PLANNING
COMMISSION
MEETING

OCTOBER 11, 2016
The Planning Commission will hold a work session to discuss the Community Planning Department’s work program, current and future projects and priorities.

FAIRBANKS NORTH STAR BOROUGH PLANNING COMMISSION
REGULAR MEETING
AGENDA

A. ROLL CALL

B. MESSAGES
   1. Chairperson’s Comments
   2. Commissioner’s Comments
   3. Communications to the Planning Commission
   4. Citizen’s Comments – limited to three (3) minutes
      a. Agenda items not scheduled for public hearing
      b. Items other than those appearing on the agenda
   5. Disclosure & Statement of Conflict of Interest

C. APPROVAL OF AGENDA AND CONSENT AGENDA

   Approval of Consent Agenda passes all routine items indicated by asterisk (*) on agenda. Consent Agenda items are not considered separately unless any Planning Commission member or citizen so requests. In the event of such request, the item is returned to the general agenda.

D. *MINUTES
E. CONSENT AGENDA ITEMS

1. **HP2017-001** A request by the Alaska Department of Transportation and Public Facilities – Northern Region for local planning authority approval of the Chena Hot Springs Road MP 20 Jenny M. Creek Bridge Replacement project.  
   (Staff Contact: Kellen Spillman)  
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F. QUASI-JUDICIAL HEARING

1. **CU2017-004** A request by Koma Fenton, AlasConnect, Inc. on behalf of John and Mariagrace Adams for conditional use approval of a 52-foot communications tower, minor in the Rural Estate 2 (RE-2) zone on Parcel #2 of the plat labeled ‘The Partition of the Property of Frank and Sue Ellen Therrel’ in the NW1/4 of the NW1/4 of Section 29, T1S R2W, F.M. (Located at 1345 N Becker Ridge Road, on the west side of N Becker Ridge Road, west of Chena Ridge Road) (Staff Contact: Manish Singh)  
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2. **CU2017-002** A request by John Larrison for conditional use approval of a kennel, minor in the Rural Estate 4 (RE-4) zone on Lot 84, Goldstream Subdivision. (Located at 1261 Ballina Road on the south side of Ballina Road, southeast of Goldstream Road). (Staff Contact: Stacy Wasinger)  
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G. PUBLIC HEARING

   NONE

H. APPEALS

   NONE

I. UNFINISHED BUSINESS

1. Potential Planning Commission sponsorship of an amendment to Title 18 definitions of “School Buildings”.  
   Page 271

J. NEW BUSINESS

   NONE

K. EXCUSE ABSENT MEMBERS

L. COMMISSIONER’S COMMENTS

1. FMATS  
   Page 281

2. Other

M. ADJOURNMENT
WORK SESSION
PRIORITY PLANNING ORDINANCES

1. Quasi-judicial Restructuring

2. Permit process ordinance to standardize all processes/GFR notice
distances & property owner authorization/ Non-conforming code
amendment/ add CUP modification process

3. Vesting and permit expiration

4. Sign code repeal of unconstitutional elements

5. JLUS Height ordinance

6. JLUS Density/ Intensity of uses / Safety ordinance

7. Communications facilities update ordinance

8. CUP criteria
COMMUNITY PLANNING DEPARTMENT WORK
PLAN THROUGH FYE 2017

Platting: FYE 2016/17 Priorities
1) Waiver research and documentation
2) GFR for Subdivisions project
3) Intake checklists for major platting application types
4) Update platting applications and other forms
5) Update Platting Administrative Procedures Manual
6) Addressing and road naming ordinance
7) Legal access ordinance
8) Road construction exemption ordinance
9) Final plat note for variances and other clean-up ordinances

FYE 2018 and Beyond
10) Subdivision Road Standards
11) GPS Controls project
12) Recording of unrecorded waivers

Planning: FYE 2016/17 Priorities
1. Setback exemptions ordinance
2. Smith Ranch Rethink
3. Permit process ordinance to standardize all processes
4. Non-conforming code amendment
5. Community Outreach Plan and Education Program
6. ZDevel: Historical zoning and annexation verification database
7. Cell tower update ordinance
8. Timeline/schedule for new Comp Plan
9. Chena Slough Flood Study
10. Salcha Flood Study
11. Sign Code ordinance
12. Marijuana zoning update to address state regs
13. JLUS Implementation
   a. Brochure on Noise Mitigation Construction standards
   b. Height ordinance
   c. Density/Intensity of uses/Safety ordinance
   d. Property acquisition support “resolution”
14. Historic Preservation Plan Update
15. Parking Study/Ordinance
16. Update 1988 MOU w/AK DOT&PF
17. Revision to Vision Fairbanks Plan  
18. Adoption of Official Zoning Map  
19. Admin Variance/ Variance amendments/ ordinances  
20. Update 1991 Road Plan  
21. Verify Community Quarterly statistical accuracy and update graphics  

**FYE 2018 and Beyond**  

1. MTP update and adoption by FNSB  
2. Update/finalize Population Projection  
3. Write and adopt new FNSB Comprehensive Plan  
4. Corridor/Land use correlation studies (possible partnership agreements)  
5. Define accessory bldg. by size and other Title 18 clean-up amendments  

**CP Administration: FYE 2016/17 Priorities**  

A. Intake checklists for major planning application types  
B. Intake checklists for major platting application types  
C. Update planning applications and other forms  
D. Update platting applications and other forms  
E. Update and expand website content  
F. Interactive land use permits map  
G. Brochure & Flowchart on development processes  
H. Quasi-judicial testimony rules and procedures  
I. Amended written public hearing procedure (PB, PC, Admin)  
J. Written appeal hearing procedure (PB & PC)  
K. Develop CP Department Policy Manual  
L. Update Planning Administrative Procedures Manual  
M. Update Permit Tech Procedures Manual  
N. Update Front Desk Procedures Manual  
O. Other quasi-judicial policies and procedures as needed  
P. CP Electronic file protocol  
Q. Update CP Land Use Determinations Manual  
R. Customer comment cards for counter service/ exceptional service recognition cards  
S. New Board member orientation checklists for each of 5 boards  
T. Develop performance measures for each division and function  

**FYE 2018 and Beyond**  

U. Develop minimum training requirements/certifications for each position type  
V. Scanning of files
MINUTES

September 7, 2016
A regular meeting of the Fairbanks North Star Borough Planning Commission was held in the Mona Lisa Drexler Assembly Chambers, Juanita Helms Administration Center, 809 Pioneer Road, Fairbanks, Alaska. The meeting was called to order at 6:00 p.m. by Chris Guinn, Chairman.

MEMBERS PRESENT: Chris Guinn  Mark Billingsley
Sean Reilly  Mindy O’Neal
Charles Whitaker  Pat Thayer
John Perreault  Robert Peterson

MEMBERS ABSENT: Wendy Presler

OTHERS PRESENT: Christine Nelson, Director of Community Planning
Manish Singh, Planner II
Wendy Doxey, Asst. Borough Attorney
Tanya Hughes, Administrative Assistant

A. ROLL CALL

B. MESSAGES

1. Chairperson’s Comments
   NONE

2. Communications to the Planning Commission

   Ms. Nelson informed the commission of the following items: the FYE Department Work Plan, a work session on the October 11 meeting agenda, upcoming APA Commissioner training schedule, September 25 Planning Commission meeting was cancelled, and she would be out of office from September 12 – October 1 but would be available by email.

3. Citizens’ Comments – limited to three (3) minutes
   a. Agenda items not scheduled for public hearing.
      NONE
   b. Items other than those appearing on the agenda.

4. Disclosure & Statement of Conflict
Mr. Whitaker declared for the record that at a social function an individual mentioned that they were planning to testify regarding CU2017-001 to which he replied that it was a quasi-judicial case and would hear any testimony at the meeting.

C. * APPROVAL OF AGENDA AND CONSENT AGENDA

Approval of Consent Agenda passes all routine items indicated by asterisk (*) on agenda. Consent Agenda items are not considered separately unless any Planning Commission member or citizen so requests. In the event of such request, the item is returned to the general agenda.

MOTION: To approve the Agenda and Consent Agenda by Mr. Billingsley, seconded by Ms. Thayer.

ROLL CALL

Eight (8) in Favor: Mr. Reilly, Mr. Perreault, Mr. Whitaker, Mr. Peterson, Ms. O’Neall, Mr. Billingsley, Ms. Thayer, and Mr. Guinn

Zero (0) Opposed:

MOTION CARRIED

D. *MINUTES

1. *Minutes from August 16, 2016 PC Meeting

E. CONSENT AGENDA ITEMS

NONE

F. QUASI-JUDICIAL HEARING

CU2017-001 A request by Koma Fenton, AlasConnect, Inc. on behalf of Jackie L. and Lorna D. Willard for conditional use approval of a 32-foot communications tower, minor in the Rural Estate 2 (RE-2) zone on Lot 1, Pullman Park Subdivision, First Addition (Located at 1530 Alderwood Drive, on the east side of Alderwood Drive, east of Chena Ridge Road). (Staff Contact: Manish Singh)

OATH GIVEN

Koma Fenton, applicant, explained that the proposed tower was located next to a Golden Valley utility pole. The proposed tower would serve 2-3 dozen owners in an underserved area.
Mr. Singh presented the staff report. Based on the staff analysis, the Department of Community Planning recommended approval of the proposed request with seven (7) conditions and three (3) findings of fact in support of this decision:

CONDITIONS

1. The applicant or holder of this conditional use permit shall comply with all applicable local, state, and federal laws.

2. The applicant or holder of this conditional use permit shall provide FNSB Community Planning Department a set of design drawings and specifications stamped by a registered professional in the state of Alaska.

3. All existing vegetation on the west side of the property, except that necessary to be removed for maintenance of the communications tower, shall be maintained on the property.

4. The support structure of the communications tower shall remain a wooden utility pole to appear similar to other power poles in the neighborhood.

5. No shelter, ground equipment or other structures associated with the communications tower shall be added to the site unless appropriate land use approvals are obtained.

6. The communications tower shall not be illuminated.

7. If any modifications are made to the tower design, proposed location, site plan, or other FNSB required documents, the applicant or holder of this conditional use permit shall submit revised documents to the FNSB Community Planning Department. If substantial modifications are made to these documents or to the operation of the communications tower, an amendment to the conditional use permit may be required pursuant to FNSBC 18.104.050 (D).

FINDINGS OF FACT

The Department of Community Planning further recommends the following Findings of Fact in support of approval:

1. The proposed conditional use will conform to the intent and purpose of Title 18 and of other ordinances and state statutes because it will conform to Title 18 requirements as a conditional use in the RE-2 zone.
   a. The purpose of Title 18 will be met because the Fairbanks North Star Borough Comprehensive Plan Transportation and Infrastructure Goal 2 is being enhanced with the development of this site as communications tower, minor.
   b. The intent of Title 18 will be met because with the conditions imposed, the conditional use will both protect private property rights and promote public health, safety, and welfare.
   c. The Applicant has provided information sufficient to show they intend to meet all local, state, and federal laws.
2. There are adequate existing energy and transportation facilities serving the site and other public services are available to serve the proposed conditional use.

   a. The proposed conditional use does not need any water or sewer for operation.
   b. The site is within Chena Goldstream Fire Service Area.
   c. The site is currently connected to the GVEA grid which will provide sufficient energy supply for tower operation.
   d. The site is served by Alderwood Drive and Chena Ridge Road.
   e. The tower does not generate any additional trips and does not impede vehicular and pedestrian traffic on the surrounding roads.

3. With the conditions imposed, the proposed conditional use will protect public health, safety, and welfare as the facility will comply with Title 18 standards for the RE-2 zone (FNSBC 18.36) and Standards for communications towers (FNSBC 18.96.160) as well as other federal, state and local requirements for a communications tower, minor.

   a. The tower would serve residents in the neighborhood that are currently underserved by internet service providers.
   b. The visual impact analysis provided by the applicant shows the tower is visually screened by existing trees and houses. The structure and design of the tower makes its appearance very similar to other power poles in the neighborhood minimizing the visual impact.
   c. There are no existing communications towers located in the neighborhood or anywhere within 1,000 feet of the proposed tower location for collocation. There are no existing alternate structures such as power and telephone poles, buildings and other structures in the area meeting the technical requirements of the service provided by ACW.
   d. The proposed location of tower in RE-2 zone meets the technical needs of Line of Sight (LOS) required by the equipment utilized by ACW and the location of the tower helps minimize the visual impact to the residential neighborhood.
   e. The tower is designed to allow for future collocations.
   f. The section of the pole utilized by ACW is only 65% of its capacity; allowing for expansion of ACW’s service.
   g. The tower is not illuminated.
   h. The tower meets all requirements of RE-2 zone including yard and height requirements. The tower is located 26 feet and 7 inches from the south property line which is more than the 50% of the height of the tower; therefore, meeting the FNSBC 18.96.160 (C) (2) (h) yard requirements.
   i. The 32 foot height is the minimum required to maintain the LOS to a repeater on another broadcast location.
   j. The tower operates on unlicensed frequencies and do not require an FCC license.
   k. The tower has a determination of no hazard from FAA.

Mr. Billingsley queried the number of poles owned by AlasConnect, Inc.

Mr. Fenton replied that only two poles were currently owned with one proposed in the near future.

Mr. Billingsley inquired regarding requirements for GVEA to place utility poles.
Mr. Singh responded that GVEA usually relies on utility easements to place new poles.

Mr. Billingsley queried if there was a height restriction on utility poles.

Mr. Singh responded no.

Ms. Nelson added that Utility Poles were specifically exempted from requiring a permit under definitions in FNSB Code.

Interested Person Testimony Opened

Spencer Atkinson, affected property owner, described a concern that there might be a negative impact on their private property if the tower was visible from their home, and the visual impact on the neighborhood in general.

Mr. Whitaker inquired if the pole was visible from their home.

Mr. Atkinson replied that he did not think so.

Interested Person Testimony Closed

Mr. Fenton declined the opportunity for rebuttal.

MOTION: To approve CU2017-001 with seven (7) conditions and three (3) findings of fact by Mr. Billingsley, seconded by Ms. Thayer.

Mr. Billingsley spoke in favor of approval of CU2017-001; the pole was smaller than the neighboring utility pole, there were no objections to the application, it serves the community needs, and meets the Conditions.

Ms. Thayer spoke in favor of approval of CU2017-001, and agreed with Mr. Billingsley’s statements. She added that the tower poses no FAA hazard regarding the flight patterns of the airport below.

Mr. Guinn spoke in favor of approval of CU2017-001, and also agreed with Mr. Billingsley’s statements.

ROLL CALL

Eight (8) in Favor: Mr. Perreault, Mr. Whitaker, Mr. Peterson, Ms. O’Neall, Mr. Billingsley, Ms. Thayer, Mr. Reilly, and Mr. Guinn

Zero (0) Opposed:

MOTION CARRIED
G. **PUBLIC HEARING**

**Ordinance No. 2016-46** An Ordinance amending Title 18 regarding Marijuana Establishments. (Sponsored by: Assembly members Sattley and Hutchison) (Staff Contact: Christine Nelson)

**Guy Sattley**, Assembly member and co-sponsor, stated that the FNSB was proactive in creating buffer zones and regulations, for the recent change in State of Alaska law which allowed marijuana cultivation and retail outlets, very early in the process. The State of Alaska created the option for a $1000.00 add on license to retail store applications which would allow an on-site consumption venue. He disagreed with the staff report’s comparison to alcohol establishments; they were irrelevant.

**Diane Hutchison**, Assembly member and co-sponsor, expressed that consideration for an on-site consumption venue should have a different level of consideration than a retail store. Parking and loitering near the location would be different; this created different health and safety concerns for the surrounding property owners and residents. She reiterated Mr. Sattley’s point that when buffer zones were created at the FNSB level the option for on-site consumption did not exist. A conditional use process would notify nearby residents of the application.

**Mr. Billingsley** inquired regarding the creation of regulations for on-site consumption by the Marijuana Control Board.

**Mr. Sattley** replied there was a 30 or 60 day comment period that had just closed, and a two day meeting that was currently still taking place, during which they voted to postpone the discussion regarding on-site consumption venues.

**Mr. Billingsley** remarked that additional regulation would exist.

**Ms. Hutchison** responded that the proposal was a zoning ordinance; local municipalities were allowed to regulate local licensing, if they chose.

**Ms. Thayer** restated the current application process for clarification: an application for a retail store was automatically issued, the Assembly does not see that request; however, if the application were for a retail store with on-site consumption, the proposed ordinance would require that application to be heard before the Planning Commission.

**Ms. Hutchison** concurred.

**Mr. Billingsley** observed that applicants would have meet regulatory burdens and go before the Assembly.

**Ms. Hutchison** clarified that similar to an alcohol license, once state regulations were met, the license would be sent to the Assembly for protest or no protest. The reasons for protests were limited. A Conditional Use process would issue notification to affected property owners and give them an opportunity to appear and voice concerns regarding an application.

**Mr. Perreault** inquired if the proposed process matched the alcohol permitting process in the same zones.
Ms. Hutchison replied that she was not sure; she expressed that was irrelevant. Marijuana was still illegal at the Federal level. Citizens’ have a concern about an illegal business in operation next to them.

Mr. Perreault queried how a conditional use permit would affect the behavior of the patrons of these establishments.

Mr. Sattley remarked that driving to a retail operation and leaving with a product was different from going to a retail store and smoking on site. There was an added safety concern of individuals driving under the influence.

Ms. Hutchison added that the Planning Commission could set more restrictive conditions, hopefully based on the neighborhood concerns.

Mr. Perreault agreed that public input and awareness was a concern. There was a two week appeal period after a permit was granted. He posited that the real issue was public awareness of permits granted so that they were able to respond. He questioned whether FNSB should wait until the State actually had rules.

Ms. Hutchison relayed that unless a definition were determined at the local level for “on-site consumption”, prior to the State passage of the retail add on, retail businesses could chose this option and permits would be issued across the counter.

Mr. Billingsley queried how the State would handle protests received from local governments.

Ms. Doxey answered that the State had regulations in place; they will implement a localities protest or conditions as long as it is not considered arbitrary, capricious, or unreasonable.

Ms. Nelson presented the staff report. Based on the staff analysis, the Department of Community Planning recommended that the Planning Commission recommend denial of Ordinance 2016-46 to the Assembly. Neighborhood land use impact would primarily be related to a retail marijuana store, not the additional on-site consumption activity. The primary concern was consistency within the code.

Ms. Thayer observed that other types of product/consumer-based businesses have an impact on the land surrounding them; littering, loitering, etc. There would be impacts.

Ms. Nelson agreed and clarified that the comparison was whether there would be more impacts by a retail store with on-site consumption versus a retail only store.

Mr. Billingsley requested clarification; current regulations do not treat alcohol and marijuana consumption venues differently.

Ms. Nelson responded; that was correct.

Mr. Billingsley further queried; if consumption had been considered while drafting the current regulations would different regulations have been proposed.

Ms. Nelson replied, based on internal consistency, no. More conditional uses were considered initially; it was discussed between the Department, Administration, and the Assembly and evolved into the table on page 185.
Mr. Billingsley inquired if consumption was considered while drafting regulations.

Ms. Nelson replied, in theory, they were examined relative impacts and observing liquor stores, establishments, and restaurants where consumption happened.

Mr. Perreault queried the notification process for opening new alcohol consumption establishments.

Ms. Nelson replied they were all permitted uses.

Mr. Perreault further queried if any alcohol consumption venues were a conditional use process.

Mr. Guinn probed when it would be considered ok to not be consistent.

Ms. Nelson replied that would be a community decision; there were differences between alcohol and marijuana. They are Public Safety issues, not land use issues. Having well documented reasons for treating them differently is important.

Mr. Whitaker queried the buffers for similar permitted uses from the table on page 182.

Ms. Nelson replied that two of the uses were buffered, neither more than 200ft.

Ms. Hutchison clarified that on-site consumption was not brought before the Assembly; no debate has occurred at the Assembly level. Further, alcohol licenses have a limited number available – transfers did occur; was there an unlimited number of licenses for retail with on-site consumption.

Ms. Nelson responded that to her knowledge the State would not limit the number of permits; however, there was no transfer process.

Ms. Doxey added that the regulations will not allow the transfer of a license from location to location but there is potential for transfer from person to person; the license would have to come back to local government.

Ms. Hutchison pointed out that what the State will or will not allow was irrelevant to the discussion of what FNSB, as a local government, defines what these licenses are. Also, the argument that the proposed increase in public testimony, through the creation of a conditional use for these types of permits, would make the Planning Commission’s job more difficult was also irrelevant; Ms. Nelson herself had noted that Boards and Commissions often hear testimony which they need to sort through to determine the relevance and weigh the evidence presented, that the Planning Commission routinely encounters this with most sensitive uses. Finally, the suggestion that the Ordinance be denied until a comparison with uses involving alcohol was unnecessary, this Ordinance was regarding on-site consumption of Marijuana. On-site consumption of alcohol was not a relevant comparison, marijuana is not alcohol. Striving to make FNSB Code consistent for the two different uses was ignoring the fact that they are not the same.

Mr. Sattley spoke regarding the staff reports analysis that between a retail marijuana store and a retail marijuana store with on-site consumption, parking was the only added neighborhood
impact; the impacts were much larger, like loitering, etc. The Planning Commission was welcome to make suggestions in their recommendation.

Public Testimony Opened

NONE

Public Testimony Closed

MOTION: That the Planning Commission recommends the postponement of Ordinance No. 2016-46 by the FNSB Assembly until the State of Alaska has acted on and created regulations for retail stores with on-site consumption by Mr. Perreault, seconded by

MOTION DIED FOR LACK OF SECOND

MOTION: That the Planning Commission recommends denial of Ord. No. 2016-46 by Mr. Billingsley, seconded by Mr. Reilly.

Mr. Billingsley spoke in favor of recommending denial of the Ordinance to the Assembly; there were adequate regulatory barriers for on-site consumption, regulations for on-site consumption venues will be created by the Marijuana Control Board, and the FNSB Assembly will have the option to protest the permits. The Marijuana Control Board has stated that they will defer to the local governmental body. The FNSB can find reasons to protest that are not arbitrary, unreasonable, or capricious. This is not a planning and zoning issue.

Ms. Thayer spoke against recommending denial of the Ordinance to the Assembly. Currently anyone can apply for a marijuana retail store with on-site consumption and receive that permit across the counter; it will not go before the Planning Commission, Assembly, or residents of that area.

Mr. Whitaker spoke against recommending denial of the Ordinance to the Assembly. Residents deserve the right to be informed and testify.

Ms. Doxey clarified local government protest options; there was a change in the law that made the protest provision of the State Statute non-area wide. Applications for businesses within city limits will go to their respective City Councils and they will have the protest power.

Mr. Billingsley reiterated that permitting for retail establishments was approved by the Assembly. Further, he agreed with Ms. Thayer’s statement that zoning permits would not be vetted through the Planning Commission or the Assembly. However, the Marijuana Control Boards permit which controlled operation of a retail store with on-site consumption will be heard before the geographically appropriate local government board, and they have the right to file a protest.
Mr. Perreault spoke in favor of recommending denial of the Ordinance to the Assembly; the issue that affected property owners do not have a say in the process is not solved by adding these regulations. If the applicants’ paperwork is in order, the Planning Commission would approve a conditional use. The issues regarding public safety, whether clients of these establishments will loiter or drive under the influence, are not able to be addressed by conditions under the purview of the Planning Commission. Those actions are already illegal. They do not fall under the regulations of land use. There is a two week appeal process available to affected property owners which could be taken advantage of if those residents were informed, currently no notices were sent, they were posted online.

Mr. Sattley expressed concern regarding the protest capabilities of the local governing body. To date all marijuana applications heard by the Assembly have been approved. The likelihood of any future denial based on the testimony of a few neighbors was low. The previous Borough attorney described that grandfather rights were applicable to a business that was licensed, permitted, and in operation. Currently none of the businesses’ meet these standards. Once the State issues licenses most applicants will be grandfathered in quickly. At that time all potential that exists for Public input will fall to the wayside.

Ms. ONeall spoke in favor of recommending denial of the Ordinance to the Assembly; effects on the community are unknown currently. The closest comparison would be to alcohol consumption businesses. The local population voted to legalize marijuana businesses. Local governments have a certain amount of control. Marijuana Control Board members are dedicated to creating the best regulations for the community. She suggested approaching the regulation from a viewpoint other than fear.

Mr. Reilly spoke in favor of recommending denial of the Ordinance to the Assembly. Since the original passage of legalization there has been a long time for the public to contact the Assembly and other law making officials to voice their concerns and opinions. He agreed with Mr. Perreault’s concern that permitting should have a better notification process to allow affected property owners to make use of the appeal process. He disagreed with the comparison of marijuana to alcohol.

Ms. Hutchison added that no other states that had legalized the sale of marijuana have allowed the use of on-site consumption. She agreed that we do not know the effects and to rush in and allow the use without that understanding was irresponsible. Citizens’ have very busy lives and do not check local government agendas on a regular basis. A notification and conditional use process would be the best available option. There is no other process currently. All of this is new and there is fear that this will affect more than the individual that wants to casually smoke the product; it will affect the community.

ROLL CALL

Five (5) in Favor: Mr. Peterson, Ms. O’Neall, Mr. Billingsley, Mr. Reilly, and Mr. Perreault

Three (3) Opposed: Mr. Whitaker, Ms. Thayer, and Mr. Guinn
OC2017-001 An Ordinance amending FNSBC Title 18 regarding marijuana cultivation facilities as a use in the Rural Agricultural and Rural Farmstead Districts. (Sponsored by Planning Commissioner Whitaker) (Staff Contact: Christine Nelson)

Ms. Nelson presented the staff report. Based on the staff analysis, the Department of Community Planning recommends that the Planning Commission not support or forward this Ordinance; both zones have other agricultural uses with no size limitations and which could have equal or greater impacts than a small or large indoor marijuana cultivation facility or a limited outdoor marijuana cultivation facility.

Mr. Perreault queried the process of notification for Conditional Use permits.

Ms. Nelson replied that Dear Property owner letters were mailed, a sign was posted at the location, and it was noticed in the News Miner. Zoning permits do not have the same requirements; a recent upgrade was that all zoning permits are now posted automatically to the website within 30 minutes of being granted.

Mr. Billingsley requested clarification regarding the Z/CUP table on page 195; which Zoning Permits did this Ordinance Change seek to change to conditional use permits. He queried if there was consistency with alcohol.

Ms. Nelson responded that all the Rural and Agricultural and Rural Farmstead Zoning Permits would be changed to conditional use permits; however, some of the GU would remain the same. There was no consistency with alcohol because it was not an agricultural use.

Mr. Whitaker expressed thanks for Mr. Singh’s efforts with the permit posting upgrade. Regarding the comparisons done by staff for uses within this zone, there are no requirements for any other uses to have lighting, security cameras, and audible alarm systems. He opined that a large portion of Rural and Agricultural zoned lots were developed as residential use. According to Title 18.28.010 Rural and Agricultural Districts Intent “These districts are intended for agricultural uses of land for very low density residential development…” Previous testimony heard before the Planning Commission highlighted the fact that the zones are used for agricultural and residential uses.

Ms. ONeall queried if the regulations for lighting and security were the same depending on the operations size.

Mr. Whitaker replied that he believed it was the same, and expressed a concern that some applicants would add extremely bright lighting.

Mr. Peterson clarified that conditions on lighting couldn’t supersede State requirements.

Ms. Nelson added that the lighting could be conditioned as long as it met State requirements.

Public Testimony Opened
Ms. Hutchison, Assembly member, spoke in favor of the proposed ordinance for the same reason she proposed the last Ordinance, notification to affected property owners. She informed that the Assembly was told that they had no power to protest once an applicant received their zoning permit. The initiative to allow marijuana was passed by the voters; however, they did not vote to have the establishments in a zones and locations, they did not vote to have them permitted without notification to surrounding residents. The public deserves a voice in the process.

Public Testimony Closed

Ms. O’Neall queried if Ms. Hutchison thought that this could be addressed by size limit.

Ms. Hutchison reiterated that she felt the problem was notification and Public input. She expressed concern that the operations were being permitted and run by individuals from outside states that were here for an average of four months and did not have consideration for the long term residents of the adjacent area.

Mr. Billingsley queried who had instructed the Assembly that they had no power to protest an application.

Ms. Hutchison responded that it fell under arbitrary and capricious standards; a zoning permit was already issued, and the State issued a license with a letter attached that no background checks were performed by the State at the time the license was issued. There were no grounds to file a protest.

Ms. Doxey clarified, the Assembly created the FNSB Code of Ordinances; for the Assembly to file a protest after an application or license has met the standards of Municipal Law, based on its location, would be arbitrary, capricious, and unreasonable. However, there may be a different basis for protest.

Mr. Billingsley added that Assembly could explore and create a list of other bases for protests and apply the appropriate ones for different licenses that are heard before them.

Ms. Hutchison replied that the Assembly was given strict instructions as to what reasons were allowed to use for consideration.

Mr. Perreault countered that the Planning Commission also had a strict list of reasons they were allowed to consider when making decisions.

Ms. Hutchison responded that the Planning Commission was allowed to create conditions, for a conditional use process, which makes a use more compatible with the surrounding area and satisfies health, safety, and welfare. She opined that the conditional use process was broken because it did not take residents’ concerns regarding new uses into account as a basis for decisions.

Ms. Doxey added, regarding Mr. Billingsley’s earlier comment, that bases for Assembly protests, determined by State Statute, were limited to time, place, manner, and number of establishments which are already addressed by FNSB Code.

Ms. Hutchison expounded that the Conditional Use process was broken because it did not consider the nature or character of the neighborhood.
MOTION: To approve and sponsor OC2017-001 and forward the proposed Ordinance to the FNSB Assembly, by Mr. Whitaker, seconded by Ms. Thayer.

Mr. Billingsley spoke in favor of supporting the proposed ordinance and commented that noise was still and issue to be addressed in the future. He noted that the Planning Commission could reject conditional uses based on health, safety, and welfare standards. Regarding the Assembly being restricted to protests for only time, place, or manner; the fear of litigation costs should not be the driving force behind FNSB decisions. The Arbitrary and Capricious standard is one of the most deferential in Law. He posited that the Assembly and the Planning Commission could both be more assertive with the decisions under their purview.

Mr. Whitaker spoke in favor of supporting the proposed ordinance and reminded that the implementation of marijuana enterprises was referred to by the FNSB from the beginning as a work in progress; changes were expected. He noted that the residents in the General Use zones were currently afforded more opportunity for Public testimony in similar cases than those in the Rural and Agricultural, and Rural Farmstead zones. The purpose of the Ordinance was to afford those residents the same opportunity. Land Use Goal 4 of the Regional Comprehensive Plan was to enhance development opportunities, while minimizing Land Use Conflicts. A Conditional Use process would allow some Land Use conflicts to be addressed.

Ms. ONeall spoke in favor of supporting the proposed ordinance and agreed that the integrity of the zone should be retained. She disagreed with the idea of placing a time limit on the definition of community; how long an owner has lived in the area should note denote whether they are a part of that community. By virtue of owning land that owner becomes part of that community. There is fear of the cannabis industry. She spoke in support of Ms. Hutchison’s idea of residential integrity and allowing residents have a voice in what uses will be in their neighborhood.

Mr. Peterson spoke against supporting the proposed ordinance. FNSB Code has no limitations on lighting for any other type of land owner; creating a standard for only one type of land owner was not equitable.

ROLL CALL

Five (5) in Favor: Ms. O’Neall, Mr. Billingsley, Ms. Thayer, Mr. Whitaker, and Mr. Guinn
Three (3) Opposed: Mr. Peterson, Mr. Reilly, and Mr. Perreault

MOTION CARRIED

H. APPEALS

NONE
I. UNFINISHED BUSINESS

NONE

J. NEW BUSINESS

1. Potential Planning Commission sponsorship of an amendment to Title 18 definitions of “School Buildings”.

   Mr. Guinn explained that he had requested a discussion by staff for a recommendation of change in the current definition.

   Ms. Nelson stated that they had completed a little research and requested additional direction regarding the goal for changing the definition.

   Mr. Guinn opined that vocational buildings should not be considered “school buildings” with regard to marijuana buffer zones.

   Mr. Perreault noted that there are definitions for things like “daycares” and “trade schools” in FNSB Code; the question should be which are actually included in the buffer zone ordinance. Perhaps under the age of 18 could be added to the list of items that deserve a buffer.

   Mr. Reilly suggested that age 18 not be the cutoff for Special Education programs. He suggested considering the acceptance of Federal Funds for lunch programs; that may impact which are considered schools.

   Ms. Nelson suggested a work session for October 25; the purpose for the changes to definitions will determine the changes required.

K. EXCUSE ABSENT MEMBERS

   Mr. Billingsley stated that he may not be here on October 25; he will know with certainty at the next meeting on October 11.

L. COMMISSIONER’S COMMENTS

1. FMATS

   Ms. Nelson relayed information regarding projects at FMATS.

2. Other

   Mr. Billingsley suggested that the issue of increased notice for marijuana permits could potentially be addressed through requirements placed on applicants for posting of signage, or signatures of neighbors; create limited impact on the Community Planning Department and Borough funds and include a sunset date in case the demand is much less in a few years.
Ms. Nelson stated that applications for marijuana establishments have slowed down. She opined that a local licensing process would address and solve all of the issues discussed; notice to residents, analysis of the neighborhood, local control, etc. She explained that she would be suggesting this to the administration as a better way for dealing with neighborhood issues and notification process than any conditional use process.

M. ADJOURNMENT

There being no further business, the meeting was adjourned at 9:22 p.m.
STAFF REPORT

HP2017-001
STAFF REPORT

TO: Fairbanks North Star Borough Planning Commission

THROUGH: D. Christine Nelson, Director
Department of Community Planning

FROM: Kellen D. Spillman, Deputy Director
Department of Community Planning

DATE: October 11, 2016

SUBJECT: HP2017-001 Chena Hot Springs Road MP 20 Jenny M. Creek Bridge Replacement project: A request by the Alaska Department of Transportation and Public Facilities – Northern Region for local planning authority approval of the Chena Hot Springs Road MP 20 Jenny M. Creek Bridge Replacement project.

I. GENERAL INFORMATION

A. Applicant: State of Alaska
   Department of Transportation & Public Facilities
   2301 Peger Road
   Fairbanks, AK 99701

B. Location: Jenny M. Creek at Chena Hot Springs Road

C. Right-of-Way: Existing right-of-way

D. Current Zoning: General-Use - 1 (GU)

E. Comprehensive Plan: Preferred Agricultural Land

F. FEMA Flood Hazard: A portion of this project is located within FEMA Flood Zone A and a FEMA Floodway. A FNSB Title 15 Flood Plain Permit will be required.

II. ANALYSIS

Current Conditions

The proposed Jenny M. Creek Bridge replacement project is located at mile 20 of Chena Hot Springs Road. According to DOT&PF, the current 63 foot long 33.5 foot wide bridge over Jenny M. Creek is structurally deficient. A topographic map of the area is available in Figure 1 and a more in-depth analysis of the bridge condition is available in the supplemental information attached to this report.
According to DOT&PF, the current bridge over Jenny M. Creek has a substructure and superstructure that has been rated “poor” (48 out of 99 on the 2014 bridge inspection report). This existing bridge was built in 1965 and is well past the typical design life of a bridge. Additionally “the slopes at both ends of the bridge have been moving towards the stream and pushing on the lower portions of the abutments.” (DOT&PF)

**Figure 2: Existing Bridge Over Jenny M. Creek**

There is also an existing multi-use trail located within the Chena Hot Springs Road right-of-way. This trail is not paved and utilized mostly be recreational vehicles in this location.

