ATTACHMENTS

WIRELESS COMMUNICATIONS FACILITY 3850 RESERVOIR ROAD

WCF15-02 V15-02

Application, 8-4-15

Statement of Compliance for Proposed Wireless Facility, 2-12-15

FCC License

Non-Ionizing Emissions (NIER) Report

Architectural Drawings

RF Propagation Maps

Location Map of All Sites

Photo Simulations

Federal Aviation Administration Determination, 1-15-15

Oregon Department of Aviation Determination, 1-15-15

Oregon Department of Aviation Letter, 8-26-15

State Historic Preservation Office Section 106 NEPA Review Determination, 3-13-15

Letter from Day Wireless Systems on co-location, 8-28-15

Memo from Police Chief Peter Cruzon, 4-3-12

Statement of Compliance for Proposed Wireless Facility

Verizon Wireless Site ID: OR1 Reservoir Submitted to the City of Astoria February 12, 2015

I. General Information

Applicant: Verizon Wireless (VAW), LLC dba, Verizon Wireless

5430 NE 122nd Avenue Portland, OR 97317

Representative: Lexcom Development

Sharon Gretch 31649 Sexton Road Philomath, OR 97370 (541) 515-8263

Project Information:

Property Owner: C

City of Astoria

Site Address:

Parcel North of 3350 Pipeline Road

Parcel:

80916000100

Parcel Area:

82.6 acres

Zone Designation:

Land Reserve

Existing Use:

Park

Attachments List

- 00. Land Use Application signed by Applicant
 - a. Wireless Communication Facility Application
 - b. Variance Application General (for height)
- 01. Statement of Compliance Narrative
- 02. Deed
- 03. FCC License
- 04. Non-lonizing Electromagnetic Report (NIER)
- 05. Architectural Drawings
- 06. Propagation Maps
- 07. Location map of all sites
- 08. Photo Simulations
- 09. FAA / ODA Determinations
- 10. Section 106 proof of filing email

II. Project Overview

Lexcom Development is submitting an application on behalf of Verizon Wireless (VAW), LLC, dba Verizon Wireless and the property owner, City of Astoria. The site proposed herein is one of two towers designed replace the existing tower located near the Column of Astoria. The site proposed herein will improve the voice and data capacity for its customers living in an area directly south of the City of Astoria and areas east of town along US Highway 30 a.

The applicant proposes to construct a 150-foot tall lattice tower with up to a total of twelve panel antennas and future microwave antennas. Ancillary ground equipment inclusive of two pre-fabricated shelters, one owned/operated by Verizon Wireless and one owned/operated by the City of Astoria, future generator and utility frame¹ will be located within a 50' x 50' lease area. The site will be accessed via an existing unimproved dirt road originating from Pipeline Road. Further, the site has been designed as a replacement tower for the removal of the facility adjacent to the Column of Astoria. The other existing carriers on that facility would be relocated to this proposed facility and include, but are not limited to, the City of Astoria emergency services communication site for the Police Department, antennas for the hospital and other additional carriers.

The location of the proposed site maximizes coverage while minimizing visual impacts by utilizing existing topography, distance to property lines and natural screening². The proposed antenna height, with an overall antenna tip height of 150-feet, is the minimum height necessary to provide the required coverage relative to nearby complementary wireless facilities and accommodate all tower users.

This site can meet the City of Astoria's criteria for siting of new wireless telecommunication facilities, including height, setbacks and design as will be demonstrated herein. As shown throughout this application, Verizon's proposal is the least intrusive means of meeting coverage objectives. Verizon Wireless respectfully requests that the City of Astoria approve the facility as proposed herein.

III. Site Selection & Design

Verizon seeks to improve a significant coverage and capacity deficiency in its 3G and 4G LTE coverage in the City of Astoria. Wireless service is a critical today, with many people relying on their wireless devices for everything from information gathering to financial transactions to primary home phone service. The proposed location was chosen by Verizon Wireless to improve the quality of voice and data service as well as 911 services, for its customers living in an area directly south of the City of Astoria and areas east of town along US Highway 30³.

Verizon constructs wireless communication facilities at carefully selected locations. The need for service in this particular geographic area was determined by market demand, coverage requirements for a specific geographic area, and the need to provide continuous coverage from one site to another. Once the need for additional coverage or capacity was established, Verizon's RF engineers performed a study to determine the approximate site location and antenna height required to provide service in the

Site ID: OR1 Reservoir / Parcel North of 3350 Pipeline Road

Page 2 of 18

¹ See, Architectural Drawings, enclosed as Attachment 5.

² See, *Photo simulations*, enclosed as Attachment 8.

³ See, *RF Propagation Maps for site "OR1 Reservoir"*, *Exhibits 1 through 4*, enclosed as Attachment 6.

desired coverage area. Using a computer modeling program that accounts for the terrain within the service area and other variables, such as proposed antenna height, available radio frequencies and wireless equipment characteristics, the engineers identified a "search ring," wherein a site could be located to fill the coverage gap. The engineers took the following objectives into consideration when identifying the search ring:

- 1. Coverage. The antenna site must be located in an area where the radio frequency broadcasts will provide adequate coverage within the significant gap in coverage. The RF engineer must take into consideration the coverage objectives for the site as well as the terrain in and around the area to be covered. Since radio frequency broadcasts travel in a straight line and diminish as they travel further away from the antennas, it is generally best to place an antenna site near the center of the desired coverage area. However, in certain cases, the search ring may be located away from the center of the desired coverage area due to the existing coverage, the surrounding terrain, or other features which might affect the radio frequency broadcasts like buildings or sources of electrical interference.
- 2. <u>Capacity</u>. Capacity refers to the technological limitation of a wireless communication facility to provide communication. Mobile phones and wireless devices transmit to and receive radio frequency signal from antennae at wireless communication facilities. Antennae are capable of transmitting and receiving a finite amount of signal the capacity. When capacity is reached, busy signals on phone result and data transmission is lost. Monitoring of each wireless facility is continuous and the data collected analyzed for planning to prevent overloading. Projections based on the data allow Verizon to plan, design, permit, and construct new facilities or modify existing wireless communication facility before reaching capacity.
- 3. <u>Clutter.</u> Verizon's antennas must "clear the clutter" in the area. The radio frequencies used in Verizon's systems are adversely affected by trees, buildings, and other natural and man-made obstacles. Radio frequencies do not penetrate mountains, hills, rocks or metal, and radio frequencies are diminished by trees, brick and wood walls, and other structures. Therefore, antennas must be installed above or close to the "clutter" in order to provide high quality communications services in the desired coverage areas. In addition, if the local code requires us to accommodate additional carriers on the structure, the structure must be even higher in order to allow the other carriers' antennas to clear the clutter as well.
- 4. <u>Call Handoff.</u> The antenna site must be located in an area where the radio broadcasts from this site will allow seamless call handoff with adjacent sites. "Call handoff" is a feature of a wireless communications system which allows an ongoing telephone conversation to continue uninterrupted as the user travels from the coverage area of one antenna site into the coverage area of an adjacent antenna site. This requires coverage overlap for a sufficient distance and/or period of time to support the mechanism of the handoff.
- 5. <u>Quality of Service</u>. Users of wireless communications services want to use their services where they live, work, commute and play, including when they are indoors. Verizon's coverage objectives include the ability to provide indoor coverage in areas where there are residences, businesses and indoor recreational facilities.
- 6. <u>Radio Frequencies used by System.</u> The designs of telecommunications systems will vary greatly based upon the radio frequencies that are used by the carrier. If the carrier uses radio frequencies that are in the 850 MHz to 950 MHz range, the radio signals will travel further and will penetrate

- buildings better than the radio frequencies in the 1900 MHz band. Thus, Verizon needs more antennas in a given area to support technologies that use the 1900 MHz band.
- 7. <u>Land Use Classifications.</u> Verizon's ability to construct a cell site on any particular property is affected by Oregon state law and Astoria city code.

Site Selection Process for this Location

Terrain data within the service area is entered into a modeling program along with a series of variables, such as proposed antenna height, available radio frequencies and wireless equipment characteristics. Using this information, Verizon's RF engineers identified an area of optimum location for and height of a new wireless communication facility antenna to maximize the coverage objective. When this technical analysis was completed, a search area map and a description of other requirements were provided to Verizon's site development specialists.

When designing an existing or new area for coverage or capacity, Verizon Wireless 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 not attainable because of space constraints or unreliable structural design, Verizon Wireless will propose a new tower. In this instance, our real estate group with the help of outside consultants did several searches and concluded there is no existing cell towers nearby for collocation, to meet the OR1 Reservoir objectives.

The following sites listed below represent the Verizon priority siting and alternate candidates reviewed within the search area. The analysis of site viability is included under, 'Summary'.

Verizon Priority Siting	Type of Property	Description	Summary
1)	Existing Structures	Collocation on existing WCF towers	There are no existing WCF towers within this desired search area on which to collocate.
		Upgrade to existing WCF towers	None available in the search area to upgrade.
		Existing alternative tall structures (i.e., water tanks, Stadium Lighting, etc.)	Existing radio tower; See letter attached letter.
		Rooftop Installation Opportunities	No tall buildings are located within the search ring.

2)	Utility Structures	Existing utility poles	None. Too distant.
	(i.e., power poles,		y = -1
	high tension power		
	lines, etc.)		
3)	New Facility	Raw land Opportunities	Site proposed herein;

Table 1 - Priority Site Analysis

Coverage plots are attached herein under Attachment 6 and labeled as Exhibits 1 through 4.

- Exhibit 1 shows current coverage, inclusive of the site near the Astoria Column titled 'Astoria HD' and existing sites, OR1 Gearhart and OR1 Warrenton.
- Exhibit 2, shows coverage following the removal of the 'Astoria HD' site, depicting the area as it would exist without any coverage. The dotted circle in Exhibit 2 depicts area of RF coverage and capacity gap that the site herein is proposed to fill.
- Exhibit 3 shows coverage/ RF signal emitting from the site proposed herein. With the
 antenna at 150-feet, nearly the entire coverage objective area will be covered by high to
 moderate RF signal strength, as depicted by the purple and blue portions of the map.
 Therefore Exhibit 3 meets our design objective for this site and clearly shows the proposed
 location improving, and in many cases adding signal strength to this large area.
- Exhibit 4 depicts how the proposed site will be integrated into our network system for that
 area. The proposed site ensures, RF signal overlaps with adjacent sites to allow continuity of
 call(s) or "handoff." Therefore a 150' (AGL) antenna centerline is required at the OR1
 Reservoir site location as shown to fulfill the coverage and capacity objective for the site and
 to provide service for its customers living in an area directly south of the City of Astoria and
 areas east of town along US Highway 30.

Enhanced 911 (E911) Requirements

In addition to providing improved service to Verizon customers, the proposed antenna location is needed to meet Federal Communications Commission (FCC) requirements for Enhanced 911 (E911) service. The wireless E911 program is divided into two phases. Phase I requires wireless carriers, upon request from a local Public Safety Answering Point (PSAP), to report the telephone number of a wireless 911 caller and the location of the antenna that received the call. Phase II of the E911 program requires wireless carriers to provide far more precise location information, within 50 to 100 meters in most cases.

The FCC established a four-year schedule for Phase II. It began on October 1, 2001 with a target completion date of December 31, 2005. Provision of E911 service in accordance with FCC requirements

is a major component of the demand for additional cell sites. In addition to providing greater signal strength for in-building coverage that will provide better service to residential customers in the area, the proposed WCF will provide more precise triangulation for providing E911 service as required by the FCC. This will allow a person who is using E911 because of an emergency to be found more quickly because their location will be more easily determined as this and other antenna sites are added to the wireless network.

Verizon engineers have carefully designed this site to maximize quality of service to our customers, which can best be accomplished at a height of 150-feet (antenna tip height). This location was also selected because of its position relative to existing and proposed sites, providing favorable site geometry for federally mandated E911 location accuracy requirements and efficient frequency reuse. Good site geometry is needed to achieve accurate location of mobile users through triangulation with existing and proposed sites.

IV. Applicable Law

Federal, state and local laws will apply to this application.

Federal law, primarily found in the Telecommunications Act, acknowledges a local jurisdictions zoning authority over proposed wireless facilities but limits the exercise of that authority in several important ways. First, a local government must approve an application for a wireless communications site if three conditions are met: (1) there is a significant gap in coverage; (2) the carrier has shown that the manner in which it proposes to provide service in the significant gap is the least intrusive on the values that the community seeks to protect as allowed by applicable law; and (3) there are no potentially available and technologically feasible alternatives that are less intrusive on the goals that the community seeks to protect as allowed by applicable law. 47 U.S.C. Section 332(c)(7)(A) and (B)(i)(II); and T-Mobile USA, Inc. v. City of Anacortes, 572 P.3d 987 (9th Cir. 2009).

In addition, under the Telecommunications Act, the City of Astoria is prohibited from considering the environmental effects (including health effects) of the proposed site if the site will operate in compliance with federal regulations. 47 U.S.C. Section 332(c)(7)(B)(iv). Therefore, this issue is preempted under federal law and any testimony or documents introduced relating to the environment or health effects of the proposed site should be disregarded in this proceeding.

Finally, the Telecommunications Act requires local jurisdictions to act upon applications for wireless communications sites within a 'reasonable' time. The FCC has issued a 'Shot Clock' rule to establish a deadline for the issuance of land use permits for wireless facilities. According to the FCC, a reasonable period of time for local government to act on wireless applications is 90-days for a co-location application and 150-days for all other applications. This time period includes all application notice and appeal periods. Therefore, under federal law, the reasonable period for the City of Astoria to review this application is 150-days unless more restrictive timelines apply per state and/or local law.

V. Application submittal requirements: Astoria Development Code

Verizon proposal complies with the submittal requirements of the City of Astoria Development Code. These are addressed in the order laid out below.

Article 15 – Wireless Communication Service Facilities

Article 11 - Conditional Use

Article 12 - Variance

Article 15 – Wireless Communication Service Facilities

15.035. PERMITTED LOCATIONS OF WIRELESS COMMUNICATION SERVICE FACILITIES.

- <u>A. Zones:</u> Wireless Communication Service Facilities, including antenna, antenna arrays, and antenna support structures are permitted with administrative or conditional use review in the zones as provided below:
 - <u>1. Permitted Zones:</u> Wireless Communication Service Facilities are permitted in the following zones through the Administrative or Conditional Use process in accordance with Astoria Development Code Article 9:
 - g. LR (Land Reserve)
- B. Preferred Location, Siting, and Designs in Priority Order.
 - 2. Conditional Use Review.
 - a. Location on New Antenna Support Structure

Response: The proposed use is for new antenna support structure in a Land Reserve (LR) zone which is permitted use subject to a Conditional Use Review.

<u>15.045. COLLOCATION AND USE OF ALTERNATIVE ANTENNA SUPPORT STRUCTURES FOR WIRELESS COMMUNICATION SERVICE FACILITIES.</u>

- <u>B. Collocation Required:</u> Collocation or use of alternative antenna support structure shall be required unless demonstrated to be infeasible to the satisfaction of the Community Development Director or the Astoria Planning Commission. If an applicant proposes to construct a new antenna support structure, evidence shall be submitted by the applicant to demonstrate the following:
 - 1. That no existing antenna support structures or alternative antenna support structures are located within the geographic area which meet the service provider's engineering requirements to provide service; OR
 - 2. That existing antenna support structures and alternative antenna support structures are not of sufficient height to meet the service provider's engineering requirements to provide service;
 - That existing support structures and alternative antenna support structures do not have sufficient structural strength to support the service provider's engineering requirements to provide service; OR
 - 4. That an applicant's proposed antennas or antenna arrays would cause detrimental electromagnetic interference, or NIER field interference with nearby antennas or antenna arrays, or vice-versa; OR
 - 5. That there are other limiting factors, such as inadequate space for an equipment shelter, that render existing antenna support structures or alternative antenna support structures unsuitable.

Response: Verizon consultants worked closely with the City of Astoria to identify a viable location that would minimize the visual impact to the surrounding area and meet the coverage objectives of both Verizon Wireless and the City of Astoria.

When designing an existing or new area for coverage or capacity, Verizon Wireless 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 not attainable because of space constraints or unreliable structural design, only then will Verizon Wireless propose a new tower. The consultants did several searches and concluded there are no existing cell towers or viable alternative structures such as water tanks, tall power poles or similar structures nearby for collocation that would meet the OR1 Reservoir objectives. See alternate site review under III. Site Selection & Design, above for detailed analysis.

15.060. APPLICATION SUBMITTAL REQUIREMENTS.

- A. All applications for permits for the placement and construction of Wireless Communication Service Facilities shall be accompanied by the following:
 - 1. A complete description of the proposed WCSF including use of concealment technology, height, location, siting, and design, and description of services the applicant intends to provide from the facility.
 - 2. Proof of ownership of the land upon which the WCSF is proposed; or evidence of an appropriate easement, lease, rental agreement, or land use application signed by the applicant and signed by the underlying property owner.
 - 3. Copy of the carrier's current FCC license for the proposed coverage area.
 - 4. Evidence demonstrating compliance with non-ionizing electromagnetic radiation (NIER) emissions standards as set forth by the FCC particularly with respect to any habitable areas within the structure on which the antennas are co-locating or in structures adjacent to or across a public right-of-way from the antennas.
 - 5. An accurate and scaled site plan, scaled elevation views, and other supporting drawings, illustrating the location and dimensions of the proposed WCSF, including but not limited to: antenna support structure, alternative antenna support structure, antenna array, antennas, equipment enclosures, and any and all other devices and attachments.
 - Readily discernible map of the proposed area of coverage.
 - 7. Location map of all sites currently operated by the carrier in a five (5) mile radius of the proposed site. Such locations shall be of sufficient detail to be added to the City's GIS data system. For each such site, the targeted area and capabilities of the sites shall be adequately described.
 - 8. Visual impact analysis and demonstrations including mock-ups and/or photo simulations from at least three (3) directional perspectives.
 - 9. Evidence demonstrating that the applicant has filed a request with the Federal Aviation Administration (FAA) and the Oregon Department of Aviation (ODA) to review the application, or evidence demonstrating that the applicant has complied with all FAA and ODA requirements.

10. Evidence demonstrating that the applicant has filed a request with the State Historic Preservation Office to review the application under Section 106 of the National Historic Preservation Act, or evidence demonstrating that the applicant has complied with all State Historic Preservation Office requirements as a result of the Section 106 consultation.

Response: A description of the proposed facility addressing 15.060(A)(1) is located under *Section 2: Project Overview* and *Section 3: Site Design and Selection* and submittal requirements as described under 15.060(A)(2-10) are attached herein. See, *Attachments List*, on page 1 of this document for reference.

11. A collocation feasibility study conducted for the proposed service area of the facility being proposed. The study will describe the applicant's policy on collocation and demonstrate that collocation efforts were made and provide findings on why collocation can or cannot occur as indicated in Section 15.045.B.

Response: See, response to Section 15.045(B) above. There are no existing cell towers or viable alternative structures such as water tanks, tall power poles or similar structure nearby for collocation, to meet the OR1 Reservoir objectives. The nearest existing vertical structure is under a mile away and is the tower located at the Astoria Column which this site, in conjunction with two other proposed sites, is designed to replace.

12. Where less preferred locations or design are proposed, a description of other alternatives considered (alternate sites, alternative heights, number of facilities, and equipment utilized) and the reasons why higher priority locations or designs were not selected.

Response: Verizon consultants worked closely with the City of Astoria to identify a viable location that would minimize the visual impact to the surrounding area. No other sites exist within the area.

<u>15.065. STANDARDS AND REVIEW CRITERIA:</u> All applications for Wireless Communication Service Facilities shall demonstrate compliance and conformity with the following requirements. The burden of proof is on the applicant to demonstrate such compliance and conformity. The Community Development Director may release an applicant from a requirement when it is determined that the requirement is not applicable to the request.

A. General and Operating Requirements.

- 1. Owner and Applicant Responsibilities. The owner and applicant of the Wireless Communication Service Facility and his or her successors and assigns at all times shall have the following responsibilities:
 - a. The owner shall respond in a reasonable and timely manner to a request for information from a potential collocation applicant. In responding to such a request, the owner and potential collocation applicant shall furnish to each other all non-proprietary information necessary to enable the potential collocation applicant and the owner to determine the feasibility of collocation.

b. The owner and potential collocation applicant shall negotiate in good faith for shared use of the owner's Wireless Communication Service Facility.

