



CITY OF SWEET HOME PLANNING COMMISSION MEETING AGENDA

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November 18, 2019, 6:30 p.m.
City Hall Council Chambers, 3225 Main Street
Sweet Home, OR 97386

PLEASE silence all cell phones – Anyone who wishes to speak, please sign in.

1. Call to Order and Pledge of Allegiance
2. Roll Call of Commissioners:
Lance Gatchell (Chair); Henry Wolthuis (Vice Chairperson); Eva Journey; Greg Stephens; Thomas Herb, Greg Korn, Jeff Parker
3. Public Comment. This is an opportunity for members of the public to address the Planning Commission on topics that are not listed on the agenda.
4. **Public Hearing for File CU19-09:** The applicant is requesting a conditional use permit in order to install a wireless telecommunications facility consisting of a 100-foot monopole and associated equipment within a 2,500 square foot fenced compound. Verizon Wireless (“Verizon”) is proposing to build a new Wireless Telecommunications Facility (“WTF” or “Facility”), OR4 Foster Lake, located one property east of 1602 18th Avenue in Sweet Home, Oregon. This proposed new WTF is intended to fill a significant gap in Verizon’s high band 4G LTE coverage and expand capacity for its customers in the City of Sweet Home. The subject property contains 57,934.8 square feet and is in the Industrial (M) Zone.
5. **Public Hearing for File CU19-10:** The applicant has requested a Conditional Use Permit in order to install a wireless telecommunications facility consisting of a radio antenna on a monopole connected to the Sweet Home Elk’s Lodge and associated equipment within a 362 square foot fenced compound. The radio antenna is needed to continue to operate the Falls Creek Hydroelectric Project. The project needs to improve the communication it has with Pacificorp substation on 18th Avenue in Sweet Home. The subject property contains approximately 3.65 acres and is in the Residential Low Density (R-1) Zone.
6. Staff Update on Planning Projects
7. Adjournment

Persons interested in commenting on these issues should submit testimony in writing to the Community and Economic Development Department Office located in City Hall prior to the hearing or attend the meeting and give testimony verbally. Persons who wish to testify will be given the opportunity to do so by the Chair of the Commission at the Planning Commission meeting. Such testimony should address the zoning ordinance criteria which are applicable to the request. The Sweet Home Planning Commission welcomes your interest in these agenda items. Pursuant to ORS 192.640, this agenda includes a list of the principal subjects anticipated to be considered at the meeting; however, the Commission may consider additional subjects as well. This meeting is open to the public and interested citizens are invited to attend.

The failure of an issue to be raised in a hearing, in person or by letter, or failure to provide sufficient specificity to afford the decision maker an opportunity to respond to the issue precludes appeal to the Land Use Board of Appeals based on that issue.

A copy of the application, all documents and evidence relied upon by the applicant and applicable criteria are available for inspection at no cost and a copy will be provided at reasonable cost. A copy of the staff report will be available for inspection at no cost at least seven days prior to the hearing and a copy will be provided at reasonable cost. Please contact the Community and Economic Development Department at 3225 Main Street, Sweet Home, Oregon 97386; Phone: (541) 367-8113.

Planning Commission Process and Procedure for Public Hearings

- Open each Hearing individually
- Review Hearing Procedure (SHMC 17.12.130)
- Hearing Disclosure Statement (ORS 197.763)
 - At the commencement of a hearing under a comprehensive plan or land use regulation, a statement shall be made to those in attendance that:
READ: “The applicable substantive criteria are listed in the staff report. Testimony, arguments and evidence must be directed toward the criteria described or other criteria in the plan or land use regulation which the person believes to apply to the decision. Failure to raise an issue accompanied by statements or evidence sufficient to afford the decision maker and the parties an opportunity to respond to the issue precludes appeal to the Land Use Board of Appeals based on that issue.”
- Declarations by the Commission:
 - Personal Bias - Prejudice or prejudice of the facts to such a degree that an official is incapable of making an objective decision based on the merits of the case.
 - Conflict of Interest - Does any member of the Commission or their immediate family have any financial or other interests in the application that has to be disclosed.
 - Ex Parte Information - The Planning Commission is bound to base their decision on information received in the Public Hearing and what is presented in testimony. If a member of the Planning Commission has talked with an applicant or has information from outside the Public Hearing it needs to be shared at that time so that everyone in the audience has an opportunity to be aware of it and the rest of the Planning Commission is aware of it. In that way it can be rebutted and can be discussed openly.
- Staff Report
 - Review of application
 - Discussion of relative Criteria that must be used
 - During this presentation the members of the Planning Commission may ask questions of the staff to clarify the application or any part of the Zoning Ordinance or the applicable information.
- Testimony
 - Applicant’s Testimony
 - Proponents’ Testimony
 - Testimony from those wishing to speak in favor of the application
 - Opponents’ Testimony
 - Testimony from those wishing to speak in opposition of the application
 - Neutral Testimony
 - Testimony from those that are neither in favor nor in opposition of the application.
 - Rebuttal
- Close Public Hearing
- Discussion and Decision among Planning Commissioners
 - Motion
 - Approval
 - Denial
 - Approval with Conditions
 - Continue
- If there is an objection to a decision it can be appealed to the City Council. The Planning Commission shall set the number of days for the appeal period. At the time the City Council goes through the Public Hearing Process all over again.
 - Recommendation made by Planning Commission—City Council makes final decision.
 - If you have a question, please wait until appropriate time and then direct your questions to the Planning Commission. Please speak one at a time so the recorder knows who is speaking.



Community and Economic Development Department

City of Sweet Home
 3225 Main Street
 Sweet Home, OR 97386
 541-367-8113
 Fax 541-367-5113
 www.sweethomeor.gov

Staff Report Presented to the Planning Commission

REQUEST: The applicant is requesting a conditional use permit in order to install a wireless telecommunications facility consisting of a 100-foot monopole and associated equipment within a 2,500 square foot fenced compound. Verizon Wireless (“Verizon”) is proposing to build a new Wireless Telecommunications Facility (“WTF” or “Facility”), OR4 Foster Lake, located one property east of 1602 18th Avenue in Sweet Home, Oregon. This proposed new WTF is intended to fill a significant gap in Verizon’s high band 4G LTE coverage and expand capacity for its customers in the City of Sweet Home. The subject property contains 57,934.8 square feet and is in the Industrial (M) Zone.

APPLICANT: Velocitel, LLC (Representing Verizon Wireless)
PROPERTY OWNER: Lester Sales, Inc.
FILE NUMBER: CU19-09
PROPERTY LOCATION: One property east of 1602 18th Avenue, Sweet Home, Oregon 97386; Identified on the Linn County Assessor’s Map as 13S01E31AA Tax Lot 03800.

REVIEW AND DECISION CRITERIA: Sweet Home Municipal Code Section(s) 17.44, 17.80, and 17.98.

HEARING DATE & TIME: **November 18, 2019 at 6:30 PM**

HEARING LOCATION: City Hall at 3225 Main Street, Sweet Home, Oregon 97386

STAFF CONTACT: Angela Clegg, Associate Planner
 Phone: (541) 367-8113; Email: aclegg@sweethomeor.gov

REPORT DATE: November 11, 2019

I. PROJECT AND PROPERTY DESCRIPTION

LOCATION: The subject property contains approximately 57,934.8 square feet and is in the Industrial (M) Zone. Identified on the Linn County Assessor’s Map as 13S01E31AA Tax Lot 3800. The proposed business is located one property east of 1602 East 18th Avenue, Sweet Home, Oregon.

ZONING AND COMPREHENSIVE PLAN DESIGNATIONS:

Property	Zoning Designation	Comprehensive Plan Designation
Subject Property	Industrial (M)	Light Industrial
Property North	Industrial (M)	Light Industrial
Property East	Industrial (M) and Recreational Commercial (RC)	Planned Recreation Commercial
Property South	Industrial (M)	Heavy Industrial
Property West	Industrial (M)	Light Industrial and General Industrial

Floodplain Based on a review of the September 29, 2010 FEMA FIRM Maps; Panel 41043C0913G, the subject property is located outside of the 100-year floodplain.

Wetlands: Based on a review of the City of Sweet Home Local Wetlands Inventory and a review of the National Wetlands Inventory Map, the subject property does not contain inventoried wetlands.

Access: The subject property has frontage along 18th Avenue and has access from 18th Avenue.

Services: The property is connected to City water and sewer.

TIMELINES AND HEARING NOTICE:

Mailed/Emailed Notice: October 17, 2019
Notice Published in Newspaper: October 23, 2019
Planning Commission Public Hearing: November 18, 2019
120-Day Deadline: February 13, 2020
Notice was provided as required by SHMC 17.12.120

II. COMMENTS

Building Division: The Building Program has no issues with this request

Engineering Division: In regards to the proposed Telecommunications Monopole Facility on 18th Avenue, the CEDD-ED has only one issue. Construction is on private property, the tower and equipment will not have any connections to City water and sewer services, and there is already an existing driveway apron to 18th Avenue.

The remaining item is the city standard Hard Surface Approach that all development is required to construct. In this case the public right-of-way portion is completed with the adjacent concrete sidewalk. The private side portion is the missing component and will need to be built because the driveway is gravel behind the sidewalk, with loose rock coming out onto the 18th Avenue roadway. The approved hard surface driveway material may be paver blocks, concrete or asphalt concrete, for a minimum distance of 20ft from the property line toward the structure.

Public Works Dept. Public Works has no issues with this request

Fire Department: No comments as of the issue of this Staff Report.

No other comments were received as of the writing of this staff report.

III. REVIEW AND DECISION CRITERIA

The review and decision criteria for a conditional use permit are listed below in bold. Staff findings and analysis are provided under each review and decision criterion. The applicant's findings are included in their written statement included in Attachment D.

1. Conditional Use Standards

- A. **The request complies with the requirements of the underlying zone or overlay zone, city codes, state and federal laws. [SHMC 17.80.040(A)]**
- B. **The purpose of the M zone is to provide areas suitable and desirable for all types of industrial activity; provided that, development controls are utilized to minimize possible harmful effects related to air and water pollution and to potential nuisance hazards such as fire, explosion or noise. The M zone is appropriate in those large areas already developed for industrial use and in those areas possessing site characteristics suitable for industry, such as good access to highway and rail facilities, readily available water and sewer systems, level and well drained sites, and little or no potential hazard to nearby residential or commercial areas. [SHMC 17.44.010]**

Staff Findings: The subject property is in the Industrial (M) Zone. The applicant's proposal consists of wireless telecommunications facility (WTF). A WTF may be established in the M Zone as a conditional use under Sweet Home Municipal Code (SHMC) 17.98.

For this application to comply with all applicable city codes and state and federal laws, this application may require additional permits. If this application is approved, Staff recommends a condition of approval that prior to operation, the applicant shall obtain all required local, state, and federal permits. The property owner shall obtain all necessary permits from the Building Division and Engineering Division. These permits may include, but are not limited to: building, electrical, mechanical, and plumbing permits from the Building Division and a new or amended access permit from the Sweet Home Public Works Department. The applicant shall submit copies of all required permits and licenses to the Sweet Home Community and Economic Development Department for inclusion in the record of CU19-09.

- C. **The site size, dimensions, location, topography and access are adequate for the needs of the proposed use, considering, but not limited to, the following:**
 - 1. **Building size;**
 - 2. **Parking;**
 - 3. **Traffic;**
 - 4. **Noise;**
 - 5. **Vibration;**
 - 6. **Exhaust and emissions;**
 - 7. **Light and glare;**
 - 8. **Erosion;**
 - 9. **Odor;**
 - 10. **Dust;**
 - 11. **Visibility;**
 - 12. **Safety;**

13. Building, landscaping or street features. [SHMC 17.80.040(B)]

Staff Findings:

- a. Building size – The proposed use would be located within a 50' x 50' fenced area on the property, and the applicant has not requested to construct a building. The proposal includes a 100 foot tall monopole, fenced area, and equipment shelters.
 - b. Parking and Traffic – The subject property is in the M zone. The applicant states that the facility is not staffed and would generate on average one vehicle trip per month for maintenance. The applicant would need to provide all parking as required by the applicable sections of SHMC Section 17.08.090.
 - c. Noise – The applicant states that no noise impact would be created. Based on the information provided in the application, no noise impact has been identified.
 - d. Vibration – Based on a description of the proposal, no significant vibration would be created by the proposed use.
 - e. Exhaust and emissions –The applicant is proposing a WTF. The applicant has not proposed a use that would create exhaust or emissions. Odor impacts are discussed below.
 - f. Light and glare – The applicant has not proposed any new outdoor lighting. SHMC 17.98.050(l) and SHMC 17.44.090 provide the lighting standards in the M Zone and for WTF's which would apply to the WTF development on the property. That section states that "exterior lighting shall be located in such a manner so as not to face directly, shine or reflect glare onto a street, a highway or a lot in a residential zone."
 - g. Erosion – The proposed use would be located within a fenced 50' x 50' area. No significant erosion impact is anticipated.
 - h. Odor – Based on the description of the proposal, no odor would be created by the proposed use.
 - i. Dust – If parking is provided, the applicant would be required to maintain a hard surface parking lot. No additional sources of dust have been identified.
 - j. Visibility –The proposed use would be located within the M zone. SHMC 17.98.050(G)(1-4) provide visual impact standards for WTF's including using a flat paint and non-reflective materials which are addressed below. Consequently, Staff has not identified any significant visibility impacts that would result from operation of the proposed use.
 - k. Safety – The applicant indicates a plan to install a fence and gate surrounding the proposed WTF. SHMC 17.98.050(L) provides security requirements for WTF's which are discussed below. In addition, the applicant would need to acquire all applicable state and federal permits prior to operation of the proposed use.
 - l. Building, landscaping or street features – The proposed use does not include a building. The applicant provided a landscape plan. As proposed, landscaping, and street features in the area would be adequate to accommodate the proposed use.
- D. Any negative impacts of the proposed use on adjacent properties and on the public can be mitigated through application of other code standards, or other reasonable conditions of approval that include but are not limited to those listed in this chapter. [SHMC 17.80.040(C)]**

Staff Findings: The applicant states that the visual impact of the WTF would be minor in nature and mitigated through conditions of approval. Staff has not identified any negative impacts to adjacent properties. In order to ensure compliance with the standards listed in the SHMC, Staff has included proposed conditions of approval that are listed in Section V of this report.

E. All required public facilities have adequate capacity, as determined by the city, to serve the proposed use. [SHMC 17.80.040(D)]

Staff Findings: The Engineering Division submitted comments on this application and has no concerns. Construction is on private property, the tower and equipment will not have any connections to City water and sewer services,

The application complies with this criterion.

F. Home Occupations must meet the following standards:

- a. **The home occupation shall be secondary to the residential use.**
- b. **All aspects of the home occupation shall be contained and conducted within a completely enclosed building.**
- c. **No materials or mechanical equipment shall be used which are detrimental to residential use of the dwelling or nearby dwellings because of vibration, noise, dust, smoke, odor, interference with the electrical grid, radio or television reception or other similar factors.**
- d. **Vehicles related to the home occupation shall be parked in a manner so as to not block any driveway or impede the safe flow of traffic.**

Staff Findings: The applicant has not proposed a home occupation.

The application complies with this criterion.

G. Marijuana facilities must be located in a fixed location. No temporary or mobile sites of any sort are allowed. [SHMC 17.80.040(F)]

H. Marijuana facilities may not have any drive-up services. [SHMC 17.80.040(G)]

I. Marijuana facilities must be located at least 1,000 feet from the property boundary of any school. [SHMC 17.80.040(H)]

J. Marijuana facilities must be sited on a property so as to be at least 100 feet from the boundary of any residentially zoned property. [SHMC 17.80.040(I)]

Staff Findings: The applicant has not proposed any marijuana services.

The application complies with these criteria.

K. In approving a conditional use permit application, the Planning Commission may impose, in addition to those standards and requirements expressly specified by this chapter, additional conditions determined to be necessary to assure that the proposed development meets the decision criteria as well as the best interests of the surrounding properties, the neighborhood, and the city as a whole. [SHMC 17.80.050]

Staff Findings: This provision of the SHMC allows the Planning Commission to impose conditions of approval. This is an opportunity for the Planning Commission to determine if conditions are needed in order to ensure compliance with the "decision criteria as well as the best interests of the surrounding properties, the neighborhood, and the city as a whole." As specified in SHMC 17.80.050, conditions could include, but are not limited to: expanding setbacks, limiting hours of operation, requiring site or architectural design features, imposing additional sign standards, and so forth.

In order to ensure compliance with the standards listed in the SHMC, Staff has included proposed conditions of development listed in Section V of this report. These conditions are primarily a customized list of existing local, state, and federal standards that apply to the application.

- L. A conditional use permit shall be void one year after the date of the Planning Commission approval if the use has not been substantially established within that time period. [SHMC 17.80.070]**

Staff Findings: As required under this section, Staff recommends that a condition of approval require that the conditional use permit shall be void one (1) year after the date of the Planning Commission approval if the use has not been substantially established, as defined under SHMC 17.80.070(A), within that time period. The City Planner may grant one extension of up to one year for a conditional use permit that contained a one-year initial duration upon written request of the applicant and prior to the expiration of the approved period. Requests other than a one-year request made prior to the expiration of the approved period must be approved by the Planning Commission. A conditional use permit not meeting the above time frames will be expired and a new application will be required.

2. Wireless Telecommunications Facilities [SHMC 17.98]

- A. WTFs shall be sited in accordance with the following priorities, in order of their preference. If the applicant proposes a facility on lower priority preferences, the applicant shall prove conclusively, that each of the higher priorities has been considered and found to be not feasible. [SHMC 17.98.040]**
- a. Priority #1. Use of an attached wireless communication facility whereby transmission and reception devices are placed on existing structures which are consistent in height with and situated similarly to types normally found in the surrounding area, such as telephone, electrical or light poles.**
 - b. Priority #2. Co-location by placement of antennas or other transmission and reception devices on an existing tower, building or other structure, such as a utility pole, water tank or similar existing structure.**
 - c. Priority #3. Siting of a new tower, in a visually subordinate manner, using visual compatibility techniques.**
 - d. Priority #4. Siting of a new tower in a visually dominant location, but employing visual compatibility techniques.**
 - e. Priority #5. Siting of a tower in a visually dominant location, not employing visual compatibility techniques.**

Staff Findings: The applicant states that they first attempted to utilize existing structures, such as telephone, electrical, and light poles. The applicant considered a 50' utility pole and determined that the utility pole could not provide an adequate level of service. The applicant provided a RF site analysis for the utility pole. Staff finds that the applicant's statements and provided coverage maps demonstrate that Priority #1 was considered. The applicant states that they identified a geographic search area where the facility could provide an effective level of service. The applicant identified a water tank and the Elks Lodge rooftop. The applicant states that the two existing structures would not provide the necessary level of service. Staff finds that the applicant's statements and provided coverage maps demonstrate that Priority #2 was considered.

The applicant provided photo simulations of the proposed monopole tower and states that the proposed tower would use a flat paint color, landscaping would surround the fenced area, and the facility would have significant setback distances. The applicant states that the proposed monopole is a slim alternative to a lattice tower which requires a larger footprint. The applicant states that the proposed WTF is approximately 700 feet from Main Street and located within an industrial area. Based on the applicant's statements Staff finds that the applicant meets Priority #3.

The application complies with these criteria.

- B. All facilities shall meet all requirements established by the other provisions of SHMC that are not in conflict with the requirements contained in this chapter. [SHMC 17.98.050(A)]**
- C. All facilities shall comply with all federal, state and city codes, including, but not limited to, Federal Communication Commission and Federal Aviation Administration standards. [SHMC 17.98.050(B)]**

Staff Findings: The applicant states that the proposed WTF would meet all the requirements established by other provisions of the SHMC. Staff reviewed the conditional use, WTF, and other applicable standards in this staff report. Staff recommends a condition of approval that all facilities shall meet the requirements of the Uniform Building Code and/or the Oregon Structural Specialty Code.

The applicant provided a Federal Aviation Administration (FAA) TOWAIR Determination which determines impacts of towers on aircraft and airports, the proposed facility was determined not to be a hazard to air navigation and does not require a registration with the FAA. In addition, the applicant states that the proposed facility would operate in accordance with the Federal Communications Commissions (FCC) RF emissions regulations and provided a MPE/FCC compliance letter. To ensure compliance, Staff recommends a condition of approval that the proposed WTF shall comply with all federal, state and city codes, including, but not limited to, FCC and FAA standards.

With the above conditions, the application complies with this criteria.

- D. Access shall meet the standards of the underlying zone. [SHMC 17.98.050(C)]**

Staff Findings: The proposed WTF is located within the M zone. The applicant states that the development would utilize the existing driveway and no new access points are proposed. Staff finds that the proposal meets the access standards of the underlying zone.

The application complies with this criterion.

- E. Height of a facility shall be measured from the natural, undisturbed ground surface below the center of the base of the proposed facility to the top of the facility or if higher, the tip of the highest antenna or other transmission or reception device. [SHMC 17.98.050(D)(1)]**
- F. No WTF shall exceed the height standard of this chapter, except where attached to an existing structure that exceeds that height and the attached antennas do not increase the total height of that structure by more than ten feet. [SHMC 17.98.050(D)(2)]**

Staff Findings: Pursuant to SHMC 17.98.090(C)(2) WTFs shall not exceed 100 feet. The applicant states that the proposed WTF would be 100 feet measured from the ground to the top of the highest antenna. Staff finds that the proposed telecommunications facility meets the height standard of this chapter.

To ensure compliance, Staff recommends a condition of approval that the proposed WTF shall not exceed 100 feet in height.

- G. New facilities, if technically feasible, will be designed and constructed for three antennas/providers to co-locate on the facility and to allow antennas mounted at varying heights. [SHMC 17.98.050(E)(1)]**
- H. The owner of a facility may not deny a wireless telecommunications provider the ability to co-locate on its wireless communication facility at a fair market rate or at another cost agreed to by the affected parties. [SHMC 17.98.050(E)(2)]**
- I. A facility may be attached to any existing structure as long as the height of that structure is not increased by more than ten feet and so long as it meets all relevant requirements of this section. [SHMC 17.98.050(E)(3)]**

- J. Co-location shall not be precluded simply because a reasonable fee or shared use is charged or because reasonable costs necessary to adopt the existing or proposed uses to a shared tower. The Planning Commission may consider expert testimony to determine whether the fees and costs are reasonable. [SHMC 17.98.050(E)(4)]**
- K. Co-location costs that exceed new tower development costs are considered to be unreasonable. [SHMC 17.98.050(E)(5)]**

Staff Findings: The applicant states that the proposed WTF would be structurally designed to allow the co-location of a minimum of three (3) providers and that they would not deny a wireless telecommunications provider the ability to co-locate on its WTF at a fair market rate or at another cost agreed to by the affected parties. The proposed WTF is not attached to an existing structure. The applicant states that they would comply with SHMC 17.98.050(E)(4 and 5). In order to ensure compliance, Staff recommends a condition of approval that the proposed facility shall be designed and constructed for three (3) antennas/providers to co-locate on the facility and to allow antennas mounted at varying heights, and the owner of the facility may not deny a wireless telecommunications provider the ability to co-locate on its WTF at a fair market rate or at another cost agreed to by the affected parties.

With this condition, the application complies with the above criteria.

- L. All facilities must meet the requirements of the Uniform Building Code and/or the Oregon Structural Specialty Code. [SHMC 17.98.050(F)]**

Staff Findings: The applicant states that the proposed WTF would meet the requirements of the Building and Structural Code.

As discussed above, to ensure compliance, Staff recommends that all facilities shall meet the requirements of the Uniform Building Code and/or the Oregon Structural Specialty Code.

- M. Where possible new facilities will be located in such a manner that they blend in with the background around them, using techniques to ensure visual compatibility characteristics. [SHMC 17.98.050(G)(1-4)]**
 - a. All new WTF towers shall be a monopole or lattice tower structure constructed out of metal or other nonflammable material.**
 - b. All accessory structures (i.e vaults, equipment rooms, utilities and equipment enclosures) shall be concealed, camouflaged, shall be consistent with the underlying zone or shall be placed underground.**
 - c. Visible exterior surfaces of accessory facilities (i.e. vaults, equipment rooms, utilities and equipment enclosures) shall be constructed out of nonreflective materials.**
 - d. WTFs shall be initially painted and thereafter repainted as necessary with a “flat” paint. The color shall be one that will minimize the facility’s visibility to the maximum extent feasible.**

Staff Findings: The applicant is proposing a monopole tower that would be constructed with galvanized steel. The applicant states that the proposed equipment cabinets would be fully screened by the proposed landscaping and the cabinets would be painted a neutral non-reflective color. The applicant states that the monopole would be painted a flat grey color that would blend in with the sky. Staff finds that as proposed the application complies with these criteria. To ensure compliance, Staff recommends a condition of approval that the monopole shall be constructed out of metal, all accessory structures shall be concealed, camouflaged, shall be consistent with the M zone or shall be placed underground, visible exterior surfaces of accessory structures shall be constructed out of non-reflective materials, and the monopole shall be initially painted and thereafter repainted as necessary with a flat paint.

With the above condition, the application complies with these criteria.

N. All WTFs shall be installed in such a manner as to maintain and enhance existing vegetation. Where no vegetation exists, a landscaping plan must be submitted for the site. [SHMC 17.98.050(H)]

Staff Findings: The applicant states that the existing site does not have any vegetation and a landscape plan is included. Staff finds that the applicant submitted a landscape plan for the proposed WTF. To ensure compliance, Staff recommends a condition of approval that the applicant implement and maintain the submitted landscaping plan.

With the above condition, the application complies with this criterion.

O. No lighting shall be permitted on a WTF except as required for security and as required by the Federal Aviation Administration. Security lighting shall be located in such a manner so as not to face directly, shine or reflect glare onto any street or a lot in a residential zone. [SHMC 17.98.050(I)]

- a. **Exterior lighting shall be located in such a manner so as not to face directly, shine or reflect glare onto a street, a highway or a lot in a residential zone. [SHMC 17.44.090]**

Staff Findings: The applicant states that they are not proposing any lighting. The applicant provided a TOWAIR Determination that the proposed facility would not be a hazard to air navigation and does not require registration with the FAA. Therefore, no safety lighting would be required by the FAA. Staff finds that the applicant is not proposing any lighting.

The application complies with this criterion.

P. No telecommunications facility shall be installed on an exposed ridge line unless it blends with the surrounding existing natural and human-made environment in such a manner as to be visually compatible with the environment. [SHMC 17.98.050(J)]

Staff Findings: The applicant states that the proposed facility shall not be installed on a ridge line. Staff finds that the proposed WTF would be located in a flat area not on a ridge line.

The application complies with this criterion.

Q. Facilities shall be set back at least 25% of the tower height from all property lines or shall meet the setbacks of the underlying zone, which ever is greater. [SHMC 17.98.050(K)]

- a. **Except as provided in Chapter 17.80 and §§ 17.08.030 through 17.08.130, in an M zone yards shall be as follows. [SHMC 17.44.050(A-D)]**
- i. **The front yard shall be a minimum of 20 feet.**
 - ii. **The street side yard shall be a minimum of 20 feet.**
 - iii. **A side or rear yard abutting a residential zone shall be a minimum of 20 feet.**
 - iv. **Where a side or rear yard is not required and a structure is not to be erected at the property line, it shall be set back at least three feet from the property line.**

Staff Findings: The proposed WTF is 100 feet tall. The minimum required setback for the Industrial zone is 20 feet and 25% of the tower height is 25 feet; therefore, the proposed tower shall be setback 25 feet from all property lines. Based on the applicant's plot plan the proposed WTF would be located approximately 58 feet from the closest property line.

The application complies with this criteria.

R. All WTFs shall maintain in place a security program that will deter unauthorized access and vandalism. [SHMC 17.98.050(L)]

Staff Findings: The applicant states that the proposed WTF would be surrounded by a 6 foot fence with barbed wire and a locked gate to maintain security. Staff finds that the proposed fence and gate would deter unauthorized access and vandalism. To ensure compliance, Staff recommends a condition of approval that the proposed WTF shall be enclosed by a chain link fence and gate.

With the above condition, the application complies with this criterion.

S. Underground equipment shelters should be considered. [SHMC 17.98.050(M)]

Staff Findings: The applicant is not proposing an underground equipment shelter. The applicant states that an above ground equipment shelter is proposed because of the ease of maintenance and access, in the event of an emergency. Staff finds that an above ground equipment shelter is reasonable to meet access requirements.

The application complies with this criterion.

T. Signs shall comply with the requirements set forth in this chapter. [SHMC 17.98.050(N)(1)]

U. All telecommunications facilities shall be clearly identified as to the location and operator so as to facilitate emergency response. [SHMC 17.98.050(N)(2)]

Staff Findings: The applicant states the proposed WTF would include informational signage that identifies the operator, site number, and contact information. In order to ensure compliance, Staff finds that the proposed WTF shall be clearly identified as to the location and operator to facilitate emergency response.

With the above condition, the application complies with this criteria.

V. All attached facilities shall be located and designed to appear an integral part of the structure. [SHMC 17.98.060(A-D)]

- a. **Roof mounted antennas and all building mounted accessory equipment shall be located no closer to the nearest edge of the roof than the height of the antenna or accessory equipment, whichever is greater.**
- b. **Wall mounted antennas shall be architecturally integrated into the building.**
- c. **Wall mounted antennas shall be located no more than four feet from the face of the wall.**
- d. **Accessory structures for attached facilities, such as equipment shelters, cabinets or other enclosed structures containing electronic equipment, shall be camouflaged or otherwise constructed using visual compatibility techniques.**

Staff Findings: The applicant is not proposing an attached telecommunications facility.

The application complies with these criteria.

W. Wireless telecommunications facilities that do not have functioning antennas for a period of six months shall be considered abandoned and shall be removed by the owner or operator within 60 days thereafter. [SHMC 17.98.070]

Staff Findings: The applicant states that they would comply with this criterion. In order to ensure compliance, Staff recommends a condition of approval that if the proposed WTF does not have functioning antennas for a period of six months they shall be considered abandoned and shall be removed by the owner or operator within 60 days thereafter.

With the above condition, the application complies with this criterion.

X. Special Review Criteria. Industrial zones [SHMC 17.98.090(A)(C)(1-5)]

- a. **Standards for access are the set by the underlying zone.**

- b. **Facilities shall not exceed 100 feet.**
- c. **Landscaping. Existing trees and other screening vegetation in the vicinity and along the access road shall be protected from damage, both during the construction period and thereafter. The accessory structure shall be screened by an evergreen material with an ultimate height of at least eight feet and a planted height of at least three feet. The landscaping must be protected and maintained.**
- d. **Signs. Facilities shall be identified with an identification sign not exceeding two square feet in size.**
- e. **Accessory facilities. Accessory structures for facilities, such as equipment shelters, cabinets or other enclosed structures containing electronic equipment, shall be camouflaged or otherwise constructed using visual compatibility techniques.**

Staff Findings: The applicant states that the proposed WTF would be accessed from 18th Avenue and the proposed WTF would be 100 feet tall. As discussed above, the applicant submitted a landscape plan. The applicant states the proposed WTF would include informational signage that identifies the operator, site number, and contact information. As discussed above, the applicant states that the accessory facilities would be camouflaged by landscaping and would be constructed using visual compatibility techniques including a non-reflective paint. Staff finds that the applicant demonstrated compliance with these criteria. To ensure compliance, as discussed above the monopole communication tower shall not exceed 100 feet. The applicant shall implement the landscape plan and maintain the proposed landscape plan. Facilities shall be identified with an identification sign not exceeding two square feet in size. The proposed WTF shall be limited to the activities evaluated under this application.

With the above conditions the application complies with these criteria.

3. Narrative Required [SHMC 17.98.080(C)(1-15)]

- A. The name and contact information for the provider;**
- B. A description of the character of the proposed facility;**
- C. Analysis of how the application meets the review criteria;**
- D. Applicants/providers shall provide evidence of legal access to the proposed wireless telecommunications facility;**
- E. The applicant/provider shall provide evidence that legal access to the facility site will be maintained for the duration of the facility's operation;**
- F. Where a proposed wireless telecommunications facility is located on a property not owned by the provider, the applicant/provider shall present documentation that the owner of the property has granted an easement or entered into a lease for the proposed facility and that vehicular access is provided to the facility;**
- G. The applicant shall provide evidence that describes the facility tower's structural capacity to carry the antennas of at least three wireless telecommunications providers;**
- H. The applicant shall provide evidence of steps the provider will take to avoid interference with normal radio and television reception in the surrounding area and with any public safety agency or organization, per FCC requirements;**
- I. The applicant shall demonstrate that the WTF is intended to provide service primarily within the community.**

The city reserves the right to deny a permit if it is shown that the facility is not intended to provide service primarily within the community.

- J. **The applicant/provider shall demonstrate that the wireless telecommunications facility must be located where it is proposed in order to service the provider's service area. There shall be an explanation of why a facility at this proposed site is technically necessary;**
- K. **If the applicant/provider proposes a new tower or co-located facility, the applicant shall provide evidence that the facility's height is the lowest height at which the gap in coverage can be filled;**
- L. **All applications shall include evidence that at least one provider will use the proposed facility to provide wireless telecommunications service immediately upon construction completion of the facility.**
The city reserves the right to deny applications that propose a facility without a provider.
- M. **The application shall include a written agreement that wireless telecommunications facilities owned by the provider, that do not have an operating antenna for a period of six months, shall be considered abandoned and shall be removed by the operator within 60 days thereafter; and**
- N. **The application shall include a written agreement from the property owner that if the provider fails to remove an abandoned WTF, the property owner has full legal and fiscal responsibility for the WTF removal.**

Staff Findings: The applicant provided a narrative addressing the above requirements. The applicant states that the lease agreement provides legal access to the proposed WTF. The applicant states that the WTF is structurally designed to support three (3) WTF providers and that the WTF would operate on a dedicated licensed frequency as demonstrated by the provided FCC license. The RF analysis demonstrates that the proposed WTF is intended to provide service primarily within the community. The RF analysis demonstrates that the WTF is necessary to expand the service coverage in Sweet Home. The proposed facility is 100 feet tall which is the maximum height allowed within the M zone. The applicant provided an RF analysis comparing 80 feet to 100 feet to demonstrate the additional coverage achieved with the additional height. Staff finds that the proposed facility is at the lowest height at which the gap in coverage and capacity could be filled. The provider for this application is Verizon wireless and the applicant understands that facilities that do not have an operating antenna for a period of six months shall be considered abandoned.

IV. PLANNING COMMISSION ACTION

In acting on a Conditional Use permit application, the Planning Commission will hold a public hearing at which it may either approve or deny the application. If the application is denied, the action must be based on the applicable review and decision criteria. If approved, the Planning Commission may impose conditions of approval. Staff's recommended conditions are included in Section V.

Appeal Period: Pursuant to ORS 227.175, the Planning Commission may establish an appeal period of not less than 12 days from the date the written notice of the Planning Commission's decision is mailed. Staff's recommendation is that the Planning Commission's decision on this matter be subject to a **12-day appeal period** from the date that the notice of decision is mailed.

Order: After the Planning Commission decides, Staff recommends that the Planning Commission direct staff to prepare an order that is signed by the Chairperson of the Planning Commission. The Order would memorialize the decision and provide the official list of conditions (if any) that apply to the approval; if the application is approved.

V. RECOMMENDED CONDITIONS IF APPROVED

If the Planning Commission approves this application, Staff recommends that the conditions of approval listed below be required in order to ensure that the application is consistent with the findings in the Review and Decision Criteria (Section III) and as required by the Sweet Home Municipal Code and other provisions of law. Appeals to the Land Use Board of Appeals (LUBA) may only be based on Review and Decision Criteria contained in Section III.

Recommended Conditions of Approval for CU19-09:

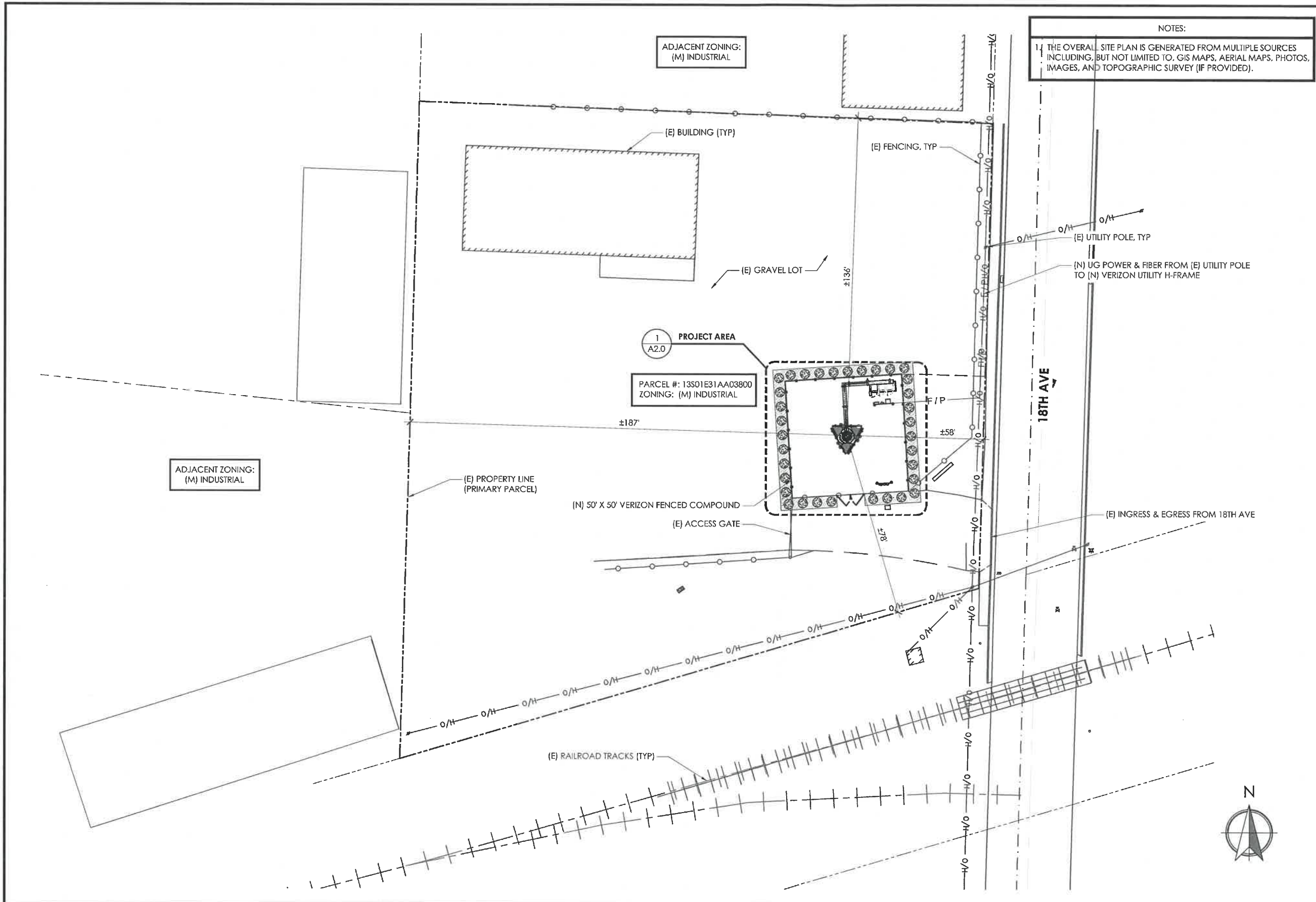
1. The proposed WTF shall be located within the enclosed chain link fence and gate on the subject property. The proposed WTF shall be limited to the activities evaluated under this application.
2. This approval is for a monopole WTF that shall not exceed 100 feet in height. The applicant shall implement the submitted landscaping plan and maintain the proposed landscaping.
3. All facilities shall meet the requirements of the Uniform Building Code and/or the Oregon Structural Specialty Code.
4. The proposed WTF shall be clearly identified as to the location and operator to facilitate emergency response. Facilities shall be identified with an identification sign not exceeding two square feet in size.
5. If the proposed WTF does not have functioning antennas for a period of six months it shall be considered abandoned and shall be removed by the owner or operator within 60 days thereafter.
6. The proposed facility shall be designed and constructed for three (3) antennas/providers to co-locate on the facility and to allow antennas mounted at varying heights, and the owner of the facility may not deny a wireless telecommunications provider the ability to co-locate on its WTF at a fair market rate or at another cost agreed to by the affected parties.
7. The monopole shall be constructed out of metal, all accessory structures shall be concealed, camouflaged, shall be consistent with the M zone or shall be placed underground, visible exterior surfaces of accessory structures shall be constructed out of non-reflective materials, and monopole shall be initially painted and thereafter repainted as necessary with a flat paint.
8. Prior to operation, the applicant shall ensure that the proposed WTF complies with all federal, state and city codes, including, but not limited to, Federal Communications Commission (FCC) and Federal Aviation Administration (FAA) standards. The property owner shall obtain all necessary permits from the Building Division and Engineering Division. These permits may include, but are not limited to: building, electrical, mechanical, and plumbing permits from the Building Division and a new or amended access permit from the Sweet Home Public Works Department. The applicant shall submit copies of all required permits and licenses to the Sweet Home Community and Economic Development Department for inclusion in the record of CU19-09.
9. Parking shall be provided for the WTF as required by the SHMC. Parking facilities shall comply with all applicable sections of SHMC 17.08.090. All parking lots and driveway approaches shall be hard surfaced and permanently marked.
10. The proposed WTF will be required to provide a hard-surfaced access approach. "An access approach to a city street, state highway, alley or other public right-of-way shall be hard surfaced and constructed in accordance with city design standards. An access approach shall extend 20 feet onto the property, measured from the right-of-way or property line, whichever is closest to a structure on the property. In addition to the above, if the street is hard surfaced the approach will extend to the existing hard surface

roadway edge or curb whichever applies” [SHMC 17.08.100(A)(1-3)]. Per the City Engineer, the public right-of-way portion is completed with the adjacent concrete sidewalk. The private side portion is the missing component and will need to be built because the driveway is gravel behind the sidewalk, with loose rock coming out onto the 18th Avenue roadway. The approved hard surface driveway material may be paver blocks, concrete or asphalt concrete, for a minimum distance of 20ft from the property line toward the structure.

11. The conditional use permit shall be void one (1) year after the date of the Planning Commission approval if the use has not been substantially established, as defined under SHMC 17.80.070(A), within that time period. The City Planner may grant one extension of up to one year for a conditional use permit that contained a one-year initial duration upon written request of the applicant and prior to the expiration of the approved period. Requests other than a one-year request made prior to the expiration of the approved period must be approved by the Planning Commission. A conditional use permit not meeting the above time frames will be expired and a new application will be required.

VI. ATTACHMENTS

- Attachment A - Site Plan
- Attachment B - Subject Property Map
- Attachment C - Information in the Record as of September 30, 2019; Including Application Materials.



DRAWN BY: CL
CHECKED BY: CL

DRAWING VERSION		
VER.	DATE	DESCRIPTION
1	8/13/19	PRELIM CX DRAWINGS
2	09/19/19	CLIENT COMMENT

LICENSER

PRELIMINARY

PROJECT INFORMATION

OR4 FOSTER LAKE

1602 18TH AVE
SWEET HOME, OR 97386

SHEET TITLE

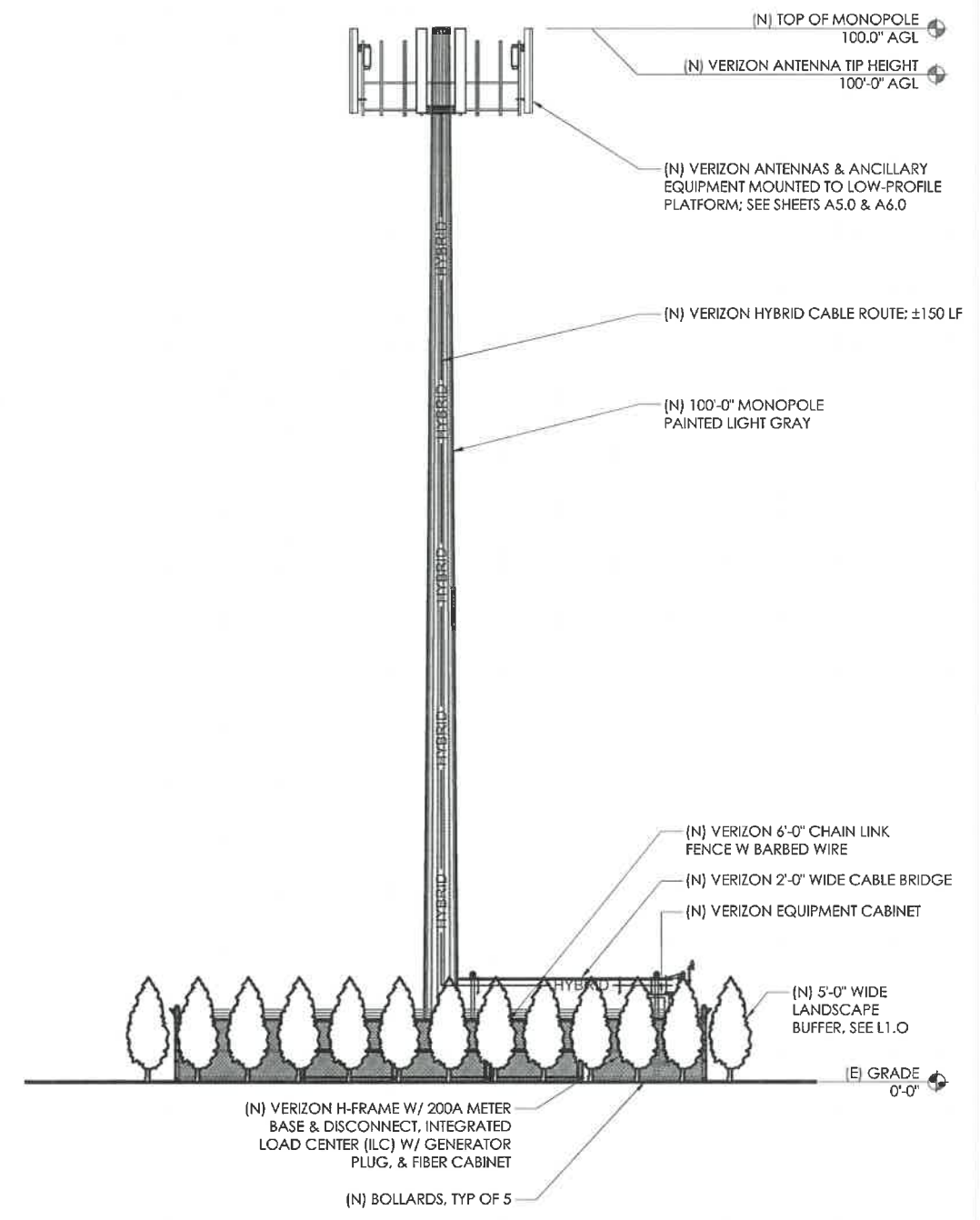
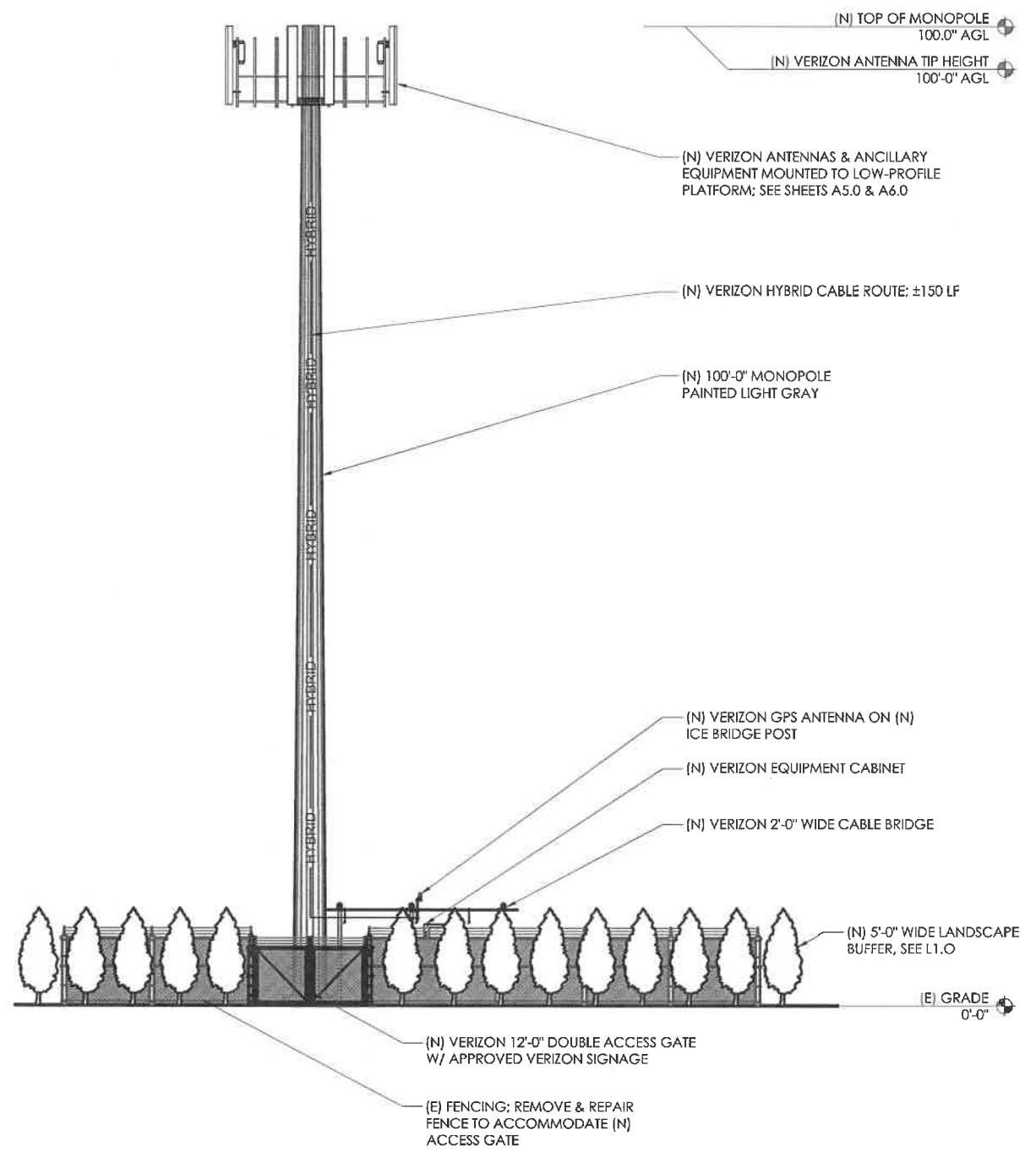
OVERALL SITE PLAN

SHEET NO.

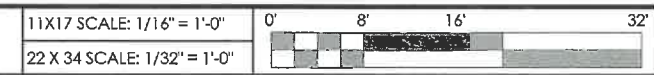
A1.0

NOTES:

1. THE PROJECT CM / PM TO VERIFY ANY REQUIRED PAINTING REQUIREMENTS FOR PROPOSED TOWER, ANTENNAS, ANCILLARY EQUIPMENT, CABLES, AND HARDWARE PRIOR TO ORDERING / INSTALLING EQUIPMENT.
2. NEW OR REPLACEMENT ANTENNA MOUNTS SHALL COMPLY WITH NSTD-445 STANDARDS AS REQUIRED BY VERIZON.
3. THE 4449 & 8843 RADIOS CANNOT BE PAINTED. IF PAINTING IS REQUIRED THEN A SHROUD WILL BE REQUIRED FOR THE RADIOS. ERICSSON RADIO SHROUD PART # SXK 125 4244 OR APPROVED EQUAL.



1 SOUTH ELEVATION



2 WEST ELEVATION



DRAWN BY: CL
 CHECKED BY: CL

DRAWING VERSION		
VER.	DATE	DESCRIPTION
1	8/13/19	PRELIM CX DRAWINGS
2	09/19/19	CLIENT COMMENT

LICENSER

PRELIMINARY

PROJECT INFORMATION

OR4 FOSTER LAKE

1602 18TH AVE
 SWEET HOME, OR 97386

SHEET TITLE

ELEVATIONS

SHEET NO.

A3.0



SUBJECT PROPERTY

TAMARACK

18TH

19TH

MAIN

Subject Property Map
CU19-09
13S01E31AA03800



1 inch = 165 feet

Date: 8/7/2018



Community and Economic Development Department

City of Sweet Home
1140 12th Avenue
Sweet Home, OR 97386
541-367-8113
Fax 541-367-5113
www.ci.sweet-home.or.us

Application for a Conditional Use Permit

Date Received: 09.30.19
Date Complete: 10.11.19
File Number: CU19-09
Application Fee \$: 615.00
Receipt #: 3672
Hearing Date:

Applicant's Name:
Velocitel, LLC (Representing Verizon Wireless)

Property Owner:
Lester Sales, Inc.

Applicant's Address:
7600 SW Mohawk St., Tualatin, OR 97062

Owner's Address:
PO BOX 465, Sweet Home, OR 97386

Applicant's Phone and e-mail:
503-421-2251 mbirndorf@velocitel.com

Owner's Phone and email:
(541)-409-1200

Subject Property Address:
1602 18th Ave., Sweet Home, OR

Subject Property Assessor's Map and Tax Lot:
13S01E31AA 03800

Subject Property Size:
1.33 AC

Subject Property: Zoning Classification
Industrial "M"

Comprehensive Plan Classification:
Industrial

Nature of Applicants Request

Narrative describing the proposed use: Brief Description on this form and attach extra sheets if needed.

A wireless telecommunications facility consisting of a 100' monopole and associated equipment within a 50' by 50' fenced compound. See attached narrative and statement of code compliance.

Impacts on the neighborhood: Include traffic, parking, noise, odor, dust or other impacts. Brief Description on this form.

See attached narrative and statement of code compliance.

Submittal Requirements

The checklist on the other side of this application lists the required items must be submitted with this application and the Criteria the request must meet. Please address all items that apply to this request.

I certify that the statements contained on this application, along with the submitted materials, are in all respects true and are correct to the best of my knowledge and belief.

Applicant's Signature:
[Handwritten Signature]

Date: 9/25/19

Property Owner's Signature:
Please see attached Owner Authorization

Date:

Within 30 days following the filing of this application, the City Planner will make a determination of completeness regarding the application. If deemed complete, the application will be processed.

September 27, 2019

Ms. Angela Clegg
Associate Planner
City of Sweet Home
Community & Economic Development Department
3225 Main Street
Sweet Home, OR 97386

**RE: Verizon's Conditional Use Application for a Wireless Communication Facility
at 1602 18th Ave., Sweet Home, OR 97386 (OR4 Foster Lake)**

Dear Ms. Clegg,

Please accept this conditional use permit application for a new wireless communications facility in the City of Sweet Home. Enclosed please find:

1. A check in the amount of \$615
2. Wireless Communications Facility Application with the following attachments:
 - Attachment 1—Project Narrative (this document)
 - Attachment 2—Statement of Code Compliance
 - Attachment 3—Owner Authorization
 - Attachment 4—FCC License
 - Attachment 5—MPE/FCC Compliance Letter
 - Attachment 6—FAA TOWAIR Determination
 - Attachment 7—Zoning Drawings
 - Attachment 8—Photo Simulations
 - Attachment 9—RF Site Analysis
 - Attachment 10—Redacted Lease Agreement
 - Attachment 11—WTF Removal Agreements

Please contact me upon your initial review. I look forward to working with you.

Sincerely,



Michael Birndorf
Site Acquisition Specialist
Velocitel, LLC.

ATTACHMENT 1

**PROJECT NARRATIVE
CONDITIONAL USE APPLICATION
Verizon Wireless (OR4 Foster Lake)**

Submitted to the City of Sweet Home, Oregon
Community and Economic Development Dept.

Applicant: Verizon Wireless
3245 158th Ave SE
Bellevue, WA 98008
(425) 603-8119

Representative: Velocitel, LLC.
7600 SW Mohawk Street
Tualatin, OR 97062
Contact: Michael Birndorf
mbirndorf@velocitel.com
(503) 421-2251

Property Owners: Lester Sales, Inc.
Attention: Jim Philpott
PO BOX 465
Sweet Home, OR 97386
(541) 409-1200

Project Address: 1602 18th Ave.
Sweet Home, OR 97386

Map & Tax Lot: 13S01E31AA 03800

Zoning Classification: Industrial Zone ("M Zone")

Velocitel, LLC. is submitting this application on behalf of **Verizon Wireless** and the underlying property owner, Lester Sales, Inc.

1. PROJECT OVERVIEW

Verizon Wireless ("Verizon") is proposing to build a new Wireless Telecommunications Facility ("WTF" or "Facility"), OR4 Foster Lake, located at 1602 18th Avenue in Sweet Home, OR. This proposed new WTF is intended to fill a significant gap in Verizon's high band 4G LTE coverage and expanded capacity for its customers in the City of Sweet Home.

Verizon intends for its application for the proposed WTF to include the following documents (collectively, "Verizon's Application"):

- Attachment 1—Project Narrative (this document)
- Attachment 2—Statement of Code Compliance
- Attachment 3—Owner Authorization
- Attachment 4—FCC License
- Attachment 5—MPE/FCC Compliance Letter
- Attachment 6—FAA TOWAIR Determination
- Attachment 7—Zoning Drawings
- Attachment 8—Photo Simulations
- Attachment 9—RF Site Analysis
- Attachment 10—Redacted Lease Agreement
- Attachment 11—WTF Removal Agreements

As shown in Verizon's Application, this proposed project meets all applicable City of Sweet Home Code of Ordinance ("SHC") zoning criteria for siting new wireless telecommunications facilities and complies with all other applicable state and federal laws and regulations. Verizon's proposal is also the least intrusive means of meeting its coverage objectives for this site. Accordingly, Verizon respectfully requests the City to approve this project as proposed, subject only to Sweet Home's standard conditions of approval.

Please Note: The responses and information included in **Attachment 2, Statement of Code Compliance** are intended to support and supplement this Project Narrative. All references to "Attachments" in this Project Narrative and the Statement of Code Compliance are in reference to the attachments included as part of Verizon's Application.

2. PROPOSED PROJECT DETAILS

2.1. Subject Property

Detailed information regarding the proposed subject property and lease area for this WTF is included in **Attachment 7, Zoning Drawings**.

2.1.1. Proposed location; use; zoning.

- The subject property of this proposal is located at 1602 18th Ave. on parcel number 13S01E31AA 03800 (the "Property"). The Property is owned by Lester Sales, Inc.

- The Property is zoned Industrial ("M Zone") and is currently used as a storage yard. The surrounding properties to the north, east, and west are also zoned Industrial.

2.1.2. Lease area.

- The proposed 50ft x 50ft lease area (fenced compound) for the WTF is located within the western portion of the property next to the existing driveway (the "Lease Area").

- The Lease Area will be covered in 6in of 3/4in crushed rock with weed barrier on 95% compacted fill.

- The Lease Area will be surrounded by a 6ft chain link fence, topped with barbed wire. Access to the Lease Area will be secured by a locked gate.

- The fence will be surrounded by a proposed evergreen hedge.

2.1.3. Access and parking.

- Access to the Lease Area will be via the existing gravel driveway that currently serves the property.

- Parking is available in the storage yard next to the Lease Area.

2.2. Wireless Facilities and Equipment

Specifications of the facilities outlined below, including a site plan, can be found in **Attachment 7, Zoning Drawings**.

2.2.1. Support structure design.

Verizon is proposing to build a new 100ft tall monopole (the "Tower") within the Lease Area on the Property. This will be an unmanned wireless communications facility.

2.2.2. Antennas and accessory equipment.

- The Tower will contain the following Verizon LTE equipment:

- Up to 12 panel antennas (6 w/initial install)

- Up to 18 remote radio units (RRUs) (3 w/initial install)

- A minimum of one microwave (MW) antenna (0 w/initial install)

- 3 over voltage protection (OVP) units (1 w/initial install)

- All associated and accessory equipment

- The antennas, RRUs, and accessory equipment on the Tower will be painted a flat neutral grey color.

- The Tower will be designed with capacity for 3 wireless telecommunications providers (including Verizon)

2.2.3. Ground equipment.

- All ground equipment associated with the Tower will be constructed within the Lease Area.
- The ground equipment will consist of three (3) equipment cabinets on a 4' x 11' concrete pad.

2.2.4. Lighting. The Tower will not be artificially illuminated, and no artificial lighting is required pursuant to state or federal authorities. (See **Attachment 6, FAA TOWAIR Determination**)

3. VERIZON'S TARGETED SERVICE AREA & OBJECTIVES

3.1. Overview—Verizon

Verizon is upgrading and expanding its wireless communications network to provide improvements in speed and functionality. Verizon understands the importance of having access to reliable, speedy wireless communications and data. Our customers rely on such wireless connections for school, work, business, and in their personal lives. Installing the latest technology is the next step in increasing wireless speeds and network capacity to meet the demands of uses and the variety of content accessed over our mobile networks.

Upon completion of this facility, Verizon will operate a state-of-the-art digital network of wireless communications facilities throughout the proposed coverage area as part of its nationwide wireless communications network.

3.2. Targeted Service Area and Objectives for Proposed WTF

This proposed new WTF is intended to fill a significant coverage gap and expand capacity in Verizon's high band LTE service experienced by its customers within the City of Sweet Home. The WTF is centrally located to improve and expand coverage to the city center, surrounding neighborhoods to the north and south, and along Highway 20 from the western boundary of the City to the eastern boundary adjacent to Foster Lake. The site location meets Verizon's service objectives to provide continuous outdoor, in-vehicle, and in-building wireless coverage within this targeted service area. This targeted service area and objective was determined through a combined analysis of market demand, customer complaints, service requests, and radio frequency engineering design.

This proposed new Facility will allow for uninterrupted wireless service in the targeted service area with fewer dropped calls, improved call quality, and improved access to additional wireless services that the public now demands. This includes emergency 911 calls throughout the area.

3.3. Search Ring

Verizon's radio frequency ("RF") engineers performed an RF engineering study, which considered multiple factors, to determine the approximate site location and antenna height required to fulfill the above-noted network objectives for the targeted service area. From this study, Verizon's RF engineers identified a specific geographic area, or "search ring", where a WTF may be located to provide effective service in the targeted service area.

4. SITING ANALYSIS

Verizon considers all siting possibilities within, and adjacent to, a search ring to determine the best location for a new facility to meet the targeted service objectives. Verizon will first attempt to utilize an existing tower or structure for collocation at the desired antenna height. If an existing tower or structure is not available or determined to be infeasible, Verizon will then propose a new tower.

For this proposed WTF, Verizon's engineering and real estate group, with the assistance of outside consultants, thoroughly analyzed all siting options and it was determined there wasn't a structure suitable for the purposes of meeting Verizon's coverage objectives. (See **Attachment 9, RF Site Analysis**).

5. APPLICABLE LAW

5.1. Local Codes

5.1.1. Zoning approval. Pursuant to the Sweet Home Code of Ordinances ("SHC"), zoning code criteria, a WTF is allowed subject to a Conditional Use Permit in all zones. The City of Sweet Home criteria governing Conditional Use Permits are specifically addressed in Attachment 2, Statement of Code Compliance.

5.2. Federal Law

Federal law, primarily found in the Telecommunications Act of 1996 ("Telecom Act"), acknowledges a local jurisdiction's zoning authority over proposed wireless facilities but limits the exercise of that authority in several important ways.

5.2.1. Local jurisdictions may not materially limit or inhibit. The Telecom Act prohibits a local jurisdiction from taking any action on a wireless siting permit that "prohibit[s] or [has] the effect of prohibiting the provision of personal wireless services." 47 U.S.C. § 332(c)(7)(B)(i)(II). According to the Federal Communications Commission ("FCC") Order adopted in

September 2018,¹ a local jurisdiction's action has the effect of prohibiting the provision of wireless services when it "materially limits or inhibits the ability of any competitor or potential competitor to compete in a fair and balanced legal and regulatory environment."² Under the FCC Order, an applicant need not prove it has a significant gap in coverage; it may demonstrate the need for a new wireless facility in terms of adding capacity, updating to new technologies, and/or maintaining high quality service.³

While an applicant is no longer required to show a significant gap in service coverage, in the Ninth Circuit, a local jurisdiction clearly violates section 332(c)(7)(B)(i)(II) when it prevents a wireless carrier from using the least intrusive means to fill a significant gap in service coverage. *T-Mobile U.S.A., Inc. v. City of Anacortes*, 572 F.3d 987, 988 (9th Cir. 2009).

- **Significant Gap.** Reliable in-building coverage is now a necessity and every community's expectation. Consistent with the abandonment of land line telephones and reliance on only wireless communications, federal courts now recognize that a "significant gap" can exist based on inadequate in-building coverage. See, e.g., *T-Mobile Central, LLC v. Unified Government of Wyandotte County/Kansas City*, 528 F. Supp. 2d 1128, 1168-69 (D.Kan. 2007), *affirmed in part*, 546 F.3d 1299 (10th Cir. 2008); *MetroPCS, Inc. v. City and County of San Francisco*, 2006 WL 1699580, *10-11 (N.D. Cal. 2006).
- **Least Intrusive Means.** The least intrusive means standard "requires that the provider 'show that the manner in which it proposes to fill the significant gap in service is the least intrusive on the values that the denial sought to serve.'" 572 F.3d at 995, *quoting MetroPCS, Inc. v. City of San Francisco*, 400 F.3d 715, 734 (9th Cir. 2005). These values are reflected by the local code's preferences and siting requirements.

5.2.2. Environmental and health effects prohibited from consideration.

Also, under the Telecom Act, a jurisdiction is prohibited from considering the environmental effects of RF emissions (including health effects) of the proposed site if the site will operate in compliance with federal regulations. 47 U.S.C. § 332(c)(7)(B)(iv). Verizon has included with this application a statement from its radio frequency engineers demonstrating

¹ *Accelerating Wireless and Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, Declaratory Ruling and Third Report and Order, WT Docket No. 17-79, WC Docket No. 17-84, FCC 18-133 (rel. Sept. 27, 2018); 83 Fed. Reg. 51867 (Oct. 15, 2018) ("FCC Order").

² *Id.* at ¶ 35.

³ *Id.* at ¶¶ 34-42.

that the proposed facility will operate in accordance with the Federal Communications Commission's RF emissions regulations. (See **Attachment 4, Verizon MPE/FCC Compliance Letter**). Accordingly, this issue is preempted under federal law and any testimony or documents introduced relating to the environmental or health effects of the proposed Facility should be disregarded in this proceeding.

5.2.3. No discrimination amongst providers. Local jurisdiction also may not discriminate amongst providers of functionally equivalent services. 47 U.S.C. § 332(c)(7)(B)(i)(I). A jurisdiction must be able to provide plausible reasons for disparate treatment of different providers' applications for similarly situated facilities.

5.2.4. Shot Clock. Finally, the Telecom Act requires local jurisdictions to act upon applications for wireless communications sites within a "reasonable" period of time. 47 U.S.C. § 332(c)(7)(B)(ii). The FCC has issued a "Shot Clock" rule to establish a deadline for the issuance of land use permits for wireless facilities. 47 C.F.R. § 1.6001, *et seq.* A presumptively reasonable period of time for a local government to act on all relevant applications for a "macro" wireless facility on a new structure is 150 days. 47 C.F.R. § 1.6003(c)(1)(iv). The Shot Clock date is determined by counting forward 150 calendar days from the day after the date of submittal, including any required pre-application period. 47 C.F.R. § 1.6003(e).

Pursuant to federal law, the reasonable time period for review of this application is 150 days.

ATTACHMENT 2

**STATEMENT OF CODE COMPLIANCE
CONDITIONAL USE APPLICATION
Verizon Wireless (OR4 Foster Lake)**

Submitted to the City of Sweet Home, Oregon
Community & Economic Development Department

Verizon Wireless's ("Verizon") proposal for a new Wireless Telecommunications Tower in the Industrial Zone ("M Zone") is subject to and complies with the following applicable provisions of Title 17: Zoning, as codified in the Sweet Home Code of Ordinances ("SHC"), and Sweet Home Comprehensive Plan ("Comp Plan").

- **SECTION 17.44.: INDUSTRIAL – “M ZONE”**
- **SECTION 17.80: CONDITIONAL USES**
- **SECTION 17.98: WIRELESS TELECOMMUNICATIONS FACILITIES**

PLEASE NOTE: Verizon's responses to applicable CCC criteria are indicated below in **bold italicized blue text**. Any reference to an "Attachment" is in reference to an attachment included in Verizon's CUP application for the proposed Facility.

SECTION 17.44: INDUSTRIAL ZONE – “M ZONE”

SECTION 17.44.010 PURPOSE.

The purpose of the M zone is to provide areas suitable and desirable for all types of industrial activity; provided that, development controls are utilized to minimize possible harmful effects related to air and water pollution and to potential nuisance hazards such as fire, explosion or noise. The M zone is appropriate in those large areas already developed for industrial use and in those areas possessing site characteristics suitable for industry, such as good access to highway and rail facilities, readily available water and sewer systems, level and well drained sites, and little or no potential hazard to nearby residential or commercial areas.

Applicant Response: The location of the proposed Wireless Telecommunications Facility (“WTF”) is consistent with the purpose of the M zone. The subject property is developed as a storage yard and is well served by existing infrastructure, roads, utilities, etc. Surrounding industrial uses and the adjacent rail line provide a buffer to residential and commercial uses in the area.

17.44.020 USES PERMITTED OUTRIGHT.

In an M zone, the following uses and their accessory uses are permitted outright:

- A. Truck terminal, freight depot;
- B. Wholesale establishment;
- C. A use involving manufacture, research, warehousing, assembly, processing or fabricating, except the following:
 - 1. A use listed as a conditional use in the M zone; and
 - 2. A use which has been declared a nuisance by statute, ordinance or a court of competent jurisdiction.
- D. Amateur radio antennas; and
- E. Commercial radio stations and antennas.

Applicant Response: The proposed use is for a WTF, which is not listed as an outright permitted use in the M zone.

17.44.030 CONDITIONAL USES PERMITTED.

In an M zone, the following uses and their accessory uses may be permitted subject to the provisions of Chapter 17.80:

- A. Manufacturing and related uses including:
 - 1. Cement, lime or similar products manufacture;
 - 2. Explosives storage or manufacture;
 - 3. Petroleum products manufacture or refining;
 - 4. Pulp mill;
 - 5. Rendering plant, tannery, slaughterhouse;
 - 6. Smelting, refining of metallic ore; and
 - 7. Other uses similar to the above which may possess characteristics injurious to public health and safety due to emission of smoke, noise, dust, odor, refuse, fumes, vibration or similar hazard.
- B. Airport;
- C. Automobile wrecking yard, junkyard;
- D. Public utility or safety facility;
- E. Retail sales or repair when secondary to the outright use;
- F. Heavy equipment repair;
- G. Feed, seed store;
- H. Plumbing, heating, electrical or paint contractor's storage, sales or repair shop;
- I. Controlled recreation;
- J. A single-family dwelling occupied by the owner, manager, night watchperson or caretaker of the industrial establishment may be permitted accessory to the industrial use; and
- K. Marijuana producer, marijuana processor, marijuana wholesaler, a marijuana laboratory, a marijuana test facility, a marijuana grow site, and a marijuana processor site.

Applicant Response: The proposed use is for a WTF, which is not specifically listed as a permitted Conditional Use above; however, Section 17.98.030.B.3 provides that Wireless Telecommunications Facilities are allowed with a Conditional Use Permit in all zones. The subject application is for a Conditional Use Permit.

17.44.040 LIMITATION ON USE.

Uses permitted outright involving manufacture and all conditional uses shall meet all applicable standards and regulations of the Oregon State Board of Health, the Oregon Department of Environmental Quality, the Mid-Willamette Valley Air Pollution Authority and any other public agency having appropriate regulatory jurisdiction. Prior to approval of conditional use permits or zoning permits, evidence shall be submitted to the city indicating that the proposed activity has been approved by all appropriate regulatory agencies.

Applicant Response: As stated above, the proposed WTF requires a Conditional Use permit and is subject to the requirements of the FCC. The facility will be operated by Verizon. Verizon has an FCC license to provide Wireless Telecommunications services to this community and will comply with all requirements of this license (see Attachment 4, FCC License).

Verizon has included with this application a statement from its radio frequency engineer demonstrating that the proposed facility will operate in accordance with the Federal Communications Commission's RF emissions regulations (see Attachment 5, MPE/FCC Compliance Letter).

Verizon has also included documentation that it complies with FAA regulations. For the proposed facility, the applicant received a TOWAIR determination, a service of the FCC to identify impacts of towers on aircraft and airports (see Attachment 6, FAA TOWAIR Determination), and that determination found that the facility will not be a hazard to air navigation and; therefore, does not require registration with the FAA.

17.44.050 YARDS.

Except as provided in Chapter 17.80 and §§ 17.08.030 through 17.08.130, in an M zone yards shall be as follows.

- A. The front yard shall be a minimum of 20 feet.
- B. The street side yard shall be a minimum of 20 feet.
- C. A side or rear yard abutting a residential zone shall be a minimum of 20 feet.
- D. Where a side or rear yard is not required and a structure is not to be erected

at the property line, it shall be set back at least three feet from the property line.

Applicant Response: Both the proposed monopole and associated equipment cabinets comply with the minimum setback requirements in the M zone. The equipment cabinets are setback approx. 35' from the nearest property line. The monopole is setback between 58' and 187' from surrounding property lines. Therefore, these criteria are met. The monopole also meets the additional setback requirements of Section 17.98.040.K, which is 25% of tower height (25' for the proposed tower) from adjacent property lines.

17.44.060 LOT COVERAGE.

In an M zone, buildings shall not occupy more than 50% of the lot area.

Applicant Response: This criterion is not applicable. No new buildings are proposed.

17.44.070 BUILDING HEIGHT.

Except as provided in Chapter 17.80 and §§ 17.08.030 through 17.08.130, in an M zone building heights shall not be restricted. However, all buildings exceeding 35 feet in height to be constructed or substantially altered or extended shall meet all applicable state of Oregon and city standards related to public safety and fire protection.

Applicant Response: There are no buildings proposed. The proposed monopole will be 100' tall, which complies with the maximum height requirement for a Wireless Telecommunication Tower in the M zone pursuant to Section 17.98.020.C.2.

17.44.090 EXTERIOR LIGHTING.

Exterior lighting shall be located in such a manner so as not to face directly, shine or reflect glare onto a street, a highway or a lot in a residential zone.

Applicant Response: The subject proposal does not include any exterior lighting, and none is required by the FAA.

SECTION 17.80: CONDITIONAL USES

17.80.010 PURPOSE.

Certain uses require a case-by-case review and analysis due to the nature of their potential impacts on surrounding land uses and public facilities. These are identified as conditional uses. A conditional use is an activity which is basically similar to other uses permitted in the zone. It is the intent of this chapter to

provide standards and procedures so that these uses may be permitted, enlarged or altered in a manner that will not be detrimental to the public health, safety and general welfare, or to adjacent properties. Nothing in this chapter guarantees that a conditional use permit will be issued.

17.80.020 PROCESS.

An application for a conditional use permit shall be processed as a quasi-judicial land use decision. Notice will be provided as per § 17.12.120. The Planning Commission will hold a public hearing following the procedures in § 17.12.130. Ministerial decisions will be made without public notice or hearing.

17.80.030 APPLICATION REQUIREMENTS.

An application for a conditional use must meet the submittal requirements and the decision criteria noted below.

- A. The applicant shall file an application with the city. Within 30 days following the filing of the application, the City Planner will make a determination of completeness regarding the application. If deemed complete, the application will be processed in accordance with this title.

Applicant Response: The subject Conditional Use Permit application has been filed with the City and will be reviewed for completeness by the City Planner in accordance with this criterion.

- B. The application form shall be accompanied by the following information:
1. A site plan drawn to scale showing the dimensions and arrangement of the proposed development on the subject lot;

Applicant Response: This information is included on Page A1 and A2 in Attachment 7, Zoning Drawings.

2. Narrative describing the proposed use and the impacts on the neighborhood;

Applicant Response: This information is included as Attachment 2 (this document).

3. For commercial activities, a proposed plan of business operation;

Applicant Response: The proposed use is not a commercial activity, it's a utility.

4. Off street parking and on-site circulation plans for vehicles, bicycles, and pedestrians;
5. The location and dimensions of entrances and exits;

Applicant Response: This information is included on Page A1 and A2 of Attachment 7, Zoning Drawings.

6. A Traffic Impact Study, if required by the City Engineer and the City Planner;

Applicant Response: A traffic study is not required by the City Engineer.

7. Landscape plans;

Applicant Response: This information is included on Page L1 of Attachment 7, Zoning Drawings.

8. A signage plan, if applicable;

Applicant Response: This information is included on Page A8 of Attachment 7, Zoning Drawings.

9. Drawings of the exterior for new buildings;
10. Photographs of existing buildings if no changes are to be made to the exterior of the building.

Applicant Response: There are no new buildings or existing building alterations proposed. However, elevation drawings for the monopole and equipment are provided on Page A3 of Attachment 7, Zoning Drawings.

17.80.040 USE CRITERIA.

The criteria that will be used in approving, approving with conditions, or denying an application, or to enlarge or alter a conditional use, will be based on findings with respect to each of the following standards and criteria.

- A. The request complies with the requirements of the underlying zone or overlay zone, city codes, state and federal laws.

Applicant Response: As further described in this narrative, the subject proposal complies with all applicable local, state, and federal laws, including the requirements of the underlying M Zone (17.44) and the Wireless Telecommunications Ordinance (Chapter 17.98).

- B. The site size, dimensions, location, topography and access are adequate for the needs of the proposed use, considering, but not limited too, the following:
 1. Building size;
 2. Parking;

3. Traffic;
4. Noise;
5. Vibration;
6. Exhaust and emissions;
7. Light and glare;
8. Erosion;
9. Odor;
10. Dust;
11. Visibility;
12. Safety;
13. Building, landscaping or street features.

Applicant Response: The size, dimensions, location, topography and access of the subject industrial property is adequate for the needs of the proposed Wireless Telecommunications Facility. The facility is contained within a 50' x 50' fenced compound located in the southeast portion of the property. A 6' tall chain link fence, with barbed wire, and locked gate surrounding the compound secure the facility from unauthorized access. The proposed monopole, which utilizes a low-profile design to achieve the height requirements, has a slim silhouette and footprint and will not require the removal of any trees or other natural features. The subject property is flat; therefore, topography is not a factor limiting development.

The unstaffed facility will generate an average of one trip a month for maintenance. There is more than adequate parking on site for the monthly maintenance visit, which is typically performed in a light truck or SUV. The existing driveway off 18th Avenue is adequate access for the use and there are no sight distance issues.

Since the proposed WTF is an unstaffed, passive use, it will have virtually no effect or impact on the use of surrounding properties or public facilities. After an initial construction period of 30 - 45 days, the only traffic generated will be for routine maintenance visits, typically once a month. There are no activities associated with the site that will produce airborne emissions, odor, excessive noise, vibration, heat, glare, radioactive materials, or noxious and toxic materials. There is no lighting proposed or required for the installation. All ground equipment needed to operate the facility is located within self-contained equipment cabinets. Since the facility does not have water or sanitary facilities, it will generate no wastewater. Consequently, the proposed facility will result in a negligible impact to the surrounding properties.

Regarding public safety, the proposed wireless facility will improve public health and safety for the City of Sweet Home and the surrounding area by improving reliable access to emergency services and 911. The monopole will be engineered to meet or exceed local building code safety requirements, ensuring a safe facility which will not be a hazard to surrounding properties or the public.

Additionally, as shown in Attachment 6, FAA TOWAIR Determination, a service of the FCC to identify impacts of towers on aircraft and airports, the proposed facility will not be a hazard to air navigation and does not require registration with the FAA. The proposed facility will also operate in accordance with the Federal Communications Commission's RF emissions regulations (see Attachment 5, MPE/FCC Compliance Letter).

The most noticeable impact of the proposed monopole on surrounding properties is visibility. However, as seen in Attachment 8, Photo Simulations, taken from the surrounding area and Attachment 7, Zoning Drawings, the proposed monopole will utilize color, proposed landscaping, existing tall trees, proximity to existing utility poles and structures, buildings, and large setbacks to minimize its visual impact from surrounding properties and the public. The photo simulations capture an accurate perspective of the area's views of the proposed monopole. When viewed from the surrounding areas, the proposed monopole will be compatible with adjacent industrial development and surrounding land uses and will not produce significant negative impacts.

- C. Any negative impacts of the proposed use on adjacent properties and on the public can be mitigated through application of other code standards, or other reasonable conditions of approval that include but are not limited to those listed in this chapter.

Applicant Response: As previously mentioned, the most noticeable impact of the proposed monopole will be its appearance. However, the extent of the visual impact will be minor in nature and will be mitigated through conditions of approval. The applicant is proposing to paint the monopole light grey, which will blend with the typical grey Pacific NW sky, and other utility infrastructure on adjacent properties. The compound will be fenced, and equipment will be screened from view by a proposed evergreen hedge. See Attachment 7, Zoning Drawings.

- D. All required public facilities have adequate capacity, as determined by the

city, to serve the proposed use.

Applicant Response: The subject parcel is well-served by the existing transportation network. Power and fiber optic telephone service is readily available to serve the proposed facility in the adjacent streets. The installation will not require any water, sewer or other public services. The facility is unmanned and will generate virtually no traffic. The proposed facility is located on a developed industrial property that is set aside for uses designed to serve residents in the surrounding area and will help satisfy the increasing demand for wireless services in Sweet Home.

- E. Home occupations must meet the following standards:
1. The home occupation shall be secondary to the residential use.
 2. All aspects of the home occupation shall be contained and conducted within a completely enclosing building.
 3. No materials or mechanical equipment shall be used which are detrimental to residential use of the dwelling or nearby dwellings because of vibration, noise, dust, smoke, odor, interference with the electrical grid, radio or television reception or other similar factors.
 4. Vehicles related to the home occupation shall be parked in a manner so as to not block any driveway or impede the safe flow of traffic.

Applicant Response: These criteria are not applicable. The subject application does not include a home occupation.

- F. Marijuana facilities must be located in a fixed location. No temporary or mobile sites of any sort are allowed.
- G. Marijuana facilities may not have any drive up services.
- H. Marijuana facilities must be located at least 1,000 feet from the property boundary of any school.
- I. Marijuana facilities must be sited on a property so as to be at least 100 feet from the boundary of any residentially zoned property.

Applicant Response: These criteria are not applicable. This proposal does not include a marijuana facility.

17.80.050 CONDITIONS OF APPROVAL.

In approving a conditional use permit application, the Planning Commission may impose, in addition to those standards and requirements expressly specified by this chapter, additional conditions determined to be necessary to assure that the proposed development meets the decision criteria as well as the best interests of the surrounding properties, the neighborhood, and the city as a whole.

- A. These conditions may include, but are not limited to, the following:
1. Requiring larger setback areas, lot area, and/or lot depth or width;
 2. Limiting the hours, days, place and/or manner of operation;
 3. Requiring site or architectural design features that minimize environmental impacts such as noise, vibration, exhaust/emissions, light, glare, erosion, odor or dust;
 4. Limiting the building height, size or lot coverage, or location on the site;
 5. Designating the size, number, locations and/or design of vehicle access points, parking areas, or loading areas;
 6. Increasing the number of required parking spaces;
 7. Requiring street right-of-ways to be dedicated and streets, sidewalks, curbs, planting strips, pathways or trails to be improved, so long as findings in the development approval indicate how the dedication and/or improvements, if not voluntarily accepted by the applicant, are roughly proportional to the impact of the proposed development;
 8. Limiting the number, size, location, height and lighting of signs;
 9. Limiting or setting standards for the location, design, and/or intensity of outdoor lighting;
 10. Requiring fencing, screening, landscaping, berms, drainage, water quality facilities or other facilities to protect adjacent or nearby property, and the establishment of standards for their installation and maintenance;
 11. Designating sites for open space or outdoor recreation areas;
 12. Requiring the protection and preservation of existing trees, soils, vegetation, watercourses, habitat areas, drainage areas, and historic or cultural resources;
 13. Requiring ongoing maintenance of buildings and grounds;
 14. Setting a time limit for which the conditional use is approved.

Applicant Response: These criteria do not require any action on the part of the applicant.

- B. Uses existing prior to the effective date of this chapter and classified in Title 17 as a conditional use shall meet the criteria for modification of approved plans and developments.

Applicant Response: This criterion is not applicable. The applicant is not proposing to modify an existing use.

- C. The Planning Commission may require the applicant of an approved conditional use permit to enter into an agreement with the city for improvements in accordance with the provisions of Chapter 16.24. This is to assure that the conditions of approval are completed according to the plans

as approved by the Planning Commission.

Applicant Response: The applicant will comply with this criterion.

17.80.060 MODIFICATION TO APPROVED PLANS AND DEVELOPMENTS AND TRANSFERS.

- A. Acceptable modification requests of an approved plan or existing development may be processed as a ministerial decision with, no notice or hearing, by the City Planner only if the following threshold criteria can be met:
1. There will be no change in land use;
 2. The proposed change does not result in an increase in the overall impacts to adjacent properties;
 3. There is no increase in the amount of operational activity;
 4. The proposed change does not violate the standards of the land use zone;
 5. The proposed change does not result in a change to lot or parcel boundary lines.
- B. Proposed changes that do not meet the above criteria shall be processed as a new application.
- C. Transfers.
1. A conditional use permit is transferable to an applicant's successors within six months of a change in ownership or management of an approved use if it complies with the approval of the original application and meet the criteria for an acceptable modification.
 2. Between six months and one year from a change of ownership or management, the City Planner may review and approve a transfer of the conditional use permit if it complies with the approval of the original application and meets the criteria for an acceptable modification.

Applicant Response: These criteria are not applicable. The applicant is not proposing to modify an approved plan.

17.80.070 EXPIRATION OF APPROVAL.

A conditional use permit shall be void one year after the date of the Planning Commission approval if the use has not been substantially established within that time period.

- A. Substantial establishment of a use will be determined based on the following:
1. The approved use has been lawfully established; or
 2. New construction required for the operation of the conditional use permit has been permitted and construction has progressed in a timely manner as determined by the building permit process.
 3. All conditions of approval have been met or any failure to fully comply is not the fault of the applicant and progress continues to be made towards

compliance.

- B. The City Planner may grant one extension of up to one year for a conditional use permit that contained a one-year initial duration upon written request of the applicant and prior to the expiration of the approved period.
- C. Requests other than a one-year request made prior to the expiration of the approved period must be approved by the Planning Commission.
- D. A conditional use permit not meeting the above time frames will be expired and a new application will be required.

Applicant Response: The Applicant will comply with these criteria.

17.80.080 TERMINATION OF A CONDITIONAL USE.

A conditional use permit may be terminated by the Planning Commission. A termination will be processed in the same manner as a new conditional use application.

- A. The following persons may initiate a termination hearing:
 - 1. The owner of the subject property;
 - 2. The Planning Commission;
 - 3. The city.
- B. A termination shall be based on facts including any one or more of the following:
 - 1. Approval of the conditional use was obtained by misrepresentation;
 - 2. The use does not meet the conditions specifically established in the conditional use approval;
 - 3. The use is in violation of any provision of this title or any other applicable city codes, or statutes;
 - 4. The use has been inactive for a period exceeding one year.

Applicant Response: These criteria do not require any action on the part of the applicant.

SECTION 17.98: WIRELESS TELECOMMUNICATIONS FACILITIES

17.98.010 PURPOSE.

The purpose of this section is:

- A. To minimize adverse health, safety, public welfare or visual impacts of towers, through careful design, siting, landscaping and innovative visual compatibility techniques;
- B. To encourage shared use/co-location of towers and antenna support structures as a primary option rather than construction of additional single-use towers;
- C. To encourage utilization of technological designs that will either eliminate or reduce the need for construction of new tower facilities;

- D. To avoid potential damage to property caused by facilities, by ensuring such structures are sound and carefully designed, constructed, modified, maintained and removed when no longer used or are determined to be structurally unsound; and
- E. To ensure that towers are compatible with surrounding land uses.