**Zoning**

The properties located along this section of the Chena Hot Springs Road are within the General Use (GU-1) zone.
Proposed Improvements

The DOT&PF is proposing to replace the entire bridge structure, including associated appurtenances, at the crossing of the Chena Hot Springs Road and Jenny M. Creek. The proposed bridge will be a length of 124 feet and 27 feet wide. According to DOT&PF a longer bridge is desired to avoid poor soil conditions. Additionally, there will be 600 feet of roadway reconstructed on each side of the bridge. A typical section of the proposed improvements along Chena Hot Springs Road is available in Figure 2. Traffic flow will continue throughout the construction of this project via a temporary bridge.

The existing multi-use trail will be removed for the duration of the project for the construction of the temporary bridge, but restored after the project.

Figure 3: Proposed Typical Section

Maintenance

The Alaska DOT&PF currently maintains Chena Hot Springs Road, including the Jenny M. Creek Bridge, and will continue maintenance after this project is completed.

Cost

The estimated cost for this project is as follows:

Design $590,000
Construction $4,320,000
Total Cost of Project $4,910,000
This project is funded through Federal funding in the Alaska Statewide Transportation Improvement Program (STIP).

**Right-of-Way**

This project will be constructed entirely within existing right-of-way.

**Staff Analysis**

This project is proposing to replace a bridge along Chena Hot Springs Road, an Alaska Highway System (AHS) route, which has been deemed “structurally deficient”.

Chena Hot Springs Road serves as a link between primarily rural type residential properties and recreational opportunities that exist beyond Mile 20. A project such as a bridge replacement is supported by the FNSB Regional Comprehensive Plan as it does encourage the design and maintenance of roads based on their function and community needs. This will also ensure that larger freight loads can still utilize Chena Hot Springs Road, as special weight restrictions might be needed on structurally deficient bridges.

This project has been scheduled as a non-significant consent agenda item before the FNSB Planning Commission per MOU between the FNSB and DOT&PF. The FNSB Planning Commission will have final local planning authority approval authority over this project.

**III. RECOMMENDATION**

Based on the staff analysis above, the Department of Community Planning recommends that the Planning Commission approve of HP2017-001 as a consent agenda item adopting the staff report and two (2) findings of fact.

**IV. FINDINGS**

The Department of Community Planning recommends adoption of the following Findings of Fact in support of approval, as stated in the Fairbanks North Star Borough Comprehensive Plan:

1. The Chena Hot Springs Road MP 20 Jenny M. Creek Bridge Replacement project will “encourage location, design, and maintenance of roads based on their function and community needs” (Transportation and Infrastructure: **Goal 1, Strategy 1**) by replacing an aging and functionally obsolete bridge that is an important connection between Fairbanks and the residential areas/recreation opportunities along Chena Hot Springs Road.

2. The Chena Hot Springs Road MP 20 Jenny M. Creek Bridge Replacement project is consistent with developing and maintaining Fairbanks as the transportation hub for the Interior (**Economic Development, Goal 1, Strategy 3**) by upgrading a section of the Chena Hot Springs Road that will allow vehicles and freight to access the Fairbanks area.

**V. ATTACHMENTS**

Additional information:  DOT&PF Application Form  
Design Study Report
Kellen Spillman

From: Organek, Jeff C (DOT) <jeff.organek@alaska.gov>
Sent: Thursday, September 15, 2016 2:56 PM
To: Kellen Spillman; Hughes, Thomas C (DOT)
Subject: RE: Chena Hot Springs Road MP 20 Jenny M. Creek Bridge Replacement

Kellen,

In regards to the subject project, I am requesting local planning authority under AS35.30.010.

-Jeff Organek

From: Kellen Spillman [mailto:KSpillman@fnsb.us]
Sent: Thursday, September 15, 2016 2:02 PM
To: Hughes, Thomas C (DOT); Organek, Jeff C (DOT)
Subject: RE: Chena Hot Springs Road MP 20 Jenny M. Creek Bridge Replacement

All,

More specifically I just need written confirmation (an e-mail is sufficient) that you are requesting local planning authority approval under AS35.30.010, not AS35.30.020 as the letter states. These are two different requirements and the Planning Departments process of handling both of these requests would be different.

Kellen Spillman
FNSB Community Planning

From: Kellen Spillman
Sent: Thursday, September 15, 2016 1:57 PM
To: 'Hughes, Thomas C (DOT)'; Organek, Jeff C (DOT)
Subject: RE: Chena Hot Springs Road MP 20 Jenny M. Creek Bridge Replacement

Jeff/Thomas,

Are you referring to the attached documents? If so, please see my e-mail at the beginning of the string as all of my original questions/comments are still valid.

Thanks,

Kellen Spillman
FNSB Community Planning

From: Hughes, Thomas C (DOT) [mailto:thomas.hughes@alaska.gov]
Sent: Thursday, September 15, 2016 1:14 PM
To: Organek, Jeff C (DOT); Kellen Spillman
Subject: RE: Chena Hot Springs Road MP 20 Jenny M. Creek Bridge Replacement

Jeff and Kellen,

I have the receipt for delivery.
From: Organek, Jeff C (DOT)  
Sent: Thursday, September 15, 2016 12:00 PM  
To: Kellen Spillman <KSpillman@fnsb.us>  
Cc: Hughes, Thomas C (DOT) <thomas.hughes@alaska.gov>  
Subject: RE: Chena Hot Springs Road MP 20 Jenny M. Creek Bridge Replacement

We mailed that out a week or so ago. It is my understanding that it was received on your end, and the we received the certified mail receipt back........although I cannot find the receipt...

In any case, I have attached a copy of the letter/ request to this e mail.

-Jeff

From: Kellen Spillman [mailto:KSpillman@fnsb.us]  
Sent: Thursday, September 15, 2016 11:42 AM  
To: Organek, Jeff C (DOT)  
Cc: Hughes, Thomas C (DOT)  
Subject: RE: Chena Hot Springs Road MP 20 Jenny M. Creek Bridge Replacement

Jeff,

Do you have any idea when we will receive the paperwork requesting local approval? We will need it by this Friday to get it on the 10.11.16 agenda. If not the next meeting would be 10.25.16.

Thanks,

Kellen Spillman  
FNSB Community Planning

From: Organek, Jeff C (DOT) [mailto:jeff.organek@alaska.gov]  
Sent: Tuesday, September 06, 2016 9:07 AM  
To: Kellen Spillman  
Cc: Hughes, Thomas C (DOT)  
Subject: RE: Chena Hot Springs Road MP 20 Jenny M. Creek Bridge Replacement

Kellen,

You should be receiving a formal letter of request for Local Planning Approval in the near future.

October 11 should work.

Thank you, Jeff

From: Kellen Spillman [mailto:KSpillman@fnsb.us]  
Sent: Tuesday, September 06, 2016 9:04 AM  
To: Organek, Jeff C (DOT)  
Cc: Christine Nelson  
Subject: Chena Hot Springs Road MP 20 Jenny M. Creek Bridge Replacement

Good Morning Jeff,

I did receive the package you sent over on the Chena Hot Springs Road MP 20 Jenny M. Creek Bridge Replacement project and I just wanted to clarify a few things. While it does not appear this project violates any planning and zoning ordinances per AS 35.30.020, as cited in the letter, this project will still does need local planning authority approval by
the Planning Commission per AS 35.30.010, which is not cited in the letter. The 90 day review period is tied to AS 35.30.010, as outlined in AS 35.30.010 (C).

A simple replacement project like this that does not involve ROW acquisition could be treated as a consent agenda item, without a public hearing before the P.C. I just wanted to confirm that you are requesting local planning authority approval on this project per 35.30.010, and if so would an October 11, 2016 date before the Planning Commission work? Since it appears this would be a consent agenda item it would be up to you if you wanted to attend or not.

Thanks,

Kellen Spillman
Deputy Director
FNSB Community Planning
kspillman@fnsb.us
(907) 459-1266
August 31, 2016

Kellen Spillman
Community Planning Deputy Director
Fairbanks North Star Borough
Administrative Center, 2nd floor
PO Box 71267
Fairbanks, AK 99707

Dear Kellen Spillman:

Re: Chena Hot Springs Road MP 20 Jenny M. Creek Bridge Replacement
Z606360000/0650(028)

We are submitting the enclosed Design Study Report for your review and comment. In addition to a general review, please specifically review for compliance in accordance with AS 35.30.020.

Under AS 35.30.020, the Department of Transportation and Public Facilities (Department) must comply with local planning and zoning ordinances and other regulations in the same manner and to the same extent as other landowners. If you believe that the Department’s construction of this project would result in a violation of planning, zoning, or other regulations generally applicable to landowners, please identify the portions of the project that would be in violation, and the specific planning, zoning, or other regulations that you believe would be violated.

If we have not received comments regarding the project’s compliance with planning and zoning ordinances within 90 days after submittal of these plans, the Department will proceed with the project as planned.

Sincerely,

Jeffrey C. Orgel, P.E.
Engineering Manager

Enclosure: Design Study Report
Application for Local Government Review (FNSB ONLY)

By Certified Mail #: 7016 0750 0000 7867 3388
Return Receipt Requested

“Keep Alaska Moving through service and infrastructure.”
FAIRBANKS NORTH STAR BOROUGH (FNSB) APPLICATION FOR LOCAL GOVERNMENT REVIEW

PROJECT NAME AND NUMBER: Chena Hot Springs Road MP 20 Jenny M. Creek Bridge Replacement
Z60636/0650(028)

FNSB ACTION REQUESTED: Review and Comment
(As required by Alaska Statute 35.30.020)

APPLICANT: State of Alaska
Department of Transportation and Public Facilities
Design and Engineering Services
Northern Region
2301 Peger Road
Fairbanks, AK 99709-5316

For Information Contact: Jeffery C. Organek, P.E. (Project Manager)
jeff.organek@alaska.gov (E-mail Address)
(907)451-2274 (Telephone Number)

PROJECT DESCRIPTION:

A. Type
1. Highway X
2. Facility
3. Airport
4. Other

B. Recommended Project Classification
1. Non-significant
   a. Minor Review X
   b. Standard Review
2. Significant

C. PROJECT SUMMARY:
Replace Jenny M. Creek Bridge on Chena Hot Springs Road MP 20 with a 124-foot long by 37 foot wide concrete decked bulb-tee girder bridge.

PURPOSE OF PROJECT:
The existing bridge is structurally deficient due to the substructure being in poor condition. The slopes at both ends of the bridge have been moving towards the stream and pushing on the lower portions of the abutments. It has been determined by the Alaska Department of Transportation that this bridge should be replaced.
A. Source

1. FMATS
2. CIP  X
3. Safety
4. Other

B. Justification (traffic warrants, safety, etc.):

Replaces a structurally deficient and unstable bridge with a new bridge

PROJECT LOCATION AND TERMINI:

RIGHT OF WAY:  Existing  X  New  N/A

A. If the project involves right of way acquisition, include a map indicating the location and size of the take.

B. Will a plat be filed?  Yes  No  X

C. Expected date for plat submittal:  N/A

PROJECT FUNDING:

A. Type:  Construction  X  Design  X  Right-of-Way

B. Amount: (estimate)  $4,320,000  $590,000

C. Date available:  7-1-17  Currently unavailable

D. Source:  CIP  CIP

PUBLIC INVOLVEMENT:

A. Public Meetings and Hearings (included synopsis)

1. Scoping Meeting  1-29-15
2. Requested Meetings  N/A
   (indicate for whom, i.e., PTA, FMATS, etc.)
3. Location Hearing  N/A
4. Design Hearing  N/A

If the DOT&PF had a public hearing, please enclose minutes. When minutes are not available, please enclose a summary of the controversy to date regarding the project.

Please contact Kellen Spillman, FNSB Planner, at 459-1266 or kspillman@fnssb.us if you have any questions regarding completion of this application.
Chena Hot Springs Road MP 20
Jenny M. Creek Bridge Replacement

STATE OF ALASKA
Department of Transportation and Public Facilities

NORTHERN REGION
AUGUST 2016
DESIGN APPROVAL

CHENA HOT SPRINGS ROAD MP 20 JENNY M. CREEK BRIDGE REPLACEMENT

PROJECT NO. Z606360000/0650028

Requested by:  
Jeffery C. Orgaenek, P.E.
Engineering Manager
Northern Region

Design Approval Granted:  
Sarah E. Schacher, P.E.
Preconstruction Engineer
Northern Region

Distribution:  DSR Distribution Memo Recipients
Michael Cain, FHWA
Richard Pratt, Bridge Design
Kellen Spillman, Community Planning Deputy Director (FNSB)
Pete Kelly, State Senator (Fairbanks)
Dave Talerico, State Representative (Two Rivers)
Distribution List

By Internal E-mail:

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Sarah E. Schacher, P.E., Preconstruction Engineer
Francis Ganley, P.E., Construction Engineer
Judy Chapman, Planning Chief
Timothy J. Wooster, P.E., Design Group Chief
Albert M.L. Beck, P.E., Aviation Group Chief
Barry Hooper, P.E., PD&E Chief
Jason Sakalaskas, P.E., Acting Regional M&O Chief
Jeffery C. Organek, P.E., Engineering Manager
Martin D. Shurr, P.L.S, Right of Way Chief
Gail Gardner, P.E., Regional Utilities Engineer
Cora Shook, ROW Agent IV, ROW Neg. Supervisor
Kahlil A Wilson, ROW Agent III, Material Site Coordinator
Brett Nelson, Regional Environmental Manager
Jeff Currey, P.E., Regional Materials Engineer
Steve McGroarty, P.E., Geotechnical Engineer
Kevin Maxwell, Regional Geologist
Jeff Stutzke, P.E., Regional Hydraulics Engineer
Pam Golden, P.E., Regional Traffic & Safety Engineer
Lance D. Mearig, P.E., Chief Engineer
Richard Pratt, P.E., Chief Bridge Engineer

By External E-mail:

Jacquie Braden, Civil Rights & Compliance Spec
Dennis Bishop, M&O Foreman
Michael Cain, FHWA
Richard Pratt, Bridge Design
Kellen Spillman, Community Planning Deputy Director (FNSB)
Pete Kelly, State Senator (Fairbanks)
Dave Talerico, State Representative (Two Rivers)

Paper Copy:

Barbara L. Tanner, P.E., Chief of Contracts & LPA Design

Approval Sheet Paper Copy:

Shelley Dykema, Project Control Chief
DESIGN STUDY REPORT FOR

CHENA HOT SPRINGS ROAD MP 20 JENNY M. CREEK BRIDGE REPLACEMENT

PROJECT NO. Z606360000/0650028

PREPARED BY: Thomas C. Hughes

UNDER THE SUPERVISION OF: Jeffery C. Organek, P.E.

ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION DESIGN AND ENGINEERING SERVICES
AUGUST 2016
CHENA HOT SPRINGS ROAD MP 20 JENNY M. CREEK BRIDGE REPLACEMENT
PROJECT NO: Z606360000/0650028

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INTRODUCTION/HISTORY

The Alaska Department of Transportation & Public Facilities (ADOT&PF), in cooperation with the Alaska Division Office of the Federal Highway Administration (FHWA), is proposing to replace the Jenny M. Creek Bridge (#0312), near milepost (MP) 20 of the Chena Hot Springs Road.

The existing 63-feet long by 33.5-feet wide bridge, built in 1965, is structurally deficient due to the substructure being in poor condition. The slopes at both ends of the bridge have been moving towards the stream and pushing on the lower portions of the abutments. The slope movement and resulting pressure caused from the movement has resulted in significant damage to the west end of the bridge in particular.

Damage includes:
- Abutment cap beam cracks.
- Several of the bearing anchor bolts connecting the girders to the abutments are sheared off.
- Girder ends are digging into the reinforced concrete abutment backwall. The bottom flanges of the girders are buckling upwards as the girders are being compressed between the abutments.
- Approach and transition railings are undermined and misaligned.

Based upon the 2014 bridge inspection report, the bridge has a sufficiency rating of 48 on a scale of 0 to 99 (Worst to best). Also, the substructure has a condition rating of 4 on a scale of 0 to 9 (Worst to best).

Figure 1
PROJECT DESCRIPTION

The existing bridge will be replaced with a 124-foot long by 37-foot wide concrete decked bulb-tee girder bridge. The new bridge will be lengthened to move the abutments away from the poor soil conditions. The ground conditions will be evaluated by foundation and geotechnical engineers to define soil properties. The extra bridge width will accommodate current highway design standards and provide pedestrian access over the bridge. The longer bridge will increase hydraulic capacity under the bridge.

There is a multipurpose trail located inside the ROW adjacent to the old bridge on the downstream side that accommodates general traffic such as: dog teams, snow machines, 4-wheelers, pedestrians, etc. The old multipurpose trail will be temporarily removed to construct a traffic diversion during the construction of the new bridge. Once the new bridge is constructed and the traffic diversion removed, a new multipurpose trail will be built to current standards.

This project addresses structural deficiencies of the old bridge by replacing the entire structure, with a longer, wider bridge that meets current design standards. In addition, approximately 600 feet of roadway will be reconstructed on the east and west transitions into the bridge.

The total project length is approximately 0.3 miles.

Figure 2
DESIGN STANDARDS

The design standards followed for this project are:


The design criteria for this project are in Appendix A. This highway is classified as a Rural Major Collector road.

DESIGN EXCEPTIONS AND DESIGN WAIVERS

There are no design exceptions required for this project.

DESIGN ALTERNATIVES

No design alternatives have been considered since the environmental document.
PREFERRED DESIGN ALTERNATIVE

The preferred design alternative is to construct a new concrete deck bulb-tee girder bridge. In addition to being a proven economical bridge type that requires little maintenance, it has proven to be a very durable structure. The new bridge design is a common structure type that has been successfully constructed throughout the state.

Maintaining this configuration accomplishes the following goals:

- Use of concrete deck bulb-tee girder bridge is consistent with simplifying and standardizing bridge crossings within the state, thereby easing construction and maintenance.
- Improves roadway geometrics to exceed requirements for a 55-mph design speed, by widening the shoulders to meet current standards.

Refer to “Horizontal & Vertical Alignment” for additional roadway geometrics discussion.

3R ANALYSIS

Not applicable. This is a reconstruction project.

TRAFFIC ANALYSIS

Chena Hot Springs Road is designated as a Rural Major Collector. Present year (2015) ADT was 1800 vehicles per day, and is projected to be 2265 vehicles per day in the design year (2038). This project will provide additional paved shoulder width along with a substantial pavement section that will to accommodate the projected traffic volumes in the design year. Refer to “Typical Section” and Appendix A for additional information.

HORIZONTAL/VERTICAL ALIGNMENT

The preliminary Plan & Profile sheets for this project are located in Appendix D. The horizontal and vertical geometry is designed to recommended standards for a 55 MPH design speed.

The horizontal alignment along Chena Hot Springs Road will follow the existing alignment. The maximum vertical alignment grade will be 2.6% on the new bridge, which is below the maximum bridge design grade of 4% for rolling terrain. The grade in the transition section going east will be at 3.6%. There will be a 2-foot vertical alignment grade raise at the abutments, this will accommodate the taller bridge girders while maintaining the proper clearances under the new bridge.
TYPICAL SECTION(S)

The proposed typical sections for the project are described below.

- **Bridge Section** — The new bridge deck will have 12-foot lanes with 5-foot shoulders with a 4-inch layer of HMA and a 2% cross slope. The bridge section is shown in Figure 3.

Figure 3
- **Guardrail Section** – The guardrail sections east and west of the new bridge will have 12-foot lanes with 5-foot shoulders and 2-foot for guardrail, a 2% cross slope and 2:1 side slopes. The guardrail section road layers will consist of a 2-inch layer of HMA over 3-inch of ATB, on 8-inch layer of Subbase, Grading F and a 24-inch layer of Select Material, Type A. There will be a 12-foot wide multipurpose use trail on the downstream side of the bridge to accommodate general traffic such as: dog teams, snow machines, 4-wheelers, pedestrians, etc. Guardrail will transition into the new bridge from the east and west directions. A temporary traffic diversion will be located downstream of the new bridge. The traffic diversion will be demolished after construction of the new bridge is complete. The guardrail section is shown in Figure 4.

![Guardrail Section Diagram](image)

*Figure 4*
**Transition Section** – The transition section connects the existing road section with the guardrail section. The shoulder width over the first 100 feet will vary between 4 feet at the existing road section and 5 feet at the beginning of the transition section. The remainder of this region will be defined with 12-foot lanes with 5-foot shoulders, a 2% cross slope and 4:1 side slopes. There will be a 12-foot wide multipurpose use trail on the downstream side of the new bridge to accommodate general traffic such as: dog teams, snow machines, 4-wheelers, pedestrians, etc. This sections road layers will consist of a 2-inch layer of HMA over a 3-inch layer of ATB, an 8-inch layer of Subbase, Grading F and on 24-inch layer of Select Material, Type A. There will be a clear zone distance of 28 feet on both sides of the road. A temporary traffic diversion will be located downstream of the new bridge. The traffic diversion will be demolished after construction of the new bridge is complete. The transition section is shown in Figure 5.

![Transition Section Diagram](image)

Figure 5
PAVEMENT DESIGN

The selected pavement design was developed using the Alaska Flexible Pavement Manual and associated software. The preliminary pavement design was based on General Policy-6 which requires a minimum of one layer of binder course, stabilized base, and a 15-year design life. General Policy-10 requires a minimum 2 inches of asphalt concrete thickness. The pavement design was analyzed using the mechanistic design method. Refer to Typical Sections and Appendix C for additional information.

PRELIMINARY BRIDGE LAYOUT

This project will replace the existing Jenny M. Creek Bridge with a new 124 foot long by 37 foot wide concrete decked bulb-tee girder bridge. See Appendix E for the preliminary bridge plans.

RIGHT-OF-WAY REQUIREMENTS

The existing right-of-way is 100-feet wide on each side of the existing centerline of Chena Hot Springs Road. The proposed project footprint is expected to stay within the existing right-of-way. Temporary Construction Permits and/or easements are not expected.

MAINTENANCE CONSIDERATIONS

Maintenance personnel have not reported extraordinary issues requiring special maintenance considerations for this project. Maintenance personal have reported that there has been occasional aufeis issues contributing to the damage of the abutments. The project will install rip rap and widen the channel below the bridge, which will reduce the risk of damage to the new abutments from future aufeis events.

The project will widen the existing paved shoulders by 2 feet, increasing the required maintenance area by approximately 0.03 lane miles. There are no known culverts requiring thaw pipes. Snow drifting is not expected to be an issue in this location due to adjacent tree cover and the relatively tall road embankment.

The new bridge will replace a structurally deficient old bridge with abutment damage, and is therefore expected to minimize short and medium term maintenance needs for the crossing.

MATERIAL SOURCES

All material sites will be contractor furnished.

UTILITY RELOCATION & COORDINATION

Existing power and phone lines are located 100-feet from centerline, near the edge of right-of-way limits. There are no utilities that will be adversely affected.

ACCESS CONTROL FEATURES

Access control will not be modified with this project.
PEDESTRIAN/BICYCLE (ADA) PROVISIONS

This project will provide 5-foot shoulders within the area of improvements. This shoulder width is sufficient to accommodate pedestrian and bicycle traffic. The new multipurpose trail will serve non-motorized or motorized off-road uses and will be improved.

SAFETY IMPROVEMENTS

Safety improvements from this project include:

- Shoulder widening will provide more space for bicyclists and pedestrians.
- Upgrade guardrails and bridge rails to modern, crash tested hardware.

INTELLIGENT TRANSPORTATION SYSTEM FEATURES

There are no intelligent transportation system features within the project limits.

DRAINAGE

The majority of the roadway within the project limit is elevated 5 to 10 feet above existing terrain, with the exception of Jenny M. Creek Bridge which is elevated approximately 10 feet above the creek bottom. Jenny M. Creek is the lowest point within the project area, and water generally flows towards the creek and ultimately to the Chena River. Jenny M. Creek has been identified by the Department of Fish and Game (DFG) to likely support resident fish, but has not been identified as an anadromous fish habitat. With implementation of DFG Fish Habitat Permit provisions, no adverse effect to resident or anadromous fish is expected.

There are no known drainage issues in the area. Maintenance personnel are unaware of any occasions where the ice buildup has posed significant concern to safety or property. The new bridge section will improve the hydraulic capacity of the structure as well as provide additional storage for ice buildup. Riprap revetments will be constructed along the abutment slopes as needed to protect the stream and crossing from future erosion.

The proposed improvements will occur within a FEMA mapped 100-year floodplain. A location Hydraulics study has been performed, and the improvements are not expected to impact the 100-year flood elevation.

According to the Western Regional Climate Center website, the average total precipitation in Two Rivers, Alaska is 15.11 inches, and average snow depth is 8 inches.

SOIL CONDITIONS

The project is located in the Yukon-Tanana Upland physiographic section of Alaska. The terrain is typified by low mountains, plateaus, and highlands with summits from 1000 to 5000 feet above sea level. The most common natural foundation soil on the project is wind-blown silt generally located on the higher slopes of the rounded hills. The soils in the vicinity of the project limits consist of silt soils that are generally frozen at depth, but have little or no visible ice around the surface and usually perform relatively well as road foundation.

Drilling for a soils investigation is scheduled for the summer of 2016. This investigation will help to further classify the soils and to finalize the geotechnical recommendations for the project.
EROSION AND SEDIMENT CONTROL

The area of ground disturbance for this project is approximately 4 acres. A Storm Water Pollution Prevention Plan will be required. Approximately ¼ acre of wetland impacts are anticipated. Currently the project area is vegetated with spruce, birch, willows, and alders.

The proposed Chena Hot Springs Road embankment will require temporary and permanent erosion and sediment control measures. Throughout the project, ground disturbance will be minimized and existing vegetation will be preserved wherever it is practical.

Temporary erosion control measures may include, but are not limited to: temporary seeding, erosion control mats, watering and/or chemical stabilization for dust control, velocity control BMP’s, and perimeter controls. Perimeter controls will be installed at the toe of slopes and disturbed areas within the project limits to prevent excessive sedimentation to down-slope vegetation and water bodies. The preferred perimeter protection method in the project area will be vegetated buffer. Given the excavation required in the vicinity of Jenny M. Creek, special care may be needed to avoid excessive sedimentation into the creek. BMP’s may include erosion control blankets, diversions berms, wattles and other measures. Seeding of finished slopes may be difficult due to the size of the slopes and lack of sunlight. Use of organic overburden and/or long term erosion control blankets will be investigated to assist in establishing vegetative cover.

All disturbed ground will be seeded or covered with riprap or ditch lining for permanent stabilization.

ENVIRONMENTAL COMMITMENTS
The following are the environmental commitments from the environmental document approved 4/27/16.

- The project would comply with all water-related and fisheries-related permit conditions such that substantial adverse effects to fisheries and waters do not occur.
- The design of the new bridge would be coordinated with the Department of Fish & Game so that it would adequately accommodate fish passage, as needed.
- Practicable measures would be implemented to minimize the introduction or spread of noxious weeds.
- Best management practices would be implemented during construction to minimize detachment and transport of sediment beyond the construction site. As necessary, in compliance with the APDES General Permit for Construction Activities, the construction contractor would issue a Notice of Intent to the ADEC for storm water discharges.
- Sufficient notice would be provided to highway users of traffic diversions and delays.
- Watering ground disturbed areas during construction would be implemented as needed to minimize air quality impacts.
- The contractor would be required to develop a Hazardous Materials Control Plan to address containment, cleanup, and disposal of all construction related discharges of petroleum fuels, oils, and/or other hazardous substances. Wastes generated during construction would be properly handled, contained, and disposed at an appropriately permitted disposal facility, in accordance with State and Federal laws.
- If applicable, the project would comply with any local noise ordinance or a variance obtained.
- Permit provisions related to any necessary diversion/dewatering would be followed.
The following permits and authorizations are required:

1. Army Corps of Engineers (USACE), Section 404/10 (NWP 14)
2. Alaska Department of Fish & Game (ADF&G) Fish Habitat Permit
3. Flood Hazard Permit
4. ADEC 401 Water Quality Certification
5. ADEC National Pollutant Discharge Elimination System Permit

WORK ZONE TRAFFIC CONTROL

This project is not considered significant for traffic control per DOT&PF’s Policy and Procedure 05.05.015. Chena Hot Springs Road is not in a Transportation Management Area, the AADT is less than 30,000 vehicles per day, and it is not expected to fully close the highway for more than one hour at a time.

A temporary traffic diversion is expected to be used.

A generalized construction/demolition sequence may consist of:

1. Construct the traffic diversion on the downstream side of the new bridge.
2. Divert traffic to the temporary traffic diversion.
3. Remove old bridge.
4. Construct the new bridge and roadway.
5. Move traffic to the new bridge.
6. Remove the traffic diversion.

VALUE ENGINEERING

A value engineering study will not be prepared for this project. The road in this project is not on the National Highway System and the total estimated project cost (all phases) is less than $40 million. This is in compliance with P&P 05.01.030 dated April 12, 2013.

COST ESTIMATE

The estimated costs for this project are as follows:

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<th>Cost</th>
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<td>Total Cost of Project</td>
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APPENDIX A

DESIGN CRITERIA
AND
DESIGN DESIGNATION
| **Project Name:** Chena Hot Springs Road MP 20 Jenny M. Creek Bridge Replacement  |
| Project Number: Z606360000/0650(028)  |
| Functional Classification: Major Collector  |
| Design Year: 2038  |
| Design Year ADT: 2265  |
| OHV: 11.40%  |
| Percent Trucks: 8.00%  |
| Pavement Design Year: 2032  |
| Terrain: Rolling  |
| Design Speed: 55 mph  |
| Width of Travelled Way: 11 ft (PCM Table 1130-6)  |
| Width of Shoulders: Outside: 6 ft (PCM Table 1130-6) Inside: N/A  |
| Cross Slope: 2%  |
| Super-elevation Rate: 8%  |
| Minimum Radius of Curvature: 1065 ft (PCM Table 1120-1 & GB Ex 3-22)  |
| Maximum Allowable Grade: 7% (PCM Table 1120-1)  |
| Minimum Allowable Grade: 0%  |
| Stopping Sight Distance: 495 ft (PCM Table 1120-1 & GB Ex 9-55)  |
| Lateral Offset to Obstruction: 5 ft  |
| Vertical Clearance: 16 ft - 6 in (PCM Table 1130-1)  |
| Bridge Width: Approach roadway (width) (GB Ex 6-5)  |
| Bridge Structural Capacity: HL-93 (Bridge Design)  |
| Passing Sight Distance: 1985 ft (PCM Table 1120-1 & GB Ex 3-7)  |
| Surface Treatment: TWM: HMA Shoulders: HMA  |
| Side Slope Ratios: Fore: 4:1 Back: 2:1  |
| Degree of Access Control: N/A  |
| Median Treatment: N/A  |
| Illumination: N/A  |
| Curb Usage and Type: N/A  |
| Bicycle Provisions: 5 ft shoulder on bridge and 5 ft on road provided  |
| Pedestrian Provisions: 5 ft shoulder on bridge and 5 ft on road provided  |
| Misc. Criteria: N/A  |

**Proposed - Designer/Consultant:**

**Endorsed - Engineering Manager:**

**Approved - Preconstruction Engineer:**

Shaded criteria are commonly referred to as the FHWA 13 controlling criteria. For NHS routes only, these criteria must meet the minimums established in the Green Book (AASHTO A Policy on Geometric Design of Highways and Streets). For all other routes, these criteria must meet the minimums established in the Alaska Highway Preconstruction Manual. Otherwise a Design Exception must be approved.

*Design Criteria marked with a "#" do not meet minimums and must have a Design Exception(s) and/or Design Waiver(s) approved. See the Design Study Report for Design Exceptions/Design Waiver approval(s) and approved design criteria values.*
MEMORANDUM

TO: Ryan F. Anderson, P.E., Preconstruction Engineer
    Northern Region

FROM: Judy Chapman
    Planning Chief
    Northern Region

DATE: May 24, 2016

FILE NO: 1\Traffic Data\DESIGN\2015\CHSRMP20_60636.doc

TELEPHONE NO: 451-5150

SUBJECT: Chena Hot Springs Rd MP 20
          Jenny M Creek Bridge Replacement
          Z606360000/0650(028)
          Design Designation

Please approve the attached design designation by signing the endorsement below which enables your staff to proceed.

Any questions should be directed to Scott Vockeroth at 451-2251.

Ryan F. Anderson, P.E., Preconstruction Engineer

Date

cc: Jeffery C. Organeck, P.E., Engineering Manager, Northern Region

Attachment
### DESIGN DESIGNATION
Northern Region Planning
Traffic Data & Forecasting

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<td>URBAN/RURAL:</td>
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**ESAL'S (Design Lane)**
To Be Provided by Design
MEMORANDUM

TO: Judy Chapman, Planning Chief, Northern Region

THRU: Ryan F. Anderson, P.E., Preconstruction Engineer, Northern Region

FROM: Jeffery C. Organek, P.E., Engineering Manager, Northern Region

State of Alaska
Department of Transportation & Public Facilities
Northern Region Design and Engineering Services

DATE: May 17, 2016

FILE NO.: P:\Projects\Hikna\MP6936 CHSR MP 20 Jenny M Creek Bridge\Change 1
PHONE NO.: 541-2274
FAX NO.: 451-5126

SUBJECT: Chena Hot Springs RD MP 20
Jenny M Creek Bridge Replacement
Z606360000/0650(028)
Design Designation Request

Please provide a Design Designation for the subject project.

☑ Present AADT
☑ Design Year AADT (2038)
☑ Mid-Design Period AADT (2028)
☑ Design Hourly Volume
☑ Directional Split
☑ Percent Trucks
☑ Design Functional Classification
☐ Intersection Turning Movement Counts at;
☐ Other (Specify)

The project is scheduled for construction in FY2018.

Please complete the attached Traffic Data Request Form.

Attachment: as stated

"Keep Alaska Moving through service and infrastructure."

63
**Traffic Data Request Form**

**Alaska Department of Transportation & Public Facilities**

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<th>Jeff Organek</th>
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<td>AADT Growth Rate Forward (%/yr):</td>
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<td>Begin Year:</td>
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<td>5/19/2016</td>
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<td>Historic M.P. Interval:</td>
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<td>CDS Route Name:</td>
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<td>CDS M.P. Interval:</td>
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### Lane Configuration Sketch:
(Designer: Provide sketch of lane layout. Number each lane and show directions.)

![Sketch of lane configuration]

### Percent of Base Year Total AADT for Each Numbered Lane in Configuration Sketch:

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**Figure 6.1. Traffic Data Request (TDR) Form**

---

Effective 4/01/04

6-3 Alaska Flexible Pavement Design Manual

64
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**Computations and Historic Data**

**Project:** Chena Hot Springs Rd MP 20  
**Project #:** 60636

### Historic AADT

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Growth rate for calculations was 1.00% due to historic traffic patterns and previous design designations.