Response: It is the industry standard to allow colocation of multiple carriers on a single tower. Further, colocation is mandated under the Telecommunications Act, obligating carriers to provide, "on rates, terms, and conditions that are just, reasonable, and nondiscriminatory, for physical collocation of equipment necessary for interconnection or access to unbundled network elements."

- 2. Environmental and Historic Resource Protection. All Wireless Communication Service Facilities shall be sited so as to minimize the effect on environmental and historic resources. To that end, the following measures shall be implemented for all Wireless Communication Service Facilities:
 - a. The facility shall comply with all applicable local, State, and Federal regulations, including but not limited to: Columbia River Estuary Shoreland Overlay, Sensitive Bird Habitat Overlay, Astoria Historic Properties regulations, National Environmental Policy Act, National Historic Preservation Act, and Endangered Species Act;
 - b. Alteration or disturbance of natural vegetation and topography shall be minimized;

Response: The site shall comply with all applicable local, State and Federal Regulations. The site proposed herein was designed in conjunction with City of Astoria and was chosen as it preserves existing vegetation and afforded the best screening for the tower from off-site locations⁴. The site will be minimally graded, stumps removed and has been designed for suitable drainage⁵.

<u>3. Noise.</u> No testing of back-up power generators shall occur between the hours of 6:00 PM and 7:00 AM. Emergency operation of back-up power generators is permitted at any time.

Response: The back-up generator shall only be tested as detailed above.

4. Permits Required.

- a. A Building Permit issued by the City is required for each Wireless Communication Service Facility. A building permit will not be issued until all land use approvals have been obtained; until any associated conditions have been met; and until all other applicable local, State, and Federal approvals have been secured and complied with, including but not limited to Astoria Development Code, Article 6 Historic Properties, and Section 106 requirements as set forth by the State Historic Preservation Office.
- b. No Wireless Communication Service Facility shall be constructed or operated within the City limits until all necessary City, State, and Federal approvals have been secured. Evidence of approvals shall be provided to the City.

Response: A Building Permit request will be filed once land use has been reviewed and approvals

⁴ See, *Photo simulations*, enclosed as Attachment 8.

⁵ See, Architectural Drawings, enclosed as Attachment 5, pages C-1 through C-3.

obtained. All City State and Federal approvals have been applied for and shall be obtained prior to construction start.

5. Prohibited Structures.

a. Lattice and guyed wire towers and support structures and speculation ("spec") support structures are prohibited in all zones except as noted in Section 5.b.

b. Lattice towers and support structures that are required for Emergency Communications Facilities and Temporary Communications Facilities operated by public officials may be located in the LR Zone (Land Reserve). Co-location by private communication providers on a lattice tower with emergency communication facilities is allowed.

Response: The lattice tower proposed herein is required for emergency communications for the City of Astoria Police Departments, along with additional communication systems for the hospital and other carriers.

6. Radio Frequency Standards.

a. The applicant shall provide evidence that the Wireless Communication Service Facility is in compliance with FCC standards and that the Wireless Communication Service Facility will not cause interference with the reception of area television, radio, or emergency communication broadcasts. If at any time, the City finds that the Wireless Communication Service Facilities interfere with such reception, the applicant shall mitigate the interference. If the applicant does not mitigate the interference to the City's satisfaction, the City may revoke or modify the permit.

Response: See Attachment 4, NIER report.

<u>7. Security.</u> The applicant shall insure that sufficient anti-climbing measures have been incorporated into the WCSF, as needed, to reduce potential for trespass and injury.

Response: The facility will be surrounded by a 6 foot fence. Given the proposed sites distance to existing developments and the existing gating at the ingress to the existing access road no additional measures have been proposed.

8. Technical Expert Support. The Community Development Director may employ on behalf of the City an independent technical expert to review any technical materials submitted including, but not limited to, those required under this Section, and in those cases where a technical demonstration of unavoidable need or unavailability of alternatives is required.

B. Location, Siting and Design Requirements.

<u>1. Preferred Location, Siting, and Designs in Priority Order.</u> See Section 15.035.B of this Code.

Response: Per 15.035(B) Preferred Location, Siting, and Designs in Priority Order; sites that are located on an existing support structure or existing alternative support structure are given the highest priority. As is demonstrated, there are no existing structures in the area to locate a facility meet the OR1 Reservoir objectives. As the second priority siting, the preferred design is a camouflaged/concealed tower. This site was specifically located in such a manner to utilize the distance to property lines and from existing development along with the existing topography to conceal the tower. See Attachment O8, photo simulations; the facility should not be discernable from off-site locations.

- <u>2. Adverse Impact.</u> WCSF shall not create a substantial adverse impact on the view from any public park, natural scenic vista, historic property (locally designated or on National Register), major scenic and view corridor, or residential area. In determining the potential substantial adverse impact of the proposed facility upon scenic, natural, historic, and cultural resources or vicinity, the following points shall be considered:
 - a. The extent to which the proposed WCSF is visible from the viewpoint(s) of the impacted resource or vicinity.
 - b. The type, number, height, and proximity of existing structures and features, and background features within the same line of sight as the proposed facility.
 - c. The amount of vegetative screening.
 - d. The distance of the proposed facility from the impacted resource or vicinity.
 - e. The presence of reasonable alternatives that allow the facility to function consistently with its purpose.

Response: This site was specifically located in such a manner to utilize the distance to property lines and from existing development along with the existing topography to conceal the tower. Given the existing tree heights located downslope from the proposed facility along with the distance to the nearest development, the visual impact from the surrounding area is significantly mitigated. No adverse impact to adjacent parcels or other resources is anticipated. See Attachment 08, Photo simulations; the facility should not be discernable from off-site locations.

3. Use of Concealment Technology. All Wireless Communication Service Facilities shall utilize concealment technology so as to blend in with the surrounding natural and human-made environment in such a manner so as to be either reasonably difficult for the naked eye to detect or observe, or made part of the feature enclosing it. To this end, Wireless Communication Service Facilities shall be designed so as to be camouflaged to the greatest extent possible, including but not limited to: concealment technology, use of compatible building materials and colors, vegetative, structural or topographic screening.

Response: This site was specifically located in such a manner to utilize the distance to property lines and from existing development along with the existing topography to conceal the tower. Given the existing tree heights located downslope from the proposed facility along with the distance to the nearest development, the visual impact from the surrounding area is significantly mitigated. No adverse impact to adjacent parcels or other resources is anticipated. See Attachment 08, Photo simulations; the facility should not be discernable from off-site locations.

<u>4. Access Driveways and Parking.</u> All access drives and parking areas shall be no longer or wider than necessary and be improved to comply with the requirements of the Astoria Development Code and Astoria City Code.

- a. Existing driveways shall be used for access whenever possible.
- b. New parking areas shall, whenever feasible, be shared with subsequent Wireless Communication Service Facilities and/or other permitted uses.

Response: No new access driveways or parking is proposed for this site.

5. Color and Materials.

- a. All buildings, poles, antenna support structures, antennas, antenna arrays, and other associated components of each Wireless Communication Facility site shall be initially coated and thereafter recoated as necessary with a non-reflective neutral color in muted tones.
- b. The color selected shall be one that will minimize visibility of the WCSF to the greatest extent feasible. To this end, improvements which will be primarily viewed against soils, trees, or grasslands shall be coated with colors matching those landscapes, while elements which rise above the horizon shall be coated a color that matches the typical overcast sky (i.e. white, light gray, etc.) or background color at that location.
- c. The color and coating shall be reviewed and approved by the Community Development Director or Astoria Planning Commission.
- d. Upon a clear showing by the applicant that compliance with the requirements of this section would void a manufacturer's warranty on any specific equipment, or that natural aging of the material would provide greater concealment, the Community Development Director or Astoria Planning Commission may waive the requirements of this section for such specifically identified equipment.

Response: All equipment shall be of a non-reflective, earth tone color that shall blend with the natural environment and located behind a 6' tall chain link fence. The tower is a non-reflective, powder coated, grey tone. This tone tends to blend better with the varied colors as occur in nature, taking on the surrounding tones of both sky and earth.

<u>6. Height.</u> In addition to the maximum structure height requirements of each Zone, Wireless Communication Service Facilities shall comply with the following height requirements:

- a. WCSF shall comply with the height limit of the underlying zone, unless a variance to the height limit of the underlying zone is approved.
- b. If there is not a height limit in the underlying zone, the maximum height of a ground-mounted facility, including a monopole, shall be 45'.
- c. In reviewing Variance requests to the above described height limits, the following shall be considered:
 - 1) The proposed structure and facility uses concealment technology; and

- 2) It is demonstrated that a greater height is required to provide the necessary service.
- d. Building or other structure-mounted Wireless Communication Service Facilities shall not project more than ten (10) additional feet above the highest point on the existing building or structure and shall not project higher than the height requirements of the underlying zone, unless a variance to the height limit of the underlying zone is approved.
- e. WCSF shall not penetrate imaginary surfaces around the Astoria Airport as defined by the Oregon Department of Aviation, unless a waiver is granted pursuant to Oregon Revised Statutes.

Response: A variance to height is being requested for this location. The site proposed herein has been submitted to the FAA and ODA for review, both issuing a determination of 'No Hazard'⁶. See response to Article 12 regarding 6(c)(1) and (2), starting on page 16 herein.

<u>7. Landscape and Screening.</u> All Wireless Communication Service Facility sites shall be improved with existing native vegetation, suitable landscaping and/or fencing installed to screen the facility, where necessary. To this end, all of the following requirements shall be implemented for all Wireless Communication Service Facilities which are installed on antenna support structures:

- a. A landscape plan, meeting the requirements of Development Code Sections 3.105 to 3.120, shall be submitted as part of the application.
- b. Any proposed or required fenced area is to be surrounded, where feasible, by a landscaped strip of sufficient width and height to create a visual screen.
- c. Planted vegetation shall be of the evergreen variety.
- d. The landscape plan shall be subject to review and approval of the Community Development Director or Astoria Planning Commission.
- e. The fence shall be a maximum of six (6) feet in height.
- f. The fenced area is to be surrounded by evergreen shrubs (or similar type of evergreen landscaping). Required landscaping shall be located outside of the fenced area.
- g. The fence shall, where feasible, be installed and maintained around the entire perimeter of the site and surround the WCSF and the equipment shelter.
- h. If the Community Development Director determines that a fence surrounding antenna support structures located in a public right-of-way or adjacent to existing structures is not feasible, such structures may be exempted from the fencing requirements of this Section.
- i. Chain link fences shall be painted or coated with a non-reflective color.
- j. Electric, barbed wire, and concertina wire fences are prohibited.

-

⁶ See, FAA / ODA determinations, enclosed as Attachment 9.

Response: Landscaping has not been proposed for this location given the proposed sites distance to existing developments and surrounding natural cover. All fencing is of a non-reflective color and no electric, barbed wire or concertina wire is proposed.

8. Lighting.

- a. A Wireless Communication Service Facility shall only be illuminated as necessary to comply with FAA or other applicable State and Federal requirements. Documentation from such State and Federal agencies describing required compliance measures is required.
- b. Exterior lighting shall not glare onto adjacent properties.
- c. Strobe lights are prohibited.

Response: FAA and ODA have been notified of the proposed development and have issued a determination of 'No Hazard', thus aviation lighting shall not be required. Only on-site maintenance lighting is proposed for the equipment and shall be downward tilted and on a timer.

9. Setback.

- a. Antenna support structures, excluding those utility poles and similar structures which are located within the right-of-way, and excluding equipment enclosures, shall be located no closer to a structure on the subject property, or from the property line of the subject property, than a distance equal to the total height of the structure measured from finished grade, or the distance of "worst-case scenarios", as recommended in the FCC "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance" Guidebook, dated June 2, 2000, whichever is greater. However, utility poles and similar structures which are located within the right-of-way, and equipment enclosures are subject to recommendations in the FCC "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance" Guidebook, dated June 2, 2000.
- b. All WCSF equipment enclosures shall be set back from property lines according to the requirements of the Zone.
- c. A setback requirement to a property line may be reduced, through Variance approval. A Variance to the setback requirement shall be in accordance with the requirements of Article 12, and the following additional criteria:
 - It shall be demonstrated that the location of the proposed facility will take advantage of an existing natural or artificial feature to conceal the facility or minimize its visual impacts.

Response: The minimum setbacks in the LR zone are satisfied as the site is over 700-feet from all property lines.

10. Signs. The use of any portion of a Wireless Communication Service Facility for signs other than warning or equipment information signs is prohibited. For emergency purposes, equipment

information limited to the WCSF provider(s) name and contact phone number shall appear at the facility in a discreet yet visible location, either on the equipment cabinet or supporting structure.

Response: Signage for the site will comply with this standard.

11. Storage.

- a. WCSF storage facilities (i.e., vaults, equipment rooms, utilities, and equipment cabinets or enclosures) shall be constructed of non-reflective materials (exterior surfaces only) and shall be placed underground where feasible or be sited (i.e., depressed, or located behind earth berms) to minimize their profile.
- b. WCSF storage facilities shall be no taller than one story (15 feet) in height and shall be designed to look like a building or facility typically found in the surrounding area.
- c. On-premises storage of material or equipment shall not be allowed other than that which is necessary to the use, operation, and maintenance of the WCSF.

Response: No on-site storage is proposed.

Article 11 – Conditional Use

11.030 Basic Conditional Use Standards.

- A. Before a conditional use is approved, findings will be made that the use (except for housing developments) will comply with the following standards:
 - 1. The use is appropriate at the proposed location. Several factors which should be considered in determining whether or not the use is appropriate include: accessibility for users (such as customers and employees); availability of similar existing uses; availability of other appropriately zoned sites; and the desirability of other suitably zoned sites for the use.
 - 2. An adequate site layout will be used for transportation activities. Consideration should be given to the suitability of any access points, on-site drives, parking, loading and unloading areas, refuse collection and disposal points, sidewalks, bike paths, or other transportation facilities. Suitability, in part, should be determined by the potential impact of these facilities on safety, traffic flow and control, and emergency vehicle movements.
 - 3. The use will not overburden water and sewer facilities, storm drainage, fire and police protection, or other utilities.
 - 4. The topography, soils, and other physical characteristics of the site are appropriate for the use. Where determined by the City Engineer, an engineering or geologic study by a qualified individual may be required prior to construction.
 - 5. The use contains an appropriate amount of landscaping, buffers, setbacks, berms or other separation from adjacent uses.

Response: The subject 82.6 acre parcel is zoned Land Reserve and the use proposed herein, Wireless Communication Facility, is permitted subject to a Conditional Use review. The site is an unmanned, passive use requiring 1 to 2 trips per month for maintenance purposes. This monthly maintenance visit would have no impact on the existing vehicular access to and from the proposed site, or to pedestrian, bicycle and transit circulation. The facility requires only power and fiber and does not require water, sewer or surface water drainage. Further, this proposal would not produces any adverse noise, glare or

noxious odors. As demonstrated herein, there are no existing structures in the vicinity that can accommodate this use and the site is well removed from any other development. The minimal footprint, 2,500 sq. feet, will have little impact on existing and projected uses on-site and will not interfere with normal usage. The topography and physical characteristics of the site are ideal for the site as they provide natural camouflage for the facility and is optimal for appropriate hand-off to adjacent sites within the network.

Article 12 – Variances

12.030. GENERAL CRITERIA.

Variances to a requirement of this Code, with respect to lot area and dimensions, setbacks, yard area, lot coverage, height of structures, vision clearance, and other quantitative requirements may be granted only if, on the basis of the application, investigation and evidence submitted by the applicant, findings are made based on the four factors listed below. Variances from off-street parking, sign requirements, and Flood Hazard Overlay Zone are not subject to General Criteria (refer to Sections 12.040, 12.050, and 12.055 as applicable)." (Amended by Ordinance 09-03, 8/3/09)

- A. The granting authority may grant a variance from the requirements of this chapter, if on the basis of the application, investigation, and the evidence submitted by the applicant, all four (4) of the following expressly written findings are made:
 - 1. The request is necessary to prevent unnecessary hardship; and
 - 2. Development consistent with the request will not be substantially injurious to the neighborhood in which the property is located; and
 - 3. The request is necessary to make reasonable use of the property; and
 - 4. The request is not in conflict with the Comprehensive Plan.
- B. In evaluating whether a particular request is to be granted, the granting authority shall consider the following, together with any other relevant facts or circumstances.
 - 1. Relevant factors to be considered in determining whether a hardship exists include:
 - a. Physical circumstances related to the property involved;
 - b. Whether a reasonable use, similar to like properties, can be made of the property without the variance;
 - c. Whether the hardship was created by the person requesting the variance;
 - d. The economic impact upon the person requesting the variance if the request is denied.
 - 2. Relevant factors to be considered in determining whether development consistent with the request is substantially injurious to the neighborhood include:
 - a. The physical impacts such development will have, such as visual, noise, traffic and the increased potential for drainage, erosion and landslide hazards.
 - b. The incremental impacts occurring as a result of the proposed variance.
 - 3. A determination of whether the standards set forth in Section 12.030(A) are satisfied necessarily involves the balancing of competing and conflicting interests. The considerations listed in Section 12.030(B) (1) & (2) are not standards and are not intended to be an exclusive

- list of considerations. The considerations are to be used as a guide in the granting authority's deliberations.
- 4. Prior variances allowed in the neighborhood shall not be considered by the granting authority in reaching its decision. Each request shall be considered on its own merits.

Response: Verizon Wireless is requesting a variance to the height limitation of 45-feet for new wireless facilities. This request is necessary as, at 45-feet, the site would be unable to meet the coverage objectives, prohibit the installation of emergency service antennas and would not meet the requirements needed to replace the site at the Astoria Column and hand-off to the adjacent sites inclusive of OR1 Warrenton, OR1 City Park, OR1 Astor and OR1 Stavebolt⁷.

As detailed herein, radio frequencies do not penetrate mountains, hills, rocks or metal, and radio frequencies are diminished by trees, brick and wood walls, and other structures. Therefore, antennas must be installed above or close to the "clutter" in order to provide high quality communications services in the desired coverage areas. Therefore, antennas must be installed at or above the crest of the hill and tree height in order to provide high quality communications services in the desired coverage area. The minimum height required to accommodate all users at this location is 150-feet.

Further, the site would not impact neighboring properties as wireless facilities are a passive use, requiring no on-site sewer or water services and creating no glare, noxious odors or significant traffic. As is demonstrated herein, the site is not in conflict with the Comprehensive Plan and could support the goals of the Plan by providing quality communication services that can support residential, commercial, industrial growth and enhance emergency 911 services.

C. No variance may be granted which will permit a use not permitted in the applicable zone or which will increase the allowable residential density in any zone with the exception of individual lot size reduction.

Response: This proposed use is permitted in the applicable zone and will not increase residential density.

VI. Conclusion

The Verizon proposal herein can meet all requirements of the City of Astoria Development Code (to the extent that they are not preempted by federal law). As such, it is respectfully requested that the City of Astoria approve this proposal as designed, subject only to standard conditions of approval.

⁷ See, *Propagation Maps*, enclosed as Attachment 6, Exhibit 4, OR1 Reservoir Network Integration.