Applicant Response: The subject proposal meets the purpose of this Section for a variety of reasons. It is appropriate use within the industrial zone on the subject property, which is surrounded by industrially zoned properties. The location and design of the proposed facility will limit visual impacts by locating in an underutilized storage yard, near other utility structures, and surrounded by a landscape buffer. The tower is designed to accommodate co-location, which will reduce the need for additional towers in the area in the future.

17.98.020 DEFINITIONS.

For the purpose of this code of ordinances, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

ANTENNA, WIRELESS TELECOMMUNICATIONS. The physical device, commonly in the form of a metal rod, wire panel or dish, through which electromagnetic, wireless telecommunications signals authorized by the Federal Communications Commission are transmitted or received. **ANTENNAS** used by amateur radio operators, police, fire and AM radio are excluded from this definition.

ATTACHED WIRELESS TELECOMMUNICATIONS FACILITY. A wireless telecommunications facility that is affixed to an existing structure, other than a wireless telecommunications tower.

CO-LOCATION. A wireless telecommunications facility comprised of a single telecommunications tower or building supporting one or more antennas, dishes or similar devices owned or used by more than one provider.

LATTICE TOWER. A support structure constructed of vertical metal struts and cross braces forming a triangular or square structure which often tapers from the foundation to the top.

MONOPOLE. A support structure constructed of a single, self-supporting hollow metal tube securely anchored to a foundation.

PROVIDER. A company holding a Federal Communications Commission (FCC) license that is in business to provide telecommunications services.

WIRELESS TELECOMMUNICATIONS. The transmission, via radio frequency electromagnetic waves, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received.

WIRELESS TELECOMMUNICATIONS ACCESSORY STRUCTURE/EQUIPMENT.

Equipment shelters or radio equipment necessary for the operation of wireless telecommunications in addition to the antenna and tower.

WIRELESS TELECOMMUNICATIONS EQUIPMENT SHELTER. The structure in which the

electronic radio equipment and relay equipment for a wireless telecommunications facility is housed.

WIRELESS TELECOMMUNICATIONS FACILITY (WTF). A facility consisting of the equipment and structures involved in receiving and or transmitting telecommunications or radio signals.

WIRELESS TELECOMMUNICATIONS SUPPORT FACILITY. A wireless telecommunications tower.

WIRELESS TELECOMMUNICATIONS TOWER. A structure intended to support equipment used to transmit and/or receive telecommunications signals including monopoles, guyed and lattice towers, but not excluding any other approved structure.

VISUAL COMPATIBILITY CHARACTERISTICS. Characteristics that minimize the visual impact of a tower or antennas.

17.98.030 REVIEW PROCEDURES.

- A. Wireless telecommunications facilities, hereby referred to as "WTFs" and/or "facilities" within this section, require a conditional use permit.
- B. The process of review is dependent on the type of facility proposed (i.e. co-located/attached or freestanding) and its proposed location.
 1. *Notice.* When mailed notice of a public hearing or an administrative action relating to a wireless communication facility is required by this chapter, the notice shall be sent to owners of record of property where the property is located as follows:
 - a. Within 300 feet from the exterior boundary of the subject property when the proposed WTF meets the height requirement of this chapter; and
 - b. For WTFs that exceed the height requirement of this chapter, an additional 50 feet of notice area is required for every ten-foot increment in height.
 2. *Action and findings by Planning Commission.* For applications proposing the siting of wireless telecommunications facilities through means other than attachment, the Planning Commission shall conduct a public hearing in accordance with Chapter 17.12 of this code. Following the close of the hearing, the Planning Commission shall either approve, conditionally approve or deny the development plan. A wireless communication facility, as authorized, shall be subject to all conditions imposed and shall be varied from other provisions of this chapter only to the extent specified in the approval.
 3. *Conditional uses permitted.* Wireless telecommunications facilities shall be permitted upon granting of a conditional use permit in all zones, except subsection B.4. of this section.
 4. *Uses prohibited.* Wireless telecommunications facilities shall be prohibited in the Natural Resources Overlay Zone.

Applicant Response: Wireless telecommunications facilities are allowed, subject to a conditional use permit in the Manufacturing Zone. The subject property is not located in a Natural Resource Overlay Zone.

17.98.040 SITING PREFERENCES.

WTFs shall be sited in accordance with the following priorities, in order of their preference. If the applicant proposes a facility on lower priority preferences, the applicant shall prove conclusively, that each of the higher priorities has been considered and found to be not feasible.

A. Priority #1. Use of an attached wireless communication facility whereby transmission and reception devices are placed on existing structures which are consistent in height with and situated similarly to types normally found in the surrounding area, such as telephone, electrical or light poles.

Applicant Response: Verizon first attempts to utilize an existing structure at the desired antenna height to meet the targeted service objectives. As described in Attachment 9, RF Site Analysis, there is a 50' tall utility pole, located adjacent to the driveway of the proposed site, which is part of an electrical transmission line that extends along 18th Ave. The applicant evaluated the feasibility of attaching a WTF to this structure. The antennas would need to be mounted at approximately 40' (antenna tip height) on the pole to provide clearance to the transmission lines. While the location is favorable, the height of the structure will provide limited coverage and capacity off-loading and will not adequately serve the applicant's customers in the City of Sweet Home. Therefore, the priority #1 siting preferences are not feasible.

B. Priority #2. Co-location by placement of antennas or other transmission and reception devices on an existing tower, building or other structure, such as a utility pole, water tank or similar existing structure.

Applicant Response: As described in Attachment 9, RF Site Analysis, Verizon performed a radio frequency engineering study, which considered multiple factors, to determine the approximate site location required to fulfill the above-noted network objectives for the targeted service area. This study identified a specific geographic area, or "search ring", where the new facility must be located to provide effective service in the targeted service area. There are no existing towers, tall buildings, water towers, or similarly suitable structures for collocation within the prescribed search ring. Nevertheless, two existing structures located outside the search ring were evaluated for collocation. This included a building rooftop and a water tower.

The existing building that was evaluated is the Elks Lodge, which is located 1.4 miles west of Verizon's proposed location, placing it in the western edge of the

City of Sweet Home. *Given the low antenna tip height of approximately 30', and location outside of the search ring, this rooftop will not provide for quality indoor signal coverage in the east and central part of the City of Sweet Home.*

The existing water tower that was evaluated is in the northern part of the city, east of the proposed site, and is outside the prescribed search ring. Consequently, this site location would not provide acceptable indoor signal coverage in the southern and southwestern parts of the City. Also, the northern antenna sector would be mainly covering foliage and unoccupied land where coverage and capacity is not needed.

Based on the foregoing, the priority #2 siting preferences are not feasible.

C. Priority #3. Siting of a new tower, in a visually subordinate manner, using visual compatibility techniques.

Applicant Response: *The subject proposal including siting of a new tower, in a visually subordinate manner, using visual compatibility techniques.*

As seen in Attachment 8, Photo Simulations, taken from the surrounding area and Attachment 7, Zoning Drawings, the proposed monopole will utilize color, proposed landscaping, existing tall trees, proximity to existing utility poles and structures, buildings, and large setbacks to minimize its visual impact from surrounding properties and the public. The photo simulations capture an accurate perspective of the area's views of the proposed monopole. When viewed from the surrounding areas, the proposed monopole will be compatible with adjacent industrial development and surrounding land uses and will not produce significant negative impacts.

Visually subordinate:

- *The monopole is setback on the subject property between 58' and 187' from surrounding property lines and greater than 700' from Main Street.*
- *The property is surrounded by other utility facilities, including a transmission line along 18th Ave. and a substation to the north with many tall utility structures and wires.*
- *The adjacent industrial uses and large abutting properties provide a visual buffer from residential uses to the north.*

Visual compatibility techniques:

- *The monopole has a slim silhouette and footprint compared to more massive alternates, such as a lattice towers with their many cross members and large footprint.*
- *The monopole will be painted a flat grey to blend with the sky and*

surrounding utility infrastructure.

- ***The ground equipment will be screened by a fully sight obscuring landscape buffer consisting of an evergreen hedge.***

D. Priority #4. Siting of a new tower in a visually dominant location, but employing visual compatibility techniques.

Applicant Response: This criterion is not applicable, because a higher priority siting option is being utilized.

E. Priority #5. Siting of a tower in a visually dominant location, not employing visual compatibility techniques.

Applicant Response: This criterion is not applicable, because a higher priority siting option is being utilized.

17.98.050 STANDARDS AND REQUIREMENTS.

- A. *General; conflict.* All facilities shall meet all requirements established by the other provisions of SHMC that are not in conflict with the requirements contained in this chapter.
- B. *General; compliance.* All facilities shall comply with all federal, state and city codes, including, but not limited to, Federal Communication Commission and Federal Aviation Administration standards.

Applicant Response: As previously stated, the proposal complies with all applicable requirements of the Sweet Home Municipal Code, State and Federal Requirements. The monopole will be engineered to meet or exceed local and state building code safety requirements, ensuring a safe facility which will not be a hazard to surrounding properties or the public. The applicant, Verizon Wireless, is licensed by the Federal Communications Commission to operate the proposed WTF (see Attachment 4, FCC License). As shown in Attachment 6, FAA TOWAIR Determination, a service of the FCC to identify impacts of towers on aircraft and airports, the proposed facility will not be a hazard to air navigation and does not require registration with the FAA. The proposed facility will also operate in accordance with the Federal Communications Commission's RF emissions regulations (see Attachment 5, MPE/FCC Compliance Letter).

C. Access. Access shall meet the standards of the underlying zone.

Applicant Response: The proposed Wireless Telecommunications Facility meets the access requirements of the Industrial "M" zone. The proposed development will utilize the existing driveway approach onto 18th Ave. and will not create any

new access points to the adjacent street. The proposed use, which is does not generate significant traffic, does not warrant upgrading the existing approach.

D. *Height.*

1. Height of a facility shall be measured from the natural, undisturbed ground surface below the center of the base of the proposed facility to the top of the facility or if higher, the tip of the highest antenna or other transmission or reception device.
2. No WTF shall exceed the height standard of this chapter, except where attached to an existing structure that exceeds that height and the attached antennas do not increase the total height of that structure by more than ten feet.

Applicant Response: The proposed monopole meets the 100' height limit in the M zone as measured from the ground to the tip of the highest antenna (see Page A3 in Attachment 7, Zoning Drawings).

E. *Co-location.*

1. New facilities, if technically feasible, will be designed and constructed for three antennas/providers to co-locate on the facility and to allow antennas mounted at varying heights.

Applicant Response: The proposed facility will be structurally designed to allow collocation of a minimum of 3 providers.

2. The owner of a facility may not deny a wireless telecommunications provider the ability to co-locate on its wireless communication facility at a fair market rate or at another cost agreed to by the affected parties.

Applicant Response: The applicant will comply with this requirement.

3. A facility may be attached to any existing structure as long as the height of that structure is not increased by more than ten feet and so long as it meets all relevant requirements of this section.

Applicant Response: This criterion is not applicable. The proposed facility will not be attached to an existing structure.

4. Co-location shall not be precluded simply because a reasonable fee or shared use is charged or because reasonable costs necessary to adopt the existing or proposed uses to a shared tower. The Planning Commission may consider expert testimony to determine whether the fees and costs are reasonable.

5. Co-location costs that exceed new tower development costs are considered to be unreasonable.

Applicant Response: The applicant will comply with this requirement.

- F. *Construction.* All facilities must meet the requirements of the *Uniform Building Code* and/or the *Oregon Structural Specialty Code*.

Applicant Response: The proposed WTF will meet the requirements of the Building and Structural Code. The Applicant will prepare all necessary engineering and obtain a building permit for the facility.

- G. *Design.* Where possible new facilities will be located in such a manner that they blend in with the background around them, using techniques to ensure visual compatibility characteristics.

1. All new WTF towers shall be a monopole or lattice tower structure constructed out of metal or other nonflammable material.

Applicant Response: The proposed facility is a monopole that will be constructed of galvanized steel. This criterion is met.

2. All accessory structures (i.e. vaults, equipment rooms, utilities and equipment enclosures) shall be concealed, camouflaged, shall be consistent with the underlying zone or shall be placed underground.

Applicant Response: The proposed equipment cabinets will be fully screened by new landscaping consisting of an evergreen hedge.

3. Visible exterior surfaces of accessory facilities (i.e. vaults, equipment rooms, utilities and equipment enclosures) shall be constructed out of nonreflective materials.

Applicant Response: The proposed equipment cabinets are painted a neutral, non-reflective color. This criterion is met.

4. WTFs shall be initially painted and thereafter repainted as necessary with a "flat" paint. The color shall be one that will minimize the facility's visibility to the maximum extent feasible.

Applicant Response: The applicant is proposing to paint the tower a flat grey color to blend with the typical NW sky. This criterion is met.

- H. *Landscaping.* All WTFs shall be installed in such a manner as to maintain and enhance existing vegetation. Where no vegetation exists, a landscaping plan must be submitted for the site.

Applicant Response: There is no existing vegetation on the site. A landscape plan is included in the plan set (see Page L1 of Attachment 1, Zoning Drawings). This criterion is met.

- I. *Lighting.* No lighting shall be permitted on a WTF except as required for security and as required by the Federal Aviation Administration. Security lighting shall be located in such a manner so as not to face directly, shine or reflect glare onto any street or a lot in a residential zone.

Applicant Response: The applicant is not proposing to install any lighting. As documented in Attachment 6, FAA TOWAIR Determination, the proposed facility will not be a hazard to air navigation and does not require registration with the FAA. Therefore, aviation safety lighting will not be required by the FAA. This criterion is met.

- J. *Location.* No telecommunications facility shall be installed on an exposed ridge line unless it blends with the surrounding existing natural and human-made environment in such a manner as to be visually compatible with the environment.

Applicant Response: The proposed facility is not located on a ridgeline. This criterion is met.

- K. *Setbacks.* Facilities shall be set back at least 25% of the tower height from all property lines or shall meet the setbacks of the underlying zone, whichever is greater.

Applicant Response: The proposed monopole is 100' tall, which requires a minimum setback of 25'. The minimum setback in the M zone per 17.44.050 is 20'. The proposed monopole will be setback between 58' and 187' from surrounding property lines, which greatly exceeds the requirement.

- L. *Safety.* All WTFs shall maintain in place a security program that will deter unauthorized access and vandalism.

Applicant Response: The proposed Wireless Transmission Facility will be surrounded by a 6' tall chain link fence with barbed wire and a locked gate to maintain security and prevent unauthorized access. This criterion is met.

M. *Underground equipment shelters.* Underground equipment shelters should be considered.

Applicant Response: The proposed equipment consists of above ground equipment cabinets mounted on a pad like other types of outdoor utility equipment. The equipment needs to be above ground for ease of maintenance and access, particularly in the event of an emergency.

N. Signs.

1. Signs shall comply with the requirements set forth in this chapter.
2. All telecommunications facilities shall be clearly identified as to the location and operator so as to facilitate emergency response.

Applicant Response: All proposed signs will comply with the requirements of this Section. As shown on Page A8 of Attachment 7, Zoning Drawings, the proposal includes an informational sign that identifies the operator, site number, and contact information. These criteria are met.

17.98.060 ATTACHED TELECOMMUNICATIONS FACILITIES.

All attached facilities shall be located and designed to appear an integral part of the structure.

- A. Roof mounted antennas and all building mounted accessory equipment shall be located no closer to the nearest edge of the roof than the height of the antenna or accessory equipment, whichever is greater.
- B. Wall mounted antennas shall be architecturally integrated into the building.
- C. Wall mounted antennas shall be located no more than four feet from the face of the wall.
- D. Accessory structures for attached facilities, such as equipment shelters, cabinets or other enclosed structures containing electronic equipment, shall be camouflaged or otherwise constructed using visual compatibility techniques.

Applicant Response: These criteria are not applicable. The subject proposal does not include an attached Telecommunications Facility.

17.98.070 ABANDONMENT OF FACILITIES.

Wireless telecommunications facilities that do not have functioning antennas for a period of six months shall be considered abandoned and shall be removed by the owner or operator within 60 days thereafter.

Applicant Response: The applicant will comply with this requirement.

17.98.080 APPLICATION.

A. *Application requirements.*

1. One copy of the narrative on eight and one-half inch by 11-inch sheets;

Applicant Response: A Statement of Code Compliance is provided (this document).

2. A development site plan drawn to scale with sheet size not to exceeding 24 inches by 36 inches. Where necessary, an overall plan with additional detail sheets may be submitted;
3. All information necessary to evaluate the request;
4. One set of the plan shall be reduced to fit on eight and one-half inch by 11-inch sheets of paper. Names and numbers must be legible on this sheet size; and

Applicant Response: A full size (11"x17") and reduced plan set is provided as Attachment 7.

5. After the application is accepted as complete, any revisions may require a new application, additional filing fees and rescheduling of the public hearing.

Applicant Response: The Applicant will comply with this requirement.

B. *Development plan required.* All applications shall be accompanied by a development plan drawn to scale showing the following:

1. Use or uses;
2. Location of the proposed facility and relevant dimensions;
3. Height of the proposed facility;
4. Setbacks for the proposed facility;

Applicant Response: A Development Plan is included in the plan set (see Pages A1-A3 of Attachment 7, Zoning Drawings).

5. A photo simulation of the proposed WTF for the maximum number of providers;

Applicant Response: Photo-simulations of the proposed facility from various angles are provided as Attachment 8.

6. Dimensions and location of areas to be reserved for vehicular and pedestrian access and circulation;
7. A landscaping plan that indicates how the facility will be screened from adjoining uses;

8. A fencing plan that indicates the location, height and design of any proposed fencing;
9. A lighting plan that indicates the type and location of any proposed lighting;
10. A sign plan that indicates the size, location, and design of any proposed signage;
11. Drawings demonstrating the materials, color and design of the proposed facility;

Applicant Response: The above described information is provided in the plan set (see Attachment 7, Zoning Drawings).

12. A map showing all existing wireless communication facility sites operated by the provider within two miles of the Sweet Home boundary, or the top of the nearby ridges, whichever is greater, including a description of the facility at each location;

Applicant Response: A map of the applicant's sites within 2 miles of the proposed facility is provided in Attachment 9.

13. A propagation study indicting proposed facility and the adjacent hand-off sites;

Applicant Response: A propagation study is provided with in Attachment 9, RF Site Analysis.

14. If provider proposes to construct a new facility (tower), all applications shall include findings that demonstrate that it is not legally or technically feasible to co-locate:
 - a. Documentation of the efforts that have been made to co-locate on existing or previously approved towers;
 - b. Each provider shall make a good faith effort to contact the owner(s) of all existing or approved towers and shall provide a list of all owners contacted in the area, including the date, form of contact and the result of contact; and
 - c. Documentation as to why co-locating on an existing or proposed tower or attachment to existing structures within one-half mile of the proposed site is not feasible.

Applicant Response: As previously described, Verizon considers all siting possibilities within, and adjacent to, a search ring to determine the best location for a new facility to meet the targeted service objectives. Verizon will first attempt to utilize an existing tower or other structure for collocation at the

desired antenna height. If an existing tower or structure is not available or determined to be infeasible, Verizon will then propose a new tower.

In this case, the applicant is proposing to construct a new tower, because it is not technically feasible to collocate on an existing tower or other structure. There are no existing towers within one-half mile of the proposed site or within the applicant's required search ring. The nearest tall structures are utility poles along the site frontage, the Elks Lodge building rooftop (1.4 miles west), and a water tower (.4 miles east) at the old mill site. As described in detail in Attachment 9, RF Site Analysis, these structures do not provide the required coverage and/or capacity; therefore, they were rejected as follows:

- Utility Pole (18th Ave.): The height of the structure would provide limited coverage and capacity off-loading and will not adequately serve the applicant's customers in the City of Sweet Home.**
- Elks Lodge (440 Osage St.): The low antenna tip height and location outside of the search ring will not provide for quality indoor signal coverage in the east and central part of the City of Sweet Home.**
- Water Tower (2210 Tamarack St.): This location would not provide acceptable indoor signal coverage in the southern and southwestern parts of the City. Also, the northern antenna sector would be mainly covering foliage and unoccupied land where coverage and capacity is not needed.**

15. Such other pertinent information shall be included as may be considered necessary by the review authority to make a determination that the contemplated arrangement or use makes it necessary and desirable to apply regulations and requirements differing from those ordinarily applicable under this chapter and the subdivision ordinance.

Applicant Response: This application includes all information necessary to evaluate the request.

C. *Narrative required.* A written statement shall include the following information:

1. The name and contact information for the provider;
2. A description of the character of the proposed facility;
3. Analysis of how the application meets the review criteria;

Applicant Response: This information is provided in the applicant's narrative.

4. Applicants/providers shall provide evidence of legal access to the proposed wireless telecommunications facility;

Applicant Response: The lease agreement between the applicant and the property owner stipulates that the applicant is provided legal access to the telecommunications facility. (see page 2 of Attachment 10, Redacted Lease Agreement).

5. The applicant/provider shall provide evidence that legal access to the facility site will be maintained for the duration of the facility's operation;

Applicant Response: The lease agreement with the property owner stipulates that legal access will be maintained for the duration of the facility's operation (see Page 2 of Attachment 10: Redacted Lease Agreement).

6. Where a proposed wireless telecommunications facility is located on a property not owned by the provider, the applicant/provider shall present documentation that the owner of the property has granted an easement or entered into a lease for the proposed facility and that vehicular access is provided to the facility;

Applicant Response: The proposed wireless telecommunications facility is located on property not owned by the provider. A copy of the lease agreement for the facility, which includes access rights, is provided (see Attachment 10: Redacted Lease Agreement).

7. The applicant shall provide evidence that describes the facility tower's structural capacity to carry the antennas of at least three wireless telecommunications providers;

Applicant Response: The proposed monopole will be designed to accommodate at least three wireless telecommunications providers. A structural engineering analysis report documenting this will be provided with the building permit application. This can be a conditional approval.

8. The applicant shall provide evidence of steps the provider will take to avoid interference with normal radio and television reception in the surrounding area and with any public safety agency or organization, per FCC requirements;

Applicant Response: The proposed wireless telecommunications facility operates within a dedicated licensed frequency range that is separate from normal radio and TV signals (see Attachment 4, FCC License). Further, in the unlikely event that interference occurs, the applicant is required as a condition of its FCC license to remedy it.

9. a. The applicant shall demonstrate that the WTF is intended to provide service primarily within the community.
- b. The city reserves the right to deny a permit if it is shown that the facility is not intended to provide service primarily within the community.

Applicant Response: The proposed WTF is intended to provide service primarily within the community (see Attachment 9, RF Site Analysis).

10. The applicant/provider shall demonstrate that the wireless telecommunications facility must be located where it is proposed in order to service the provider's service area. There shall be an explanation of why a facility at this proposed site is technically necessary;

Applicant Response: As described in detail in Attachment 9, RF Site Analysis, the WTF is strategically located to improve and expand coverage to the Sweet Home city center, surrounding neighborhoods to the north and south, and along Highway 20 from the western boundary of the City to the eastern boundary adjacent to Foster Lake. The site location meets Verizon's service objectives to provide continuous outdoor, in-vehicle, and in-building wireless coverage and capacity off-load within this targeted service area.

11. If the applicant/provider proposes a new tower or co-located facility, the applicant shall provide evidence that the facility's height is the lowest height at which the gap in coverage can be filled;

Applicant Response: As described in Attachment 9, RF Site Analysis, the proposed WTF is lowest height at which the gap in coverage and capacity can be filled.

12. a. All applications shall include evidence that at least one provider will use the proposed facility to provide wireless telecommunications service immediately upon construction completion of the facility.
- b. The city reserves the right to deny applications that propose a facility without a provider.

Applicant Response: The Applicant is Verizon Wireless. Verizon Wireless is building the facility for its use and will immediately occupy the monopole upon completion of construction.

13. The application shall include a written agreement that wireless telecommunications facilities owned by the provider, that do not have an operating antenna for a period of six months, shall be considered

abandoned and shall be removed by the operator within 60 days thereafter; and

Applicant Response: The subject application includes a written agreement from the provider that the facility will be removed within 60 days after it stops operating in accordance with this criterion (see WTF Removal Agreements, Attachment 11).

14. The application shall include a written agreement from the property owner that if the provider fails to remove an abandoned WTF, the property owner has full legal and fiscal responsibility for the WTF removal.

Applicant Response: The subject application includes a written agreement from the property owner that if the provider fails to remove the abandoned facility, the property owner will be responsible for removal in accordance with this criterion (see WTF Removal Agreements, Attachment 11).

17.98.090 SPECIAL REVIEW CRITERIA.

- A. *Residential zones.* A wireless telecommunications facility is not allowed in any residential zone unless it is an attached WTF that meets the requirements of this section.
 1. *Access.* Standards for access are the set by the underlying zone.
 2. *Height.* A facility that is attached to an existing structure may not exceed the height of the existing structure, unless findings are made by the Planning Commission that such an increase will have a minimal impact on the appearance of the structure.
 3. *Landscaping.* Existing trees and other screening vegetation in the vicinity and along the access road shall be protected from damage, both during the construction period and thereafter.
 4. *Signs.* Facilities shall be identified with an identification sign not exceeding two square feet in size.
 5. *Accessory facilities.* Accessory structures for attached facilities, such as equipment shelters, cabinets or other enclosed structures containing electronic equipment, shall be camouflaged or otherwise constructed using visual compatibility techniques.

Applicant Response: These criteria are not applicable. The subject property is not zoned Residential.

- B. *Commercial zones.* A wireless telecommunications facility in any commercial zone must be either an attached WTF or a monopole, and that meets the requirements of this section.
 1. *Access.* Standards for access are the set by the underlying zone.

2. *Height.* The height of a WTF shall not exceed 80 feet.
3. *Landscaping.* Existing trees and other screening vegetation in the vicinity and along the access road shall be protected from damage, both during the construction period and thereafter. The accessory structure shall be screened by an evergreen material with an ultimate height of at least eight feet and a planted height of at least three feet. The landscaping must be protected and maintained.
4. *Signs.* Facilities shall be identified with an identification sign not exceeding two square feet in size.
5. *Accessory facilities.* Accessory structures for attached facilities, such as equipment shelters, cabinets or other enclosed structures containing electronic equipment, shall be camouflaged or otherwise constructed using visual compatibility techniques.

Applicant Response: These criteria are not applicable. The subject property is not zoned Commercial.

C. *Industrial zones.*

1. *Access.* Standards for access are the set by the underlying zone.

Applicant Response: The proposed Wireless Telecommunications Facility meets the access requirements of the M zone. The proposed development will utilize the existing driveway approach onto 18th Avenue and will not create any new access points.

2. *Height.* Facilities shall not exceed 100 feet.

Applicant Response: The proposed facility is 100' tall. This criterion is met.

3. *Landscaping.* Existing trees and other screening vegetation in the vicinity and along the access road shall be protected from damage, both during the construction period and thereafter. The accessory structure shall be screened by an evergreen material with an ultimate height of at least eight feet and a planted height of at least three feet. The landscaping must be protected and maintained.

Applicant Response: There is no existing screening vegetation on the site. A landscape plan is included (see Page L1 of Attachment 7, Zoning Drawings) that identifies the proposed screening material for the accessory ground equipment, which will reach a mature height of 8'.

4. *Signs.* Facilities shall be identified with an identification sign not exceeding two square feet in size.

Applicant Response: As shown on Page A8 of Attachment 7, Zoning Drawings, the proposed WTF includes an informational sign that identifies the operator, site number, and contact information.

5. *Accessory facilities.* Accessory structures for facilities, such as equipment shelters, cabinets or other enclosed structures containing electronic equipment, shall be camouflaged or otherwise constructed using visual compatibility techniques.

Applicant Response: The proposed equipment cabinets will be screened from view by an evergreen hedge. See Page L1 of Attachment 7, Zoning Drawings.

ATTACHMENT 3



August 27, 2019

City of Sweet Home
Planning Department
3225 Main Street
Sweet Home, OR, 97386

RE: OWNER LETTER OF AUTHORIZATION

Site Number: Verizon OR4-Foster Lake
Site Location: 1602 18th Ave., Sweet Home, OR 97386
Map/Tax Lot: 13S01E31AA03800

To Whom It May Concern:

I authorize Verizon Wireless and Velocitel, LLC., and/or their agents, to act as our nonexclusive agent for the sole purpose of preparing and consummating any land use, building, or other permit application(s) necessary to obtain approval of the applicable jurisdiction(s) for the installation of a new wireless communication facility, including tower, antennas and associated equipment on the above described property.

Acknowledged, Accepted and Agreed:

Property Owner/Agent Signature: James E Philpott
Printed Name / Title: JAMES E Philpott V.P. LEAD SALES
Date: 8-27-19

ATTACHMENT 4

ULS License

Cellular License - KNKN413 - Verizon Wireless (VAW) LLC

Call Sign	KNKN413	Radio Service	CL - Cellular
Status	Active	Auth Type	Regular

Market

Market	CMA609 - Oregon 4 - Lincoln	Channel Block	B
Submarket	0	Phase	2

Dates

Grant	08/27/2019	Expiration	10/01/2029
Effective	08/27/2019	Cancellation	

Five Year Buildout Date

07/12/1995

Control Points

2 500 West Dove Road, TARRANT, Southlake, TX
P: (800)264-6620

Licensee

FRN	0003800307	Type	Limited Liability Company
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Licensee

Verizon Wireless (VAW) LLC 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
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Contact

Verizon Wireless Licensing Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
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Ownership and Qualifications

Radio Service Type	Mobile
Regulatory Status	Common Carrier Interconnected Yes

Alien Ownership

The Applicant answered "No" to each of the Alien Ownership questions.

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Demographics

Race		Gender	
Ethnicity			

ULS License

PCS Broadband License - KNLH664 - Verizon Wireless (VAW) LLC

Call Sign	KNLH664	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

Reserved Spectrum

Reserved Spectrum

Market

Market	BTA133 - Eugene-Springfield, OR	Channel Block	E
Submarket	0	Associated Frequencies (MHz)	001885.00000000-001890.00000000-001965.00000000-001970.00000000

Dates

Grant	06/01/2017	Expiration	06/26/2027
Effective	06/01/2017	Cancellation	

Buildout Deadlines

1st	06/26/2002	2nd	
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Notification Dates

1st	06/27/2002	2nd	
-----	------------	-----	--

Licensee

FRN	0003800307	Type	Limited Liability Company
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Licensee

Verizon Wireless (VAW) LLC 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
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Contact

Verizon Wireless Licensing - Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
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Ownership and Qualifications

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government? No

Is the applicant an alien or the representative of an alien? No

Is the applicant a corporation organized under the laws of any foreign government? No

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country? No

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country? **Yes**

The Alien Ruling question is not answered.

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity

Gender

U.S. License

PCS Broadband License - KNLH695 - Verizon Wireless (VAW) LLC

Call Sign	KNLH695	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

Reserved Spectrum

Reserved Spectrum

Market

Market	BTA395 - Salem-Albany-Corvallis, OR	Channel Block	E
Submarket	3	Associated Frequencies (MHz)	001885.00000000-001890.00000000-001965.00000000-001970.00000000

Dates

Grant	06/02/2017	Expiration	06/26/2027
Effective	06/02/2017	Cancellation	

Buildout Deadlines

1st	06/26/2002	2nd	
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Notification Dates

1st	07/08/2002	2nd	
-----	------------	-----	--

Licensee

FRN	0003800307	Type	Limited Liability Company
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Licensee

Verizon Wireless (VAW) LLC 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
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Contact

Verizon Wireless Licensing - Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
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Ownership and Qualifications

Radio Service Type	Mobile		
Regulatory Status	Common Carrier	Interconnected	Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government? No

Is the applicant an alien or the representative of an alien? No

Is the applicant a corporation organized under the laws of any foreign government? No

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country? No

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country? Yes

The Alien Ruling question is not answered.

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity

Gender

ULS License

PCS Broadband License - WQCS439 - Verizon Wireless (VAW) LLC

Call Sign	WQCS439	Radio Service	CW - PCS Broadband
Status	Active	Auth Type	Regular

Rural Service Provider Bidding Credit

Is the Applicant seeking a Rural Service Provider (RSP) bidding credit?

Reserved Spectrum

Reserved Spectrum

Market

Market	BTA395 - Salem-Albany-Corvallis, OR	Channel Block	E
Submarket	2	Associated Frequencies (MHz)	001885.00000000-001890.00000000-001965.00000000-001970.00000000

Dates

Grant	04/23/2015	Expiration	05/13/2025
Effective	11/04/2016	Cancellation	

Buildout Deadlines

1st	05/13/2010	2nd	
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Notification Dates

1st	03/26/2010	2nd	
-----	------------	-----	--

Licensee

FRN	0003800307	Type	Limited Liability Company
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Licensee

Verizon Wireless (VAW) LLC 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
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Contact

Verizon Wireless Licensing - Manager 5055 North Point Pkwy, NP2NE Network Engineering Alpharetta, GA 30022 ATTN Regulatory	P:(770)797-1070 F:(770)797-1036 E:LicensingCompliance@VerizonWireless.com
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Ownership and Qualifications

Radio Service Type	Fixed, Mobile
Regulatory Status	Common Carrier Interconnected Yes

Alien Ownership

Is the applicant a foreign government or the representative of any foreign government? No

Is the applicant an alien or the representative of an alien? No

Is the applicant a corporation organized under the laws of any foreign government? No

Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country? No

Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country? **Yes**

The Alien Ruling question is not answered.

Basic Qualifications

The Applicant answered "No" to each of the Basic Qualification questions.

Tribal Land Bidding Credits

This license did not have tribal land bidding credits.

Demographics

Race

Ethnicity

Gender

ATTACHMENT 5



September 19, 2019

To: City of Sweet Home
Community and Economic Development
3225 Main Street
Sweet Home, OR 97386

RE: Verizon Wireless OR4 Foster lake Site Located at: 1602 18th Ave., Sweet Home, OR

To Whom It May Concern,

We write to inform you that Verizon Wireless has performed a radio frequency (RF) compliance pre-construction evaluation for the above-noted proposed site and based on the result of the evaluation, the site will be compliant with FCC Guidelines.

The FCC has established safety rules relating to potential RF exposure from cell sites. The rules are codified at 47 C.F.R § 1.1310. The FCC provides guidance on how to ensure compliance with its rules in the FCC Office of Engineering and Technology Bulletin 65 (available at https://transition.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet65/oet65.pdf). The FCC developed the RF standards, known as Maximum Permissible Exposure (MPE) limits, in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. The FCC provides information about the safety of radio frequency (RF) emissions from cell towers on its website at: <https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety>.

Please refer to the FCC Office of Engineering and Technology Bulletin 65 and the attached Verizon Wireless RF Brochure for information on RF exposure guidelines, RF safety, and landlord responsibilities. Questions related to compliance with federal regulations should be directed to VZWRFCCompliance@VerizonWireless.com.

Please contact your local Verizon Wireless resource below if you have additional site-specific questions.

Contact Name	Contact Email	Contact Phone
Preeti Pathanjali	preeti.pathanjali@verizonwireless.com	971-712-6183

Sincerely,

David Deen
Manager-RF System Design
Verizon Wireless

Property Owner Responsibilities

(M.E.N.U)

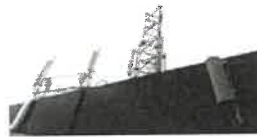
RF exposure safety and the protection of every licensee's infrastructure are very important. Property owners and licensees have a shared responsibility in maintaining a safe and secure RF environment. Property owners can help in this significant endeavor by:

- ⇒ **Maintaining** all necessary wireless licensee contact information.
- ⇒ **Enforcing** restricted access (help maintain a Controlled Environment). **Ensuring** all building/maintenance personnel are aware that the potential for exposure exists, and follow all appropriate entry and safety procedures.
- ⇒ **Notifying** all licensees when any non-carrier requests access to any area with antennas **at least 24 hours in advance**.
- ⇒ **Understanding** that compliance with the FCC and OSHA can be achieved with RF Exposure levels above the applicable limit if the proper signage, physical barrier, and access restrictions are implemented. Commitment to compliance and willingness to cooperate are essential.

For General RF Safety & Awareness Questions
Verizon Wireless

E-mail: VZWRFCCompliance@vzw.com
E-mail Subject: "ATTN: RF Compliance"

In The Event That Emergency Maintenance Is Required
24-Hour Network Operations Center:
1-800-264-6620



RF Safety & Awareness Training Contacts

- Amirit Technologies
(www.amirit.com)
- C-Squared Systems
(www.csquaredsystems.com)
- Dtech Communications
(www.dtechcom.com)
- EBI Consulting
(www.ebiconsulting.com)
- Global RF Solutions
(www.grfs.net)
- Hamnett & Edison, Inc.
(www.h-e.com)
- Lawrence Behr Associates, Inc.
(www.lbagroup.com)
- LCC
(www.lcc.com)
- Millennium Engineering
(www.millenniumengineering.net)
- Pinnacle Telecom Group
(www.pinnacletelecomgroup.com)
- Richard A. Tell Associates
(www.radhaz.com)
- RSI
(www.rfcomply.com)
- SiteSafe
(www.sitesafe.com)
- Telnet
(www.telnet-inc.com)
- Trott Communications Group
(www.trottgroup.com)
- Waterford Consultants
(www.waterfordconsultants.com)

Radio Frequency (RF) Emissions

SAFETY
&
AWARENESS



FCC Information

The Federal Communications Commission (FCC) has established safety guidelines relating to RF exposure from cell sites. The FCC developed those standards, known as Maximum Permissible Exposure (MPE) limits, in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. The standards were developed by expert scientists and engineers after extensive reviews of the scientific literature related to RF biological effects. The FCC explains that its standards incorporate prudent margins of safety. The following represents an overview of the most applicable information.

Classifications for Exposure Limits

Occupational

Persons are "exposed as a consequence of their employment" and are "fully aware of the potential for exposure and can exercise control over their exposure".

General Population

Any persons that "may not be made fully aware of the potential for exposure or cannot exercise control over their exposure".

Those in this category do not have RF Safety & Awareness Training.

Ensuring Compliance With FCC Guidelines

Areas or portions of any transmitter site may be susceptible to high power densities that could cause personnel exposures in excess of the FCC guidelines.

Wireless Licensees are required by law to implement the following:

- Restrict access (lock doors/ladders)
- Post notification signage on every access point to increase awareness of the potential for exposure BEFORE one enters an area with antennas
- Place additional notification signage and visual indicators in an area with antennas (beyond an access point) where RF exposure levels may start to exceed the FCC's limits.

Compliance Materials

Notification Signage



(Notice) RF Guidelines - Informs viewer of the basic safety guidelines for working in an RF Environment.



Information - Provides relevant contact information for any questions or requests.



(Blue) Notice - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population MPE limit but will remain below the Occupational MPE limit.



(Yellow) Caution - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population and Occupational MPE limit.



(Red) Warning - Informs viewer that beyond the sign, RF exposure levels may substantially exceed the General Population and Occupational MPE limit.

Indicative Barriers

In addition to physical barriers such as locked doors or ladders, wireless licensees may also be required to place indicative barriers as a means of visually demarcating an area where RF levels are expected to exceed the FCC's limits. **Examples of Indicative Barrier Materials:** plastic chains, buckets, reflective paint or tape, plastic cones, fiber-glass fences, and poles mounted in cinderblocks.



Antenna Safety

Antenna Types



Yagi - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk behind or under this antenna.**



Panel - Antenna that radiates energy in one direction. RF energy beam can range from narrow to very wide. **Walk behind this antenna. Stay out of the general direction that the antenna is pointing.**



Whip - Antenna that radiates energy equally in all directions. **Maintain as much distance as possible from this antenna.**



Microwave - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk under or behind this antenna.**

When In An Environment With Antennas:

- ⇒ Maintain at least a 3-foot clearance from all antennas. A 10-foot separation distance is preferred.
- ⇒ Never touch an antenna. Assume all are active.
- ⇒ Read and obey ALL signs on an access point.
- ⇒ Read and obey ALL signs in the environment with antennas.
- ⇒ Never walk past an indicative barrier without first confirming transmitter inactivity.
- ⇒ Never walk in front of or stand in front of an antenna whenever possible. Keep walking.
- ⇒ Contact all wireless licensees at least 24-hours in advance of scheduled maintenance.

ATTACHMENT 6

TOWAIR Determination Results

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

Structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided.

Your Specifications

NAD83 Coordinates

Latitude	44-24-02.9 north
Longitude	122-43-23.7 west

Measurements (Meters)

Overall Structure Height (AGL)	30.5
Support Structure Height (AGL)	30.5
Site Elevation (AMSL)	164.3

Structure Type

MTOWER - Monopole

Tower Construction Notifications

Notify Tribes and Historic Preservation Officers of your plans to build a tower.

CLOSE WINDOW

ATTACHMENT 7

PROJECT SCOPE

1. PROPOSED INSTALLATION OF A TELECOMMUNICATIONS FACILITY ON AN EXISTING PARCEL FOR VERIZON.
2. PROPOSED INSTALLATION OF THE FOLLOWING VERIZON EQUIPMENT ON MONOPOLE:
 - (1) ANTENNAS
 - (1) CABLES (RADIO UNITS (RUU))
 - (1) COWS
 - (1) HYBRID CABLES
3. PROPOSED INSTALLATION OF THE FOLLOWING VERIZON EQUIPMENT EQUIPMENT CABINET ON NEW CONC. PAD, UTILITY FRAME, ICE BRIDGE, (1) GPS ANTENNA, & (1) OVP WITHIN NEW 50'X50' FENCED COMPOUND
4. NEW 100' AGL MONOPOLE.
5. PROPOSED INSTALLATION OF NEW 200A ELECTRICAL SERVICE AND FIBER SERVICE.

PROJECT CONTACTS

APPLICANT:
VERIZON WIRELESS
4500 NE 122ND AVE
PORTLAND, OR 97230

PROPERTY OWNER:
TESTER SALES, INC.
CONTACT - JIM PHELIPOTT
PH: 541.409.1200

TOWER OWNER:
VERIZON WIRELESS TOWERS
1621 NE 2ND WAY
REBMOND, VA 29823

SITE ACQUISITION AGENT:
SWEET HOME, OR 97230

VELOCITY:
7801 SW 10TH STREET
TULALUM, OR 97062
MICHAEL BRINDORF
PH: 503.421.2251

TRAINING/PREMIERING AGENT:
VELOCITY
7800 SW MCHAWAY STREET
TULALUM, OR 97062
PH: 503.421.2251

RE ENGINEER:
VERIZON WIRELESS
5000 NE 122ND AVE
PORTLAND, OR 97230

CONSTRUCTION MANAGER:
VERIZON WIRELESS
5000 NE 122ND AVE
PORTLAND, OR 97230
STEVE BODINE
stephen.bodine@verizonwireless.com

ENGINEER OF RECORD:
VECTOR STRUCTURAL ENGINEERING
651 W. GALERIA PARK BLDG, SUITE 101
DRAPER, UT 84020 SE
PH: 801.990.1275

SURVEOR:
SWEET HOME CONSULTING, LLC
245 SWANT HERBENS AVE, SUITE 5A
TACOMA, WA 98402



OR4 FOSTER LAKE
1602 18TH AVE
SWEET HOME, OR 97386

CONSTRUCTION DRAWINGS

PROJECT INFORMATION

SITE NAME: OR4 FOSTER LAKE
ADDRESS: 1602 18TH AVE
SWEET HOME, OR 97386

JURISDICTION: CITY OF SWEET HOME
LOCAL ZONING: UTILITY/ACCESSORY
IND. INDUSTRIAL

HEIGHT LIMIT: 100'

LATITUDE: 44.602662° N
LONGITUDE: -122.223297° W
GROUND ELEVATION: 13A CERIFICATION / RBDS
559.2'

(N) OR IS STRUCTURE HEIGHT: 100' AGL
(N) VERIZON GROUND LEASE AREA: 2,800 SQ FT

OCCUPANCY: U
GROUP: H-8

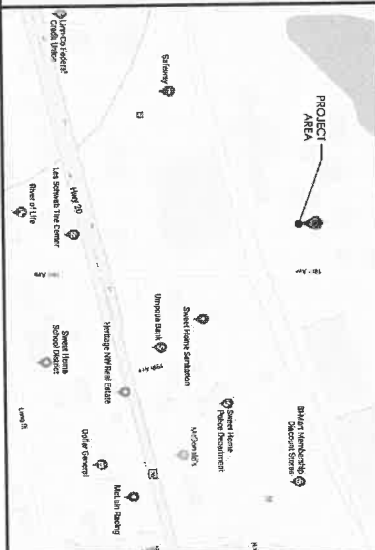
DRIVING DIRECTIONS

- FROM VERIZON OFFICE IN PORTLAND, OREGON:
1. GET ON I-54 W/US-30 W FROM NE 122ND AVE AND NE FREMONT ST (2.4 MI)
 2. FOLLOW I-5 S TO OR-34 E IN LINN COUNTY, TAKE EXIT 228 FROM I-5 S (79.8 MI)
 3. TURN LEFT ONTO OR-34 E (5.4 MI)
 4. EXIT ONTO DENNY SCHOOL RD (1.5 MI)
 5. CONTINUE STRAIGHT ONTO AIRPORT DR (2.2 MI)
 6. TURN RIGHT ONTO HWY 20 ERS MAIN ST/SANTIAM HWY 16 (13.6 MI)
 7. TURN LEFT ONTO 18TH AVE (0.1 MI)
 8. DESTINATION WILL BE ON THE LEFT
- TOTAL MILES:** 105 MILES
TOTAL TIME: 1 HOUR, 55 MINUTES

VICINITY MAP



LOCALIZED MAP



SHEET INDEX

T-1.0	TITLE SHEET
L-3.1	SURVEY
A-1.0	OVERALL SITE PLAN
A-2.0	ENLARGED SITE PLAN
A-3.0	ELEVATIONS
A-4.0	EQUIPMENT DETAILS
A-5.0	EQUIPMENT SCHEDULE & ANTENNA PLAN
A-5.1	EQUIPMENT TOWER DETAILS
A-5.2	EQUIPMENT DETAILS
A-6.0	FENCE DETAILS
A-7.0	CONSTRUCTION DETAILS
A-8.0	SITE SIGNAGE DETAILS
L-1.0	LANDSCAPE PLAN
R-1.0	RF PLUMBING DIAGRAM
E-1.0	UTILITY SITE PLAN
E-2.0	ELEC. DIAGRAM'S PANEL SCHED.
E-3.0	GROUNDING PLAN
E-4.0	GROUNDING DETAILS
G-1.0	GENERAL NOTES
G-2.0	GENERAL NOTES

GOVERNING CODES

- **THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS FURNISHED BY WAY OF ADVICE, ANY USE OR MISUSE OF THE SAME IS THE USER'S RESPONSIBILITY AND THE OWNER'S RESPONSIBILITY. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.
- 2014 OREGON STRUCTURAL SPECALITY CODE
 - 2017 OREGON ELECTRICAL SPECALITY CODE
 - 2014 OREGON ENERGY EFFICIENCY SPECALITY CODE
 - 2014 MECHANICAL SPECALITY CODE
 - 2017 NFPA 70 NATIONAL ELECTRICAL CODE
 - 2012 OREGON FIRE CODE
 - 2012 INTERNATIONAL BUILDING CODE
- A-1.0 COMPLIANCE INSTALLATION IS UNMANAGED, NOT FOR HUMAN OCCUPANCY. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

APPROVALS

BNAI CONSTRUCTION DRAWINGS SIGNATURE	
**REQUIREMENTS FOR A GENERAL CONTRACTOR TO EACH REQUIREMENT FOR ADVANCEMENTS ARE BEING REVIEWED.	
CONSULTANT/PRINTED NAME	SIGNATURE DATE
SITE ACO:	
PERMITS/ING:	
FR MGR:	
CONST. MGR:	
OPS. MGR:	
PROJ. MGR:	
REG. REVIEW:	
DEV. MGR:	



DRAWN BY:	CL
CHECKED BY:	CL
DRAWING VERSION:	
VAR. 1 DATE 1/19/19	DESCRIPTION: REBUILT CON DRAWINGS
VAR. 2 DATE 07/19/19	CLIENT COMMENT

LICENSER:
PRELIMINARY

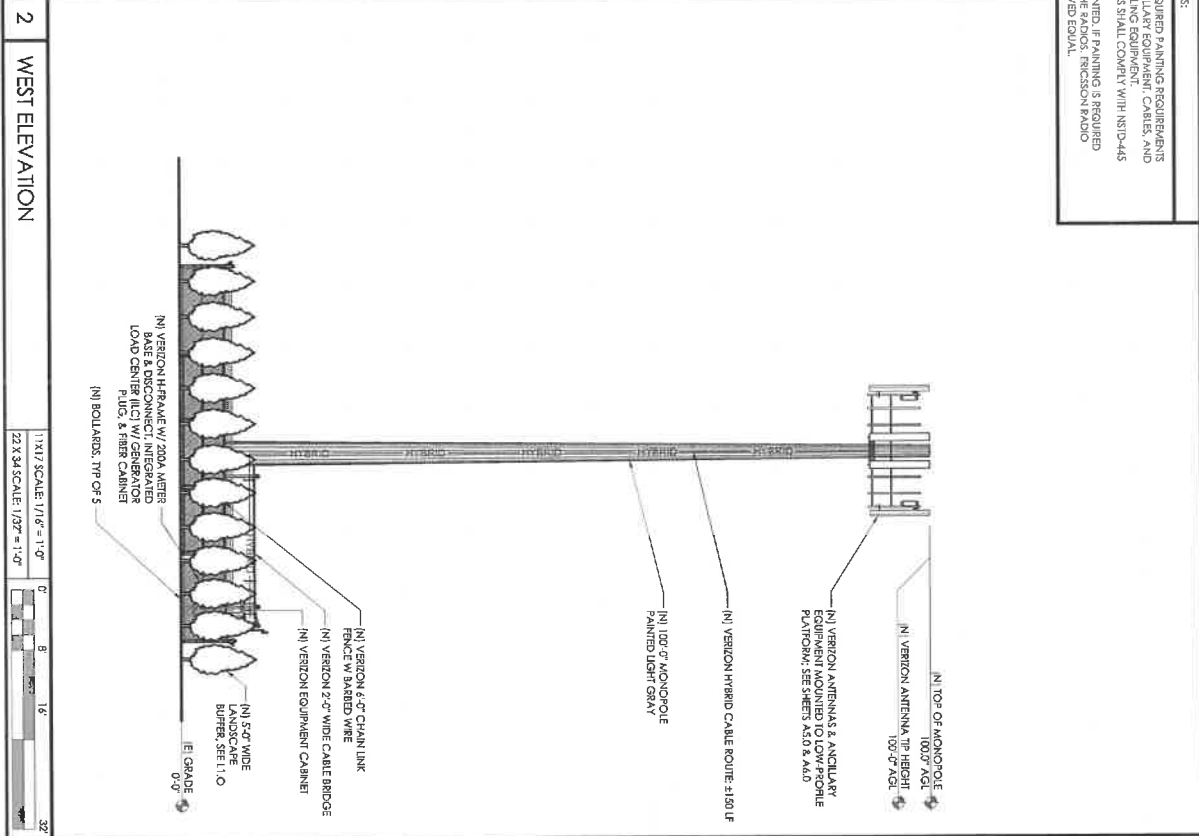
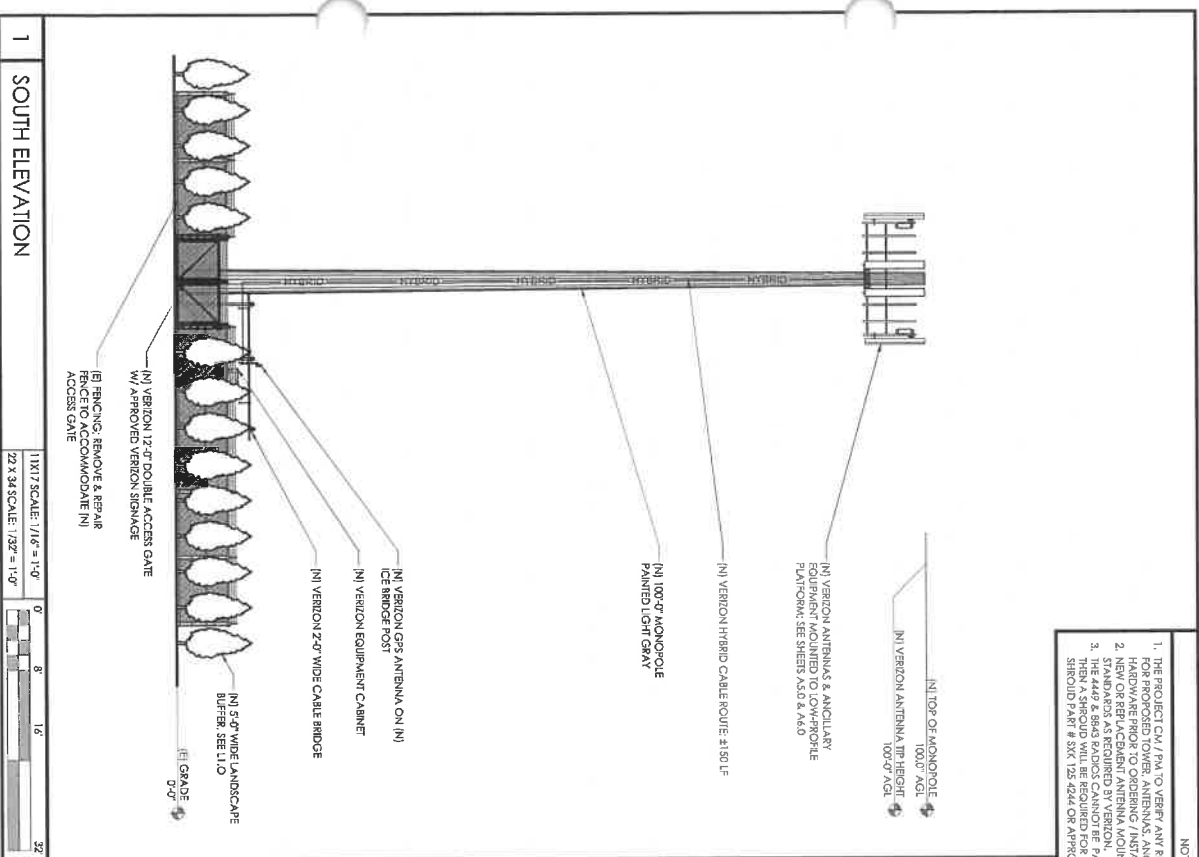
PROJECT INFORMATION
OR4 FOSTER LAKE
1602 18TH AVE
SWEET HOME, OR 97386

SHEET TITLE
TITLE SHEET
SHEET NO.
T1.0



Know what's below.
Call before you dig.

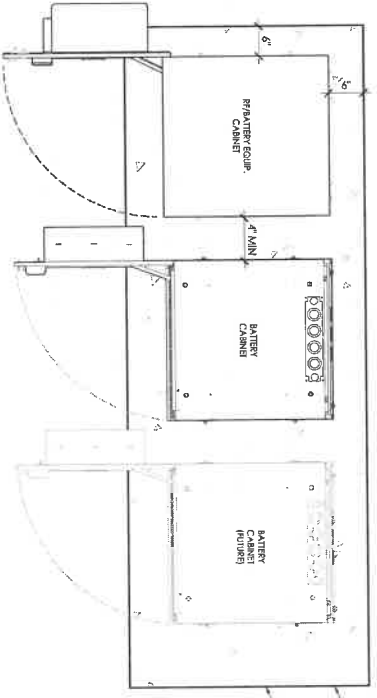
- NOTES:
1. THE PROJECT CIV / PIA TO VERIFY ANY REQUIRED PAINTING REQUIREMENTS FOR PROPOSED TOWER ANTENNAS, ANGLIARY EQUIPMENT, CABLES, AND STRUCTURAL ELEMENTS. CONTACT THE ARCHITECT FOR MORE INFORMATION.
 2. NEW OR REPLACEMENT ANTENNA MOUNTS SHALL COMPLY WITH NSTD-445 STANDARDS AS REQUIRED BY VERIZON.
 3. THE 4449 & 8843 BIDDOS CANNOT BE PAINTED, IF PAINTING IS REQUIRED FOR THESE ANTENNAS, CONTACT THE ARCHITECT FOR MORE INFORMATION. SHROUD PART # 8XX 125 4244 OR APPROVED EQUAL.



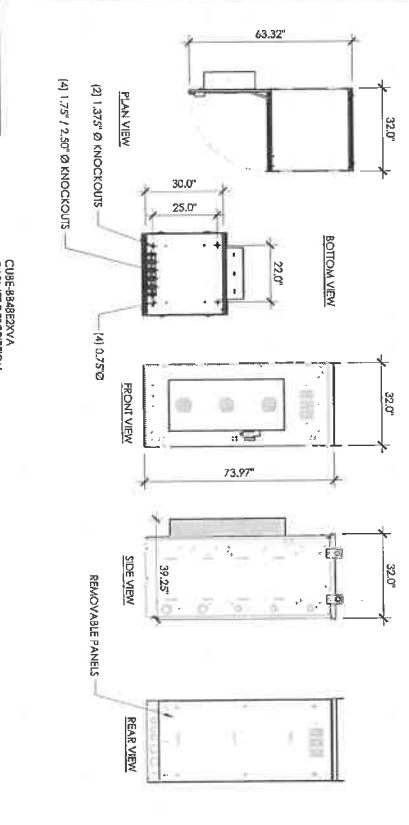
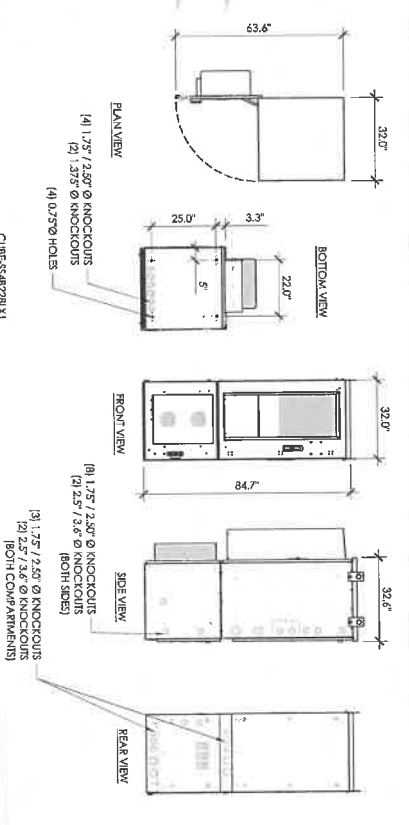
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VER.	DATE	DESCRIPTION								
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2	09/11/19	CLIENT COMMENT								
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<p>PROJECT INFORMATION</p> <p>OR4 FOSTER LAKE</p> <p>1602 18TH AVE</p> <p>SWEET HOME, OR 97386</p>										
<p>SHEET TITLE</p> <p>ELEVATIONS</p>										
<p>SHEET NO.</p> <p>A3.0</p>										

VERION EQUIPMENT SPECIFICATIONS			
EQUIPMENT	DIMENSIONS (H X W X D)	MAX. WEIGHT	
CHARLES CUBE-84828ALX1	94.7" x 32.5" x 32.0"	4,300 LBS (VERBY)	
REBATTERY CAB			(VERBY)
CHARLES CUBE-84828VXA	73.97" x 32.0" x 32.0"	4,300 LBS (VERBY)	
BATTERY CAB (FUTURE)			(VERBY)

- NOTES:
- FOR ATTACHMENT OF (N) EQUIPMENT CABINETS TO CONCRETE FLD, USE (4) 1/2" Ø SPLIT RWK BOLT - 7" SPACED STEEL BRACKET EACH CORNER OF CABINET. SEE EQUIPMENT SPECIFICATIONS FOR LOCATIONS AND VERIFY W/ MANUFACTURER'S SPECIFICATIONS.
 - FOR ATTACHMENT OF (N) EQUIPMENT CABINETS TO EQUIPMENT PLATFORM, USE (4) 1/2" Ø A507 STEEL THRU-BOLTS W/ 12 GA. THERMADO GRATING CLIP TO RECEIVE BOLTS, OR PER MANUFACTURER'S SPECIFICATIONS.
 - CONDUIT STRIP UP LOCATIONS FOR ELECTRICAL, FIBER AND GENERATOR TO BE DETERMINED BY VERION REPRESENTATIVE / CONTRACTOR.



1 ENLARGED EQUIPMENT PLAN



2 RF / BATTERY CABINET

3 BATTERY CABINET

CUBE-84828ALX1
 CABINET DESCRIPTION:
 THE CABINET INCLUDES A BATTERY COMPARTMENT AND A EQUIPMENT COMPARTMENT. THE EQUIPMENT COMPARTMENT HAS 16RU OF 19\"/>

- NOTES:
- USE 3\"/>

CUBE-84828VXA
 CABINET DESCRIPTION:
 THIS IS THE 50 BATTERY COMPARTMENT. THE EQUIPMENT COMPARTMENT HAS 16RU OF 19\"/>

- NOTES:
- USE 3\"/>

11 X 17 SCALE: 1/2" = 1'-0"
 22 X 34 SCALE: 1" = 1'-0"

					PROJECT INFORMATION ORA FOSTER LAKE 1607 18TH AVE SWEET HOME, OR 97386
					SHEET TITLE EQUIPMENT DETAILS
SHEET NO. A4.0					

VERIZON TOWER / POLE / ROOFTOP EQUIPMENT SCHEDULE

SECTOR	EXIST / NEW	QUANTITY	TECHNOLOGY	TIP HI	AZIMUTH	MFR	EQUIPMENT MODEL	PORT	DIMENSIONS (L x W x D)	WEIGHT (LBS)	MECH DOWNTILT	ELEC DOWNTILT	CABLE TYPE	CABLE QTY	CABLE LENGTH
ALPHA	NEW	1	700/850/AMV	100.00'	0°	COMMSCOPE	NH-H45C-R28	HEX	9.67' x 11.97' x 7.11'	45.3	0°	0°	---	---	---
	NEW	1	700/850/PCS	100.00'	0°	COMMSCOPE	NH-H45C-R28	HEX	9.67' x 11.97' x 7.11'	45.3	0°	0°	---	---	---
	NEW	1	700/850	---	---	ERICSSON	RRU 4449	---	18.07' x 13.27' x 9.47'	70.0	---	---	---	---	---
BETA	NEW	1	700/850	---	---	ERICSSON	RRU 8843	---	18.07' x 13.27' x 9.47'	70.0	---	---	---	---	---
	NEW	1	700/850/PCS	---	---	ERICSSON	RRU 8843	---	18.07' x 13.27' x 9.47'	70.0	---	---	---	---	---
	NEW	1	700/850/AMV	100.00'	240°	COMMSCOPE	NH-H45C-R28	HEX	9.67' x 11.97' x 7.11'	45.3	0°	0°	---	---	---
GAMMA	NEW	1	700/850/PCS	100.00'	120°	COMMSCOPE	NH-H45C-R28	HEX	9.67' x 11.97' x 7.11'	45.3	0°	0°	---	---	---
	NEW	1	700/850	---	---	ERICSSON	RRU 4449	---	18.07' x 13.27' x 9.47'	70.0	---	---	---	---	---
	NEW	1	700/850/PCS	---	---	ERICSSON	RRU 8843	---	18.07' x 13.27' x 9.47'	70.0	---	---	---	---	---
GROUND	NEW	1	---	---	---	RAYCAP	RDIC-4627-R-48	---	29.5' x 16.5' x 12.42'	32.0	---	---	---	---	

1 EQUIPMENT SCHEDULE

1:1X17 SCALE: NIS
22 X 34 SCALE: NIS

NOTES:

THE 4449 & 8843 RADIOS CANNOT BE PAINTED. IF PAINTING IS REQUIRED THEN A SPOOLD WILL BE REQUIRED FOR THE RADIOS. ERICSSON RADIO APPROVED EQUAL.

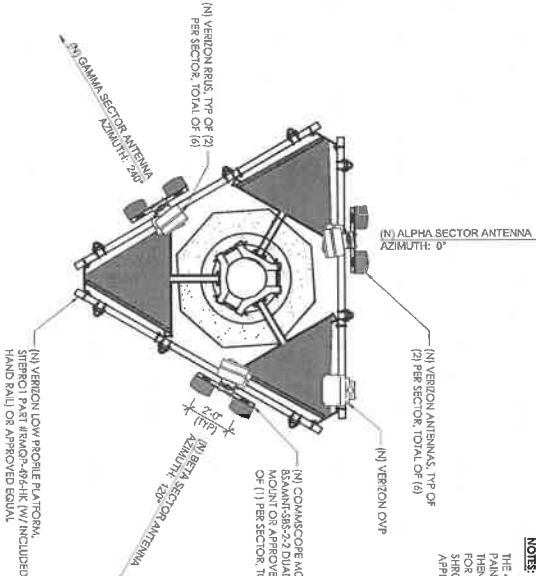
- GENERAL NOTES:**
- THE PROJECT OWNER SHALL VERIFY ANY REQUIRED PAINTING REQUIREMENTS FOR PROPOSED TOWER, ANTENNAS, ANGLUARY EQUIPMENT, CABLES, AND HARDWARE PRIOR TO ORDERING / INSTALLING EQUIPMENT.
 - TOWER / POLE STRUCTURAL ANALYSIS TO BE PERFORMED BY OTHERS. ANTENNA / ANGLUARY EQUIPMENT MOUNT ANALYSIS TO BE PERFORMED BY OTHERS.
 - THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING ANY NECESSARY TOWER RIGGING PLANS THAT ARE SUBJECT TO OWNER APPROVAL.
 - THE GENERAL CONTRACTOR SHALL REFER TO THE FINAL STRUCTURAL ANALYSIS FOR CABLE TYPING.

ANTENNA NOTES:

- THE GENERAL CONTRACTOR SHALL VERIFY FINAL ANTENNA / ANGLUARY EQUIPMENT PLACEMENT, MODEL, QUANTITY, AZIMUTH, ETC. W/ CLIENT BEFORE ORDERING EQUIPMENT.
- THE GENERAL CONTRACTOR SHALL FIELD VERIFY THE SUITABILITY OF ANTENNA MOUNT AT SPECIFIED TOWER / POLE ELEVATION PRIOR TO ORDERING MATERIALS.
- REFERENCE MANUFACTURER MANUALS FOR MOUNTING INFORMATION FOR ALL PROPOSED EQUIPMENT, AS NEEDED.

CABLE NOTES:

- ALL EXISTING AND PROPOSED CABLE LENGTHS ARE APPROXIMATE. THE GENERAL CONTRACTOR SHALL FIELD VERIFY LENGTHS PER FINAL MOUNTING CONFIGURATION AND STRUCTURAL ANALYSIS.
- ALL CABLE INSTALLATIONS SHALL CONFORM TO CURRENT CARRIER STANDARDS.
- THE GENERAL CONTRACTOR SHALL PROVIDE DRIP LOOPS IN CABLES AND JUMPEES WHERE APPLICABLE.
- ALL INSTALLED CABLES TO BE COLOR CODED W/ TAPE TO INDICATE ANTENNA SECTOR BASED ON CURRENT CARRIER STANDARDS.
- COLOR-BAND ELECTRICAL TAPE SHALL DENOTE END OF EACH CABLE AND JUMPER AS CLOSE TO THE END AS POSSIBLE (NOT TO INTERFERE WITH WEATHERPROOFING KIT).



2 ANTENNA PLAN

1:1X17 SCALE: NIS
22 X 34 SCALE: NIS

3 NOTES

1:1X17 SCALE: NIS
22 X 34 SCALE: NIS



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CHECKED BY: C1

DATE: 8/13/19
DESCRIPTION: PRELIM CX DRAWINGS
CLIENT COMMENT: 09/19/19

DESIGNER

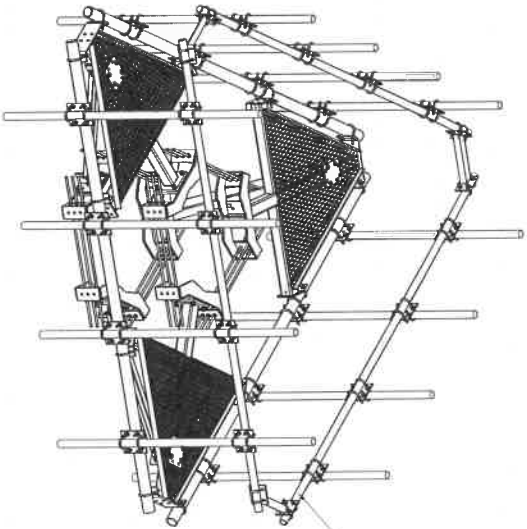
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PROJECT INFORMATION

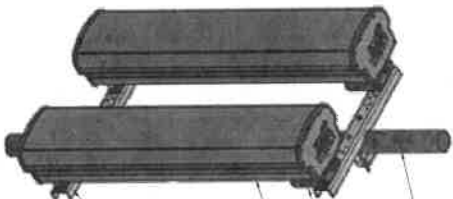
ORA FOSTER LAKE
1602 18TH AVE
SWEET HOME, OR 97386

EQUIPMENT SCHEDULE
& ANTENNA PLAN

SHEET NO.
A5.0



(N) VERIZON LOW PROFILE PLATEFORM A389001 PART #RAMP-4664K (W/ INCLUDED HAND PAID) OR APPROVED EQUAL. INSTALL PER MFR RECOMMENDATIONS



(E) Z STANDARD 12.37" O.D. X 0.154" THICK MOUNTING PIPE (UNO), CONTRA TO RERFACE (W/ LONGER PIPES AS REQUIRED) ACCORDING TO MFR ANTENNAS

(N) ANTENNA MOUNTING HARDWARE PROVIDED BY ANTENNA MFR. INSTALL PER MFR RECOMMENDATIONS

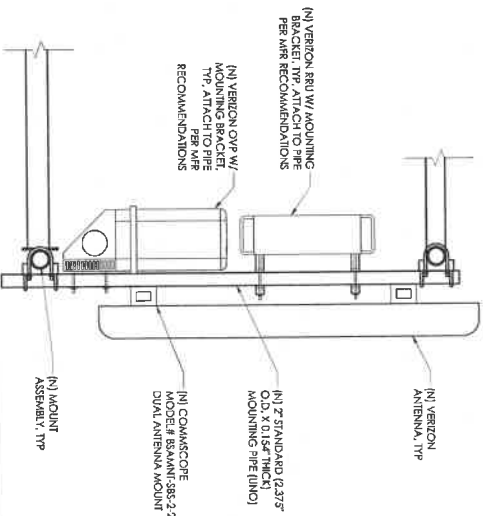
(N) VERIZON ANTENNA, TYP

1 ANTENNA MOUNT ASSEMBLY

1/1X17 SCALE: NIS
22 X 34 SCALE: NIS

2 JMA DUAL ANTENNA MOUNT DETAIL

1/1X17 SCALE: NIS
22 X 34 SCALE: NIS

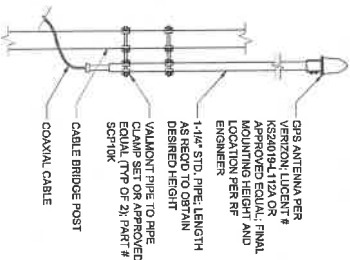


(N) VERIZON ANTENNA, TYP

(N) 2" STANDARD 12.37" O.D. X 0.154" THICK MOUNTING PIPE (UNO)

(N) COMMSCOPE MODEL# S8S-2-2 DUAL ANTENNA MOUNT

(N) MOUNT ASSEMBLY, TYP



GPS ANTENNA PER VERIZON, LOCATED & APPROVED EQUAL. FINAL MOUNTING HEIGHT AND LOCATION PER RF ENGINEER

1-1/4" STD. PIPE LENGTH AS REQ'D TO OBTAIN DESIRED HEIGHT

VALUANT PIPE TO PIPE CLAMP SET OR APPROVED EQUAL (TYP OF 2). PART # SECTION

CABLE BRIDGE POST

COAXIAL CABLE

3 ANCILLARY EQUIPMENT TO PIPE

1/1X17 SCALE: NIS
22 X 34 SCALE: NIS

4 GPS ANTENNA TO CABLE BRIDGE

1/1X17 SCALE: NIS
22 X 34 SCALE: NIS

5 NOT USED

1/1X17 SCALE: NIS
22 X 34 SCALE: NIS





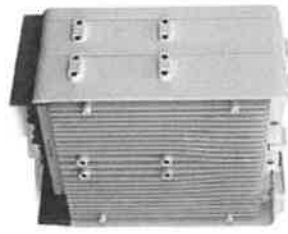
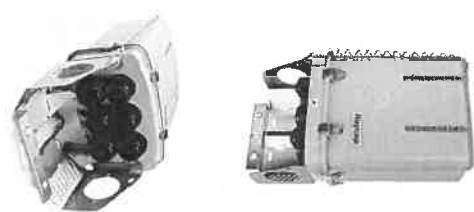
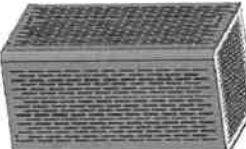
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CHECKED BY:	CL	
DRAWING VERSION		
VER.	DATE	DESCRIPTION
1	8/13/19	FRESH C/D DRAWINGS
2	09/19/19	CLIENT COMMENT



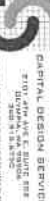

PRELIMINARY

PROJECT INFORMATION
OR4 FOSTER LAKE
1602 18TH AVE
SWEET HOME, OR 97386

EQUIPMENT MOUNT DETAILS

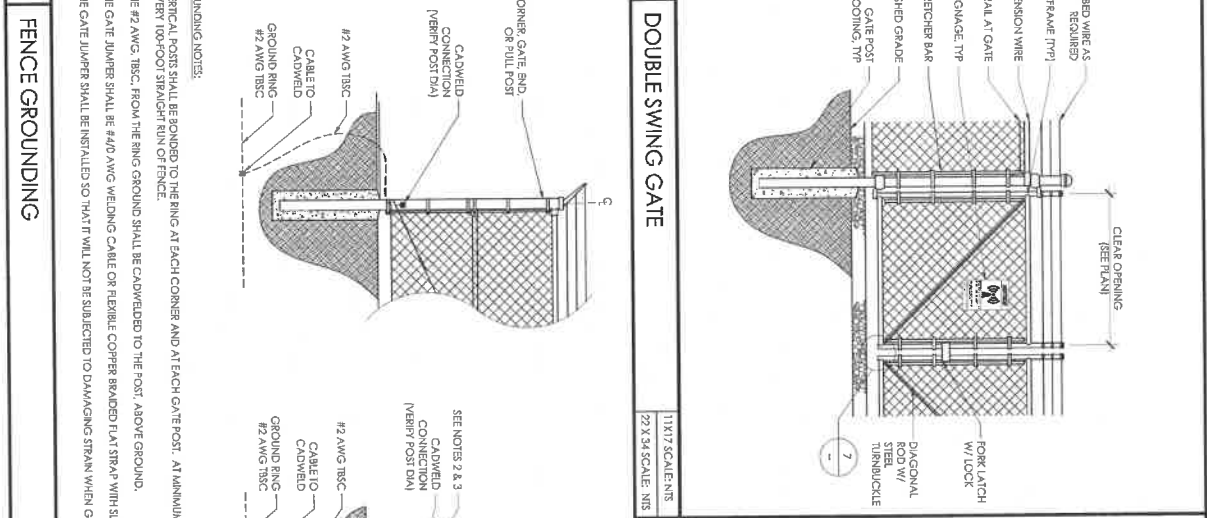
SHEET NO.
A5.1

<p>ANTENNA</p> <p>MODEL #: NH-45C-928</p> <p>DIMENSIONS: LENGTH: 94.0" WIDTH: 7.1" DEPTH: 62.3 LBS</p> <p>FREQUENCY BAND: 1.695-2.640 MHz 678-978 MHz</p> <p>QTY OF RF CONNECTORS: (2) LOW BAND (1) HIGH BAND / TOTAL</p> <p>MANUFACTURER: COMSCORP</p> <p>NOTES: MOUNT ANTENNA PER MANUFACTURER RECOMMENDATIONS.</p> 	<p>RRU 4449</p> <p>DIMENSIONS: HEIGHT: 18.0" WIDTH: 13.0" DEPTH: 9.4" WEIGHT: 70.0 LBS</p> <p>OUTPUT POWER: 4 X 40W ON EACH BAND OR 2 X 40W ON EACH BAND OR HIGH POWER RF PORTS</p> <p>CARRIER CAPACITY: UP TO 24 MHz</p> <p>MANUFACTURER: ERICSSON</p> <p>NOTES: MOUNT RRU PER MANUFACTURER RECOMMENDATIONS.</p> 	<p>RRU 8843</p> <p>DIMENSIONS: HEIGHT: 18.0" WIDTH: 13.0" DEPTH: 9.4" WEIGHT: 70.0 LBS</p> <p>OUTPUT POWER: 4 X 40W ON EACH BAND OR 2 X 40W ON EACH BAND OR HIGH-POWER RF PORTS</p> <p>CARRIER CAPACITY: UP TO 24 MHz</p> <p>MANUFACTURER: ERICSSON</p> <p>NOTES: MOUNT RRU PER MANUFACTURER RECOMMENDATIONS.</p> 
<p>1 ANTENNA SPECIFICATIONS</p> <p>11X17 SCALE: NTS 22 X 34 SCALE: NTS</p> <p>SURGE PROTECTOR</p> <p>DIMENSIONS: LENGTH: 12.6" WIDTH: 11.2" HEIGHT: 29.2" WEIGHT: 32.0 LBS</p> <p>MODEL #: RVZDC-6627-PF-48</p> <p>NOMINAL OPERATING VOLTAGE: 48 VDC</p> <p>MANUFACTURER: RANCAP</p> <p>NOTES: MOUNT PER MANUFACTURER RECOMMENDATIONS.</p> 	<p>2 RRU 4449 SPECIFICATIONS</p> <p>11X17 SCALE: NTS 22 X 34 SCALE: NTS</p> <p>SXK 125 4244</p> <p>DIMENSIONS: HEIGHT: 28.0" WIDTH: 14.6" DEPTH: 17.6" WEIGHT: 58.5 LBS</p> <p>DESCRIPTION: AESTHETIC POLE MOUNTED SHROUD TO CONCEAL THE OPERATIONAL 9AHD RADIO (4449 OR 8843) ALSO HAS PROVISIONS FOR POWER SUPPLY UNITS (PSU).</p> <p>MANUFACTURER: ERICSSON</p> <p>NOTES: MOUNT TO RRU PER MANUFACTURER RECOMMENDATIONS. MOUNTING PART # SXK 125 25402</p> 	<p>3 RRU 8843 SPECIFICATIONS</p> <p>11X17 SCALE: NTS 22 X 34 SCALE: NTS</p> <p>NOT USED</p>
<p>4 OVP RVZDC-6627-PF-48 SPECS.</p> <p>11X17 SCALE: NTS 22 X 34 SCALE: NTS</p>	<p>5 RADIO SHROUD SPECIFICATIONS</p> <p>11X17 SCALE: NTS 22 X 34 SCALE: NTS</p>	<p>6 NOT USED</p>

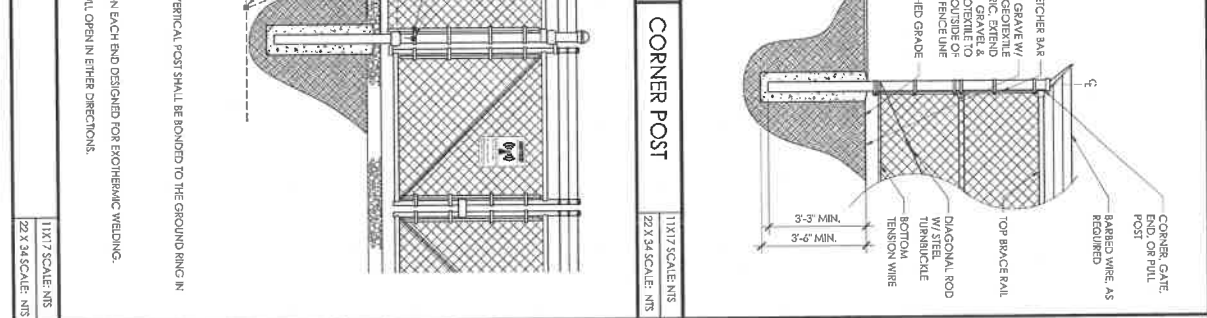
				<p>DRAWING BY: CL</p> <p>CHECKED BY: CL</p> <p>DRAWING VERSION:</p> <table border="1"> <tr> <th>VER.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr> <td>1</td> <td>01/15/19</td> <td>PRELIM CX DRAWINGS</td> </tr> <tr> <td>2</td> <td>09/17/19</td> <td>CLIENT COMMENT</td> </tr> </table>	VER.	DATE	DESCRIPTION	1	01/15/19	PRELIM CX DRAWINGS	2	09/17/19	CLIENT COMMENT	<p>LICENSER</p>	<p>PRELIMINARY</p>	<p>PROJECT INFORMATION</p> <p>ORA FOSTER LAKE 1602 18TH AVE SWEET HOME, OR 97386</p>	<p>EQUIPMENT DETAILS</p> <p>SHEET TITLE</p>	<p>SHEET NO.</p> <p>A5.2</p>
VER.	DATE	DESCRIPTION																
1	01/15/19	PRELIM CX DRAWINGS																
2	09/17/19	CLIENT COMMENT																

1. THE CONTRACTOR SHALL MATCH THE FENCING STYLE, HEIGHT, BANDING, BARBED WIRE, SUPPORTS, AND MEASUREMENTS OF THE EXISTING FENCE WHEREVER THE PROJECT REQUIRES MODIFICATION OR EXTENSION OF AN EXISTING FENCED AREA.
2. ALL WIRE RAILS, FABRIC, POSTS, HARDWARE, AND OTHER STEEL MATERIAL SHALL BE HOT-DIP GALVANIZED AND CONFORM TO ALL ASTM REGULATIONS FOR GALVANIZING.
3. THE FABRIC SHALL BE 6'-0" HIGH X 2" CHAIN LINK MESH OR NO. 9 GAUGE (0.148) WIRE AND HAVE A TWISTED AND BARBED FINISH FOR THE TOP RAILS AND A RIBBED FINISH FOR THE BOTTOM RAILS. FABRIC SHALL CONFORM TO THE SPECIFICATIONS OF ASTM A992, CLASS 1.
4. ALL BARBED WIRE SHALL BE 12 GAUGE TWISTED WIRE, DOUBLE STRAND, WITH 14 GAUGE 4 POINT ROUND BARBS SPACED AT 3" O.C....
5. ALL POSTS SHALL BE GALVANIZED STEEL, SCHEDULE 20 PIPE OF THE FOLLOWING DIMENSIONS: LINE = 2 3/8" / CORNER = 3" / GATE = 3" / FABRIC RAIL = 2 1/2" / CORNER = 3" / GATE = 3" / INCLUDING THE METAL DOME CAP TO PROVIDE FOR ATTACHMENT OF THE BARBED WIRE.
6. GATE POSTS SHALL HAVE A FULL HEIGHT VERTICAL BRACE AND A FULL WIDTH HORIZONTAL BRACE SECURED IN PLACE BY USE OF GATE BRACE CLAMPS.
7. ALL TOP AND BRACE BARS SHALL BE 1 1/2" DIA. SCHEDULE 20 HORIZONTAL COMPRESSION MEMBER, SECRETLY ATTACHED TO IRON FITTINGS.
8. HINGES SHALL BE A MINIMUM OF 200 DEGREES WITH A HINGE ADAPTER. LATCHES AND LOCKS SHALL BE ASSEMBLY SHALL BE TAMPER-PROOF. ALL STOPS AND DOUBLE GATES SHALL HAVE A FULL HEIGHT PULLER BAR WITH A METAL DOME CAP.
9. A NO. 7 GATE HINGE COATED TENSION WIRE TO BE USED AT THE CORNER AND GATEPOSTS.
10. A 6" X 12" EPOXY TO HOLD TENSION WIRE SHALL BE USED AT ALL LINE POSTS.
11. ALL STRINGER BARS SHALL BE 3/16 X 3/4" OR I HAVE EQUIVALENT CROSS SECTION AREA.
12. ALL CORNER GATE AND END RAILS SHALL HAVE A 3/8" TRUSS ROD WITH UNBANDAGED AND BE BRACED WITH ONE 1/2" DIA. HORIZONTAL COMPRESSION MEMBER, SECRETLY ATTACHED WITH IRON FITTINGS.
13. CONTRACTOR TO PROVIDE ALL OTHER HARDWARE NECESSARY TO ATTACH, TENSION, CAP, BAND, HINGE, FASTEN AND FINISH THE FENCING PROPERLY.
14. IF APPLICABLE, THE BARBED WIRE SUPPORT RAILS SHALL BE SCH. 40 GALVANIZED STEEL WITH SET BACK AND LOCK, LOCK WIRE IN THE AREA.
15. ALL POSTS, GATE GUARDS, AND OTHER OPEN PIPES SHALL BE CAPPED WITH A HOT-DIP GALVANIZED CAST STEEL DOME CAP. ALL POSTS SHALL HAVE A MINIMUM OF 6" OF CONCRETE UNDER THE LOWER MOST PORTION TO A MINIMUM OF 8" LARGER THAN THE DIAMETER AT THE HINGED GRADE.
16. ALL FENCE POSTS SHALL BE SCH. 40 GALVANIZED STEEL POSTS WITH SET BACK AND LOCK WIRE IN THE AREA.
17. AT CORNER POSTS, GATE POST, LINE POST, AND END OF GATE, FABRIC SHALL BE ATTACHED WITH STRINGER AND TENSION BAND CLIPS AT 1'-3" INTERVALS.
18. ATTACH FABRIC TO BRACE RAILS, TENSION WIRE AND TRUSS RODS WITH THE CLIPS AT 2'-0" INTERVALS.
19. PROVIDE A MAXIMUM GAP OF 1" BETWEEN THE CHAIN LINK FABRIC AND THE RAIL GRADE.
20. GATE HINGERS SHALL HAVE THEIR THERMOPLASTIC OR WOOD TO PREVENT UNAUTHORIZED REMOVAL, AND GATES SHALL BE INSTALLED SO THAT LOGS ARE ACCESSIBLE FROM BOTH SIDES.
21. CONTRACTOR TO TOUCH UP ALL SCRUBS, SCRAPERS, MARKS, AND BURN MARKS WITH A COLD GALVANIZED STRAIN.

