVine, Chair, Planning Commission
BY: Joseph Meyers, Planner 
THROUGH: Jill Maclean, Director, AICP

PROPOSAL: Applicant requests a Conditional Use Permit (CUP) for over 5,000 square feet of commercial use in the industrial zoning district.

STAFF RECOMMENDATION: Approval without conditions

KEY CONSIDERATIONS FOR REVIEW:

- BLD 2015-0549 and Certificate of Occupancy was issued for a salon in unit 112
- Applicant seeks to move the salon into 113 and expand its size
- Current salon space would become a similar commercial use
- General Commercial zoning exists across Crest St. and along Old Dairy Road
- This type of commercial use is allowed in Industrial (I) zoning with a CUP

GENERAL INFORMATION

Property Owner	Builders Plaza Two Condominium Association
Applicant	V. Hugo Miramontes & Tenaya N. Miramontes
Property Address	1880 Crest St., Unites 112 & 113
Legal Description	Builders Plaza II Block J Lot 3B Condo Land, Units 112 & 113
Parcel Number	5B1501010002; 5B1501010003
Zoning	I (Industrial)
Land Use Designation	Light Industrial
Lot Size	33,476 square feet
Water/Sewer	CBJ
Access	Crest Street
Existing Land Use	Industrial
Associated Applications	WET 2001-0001, BLD 2013-0015, BLD 2015-0549

ALTERNATIVE ACTIONS:

1. **Amend:** require additional conditions, or delete or modify the recommended conditions.
2. **Deny:** deny the permit and adopt new findings for items 1-6 below that support the denial.
3. **Continue:** to a future meeting date if determined that additional information or analysis is needed to make a decision, or if additional testimony is warranted.

ASSEMBLY ACTION REQUIRED:

Assembly action is not required for this permit.

STANDARD OF REVIEW:

- Quasi-judicial decision
- Requires five (5) affirmative votes for approval
- Code Provisions:
 - o 49.15.330
 - o 49.65.800
 - o 04.050.020
 - o 49.80.120
 - o 49.25.300(2.200)

The Commission shall hear and decide the case per 49.15.330(a) Conditional Use Permit. A conditional use is a use that may or may not be appropriate in a particular zoning district according to the character, intensity, or size of that or surrounding uses. The conditional use permit procedure is intended to afford the commission the flexibility necessary to make determinations appropriate to individual sites. The commission may attach to the permit those conditions listed in subsection (g) of this section as well as any further conditions necessary to mitigate external adverse impacts. If the commission determines that these impacts cannot be satisfactorily overcome, the permit shall be denied.

SITE FEATURES AND ZONING



SURROUNDING ZONING AND LAND USES	
North (I)	Industrial
South (I)	Industrial
East (I)	Industrial
West (ROW)	Crest Street

SITE FEATURES	
Anadromous	None
Flood Zone	None
Hazard	None
Hillside	None
Wetlands	None
Parking District	None
Historic District	None
Overlay Districts	None

BACKGROUND INFORMATION

Project Description – The applicants are seeking to do two things:

1. Move the existing salon from the front of Suite 112 to the entirety of Suite 113, changing the use and expanding the square footage of the miscellaneous commercial use.
2. Convert former salon space to a similar miscellaneous commercial use.

Background – The lot is zoned I (industrial) and is 33,476 square feet in area. The structure on the lot was built in 2013 through building permit BLD 2013-0015, and a salon was permitted on site in 2015 in Suite 112 through building permit BLD 2015-0015. A CUP for commercial uses of this type was required by code at the time, but staff was unable to locate an approved CUP.

The applicant proposes moving the salon into unit 113 thereby expanding the footprint of the commercial use on this lot. Over 5,000 square feet of commercial use in the industrial zoning district is permitted with a CUP by 49.25.300 (2.200).

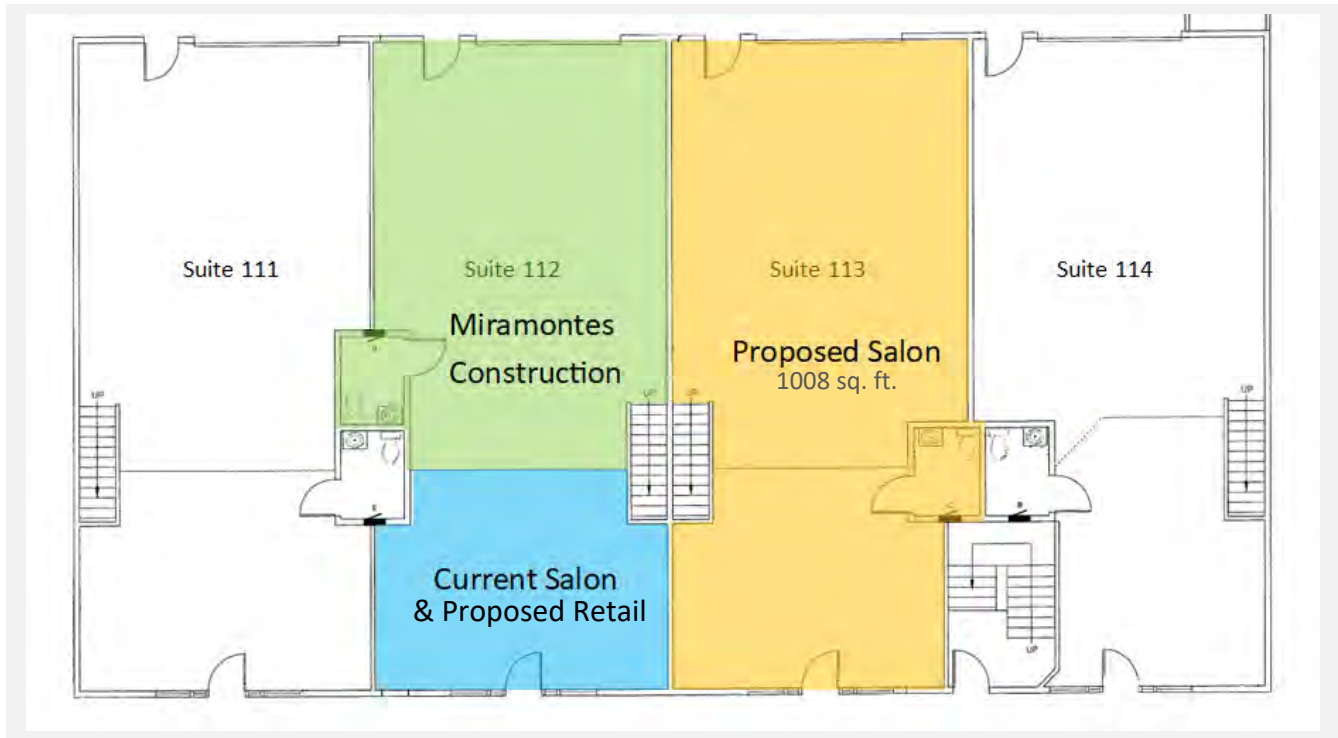
The table below summarizes relevant history for the lot and proposed development.

Date	Item	Summary
2001	WET 2001-0001	Permit to fill 240 sq. ft. of class C wetlands
2013	BLD 2013-0015	Permitted the existing structure on the lot
2015	BLD 2015-0549	Allows construction of salon on site
2015	Certificate of Occupancy	Allows salon in industrial zoning district

ZONING REQUIREMENTS

Standard		Requirement	Proposed	Existing	Code Reference
Lot	Size	2,000 sq. ft.	33,476 sq. ft.	33,476 sq. ft.	49.25.400
	Width	20 feet	169 feet	169 feet	49.25.400
	Depth	60 feet	153 feet	153 feet	49.25.400
Setbacks	Front	10 feet	50 feet	50 feet	49.25.400
	Rear	10 feet	46 feet	46 feet	49.25.400
	Side	0 feet	35 feet	35 feet	49.25.400
	Side	0 feet	20 feet	20 feet	49.25.400
	Street Side	10 feet	N/A	N/A	49.25.400
Lot Coverage Maximum		None	16%	16%	49.25.400
Vegetative Cover Minimum		5%	10%	10%	49.50.300
Height	Permissible	No maximum	32 feet	32 feet	49.25.400
	Accessory	No maximum	N/A	N/A	49.25.400
Maximum Dwelling Units (0/Acre)		0 units	1*	1*	49.25.300(A)
*49.25.300(A): A single-family residence is allowed as an owner or caretaker residence that is accessory to an existing permitted use in the industrial zone. The Industrial zone allows for one caretaker unit per lot. If unit 1115 is sold independently and is no longer associated with one of the industrial uses on site it cannot be considered a caretaker unit.					
Use		Storage and display of goods with greater or equal to 5,000 square feet and/or 20 percent of the gross floor area of outside merchandising of goods.			49.25.300 (2.200)

SITE PLAN



ANALYSIS

Project Site – The project site, Builders Plaza II Block J Lot 3B, is 33,476 square feet and zoned for Industrial use. The site is accessed from an existing panhandle easement connecting to Crest Street and will provide for both ingress and egress traffic. The lot is bordered by Builders Plaza I and Valley Lumber to the north, NC Machinery Company to the south and east, and Crest Street to the west.

Condition: None recommended.

Project Design – The project consists of converting Suite 113 into a salon space, and conversion of the existing salon into a small retail space.

Condition: None recommended.

Traffic – According to CBJ 49.40.300(a)(2) a traffic impact analysis IS NOT required.

Condition: None recommended.

Use	Total Sq. Ft.	Trips Generated	Total Trips
Hair Salon	1,730 sq. ft.	5.08 per 1000 sq. ft.	8.8
Misc. Retail	327 sq. ft.	2.49 per 1000 sq. ft.	0.8
Residential	2,700 sq. ft.	9.52 per dwelling unit	9.5
Warehousing	4,022 sq. ft.	3.82 per 1,000 sq. ft.	15.4

Use	Total Sq. Ft.	Trips Generated	Total Trips
Total ADTs:			34.5

Vehicle Parking & Circulation – According to CBJ 49.40, 13 off-street parking spaces are required, including one (1) ADA accessible space. Fifteen spaces exist on site with designated area for seven additional spaces as needed. Two of the existing spaces are designated ADA spaces. There is also a 12 foot by 30 foot loading area on the north side of the structure.

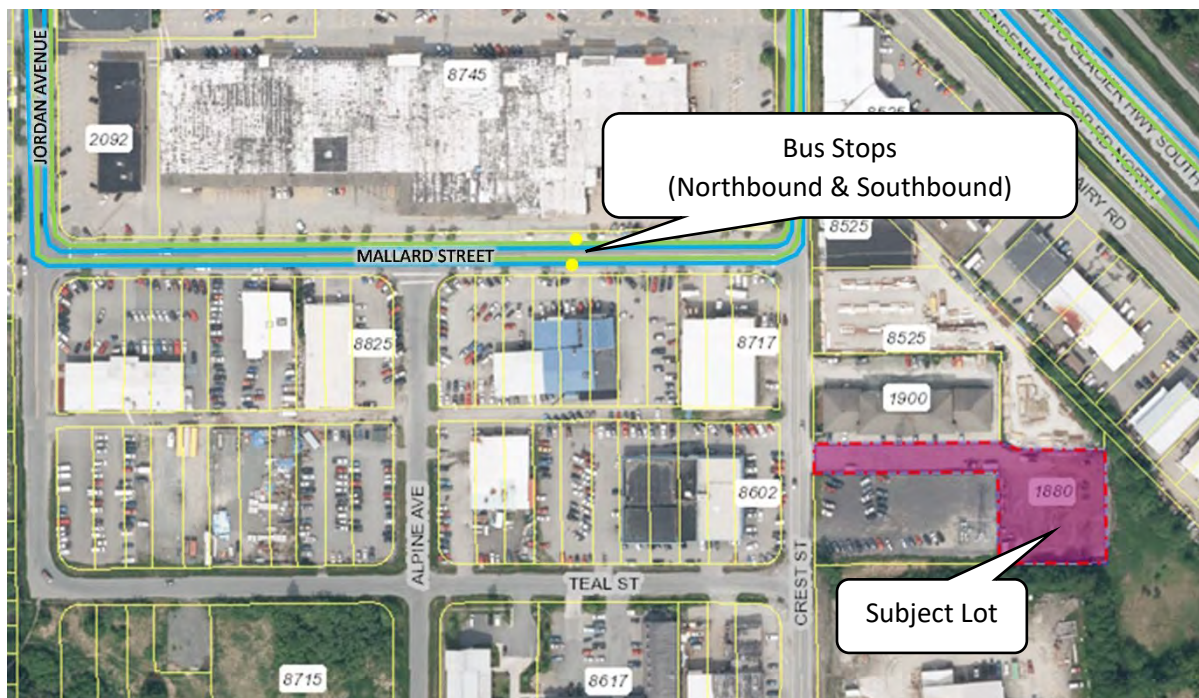
Condition: None recommended.

Use	Total Sq. Ft.	Spaces Required	Total Spaces
Retail Commercial	1,730 sq. ft.	1 per 300 sq. ft.	6
Retail Commercial	327 sq. ft.	1 per 300 sq. ft.	1
Single family Dwelling Unit	2,700 sq. ft.	2	2
Warehouses/manufacturing	4,022 sq. ft.	1 per 1,000 sq. ft.	4
Total Parking Requirement:			13
Off-Street Loading Spaces Required:			1
ADA Accessible Spaces Required:			1

Non-motorized Transportation – The panhandle easement is paved, however there are no sidewalks between the subject lot and Crest Street. Crest Street has an unpaved shoulder where pedestrians can access the site.

Condition: None recommended.

Proximity to Transit – The nearest transit stop on Mallard Street is 1,025 feet away on foot.



Condition: None recommended.

Noise – The proposed uses are not expected to generate any noise impacts beyond what would be expected in an industrial zoning district.

Condition: None recommended.

Lighting – The Land Use Code requires parking areas "to be suitably lit." This is interpreted to mean exterior lighting should be provided in parking areas and immediately adjacent to structures. All exterior lighting should be of full cut-off design. This design helps to ensure that all lighting is directed only on the lot to minimize impact to adjacent neighborhoods. The applicants have proposed lighting fixtures that meet the required full cut-off design. The lighting fixtures are the same fixtures that were approved for installation on under building permit BLD2013-0015 and meet lighting requirements.

Condition: None recommended.

Vegetative Cover & Landscaping – Vegetative cover of 5% (1,674 square feet) was provided at time of building permit approvals and has been maintained accordingly.

Condition: None recommended.

Habitat – A permit was issued by the Wetlands Review Board on February 22, 2001 for permission to fill approximately 240 square feet of wetlands (WET 2001-00001). The property has a 10-foot wetland buffer on the eastern and southern boundaries of the lot. This buffer is shown on plat 2014-32.

Condition: None recommended.

Drainage and Snow Storage – Property drainage has been maintained per building permit BLD 2013-0015 with a minimum 2% slope away from buildings and directed to approved adjacent drain paths and easements.

Condition: None recommended.

Historic District – The lot is not within the Juneau Historic District.

Condition: None recommended.

Hazard Zones – There are no mapped hazard zones on the lot.

Condition: None recommended.

Public Health, Safety, and Welfare – No information has been submitted that suggests the proposed development will materially endanger the public health, safety, or welfare.

Condition: None recommended.

Property Value or Neighborhood Harmony – No information has been submitted that suggests the proposed development will be out of character with the existing neighborhood or reduce property values of neighboring property. The lot is located in the Industrial zoning district and surrounded by industrial and commercial uses.

Condition: None recommended.

AGENCY REVIEW

CDD conducted an agency review comment period between March 16, 2021 and March 30, 2021. Agency review comments can be found in Attachment C.

Agency	Summary
CBJ Assessor	No comments received as of the writing of this report.
Alaska Department of Transportation	No comments received as of the writing of this report.
General Engineering	GE has no issues nor comments regarding this permit.
Building	No issues with this project at this time.
Capital City Fire/Rescue	No comments received as of the writing of this report.

PUBLIC COMMENTS

CDD conducted a public comment period April 13, 2021 to April 26, 2021. Public notice was mailed to property owners within 500 feet of the proposed development. A public notice sign was also posted on-site two weeks prior to the scheduled hearing. No public comments were received at the time this report was written.

CONFORMITY WITH ADOPTED PLANS

The proposed development is in general conformity with the 2013 Comprehensive Plan, and the 2015 Juneau Economic Development Plan.

PLAN	Chapter	Page No.	Item	Summary
2013 Comprehensive Plan	5	163	Policy 5.1	Proposed development promotes a diverse economy.
	5	47	Policy 5.11	Proposed development will provide year round employment and provide tax revenue to support public services.
	11	148	Land Use Designation	Complies with the Light Industrial land use designation.
	11	180	Subarea 4	Provide for increased community commercial development close to existing commercial areas in the lower valley.
	5	76	Build on Our Strengths	Job and wealth creation are at the heart of this initiative. In general, all actions serve to add new and sustainable jobs to Juneau's economy.

FINDINGS

Conditional Use Permit Criteria - Per CBJ 49.15.330 (e) & (f), Review of Director's & Commission's Determinations, the Director makes the following findings on the proposed development:

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

Analysis: No further analysis needed.

Finding: Yes. The application contains the information necessary to conduct full review of the proposed operations. The application submittal by the applicant, including the appropriate fees, substantially conforms to the requirements of CBJ Chapter 49.15.

2. *Is the proposed use appropriate according to the Table of Permissible Uses?*

Analysis: The application is for miscellaneous retail. The use is listed at CBJ 49.25.300, Section 2.120 for the Industrial zoning district.

Finding: Yes. The requested permit is appropriate according to the Table of Permissible Uses.

3. *Will the proposed development comply with the other requirements of this chapter?*

Analysis: The proposed site design complies with Title 49.

Finding: Yes. With the recommended conditions, the proposed development will comply with Title 49, including parking, lighting, and vegetative cover.

4. *Will the proposed development materially endanger the public health, safety, or welfare?*

Analysis: No additional analysis needed.

Finding: No. There is no evidence to suggest that, with appropriate conditions, the requested miscellaneous retail in an Industrial zoning district will materially endanger the public health or safety.

5. *Will the proposed development substantially decrease the value of or be out of harmony with property in the neighboring area?*

Analysis: The CBJ Assessor did not make comment on the proposed development.

Finding: No. There is no evidence to suggest that, with appropriate conditions, the requested miscellaneous retail in an Industrial zoning district will substantially decrease the value or be out of harmony with the property in the neighboring area.

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

Analysis: Policies in the Comprehensive Plan support diverse economic development and increased community commercial development close to existing commercial areas in the lower valley. Additionally, the proposed use complies with the existing land use designation.

Finding: Yes. The proposed miscellaneous retail use with the recommended conditions, will be in general

conformity with the 2013 Comprehensive Plan, and the 2015 Juneau Economic Development Plan.

RECOMMENDATION

Staff recommends the Planning Commission adopt the Director's analysis and findings and APPROVE the requested Conditional Use Permit. The permit would allow the development of miscellaneous retail in the industrial zoning district.

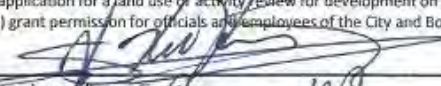
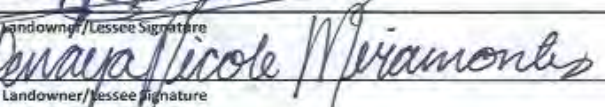
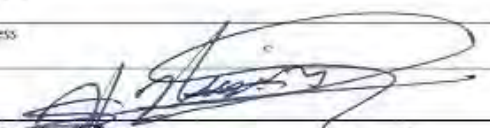
STAFF REPORT ATTACHMENTS

Item	Description
Attachment A	Application Packet
Attachment B	Abutters Notice and Public Notice Sign Photo
Attachment C	Agency Comments



DEVELOPMENT PERMIT APPLICATION

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

To be completed by Applicant	PROPERTY LOCATION		
	Physical Address 1880 Crest St. Units 112 & 113		
	Legal Description(s) (Subdivision, Survey, Block, Tract, Lot) PLAZA II BL J LT 3B CONDO LAND, UNIT 112 & UNIT 113		
	Parcel Number(s) CONDO LAND PCN-5B1501010000 / UNIT 112 PCN-5B1501010003 / UNIT 113 PCN-5B1501010002		
	☐ This property located in the downtown historic district ☐ This property located in a mapped hazard area, if so, which _____		
	LANDOWNER/ LESSEE		
	Property Owner Hugo & Tenaya Miramontes	Contact Person Hugo Miramontes	Phone Number(s) (907) 321-4846
	Mailing Address 1880 Crest St. Suite 112, Juneau, AK, 99801		
	E-mail Address vhmiramontes@hotmail.com		
	LANDOWNER/ LESSEE CONSENT 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  Landowner/Lessee Signature		02-28-2021 Date	
X  Landowner/Lessee Signature		02-28-2021 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.			
APPLICANT If the same as OWNER, write "SAME"			
Applicant SAME		Contact Person	
Mailing Address		Phone Number(s)	
E-mail Address			
X  Applicant Signature		02-28-2021 Date of Application	

DEPARTMENT USE ONLY BELOW THIS LINE

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

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

For assistance filling out this form, contact the Permit Center at 586-0770.

Intake Initials jpm
Case Number
Date Received 03/01/2021



ALLOWABLE/CONDITIONAL USE PERMIT APPLICATION

See reverse side for more information regarding the permitting process and the materials required for a complete application.

NOTE: Must be accompanied by a DEVELOPMENT PERMIT APPLICATION form.

To be completed by Applicant

PROJECT SUMMARY

Conditional use permit to allow retail use in a Industrial zoning district.

TYPE OF ALLOWABLE OR CONDITIONAL USE PERMIT REQUESTED

- ☐ Accessory Apartment – Accessory Apartment Application (AAP)
- ☒ Use Listed in 49.25.300 – Table of Permissible Uses (USE)
- Table of Permissible Uses Category: 2.100 Sales/retail less than 5000 sqft

IS THIS A MODIFICATION or EXTENSION OF AN EXISTING APPROVAL?

☐ YES – Case # _____ ☒ NO

UTILITIES PROPOSED

WATER: ☒ Public ☐ On Site SEWER: ☒ Public ☐ On Site

SITE AND BUILDING SPECIFICS

Total Area of Lot 33.476 square feet Total Area of Existing Structure(s) 6.632 square feet

Total Area of Proposed Structure(s) Existing square feet

EXTERNAL LIGHTING

Existing to remain ☐ No ☒ Yes – Provide fixture information, cutoff sheets, and location of lighting fixtures

Proposed ☐ No ☒ Yes – Provide fixture information, cutoff sheets, and location of lighting fixtures

ALL REQUIRED DOCUMENTS ATTACHED

☒ Narrative including:

- ☒ Current use of land or building(s)
- ☒ Description of project, project site, circulation, traffic etc.
- ☒ Proposed use of land or building(s)
- ☒ How the proposed use complies with the Comprehensive Plan

If this is a modification or extension include:

- ☐ Notice of Decision and case number
- ☐ Justification for the modification or extension
- ☐ Application submitted at least 30 days before expiration date

☒ Plans including:

- ☒ Site plan
- ☒ Floor plan(s)
- ☒ Elevation view of existing and proposed buildings
- ☒ Proposed vegetative cover
- ☒ Existing and proposed parking areas and proposed traffic circulation
- ☒ Existing physical features of the site (e.g.: drainage, habitat, and hazard areas)

-----DEPARTMENT USE ONLY BELOW THIS LINE-----

ALLOWABLE/CONDITIONAL USE FEES

	Fees	Check No.	Receipt	Date
Application Fees	\$ _____			
Admin. of Guarantee	\$ _____			
Adjustment	\$ _____			
Pub. Not. Sign Fee	\$ _____			
Pub. Not. Sign Deposit	\$ _____			
Total Fee	\$ _____			

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

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

For assistance filling out this form, contact the Permit Center at 586-0770.

Case Number

Date Received

Conditional use permit for 1880 Crest St units 112 & 113

3/1/2021

TO: CBJ Community Development

From: Hugo & Tenaya Miramontes

<u>PAGE#</u>	<u>DISCRIPTION</u>
1.	Title page & table of contents
2.	Narrative & proposed use description
3.	Conditional use permit application
4.	Development permit application
5-8	Pre Application notes
9.	Pre Application line Item response
10.	Current uses
11.	Proposed uses
12.	Proposed parking plan
13.	Traffic circulation plan
14.	Elevation view
15.	Exterior lighting plan
16.	Current layout of unit 112
17.	Proposed layout for unit 113

NARRATIVE & PROPOSED USE DESCRIPTION

We own unit 112 which is being used for our two businesses, Miramontes Construction and Charisma Salon and Esthetics. We recently purchased unit 113 and 115, We have relocated our home to the caretaker's unit 115 and want to relocate Charisma Salon to Unit 113. We also want to allow the existing salon space in unit 112 to be repurposed as a similar retail use. Unit 112 was originally purchased in 2014 for relocation of Miramontes construction. In 2015 we applied for and received a permit to separate and install a 327sq ft salon space. The permit was completed, and final approval was received from all CBJ departments. For the last 6 years the salon has operated successfully with no noticeable negative impact to the designated property use or its adjacent neighbors. The Salon has gained popularity and a steady flow of happy clients over the years. In 2020 we felt that expanding the salon to its own space would be a sound business development and better serve our business plan. It would also make more substantial contributions to support stability, diversity, and an equitable economy of our community.

After many months of planning, designing, and purchasing for the new space, our application for the renovation was submitted. During the submittal process we learned that a conditional use permit was required along with the building permit to relocate the salon into our newly purchased unit 113. This surprised us considering the ease of which the first salon was created. We contacted a good friend and consultant Jay Srader to review and help us through the permit process to help meet our needs while also establishing and correctly documenting the retail use and limitations that will apply.

Our review of the Land use code and the comprehensive plan as compared to our intended use did not reveal any conflicts. The property location is identified in a "urban area". In typical urban areas, residential, commercial, mixed use and/or public facilities share land and utilities in a compact area. Our research showed that Industrial/Commercial uses very commonly have sub-category retail uses associated. Many examples are right in our community as company's that manufacture their products in one part of the building and provide a retail space in another. Our proposal would allow a modest flexibility in use of the two spaces that will be beneficial by allowing more choices for business and property owners of the future. We humbly request your consideration of our proposal and look forward to developing a plan that is beneficial to our business and our community.

BUSINESS/USE DESCRIPTION

Charisma Salon and Esthetics is a business that supports beauticians stepping out of the commission field into the role of booth renting and running their own business. The business will be made up of established hairdressers and an esthetician and will sell hair products and skin care to clients we service. Hours of operation will vary per stylist but on average it will be 9am to 5pm. Most stylist typically work 4 days a week. 3 booths will be rented and one occupied by the owner/manager. We take great pride in our work and pay careful attention to the needs of our clients and our neighbors. Our expansion and growth allow us more opportunity to better support sustainability and diversity in our community while continuing to give excellent service to our clients.



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

Beauty Salon in Industrial

Case Number: PAC2021 0008

Applicant: Hugo Miramontes/~~Jay Grader~~ **Tenayas Miramontes**

113 & 115

Property Owner: Hal & Leslie Dahugerty (Miramontes purchasing units ~~1112-1115~~)

Property Address: 1880 Crest Street; units 111 thru 115

Parcel Code Number: 5B1501010002 & **5B1501010003**

Site Size: 33,476 Square Feet

Zoning: Industrial

113

Existing Land Use: Unit ~~1113~~ is currently vacant

Conference Date: 2/17/2021

Report Issued: 2/24/2021

List of Attendees

Note: Copies of the Pre-Application Conference Report will be emailed, instead of mailed, to participants who have provided their email address below.

Name	Title	Email address
Hugo Miramontes Tenayas Miramontes	Applicant	Vhmiramontes@hotmail.com
Beth McKibben, AICP	Senior Planner	beth.mckibben@juneau.org
Kyle Paw	Building	Kyle.paw@juneau.org
Jay Grader	Applicant / Consultant	farawayjay@hotmail.com

Pre-Application Conference Final Report

Conference Summary

Questions/issues/agreements identified at the conference that weren't identified in the attached reports.
The following is a list of issues, comments and proposed actions, and requested technical submittal items that were discussed at the pre-application conference.

Builders Plaza II was originally constructed and used as one industrial use. In 2014 ownership of the property was fractured: the land is owned in common and the individual units were sold independently. The Miramontes' are in the process of purchasing units ~~1112-1115~~. 113 & 115

- Unit 111 is used as storage and owned by Dr. Lam.
- Unit 112 currently is used storage and office space for Miramontes Construction, and a small beauty salon.
- Unit 113 is currently vacant. The applicant would like to establish a beauty salon in unit 1113, and abandon the salon in Unit 112.
- Unit 114 is used as storage space and an associated office.
- Unit 115 is a 2,400 square foot residence.

Units 111-114 are 1,008 square feet with some loft space. The proposed beauty salon would be 1,008 square feet. As a retail use of less than 5,000 square feet in an industrial zoning district a conditional use permit is required.

If the conditional use permit is approved for unit 113, then only that unit has the flexibility to be used for retail. The other units must meet use requirements of the industrial zoning district. Alternatively, a conditional use permit could be pursued for the entire structure.

Planning Division

1. **Zoning** – The lot and the surrounding area is zoned Industrial (I). CBJ 49.25 Table of Dimensional Standards requires Industrial lots to be a minimum of 2,000 square feet with a lot width of 20 feet and a depth of 60 feet.
 - a. **Sales/rental 2.100:** Uses require a conditional use permit
 - b. **Offices 3.00:**
 - i. Uses less than 2,500 sq.ft are NOT permitted;
 - ii. Larger than 2,500 sq.ft. require a conditional use permit.
 - iii. Offices associated with an Industrial use are permitted outright, but must clearly be incidental and subordinate to the primary industrial use.
 - c. **NOTE-** The Industrial zone allows for one caretaker unit per lot. If unit 1115 is sold independently and is no longer associated with one of the industrial uses on site it cannot be considered a caretaker unit.

Setbacks –

- 10 foot front and rear yard setbacks
- 0 foot side yard setbacks.

Pre-Application Conference Final Report

- This proposal is for an established building. Setbacks are already established.
- 2. **Height** – There are no building height limits in Industrial.
- 3. **Access – Crest Street**
- 4. **Parking & Circulation**– Parking and circulation requirements will be determined by the adding up the requirements of each of the uses on the site. Industrial lots are not allowed to have back out parking.
- 5. **Lot Coverage** – No maximum lot coverage in Industrial.
- 6. **Vegetative Coverage** – 5%.
- 7. **Lighting** –Exterior lighting may not produce off site glare
- 8. **Noise** – Is not expected to be a concern
- 9. **Flood** –X flood zone. Area of minimal flood hazard.
- 10. **Hazard/Mass Wasting/Avalanche/Hillside Endorsement** – Not applicable
- 11. **Wetlands** – WET1998-00003 permitted 2.2 acres of fill in category C wetlands; WET2001-00001 permitted 240 sq. ft. of fill in category C wetlands; WET2003-0001 permitted 2,500 square feet of fill in category C wetlands.
- 12. **Habitat** – Not applicable
- 13. **Plat or Covenant Restrictions** –
- 14. **Traffic** – Estimated traffic counts will be determined based on the cumulative estimate generated for each use on the site. If traffic counts range from 250 to 500 a traffic impact analysis may be required. Any development expected to generate over 500 average daily trips will be required to have a traffic impact analysis.
- 15. **Nonconforming situations** –none noted

Other Applicable Agency Review

- 16. N/A

List of required applications

Based upon the information submitted for pre-application review, the following list of applications must be submitted in order for the project to receive a thorough and speedy review.

- 1. Conditional Use Permit Application
- 2. Development Permit Application – DPA must include approval of common owner's hip to apply for conditional use permit. If unit 1111 is included in the conditional use permit application owner must also sign DPA.

Additional Submittal Requirements

Submittal of additional information, given the specifics of the development proposal and site, are listed below. These items will be required in order for the application to be determined Counter Complete.

Pre-Application Conference Final Report

1. A copy of this pre-application conference report.
1. Project narrative describing the operations, hours, staffing, which unit(s) are included in the request for a conditional use, time line for development, existing/proposed lighting.
2. Site plan showing – structure, setbacks, existing parking, vegetative cover
3. All items listed on the Conditional Use Permit Application form

Exceptions to Submittal Requirements

Submittal requirements staff has determined **not** to be applicable or **not** required, given the specifics of the development proposal, are listed below. These items will **not** be required in order for the application to be reviewed.

Fee Estimates

The preliminary plan review fees listed below can be found in the CBJ code section 49.85.

Based upon the project plan submitted for pre-application review, staff has attempted to provide an accurate estimate for the permits and permit fees which will be triggered by your proposal.

1. Conditional Use Permit Fee – Class B Uses \$500.00
2. Public Notice Sign Fee - \$50 plus \$100 refundable deposit

For informational handouts with submittal requirements for development applications, please visit our website at www.juneau.org/cdd.

Submit your Completed Application

You must submit your application(s) in person with payment made to:

City & Borough of Juneau, Permit Center
 230 South Franklin Street
 Fourth Floor Marine View Center
 Juneau, AK 99801

Phone: (907) 586-0715
 Fax: (907) 586-4529
 Web: www.juneau.org/cdd

Attachments:

49.15.330 – if a Conditional Use Permit

PRE APPLICATION NOTES LINE ITEM RESPONSE

- #4 Parking & Circulation see pages 12 & 13.
- #5 No lot coverage restrictions.
- #6 Vegetative coverage of 5% was provided at time of building permit approvals and has been maintained accordingly.
- #7 Exterior lighting will remain as installed see page 15.
- #8 Noise, proposed use has no identifiable noise activities.
- #9 Flood, no flood hazard identified.
- #10 Hazards, Not applicable.
- #11 Wetlands, all required wetlands permits were previously issued and completed.
- #12 Habitat, not applicable.
- #13 No plat or covenant restrictions found.
- #14 Traffic, estimated traffic count per day is well below the threshold for analysis.
- #15 No documented non-conforming situations noted.

Additional Submittal information

- Property drainage has been maintained as designed, minimum 2% slope away from buildings and directed to approved adjacent drain paths and easements.

CURRENT USES

Current uses are Industrial (in Yellow) as permitted in per CBJ Zoning & land use code and a 326.3sq ft portion (in orange) of unit 112 used for a small hair salon permitted and approved in 2015.

Below image was taken from the approved construction documents when structure was built and highlight colors added.



PROPOSED USES

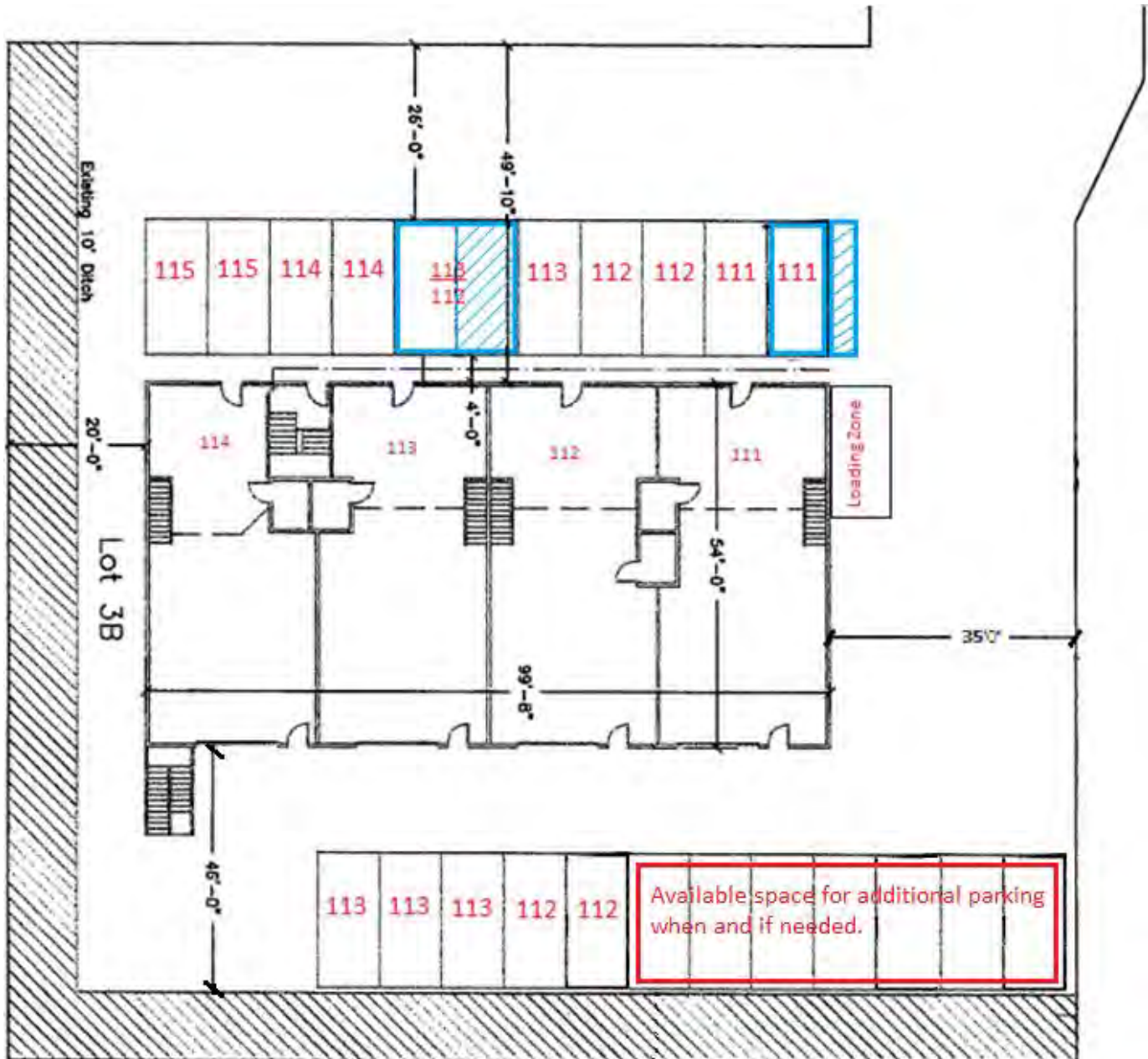
Proposed use changes are to relocate the existing salon from unit 112 to unit 113 and to properly permit and document the renovated 327.3sq ft front portion of Unit 112 for use as similar retail as defined in CBJ Title 49.

Orange = permitted retail

Yellow = Industrial use per original permitted design

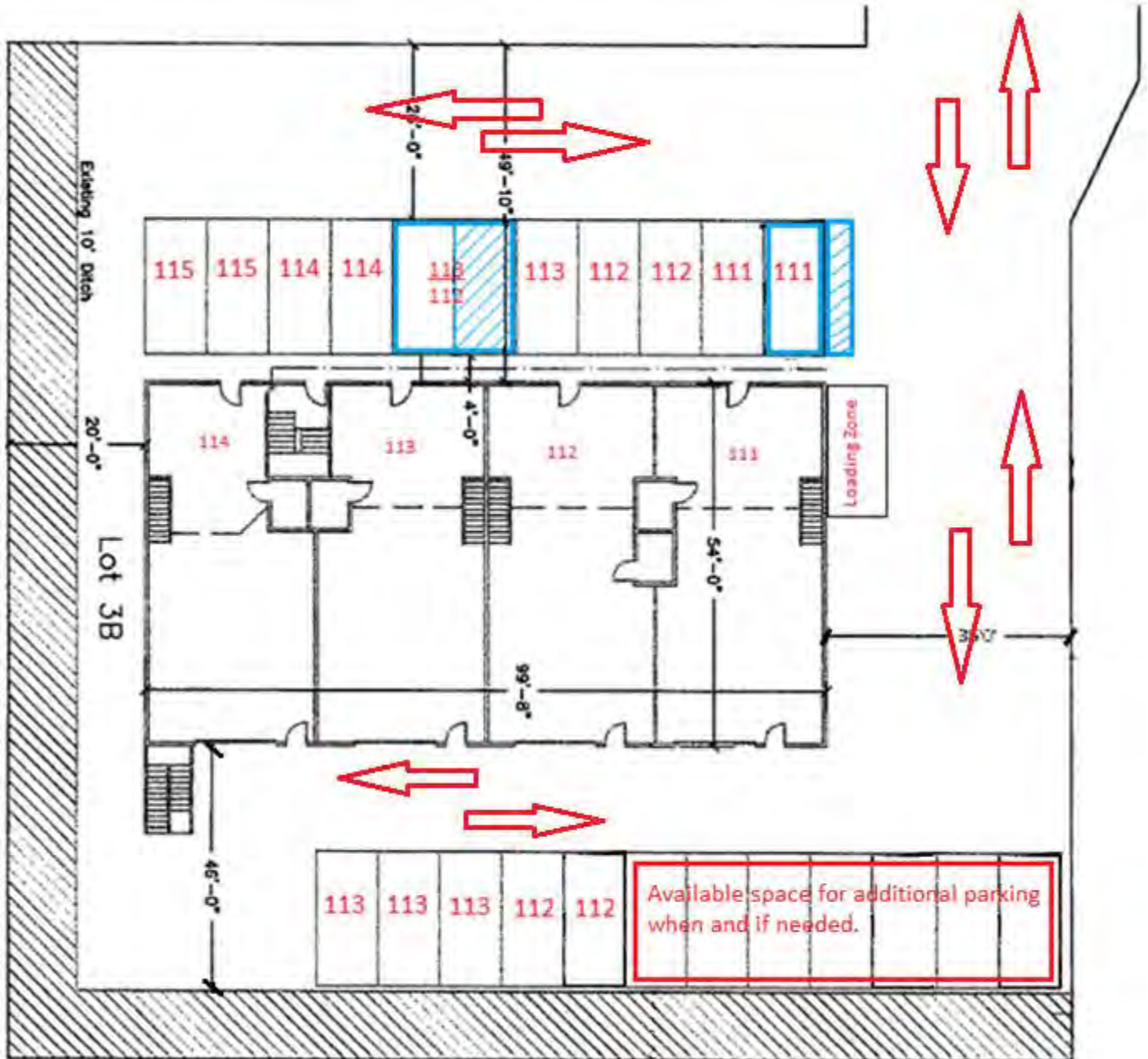


- Unit 113 retail 1296sq ft/300 = 4.3 (5 spaces)
- Unit 112 – 327.3sq ft/300 = 1.091 (2 spaces)
- One new full van Accessible parking space will be provided for the retail spaces.
- Existing units 111 & 114 Industrial/storage uses have the require 2 spaces per unit with one ADA space, the existing caretaker unit 115 will remain at 2 spaces as required.
- All spaces will be painted to industry standards and sized per applicable land use code title 49 and the Americans with Disabilities act.
- Signage will be posted on the retail store fronts “additional parking in the rear.”



TRAFFIC CIRCULATION PLAN

Red arrows indicate vehicle travel routes in and out of the property, parking spaces are pull in/back out as typically used in two way traffic flow.



ELEVATION VIEW

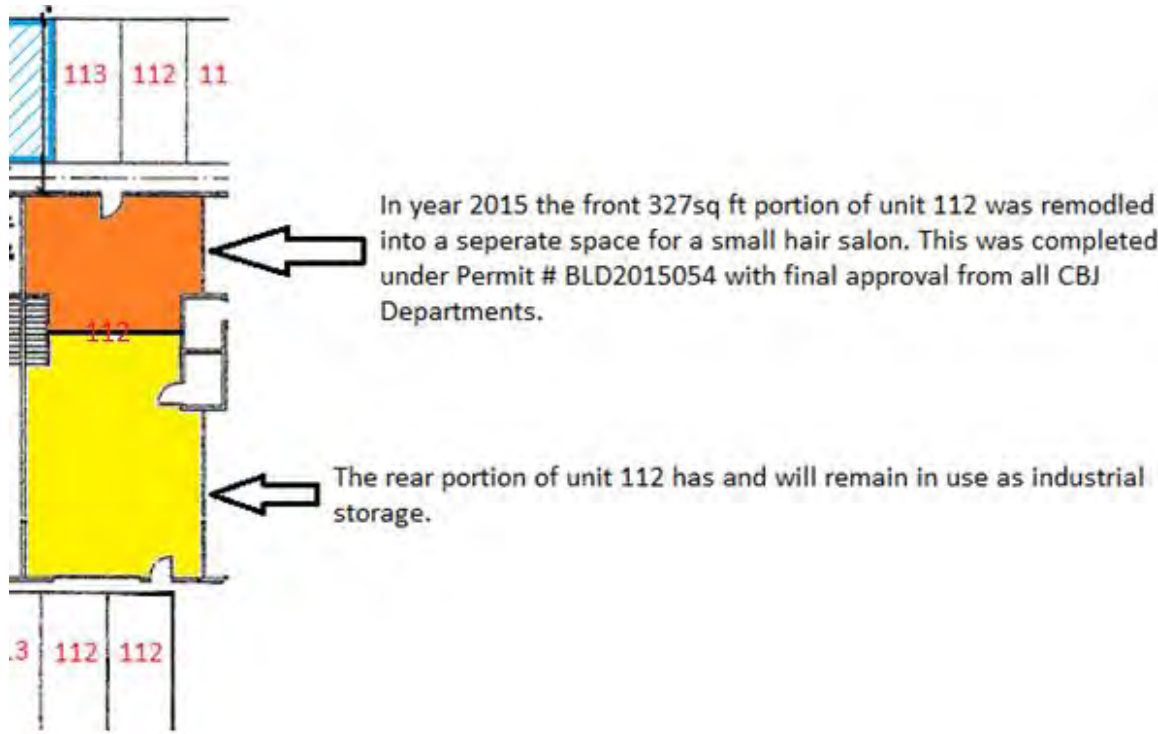


EXTERIOR LIGHTING PLAN

No change to existing lighting, currently each unit entryway has a single downfacing shielded lens LED exterior light with day/night photocell. Any future lighting changes or signage will be done with appropriate permits and approvals.

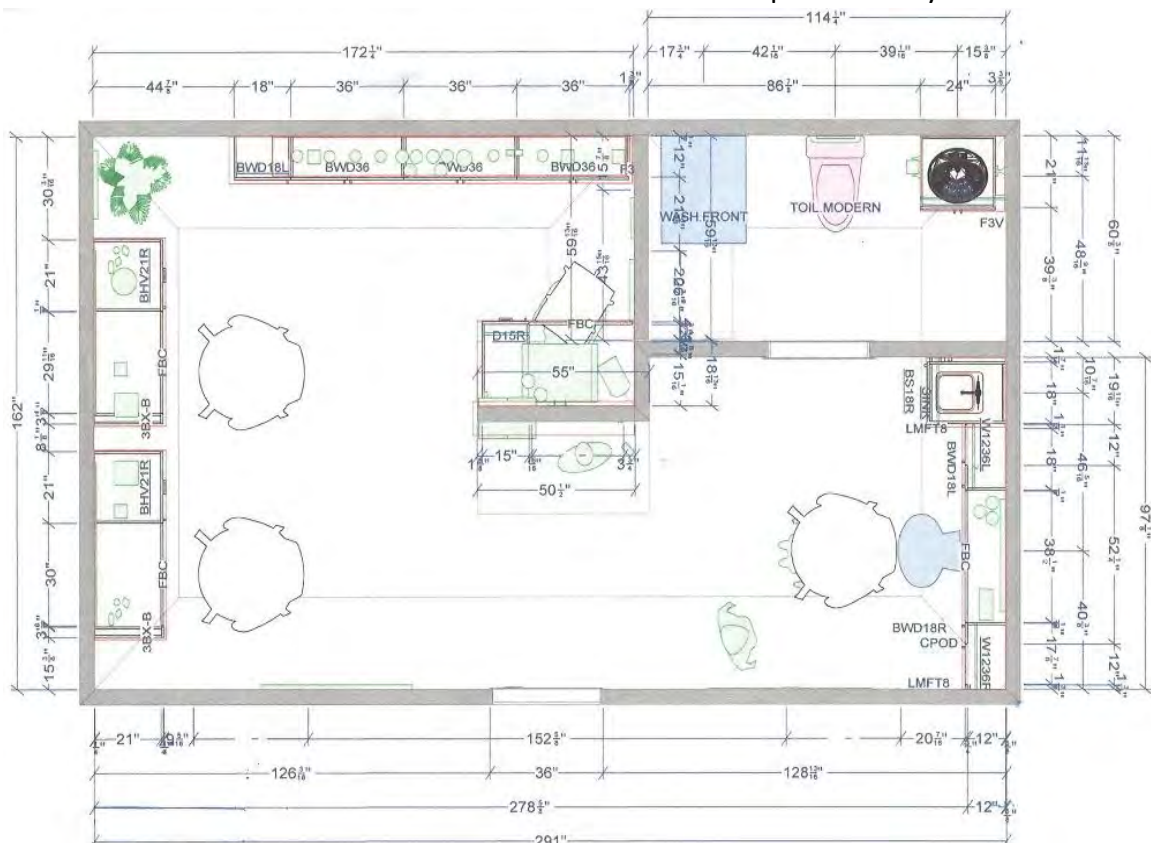


Unit 112, CURRENT LAYOUT & USE

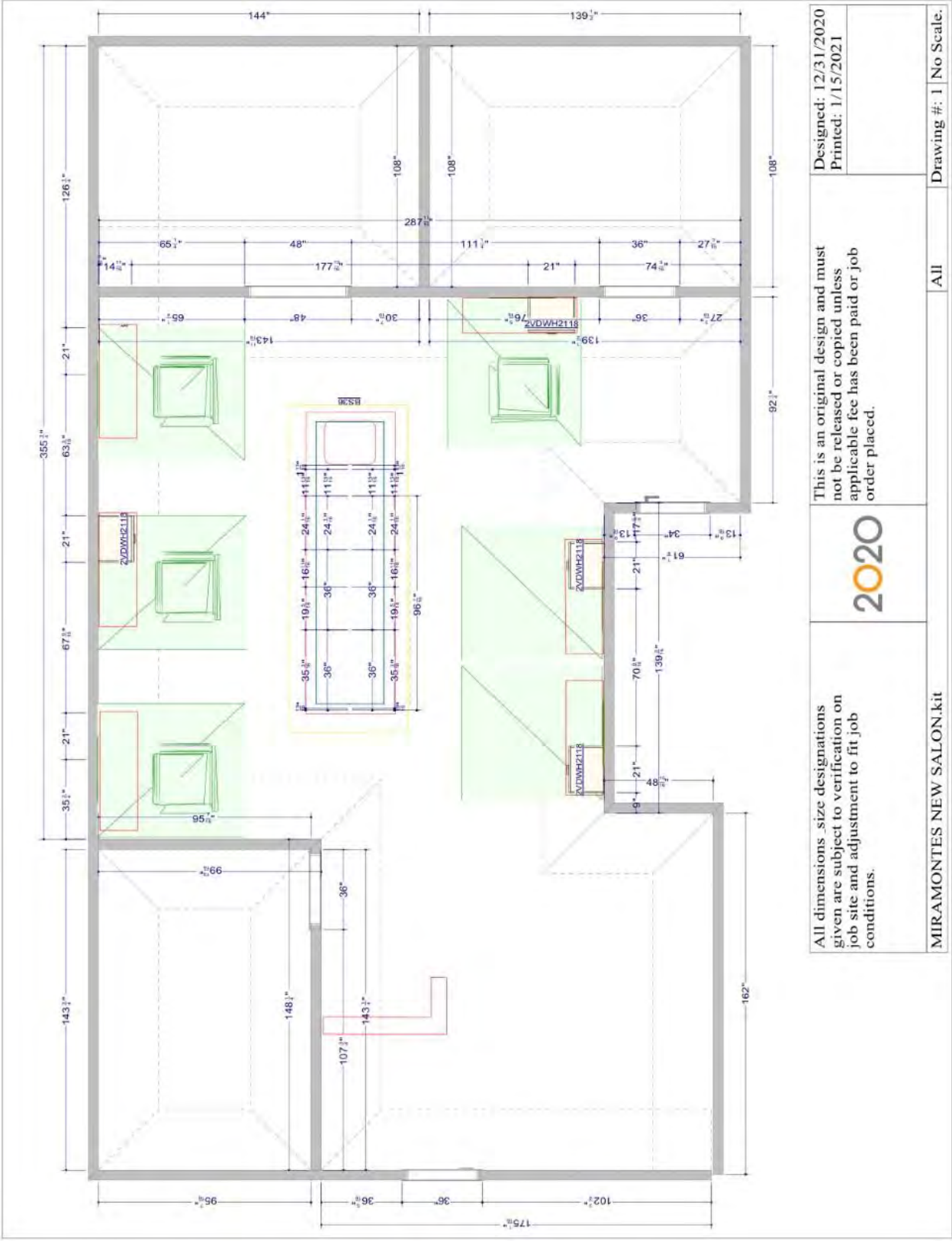


Existing salon floor plan

This salon will be moved to unit 113 when renovations are complete. The available empty space would be available for future use as industrial or retail as permitted by Title 49.