Common Name: Verizon Wireless / Call Sign: KNLH685

Frequency Band (MHz): 1885-1890, 1965-1970

Expiration Date 06/26/2017 Market BTA358 - Portland, OR

Frequency Band (MHz)

1885-1890, 1965-1970

Licensee FRN

0003800307

Licensee Details Verizon Wireless (VAW) LLC

1120 Sanctuary Pkwy, #150 GASA5REG Alpharetta, GA 300097630

Attn: Regulatory Phone: (770) 797-1070 Fax: (770) 797-1036

Email:

LicensingCompliance@VerizonWireless.com

Radio Service CW -PCS Broadband

Contact Details Verizon Wireless

1120 Sanctuary Pkwy, #150 GASA5REG

Alpharetta, GA 300097630 Attn: Regulatory Phone: (770) 797-1070 Fax: (770) 797-1036

Email: LicensingCompliance@VerizonWireless.com

Market Details

* Population is based on 2010 Census figures (Note: US territories are based on 2000 Census figures)

1. Spectrum (MHz):

1885.375-1886.875, 1965.375-1966.875

State/County

Oregon 4 of 36 Counties

County	Population *	Geographic Coverage (%)
1. Clatsop County	37,039	100
2. Harney County	7,422	100
3. Lincoln County	46,034	100
4. Wheeler County	1,441	100

2. Spectrum (MHz):

1885-1890, 1965-1970

State/County

Oregon 10 of 36 Counties

County	Population *	Geographic Coverage (%)
1. Clackamas County	360,960	90.2
2. Columbia County	49,351	100
3. Grant County	7,445	100
4. Hood River County	22,346	100
5. Multnomah County	735,334	100
6. Sherman County	1,765	99.77
7. Tillamook County	25,250	100
8. Wasco County	23,322	69.45
9. Washington County	529,710	100
10. Yamhill County	99,193	100

Common Name: Verizon Wireless / Call Sign: KNLH685

Frequency Band (MHz): 1885-1890, 1965-1970

Washington 3 of 39 Counties

County	Population *	Geographic Coverage (%)
1. Clark County	425,363	100
2. Klickitat County	20,318	100
3. Skamania County	11,066	100

HATFIELD & DAWSON CONSULTING ELECTRICAL ENGINEERS 9500 GREENWOOD AVE. N. SEATTLE, WASHINGTON 98103

BENJAMIN F. DAWSON III, PE THOMAS M. ECKELS, PE STEPHEN S. LOCKWOOD, PE DAVID J. PINION, PE ERIK C. SWANSON, PE

THOMAS S. GORTON, PE MICHAEL H. MEHIGAN, PE JAMES B. HATFIELD, PE CONSULTANT

TELEPHONE (206) 783-9151 FACSIMILE (206) 789-9834

E-MAIL pinion@hatdaw.com

MAURY L. HATFIELD, PE (1942 – 2009) PAUL W. LEONARD, PE (1925 – 2011)

NON-IONIZING ELECTROMAGNETIC EXPOSURE ANALYSIS AND

ENGINEERING CERTIFICATION

PREPARED FOR

Verizon Wireless

"OR1 RESERVOIR"

NEW PERSONAL WIRELESS FACILITY

PARCEL NORTH OF 3350 PIPELINE ROAD

ASTORIA

CLATSOP COUNTY, OREGON

DECEMBER 2014

INTRODUCTION

Hatfield & Dawson Consulting Engineers has been retained to evaluate the proposed Verizon Wireless personal wireless telecommunications facility "OR1 RESERVOIR" for compliance with current Federal Communications Commission (FCC) and local guidelines regarding public exposure to radio frequency (RF) electromagnetic fields (EMFs).

BACKGROUND

Construction drawings furnished by Verizon representatives show that the proposed wireless facility will have panel antennas installed atop a new steel lattice self-supporting tower on the parcel north of 3350 Pipeline Road, Astoria, in Clatsop County, Oregon 97103.

The drawings show the proposed Verizon panel antennas mounted and centered approximately 147 feet above ground level and far removed from any habitable space. Thus all of the Verizon antennas will be mounted well above head height for persons at the project site, on adjacent properties, or within nearby buildings.

The base of the tower will be surrounded by a chain link fence topped with barbed wire. Therefore it is unlikely that anyone other than authorized workers could approach near enough to any of the tower-mounted antennas to cause that person's RF exposure to exceed FCC limits.

All of the Verizon antennas are highly directional in the vertical plane, and they project the majority of the transmitted RF energy horizontally and well above all nearby habitable areas. It is expected that RF exposure conditions will be well below FCC and local public exposure limits at the project site and on adjacent properties, due to the contributions from all of the Verizon wireless operations at the project site.

EMISSION CHARACTERISTICS

The proposed Verizon facility may operate within the 700 MHz Upper Block "C" band, the 800 MHz Cellular "B" band, the Personal Communications Service (PCS) bands, and the Advanced Wireless Service (AWS) "B" band 2.1 GHz frequency range.

COMPLIANCE WITH FCC AND LOCAL REGULATIONS

The operation of the proposed Verizon facility will NOT create significant RF exposure conditions in any occupancy, publicly accessible area, or within any habitable area. There does not appear to be any habitable area near the rural location of the proposed Verizon antennas.

Installation of the proposed Verizon antennas will not cause any any publicly accessible area to exceed the Federal Communications Commission's (FCC) limits for human exposure to radio frequency electromagnetic fields. Thus the proposed Verizon wireless operations at the OR1 RESERVOIR project site will not have a significant environmental impact as defined by the FCC Public MPE limits.

The FCC has determined through calculations and technical analysis that personal wireless facilities, such as those operated by Verizon, are highly unlikely to cause human RF exposures in excess of FCC guideline limits. In particular, personal wireless facilities with non-building-mounted antennas greater than 10 meters (about 33 feet) above ground level are considered to have such a low impact on overall exposure conditions that they are "categorically excluded" (i.e., exempt) from the requirement for routine environmental assessment regarding RF exposure hazards. Thus according to FCC rules, the proposed Verizon personal wireless facility, with all antennas centered at well above the 33 foot level, is exempt from further RF safety environmental assessment because it is presumed to be in compliance with the FCC RF exposure rules and guidelines. The proposed facility is expected to be compliant with FCC rules regarding public RF exposure provided that direct access to the Verizon antennas is positively restricted.

COMPLIANCE WITH FCC REGULATIONS FOR RF EMISSIONS AND RF INTERFERENCE

It is expected that the RF interaction between all of the Verizon wireless operations at the project site will be low enough to preclude the likelihood of localized interference caused by the proposed Verizon Wireless facility to the reception of any other communications signals. All of the Verizon antennas are sufficiently high enough, and far enough removed from all occupancies, that they are unlikely to cause interference with nearby consumer receivers or other consumer electronic devices.

Transmission equipment for the proposed Verizon wireless facility is certified by the FCC under the equipment authorization procedures set forth in the FCC rules. This assures that the wireless facility will transmit within the desired base-station frequency bands at authorized power levels. The proposed Verizon Wireless facility will operate in accordance with all FCC rules regarding power, signal bandwidth, interference mitigation, and good RF engineering practices.

The proposed Verizon facility will comply with all FCC standards for radio frequency emissions.

COMPLIANCE WITH LOCAL REGULATIONS

Because the proposed Verizon Wireless facility is in compliance with federal rules, it is also in compliance with local regulations concerning RF emissions. The following is the complete text of 47 U.S.C. § 332(c)(7)(B)(iv):

"No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions."

CONCLUSIONS BASED ON CALCULATIONS AND REGULATIONS

The proposed Verizon Wireless facility "OR1 RESERVOIR" will be in compliance with current FCC and local rules regarding radio frequency interference and public exposure to radio frequency electromagnetic fields. This conclusion is based on information supplied by Verizon representatives, and estimates of future RF exposure conditions due to the proposed Verizon facility in specific areas with the corresponding safe exposure guidelines set forth in the FCC rules.

The FCC exposure limits are based on recommendations by federal and private entities with the appropriate expertise in human safety issues. Under the Commission's rules and guidelines, licensees are required to ensure compliance with the limits for maximum permissible exposure (MPE) established by the FCC. These limits have been developed based on guidelines provided by the Institute of Electrical and Electronics Engineers, Inc. (IEEE) and the National Council on Radiation Protection and Measurements (NCRP). Both the NCRP and IEEE guidelines were developed by scientists and engineers with a great deal of experience and knowledge in the area of RF biological effects and related issues.

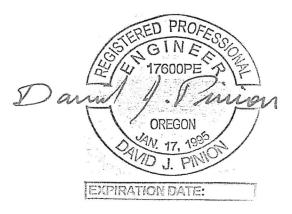
To ensure full compliance with current FCC rules regarding human exposure to radio frequency electromagnetic fields, the Verizon transmitters should be turned off whenever maintenance and repair personnel are required to work in the immediate vicinity of the Verizon antennas. This safety procedure should apply to all proposed and future wireless transmission facilities at the project site. All instances of antenna-related work require that the subject antennas be completely deactivated.

QUALIFICATIONS

I am a Senior Member of the IEEE. As a partner in the firm of Hatfield & Dawson Consulting Engineers I am registered as a Professional Engineer in the States of Oregon, Washington, California and Hawaii. I am an experienced radio engineer with over 30 years of professional engineering experience whose qualifications are a matter of record with the Federal Communications Commission, and I hold an FCC General Radiotelephone Operator License PG-12-21740.

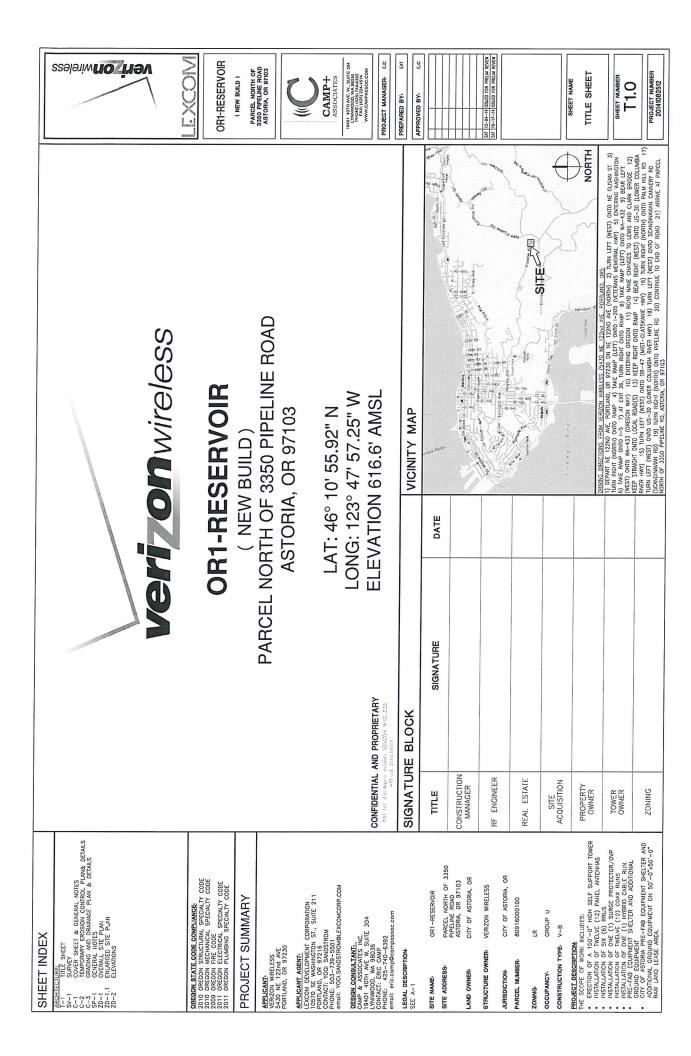
All representations contained herein are true to the best of my knowledge.

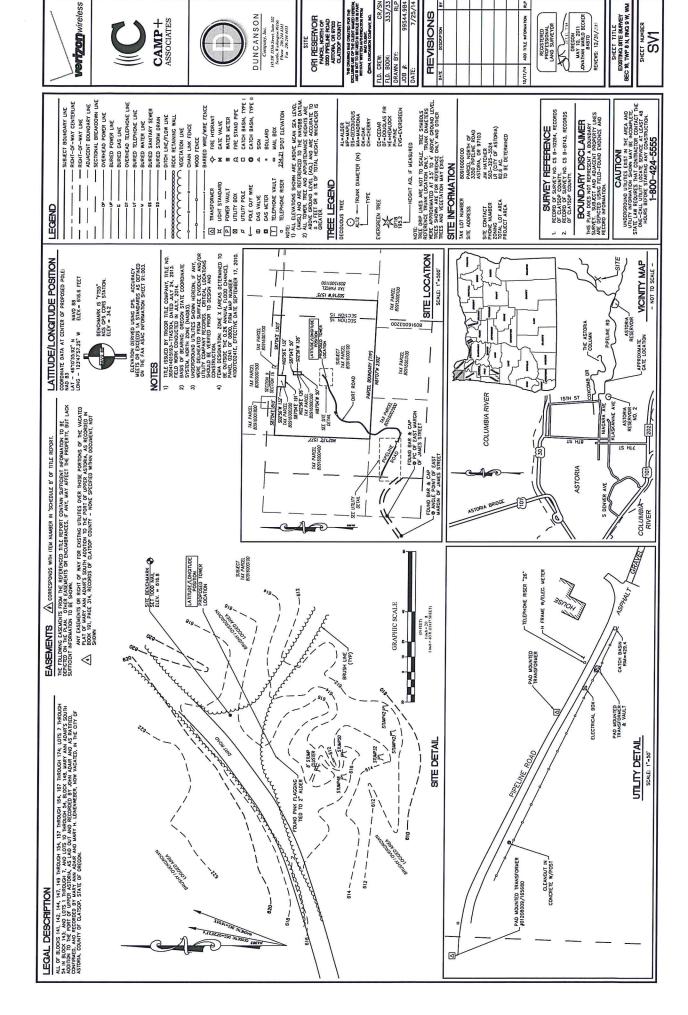
19 December 2014



David J. Pinion, P.E.

PE Expiration Date 12/31/2014





PARCEL NORTH OF 3350 PIPLINE RD **OR1-RESERVOIR**

ASTORIA, OR 97103

APPLICANT

ARCHITECT
CAMP AND ASSOCIATES
19401 40TH ANE W, SUITE 200
LINHWOOD, WAS 98036
433.280.8651 FAX 43.232.2860
CONTACT: ERIC CAMP

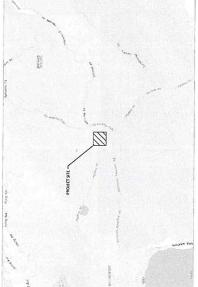
CIVIL ENGINEER
CG PAGINERING
250 4TH AVE S, SUITE 200
EDMONDS, WAS 8020
425, 778 8500 FAX 778 5536
COMTACT: JARED UNDERBRINK

LEGAL DESCRIPTION

ALL OF BLOCK SIT, 107, 144, 107, 109 THOUGH 154, 137 THOUGH 154, 137 THOUGH 154, 137 THOUGH THOUGH 174, 137 THOUGH T

TAX PARCEL NUMBER

SHEET INDEX



VICINITY MAP

		LEGEND				
DESCRIPTION	EXISTING	PROPOSED		ABBREVIATIONS	IATIONS	
PROPERTY LINE			ABN	ABANDONED	2	MECHANICAL JOINT
ADJACENT PROPERTY LINE			9018	BUILDING	MON	MONUMENT
CENTERLINE			WOR	BOTTOM OF WALL	STN	NOT TO SCALE
CLEARING UMITS			ىي	CENTERUNE	g	ON CENTER
SEDIMENT BARRIER		 	83	CATCH BASIN	ž	POINT OF CURVATURE
CONTOUR LINE	100		CMP	CORRUGATED METAL PIPE	ā	POINT OF INTERSECTION
FENCE	-00	-0-0-0-	8	CLEANOUT	214	POST INDICATOR VALVE
SANITARY SEWER LINE			CONC	CONCRETE	ىي	PROPERTY LINE
MANHOLE	0	@	CONST	CONSTRUCTION	Ł	POINT OF TANGENCY
STORM DRAIN MAIN		95	CUYD	CUBIC YARD	PVC	POINT OF VERTICAL CURVE
STORM DRAIN PIPE	1 1 1 1 1 1 1 1 1	1	DDCVA	DOUBLE DETECTOR CHECK	2	POINT OF VERTICAL INTERSECTION
ROOF DRAIN			DIA	DIAMETER	PVMT	
FOOTING DRAIN	-111		DIP	DUCTILE IRON PIPE	5	POINT OF VERTICAL TANG.
PRESSURE LINE		-44	3	ГАСН	æ	RADIUS
CATCH BASIN (TYPE 1)	0		a	EXPANSION JOINT	REINE	REINFORCEMENT
CATCH BASIN (TYPE 2)	0	▣	FIEV	ELEVATION	2	RESTRAINED JOINT
CLEANOUT	•		403	EDGE OF PAVEMENT	RET	RETAINING
CLEANOUT AND WYE	· t	ř	ă	EXISTING	T.	RIGHT
GRADE BREAK	1 1 1 1 1 1 1		roc	FIRE DEPT. CONNECTION	S	STORM DRAIN
SURFACE SWALE	Ţ	Ţ	FFE	FINISHED FLOOR ELEVATION	SECT	SECTION
DRAINAGE ARROW	1	1	£	FIRE HYDRANT	SDMH	STORM DRAIN MANHOLE
WATER LINE	wa wa	WA WA	ı.	FLANGE	SIM	SIMILAR
WATER METER	₩	25	E	FEET/FOOT	g	SQUARE
FIRE HYDRANT	Þ	Þ.	S	GATE VALVE	×	SANITARY SEWER
FDC	Þ	>	d H	HIGH POINT	SSMH	SANITARY SEWER MANHOLE
PIV	0	•	Ħ	HEIGHT	STA	STATION
GATE VALVE	×	×	QI	INSIDE DIAMETER	OTS	STANDARD
TEE	H	·Н	11	INVERT ELEVATION	JI.S	STEEL
90. BEND	ר	ר	_	LENGTH/LINE	18	THRUST BLOCK
THRUST BLOCKING	٧	•	5	UNEAL FOOT	700	TOP OF CURB
ব	,	3	9	LOW POINT	TOW	TOP OF WALL
CONCRETE PAVEMENT			11	LEFT	TOP	TOP ELEVATION
ASPHALT PAVEMENT			MAX	MAXIMUM	d/L	TYPICAL
CRUSHED SURFACING			MECH	MECHANICAL	Ņ	VERTICAL CURVE
ROCKERY	0000000000	000000000	МН	MANHOLE	/w	WITH
SPOT ELEVATION	000	1000	MIN	MINIMUM	WW	WATER METER
TELEPHONE LINE		111111				
POWER LINE	-111					
GAS LINE	-99					
SIGN	đ	þ				



(NEW BUILD)

PARCEL NORTH OF 3350 PIPELINE ROAD ASTORIA, OR 97103

ENGINEERING
220 4TH AVE. S., SUITE 200
EDHOUS, WASHINGTON 96020
FHORE (423) 778-5500
FAX (423) 778-5500

PROJECT MANAGER CG PROJECT NUMBER 14515 22

PREPARED BY

NEY DATE DESCRETTOR APPROVED BY

March Control of the Property of the Property

PREPARE SUBGRADE BY REMOVING ALL SURFACE VEGETATION, DEBRIS, AND TOPSOIL PRIOR TO THE PLACEMENT OF ANY FILL MATERIAL IN A FUTURE RIGHT-OF-WAY AREA.

THE FRANTISE ORTS AGENT SHALL RETAIN THE SERVICES OF A GEOTEOHUGAL ENGINEER TO MAKE ALL INSTRUCTIONS, TO PRODOUG MATERIAL STEAK GENORGE, AND TO EXERTINE THAT THE PACKED STRUCTIONAL TILLS MEET THE ENGARMARIET SPECHENTION RECOMMENDED IN THE GOTTICHMENT SPECHENTION RECOMMENDED IN THE CONSTRUCTION SPECHENTION.

ROSION CONTROL NOTES

THE PRANTITE OR IT'S AGENT SHALL SCHIDULE AN IN-HELD PRE-CONSTRUCTION METHING WITH HIS OWNER, ESSION MAD ANNER ASSENT INSECTION, AND ANNER CITION CHILD ANNER ASSENT ASSENT INSECTION, AND ANNER ASSENT ASSENT ASSENT AND ANNER ASSENT AS INSECTION OF THE STREET PRE-CITION AND ANNER ASSENT AS ASSENT AS AND ANNER ASSENT AS AND AND ANNER ASSENT ASSEN

. UTILITES SHOWN ON THESE PLANS ARE FOR INFORMATION AND COORDINATION PURPOSES TOWN AND ARE MOST ALTHOUGH THE VALUES TREET IMPROVEMENT PERMIT PRIVATE AND USBLIC LITTLY COMPANIES ARE REQUIRED TO SCURE SEPARATE UTILITY PERMITS FROM THE CITY FOR ALL WORK WITHIN THE PUBLIC BIGHT-OF-WAN

STREET FURNISHINGS ARE SHOWN FOR REFERING ONLY. THE INSTALLATION OF ALL STREET MENNIUGE INCLUDIAGE SHOWN THOUSE TO SHOW AND ASSAURCE SHOWN CARAGE CASE. SHOWN SHOWN STREAMS (CHOUT, CONDUCTORS, OUTLETS), AND THEN CASE ASSAURCE AND ASSAURCE ASSAURCE ASSAURCES, OUTLETS, AND THEN FEARL STREAMS.

TOR UNANTICIPATED CONTAMINATED MEDIA ENCOUNTERED, THE PERMITTEE/APPLICANT OR ACAGEM SHARE RESPONSED FOR ALL COSTS ASSOCIATED WITH THE MANAGEMENT, AND DISPOSAL OF CONTAMINATED MEDIA ENCOUNTERED. THE PERMITTEE IS ALSO RESPONSEDE. FOR ALL RESULTANT DELAYS.