**Growth Rate Factors**

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### Future AADTs

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**K-factor:** 11.60%

**DHV:**

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**Direction Split:** 40-60

### Class Data

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**Load Factors:**

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</table>
APPENDIX B

ENVIRONMENTAL DOCUMENT
VIII. Environmental Documentation Approval Signatures

Prepared by: Thomas Benjamin
[Sign] Environmental Impact Analyst
[Print Name] Environmental Impact Analyst

Reviewed by: Jeffrey C. Organek
[Sign] Engineering Manager
[Print Name] Engineering Manager

Approved by: Brett Nelson
[Sign] Regional Environmental Manager
[Print Name] Regional Environmental Manager

Assigned CE
Approved by: [Sign] DOT&PF Statewide NEPA Manager
[Print Name] DOT&PF Statewide NEPA Manager

Non-Assigned CE
Approved by: [Sign] FHWA Area Engineer
[Print Name] FHWA Area Engineer

Date: 4-27-16

Date: 4-27-16

Date: 4-27-16

Date:
APPENDIX C

PAVEMENT DESIGN
### Traffic Data for Design and Historic ESALs

#### Design Data Input

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#### Historic Data Input

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<th>Lane</th>
<th>%</th>
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#### Truck Category

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#### TOTAL DESIGN ESALs: 300,610

#### TOTAL HISTORIC ESALs: -

### Construction Year ESAL Calculations

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Total Construction Year ESALs: 18,675

### Historic Construction Year ESAL Calculations

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Total Historic Construction Year ESALs: 0

CLICK HERE FOR MORE INFORMATION ON ESAL CALCULATIONS
APPENDIX D

PRELIMINARY PLAN AND PROFILE SHEETS
APPENDIX E

PRELIMINARY BRIDGE PLANS
DEPARTMENT OF COMMUNITY PLANNING
STAFF REPORT
CU2017-004
October 11, 2016 Planning Commission Meeting

TO: Fairbanks North Star Borough Planning Commission

FROM: Manish Singh, Planner II

DATE: September 27, 2016

RE: CU2017-004: A request by Koma Fenton, AlasConnect, Inc. on behalf of John and Mariagrace Adams for conditional use approval of a 52-foot communications tower, minor in the Rural Estate 2 (RE-2) zone on Parcel #2 of the plat labeled 'The Partition of the Property of Frank and Sue Ellen Therrell' in the NW1/4 of the NW1/4 of Section 29, T1S R2W, F.M. (located at 1345 N Becker Ridge Road, on the west side of N Becker Ridge Road, west of Chena Ridge Road).

I. EXECUTIVE SUMMARY

The Department of Community Planning recommends APPROVAL of the conditional use request with seven (7) conditions of approval and three (3) Findings of Fact in support of approval. The staff analysis finds that the communications tower, minor, with proposed conditions, will meet the intent and purpose of Title 18 and of other ordinances and state statutes, will have adequate public services and will protect public health, safety and welfare.

II. GENERAL INFORMATION

A. Purpose To allow a 52-foot communications tower, minor in the RE-2 zone

B. Location On the west side of N Becker Ridge Road, west of Chena Ridge Road

C. Access N Becker Ridge Road

D. Size/PAN Sq.ft. PAN
80,150 0480151

E. Existing Zone Rural Estate 2 (RE-2)

F. Existing Land Use Single-Family Residence Communications Tower, Minor

G. Surrounding Land Use/Zoning Zoning: RE-2, Land Use: Residential

H. Community Facilities Water and Sewer: Private Electricity: GVEA

I. Code Violations None on file
III. ZONING AND DEVELOPMENT HISTORY

The subject property was rezoned from UU to RE with the adoption of Ord. No. 70-42 on November 25, 1970. The zoning on the subject property changed from RE to RE-2 when Ord. 88-010 came in effect on April 25, 1988. Parcel #2 was created with the recording of a plat labeled ‘The Partition of the Property of Frank and Sue Ellen Therrell’ in the NW1/4 of the NW1/4 of Section 29, T1S R2W, F.M. on May 05, 1974 (Exhibit 1). The property currently contains a single-family residence. FNSB Assessor’s database shows that the construction of the existing single-family dwelling was completed in 1977.

A 52-foot communications tower, minor requires a conditional use permit in RE-2 zone [FNSBC18.36.020 (B)]. AlasConnect, Inc. (ACW) requests a conditional use permit for a proposed tower to provide internet service to the potential customers in the neighborhood.

IV. APPLICABLE APPROVAL CRITERIA

Conditional Uses are governed by the following provisions of Title 18, Fairbanks North Star Borough Code of Ordinances:

18.104.050 (C) Hearing and Decision by the Planning Commission

The planning commission shall review, hear and decide whether or not to approve a request for a conditional use. The planning commission shall also consider and adopt findings in each of the following:

1. Whether or not the proposed conditional use conforms to the intent and purpose of this title and of other ordinances and state statutes;

2. Whether or not there are adequate existing sewage capacities, transportation facilities, energy and water supplies, and other public services to serve the proposed conditional use;
3. Whether or not the proposed conditional use will protect the public health, safety and welfare.

The planning commission may approve or deny a conditional use request or may approve a conditional use request with conditions to ensure the protection of the public health, safety and welfare. Such conditions may relate to any, or more, of the following: traffic flow and access requirements, lighting, pedestrian movements, time limits for commencing or ceasing use.

Communications Towers are also governed by the provisions of Title 18, Standards for communications towers:

18.96.160 (C) (2) Approval Criteria

The planning commission shall approve, approve with conditions or deny a permit under this section after considering all of the following criteria:

a. Location and Visual Impact. The proposed communications tower, antenna or accessory structure will be placed in a reasonably available location which will minimize the visual impact on the surrounding area and allow the facility to function in accordance with minimum standards imposed by the applicable communications regulations and applicant's technical design requirements. Conditions may be imposed, including camouflage, screening, vegetative buffers and/or site requirements, to ensure this criteria is met.

b. Inability to Locate on an Existing Structure. A permit should not be issued unless a proposed antenna and equipment cannot be accommodated and function as required by applicable regulations and applicant's technical requirements without unreasonable modifications on any existing structure or tower under control of the applicant.

c. Necessity for Location in a Residential Neighborhood. A permit should not be issued in a residential neighborhood unless the area cannot be adequately served by a facility placed in a nonresidential area for valid technical reasons. Conditions may be imposed to lessen the impact of a communications tower on a residential neighborhood, including limitations on times for maintenance work to be performed, number of vehicles present, yard maintenance, and similar requirements.

d. Design for Future Use. A new tower must be designed to accommodate additional antennas equal in number to the applicant's present and reasonably foreseeable future requirements.

e. Collocation. A permit shall be conditioned to require the applicant to make the tower available for use by as many other licensed carriers as can be technically collocated thereon when the use will not result in substantial injury to the owner, or in substantial detriment to the service to the customers of the owners. All licensed carriers shall cooperate with each other in collocating additional facilities upon such towers. All licensed carriers shall exercise good faith in collocating with other licensed carriers and in the sharing of towers, including the sharing of technical information to evaluate the feasibility of collocation.
f. Illumination. A communications tower may not be illuminated unless otherwise required by state or federal law or regulations or unless evidence has been presented that lighting is necessary to ensure the safety of the public. To prevent direct light reflection on other property, tower structure lighting shall be shielded to the extent permitted by the Federal Aviation Administration.

g. Distance from Existing Tower. A permit for a proposed tower within 1,000 feet of an existing tower shall not be issued unless the applicant certifies that the existing tower does not meet the applicant’s structural specifications and the applicant’s technical design requirements, or that a collocation agreement could not be obtained.

h. Yard Requirements. Yards shall be a distance equal to 50 percent or greater of the height of the tower from a lot line. The planning commission may modify this requirement if the tower and equipment will be adequately screened to mitigate its visual impact and no safety hazards are presented.

i. Height. The permitted height of a proposed tower shall be the minimum required to meet the applicant’s technical needs and will consider the impact on the surrounding uses.

j. Zoning District Standards. Nothing in this section alters the requirements for visibility, fencing, screening, landscaping, parking, access, lot size, exterior illumination, sign, storage, or other general zoning district regulations, except yard and height requirements, of any specific zone. Yard and height requirements in this section shall apply.

k. Design Drawings and Specifications. A permit shall be conditioned to require the applicant to submit design drawings and specifications stamped by a registered professional in the state of Alaska certifying compliance with the building code of the authority having jurisdiction.

l. Compliance with Other Laws. A proposed tower must comply with all local, state, and federal laws.

Public Notice

There were 71 dear property owner notices mailed out and the staff did not receive any inquiries about this conditional use.

V. STAFF ANALYSIS

A. Development and Use

This application requests a conditional use permit use approval for a proposed communications tower, minor, which is defined in FNSBC 18.04.010 as “any tower, pole, or similar guyed or fixed structure that supports a communications antenna which does not exceed the greater of 60 feet in height from adjacent ground level or 30 feet above the roof of any building atop which the tower may be constructed. Antennas which are directly attached to building facades and do not extend above the established roof line are exempt from this title. A minor communications tower is not a principal building under this title.”
The proposed tower would be a wood utility pole with seven wireless antennas. The wood utility pole is 52 feet above ground level and 8 feet below ground level (Figure 2).

**Figure 2: Tower Design**  
(Source: Applicant)

---

**B. Zoning, Land Use and Comprehensive Plan Designation**

**Figure 3** shows that all of the surrounding parcels are zoned RE-2. The parcel also has Outdoor Recreational (OR) zone toward west. A 52-foot communications tower, minor is a conditional use permit in RE-2 zone [FNSBC18.36.020 (B)]. The neighboring properties are primarily used for residential purposes.

The comprehensive plan designation for the subject parcel is “Perimeter Area”. It is defined as “Area generally within a 10 to 20 minute travel time of urban destinations, and which contains primarily residential use; variable densities are encouraged providing they are compatible with the surrounding community, sensitive to natural systems and have adequate water and sewer facilities.” The proposed conditional use conforms to the comprehensive plan designation to the parcel because it provides internet service to a primarily residential neighborhood. The application material and the narrative for this proposal align with Transportation and Infrastructure Goal 2, Strategy 6 of FNSB Regional Comprehensive Plan, which is to develop appropriate infrastructure that supports all land use categories. The tower is intended to provide internet service to the residential neighborhood which is currently underserved by internet service providers including ACW.
Applicant has mentioned that apart from ACW, ACS also provides internet to certain other residents in this area.

**Figure 3: Zoning Map**  
(Source: FNSB GIS)

![Zoning Map](image)

### C. Agency Comments

The FNSB Department of Community Planning contacted following agencies for comments:

- a. State of Alaska Department of Public Safety, Division of Fire and Life Safety
- b. Chena Goldstream Fire Service Area
- c. State of Alaska Troopers
- d. State of Alaska Department of Transportation (ADOT)
- e. FNSB Emergency Operations
- f. State of Alaska Department of Natural Resources (ADNR)
- g. State of Alaska Department of Environmental Conservation (ADEC)
- h. Golden Valley Electric Association (GVEA)

All written comments are included in the “Agency Comments” section following this report.
D. 18.96.160 (C) (2) Approval Criteria

a. Location and Visual Impact. The proposed communications tower, antenna or accessory structure will be placed in a reasonably available location which will minimize the visual impact on the surrounding area and allow the facility to function in accordance with minimum standards imposed by the applicable communications regulations and applicant's technical design requirements. Conditions may be imposed, including camouflage, screening, vegetative buffers and/or site requirements, to ensure this criteria is met.

The design of the communications tower, minor includes a wooden utility pole with 7 wireless antennas at the top. The total height of the wooden pole with all antennas and equipment is 52 feet above ground level. The tower is positioned on the south side of the property on the higher ground and near surrounding trees to be least intrusive and blend into the landscape. The tower has all equipment, cabling and other components attached to the pole and it does not require a separate structure or fencing at the bottom of the tower. The structure and design of the tower makes its appearance very similar to similar GVEA power poles in the neighborhood. The main visual difference is that the existing tower has slim antennas at the top of it, while GVEA power poles have a large cross arm at the top for holding wires, with many also having transformers near the top of the poles. ACW has already received two conditional use permits for existing towers on Nautilus Drive (CU2017-001) and Alderwood Drive (CU2016-017). The proposed tower on N Becker Ridge Road would have a similar visual appearance (Figure 4 & 5).

Figure 4: Similar existing ACW tower at 645 Nautilus Drive (CU2016-017)
(Source: Staff)
The application material includes a visual impact analysis (Exhibit 2). It shows the proposed tower visually screened and camouflaged by existing trees and houses in three photographs taken from around 500 feet distances on south, west and southwest sides. The location and design of the tower in conjunction with the existing vegetation and topography on the site and in the surrounding area minimizes the visual impact of the tower to the neighboring property owners. Therefore, Community Planning staff recommends a condition to retain existing vegetation on the property to maintain the current minimal visual impact resulting from the existing trees and vegetation on site and which helps visually screen the tower. Community Planning staff also recommends that the structure of the tower remain a wooden utility pole to appear similar to other GVEA power poles in the area.

b. Inability to Locate on an Existing Structure. A permit should not be issued unless a proposed antenna and equipment cannot be accommodated and function as required by applicable regulations and applicant’s technical requirements without unreasonable modifications on any existing structure or tower under control of the applicant.
The subject area is currently underserved by Internet Service providers, including ACW. The tests conducted by ACW show that there isn’t enough signal penetrating into the area from their current broadcast locations because of the Line of Sight (LOS) requirement by the technology utilized. LOS is essential for an internet connection through ACW to be locked in, stable, and capable of passing high speed data at distances greater than half mile.

The applicant has provided a map showing their other towers in Fairbanks area (Exhibit 3). There are no existing communications towers located in the neighborhood or anywhere within half mile of the proposed tower location for collocation. Additionally, there are no existing alternate structures such as houses, power and telephone poles in the area meeting the technical requirements of the service technology utilized by ACW.

c. Necessity for Location in a Residential Neighborhood. A permit should not be issued in a residential neighborhood unless the area cannot be adequately served by a facility placed in a nonresidential area for valid technical reasons. Conditions may be imposed to lessen the impact of a communications tower on a residential neighborhood, including limitations on times for maintenance work to be performed, number of vehicles present, yard maintenance, and similar requirements.

The application materials state that there isn’t enough signal penetrating into this residential area from ACW’s current broadcast locations because of the Line of Sight (LOS) requirement by the technology utilized. The existing internet service coverage map provided by the applicant shows non-qualifying and zero signals (shown in red and no color in Exhibit 4) in the subject residential area from ACW’s existing Wilson tower broadcast site. Non-qualifying indicates that customers will experience unacceptable performance. The proposed internet service coverage map shows qualifying signal with the current tower location and height (shown in green in Exhibit 5). The applicant has provided a map of the potential customers which would be served by this tower after the conditional use approval (Exhibit 6).

The applicant’s narrative states that ACW strives to provide cost-effective internet service to interior residents of Alaska. ACW can serve small number of customers that other companies may chose not to serve due to the cost of providing that service to a low density of customers. ACW operates its residential internet service using unlicensed frequencies and a combination hardware that is fast and cost-effective. This equipment needs little or no routine maintenance after installation. However, it requires Line of Sight (LOS) to a repeater on another broadcast location and also requires closer proximity to the customers served.

ACW searched properties in the RE-2 zoned area because there are no non-residential properties in the surrounding area. The properties in the OR zone didn’t meet the LOS requirement. Although the tower is located in RE-2 zone, it has minimum negative impact on the residential neighborhood. By placing a 52-foot tower with LOS to the broadcast location, in conjunction with the smaller, lighter, and less expensive equipment used, ACW would be able to maintain this site without the use of cranes, contractors, or other large equipment which could be a potential nuisance in this residential area. Additionally, a 52-foot wooden pole in the RE-2 zone has much less visual impact compared to a lattice tower or monopole because those towers would be more visible than the current wooden utility pole. The current pole is screened by
existing trees and houses and blends with the surroundings and other power poles in the neighborhood. **Exhibit 7** shows the alternative site analysis provided by the applicant for the proposed conditional use. Alternate Sites 1, 2 and 3 were able to meet the LOS requirement but their respective property owners did not want the pole on their property. Alternate Site 4 failed due to the LOS requirement. The location of the existing tower was selected taking the LOS and other technical requirements, visual impact, maintenance and cost-effectiveness into account.

d. **Design for Future Use.** A new tower must be designed to accommodate additional antennas equal in number to the applicant’s present and reasonably foreseeable future requirements.

The application materials state that there is room for collocation beneath the ACW equipment (Figure 2). Additionally, the section of the pole to be utilized by ACW is only 42% of its capacity; allowing for expansion of ACW’s service.

e. **Collocation.** A permit shall be conditioned to require the applicant to make the tower available for use by as many other licensed carriers as can be technically collocated thereon when the use will not result in substantial injury to the owner, or in substantial detriment to the service to the customers of the owners. All licensed carriers shall cooperate with each other in collocating additional facilities upon such towers. All licensed carriers shall exercise good faith in collocating with other licensed carriers and in the sharing of towers, including the sharing of technical information to evaluate the feasibility of collocation.

The application materials state that there is room for collocation beneath the ACW equipment (Figure 2).

f. **Illumination.** A communications tower may not be illuminated unless otherwise required by state or federal law or regulations or unless evidence has been presented that lighting is necessary to ensure the safety of the public. To prevent direct light reflection on other property, tower structure lighting shall be shielded to the extent permitted by the Federal Aviation Administration.

The applicant has included a determination from FAA with the application. Per the FAA determination, the tower will not be illuminated.

g. **Distance from Existing Tower.** A permit for a proposed tower within 1,000 feet of an existing tower shall not be issued unless the applicant certifies that the existing tower does not meet the applicant’s structural specifications and the applicant’s technical design requirements, or that a collocation agreement could not be obtained.

The applicant has provided a map showing their other towers in Fairbanks area (Exhibit 3). There are no existing communications towers located in the neighborhood or anywhere within 1,000 feet of the proposed tower location for collocation. The nearest ACW tower on 1530 Alderwood Drive is approximately 2,500 feet away. Additionally, there are no existing alternate structures such as power, telephone poles, buildings or other structures in the area meeting the technical requirements of the service provided by ACW.
h. Yard Requirements. Yards shall be a distance equal to 50 percent or greater of the height of the tower from a lot line. The planning commission may modify this requirement if the tower and equipment will be adequately screened to mitigate its visual impact and no safety hazards are presented.

This application does not include a yard modification request. The site plan provided for the existing tower (Figure 6) shows the wooden pole located 33 feet from the south property line which is more than the 50% of the height of the tower; therefore, meeting the FNSBC 18.96.160 (C) (h) yard requirements from the south and all other property lines.

Figure 5: Site Plan
(Source: Applicant)

i. Height. The permitted height of a proposed tower shall be the minimum required to meet the applicant’s technical needs and will consider the impact on the surrounding uses.

The technology utilized by ACW requires Line of Sight (LOS) to a repeater at another broadcast location and also requires closer proximity to the customers served. The application materials state that the proposed 52-foot height is the minimum required to maintain the LOS to a repeater on another broadcast location. In order to determine the minimum height requirement for the site, ACW surveyed the area with an Unmanned Aerial Vehicle (UAV) to find the appropriate height to meet these requirements. Surveys were done at multiple potential sites in the subdivision at heights between 30’ and 100’.

Through these surveys, ACW found that the LOS requirement was achieved at 52’ at the existing location.
The 52-foot height minimizes the visual impact because at that height the tower blends with the surroundings and the other existing power poles in the area and it is screened with the existing trees and houses in the neighborhood. The application material includes a visual impact analysis (Exhibit 2). It shows the tower visually blocked by existing trees and houses in three photographs taken from around 500 feet distances on south, west and southwest sides.

**j. Zoning District Standards.** Nothing in this section alters the requirements for visibility, fencing, screening, landscaping, parking, access, lot size, exterior illumination, sign, storage, or other general zoning district regulations, except yard and height requirements, of any specific zone. Yard and height requirements in this section shall apply.

The proposed 52-foot tower meets all requirements of RE-2 zone including yard and height requirements.

**k. Design Drawings and Specifications.** A permit shall be conditioned to require the applicant to submit design drawings and specifications stamped by a registered professional in the state of Alaska certifying compliance with the building code of the authority having jurisdiction.

The application materials do not include stamped design drawings and specifications. Community Planning staff recommends a condition to require design drawings and specifications stamped by a registered professional in the state of Alaska.

**l. Compliance with Other Laws.** A proposed tower must comply with all local, state, and federal laws.

The application materials demonstrate that the tower operates on unlicensed frequencies and does not require an FCC license. The application includes a determination of no hazard from FAA. The tower is not within City of Fairbanks or City of North Pole limits and appears to be complying with all applicable local, state and federal laws. However, to ensure that compliance in future, Community Planning staff recommends a condition that the tower must comply with all local, state and federal laws.

E. 18.104.050 (C) Hearing and Decision by the Planning Commission

(1) **Whether or not the proposed conditional use conforms to the intent and purpose of this title and of other ordinances and state statutes;**

**Purpose of FNSBC Title 18:** The purpose of Title 18 is “to implement the Fairbanks North Star Borough comprehensive plan” (FNSBC 18.12.020). The application materials align with Transportation and Infrastructure Goal 2, Strategy 6 of FNSB Regional Comprehensive Plan, which is to develop appropriate infrastructure that supports all land use categories. It also aligns with Land Use Goal 4, Strategy 10, which is to attract and support development that is compatible with and enhances existing land use. The tower is intended to provide internet service to the residential neighborhood which is underserved by internet service providers.
Intent of FNSBC Title 18: The intent of Title 18 which is “to protect private property rights, to promote the public health, safety and general welfare of the residents of the borough, and safety from fire and to promote the efficient distribution of water, sewage, schools, parks and other public requirements; to provide safe traffic flow on the public streets; to promote economic development and the growth of private enterprise; and to divide the borough into districts (FNSBC 18.12.020).”

Allowing an owner to develop their private property is an example of protecting private property rights with local zoning regulations. This proposal is to develop the property with a 52-foot communications tower, minor which is a conditional use in RE-2 zone. This would allow the residents in the neighborhood to fully enjoy their property with internet service. All conditional uses for RE-2 zone are listed in Title 18 of FNSB Code. The public notification, public hearing procedures and approval criteria for conditional uses protect the property rights of the surrounding property owners.

With the conditions imposed, the application promotes the public health, safety and general welfare of the residents of the borough because the applicant has selected the location of the tower to be least obtrusive in the neighborhood while meeting their technical requirements. The location and design of the tower in conjunction with the existing vegetation on the site and in the surrounding area minimizes the visual impact of the tower to neighboring property owners. Additionally, the equipment utilized for ACW for this tower requires little or no maintenance after installation minimizing any disturbances to the neighbors. The proposed conditional use will have a safe traffic flow because the tower does not generate any additional trips and does not impede vehicular and pedestrian traffic on the surrounding roads. The application material and the narrative for this proposal demonstrates that it meets the intent of Title 18 because the communications tower protects property rights and with the conditions imposed, it would promote the public health, safety and general welfare of the residents of the borough.

Alaska State Statute and Other Ordinances: The application materials demonstrate that the tower operates on unlicensed frequencies and do not require an FCC license. The application includes a determination of no hazard from FAA. The tower is not within City of Fairbanks or City of North Pole limits and appears to comply with Alaska State Statutes and other ordinances.

(2) Whether or not there are adequate existing sewage capacities, transportation facilities, energy and water supplies, and other public services to serve the proposed conditional use;

The applicant has demonstrated that the proposed conditional use has adequate power supply from GVEA. The proposed conditional use does not require any water and sewage capacity for operation. The proposed conditional use is within Chena Goldstream Fire Service Area. The applicant has demonstrated that the proposed conditional use has adequate transportation facilities. The proposed tower will have a safe traffic flow because it is served by N Becker Ridge Road and Chena Ridge Road. The tower does not generate any additional trips and does not impede vehicular and pedestrian traffic on the surrounding roads. The applicant has mentioned that Matanuska Telephone Association (MTA), Alasconnect’s parent company and a registered public utility company would erect the wooden pole and the install antennas and equipment. MTA would use the public utility easement and the section line easement toward the west side of the property to access the tower location. This would
avoid cutting down trees for vehicular access which would have been required if the erection of the tower was to take place using the N Becker Ridge Road. After erection, the maintenance of the tower would be done using N Becker Ridge Road.

(3) **Whether or not the proposed conditional use will protect the public health, safety and welfare.**

With the conditions imposed, the application protects the public health, safety and general welfare of the residents of the borough because the proposed conditional use would provide internet service to the residential neighborhood that is currently underserved by internet service providers including ACW. The access to internet would not only allow residents connect to the world outside including accessing information pertinent to public health safety and welfare.

Additionally, the applicant has selected the location of the tower to be least obtrusive in the neighborhood. The location and design of the tower in conjunction with the existing vegetation on the site and in the surrounding area minimizes the visual impact of the tower to neighboring property owners. The wooden utility pole would be less obtrusive than a lattice tower or monopole. Additionally, the equipment utilized for ACW for this conditional use requires little or no maintenance after installation minimizing any disturbances to the residential neighborhood. The tower would not be illuminated and would not generate any other negative impacts to the neighboring property owners. The proposed conditional use will have a safe traffic flow because the tower does not generate any additional trips and does not impede vehicular and pedestrian traffic on the surrounding roads.

Although this conditional use approval is for a particular use of the said property, a change in the site plan or operation method or expansion may result in increased impacts or trigger a public health, safety and welfare concern which have not been analyzed as part of this conditional use permit. Therefore, Community Planning staff suggests a condition that if any modifications are made to the tower design, proposed location, site plan, or other required documents, the applicant shall submit revised documents to the FNSB Community Planning Department. If substantial modifications are made to these documents, an amendment to the conditional use permit may be required pursuant to FNSBC 18.104.050 (D).

VII. **RECOMMENDATION**

Based on the staff analysis, the Department of Community Planning recommends **APPROVAL** of the conditional use permit request for a 52-foot Communications Tower, Minor in the RE-2 zone with seven (7) conditions.

VIII. **CONDITIONS**

1. The applicant or holder of this conditional use permit shall comply with all applicable local, state, and federal laws.

2. The applicant or holder of this conditional use permit shall provide FNSB Community Planning Department a set of design drawings and specifications stamped by a registered professional in the state of Alaska.
3. All existing vegetation on the south side of the property, except that necessary to be removed for maintenance of the communications tower, shall be maintained on the property.

4. The support structure of the communications tower shall be a wooden utility pole to appear similar to other power poles in the neighborhood.

5. No shelter, ground equipment or other structures associated with the communications tower shall be added to the site unless appropriate land use approvals are obtained.

6. The communications tower shall not be illuminated.

7. If any modifications are made to the tower design, proposed location, site plan, or other FNSB required documents, the applicant or holder of this conditional use permit shall submit revised documents to the FNSB Community Planning Department. If substantial modifications are made to these documents or to the operation of the communications tower, an amendment to the conditional use permit may be required pursuant to FNSB 18.104.050 (D).

IX. FINDINGS OF FACT

The Department of Community Planning further recommends the following Findings of Fact in support of approval:

1. The proposed conditional use will conform to the intent and purpose of Title 18 and of other ordinances and state statutes because it will conform to Title 18 requirements as a conditional use in the RE-2 zone.
   a. The purpose of Title 18 will be met because the Comprehensive Plan Transportation and Infrastructure Goal 2 and Land Use Goal 4 are being enhanced with the development of this site as communications tower, minor.
   b. The intent of Title 18 will be met because with the conditions imposed, the conditional use will both protect private property rights and promote public health, safety, and welfare.
   c. The applicant has provided information sufficient to show they intend to meet all local, state, and federal laws.

2. There are adequate existing energy and transportation facilities serving the site and other public services are available to serve the proposed conditional use.
   a. The proposed conditional use does not need any water or sewer for operation.
   b. The site is within Chena Goldstream Fire Service Area.
   c. The site is currently connected to the GVEA grid which will provide sufficient energy supply for tower operation.
   d. The site is served by N Becker Ridge Road and Chena Ridge Road.
   e. Matanuska Telephone Association (MTA), Alasconnect’s parent company and a registered public utility company would erect the wooden pole and the install antennas and equipment using the public utility easement and the section line easement toward the west side of the property.
   f. The maintenance of the tower would be done using N Becker Ridge Road.
g. The tower does not generate any additional trips and does not impede vehicular
and pedestrian traffic on the surrounding roads.

3. With the conditions imposed, the proposed conditional use will protect public health,
safety, and welfare as the facility will comply with Title 18 standards for the RE-2 zone
(FNSBC 18.36) and Standards for communications towers (FNSBC 18.96.160) as well
as other federal, state and local requirements for a communications tower, minor.

a. The tower would serve residents in the neighborhood that are currently
underserved by internet service providers.
b. The visual impact analysis provided by the applicant shows the tower is visually
screened by existing trees and houses. The structure and design of the tower
makes its appearance very similar to other power poles in the neighborhood
minimizing the visual impact.
c. There are no existing communications towers located in the neighborhood or
anywhere within 1,000 feet of the proposed tower location for collocation. There
are no existing alternate structures such as power and telephone poles, buildings
and other structures in the area meeting the technical requirements of the service
provided by ACW.
d. The proposed location of tower in RE-2 zone meets the technical needs of Line
of Sight (LOS) required by the equipment utilized by ACW and the location of the
tower helps minimize the visual impact to the residential neighborhood.
e. The tower is designed to allow for future collocations.
f. The section of the pole utilized by ACW is only 42% of its capacity; allowing for
expansion of ACW’s service.
g. The tower is not illuminated.
h. The tower meets all requirements of RE-2 zone including yard and height
requirements. The tower is located 33 feet from the south property line which is
more than the 50% of the height of the tower; therefore, meeting the FNSBC
18.96.160 (C) (2) (h) yard requirements.
i. The 52 foot height is the minimum required to maintain the LOS to a repeater on
another broadcast location.
j. The tower operates on unlicensed frequencies and do not require an FCC
license.
k. The tower has a determination of no hazard from FAA.

DRAFT PLANNING COMMISSION MOTION:

I move to approve the Conditional Use Permit for the communications tower,
minor with seven (7) conditions, and adopting the staff report and three (3)
Findings of Fact in support of the approval.
Visual Impact - North View

Photo was taken from ~500' South of proposed site. Proposed site area is completely obstructed by trees.
Photo was taken from ~50' West of proposed structure obstructed by trees.
North-East View

Photo was taken from ~500ft South-West of proposed site. Proposed site area is completely obstructed by trees.
### Existing ACW Infrastructure

<table>
<thead>
<tr>
<th>Site#</th>
<th>Site Name</th>
<th>Site Type</th>
<th>Site Address</th>
<th>Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wilson</td>
<td>Tower</td>
<td>901 Bidwil Ave</td>
<td>Golden Valley Electric Association</td>
</tr>
<tr>
<td>2</td>
<td>Zehnder</td>
<td>Tower</td>
<td>758 Illinois St</td>
<td>Golden Valley Electric Association</td>
</tr>
<tr>
<td>3</td>
<td>Birch</td>
<td>Tower</td>
<td>1194 Beacon Rd</td>
<td>Fairbanks North Star Borough</td>
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<tr>
<td>4</td>
<td>Ester</td>
<td>Tower</td>
<td>3882 Ester Dome Rd</td>
<td>University of Alaska</td>
</tr>
<tr>
<td>5</td>
<td>Fort Wainwright</td>
<td>Tower</td>
<td>Alder Ave, Fort Wainwright</td>
<td>USA Land Management</td>
</tr>
<tr>
<td>6</td>
<td>Haystack</td>
<td>Pole</td>
<td>5830 Middle Fork Rd</td>
<td>Katheryn Mosley</td>
</tr>
<tr>
<td>7</td>
<td>Currant Court</td>
<td>Tower</td>
<td>1230 Blackberry Dr</td>
<td>Capstar Radio Operating Company</td>
</tr>
<tr>
<td>8</td>
<td>Poker Flats</td>
<td>Tower</td>
<td>30 Mile Steese Hwy</td>
<td>UAF Geophysical Institute</td>
</tr>
<tr>
<td>A</td>
<td>A-Frames</td>
<td>Pole</td>
<td>645 Nautilus Dr</td>
<td>Cameron C Cashman</td>
</tr>
<tr>
<td>B</td>
<td>Chena Ridge</td>
<td>Pole</td>
<td>1530 Alderwood Dr</td>
<td>Jackie L Willard Jr.</td>
</tr>
</tbody>
</table>
Proposed Site – Coverage Gap

This map represents the current coverage area from our transmitters on Birch Hill.

Green signifies qualifying signal of better than -70 db, which indicates a maximum customer download speed of 4 Mbps during speed tests.

Red signifies non-qualifying signal, which indicates that customer will experience unacceptable performance.

No color indicates zero signal available.

Proposed Coverage Area

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<table>
<thead>
<tr>
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<th>TYPE</th>
<th>PAGE</th>
</tr>
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<tr>
<td></td>
<td>ESTER DOME TOWER SITE</td>
<td>ACW</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
<th>Customer</th>
<th>To</th>
<th>Circuit ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/16/16</td>
<td>AC WIRELESS</td>
<td>PROPOSED CHENA RIDGE RD SITE</td>
<td>ALC00544</td>
</tr>
</tbody>
</table>
This map represents the approximate area that will be able to be served after the proposed construction is completed.

Green signifies qualifying signal of better than -70 dB, which indicates a maximum customer download speed of 4 Mbps during speed tests.

Red signifies non-qualifying signal, which indicates that customer will experience unacceptable performance.

No color indicates zero signal available.
Proposed Site – Potential Customers

This map was compiled using a list of failed surveys. These were all sites that were determined by ACW Technicians to be possible customers with the installation of the proposed Nautilus Dr Site.
1. Alternate Site 1
Able to obtain LOS but property owner did not want construction on their property

2. Alternate Site 2
Able to obtain LOS but property owner did not want construction on their property

3. Alternate Site 3
Able to obtain LOS but property owner did not want construction on their property

4. Alternate Site 4
Unable to obtain LOS

A. Proposed Site
Able to obtain LOS and property owner was willing to lease property
CU2017-004: Neighborhood Photographs (looking toward proposed tower location)
Agency Comments

CU2017-004
September 6, 2016

Manish Singh
Planner II
FNSB Department of Community Planning
msingh@fnsb.us

Type of Request: Conditional Use Permit- CU 2017-004

Property Location: 1345 N. Becker Ridge Road; PAN 0480151

ADOT&PF has reviewed the above request and has no comment.

Driveways on state owned roads must meet current Alaska DOT&PF standards. If they do not meet these standards, ADOT&PF may request that they be modified to do so. If the owner wishes to modify an existing permitted driveway, or create a new driveway, an ADOT&PF driveway permit is required before construction. The ADOT&PF permitting website can be found at: http://www.dot.state.ak.us/permits/index.shtml

Thank you.

Sincerely,

Margaret L. Carpenter
Fairbanks Area Transportation Planner
(907) 451-2252

cc: George Stefan, FNSB
    Angela Parker, FNSB

“Keep Alaska Moving through service and infrastructure.”
Manish Singh

From: Julie L. Karl <JLKarl@gvea.com>
Sent: Tuesday, September 13, 2016 8:25 AM
To: Manish Singh
Subject: RE: CU2017-004: Requesting Comments for a 52 foot Communications tower, minor Conditional Use Application (1345 N Becker Ridge Rd)

Follow Up Flag: Follow up
Flag Status: Flagged

Manish,

GVEA has no objection to proposed communications tower located on 1345 N Becker Ridge Rd as shown to be constructed outside of GVEA’s easement area.

Thank you for the opportunity to comment.

Julie Karl, Land Management Supervisor
GVEA Transmission & Distribution
907-458-5763 direct line
907-458-6371 fax
jlkarl@gvea.com

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From: Manish Singh [mailto:MSingh@fnsb.us]
Sent: Friday, September 02, 2016 3:15 PM
To: David.tyler@alaska.gov; David.aden@alaska.gov; Linda.mahlen@alaska.gov; Tonya.bear@alaska.gov; George.horton@alaska.gov; Dps.ast.directors.office@alaska.gov; Julie L. Karl; Bill Witte
Subject: CU2017-004: Requesting Comments for a 52 foot Communications tower, minor Conditional Use Application (1345 N Becker Ridge Rd)

Dear Sir/Ma’am,

The Fairbanks North Star Borough Planning Commission is considering CU2017-004, a request for conditional use approval of a 52 foot Communications tower, minor in the Rural Estate 2 (RE-2) zone, located at 1345 N Becker Ridge Rd (on the west side of N Becker Ridge Raod, west of Chena Ridge Road). This application (CU2017-004) is scheduled for a Planning Commission public hearing on October 11, 2016.

I have attached the application with this email. The department requests you to send us your comments for this proposal by September 16, 2016. If you have any questions regarding this proposal, please contact me at (907) 459 1225 or msingh@fnsb.us

Thanks,

Manish

Manish Singh
Planner II
Department of Community Planning
907-459-1225 / msingh@fnsb.us
Application Material Received on
August 22, 2016

CU2017-004
**Communications Facilities Modification/Collocation**

| □ Modification that qualifies for Section 6409(a) |
| □ Substantial Modification (Does not qualify for Section 6409(a)) |

<table>
<thead>
<tr>
<th>Applicant:</th>
<th>Property Owner:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: Koma Fenton</td>
<td>Name: John T. Adams</td>
</tr>
<tr>
<td>Mailing Address: 612 Illinois St</td>
<td>Mailing Address: 1107 Chenega Ridge Rd</td>
</tr>
<tr>
<td>Fairbanks, AK 99701</td>
<td>Fairbanks, AK 99709</td>
</tr>
<tr>
<td>Phone: (907) 459-4934</td>
<td>Phone: 907-347-3502</td>
</tr>
<tr>
<td>Mobile:</td>
<td>E-mail: <a href="mailto:rki@alasconnect.com">rki@alasconnect.com</a></td>
</tr>
<tr>
<td>Fax:</td>
<td>E-mail: <a href="mailto:john_adams@lawstud65.org">john_adams@lawstud65.org</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property Information:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal Description: TL-1 Lipscomb Plats 60-6887 8122/60 WNR 74-37</td>
</tr>
<tr>
<td>Street Address: 1107 Chenega Ridge Rd</td>
</tr>
<tr>
<td>Parcel Account Numbers (PAN): 0480151</td>
</tr>
<tr>
<td>Existing Zone: RE-2</td>
</tr>
<tr>
<td>Existing Use: Residential</td>
</tr>
<tr>
<td>Description of Proposed Use: Low-profile, leased telecommunications site, utilizing a small utility pole</td>
</tr>
<tr>
<td>Height including all antennas/appurtenances: [32]</td>
</tr>
<tr>
<td>Lease Area Setback/Requested Yard Modifications:</td>
</tr>
<tr>
<td>□ North _______  □ South _______</td>
</tr>
<tr>
<td>□ East _______  □ West _______</td>
</tr>
</tbody>
</table>

I hereby certify that □ (I am) □ (I am authorized to act for) the owner of the property. I understand that payment of the application fee helps to cover the costs associated with processing this application, and that payment of the fee does not assure approval of the application.

APPLICANT SIGNATURE:  
PROPERTY OWNER SIGNATURE:  

To be completed by staff:

| Date: | 08/20/16 |
| Fee: | $2,000 |
| Receipt No.: | 519747 |
| Shot Clock: | — |
| Proposed Meeting Date: | 04/11/2016 |
| Sign Issued? | □ Yes, Sign #:  |

*Fairbanks North Star Borough is subject to the Alaska Public Records Act, AS 40.25 et seq. and this document may be subject to public disclosure under state law. Revised 03/01/15*
Property Information for PAN#: 0480151

PROPERTY DESCRIPTION: LIPSCOMB, LOT: 01
OWNER: Adams John T, Adams Mariagrace D
BILLING ADDRESS: 1345 N Becker Ridge Rd Fairbanks, AK 99709 2802
SITUS ADDRESS: 1345 N Becker Ridge Rd
PARCEL SIZE: 80150 SF
FLOOD ZONE: X (100%)
SPECIAL REG. AREAS: None
ZONING: RE-2 (100%)
COMP PLAN: Perimeter Area (100%), Perimeter Boundary (100%), Preferred Residential Land (11%)
PLANNING DISTRICT: Chena Ridge (100%)
ROAD SERVICE AREA: None
FIRE SERVICE AREA: Chena Goldstream (100%)
FIRE RESPONSE AGENCY N/A
STRUCTURES: SFR (1 Unit)
COMMUNITY PLANNING PERMITS: NONE
August 1, 2016

Fairbanks North Star Borough
Department of Community Planning
P.O. Box 71267
Fairbanks, AK 99707-1267

Greetings,

AlasConnect hereby proposes placement of a small communications pole at 1345 N Becker Ridge Road, previously assessed as 1407 Chena Ridge Road, in Fairbanks, Alaska. The parcel account number for this property is 0480151 and it is located within an RE-2 zoning district. Minor communications towers are considered conditional use within this residential district.

The proposed 52’ pole will be placed within a lease area and will be used to serve currently unserved and underserved residents with broadband Internet services. The pole and attached antennas are unobtrusive and the equipment at the top of the poles measure less than 3’ in diameter.

Attached is the completed conditional use application for this new communications tower. It is being submitted in accordance with FNSB Code 18.54.030, Procedures for conditional uses, and FNSB Code 18.50.155, Standards for communications towers. The associated narrative and required documentation describe the project’s compliance with approval criteria set forth within those codes. Therefore, AlasConnect respectfully requests approval of a conditional use permit for this new pole.

Please contact me with any questions at all about this.

Sincerely,

Koma Fenton
Business & Project Manager
AlasConnect, LLC
Phone: (907) 459-4934
Fax: (907) 459-4913
koma.fenton@alasconnect.com
### Conditional Use Communications Tower Checklist

<table>
<thead>
<tr>
<th>Application Package 18.50.155(C)(1)</th>
<th>Initials</th>
<th>Page Refs</th>
</tr>
</thead>
<tbody>
<tr>
<td>One copy of the specifications for the proposed structures and antennas, including description of the design characteristics and material.</td>
<td></td>
<td>P. 17-45</td>
</tr>
<tr>
<td>A site plan drawn to scale showing property boundaries, tower location, tower height, guy wires and anchors, existing structures, photographs or elevation drawings depicting typical design of proposed structures, parking, fences, landscaping, and existing land uses on adjacent property.</td>
<td></td>
<td>P. 47-49</td>
</tr>
<tr>
<td>A current map showing locations of all of the applicant’s antennas, facilities, existing towers, and proposed towers within the borough.</td>
<td></td>
<td>P. 51-52</td>
</tr>
<tr>
<td>Names of the owners of the tower, antennas and equipment to be located on the site.</td>
<td></td>
<td>P. 51-52</td>
</tr>
<tr>
<td>Evidence that a valid FCC license for the proposed activity has been issued, if required.</td>
<td></td>
<td>P. 11, P. 77-78</td>
</tr>
<tr>
<td>A copy of the Federal Aviation Administration (FAA) determination as to whether the tower poses an aviation hazard, including the safety lighting and marking required by FAA, if any, and whether preferences or requests for deviations from such marking and lighting systems were submitted.</td>
<td></td>
<td>P. 58-63</td>
</tr>
<tr>
<td>A written agreement, approved by the borough attorney, to remove the tower and/or antenna within 180 days after the tower or antenna is substantially unused for a period of 12 consecutive months. - Attach CT Removal Agreement.</td>
<td></td>
<td>P. 56-57</td>
</tr>
<tr>
<td>A visual impact analysis that quantifies the amount of visual impact on properties located within 500 feet of any proposed tower; for major communications towers, additional analysis must be conducted at 2,500 feet, and two miles from the proposed communications tower site. Such analysis should include, to the extent practicable, the visual impact from at least two of the four compass directions, and show the relationship of the tower and its facilities against the massing of surrounding structures, trees, and other intervening visual masses. This analysis will include recommendations to mitigate adverse visual impacts on other properties.</td>
<td></td>
<td>P. 64-67</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Narrative &amp; Package 18.50.155(c)(2)</th>
<th>Initials</th>
<th>Page Refs</th>
</tr>
</thead>
<tbody>
<tr>
<td>An alternative site analysis including the availability of suitable existing towers and other alternative structures or locations for the proposed tower considered by the applicant.</td>
<td></td>
<td>P. 12-13, P. 68-70</td>
</tr>
<tr>
<td>Additional information required by the planning department for determination that all applicable laws are met.</td>
<td></td>
<td>P. 10, P. 54</td>
</tr>
<tr>
<td>Location and Visual Impact. The proposed communications tower, antenna or accessory structure will be placed in a reasonably available location which will minimize the visual impact on the surrounding area and allow the facility to function in accordance with minimum standards imposed by the applicable communications regulations and applicant’s technical design requirements. Conditions may be imposed, including camouflage, screening, vegetative buffers and/or site requirements, to ensure this criteria is met.</td>
<td></td>
<td>P. 8, P. 13</td>
</tr>
<tr>
<td>Inability to Locate on an Existing Structure. A permit should not be issued unless a proposed antenna and equipment cannot be accommodated and function as required by applicable regulations and applicant’s technical requirements without unreasonable modifications on any existing structure or tower under control of the applicant.</td>
<td></td>
<td>P. 8, P. 12-14, P. 70</td>
</tr>
<tr>
<td>Necessity for Location in a Residential Neighborhood. A permit should not be issued in a residential neighborhood unless the area cannot be adequately served by a facility placed in a nonresidential area for valid technical reasons. Conditions may be imposed to lessen the impact of a communications tower on a residential neighborhood, including limitations on times for maintenance work to be performed, number of vehicles present, yard maintenance, and similar requirements.</td>
<td></td>
<td>P. 12-13, P. 69</td>
</tr>
<tr>
<td>Design for Future Use. A new tower must be designed to accommodate additional antennas equal in number to the applicant’s present and reasonably foreseeable future requirements.</td>
<td></td>
<td>P. 13</td>
</tr>
</tbody>
</table>
Conditional Use Communications Tower Checklist

Collocation. A permit shall be conditioned to require the applicant to make the tower available for use by as many other licensed carriers as can be technically collocated thereon when the use will not result in substantial injury to the owner, or in substantial detriment to the service to the customers of the owners. All licensed carriers shall cooperate with each other in collocating additional facilities upon such towers. All licensed carriers shall exercise good faith in collocating with other licensed carriers and in the sharing of towers, including the sharing of technical information to evaluate the feasibility of collocation.

Illumination. A communications tower may not be illuminated unless otherwise required by state or federal law or regulations or unless evidence has been presented that lighting is necessary to ensure the safety of the public. To prevent direct light reflection on other property, tower structure lighting shall be shielded to the extent permitted by the Federal Aviation Administration.

Distance from Existing Tower. A permit for a proposed tower within 1,000 feet of an existing tower shall not be issued unless the applicant certifies that the existing tower does not meet the applicant’s structural specifications and the applicant’s technical design requirements, or that a collocation agreement could not be obtained.

Yard Requirements. Yards shall be a distance equal to 50 percent or greater of the height of the tower from a lot line. The planning commission may modify this requirement if the tower and equipment will be adequately screened to mitigate its visual impact and no safety hazards are presented.– Site Plan with setbacks from property lines to nearest part of structure (antennas, equipment cabinets, etc.) and from lease lines to nearest part of structure.

Height. The permitted height of a proposed tower shall be the minimum required to meet the applicant’s technical needs and will consider the impact on the surrounding uses.– The height is from the ground to the top of structure (antennas).

Zoning District Standards. Nothing in this section alters the requirements for visibility, fencing, screening, landscaping, parking, access, lot size, exterior illumination, sign, storage, or other general zoning district regulations, except yard and height requirements, of any specific zone. Yard and height requirements in this section shall apply.

Design Drawings and Specifications. A permit shall be conditioned to require the applicant to submit design drawings and specifications stamped by a registered professional in the state of Alaska certifying compliance with the building code of the authority having jurisdiction.

Compliance with Other Laws. A proposed tower must comply with all local, state, and federal laws.

Other Items

Utility Lot. A utility lot is required when there is a deed or lease of more than five years OR in rural and agricultural through TF zones, not more than one principal building may be located on one lot. A major communication tower (greater than 60’ in height) is a principal building.

Equipment Removal

P. 13

P. 11

P. 12

P. 10

P. 47

P. 10-11

P. 47

P. 2

P. 17-45

P. 46-49

P. 10

P. 54

P. 57
Conditional Use Permit Application
1345 N Becker Ridge Rd
(Previously Assessed as 1407 Chena Ridge Rd)
Fairbanks, AK

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1.0 Introduction

In today’s world, the availability of Internet communication systems and the ability to quickly access information online is becoming more prevalent and necessary. Individuals are increasingly using the Internet for entertainment purposes such as social media, purchasing goods and services, watching TV shows and movies, and much more. They are also using it for more practical reasons such as for access to news, education, emergency services, health care services, and all facets of business. The reliance upon communications such as email, messaging, Internet voice services, video conferencing, and general information access is real and constantly growing. In fact, many Internet Service Providers (ISP) customers directly rely upon these services in order to conduct their day to day responsibilities, both personally and professionally.

At AlasConnect, our AC Wireless (ACW) division is a Wireless Internet Service Provider (WISP) dedicated to providing modern Internet service to areas that are currently unserved or underserved. It is our goal to provide Internet service to anyone within the Interior that does not have access to this basic utility.

As part of our ongoing efforts to expand our coverage area and fill the gaps within current coverage areas, AlasConnect is proposing the construction of a 52’ communications pole at 1407 Chena Ridge Road. The proposed construction will serve as both an expansion to new potential customers and fill a gap in coverage that current customers are affected by within that immediate area. The proposed location is zoned RE-2 and the construction of a communications tower is a permitted use which is subject to the conditional use process as defined by FNSB 18.18.020. The proposed pole is the least intrusive means to address the gap in ACW coverage, while also protecting property owner rights. There are no parcels of land zoned as non-residential (i.e. general use) or collocation opportunities that would allow ACW to address the coverage gap in this area.

The construction of the proposed pole will be beneficial to the residents in this area as many are unserved while the rest are all underserved. The structure is a wood utility pole being fitted for wireless communication purposes. Due to the nature of utility poles, it will be masked by the surrounding forest. This will make the visual impact to the area minimal as the proposed construction blends in with the surrounding forest.

1.1 Wireless Internet Service Provider & Radio Frequencies

A Wireless Internet Service Provider (WISP) is defined as an Internet Service Provider (ISP) that utilizes wireless networking as a medium to provide Internet service to customers. Initially, WISP’s operated and were found only in rural areas that were not being served by cable or DSL services. While this is still the case, WISPs are covering more urban areas as ISPs continually lag behind in their ability to serve communities and reach many underserved or unserved customers.
The technology utilized by ACW includes commonplace wireless networking equipment designed to operate over frequencies that are classified as ‘open’ by Federal Regulations. These frequencies include 900 MHz, 2.4 GHz, and 5.8 GHz. The FCC has classified these frequencies as ‘Unlicensed’ and do not require licensing to operate. See appendix 6.10 for specifics.

1.2 Existing Gap in ACW Coverage

The area surrounding the Chena Ridge Road area is currently underserved by any Internet Service Provider (ISP), including ACW. However, ACS provides very limited DSL service. The service gap was first noted when some existing customers for ACW, that were using an older network system, began to see depreciation of service. ACW Engineers and Technicians have completed many tests and studies in an effort to expand coverage to this area. All the results have shown that there was not enough signal penetrating into the area from our current broadcast locations.

The number one reason that residents of this area are unable to get ACW services is Line of Sight (LOS) requirement by the technology utilized. LOS is the ability to see, unobstructed with the naked eye, the site that will be used to make a network connection back to the main facility. LOS is essential for an internet connection through ACW to be locked in, stable, and capable of passing high speed data at distances greater than ½ mile.

1http://www.balticnetworks.com/media/catalog/product/cache/1/image/512x512/9df78eab33525d08d6e5fb8d27136e95/r/m/rm2-ti_links_1.jpg
With a new pole situated at this proposed location, ACW will be able to close this gap in service and meet the demand of residents in the neighborhood (Appendix 6.9). Currently ACW has more than a dozen requests for service in the area. All of these potential customers are unable to receive current services without the construction of the proposed site. All of these customers failed a site survey due to the heavy foliage in the area blocking current sites. With the proposed site, ACW will be able to service these potential customers as well as many more in the area.

2.0 Tower and Site Design

Through careful engineering and strategic choices in design, the site and the proposed height required to reach and maintain LOS to the nearest repeater site will meet all conditions of service while protecting private property rights. The proposed construction is designed to fill the gap in the ACW network coverage in the least intrusive manner possible (Appendix 6.1), while also complying with all local, state and federal laws.

The proposed design at 1407 Chena Ridge Road includes a 60-foot pole, 52 feet of which will be exposed out of the ground, with 7 wireless antennas at the top. The site will also include 14”x18” enclosure and a very slim 14’ meter pole attached to its side. The design of the site, shown in Appendix 6.1, will be positioned near surrounding trees to blend into the landscape. This serves to reduce the visual impact of the pole and should be less intrusive than the many power poles providing electricity throughout neighborhood.

The attached design outlines the typical build, antennas, and all equipment to be placed on the pole. The structure is a wood utility pole with all equipment, cabling, enclosures, and components attached to the pole. Antennas are placed near the top of the pole and there is no need for a separate structure or fencing at the bottom of the pole. The pole itself, along with its attached components, are is unobtrusive and the pole itself is no different than GVEA distribution poles which are used to feed power to each resident’s home. The main visual difference is that ACW’s proposed pole has slim antennas at the top of it, while GVEA power poles have a large cross arm at the top for holding wires, with many also having transformers near the top of the poles.

2.1 Yard Modification

Due to the nature of the installation and the lease being limited to 5 year increments, there is no yard or utility lot modification required for the proposed construction (Appendix 6.2).

The proposed site location for the pole is 33’ from the existing property lines. Since the proposed construction will be 52’ from the ground this pole location meets the required distance from the property line, being more than 50% of the total height of proposed construction.
2.2 Minimum Height Analysis

A primary factor when determining the minimum height of any proposed construction for ACW is Line-of-Sight (LOS). This is the ability to see, unobstructed and with the naked eye, the site that will be used to make a network connection back to the main facility or repeater site. The proposed 52’ height meets the minimum requirements for ACW while following the FNSB Regulations. Protecting property rights, minimizing visual impact, maintaining LOS to the nearest site for backhaul (a connection used for transmitting and receiving data to a point from which it can be distributed over a network), and obtaining maximum coverage to the surrounding area were all primary factors in this analysis. In order to determine the minimum height requirement for the site, ACW Technicians surveyed the area with an Unmanned Aerial Vehicle (UAV), a drone, to find the proper height to meet these requirements. These surveys were done at multiple potential sites in the subdivision with each survey being conducted from altitudes between 30’ and 100’. Through these surveys, we found that the LOS requirement was achieved at 52’ on the proposed property.

2.3 FAA Determination and Illumination Requirements

AlasConnect is not required to file a notice with the FAA according to Form 7460-I, Section 77.9 due to the proposed pole’s low height and long horizontal distance from any runway. The communications pole at this site will be shielded by natural terrain of greater height and will not adversely affect safety in aviation. Regardless, AlasConnect has filed and received a Determination from the FAA which can be found in Appendix 6.5. Per the FAA determination and FNSB Regulations, the pole will not be illuminated.

2.4 FCC License Requirement

As previously mentioned, ACW utilizes equipment operating in unlicensed, ‘open’, frequencies. Because of this there is no FCC license requirement for this communications pole. See Appendix 6.10 for specifics.
2.5 Lease and Tower Removal Agreements

Conditional use approval is being requested to construct a communications pole on the property detailed within the Application cover page. In accordance with FNSB Code 18.50.155(B)(1)(g) and per the Lease Agreement (Appendix 6.4), AlasConnect agrees to remove all equipment within 180 days after the tower or antenna is substantially unused for a period of 12 consecutive months. This agreement shall run with the land and shall be binding on any future owner of the property. See appendix 6.4 and 6.4.1 for these signed and approved agreements.

2.6 Alternative Site Analysis and Inability to Co-Locate

ACW engineers and technicians started the initial investigation into potential sites by looking into any existing tower locations surrounding this area to Co-Locate on. The first step was locating existing towers that could potentially serve customers in this immediate area. Towers at Ester Dome, Wilson, and Zehnder were looked at. These were all eliminated due to the LOS and proximity requirements for the service. Additionally, there are no other existing towers within 1000’ of the proposed location.

Next, our technicians looked at locations within our target area for sites to install a minor communications tower. After initial surveys we eliminated any properties north of Isberg Road as these locations are at too low of an elevation, with the terrain blocking our ability to backhaul the service onto our existing infrastructure.

After extensive research and testing in the area, the proposed site was found to be necessary for the intended construction, Appendix 6.7. All potentials sites in the immediate area are zoned as RE-2 and there are no GU-1 sites available in the area. For each of these other properties it was found that the amount of work and land clearing required to install the proposed construction, achieve the height needed to maintain LOS to the nearest tower site, achieve the height needed to serve the surrounding area, or terms of lease from property owner was not feasible. In some cases, property owners in the immediate vicinity were simply not interested. It was for these reasons that ACW chose this specific location with RE-2 zoning.

Through extensive review of the neighborhood, we were able to find four properties that could potentially meet backhaul requirements, as shown in Appendix 6.7. However, property owners were not interested in a lease agreement for alternate sites 1 and 2, while alternate site 3 failed to meet our technical requirements, including potential coverage area, location of power, cost of construction and maintenance requirements.

To limit the potential impact of the site upon the surrounding neighborhood, ACW will limit the amount of site visits, limit the number of techs onsite during visits, limit the number of vehicles
used in site visit, and limit the maintenance required to site. This will be achieved through remote maintenance and proactive management, while also utilizing equipment that needs little or no routine maintenance after installation is completed.

2.7 Design for Future Use and Co-Locations

The proposed tower is designed in such a way that there is room for Co-Location beneath the ACW equipment. In addition, the section utilized by ACW is only at approximately 42% of its capacity. (Appendix 6.1)

3.0 Proposed Tower Location

In order to achieve proper Line of Sight (LOS) while reducing the visual impact of the proposed pole the chosen location is in the Southern half of the property lot (Appendix 6.2). Our design uses the tree coverage to mask the visual impact.

The entire sight is dependent upon having LOS to one of the existing ACW sites. Appendix 6.3 shows a map of the current locations of antennas and towers within the borough, as well as the proposed poles that we are seeking conditional use permits for. Due to the limited wireless infrastructure, AlasConnect is seeking to make the most of it in order to benefit its customers and meet demand for Internet services within this area.

3.1 Visual Impact

The proposed pole to be used at this site is a very low profile utility pole. This means that it will not stand out more than the standard electric service poles which are located throughout the entire borough. The visual impact analysis (Appendix 6.6) shows that the trees will be masking the site of the pole from multiple angles and varying degrees of distance. In addition, these poles are nothing like metal communications towers used for cellular services. The pole will be less than 1’ wide at the top and requires no large structure at the base. Due to the nature of the installation, there is no yard modification required for the proposed construction.

The proposed construction will not be visible from any direction on the road until within a distance of approximately 200 feet. This is due to the nature of the construction. The proposed construction will blend in with surrounding foliage, a hillside, heavy foresting, and existing power poles.

There are no odors, noise, dust, or light impacts from this site to the surrounding area or across property lines.
3.2 Inability to Locate on Existing Structure

Similar to what is stated in section 2.6, there were no existing structures found that met the technical requirements for our service. In addition, there are no existing communication towers located in the immediate area or anywhere within half a mile of the proposed pole.

3.3 Owners of Equipment

AlasConnect will be the owner of the tower, antennas, and all equipment to be located on the site for this communications pole (Appendix 6.4).

3.4 Site Maintenance

When a site visit does occur, there will be a maximum of 2 full time Systems Technicians on site. These visits occur rarely at other sites and generally once per year, at most, once construction is completed. While AlasConnect techs may visit for site maintenance, if and when needed, there will be a monthly visit from a GVEA Meter technician to assess the power usage for the site. This already occurs for homes and meters within the neighborhood, so will not negatively impact surrounding property owners.

4.0 Compliance with Conditional Use Permit Standard

ACW’s proposed N Becker Ridge Road pole project meets and exceeds all approval criteria set forth for communications towers by FNSB Code 18.50.155. The proposed pole project also meets the general criteria for issuance of a conditional use permit in the Fairbanks North Star Borough, as set forth in FNSB Code 18.54.030.C. Criteria is met by conforming to the intent and purpose of this title, requiring no access to existing sewage, transportation, or water facilities, with the only public utility needed being GVEA for electricity, and will protect public health, safety, and welfare by providing a means of communication, access to public knowledge, as well as a means to further education while protecting the private property rights of residents.

The site will not require water supplies nor the use of sewage facilities and is served by the Borough road system. The necessary power requirements will be met with provided service from GVEA.
4.1 EMS Access

In the case of emergencies, EMS can access the site from the existing parking pad. The site does not impede access to the property in any way.

5.0 Conclusion

AlasConnect respectfully requests that you approve this application for conditional use. It is being submitted in accordance with FNSB Code 18.54.030, procedures for conditional uses, and FNSB Code 18.50.155, standards for communications towers. The narrative and required documentation describe the project’s compliance with approval criteria set forth within those codes. The proposed pole project also meets the general criteria for issuance of a conditional use permit in the Fairbanks North Star Borough, as set forth in FNSB Code 18.54.030.C by: (1) conforming to the intent and purpose of this title, (2) requires no access to existing sewage, transportation, or water facilities, with the only public utility needed being GVEA for electricity, and (3) will protect public health, safety, and welfare by providing a means of communication, access to public knowledge, as well as a means to further education while protecting the private property rights of residents.

AlasConnect has had a large demand for service in this area and has strong evidence that this newly proposed pole site will benefit and serve approximately 60 borough customers, helping them to gain access to necessary Internet services. Please grant a conditional use permit for this site, which will help numerous underserved residents gain access to essential Internet services.
6.0 Appendix - Diagrams

6.1 Pole Design
6.2 Site Plan
6.3 Map of ACW Facilities in the FNSB
6.4 Lease Agreement
6.4.1 Tower Removal Agreement
6.5 FAA Determination
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Appendix – Diagrams

6.1 Pole Design
Proposed Site Construction Design

- 2.4GHz and 5.8GHz Point-to-Point Antennas
- 2.4GHz and 5.8GHz Sector Antennas
- GVEA Power
- Meter Pole
- Equipment Enclosure
- Meter
- Ground level
- Grounding Rods

Total Height: 52'
Total Depth: 8'

1" = 9'
### NOTES:

1. ATTACH THE PIPES OR PIPE MOUNTS TO THE BRACKETS PRIOR TO ADDING THE JAW-BOLT/CHAIN ASSEMBLY.
INSTALLATION INSTRUCTIONS

The Ultimate in Fall Protection

LAD-SAF™
Flexible Cable Ladder
Safety Systems

BSI (0086)
Kitemark Court
Davy Ave, Knowlhill
Milton Keynes
MK5 8PP, UK

BSI (0086)
Kitemark Court
Davy Ave, Knowlhill
Milton Keynes
MK5 8PP, UK

CE TYPE TEST

ISO 9001
ANSI A14.3
prEN 353-1:2012

CSA Z259.2.5

CE PRODUCTION
QUALITY CONTROL

141 kg/
310 lbs

1 x 1
4 x 4

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<td>B</td>
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<td>D</td>
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<td>E</td>
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FORM NO: 5902228
REV: Q

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FORWARD
This instruction manual describes the installation of the Lad-Saf™ Flexible Cable Ladder Safety Systems. It should be used as part of an employee training program as required by OSHA, ANSI, CSA, and CE, and must be kept with the equipment.

- To avoid serious injury or death follow the safety information in these instructions.
- Installers must read and follow the manufacturer’s instructions for safety equipment used with this system.
- Proper fall protection must be used while installing this system.

If you have questions on the installation or suitability of this equipment for your application, contact DBI-SALA.

GLOSSARY REFERENCES
Numbered Glossary References on the front cover of this instruction reference the following items:

1. Installation Instructions
2. Lad-Saf™ Flexible Cable Ladder Safety Systems
3. Standards
4. Number of notified body that performed CE Test.
5. Number of notified body checking the manufacture of this PPE.
6. Maximum number of users.
7. Maximum user weight is 141 kg (310 lbs) including tools, other equipment and clothing.

Lad-Saf™ Flexible Cable Ladder Safety System Components, Figure 1:
A. Top Bracket
B. Cable
C. Cable Guide
D. i-Safe RFID Tag
E. Bottom Bracket

Part Lists And Part References
The parts that can comprise a typical Lad-Saf™ Ladder Safety System are listed in the Parts List Table in this manual. Some items may have multiple part options and part numbers. The “Item” column on the left side of each part list is associated with one or more part numbers found in the columns to right (for example: TB-1, BB-5, etc.) that can be used for installation. The installation situation will determine which parts must be used.
1.0 APPLICATIONS

1.1 PURPOSE: When used in combination with the Lad-Saf™ Detachable Cable Sleeve (sold separately), the Lad-Saf™ Flexible Cable Ladder Safety System (Figure 1) is designed to protect a worker in the event of a fall while climbing fixed ladders or similar climbing structures. LAD-SAF™ systems are intended to be installed on fixed ladders or ladder-like climbing surfaces that are part of a structure (e.g., water tank ladders, mono poles [wood, steel, or concrete] buildings, manways, antenna structures and towers).

1.2 LIMITATIONS: LAD-SAF™ systems are not intended to be installed on portable ladders. These systems are designed for use on ladders that are generally vertical. The ladder safety system must not exceed a maximum angle of 15° from vertical. The following application limitations must be considered before installing the LAD-SAF™ system.

A. LADDER STRUCTURE: The ladder structure to which the system is installed must be capable of withstanding the loads applied by the system in the event of a fall (see Section 2.2).

B. SYSTEM CAPACITY: The number of users allowed on the system at one time varies depending on the type of system and installation. Generally, system capacities range from one to four users. See sections 2.0 and 3.0 for more information on capacity limitations. System capacities are based on a maximum user weight, including tools and clothing, of 310 lbs (140.6 kg).

C. ENVIRONMENTAL HAZARDS: Use of this equipment in areas with environmental hazards may require that additional precautions be taken to reduce the possibility of injury to the user or damage to the equipment. (e.g., high heat caused by welding or metal cutting, caustic chemicals, seawater, high voltage power lines, explosive or toxic gases, moving machinery, sharp edges).

D. TRAINING: This equipment is intended to be installed by persons who have been trained in its correct application.

1.3 Refer to applicable local, and national requirements governing this equipment for more information on ladder safety systems and associated components, including OSHA 1910.27.

2.0 SYSTEM REQUIREMENTS

2.1 COMPATIBILITY OF COMPONENTS AND SUBSYSTEMS: This equipment is designed for use with DBI-SALA approved components and subsystems. The use of non-approved components and subsystems (e.g., harnesses, lanyards, sleeves, etc.) may jeopardize compatibility of equipment, and could affect the safety and reliability of the complete system. If you have questions on the installation or suitability of this equipment for your application, contact DBI-SALA.

2.2 LOAD REQUIREMENTS FOR STRUCTURE AND BRACKET CONNECTIONS: The climbing structure to which the LAD-SAF™ system is installed must be capable of supporting the loads imposed by the system. For calculation purposes the required bracket load may be assumed to be distributed evenly between the number of rung attachments. For example, the TB-3 top bracket (Figure 2) is supplied with three rung connections. The load required for each rung for a single user system is 1,125 lbs (5.0 kN) per rung (3,375 lbs [15.0 kN]/3).

A. TOP BRACKET: (See Figure 2 and TB Items Part List) The top bracket connection loads include system pretension and forces associated with arresting a fall. Load requirements for the top bracket vary depending on the number of users allowed on the system at one time, top bracket model, and type of connection to the structure.

1. The following top brackets allow up to four users on the system at one time:

   | Item Numbers; TB-2, TB-3, TB-4, TB-6, TB-7, TB-10 and Part Numbers; 6116048, 6116050, 6116051, 6116052, TB-1, 6116055, 6116057, 6116059, TB-5, 6116282, 6116286, 6116290, 6116291, 6116292, 6116293, 6116294, 6116295, 6116296.  

   Note: Other installation requirements may limit the number of users allowed on a system. See section 3.0.

   Top Bracket Connection Loads:
   - One user on the system: 3,375 lbs (15.0 kN)
   - Two users on the system: 4,350 lbs (19.3 kN)
   - Three users on the system: 5,325 lbs (23.7 kN)
   - Four users on the system: 6,300 lbs (28.0 kN)

   Exception: TB-1 top bracket is designed for use with 6116336 or 6116337 grab bar extension. When the grab bar is used as a connection for a personal fall arrest system the bracket connection must support a minimum of 5,000 lbs (22.2 kN), or 3,600 lbs (16.0 kN) for a certified anchorage. See ANSI Z359.1 and OSHA regulations.

2. These top brackets allow one user only:

   | Item Numbers; TB-8, TB-9, TB-11 and Part Numbers 6116074, 6116325, 6116324 and 6116328.

   Exception: TB-9 (6116074) allows two users.

   Top Bracket Connection Loads:
   - One user on the system: 3,375 lbs (15.0 kN)
   - Two users on the system: 4,350 lbs (19.3 kN)

B. BOTTOM BRACKET: The bottom bracket connection must be capable of supporting a system pretension load of 750 lbs (3.3 kN) in the direction of loading.
3.0 **SYSTEM INSTALLATION**

![Improper installation procedures could result in serious injury or death. Read and follow all instructions.]

3.1 LAD-SAF™ systems are designed for easy installation onto a variety of fixed ladder structures. To begin the installation you need to know the model numbers of the top and bottom brackets, cable guides, and type of cable (galvanized or stainless steel). Figures 2, 3, 4 and 5 identify most models. Some brackets are designed to be installed using stand-off supports which go between the bracket and structure. You need to know model numbers of stand-off supports if included with your system. See Figure 5 for model numbers of most stand-off supports. Follow the instructions for the models included in your system.

Generally, the LAD-SAF™ system is installed from the top of the ladder down. The basic procedure is:

- **Step 1.** Install the top bracket
- **Step 2.** Connect the cable to the top bracket
- **Step 3.** Install the cable guides
- **Step 4.** Install the bottom bracket
- **Step 5.** Tension the cable
- **Step 6.** Inspect the installation

Planning the installation can minimize the amount of time on the ladder and improve safety.

![Use proper safety procedures when installing LAD-SAF™ systems.]

**3.2 SYSTEM COMPONENT COMPATIBILITY:**

<table>
<thead>
<tr>
<th>Bracket Type</th>
<th>Stainless Cable with Stainless Swage Fitting</th>
<th>Stainless Cable with Carrier Clamp</th>
<th>Galvanized Cable with Stainless Swage Fitting</th>
<th>Galvanized Cable with Carrier Clamp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stainless</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Galvanized</td>
<td>O</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

Y = recommended component combination.  O = optional.  N = not recommended

**Do not use carrier clamps with stainless steel cables.**

3.3 **WELDING RECOMMENDATIONS:** Some installations require welding brackets to the structure. DBI-SALA recommends that welding be completed by a certified professional welder in accordance with applicable national welding codes or standards. Base and filler materials must be compatible with galvanized or stainless steel, depending on the materials of your system. Protect finished welds from corrosion with coating or paint.

3.4 **TOP BRACKET INSTALLATION:** Before installing the top bracket it is recommended that the ladder or climbing structure be evaluated by a qualified person to determine if the load requirements for the system are satisfied.

**A. INSTALLATION OF TB-2, TB-3, TB-10 TOP BRACKETS:**

**Direct Connection to Ladder:**

See Figure 6 for typical installations of the TB-2, TB-3, and TB-10 top brackets onto a round rung ladder. The top bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The top bracket is typically mounted in the center of the climbing surface for ease of climbing, but may be located towards the side of the ladder if required.

**TB-3, TB-10:**

- **For systems limited to one user,** the top bracket may be installed with up to four feet extending above the top rung connection. This will allow the use of only two ladder rung clamps. Ensure the ladder will withstand the required loads between the two rungs.
- **For systems allowing up to two users simultaneously,** the top bracket may be installed with up to three feet extending above the top rung connection.
- **For systems allowing up to four users simultaneously,** the top bracket may be installed with up to two feet extending above the top rung connection.