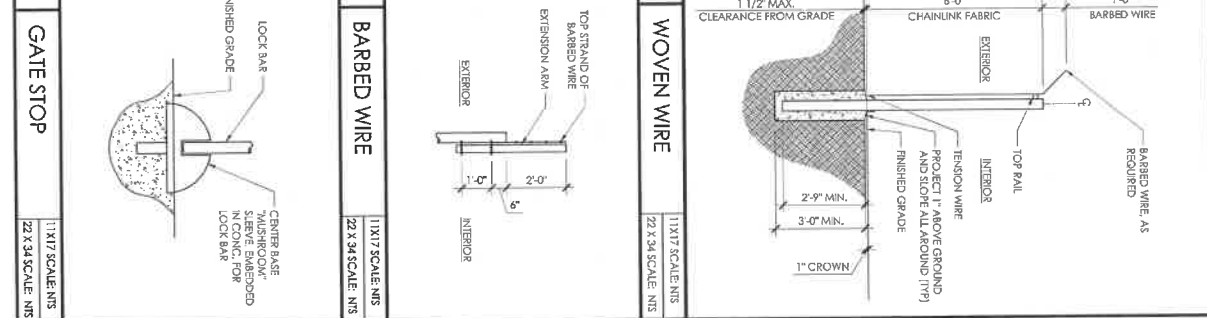
1 NOTES



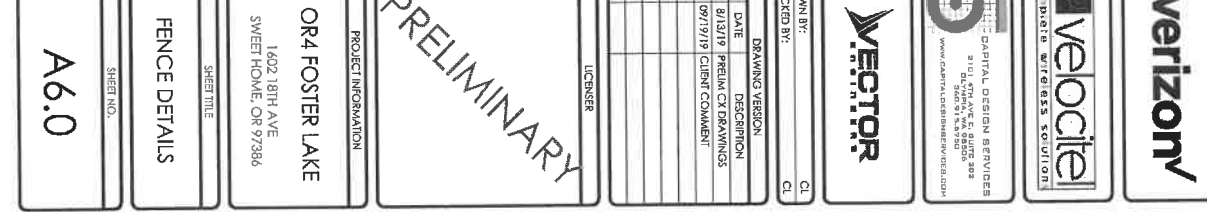
2 DOUBLE SWING GATE



3 CORNER POST



4 WOVEN WIRE



5 GATE STOP



6 BARBED WIRE

7 GATE STOP

8 BARBED WIRE

9 GATE STOP

10 BARBED WIRE

11 GATE STOP

12 BARBED WIRE

13 GATE STOP

14 BARBED WIRE

15 GATE STOP

16 BARBED WIRE

17 GATE STOP

18 BARBED WIRE

19 GATE STOP

20 BARBED WIRE

21 GATE STOP

22 BARBED WIRE

23 GATE STOP

24 BARBED WIRE

25 GATE STOP

26 BARBED WIRE

27 GATE STOP

28 BARBED WIRE

29 GATE STOP

30 BARBED WIRE

31 GATE STOP

32 BARBED WIRE

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34 BARBED WIRE

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36 BARBED WIRE

37 GATE STOP

38 BARBED WIRE

39 GATE STOP

40 BARBED WIRE

41 GATE STOP

42 BARBED WIRE

43 GATE STOP

44 BARBED WIRE

45 GATE STOP

46 BARBED WIRE

47 GATE STOP

48 BARBED WIRE

49 GATE STOP

50 BARBED WIRE

51 GATE STOP

52 BARBED WIRE

53 GATE STOP

54 BARBED WIRE

55 GATE STOP

56 BARBED WIRE

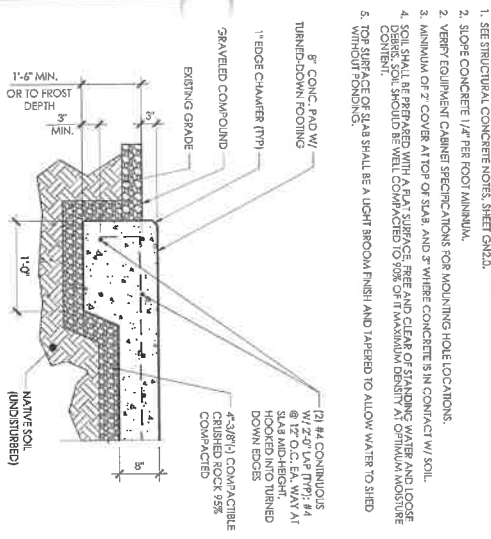
57 GATE STOP

58 BARBED WIRE

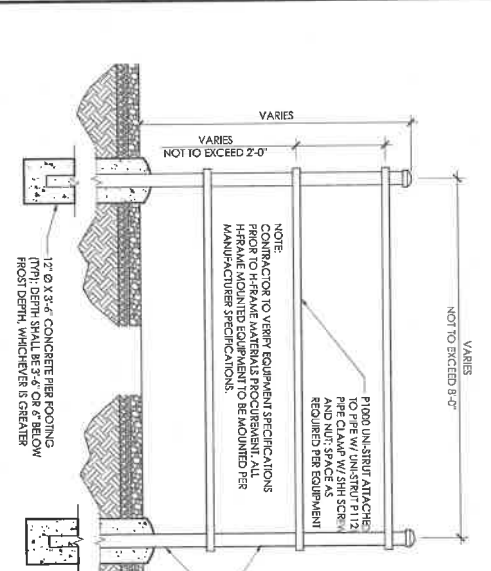
59 GATE STOP

60 BARBED WIRE

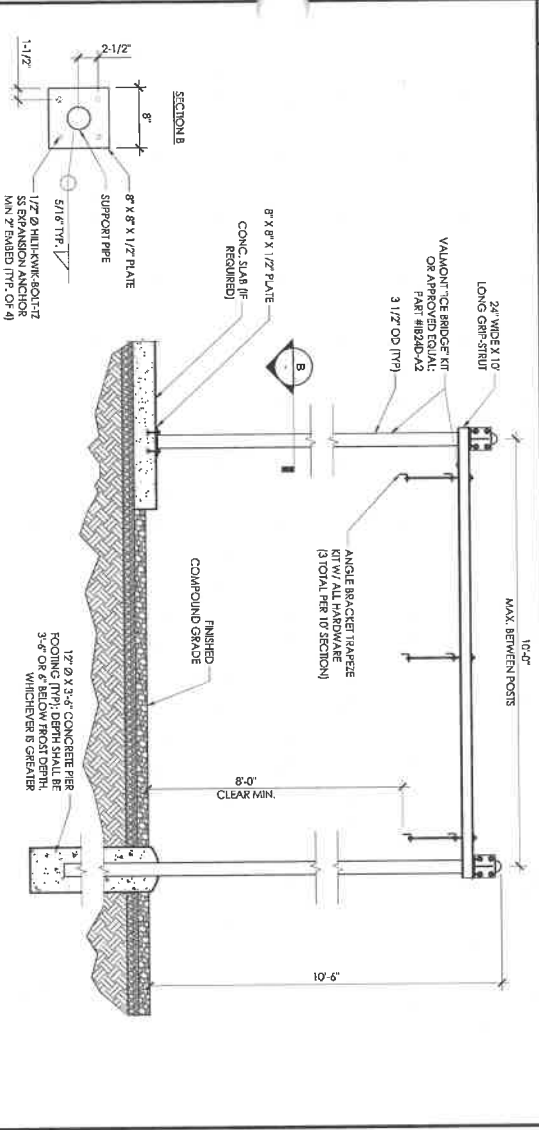
- NOTES:
1. SEE STRUCTURAL CONCRETE NOTES, SHEET CND-2.
 2. SLOPE EQUIPMENT CABINET SPECIFICATIONS FOR MOUNTING HOLE LOCATIONS.
 3. MINIMUM OF 2" COVER AT TOP OF SLAB AND 5" WHERE CONCRETE IS IN CONTACT W/ SOIL.
 4. SOIL SHALL BE TREATED WITH COMPACTED FREE AND CLEAR OF STANDING WATER AND LOOSE CONTENT.
 5. TOP SURFACE OF SLAB SHALL BE A LIGHT BROOM FINISH AND TAPERED TO ALLOW WATER TO SHED WITHOUT FLOODING.



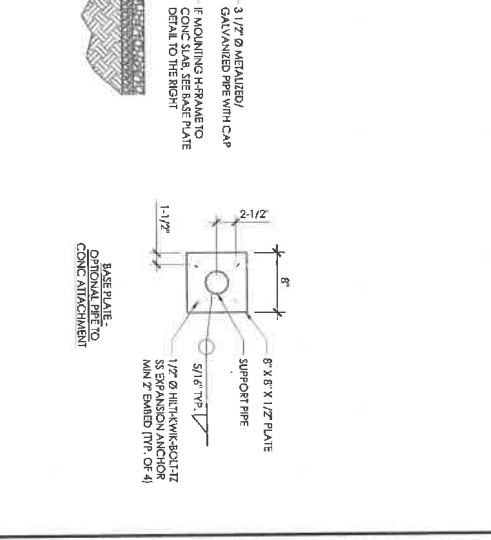
1 EQUIP PAD SECTION
1:1X17 SCALE: NTS
22 X 34 SCALE: NIS



2 H-FRAME
1:1X17 SCALE: NTS
22 X 34 SCALE: NIS



3 CABLE BRIDGE ELEVATION
1:1X17 SCALE: NTS
22 X 34 SCALE: NIS



4 CABLE BRIDGE SECTION
1:1X17 SCALE: NTS
22 X 34 SCALE: NIS



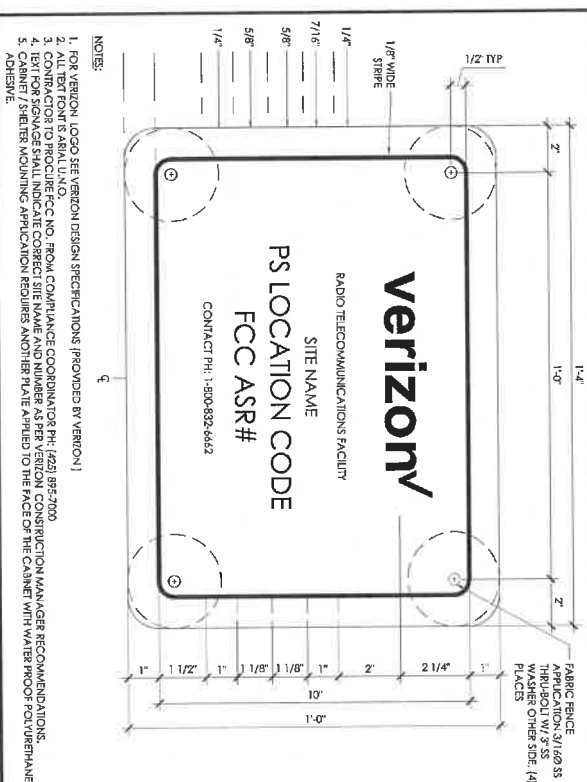
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DRAWING VERSION:	
DATE:	DESCRIPTION:
1 8/7/19	PRELIM CD DRAWINGS
2 9/17/19	CLIENT COMMENT

PRELIMINARY

PROJECT INFORMATION
OR4 FOSTER LAKE
1602 18TH AVE
SWEET HOME, OR 97386

SHEET TITLE
CONSTRUCTION
DETAILS
SHEET NO.
A7.0

- SIGNS AND PLACEMENT:**
- LOW LEVEL (RUE) WARNING SIGNS (PLACE AT SITE ENTRY/ACCESS POINTS ONLY):
 - ROOF TOPS: PLACE SIGNS ON THE INSIDE OF ROOF HATCH, PLACE ON ACCESS DOOR UNLESS DOOR IS USED BY GENERAL PUBLIC OR BUILDING BEHAVIOR REGULATORY FOR ACCESS IN THESE CASES.
 - CONCRETE CONSTRUCTION: PLACE SIGNS ON CONCRETE ENVIRON.
 - VERIZON OWNED SITES: PLACE ONE SIGN ON SIDE GATE.
 - HIGH LEVEL (RED) CAUTION SIGNS (PLACE AT ALL ANTENNA SECTIONS WHERE ACCESS BY THE GENERAL PUBLIC TO THE ANTENNAS IS POSSIBLE):
 - ALL SIGNS WILL BE SECURED WITH EITHER STAINLESS STEEL TP TIES OR STAINLESS TIECH SCREWS.
 - CC PARTICIPATION IN SIGN LOCATION:
 - CC WILL MEET WITH ALL CC'S TO OUTLINE CRITERIA FOR SIGN PLACEMENT. SIGN PLACEMENT WILL BE A CHALLENGING, WE WILL GIVE CC'S AS MUCH GUIDANCE ON SPECIFIC SITUATIONS AS WE CAN FORESEE, BUT CC'S WILL BE ENCOURAGED TO PARTNER WITH CM OR CC IN DECIDING PLACEMENT OF DIFFICULT SITES. A JOINT SITE VISIT MAY BE REQUIRED TO FULLY REQUIREMENTS.
 - CC WILL CALL OUT SIGN LOCATIONS/ AT THE A&E WALK FOR EACH SITE AS THOSE OCCUR.
 - ON SITES WITH EXISTING A&E BUT NOT YET CONSTRUCTED, CC WILL BE ASKED TO PROVIDE WITHIN A REASONABLE TIME FRAME (70) A DETAIL FOR SIGN PLACEMENT THAT WILL BE SHIPPED INTO EXISTING SITS.
 - SIGN DISBURSEMENT FROM WAREHOUSE:
 - SIGNS WILL BE IN STOCK AT EVENT WAREHOUSE TO BE DISBURSED AS PART OF THE CC SIGN AS CALLED OUT IN A&E DRAWINGS FOR EACH SITE.



CAUTION

On site lower: Radio frequency fields near some antennas may exceed FCC rules for human exposure.

Personal climbing this tower should be trained for working in radio frequency environments and use a personal RF monitor if working near active antennas.

Ref: FCC 47CFR 1.1376(b)

11X17 SCALE: NIS
22 X 34 SCALE: NIS

VERIZON SITE SIGNAGE

INFORMATION

VERIZON requires telecommunication antennas at this location. Remain at least 3 feet away from any antenna and obey all posted signs.

Contact the authority of the antenna(s) before working closer than 3 feet from the antenna(s)

Contact VERIZON at (VERIZON PHONER) prior to performing any maintenance or install near VERIZON antennas

This is a site of a telecommunication antenna. Contact the management office if this communication is found unattended.

INFORMACION

En esta propiedad se ubican antenas de telecomunicaciones operadas por VERIZON. Favor mantener una distancia de no menos de 3 pies y obedecer todas las señalizaciones.

Comuníquese con el propietario o las propiedades de las zonas de trabajo o cualquier otro personal de 3 pies de la antena.

Comuníquese con VERIZON (PHONER) antes de realizar cualquier mantenimiento o reparaciones cerca de las antenas de VERIZON.

Esta es la estación base número _____

favor comunicarse con la oficina de la administración del edificio al estar puesta o computera sin encontrarla en el caso

11X17 SCALE: NIS
22 X 34 SCALE: NIS

RF WARNING SIGN

NOTICE

Beyond this point you are entering an area where RF Emissions may exceed the FCC General Population Exposure Limits

Follow all posted signs and site guidelines for working in an RF environment

Ref: FCC 47CFR 1.1376(b)

DANGER

NO TRESPASSING

11X17 SCALE: NIS
22 X 34 SCALE: NIS

verizon

veociel

VECTOR

5 CAPITAL DESIGN SERVICES
3101 6TH AVE N. SUITE 500
DENVER, CO 80202
WWW.CAPITALDESIGNSERVICES.COM

OR4 FOSTER LAKE
1623 18TH AVE
SWEET HOME, OR 97386

PRELIMINARY

A8.0

SHEET NO.

SITE SIGNAGE DETAILS

LICENSER

DRAWING VERSION

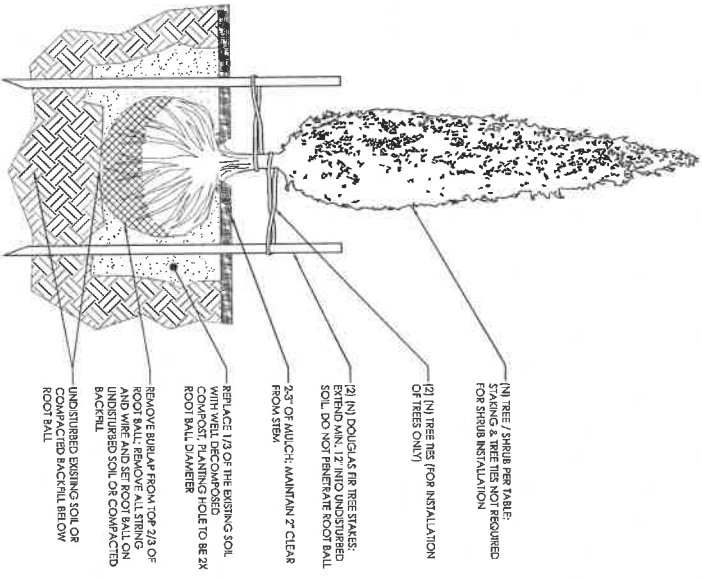
VER.	DATE	DESCRIPTION
1	8/13/19	PRELIM DRAWINGS
2	09/19/19	CLIENT COMMENT

DRAWN BY: _____

CHECKED BY: _____

1. ALL LANDSCAPING SHALL BE INSTALLED PRIOR TO RECEIVING FINAL BUILDING INSPECTION APPROVAL.
 2. ALL PLANTINGS ARE BROUGHT TO-BEARANT. NO IRRIGATION IS REQUIRED FOLLOWING INITIAL WATERING AT INSTALLATION.
 3. ALL PLANTINGS WILL BE GUARANTEED BY LANDSCAPER FOR A PERIOD OF ONE YEAR FROM INSTALLATION.
 4. ALL DEBRIS AND EXISTING GROUND COVER REMOVAL IS TO BE DONE BY THE CONTRACTOR.
 5. MULCH (AS A GROUND COVER) MUST BE CONFINED TO AREAS UNDERNEATH PLANTS AND IS NOT A SUBSTITUTE FOR GROUND COVER PLANTS.
 6. CONTRACTOR TO PROVIDE SUFFICIENT WATERING UPON INITIAL INSTALLATION OF PLANTINGS.
 7. ALL PLANTINGS SHALL BE FERTILIZED PER SPECIFIC SPECIE REQUIREMENTS.
 8. THE CONTRACTOR SHALL CONTACT THE OWNERS REPRESENTATIVE TO ARRANGE AN ON-SITE MEETING TO DISCUSS PROJECT PRIOR TO COMMENCEMENT OF ANY WORK.
 9. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES AND OTHER OBSTRUCTIONS THAT MAY AFFECT THE WORK. OPERATIONAL RESPONSIBILITY FOR REPAIRING AND/OR REPLACING, AT HIS OR HER OWN EXPENSE, ANY DAMAGES FROM HIS OR HER CLEAR AND GRUB ALL NEW PLANTING AREAS PRIOR TO THE INSTALLATION OF ANY NEW PLANT MATERIAL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ALL EXISTING LANDSCAPED AREAS DAMAGED AS A RESULT OF THE CONSTRUCTION OF THIS PROJECT, AND REPLANT WITH SAME SPECIES AS NEEDED.

1 NOTES

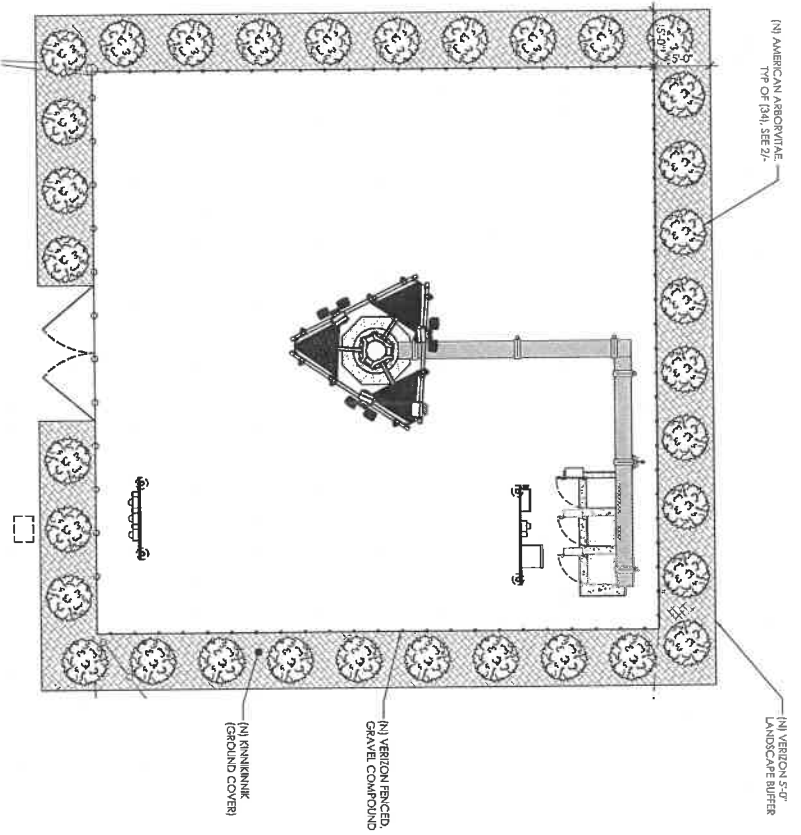


2 TREE / SHRUB PLANTING

1:1X17 SCALE: NTS
22 X 34 SCALE: NTS

PLANT LIST

SYMBOL	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	CLASS.
	THUJA OCCIDENTALIS	AMERICAN ARBOVITAE	(94)	6'-0" HT. MIN @ PLANTING (3' EACH WAY	HIGH GREEN GROUND COVER
	ARCTOSTAPHYLOS UVA-URSI	KINNEBICK (BEARBERRY)	(13.0)	1'-0" HT. MIN @ PLANTING (3' EACH WAY	HIGH GREEN GROUND COVER



3 LANDSCAPE PLAN

1:1X17 SCALE: NTS
22 X 34 SCALE: NTS

veoctor
CONTRACTOR - SITE DESIGN SOLUTIONS

CAPITAL DESIGN SERVICES
3101 4TH AVE. SUITE 300
SEASIDE, CA 92082
www.capitaldesignservices.com

VECTOR

DRAWING BY:	CL	
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DRAWING VERSION		
VER.	DATE	DESCRIPTION
1	8/13/19	PRELIM. C.D. DRAWINGS
2	09/19/19	CLIENT COMMENT

PRELIMINARY

PROJECT INFORMATION

OR4 FOSTER LAKE

1602 18TH AVE
SWEET HOME, OR 97386

SHEET NO.

LANDSCAPE PLAN

SHEET TITLE

L1.0



DRAWN BY:	CI
CHECKED BY:	CI

VER.	DATE	DESCRIPTION
1	8/15/19	PRELIM C.A. DRAWINGS
2	09/19/19	CLIENT COMMENT

LCBENSR

PRELIMINARY

PROJECT INFORMATION
ORA FOSTER LAKE
1602 18TH AVE
SWEET HOME, OR 97306

SHEET TITLE
RF PLUMBING
DIAGRAM

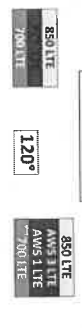
SHEET NO.
RF1.0

EUG FOSTER LAKE [3 Sector - 4x4 RET RRH (700, 850, PCS, AWS1, AWS3)]

SECTOR 1

SECTOR 2

SECTOR 3



RRU Bands:

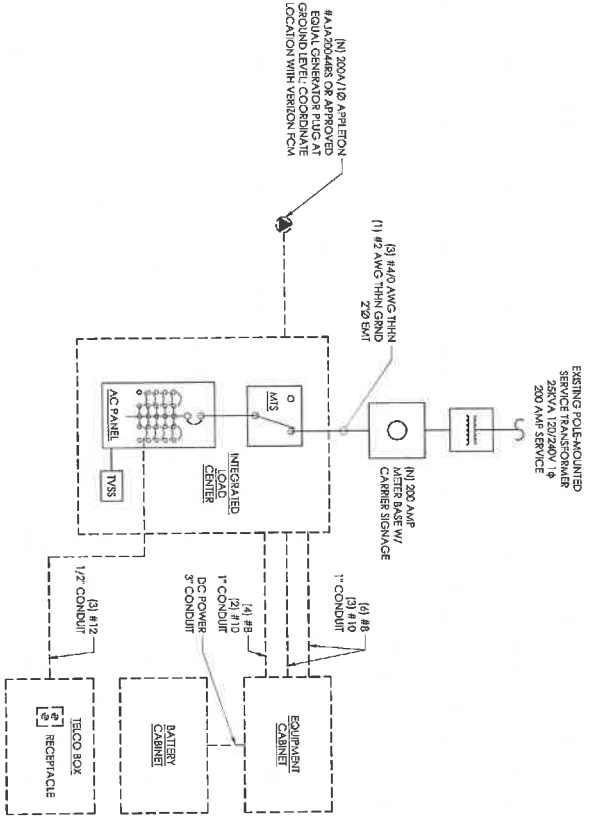
700	Band 13
AWS	Band 4
PCS	Band 2
850	Band 5
AWS-1/3	Band 56A
CBRS	Band 48
LAA	Band 48

RET Control Path Note:
 All Smart Blast's (SRT)/Internal Blast's, or External AISG RET Controllers are driven by the BOLD coax/jumper pathways.
 Example:
 Antenna port '1'
 driven by
 RRH port 'A'

COMMON VZW DC PLANT RECTIFIER REQUIREMENTS

REC'TIFIER	INPUT VA CURRENT AT 240 VAC (EACH REC'TIFIER)	2 REC'T / BRANCH CIRCUIT ALTERNATE APPROX. CH	1 REC'T / BRANCH CIRCUIT ALTERNATE APPROX. CH
VERTICAL 3000V (R48-2000A3 OR SIM)	1.5 AMPS	40A/2P / 10 THHN	30A/2P / 10 THHN
GE 75A (NE75AC480000 OR SIM)	22 AMPS (MAX)	60A/2P / 6 THHN	30A/2P / 10 THHN
OTHER - COORD W/ VENDOR	REFER TO CUT SHEETS	REFER TO CUT SHEETS	REFER TO CUT SHEETS

LOAD CALCULATION	AMPS
LOAD	123.0
PROPOSED LOAD:	
TOTAL DEMAND:	129.0
VOLTAGE 120/240V SINGLE PHASE 5W 525A	



- NOTES:
1. ALL ELECTRICAL WORK TO COMPLY WITH THE CURRENT NEC.
 2. ALL WIRING TO BE CONFORM TO CONDUCTORS, PHASE, CEA.
 3. SERVICE TO BE PROVIDED BY VENDOR WIRELESS.
 4. BASED ON A 25 KVA 240V 1-PHASE TRANSFORMER WITH AN IMPEDANCE OF 1.5%, THE AVAILABLE FAULT CURRENT AT THE METERSERVICE DISCONNECT IS LESS THAN 6.5A IKA.
 5. SERVICE GROUNDING ELECTRODE CONDUCTOR SIZE TO COMPLY WITH NEC 250.44.
 6. ALL ELECTRICAL WORK TO BE PROVIDED BY VENDOR WIRELESS SERVICE ONLY.
 7. ALL WIRING TO BE APPLIED AT THE SERVICE DISCONNECT STATION. WARNING STICK HAZARD W/5S IF GROUNDING ELECTRODE CONDUCTOR OR BONDING JUNCTION CONNECTION IN THIS EQUIPMENT IF REMOVED WHILE ALTERNATE SOURCE(S) IS ENERGIZED PER 702.491.

PANEL NAME:	VZW ITC	MODEL NUMBER:	INTERSECT AA-300C-1P4-3R
RATED VOLTAGE:	240	120	120
MAIN BREAKER:	200	AMPS	30A
PHASE:	200	AMPS	30A
NEUTRAL BARS:	YES		
ENCLOSURE TYPE:	NEULA 3R		
AC:	48K		
PHASE:	1	3	
PHASE:	2	3	
PHASE:	3	3	
PHASE:	4	3	
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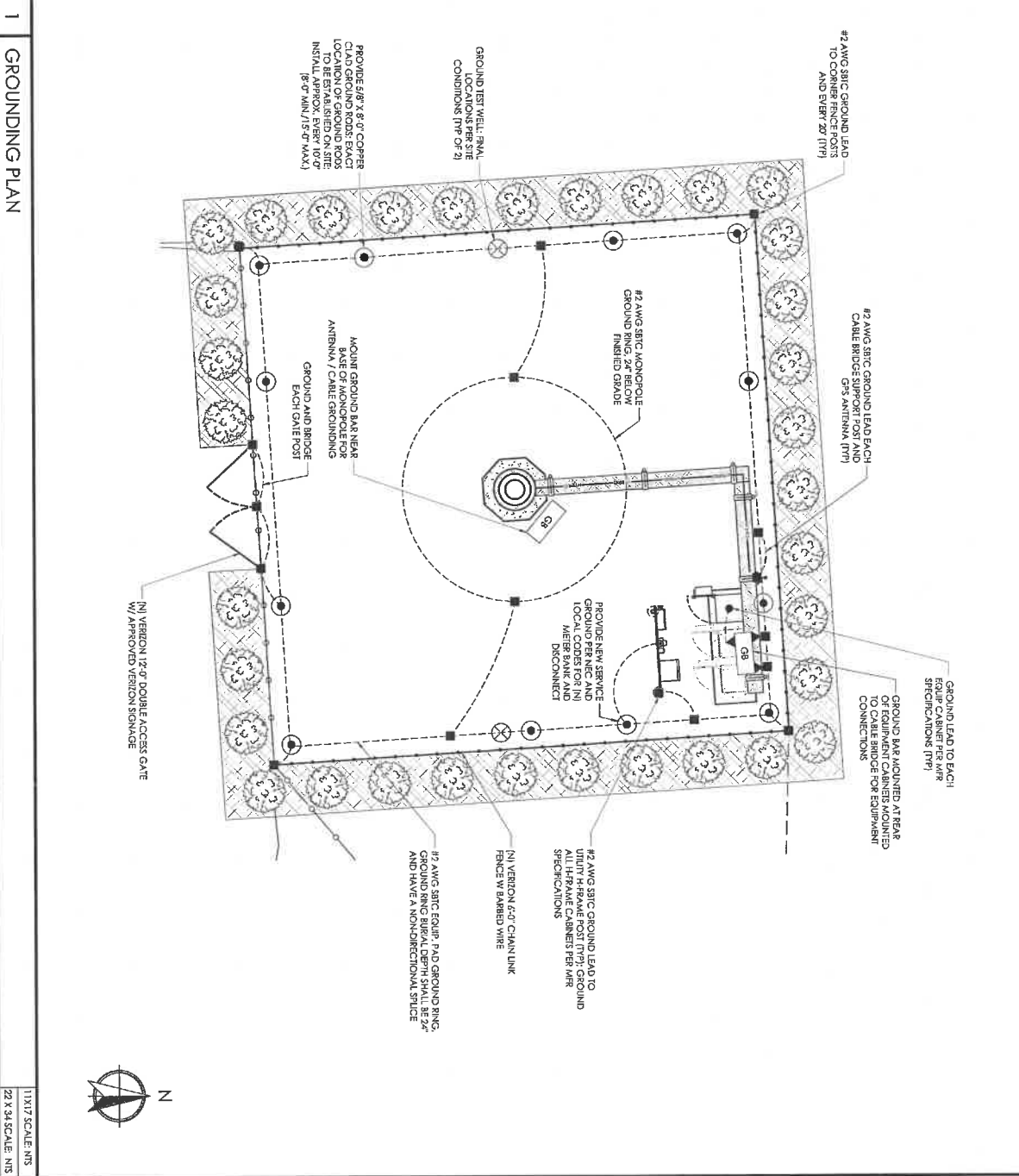
- NOTES:
1. CONDUCTORS ARE TYPE THWN (75°C) COPPER.
 2. MAXIMUM LENGTH OF RUN FOR REC'TIFIER CIRCUITS IS 50FT.
 3. INTERSECT GENERAC INTEGRATED LOAD CENTER INCLUDES 200 AMP MAIN DISCONNECT AND TRANSFER SWITCH FOR PORTABLE OR PERMANENT GENERATOR.
 4. REC'TIFIER LOADS ARE CONSIDERED TO BE NON-CONDUCTIVE.
 5. IF CONDUCTOR SIZE AND/OR LENGTH WHICH CAUSE TOTAL DEMAND TO EXCEED GENERATOR BREAKER SIZE BACKUP POWER SYSTEM SHALL BE EVALUATED AND UPGRADED AS NECESSARY.

PANEL SCHEDULE

1. DIRECTION OF GROUNDING DESIGN FOR ALL ELECTRICAL SYSTEMS SHALL BE DETERMINED BY THE NATIONAL ELECTRICAL CODE.
2. GROUNDING SHALL CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE.
3. ALL GROUNDING SHALL CONFORM TO THE CURRENT CARRIER STANDARDS.
4. MINIMUM BONDING MEASURE FOR GROUNDING CONDUCTORS IS 2. WHEN BONDING IS NECESSARY, GROUNDING CONDUCTORS ARE TO BE AS STRAIGHT AS POSSIBLE.
5. ALL ABOVE GRADE GROUND LEADS TO BE SHEATHED IN CARLEY-LEFLEX™ FLEXIBLE CONDUIT OR APPROVED EQUAL.
6. ALL GROUND BAR CONNECTIONS ARE TO BE 2" HOLE LUG COMPRESSION TYPE. STAKED CONNECTIONS SHALL BE MADE ON OPPOSITE SIDES OF THE GROUND BAR WILL BE PERMITTED.
7. NO SPICES PERMITTED IN GROUNDING CONDUCTORS. ALL GROUNDING CONNECTORS TO BE CLEAN AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. USE PENROX OR APPROVED EQUAL ANTIOXIDANT GREASE.
8. ENSURE ALL MECHANICAL CONNECTORS ARE TORQUED TO THE MANUFACTURER'S SPECIFIED VALUES.
9. MULTIPLE BONDS ON GROUND RODS TO BE SEPARATED BY AT LEAST 6'.
10. MAXIMUM RESISTANCE OF THE COMPLETED GROUNDING SYSTEM SHALL NOT EXCEED A RESISTANCE OF 5 OHMS TO EARTH.
11. GROUND WIRES SHALL NOT BE INSTALLED THROUGH HOLES IN ANY METAL OBJECTS OR SUPPORTS TO PRECLUDE ESTABLISHING A "CHOKER POINT".
12. FERROUS METAL CURS WHICH COMPLETELY SURROUND THE GROUND WIRE SHALL NOT BE USED. METAL CURS THAT DO NOT COMPLETELY SURROUND ACCEPTABLE.
13. ALL OUTDOOR CONNECTIONS TO BE BROUGHT OUT PROPERLY APPLIED CRIMP TYPE UNLESS OTHERWISE SPECIFIED.
14. ALL GROUNDING CONNECTIONS TO BE GROUNDED WITH 8" SQUARE BARREL GROUNDING STUDS.
15. GROUND BARS SHALL NOT BE FIELD JOINTED.
16. ALL HORIZONTAL BRACE SECTIONS TO BE GROUNDED WITH 8" SQUARE BARREL GROUNDING STUDS.
17. GROUND RING RIBBON DEPTH SHALL BE 24" AND HAVE A NON-DIRECTIONAL SPICE.
18. A CERTIFIED CONTRACTOR WILL MAKE ALL MEASUREMENTS REQUIRED TO TEST THE GROUNDING SYSTEM. ACCEPTABLE RESISTANCE MEASURED FOR THE GROUNDING SYSTEM WILL NOT EXCEED 5 OHMS. TESTS SHALL BE CONDUCTED AT THE END OF THE DISTANCE. THE TESTS AND RESULTS AT DISTANCES ARE SUBJECT TO A SITE BY SITE BASIS. VERION WIRELESS SHALL BE GIVEN 24 HOURS NOTICE ASSOCIATED WITH GROUND TESTING WILL BE AT THE EXPENSE OF THE CONTRACTOR.
19. PROVIDE #2 NY GREN. LUGS PER EACH CABLE BRIDGE POST TO CABLE BRIDGE CHANNEL.

LEGEND

⊗	GROUND TEST WELL
○	GROUND ROD
●	CAD WELD CONNECTION
▲	MECHANICAL CONNECTION (DOUBLE HOLE LUG)
●	CONNECT PER MFR SPECIFICATIONS
○	GROUND BAR



CAPITAL DESIGN SERVICES 3101 4TH AVE. S. SUITE 803 SEASIDE, OR 97138 WWW.DAVYLABORDESIGNSERVICES.COM	
DRAWN BY: CL CHECKED BY: CL	DRAWING VERSION VER. DATE DESCRIPTION 1 8/13/19 PRELIM CX DRAWINGS 2 09/19/19 CLIENT COMMENT
LICENSER	
<p style="text-align: center; font-size: 2em; font-weight: bold;">PRELIMINARY</p>	
PROJECT INFORMATION OR4 FOSTER LAKE 1402 18TH AVE SWEET HOME, OR 97386	
SHEET TITLE GROUNDING PLAN	
SHEET NO. E3.0	

1:1X17 SCALE: MTS
 22 X 34 SCALE: INS

<p>1 ANTENNA / EQUIP GROUNDING</p>	<p>2 GROUND BAR</p>	<p>2 GROUND BAR TO GROUND WIRE</p> <p>NOTE: 1. CONTRACTOR TO CONFORM TO THE LATEST VERSION, WIRELESS PANT STANDARDS.</p>
<p>4 TYPICAL LUG</p> <p>NOTE: 1. FOR GROUND BOND TO STEEL ONLY, INSERT A EPAGON TOOTH WASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH KOR-PRO-SHIELD. 2. ALL HARDWARE 18/8 STAINLESS STEEL INCLUDING LOCK WASHER. COAT ALL SURFACES WITH KOR-SHIELD BEFORE MOUNTING. 3. PROVIDE DO NOT DISCONNECTING.</p>	<p>5 GROUND TEST WELL</p>	<p>6 GROUND RING / CADWELD CONN</p>

OPERATED BY TELUS SOLUTIONS

3101 4TH AVE, SUITE 202
CALGARY, ALBERTA T2C 1A9
WWW.CAPITALDESIGNSERVICES.COM

DRAWN BY:	C1	CHECKED BY:	C1
DRAWING VERSION:			
VER:	DATE:	DESCRIPTION:	
1	8/10/19	PRELIM CD DRAWINGS	
2	09/19/19	CLIENT COMMENT	

PROJECT INFORMATION

ORA4 FOSTER LAKE

1602 18TH AVE
SWEET HOME, OR 97386

SHEET TITLE

GROUNDING DETAILS

SHEET NO.

E4.0

PRELIMINARY

ATTACHMENT 8

OR4 Foster Lake Sweet Home, OR

Map



Photo Location Map



Address: 1602 18TH AVE
SWEET HOME, OR 97386



OR4 Foster Lake
 18th Ave. & Tamarack St. (looking SW toward site)

Proposed Antenna Height: 100.0' AGL
 Proposed Structure Height: 100.0' AGL
 Description: (6) Proposed Verizon antennas w/ (6) Remote Radio Units & (1) OVP attached to a new 100' Monopole within a 50'x50' fenced lease area.

VIEW 1



Existing Conditions - Looking Southwest

Proposed Conditions - Looking Southwest



complete wireless solutions
velocitel
verizon

Visual Impact will be affected by location and visibility of observer. This document is for planning and information purposes only and is purely conceptual. This is solely the designers / photographers interpretation of the proposed development.

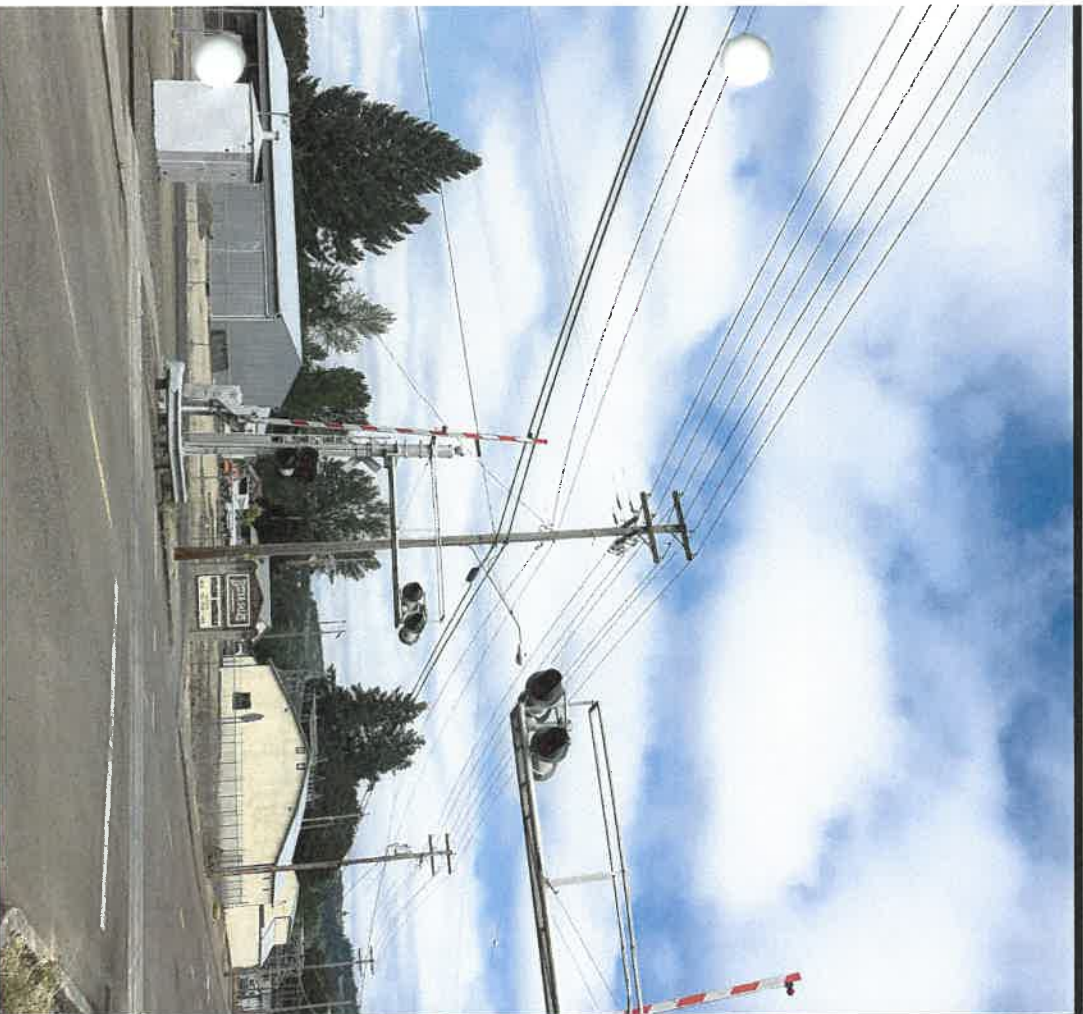
Address: 1602 18TH AVE
 SWEET HOME, OR 97386

OR4 Foster Lake

18th Ave. @ Rail Crossing (looking NW toward site)

Proposed Antenna Height: 100.0' AGL
Proposed Structure Height: 100.0' AGL
Description: (6) Proposed Verizon antennas w/ (6) Remote Radio Units & (1) OVP attached to a new 100' Monopole within a 50'x50' fenced lease area.

VIEW 2



Existing Conditions - Looking Northwest

Proposed Conditions - Looking Northwest



CAPITAL DESIGN SERVICES



Visual Impact will be affected by location and visibility of observer. This document is for planning and information purposes only and is purely conceptual. This is solely the designers / photographers interpretation of the proposed development.

Address: 1602 18TH AVE
SWEET HOME, OR 97386

OR4 Foster Lake

18th Ave. & Main St. (looking NW toward site)

Proposed Antenna Height: 100.0' AGL
Proposed Structure Height: 100.0' AGL
Description: (6) Proposed Verizon antennas w/ (6) Remote Radio Units & (1) OVP attached to a new 100' Monopole within a 50'x50' fenced lease area.

VIEW 3



Existing Conditions - Looking Northwest

Proposed Conditions - Looking Northwest



CAPITAL DESIGN SERVICES



Visual impact will be affected by location and visibility of observer. This document is for planning and information purposes only and is purely conceptual. This is solely the designers / photographers interpretation of the proposed development.

Address: 1602 18TH AVE
SWEET HOME, OR 97386

ATTACHMENT 9



Sept 16, 2019

City of Sweet Home
Community and Economic Development
3225 Main Street
Sweet Home, OR 97386

RE: RF Site Analysis - Verizon Wireless
Site: OR4 Foster Lake (1602 18th Avenue, Sweet Home, OR)

Overview & Service Area:

Verizon Wireless strives to provide excellent wireless service with a network of cell sites that allows our customers to reliably place calls and have access to the latest technology and high-speed data services. The objective of the proposed site within the Verizon Wireless network is to improve both coverage and capacity in the City of Sweet Home. Currently, the city is serviced by Verizon's Sweet Home macro site that is situated 2.5 miles north of the City. The proposed Foster Lake site, located at 1602 18th Ave., will fortify coverage and capacity by being centrally located within the city of Sweet Home. Construction of the proposed site entails installing 6 antennas, and auxiliary equipment, on a 100' tall monopole, and supporting base station equipment.

Search Ring & Site Selection:

Verizon Wireless performed a radio frequency engineering study, which considered multiple factors, to determine the approximate site location required to fulfill the above-noted network objectives for the targeted service area. From this study, we identified a specific geographic area, or "search ring", where the new facility must be located to provide effective service in the targeted service area. As shown on the attached search ring map, the search ring for the proposed facility extends approximately ¼ mile north and ½ mile south of Highway 20 from Holley Rd. to the west to 22nd Ave. to the east in the City of Sweet Home.

Coverage:

The proposed site is centrally located adjacent to Highway 20 and the City's central business district in order to improve and expand coverage to the city center, surrounding neighborhoods to the north and south, and along Highway 20 from the western boundary of the City to the eastern boundary adjacent to Foster Lake. In order to provide excellent wireless service to the above described coverage area, the antenna height and site location must provide a line of sight to the roads, offices, and homes where our customers work and reside. Six (6) multi-frequency antennas are being proposed in order to provide the necessary radio frequencies supporting all of Verizon Wireless voice and data services. The proposed antenna tip height of 100' is the minimum height needed for the effective functioning of the proposed antennas. See propagation information and maps below.

Capacity:

Another function of some wireless sites, such as the subject Foster Lake site, is to provide additional capacity in an area. The capacity of wireless networks is limited by the spectrum availability, the number of available antennas, and the radios and amplifiers associated with those antennas and spectrum. When a mobile user attempts to make a call on a wireless network where capacity is limited by these factors, the resulting delay and busy signal can be very frustrating. To remedy capacity issues, additional sites and or spectrum, which are directly correlated to the number of antennas at the site as outlined below, are added to an area to provide additional calling capacity for Verizon Wireless customers.



There is currently only one existing Verizon Wireless site, the Sweet Home macro site, serving the Sweet Home area, and it has limited capacity. To remedy the reduced capacity, the subject site is being proposed so that calls at surrounding sites can be "offloaded" to the proposed site and thus creating more wireless capacity for the vicinity. For this capacity off-loading to be successful, precise placement of the new antennas is necessary. If the site is too far away, the signal will not have adequate strength to capture calls from the impacted existing sites or cells. Similarly, sites that are too close together will not provide the needed capacity relief to the existing sites. Thus, for new site/cell capacity solutions to work, site placement and height are critical factors and must be chosen carefully.

Alternative Sites Reviewed:

When designing an existing or new coverage expansion area(s), Verizon Wireless first attempts to utilize an existing tower or other structure for collocation at the desired antenna height. If an existing tower or structure is not available or not attainable because of space constraints or unreliable structural design, Verizon Wireless will propose a new tower. Below are the alternate collocation sites in the City that were evaluated by Verizon. These alternative sites do not provide the required coverage and/or capacity; therefore, they were rejected for the following reasons.

- **Alt. Site #1: Transmission pole on 18th Ave. (44°24'02.44" N, 122°43'23.25 W):** This 50' tall utility transmission pole, located adjacent to the driveway of the proposed site, is part of a electrical transmission line that runs along 18th Ave. The antennas would be mounted at approximately 40' antenna tip height on the pole to provide clearance to the transmission lines. Although the location is favorable, the low height will provide limited coverage and capacity off-loading and will not adequately serve our customers in the city of Sweet Home. See propagation information and maps below.
- **Alt. Site #2: Elks Lodge rooftop at 440 Osage St. (44°24'01.65" N, 122°44'49.44 W):** The location of the lodge is 1.4 miles west of Verizon's proposed location, placing it in the western edge of the City of Sweet Home. Given the low antenna tip height of approximately 30', and location outside of the prescribed search ring, this rooftop will not provide for quality indoor signal coverage in the east and central part of the City of Sweet Home. See propagation information and maps below.
- **Alt. Site #3: Water tower at 2210 Tamarack St. (44°24'12.16" N, 122°42'58.66 W):** The location of this water tower is in the northern part of the city, east of the proposed site, and is outside the prescribed search ring. Consequently, this site location would not provide acceptable indoor signal coverage in the southern and southwestern parts of the City. Also, the northern antenna sector would be mainly covering foliage and unoccupied land where coverage and capacity is not needed. See propagation information and maps below.

Propagation Maps:

There are several methods for determining where coverage gaps exist within a given network of wireless sites. One of these is through the use of propagation maps. The propagation map is a computer simulation of the strength of Verizon Wireless signals at a given height and location in the context of the network. Propagation maps are one tool for determining whether a proposed site will meet the coverage objective and what antenna height is needed to provide robust service for Verizon Wireless customers. The radio propagation tool is designed to take factors such as terrain, tree coverage, and existing buildings into account, so that it depicts a reliable estimate of coverage that would be provided by a proposed site.

The propagation maps that follow show three levels of service, designated as the following colors:

- Red - a level of service adequate for providing reliable coverage inside a building
- Yellow - a level of service adequate for providing reliable coverage outdoors or inside a car



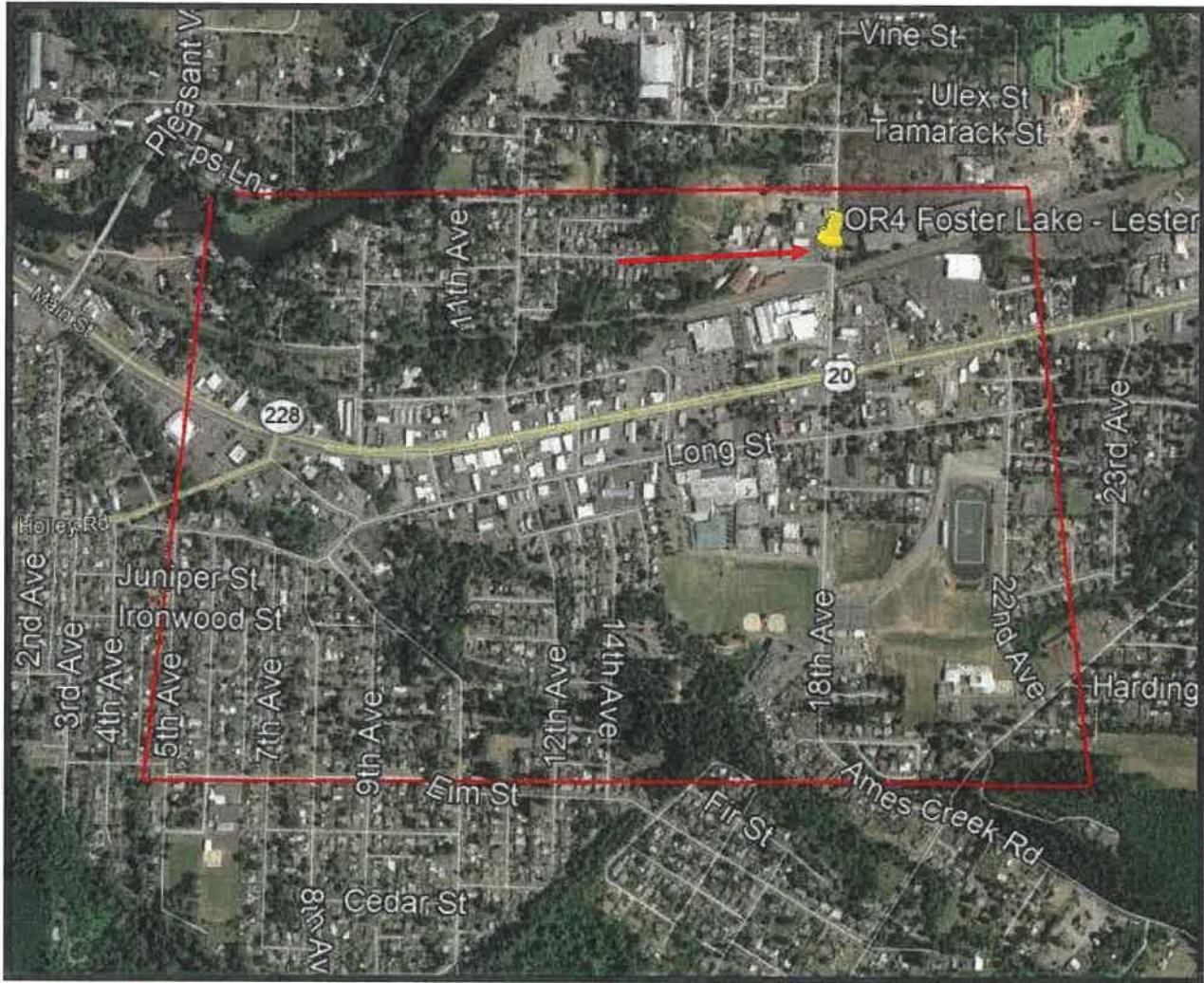
- White - unreliable signal strength, may not be not capable of reliably making and holding a call depending on environment

In summary, as illustrated in the propagation maps below, and the other supporting documentation provided, the proposed site location and structure height is necessary to offload the existing site to provide additional capacity in the Verizon Wireless network as well as add needed coverage between sites in our target service area.

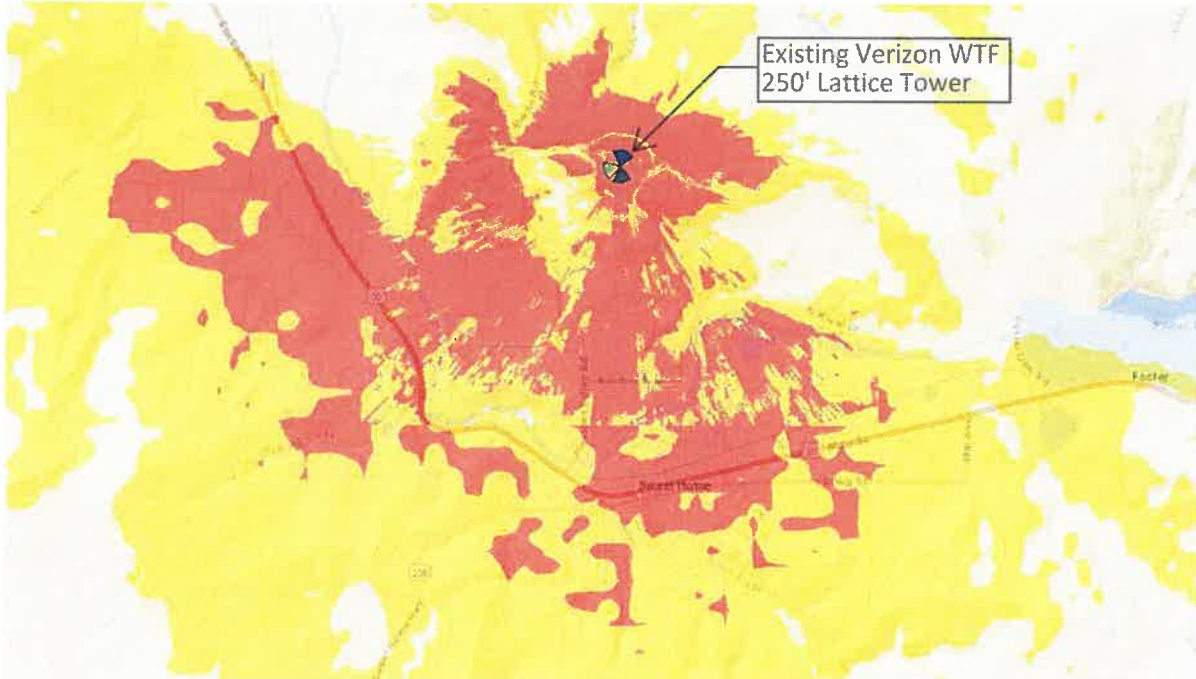
Sincerely,


Preeti Pathanjali
Verizon Wireless RF Design

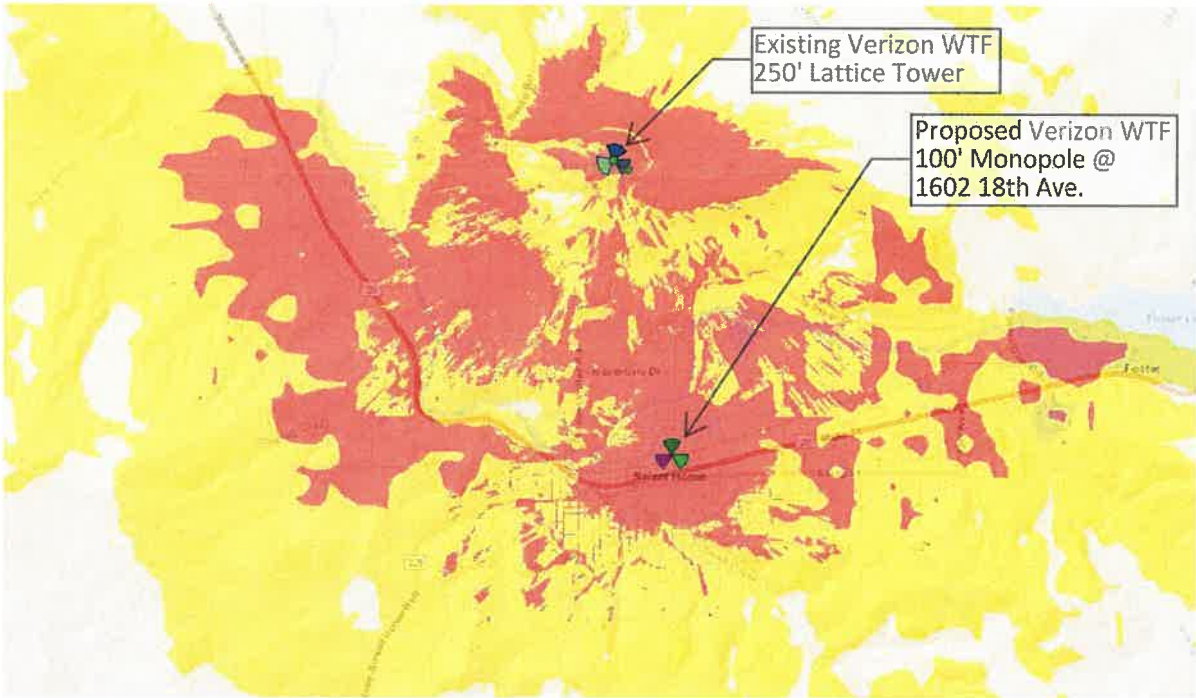
SEARCH RING MAP



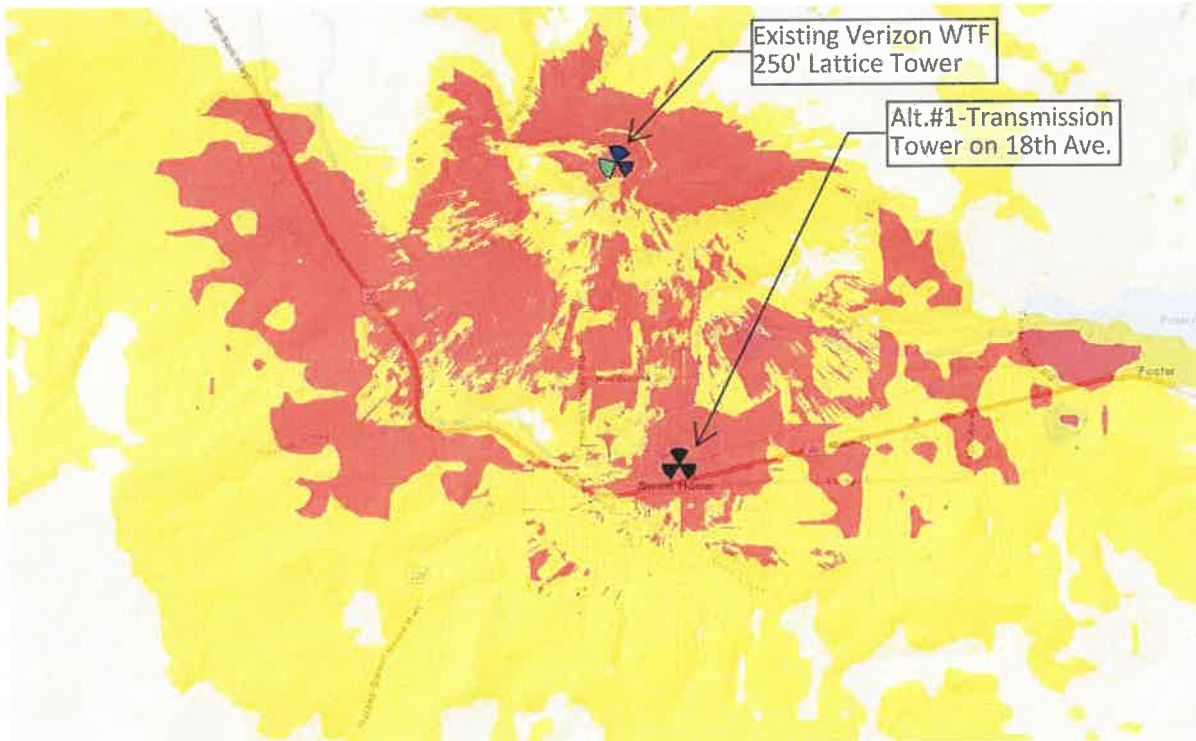
Before Proposed Foster Lake Site:



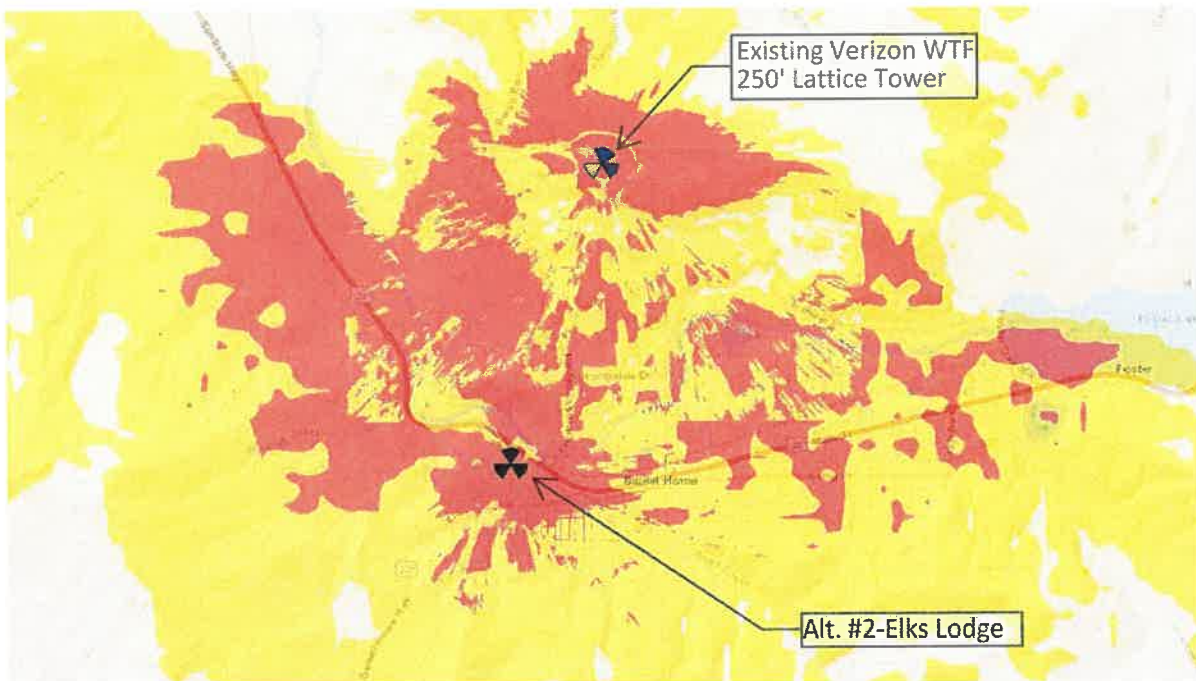
After Proposed Foster Lake Site:



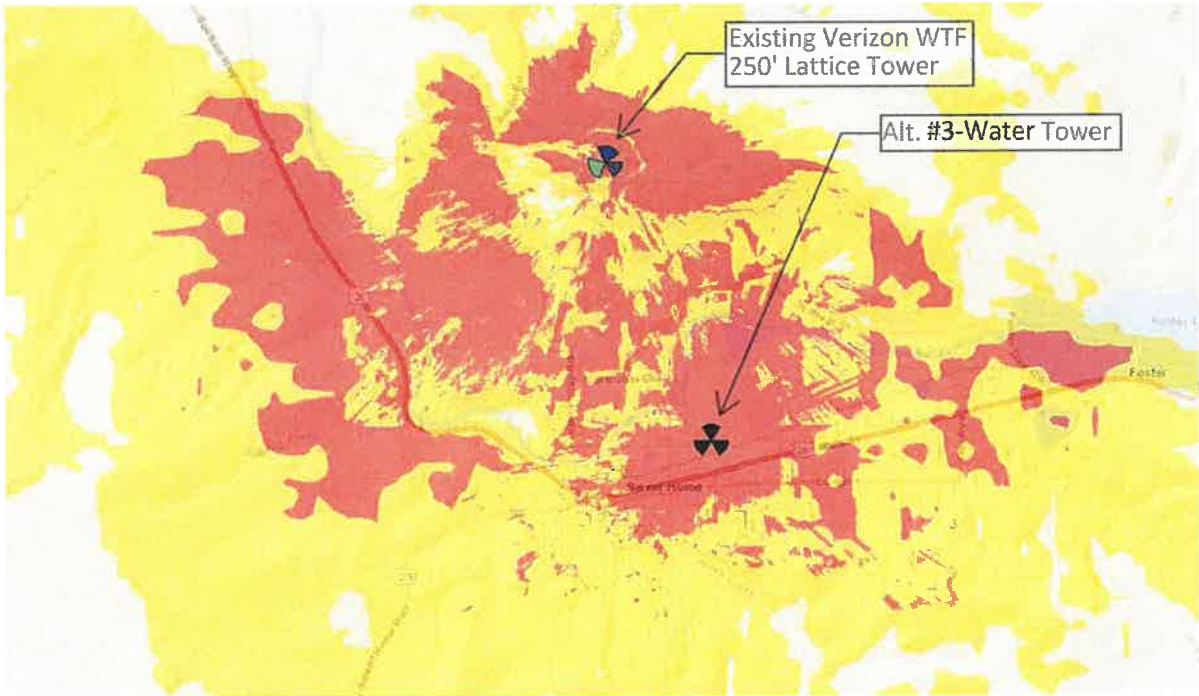
Alternate Collocation Site #1-Existing Transmission Tower:



Alternate Collocation Site #2-Elks Lodge:



Alternate Collocation Site #3-Water Tower:



ATTACHMENT 10

LAND LEASE AGREEMENT

This Land Lease Agreement (the "Agreement") made this _____ day of _____, 201____, between Lester Shingle Company, Sweet Home, Oregon, a partnership comprised of Melvin L. Lester and Stanley L. Lester, partners, and Lester Sales, Inc., an Oregon Corporation, with its principal offices located at 1602 18th Street, Sweet Home, Oregon 97386, hereinafter collectively designated LESSOR, and Verizon Wireless (VAW) LLC d/b/a Verizon Wireless with its principal offices at One Verizon Way, Mail Stop 4AW100, Basking Ridge, New Jersey 07920 (telephone number 866-862-4404), hereinafter designated LESSEE. LESSOR and LESSEE are at times collectively referred to hereinafter as the "Parties" or individually as the "Party."

WITNESSETH

In consideration of the mutual covenants contained herein and intending to be legally bound hereby, the Parties hereto agree as follows:

1. GRANT. In accordance with this Agreement, LESSOR hereby grants to LESSEE the right to install, maintain and operate communications equipment ("Use") upon the Premises (as hereinafter defined), which are a part of that real property owned, leased or controlled by LESSOR located in Sweet Home, County of Linn, State of Oregon (APN #243457/Map #12S01E31AA 03800) (the "Property"). The Property is legally described on Exhibit "A" attached hereto and made a part hereof. The Premises are a portion of the Property and are approximately 2,500 square feet and are shown in detail on Exhibit "B" attached hereto and made a part hereof. LESSEE may survey the Premises. Upon completion, the survey shall replace Exhibit "B" in its entirety.

2. INITIAL TERM. This Agreement shall be effective as of the date of execution by both Parties ("Effective Date"). The initial term of the Agreement shall be for 5 years beginning on the Commencement Date (as hereinafter defined). The "Commencement Date" shall be the first day of the month in which LESSEE begins installation of LESSEE's communications equipment.

3. EXTENSIONS. This Agreement shall automatically be extended for 4 additional 5-year terms unless LESSEE terminates it at the end of the then current term by giving LESSOR written notice of the intent to terminate at least 3 months prior to the end of the then current term. The initial term and all extensions shall be collectively referred to herein as the "Term".

4. RENTAL.

(a). Rental payments shall begin on the Commencement Date and be due at a total annual rental of _____ to be paid in equal monthly installments on the first day of the month, in advance, to LESSOR at 1602 18th Street, Sweet Home, Oregon 97386 or to such other person, firm, or place as LESSOR may, from time to time, designate in writing at least 30 days in advance of any rental payment date by notice given in accordance with Paragraph 20 below. LESSOR and LESSEE acknowledge and agree that the initial rental payment shall not be delivered by LESSEE until 90 days after the Commencement Date. Upon agreement of the Parties, LESSEE may pay rent by electronic funds transfer and in such event, LESSOR agrees to provide to LESSEE bank routing information for such purpose upon request of LESSEE.

(b). For any party to whom rental payments are to be made, LESSOR or any successor in interest of LESSOR hereby agrees to provide to LESSEE (i) a completed, current version of Internal

Revenue Service Form W-9, or equivalent; (ii) complete and fully executed state and local withholding forms if required; and (iii) other documentation to verify LESSOR's or such other party's right to receive rental as is reasonably requested by LESSEE. Rental shall accrue in accordance with this Agreement, but LESSEE shall have no obligation to deliver rental payments until the requested documentation has been received by LESSEE. Upon receipt of the requested documentation, LESSEE shall deliver the accrued rental payments as directed by LESSOR.

5. ACCESS. LESSEE shall have the non-exclusive right of ingress and egress from a public right-of-way, 7 days a week, 24 hours a day, over the Property to and from the Premises for the purpose of installation, operation and maintenance of LESSEE's communications equipment over or along a 15-foot-wide right-of-way ("Easement"), which shall be depicted on Exhibit "B". LESSEE may use the Easement for the installation, operation and maintenance of wires, cables, conduits and pipes for all necessary electrical, telephone, fiber and other similar support services. In the event it is necessary, LESSOR agrees to grant LESSEE or the provider the right to install such services on, through, over and/or under the Property, provided the location of such services shall be reasonably approved by LESSOR. Notwithstanding anything to the contrary, the Premises shall include such additional space sufficient for LESSEE's radio frequency signage and/or barricades as are necessary to ensure LESSEE's compliance with Laws (as defined in Paragraph 27).

6. CONDITION OF PROPERTY. LESSOR shall deliver the Premises to LESSEE in a condition ready for LESSEE's Use and clean and free of debris. LESSOR represents and warrants to LESSEE that as of the Effective Date, the Premises (a) in compliance with all Laws; and (b) in compliance with all EH&S Laws (as defined in Paragraph 24).

7. IMPROVEMENTS. The communications equipment including, without limitation, the tower structure, antennas, conduits, fencing and other screening, and other improvements shall be at LESSEE's expense and installation shall be at the discretion and option of LESSEE. LESSEE shall have the right to replace, repair, add or otherwise modify its communications equipment, tower structure, antennas, conduits, fencing and other screening, or other improvements or any portion thereof and the frequencies over which the communications equipment operates, whether or not any of the communications equipment, antennas, conduits or other improvements are listed on any exhibit.

8. GOVERNMENT APPROVALS. LESSEE's Use is contingent upon LESSEE obtaining all of the certificates, permits and other approvals (collectively the "Government Approvals") that may be required by any Federal, State or Local authorities (collectively, the "Government Entities") as well as a satisfactory soil boring test, environmental studies, or any other due diligence LESSEE chooses that will permit LESSEE's Use. LESSOR shall cooperate with LESSEE in its effort to obtain such approvals and shall take no action which would adversely affect the status of the Property with respect to LESSEE's Use.

9. TERMINATION. LESSEE may, unless otherwise stated, immediately terminate this Agreement upon written notice to LESSOR in the event that (i) any applications for such Government Approvals should be finally rejected; (ii) any Government Approval issued to LESSEE is canceled, expires, lapses or is otherwise withdrawn or terminated by any Government Entity; (iii) LESSEE determines that such Government Approvals may not be obtained in a timely manner; (iv) LESSEE determines any structural analysis is unsatisfactory; (v) LESSEE, in its sole discretion, determines the Use of the Premises is obsolete or unnecessary; (vi) with 3 months prior notice to LESSOR, upon the annual anniversary of the Commencement Date; or (vii) at any time before the Commencement Date for any reason or no reason in LESSEE's sole discretion.

10. INDEMNIFICATION. Subject to Paragraph 11, each Party shall indemnify and hold the other harmless against any claim of liability or loss from personal injury or property damage resulting from or arising out of the negligence or willful misconduct of the indemnifying Party, its employees, contractors or agents, except to the extent such claims or damages may be due to or caused by the negligence or willful misconduct of the other Party, or its employees, contractors or agents. The indemnified Party will provide the indemnifying Party with prompt, written notice of any claim covered by this indemnification; provided that any failure of the indemnified Party to provide any such notice, or to provide it promptly, shall not relieve the indemnifying Party from its indemnification obligation in respect of such claim, except to the extent the indemnifying Party can establish actual prejudice and direct damages as a result thereof. The indemnified Party will cooperate appropriately with the indemnifying Party in connection with the indemnifying Party's defense of such claim. The indemnifying Party shall defend any indemnified Party, at the indemnified Party's request, against any claim with counsel reasonably satisfactory to the indemnified Party. The indemnifying Party shall not settle or compromise any such claim or consent to the entry of any judgment without the prior written consent of each indemnified Party and without an unconditional release of all claims by each claimant or plaintiff in favor of each indemnified Party.

11. INSURANCE. The Parties agree that at their own cost and expense, each will maintain commercial general liability insurance with limits not less than _____ for injury to or death of one or more persons in any one occurrence and _____ for damage or destruction in any one occurrence. The Parties agree to include the other Party as an additional insured. The Parties hereby waive and release any and all rights of action for negligence against the other which may hereafter arise on account of damage to the Premises or the Property, resulting from any fire, or other casualty which is insurable under "Causes of Loss – Special Form" property damage insurance or for the kind covered by standard fire insurance policies with extended coverage, regardless of whether or not, or in what amounts, such insurance is now or hereafter carried by the Parties, even if any such fire or other casualty shall have been caused by the fault or negligence of the other Party. These waivers and releases shall apply between the Parties and they shall also apply to any claims under or through either Party as a result of any asserted right of subrogation. All such policies of insurance obtained by either Party concerning the Premises or the Property shall waive the insurer's right of subrogation against the other Party.

12. LIMITATION OF LIABILITY. Except for indemnification pursuant to Paragraphs 10 and 24, a violation of Paragraph 29, or a violation of law, neither Party shall be liable to the other, or any of their respective agents, representatives, or employees for any lost revenue, lost profits, loss of technology, rights or services, incidental, punitive, indirect, special or consequential damages, loss of data, or interruption or loss of use of service, even if advised of the possibility of such damages, whether under theory of contract, tort (including negligence), strict liability or otherwise.

13. INTERFERENCE.

(a). LESSEE agrees that LESSEE will not cause interference that is measurable in accordance with industry standards to LESSOR's equipment. LESSOR agrees that LESSOR and other occupants of the Property will not cause interference that is measurable in accordance with industry standards to the then existing equipment of LESSEE.

(b). Without limiting any other rights or remedies, if interference occurs and continues for a period in excess of 48 hours following notice to the interfering party via telephone to LESSEE's

Network Operations Center (at (800) 224-6620/(800) 621-2622) or to LESSOR at (541) 409-1200, the interfering party shall or shall require any other user to reduce power or cease operations of the interfering equipment until the interference is cured.

(c). The Parties acknowledge that there will not be an adequate remedy at law for noncompliance with the provisions of this Paragraph and therefore the Parties shall have the right to equitable remedies such as, without limitation, injunctive relief and specific performance.

14. REMOVAL AT END OF TERM. Upon expiration or within 90 days of earlier termination, LESSEE shall remove LESSEE's Communications Equipment (except footings) and restore the Premises to its original condition, reasonable wear and tear and casualty damage excepted. LESSOR agrees and acknowledges that the communications equipment shall remain the personal property of LESSEE and LESSEE shall have the right to remove the same at any time during the Term, whether or not said items are considered fixtures and attachments to real property under applicable laws. If such time for removal causes LESSEE to remain on the Premises after termination of the Agreement, LESSEE shall pay rent at the then existing monthly rate or on the existing monthly pro-rata basis if based upon a longer payment term, until the removal of the communications equipment is completed.

15. HOLDOVER. If upon expiration of the Term the Parties are negotiating a new lease or a lease extension, then this Agreement shall continue during such negotiations on a month to month basis at the rental in effect as of the date of the expiration of the Term. In the event that the Parties are not in the process of negotiating a new lease or lease extension and LESSEE holds over after the expiration or earlier termination of the Term, then LESSEE shall pay rent at the then existing monthly rate or on the existing monthly pro-rata basis if based upon a longer payment term, until the removal of the communications equipment is completed.

16. RIGHT OF FIRST REFUSAL. If at any time after the Effective Date, LESSOR receives an offer or letter of intent from any person or entity that is in the business of owning, managing or operating communications facilities or is in the business of acquiring landlord interests in agreements relating to communications facilities, to purchase fee title, an easement, a lease, a license, or any other interest in the Premises or any portion thereof or to acquire any interest in this Agreement, or an option for any of the foregoing, LESSOR shall provide written notice to LESSEE of said offer ("LESSOR's Notice"). LESSOR's Notice shall include the prospective buyer's name, the purchase price being offered, any other consideration being offered, the other terms and conditions of the offer, a description of the portion of and interest in the Premises and/or this Agreement which will be conveyed in the proposed transaction, and a copy of any letters of intent or form agreements presented to LESSOR by the third party offeror. LESSEE shall have the right of first refusal to meet any bona fide offer of sale or transfer on the terms and conditions of such offer or by effectuating a transaction with substantially equivalent financial terms. If LESSEE fails to provide written notice to LESSOR that LESSEE intends to meet such bona fide offer within thirty (30) days after receipt of LESSOR's Notice, LESSOR may proceed with the proposed transaction in accordance with the terms and conditions of such third party offer, in which event this Agreement shall continue in full force and effect and the right of first refusal described in this Paragraph shall survive any such conveyance to a third party. If LESSEE provides LESSOR with notice of LESSEE's intention to meet the third party offer within thirty (30) days after receipt of LESSOR's Notice, then if LESSOR's Notice describes a transaction involving greater space than the Premises, LESSEE may elect to proceed with a transaction covering only the Premises and the purchase price shall be pro-rated on a square footage basis. Further, LESSOR acknowledges and agrees that if LESSEE exercises this right of first refusal, LESSEE may require a reasonable period of time to conduct due diligence and effectuate the

closing of a transaction on substantially equivalent financial terms of the third party offer. LESSEE may elect to amend this Agreement to effectuate the proposed financial terms of the third party offer rather than acquiring fee simple title or an easement interest in the Premises. For purposes of this Paragraph, any transfer, bequest or devise of LESSOR's interest in the Property as a result of the death of LESSOR, whether by will or intestate succession, or any conveyance to LESSOR's family members by direct conveyance or by conveyance to a trust for the benefit of family members shall not be considered a sale for which LESSEE has any right of first refusal.

17. RIGHTS UPON SALE. Should LESSOR, at any time during the Term, decide (i) to sell or otherwise transfer all or any part of the Property, or (ii) to grant to a third party by easement or other legal instrument an interest in and to any portion of the Premises, such sale, transfer, or grant of an easement or interest therein shall be under and subject to this Agreement and any such purchaser or transferee shall recognize LESSEE's rights hereunder. In the event that LESSOR completes any such sale, transfer, or grant described in this Paragraph without executing an assignment of the Agreement whereby the third party agrees in writing to assume all obligations of LESSOR under this Agreement, then LESSOR shall not be released from its obligations to LESSEE under this Agreement, and LESSEE shall have the right to look to LESSOR and the third party for the full performance of the Agreement.

18. LESSOR'S TITLE. LESSOR covenants that LESSEE, on paying the rent and performing the covenants herein, shall peaceably and quietly have, hold and enjoy the Premises. LESSOR represents and warrants to LESSEE as of the Effective Date and covenants during the Term that LESSOR has full authority to enter into and execute this Agreement and that there are no liens, judgments, covenants, easement, restrictions or other impediments of title that will adversely affect LESSEE's Use.

19. ASSIGNMENT. Without any approval or consent of the other Party, this Agreement may be sold, assigned or transferred by either Party to (i) any entity in which the Party directly or indirectly holds an equity or similar interest; (ii) any entity which directly or indirectly holds an equity or similar interest in the Party; or (iii) any entity directly or indirectly under common control with the Party. LESSEE may assign this Agreement to any entity which acquires all or substantially all of LESSEE's assets in the market defined by the FCC in which the Property is located by reason of a merger, acquisition or other business reorganization without approval or consent of LESSOR. As to other parties, this Agreement may not be sold, assigned or transferred without the written consent of the other Party, which such consent will not be unreasonably withheld, delayed or conditioned. No change of stock ownership, partnership interest or control of LESSEE or transfer upon partnership or corporate dissolution of either Party shall constitute an assignment hereunder. LESSEE may sublet the Premises in LESSEE's sole discretion.

20. NOTICES. Except for notices permitted via telephone in accordance with Paragraph 13, all notices hereunder must be in writing and shall be deemed validly given if sent by certified mail, return receipt requested or by commercial courier, provided the courier's regular business is delivery service and provided further that it guarantees delivery to the addressee by the end of the next business day following the courier's receipt from the sender, addressed as follows (or any other address that the Party to be notified may have designated to the sender by like notice):

LESSOR: Lester Shingle Company and Lester Sales, Inc.
1602 18th Street
Sweet Home, Oregon 97386
Telephone: (541) 409-1200

LESSEE: Verizon Wireless (VAW) LLC
d/b/a Verizon Wireless
180 Washington Valley Road
Bedminster, New Jersey 07921
Attention: Network Real Estate

Notice shall be effective upon actual receipt or refusal as shown on the receipt obtained pursuant to the foregoing.

21. SUBORDINATION AND NON-DISTURBANCE. Within 15 days of the Effective Date, LESSOR shall obtain a Non-Disturbance Agreement, as defined below, from its existing mortgagee(s), ground lessors and master lessors, if any, of the Property. At LESSOR's option, this Agreement shall be subordinate to any future master lease, ground lease, mortgage, deed of trust or other security interest (a "Mortgage") by LESSOR which from time to time may encumber all or part of the Property; provided, however, as a condition precedent to LESSEE being required to subordinate its interest in this Agreement to any future Mortgage covering the Property, LESSOR shall obtain for LESSEE's benefit a non-disturbance and attornment agreement for LESSEE's benefit in the form reasonably satisfactory to LESSEE, and containing the terms described below (the "Non-Disturbance Agreement"), and shall recognize LESSEE's rights under this Agreement. The Non-Disturbance Agreement shall include the encumbering party's ("Lender's") agreement that, if Lender or its successor-in-interest or any purchaser of Lender's or its successor's interest (a "Purchaser") acquires an ownership interest in the Property, Lender or such successor-in-interest or Purchaser will honor all of the terms of the Agreement. Such Non-Disturbance Agreement must be binding on all of Lender's participants in the subject loan (if any) and on all successors and assigns of Lender and/or its participants and on all Purchasers. In return for such Non-Disturbance Agreement, LESSEE will execute an agreement for Lender's benefit in which LESSEE (1) confirms that the Agreement is subordinate to the Mortgage or other real property interest in favor of Lender, (2) agrees to attorn to Lender if Lender becomes the owner of the Property and (3) agrees to accept a cure by Lender of any of LESSOR's defaults, provided such cure is completed within the deadline applicable to LESSOR. In the event LESSOR defaults in the payment and/or other performance of any mortgage or other real property interest encumbering the Property, LESSEE, may, at its sole option and without obligation, cure or correct LESSOR's default and upon doing so, LESSEE shall be subrogated to any and all rights, titles, liens and equities of the holders of such mortgage or other real property interest and LESSEE shall be entitled to deduct and setoff against all rents that may otherwise become due under this Agreement the sums paid by LESSEE to cure or correct such defaults.

22. DEFAULT. It is a "Default" if (i) either Party fails to comply with this Agreement and does not remedy the failure within 30 days after written notice by the other Party or, if the failure cannot reasonably be remedied in such time, if the failing Party does not commence a remedy within the allotted 30 days and diligently pursue the cure to completion within 90 days after the initial written notice, or (ii) LESSOR fails to comply with this Agreement and the failure interferes with LESSEE's Use and LESSOR does not remedy the failure within 5 days after written notice from LESSEE or, if the failure cannot reasonably be remedied in such time, if LESSOR does not commence a remedy within the allotted 5 days and diligently pursue the cure to completion within 15 days after the initial written notice. The cure periods set forth in this Paragraph 22 do not extend the period of time in which either Party has to cure interference pursuant to Paragraph 13 of this Agreement.

23. REMEDIES. In the event of a Default, without limiting the non-defaulting Party in the exercise of any right or remedy which the non-defaulting Party may have by reason of such default, the

non-defaulting Party may terminate this Agreement and/or pursue any remedy now or hereafter available to the non-defaulting Party under the Laws or judicial decisions of the state in which the Property is located. Further, upon a Default, the non-defaulting Party may at its option (but without obligation to do so), perform the defaulting Party's duty or obligation. The costs and expenses of any such performance by the non-defaulting Party shall be due and payable by the defaulting Party upon invoice therefor. If LESSEE undertakes any such performance on LESSOR's behalf and LESSOR does not pay LESSEE the full undisputed amount within 30 days of its receipt of an invoice setting forth the amount due, LESSEE may offset the full undisputed amount due against all fees due and owing to LESSOR under this Agreement until the full undisputed amount is fully reimbursed to LESSEE.

24. ENVIRONMENTAL. LESSEE shall conduct its business in compliance with all applicable laws governing the protection of the environment or employee health and safety ("EH&S Laws"). LESSEE shall indemnify and hold harmless the LESSOR from claims to the extent resulting from LESSEE's violation of any applicable EH&S Laws or to the extent that LESSEE causes a release of any regulated substance to the environment. LESSOR shall indemnify and hold harmless LESSEE from all claims resulting from the violation of any applicable EH&S Laws or a release of any regulated substance to the environment except to the extent resulting from the activities of LESSEE. The Parties recognize that LESSEE is only leasing a small portion of LESSOR's property and that LESSEE shall not be responsible for any environmental condition or issue except to the extent resulting from LESSEE's specific activities and responsibilities. In the event that LESSEE encounters any hazardous substances that do not result from its activities, LESSEE may relocate its facilities to avoid such hazardous substances to a mutually agreeable location or, if LESSEE desires to remove at its own cost all or some of the hazardous substances or materials (such as soil) containing those hazardous substances, LESSOR agrees to sign any necessary waste manifest associated with the removal, transportation and/or disposal of such substances.

25. CASUALTY. If a fire or other casualty damages the Property or the Premises and impairs LESSEE's Use, rent shall abate until LESSEE's Use is restored. If LESSEE's Use is not restored within 45 days, LESSEE may terminate this Agreement.

26. CONDEMNATION. If a condemnation of any portion of the Property or Premises impairs LESSEE's Use, LESSEE may terminate this Agreement. LESSEE may on its own behalf make a claim in any condemnation proceeding involving the Premises for losses related to LESSEE's communications equipment, relocation costs and, specifically excluding loss of LESSEE's leasehold interest, any other damages LESSEE may incur as a result of any such condemnation.

27. APPLICABLE LAWS. During the Term, LESSOR shall maintain the Property in compliance with all applicable laws, EH&S Laws, rules, regulations, ordinances, directives, covenants, easements, consent decrees, zoning and land use regulations, and restrictions of record, permits, building codes, and the requirements of any applicable fire insurance underwriter or rating bureau, now in effect or which may hereafter come into effect (including, without limitation, the Americans with Disabilities Act and laws regulating hazardous substances) (collectively "Laws"). LESSEE shall, in respect to the condition of the Premises and at LESSEE's sole cost and expense, comply with (i) all Laws relating solely to LESSEE's specific and unique nature of use of the Premises; and (ii) all building codes requiring modifications to the Premises due to the improvements being made by LESSEE in the Premises. It shall be LESSOR's obligation to comply with all Laws relating to the Property, without regard to specific use (including, without limitation, modifications required to enable LESSEE to obtain all necessary building permits).

28. TAXES.

(a). LESSOR shall invoice and LESSEE shall pay any applicable transaction tax (including sales, use, gross receipts, or excise tax) imposed on the LESSEE and required to be collected by the LESSOR based on any service, rental space, or equipment provided by the LESSOR to the LESSEE. LESSEE shall pay all personal property taxes, fees, assessments, or other taxes and charges imposed by any Government Entity that are imposed on the LESSEE and required to be paid by the LESSEE that are directly attributable to the LESSEE's equipment or LESSEE's use and occupancy of the Premises. Payment shall be made by LESSEE within 60 days after presentation of a receipted bill and/or assessment notice which is the basis for such taxes or charges. LESSOR shall pay all ad valorem, personal property, real estate, sales and use taxes, fees, assessments or other taxes or charges that are attributable to LESSOR's Property or any portion thereof imposed by any Government Entity.