RIMOVE AND DISPOSE (AT A PROPER LOCATION OR LANDFILL) ALL MATERALS DICKVATET FROM WORK IN THE REGIT CHANK I CON DISOLACE, ON PRINKET REOPERTY, SECURE A FILL PERMIT, PRIOR TO BEGINNING WOOK FROM THE BUTELU OF DEVILOPMENT SERVICES OF PROVIDE A COPY OF THE APPROVED FILL PERMIT TO THE STREET CONSTRUCTION HISPECT

A THITINEN EVALUATION OF GROOL DAY REQUESTS OF TOO PART.

ORGONULIN WORTHCHOOL CHIRL. HOST MALE ARE TITGHTH HOR ARE SES OF BO ON MANY HE CHIRL. THOSE MALE SET MALE THE CHIRL THE MALE THE MALE

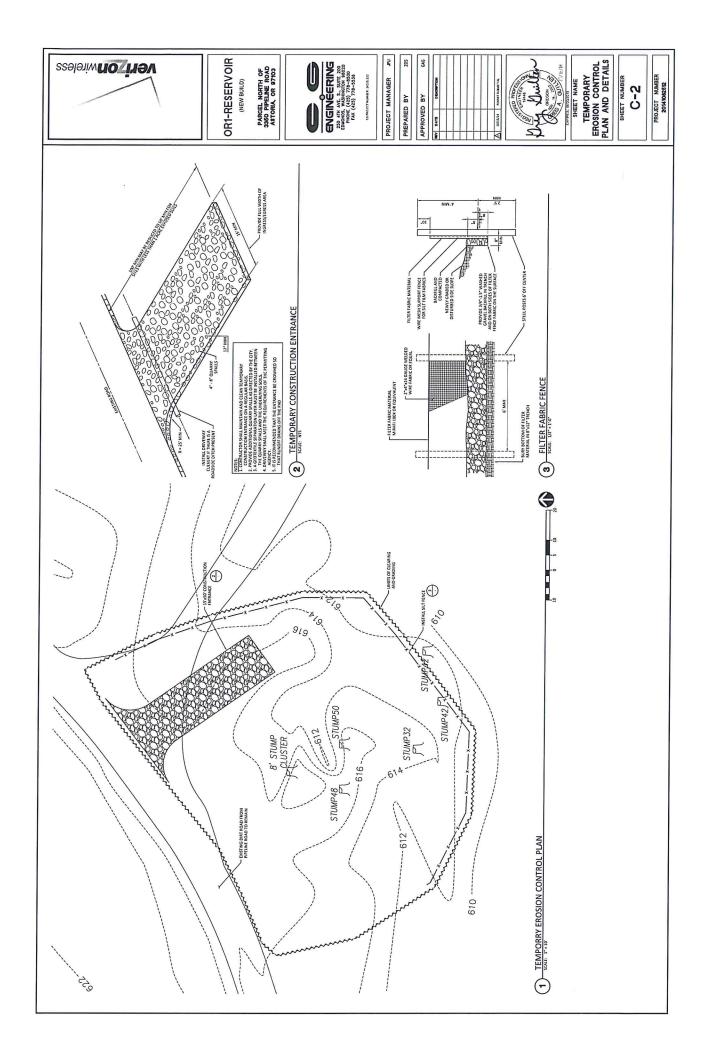
THE CONTRACTOR SHALL HAVE AT ALL TIMES ON SITE, THE APPROVED CONSTRUCTION DRAWINGS & SPICIAL SPECIFICATIONS, OTY OF ASTORIA STANDARD SPECIFICATIONS AS STANDARD DRAWINGS, AND ALL OTHER APPLICABLE SPECIFICATIONS BOOKS AND MAY ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THESE DRAWINGS AND THE APPLICABLE REQUIREMENTS OF THE CITY OF ASTORIAS STANDARD CONSTRUCTION SPECIAL SPECIFICATIONS.

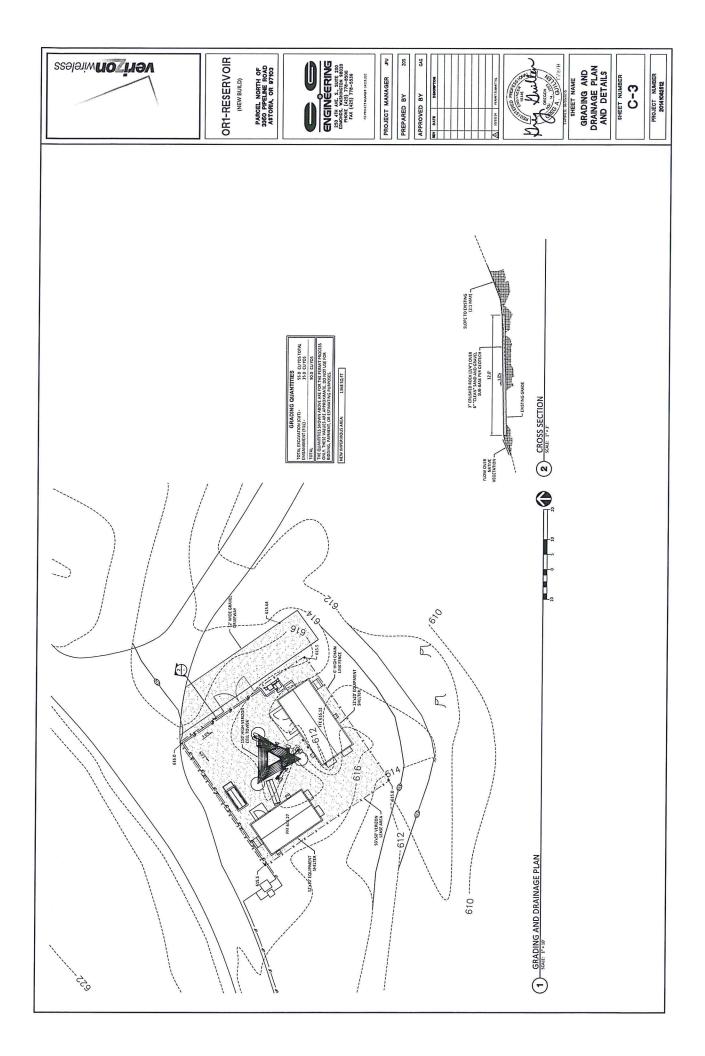
SENERAL NOTES

COVER SHEET
AND GENERAL
NOTES

SHEET NUMBER <u>5</u>

PROJECT NUMBER 20141082512





CONSTRUCTORS NAW AUGUST OFFT DEPT OF THE TOTAL OFFT DEPT OFFT DEPT OF THE OFFT DEPT OF THE

GENERAL NOTES

Dabawics, Aer 01 Det SCALLO, MITTO LIDUSCOS TARE RECEDENCE, AND THIS SET OF PLASS IS MITTOOD TO BE USED TORE DADSAMATIC PAPPOSES ONLY, MUESS NOTED DIMERMED TO BE USED TORE DADSAMATIC PAPPOSES ONLY, MUESS MORTAL CHORNER, LOGGE AND AMBRICANS, EDGE AND AMBRICANS, EDGE AND AMBRICANS TO MENTION, TO RECEDE TO THE MENTION OF THE MENTION AND AMBRICANS TO SCAPPED THE INSTALLATIONS AS DESCRIBED HEBBI.

PROB 10 E SABASCOS OF BOTA THE COMMUTGES WHICH SPALL SEY THE ADD STATE AND THAN THE CONTRICTOR WHICH CONTRICTOR ATTENDOR THE CONTRICTOR WHICH CONTRICTOR WAS CONTRICTOR WHICH CONTRICTOR WAS CONTRICTOR. THE CONTRICTOR WAS CONTRICTOR THAN THE CONTRICTOR WE CACCOUNTERIO AS SHOWN THOSE TO PROBE TO THE CONTRICTOR WHI THE CONTRICTOR WHI THE CONTRICTOR WHI THE CONTRICTOR WHI WHITH THE WAS THE TO BE BROUGHT TO THE ATTENDED TO THE WASHIET/DIAGRET WINNING.

COMEAL CONTRACTOR SHALL RECENE WRITTEN AUTHORIZATION TO PROCEED WITH STSTUCTION DRAWING STATEMENT WORK ON ANY IELE NOT CLEARLY DEFINED BY THE STSTUCTION DRAWINGS/CONTRACT DOCUMENTS.

THE CONTRACTOR SHALL SUPERNISE AND DRECT THE PROJECT DESCRIBED HEBBIN, THE CONTRACTOR SHALL BE SOLDEY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS TECHNOLES, SCOLDENCES AND PROCEDURES AND FOR COORDINATION ALL PORTIONS OF THE CONTRACT,

THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND WATERALS ACCORDING TO MANUFACTURETSY, VANCORS SPECIFORMS UNLESS NOTED OTHERWISE OR WHERE LODAL CODES OR ORDINANCES THE PRECEDENCE.

THE STRUCTURAL COMPONENTS OF THIS PROJECT SITE/FACULTY ARE NOT TO BE ALTERED BY THIS CONSTRUCTION PROJECT UNESS NOTED OTHERWISE.

AMENIA SUPPORTING POLE IS UNDER A SEPARATE CONTRACT; THE CONTRACTOR SUALL ASSES AMENIA INSTITUCTION SUBJECTIONS THENS OF COORDINATION AND SITE ACCESS. REFORM SUB-CONTRACTOR SUALL BE RESPONSIBLE FOR PROTECTION OF PERSONNEL AND PROPERTY FROM HAZAROUS ESPOSURE TO OMERICAD DAMERIS.

DETAILS INCLUDED HEREIN ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS WAY BE REQUISED TO SULT AND EXCHIDINGS OF STATIONS. AND SULCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE SCOPE OF WORK. CENERAL COMPACTOR SHALL PROVIDE AT THE PROJECT SITE A FULL SET OF CONSTRUCTION DOCUMENTS UPARTID WITH THE LATEST RENSIONS AND ADDELIAN OR CHARRICATION TOWN THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.

THE CONTRACTOR SHALL MAKE NECESSARY PROMSIONS TO PROTECT EXSTING IMPROPERENTS. ESCENERY, SANGL, CHRBAC, ETC, DIRANG, CONSTRICTION UPON CONCEITED AY WORL. CONTRACTOR SHALL REPAR AY TRAMEE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.

CONTRACTOR SWALL BISURE THE GENERAL WORK AREN IS KEPT CLEWI AND INJURY OF RETE CONSTRUCTION, MOSPOSCE OF LALD INE, CEBERS, A BUBBISH AND RELOVE COUPLENT NOT SPECOFIE DAS REALANING ON THE PROPERTY, PREDISTS SMALL BE LETT IN CLEWI CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SAUDGES OF ANY MANURE.

THE CONTRACTOR SHALL COMPY WITH ALL LOCAL AND MITONAL CODES, REGULATIONS AND SELTY RECOUNTINGS, ALL DEBAC MANUFACTOR AND INTERPRETATIONS. AND ANY UTILITY COMMANIES, RECOLATIONS AND ORECOFFES.

THE DAMAGES AND SECTIONS ARE LEGACE DESCRIPE FOR HIS SOOF OF WHICE DAMAGES AND CHORNERS AND CHORNERS HER TOTAL DAMAGES AND CHORNER WAS DESCRIPED AND DAMAGES AND CHORNERS AND DESCRIPED AND DAMAGES HER TOTAL DAMAGES AND DAMAGES HER CHORNERS AND DAMAGES HER CHORNERS AND DAMAGES AND DAMAGES HER CHORNERS AND DAMAGES AND D

FRIFICATION THAT EXISTING TOMER/POLE/STRUCTURE CAN SUPPORT THE PROPOSED WITENIN, COAX & ADDITIONAL EQUIPMENT LOADING IS TO BE DONE BY DHERS. CONTRACTOR IS RESPONSIBLE FOR FIELD MEASUREMENTS TO CONFIRM LENGTHS OF CABLE TRAYS AND ELECTRICAL LINES AND ANTENNA MOUNTING.

SPECIAL MESPECIDOS NA ACCIONACE, WITH RE 110 AND 1704 SHALL REFERENCE WAS STECKA INSCRIPTION TO ALCADOR APPROVED THE RECENT APPROVED THE MACHINE TO APPROVE THE PROJECT WAS ACCIONATED THE ACCIONATED THE RECENT OF THE RECENT OF THE RECENT OF THE PROJECT OF THE RECENT OF THE PROJECT OF THE PRO

ILEMS_IO_BE_INSPECIED: 1. ANCHOR BOLTS (%" • ANCHOR BOLTS PROVED LOAD IS: 1,500 LBS. IN TENSION) HICH STRENGTH BOLTS (A325 OR EQUIVALENT)

RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALY. SPECIFICATION PROJECT SUMMARY.

THE SITE SHALL BE CRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE PCS EQUIPMENT, TOWER AREAS, AND ADJACENT BUILDINGS.

THE SUBGRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO THE CRUSHED STONE APPLICATION. NO FILL OR EUBANKAUENT WATERIAL, SHALL BE PLACED ON FROZEN GROUND, FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EUBANKWENT;

SUBGRADE AND BASE PREPARATION:

An Adoles-George Construction II are Recessory to expected the SIE BY 2-0" AND IMPRILATE AND IMPRILATE ADDITION TO ADDITION T

COURTON SALL EL ACCUPLANTE DE PLACING THE FILL IN SUCCESSIVE.

COURTONNE DECH LIFT TO ALL LEST THE SPECIFIED MINIMAL DRY DESIGN.

ANY ORGANIC MATERIA, DELETERIOUS MATERIAL, OR DISTURBED SOIL SHALL BE REMOVED FROM FLATWORK AREAS.

THE GROUND SURPACE SURROUNDING EXTERIOR STRUCTURES SHALL BE SLOPED TO DRAIN AWAY IN ALL DIRECTIONS.

CONCRETE NOTES.

1. ALC DESCRIPTION OF SPALL BE IN ACCEDANCE WITH A.C.J. 301, A.C.J. 318 AND THE SPECIPIONION OCET-IN-PLACE CONCRETE.

WEES TO DIFFERED. ALL DEST-W-PLACE CONCRETE SAUL BE NORW, WIDNING SPES SUBMET BOWN STATES STATEMEN OF 2500 PRIVATE WAS AND THOUSE WITH BELL SECTION WITH BELL SECTION WITH BELL SECTION WITH BELL SECTION WITH SECTION SECTION WITH SECTION SECTI

RENFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO A.S.T.M. A815, GRADE 60, DEFORMED. ALL CONCRETE FLATWORK SHALL HAVE A STIFF BROOM FINISH AND HAVE A SLOPE OF 1/8" PER FOOT UNLESS NOTED OTHERWISE.

DETALL FABRICATE AND ERECT REINFORCEMENT BARS, INCLUDING BAR SUPPORTS, STACERS, ETC. IN ACCORDANCE WITH "DETALING OF CONC. REINFORCEMENT" (A.C.I. 315—80). REY, 1986).

UNIESS OTHERMISE NOTED, ALL LAP SPLICES SHALL BE CLASS B CONFORMING TO ACI 318-95.

7. A CHAMFER OF 1" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH A.C.I. 301 SECTION 4.2.4 UNLESS OTHERWISE NOTED.

CONCRETE WORK SHALL BE COORDINATED WITH THE MECHANICAL, EQUIPMENT, AND ELECTRICAL WORK TO ASSURE THAT ALL PEFECTED PHES, CONDUITS INSERTS, ETC. IN PACE AND VERRIED BEFORE PACKING CONCRETE.

CONCRETE COVER FOR REINFORCING BARS SHALL CONFORM TO THE FOLLOWING UNLESS INDICATED OTHERWISE OF THE DRAWNES.

OR IN CONTACT WITH GROUND 2 INCHES

-CONCRETE CAST AGAINST EARTH-

10. COORDINATE LOCATION OF STEEL ANCHOR BOLTS WITH STEEL FABRICATOR PRIOR TO INSTALLATION IN FIELD.

CONTRACTOR SHALL PROVIDE SLEEVES FOR ALL WALL/SLAB PENETRATIONS (PIPMG, CONDUIT.ETC.) POWER, TELCO AND COAX TO ENTER SITE UNDER EQUIPMENT SLAB.

SECTION INCLUDES: STRUCTURAL, STEEL, FRAMING WENBERS, BASE PLATES, PLATES, BARS AND GROUTING UNDER BASE PLATES.

SUBMITIZES

SUBMITIZES

NODITE SIZES, SPACING, AND LICOMONS OF STRUCTURAL Underthis SUPPORT, CONDETTS, LOUGS, AND WELDED SECTIONS CAUGHTS, CONDETTS, LOUGS, AND WELDED SECTIONS CAUGHT ASSEMBLY. LOUGHS AND WELDED SECTIONS OF REBERGALION AND DEFENDING STRUCTURAL SITES, INTO BE LILLOUGH, SHEALAND AND DEFENDING STRUCTURAL STRUCTURAL SITES AND STRUCTURAL S

B. PERFORM DESIGN UNDER DIRECT SUPERVISION OF A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE.

STRUCTURAL STEEL MEMBERS: STRUCTURAL TUBING: PIPE: NUTS, AND WASHERS: ANCHOR BOLTS: WELDING MATERALS: 1. MATERALS:
A. STRUCTURAL:
B. STRUCTURAL:
C. PIPE:
D. BOLTS, NUTS,
E. ANCHOR BOIL
F. WELDING MA

AND AND GADE OF STAND AND GADE BY AND CAPE OF STAND AND THE CE OF S, CHOLE BY AND AND THE CENTRAL CAPE OF S, CHOLE BY AND AND THE CENTRAL CAPE OF STAND CAPE OF STAND OF STAND CAPE OF STAND CAPE OF STAND OF STAN

ZINC RICH TYPE H. SHOP AND TOUCH-UP PRIMER:
1. TOUCH-UP PRIMER
FOR CALV, SURFACES:

CRIND EXPOSED FABRICATION: CONTINUOUSLY SEAL JOINTED MEMBERS BY CONTINUOUS WELDS. WELDS SMOOTH.

PREPARE STRUCTURAL COMPONENT SURFACES IN ACCORDANCE WITH SSPC SP-1 TO SP-10 PROCEDURES. STRUCTURAL STEEL WEMBERS SHALL BE HOT DIPPED CALVANIZED.

EXAMINATION AND PREPARATION: VERIFY THAT THE FIELD CONDITIONS ARE ACCEPTABLE. ERECTION:

ALLOW FOR ERECTION LOADS. PROVDE TEMPORARY BRACING TO MAINTAIN FRAMING IN ALLOIMENT UNIL COMPETION OF ERECTION AND INSTALLATION OF PEREMANENT BRIGGING AND BRACING. FIELD WELD COMPONENTS INDICATED ON SHOP DRAWINGS.

DO NOT FIELD CUT OR ALTER STRUCTURAL MEMBERS WITHOUT APPROVAL

OF THE ARCHITECT/FINGINEER.

AFTER ERECTION, TOUCH-UP WELDS, ABRASIONS, AND SURFACES NOT SHOP PRINCE OR GALWANZED WITH TOUCH-UP PRINCES AS SPECIFIED UNDER SECTION 05000,—NETALS, PART 2 — PRODUCTS, H & I. SURFACES TO BE IN CONTACT WITH CONCRETE NOT INCLUDED.

FIELD GUALITY CONTROL: FIELD INSPECTIONS, WELDS AND TORQUING.

TELECOMMUNICATIONS WIRING COMPONENTS (COAXIAL ANTENNA CABLE)

ALL MATERIALS, PRODUCTS OR PROCEDURES INCORPORATED INTO WORK SHALL BE NEW AND OF STANDARD COMMERCIAL QUALITY.

CERTAN MATERALS AND PRODUCTS WILL BE SUPPLED BY THE OWNER (REFER TO CREEKE DIRECTED EQUIPMENT). WATERALS AND SUPPLES FOR PIESE (TEAS), THE CONTRACTOR IS RESPONSIBLE FOR PICKUP AND DELIVERY OF ALL SUCH MATERALS. ALL OTHER MATERIALS AND PRODUCTS SPECIFIED IN THE CONTRACT DOCUMENTS SHALL BE SUPPLIED BY THE CONTRACTOR.