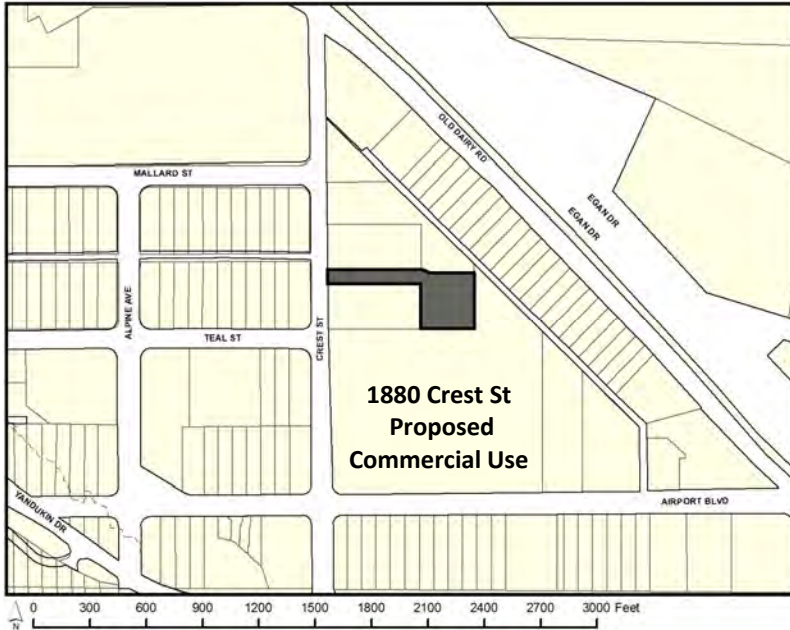
UNIT 113, PROPOSED NEW RETAIL LAYOUT*



*Layout and final floor plan may vary based on Community Development review and approval of required permits for renovation and use.

Invitation to Comment

On a proposal to be heard by the CBJ Planning Commission
Your Community, Your Voice



155 S. Seward Street Juneau, Alaska 99801

TO:

An application has been submitted for consideration and public hearing by the Planning Commission for a **Conditional Use Permit for commercial use at 1880 Crest Street** in an **Industrial Zone**.

TIMELINE

Staff Report expected to be posted **Monday, April 19, 2021** at <https://juneau.org/community-development/planning-commission>. Find hearing results, meeting minutes and more here as well.

Now through April 5

Comments received during this period will be sent to the Planner, **Joseph Meyers**, to be included as an attachment in the staff report.

April 6 — noon, April 26

Comments received during this period will be sent to Commissioners to read in preparation for the hearing.

HEARING DATE & TIME: 7:00 pm, April 27, 2021

This virtual meeting will be by video and telephonic participation only. To join the Webinar, visit: <https://juneau.zoom.us/j/91269731818>. The Webinar ID is: 912 6973 1818. To join by telephone, call: +1 253 215 8782 or +1 346 248 7799 or +1 669 900 6833 or +1 301 715 8592 or +1 312 626 6799 or +1 929 436 2866 and enter the Webinar ID.

April 28

The results of the hearing will be posted online.

Phone: **(907)586-0715** ♦ Email: pc_comments@juneau.org
Mail: **Community Development, 155 S. Seward St, Juneau AK 99801**

Printed March 23, 2021

Case No.: USE2021 0003
Parcel No.: 5B1501010000
CBJ Parcel Viewer: <http://epv.juneau.org>



NOTICE 586-0715
PERMIT FOR
COMMERCIAL USE
IN INDUSTRIAL ZONE
Unauthorized equipment is being used.
Conditional Use Permit for Agricultural
Use is required for zoning.
HEARING DATE: 4/27/21

1880 CREST ST
SUITE 112

SUITE 112
1880 CREST AVE.

SUITE 113
1880 CREST AVE.



NOTICE 586-0715
pc_comments@perc.org

**PERMIT FOR
COMMERCIAL USE
IN INDUSTRIAL ZONE**

USE20210003: Applicant is seeking a
Conditional Use Permit for a commercial
use in industrial zoning

HEARING DATE: 4/27/21

SUITE 112
1880 CREST AVE.

1880 CREST ST
SUITE #112

MFIR
NO NOISE





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

COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: Building Department

STAFF PERSON/TITLE: Charlie Ford

DATE: 03/16/2021

APPLICANT: Hugo Miramontes & Tenaya Miramontes

TYPE OF APPLICATION: Conditional Use Permit

PROJECT DESCRIPTION:

Applicant is seeking to create a salon in unit 113 and maintain a commercial use in the front of unit 112.

LEGAL DESCRIPTION: BUILDERS PLAZA II BL J LT 3B C

PARCEL NUMBER(S): 5B1501010000

PHYSICAL ADDRESS: 1880 Crest Street, Juneau

SPECIFIC QUESTIONS FROM PLANNER:

Do you see any specific issues with converting use from industrial to commercial in an existing structure?

AGENCY COMMENTS:

The Building Department has no issues with this project at this time.



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

COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: Capital City Fire/Rescue
STAFF PERSON/TITLE: Dan Jager
DATE: 03/16/2021
APPLICANT: Hugo Miramontes & Tenaya Miramontes
TYPE OF APPLICATION: Conditional Use Permit

PROJECT DESCRIPTION:

Applicant is seeking to create a salon in unit 113 and maintain a commercial use in the front of unit 112.

LEGAL DESCRIPTION: BUILDERS PLAZA II BL J LT 3B C
PARCEL NUMBER(S): 5B1501010000
PHYSICAL ADDRESS: 1880 Crest Street, Juneau

SPECIFIC QUESTIONS FROM PLANNER:

1. Do you see any specific issues with converting use from industrial to commercial in an existing structure?
2. Will the proposed development materially endanger the public health, safety, or welfare?

AGENCY COMMENTS:



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

COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: City Assessor
STAFF PERSON/TITLE: Mary Grant
DATE: 03/16/2021
APPLICANT: Hugo Miramontes & Tenaya Miramontes
TYPE OF APPLICATION: Conditional Use Permit

PROJECT DESCRIPTION:

Applicant is seeking to create a salon in unit 113 and maintain a commercial use in the front of unit 112.

LEGAL DESCRIPTION: BUILDERS PLAZA II BL J LT 3B C
PARCEL NUMBER(S): 5B1501010000
PHYSICAL ADDRESS: 1880 Crest Street, Juneau

SPECIFIC QUESTIONS FROM PLANNER:

1. Do you see any specific issues with converting use from industrial to a commercial service (salon) in an existing structure?
2. Will the proposed development substantially decrease the value of or be out of harmony with property in the neighboring area?

AGENCY COMMENTS:



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

COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: General Engineering
STAFF PERSON/TITLE: Autumn Sapp
DATE: 03/16/2021
APPLICANT: Hugo Miramontes & Tenaya Miramontes
TYPE OF APPLICATION: Conditional Use Permit

PROJECT DESCRIPTION:

Applicant is seeking to create a salon in unit 113 and maintain a commercial use in the front of unit 112.

LEGAL DESCRIPTION: BUILDERS PLAZA II BL J LT 3B C
PARCEL NUMBER(S): 5B1501010000
PHYSICAL ADDRESS: 1880 Crest Street, Juneau

SPECIFIC QUESTIONS FROM PLANNER:

1. Do you see any specific issues with converting use from industrial to a commercial service (salon) in an existing structure?

AGENCY COMMENTS:

GE has no issues nor comments regarding this permit.

USE2021 0003

Recommend **APPROVAL without conditions** for over 5,000 square feet of commercial use in the industrial zoning district.



Key considerations

- BLD 2015-0549 and Certificate of Occupancy was issued for a salon in unit 112
- Applicant seeks to move the salon into 113 and expand its size
- Current salon space would become a similar commercial use
- General Commercial (GC) zoning exists across Crest St. and along Old Dairy Road
- This type of commercial use is allowed in Industrial (I) zoning with a CUP

This aerial map shows the project area in Glacier Park. The project site is highlighted in orange and labeled 'Project Site' with a callout arrow. The map includes labels for 'GC' (Glacier County) and 'I' (Interstate). The project site is located on the east side of Alpine Ave, south of Teal St, and west of Old Dairy Rd. The map also shows surrounding streets such as Glacier Hwy, Airport Blvd, and various lot numbers.

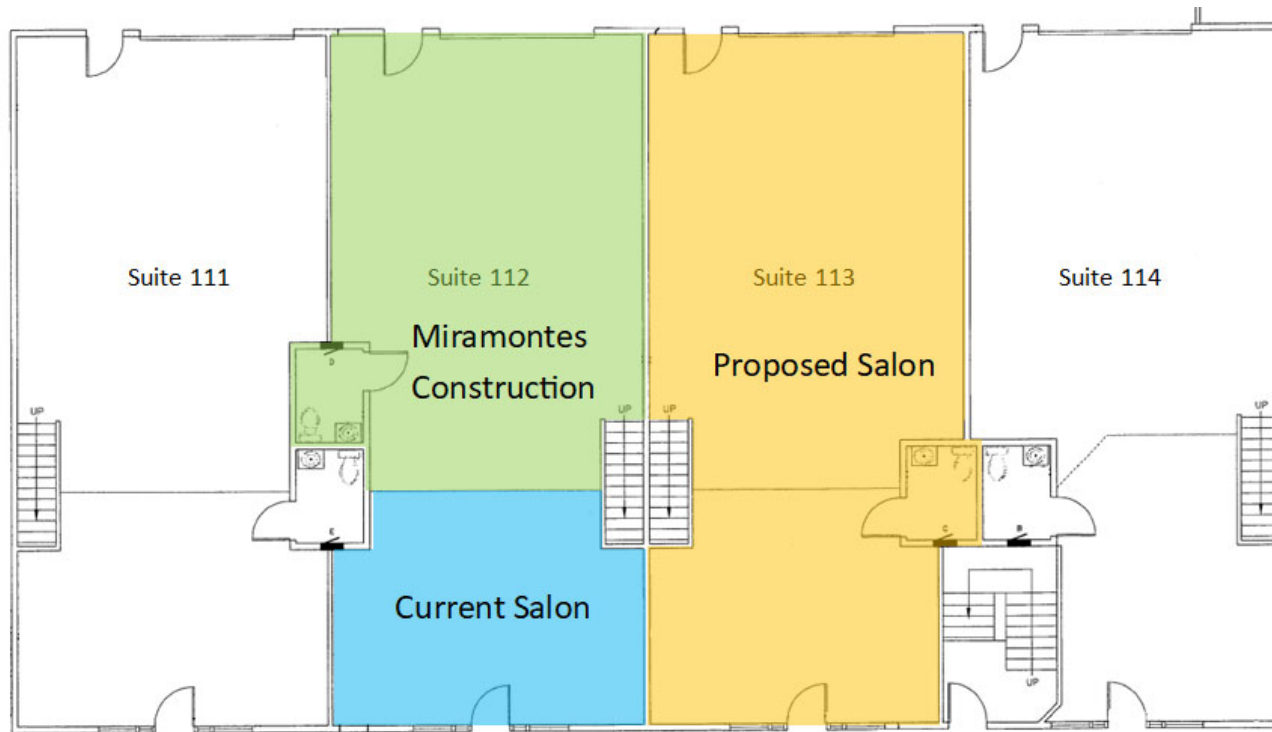
Agency Comments

Agency	Summary
CBJ Engineering	CBJ Engineering has no concerns with this project as proposed. The drainage and utility plan will be reviewed during the building permit process.
CBJ Building	The CBJ Building Department has no concerns with this project as proposed. The construction plans will be reviewed during the building permit process.
Capital City Fire and Rescue	No comments were provided.
CBJ Assessor's Office	No comments were provided.

Public Comments

No public comments have been received at the time of this hearing.

Project Site



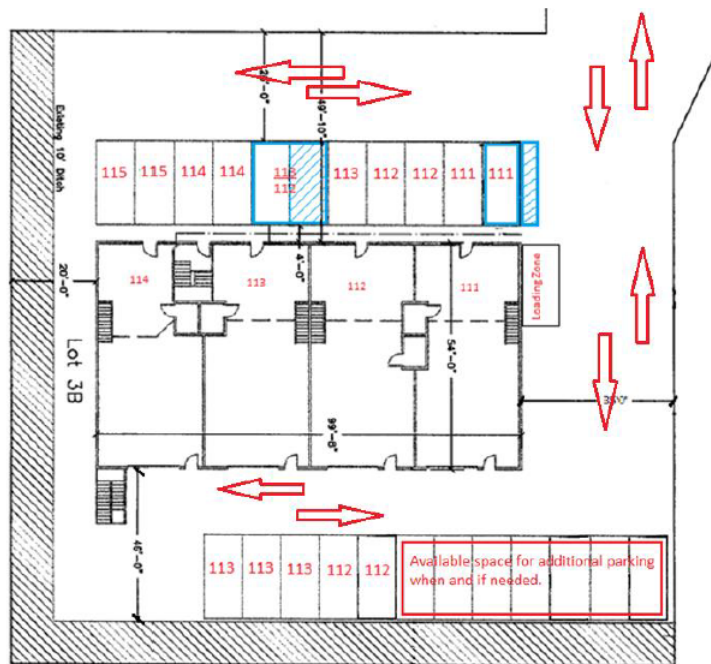
Units 112, 113, and the upstairs caretaker unit (115)
are all owned by the applicant

Traffic

Use	Total Sq. Ft.	Trips Generated	Total Trips
Hair Salon	1,730 sq. ft.	5.08 per 1000 sq. ft.	8.8
Misc. Retail	327 sq. ft.	2.49 per 1000 sq. ft.	0.8
Residential	2,700 sq. ft.	9.52 per dwelling unit	9.5
Warehousing	4,022 sq. ft.	3.82 per 1,000 sq. ft.	15.4
Total ADTs:			34.5

According to CBJ 49.40.300(a)(2) a traffic impact analysis IS **NOT** required.

Parking & Circulation

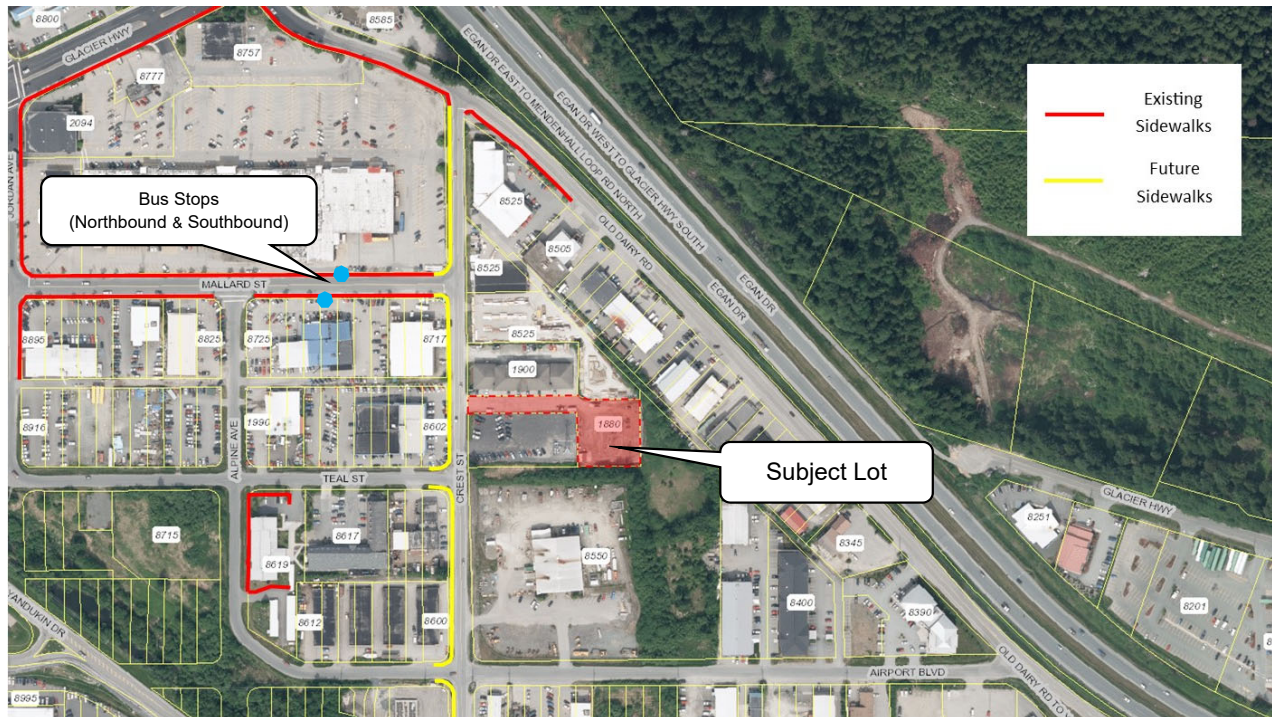


Use	Total Sq. Ft.	Spaces Required	Total Spaces	Existing Spaces
Retail Commercial	1,730 sq. ft.	1 per 1,000 sq. ft.	2	
Retail Commercial	327 sq. ft.	1 per 1,000 sq. ft.	1	
Single family Dwelling Unit	2,700 sq. ft.	2 per dwelling unit	2	
Warehouses/manufacturing	4,022 sq. ft.	1 per 1,000 sq. ft.	4	
Total Parking Requirement:			9	15
Off-Street Loading Spaces Required:			1	1
ADA Accessible Spaces Required:			1	2

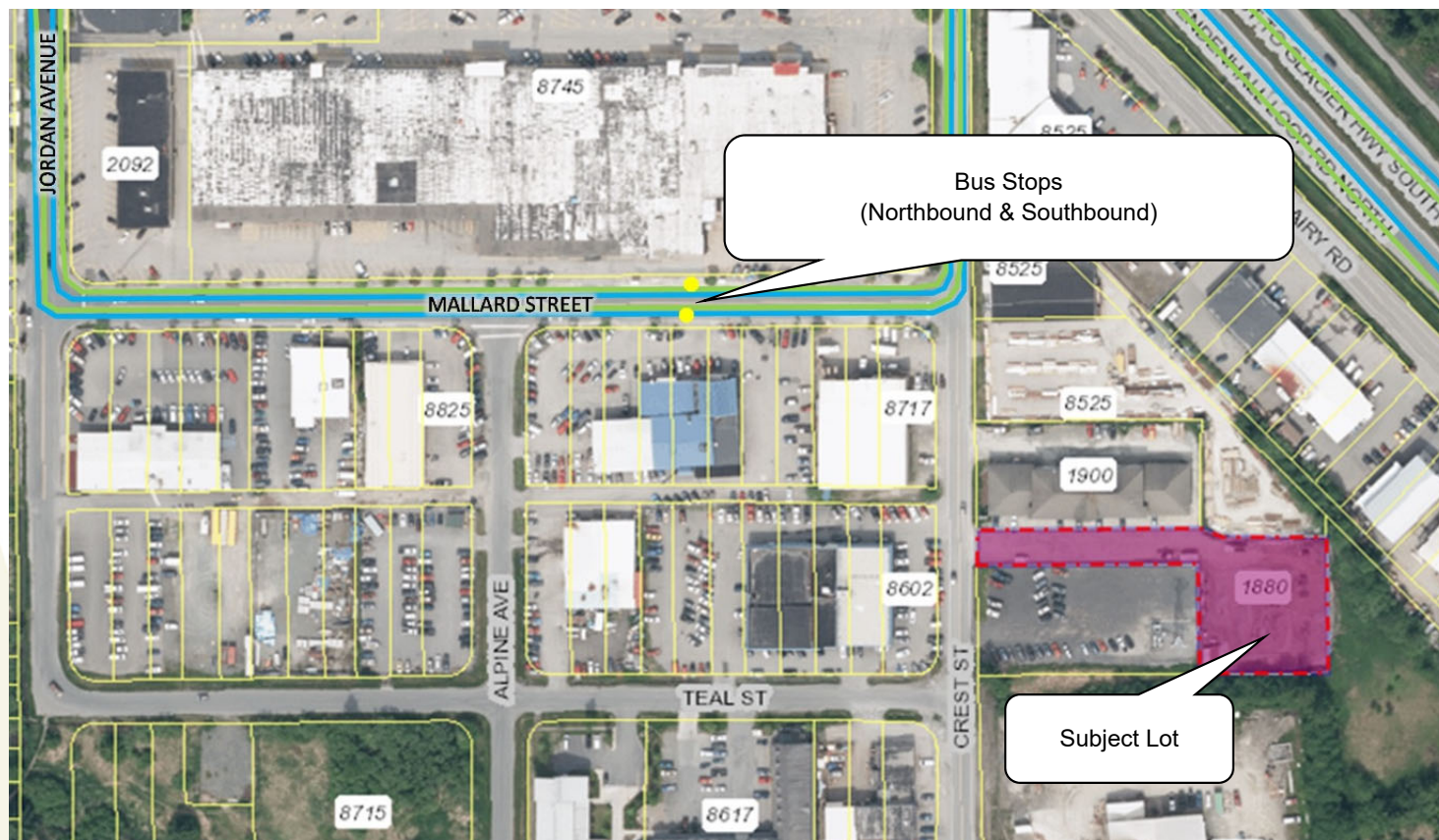
Parking exceeds code requirements for number and type of parking spaces and loading area

Non-motorized Transportation

The panhandle easement is paved, however there are no sidewalks between the hair salon and Crest Street. Crest Street has an unpaved shoulder where pedestrians can access the site. However CSP 2020-0012 will provide sidewalks along one side of Crest Street at a future date.



Proximity to Transit



Noise and lighting

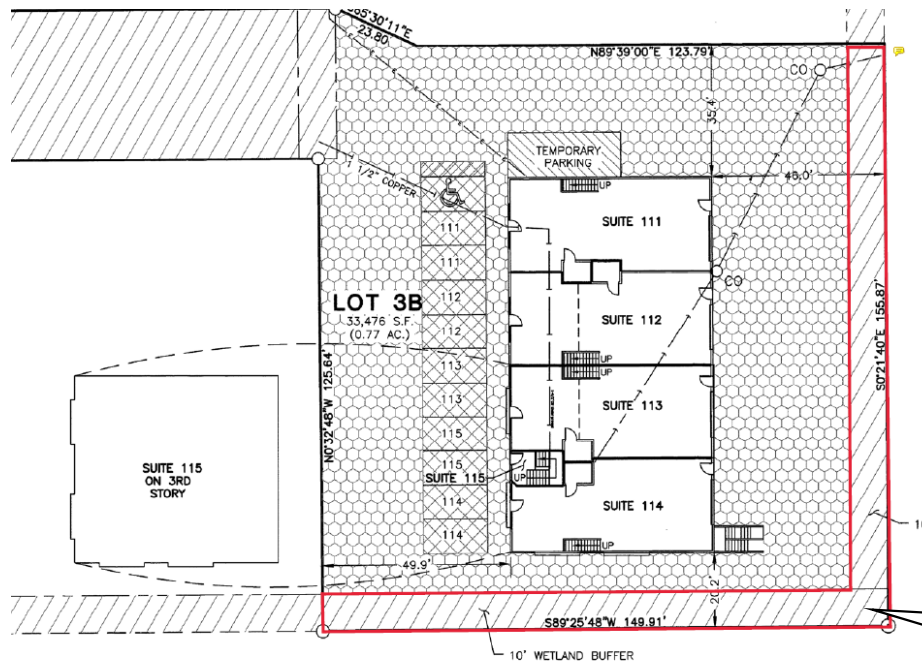
- No noise out of character for I zone.
- Lighting – exterior façade lights meet the requirements of a “suitably lit” parking area and are full cut-off design

Light locations



Existing exterior lights in situ

Vegetative Cover



33,476 square foot lot x 5% = 1,674 sq. ft. of vegetative cover required

Vegetative cover can include landscaping, required open space or other required natural areas.

Public Health, Safety and Welfare

- Renovations for salon will meet Building and Fire Code requirements.
- There are no concerns that this development will negatively impact the public's health, safety and welfare.



Property value and neighborhood harmony

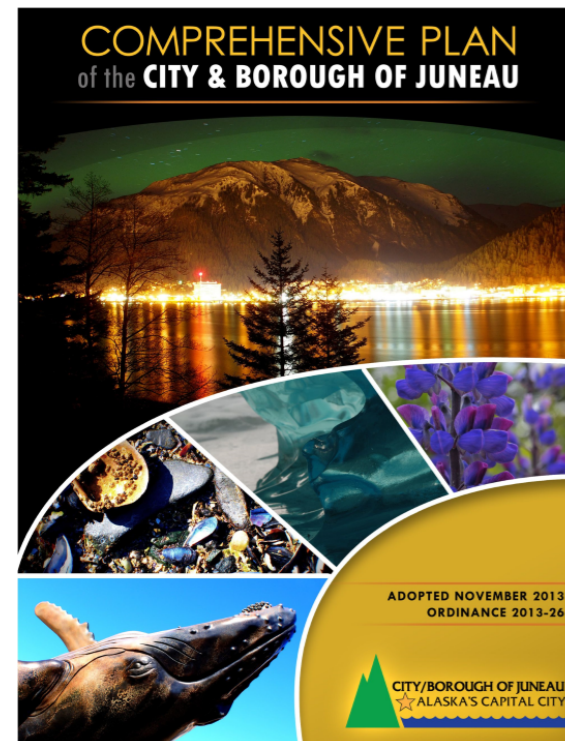
14

- Surrounding land uses include industrial, and commercial.
- CBJ Assessor does not anticipate any negative impacts to property values or neighborhood harmony.



Conformity with 2013 Comprehensive Plan

- Policy 5.1 – Proposed development promotes a diverse economy
- Policy 5.11 – Proposed development will provide year round employment and provide tax revenue to support public services.
- Chapter 11: Subarea 4 – provide for increased community commercial development close to existing commercial areas in the lower valley.



Findings

1. Application complete
2. In Table of Permissible Uses
3. Will comply with parking, lot coverage, drainage, vegetative cover requirements
4. Will not materially endanger public
5. Will not substantially decrease assessed value
6. Conforms with 2013 Comprehensive Plan

Recommend APPROVAL without conditions

For more than 5,000 square feet of retail in the
Industrial zoning district

QUESTIONS?



Planning Commission

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

PLANNING COMMISSION NOTICE OF DECISION

Date: April 28, 2021
Case No.: USE2021 0003

Hugo & Tenaya Miramontes
1880 Crest St., Suite 112
Juneau, AK 99801

Proposal: Applicant requests a Conditional Use Permit for over 5,000 square feet of commercial use in the industrial zoning district.

Property Address: 1880 Crest St., Units 112 & 113

Legal Description: Builders Plaza II Block J Lot 3B Condo Land, Units 112 & 113

Parcel Code No.: 5B1501010002; 5B1501010003

Hearing Date: April 27, 2021

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated April 16, 2021, and approved the Conditional Use Permit for over 5,000 square feet of commercial use in the industrial zoning district, to be conducted as described in the project description and project drawings submitted with the application.

Attachments: April 16, 2021, memorandum from Joseph Meyers, Community Development, to the CBJ Planning Commission regarding USE2021 0003.

This Notice of Decision does not authorize construction activity. Prior to starting any project, it is the applicant's responsibility to obtain the required building permits.

This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance with CBJ 01.50.030. Appeals must be filed by 4:30 P.M. on the day twenty days from the date the decision is filed with the City Clerk, pursuant to CBJ 01.50.030 (c). Any action by the applicant in reliance on the decision of the Planning Commission shall be at the risk that the decision may be reversed on appeal (CBJ 49.20.120).

Hugo & Tenaya Miramontes

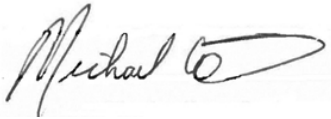
Case No.: USE2021 0003

April 28, 2021

Page 2 of 2

Effective Date: The permit is effective upon approval by the Commission, April 27, 2021.

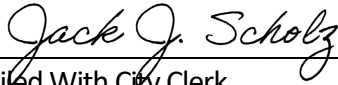
Expiration Date: The permit will expire 18 months after the effective date, or October 28, 2022, if no Building Permit has been issued and substantial construction progress has not been made in accordance with the plans for which the development permit was authorized. Application for permit extension must be submitted thirty days prior to the expiration date.



Michael LeVine, Chair
Planning Commission

May 3, 2021

Date



Filed With City Clerk

May 3, 2021

Date

cc: Plan Review

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this development project. ADA regulations have access requirements above and beyond CBJ-adopted regulations. Owners and designers are responsible for compliance with ADA. Contact an ADA - trained architect or other ADA trained personnel with questions about the ADA: Department of Justice (202) 272-5434, or fax (202) 272-5447, NW Disability Business Technical Center (800) 949-4232, or fax (360) 438-3208.

**PLANNING COMMISSION AGENDA
THE CITY AND BOROUGH OF JUNEAU, ALASKA**

WCF2021 0001: A new 100-foot Wireless Communications Facility Monopole - APPROVED WITH AMENDMENTS

AGENDA ITEM:

Case No.: WCF2021 0001

Applicant: Mastec Network Solutions

Location: 3500 N Douglas Highway

Proposal: A new 100-foot Wireless Communications Facility Monopole

RECOMMENDATION:

Staff recommends the Planning Commission adopt the Director's analysis and findings and **APPROVE** the requested Wireless Communication Facility Special Use Permit. The permit would allow a new 100-foot wireless communication facility (WCF) monopole at 3500 N Douglas Highway in a Waterfront Industrial zoning district.

The approval is subject to the following conditions:

Condition #1: Design & Performance, custom condition: Fencing must be installed such that when vehicle gates are opened they remain within the lot lines.

ATTACHMENTS:

Description	Upload Date	Type
☐ Staff Report for WCF2021 0001 - Part 1	4/16/2021	Staff Report
☐ Staff Report for WCF2021 0001 - Part 2	4/16/2021	Staff Report
☐ Presentation for WCF2021 0001	4/27/2021	Presentation
☐ Notice of Decision for WCF2021 0001	5/3/2021	Notice of Decision



(907) 586-0715
CDD_Admin@juneau.org
www.juneau.org/CDD

155 S. Seward Street • Juneau, AK 99801

DATE: April 16, 2021
TO: Michael LeVine, Chair, Planning Commission
BY: Irene Gallion, Senior Planner *Irene Gallion*
THROUGH: Jill Maclean, Director, AICP

PROPOSAL: Applicant requests a Wireless Communication Facility Special Use Permit for a new, 100-foot Wireless Communication Facility (WCF) monopole at 3500 N. Douglas Highway in a Waterfront Industrial zoning district.

STAFF RECOMMENDATION: Approval with conditions

KEY CONSIDERATIONS FOR REVIEW:

- Tower will accommodate 5G antennas. The safety of 5G is the purview of the Federal Communications Commission (FCC).
- The Commission may want to consider if a mono-pine or monopole is less obtrusive to the view.

GENERAL INFORMATION	
Property Owner	Jeff Trucano – Nowell Avenue Development
Applicant	Mastec Network Solutions
Property Address	3500 N. Douglas Highway
Legal Description	ATS 123 Lot 1
Parcel Number	1D060L010010
Zoning	Waterfront Industrial
Land Use Designation	Waterfront Commercial Industrial
Lot Size	9,845 square feet, 0.2260 acres
Water/Sewer	CBJ
Access	North Douglas Highway
Existing Land Use	Vacant/material storage
Associated Applications	None at this time

ALTERNATIVE ACTIONS:

1. **Amend:** require additional conditions, or delete or modify the recommended conditions.
2. **Deny:** deny the permit and adopt new findings for items 1-6 below that support the denial.
3. **Continue:** to a future meeting date if determined that additional information or analysis is needed to make a decision, or if additional testimony is warranted.

ASSEMBLY ACTION REQUIRED:

Assembly action is not required for this permit.

STANDARD OF REVIEW:

- Quasi-judicial decision
- Requires five (5) affirmative votes for approval
- Code Provisions:
 - o 49.65 Article IX
 - o 49.80

The Commission shall hear and decide the case per 49.65.970(a) *As of the effective date of this article, no person shall be permitted to site, place, build, construct, modify, or prepare any site for the placement or use of WCF, except for those WCF identified in section 49.65.940, Table 1, without having first obtained a special use permit. All applicants for a special use permit and any modification of such facility shall comply with the requirements set forth in this section.*

49.65.900 – Wireless Communication Facilities Special Use Permit Purpose. *It is the purpose of this article to establish reasonable regulations for the placement, construction and modification of wireless communication facilities (WCF) consistent with the Telecommunications Act of 1996 and applicable law and:*

- (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).*

SITE FEATURES AND ZONING



SURROUNDING ZONING AND LAND USES

North	Vacant
South	North Douglas Highway
East	AEL&P
West	Vacant

SITE FEATURES

Anadromous	No
Flood Zone	Yes, AE at 25 feet
Hazard	No
Hillside	No
Wetlands	No
Parking District	No
Historic District	No
Overlay Districts	RV Park Area, Special Waterfront Area (Map 3H)

BACKGROUND INFORMATION

Project Description –

The Applicant is proposing a 100-foot monopole, with a 230 square foot shelter for equipment. The monopole and shelter are proposed inside a fenced area 35 feet by 35 feet (**Attachment A**).

Background –

In 1982, the Board of Appeals met to hear Henry Tiffany III's appeal of a stop work order for the Forest Edge Condominium project. Mr. Madsen was disposing of excavation from the Forest Edge Condominium project on the lot. While the U.S. Army Corps of Engineers eventually permitted disposal on the lot, the remaining concern was the high degree of organics in the excavation. The Board found in opposition to Mr. Tiffany. The excavation had to be removed from the lot.

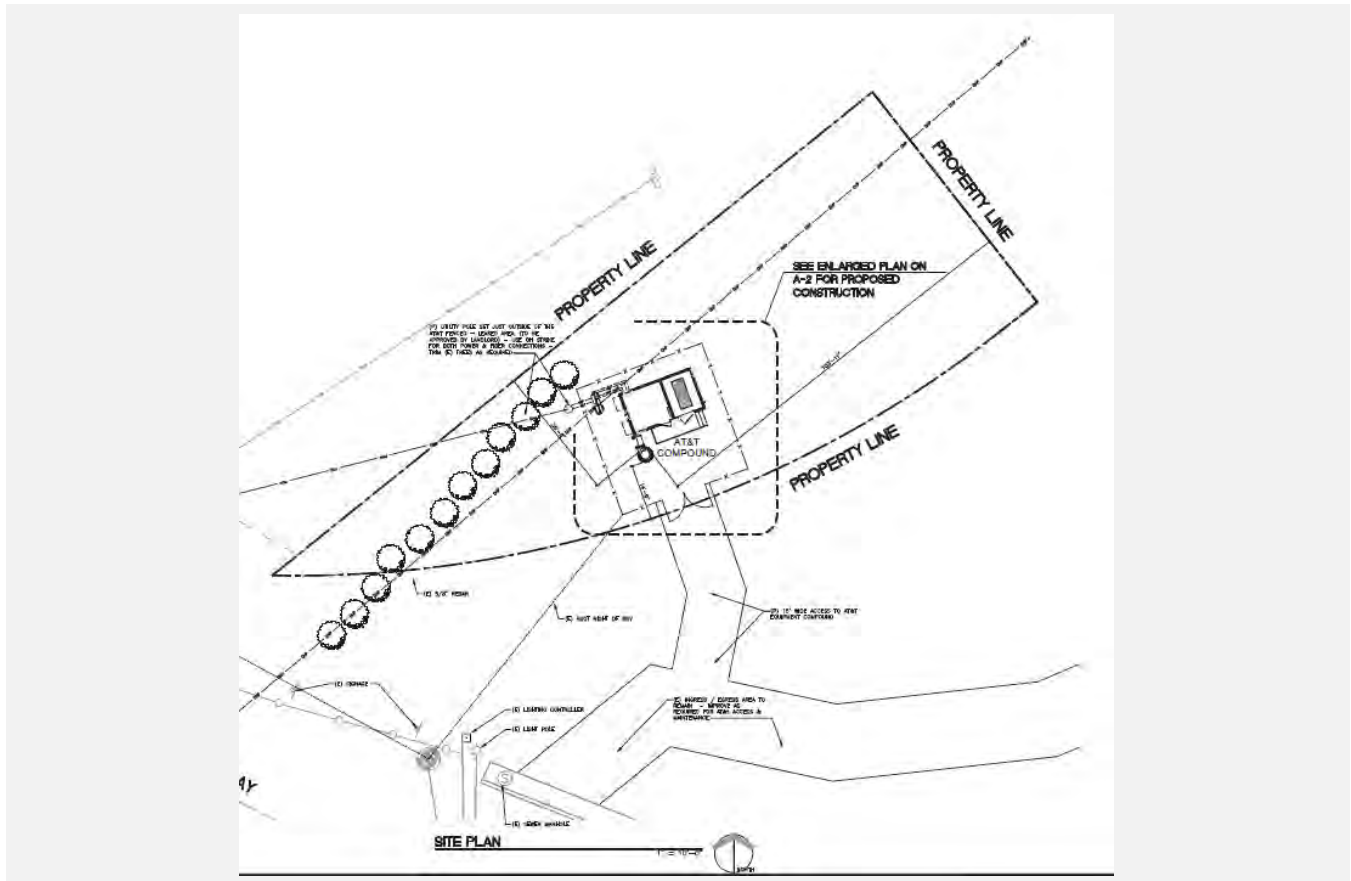
A 1996 conditional use and design review application proposed a 185-foot communications tower with a shipping container modified to shelter transmission equipment (USE CU96-53). The application was withdrawn before the Planning Commission hearing. One comment in the file opposes the project, saying that the "existing tower" already causes interference with phones, radios, and stereos. No record of permitting showed an "existing tower" on the lot. The "existing tower" is believed to be on another site.

In 2001, the site was considered for an electrical upgrade for the West Juneau lift station, but the project was withdrawn.

The table below summarizes relevant history for the lot.

Item	Summary
Plat 2001-9	Subdivision into three lots for the purpose of leasing land.
BLD2001-00599	Replace existing generator and fuel tank; upgrade control panels, power service, and other electrical equipment.
MAP2005-00009	Zoning change from Waterfront Industrial to Industrial. Denied.
USE-CU96-53	Conditional Use Permit for 185-foot communications tower. Withdrawn.

SITE PLAN



ANALYSIS

The 2014 Wireless Communications Master Plan provides context on the need to develop new towers (page 63).

Tower siting is based on population using the service. The 2014 service was designed to accommodate between 1,750 and 2,500 separate devices. However, since then, the number of devices each individual is using has increased, and the degree of bandwidth use has increased. This means each tower will need to decrease the number of people accommodated, resulting in more towers needed to serve people.

Project Site – Coverage objectives for the site include Douglas Island and the downtown waterfront. The shore-side location provides proximity to downtown customers. Reduced obstructions to underserved parts of Douglas Island will improve service.

This lot is in the Waterfront Industrial (WI) zoning district, intended for uses which need or substantially benefit from a shore-side location [CBJ 49.25.250]. Wireless is line-of-sight technology. Waterfront location improves coverage and reduces the need for additional antennas.

The 2013 Comprehensive Plan Land Use Designation Maps show the area Waterfront Commercial Industrial. This land should be used for water-dependent heavy commercial and industrial uses like marine transportation terminals, large or small boat marinas, boat repair, shipyards, marine freight handling areas, fish buying and processing plants, ice plants, marine hatcheries, and marine parks. Residential uses are prohibited in Waterfront Commercial/Industrial zoning districts, with the exception of caretaker units (page 149).

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Coverage objectives for the site include commercial and industrial waterfront uses. The site will be used to “offload” cellular traffic from cruise ships during the season. When the cruise ships arrive the existing network reaches capacity and some customers may not be able to use the service. This site will accommodate some of the traffic so the entire network is more stable and functional during high-use periods.

The site is within 500 feet of single-family and multi-family structures on Sitka Street and the west end of Nowell Avenue. Within 1,000 feet are more residences west of Cordova Street, including the Alaska Housing Finance Corporation’s Cedar Park.



The site was chosen after colocation of antennas was analyzed for the objective of the tower, which was better service to Douglas Island. Using site numbers from the Wireless Telecommunications Mater Plan:



- Site 49 is the closest existing tower. Due to location, Douglas coverage is inadequate. Additionally, the tower structure is failing, and leasable ground space is lacking.
- Site 33 and 34 were outside of the search area.
- Site 35 is already an AT&T site.
- Site 37 is a roof top installation that took up all the room and left no other carrier possibilities. Additionally, this site is outside of the objective area, and would provide overlapping coverage with a high likelihood of interference.
- Site 38 is a high rooftop in the downtown core. AT&T has an existing and a planned site (Juneau Harbor) to cover this area. Significant interference is anticipated at this site, which also fails to meet coverage objectives.
- Sites 39 and 40 are outside of coverage objectives and too close to existing sites.
- Site 41, 45, 46, 47 and 48 are existing AT&T sites.

Condition: None.

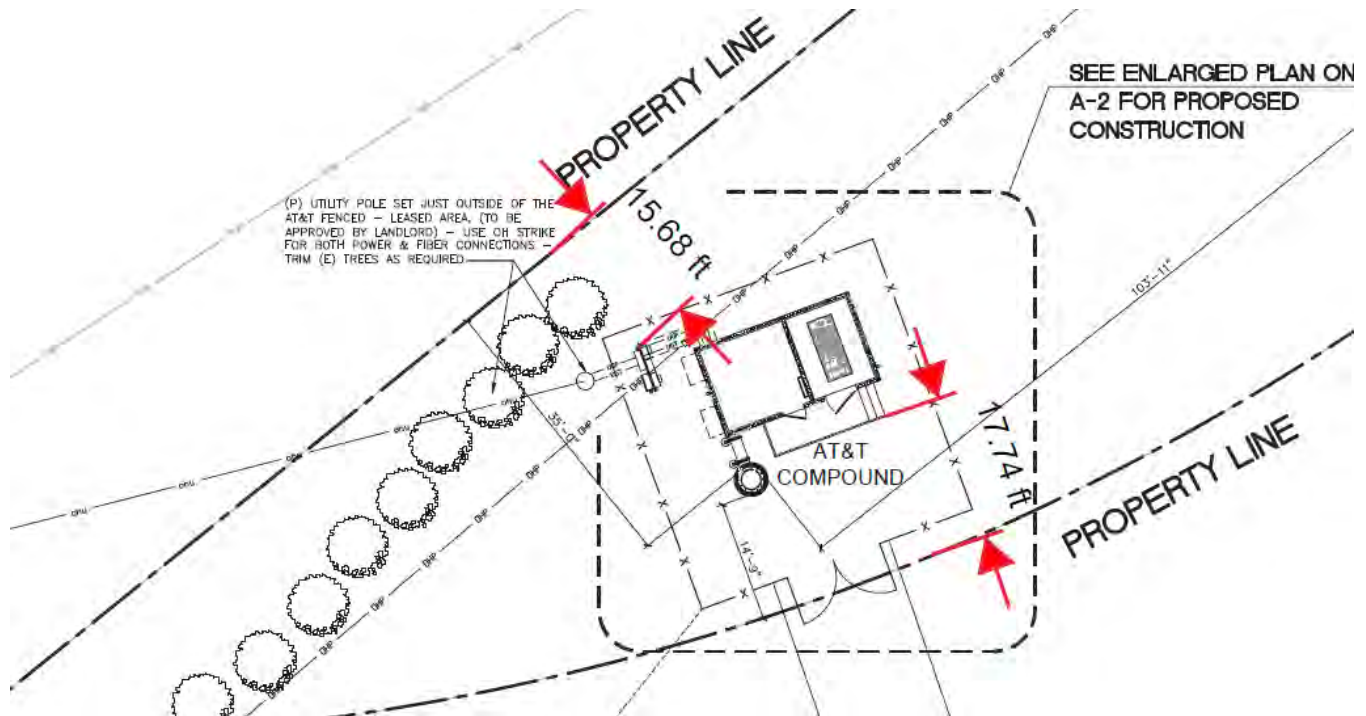
Project Design – The 100 foot mono-pine is designed with break point technology. Code requires a 14 foot 7 inch setback from the lot lines. Setback requirements are met.

The minimum setback distance shall be equal to 110 percent of the distance from the top of the structure to the break point level of the structure, or the minimum yard setback requirements, whichever is greater [CBJ 49.65.930(f)]. The break point for this structure is 13 feet 3 inches below the top of the structure (page 39 of the application).

Break Point X 1.10 = Minimum setback

13.25 feet X 1.10 = 14.575, or **14 feet 7 inches**

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Condition: None.

Traffic – Anticipated traffic is low, with one technician making regular inspection visits.

Access is through Alaska Department of Transportation and Public Facilities (ADOT&PF) right-of-way, using an established access driveway. ADOT&PF would require a driveway permit to access the lot, and for the gates to remain entirely on the lot when opened.

Condition #1: Design & Performance, custom condition: Fencing must be installed such that when vehicle gates are opened they remain within the lot lines.

Parking and Circulation – Parking for a technician vehicle can be accommodated on the lot within the fenced area or next to it.

Condition: None.

Vegetative Cover and Landscaping – WI zoning requires five percent vegetative cover, or 492 square feet. The fenced area is proposed to be 35 feet by 35 feet, or 1,225 square feet.

Existing trees on the steeper parts of the lot total about 5,800 square feet.

Condition: None.



Habitat – The northwest lot line is approximately 100 feet from Kowee Creek at its nearest point. Kowee Creek is an anadromous stream included in the 2013 Comprehensive Plan appendix of streams that require a 50-foot setback (2013 Comprehensive Plan, Appendix B).

The area has no 2013 Comprehensive Plan Natural Resource land designations in the area. The Kowee Creek stream corridor protection begins about 1,600 feet uphill, where land use changes from Medium Density Residential to Recreational. The site does not impact View Corridors established in the Comprehensive Plan.

Condition: None.

Drainage – Drainage will be considered in the building permit review process.

Condition: None.

Hazard Zones – The northeast corner of the lot is in the AE special flood hazard area, with an elevation of 25 feet. An AE designation means the area could be inundated by a one percent annual chance of flood. The northeast corner of the lot is not proposed for development.

The project is not anticipated to require a Hillside Endorsement. If site development extends into the steeper parts of the lot on the northeast a Hillside Endorsement may be required. That requirement will be evaluated during the building permit review process.

Condition: None.



Public Health or Safety – Safety elements can be divided into radio frequency safety and infrastructure safety.

Radio Frequency Safety: This wireless facility complies with the Telecommunications Act of 1996, and enforcement is the purview of the FCC. In 2019, the FCC reviewed exposure standards in light of 5G technology. The FCC determined no changes to standards were warranted (FCC press release, “Chairman Pai Proposes to Maintain Current Radiofrequency Exposure Safety Standards,” August 8, 2019).

Infrastructure Safety Features: CBJ 49.65.930(b) requires that towers and support structures be reasonably shielded from unauthorized access, with access for only those who service them.

The applicant is proposing a six foot high, two-inch mesh chain link fence with privacy slats, topped with a foot of three strand barbed wire. The twelve foot wide vehicle gate will have a lock bar (page A-5 of the plan set).

Signs will be placed at “challenge” sites, or where an individual is most likely to encounter the sign when accessing the site. Signs include:

- A facility sign describing the owner, FCC details, and a contact number [complies with CBJ 49.65.930(c) regarding sign requirements].
- A “NO TRESPASSING” sign.
- A notice advising that you are entering an area where RF emissions may exceed FCC recommendations, and to use appropriate precautions.

The FCC has a “TOWAIR” program to determine if towers need to be registered with the Federal Aviation

Administration. Registration of this tower is not required, therefore lighting is not required.

Condition: None.

Property Value or Neighborhood Harmony – The proposed tower is in keeping with the industrial nature of the lots.

The mono-pine will be in the view shed of uphill residences. Staff requests that the Commission consider whether a plain monopole might serve the community better. A monopole has a more narrow profile. When viewed from the residences uphill from the site, the monopole would allow residents a better view of the channel and boat harbors.

Juneau’s abundance of trees and greenery, and guidance from previous staff, lead the applicant to propose a mono-pine as the best blending and least intrusive tower style. The mono-pine will blend when viewed from various locations on Douglas Highway, as illustrated in the Visual Analysis Report.

For residences uphill from the site, the mono-pine may appear to be less natural. Structures block the views from the roadways directly uphill from the proposed site, so understanding visual impacts is difficult.

Condition: None.

SPECIFIED USE REVIEW - CBJ 49.65 ARTICLE IX – WIRELESS COMMUNICATION FACILITIES

Tower Location –

Topic and Code Reference	Summary	Complies	Recommended Condition
49.65.920 and 49.65.960(b) Location preference for new WCFs	A new tower is proposed because of lack of suitable colocation facilities.	☒ Yes ☐ No ☐ N/A	
49.65.920(b) Collocation on existing WCF	The applicant has provided analysis as to why they cannot collocate on existing facilities in Juneau’s downtown and Blueberry Hills.	☒ Yes ☐ No ☐ N/A	
49.65.930(g) and 49.65.970(f)(3)(C) Natural Areas & View sheds	No natural areas or viewsheds, as defined in the 2013 Comprehensive plan, are impacted.	☒ Yes ☐ No ☐ N/A	
49.65.970(f)(3)(A) State or local wildlife refuges	The tower is not proposed in a wildlife refuge.	☒ Yes ☐ No ☐ N/A	
49.65.970(f)(3)(B) Public parks	The proposed tower is not in a public park. The tower might be seen from Overstreet Park. The applicant proposal is to mitigate view impacts with a mono-pine.	☒ Yes ☐ No ☐ N/A	

Topic and Code Reference	Summary	Complies	Recommended Condition
49.65.970(f)(3)(D) Mendenhall Glacier	The proposed tower will not impact the view of the Mendenhall Glacier from the North Douglas boat launch nor the False Outer Point.	☒ Yes ☐ No ☐ N/A	

Wireless Communication Facility Design Criteria –

Topic and Code Reference	Summary	Complies	Recommended Condition
49.65.930(a) Concealed and non-concealed antenna	Applicant proposes concealed antennas.	☒ Yes ☐ No ☐ N/A	
49.65.930(b) Site security	Applicant proposes a six foot chain link fence with privacy slats topped with one foot of three-strand barbed wire.	☒ Yes ☐ No ☐ N/A	
49.65.930(c) Signage	Code compliant signage is proposed, plus “NO TRESPASSING” and RF exposure warnings.	☒ Yes ☐ No ☐ N/A	
49.65.930(d) and 49.65.970(c)(2)(B)(vi) Lighting	The tower was evaluated through the FCC TOWAIR program and does not require lighting.	☒ Yes ☐ No ☐ N/A	
49.65.930(e)(1) and 49.65.960(n) Antenna arrays required	The tower is proposed at 100 feet tall. The tower will have one initial antenna array, and can accommodate three more. The proposed tower meets code requirements for 4 arrays.	☒ Yes ☐ No ☐ N/A	
49.65.930(e)(2) Utilities	Overhead utilities will be brought to a pole to the northwest of the developed site, then undergrounded. Overhead power transits the lot.	☒ Yes ☐ No ☐ N/A	
49.65.930(e)(3) WCF designed to blend with surrounding features	A mono-pine is proposed.	☒ Yes ☐ No ☐ N/A	

Topic and Code Reference	Summary	Complies	Recommended Condition
49.65.930(e)(4) Guy Wires Prohibited	Guy wires are not proposed.	☒ Yes ☐ No ☐ N/A	
49.65.930(f) Setbacks	The mono-pine uses break point technology. The required 14 foot 7 inch setback is met in the proposed design.	☒ Yes ☐ No ☐ N/A	
49.65.930(h) Compliance with the Master Plan	As discussed below, the proposed WCF conforms with the Wireless Telecommunications Master Plan.	☒ Yes ☐ No ☐ N/A	
49.65.930(i) Visibility	The mono-pine design blends with surroundings when viewed from a distance, but is taller than vegetation on the lot.	☒ Yes ☐ No ☐ N/A	
49.65.930(j) and 49.65.960(r) Structural Assessment	Andrew P, Adams, P.E. reviewed foundations. Ehresmann Engineering, Inc. conducted the structural review of the mono-pine.	☒ Yes ☐ No ☐ N/A	

Special Use Permit Submittal Requirements –

Topic and Code Reference	Summary	Complies	Recommended Condition
49.65.960(c) and 49.65.970(c)(2)(A) Design Criteria Narrative	Application, page 8-12.	☒ Yes ☐ No ☐ N/A	
49.65.960(d) Statement of Compliance with FCC Standards	Application, page 30.	☒ Yes ☐ No ☐ N/A	
49.65.960(p) Certification of Compliance with all Applicable Laws	Application, page 30.	☒ Yes ☐ No ☐ N/A	

49.65.960(q) Statement of limits on collocation	Application, page 9.	☒ Yes ☐ No ☐ N/A	
49.65.960(s) Certification of construction standards	Application, page 32.	☒ Yes ☐ No ☐ N/A	
49.65.960(t) Compliance with FAA Regulations	Application, page 36. The TOWAIR analysis indicates the tower does not need to be registered or lit.	☒ Yes ☐ No ☐ N/A	
49.65.970(c)(2)(C) Minimum Height Required	Application, page 12.	☒ Yes ☐ No ☐ N/A	
49.65.970(c)(2)(E) Propagation Study	Application, page 82.	☒ Yes ☐ No ☐ N/A	

Visual Impact Assessment –

Topic and Code Reference	Summary	Complies	Recommended Condition
49.65.970(c)(2)(B)(i) Zone of Visibility Map	Application, page 70.	☒ Yes ☐ No ☐ N/A	
49.65.970(c)(2)(B)(ii) Siting for Lease Adverse Impact	Application, page 70-80.	☒ Yes ☐ No ☐ N/A	
49.65.970(c)(2)(B)(iii) Before and after depiction of site	The mono-pine provides effective view shielding when viewed from downtown and North Douglas.	☒ Yes ☐ No ☐ N/A	
49.65.970(c)(2)(B)(iv) Visual Impact of Base	Application, page 80.	☒ Yes ☐ No ☐ N/A	
49.65.970(c)(2)(B)(v) Screening of Base	Application, page 80. Chain link with privacy slats.	☒ Yes ☐ No ☐ N/A	
49.65.970(c)(2)(D) Balloon Test	Application, page 73.	☒ Yes ☐ No ☐ N/A	

AGENCY REVIEW

CDD conducted an agency review comment period between March 31, 2021 and April 9, 2021. Agency review comments can be found in Attachment B.

Agency	Summary
CBJ General Engineering	No comments at this time. Grading requirements will be addressed in the building permit.
Capital City Fire and Rescue	There are no fire code or fire department concerns for this project at this time.