(b). LESSEE shall have the right, at its sole option and at its sole cost and expense, to appeal, challenge or seek modification of any tax assessment or billing for which LESSEE is wholly or partly responsible for payment. LESSOR shall reasonably cooperate with LESSEE at LESSEE's expense in filing, prosecuting and perfecting any appeal or challenge to taxes as set forth in the preceding sentence, including but not limited to, executing any consent, appeal or other similar document. In the event that as a result of any appeal or challenge by LESSEE, there is a reduction, credit or repayment received by the LESSOR for any taxes previously paid by LESSEE, LESSOR agrees to promptly reimburse to LESSEE the amount of said reduction, credit or repayment. In the event that LESSEE does not have the standing rights to pursue a good faith and reasonable dispute of any taxes under this paragraph, LESSOR will pursue such dispute at LESSEE's sole cost and expense upon written request of LESSEE.

29. NON-DISCLOSURE. The Parties agree this Agreement and any information exchanged between the Parties regarding the Agreement are confidential. The Parties agree not to provide copies of this Agreement or any other confidential information to any third party without the prior written consent of the other or as required by law. If a disclosure is required by law, prior to disclosure, the Party shall notify the other Party and cooperate to take lawful steps to resist, narrow, or eliminate the need for that disclosure.

30. MOST FAVORED LESSEE. LESSOR represents and warrants that the rent, benefits and terms and conditions granted to LESSEE by LESSOR hereunder are now and shall be, during the Term, no less favorable than the rent, benefits and terms and conditions for substantially the same or similar tenancies or licenses granted by LESSOR to other parties. If at any time during the Term LESSOR shall offer more favorable rent, benefits or terms and conditions for substantially the same or similar tenancies or licenses as those granted hereunder, then LESSOR shall, within 30 days after the effective date of such offering, notify LESSEE of such fact and offer LESSEE the more favorable offering. If LESSEE chooses, the parties shall then enter into an amendment that shall be effective retroactively to the effective date of the more favorable offering, and shall provide the same rent, benefits or terms and conditions to LESSEE. LESSEE shall have the right to decline to accept the offering. LESSOR's compliance with this requirement shall be subject, at LESSEE's option, to independent verification.

31. JOINT AND SEVERAL LIABILITY. In the event that LESSOR herein consists of one or more individuals or entities, each shall be jointly and severally liable to LESSEE for LESSOR's performance of all terms, covenants and conditions of this Agreement.

32. MISCELLANEOUS. This Agreement contains all agreements, promises and understandings between the LESSOR and the LESSEE regarding this transaction, and no oral agreement, promises or understandings shall be binding upon either the LESSOR or the LESSEE in any dispute, controversy or proceeding. This Agreement may not be amended or varied except in a writing signed by all Parties. This Agreement shall extend to and bind the heirs, personal representatives, successors and assigns hereto. The failure of either party to insist upon strict performance of any of the terms or conditions of this Agreement or to exercise any of its rights hereunder shall not waive such rights and such party shall have the right to enforce such rights at any time. The performance of this Agreement shall be governed, interpreted, construed and regulated by the laws of the state in which the Premises is located without reference to its choice of law rules. Except as expressly set forth in this Agreement, nothing in this Agreement shall grant, suggest or imply any authority for one Party to use the name, trademarks, service marks or trade names of the other for any purpose whatsoever. LESSOR agrees to execute a Memorandum of this Agreement which LESSEE may record with the appropriate recording officer. The provisions of the Agreement relating to indemnification from one Party to the other Party shall survive any termination or expiration of this Agreement.

Remainder of page left intentionally blank.

IN WITNESS WHEREOF, the Parties hereto have set their hands and affixed their respective seals the day and year first above written.

LESSOR: Lester Shingle Company, Sweet Home, Oregon, a partnership comprised of Melvin L. Lester and Stanley L. Lester, partners, and Lester Sales, Inc., an Oregon Corporation

By: Deceased
Name: Melvin L. Lester
Title: Partner
Company: Lester Shingle Company,
Sweet Home, Oregon

Date: _____

By: Stanley L. Lester
Name: Stanley L. Lester
Title: Partner
Company: Lester Shingle Company,
Sweet Home, Oregon
Date: 9-24-2019

By: James E. Philpott
Name: JAMES E Philpott
Title: V.P. LESTER SALES
Company: Lester Sales, Inc.
Date: 9-24-19

LESSEE: Verizon Wireless (VAW) LLC
d/b/a Verizon Wireless

By: _____
Name: _____
Title: _____
Date: _____

EXHIBIT "A"
DESCRIPTION OF PROPERTY

Part of Section 31 in Township 13 South, Range 1 East of the Willamette Meridian, more particularly described as follows:
Beginning at the intersection of the east line of said Section 31 and the northerly right of way line of the Oregon Electric Railway Co.; thence North 0°01' West along the East line of said Section 31 to a point which is South 0°01' East 663.7 feet from the Northeast corner of said Section 31; thence North 89°31' West a distance of 265 feet to the Southwest corner of that tract, conveyed to Cedar Creek Logging Co. by deed recorded February 18, 1954 in Book 236, Page 254, Deed Records; thence South 0°01' East parallel with the East line of said Section 31 to the northerly right of way line of the Oregon Electric Railway Co.; thence easterly along said right of way line to the place of beginning.

EXHIBIT "B"
SITE PLAN OF THE PREMISES

(See attached)

ATTACHMENT 11



August 22, 2019

City of Sweet Home
Planning Department
3225 Main Street
Sweet Home, OR, 97386

RE: REMOVAL OF ABANDONED WIRELESS TELECOMMUNICATIONS FACILITY

Site Number: Verizon OR4-Foster Lake
Site Location: 1602 18th Ave., Sweet Home, OR 97386
Map/Tax Lot: 13S01E31AA03800

To Whom It May Concern:

If the telecommunications facility on the above described property does not have an operating antenna for a period of six (6) months, it shall be considered abandoned and shall be removed by the operator within 60 days thereafter.

Acknowledged, Accepted and Agreed:

Operator Signature:  _____

Printed Name / Title: Maxim Gubkin / Real Estate Specialist

Date: 08/22/2019



August 27, 2019

City of Sweet Home
Planning Department
3225 Main Street
Sweet Home, OR, 97386

RE: REMOVAL OF ABANDONED WIRELESS TELECOMMUNICATIONS FACILITY

Site Number: Verizon OR4-Foster Lake
Site Location: 1602 18th Ave., Sweet Home, OR 97386
Map/Tax Lot: 13S01E31AA03800

To Whom It May Concern:

If the wireless telecommunications facility is abandoned and Verizon Wireless fails to remove it, the property owner, Lester Shingle Co. and Lester Sales, Inc., is fully responsible for removing the wireless telecommunications facility, including tower, antennas, and associated equipment on the above described property.

Acknowledged, Accepted and Agreed:

Property Owner/Agent Signature: James E Philpott
Printed Name / Title: James E Philpott V.P. LESTER SALES INC
Date: 8-27-19



OR4 FOSTER LAKE

1602 18TH AVE
SWEET HOME, OR 97386

CONSTRUCTION DRAWINGS

PROJECT SCOPE

- PROPOSED INSTALLATION OF A TELECOMMUNICATIONS FACILITY ON AN EXISTING PARCEL FOR VERIZON.
- PROPOSED INSTALLATION OF THE FOLLOWING VERIZON EQUIPMENT ON MONOPOLE:
 - * (6) ANTENNAS
 - * (6) REMOTE RADIO UNITS (RRUs)
 - * (1) OVPS
 - * (1) HYBRID CABLES
 PROPOSED INSTALLATION OF THE FOLLOWING VERIZON EQUIPMENT CABINETS ON NEW CONC. PAD, UTILITY H-FRAME, ICE BRIDGE, (1) GPS ANTENNA, & (1) OVP WITHIN NEW 50'X50' FENCED COMPOUND
- NEW 100' AGL MONOPOLE.
- PROPOSED INSTALLATION OF NEW 200A ELECTRICAL SERVICE, AND FIBER SERVICE.

SHEET INDEX

- T-1.0 TITLE SHEET
- LS-1 SURVEY
- A1.0 OVERALL SITE PLAN
- A2.0 ENLARGED SITE PLAN
- A3.0 ELEVATIONS
- A4.0 EQUIPMENT DETAILS
- A5.0 EQUIPMENT SCHEDULE & ANTENNA PLAN
- A5.1 EQUIPMENT MOUNT DETAILS
- A5.2 EQUIPMENT DETAILS
- A6.0 FENCE DETAILS
- A7.0 CONSTRUCTION DETAILS
- A8.0 SITE SIGNAGE DETAILS
- L1.0 LANDSCAPE PLAN
- RF1.0 RF PLUMBING DIAGRAM
- E1.0 UTILITY SITE PLAN
- E2.0 ELEC. DIAGRAM & PANEL SCHED.
- E3.0 GROUNDING PLAN
- E4.0 GROUNDING DETAILS
- GN1.0 GENERAL NOTES
- GN2.0 GENERAL NOTES



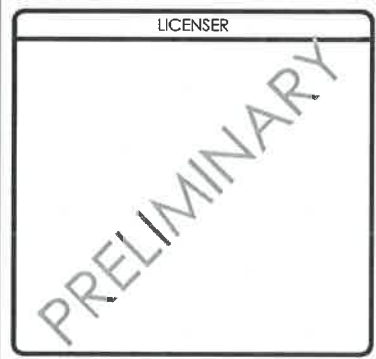
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CHECKED BY: CL

DRAWING VERSION		
VER.	DATE	DESCRIPTION
1	8/13/19	PRELIM CX DRAWINGS
2	09/19/19	CLIENT COMMENT

** THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE OWNER IS STRICTLY PROHIBITED.

GOVERNING CODES

- 2014 OREGON STRUCTURAL SPECIALTY CODE
 - 2017 OREGON ELECTRICAL SPECIALTY CODE
 - 2014 OREGON ENERGY EFFICIENCY SPECIALTY CODE
 - 2014 MECHANICAL SPECIALTY CODE
 - 2017 NFPA 70 NATIONAL ELECTRICAL CODE
 - 2014 OREGON FIRE CODE
 - 2012 INTERNATIONAL BUILDING CODE
- A.D.A. COMPLIANCE
INSTALLATION IS UNMANNED / NOT FOR HUMAN HABITATION. HANDICAP ACCESS IS NOT REQUIRED PER A.D.A.



PROJECT CONTACTS

APPLICANT:
VERIZON WIRELESS
5430 NE 122ND AVE
PORTLAND, OR 97230

PROPERTY OWNER:
LESTER SALES, INC.
CONTACT - JIM PHILPOTT
PH: 541.409.1200

TOWER OWNER:
VERIZON WIRELESS TOWERS
16221 NE 72ND WAY
REDMOND, WA 98052

SITE ACQUISITION AGENT:
VELOCITEL
7600 SW MOHAWK STREET
TUALATIN, OR 97062
MICHAEL BIRNDORF
PH: 503.421.2251

ZONING/PERMITTING AGENT:
VELOCITEL
7600 SW MOHAWK STREET
TUALATIN, OR 97062
PH: 503.421.2251

RF ENGINEER:
VERIZON WIRELESS
5430 NE 122ND AVE
PORTLAND, OR 97230

CONSTRUCTION MANAGER:
VERIZON WIRELESS
5430 NE 122ND AVE
PORTLAND, OR 97230
STEVE BODINE
stephen.bodine1@verizonwireless.com

ENGINEER OF RECORD:
VECTOR STRUCTURAL ENGINEERING
651 W. GALENA PARK BLVD., SUITE 101
DRAPER, UT 84020
WELLS L. HOLMES, SE
PH: 801.990.1775

SURVEYOR:
AMBIT CONSULTING, LLC
245 SAINT HELENS AVE, SUITE 3A
TACOMA, WA 98402

PROJECT INFORMATION

SITE NAME: OR4 FOSTER LAKE
ADDRESS: 1602 18TH AVE SWEET HOME, OR 97386

JURISDICTION: CITY OF SWEET HOME
PARCEL #: 13S01E31AA03800
ZONING: (M) INDUSTRIAL
HEIGHT LIMIT: 100'

LATITUDE: 44.400856° N
LONGITUDE: -122.723767° W
SOURCE: 1A CERTIFICATION / RFDS
GROUND ELEVATION: 539.0'

(N) OR (E) STRUCTURE HEIGHT: 100.0' AGL
(N) VERIZON GROUND LEASE AREA: 2,500 SQ FT

OCCUPANCY GROUP: U II-B

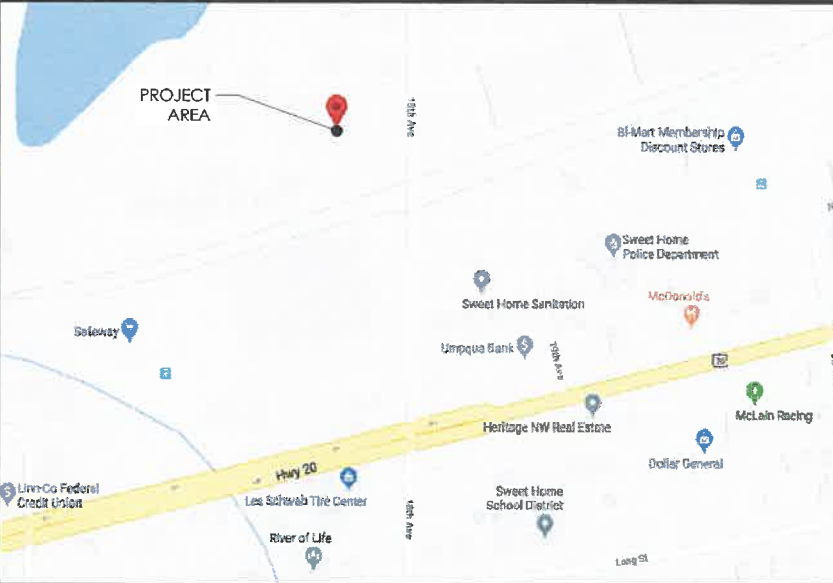
DRIVING DIRECTIONS

- FROM VERIZON OFFICE IN PORTLAND, OREGON:
- GET ON I-84 W/US-30 W FROM NE 122ND AVE AND NE FREMONT ST (2.4 MI)
 - FOLLOW I-5 S TO OR-34 E IN LINN COUNTY. TAKE EXIT 228 FROM I-5 S (79.8 MI)
 - TURN LEFT ONTO OR-34 E (5.4 MI)
 - EXIT ONTO DENNY SCHOOL RD (1.5 MI)
 - CONTINUE STRAIGHT ONTO AIRPORT DR (2.2 MI)
 - TURN RIGHT ONTO HWY 20 E/S MAIN ST/SANTIAM HWY 16 (13.6 MI)
 - TURN LEFT ONTO 18TH AVE (0.1 MI)
 - DESTINATION WILL BE ON THE LEFT
- TOTAL MILES: 105 MILES
TOTAL TIME: 1 HOURS, 55 MINUTES

VICINITY MAP



LOCALIZED MAP



APPROVALS

FINAL CONSTRUCTION DRAWINGS SIGN-OFF

** REVIEWERS SHALL PLACE INITIALS ADJACENT TO EACH REDLINE NOTE AS DRAWINGS ARE BEING REVIEWED.

CONSULTANT/PRINTED NAME	SIGNATURE	DATE
SITE ACQ.:		
PERMITTING:		
RF MGR:		
CONST. MGR:		
OPS. MGR:		
PROJ. MGR:		
REG. REVIEW:		
DEV. MGR:		

PROJECT INFORMATION

OR4 FOSTER LAKE

1602 18TH AVE
SWEET HOME, OR 97386

SHEET TITLE

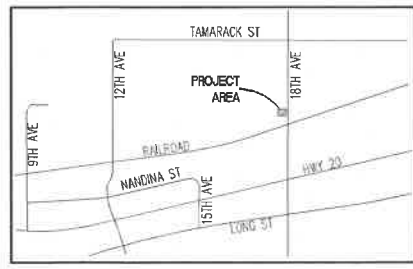
TITLE SHEET

SHEET NO.

T1.0



Know what's below.
Call before you dig.



SURVEY DATE
05/22/2019

BASIS OF BEARING
BEARINGS SHOWN HEREON ARE BASED UPON U.S. STATE PLANE NAD83 COORDINATE SYSTEM OREGON STATE PLANE COORDINATE NORTH ZONE, DETERMINED BY GPS OBSERVATIONS.

BENCHMARK
PROJECT ELEVATIONS ESTABLISHED FROM GPS DERIVED ORTHOMETRIC HEIGHTS BY APPLICATION OF NGS 'GEOID 12B' MODELED SEPARATIONS TO ELLIPSOID HEIGHTS DETERMINED BY RAW STATIC GPS DATA. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO NAVD88.

FLOOD ZONE
THIS PROJECT APPEARS TO BE LOCATED WITHIN "OTHER AREAS ZONE X" ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY INSURANCE RATE MAP NO. 41043C0913G, 09/29/2010.

UTILITY NOTES
SURVEYOR DOES NOT GUARANTEE THAT ALL UTILITIES ARE SHOWN OR THEIR LOCATIONS ARE DEFINITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND DEVELOPER TO CONTACT BLUE STAKE AND ANY OTHER INVOLVED AGENCIES TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. REMOVAL, RELOCATION AND/OR REPLACEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.

SURVEYOR'S NOTES
SURVEYOR HAS NOT PERFORMED A SEARCH OF PUBLIC RECORDS TO DETERMINE ANY DEFECT IN TITLE ISSUED.

THE BOUNDARY SHOWN HEREON IS PLOTTED FROM RECORD INFORMATION AND DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE PROPERTY.

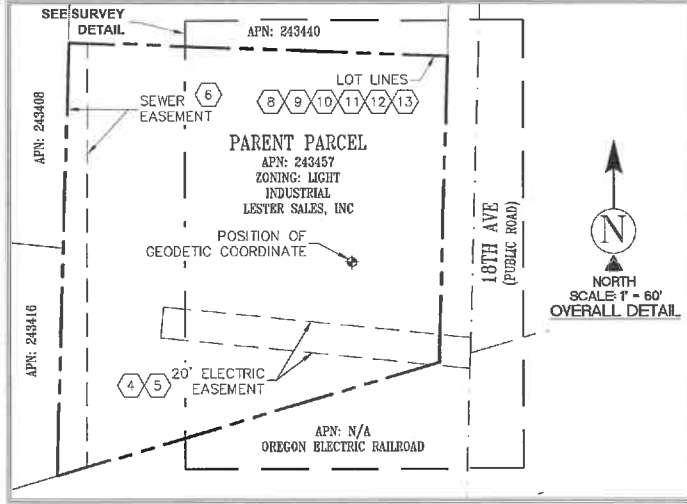
ALL DISTANCES SHOWN HEREON ARE GRID DISTANCES.

CONTOURS DERIVED FROM DIRECT FIELD OBSERVATIONS AND FOLLOWS THE CURRENT NATIONAL MAP STANDARDS FOR VERTICAL ACCURACY.

LESSOR'S LEGAL DESCRIPTION
PART OF SECTION 31 IN TOWNSHIP 13 SOUTH, RANGE 1 EAST OF THE WILLAMETTE MERIDIAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT THE INTERSECTION OF THE EAST LINE OF SAID SECTION 31 AND THE NORTHERLY RIGHT OF WAY LINE OF THE OREGON ELECTRIC RAILWAY CO.; THENCE NORTH 0°01' WEST ALONG THE EAST LINE OF SAID SECTION 31 TO A POINT WHICH IS SOUTH 0°01' EAST 663.7 FEET FROM THE NORTHEAST CORNER OF SAID SECTION 31; THENCE NORTH 89°31' WEST A DISTANCE OF 265 FEET TO THE SOUTHWEST CORNER OF THAT TRACT, CONVEYED TO CEDAR CREEK LOGGING CO. BY DEED RECORDED FEBRUARY 18, 1954 IN BOOK 236, PAGE 254, DEED RECORDS; THENCE SOUTH 0°01' EAST PARALLEL WITH THE EAST LINE OF SAID SECTION 31 TO THE NORTHERLY RIGHT OF WAY LINE OF THE OREGON ELECTRIC RAILWAY CO.; THENCE EASTERLY ALONG SAID RIGHT OF WAY LINE TO THE PLACE OF BEGINNING.

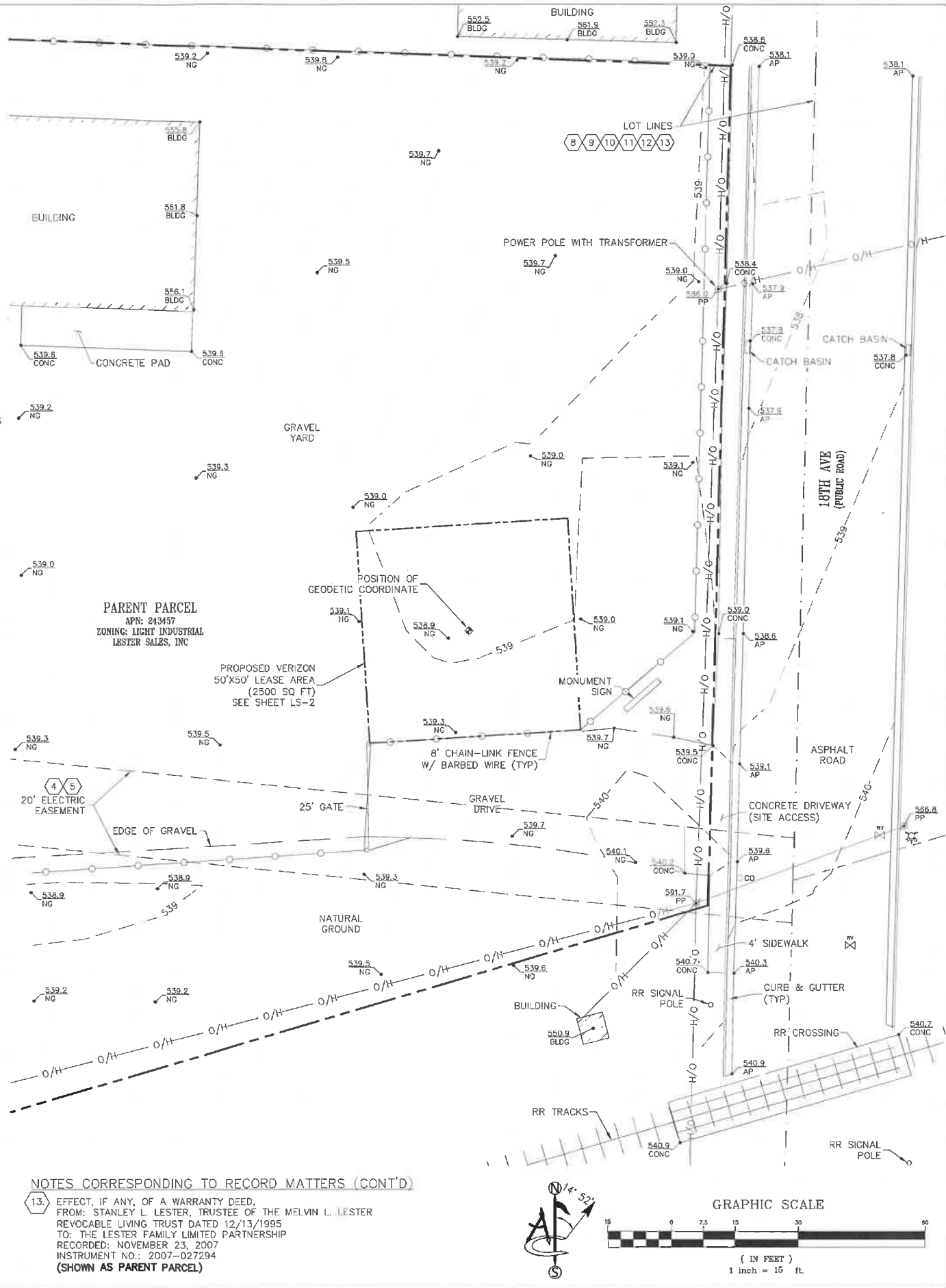
POSITION OF GEODETIC COORDINATES
LATITUDE 44° 24' 03.05" (44.400847°) NORTH (NAD83)
LONGITUDE 122° 43' 23.76" (122.723266°) WEST (NAD83)
GROUND ELEVATION @ 539.0' (NAVD88)

LEGEND	
NG	NATURAL GROUND
CO	SANITARY CLEANOUT
B	BOLLARD
WV	WATER VALVE
	DECIDUOUS TREE
	SPOT ELEVATION
BLDG	BUILDING
HYD	FIRE HYDRANT
CONC	TOP OF CONCRETE
AP	TOP OF ASPHALT
	DECIDUOUS TREE
	POSITION OF GEODETIC COORDINATE
---	SUBJECT PROPERTY LINE
---	ADJACENT PROPERTY LINE
---	MAJOR CONTOUR INTERVAL
---	MINOR CONTOUR INTERVAL
O/H	OVERHEAD LINE
---	LEASE AREA



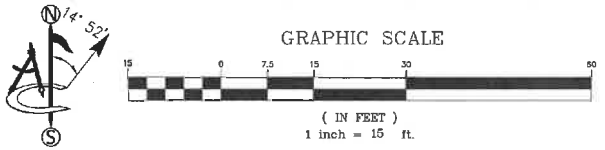
NOTES CORRESPONDING TO RECORD MATTERS
REFERENCE IS MADE TO AMERITITLE TITLE NO.: 297621AM, DATED MAY 14, 2019. ALL EASEMENTS CONTAINED WITHIN SAID GUARANTEE AFFECTING THE IMMEDIATE AREA SURROUNDING THE LEASE HAVE BEEN PLOTTED. ITEMS 1-3 ARE NOT SURVEY RELATED ITEMS. ITEMS 8-13 ARE SHOWN HEREON AS PARENT PARCEL LINES.

4. AN EASEMENT INCLUDING THE TERMS AND PROVISIONS THEREOF, AFFECTING THE PORTION OF SAID PREMISES AND FOR THE PURPOSES STATED THEREIN AS SET FORTH IN INSTRUMENT: GRANTED TO: PACIFIC POWER & LIGHT COMPANY RECORDED: NOVEMBER 1, 1971 INSTRUMENT NO.: MF VOLUME: 27 PAGE: 125 (SHOWN AS PARENT PARCEL)
5. AN EASEMENT INCLUDING THE TERMS AND PROVISIONS THEREOF, AFFECTING THE PORTION OF SAID PREMISES AND FOR THE PURPOSES STATED THEREIN AS SET FORTH IN INSTRUMENT: GRANTED TO: CITY OF SWEET HOME, OREGON, A MUNICIPAL CORPORATION RECORDED: FEBRUARY 14, 1977 INSTRUMENT NO.: MF VOLUME: 157 PAGE: 274 (SHOWN AS PARENT PARCEL)
6. AN EASEMENT INCLUDING THE TERMS AND PROVISIONS THEREOF, AFFECTING THE PORTION OF SAID PREMISES AND FOR THE PURPOSES STATED THEREIN AS SET FORTH IN INSTRUMENT: GRANTED TO: CITY OF SWEET HOME, A MUNICIPAL CORPORATION RECORDED: OCTOBER 19, 1978 INSTRUMENT NO.: MF VOLUME: 215 PAGE: 846 (SHOWN AS PARENT PARCEL)
7. AN EASEMENT INCLUDING THE TERMS AND PROVISIONS THEREOF, AFFECTING THE PORTION OF SAID PREMISES AND FOR THE PURPOSES STATED THEREIN AS SET FORTH IN INSTRUMENT: GRANTED TO: TELEPHONE UTILITIES OF OREGON, INC. DBA PTI COMMUNICATIONS, AN OREGON CORPORATION RECORDED: APRIL 1, 1992 INSTRUMENT NO.: MF VOLUME: 594 PAGE: 3 (NOT SHOWN - EXCEPTION INDETERMINATE)
8. EFFECT, IF ANY, OF A WARRANTY DEED, FROM: STANLEY L. LESTER TO: STANLEY L. LESTER AND SHARON J. LESTER, TRUSTEE UNDER THE STANLEY L. LESTER REVOCABLE LIVING TRUST DATED DECEMBER 5, 1995, AS TO AN UNDIVIDED ONE-HALF INTEREST AND SHARON J. LESTER AND STANLEY L. LESTER TRUSTEE UNDER THE SHARON J. LESTER REVOCABLE LIVING TRUST DATED DECEMBER 5, 1995, AS TO AN UNDIVIDED ONE-HALF INTEREST, TOGETHER AS TENANTS IN COMMON RECORDED: DECEMBER 15, 1995 INSTRUMENT NO.: MF VOLUME: 778 PAGE: 809 (SHOWN AS PARENT PARCEL)
9. EFFECT, IF ANY, OF A WARRANTY DEED, FROM: MELVIN L. LESTER TO: MELVIN L. LESTER, TRUSTEE UNDER THE MELVIN L. LESTER REVOCABLE LIVING TRUST DATED DEC. 13, 1995 RECORDED: DECEMBER 18, 1995 INSTRUMENT NO.: MF VOLUME: 779 PAGE: 135 (SHOWN AS PARENT PARCEL)
10. EFFECT, IF ANY, OF A STATUTORY WARRANTY DEED, FROM: MELVIN L. LESTER REVOCABLE LIVING TRUST, DATED DECEMBER 13, 1995 TO: MELVIN LESTER RECORDED: DECEMBER 11, 1991 INSTRUMENT NO.: MF VOLUME: 910 PAGE: 215 (SHOWN AS PARENT PARCEL)
11. EFFECT, IF ANY, OF A STATUTORY WARRANTY DEED, FROM: MELVIN LESTER TO: THE LESTER FAMILY LIMITED PARTNERSHIP RECORDED: DECEMBER 11, 1997 INSTRUMENT NO.: MF VOLUME: 910 PAGE: 219 (SHOWN AS PARENT PARCEL)
12. EFFECT, IF ANY, OF A BARGAIN AND SALE DEED, FROM: THE LESTER FAMILY LIMITED PARTNERSHIP TO: MELVIN L. LESTER, TRUSTEE OF THE MELVIN L. LESTER REVOCABLE LIVING TRUST DATED 12/13/95 RECORDED: JUNE 27, 2006 INSTRUMENT NO.: 2006-15494 (SHOWN AS PARENT PARCEL)
13. EFFECT, IF ANY, OF A WARRANTY DEED, FROM: STANLEY L. LESTER, TRUSTEE OF THE MELVIN L. LESTER REVOCABLE LIVING TRUST DATED 12/13/1995 TO: THE LESTER FAMILY LIMITED PARTNERSHIP RECORDED: NOVEMBER 23, 2007 INSTRUMENT NO.: 2007-027294 (SHOWN AS PARENT PARCEL)



NOTES CORRESPONDING TO RECORD MATTERS (CONT'D)

13. EFFECT, IF ANY, OF A WARRANTY DEED, FROM: STANLEY L. LESTER, TRUSTEE OF THE MELVIN L. LESTER REVOCABLE LIVING TRUST DATED 12/13/1995 TO: THE LESTER FAMILY LIMITED PARTNERSHIP RECORDED: NOVEMBER 23, 2007 INSTRUMENT NO.: 2007-027294 (SHOWN AS PARENT PARCEL)



PROJECT INFORMATION:

OR4 FOSTER LAKE ALT 6

NON-SITUS ADDRESS
SWEET HOME, OR 97386

LINN COUNTY

ORIGINAL ISSUE DATE:
07/13/2019

REV. DATE: DESCRIPTION: BY:

0	07/13/2019	PRELIM W/ TITLE	LO
1	08/15/2019	ADD TITLE/DESIGN (C)	LO

PROJECT COORDINATION:

CAPITAL DESIGN SERVICES

2101 4TH AVE. E. SUITE 202
OLYMPIA, WA 98506
360.991.1501
WWW.CAPITALDESIGNSERVICES.COM

SURVEY PREPARED BY:

410 E. SOUTHERN AVE.
TEMPE, ARIZONA 85282
PH. (480) 659-4072
WWW.AMBITCONSULTING.US

DRAWN BY: _____ CHK.: _____ APV.: _____

LO	PD	DG
X		

LICENSER:

REGISTERED PROFESSIONAL LAND SURVEYOR

Dan L. Gilbert

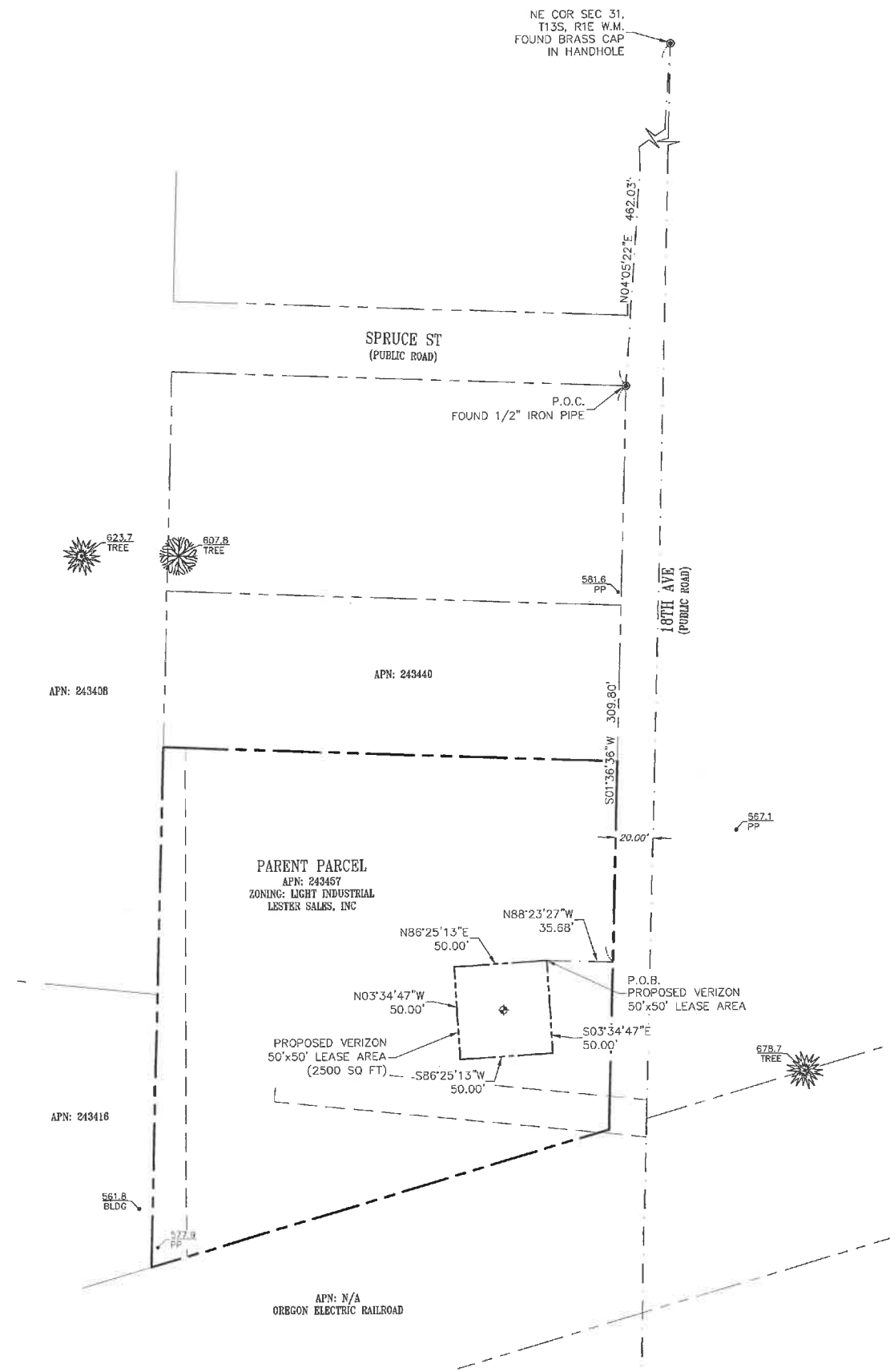
OREGON
JULY 11, 2000
DAN L. GILBERT
60121
EXP 6-30-21

SHEET TITLE:
SITE SURVEY

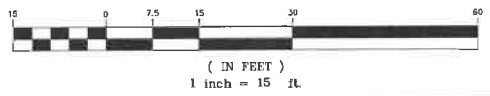
SHEET NUMBER:
LS-1

LEASE AREA LEGAL DESCRIPTION

DESCRIPTION OF A VERIZON WIRELESS 50'x50' LEASE AREA BEING A PORTION OF THE NORTHEAST QUARTER OF SECTION 31, TOWNSHIP 13 SOUTH, RANGE 1 EAST OF THE WILLAMETTE MERIDIAN, IN THE COUNTY OF LINN, STATE OF OREGON, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
 COMMENCING AT THE INTERSECTION OF THE SOUTH LINE OF SPRUCE STREET AND THE WEST LINE OF 18TH AVENUE, FROM WHICH THE NORTHEAST CORNER OF SAID SECTION 31 BEARS NORTH 04°05'22" EAST, 462.03 FEET; THENCE, ALONG SAID WEST LINE OF 18TH AVENUE, SOUTH 01°36'36" WEST, 309.80 FEET; THENCE NORTH 88°23'27" WEST, 35.68 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 03°34'47" EAST, 50.00 FEET; THENCE SOUTH 86°25'13" WEST, 50.00 FEET; THENCE NORTH 03°34'47" WEST, 50.00 FEET; THENCE NORTH 86°25'13" EAST, 50.00 FEET TO THE POINT OF BEGINNING. CONTAINING 2500 SQUARE FEET (0.057 ACRES) OF LAND, MORE OR LESS.



GRAPHIC SCALE




PROJECT INFORMATION:
OR4 FOSTER LAKE ALT 6
 NON-SITUS ADDRESS
 SWEET HOME, OR 97386
 LINN COUNTY

ORIGINAL ISSUE DATE:
07/13/2019

REV.: DATE: DESCRIPTION: BY:


0	07/13/2019	PRELIM W/ TITLE	LO
1	08/15/2019	ADD TITLE/DESIGN (C)	LO

PROJECT COORDINATION:

CAPITAL DESIGN SERVICES
 2101 4TH AVE E, SUITE 202
 OLYMPIA, WA 98512
 360.991.1261
 WWW.CAPITALDESIGNSERVICES.COM

SURVEY PREPARED BY:

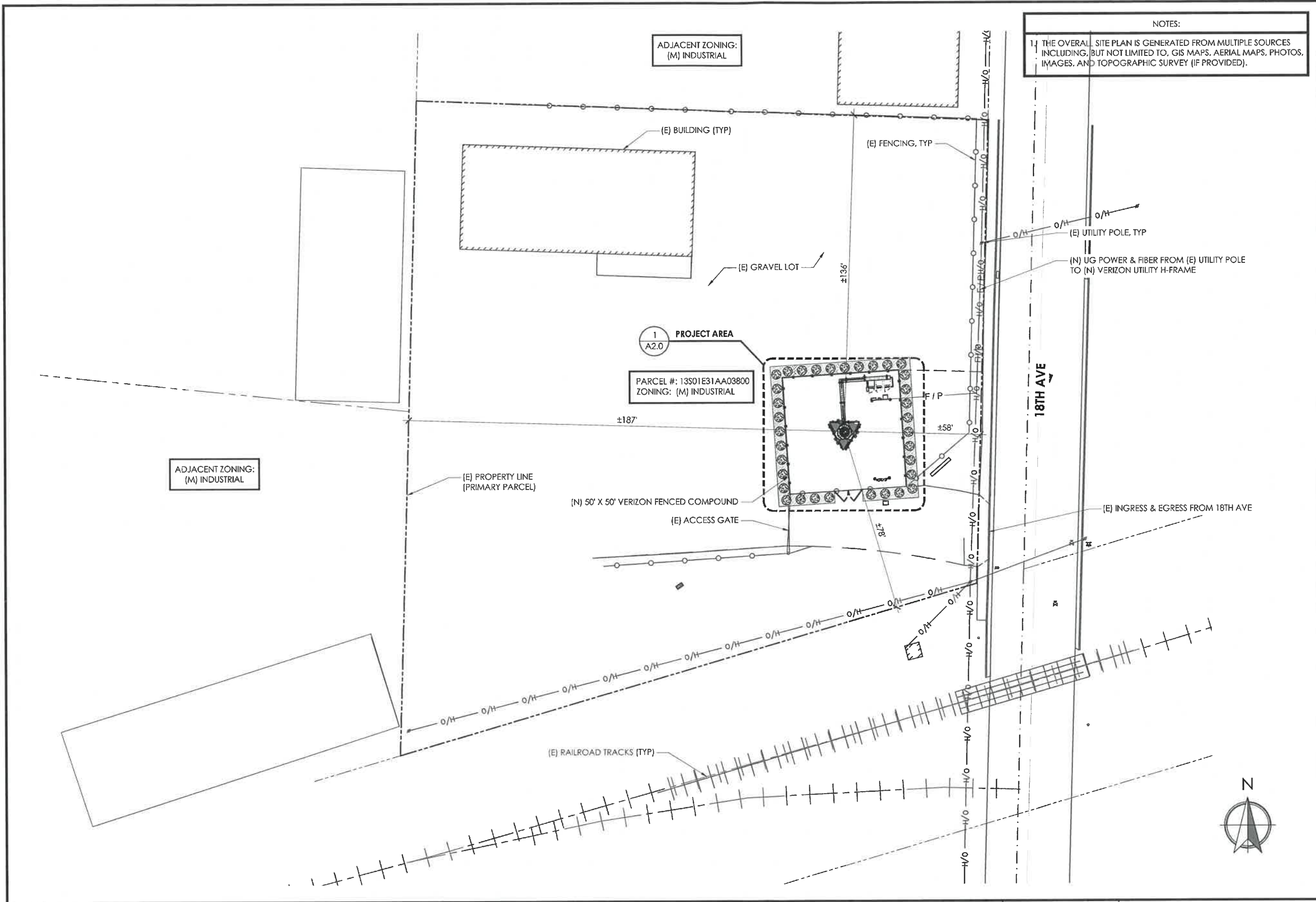
ambit consulting
 410 E. SOUTHERN AVE.
 TEMPE, ARIZONA 85282
 PH. (480) 659-4072
 WWW.AMBITCONSULTING.US

DRAWN BY: _____ CHK.: _____ APV.: _____
 LO PD DG

LICENSER:


SHEET TITLE:
SITE SURVEY

SHEET NUMBER:
LS-1



DRAWN BY: CL
CHECKED BY: CL

DRAWING VERSION		
VER.	DATE	DESCRIPTION
1	8/13/19	PRELIM CX DRAWINGS
2	09/19/19	CLIENT COMMENT

LICENSER

PRELIMINARY

PROJECT INFORMATION

OR4 FOSTER LAKE

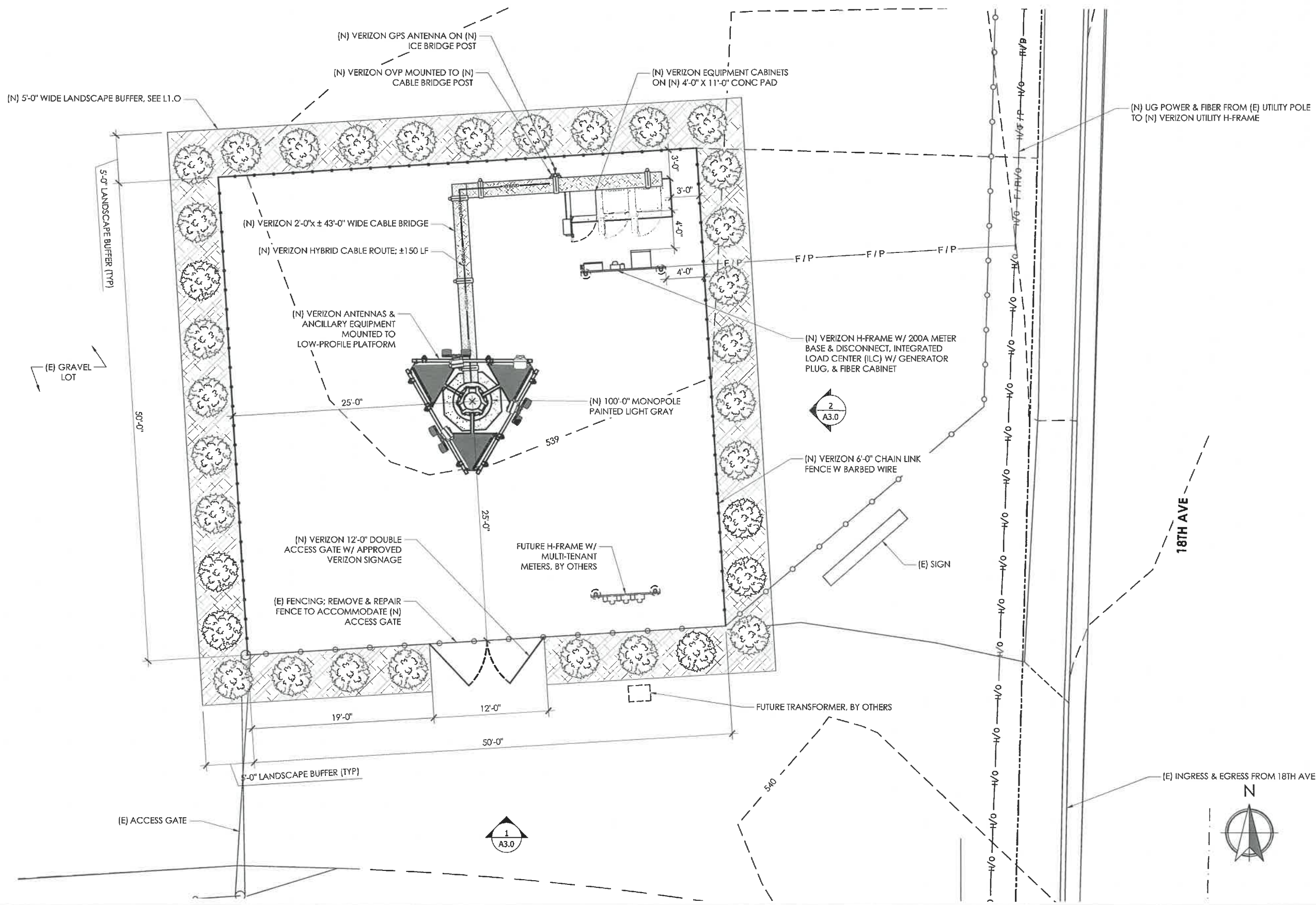
1602 18TH AVE
SWEET HOME, OR 97386

SHEET TITLE

OVERALL SITE PLAN

SHEET NO.

A1.0



DRAWN BY: CL
 CHECKED BY: CL

DRAWING VERSION		
VER.	DATE	DESCRIPTION
1	8/13/19	PRELIM CX DRAWINGS
2	09/19/19	CLIENT COMMENT

LICENSER

PRELIMINARY

PROJECT INFORMATION

OR4 FOSTER LAKE

1602 18TH AVE
 SWEET HOME, OR 97386

SHEET TITLE

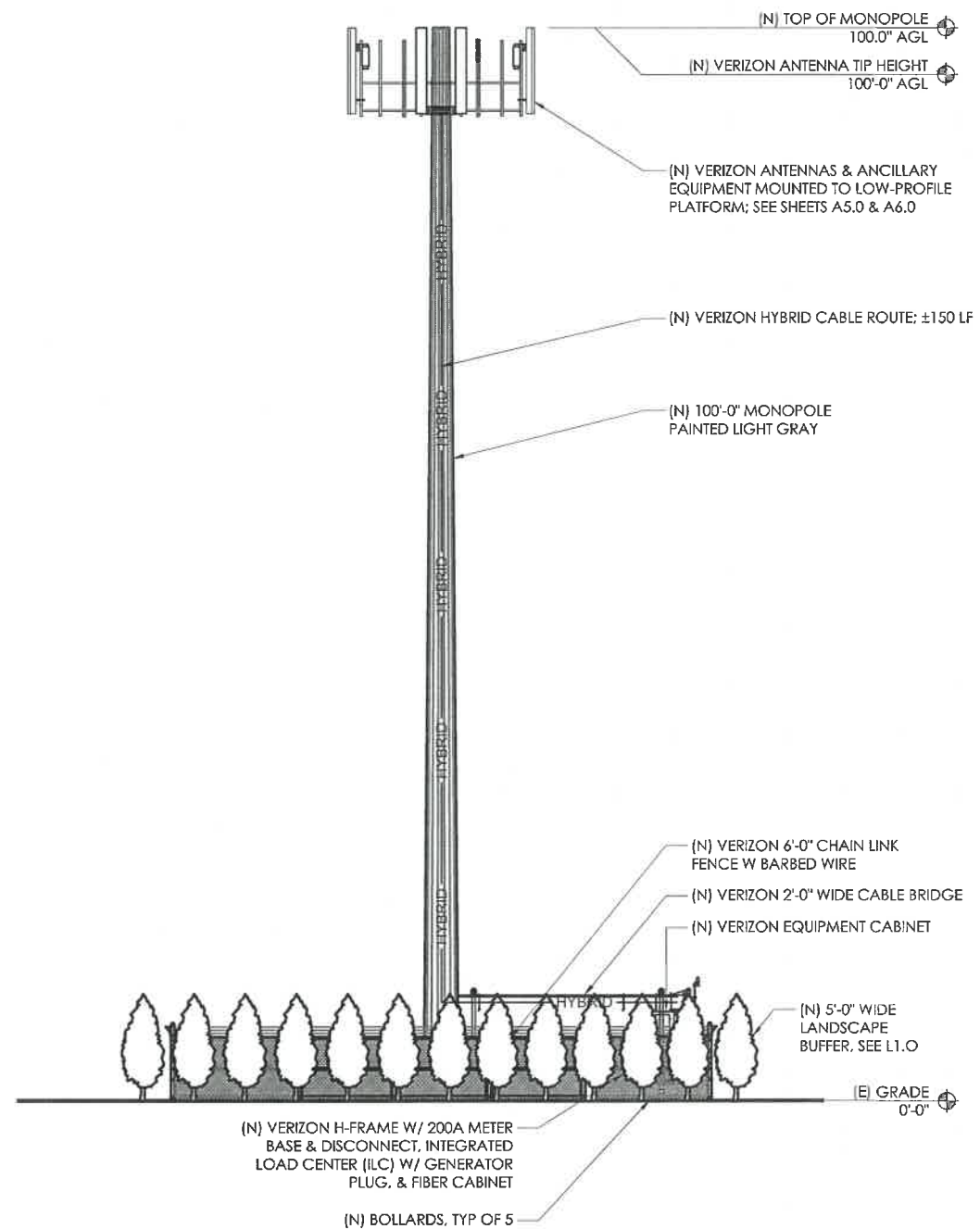
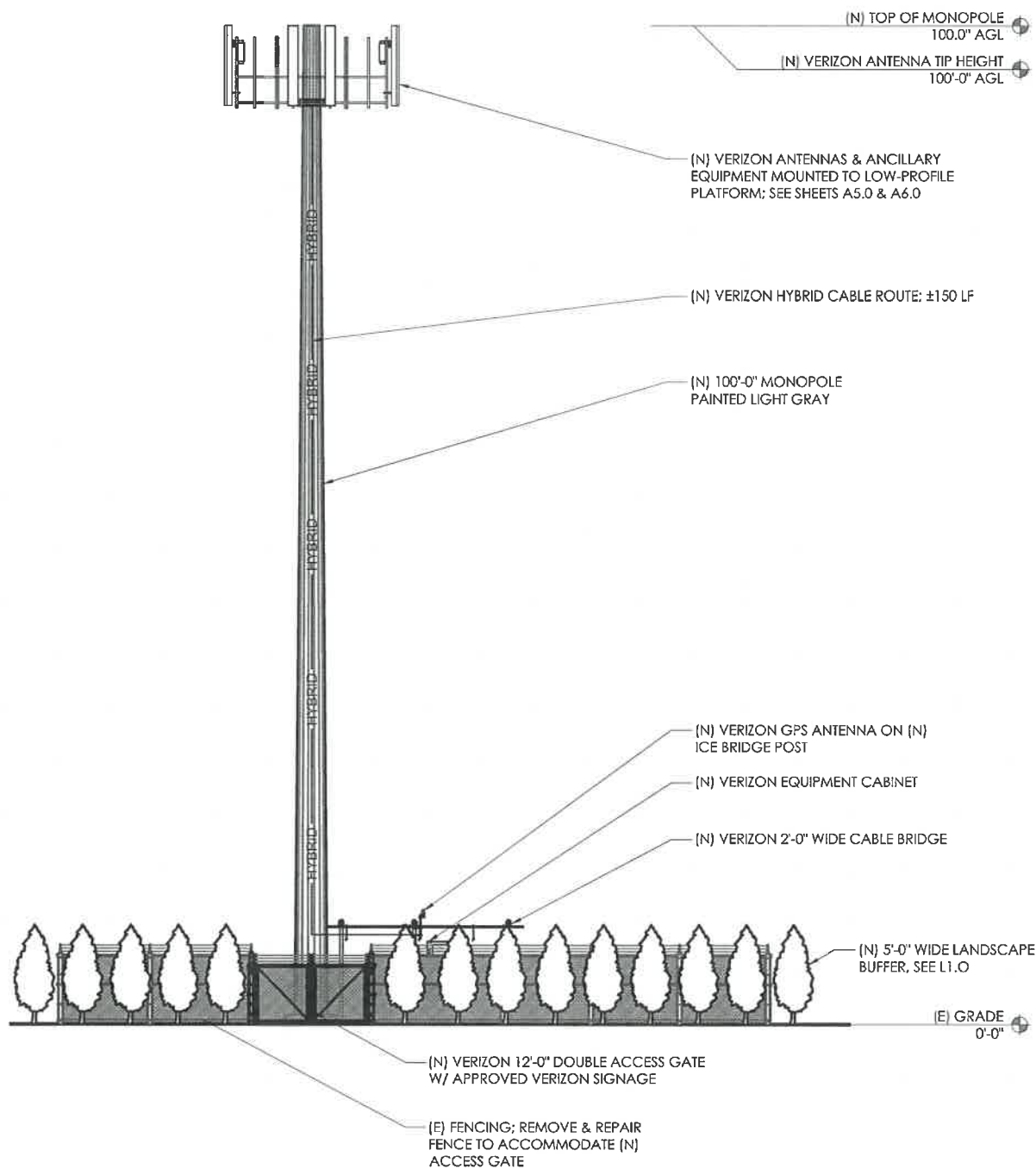
ENLARGED SITE PLAN

SHEET NO.

A2.0

NOTES:

1. THE PROJECT CM / PM TO VERIFY ANY REQUIRED PAINTING REQUIREMENTS FOR PROPOSED TOWER, ANTENNAS, ANCILLARY EQUIPMENT, CABLES, AND HARDWARE PRIOR TO ORDERING / INSTALLING EQUIPMENT.
2. NEW OR REPLACEMENT ANTENNA MOUNTS SHALL COMPLY WITH NSTD-445 STANDARDS AS REQUIRED BY VERIZON.
3. THE 4449 & 8843 RADIOS CANNOT BE PAINTED. IF PAINTING IS REQUIRED THEN A SHROUD WILL BE REQUIRED FOR THE RADIOS. ERICSSON RADIO SHROUD PART # SXK 125 4244 OR APPROVED EQUAL.



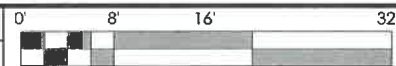
1 SOUTH ELEVATION

11X17 SCALE: 1/16" = 1'-0"
22 X 34 SCALE: 1/32" = 1'-0"



2 WEST ELEVATION

11X17 SCALE: 1/16" = 1'-0"
22 X 34 SCALE: 1/32" = 1'-0"



DRAWN BY: CL
CHECKED BY: CL

DRAWING VERSION		
VER.	DATE	DESCRIPTION
1	8/13/19	PRELIM CX DRAWINGS
2	09/19/19	CLIENT COMMENT

LICENSER

PRELIMINARY

PROJECT INFORMATION

OR4 FOSTER LAKE

1602 18TH AVE
SWEET HOME, OR 97386

SHEET TITLE

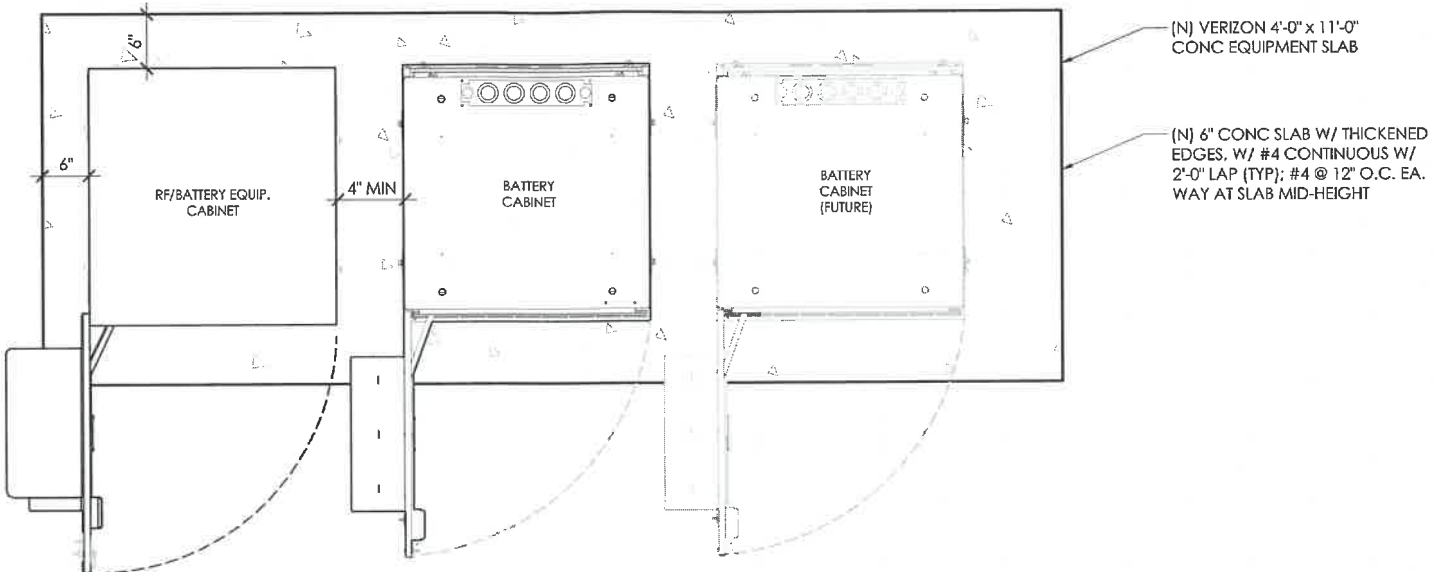
ELEVATIONS

SHEET NO.

A3.0

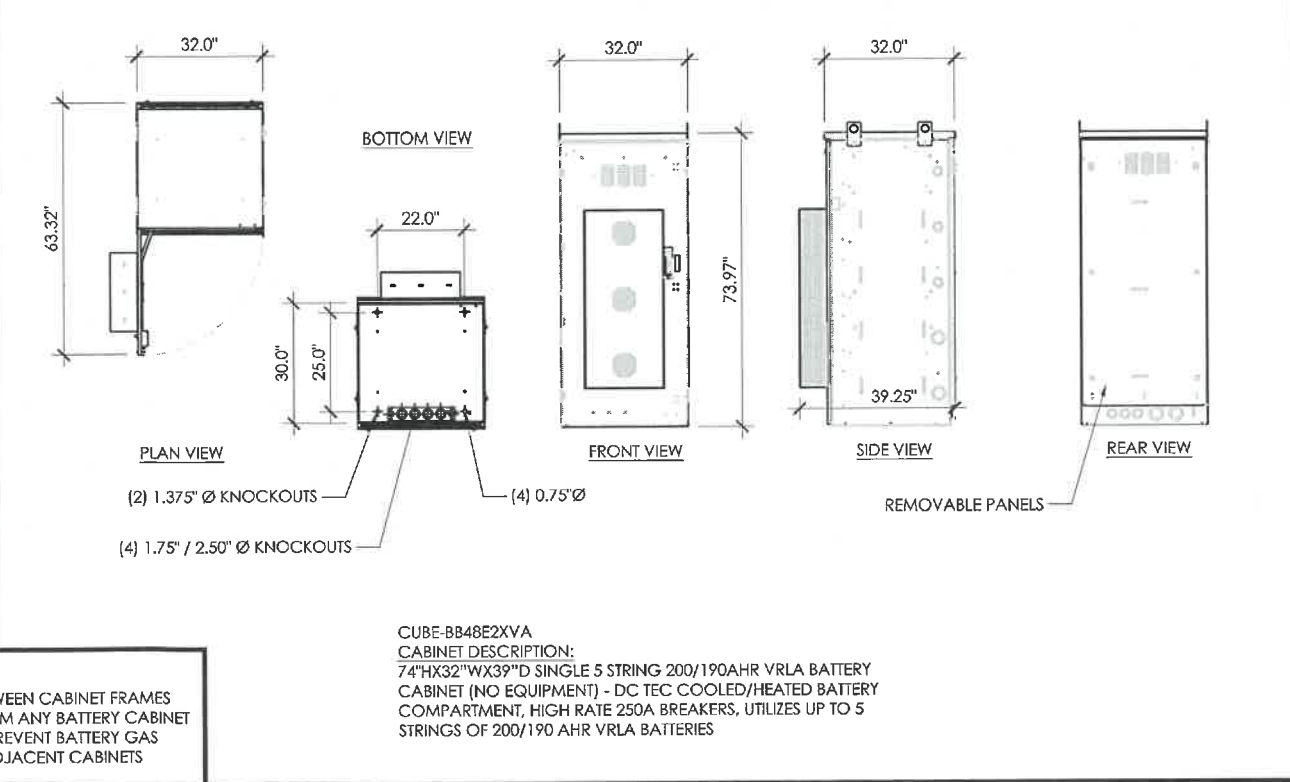
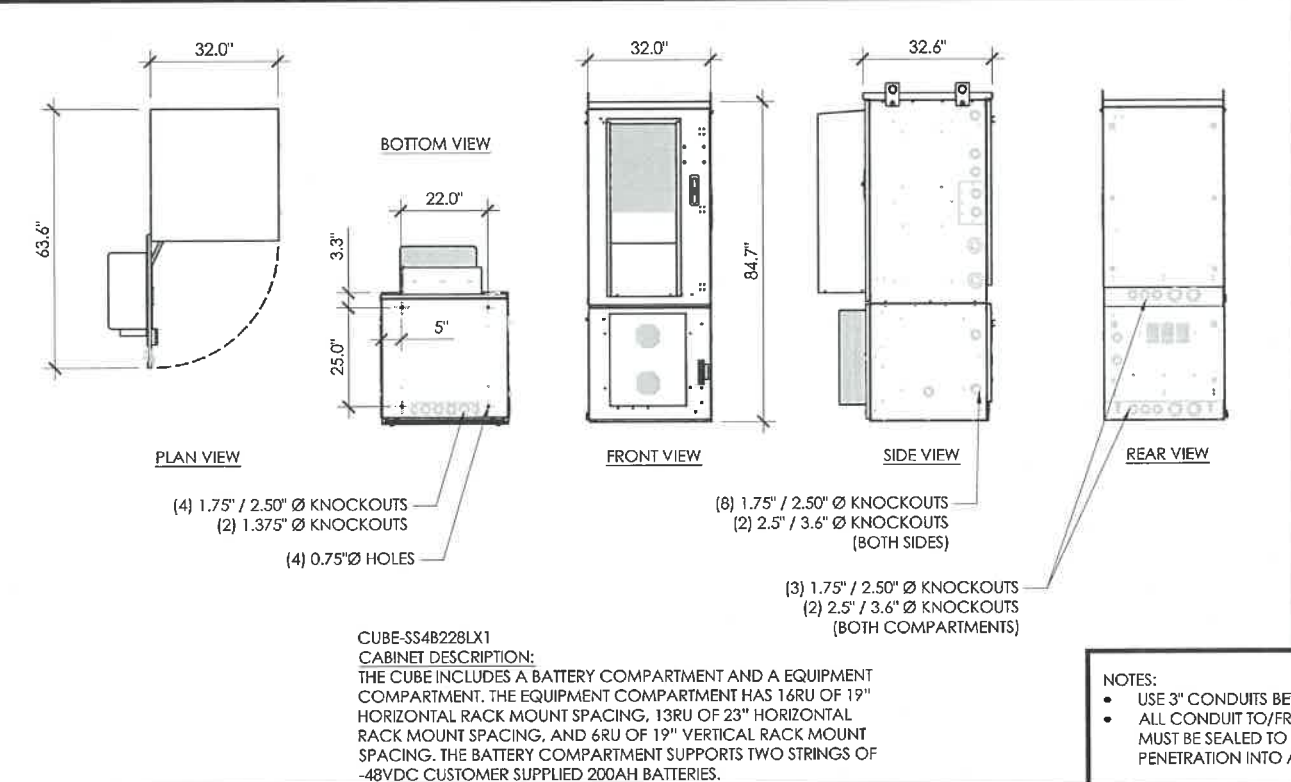
VERIZON EQUIPMENT SPECIFICATIONS		
EQUIPMENT	DIMENSIONS [H x W x D]	MAX. WEIGHT
CHARLES CUBE-SS4B228LX1 RF/BATTERY CAB	84.7" x 32.6" x 32.6"	4,300 LBS (VERIFY)
CHARLES CUBE-BB48E2XVA BATTERY CAB (FUTURE)	73.97" x 32.0" x 32.0"	4,300 LBS (VERIFY)

- NOTES:
- FOR ATTACHMENT OF (N) EQUIPMENT CABINETS TO CONCRETE PAD, USE (4) 1/2" Ø HILTI KWIK BOLT - TZ STAINLESS STEEL EXPANSION ANCHORS W/ 3-1/4" MINIMUM EMBEDMENT EACH CORNER OF CABINET, SEE EQUIPMENT SPECIFICATIONS FOR LOCATIONS AND VERIFY W/ MANUFACTURER'S SPECIFICATIONS.
 - FOR ATTACHMENT OF (N) EQUIPMENT CABINETS TO EQUIPMENT PLATFORM, USE (4) 1/2" Ø A307 STEEL THRU-BOLTS W/ 12 GA THREADED GRATING CLIP TO RECEIVE BOLTS, OR PER MANUFACTURER'S SPECIFICATIONS.
 - CONDUIT STUB UP LOCATIONS FOR ELECTRICAL, FIBER AND GENERATOR TO BE DETERMINED BY VERIZON REPRESENTATIVE / CONTRACTOR.



1 ENLARGED EQUIPMENT PLAN

11 X 17 SCALE: 1/2" = 1'-0"
 22 X 34 SCALE: 1" = 1'-0"



- NOTES:
- USE 3" CONDUITS BETWEEN CABINET FRAMES
 - ALL CONDUIT TO/FROM ANY BATTERY CABINET MUST BE SEALED TO PREVENT BATTERY GAS PENETRATION INTO ADJACENT CABINETS

2 RF / BATTERY CABINET

3 BATTERY CABINET



DRAWN BY: CL
 CHECKED BY: CL

DRAWING VERSION		
VER.	DATE	DESCRIPTION
1	8/13/19	PRELIM CX DRAWINGS
2	09/19/19	CLIENT COMMENT

LICENSER

PRELIMINARY

PROJECT INFORMATION

OR4 FOSTER LAKE
 1602 18TH AVE
 SWEET HOME, OR 97386

SHEET TITLE

EQUIPMENT DETAILS

SHEET NO.

A4.0

VERIZON TOWER / POLE / ROOFTOP EQUIPMENT SCHEDULE

SECTOR	EXIST / NEW	QUANTITY	TECHNOLOGY	TIP HT	AZIMUTH	MFR	EQUIPMENT MODEL	PORT	DIMENSIONS (L x W x D)	WEIGHT (LBS)	MECH DOWNTILT	ELEC DOWNTILT	CABLE TYPE	CABLE QTY	CABLE LENGTH
ALPHA	NEW	1	700/850/AWS	100.00'	0°	COMMSCOPE	NHH-65C-R2B	HEX	96.0" x 11.9" x 7.1"	65.3	0°	0°	---	---	---
	NEW	1	700/850/PCS	100.00'	0°	COMMSCOPE	NHH-65C-R2B	HEX	96.0" x 11.9" x 7.1"	65.3	0°	0°	---	---	---
	NEW	1	700/850	---	---	ERICSSON	RRU 4449	---	18.0" x 13.2" x 9.4"	70.0	---	---	---	---	---
	NEW	1	AWS/PCS	---	---	ERICSSON	RRU 8843	---	18.0" x 13.2" x 9.4"	70.0	---	---	---	---	---
	NEW	1	---	---	---	RAYCAP	RVZDC-6627-PF-48	---	29.5" x 16.5" x 12.6"	32.0	---	---	12X24 HYBRID	1 (N)	150 LF
	NEW	1	---	---	---	---	---	---	---	---	---	---	---	---	---
BETA	NEW	1	700/850/AWS	100.00'	120°	COMMSCOPE	NHH-65C-R2B	HEX	96.0" x 11.9" x 7.1"	65.3	0°	0°	---	---	---
	NEW	1	700/850/PCS	100.00'	120°	COMMSCOPE	NHH-65C-R2B	HEX	96.0" x 11.9" x 7.1"	65.3	0°	0°	---	---	---
	NEW	1	700/850	---	---	ERICSSON	RRU 4449	---	18.0" x 13.2" x 9.4"	70.0	---	---	---	---	---
	NEW	1	AWS/PCS	---	---	ERICSSON	RRU 8843	---	18.0" x 13.2" x 9.4"	70.0	---	---	---	---	---
	NEW	1	---	---	---	---	---	---	---	---	---	---	---	---	---
	NEW	1	---	---	---	---	---	---	---	---	---	---	---	---	---
GAMMA	NEW	1	700/850/AWS	100.00'	240°	COMMSCOPE	NHH-65C-R2B	HEX	96.0" x 11.9" x 7.1"	65.3	0°	0°	---	---	---
	NEW	1	700/850/PCS	100.00'	240°	COMMSCOPE	NHH-65C-R2B	HEX	96.0" x 11.9" x 7.1"	65.3	0°	0°	---	---	---
	NEW	1	700/850	---	---	ERICSSON	RRU 4449	---	18.0" x 13.2" x 9.4"	70.0	---	---	---	---	---
	NEW	1	AWS/PCS	---	---	ERICSSON	RRU 8843	---	18.0" x 13.2" x 9.4"	70.0	---	---	---	---	---
	NEW	1	---	---	---	---	---	---	---	---	---	---	---	---	---
	NEW	1	---	---	---	---	---	---	---	---	---	---	---	---	---
GROUND	NEW	1	---	---	---	RAYCAP	RVZDC-6627-PF-48	---	29.5" x 16.5" x 12.6"	32.0	---	---	---	---	---

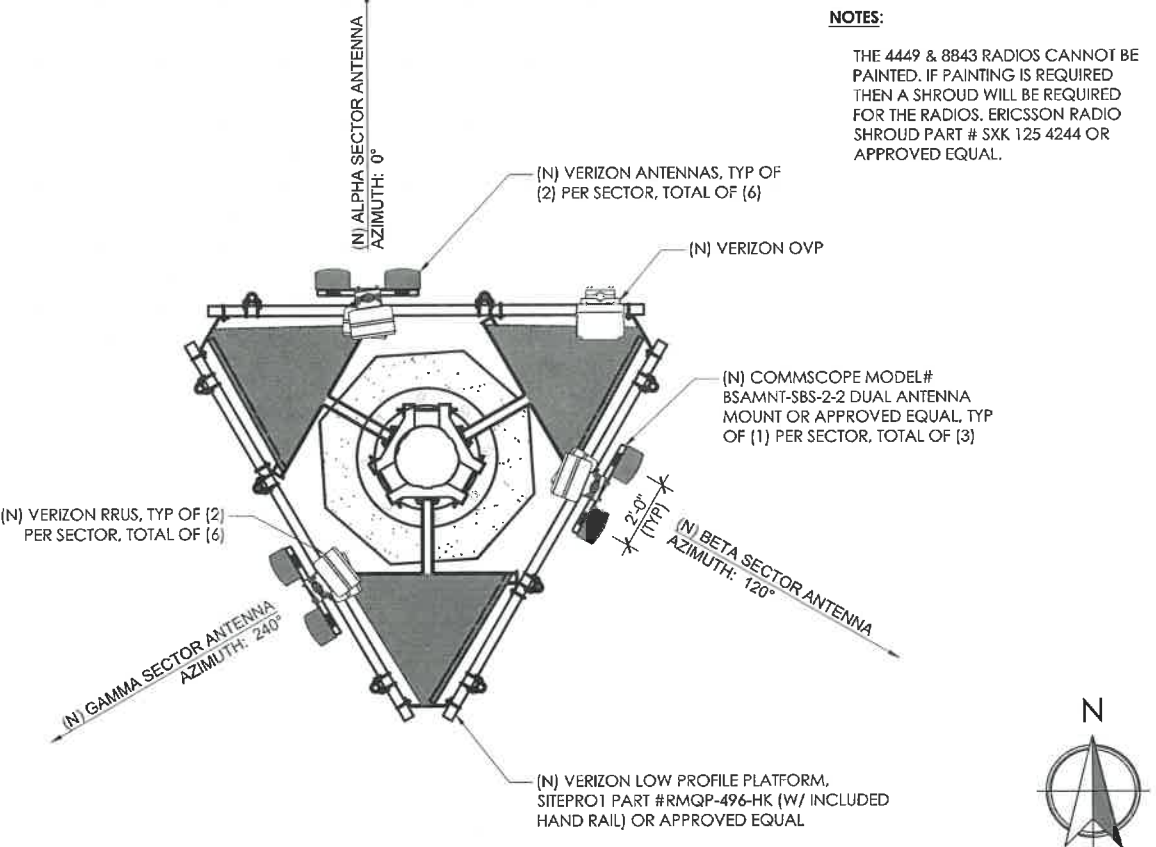


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CHECKED BY: CL

DRAWING VERSION		
VER.	DATE	DESCRIPTION
1	8/13/19	PRELIM CX DRAWINGS
2	09/19/19	CLIENT COMMENT

1 EQUIPMENT SCHEDULE

11X17 SCALE: NTS
22 X 34 SCALE: NTS

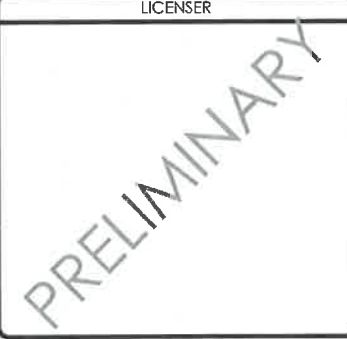


2 ANTENNA PLAN

11X17 SCALE: NTS
22 X 34 SCALE: NTS

3 NOTES

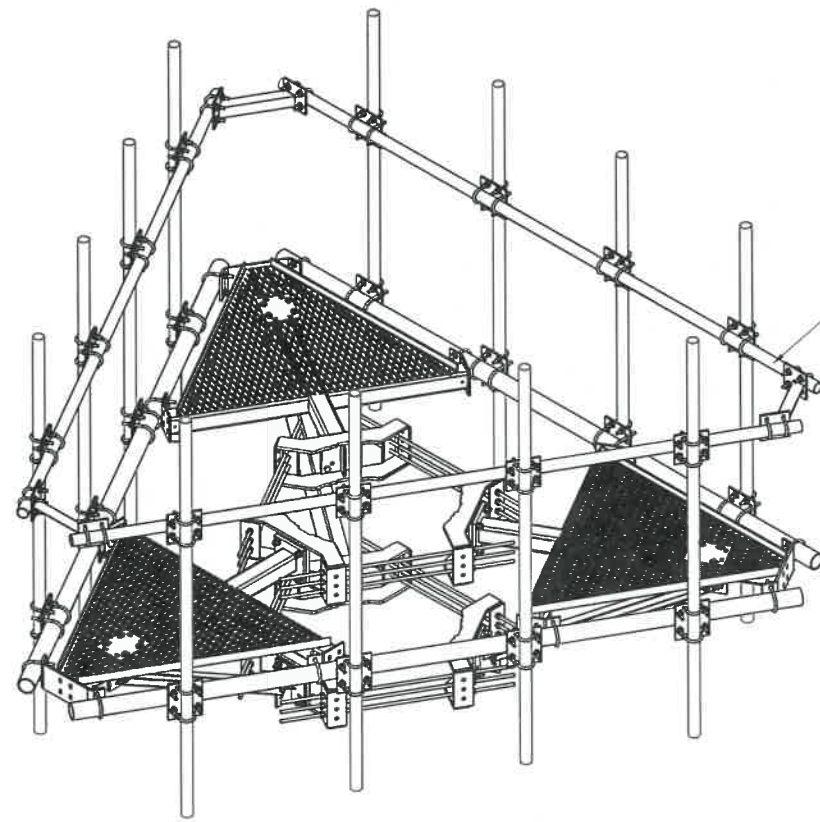
11X17 SCALE: NTS
22 X 34 SCALE: NTS



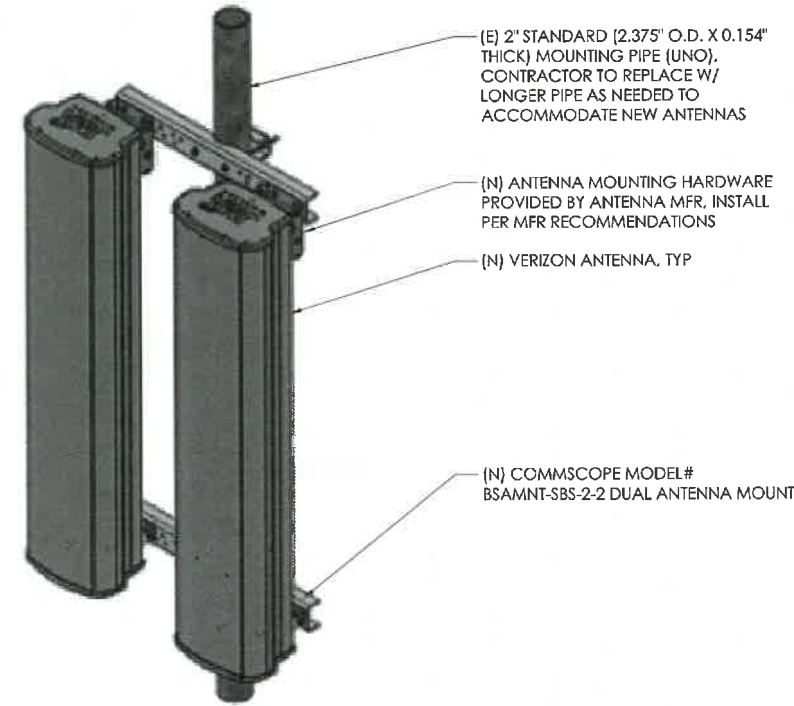
LICENSER
PROJECT INFORMATION
OR4 FOSTER LAKE
1602 18TH AVE
SWEET HOME, OR 97386

SHEET TITLE
EQUIPMENT SCHEDULE & ANTENNA PLAN

SHEET NO.
A5.0



(N) VERIZON LOW PROFILE PLATFORM, SITEPRO1 PART #RMQP-496-HK (W/ INCLUDED HAND RAIL) OR APPROVED EQUAL, INSTALL PER MFR RECOMMENDATIONS



(E) 2" STANDARD (2.375" O.D. X 0.154" THICK) MOUNTING PIPE (UNO), CONTRACTOR TO REPLACE W/ LONGER PIPE AS NEEDED TO ACCOMMODATE NEW ANTENNAS

(N) ANTENNA MOUNTING HARDWARE PROVIDED BY ANTENNA MFR, INSTALL PER MFR RECOMMENDATIONS

(N) VERIZON ANTENNA, TYP

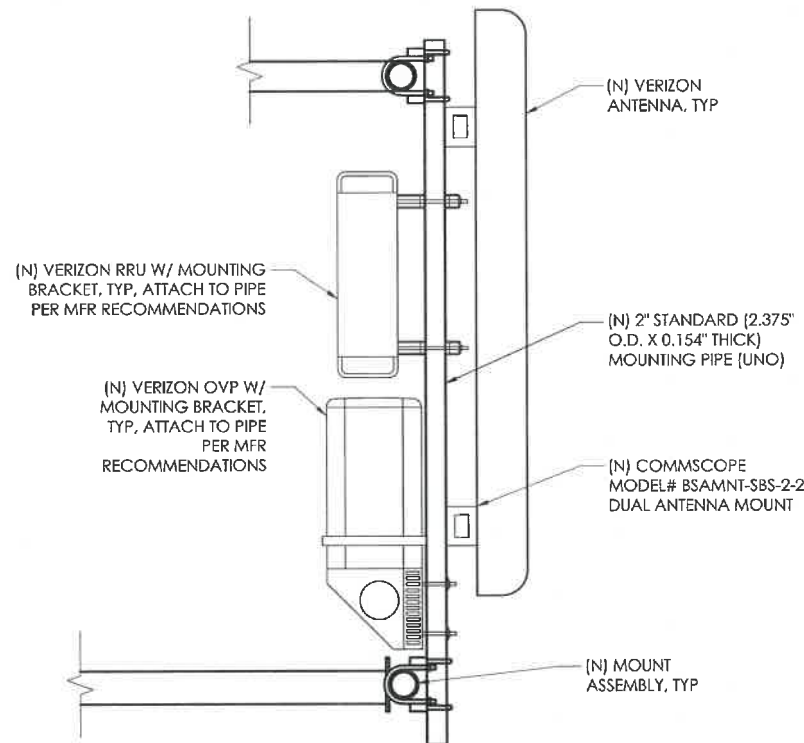
(N) COMMSCOPE MODEL# BSAMNT-SBS-2-2 DUAL ANTENNA MOUNT

1 ANTENNA MOUNT ASSEMBLY

11X17 SCALE: NTS
22 X 34 SCALE: NTS

2 JMA DUAL ANTENNA MOUNT DETAIL

11X17 SCALE: NTS
22 X 34 SCALE: NTS



(N) VERIZON ANTENNA, TYP

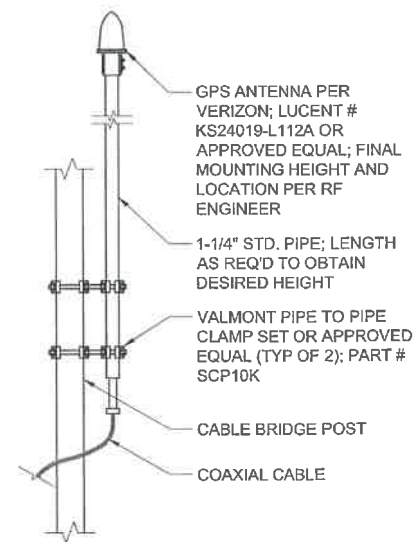
(N) VERIZON RRU W/ MOUNTING BRACKET, TYP, ATTACH TO PIPE PER MFR RECOMMENDATIONS

(N) VERIZON OVP W/ MOUNTING BRACKET, TYP, ATTACH TO PIPE PER MFR RECOMMENDATIONS

(N) 2" STANDARD (2.375" O.D. X 0.154" THICK) MOUNTING PIPE (UNO)

(N) COMMSCOPE MODEL# BSAMNT-SBS-2-2 DUAL ANTENNA MOUNT

(N) MOUNT ASSEMBLY, TYP



GPS ANTENNA PER VERIZON; LUCENT # KS24019-L112A OR APPROVED EQUAL; FINAL MOUNTING HEIGHT AND LOCATION PER RF ENGINEER

1-1/4" STD. PIPE; LENGTH AS REQ'D TO OBTAIN DESIRED HEIGHT

VALMONT PIPE TO PIPE CLAMP SET OR APPROVED EQUAL (TYP OF 2); PART # SCP10K

CABLE BRIDGE POST

COAXIAL CABLE

3 ANCILLARY EQUIPMENT TO PIPE

11X17 SCALE: NTS
22 X 34 SCALE: NTS

4 GPS ANTENNA TO CABLE BRIDGE

11X17 SCALE: NTS
22 X 34 SCALE: NTS

5 NOT USED

11X17 SCALE: NTS
22 X 34 SCALE: NTS



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VER.	DATE	DESCRIPTION
1	8/13/19	PRELIM CX DRAWINGS
2	09/19/19	CLIENT COMMENT

LICENSER
PRELIMINARY

PROJECT INFORMATION
OR4 FOSTER LAKE
1602 18TH AVE
SWEET HOME, OR 97386

SHEET TITLE
EQUIPMENT MOUNT DETAILS

SHEET NO.
A5.1

ANTENNA

MODEL #:
NHH-65C-R2B

DIMENSIONS:
LENGTH: 96.0"
WIDTH: 11.9"
DEPTH: 7.1"
WEIGHT: 65.3 LBS

FREQUENCY BAND:
1695-2360 MHz
698-896 MHz

QTY OF RF CONNECTORS:
(2) LOW BAND
(4) HIGH BAND
(6) TOTAL

MANUFACTURER:
COMMSCOPE

NOTES:
MOUNT ANTENNA PER MANUFACTURER RECOMMENDATIONS.



RRU 4449

DIMENSIONS:
HEIGHT: 18.0"
WIDTH: 13.0"
DEPTH: 9.4"
WEIGHT: 70.0 LBS

OUTPUT POWER:
4 X 40W ON EACH BAND OR
2 X 60W EACH BAND ON (2)
HIGH-POWER RF PORTS

CARRIER CAPACITY:
UP TO 24 MHZ

MANUFACTURER:
ERICSSON

NOTES:
MOUNT RRU PER MANUFACTURER RECOMMENDATIONS.



RRU 8843

DIMENSIONS:
HEIGHT: 18.0"
WIDTH: 13.0"
DEPTH: 9.4"
WEIGHT: 70.0 LBS

OUTPUT POWER:
4 X 40W ON EACH BAND OR
2 X 60W EACH BAND ON (2)
HIGH-POWER RF PORTS

CARRIER CAPACITY:
UP TO 24 MHZ

MANUFACTURER:
ERICSSON

NOTES:
MOUNT RRU PER MANUFACTURER RECOMMENDATIONS.



DRAWN BY: CL
CHECKED BY: CL

DRAWING VERSION		
VER.	DATE	DESCRIPTION
1	8/13/19	PRELIM CX DRAWINGS
2	09/19/19	CLIENT COMMENT

1 ANTENNA SPECIFICATIONS

11X17 SCALE: NTS
22 X 34 SCALE: NTS

2 RRU 4449 SPECIFICATIONS

11X17 SCALE: NTS
22 X 34 SCALE: NTS

3 RRU 8843 SPECIFICATIONS

11X17 SCALE: NTS
22 X 34 SCALE: NTS

SURGE PROTECTOR

DIMENSIONS:
LENGTH: 12.6"
WIDTH: 16.5"
HEIGHT: 29.5"
WEIGHT: 32.0 LBS

MODEL #:
RVZDC-6627-PF-48

NOMINAL OPERATING VOLTAGE:
48 VDC

MANUFACTURER:
RAYCAP

NOTES:
MOUNT PER MANUFACTURER RECOMMENDATIONS.



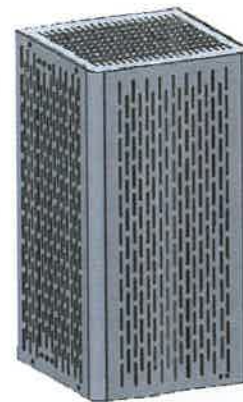
SXK 125 4244

DIMENSIONS:
HEIGHT: 28.0
WIDTH: 14.6"
DEPTH: 17.6"
WEIGHT: 58.5 LBS

DESCRIPTION:
AESTHETIC POLE-MOUNTED SHROUD TO CONCEAL THE ERICSSON DUAL BAND RADIO (4449 OR 8843). ALSO HAS PROVISIONS FOR POWER SUPPLY UNITS (PSU).