MATERIALS:

INSTALL COURL OUTE, AND TERMANDONS EFFECTS ANTENMAS AND ELABORET PER MANUFATURES RECOMMENDATION WITH COURT WITH COURT OF THE THE CONTEST OF THE WITHOUT OF THE WITHOUT OF TRAININGSOOF ALL CONNECTIONS EFFECTS IN THE WITHOUT AND PARTICIPATED FOR MANUFACTURIES (EXCESS OF EQUIPMENT COURTS)

ALL COXX RUN LENGTHS GREATER THAN 143 FEET SHALL BE 1-5/8".
AND IN LENGTH LESS THAN OR EQUAL TO 143 FEET SHALL BE 7/8". ANTENNA AND COAXIAL CABLE GROUNDING

A. ALL COAXAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAGHT RUNS OF COAXAL CABLE (NOT WITHIN BENDS)

A. TO PROVIDE EASY IDENTIFICATION AND UNFORM MARKING OF ANTENIA CABLING, PLASTIC TAGS SHALL BE USED AT THE FOLLOWING LIGATIONS. COAXIAL CABLE IDENTIFICATION

FIRST LOCATION IS AT THE END OF THE COAX NEAREST THE AVIENIA, (WHERE THE COAXIAL CABLE AND JUMPER ARE CONNECTED).

USE ANDREW CABLE TIES (PT.# 27290) TO SECURE IDENTIFICATION SECOND LOCATION IS INSIDE THE EQUIPMENT SHELTER NEAR THE WAVECUIDE ENTRY PORT.

ILEDNO.

TERONO.

TER

NSTALLINO NG SECONDARY PONES AND CONNECTION TO METER SAUL BE COUNCETED IN COMBLANCE WITH MATIONAL ELECTRIC CODE, NPP. 370, AND THE STATE LUNES FINGLES AND RECULATIONS FOR INSTALLING ELECTRIC WHESE & EQUIPMENT ALL LUTES ISSUE, AND WITH PSECRIFICATIONS PER A.S.T.M. B. 231, B. 400, I.C.E.A. 5851–401, I.C.E.A. PBII–570, &

UNDERGOOD CORPORATION CONTRACTOR OF STATE OF STA PROVIDE A METER BASE PER LOCAL UTILITY STANDARDS. MOUNT ON SIDE OF OWNER FURNISHED BACK BOARD.

Verī onwireless

CONDUIT USED INDOORS SHALL BE E.M.T., AND RIGID CALVANIZED STEEL FOR OUTDOORS, CONPLINCS SHALL BE RIGID STEEL AND COMPRESSION TYPE FOR E.M.T. SET SCREW THINGS ARE NOT PERMITED. FOR ALL STUBS—UPS, USE RIGID CALVANIZED STEEL CONDUIT. WRRE AND CABLE SIALL BE OF THE TYPE AND SIZE AS REQUIRED BY NEC. THERE WILL NO SPLUES ALLUND. HAND HOLES AS NEEDED.

CONTROLLE SALL SPRONE TETL OF THE GROADANG STRICE OF KERDINDS TESTING CARCANIC TESTING STREET OF KERDINGS STRICE OF KERDINGS ST

OR1-RESERVOIR

(NEW BUILD)

PARCEL NORTH OF 3350 PIPELINE ROAD ASTORIA, OR 97103

ALL EXTERIOR CROUND BARS SHALL BE COATED WITH ANTI-CORROSIVE AGENT SUCH LPS-3 OR AS PER NOTE 6 ABOVE. ALL JUNCTION AND OUTLET BOXES TO BE LABELED WITH KROY TAPE, OR EQUAL, DESIGNATING ALL CIRCUIT NUMBERS CONTAINED IN EACH BOX.

WERRY THAT ALC, OF THE UTILITY DOES NOT EXCEED THE ALC. RATING OF THE PROVIDED EQUIPMENT STELLIER PACKAGE. P FORT HONGE, PROVIDE PASIBLE SERVICE ENTRANCE STITICH AND CONTRIAN LOWERING OF AIC TO ACCEPTABLE LEVELS. CONTRACTOR SIMIL COORDINATE WITH SITE SURVEY TO LOCATE EXISTING UNDERGROUND UNLINES, WHERBERS POTENTLY, CONFLOCES, INTERFERENCES EXIST, WAY, EXCANATE TO AWO'D DAMACE, CONINCET ALL UNLINES TO LOCATE UNDERGROUND PRIME IN PUBLIC FOR CONTRACTOR TO ENSURE ILC PROVIDED WITH (2) INTERNAL INSS.

CONTRACTOR SHALL CORRENTE WITH UTILITY COURSE OF THE WAR DATE DATE OF THE WAS DATED TO WAR AND TOWN THE WAS DATED TO WAR AND TOWN THE WAS DATED TO W

UTLITY PONITS OF SERVCE AND WORK / WATERALS SHOWN ARE BASED UPON PRELIMINARY INFORMATION PROVIDED BY THE UTLITY COMPANIES AND ARE FOR BID PURPOSES ONLY.

19401 40TH AVE, W., SUITE 30, LYNNWCOD, WA 98036 PHONE; (425) 740-6392 FAX; (425) 224-1614

CAMP+ ASSOCIATES

GROUNDING NOTES.

2. CONDUIT ROUTINGS ARE SCHEMATIC, CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED. 1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE DESIGN AND CONSTRUCTION SPECIFICATIONS AND ALL APPLICABLE LOCAL CODES.

2 Ę EJC

PROJECT MANAGER

PREPARED BY. APPROVED BY.

3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND VIOLEGEOUND CONTROL INSTALLATION AS TO PRECENT ANY LOSS OF CONTRUITY HE GROUNDING SYSTEM OR DAMAGE TO THE CHOUNDING SYSTEM OR DAMAGE TO THE CHOUNDIN

5. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR & EXTERIOR) SHALL BE FORMED USING TWO (2) HIGH PRESS CRIMPS. 4. ALL GROUND CONNECTIONS BELOW GRADE SHALL BE EXOTHERMIC (CADWELD).

6. ALL EXOTHERMIC CONNECTIONS TO THE OROUND RODS SHALL START AT THE TOP & HAVE A VERTICAL SEPARATION OF 6" FOR EVERY ADDITIONAL CONNECTION.

7. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL. 8. ALL EXTERIOR GROUND CONDUCTORS SHALL BE \$2 AMG THY PLATED COPPER UNLESS OTHERWISE INDICATED.

EM 12-04-14 SSUED FOR PRELIM REVEW

9. GROUND ROOS SHALL BE STANLESS STEL OR COPPER CLAD STEEL, 5/8".~ 10-FT, LUNG (OR NOTED OTHERWISE ON PLANS), AND SHALL BE DRIVEN VERTICALLY WITH THER TOPS 18" BELOW FINAL GRADE OR 6" BELOW FROST LINE FOR MAXIMUM DEPTH. CONNECTIONS TO THE CROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BUCKT TO EACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITED.

11, USE OF 90" BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVIOLD WHEN 45" BENDS CAN BE ADEQUATELY SUPPORTED.

12. CROUND RING SHALL BE LOCATED A MINIMUM OF 24" BELOW GRADE OR 6" MINIMUM BELOW THE FROST LINE. 13. INSTALL GROUND CONDUCTORS AND GROUND ROD MINIMUM OF 1"-O" FROM EQUIPMENT CONCRETE PAD, SPREAD FOOTING, OR FENCE.

EXOTHERMIC WELD GROUND CONNECTION TO FENCE POST: TREAT WITH A COLD GALVANIZED SPRAY.

GENERAL NOTES

SHEET NAME

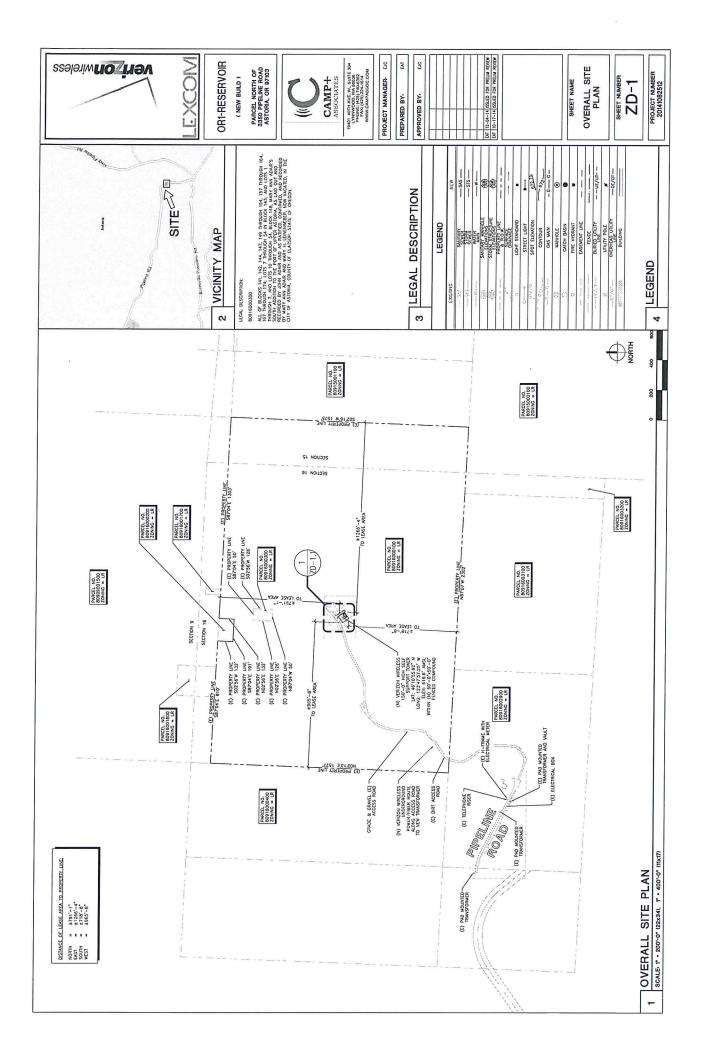
15. OBSERVE N.E.C. AND LOCAL UTILITY REQUIREMENTS FOR ELECTRICAL SERVICE GROUNDING

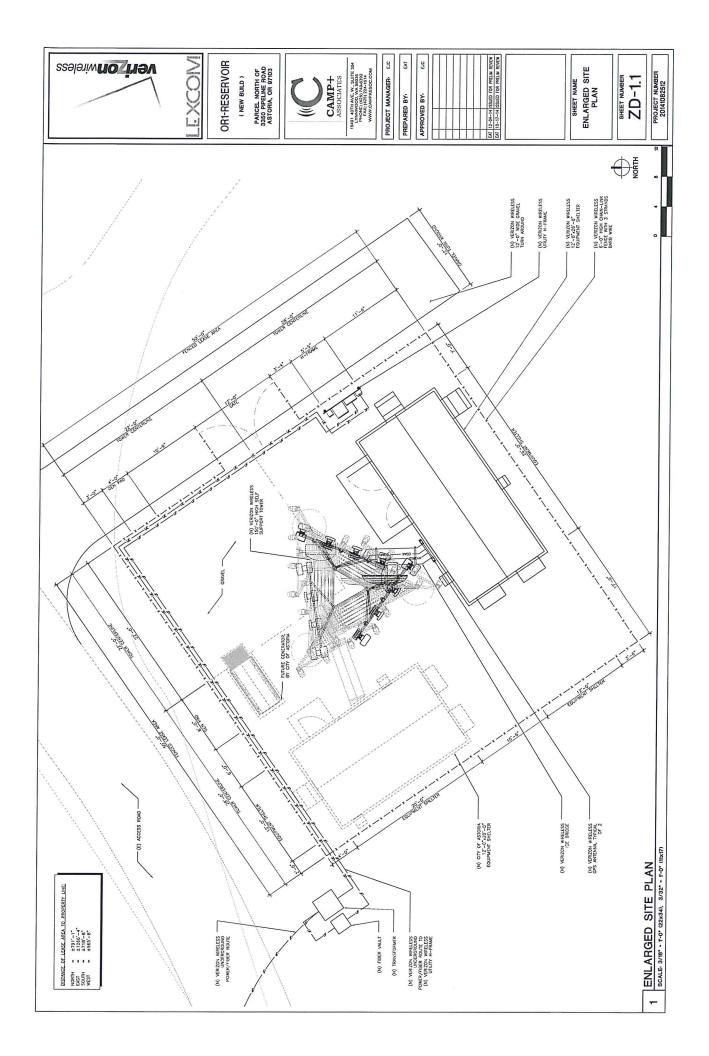
GROUNDING ATTACHMENT TO TOWER SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS OR AT GROUNDING POINTS PROVIDED (2 MINIMUM)

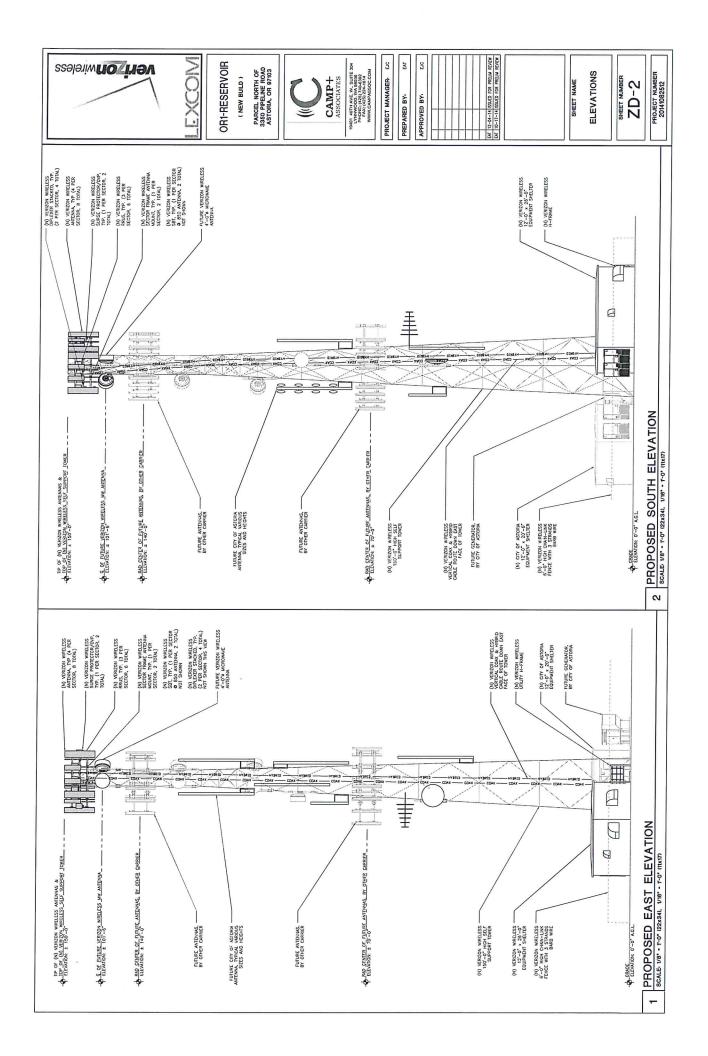
17. MAXIMUM RESISTANCE OF THE COMPLETED GROUND SYSTEM SHALL NOT EXCEED 5 OHMS.

CONTRACTOR TO VERIFY CURRENT GROUNDING STANDARDS PRIOR TO CONSTRUCTION.

PROJECT NUMBER 20141082512 SHEET NUMBER SP-1









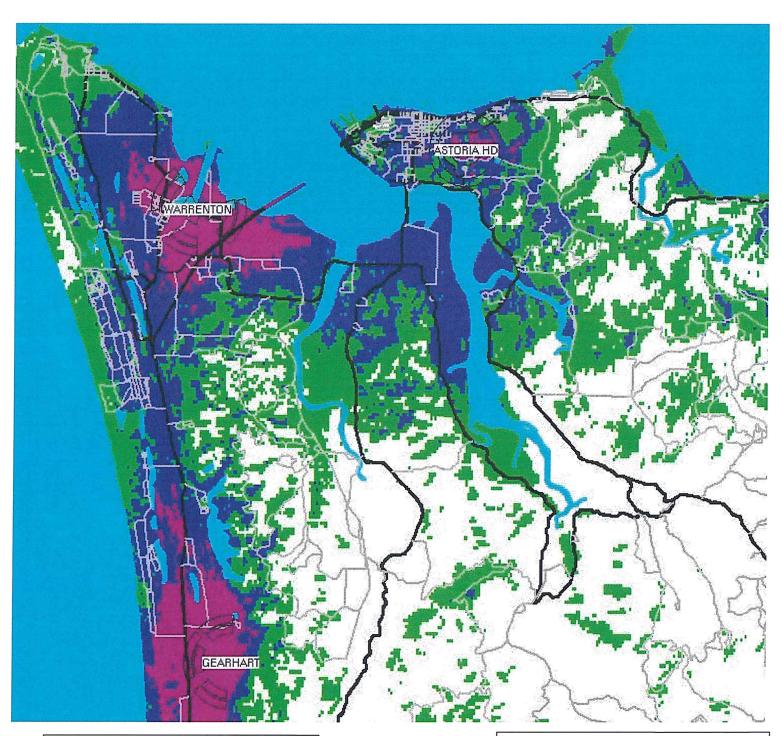
RF Propagation Maps

For Site "OR1 Reservoir"

Map Disclaimer

These maps show approximately where there is wireless coverage based on our own internal data. The maps are **not** a depiction of actual service or rates availability. The mapped territory contains areas with no service. Voice clarity and reception may vary near coverage boundaries. Wireless service is subject to network and transmission limitations, including cell site unavailability, particularly in remote areas. Customer equipment, weather, topography, and other environmental considerations associated with radio technology also affect service. Additionally, service may vary significantly within buildings depending on location or building structure.

Exhibit 1 – OR1 Reservoir current Coverage

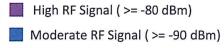


Existing Sites:

OR1 Warrenton

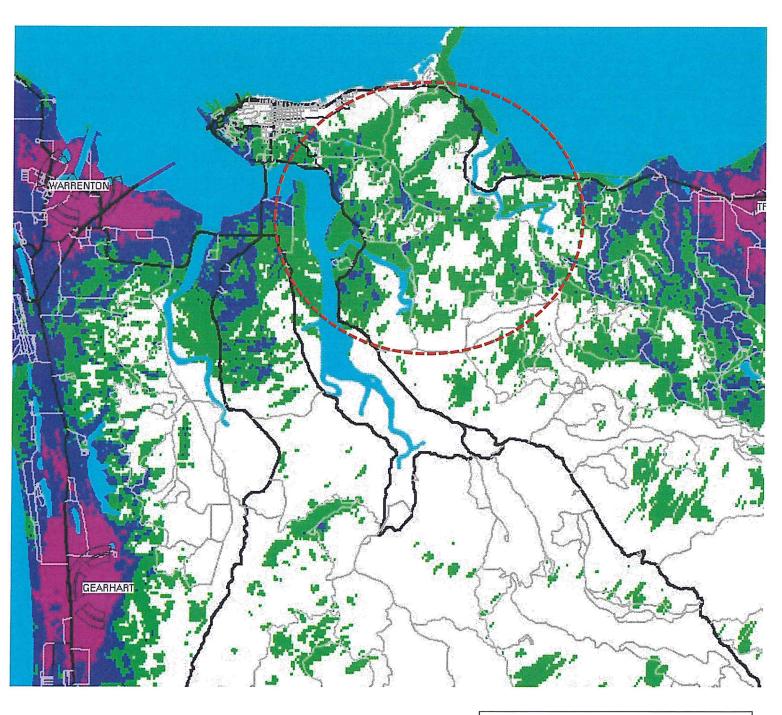
OR1 Astoria HD (near Astoria Column)

OR1 Gearhart



Weak RF Signal (>= -100 dBm)

Exhibit 2 – OR1 Reservoir without Coverage (Inclusive of removal of Astoria HD site near the Column)





- Moderate RF Signal (>= -90 dBm)
- Weak RF Signal (>= -100 dBm)