PUBLIC COMMENTS

CDD conducted a public comment period between March 26, 2021 and April 5, 2021. Public notice was mailed to property owners within 1500 feet of the lot. A public notice sign was also posted on-site two weeks prior to the scheduled hearing (Attachment C). Public comments submitted at time of writing this staff report can be found in Attachment D.

Name	Summary
Dick Callahan	Concerns about health and property values.

CONFORMITY WITH ADOPTED PLANS

The proposal conforms with the 2013 Comprehensive Plan and the 2014 Wireless Telecommunications Master Plan.

PLAN	Chapter	Page No.	Item	Summary
2013 Comprehensive Plan	12.11		SOP1	<i>Facilitate the provision of high quality, consistent wireless communication services to residents, business, and visitors.</i> This tower will improve service to Juneau residents and visitors.
	12.11		SOP2	<i>Avoid potential injury to persons and properties from tower failure and windstorm hazards through structural standards and setback requirements.</i> This tower uses break point technology and appropriate setbacks.
	12.11		SOP3	<i>Accommodate the growing need and demand for wireless communication services.</i> Increased broadband use will be accommodated.
	12.11		IA3	<i>Establish standards for location, structural integrity, and compatibility with surrounding neighborhoods to minimize the impacts of WCFs on surrounding land uses.</i> This proposal includes proposed camouflage.

PLAN	Chapter	Page No.	Item	Summary
2014 Wireless Telecommunications Master Plan		6	Policy 1	<i>To ensure the protection of the health and safety of the public with the development of wireless communication facilities. This tower and antennas will comply with FCC regulations. The tower uses break point technology. The proposal includes fencing and signage.</i>
		6	Policy 2	<i>To protect aviation safety by coordinating with the Federal Aviation Administration (FAA) with the development of wireless communication facilities. This station has had a TOWAIR review and does not need to be registered with the FAA.</i>
		7	Policy 3	<i>To protect the natural environment with the development of wireless communication facilities. The tower does not impact habitat or protected land.</i>
		7	Policy 4	<i>To protect the public interest and neighborhood harmony with wireless communication facilities – this policy includes camouflage.</i>
		8	Policy 5	<i>Promote land use efficiently with the collocation of wireless communication facilities to existing structures. The applicant explicitly considered collocation before proposing a new tower.</i>
		8	Policy 6	<i>To preserve the scenic viewsheds and corridors listed in the 2013 Comprehensive Plan with the development of wireless communication facilities. This tower is not located in a Comprehensive Plan viewshed.</i>

FINDINGS

Wireless Communication Facility Special Use Permit Approval Criteria – 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. Per CBJ 49.65.970(d) and (f), Review of Director's and Commission's Determinations, the Director makes the following findings on the proposal:

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

Analysis: No additional analysis required.

Finding: Yes. The application contains the information necessary to conduct full review of the proposed operations. The application submittal, including the appropriate fees, substantially conforms to the

requirements of CBJ Chapter 49.65.900.

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

Analysis: Notice of the proposed Wireless Communication facility was provided in the Juneau Empire 10 days prior to the scheduled hearing; three (3) public notice signs were posted two (2) weeks prior to the scheduled hearing; and postcards were mailed to property owners within 1500 feet of the proposed Wireless Communication Facility and to neighborhood associations listed with the Municipal Clerk.

Finding: Yes. Public notice of the proposed Wireless Communication Facility was provided in accordance with CBJ 49.65.970(e).

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

Analysis: The tower uses break point technology, will be fenced and have safety signage. Antennas will operate under FCC guidelines.

Finding: Yes. The proposed WCF will comply with safety and safety-related codes and requirements.

4. *Is the proposed use appropriate according to the purpose of the zoning district, and other specific zoning, overlay, or land use designation?*

Analysis: The lot is zoned Waterfront Industrial. This site will support residents and tourists.

Finding: Yes. The proposal is appropriate according to the Table of Permissible Uses and the Comprehensive Plan Land Use Designation.

5. *Is another approved WCF or WCF application that is available to the applicant present within the geographic search area?*

Analysis: Under "Project Site" is a summary of the other locations analyzed.

Finding: No. The applicant has demonstrated that another appropriate WCF is not available in the geographic area.

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

Analysis: No additional analysis required.

Findings: No. The proposed site is not on, or eligible to be on, the National Register of Historic Places.

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

Analysis: The site is currently used for material storage, and is next to an electrical power station.

Findings: No. The proposed site is not listed in the 2013 Comprehensive Plan as a scenic corridor.

- 8. 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?**

Analysis: No further analysis needed.

Findings: Yes. The applicant has demonstrated that no existing tower can accommodate the applicants proposed use.

- 9. Will the proposed development conform with the land use plan, thoroughfare plan, or other officially adopted plans?**

Analysis: No further analysis needed.

Findings: Yes. The proposed WCF, with recommended conditions, will be sited and constructed in conformity with the 2013 Comprehensive Plan and the 2014 Wireless Telecommunications Master Plan.

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

Analysis: No additional analysis required.

Findings: No. The proposed WCF is not located on State or local wildlife refuges.

- 11. 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?**

Analysis: The proposed tower is not in a park.

Findings: No. The proposed WCF is not located in an area designated as a public park.

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

Analysis: No additional analysis required.

Findings: No. The proposed WCF is not in in any area designated as a scenic corridor/viewshed identified in the Comprehensive Plan of the City and Borough of Juneau.

- 13. 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?**

Analysis: No additional analysis required.

Findings: No. The proposed WCF will not obstruct views of the Mendenhall Glacier.

RECOMMENDATION

Staff recommends the Planning Commission adopt the Director's analysis and findings and **APPROVE** the requested Wireless Communication Facility Special Use Permit. The permit would allow a new 100-foot wireless communication facility (WCF) monopole at 3500 N Douglas Highway in a Waterfront Industrial zoning district.

The approval is subject to the following conditions:

Condition #1: Design & Performance, custom condition: Fencing must be installed such that when vehicle gates are opened they remain within the lot lines.

STAFF REPORT ATTACHMENTS

Item	Description
Attachment A	Application Packet
Attachment B	Agency Comments
Attachment C	Abutters Notice and Public Notice Sign Photo
Attachment D	Public Comments



DEVELOPMENT PERMIT APPLICATION

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

Physical Address 3500 Douglas Highway, Juneau, AK 99801		
Legal Description(s) (Subdivision, Survey, Block, Tract, Lot) AtS 123 Lot 1		
Parcel Number(s) 1D060L010010		
☒ This property located in the downtown historic district ☒ This property located in a mapped hazard area, if so, which _____		
Property Owner Jeff Trucano, President - Nowell Avenue Development		Contact Person Alissa Haynes
Mailing Address 3500 N. Douglas Highway, Juneau, AK 99801		Phone Number(s) 907-727-7907
E-mail Address alissa.haynes@selectsiteacq.com		
LANDOWNER/ LESSEE CONSENT Required for Planning Permits, not needed on Building/ Engineering Permits Alissa Haynes (ATT Lessee Representative)		
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 Digitally signed by Alissa Haynes DN: cn=Alissa Haynes, o, ou, email=sitedeployment@gmail.com, c=US Date: 2021.02.25 15:35:29 -0400 Landowner/Lessee Signature		02/12/2021 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.		
Applicant Mastec Network Solutions		Contact Person Alissa Haynes
Mailing Address 685 Matterhorn Drive, Park City, UT 84098		Phone Number(s) 907-727-7907
E-mail Address alissa.haynes@selectsiteacq.com		
X Digitally signed by Alissa Haynes DN: cn=Alissa Haynes, o, ou, email=sitedeployment@gmail.com, c=US Date: 2021.02.25 15:35:17 -0400 Applicant's Signature		January 28, 2021 Date of Application

-----DEPARTMENT USE ONLY BELOW THIS LINE-----

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

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

For assistance filling out this form, contact the Permit Center at 586-0770.

Intake Initials 	
Case Number	Date Received 03/01/2021
	Page 4 of 103



WIRELESS COMMUNICATION FACILITY APPLICATION

See reverse side for more information regarding the permitting process and the materials required for a complete application.

NOTE: Must be accompanied by a DEVELOPMENT PERMIT APPLICATION form.

To be completed by Applicant	PROJECT SUMMARY: Install a new 100' monopine for 4 antennas arrays with ground placed equipment shelter in a 35'x35' fenced equipment compound.
	ZONING DISTRICT: WI
	PROPOSED WCF TYPE ☐ Colocation ☒ New Tower ☐ Attached WCF ☐ Eligible Facility Request
	LIGHTING Proposed ☐ YES (this application requires all items under 49.65.950 and 49.65.970, it will go through the Special Use Permit process) ☒ NO Existing ☐ YES ☐ NO
	STRUCTURE HEIGHT (in feet) 100' AGL
	Does the requested facility meet the criteria listed in Table 1 (CBJ 49.65.950(a))? ☐ Yes Does the facility qualify as a substantial Change per 49.65.950(b)(1-6)? ☐ Yes – Submit items under 49.65.960 with your application ☐ No – this application meets Table 1 (49.65.950(a)) with no substantial changes ☒ No – Submit items under 49.65.950 and 49.65.970. Proceed with the Special Use Permit process.
ALL REQUIRED MATERIALS ATTACHED ☒ Complete submittal checklist	

-----DEPARTMENT USE ONLY BELOW THIS LINE-----

REQUIRED PERMIT				
Building Permit		Project falls under Table 1 (49.65.950)		
Special Use Permit		Project <i>does not</i> fall under Table 1		
REVIEW APPROVALS				
	Initials	Date		
Building	_____	_____		
Engineering	_____	_____		
Planning	_____	_____		
Fees	Fees	Check No.	Receipt No.	Date
Application Fee	\$ 850			
Public Notice Sign Fee	\$ 50			
Public Notice Sign Deposit	\$ 100			
Total	\$ 1000			

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

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED

For assistance filling out this form, contact the Permit Center at 586-0770.

Case Number	Date Received
WCF 2021-0001	03/01/2021
Page 3 of 103	

Attachment A - Application Packet

BUILDING PERMIT APPLICATION

Page 1 of 227

(Including Water, Sewer, Driveway, Grading, Mechanical, Plumbing, Electrical, and Building Safety Inspections)

(APPLICANT PLEASE FILL IN TOP PORTION OF PAGE AFTER FIRST LINE)

Project No:	Project Name: (City Staff to assign name)	Case No:	Date Received:
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APPLICANT AREA

CONTRACTOR/OWNER-BUILDER Mastec Network Solutions-Alaska Mailing Address 2240 East Dowling Road, Anchorage, AK 99507		Contact by E-Mail ☒ alissa.haynes@selectsiteacq.com Contact Person Alissa Haynes Phone No. 907-727-7907 FAX No. License Number
ARCHITECT / ENGINEER DHD Architecture PLLC Mailing Address 1324 246th Ave SE, Issaquah, WA 98027		Contact by E-Mail ☒ davidhdean@msn.com Contact Person David Dean Phone No. 425-503-0637 FAX No. License Number 11332
PERMIT CLASS ☒ NEW ☐ ADDITION ☐ REPAIR/REMOD ☒ DEMOLITION ☐ GRADING ☐ DRIVEWAY ☐ BUILDING SAFETY ☒ OTHER Construct 90' monopole		
BUILDING TYPE ☐ Residential ☐ Commercial ☒ Other WCF - 100' monopole		
EXISTING DWELLING UNITS ON PROPERTY <u>1</u> NEW DWELLING UNITS THIS PROJECT <u>0</u> TOTAL EXISTING BUILDINGS ON PROPERTY <u>1</u>		
DESCRIPTION OF WORK: Install new 100' monopine with break-point technology for 4 antenna arrays with an equipment shelter and emergency generator..		VALUE: TYPE (ie: house, garage, deck, unfinished) New: _____ Sq. Ft. New: _____ Sq. Ft. New: _____ Sq. Ft. New: _____ Sq. Ft. Cost of Remodeling: \$ _____ (if any)
I hereby certify that I have read and examined this application and know the same to be true and correct. All provisions of laws and ordinances governing this type of work will be complied with whether specified herein or not. The granting of a permit does not presume to give authority to violate or cancel the provisions of any other federal, state or local law regulating construction or the performance of construction. Signature or Authorized Agent: Alissa Haynes DN: cn=Alissa Haynes, o, ou, email=sitedeployment@gmail.com m-c-UC Date: 2021.02.28 15:24:40		

STAFF AREA

BUILDINGS Occupancy Class _____ Type of Construction _____ FCC Code _____ Permit Classification _____		BUILDING PERMIT FEES PLAN REVIEW FEES Building Plan Review \$ _____ Grading Plan Review \$ _____ Total Review Fees \$ _____ PLAN REVIEW PAYMENT Date _____ Receipt No. _____ CK _____																																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Occupancy</th> <th>Square Feet</th> <th>@ Rate</th> <th>= Valuation</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> Bedrooms _____ Stories _____		Occupancy	Square Feet	@ Rate	= Valuation																					PERMIT ISSUANCE FEES Adjusted Plan Review Fee \$ _____ Fast Track Fee \$ _____ Early Start Fee \$ _____ Building Permit Fee \$ _____ Water Assessment Fee \$ _____ Water Inspection Fee \$ _____ Sewer Assessment Fee \$ _____ Sewer Inspection Fee \$ _____ Grading Permit Fee \$ _____ Driveway Permit Fee \$ _____ Bond for \$ _____ Other \$ _____ Total Issuance Fees \$ _____ PERMIT ISSUANCE PAYMENTS Date _____ Rcpt _____ Ck _____ \$ _____ Date _____ Rcpt _____ Ck _____ \$ _____ Date _____ Rcpt _____ Ck _____ \$ _____ Date _____ Rcpt _____ Ck _____ \$ _____																
Occupancy	Square Feet	@ Rate	= Valuation																																							
LAND USE PARKING _____ FLOOD ELEV. _____ FIRM ZONE _____ FIRM MAP _____ LAND USE PERMITS: Case Number _____ Case Number _____ Case Number _____ Case Number _____		ENGINEERING/PUBLIC WORKS CITY WATER Units: _____ Case No: _____ Service - Size _____ Fire Line - Size _____ Metered _____ Extended Pay # _____ CITY SEWER Units: _____ Case No: _____ BOND Case No: _____ OTHER Case No: _____ ADEC On-site Water No _____ Date _____ ADEC On-site Sewer No _____ Date _____																																								
Water Connection Permits I hereby acknowledge receipt of a _____ inch meter yoke. X _____ Date: _____		PLAN REVIEW APPROVALS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th> </th> <th>Initials</th> <th>Date</th> </tr> </thead> <tbody> <tr><td>Fire</td><td> </td><td> </td></tr> <tr><td>Zoning</td><td> </td><td> </td></tr> <tr><td>Engineering</td><td> </td><td> </td></tr> <tr><td>Water</td><td> </td><td> </td></tr> <tr><td>Sewer</td><td> </td><td> </td></tr> <tr><td>Architectural</td><td> </td><td> </td></tr> <tr><td>Structural</td><td> </td><td> </td></tr> <tr><td>Plumbing</td><td> </td><td> </td></tr> <tr><td>Mechanical</td><td> </td><td> </td></tr> <tr><td>Electrical</td><td> </td><td> </td></tr> <tr><td>Access</td><td> </td><td> </td></tr> <tr><td>Special Inspection Form</td><td> </td><td> </td></tr> </tbody> </table> APPROVED FOR ISSUANCE Signature _____ Date _____			Initials	Date	Fire			Zoning			Engineering			Water			Sewer			Architectural			Structural			Plumbing			Mechanical			Electrical			Access			Special Inspection Form		
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CONDITIONS AND HOLDS ON PERMIT: _____ _____ _____ _____																																										

BUILDING PERMIT APPLICATION (Continued)**TYPES OF INSPECTIONS**

The inspections indicated below are normally required for each permit type. (Staff marks applicable items)

BU (Commercial Buildings)**BI (Com. Building Safety Inspection)**

C100 Setback
C110 Excavation/Footing
C120 Forms & Rebar
C130 Steel/Masonry
C140 Framing
C150 Insulation/Drywall
C160 Rated Walls & Assemblies
C170 Smoke Detect. & Alarm Systems
C180 Underground Plumbing
C190 Water Piping Test
C210 DWV Piping Test
C220 Plumbing Fixtures Final
C250 Cross Connection Control
C255 Meter Yoke with Meter
C265 Gas Piping
C270 Plenums & Ducts
C300 Furnace/Stove Clearance
C301 Combustion Air
C400 Ventilation
C410 Fire Dampers/Sprinklers
C420 Commercial Hoods
C430 Temporary Power
C440 Service/Panel
C450 Conduit & Raceway Systems
C460 Bonding/Grounding
C470 Grading/Drainage
C480 Landscaping/Parking
C490 Planning Requirements
C500 Roofing
C600 Zoning Final
C800 Commercial Final

DM (Demolition)

E100 Sewer Capped
E110 Debris Filled
E120 Excavation Filled
E500 Demolition Final

MS (Install Mobile Home)

I100 Setbacks
I110 Foundation
I120 Electrical Hookup
I130 Plumbing Hookup
I140 Porches & Stairs
I150 Skirting
I500 Mobile Home Final

SF (Single Family - 4 Units)**BI (Res. Building Safety Inspection)**

D100 Setbacks
D110 Excavation/Footing
D115 Stem Walls/Forms/Rebar
D120 Temporary Power
D140 Rough Framing
D150 Rough Electrical
D160 Rough Plumbing
D170 Underslab Utilities
D180 Vents (Bath, Dryer, etc.)
D190 Firewall Separation
D210 Yellow Tag Electrical
D220 Woodstove/Chimney
D230 Smoke Detection
D240 Insulation
D250 Cross Connection Control
D255 Meter Yoke
D257 Oil & Gas Piping/Tanks
D260 Grading/Drainage
D263 ADEC On-Site Water Final
D266 ADEC On-Site Sewer Final
D270 Repair/Rehab Exemption
D280 Res Zoning Final
D800 Residential Final

WS (Wood Stove)

K100 Approved Model
K110 Stove Clearances
K120 Stack Clearances
K130 Hearth
K200 Woodstove Final

FS (Fire Sprinkler)**FA (Fire Alarm)**

L100 Pressure Test
L110 Underground Flush
L120 Proper Bracing
L130 Return Bends
L140 Head Placement
L150 FDC Location
L160 Alarm Panel/Transmitter
L170 Alarm Zones
L180 Battery/Backup
L190 Phone Connection
L200 Reset Procedures
L210 System Test
L220 Detectors Spare
L500 Fire Final

PB (Plumbing)

J100 Underground Plumbing
J110 Water Piping
J120 DWV Piping
J130 Hydronic System
J140 Water Heater
J150 Water Softener
J160 Water Service
J170 Gas Piping
J180 Cross Connection Control
J500 Plumbing Final

MC (Mechanical)

H110 Plenums & Ducts
H120 Furnace
H130 Inlets & Outlets
H140 Combustion Air
H150 Compressor
H160 Appliance Clearance
H170 Smoke Detection Systems
H190 Commercial Hood
H500 Mechanical Final

EC (Electrical)

F100 Temporary Power
F110 Building Service
F120 Conduit & Raceway Systems
F140 General Wiring
F150 Cable Systems
F160 Bonding
F170 Grounding
F180 Devices & Equipment
F190 Smoke Detection
F500 Electrical Final

DW (Driveway)

N160 Location
N200 Grade
N210 Width
N330 Headwalls
N350 Culvert
N400 Curb Cut
N410 Curb Box/Thaw Wire
N420 Bond Return Request
N800 Driveway Final

WC (Water Connection)**WE (Water Extended)****WI (Water Inspection)****FC (Fire Connection)**

D100 Water Meter/Yoke
D105 Water Meter Required
D110 Size of Water Service
D120 Depth (Water) Depth
D130 Cross Connection Contr
D140 Pressure Test
D150 Thaw Waiver
D500 Turn Water OFF
D510 Seasonal Water Turn O
D550 Hold
D600 Turn Water ON
D610 Seasonal Water Turn O
Z080 Billing Authorization - W
D800 Water Final

SC (Sewer Connection)**SI (Sewer Inspection)**

C100 Depth
C110 Soil
C120 Material
C125 Grade
C130 Cleanouts
C140 Sewer Connection
C150 Sewer Disconnect
Z070 Billing Authorization - Se
C500 Sewer Final

GR (Grading)

G100 Retaining Walls, etc.
G120 Drainage
G130 Slopes
G140 Compaction
G150 Material
G200 Grading Final

ADDITIONAL CONDITIONS AND HOLDS (STAFF)

**ENTRY AND TESTING AUTHORIZATION**

Market: Alaska PNW	Property Owner(s): Nowell Avenue Development
Site Number: JN3072	Property Address: 3500 N. Douglas Highway Juneau, AK 99801
Site Name: Kowee Creek	

This Entry and Testing Authorization is granted by the Owner(s) of the Property described above, to New Cingular Wireless PCS, LLC, a Delaware limited liability company ("AT&T"), in connection with AT&T's desire to lease space on the Property for a wireless communications facility.

Owner hereby grants to AT&T and its authorized agents, a revocable right to enter the Property to perform any reasonable tests that AT&T deems desirable at AT&T's expense to determine the feasibility of constructing and operating a communications facility upon the Property, including but not limited to: (1) radio frequency testing; (2) soils testing; (3) environmental audits; (4) boundary surveys; (5) on-site feasibility assessment; (6) utilities ordering, coordination and installation; and/or (7) filing of zoning and other permit applications (the "Access Rights").

By exercising any of the Access Rights, AT&T agrees to: (a) repair any damage to the Property caused by AT&T's use of the Access Rights; and (b) indemnify, defend and hold Owner harmless from and against any and all claims, damages, losses and expenses arising out of the negligence or willful misconduct of AT&T or its agents in connection with the Access Rights.

THE OWNER HEREBY ACKNOWLEDGES THAT THE AT&T HAS MADE NO REPRESENTATIONS OR COMMITMENTS THAT A LEASE AGREEMENT CONCERNING THE PROPERTY WILL BE ENTERED INTO IN THE FUTURE.

This constitutes the entire understanding between the parties regarding the Access Rights. Any prior understandings, whether oral or written are superseded. This authorization is governed by the laws of the State in which the Property is located.

Jeff Trucano
Signature

Jeff Trucano, Vice President
Printed Name and Title

9/10/18
Date



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)

- Page 1 ☒ 1) Completed Building Permit Application
- Page 3 ☒ 2) Completed WCF Application
- Page 4 ☒ 3) Completed Development Permit Application
- ☒ 4) Fees (contact the Permit Center at (907) 586-0770 to determine amount)
- Page 31 ☒ 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
- Qualified person resume
pages 31-1, 31-2, 31-3, 31-4
- Page 8 ☒ 6) Site address and CBJ Parcel Identification Number (tax ID number)
- Page 8 ☒ 7) Site size and dimensions
- Pages 12-28 ☒ 8) Site plan showing all existing and proposed structures, buildings, fences (their height) and landscaping
- Page 9 ☒ 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
- Page 30 ☒ 10) Certification that proposal complies with applicable laws pertaining to service offered
- Page 32 ☒ 11) The following documents from a licensed Alaska Professional Engineer:
 - Page 32 ☒ 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
 - Page 32 ☒ Signed and stamped letter indicating the proposed WCF is in compliance with industry practices of the National Association of Tower Erectors
- Page 36 ☒ 12) Letter indicating compliance with FAA regulations in 14 CFR Part 77 (if applicable)



WIRELESS COMMUNICATION FACILITY CHECKLIST

Packet Page 91 of 227



- Page 37 ☒ 13) 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
- Page 32, 38 ☒ 14) 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)
- ☒ 15) A narrative describing compliance with subsections under 49.65.930:
- | | |
|---|--|
| ☒ Concealed & Non-concealed antenna (page 10) | ☒ Setbacks (page 16) |
| ☒ Security (page 80) | ☒ Affects to mapped (page 70) |
| ☒ Signage (page 29) | ☒ Viewsheds (page 70) |
| ☒ Lighting (N/A) | ☒ WCF Master Plan |
| ☒ Design Criteria (page 38) | ☒ Structural Assessment (32, 38) |
- ☒ 16) Visual Impact Study consisting of:
- Page 70 ☒ Zone of Visibility Map
- Page 71 ☒ 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
- Pages 74-79 ☒ 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
- Page 79 ☒ Description of visual impact
- Page 79 ☒ Narrative or drawing describing how the base of the tower and accessory structures will be screened from view
- Page 68 ☒ 17) 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.)
- Page 69 ☒ 18) Narrative indicating that the design height is the minimum necessary for effective functioning of provider's network
- Page 74 ☒ 19) Visual impact assessment according to 49.65.970(c)(2)(B)
- Page 73 ☒ 20) Balloon Test according to 49.65.970(c)(2)(D)
- Page 82 ☒ 21) Propagation study

REQUEST FOR
Special Use Permit

100' Monopine Wireless Communications Facility

3500 N. Douglas Highway, Juneau, AK 99801

APPLICANT: Mastec Network Solutions - Alaska
c/o Alissa Haynes, Agent for Applicant
Phone: (907) 727-7907
685 Matterhorn Drive
Park City, Utah 84098

CO-APPLICANT: AT&T Towers

**IDENTIFICATION
OF APPLICANTS:** Lessee/Licensee

LOCATION: The 35'x35' leased premises are located on a 9,844 square foot parcel at 3500 N. Douglas Highway Highway.

**LEGAL
DESCRIPTION:** ATS 123 Lot 1

TPN: 1D060L0100101

FEE OWNER: Nowell Avenue Development

LAND AREA: .23 Acres /9,844 square feet

LAND USE: Existing Use: Industrial storage
Proposed Tower Height: 95' AMSL
Overall Appurtenance Height: 100'

SITE: Acres: .02 acres (35'x35' as a portion of the .23 acre parcel)
Vegetation: Trees and brush bordering NW property boundary
Zoning: W-I Waterfront Industrial
Topography: Mostly level on leased premises

I. INTRODUCTION

Mastec is requesting a Special Use or Conditional Use Permit to install a new AT&T 100' monopine to provide coverage on Douglas Island and across the Gastineau Channel.

The monopine will be installed within the 1,225 square foot leased area at 3500 N. Douglas Highway.

II. PROJECT LOCATION

Located along the water side of Douglas Highway and the Juneau- the site is predominately level with downhill slope to the waterfront. The character of the area is industrial, with waterfront commercial and industrial uses to the east and west and dense forest to the south. The lot is mostly cleared and used for materials storage.

III. PROJECT SITE SELECTION

The existing leased area was selected for the necessity to provide coverage and improving the AT&T network.

IV. PROJECT DESCRIPTION

Mastec proposes to construct a new 100' monopine constructed with slip joint and breakpoint technology which meets the 110% fall zone requirement. The new monopole will allow for three (3) additional antenna arrays on the tower for carrier co-location.

V. INFRASTRUCTURE CONSIDERATIONS

Water and Wastewater

The proposed project does not require a water connection or Borough service. The requested use will not generate a need for wastewater disposal.

Roadway and Access

The facility access is off of Douglas Highway and is located more than 95' from the property line.

Fire and Police

Fire and Police will not be affected.

Other Utilities

Power and telephone service are existing facilities on the property.

VI. HISTORICAL and CURRENT STATUS

The project location is used commercially and will be operated by AT&T as a wireless telecommunications facility.

VII. ENVIRONMENTAL CONSIDERATIONS**General Description**

The facilities will not create unusual noise, traffic or other conditions or situations that may be objectionable, detrimental, or incompatible with the other permitted uses in the vicinity.

Flora and Fauna

The vegetation on the Property consists entirely of native vegetation consistent with the region. No threatened or endangered plant species were observed upon any of the parcel. The vegetation on the facility will not be threatened or endangered.

Native species may be found within the Property. Mammals that may be found include small rodents, rabbits, fox, moose and bear passing through. Birds on the facility may include Ptarmigan, Eagles, Crows and other native birds.

The Property does not abut nor is situated within Natural Area Reserve or Wildlife Refuge or Sanctuary.

Visual

There will not be any significant impact visually to the site. The monopole will be concealed to have the appearance of a 100' pine tree. There are native pine trees within the area and immediately to the south of the parcel.

Air Quality/Noise

The facility will have no long-term impacts on the air quality and ambient noise levels in the area.

VIII. PLANNING AND LAND USE CONSIDERATIONS

Surrounding Land Uses

The area surrounding this parcel is zoned WI. The Gastineau Channel is to the north of the parcel and the surrounding Land Use to the east and west is waterfront industrial. The Douglas Highway is to the south of the parcel.

There will be no increase in traffic as the facility is unmanned. Unless in times that require immediate attention, normal traffic will be monthly maintenance visits of approximately 1 hour.

All of the improvements are designed and constructed in accordance with the Telecommunications Act of 1996 (47 U.S.C. 332(C)), as amended, and the Federal Communication Commission's guidelines. The subject antenna and related equipment have been designed to comply with, and do comply with, all FCC guidelines.

IX. JUSTIFICATION FOR THE REQUEST

The population of Juneau has increased making a high demand for the necessity to install new wireless communications facility. In order to meet the demands of the Juneau residents and provide network coverage, the addition and upgrade of antenna equipment is crucial. The proposed monopole will allow AT&T to improve their network by expanding coverage with the newest technology as well as allow co-location for carriers.

The proposed development will have no significant negative impact on the area. The facility (a) is compatible with the existing uses in areas on or around the Property; (b) does not have substantial negative impacts on scenic or open space resources within the area; and (c) will not increase runoff or otherwise endanger ecosystem. The facility has no significant adverse effects on recreational, historic or economic resources and will not create any greater impacts than those already existing.

X. CONCLUSION

Broadcasting and wireless communications technology are ubiquitous, with many people using wireless phones in their everyday lives. To meet the growing demands of the community, carriers strive to provide a consistent high-quality level of service. This facility provides and meets the demands of that service.

Mastec thus requests a pre-application meeting for this facility for the following:

- The current use is compatible with the permit standards through Special Use Permit and Conditional Use Permit applications.
- The current use is not detrimental to persons or property.

- The current use does not cause substantial environmental consequences and
- The current use is consistent with the intent of the telecommunications facilities code. In addition to the above findings, Mastec finds the facility suitable in that:
- The location of this facility is necessary to achieve the existing broadcast coverage.
- The heights of the antennas are necessary for the effective functioning for each carrier that will co-locate on the tower in order to achieve the necessary coverage.
- Power and Telco is on facility.
- The permitted use will allow for co-location on the tower for a total of four (4) antenna array heights.

Attachment A - Application Packet

GENERAL NOTES:

- DRAWINGS ARE NOT TO BE SCALED. WRITTEN DIMENSIONS TAKE PRECEDENCE. THIS SET OF DOCUMENTS IS INTENDED TO BE USED FOR DIAGRAMMATIC PURPOSES ONLY. UNLESS NOTED OTHERWISE, THE GENERAL CONTRACTOR'S SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR, AND ANY REQUIREMENTS DEEMED NECESSARY TO COMPLETE PROJECT AS DESCRIBED IN THE DRAWINGS AND OWNER'S PROJECT MANUAL.
- PRIOR TO THE SUBMISSION OF BIDS, CONTRACTORS INVOLVED SHALL VISIT THE JOB SITE TO FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE PROPOSED PROJECT. CONTRACTORS SHALL VISIT THE CONSTRUCTION SITE WITH THE ARCHITECT/ENGINEER PRIOR TO BIDDING TO VERIFY FIELD CONDITIONS AND CONFIRM THAT THE PROJECT WILL BE COMPLETED AS SHOWN. PRIOR TO PROCEEDING WITH CONSTRUCTION, ANY ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER VERBALLY AND IN WRITING.
- THE ARCHITECT/ENGINEERS HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. CONTRACTORS BIDDING THE JOB ARE NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS. THE BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE ARCHITECT/ENGINEER OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO SUBMISSION OF CONTRACTORS PROPOSAL. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED OTHERWISE.
- THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO MANUFACTURER'S VENDORS SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
- ALL WORK PERFORMED ON THE PROJECT AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDINANCES OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK.
- GENERAL CONTRACTOR SHALL PROVIDE, AT THE PROJECT SITE, A FULL SET OF CONSTRUCTION DOCUMENTS UPDATED WITH THE LATEST REVISIONS AND ADDENDUM OR CLARIFICATIONS FOR USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT. THIS SET IS A VALID CONTRACT DOCUMENT ONLY IF THE TITLE SHEET IS STAMPED "FOR CONSTRUCTION" AND EACH SUCCESSIVE SHEET BEARS THE ARCHITECT'S SIGNED WET STAMP.
- THE STRUCTURAL COMPONENTS OF ADJACENT CONSTRUCTION OR FACILITIES ARE NOT TO BE ALTERED BY THIS CONSTRUCTION PROJECT UNLESS NOTED OTHERWISE.
- SEAL ALL PENETRATIONS THROUGH FIRE-RATED AREAS WITH U.L. LISTED OR FIRE MARSHALL APPROVED MATERIALS IF APPLICABLE TO THIS FACILITY AND/OR PROJECT SITE.
- CONTRACTOR TO PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2A OR 2A-B C, WITH A MINIMUM TRAVEL DISTANCE TO ALL PORTIONS OF PROJECT AREA DURING CONSTRUCTION.
- CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR AROUND THE PROPERTY.
- CONTRACTOR SHALL KEEP GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, AND RUBBISH. CONTRACTOR SHALL REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OR PREMISES. SITE SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
- THE GENERAL CONTRACTOR SHALL RECEIVE WRITTEN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL PERFORM WORK DURING OWNER'S PREFERRED HOURS TO AVOID DISTURBING NORMAL BUSINESS.
- THE CONTRACTOR SHALL PROVIDE AT&T WIRELESS, LLC. PROPER INSURANCE CERTIFICATES NAMING AT&T WIRELESS, LLC. AS ADDITIONAL INSURED, AND AT&T WIRELESS, LLC. PROOF OF LICENSE(S) AND FE & P&A INSURANCE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND COORDINATING ALL INSPECTIONS.
- CAUTION! CALL BEFORE YOU DIG! BURIED UTILITIES EXIST IN THE AREA AND UTILITY INFORMATION SHOWN MAY NOT BE COMPLETE. CONTACT THE ONE-CALL UTILITY LOCATE SERVICE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION. DIAL 811
- CONTRACTOR TO DOCUMENT ALL WORK PERFORMED WITH PHOTOGRAPHS AND SUBMIT TO AT&T WIRELESS, LLC. ALONG WITH REDLINED CONSTRUCTION SET.
- CONTRACTOR TO DOCUMENT ALL CHANGES MADE IN THE FIELD BY MARKING UP RED LINES. THE APPROVED CONSTRUCTION SET AND SUBMITTING THE REDLINED SET TO AT&T WIRELESS, LLC. UPON COMPLETION.
- FOR COLLOCATION SITES: CONTACT TOWER OWNER REPRESENTATIVE FOR PARTICIPATION IN BID WALK.
- GENERAL CONTRACTOR SHALL TO COORDINATE ALL POWER INSTALLATION WITH POWER COMPANY AS REQUIRED. CONTRACTOR TO REPORT POWER INSTALLATION COORDINATION SOLUTIONS TO NETWORK CARRIER REPRESENTATIVE, PROJECT CONSTRUCTION MANAGER AND ARCHITECT.
- ANY SUBSTITUTIONS OF MATERIALS AND/OR EQUIPMENT, MUST BE APPROVED BY AT&T CONSTRUCTION MANAGER.
- IN THE CASE OF ROOFTOP SOLUTIONS FOR EQUIPMENT AND/OR ANTENNA FRAMES WHERE PENETRATION OF EXISTING ROOFING MATERIALS OCCUR, THE GENERAL CONTRACTOR SHALL COORDINATE WITH BUILDING OWNER AND BUILDING ROOFING CONTRACTOR OF RECORD FOR INSTALLATION, PATCH, REPAIR OR ANY AUGMENTATION TO THE ROOF. AND HAVE THE WORK GUARANTEED UNDER THE ROOFING CONTRACTOR'S WARRANTY FOR MOISTURE PENETRATION OR OTHER FUTURE BREACH OF ROOFING INTEGRITY.
- IN THE CASE OF ROOFTOP SOLUTIONS WITH THE INSTALLATION OF ANTENNAS WITH CONCEALED (SHROUDED) SUPPORT FRAMES OR TRIPODS, THE GENERAL CONTRACTOR SHALL COORDINATE WITH THE FRP DESIGNER/ARCHITECT TO ENSURE THAT THE FINAL FRP SHROUD IS SIMULATING IN APPEARANCE DESIGNATED EXISTING EXTERIOR BUILDING FACADE MATERIALS, TEXTURES, AND COLORS. THE CONTRACTOR SHALL FURTHERMORE ENSURE THE USE OF COUNTERSUNK FASTENERS IN ALL FRP CONSTRUCTION WHEN PHOTO SIMULATIONS ARE PROVIDED. THE CONTRACTOR SHALL ENSURE THAT FINAL CONSTRUCTION REPRESENTS WHAT IS INDICATED IN PHOTO SIMULATIONS. SHOP DRAWINGS SHALL BE PROVIDED TO THE GENERAL CONTRACTOR, CONSTRUCTION COORDINATOR, AND ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION.

GENERAL NOTES (CONT'D):

- IN THE CASE OF ROOFTOP SOLUTIONS FOR EQUIPMENT AND/OR ANTENNA FRAMES WHERE ANCHORING TO A CONCRETE ROOF SLAB IS REQUIRED, CONTRACTORS SHALL CONFIRM PRIOR TO SUBMITTING BID) WITH CONSULTING CONSTRUCTION COORDINATOR AND ARCHITECT THE PRESENCE OF POST TENSION TENDONS WITHIN THE ROOF SLAB. RESULTING FROM AN UNDOCUMENTED DESIGN CHANGE IN THE EXISTING BUILDING "AS-BUILT DRAWING SET" - HAVING INDICATED AN ORIGINAL DESIGN SOLUTION OF REINFORCED CONCRETE W/ EMBEDDED STEEL REBAR. IN THE EVENT POST TENSION SLAB SOLUTION IS PRESENT, CONTRACTOR SHALL INCLUDE PROVISIONS FOR A RAY PROCEDURES IS INCLUDED IN BID) FOR ALL PENETRATION AREAS WHERE ANCHORING OCCURS.
- GENERAL & SUB CONTRACTORS SHALL USE STAINLESS STEEL METAL LOCKING TIES FOR ALL CABLE TRAY THE DOWNS AND ALL OTHER GENERAL TIE DOWNS (WHERE APPLICABLE). PLASTIC ZIP TIES SHALL NOT BE PERMITTED FOR USE ON AT&T PROJECTS. RECOMMENDED MANUFACTURER SHALL BE: PANDUIT CORP. METAL LOCKING TIES MODEL NO. M-745-CP UNDER SERIES-304 G R EQUAL. PANDUIT PRODUCT DISTRIBUTED BY TRACOR OF TACOMA, WA.

DESIGN CRITERIA:

- THE STRUCTURAL DESIGN OF THIS PROJECT IS IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE 2012.

DESIGN LOADS:

-ROOF SNOW LOAD	_____	PER STRUCTURAL
-BASIC WIND SPEED	_____	PER STRUCTURAL
-WIND EXPOSURE	_____	PER STRUCTURAL

CONCRETE NOTES:

- ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI-318.
- CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH CHAPTER 19 OF THE IBC 2012. STRENGTHS AT 28 DAYS AND MIX CRITERIA SHALL BE AS FOLLOWS:

TYPE OF CONSTRUCTION	28 DAY STRENGTHS (f _c)	W/C RATIO	MINIMUM CEMENT CONTENT PER CUBIC YARD
A. SLABS ON GRADE TOPPING SLABS CONCRETE PIERS	3,000 PSI	≤ 45	5 1/2 SACKS
B. ALL STRUCTURAL CONCRETE EXCEPT WALLS	4,000 PSI	≤ 45	6 1/2 SACKS
C. CONCRETE WALLS	4,000 PSI	≤ 45	6 1/2 SACKS

CEMENT SHALL BE ASTM C150, PORTLAND CEMENT TYPE I U.N.O.

- THE GENERAL CONTRACTOR SHALL SUPERVISE AND BE RESPONSIBLE FOR THE METHODS AND PROCEDURES OF CONCRETE PLACEMENT.
 - ALL CONCRETE WITH SURFACES EXPOSED TO STANDING WATER SHALL BE AIR-ENRICHED WITH AN AIR-ENRICHING AGENT CONFORMING TO ASTM C260, C494, C618, C689 AND C1017. TOTAL AIR CONTENT SHALL BE IN ACCORDANCE WITH TABLE 19.4.2.1 OF THE IBC 2012.
 - REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1) GRADE 60, fy 60,000 PSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, fy 40,000 PSI. GRADE 60 REINFORCING BARS INDICATED ON DRAWINGS TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCING COMPLYING WITH ASTM A615(S1) MAY BE WELDED ONLY IF MATERIAL PROPERTY REPORTS INDICATING CONFORMANCE WITH WELDING PROCEDURES SPECIFIED IN A-W-S D14 ARE SUBMITTED.
 - REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI 315 AND 318. LAP ALL CONTINUOUS REINFORCEMENT AT LEAST 30 BAR DIAMETERS OR A MINIMUM OF 2'-0". PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS AT LEAST 30 BAR DIAMETERS OR A MINIMUM OF 2'-0". LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.
 - WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.
 - SPIRAL REINFORCEMENT SHALL BE PLAIN WIRE CONFORMING TO ASTM A615, GRADE 60, fy 60,000 PSI.
 - NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE CONSULTANT.
 - CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
- | | |
|---|---|
| - FOOTINGS AND OTHER UNIFORMED SURFACES, EARTH FACE | 3" |
| - FORMED SURFACES EXPOSED TO EARTH OR WEATHER | (#6 BARS OR LARGER) 2"
(#5 BARS OR SMALLER) 1 1/2" |
| - SLABS AND WALLS (INTERIOR FACE) | 3/4" |
- BARS SHALL BE SUPPORTED ON CHAIRS OR DOBBIE BRICKS.
 - ANCHOR BOLTS TO CONFORM TO ASTM A307.
 - NON-SHRINK GROUT SHALL BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (3,000 PSI MINIMUM).
 - ALL EXPANSION ANCHORS TO BE HILTI BRAND. ADHESIVE ANCHORS REQUIRE TESTING TO CONFIRM CAPACITY UNLESS WAIVED BY ENGINEER.

STRUCTURAL STEEL NOTES:

- SHOP DRAWINGS FOR STRUCTURAL STEEL SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW PRIOR TO FABRICATION.
- STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION (INCLUDING FIELD WELDING, HIGH STRENGTH FIELD BOLTING, EXPANSION BOLTS, AND THREADED EXPANSION ANCHORS) SHALL BE BASED ON THE A.I.S.I. "SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" LATEST EDITION. SUPERVISION SHALL BE IN ACCORDANCE WITH IBC 2012 CHAPTER 22. BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE CONSULTANT. THE CONSULTANT SHALL BE FURNISHED WITH A COPY OF ALL INSPECTION REPORTS AND TEST RESULTS.
- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
TYPE OF MEMBER
A. WIDE FLANGE SHAPE ASTM A992, Fy 50 KSI
B. OTHER SHAPE, PLATES AND ROD ASTM A36, Fy 36 KSI
C. PIPE COLUMNS ASTM A53, Fy 35 KSI
D. STRUCTURAL TUBING ASTM A500, Fy 48 KSI
E. ANCHOR BOLTS ASTM A307
F. CONNECTION BOLTS ASTM A325
ALL MATERIAL TO BE HOT DIPPED GALVANIZED AFTER FABRICATION PER A123/A123M-00.
5. ALL WELDING SHALL BE IN CONFORMANCE WITH A.I.S.I. AND AWS STANDARDS AND SHALL BE PERFORMED BY W.A.B.O. CERTIFIED WELDERS USING E70 XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY AWS) SHALL BE USED. WELDING OF GRADE 50 REINFORCING BARS (IF REQUIRED) SHALL BE PERFORMED USING LOW WELDING ELECTRODES. WELDING OF GRADE 40 REINFORCING BARS (IF REQUIRED) SHALL BE PERFORMED USING E70 XX ELECTRODES. WELDING WITHIN 4" OF COLD BENDS IN REINFORCING STEEL IS NOT PERMITTED. SEE REINFORCING NOTE FOR MATERIAL REQUIREMENTS OF WELDED BARS.
6. COLD-FORMED STEEL FRAMING MEMBERS SHALL BE OF THE SHAPE, SIZE, AND GAGE SHOWN ON THE PLANS. PROVIDE MINIMUM SECTION PROPERTIES INDICATED. ALL COLD-FORMED STEEL FRAMING SHALL CONFORM TO THE A.I.S.I. "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS."
7. BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (3/4" DIA.) AND SHALL HAVE A MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
8. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A307 BOLTS UNLESS NOTED OTHERWISE.
9. ALL STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE DESIGN & CONSTRUCTION SPECIFICATION AND IN ACCORDANCE WITH ASTM A333 UNLESS NOTED OTHERWISE.
10. ALL WELDS TO BE 1/4" FILLET UNLESS NOTED OTHERWISE.
11. TOUCH UP ALL FIELD DRILLING AND WELDING WITH 2 COATS OF GALVACON (ZINC RICH PAINT) OR APPROVED EQUAL.

TOWER/POLE NOTES:

- VERIFICATION THAT THE PROPOSED TOWER/POLE CAN SUPPORT THE PROPOSED ANTENNA LOADING IS TO BE DONE BY OTHERS.
- PROVIDE SUPPORTS FOR THE ANTENNA COAX CABLES TO THE ELEVATION OF ALL INITIAL AND FUTURE ANTENNAS. ANTENNA COAX CABLES ARE TO BE SUPPORTED AND RESTRAINED AT THE CENTERS SUBSTITUTED TO THE MANUFACTURER'S REQUIREMENTS.

ABBREVIATED ROOF TOP SAFETY PROCEDURES (WHEN APPLICABLE):

FALL PROTECTION METHODS AND EQUIPMENT
ROOF TOP INSTALLATIONS

- FOR WORK IS BEING PERFORMED WITHIN 25' OF AN UNPROTECTED ROOF EDGE, THE CONSTRUCTION SUPERVISOR SHALL DESIGNATE A TRAINED SAFETY MONITOR TO OBSERVE THE MOVEMENTS AND ACTIVITIES OF THE CONSTRUCTION WORKERS.
- SAFETY MONITOR SHALL WARN CONSTRUCTION WORKERS OF HAZARDS (E.G., BACKING UP TOWARD A ROOF EDGE, ETC.) OR UNSAFE ACTIVITIES. THE SAFETY MONITOR MUST BE ON THE SAME ROOF AND WITHIN VISUAL AND VERBAL DISTANCE OF THE CONSTRUCTION WORKERS.
- CONSTRUCTION INVOLVING WORKERS TO APPROACH WITHIN 6' OR LESS OF AN UNPROTECTED ROOF EDGE, REQUIRES WORKERS TO USE SAFETY LINE.
- SAFETY LINE SHALL BE MINIMUM 1/2" DIAMETER NYLON, WITH A NOMINAL TENSILE STRENGTH OF 5400 LBS.
- SAFETY LINE SHALL BE ATTACHED TO A SUBSTANTIAL MEMBER OF THE STRUCTURE.
- SAFETY LINE LENGTH SHALL BE SET ALLOWING CONSTRUCTION WORKER TO REACH EDGE OF ROOF, BUT NOT BEYOND.
- SAFETY BELTS SHALL BE WORN BY ALL CONSTRUCTION WORKERS.
- MONTHLY SAFETY INSPECTION AND MAINTENANCE OF THE FALL PROTECTION EQUIPMENT SHALL OCCUR BY THE SAFETY COMMITTEE REPRESENTATIVES, INCLUDING:
INSPECTION OF CONSTRUCTION AREA FOR HAZARDS
USE OF AN INSPECTION CHECKLIST
INTERVIEWING COWORKERS REGARDING SAFETY CONCERNS
REPORTING AND DOCUMENTING ANY HAZARDS
REPORTING HAZARDS TO THE SAFETY COMMITTEE FOR CONSIDERATION
POSTING RESULTS OF INSPECTION AND ANY ACTION TAKEN
RECEIVING AN UNBIASED REVIEW OF ONE'S OWN WORK AREA BY ANOTHER COWORKER SAFETY REPRESENTATIVE
REFER TO ROOFTOP WORK AREA SAFETY PROTOCOL
NATIONAL ASSOCIATION OF TOWER ERECTORS 2000 PUBLICATION
REFERENCED OSHA REGULATIONS/STANDARDS SHALL BE REVIEWED BY TOWER ERECTORS.
EQUIPMENT INSTALLERS, AND TOWER/ROOF TOP CONTRACTORS/SUBCONTRACTORS
29 CFR 1926.500 - SCOPE, APPLICATION, AND DEFINITIONS
29 CFR 1926.501 - DUTY TO HAVE FALL PROTECTION
19 CFR 1926.502 - FALL PROTECTION SYSTEMS CRITERIA AND PRACTICES

SYMBOLS AND ABBREVIATIONS

A/C	AIR CONDITIONING	LBS	POUNDS
AGL	ABOVE GRADE LEVEL	MAX	MAXIMUM
APPROX	APPROXIMATELY	MCH	MECHANICAL
BLDG	BUILDING	MTL	METAL
BLK	BLOCKING	MFR	MANUFACTURE
CLG	CEILING	MGR	MANAGER
CLR	CLEAR	MIN	MINIMUM
CONC	CONCRETE	MISC	MISCELLANEOUS
CONST	CONSTRUCTION	NA	NOT APPLICABLE
CONT	CONTINUOUS	NSC	NOT IN CONTRACT
		NTS	NEAR SIDE
		NTS	NOT TO SCALE
		OC	ON CENTER
		OD	OUTSIDE DIAMETER
		PLYWD	PLYWOOD
		PROJ	PROJECT
		PROP	PROPERTY
		PT	PRESSURE TREATED
		REQ	REQUIRED
		RO	ROUGH OPENING
		SHT	SHEET
		SM	SIMILAR
		SPEC	SPECIFICATION
		SF	SQUARE FOOT
		SS	STAINLESS STEEL
		STL	STEEL
		STRUCT	STRUCTURAL
		STD	STANDARD
		STU	SUSPENDED
		THRU	THROUGH
		TNG	TINNED
		TYP	TYPICAL
		UNO	UNLESS NOTED OTHERWISE
		VERT	VERTICAL
		VE	VERTICAL IN FIELD
		W	WITH
		W/O	WITHOUT
		WATER	WATER PROOF
ID	INSIDE DIAMETER		
IN	INCH		
INFO	INFORMATION		
INSUL	INSULATION		
INT	INTERIOR		
IBC	INTERNATIONAL BUILDING CODE		
		TELEPHONE	
		POWER	
		GROUND WIRE	
		COAXIAL CABLE	
		ANTENNA	
		CENTERLINE	
		EXISTING	
		DETAIL NUMBER	
		SHEET NUMBER	

TRANSMITTING NOTES:

APPLICABLE BUILDING CODES AND STANDARDS:

- ALL TRANSMITTING ANTENNAS WILL BE INSTALLED IN A MANNER AS SET FORTH BY THE MANUFACTURER AND BY THE FEDERAL COMMUNICATIONS COMMISSION AS MEETING THE CURRENT AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) STANDARD FOR NONIONIZING ELECTROMAGNETIC RADIATION (NIE).
- TELECOMMUNICATIONS INDUSTRY ASSOCIATION, (TIA) 222-G, STRUCTURAL STANDARD FOR STRUCTURAL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES.
- INSTITUTE FOR ELECTRICAL, AND ELECTRONICS ENGINEERS' IEEE 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM IEEE 1000 (1999) RECOMMENDED PRACTICES FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT.
- IEEE C92.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE").
- TIA 607 COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS.