MANUFACTURER:
ERICSSON

NOTES:
MOUNT TO RRU PER MANUFACTURER RECOMMENDATIONS.
MOUNTING PART# SK 125 2540/2



NOTES:
THE 4449 & 8843 RADIOS CANNOT BE PAINTED. IF PAINTING IS REQUIRED THEN A SHROUD WILL BE REQUIRED FOR THE RADIOS. ERICSSON RADIO SHROUD PART # SXK 125 4244 OR APPROVED EQUAL.

4 OVP RVZDC-6627-PF-48 SPEC'S.

11X17 SCALE: NTS
22 X 34 SCALE: NTS

5 RADIO SHROUD SPECIFICATIONS

11X17 SCALE: NTS
22 X 34 SCALE: NTS

6 NOT USED

LICENSER

PRELIMINARY

PROJECT INFORMATION

OR4 FOSTER LAKE

1602 18TH AVE
SWEET HOME, OR 97386

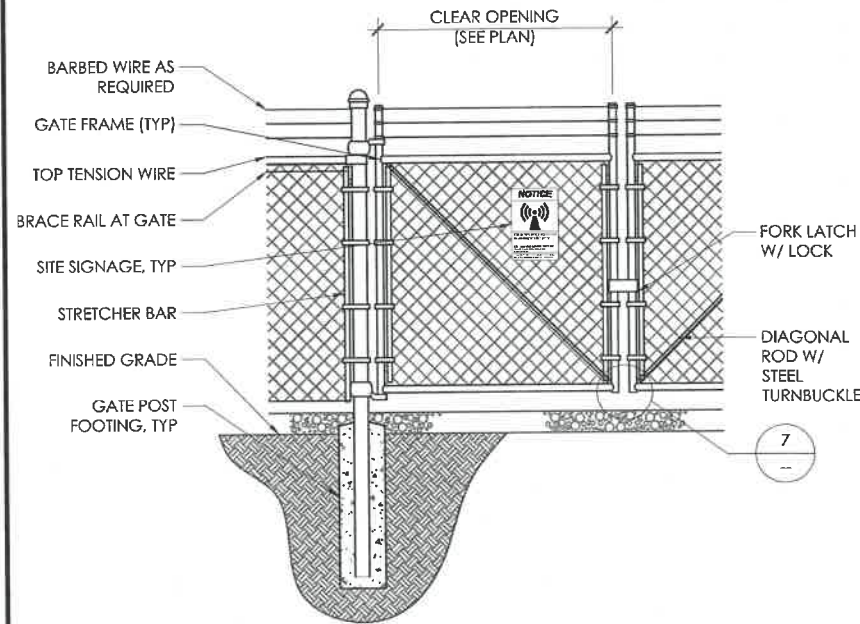
SHEET TITLE

EQUIPMENT DETAILS

SHEET NO.

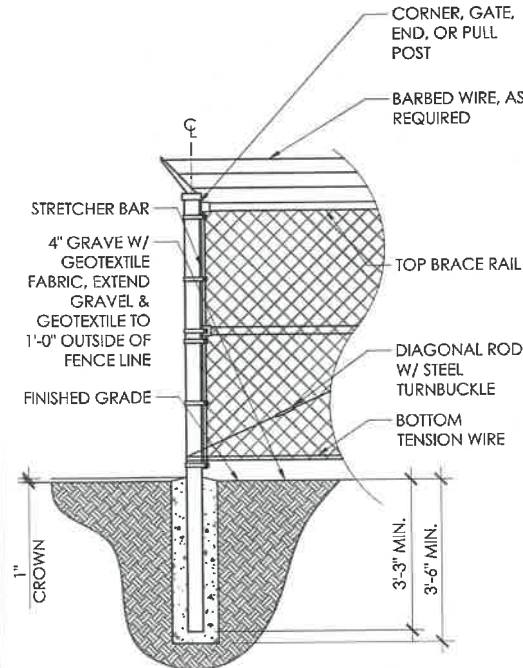
A5.2

- THE CONTRACTOR SHALL MATCH THE FENCING STYLE, HEIGHT, BANDING, BARBED WIRES, SUPPORTS, AND MEASUREMENTS OF THE EXISTING FENCE WHEREVER THE PROJECT REQUIRES MODIFICATION OR EXTENSION OF AN EXISTING FENCED AREA.
- ALL WIRE RAILS, FABRIC, POLES, HARDWARE, AND OTHER STEEL MATERIAL SHALL BE HOT-DIPPED GALVANIZED AND CONFORM TO ALL ASTM REGULATIONS FOR GALVANIZING.
- THE FABRIC SHALL BE 6'-0" HIGH X 2" CHAIN LINK MESH OF NO. 9 GAUGE (0.148) WIRE, AND HAVE A TWISTED AND BARBED FINISH FOR THE TOP EDGES AND A KNUCKLED FINISH FOR THE BOTTOM EDGES. FABRIC SHALL CONFORM TO THE SPECIFICATIONS OF ASTM A-392 CLASS-1.
- ALL BARBED WIRE SHALL BE 12 GAUGE TWISTED WIRE, DOUBLE-STRAND, WITH 14 GAUGE, 4 POINT ROUND BARBS SPACED AT 5" O.C..
- ALL POSTS SHALL BE GALVANIZED STEEL, SCHEDULE 20 PIPE OF THE FOLLOWING DIAMETERS: LINE = 2-3/8" / CORNER = 3" / GATE = 3"
- IF APPLICABLE, EXTEND CORNER AND GATE POSTS 12" INCLUDING THE METAL DOME CAP TO PROVIDE FOR ATTACHMENT OF THE BARBED WIRE.
- GATE FRAMES SHALL HAVE A FULL HEIGHT VERTICAL BRACE AND A FULL WIDTH HORIZONTAL BRACE, SECURED IN PLACE BY USE OF GATE BRACE CLAMPS.
- ALL TOP AND BRACED RAILS SHALL BE 1-5/8" Ø SCHEDULE 20 MECHANICAL BRACE, SECURED IN PLACE BY USE OF GATE BRACE CLAMPS.
- HINGES SHALL BE A MINIMUM OF 200 DEGREES WITH A HINGE ADAPTER. LATCHES, STOPS AND KEEPERS SHALL BE PROVIDED FOR ALL GATES. THE GUIDE LATCH ASSEMBLY SHALL BE TAMPER-PROOF. ALL STOPS AND DOUBLE GATES SHALL HAVE A FULL HEIGHT PLUNGER BAR WITH A METAL DOME CAP.
- A NO. 7 GAUGE ZINC COATED TENSION WIRE IS TO BE USED AT THE BOTTOM OF THE FABRIC, TERMINATED WITH BAND CLIPS AT CORNER AND GATEPOSTS.



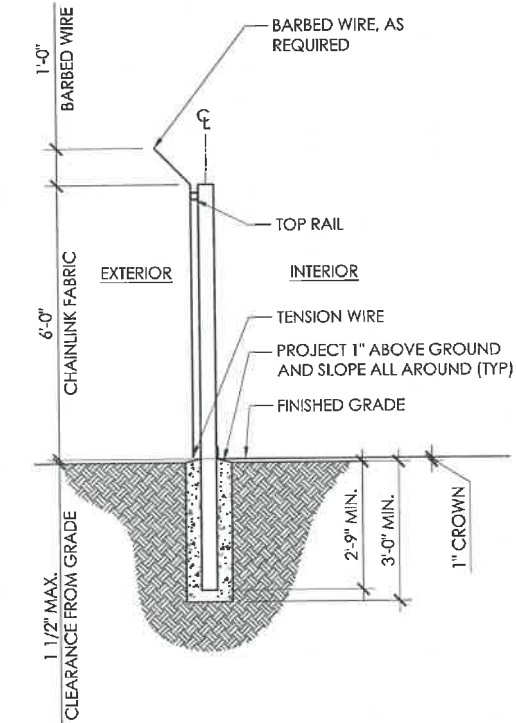
2 DOUBLE SWING GATE

11X17 SCALE: NTS
22 X 34 SCALE: NTS



3 CORNER POST

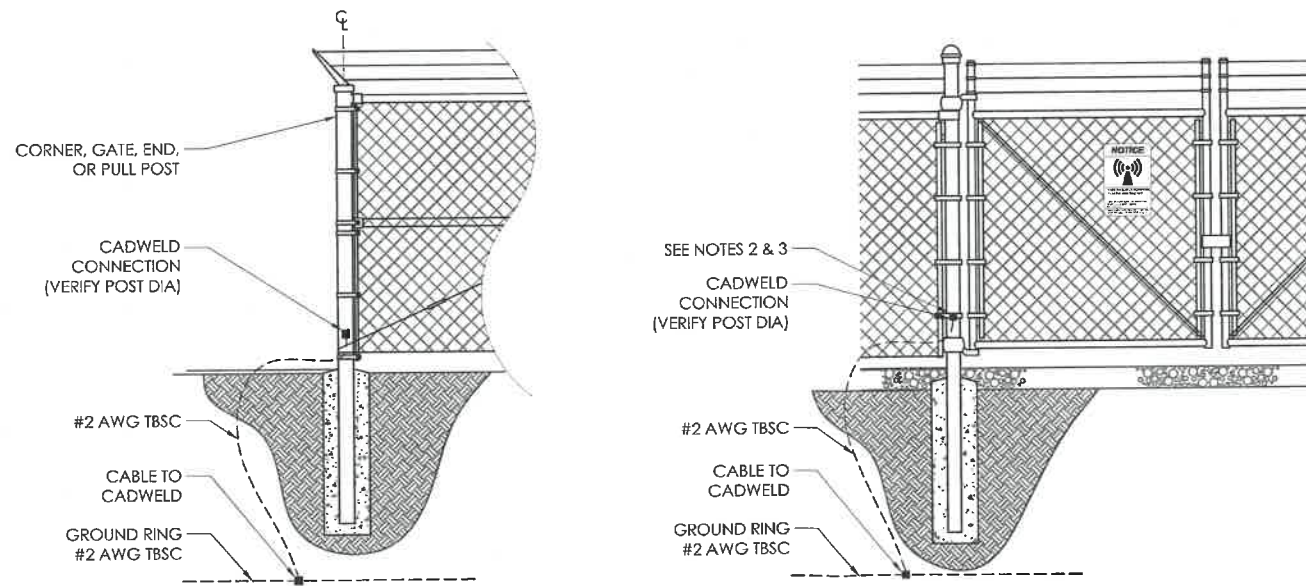
11X17 SCALE: NTS
22 X 34 SCALE: NTS



4 WOVEN WIRE

11X17 SCALE: NTS
22 X 34 SCALE: NTS

- A 6" X 12" EYEBOLT TO HOLD TENSION WIRE SHALL BE USED AT ALL LINE POSTS.
- ALL STRETCHER BARS SHALL BE 3/16 X 3/4" OR HAVE EQUIVALENT CROSS SECTION AREA.
- ALL CORNER GATE AND END PANELS SHALL HAVE A 3/8" TRUSS ROD WITH TURNBUCKLES AND BE BRACED WITH ONE 1-5/8" HORIZONTAL COMPRESSION MEMBER, SECURELY ATTACHED WITH IRON FITTINGS.
- CONTRACTOR TO PROVIDE ALL OTHER HARDWARE NECESSARY TO ATTACH, TENSION, CLIP, BAND, HINGE, FASTEN AND FINISH THE FENCING PROPERLY.
- IF APPLICABLE, THE BARBED WIRE SUPPORT ARMS SHALL BE SCH. 40 GALVANIZED STEEL WITH SET BOLT AND LOCK WIRE IN THE ARM.
- ALL POSTS, GATE GUARDS, AND OTHER OPEN PIPES SHALL BE CAPPED WITH A HOT DIPPED GALVANIZED CAST STEEL DOME CAP.
- ALL POSTS SHALL HAVE A MINIMUM OF 6" OF CONCRETE UNDER THE LOWER MOST PORTION TO A MINIMUM OF 8" LARGER THAN THE DIAMETER AT THE FINISHED GRADE.
- ALL FENCE POSTS SHALL BE SCH. 40 GALVANIZED STEEL POSTS WITH SET BOLT AND LOCK WIRE IN THE ARM.
- AT CORNER POSTS, GATE POST, LINE POST, AND SIDE OF GATE FRAME, FABRIC SHALL BE ATTACHED WITH STRETCHER AND TENSION BAND CLIPS AT 1'-3" INTERVALS.
- ATTACH FABRIC TO BRACE RAILS, TENSION WIRE AND TRUSS RODS WITH THE TIE CLIPS AT 2'-0" INTERVALS.
- PROVIDE A MAXIMUM GAP OF 1" BETWEEN THE CHAIN LINK FABRIC AND THE FINAL GRADE.
- GATE HINGES SHALL HAVE THEIR THREADS PEENED OR WELDED TO PREVENT UNAUTHORIZED REMOVAL, AND GATES SHALL BE INSTALLED SO THAT LOCKS ARE ACCESSIBLE FROM BOTH SIDES.
- CONTRACTOR TO TOUCH UP ALL SCRAPES, SCRATCHES, MARKS, AND BARE AREAS WITH A COLD GALVANIZED SPRAY.

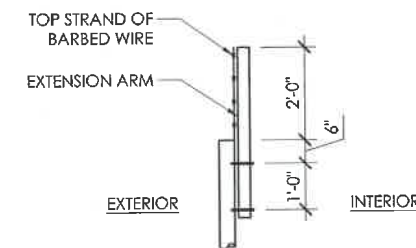


GROUNDING NOTES:

- VERTICAL POSTS SHALL BE BONDED TO THE RING AT EACH CORNER AND AT EACH GATE POST. AT MINIMUM, ONE VERTICAL POST SHALL BE BONDED TO THE GROUND RING IN EVERY 100-FOOT STRAIGHT RUN OF FENCE.
- THE #2 AWG, TBSC, FROM THE RING GROUND SHALL BE CADWELDED TO THE POST, ABOVE GROUND.
- THE GATE JUMPER SHALL BE #4/0 AWG WELDING CABLE OR FLEXIBLE COPPER BRAIDED FLAT STRAP WITH SLEEVES ON EACH END DESIGNED FOR EXOTHERMIC WELDING.
- THE GATE JUMPER SHALL BE INSTALLED SO THAT IT WILL NOT BE SUBJECTED TO DAMAGING STRAIN WHEN GATE IS FULL OPEN IN EITHER DIRECTIONS.

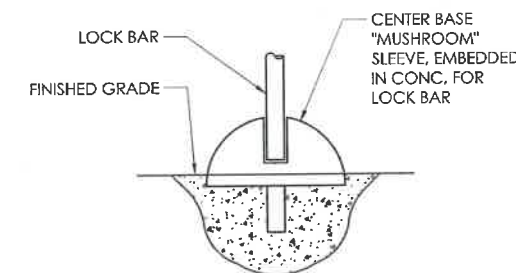
5 FENCE GROUNDING

11X17 SCALE: NTS
22 X 34 SCALE: NTS



6 BARBED WIRE

11X17 SCALE: NTS
22 X 34 SCALE: NTS



7 GATE STOP

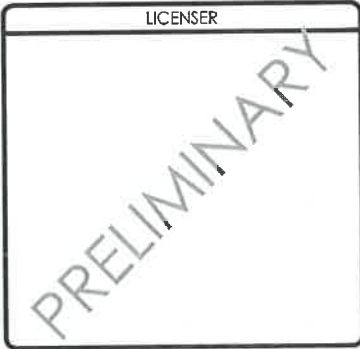
11X17 SCALE: NTS
22 X 34 SCALE: NTS

1 NOTES



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VER.	DATE	DESCRIPTION
1	8/13/19	PRELIM CX DRAWINGS
2	09/19/19	CLIENT COMMENT



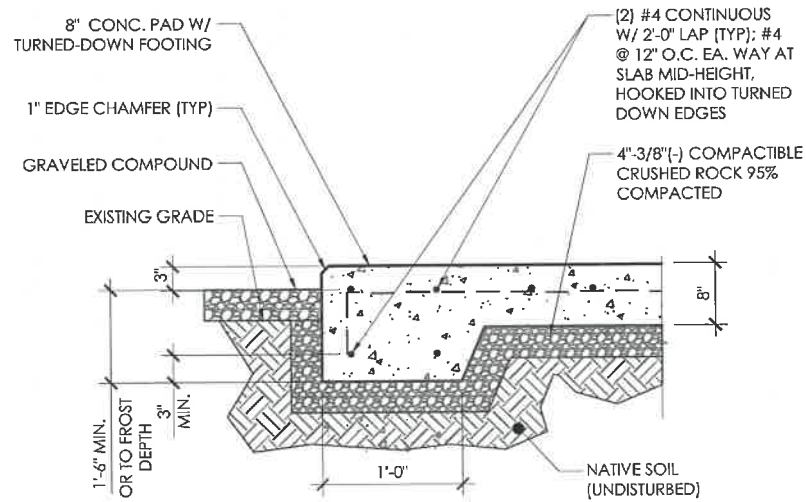
PROJECT INFORMATION
OR4 FOSTER LAKE
1602 18TH AVE
SWEET HOME, OR 97386

SHEET TITLE
FENCE DETAILS

SHEET NO.
A6.0

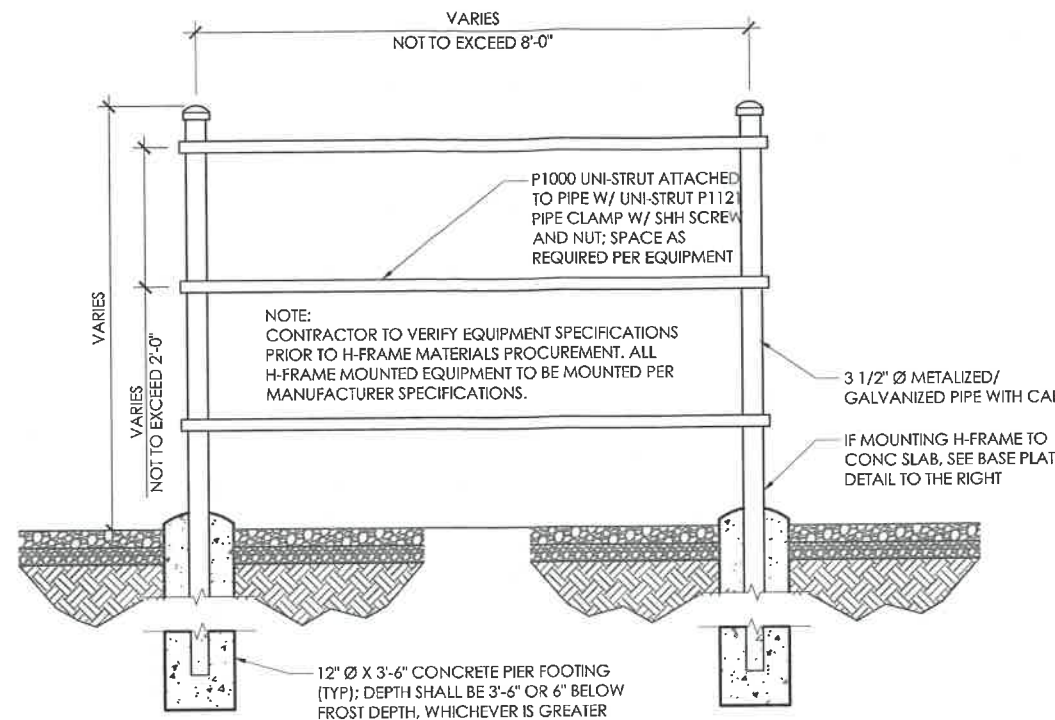
NOTES:

1. SEE STRUCTURAL CONCRETE NOTES, SHEET GN2.0.
2. SLOPE CONCRETE 1/4" PER FOOT MINIMUM.
3. VERIFY EQUIPMENT CABINET SPECIFICATIONS FOR MOUNTING HOLE LOCATIONS.
4. SOIL SHALL BE PREPARED WITH A FLAT SURFACE, FREE AND CLEAR OF STANDING WATER AND LOOSE DEBRIS. SOIL SHOULD BE WELL COMPACTED TO 90% OF IT MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.
5. TOP SURFACE OF SLAB SHALL BE A LIGHT BROOM FINISH AND TAPERED TO ALLOW WATER TO SHED WITHOUT PONDING.



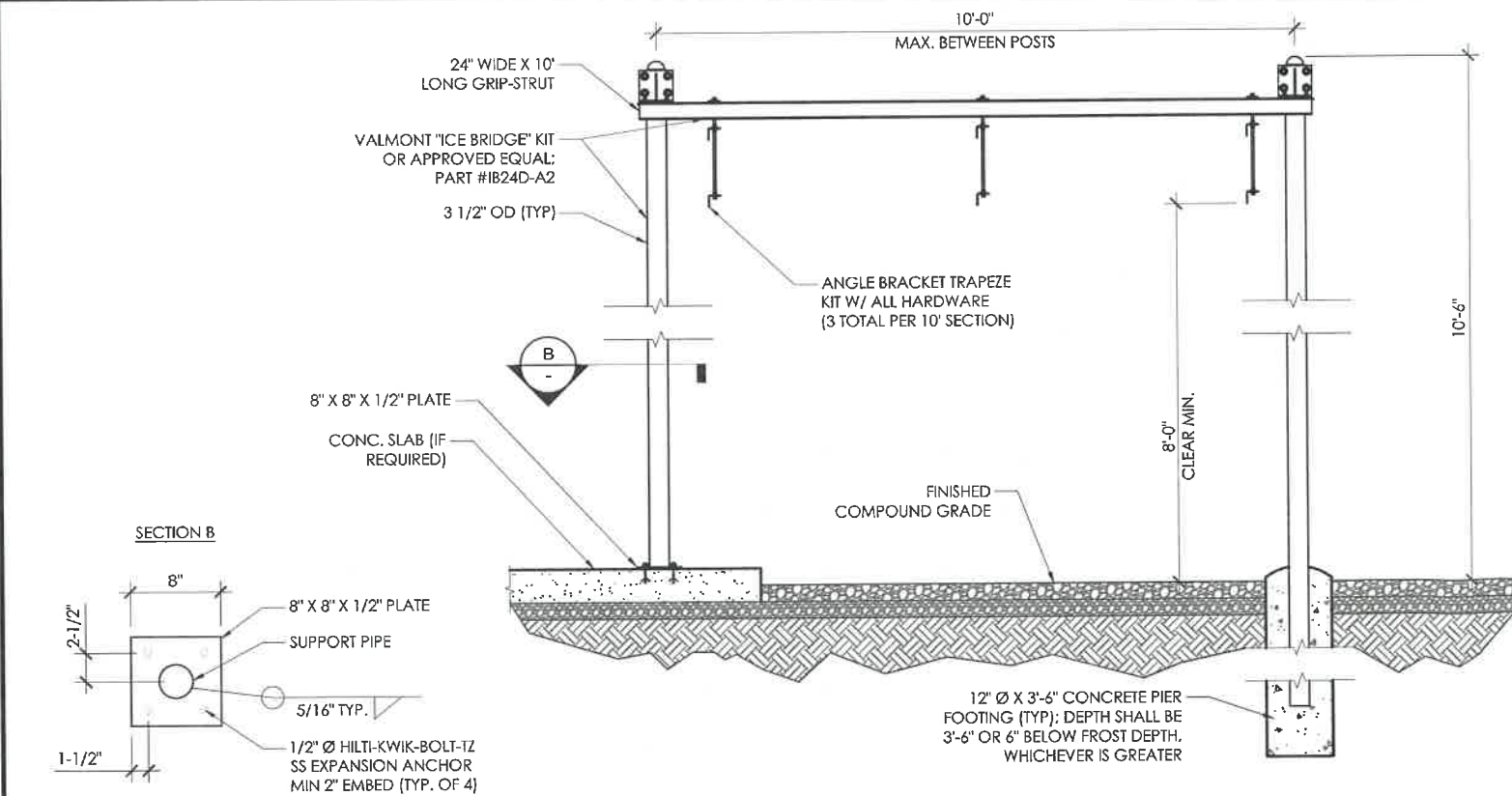
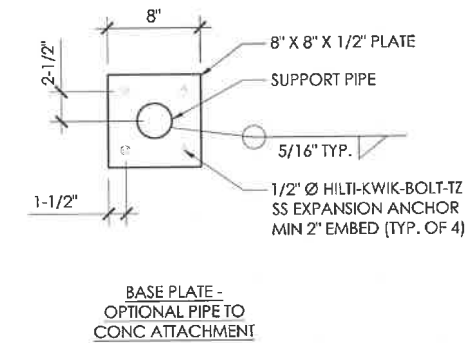
1 EQUIP PAD SECTION

11X17 SCALE: NTS
22 X 34 SCALE: NTS



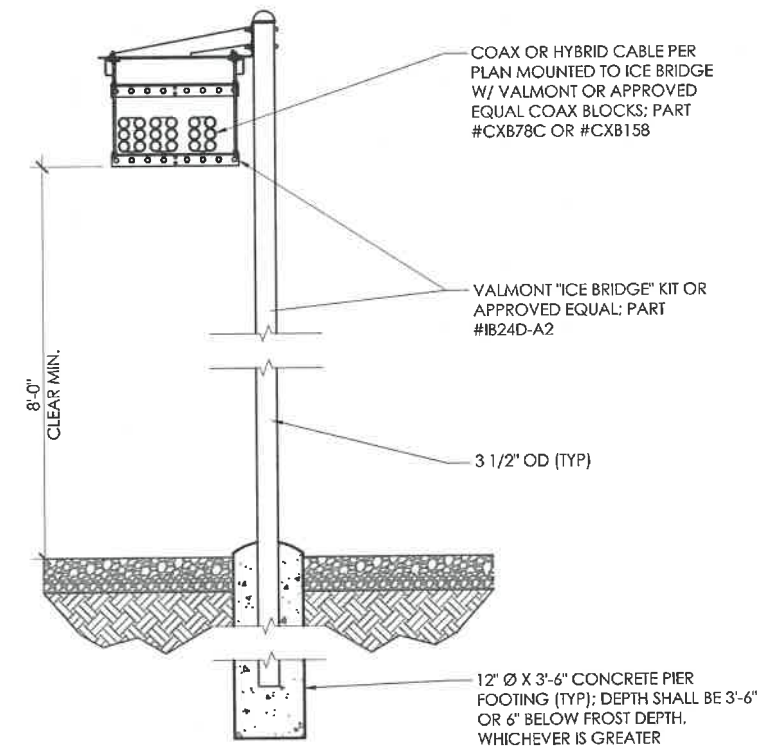
2 H-FRAME

11X17 SCALE: NTS
22 X 34 SCALE: NTS



3 CABLE BRIDGE ELEVATION

11X17 SCALE: NTS
22 X 34 SCALE: NTS



4 CABLE BRIDGE SECTION

11X17 SCALE: NTS
22 X 34 SCALE: NTS



DRAWN BY: CL
CHECKED BY: CL

DRAWING VERSION		
VER.	DATE	DESCRIPTION
1	8/13/19	PRELIM CX DRAWINGS
2	09/19/19	CLIENT COMMENT



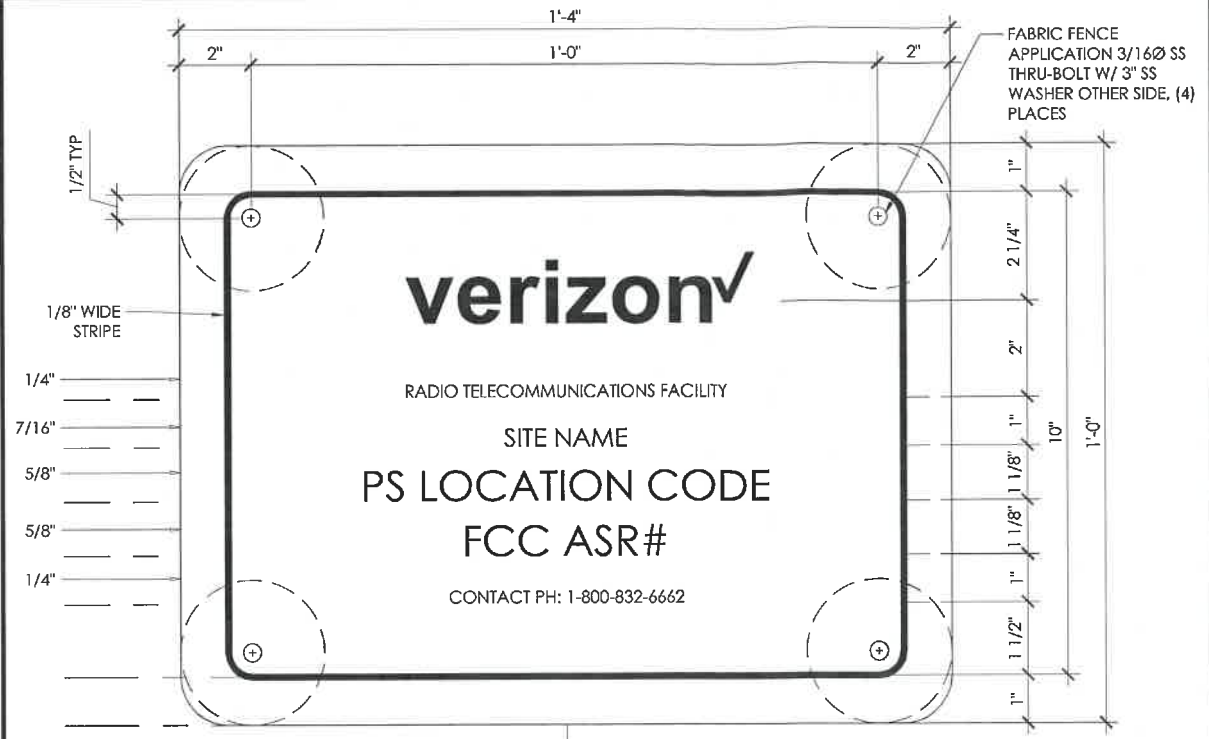
PROJECT INFORMATION
OR4 FOSTER LAKE
1602 18TH AVE
SWEET HOME, OR 97386

SHEET TITLE
CONSTRUCTION DETAILS

SHEET NO.
A7.0

SIGNS AND PLACEMENT:

- LOW LEVEL (BLUE) WARNING SIGNS (PLACE AT SITE ENTRY/ACCESS POINTS ONLY):**
 - ROOF TOPS: PLACE SIGNS ON THE INSIDE OF ROOF HATCH. PLACE ON ACCESS DOOR UNLESS DOOR IS USED BY GENERAL PUBLIC OR BUILDING TENANTS REGULARLY FOR ACCESS. IN THESE CASES, CONSULT CONSTRUCTION MANAGER OR QC SUPERVISOR.
 - WATER TANKS: PLACE SIGNS ON COMPOUND GATE.
 - VERIZON -OWNED SITES: PLACE ONE SIGN ON SITE GATE.
- HIGH LEVEL (RED) CAUTION SIGNS (PLACE AT ALL ANTENNA SECTORS WHERE ACCESS BY THE GENERAL PUBLIC TO THE ANTENNAS IS POSSIBLE):**
 - ALL SIGNS WILL BE SECURED WITH EITHER STAINLESS STEEL ZIP TIES OR STAINLESS TECH SCREWS.
- CC PARTICIPATION IN SIGN LOCATION:**
 - CM WILL MEET WITH ALL CC'S TO OUTLINE CRITERIA FOR SIGN PLACEMENT. EMPHASIS WILL BE ON "GRAY AREA" SITES. WHERE SIGN PLACEMENT IS PARTICULARLY CHALLENGING. WE WILL GIVE CC'S AS MUCH GUIDANCE ON SPECIFIC SITUATIONS AS WE CAN FORESEE, BUT CC'S WILL BE ENCOURAGED TO PARTNER WITH CM OR QC IN DECIDING PLACEMENT OF DIFFICULT SITES. A JOINT SITE VISIT MAY BE REQUIRED TO FULFILL REQUIREMENTS.
 - CC WILL CALL OUT SIGN LOCATION(S) AT THE A&E WALK FOR EACH SITE AS THOSE OCCUR.
 - ON SITES WITH EXISTING A&E BUT NOT YET CONSTRUCTED, CC WILL BE ASKED TO PROVIDE (WITHIN A REASONABLE TIME FRAME TBD) A DETAIL FOR SIGN PLACEMENT THAT WILL BE SLIP-SHEETED INTO EXISTING SETS.
- SIGN DISBURSEMENT FROM WAREHOUSE:**
 - SIGNS WILL BE IN STOCK AT KENT WAREHOUSE TO BE DISBURSED AS PART OF THE GC BOM AS CALLED OUT IN A&E DRAWINGS FOR EACH SITE.



- NOTES:**
- FOR VERIZON LOGO SEE VERIZON DESIGN SPECIFICATIONS (PROVIDED BY VERIZON)
 - ALL TEXT FONT IS ARIAL U.N.O.
 - CONTRACTOR TO PROCURE FCC NO. FROM COMPLIANCE COORDINATOR PH: (425) 895-7000
 - TEXT FOR SIGNAGE SHALL INDICATE CORRECT SITE NAME AND NUMBER AS PER VERIZON CONSTRUCTION MANAGER RECOMMENDATIONS.
 - CABINET / SHELTER MOUNTING APPLICATION REQUIRES ANOTHER PLATE APPLIED TO THE FACE OF THE CABINET WITH WATER PROOF POLYURETHANE ADHESIVE.

NOTICE

Beyond this point you are entering an area where RF Emissions may exceed the FCC General Population Exposure Limits

Follow all posted signs and site guidelines for working in an RF environment

Ref: FCC 47cfr 1.137(b)

DRAWN BY: CL
CHECKED BY: CL

DRAWING VERSION		
VER.	DATE	DESCRIPTION
1	8/13/19	PRELIM CX DRAWINGS
2	09/19/19	CLIENT COMMENT

1 NOTES

2 VERIZON SITE SIGNAGE

3 RF WARNING SIGN

CAUTION

On this tower:
Radio frequency fields near some antennas may exceed FCC rules for human exposure.

Personnel climbing this tower should be trained for working in radio frequency environments and use a personal RF monitor if working near active antennas.

Ref: FCC 47cfr 1.137(b)

INFORMATION

VERIZON operates telecommunications antennas at this location. Remain at least 3 feet away from any antenna and obey all posted signs.

Contact the owner(s) of the antenna(s) before working closer than 3 feet from the antenna(s)

Contact VERIZON at (VERIFY PHONE#) prior to performing any maintenance or repairs near VERIZON antennas

This is site#
Contact the management office if this door/hatch/gate is found unlocked.

INFORMACION

En esta propiedad se ubican antenas de telecomunicaciones operadas por VERIZON. Favor mantener una distancia de no menos de 3 pies y obedecer todos los avisos.

Comuniquese con el propietario o las propietarias de las antes de trabajar o caminar de menos de 3 pies de la antena

Comuniquese con VERIZON (PHONE#) antes de realizar cualquier mantenimiento a reparaciones cara de las antenas de VERIZON

Esta es la estacion base numero

favor comunicarse con la oficina de la administracion del edificio si esta puerta o compuerta se encuentra sin candado

DANGER

NO TRESPASSING

DANGER

NO TRESPASSING

PRELIMINARY

LICENSER

PROJECT INFORMATION

OR4 FOSTER LAKE

1602 18TH AVE
SWEET HOME, OR 97386

SHEET TITLE

SITE SIGNAGE DETAILS

SHEET NO.

A8.0

4 RF WARNING SIGN

5 INFORMATION SIGN

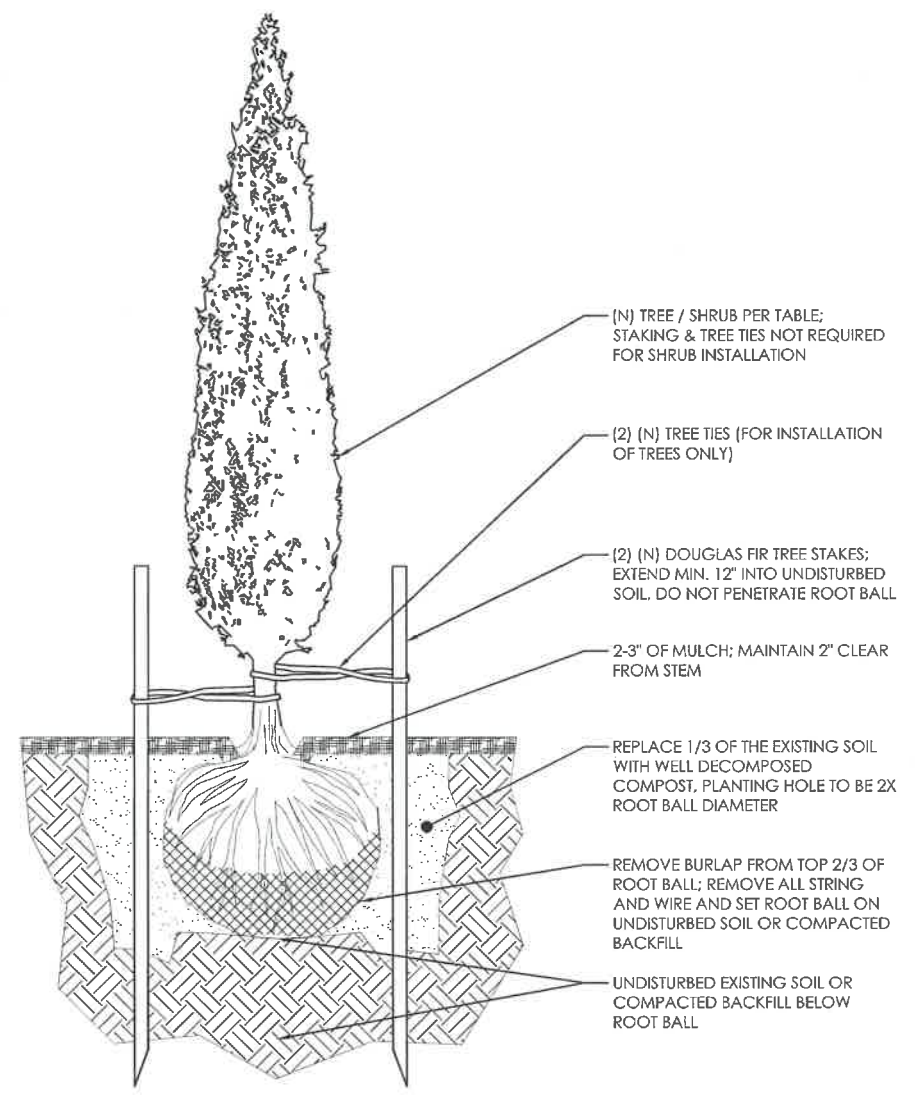
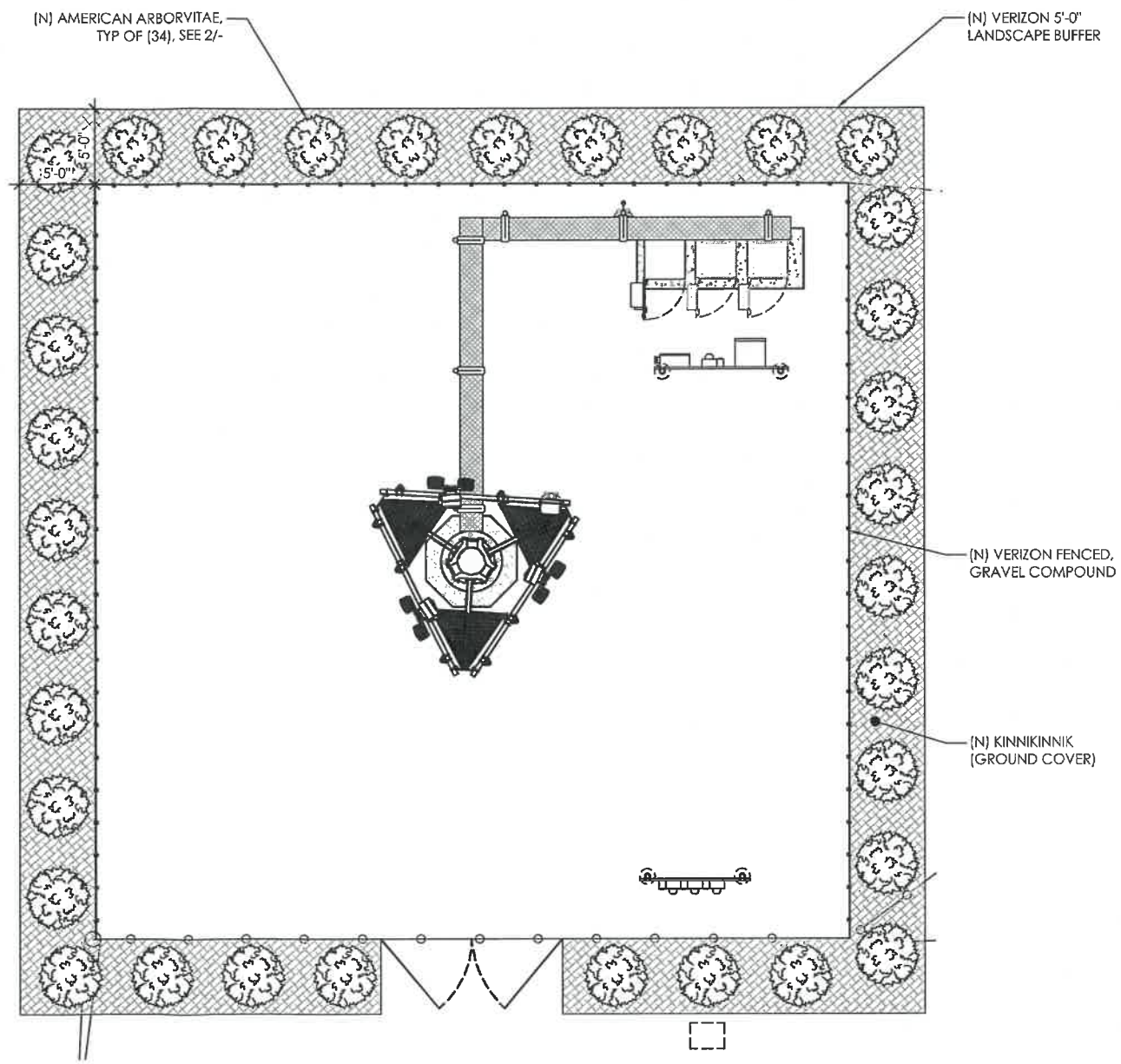
6 NOT USED

7 NO TRESPASSING SIGN

1. ALL LANDSCAPING SHALL BE INSTALLED PRIOR TO RECEIVING FINAL BUILDING INSPECTION APPROVAL.
2. ALL PLANTINGS ARE DROUGHT TOLERANT, NO IRRIGATION IS REQUIRED FOLLOWING INITIAL WATERING AT INSTALLATION.
3. ALL PLANTINGS WILL BE WARRANTED BY LANDSCAPER FOR A PERIOD OF ONE YEAR FROM INSTALLATION.
4. ALL DEBRIS AND EXISTING GROUND COVER REMOVAL IS TO BE DONE BY THE CONTRACTOR.
5. MULCH (AS A GROUND COVER) MUST BE CONFINED TO AREAS UNDERNEATH PLANTS AND IS NOT A SUBSTITUTE FOR GROUND COVER PLANTS.
6. CONTRACTOR TO PROVIDE SUFFICIENT WATERING UPON INITIAL INSTALLATION OF PLANTINGS.
7. ALL PLANTINGS SHALL BE FERTILIZED PER SPECIFIC SPECIE REQUIREMENTS.
8. THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE TO ARRANGE AN ON-SITE MEETING TO DISCUSS PROJECT PRIOR TO COMMENCEMENT OF ANY WORK.
9. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UNDERGROUND UTILITIES AND OTHER OBSTRUCTIONS THAT MAY AFFECT THE WORK, AND SHALL BE RESPONSIBLE FOR REPAIRING AND/OR REPLACING, AT HIS OR HER OWN EXPENSE, ANY DAMAGES FROM HIS OR HER OPERATION.
10. CLEAR AND GRUB ALL NEW PLANTING AREAS PRIOR TO THE INSTALLATION OF ANY NEW PLANT MATERIAL.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ALL EXISTING LANDSCAPED AREAS DAMAGED AS A RESULT OF THE CONSTRUCTION OF THIS PROJECT, AND REPLANT WITH SAME SPECIES AS NEEDED.

1 NOTES

PLANT LIST					
SYMBOL	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	CLASS.
	THUJA OCCIDENTALIS	AMERICAN ARBOVITAE	(34)	6'-0" HT. MIN. @ PLANTING	HIGH SCREEN SHRUB
	ARCTOSTAPHYLOS UVA-URSI	KINNIKINNIK (BEARBERRY)	(T.B.D.)	1 GAL. & 30" O.C. EACH WAY	GROUND COVER



2 TREE / SHRUB PLANTING

11X17 SCALE: NTS
22 X 34 SCALE: NTS

3 LANDSCAPE PLAN

11X17 SCALE: NTS
22 X 34 SCALE: NTS



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VER.	DATE	DESCRIPTION
1	8/13/19	PRELIM CX DRAWINGS
2	09/19/19	CLIENT COMMENT



PROJECT INFORMATION
OR4 FOSTER LAKE
1602 18TH AVE
SWEET HOME, OR 97386

SHEET TITLE
LANDSCAPE PLAN

SHEET NO.
L1.0



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PROJECT INFORMATION

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SWEET HOME, OR 97386

SHEET TITLE

RF PLUMBING
DIAGRAM

SHEET NO.

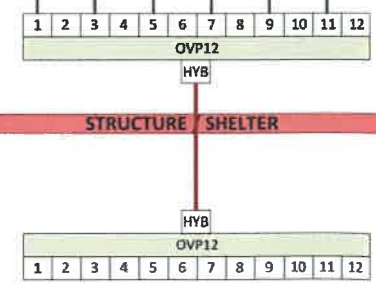
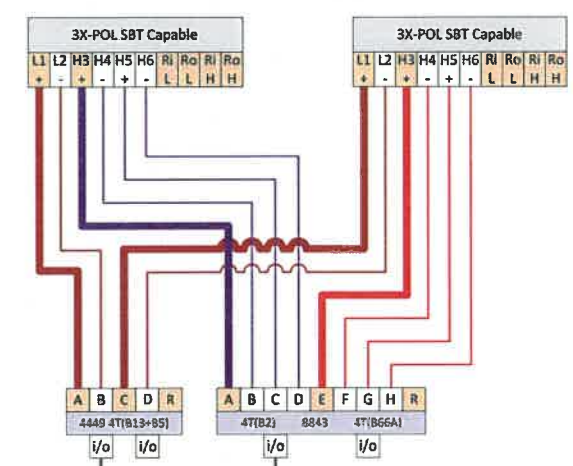
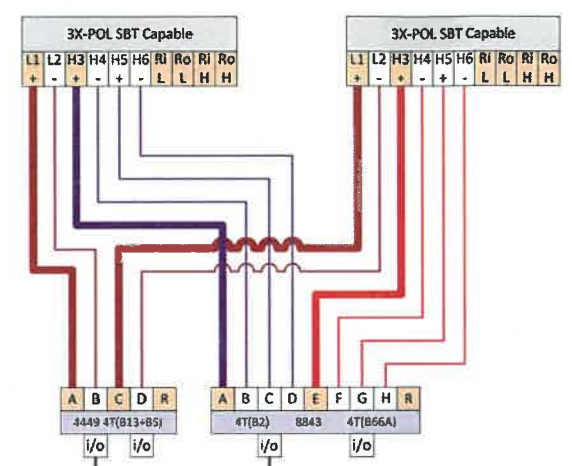
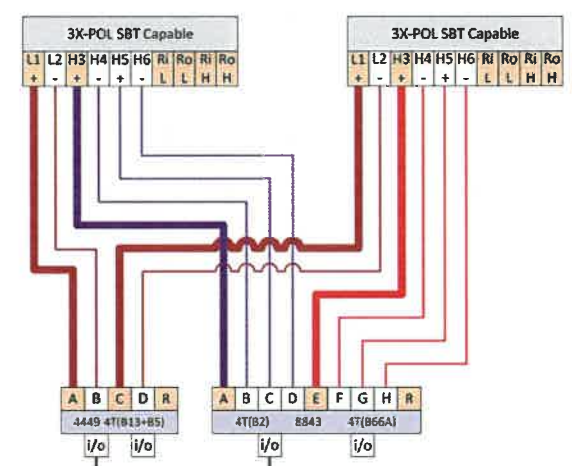
RF1.0

EUG FOSTER LAKE [3 Sector – 4x4 RET RRH (700, 850, PCS, AWS1, AWS3)]

SECTOR 1

SECTOR 2

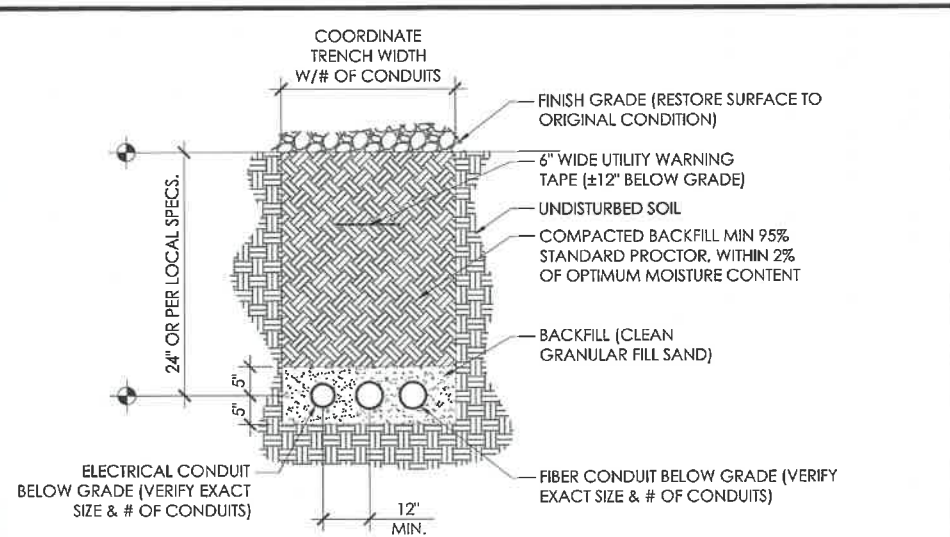
SECTOR 3



- RRU Bands:**
- 700 ----- Band 13
 - AWS ----- Band 4
 - PCS ----- Band 2
 - 850 ----- Band 5
 - AWS-1/3 ----- Band 66A
 - CBRS ----- Band 48
 - LAA ----- Band 46

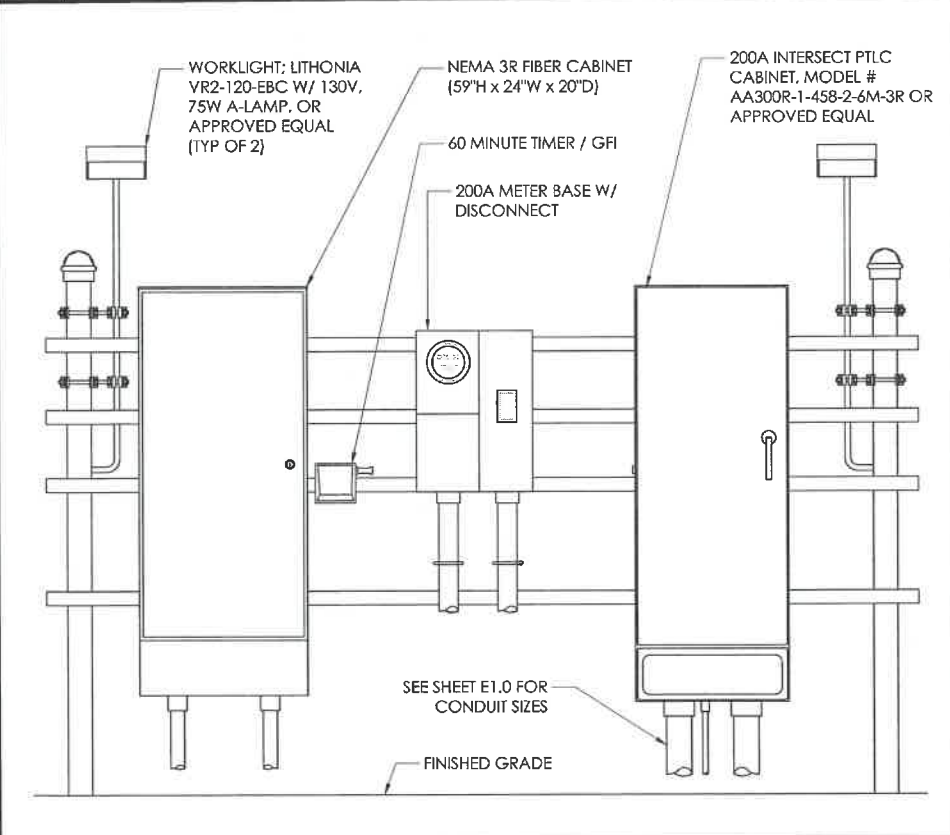
RET Control Path Note:
All Smart BiasT's (SBT)/Internal BiasT's, or External AISG RET Controllers are driven by the **BOLD** coax/jumper pathways.

Example:
Antenna port '1' driven by RRH port 'A'

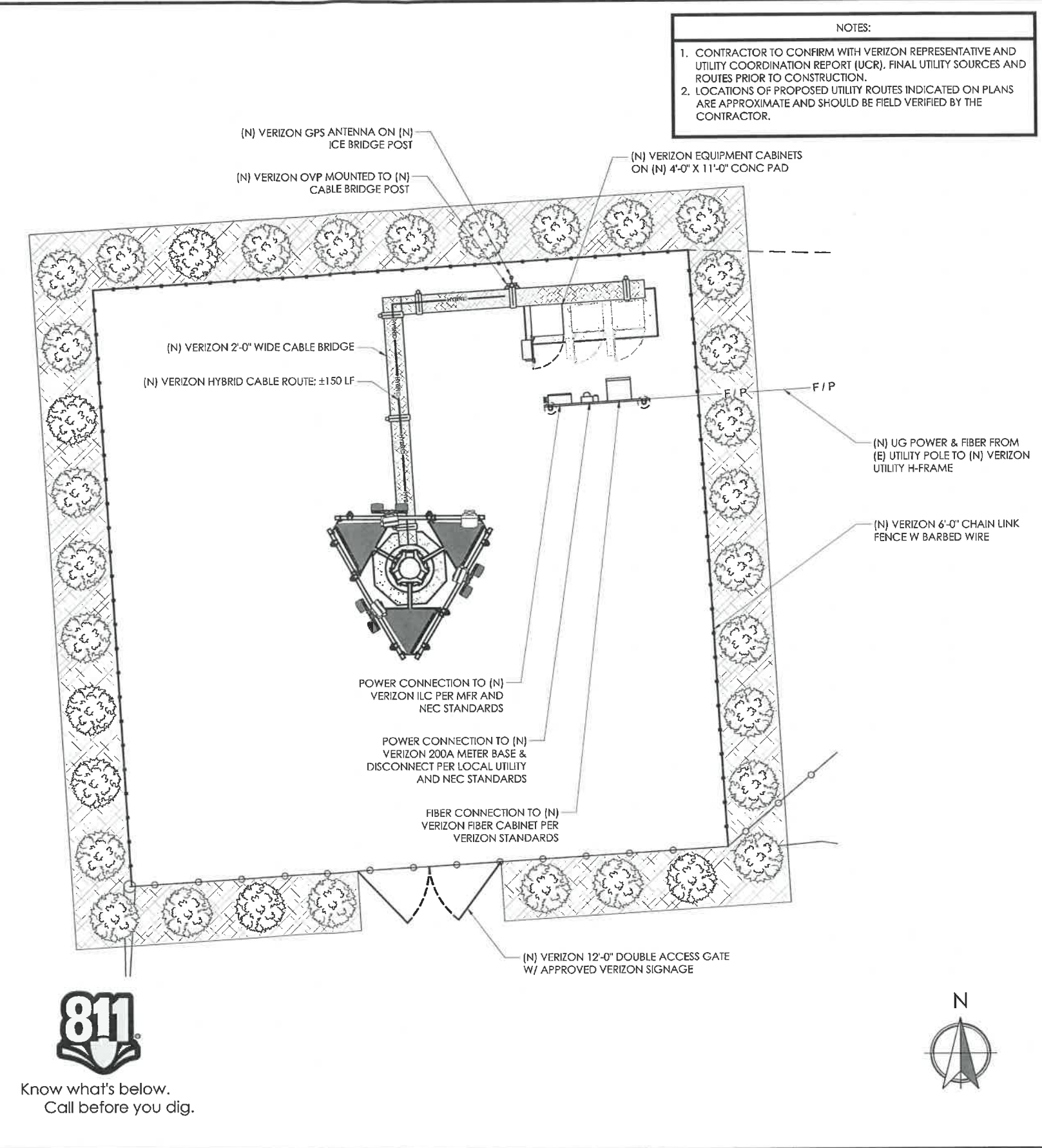


- NOTES:**
1. INSTALL ALL UNDERGROUND UTILITIES PER LOCAL UTILITY REQUIREMENTS.
 2. LOCATE ALL UNDERGROUND UTILITIES PRIOR TO TRENCHING / EXCAVATION.
 3. COORDINATE SIZE, TYPE, AND STUB-UP LOCATIONS WITH LOCAL UTILITY COMPANIES REQUIREMENTS.
 4. REFER TO ELECT PLAN FOR EXACT SIZE AND LOCATION.
 5. ALL SWEEPS TO HAVE A MINIMUM BENDING RADIUS OF 36" UNLESS NOTED OTHERWISE.
 6. CONTRACTOR TO MAINTAIN MIN. SEPARATION REQUIREMENTS BETWEEN MULTIPLE CONDUITS PER LOCAL UTILITY REQUIREMENTS.
 7. COMPACT BACKFILL TO 95% PROCTOR DENSITY AT ALL DRIVEWAY OR HARD SURFACED AREAS. COMPACT TO 90% PROCTOR DENSITY ALL OTHER AREAS UNLESS NOTED OTHERWISE, REFER TO GEOTECHNICAL REPORT.
 8. CONTRACTOR TO RESTORE TRENCH TO ITS ORIGINAL CONDITION BY SEEDING / SODDING GRASS AREAS, OR REPLACING ASPHALT / CONCRETE TO THEIR ORIGINAL CROSS SECTION.
 9. CONTRACTOR TO OBTAIN NECESSARY PERMITS FOR ALL RIGHT-OF-WAY WORK.

1 UTILITY TRENCH 11X17 SCALE: NTS
22 X 34 SCALE: NTS



2 UTILITY H-FRAME 11X17 SCALE: NTS
22 X 34 SCALE: NTS



3 UTILITY SITE PLAN 11X17 SCALE: 1" = 10'-0"
22 X 34 SCALE: 1" = 5'-0"

- NOTES:**
1. CONTRACTOR TO CONFIRM WITH VERIZON REPRESENTATIVE AND UTILITY COORDINATION REPORT (UCR), FINAL UTILITY SOURCES AND ROUTES PRIOR TO CONSTRUCTION.
 2. LOCATIONS OF PROPOSED UTILITY ROUTES INDICATED ON PLANS ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED BY THE CONTRACTOR.



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PROJECT INFORMATION
OR4 FOSTER LAKE
1602 18TH AVE
SWEET HOME, OR 97386

SHEET TITLE
UTILITY SITE PLAN

SHEET NO.
E1.0

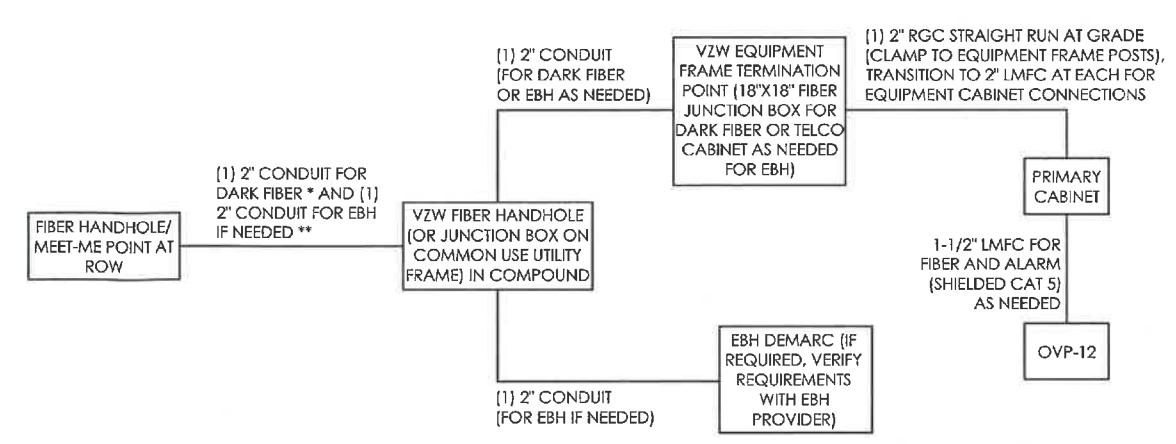
COMMON V2W DC PLANT RECTIFIER REQUIREMENTS			
RECTIFIER	INPUT FLA CURRENT AT 240 VAC (EACH RECTIFIER)	2 RECT / BRANCH CIRCUIT ALTERNATE APPROACH	1 RECT / BRANCH CIRCUIT ALTERNATE APPROACH
VERTIV 3500W (R48-2000e3 OR SIM)	15.5 AMPS	40A/2P (OR 45A/2P) # 8 THHN	30A/2P # 10 THHN
GE 75A (NE075AC48xxxx OR SIM)	22 AMPS (MAX.)	60A/2P # 6 THHN	30A/2P # 10 THHN
OTHER - COORD W/ VENDOR	REFER TO CUT SHEETS	REFER TO CUT SHEETS	REFER TO CUT SHEETS

LOAD CALCULATION	
LOAD	AMPS
PROPOSED LOAD:	123.0
TOTAL DEMAND:	129.0
VOLTAGE: 120/240V SINGLE PHASE 3W 200A	

PANEL NAME:		VZW ILC		MODEL NUMBER:		INTERSECT AA300G-1PH-3R									
RATED VOLTAGE:		240	120	VOLTS		PHASE/WIRE:									
MAIN BREAKER:		200		AMPS		BUS RATING:									
MOUNT:		SURFACE		NEUTRAL BAR:		YES									
ENCLOSURE TYPE:		NEMA 3R		AIC:		65K									
POS	USAGE FACTOR	BUS AMPS		LOAD	POLES	AMPS	L1	L2	POLES	AMPS	LOAD	BUS AMPS		USAGE FACTOR	POS
		L1	L2									L1	L2		
1	1	18		RECTIFIER	2	30A			30A	2	FUTURE RECTIFIER	18		1	2
3	1		18										18		4
5	1	18		RECTIFIER	2	30A			30A	2	FUTURE RECTIFIER	18		6	
7	1		18										18		8
9	1	18		RECTIFIER	2	30A									10
11	1		18												12
13	1	18		RECTIFIER	2	30A									14
15	1		18												16
17	1.25	12		GH RECEPT. /LIGHT	1	20A									18
19	1.25		12	BLOCK HEATER	1	20A									20
21	1.25	5		BATT. CHARGER	1	20A									22
23															24
25															26
27															28
29															30
		93.25	87	:SUB TOTAL AMPS								SUB TOTAL AMPS:		36	36
												FACTORED TOTAL AMPS:		129.25	123

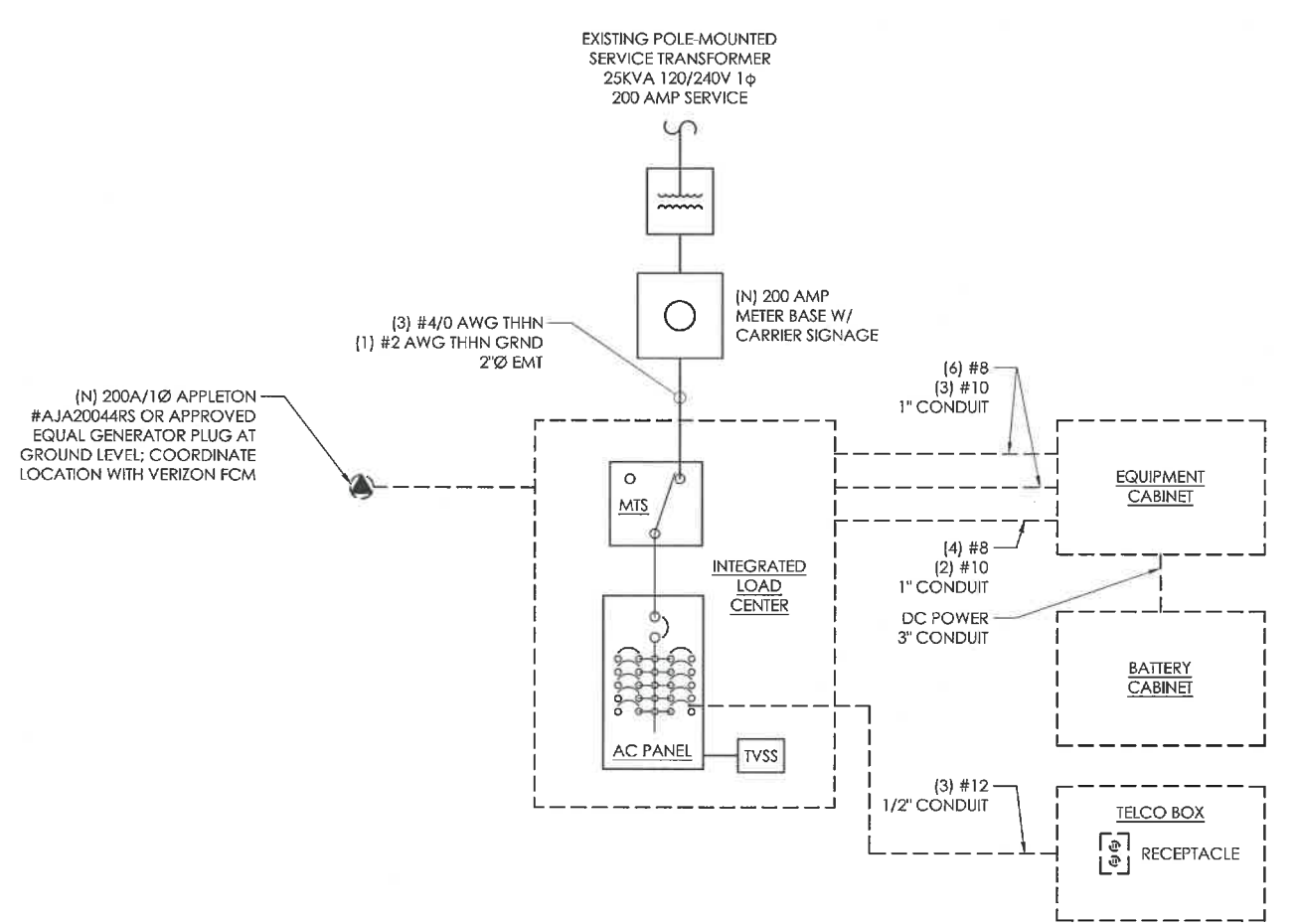
- NOTES:
- ALL CONDUCTORS ARE TYPE THWN (75°C) COPPER.
 - MAXIMUM LENGTH OF RUN FOR RECTIFIER CIRCUITS IS 50FT.
 - INTERSECT/ GENERAC INTEGRATED LOAD CENTER INCLUDES 200 AMP MAIN DISCONNECT AND TRANSFER SWITCH FOR PORTABLE OR PERMANENT GENERATOR.
 - RECTIFIER LOADS ARE CONSIDERED TO BE NON-CONTINUOUS.
 - IF ADDITIONAL FUTURE LOADS ARE ADDED WHICH CAUSE TOTAL DEMAND TO EXCEED GENERATOR BREAKER SIZE, BACKUP POWER SYSTEM SHALL BE EVALUATED AND UPGRADED AS NECESSARY.

PANEL SCHEDULE



FIBER SINGLE LINE DIAGRAM

- * ADD (1) ADDITIONAL 2" CONDUIT FOR DARK FIBER (2 TOTAL) IF REQUIRED BY LOCAL MARKET FACILITIES. VERIFY PRIOR TO CONSTRUCTION. (ADD 2 PULL STRINGS TO EACH CONDUIT)
- ** VERIFY EBH REQUIREMENTS WITH TELCO PROVIDER PRIOR TO CONSTRUCTION. (ADD 2 PULL STRINGS TO EACH CONDUIT)



- NOTES:
- ALL ELECTRICAL WORK TO COMPLY WITH THE CURRENT NEC.
 - ALL WIRING TO BE COPPER CONDUCTORS.
 - SERVICE TRANSFORMER: 25KVA 120/240V 1PHASE - CEA.
 - METER BASE TO BE LABELED "VERIZON WIRELESS".
 - BASED ON A 25 KVA 240V 1-PHASE TRANSFORMER WITH A IMPEDANCE OF 1.5%. THE AVAILABLE FAULT CURRENT AT THE METER/SERVICE DISCONNECT IS LESS THAN 6.94 KA.
 - SERVICE GROUNDING ELECTRODE CONDUCTOR SIZE TO COMPLY WITH NEC 250.66.
 - NEUTRAL TO BE BONDED TO THE SYSTEM GROUND AT THE VERIZON WIRELESS SERVICE ONLY.
 - A SIGN SHALL BE AFFIXED AT THE SERVICE DISCONNECT STATING "WARNING SHOCK HAZARD EXISTS IF GROUNDING ELECTRODE CONDUCTOR OR BONDING JUMPER CONNECTION IN THIS EQUIPMENT IF REMOVED WHILE ALTERNATE SOURCE(S) IS ENERGIZED PER 702.(B).

2101 4TH AVE E, SUITE 202
OLYMPIA, WA 98506
360.915.0750
WWW.CAPITALDESIGNSERVICES.COM

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PROJECT INFORMATION

OR4 FOSTER LAKE

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SWEET HOME, OR 97386

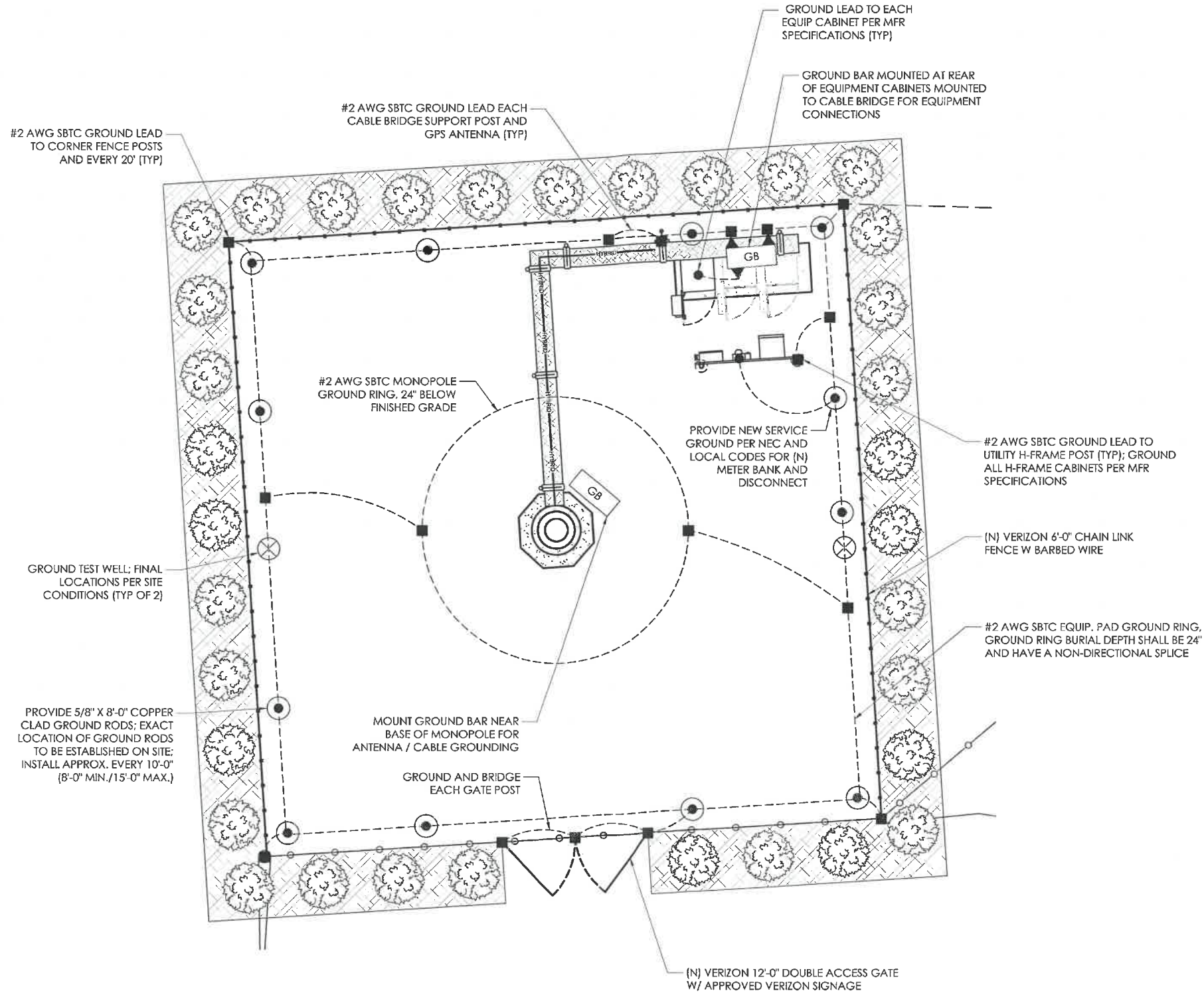
SHEET TITLE

ELEC. DIAGRAM & PANEL SCHED.

SHEET NO.

E2.0

1. DEPICTION OF GROUNDING DESIGN IS FOR CONCEPTUAL PURPOSES ONLY. CONTRACTOR TO DETERMINE FINAL ROUTING PER EXISTING SITE CONDITIONS.
2. GROUNDING SHALL COMPLY WITH LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
3. ALL GROUNDING SHALL CONFORM TO THE CURRENT CARRIER STANDARDS.
4. MINIMUM BENDING RADIUS FOR GROUND CONDUCTOR IS 8". WHEN BENDING IS NECESSARY, GROUND CONDUCTORS ARE TO BE AS STRAIGHT AS POSSIBLE.
5. ALL ABOVE GRADE GROUND LEADS TO BE SHEATHED IN CARFLEX-X-FLEX™ FLEXIBLE CONDUIT OR APPROVED EQUAL.
6. ALL GROUND BAR CONNECTIONS ARE TO BE 2 HOLE LUG COMPRESSION TYPE. STACKED CONNECTIONS ARE NOT ACCEPTABLE. BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BAR WILL BE PERMITTED.
7. NO SPLICES PERMITTED IN GROUND CONDUCTORS.
8. ALL GROUNDING CONNECTORS TO BE CLEAN AND FREE OF PAINT AT THEIR MATING SURFACES AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. USE PENETROX OR APPROVED EQUAL ANTIOXIDANT GREASE.
9. ENSURE ALL MECHANICAL CONNECTORS ARE TORQUED TO THE MANUFACTURER'S SPECIFIED VALUES.
10. MULTIPLE BONDS ON GROUND RODS TO BE SEPARATED BY AT LEAST 6".
11. MAXIMUM RESISTANCE OF THE COMPLETED GROUND SYSTEM SHALL NOT EXCEED A RESISTANCE OF 5 OHMS TO EARTH.
12. GROUND WIRES SHALL NOT BE INSTALLED THROUGH HOLES IN ANY METAL OBJECTS OR SUPPORTS TO PRECLUDE ESTABLISHING A "CHOKER" POINT.
13. FERROUS METAL CLIPS WHICH COMPLETELY SURROUND THE GROUND WIRE SHALL NOT BE USED. METAL CLIPS THAT DO NOT COMPLETELY SURROUND THE GROUND WIRE OR PLASTIC CLIPS ARE ACCEPTABLE.
14. ALL OUTDOOR CONNECTIONS TO BE EXOTHERMIC CADWELD, INTERIOR CONNECTIONS CAN BE A PROPERLY APPLIED CRIMP TYPE UNLESS OTHERWISE SPECIFIED.
15. GROUND BARS SHALL NOT BE FIELD MODIFIED.
16. ALL HORIZONTAL FENCE SECTIONS TO BE GROUNDED WITH 8" SINGLE BARREL GROUND STRAPS.
17. GROUND RING BURIAL DEPTH SHALL BE 24" AND HAVE A NON-DIRECTIONAL SPLICE.
18. A CERTIFIED CONTRACTOR WILL MAKE ALL MEASUREMENTS REQUIRED TO TEST THE GROUNDING SYSTEM, USING A MEGGER OR EQUIVALENT. THE ACCEPTABLE RESISTANCE MEASURED FOR THE GROUNDING SYSTEM WILL NOT EXCEED 5 OHMS RESISTANCE. THREE DISTANCES SHALL BE USED: 1 AT 100 FEET, 1 AT 70 FEET, AND 1 AT 35 FEET. THESE DISTANCES ARE SUBJECT TO A SITE BY SITE BASIS. VERIZON WIRELESS SHALL BE GIVEN 24 HOURS NOTICE BEFORE TESTING IS TO BE DONE. THE COST ASSOCIATED WITH GROUND TESTING WILL BE AT THE EXPENSE OF THE CONTRACTOR.
19. PROVIDE #2 TW GREEN JUMPER FROM EACH CABLE BRIDGE POST TO CABLE BRIDGE CHANNEL.



LEGEND

- ⊗ GROUND TEST WELL
- GROUND ROD
- CAD WELD CONNECTION
- ▲ MECHANICAL CONNECTION (DOUBLE HOLE LUG)
- CONNECT PER MFR SPECIFICATIONS
- GB GROUND BAR

1 GROUNDING PLAN



11X17 SCALE: NTS
22 X 34 SCALE: NTS

verizon

velocitel
complete wireless solutions

CAPITAL DESIGN SERVICES
2101 4TH AVE E, SUITE 202
OLYMPIA, WA 98506
360.915.6750
WWW.CAPITALDESIGNSERVICES.COM

VECTOR
ENGINEERS

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GROUNDING PLAN

SHEET NO.

E3.0

GENERAL CONSTRUCTION NOTES

- ALL WORK SHALL ADHERE TO THE REQUIREMENTS OF THE LOCAL BUILDING CODE (LATEST EDITION), AND ALL OTHER APPLICABLE CODES AND ORDINANCES AS REQUIRED BY THE JURISDICTION.
- CONTRACTOR SHALL CONSTRUCT SITE IN ACCORDANCE WITH THESE DRAWINGS AND THE CARRIER INTEGRATED CONSTRUCTION STANDARDS FOR WIRELESS SITES (LATEST REVISION). SPECIFICATIONS ARE THE RULING DOCUMENTS, AND ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND THESE DRAWINGS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD (EOR) PRIOR TO PROCEEDING WITH CONSTRUCTION.
- THE DRAWINGS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY, UNLESS OTHERWISE NOTED. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT AND APPURTENANCES, AND LABOR NECESSARY TO EFFECT ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- CONTRACTOR SHALL VISIT THE JOB SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. FIELD CONDITIONS INCLUDING DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN IN THE DRAWINGS PRIOR TO PROCEEDING WITH CONSTRUCTION, IS REQUIRED. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE EOR PRIOR TO THE COMMENCEMENT OF WORK. NO COMPENSATION WILL BE AWARDED BASED ON CLAIM OF LACK OF KNOWLEDGE OF FIELD CONDITIONS.
- DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, AND SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE WORK.
- DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
- CONTRACTOR SHALL RECEIVE CLARIFICATION IN WRITING, AND SHALL RECEIVE IN WRITING AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEMS NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING THE BEST CONSTRUCTION SKILLS AND ATTENTION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER CONTRACT, UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS.
- CONTRACTOR SHALL COORDINATE HIS WORK WITH THE SUPERINTENDENT OF BUILDINGS & GROUNDS AND SCHEDULE HIS ACTIVITIES AND WORKING HOURS IN ACCORDANCE WITH THE REQUIREMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK OF OTHERS AS IT MAY RELATE TO RADIO EQUIPMENT, ANTENNAS AND ANY OTHER PORTIONS OF THE WORK.
- INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
- MAKE NECESSARY PROVISIONS TO PROTECT EXISTING SURFACES, EQUIPMENT, IMPROVEMENTS, PIPING ETC. AND IMMEDIATELY REPAIR ANY DAMAGE THAT OCCURS DURING CONSTRUCTION.
- IN DRILLING HOLES INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, PIPE RUNS, ETC., MUST BE CLEARLY UNDERSTOOD THAT REINFORCING STEEL SHALL NOT BE DRILLED INTO, CUT OR DAMAGED UNDER ANY CIRCUMSTANCES (UNLESS NOTED OTHERWISE). LOCATIONS OF REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND THEREFORE MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT.
- REPAIR ALL EXISTING WALL SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND IN WITH ADJACENT SURFACES.
- SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH U.L. LISTED AND FIRE CODE APPROVED MATERIALS.
- KEEP CONTRACT AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, AND RUBBISH. EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OF THE OWNER SHALL BE REMOVED. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ITEMS UNTIL COMPLETION OF CONSTRUCTION.
- MINIMUM BEND RADIUS OF ANTENNA CABLES SHALL BE IN ACCORDANCE WITH CABLE MANUFACTURERS RECOMMENDATIONS.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF THE ENGINEER.
- CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION SHALL BE IN CONFORMANCE WITH JURISDICTIONAL OR STATE AND LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL AND COORDINATED WITH LOCAL REGULATORY AUTHORITIES.
- LIGHT SHADED LINES AND NOTES REPRESENT WORK PREVIOUSLY DONE, DARK SHADED LINES AND NOTES REPRESENT THE SCOPE OF WORK FOR THIS PROJECT. CONTRACTOR SHALL VERIFY IF EXISTING CONSTRUCTION IS COMPLETE. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY EXISTING CONDITIONS THAT DEVIATE FROM THE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS AND/OR WIRING CERTIFICATES REQUIRED FOR THE ELECTRICAL SERVICE UPGRADE. IN ADDITION, CONTRACTOR SHALL PROVIDE ALL NECESSARY COORDINATION AND SCHEDULING WITH THE SERVING ELECTRICAL UTILITY AND LOCAL INSPECTION AUTHORITIES.
- CONTRACTOR TO VERIFY ALL ASPECTS OF THE EXISTING STRUCTURE FOR CONFORMITY WITH THE VALUES SHOWN IN THESE DRAWINGS AND NOTIFY THE E.O.R. IF ANY DISCREPANCIES ARE FOUND. ALL ELEMENTS OF EXISTING STRUCTURE TO REMAIN UNDISTURBED, U.N.O.

SITE WORK NOTES

- DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.
- DO NOT SCALE BUILDING DIMENSIONS FROM DRAWING.
- SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON AS-BUILT DRAWINGS BY GENERAL CONTRACTOR AND ISSUED TO ARCHITECT/ENGINEER AT COMPLETION OF PROJECT.
- ALL EXISTING UTILITIES, FACILITIES, CONDITIONS AND THEIR DIMENSIONS SHOWN ON PLANS HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ENGINEER AND OWNER ASSUME NOT RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.
- CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES BOTH HORIZONTALLY AND VERTICALLY PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER FOR RESOLUTION AND INSTRUCTION. AND NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT/ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT HIS/HER OWN RISK AND EXPENSE.
- CONTRACTOR SHALL CALL LOCAL DIGGER HOT LINE FOR UTILITY LOCATIONS 48 HOURS PRIOR TO START OF CONSTRUCTION.
- ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK.
- GRADING OF THE SITE WORK AREA IS TO BE SMOOTH AND CONTINUOUS IN SLOPE AND IS TO FEATHER INTO EXISTING GRADES AT THE GRADING LIMITS.
- ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
- STRUCTURAL FILLS SUPPORTING PAVEMENTS SHALL BE COMPACTED TO 95% OF MAXIMUM STANDARD PROCTOR DRY DENSITY.
- NEW GRADES NOT IN BUILDING AND DRIVEWAY IMPROVEMENT AREA TO BE ACHIEVED BY FILLING WITH APPROVED CLEAN FILL AND COMPACTED TO 95% OF STANDARD PROCTOR DENSITY.
- ALL FILL SHALL BE PLACED IN UNIFORM LIFTS. THE LIFTS THICKNESS SHOULD NOT EXCEED THAT WHICH CAN BE PROPERLY COMPACTED THROUGHOUT ITS ENTIRE DEPTH WITH THE EQUIPMENT AVAILABLE.
- ANY FILLS PLACED ON EXISTING SLOPES THAT ARE STEEPER THAN 10 HORIZONTAL TO 1 VERTICAL SHALL BE PROPERLY BENCHED INTO THE EXISTING SLOPE AS DIRECTED BY A GEOTECHNICAL ENGINEER.
- CONTRACTOR SHALL CLEAN ENTIRE SITE DAILY AFTER CONSTRUCTION SUCH THAT NO PAPERS, THRASH, WEEDS, BRUSH OR ANY OTHER DEPOSITS WILL REMAIN. ALL MATERIALS COLLECTED DURING CLEANING OPERATIONS SHALL BE DISPOSED OF OFF-SITE BY THE GENERAL CONTRACTOR.
- ALL TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH THE IMPROVEMENTS SHALL BE PROTECTED BY THE GENERAL CONTRACTOR.
- ALL SITE WORK SHALL BE CAREFULLY COORDINATED BY GENERAL CONTRACTOR WITH LOCAL UTILITY COMPANY, TELEPHONE COMPANY, AND ANY OTHER UTILITY COMPANIES HAVING JURISDICTION OVER THIS LOCATION.
- IN ALL AREAS TO RECEIVE FILL, REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE. PLOW STRIP OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SUCH THAT FILL MATERIAL WILL BIND WITH EXISTING/PREPARED SOIL SURFACE.
- WHEN SUB GRADE OR PREPARED GROUND SURFACE HAS A DENSITY LESS THAN THAT REQUIRED FOR THE FILL MATERIAL, SCARIFY THE GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE-CONDITION AND/OR AERATE THE SOILS AND RE-COMPACT TO THE REQUIRED DENSITY PRIOR TO PLACEMENT OF FILLS.
- IN AREAS WHICH EXISTING GRAVEL SURFACING IS REMOVED OR DISTURBED DURING CONSTRUCTION OPERATIONS, REPLACE GRAVEL SURFACING TO MATCH ADJACENT GRAVEL SURFACING AND RESTORED TO THE SAME THICKNESS AND COMPACTION AS SPECIFIED. ALL RESTORED GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES.
- EXISTING GRAVEL SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED WITH THE CONDITION THAT ANY UNFAVORABLE AMOUNTS OF ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ANY ADDITIONAL GRAVEL RESURFACING MATERIAL AS NEEDED TO PROVIDE A FULL DEPTH COMPACTED SURFACE THROUGHOUT SITE.
- GRAVEL SUB SURFACE SHALL BE PREPARED TO REQUIRED COMPACTION AND SUB GRADE ELEVATIONS BEFORE GRAVEL SURFACING IS PLACED AND/OR RESTORED. ANY LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED AND ANY DEPRESSIONS IN THE SUB GRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL SHALL NOT BE USED FOR FILLING DEPRESSIONS IN THE SUB GRADE.
- PROTECT EXISTING GRAVEL SURFACING AND SUB GRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE.
- DAMAGE TO EXISTING STRUCTURES AND/OR UTILITIES RESULTING FROM CONTRACTORS NEGLIGENCE SHALL BE REPAIRED AND/OR REPLACED TO THE OWNERS SATISFACTION AT NO ADDITIONAL COST TO THE CONTRACT.
- ALL SUITABLE BORROW MATERIAL FOR BACK FILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATIONS APPROVED BY GOVERNING AGENCIES AT NO ADDITIONAL COST TO THE CONTRACT.
- FOUNDATION DESIGN IS BASED UPON 1,500 PSF ALLOWABLE BEARING PRESSURE. INDEPENDENT SOILS TESTING BY A LICENSED GEOTECHNICAL ENGINEER IS STRONGLY RECOMMENDED TO VERIFY SOIL BEARING CAPACITY, SLOPE STABILITY, AND ALL OTHER APPLICABLE SOILS PARAMETERS.