Exhibit 3 – OR1 Reservoir Coverage Only

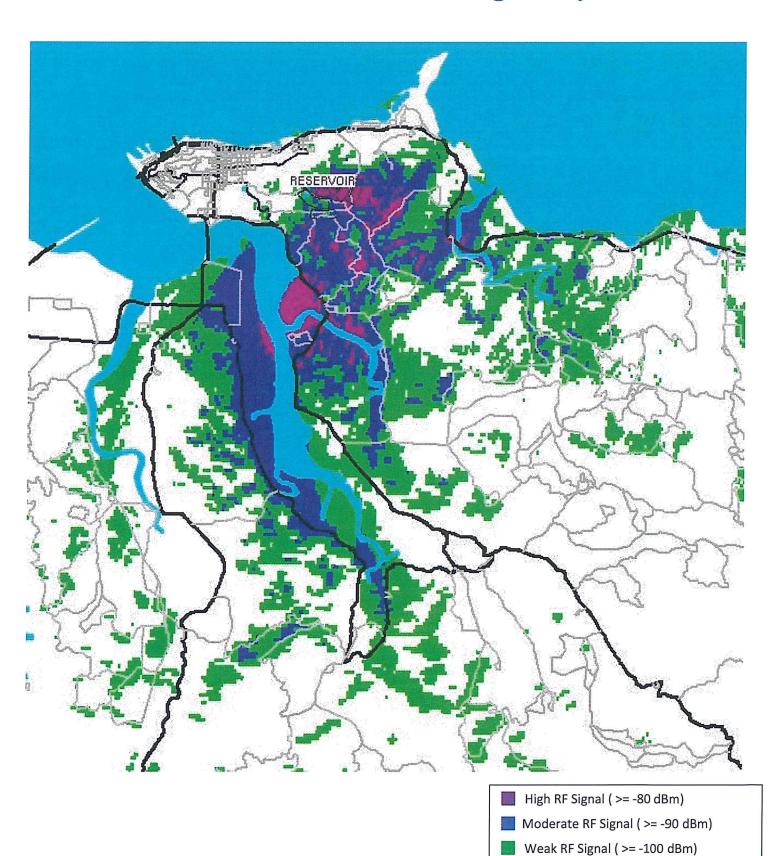
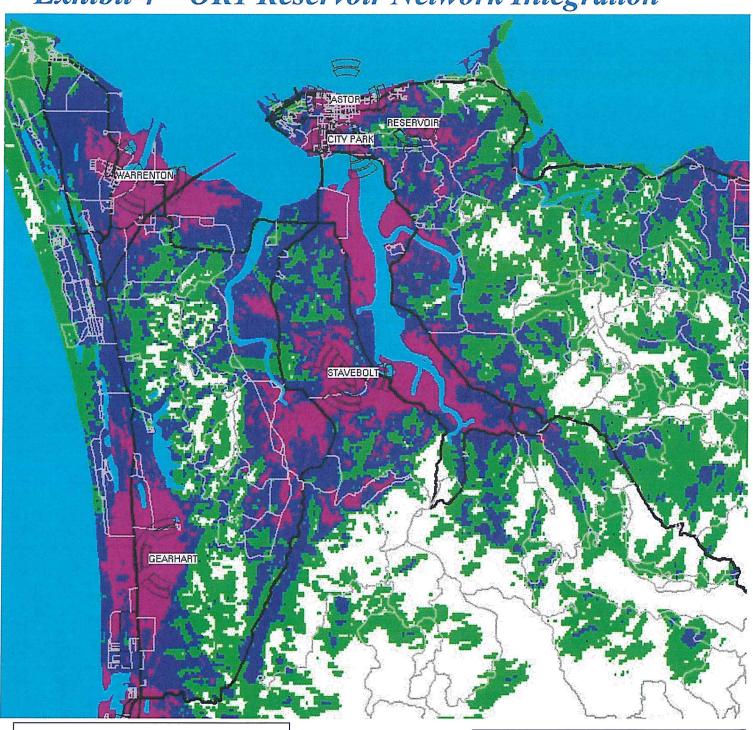


Exhibit 4 – OR1 Reservoir Network Integration



High RF Signal (>= -80 dBm)

Moderate RF Signal (>= -90 dBm)

Weak RF Signal (>= -100 dBm)



OR1 Warrenton

OR1 Gearhart

Proposed Sites:

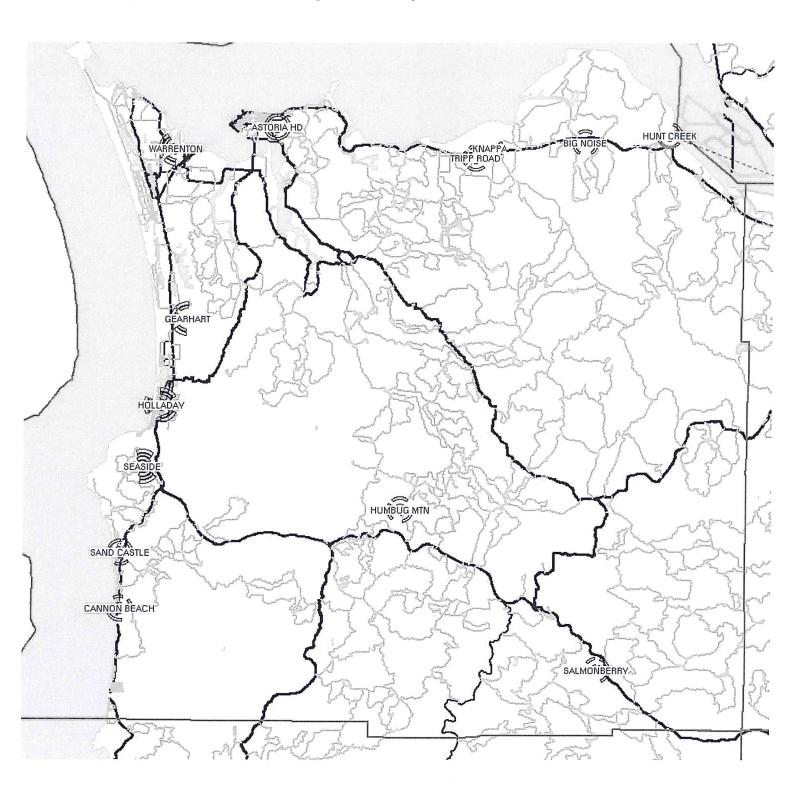
OR1 City Park

OR1 Reservoir (Site proposed herein)

OR1 Astor

OR1 Stavebolt

Location Map
All Existing Clatsop County Sites
Owned and/or operated by Verizon Wireless.
(Propagation not shown for clarity)





PARCEL NORTH OF 3350 PIPELINE ROAD, ASTORIA, OR 97103

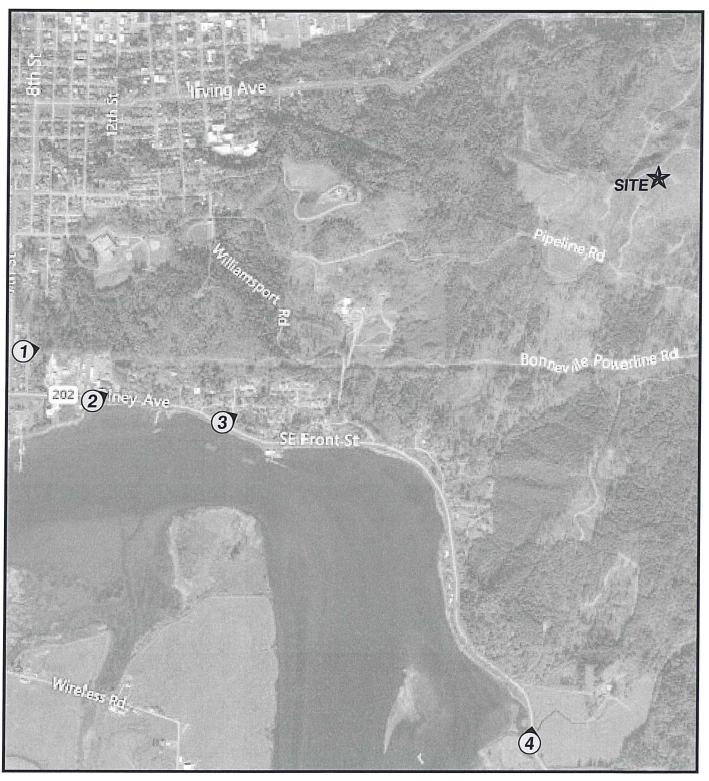
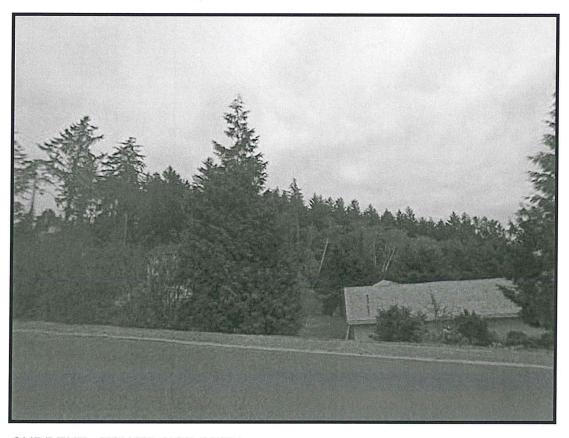


PHOTO SIM LOCATION MAP



PARCEL NORTH OF 3350 PIPELINE ROAD, ASTORIA, OR 97103

VIEW #1 LOOKING EAST



CURRENT - TOWER NOT SEEN



PARCEL NORTH OF 3350 PIPELINE ROAD, ASTORIA, OR 97103

VIEW #2 LOOKING NORTHEAST

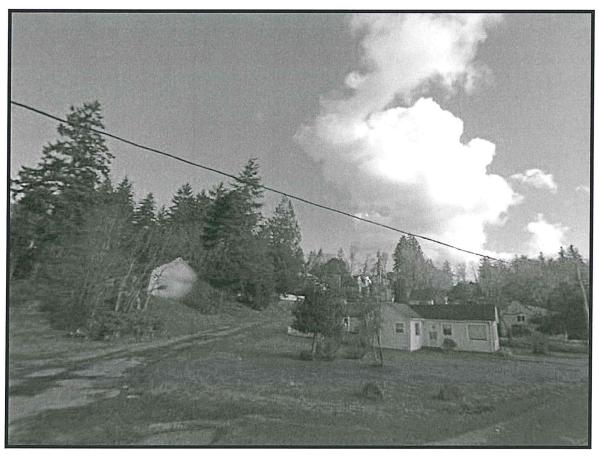


CURRENT- TOWER NOT SEEN



PARCEL NORTH OF 3350 PIPELINE ROAD, ASTORIA, OR 97103

VIEW #3 LOOKING NORTHEAST

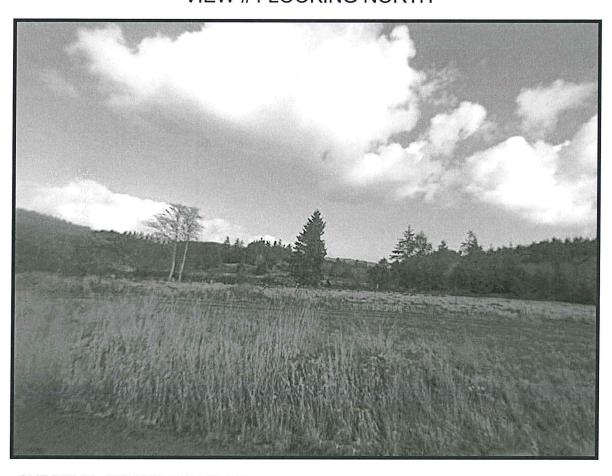


CURRENT - TOWER NOT SEEN

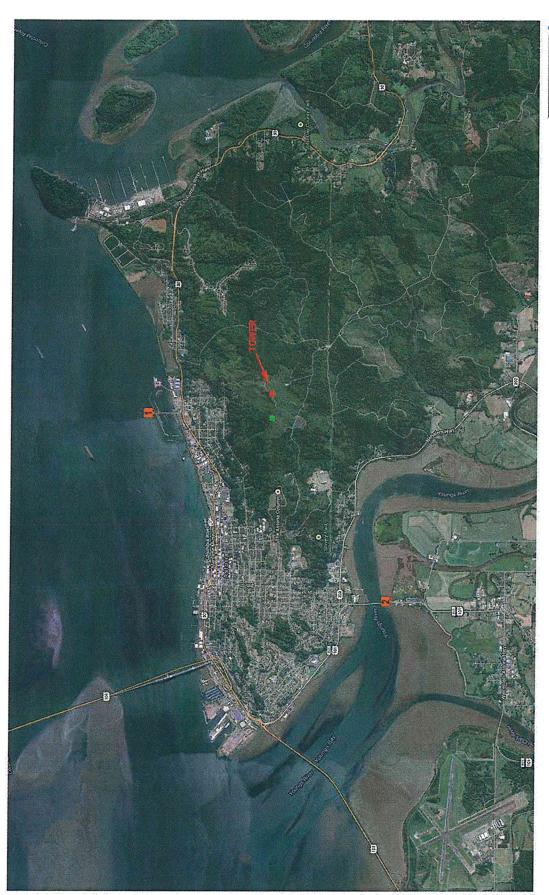


PARCEL NORTH OF 3350 PIPELINE ROAD, ASTORIA, OR 97103

VIEW #4 LOOKING NORTH



CURRENT - TOWER NOT SEEN



IIM BRADLEY IMAGING 💠



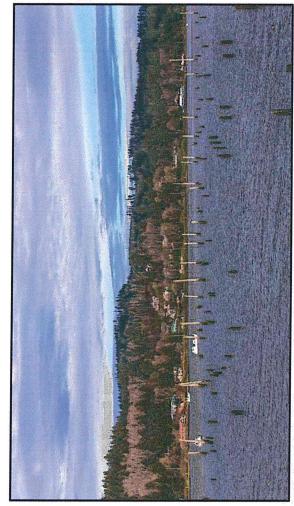






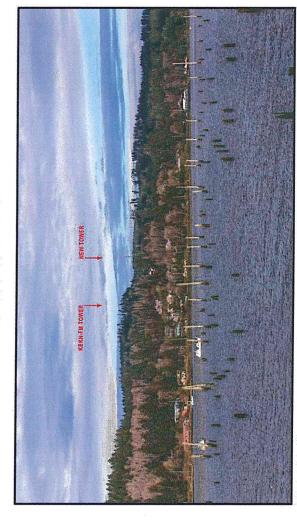


3350 Pipeline Road Astoria, OR. 97103



CURRENT

VIEW #2 LOOKING NORTHEAST FROM 35431 US-101 BRIDGE

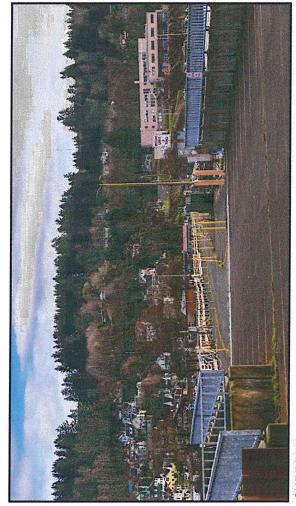


PROPOSED

TIM BRADLEY IMAGING 💠



3350 Pipeline Road Astoria, OR. 97103



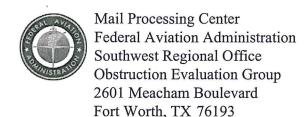
CURRENT

VIEW #1 LOOKING SOUTH FROM THE 36TH ST. BREAKWATER



PROPOSED

IIM BRADLEY IMAGING 💠



Issued Date: 01/15/2015

Jim O'Dowd Verizon Wireless 180 Washington Valley Rd Bedminster, NJ 07921

** DETERMINATION OF NO HAZARD TO AIR NAVIGATION **

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

Structure:

Antenna Tower OR 1

Location:

Astoria, OR

Latitude:

46-10-55.92N NAD 83

Longitude:

123-47-57.25W

Heights:

617 feet site elevation (SE)

150 feet above ground level (AGL) 767 feet above mean sea level (AMSL)

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

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

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

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed and maintained in accordance with FAA Advisory circular 70/7460-1 K Change 2.

This determination expires on 07/15/2016 unless:

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

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

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

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

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

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

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

If we can be of further assistance, please contact our office at (310) 725-6591. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2014-ANM-3227-OE.

Signature Control No: 236479859-240207357

(DNE)

Tameria Burch Technician

Attachment(s)
Frequency Data

cc: FCC

Frequency Data for ASN 2014-ANM-3227-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
				-
698	806	MHz	1000	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1850	1910	MHz	1640	W
1930	1990	MHz	1640	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W





January 15, 2015

Verizon Wireless 10570 SE Washington St. Suite 211 Portland, OR 97216 3040 25th Street, SE Salem, OR 97302-1125 Phone: (503) 378-4880 Toll Free: (800) 874-0102 FAX: (503) 373-1688

Subject:

Oregon Department of Aviation comments regarding proposed construction of a monopole 150' in height located in Astoria, Oregon.

Aviation Reference: 2015-ODA-003-OE

The Oregon Department of Aviation (ODA) has conducted an aeronautical study of these proposed new structure(s) and has determined that notice to the FAA is required. The structure does not exceed Obstruction Standards of OAR 738-70-0100.

This determination is based, in part, on the foregoing description which includes specific coordinates and heights. Any changes to the original application will void this determination. Any future construction or alteration to the original application will require a separate notice from ODA.

This determination will expire (12) months from the date of this letter if construction has not been started.

Mitigation Recommendation:

	We do not object with conditions to the construction described in this proposal. This determination does not constitute ODA approval or disapproval of the physical development involved in the proposal. It is a determination with respect to the safe and efficient use of navigable airspace by aircraft and with respect to the safety of persons and property on the ground.
	Marking and lighting are necessary for aviation safety. We recommend it be installed and maintained in accordance with FAA Advisory Circular AC70/7460-1K Change 2
	The proposed obstruction should to be lower to a height that is no longer a hazard to the airport primary and horizontal surface FAA FAR 77
	The proposed obstruction should be relocate outside the airport primary and horizontal surface FAA FAR 77
Since	rely,
Skie	

John P. Wilson Jr, Airport Operation & Tall Structure Specialist.





3040 25th Street, SE Salem, OR 97302-1125 Phone: (503) 378-4880 Toll Free: (800) 874-0102 FAX: (503) 373-1688

August 26, 2015

Sherri Williams
Administrative Assistant
City of Astoria
Community Development Department
Astoria City Hall
1095 Duane Street
Astoria, OR 97103

SUBJECT: WCF15-02 / V15-02 Wireless Communication Facility

This letter is in response to City's notice of application(s) for a 150-foot wireless communication monopole, located at 3850 Reservoir Road (Map T8N-R9W Section 16 Tax Lot 100). After a preliminary review of the proposed application the Oregon Department of Aviation has the following comments and recommendations:

Prior to issuance of a building permit the applicant must file and receive a
determination from the Oregon Department of Aviation and the FAA as required
by OAR 738-070-0060 on FAA <u>Form 7460-1 Notice of Proposed Construction or
Alteration</u> to determine if this monopole is a hazard to aviation safety. Safety
mitigation measures may be required, such as markings and lighting meeting
FAA design standards.

Thank you for allowing ODA to comment on this development proposal. If you have any questions or need further information please feel free to contact me at 503-378-2529 or Jeff.Caines@aviation.state.or.us or Heather Peck — Projects and Planning Manager at 503-378-3168 or Heather.Peck@aviation.state.or.us.

Sincerely,

Jeff Caines, AICP Aviation Planner

Jarom Perkins

From:

towernotifyinfo@fcc.gov

Sent:

Friday, March 13, 2015 3:15 PM

To:

Jarom Perkins

Subject:

Section 106 Notification of SHPO/THPO Concurrence- Email ID #1132175

This is to notify you that the Lead SHPO/THPO has concurred with the following filing:

Date of Action: 03/13/2015

Direct Effect: No Historic Properties in Area of Potential Effects (APE) Visual Effect: No Historic Properties in Area of Potential Effects (APE)

Comment Text: None

File Number: 0006668610

Purpose: New Tower Submission Packet Notification Date: 7AM EST 02/13/2015

Applicant: Cellco Partnership and its controlled affiliates doing business as Verizon Wireless

Consultant: Applied Archaeological Research, Inc. on behalf of Trileaf Corporation

Positive Train Control Filing Subject to Expedited Treatment Under Program Comment: No

Site Name: OR1 Reservoir

Site Address: Parcel North of 3350 Pipeline Road

Detailed Description of Project: Legal Description: S16 T8N R9W Project Description: Project is a collocation with less than 500 square feet of

ground disturbance in already disturbed ground. Site Coordinates: 46-10-55.9 N, 123-47-57.2 W

City: Astoria County: CLATSOP

State:OR

Lead SHPO/THPO: Oregon State Historic Preservation Office

NOTICE OF FRAUDULENT USE OF SYSTEM, ABUSE OF PASSWORD AND RELATED MISUSE

Use of the Section 106 system is intended to facilitate consultation under Section 106 of the National Historic Preservation Act and may contain information that is confidential, privileged or otherwise protected from disclosure under applicable laws. Any person having access to Section 106 information shall use it only for its intended purpose. Appropriate action will be taken with respect to any misuse of the system.