**TB-2:**

- **For systems allowing up to four users simultaneously,** the top bracket may be installed with up to five feet extending above the top bracasket connection.

**One rung clamp (two for the TB-10 bracket) is designed to bolt through the bracket and onto the rung. This clamp must not be omitted, or the bracket may slip under load.**

Install rung clamps using the hardware provided. Do not substitute other fasteners. Torque fasteners to 20-25 ft-lbs (27.1-33.9 N-m).
Stand-off Support Connection:
Figure 7 shows the installation of the TB-3 top bracket using a horizontal stand-off bracket. These installations are limited to one user on the system at a time. Use hex bolts in place of U-bolts to attach the TB-3 top bracket to the horizontal stand-off. Torque fasteners to 20-25 ft-lbs (27.1-33.9 N-m).

Ladder Rung Support:
Ladder rung supports can be used to reinforce hollow ladder rungs to reduce crushing or collapsing of the rung due to tightening of the Ladder Safety System Clamps, and to generally strengthen the rung. The Rung Support must have sufficient length extending on either side of the Ladder Side Rails to install Rung Support fasteners. Install ladder rung support at each LAD-SAF™ component connection point. The ladder and its connection to the structure must be evaluated by a qualified person to determine if the load requirements for the system are met.

Ladder Rung Supports are available in various shapes and lengths. For best results, select a Ladder Rung Support size that will fit closely with the inside dimensions of the rung. See Figure 8 for examples of ladder rung supports.

<table>
<thead>
<tr>
<th>Model</th>
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<tbody>
<tr>
<td>6100187</td>
<td>1 in</td>
<td>22 in</td>
</tr>
<tr>
<td>6100188</td>
<td>1 in</td>
<td>26 in</td>
</tr>
<tr>
<td>6100189</td>
<td>1 in</td>
<td>30 in</td>
</tr>
</tbody>
</table>

Install at each point indicated below:
1. Slide the Rung Support through the open rung.
2. Slide Washers over each end of the Rung Support and secure with Nuts. Tighten Nuts until Washer’s are flush against the Ladder Rail.
3. Insert Cotter Pins through the holes in each end of the Rung Support. Cotter Pins should inserted from the top of the Rung Support to prevent them from dropping out of the holes.
4. Separate and bend the Cotter Pin Legs to ensure Cotter Pins stay in the holes and the Rung Supports can not slide out of the Ladder Rung.

B. INSTALLATION OF TB-1 TOP BRACKET AND 6116336 GRAB BAR:
See Figure 9 for a typical installation of the TB-1 top bracket onto a round rung ladder. The top bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The top bracket is typically mounted in the center of the climbing surface for ease of climbing, but may be located towards the side of the ladder if required.

The top rung clamp bolts through a plate that is welded onto the bracket. This rung clamp must not be omitted, or the bracket may slip under load.

Install rung clamps using the hardware provided. Do not substitute other fasteners. Torque fasteners to 20-25 ft.-lbs (27.1-33.9 N-m).

The 6116336 grab bar (A) is installed by sliding the grab bar into the square tube of the TB-1 top bracket and installing the detent pin (C) into the grab bar.

C. INSTALLATION OF TB-4, TB-6, AND TB-7 BOLT-ON TOP BRACKETS:
See Figure 10 for a typical installation of the TB-4, TB-6, and TB-7 top brackets. The top bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The top bracket is typically mounted in the center of the climbing surface, directly above the ladder, for ease of climbing, but may be located towards the side of the ladder; 12 inches (30.5 cm) maximum from center, if required. The top brackets are to be connected to the structure with a DBI-SALA (model SO-2 stand-off in Figure 10) or customer supplied stand-off support. Stand-off supports must support the loads specified in section 2.2, and must be compatible with the LAD-SAF™ system.

Angle Leg and Round Leg Stand-off Installation:
See Figure 11 for the installation of the angle (example: SO-4) and round leg (example: SO-5) stand-off supports. Install stand-off supports using the hardware provided. Do not substitute other fasteners. Torque 3/8-inch fasteners to 20-25 ft-lbs (27.1-33.9 N-m). Install the top bracket to the stand-off support using the 1/2-inch fasteners provided. Torque 1/2-inch fasteners to 40-45 ft-lbs (54-61 N-m). Note: For the TB-6 stand-off, fasteners are not supplied. DBI-SALA recommends using lock washers, double nuts, or other methods to ensure fasteners will not loosen.

SO-2 Weld-on Stand-off Installation:
Install the SO-2 stand-off support as shown in Figure 10. See section 3.3 for welding recommendations. The stand-off must be perpendicular to the pole surface and in-line with the carrier cable.

Installations that use the angle leg or round leg stand-off support brackets are limited to one user on the system at a time.
D. INSTALLATION OF TB-5 WOOD POLE TOP BRACKET:

See Figure 12 for a typical installation of the TB-5 top bracket onto a wooden pole. The top bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The top bracket is typically mounted in the center of the climbing surface for ease of climbing, but may be located towards the side of the ladder if required. Use 1/2-inch fasteners (not provided) to attach the top bracket to the pole. Fasteners should extend through the pole when possible. DBI-SALA recommends using lock washers, double nuts, or other methods to ensure fasteners will not loosen.

E. INSTALLATION OF TB-9, TB-13, AND TB-14 TOP BRACKETS:

See figure 13 for a typical installation of TB-9, TB-13, and TB-14 top brackets onto a ladder. Some brackets utilize rung spacers while others do not (see Figure 2). The top bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The top bracket is typically mounted in the center of the climbing surface for ease of climbing, but may be located towards the side of the ladder if required.

- For systems limited to one user, the top bracket may be installed with up to 4 ft. (1.2 m) extending above the top rung connection. This will allow the use of only two ladder rung clamps. Ensure the ladder will withstand the required loads between the two rungs.
- For systems allowing up to two users simultaneously, the top bracket may be installed with up to 3 ft. (0.9 m) extending above the top rung connection.
- For systems allowing up to four users simultaneously, the top bracket may be installed with up to 2 ft. (0.6 m) extending above the top rung connection.

F. INSTALLATION OF TB-8 TELESCOPING TOP BRACKET:

See Figure 14 for a typical installation of the TB-8 top bracket onto a round rung ladder. The top bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The top bracket is designed to mount at or near the top of the ladder and telescope up when in use. Typical installations include access ladders into manholes and under trap doors.

G. INSTALLATION OF D-RING ANCHORAGE:

See Figure 15. The D-ring Anchorage (6100219) is designed for use with the DBI-SALA Force2™ energy absorbing lanyard and full body harness. The D-ring Anchorage must be attached to a Lad-Saf™ top bracket (A) that is attached to a structure that meets the top bracket load requirements.

APPLICATION: The D-ring anchorage must be used in accordance with local requirements for fall arrest or rescue systems.

INSTALLATION: See Figure 15. Install the D-ring anchorage assembly (B) no more than 6 in. (15.2 cm) above the ladder rung (C) where the top clamp plate (D) of the Lad-Saf™ top bracket is attached. The D-ring must be on the climbing (cable) side of the top bracket. Clamp the D-ring anchorage assembly to the top bracket with the fasteners provided with the assembly. Torque fasteners to 20-25 ft-lbs (27.1-33.9 N-m).

3.5 INSTALLATION OF CARRIER CABLE TO TOP BRACKET:

A. INSTALLATION OF GALVANIZED CARRIER CABLE:

1. Lay the carrier cable out on the ground in a clean area by rolling the coil. Do not pull cable from center of coil. For some installations it may be easier to lower the carrier cable from the top connection level down to the bottom bracket. If so, carefully lower the cable by unspooling without twisting the cable at the top connection. Do not drop the cable to the lower level.

Inspect the cable for shipping damage before proceeding. Do not install damaged cable.

2. See Figure 16 for installation of the galvanized carrier cable into the top bracket. Ensure the end of cable (A) is free of kinks and unraveled strands. Pass the cable up through the top bracket pipe (B) and the urethane shock absorber (C). Install the carrier clamp (D) and washer (E) onto cable with the cone of carrier clamp pointing down. At least 1.0 in. (2.5 cm), but no more than 2 in. (5.1 cm), of cable must protrude through the carrier clamp.

Seat the carrier clamp into shock absorber by pulling firmly on carrier clamp below the top bracket pipe. Install cap (F) by seating it firmly onto the pipe.

One rung clamp (lower connection) is designed to bolt through the bracket and onto the rung. This clamp must not be omitted, or the bracket may slip under load.

When using TB-8 telescoping top bracket, use only the swaged end fitting in the top bracket.

Keep the carrier cable and carrier clamp clean during installation. Contamination of the carrier clamp or cable could cause the clamp to malfunction.

 Carrier cable is very stiff and may spring out of coil unexpectedly. Use proper safety procedures when unrolling cable. Use appropriate safety gear, including gloves and safety glasses, when unrolling cable.

Excess cable protruding through the carrier clamp may prevent installation of the cap. If this occurs, cut off extra cable. Do not remove carrier clamp from cable to avoid damage to the carrier clamp.
B. INSTALLATION OF STAINLESS STEEL CARRIER CABLE:

1. Lay the carrier cable out on the ground in a clean area by rolling the coil. Do not pull the cable from the center of the coil.

   **Carrier cable is very stiff, and may spring out of the coil unexpectedly. Use caution when unrolling cable. Use appropriate safety gear, including gloves and safety glasses, when unrolling cable.**

   Inspect the cable for shipping damage before proceeding. Do not install damaged cable.

2. See Figure 17 for installation of a stainless steel carrier cable into the top bracket. All stainless steel carrier cables are supplied with a swaged end fitting for connection to the top bracket. To install the carrier cable (A), feed the free end of the cable down through the washer (D), urethane shock absorber (C) and top bracket pipe (B) until the swage fitting (E) is firmly seated into the shock absorber. Install the cap (F) by seating it firmly onto the pipe.

3.6 INSTALLATION OF CABLE GUIDES, ALL MODELS:

   Cable guides protect the carrier cable from chafing against the ladder or structure and to prevent the climber from excessively deflecting the cable from side to side. Cable guides should be positioned at approximately 25 ft (7.62 m) intervals along the carrier cable between the top and bottom brackets, and at any point along the system where the cable may abrade against the structure. Cable guides should be staggered along the system to reduce harmonic effects of the wind, such as at 23 (7.01), 25 (7.61), and 27 (8.23) feet (m) intervals. For high wind areas "L" shaped cable guides may be used. The "L" shaped cable guides should be alternated with opening on the left, then right, etc. up the ladder. Latching cable guides are also available.

   **Direct Connection to Ladder:**

   See Figure 18 for typical installations of cable guides onto a ladder. (A = CG-15, B = CG-3, C = CG-5) Some cable guides utilize rung spacers and clamp plates while others do not (see Figure 4). Install the cable guide using the hardware provided. Do not substitute other fasteners. Torque fasteners to 20-25 ft-lbs (27.1-33.9 N-m).

   **SO-7 Weld-on Stand-off Support Installation:**

   See Figure 20 for typical installations of angle leg (A) and round leg (B) stand-off supports. Install the stand-off support using the hardware provided. Do not substitute other fasteners. Torque fasteners to 20-25 ft-lbs (27.1-33.9 N-m).

   Install the cable guide to the stand-off support using the hardware provided. Do not substitute other fasteners. Torque fasteners to 20-25 ft-lbs (27.1-33.9 N-m).

3.7 INSTALLATION OF BOTTOM BRACKET AND CARRIER CABLE TENSION ADJUSTMENT:

   Before installing the bottom bracket it is recommended that the ladder and/or climbing structure be evaluated by a qualified engineer to determine if the load requirements for the system specified in section 2.2 are met.

   **Depending on the length of the system, and the environment in which the system is installed, it may be necessary to periodically re-tension the system. Extreme temperature ranges and very long systems will likely require periodic re-tensioning. The tension indicator can be purchased separately (9504239). Contact DBI-SALA for details.**

A. INSTALLATION OF BB-1, BB-2, BB-3, AND BB-9 BOTTOM BRACKETS:

   **Direct Connection to Ladder:**

   See Figure 21 for a typical installation of the bottom bracket onto a ladder. Some brackets utilize "U"-bolts while others utilize bolts and clamp plates to attach to the ladder (see Figure 3). The bottom bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The bottom bracket must be mounted in-line (vertically) with the top bracket.

   **One rung clamp is designed to bolt through the bracket and onto the rung. This clamp must not be omitted, or the bracket may slip under load.**

   Install the rung clamps using hardware provided. Do not substitute other fasteners. Torque fasteners to 20-25 ft-lbs (27.1-33.9 N-m).

   **Stand-off Support Connection:**

   Figure 22 shows the installation of the bottom brackets using a horizontal stand-off bracket. Use U-bolts to attach to support leg (A). Use hex bolts provided in place of U-bolts to attach the bottom bracket to the horizontal stand-off (B). Torque fasteners to 20-25 ft-lbs (27.1-33.9 N-m).

   **Carrier Cable Tension Adjustment:**

   Figure 21 shows the assembly of the tension rod to the bottom bracket and carrier cable (A). Loosely clamp the saddle clips (B) around the carrier cable. Slide the tension rod (C) down the carrier cable and through the hole in the bracket until sufficient threads are exposed to allow the installation of the tension indicator (D), washers (E), and nuts (F and G). Remove the slack in the carrier cable by pulling the cable through the saddle clips. Tighten saddle clips to 35 ft-lbs (47.5 N-m). Tighten the tensioning nut (F) until the ring on the tension indicator is sheared off. A small amount of grease on the tension rod threads will reduce the effort required to tension the carrier cable. If there are insufficient threads exposed to fully tension the carrier cable, pull more carrier cable through the saddle clips on the tension rod and repeat the procedure. When correct carrier cable tension is reached tighten the jam nut (G) against the tensioning nut. Cut off excess cable just below the lower saddle clip.
B. INSTALLATION OF BB-4, BB-5, AND BB-6 BOTTOM BRACKETS:

**Bottom Bracket Installation:**
See Figure 23 for typical installations of the BB-4 and BB-6 bottom brackets onto a round rung ladder. See Figure 24 for a typical installation of the BB-5 bottom bracket with a weld-on stand-off support. The bottom bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The bottom bracket must be mounted in-line (vertically) with the top bracket.

| ![](warning.png) | One rung clamp is designed to bolt through the bracket and onto the rung. This clamp must not be omitted, or the bracket may slip under load. |

Install the rung clamps using the hardware provided. Do not substitute other fasteners. Torque fasteners to 20-25 ft.-lbs (27.1-33.9 N-m).

**Weld-on Stand-off Installation:**
Install the SO-2 stand-off support as shown in Figure 24. See section 3.3 for welding recommendations. The stand-off must be perpendicular to the pole surface and in-line with the carrier cable.

**Carrier Cable Tension Adjustment:**
Figures 23 and 24 show the assembly of the tension rod to the bottom bracket and carrier cable. Loosely clamp the saddle clips around the carrier cable (A). Slide the tension rod (C) down the carrier cable and through the hole in the bracket until sufficient threads are exposed to allow the installation of the washers (E) and nuts (F and G). Remove slack in the carrier cable by pulling the cable through the saddle clips. Tighten the saddle clips to 35 ft.-lbs (47.5 N-m). Tighten the tensioning nut (F) until the carrier cable is taut. A small amount of grease on the tension rod threads will reduce the effort required to tension the carrier cable. Compress the spring to approximately 5-1/2 in. (14 cm) (H). Do not completely compress the spring. If there are insufficient threads exposed to fully tension the carrier cable, pull more carrier cable through the saddle clips on the tension rod and repeat the procedure. When the correct carrier cable tension is reached, tighten the jam nut against the tensioning nut (G). Cut off excess cable just below the lower saddle clip.

C. INSTALLATION OF BB-7 BOLT-ON BOTTOM BRACKETS:

**Bottom Bracket Installation:**
See Figure 25 for a typical installation of the BB-7 bottom brackets. The bottom bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The bottom bracket must be mounted in-line (vertically) with the top bracket. The 6100035 and 6100040 bottom brackets are designed to be connected to the structure using a DBI-SALA or customer supplied stand-off support. Customer supplied stand-off supports must be capable of withstanding the loads specified in section 2.2 and must be compatible with the LAD-SAF™ system.

**Weld-on Stand-off Installation:**
Install the SO-2 stand-off support as shown in Figure 25. See section 3.3 for welding recommendations. The stand-off must be perpendicular to the pole surface and in-line with the carrier cable.

**Angle Leg and Round Leg Stand-off Installation:**
See Figure 26 for the installation of angle (A) and round (B) leg stand-off supports. Install stand-off supports using the hardware provided. Do not substitute other fasteners. Torque 3/8 inch fasteners to 20-25 ft.-lbs (27.1-33.9 N-m). Install bottom bracket to stand-off support using 1/2-inch fasteners provided. Torque 1/2-inch fasteners to 40-45 ft.-lbs (54-61 N-m).

**Carrier Cable Tension Adjustment:**
Figure 25 shows the assembly of the tension rod to the bottom bracket and carrier cable (A). Loosely clamp the saddle clips (B) around the carrier cable. Slide the tension rod (C) down the carrier cable and through the hole in the bracket until sufficient threads are exposed to allow the installation of the tension indicator (D), washers (E), and nuts (F and G). Remove slack in the carrier cable by pulling the cable through the saddle clips. Tighten saddle clips to 35 ft.-lbs (47.5 N-m). Tighten the tensioning nut (F) until the ring on the tension indicator is sheared off. A small amount of grease on the tension rod threads will reduce the effort required to tension the carrier cable. If there are insufficient threads exposed to fully tension the carrier cable, pull more carrier cable through the saddle clips on the tension rod and repeat the procedure. When the correct carrier cable tension is reached, tighten the jam nut (G) against the tensioning nut. Cut off excess cable just below the lower saddle clip.

D. INSTALLATION OF BB-8 WOOD POLE BOTTOM BRACKET:

**Bottom Bracket Installation:**
See Figure 27 for a typical installation of the BB-8 bottom bracket. The bottom bracket should be positioned to allow users safe access when connecting or disconnecting from the system. The bottom bracket must be mounted in-line (vertically) with the top bracket. Use 1/2-inch fasteners (not provided) to attach the bottom bracket to the pole. DBI-SALA recommends using lock washers, double nuts, or other methods to ensure fasteners will not loosen.

**Carrier Cable Tension Adjustment:**
Figure 27 shows the assembly of the tension rod to the bottom bracket and carrier cable. Loosely clamp the saddle clips around the carrier cable. Slide the tension rod down the carrier cable and through the hole in the bracket until sufficient threads are exposed to allow the installation of the tension indicator, washers, and nuts. Remove slack in the carrier cable by pulling the cable though the saddle clips. Tighten saddle clips to 35 ft.-lbs (47.5 N-m). Tighten the tensioning nut until the ring on the tension indicator is sheared off. A small amount of grease on the tension rod threads will reduce the effort required to tension the carrier cable. If there are insufficient threads exposed to fully tension the carrier cable, pull more carrier cable through the saddle clips on the tension rod and repeat the procedure. When the correct carrier cable tension is reached, tighten the jam nut against the tensioning nut. Cut off excess cable just below the lower saddle clip.
E. 5900172 COUNTERWEIGHT:
To install the 5900172 counterweight onto the carrier cable, loosen the saddle clips and pass the carrier cable through the counterweight. Position the counterweight to allow users safe access when connecting or disconnecting from the system. Tighten the saddle clips against the carrier cable.

4.0 IDENTIFICATION AND INSPECTION AFTER SYSTEM INSTALLATION:
A. Install the installation and service label onto the ladder or structure in a prominent location. Use the steel wire provided with the label to attach it to the ladder or structure. Before installing the label, mark the installation date and number of users allowed in the appropriate locations on the label. Use a metal letter stamp to mark the label. Record the system identification information in the Installation Checklist at the end of this manual.
B. After installation conduct a final inspection of the system as follows:
• Ensure all fasteners are in place and properly tightened.
• Ensure the carrier cable is properly tensioned. Do not use the Lad-Saf™ system if the bottom of the cable is not secured/tensioned with the bottom bracket assembly.
• For cables terminated with a carrier clamp, the cable should extend above the carrier clamp 1.0 in. - 2.0 in. (2.5 cm - 5.0 cm).
• Ensure the carrier cable does not abrade against the structure at any point.
• Ensure the system information is recorded on the label.

5.0 INSPECTION
5.1 I-SAFE™ RFID TAG:
The Lad-Saf™ system includes an i-Safe™ Radio Frequency Identification (RFID) tag (Figure 28). The RFID tag can be used in conjunction with the i-Safe handheld reading device and web based portal to simplify inspection and inventory control and provide records for your fall protection equipment. If you are a first-time user, contact a Capital Safety Customer Service representative (see back cover). If you have already registered, go to www.capitalsafety.com/isafe. html. Follow the instructions provided with your i-Safe handheld reader or on the web portal to transfer your data to your web log.

6.0 MAINTENANCE, SERVICING, STORAGE
6.1 If the carrier cable becomes heavily soiled with oil, grease, paint, or other substances, clean it with warm soapy water. Wipe off the cable with a clean, dry cloth. Do not force dry with heat. Do not use acid or caustic chemicals that could damage the cable.

7.0 SPECIFICATIONS
7.1 All top and bottom brackets, cable guides, carrier cable, and fasteners are made of galvanized or stainless steel. Contact DBI-SALA for material specification details if required. The LAD-SAF™ system, when installed according to the installation instructions, meets OSHA, ANSI (ANSI A14.3), CSA (Z259.2.5) and CE (prEN353-1:2012) requirements.

8.0 LAD-SAF SYSTEM LABELING
Please reference the User Manual supplied with the Lad-Saf™ X2 Detachable Sleeve for proper use and maintenance of this system.

Lad-Saf System:
The Lad-Saf Flexible Cable Ladder Safety System label must be securely attached and fully legible. (See Figure 28) Label Contents:

1. WARNING: Manufacturer’s instructions supplied with this product at time of shipment must be followed for proper installation, use, inspection and maintenance. Unauthorized alteration or substitution of system elements or components is prohibited. Do not use system with incompatible safety sleeves. Before each use inspect system visually for defects. Formally inspect system in accordance with instructions at least annually. Failure to heed warnings may result in serious injury or death.
2. System Capacity
3. Inspections
4. Date of Inspection
5. Inspected By
6. Date of Next/Annual Inspection
7. RFID Tag
8. Serial Number
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**INSTALLATION CHECKLIST**

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<th>Date Of First Use:</th>
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**Install Date:**

☐ Ensure all fasteners are in place and properly tightened.

☐ Ensure the Carrier Cable is properly tensioned

☐ Ensure the Carrier Cable does not abrade against the structure at any point.

☐ Ensure system information is recorded on the system label and Inspection and Maintenance Log:

Components of the LAD-SAF system include an i-Safe™ Radio Frequency (RFID) tag. The RFID tag can be used in conjunction with the i-Safe handheld reading device and web based portal (www.capitalsafety.com/isafe) to simplify inspection and inventory control and maintain electronic records for your fall protection equipment.

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LIMITED LIFETIME WARRANTY

Warranty to End Users: CAPITAL SAFETY warrants the original end user ("End User") that its products are free from defects in materials and workmanship under normal use and service. This warranty extends for the lifetime of the product from the date the product is purchased by the End User. To the extent any product is purchased by a person other than an End User or re-sold, capital safety's sole discretion determines and deems appropriate. No oral or written information or advice given by CAPITAL SAFETY, its distributors, directors, officers, agents or employees shall create any different or additional warranties or in any way increase the scope of the warranty capitale safety, its distributors, directors, officers, agents or employees shall not be responsible for or liable for any defect or defect that is the result of product misuse, abuse, alteration or modification, or for defects for which the Distributor or its employees, agents or representatives are responsible. CAPITAL SAFETY will not accept liability for defects that are the result of product misuse, abuse, alteration or modification, or for defects for which the Distributor or its employees, agents or representatives are responsible.

Garantie limitada de por vida

Garantía para el Usuario final: CAPITAL SAFETY garantiza al usuario final original ("Usuario final") que sus productos están exentos de defectos en materiales o mano de obra, bajo uso normal y servicio. Esta garantía se extiende por la vida útil del producto a partir de la fecha de compra por el Usuario final. En el caso de que el producto sea adquirido por una persona diferente al Usuario final o re-adquirido, la responsabilidad de CAPITAL SAFETY se limitará a su discreción y determinación. No se pueden crear diferentes o adicionales garantías ni se aumentará el alcance de la garantía de CAPITAL SAFETY de forma que distribuidores, directivos, empleados, oficiales o agentes de CAPITAL SAFETY no sean responsables ni sean responsables por defectos o defectos que resulten del uso incorrecto, abuso, alteración o modificación, o por defectos de los que sean responsables los distribuidores o sus empleados, agentes o representantes. CAPITAL SAFETY no aceptará responsabilidad por defectos que resulten del uso incorrecto, abuso, alteración o modificación, o por defectos de los que sean responsables los distribuidores o sus empleados, agentes o representantes.

Garantía limitada de vida útil

Garantía para el Usuario final: CAPITAL SAFETY garantiza al usuario final original ("Usuario final") que sus productos están exentos de defectos en materiales o mano de obra, bajo uso normal y servicio. Esta garantía se extiende por la vida útil del producto a partir de la fecha de compra por el Usuario final. En el caso de que el producto sea adquirido por una persona diferente al Usuario final o re-adquirido, la responsabilidad de CAPITAL SAFETY se limitará a su discreción y determinación. No se pueden crear diferentes o adicionales garantías ni se aumentará el alcance de la garantía de CAPITAL SAFETY de forma que distribuidores, directivos, empleados, oficiales o agentes de CAPITAL SAFETY no sean responsables ni sean responsables por defectos o defectos que resulten del uso incorrecto, abuso, alteración o modificación, o por defectos de los que sean responsables los distribuidores o sus empleados, agentes o representantes. CAPITAL SAFETY no aceptará responsabilidad por defectos que resulten del uso incorrecto, abuso, alteración o modificación, o por defectos de los que sean responsables los distribuidores o sus empleados, agentes o representantes.

GARANTÍA LIMITADA DE VIDA ÚTIL

Garantía para el Usuario final: CAPITAL SAFETY garantiza al usuario final original ("Usuario final") que sus productos están exentos de defectos en materiales o mano de obra, bajo uso normal y servicio. Esta garantía se extiende por la vida útil del producto a partir de la fecha de compra por el Usuario final. En el caso de que el producto sea adquirido por una persona diferente al Usuario final o re-adquirido, la responsabilidad de CAPITAL SAFETY se limitará a su discreción y determinación. No se pueden crear diferentes o adicionales garantías ni se aumentará el alcance de la garantía de CAPITAL SAFETY de forma que distribuidores, directivos, empleados, oficiales o agentes de CAPITAL SAFETY no sean responsables ni sean responsables por defectos o defectos que resulten del uso incorrecto, abuso, alteración o modificación, o por defectos de los que sean responsables los distribuidores o sus empleados, agentes o representantes. CAPITAL SAFETY no aceptará responsabilidad por defectos que resulten del uso incorrecto, abuso, alteración o modificación, o por defectos de los que sean responsables los distribuidores o sus empleados, agentes o representantes.

BEPEKTE LEVENSSPALE GARANTIE

Garantie gericht aan de gebruiker: CAPITAL SAFETY garandeert de oorspronkelijke eindgebruiker ('eindgebruiker') dat zijn producten bij normaal gebruik en service vrij zijn van defecten in materiaal- en fabrieksinzameling van de fabrikant en onder normale gebruiksomstandigheden, beginnend met de data van aankoop van het product, de eindgebruiker. De garantie omvat: de reparatie of vervanging van het defecte product, of voor defecten die het gevolg zijn van misbruik, verkeerde gebruik, verandering of aanpassing van het product, of voor defecten die het gevolg zijn van het niet opvolgen van de instructies van de fabrikant. De garantie kent geen einddatum. De eindgebruiker moet de fabrikant onmiddellijk inzicht geven in het feit of het product reclame gesteld heeft. DE EINDEGEBRUIKER DIENDE VAN TOEPASSING IS OP ONZE PRODUCTEN EN TREEDT NIET IN DE PLACHT VAN ANDERE UITLEVERINGSKEURINGEN OF STILZWINGEN GEANNULEERDE KEURINGEN.

LEBENSFLAGE GARANTIE


LEBENSFLAGE GARANTIE

Garantia limitada de vida útil

Garantía para el Usuario final: CAPITAL SAFETY garantiza al usuario final original ("Usuario final") que sus productos están exentos de defectos en materiales o mano de obra, bajo uso normal y servicio. Esta garantía se extiende por la vida útil del producto a partir de la fecha de compra por el Usuario final. En el caso de que el producto sea adquirido por una persona diferente al Usuario final o re-adquirido, la responsabilidad de CAPITAL SAFETY se limitará a su discreción y determinación. No se pueden crear diferentes o adicionales garantías ni se aumentará el alcance de la garantía de CAPITAL SAFETY de forma que distribuidores, directivos, empleados, oficiales o agentes de CAPITAL SAFETY no sean responsables ni sean responsables por defectos o defectos que resulten del uso incorrecto, abuso, alteración o modificación, o por defectos de los que sean responsables los distribuidores o sus empleados, agentes o representantes. CAPITAL SAFETY no aceptará responsabilidad por defectos que resulten del uso incorrecto, abuso, alteración o modificación, o por defectos de los que sean responsables los distribuidores o sus empleados, agentes o representantes.

GARANTIE LIMITATĂ PE VIATĂ

Garantie acordată utilizatorului final: CAPITAL SAFETY garantează utilizatorului final inițial ("Utilizator final") că, în condiții normale de utilizare și întreținere, produsele sale nu vor prezenta defecte de materiale sau de executie. Această garanție este vărstabilă pe toată durata de viață a produsului, începând cu data achiziționării produsului. Această garantie este individuală și nu se înlocuiește dacă alte garanții și răspundere, EXPECES SAU IMPLICITICE.

LEBENSFLAGE GARANTIE

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LIFETIME WARRANTY

Warranty to End User: D B Industries, Inc., dba CAPITAL SAFETY USA (“CAPITAL SAFETY”) warrants to the original end user (“End User”) that its products are free from defects in materials and workmanship under normal use and service. This warranty extends for the lifetime of the product from the date the product is purchased by the End User, in new and unused condition, from a CAPITAL SAFETY authorized distributor. CAPITAL SAFETY’S entire liability to End User and End User’s exclusive remedy under this warranty is limited to the repair or replacement in kind of any defective product within its lifetime (at CAPITAL SAFETY in its sole discretion determines and deems appropriate). No oral or written information or advice given by CAPITAL SAFETY, its distributors, directors, officers, agents or employees shall create any different or additional warranties or in any way increase the scope of this warranty. CAPITAL SAFETY will not accept liability for defects that are the result of product abuse, misuse, alteration or modification, or for defects that are due to a failure to install, maintain, or use the product in accordance with the manufacturer’s instructions.

CAPITAL SAFETY’S WARRANTY APPLIES ONLY TO THE END USER. THIS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO OUR PRODUCTS AND IS IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES, EXPRESSED OR IMPLIED. CAPITAL SAFETY EXPRESSLY EXCLUDES AND DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND SHALL NOT BE LIABLE FOR INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING WITHOUT LIMITATION, LOST PROFITS, REVENUES, OR PRODUCTIVITY, OR FOR BODILY INJURY OR DEATH OR LOSS OR DAMAGE TO PROPERTY, UNDER ANY THEORY OF LIABILITY, INCLUDING WITHOUT LIMITATION, CONTRACT, WARRANTY, STRICT LIABILITY, TORT (INCLUDING NEGLIGENCE) OR OTHER LEGAL OR EQUITABLE THEORY.

LIMITED LIFETIME WARRANTY

GARANTIE LIMITÉE SUR LA DURÉE DE VIE

Garantie offerte à l’utilisateur final: D B Industries, Inc., dba CAPITAL SAFETY USA (“CAPITAL SAFETY”) garantit à l’utilisateur final d’origine (“Utilisateur final”) que les produits sont libres de tout défaut matériel et de fabrication dans des conditions normales d’utilisation et de service. Cette garantie couvre toute la durée de vie du produit, de sa date d’achat à l’état neuf et inutilisé par l’utilisateur auprès d’un distributeur agréé CAPITAL SAFETY. La responsabilité intégrale de Capital Safety est le seul recours du Client dans le cadre de cette garantie se limite à la réparation ou le remplacement en nature des produits défectueux pendant leur durée de vie (à la seule discrétion de Capital Safety et selon ce qu’elle juge approprié). Aucun renseignement ou avis oral ou écrit fourni par CAPITAL SAFETY, ses détaillants, administrateurs, cadres, distributeurs, mandataires ou employés ne représentera une garantie ou n’augmentera de quelque manière la portée de la présente garantie limitée. CAPITAL SAFETY n’accepte aucune responsabilité pour les défauts causés par un abus, une utilisation abusive, une altération ou une modification, ou pour les défauts causés par le non-respect des instructions du fabricant relatives à l’installation, à l’entretien ou à l’utilisation du produit.

CETTE GARANTIE CAPITAL SAFETY S’APPLIQUE UNIQUEMENT Á L’UTILISATEUR FINAL. ELLE EST LA SEUL GARANTIE APPLICABLE Á NOS PRODUITS, ELLE EXCLUT TOUTE AUTRE GARANTIE EXPRESSE OU IMPLICITE. CAPITAL SAFETY EXCLUT EXPLICITEMENT ET DÉCLINE TOUTE GARANTIE IMPLICITE DE HONNÊTETÉ RELATIVE ET D’ADAPTATION À DES FINS PARTICULIÈRES, ET NE SERA RESPONSABLE POUR AUCUN DOMMAGE INTÉRESSANT DIRECT OU INDIRECT, CORRÉLATIF OU ACCESSOIRE DE TOUTE NATURE Y COMPRIS ET DE MANIÈRE NON LIMITATIVE, LES PERTES DE PROFITS, LES RECOURS OU LA PRODUCTIVITÉ, LES BLESSURES CORPORELLES, VOIR LA MORTE OU DOMMAGES À LA PROPIÉTÉ, DANS LE CADRE DE TOUTE THÉORIE DE RESPONSABILITÉ, Y COMPRIS ET DE MANIÈRE NON LIMITATIVE UN CONTRAT, UNE GARANTIE, UNE RESPONSABILITÉ (Y COMPRIS LA NÉGLIGENCE) OU TOUTE AUTRE THÉORIE LÉGALE OU ÉQUITATIVE.

The Ultimate in Fall Protection
Connection Detail - Meter Located On Pole

Note: See National Electrical Code (NEC) for more information.

Service Equipment
Located Where Conductors Enter Building

Meter Enclosure
Mounted on Pole or Pedestal

4-Wire Feeder to Distribution Panel

Combination Rain Tight Meter and Breaker Enclosure

Grounding Block
Must be permanently bonded to enclosure.

Main Breaker

Additional 5/8" x 6' (Mn) Copper clad ground rod (install 1st rod is the only grounding electrode. See NEC 250.53(A)(2))

Legend
N Neutral
Black Wire (In most only)
Black Wire with White Tape Wrapped Around Ends
L1, L2 Phases
Black Wire
G Grounding Electrode Conductor
Green or Bare Wire
ESC Equipment Grounding Conductor
Green or Bare Wire

Wire/Conduit Size Table:

<table>
<thead>
<tr>
<th>Service Size</th>
<th>Minimum Wire Size (XHHW or RHW)</th>
<th>Minimum Conduit Size (RMC or MC)</th>
<th>Minimum Grounding Electrode Conductor Size</th>
<th>Equipment Minimum Grounding Conductor Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 Amp</td>
<td>#2 Copper</td>
<td>1 1/4&quot;</td>
<td>#4 Copper</td>
<td>#6 Copper</td>
</tr>
<tr>
<td>200 Amp</td>
<td>#3/0 Copper</td>
<td>2&quot;</td>
<td>#4 Copper</td>
<td>#6 Copper</td>
</tr>
<tr>
<td>300 Amp</td>
<td>300 kcmal Copper</td>
<td>2&quot;</td>
<td>#4 Copper</td>
<td>#4 Copper</td>
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</table>

Material List:

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty</th>
<th>Description</th>
<th>Typical Catalog</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>Ground Rod - 5/8&quot; x 6'</td>
<td>Blackburn 6256</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Ground Rod Clamp</td>
<td>Blackburn 568</td>
</tr>
<tr>
<td>3</td>
<td>**</td>
<td>#4 AWG or #2 AWG CU Wire</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>**</td>
<td>Copper Clad Ground Rod</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>Stand-Off Bracket</td>
<td>Morfab 8550SM</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>Stand-Off Bracket</td>
<td>Morfab 8550SM</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>Treated Pole - 30' Illustrated</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>OVAL EVENT</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>Galvanized Square Washer</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>Angle Trench Evertail - 9/16</td>
<td>Jossen 8051B</td>
</tr>
<tr>
<td>11</td>
<td>2</td>
<td>Preformed Grip</td>
<td>Jossen ANGEO116</td>
</tr>
<tr>
<td>12</td>
<td>**</td>
<td>Guy Cable - 1/4&quot; or Larger</td>
<td>Floridian 8774</td>
</tr>
<tr>
<td>13</td>
<td>**</td>
<td>Screw Anchor</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>Service Assembly</td>
<td>100A, 200A, 300A</td>
</tr>
<tr>
<td>15</td>
<td>**</td>
<td>Conduit Bushing</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>**</td>
<td>Conduit (Direct Burial)</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>**</td>
<td>Cover or Warning Tape</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>**</td>
<td>2-Pole Conduit Strap</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>1</td>
<td>Service Disconnect</td>
<td>100A, 200A, 300A</td>
</tr>
<tr>
<td>20</td>
<td>**</td>
<td>Conduit</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>**</td>
<td>Locknut &amp; Bonding Bushing</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>**</td>
<td>Copper Conductor</td>
<td></td>
</tr>
</tbody>
</table>

General Note:
1. The information in this booklet provides general guidelines for the installation of service equipment to meet the requirements of GVEA. It is the owner's responsibility to make sure that the service is also installed to meet all applicable city, borough, and State of Alaska codes, as well as the National Electrical Code (NEC) and National Electrical Safety Code (NESC).
2. If service drop exceeds 50', pole must be guyed. Service drop must not exceed 150'.
3. Telephone drop must be more than 12' (vertical clearance) below power cable at all points. See NEC 235C.

See instructions on following pages.
** Quantity/Length determined by installation requirements.
Instructions by Item #

1. **GROUND ROD**
   Shall be 3/8" x 8' listed copper-clad. Locate in undisturbed earth a minimum of 18" from pole and outside of hole dug for pole installation.
   
   - Ground rod at house must be located at least 18" from foundation or basement of building and out from under eaves. See NEC Article 250 for more information.
   - Drive rod 6" below ground level into undisturbed earth. Leave exposed for inspection. Cover the ground rod hole in winter to prevent it from filling with snow.
   
2. **GROUND ROD CLAMP**
   Use bronze or stainless steel clamp listed for direct burial.

3. **AWG #4 or #2AWG SOLID OR STRANDED BARE COPPER WIRE**
   Connect continuous grounding electrode conductor to grounding block or disconnect, then ground to minimum 5/8" x 8' ground rod and, if available, connect to nearest continuous metallic cold water system. Attached with UL listed grounding connectors.

4. **STAPLE**
   Copper Clad
   Staple Ground Wire every 6'.

5. **STAND-OFF BRACKET**
   Used to mount service equipment, with nuts, bolts, washers, and lag screws.

6. **STAND-OFF BRACKET**
   with lag screws.

7. **FULLY PRESSURE TREATED POLE NO CEDAR (MEMBER OWNED)**
   Length: Minimum 25 ft or greater as required to maintain clearances.
   - Strength: ANSI class 6 or better (e.g. Class 5, 4, etc.).
   - The pole must be installed at a location agreed upon with OVEA's Construction Services Representative. At least 5 ft of the pole must be buried below the level of the surrounding ground. Pole 30' and longer must be buried 10% of pole length plus 2.5'.
   - The pole must be lifted by OVEA's Construction Services Representative. When the pole will not lean when it is climbed. Pole brand (belly button) must be visible after equipment is mounted.
   - OVEA EYEDUT (for min. 5/8" dia bolt)

8. **GALVANIZED SQUARE WASHER**
   2-1/8" Square Washer

9. **GALVANIZED THINNLE EYEBOLT**
   Install 2 square washers, and 2 square nuts (min. 5/8" dia bolt).

10. **PREFORMED GRIP OR THREE BOLT GUY CLAMP**
    1. Grip must be the correct size for the guy conductor.
    2. The painted marks on the grip must be aligned after it is installed.
    3. A three-bolt clamp may be used instead of a grip.

11. **POLE GUY DETAIL**
    Pole Guy Detail
    - Must be in line with service drop
    - OVEA SERVICE DROP (To OVEA pole & transformer)

12. **SCREW ANCHOR DETAIL**
    Screw Anchor shall be installed a minimum of 15' from meter pole (measured at final grade).

13. **SERVICE ASSEMBLY**
    (Member's service equipment)
    Preassembled with Must, Breaker, and Conductors
    - See "Construction Guide for Overhead Residences Service Assembly" for details.
    - Prior to wiring a building or performing any electrical construction for a new service, the member shall request approval from OVEA for the location of member's service equipment, including meter(s).
    - The location of the member's service equipment shall be determined by working with OVEA's Construction Services Representative.
    - The member's service equipment shall be level, plum, and located outside on the member's side.
    - The member's service equipment must be firmly supported and be in a location free from vibration, mechanical damage, and accumulating or forming ice. The meter must be accessible for reading, testing, and replacement.

14. **SERVICE ASSEMBLY (Cont.)**
    - OVEA does not permit the installation of the member's service equipment on OVEA facilities. Service equipment is not allowed to be installed on mobile structures.
    - Horizontal centerline of the meter shall be between 30" and 60" above the finished grade immediately in front of the meter.
    - The distance between the vertical centerline of the meter and any solid or obstruction shall be greater than 7 inches.
    - Member must provide and maintain a minimum 4" wide path and debris free cleaning between the member's service entrance mast and OVEA pole for access to OVEA's service drop conductors. Remove any overhanging limbs or trees.
    - Conduit type shall be rigid metal conduit (RMC) or intermediate metal conduit (IMC).
    - Meter socket for a 300A self-contained service must have a lever bypass and the upper right-hand UFM must be reduced or have an anti-inversion clip installed to prevent the insertion of a 200A meter.

15. **CONDUIT BUSHING**
    Install bushing appropriately sized for the conduit.

16. **CONDUCTOR**
    (Type USE – Direct Burial)
    Wire size depends on length of run. Check with OVEA’s Construction Services Representative. Load side conductor shall be sized properly for member's wire between service and house. OVEA recommends the use of copper wire between meter and house.

17. **1" X 8" PLANK OR MARKING TAPE**
    Soil below plank or marking tape must be rock free and backfill with soil to avoid cable damage.

18. **2-HOLE CONDUIT STRAPS**
    Strap must be listed for use with conduit installed.
    Install with screws appropriate for the material to which it is being fastened.

19. **SERVICE DISCONNECT**
    Install appropriately sized disconnect based on NEC. Breaker enclosure must be of sunlight construction.

20. **CONDUIT**
    Install appropriate size and type based on NEC.

21. **LOCKNUT & BONDING BUSHING**
    Standard locknuts or sealing locknuts are acceptable when used with a bonding bushing.

22. **COPPER CONDUCTOR**
    LEAVE MINIMUM 18" TAILS out of weather head for connection to OVEA system. Mark neutral with White Tape around ends.
Appendix – Diagrams
6.2 Site Plan
Site Plan Detail

- Height of proposed construction: 52'
- Distance from property line: 33'
- Distance from existing structure: 400'
- Height of existing structure: 40'
- Proposed area to be cleared: 30'x30'
- Distance from Existing Utility Pole: 80'

- No existing structures are to be modified nor demolished
Site Access

Green: Area to be cleared of trees
Blue: Parking Area for site visits via easement

- Height of proposed construction: 52'
- Distance from property line: 33'
- Distance from existing structure: 400'
- Height of existing structure: 40'
- Proposed area to be cleared: 30'x30'
- Distance from Existing Utility Pole: 80'

No existing structures are to be modified nor demolished
Gravel and Typar Road/Pad
Light forestation, grass, moss
Heavy forestation
Cleared Easement

- Height of proposed construction: 52'
- Distance from property line: 33'
- Distance from existing structure: 400'
- Height of existing structure: 40'
- Proposed area to be cleared: 30'x30'
- Distance from Existing Utility Pole: 80'
- No existing structures are to be modified nor demolished

Surface Material

TL-1 LIPSCOMB PLAT 60-6887 8/22/60 WVR 74-37 5/15/74

- 30' Easement
- 40' Right of Way
- 30' Easement
- 123.66'
- 109.06'
- 353.18'
- 115.20'
- 577.00'
- 33' Easement
- Distance 33'
- Proposed Easement for power
- Proposed Guy Wire 17' across ground
- Proposed Construction Location

N 1" = 77' Scale
Property Map

ALASCONNECT

FROM

TO

AC Wireless

Proposed Chena Ridge Site

Drawn By

JOR

DATE

8/3/16

CUSTOMER

AC Wireless

TYPE

ACW

CIRCUIT ID

ALC000544
Appendix – Diagrams
6.3 Map of ACW Facilities in the FNSB
Existing ACW Infrastructure

<table>
<thead>
<tr>
<th>Site#</th>
<th>Site Name</th>
<th>Site Type</th>
<th>Site Address</th>
<th>Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wilson Tower</td>
<td>Tower</td>
<td>901 Bidwil Ave</td>
<td>Golden Valley Electric Association</td>
</tr>
<tr>
<td>2</td>
<td>Zehnder Tower</td>
<td>Tower</td>
<td>758 Illinois St</td>
<td>Golden Valley Electric Association</td>
</tr>
<tr>
<td>3</td>
<td>Birch Tower</td>
<td>Tower</td>
<td>1194 Beacon Rd</td>
<td>Fairbanks North Star Borough</td>
</tr>
<tr>
<td>4</td>
<td>Ester Tower</td>
<td>Tower</td>
<td>3882 Ester Dome Rd</td>
<td>University of Alaska</td>
</tr>
<tr>
<td>5</td>
<td>Fort Wainwright</td>
<td>Tower</td>
<td>Alder Ave, Fort Wainwright</td>
<td>USA Land Management</td>
</tr>
<tr>
<td>6</td>
<td>Haystack Pole</td>
<td>Pole</td>
<td>5830 Middle Fork Rd</td>
<td>Katheryn Mosley</td>
</tr>
<tr>
<td>7</td>
<td>Currant Court</td>
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<td>Tower</td>
<td>30 Mile Steese Hwy</td>
<td>UAF Geophysical Institute</td>
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<td>A</td>
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<td>Pole</td>
<td>645 Nautilus Dr</td>
<td>Cameron C Cashman</td>
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<tr>
<td>B</td>
<td>Chena Ridge Pole</td>
<td>Pole</td>
<td>1530 Alderwood Dr</td>
<td>Jackie L Willard Jr.</td>
</tr>
</tbody>
</table>
Appendix – Diagrams
6.4 Lease Agreement
Site Lease Agreement

Definitions
"Property Owner" means the current property owner, successor in interest to the property or an authorized representative.
"AlasConnect" means AlasConnect, Inc. or an authorized representative.
"Lease Agreement" means this site lease agreement between Property Owner and AlasConnect.

Confidentiality and Non-Disclosure
The terms of this Lease Agreement are confidential and Property Owner agrees not to disclose this Lease Agreement or the terms of the Lease Agreement to any third party without prior written approval from AlasConnect.

Lease Term and Termination
The term of this lease shall be five years from the date of commencement and shall renew automatically for two additional five year terms, subject however, to either party's ability to terminate the lease by providing the other party with written notice of termination not less than 120 days prior to the expiration of the then current term. AlasConnect reserves the right to terminate the lease at any time prior to the expiration of the then current term provided that AlasConnect submits written notice to the Property Owner and pays the Property Owner a termination fee in the amount of $1,000. This Lease Agreement represents an interest in the property and AlasConnect may record an appropriate memorandum reflecting the lease arrangement. Notwithstanding the foregoing, this lease may be terminated at any time by the mutual agreement of both parties.

Upon termination of the lease, AlasConnect will remove all equipment from the leased property.

Payment
As the sole consideration for this Lease Agreement, AlasConnect agrees to make a monthly payment equal to the recorded cost of the highest level of residential broadband Internet service then currently available by AlasConnect at the lease site during the term of the lease or until such time as the lease is terminated as provided above (whichever occurs first). AlasConnect may also opt to make payments on an annual basis. The yearly value of the Internet service which is being provided as payment for the lease is, at the time of the signing of this lease, equivalent to $1,260. Additionally, AlasConnect will provide the property owner with a "Cost Reimbursement Payments in the amount of $350 annually. Payment amounts are reportable, taxable income. Therefore, AlasConnect is required to submit a Form 1099 to the Property Owner on an annual basis. In order to provide this, AlasConnect will need a completed W-9 form on file for the Property Owner.

Site and Area
See Attachment A for the site description and specifics.

Technical Feasibility
For purposes of this Lease Agreement, the lease term shall commence once the equipment has been installed, tested, and is deemed fully operational by AlasConnect.

Limitation of Liability
AlasConnect’s liability under this Lease Agreement shall be limited solely to property damage and personal injury directly caused by AlasConnect, its agents, or contractors. Notwithstanding the foregoing, AlasConnect will not be liable for any damage reasonably associated with the installation, operation, and ongoing maintenance activities on the lease site.

Property Owner agrees that he/she will not interfere, obstruct or otherwise damage AlasConnect equipment as located on the property. To the extent that any such damage occurs, it will be billable to the Property Owner.

Access and Utilities
AlasConnect and its employees, agents, contractors, and utilities will be given unrestricted access to and from the leased property for the purpose of installing, operating, and maintaining the equipment as defined in Attachment A. However, AlasConnect will make reasonable attempts to provide Property Owner with advanced notice in the event that such access is required.

Governing Law
This lease shall be governed by the laws of the State of Alaska.

Signed and Dated (Sign and Print Name)
AlasConnect:  
Signature:  
Date:  
Property Owner:  
Signature:  
Date:  

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Appendix – Diagrams

6.4.1 Tower Removal Agreement
August 1, 2016

Fairbanks North Star Borough
Borough Attorney’s Office
PO Box 71267
Fairbanks, AK 99707

To Whom It May Concern:

This letter is being provided to the Fairbanks North Star Borough in order to satisfy the requirements outlined in Section 18.50.155 Standards for communication towers.

AlasConnect hereby agrees to remove its minor communications tower proposed to be located at 1345 N Becker Ridge Road within 180 days after the tower is substantially unused for a period of 12 consecutive months.

This agreement shall run with the land and shall be binding on any future owner of the property. If the conditional use is approved, this agreement shall be recorded at the owner’s expense.

Please contact me with any questions at all about this.

Sincerely,

Jeff Yauney
President & CEO
AlasConnect, LLC
(907) 459-4929
(907) 460-6360 (cell)
jpyauney@alasconnect.com
Appendix – Diagrams
6.5 FAA Determination
** DETERMINATION OF NO HAZARD TO AIR NAVIGATION **

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

Structure: Utility Pole Jackhammer Rd. Pole  
Location: Fairbanks, AK  
Latitude: 64-48-11.03N NAD 83  
Longitude: 148-00-47.33W  
Heights: 1269 feet site elevation (SE)  
52 feet above ground level (AGL)  
1321 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

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

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

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed and maintained in accordance with FAA Advisory circular 70/7460-1 L.

This determination does not constitute authority to transmit on the frequency(ies) identified in this study. The proponent is required to obtain a formal frequency transmit license from the Federal Communications Commission (FCC) or National Telecommunications and Information Administration (NTIA), prior to on-air operations of these frequency(ies).

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.
This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

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

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

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

If we can be of further assistance, please contact our office at (907) 271-5863. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2016-AAL-326-OE.

Signature Control No: 284931506-286995014
(DNE)
Robert van Haastert
Specialist

Attachment(s)
Frequency Data
Map(s)

cc: FCC
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<tr>
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</tbody>
</table>
Appendix – Diagrams

6.6 Visual Impact Analysis
Visual Impact - North View

Photo was taken from ~500' South of proposed site. Proposed site area is completely obstructed by trees.
Photo was taken from ~500' West of proposed site. Proposed site area is completely obstructed by trees.
North-East View

Photo was taken from ~500ft South-West of proposed site. Proposed site area is completely obstructed by trees.
Appendix – Diagrams
6.7 Alternate Site Survey
Alternate Sites – Existing Towers (Potential Co-Locations)

1. Zehnder Tower
2. Gold Hill Tower
3. Chena Pump Tower
4. 2380 Broadmore
5. Airport Tower
6. Wilson Tower
C. Proposed Site
Alternate Sites – Potential Pole Sites

1. Alternate Site 1: Able to obtain LOS but property owner did not want construction on their property.
2. Alternate Site 2: Able to obtain LOS but property owner did not want construction on their property.
3. Alternate Site 3: Able to obtain LOS but property owner did not want construction on their property.
4. Alternate Site 4: Unable to obtain LOS.

A. Proposed Site: Able to obtain LOS and property owner was willing to lease property.
Appendix – Diagrams
6.8 Zoning Map
Appendix – Diagrams

6.9 Coverage Gap
This map was compiled using a list of failed surveys. These were all sites that were determined by ACW Technicians to be possible customers with the installation of the proposed Nautilus Dr Site.
Proposed Site – Coverage Map

This map represents the approximate area that will be able to be served after the proposed construction is completed.

Green signifies qualifying signal of better than -70 db, which indicates a maximum customer download speed of 4 Mbps during speed tests.

Red signifies non-qualifying signal, which indicates that customer will experience unacceptable performance.

No color indicates zero signal available.
Proposed Site – Coverage Gap

This map represents the current coverage area from our transmitters on Birch Hill.

Green signifies qualifying signal of better than -70 db, which indicates a maximum customer download speed of 4 Mbps during speed tests.

Red signifies non-qualifying signal, which indicates that customer will experience unacceptable performance.

No color indicates zero signal available.
Appendix – Diagrams
6.10 FCC License Requirements
systems to operate within the same frequency band with decreased potential for mutual interference problems.

II. BACKGROUND

2. Part 15 of the regulations permits the operation of radio frequency (RF) devices without a license from the Commission or the need for frequency coordination. The technical standards for Part 15 transmission systems are designed to ensure that there is a low probability that these devices will cause harmful interference to other users of the spectrum. Indeed, the primary operating conditions under Part 15 are that the operator must accept whatever interference is received and must correct whatever interference is caused.

3. Spread spectrum communications systems use special modulation techniques that spread the energy of the signal being transmitted over a very wide bandwidth. The information to be conveyed is modulated onto a carrier frequency by some conventional technique, such as AM, FM or digital, and the bandwidth of the signal is deliberately widened by means of a spreading function. This spreading reduces the power density of the signal at any frequency within the transmitted bandwidth, thereby reducing the probability of causing interference to other signals occupying the same spectrum. The spreading technique used in the transmitter is reversed in the receiver to enable detection and decoding of the signal. This reversal of the signal spreading process enables the suppression of strong undesired signals in the receiver. Spread spectrum systems are thus able to tolerate strong nonspread signals with a reduced likelihood of receiving harmful interference.

4. Part 15 authorizes the unlicensed operation of spread spectrum transmitters within the 915 MHz, 2450 MHz and 5800 MHz frequency bands at higher power levels than would normally be permitted for other unlicensed devices. The current regulations limit spread spectrum systems to a maximum peak transmitter output power of one watt. When operating at that power level, the maximum directional gain of the associated antenna may not exceed 6 dBi, resulting in a maximum equivalent isotropically radiated power (EIRP) of four watts, i.e., 6 dBW. Direct sequence systems must employ a minimum bandwidth of 500 kHz with a processing gain of at least 10 dB. Frequency hopping systems in the 915 MHz band must use at least 50 hopping channels with a maximum channel bandwidth of 500 kHz, while hopping systems in the 2450 MHz and 5800 MHz bands must use at least 75 hopping channels with a maximum channel bandwidth of 1 MHz.

5. In the Notice of Proposed Rule Making ("Notice") in this proceeding, the Commission proposed to amend Part 15 of its rules to permit the use of higher antenna gains, without a corresponding reduction in transmitter output power, for spread spectrum transmitters operating in the 5800 MHz band. This proposal was in response to a Petition for Rule Making and Request for Immediate Waiver submitted by Western Multiplex Corporation (WMC). In the Notice, the Commission also proposed to reduce the minimum number of channels required for frequency hopping systems operating in the 915 MHz band from 50 to 25 channels, along with a corresponding reduction in the maximum allowable transmitter output power. This latter proposal was in response to a Petition for Rule Making submitted by Spectralink Corporation (Spectralink). On its own motion, the Commission also proposed several additional amendments to Part 15 of the rules regarding the maximum permitted spectral power density for direct sequence spread spectrum systems; the definitions of direct sequence, pseudorandom sequence, and frequency hopping systems; theacceptability of transmitters employing short duration transmissions; the measurement of processing gain; clarification of the limits on unwanted emissions; the coordination of frequency hopping transmitters; and the use of external radio frequency power amplifiers. It further proposed that the changes to the regulations adopted in response to the Notice become effective upon the date of publication in the Federal Register in order to make the benefits resulting from the changes available as soon as possible. Finally, the Commission denied a Petition for Rule Making from Symbol Technologies, Inc. (Symbol) which requested that the minimum number of channels required for frequency hopping systems operating in the 2450 MHz or 5800 MHz bands be reduced from 75 to 20.

6. Comments responding to the proposed changes to the rules were submitted by a number of parties. Generally, these comments were supportive of the Commission's proposals. The commenters also submitted numerous suggestions for improving or modifying the proposed rules. A list of the parties submitting comments is contained in Appendix A.

III. DISCUSSION
Application Material Received on
August 31, 2016

CU2017-004
August 1, 2016

Fairbanks North Star Borough
Borough Attorney’s Office
PO Box 71267
Fairbanks, AK 99707

To Whom It May Concern:

This letter is being provided to the Fairbanks North Star Borough in order to satisfy the requirements outlined in Section 18.50.155 Standards for communication towers.

AlasConnect hereby agrees to remove its minor communications tower proposed to be located at 1345 N Becker Ridge Road within 180 days after the tower is substantially unused for a period of 12 consecutive months.

This agreement shall run with the land and shall be binding on any future owner of the property. If the conditional use is approved, this agreement shall be recorded at the owner’s expense.

Please contact me with any questions at all about this.

Sincerely,

Jeff Yauney
President & CEO
AlasConnect, LLC
(907) 459-4929
(907) 460-6360 (cell)
jpyauney@alasconnect.com
DEPARTMENT OF COMMUNITY PLANNING
STAFF REPORT

CU2017-002
October 11, 2016 Planning Commission Meeting

TO: Fairbanks North Star Borough Planning Commission

FROM: Stacy Wasinger, Planner III

DATE: September 28, 2016

RE: CU2017-002: A request by John Larrison for conditional use approval of a kennel, minor in the Rural Estate 4 (RE-4) zone on Lot 84, Goldstream Subdivision (located at 1261 Ballina Road on the south side of Ballina Road, southeast of Goldstream Road).

I. EXECUTIVE SUMMARY

The Department of Community Planning recommends APPROVAL of the conditional use request with eight (8) conditions of approval and three (3) Findings of Fact in support of approval. The applicant has requested a conditional use permit for a non-commercial, minor dog kennel, which by Title 18 definition would allow up to 24 dogs to be kept on site. Potential noise impacts from barking dogs are a primary concern in the analysis of this proposed conditional use kennel. Proposed conditions that limit activity and feeding hours, require vegetation to be retained within the east side yard setback, and maintain all setbacks will help mitigate the potential noise impacts. Additional proposed conditions require that the animals be contained on the site and limit the proposed kennel to non-commercial use. These conditions address potential safety concerns of animals leaving the kennel site and that adequate facilities exist to serve the kennel, including transportation facilities. The staff analysis finds that the kennel, minor, with proposed conditions, will meet the intent and purpose of Title 18 and of other ordinances and state statutes, will have adequate public services and will protect public health, safety and welfare.

II. GENERAL INFORMATION

A. Purpose

To allow a kennel, minor in the RE-4 zone

B. Location

On the south side of Ballina Road, southeast of Goldstream Road

C. Access

Ballina Road

D. Size/PAN

<table>
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E. Existing Zone

RE-4

F. Existing Land Use

Vacant
G. Surrounding Land Use/Zoning

North: Zoning: RE-4, Land Use: Residential
South: Zoning: OR, Land Use: Vacant
East: Zoning: RE-4, Land Use: Residential
West: Zoning: RE-4, Land Use: Vacant

H. Community Facilities
Water and Sewer: Private
Electricity: GVEA

I. Code Violations
None on file

J. Flood Zone
X (100%) (March 17, 2014 dFIRM)

K. Zoning History
Unrestricted Use (UU) to Rural Estate (RE-LA I) with Ord. No. 79-101, adopted Nov. 8, 1979
Rural Estate (RE-LA I) to Rural Estate 4 (RE-4) with Ord. No. 88-010, effective Apr. 25, 1988

L. Ownership
John Larrison
1024 Aurora Borealis Lane
Fairbanks, AK 99709

M. Applicant
Same

III. ZONING AND DEVELOPMENT HISTORY

Zoning was first established on the subject property with the adoption of Ordinance No. 67-34 on March 28, 1968 with the designated zone of Unrestricted Use (UU). The subject property was rezoned from UU to Rural Estate (RE-LA I) with the adoption of Ord. No. 79-101 on November 8, 1979. Lot 84 was created with the recording of a plat for Goldstream Subdivision on February 4, 1981 (Exhibit 1). The zoning on the subject property changed from RE-LA I to Rural Estate 4 (RE-4) when Ord. 88-010 came in effect on April 25, 1988. The property is currently vacant but a zoning permit for a cabin was issued on May 31, 2016. A cabin residence is a permitted use in the RE-4 zone.

This application requests a conditional use permit to utilize the parcel as a kennel, minor defined in FNSBC 18.04.010 as “a lot on which no fewer than five and no more than 24 dogs or cats, six months of age and older, are maintained out-of-doors or in unheated buildings”. A kennel, minor requires a conditional use permit in the RE-4 zone (FNSBC18.36.020 (B)). The applicant states that he currently has nineteen (19) dogs, but the definition of “kennel, minor” allows up to twenty-four (24) dogs.

The lot on which the proposed conditional use kennel is located is currently vacant. The adjacent property to the west is vacant, the property to the south is vacant and owned by the State of Alaska Department of Natural Resources, and the property to the east is developed residentially. The surrounding neighborhood is currently either developed residentially or undeveloped. Figure 1 shows the current land use of parcels in the neighborhood, based on the FNSB Assessor primary use designations. Parcels in yellow are designated as
residential uses, gray are vacant parcels, and the red parcel off of Goldstream Road is owned by the Chena Goldstream Fire and Rescue Department. According to FNSB GIS data, the nearest existing structure to the proposed conditional use is a residential structure located on the eastern adjacent parcel, approximately 150 feet from the subject parcel’s east property line and 300 feet from the proposed dog areas.

**Figure 1: Surrounding Land Uses** (Source: FNSB GIS)

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**IV. APPLICABLE APPROVAL CRITERIA**

Conditional Uses are governed by the following provisions of Title 18, Fairbanks North Star Borough Code of Ordinances:

18.104.050 (C) Hearing and Decision by the Planning Commission
The planning commission shall review, hear and decide whether or not to approve a request for a conditional use. The planning commission shall also consider and adopt findings in each of the following:

1. Whether or not the proposed conditional use conforms to the intent and purpose of this title and of other ordinances and state statutes;

2. Whether or not there are adequate existing sewage capacities, transportation facilities, energy and water supplies, and other public services to serve the proposed conditional use;

3. Whether or not the proposed conditional use will protect the public health, safety and welfare.

The planning commission may approve or deny a conditional use request or may approve a conditional use request with conditions to ensure the protection of the public health, safety and welfare. Such conditions may relate to any, or more, of the following: traffic flow and access requirements, lighting, pedestrian movements, time limits for commencing or ceasing use.

Public Notice

There were 51 dear property owner notices mailed out and staff received six (6) inquiries about this conditional use.

V. STAFF ANALYSIS

A. Development and Use

This application requests a conditional use permit use approval for a kennel, minor, which is defined in FNSBC 18.04.010 as “a lot on which no fewer than five and no more than 24 dogs or cats, six months of age and older, are maintained out-of-doors or in unheated buildings.” The applicant currently has 19 dogs proposed to be on site in the kennel, but the definition of “kennel, minor” allows for up to 24 dogs.

This conditional use application is for a private kennel to support the applicant and property owner’s personal dog mushing activities. There will not be commercial activities associated with the kennel and the dogs will be transported off-site for mushing activities. The 24 foot by 16 foot dry cabin proposed on site will be occupied by the applicant/property owner full-time. The applicant states that he will be available should issues arise because he will be living on-site. Two privacy fence segments, six and a half feet tall and made of wood and metal siding, are proposed between Ballina Road and the rows of dog shelters and stakes, in addition to a gate in front of the driveway.

Training, feeding, and other daily activities associated with a kennel are proposed for the site. The applicant proposes that 3pm to 10pm, Monday through Friday, and 8am to 10pm Saturday and Sunday will be the primary hours of activity. September through May will be the months with the highest activity. Feeding is proposed to take place no earlier than 7am and no later than 11pm and will occur once daily during summer months and twice daily during winter months (September through May). Animal waste
will be picked up daily and disposed of off-site weekly at appropriate transfer site locations. Water will be hauled to the site and stored in the cabin.

Figures 2 and 3 illustrate the overall and detailed site plan provided by the applicant. The dogs are proposed to be housed outdoors with a separate shelter for each dog at least 20 feet apart and a proposed six and a half to eight foot tether to leash each dog near its shelter. All shelters are proposed to be 45 feet from Ballina Road and 10 feet from the west property line. However, the side-yard setback for buildings is 25 feet from the west property line. By definition in FNSBC 18.04.010, “building” is “a structure for the support, shelter or enclosure of persons, animals, chattel or property of any kind.” This definition includes temporary structures and the dog shelters. A fenced twelve foot by six and a half foot dog pen is also proposed behind the cabin.

**Figure 2: Site Plan**
(Source: Site plan by applicant, annotations by Community Planning staff for illustrative purposes.)
Figure 3: Detailed Site Plan
(Source: Site plan by applicant, annotations by Community Planning staff for illustrative purposes.)

B. Zoning, Land Use and Comprehensive Plan Designation

Figure 4 shows that the surrounding parcels to the north, east, and west are zoned RE-4. The parcel to the south, owned by the State of Alaska, Department of Natural Resources, is zoned Outdoor Recreation (OR). There is also General Use 1 (GU-1) zoning in the area. The neighboring properties are primarily used for residential purposes or vacant. A kennel, minor is a conditional use permit in RE-4 zone (FNSBC18.36.020 (B)). The RE-4 zone also permits uses such as single-family and two-family residences, accessory uses, and domestic livestock. Required setbacks in the RE-4 zone are 35 feet from the front property line and 25 feet from the side and rear property lines.

The comprehensive plan designation for the subject parcel is “Outskirt Area”. It is defined as “Area generally within a 20 to 30 minute travel time of urban destinations, and which contains primarily open space, mining and residential uses; variable densities are encouraged provided they are compatible with the surrounding community, sensitive to natural systems and have adequate water and sewer facilities. Other uses include agriculture, and supporting commercial uses.” The proposed conditional use conforms to the comprehensive plan designation to the parcel because the site will remain primarily open and with conditions, the impacts of the kennel, minor on the surrounding community will be mitigated. The application materials align with Land Use Goal 4,
Strategy 10 of the FNSB Regional Comprehensive Plan, which is to “attract and support development that is compatible with and enhances existing land use”. The private dog kennel is intended to provide the property owner a site to house his mushing dogs on the same site as his residence. With conditions as proposed, it is staff’s recommendation that the proposed conditional use will be compatible with the existing uses in the surrounding neighborhood. Appropriate conditions will help mitigate impacts and increase compatibility.

Figure 4: Zoning Map
(Source: FNSB GIS)

C. Agency Comments

The FNSB Department of Community Planning contacted following agencies for comments:

a. State of Alaska Department of Public Safety, Division of Fire and Life Safety
b. State of Alaska Department of Natural Resources (ADNR)
c. State of Alaska Department of Environmental Conservation (ADEC)
d. State of Alaska Troopers
e. Army Corp of Engineers
f. Golden Valley Electric Association (GVEA)
D. 18.104.050 (C) Hearing and Decision by the Planning Commission

(1) Whether or not the proposed conditional use conforms to the intent and purpose of this title and of other ordinances and state statutes;

Purpose of FNSBC Title 18: The purpose of Title 18 is “to implement the Fairbanks North Star Borough comprehensive plan” (FNSBC 18.12.020). The application materials align with Land Use Goal 4, Strategy 10 of the FNSB Regional Comprehensive Plan, which is to “attract and support development that is compatible with and enhances existing land use”. With conditions as proposed, it is staff’s recommendation that the proposed conditional use will be compatible with the existing uses in the surrounding neighborhood. Appropriate conditions will help mitigate impacts and increase compatibility. The proposed conditional use is also consistent with the Outskirt Area designation.

Intent of FNSBC Title 18: The intent of Title 18 which is “to protect private property rights, to promote the public health, safety and general welfare of the residents of the borough, and safety from fire and to promote the efficient distribution of water, sewage, schools, parks and other public requirements; to provide safe traffic flow on the public streets; to promote economic development and the growth of private enterprise; and to divide the borough into districts (FNSBC 18.12.020)."

Allowing an owner to develop their private property is an example of protecting private property rights with local zoning regulations. This proposal is to develop the property with a kennel, minor which is a conditional use in RE-4 zone. All conditional uses for RE-4 zone are listed in Title 18 of FNSB Code. The public notification, public hearing procedures and approval criteria for conditional uses protect the property rights of the surrounding property owners.

With the conditions imposed, the application promotes the public health, safety and general welfare of the residents of the borough because the applicant has addressed noise, odor, and other potential impacts. The location and fencing of the dog areas in conjunction with the existing vegetation on the site and in the surrounding area minimizes the visual impact to neighboring property owners. The fence and vegetation also help to create a buffer from the kennel use to the adjacent parcel on the east, which is currently vacant. While there are no ITE trip generation standards for a non-commercial kennel, staff’s opinion is that there will only be a slight expected generation rate above a single-family residence (K. Spillman). The proposed conditional use will not generate significant additional trips and does not impede vehicular and pedestrian traffic on the surrounding roads. Noise created by the dogs barking is an impact that will cross property lines. Limiting feeding and activity hours will mitigate the noise impact as much as is possible. However, there is still expected to be some noise from barking. The application material and the narrative for this proposal demonstrates that it meets
the intent of Title 18 because the kennel protects property rights and with the conditions imposed, it would promote the public health, safety and general welfare of the residents of the borough.

**Alaska State Statute and Other Ordinances:** The site is not within City of Fairbanks or City of North Pole limits and complies with the FNSB Comprehensive Plan and other ordinances.

**(2) Whether or not there are adequate existing sewage capacities, transportation facilities, energy and water supplies, and other public services to serve the proposed conditional use;**

The applicant has demonstrated that the proposed conditional use has adequate power supply from GVEA. The proposed conditional use will be served by hauled water and does not require sewage capacity for operation. The applicant has proposed an outhouse for the dry cabin that requires prior approval by ADEC if a holding tank is utilized. A condition to meet all ADEC requirements will address this concern. Dog waste and any other solid waste will be removed from the site and disposed of properly in a borough transfer site. The proposed conditional use is within Chena Goldstream Fire Service Area.

Staff’s opinion is that the proposed conditional use has adequate transportation facilities. The proposed kennel will have adequate traffic capacity because it is served by Ballina Road and Goldstream Road in the Goldstream Road Service Area. The kennel is not proposed to be a commercial operation and proposed condition number 5 will ensure commercial kennel activities are not conducted on this site. While there are no ITE trip generation standards for a non-commercial kennel, staff’s opinion is that there will only be a slight expected generation rate above a single-family residence (K. Spillman). A commercial kennel might have increased traffic and other impacts. Staff therefore recommends a condition that no commercial mushing or kennel activities shall be allowed under this proposed conditional use.

**(3) Whether or not the proposed conditional use will protect the public health, safety and welfare.**

With the conditions imposed, the application protects the public health, safety and general welfare of the residents of the borough because the proposed conditional use would mitigate impacts to the surrounding neighborhood. Noise impacts and keeping the dogs contained are primary concerns for health, safety, and welfare impacts to the neighborhood.

The applicant has selected to site the dog shelters and cabin area to the west side of the property, next to a currently vacant lot. Additionally, proposed sight-obscuring fencing, in conjunction with the existing vegetation on the site and in the surrounding area, will minimize the visual impact and create a buffer for neighboring property owners. A condition to maintain existing vegetation is proposed to maintain this barrier. The dogs are proposed to be tethered on-site to prevent them from leaving the kennel or roaming on adjacent property. A condition that all animals shall be secured on the kennel site as proposed will mitigate the health, safety, and welfare impacts of dogs roaming to the neighborhood. The applicant has stated that the outdoor lighting will not impact other property. FNSBC 18.96.140 states that "lighting, glare and general illumination shall not
be directed towards residentially zoned properties other than that property from which the lighting, glare, general illumination originates” and ensures that there are no adverse impacts to adjacent neighbors from outdoor lighting. Odor is a concern with land uses that involve animals, particularly through animal waste. Animal waste is proposed to be picked up daily, mitigating the odor impacts of the proposed conditional use. The proposed conditional use will have a safe traffic flow because the tower does not generate any additional trips and does not impede vehicular and pedestrian traffic on the surrounding roads.

FNSB GIS information shows that the property may contain some wetlands. The proposed dog shelters for the minor kennel are not intended to be permanent structures and would not require fill. However, if there are Jurisdictional Wetlands determined to be on site, any fill activity on site may require permits from the Army Corp of Engineers. No such determination has been made. A condition to meet all other local, state, and federal requirements would include the Applicant obtaining any applicable Army Corp of Engineer determinations and permits.

Noise is a primary concern with the proposed conditional use. According to a study for an animal shelter in another municipality from Impact Sciences, Inc., the maximum noise created by a dog barking from three feet away is 100 decibels. This would be equivalent to an automobile horn (Exhibit 2). However, the average noise from a dog bark is approximately 75 decibels and would decrease with distance from the site (Exhibit 3). According to a noise calculator produced by Georgia State University, a sound that is 100 decibels from three feet away would be heard as approximately a 60 decibel level sound from a distance of 300 feet, which is the approximate distance of the nearest structure to the proposed conditional use kennel. In the recent implementation of a Military Noise Overlay Zone in the borough, 65 decibels was determined to be the threshold for inclusion in the overlay. The overlay zone provides notice that properties within it may be affected by military aircraft and arms noise at this sound level.

It is expected that some noise will ensue from the dogs proposed to be sheltered in the kennel, from barking during training activities, feeding, or other times. According to the Humane Society of the United States, some of the primary causes of barking are hunger, territoriality, and excitement (Exhibit 4). Feeding, training, and passing vehicles could be triggers for barking. The application materials state that the primary activity hours will be 3pm to 10pm, Monday through Friday and 8am to 10pm Saturday and Sunday. Feedings are proposed to occur no earlier than 7am and no later than 11pm. Due to the residential nature of the surrounding neighborhood, a condition is proposed to limit the activity hours to limit the potential noise impacts as much as possible. Limiting all activity, including feeding, to between the hours of 8am and 10pm instead of 7am to 11pm will help reduce impacts. Additionally, the proposed fencing and vegetative barriers will create a visibility buffer and help mitigate territorial barking.

Although this conditional use approval is for a particular use of the said property, a change in the site plan or operation method or expansion may result in increased impacts or trigger a public health, safety and welfare concern which have not been analyzed as part of this conditional use permit. Therefore, Community Planning staff

2 “Estimating Sound Levels With the Inverse Square Law.” Georgia State University Physics Department <http://hyperphysics.phy-astr.gsu.edu/hbase/acoustic/isprob2.html>
suggests a condition that if any modifications are made to the operation of the kennel, proposed location, site plan, or other required documents, the applicant shall submit revised documents to the FNSB Community Planning Department. If substantial modifications are made to these documents, an amendment to the conditional use permit may be required pursuant to FNSBC 18.104.050 (D).

VII. RECOMMENDATION

Based on the staff analysis, the Department of Community Planning recommends APPROVAL of the conditional use permit request for a kennel, minor in the RE-4 zone with eight (8) conditions.

VIII. CONDITIONS

1. The applicant or holder of this conditional use permit shall comply with all applicable local, state, and federal laws.

2. All training, exercise, feeding, and other kennel activities shall be limited to between the hours of 8am to 10pm.

3. All animals shall be contained on the site through tethers as proposed, fencing, or other equivalent containment methods.

4. All dog shelters and other structures shall meet zoning district setback requirements.

5. Commercial kennel activities shall not be permitted.

6. All existing vegetation within the 25 foot setback on the west side of the property, except that necessary to be removed for maintenance or construction of the dog shelters, shall be maintained on the property.

7. A revised site plan with all dog shelters located out of the setbacks and vegetative buffers shall be submitted to the FNSB Community Planning Department.

8. If any modifications are made to the proposed location, site plan, or other FNSB required documents, the applicant or holder of this conditional use permit shall submit revised documents to the FNSB Community Planning Department. If substantial modifications are made to these documents or to the operation of the communications tower, an amendment to the conditional use permit may be required pursuant to FNSBC 18.104.050 (D).

IX. FINDINGS OF FACT

The Department of Community Planning further recommends the following Findings of Fact in support of approval:

1. The proposed conditional use will conform to the intent and purpose of Title 18 and of other ordinances and state statutes because it will conform to Title 18 requirements as a conditional use in the RE-4 zone.
a. The purpose of Title 18 will be met because the Fairbanks North Star Borough Comprehensive Plan Land Use Goal 4, Strategy 10 of the FNSB Regional Comprehensive Plan, which is to “attract and support development that is compatible with and enhances existing land use”. With appropriate conditions, as proposed, the proposed conditional use is compatible with the existing land uses. The proposed conditional use is also consistent with the Outskirt Area designation.

b. The intent of Title 18 will be met because with the conditions imposed, the conditional use will both protect private property rights and promote public health, safety, and welfare.

c. The Applicant has provided information sufficient to show they intend to meet all local, state, and federal laws.

2. There are adequate existing energy and transportation facilities serving the site and other public services are available to serve the proposed conditional use.

a. The proposed conditional use will be served by hauled water, an outhouse for the dry cabin, and animal and other solid waste will be removed from the site to appropriate disposal transfer sites.

b. The site is within Chena Goldstream Fire Service Area.

c. The site will be connected to the GVEA grid which will provide sufficient energy supply for the kennel and cabin.

d. The site is served by Ballina Road and Goldstream Road.

e. The non-commercial kennel is not expected to generate significant additional trips and does not impede vehicular and pedestrian traffic on the surrounding roads.

3. With the conditions imposed, the proposed conditional use will protect public health, safety, and welfare as the facility will comply with Title 18 standards for the RE-4 zone (FNSBC 18.36) as well as other federal, state and local requirements for a kennel, minor.

a. The existing vegetation and proposed fencing will create a buffer and minimize the visual impact of the proposed conditional use.

b. Noise impacts are expected with the operation of the kennel. Hours of activity will be limited to 8am through 10pm to minimize noise impacts on the surrounding residential neighborhood.

c. Odor impacts involving the kennel use will be minimized with the removal of animal waste daily.

d. Animals will be tethered on site to prevent health, safety, and welfare concerns caused by uncontained animals.

e. Outdoor lighting will not be directed toward or impact neighboring properties.

f. The applicant will comply with all other local, state, and federal laws, including any wetland determination by the Army Corp of Engineers.

DRAFT PLANNING COMMISSION MOTION:

I move to approve the Conditional Use Permit for the communications tower, minor with eight (8) conditions, and adopting the staff report and three (3) Findings of Fact in support of the approval.
4.4 NOISE

4.4.1 Introduction

This section describes the existing noise conditions in the project area and potential noise impacts during construction and operation of the project. Regulations and policies affecting the noise environment and potential impacts are presented and discussed within this section. Information presented in this section is based on the Center for Compassion Noise Study conducted by Wilson, Ihrig & Associates, Inc (WIA) and the Peer Review Report of Noise Study, prepared by Charles M. Salter Associates, Inc. These documents are included in their entirety in Appendix 4.4.

4.4.2 Characteristics of Noise

Noise is usually defined as unwanted sound and is an undesirable byproduct of society’s normal day-to-day activities. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm, or when it has adverse effects on health. The definition of noise as unwanted sound implies that it has an adverse effect on people and their environment.

Noise is measured on a logarithmic scale of sound pressure levels that is known as decibels (dB). Because decibels are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. For example, if one automobile produces a sound pressure level of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB; they would, in fact, be combined to produce 73 dB. When two sounds of equal sound pressure levels are combined, they will produce a combined sound pressure level that is 3 dB greater than the original sound pressure level. In other words, sound energy must be doubled to produce a 3 dB increase. If two sound levels differ by 10 dB or more, the combined sound pressure level is equal to the higher sound pressure level; the lower sound level does not increase the higher sound level but is “masked” by it. Common noise levels associated with certain activities are shown on Figure 4.4-1, Typical Noise Levels.

Sound pressure level alone is not a reliable indicator of loudness because the human ear does not respond uniformly to sounds at all frequencies.
EXHIBIT 2

**EXAMPLES**

- NEAR JET ENGINE
- THRESHOLD OF PAIN
- THRESHOLD OF FEELING—HARD ROCK BAND
- ACCELERATING MOTORCYCLE AT A FEW FEET AWAY*
- LOUD AUTO HORN AT 10' AWAY
- NOISY URBAN STREET
- NOISY FACTORY
- SCHOOL CAFETERIA WITH UNTREATED SURFACES
- STENOGRAPHIC ROOM
- NEAR FREeways AUTO TRAFFIC
- AVERAGE OFFICE
- SOFT RADIO MUSIC IN APARTMENT
- AVERAGE RESIDENCE WITHOUT STEREO PLAYING
- AVERAGE WHISPER
- RUSTLE OF LEAVES IN WIND
- HUMAN BREATHING
- THRESHOLD OF AUDIBILITY

**DECIbELS (dB)**

- 140
- 130
- 120
- 110
- 100
- 90
- 80
- 70
- 60
- 50
- 40
- 30
- 20
- 10
- 0

**SUBJECTIVE EVALUATIONS**

- DEAFENING
- VERY LOUD
- LOUD
- MODERATE
- FAINT
- VERY FAINT

*NOTE: 50' from motorcycle equals noise at about 2000' from a four-engine jet aircraft.

†NOTE: dB are "average" values as measured on the A-scale of a sound-level meter.

**FIGURE 4.4-1**

Typical Noise Levels
For example, it is less sensitive to low and high frequencies than to medium frequencies that more closely correspond with human speech. In response to the human ear sensitivity, the A-weighted noise level, referenced in units of dB(A), was developed to better correspond with people’s subjective judgment of sound levels. In general, changes in a community noise level of less than 3 dB(A) are not typically noticed by the human ear (USDOT 1980). Changes from 3 to 5 dB(A) may be noticed by some individuals who are extremely sensitive to changes in noise. An increase of greater than 5 dB(A) is readily noticeable, while the human ear perceives a 10 dB(A) increase in sound level to be a doubling of sound.

Noise sources occur in two forms: (1) point sources, such as stationary equipment or individual motor vehicles; and (2) line sources, such as a roadway with a large number of point sources (motor vehicles). Sound generated by a point source typically diminishes (attenuates) at a rate of 6 dB(A) for each doubling of distance from the source to the receptor at acoustically “hard” sites, and it attenuates at a rate of 7.5 dB(A) at acoustically “soft” sites. For example, a 60 dB(A) noise level measured at 50 feet from a point source at an acoustically hard site would be 54 dB(A) at 100 feet from the source, and it would be 48 dB(A) at 200 feet from the source. Sound generated by a line source typically attenuates (i.e., becomes less) at a rate of 3 dB(A) and 4.5 dB(A) per doubling of distance from the source to the receptor for hard and soft sites, respectively (USDOT 1980). Man-made or natural barriers can also attenuate sound levels, as illustrated in Figure 4.4-2, Noise Attenuation Barriers.

Solid walls and berms may reduce noise levels by 5.0 to 10.0 dB(A) (USDOT 1980). The minimum attenuation of exterior to interior noise provided by typical structures in California is provided in Table 4.4-1, Outside to Inside Noise Attenuation in dB(A).
"Barrier Effect" Resulting from Differences in Elevation.

"Barrier Effect" Resulting from Typical Soundwall.

Table 4.4-1
Outside to Inside Noise Attenuation in dB(A)

<table>
<thead>
<tr>
<th>Building Type</th>
<th>Open Windows</th>
<th>Closed Windows</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residences</td>
<td>17</td>
<td>25</td>
</tr>
<tr>
<td>Schools</td>
<td>17</td>
<td>25</td>
</tr>
<tr>
<td>Churches</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Hospitals/Convalescent Homes</td>
<td>17</td>
<td>25</td>
</tr>
<tr>
<td>Offices</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Theaters</td>
<td>17</td>
<td>25</td>
</tr>
</tbody>
</table>


As shown, structures with closed windows can attenuate exterior noise by a minimum of 8.0 dB(A).

When assessing community reaction to noise, there is an obvious need for a scale that averages sound pressure levels over time and quantifies the result in terms of a single numerical descriptor. The scale applicable to this analysis is the Community Noise Equivalent Level (CNEL). CNEL is the average A-weighted sound level measured over a 24-hour period that is adjusted to account for some individuals’ increased sensitivity to noise levels during the evening and nighttime hours. A CNEL noise measurement is obtained after adding 5 dB to sound levels occurring during the evening from 7 p.m. to 10 p.m., and 10.0 dB to sound levels occurring during the nighttime from 10 p.m. to 7 a.m. The 5 and 10-dB “penalties” are applied to account for people’s increased noise sensitivity during the evening and nighttime hours.

Traffic Noise

The level of traffic noise depends on three primary factors: (1) the volume of the traffic; (2) the speed of the traffic; and (3) the number of trucks in the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and a greater number of trucks. Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires.

Train Noise

Train noise is a combination of different noise sources such as propulsion mechanisms, machinery and auxiliary equipment, wheel-rail interaction, and
vehicle-body vibrations. Train noise is a unique noise source that constitutes a single pass-by event per train.

**Airport Noise**

Airport noise is generated by airplane take off and landing, engine idling, and airplane taxi. Airports gather data from a variety of noise monitoring locations within and around the airport. From this data noise contours are drawn to define the aircraft noise impact area and noise impact boundary. The lines are usually drawn in five-decibel increments that resemble elevation contours on topographic maps. They identify the average aircraft noise level within the boundary of the contour. Variations in flight activity and local characteristics such as the microclimate, vegetation, and buildings can affect the noise impact area.

**Sensitive Receptors**

Whether a sound is considered unpleasant depends on the individual who hears the sound and the setting and circumstance under which the sound is heard. While performing certain tasks, people expect and, as such, accept certain sounds that are considered unpleasant under other circumstances. For example, if a person works in an office, sounds from printers, copiers, telephones, and keyboards are generally acceptable and not considered unduly unpleasant or unwanted. By comparison, when resting or relaxing, these same sounds may be intolerable. Because individuals' tolerance for noise varies by setting, some land uses are more sensitive to changes in the noise environment. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, parks, and outdoor recreation areas are generally more sensitive to noise than are commercial and industrial land uses. In the vicinity of the project site, sensitive receptors include residential areas located to the southwest of the project site.

**4.4.3 Existing Conditions**

**Off-Site Noise Sources**

The project site is located in a light industrial environment between Rollins Road and Edwards Court in the City of Burlingame. US 101, a major interstate freeway, runs just east of the site and Caltrain operates a major line with tracks
that run west of the project site. The Caltrain Broadway station is located approximately one half mile south of the project site. These rail facilities support commuter passenger travel. The Broadway station operates only on the weekends. During the weekdays, commuter trains pass through the station, but no stops are made. Bay Area Rapid Transit (BART) operates the Millbrae station approximately one mile north of the project. As this station is the end of the transit line, there are "tail" tracks extending parallel to the Caltrain tracks for rail storage and maintenance purposes. The BART tail track ends approximately 0.6 miles north of the project site.

Rollins Road is a four-lane arterial through the City of Burlingame and carries a variety of motor vehicle traffic from passenger cars to large trucks. Edwards Court has a two-story office building and light industrial buildings opposite from the project site. This area receives much less traffic than Rollins Road, but the same mix of vehicles is present due to the types of businesses in the area. Noise generated by vehicular traffic within the project area and the railroad line represents the predominant noise sources for the project area.

The nearest airport to the project site is the San Francisco International Airport (SFIA), approximately 3 miles northeast of the project site. This is a major airport hub on the West coast. Air traffic is comprised of passenger planes, distribution planes, and military. On average SFIA has about 25,000 flight operations and serves 2.4 million passengers per month (SFO 2006). Aircraft in ascent and descent create considerable noise on land uses in the immediate vicinity. The project site is within the 65 CNEL noise contour for the SFIA. This contributes greatly to the existing noise level in the project vicinity.

On-Site Noise Sources

Two structures, a one-story pharmaceutical laboratory, and a three-story vacant building currently occupy the project site. The vacant building does not generate any perceptible noise, and the only audible source of noise from the one-story building is the rooftop mechanical equipment that generates intermittent operating noise. No other noise sources are generated on-site.
Existing Noise Levels

As part of the Noise Study performed by WIA, noise measurements were taken at three different locations in the project vicinity for a one-week period. Figure 4.4-3, Noise Monitoring Locations, shows were each sound level meter was placed. These locations include: one next to the project site, one in a residential area on Mills Avenue and California Drive, and one in another residential area at 1411 Paloma Avenue. The meters continuously logged noise levels providing data summaries for a total of six full 24-hour periods. The results of the measurements are summarized below.

Project Vicinity

Based on the results, the Community Noise Exposure Level (CNEL) measured ranged from 72 to 76 dB for noise levels within the project vicinity. The 76 dB is a result from an unusually high noise level recorded during one night. The mean CNEL value at the site’s property line is 74 dB. Additionally, CSA conducted short-term measurements of the noise environment along Edwards Court.¹ Based on these measurements, the minimum daytime noise level was 53 dB, resulting from vehicular traffic on US 101.

As previously mentioned, the most significant sources of noise in this area are traffic from US 101 and local street traffic on Rollins Road and Edwards Court. Trains on the Caltrain railroad tracks and BART tracks also contribute to this noise levels in this area. The CNEL levels were taken over six full 24-hour periods, covering both weekdays and weekends. Therefore, noise levels include the noise levels from the different schedules Caltrain operates for the weekend and weekdays.

Residential Areas

At the corner of Mills Avenue and California Drive, located about 1,000 feet southwest of the project site, the CNEL measured between 70 and 72 dB. This location is near the Caltrain station where train traffic significantly influences the local noise environment. The third meter location, 1411 Paloma Avenue, was

¹ Based on measurements conducted between 11:00 AM and noon, the \( L_{10} \) (90th percentile) daytime noise level is estimated to be 56 dB; the \( L_{10} \) (10th percentile) is estimated to be 62 dB.
chosen because it was located in a residential area that is further from the Caltrain tracks. The data indicated that the CNEL measured for this area ranged from 59 to 62 dB. Street traffic and local activities near the homes in the area are the dominant sources of noise at this location.

4.4.4 Regulatory Considerations

City of Burlingame General Plan Noise Element

The City of Burlingame General Plan Noise Element describes the existing noise conditions for the area, a noise abatement program, and policies and goals for future noise sources and levels. Using measurements taken in various sites within the City, suggested outdoor noise levels based on land use, were developed. The maximum outdoor noise level for industrial land uses is 75 CNEL. The following goal and program apply to the project.

Policy Goal N(D):
Consider use of existing city and inter-governmental processes to accomplish noise control.

Program N(J):
The environmental review process and the building permit plan check and inspection process shall be used as Administrative Review processes for the Noise Abatement and Controls Program. The program has specific guidelines to direct scope and analysis based on the individual characteristics of each approval requested.

City of Burlingame Municipal Code

Section 10.40.035 General Noise Regulations of the City of Burlingame Municipal Code states the following:

Notwithstanding any other provisions of this code, and in addition thereto, it is unlawful for any person wilfully to make or continue, or cause to be made or continued, any loud, unnecessary or unusual noise which disturbs the peace and quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensiveness residing in the area.

Additionally, the proposed use would be conditionally allowed through the determination of its use being “similar in nature to one already allowed” in the
M-1 district. In this case, the use “already allowed” would be the veterinary hospitals with animal care facilities (except breeding and boarding facilities) with compliance to the following conditions:

- All animal care activity is contained within a structure;
- The noise level is not increased at [the] property line by more than 5 dB(A) $L_{10}$ and
- No animal is kept overnight without an attendant being present.

To summarize, the noise level is subject to an assumed statistical distribution of fluctuating environmental noise levels.

4.4.5 Project Consistency with Applicable Regulations

CEQA requires an analysis of consistency with plans and policies as part of the environmental setting (see CEQA Guidelines Section 15125). The General Plan Guidelines published by the State Office of Planning and Research define consistency as follows: “An action, program, or project is consistent with the General Plan if, considering all its aspects, it will further the objectives and policies of the General Plan and not obstruct their attainment.” Therefore, the standard for analysis used in the EIR is based on general agreement with the policy language and furtherance of the policy intent (as determined by a review of the policy context). The project does not have to be in exact agreement with a policy for the project to be consistent with it.

*City of Burlingame General Plan Noise Element*

Given that the existing noise environment was recorded at an average of 74 dB, and that the proposed project would implement a similar type of land use to existing land uses in the area, the 75 CNEL industrial threshold identified by the General Plan would not be exceeded. Given the existing conditions and the potential noise sources of the proposed project would range from 51 to 76 dB(A), the maximum CNEL for an industrial area would not be exceeded upon project implementation. The noise level analyzed to be 76 dB(A) would occur immediately outside a classroom window and that reading would not influence the overall CNEL level beyond existing conditions (see discussion under impacts below). This analysis is also consistent with the requirements of environmental
review according to the Noise Abatement Program. Therefore, the project is consistent with the Noise Element.

City of Burlingame Municipal Code

Section 10.40.035 General Noise Regulations of the City of Burlingame Municipal Code does not present any quantitative threshold levels by which to judge consistency. As discussed in the impact section below, the noise created by the project would not significantly increase existing noise levels and would not expose individuals in sensitive receptor areas to unusual or unnecessary noise. Furthermore, the projected daytime $L_{10}$ noise level due to barking dogs would not exceed the existing $L_{10}$ noise level, thereby attaining the following condition: the noise level is not increased at [the] property line by more than 5 dB(A) $L_{10}$.

Therefore, the project is consistent with the City’s Municipal Code.

4.4.6 Impacts and Mitigation

Significance Criteria

In accordance with the CEQA Guidelines Appendix G and the City of Burlingame regulations, the project would cause a potentially significant noise impact if it would result in:

- Exposure of persons to or generation of noise levels in excess of 75 CNEL, or an increase of the noise level at the property line by more than 5 dB(A) $L_{10}$;

- Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels;

- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;

- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;

- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels; or

- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.
4.4 Noise

Issues Not Discussed Further

The initial study found less than significant impacts to ground borne vibration and noise; projects located within an airport land use plan; construction-related noise impacts; and projects within the vicinity of a private airstrip. Traffic generated by the project would not increase substantially to cause a change in the existing noise ambient environment. Therefore, these issues are not further discussed in this section but are included in Section 7.3 Effects Found Not to be Significant.

Impacts and Mitigation Measures

Impact 4.4-1: The project would introduce new noise sources to the area, including dog barking. This is considered significant prior to mitigation.

The most noise-sensitive receptor is the residential area, located about 1,000 feet to the southwest, and the nearby industrial parcels. The impact analysis below focuses on the three noise generators associated with the project: dog barking, animals housed outdoors, and mechanical equipment.

Dog Barking

Dogs barking on the site would create the most significant source of noise. Dogs would be located in the Indoor Exercise Area, the classrooms, the Canine Adoption Center, and the holding kennels. Dogs would also be transported from the parking lot to inside the building.

The Indoor Exercise Area has an operable roof that will affect noise levels from the project. Dogs would be supervised and at no time be allowed to bark continuously. The maximum noise level at three feet from a barking dog is 100 dB(A). For someone positioned immediately outside the glass block wall of the Indoor Exercise Area, the maximum expected noise level from a barking dog would be 73 dB(A) with the roof closed. With the roof open, the maximum expected noise level from a dog barking is expected to be the same or slightly higher because the noise level immediately outside the building would be mostly affected by the glass block wall, not the roof position. At the sidewalk of Rollins Road, 23 feet away from the Indoor Exercise Area, the maximum expected noise
level from a dog barking would be 54 dB(A) with the roof closed and 68 dB(A) with the roof open.

Similar to the Indoor Exercise Area, dogs inside the classrooms would be supervised and not be allowed to bark continuously. Immediately outside the classroom exterior window the maximum expected noise level is approximately 76 dB(A). The maximum expected noise level along the sidewalk of Rollins Road is 57 dB(A). The dog habitats in the Canine Adoption Center are fully enclosed in the building. The maximum expected noise level inside the dog habitat with a dog barking would be 99 dB(A). Immediately outside the habitat, inside the building, the maximum expected noise level would be 75 dB(A). The exterior wall windows would reduce exterior noise levels to 51 dB(A). A combination of 10 dogs barking simultaneously would yield a maximum expected noise level of 61 dB(A) immediately outside one of the exterior windows. The noise level along the sidewalk of Edwards Court approximately 20 feet away would be significantly less. The maximum expected noise level inside one of the holding kennels would be 98 dB(A) with three dogs barking continuously. This noise level would be less than the individual habitat because the kernel is larger, thereby attenuating the noise. The maximum expected noise level immediately outside the kennel skylight would be 74 dB(A). This would be significantly reduced by the building parapet and would not be audible along Rollins Road.

Animals Housed Outdoors

Aviaries and pens along the north side of the project site would house animals in an enclosed, outdoor environment. WIA performed a site visit to the Lindsay Wildlife Museum in Walnut Creek on February 1, 2006. This is a facility approximately 40 miles away from the project site that provides similar wildlife rescue services as those proposed by the project. WIA spoke to the Wildlife Rehabilitation Director who explained that unlike domestic dogs, most wildlife do not vocalize unless stimulated by the caretaker or another species member. The vocalizations the WIA Staff witnessed during the site visit were not as loud as a dog barking. As described above, the maximum expected noise level immediately outside the kennel skylight would be 74 dB(A). Because any vocalizations from animals housed outdoors would be below this noise level, the existing ambient noise levels would not be affected by native wildlife vocalizations.
4.4 Noise

Mechanical Equipment

The project would include eight air handlers distributed over three rooftop locations. The total maximum noise level from the air handlers operating simultaneously would be 57 dB(A). Noise leaks from the interior through the environmental control systems would be insignificant compared to the noise emitted by the air handlers. Exhaust systems would only be used in the euthanasia room and toilet room, both of which are areas of low noise. Noise transmitted through the exhaust system would not be audible at the exterior of the building.

Conclusion

The two locations chosen for sensitive receptor sites were Mills Avenue at California Drive, approximately 1,000 feet from the project site and 1411 Paloma Avenue, approximately 1,700 feet from the project site. Both residential locations are southwest of Rollins Road, see Figure 4.4-1. The existing noise conditions for Mills Avenue at California Drive ranged from 70 to 72 dB and from 59 to 62 dB at 1411 Paloma Avenue. The maximum noise level from dogs barking in the Indoor Exercise Area with the roof open would be 44 dB(A) at the California Drive location and 41 dB(A) for the Paloma Avenue location. These levels would be virtually inaudible at both sites due to existing conditions. Noise from dogs barking inside the classrooms, at the Canine Adoption Center, and in the holding kennels would be inaudible at both residential locations given existing conditions.

Based on observations at a similar facility, the Lindsay Wildlife Museum, any noise made by the animals associated with the proposed Center should not annoy reasonable persons of normal sensitivities and would not have any significant impact upon the CNEL in either residential location. The maximum expected noise level of rooftop mechanical equipment operation would be expected to be 45 dB(A) at California Drive and 40 dB(A) at Paloma Avenue. It is unlikely the expected noise level would be reached unless all mechanical equipment is operating simultaneously over a 24-hour period. Regardless, this is well below the existing background noise levels within the residential areas.
4.4 Noise

It is important to note that occasional dog barking would probably have little or no effect upon the value of the local or distant 24-hour average noise level (i.e., CNEL). Similarly, occasional barking would have little or no effect on the local or distant $L_{10}$ noise level. Therefore, the project should not generate a future environmental noise impact. Consequently, noise generated by dog barking within the Center would not exceed existing exterior noise levels (in CNEL). However, a dog barking from the Center may be noticeable by a pedestrian along either Rollins Road to the west or Edward Court to the south. To determine the significance of the barking heard by pedestrians on the streets, CSA compared the level of noise associated with barking and compared it to background (or ambient) noise levels close to the site (53 dB). Given this, the minimum daytime noise levels would be approximately 15 dB less than the estimated noise level from barking dogs. Therefore, under “worst-case” conditions, a pedestrian near the Center may occasionally hear dogs barking. However, people inside adjacent buildings would not notice the noise from barking dogs. As discussed previously, the noise level created from dogs barking in the Exercise Area would be 68 dB(A) at the sidewalk of Rollins Road with the roof open. This level would decrease with distance due to noise attenuation factors, building setbacks and physical barriers such as walls and windows. Therefore, people in the office buildings across either Edwards Court or Rollins Road would not be able to detect dog barking from the Center.

The project would not exceed the CNEL for industrial land uses beyond existing conditions with the appropriate project design. The noise impact upon residential uses in the vicinity would either be inaudible or much less than the existing noise levels. The ambient noise level for the project vicinity would not substantially increase. The mitigation measures listed below would reduce noise impacts associated with the animals on-site to a less than significant level.

**Mitigation Measure 4.4-1a:** Dogs shall be housed in kennels that are designed to minimize the view of other dogs to eliminate or reduce barking. Dogs shall only share a kennel with dogs that have been specifically matched for compatibility as approved by the licensed veterinarian on-site.

**Mitigation Measure 4.4-1b:** The acoustics of the facility shall be constructed and designed with specific materials and elements as approved by a noise consultant.
to attenuate noise, including barking. This includes but is not limited to the following:

- Minimum sound isolation properties of the classroom exterior windows shall be STC 24;
- Acoustical tile shall be used for the ceiling above the dog kennels;
- The windows and ceiling pads in the lobby area shall have a minimum STC 24 isolation rating, with a single layer of 5/8 gypsum for the ceiling and a single pane of 1/8-inch glass for the window; and
- The minimum reduction from any component of the exterior wall of the building shall be STC 24 for the windows, assuming a single pane of 1/8-inch glass.

**Mitigation Measure 4.4-1c:** Prior to acceptance at the Center, dogs shall be screened by professional animal behaviorists for serious behavioral problems (e.g., constant barking, aggression, food guarding, etc.). A dog diagnosed with behavioral problems shall not be transferred to the Center unless that behavior is treated and determined to be resolved by a licensed veterinarian prior to transfer.
<table>
<thead>
<tr>
<th>Commercial</th>
<th>Industrial</th>
<th>Residential</th>
<th>dB Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threshold For Hearing</td>
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<tr>
<td>Good Recording Studio</td>
<td>Breathing</td>
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<tr>
<td></td>
<td>Rustling Leaves</td>
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<td>Whisper, Mosquito</td>
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<td>Library</td>
<td>Living / Dining Room</td>
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<td>Refrigerator Hum</td>
<td>Kitchen / Bathroom</td>
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<td>Power Lawn Mower</td>
<td>Home Office</td>
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</tr>
<tr>
<td></td>
<td>Birds at 10 yd</td>
<td></td>
<td>55</td>
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<tr>
<td>Conversational Speech</td>
<td></td>
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<td>Piano Practice</td>
<td>Electric Shaver</td>
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<td>Inplant Office</td>
<td>Street Traffic</td>
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<td>Alarm Clock</td>
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<td>Television / Dishwasher</td>
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<td>Airplane at 1 mile</td>
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<td>Vacuum Cleaner</td>
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<td>Handsaw</td>
<td>Garbage Disposal</td>
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<td>Appliance in Auditorium</td>
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<td>Lawn Mower</td>
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<td>OSHA Required Hearing Protection in Factory</td>
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<td>Subway</td>
<td>Farm Tractor</td>
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<td>Sustained Exposure May Cause Hearing Loss</td>
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<td>Diesel Truck</td>
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<td>Printing Press</td>
<td>Train</td>
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<td>Heavy Truck</td>
<td>Power Saw</td>
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<td>Power Mower</td>
<td>Baby Crying</td>
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<td>Punch Press</td>
<td>Squeaky Toy to Ear</td>
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<td>Shot Gun</td>
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<td>Pneumatic Clipper</td>
<td>Air Raid Siren</td>
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<td>Military Jet</td>
<td>Shotgun</td>
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<td>Aircraft Carrier Deck</td>
<td>Jet Takeoff</td>
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<td>Chest Wall Begins to Vibrate</td>
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<td>Death of Hearing Tissue</td>
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<tr>
<td>Loudest Possible Sound</td>
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</table>
Why Dogs Bark

Check out some of the reasons why dogs sound off

iStockphoto

Dogs have a lot to say, and they do it by barking. They bark to go out, come in, to tell you a stranger’s in your yard, and at people, cars, and other animals.

Too much barking or barking at inappropriate times can be a problem. You want to be respectful of your neighbors as well as local laws, so you need to get your dog’s barking under control.

In order to determine why your dog barks, you may need to do some clever detective work—especially if it occurs when you're not home. You can ask your neighbors what they see and hear, go around the block and watch and listen, start a tape recorder or video camera when you leave the house. After some sleuthing, you may be able to find out which of the following common problems is causing your dog to bark.

Common causes of barking

Attention/Demand: Your dog may want to eat, go outside, or your undivided attention.

Boredom/Frustration: Your dog may have been left outside day and night, or confined to one room for a long period of time.

Fear: Your dog may be afraid of objects, people, places, other animals, or loud noises such as thunder and fireworks. Tip: Your dog’s posture can tell you if he’s barking out of fear. Typically his ears are back and his tail is held low.

Territoriality/Protectiveness: Your dog is barking in the presence of “intruders,” which may include people and other dogs in adjacent yards. Tip: If your dog is being territorial, his posture appears threatening with his tail held high and his ears up and forward.

Playfulness/Excitement: Your dog may be overly playful and excited when greeting people.

Health Issues: Your dog may have Canine Cognitive Dysfunction or deafness, causing him to bark because he’s unable to hear himself bark.

Dealing with health-related barking

Some dogs bark because of age-related dementia or deafness. Be patient with your dog. Keep his environment simple and orderly; don't make frequent changes. Talk to your vet about medications that may help the dementia. Teach your deaf dog the “quiet” command using hand signals or a flash of light or a vibrating collar (NOT a shock collar) as the cue instead of saying the word “quiet.”

Dealing with multiple barking dogs

http://www.humanesociety.org/animals/dogs/tips/barking-causes.html
If you share your home and your life with more than one dog, you know how they can set each other off. The doorbell rings and deafening, out-of-control barking ensues. You must train each dog individually before you can work with them as a group. It takes a little more effort to settle your pack of wild hounds, but you’ll be rewarded with a group of well-mannered dogs. And your friends and relatives will no longer dread coming to your house!
Public Hearing sign posted September 16, 2016

Ballina Road 249
APPLICATION MATERIAL SUBMITTED ON

August 1, 2016
Fairbanks North Star Borough
Department of Community Planning
809 Pioneer Road/P.O. Box 72267
Fairbanks, Alaska 99707-1267
(907) 459-1260 Fax: (907) 459-1255
planning@fnsb.us

CONDITIONAL USE PERMIT APPLICATION
File No. CU2017-002

FEES: $800 conditional use permit application
$200 sign deposit (check or cash only)

<table>
<thead>
<tr>
<th>Applicant: Same</th>
<th>Property Owner:</th>
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<tbody>
<tr>
<td>Name: John Harrison</td>
<td></td>
</tr>
<tr>
<td>Mailing Address: 1234 Aurora Baraculis In</td>
<td></td>
</tr>
<tr>
<td>City, State, Zip: Fairbanks AK 99709</td>
<td></td>
</tr>
<tr>
<td>Phone: 328-9240</td>
<td></td>
</tr>
<tr>
<td>Cell: 315-2453</td>
<td></td>
</tr>
<tr>
<td>E-mail: jalarr@<a href="mailto:2222@gmail.com">2222@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>

Property Information:
- Property Description: Goldstream Alaska, Lot: 84
- Street Address: 3616 Baling Rd.
- Parcel Account Numbers (PAN): 0132527
- Lot Size: 4.92 AC
- Zoning District: RE-4 (100%)
- Existing Use(s): Vacant Land

Conditional Use Request Information:
Proposed Use(s):
- Minor Kennel
- Physical Residence

Request Description and Reasons for the Request:
refer to attached Narrative

APPLICANT SIGNATURE: John Harrison DATE: 7/31/16
OWNER SIGNATURE (if different): DATE: 

If the applicant is not the sole property owner, written consent of all property owners must be provided (FNSBC 18.104.050(B)).
John Larrison
1261 Ballina rd.
Fairbanks Ak 99709

A narrative in request of a minor recreational kennel permit.

The lot I wish to put my dogs on is a 4.92 rural acre parcel. The location and setting this property makes it a desirable spot for a Dog Mushers and thus the cause of purchase this spring past.

I presently own 19 Sled Dogs and plan on keeping this number within the limits of Minor Kennel designation. All of my dogs live year round outside and are kept tethered. I will refrain from allowing any free roaming.

Each dog is provided with good shelter. I take dog care seriously and of high importance. Animal waste pick-up is done daily. There will be no issue of smell as it will be disposed of off site.

With this particular group of dogs, location and size of kennel, I don't expect there to be too much in the way of noise. Still, I plan on putting a fence up between the back pond, where my dogs will be staked out and the front road. This will help in keeping the dogs from viewing any activities taking place on Ballina rd. and beyond. If necessary I will add a sound deadening tarp to the fence.

Dogs bark during feedings. I will feed out at reasonable hours and feed out fast. All my dogs are working dogs and sleep especially well during mushing season.

My dogs and I will stand ready, to adapt to and address, as necessary any concerns brought to us by our neighbors. Good relations we hope to establish and retain.

It is this kennels intent to operate in compliance with Borough regulation.

John Larrison

No impact on neighborhood with outdoor lighting will be hauling water to dry cabin.
APPLICATION
MATERIAL
SUBMITTED ON

August 23, 2016
Lot 84 Gold Stream Subdivision

Scale one square = 5'
Set back for buildings
Front yard 35'
Side yard 25'
Rear yard 25'

X = Dog
T = Fence 6 1/2' high
\( / \) = Gate

Ballina rd
S.E. Corner

Comm. Planning Dept
AUG 23 2016
RECEIVED
Site Plan Attachment: minor kennel

- For loading and unloading, I'll be backing in on gravel drive and pulling straight out.

- Dog shelters are 3'2" x 2' in size and will be placed min. 45' from edge of Ballina rd and 10' off East Property line.

- Two privacy fences 6'/2" high by 10' wide will be made of wood & metal siding. They are each located in front of dog rows. With the same material I'll have a gate at front of drive. A fenced 12' x 6'/2" Dog Pen will be to the side of cabin.

- Dog Shelters are backed against each other with 8' stake out in front or located facing each other, min. 20' distance apart. Chains are 6'/2" to 8' in length. All Shelters are easily moveable and off ground.

- Water will be hauled in 7 gallon jugs and stored inside cabin.

- Outhouse will be enclosed and pumped.
CU 2017-002  Minor Kennel permit request

My Kennel will operate so to protect public health, safety and welfare. This will be achieved through specified animal waste disposal, management. To control noise and in keeping dogs with me or on property, the administering of vaccines and a personal full time residence making me everyday available should issue arise.

1. Dry cabin on land will be my residence.

2. I will be on site 7 days a week a majority of each day.

3. I will not be running a tour operation or any other commercial enterprise. Besides occasional visitors, traffic will be minimal.

4. 3 PM to 10 PM Mon-Fri 8 AM-10 PM Sat & Sun from Sept to May will primarily be the 24 hours of activity. Feeding will be no earlier than 7 am or later then 11 pm. Feeding takes place once during summer and twice during winter.
5. Dogs will be transported off site for mushing activities.

6. There are not any trails on my parcel or illegal trails I intend to utilize adjacent.

7. Animal waste will be disposed of weekly at transfer site.

8. I will not be storing or using any chemicals.

9. Removal of animal waste and not bringing any contaminants onto land will keep groundwater from being impacted.
Hi Stacey,

Our website address:


Have a good day, Melissa

-----------------------------------------------
Melissa Riordan
Project Manager
Regulatory Division
Alaska District
U.S. Army Corps of Engineers
Phone 907.474.2166

-----Original Message-----
From: Stacy Wasinger [mailto:SWasinger@fnsb.us]
Sent: Friday, September 16, 2016 11:01 AM
To: Riordan, Melissa C POA <Melissa.C.Riordan@usace.army.mil>
Subject: [EXTERNAL] CU2017-002 (Conditional Use Permit Application for Minor Kennel at 1261 Ballina Road)

Good morning,

Attached, please find the application materials for a minor kennel (between 5 and 24 dogs) conditional use permit that has been submitted to the FNSB Community Planning Department. Due to the Rural Estates zoning on this property, the minor kennel use requires a conditional use permit, which is scheduled to be decided at a public hearing before the Planning Commission on October 11, 2016. Also attached is a zoning report that contains basic information regarding the parcel.

We are providing this information to you for review and comment, if any, because the site potentially contains wetlands. I do not see that there has been a determination of jurisdictional wetlands on the property, but do you have any record of this area? The application primarily includes temporary dog shelters and a dry cabin. If you have any concerns or potential issues regarding this land use on the property, please send a response in writing and we will include the comment in the information that is provided to the Planning Commission.
If possible, please return any comment by Tuesday, September 20th. If there is another contact that would be appropriate to review this application, please feel free to forward this email or let me know and I will contact them. If you have any questions or need any clarification, please just let me know. I appreciate your time and help on this issue.

Thanks!

Stacy

Stacy Wasinger

Planner III | FNSB Community Planning

swasinger@fnsb.us <mailto:swasinger@fnsb.us>

907-459-1262

Fairbanks North Star Borough

PO Box 71267 / 809 Pioneer Road

Fairbanks, AK 99707-1267
Stacy Wasinger

From: Tom Hancock
Sent: Thursday, September 01, 2016 10:43 AM
To: Stacy Wasinger; jon@jonsmachine.com
Subject: RE: CU2017-002 (Conditional Use Permit Application for Minor Kennel at 1261 Ballina Road)

Stacy:
I have no objection or comment.

Thomas E. Hancock, Jr., Trails Coordinator
Parks and Recreation Department
Fairbanks North Star Borough
PO Box 71267
Fairbanks, Alaska 99707
Office: (907) 459-7401
thancock@fnsb.us

From: Stacy Wasinger
Sent: Wednesday, August 31, 2016 2:10 PM
To: jon@jonsmachine.com; Tom Hancock (commissioner not BAC)
Cc: Tom Hancock
Subject: CU2017-002 (Conditional Use Permit Application for Minor Kennel at 1261 Bellina Road)

Good afternoon,

Attached, please find the application materials for a minor kennel (between 5 and 24 dogs) conditional use permit that has been submitted to the FNSB Community Planning Department. Due to the Rural Estates zoning on this property, the minor kennel use requires a conditional use permit, which is scheduled to be heard at a public hearing before the Planning Commission on October 11, 2016. Also attached is a zoning report that contains basic information regarding the parcel.

We are providing this information to you for review and comment, if any, because the site is within your service area. If you have any concerns or potential issues regarding this land use on the property from a road service commissioner perspective, please send a response in writing and we will include the comment in the information that is provided to the Planning Commission. CU permits are decided based on three criteria defined in :NSBC 18.104.050(C)(1-3). These are the primary findings that the Commission will be required to make. However, any written comment by an agency will be provided to the Commission.

Please return any comments no later than Thursday, September 8th at 5pm to be included in the staff report analysis. To clarify, as stated above, these comments would be only agency comments. If you would like to comment on the application as an interested party or neighbor, such comments would need to be made via quasi-judicial testimony for the public hearing. If you or any of the neighbors have questions regarding that process, please just let me know.

If you have any questions or need any clarification, please feel free to contact me. I appreciate your time and help on this issue.

Thanks!
Stacy
Stacy Wasinger  
Planner III | FNSB Community Planning  
swasinger@fnsb.us  
907-459-1262  

Fairbanks North Star Borough  
PO Box 71267 / 809 Pioneer Road  
Fairbanks, AK 99707-1267
The applicant mentions on page 5 of the attached pdf that the outhouse will be inclosed (sic) and pumped. If the applicant intends to install a vaulted pit privy (one with a holding tank to store waste that requires regular pumping) then he needs to obtain approval from DEC Wastewater program. This is the extent of my comments.

Thanks,

Tonya Bear, P.E.
Engineer 1

Department of Environmental Conservation
Division of Water, Wastewater Discharge
Engineering Support & Plan Review Section
610 University Avenue, Fairbanks, AK 99709
Email: tonya.bear@alaska.gov
Office: 907-451-2177

---

Attached, please find the application materials for a minor kennel (between 5 and 24 dogs) conditional use permit that has been submitted to the FNSB Community Planning Department. Due to the Rural Estates zoning on this property, the minor kennel use requires a conditional use permit, which is scheduled to be decided at a public hearing before the Planning Commission on October 11, 2016. Also attached is a zoning report that contains basic information regarding the parcel.

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Please return any comments no later than Thursday, September 8th at 5pm to be included in the staff report analysis. If there is another contact that would be appropriate to review this application, please feel free to forward this email or let me know and I will contact them. If you have any questions or need any clarification, please just let me know. I appreciate your time and help on this issue.

Thanks!
Stacy
UNFINISHED BUSINESS
MEMORANDUM

TO: FNSB Planning Commission

THROUGH: Kellen Spillman
Community Planning Deputy Director

FROM: Stacy Wasinger, Planner III

DATE: September 22, 2016

SUBJECT: Title 18 School and Related Definitions

As requested by the Planning Commission at its September 7, 2016 meeting, the Community Planning Department has compiled the definitions and references related to schools in Title 18. These references include those terms defined in FNSBC 18.04.010 (Definitions) and all other school references throughout Title 18. There are four types of references to schools in Title 18:

1) **Defined in Title 18**: those uses specifically defined in FNSBC 18.04.010

2) **Referred to in Other Definitions**: references to schools or related uses in other definitions found in FNSBC 18.04.010

3) **Referred to in Zone District Standards**: references to schools or related uses in the permitted or conditional uses within specific zone district standards, but not defined

4) **Referred to in Purpose, Overlay Zones, and Supplemental Standards**: references to schools in FNSBC 18.12.020 “Purpose”, 18.92 “Overlay Designations”, or 18.96 “Supplementary Regulations”

Attached you will find each specific school reference contained within FNSBC 18.
1) **Defined in Title 18:**
- "School buildings" means buildings, except church buildings as defined, used primarily for teaching and instruction on a daily basis as its primary use, including elementary and secondary schools and colleges. This definition does not include trade/technical/vocational school.
- "Trade/technical/vocational school" means a school on a secondary or post secondary level that offers instruction and practical experience in skilled trades, including, but not limited to, aviation, mechanics, carpentry, plumbing and construction.

2) **Referred to in other definitions:**
- *Schools* as accessory to religious educational uses in Church buildings definition
  - "Church buildings" means buildings and accessory structures and land uses which are primarily intended for conducting regularly scheduled religious services, and associated accessory uses such as convents, monasteries, rectories, day care, schools and other religious educational uses. This definition is not intended to include home worship, Bible study, or other similar activities which are permitted as accessory uses of residential dwelling units.

  - College, university, boarding school, orphanage, convent, monastery, other institutional use in dormitory definition
    - "Dormitory" means a building used as group living quarters for students, members of a religious order, or employees, as an accessory use for a college, university, boarding school, orphanage, convent, monastery, other institutional use, or industrial use.

3) **Referred to in zone district standards:**
- *Schools: art, music, dance, business, trade and similar educational uses*
  - Permitted in MFO, LC, GC, CBD
  - Conditional Use in OR, MF

- *School buildings*
  - Permitted in MFO, LC, GC, CBD
  - Conditional Use in RA, RF, RE, RR, SF, TF, MF
  - Not permitted in LI

- *Trade/technical/vocational school*
  - Permitted in RA, RF, MFO, LC, GC, CBD, ML
  - Conditional Use in RE, RR, SF, TF, MF

- *Book, stationery and school supply stores*
  - Permitted in GC
4) **Referred to in Purpose, Overlay Zones, and Supplemental Regulations:**

**18.12.020 Purpose.**
The purpose of this title is to implement the Fairbanks North Star Borough comprehensive plan.

This title is intended to protect private property rights, to promote the public health, safety and general welfare of the residents of the borough, and safety from fire and to promote the efficient distribution of water, sewage, schools, parks and other public requirements; to provide safe traffic flow on the public streets; to promote economic development and the growth of private enterprise; and to divide the borough into districts. (Ord. 99-089 § 2, 2000; Ord. 88-010 § 2, 1988. 2004 Code § 18.04.020.)

**18.92.060 CF – Correctional facilities designation.**
A. Purpose. This designation is intended to provide for the location of correctional facilities.
B. Regulations and Standards. Neither a center or correctional facility shall be located within 1,000 feet of either a habitable dwelling or a school, excluding private trade, clerical skills, or other adult training centers. (Ord. 92-006 § 4, 1992. 2004 Code § 18.48.060.)

**18.96.060 Off-street parking and loading requirements.**
C. Minimum Standards for Off-Street Parking Spaces. For every use, there shall be provided the following minimum number of off-street parking spaces:
   9. Theater or auditorium (including school auditoriums), church, funeral parlor, assembly hall: one space per four seats;

**18.96.130 Standards for junkyards.**
Junkyards shall meet the following standards:
A. The proposed site shall not be established within 500 feet of any school building, hospital, public building or residentially zoned land adjacent thereto.

**18.96.170 Standards for residential cluster development.**
C. Development Performance Standards. A cluster development shall meet the following requirements and standards:
   6. Density. In a cluster development, where a variety of housing types may be provided including single-family, two-family or multiple-family structures, the maximum number of dwelling units allowed shall be determined by the total number of dwelling units that can exist if the property is subdivided to its greatest potential under its current zoning designation. The maximum number of dwelling units may be reduced because of, but not limited to, the following:
      e. An excessive burden imposed on parks, recreational areas, schools, and other public services and utilities which serve or are proposed to serve the development.

**18.96.220 Standards for sexually oriented businesses.**
B. Location.
1. Regardless of whether a sexually oriented business is a permitted or conditional use, a sexually oriented business may not be located:
   c. within 1,000 feet of a lot which contains any of the following preexisting, primary uses:
      i. A church building;
      ii. A public or private school and its grounds, from preschool to twelfth grade;
18.96.240 Standards for commercial marijuana establishments.
   A. General Standards.
      3. No marijuana establishment, except a marijuana testing facility, shall be located within the following buffer distances:
         a. Five hundred feet of primary and secondary school buildings (K-12) including vocational programs, playgrounds, adult and juvenile correctional facilities and housing facilities owned by a public housing authority with children as residents; and
         b. Two hundred feet of any post-secondary school buildings including but not limited to trade/technical/vocational schools, colleges and universities; and
■ ECHO housing (See also accessory dwelling unit)  An accessory structure on a single residential lot for occupancy only by immediate family members of the occupants of the principal structure on the lot. (Rock Hall, Md.)

■ ecological impact (See also environmental impact)  A modification or change in the existing natural environment that could result in the disruption and/or loss of wildlife habitat, vegetation, air quality, soil and water resources, and/or an increase in ambient noise levels. (Albuquerque/Bernalillo County, N. Mex.)

■ ecology  The interrelationship of living things to one another and their environment; the study of such interrelationships. (California Planning Roundtable)

■ economic base  Economic base theory essentially holds that the structure of the economy is made up of two broad classes of productive effort: basic activities that produce and distribute goods and services for export to firms and individuals outside a defined localized economic area, and nonbasic activities whose goods and services are consumed at home within the boundaries of the local economic area. Viewed another way, basic activity exports goods and services and brings new dollars into the area; nonbasic activity recirculates dollars within the area. This distinction holds that the reason for the growth of a particular region is its capacity to provide the means of payment for raw materials, food, and services that the region cannot produce itself and also support the nonbasic activities that are principally local in productive scope and market area. (California Planning Roundtable)

■ economic development (See also business; commercial; retail)  A development that provides a service, produces a good, retails a commodity, or emerges in any other use or activity for the purpose of making financial gain. (Renton, Wash.)

Any change in a community that enables greater production, increased employment, and a better distribution of goods and services. (Interstate 81 Corridor Council)

■ economic development commission (EDC) (See also community development corporation (CDC))  An agency charged with seeking economic development projects and economic expansion at higher employment densities. (California Planning Roundtable)

■ ecosystem (See also biodiversity; habitat)  An interacting system formed by a biotic community and its physical environment. (California Planning Roundtable)

Systems which predominantly consist of or are used by those communities of plants, animals, bacteria, and other flora and fauna which occur endgenously on the land, in the soil, or in the water. (Temple Terrace, Fla.)

The interacting system of a biological community and its non-living environmental surroundings. (United States Environmental Protection Agency)

Living and nonliving components which interact forming a complete environmental unit (United States Department of Agriculture)

A characteristic assemblage of plant and animal life within a specific physical environment and all interactions among species and between species and their environment. (Monroe County, Ind.)

■ educational facilities, college/university (See also campus)  An institution other than a trade school that provides full-time or part-time education beyond high school. (Durham, N.C.)

A post-secondary institution for higher learning that grants associate or bachelor degrees and may also have research facilities and/or professional schools that grant master and doctoral degrees. This may also include community colleges that grant associate or bachelor degrees or certificates of completion in business or technical fields. (Federal Way, Wash.)

An educational institution authorized by the state to award associate, baccalaureate, or higher degrees. (Champaign, Ill.)

An institution for post-secondary education, public or private, offering courses in general, technical, or religious education and not operated for profit. It operates in buildings owned or leased by the institution for administrative and faculty offices, classrooms, laboratories, chapels, auditoriums, lecture halls, libraries, student and faculty centers, athletic facilities, dormitories, fraternities, and sororities, but not including colleges or trade schools operated for profit. (St. Paul, Minn.)

■ educational facilities, community college  A public college or technical institute which . . . provides a two-year, post-secondary, terminal-general, terminal-technical, out-of-school youth or adult education program, or any combination of these. The community college may also provide area vocational-technical education services to secondary senior high school students. (State of Pennsylvania)

■ educational facilities, elementary school  Serves students between the
kindergarten and high school levels. (Redmond, Wash.)

- educational facilities, high school
  Ninth, tenth, eleventh, and twelfth grades. (Redmond, Wash.)

- educational facilities, junior high school
  A school which embraces not more than the first year of high school with not more than the upper two elementary grades. (Concord, N.C.)

- education facilities, kindergarten
  Same as a nursery school except when operated in conjunction with a school of general instruction and having accredited instruction. (Prescott Valley, Ariz.)

A school or class for children of the 4-to 6-year-age group. (Ogden, Utah)

- educational facilities, nursery school
  A school that is primarily educational in nature, meets the needs of a child of three to five years of age. (Goschland County, Va.)

Any day care center which receives children between the ages of two and six years and which is established and professionally operated primarily for educational purposes to meet the developmental needs of the children served. (Vernon Hills, Ill.)

An institution intended primarily for the daytime care of children of preschool age. Even though some instruction may be offered in connection with such care, the institution shall not be considered a "school" within the meaning of this chapter. (Prescott Valley, Ariz.)

- educational facilities, preschool
  Providing day care with or without educational services for children not yet attending elementary school; includes nursery school and kindergarten. (Palmer, Alaska)

A school for children primarily between the ages of three and five, providing preparation for elementary school. (Carmel, Ind.)

A facility for the organized instruction of children who have not reached the age for enrollment in kindergarten. (Skokomish County, Wash.)

A facility for children who have attained the age of three years which is either: (a) recognized by the State Board of Education; or (b) registered with the state board of education and recognized or accredited by a recognized national or multistate educational organization or association which regularly recognizes or accredits schools; or (c) licensed by the [appropriate state department]. (Elmhurst, Ill.)

- educational facilities, primary
  A public, private, or parochial school offering instruction at the elementary school level in the branches of learning and study required to be taught in schools within the state. (Des Moines, Iowa)

- educational facilities, primary/secondary
  A public, private, or parochial school offering instruction at the elementary, junior, and/or senior high school levels in the branches of learning and study required to be taught in the public schools of the [state]. (Blackburg, Va.)

- educational facilities, private school
  Any building or group of buildings, the use of which meets state requirements for primary, secondary, or higher education and which does not secure the major part of its funding from any governmental agency. (McHenry County, Ill.)

An educational institution other than a public school which offers instruction in the several branches of learning and study required to be taught in the public schools or where instruction is given in the vocational, professional, or recreational fields. (Glendale, Calif.)

- educational facilities, school for the arts
  A school where classes in the various arts (e.g., dance, painting, sculpturing, singing) are taught to four or more persons at a time. (Gastonia, N.C.)

- educational facilities, secondary
  A public, private, or parochial school offering instruction at the junior high or high school level in the branches of learning and study required to be taught in the schools of the State. (Des Moines, Iowa)

- educational facilities, vocational school
  A school established to provide for the teaching of industrial, clerical, managerial, or artistic skills. This definition applies to schools that are owned and operated privately for profit and that do not offer a complete educational curriculum (e.g., beauty school, modeling school). (North Liberty, Iowa)

A secretarial school or college, or business school or college, when not public and not owned of conducted by or under the sponsorship of a religious or charitable organization; school conducted as commercial enterprise for teaching instrumental music, dancing, barbering, or hairdressing, or for teaching industrial skills in which machinery is employed as a means of instruction. This definition shall not be deemed to include an "educational institution." (Pine Bluff, Ark.)

A specialized instructional establishment that provides on-site training of business, commercial, and/or trade skills such as accounting, data processing, and computer repair. This classification excludes establishments providing training in an activity that is not otherwise permitted in the zone. Incidental instructional services in conjunction with another primary use shall not be considered a business and trade school. (Redondo Beach, Calif.)

- educational institution
  A public, parochial, or private institution that provides educational instruction to students. This definition does not include trade or business schools or colleges. (Pine Bluff, Ark.)

Any public, parochial, private, charitable, or nonprofit school, junior college, or university, other than trade or business schools, including instructional and recreational uses, with or without living quarters, dining rooms, restaurants, heating plants, and other incidental facilities for students, teachers and employees. (Gurnee, Ill.)

- educational use
  Use of land or a building or buildings as or for an institution not for profit but for the establishment and maintenance of a public or private college, secondary or elementary school or other educational institution for the academic instruction and cultivation of the mind and for the inculcation of a clearer sense of moral and spiritual values and not including an institution or
safe room (See storm shelter)
saloon (See bar)
salvage Any article or material that is to be or intended to be reclaimed or saved from destruction. (Palm Desert, Calif.)
salvage yard (See also junkyard) A facility or area for storing, keeping, selling, dismantling, shredding, compressing, or salvaging scrap or discarded material or equipment. Scrap or discarded material includes but is not limited to metal, paper, rags, tires, bottles, motor vehicle parts, machinery, structural steel, equipment, and appliances. The term includes facilities for separating trash and debris from recoverable resources, such as paper products, glass, metal cans, and other products which can be returned to a condition in which they may again be used for production. (Clark County, Nev.)

Any lot or parcel, or part thereof, including automobile graveyards, where a salvage yard, or parts thereof, are located for the purposes of resale as parts or parts as salvage only. (Bedford County, Va.)

A parcel of land on which wastes or used secondhand materials are bought, sold, exchanged, stored, processed, or handled. Materials include but are not limited to scrap iron and other ferrous metals, paper, rags, rubber tires, bottles, discarded goods, machinery, or two or more inoperable motor vehicles. (Jacksonville, Fla.)

A lot or parcel of land used for the collection, keeping, or abandonment of discarded or waste materials. (Clarkdale, Ariz.)

Any location whose primary use is where waste or scrap materials are stored, bought, sold, accumulated, exchanged, packaged, disassembled, or handled, including but not limited to materials such as scrap metals, paper, rags, tires, and bottles. (North Liberty, Iowa)
sand dune (See dune)
sand and gravel pit (See also extractive industry; mineral extracting; quarry) A type of open pit mine, or strip mine, from which the mineral removed is restricted to sand and gravel. (El Paso, Tex.)
sanitarium/sanatorium (See also clinic; health care facility; hospital) A health station, retreat, or an institution for the recuperation and treatment of persons suffering from physical or mental disorders. (Jefferson County, Colo.)

A building and premises, other than a hospital, intended for the care and housing of more than five sick, injured, or infirm persons for compensation. (Belmont, Calif.)

A health station or retreat or other place where patients are housed, and where treatment is given, but excluding mental institutions, or institutions for treatment of persons addicted to the use of drugs. (Menlo Park, Calif.)
satellite dish antenna (See antenna, satellite dish)
sauna (See also bathhouse; health spa) A steam bath or heated bathing room used for the purpose of bathing, relaxation, or reducing utilizing steam or hot air as a cleaning, relaxing, or reducing agent. (Rochester, Minn.)
sawmill (See also forest industry; lumber manufacturing; lumberyard) A facility where logs or partially processed cants are sawn, split, shaved, stripped, chipped, or otherwise processed to produce wood products, not including the processing of timber for use on the same lot by the owner or resident of that lot. (Kent County, Md.)

A stationary or portable machine used in converting logs to lumber or ties or in refining lumber. (Marinette County, Wis.)

A facility for the processing of timber from the property on which it is located, from adjoining property, or from other properties removed from the sawmill or its environs without regard to point of origination. (Campbell County, Va.)

An operation or facility which has, as its predominant purpose, the sawing or planing of logs or trees into rough slabs. A sawmill is sometimes referred to as a planing mill. (Concord, N.C.)
sawmill, accessory A sawmill which is operated as an incident to a construction site or another industrial or retail operation which is or will be established as a primary use on the same site. (Concord, N.C.)

scarifying establishment (See tattoo parlor)
scenic Pertaining to natural features of the landscape that are visually significant or unique. (APA's Growing Smart Legislative Guidebook)

Scenic area (See also easement, scenic view protection regulations) Any area of particular scenic beauty or historical significance as determined by the United States, the state, or the city, and including any interest in land that have been acquired for the restoration, preservation, and enhancement of scenic beauty. (El Paso, Tex.)

Land and other natural features valued for their aesthetic qualities. (Deschutes County, Ore.)
scenic highway (See also corridor, scenic) Any highway designated as a scenic highway by an agency of the city, county, state, or federal government. (Lake Elsinore, Calif.)

A highway, road, drive, or street that, in addition to its transportation function, provides opportunities for the enjoyment of natural and man-made scenic resources and access or direct views to areas or scenes of exceptional beauty or historic or cultural interest. The aesthetic values of scenic routes often are protected and enhanced by regulations governing the development of property or the placement of outdoor advertising. . . . (California Planning Roundtable)

Scenic highway corridor (See corridor, scenic)
school (See also educational facilities definitions) An institution for the teaching of children or adults including primary and secondary schools, colleges, professional schools, dance schools, business schools, trade schools, art schools, and similar facilities. (Santa Rosa, Calif.)
An institution providing full time instruction and including accessory facilities traditionally associated with a program of study which meets the requirements of the laws of the state. (Campbell County, Va.)

school, alternative

A school which offers a curriculum which is equivalent to but is a substitute for the curriculum commonly found in more traditional public or private schools. (Richland, Wash.)

school, charter

A public school established by a contract with a district governing board, the state board of education or the state board for charter schools pursuant to [state law] to provide learning that will improve pupil achievement. (Sedona, Ariz.)

school district (See also educational facilities definitions)

The territory administered by the elected or appointed authorities of a state, county, or other local governmental unit to provide educational services to a resident population. A school district typically includes several school buildings, teachers, and related staff. (United States Census Bureau)

school site

A site that is operated as the school or as a primary or secondary school that contains all improvements required by local, state, or federal regulations necessary for general primary or secondary academic instruction. (San Jose, Calif.)

school support facilities

Facilities which are required to maintain efficient operation of a school or school system but which are not directly related to the academic program of study. (Campbell County, Va.)

scrap yard (See wrecking yard)

screen (See also buffer; fence; visual obstruction)

A structure providing enclosure and a visible barrier between the area enclosed and the adjacent property. A screen may also be constructed, consisting of shrubs or other growing materials. (Traverse City, Mich.)

Trees, shrubs, walls, solid fences, etc. used to create a visual or noise barrier. (Wood River, Ill.)

screen, opaque

A masonry wall, fence sections, earthen berm, evergreen hedge, or a combination of these elements which completely interrupts visual contact and provides spatial separation. (Traverse City, Mich.)

screened

Obscured from public view. (Hedwig Village, Tex.)

screening (See bend; buffer; fence; visual obstruction)

1. A method of visually shielding or obscuring one abutting or nearby structure or use from another by fencing, walls, berms, or densely planted vegetation; and (2) the removal of relatively coarse floating or suspended solids by straining through racks or screens. (Sixpenny County, Calif.)

A method of visually shielding or obscuring an abutting or nearby use or structure from another by fencing, walls, berms, or densely planted vegetation. (Clarkdale, Ariz.)

The treatment created with landscaping or a decorative two-dimensional structure to visually conceal an area or on-site utilitarian use that is considered unattractive. (Burien, Wash.)

screening wall (See also wall)

A wall made of fieldstone, brick, stucco, wrought-iron (or equivalent to wrought-iron), or wood picket excluding round industrial railing and chain link fence. The wall shall create a visual buffer and be at least 50 percent solid and be three to four feet long. (Gainesville, Fla.)

sculpture (See also art, works of)

A three-dimensional construction or form, generally executed for the purposes of decoration or artistic expression, and displayed in any place accessible to the public. (Columbus, Ohio)

An object fashioned, shaped, and formed by hand or machine into a work of art, including but not limited to contemporary, modern, classical, or abstract design, and that which may or may not be a likeness of a person or thing. (Palm Beach, Fla.)

searchlight (See also beacon)

A powerful light or lights equipped with a reflector to produce a bright beam or beams. (Rossville, Minn.)

seasonal decoration (See also sign, holiday decoration)

Any structure, not displaying numbers or letters, used to display holiday symbols or insignias or themes, such as, but not limited to, decorated Christmas trees, air-filled balloons or figures, wood figures, cutouts, and similar constructions. (Cohls Neck, N.J.)

Noncommercial signs or other materials temporarily displayed on traditionally accepted civic, patriotic, and/or religious holidays. (Steamboat, Colo.)

seasonal market (See also farmer’s market)

A temporary facility used to conduct retail trade for a period not exceeding 90 days in a calendar year. (Milwaukee, Wisc.)

seasonal population (See also migrant farm worker; tourism)

Part-time inhabitants who utilize, or may be expected to utilize, public facilities or services, but are not residents. Seasonal population shall include tourists, migrant farmworkers, and other short-term and long-term visitors. (Temple Terrace, Fla.)

seating capacity

The actual seating capacity of an area based upon the number of seats or one seat per 24 inches of bench or pew length. For other areas where seats are not fixed, the seating capacity shall be determined as indicated by the Uniform Building Code. (Roswell, N.Mex.)

seating place

In churches or other assembly areas where benches or pews are used in place of seats, each 24 inches of bench or pew shall be counted as one seat. (Clarkdale, Ariz.)

The seating capacity of a building is determined by the specifications and plans filed to obtain a building permit. In the event individual seats are not provided, each 18 inches of benches or similar seating accommodations spaced 32 inches from back to back shall be considered as one seat. (Beverly Hills, Calif.)

seating space

A seating space in a place of public assembly shall be considered as a fixed permanent seat; provided, in the case of bleachers, benches, or the flat tops of walls, seating shall be 18 inches wide and 16 inches deep; provided, that seating 30 inches or more in depth shall count double when access is
FMATS
POLICY COMMITTEE MEETING
Wednesday, September 21, 2016
12:00 – 2:00 P.M.
City of Fairbanks, 800 Cushman Street, City Council Chambers

1. Call to Order
2. Introduction of Members and Attendees
3. Public Comment Period (3 minute limit)
4. Approval of the September 21, 2016 Agenda
5. Approval of the August 17, 2016 Minutes
6. Committee Reports
   a. Coordinator’s Office Report and Technical Committee Action Items
   b. Coordinator’s Office Reorganization Update
   c. Air Quality Planning Subcommittee Meeting Update
   d. FMATS Improvement Program Subcommittee Update
7. Old Business
   a. Travel Model Planning Assumption Recommendations (Action Item)
   b. FMATS 2017 – 2020 Transportation Improvement Program Draft Discussion
8. New Business
   a. Freight Mobility Plan Draft Existing Conditions Report
   b. Chena River Walk Funding for TIP (Action Item)
   c. FFY17 Technical and Policy Committee Meeting Dates (Action Item)
   d. Letter to EPA via DE C regarding the Non-Attainment Area and Highway Sanctions (Action Item)
   e. FMATS Bylaws Review Discussion
9. Public Comment Period
10. Other Issues
11. Informational Items
   a. Banking Request Approval
   b. FTA 5339 Grant Award for Transit Maintenance Facility
   c. FNSB’s Clear the Air Conference and Expo: Paths to Attainment 9.26.16 – 9.28.16
   d. Statewide Long Range Transportation Plan
   e. Obligations and Offsets
12. Policy Committee Comments
13. Adjourn

Next Scheduled Policy Committee Meeting – Wednesday, October 19, 2016, Noon, Fairbanks City Hall, Council Chambers