STRUCTURAL STEEL NOTES

- ALL STEEL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION. STEEL SECTIONS SHALL BE IN ACCORDANCE WITH ASTM AS INDICATED BELOW:
W-SHAPES: ASTM A992, 50 KSI
ANGLES, BARS CHANNELS: ASTM A36, 36 KSI
HSS SECTIONS: ASTM 500, 46 KSI
PIPE SECTIONS: ASTM A53-E, 35 KSI
- ALL EXTERIOR EXPOSED STEEL AND HARDWARE SHALL BE HOT DIPPED GALVANIZED.
- ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP. ALL WELDING SHALL BE PERFORMED IN AN APPROVED SHOP.
- ALL BOLTS FOR STEEL TO STEEL CONNECTIONS TO BE PER ASTM A325. HOLES TO BE 1/16" DIA. LARGER THAN BOLT, U.N.O.
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8"Ø ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
- FIELD MODIFICATIONS ARE TO BE COATED WITH ZINC ENRICHED PAINT.
- HOLES TO RECEIVE EXPANSION/WEDGE ANCHORS SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH AND DIAMETER. LOCATE AND AVOID CUTTING EXISTING REBAR OR TENDONS WHEN DRILLING HOLES IN ELEVATED CONCRETE SLABS OR CONCRETE WALLS.
- USE AND INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER ICC & MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURES. THIRD PARTY SPECIAL INSPECTION IS REQUIRED FOR CONCRETE EXPANSION ANCHORS (I.E. SIMPSON STRONG-BOLT 2 WEDGE ANCHORS PER ESR-3037). INSTALLATION OF WEDGE ANCHORS IN MASONRY IS NOT PERMITTED.

FOUNDATION, EXCAVATION AND BACKFILL NOTES

- ALL FINAL GRADED SLOPES SHALL BE A MAXIMUM OF 3 HORIZONTAL TO 1 VERTICAL.
- ALL EXCAVATIONS PREPARED FOR PLACEMENT OF CONCRETE SHALL BE OF UNDISTURBED SOILS, SUBSTANTIALLY HORIZONTAL AND FREE FROM ANY LOOSE, UNSUITABLE MATERIAL OR FROZEN SOILS, AND WITHOUT THE PRESENCE OF POUNDING WATER. DEWATERING FOR EXCESS GROUND WATER SHALL BE PROVIDED WHEN REQUIRED. COMPACTION OF SOILS UNDER CONCRETE PAD FOUNDATIONS SHALL NOT BE LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR THE SOIL IN ACCORDANCE WITH ASTM D1557.
- CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC OR UNSUITABLE MATERIAL. IF INADEQUATE BEARING CAPACITY IS REACHED AT THE DESIGNED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION SHALL BE FILLED WITH CONCRETE OF THE SAME TYPE SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. ANY STONE SUB BASE MATERIAL, IF USED, SHALL NOT SUBSTITUTE FOR REQUIRED THICKNESS OF CONCRETE.
- ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH PRIOR TO BACK FILLING. BACK FILL SHALL CONSIST OF APPROVED MATERIALS SUCH AS EARTH, LOAM SANDY CLAY, SAND AND GRAVEL, OR SOFT SHALE, FREE FROM CLODS OR LARGE STONES OVER 2 1/2" MAX DIMENSIONS. ALL BACK FILL SHALL BE PLACED IN COMPACTED LAYERS.
- ALL FILL MATERIALS AND FOUNDATION BACK FILL SHALL BE PLACED MAXIMUM 6" THICK LIFTS BEFORE COMPACTION. EACH LIFT SHALL BE WETTED IF REQUIRED AND COMPACTED TO NOT LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR SOIL IN ACCORDANCE WITH ASTM D1557.
- NEWLY PLACED CONCRETE FOUNDATIONS SHALL CURE A MINIMUM OF 72 HRS PRIOR TO BACK FILLING.
- FINISHED GRADING SHALL BE SLOPED TO PROVIDE POSITIVE DRAINAGE AND PREVENT STANDING WATER. THE FINAL (FINISH) ELEVATION OF SLAB FOUNDATIONS SHALL SLOPE AWAY IN ALL DIRECTIONS FROM THE CENTER. FINISH GRADE OF CONCRETE PADS SHALL BE A MAXIMUM OF 4 INCHES ABOVE FINAL FINISH GRADE ELEVATIONS. PROVIDE SURFACE FILL GRAVEL TO ESTABLISH SPECIFIED ELEVATIONS WHERE REQUIRED.
- NEWLY GRADED SURFACE AREAS TO RECEIVE GRAVEL SHALL BE COVERED WITH GEOTEXTILE FABRIC TYPE: TYPAR-3401 AS MANUFACTURED BY "CONSTRUCTION MATERIAL 1-800-239-3841" OR AN APPROVED EQUIVALENT, SHOWN ON PLANS. THE GEOTEXTILE FABRIC SHALL BE BLACK IN COLOR TO CONTROL THE RECURRENCE OF VEGETATIVE GROWTH AND EXTEND TO WITHIN 1 FOOT OUTSIDE THE SITE FENCING OR ELECTRICAL GROUNDING SYSTEM PERIMETER WHICH EVER IS GREATER. ALL FABRIC SHALL BE COVERED WITH A MINIMUM OF 4" DEEP COMPACTED STONE OR GRAVEL AS SPECIFIED. I.E. FOOT TYPE No. 57 FOR FENCED COMPOUND; FOOT TYPE No. 67 FOR ACCESS DRIVE AREA.

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1	8/13/19	PRELIM CX DRAWINGS
2	09/19/19	CLIENT COMMENT

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PRELIMINARY

PROJECT INFORMATION
OR4 FOSTER LAKE
1602 18TH AVE
SWEET HOME, OR 97386

SHEET TITLE
GENERAL NOTES

SHEET NO.
GN1.0

STRUCTURAL CONCRETE NOTES

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 318-11 AND THE SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
- ALL CONCRETE FOR SLABS ON GRADE, SHELTER FOUNDATION, AND PIER FOUNDATIONS FOR FENCES, ICE BRIDGE, AND H-FRAME SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH $f_c = 3,000$ PSI AT 28 DAYS UNLESS NOTED OTHERWISE. SPECIAL INSPECTION REQUIRED AS NOTED.
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES CLASS "B" AND ALL HOOKS SHALL BE STANDARD UNLESS NOTED OTHERWISE.
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
 CONCRETE CAST AGAINST EARTH.....3 IN.
 CONCRETE EXPOSED TO EARTH OR WEATHER:
 #6 AND LARGER.....2 IN.
 #5 AND SMALLER & WWF.....1 1/2 IN.
 CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
 SLAB AND WALL.....3/4 IN.
 BEAMS AND COLUMNS.....1 1/2 IN.
- A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE U.N.O. IN ACCORDANCE WITH ACI 301, LATEST EDITION, SECTION 4.
- HOLES TO RECEIVE EXPANSION/WEDGE ANCHORS SHALL BE 1/8" LARGER IN DIAMETER THAN THE ANCHOR BOLT, DOWEL OR ROD AND SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. LOCATE AND AVOID CUTTING EXISTING REBAR WHEN DRILLING HOLES IN ELEVATED CONCRETE SLABS.
- USE AND INSTALLATION OF CONCRETE ADHESIVE AND EXPANSION/WEDGE ANCHORS SHALL BE PER ICC & MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURES.
- FOUNDATION DESIGN IS BASED ON PRESUMPTIVE SOIL PARAMETERS. IT IS STRONGLY RECOMMENDED THAT INDEPENDENT SOILS TESTING BE PERFORMED BY A LICENSED GEOTECHNICAL ENGINEER TO VERIFY SOIL BEARING CAPACITY, SLOPE STABILITY, AND ALL OTHER RELATED SOIL PARAMETERS.

STRUCTURAL STEEL NOTES

- ALL STEEL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION. STEEL SECTIONS SHALL BE IN ACCORDANCE WITH ASTM AS INDICATED BELOW:
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- FIELD MODIFICATIONS ARE TO BE COATED WITH ZINC ENRICHED PAINT.
- HOLES TO RECEIVE EXPANSION/WEDGE ANCHORS SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH AND DIAMETER. LOCATE AND AVOID CUTTING EXISTING REBAR OR TENDONS WHEN DRILLING HOLES IN ELEVATED CONCRETE SLABS OR CONCRETE WALLS.
- USE AND INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER ICC & MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURES. THIRD PARTY SPECIAL INSPECTION IS REQUIRED FOR CONCRETE EXPANSION ANCHORS (I.E. SIMPSON STRONG-BOLT 2 WEDGE ANCHORS PER ESR-3037). INSTALLATION OF WEDGE ANCHORS IN MASONRY IS NOT PERMITTED.

SPECIAL INSPECTION NOTES

- CONTRACTOR SHALL PROVIDE REQUIRED SPECIAL INSPECTIONS PERFORMED BY AN INDEPENDENT INSPECTOR, APPROVED BY CARRIER AND THE LOCAL JURISDICTION, AS REQUIRED BY IBC SECTION 1704 AND 1705 FOR THE FOLLOWING:
 - STRUCTURAL STEEL:
 - ALL HIGH STRENGTH BOLT INSTALLATIONS; BOLTING INSPECTION TASKS SHALL BE IN ACCORDANCE WITH TABLES N5.6-1, N5.6-2, AND N5.6-3 PER AISC 360-10.
 - FIELD WELDING (IF UTILIZED).
 - BOLTS AND ANCHORS IN CONCRETE:
 - RETROFIT ANCHORS IN CONCRETE (ASHESIVE/EPOXY, EXPANSION, WEDGE, OR SCREW TYPE ANCHORS); INSPECT SIZE, LENGTH, CLEANLINESS, AND INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS.
 - CONCRETE CONSTRUCTION:
 - VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH IBC SECTION 1705, TABLE 1705.3.

SPECIAL INSPECTION NOTES

- PROVIDE SPECIAL INSPECTIONS FOR OTHER ITEMS NOTED ON DRAWINGS TO CONFIRM COMPLIANCE WITH CONTRACT DOCUMENTS.
- THE SPECIAL INSPECTOR SHALL PROVIDE A COPY OF THE REPORT TO THE OWNER, ARCHITECT, STRUCTURAL ENGINEER, CONTRACTOR, AND BUILDING OFFICIAL.
- CONTINUOUS THIRD PARTY SPECIAL INSPECTION REQUIRED FOR ALL BELZONA 1111 MOUNTED PLATES AND HARDWARE.

INSPECTION OF HIGH-STRENGTH BOLTING (PER AISC 360-10, SECTION N5):

OBSERVATION OF BOLTING OPERATIONS SHALL BE THE PRIMARY METHOD USED TO CONFIRM THAT THE MATERIALS, PROCEDURES AND WORKMANSHIP INCORPORATED IN CONSTRUCTION ARE IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS AND THE PROVISIONS OF THE RCSC SPECIFICATION.

- FOR SNUG-TIGHT JOINTS, PRE-INSTALLATION VERIFICATION TESTING AS SPECIFIED IN TABLE N5.6-1 AND MONITORING OF THE INSTALLATION PROCEDURES AS SPECIFIED IN TABLE N5.6-2 ARE NOT APPLICABLE. THE QCI AND QAI NEED NOT BE PRESENT DURING THE INSTALLATION OF FASTENERS IN SNUG-TIGHT JOINTS.
- FOR PRETENSIONED JOINTS AND SLIP-CRITICAL JOINTS, WHEN THE INSTALLER IS USING THE TURN-OF-NUT METHOD WITH MATCHMARKING TECHNIQUES, THE DIRECT-TENSION-INDICATOR METHOD, OR THE TWIST-OFF-TYPE TENSION CONTROL BOLT METHOD, MONITORING OF BOLT PRETENSIONING PROCEDURES SHALL BE AS SPECIFIED IN TABLE N5.6-2. THE QCI AND QAI NEED NOT BE PRESENT DURING THE INSTALLATION OF FASTENERS WHEN THESE METHODS ARE USED BY THE INSTALLER.
- FOR PRETENSIONED JOINTS AND SLIP-CRITICAL JOINTS, WHEN THE INSTALLER IS USING THE CALIBRATED WRENCH METHOD OR THE TURN-OF-NUT METHOD WITHOUT MATCHMARKING, MONITORING OF BOLT PRETENSIONING PROCEDURES SHALL BE AS SPECIFIED IN TABLE N5.6-2. THE QCI AND QAI SHALL BE ENGAGED IN THEIR ASSIGNED INSPECTION DUTIES DURING INSTALLATION OF FASTENERS WHEN THESE METHODS ARE USED BY THE INSTALLER.

AS A MINIMUM, BOLTING INSPECTION TASKS SHALL BE IN ACCORDANCE WITH TABLES N5.6-1, N5.6-2 AND N5.6-3. IN THESE TABLES, THE INSPECTION TASKS ARE AS FOLLOWS:

- O - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
 P - PERFORM THESE TASKS FOR EACH BOLTED CONNECTION.
 QC - QUALITY CONTROL TASKS TO BE PERFORMED BY STEEL FABRICATOR OR ERECTOR
 QA - QUALITY ASSURANCE TASKS TO BE PERFORMED BY A SPECIAL INSPECTION AGENCY OR INDIVIDUALS DEFINED BY AWS B5.1, OR INDIVIDUALS QUALIFIED UNDER THE PROVISIONS OF AWS D1.1/D1.1M SUBCLAUSE 6.1.4

TABLE N5.6-1; INSPECTION TASKS PRIOR TO BOLTING

INSPECTION TASKS PRIOR TO BOLTING	QC	QA
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	O	O
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	O
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS, AND OTHER FASTENER COMPONENTS	O	O

TABLE N5.6-2; INSPECTION TASKS DURING BOLTING

INSPECTION TASKS DURING BOLTING	QC	QA
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	O	O
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	O	O
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	O	O

TABLE N5.6-3; INSPECTION TASKS AFTER BOLTING

INSPECTION TASKS DURING BOLTING	QC	QA
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P	P
REQUIRED STRUCTURAL OBSERVATION		
STRUCTURAL OBSERVATION FOR SEISMIC RESISTANCE: STRUCTURE HEIGHT > 75' PER IBC 1704.5.1		

DRAWING ABBREVIATIONS

AFF	ABOVE FINISH FLOOR	LF	LINEAR FEET
AGL	ABOVE GRADE LEVEL	MAX	MAXIMUM
AWG	AMERICAN WIRE GAUGE	MECH	MECHANICAL
AC	AIR CONDITIONING	MFR	MANUFACTURER
ADJ	ADJUSTABLE	MGR	MANAGER
APPROX	APPROXIMATELY	MIN	MINIMUM
AZ	AZIMUTH	MISC	MISCELLANEOUS
BLDG	BUILDING	MTL	METAL
CM	CONSTRUCTION MANAGER	MTZL	METALIZE(D)
CAB	CABINET	MW	MICROWAVE
CL	CENTERLINE	NEC	NATIONAL ELECTRICAL CODE
CLG	CEILING	(N)	NEW
CLR	CLEAR	NIC	NOT IN CONTRACT
CO	COPPER	NTS	NOT TO SCALE
CONC	CONCRETE	N/A	NOT APPLICABLE
COND	CONDUIT	OC	ON CENTER
CONST	CONSTRUCTION	OD	OUTSIDE DIAMETER
CONT	CONTINUOUS	OP	OVERHEAD POWER
DEMO	DEMOLISH	OT	OVERHEAD FIBER
DIA	DIAMETER	OPP	OPPOSITE
DIM	DIMENSION	PL	PROPERTY LINE
DN	DOWN	PLYWD	PLYWOOD
DTL	DETAIL	PM	PROJECT MANAGER
DWG	DRAWING	PROP	PROPERTY
EA	EACH	PT	PRESSURE TREATED
ELECT	ELECTRICAL	RO	ROUGH OPENING
ELEV	ELEVATION	ROW	RIGHT OF WAY
EOR	ENGINEER OF RECORD	RRU/RRH	REMOTE RADIO UNIT
EQ	EQUAL	REQ	REQUIRED
EQUIP	EQUIPMENT	SBTC	SOLID BARE TINNED COPPER
(E)	EXISTING	SF	SQUARE FEET
EXT	EXTERIOR	SHT	SHEET
FIN	FINISH	SPEC	SPECIFICATION
FLR	FLOOR	SQ	SQUARE
FT	FOOT, FEET	SS	STAINLESS STEEL
GA	GAUGE	STL	STEEL
GALV	GALVANIZED	STRUCT	STRUCTURE, STRUCTURAL
GC	GENERAL CONTRACTOR	TOC	TOP OF CONCRETE
GWB	GYPSUM WALL BOARD	TOM	TOP OF MASONRY
GR	GRADE	THRU	THROUGH
GRND	GROUND	TNND	TINNED
HVAC	HEATING, VENTING & AIR CONDITIONING	TYP	TYPICAL
HORIZ	HORIZONTAL	UG	UNDERGROUND
HT	HEIGHT	UNO	UNLESS NOTED OTHERWISE
IBC	INTERNATIONAL BUILDING CODE	UP	UNDERGROUND POWER
ID	INSIDE DIAMETER	UF	UNDERGROUND FIBER
IN	INCH	VIF	VERIFY IN FIELD
INSUL	INSULATION	VERT	VERTICAL
INT	INTERIOR	WP	WATERPROOF
JBOX	JUNCTION BOX	W/	WITH
LB(S)	POUND(S)	W/O	WITHOUT

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PROJECT INFORMATION
OR4 FOSTER LAKE
1602 18TH AVE
SWEET HOME, OR 97386

SHEET TITLE
GENERAL NOTES

SHEET NO.
GN2.0

Foster Lake

Verizon

Preeti Pathanjali, RF Design

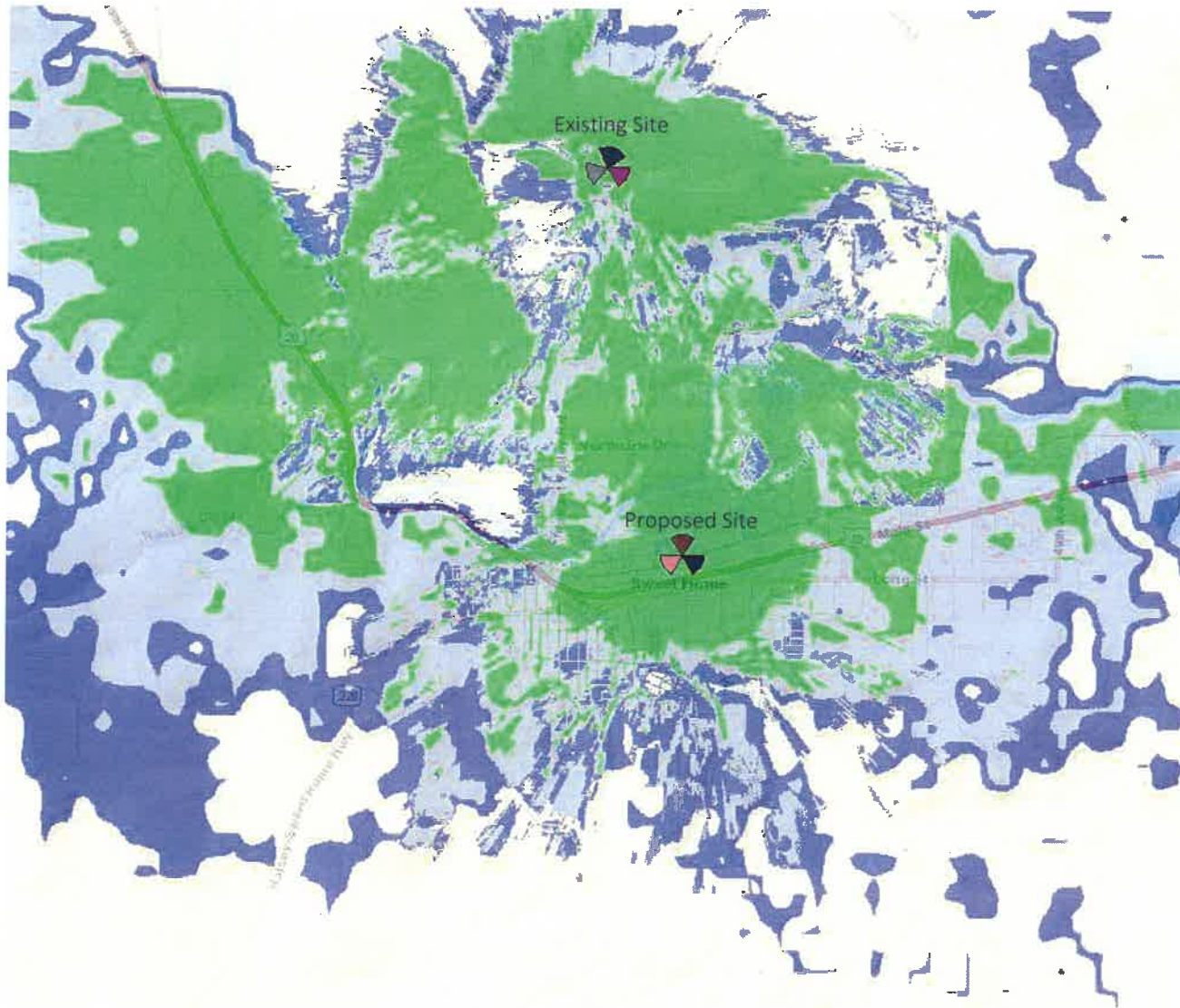
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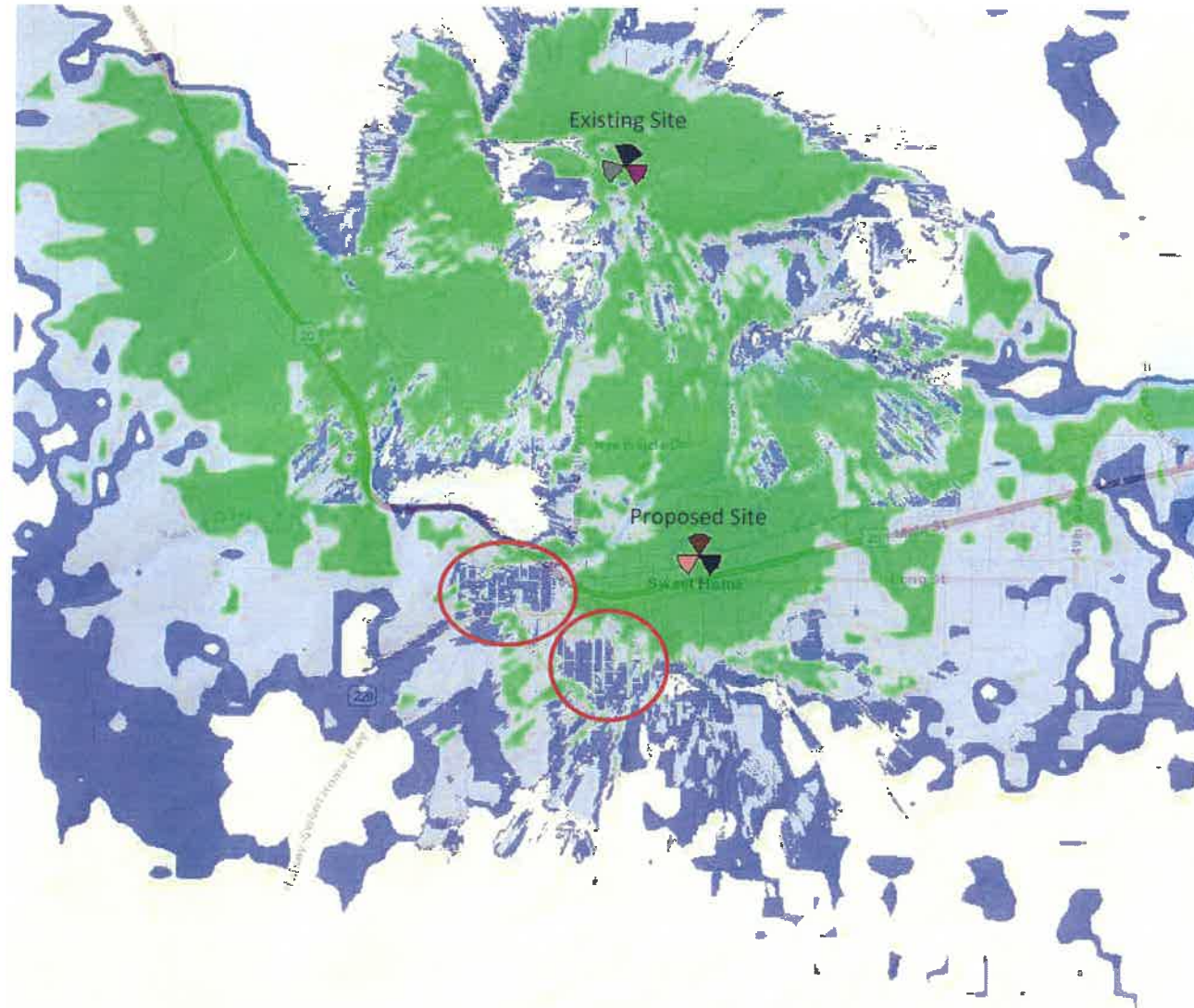
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RF Propagation Plot-100' vs. 80' (In Building Coverage Comparison)

Antenna Tip Height at 100'



Antenna Tip Height at 80'



- Excellent In Building Coverage
- Acceptable In Building Coverage
- Poor In Building Coverage

Summary

When the antenna tip height is dropped from 100' to 80':

- We see that the neighborhoods in the West and Southwest go into the **degraded in building coverage** category. Marked in red circles.
- This shows that a minimum height of 100' is needed to provide acceptable in building coverage and fill the existing coverage gap in the neighborhoods in Sweet Home.





Community and Economic Development Department

City of Sweet Home
3225 Main Street
Sweet Home, OR 97386
541-367-8113
Fax 541-367-5113
www.sweethomeor.gov

Staff Report Presented to the Planning Commission

REQUEST: The applicant has requested a Conditional Use Permit in order to install a wireless telecommunications facility consisting of a radio antenna on a monopole connected to the Sweet Home Elk's Lodge and associated equipment within a 362 square foot fenced compound. The radio antenna is needed to continue to operate the Falls Creek Hydroelectric Project. The project needs to improve the communication it has with Pacificorp substation on 18th Avenue in Sweet Home. The subject property contains approximately 3.65 acres and is in the Residential Low Density (R-1) Zone.

- APPLICANT: Falls Creek H.P., Limited Partnership
PROPERTY OWNER: BPOE Elks #1972 Sweet Home
FILE NUMBER: CU19-10
PROPERTY LOCATION: 440 Osage Street, Sweet Home, OR 97386; Identified on the Linn County Assessor's Map as 13S01W36A Tax Lot 200.
REVIEW AND DECISION CRITERIA: Sweet Home Municipal Code Section(s) 17.24, 17.80, and 17.98.
HEARING DATE & TIME: November 18, 2019 at 6:30 PM
HEARING LOCATION: City Hall at 3225 Main Street, Sweet Home, Oregon 97386
STAFF CONTACT: Angela Clegg, Associate Planner
Phone: (541) 367-8113; Email: aclegg@sweethomeor.gov
REPORT DATE: November 11, 2019

I. PROJECT AND PROPERTY DESCRIPTION

LOCATION: The subject property contains approximately 3.65 acres and is in the Low Density Residential (R-1) Zone. Identified on the Linn County Assessor's Map as 13S01E36A Tax Lot 200. The proposed business is located one property east of 440 Osage Street, Sweet Home, Oregon.

ZONING AND COMPREHENSIVE PLAN DESIGNATIONS:

Table with 3 columns: Property, Zoning Designation, Comprehensive Plan Designation. Rows include Subject Property, Property North, Property East, Property South, and Property West.

Floodplain Based on a review of the September 29, 2010 FEMA FIRM Maps; Panel 41043C0913G, the subject property is located outside of the 100-year floodplain.

Wetlands: Based on a review of the City of Sweet Home Local Wetlands Inventory and a review of the National Wetlands Inventory Map, the subject property does not contain inventoried wetlands.

Access: The subject property has frontage along Osage Street and has access from Osage Street.

Services: The property is connected to City water and sewer.

TIMELINES AND HEARING NOTICE:

Mailed/Emailed Notice: October 18, 2019
Notice Published in Newspaper: October 23, 2019
Planning Commission Public Hearing: November 18, 2019
120-Day Deadline: February 13, 2020
Notice was provided as required by SHMC 17.12.120

II. COMMENTS

Building Division: The Building Program has no issues with this request.

Engineering Division: Regarding the Monopole Radio Tower at the Elks Lodge for Falls Creek, the CEDD-ED have no issues. The pole is estimated to be 43ft high, well under the height of on-site and neighboring trees, and is not near any public roadways, well within the property limits. There is no water and sewer services to the facilities of course.

The location will not have separate address, the facility will use the address of the Elks Lodge – 440 Osage St.

Public Works Dept.: Public Works has no issues with this request at this time.

Fire Department: No comments as of the issue of this Staff Report.

Public Comments: See Attachment E

No other comments were received as of the writing of this staff report.

III. REVIEW AND DECISION CRITERIA

The review and decision criteria for a conditional use permit are listed below in bold. Staff findings and analysis are provided under each review and decision criterion. The applicant's findings are included in their written statement included in Attachment D.

1. Conditional Use Standards

- A. The request complies with the requirements of the underlying zone or overlay zone, city codes, state and federal laws. [SHMC 17.80.040(A)]**
- B. The purpose of the R-1 zone is to provide areas suitable and desirable for single-family homes, associated public service uses and duplexes on corner lots. The R-1 zone is most appropriate in areas which have developed or will develop with single-family homes at a density which warrants provision of public water and sewer facilities. [SHMC 17.24.010]**

Staff Findings: The subject property is in the Low Density Residential (R-1) Zone. The applicant's proposal consists of wireless telecommunications facility (WTF). A WTF may be established in the R-1 Zone as a conditional use under Sweet Home Municipal Code (SHMC) 17.98.

For this application to comply with all applicable city codes and state and federal laws, this application may require additional permits. If this application is approved, staff recommends a condition of approval that prior to operation, the applicant shall obtain all required local, state, and federal permits. The property owner shall obtain all necessary permits from the Building Division and Engineering Division. These permits may include, but are not limited to: building, electrical, mechanical, and plumbing permits from the Building Division. The applicant shall submit copies of all required permits and licenses to the Sweet Home Community and Economic Development Department for inclusion in the record of CU19-10.

- C. The site size, dimensions, location, topography and access are adequate for the needs of the proposed use, considering, but not limited to, the following:**
 - 1. Building size;**
 - 2. Parking;**
 - 3. Traffic;**
 - 4. Noise;**
 - 5. Vibration;**
 - 6. Exhaust and emissions;**
 - 7. Light and glare;**
 - 8. Erosion;**
 - 9. Odor;**
 - 10. Dust;**
 - 11. Visibility;**
 - 12. Safety;**
 - 13. Building, landscaping or street features. [SHMC 17.80.040(B)]**

Staff Findings:

- a. Building size – The proposed use would be located within a 21'-8" x 15' fenced area on the property with a 9' x 10' shed. The proposal includes 43-foot-tall monopole, fenced area, a propane tank and equipment shelters.
- b. Parking and Traffic – The subject property is in the R-1 zone. The applicant states that the facility is not staffed and would generate on average one vehicle trip per month for maintenance. The applicant would need to provide all parking as required by the applicable sections of SHMC Section 17.08.090.

- c. Noise – The applicant states that no noise impact would be created except during the construction phase of the WTF. Based on the information provided in the application, no noise impact has been identified.
 - d. Vibration – Based on a description of the proposal, no significant vibration would be created by the proposed use.
 - e. Exhaust and emissions – The applicant states that no exhaust or emissions impact would be created except during the construction phase of the WTF. The applicant is proposing a WTF. The applicant has not proposed a use that would create exhaust or emissions. Odor impacts are discussed below.
 - f. Light and glare – The applicant has not proposed any new outdoor lighting. SHMC 17.98.050(l) provide the lighting standards which would apply to the WTF development on the property. That section states that “No lighting shall be permitted on a WTF except as required for security and as required by the Federal Aviation Administration. Security lighting shall be located in such a manner so as not to face directly, shine or reflect glare onto any street or a lot in a residential zone.”
 - g. Erosion – The proposed use would be located within a fenced 50’ x 50’ area. No significant erosion impact is anticipated.
 - h. Odor – Based on the description of the proposal, no odor would be created by the proposed use.
 - i. Dust – The applicant states that no dust impact would be created except during the construction phase of the WTF. No additional sources of dust have been identified.
 - j. Visibility – The proposed use would be located within the R-1 Zone. SHMC 17.98.050(G)(1-4) provide visual impact standards for WTF’s including using a flat paint and non-reflective materials which are addressed below. Consequently, staff has not identified any significant visibility impacts that would result from operation of the proposed use.
 - k. Safety – The applicant indicates a plan to install a fence and gate surrounding the proposed WTF. SHMC 17.98.050(L) provides security requirements for WTF’s which are discussed below. In addition, the applicant would need to acquire all applicable state and federal permits prior to operation of the proposed use.
 - l. Building, landscaping or street features – The proposal includes 43-foot-tall monopole, fenced area, a propane tank and equipment shelters. The landscaping and street features are preexisting as part of the Elks Lodge landscaping. As proposed, landscaping, and street features in the area would be adequate to accommodate the proposed use.
- D. Any negative impacts of the proposed use on adjacent properties and on the public can be mitigated through application of other code standards, or other reasonable conditions of approval that include but are not limited to those listed in this chapter. [SHMC 17.80.040(C)]**

Staff Findings: The applicant states that the visual impact of the WTF would be minor in nature and mitigated through conditions of approval. However, it is likely that any effect would be negligible, as the WTF will be entirely obscured by trees. Staff has not identified any negative impacts to adjacent properties. It is unclear, and likely impossible to predict, what effect, if any, the proposed WTF would have on property values. In order to ensure compliance with the standards listed in the SHMC, staff has included proposed conditions of approval that are listed in Section V of this report.

- E. All required public facilities have adequate capacity, as determined by the city, to serve the proposed use. [SHMC 17.80.040(D)]**

Staff Findings: The Engineering Division submitted comments on this application and has no concerns. The subject property is currently served by City water and sewer.

The application complies with this criterion.

F. Home Occupations must meet the following standards:

- a. **The home occupation shall be secondary to the residential use.**
- b. **All aspects of the home occupation shall be contained and conducted within a completely enclosed building.**
- c. **No materials or mechanical equipment shall be used which are detrimental to residential use of the dwelling or nearby dwellings because of vibration, noise, dust, smoke, odor, interference with the electrical grid, radio or television reception or other similar factors.**
- d. **Vehicles related to the home occupation shall be parked in a manner so as to not block any driveway or impede the safe flow of traffic.**

Staff Findings: The applicant has not proposed a home occupation.

The application complies with this criterion.

G. Marijuana facilities must be located in a fixed location. No temporary or mobile sites of any sort are allowed. [SHMC 17.80.040(F)]

H. Marijuana facilities may not have any drive-up services. [SHMC 17.80.040(G)]

I. Marijuana facilities must be located at least 1,000 feet from the property boundary of any school. [SHMC 17.80.040(H)]

J. Marijuana facilities must be sited on a property so as to be at least 100 feet from the boundary of any residentially zoned property. [SHMC 17.80.040(I)]

Staff Findings: The applicant has not proposed any marijuana services.

The application complies with this criterion.

K. In approving a conditional use permit application, the Planning Commission may impose, in addition to those standards and requirements expressly specified by this chapter, additional conditions determined to be necessary to assure that the proposed development meets the decision criteria as well as the best interests of the surrounding properties, the neighborhood, and the city as a whole. [SHMC 17.80.050]

Staff Findings: This provision of the SHMC allows the Planning Commission to impose conditions of approval. This is an opportunity for the Planning Commission to determine if conditions are needed in order to ensure compliance with the "decision criteria as well as the best interests of the surrounding properties, the neighborhood, and the city as a whole." As specified in SHMC 17.80.050, conditions could include, but are not limited to: expanding setbacks, limiting hours of operation, requiring site or architectural design features, imposing additional sign standards, and so forth.

In order to ensure compliance with the standards listed in the SHMC, staff has included proposed conditions of development listed in Section V of this report. These conditions are primarily a customized list of existing local, state, and federal standards that apply to the application.

L. A conditional use permit shall be void one year after the date of the Planning Commission approval if the use has not been substantially established within that time period. [SHMC 17.80.070]

Staff Findings: As required under this section, staff recommends that a condition of approval require that the conditional use permit shall be void one (1) year after the date of the Planning Commission approval if the use has not been substantially established, as defined under

SHMC 17.80.070(A), within that time period. The City Planner may grant one extension of up to one year for a conditional use permit that contained a one-year initial duration upon written request of the applicant and prior to the expiration of the approved period. Requests other than a one-year request made prior to the expiration of the approved period must be approved by the Planning Commission. A conditional use permit not meeting the above time frames will be expired and a new application will be required.

2. Wireless Telecommunications Facilities [SHMC 17.98]

- A. WTFs shall be sited in accordance with the following priorities, in order of their preference. If the applicant proposes a facility on lower priority preferences, the applicant shall prove conclusively, that each of the higher priorities has been considered and found to be not feasible. [SHMC 17.98.040]**
- a. Priority #1. Use of an attached wireless communication facility whereby transmission and reception devices are placed on existing structures which are consistent in height with and situated similarly to types normally found in the surrounding area, such as telephone, electrical or light poles.**
 - b. Priority #2. Co-location by placement of antennas or other transmission and reception devices on an existing tower, building or other structure, such as a utility pole, water tank or similar existing structure.**
 - c. Priority #3. Siting of a new tower, in a visually subordinate manner, using visual compatibility techniques.**
 - d. Priority #4. Siting of a new tower in a visually dominant location, but employing visual compatibility techniques.**
 - e. Priority #5. Siting of a tower in a visually dominant location, not employing visual compatibility techniques.**

Staff Findings: The applicant had requested a variance in May 2019 for a proposed 180-foot WTF at the PacifiCorp substation on 18th Avenue. The applicant withdrew the application in June 2019 in favor of a property that wouldn't require a variance. The applicant considered the water tower at the Old Mill property, but there was not adequate line-of-site to the Huss Ridge repeater.

The applicant provided photo simulations of the proposed monopole tower and states that the proposed tower would use a flat paint color, existing landscaping would be adequate to cover the fenced area, and the facility would have required setback distances. Based on the applicant's statements staff finds that the applicant meets Priority #3.

The application complies with these criteria.

- B. All facilities shall meet all requirements established by the other provisions of SHMC that are not in conflict with the requirements contained in this chapter. [SHMC 17.98.050(A)]**
- C. All facilities shall comply with all federal, state and city codes, including, but not limited to, Federal Communication Commission and Federal Aviation Administration standards. [SHMC 17.98.050(B)]**

Staff Findings: The applicant states that the proposed WTF would meet all the requirements established by other provisions of the SHMC. Staff reviewed the conditional use, WTF, and other applicable standards in this staff report. Staff recommends a condition of approval that all facilities shall meet the requirements of the Uniform Building Code and/or the Oregon Structural Specialty Code.

With the above conditions, the application complies with this criteria.

- D. Access shall meet the standards of the underlying zone. [SHMC 17.98.050(C)]**

Staff Findings: The proposed WTF is located within the R-1 zone. Based on the applicant's plot plan the development would utilize the existing driveway and no new access points are proposed. Staff finds that the proposal meets the access standards of the underlying zone.

The application complies with this criterion.

- E. Height of a facility shall be measured from the natural, undisturbed ground surface below the center of the base of the proposed facility to the top of the facility or if higher, the tip of the highest antenna or other transmission or reception device. [SHMC 17.98.050(D)(1)]**
- F. No WTF shall exceed the height standard of this chapter, except where attached to an existing structure that exceeds that height and the attached antennas do not increase the total height of that structure by more than ten feet. [SHMC 17.98.050(D)(2)]**

Staff Findings: Pursuant to SHMC 17.98.090(A)(2) a facility that is attached to an existing structure may not exceed the height of the existing structure, unless findings are made by the Planning Commission that such an increase will have a minimal impact on the appearance of the structure. The applicant states that the proposed WTF would be 43 feet measured from the ground to the top of the highest antenna. Staff finds that the proposed telecommunications facility meets the height standard of this chapter.

To ensure compliance staff recommends a condition of approval that the proposed WTF shall not exceed 100 feet in height.

- G. New facilities, if technically feasible, will be designed and constructed for three antennas/providers to co-locate on the facility and to allow antennas mounted at varying heights. [SHMC 17.98.050(E)(1)]**
- H. The owner of a facility may not deny a wireless telecommunications provider the ability to co-locate on its wireless communication facility at a fair market rate or at another cost agreed to by the affected parties. [SHMC 17.98.050(E)(2)]**
- I. A facility may be attached to any existing structure as long as the height of that structure is not increased by more than ten feet and so long as it meets all relevant requirements of this section. [SHMC 17.98.050(E)(3)]**
- J. Co-location shall not be precluded simply because a reasonable fee or shared use is charged or because reasonable costs necessary to adopt the existing or proposed uses to a shared tower. The Planning Commission may consider expert testimony to determine whether the fees and costs are reasonable. [SHMC 17.98.050(E)(4)]**
- K. Co-location costs that exceed new tower development costs are considered to be unreasonable. [SHMC 17.98.050(E)(5)]**

Staff Findings: The proposed WTF is attached to an existing structure by an ice bridge. The applicant states that they would comply with SHMC 17.98.050(E)(4 and 5). In order to ensure compliance staff recommends a condition of approval that the proposed facility shall be designed and constructed for three (3) antennas/providers to co-locate on the facility and to allow antennas mounted at varying heights, and the owner of the facility may not deny a wireless telecommunications provider the ability to co-locate on its WTF at a fair market rate or at another cost agreed to by the affected parties.

With this condition, the application complies with the above criteria.

- L. All facilities must meet the requirements of the Uniform Building Code and/or the Oregon Structural Specialty Code. [SHMC 17.98.050(F)]**

Staff Findings: The applicant states that the proposed WTF would meet the requirements of the Building and Structural Code.

As discussed above, to ensure compliance staff recommends that all facilities shall meet the requirements of the Uniform Building Code and/or the Oregon Structural Specialty Code.

M. Where possible new facilities will be located in such a manner that they blend in with the background around them, using techniques to ensure visual compatibility characteristics. [SHMC 17.98.050(G)(1-4)]

- a. All new WTF towers shall be a monopole or lattice tower structure constructed out of metal or other nonflammable material.
- b. All accessory structures (i.e vaults, equipment rooms, utilities and equipment enclosures) shall be concealed, camouflaged, shall be consistent with the underlying zone or shall be placed underground.
- c. Visible exterior surfaces of accessory facilities (i.e. vaults, equipment rooms, utilities and equipment enclosures) shall be constructed out of nonreflective materials.
- d. WTFs shall be initially painted and thereafter repainted as necessary with a “flat” paint. The color shall be one that will minimize the facility’s visibility to the maximum extent feasible.

Staff Findings: The applicant is proposing a monopole tower that would be constructed with galvanized steel. The applicant states that the proposed shed, generator and propane tank would be painted a neutral non-reflective color. The applicant states that the monopole would be painted a flat grey color that would blend in with the sky. Staff finds that as proposed the application complies with these criteria. To ensure compliance, staff recommends a condition of approval that the monopole shall be constructed out of metal, all accessory structures shall be concealed, camouflaged, shall be consistent with the R-1 zone or shall be placed underground, visible exterior surfaces of accessory structures shall be constructed out of non-reflective materials, and the monopole shall be initially painted and thereafter repainted as necessary with a flat paint.

With the above condition, the application complies with these criteria.

N. All WTFs shall be installed in such a manner as to maintain and enhance existing vegetation. Where no vegetation exists, a landscaping plan must be submitted for the site. [SHMC 17.98.050(H)]

Staff Findings: The proposed site has existing vegetation. A landscape plan is not required. To ensure compliance, staff recommends a condition of approval that the applicant/property owner be required maintain the existing vegetation to the south of the proposed project including replacing any vegetation that may die.

With the above condition, the application complies with this criterion.

O. No lighting shall be permitted on a WTF except as required for security and as required by the Federal Aviation Administration. Security lighting shall be located in such a manner so as not to face directly, shine or reflect glare onto any street or a lot in a residential zone. [SHMC 17.98.050(I)]

Staff Findings: The applicant is not proposing any lighting.

The application complies with this criterion.

P. No telecommunications facility shall be installed on an exposed ridge line unless it blends with the surrounding existing natural and human-made environment in such a manner as to be visually compatible with the environment. [SHMC 17.98.050(J)]

Staff Findings: The proposed facility shall not be installed on a ridge line. Staff finds that the proposed WTF would be in a flat area not on a ridge line.

The application complies with this criterion.

Q. Facilities shall be set back at least 25% of the tower height from all property lines or shall meet the setbacks of the underlying zone, which ever is greater. [SHMC 17.98.050(K)]

a. Except as provided in § 17.08.060, in a R-1 zone, yard setbacks shall be as follows. [SHMC 17.24.050(A-F)]

- i. The front yard shall be a minimum of 20 feet.**
- ii. Each side yard shall be a minimum of five feet, and the total of both side yard setbacks shall be a minimum of 13 feet.**
- iii. The street side yard shall be a minimum of 15 feet.**
- iv. The rear yard shall be a minimum of 15 feet.**
- v. On a flag lot, or similarly configured lot, the inset front yard setback shall be a minimum of 15 feet.**
- vi. Regardless of the side and rear yard requirements of the zone, an accessory structure, excluding detached accessory dwellings, may be built to within five feet of side or rear lot line; provided, the structure is more than 70 feet from the street abutting the front yard and 20 feet from the street abutting the street side yard.**

Staff Findings: The proposed WTF is 43 feet tall. The minimum required setback for the Industrial zone is 20 feet and 25% of the tower height is 25 feet; therefore, the proposed tower shall be setback 25 feet from all property lines. Based on the applicant's plot plan the proposed WTF would be located approximately 58 feet from the closest property line.

The application complies with this criteria.

R. All WTFs shall maintain in place a security program that will deter unauthorized access and vandalism. [SHMC 17.98.050(L)]

Staff Findings: The proposed WTF would be surrounded by a 6-foot fence with barbed wire and a locked gate to maintain security. There would be a security camera mounted that focuses on the area which will be enclosed by the fence. Staff finds that the proposed camera, fence and gate would deter unauthorized access and vandalism. To ensure compliance staff recommends a condition of approval that the proposed WTF shall be enclosed by a chain link fence and gate.

With the above condition, the application complies with this criterion.

S. Underground equipment shelters should be considered. [SHMC 17.98.050(M)]

Staff Findings: The applicant is not proposing an underground equipment shelter. The applicant states that two radio cabinets, a back-up battery, and a security camera would be in the basement of the Elks Lodge. Staff finds that use of the Elks Lodge basement is reasonable to meet access requirements.

The application complies with this criterion.

T. Signs shall comply with the requirements set forth in this chapter. [SHMC 17.98.050(N)(1)]

U. All telecommunications facilities shall be clearly identified as to the location and operator so as to facilitate emergency response. [SHMC 17.98.050(N)(2)]

Staff Findings: The proposed WTF would include informational signage that identifies the operator, site number, and contact information. In order to ensure compliance staff finds that the proposed WTF shall be clearly identified as to the location and operator to facilitate emergency response.

With the above condition, the application complies with this criteria.

- V. All attached facilities shall be located and designed to appear an integral part of the structure. [SHMC 17.98.060(A-D)]**
- a. Roof mounted antennas and all building mounted accessory equipment shall be located no closer to the nearest edge of the roof than the height of the antenna or accessory equipment, whichever is greater.**
 - b. Wall mounted antennas shall be architecturally integrated into the building.**
 - c. Wall mounted antennas shall be located no more than four feet from the face of the wall.**
 - d. Accessory structures for attached facilities, such as equipment shelters, cabinets or other enclosed structures containing electronic equipment, shall be camouflaged or otherwise constructed using visual compatibility techniques.**

Staff Findings: The applicant is proposing an attached telecommunications facility.

The application complies with these criteria.

- W. Wireless telecommunications facilities that do not have functioning antennas for a period of six months shall be considered abandoned and shall be removed by the owner or operator within 60 days thereafter. [SHMC 17.98.070]**

Staff Findings: The applicant states that they would comply with this criterion. In order to ensure compliance staff recommends a condition of approval that the if the proposed WTF does not have functioning antennas for a period of six months shall be considered abandoned and shall be removed by the owner or operator within 60 days thereafter.

With the above condition, the application complies with this criterion.

- X. Residential zones. A wireless telecommunications facility is not allowed in any residential zone unless it is an attached WTF that meets the requirements of this section. [SHMC 17.98.90(A)]**
- a. Access. Standards for access are the set by the underlying zone.**
 - b. Height. A facility that is attached to an existing structure may not exceed the height of the existing structure, unless findings are made by the Planning Commission that such an increase will have a minimal impact on the appearance of the structure.**
 - c. Landscaping. Existing trees and other screening vegetation in the vicinity and along the access road shall be protected from damage, both during the construction period and thereafter.**
 - d. Signs. Facilities shall be identified with an identification sign not exceeding two square feet in size.**
 - e. Accessory facilities. Accessory structures for attached facilities, such as equipment shelters, cabinets or other enclosed structures containing electronic equipment, shall be camouflaged or otherwise constructed using visual compatibility techniques.**

Staff Findings: The applicant states that the proposed WTF would be accessed from Osage Street and the proposed WTF would be 43 feet tall. As discussed above, there is existing landscaping no further landscaping is required. The applicant states the proposed WTF would include informational signage that identifies the operator, site number, and contact information. As discussed above, the applicant states that the accessory facilities would be camouflaged by landscaping and would be constructed using visual compatibility techniques including a non-reflective paint. Staff finds that the applicant demonstrated compliance with these criteria. To

ensure compliance, as discussed above the monopole communication tower shall not exceed 100 feet. The applicant/owner shall maintain the existing landscape to the south of the proposed project. Facilities shall be identified with an identification sign not exceeding two square feet in size. The proposed WTF shall be limited to the activities evaluated under this application.

With the above conditions the application complies with these criteria.

3. Narrative Required [SHMC 17.98.080(C)(1-15)]

- A. The name and contact information for the provider;**
- B. A description of the character of the proposed facility;**
- C. Analysis of how the application meets the review criteria;**
- D. Applicants/providers shall provide evidence of legal access to the proposed wireless telecommunications facility;**
- E. The applicant/provider shall provide evidence that legal access to the facility site will be maintained for the duration of the facility's operation;**
- F. Where a proposed wireless telecommunications facility is located on a property not owned by the provider, the applicant/provider shall present documentation that the owner of the property has granted an easement or entered into a lease for the proposed facility and that vehicular access is provided to the facility;**
- G. The applicant shall provide evidence that describes the facility tower's structural capacity to carry the antennas of at least three wireless telecommunications providers;**
- H. The applicant shall provide evidence of steps the provider will take to avoid interference with normal radio and television reception in the surrounding area and with any public safety agency or organization, per FCC requirements;**
- I. The applicant shall demonstrate that the WTF is intended to provide service primarily within the community.**
The city reserves the right to deny a permit if it is shown that the facility is not intended to provide service primarily within the community.
- J. The applicant/provider shall demonstrate that the wireless telecommunications facility must be located where it is proposed in order to service the provider's service area. There shall be an explanation of why a facility at this proposed site is technically necessary;**
- K. If the applicant/provider proposes a new tower or co-located facility, the applicant shall provide evidence that the facility's height is the lowest height at which the gap in coverage can be filled;**
- L. All applications shall include evidence that at least one provider will use the proposed facility to provide wireless telecommunications service immediately upon construction completion of the facility.**
The city reserves the right to deny applications that propose a facility without a provider.
- M. The application shall include a written agreement that wireless telecommunications facilities owned by the provider, that do not have an operating antenna for a period of six months, shall be considered abandoned and shall be removed by the operator within 60 days thereafter; and**

N. The application shall include a written agreement from the property owner that if the provider fails to remove an abandoned WTF, the property owner has full legal and fiscal responsibility for the WTF removal.

Staff Findings: The applicant provided a letter from the Elks Lodge that verifies that a lease agreement has been signed and provides access to the proposed WTF. The applicant provided a narrative of the proposed facility in Attachment E. The proposed facility is 43 feet tall and would have a minimum impact on the appearance of the structure. The provider for this application is Falls Creek H.P, Limited Partnership and the applicant understands that facilities that do not have an operating antenna for a period of six months shall be considered abandoned.

IV. PLANNING COMMISSION ACTION

In acting on a Conditional Use permit application, the Planning Commission will hold a public hearing at which it may either approve or deny the application. If the application is denied, the action must be based on the applicable review and decision criteria. If approved, the Planning Commission may impose conditions of approval. Staff's recommended conditions are included in Section V.

Appeal Period: Pursuant to ORS 227.175, the Planning Commission may establish an appeal period of not less than 12 days from the date the written notice of the Planning Commission's decision is mailed. Staff's recommendation is that the Planning Commission's decision on this matter be subject to a **12-day appeal period** from the date that the notice of decision is mailed.

Order: After the Planning Commission decides, staff recommends that the Planning Commission direct staff to prepare an order that is signed by the Chairperson of the Planning Commission. The Order would memorialize the decision and provide the official list of conditions (if any) that apply to the approval; if the application is approved.

V. RECOMMENDED CONDITIONS IF APPROVED

If the Planning Commission approves this application, staff recommends that the conditions of approval listed below be required in order to ensure that the application is consistent with the findings in the Review and Decision Criteria (Section III) and as required by the Sweet Home Municipal Code and other provisions of law. Appeals to the Land Use Board of Appeals (LUBA) may only be based on Review and Decision Criteria contained in Section III.

Recommended Conditions of Approval for CU19-10:

1. The proposed WTF shall be located within the enclosed chain link fence and gate on the subject property. The proposed WTF shall be limited to the activities evaluated under this application.
2. This approval is for a monopole WTF that shall not exceed 100 feet in height. The applicant shall maintain the existing vegetation and replace vegetation when needed.
3. All facilities shall meet the requirements of the Uniform Building Code and/or the Oregon Structural Specialty Code.
4. The proposed WTF shall be clearly identified as to the location and operator to facilitate emergency response. Facilities shall be identified with an identification sign not exceeding two square feet in size.
5. If the proposed WTF does not have functioning antennas for a period of six months shall be considered abandoned and shall be removed by the owner or operator within 60 days thereafter.

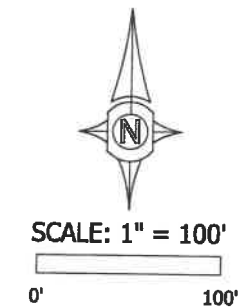
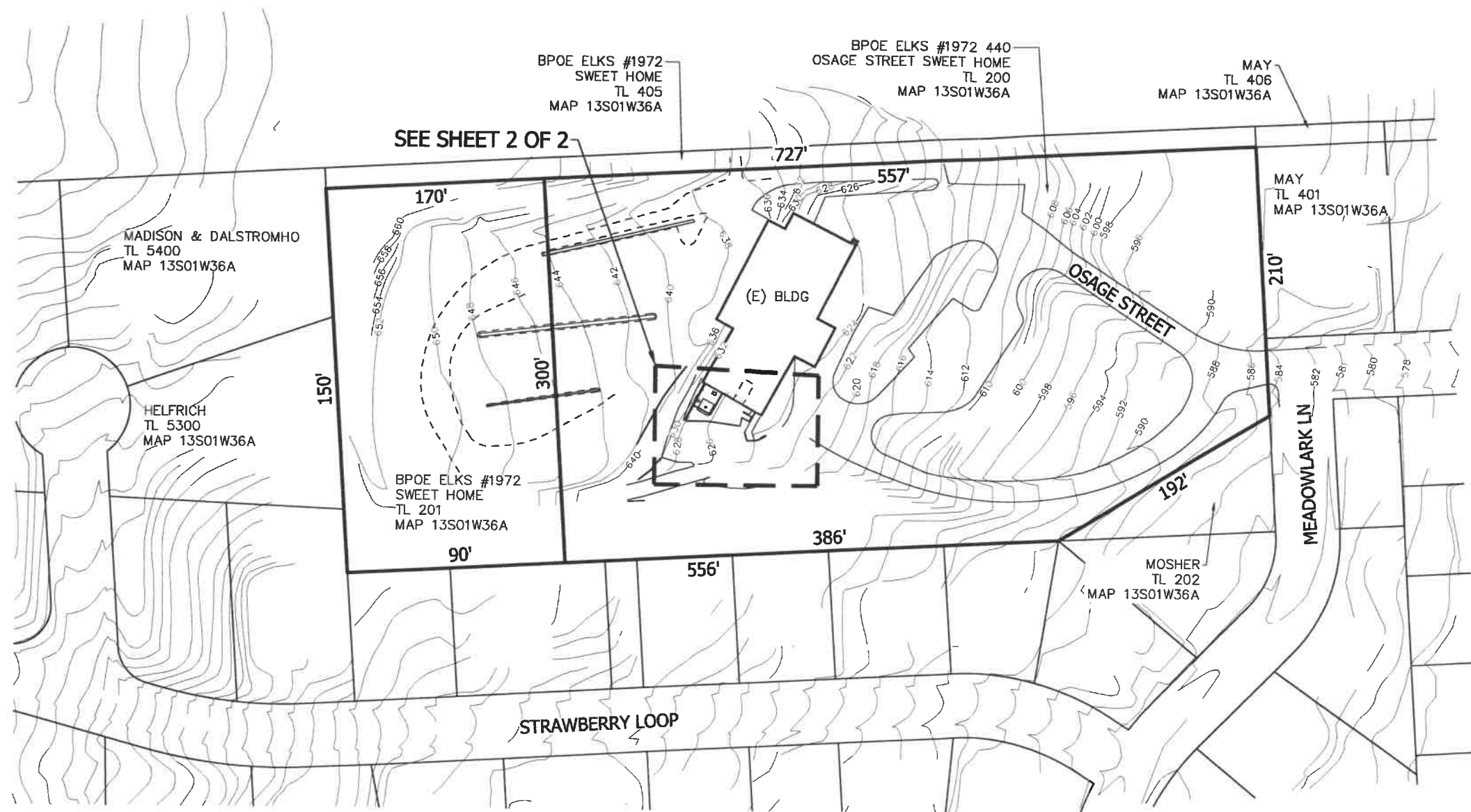
6. The proposed facility shall be designed and constructed for three (3) antennas/providers to co-locate on the facility and to allow antennas mounted at varying heights, and the owner of the facility may not deny a wireless telecommunications provider the ability to co-locate on its WTF at a fair market rate or at another cost agreed to by the affected parties.
7. The monopole shall be constructed out of metal, all accessory structures shall be concealed, camouflaged, shall be consistent with the R-1 zone or shall be placed underground, visible exterior surfaces of accessory structures shall be constructed out of non-reflective materials, and monopole shall be initially painted and thereafter repainted as necessary with a flat paint.
8. Prior to operation, the applicant shall that the proposed WTF shall comply with all federal, state and city codes, including, but not limited to, Federal Communications Commission (FCC) and Federal Aviation Administration (FAA) standards. The property owner shall obtain all necessary permits from the Building Division and Engineering Division. These permits may include, but are not limited to: building, electrical, mechanical, and plumbing permits from the Building Division and a new or amended access permit from the Sweet Home Public Works Department. The applicant shall submit copies of all required permits and licenses to the Sweet Home Community and Economic Development Department for inclusion in the record of CU19-09.
9. Parking shall be provided for the WTF as required by the SHMC. Parking facilities shall comply with all applicable sections of SHMC 17.08.090; including but not limited to all stormwater drainage, surfacing, and dimensional standards. All parking lots and driveway approaches shall be hard surfaced and permanently marked.
10. The conditional use permit shall be void one (1) year after the date of the Planning Commission approval if the use has not been substantially established, as defined under SHMC 17.80.070(A), within that time period. The City Planner may grant one extension of up to one year for a conditional use permit that contained a one-year initial duration upon written request of the applicant and prior to the expiration of the approved period. Requests other than a one-year request made prior to the expiration of the approved period must be approved by the Planning Commission. A conditional use permit not meeting the above time frames will be expired and a new application will be required.

VI. ATTACHMENTS

- | | |
|----------------|--|
| Attachment A - | Site Plan |
| Attachment B - | Subject Property Map |
| Attachment C - | Public Comments |
| Attachment D - | Information in the Record as of November 8, 2019; Including Application Materials. |

Exhibit B.1 Survey of Elk Lodge and Surrounding Area

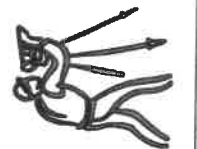
ATTACHMENT A



UDELL ENGINEERING & LAND SURVEYING, LLC
 63 EAST ASH ST.
 LEBANON, OREGON 97355
 (541) 451-5125 PH.
 (541) 451-1366 FAX

EXISTING CONDITIONS
 BPOE ELKS NO. 1972 SWEET HOME
 440 OSAGE STREET
 LINN COUNTY, OREGON

DATE: 7-30-2019, REV: 8-14-2019
 PROJECT: 19-07 HILLS CREEK
 DRAWN BY: BHP
 CHECKED BY: RWL



SHEET 1
 of 2
 SCALE: SEE BARSCALE

Exhibit B.2 Satellite photo of lodge with superimposed project on SW corner.



SEE SHEET 2 OF 2

UDELL ENGINEERING & LAND SURVEYING, LLC
 63 EAST ASH ST.
 LEBANON, OREGON 97355
 (541) 451-5125 PH.
 (541) 451-1366 FAX

EXISTING CONDITIONS
 BPOE ELKS NO. 1972 SWEET HOME
 440 OSAGE STREET
 LINN COUNTY, OREGON

DATE: 7-30-2019, REV 8-14-2019
 PROJECT: 19-207 FALLS CREEK
 DRAWN BY: [blank]
 CHECKED BY: [blank]



SCALE: 1" = 60'
 0' 60'

SHEET 3
 OF 3
 SCALE: SEE BARSCALE



SUBJECT PROPERTY
CU19-10
13S01W36A00200



1 inch = 165 feet

Date: 8/7/2018

ATTACHMENT C

To: Sweet Home Planning Commission

From: Ken Collins home owner on Strawberry Loop, Sweet Home, Oregon

The planning commission is responsible for creating and maintaining healthy, vibrant, and sustainable communities within our city via sustainable zoning regulations. Once a regulation in R-1 zoning is abridged by way of conditional use permits, all R-1 zones within our city are now subject to the same conditional use permit.

It is unconscionable to believe that a decision to allow a large monopole radio antenna in an R-1 zone neighborhood of well-maintained family houses could even be considered. What multiplies the last sentence is the fact that: (1) it does not enhance the community or the city's well-being, (2) It could open the door to co-leasing other businesses upon the monopole, which is not within R-1 regulations. (3) It affects some homes' market values more than others, especially those within 300 ft of the tower's site.

Once the property is leased out and the structure built, there is no reason more radio and RF energy cannot be placed on that tower. All of which could interfere with signals from other means.

I urge you to deny this request and possibly suggest there must be other suitable locations where it would be more than welcome.



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ML

Questions to be answered by Sweet Home Planning Commission at Nov. 18, 2019 Public Meeting regarding Pacific Corp. Request for Tower Construction on ELKS Lodge Property adjacent to Sweet Home R-1 zoned Strawberry Loop residential, single-family properties.

1. What is the proposed "monopole" tower expected to look like upon completion?
2. How tall? Will it use guy wires?
3. Will you please show us a picture of proposed tower structure?
4. Are trees expected to be removed?
5. Regarding "Conditional Use"(17.24.030), Isn't it true proposed tower does not fall under the category (8H. Chap. 17.80) use as a "Public Utility Facility" as Pacific Corp. is NOT a public utility?
6. Regarding "Conditional Use", Isn't it true proposed tower does NOT fall under the category (8P. Chap.17.80) because it is NOT "compatible with the purpose and intent of the zone" (R-1 Residential Single Family)?
7. Regarding "Conditional Use", (8P. Chap. 17.80) Isn't it true proposed tower fails the requirement of "would not significantly exceed.. off-site impacts...typical of the other conditionally permitted uses..." IF the following Off-Site Impacts are considered? Please see the following Off-Site Impacts:
8. (17.80.040 USE CRITERIA)
(B.3 & 4). Traffic & Noise. Future contractors may be allowed by Pacific Corp. to add additional equipment to the tower. The leasing property owner may not even be aware of this. Will the city planners and ELKS lease agreement provide written protection from this taking place in the future?
9. (B.7). Light and glare. What type of tower lighting is expected? *** Are planners considering a future of "light pollution" for Sweet Home?
(B.11). Visibility. Tower will block current views for many Strawberry Loop residents where a brand new, unsold home is currently marketed as "View Property". Why didn't the ELKS plan to build the tower in front of the ELKS balcony deck? ***Visibility is an issue here.
(B.12). Safety. Are city planners concerned about Electromagnetic Fields and Radiation, especially if additional contractors are allowed to add cell equipment? *** Please see attached research and citations. *** A young family owns a residence less than 100 ft from proposed site.
(B.12). Safety continued: Are city planners concerned about lightning storms and subsequent fire? ***A metal pole standing taller than mature, pitch-filled evergreens and houses surrounding it is a real-life danger.
(B.13C). Street Features. Negative Impacts on Adjacent Properties: Would planners agree tower build detracts from the purpose of R-1 Zoning? Would a tower contribute to single family residences and neighborhoods? ***No. Would a tower enhance a family experience within the neighborhood such as a playground would do? ***No. Would a tower enhance the look and feel of our safe, established, well-maintained neighborhood?
***Absolutely not.
(E. 3). ...Detrimental to residential use of the dwelling...because of interference with the electrical grid, radio or tv reception, or other similar factors. Can the planners guarantee the proposed tower (and any other equipment placed upon it in the future) would cause NO

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interference with neighborhood electrical, cell phone, wifi, tv, cable, radio, or ham radio signals, or future signals sent from future cell towers? ***Impossible to guarantee.

(B.13C). Street Features continued: Negative Impacts on Adjacent Properties: Would planners agree tower build will bring lowered property values to any R-1 Zoned established neighborhood in Sweet Home? ***Please see attached research and citations. ***Strawberry Loop neighborhood started in early 1970s and has been solidly established, maintained, and has provided an example of responsible homeownership and neighborly leadership nearly 50 years, setting an example for newer Sweet Home neighborhoods such as Canyon Creek and Mimosa.

Will the planners agree that lowered property values is NOT the way to build a better future for Sweet Home?

Finally, will the planners agree a more suitable site can be found on a hill around Sweet Home without scarring this established neighborhood?

All Sweet Home residents would be better off supporting the ELKS and their fine work and all they do for OUR community. That way, the ELKS wouldn't need to resort to a request such as this.

Respectfully submitted by Kathi Collins
Nov. 8, 2019

Example: $\$279,000$ Home's mkt value
- 20% loss of (1/5 of home's value)
(Here $\$55,800$)
= $\$223,200$ Reduced mkt. value

Towers of Babble

Property Owners Can Profit From Telecommunications Leases.

By Douglas K. Dolan, CCIM | Commercial Real Estate's Global Standard for Professional Achievement. <https://www.ccim.com/cire-magazine/articles/towers-babble/?gmSsoPc=1>

* Our point: This is NOT just about "Visual Clutter" in our community.

Suburban tower heights typically range from 100 feet to 200 feet, with much taller towers, up to 400 feet, located in rural areas. **How tall?** A monopole is a single pole constructed from galvanized metal sections stacked on top of each other to obtain the required height. **Typically 50 feet to 175 feet, a monopole does not have guy wires and has a sleeker** look than a lattice or guyed tower. All cabling is concealed inside the monopole.

The height of the antennas affects service distance. Every 100 feet in tower height equates to 1 mile to 1.5 miles of reliable coverage, depending on terrain. Thus, a 200-foot tower (or rooftop) reliably serves a 2-mile to 3-mile radius, depending on terrain. The signal will travel farther but will begin to reach only hilltops. **Telecommunications companies re-use frequencies, therefore tall towers placed too close together can interfere with each other.** The length of the antennas can determine the amplification of the signal, the number of calls it can handle, and the direction of the signal.

Radio frequency engineers enter the site coordinates into a software program to evaluate the effectiveness of various tower locations. **Has this been done?**

Flood Plain. Properties listed in 100-year flood plains usually are excluded, even if the area never has flooded. ***Has this been checked?**

* **How long is the lease with ELKS? What's the cost of the lease? How much in property taxes will be paid by the ELKS or Falls Creek Lmt'd. Partnership to the City of Sweet Home? Who will benefit besides: ELKS, Falls Creek Partnership, and Pacific Corp? Will this metal monopole interfere with existing cell tower signals?**

* My questions + comments are in red with *.

-Kathi Collins

11-8-19

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Impact Of Cell Towers On Property Values

 lorhutton ·  Feb 19, 2002

 Not open for further replies.

[←Prev](#) [1](#) [2](#)


S

Shannon

Freshman Member

Joined: Jan 17, 2002

Feb 23, 2002

 #11

lorhutton:

No, I don't know if developers considered the proximate tower when pricing their properties where you are located. In my market it depends. When the properties are valued as entry level housing, towers have little impact on values. However, when the impacted property is valued above the average price, towers can have a huge impact on value. Let's put it another way. When the buyer is looking for shelter, the impact is minimal. When the buyer is making a lifestyle buying decision, view is much more important. In these cases, towers can have a negative impact on value, time on market, and market appeal. Most buyers when given a choice between two similar houses, they will choose the one without tower proximity.

This morning I read a letter to the editor in the News & Observer, a Raleigh, NC

REAL ESTATE | IN THE REGION | LONG ISLAND

A Pushback Against Cell Towers

By MARCELLE S. FISCHLER AUG. 27, 2010

Wantagh

TINA CANARIS, an associate broker and a co-owner of RE/MAX Hearthstone in Merrick, has a \$999,000 listing for a high ranch on the water in South Merrick, one of a handful of homes on the block on the market. But her listing has what some consider a disadvantage: a cell antenna poking from the top of a telephone pole at the front of the 65-by-100-foot lot.

“Even houses where there are transformers in front” make “people shy away,” Ms. Canaris said. “If they have the opportunity to buy another home, they do.”

She said cell antennas and towers near homes affected property values, adding, “You can see a buyer’s dismay over the sight of a cell tower near a home just by their expression, even if they don’t say anything.”

By blocking, or seeking to block, cell towers and antennas over the course of the last year, Island homeowners have given voice to concerns that proximity to a monopole or antenna may not be just aesthetically unpleasing but also harmful to property values. Many also perceive health risks in proximity to radio frequency radiation emissions, despite industry assertions and other evidence disputing that such emissions pose a hazard.

Emotions are running so high in areas like Wantagh, where an application for

six cell antennas on the Farmingdale Wantagh Jewish Center is pending, that the Town of Hempstead imposed a moratorium on applications until Sept. 21. That is the date for a public hearing on a new town ordinance stiffening requirements.

At a community meeting on Aug. 16 at Wantagh High School, Dave Denenberg, the Nassau county legislator for Bellmore, Wantagh and Merrick, told more than 200 residents that 160 cell antennas had been placed on telephone poles in the area in the last year by NextG, a wireless network provider.

“Everyone has a cellphone,” Mr. Denenberg said, “but that doesn’t mean you have to have cell installations right across the street from your house.” Under the old town code, installations over 30 feet high required an exemption or a variance. But in New York, wireless providers have public utility status, like LIPA and Cablevision, and they can bypass zoning boards.

Earlier this month in South Huntington, T-Mobile was ordered to take down a new 100-foot monotower erected on property deemed environmentally sensitive (and thus requiring a variance). Andrew J. Campanelli, a civil rights lawyer in Garden City, said a group of residents had hired him to oppose the cellular company’s application.

“They were worried about the property values,” Mr. Campanelli said. “If your home is near a cell antenna, the value of your property is going down at least 4 percent. Depending on the size of the tower and the proximity, it is going down 10 percent.”

In January, in an effort to dismantle 50 cell antennas on a water tower across from a school in the village of Bayville, Mr. Campanelli filed a federal lawsuit that cited health risks and private property rights.

In a statement, Dr. Anna F. Hunderfund, the Locust Valley superintendent, said that in February 2009 the district had engaged a firm to study the cellphone installations near the Bayville schools, finding that the tower “posed no significant health risks,” and she noted that the emission levels fell well below amounts deemed unsafe by the Federal Communications Commission.

In June 2009, Sharon Curry, a psychologist in Merrick, woke up to find a cell

antenna abutting her backyard, level to her 8-year-old son's bedroom window.

Puzzled by its presence, particularly because she lives next to an elementary school, she did research to see if there was cause for concern. What she learned about possible health impacts, she said, led her to seek help from civic associations and to form a group, Moms of Merrick Speak Out, to keep new cell towers out. She said she was seeking the "responsible" placement of cell antennas, away from homes and schools.

The Federal Communications Act of 1996^{updates?} says health concerns are not a valid reason for a municipality to deny zoning for a cell tower or antenna. Property values and aesthetics, however, do qualify, according to the act.

Frank Schilero, an associate broker with RE/MAX Innovations in Wantagh, has a listing on a \$629,000 home down the street from the Farmingdale Wantagh Jewish Center, where the application is pending to put six cell antennas on the roof.

"People don't like living next to cell towers, for medical reasons or aesthetics," Mr. Schilero said. "Or they don't want that eyesore sticking up in their backyards." There is an offer on his listing, he added, but since the buyer heard about the possible cell antennas she has sought more information from the wireless companies about their size and impact.

Charles Kovit, the Hempstead deputy town attorney, said that under the proposed code change any new towers or antennas would have to be 1,500 feet from residences, schools, houses of worship and libraries.

The town recently hired a consultant, Richard A. Comi of the Center for Municipal Solutions in Glenmont, to review antenna applications.

Under the new ordinance, applications for wireless facilities would require technical evidence that they had a "gap" in coverage necessitating a new tower.

"If not, they will get denied," Mr. Kovit said. The wireless companies would also have to prove that the selected location had "the least negative impact on area character and property values." If another location farther away from homes can solve the gap problem, "they are going to have to move."

Tower

* Why were letters re: mtg. only sent to those residences within 300ft of tower when all neighborhood prop. values would be affected?



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Future home buyers won't ask "What kind of tower is that?" They'll just look for a home elsewhere.

Cell Phone Towers Lower Property Values: Documentation And Research On Cellular Base Stations Near Homes

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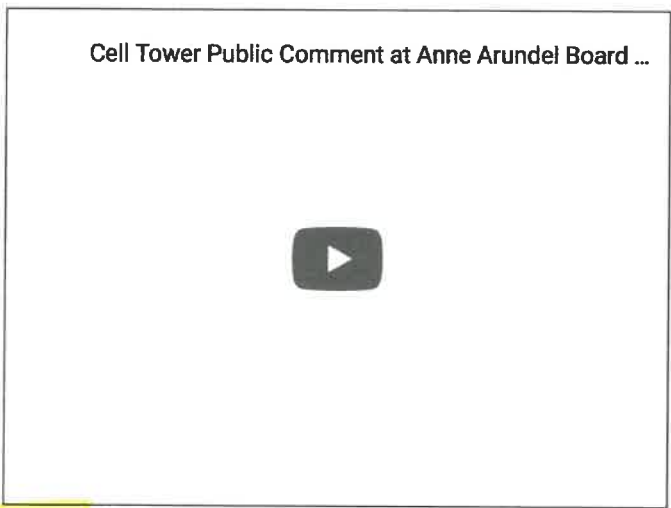
CELL PHONE FINE PRINT WARNINGS

(https://ehtrust.org/key-issues/fine-print-warnings/)

CELL PHONE RADIATION FAQ'S

(https://ehtrust.org/take-action/educate-yourself/cell-phones-and-wireless-radiation-faqs/)

Cell Antennas Lower Property Values



WIFI IN SCHOOLS

(https://ehtrust.org/key-issues/wifi-in-schools/)

CELL PHONES AND BREAST CANCER

(https://ehtrust.org/key-issues/cell-phones-and-breast-cancer/)

Research indicates that over 90% of home buyers and renters are less interested in properties near cell towers and would pay less for a property in close vicinity to cellular antennas. Documentation of a price drop up to 20% is found in multiple surveys and published articles as listed below. The US Department of Housing and Urban Development (HUD) considers cell towers as "Hazards and Nuisances."

Once built. Cell towers can go up an additional 20 feet- without community consent.

Most people in the United States are unaware that once a tower is built, it can go up to 20 feet higher with no public process due to the passing of Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012.

(https://ecfsapi.fcc.gov/file/7521070994.pdf) In other words, a 100 foot tower can be increased to 120 feet after it is constructed and the community will have no input. Communities are largely unaware of this law.

The California Association of Realtors' Property Sellers Questionnaire specifically "cell towers" listed on the disclosure form for sellers of real estate. The seller must note "neighborhood noise, nuisance or other problems from.." and includes cell towers and high voltage transmission lines on the long list problems. Click here to see the California Association of Realtors' Property Sellers Questionnaire (<https://ehtrust.org/wp-content/uploads/Real-Estate-Seller-Property-Questionnaire-reduced-12-17-1.pdf>) (p. 3-4 under K. Neighborhood)

Scroll down this page for resources on property de-valuation.

Read the peer reviewed published science documenting the public health risk at this link. (<https://ehtrust.org/science/cell-towers-and-cell-antennae/>)

The realtor industry has written several articles documenting the property devaluation after communication towers are built near property.

National Association of REALTORS® References

Letter to the FCC by the The National Association of REALTORS "5G Could Hurt Property Owners"

The National Association of REALTORS® and other real estate organizations are urging the Federal Communications Commission to heed caution and ensure that its proposal to expand high-speed 5G networks nationwide doesn't violate property owners' rights. Read the National Association of REALTORS® Letter (<https://magazine.realtor/daily-news/2019/06/24/nar-fcc-s-5g-plan-could-hurt-property-owners>)

"A coalition of real estate groups, including NAR, the National Multifamily Housing Council, the National Apartment Association, and the Institute of Real Estate Management, among others, submitted a letter to the FCC expressing concern over its proposed rule regarding over-the-air reception devices. The coalition says the rule could make it easier for antennas and other devices to be placed on properties without the owners' consent. The coalition flagged these two potential issues:

- The rule could allow residential or commercial tenants to install a 5G small cell or other wireless infrastructure on a balcony or within a leased space to boost individual coverage and also transmit a signal to other customers of the telecom provider.
- The rule could allow a telecom carrier who already leases rooftop space from a property owner (for antennas or other equipment) to be able to attach a 5G small cell or other wireless infrastructure on that existing equipment without having to change their agreement with the property owner.
- "The real estate associations strongly support the deployment of broadband infrastructure of all kinds because apartment residents, commercial tenants, and their customers need and want the service that the infrastructure supports," the coalition wrote in its letter to the FCC. "With the rise of e-commerce, changes in how consumers access media, and our ever-increasing reliance on the Internet for basic functions, broadband connectivity is a top priority for the industry."
- "The real estate associations believe strongly the marketplace is working, and so we urge the Commission to avoid measures that could prove counterproductive, and thereby harm investment, constrain competition, and limit consumer access to broadband service. We are also concerned that inopportune regulation could raise the cost of developing multifamily housing and commercial real estate."
- <https://magazine.realtor/daily-news/2019/06/24/nar-fcc-s-5g-plan-could-hurt-property-owners> (<https://magazine.realtor/daily-news/2019/06/24/nar-fcc-s-5g-plan-could-hurt-property-owners>)

Wireless Towers and Home Values: An Alternative Valuation Approach Using a Spatial Econometric Analysis

(https://ideas.repec.org/a/kap/jrefec/v56y2018i4d10.1007_s11146-017-9600-9.html) (*Journal of Real Estate Finance & Economics*, May 1, 2018)

- For properties located within 0.72 kilometers of the closest tower, results reveal significant social welfare costs with values declining 2.46% on average, and up to 9.78% for homes within tower visibility range compared to homes outside tower visibility range; in aggregate, properties within the 0.72-kilometer band lose over \$24 million dollars.

"Impact of Communication Towers and Equipment on Nearby Property Values"

(<https://ehtrust.org/wp-content/uploads/Cell-Towers-Home-Values.pdf>) prepared by Burgoyne Appraisal Company, March 7, 2017

- "In 32 years of experience as a Real Estate Appraiser specializing in detrimental conditions, takings, adverse impacts and right-of-way, I have found that aesthetics (or rather the adverse impact on aesthetics) of externalities routinely has the largest impact on property values. As a result, proximity to towers of all types (cell, wind turbine, and electric transmission) has an impact on property values. The same is true with all sorts of surface installations such as pump stations and communication equipment boxes. This would apply to new small cell and DAS equipment, although again, one would expect that the less intrusive the facility, the less significant the impact. Small cell and DAS installations can be unsightly, bulky, inconsistent, and even noisy."

The Cost of Convenience: Estimating the Impact of Communication Antennas on Residential Property Values

(<http://gatonweb.uky.edu/Faculty/blomquist/LE%202016%20Locke%20Blomquist%20towers.pdf>) (*Land Economics*, Feb. 2016)

- "Re a study on property in Kentucky- "The best estimate of the impact is that a property with a visible antenna located 1,000 feet away sells for 1.82% (\$3,342) less than a similar property located 4,500 feet away. The aggregate impact is \$10.0 million for properties located within 1,000 feet"

The Lo Down on Cell Towers, Neighborhood Values, and the Secretive Telecoms(link is external) (<http://dissidentvoice.org/2015/12/the-lo-down-on-cell-towers-neighborhood-values-and-the-secretive-telecoms/>) (*The Dissident Voice*, Dec. 19, 2015)

Cell Towers: Not in My Back Yard (<http://tedium.co/2015/08/04/cell-towers-nimby-trees/>) (*Tedium Blog*, Aug. 5, 2015)

"Examining invisible urban pollution and its effect on real estate value in New York City (<http://nyrej.com/examining-invisible-urban-pollution-and-its-effect-on-real-estate-value-in-new-york-city-by-william-gati>)" – by William Gati in *New York Real Estate Journal* September 2017

- "Understanding EMF values of business and residential locations is relatively new for the real estate industry. Cell phone towers bring extra tax revenue and better reception to a section of the city, but many are skeptical because of potential health risks and the impact on property values. Increasing numbers of people don't want to live near cell towers. In some areas with new towers, property values have decreased by up to 20%."

"Cell Tower Antennas Problematic for Buyers (<http://realtormag.realtor.org/daily-news/2014/07/25/cell-towers-antennas-problematic-for-buyers>)" published in REALTOR® Magazine:

- An overwhelming 94 percent of home buyers and renters surveyed by the National Institute for Science, Law & Public Policy (NISLAPP) say they are less interested and would pay less for a property located near a cell tower or antenna.
- The NISLAPP survey echoes the findings of a study by Sandy Bond of the New Zealand Property Institute and past president of the Pacific Rim Real Estate Society (PRRES). "The Impact of Cell Phone Towers on House Prices in Residential Neighborhoods," which was published in The Appraisal Journal in 2006, found that buyers would pay as much as 20 percent less for a property near a cell tower or antenna.

2014 Survey by the National Institute for Science, Law and Public Policy (NISLAPP) in Washington, D.C., "Neighborhood Cell Towers & Antennas—Do They Impact a Property's Desirability?" (<http://cts.businesswire.com/ct/CT?id=smartlink&url=http%3A%2F%2Felectromagnetichealth.org%2Felectromagnetic-health-blog%2Fsurvey-property-desirability%2F&sheet=50899812&newsitemid=20140703005726&lan=en-US&anchor=%E2%80%9CNeighborhood+Cell+Towers+%26+Antennas%E2%80%94Do+They+Impact+a+Property%27s+Desirability%3F%E2%80%94>)

- Home buyers and renters are less interested in properties located near cell towers and antennas, as well as in properties where a cell tower or group of antennas are placed on top of or attached to a building. 94% said a nearby cell tower or group of antennas would negatively impact interest in a property or the price they would be willing to pay for it.
- Read the Press Release: Survey by the National Institute for Science, Law & Public Policy (<http://www.businesswire.com/news/home/20140703005726/en/Survey-National-Institute-Science-Law-Public-Policy#.U8muiLGO1oY>)

Cell Towers on Schools Near Homes Lower Propert...



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Lawyers Write About the Property Value Drop.

([https://www.montgomerycountymd.gov/cable/Resources/Files/Towers/cellTowerInfo/Ex%20Parte-Smart%20Communities%20and%20Special%20Districtst%2009-19-18-c2%20\(1\).pdf](https://www.montgomerycountymd.gov/cable/Resources/Files/Towers/cellTowerInfo/Ex%20Parte-Smart%20Communities%20and%20Special%20Districtst%2009-19-18-c2%20(1).pdf))

[RESOURCES TO SHARE \(HTTPS://EHTRUST.ORG/RESOURCES-TO-SHARE/\)](https://ehtrust.org/resources-to-share/)

Best Post and Krieger Letter to Ms. Marlene H. Dortch, Secretary Federal Communications Commission September 19, 2018

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([https://www.montgomerycountymd.gov/cable/Resources/Files/Towers/cellTowerInfo/Ex%20Parte-Smart%20Communities%20and%20Special%20Districtst%2009-19-18-c2%20\(1\).pdf](https://www.montgomerycountymd.gov/cable/Resources/Files/Towers/cellTowerInfo/Ex%20Parte-Smart%20Communities%20and%20Special%20Districtst%2009-19-18-c2%20(1).pdf)) "RE" Smart Communities and Special Districts Coalition – Ex Parte Submission: Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, WT Docket No. 17-79; Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment, WC Docket No. 17-84"

- "Further, the assumption that there is little to consider in a small cell application is belied by the definition the Commission adopts for "small wireless facility": while it justifies its rules based on the assumption that

Homeowners speak out against plans to build 2 cell...



STUDIES ON IMPACTS OF TOWERS

Sandy Bond, Ph.D., Ko-Kang Wang, "The Impact of Cell Phone Towers on House Prices in Residential Neighborhoods, (<http://electromagnetichealth.org/wp-content/uploads/2014/06/TAJSummer05p256-277.pdf>)" The Appraisal Journal, Summer 2005; Source: Goliath business content website.

- "Overall, respondents would pay from 10%–19% less to over 20% less for a property if it were in close proximity to a CPBS."

"Cellular Phone Towers: Perceived impact on residents and property values" (http://www.prrs.net/Papers/Bond_The_Impact_Of_Cellular_Phone_Base_Station_Towers_On_Property_Values.pdf) University of Auckland, paper presented at the Ninth Pacific-Rim Real Estate Society Conference, Brisbane, Australia, January 19-22, 2003; Source: Pacific Rim Real Estate Society website,

A Field Guide to Cell Towers, The National Association of Realtors (<http://www.realtor.org/field-guides/field-guide-to-cell-phone-towers>)

The effect of distance to cell phone towers on house prices (<http://www.ci.pleasant-hill.ca.us/DocumentView.aspx?DID=5154>) S Bond, Appraisal Journal, Fall 2007, Source, Appraisal Journal (Found on page 22 (<http://www.ci.pleasant-hill.ca.us/DocumentCenter/Home/View/5154>)) See also Using GIS to Measure the Impact of Distance to Cell Phone Towers on House Prices in Florida (http://www.prrs.net/papers/Bond_Squires_Using_GIS_to_Measure.pdf)

Florida State University Law Review Volume 24 | Issue 1 Article 5 1996 The Power Line Dilemma: Compensation for Diminished Property Value Caused by Fear of Electromagnetic Fields (<http://ir.law.fsu.edu/cgi/viewcontent.cgi?article=1427&context=lr>)

New Zealand Ministry for the Environment, "Appendix 5: The Impact of Cellphone Towers on Property Values" (<http://www.mfe.govt.nz/publications/rma/nestelecommunications-section32-aug08/html/page12.html#footnote-24>) Source: New Zealand Ministry for the Environment website

Powers, turbines and transmission lines impacts on property value edited by Sally Bond Sally Sims and Peter Dent, 2014 (http://www.clarkdale.az.gov/2015_Meetings/2015_Council/2015-05-12_Council_Regular/Public_Comment_Rcd_Karen_Daniels.pdf)

The US Department of Housing and Urban Development (HUD) considers cell towers as "Hazards and Nuisances."

- HUD requires its certified appraisers to take the presence of nearby cell towers into consideration when determining the value of a single family residential property.
- HUD guidelines categorize cell towers with "hazards and nuisances." HUD

prohibits FHA underwriting of mortgages for homes that are within the engineered fall zone of a cell tower.