Select Site Acquisition, LLC
1000 S. 10TH AVE.
LIBERTY LAKE, WA 99019

DHD
ARCHITECTURE PLLC
15424 14TH AVE SE
BOZEMAN, WA 99007
PHONE: 509.325.1111
EMAIL: carl@ddh.com
HTTP://WWW.DDHARCHITECTURE.BIZ

JN3072
KOWEE CREEK NSB
3500 N DOUGLAS HWY
JUNEAU, AK 99801

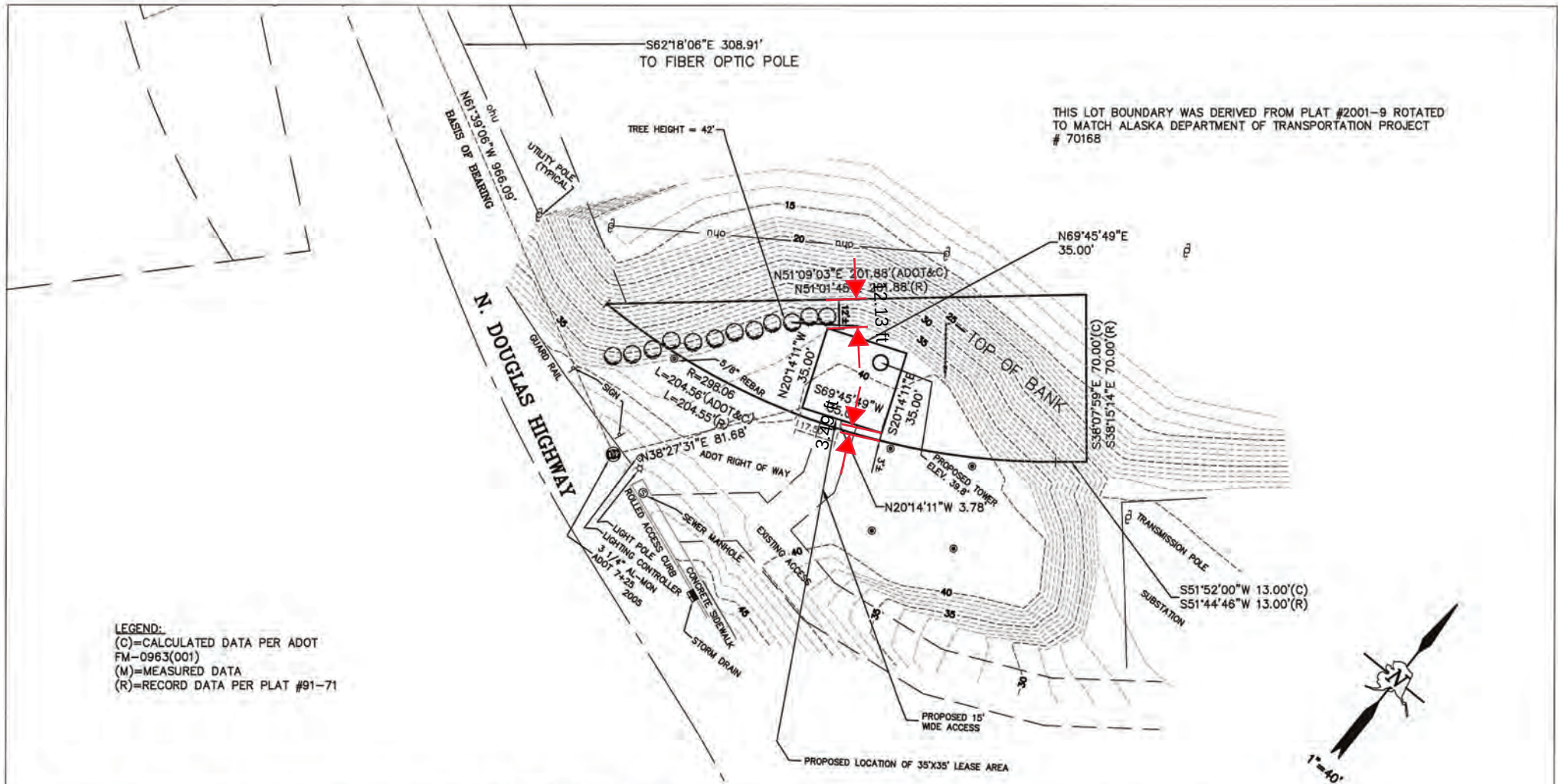
ISSUED DATE: 12-18-19
DATE: 12-18-19
NO. 08-01-12-9
DATE: 08-01-12-9
NO. 08-01-12-9
DATE: 08-01-12-9
NO. 08-01-12-9



SHEET TITLE:
GENERAL NOTES

SHEET NUMBER:
G-1

Attachment A - Application Packet

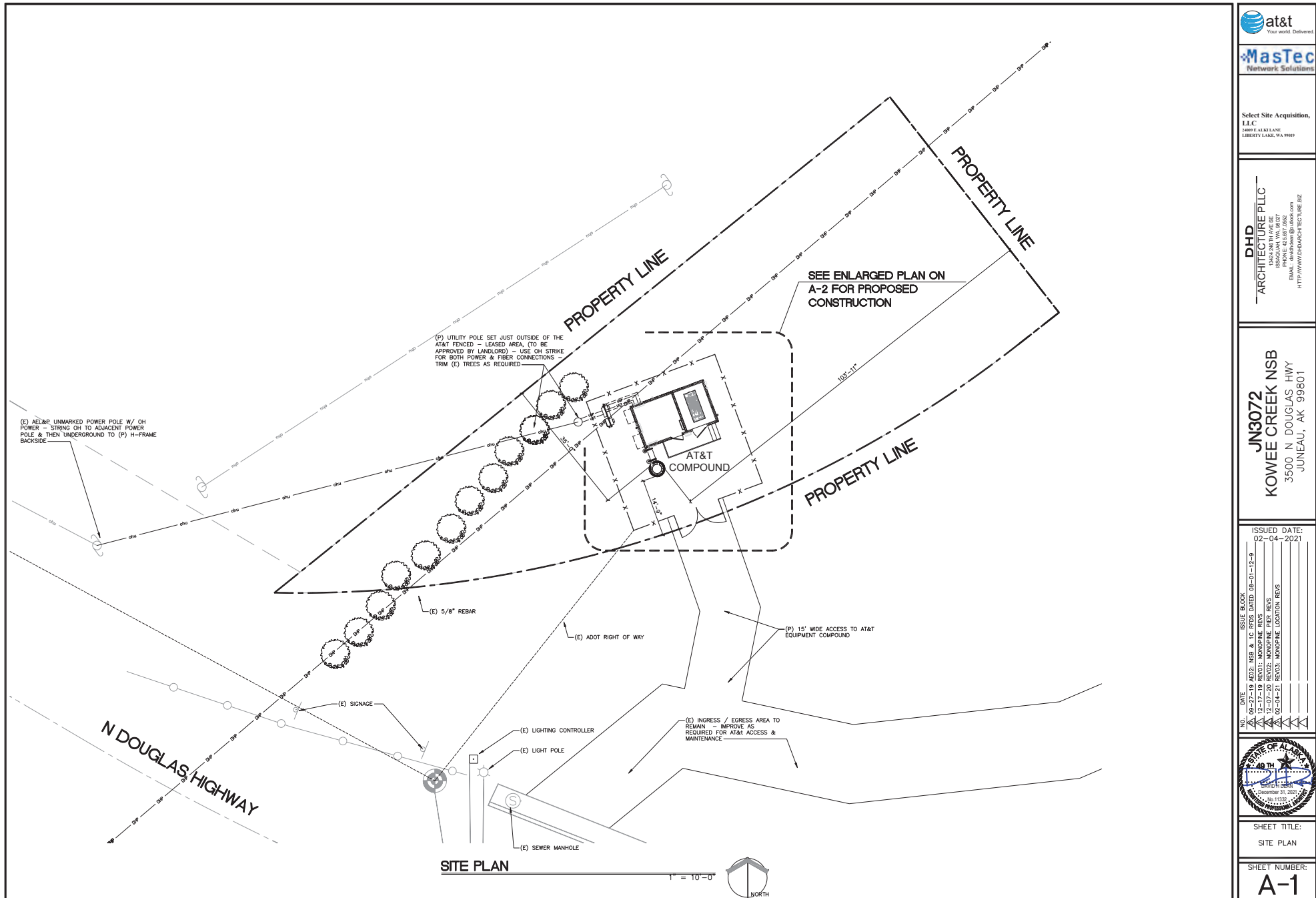


 STATE OF ALASKA 49TH Robert J. Farmer 10615-S REGISTERED PROFESSIONAL LAND SURVEYOR	CELL TOWER: KOWEE CREEK JN3072	FARMER SURVEYING 9131 E. FRONTAGE RD. PALMER, ALASKA 99645 PH: (907)745-0222 bob@farmersurveying.com www.farmersurveying.com	
	#126467	WO: 1900201 PAGE: 1 of 1 SCALE: 1"= 40'	FB:19-05 FILE: 1900201SP
	I HEREBY CERTIFY THAT A SITE SURVEY WAS PERFORMED UNDER MY DIRECTION ON THE FOLLOWING DESCRIBED PROPERTY: LOT 1, ALASKA TIDELANDS SURVEY No. 123, PLAT #2001-9 JUNEAU RECORDING DISTRICT, JUNEAU, ALASKA. SURVEYED ON THE 19th OF AUGUST, 2019.		
	©2019		

NOTES:

1. THIS SURVEY REPRESENTS VISIBLE IMPROVEMENTS AND CONDITIONS ON THE DATE OF SURVEY.
2. ELEVATION AT THE GROUND OF THE PROPOSED TOWER SITE HAS A GEOID12B (NAVD88) ELEVATION OF 39.8 FEET, DERIVED FROM AN OPUS SOLUTION OF A STATIC SURVEY.
3. THE PURPOSE OF THIS SURVEY IS TO DEPICT THE PROPOSED CELL TOWER IMPROVEMENTS AS THEY RELATE TO PROPERTY LINES. THIS SURVEY DOES NOT DEPICT ALL IMPROVEMENTS LOCATED ON THIS PARCEL.
4. IT IS THE USERS RESPONSIBILITY TO DETERMINE THE EXISTENCE OF ANY EASEMENTS, COVENANTS, OR RESTRICTIONS WHICH DO NOT APPEAR ON THE RECORDED PLAT OR IS SUPPLIED BY CLIENT.
5. THIS DOCUMENT DOES NOT CONSTITUTE A BOUNDARY SURVEY AND IS SUBJECT TO ANY INACCURACIES THAT A SUBSEQUENT BOUNDARY SURVEY MAY DISCLOSE.

Attachment A - Application Packet



(P) UTILITY POLE SET JUST OUTSIDE OF THE AT&T FENCED - LEASED AREA. (TO BE APPROVED BY LANDLORD) - USE OH STRIKE FOR BOTH POWER & FIBER CONNECTIONS - TRIM (E) TREES AS REQUIRED

(P) AT&T UNDERGROUND CONDUIT - AVOID (E) UTILITIES, V.I.F.

(P) ICE BRIDGE W/ COAX & FIBER - DC LINES FROM SHELTER TO ANTENNAS
 $\frac{2}{A-3}$

(P) AT&T BARBED WIRE FENCE & MATCHING ACCESS GATES - SEE PLAN FOR ADDITIONAL INFO
 $\frac{1}{A-5}$

PROPOSED 95' MONOPINE W/ ANTENNAS, (W/ CAMOUFLAGE BRANCHES) & MOUNTS PAINTED TO MATCH

SATN13

(P) PIER FOUNDATION, PLATFORM & STEPS PER STRUCTURAL

(P) (2) FIBER TRUNK & (6) DC TRUNK FROM SHELTER TO TOWER EQUIPMENT

AT&T FENCED COMPOUND

12'-0" GATE

11'-0"

35'-0" AT&T LEASE - FENCED AREA

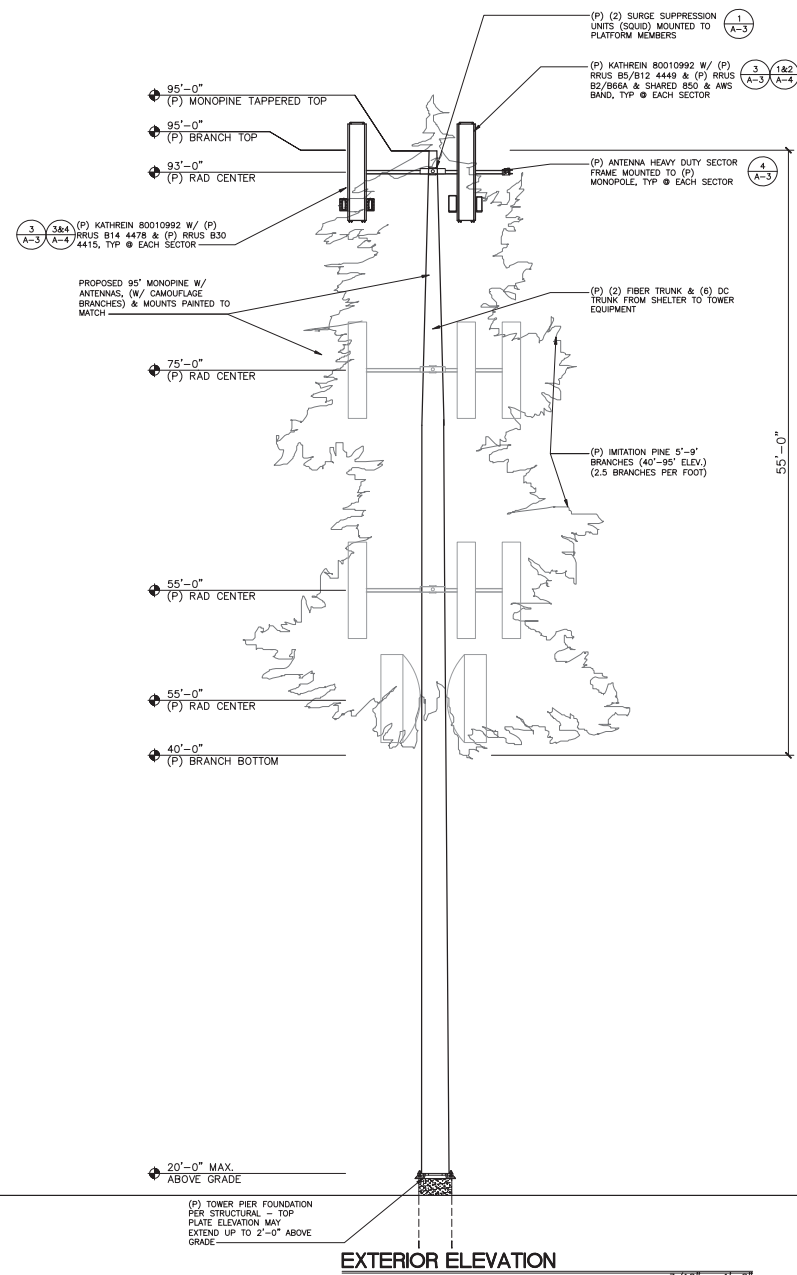
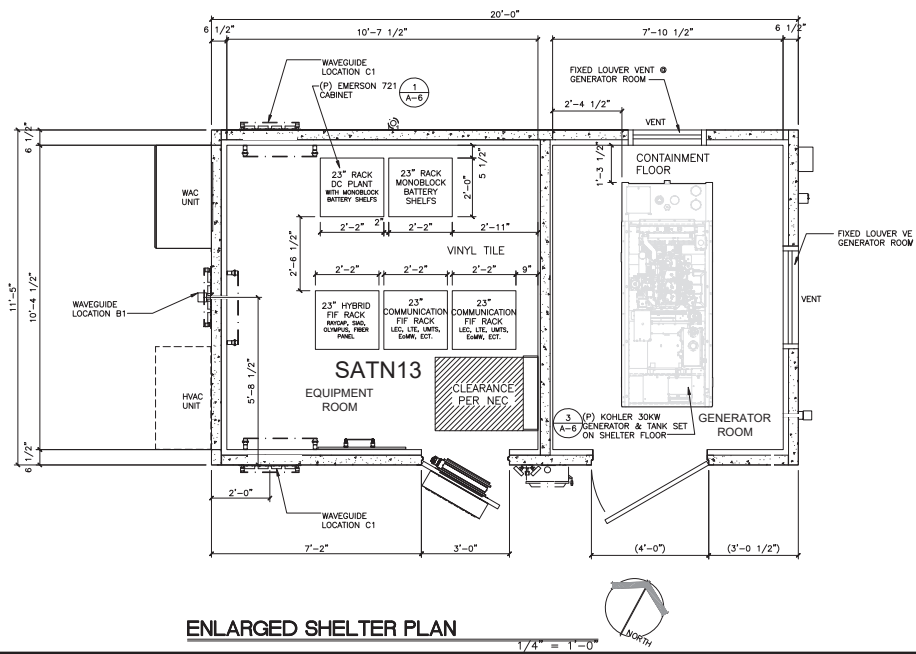
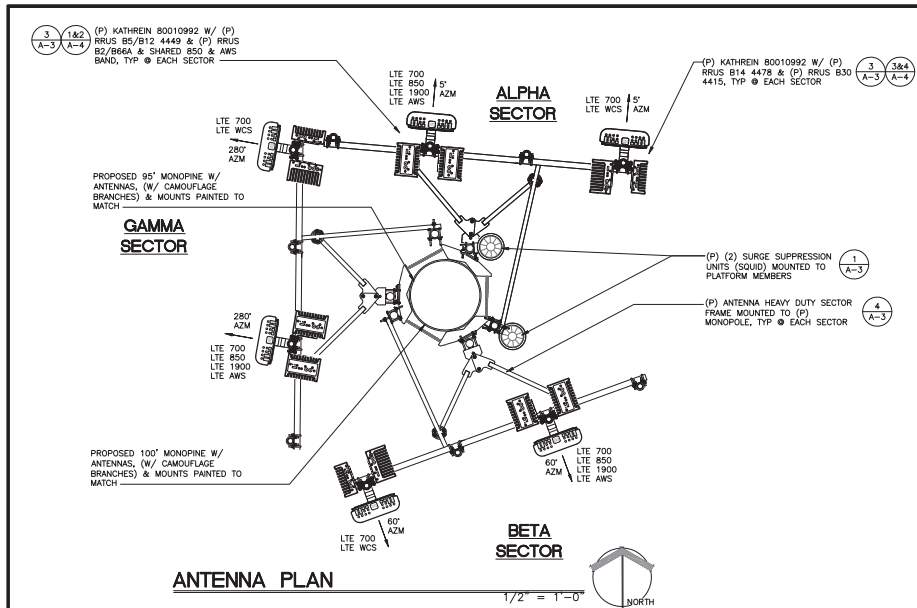
ENLARGED LEASE PLAN

$\frac{1}{4"} = 1'-0"$

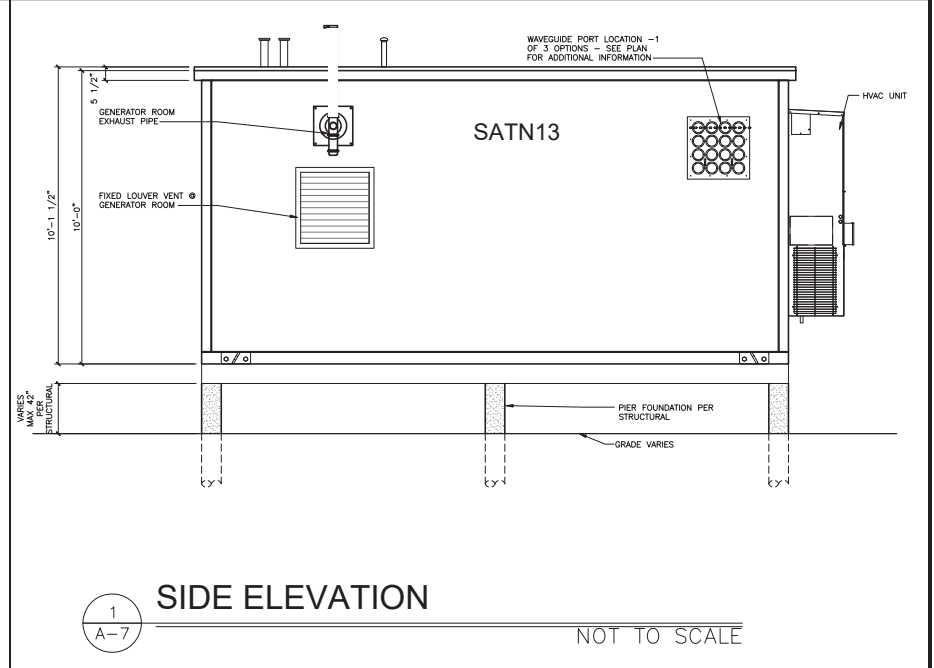
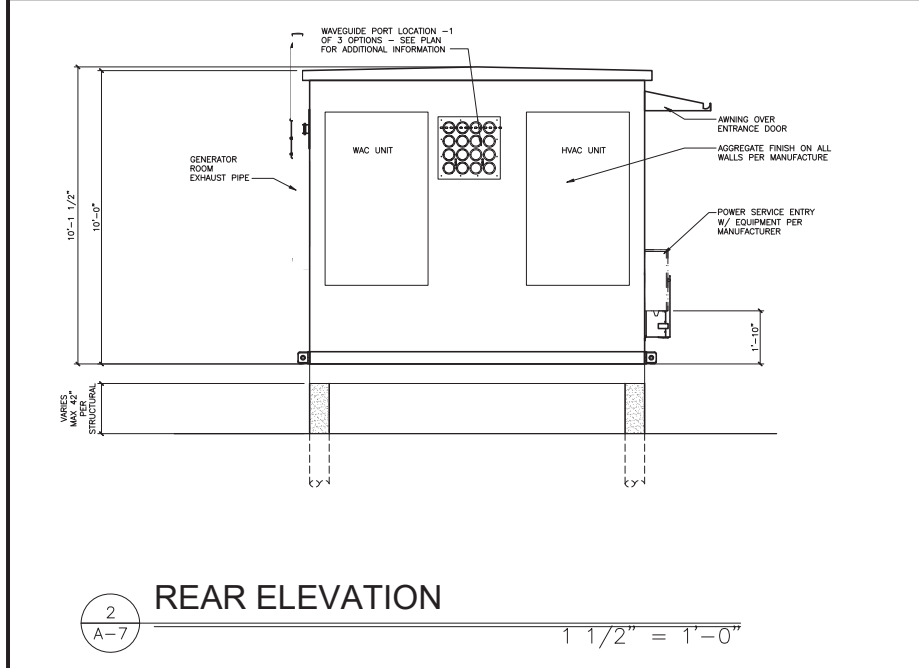
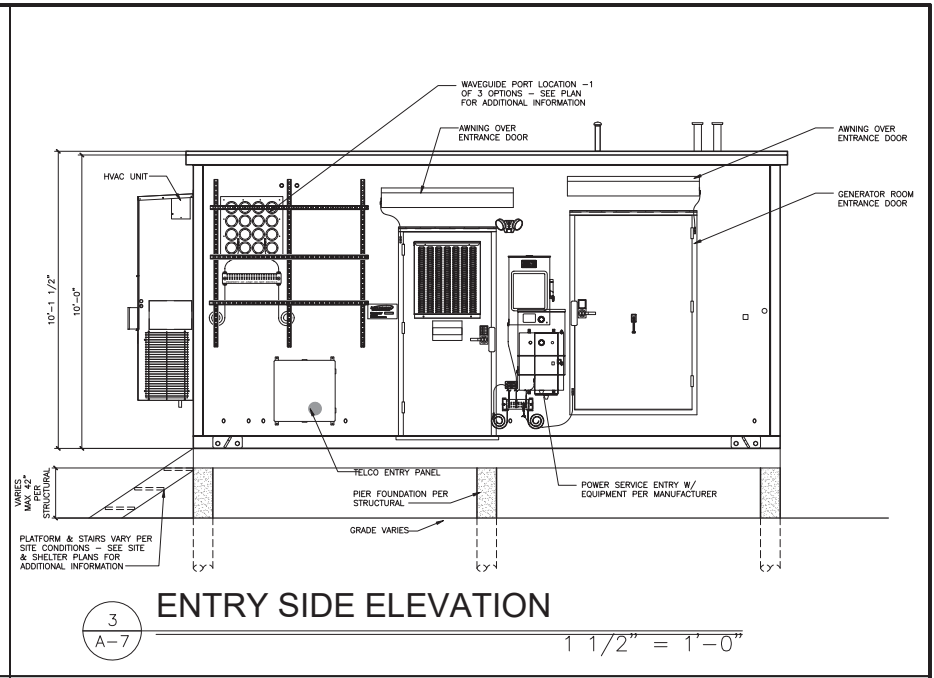
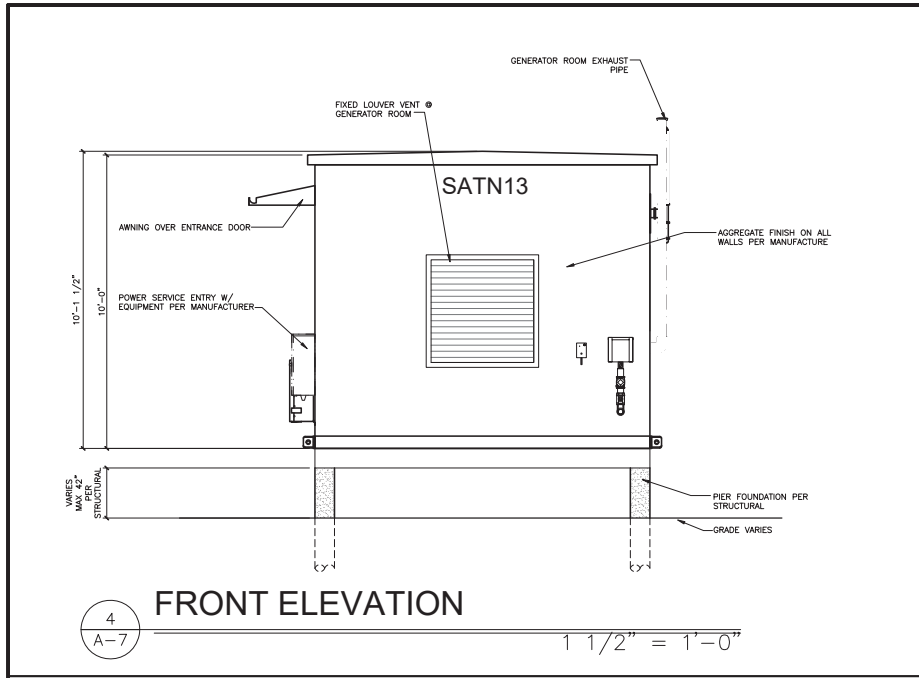
NORTH



Attachment A - Application Packet



Attachment A - Application Packet



DHD
ARCHITECTURE PLLC
13424 246TH AVE SE
ISSAQUAH, WA 98027
PHONE: 425.657.0352
EMAIL: david@dhda.com
[HTTP://WWW.DHDAARCHITECTURE.BIZ](http://www.dhdaarchitecture.biz)

NO.	DATE	ISSUE BLOCK
1	09-27-19	AE02: NSB & 1C RFDS DATED 08-01-12-9
2	12-17-19	REV01: MONOPINE REVS
3		
4		
5		
6		
7		
8		
9		
10		

ISSUED DATE: 12-18-19

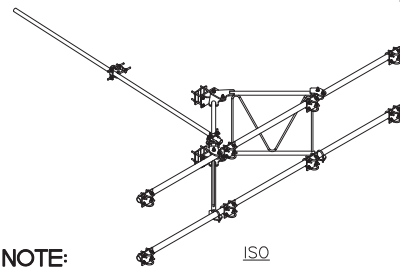


SHEET NUMBER:
A-22

Attachment A - Application Packet

VALMONT HEAVY DUTY V-FRAME VFA12-HD

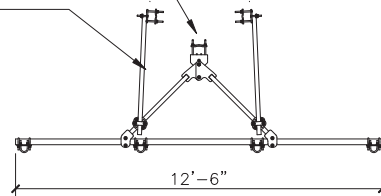
12'-6" HEAVY DUTY V-FRAME W/
TWO (2) STIFF ARMS



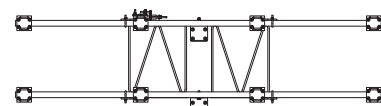
NOTE:
(OR APPROVED EQUAL)
SEE PLANS OR STRUCTURAL FOR SITE
SPECIFIC INFORMATION

EXISTING OR PROPOSED
SELF SUPPORTED
TOWER LEG

USE 2 STIFF
ARMS AS
REQUIRED



PLAN



ELEVATION

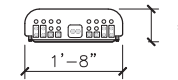
SECTOR FRAME

4
A-3

NOT TO SCALE

KATHREIN 800 10992 ANTENNA

WEIGHT; 133.3 lbs / 150 lbs W/ CLAMPS
WIND LOAD;
FRONTAL: 1710 N AT 150 KM / HR
LATERAL: 560 N AT 15 KM / HR



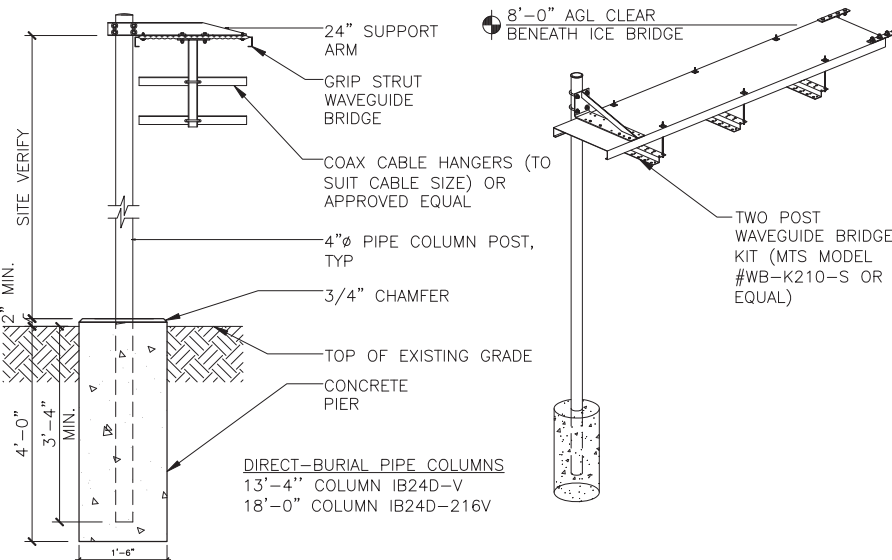
GROUNDING:
THE METAL PARTS OF THE ANTENNA INCLUDING THE
MOUNTING KIT AND THE INNER CONDUCTORS ARE DC
GROUNDED.

ALL SPECIFICATIONS ARE SUBJECT TO CHANGE W/ OUT
NOTICE - THE LATEST SPECIFICATIONS ARE AVAILABLE
AT WWW.KATHREIN-SCALA.COM

KATHREIN ANTENNA

3
A-3

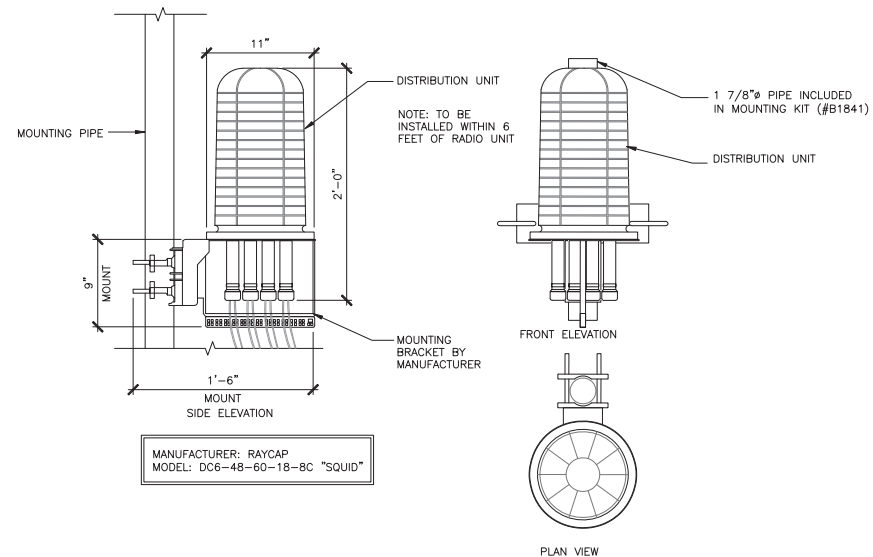
NTS



ICE BRIDGE

2
A-3

NOT TO SCALE



SURGE SUPPRESSION UNIT

1
A-3

NTS



Select Site Acquisition, LLC
10001 S. LAKELAND
LIBERTY LAKE, WA 99019

DHD
ARCHITECTURE PLLC
18524 14TH AVE SE
ISSAQUAH, WA 98027
EMAIL: david.dhd@arch.com
HTTP: WWW.DHDARCHITECTURE.BIZ

JN3072
KOWEE CREEK NSB
3500 N DOUGLAS HWY
JUNEAU, AK 99801

ISSUED DATE:
12-18-19

NO. 08-01-12-9
DATE: 08-01-12-9
BY: JN3072 NSB & LC
12-17-19 REV01: MONSIEUR RDS



SHEET TITLE:
EQUIPMENT DETAILS

SHEET NUMBER:
A-3

Attachment A - Application Packet

RRUSS 4449 B5, B12

DIMENSIONS (WITH SUNSHIELD)

WIDTH: 14.96 in

HEIGHT: 13.19 in

DEPTH: 9.25 in

WEIGHT: 70 lbs

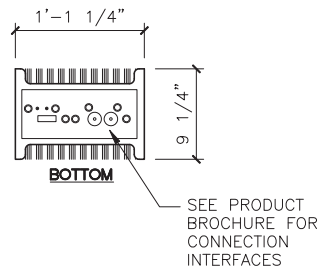
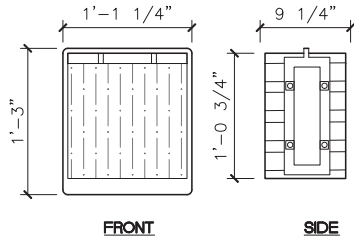
4TX/4RX PER BAND
320W OF TOTAL POWER

4x40 W PER BAND OR 2x60 W & 2x80 W
FOR B66A

LTE: MAX OF 3 CARRIERS PER PORT (DL), MAX 3
CARRIERS PER PORT (UL)

-48 VDC 3-WIRE (2-WIRE W/ ADAPTER)

- ADAPTER IS REQUIRED FOR 2-WIRE CONNECTION
- SHIELDED DC CABLE IS REQUIRED
- > GROUND CABLE SIZE = 2AWG



SEE PRODUCT
BROCHURE FOR
CONNECTION
INTERFACES

RRUS B5 / B12 4449

4
A-4

1 1/2" = 1'-0"

RRUSS 8843 B2, B66A

DIMENSIONS (WITH SUNSHIELD)

WIDTH: 14.96 in

HEIGHT: 13.19 in

DEPTH: 9.25 in

WEIGHT: 70 lbs

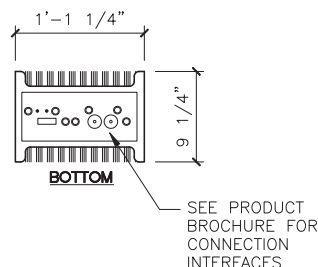
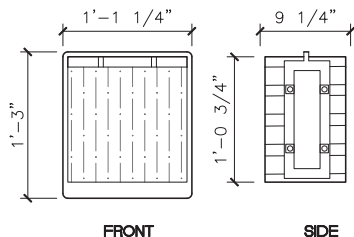
4TX/4RX PER BAND
320W OF TOTAL POWER

4x40 W PER BAND OR 2x60 W & 2x80 W
FOR B66A

LTE: MAX OF 3 CARRIERS PER PORT (DL), MAX 3
CARRIERS PER PORT (UL)

-48 VDC 3-WIRE (2-WIRE W/ ADAPTER)

- ADAPTER IS REQUIRED FOR 2-WIRE CONNECTION
- SHIELDED DC CABLE IS REQUIRED
- > GROUND CABLE SIZE = 2AWG



SEE PRODUCT
BROCHURE FOR
CONNECTION
INTERFACES

RRUS B2 / B66A 8843

2
A-4

1 1/2" = 1'-0"

RRUSS 4478 B14

DIMENSIONS (WITH HANDLES & FAN UNIT)

WIDTH: 13.40 in

HEIGHT: 18.1 in

DEPTH: 8.26 in

WEIGHT: 59.4 lbs

CPRI 2 PORTS X 2.5/4.9/9.8/10.1 GBPS. INSTALL 1 SFP
AND CONNECT 1 FIBER PAIR TO THE RRUSS 4415 DURING
INITIAL INSTALL.

ONLY USE ERICSSON SUPPLIED AND APPROVED SFPs

RDH10265/25

2 EXTERNAL ALARM INPUTS

MAX WIND LOAD @ 50M/SEC = 260N

BREAKER SIZE = 25A, DC POWER CONSUMPTION = 650 W

(FOR DIMENSIONING)

200MM HORIZONTAL SEPARATION REQUIRED FOR SIDE BY

SIDE MOUNTING

200MM SEPARATION REQUIRED FROM ANTENNA BACKPLANE

TO RADIO

400MM VERTICAL OUTDOOR/INDOOR SEPARATION REQUIRED

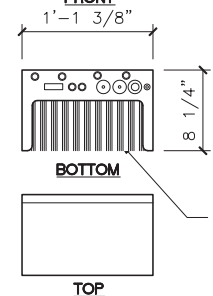
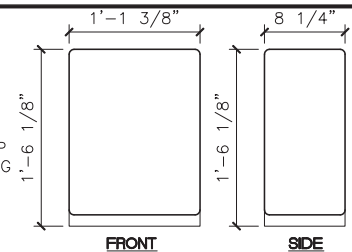
BETWEEN 2 RADIOS

500MM VERTICAL SEPARATION BELOW ANTENNA

MIN, MAX DC CABLE SIZE FROM SQUID TO RADIO = 10,8

AWG

- ADAPTER IS REQUIRED FOR 2-WIRE CONNECTION
- SHIELDED DC CABLE IS REQUIRED
- > GROUND CABLE SIZE = 2AWG



SEE PRODUCT
BROCHURE FOR
CONNECTION
INTERFACES

RRUS B14 4478

3
A-4

NOT TO SCALE

RRUSS 4415 B30

DIMENSIONS (WITH SUNSHIELD)

WIDTH: 13.4 in

HEIGHT: 16.5 in

DEPTH: 5.9 in

WEIGHT: 46 lbs

CPRI 2 PORTS X 2.5/4.9/9.8/10.1 GBPS. INSTALL 2 SFP
AND CONNECT 2 FIBER PAIR TO THE RRUSS 4415 DURING
INITIAL INSTALL.

ONLY USE ERICSSON SUPPLIED AND APPROVED SFPs

RDH10265/25

2 EXTERNAL ALARM INPUTS

MAX WIND LOAD @ 50M/SEC = 260N

BREAKER SIZE = 25A, DC POWER CONSUMPTION = 670 W

(FOR DIMENSIONING)

200MM HORIZONTAL SEPARATION REQUIRED FOR SIDE BY

SIDE MOUNTING

200MM SEPARATION REQUIRED FROM ANTENNA BACKPLANE

TO RADIO

400MM VERTICAL OUTDOOR/INDOOR SEPARATION REQUIRED

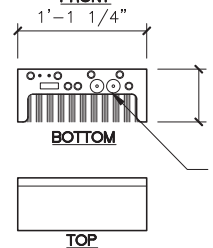
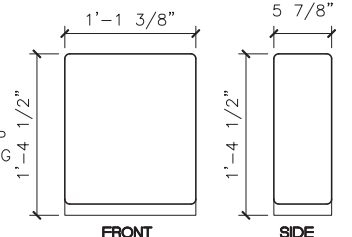
BETWEEN 2 RADIOS

500MM VERTICAL SEPARATION BELOW ANTENNA

MIN, MAX DC CABLE SIZE FROM SQUID TO RADIO = 10,8

AWG

- ADAPTER IS REQUIRED FOR 2-WIRE CONNECTION
- SHIELDED DC CABLE IS REQUIRED
- > GROUND CABLE SIZE = 2AWG



SEE PRODUCT
BROCHURE FOR
CONNECTION
INTERFACES

RRUS B30 4415

1
A-4

NOT TO SCALE



Select Site Acquisition,
LLC
10001 S. LAKELANE
LIBERTY LAKE, WA 99019

DHD
ARCHITECTURE PLLC
1500 N. 10TH AVE. SUITE 100
BIRMINGHAM, AL 35207
EMAIL: dhd@architecturerc.com
HTTP://WWW.DHDARCHITECTURE.BIZ

JN3072
KOWEE CREEK NSB
3500 N DOUGLAS HWY
JUNEAU, AK 99801

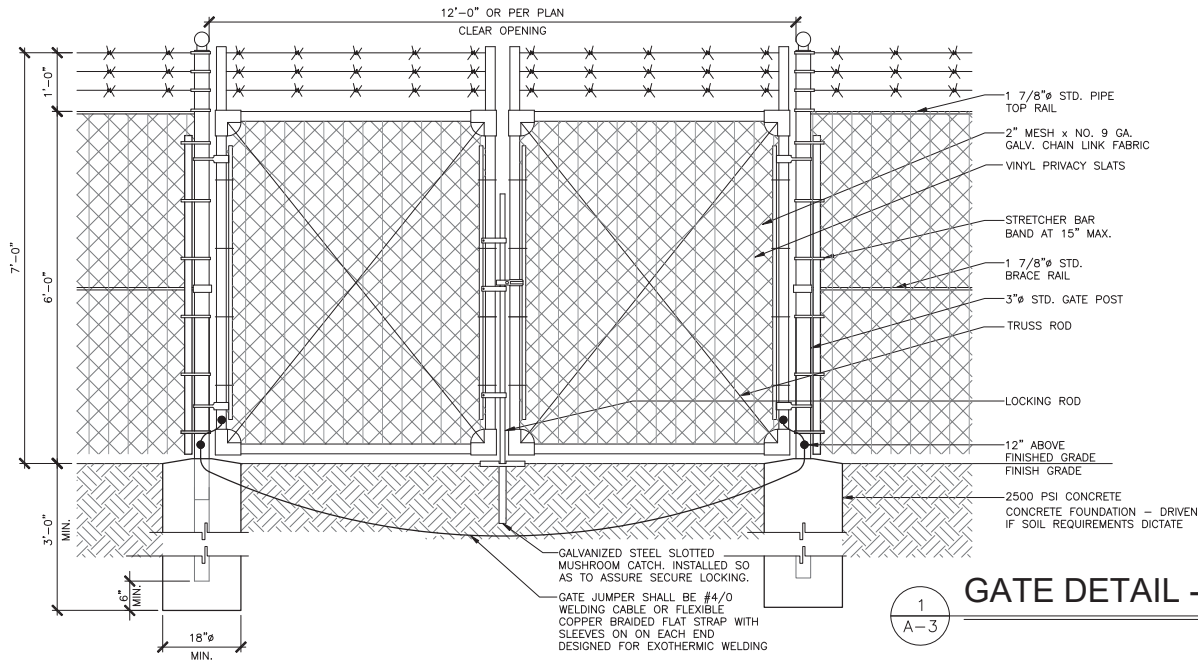
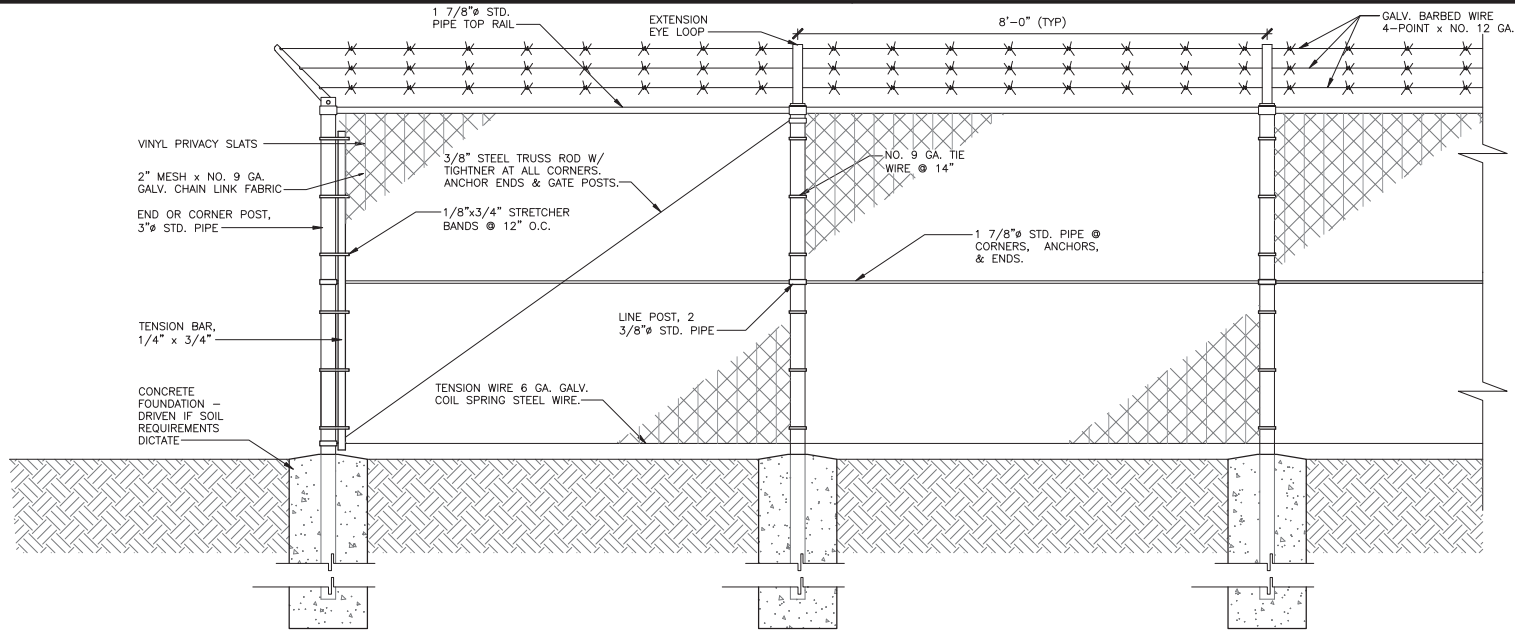
ISSUED DATE:
12-18-19
DATE: 08-01-2020
BY: JN3072 NSB & LC
12-17-19 REV01: MANDATORY



SHEET TITLE:
EQUIPMENT DETAILS

SHEET NUMBER:
A-4

Attachment A - Application Packet



GATE DETAIL - ELEVATION

NOT TO SCALE



Select Site Acquisition, LLC
1000 S. 10TH AVE.
LIBERTY LAKE, WA 99019

DHD
ARCHITECTURE PLLC
15425 10TH AVE. SE
ISSAQUAH, WA 98027
EMAIL: dave@dharchitecture.com
HTTP://WWW.DHARCHITECTURE.BIZ

JN3072
KOWEE CREEK NSB
3500 N DOUGLAS HWY
JUNEAU, AK 99801

ISSUED DATE: 12-18-19
DATE: 08-01-12-9
NO. 08-01-12-9
12-17-18 REV01: MENDING RODS



SHEET TITLE:
EQUIPMENT DETAILS

SHEET NUMBER:
A-5

Attachment A - Application Packet

KOHLER POWER SYSTEMS

30REOZK

WEIGHT; 1,130 lbs

L x W x H

55.1" x 32" x 40.3

60 Hz OFFERS A UL 2200 LISTING

KOHLER CO

STANDARD FUEL TANK

CAPACITY: 123 GALLONS

WEIGHT; 586 lbs

L x W x H

76.2" x 31.89" x 25"

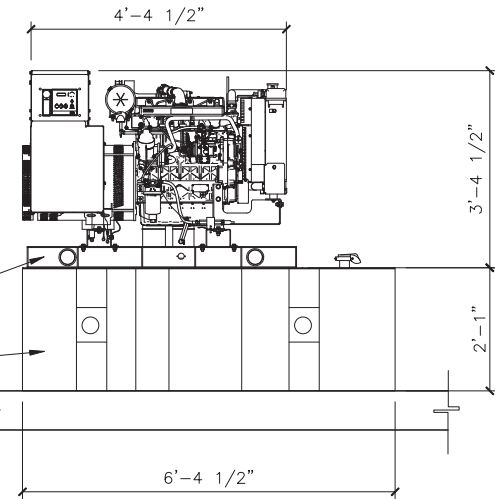
60 Hz OFFERS A UL 2200 LISTING

4x Ø25.4 (1.00) STANDARD MOUNTING

GENERATOR & TANK CONNECTION
KIT PER MANUFACTURER

123 GALLON TANK

SHELTER FLOOR - CONNECT TO
MEET ALL LOCAL SEISMIC &
BUILDING CODES



GENERATOR DETAIL

3
A-6

EMERSON 721

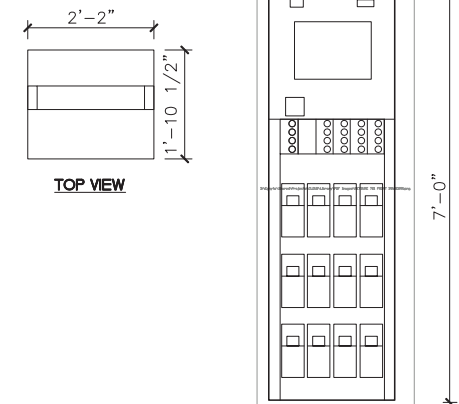
NEQ. 15312 POWER SYSTEM:

THE MODULAR NETSURE™ 721 POWER SYSTEM WITH 3500 WATT OR 2000 WATT RECTIFIERS AND 1500 WATT DC TO DC CONVERTERS PROVIDES UP TO 4000 AMPS OF CURRENT FOR -48 VOLT SYSTEMS WITH UP TO 500 AMPS AT +24 VOLTS. THE BASIC COMPONENTS OF THE POWER SYSTEM INCLUDE THE ACU+ CONTROL UNIT, MODULE MOUNTING SHELF ASSEMBLIES WHICH HOUSE THE RECTIFIERS AND CONVERTERS, AND A MODULAR DISTRIBUTION CABINET

WEIGHT: 375 LBS

DIMENSIONS: 84"Hx25.8"Wx22.5"D

(5) BATTERY TRAYS @ 8RU (14")
SPACING, (1) STRING PER TRAY, UP
TO 190 Ahr EACH, 200 A CB PER
STRING



POWER - BATTERY CABINET

1
A-6

NOT TO SCALE



Select Site Acquisition,
LLC
1000 E. 10TH AVE
LIBERTY LAKE, WA 99019

DHD
ARCHITECTURE PLLC
15330 14TH AVE SE
ISSAQUAH, WA 98027
EMAIL: dave@dharchitecture.biz
HTTP://WWW.DHARCHITECTURE.BIZ

JN3072
KOWEE CREEK NSB
3500 N DOUGLAS HWY
JUNEAU, AK 99801

ISSUED DATE:
12-18-19

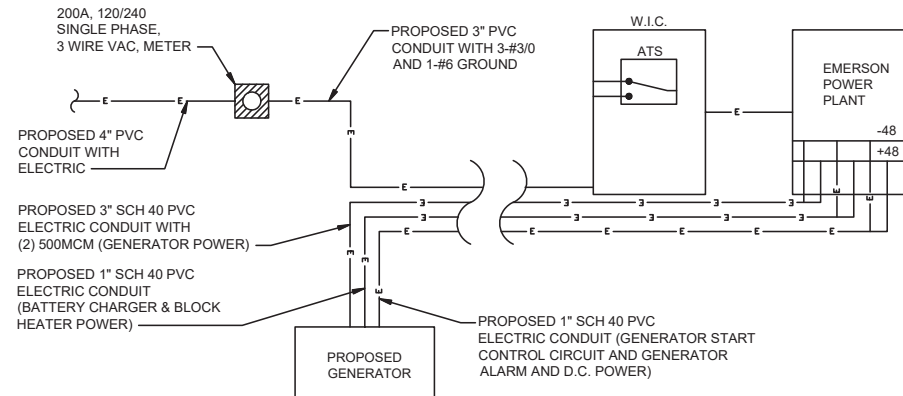
DATE: 08-01-12-9
NO. 08-01-12-9
12-17-18 REV01: MONITORING



SHEET TITLE:
EQUIPMENT DETAILS

SHEET NUMBER:
A-6

Attachment A - Application Packet



ONE-LINE SCHEMATIC

3
E-1

NTS

INTEGRATED LOAD CENTER																																	
LOAD				LOAD PER PHASE (VA)																		LOAD PER PHASE (VA)						LOAD					
DESCRIPTION		QTY.	UNIT V.A.	PHASE		WIRE COLOR	LOADS CONTINUOUS	LOADS NON-CONTINUOUS	SUB-PANEL	WIRE SIZE	GROUNDING TYPE	TRIP	TRIP	GROUNDING WIRE SIZE	WIRE SIZE	LOADS CONTINUOUS	LOADS NON-CONTINUOUS	SUB-PANEL	WIRE COLOR	PHASE		UNIT V.A.	QTY.	DESCRIPTION									
				A	B															A	B												
1	RECTIFIER #1	1	1400	1400		BLK	X						40	(10) 8					X	BLK	1400		1400	1	RECTIFIER #5	31.0							
3		1	1400		1400	RED													X	RED		1400	1400	1									
5	RECTIFIER #2	1	1400	1400		BLK	X						40	(10) 8					X	BLK	1400		1400	1	RECTIFIER #6	31.0							
7		1	1400		1400	RED													X	RED		1400	1400	1									
9	RECTIFIER #3	1	1400	1400		BLK	X						40	(10) 8					X	BLK	1400		1400	1	RECTIFIER #7	31.0							
12		1	1400		1400	RED													X	RED		1400	1400	1									
13	RECTIFIER #4	1	1400	1400		BLK	X						40	(10) 8					X	BLK	1400		1400	1	RECTIFIER #8	31.0							
15		1	1400		1400	RED													X	RED		1400	1400	1									
17						BLK														BLK													
19						RED	X							12	12	20				RED													
21	GFCI RECEPTACLES	2	180	360		BLK	X													BLK													
23	OPTIONAL FIBER BOX RECEPTACLE	1	180		180	RED	X													RED													
25	BATTERY CHARGER	1	240	240		BLK	X													BLK													
27	BLOCK HEATER	1	1500		1500	RED	X													RED													
29	OIL HEATER	1	180	180		BLK	X													BLK													
				SUB-TOTAL CONTINUOUS	6,380	7,280													5,600	5,600	SUB-TOTAL CONTINUOUS	TOTAL KVA CONTINUOUS x 1.25	31.0										
				SUB-TOTAL NON-CONT	-	-													-	-	SUB-TOTAL NON-CONT	TOTAL KVA NON-CONTINUOUS	-										
				SUB-TOTAL SUB-PANEL	-	-													-	-	SUB-TOTAL SUB-PANEL	TOTAL KVA SUB-PANEL	-										
PANEL DESIGNATION: ELECTRICAL PANEL (ITEM 2)																																	
MAIN LUGS: N/A MAIN BREAKER: 200 AMP														BRANCH BREAKER TYPE: SIEMENS - BL																			
VOLTAGE: 120/240				CYCLE: 60				PHASE: 1				WIRES: 3				MAIN COPPER BUS: 200 AMPS				NEUTRAL: 200 AMPS				TOTAL AMPS				31.0					
																								TOTAL AMPS				129.0					

TYPICAL PANEL SCHEDULE

$$\frac{1}{E-1}$$

NTS

**Select Site Acquisition,
LLC**
24009 E ALKI LANE
LIBERTY LAKE, WA 99019

DHD
ARCHITECTURE PLLC
13424 246TH AVE SE
ISSAQUAH, WA, 98027
PHONE: 425.657.0562
EMAIL: davidandearl@outlook.com
[HTTP://WWW.DHDARCHITECTURE.BIZ](http://www.dhdarchitecture.biz)

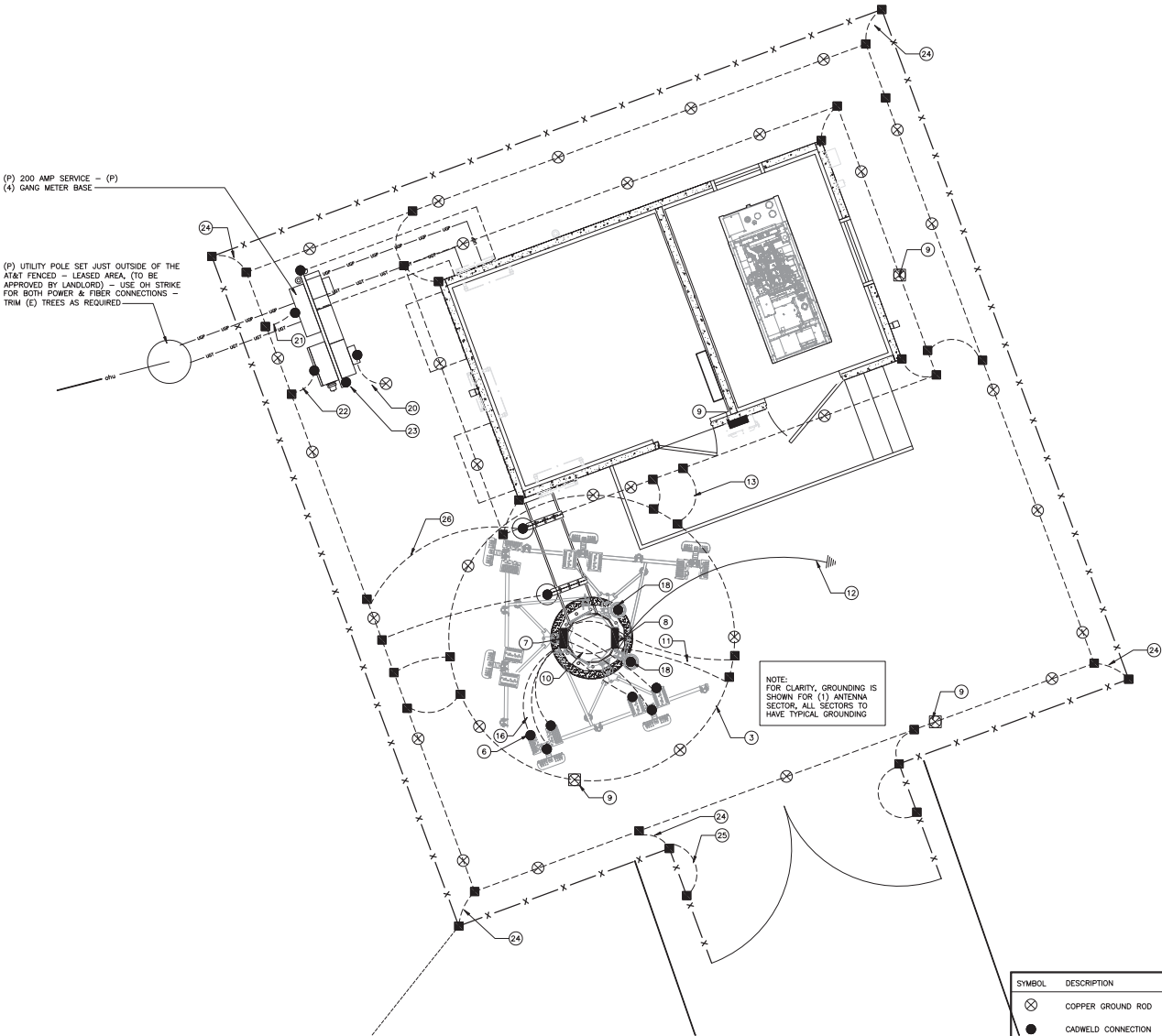
JN3072
KOWEE CREEK NSB
3500 N DOUGLAS HWY
JUNEAU, AK 99801

NO.	DATE	ISSUE BLOCK
1	09-27-19	MDZ: NSB & 1C RFDS DATED 08-01-12-9
2	12-17-19	REV01: MONOPINE REVS
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SHEET TITLE:
SCHEMATIC INFO

SHEET NUMBER:
E-1

Attachment A - Application Packet



SCHEMATIC GROUNDING PLAN

N.T.S.

GROUNDING KEYED NOTES:

- #2 AWG EXTERNAL GROUND RING.
- #2 AWG SHELTER GROUND RING.
- #2 AWG TOWER GROUND RING.
- GROUND ROD 10'-0" O.C. MIN. (TYP)
- TEST WELL. SEE DETAIL
- CAD WELD (TYP). SEE DETAIL
- ANTENNA GROUND BUS BAR AT ANTENNA LEVEL OF TOWER WITH COAX GROUND KIT. SEE DETAIL
- TOWER GROUND BUS BAR AT BASE OF TOWER WITH COAX GROUND KIT. SEE DETAILS AND MANUFACTURER FOR COAX GROUNDING.
- SHELTER GROUND BUS BAR AT SHELTER COAX ENTRY PORT WITH COAX GROUND KIT. SEE DETAIL AND MANUFACTURER FOR COAX GROUNDING.
- #2 AWG GROUND FROM ANTENNA GROUND BUS BAR TO TOWER GROUND BUS BAR (TYP OF 2 PLACES). SEE DETAILS
- #2 AWG GROUND FROM TOWER GROUND BUS BAR TO TOWER GROUND RING (TYP OF 2 PLACES). SEE DETAILS
- #2 AWG GROUND FROM SHELTER GROUND BUS BAR TO TOWER GROUND BUS BAR (TYP OF 2 PLACES). SEE DETAIL
- #6 AWG GROUND FROM SHELTER GROUND RING TO TOWER GROUND RING (TYP OF 2 PLACES). SEE DETAIL
- #2 AWG GROUND FROM SHELTER/TOWER GROUND RING TO COMPOUND GROUND RING. (TYP OF 2 PLACES EACH RING). SEE DETAIL
- #2 AWG GROUND FROM TOWER GROUND RING TO TOWER BASE (TYP OF 3 PLACES). SEE DETAILS
- #6 AWG ANTENNA MOUNT GROUND TO ANTENNA GROUND BUS BAR (TYP OF 12) SEE DETAIL
- #6 AWG SURGE SUPPRESSION UNIT GROUND TO ANTENNA GROUND BUS BAR (TYP OF 2)
- #2 AWG GROUND FROM RRU/RRH'S TO PLATFORM OR SHELTER GROUND RING (TYP) SEE DETAIL
- #2 AWG FROM GPS ANTENNA TO SHELTER GROUND RING. SEE DETAIL
- #2 AWG GROUND FROM POWER METER TO ISOLATED GROUND ROD SEE DETAIL
- #6 AWG GROUND FROM TELCO BOX TO EXTERNAL GROUND RING. SEE DETAIL
- #6 AWG GROUND FROM ELECTRICAL DISCONNECT TO EXTERNAL GROUND RING
- #2 AWG FROM SUPPORT RACK TO EXTERNAL GROUND RING (TYP OF 2 PLACES). SEE DETAIL
- #6 AWG GROUND FROM VERTICAL FENCE POST TO EXTERNAL GROUND RING (TYP).
- #4 AWG WELDING CABLE OR FLEXIBLE CABLE, GATE JUMPER.
- #2 AWG FROM EACH ICE BRIDGE POST TO EXTERNAL GROUND RING

GROUNDING NOTES & LEGEND

GENERAL GROUNDING NOTES

- ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
- GROUND ALL ANTENNA BASES, FRAMES, CABLE RINGS, AND OTHER METALLIC COMPONENTS USING GROUND WIRES AND CONNECT TO SURFACE MOUNTED BUS BARS. FOLLOW ANTENNA AND BTS MANUFACTURERS PRACTICES FOR GROUNDING REQUIREMENTS. GROUND COAX SHIELD AT BOTH ENDS AND EXIT FROM TOWER OR POLE USING MFR'S PRACTICES.
- ALL GROUND CONNECTIONS SHALL BE CADWELD. ALL WIRES SHALL BE COPPER THIN/THIN. ALL GROUND WIRE SHALL BE GREEN INSULATED WIRE ABOVE GROUND.
- CONTRACTOR TO VERIFY AND TEST GROUND TO SOURCE. GROUNDING AND OTHER OPERATIONAL TESTING WILL BE WITNESSED BY AT&T WIRELESS, LLC. REPRESENTATIVE.
- REFER TO DIVISION 16 GENERAL ELECTRIC; GENERAL ELECTRICAL PROVISION AND COMPLY WITH ALL REQUIREMENTS OF GROUNDING STANDARDS.
- ELECTRICAL CONTRACTOR TO PROVIDE DETAILED DESIGN OF GROUNDING SYSTEM, AND RECEIVE APPROVAL OF DESIGN BY AUTHORIZED AT&T MOBILITY REPRESENTATIVE, PRIOR TO INSTALLATION OF GROUNDING SYSTEM. PHOTO DOCUMENT ALL CADWELDS AND GROUND RING
- NOTIFY CONSTRUCTION MANAGER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.

GROUNDING ROD NOTES

- (WHERE APPLICABLE)
- ELECTRICAL CONTRACTOR SHALL ORDER GROUND RESISTANCE TESTING ONCE THE GROUND SYSTEM HAS BEEN INSTALLED. A QUALIFIED INDIVIDUAL, UTILIZING THE FALL OF POTENTIAL METHOD, SHOULD PERFORM TEST. THE REPORT WILL SHOW THE LOCATION OF THE TEST AND CONTAIN NO LESS THAN 9 TEST POINTS ALONG THE TESTING LINE, GRAPHED OUT TO SHOW THE PLATEAU.
- 2 POINT GROUND TEST OR 3 POINT 62% TESTS WILL NOT BE ACCEPTED AS ALTERNATIVES TO THE AFORE MENTIONED GROUND TESTS. TEST SHALL BE PERFORMED WHILE THE COUNTERPOISE IS ISOLATED FROM THE A/C SYSTEM GRIDS AND EXISTING COMMUNICATIONS FACILITY.



Select Site Acquisition, LLC
1800 E. ALASKA LANE
LIBERTY LAKE, WA 99019

DHD
ARCHITECTURE PLLC
13432 16TH AVE SE
BOZEMAN, WA 99707
EMAIL: dave@dharchitecture.com
HTTP://WWW.DHARCHITECTURE.BIZ

JN3072
KOWEE CREEK NSB
3500 N DOUGLAS HWY
JUNEAU, AK 99801

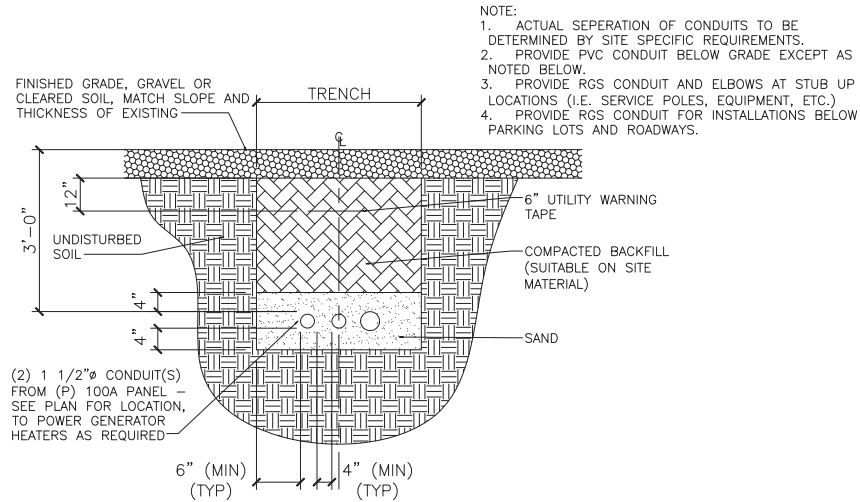
ISSUED DATE:
12-18-19

DATE	ISSUE BLOCK	DATE	ISSUE BLOCK
08-01-12-9	ISSUE BLOCK	08-01-12-9	ISSUE BLOCK
12-17-19	ISSUE BLOCK	12-17-19	ISSUE BLOCK
12-17-19	ISSUE BLOCK	12-17-19	ISSUE BLOCK
12-17-19	ISSUE BLOCK	12-17-19	ISSUE BLOCK
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12-17-19	ISSUE BLOCK	12-17-19	ISSUE BLOCK
12-17-19	ISSUE BLOCK	12-17-19	ISSUE BLOCK
12-17-19	ISSUE BLOCK	12-17-19	ISSUE BLOCK

SHEET TITLE:
SCHEMATIC
GROUNDING

SHEET NUMBER:
E-2

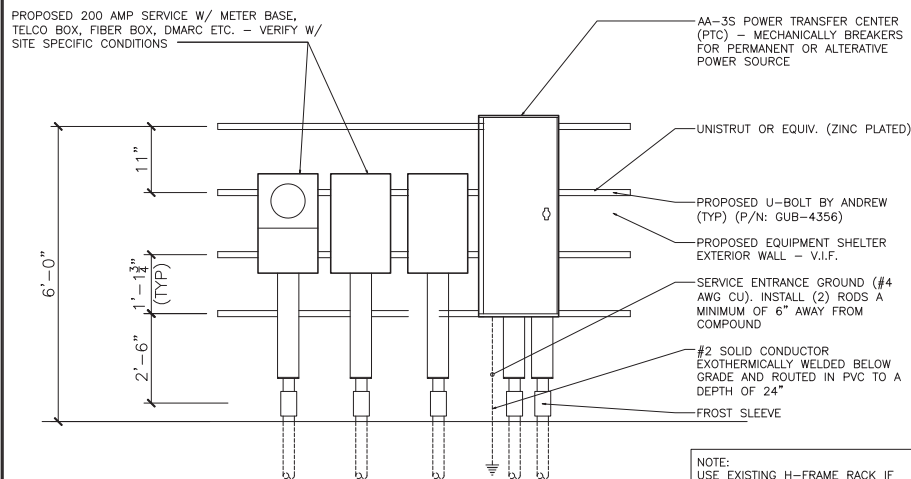
Attachment A - Application Packet



* SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS

TRENCH SECTION

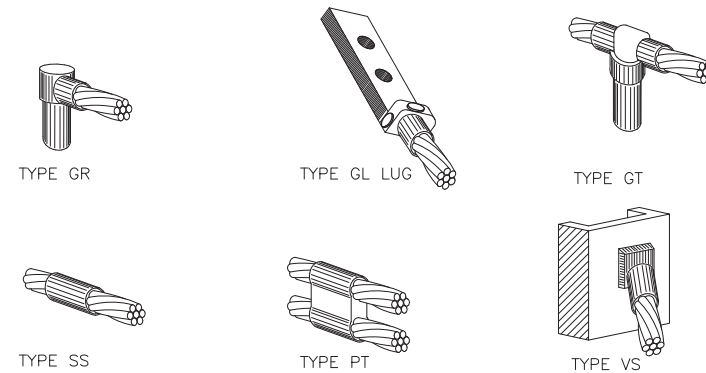
NOT TO SCALE



NOTE:
USE EXISTING H-FRAME RACK IF
SPACE IS AVAILABLE - IF NOT,
EXTEND OR INSTALL NEW H-FRAME
RACK FOR PROPOSED EQUIPMENT.

H-FRAME @ SHELTER WALL

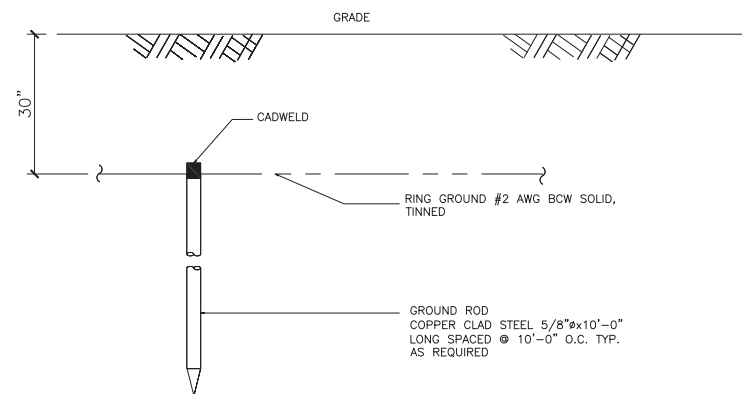
NOT TO SCALE



NOTE:
CADWELD "TYPES" SHOWN ABOVE ARE EXAMPLES -
CONSULT WITH PROJECT MANAGER FOR SPECIFIC
TYPES OF CADWELDS TO BE USED FOR THIS
PROJECT.

CADWELD GROUND TYPES

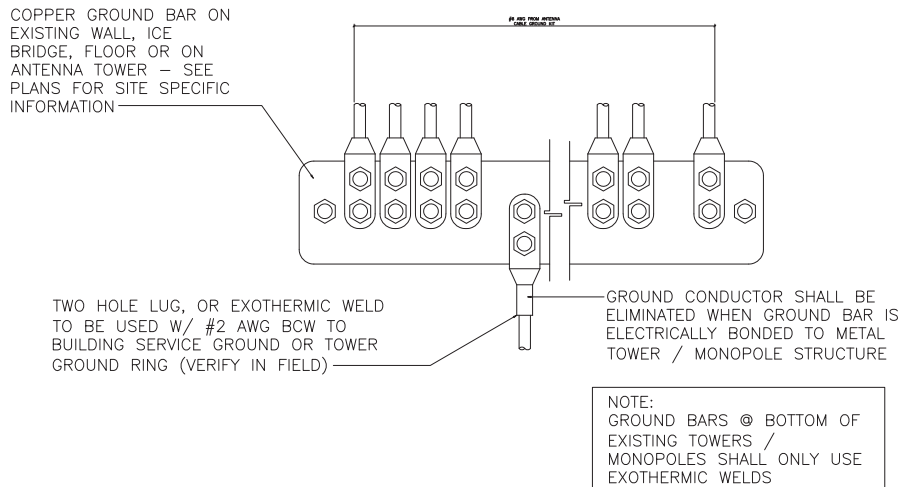
NOT TO SCALE



GROUNDING ROD (TYP)

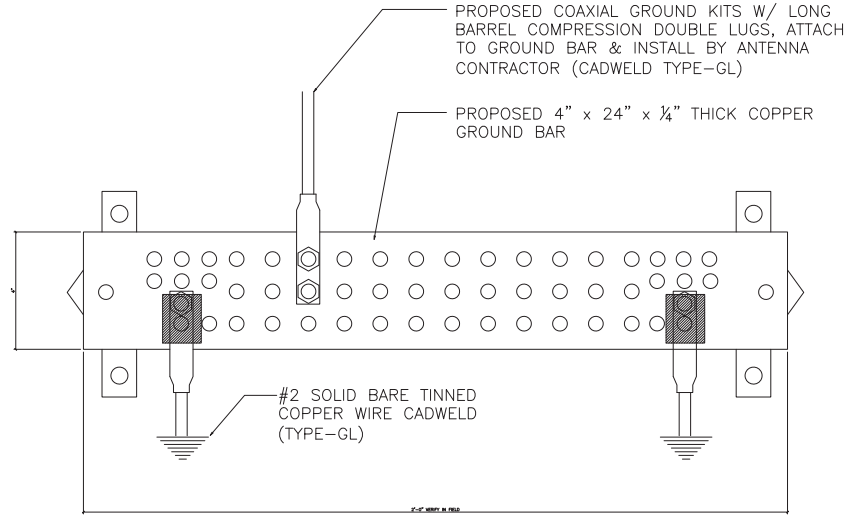
NOT TO SCALE

Attachment A - Application Packet



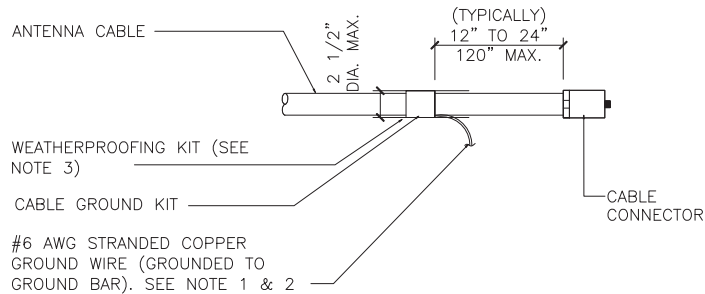
GROUND WIRE INSTALL

NOT TO SCALE



GROUND BAR

NOT TO SCALE



NOTES:

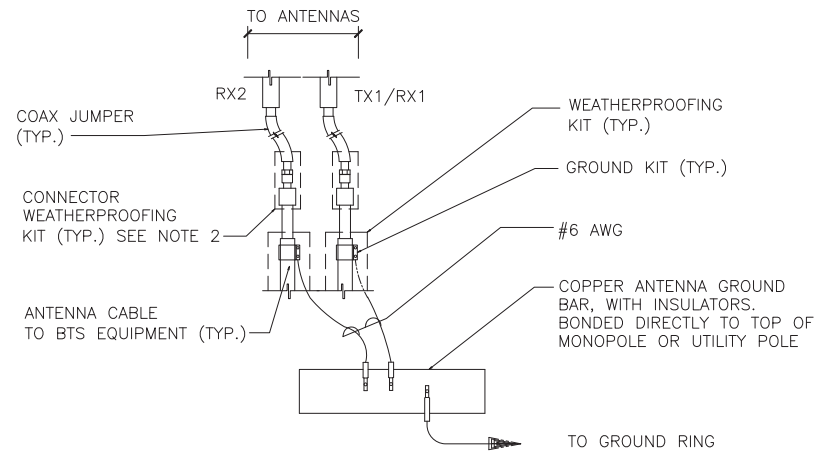
DO NOT INSTALL CABLE GROUND KIT @ BEND & ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.

GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.

WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

CABLE GROUNDING KIT

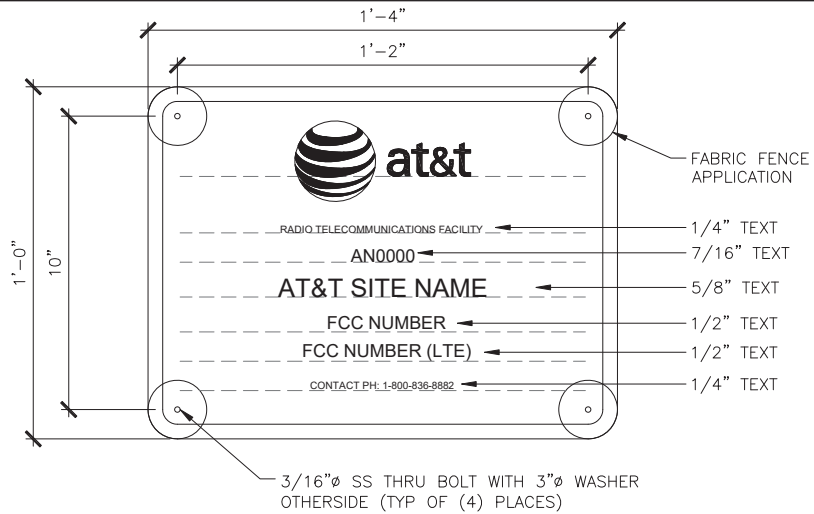
NOT TO SCALE



GROUND CONNECTIONS

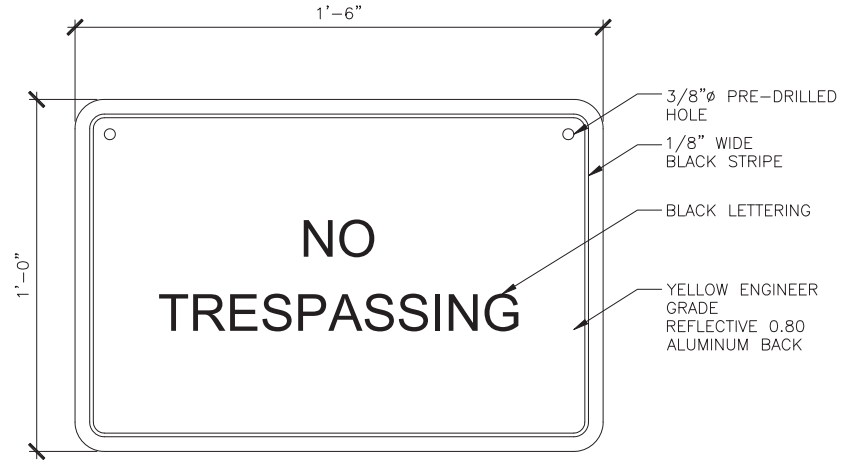
NOT TO SCALE

Attachment A - Application Packet



SIGNAGE

NO SCALE



SIGNAGE

NO SCALE

SIGNS AND PLACEMENT:

1. LOW LEVEL BLUE NOTICE SIGNS – PLACE AT SITE ENTRY / ACCESS POINTS ONLY.
- ROOFTOPS: PLACE SIGNS ON THE INSIDE OF ROOF HATCH; PLACE ON ACCESS DOOR UNLESS DOOR IS USED BY GENERAL PUBLIC OR BUILDING TENANTS ON A REGULAR BASIS FOR ACCESS – IN THESE CASES CONSULT CONSTRUCTION MANAGER.
 - WATER TANKS: PLACE SIGNS ON COMPOUND GATE.
 - NETWORK CARRIER OWNED SITES: PLACE ONE SIGN ON COMPOUND GATE; ALL SIGNS SHALL BE SECURED WITH EITHER STAINLESS STEEL ZIP TIES OR STAINLESS TECH SCREWS.

2. CONSTRUCTION COORDINATOR PARTICIPATION IN SIGN LOCATION: NETWORK CARRIER CONSTRUCTION MANAGER SHALL MEET WITH ALL CONSTRUCTION COORDINATOR'S TO OUTLINE CRITERIA FOR SIGN PLACEMENT. EMPHASIS SHALL BE PLACED ON "CHALLENGING" SITES, WHERE THE NETWORK CARRIER CONSTRUCTION MANAGERS SHALL GIVE CONSTRUCTION COORDINATOR'S AS MUCH GUIDANCE ON EACH SPECIFIC SITUATION AS POSSIBLE, HOWEVER, CONSTRUCTION COORDINATOR'S SHALL BE ENCOURAGED TO PARTNER WITH NETWORK CARRIER CONSTRUCTION MANAGER IN DECIDING PLACEMENT PERTAINING TO CHALLENGING SITES. A SITE VISIT MAY BE REQUIRED TO FULFILL REQUIREMENTS. CONSTRUCTION COORDINATOR SHALL IDENTIFY ALL SIGN LOCATIONS AT THE A&E WALK. PLEASE SEE SIGN DETAIL AND SIZE.

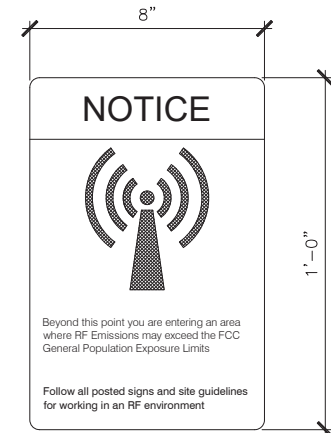
3. SIGN DISBURSEMENT FROM WAREHOUSE:
SIGN INVENTORY SHALL BE ACCESSIBLE AT NETWORK CARRIER WAREHOUSE
TO BE DISBURSED AS PART OF THE GENERAL CONTRACTOR BOM AS CALLED
OUT IN A&E DRAWINGS FOR EACH SITE.

GENERAL SIGNAGE NOTES

NO SCALE

NOTES:

1. FOR AT&T LOGO SEE AT&T LOGO DESIGN SPECIFICATIONS
2. ALL TEXT FONT IS ARIAL U.N.O.
3. CONTRACTOR TO PROCURE FCC NO. FROM AT&T COMPLIANCE MANAGER
PH: 425-580-8860
4. TEXT FOR SIGNAGE SHALL INDICATE CORRECT SITE NAME AND NUMBER AS PER AT&T CONSTRUCTION MANAGER RECOMMENDATIONS
5. CABINET MOUNTING APPLICATION REQUIRES ADHERING PLATE TO FACE OF CABINET WITH WATERPROOFING POLYURETHANE ADHESIVE



SIGNAGE

NO SCALE



**Select Site Acquisition,
LLC**
24009 E ALKI LANE
LIBERTY LAKE, WA 99019

DHD
ARCHITECTURE PLLC
13424 246TH AVE SE
ISSAQUAH, WA, 98052
PHONE: 425.657.0552
EMAIL: dhd@dharchitecture.com
[HTTP://WWW.DHDARCHITECTURE.BIZ](http://www.dhdarchitecture.biz)

JN3072
KOWEE CREEK NSB
3500 N DOUGLAS HWY
JUNEAU, AK 99801

NO.	DATE	ISSUE BLOCK
1	09-27-19	AE02: NSB & 1C RFD5 DATED 08-01-12-9
2	12-17-19	REV01: MONOPINE REV5
3		
4		
5		
6		
7		
8		
9		
10		



SHEET TITLE:
EQUIPMENT DETAILS

SHEET NUMBER:
RF-1



CERTIFICATION OF COMPLIANCE

January 28, 2021
JN3072 Kowee Creek
3500 N. Douglas Highway
Juneau, AK 99801

City and Borough of Juneau
Community Development
Juneau Permit Center
230 S Franklin Street
Juneau, AK 99801

To the Juneau Permit Center:

I hereby certify that:

The proposed technology upgrade to the existing Communication Facility complies with all applicable laws pertaining to its service offered.

Sincerely,

A handwritten signature in dark ink, appearing to read "Alissa Haynes", is written over a faint, circular, light-colored background.

Digitally signed by Alissa Haynes
DN: cn=Alissa Haynes, o, ou,
email=sitedeployment@gmail.co
m, c=US
Date: 2021.02.25 15:55:13 -04'00'

Alissa Haynes, WPM
alissa.haynes@selectsiteacq.com
Representing AT&T Mobility in AK
685 Matterhorn Drive
Park City, UT 84098
907-727-7907



Date: November 24, 2020
Site Number: JN3072 – KOWEE CREEK
FA Code: 11579315
USID: 270940
Address: 3500 North Douglas Highway, Juneau, AK 99801
Re: Radio Frequency Compliance

Statement of Compliance

This AT&T wireless communications facility complies with all federal standards for radio frequency radiation in accordance with the Telecommunications Act of 1996 and subsequent amendments and any other requirements imposed by state or federal regulatory agencies.

Description of Facility:

Location Type: Proposed wireless communications facility will be comprised of multiple panel antennas and associated radio cabinets utilizing licensed frequencies in the 700, 850, 1900, 2100, and 2300 MHz bands. The purpose of the facility is to provide coverage and/or capacity to the geographic service area.

Power Density:

The power density from any sector as designed with the proposed facility shall not exceed the FCC maximum permissible exposure limits in accordance with FCC Public Standards OET Bulletin 65 (e.g., 1 mW/cm² at 1900 MHz) at any location that is considered generally accessible by the general public.

The proposed facility should not interfere with other communications facilities. Our sites are monitored 24/7 by a national operations center to insure all is operating normally. In addition, we have local technicians who make routine visits to cell sites to make repairs when needed. AT&T audits our facilities on a semi-annual basis to ensure that FCC compliance levels are continuously met.

If requested, a detailed radio frequency emission safety report detailing the maximum potential exposures will be provided to the jurisdiction.

Sincerely,

A handwritten signature in black ink, appearing to read "Juvylyn Calces".

Juvylyn Calces
AT&T Mobility - RAN Engineering

Juvelyln A. Calces

jc7183@att.com

(Cell) 425-449-2057

**PROFESSIONAL
HIGHLIGHTS**

- RF Engineer with more than 24 years of extensive multi-Vendor experience in cellular Design, Performance, Planning, Optimization and Benchmarking.
- Managed RF Safety and Compliance for Pacific Northwest
- Spectrum Negotiations and Frequency coordination execution between operators.
- Managed E911 network for Pacific Northwest using UTDOA and AGPS technology
- Knowledgeable on most drive test equipments such as Agilent Nitro and Viper, Ericsson TEMS, Wireless Pro, SAFFCO PVP and post processing drive test data using ACTIX Analyzer and TEMS Deskcat
- Valuable knowledge on RF network planning and design using Atoll
- Excellent interpersonal, communications and presentation skills.

**WORK
EXPERIENCE****11/2009 – Present****AT&T Mobility –Tualatin, OR, USA****RAN Engineer**

- RF Safety and Compliance Lead (01/2019 – current)
Responsibilities include:
 1. RF safety analysis coordinator for Pacific Northwest Markets.
 2. Cellular license Management for WA, OR and AK Markets.
 3. Preparation and tracking of Cellular License Extension agreements.
 4. RF Safety and MPE audit in compliance with FCC guidelines.
 5. Preparation of CGSA contour maps and coverage maps using ATOLL and MapInfo.
 6. License Protection – POPs calculations and CMA percentage coverage calculations
- E911 Sustainment Lead (11/2009 to 12/2018)
Responsibilities include:
 1. Responsible in issuance of E911 data fill for new site built, carrier adds, rehome and modification of LTE, 5G NR, UMTS, GSM and TDMA sites to customers such as Intrado, eSMLC and VCIDDB databases, True Position, IT- Billing, Call Routing, ICS and GCS. Issue ACD for Addition, change and deletion of site information in the IMPC and NDP to Lucent for UMTS sites. Coordinates with the Design, RF Performance and Field operations with regards to implementation of issued data fill and ACD forms prior to integration or rehome of sites.
 2. Managed the VCIDDB database, GMLC, and ESMLC 4G/SAS 3G databases to ensure data integrity for better location calculation.
 3. Provides support for live PSAP testing and help troubleshoot any issues real time.
 4. Modify and maintain Cell Site database for Pacific Northwest and ensures data integrity of site information in the Database. Generate
 5. Voice coverage polygons for the entire Pacific Northwest using Atoll, MapInfo, and vertical mapper.
 6. Ensure all critical elements of 911 location system are engineered, quality checked, and managed on a daily basis, including the support of: 911 RF configuration management, PSAP validation and testing, 911 accuracy management, support of new PSAP Phase 1 & 2 deployments, and 911 quality assurance.

01/2007 – 10/2009**Mycom North America –RICHARDSON, TX, USA****Sr. RF Engineer**

Responsibilities include:

1. Responsible in issuance of E911 data fill for new site built, rehome and modification of GSM, UMTS and TDMA sites to customers such as Intrado, True Position, IT- Billing, Call Routing, ICS, and GCS. Issue ACD for Addition, change and deletion of site information in the IMPC and NDP to Lucent for UMTS sites. Coordinates with the Design, RF Performance and Field operations with regards to implementation of issued data fill and ACD forms prior to integration or rehome of sites.
2. Modify and maintain Cell Site database for Pacific Northwest and ensures data integrity of site information in the Database. Generate
3. Voice coverage polygons for the entire Pacific Northwest using Atoll, MapInfo, and vertical mapper.
4. Ensure all critical elements of 911 location system are engineered, quality checked, and managed on a daily basis, including the support of: 911 RF configuration management, PSAP validation and testing, 911 accuracy management, support of new PSAP Phase 1 & 2 deployments, and 911 quality assurance.

10/2005 – 01/2007**inCode Wireless Group –Alpharetta, GA, USA****RF Engineer**

- True Position LBS (Location Based Services) Test – Chicago, IL
Performed test for various types of Location Based Services (LBS) technology and analyze its performance available for wireless handsets. The technologies compared include UTDOA, ECID, CGI+TA and Cell ID for GSM and AGPS for GSM, CDMA and IDEN.
- Cingular Video Share Project (UMTS Services)– Washington, DC; Baltimore, OH; Columbus, OH; Cleveland, OH; Akron, OH; Harrisburg, PA
This is Phase 2 of Cingular Video Sharing project. inCode assisted Cingular in testing the video sharing service for different markets with different networks like Lucent and Ericsson. The testing consists of: VS calls in both poor and good coverage (intra and inter market scenarios), spot checks along a drive route, spot checks on points of interest and concurrent test in specific markets. The video sharing service test was completed on 6 markets – Washington DC, Baltimore, Columbus, Cleveland, Akron and Harrisburg.
- LGC Wireless Indoor RF Survey Project – Atlanta, GA
Conducted indoor RF Survey at 191 Peachtree Tower (50 floors). Perform data collection and post processing of log files (for both 191 Peachtree Tower and KC Campus) using Wireless Pro for Cingular, Verizon, and Sprint Wireless. Prepare the Indoor RF Survey report with the appropriate recommendations for submission to the client.
- Nokia Flash cut Optimization – Boston, MA, USA
Responsibilities include:
 1. Assist Nokia on the Flash Cut optimization process for Massachusetts market.
 2. Optimize the network by post processing the log files and analyzing collected drive test data thru modification of transmit power of some sites, tuning of radio cell parameter, monitoring, and troubleshooting alarms, neighbor definitions, and monitoring GPRS/EGPRS statistics
 3. Evaluate HO trends and causes, monitor traffic (voice and data) statistics, identify sites which affect network performance degradation and make recommendations
 4. Monitored and troubleshoot the alarms generated by the integrated sites after cut-over.
 5. BTS, HOC and POC parameter consistency check of sites
 6. Implement parameter modifications in RNW, CM Editor and CM Plan Manager
 7. Neighbor definitions and modifications and implement additional neighbors in NOKIA and Ericsson OSS
 8. Generate top offender list in the network and provide analysis and recommendations to Nokia RF Performance engineer
 9. Monitored site performance via statistical reports from NDW, customer complaints, and generated alarms

- E911 Research Group – Alpharetta, GA, USA

Responsibilities include:

1. Research on E911 particularly the history, FCC regulations and the different location technologies particularly the Uplink Time Difference of Arrival (UTDOA) Solution.
2. Study and familiarize on the additional nodes deployed in a carrier's coverage area. Research on how the WLS is implemented as an overlay to a wireless network and how each of the elements function to provide the exact location of a mobile.
3. Have hands on experience on the configuration management using SCOUT thru In-house trainings conducted by an E911 SME.

- GSM Drive test and Site Verification – Metro Atlanta, GA, USA (Ericsson) and Guatemala, Central America (Nortel)

Responsibilities include:

1. Responsible in the pre and post drive test of sites for Tier 1 carrier in Metro Atlanta and phase rollout 900 MHz sites in Guatemala.
2. Performed real time drive test analysis and troubleshooting and cascaded to Field Engineer counterpart for any RF related issues observed. Also, provides drive test analysis report to Field Engineer counterpart after every drive test conducted.
3. Performed regular updates on the status of the field activities.
4. Ensure proper handling of the log files, post processing, conversion to TEMS format, naming convention and backup to the assigned server.

- Drive Test Lead UMTS (Siemens) – Atlanta, GA, USA

Responsibilities include:

1. Perform UMTS System data collection for coverage and performance analysis in support of pre-launch and Conditional Acceptance milestones.
2. Use Agilent Nitro E6474A for network coverage and performance analysis and use as a tool in identifying and troubleshooting network / RF related problems.
3. Performed different UMTS test scenarios for voice call and data e.g. dial-up test, ftp test, 3G to 2G & 2G to 3G handover tests both for data and voice calls, using 3G phones and Sierra Wireless Cards and drive test under simulated loaded network condition (Orthogonal Channel Noise-Generator Script (OCNS) loaded into the UMTS network by RNP Engineers).

09/2000 - 09/2005

Smart Communications Inc.-Manila, Philippines

RF Engineer

Responsibilities include:

1. Responsible for BSS system performance monitoring and continuous improvement to maintain the standard Key Performance Indicators (KPIs) of the network.
2. Do site surveys and coverage drive testing of Nokia GSM 900/1800 MHz networks. Analyze and Evaluates coverage drive test data and perform troubleshooting of sites by identifying possible interference or network and hardware problems.
3. Operates test equipment such as SAFFCO Walkabout, Agilent's Portable Voice Print, Viper and Nitro, Ericsson TEMS Investigation, and post process the collected data using SAFFCO OPAS, TEMS Deskcat and ACTIX Analyzer.
4. Conduct cluster optimization and implement reengineering plan and configuration using drive test data.
5. Modifies cell parameters on two-layer 900/1800Mhz GSM architecture in such a way to optimize the performance.
6. Attends customer complaints as part of company's goal for total customer satisfaction.
7. Issues work order to field operations group and NOC to troubleshoot and fix hardware problem on cell sites that shows performance degradation.
8. Conduct Competitive Benchmarking to compare network performance against competitors' in terms of CCR, Drop Rate, Access Failure, SMS Delivery time, SMS Success Rate, Call Attempts Success Rate, Connection Time, Rx Qual DL / UL and provide recommendations to address identified problems to further improve and maintain good quality of service.
9. Conducts in building test to survey indoor coverage of the network and recommend parameter changes to optimize signal coverage.
10. Provides network performance analysis based on traffic statistics to different sectors of NSD

03/1997 - 09/2000**Pilipino Telephone Corporation (PILTEL) - Manila, Philippines****RF Optimization Engineer**

Responsibilities include:

1. Optimize analog and digital network as well as paging network by managing database parameters that are affecting RF performance and through adjusting RF parameters such as transmit and receive power, access thresholds etc.
2. Do drive test and coverage testing of South Luzon CS (before activation for baselining, after activation for optimization, during conversion and relocation) and to make recommendations based on the findings such as retuning of voice channels and changes in control channel, recommend adjustment of transmit power depending on the area served, adjustment of access and primary thresholds, handoff biases and neighbors and other database parameters and recommend hardware changes such as re-orientation and down tilting of antenna, growing or adding of radios if necessary etc.
3. Maintain a good quality of service by conducting QOS testing to be used as a tool in identifying signal strengths or coverage (primary, secondary, tertiary or no service) of the area.
4. Operates and uses propagation tools such as PACE (Performance Analysis & Cellular Engineering) in troubleshooting service impairments such as interference, muting, crosstalk, etc.
5. Generate, evaluates, and analyzes traffic statistics and recommend solutions on how to improve such statistics.
6. Operates the COMARCO, SMRT-SAM (+) equipment, the SAFCO Walkabout, etc. and conduct post processing of data using the SAFFCO OPAS 32 software and MAPINFO tool.

03/1997 – 09/2000**Pilipino Telephone Corporation (PILTEL) – Manila, Philippines****Switch Engineer**

Responsibilities include:

1. Monitors, operates, and maintains Lucent's Autoplex System 1000 such as the ECP (3B21D), System 85 Definity Switch (DCS), Digital Access Cross connect Systems (DACSII), etc.
2. Translates switch, cell site (AMPS and CDMA), trunking, routing and dialing plan database parameters using Recent/Change and Verify (R/CV) terminals of Autoplex System 1000.
3. Performs system routine maintenance of Autoplex System 1000 such as diagnostics, amatape copying and system backups.
4. Performs integration / rehomeing of SI and SII cell sites for network balancing and optimization.
5. Performs facility line-up (microwave, SDH, OLTE, transcoded facilities, etc.) for upcoming/to be rehomed cell sites or new trunk groups.

03/1997 – 09/2000**Pilipino Telephone Corporation (PILTEL)- Manila, Philippines****RF Engineer**

Responsibilities include:

1. Monitoring and maintenance of both Lucent and Motorola cellular network (cell sites, switch facilities and its peripherals).
2. Conducts first line maintenance, troubleshoots, and isolates base station trouble and if problems can't be fixed remotely, coordinates problem to field personnel.
3. Preparation of reports for base station outages and daily hardware trouble of all CS.
4. Creation, modification, and deletion of PIN (Personal Identification Number) database on Octel's Phone Card Call Processing machine (networked to both Lucent and Motorola switches).
5. Remote troubleshooting, isolation, and correction of link/router trouble on the data network.
6. Monitoring of router link status, builds user accounts on WINNT server for Engineering and Operations personnel.

EDUCATION

Bachelor of Science, Electronics and Communications Engineering
 Mapua Institute of Technology (M.I.T.), Manila, Philippines-1995



February 4, 2021

Todd Richardson
SAQ Project Manager -Alaska Market
MasTec Network Solutions
2240 E. Dowling Rd.
Anchorage, AK 99515

Mr. Richardson,

Per your request, I have completed a review of the drawings and evaluation reports for site JN3072 KOWEE CREEK, located in Juneau, Alaska (Site Address: 3500 N DOUGLAS HWY, JUNEAU, AK 99801). The most current construction drawings were completed by DHD Architecture, PLLC on 12/18/2019, and the most current tower analysis was completed by Ehresmann Engineering Inc. I completed the foundation designs for this site based on a geotechnical report provided by PDC Engineers in July 2020.

The scope of this review was to determine that the wireless communications facility 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. The information provided in the construction documents provided by DHD Architecture, PLLC with supporting documents is sufficient for a license and qualified contractor to complete the scope of work within applicable codes and safety standards and meets the standards for the National Association of Tower Erectors compliance.

If any of the information provided for review has been updated, this review may be affected, and Andrew P. Adams, PE Consulting Engineer should be allowed to review any new information to determine its effect on the structural integrity of the tower and foundation. I trust this is the information you require. If you need any further assistance, please contact the undersigned.

Respectfully,

Andrew P. Adams, P.E.



2/4/2021

Attachment A - Application Packet

MONOPOLE DESIGN CRITERIA:

DESIGN PER TIA-222-G
108 MPH WIND & NO ICE (V_{asd})
(V_{ult} = 140 MPH WIND)
60 MPH WIND & 1/4" ICE (V_{asd})
60 MPH WIND & NO ICE (SERVICE)
STRUCTURE CLASS II
EXPOSURE CATEGORY D
TOPOGRAPHIC CATEGORY 1

SITE INFORMATION:

COORDINATES: LATITUDE: 58.297757°N
LONGITUDE: 134.433447°W
ADDRESS: 3500 N DOUGLAS HWY
JUNEAU, AK 99801
COUNTY: JUNEAU COUNTY, ALASKA

MAXIMUM BASE MOMENT & FORCES

MOMENT (FT-KIPS)	SHEAR (KIPS)	AXIAL (KIPS)
5,578	85	39

DESIGN LOADING:

ELEV.	ITEM	RAD.	FEEDLINES
95'	(3) 10' T-FRAME	---	(6) HYBRID CABLE (INSIDE POLE)
95'	(9) 80010992	---	
95'	(3) RRUS 4415 B25	---	
95'	(3) RRUS 32 B66	---	
95'	(3) RRUS 4478 B14	---	
95'	(6) RADIO 2203	---	
95'	(3) RRUS 32 B30	---	
95'	(3) DC6-48 60-18-8F	---	
75'	(3) 10' T-FRAME	---	(6) HYBRID CABLE (INSIDE POLE)
75'	(9) 80010992	---	
75'	(3) RRUS 4415 B25	---	
75'	(3) RRUS 32 B66	---	
75'	(3) RRUS 4478 B14	---	
75'	(6) RADIO 2203	---	
75'	(3) RRUS 32 B30	---	
75'	(3) DC6-48 60-18-8F	---	
65'	DISH MOUNT	---	(2) 1 1/4" FIBER (INSIDE POLE)
65'	(2) UBT ODU (BEHIND DISH)	---	(2) LMR-400 (INSIDE POLE)
65'	VHLPX2-10B	---	
55'	(3) 10' T-FRAME	---	(6) HYBRID CABLE (INSIDE POLE)
55'	(9) 80010992	---	
55'	(3) RRUS 4415 B25	---	
55'	(3) RRUS 32 B66	---	
55'	(3) RRUS 4478 B14	---	
55'	(6) RADIO 2203	---	
55'	(3) RRUS 32 B30	---	
55'	(3) DC6-48 60-18-8F	---	
40'-95'	(142) PINE BRANCHES (5'-9' IN LENGTH)	---	

NOTES:

- ORIENT V-NOTCH ON TOP OF TEMPLATE AND REFERENCE TAB ON BASE PLATE @ 0°.
- STAMP "EEI 108420" ON TOP OF BASE PLATE (NEAR NORTH TAB) WITH 1/2" STEEL STAMPS.
- ENTIRE MONOPOLE WILL BE BARKED.
- PILE FOUNDATION AND CAP PLATE DESIGNED BY OTHERS.

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02/12/2021

Firm License Number: AECL1355
VSE Project Number: U1408.463.201

ANCHOR BOLT DATA:

(22x) 2 1/4" Ø ASTM A615 GRADE 75 KSI
X 2'-0" LG ON A 59" Ø BOLT CIRCLE

BASE PLATE DATA:

66" Ø, 2" THICK, ROUND
ASTM A572 50 KSI
(22x) 5/8" THICK X 12" TALL GUSSETS
ASTM A572 65 KSI

POLE DATA (MEASURED FROM BASE PLATE)

POLE 65 KSI 18 SIDED					
ELEV.	WALL THICKNESS	TAPER	TUBE LENGTH	TOP DIA.	BASE DIA.
84'-9"-93'	3/16"	.305"/FT.	8'-3"	24"	26 1/2"
58'-9"-84'-9"	1/4"	.305"/FT.	26'-0"	26 1/2"	34 1/2"
23'-9"-63'-9"	7/16"	.305"/FT.	40'-0"	32 3/8"	44 11/16"
0'-30'	1/2"	.305"/FT.	30'-0"	41 13/16"	51"

			NAME CE
			DRAWN BY:
			CHECKED BY:
			ENG APPR.
			MFG APPR.
			Q.C.
			Site:
			JN3072 KOWEE CREEK, AK
			4400 West 31st Street Yankton, SD 57078 605-665-7532 605-665-9780
REV	DESCRIPTION	DATE	Job# 108420

Ehresmann Engineering, Inc.



TITLE:
93'
MONOPOLE

DWG. NO. 108420E01
Page 40 of 103
Sheet NO. E01
Rev. 1A

Attachment A - Application Packet

AT&T MOBILITY

JN3072 Kowee Creek
Juneau, Alaska
Prepared For: MasTec Network Solutions

1.0 GENERAL LOADING

BUILDING CODES:
INTERNATIONAL BUILDING CODE 2012
TIA-222-H
AMERICAN INSTITUTE OF STEEL CONSTRUCTION, 13TH EDITION
DESIGN REACTIONS
MAX BASE MOMENT: 5179 FT-KIP
MAX BASE SHEAR: 79 KIPS
MAX COMPRESSION: 37 KIPS

2.0 GENERAL CONDITIONS

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND SECTIONS AND REPORT ANY DISCREPANCY TO THE ENGINEER PRIOR TO THE FABRICATION OR INSTALLATION OF STRUCTURAL MEMBERS.
THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORTS THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND/OR SEQUENCES.
THE PROJECT SPECIFICATIONS SHALL BE CONSIDERED AN INTEGRAL PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL REVIEW THE SPECIFICATIONS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.
THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY REQUIREMENTS AND PUBLIC AGENCIES SAFETY ORDINANCES.
DESIGN BASED ON SOIL REPORT PROVIDED BY PDC ENGINEERS, PROJECT 20094.02AN, DATE 7/24/2020 AND EHRESMANN ENGINEERING JOB #P10804-1 DATE 8/14/2019.

3.0 STEEL

MONOPOLE FOUNDATION PILE SHALL BE 45" DIA X 1" WALL ASTM A252
GR 3, 50 KSI YIELD MIN.

ALL STRUCTURAL STEEL SHALL BE ASTM A572 GR B, 50 KSI U.N.O..

ALL WELDING SHALL BE PERFORMED BY AWS D1.1 QUALIFIED WELDERS
USING QUALIFIED PROCEDURES.

ALL STRUCTURAL STEEL FOR THE TOWER FOUNDATION SHALL BE PROTECTED WITH A THREE PART COATING SYSTEM APPLIED AFTER FABRICATION AS FOLLOWS:
- SHOP PREPARATION: CLEAN ALL SURFACES ACCORDING TO SSPC-10 NEAR WHITE BLAST-CLEANING. SURFACES SHALL HAVE A 2 TO 3 MIL SURFACE PROFILE WITH SHARP PATTERN.
- SHOP PRIMER: 2-4 MIL COAT OF DEVCOE CATHA-COAT 302H.
- SHOP PAINT: TWO 4-8 MIL COATES DEVCOE BAR-RUST 235.
- TOP COAT: 2-3 MIL COAT DEVCOE DEVTHANE 389.
- FIELD PAINTING WELDS, TOUCH UP AND REPAIRS REQUIRED.

4.0 PILE DRIVING

48 HOUR PRIOR NOTICE REQUIRED FOR PILE HAMMER TYPE APPROVAL BY THE ENGINEER OF RECORD.

THE PILE HAMMER SHALL HAVE A MINIMUM RATING OF 40,000 FT-LBS.
IF PILE ENCOUNTERS REFUSAL PRIOR TO ACHIEVING MINIMUM DEPTH, CONTACT THE ENGINEER OF RECORD.

PILE TOLERANCE SHALL NOT EXCEED 1/2" PER 10 FEET VERTICAL AND +/- 3" HORIZONTAL.

5.0 SITE PREPARATION

TO PROVIDE LATERAL RESISTANCE FOR THE PILE FOUNDATION FOR THE TOWER, THE EXISTING FILL MATERIAL SHOULD BE EXCAVATED TO 7 FEET BELOW FINISHED GRADE AND REPLACE WITH COMPACTED SHOT ROCK FILL. THE EXCAVATION AND SHOT ROCK FILL SHOULD EXTENDED LATERALLY 10 FEET AWAY FROM THE PILE IN ALL DIRECTIONS.

ALL ORGANIC MATERIAL SHOULD BE REMOVED.

SITE GRADING SHALL BE DESIGNED TO ROUTE SURFACE WATER AROUND AND AWAY FROM THE TOWER BASE.



6.0 INSPECTIONS

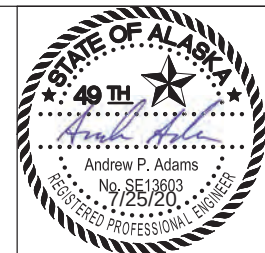
THE CONTRACTOR IS RESPONSIBLE FOR ALL SPECIAL INSPECTIONS AND FIELD REPORTS. SUBMIT TO THE ENGINEER OF RECORD FOR APPROVAL.

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION

VERIFICATION AND INSPECTION	FREQUENCY	INSPECTION
INSPECTION OF STEEL TYPE AND GRADE.	PERIODIC	INSPECT PRIOR TO FABRICATION
INSPECTION OF WELDS	CONTINUOUS	PER IBC 1704 AND D1.1
BOLTED CONNECTIONS	PERIODIC	PER IBC 1704

REQUIRED VERIFICATION AND INSPECTION OF DRIVEN DEEP FOUNDATION ELEMENTS

VERIFICATION AND INSPECTION	FREQUENCY	INSPECTION
VERIFY ELEMENT MATERIALS, SIZES AND LENGTHS COMPLY WITH THE REQUIREMENTS.	ONE TIME	INSPECTED PRIOR TO INSTALLATION
OBSERVE DRIVING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT.	CONTINUOUS	PROVIDE LOGS TO ENGINEER OF RECORD



Andrew P. Adams, PE
Consulting Engineer
PO BOX 876303
Wasilla, AK 99687
907-947-9303
573-586-8735 (CELL)
ANDREWADAMS@GCI.NET

JN3072 - KOWEE CREEK
3500 N DOUGLAS HWY
JUNEAU, AK 99801
FOR
MasTec Network Solutions

DATE: 7/25/20

DRN: AA

CHK'D: AA

TYPE: Foundation

Scale: As Noted

SHEET NO:

S

1

OF

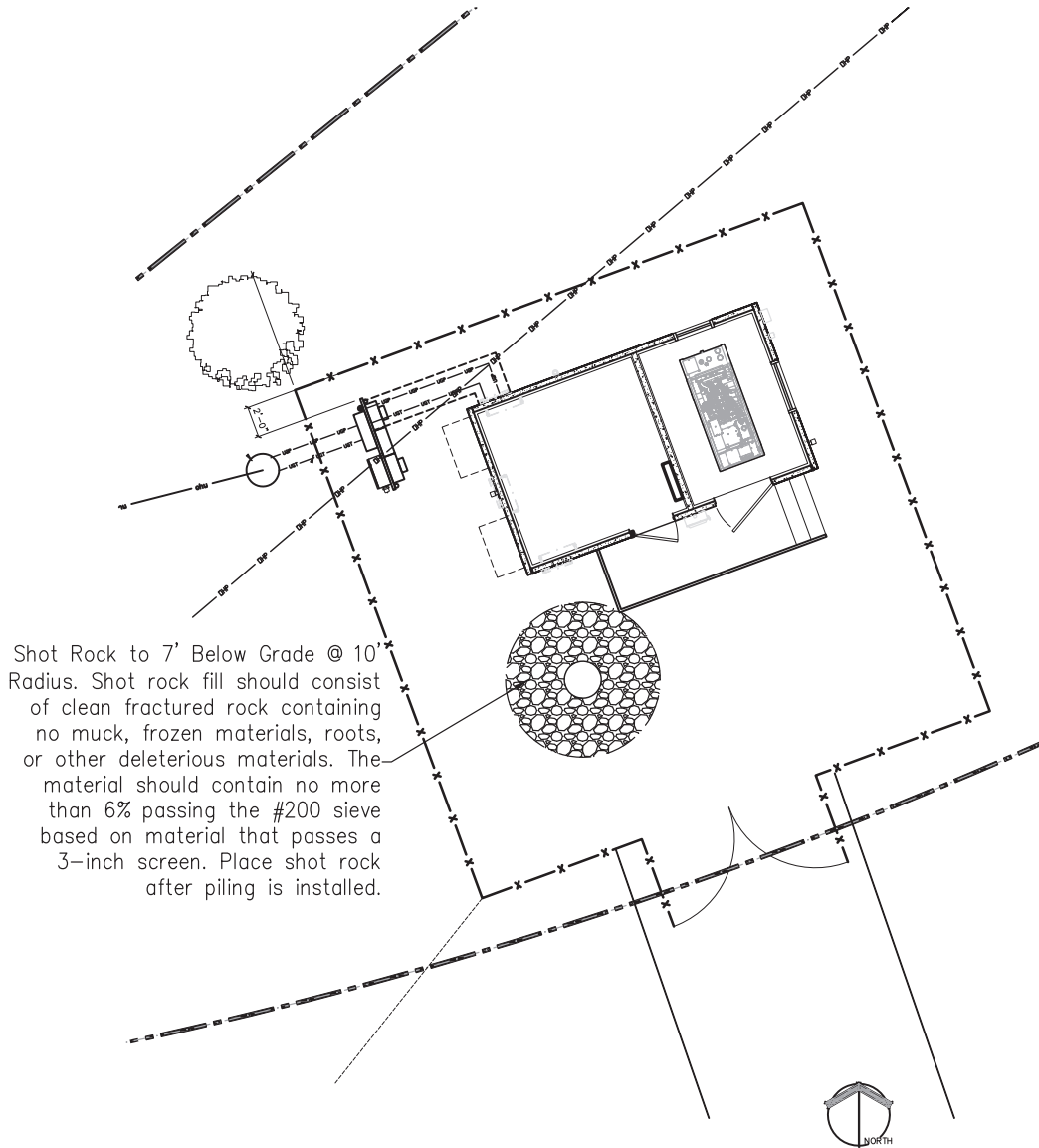
JOB NO: REV O: IFC

DWG:

Page 33 of 103

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Attachment A - Application Packet



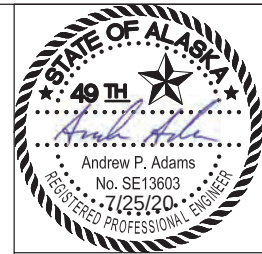
GENERAL NOTES:

1. FIELD VERIFICATION: FIELD VERIFY EXISTING DIMENSIONS, ELEVATIONS, AND DETAILS. NOTIFY ENGINEER OF DISCREPANCIES OR OMISSIONS BEFORE SHOP DRAWING SUBMITTAL.
2. SUBSTITUTIONS: SUBMIT TO THE ENGINEER SUBSTITUTIONS FOR SPECIFIED PRODUCTS PRIOR TO CONSTRUCTION. INCLUDE DOCUMENTATION CERTIFYING SUBSTITUTION IS EQUAL OR BETTER THAN SPECIFIED PRODUCT.
3. QUALITY CONTROL: THE FOLLOWING SPECIAL INSPECTIONS WILL BE PERFORMED BY INSPECTORS RETAINED BY THE OWNER IN ACCORDANCE WITH IBC SECTION 1704. COORDINATE WITH OWNER IN SCHEDULING INSPECTIONS TO ALLOW A MINIMUM OF THREE WORKING DAYS NOTICE BEFORE SUCH INSPECTION IS REQUIRED:
 - 3.1. IN-PLACE DENSITY OF FILL & NATIVE SOILS
 - 3.2. IN-PLACE DENSITY OF COMPACTED D1 AGGREGATE APPROACH.

FOUNDATIONS AND EARTHWORK

1. WORK AREA TO BE IDENTIFIED BY LICENSED SURVEYOR PER ACCESS AND PERMIT AGREEMENTS.
2. PLACE STRUCTURAL FILL AS DESIGNATED ON PLANS UNDER TOWER LOCATION.

SIEVE SIZE	% PASSING
#200	LESS THAN 6%
3. MATERIAL NOT MEETING THE GRADATION REQUIREMENTS MAY BE USED IF APPROVED BY THE GEOTECHNICAL ENGINEER. STRUCTURAL FILL SHALL NOT CONTAIN ORGANIC MATERIALS. COMPACT ALL STRUCTURAL FILL TO 95% OF THE MAXIMUM DRY DENSITY PER ASTM D1557 OR OTHER TEST METHODS DETERMINED BY GEOTECHNICAL ENGINEER. BACKFILL AND COMPACT IN 18 INCH LOOSE HEIGHT MAXIMUM LIFTS, UNLESS NOTED OTHERWISE ON THE DRAWINGS. FILL SHALL BE UNFROZEN AND PLACED AT ABOVE FREEZING TEMPERATURES.
4. THE OWNER SHALL RETAIN A GEOTECHNICAL ENGINEER TO DETERMINE SOIL CLASSIFICATION AND MOISTURE DENSITY TESTS OF THE PROPOSED FILL MATERIAL AND TO MAKE IN-PLACE FIELD DENSITY TESTS TO VERIFY COMPACTION.



Andrew P. Adams, PE
Consulting Engineer
PO BOX 876303
Wasilla, AK 99687
907-947-9303
573-586-8735 (CELL)
ANDREWADAMS@GOL.NET

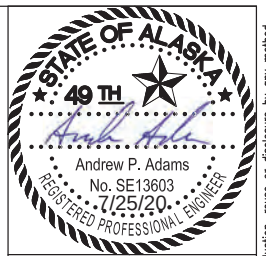
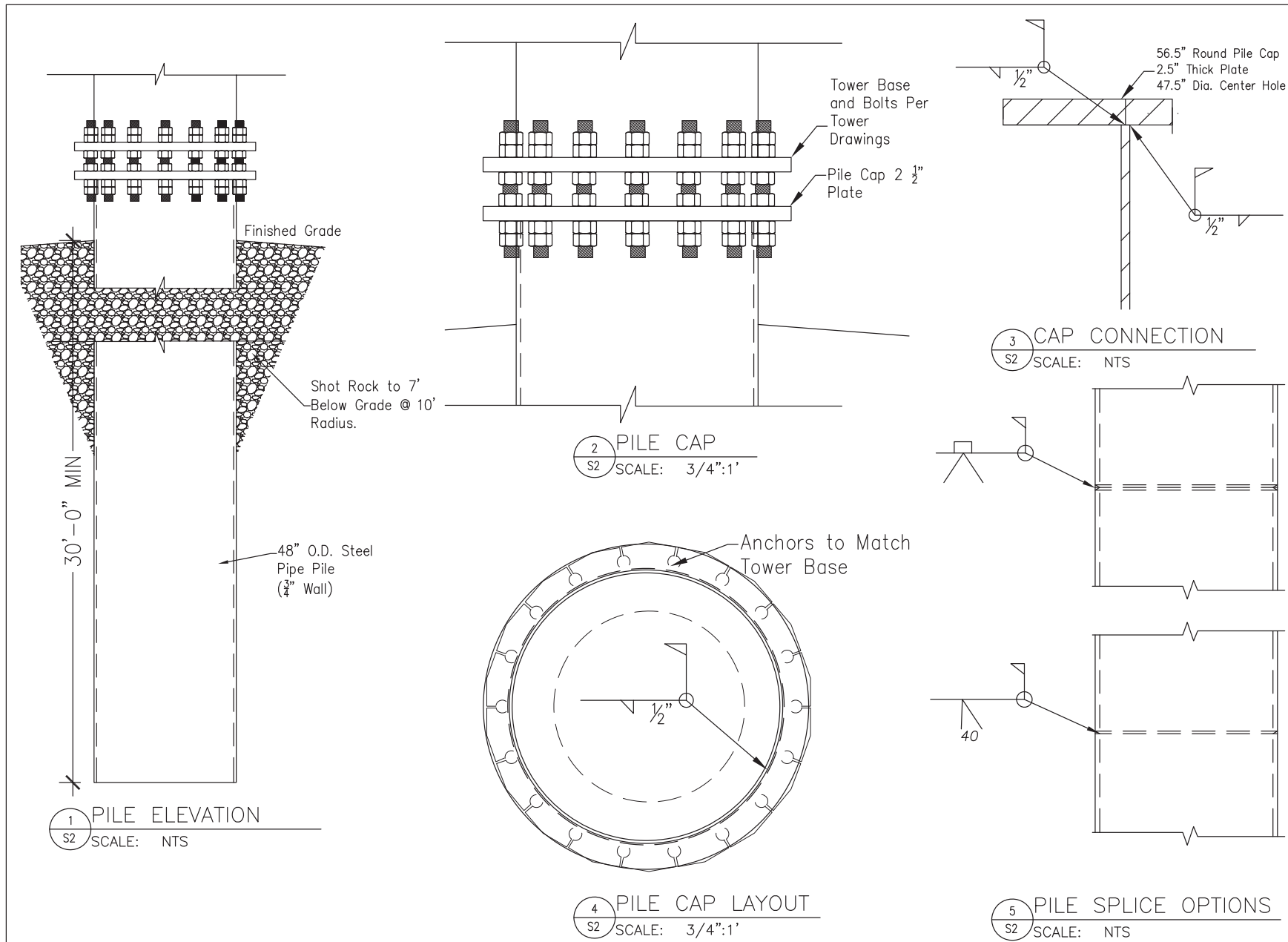
JN3072 - KOWEE CREEK
3500 N DOUGLAS HWY
JUNEAU, AK 99801
FOR
MasTec Network Solutions

DATE: 7/25/20
DRN: AA
CHK'D: AA
TYPE: Foundation
Scale: As Noted

SHEET NO:
S
OF
2

JOB NO: REV O: IFC
DWG:

Attachment A - Application Packet



Andrew P. Adams, PE
Consulting Engineer
PO BOX 876303
Wasilla, AK 99687
907-947-9303
573-586-8735 (CELL)
ANDREW@ADAMS@GCL.NET

JN3072 - KOWEE CREEK
3500 N DOUGLAS HWY
JUNEAU, AK 99801
FOR
MasTec Network Solutions

DATE: 7/25/20	DRN: AA	CHK'D: AA	TYPE: Foundation	Scale: As Noted
SHEET NO: S 3				
OF				
JOB NO: REV 0: IFC				
DWG: Page 35 of 103				

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NOTICE OF COMPLIANCE

The proposed project is in compliance with FAA regulations 14CFR Part 77.

A part 77 Notice of Proposed Construction will be filed for the proposed project if requested by the FAA.

Respectfully,

A handwritten signature in dark ink, appearing to be "Alissa Haynes", written over a horizontal line.

Alissa Haynes

Digitally signed by Alissa Haynes
DN: cn=Alissa Haynes, o, ou,
email=sitedeployment@gmail.com, c=US
Date: 2021.02.25 15:56:10 -04'00'



There are no dwellings within the distance of the proposed tower equal to the height of the proposed tower. There no agreements in place which limit or preclude the proposed WCF from being shared with new WCF's.

Respectfully,

A handwritten signature in dark ink, appearing to be "Alissa Haynes", written over a horizontal line.

Digitally signed by Alissa Haynes
DN: cn=Alissa Haynes, o, ou,
email=sitedeployment@gmail.com, c=US
Date: 2021.02.25 15:57:09 -04'00'

Alissa Haynes



**EHRESMANN
ENGINEERING INC.**

4400 West 31st St – Yankton, SD 57078

Phone: (605) 665-7532 Fax: (605) 665-9780

<http://www.ehresmannengineering.com>

E-Mail: e.heine@ehresmannengineering.com

February 11, 2021

Todd Richardson
Mastec Network Solutions
2240 East Dowling Road
Anchorage, AK 99507

Subject: 93' Ehresmann Engineering, Inc. Monopine Pole (100' Overall A.G.L.)
Site: JN3072 Kowee Creek
Location: Juneau, AK
EEI JO#: 108420

As requested, we have designed and can furnish a 93' Ehresmann Engineering, Inc. monopine to be located in Juneau, AK. The site will be called JN3072 Kowee Creek.

Address: 3500 N Douglas Hwy
Juneau, AK 99801

Coordinates: 58.297757 N
134.433447 W

The monopole will be designed as follows:

- In accordance with the Telecommunications Industry Association TIA-222-G Standard
- 108 mph wind with no ice (Vasd)
- Vult = 140 mph wind
- 60 mph wind with 1/4" ice (Vasd)
- 60 mph wind with no ice (service)
- Structure Class II
- Exposure Category D
- Topographic Category 1

Design loading will be included as outlined on stamped drawing #108420E01.

This tower design standard takes into account several safety factors including load factors and steel strength capacities. Therefore, it is highly unlikely that the pole will fail structurally in a wind or ice event where the design criteria are exceeded within the range of built-in safety factors.

Should the wind speed or ice loading increase beyond the capacity of the built-in safety factors to the point of failure, the most likely location of failure would be at the theoretical "break-point" location. For the JN3072 Kowee Creek pole, a theoretical break-point flange was designed to be the highest stressed area of the pole at 13'-3" below the overall height of the monopine (EL. 86'-9" Above Ground Line)

Please note that our design does NOT include the pole foundation (which is to be designed by others) and therefore this letter only pertains to the pole itself. Foundation must be designed such that the theoretical break-point of the pole would fail before the foundation.

Please also note, that the break-point design pertains to the steel portion of the pole only. In an extreme wind/ice event, some branch pieces may become unattached and fall outside the expected fall radius of the pole itself. However, tie-off lanyards are provided with our branches and are to be installed as shown on drawing #108420E03 to minimize risk of entire branches falling.

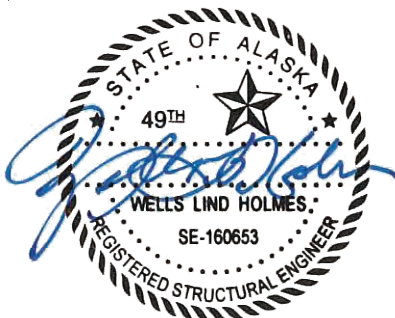
All opinions outlined in this letter are valid only if this specific Ehresmann Engineering, Inc. pole is furnished and properly installed.

If you have any questions, please feel free to contact us.

Regards,



Eric Heine



02/12/2021

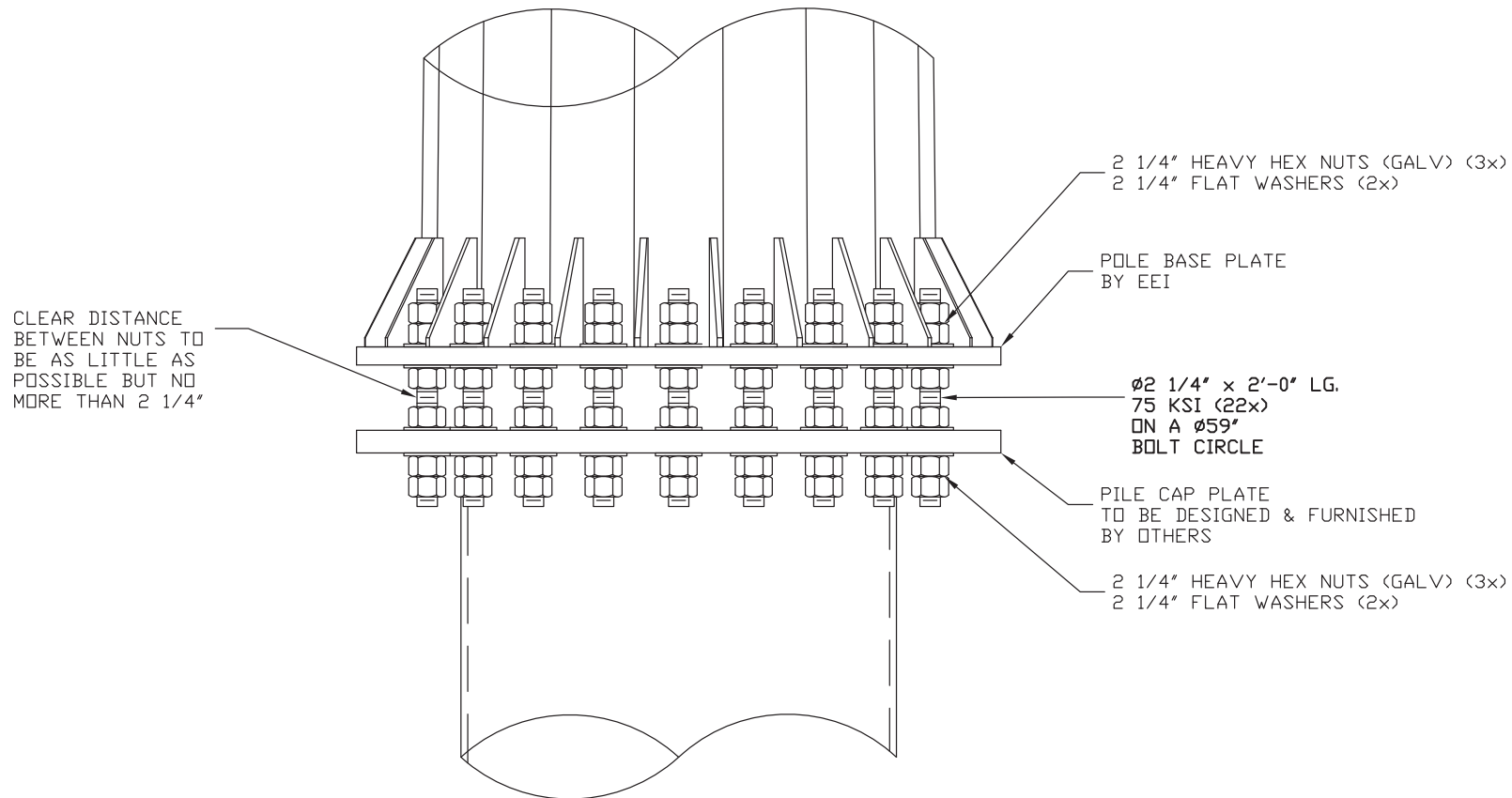
Firm License Number: AECL1355
VSE Project Number: U1408.463.201

Attachment A - Application Packet

Weldment	Part	Qty	Description	Weight
	578682	22	Ø2 1/4" X 2'-0" LG ANCHOR ROD KIT (ASSEMBLED)	1,214
	---	132	2 1/4" HEAVEY HEX NUT. A563 (CALV.)	---
	---	88	2 1/4" FLAT WASHER. F436 (CALV.)	---

BLACK IRON WT = 1,214#

NOTE: REQUIRED ANCHOR ROD LENGTH TO BE CONFIRMED BY ENGINEER RESPONSIBLE FOR FOUNDATION/CAP PLATE DESIGN.



02/12/2021

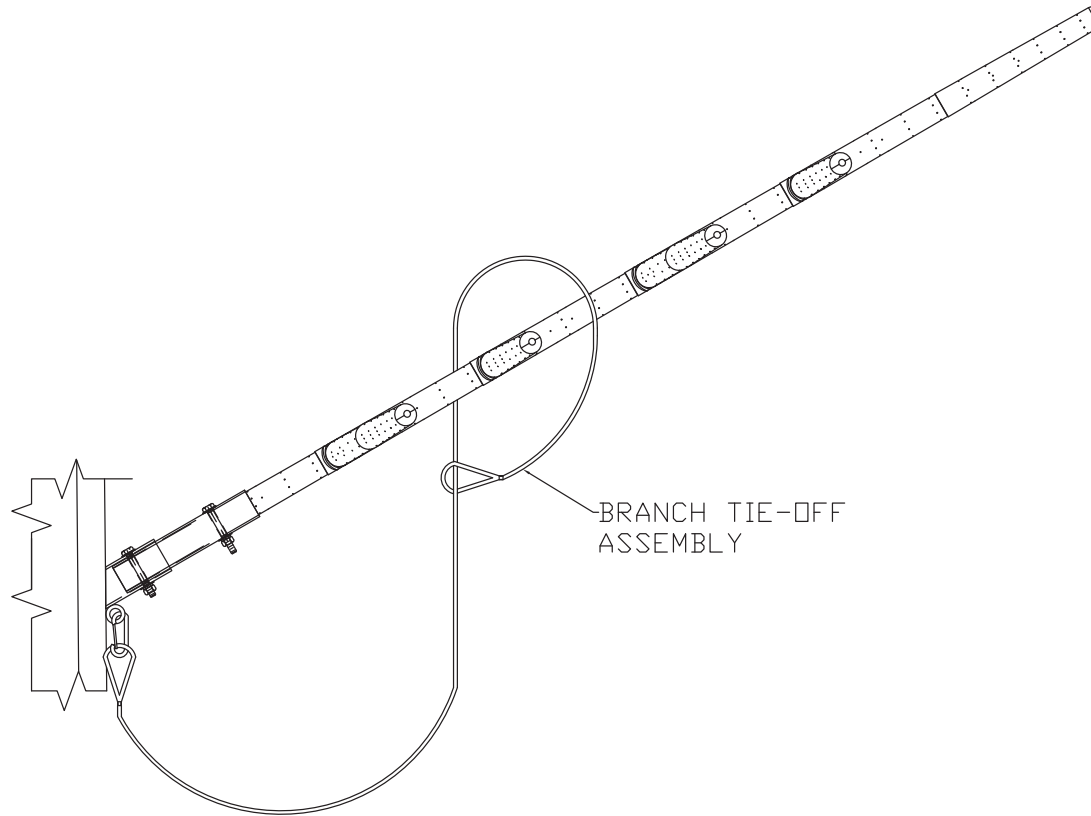
Firm License Number: AECL1355
VSE Project Number: U1408.463.201

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				NAME	 Ehresmann Engineering, Inc. 4400 West 31st Street Yankton, SD 57078 605-665-7532 605-665-9780	TITLE:	ANCHOR ROD INSTALLATION				
				DRAWN BY:		GE			DWG. NO.	108420E02 Page 41 of 103	
				CHECKED BY:					Sheet No.		E02
				ENG APPR.					Rev. 1A		
				MFG APPR.							
				Q.C.							
				Site:							
				JN3072 KOWEE CREEK, AK							
				DRAWING CREATED		01/28/21					
				REV		DESCRIPTION	DATE				

Attachment A - Application Packet

Weldment	Part	Qty	Description	Weight
BRANCH		142	HDPE PINE BRANCHES (5' TO 9' LG)	---
---		142	BRANCH TIE-OFF ASSEMBLY 5'-0" LG.	---



ELEVATION VIEW
TYPICAL INSTALLATION



02/12/2021

Firm License Number: AECL1355
VSE Project Number: U1408.463.201

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				NAME	 Ehresmann Engineering, Inc. 4400 West 31st Street Yankton, SD 57078 605-665-7532 605-665-9780	TITLE: BRANCH TIE OFF INSTALLATION	
				DRAWN BY:			CE
				CHECKED BY:			
				ENG APPR.			
				MFG APPR.			
				Q.C.			
				Site:			
				JN3072 KOWEE CREEK, AK			
	DRAWING CREATED	02/08/21		Job# 108420		DWG. NO. 108420E03 Page 42 of 103	
REV	DESCRIPTION	DATE				Sheet NO. E03	
						Rev. 1A	

Attachment A - Application Packet

GENERAL

Ehresmann Engineering, Inc. (EEI) designs and manufactures steel towers/poles and tower components to the most stringent industry standards, and uses the highest quality materials. However, certain hazards are inherent in tower work. For this reason, it is imperative that erection of towers and installation of tower components be accomplished in a safe and workmanlike manner, and only by experienced and professional contractors. Unless the customer specifies otherwise in writing, or unless otherwise noted in our design documents or on our installation drawings, design of and/or fabrication of items by Ehresmann Engineering, Inc. shall meet the conditions outlined in these notes.

1. All tower designs and/or work shall be in accordance with TIA-222-G, 'Structural Standards for Steel Antenna Tower and Antenna Supporting Structures' or as otherwise specified in writing by the customer.
2. Purchasers shall verify the installation is in conformance with all local, state, and federal requirements. This also includes requirements for obstruction marking and lighting.
3. If towers, tower components, mounts, foundations or modification materials are not installed in accordance with Ehresmann Engineering, Inc. installation drawings and specifications, then all designs are considered invalid, and EEI disclaims any responsibility for said design and/or certification.
4. The purchaser shall be responsible to inspect condition of underground anchors prior to work on towers, and to furnish any and all soils reports, where required.
5. All items must be inventoried at the time of delivery to the job site/storage facility. Any shortages reported after this delivery will be the responsibility of the Contractor/Owner.
6. Any problems that occur with scheduling, transportation, delivery, Foundation Installation, erection or any items furnished by EEI must be reported immediately to allow EEI time to take corrective measures. EEI will make every effort to repair/replace necessary items in an expedited manner and/or will pursue corrective measures in the most economical way possible at our discretion. However, under no circumstances will EEI pay for or be responsible for any down time or expenses incurred due to down time.
7. EEI will make every effort to deliver materials at the requested time. However, we cannot and will not be responsible for delays caused by breakdowns, weather and/or other factors out of our control once the materials have left our facility. We strongly suggest that cranes, tower crews, etc... not be scheduled until delivery is verified to be on time. EEI will not be responsible for any costs incurred due to these possible delays.
8. Any and all permits, licenses, or payment of taxes required for construction are the sole responsibility of the purchaser.
9. Manufacturer Assistance: Contractors / Erectors may contact Ehresmann Engineering, Inc. at (605) 665-7532 for questions on design, materials, or installation regarding items furnished by Ehresmann Engineering, Inc.
10. Ehresmann Engineering, Inc. is available, upon request, to supervise installation and/or completion of modifications, or to provide on-site inspection after project completion.

***Please also reference site specific design documents and drawings for additional notes.

Anchor Rod Tightening:

Prior to placing anchor rods in the concrete, it is recommended that an anchor rod rotation capacity test be run with at least one anchor rod. This test may be run in a Skidmore-Wilhelm device or in a mockup of the base plate using a small piece of plate with one hole of equivalent grade, thickness, and finish. The test consists of steps 2 through 12 as outlined below and adapted as necessary for the mock set-up. It is recommended that the nut be rotated at least to the required rotation as given in step 11. After the test, the nuts should be removed and all threads (rod and nut) inspected for damage. Once the anchor rod is removed from the test plate, the nuts shall again be turned onto the rod well past the location of the leveling nut and backed off by one worker using an ordinary wrench with no cheater bar. The threads are considered damaged if more than minimal effort is required to turn the nut. Please note that nuts should be turned onto ALL anchor rods and backed off with minimal effort as outlined above to verify threads of ALL anchor rods and nuts prior to placement in concrete.

Recommended Steps for Anchor Rod Tightening:

1. Verify proper position of anchor rods.
2. Verify that all nuts can be turned onto the rods well past the elevation of the bottom of the leveling nut and backed off by one worker using an ordinary wrench without a cheater bar.
3. If threads of anchor rods were lubricated more than 24 hours before placing the leveling nut or have been wet since they were lubricated, the exposed threads of the anchor rods should be relubricated (Beeswax and toilet-ring wax have been shown to provide good lubrication).
4. Place leveling nuts on anchor rods and level.
5. Place leveling nut washers.
6. Set pole or tower legs.
7. Plumb pole or legs and/or level base plates.
8. Place top nut washers.
9. Threads and bearing surfaces of the top nuts should be lubricated, placed and tightened to the snug-tight condition in a star pattern. Reference TABLE 1 for snug-tight torque values.
10. Tighten leveling nuts to the snug-condition (as outlined for top nuts) in a star pattern.
11. Mark the reference position of the top nut in the snug-tight condition with a suitable marking on one flat with a corresponding reference mark on the base plate at each bolt. Top nuts should be turned in increments in a star pattern (at least two full tightening cycles) to the appropriate nut rotation specified below.

Anchor Rod Diameter, In.	Nut Rotation from Snug-Tight Condition
less than 1 1/2"	1/3 turn
greater than or equal to 1 1/2"	1/6 turn

12. A torque wrench should be used to verify that a torque at least equal to the computed verification torque T_v is required to additionally tighten the leveling nuts and the top nuts. Reference TABLE 1 for verification torque values. An inability to achieve this torque should be interpreted to indicate that the threads have stripped and should be reported to the Engineer of Record.
13. Locking nuts are to be installed over all top nuts when tightening is completed.

TABLE 1

ANCHOR ROD DIAMETER (INCHES)	SNUG-TIGHT TORQUE (FT-LBS)	VERIFICATION TORQUE (FT-LBS)
3/4	38-56	188
1	91-136	454
1 1/4	182-272	908
1 1/2	316-474	1581
1 3/4	499-748	2494
2	750-1125	3750
2 1/4	921-1382	4607

VALUES AS SHOWN IN TABLE 1 ARE BASED ON ASTM F1554 GRADE 105 ANCHOR RODS WITH MINIMUM ULTIMATE TENSILE STRENGTH OF 125 KSI FOR ROD DIAMETERS UP TO 2" AND ASTM A615 GR. 75 ANCHOR RODS WITH MINIMUM ULTIMATE TENSILE STRENGTH OF 105 KSI FOR 2 1/4" ANCHOR RODS.

Erection / Installation:

When installing items provided by Ehresmann Engineering, Inc., the contractor (person performing the erection or modification) shall comply with the following:

1. All structural work shall be performed in relatively calm weather, with wind velocities not exceeding 15 MPH at any height of the tower. Additionally it is recommended that work be completed in accordance with ANSI/TIA-322 and ANSI/ASSE A10.48.
2. All structural work shall be performed by a competent and reputable contractor with experience in similar tower work.
3. Our drawings indicate the major operations to be performed, but do not show every field condition that may be encountered. Prior to beginning work, the contractor should survey the job thoroughly to eliminate future field problems.
4. It is the contractor's sole responsibility to determine the erection procedure and sequence to insure the stability and safety of the tower and adequacy of temporary or incomplete connections during construction.
5. All nuts for bearing type connections shall be tightened to a 'snug tight' condition as defined by AISC. All nuts for direct tension/fully pre-tensioned or slip critical connections shall be tightened per the 'turn-of-the-nut' method in accordance with AISC.
6. It shall be the contractor's responsibility to ensure that all practices and procedures used during assembly, installation and erection work required on the tower or foundations do not endanger the safety of any personnel nor the structural integrity of the tower.
7. The contractor shall use only safe and workmanlike procedures when modifying a tower.
8. The contractor shall not correct any errors in manufacturing or design without special permission and written instructions from Ehresmann Engineering, Inc. This means straightening, relocation or reaming of bolt holes, drifting or any other application of force to make the members fit. (This restriction does not apply to diagonal members designed for initial tension or specific drag.) The contractor shall immediately notify Ehresmann Engineering, Inc., through the appropriate channels to effect correction.
9. The contractor shall immediately notify Ehresmann Engineering, Inc. of any material which is damaged during erection or installation. The contractor shall not correct or substitute any member damaged during installation without written consent and instructions from Ehresmann Engineering, Inc.
10. The contractor shall refrain from exerting excessive forces on the tower or on modification material during installation. Tower member design does not include stresses due to erection since erection equipment and conditions are unknown. Our design assumes that the services of competent and qualified personnel will be utilized to develop proper procedures and rigging plans. Our design also assumes that competent and qualified personnel will be hired to perform the work.
11. All field-punched holes shall be touched up with cold galvanizing. Under no circumstances shall the torching of holes be allowed.
12. All factory installed bracing placed within monopole tube sections is to remain in place until erection is complete. Do not remove bracing without prior consultation with EEI.

Concrete & Foundation Installation:

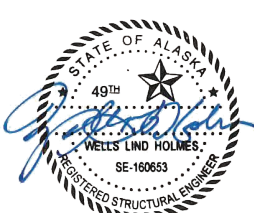
1. All rebar shall have 3' minimum cover, unless specified otherwise, and shall conform to ASTM A615. Rebar grade to be as specified on site drawings.
2. Tie and secure all rebar and anchor bolts/shafts before placing concrete.
3. Hook length as specified for vertical bars is from back side of bend. Minimum straight length of hook after bend shall be 12x bar diameter.
4. Bending of rebar to be in accordance with ACI-318 latest edition.
5. Sides of excavation may need to be braced or sloped back as required for stability and in accordance with all applicable safety regulations.
6. Base of excavation shall be clean and free of all debris.
7. All excavation, backfill and soil compaction to be completed in accordance with Geotechnical Engineer's recommendations. However, compacted density of all backfill must meet minimum unit weight as specified on site drawings.
8. Attention shall be given to final site drainage and compaction of the fill placed around the foundation to minimize surface water infiltration around the foundation.
9. Concrete strength and mix values to be listed on site specific foundation drawings. Alternate values may be acceptable and could be dependent on placement methods. However, use of alternate values must be approved by EDR prior to installation. EEI will not be responsible for any delays due to request for approval of alternate values. It is the Contractor's responsibility to allow adequate time for approval.
10. Use of water reducers may be required for some placement methods to achieve necessary slump and/or flow without exceeding maximum water/cement ratios. It is Contractor's responsibility to utilize proper mix to ensure proper placement of concrete for the method of placement chosen.
11. Exposed edges of all foundations to be chamfered 1' x 45°.
12. Use steel top and bottom anchor bolt templates provided by EEI for proper anchor bolt spacing and placement.
13. All concrete work shall be in accordance with ACI 318 (Latest Edition). ACI specifications for 'Cold Weather' or 'Hot Weather' concreting shall be followed as applicable.

Structural Steel & Hardware:

1. All fabricated steel shall have a minimum yield strength of 36 ksi. Use of higher strength steel for some members/items will be noted in design documents or drawings as applicable.
2. All fabricated steel shall be hot dip galvanized per ASTM A123.
3. All structural fasteners shall be ASTM F3125 Gr. A325 unless specified otherwise.
4. U-Bolts to be ASTM A36, A572 Gr. 50, or A193 Gr. B7 depending on size and application. Reference site specific drawings for additional details.
5. Step Bolts to be ASTM A449.
6. All hardware shall be hot dip galvanized per ASTM A153.
7. Welded connections shall conform to the latest revision of the American Welding Society, A.W.S. D1.1.
8. All structural components shall be verified for proper assembly by the field crew prior to installation.



605 W. GARDEN PARK BLVD. STE. 101
ANCHORAGE, ALASKA 99503
PHONE (800) 799-0775
WWW.VECTORENGINE.COM



02/12/2021

Firm License Number: AECL1355
VSE Project Number: U1408.463.201

				NAME
				DRAWN BY: BJH
				CHECKED BY:
				ENG APPR.
				MFG APPR.
				Q.C.
	TUBE BRACING NOTE	10/29/19	Site:	
	U-BOLT/STEP-BOLT GR.	10/16/19	JN3072 KOWEE CREEK, AK	
	DRAWING CREATED	03/19/17		
REV	DESCRIPTION	DATE	Job# 108420	



Ehresmann Engineering, Inc.

4400 West 31st Street
Yankton, SD 57108
605-665-7532
605-665-9780

TITLE: STD TOWER & TOWER FOUNDATION NOTES	
DWG. NO. 108420N1	Page 43 of 103
Sheet No. N1	Rev. 1A

Attachment A - Application Packet

SPECIAL INSPECTION STATEMENT IN ACCORDANCE WITH IBC SECTION 1704.3

SPECIAL INSPECTIONS REQUIRED:		
STRUCTURAL STEEL:	CONTINUOUS	PERIODIC
HIGH-STRENGTH BOLTS		X
STRUCTURAL OBSERVATION:		
YES		X

VERIFICATION AND TESTING SHALL BE COMPLETED AS FOLLOWS:

STRUCTURAL STEEL CONSTRUCTION (MONOPOLE STRUCTURE):

INSPECTION OF HIGH-STRENGTH BOLTED CONNECTIONS:

- VERIFY IDENTIFICATION MARKINGS/GRADE, QTY AND SIZE OF BOLTS, NUTS & WASHERS
- VISUALLY INSPECT SNUG-TIGHT BOLTED JOINTS TO VERIFY ALL PLIES IN CONTACT AND LOCK-WASHERS COMPRESSED
- VERIFY PROPER TIGHTENING OF PRETENSIONED CONNECTIONS USING TURN-OF-NUT METHOD WITH MATCHMARKING

STRUCTURAL OBSERVATION:

- VERIFY PROPER INSTALLATION/ERECTION OF MONOPOLE PER DESIGN SPECIFICATIONS UPON COMPLETION OF INSTALLATION. VERIFICATION TO INCLUDE THE FOLLOWING:
 - MINIMUM SLIP JOINT OVERLAPS
 - STRUCTURE PLUMB IN ACCORDANCE WITH TIA-222
 - MAXIMUM CLEAR DISTANCE BETWEEN TOP OF FOUNDATION AND LEVELING NUT

VERIFICATION OF ALL ITEMS AS OUTLINED ABOVE SHALL BE BASED ON DESIGN SPECIFICATIONS AND INSTALLATION DETAILS AS COMPLETED BY EHRESMANN ENGINEERING, INC.

SPECIAL INSPECTOR SHALL IDENTIFY AND DOCUMENT RESULTS OF ALL INSPECTIONS AND MATERIAL TESTING AS OUTLINED. INSPECTION REPORTS SHALL BE SUBMITTED AS SOON AS POSSIBLE UPON COMPLETION OF INSPECTION BUT NO MORE THAN 5 WORKING DAYS UNLESS OTHERWISE AGREED BY PROJECT OWNER.

DEVIATION OR NON-COMPLIANCE SHALL BE CORRECTED BY CONTRACTOR. ANY DEVIATIONS NOT CORRECTED ARE TO BE CLEARLY IDENTIFIED IN FINAL REPORTS AND EHRESMANN ENGINEERING, INC. SHOULD BE NOTIFIED IMMEDIATELY FOR CONSULTATION.

THE PROJECT OWNER OR AN AGENT OF THE OWNER IS RESPONSIBLE FOR SCHEDULING AND FUNDING ALL SPECIAL INSPECTION SERVICES.



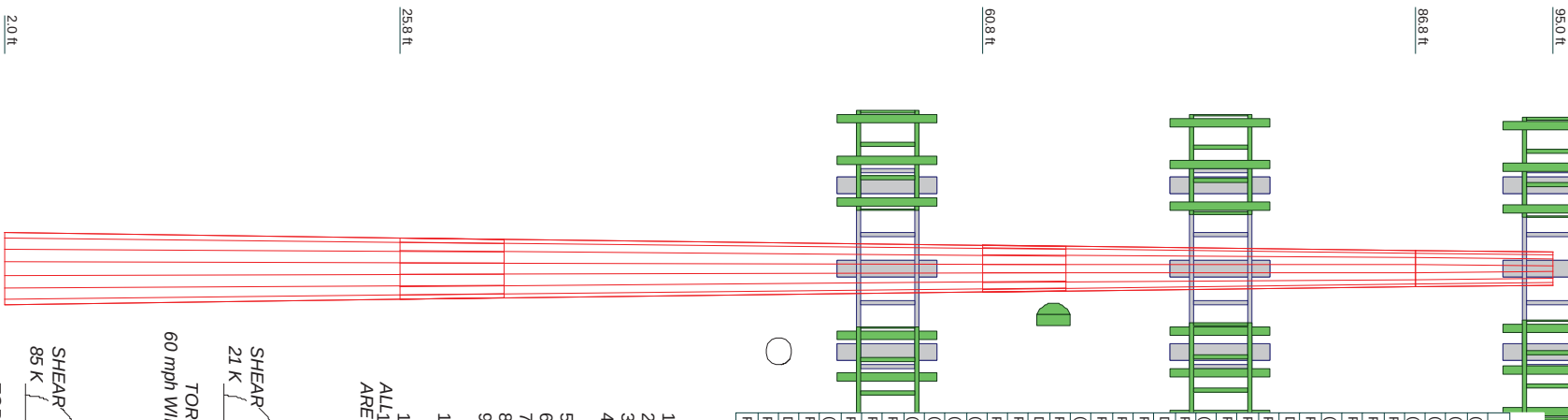
02/12/2021

Firm License Number: AECL1355
VSE Project Number: U1408.463.201

			NAME	Ehresmann Engineering, Inc.
			DRAWN BY:	
			CHECKED BY:	
			ENG APPR.	
			MFG APPR.	
			Q.C.	
			Site:	
			JN3072 KOWEE CREEK, AK	4400 West 31st Street Yankton, SD 57078 605-665-7532 605-665-9780
	DRAWING CREATED	01/28/21		
REV	DESCRIPTION	DATE	Job# 108420	

TITLE: 93' MONOPOLE SPECIAL INSPECTION STATEMENT	
DWG. NO. 108420SI	Page 44 of 103
Sheet No. SI	Rev. 1A

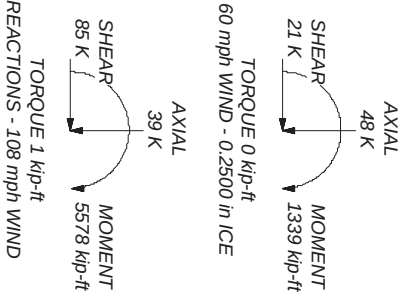
Section	4	3	2	1
Length (ft)	30.00	40.00	26.00	8.25
Number of Sides	18	18	18	18
Thickness (in)	0.5000	0.4375	0.2500	0.1875
Socket Length (ft)		6.25	5.00	
Top Dia (in)	41.8473	32.4246	26.5172	24.0000
Bot Dia (in)	51.0007	44.6292	34.4502	26.5172
Grade	A572-65			
Weight (K)	17.4	7.3	2.1	0.4



DESIGNED APPURTENANCE LOADING			
TYPE	ELEVATION	TYPE	ELEVATION
(3) 10' EEI T-FRAMES	95	RRUS 4478 B14	75
(3) 80010992	95	(2) Radio 2203	75
(3) 80010992	95	RRUS 32 B30	75
(3) 80010992	95	DC6-48 60-18-8F	75
RRUS 4415 B25	95	RRUS 4415 B25	75
RRUS 32 B66	95	RRUS 32 B66	75
RRUS 4478 B14	95	RRUS 4478 B14	75
(2) Radio 2203	95	(2) Radio 2203	75
RRUS 32 B30	95	RRUS 32 B30	75
DC6-48 60-18-8F	95	DC6-48 60-18-8F	75
RRUS 4415 B25	95	Dish mount	65
RRUS 32 B66	95	(2) UBT ODU (behind dish)	65
RRUS 4478 B14	95	V/LP-X2-18B	65
(2) Radio 2203	95	Pine Branches	60-40
RRUS 32 B30	95	(3) 80010992	55
DC6-48 60-18-8F	95	RRUS 4415 B25	55
RRUS 4415 B25	95	RRUS 32 B66	55
RRUS 32 B66	95	RRUS 4478 B14	55
RRUS 4478 B14	95	(2) Radio 2203	55
(2) Radio 2203	95	RRUS 32 B30	55
RRUS 32 B30	95	DC6-48 60-18-8F	55
DC6-48 60-18-8F	95	(3) 80010992	55
RRUS 4415 B25	95	(3) 10' EEI T-FRAMES	55
RRUS 32 B66	95	(3) 80010992	55
Pine Branches	80-60	RRUS 4478 B14	55
(3) 10' EEI T-FRAMES	75	(2) Radio 2203	55
(3) 80010992	75	RRUS 32 B30	55
(3) 80010992	75	DC6-48 60-18-8F	55
RRUS 4415 B25	75	RRUS 4415 B25	55
RRUS 32 B66	75	RRUS 32 B66	55
RRUS 4478 B14	75	RRUS 4478 B14	55
(2) Radio 2203	75	(2) Radio 2203	55
RRUS 32 B30	75	RRUS 32 B30	55
DC6-48 60-18-8F	75	DC6-48 60-18-8F	55
RRUS 4415 B25	75	(3) 80010992	55
RRUS 32 B66	75	(3) 10' EEI T-FRAMES	55
RRUS 4478 B14	75	(3) 80010992	55

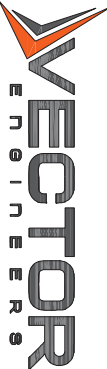
TOWER DESIGN NOTES

1. Tower is located in Juneau County, Alaska.
2. Tower designed for Exposure D to the TIA-222-G Standard.
3. Tower designed for a 108 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 60 mph basic wind with 0.25 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. Weld together tower sections have slip joint connections.
9. Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications.
10. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
11. Welds are fabricated with ER80S-XXX electrodes.
- ALL 12" TOWER RATING: 91.7% ARE FACTORED



02/12/2021

Firm License Number: AECL1355
VSE Project Number: U1408,463,201

**VECTOR**
ENGINEERS

651 W. GALENA PARK BLVD. STE. 101
DRAPER, UTAH 84020

PHONE (801) 990-1775
WWW.VECTORSE.COM

JN3072 KOWEE CREEK, AK 108420

Project: 93 FT MONOPINE

Client: MASTEC

Code: TIA-222-G

Patn: 108420

Drawn by: EH

Scale: NTS

Appd: Png No. E-1

Ehresmann Engineering, Inc.

4400 W. 31st Street

Yankton, SD

Phone: (605) 665-7532

FAX: (605) 665-9780

tnxTower Ehresmann Engineering, Inc. 4400 W. 31st Street Yankton, SD Phone: (605) 665-7532 FAX: (605) 665-9780	Job JN3072 KOWEE CREEK, AK 108420_	Page 1 of 22
	Project 93 FT MONOPINE	Date 09:03:35 02/11/21
	Client MASTEC	Designed by EH

Tower Input Data

The tower is a monopole.

This tower is designed using the TIA-222-G standard.

The following design criteria apply:

Tower is located in Juneau ~~County~~ ^{Borough}, Alaska.

Basic wind speed of 108 mph.

Structure Class II.

Exposure Category D.

Topographic Category 1.

Crest Height 0.00 ft.

Nominal ice thickness of 0.2500 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 60 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

Weld together tower sections have slip joint connections..

Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications..

Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards..

Welds are fabricated with ER80S-XXX electrodes..

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in pole design is 1.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification √ Use Code Stress Ratios Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz Use Special Wind Profile Include Bolts In Member Capacity √ Leg Bolts Are At Top Of Section Secondary Horizontal Braces Leg Use Diamond Inner Bracing (4 Sided) SR Members Have Cut Ends SR Members Are Concentric	Distribute Leg Loads As Uniform Assume Legs Pinned Assume Rigid Index Plate Use Clear Spans For Wind Area Use Clear Spans For KL/r Retension Guys To Initial Tension Bypass Mast Stability Checks Use Azimuth Dish Coefficients √ Project Wind Area of Appurt. Autocalc Torque Arm Areas Add IBC .6D+W Combination Sort Capacity Reports By Component Triangulate Diamond Inner Bracing Treat Feed Line Bundles As Cylinder Ignore KL/ry For 60 Deg. Angle Legs	Use ASCE 10 X-Brace Ly Rules Calculate Redundant Bracing Forces Ignore Redundant Members in FEA √ SR Leg Bolts Resist Compression √ All Leg Panels Have Same Allowable Offset Girt At Foundation Consider Feed Line Torque √ Include Angle Block Shear Check Use TIA-222-G Bracing Resist. Exemption Use TIA-222-G Tension Splice Exemption Poles Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets Pole Without Linear Attachments Pole With Shroud Or No Appurtenances Outside and Inside Corner Radii Are Known
--	---	--

tnxTower Ehresmann Engineering, Inc. 4400 W. 31st Street Yankton, SD Phone: (605) 665-7532 FAX: (605) 665-9780	Job	JN3072 KOWEE CREEK, AK 108420_	Page 2 of 22
	Project	93 FT MONOPINE	Date 09:03:35 02/11/21
	Client	MASTEC	Designed by EH

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	95.00-86.75	8.25	0.00	18	24.0000	26.5172	0.1875	0.7500	A572-65 (65 ksi)
L2	86.75-60.75	26.00	5.00	18	26.5172	34.4502	0.2500	1.0000	A572-65 (65 ksi)
L3	60.75-25.75	40.00	6.25	18	32.4246	44.6292	0.4375	1.7500	A572-65 (65 ksi)
L4	25.75-2.00	30.00		18	41.8473	51.0007	0.5000	2.0000	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	It/Q in ²	w in	w/t
L1	24.3413	14.1714	1015.2211	8.4534	12.1920	83.2694	2031.7780	7.0871	3.8940	20.768
	26.8973	15.6695	1372.4084	9.3470	13.4707	101.8807	2746.6227	7.8362	4.3370	23.131
L2	26.8877	20.8430	1816.8778	9.3249	13.4707	134.8759	3636.1463	10.4235	4.2270	16.908
	34.9431	27.1379	4010.2375	12.1411	17.5007	229.1473	8025.7517	13.5715	5.6232	22.493
L3	34.4064	44.4181	5741.7961	11.3554	16.4717	348.5854	11491.1474	22.2133	4.9367	11.284
	45.2502	61.3657	15140.6759	15.6881	22.6716	667.8243	30301.2743	30.6887	7.0847	16.194
L4	44.3521	65.6181	14172.7597	14.6783	21.2584	666.6897	28364.1683	32.8153	6.4851	12.97
	51.7103	80.1446	25823.0064	17.9278	25.9084	996.7056	51679.9914	40.0799	8.0961	16.192

Tower Elevation ft	Gusset Area (per face) ft ²	Gusset Thickness in	Gusset Grade	Adjust. Factor A _f	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 95.00-86.75				1	1.03	1.01			
L2 86.75-60.75				1	1.03	1.01			
L3 60.75-25.75				1	1.03	1.01			
L4 25.75-2.00				1	1.03	1.01			

Monopole Base Plate Data

Base Plate Data

Base plate is square	
Base plate is grouted	
Anchor bolt grade	A615-75
Anchor bolt size	2.2500 in
Number of bolts	22
Embedment length	0.0000 in
f _c	4.500 ksi
Grout space	4.5000 in
Base plate grade	A572-50
Base plate thickness	2.0000 in
Bolt circle diameter	59.0000 in
Outer diameter	66.0000 in
Inner diameter	44.0000 in
Base plate type	Stiffened Plate

Attachment A - Application Packet

tnxTower Ehresmann Engineering, Inc. 4400 W. 31st Street Yankton, SD Phone: (605) 665-7532 FAX: (605) 665-9780	Job JN3072 KOWEE CREEK, AK 108420_	Page 3 of 22
	Project 93 FT MONOPINE	Date 09:03:35 02/11/21
	Client MASTEC	Designed by EH

Base Plate Data	
Bolts per stiffener	1
Stiffener thickness	0.6250 in
Stiffener height	12.0000 in

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C _A A _A ft ² /ft	Weight plf
Hybrid Cable	C	No	Yes	Inside Pole	95.00 - 2.00	6	No Ice	0.00	0.82
							1/2" Ice	0.00	0.82
Hybrid Cable	C	No	Yes	Inside Pole	75.00 - 2.00	6	No Ice	0.00	0.82
							1/2" Ice	0.00	0.82
1 1/4" Fiber	C	No	Yes	Inside Pole	65.00 - 2.00	2	No Ice	0.00	0.66
							1/2" Ice	0.00	0.66
LMR-400 (13/32 FOAM)	C	No	Yes	Inside Pole	65.00 - 2.00	2	No Ice	0.00	0.07
							1/2" Ice	0.00	0.07
Hybrid Cable	C	No	Yes	Inside Pole	55.00 - 2.00	6	No Ice	0.00	0.82
							1/2" Ice	0.00	0.82

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
L1	95.00-86.75	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.04
L2	86.75-60.75	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.20
L3	60.75-25.75	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.54
L4	25.75-2.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.39

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
L1	95.00-86.75	A	0.553	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.04
L2	86.75-60.75	A	0.541	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.20
L3	60.75-25.75	A	0.513	0.000	0.000	0.000	0.000	0.00

tnxTower Ehresmann Engineering, Inc. 4400 W. 31st Street Yankton, SD Phone: (605) 665-7532 FAX: (605) 665-9780	Job	JN3072 KOWEE CREEK, AK 108420_	Page 4 of 22
	Project	93 FT MONOPINE	Date 09:03:35 02/11/21
	Client	MASTEC	Designed by EH

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	$C_A A_A$ In Face ft^2	$C_A A_A$ Out Face ft^2	Weight K
L4	25.75-2.00	B	0.457	0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.54
		A		0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.39

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	$C_A A_A$ Front ft^2	$C_A A_A$ Side ft^2	Weight K
(3) 10' EEI T-FRAMES	A	None		0.0000	95.00	No Ice 1/2" Ice	19.77 27.00	1.67 1.85
(3) 80010992	A	From Leg	3.00 0.00 0.00	0.0000	95.00	No Ice 1/2" Ice	19.33 20.00	0.13 0.23
(3) 80010992	B	From Leg	3.00 0.00 0.00	0.0000	95.00	No Ice 1/2" Ice	19.33 20.00	0.13 0.23
(3) 80010992	C	From Leg	3.00 0.00 0.00	0.0000	95.00	No Ice 1/2" Ice	19.33 20.00	0.13 0.23
RRUS 4415 B25	A	From Leg	3.00 0.00 0.00	0.0000	95.00	No Ice 1/2" Ice	1.84 2.01	0.05 0.06
RRUS 32 B66	A	From Leg	3.00 0.00 0.00	0.0000	95.00	No Ice 1/2" Ice	2.74 2.96	0.05 0.07
RRUS 4478 B14	A	From Leg	3.00 0.00 0.00	0.0000	95.00	No Ice 1/2" Ice	2.02 2.20	0.06 0.08
(2) Radio 2203	A	From Leg	3.00 0.00 0.00	0.0000	95.00	No Ice 1/2" Ice	0.52 0.61	0.01 0.01
RRUS 32 B30	A	From Leg	3.00 0.00 0.00	0.0000	95.00	No Ice 1/2" Ice	2.74 2.96	0.05 0.07
DC6-48 60-18-8F	A	From Leg	3.00 0.00 0.00	0.0000	95.00	No Ice 1/2" Ice	2.20 2.40	0.03 0.05
RRUS 4415 B25	B	From Leg	3.00 0.00 0.00	0.0000	95.00	No Ice 1/2" Ice	1.84 2.01	0.05 0.06
RRUS 32 B66	B	From Leg	3.00 0.00 0.00	0.0000	95.00	No Ice 1/2" Ice	2.74 2.96	0.05 0.07
RRUS 4478 B14	B	From Leg	3.00 0.00 0.00	0.0000	95.00	No Ice 1/2" Ice	2.02 2.20	0.06 0.08
(2) Radio 2203	B	From Leg	3.00 0.00 0.00	0.0000	95.00	No Ice 1/2" Ice	0.52 0.61	0.01 0.01
RRUS 32 B30	B	From Leg	3.00	0.0000	95.00	No Ice	2.74	0.05

Attachment A - Application Packet

tnxTower Ehresmann Engineering, Inc. 4400 W. 31st Street Yankton, SD Phone: (605) 665-7532 FAX: (605) 665-9780	Job	JN3072 KOWEE CREEK, AK 108420_	Page 138 of 217 5 of 22
	Project	93 FT MONOPINE	Date 09:03:35 02/11/21
	Client	MASTEC	Designed by EH

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
DC6-48 60-18-8F	B	From Leg	0.00	0.0000	95.00	1/2" Ice	2.96	1.86	0.07
			0.00			No Ice	2.20	1.81	0.03
			3.00			1/2" Ice	2.40	1.99	0.05
RRUS 4415 B25	C	From Leg	0.00	0.0000	95.00	No Ice	1.84	0.82	0.05
			3.00			1/2" Ice	2.01	0.94	0.06
			0.00						
RRUS 32 B66	C	From Leg	0.00	0.0000	95.00	No Ice	2.74	1.67	0.05
			3.00			1/2" Ice	2.96	1.86	0.07
			0.00						
RRUS 4478 B14	C	From Leg	0.00	0.0000	95.00	No Ice	2.02	1.25	0.06
			3.00			1/2" Ice	2.20	1.40	0.08
			0.00						
(2) Radio 2203	C	From Leg	0.00	0.0000	95.00	No Ice	0.52	0.26	0.01
			3.00			1/2" Ice	0.61	0.33	0.01
			0.00						
RRUS 32 B30	C	From Leg	0.00	0.0000	95.00	No Ice	2.74	1.67	0.05
			3.00			1/2" Ice	2.96	1.86	0.07
			0.00						
DC6-48 60-18-8F	C	From Leg	0.00	0.0000	95.00	No Ice	2.20	1.81	0.03
			3.00			1/2" Ice	2.40	1.99	0.05
			0.00						
Pine Branches	A	None		0.0000	60.00 - 40.00	No Ice	270.02	270.02	1.06
						1/2" Ice	315.02	315.02	1.56
Pine Branches	A	None		0.0000	80.00 - 60.00	No Ice	174.43	174.43	0.75
						1/2" Ice	214.43	214.43	1.25
Pine Branches	A	None		0.0000	95.00 - 80.00	No Ice	132.48	132.48	0.58
						1/2" Ice	162.48	162.48	1.08
(3) 10' EEI T-FRAMES	A	None		0.0000	75.00	No Ice	19.77	19.77	1.67
						1/2" Ice	27.00	27.00	1.85
						No Ice	19.33	8.44	0.13
(3) 80010992	A	From Leg	3.00	0.0000	75.00	No Ice	19.33	8.44	0.13
			0.00			1/2" Ice	20.00	9.08	0.23
			0.00						
(3) 80010992	B	From Leg	3.00	0.0000	75.00	No Ice	19.33	8.44	0.13
			0.00			1/2" Ice	20.00	9.08	0.23
			0.00						
(3) 80010992	C	From Leg	3.00	0.0000	75.00	No Ice	19.33	8.44	0.13
			0.00			1/2" Ice	20.00	9.08	0.23
			0.00						
RRUS 4415 B25	A	From Leg	3.00	0.0000	75.00	No Ice	1.84	0.82	0.05
			0.00			1/2" Ice	2.01	0.94	0.06
			0.00						
RRUS 32 B66	A	From Leg	3.00	0.0000	75.00	No Ice	2.74	1.67	0.05
			0.00			1/2" Ice	2.96	1.86	0.07
			0.00						
RRUS 4478 B14	A	From Leg	3.00	0.0000	75.00	No Ice	2.02	1.25	0.06
			0.00			1/2" Ice	2.20	1.40	0.08
			0.00						
(2) Radio 2203	A	From Leg	3.00	0.0000	75.00	No Ice	0.52	0.26	0.01
			0.00			1/2" Ice	0.61	0.33	0.01
			0.00						
RRUS 32 B30	A	From Leg	3.00	0.0000	75.00	No Ice	2.74	1.67	0.05
			0.00			1/2" Ice	2.96	1.86	0.07
			0.00						
DC6-48 60-18-8F	A	From Leg	3.00	0.0000	75.00	No Ice	2.20	1.81	0.03
			0.00			1/2" Ice	2.40	1.99	0.05
			0.00						

Attachment A - Application Packet

tnxTower Ehresmann Engineering, Inc. 4400 W. 31st Street Yankton, SD Phone: (605) 665-7532 FAX: (605) 665-9780	Job	Page 139 of 217
	JN3072 KOWEE CREEK, AK 108420_	6 of 22
	Project	Date
	93 FT MONOPINE	09:03:35 02/11/21
	Client	Designed by
	MASTEC	EH

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
RRUS 4415 B25	B	From Leg	0.00 3.00 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	1.84 2.01	0.82 0.94	0.05 0.06
RRUS 32 B66	B	From Leg	0.00 3.00 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	2.74 2.96	1.67 1.86	0.05 0.07
RRUS 4478 B14	B	From Leg	0.00 3.00 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	2.02 2.20	1.25 1.40	0.06 0.08
(2) Radio 2203	B	From Leg	0.00 3.00 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	0.52 0.61	0.26 0.33	0.01 0.01
RRUS 32 B30	B	From Leg	0.00 3.00 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	2.74 2.96	1.67 1.86	0.05 0.07
DC6-48 60-18-8F	B	From Leg	0.00 3.00 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	2.20 2.40	1.81 1.99	0.03 0.05
RRUS 4415 B25	C	From Leg	0.00 3.00 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	1.84 2.01	0.82 0.94	0.05 0.06
RRUS 32 B66	C	From Leg	0.00 3.00 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	2.74 2.96	1.67 1.86	0.05 0.07
RRUS 4478 B14	C	From Leg	0.00 3.00 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	2.02 2.20	1.25 1.40	0.06 0.08
(2) Radio 2203	C	From Leg	0.00 3.00 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	0.52 0.61	0.26 0.33	0.01 0.01
RRUS 32 B30	C	From Leg	0.00 3.00 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	2.74 2.96	1.67 1.86	0.05 0.07
DC6-48 60-18-8F	C	From Leg	0.00 3.00 0.00 0.00	0.0000	75.00	No Ice 1/2" Ice	2.20 2.40	1.81 1.99	0.03 0.05
(3) 10' EEI T-FRAMES	A	None		0.0000	55.00	No Ice 1/2" Ice	19.77 27.00	19.77 27.00	1.67 1.85
(3) 80010992	A	From Leg	0.00 3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice	19.33 20.00	8.44 9.08	0.13 0.23
(3) 80010992	B	From Leg	0.00 3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice	19.33 20.00	8.44 9.08	0.13 0.23
(3) 80010992	C	From Leg	0.00 3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice	19.33 20.00	8.44 9.08	0.13 0.23
RRUS 4415 B25	A	From Leg	0.00 3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice	1.84 2.01	0.82 0.94	0.05 0.06
RRUS 32 B66	A	From Leg	0.00 3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice	2.74 2.96	1.67 1.86	0.05 0.07
RRUS 4478 B14	A	From Leg	0.00 3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice	2.02 2.20	1.25 1.40	0.06 0.08

Attachment A - Application Packet

tnxTower Ehresmann Engineering, Inc. 4400 W. 31st Street Yankton, SD Phone: (605) 665-7532 FAX: (605) 665-9780	Job	JN3072 KOWEE CREEK, AK 108420_	Page 140 of 217 7 of 22
	Project	93 FT MONOPINE	Date 09:03:35 02/11/21
	Client	MASTEC	Designed by EH

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	CAAA Front ft ²	CAAA Side ft ²	Weight K
(2) Radio 2203	A	From Leg	3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice 0.52 0.61	0.26 0.33	0.01 0.01
RRUS 32 B30	A	From Leg	3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice 2.74 2.96	1.67 1.86	0.05 0.07
DC6-48 60-18-8F	A	From Leg	3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice 2.20 2.40	1.81 1.99	0.03 0.05
RRUS 4415 B25	B	From Leg	3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice 1.84 2.01	0.82 0.94	0.05 0.06
RRUS 32 B66	B	From Leg	3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice 2.74 2.96	1.67 1.86	0.05 0.07
RRUS 4478 B14	B	From Leg	3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice 2.02 2.20	1.25 1.40	0.06 0.08
(2) Radio 2203	B	From Leg	3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice 0.52 0.61	0.26 0.33	0.01 0.01
RRUS 32 B30	B	From Leg	3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice 2.74 2.96	1.67 1.86	0.05 0.07
DC6-48 60-18-8F	B	From Leg	3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice 2.20 2.40	1.81 1.99	0.03 0.05
RRUS 4415 B25	C	From Leg	3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice 1.84 2.01	0.82 0.94	0.05 0.06
RRUS 32 B66	C	From Leg	3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice 2.74 2.96	1.67 1.86	0.05 0.07
RRUS 4478 B14	C	From Leg	3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice 2.02 2.20	1.25 1.40	0.06 0.08
(2) Radio 2203	C	From Leg	3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice 0.52 0.61	0.26 0.33	0.01 0.01
RRUS 32 B30	C	From Leg	3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice 2.74 2.96	1.67 1.86	0.05 0.07
DC6-48 60-18-8F	C	From Leg	3.00 0.00 0.00	0.0000	55.00	No Ice 1/2" Ice 2.20 2.40	1.81 1.99	0.03 0.05
Dish mount	B	From Leg	0.00 0.00 0.00	0.0000	65.00	No Ice 1/2" Ice 4.50 5.60	4.50 5.60	0.10 0.14
(2) UBT ODU (behind dish)	B	From Leg	0.50 0.00 0.00	0.0000	65.00	No Ice 1/2" Ice 0.81 0.92	0.58 0.68	0.01 0.02

tnxTower Ehresmann Engineering, Inc. 4400 W. 31st Street Yankton, SD Phone: (605) 665-7532 FAX: (605) 665-9780	Job	JN3072 KOWEE CREEK, AK 108420_	Page 8 of 22
	Project	93 FT MONOPINE	Date 09:03:35 02/11/21
	Client	MASTEC	Designed by EH

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft	Aperture Area ft ²	Weight K
VHLPX2-18B	B	Paraboloid w/Shroud (HP)	From Leg	1.00 0.00 0.00	Worst		65.00	2.00	No Ice 1/2" Ice	3.10 3.41 0.11 0.13

Tower Pressures - No Ice

$$G_H = 1.100$$

Section Elevation ft	z ft	K _Z	q _z psf	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
L1 95.00-86.75	90.81	1.409	40	17.613	A	0.000	18.142	18.142	100.00	0.000	0.000
					B	0.000	18.142		100.00	0.000	0.000
					C	0.000	18.142		100.00	0.000	0.000
L2 86.75-60.75	73.19	1.357	38	66.983	A	0.000	68.993	68.993	100.00	0.000	0.000
					B	0.000	68.993		100.00	0.000	0.000
					C	0.000	68.993		100.00	0.000	0.000
L3 60.75-25.75	42.77	1.236	35	116.166	A	0.000	119.651	119.651	100.00	0.000	0.000
					B	0.000	119.651		100.00	0.000	0.000
					C	0.000	119.651		100.00	0.000	0.000
L4 25.75-2.00	13.57	1.03	29	95.062	A	0.000	97.914	97.914	100.00	0.000	0.000
					B	0.000	97.914		100.00	0.000	0.000
					C	0.000	97.914		100.00	0.000	0.000

Tower Pressure - With Ice

$$G_H = 1.100$$

Section Elevation ft	z ft	K _Z	q _z psf	t _z in	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
L1 95.00-86.75	90.81	1.409	12	0.5533	18.374	A	0.000	18.925	18.925	100.00	0.000	0.000
						B	0.000	18.925		100.00	0.000	0.000
						C	0.000	18.925		100.00	0.000	0.000
L2 86.75-60.75	73.19	1.357	12	0.5415	69.330	A	0.000	71.410	71.410	100.00	0.000	0.000
						B	0.000	71.410		100.00	0.000	0.000
						C	0.000	71.410		100.00	0.000	0.000
L3 60.75-25.75	42.77	1.236	11	0.5131	119.324	A	0.000	122.904	122.904	100.00	0.000	0.000
						B	0.000	122.904		100.00	0.000	0.000
						C	0.000	122.904		100.00	0.000	0.000
L4 25.75-2.00	13.57	1.03	9	0.4575	97.093	A	0.000	100.006	100.006	100.00	0.000	0.000
						B	0.000	100.006		100.00	0.000	0.000
						C	0.000	100.006		100.00	0.000	0.000

tnxTower Ehresmann Engineering, Inc. 4400 W. 31st Street Yankton, SD Phone: (605) 665-7532 FAX: (605) 665-9780	Job JN3072 KOWEE CREEK, AK 108420_	Page 9 of 22
	Project 93 FT MONOPINE	Date 09:03:35 02/11/21
	Client MASTEC	Designed by EH

Tower Pressure - Service

$$G_H = 1.100$$

Section Elevation ft	z ft	K _Z	q _z psf	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
L1 95.00-86.75	90.81	1.409	11	17.613	A	0.000	18.142	18.142	100.00	0.000	0.000
					B	0.000	18.142		100.00	0.000	0.000
					C	0.000	18.142		100.00	0.000	0.000
L2 86.75-60.75	73.19	1.357	11	66.983	A	0.000	68.993	68.993	100.00	0.000	0.000
					B	0.000	68.993		100.00	0.000	0.000
					C	0.000	68.993		100.00	0.000	0.000
L3 60.75-25.75	42.77	1.236	10	116.166	A	0.000	119.651	119.651	100.00	0.000	0.000
					B	0.000	119.651		100.00	0.000	0.000
					C	0.000	119.651		100.00	0.000	0.000
L4 25.75-2.00	13.57	1.03	8	95.062	A	0.000	97.914	97.914	100.00	0.000	0.000
					B	0.000	97.914		100.00	0.000	0.000
					C	0.000	97.914		100.00	0.000	0.000

Tower Forces - No Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
L1 95.00-86.75	0.04	0.42	A	1	0.65	40	1	1	18.142	0.52	62.85	C
			B	1	0.65		1	1	18.142			
			C	1	0.65		1	1	18.142			
L2 86.75-60.75	0.20	2.14	A	1	0.65	38	1	1	68.993	1.90	73.05	C
			B	1	0.65		1	1	68.993			
			C	1	0.65		1	1	68.993			
L3 60.75-25.75	0.54	7.27	A	1	0.65	35	1	1	119.651	2.99	85.34	C
			B	1	0.65		1	1	119.651			
			C	1	0.65		1	1	119.651			
L4 25.75-2.00	0.39	7.51	A	1	0.65	29	1	1	97.914	2.05	86.13	C
			B	1	0.65		1	1	97.914			
			C	1	0.65		1	1	97.914			
Sum Weight:	1.17	17.35						OTM	326.68 kip-ft	7.45		

Tower Forces - No Ice - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
L1 95.00-86.75	0.04	0.42	A	1	0.65	40	1	1	18.142	0.52	62.85	C
			B	1	0.65		1	1	18.142			
			C	1	0.65		1	1	18.142			
L2 86.75-60.75	0.20	2.14	A	1	0.65	38	1	1	68.993	1.90	73.05	C
			B	1	0.65		1	1	68.993			
			C	1	0.65		1	1	68.993			

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tnxTower Ehresmann Engineering, Inc. 4400 W. 31st Street Yankton, SD Phone: (605) 665-7532 FAX: (605) 665-9780	Job	JN3072 KOWEE CREEK, AK 108420_	Date	10 of 22
	Project	93 FT MONOPINE	Date	09:03:35 02/11/21
	Client	MASTEC	Designed by	EH

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
L3 60.75-25.75	0.54	7.27	A	1	0.65	35	1	1	119.651	2.99	85.34	C
			B	1	0.65		1	1	119.651			
			C	1	0.65		1	1	119.651			
L4 25.75-2.00	0.39	7.51	A	1	0.65	29	1	1	97.914	2.05	86.13	C
			B	1	0.65		1	1	97.914			
			C	1	0.65		1	1	97.914			
Sum Weight:	1.17	17.35						OTM	326.68 kip-ft	7.45		

Tower Forces - No Ice - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
L1 95.00-86.75	0.04	0.42	A	1	0.65	40	1	1	18.142	0.52	62.85	C
			B	1	0.65		1	1	18.142			
			C	1	0.65		1	1	18.142			
L2 86.75-60.75	0.20	2.14	A	1	0.65	38	1	1	68.993	1.90	73.05	C
			B	1	0.65		1	1	68.993			
			C	1	0.65		1	1	68.993			
L3 60.75-25.75	0.54	7.27	A	1	0.65	35	1	1	119.651	2.99	85.34	C
			B	1	0.65		1	1	119.651			
			C	1	0.65		1	1	119.651			
L4 25.75-2.00	0.39	7.51	A	1	0.65	29	1	1	97.914	2.05	86.13	C
			B	1	0.65		1	1	97.914			
			C	1	0.65		1	1	97.914			
Sum Weight:	1.17	17.35						OTM	326.68 kip-ft	7.45		

Tower Forces - With Ice - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	Face	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
L1 95.00-86.75	0.04	0.57	A	1	1.2	12	1	1	18.925	0.31	37.36	C
			B	1	1.2		1	1	18.925			
			C	1	1.2		1	1	18.925			
L2 86.75-60.75	0.20	2.68	A	1	1.2	12	1	1	71.410	1.12	43.08	C
			B	1	1.2		1	1	71.410			
			C	1	1.2		1	1	71.410			
L3 60.75-25.75	0.54	8.15	A	1	1.2	11	1	1	122.734	1.75	49.88	C
			B	1	1.2		1	1	122.734			
			C	1	1.2		1	1	122.734			
L4 25.75-2.00	0.39	8.16	A	1	1.2	9	1	1	99.779	1.19	50.01	C
			B	1	1.2		1	1	99.779			
			C	1	1.2		1	1	99.779			
Sum Weight:	1.17	19.56						OTM	192.02	4.36		

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Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
ft	K	K							kip-ft			

Tower Forces - With Ice - Wind 60 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
ft	K	K										
L1 95.00-86.75	0.04	0.57	A B C	1 1 1	1.2 1.2 1.2	12	1 1 1	1 1 1	18.925 18.925 18.925	0.31	37.36	C
L2 86.75-60.75	0.20	2.68	A B C	1 1 1	1.2 1.2 1.2	12	1 1 1	1 1 1	71.410 71.410 71.410	1.12	43.08	C
L3 60.75-25.75	0.54	8.15	A B C	1 1 1	1.2 1.2 1.2	11	1 1 1	1 1 1	122.734 122.734 122.734	1.75	49.88	C
L4 25.75-2.00	0.39	8.16	A B C	1 1 1	1.2 1.2 1.2	9	1 1 1	1 1 1	99.779 99.779 99.779	1.19	50.01	C
Sum Weight:	1.17	19.56						OTM	192.02 kip-ft	4.36		

Tower Forces - With Ice - Wind 90 To Face

Section Elevation	Add Weight	Self Weight	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
ft	K	K										
L1 95.00-86.75	0.04	0.57	A B C	1 1 1	1.2 1.2 1.2	12	1 1 1	1 1 1	18.925 18.925 18.925	0.31	37.36	C
L2 86.75-60.75	0.20	2.68	A B C	1 1 1	1.2 1.2 1.2	12	1 1 1	1 1 1	71.410 71.410 71.410	1.12	43.08	C
L3 60.75-25.75	0.54	8.15	A B C	1 1 1	1.2 1.2 1.2	11	1 1 1	1 1 1	122.734 122.734 122.734	1.75	49.88	C
L4 25.75-2.00	0.39	8.16	A B C	1 1 1	1.2 1.2 1.2	9	1 1 1	1 1 1	99.779 99.779 99.779	1.19	50.01	C
Sum Weight:	1.17	19.56						OTM	192.02 kip-ft	4.36		

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Tower Forces - Service - Wind Normal To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
L1 95.00-86.75	0.04	0.42	A	1	0.65	11	1	1	18.142	0.14	17.36	C
			B	1	0.65		1	1	18.142			
			C	1	0.65		1	1	18.142			
L2 86.75-60.75	0.20	2.14	A	1	0.65	11	1	1	68.993	0.52	20.17	C
			B	1	0.65		1	1	68.993			
			C	1	0.65		1	1	68.993			
L3 60.75-25.75	0.54	7.27	A	1	0.65	10	1	1	119.651	0.82	23.57	C
			B	1	0.65		1	1	119.651			
			C	1	0.65		1	1	119.651			
L4 25.75-2.00	0.39	7.51	A	1	0.65	8	1	1	97.914	0.56	23.78	C
			B	1	0.65		1	1	97.914			
			C	1	0.65		1	1	97.914			
Sum Weight:	1.17	17.35						OTM	90.21 kip-ft	2.06		

Tower Forces - Service - Wind 60 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
L1 95.00-86.75	0.04	0.42	A	1	0.65	11	1	1	18.142	0.14	17.36	C
			B	1	0.65		1	1	18.142			
			C	1	0.65		1	1	18.142			
L2 86.75-60.75	0.20	2.14	A	1	0.65	11	1	1	68.993	0.52	20.17	C
			B	1	0.65		1	1	68.993			
			C	1	0.65		1	1	68.993			
L3 60.75-25.75	0.54	7.27	A	1	0.65	10	1	1	119.651	0.82	23.57	C
			B	1	0.65		1	1	119.651			
			C	1	0.65		1	1	119.651			
L4 25.75-2.00	0.39	7.51	A	1	0.65	8	1	1	97.914	0.56	23.78	C
			B	1	0.65		1	1	97.914			
			C	1	0.65		1	1	97.914			
Sum Weight:	1.17	17.35						OTM	90.21 kip-ft	2.06		

Tower Forces - Service - Wind 90 To Face

Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
L1 95.00-86.75	0.04	0.42	A	1	0.65	11	1	1	18.142	0.14	17.36	C
			B	1	0.65		1	1	18.142			
			C	1	0.65		1	1	18.142			
L2	0.20	2.14	A	1	0.65	11	1	1	68.993	0.52	20.17	C

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Section Elevation ft	Add Weight K	Self Weight K	F a c e	e	C _F	q _z psf	D _F	D _R	A _E ft ²	F K	w plf	Ctrl. Face
86.75-60.75			B	1	0.65		1	1	68.993			
L3	0.54	7.27	C	1	0.65		1	1	68.993			
60.75-25.75			A	1	0.65	10	1	1	119.651	0.82	23.57	C
			B	1	0.65		1	1	119.651			
			C	1	0.65		1	1	119.651			
L4 25.75-2.00	0.39	7.51	A	1	0.65	8	1	1	97.914	0.56	23.78	C
			B	1	0.65		1	1	97.914			
			C	1	0.65		1	1	97.914			
Sum Weight:	1.17	17.35						OTM	90.21 kip-ft	2.06		

Force Totals

Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, M _x kip-ft	Sum of Overturning Moments, M _z kip-ft	Sum of Torques kip-ft
Leg Weight	17.35					
Bracing Weight	0.00					
Total Member Self-Weight	17.35			0.22	-0.38	
Total Weight	31.98			0.22	-0.38	
Wind 0 deg - No Ice		-0.01	-53.20	-3460.60	0.14	0.64
Wind 30 deg - No Ice		26.60	-46.07	-2996.68	-1730.64	0.73
Wind 60 deg - No Ice		46.08	-26.59	-1729.74	-2997.80	0.64
Wind 90 deg - No Ice		53.21	0.01	0.74	-3461.80	0.37
Wind 120 deg - No Ice		46.09	26.61	1731.08	-2998.31	0.00
Wind 150 deg - No Ice		26.61	46.08	2997.64	-1731.54	-0.37
Wind 180 deg - No Ice		0.01	53.20	3461.04	-0.90	-0.64
Wind 210 deg - No Ice		-26.60	46.07	2997.12	1729.88	-0.73
Wind 240 deg - No Ice		-46.08	26.59	1730.18	2997.04	-0.64
Wind 270 deg - No Ice		-53.21	-0.01	-0.30	3461.04	-0.37
Wind 300 deg - No Ice		-46.09	-26.61	-1730.64	2997.56	0.00
Wind 330 deg - No Ice		-26.61	-46.08	-2997.20	1730.78	0.37
Member Ice	2.21					
Total Weight Ice	40.61			0.30	-0.52	
Wind 0 deg - Ice		-0.00	-20.87	-1322.16	-0.34	0.23
Wind 30 deg - Ice		10.44	-18.08	-1144.90	-661.69	0.27
Wind 60 deg - Ice		18.08	-10.43	-660.78	-1145.88	0.23
Wind 90 deg - Ice		20.88	0.00	0.47	-1323.17	0.13
Wind 120 deg - Ice		18.08	10.44	661.67	-1146.05	0.00
Wind 150 deg - Ice		10.44	18.08	1145.66	-661.99	-0.13
Wind 180 deg - Ice		0.00	20.87	1322.75	-0.69	-0.23
Wind 210 deg - Ice		-10.44	18.08	1145.49	660.66	-0.27
Wind 240 deg - Ice		-18.08	10.43	661.38	1144.85	-0.23
Wind 270 deg - Ice		-20.88	-0.00	0.13	1322.14	-0.13
Wind 300 deg - Ice		-18.08	-10.44	-661.08	1145.02	0.00
Wind 330 deg - Ice		-10.44	-18.08	-1145.07	660.96	0.13
Total Weight	31.98			0.22	-0.38	
Wind 0 deg - Service		-0.00	-14.69	-955.50	-0.24	0.18
Wind 30 deg - Service		7.35	-12.72	-827.38	-478.20	0.20
Wind 60 deg - Service		12.73	-7.34	-477.52	-828.13	0.18
Wind 90 deg - Service		14.70	0.00	0.36	-956.26	0.10
Wind 120 deg - Service		12.73	7.35	478.20	-828.27	0.00
Wind 150 deg - Service		7.35	12.73	827.97	-478.44	-0.10

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Load Case	Vertical Forces K	Sum of Forces X K	Sum of Forces Z K	Sum of Overturning Moments, M_x kip-ft	Sum of Overturning Moments, M_z kip-ft	Sum of Torques kip-ft
Wind 180 deg - Service		0.00	14.69	955.94	-0.52	-0.18
Wind 210 deg - Service		-7.35	12.72	827.82	477.44	-0.20
Wind 240 deg - Service		-12.73	7.34	477.95	827.37	-0.18
Wind 270 deg - Service		-14.70	-0.00	0.08	955.50	-0.10
Wind 300 deg - Service		-12.73	-7.35	-477.76	827.51	0.00
Wind 330 deg - Service		-7.35	-12.73	-827.53	477.69	0.10

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 30 deg - No Ice
5	0.9 Dead+1.6 Wind 30 deg - No Ice
6	1.2 Dead+1.6 Wind 60 deg - No Ice
7	0.9 Dead+1.6 Wind 60 deg - No Ice
8	1.2 Dead+1.6 Wind 90 deg - No Ice
9	0.9 Dead+1.6 Wind 90 deg - No Ice
10	1.2 Dead+1.6 Wind 120 deg - No Ice
11	0.9 Dead+1.6 Wind 120 deg - No Ice
12	1.2 Dead+1.6 Wind 150 deg - No Ice
13	0.9 Dead+1.6 Wind 150 deg - No Ice
14	1.2 Dead+1.6 Wind 180 deg - No Ice
15	0.9 Dead+1.6 Wind 180 deg - No Ice
16	1.2 Dead+1.6 Wind 210 deg - No Ice
17	0.9 Dead+1.6 Wind 210 deg - No Ice
18	1.2 Dead+1.6 Wind 240 deg - No Ice
19	0.9 Dead+1.6 Wind 240 deg - No Ice
20	1.2 Dead+1.6 Wind 270 deg - No Ice
21	0.9 Dead+1.6 Wind 270 deg - No Ice
22	1.2 Dead+1.6 Wind 300 deg - No Ice
23	0.9 Dead+1.6 Wind 300 deg - No Ice
24	1.2 Dead+1.6 Wind 330 deg - No Ice
25	0.9 Dead+1.6 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service

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Comb. No.	Description
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	95 - 86.75	Pole	Max Tension	26	0.00	0.00	0.00
			Max. Compression	26	-7.34	0.00	0.00
			Max. Mx	8	-3.88	-129.51	-0.00
			Max. My	14	-3.88	-0.00	-129.51
			Max. Vy	8	18.69	-129.51	-0.00
			Max. Vx	14	18.69	-0.00	-129.51
			Max. Torque	17			-0.00
L2	86.75 - 60.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-17.49	0.00	0.00
			Max. Mx	8	-10.15	-773.60	-0.02
			Max. My	14	-10.15	-0.03	-773.60
			Max. Vy	8	43.76	-773.60	-0.02
			Max. Vx	14	43.76	-0.03	-773.60
			Max. Torque	16			-0.63
L3	60.75 - 25.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-35.54	-0.59	-0.34
			Max. Mx	8	-24.98	-3071.33	-0.70
			Max. My	14	-24.98	-0.90	-3070.63
			Max. Vy	8	81.76	-3071.33	-0.70
			Max. Vx	14	81.74	-0.90	-3070.63
			Max. Torque	4			-1.18
L4	25.75 - 2	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-47.66	-0.59	-0.34
			Max. Mx	8	-38.54	-5577.31	-1.10
			Max. My	14	-38.54	-1.30	-5576.15
			Max. Vy	8	85.17	-5577.31	-1.10
			Max. Vx	14	85.15	-1.30	-5576.15
			Max. Torque	4			-1.18

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	30	47.66	-20.88	-0.00
	Max. H _x	20	38.60	85.14	0.01
	Max. H _z	2	38.60	0.01	85.13
	Max. M _x	2	5575.62	0.01	85.13
	Max. M _z	8	5577.31	-85.14	-0.01
	Max. Torsion	16	1.18	42.56	-73.72
	Min. Vert	17	28.95	42.56	-73.72
	Min. H _x	8	38.60	-85.14	-0.01
	Min. H _z	14	38.60	-0.01	-85.13
	Min. M _x	14	-5576.15	-0.01	-85.13

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Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
	Min. M _z	20	-5576.39	85.14	0.01
	Min. Torsion	4	-1.18	-42.56	73.72

Tower Mast Reaction Summary

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
Dead Only	32.17	0.00	0.00	0.22	-0.38	0.00
1.2 Dead+1.6 Wind 0 deg - No Ice	38.60	-0.01	-85.13	-5575.62	0.38	1.02
0.9 Dead+1.6 Wind 0 deg - No Ice	28.95	-0.01	-85.13	-5559.80	0.49	1.02
1.2 Dead+1.6 Wind 30 deg - No Ice	38.60	42.56	-73.72	-4828.17	-2788.16	1.18
0.9 Dead+1.6 Wind 30 deg - No Ice	28.95	42.56	-73.72	-4814.48	-2780.10	1.17
1.2 Dead+1.6 Wind 60 deg - No Ice	38.60	73.73	-42.55	-2786.95	-4829.74	1.02
0.9 Dead+1.6 Wind 60 deg - No Ice	28.95	73.73	-42.55	-2779.08	-4815.86	1.02
1.2 Dead+1.6 Wind 90 deg - No Ice	38.60	85.14	0.01	1.10	-5577.31	0.59
0.9 Dead+1.6 Wind 90 deg - No Ice	28.95	85.14	0.01	1.03	-5561.30	0.59
1.2 Dead+1.6 Wind 120 deg - No Ice	38.60	73.74	42.57	2788.93	-4830.57	0.00
0.9 Dead+1.6 Wind 120 deg - No Ice	28.95	73.74	42.57	2780.92	-4816.69	0.00
1.2 Dead+1.6 Wind 150 deg - No Ice	38.60	42.58	73.73	4829.54	-2789.61	-0.59
0.9 Dead+1.6 Wind 150 deg - No Ice	28.95	42.58	73.73	4815.71	-2781.55	-0.59
1.2 Dead+1.6 Wind 180 deg - No Ice	38.60	0.01	85.13	5576.15	-1.30	-1.02
0.9 Dead+1.6 Wind 180 deg - No Ice	28.95	0.01	85.13	5560.19	-1.18	-1.02
1.2 Dead+1.6 Wind 210 deg - No Ice	38.60	-42.56	73.72	4828.71	2787.24	-1.18
0.9 Dead+1.6 Wind 210 deg - No Ice	28.95	-42.56	73.72	4814.88	2779.41	-1.17
1.2 Dead+1.6 Wind 240 deg - No Ice	38.60	-73.73	42.55	2787.48	4828.81	-1.02
0.9 Dead+1.6 Wind 240 deg - No Ice	28.95	-73.73	42.55	2779.47	4815.17	-1.02
1.2 Dead+1.6 Wind 270 deg - No Ice	38.60	-85.14	-0.01	-0.57	5576.39	-0.59
0.9 Dead+1.6 Wind 270 deg - No Ice	28.95	-85.14	-0.01	-0.64	5560.61	-0.59
1.2 Dead+1.6 Wind 300 deg - No Ice	38.60	-73.74	-42.57	-2788.40	4829.65	0.00
0.9 Dead+1.6 Wind 300 deg - No Ice	28.95	-73.74	-42.57	-2780.52	4816.00	0.00
1.2 Dead+1.6 Wind 330 deg - No Ice	38.60	-42.58	-73.73	-4829.01	2788.69	0.59
0.9 Dead+1.6 Wind 330 deg - No Ice	28.95	-42.58	-73.73	-4815.31	2780.86	0.59

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Load Combination	Vertical K	Shear _x K	Shear _z K	Overturning Moment, M _x kip-ft	Overturning Moment, M _z kip-ft	Torque kip-ft
1.2 Dead+1.0 Ice+1.0 Temp	47.66	0.00	0.00	0.34	-0.59	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	47.66	-0.00	-20.87	-1337.18	-0.43	0.23
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	47.66	10.44	-18.08	-1157.90	-669.32	0.27
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	47.66	18.08	-10.43	-668.26	-1159.03	0.23
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	47.66	20.88	0.00	0.52	-1338.34	0.13
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	47.66	18.08	10.44	669.27	-1159.20	0.00
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	47.66	10.44	18.08	1158.77	-669.62	-0.13
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	47.66	0.00	20.87	1337.88	-0.78	-0.23
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	47.66	-10.44	18.08	1158.60	668.11	-0.27
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	47.66	-18.08	10.43	668.96	1157.81	-0.23
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	47.66	-20.88	-0.00	0.18	1337.12	-0.13
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	47.66	-18.08	-10.44	-668.57	1157.99	0.00
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	47.66	-10.44	-18.08	-1158.07	668.41	0.13
Dead+Wind 0 deg - Service	32.17	-0.00	-14.69	-961.11	-0.24	0.18
Dead+Wind 30 deg - Service	32.17	7.35	-12.72	-832.24	-481.01	0.20
Dead+Wind 60 deg - Service	32.17	12.73	-7.34	-480.32	-832.99	0.18
Dead+Wind 90 deg - Service	32.17	14.70	0.00	0.37	-961.88	0.10
Dead+Wind 120 deg - Service	32.17	12.73	7.35	481.01	-833.14	0.00
Dead+Wind 150 deg - Service	32.17	7.35	12.73	832.83	-481.26	-0.10
Dead+Wind 180 deg - Service	32.17	0.00	14.69	961.55	-0.53	-0.18
Dead+Wind 210 deg - Service	32.17	-7.35	12.72	832.69	480.24	-0.20
Dead+Wind 240 deg - Service	32.17	-12.73	7.34	480.76	832.22	-0.18
Dead+Wind 270 deg - Service	32.17	-14.70	-0.00	0.08	961.11	-0.10
Dead+Wind 300 deg - Service	32.17	-12.73	-7.35	-480.57	832.37	0.00
Dead+Wind 330 deg - Service	32.17	-7.35	-12.73	-832.39	480.49	0.10

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.00	-32.17	0.00	0.00	32.17	0.00	0.000%
2	-0.01	-38.60	-85.13	0.01	38.60	85.13	0.000%
3	-0.01	-28.95	-85.13	0.01	28.95	85.13	0.000%
4	42.56	-38.60	-73.72	-42.56	38.60	73.72	0.000%
5	42.56	-28.95	-73.72	-42.56	28.95	73.72	0.000%
6	73.73	-38.60	-42.55	-73.73	38.60	42.55	0.000%
7	73.73	-28.95	-42.55	-73.73	28.95	42.55	0.000%
8	85.14	-38.60	0.01	-85.14	38.60	-0.01	0.000%
9	85.14	-28.95	0.01	-85.14	28.95	-0.01	0.000%
10	73.74	-38.60	42.57	-73.74	38.60	-42.57	0.000%
11	73.74	-28.95	42.57	-73.74	28.95	-42.57	0.000%
12	42.58	-38.60	73.73	-42.58	38.60	-73.73	0.000%
13	42.58	-28.95	73.73	-42.58	28.95	-73.73	0.000%
14	0.01	-38.60	85.13	-0.01	38.60	-85.13	0.000%
15	0.01	-28.95	85.13	-0.01	28.95	-85.13	0.000%

Attachment A - Application Packet

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Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
16	-42.56	-38.60	73.72	42.56	38.60	-73.72	0.000%
17	-42.56	-28.95	73.72	42.56	28.95	-73.72	0.000%
18	-73.73	-38.60	42.55	73.73	38.60	-42.55	0.000%
19	-73.73	-28.95	42.55	73.73	28.95	-42.55	0.000%
20	-85.14	-38.60	-0.01	85.14	38.60	0.01	0.000%
21	-85.14	-28.95	-0.01	85.14	28.95	0.01	0.000%
22	-73.74	-38.60	-42.57	73.74	38.60	42.57	0.000%
23	-73.74	-28.95	-42.57	73.74	28.95	42.57	0.000%
24	-42.58	-38.60	-73.73	42.58	38.60	73.73	0.000%
25	-42.58	-28.95	-73.73	42.58	28.95	73.73	0.000%
26	0.00	-47.66	0.00	0.00	47.66	0.00	0.000%
27	-0.00	-47.66	-20.87	0.00	47.66	20.87	0.000%
28	10.44	-47.66	-18.08	-10.44	47.66	18.08	0.000%
29	18.08	-47.66	-10.43	-18.08	47.66	10.43	0.000%
30	20.88	-47.66	0.00	-20.88	47.66	-0.00	0.000%
31	18.08	-47.66	10.44	-18.08	47.66	-10.44	0.000%
32	10.44	-47.66	18.08	-10.44	47.66	-18.08	0.000%
33	0.00	-47.66	20.87	-0.00	47.66	-20.87	0.000%
34	-10.44	-47.66	18.08	10.44	47.66	-18.08	0.000%
35	-18.08	-47.66	10.43	18.08	47.66	-10.43	0.000%
36	-20.88	-47.66	-0.00	20.88	47.66	0.00	0.000%
37	-18.08	-47.66	-10.44	18.08	47.66	10.44	0.000%
38	-10.44	-47.66	-18.08	10.44	47.66	18.08	0.000%
39	-0.00	-32.17	-14.69	0.00	32.17	14.69	0.000%
40	7.35	-32.17	-12.72	-7.35	32.17	12.72	0.000%
41	12.73	-32.17	-7.34	-12.73	32.17	7.34	0.000%
42	14.70	-32.17	0.00	-14.70	32.17	-0.00	0.000%
43	12.73	-32.17	7.35	-12.73	32.17	-7.35	0.000%
44	7.35	-32.17	12.73	-7.35	32.17	-12.73	0.000%
45	0.00	-32.17	14.69	-0.00	32.17	-14.69	0.000%
46	-7.35	-32.17	12.72	7.35	32.17	-12.72	0.000%
47	-12.73	-32.17	7.34	12.73	32.17	-7.34	0.000%
48	-14.70	-32.17	-0.00	14.70	32.17	0.00	0.000%
49	-12.73	-32.17	-7.35	12.73	32.17	7.35	0.000%
50	-7.35	-32.17	-12.73	7.35	32.17	12.73	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	4	0.00000001	0.00002462
3	Yes	4	0.00000001	0.00001245
4	Yes	5	0.00000001	0.00001318
5	Yes	4	0.00000001	0.00057485
6	Yes	5	0.00000001	0.00001279
7	Yes	4	0.00000001	0.00055871
8	Yes	4	0.00000001	0.00001764
9	Yes	4	0.00000001	0.00000854
10	Yes	5	0.00000001	0.00001297
11	Yes	4	0.00000001	0.00056628
12	Yes	5	0.00000001	0.00001308
13	Yes	4	0.00000001	0.00057065
14	Yes	4	0.00000001	0.00002536
15	Yes	4	0.00000001	0.00001286
16	Yes	5	0.00000001	0.00001276

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17	Yes	4	0.00000001	0.00055756
18	Yes	5	0.00000001	0.00001315
19	Yes	4	0.00000001	0.00057356
20	Yes	4	0.00000001	0.00001702
21	Yes	4	0.00000001	0.00000819
22	Yes	5	0.00000001	0.00001297
23	Yes	4	0.00000001	0.00056601
24	Yes	5	0.00000001	0.00001286
25	Yes	4	0.00000001	0.00056178
26	Yes	4	0.00000001	0.00000001
27	Yes	4	0.00000001	0.00032849
28	Yes	4	0.00000001	0.00038722
29	Yes	4	0.00000001	0.00038619
30	Yes	4	0.00000001	0.00032891
31	Yes	4	0.00000001	0.00038708
32	Yes	4	0.00000001	0.00038736
33	Yes	4	0.00000001	0.00032880
34	Yes	4	0.00000001	0.00038586
35	Yes	4	0.00000001	0.00038688
36	Yes	4	0.00000001	0.00032838
37	Yes	4	0.00000001	0.00038612
38	Yes	4	0.00000001	0.00038584
39	Yes	4	0.00000001	0.00000479
40	Yes	4	0.00000001	0.00002193
41	Yes	4	0.00000001	0.00002037
42	Yes	4	0.00000001	0.00000459
43	Yes	4	0.00000001	0.00002108
44	Yes	4	0.00000001	0.00002151
45	Yes	4	0.00000001	0.00000480
46	Yes	4	0.00000001	0.00002025
47	Yes	4	0.00000001	0.00002178
48	Yes	4	0.00000001	0.00000458
49	Yes	4	0.00000001	0.00002098
50	Yes	4	0.00000001	0.00002059

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	95 - 86.75	8.568	43	0.7634	0.0004
L2	86.75 - 60.75	7.260	43	0.7437	0.0004
L3	65.75 - 25.75	4.263	43	0.5935	0.0004
L4	32 - 2	0.996	43	0.2916	0.0001

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
95.00	(3) 10' EEI T-FRAMES	43	8.568	0.7634	0.0004	18521
90.00	Pine Branches	43	7.771	0.7536	0.0004	18521
85.00	Pine Branches	43	6.990	0.7364	0.0004	11046
80.00	Pine Branches	43	6.236	0.7085	0.0004	9881
75.00	Pine Branches	43	5.513	0.6723	0.0004	9103
70.00	Pine Branches	43	4.822	0.6308	0.0004	8437

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Elevation	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
ft						
65.00	VHLPX2-18B	43	4.167	0.5869	0.0004	7790
60.00	Pine Branches	43	3.551	0.5429	0.0003	7080
55.00	Pine Branches	43	2.977	0.4989	0.0003	6468
50.00	Pine Branches	43	2.449	0.4548	0.0003	5954
45.00	Pine Branches	43	1.972	0.4103	0.0002	5515
40.00	Pine Branches	43	1.549	0.3652	0.0002	5136

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	95 - 86.75	49.635	8	4.4254	0.0021
L2	86.75 - 60.75	42.063	8	4.3110	0.0021
L3	65.75 - 25.75	24.705	8	3.4402	0.0021
L4	32 - 2	5.775	10	1.6910	0.0006

Critical Deflections and Radius of Curvature - Design Wind

Elevation	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
ft						
95.00	(3) 10' EEI T-FRAMES	8	49.635	4.4254	0.0021	3231
90.00	Pine Branches	8	45.019	4.3685	0.0021	3231
85.00	Pine Branches	8	40.497	4.2688	0.0021	1925
80.00	Pine Branches	8	36.131	4.1067	0.0022	1721
75.00	Pine Branches	8	31.942	3.8967	0.0022	1585
70.00	Pine Branches	8	27.943	3.6560	0.0022	1468
65.00	VHLPX2-18B	8	24.150	3.4019	0.0021	1355
60.00	Pine Branches	8	20.579	3.1469	0.0020	1230
55.00	Pine Branches	8	17.254	2.8920	0.0017	1122
50.00	Pine Branches	8	14.197	2.6361	0.0015	1032
45.00	Pine Branches	8	11.432	2.3782	0.0012	955
40.00	Pine Branches	10	8.982	2.1173	0.0010	889

Base Plate Design Data

Plate Thickness	Number of Anchor Bolts	Anchor Bolt Size	Actual Allowable Ratio Bolt Tension K	Actual Allowable Ratio Bolt Compression K	Actual Allowable Ratio Plate Stress ksi	Actual Allowable Ratio Stiffener Stress ksi	Controlling Condition	Ratio
in		in						
2.0000	22	2.2500	202.42	205.92	30.566	25.922	Bolt T	0.91
			223.65	371.27	45.000	45.000		✓
			0.91	0.55	0.68	0.58		

Attachment A - Application Packet

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Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K	φP _n K	Ratio $\frac{P_u}{\phi P_n}$
L1	95 - 86.75 (1)	TP26.5172x24x0.1875	8.25	93.00	119.4	15.6695	-3.88	248.32	0.016
L2	86.75 - 60.75 (2)	TP34.4502x26.5172x0.25	26.00	93.00	96.2	25.9273	-10.15	632.77	0.016
L3	60.75 - 25.75 (3)	TP44.6292x32.4246x0.4375	40.00	93.00	74.3	58.7177	-24.98	2238.50	0.011
L4	25.75 - 2 (4)	TP51.0007x41.8473x0.5	30.00	93.00	62.2	80.1446	-38.54	3725.06	0.010

Pole Bending Design Data

Section No.	Elevation ft	Size	M _{ux} kip-ft	φM _{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M _{uy} kip-ft	φM _{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	95 - 86.75 (1)	TP26.5172x24x0.1875	129.51	566.93	0.228	0.00	566.93	0.000
L2	86.75 - 60.75 (2)	TP34.4502x26.5172x0.25	773.60	1195.08	0.647	0.00	1195.08	0.000
L3	60.75 - 25.75 (3)	TP44.6292x32.4246x0.4375	3071.66	3783.85	0.812	0.00	3783.85	0.000
L4	25.75 - 2 (4)	TP51.0007x41.8473x0.5	5577.87	6156.32	0.906	0.00	6156.32	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V _u K	φV _n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T _u kip-ft	φT _n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	95 - 86.75 (1)	TP26.5172x24x0.1875	18.69	523.17	0.036	0.00	1136.46	0.000
L2	86.75 - 60.75 (2)	TP34.4502x26.5172x0.25	43.76	889.14	0.049	0.00	2395.83	0.000
L3	60.75 - 25.75 (3)	TP44.6292x32.4246x0.4375	81.76	2181.21	0.037	0.00	7588.77	0.000
L4	25.75 - 2 (4)	TP51.0007x41.8473x0.5	85.18	2970.16	0.029	0.00	12346.08	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
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Section No.	Elevation ft	Ratio P_u	Ratio M_{ux}	Ratio M_{uy}	Ratio V_u	Ratio T_u	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	95 - 86.75 (1)	0.016	0.228	0.000	0.036	0.000	0.245	1.000	4.8.2 ✓
L2	86.75 - 60.75 (2)	0.016	0.647	0.000	0.049	0.000	0.666	1.000	4.8.2 ✓
L3	60.75 - 25.75 (3)	0.011	0.812	0.000	0.037	0.000	0.824	1.000	4.8.2 ✓
L4	25.75 - 2 (4)	0.010	0.906	0.000	0.029	0.000	0.917	1.000	4.8.2 ✓

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	95 - 86.75	Pole	TP26.5172x24x0.1875	1	-3.88	248.32	24.5	Pass
L2	86.75 - 60.75	Pole	TP34.4502x26.5172x0.25	2	-10.15	632.77	66.6	Pass
L3	60.75 - 25.75	Pole	TP44.6292x32.4246x0.4375	3	-24.98	2238.50	82.4	Pass
L4	25.75 - 2	Pole	TP51.0007x41.8473x0.5	4	-38.54	3725.06	91.7	Pass
							Summary	
							Pole (L4)	91.7 Pass
							Base Plate	90.5 Pass
							RATING =	91.7 Pass

FAA Lighting

A TOWAIR Determination was completed to verify the coordinates, heights and type of proposed structure. The determination has indicated the structure does not require registration and therefore no lighting is required.



Digitally signed by Alissa Haynes
DN: cn=Alissa Haynes, o, ou,
email=sitedeployment@gmail.co
m, c=US
Date: 2021.03.02 19:42:44 -04'00'

Alissa Haynes

Narrative on Tower Height

To meet the requirements of the WCF code – capability to host three or more carriers and to meet the RF needs associated with wireless data communication, the proposed height is necessary.

The 100' proposed monopine tower height will allow AT&T to upgrade their network which will expand their currently offered services and coverage. Additionally, this monopine will allow for other carriers to co-locate on the tower while providing the necessary vertical separation between carriers to avoid interference.



Digitally signed by Alissa Haynes
DN: cn=Alissa Haynes, o, ou,
email=sitedeployment@gmail.co
m, c=US
Date: 2021.03.02 19:43:14 -04'00'

Alissa Haynes

Visual Analysis Report

AT&T Communications Facility: JN3072 Kowee Creek – 3500 N Douglas Hwy

Zone of Visibility Map showing View location point in coordinates. Views are labeled for the following Photo-simulations to follow.



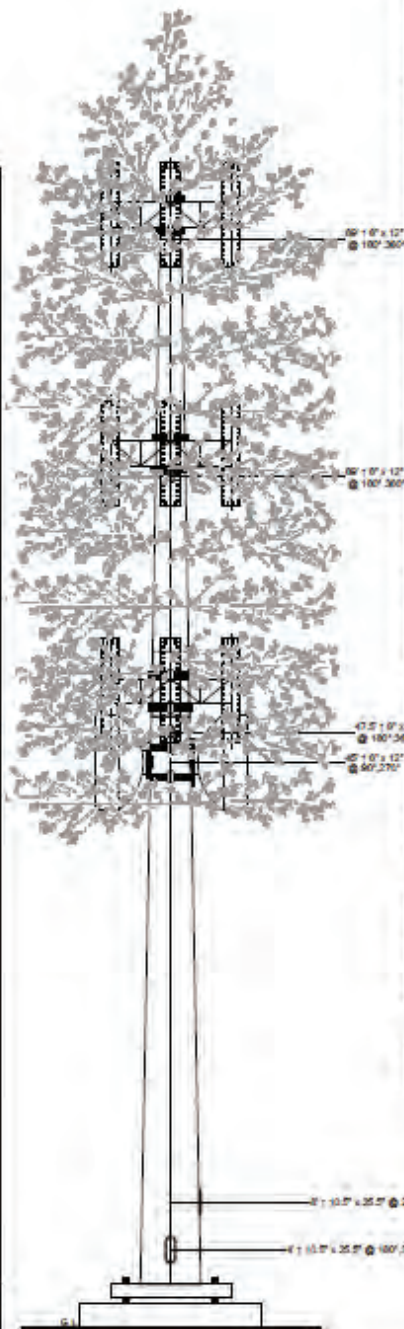
After the completion of the pre-application meeting with the CBJ, it was recommended that due to the high visibility location of the proposed communications tower, that a stealth design be deployed to help the visual impacts.

Due to the existence of abundant green trees and vegetation, a monopine tower design was chosen to be the most compatible stealth tower design for this location. The photo-simulations that will be shown later in this report will represent the stealth tower from the visual reference points. In most cases, the existing trees screen the proposed facility from view at the points identified by the CBJ.

Additionally, please see the drawing of the (p) tower elevation view with structural information from the manufacturer.

SIZES ARE PRELIMINARY AND MAY CHANGE DURING FINAL DESIGN

Length (ft)	100'-0"
Number of Series	10
Leg Spacing (ft)	5'-0"
Top Diameter (in)	36.00"
Bottom Diameter (in)	60.00"
Taper (in/ft)	0.45
Grade	A573-60
Weight (lb)	12000
Overall Steel Height (ft)	98



Designed Appurtenance Loading

Elev	Description	Tx-Line
91	3V-Boom - 126' Face - 38' Standoff	
91	(2) 60010862	(5) OG/Fiber Trunks
91	(3) RRLUS 4415 B25	
91	(3) RRLUS 4415 B65	
91	(3) B14 4473	
91	(3) RRLUS 4473 B5	
91	(3) RRLUS 2333 B2	
91	(3) RRLUS 2333 B4	
91	(3) DCS-46-60-15-8F	
71	2V-Boom - 126' Face - 38' Standoff	
71	(3) DCS-46-60-15-8F	
71	(3) RRLUS 2333 B4	
71	(3) RRLUS 2333 B2	
71	(3) RRLUS 4473 B5	
71	(3) RRLUS 4415 B65	
71	(3) RRLUS 4415 B25	
71	(2) 60010862	(5) OG/Fiber Trunks
71	(3) B14 4473	
51	3V-Boom - 126' Face - 38' Standoff	
51	(2) 60010862	(5) OG/Fiber Trunks
51	(3) RRLUS 4415 B25	
51	(3) RRLUS 4415 B65	
51	(3) B14 4473	
51	(3) RRLUS 4473 B5	
51	(3) RRLUS 2333 B2	
51	(3) RRLUS 2333 B4	
51	(3) DCS-46-60-15-8F	
45	(2) Dish Mount (Monopole Only) - Pipe Mount (5'-10' Dish)	
45	(2) R H P. Dish	(2) 6W105

Design Criteria - ANSI/TIA-222-G

ASCE 7-10 Ultimate Wind Speed (No Ice)	130 mph
Wind Speed (Ice)	90 mph
Design Ice Thickness	1.00 in
Structure Class	II
Risk Category	II
Exposure Category	D
Topographic Category	1

Load Case Reactions

Description	Axial (kips)	Shear (kips)	Moment (ft-k)	Deflection (ft)	Sway (deg)
3a Gusted Wind	38.51	74.03	4721.18	3.45	3.57
3a Gusted Wind 0.3 Dead	39.15	74	4706.56	3.44	3.85
3a Gusted Wind/Snow	50.95	75.42	5714.48	5.72	5.9
Service Loads	32.4	14.57	521.37	0.68	0.77

Base Plate Dimensions

Shape	Diameter	Thickness	Bolt Circle	Bolt Qty	Bolt Diameter
Round	73.5"	2"	67.75"	16	2.25"

Notes

- 1) Antenna Feed Lines Run Inside Pole
- 2) All dimensions are above ground level, unless otherwise specified.
- 3) Weights shown are estimates. Final weights may vary.
- 4) This tower design and, if applicable, the foundation design(s) shown on the following page(s) also meet or exceed the requirements of the 2012 International Building Code.
- 5) This structure has been designed to support pine tree branches starting at the 40' elevation to an overall height of 100' and full cladding.



Sabre Communications Corporation
 7101 Southridge Drive
 P.O. Box 505
 Mobile, AL 36688-0505
 Phone: (205) 264-6600
 Fax: (205) 264-6614

Information contained herein is the sole property of Sabre Communications Corporation, constitutes a trade secret as defined by state Code (C.S. 55) and shall not be reproduced, copied or used in whole or part for any purpose whatsoever without the prior written consent of Sabre Communications Corporation.

Quote:	20-2162-RSS
Customer:	MASTEC NETWORK SOLUTIONS GROUP
Site Name:	Kowee Creek, AK JN3072
Description:	95' Monopole
Date:	8/8/2019
By:	PSW
Page:	1

All information derived for the proposed tower location based on the required balloon test. A four (4) foot diameter red balloon was conducted on August 22, 2020 through August 25th. Photos for this analysis were taken on August 22nd. Rough weather with heavy rain and wind made this a challenge.

View of Balloon floating at 100-feet from the proposed tower location.



View #1: Looking Southwest towards (P) communications facility from 109 Troy Ave.

EXISTING VIEW #1 – Looking SW towards the proposed Stealth Tower location from 109 Troy Ave.



PROPOSED VIEW #1 - 95-foot Monopine with top branches extending to 100-feet AGL - Looking SW at the proposed Stealth Tower from 109 Troy Ave.



VIEW #2 - Looking Northwest towards proposed communications facility from 3231 Douglas Hwy.

EXISTING VIEW #2 – Looking NW at the proposed Stealth Tower from 3231 Douglas Hwy



PROPOSED VIEW #2 - 95-foot Monopine with top branches extending to 100-feet AGL - Looking NW at the proposed Stealth Tower from 3231 Douglas Hwy.



EXISTING/PROPOSED VIEW #3 - 95-foot Monopine with top branches extending to 100-feet AGL - Looking NE at the proposed Stealth Tower from 3315 Pioneer Ave. Tower is not visible from this location, as it is located behind this tree-line at a much lower elevation. Any visible location will appear to see a stealth tree tower designed to blend.



EXISTING VIEW #4 - 95-foot Monopine with top branches extending to 100-feet AGL - Looking NE at the proposed Stealth Tower from 3795 N Douglas Hwy. Tower is not visible from this location, as it is located behind this tree-line. Any visible location will appear to see a stealth tree tower designed to blend.



CONCLUSION: The proposed tower location is located in a prominent spot across the Douglas Bridge and will be readily viewed from a variety of locations. Due to this issue, AT&T agreed to deploy a stealth tower (Monopine) designed to resemble a pine tree.

This design along with the backdrop of the existing coniferous trees provides the best screening. Only a careful eye will be able to pick out the proposed Monopine design at this location.

Existing surrounding eye sores in this area include an electrical sub-station with a short communications tower and marine industrial uses along the waterfront. Existing residential units on the Douglas Island side may see the proposed monopine at a closer vantage point.

Any visual impacts are significantly reduced by the proposed stealth tower – monopine design that blends with the natural environment.

The base of the tower will be screened by a security fence that has green vinyl slats to obscure the view into the compound and of the prefabricated equipment shelter. The layout and appearance of the equipment will even without the security fencing will look similar to a small residential structure with tower base painted brown to match the tree trunk.

Photo of an actual Monopine constructed near the daylodge - Alyeska Ski Resort in Girdwood, Alaska.



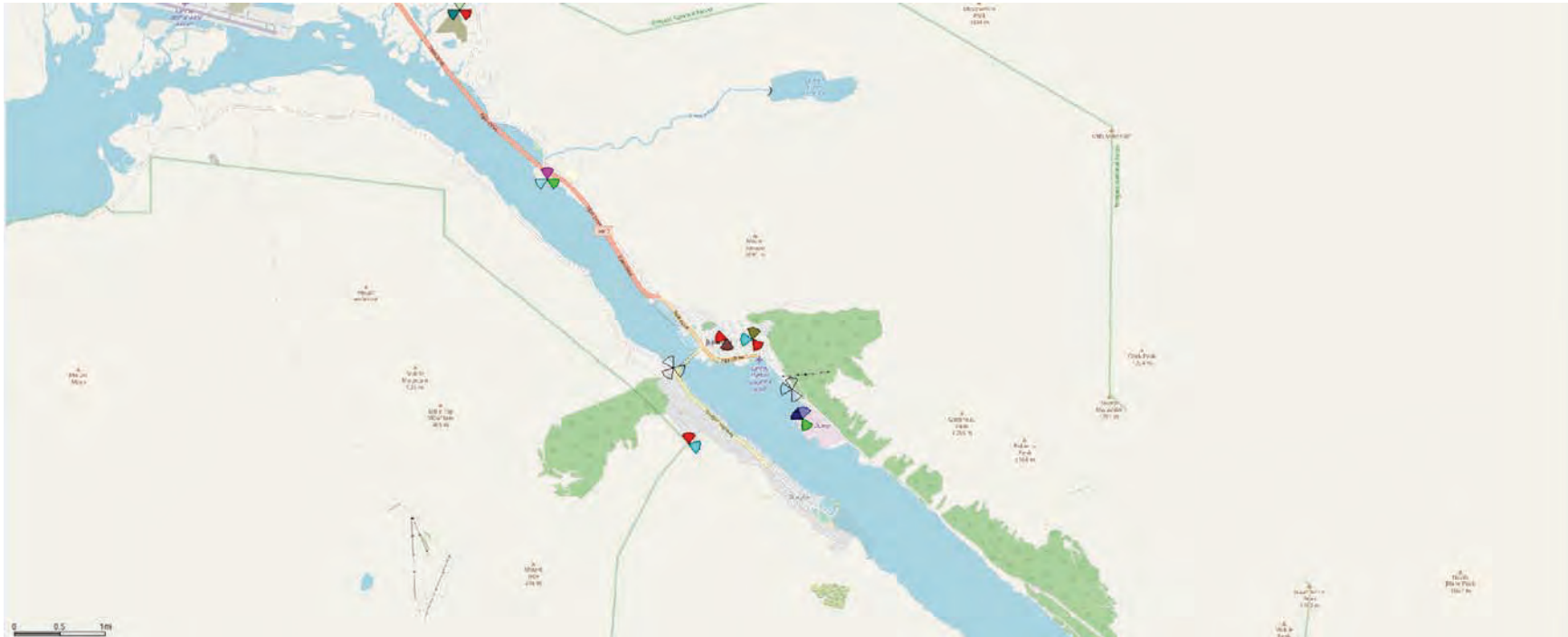
COVERAGE EVALUATION

JN3072 Kowee Creek

November 16, 2020



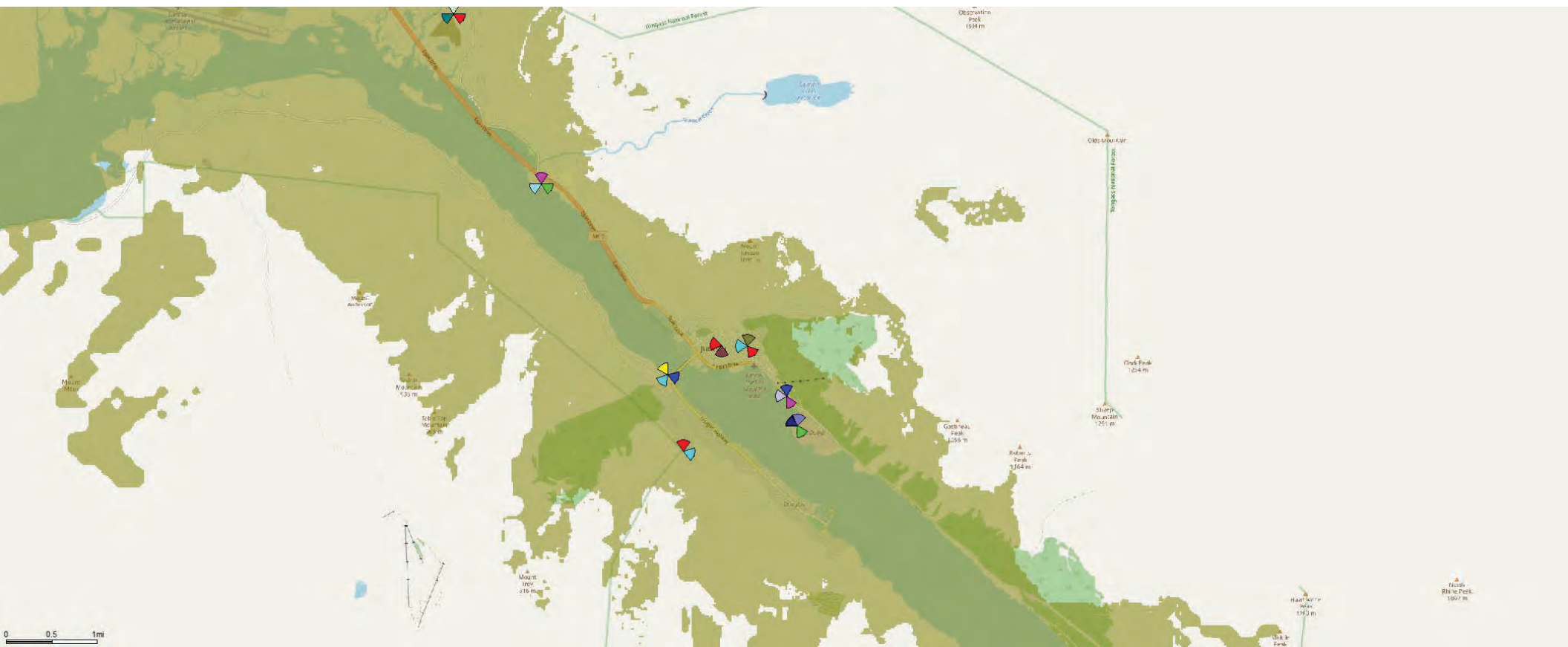
Without Coverage



Without Coverage Zoomed



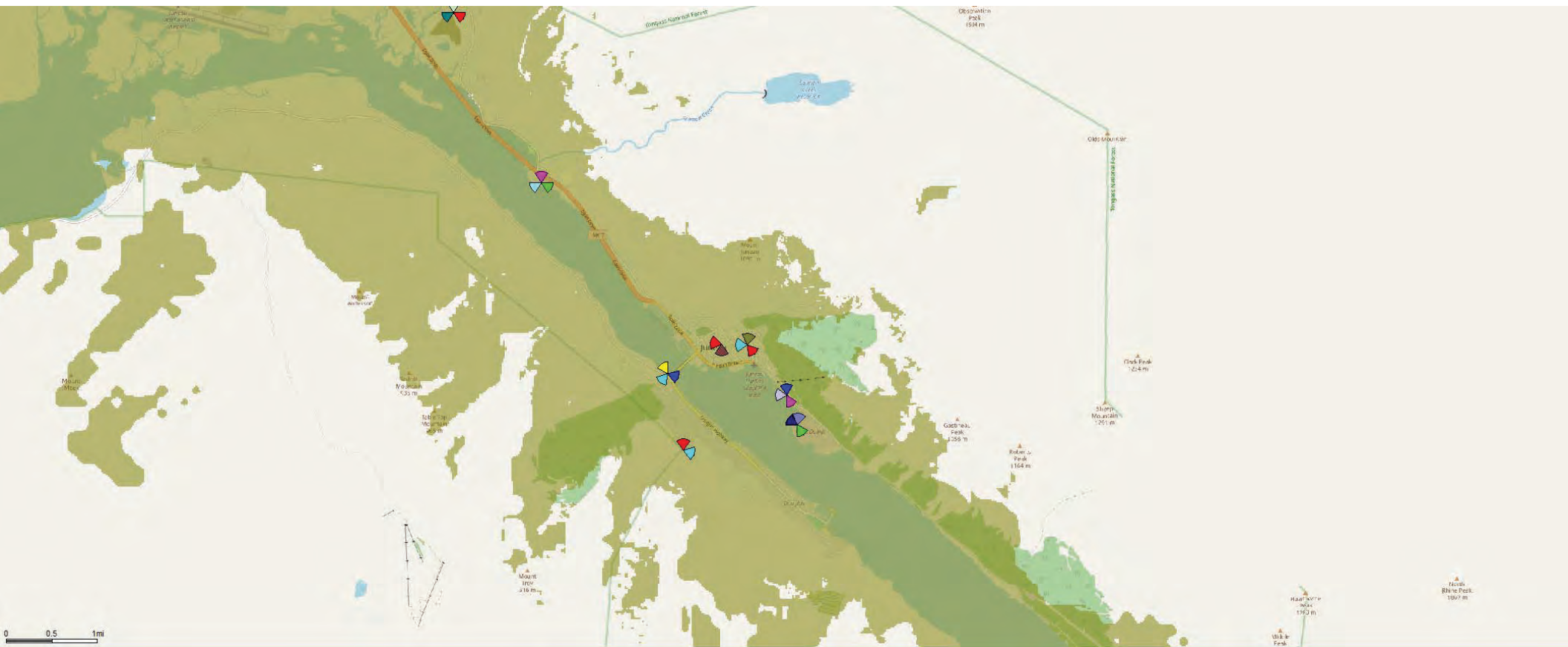
Low Band Coverage @ 95'



Low Band Coverage @ 95' Zoomed



Low Band Coverage @ 75'



Low Band Coverage @ 75' Zoomed



Mid Band Coverage @ 95'



Mid Band Coverage @ 95' Zoomed



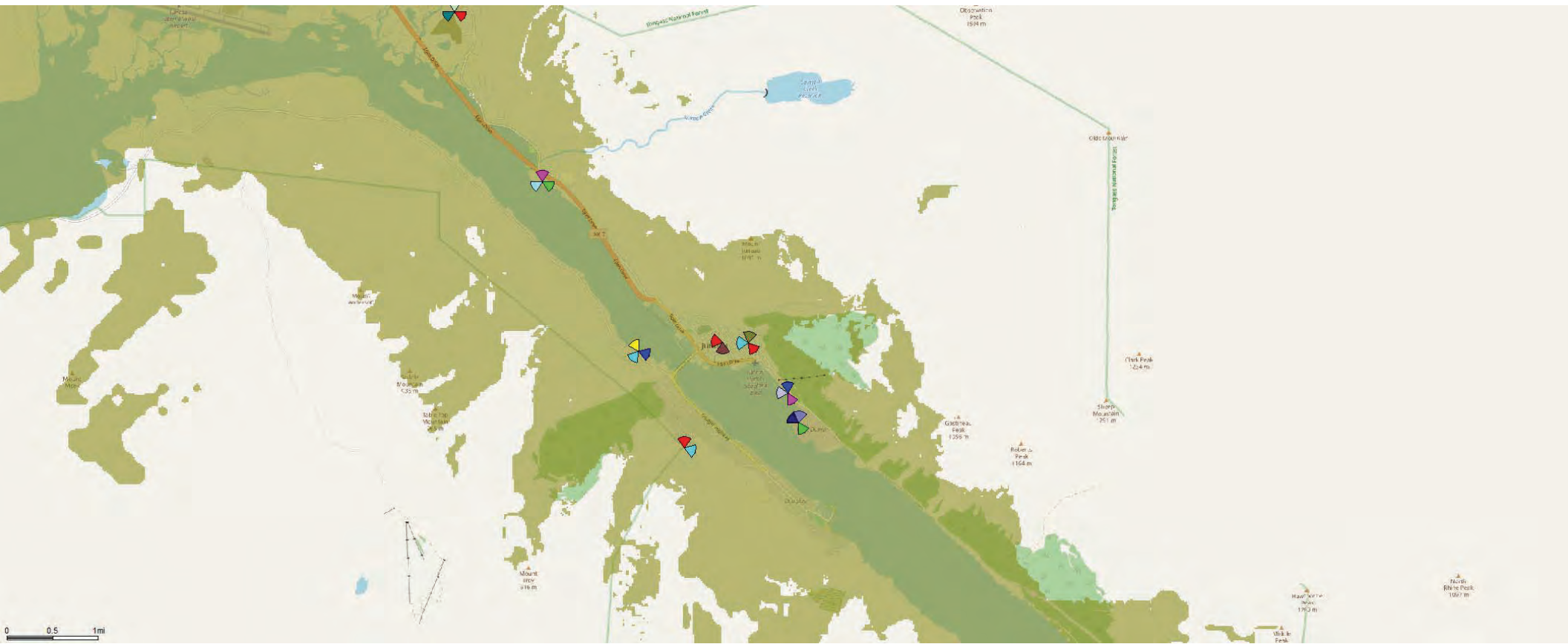
Mid Band Coverage @ 75'



Mid Band Coverage @ 75' Zoomed



Low Band Coverage @ 80' On Radio Tower



Low Band Coverage @ 80' On Radio Tower Zoomed



Mid Band Coverage @ 80' On Radio Tower



Mid Band Coverage @ 80' On Radio Tower Zoomed



Pre-Application Conference Report

Additional submittal requirement:

A copy of the pre-application conference report dated October 30, 2019 is attached to this application.



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

100' Monopine Communication Tower

Case Number: PAC2019 0067

Applicant: AT&T Mobility

Property Owner: Nowell Avenue Development

Property Address: 3500 N Douglas Hwy

Parcel Code Number: 1D060L010010

Site Size: 9,845 Square Feet

Zoning: Waterfront Industrial

Existing Land Use: Vacant

Conference Date:	October 23, 2019
Report Issued:	October 30, 2019

List of Attendees

Note: Copies of the Pre-Application Conference Report will be emailed, instead of mailed, to participants who have provided their email address below.

Justin Abbott	Applicant	Justin.Abbott@juneau.org
Amy Liu	Planner	Amy.Liu@juneau.org
Adrienne Scott	Permit Technician	Adrienne.Scott@juneau.org

Conference Summary

Questions/issues/agreements identified at the conference that weren't identified in the attached reports.

The following is a list of issues, comments and proposed actions, and requested technical submittal items that were discussed at the pre-application conference.

Planning Division

1. **Zoning** – Please address items in the attached WCF checklist, which outlines application requirements unique to WCFs, including but not limited propagation study, structural assessment, balloon test, FAA determination of lighting or marking requirement, RF exposure report, etc.
2. **Setbacks** – Site plan should show distances between lot lines and tower/appurtenant structures. If the tower is not constructed using breakpoint design technology, the minimum setback distance from the nearest property line shall be equal to the height of the proposed tower. If the tower has been constructed using breakpoint design technology, the minimum setback distance shall be equal to 110 percent of the distance from the top of the structure to the breakpoint level of the structure or the minimum yard setback requirements, whichever is greater. Certification by a professional engineer registered in the State of Alaska of the breakpoint design and the design's fall radius must be provided with the application. Any appurtenant structure shall be located so as to comply with the applicable minimum setback requirements for the property on which it is situated.
3. **Height** – All freestanding WCFs between 60 and 120 feet in height shall be engineered and constructed to accommodate no fewer than four antenna arrays. All WCFs between 121 feet and 150 feet shall be engineered and constructed to accommodate no fewer than five antenna arrays. All WCFs between 151 feet and taller shall be engineered and constructed to accommodate no fewer than six antenna arrays.
4. **Access** – Access is provided off North Douglas Hwy.
5. **Lot Coverage** – There is no maximum lot coverage.
6. **Vegetative Coverage** – Vegetative coverage is a minimum 10% of lot area.
7. **Lighting** – Notice is required to be provided to the FAA, on a form prescribed by the FAA, if the facility falls under notification requirements mentioned in 14 CFR Part 77. The applicant is responsible for determining whether notification is required. Any WCF that is required to have lighting by the FAA will be lighted with the minimum intensity and number of flashes per minute (i.e., the longest duration between flashes) allowable by the FAA. The lights shall be oriented, shielded or otherwise designed so as not to project directly on to surrounding property, consistent with FAA requirements
8. **Noise** – NA
9. **Flood** – A portion of the lot is within the AE flood zone at a base flood elevation of 25 feet. All structures and utilities must be constructed above BFE. An elevation certificate will be required prior to foundation inspection during building permit review.
10. **Wetlands** – CBJ has not mapped wetlands at the proposed site, but advises the applicant to work with applicable federal agencies to determine whether wetland development will be an issue. Staff notes that the National Wetlands Inventory identifies wetlands on a portion of the subject lot.
11. **Habitat** – CBJ does not enforce special protections for eagle nests, but advises the applicant to work with applicable federal agencies to determine whether this will be an issue.
12. **Plat or Covenant Restrictions** –
13. **Traffic** – NA
14. **Viewshed**- The 2013 Comprehensive Plan does not include the proposed site in a viewshed.

Pre-Application Conference Final Report

Building Division

15. **Building** – NA
16. **Outstanding Permits** – NA

General Engineering/Public Works

No comments at this time.

Fire Marshal

17. **Fire Items/Access** – There are no fire code issues with this project.

Other Applicable Agency Review

18. DOT&PF given right of way
19. Potentially Army Corps

List of required applications

Based upon the information submitted for pre-application review, the following list of applications must be submitted in order for the project to receive a thorough and speedy review.

1. Development permit application
2. WCF application

Additional Submittal Requirements

Submittal of additional information, given the specifics of the development proposal and site, are listed below. These items will be required in order for the application to be determined Counter Complete.

1. A copy of this pre-application conference report.
2. WCF checklist

Exceptions to Submittal Requirements

Submittal requirements staff has determined **not** to be applicable or **not** required, given the specifics of the development proposal, are listed below. These items will **not** be required in order for the application to be reviewed.

NA

Fee Estimates

The preliminary plan review fees listed below can be found in the CBJ code section 49.85.

Based upon the project plan submitted for pre-application review, staff has attempted to provide an accurate estimate for the permits and permit fees which will be triggered by your proposal.

1. WCF application: \$850.00
2. Public notice sign: \$150.00

For informational handouts with submittal requirements for development applications, please visit our website at www.juneau.org/cdd.

Submit your Completed Application

Pre-Application Conference Final Report

You must submit your application(s) in person with payment made to:

City & Borough of Juneau, Permit Center
230 South Franklin Street
Fourth Floor Marine View Center
Juneau, AK 99801

Phone: (907) 586-0715
Fax: (907) 586-4529
Web: www.juneau.org/cdd



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) Fees (contact the Permit Center at (907) 586-0770 to determine amount)
- 4) 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
- 5) Site address and CBJ Parcel Identification Number (tax ID number)
- 6) Site size and dimensions
- 7) Site plan showing all existing and proposed structures, buildings, fences (their height) and landscaping
- 8) 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
- 9) Certification that proposal complies with applicable laws pertaining to service offered
- 10) 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
- 11) 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

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

Concealed & Non-concealed antenna	Affects to mapped
Security	Viewsheds
Signage	WCF Master Plan
Lighting	Structural Assessment
Design Criteria	
Setbacks	
- 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
- 21) A detailed explanation justifying why a site of a higher priority was not selected must be submitted with the WCF application, as required by section 49.65.960.

Irene Gallion

From: Autumn Sapp
Sent: Wednesday, March 31, 2021 10:41 AM
To: Irene Gallion
Subject: RE: WCF21-01: Proposed wireless tower PART 2

Good morning,

There are no comments from GE at this time. Grading requirements will be addressed in the building permit.

Thank you,

Autumn Sapp
City and Borough of Juneau
Engineering & Public Works
Business Manager
907-586-0917

From: Irene Gallion <Irene.Gallion@juneau.org>
Sent: Wednesday, March 31, 2021 10:16 AM
To: Autumn Sapp <Autumn.Sapp@juneau.org>; Charlie Ford <Charlie.Ford@juneau.org>; Dan Jager <Dan.Jager@juneau.org>; Dan Bleidorn <Dan.Bleidorn@juneau.org>; David Campbell <DSCampbell@juneaupolice.com>
Subject: WCF21-01: Proposed wireless tower PART 2

See previous e mail.

Irene Gallion | Senior Planner

[Community Development Department](#) | City & Borough of Juneau, AK
Location: 230 S. Franklin Street | 4th Floor Marine View Building
Office: 907.586.0753



Fostering excellence in development for this generation and the next.



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

COMMUNITY DEVELOPMENT DEPARTMENT - REQUEST FOR AGENCY COMMENT

DEPARTMENT: Fire

STAFF PERSON/TITLE: Dniel Jager, Fire Marshal

DATE: March 31, 2021

APPLICANT: Mastec Network Solutions

TYPE OF APPLICATION: Wireless Communicaiton Facility

PROJECT DESCRIPTION:

New 100-foot wireless communications facility (WCF) monopole and associated equipment sheds.

LEGAL DESCRIPTION: ATS 123 Lot 1

PARCEL NUMBER(S): 1D060L010010

PHYSICAL ADDRESS: 3500 North Douglas Highway

SPECIFIC QUESTIONS FROM PLANNER:**AGENCY COMMENTS:**

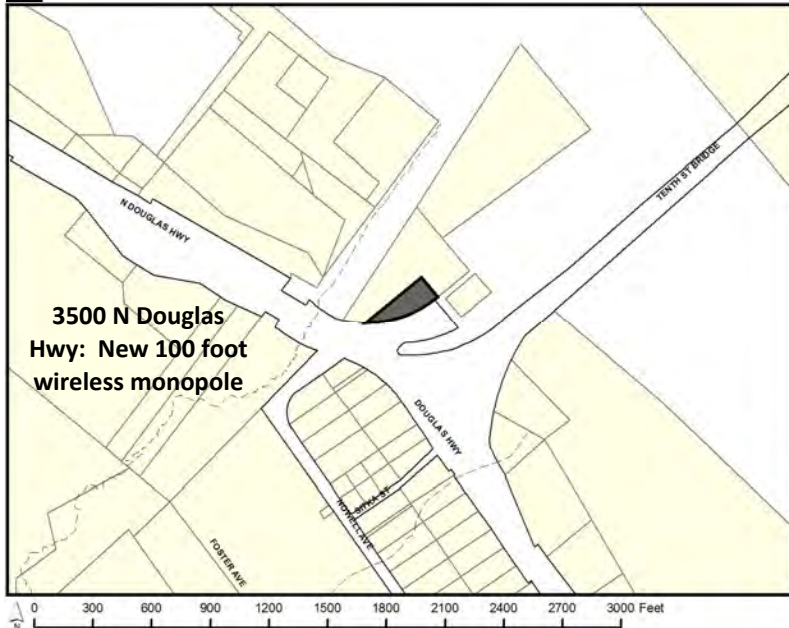
There are no fire code or fire department concerns for this project at this time.

AGENCY COMMENTS (CONTINUED):



Invitation to Comment

On a proposal to be heard by the CBJ Planning Commission
Your Community, Your Voice



155 S. Seward Street Juneau, Alaska 99801

TO:

An application has been submitted for consideration and public hearing by the Planning Commission for a **new 100-foot Wireless Communications Facility (WCF) Monopole at 3500 N Douglas Highway** in a **Waterfront Industrial zoning district**.



TIMELINE

Staff Report expected to be posted **Monday, April 19, 2021** at <https://juneau.org/community-development/planning-commission>. Find hearing results, meeting minutes and more here as well.

Now through April 5

Comments received during this period will be sent to the Planner, **Irene Gallion**, to be included as an attachment in the staff report.

April 6 — noon, April 26

Comments received during this period will be sent to Commissioners to read in preparation for the hearing.

HEARING DATE & TIME: 7:00 pm, April 27, 2021

This virtual meeting will be by video and telephonic participation only. To join the Webinar, visit: <https://juneau.zoom.us/j/91269731818>. The Webinar ID is: 912 6973 1818. To join by telephone, call: +1 253 215 8782 or +1 346 248 7799 or +1 669 900 6833 or +1 301 715 8592 or +1 312 626 6799 or +1 929 436 2866 and enter the Webinar ID.

April 28

The results of the hearing will be posted online.

Phone: (907)586-0715 ♦ Email: pc_comments@juneau.org
 Mail: Community Development, 155 S. Seward St, Juneau AK 99801

Printed March 26, 2021

Case No.: WCF2021 0001
 Parcel No.: 1D060L010010
 CBJ Parcel Viewer: <http://epv.juneau.org>



04/12/2021 12:12 PM



NOTICE 586-0715
DO NOT REMOVE OR DESTROY
WIRELESS COMMUNICATION FACILITY
WFC20210001
New 100 foot tower and
equipment shelter
HEARING DATE:
4/27/21

04/12/2021 12:12 PM



Packet Page 199 of 221

04/12/2021 12:12 PM

From: Dick Callahan <harborsealpress@gmail.com>
Sent: Monday, April 05, 2021 11:44 AM
To: PC_Comments
Subject: Re: application for WCF Monopole W. N. Douglas Case:WCF 2021 0001

EXTERNAL E-MAIL: BE CAUTIOUS WHEN OPENING FILES OR FOLLOWING LINKS

To the CBJ Planners:

Thank-you for alerting the public about this and for the opportunity to comment:

- 1) It's ironic that the CBJ notice came out at the same time as CBJ property assessments because cell towers lower property values. Realtor Magazine published results of a survey that found *"79 percent said that under no circumstances would they ever purchase or rent a property within a few blocks of a cell tower or antennas,"* also that 94% would be less interested in such property and would pay less for it. 90% were concerned about living near cell towers.
- 2) It's a red flag that the CBJ applicant prompting the invitation to comment wants a permit to build the tower separate from from permitting to what will go on it. (3G 4G 5G?) Also, it's unclear whether they'd be able to change electromagnetic radiation output configurations if they're granted the permits.
- 3) With huge money at stake, the wireless industry is pushing for ever more towers at the same time a growing body of credible studies and legal actions link cell towers to headaches, sleep disorders, cancers-including brain cancers, lower performance of school children, reproductive health, blood disorders, to name a few.
- 4) The wireless industry claims health risks of wireless towers are unproven. At the same time, ***"Cell phone companies, such as Verizon, AT&T, Sprint and T-Mobile have also defined EMFs, microwaves and all non-ionizing radiation as pollutants and will not cover [health] damages."*** (citation below 'Insurance companies keep quiet about EMF Exclusion Clause.')

Ask yourself why the world's leading insurance companies, including Lloyd's of London have excluded electromagnetic radiation caused illness from their coverage.

"Currently, 170 different countries are represented on a petition calling for a halt in production and installation of 5G cell phone antennas. Doctors, scientists, and engineers have compiled hundreds of pages of documentation outlining the harmful effects of EMR and EMF. The United States is still moving forward with its 5G project despite the evidence. Countries such as the UK, France, Israel, and India have issued cease orders on 5G antennas in either specific or overall capacities." (citation below 'Insurance companies can refuse claims related to electromagnetic radiation illness')

- 5) Wireless industry technology has outrun FCC regulations. The FCC appears as an industry public relations partner rather than as regulator looking out for public health. At the same time physicians and public health advocacy groups are advocating for tighter controls, better studies, and fewer towers.
- 6) The wireless industry is looking more and more like the tobacco and fast food industries that hid behind government regulators for decades while knowing full well their products were killing people. Two examples: When Rep. Carolyn Maloney of NY directed investigation of a wireless tower by a school, the company took down the tower the day before the inspectors were to come. and when there was a spike in childhood cancers at a Ripon, California elementary school, where Sprint had been allowed to build a cell tower on the campus, parents hired their own investigator who found higher RF levels than the parents had been told were emitted. Sprint shut down the cell phone tower still claiming they weren't responsible for the kids with cancer.

finally,

7) While the CBJ application is for a tower built in an industrial zone. Wireless Radiation is classified as a pollutant. I doubt most of us would complain about this hundred foot tower if it stood there by itself inert. or even if its pollution stayed on site, but it won't. It's more like a smoke stack that will impact wide areas.

Again, thanks for the opportunity to respond. Please include my name with those who want to call a halt to new cell phone towers in Juneau and Douglas,

Dick Callahan, Juneau

<https://magazine.realtor/daily-news/2014/07/25/cell-towers-antennas-problematic-for-buyers>

<https://maloney.house.gov/issues/local-issues/cell-phone-towers-0>

<https://mdsafetech.org/cell-tower-health-effects/>

<https://www.cbsnews.com/news/cell-tower-shut-down-some-california-parents-link-to-several-cases-of-childhood-cancer/>

<https://sacramento.cbslocal.com/2019/06/28/cell-tower-hurt-financially-cbs13-investigates/>

<https://5gtechnologynews.com/insurance-companies-can-refuse-claims-related-to-electromagnetic-radiation-illnesses/>

<https://5gtechnologynews.com/insurance-companies-keep-quiet-about-emf-exclusion-clause/>

WCF2021 0001

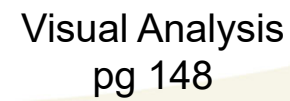
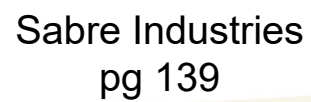
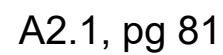
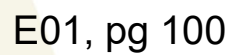
- New 100-foot Wireless Communications Facility (WCF) Monopole
 - 3500 N Douglas Highway
 - Waterfront Industrial

April 27, 2021

Regular Planning Commission Committee

Presentation organization

- General overview of project
- Commission conditions
- Commission denial



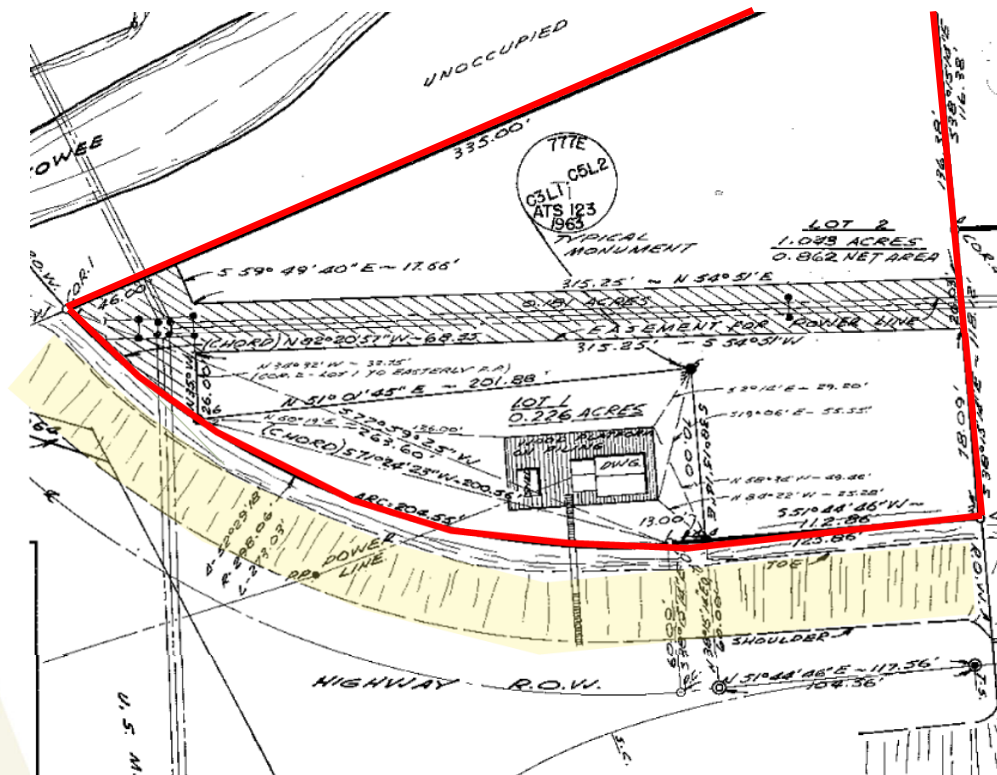
Project summary (pg 47)





ADOT&PF ROW

Plat 2001-09



Commission mandate 49.65.970

Conditions

- Design
- Aesthetics

Denial

- Safety conflict
- Zoning conflict
- Colocation availability
- X Historic value
- Scenic

AUTOMATIC DENIAL N/A

- X Wildlife refuge
- X Public park
- X Comp Plan Scenic Corridor or Viewshed
- X Obstruct view of Mendenhall Glacier

Commission mandate 49.65.970

Conditions

- Design
- Aesthetics

Denial

- Safety conflict
- Zoning conflict
- Colocation availability
- X Historic value**
- Scenic value

AUTOMATIC DENIAL N/A

- X Wildlife refuge
- X Public park
- X Comp Plan Scenic Corridor or Viewshed
- X Obstruct view of Mendenhall Glacier

Condition based on design [49.65.970(f)(1)]

○ Does antenna blend?

- ✓ Secured
- ✓ Appropriate signage
- ✓ FAA lighting not required
- ✓ Accommodates no less than four antenna arrays

- ✓ Underground utilities
- ✓ Concealed support facilities
- ✓ Setbacks met*
- ✓ Complies with WCF Master Plan*

○ Visibility

- ✓ Structural assessment

Design elements found in 49.65.930

Condition based on design [49.65.970(f)(1)]

- Concealed antennas designed to blend with the existing design, color and texture of the tower [49.65.930(a)(2)]
- Tower is located and configured to minimize adverse visual impacts [49.65.930(i)(A)]
- Resemble surrounding landscape or be compatible with built environment [49.65.930(i)(B)]
 - Designs, height, scale, color



Condition based on aesthetics [49.65.970(f)(1)]

- Protection of view
 - ✓ Protection of Comp Plan Viewsheds
- Concentrations of WCFs in the area
- Modifications that will create less intrusive visual impact

Commission mandate 49.65.970

Conditions

- Design
- Aesthetics

Denial

- Safety conflict
- Zoning conflict
- Colocation availability
- X Historic value**
- Scenic

AUTOMATIC DENIAL N/A

- X Wildlife refuge
- X Public park
- X Comp Plan Scenic Corridor or Viewshed
- X Obstruct view of Mendenhall Glacier

Safety [49.65.970(f)(2)(A)]

- Six foot high, two-inch mesh chain link fence (page 85)
- One foot of three-strand barbed wire (page 85)
- 12-foot vehicle gate with lock bar (page 85)
- Challenge signage (page 92)
- No FAA light needed (page 135)
- Engineer review of tower (page 106)
- Engineer review of foundation (page 99)

What about 5G?

- Facility compliance with radio frequency FCC Regulations (page 94)
- AT&T antenna will operate in low and medium frequency range, comparable to 4G
- AT&T plans other locations for 5G
- Other tower tenants may operate in the higher frequencies of 5G



Zoning [49.65.970(f)(2)(B)]

- Function-fixed location
 - Waterfront users – including tourists
 - Unimpeded site lines for Douglas



Colocation [49.65.970(f)(2)(C),(F)]



Existing tower inventory, page 47

- Population-based
- 2014 service for 1,750 and 2,500 devices
- Since then:
 - # of devices increased
 - Bandwidth use has increased
- Each tower accommodates fewer people
- Need more towers

Scenic properties [49.65.970(f)(2)(E)]



Additional conditions?

Conditions

- Design
- Aesthetics

Denial

- Safety conflict
- Zoning conflict
- Colocation availability

X Historic value

- Scenic

Condition #1: Design & Performance, custom condition: Fencing must be installed such that when vehicle gates are opened they remain within the lot lines.

Recommend APPROVAL with conditions

- Complete application
- Noticed appropriately
- Complies with safety codes
- Appropriate to the zoning district
- Robust analysis of colocation
- Not a historical resource
- Area currently equipment storage
- Complies with existing plans
- Not a wildlife refuge
- Not a public park
- Not in a Comp Plan viewshed
- Does not obstruct the Mendenhall Glacier view

Thank you!

Applicant: Alissa Haines
Mastec Network Solutions - Alaska

Findings are available on subsequent slides if needed for discussion



Planning Commission

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

PLANNING COMMISSION NOTICE OF DECISION

Date: April 28, 2021
File No.: WCF2021 0001

Mastec Network Solutions
ATTN: Alissa Haynes
685 Matterhorn Drive
Park City, UT 84098

Application For: A Wireless Communication Facility Permit to install a new 100-foot Wireless Communications Facility (WCF) Monopole at 3500 N Douglas Highway in a Waterfront Industrial zoning district.

Legal Description: ATS 123 Lot 1

Property Address: 3500 N. Douglas Highway

Parcel Code No.: 1D060L010010

Hearing Date: April 27, 2021

The Planning Commission, at its regular public meeting, adopted the analysis and findings listed in the attached memorandum dated March 16, 2020, and APPROVED the Special Use Permit to install a new 100-foot Wireless Communications Facility (WCF) Monopole at 3500 N Douglas Highway in a Waterfront Industrial zoning district. The project description and project drawings submitted with the application will be changed from the proposed mono-pine to an approved mono-pole.

Attachments: April 16, 2021 memorandum from Irene Gallion, Community Development, to the CBJ Planning Commission regarding WCF2021 0001.

This Notice of Decision does not authorize construction activity. Prior to starting any project, it is the applicant's responsibility to obtain the required building permits.

This Notice of Decision constitutes a final decision of the CBJ Planning Commission. Appeals must be brought to the CBJ Assembly in accordance with CBJ 01.50.030. Appeals must be filed by 4:30 P.M. on the day twenty days from the date the decision is filed with the City Clerk, pursuant to

Case No.: WCF2021 0001

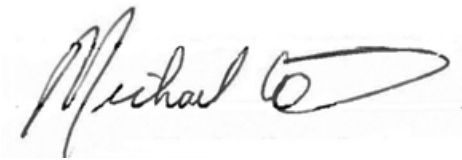
April 28, 2021

Page 2 of 2

CBJ 01.50.030(c). Any action by the applicant in reliance on the decision of the Planning Commission shall be at the risk that the decision may be reversed on appeal (CBJ 49.20.120).

Effective Date: The permit is effective upon approval by the Commission, April 27, 2021.

Expiration Date: The permit will expire 18 months after the effective date, or September 27, 2023, if no Building Permit has been issued and substantial construction progress has not been made in accordance with the plans for which the development permit was authorized. Application for permit extension must be submitted thirty days prior to the expiration date.

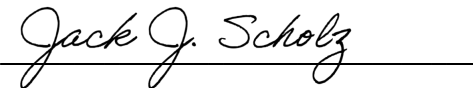


May 3, 2021

Michael LeVine, Chair

Date

Planning Commission



May 3, 2021

Filed With City Clerk

Date

cc: Plan Review

NOTE: The Americans with Disabilities Act (ADA) is a federal civil rights law that may affect this development project. ADA regulations have access requirements above and beyond CBJ-adopted regulations. Owners and designers are responsible for compliance with ADA. Contact an ADA - trained architect or other ADA trained personnel with questions about the ADA: Department of Justice (202) 272-5434, or fax (202) 272-5447, NW Disability Business Technical Center (800) 949-4232, or fax (360) 438-3208.

**PLANNING COMMISSION AGENDA
THE CITY AND BOROUGH OF JUNEAU, ALASKA**

Legal Opinion: Subdivisions, variances, and nonconforming situations

ATTACHMENTS:

	Description	Upload Date	Type
▣	Legal Opinion: Subdivisions, variances, and nonconforming situations	4/27/2021	Miscellaneous



MEMORANDUM

DATE: April 21, 2021
 TO: Planning Commission and Board of Adjustment
 FROM: Sherri Layne, Assistant Municipal Attorney
 SUBJECT: Subdivisions, variances, and nonconforming situations

At the public hearing on April 13, 2021, the Planning Commission (“Commission”) sitting at the Board of Adjustments asked for guidance on (1) the implications of a dismissal of the application for a variance, and (2) if a minor subdivision must have a variance to build a minor subdivision on a nonconforming property.

1. What are the implications of a ‘dismissal’ of the application?

The Commission may dismiss the variance application; however, the two-lot subdivision must still be approved by the Director. The Director has the authority over minor subdivisions (CBJC 49.15.501(a)) such as this one. The Commission can dismiss – however, that could expose the Commission to an appeal based on not making a decision on the application. Playing this scenario out, even if the Commission chose to dismiss, the applicant would still need a permit from the Director for a common wall subdivision, which is not allowed under the nonconforming section of code or under the dimensional standards requirements in CBJC 49.25.400. If the Director does not grant the permit for a subdivision, the applicant would then need to appeal back to the Commission. However, the Commission does not have authority over minor subdivisions, so the Commission would follow the criteria in reviewing the Director’s decision, and if the Commission found an error, it would remand it back to the Director.

2. Does a property owner need a variance to apply for a minor subdivision on a nonconforming property?

Yes.

It may be helpful to keep in mind what the CBJ has indicated as the purpose of the nonconforming code. In April 2020, the CBJ said “the certification of nonconforming situations is expected to ease sales of nonconforming situations. A Nonconforming Certificate may be acquired at any time. Property owners are encouraged to seek a Nonconforming Certificate for their property prior to listing it for sale.”

The relevant sections of the nonconforming code are CBCJ 49.30.230 and 49.30.250, and 49.80 Definitions. Reviewing these sections, it indicates a nonconforming lot has the same development rights as the previous owner. While it allows the same rights as the previous owner and the same development rights as other property owners, the property owner *must* still comply with zoning and permitting requirements. If the property owner wants to develop the property outside of what is allowed under Title 49, they should apply for a variance. The variance process is the proper process for asking to go outside of the requirements and essentially get permission to violate Title 49. Based on the code and case law, a variance is only warranted in very limited circumstances.

In this case, the previous owner's nonconforming rights would allow several development options, including a single family dwelling, a duplex, or a tri-plex. Subdividing the nonconforming lot into two nonconforming lots aggravates the already existing nonconforming situation. The property owner would end up with two nonconforming lots. Further, in order to subdivide, both lots needs to meet the dimensional standards in CBJC 49.25.400. Note that even a conforming lot must meet dimensional standards to subdivide. A common wall development, as proposed by the applicant, is considered a subdivision under CBJC 49.65.720 and CBJC 49.80 includes "subdivision" under the definition of "development".

Keep in mind that the Commission has the authority to makes its own findings based on the staff report, presentations, public testimony, and discussion. The Commission can make new findings – it just needs to be very, very clear in the facts and reasoning to support it.

Additional information that may help in your analysis:

49.20.250 – Grounds for variances

(b) Non-administrative variances.

(1) A variance may be granted to provide an applicant relief from requirements of this title after the prescribed hearing and after the board of adjustment has determined that:

- (A) Enforcement of the ordinance would create an undue hardship resulting from the unusual or special conditions of the property;
- (B) The unusual or special conditions of the property are not caused by the person seeking the variance;
- (C) The grant of the variance is not detrimental to public health, safety, or welfare; and
- (D) The grant of the variance is narrowly tailored to relieve the hardship.

Relevant variance case law:

City and Borough of Juneau v. Thibodeau, 595 P.2d 626 (AK 1979) – More profitable use of land is not a basis for a variance.

Courts have also stated that applicants must show the denial of the variance would leave them with no other reasonable use of the property and that no reasonable return could be made on the property.

E&F v. Zoning Board of Appeals of the Town of Fairfield 320 Conn. 9 (2015) (bad measurement put building addition into the setback) – Artificial or self-created hardship is not enough. “Financial considerations are relevant only if the application of the regulation or ordinance practically destroys the value of the property for any use to which it may be put *and* the regulation or ordinance as applied to the subject property bears little relationship to the purpose of the zoning plan”.

Courts have stated that a “zoning regulation that prevents land from being used for its greatest economic potential does not create the exceptions kind of financial hardship” that Courts have deemed to have a “confiscatory or arbitrary effect”.

Several courts have stated “hardship alone is not sufficient” and variances from the terms of the zoning ordinance should be permitted “only under peculiar and exceptional circumstances.”

Lastly, there was a question about whether or not there is any liability for CBJ because the applicant indicates she spent over \$20,000 on engineering and surveying based on information she received (and did not receive) at her pre-application conference.

To be clear, the answer is no. Under AS 09.65.070(d), the applicant may not file an action for damages against the CBJ in this particular situation.