8-28-2015

Brad Johnston Chief of Police City of Astoria

Dear Chief Johnston,

You have asked Day Wireless to evaluate the possibility of co-locating public safety radio equipment on the KVAS broadcast tower rather than the new "Reservoir Ridge" tower that will be constructed by Verizon Wireless.

Day Wireless has served as your Land Mobile Radio (LMR) service provider for the past eight years and because of this, we have extensive knowledge of your existing LMR towers and infrastructure, as well as the performance requirements of the LMR network currently in place.

While we believe that there are a number of factors that make co-location on the KVAS tower impractical, such as loading and antenna separation, one factor is particularly compelling: the LMR coverage performance at the new Reservoir Ridge site will be superior to the KVAS site. Day Wireless performed a propagation study to predict the performance at each site for comparison. The reservoir ridge site showed enhanced coverage in the follow areas: East Astoria including Mill Creek Rd, Liberty LN, and Halsey Rd.

Because LMR coverage is a life and limb consideration affecting the safety of the public and first responders, we believe that a compelling argument is supported to install the LMR equipment on the reservoir ridge tower versus the KVAS tower.

If you have any questions, please do not hesitate to contact us.

Sincerely,

Matt Enser, CSM, CET, ICET Manager Day Wireless Systems 360-423-3690



CITY OF ASTORIA FOUNDED 1811 – INCORPORATED 1856

MEMORANDUM

POLICE DEPARTMENT

DATE:

APRIL 3, 2012

To:

PAUL BENOIT

CC:

CHIEF CURZON

FROM:

DEPUTY CHIEF JOHNSTON

SUBJECT:

KVAS TOWER

I consulted with the radio technicians at Day Wireless and Cascade Networks who are familiar with the local public safety radio systems design, capabilities and plan. Both are of the opinion that moving to the KVAS site would provide potentially worse public safety radio coverage to the City of Astoria and provide increased cost to the city. Both recommend against exploring the option unless it is an option of last resort.

Radio Frequency Issues

The site considered is a high power FM broadcast tower. Had it been an AM broadcast tower the project would be technically infeasible. Technically, we are told that the presence of the high power FM broadcast station at the same location as the substantially lower powered public safety equipment causes several problems. The primary problem is receiver desensitizing. Quoting from the information provided by Day Wireless: "FM noise is a major contributor to receiver de-sensing. It often occurs at sites where there are high power FM broadcast transmitter aerials close to sensitive land mobile receive aerials. The white noise created in high power linear amplifiers raises the noise floor often over a wide range of spectrum and affects sensitive narrow band FM receivers by reducing their ability to receive signals. The affected receivers may suffer a reduced sensitivity by 10 to 30dB. It is not possible to audibly hear this noise and

the receiver outwardly appears to be fine (receiver "hiss" is apparent as appears normal)."

We see this receiver desensitizing to be true at the much larger commercial site that houses both public safety and commercial providers at Tillamook Head. The 290 foot self supporting tower at Tillamook Head has antenna for several commercial providers a cellular company and public safety radios. Day Wireless recently measured the sensitivity of the public safety receivers there. At seventy feet, where the public safety radio receiver antenna are located, the background radio frequency (RF) noise at the area is high enough that the mobile user requires 14 times as much power to penetrate the noise and reach the receiver. We would not anticipate this level of de-sensitivity but do not wish to co locate when another option exists.

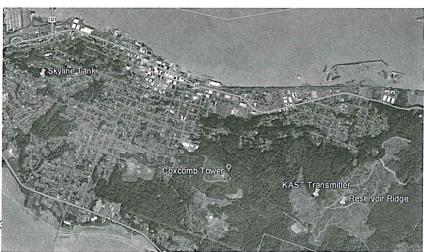
We have had problems with portables reaching the receiver at Coxcomb since the receiver was moved from Skyline to Coxcomb. It is anticipated that the geography of the area may cause problems with the opposite problem as well. In those areas shadowed, we may have problems, at the licensed effective radiating power (ERP), with the transmitter reaching the mobile/portable units in the field. For public safety radio the ERP licensed is quite modest. At its current location, the primary dispatch frequency for law enforcement is limited to 120 watts ERP. This is compared to the FM station that is licensed at 11kW ERP. These problems are likely to be had at the toe of the hill all around the perimeter of the south slope.

These risks related to the collocation with a high power FM broadcast can be overcome. The reality is we have spent a considerable amount of time cleaning up our own RF interference. At this late stage, adding additional engineering costs into the equation are not preferable, especially since VZW will still remain at Coxcomb. Moving to a site farther away from the population base serviced will not serve us better.

Verizon Wireless Relocation and Microwave Paths

Verizon wireless (VZW) looked at the site and discarded both it and the green field site in the blow down (we nicknamed this as Reservoir Ridge). VZW brought

a boom truck to do testing at both Reservoir Ridge and the KAST (KVAS) transmitter site. However, after looking at the results from Reservoir Ridge VZW did not test at the KVAS site because the site was lower and more



Patrol (503) 3

susceptible to the weaknesses at Reservoir Ridge. VZW shared the coverage maps generated. In order to view this data city employees had to sign confidentiality agreements. In summary, the issue is that the saddle in the top of the hill causes a radio shadow to be created by Coxcomb. The shadow covers the top of the hill, and the south slope neighborhoods where there is a large density of population served. Public Safety radio modeling shows this to be much less significant, but VZW dismissed discussions about this site completely. Any movement to the KVAS site would have no support by VZW and would leave VZW on Coxcomb without public safety.

Reservoir Ridge, for public safety has several attractive assets. One of the key features that make Reservoir Ridge an attractive site is the ability to have clear line of site between other communications sites for microwave connectivity. This site has connectivity from near ground level with sites at: Skyline Wickiup, Nicolai, Meglar, Tillamook Head and Humbug. These sites are all part of or a planned expansion of the microwave network connecting communications sites. At 60' lower ground elevation, the KVAS site has limited connectivity to some sites except at the higher elevation on the tower. Placing some of the larger dishes such as the 4 foot dish now at the caretaker's house will increase wind load significantly. We would also need to move the fiber connection from the column to the KVAS site increasing the cost of the relocation.



KVAS tower in the foreground to the left. Astor Column in the distance.

STAFF REPORT AND FINDINGS OF FACT

August 23, 2015

TO:

ASTORIA PLANNING COMMISSION

FROM:

ROSEMARY JOHNSON, SPECIAL PROJECTS PLANNER TOSEMANIII

SUBJECT:

WIRELESS COMMUNICATION FACILITY (WCF15-03) AT 1580 SHIVELY

PARK ROAD

I. <u>BACKGROUND SUMMARY</u>

A. Applicant:

Verizon Wireless (VAW), LLC dba, Verizon Wireless

5430 NE 122nd Avenue Portland OR 97230

Lexcom Development

Sharon Gretch

31649 Sexton Road Philomath OR 97370

B. Owner:

City of Astoria

1095 Duane Street Astoria OR 97103

C. Location:

1580 Shively Park Road; Map T8N R9W Section 17, Tax Lot 1200

and Section 17CA, Tax Lot 600; Lots 1 to 8, Block 18, Central

Astoria, and vacated portion of Nile Street

D. Zone:

IN Zone, Institutional

E. Lot Size:

approximately 12.4 acres (proposed area to be used

approximately 1,120 square feet)

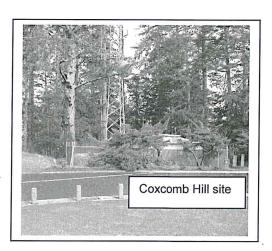
F. Proposal:

To construct a wireless communication facility with 150' tall

monopole and enclosed equipment building

II. BACKGROUND INFORMATION

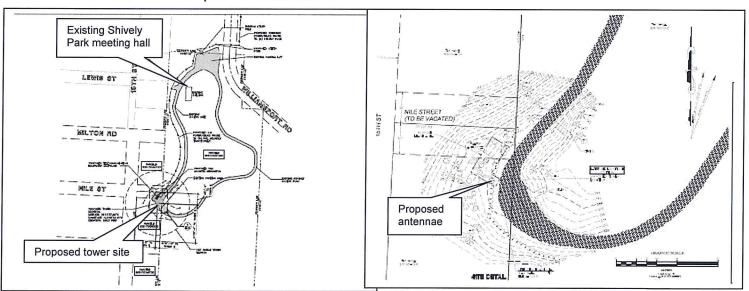
Verizon Wireless currently operates a wireless communication facility on an existing lattice tower on the north side of Coxcomb Hill Drive (Criege Circle) within the Astor Park/Astoria Column area owned by the City. The City shares use of the facility for its emergency services communications. The facility includes a lattice tower, wood pole, and utility building.



The existing lattice tower cannot structurally accommodate new communication facilities necessary for Verizon Wireless to provide full service. Currently, the central portion of Astoria has "poor to non-existent" coverage by the existing Verizon facility. The applicant is proposing to increase cell coverage for Astoria with the new facility. The lattice tower at Coxcomb Hill has existed since 1991 prior to adoption of the Wireless Communications Facility Ordinance, and does not conform to the existing code standards. Therefore, it is classified as an existing, non-conforming facility. The tower was originally constructed by GTE Mobile Net which is now part of Verizon Wireless. The existing tower was evaluated to determine if it could structurally and technically accommodate the increase in wireless communication services and the needed upgrade of the City's emergency communication service. It was determined that the existing tower would not meet structural requirements and a new tower would need to be constructed. It was therefore determined that the facility should be relocated to another site to accommodate the WCF and improve the aesthetics of the Astoria Column Park. The Friends of the Column, City, and Verizon identified alternate locations that would provide emergency communications as well as cell service to replace what is provided by the tower at the Column. Staff has been working with the consultant hired by the Friends of the Column and Verizon representatives on the various aspects of this project for several years. Investigation of the viability of several other sites was completed. Due to the need for a high elevation location with limited obstructions, and the City's desire for minimal visual impact of the tower, two sites on City-owned properties were selected. One site is located in the Land Reserve urban forest near Reservoir 3 (east of the Column) would include both private and public facilities. The other site is within the forested area in Shively Park.

At its August 3, 2015 meeting, the City Council approved the negotiated lease for the proposed sites on City-owned property and for the City Manager to sign the land use permit applications to begin the public review process.

All references in the Findings of Fact to the proposed wireless communication "facility" includes the installation of the associated equipment building, enclosure, and buried cable without specific notation.



III. PUBLIC REVIEW AND COMMENT

A public notice was mailed to all property owners within 500 feet, excluding rights-of-way, pursuant to Section 15.090 on August 21, 2015. A notice of public hearing was published in the <u>Daily Astorian</u> on September 9, 2015 pursuant to Section 9.020. A display ad was published in the <u>Daily Astorian</u> on September 9, 2015 pursuant to Section 15.090.2.b.

IV. APPLICABLE REVIEW CRITERIA AND FINDINGS OF FACT

A. Section 15.035.A.1, Permitted Locations of Wireless Communication Service Facilities, Permitted Zones, lists the permitted zones for a WCF.

Section 2.840.11, Uses Permitted Outright in the IN Zone, lists "utilities" as an outright use.

<u>Finding</u>: The proposed use is allowed within the IN Zone.

B. Section 15.035.B.2.a, Preferred Location, Siting, and Designs in Priority Order, states that a Conditional Use Review is required for "Location on New Antenna Support Structure"

<u>Finding</u>: The proposal is to construct a new tower. The proposal shall be reviewed as a conditional use before the Planning Commission.

C. 15.045.A, Collocation and Use of Alternative Antenna Support Structures for Wireless Communication Service Facilities, Collocation Design Required, states that "All antenna support structures shall be designed and constructed so as to not preclude collocation."

Finding: The structure is designed to accommodate collocation in the future.

D. 15.045.B, Collocation Required, states that "Collocation or use of alternative antenna support structure shall be required unless demonstrated to be infeasible to the satisfaction of the Community Development Director or the Astoria Planning Commission.

If an applicant proposes to construct a new antenna support structure, evidence shall be submitted by the applicant to demonstrate the following:

- 1. That no existing antenna support structures or alternative antenna support structures are located within the geographic area which meet the service provider's engineering requirements to provide service; OR
- 2. That existing antenna support structures and alternative antenna support structures are not of sufficient height to meet the service provider's engineering requirements to provide service; OR

- 3. That existing support structures and alternative antenna support structures do not have sufficient structural strength to support the service provider's engineering requirements to provide service; OR
- 4. That an applicant's proposed antennas or antenna arrays would cause detrimental electromagnetic interference, or NIER field interference with nearby antennas or antenna arrays, or vice-versa; OR
- 5. That there are other limiting factors, such as inadequate space for an equipment shelter, that render existing antenna support structures or alternative antenna support structures unsuitable."

<u>Finding</u>: Verizon and the City worked together to identify potential sites for the facility. No existing tower is available to service the south side of Astoria except the existing tower at Coxcomb Hill. There are no tall structures within the search ring for this service area. Utility poles in this area are only 20'to 35' tall. The Fred Lindstrom Park area with park lighting poles was too low in elevation to meet the coverage needs of Verizon. No acceptable colocation sites were identified.

E. Section 15.065, Standards and Review Criteria, states that "all applications for Wireless Communication Service Facilities shall demonstrate compliance and conformity with the following requirements. The burden of proof is on the applicant to demonstrate such compliance and conformity. The Community Development Director may release an applicant from a requirement when it is determined that the requirement is not applicable to the request."

Section 15.065.A.1, Owner and Applicant Responsibilities, states that the owner and applicant of the Wireless Communication Service Facility and his or her successors and assigns at all times shall have the following responsibilities:

- a. The owner shall respond in a reasonable and timely manner to a request for information from a potential collocation applicant. In responding to such a request, the owner and potential collocation applicant shall furnish to each other all non-proprietary information necessary to enable the potential collocation applicant and the owner to determine the feasibility of collocation.
- b. The owner and potential collocation applicant shall negotiate in good faith for shared use of the owner's Wireless Communication Service Facility."

<u>Finding</u>: While shared use of the site is possible, the collocation requirement for other applicants does not apply since there are no applicants at this time. The site is owned by the City of Astoria. City Council approved signing the application as property owner on 8-3-15, and the City has entered into a lease agreement with Verizon for use of the site.

- F. Section 15.065.A.2, Environmental and Historic Resource Protection, states that all Wireless Communication Service Facilities shall be sited so as to minimize the effect on environmental and historic resources. To that end, the following measures shall be implemented for all Wireless Communication Service Facilities:
 - a. The facility shall comply with all applicable local, State, and Federal regulations, including but not limited to: Columbia River Estuary Shoreland Overlay, Sensitive Bird Habitat Overlay, Astoria Historic Properties regulations, National Environmental Policy Act, National Historic Preservation Act, and Endangered Species Act;"

<u>Finding</u>: The Astor Park and Astoria Column are designated on the National Register of Historic Places. The Friends of the Column have plans to improve the park and relocation of the existing non-conforming WCF tower is a goal and will bring that site into compliance with the Historic Properties regulations. The proposed site at Shively Park is designated as historic and therefore subject to the requirements of Code of Federal Regulations Section 106. The applicant has submitted a letter from State Historic Preservation Office (SHPO) dated 2-24-15 with a NEPA finding of "no adverse impact."

The site is not within the Shoreland Overlay area nor within the Sensitive Bird Habitat Overlay.

"b. Alteration or disturbance of natural vegetation and topography shall be minimized;"

<u>Finding</u>: Verizon has worked with Parks and Recreation Director Angela Cosby to identify the minimal vegetation to be removed to accommodate the facility. The tower will be 150' tall and will be within the existing tree area. The equipment building will be constructed slightly below street grade to take advantage of the existing topography as part of the screening of the facility.

G. Section 15.065.A.3, Noise, states that "no testing of back-up power generators shall occur between the hours of 6:00 PM and 7:00 AM. Emergency operation of back-up power generators is permitted at any time."

<u>Finding</u>: Back-up power generators are indicated on the plans and will be operated in accordance with the above standards.

- H. Section 15.065.A.4, Permits Required, requires the following permits:
 - "a. A Building Permit issued by the City is required for each Wireless Communication Service Facility. A building permit will not be issued until all land use approvals have been obtained; until any associated

conditions have been met; and until all other applicable local, State, and Federal approvals have been secured and complied with, including but not limited to Astoria Development Code, Article 6 Historic Properties, and Section 106 requirements as set forth by the State Historic Preservation Office (SHPO)."

<u>Finding</u>: The applicant has completed the Section 106 Review. The applicant has submitted a "New Construction" (NC) permit application for review by the City Historic Landmarks Commission (HLC). The HLC will review the permit at their September 15, 2015 meeting. Approval of the WCF permit is conditioned upon approval of the NC permit by HLC (Condition 1). A building permit application shall be submitted and will only be issued after all other permits have been obtained.

"b. No Wireless Communication Service Facility shall be constructed or operated within the City limits until all necessary City, State, and Federal approvals have been secured. Evidence of approvals shall be provided to the City."

<u>Finding</u>: Verizon Wireless has submitted approvals from Federal Aviation Administration dated 1-15-15, and from Oregon Department of Aviation dated 3-4-15. The FCC license (FRN 0003800307, expires 6-26-2017) is attached. Construction shall not begin until all permits have been obtained (Condition 1).

I. Section 15.065.A.5, Prohibited Structures, states that "lattice and guyed wire towers and support structures and speculation ("spec") support structures are prohibited in all zones except as noted in Section 5.b.."

<u>Finding</u>: The applicant is proposing to construct a monopole and there will be no guyed wires.

J. Section 15.065.A.6.a, Radio Frequency Standards, states that "the applicant shall provide evidence that the Wireless Communication Service Facility is in compliance with FCC standards and that the Wireless Communication Service Facility will not cause interference with the reception of area television, radio, or emergency communication broadcasts. If at any time, the City finds that the Wireless Communication Service Facilities interfere with such reception, the applicant shall mitigate the interference. If the applicant does not mitigate the interference to the City's satisfaction, the City may revoke or modify the permit."

<u>Finding</u>: The applicant has submitted a copy of the FCC license indicating compliance with FCC standards. No comments were received from City departments for this specific request. This criteria requires that the applicant "mitigate the interference to the City's satisfaction". It is the recommendation of the Astoria Police Chief for all wireless transmitters that the interference be mitigated within 24 hours of notification of an agency to Verizon Wireless that there is interference to emergency communications (Condition 2). The

applicant has submitted the Non-Ionizing electromagnetic Exposure Analysis and Engineering Certification (NIER), dated January 2015, indicating compliance.

K. Section 15.065.A.7, Security, states that "the applicant shall insure that sufficient anti-climbing measures have been incorporated into the WCF, as needed, to reduce potential for trespass and injury."

<u>Finding</u>: The WCF will have a 6' fence around the facility and all climbing pegs used during construction will be removed upon completion.

The Fire Department will require a Knox Lock Box be secured to the fence with an access key provided in the event a fire or other type of emergency requires immediate access to Fire Department personnel. The final location of the secured Knox Box shall be determined by the Fire Chief upon a site visit and shall be installed prior to operation of the site (Condition 7). An application for a Knox Lock box may be obtained from the Fire Department during normal business hours.

L. Section 15.065.A.8, Technical Expert Support, states that "the Community Development Director may employ on behalf of the City an independent technical expert to review any technical materials submitted including, but not limited to, those required under this Section, and in those cases where a technical demonstration of unavoidable need or unavailability of alternatives is required."

<u>Finding</u>: The City has determined that an independent expert is not necessary. However, it should be noted that the City did hire Converge Communications, a WCF consulting firm to assist the City in the review of potential sites, development of lease agreements, and with the technical review of documents.

M. Section 15.065.B.1, Preferred Location, Siting, and Designs in Priority Order, states "See Section 15.035.B of the Wireless Communication Facility Code."

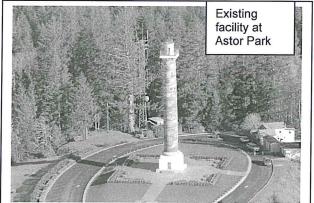
<u>Finding</u>: As noted above, the proposed location is a new facility and requires a conditional use permit. The site is located in the IN Zone which is a "permitted zone" for a WCF.

- N. Section 15.065.B.2, Adverse Impact, states that WCF shall not create a substantial adverse impact on the view from any public park, natural scenic vista, historic property (locally designated or on National Register), major scenic and view corridor, or residential area. In determining the potential substantial adverse impact of the proposed facility upon scenic, natural, historic, and cultural resources or vicinity, the following points shall be considered:
 - a. The extent to which the proposed WCF is visible from the viewpoint(s) of the impacted resource or vicinity.