- "The appraiser must indicate whether the dwelling or related property improvements is located within the easement serving a high-voltage transmission line, radio/TV transmission tower, cell phone tower, microwave relay dish or tower, or satellite dish (radio, TV cable, etc)."
- Read it here at the US Department of Housing and Urban Development. (<https://archives.hud.gov/offices/hsg/sfh/ref/sfh-118f.cfm>)

Cell Towers are Discussed in the Written Testimony of Bobbi Borland Acting Branch Chief, HUD Santa Ana Homeownership Center Hearing before the Subcommittee on Insurance, Housing and Community Opportunity U.S. House of Representatives Committee on Financial Services on "The Impact of Overhead High Voltage Transmission Towers and Lines on Eligibility for Federal Housing Administration (FHA) Insured Mortgage Programs" Saturday, April 14, 2012 (<https://financialservices.house.gov/uploadedfiles/hhrg-112-ba04-wstate-bborland-20120414.pdf>)

- With regard to the new FHA originations, the guide provides that: "The appraiser must indicate whether the dwelling or related property improvements are located within the easement serving a high-voltage transmission line, radio/TV transmission tower, cell phone tower, microwave relay dish or tower, or satellite dish (radio, TV cable, etc)."

Once Built, Towers Could Be Allowed To Go 20 Feet Taller

Middle Class Tax Relief And Job Creation Act Of 2012, Sec. 6409(A)

The Federal Communications Commission (FCC) has proposed and is currently considering rules to clarify and implement the requirements of Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012. Under section 6409(a), "a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or base station." The FCC considers eligible facilities' requests to include requests for carrier co-locations and for replacing existing antennas and ground equipment with larger antennas/equipment or more antennas/equipment.

The FCC has proposed, as part of these rules, applying a four-pronged test, which could lead to cell towers increasing in height by 20-plus feet beyond their approved construction heights.

Applying the test may also lead increases in the sizes of compounds, equipment cabinets and shelters, and hazardous materials used for back-up power supplies, beyond what was originally approved.

Under this test, a "substantial increase in the size of the tower" occurs if:

- 1) [t]he mounting of the proposed antenna on the tower would increase the existing height of the tower by more than 10%, or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater, except that the mounting of the proposed antenna may exceed the size limits set forth in this paragraph if necessary to avoid interference with existing antennas; or
- 2) [t]he mounting of the proposed antenna would involve the installation of more than the standard number of new equipment cabinets for the technology involved, **not to exceed four, or more than one new equipment shelter**; or
- 3) [t]he mounting of the proposed antenna would involve adding an appurtenance

to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater, except that the mounting of the proposed antenna may exceed the size limits set forth in this paragraph if necessary to shelter the antenna from inclement weather or to connect the antenna to the tower via cable; or

4) [t]he mounting of the proposed antenna would involve excavation outside the current tower site, defined as the current boundaries of the leased or owned property surrounding the tower and any access or utility easements currently related to the site.

<http://apps.fcc.gov/ecfs/document/view?id=7521070994>
(<https://ecfsapi.fcc.gov/file/7521070994.pdf>)



Email us at
info@ehtrust.org
(<mailto:info@ehtrust.org>)

Mailing address

P.O. Box 58, Teton
Village WY 83025

**Express mail should
be sent to**

7100 N Rachel Way
Unit 6 Eagles Rest
Teton Village WY
83025

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24 July 2019 *EM, FBA* Property Values, Desirability and Cell Towers



> November 2017

> October 2017

> August 2017

Cell towers planned for two churches

> June 2017

Two Dutch Reformed churches – one in Bothasig and another in Table View – stand to benefit from a deal that would allow a company to build cell towers on their premises. Residents have until Monday September 11 to lodge objections to the free-standing base station proposed for the church at 7 Nassau Street, Bothasig, ...
Continue reading

> March 2017



> February 2017

> January 2017

The *general public*, now better educated and better informed on technology-related issues than ever before, may be the single greatest determinant to the success or failure of a proposed technology project. This is especially true in democratic and highly industrialized societies. Public sentiment often makes itself heard through highly vocal *associations* or other special interest groups that usually have good access to the media.

> December 2016

> November 2016

> October 2016

> September 2016

A study on "The impact of cell phone towers

on house prices: evidence from Brisbane, Australia”

The growing public pressure against the spread of cell phone towers in urban areas has created a need to understand their impact on adjacent house prices. A few existing studies are, however, controversial in their methodology and inconclusive in their results. Therefore, our study on the effect of cell phone towers on house prices is designed to avoid these deficiencies. Property transaction data collected from two suburbs within the Brisbane City Council were analysed adopting the spatial hedonic property valuation model. The estimated models were statistically significant and were largely in line with theoretical expectations. The results revealed that proximity to cell phone towers negatively affects house values, decreasing as the distance from the tower increases. A suitable compensation programme for nearby property owners is, therefore, suggested as being an appropriate policy response. <https://link.springer.com/article/10.1007/s10018-017-0190-9>

-A survey conducted in June 2014 by the National Institute for Science, Law and Public Policy (NISLAPP) in Washington, D.C., “*Neighborhood Cell Towers & Antennas—Do They Impact a Property’s Desirability?*”, shows home buyers and renters are less interested in properties located near cell towers and antennas, as well as in properties where a cell tower or group of antennas are placed on top of or attached to a building.

★ Of the 1,000 survey respondents:

-94% said a nearby cell tower or group of antennas would negatively impact interest in a property or the price they would be willing to pay for it.

-94% said a cell tower or group of antennas on top of, or attached to, an apartment building would negatively impact interest in the apartment building or the price they would be

willing to pay for it.

-95% said they would opt to buy or rent a property that had zero antennas on the building over a comparable property that had several antennas on the building.

-79% said under no circumstances would they ever purchase or rent a property within a few blocks of a cell tower or antennas.

-88% said that under no circumstances would they ever purchase or rent a property with a cell tower or group of antennas on top of, or attached to, the apartment building.

-89% said they were generally concerned about the increasing number of cell towers and antennas in their residential neighborhood.

Concern was expressed in the comments section by respondents about potential property valuation declines near antennas and cell towers. While the NISLAPP survey did not evaluate property price declines, a study on this subject by Sandy Bond, PhD of the New Zealand Property Institute, and Past President of the Pacific Rim Real Estate Society (PRRES), "The Impact of Cell Phone Towers on House Prices in Residential Neighborhoods", was published in The Appraisal Journal of the Appraisal Institute in 2006. The Appraisal Institute is the largest global professional organization for appraisers with 91 chapters. The study indicated that home buyers would pay from 10%–19% less to over 20% less for a property if it were in close proximity to a cell phone base station. The 'opinion' survey results were then confirmed by a market sales analysis. The results of the sales analysis showed prices of properties were reduced by around 21% after a cell phone base station was built in the neighborhood.

The Appraisal Journal study added:

"Even buyers who believe that there are no adverse health

Even buyers who believe that there are no adverse health effects from cell phone base stations, knowing that other potential buyers might think the reverse, will probably seek a price discount for a property located near a cell phone base station.”

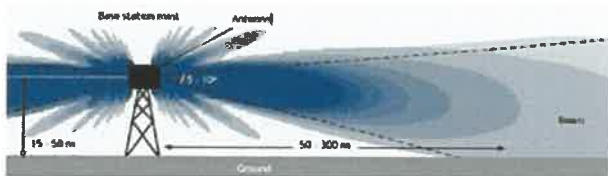
James S. Turner, Esq., Chairman of the National Institute for Science, Law & Public Policy and Partner, Swankin & Turner in Washington, D.C., says:

“The NISLAPP survey suggests there is now a high level of awareness about potential risks from cell towers and antennas. In addition, the survey indicates respondents believe they have personally experienced cognitive (57%) or physical (63%) effects from radiofrequency radiation from towers, antennas or other radiating devices, such as cell phones, routers, smart meters and other consumer electronics. Almost 90% are concerned about the increasing number of cell towers and antennas generally.”

The disclosure duties of an estate agent: *“As a realtor, I must disclose to potential buyers where there are any cell towers nearby.”* The California Association of Realtors maintains that *‘sellers and licensees must disclose material facts that affect the value or desirability of the property,’* including *‘known conditions outside of and surrounding’* it. This includes *‘nuisances’* and zoning changes that allow for commercial uses.” <https://sites.google.com/site/nocelltowerinourneighborhood/home/decreased-real-estate-value>

Estate agents are regulated by a strict code of conduct. They have an equal duty to both buyer and seller of a property.

Radiation Pattern of a Cell Tower Antenna



Propagation of "main beam" from antenna mounted on a tower or roof top

People living within 50 to 300 meter radius are in the high radiation zone (dark blue) and are more prone to ill-effects of electromagnetic radiation

Therefore it is reasonable to suggest that public perception dictates that values of properties of a similar size and type within 300 m of a cell phone tower will be lower than those outside of that radius [this is confirmed in the above documents and references below from international sources in which it appears to be a graduated scale of devaluation determined mainly by distance.]

The National Buildings Act gives the owner of a property the right to not have his/her property devalued by the acts or omissions of others. This is confirmed in a judgement by Judge Yekiso in 2006 in which he interprets the ACT as follows

-

approval in respect thereof. However, if the building plans do comply with the requirements of the National Buildings Act and *any other applicable law*, that does not signify the end of the process. **The local authority is still required to consider the contextual effect the erection of the proposed building will have on the adjoining or neighbouring properties when erected, and that is, whether the area in which such building is to be erected will probably or in fact be disfigured thereby; whether such building will probably or in fact be unsightly or objectionable or whether it will**

probably or in fact derogate from the value of adjoining or neighbouring properties. In the final analysis what I am, therefore, required to

Advanced Notice

Therefore if the City Manager [by way of the Community via the local Municipality] is informed in advance that the surrounding property owners would find a structure *“Unightly” or “Objectionable” or “May derogate from the value of surrounding properties”* then the decision is no longer his/hers to make. This especially if supported by professional valuation projections to which this part of the Act applies, the interpretation being supported by the Yekiso Judgement decision AND can be further verified by an assessment by an estate agent working in or familiar with the area concerned.

This brings us back to estate agents' responsibilities and property values. Internationally it has been determined that properties surrounding cell phone antennae are devalued by between 10-20%. It is therefore reasonable to suggest that in terms of the radiation pattern drawing above that the 10% devaluation should apply in the region of 300 m and the 20% to properties close to or within sight of the tower and these should be the guidelines used by property professionals based on known buyers perceptions / concerns.

Property valuation can only and must only be determined by independent local property professionals who have knowledge of the area concerned, not by government agencies and should be determined by the desirability of a property on a willing seller/willing buyer basis. It is the duty [at the very minimum in the moral sense] of the authorities to compensate any property owner who, based on the estate agents valuation, has been financially disadvantaged by a decision to approve a structure considered to be –

“Unightly” OR “Objectionable” OR “May derogate from the values of surrounding properties.”

SCIENTISTS FOR WIRED TECHNOLOGY

Advocacy based on Scientists' research of the hazards of pulsed and modulated Radiofrequency Microwave Radiation

Sonoma, CA

How Much RF-EMR Exposure is Safe?

Biologically-Based RF Microwave Radiation Exposure Guidelines

To compare, [explore this link](#) to "FCC Guidelines for Human Exposure to Radio-frequency Microwave Radiation"

BioInitiative, 2017: "A scientific benchmark of $30 \mu\text{W}/\text{m}^2$ for lowest observed effect level for RF microwave radiation is based on mobile phone base station-level studies. Applying a ten-fold reduction to compensate for the lack of long-term exposure (to provide a safety buffer for chronic exposure) or for children as a sensitive subpopulation yields a **3 to 6 $\mu\text{W}/\text{m}^2$** RF Microwave Radiation exposure guideline"

Similar scientifically-based RF Microwave Radiation Exposure Guidelines are published by the International Institute for Building-Biology & Ecology:

No Hazard

Slight Hazard

Severe Hazard

Extreme
Hazard

--	--	--	--

< 0.1 $\mu\text{W}/\text{m}^2$	$0.1 \mu\text{W}/\text{m}^2$ to 10 $\mu\text{W}/\text{m}^2$	$10 \mu\text{W}/\text{m}^2$ to $1,000$ $\mu\text{W}/\text{m}^2$	$> 1,000$ $\mu\text{W}/\text{m}^2$
NO HAZARD	SLIGHT HAZARD	SEVERE HAZARD	EXTREME HAZARD

- $\mu\text{W}/\text{m}^2$ = millionths of a Watt per square meter (a measurement of power flux density)
- **Power flux density** (PFD) = the amount of electrical power that flows through a unit area: expressed as microWatts (μW) per square meter (m^2).
- PFD measures only the **rate of electrical power**, **NOT the total electrical power delivered over time**, which requires the rate to be multiplied by the time of exposure and then requires reporting the results in a **more relevant unit**: $\mu\text{W}\text{-seconds}/\text{m}^2$ or $\mu\text{Joules}/\text{m}^2$
- Average $\mu\text{W}/\text{m}^2$ readings, as specified by the FCC, **significantly under-report** the levels of pulsed, data-modulated, RF microwave radiation exposures for two reasons —
 1. **Peak RF microwave radiation** exposures meter **100x–1000x higher** than average RF microwave radiation for data-carrying, modulated, high-crest signals like Wi-Fi, 4G/LTE and 5G because of the **duty cycle**, inherent in these RF signals. Inexplicably, the FCC RF microwave radiation exposure guidelines *only consider average* RF microwave radiation exposures, which is a significant error because living organisms' biology reacts to the sharp changes of RF microwave radiation from zero to peak levels and back again. This is more fully explained here: [Palo Alto Whitewashes RF Microwave Radiation Exposure Hazards](#)
 2. The FCC RF microwave radiation exposure guidelines **consider neither the time of exposure nor the total electrical power delivered over time**, which is *utter nonsense* and scientifically unsound. This is more fully explained here: [RF Microwave Radiation Counter](#).

1997 FCC Office of Engineering and Technology Bulletin 65: FCC Guidelines for Human Exposure to Radiofrequency Microwave Radiation

Power Flux Density in Far-Field Region from RF-EMR Source in $\mu\text{W}/\text{m}^2$

Submitted November 8, 2019 by Tim Breeden 1530 Tamarack St, Sweet Home, OR 97386 541-367-1275

Regarding the CU-19-10 conditional use permit, I object to granting the permit.

It does not meet the requirements of 17.24.070 as the maximum height for R1 zone is 30 feet. This proposal asks for a 45 foot height which is very visible in this residential zone.

17.24.030 allows conditional use permits for public utility facilities.

Falls Creek H.P. is not a public utility. It is not regulated by the Oregon Public Utilities Commission. It does not serve the public. It's a private corporation whose only customer is Pacific Power. It does not qualify for public utilities exemption for the R1 zone and should not receive a permit.

17.80.040 (B)6 prohibits excessive emissions. This tower will not initially emit high levels of radiation. However with the city's co-location policies, additional emissions are just on the horizon and a co-located cell antenna will raise those levels significantly. There is no legal mechanism to limit these additional emissions once the initial tower is approved. This is entirely inappropriate for a R1 residential zone and these conditional use procedures are inadequate to protect residents from unlimited amounts of microwave radiation.

To preserve and protect the residents, this permit should not be approved. Attached is a study of health effects on residents from as far away as 300 yards. While it is legal to saturate every corner of town with microwave radiation, it is generally recognized as a health hazard. There is no "good" amount of microwave radiation. It is not the residents or the city's job to facilitate a corporations profits at the expense of their health.

The permit must not be granted and the city of Sweet Home must regulate antenna sites more stringently.

The telecommunication codes should require the applicant to possess a valid FCC license.

Co-location antennas must go through the same approval process as the original WTF.

The site owner must be the lessor for the co-located antenna, not the original permitholder.

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11-8-19
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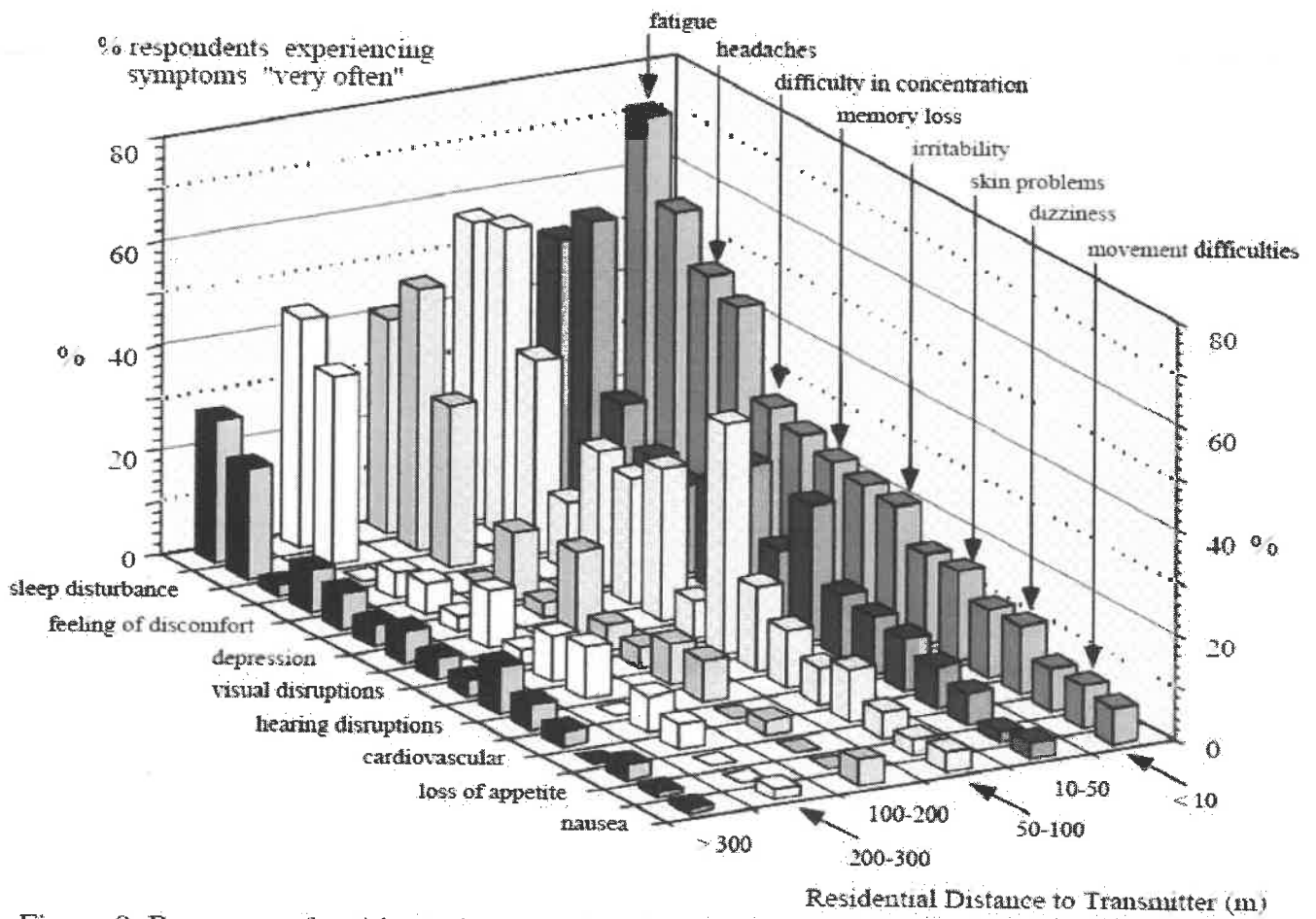


Figure 9. Response of residents living in the vicinity of a cellular phone base station in France.

Glen and Cynthia Hubbard

331 Strawberry Loop
Sweet Home, Oregon 97386
(541)367-4101
GlenorCynthia@comcast.net

November 8, 2019

Sweet Home Planning Commission

File # CU19-10

We are property owners in the Strawberry Heights subdivision within eye sight of the BPOE Elks #1972 Sweet Home Lodge. We were notified that the Elks Lodge has applied for a Conditional Use Permit (CUP) to install a wireless telecommunications facility consisting of a radio antenna on a monopole. We oppose the installation of this facility. The communication tower will be the first thing we see when we open our drapes in the morning. It will negatively impact our view and will be an eye sore to our neighborhood's picturesque landscape. In addition, this utility pole could lower our neighborhood property values (resale values as well as taxation values). The facility will add an element of commercialization to this otherwise charming neighborhood.

Utilities (gas, electric, cable, phone, water, sewer) in the Strawberry Heights neighborhood are underground. We personally had our electrical service relocated a few years ago and paid extra to have the electric re-buried. This conditional use permit if approved will allow a utility pole within eye sight of a neighborhood that has gone to great lengths to keep utilities hidden.

Please preserve our neighborhood and reject the Elks Lodge application.

Thank you.

Sincerely yours,



Glen and Cynthia Hubbard

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11-8-19
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ATTACHMENT D

Community and Economic Development Department

City of Sweet Home
1140 12th Avenue
Sweet Home, OR 97386
541-367-8113
Fax 541-367-5113
www.ci.sweet-home.or.us

Application for a Conditional Use Permit

Date Received: 10.16.19
Date Complete: 10.17.19
File Number: CU19-10
Application Fee \$: 615.00
Receipt #: _____
Hearing Date: _____

Applicant's Name:
Falls Creek H.P., Limited Partnership

Property Owner:
BPOE Elks #1972 Sweet Home

Applicant's Address:
65 Madison Ave., Ste 55, Morristown, N.J 07960

Owner's Address:
440 Osage Street, Sweet Home, OR 97386

Applicant's Phone and e-mail:
(consultant Gary Marcus) 541-953-2725, garymarcus1@aol.com

Owner's Phone and email:
(541) 367-7806 office, sweethomebpoe1972@comcast.net

Subject Property Address:
440 Osage Street, Sweet Home, OR 97386

Subject Property Assessor's Map and Tax Lot:
13S01E36A-200

Subject Property Size:

Subject Property: Zoning Classification
Residential

Comprehensive Plan Classification:
Residential

Nature of Applicants Request

Narrative describing the proposed use: Brief Description on this form and attach extra sheets if needed.

See Permit Application dated August 19, 2019, and supplemental information dated October 9, 2019

Dan Parker from Falls Creek H.P., Limited Partnership is the owner's representative for the Falls Creek project. His phone number is (315) 261-2158
Dan's email address is dan.parker@eaglecreekre.com.

Impacts on the neighborhood: Include traffic, parking, noise, odor, dust or other impacts. Brief Description on this form.

The modifications will occur in a current parking lot in the SW corner of the Elk's Lodge. It will be in an area that is 22 feet long and 15 wide.

There will be noise during the first 2 days when the existing driveway is broken up. Otherwise it will be similar to residential construction for 3 weeks.

Submittal Requirements

The checklist on the other side of this application lists the required items must be submitted with this application and the Criteria the request must meet. Please address all items that apply to this request.

I certify that the statements contained on this application, along with the submitted materials, are in all respects true and are correct to the best of my knowledge and belief.

Applicant's Signature:
Dan Parker (315) 261-2158

Date:
October 17, 2019

Property Owner's Signature:
[Signature] TRUSTEE

Date:
October 17, 2019

Within 30 days following the filing of this application, the City Planner will make a determination of completeness regarding the application. If deemed complete, the application will be processed.

SHMC 17.80.030 APPLICATION REQUIREMENTS

An application for a Conditional Use must meet the submittal requirements and the decision criteria noted below.

- X 1. A site plan drawn to scale showing the dimensions and arrangement of the proposed development on the subject lot;
X 2. Narrative describing the proposed use and the impacts on the neighborhood;
X 3. For commercial activities, a proposed plan of business operation;
NA 4. Off street parking and on-site circulation plans for vehicles, bicycles, and pedestrians;
X 5. The location and dimensions of entrances and exits;
NA 6. A Traffic Impact Study, if required by the City Engineer and the City Planner;
Existing 7. Landscape plans;
X 8. A signage plan, if applicable;
X 9. Drawings of the exterior for new buildings;
X 10. Photographs of existing buildings if no changes are to be made to the exterior of the building.

SHMC17.80.040 CONDITIONAL USE CRITERIA.

The criteria that will be used in approving, approving with conditions, or denying an application, or to enlarge or alter a conditional use, will be based on findings with respect to each of the following standards and criteria.

- X A. The request complies with the requirements of the underlying zone or overlay zone, city codes, state and federal laws.
X B. The site size, dimensions, location, topography and access are adequate for the needs of the proposed use, considering, but not limited to, the following:
X 1. Building size X 6. Exhaust and emissions X 11. Visibility
X 2. Parking X 7. Light and glare X 12. Safety
X 3. Traffic X 8. Erosion X 13. Building, landscaping or street features
X 4. Noise X 9. Odor
X 5. Vibration X 10. Dust
X C. Any negative impacts of the proposed use on adjacent properties and on the public can be mitigated through application of other code standards, or other reasonable conditions of approval that include but are not limited to those listed in this chapter.
X D. All required public facilities have adequate capacity, as determined by the city, to serve the proposed use.
NA E. Home occupations must meet the following standards:
NA 1. The home occupation shall be secondary to the residential use.
NA 2. All aspects of the home occupation shall be contained and conducted within a completely enclosing building.
NA 3. No materials or mechanical equipment shall be used which are detrimental to residential use of the dwelling or nearby dwellings because of vibration, noise, dust, smoke, odor, interference with the electrical grid, radio or television reception or other similar factors.
NA 4. Vehicles related to the home occupation shall be parked in a manner so as to not block any driveway or impede the safe flow of traffic
NA F. Marijuana facilities must be located in a fixed location. No temporary or mobile sites of any sort are allowed.
NA G. Marijuana facilities may not have any drive up services.
NA H. Marijuana facilities must be located at least 1,000 feet from the property boundary of any school.
NA I. Marijuana facilities must be sited on a property so as to be at least 100 feet from the boundary of any residentially zoned property.



Sweet Home Lodge No. 1972

BENEVOLENT AND PROTECTIVE ORDER OF ELKS
P.O. BOX 176 440 OSAGE ST.
SWEET HOME, OREGON 97386

OFFICE OF THE SECRETARY

(541) 367-3559

November 4, 2019

Suzanne Larson
Building Official
Linn County Building Department
300 SW 4th Ave
PO Box 100
Albany, OR 97321

RE: Permit Application – Commercial Structure

Dear Suzanne,

The Elk Lodge has signed a lease giving permission to the Falls Creek H.P., Limited Partnership ("Falls Creek") to construct a radio monopole on the paved area near the southwest portion of the Elk Lodge. Since the Elk Lodge is the property owner of that land, we want Linn County to know that Falls Creek is submitting a Permit Application for a commercial structure with our consent.

In addition to constructing a radio signal monopole, Falls Creek will build a storage shed around it to comply with the Sweet Home building code, and also place 5.5 kW propane generator in that area, and a 120 gallon propane tank. They will also mount a security camera that focuses on that area which will be enclosed by a fence. There will be radio cable wiring that goes from the monopole into the Elk Lodge, and inside the building will be two radio racks, back up battery and other equipment to operate a radio signal. Century Tel will provide a T-1 phone line from that radio equipment to PacifiCorp's substation on 18th Avenue.

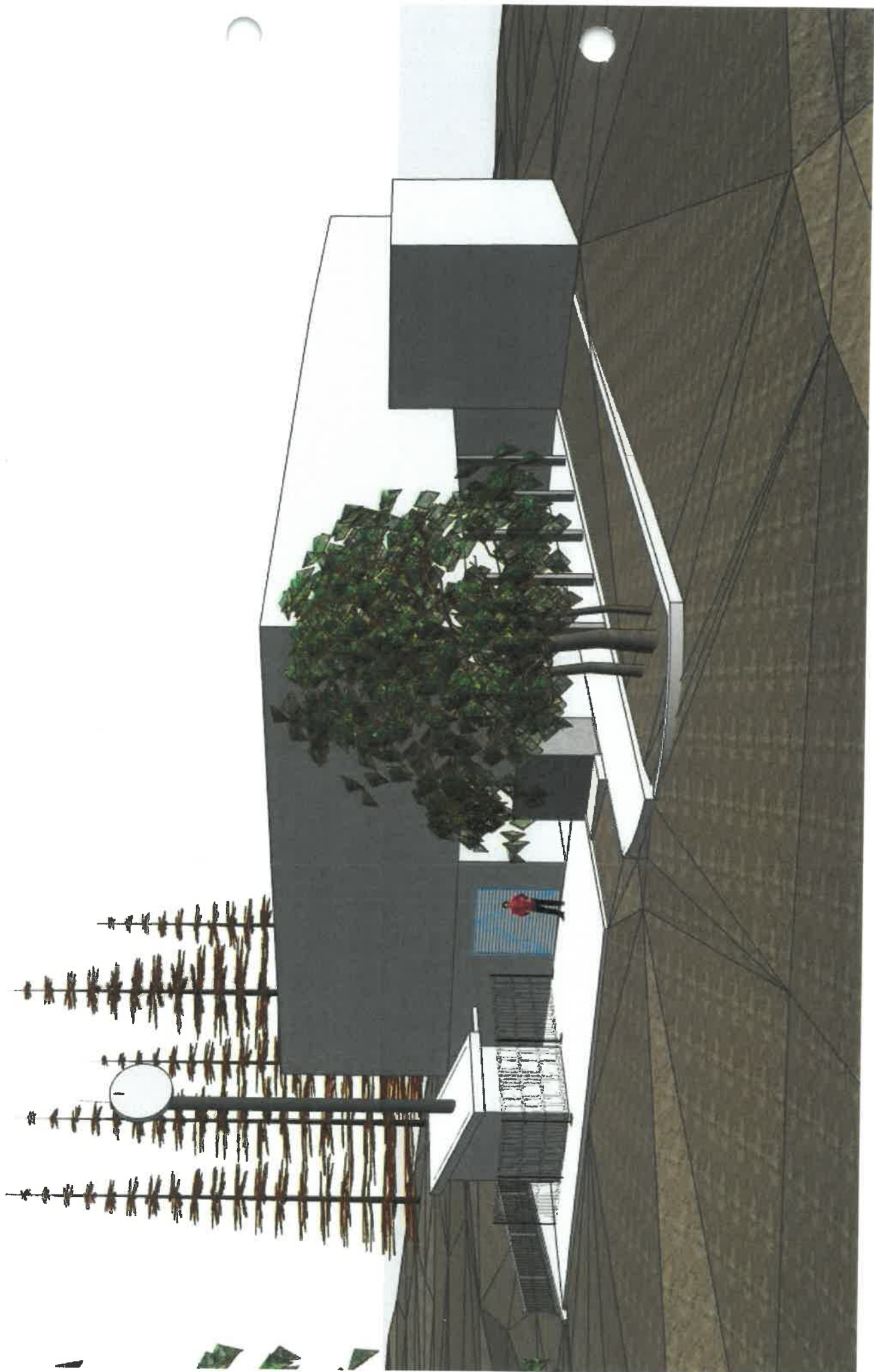
The technical details for this application will be submitted by Falls Creek with the permission of the Elk Lodge. When emailing us regarding the forthcoming application please cc Gary Marcus consultant with Falls Creek at garymarcus1@aol.com, or call him at 541-953-2725 as Gary will be supervising the permitting and construction effort. Also please email Dan Parker, Vice President of Development with Falls Creek at danparker@eaglecreere.com. We anticipate construction to occur sometime in November and early December.

Please contact me if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Bonnie J. McCollum".

Bonnie McCollum
Trustee & Chairman of the BOD



City of Sweet Home
Permit Application – Commercial Structure
For The Elk Lodge, 440 Osage Street, Sweet Home

Introduction

The Falls Creek Hydroelectric Project (Falls Creek) needs to establish a radio datalink from the PacifiCorp Substation, on 18th Avenue in Sweet Home, to the Falls Creek Hydroelectric plant located about 20-miles east of Sweet Home, near Mile Marker 49 on Hwy 20.

After considering numerous options, Falls Creek determined that the optimal path for these radio signals, with the least visual and infrastructure impact on the City of Sweet Home, would be as follows:

1. From the PacifiCorp Substation on 18th Avenue to The Elk Lodge at 440 Osage Street via a T1 phone line.
2. From The Elk Lodge to a Forest Service repeater on top of Huss Ridge.
3. From that repeater to Falls Creek Hydro plant, which is along the South Santiam River on Hwy 20.

Proposed Placement of Monopole at Elk Lodge on 440 Osage Street

The membership of The Elk Lodge (BPOE #1972) in Sweet Home has unanimously voted to lease an area in the SE corner of the Lodge's parking lot to Falls Creek. Please see attached Exhibit A, which is the letter written by The Elk Lodge granting Falls Creek permission to submit this permit application to the City of Sweet Home. A list of all the Exhibits appears at the end of this document.

Exhibit B.1 is a site plan of The Elk Lodge, its surrounding streets, and the area where the monopole will be placed adjacent to the lodge. Exhibit B.2 is a close-up color satellite photo of the lodge area with the same information.

Exhibit C focuses on the area outside the lodge that shows the placement of a steel monopole that is 43-feet high, with a 4-foot lightning rod on top of it. There will be a cable that runs from that lightning rod to the ground to protect the Lodge and all equipment in it from lightning.

Exhibit C also shows the location of what is known as a 57-gallon propane tank located, according to code, at least 10-feet away from the Lodge and 10-feet away from a propane powered 2.5 kW generator that will be housed in a small generator shelter. The propane tank will be 3-feet away from a back fence that will run along an existing back walkway of the Lodge and 3-feet away from that same fence along the south side of the monopole enclosed area. The

3-foot distances are according to propane tank code. Also, according to code, the propane tank will sit on concrete that is 4-inches high and 3-inches on side of a square.

Exhibit C also shows the location of an Onan 2.5 kW generator housed in a small generator shelter. The shelter is located 18-inches from The Elk Lodge and is at least 5-feet away from a garage door, as outside generators must be 5-feet away from all doors and windows. There are no minimum distance requirements that the monopole must be from the generator or the propane tank, since the monopole has radio wires attached to it that have extremely low wattage of electricity powering the radio signal.

The Monopole

The monopole was designed by Valmont Microflect in Salem, Oregon:

Valmont Microflect
3575 25th Street, SE
Salem, OR 97302-1123
503- 363- 9267
<http://www.microflect.com>

Valmont designs many of the communication structures for PacifiCorp and they recommended Valmont to Falls Creek.

The monopole is 43-feet tall (Exhibit D) and has a PR-950 antenna mounted on top of it (Exhibit E).

There will be a lightning rod extending 4-feet from the top of the monopole so the total height of the structure will be 47-feet. The lightning rod will deliver a potential lightning strike to the ground where it will not cause damage to any of the equipment on the pole, or any part of The Elk Lodge or equipment in The Elk Lodge.

The monopole with the antenna is designed to withstand a wind load of 150-mph and will be anchored by a 10-foot x 10-foot concrete slab designed specifically for this monopole and its load (Exhibit F).

There will be a "snow bridge" which looks like a thin ladder that is horizontal and will connect the monopole to the Elk Lodge at an elevation of 7-feet, so that people can walk under it without interfering with it. On the underside of the snow bridge will be a radio signal cable that connects the antenna to the radio units inside The Elk Lodge.

The propane tank, 2.5 kW propane generator and fence.

The radio communication system is designed to run continuously 24-hours a day, 365 days a year. It is designed to never lose electricity which powers its radios signal. Almost all the time it will use electricity delivered by PacifiCorp to The Elk Lodge. During rare power outages, or even power flickers, the radio system will automatically switch to electricity from 48-hour backup batteries located in The Elk Lodge on the other side of the wall near the monopole. On the very rare occasions when electricity is out for more than 48 hours, there is a backup 2.5 kW generator that will automatically turn on when the backup batteries get low on power. The Onan generator (Exhibit C.1) is one of the quietest generators on the market and will be housed in a small generator shelter that will further muffle its sound (Exhibit C.2), protect it from weather, and secure it from theft. Near the shelter, attached to the wall of The Elk Lodge, will be the CenturyTel T-1 phone line. This line will carry the radio signal from the radios in the lodge to PacifiCorp's' substation in Sweet Home.

The 57-gallon propane tank (Exhibit C.3) does not really contain 57-gallons but is just called a 57-gallon tank by industry vernacular. According to code, the tank is required to be a minimum of 10-feet away from The Elk Lodge, and 10-feet away from the generator, which is a potential source of ignition. The monopole itself carries electricity at a low voltage that cannot cause ignition. Therefore, there are no code setbacks for the monopole from the propane tank or the generator. The propane tank must also be 3-feet away from any fence. As mentioned earlier, the propane tank will sit on a concrete foundation that is 4-inches high and 3-inches on side of a square. There will be a pipe or hose embedded in conduit under the concrete that leads from the tank to the propane generator.

There will be a fence surrounding the tank, monopole and generator shelter. The south side of the fence will be locked and swing outward to allow people and vehicles to enter the fenced area.

Inside the Lodge

The radio signal cables under the snow bridge will enter the Lodge 7-feet from the basement floor and go to one of the two cabinets that house the radio racks and other equipment (Exhibit G). There will be a second cabinet, exactly like the first, that will house the battery backup system and the electrical control system.

There will also be a carbon monoxide monitor in the Lodge near the garage door to monitor any carbon monoxide intrusion into the lodge from the generator. Falls Creek will mount security cameras outside the Lodge that monitor the fence area around the outside equipment. To further enhance the security at The Elk Lodge, the Falls Creek battery backup system and small

generator will supply continuous electricity to the Lodge security system to protect the Lodge when AC electricity fails.

Contractor

The entire system, both inside and outside the Lodge, will be installed by Global Tower Service, Inc., an experienced communication contractor that builds much of the radio communication systems around Oregon and has a close business relationship with Valmont Microflect who designed the system.

Jeff Hahn, President
Global Tower Service, Inc.
111 Catherine DR
Woodland WA 98674
360-225-8800
jeff@globaltowerservice.com
CCB # GLOBATS932PC

Exhibit H is Global Tower's CCB certificate

Thank you for considering Falls Creek H.P., Limited Partnership's application to build these additions to The Elk Lodge. This radio system, when built, will not only contribute to The Elk Lodge's mission through payment of our rent to The Elk Lodge, but will also strengthen the Sweet Home area electrical infrastructure. In addition, the Linn County Fire Department is planning to use our mountaintop facility to expand their radio coverage for much of Linn County, including covering many Forest Service campgrounds not currently reachable by radio signal. This will enhance fire protection for Linn County and the Forest Service.

If you have any questions, please contact Diane Moore who is administering this application for Falls Creek.

Diane Moore
Office: 541-683-5200
Cell: 541-520-5425
Dmoore@frontier-technology.com

List of Exhibits

- Exhibit A Letter from Elk Lodge granting permission to Falls Creek to file application.
- Exhibit B.1 Survey of Elk Lodge and surrounding area
- Exhibit B.2 Color satellite photo of Lodge area with project superimposed on SW corner of Lodge.
- Exhibit C Detailed closeup of the area of monopole, tank, generator, snow bridge, and cabinets inside lodge.
- Exhibit C.1 Onan 2.5 kW propane generator
- Exhibit C.2 Shelter for generator
- Exhibit C.3 Indicative propane tank.
- Exhibit D Valmont engineers stamped certificate of monopole design.
- Exhibit E PR-950 Antenna that will be placed near top of monopole.
- Exhibit F Valmont engineers stamped certificate that concrete footing will hold monopole and antenna in high winds and extreme weather.
- Exhibit G Cabinet in lodge specifically designed to hold radio racks. A second cabinet will house the backup battery and electric controls.
- Exhibit H Global Tower Service will construct and install these materials and plans. Exhibit H is a copy of the CCB certificate.

RECEIVED
11.13.19

1. **Narrative Required [SHMC 17.98.080(C)(1-15)]**

A. **The name and contact information for the provider;**

Facility Developer's representative:
Gary Marcus
Consultant
Falls Creek H.P., Limited Partnership
3980 N. Shasta Loop
Eugene, OR 97405
(541) 953-2725
Garymarcus1@aol.com

Property Owner's representative:
Bonnie McCullum
Trustee and Chairman of the Board
Sweet Home Lodge No. 1972
Benevolent and Protective Order of the Elks
PO Box 176
440 Osage Street
Sweet Home, OR 97386
(541) 367-3559
sweethomebpoe1972@comcast.net

B. **A description of the character of the proposed facility;**

The Elk Lodge is a building that is about 150 feet long, 43 to 51 feet wide, and 27 feet high, consisting of two stories and 15,288 square feet.

The proposed facility would be located on approximately 330 square feet on the pavement of the SW corner of the lodge. The facility will use a space that is 22 feet long and 15 feet wide. (photo attached)

The facility consists of a 43-foot monopole with an antenna near the top, and a 4-foot lightning rod on top of the monopole. The monopole would be enclosed by a 9' X 9' shed with a roof sloping from 11 feet to 8 feet. Emergency power will be provided by a 120-gallon propane tank and a 5.5 kW propane generator. All of the facilities will be enclosed by a fence. Cables will run from the monopole via a snow bridge to the Elk's Lodge. Inside the Elk Lodge will be radios in radio transmitter racks and a backup battery. The monopole would be made of dull galvanized steel, grayish in color, that would fade further over time. The shed will match the design and color of the Elk Lodge.

C. **Analysis of how the application meets the review criteria;**

The Falls Creek Project generates renewable energy and has for the past 35 years. To continue to provide power to the electrical grid, PacifiCorp requires an updated communications system that meets its criteria to be constructed. Constructing a radio signal-based system is the only practical option to meet this new requirement.

The facility is designed to have a low visual impact, and blend into the corner of the much larger Elk's Lodge. The lodge is built into a hill, and to the west of the proposed facility is a sloping 16-foot high berm. To the south of the building are mature, dense Douglas Fir trees, perhaps 150 feet high. To the west of the facility is a 25-foot high

tree, and the lodge itself. All of these existing features will at least partially obscure the facility from public view.

D. Applicants/providers shall provide evidence of legal access to the proposed wireless telecommunications facility;

Falls Creek has executed a 15-year renewable lease with the Elk's Lodge that gives Falls Creek the rights to construct and operate the proposed wireless facility. The lease is attached.

E. The applicant/provider shall provide evidence that legal access to the facility site will be maintained for the duration of the facility's operation;

Falls Creek, through its lease with the Lodge, has legal access to the facility site to operate and maintain it for the duration of the facility's operation.

F. Where a proposed wireless telecommunications facility is located on a property not owned by the provider, the applicant/provider shall present documentation that the owner of the property has granted an easement or entered into a lease for the proposed facility and that vehicular access is provided to the facility;

Vehicular access is provided by an existing driveway that encircles the lodge. Falls Creek has access to the facility as written in the lease.

G. The applicant shall provide evidence that describes the facility tower's structural capacity to carry the antennas of at least three wireless telecommunications providers;

The monopole is designed and engineered by Valmont Structures to only allow one antenna. A 10' X 10' concrete slab is designed to hold the monopole and antenna and to withstand wind speeds of up to 150mph. No other antennas can be mounted on this pole without a redesign and the permission of the City of Sweet Home and the Elk Lodge.

H. The applicant shall provide evidence of steps the provider will take to avoid interference with normal radio and television reception in the surrounding area and with any public safety agency or organization, per FCC requirements;

The application shows that the radio signal is narrow, fixed, and unidirectional, and not omnidirectional. The FCC will assign a transmitting frequency of 957.95V, and a receiving frequency of 954.35V. See attached path data sheet. It will not interfere with regular radio and television reception in the surrounding area, nor with any public safety organization, per FCC requirements.

I. The applicant shall demonstrate that the WTF is intended to provide service primarily within the community.

The facility will provide service to the Falls Creek hydroelectric power plant, operating for 35-years with plans to continue to do business in the community for many years in the future. Renewable energy that is produced by the Falls Creek Project interconnects with the electrical grid at the PacifiCorp substation in Sweet Home. This local, renewable generation supports grid stability for the area.

The facility supports a radio relay station on Huss Ridge, which will enable the Linn County Fire Department to improve its radio coverage for emergency services. Without the Elk Lodge facility, there will not be a Huss Ridge facility, and that would eliminate the plans for the Linn County Fire Department to provide expanded service to the area. Not having this Elk Lodge facility would be a significant loss to Linn County Fire Department's plans.

The city reserves the right to deny a permit if it is shown that the facility is not intended to provide service primarily within the community.

- J. **The applicant/provider shall demonstrate that the wireless telecommunications facility must be located where it is proposed in order to service the provider's service area. There shall be an explanation of why a facility at this proposed site is technically necessary;**

Falls Creek investigated 25 potential sites in the Sweet Home area and focused on sites that had FCC licenses in the past. Almost none of the sites were tall enough to have the required line-of-sight radio connection with Huss Ridge, which is 28 miles east of Sweet Home. The other locations were either too low in elevation or were blocked by topography, specifically Riggs Hill. The only viable alternative was to build a new 180-foot tower in PacifiCorp's substation in the center of town. This alternative was discarded due to the necessity of a variance and potential visual effects.

The Elk's Lodge is built on a hill. The lodge is surrounded by tall Douglas Fir trees that block the view of the lodge from neighbors on the south, west, and north. However, the lodge has an entirely open eastern line-of-sight to Huss Ridge. Furthermore, the lodge itself provides a secure, protected environment for the radio equipment and a convenient place for CenturyLink phone company to wire a T1 phone line to PacifiCorp's substation on 18th Avenue. Given the site topography and line-of-sight, the antenna is only about 16 feet above the roof of the lodge. Initially, Falls Creek considered attaching a 16-foot antenna to the roof of the lodge. However, the lodge roof was not designed for such an antenna and supporting structure.

Consequently, the superior alternative is the proposed monopole, located to be partially obscured next to the lodge, and enclosed by a shed that would help the monopole blend into the architecture of the lodge.

- K. **If the applicant/provider proposes a new tower or co-located facility, the applicant shall provide evidence that the facility's height is the lowest height at which the gap in coverage can be filled;**

The height of the 43-foot-high pole and antenna is the lowest possible with a reliable line-of-sight over Osage Street where there are no trees and no possibility of future tree growth. The lodge is approximately 27-feet tall at that location, and the antenna is the minimum height over the top of the lodge with a margin to ensure a clean line-of-sight.

As stated above, the alternative site at the PacifiCorp substation would require a new 180-foot tall tower with more significant visual impacts.

- L. **All applications shall include evidence that at least one provider will use the proposed facility to provide wireless telecommunications service immediately upon construction completion of the facility.**

The Falls Creek power plant will immediately use the facility as soon as it is built and will use it continuously for at least the next 15 years. The Linn County Fire Department will immediately use the additional antenna at the facility on Huss Ridge as soon as that is completed.

The city reserves the right to deny applications that propose a facility without a provider.

- M. **The application shall include a written agreement that wireless telecommunications facilities owned by the provider, that do not have an operating antenna for a period of six months, shall be considered abandoned and shall be removed by the operator within 60 days thereafter; and**

The lease between Falls Creek and the Elk Lodge contains the required language specifically:

“f. In the event the wireless telecommunications facilities (“WTF”) owned by the Lessee do not have an operating antenna for a period of six months, the WTF shall be considered abandoned and shall be removed by the Lessee within 60 days thereafter.”

- N. **The application shall include a written agreement from the property owner that if the provider fails to remove an abandoned WTF, the property owner has full legal and fiscal responsibility for the WTF removal.**

The lease between Falls Creek and the Elk Lodge contains the required language.

“g. In the event the WTF is abandoned pursuant to subsection f above and the Lessee fails to remove the abandoned WTF, the Lessor has full legal and fiscal responsibility for the WTF removal. Such responsibility does not relieve the Lessee from the obligation to reimburse the Lessor for any and all costs incurred by the Lessor in removing the WTF and the Lessee shall pay any such amounts incurred upon demand by the Lessor.”



Path Data Sheet

812 Lexington Dr
Plano, Texas 75075
www.micronetcom.com

Phone: 972-422-7200
Fax: 972-422-1900
epcn@micronetcom.com

File: M1921710 - 2

Date: August 09, 2019 - (Not Coordinated)

Site Name, State	Elk Lodge, OR	Huss Ridge, OR
Call Sign / Status	/	/
Company Name(s):	Falls Creek H.P. Limited Partnership	Falls Creek H.P. Limited Partnership
FRN / Radio Service	0028715985 / MG	0028715985 / MG
City / County	/ Linn	/ Linn
Latitude	N(NAD 83) 44 24 00.8	44 24 12.0
Longitude	W(NAD 83) 122 44 50.4	122 10 52.7
Azimuth / Tilt	(deg/deg) 89.4 / 1.4	269.8 / -1.7
Elevation	AMSL(ft/m) 643.0 / 196.0	4760.0 / 1450.8
ASR#		
Distance	(miles/km) 28.02 / 45.09	

Transmit Receive Antenna	SCALA	SCALA
Antenna Model	PR-950	PR-950
Gain / Beamwidth	(dBi/deg) 18.2 / 12.0V 24.0H	18.2 / 12.0V 24.0H
Antenna Height	AGL(ft/m) 43.0 / 13.1	49.0 / 14.9
Diameter	(ft) 5.7	5.7

Equipment	4RF COMMUNICATIONS	4RF COMMUNICATIONS
Equipment Model	APRISA XE	APRISA XE
Stability / Threshold	(%/dBm) 0.0002 / -90.0	0.0002 / -90.0
ATPC / Trigger Level	(dBm) No /	No /
ACM Advantage	No	No
Fixed Losses Cm, Tx, Rx, Div	(dB) 1.9, 0.0, 0.0, 0.0	1.9, 0.0, 0.0, 0.0

Transmit Frequencies (MHz)			957.95V			954.35V						
Emissions			Elk Lodge, OR			Huss Ridge, OR						
Mod/Lvl	Designator	Traffic (kbps)	Tx Power (dBm)			EIRP (dBm)	Rx Lvl (dBm)	Tx Power (dBm)				
			nom	crd	max			nom	crd	max		
QAM/64	200KD7W	952		29.0		45.2	-63.7		29.0		45.2	-63.7

PRELIMINARY
NOT FOR CONSTRUCTION
2019.10.04

FALLS CREEK H.P., LIMITED PARTNERSHIP
440 OSAGE STREET
SWEET HOME, OR 97386

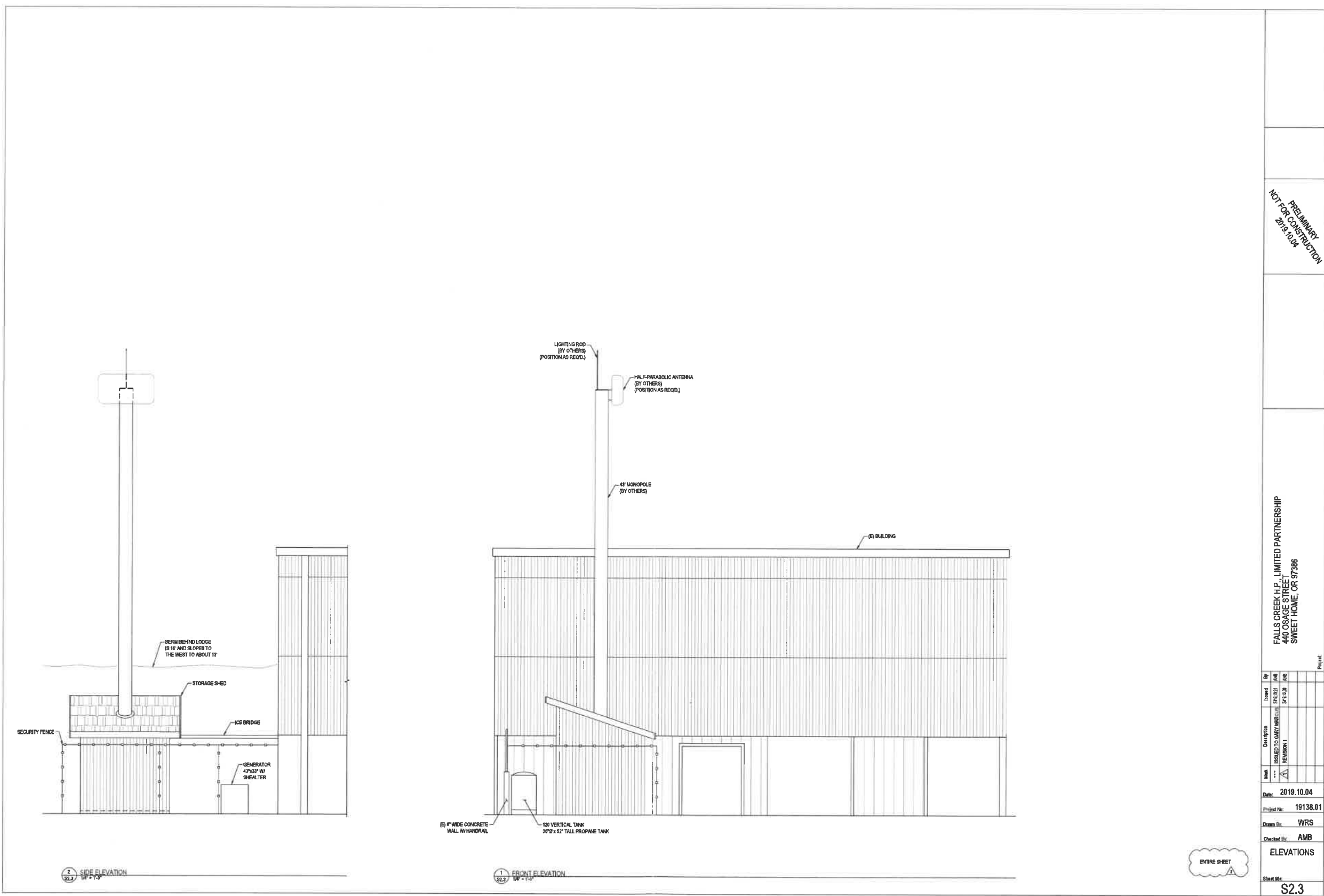
Project

By	AMB
Issued	2019.10.01
Drawn	2019.02.28
Description	ISSUED TO GARY MARRIOTT REVISION 1
Scale	1/4" = 1'
Date	2019.10.04
Project No.	19138.01
Drawn By	WRS
Checked By	AMB

ELEVATIONS

Sheet No.
S2.3

ENTIRE SHEET

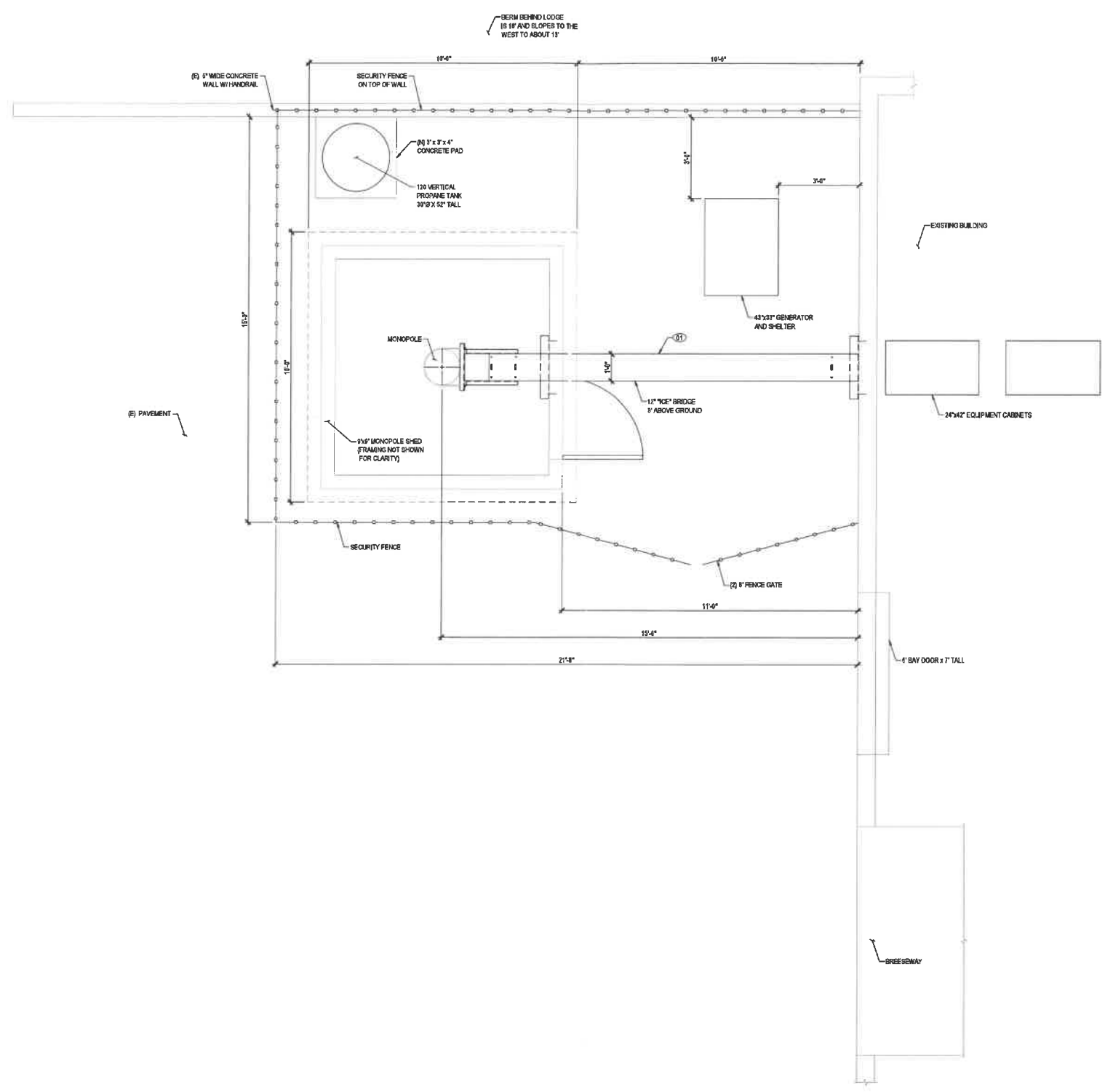


2 SIDE ELEVATION
1/4" = 1'

1 FRONT ELEVATION
1/4" = 1'

10/26/2019 8:11:57 AM

KEYED NOTES TO THIS SHEET:
 (1) FOR ADDITIONAL INFORMATION CONCERNING THE 12" GSA-SPW ICE BRIDGE REFERENCE THE SITE PRO 1 DRAWING BR120-Z.



PRELIMINARY
 NOT FOR CONSTRUCTION
 2019.10.04

FALLS CREEK H.P., LIMITED PARTNERSHIP
 440 OSAGE STREET
 SWEET HOME, OR 97386

Revision	Description	By	Date
1	ISSUED TO GARY MURPHY	AMB	2019.10.04
2	REVISION 1	AMB	2019.10.04
3	REVISION 2	AMB	2019.10.04

Date: 2019.10.04
 Project No: 19138.01
 Drawn By: WRS
 Checked By: AMB

ICE BRIDGE DETAILS
 Sheet No: S2.1

ICE BRIDGE LAYOUT
 12'-0" x 14'

ENTIRE SHEET

ASSESSOR
COPY

Elk Lodge
Falls Creek

Permit Application
Commercial Structural

August 19, 2019

1

Exhibit A - Authorization Letter from Elks Lodge

2

Exhibit B - Site Plan & Satellite Photo

3

Exhibit C - Close-up View of Site Plan & Support Equipment

4

Exhibit D - Valmont Engineers - Monopole Design Stamped Certificate

5

Exhibit E - PR-950 Antenna

6

Exhibit F - Valmont Engineers Concrete Footing Stamped Certificate

7

Exhibit G - Radio Rack Cabinet

8

Exhibit H - Global Tower CCB

1



Sweet Home Elks Lodge #1972

PO Box 176 440 Osage St.
Sweet Home, Oregon 97386
541-367-3559
541-367-7806 fax

August 2, 2019

Molly Laycock, CPT
City of Sweet Home - Building Program
1140 12th Avenue
Sweet Home, OR 97386

RE: Permit Application – Commercial Structure

Dear Molly,

The Elk Lodge has given permission to the Falls Creek H.P., Limited Partnership ("Falls Creek") to construct a radio monopole on the paved area near the southwest portion of the Elk Lodge. Since the Elk Lodge is the property owner of that land, we will be submitting a Permit Application for a commercial structure on behalf of Falls Creek.

In addition to constructing a radio signal monopole, Falls Creek will put a small 2.5 kW ~~natural~~ propane gas generator in that area, and a 57 gallon ~~natural-gas~~ tank. They will also mount a security *propane camera that focuses on that area which will be enclosed by a fence. There will be radio cable wiring that goes from the monopole into the Elk Lodge, and inside the building will be a radio rack, back up battery and other equipment to operate a radio signal. Century Tel will provide a T-1 phone line from that radio equipment to PacifiCorp's substation on 18th Avenue.

The technical details for this application will be submitted by Falls Creek under the auspices of the Elk Lodge. When emailing us regarding the forthcoming application please cc Gary Marcus from Falls Creek at garymarcus1@aol.com, or call him at 541-953-2725 as Gary will be supervising the permitting and construction effort. We anticipate construction to occur at the end of September.

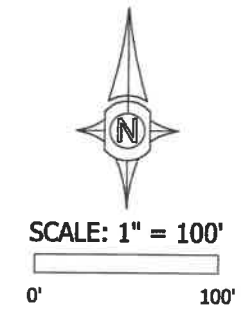
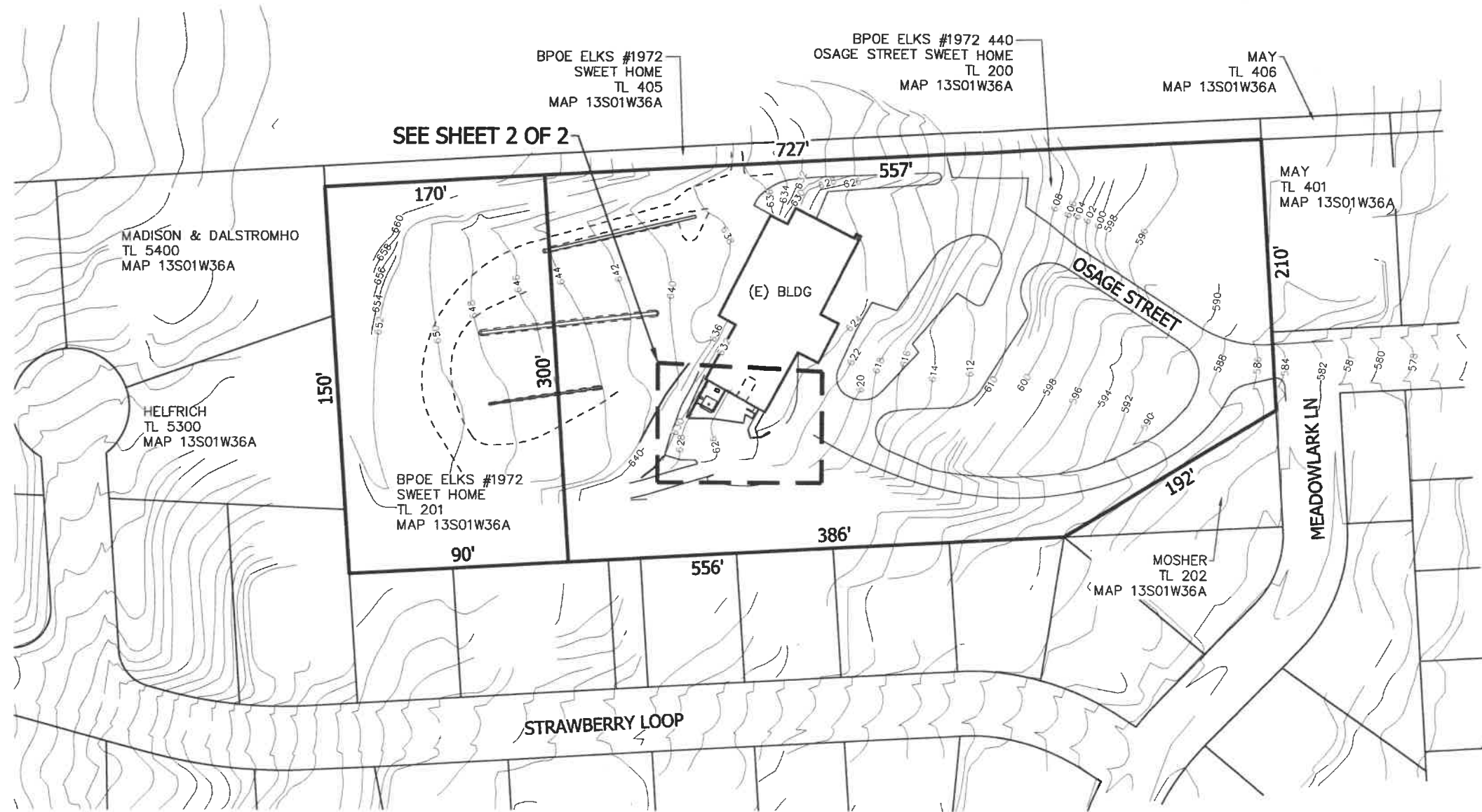
Please contact me if you have any questions.

Sincerely,

Bonnie McCollum
Trustee & Board Chairman

2

Exhibit B.1 Survey of Elk Lodge and Surrounding Area



**UDELL ENGINEERING &
LAND SURVEYING, LLC**
63 EAST ASH ST.
LEBANON, OREGON 97355
(541) 451-5125 PH.
(541) 451-1366 FAX

EXISTING CONDITIONS
BPOE ELKS NO. 1972 SWEET HOME
440 OSAGE STREET
LINN COUNTY, OREGON

DATE: 7-30-2013, REV B-1-4-2013
PROJECT: 19-207 FALLS CREEK
DRAWN BY:
BMP: [blank]
CHECKED BY: [blank]
WAL



SHEET 1
2
SCALE: SEE BARSCALE

Exhibit B.2 Satellite photo of lodge with superimposed project on SW corner.



SEE SHEET 2 OF 2

BPOE ELKS #1972
SWEET HOME
TL 201
MAP 13S01W36A

MOSHER
TL 202
MAP 13S01W36A

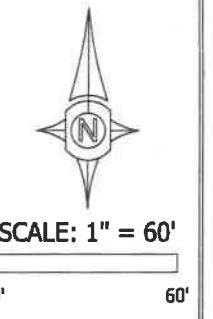
MAY
TL 401
MAP 13S01W36A

STRAWBERRY
STRAWBERRY LOOP

UDELL ENGINEERING &
LAND SURVEYING, LLC
63 EAST ASH ST.
LEBANON, OREGON 97355
(541) 451-5125 PH.
(541) 451-1366 FAX

EXISTING CONDITIONS
BPOE ELKS NO. 1972 SWEET HOME
440 OSAGE STREET
LINN COUNTY, OREGON

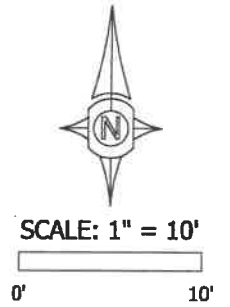
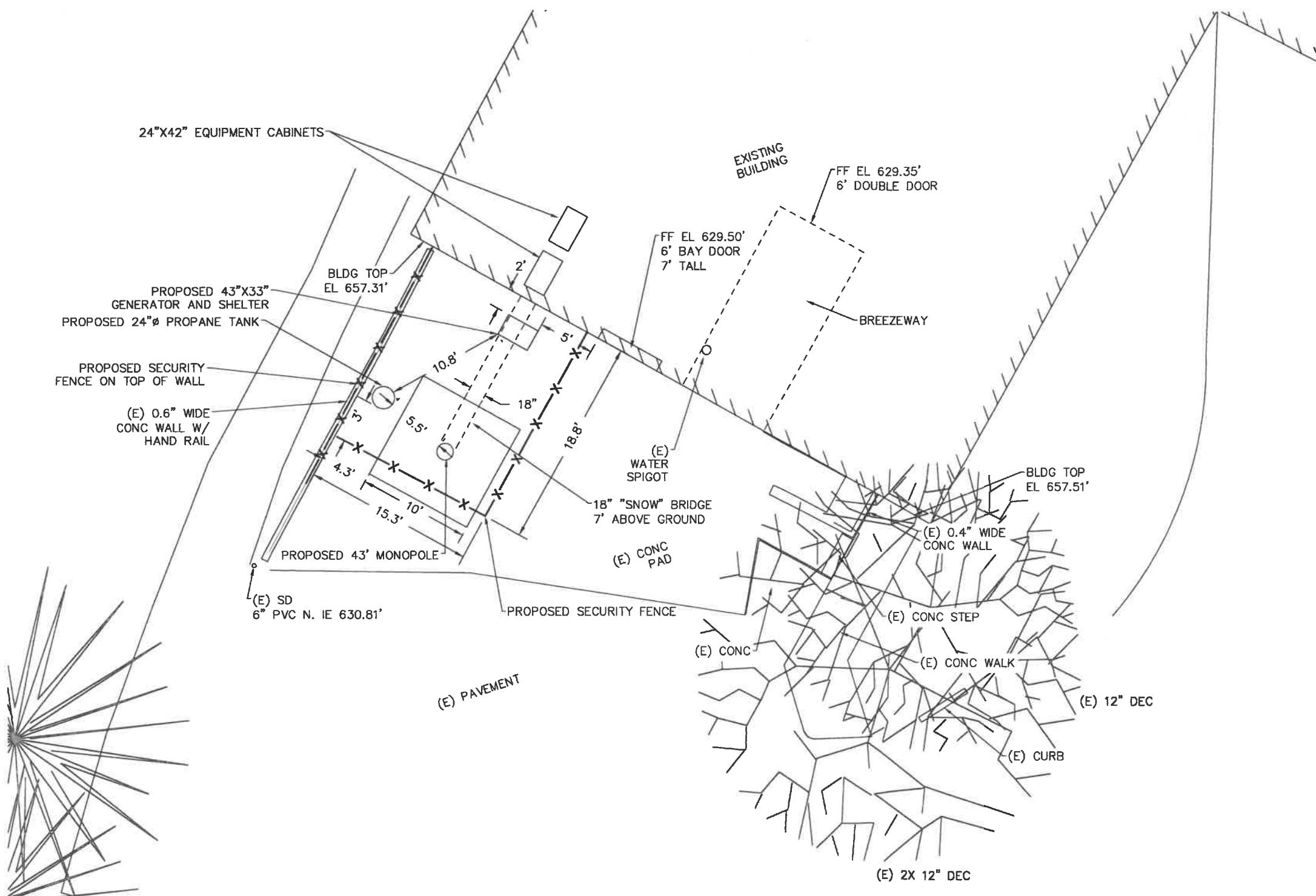
DATE 7-30-2019, REV 8-14-2019
PROJECT 19-007 FALLS CREEK
DRAWN BY
RMP
CHECKED BY
WNL



SHEET 3
of 3
SCALE: SEE BARSCALE

3

Exhibit C Close-up detail of area for monopole, tank, generator, snow bridge and cabinets inside lodge



UDELL ENGINEERING & LAND SURVEYING, LLC
 63 EAST ASH ST.
 LEBANON, OREGON 97355
 (541) 451-5125 PH.
 (541) 451-1366 FAX

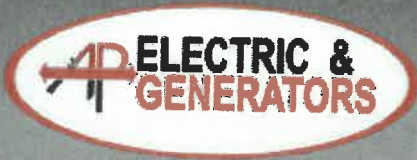
SITE PLAN

BPOE ELKS NO. 1972 SWEET HOME
 440 OSAGE STREET
 LINN COUNTY, OREGON

DATE	7-30-2019	REV	0-1-2019
PROJECT	19-207 FALLS CREEK		
DRAWN BY	JMP		
CHECKED BY	KWL		



SHEET 2
 OF 3
 SCALE: SEE BARSCALE



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- FINANCING

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RV & Commercial Mobile Generators 3.6-20kW /
Cummins Onan RV Generators /
Cummins Onan 2.5HGJBB-1121 QG 2500W Propane RV Generator

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CUMMINS ONAN
**CUMMINS ONAN 2.5HGJBB-1121
QG 2500W PROPANE RV
GENERATOR**

\$2,576.00

\$83.11 / Month *

- WINCO
- Cummins Power Generation
- Ronk
- ASCO
- Cummins Onan
- Westinghouse
- Caterpillar
- View all brands

Availability:
Ships Factory Direct

SKU
2.5HGJBB-1121A



FREE SHIPPING*
([policy](#))



NO TAX
(except CA, IL & WI)



FREE LIFTGATE SERVICE*
([policy](#))

Quantity:

1

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PRODUCT DESCRIPTION




Cummins Onan QG Propane (LPV) powered 2500 watt RV generator. Perfect for travel trailers, truck campers, and folding camping trailers. Runs one air conditioner with power to spare. Lightweight, compact, and easy to install. Easy maintenance with single-side service. Quietest generator set of its size.

CUMMINS ONAN 2.5HGJBB-1121 FEATURES:

- Microprocessor control with diagnostics and lightweight, compact design.
- LP fueled.
- Quietest generator sets of their size.
- Easy maintenance with single-side service.
- Completely enclosed with muffler, quick and easy to install.
- Low fuel consumption.

- 2.5kW QG RV generator set will start and run one 13500 Btu high efficiency air conditioner (15.5 amps or less) plus 600 watt base load with an additional 300 watts of power available.
- Circuit breakers: 21A
- 3 year limited warranty

TECHNICAL SPECS & DOWNLOADS

-  [2.5HGJBB-1121 Specifications Sheet](#)
-  [2.5HGJBB-1121 Owner's Manual](#)
-  [2.5HGJBB-1121 Installation Manual](#)

PRODUCT REVIEWS



This product hasn't received any reviews yet. Be the first to review this product!

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AP ELECTRIC & GENERATORS LLC

8401 102nd St.
(Suite 200)
Pleasant Prairie,
WI 53158
Office: 847-350-1906
Fax: 262-764-2610
Hours: Mon-Fri
8am - 5pm CST
info@apelectric.com

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A massive blackout affected as many as 70,000 customers of Con Edison in New ...

Power Outages Continue To plague Louisiana In Wake Of Barry

As of 1:30 pm eastern time on Monday, July 15, 2019, 40,478 customers of ...



Exhibit C.2 Shelter for Generator

Photos of the Generator enclosure for Elk Lodge

Portable Generator Enclosure (43" W x 33" D x 30" H)



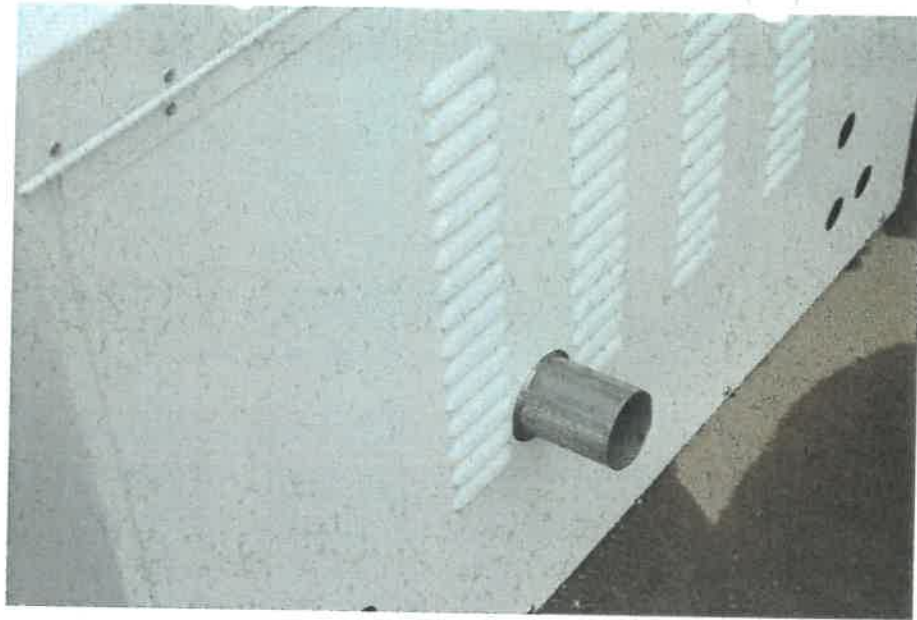


Exhibit C.3— Sample Propane Tank



NorthernTool.com | 1-800-838-0516 | Available Online Only

Worthington Cylinder Propane Tank — 200 Lbs.

Item# 172871 ★★★★★ [4 Reviews](#)



Only \$469.99

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Product Summary

The Worthington Cylinder Propane Tank is powder-coated steel for years of service. Manufactured to DOT specifications. Propane not included. **What's**

(1) Propane tank

Included

Key Specs

Item#	172871	Capacity	200 lbs.
Manufacturer's Warranty	3 Yr Consumer Limited	Dimensions L x W (in.)	40 x 24
Ship Weight	145.0 lbs	Material Type	Steel
Common Usage	Propane tank	Finish Type	Powder-coat
Compatible With	Propane	Cylinders (qty.)	1

Common Usage	Cylinder warmer	Propane tank	Cylinder warmer	Propane tank	Refill adapter
Compatible With	100 lb. cylinder	Propane	20 lb. cylinder	Propane	20 lb. cylinder
Capacity	(1) Cylinder	200 lbs.	(1) Cylinder	30 lb. (7.1 gallon)	-
Dimensions L x W (in.)	50 x 52	40 x 24	46 x 11 1/4	-	-

Dimensions L x W x H (in.)	-	-	46 x 11 1/4 x 3/4	12 x 12 x 23	-
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Watts	400	-	120	-	-
Volts	120V	-	120	-	-
Amps	3.33	-	1.0	-	-
Temperature Range (°F)	80°-90° ±10°F	-	Up to 90	-	-
Thermostat Included	Yes	-	Yes	-	-
Thermal Cutoff Safety Device	Yes	-	Yes	-	-
Receptacle Type Required	Standard	-	-	-	-
Plug Type	3-prong	-	3-prong	-	-
Power Cord (ft.)	6	-	2	-	-
Remote Included	-	-	No	-	-
Material Type	-	Steel	-	-	Brass
Finish Type	Vinyl outer shell	Powder-coat	-	Powder-coat	-
Cylinders (qty.)	1 100 Lb. cylinder	1	0	1	0
Closure Type	Strap and buckle	-	-	OPD valve	-

4

Exhibit D Engineer stamped certification of monopole design.

valmont

STRUCTURES

VALMONT MICROFLECT
3575 25TH ST. SE - P.O. BOX 12985
SALEM, OR 97302-1190
PHONE: 1-800-547-2151

ENGINEER: Christopher W. Blaumer, PE (ph x 6698)
Reviewed by: *cnb*

COMMUNICATION POLE DESIGN CALCULATIONS

CUSTOMER: Global Tower / Falls Creek Hydro
VALMONT ORDER: #452232
SITE NAME: Elks Lodge, Sweet Home, OR
POLE HEIGHT: 43 ft

AUG 16 2009



EXPIRES: 12-31-19

*** OVERVIEW ***

1. Structure design conforms to TIA-222-G Addendum 2 including:
 85 mph Wind Speed (3 second gust, 100 year return period)
 30 mph Ice Wind (50 year return period)
 0.50 in ice thickness
 60.0 mph Basic Wind Speed with no ice for twist and sway
 Exposure Category C
 Structure Classification III
 Topographic Category 3 (H = 200)
 Spectral response acceleration at short periods and 1 sec.: Ss = 1.50 & S1 = 0.60
 Site class = D
2. Feedlines are assumed to be placed interior to the pole
3. All microwave assumed to be 2 GHz unless otherwise noted
4. Total pole height is 43.0 ft agl
5. Elevations are measured from top of base plate (approximately .0 ft agl)
6. TIA-G 85mph 3-sec gust wind, with Topographic Kzt factor, Structure Class III
7. meets 130 mph 3-sec gust Ultimate wind for Structure Risk Category III/IV
8. for Linn County, OR per Fig. 1609B windmap of 2014 OSSC.

*** Structure Anchorage Information ***

Pole Height (ft):	43.0	Number of Anchor Bolts:	8
Bolt Circle (in):	18.00	Diameter of Anchor Bolts (in):	1.50
Base Shear (lbs):	3076	Length of Anchor Bolts (in):	48.00
Base Vertical (lbs):	2865	Projection Length (in):	10.50
Base Moment (in-kips):	1125	Template OD (in):	21.50

*** Loading Data***

Qty Description	ABP Height (ft)	EPA (ft^2)	Without Ice		With Ice	
			EPA (ft^2)	Weight (lbs)	EPA (ft^2)	Weight (lbs)
1 6' GRID DISH (W/PM) (1GHz)	43.00	18.11		123	53.27	587

BY VALMONT INDUSTRIES FOR:
Design Id: 452232

GLOBAL TOWER / FALLS CREEK HYDRO 43.0' POLE, SITE: ELKS LODGE, SWEET H DATE 08/15/2019
IMPAX 22.3.23.0

*** SUMMARY ***

Design Code: TIA-222-G Addendum 2

DESIGN SUMMARY

Height Above Base Plate (ft) 43.00 Ground Line Diameter (in) 12.750 Pole Shaft Weight (lbs) 2133
Top Diameter (in) 12.750
Pole Taper (in/ft) 0.00000 Shape: Round

Section Characteristics

/First/

Base Diameter (in) 12.750
Top Diameter (in) 12.750
Thickness (in) 0.37500
Length (ft) 43.000
Weight (lbs) 2133
Yield Strength (ksi) 50.00
Section Shape Round

ANALYSIS SUMMARY

	Pt. of Fixity	Governing Level Sec.1	Pole Top
Governing Load Case	WIND	WIND	WIND
Height (ft)	0.00	0.00	43.00
Resultant Moment (in-kips)	1125	1125	0
Shear Force (lbs)	3082	3082	1238
Axial Force (lbs)	2739	2739	110
Combined Interaction Value	0.44	0.44	0.00
Total Deflection (in)	0.00	0.00	11.06

Note: Diameters are outside, measured across the flats
Forces and moments are reported in the local element coordinate system

BY VALMONT INDUSTRIES
Design Id: 452232

FOR:

GLOBAL TOWER / FALLS CREEK HYDRO 43.0' POLE, SITE: ELKS LODGE, SWEET H

DATE 08/15/2019
IMPAX 22.3.23.0

*** POLE SHAFT POINT OF FIXITY REACTIONS ***

Loading Case Identifier	Moments About X-Axis (in-kips)	Moments About Y-Axis (in-kips)	Moments Resultant (X & Y) (in-kips)	Moments Torsional (in-kips)	Vertical Force (lbs)	Shear In X-Direction (lbs)	Shear In Y-Direction (lbs)	Shear Resultant (X & Y) (lbs)	Notes
WIND	0	-1125	1125	0	2746	3076	0	3076	
ICE + WIND	0	-211	211	0	4238	554	0	554	
T+S	0	-272	272	0	2258	745	0	745	
Seismic	0	-717	717	0	2707	1731	0	1731	

Note: Positive vertical force is downward.
Reactions are considered in the global coordinate system.

BY VALMONT INDUSTRIES FOR: GLOBAL TOWER / FALLS CREEK HYDRO 43.0' POLE, SITE: ELKS LODGE, SWEET H DATE 08/15/2019
 Design Id: 452232 *** INPUT LOADS *** IMPAX 22.3.23.0

Design Code TIA-222-G Addendum 2
 Loading Case WIND

Basic Wind Velocity is 85.00 mph Ice Thickness 0.00
 Wind Orientation is 0.0 Degrees Clockwise From +X Axis
 Structure Weight Overload Factor is 1.200
 Exposure C, Gust Factor 1.10
 Structure Category 3, Topographic Category 3, Crest Height 200.00 ft
 Orientations are Measured Clockwise From +X Axis
 Positive Y Axis is 90 Degrees Clockwise From +X Axis
 Foundation Rotation of 0.00 Degrees

Orientation of System
 +***** +X-Axis
 * * (Transverse)
 * *
 * *
 (Longitudinal) * * (Vertical)
 +Y-Axis * * +Z-Axis

Load Number	Mounting Height (ft)	Load Height (ft)	Load Eccentricity (ft)	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
1	43.00	43.00	0.00	0.00	1234	0	148	18.11	1-6' GRID DIS

BY VALMONT INDUSTRIES FOR: GLOBAL TOWER / FALLS CREEK HYDRO 43.0' POLE, SITE: ELKS LODGE, SWEET H DATE 08/15/2019
 Design Id: 452232 IMPAX 22.3.23.0

*** INPUT LOADS ***

Design Code TIA-222-G Addendum 2
 Loading Case ICE + WIND

Basic Wind Velocity is 30.00 mph Ice Thickness 0.50
 Wind Orientation is 0.0 Degrees Clockwise From +X Axis
 Structure Weight Overload Factor is 1.200
 Exposure C, Gust Factor 1.10
 Structure Category 3, Topographic Category 3, Crest Height 200.00 ft
 Orientations are Measured Clockwise From +X Axis
 Positive Y Axis is 90 Degrees Clockwise From +X Axis
 Foundation Rotation of 0.00 Degrees

Orientation of System
 +***** +X-Axis
 * * (Transverse)
 * *
 * *
 (Longitudinal) * * (Vertical)
 +Y-Axis * * +Z-Axis

Load Number	Mounting Height (ft)	Load Height (ft)	Load Eccentricity (ft)	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
1	43.00	43.00	0.00	0.00	246	0	704	53.27	1-6' GRID DIS

BY VALMONT INDUSTRIES FOR: GLOBAL TOWER / FALLS CREEK HYDRO 43.0' POLE, SITE: ELKS LODGE, SWEET H DATE 08/15/2019
 Design Id: 452232 *** INPUT LOADS *** IMPAX 22.3.23.0

Design Code TIA-222-G Addendum 2
 Loading Case T+S

Basic Wind Velocity is 60.00 mph Ice Thickness 0.00
 Wind Orientation is 0.0 Degrees Clockwise From +X Axis
 Structure Weight Overload Factor is 1.000
 Exposure C, Gust Factor 1.10
 Structure Category 3, Topographic Category 3, Crest Height 200.00 ft
 Orientations are Measured Clockwise From +X Axis
 Positive Y Axis is 90 Degrees Clockwise From +X Axis
 Foundation Rotation of 0.00 Degrees

Orientation of System
 +X-Axis
 (Transverse)
 * *
 * *
 (Longitudinal) * * (Vertical)
 +Y-Axis * * +Z-Axis

Load Number	Mounting Height (ft)	Load Height (ft)	Load Eccentricity (ft)	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
1	43.00	43.00	0.00	0.00	299	0	123	18.11	1-6' GRID DIS

BY VALMONT INDUSTRIES FOR: GLOBAL TOWER / FALLS CREEK HYDRO 43.0' POLE, SITE: ELKS LODGE, SWEET H DATE 08/15/2019
 Design Id: 452232 IMPAX 22.3.23.0

*** INPUT LOADS ***

Design Code TIA-222-G Addendum 2
 Loading Case Seismic
 Seismic analysis following the Equivalent Modal Analysis Procedure
 Structure Category: 3
 Site Class: D
 Response Acceleration at short periods: 1.50
 Response Acceleration at one second: 0.60
 The above are used to obtain the acceleration and velocity based site coefficients Fa and Fv
 Foundation Rotation of 0.00 Degrees

Load Number	Mounting Height (ft)	Load Height (ft)	Load Eccentricity (ft)	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
1	43.00	43.00	0.00	0.00	0	0	148	18.11	1-6' GRID DIS

BY VALMONT INDUSTRIES
Design Id: 452232

FOR:

GLOBAL TOWER / FALLS CREEK HYDRO 43.0' POLE, SITE: ELKS LODGE, SWEET H

DATE 08/15/2019
IMPAX 22.3.23.0

*** Properties ***

Connection Locations	Distance From Base (ft)	Diameter Across Flats (in)	Wall Thickness (in)	D/t Across Flats	w/t Across Flats	Moments of Inertia (in ⁴)	Area (in ²)
Top of Sect 1	43.00	12.750	0.3750	34.00		279	14.57
	40.50	12.750	0.3750	34.00		279	14.57
	38.00	12.750	0.3750	34.00		279	14.57
	35.50	12.750	0.3750	34.00		279	14.57
	33.00	12.750	0.3750	34.00		279	14.57
	30.50	12.750	0.3750	34.00		279	14.57
	28.00	12.750	0.3750	34.00		279	14.57
	25.50	12.750	0.3750	34.00		279	14.57
	23.00	12.750	0.3750	34.00		279	14.57
	20.50	12.750	0.3750	34.00		279	14.57
	18.00	12.750	0.3750	34.00		279	14.57
	15.50	12.750	0.3750	34.00		279	14.57
	13.00	12.750	0.3750	34.00		279	14.57
	10.50	12.750	0.3750	34.00		279	14.57
	8.00	12.750	0.3750	34.00		279	14.57
	5.50	12.750	0.3750	34.00		279	14.57
	3.00	12.750	0.3750	34.00		279	14.57
Pt of Fixity	0.00	12.750	0.3750	34.00		279	14.57

BY VALMONT INDUSTRIES FOR: GLOBAL TOWER / FALLS CREEK HYDRO 43.0' POLE, SITE: ELKS LODGE, SWEET H DATE 08/15/2019
 Design Id: 452232 IMPAX 22.3.23.0
 Forces and Moments for Pole in the Local Element Coordinate System

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
43.00	0	0	0	0	1238	0	1238	110
40.50	0	-39	39	0	1351	0	1351	259
38.00	0	-81	81	0	1464	0	1464	408
35.50	0	-127	127	0	1577	0	1577	557
33.00	0	-176	176	0	1689	0	1689	707
30.50	0	-228	228	0	1801	0	1801	857
28.00	0	-284	284	0	1912	0	1912	1008
25.50	0	-343	343	0	2022	0	2022	1159
23.00	0	-405	405	0	2131	0	2131	1311
20.50	0	-471	471	0	2238	0	2238	1464
18.00	0	-539	539	0	2343	0	2343	1617
15.50	0	-611	611	0	2445	0	2445	1772
13.00	0	-686	686	0	2545	0	2545	1927
10.50	0	-764	764	0	2646	0	2646	2083
8.00	0	-845	845	0	2747	0	2747	2241
5.50	0	-929	929	0	2848	0	2848	2399
3.00	0	-1016	1016	0	2948	0	2948	2560
0.00	0	-1125	1125	0	3082	0	3082	2739

BY VALMONT INDUSTRIES FOR:
 Design Id: 452232
 Deflections and Stresses for Pole

GLOBAL TOWER / FALLS CREEK HYDRO 43.0' POLE, SITE: ELKS LODGE, SWEET H

DATE 08/15/2019
 IMPAX 22.3.23.0

Loading Case WIND

*** Deflections and Stresses ***

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
43.00	11.1	0.0	11.1	0.1	1.77	0.00	0.00	0.01	0.00	0.01
40.50	10.1	0.0	10.1	0.1	1.76	0.00	0.02	0.01	0.00	0.02
38.00	9.2	0.0	9.2	0.1	1.75	0.00	0.03	0.01	0.00	0.03
35.50	8.3	0.0	8.3	0.1	1.73	0.00	0.05	0.01	0.00	0.05
33.00	7.4	0.0	7.4	0.1	1.70	0.00	0.07	0.01	0.00	0.07
30.50	6.5	0.0	6.5	0.1	1.65	0.00	0.09	0.01	0.00	0.09
28.00	5.7	0.0	5.7	0.1	1.60	0.00	0.11	0.01	0.00	0.11
25.50	4.9	0.0	4.9	0.0	1.53	0.00	0.13	0.01	0.00	0.13
23.00	4.1	0.0	4.1	0.0	1.45	0.00	0.16	0.01	0.00	0.16
20.50	3.3	0.0	3.3	0.0	1.36	0.00	0.18	0.01	0.00	0.18
18.00	2.6	0.0	2.6	0.0	1.25	0.00	0.21	0.01	0.00	0.21
15.50	2.0	0.0	2.0	0.0	1.13	0.00	0.24	0.01	0.00	0.24
13.00	1.5	0.0	1.5	0.0	0.99	0.00	0.27	0.02	0.00	0.27
10.50	1.0	0.0	1.0	0.0	0.84	0.00	0.30	0.02	0.00	0.30
8.00	0.6	0.0	0.6	0.0	0.67	0.00	0.33	0.02	0.00	0.33
5.50	0.3	0.0	0.3	0.0	0.48	0.00	0.36	0.02	0.00	0.36
3.00	0.1	0.0	0.1	0.0	0.27	0.00	0.39	0.02	0.00	0.40
0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.44	0.02	0.00	0.44

BY VALMONT INDUSTRIES FOR: GLOBAL TOWER / FALLS CREEK HYDRO 43.0' POLE, SITE: ELKS LODGE, SWEET H DATE 08/15/2019
 Design Id: 452232 IMPAX 22.3.23.0
 Forces and Moments for Pole in the Local Element Coordinate System

Loading Case ICE + WIND									
Dist. From	Mx	My	Resultant	Torsion	Shear	Shear	Resultant	Axial	
Base	(in-kips)	(in-kips)	Mx & My	(in-kips)	X-Dir.	Y-Dir.	Shear	(lbs)	(lbs)
(ft)			(in-kips)		(lbs)	(lbs)	(lbs)		
43.00	0	0	0	0	250	0	250	703	
40.50	0	-8	8	0	269	0	269	911	
38.00	0	-16	16	0	289	0	289	1120	
35.50	0	-25	25	0	308	0	308	1328	
33.00	0	-35	35	0	328	0	328	1536	
30.50	0	-45	45	0	347	0	347	1744	
28.00	0	-55	55	0	366	0	366	1952	
25.50	0	-67	67	0	384	0	384	2159	
23.00	0	-79	79	0	403	0	403	2367	
20.50	0	-91	91	0	420	0	420	2574	
18.00	0	-104	104	0	438	0	438	2780	
15.50	0	-117	117	0	455	0	455	2986	
13.00	0	-131	131	0	471	0	471	3192	
10.50	0	-146	146	0	487	0	487	3397	
8.00	0	-160	160	0	503	0	503	3601	
5.50	0	-176	176	0	519	0	519	3803	
3.00	0	-192	192	0	534	0	534	4004	
0.00	0	-211	211	0	556	0	556	4238	

BY VALMONT INDUSTRIES FOR:
 Design Id: 452232
 Deflections and Stresses for Pole

GLOBAL TOWER / FALLS CREEK HYDRO 43.0' POLE, SITE: ELKS LODGE, SWEET H

DATE 08/15/2019
 IMPAX 22.3.23.0

Loading Case ICE + WIND

*** Deflections and Stresses ***

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
43.00	2.1	0.0	2.1	0.0	0.34	0.00	0.00	0.00	0.00	0.01
40.50	1.9	0.0	1.9	0.0	0.34	0.00	0.00	0.00	0.00	0.01
38.00	1.8	0.0	1.8	0.0	0.33	0.00	0.01	0.00	0.00	0.01
35.50	1.6	0.0	1.6	0.0	0.33	0.00	0.01	0.00	0.00	0.01
33.00	1.4	0.0	1.4	0.0	0.32	0.00	0.01	0.00	0.00	0.01
30.50	1.2	0.0	1.2	0.0	0.32	0.00	0.01	0.00	0.00	0.02
28.00	1.1	0.0	1.1	0.0	0.32	0.00	0.02	0.00	0.00	0.02
25.50	0.9	0.0	0.9	0.0	0.31	0.00	0.02	0.00	0.00	0.02
23.00	0.8	0.0	0.8	0.0	0.29	0.00	0.03	0.00	0.00	0.03
20.50	0.6	0.0	0.6	0.0	0.28	0.00	0.03	0.00	0.00	0.03
18.00	0.5	0.0	0.5	0.0	0.26	0.00	0.04	0.00	0.00	0.04
15.50	0.4	0.0	0.4	0.0	0.24	0.00	0.04	0.00	0.00	0.04
13.00	0.3	0.0	0.3	0.0	0.21	0.00	0.05	0.00	0.00	0.05
10.50	0.2	0.0	0.2	0.0	0.19	0.00	0.05	0.00	0.00	0.05
8.00	0.1	0.0	0.1	0.0	0.16	0.00	0.06	0.00	0.00	0.06
5.50	0.1	0.0	0.1	0.0	0.13	0.00	0.06	0.00	0.00	0.07
3.00	0.0	0.0	0.0	0.0	0.09	0.00	0.07	0.00	0.00	0.07
0.00	0.0	0.0	0.0	0.0	0.05	0.00	0.07	0.00	0.00	0.08
					0.00	0.01	0.08	0.00	0.00	0.09

BY VALMONT INDUSTRIES FOR: GLOBAL TOWER / FALLS CREEK HYDRO 43.0' POLE, SITE: ELKS LODGE, SWEET H DATE 08/15/2019
 Design Id: 452232 IMPAX 22.3.23.0
 Forces and Moments for Pole in the Local Element Coordinate System

Loading Case T+S									
Dist. From	Mx	My	Resultant	Torsion	Shear	Shear	Resultant	Axial	
Base	(in-kips)	(in-kips)	Mx & My	(in-kips)	X-Dir.	Y-Dir.	Shear	(lbs)	(lbs)
(ft)			(in-kips)		(lbs)	(lbs)	(lbs)		
43.00	0	0	0	0	300	0	300	121	
40.50	0	-9	9	0	327	0	327	245	
38.00	0	-20	20	0	354	0	354	369	
35.50	0	-31	31	0	382	0	382	493	
33.00	0	-43	43	0	409	0	409	617	
30.50	0	-55	55	0	436	0	436	741	
28.00	0	-69	69	0	462	0	462	865	
25.50	0	-83	83	0	489	0	489	989	
23.00	0	-98	98	0	515	0	515	1114	
20.50	0	-114	114	0	541	0	541	1238	
18.00	0	-130	130	0	566	0	566	1362	
15.50	0	-148	148	0	591	0	591	1486	
13.00	0	-166	166	0	616	0	616	1611	
10.50	0	-185	185	0	640	0	640	1735	
8.00	0	-204	204	0	665	0	665	1860	
5.50	0	-225	225	0	690	0	690	1984	
3.00	0	-246	246	0	714	0	714	2109	
0.00	0	-272	272	0	747	0	747	2258	

BY VALMONT INDUSTRIES FOR: GLOBAL TOWER / FALLS CREEK HYDRO 43.0' POLE, SITE: ELKS LODGE, SWEET H DATE 08/15/2019
 Design Id: 452232 IMPAX 22.3.23.0
 Forces and Moments for Pole in the Local Element Coordinate System

Loading Case	Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
Seismic	43.00	0	0	0	0	328	0	328	141
	40.50	0	-14	14	0	618	0	618	285
	38.00	0	-36	36	0	841	0	841	429
	35.50	0	-64	64	0	1013	0	1013	575
	33.00	0	-96	96	0	1148	0	1148	722
	30.50	0	-132	132	0	1257	0	1257	869
	28.00	0	-171	171	0	1349	0	1349	1017
	25.50	0	-213	213	0	1428	0	1428	1165
	23.00	0	-257	257	0	1496	0	1496	1314
	20.50	0	-303	303	0	1555	0	1555	1464
	18.00	0	-350	350	0	1605	0	1605	1614
	15.50	0	-399	399	0	1645	0	1645	1765
	13.00	0	-449	449	0	1677	0	1677	1916
	10.50	0	-500	500	0	1700	0	1700	2068
	8.00	0	-551	551	0	1716	0	1716	2220
	5.50	0	-603	603	0	1726	0	1726	2372
	3.00	0	-655	655	0	1730	0	1730	2526
	0.00	0	-717	717	0	1735	0	1735	2704

BY VALMONT INDUSTRIES FOR:
 Design Id: 452232
 Deflections and Stresses for Pole

GLOBAL TOWER / FALLS CREEK HYDRO 43.0' POLE, SITE: ELKS LODGE, SWEET H

DATE 08/15/2019
 IMPAX 22.3.23.0

Loading Case Seismic

*** Deflections and Stresses ***

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)	Axial Interaction Term	Flexural Interaction Term	Shear Interaction Term	Torsion Interaction Term	Combined Stress Interaction
43.00	7.1	0.0	7.1	0.1	1.12	0.00	0.00	0.00	0.00	0.01
40.50	6.5	0.0	6.5	0.1	1.12	0.00	0.01	0.00	0.00	0.01
38.00	5.9	0.0	5.9	0.0	1.12	0.00	0.01	0.01	0.00	0.01
35.50	5.4	0.0	5.4	0.0	1.11	0.00	0.02	0.01	0.00	0.01
33.00	4.8	0.0	4.8	0.0	1.09	0.00	0.04	0.01	0.00	0.03
30.50	4.2	0.0	4.2	0.0	1.07	0.00	0.05	0.01	0.00	0.04
28.00	3.7	0.0	3.7	0.0	1.03	0.00	0.07	0.01	0.00	0.05
25.50	3.1	0.0	3.1	0.0	0.99	0.00	0.08	0.01	0.00	0.07
23.00	2.6	0.0	2.6	0.0	0.94	0.00	0.10	0.01	0.00	0.08
20.50	2.2	0.0	2.2	0.0	0.88	0.00	0.12	0.01	0.00	0.10
18.00	1.7	0.0	1.7	0.0	0.81	0.00	0.14	0.01	0.00	0.12
15.50	1.3	0.0	1.3	0.0	0.73	0.00	0.15	0.01	0.00	0.14
13.00	0.9	0.0	0.9	0.0	0.64	0.00	0.17	0.01	0.00	0.16
10.50	0.6	0.0	0.6	0.0	0.54	0.00	0.19	0.01	0.00	0.18
8.00	0.4	0.0	0.4	0.0	0.43	0.00	0.21	0.01	0.00	0.20
5.50	0.2	0.0	0.2	0.0	0.31	0.00	0.23	0.01	0.00	0.22
3.00	0.1	0.0	0.1	0.0	0.17	0.00	0.25	0.01	0.00	0.24
0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.28	0.01	0.00	0.26
										0.28

MI DEFLECTION RATIO // DEFLECTION LIMIT / DEFLECTION // IS

BY VALMONT INDUSTRIES FOR: GLOBAL TOWER / FALLS CREEK HYDRO 43.0' POLE, SITE: ELKS LODGE, SWEET H DATE 08/15/2019
 Design Id: 452232 IMPAX 22.3.23.0

NUMBER OF BOLTS	DIAMETER (IN.)	LENGTH (IN.)	WEIGHT (KIPS)	SHIPPED AS	PROJECTION LENGTH (IN.)	GALVANIZED LENGTH (IN.)	THREAD SIZE
8	1.500	48.00	0.24	BOLTS, TEMPLATES	10.50	18.00	6-UNC-2A
STEEL SPEC. VALMONT	STEEL SPECIF.	MAXIMUM BOLT FORCE (KIPS)	MAXIMUM BOLT SHEAR FORCE (KIPS)	FACTORED NOMINAL TENS. STRENGTH (KIPS)	STRESS AREA (SQ. IN.)	INTERACTION VALUE	CONFIGURATION OF BOTTOM END
S100	F1554	26.13	0.39	84.6	1.41	0.32	THREADED WITH HEAVY HEX HEAD NUT

NOTE: BOLT INTERACTION VALUE WAS CALCULATED BY DIVIDING SHEAR FORCE BY FACTOR RELATED TO DETAIL TYPE d) IN EIA-G SPECS.

*** BOLT COORDINATES (IN.) ***

BOLT NO.	X-COORD	Y-COORD	*	BOLT NO.	X-COORD	Y-COORD
1	9.000	0.000	*	2	6.364	6.364
3	0.000	9.000	*			

MAX. BOLT CIRCLE = 18.00 IN.

TEMPLATE DIAMETER = 21.50 IN.

*** BASE PLATE CHARACTERISTICS GOVERNED BY LOADING CASE WIND ***

BASE PLATE DIAMETER (IN.)	BASE PLATE THICKNESS (IN.)	ACTUAL WEIGHT (KIPS)	RAW MATERIAL WEIGHT (KIPS)	POLE DIAM. (MAJOR DIAM.) (IN.)
22.00	1.50	0.12	0.21	12.75
EFFECTIVE PLATE WIDTH (IN.)	PLASTIC SECTION MOD. (CU. IN.)	MOMENT IN BASE PLATE (IN. -K)	PLASTIC MOMENT (IN. -K)	FACTORED RESISTING MOM. (IN. -K)
5.01	2.82	68.58	140.82	126.74
STEEL SPECIF. VALMONT	STEEL SPECIF. OTHER	EFFECTIVE YIELD STRESS (KSI)	STRESS RATIO	
S56	A572	50	0.54	

** LOADS AT POLE BASE IN THE GLOBAL COORDINATE SYSTEM ***** LOADING CASES *****

LOADING CASE IDENTIFICATION	WIND ICE + WIND	T+S	Seismic	*****	LOADING CASES *****
MOMENT ABT. X-AXIS (IN-KIP)	0	0	0]MAX CRITERION- LOAD CASE
MOMENT ABT. Y-AXIS (IN-KIP)	-1124	-211	-272	-716]MOMENT ABT. X WIND
SHEAR FORCE (LB.)	3075	553	745	1731]MOMENT ABT. Y WIND
VERTICAL FORCE (LB.)	2746	4238	2258	2706]RES. MOMENT WIND
]SHEAR FORCE WIND
]BOLT FORCE WIND
]BOLT TENSION WIND

5

PR-950 High-Gain Half-Parabolic Antenna

KATHREIN

The KUSA Paralector® is a medium-gain half-parabolic antenna used in broadcast and communications systems around the world.

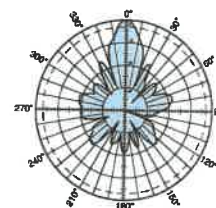
- High front-to-back ratio for point-to-point relay system applications, as well as GSM cellular repeaters and MAS and ISM systems.
- Fabricated from seamless drawn aluminum tubing and extruded pipe and heavy aluminum castings, gold anodized for corrosion protection, plus stainless steel hardware and fastenings. Foam filled broadband feed assembly requires no pressurization and can be easily replaced if necessary.



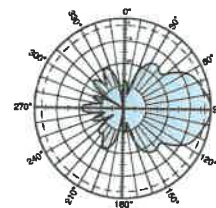
Specifications	
Frequency range	940–960 MHz
Gain	18 dBi
Impedance	50 ohms
VSWR	<1.2:1
Polarization	Horizontal or vertical
Front-to-back ratio	>25 dB
Maximum input power	100 watts (at 50°C)
H-plane beamwidth	12 degrees (half-power)
E-plane beamwidth	24 degrees (half-power)
Connector	N female
Weight	38 lb (17.2 kg)
Dimensions	68 x 36 x 18 inches (1727 x 914 x 457 mm)
Wind load at 93 mph (150 kph)	
Front / side	134 lbf / 72 lbf (594 N) / (320 N)
Wind survival rating*	100 mph (160 kph)
Shipping dimensions	40 x 36 x 7 inches (1016 x 914 x 178 mm)
Shipping weight	47 lb (21.3 kg)
Mounting	Mounting kits available for masts of 2.375 to 4.5 inch (60 to 114 mm) OD.

* Mechanical design is based on environmental conditions as stipulated in TIA-222-G-2 (December 2009) and/or ETS 300 019-1-4 which include the static mechanical load imposed on an antenna by wind at maximum velocity. See the Engineering Section of the catalog for further details.

PARAFLECTOR is a registered trademark of Kathrein USA.



H-plane
Horizontal pattern – V-polarization
Vertical pattern – H-polarization



E-plane
Horizontal pattern – H-polarization
Vertical pattern – V-polarization

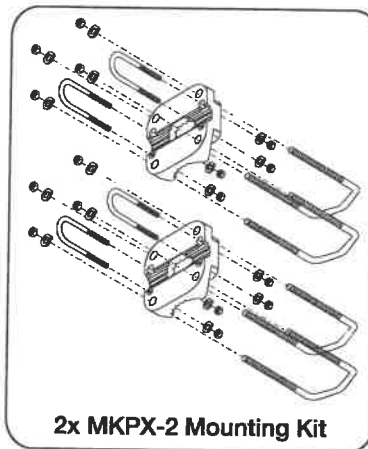
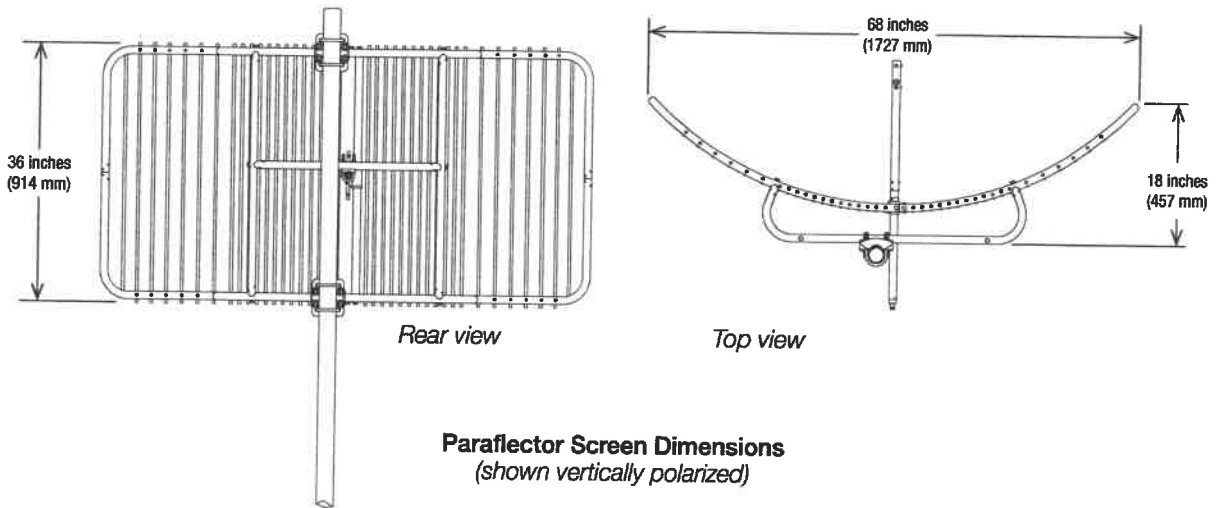
10056m subject to alteration



All specifications are subject to change without notice.
The latest specifications are available at www.kathreinusa.com

PR-950
High-Gain Half-Parabolic Antenna

KATHREIN



Mounting options

Model	Description
MKPX-2 (2x)	Mounting kit for 2.375 inch (60 mm) OD mast
MKPX-9	Mounting kit for 2.875 inch (73 mm) OD mast
MKPX-10	Mounting kit for 3.5 inch (89 mm) OD mast
MKPX-11	Mounting kit for 4 inch (102 mm) OD mast
MKPX-12	Mounting kit for 4.5 inch (114 mm) OD mast
MKTB-1	Tilt Mount Kit, 8–39 degrees tilt angle. Used with any MKPX kit listed above.

10056m subject to alteration

All specifications are subject to change without notice.
The latest specifications are available at www.kathreinusa.com

Kathrein USA Greenway Plaza II, 2400 Lakeside Blvd., Suite 650, Richardson TX 75082
Phone: 214.238.8800 Fax: 214.238.8801 Email: info@kathrein.com

F

Exhibit F Engineer's stamped certification that concrete footing will support monopole in extreme weather.

valmont

MICROFLECT

VALMONT/MICROFLECT
3575 25TH ST. SE – P.O. BOX 12985
SALEM, OR 97302-1190
PHONE: 1-800-547-2151
ENGINEER: CWB
Reviewed by: MF *CWB*

SLAB FOUNDATION DESIGN CALCULATIONS

AUG 16 2009



Valmont Order No.: 452232
Slab Foundation Drawing No. B-149457
Customer: Global Tower / Falls Creek Hydro
Site: Elks Lodge, Sweet Home, OR
Pole Ht: 43 FT

valmont  **Pole Foundation Mat Design**
MICROFLECT

SLAB DESIGN	Date:	08/15/19
Project: 452232	Run by:	CWB
<u>Input:</u>	Checked by:	MF
legs 1	1 = Pole \ 3 or 4 = Tower	
otm_t 94 k-ft	total pole overturning moment	
sh_t 3.08 k	total pole shear	
sh_l 3.08 k		
wt 2.15 k	total pole weight * 0.9	
f_w 1.50 ft	anchor bolt circle dia	
b 10.00 ft	slab width (rigid square slab only)	
t 48.00 in	slab thickness	
net_p_a 5.00 ksf	ultimate soil bearing pressure	
s_f 1.00	allowable stress increase factor (rebar)	
d_f 3.50 ft.	depth from final grade to bottom of footing	
dens_c 0.150 kcf	density of concrete	
dens_s 0.100 kcf	density of soil	
dens_fl 0.100 kcf	density of fill over slab	
f_c 4,000 psi	concrete compres. strength	
c_type	concrete type	
f_y 60,000 psi	rebar yield strength	
u 2.00	soil factor of safety: qult/qall	

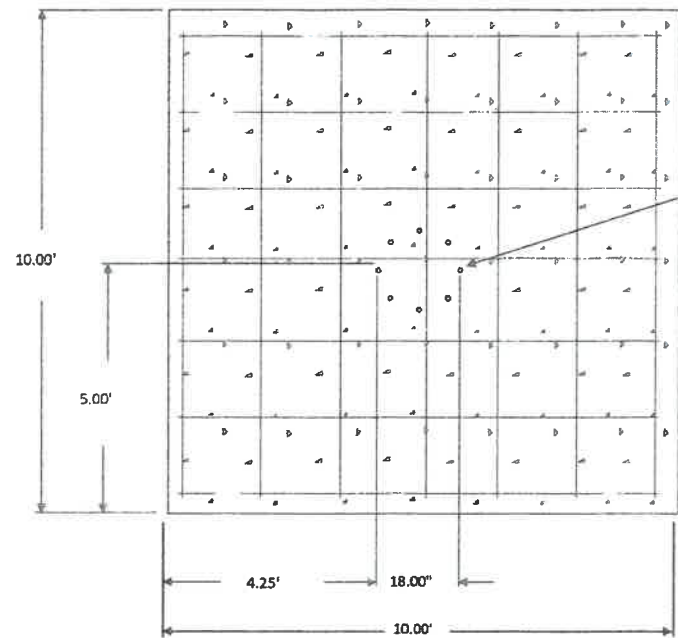
Output Summary:

s_r 2.65	OK (overturning F.S. OK)
net_p 1.08 ksf	OK (net soil bearing pressure is OK)
vol_c 15 cu.yd.	Total volume of concrete.
slab two-way shear:	(punching shear ok)
slab beam shear:	(beam shear ok)

Slab Reinforcement (ASTM A615 Gr.60):

	Size	Quan. (E/W)	Len. (ft)	Spc. (in)	Total (lbs)	
	Top Bar	#4 26	9.50	4.56	330	<---OK
	Options	#5 17	9.50	7.13	337	<---OK
Y		#6 12	9.50	10.36	342	<---OK
	As>=5.18	#7 9	9.50	14.25	350	<---OK
		#8 7	9.50	19.00	355	
		#9 6	9.50	22.80	388	
	Bot.Bar	#4 26	9.50	4.56	330	<---OK
	Options	#5 17	9.50	7.13	337	<---OK
Y		#6 12	9.50	10.36	342	<---OK
	As>=5.19	#7 9	9.50	14.25	350	<---OK
		#8 7	9.50	19.00	355	
		#9 6	9.50	22.80	388	

VALMONT MICROFLECT
 3575 25TH STREET SE
 SALEM, OR 97302
 PHONE: 1-800-547-2151



(8)-1.5" DIAMETER X 48.00" LONG ANCHOR BOLTS ON A 18" BOLT CIRCLE MATCHING PROVIDED TEMPLATES

AUG 16 2019

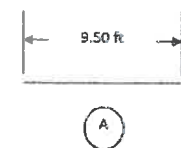


SECTION A-A
No Scale

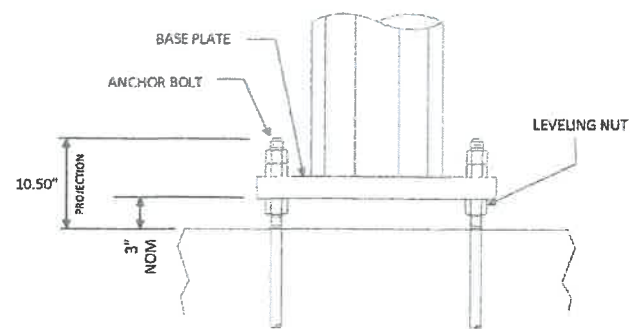
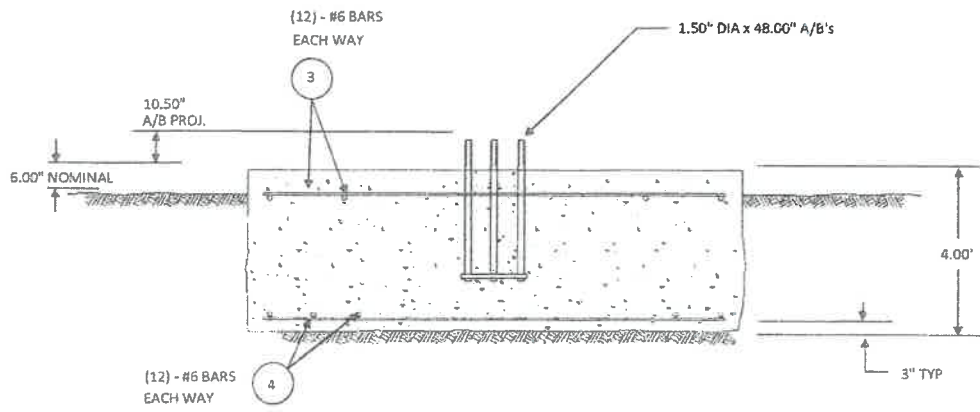
GENERAL NOTES: SLAB FOUNDATION

1. Prior to excavation, check the area for underground facilities.
2. All reinforcing shall be deformed bars conforming to ASTM A615 Grade 60 (60,000 psi min. yield) and shall be provided by the foundation contractor.
3. All concrete shall have a minimum compressive strength of 4000 psi @ 28 days. The requirement for the concrete shall be as given in the ACI "Building Code Requirements for Reinforced Concrete", ACI 318, the latest edition.
4. Trowel top of foundation smooth.
5. Concrete shall be placed against undisturbed soil to the depth indicated on the foundation drawing. The portion above grade shall be formed. If an area is excavated beyond the limits shown, this volume shall be filled with concrete or formed. After the forms are removed, the excess excavation shall be replaced and compacted.
6. Ground water was not considered in design.
7. Foundation design based on vert. bearing pressure of 5000 psf.
8. Concrete is assumed to weigh 150 pcf.
9. Estimated concrete volume = 15 cubic yards total.
10. Design Based on the following loads from installation drawing for order No: 452232.

Factored Moment = 94 FT-KIPS	Overtuning Safety Factor = 2.65
Factored Download = 2.2 KIPS	Max. Toe Bearing Pressure = 1.08 ksf
Factored Shear = 3.1 KIPS	
11. Backfill should be compacted to a density of 100 pcf.
12. Anchor bolts to be ASTM F1554, Gr. 55 ksi.
13. Reference: TIA-G PRESUMPTIVE SOIL PARAMETERS FOR CLAY
14. CUSTOMER TO VERIFY THAT ACTUAL SOIL CONDITIONS MEET OR EXCEED TIA-G PRESUMPTIVE SOIL PARAMETERS FOR CLAY.



REINFORCEMENT STEEL SCHEDULE					
Sym	Type	Rebar Size	Rebar Spacing	Weight (lbs)	Qty
3	A	#6	10.36 in	342	24
4	A	#6	10.36 in	342	24
TOTAL STEEL WEIGHT FOR COMPLETE FOUNDATION INSTALLATION =				684	



ANCHOR BOLT INSTALLATION
N.T.S.
EXTREME CARE SHOULD BE TAKEN TO ASSURE THAT ALL LEVELING NUTS ARE LEVEL WITH RESPECT TO EACH OTHER PRIOR TO ERECTION OF THE STRUCTURE

Grade 60 Rebar						
Size	Ask #	Wt/ft	Gdb (in)	d* (in)	d** (in)	
#3	11-97203	0.38	2.25	2.25	1.50	
#4	11-97204	0.67	3.00	3.00	2.00	
#5	11-97205	1.04	3.75	3.75	2.50	
#6	11-97200	1.50	4.50	4.50	4.50	
#7	11-97207	2.04	5.25	5.25	4.25	
#8	11-97208	2.67	6.00	6.00	6.00	
#9	11-97209	3.40	6.77	9.50	-	
#10	11-97210	4.30	7.62	10.75	-	
#11	11-97211	5.31	8.46	12.00	-	

* Refers to ACI standard hook detail chart
** Refers to ACI stirrup hook detail chart

Rebar Lap Splice						
Rebar Size	Rebar Grade	Specified Concrete Strength	Overlap (inches)			
			Vert & Ties	Bottom Horiz	Top Horiz	
#3	60	4000 psi	13	15	21	
#4	60	4000 psi	18	20	29	
#5	60	4000 psi	22	26	36	
#6	60	4000 psi	26	33	46	
#7	60	4000 psi	38	45	62	
#8	60	4000 psi	43	59	82	
#9	60	4000 psi	49	74	104	
#10	60	4000 psi	58	95	132	
#11	60	4000 psi	71	116	163	

Splicing is an alternative to specified material listed in rebar schedule. Lap Splice may be used on ties when Seismic Hook not required.

ELEVATION
No Scale

Rev	Description	Date	By/Ck	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES TOLERANCES ARE:	valmont	9575 25TH STREET SE SALEM, OR 97302 MAIN (503) 369-9267 FAX (503) 316-2040
					By: CWB Check: MF Date: 08/15/19	SLAB FOUNDATION LAYOUT Customer Global Tower / Falls Creek Hydro Site Elks Lodge, Sweet Home, OR
S.O. 452232					SIZE - B	Dwg No. B-149457

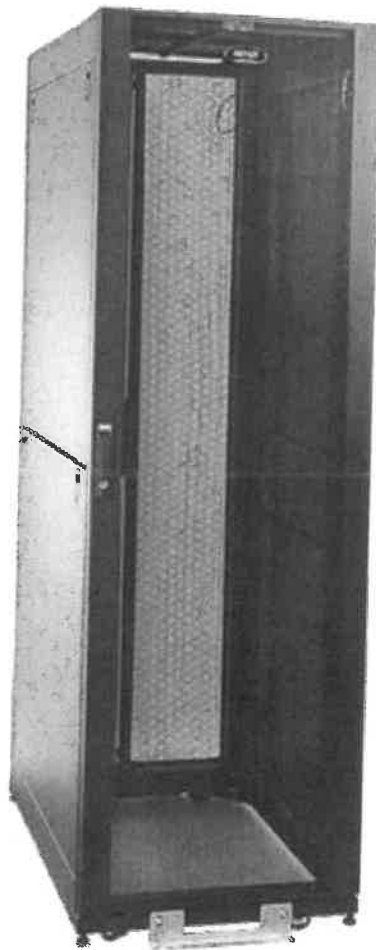
7

Exhibit G

There will be two cabinets like this inside the Elk's Lodge.

One to house the radios and one to house the battery back up.

These cabinets have good ventilation and can be locked for security.



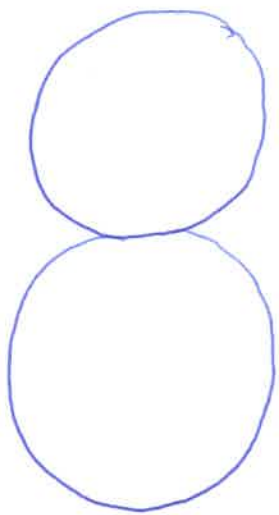


Exhibit H - Global Tower's CCB

GLOBAL TOWER SERVICE INC
111 CATHERINE DR
WOODLAND WA 98674

CCB LICENSE 180758

RESIDENTIAL BOND: NONE
COMMERCIAL BOND: \$20,000
INSURANCE: \$1,000,000 / \$2,000,000
INDEP. CONT. STATUS: NONEXEMPT
RMI: JEFFREY LEE HAHN
HOME INSPECTOR CERTIFIED: NO

CONSTRUCTION CONTRACTORS BOARD

LICENSE NUMBER: 180758
EXPIRATION DATE: 02/28/2020
ENTITY TYPE: Corporation
ENDORSEMENT(S): Commercial General Contractor Level 2
GLOBAL TOWER SERVICE INC
111 CATHERINE DR
WOODLAND WA 98674

⇄ ⇄ ⇄ ⇄ ⇄ ⇄
POCKET CARD
⇄ ⇄ ⇄ ⇄ ⇄ ⇄

fold and detach
along
perforation

↓ ↓ ↓ ↓ ↓ ↓
LICENSE CARD
↓ ↓ ↓ ↓ ↓ ↓

STATE OF OREGON CONSTRUCTION CONTRACTORS BOARD LICENSE CERTIFICATE

LICENSE NUMBER: 180758

This document certifies that:

GLOBAL TOWER SERVICE INC
111 CATHERINE DR
WOODLAND WA 98674

is licensed in accordance with Oregon Law as a Commercial General Contractor Level 2.

License Details:

EXPIRATION DATE: 02/28/2020
ENTITY TYPE: Corporation
INDEP. CONT. STATUS: NONEXEMPT
RESIDENTIAL BOND: NONE
COMMERCIAL BOND: \$20,000
INSURANCE: \$1,000,000 / \$2,000,000
RMI: JEFFREY LEE HAHN
HOME INSPECTOR CERTIFIED: NO

Elk Lodge
Falls Creek

Supplement to Our
Permit Application for
Commercial Structure

October 10, 2019

received
10/10/19 ML

Falls Creek H.P., Limited Partnership

October 9, 2019

Molly Laycock, CPT
City of Sweet Home - Building Program
3225 Main Street
Sweet Home, OR 97386

Re: Revision of Building Permit Application for a Commercial Structure at Elk's Lodge

Dear Molly;

Thank you and Blair for reviewing my application dated August 19, 2019 and suggesting ways to improve it and to help the application conform to Sweet Home's building codes. I am enclosing three copies of this letter, along with three copies of all new drawings, exhibits and a narrative that explains the changes. This letter and all the materials enclosed with it should be inserted after Tab 8 of the notebooks you have for this application and are an extension of that application.

The property owner for this application is the BPOE Elks #1972 Sweet Home (Elk's Lodge or the Lodge). The Lodge had given permission to the Falls Creek H.P., Limited Partnership to construct everything it needs to anchor a radio communication system between Sweet Home and the Falls Creek Hydroelectric Project.

Please contact me if you have any questions regarding any of the material contained in this application.

Sincerely,



Gary P. Marcus

Consultant to
Falls Creek H.P., Limited Partnership
Cell: 541-953-2725

City of Sweet Home
Permit Application – Commercial Structure
For The Elk's Lodge, 440 Osage Street, Sweet Home
Supplement
October 9, 2019

Introduction

Falls Creek applied to the City of Sweet Home for a building permit dated August 19 to place a radio antenna on a monopole connected to the Sweet Home Elk's Lodge. The building department suggested Falls Creek change some aspects of the application and Falls Creek has followed the building departments advice. This narrative focuses on the changes that were made. All aspects of the application that are not mentioned as changes will remain as they were in the original application.

Changes and New Exhibits

Since the original application had exhibits that ended with Exhibit H, this supplement has exhibits that begin with Exhibit I and continue to Exhibit O. The best way to review these changes is to look at the exhibits first and then read this narrative.

- Exhibit I is an overview of the changes. We have added a 9' X 9' x 10' storage shed placed on the 10' X 10' concrete foundation slab for the monopole. The overall view shows that the fence has been extended to enclose the shed, the propane tank, the backup generator and the ice bridge.
- Exhibit J contains the concrete foundation plan with the monopole in the center.
- Exhibit K: shows the storage shed and storage shed details. The monopole will go through the center of the roof of the storage shed. The front elevation shows that the ice bridge will exit the shed above the door. Exhibit K.1 shows the detail of how the shed will be anchored to the concrete foundation. K.2 shows details of the roof and the notes that contain the materials for the shed. The shed will be made of the same exterior material of the Elk Lodge and be painted the same color so it will blend in.
- Exhibit L is an indicative U-Bolt design that will hold the ice bridge to the monopole. The ice bridge will 12 inches wide, 4 inches thick and approximately 15 feet long. It will be supported in three places; with a U-bolt on the monopole, with a brace on the inside wall of the shed, and with a brace on the outside wall of the lodge. The purpose of the ice bridge is to protect the cables that will be in a tray under the ice bridge. The cables will

enter the Elk's Lodge at the end of the ice bridge, and the cables will be connected to radios inside the Elk's Lodge.

- Exhibit M is the plan view of the ice bridge.
- Exhibit M.1 is an elevation view of the ice bridge. The height of the ice bridge has been moved up from 7 feet to 8 feet so that the 7-foot-tall door will swing underneath it. Exhibit M.1 also contains details of the braces that will support the ice bridge when it exits the shed and when it meets the wall of the Elk's Lodge.
- Exhibit N is an indicative 120-gallon propane tank that will replace the originally proposed 55-gallon propane tank.

Dorman Construction Inc.

As stated in the original application Global Tower Services Inc. will install the concrete pads, the monopole, the ice bridge, the propane tank the backup propane generator. However, Dorman Construction Inc. will construct the storage shed.

During the past several months, Brad Anderson has been the construction supervisor for remodeling work at the Elk's Lodge. Elk's Lodge's leadership was impressed by the quality of the work that Brad did and by his integrity. Falls Creek asked Brad to design a storage shed, and Falls Creek was impressed by Brad's knowledge, detailed design concepts and experience. As a result, Falls Creek will be using Dorman Construction, Inc. construct the storage shed that surrounds the monopole and to construct related civil work. Contact information for Dorman Construction, Inc. is:

Dorman Construction, Inc.
Attention: Brad Anderson
303 5th St, Suite 135
Springfield OR 97477

Office: (541) 984-0012
brad@dormanconstruction.com

Exhibit O contains the insurance coverage that Dorman Construction has obtained for this project and has listed the Falls Creek H.P., Limited Partnership as an additional insured.

List of Exhibits

- Exhibit A Letter from Elk's Lodge granting permission to Falls Creek to file application.
- Exhibit B.1 Survey of Elk's Lodge and surrounding area
- Exhibit B.2 Color satellite photo of Lodge area with project superimposed on SW corner of Lodge.
- Exhibit C Detailed closeup of the area of monopole, tank, generator, snow bridge, and cabinets inside lodge.
- Exhibit C.1 Onan 2.5 kW propane generator
- Exhibit C.2 Shelter for generator
- Exhibit C.3 Indicative propane tank.
- Exhibit D Valmont engineers stamped certificate of monopole design.
- Exhibit E PR-950 Antenna that will be placed near top of monopole.
- Exhibit F Valmont engineers stamped certificate that concrete footing will hold monopole and antenna in high winds and extreme weather.
- Exhibit G Cabinet in lodge specifically designed to hold radio racks. A second cabinet will house the backup battery and electric controls.
- Exhibit H Global Tower Service will construct and install these materials and plans. Exhibit H is a copy of the CCB certificate.
- Exhibit I Overview of the revised site plan showing the 9 X 9 storage shed.
- Exhibit J Same as Exhibit F to set the context of the Shed. Shows the concrete footing with the monopole in the middle.
- Exhibit K Shows the shed elevation and plan view placed on the 10' X 10' concrete footing.
- Exhibit K.1 Is the detail of the anchor embedded in the concrete that holds down the shed.
- Exhibit K.1 Detail showing the room, and enlarged notes of the materials in the shed.
- Exhibit L Cut sheet shows U-Bolt connecting ice tray to monopole, support braces for buildings.
- Exhibit M Shows the ice bridge plan view.
- Exhibit M.1 Ice bridge elevation and building bracket details.

City of Sweet Home
Commercial, Structural Building Application
Revision dated October 9, 2019
For Elk Lodge, by Falls Creek Hydro Project
Page 4 of 4

Exhibit N Indicative 120-gallon propane tank with dimensions.

Exhibit O Dorman Construction Inc, insurance that will cover their liability for the Elk's
Lodge construction.

Exhibit N:

A 120-gallon propane tank will replace the previous proposed the 55-gallon tank. In the event of an electrical outage, the propane will power a propane electric generator. This will ensure the radio system will have continuous backup power in the event of a long electrical outage in Sweet Home.

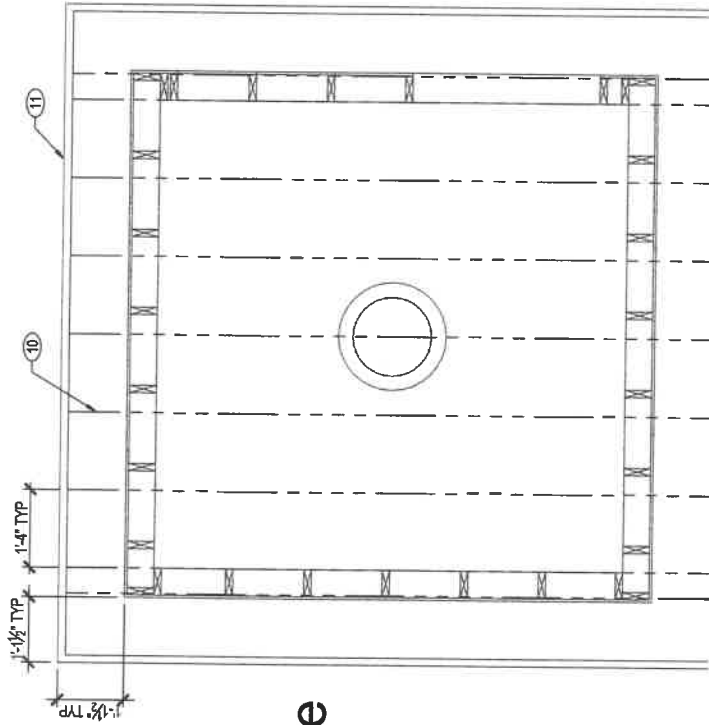


120 GALLON TANK – HORIZONTAL

A standard 120 gallon tank holds 96 gallons of propane and is generally installed for residential hot water or space heating with sufficient storage if you add a gas range or clothes dryer. Each tank is 68” long and 24” in diameter. This is more than enough electricity to supply the needs of our radio communication system, and security cameras in the event of a long outage.

Recommended minimum pouring pad size: 3.5 x 3.5 feet, 6” deep.

Exhibit K.2 Roof and Notes Enlarged



ote ice Bridge
xits above
oor

KEYED NOTES TO THIS SHEET:

- 01 MONOPOLE AND MONOPOLE'S FOUNDATION BY OTHERS
- 02 NEW FOUNDATION TO TIE INTO THE MONOPOLE'S FOUNDATION
- 03 4x8 PRESSURE TREATED W/ GALV L-METAL FLASHING UNDER SIDING
- 04 HDU2-SDS2.5 AT EACH CORNER
- 05 1/2" EXPANSION ANCHOR OR TITEN HD
- 06 2x8 STUDS
- 07 5/8" T1-11 SIDING
- 08 3x7" HOLLOW METAL DOOR AND DOOR FRAME
- 09 4x6 HEADER FOR DOOR
- 10 2x8 RAFTERS
- 11 2x8 FASCIA
- 12 1/2" CDX PLYWOOD ROOF SHEATHING
- 13 COMPOSITION LAMINATED ROOF SHINGLES
- 14 ICE BRIDGE

JOHNSON BRODERICK ENGINEER
JBE
Civil and Structural Engine
 325 W. 13th Ave
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 www.jbe.us.com

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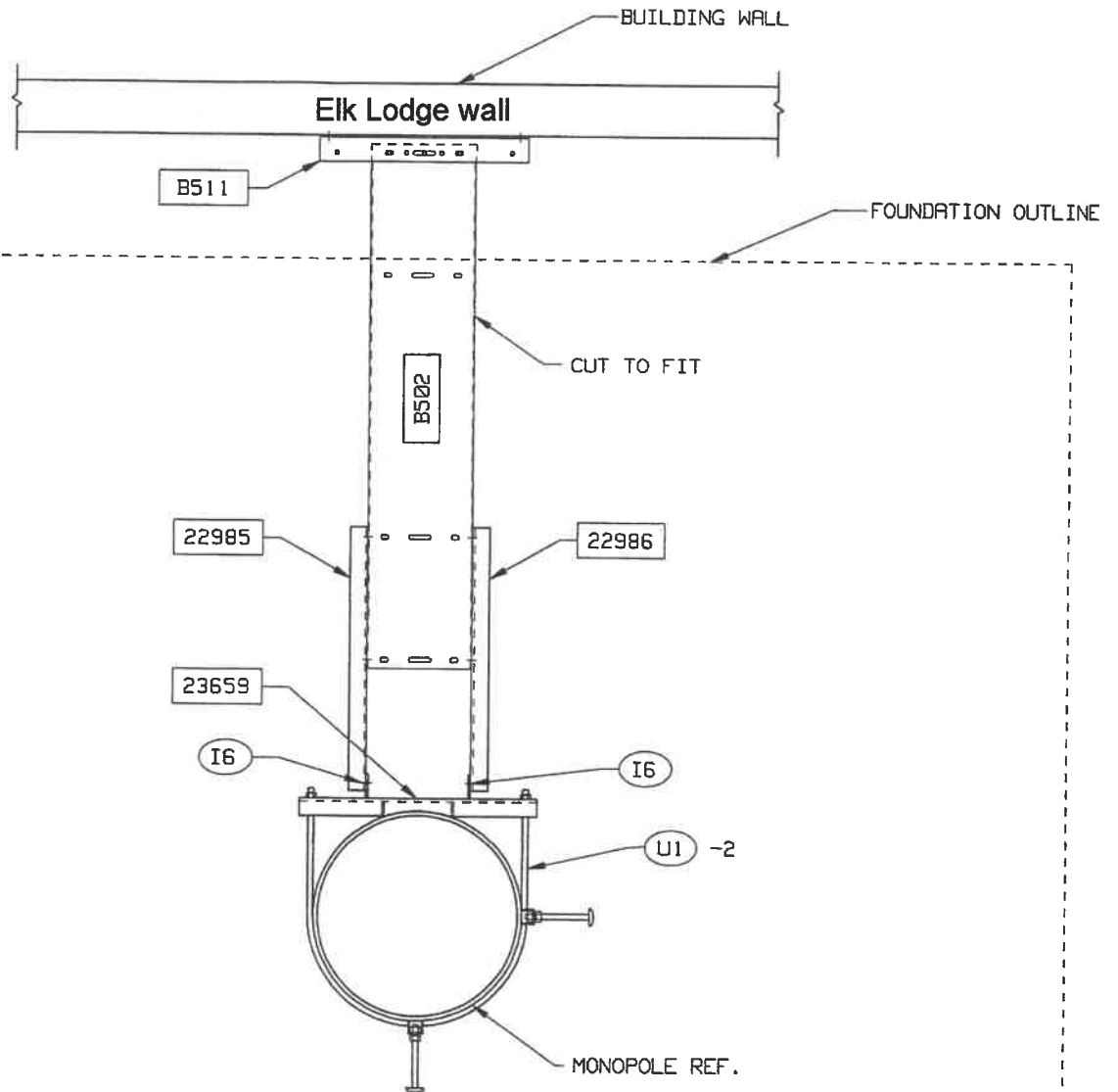


Exhibit L shows the U-bolt (U1) that is attached to the monopole. Brackets (I6) attach to support arms (22985 - 22986) which hold the ice bridge (B502). The ice bridge is supported by a brace (B511) on the outside wall of the Elk's Lodge. The antenna cable will enter the lodge and be connected to radios inside the lodge.

The Monopole will be attached to Elk's Lodge with an "Ice Bridge" also know as a "Waveguide Bridge"

WAVEGUIDE BRIDGE LAYOUT

3/4" = 1'-0"

D-86696



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

10/9/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER: Alliance Insurance Group, 941 Oak St, Eugene, OR 97401. CONTACT NAME: James River Insurance Company. PHONE: (541) 687-4799. FAX: (541) 687-4718. E-MAIL ADDRESS: info@allianceinsgrp.com. INSURER(S) AFFORDING COVERAGE: James River Insurance Company, Ohio Security Insurance Company, SAIF Corporation, Great American Insurance Company Of Ny.

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Table with columns: INSR LTR, TYPE OF INSURANCE, ADDL INSD, SUBR WVD, POLICY NUMBER, POLICY EFF (MM/DD/YYYY), POLICY EXP (MM/DD/YYYY), LIMITS. Rows include Commercial General Liability, Automobile Liability, Umbrella Liab, Excess Liab, Workers Compensation and Employers' Liability, and Inland Marine - Comm.

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required) Coverage placed with James River Insurance Company is issued pursuant to the surplus lines law and does not have the protection of state guaranty or insolvency funds nor has the policy wording been reviewed by the Insurance Department of the State.

Falls Creek Hydro Project LP is Additional Insured with respect to the General Liability, Auto Liability, and Umbrella Liability insurance, and insurance is Primary & Non-Contributory, Waiver of Subrogation is granted in favor of Certificate Holder.

CERTIFICATE HOLDER CANCELLATION

Certificate Holder: Falls Creek Hydro Project LP, 65 Madison Ave, Ste 55, Morristown, NJ 07960. Cancellation: SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED – OWNERS, LESSEES OR
 CONTRACTORS – SCHEDULED PERSON OR
 ORGANIZATION**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location(s) Of Covered Operations
Where required by written contract or written agreement	All operations of the Named Insureds
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED – OWNERS, LESSEES OR
CONTRACTORS – COMPLETED OPERATIONS**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location And Description Of Completed Operations
Where required by written contract or written agreement	All operations of the Named Insureds
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.
BUSINESS AUTO COVERAGE ENHANCEMENT ENDORSEMENT

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

With respect to coverage afforded by this endorsement, the provisions of the policy apply unless modified by the endorsement.

If the policy to which this endorsement is attached also contains a Business Auto Coverage Enhancement Endorsement with a specific state named in the title, this endorsement does not apply to vehicles garaged in that specified state.

COVERAGE INDEX

<u>SUBJECT</u>	<u>PROVISION NUMBER</u>
ACCIDENTAL AIRBAG DEPLOYMENT	13
ADDITIONAL INSURED BY CONTRACT, AGREEMENT OR PERMIT	4
AMENDED DUTIES IN THE EVENT OF ACCIDENT, CLAIM, SUIT OR LOSS	21
AMENDED FELLOW EMPLOYEE EXCLUSION	6
AUDIO, VISUAL AND DATA ELECTRONIC EQUIPMENT COVERAGE	15
BODILY INJURY REDEFINED	25
EMPLOYEES AS INSUREDS (Including Employee Hired Auto)	3
EXTRA EXPENSE - BROADENED COVERAGE	11
GLASS REPAIR - WAIVER OF DEDUCTIBLE	17
HIRED AUTO COVERAGE TERRITORY	23
HIRED AUTO PHYSICAL DAMAGE (Including Employee Hired Auto)	7
LOAN / LEASE GAP (Coverage Not Available In New York)	16
NEWLY FORMED OR ACQUIRED SUBSIDIARIES	2
PARKED AUTO COLLISION COVERAGE (WAIVER OF DEDUCTIBLE)	18
PERSONAL EFFECTS COVERAGE	12
PHYSICAL DAMAGE - ADDITIONAL TRANSPORTATION EXPENSE COVERAGE	9
PHYSICAL DAMAGE DEDUCTIBLE - VEHICLE TRACKING SYSTEM	14
PRIMARY AND NON-CONTRIBUTORY - WRITTEN CONTRACT OR WRITTEN AGREEMENT	24
RENTAL REIMBURSEMENT	10
SUPPLEMENTARY PAYMENTS	5
TOWING AND LABOR	8
TRAILERS - INCREASED LOAD CAPACITY	1
TWO OR MORE DEDUCTIBLES	19
UNINTENTIONAL FAILURE TO DISCLOSE HAZARDS	20
WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US	22

SECTION I - COVERED AUTOS is amended as follows:

1. TRAILERS - INCREASED LOAD CAPACITY

The following replaces Paragraph C.1. **Certain Trailers, Mobile Equipment And Temporary Substitute Autos of SECTION I - COVERED AUTOS:**

"Trailers" with a load capacity of 3,000 pounds or less designed primarily for travel on public roads.

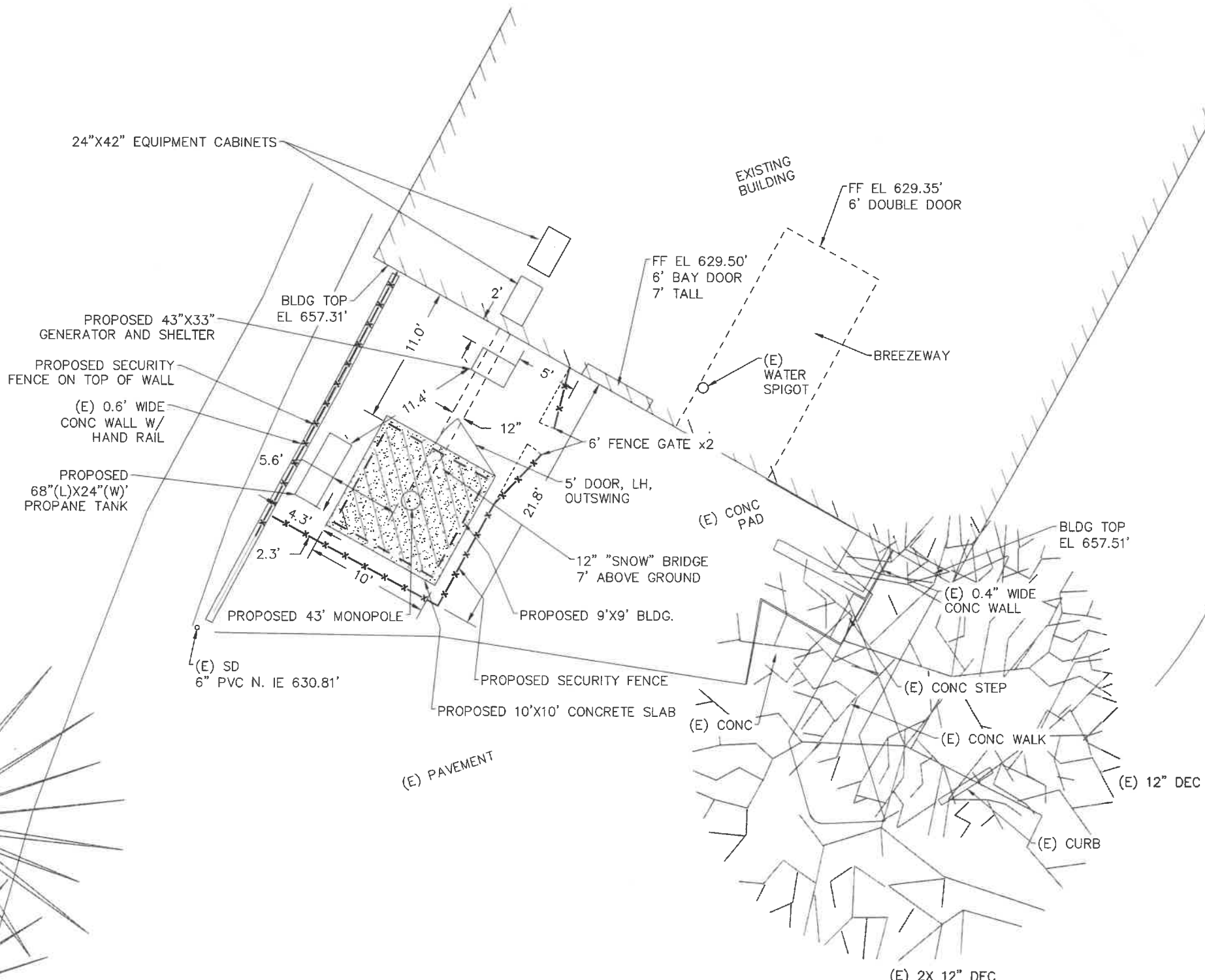
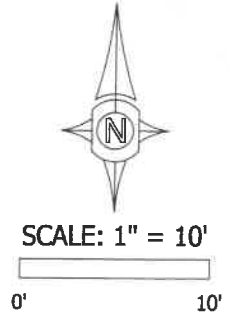


Exhibit I. 9' X 9' storage shed sits on 10' X 10' concrete slab. Propane tank now 68 inches long. Fence surrounds all structures and equipment. 15 foot long Ice bridge goes from Monopole through shed to elk lodge wall. Bridge is supported by U-Bolt on pole, brackets on shed wall and on lodge wall. Propane tank and propane generator meet all building code clearances.



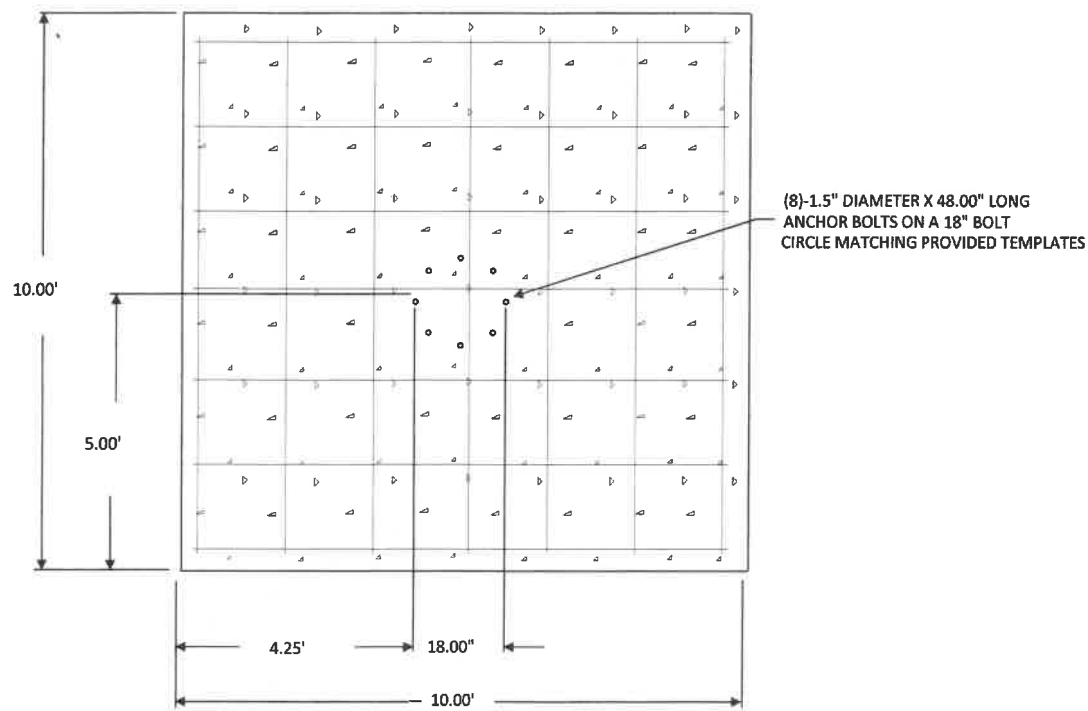
UDELL ENGINEERING & LAND SURVEYING, LLC
 63 EAST ASH ST.
 LEBANON, OREGON 97355
 (541) 451-5125 PH.
 (541) 451-1366 FAX

SITE PLAN
 BPOE ELKS NO. 1972 SWEET HOME
 440 OSAGE STREET
 LINN COUNTY, OREGON

DATE: 7-30-2015, REV. 10-1-2019
 PROJECT: 19-207 FALLS CREEK
 DRAWN BY: BWP
 CHECKED BY: OWL



SHEET 2
 of 3
 SCALE: SEE BARSCALE



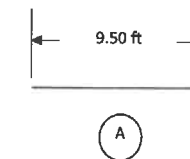
SECTION A-A
No Scale

GENERAL NOTES: SLAB FOUNDATION

1. Prior to excavation, check the area for underground facilities.
2. All reinforcing shall be deformed bars conforming to ASTM A615 Grade 60 (60,000 psi min. yield) and shall be provided by the foundation contractor.
3. All concrete shall have a minimum compressive strength of 4000 psi @ 28 days. The requirement for the concrete shall be as given in the ACI "Building Code Requirements for Reinforced Concrete", ACI 318, the latest edition.
4. Trowel top of foundation smooth.
5. Concrete shall be placed against undisturbed soil to the depth indicated on the foundation drawing. The portion above grade shall be formed. If an area is excavated beyond the limits shown, this volume shall be filled with concrete or formed. After the forms are removed, the excess excavation shall be replaced and compacted.
6. Ground water was not considered in design.
7. Foundation design based on vert. bearing pressure of 5000 psf.
8. Concrete is assumed to weigh 150 pcf.
9. Estimated concrete volume = **15 cubic yards total.**
10. Design Based on the following loads from installation drawing for order No: 452232.

Factored Moment = 94 FT-KIPS **Overturning Safety Factor = 2.65**
Factored Download = 2.2 KIPS **Max. Toe Bearing Pressure = 1.08 ksf**
Factored Shear = 3.1 KIPS

11. Backfill should be compacted to a density of 100 pcf.
12. Anchor bolts to be ASTM F1554, Gr. 55 ksi.
13. Reference: TIA-G PRESUMPTIVE SOIL PARAMETERS FOR CLAY
14. CUSTOMER TO VERIFY THAT ACTUAL SOIL CONDITIONS MEET OR EXCEED TIA-G PRESUMPTIVE SOIL PARAMETERS FOR CLAY.



REINFORCEMENT STEEL SCHEDULE					
Sym	Type	Rebar Size	Rebar Spacing	Weight (lbs)	Qty
3	A	#6	10.36 in	342	24
4	A	#6	10.36 in	342	24
TOTAL STEEL WEIGHT FOR COMPLETE FOUNDATION INSTALLATION =				685	

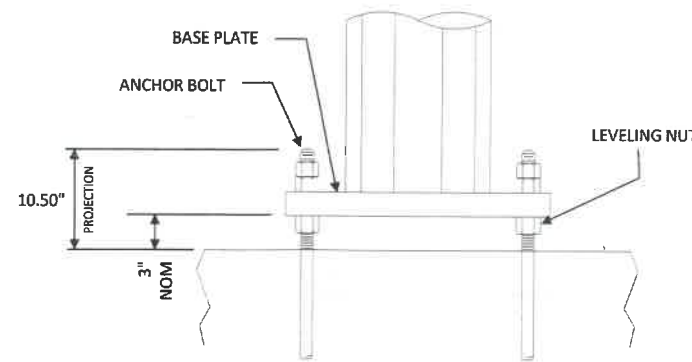
SLAB TOP STEEL 3
 SLAB BOTTOM STEEL 4
 TOTAL STEEL WEIGHT FOR COMPLETE FOUNDATION INSTALLATION = 685

Grade 60 Rebar					
Size	Ask #	Wt/ft	6db (in)	d* (in)	d** (in)
#3	11-97203	0.38	2.25	2.25	1.50
#4	11-97204	0.67	3.00	3.00	2.00
#5	11-97205	1.04	3.75	3.75	2.50
#6	11-97200	1.50	4.50	4.50	4.50
#7	11-97207	2.04	5.25	5.25	4.25
#8	11-97208	2.67	6.00	6.00	6.00
#9	11-97209	3.40	6.77	9.50	-
#10	11-97210	4.30	7.62	10.75	-
#11	11-97211	5.31	8.46	12.00	-

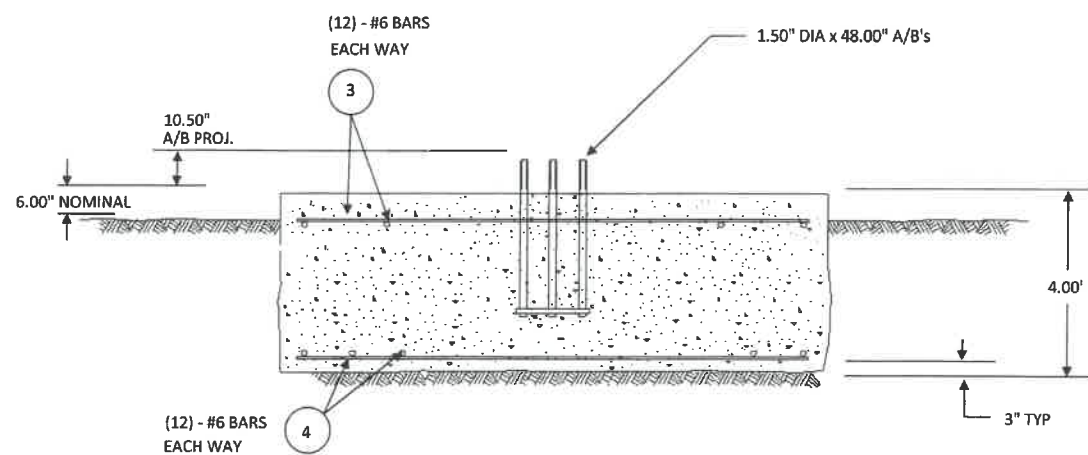
* Refers to ACI standard hook detail chart
 ** Refers to ACI stirrup hook detail chart

Rebar Lap Splice					
Rebar Size	Rebar Grade	Specified Concrete Strength	Overlap (inches)		
			Vert & Ties	Bottom Horiz	Top Horiz
#3	60	4000 psi	13	15	21
#4	60	4000 psi	18	20	29
#5	60	4000 psi	22	26	36
#6	60	4000 psi	26	33	46
#7	60	4000 psi	38	45	62
#8	60	4000 psi	43	59	82
#9	60	4000 psi	49	74	104
#10	60	4000 psi	58	95	132
#11	60	4000 psi	71	116	163

Splicing is an alternative to specified material listed in rebar schedule.
 Lap Splice may be used on ties when Seismic Hook not required.



ANCHOR BOLT INSTALLATION
 N.T.S.
 EXTREME CARE SHOULD BE TAKEN TO ASSURE THAT ALL LEVELING NUTS ARE LEVEL WITH RESPECT TO EACH OTHER PRIOR TO ERECTION OF THE STRUCTURE



ELEVATION
No Scale

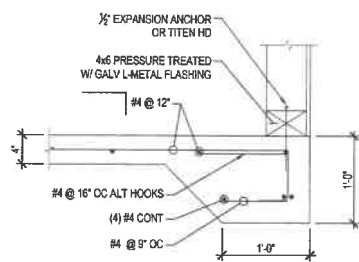
EX H.B. + J.

Rev	Description	Date	By/Ck	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES TOLERANCES ARE:	3575 25TH STREET SE SALEM, OR 97302 MAIN (503) 363-9267 FAX (503) 316-2040
				--- X .X/X" ± 1/8" X X/X" ± 1/8" * ± 1/8" ** ± 1/16"	valmont MICROFLECT By: CWB Check: MF Date: 08/15/19 SLAB FOUNDATION LAYOUT Customer Global Tower / Falls Creek Hydro Site Elks Lodge, Sweet Home, OR
				S.O. 452232	SIZE - B Dwg No. B-149457 Sheet 1 of 1

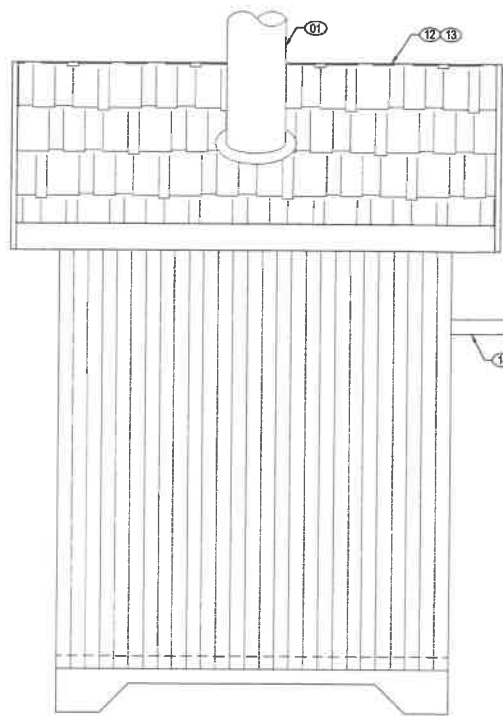
Exhibit K.

New 9' X 9' X 10' shed.

Anchor embedded in concrete to attach to shed.

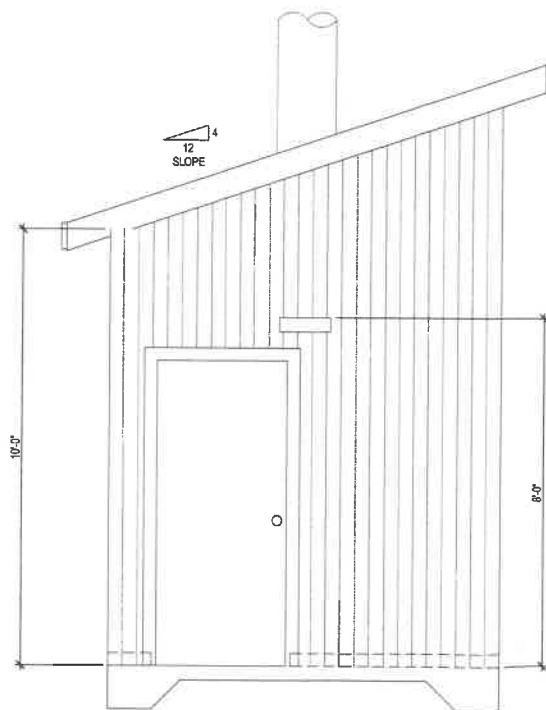


6 FOUNDATION DETAIL
1/2" = 1'-0"



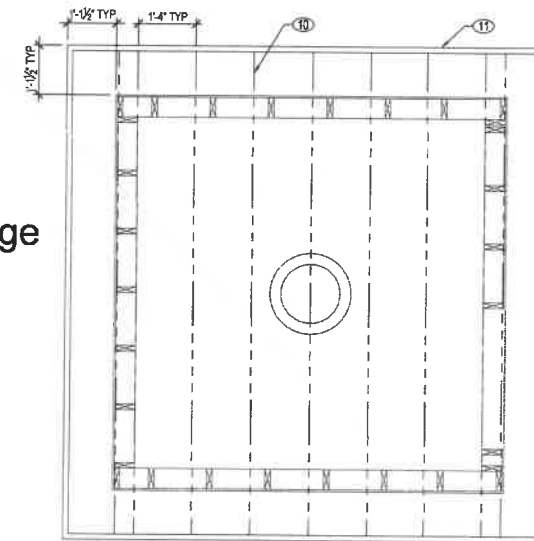
5 SIDE VIEW
1/2" = 1'-0"

Note ice Bridge exits above door

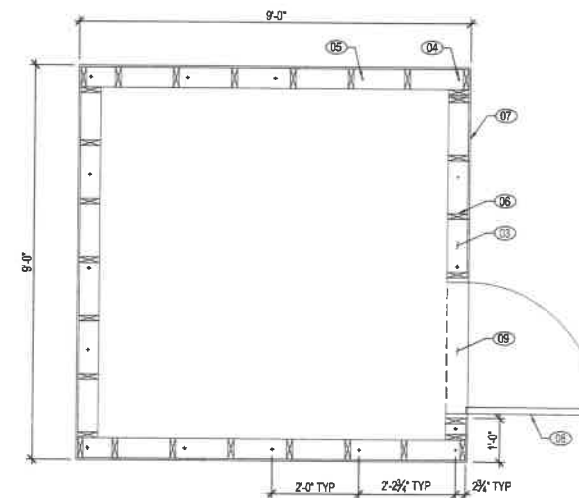


4 FRONT ELEVATION
1/2" = 1'-0"

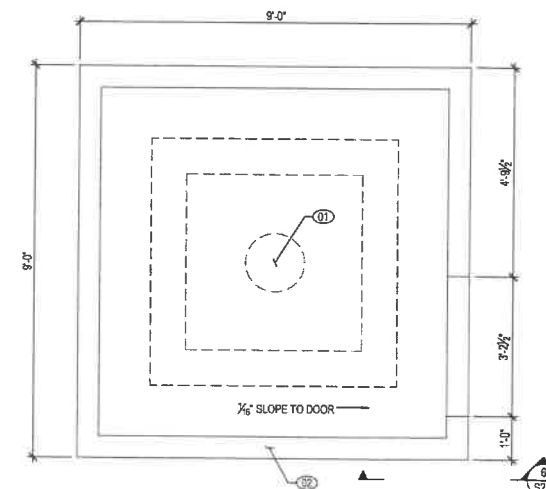
Note opening near door for ice bridge



3 ROOF PLAN
1/2" = 1'-0"



2 FRAMING DETAILS
1/2" = 1'-0"



1 FOUNDATION PLAN
1/2" = 1'-0"

KEYED NOTES THIS SHEET:

- 01 MONOPOLE AND MONOPOLES FOUNDATION BY OTHERS
- 02 NEW FOUNDATION TO TIE INTO THE MONOPOLES FOUNDATION
- 03 4x6 PRESSURE TREATED W/ GALV L-METAL FLASHING UNDER SIDING
- 04 HDU2-SDS2.5 AT EACH CORNER
- 05 1/2" EXPANSION ANCHOR OR TITEN HD
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FALLS CREEK H.P., LIMITED PARTNERSHIP
440 OSAGE STREET
SWEET HOME, OR 97386

By	Issue	Description	Mark	Date
				2019.10.04
				19138.01
				WRS
				AMB
FOUNDATION & BUILDING PLANS				Sheet No:
				S2.0

Sweet Home

**Conditional Use Permit
Application**

Additional Documents

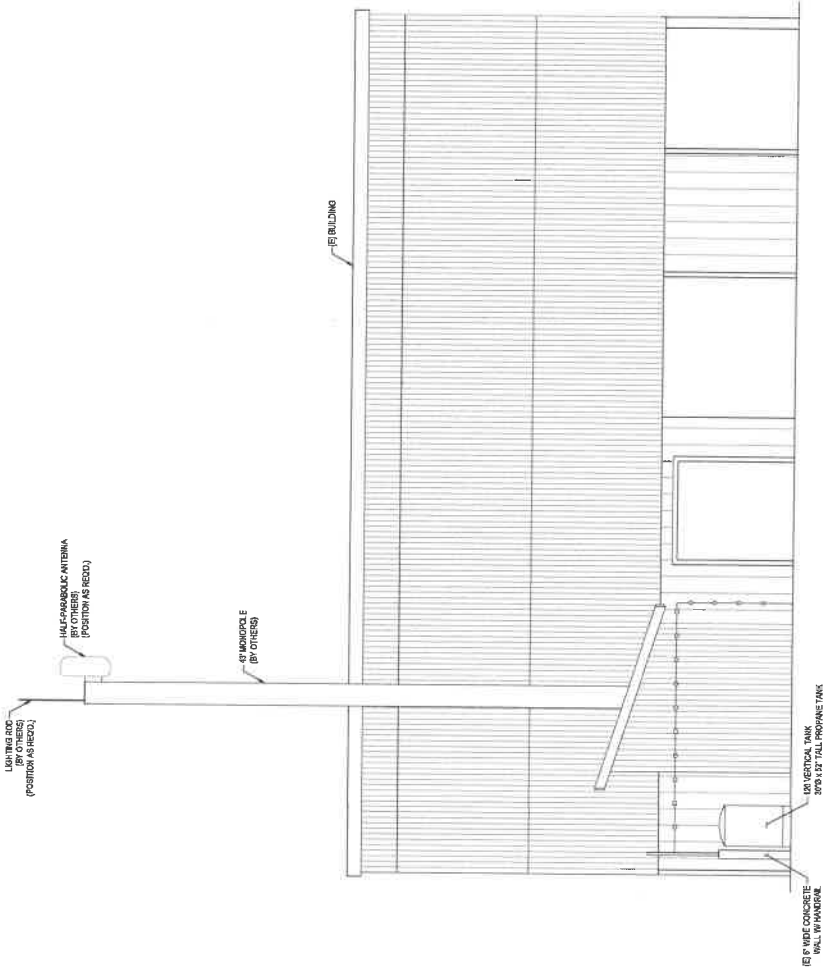
Submitted by Falls Creek

November 1, 2019

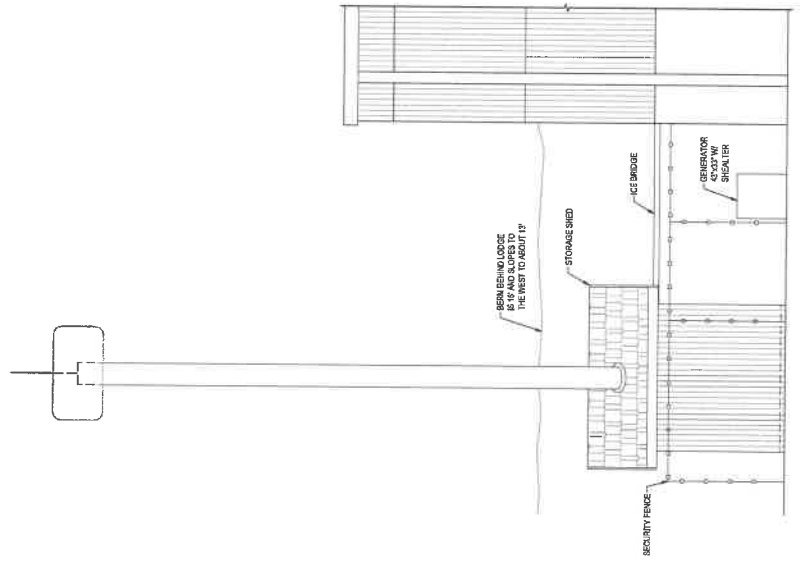
Photo of Elk Lodge with Proposed Antenna drawn in

Lodge is about 27 feet Tall. Antenna will be about 18 feet above the roof of the lodge.



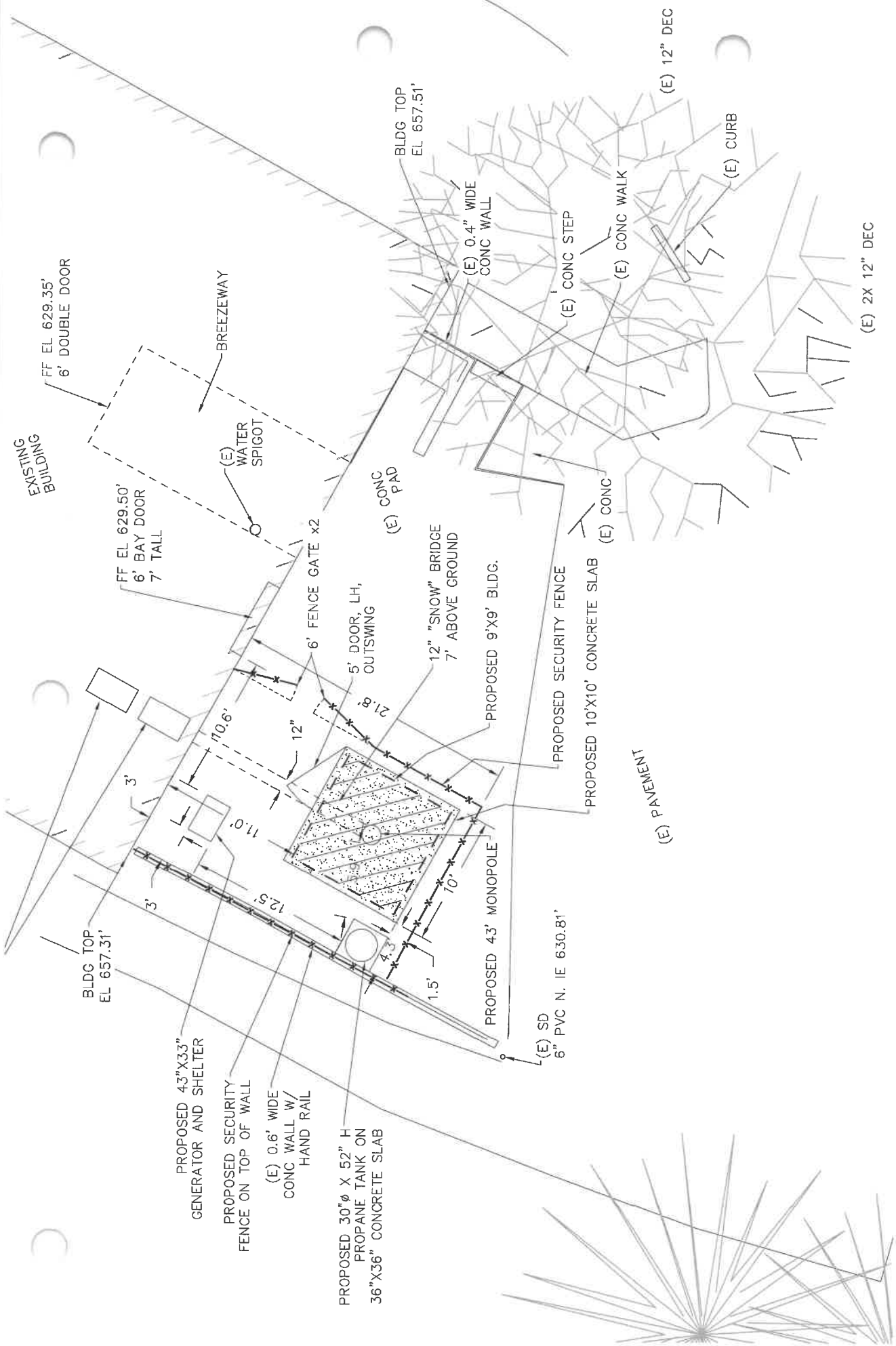


1 FRONT ELEVATION



2 SIDE ELEVATION





FF EL 629.35'
6' DOUBLE DOOR

EXISTING BUILDING

FF EL 629.50'
6' BAY DOOR
7' TALL

BREEZEWAY

(E) WATER SPIGOT

(E) CONC PAD

BLDG TOP
EL. 657.51'

(E) 0.4" WIDE
CONC WALL

(E) CONC STEP

(E) CONC WALK

(E) 12" DEC

(E) CURB

(E) 2X 12" DEC

6' FENCE GATE x2

5' DOOR, LH,
OUTSWING

12" "SNOW" BRIDGE
7' ABOVE GROUND

PROPOSED 9'X9' BLDG.

PROPOSED SECURITY FENCE

PROPOSED 10'X10' CONCRETE SLAB

(E) PAVEMENT

3'

10.6'

11.0'

12.5'

12"

21.8'

10'

1.5'

PROPOSED 43' MONOPOLE

(E) SD
6" PVC N. IE 630.81'

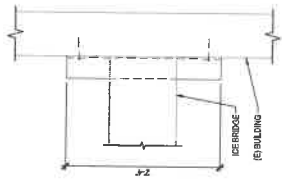
BLDG TOP
EL. 657.31'

PROPOSED 43"X33"
GENERATOR AND SHELTER

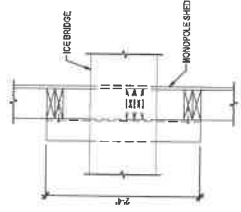
PROPOSED SECURITY FENCE ON TOP OF WALL

(E) 0.6' WIDE
CONC WALL W/
HAND RAIL

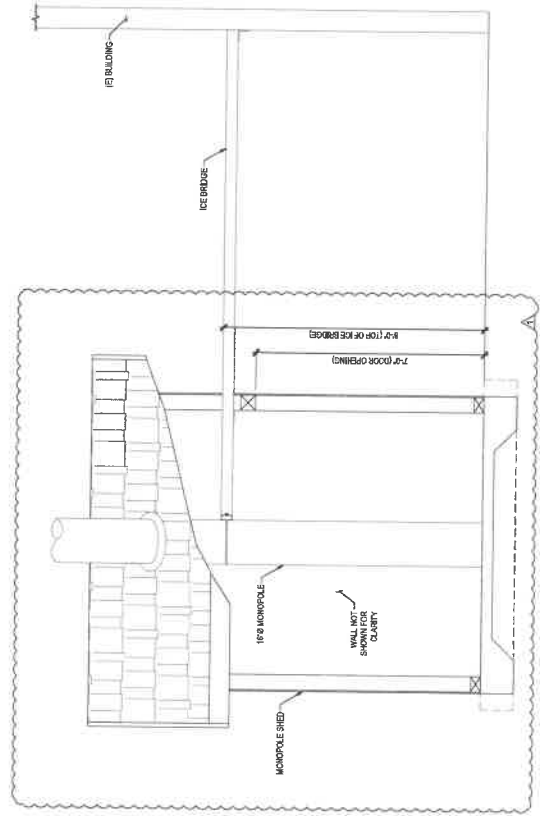
PROPOSED 30"φ X 52" H
PROPANE TANK ON
36"X36" CONCRETE SLAB



3 BRACKET DETAIL ICE BUILDING



2 BRACKET DETAIL ICE SHED



ICE SHED ELEVATION

120-gallon Propane Tank



Shelter for Generator

Portable Generator Enclosure (43" W x 33" D x 30" H)