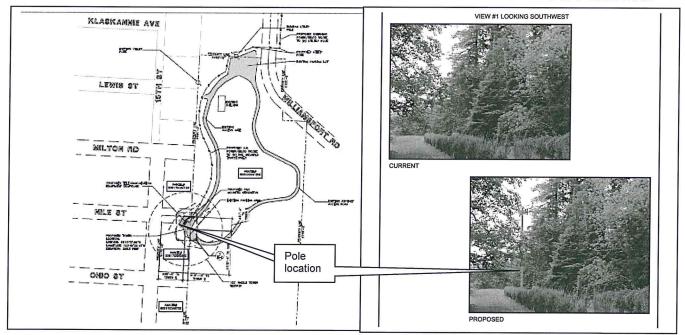
- b. The type, number, height, and proximity of existing structures and features, and background features within the same line of sight as the proposed facility.
- c. The amount of vegetative screening.
- d. The distance of the proposed facility from the impacted resource or vicinity.

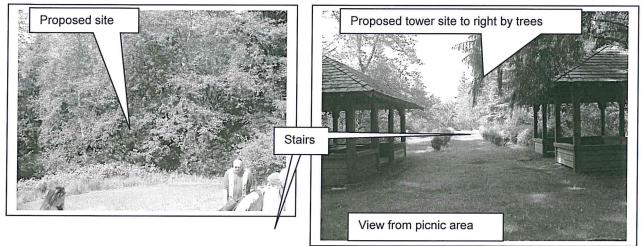
e. The presence of reasonable alternatives that allow the facility to function consistently with its purpose.

Finding: The existing facility is located adjacent to a historic landmark (Astoria Column) and is highly visible from this historic park. The proposal to relocate the tower for better coverage and less impact to a historic structure has resulted in the selection of a new site that is also designated as historic. As part of the agreement with the City, the facility at the Column will be removed (Condition 3).

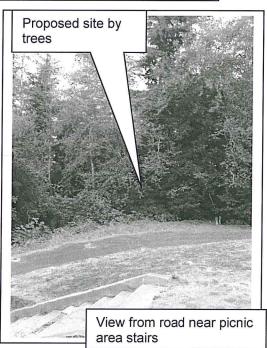


However, the location within Shively Park will be along the back road and not at the entrance to the Park. The facility will be screened from view by existing trees and the installation of new landscaping and fencing. It will sit below the level of the upper picnic area of the Park and will not be highly visible from this structure and area. Photo simulations have been submitted and are attached.





The 150' high monopole would be located within the tree area on the western edge of the park and not in direct alignment of the picnic area view corridor. While the location is within a designated historic and park area, it is approximately 500' from Shively Hall and approximately 175' from the picnic area. It would not be visible from Shively Hall nor from all but a few yards of the road/pathway around the park. Deciduous trees in this area range up to 120' tall and firs up to 150' tall. The dense vegetation of trees and its location on the back corner of the park reduces the visual impact to a minimum. Other acceptable locations would not provide the same level of service and would be much more visible from greater distances as there would not be a forested area to help screen it from view.



Since the forested area is a key element to the compatibility of the tower at this location, the applicant would be required to replant trees should they be destroyed by any means during the life of the facility (Condition 8).

O. Section 15.065.B.3, Use of Concealment Technology, states that "all Wireless Communication Service Facilities shall utilize concealment technology so as to blend in with the surrounding natural and human-made environment in such a manner so as to be either reasonably difficult for the naked eye to detect or observe, or made part of the feature enclosing it. To this end, Wireless Communication Service Facilities shall be designed so as to be camouflaged to the greatest extent possible, including but not limited to: concealment technology, use of compatible building materials and colors, vegetative, structural or topographic screening."

<u>Finding</u>: The method of concealment in this case is the use of the existing forest which hides the facility. Additional landscaping will be installed around the equipment building which will have a slatted chain link fence proposed to be painted grey. Due to the ground location with the darker underbrush background, the equipment enclosure should be painted a natural darker color such as dark brown or forest green (Condition 6). The pole is proposed to be painted grey to blend into the background sky.

- P. Section 15.065.B.4, Access Driveways and Parking, states that "all access drives and parking areas shall be no longer or wider than necessary and be improved to comply with the requirements of the Astoria Development Code and Astoria City Code.
 - a. Existing driveways shall be used for access whenever possible.
 - b. New parking areas shall, whenever feasible, be shared with subsequent Wireless Communication Service Facilities and/or other permitted uses."

<u>Finding</u>: No additional roads or parking areas are proposed. This standard does not apply.

- Q. Section 15.065.B.5, Color and Material states:
 - "a. All buildings, poles, antenna support structures, antennas, antenna arrays, and other associated components of each Wireless Communication Facility site shall be initially coated and thereafter recoated as necessary with a non-reflective neutral color in muted tones.
 - b. The color selected shall be one that will minimize visibility of the WCF to the greatest extent feasible. To this end, improvements which will be primarily viewed against soils, trees, or grasslands shall be coated with colors matching those landscapes, while elements which rise above the horizon shall be coated a color that matches the typical overcast sky (i.e. white, light gray, etc.) or background color at that location.
 - c. The color and coating shall be reviewed and approved by the Community Development Director or Astoria Planning Commission.
 - d. Upon a clear showing by the applicant that compliance with the requirements of this section would void a manufacturer's warranty on any specific equipment, or that natural aging of the material would provide greater concealment, the Community Development Director or Astoria Planning Commission may waive the requirements of this section for such specifically identified equipment."

<u>Finding</u>: The facility is proposed to be non-reflective, earth tone color behind a 6' tall chain link fence. It is proposed to be powder coated in a grey tone to blend with the sky. While the tower would be tall and have a sky backdrop, the equipment enclosure is close to the ground with the darker underbrush color. The equipment enclosure should be painted a natural darker color such as dark brown or forest green (Condition 6).

Equipment enclosure

- R. Section 15.065.B.6, Height, states that "in addition to the maximum structure height requirements of each Zone, Wireless Communication Service Facilities shall comply with the following height requirements:
 - a. WCF shall comply with the height limit of the underlying zone, unless a variance to the height limit of the underlying zone is approved.
 - b. If there is not a height limit in the underlying zone, the maximum height of a ground-mounted facility, including a monopole, shall be 45'.
 - c. In reviewing Variance requests to the above described height limits, the following shall be considered:
 - The proposed structure and facility uses concealment technology;
 and
 - 2) It is demonstrated that a greater height is required to provide the necessary service.
 - d. Building or other structure-mounted Wireless Communication Service Facilities shall not project more than ten (10) additional feet above the highest point on the existing building or structure and shall not project higher than the height requirements of the underlying zone, unless a variance to the height limit of the underlying zone is approved.
 - e. WCF shall not penetrate imaginary surfaces around the Astoria Airport as defined by the Oregon Department of Aviation, unless a waiver is granted pursuant to Oregon Revised Statutes."

Section 2.855, Height of Structures in the IN Zone, states that "No structure will exceed a height of 45 feet above grade."

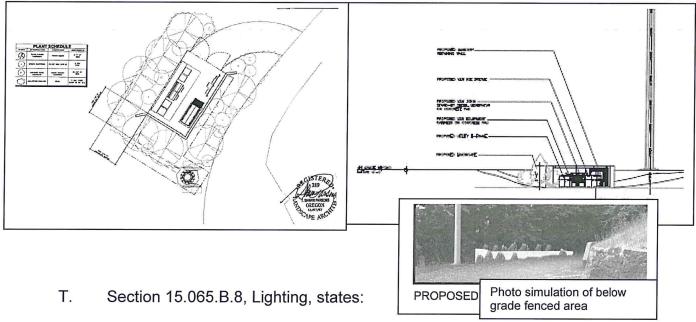
<u>Finding</u>: The facility is proposed to be 150' to meet the coverage needs of Verizon for the south area of Astoria. A Variance is required (Condition 4). The proposal has been reviewed and approved by FAA and OR Department of Aviation. The applicant has submitted a Variance application for the additional height which will be considered by the APC at the same meeting as the WCF review.

- S. Section 15.065.B.7, Landscape and Screening, states that "all Wireless Communication Service Facility sites shall be improved with existing native vegetation, suitable landscaping and/or fencing installed to screen the facility, where necessary. To this end, all of the following requirements shall be implemented for all Wireless Communication Service Facilities which are installed on antenna support structures:
 - a. A landscape plan, meeting the requirements of Development Code Sections 3.105 to 3.120, shall be submitted as part of the application.
 - b. Any proposed or required fenced area is to be surrounded, where feasible, by a landscaped strip of sufficient width and height to create a visual screen.
 - c. Planted vegetation shall be of the evergreen variety.
 - d. The landscape plan shall be subject to review and approval of the Community Development Director or Astoria Planning Commission.
 - e. The fence shall be a maximum of six (6) feet in height.

- f. The fenced area is to be surrounded by evergreen shrubs (or similar type of evergreen landscaping). Required landscaping shall be located outside of the fenced area.
- g. The fence shall, where feasible, be installed and maintained around the entire perimeter of the site and surround the WCF and the equipment shelter.
- h. If the Community Development Director determines that a fence surrounding antenna support structures located in a public right-of-way or adjacent to existing structures is not feasible, such structures may be exempted from the fencing requirements of this Section.
- i. Chain link fences shall be painted or coated with a non-reflective color.
- j. Electric, barbed wire, and concertina wire fences are prohibited."

Section 2.850, Landscaped Open Area in the IN Zone, states "A minimum of 10 percent of the total lot area will be maintained as a landscaped open area."

<u>Finding</u>: The proposed location is within the Shively Park forested area with mature natural screening. The applicant has submitted a landscape plan indicating additional landscaping to screen the site. A chain link fence will enclose the facility and will be a non-reflective earth tone color.



- "a. A Wireless Communication Service Facility shall only be illuminated as necessary to comply with FAA or other applicable State and Federal requirements. Documentation from such State and Federal agencies describing required compliance measures is required.
- b. Exterior lighting shall not glare onto adjacent properties.
- c. Strobe lights are prohibited.

<u>Finding</u>: FAA and ODA lighting requirements will need to be installed. The applicant shall keep tower lighting to the minimum required. No strobe lights are proposed and shall not be installed. The equipment building will have

downcast maintenance lighting on a timer. Light shall not glare into the Park picnic area and shall be kept to a minimum (Condition 5).

- U. Section 15.065.B.9, Setback, states:
 - "a. Antenna support structures, excluding those utility poles and similar structures which are located within the right-of-way, and excluding equipment enclosures, shall be located no closer to a structure on the subject property, or from the property line of the subject property, than a distance equal to the total height of the structure measured from finished grade, or the distance of "worst-case scenarios", as recommended in the FCC "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance" Guidebook, dated June 2, 2000, whichever is greater. However, utility poles and similar structures which are located within the right-of-way, and equipment enclosures are subject to recommendations in the FCC "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance" Guidebook, dated June 2, 2000.
 - b. All WCF equipment enclosures shall be set back from property lines according to the requirements of the Zone.
 - c. A setback requirement to a property line may be reduced, through Variance approval. A Variance to the setback requirement shall be in accordance with the requirements of Article 12, and the following additional criteria:
 - It shall be demonstrated that the location of the proposed facility will take advantage of an existing natural or artificial feature to conceal the facility or minimize its visual impacts."

Section 2.845, Yards in the IN Zone states "The minimum yard requirements in an IN Zone will be as follows:

- 1. The minimum front yard will be 20 feet.
- 2. The minimum side yard will be five (5) feet, except on corner lots, the side yard on the street side will be 15 feet.
- 3. The minimum rear yard will be 20 feet, except on corner lots, the rear yard will be five (5) feet."

<u>Finding</u>: The pole is not located adjacent to a right-of-way. Shively Park Road is a roadway within the Park and is not a dedicated right-of-way. The facility will be located within the larger Park boundary and will meet the required setbacks of the zone. The 150' tall pole will be approximately 90' from the north property line adjacent to County owned parcel to the north, and approximately 100' from the west property line adjacent to the Astoria School District property to the west. This property is undeveloped. A Variance is required from the 150' setback requirement (Condition 4).

V. Section 15.065.B.10, Signs, states that "the use of any portion of a Wireless Communication Service Facility for signs other than warning or equipment

information signs is prohibited. For emergency purposes, equipment information limited to the WCF provider(s) name and contact phone number shall appear at the facility in a discreet yet visible location, either on the equipment cabinet or supporting structure."

Finding: No new signs are proposed.

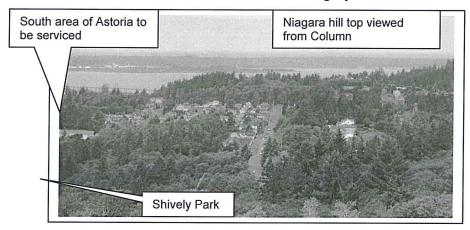
- W. Section 15.065.B.11, Storage, states:
 - "a. WCF storage facilities (i.e., vaults, equipment rooms, utilities, and equipment cabinets or enclosures) shall be constructed of non-reflective materials (exterior surfaces only) and shall be placed underground where feasible or be sited (i.e., depressed, or located behind earth berms) to minimize their profile.
 - b. WCF storage facilities shall be no taller than one story (15 feet) in height and shall be designed to look like a building or facility typically found in the surrounding area.
 - c. On-premises storage of material or equipment shall not be allowed other than that which is necessary to the use, operation, and maintenance of the WCF."

Finding: No material or equipment is proposed to be stored on the site.

- X. Section 11.030.A, Basic Conditional Use Standards, states that "Before a conditional use is approved, findings will be made that the use (except for housing development) will comply with the following standards:
 - "1. The use is appropriate at the proposed location. Several factors which should be considered in determining whether or not the use is appropriate include: accessibility for users (such as customers and employees); availability of similar existing uses; availability of other appropriately zoned sites; and the desirability of other suitably zoned sites for the use."

Finding: WCF locations require specific criteria to accommodate the technology. The site must be high enough to give the needed coverage to a large area and cannot have high, sight obscuring structures to interrupt the coverage line of sight. The applicant wants to increase the service to Astoria and specifically provide better service to the south area of the City. Coxcomb Hill and the Niagara Avenue hilltop are the only two locations that meet the technical needs of a WCF without the need for multiple intersecting locations. Due to the technical aspect of WCF industry, the City hired Converge Communications to assist with all negotiations and review of materials submitted by Verizon to help protect the City's best interest. The City worked with Converge Communications and Verizon to locate a suitable site to relocate the existing Coxcomb Hill facility. Several locations on Niagara Avenue hilltop were considered. However, after much analysis of the sites, it was determined that the

Shively Park location provided the best coverage with the least visual impact to the community. Other possible locations would have resulted in a 150' pole within a residential area with little natural vegetative screening and would not have provided the same level of service. While the proposed location is within a City Park, the site is at the back western corner of the Park and not highly visible. The location is appropriate.



"2. An adequate site layout will be used for transportation activities. Consideration should be given to the suitability of any access points, onsite drives, parking, loading and unloading areas, refuse collection and disposal points, sidewalks, bike paths, or other transportation facilities. Suitability, in part, should be determined by the potential impact of these facilities on safety, traffic flow and control, and emergency vehicle movements."

<u>Finding</u>: The site is secluded and accessible from Shively Park Road which is a gated roadway within the Park. The WCF will be unmanned with possibly one or two trips per month for maintenance purposes. With limited site visits, and the passive nature of the facility, the site does not pose any safety concerns and is suitable for the propose WCF.

"3. The use will not overburden water and sewer facilities, storm drainage, fire and police protection, or other utilities."

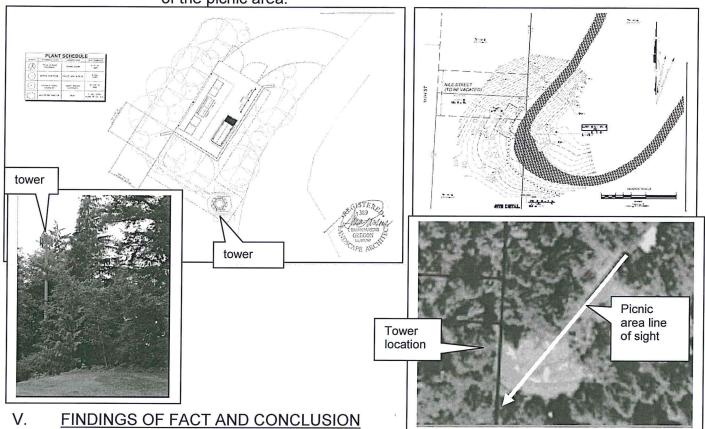
<u>Finding</u>: The facility will only need electricity and no other services. The WCF will not overburden the services.

"4. The topography, soils, and other physical characteristics of the site are appropriate for the use. Where determined by the City Engineer, an engineering or geologic study by a qualified individual may be required prior to construction."

<u>Finding</u>: The applicant has conducted engineering tests and core drillings on the site to verify that the site is capable of handling the facility. The site is not within 100' of a known geologic hazard area.

"5. The use contains an appropriate amount of landscaping, buffers, setbacks, berms or other separation from adjacent uses."

<u>Finding</u>: The exiting trees and proposed landscaping will serve as a natural buffering of the facility. The property completely surrounding the site is forested. The closest adjacent use is the Shively Park picnic area and the tower will be located to the side and not in the direct line of sight of the picnic area.



Based on the findings of fact above and those submitted with the application, the request meets the applicable review criteria. Staff recommends the Planning Commission approve the permit with the following conditions:

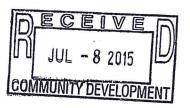
- 1. The applicant shall obtain all necessary City and building permits prior to construction.
- 2. Any interference to emergency communications shall be mitigated within 24 hours of notification of an agency to Verizon Wireless that there is interference to emergency communications.
- 3. The WCF at Astoria Column shall be removed by the applicant in accordance with the requirements listed in the lease agreement with the City.
- 4. The applicant shall obtain Variance approval for the height and setback of the facility.

- 5. All lighting shall be kept to a minimum and shall be downcast and not glare into adjacent properties or the Park picnic area.
- 6. The equipment buildings, chain link fence, and slats shall be painted a natural dark color such as dark brown or forest green.
- 7. A Knox Lock Box shall be secured to the fence with an access key provided in the event a fire or other type of emergency requires immediate access to Fire Department personnel. The final location of the secured Knox Box shall be determined by the Fire Chief upon a site visit and shall be installed prior to operation of the site.
- 8. The applicant shall replant trees buffering view of the facility should they be destroyed by any means during the life of the facility under the applicant's lease.



CITY OF ASTORIA Founded 1811 • Incorporated 1856





Pd. by Lycon Deposit: \$3,000.00

No. WCF_15-03

120 Days:

WIRELESS COMMUNICATION FACILITY APPLICATION
Property Location: Address: 1580 Shively Park Road, Astoria, OR 97103
in platted lots & Central Astoria & Central Astoria & Central Astoria & Lot Lots 1-8 Block 18 Subdivision neaded portion of
Map Tax Lot809170001200 Zone Institutional
Applicant Name: Verizon Wireless (VAW), LLC dba, Verizon Wireless
Mailing Address: _5430 NE 122nd Avenue, Portland, OR 97317
Phone: Business Phone: Email:
Property Owner's Name: <u>City of Astoria</u>
Mailing Address:1095 Duane Street, Astoria, OR 97103 Representative: Lexcom Development, Sharon Gretch, 541-515-8263, sharon.gretch@lexcomcorp.com Business Name (if applicable):
Signature of Applicant: 213 15
Signature of Applicant: Alal Option Signature of Property Owner: Date: 84/15 AK per 8/3/15 City Council
Existing Use: Park
Proposed Use: Unmanned Wireless Communication Facility Construct a 150 mah wireless Communication Facility SITE PLAN: A Site Plan depicting property lines and the location of all existing and proposed structures, parking, landscaping, and/or signs is required. The Plan must include distances to all property lines and dimensions of all structures, parking areas, and/or signs. Scaled free-hand drawings are acceptable.
FILING INFORMATION: Planning Commission meets on the fourth Tuesday of each month. Completed applications must be received by the 13th of the month to be on the next month's agenda. A Pre-Application meeting with the Associate Planner is required prior to acceptance of the application as complete. Only complete applications will be scheduled on the agenda. Your attendance at the Planning Commission meeting is recommended. The Community Development Director shall determine the classification and appropriate process for any application. Applicant shall submit three (3) copies of a complete application and plans; the fee; and other required information in accordance with Article 15.
Application Complete: 8/4/15 Permit Info Into D-Base: 8/17/15
Labels Prepared: 41/2/15 Tentative APC Meeting Date: