



## PLANNING COMMISSION

### Meeting Agenda

Monday, September 22, 2014

7:00 PM

City Council Chambers – 155 NW 2<sup>nd</sup> Avenue

Commissioner Tyler Smith (Chair)

Commissioner John Savory

Commissioner John Serlet

Commissioner (Vacant)

Commissioner Shawn Hensley

Commissioner Larry Boatright

Commissioner (Vacant)

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1. CALL TO ORDER

2. CITIZEN INPUT ON NON-AGENDA ITEMS

3. MINUTES

a. *Planning Commission Minutes, August 11, 2014*

4. PUBLIC HEARING

a. Consider a Site and Design Review & Conditional Use Permit from Verizon Wireless to construct a 100' Monopole with 12 – 8' panel antennas with the tip of antennas at a height of 104', ground equipment installed on a 22' x 3.5' concrete pad, with a 30kW backup generator installed on a 10' x 5' concrete pad, all within a 50' x 50' lease area surrounded by a secure chain link fence with screen slats topped with barbed wire at this unmanned site. **(DR 14-02/CUP 14-01)**

5. NEW BUSINESS

6. FINAL DECISIONS

***(Note: These are final, written versions of previous oral decisions. No public testimony.)***

7. ITEMS OF INTEREST/REPORT FROM STAFF

- a. *Next Regular Planning Commission meeting scheduled for Monday, October 13, 2014*
- b. *Copies of Text Amendments for Chapter 16 Planning & Development Code*
- c. *LUBA update*
- d. *Employee update*
- e. *Will the Planning Commission ever utilize large format hardcopy site plan drawings?*

8. ITEMS OF INTEREST/GUIDANCE FROM PLANNING COMMISSION

9. ADJOURNMENT

*The meeting location is accessible to persons with disabilities. A request for an interpreter for the hearing impaired or for other accommodations for person with disabilities should be made at least 48 hours before the meeting at 503-266-7001.*

*A copy of this agenda can be found on the City's web page at [www.ci.canby.or.us](http://www.ci.canby.or.us) City Council and Planning Commission Meetings are broadcast live and can be viewed on OCTS Channel 5. For a schedule of the playback times, please call 503-263-6287.*

## PUBLIC HEARING FORMAT

The public hearing will be conducted as follows:

- **STAFF REPORT**
- **QUESTIONS** (If any, by the Planning Commission or staff)
- **OPEN PUBLIC HEARING FOR TESTIMONY:**
  - APPLICANT** (Not more than 15 minutes)
  - PROPONENTS** (Persons in favor of application) (Not more than 5 minutes per person)
  - OPPONENTS** (Persons opposed to application) (Not more than 5 minutes per person)
  - NEUTRAL** (Persons with no opinion) (Not more than 5 minutes per person)
  - REBUTTAL** (By applicant, not more than 10 minutes)
- **CLOSE PUBLIC HEARING** (No further public testimony allowed)
- **QUESTIONS** (If any by the Planning Commission)
- **DISCUSSION** (By the Planning Commission)
- **DECISION** (By the Planning Commission)

All interested persons in attendance shall be heard on the matter. If you wish to testify on this matter, please step forward when the Chair calls for Proponents if you favor the application; or Opponents if you are opposed to the application; to the microphone, state your name address, and interest in the matter. You will also need to sign the Testimony sheet at the microphone with your name and address. You may be limited by time for your statement, depending upon how many people wish to testify.

**EVERYONE PRESENT IS ENCOURAGED TO TESTIFY, EVEN IF IT IS ONLY TO CONCUR WITH PREVIOUS TESTIMONY.** All questions must be directed through the Chair. Any evidence to be considered must be submitted to the hearing body for public access.

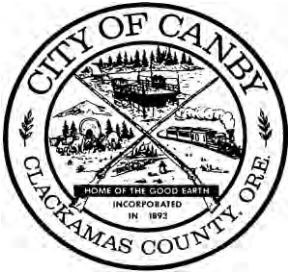
Testimony and evidence must be directed toward the applicable criteria listed on the wall.

Failure to raise an issue accompanied by statements or evidence sufficient to afford the decision-maker and interested parties an opportunity to respond to the issue, may preclude appeal to the City Council and the Land Use Board of Appeals based on that issue.

Failure of the applicant to raise constitutional or other issues relating to proposed conditions of approval with sufficient specificity to allow the local government to respond to the issue may preclude an action for damages in circuit court.

Before the conclusion of the initial evidentiary hearing, any participant may ask the hearings body for an opportunity to present additional relevant evidence or testimony that is within the scope of the hearing. The Planning Commission shall grant such requests by continuing the public hearing or leaving the record open for additional written evidence or testimony. Any such continuance of extension shall be subject to the limitations of the 120-day rule, unless the continuance or extension is requested or agreed to by the applicant.

If additional documents or evidence are provided by any party, the Planning Commission may, if requested, allow a continuance or leave the record open to allow the parties a reasonable opportunity to respond. Any such continuance or extension of the record requested by an applicant shall result in a corresponding extension of the 120-day time period.



**MINUTES**  
**PLANNING COMMISSION**  
August 11, 2014 7:00 PM  
City Council Chambers – 155 NW 2<sup>nd</sup> Avenue

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**PRESENT:** Commissioners Shawn Hensley, John Savory, John Serlet, and Larry Boatright

**ABSENT:** Chair Tyler Smith

**STAFF:** Bryan Brown, Planning Director, and Laney Fouse, Planning Staff

**OTHERS:** Ed Netter, Pat Sisul, Gordon Root, and Ken Rider - Council Liaison

**1. CALL TO ORDER**

Vice Chair Savory called the meeting to order at 7:00 pm.

**2. CITIZEN INPUT ON NON-AGENDA ITEMS** – None.

**3. MINUTES**

- a. *Planning Commission Minutes, July 14, 2014*

**Motion:** *A motion was made by Commissioner Serlet and seconded by Commissioner Hensley to approve the July 14, 2014 Planning Commission minutes as written. Motion passed 4/0.*

**4. PUBLIC HEARING**

- a. *Consider a request from Ed Netter for approval of a Minor Partition application proposing to partition three existing lots by splitting each equally to result in six lots suitable for single family attached homes in a R-2 zoned district located at 462 & 480 SW 3rd Avenue (MLP 14-01).*

Vice Chair Savory read the Public Hearing format and opened the public hearing.

Bryan Brown, Planning Director, entered the staff report into the record. This was an application for a minor lot partition for three existing lots with access on SW Third Avenue. There were previous homes on two of the lots that had been removed quite some time ago and existing homes in the area. The street had recently been overlaid, and the City would decide what degree they would allow cuts into the new street surface for the connections that might be necessary. The lots were approximately the same size and the idea was to divide each lot in half and place town homes on each tax lot. The town homes would have driveways and single car garages for parking. The existing street width was 32 feet, and the new City standard is 34 feet. Because of that, it would be narrower for on street parallel parking and two way traffic which would still function but contributing to traffic calming because of the narrowness. He did not think widening the street in front of these lots should be required since we would be unlikely to ever widen the remaining portions of this street. Sidewalks were required to meet the six foot wide City standard and two feet of the sidewalk would be placed on the private property. The applicant would be dedicating a sidewalk easement to cover that

additional sidewalk width. Staff did not receive a response from the utility companies and the applicant would continue to check with each utility to make sure a 12 foot public utility easement was needed. The general lot width/depth ratio was not met, however staff was not concerned as the lots only slightly exceeded the ratio and there were no adverse impacts. There was a question whether a parallel parking restriction adjacent to the partition was needed. He did not think there would be much room for parallel parking as the driveways were close together. Staff found the application conformed to the review criteria and recommended approval with conditions. A citizen who lived nearby submitted written comments explaining her concern that the application would add congestion and through increased traffic and parking on the street.

**Applicant:**

Ed Netter, applicant, said he was trying to take the already R-2 zoned lots and divide them in half to build individual sellable town homes that would be attached. He talked to the utility providers and they did not have an issue with the public utility easement. The utilities would be underground. He discussed where the on street parking was located. He was following the Code for the R-2 zone.

**There was no proponent, opponent, or neutral testimony.**

Vice Chair Savory closed the public hearing.

**Commissioner Deliberation:**

Commissioner Hensley confirmed the 12 foot easement was in the conditions.

**Motion:** *A motion was made by Commissioner Hensley and seconded by Commissioner Serlet to approve MLP 14-01 as written. Motion passed 4/0.*

- b. *Consider a request from Stafford Land Company for approval of a Subdivision application proposing a 4.47 acre residential subdivision consisting of 19 lots in an R-1 zoned district located at 1732 N Pine Street (SUB 14-04)*

Vice Chair Savory read the Public Hearing format and opened the public hearing.

Mr. Brown entered the staff report into the record. This was an application for a 19 lot subdivision on N Pine Street. The lot to the south was part of an annexation that would be on the November ballot. There was R-1.5 zoned property nearby, but the majority was R-1. This property would be developed as R-1. He explained the proposed layout of the subdivision. All but one lot had the sidewalks completely in the public right of way and the streets were proposed to be 34 feet wide which was the City standard. The applicant held a neighborhood meeting, and the width of the streets was one of the topics discussed and they came to an agreement for the 34 feet. When the property was annexed in 2009, the property had to enter into a Development Agreement which included continuing an extension of NE 17<sup>th</sup> Avenue. He explained how it would be aligned and the shadow plat that had been submitted by the applicant which showed how the property to the west might continue 17<sup>th</sup> Avenue. Regarding Plum Court, the applicant proposed on the west side to have planter strips except on Lot 13. In order to get every sidewalk to fit within the public right of way, Lot 13 would have a curb tight sidewalk and all the others would have a planter strip. Because of that, the pattern of street trees would continue and for Lot 13, there was a condition for a tree easement on the private property to plant a street tree. An alternative would be to move the sidewalk and put in a planter strip which would move the sidewalk in a sidewalk easement on private property and the street tree back in the right of way with a planter strip. The applicant preferred putting the

tree on the private property and leaving the sidewalk in the public right of way and that was how the condition was written. There was a pedestrian easement to the Logging Road Trail which was on Lot 11 which could result in issues with who would put in the fencing. It needed to be either a chain link fence or a screening fence that needed to be set back from the boundaries of the easement. Whatever fencing was done needed to be done in compliance with the ordinance requirement. Staff thought the application conformed to the review criteria and recommended approval with conditions. He discussed a written comment received wanting to preserve the deer and trees on the property, although it could not be done with the development. A traffic report was done in 2009 and said the additional 19 lots would have no significant impact on the local streets. There was a piped storm water system for the entire subdivision – public and private property.

**Applicant:**

Pat Sisul of Sisul Engineering was representing the applicant. He described the site and surrounding area. He discussed the location of 17<sup>th</sup> Avenue. Although the Development Agreement said 17<sup>th</sup> should be generally in a straight alignment, it deviated a little bit in order to meet the maximum 600 foot spacing from another intersection. The area was low density residential. He explained the existing conditions of the site and the layout of the subdivision with 17<sup>th</sup> Avenue in the middle of the property and lots on both sides. The lots would be an average of 8,500 to 9,000 square feet and were at the minimum width of 60 feet. The pedestrian walkway would be a connection to the Logging Road Trail and would also serve as a utility corridor. It would be 15 feet wide so the sanitary sewer vactor truck could drive there to vactor out the manhole. He discussed the shadow plat and how the property to the west could potentially develop. A street could be put down the middle of that site to generally align with 17<sup>th</sup> Avenue. Oak Street would probably not be a straight alignment and the shadow plat showed what he thought was the best option for connecting Oak. The shadow plat showed that where they had 17<sup>th</sup> Avenue worked for the off-site property and did not preclude them from being able to come up with a development. There was public water stubbed near the site which could be extended through Pine and the development. The storm drain plan was part of the N Redwood Advanced Financing District and there were two alternatives. The preferred route was to cross the Logging Road Trail and come up on the west side of the property that was to be annexed. If the timing did not work out, there was an alternative to the plan. Sanitary sewer would come from the Logging Road Trail and up to Pine Street and would be able to be extended in the future. He explained the grading and profile of what 17<sup>th</sup> would like. The application proposed all of the sidewalks to be in the public right of way and not on private property. 17<sup>th</sup> Avenue would be a 57 foot right of way, 34 feet of paved street, 6 inch curbs, 4.5 foot planter strips, 6 foot sidewalks, and an extra six inches behind the sidewalk on either side. Plum Court would also be 34 feet wide to accommodate the neighborhood request, however there was some lot size limitations on the east side of the street between Plum Court and the Logging Road Trail. The proposal was for that section of road to make the sidewalk curb tight with street trees on the back side. The opposite side of the street would have a planter strip and six foot sidewalk. It was not out of character with the area and would meet the requirement to have all of the public sidewalks in the public right of way. The pedestrian access way would be 15 feet paved with removable bollards.

Gordon Root addressed the connectivity of the site. All of the utilities connected to the site and they were planning for the future development of the surrounding properties. Regarding Plum Court, he thought the middle of the annexation property would be a good place to have the transition point from 36 feet to 34 feet. He explained how it would function as a hammerhead turn around for emergency vehicles until the annexed property was developed. He thought the street trees behind the public sidewalk was a good option and was done in other jurisdictions. The fencing along the trail connection would be put in by the developer. He anticipated it would be a six foot black chain link fence. It would be a 15 foot paved trail capable of maintaining the weight of city vehicles.

They anticipated building all of the homes themselves. The berms were 144.5 feet deep and he proposed moving the berms and trees north to provide some privacy from the multi-family development nearby. He explained where the fire hydrants would likely be located.

**There was no proponent, opponent, or neutral testimony.**

Vice Chair Savory closed the public hearing.

**Commissioner Deliberation:**

Commissioner Hensley commended the applicant for putting the sidewalks in the public right of way. Commissioner Serlet commended the applicant for reusing the materials for the berms.

**Motion:** *A motion was made by Commissioner Serlet and seconded by Commissioner Boatright to approve SUB 14-04 as written. Motion passed 4/0.*

**5. NEW BUSINESS – None.**

**6. FINAL DECISIONS**

*(Note: These are final, written versions of previous oral decisions. No public testimony.)*

a. **Beck (SUB 14-04)**

**Motion:** *A motion was made by Commissioner Hensley and seconded by Commissioner Serlet to approve the final findings for SUB 14-04 as written. Motion passed 4/0.*

b. **Netter (MLP 14-01)**

**Motion:** *A motion was made by Commissioner Hensley and seconded by Commissioner Serlet to approve the final findings for MLP 14-01 as written. Motion passed 4/0.*

**7. ITEMS OF INTEREST/REPORT FROM STAFF**

a. *Next Regular Planning Commission meeting scheduled for Monday, August 25, 2014.*

Mr. Brown announced the City won the second LUBA appeal case regarding the City Council's approval of the Fred Meyer fuel station application. They were waiting to see if that decision would be appealed. Currently there was nothing planned for the August 25 agenda and the meeting would likely be canceled.

**8. ITEMS OF INTEREST/GUIDANCE FROM PLANNING COMMISSION – None.**

**9. ADJOURNMENT**

**Motion:** *Commissioner Hensley made a motion to adjourn; Commissioner Boatright seconded the motion. Motion passed 4/0. Meeting was adjourned at 8:30 pm.*

The undersigned certify the August 11, 2014 Planning Commission minutes were presented to and **APPROVED** by the Planning Commission of the City of Canby.

**DATED** this 22<sup>nd</sup> day of September, 2014

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Bryan Brown, Planning Director

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Laney Fouse, Minutes Taker

Assisted with Preparation of Minutes – Susan Wood







# City of Canby

## SITE AND DESIGN REVIEW STAFF REPORT

FILE #: DR 14-02/CUP 14-01

Prepared for the September 22, 2014 Planning Commission Meeting

**LOCATION:** 505 N. Baker Dr.

**TAX LOT:** 31E32DC00200 (Bordered in map below)



**LOT SIZE:** 2.88 acres

**ZONING:** M-1 Light Industrial

**OWNER:** Ward Baker Properties LLC

**APPLICANT:** Verizon Wireless/Jim Jagers

**APPLICATION TYPE:** Site & Design Review/Conditional Use Permit (Type III)

**CITY FILE NUMBER:** DR/CUP 14-02

### I. **PROJECT OVERVIEW & EXISTING CONDITIONS**

Statement from the applicant's narrative:

*"Applicant proposes to construct a 100' monopole with 12- 8' panel antennas  
With tip of antennas at 104' height, ground equipment installed on a 22 'x3.5'  
Concrete pad, with a 30 kW backup generator installed on a 10' x 5' concrete pad, all*

*within a 50'x50' lease area surrounded by a secure chain link fence with screening slats topped with barb wire at this unmanned site.*" This is an unmanned facility with restricted access to equipment which is not open to the public and will be used for the transmission of radio signals for the purpose of providing public cellular service. This telephone equipment facility will be serviced by Verizon Wireless employee service personnel for repair purposes. No potable water is to be supplied at site. No waste water or solid waste will be generated at this location. One maintenance crew visit (1 man typical) per month for 1 hour is typical for this kind of facility.

The total lot area is 2.87 acres, with the project lease area consisting of 2,500 sf in the southeast corner of the property adjacent to N. Baker Drive –the source of direct access. The tower is 100' tall and total height with attached antennae is 104 feet. The site is located in the Baker Drive Industrial Park referred by Record Survey PS-16687 in records of Clackamas County.

The proposed monopole cell tower will be located in the center of a 50 X 50 foot lease area. The tower scales to be approximately 25 feet from the N Baker Drive property line and similar distance from the adjacent property line to the south. There is an existing curb tight sidewalk along the site property and an existing gate about 15 feet north of the proposed lease area which is proposed to be removed. The majority of the lease site is currently gravel, with some existing concrete to be removed and grass near the south property line to remain where an existing pad mounted electric transformer is located. Impervious surface within the lease site will actually be reduced from existing conditions.

The total site property has 363.62' of frontage on N Baker Drive. This places the monopole approximately 338' from the nearest residentially zoned property and 350' from the home on that property. The next nearest residential zoned property appears to be approximately 600 foot distance. All remaining residentially zoned property is beyond the 660 foot distance restriction that imposes the conditional use permit rather than the WCF being subject to just obtaining a building and electrical building permits.

The City Code development review process calls for cell towers less than 150 feet in height, with setback at least 660 feet from land planned for or zoned for residential use and located on a preferred industrial zoned site to need only building and electrical permits. The proposed application is within 660 foot distance from land planned for or zoned for residential use, thus by CMC 16.08.120(C)(2)c the request requires the addition of Site and Design Review when the monopole and attached antennae are under 100 feet in height. Since the total proposed monopole and attached antennae is 104 feet; the addition of a Conditional Use Permit application is imposed.

The proposed cell tower shall obtain a building permit prior to its erection. They will be required to obtain a Canby Erosion Control Permit when applying. The proposed cell tower will be designed to meet Oregon Structural Specialty Code wind load requirements. The applicant shall fill out a Canby public works department Street Opening Permit prior to commencing boring of N Baker Drive to install telephone and electric service. The monopole is being designed, at staff's request, to provide the capacity to hold two additional carriers antennae. Staff has determined that no system development charges will be applicable as the equipment cabinets are not actual buildings and demand on storm, sanitary sewer, water,

parks and transportation systems will be non-existent. With the approval of relevant conditions of approval; these required application processing steps will be met.

## **II. ATTACHMENTS**

- A.** Cover Letter from Jim Jagger dated 3.18.14, Application forms, associated materials, zoning compliance narrative prepared by Jim Jagger dated 3.14.2014
- B.** Application Exhibits:
  - a. Exhibit A: Draft Lease Agreement dated 5.16.14
  - b. Exhibit B: RF Propagation Maps for site "POR Barlow"
  - c. Exhibit C: Drawings, numbered T-1—T-2, C-1, A-1—A-6, L-1—L-2, S-1—S-2, E-1—E-9, dated 8.7.13
  - d. Exhibit D: RF Emission's Engineering Certification Compliance Report by Hatfield & Dawson/Letter from David J. Pinion, P.E. dated 1.28.14
  - e. Exhibit E: TOWAIR Determination Results and letter from the Oregon Department of Aviation dated 2.19.14
  - f. Exhibit F: Monopole Tower Photo Simulations
  - g. Exhibit G: RF Engineer's Letter of Explanation from John Dassan, RF Engineer, dated 2.21.14
- C.** Lithonia Lighting OLW Outdoor LED Wall Pack spec sheet
- D.** Completeness Response Letter from Jim Jagger dated 6.18.14
- E.** Completeness Response Letter from Morrison Hershfield dated 6.2.14
- F.** FCC Reference Radio Station Authorizations
- G.** Tower Removal Bond dated 6.12.14
- H.** Neighborhood meeting minute letter dated 3.10.14 and sign-in sheet for meeting held on 2.25.14
- I.** Citizen and agency comments
- J.** Other supporting materials submitted with the application

## **III. MAJOR ISSUES FOR PLANNING COMMISSION CONSIDERATION**

The following is a list of major topics associated with this application that may justify further discussion/comment by the Planning Commission to use as a basis to apply conditions of approval if deemed suitable:

- A.** Landscaping Plan. Staff has determined that at least 15% of the 2500 sf of lease area will be retained or provided as either grassed green space or landscaping screening buffer. There is a note on Sheet A-1 that indicates 50% of the leased area will be landscape area. The proposed landscape plan provides 245 of the needed 375 sf of landscape area with intended screening plant materials just inside the security fencing on either side of a new 12' wide gate opening. In addition, one-fourth or more of the southern half of the lease area (about 500 to 600 sf) will remain in grass, only interrupted by the emergency generator and the existing electric transformer. This internal surfacing should be confirmed, as it is not clearly labeled on the landscape plan, just stated with a note. Between the existing grass and proposed landscape buffer area the required 15% site landscaping will be met. The landscape buffering of the ground components of the wireless communications facility (WCF) from the road will be somewhat hampered by the lack of plant materials behind the access gate opening to the street. However, the

screening slates proposed within the fencing and gate may provide adequate screening from the street. The landscape plan does not specify what actual plant materials are proposed, but does indicate they should provide a screening barrier within 5-years. Staff recommends a condition of approval that the applicant submit a contract ready detail landscape plan with the actual species specific listing of the type, number, size and location of the plant material within the landscape buffer area subject to approval by the Planning Director. With the recommended condition of approval this criterion is considered met.

- B. RF Engineer's Explanation of Need for Cell Tower. The proposed Verizon Wireless monopole tower and antennae's are intended to improve voice and data capacity for customers in west and southwest Canby, along 99E and South Ivy and in much of the rural area toward Barlow & Aurora up to the Pudding River boundary. Verizon's study of existing WCF in the area concluded there was no existing structure nearby suitable for co-location that would adequately meet the capacity improvement objectives they require to serve their customers. The 6 propagation Maps included as Exhibit B with the applicant's submittal show the existing network coverage and how it is improved with the new proposed WCF. Exhibit I shows the "capacity improvement objective" highlighted in yellow. Exhibit II shows the existing network coverage without the new POR Barlow facility and the dotted circle depicts the area with capacity issues. The purple, blue, and green on the maps represents high RF signal strength, while yellow means moderate signal strength, and red areas are poor quality signal areas with white space depicting no signal at all. Exhibit III & IV show signal strength with POR Barlow facility in operation improving to obtain high to moderate signal strength in the entire "capacity improvement coverage objective area". Exhibit V & VI depict how POR Barlow will be integrated into Verizon's nearby cell tower network. This tower helps assure continuity of calls or handoff from nearby towers in Wilsonville and Aurora.

A proposed cell tower and antennae height of less than 100 feet would eliminate the requirement for the requested conditional use permit. Staff's assumption is that lowering the tower and attached antennae by 5 feet would result in a reduction in the "capacity improvement objective" that Verizon was not willing to make. Staff accepts the presented information as adequate justification for the need for a new cell tower in the general area, and as meeting related code criterion. Staff is not certain if lowering the cell tower height by 5 feet would significantly harm the applicant's "capacity improvement objective" or if doing so would present any meaningful advantage in terms of lessening impact of the tower on nearby properties or residential areas.

- C. Nearby Airport Flight Safety. The applicant supplied a TOWAIR analysis and written notice from the Oregon Department of Aviation indicating that the height of the cell tower poses no safety concern related to the landing and takeoff flight paths at the nearby Aurora State Airport. The TOWAIR is the Federal Communications Commission's software program used by tower companies to make sure the flying public will be safe from the structures erected near airports. The FCC does not require each antenna structure to be registered, only

those which are determined to exceed in height an imaginary line that runs outward and upward from the nearest point of the nearest runway. The TOWAIR is a landing slope facility calculator which allows antenna structure owners to determine whether their structures are close enough to an airport to require an aeronautical study by the Federal Aviation Administration (FAA) and FCC registration.

Air safety can only be ensured if the regulations contained in FAA CFR Title 14, FAA Part 77 and CFR Title 47, and FCC Part 17 are followed. It has been determined through research by specialists that there are certain aspects of airport surfaces contained in CFR Part 77 which TOWAIR does not fully evaluate. The area considered in a TOWAIR study goes for a maximum distance of 20,000 feet from the closest landing surface at public use airports. TOWAIR's findings are not considered to be definitive or a guarantee that all safety requirements are met but is the most widely used tool to assist tower companies in exercising flight safety due diligence. The TOWAIR study for the proposed Verizon POR Barlow cell tower indicates the nearest public airport is Aurora State Airport which is 16,125 feet away and that the proposed monopole tower is 91.8 feet below the calculated slope restriction area. The findings of the TOWAIR study is backed up by written notice from the Oregon Department of Aviation which conducted an aeronautical study of the proposed tower and has also determined that notice to the FAA is not required and does not exceed the Obstruction Standards of OAR 738-70-0100. They also indicated that marking and lighting are not necessary for aviation safety. The applicant has noted that no lighting is planned with this tower. In fact, input garnered from the neighborhood meeting held indicated a preference that the tower not be lighted. Staff considers the related code criterion satisfied.

- D. Tower Removal Bond. In accordance with CMC 16.08.120(E)(1)(a) a bond in the amount of \$50,000 has been submitted, naming the City of Canby subject to receiving payment for removal of the telecommunications facilities from the property if Verizon Wireless does not do so on its own as obligated by the terms of the bond within 90 days of discontinuance of service. The bond serves as security for performance of Verizon's obligation to remove the facilities. It stays in effect until Verizon's obligation is performed. The surety is provided by Westchester Fire Insurance Company, MA. The bond was signed and sealed on June 12, 2014 and is now in effect. This code criterion is met.
- E. Option and Land Lease Agreement. A yet to be executed copy of the Land Lease Agreement has been submitted with the application as required by code. It specifically describes the leasing of a 50 X 50 foot parcel containing 2,500 sf with a non-exclusive right for ingress and egress 7 days a week, 24 hours a day along a 15' foot wide ROW extending from the nearest public ROW (N. Baker Drive) to the lease area. The option is valid up to 12 months from the date of the Land Lease Agreement. Provision #14 of the agreement satisfies CMC 16.08.120(E)(1)(a) that the agreement also include Verizon's obligation to remove "facilities" within 90 days of discontinuance of service. Staff is satisfied that code criterion is satisfied.

- F. Radio Frequency Emission. The proposed Verizon facility will comply with all FCC standards for radio frequency emission, including public exposure to radio frequency electromagnetic fields and radiofrequency interference based on the submittal by Verizon's radio frequency engineer. The applicant has indicated that the RF interaction of the Verizon WCF is expected to be low enough to preclude the likelihood of localized interference to the reception of any other communications. They indicated in the lease agreement that they would address any unlikely problems that might arise for the business located on the lease site property. Direct public access to the Verizon antennae's shall be positively restricted. This has been done through provision of a 6' tall chain link fence with screening slats and barb wire strands around the top and warning signage. Non-building mounted antennas greater than 33 feet above ground level are considered to be "categorically excluded" from the exposure requirement.
- G. Greater Setback from N Baker Drive. Concern was raised at the neighborhood meeting about the visibility of the cell tower due to its location so close to Baker Drive. This location on the subject property is more visible to daily traffic and people coming and going along N Baker Drive than if moved to the southwest corner of the property. There are likely a variety of reasons for Verizon's choice of the location of the lease area on the subject property, the most important being the property owner's preference. The chosen location does appear to result in the least disruption to the remaining property by offering direct access from N Baker Drive from a lease gate. The cell tower itself is setback approximately 25 feet from the edge of the public right-of-way and from the adjacent property line to the south. The M-1 zone has no predetermined setback requirement for buildings or cell towers. Because of the overall 104' height of the tower and antennae it would need to be moved nearly to the back of the property to make a significant difference in its visibility. Moving the cell tower to the back southeast corner of the property would slightly increase the distance to the nearest homes as well. It is not known if the property owner would agree to another lease area on their property or not. The visibility of the tower adjacent to N Baker Drive is primarily an aesthetic sensibility which the Planning Commission has authority to address through defining and mitigating compatibility factors applicable through the Conditional Use Permit. Some concern was voiced about the possible threat of transport trucks which frequent N Baker Drive accidentally running into the tower. This certainly would be a serious problem, but is not any more likely to happen than cars or trucks running into cell towers in many other locations that front public roadways or into building or houses as well. The security fencing serves as the first defense against such a possibility. This concern might be addressed with the placement of bollards at the base of the tower. Without any specific standard to go by for setback for a cell tower, other than what is normally applied to buildings within the applicable zone, staff has not suggested a more suitable setback at this time.

**IV. APPLICABLE CRITERIA & FINDINGS**

Major approval criteria used in evaluating this application are the following Chapters from the *City of Canby's Land Development and Planning Ordinance* (Zoning Code):

- Chapter 16.08 General Provisions
- Chapter 16.10 Off Street Parking & Loading
- Chapter 16.32 M-1 Light Industrial Zone
- Chapter 16.42 Signs
- Chapter 16.43 Outdoor Lighting Standards
- Chapter 16.46 Access Limitations on Project Density
- Chapter 16.49 Site & Design Review
- Chapter 16.50 Conditional Uses
- Chapter 16.89 Application & Review Procedures
- Chapter 16.120 Parks, Open Space, & Recreation Land

Applicable code criteria are highlighted below in **gray**, with findings and discussion after the citations; most full code citations are omitted for brevity. If not discussed below, other standards from the code are either met fully, not applicable, and/or do not warrant discussion. Most met provisions have no discussion for brevity.

## ***Chapter 16.08 General Provisions***

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### **16.08.090 (A) Sidewalks required**

**Findings:** There is an existing ~5ft sidewalk; no new sidewalks are proposed or are being required.

### **16.08.110 Fences**

- A.** Fences not more than three and one-half feet in height may be constructed within the street setbacks of any R-1, R-1.5, R-2 or C-1 zone. Fences not more than six feet in height may be constructed in any interior yard, rear yard, or street yard along an alley; provided, however, that in no case shall a fence be constructed in violation of the requirements of a vision clearance area.
- E.** The Planning Commission may require sight-blocking or noise mitigating fences for any development it reviews.
- F.** The Planning Commission may require fences of up to eight feet in height for any development in C-2, C--M, M-1 or M-2, or Planned Unit Development zones.

**Findings:** A 6' chain link fence with screening slats and barbed wire is proposed along the west and north boundaries of the lease area. The existing 6' barbed wire fence is proposed to remain along Baker (eastern boundary). No fencing is proposed along the southern border because it abuts the adjacent building. If the barbed wire on the fencing is included the, fencing will measure approximately 7-8 feet in height.

Section 8.12.080, Fences, of the Municipal Code states: "No person may construct or maintain a barbed-wire fence or allow barbed wire to remain as a part of a fence along a sidewalk or public way, unless the wire is placed not less than 6 inches above the top of a board or picket fence which is not less than 6 feet high." The proposed fencing will meet this standard.

The applicant's narrative states that slatted fencing is proposed, however it is unclear from the drawings what color and what portions of the fencing is proposed to be slatted. Staff would like Planning Commission input on the desired color for the screening slats and to confirm that slats are needed both along the eastern boundary and north boundary of the lease site.

**16.08.120 Siting and review process for Wireless Telecommunications Systems Facilities.**

- A.** The purpose of this section is to provide standards and review process for wireless telecommunications systems facilities locating within the City of Canby. This purpose shall be realized by implementing new provisions of the Canby Land Development and Planning Ordinance that will:
1. Regulate the placement, appearance and number of wireless telecommunications systems facilities;
  2. Ensure that the citizens of Canby will have access to a variety of wireless telecommunications systems and providers;
  3. Reduce the visual impact of certain wireless telecommunications systems facilities by encouraging collocation;
  4. Establish a graduated system of review that will expedite facilities placement in preferred locations; and
  5. Implement the applicable provision of the Federal Telecommunications Act of 1996.

**Findings:** The Planning Commission shall consider the above when evaluating this application.

- B.** The siting and review process for WTS facilities is based on the type of facility (lattice, monopole, attached, stealth design or collocation) and its proposed location in a Preferred Site (M-1 or M-2 zoning districts), Acceptable Site (C-2 or C-M zoning districts), or Conditionally Suitable Site (C-R, C-C or C-1 zoning districts).
- C.** The development review process for wireless telecommunications systems (WTS) facilities shall be as follows:
3. Building and Electrical Permits, Site and Design Review (16.49), and Conditional Use Permit (16.50):
    - a. A detached WTS facility (monopole), including equipment shelters, buildings and cabinets housing WTS land line switching/connection equipment, on a Preferred Site, within 660 feet from Highway 99E or land either planned or zoned for residential use, and equal to or over 100 feet in height, including antennas.

**Findings:** The proposed WTS facility is in the “preferred” M-1 Zone but is less than 660ft from a residential zone. The distance from the residential zone imposes Site and Design Review requirement. The proposed tower is approximately 104ft when including the antennas. A height over 100 feet when also less than 660 feet from a residential zone imposes a Conditional Use Permit application as well.

3. All WTS facilities shall observe minimum lot size, lot coverage, building height and building setback requirements of the underlying zoning district unless specifically exempted or otherwise regulated by this section. Underground facilities may encroach upon required yards or may be placed in appropriate easements.

**Findings:** All M-1 minimum lot size, lot coverage, building height, and building setback requirements are met.

4. All detached WTS facilities shall be landscaped at the base of the towers/poles, and completely around the equipment shelters. The landscaping shall conform to the ODOT standards for plant size and spacing.



**Findings:** Two landscaped areas are proposed abutting Baker, with a gap to accommodate the gate. No landscaping is proposed to the north nor the west of the lease area. Landscaping may be desirable along the northern fence line because this area is likely visible from the street. The above reference to ODOT standards is a needed code edit clarification or omission; it is unclear what standards ODOT has for plant size and spacing and how they apply to WTS facilities.

5. Lighting for all WTS facilities shall be as required by the FAA or recommended by ODOT Aeronautics Division. All other lighting must be deflected away from adjoining property.

**Findings:** The submitted lighting spec sheet indicated that 90 degree "full cutoff" lights are proposed, which likely deflect light away from adjoining properties.

Per the letter from the Oregon Department of Aviation dated 2/19/14, FAA lighting is not required, and a request obtained from the neighborhood meeting desired that the cell tower not be lighted.

6. All detached WTS facilities shall be screened from the public right-of-way and abutting property by a security fence or wall at least 6 feet in height consisting of chain link fencing with vinyl slats, solid wood fencing, concrete masonry unit block, or brick.
8. Equipment shelters, buildings and cabinets housing radio electronics equipment shall be concealed, camouflaged or placed underground.

**Findings:** The applicant's narrative states that slatted fencing is proposed, however it is unclear from the drawings what color and what portions of the fencing is proposed to be slatted. There is some landscaping along Baker proposed but the species of trees/bushes are not indicated on the landscaping plan, therefore mature growth and screening appearance is unknown. In addition, the landscaping notes on drawing L-1 state that a row of evergreen trees or shrubs from 4'-5' shall be established, however the landscaping plan does not specifically show where trees and shrubs are proposed and how much of a screen it would create. Staff would like Planning Commission input on the desired type of fencing/screening for which the Planning Director could approve a contract ready landscape plan submittal as a condition of approval.

9. Any WTS facility sited on or designed with any of the following attributes shall first receive FCC approval, as specified in FCC Rules 1.1301 - 1.1319, as a condition of city approval prior to construction; Wilderness Area; Wildlife Preserve; Endangered Species; Historical Site; Indian Religious Site; Flood Plain; Wetlands; High Intensity White lights in residential neighborhoods; Excessive radio frequency radiation exposure.

**Findings:** This proposal is likely not on a site with the above attributes, but staff has little way of verifying this. The radio frequency engineer submittal addresses compliance with radio frequency radiation exposure. It is standard practice for cell tower companies to contact the State Historic Preservation Office to assure historic resources are not harmed. No lights are proposed for the tower. The property is not subject to the 100-year floodplain. The other issues are beyond staff's knowledge or ability to verify but we believe that the FCC will not grant approval until it is shown that these items listed in the FCC Rules are not applicable are complied with. It is standard processing practice for cell phone companies to follow the FCC requirements.

E. Application requirements for WTS facilities shall be as follows:

1. WTS providers whose proposals conform to the provisions of subsection (C)(1) of this section (16.08.120) shall submit the following information with the application for permits:
  - a. A copy of that portion of the lease agreement (or lease memo) with the property owner, facility removal within 90 days of the abandonment and a bond to guarantee removal shall be submitted for review prior to development permit approval.

**Findings:** A copy of the draft lease agreement and a bond that is intended to assure removal of the cell tower if abandoned has been submitted. The submitted lease agreement is not yet signed, but we could make it a condition of approval to obtain a final executed copy if this request is approved. The wording of the lease gives us knowledge of what we can expect to occur on the property. The bond has been determined to be suitable and is in effect now. The lease and bond appear to imply removal of the tower as well as the “telecommunications equipment” and “antenna structures”.

- b. A map of the city showing the approximate geographic limits of the cell to be created by the facility. This map shall include the same information for all other facilities owned or operated by the applicant within the city, or extending within the city from a distant location, and any existing detached WTS facilities of another provider within 1,000 feet of the proposed site.

**Findings:** The applicant’s submitted “RF Propagation Maps” meet this requirement. According to the applicant’s letter dated 6/18/14, there is no WTS facility for another provider within 1,000 feet of the proposed site.

- c. A plot plan showing:
        - i. The lease area;
        - ii. Antenna structure;
        - iii. Height above grade and setback from property lines;
        - iv. Equipment shelters and setback from property lines;
        - v. Access;
        - vi. Connection point with land line system; and
        - vii. All landscape areas associated with the WTS facility.

**Findings:** The drawings submitted meet this standard.

- d. Anticipated capacity of the WTS facility (including number and types of antennas which can be accommodated).

**Findings:** Per letter dated 6/18/14, proposed tower will accommodate 3 carriers with 12 antenna panels per carrier for a total of 36 panel antennas. The provision to accommodate additional antenna for other carriers is a key provision requested by staff to help reduce the total number of separate cell tower applications on-behalf of the community.

- e. The method(s) of stealth design (where applicable).

**Findings:** The applicant has not proposed any stealth designs. Staff does not believe a stealth design would lend greater compatibility if the proposed tower is approved for this location.

f. An engineer's statement that the radio frequency emissions at grade, or at the nearest habitable space when attached to an existing structure comply with FCC rules for such emissions; the cumulative radio frequency emissions if collocated.

**Findings:** Exhibit D, RF Engineer's Compliance Report answers and addresses this FCC standard.

g. The radio frequency range in megahertz and the wattage output of the equipment.

h. A description of the type of service offered (voice, data, video, etc.) and the consumer receiving equipment.

i. Identification of the provider and backhaul provider, if different.

**Findings:** A description of most if not all of the above information is provided. This may be of importance to those in the business.

j. A facilities maintenance regimen.

**Findings:** The applicant's narrative states that *"The facility will be visited once per month by a Verizon Equipment technician for system maintenance. The technician is responsible for removing any incidental trash or debris from the compound, and reports on the status to the facilities maintenance department. Any additional actions required (graffiti removal, weed removal, etc.) is then addressed."*

k. The zoning and comprehensive plan designation of the proposed site.

l. The FAA determination.

**Findings:** The property's zoning is M-1 and Comprehensive Plan designation is Light Industrial. Per the letter from the Oregon Department of Aviation dated 2/19/14, FAA notification of this proposed tower is not required.

m. The distance from the nearest WTS facility.

**Findings:** The applicant's narrative states that *"The closest tower is owned by Day Communications and is 0.91 miles distant, located at the east end of S. Cass Rd."*

2. WTS providers whose proposals conforms with the provisions of subsection (C)(2) and (C)(3) of this section (16.08.120) shall submit, in addition to the requirements of 16.49.035 and/or 16.50.020 of the Land Development and Planning Ordinance, the following additional information:

b. Alternatives for locating/relocating support structures within 250 feet of the proposed site.

**Findings:** The applicant's narrative states that *"There are several industrial buildings in the vicinity of the proposed facility, with heights of 30'-40', which is insufficient to achieve the required capacity coverage improvement."*

c. Photo simulations of the proposed WTS facility from the four cardinal compass points and/or abutting right-of-way, whichever provides the most accurate representation of the proposed facility from a variety of vantage points.

**Findings:** Exhibit F contains photo simulations of the proposed WTS. It should be representative of what the cell tower will look like if constructed.

d. An engineer's statement demonstrating the reasons why the WTS facility must be located at the proposed site (service demands, topography, dropped coverage, etc.).

e. An engineer's statement demonstrating the reasons why the WTS facility must be constructed at the proposed height.

**Findings:** Exhibit G, "RF Engineer's Letter of Explanation" why the proposed facility needs to be located in the general area. Other sites were explored. A willing property owner is needed. The city encouraged consideration of locating on the police building site and evaluation took place. The company chose this site. The applicant states they need a 100' cell tower to meet their coverage goals. It is understood that if the tower were lower at this location, the sought after "coverage" goal would be somewhat less.

f. Verification of good faith efforts made to locate or design the proposed WTS facility to qualify for a less rigorous approval process (building permit and/or building permit and site and design review approval).

**Findings:** Applicant's letter dated 6/18/14 states "The nearest wireless facility from the proposed location is located at 24526 S. Highway 99E (APN: 41E05BC04801). This property was rejected for being too far from the coverage objective area. There were no other existing facilities to collocate on within the existing coverage area that would allow for a less rigorous approval process. Existing industrial buildings structures were ruled out for not having the needed height necessary to meet the coverage objective. This is an industrial area surrounded by residential uses. The applicant has indicate that "they have made the best effort to locate in an area that is industrial as a preferred city site and have the least impact on residentially zoned properties." As previously mentioned, they could have possibly chosen to erect a cell tower on the city owned police facility site without need for Site & Design Review or a Conditional Use Permit. It is not entirely clear why they chose this site instead.

#### **16.08.150 Traffic Impact Study (TIS)**

**Findings:** A traffic impact study was determined to not be necessary due to the low traffic generation from this un-manned facility.

#### **16.08.160 Safety and Functionality Standards**

The City will not issue any development permits unless the proposed development complies with the city's basic transportation safety and functionality standards, the purpose of which is to ensure that development does not occur in areas where the surrounding public facilities are inadequate. Upon submission of a development permit application, an applicant shall demonstrate that the development property has or will have the following:

A. Adequate street drainage, as determined by the city.

- B. Safe access and clear vision at intersections, as determined by the city.
- C. Adequate public utilities, as determined by the city.
- D. Access onto a public street with the minimum paved widths as stated in Subsection E below.
- E. Adequate frontage improvements as follows:
  - 1. For local streets and neighborhood connectors, a minimum paved width of 16 feet along the site's frontage.
  - 2. For collector and arterial streets, a minimum paved width of 20 feet along the site's frontage.
  - 3. For all streets, a minimum horizontal right-of-way clearance of 20 feet along the site's frontage.
- F. Compliance with mobility standards identified in the TSP. If a mobility deficiency already exists, the development shall not create further deficiencies.

**Findings:**

- See "storm solutions" box on drawing C-1. The proposed development of the lease site has been determined to actually reduce runoff characteristics from those that exist today.
- The proposed site is not at an intersection, and the proposed driveway and landscaping meet usual clear vision standards.
- This facility only needs electric and phone service. Access will occur by bore under N Baker Drive. No utility service issues were raised at the pre-application conference, or through a request for comments to utility providers.
- A condition of approval requires City Engineer, Public Works, utility provider approvals.
- No street improvements proposed or required to trigger the requirements of D-F.

**Chapter 16.10 Off Street Parking & Loading**

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**16.10.050 Parking standards designated.**

USE	PARKING REQUIREMENT
q. Wireless telecommunication systems	1.00 space per site

**Findings:** A good portion of the existing lease site is a gravel surface. The site plan does not clearing demark the one on-site parking space required. There is certainly room within the lease area for a parking space. It should be on a paved surface in keeping with paving at least the first 20 from the right-of-way line to keep gravel from being tracked into the public street.

**16.10.070 Parking lots and access.**

- A. **Parking Lots.** A parking lot, whether as accessory or principal use, intended for the parking of automobiles or trucks, shall comply with the following:
  - 1. Parking lot design shall comply with the dimensional standards set forth in Figure 1 of this section.

**Findings:** The required single on-site parking space is not currently designated by the site plan. A condition of approval to provide a paved driveway should also provide a designated on-site parking space.

3. Areas used for standing or maneuvering of vehicles shall have paved asphalt, concrete, solid concrete paver surfaces, or paved “tire track” strips maintained adequately for all weather use and so drained as to avoid the flow of water across sidewalks or into public streets, with the following exception:
  - a. The Planning Director or Planning Commission may approve the use of an engineered aggregate system for outdoor storage and/or non-required parking areas provided that the applicant can demonstrate that City Standards related to:
    - i. minimizing dust generation,
    - ii. minimizing transportation of aggregate to city streets, and
    - iii. minimizing infiltration of environmental contaminants including, but not limited to, motor oils, fuels, volatile organic compounds (e.g. benzene, toluene, ethylbenzene, xylene), and ethylene glycol are met.The decision maker may impose conditions as necessary to meet City Standards.
  - b. Use of permeable surfacing materials for parking lots and driveways is encouraged whenever site and soil conditions make permeable surfacing feasible. Permeable surfacing includes, but is not limited to: paving blocks, turf block, pervious concrete, and porous asphalt. All permeable surfacing shall be designed, constructed, and maintained in accordance with the Canby Public Works Design Standards and the manufacturer’s recommendations. Maintenance of permeable surfacing materials located on private property is the responsibility of the property owner.

**Findings:** The site plan does not clearly delineate the final boundary of landscape area versus existing gravel surfacing, versus the required paved driveway requirement which is needed to also accommodate a single on-site parking space. A condition of approval to submit a revised site plan delineating the presumed extent of these items should satisfactorily meet requirements.

4. The full width of driveways must be paved in accordance with (3) above:
  - a. For a minimum of 20 feet from the right-of-way line back into the private property to prevent debris from entering public streets, and
  - b. To within 150 feet of all portions of the exterior wall of the first story of any structure(s) served by the driveway to ensure fire and emergency service provision.

**Findings:** The proposed new driveway should be paved at least 20’ behind the property line with a proper driveway approach installation to protect the sidewalk and prevent gravel debris from entering the street.

5. Except for parking to serve residential uses, parking areas adjacent to or within residential planning districts or adjacent to residential uses shall be designed to minimize disturbance of residents. Artificial lighting, which may be provided, shall be so deflected as not to shine or create glare in any residential planning district or on any adjacent dwelling, or any street right-of-way in such a manner as to impair the use of such way.

**Findings:** Subject 50’ x 50’ lease area does not abut a residential zone. Lighting spec sheets says 90 degree “full cutoff” lights are proposed.

- 7. Off-street parking areas, and the accesses to them, shall be designed and constructed to facilitate the flow of traffic, provide maximum safety of traffic access and egress and the maximum safety of pedestrian and vehicular traffic on the site and in adjacent roadways. The Planning Director or Planning Commission may require engineering analysis and/or truck turning diagrams to ensure safe and efficient traffic flow based on the number and type of vehicles using the site, the classification of the public roadway, and the design of the parking lot and access drives.

**Findings:** This site is only required a single on-site parking space. No analysis of on-site circulation is applicable. The single parking space could simply back out through the gated entry if they desire.

- 8. Parking bumpers or wheel stops shall be provided to prevent cars from encroaching on the street right-of-way, adjacent landscaped areas, or adjacent pedestrian walkways.
- 9. Accessible parking shall be provided, constructed, striped, signed and maintained as required by ORS 447.233 and all Oregon Structural Specialty Code requirements.

**Findings:** This site is not accessible to the general public so it is not clear if the single parking space should be accessible? We can request that the County Building Official make this determination with issuance of the building permit for the site.

**16.10.070 Parking lots and access.**

**B. Access**

- 6. To afford safe pedestrian access and egress for properties within the city, a sidewalk shall be constructed along all street frontages, prior to use or occupancy of the building or structure proposed for said property. The sidewalks required by this section shall be constructed to city standards...

**Findings:** Existing ~5ft sidewalks.

Minimum Access Requirements			
16.10.070(B)(10): Minimum access requirements for industrial uses - ingress and egress for industrial uses shall not be less than the following:			
<i>Parking spaces required</i>	<i>Minimum number of accesses required</i>	<i>Minimum access width</i>	<i>Sidewalks &amp; curbs (in addition to driveways)</i>
1-250	1	24 feet	Curbs required; sidewalks on one side minimum

**Findings:** Proposed gate will be ~12ft not 24ft per above. PW Design Standards require a minimum 12' driveway as proposed. There is no need for a two-way driveway approach based on the intended use.

- 9. Maximum driveway widths and other requirements except for single-family dwellings [see subsection (d) below]:

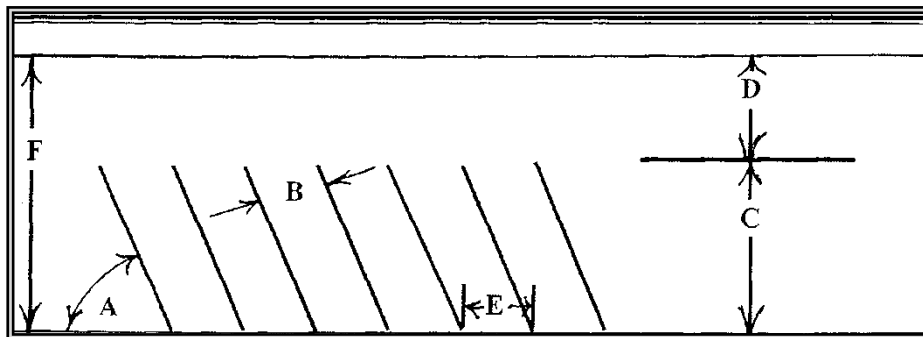
- a. Unless otherwise herein provided, maximum driveway widths shall not exceed forty (40) feet.
- b. No driveways shall be constructed within five (5) feet of an adjacent property line, except when two (2) adjacent property owners elect to provide joint access to their respective properties as provided by subsection 2.
- c. There shall be a minimum distance of forty (40) feet between any two (2) adjacent driveways on a single property.

**Findings:** A ~12ft gate is proposed about 2 feet from the property line. The existing gate to the north on the subject property is proposed to be closed to eliminate having another driveway in close proximity. Applicant shall obtain a street opening permit for installation of the paved driveway approach from Canby Public Works Department.

- 10. Distance Between Driveways and Intersections- Except for single-family dwellings [see subsection (f) below] the minimum distance between driveways and intersections shall be as provided below. Distances listed shall be measured from the stop bar at the intersection:
  - b. At the intersection of two (2) local streets, driveways shall be located a minimum of thirty (30) feet from the intersection as provided, the driveway shall be constructed as far from the intersection as possible, while still maintaining the five (5) foot setback between the driveway and property line.

**Findings:** Proposed access will meet the above provision. Industrial local streets call for 100 foot separation between driveways. This site complies with closure of the existing gate to the north of the lease site area.

TABLE 16.10.070					
This table and Figure 16.10.070 provide the minimum dimensional standards for parking areas and spaces.					
A = Parking angle in degrees		D = Minimum clear aisle width			
B = Minimum stall width		E = Minimum clear stall distance at bay side			
C = Minimum stall depth		F = Minimum clear bay width			
A	B	C	D	E	F
0 (parallel)	8'0"	-	12'0"	22'0"	20'0"
30	8'6"	16'4"	12'0"	17'0"	28'4"
45	8'6"	18'9"	12'6"	12'0"	31'3"
60	8'6"	19'10"	18'0"	9'10"	37'10"
90	8'6"	18'0"	24'0"	8'6"	42'0"





**Findings:** A single on-site paved parking space is required but not currently identified. A revised site plan should delineate this requirement. The driveway must be a minimum of 12 feet wide. An 18 foot long paved drive behind the gate would meet the on-site paved single parking space requirement.

#### **16.10.100 Bicycle Parking**

**Findings:** Bicycle parking N/A

### ***16.32 M-1 Light Industrial Zone***

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#### **16.32.010 Uses permitted outright**

- V. Wireless or cellular communications facility/tower;
- AA. Detached WTS facilities (monopole or lattice tower), under 150 feet in height and at least 660 feet from the nearest land zoned or planned for residential use or Highway 99E (see 16.08.120).
- CC. Detached WTS facilities (monopole), equal to or over 150 feet in height and at least 660 feet from the nearest land zoned or planned for residential use or Highway 99E (see 16.08.120).

#### **16.32.020 Conditional uses**

- E. Detached WTS facilities (monopole), equal to or over 100 feet in height and less than 660 feet from the nearest land zoned or planned for residential use or Highway 99E (see 16.08.120).

**Findings:** Proposed tower is under 150' but less than 660' from a residential zone, therefore a Conditional Use Permit is required. Tower is also 104' with antennas.

#### **16.32.030 Development standards**

The following subsections indicate the required development standards of the M-1 zone:

- A. Minimum lot area: five thousand square feet;
- B. Minimum width and frontage: fifty feet;
- C. Minimum yard requirements:
  - 1. Street yard: ...Remaining property none, except ten feet where abutting a residential zone.
  - 2. Interior yard: none, except ten feet where abutting a residential zone.

**Findings:** Lot leasing on a ~125,000sf parcel meets the 50' frontage requirement. The subject 50' x 50' lease area is more than 10ft from a residential zone. There is no other applicable setback requirement but the applicant is proposing setbacks of 25 feet from the public right-of-way and from the industrial zoned property to the south from the cell tower.

- E. Maximum lot coverage: no limit.
- F. Other regulations:
  - 1. Vision clearance distances shall be fifteen feet from any alley or driveway and thirty feet from any other street or railroad.
  - 2. Outside storage abutting or facing a lot in a residential zone shall be enclosed by a site-blocking fence or berm. The fence or berm shall be so designed as to screen the storage from view from the residential zone and shall be of such material and design as will not detract from adjacent residences.

**Findings:** A clear vision triangle exists at the proposed commercial/industrial driveway. The distance is 15' as measured along the street curb and edge of the driveway. A couple of the proposed screening shrubs within the proposed buffer area on either side of the driveway will be located within the defined clear vision area. The Planning Commission may want to weigh the clear vision sight advantages against the desired screening objectives around the gate area when deciding if an exception for shrubs taller than 30 inches should be allowed as indicated in the proposed landscape plan due to the only once a month use of the proposed driveway by a single maintenance technician. Otherwise, a condition of approval to comply with the standard driveway vision clearance shall be required. The subject 50' x 50' lease area is more than 10ft from a residential zone.

4. Prior to issuance of a building permit, wireless/cellular towers require written certification of approval/compliance from the Federal Communications Commission, Federal Aviation Administration and the Oregon Department of Transportation (Department of Aeronautics).

**Findings:** A letter from the Oregon Department of Aviation indicates that FAA notification is not needed. The TOWAIR analysis indicates that FCC registration is not required as well.

## **16.42 Signs**

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**Findings:** The applicant is proposing the erection of one emissions warning and one no trespassing sign on the gate. Miscellaneous small signs such as these are considered to be allowed pursuant to 16.42.025(C)(5)(f) although technically they are not considered temporary signs.

## **16.43 Outdoor Lighting Standards**

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### **16.43.030 Applicability**

The outdoor lighting standards in this section apply to the following:

- A. New uses, buildings, and major additions or modifications:
  1. For all proposed new land uses, developments, buildings, and structures that require a building permit, all outdoor lighting fixtures shall meet the requirements of this Code.

**Findings:** Per above, lighting standards applicable.

### **16.43.040 Lighting Zones**

**Findings:** The "L2" zone applies to this proposal.

### **16.43.050 Exempt Lighting.**

The following luminaires and lighting systems are exempt from the requirements of this Section.

- A. Lighting required and regulated by the Federal Aviation Administration, U.S. Coast Guard, or other federal, state, or county agency.

**Findings:** Per letter from OR Department of Aviation dated 2/19/14, FAA lighting/lighting for

aviation safety is not required. The applicant is not proposing lights on the tower.

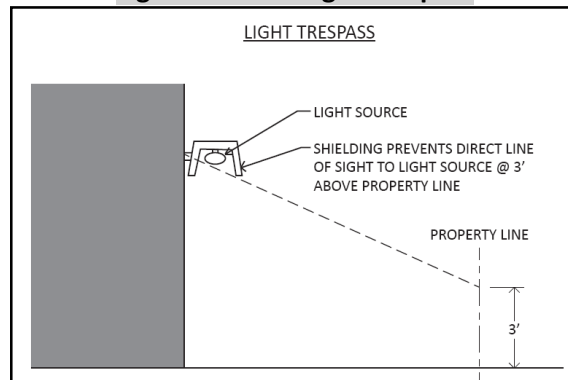
**16.43.060 Prohibited Light and Lighting.**

A. All outdoor light sources, except street lights, shall be shielded or installed so that there is no direct line of sight between the light source or its reflection at a point 3 feet or higher above the ground at the property line of the source. Light that does not meet this requirement constitutes light trespass. Streetlights shall be fully shielded. However, the applicant is permitted to have some unshielded lighting if lumens are within the limits of Table 16.43.070 below.

**Table 16.43.070 – Luminaire Maximum Lumens and Required Shielding**

Lighting Zone	Fully Shielded	Shielded	Partly Shielded	Unshielded (Shielding is highly encouraged. Light trespass is prohibited.)
LZ 2	7800 lumens or less	1600 lumens or less	800 lumens or less	Landscape and facade lighting 1600 lumens or less; ornamental lights of 800 lumens or less.

**Figure 16.43.1: Light Trespass**



**Findings:** Per the submitted lighting spec sheet “full cutoff” lights are proposed. Staff considers this to mean “fully shielded” but is not sure. Proposed lumen output is 2252-3073, thus meeting the above maximum lumen output for a “fully shielded” light.

The definitions below attempt to clarify the meaning of “fully shielded”; in addition an internet search provides many pictorial examples of shielded lighting:

16.43.020(M) Definitions:

*“Shielding. A device or technique for controlling the distribution of light. Four levels of shielding are defined as follows:*

*1. Fully Shielded. A luminaire emitting no luminous flux above the horizontal plane;*

*2. Shielded. A luminaire emitting less than 2.0 percent of its luminous flux above the horizontal plane;*

*3. Partly Shielded. A luminaire emitting less than 10 percent of its luminous flux above the horizontal plane;*

*4. Unshielded. A luminaire that may emit its flux in any direction.”*

**16.43.070 Luminaire Lamp Lumens, Shielding, and Installation Requirements**

E. Landscape features shall be used to block vehicle headlight trespass while vehicles are at an external point of service (i.e. drive-thru aisle).

**Findings:** No vehicles are to be at an external point of service so this standard is N/A.

**16.43.080(B) Height Limits.**

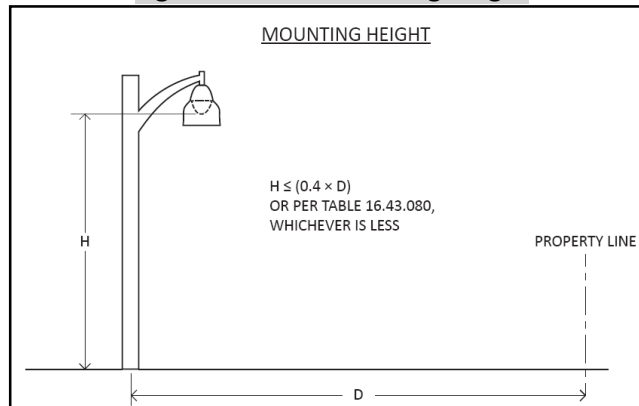
Pole and surface-mounted luminaires under this section must conform to Section 16.43.070.

A. Lighting mounted onto poles or any structures intended primarily for mounting of lighting shall not exceed a mounting height of 40% of the horizontal distance of the light pole from the property line, nor a maximum height according to Table 16.43.080, whichever is lower...

**Table 16.43.080 – Maximum Lighting Mounting Height in Feet**

Lighting Zone	Lighting for Driveways, Parking and Transit	Lighting for Walkways, Plazas and other Pedestrian	All Other Lighting
LZ 2	37.5	18.0	15.0

**Figure 16.43.2: Mounting Height**



**Findings:** Per drawing E-2, the proposed pole lights are to be installed ~45ft from the property line. Per drawing E-6, 6 foot poles are proposed. The height of the pole mounted light must be the lesser of the 15’ height in the table above or the formulae (0.4 \* 45=18’). The proposed 6’ height is less than the maximum of height of 15 feet allowed in the Table which is the lessor of the two. The height standard is met.

**16.46 Access Limitations on Project Density**

**16.46.030 Access connection.**

A. Spacing of accesses on City streets. The number and spacing of accesses on City streets shall be as specified in Table 16.46.030. Proposed developments or land use actions that do not comply with these standards will be required to obtain an access spacing exception and address the joint and cross access requirements of this Chapter.

TABLE 16.46.30				
Access Management Guidelines for City Streets*				
Street Facility	Maximum spacing** of roadways	Minimum spacing** of roadways	Minimum spacing** of roadway to driveway***	Minimum Spacing** driveway to driveway***
Neighborhood/Local	600 feet	150 feet	50 feet****	10 feet

\*\* Measured centerline on both sides of the street

Note: Spacing shall be measured between access points on both sides of the street.

**Findings:** The removal of the existing gate just north of the proposed lease gate allows compliance with a 100' driveway to driveway separation requirement that is found in the Public Works Design Standards which supersedes the 10 foot driveway separation requirement indicated above. Fifty foot roadway to driveway spacing requirement is met.

## 16.49 Site and Design Review

### 16.49.030 Site and design review plan approval required.

**Findings:** WTF towers are not listed in this section, but Design Review is required by 16.08.120(C).

### Table 16.49.040 Site Design Review Menu

As part of Site and Design Review, the following menu shall be used as part of the review. In order to "pass" this table 60% of total possible points shall be earned, 10% of the total possible points must be from LID elements

Design Criteria	Possible Points					Possible Points	Earned
	0	1	2	3	4		
Parking							
Screening of parking and/or loading facilities from public right-of-way	Not screened	Partially screened	Fully screened	-	-	2	2
Parking lot lighting provided	No	Yes	-	-	-	N/A	
Parking location (behind building is best)	Front	Side	Behind	-	-	2	0
Number of parking spaces provided (% of minimum required)	>120%	101-120%	100%	-	-	2	2

**Findings:**

- The one parking space that is to be required will be behind the screening slats and buffer landscaping.
- Parking lot lighting N/A because there is no parking lot or parking lot lighting needed or proposed.
- Therefore 6 possible "Parking" points, 4 earned.

Design Criteria	Possible Points					Possible Points	Earned
	0	1	2	3	4		
Screening of Storage Areas and Utility Boxes							
Trash storage is screened from view by solid wood fence, masonry wall or landscaping.	No	Yes	-	-	-	1	1

Trash storage is located away from adjacent property lines.	0 - 10 feet from adjacent property	11 - 25 feet from adjacent property	>25 feet from adjacent property	-	-	N/A	
Utility equipment, including rooftop equipment, is screened from view.	Not screened	Partially screened	Fully screened	-	-	2	2

**Findings:**

- Trash storage points N/A because no trash areas proposed.
- Can't tell if utility equipment is screened-don't know density of proposed landscaping and don't know what type of fencing.
- Therefore, 3 possible screening points, 3 earned.

Design Criteria	Possible Points					Possible Points	Earned
	0	1	2	3	4		
Access							
Distance of access to nearest intersection.	≤70 feet	71 - 100 feet	>100 feet	-	-	2	2
Pedestrian walkways from public street/sidewalks to building entrances.	One entrance connected.	-	Walkways connecting all public streets/sidewalks to building entrances.	-	-	N/A	-
Pedestrian walkways from parking lot to building entrance.	No walkways	Walkway next to building only	Walkways connecting all parking areas to building entrances	-	-	N/A-	-

**Findings:**

- Pedestrian walkway points N/A because no building proposed.
- 2 possible points, 2 earned

Design Criteria	Possible Points					Possible Points	Earned
	0	1	2	3	4		
Tree Retention							
Percentage of trees retained	<10%	10-50%	51-75%	>75%	-	N/A	
Replacement of trees removed	<50%	≥50%	-	-	-	N/A	

**Findings:**

- There are no existing trees on the lease area to retain.
- 0 possible points, 0 earned

Design Criteria	Possible Points					Possible Points	Earned
	0	1	2	3	4		
Signs							
Dimensional size of sign (% of maximum permitted)	>75%	50-75%	<50%	-	-	2	2

Similarity of sign color to building color	Not similar	Somewhat similar	Similar	-	-	2	1
Pole sign used	Yes	No	-	-	-	1	1

**Findings:**

- Similarity of sign color to utility cabinets, low signage use, and no pole sign
- 4 possible points, 4 earned

Design Criteria	Possible Points					Possible Points	Earned
	0	1	2	3	4		
<b>Building Appearance</b>							
Style (similar to surroundings)	Not similar	Somewhat similar (1 or 2 points possible depending on level of similarity)		-	-	N/A	-
Color (subdued and similar to surroundings is better)	Neither	Similar or subdued	Both	-	-	N/A	-
Material (concrete, wood and brick are best)	Either 1 or 2 points may assigned at the discretion of the Site and Design Review Board					N/A	-
Size of building (smaller is better)	>20,000 square feet	≤20,000 square feet	-	-	-	N/A	-
Provision of public art (i.e. murals, statues, fountains, decorative bike racks, etc.)	No	-	-	-	Yes	N/A	

**Findings:**

- All criteria with building elements N/A because no building proposed.
- The provision of public art to gain point does not make sense for a site that excludes the public.
- 0 possible points, 0 earned

Design Criteria	Possible Points					Possible Points	Earned
	0	1	2	3	4		
<b>Landscaping</b>							
Number of non-required trees provided	-	At least one tree per 500 square feet of landscaping.	-	-	-	1	1
Amount of grass (less grass is better) (% of total landscaped area)	>50%	25-50%	<25%	-	-	2	1

**Findings:**

- 3 possible points, 2 earned

Design Criteria	Possible Points					Possible Points	Earned
	0	1	2	3	4		
<b>Low Impact Development (LID)</b>							
Use of pervious paving materials (% of total paved area)	<10%	-	10-50%	51-75%	>75%	4	4

Provision of park or open space area	None	-	Open space (Generally not for public use)	-	Park (public or privately owned)	N/A	
Use of drought tolerant species in landscaping (% of total plants)	<25% drought tolerant	-	25-50% drought tolerant	51-75% drought tolerant	>75% drought tolerant	4	4
Provision of additional interior parking lot landscaping (% of minimum required)	100%	101-110%	111-120%	>120%	-	N/A	-
Provision of an eco-roof or rooftop garden (% of total roof area)	<10%	-	-	10-50%	>50%	N/A	-
Parking integrated within building footprint (below-grade, structured parking, or tuck-under parking) (% of total on-site parking)	<10%	-	-	10-50%	>50%	N/A	-
Disconnecting downspouts from city stormwater facilities	None	Some downspouts disconnected	All downspouts disconnected	-	-	N/A	
Shared parking with adjacent uses or public parking structure (% of total required parking spaces)	None	<50%	≥50%	-	-	N/A	
Provision of rain gardens/bioretention areas for stormwater runoff (% of total landscaped area)	None	-	10-50%	51-75%	>75%	N/A	

**Findings:**

- All criteria with building elements N/A because no building proposed.
- Interior parking lot landscaping N/A because no parking lot proposed
- Use of drought tolerant species noted, and can be monitored when detailed planting plan submitted prior to construction/building permit
- 8 possible points, 8 earned

**Total Possible points from Table 16.49.050, Site and Design Review Menu: 26**

**Total Points needed to pass table (60 % of total possible points): 15.6**

**Total points earned: 23 (88%)**

Therefore, it does pass.

**Total Possible LID points from Table 16.49.050, Site and Design Review Menu: 8**

**Total LID points needed to pass table (10 % of total possible LID points): 0.8**

**Total LID points earned: 8 (100%)**

Therefore, it does pass.

**16.49.050 Conditions placed on site and design review approvals.**

B. The following types of conditions may be contemplated, and the listing below is intended to be illustrative only and not to be construed as a limitation of the authority granted by this section.



1. Development Schedule. A reasonable time schedule may be placed on construction activities associated with the proposed development, or any portion thereof.
2. Dedications, Reservation. Dedication or reservation of land, or fee in lieu thereof for park, open space purposes, rights-of-way, bicycle or pedestrian paths, green way, riverbank or easements; the conveyance of title or easements to a homeowners' association.
3. Construction and Maintenance Guarantees. Security from the property owners in such an amount that will assure compliance with approval granted.
4. Plan Modification. Changes in the design or intensity of the proposed development, or in proposed construction methods or practices, necessary to assure compliance with this ordinance.
5. Off-Site Improvements. Improvements in public facilities, including public utilities, not located on the project site where necessary to assure adequate capacity and where service demand will be created or increased by the proposed development. The costs of such improvements may be paid for in full while allowing for recovery of costs from users on other development sites, or they may be pro-rated to the proposed development in proportion to the service demand projected to be created on increases by the project. If determined appropriate by the city based on specific site conditions, off-site roadway improvements may be required to accommodate bicycle and pedestrian travel consistent with the TSP and applicable sections of this code.
6. Other Approvals. Evaluation, inspections or approval by other agencies, jurisdictions, public utilities or qualified consultants may be required for all or any part of the proposed development.
7. Access Limitation. The number, location and design of street accesses to a proposed development may be limited or specified where necessary to maintain the capacity of streets to carry traffic safely, provided that sufficient access to the development is maintained.
8. Screening. The Planning Commission may require additional screening with landscaping, decorative fencing, decorative walls, or other means in order to screen outdoor storage areas, rooftop/ground mechanical equipment, garbage/recycling areas, or other visual clutter.

**Findings:** Improving screening is the most suitable possible additional condition of approval that the Planning Commission may consider if deemed necessary, along with possible increased setbacks or relocation on the subject property to address visibility concerns. Change in design of the lease site layout, or possibly with the cell tower itself in terms of stealth design if adequate findings of the benefits of such increased costs are provided. Without benefit of the public hearing, staff has not proposed any conditions of approval not specifically called for in the review criteria at this time.

We note that we never really got an adequate response as to why Verizon did not choose to pursue locating on the city owned police property site, which is also a preferred location as are industrial zoned properties.

**16.49.080 General provisions for landscaping.**

- C. The minimum area requirement for landscaping for developments coming under design review shall be the percentage of the total land area to be developed as follows. Parking lot landscaping area is included in calculating the following landscape areas:
  1. Fifteen (15) percent for all industrial and commercial zones (except the Downtown-Commercial zone, but including the Commercial-Residential zone).

**Findings:** 245sf of buffer area landscaping is proposed, 15% of 50' x 50' lease area is 375sf. The applicant has indicated that up to 50% of the site will be landscape when including the existing grass area located on the southern quarter of the lease area. Much of the remainder of the site will be gravel – which exists today. Staff is confident the 15% landscape area is met but the site plan delineation by condition is requested to be revised to more clearly delineate the surfacing of the fully developed site. With condition, this criterion is met.

**16.49.080 General provisions for landscaping.**

- E. Trees and other plant materials to be retained shall be identified on the landscape plan. The Site and Design Review Board encourages the retention, to the extent practicable, of existing healthy trees and vegetation.

**Findings:** By condition, the applicant shall submit a contract ready detailed landscape plan for approval by the Planning Director prior to issuance of building permit.

**16.49.080(F-P) Maintenance & installation provisions**

**Findings:** These sections contain provisions regarding landscaping installation and maintenance practices. **Condition #xxx** addresses the requirements of the above sections.

**16.49.090 Specifications for tree and plant materials**

- A. **Deciduous Trees.** Deciduous shade and ornamental trees shall be a minimum of two inch (2") caliper, measured six inches (6") above ground, balled and burlapped. Barefoot trees will be acceptable to plant during their dormant season. Trees shall be well branched and characteristically shaped specimen.
- B. **Coniferous Trees.** Coniferous trees shall be a minimum five feet (5') in height above ground, balled and burlapped. Trees shall be well branched and characteristically shaped specimen.
- C. **Evergreen and Deciduous Shrubs.** Evergreen and deciduous shrubs shall be at least one (1) to five (5) gallon size. Shrubs shall be characteristically branched. Side of shrub with best foliage shall be oriented to public view.
- D. **Ground covers.** Ground covers shall be fully rooted and shall be well branched or leafed.
- E. **Lawns.** Lawns shall consist of grasses, including sod, or seeds of acceptable mix within the local landscape industry. Lawns shall be 100 percent coverage and weed free.

**Findings:** These requirements cannot be determined from the plans submitted. By condition, the detailed contract ready landscape plan shall show compliance with these requirements.

**16.49.100(A)-(C)-Maintenance & installation provisions**

**Findings:** These sections require installation prior to use or occupancy and for continual long-term viability and replacement. Code enforcement is the preferred method to guarantee compliance.

**16.49.120 Parking lot landscaping standards**

- B. **Application.** Parking lot landscaping standards shall apply to any surface passenger vehicle parking area of ten (10) spaces or more, or to any paved vehicular use area 3,500 square feet or larger on the same tax lot or on contiguous tax lots under common ownership. Any paved vehicular area

which is used specifically as a utility storage lot or a truck loading area shall be exempt from landscaping requirements within a parking lot.

**Findings:** Not applicable because no parking lot area of 10 spaces or more is proposed in the 50' x 50' lease area.

H. **Irrigation System or Available Water Supply Required.** Landscaped areas shall be provided with automatic irrigation systems or a readily available water supply with at least one (1) outlet located within approximately 150 feet of all plant materials to be maintained.

**Findings:** The plans submitted indicate that water is not needed to the site. That presents a problem in terms of assuring long-term survival of the plant material. It may be possible that the applicant can arrange a temporary watering system from the existing service associated with the existing building on the site. Otherwise, a condition requiring the periodic hauling of water to the site might be suitable. Drought tolerant species are proposed, but even those require watering for at least a year or more to survive. This site may be required to install water service to the lease site to comply with the irrigation requirement. A condition for such is included by staff.

## ***16.50 Conditional Uses***

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### **16.50.010 Authorization to grant or deny conditional uses.**

A conditional use listed in this title shall be permitted, altered, or denied in accordance with the standards and procedures of this chapter. In the case of a use existing prior to the effective date of the ordinance codified in this title as a conditional use, a change in the use, or reduction in lot area, or an alteration of the structure, shall require the prior issuance of a conditional use permit. In judging whether or not a conditional use permit shall be approved or denied, the Planning Commission shall weigh the proposal's positive and negative features that would result from authorizing the particular development at the location proposed and to approve such use, shall find that the following criteria are either met, can be met by observance of conditions, or are not applicable.

A. The proposal will be consistent with the policies of the Comprehensive Plan and the requirements of this title and other applicable policies of the city;

**Findings:** Applicant's response: *"The City of Canby adopted specific regulations for Wireless Telecommunications Systems Facilities. This proposal is in compliance with those regulations and thus consistent with the policies of the Comprehensive Plan, Title 16, and other applicable policies."*

B. The characteristics of the site are suitable for the proposed use considering size, shape, design, location, topography, existence of improvements and natural features;

**Findings:** Applicant's response: *"The proposed facility will be located on a property zoned M-1, a "preferred site", which is currently an industrial gravel storage yard. The ground is flat, with no vegetation."*

C. All required public facilities and services exist to adequately meet the needs of the proposed development;

**Findings:** Applicant's response: "The proposed facility only requires electricity and telephone connection, both of which are available." We have previously indicated that irrigation of the required buffering/screening landscaping is normally required by code. Extension of water service will be necessary unless the applicant can provide an acceptable alternative manner to assure the plant material will be adequately maintained during their establishment period.

D. The proposed use will not alter the character of the surrounding areas in a manner which substantially limits, or precludes the use of surrounding properties for the uses listed as permitted in the zone.

**Findings:** Applicant's response: "The proposed facility is located on the subject property to minimize the impact on the existing and future use of the property for industrial purposes. It will not impact adjacent properties or their ability to develop as industrial."

**16.50.040 Placing conditions on a permit.**

In permitting a new conditional use or the alteration of an existing conditional use, the Planning Commission may impose conditions which it finds necessary to avoid a detrimental impact and to otherwise protect the best interests of the surrounding area or the community as a whole. These conditions may include the following:

- A. Limiting the manner in which the use is conducted, including restricting the time an activity may take place, and restraints to minimize such environmental effects as noise, vibration, air pollution, glare and odor;
- B. Establishing a special yard, other open space or lot area or dimensions;
- C. Limiting the height, size or location of a building or other structure;
- D. Designating the size, number, location, and nature of vehicle access points;
- E. Improving the street and/or expanding the rights-of-way;
- F. Designating the size, location, screening, drainage, surfacing or other improvement of a parking area or truck loading area;
- G. Limiting or otherwise designating the number, size, location, height and lighting signs;
- H. Limiting the location and intensity of outdoor lighting and requiring its shielding;
- I. Requiring diking, screening, landscaping or other facility to protect adjacent or nearby property and designating standards for its installation and maintenance;
- J. Designating the size, height, location and materials for a fence;
- K. Protecting and preserving existing trees, vegetation, water, resources, wildlife habitat or other significant natural or open space areas;
- L. Limiting the number, location, and design of street accesses and requiring shared access when appropriate;
- M. Other conditions to assure that the development complies with standards and criteria listed in section 16.50.010.

**Findings:**

Possible conditions which may be suitable with adequate findings to their need:

- Move tower to back of site
- More landscaping that improves screening
- A better fence/wall
- Paint tower
- Stealth options

## ***16.89 Application and Review Procedures***

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**Findings:** This application is being processed in accordance with Chapter 16.89. Notice of the public hearing was mailed to owners and residents of lots within 500 feet of the subject development and to applicable agencies. Notice of the meeting will be posted at the Development Services Building, Library, City Hall, and published in the *Canby Herald*. A neighborhood meeting was required and a pre-application meeting was held; minutes from these meetings are included in the Planning Commission's packet.

## ***16.120 Parks, Open Space & Recreation Land***

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**Findings:** This development does not involve actual new building square footage or occupancy of the site. Little to no impact will result to City parks, sewer system, water system unless service is required due to irrigation needs, storm system, or transportation system due to the limited traffic generation from the site. Therefore, staff would not anticipate the payment of system development charges or the dedication of any park land associated with this project.

### **V. PUBLIC TESTIMONY**

Notice of this application and opportunity to provide comment was mailed to owners and residents of lots within 500 feet of the subject properties and to all applicable public agencies. All written testimony will be presented to the Planning Commission and there will be an opportunity for public testimony at the public hearing. As of the date of this packet, the city's consulting city engineer indicated he had no comments, and a letter from Doug & Lindasue Spencer was submitted and is included in the record and packet of information provided to the Planning Commission.

### **VI. CONDITIONS OF APPROVAL**

Staff concludes that, with conditions, the application will meet the requirements for site and design review approval. All conditions of approval shall be depicted on final construction plans, as applicable; the city will not approve the building permit until all applicable conditions of approval are met. Staff has concluded the following conditions of approval:

#### **General**

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1. Approval of this application is based on submitted application materials and public testimony. Approval is strictly limited to the submitted proposal and is not extended to any other development of the properties. Any modification of development plans not in conformance with the approval of application file #DR/CUP 14-02, including all conditions of approval, shall first require an approved modification in conformance with the relevant sections of this *Canby Land Development and Planning Ordinance*. Approval of this application is based on the following:
  - a. Application forms, associated materials, narrative, and 3.18.14 Cover Letter from Jim Jagers
  - b. Application Exhibits:

- i. Exhibit A: Draft Lease Agreement dated 5.16.14
  - ii. Exhibit B: RF Propagation Maps for site "POR Barlow"
  - iii. Exhibit C: Drawings, numbered T-1—T-2, C-1, A-1—A-6, L-1—L-2, S-1—S-2, E-1—E-9, dated 8.7.13
  - iv. Exhibit D: RF Engineer's Compliance Report/Letter from David J. Pinion, P.E. dated 1.28.14
  - v. Exhibit E: TOWAIR Determination Results and letter from the Oregon Department of Aviation dated 2.19.14
  - vi. Exhibit F: Photo Simulations
  - vii. Exhibit G: RF Engineer's Letter of Explanation/Letter from John Dassin, RF Engineer, dated 2.21.14
- c. Lithonia Lighting OLW Outdoor LED Wall Pack spec sheet
  - d. Letter from Jim Jagers dated 6.18.14
  - e. Letter from Morrison Hershfield dated 6.2.14
  - f. FCC Reference Radio Station Authorizations
  - g. Tower Removal Bond dated 6.12.14
  - h. Neighborhood meeting minutes and sign-in sheet
  - i. Citizen Letter
  - j. Other supporting materials submitted with the application
2. The development shall comply with the standards of all applicable outside utility and regulatory agencies including:
    - a. City of Canby Planning
    - b. City of Canby Engineer
    - c. Canby Public Works
    - d. Canby Fire District
    - e. Canby Utility
    - f. Northwest Natural Gas
    - g. Canby Telcom
    - h. Wave Broadband
  3. The development shall comply with all applicable City of Canby Public Works Design Standards.
  4. The WTS facility shall receive FCC approval for its radio signal and as specified in FCC Rules 1.1301-1.1319 prior to construction.

### **Landscaping**

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5. The applicant shall submit a revised site plan (landscape detail sheet) that clearly delineates the extent of the landscape buffer area, gravel surface to be retained, paved driveway and parking area, and grass area to be maintained.
6. All landscaped areas shall be irrigated per 16.35.050(M) and 16.49.120(H); an irrigation outlet is required approximately every 150 feet of all plant materials to be maintained unless the Planning Commission accepts an alternative method to keep the plant material alive since water service was not otherwise planned to be extended to the site. The written findings must state the accepted alternative to irrigation.
7. The applicant shall submit a contract ready detail landscape plan prior to issuance of the building permit with species specific listing of the type, number, size and location where the plant materials are to be installed subject to approval by the Planning Director.
8. The landscape buffer area shall be expanded along the north lease boundary from the street westward approximately ½ the lease boundary (25') a minimum of 10' in width to assure good

screening of the ground facilities from street view.

9. All landscaping shall be installed and maintained per the standards of 16.49.080(F-P), 16.49.100(A-C), and 16.49.090.

#### **Fence Screening Slats**

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10. The screening slats within the fencing shall be of a color agreed to by the Planning Commission and shall be placed along the complete eastern and northern boundary of the lease area.

#### **Pave Parking and Drive**

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11. The applicant shall provide an on-site paved driveway and approach meeting the minimum 12' wide commercial standard for a minimum 20 feet behind the gated entrance which can also meet the required single on-site paved parking space standard.
12. The applicant shall obtain a "street opening permit" for installation of the paved driveway approach from Canby Public Works Department.

#### **Procedural:** Prior to issuance of building permit the following must be completed:

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13. The applicant shall apply for a City of Canby Site Plan Permit to initiate authorization of release of a building permit, pay all applicable development fees, and apply for a sediment and erosion control permit prior to construction.
14. Prior to the issuance of City Site Plan permit approval, final construction plans must be approved by the city and applicable utility/service providers. The City of Canby may require a pre-construction conference to obtain final approval from applicable utility providers and city departments. This may include, but is not limited to, approval by:
  - a. City of Canby Planning
  - b. City of Canby Engineer
  - c. Canby Public Works
  - d. Canby Fire District
  - e. Canby Utility
  - f. Canby Telcom
  - g. Wave Broadband
15. Clackamas County Building Codes Division will provide structural, electrical, plumbing, and mechanical plan review and inspection for this project. Applicable building permits are required from Clackamas County prior to construction.

#### **VII. Decision**

Based on the application submitted and the facts, findings, and conclusions of this report, Staff recommends that the Planning Commission **Approve** Site and Design Review/Conditional Use Permit File #DR/CUP 14-02 pursuant to the Conditions of Approval presented in this Staff Report.

***Sample motion:*** I move to approve Site and Design Review/Conditional Use File #DR/CUP 14-02 pursuant to the Conditions of Approval presented in this Staff Report.





March 18, 2014

MAR 21 REC'D

VIA US Priority Mail

City of Canby – Planning Division  
Attn: Mr. Bryan Brown, Planning Director  
111 NW 2<sup>nd</sup> Avenue  
Canby, Oregon 97013

RE: Wireless Communication Facility for Verizon Wireless located at 505 N Baker Drive Canby, OR 97103 (POR Barlow)


Dear Mr. Brown:

Enclosed herein you shall find materials submitted in support of Verizon Wireless' application for a Wireless Communication Facility. In order of submission:

1. This cover sheet and check for \$3,540.00.
2. Land Use Application (Conditional Use) & Property Owner Authorization.
3. Site and Design Review Application (Property Owner Authorization see 2 above).
4. Mailing labels.
5. Narrative.
6. RF justification Letter (Exhibit G) and propagation maps (Exhibit B).
7. TOWAIR (Exhibit E).
8. Clearance from the Oregon Department of Aviation (Exhibit E).
9. Photosims (Exhibit F).
10. NEIR Report (Exhibit D).
11. Minutes and attendee checklist from neighborhood meeting.
12. Drawings and CD of all submittal items will be sent separately.

I look forward to working with you. Please let me know if you have any questions. Please send a PDF receipt for the check to [jagslaw@gmail.com](mailto:jagslaw@gmail.com).

Sincerely,



Jim Jagers

On behalf of Verizon Wireless



City of Canby  
 Planning Department  
 111 NW 2<sup>nd</sup> Avenue  
 PO Box 930  
 Canby, OR 97013  
 (503) 266-7001

# LAND USE APPLICATION

## SITE AND DESIGN REVIEW General Type III

MAR 21 REC'D

**APPLICANT INFORMATION:** *(Check ONE box below for designated contact person regarding this application)*

Applicant Name: Verizon Wireless (VAW) LLC d/b/a Verizon Wireless Phone: 503-408-3436  
 Address: 5430 NE 122<sup>nd</sup> Ave Email: Sarah.grant@verizonwireless.com  
 City/State: Portland, OR Zip: 97320

Representative Name: Jim Jagers Phone: 916-213-8407  
 Address: 1100 Melody Lane, Suite 139 Email: jagslaw@gmail.com  
 City/State: Roseville, CA Zip: 95746

Property Owner Name: Ward Baker Properties, LLC Phone: (503) 266-1986  
 Signature: See attached  
 Address: 505 North Baker Drive Email: Ron@ward-henshaw.com  
 City/State: Canby, OR Zip: 97103

Property Owner Name: n/a Phone: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Address: \_\_\_\_\_ Email: \_\_\_\_\_  
 City/State: \_\_\_\_\_ Zip: \_\_\_\_\_

NOTE: Property owners or contract purchasers are required to authorize the filing of this application and must sign above

- ❶ All property owners represent they have full legal capacity to and hereby do authorize the filing of this application and certify that the information and exhibits herewith submitted are true and correct.
- ❷ All property owners understand that they must meet all applicable Canby Municipal Code (CMC) regulations, including but not limited to CMC Chapter 16.49 Site and Design Review standards.
- ❸ All property owners hereby grant consent to the City of Canby and its officers, agents, employees, and/or independent contractors to enter the property identified herein to conduct any and all inspections that are considered appropriate by the City to process this application.

**PROPERTY & PROJECT INFORMATION:**

<u>505 North Baker Drive</u>	<u>2.87 acres</u>	<u>31E32DC00200</u>
Street Address or Location of Subject Property	Total Size of Property	Assessor Tax Lot Numbers
<u>Commercial Office/Yard</u>	<u>M1</u>	<u>none</u>
Existing Use, Structures, Other Improvements on Site	Zoning	Comp Plan Designation

New Wireless Communications Facility  
 Describe the Proposed Development or Use of Subject Property

STAFF USE ONLY				
FILE #	DATE RECEIVED	RECEIVED BY	RECEIPT #	DATE APP COMPLETE

November 21, 2013

MAR 21 REC'D

VIA EMAIL

Mr. Ron Ward  
CEO/President  
Ward Baker Properties, LLC  
505 N Baker Drive  
Canby, OR 97103

RE: Property at 505 N Baker Drive, Canby, OR 97103 (POR Barlow)

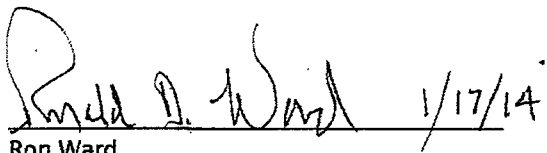
Dear Mr. Ward,

I am presenting this letter for your signature to use in conjunction with my land use and building permit application for the above referenced property. As you know my client Verizon Wireless (VAW) LLC, d/b/a Verizon Wireless will make application to the City of Canby and Clackamas County to construct and operate a new wireless communications facility on your property. Your signature below will authorize any and all needed applications to the City of Canby and Clackamas County and to other entities or organization as required by the City of Canby or Clackamas County.

Sincerely,

**Jim Jagers**

Jim Jagers  
Representing  
Verizon Wireless (VAW) LLC, d/b/a Verizon Wireless

 1/17/14

Ron Ward  
President  
Ward Baker Properties, LLC

## SITE AND DESIGN REVIEW APPLICATION – TYPE III–INSTRUCTIONS

**All required application submittals detailed below must also be submitted in electronic format on a CD, flash drive or via email. Required application submittals include the following:**

Applicant City  
Check Check

- One (1) copy of this application packet. The City may request further information at any time before deeming the application complete.
- Payment of appropriate fees – cash or check only. Refer to the city’s Master Fee Schedule for current fees. Checks should be made out to the *City of Canby*.
- Mailing labels (1" x 2-5/8") for all property owners and all residents within 500 feet of the subject property. **If the address of a property owner is different from the address of a site, a label for each unit on the site must also be prepared and addressed to “occupant.”** A list of property owners may be obtained from a title insurance company or from the County Assessor.
- One (1) copy of a written, narrative statement describing the proposed development and detailing how it conforms with the Municipal Code and to the approval criteria, including the applicable Design Review Matrix, and availability and adequacy of public facilities and services. **Ask staff for applicable Municipal Code chapters and approval criteria.**  
Applicable Code Criteria for this application includes:  

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- Three (3) copies of a Traffic Impact Study (TIS), conducted or reviewed by a traffic engineer that is contracted by the City and paid for by the applicant (payment must be received by the City before the traffic engineer will conduct or review a traffic impact study.  
Ask staff to determine if a TIS is required.
- One (1) copy in written format of the minutes of the neighborhood meeting as required by Municipal Code 16.89.020 and 16.89.070. The minutes shall include the date of the meeting and a list of attendees.
- One (1) copy in written format of the minutes of the pre-application meeting
- One copy of either the recorded plat or the recorded deeds or land sales contracts that demonstrates how and when legal property lines were established and where the boundaries of the legal lot(s) of record are located. If the property is a lot or parcel created by plat, a copy of the recorded plat may be obtained from the Clackamas County Surveyor’s office. If the property is a legal lot of record created by recorded deed or land sales contract at a time when it was legal to configure property lines by deed or contract, then those recorded deeds may be obtained from the Clackamas County Office of the Clerk, or a Title Company can also assist you in researching and obtaining deeds.
- If the development is located in a Hazard (“H”) Overlay Zone, submit one (1) copy of an affidavit signed by a licensed professional engineer that the proposed development will not result in significant impacts to fish, wildlife and open space resources of the community. If major site grading is proposed, or removal of any trees having trunks greater than six inches in diameter is proposed, then submit one (1) copy of a grading plan and/or tree-cutting plan.

Applicant City  
Check Check

Ten (10) paper copies of the proposed plans, printed to scale no smaller than 1"=50'. The plans shall include the following information:

- Vicinity Map. Vicinity map at a scale of 1"=400' showing the relationship of the project site to the existing street or road pattern.
- Site Plan-the following general information shall be included on the site plan:
  - Date, north arrow, and scale of drawing;
  - Name and address of the developer, engineer, architect, or other individual(s) who prepared the site plan;
  - Property lines (legal lot of record boundaries);
  - Location, width, and names of all existing or planned streets, other public ways, and easements within or adjacent to the property, and other important features;
  - Location of all jurisdictional wetlands or watercourses on or abutting the property;
  - Finished grading contour lines of site and abutting public ways;
  - Location of all existing structures, and whether or not they are to be retained with the proposed development;
  - Layout of all proposed structures, such as buildings, fences, signs, solid waste collection containers, mailboxes, exterior storage areas, and exterior mechanical and utility equipment;
  - Location of all proposed hardscape, including driveways, parking lots, compact cars and handicapped spaces, loading areas, bicycle paths, bicycle parking, sidewalks, and pedestrian ways;
  - Callouts to identify dimensions and distances between structures and other significant features, including property lines, yards and setbacks, building area, building height, lot area, impervious surface area, lot densities and parking areas;
  - Location of vision clearance areas at all proposed driveways and streets.
- Landscape Plan, with the following general information:
  - Layout and dimensions of all proposed areas of landscaping;
  - Proposed irrigation system;
  - Types, sizes, and location of all plants to be used in the landscaping (can be a "palette" of possible plants to be used in specific areas for landscaping);
  - Identification of any non-vegetative ground cover proposed, and dimensions of non-vegetative landscaped areas;
  - Location and description of all existing trees on-site, and identification of each tree proposed for preservation and each tree proposed for removal;
  - Location and description of all existing street trees in the street right-of-way abutting the property, and identification of each street tree proposed for preservation and each tree proposed for removal.
- Elevations Plan  
The following general information shall be included on the elevations plan:
  - Profile elevations of all buildings and other proposed structures;
  - Profile of proposed screening for garbage containers and exterior storage areas;
  - Profile of proposed fencing.
- Sign Plan.
  - Location and profile drawings of all proposed exterior signage.
- Color and Materials Plan.
  - Colors and materials proposed for all buildings and other significant structures.

One (1) copy of a completed landscaping calculation form (see page 5)

One (1) copy of a completed Design Review Matrix (see page 6) *See Narrative for detailed discussion*

**SITE AND DESIGN REVIEW APPLICATION: LANDSCAPING CALCULATION FORM**

**Site Areas**

1. Building area		- Square footage of building footprints
2. Parking/hardscape		- Square footage of all sidewalks, parking, & maneuvering areas
3. Landscaped area		- Square footage of all landscaped areas
4. Total developed area		- Add lines 1, 2 and 3
5. Undeveloped area		- Square footage of any part of the site to be left undeveloped.
6. Total site area		- Total square footage of site

**Required Site Landscaping (Code 16.49.080)**

7. Percent of landscaping required in Zoning District		- Fill in the Appropriate Percentage: R-1, R-1.5, R-2 Zones: 30%; C-2, C-M, C-R, M-1, M-2 Zones: 15%; C-1 Zone: 7.5%
8. Required minimum square footage of landscaping		- Multiply line 4 and line 7
9. Proposed square footage of landscaping		- Fill in value from line 3

**Required Landscaping within a Parking Lot (Code 16.49.120(4))**

Note: This section and the next apply only to projects with more than 10 parking spaces or 3,500 square feet of parking area

10. Zone		- Fill in the Appropriate Zone and Percentage: C-1 Zone: 5%; Core Commercial sub-area of the Downtown Canby Overlay: 10%, except for parking lots with 10 or more spaces and two or more drive aisles: 50 square feet per parking space; All other zones: 15%.
11. Percent of required landscaping		
12. Area of parking lot & hardscape		- Fill in area of parking and maneuvering areas plus all paved surface within ten (10) feet of those areas.
13. Number of vehicle parking spaces		- For Core Commercial sub-area in the Downtown Canby Overlay only, fill in the total # of parking spaces on-site.
14. Required square footage of landscaping within 10 feet of parking lot		- Multiply area of parking lot (line 12) by percent of required landscaping (line 11) -OR- for the CC sub-area in the Downtown Canby Overlay multiply line 13 by 50 square feet.
15. Proposed square footage of Landscaping within 10 feet of parking lot		- Calculate the amount of landscaping proposed within 10 feet of all parking and maneuvering areas.

**Parking Lot Tree Calculation**

16. Number of parking spaces		- Total number of vehicle parking spaces
17. Area of parking lot & hardscape		- Area from line 12
18. Number of parking spaces (line 16) divided by 8		- Round <b>up</b> to the nearest whole number
19. Area of parking lot area (line 17) divided by 2,800		- Round <b>up</b> to the nearest whole number
20. Number of required trees in parking lot		- Fill in the <b>larger</b> of row 18 and row 19
21. Number of trees provided within 10 feet of parking lot		- Fill in the number of proposed trees within 10 feet of parking and maneuvering areas.

## SITE AND DESIGN REVIEW APPLICATION: DESIGN REVIEW MATRIX

**Applicants:** Please circle the applicable point column to your project and compute the total and percentages at the end of the table.

**Table 16.49.040 Site Design Review Menu**

As part of Site and Design Review, the following menu shall be used as part of the review. In order to “pass” this table 60% of total possible points shall be earned, 10% of the total possible points must be from LID elements

Design Criteria	Possible Points				
Parking	0	1	2	3	4
Screening of parking and/or loading facilities from public right-of-way	Not screened	Partially screened	Fully screened	-	-
Parking lot lighting provided	No	Yes	-	-	-
Parking location (behind building is best)	Front	Side	Behind	-	-
Number of parking spaces provided (% of minimum required)	>120%	101-120%	100%	-	-
Screening of Storage Areas and Utility Boxes	0	1	2	3	4
Trash storage is screened from view by solid wood fence, masonry wall or landscaping.	No	Yes	-	-	-
Trash storage is located away from adjacent property lines.	0 - 10 feet from adjacent property	11 - 25 feet from adjacent property	>25 feet from adjacent property	-	-
Utility equipment, including rooftop equipment, is screened from view.	Not screened	Partially screened	Fully screened	-	-
Access	0	1	2	3	4
Distance of access to nearest intersection.	≤70 feet	71 - 100 feet	>100 feet	-	-
Pedestrian walkways from public street/sidewalks to building entrances.	One entrance connected.	-	Walkways connecting all public streets/sidewalks to building entrances.	-	-
Pedestrian walkways from parking lot to building entrance.	No walkways	Walkway next to building only	Walkways connecting all parking areas to building entrances	-	-

<b>Tree Retention</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Design Criteria</b>	<b>Possible Points</b>				
Percentage of trees retained	<10%	10-50%	51-75%	>75%	-
Replacement of trees removed	<50%	≥50%	-	-	-
<b>Signs</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Dimensional size of sign (% of maximum permitted)	>75%	50-75%	<50%	-	-
Similarity of sign color to building color	Not similar	Somewhat similar	Similar	-	-
Pole sign used	Yes	No	-	-	-
<b>Building Appearance</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Style (similar to surroundings)	Not similar	Somewhat similar (1 or 2 points possible depending on level of similarity)		-	-
Color (subdued and similar to surroundings is better)	Neither	Similar or subdued	Both	-	-
Material (concrete, wood and brick are best)	Either 1 or 2 points may assigned at the discretion of the Site and Design Review Board				
Size of building (smaller is better)	>20,000 square feet	≤20,000 square feet	-	-	-
Provision of public art (i.e. murals, statues, fountains, decorative bike racks, etc.)	No	-	-	-	Yes
<b>Landscaping</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Number of non-required trees provided	-	At least one tree per 500 square feet of landscaping.	-	-	-
Amount of grass (less grass is better) (% of total landscaped area)	>50%	25-50%	<25%	-	-
<b>Low Impact Development (LID)</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Use of pervious paving materials (% of total paved area)	<10%	-	10-50%	51-75%	>75%
Provision of park or open space area	None	-	Open space (Generally not for public use)	-	Park (public or privately owned for public use)

<b>Design Criteria</b>	<b>Possible Points</b>
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Use of drought tolerant species in landscaping (% of total plants)	<25% drought tolerant	-	25-50% drought tolerant	51-75% drought tolerant	>75% drought tolerant
Provision of additional interior parking lot landscaping (% of minimum required)	100%	101-110%	111-120%	>120%	-
Provision of an eco-roof or rooftop garden (% of total roof area)	<10%	-	-	10-50%	>50%
Parking integrated within building footprint (below-grade, structured parking, or tuck-under parking) (% of total on-site parking)	<10%	-	-	10-50%	>50%
Disconnecting downspouts from city stormwater facilities	None	Some downspouts disconnected	All downspouts disconnected	-	-
Shared parking with adjacent uses or public parking structure (% of total required parking spaces)	None	<50%	≥50%	-	-
Provision of rain gardens/bioretention areas for stormwater runoff (% of total landscaped area)	None	-	10-50%	51-75%	>75%
<b>Total Possible Points = 71, 60%=42.6 points, 10%=7.1 points</b>					

**Total Points Earned:** 25 (86%) (42.6 points required for 60%)

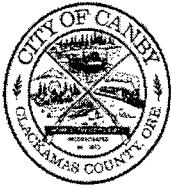
**Total LID Points Earned:** 8 (7.1 required for 10%)

## SITE AND DESIGN REVIEW – TYPE III: APPLICATION PROCESS

1. Prior to submitting an application, all applicants are encouraged to request a pre-application meeting with the City -or- the Planning Director may determine that a pre-application meeting is required prior to submitting an application. To schedule a pre-application meeting, an applicant must submit a completed pre-application form and set of preliminary plans to the City Planner, and after receiving the Planner's initials, must then make and take (3) copies of the pre-application materials to the Canby Public Works Department to schedule the pre-application meeting. The amount of the fee for a pre-application meeting is based on whether the application involves a public hearing or not.
2. Prior to submitting an application, applicants may be required to hold a neighborhood meeting with surrounding property owners and any recognized neighborhood association representative, pursuant to the procedures described in Canby Municipal Code Section 16.89.070. In certain situations, the Planning Director may waive the neighborhood meeting requirement.
3. At the time an application is submitted to the City, payment of all required application processing fees is required. An application will not be accepted without payment of fees. City Staff can provide you with information concerning application fees.
4. Staff will check the application, making sure that it is complete and all fees are paid. Copies of the application materials are routed to various City/State/County departments, as applicable, for their comments. The application is reviewed for completeness; the City Planner will accept or return the application with a written list of omissions within thirty (30) calendar days of the submittal.
5. Staff investigates the application, writes a staff report, issues public notice, notifies surrounding property owners, and makes all facts relating to the request available to the Planning Commission and all interested parties.
6. Prior to the public hearing, the City will prepare notice materials for posting on the subject property. This material must be posted **by the applicant** at least ten (10) days before the public hearing.
7. The staff report will be available to all interested parties seven (7) days prior to the hearing.
8. The Planning Commission holds a public hearing. The staff report is presented to the Commission. Testimony is presented by the applicant, proponents and opponents, followed by rebuttal from the applicant.
9. The Commission then issues findings of fact which support approval, modification, or denial of the application. A decision may be appealed to the City Council.
10. If an approval or a denial is appealed, City Council holds a public hearing. The staff report is presented and testimony taken, as at the original hearing(s). Unless the City Council decides to hear the appeal de novo, only testimony regarding items already in the record is permitted, and no new information may be entered. In the case of an appeal, the Council may affirm, revise or reverse the action of the Planning Commission in all or in part. The Council may also remand the matter back to the hearing body for further consideration.
11. Prior to construction of the project, a preconstruction meeting is held with the City and all applicable utility and service providers. If required, this meeting must be held and approval of Plan set by all agencies, and payment of Canby System Development Charge (SDC) and construction excise tax to the City before issuance of any building permits for the project(s) by Clackamas County.

## **SITE AND DESIGN REVIEW – TYPE III: REVIEW CRITERIA (Code 16.49.040)**

1. The Planning Commission shall, in exercising or performing its powers, duties or functions, determine whether there is compliance with the following A through D, and with Criteria 4, 5, and 6 below:
  - A. The proposed site development, including the site plan, architecture, landscaping and graphic design, is in conformance with the standards of this and other applicable City ordinances insofar as the location, height and appearance of the proposed development are involved; and
  - B. The proposed design of the development is compatible with the design of other developments in the same general vicinity; and
  - C. The location, design, size, color and materials of the exterior of all structures and signs are compatible with the proposed development and appropriate to the design character of other structures in the same vicinity; and
  - D. The Planning Commission shall, in making its determination of compliance with subsections B and C above, use the applicable matrix [pages 8-12] to determine “compatibility”.
2. The Planning Commission shall, in making its determination of compliance with the above requirements, be guided by the objectives and standards set forth in this section. It must be demonstrated that all required public facilities and services are available, or will become available through the development, to adequately meet the needs of the proposed development. If the site and design review plan includes utility facilities or public utility facility, then the City Planner shall determine whether those aspects of the proposed plan comply with applicable standards.
3. The Planning Commission shall, in making its determination of compliance with the requirements set forth, consider the effect of its action on the availability and cost of needed housing. The Planning Commission shall not use the requirements of this section to exclude needed housing types. However, consideration of these factors shall not prevent the Planning Commission from imposing conditions of approval necessary to meet the requirements of this section. The costs of such conditions shall not unduly increase the cost of housing beyond the minimum necessary to achieve the purposes of this ordinance.
4. As part of the site and design review, the property owner may apply for approval to cut trees in addition to those allowed in Chapter 12.32, the City Tree Ordinance. The granting or denial of said application will be based on the criteria in Chapter 12.32. The cutting of trees does not in and of itself constitute change in the appearance of the property which would necessitate application for site and design review.



City of Canby  
 Planning Department  
 111 NW 2nd Avenue  
 PO Box 930  
 Canby, OR 97013  
 (503) 266-7001

# LAND USE APPLICATION

MAR 21 REC'D

## Conditional Use Process Type III

**APPLICANT INFORMATION:** (Check ONE box below for designated contact person regarding this application)

Applicant Name: Verizon Wireless (VAW) LLC d/b/a Verizon Wireless Phone: 503-408-3436

Address: 5430 NE 122nd Ave Email: Sarah.grant@verizonwireless.com

City/State: Portland, OR Zip: 97320

Representative Name: Jim Jagers Phone: 916-213-8407

Address: 1100 Melody Lane, Suite 139 Email: jagslaw@gmail.com

City/State: Roseville, CA Zip: 95746

Property Owner Name: Ward Baker Properties, LLC Phone: 503-266-1986

Signature: See attached letter of authorization

Address: 505 North Baker Drive Email: ron@ward-henshaw.com

City/State: Canby, OR Zip: 97103

Property Owner Name: n/a Phone: \_\_\_\_\_

Signature: \_\_\_\_\_

Address: \_\_\_\_\_ Email: \_\_\_\_\_

City/State: \_\_\_\_\_ Zip: \_\_\_\_\_

*NOTE: Property owners or contract purchasers are required to authorize the filing of this application and must sign above*

- ❶ All property owners represent they have full legal capacity to and hereby do authorize the filing of this application and certify that the information and exhibits herewith submitted are true and correct.
- ❷ All property owners understand that they must meet all applicable Canby Municipal Code (CMC) regulations, including but not limited to CMC Chapter 16.49 Site and Design Review standards.
- ❸ All property owners hereby grant consent to the City of Canby and its officers, agents, employees, and/or independent contractors to enter the property identified herein to conduct any and all inspections that are considered appropriate by the City to process this application.

**PROPERTY & PROJECT INFORMATION:**

<u>505 North Baker Drive</u>	<u>2.87 acres</u>	<u>31E32DC00200</u>
Street Address or Location of Subject Property	Total Size of Property	Assessor Tax Lot Numbers
<u>Commercial Office/Yard</u>	<u>M1</u>	<u>none</u>
Existing Use, Structures, Other Improvements on Site	Zoning	Comp Plan Designation

New Wireless Communications Facility  
 Describe the Proposed Development or Use of Subject Property

STAFF USE ONLY				
FILE #	DATE RECEIVED	RECEIVED BY	RECEIPT #	DATE APP COMPLETE

November 21, 2013

MAR 21 REC'D

VIA EMAIL

Mr. Ron Ward  
CEO/President  
Ward Baker Properties, LLC  
505 N Baker Drive  
Canby, OR 97103

RE: Property at 505 N Baker Drive, Canby, OR 97103 (POR Barlow)

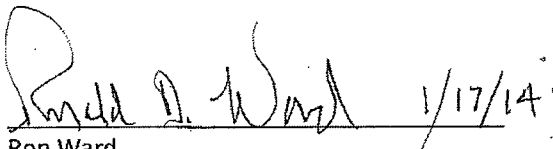
Dear Mr. Ward,

I am presenting this letter for your signature to use in conjunction with my land use and building permit application for the above referenced property. As you know my client Verizon Wireless (VAW) LLC, d/b/a Verizon Wireless will make application to the City of Canby and Clackamas County to construct and operate a new wireless communications facility on your property. Your signature below will authorize any and all needed applications to the City of Canby and Clackamas County and to other entities or organization as required by the City of Canby or Clackamas County.

Sincerely,

**Jim Jagers**

Jim Jagers  
Representing  
Verizon Wireless (VAW) LLC, d/b/a Verizon Wireless

 1/17/14

Ron Ward  
President  
Ward Baker Properties, LLC

## CONDITIONAL USE PERMIT APPLICATION – TYPE III–INSTRUCTIONS

**All required application submittals detailed below must also be submitted in electronic format on a CD, flash drive or via email. Required application submittals include the following:**

Applicant City  
Check Check

- One (1) copy of this application packet. The City may request further information at any time before deeming the application complete.
- Payment of appropriate fees – cash or check only. Refer to the city’s Master Fee Schedule for current fees. Checks should be made out to the *City of Canby*.
- Mailing labels (1" x 2-5/8") for all property owners and all residents within 500 feet of the subject property. **If the address of a property owner is different from the address of a site, a label for each unit on the site must also be prepared and addressed to “occupant.”** A list of property owners may be obtained from a title insurance company or from the County Assessor.
- One (1) copy of a written statement describing the Conditional Use Permit request, and detailing how your request meets the approval criteria (*see page 5 of this packet*).  

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- One copy of either the recorded plat or the recorded deeds or land sales contracts that demonstrates how and when legal property lines were established and where the boundaries of the legal lot(s) of record are located. If the property is a lot or parcel created by plat, a copy of the recorded plat may be obtained from the Clackamas County Surveyor’s office. If the property is a legal lot of record created by recorded deed or land sales contract at a time when it was legal to configure property lines by deed or contract, then those recorded deeds may be obtained from the Clackamas County Office of the Clerk, or a Title Company can also assist you in researching and obtaining deeds.
- If the development is located in a Hazard (“H”) Overlay Zone, submit one (1) copy of an affidavit signed by a licensed professional engineer that the proposed development will not result in significant impacts to fish, wildlife and open space resources of the community. If major site grading is proposed, or removal of any trees having trunks greater than six inches in diameter is proposed, then submit one (1) copy of a grading plan and/or tree-cutting plan.
- Ten (10) paper copies of the proposed plans, printed to scale no smaller than 1”=50’. The plans shall include the following information:
  - Vicinity Map. Vicinity map at a scale of 1”=400’ showing the relationship of the project site to the existing street or road pattern.
  - Site Plan-the following general information shall be included on the site plan:
    - Date, north arrow, and scale of drawing;
    - Name and address of the developer, engineer, architect, or other individual(s) who prepared the site plan;
    - Property lines (legal lot of record boundaries);
    - Location, width, and names of all existing or planned streets, other public ways, and easements within or adjacent to the property, and other important features;
    - Location of all jurisdictional wetlands or watercourses on or abutting the property;

Applicant City  
Check Check

- Finished grading contour lines of site and abutting public ways;
- Location of all existing structures, and whether or not they are to be retained with the proposed development;
- Layout of all proposed structures, such as buildings, fences, signs, solid waste collection containers, mailboxes, exterior storage areas, and exterior mechanical and utility equipment;
- Location of all proposed hardscape, including driveways, parking lots, compact cars and handicapped spaces, loading areas, bicycle paths, bicycle parking, sidewalks, and pedestrian ways;
- Callouts to identify dimensions and distances between structures and other significant features, including property lines, yards and setbacks, building area, building height, lot area, impervious surface area, lot densities and parking areas;
- Location of vision clearance areas at all proposed driveways and streets.

Landscape Plan

The following general information shall be included on the landscape plan:

- Layout and dimensions of all proposed areas of landscaping;
- Proposed irrigation system;
- Types, sizes, and location of all plants to be used in the landscaping (can be a "palette" of possible plants to be used in specific areas for landscaping);
- Identification of any non-vegetative ground cover proposed, and dimensions of non-vegetative landscaped areas;
- Location and description of all existing trees on-site, and identification of each tree proposed for preservation and each tree proposed for removal;
- Location and description of all existing street trees in the street right-of-way abutting the property, and identification of each street tree proposed for preservation and each tree proposed for removal.

Elevations Plan

The following general information shall be included on the elevations plan:

- Profile elevations of all buildings and other proposed structures;
- Profile of proposed screening for garbage containers and exterior storage areas;
- Profile of proposed fencing.

Sign Plan.

- Location and profile drawings of all proposed exterior signage.

Color and Materials Plan.

- Colors and materials proposed for all buildings and other significant structures.

## CONDITIONAL USE – TYPE III: APPLICATION PROCESS

1. Prior to submitting an application, all applicants are encouraged to request a pre-application meeting with the City, or the City Planner may determine that a pre-application meeting is necessary after an application has been discussed or upon receipt of an application by the City. To schedule a pre-application meeting, an applicant must submit a completed pre-application form and set of preliminary plans to the City Planner, and after receiving the Planner's initials, must then make and take 16 copies of the pre-application materials to the Canby Public Works Department to schedule the pre-application meeting. The City does not charge a fee for a pre-application meeting.
2. At the time an application is submitted to the City, payment of all required application processing fees is required. An application will not be accepted without payment of fees. City Staff can provide you with information concerning application fees.
3. Staff will check the application, making sure that it is complete and all fees are paid. Copies of the application materials are also routed to various City/State/County departments, as applicable, for their comments. The City Planner will accept or return the application with a written list of omissions within thirty (30) calendar days of the submittal.
4. Staff investigates the application, writes a staff report, issues public notice, notifies surrounding property owners, and makes all facts relating to the request available to the Planning Commission and all interested parties.
5. Prior to the public hearing, the City will prepare notice materials for posting on the subject property. This material must be posted **by the applicant** at least ten (10) days before the public hearing.
6. The staff report will be available to all interested parties seven (7) days prior to the hearing.
7. The Planning Commission holds a public hearing. The staff report is presented to the Commission. Testimony is presented by the applicant, proponents and opponents, followed by rebuttal from the applicant.
8. The Commission then issues findings of fact which support approval, approval with conditions, or denial of the application. A decision may be appealed to the City Council.
9. If the Planning Commission decision is appealed, City Council holds a public hearing. The staff report is presented and testimony taken, as at the original hearing(s). Unless the City Council decides to hear the appeal de novo, only testimony regarding items already in the record is permitted, and no new information may be entered. In the case of an appeal, the Council may affirm, revise, or reverse the decision of the Planning Commission in all or in part. The Council may also remand the matter back to the hearing body for further consideration.



## **CONDITIONAL USE PERMIT – TYPE III: STANDARDS AND CRITERIA**

Under Section 16.50.010 of the Canby Municipal Code, an application for CONDITIONAL USE PERMIT approval shall be evaluated based on the following standards and criteria:

- A. The proposal will be consistent with the policies of the Comprehensive Plan and the requirements of this title and other applicable policies of the city; and
- B. The characteristics of the site are suitable for the proposed use considering size, shape, design, location, topography, existence of improvements and natural features; and
- C. All required public facilities and services exist to adequately meet the needs of the proposed development; and
- D. The proposed use will not alter the character of the surrounding areas in a manner which substantially limits, or precludes the use of surrounding properties for the uses listed as permitted in the zone.



COMPLIANCE WITH CITY OF CANBY DEVELOPMENT CODE

Applicant: Verizon Wireless, LLC  
Applicant's Agent: Jim Jagers  
Black Rock Consulting & Development, LLC  
9895 Montegrino Ct.  
Elk Grove, CA 95757  
916-213-8407  
jagslaw@gmail.com

MAR 21 REC'D

Project: POR BARLOW  
Address: 505 N. Baker Drive  
Legal Description: Tax Lot 200, S32, T3S, R1E.  
Tax Account No.: 31E32DC00200  
Zoning: Light Industrial (M-1)

Property Owner: Ronald Ward  
Ward Baker Properties, LLC  
505 N. Baker Drive  
Canby, OR 97103  
503-266-1986  
ron@ward-henshaw.com

Date: March 12, 2014

Summary: Applicant proposes to construct a 100' monopole with 12 – 8' panel antennas with tip of antennas at 104' height, ground equipment installed on a 22'x3.5' concrete pad, with a 30 kW generator installed on a 10' x 5' concrete pad, all within a 50'x50' lease area surrounded by a secure fence with site to be unmanned.

## Development Code Criteria:

### Chapter 16.08.120: Siting and Review Process for Wireless Telecommunications Systems Facilities

*B. The siting and review process for WTS facilities is based on the type of facility (lattice, monopole, attached, stealth design or collocation) and its proposed location in a Preferred Site (M-1 or M-2 zoning districts), Acceptable Site (C-2 or C-M zoning districts), or Conditionally Suitable Site (C-R, C-C or C-1 zoning districts).*

**RESPONSE:** The proposed facility will be located in an M-1 zoning district, a Preferred Site.

*C. The development review process for wireless telecommunications systems (WTS) facilities shall be as follows:*

*3. Building and Electrical Permits, Site and Design Review (16.49), and Conditional Use Permit (16.50):*

*a. A detached WTS facility (monopole), including equipment shelters, buildings and cabinets housing WTS land line switching/connection equipment, on a Preferred Site, within 660 feet from Highway 99E or land either planned or zoned for residential use, and equal to or over 100 feet in height, including antennas.*

**RESPONSE:** The proposed facility is located within 660 feet of land zoned for residential use, and will be 100' in height, 104' including antennas. Therefore it is subject to the Site and Design Review and Conditional Use Permit processes. Upon land use approval, application will be made for building and electrical permits.

*D. Standards for siting WTS facilities shall be as follows:*

*1. Site and Design Review standards and criteria (section 16.49.040) shall apply to all WTS facilities requiring Site and Design approval.*

**RESPONSE:** Compliance with these criteria is addressed below.

*2. Conditional Use Permit standards and criteria (section 16.50.010) shall apply to all WTS facilities requiring Conditional Use Permit approval.*

**RESPONSE:** Compliance with these criteria is addressed below.

*3. All WTS facilities shall observe minimum lot size, lot coverage, building height and building setback requirements of the underlying zoning district unless specifically exempted or otherwise regulated by this section. Underground facilities may encroach upon required yards or may be placed in appropriate easements.*

4. *All detached WTS facilities shall be landscaped at the base of the towers/poles, and completely around the equipment shelters. The landscaping shall conform to the ODOT standards for plant size and spacing.*

**RESPONSE:** Compliance with these criteria for the M-1 district is addressed below.

5. *Lighting for all WTS facilities shall be as required by the FAA or recommended by ODOT Aeronautics Division. All other lighting must be deflected away from adjoining property.*

**RESPONSE:** There is no lighting proposed for the monopole. The equipment cabinets will have lighting directed downward over the cabinets.

6. *All detached WTS facilities shall be screened from the public right-of-way and abutting property by a security fence or wall at least 6 feet in height consisting of chain link fencing with vinyl slats, solid wood fencing, concrete masonry unit block, or brick.*

**RESPONSE:** The facility will be screened by a 6' chain link fence with vinyl slats.

7. *Attached WTS facilities shall be painted to match the color of the mechanical screen wall or building to which it is attached.*

**RESPONSE:** The facility is not "attached".

8. *Equipment shelters, buildings and cabinets housing radio electronics equipment shall be concealed, camouflaged or placed underground.*

**RESPONSE:** The equipment cabinets will be concealed by the 6' chain link fence with vinyl slats.

9. *Any WTS facility sited on or designed with any of the following attributes shall first receive FCC approval, as specified in FCC Rules 1.1301 - 1.1319, as a condition of city approval prior to construction; Wilderness Area; Wildlife Preserve; Endangered Species; Historical Site; Indian Religious Site; Flood Plain; Wetlands; High Intensity White lights in residential neighborhoods; Excessive radio frequency radiation exposure.*

**RESPONSE:** The proposed facility is not being sited on, nor designed with any of the indicated attributes.

E. *Application requirements for WTS facilities shall be as follows:*

1. *WTS providers whose proposals conforms with the provisions of subsection (C)(1) of this section (16.08.120) shall submit the following information with the application for permits:*

a. *A copy of that portion of the lease agreement (or lease memo) with the property owner, facility removal within 90 days of the abandonment and a bond to guarantee removal shall be submitted for review prior to development permit approval.*

**RESPONSE:** See Exhibit A - LEASE.

*b. A map of the city showing the approximate geographic limits of the cell to be created by the facility. This map shall include the same information for all other facilities owned or operated by the applicant within the city, or extending within the city from a distant location, and any existing detached WTS facilities of another provider within 1,000 feet of the proposed site.*

**RESPONSE:** Verizon has one existing site in the city of Canby (POR Canby), and two existing sites in the near vicinity (POR Wilsonville, POR Aurora). The proposed site will be located so as to connect with these three sites. See Exhibit B – 1 Area of Cell Capacity Issue.

- c. A plot plan showing:*
- i. The lease area;*
  - ii. Antenna structure;*
  - iii. Height above grade and setback from property lines;*
  - iv. Equipment shelters and setback from property lines;*
  - v. Access;*
  - vi. Connection point with land line system; and*
  - vii. All landscape areas associated with the WTS facility.*

**RESPONSE:** See Exhibit C – ZONING DRAWINGS.

*d. Anticipated capacity of the WTS facility (including number and types of antennas which can be accommodated).*

**RESPONSE:** See Exhibit C – ZONING DRAWINGS.

*e. The method(s) of stealth design (where applicable).*

**RESPONSE:** The proposed facility is located in an industrial zone, with no surrounding significant vegetation to complement or conceal. Therefore, no stealth design is proposed.

*f. An engineer's statement that the radio frequency emissions at grade, or at the nearest habitable space when attached to an existing structure comply with FCC rules for such emissions; the cumulative radio frequency emissions if collocated.*

**RESPONSE:** See Exhibit D – RF ENGINEER'S COMPLIANCE REPORT (NIER).

*g. The radio frequency range in megahertz and the wattage output of the equipment.*

**RESPONSE:** See Exhibit D – RF ENGINEER'S COMPLIANCE REPORT (NIER).

*h. A description of the type of service offered (voice, data, video, etc.) and the consumer receiving equipment.*

**RESPONSE:** See Exhibit D – RF ENGINEER'S COMPLIANCE REPORT (NIER).

i. *Identification of the provider and backhaul provider, if different.*

**RESPONSE:** See Exhibit D – RF ENGINEER’S COMPLIANCE REPORT (NIER).

j. *A facilities maintenance regimen.*

**RESPONSE:** The facility will be visited once per month by a Verizon Equipment technician for system maintenance. The technician is responsible for removing any incidental trash or debris from the compound, and reports on the status to the facilities maintenance department. Any additional actions required (graffiti removal, weed removal, etc.) is then addressed.

k. *The zoning and comprehensive plan designation of the proposed site.*

**RESPONSE:** The proposed facility is located in a Light Industrial (M-1) Zoning District, with a Comprehensive Plan Designation of Industrial.

l. *The FAA determination.*

**RESPONSE:** A TOWAIR analysis was performed, with a determination of no hazard and therefore no requirement for an FAA study. See Exhibit E – TOWAIR.

m. *The distance from the nearest WTS facility.*

**RESPONSE:** The closest tower is owned by Day Communications and is 0.91 miles distant, located at the east end of S. Cass Rd.

2. *WTS providers whose proposals conforms with the provisions of subsection (C)(2) and (C)(3) of this section (16.08.120) shall submit, in addition to the requirements of 16.49.035 and/or 16.50.020 of the Land Development and Planning Ordinance, the following additional information:*

a. *Items in section (E) above.*

**RESPONSE:** Submitted and addressed above.

b. *Alternatives for locating/relocating support structures within 250 feet of the proposed site.*

**RESPONSE:** There are several industrial buildings in the vicinity of the proposed facility, with heights of 30’-40’, which is insufficient to achieve the required coverage.

c. *Photo simulations of the proposed WTS facility from the four cardinal compass points and/or abutting right-of-way, whichever provides the most accurate representation of the proposed facility from a variety of vantage points.*

**RESPONSE:** See Exhibit G – PHOTO SIMULATIONS.

*d. An engineer's statement demonstrating the reasons why the WTS facility must be located at the proposed site (service demands, topography, dropped coverage, etc.).*

**RESPONSE:** See Exhibit H –RF ENGINEER'S JUSTIFICATION LETTER.

*e. An engineer's statement demonstrating the reasons why the WTS facility must be constructed at the proposed height.*

**RESPONSE:** See Exhibit H –RF ENGINEER'S JUSTIFICATION LETTER.

*f. Verification of good faith efforts made to locate or design the proposed WTS facility to qualify for a less rigorous approval process (building permit and/or building permit and site and design review approval).*

**RESPONSE:** See Exhibit H –RF ENGINEER'S JUSTIFICATION LETTER.

**Chapter 16.32: M-1 Light Industrial Zone**

*16.32.020 Conditional uses.*

*Conditional uses in the M-1 zone shall be as follows:*

*E. Detached WTS facilities (monopole), equal to or over 100 feet in height and less than 660 feet from the nearest land zoned or planned for residential use or Highway 99E (see 16.08.120).*

**RESPONSE:** The proposed monopole will be at 100' in height, 104' top of antennas. It will also be less than 660 feet from the nearest land zoned for residential use. Therefore, it is permissible as a Conditional Use.

**Chapter 16.43: Outdoor Lighting Standards**

**RESPONSE:** While the applicant acknowledges that the proposed facility is subject to these standards, the reality is that the tower itself will not be lighted. There will be lighting installed over the equipment cabinets, and will be directed downwards to provide illumination to technicians working on the cabinets at night. But these are usually single source lighting of the 60 watt variety. This lighting will meet the standards established by this code section,

**Chapter 16.46: Access limitations**

**RESPONSE:** The current use has an existing access gate onto N. Baker Drive approximately 10' north of the proposed north lease line. The applicant is proposing to close that access and create a new access onto N. Baker Drive midway along the east lease line.



**Chapter 16.49: Site and Design Review**

*16.49.035 Application for Site and Design Review*

*B. All other projects subject to site and design review approval pursuant to Section 16.49.030 are subject to the Type III procedural requirements set forth in Chapter 16.89. The applicant shall submit a Type III application for approval pursuant to the approval criteria set forth in 16.49.040.*

*16.49.040 Criteria and standards.*

*A. In review of a Type III Site and Design Review Application, the Board shall, in exercising or performing its powers, duties or functions, determine whether there is compliance with the following:*

*1. The proposed site development, including the site plan, architecture, landscaping and graphic design, is in conformance with the standards of this and other applicable city ordinances insofar as the location, height and appearance of the proposed development are involved; and*

**RESPONSE:** The proposed facility is a wireless communications facility consisting of a monopole and equipment cabinets. The monopole is the preferred design structure for such a proposal. The location is in the M1 zoning district, a preferred site. The height is the minimum height necessary to achieve the carrier's objective.

*2. The proposed design of the development is compatible with the design of other developments in the same general vicinity; and*

**RESPONSE:** Other wireless communications facilities in the vicinity are either a lattice or monopole structure.

*3. The location, design, size, color and materials of the exterior of all structures and signs are compatible with the proposed development and appropriate to the design character of other structures in the same vicinity.*

**RESPONSE:** The proposed facility is located to minimize the impact and usefulness of the existing property for light industrial use. The monopole design and screened lease compound are compatible with the sheet metal structures on and around the property.

*4. The proposed development incorporates the use of LID best management practices whenever feasible based on site and soil conditions. LID best management practices include, but are not limited to, minimizing impervious surfaces, designing on-site LID stormwater management facilities, and retaining native vegetation.*

**RESPONSE:** The proposed facility is located on land that has already been developed and used for light industrial purposes. The compound will be graveled and stormwater runoff will be filtered through the gravel and into the ground. No existing vegetation is to be removed.

5. The Board shall, in making its determination of compliance with this Ordinance, shall use the matrix in Table 16.49.040 to determine compatibility unless this matrix is superseded by another matrix applicable to a specific zone or zones under this title. An application is considered to be compatible with the standards of Table 16.49.040 if the following conditions are met:

a. The development accumulates a minimum of 60 percent of the total possible number of points from the list of design criteria in Table 16.49.040; and

b. At least 10 percent of the points used to comply with (a) above must be from the list of LID Elements in Table 16.49.040. (Ord. 1338, 2010).

**RESPONSE:** The applicant reviewed the proposed facility in accordance with the chart, and finds that it does not adequately address or accommodate a wireless communications facility. The table is designed to address a new commercial or industrial development on a vacant parcel, or the addition to such existing development. But it reviews items that are not a part of a wireless communications facility or design characteristics that are not suitable for such. Included below is the Table 16.49.040 Site Design Review Menu, with possible points circled where it seems applicable and comments as to overall applicability.

Design Criteria	Possible Points				
	0	1	2	3	4
Screening of parking and/or loading facilities from public right-of-way	Not screened	Partially screened	Fully screened	-	Parking will be inside the compound, and thus screened
Parking lot lighting provided	There is no "Parking Lot" and lighting for such is NOT APPLICABLE				
Parking location (behind building is best)	Front	Side	Behind	-	Parking will be inside the compound
Number of parking spaces provided (% of minimum required)	>120%	101-120%	100%	-	Per Table 16.10.050, minimum parking required is 1 space / site. Parking for one vehicle will be inside the compound.

Design Criteria	Possible Points				
	0	1	2	3	4
<b>Screening of Storage Areas and Utility Boxes</b>					
Trash storage is screened from view by solid wood fence, masonry wall or landscaping.	No	Yes	-	-	No trash storage needed for the facility, but if it were, it would be screened.
Trash storage is located away from adjacent property lines.	0 - 10 feet from adjacent property	11 - 25 feet from adjacent property	>25 feet from adjacent property	-	No trash storage needed for the facility, so it is by default located away from adjacent property lines.
Utility equipment, including rooftop equipment, is screened from view.	Not screened	Partially screened	Fully screened	-	Utility cabinets will be inside the compound and thus screened.
<b>Access</b>					
Distance of access to nearest intersection.	≤70 feet	71 - 100 feet	>100 feet	-	Proposed access is >100' from nearest intersection
Pedestrian walkways from public street/sidewalks to building entrances.	Walkways There are no buildings that are intended to have public access associated with this type of installation. So this standard is not applicable.				
Pedestrian walkways from parking lot to building entrance.	Walkways There are no buildings that are intended to have public access associated with this type of installation. So this standard is not applicable.				
<b>Tree Retention</b>					
Percentage of trees retained	There are no trees existing in the proposed lease area, so this section is Not Applicable.				
Replacement of trees removed					

Design Criteria	Possible Points				
	0	1	2	3	4
<b>Signs</b>					
Dimensional size of sign (% of maximum permitted)	>75%	50-75%	<50%	-	Only signs are for identification and emergency contact.
Similarity of sign color to building color	Not similar	Somewhat similar	Similar	-	Sign is typically black lettering on white background.
Pole sign used	Yes	No	-	-	Sign will be attached to compound fence.
<b>Building Appearance</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	
Style (similar to surroundings)	Not similar	Somewhat similar (1 or 2 points)			
Color (subdued and similar to surroundings is better)	<p>The facility is a monopole and outdoor equipment, so none of these standards are applicable.</p>				
Material (concrete, wood and brick are best)					
Size of building (smaller is better)					
Provision of public art (i.e. murals, statues, fountains, decorative bike racks, etc.)					
<b>Landscaping</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Number of non-required trees provided	-	At least one tree per 500 square feet of landscaping.	-	-	There are no trees required for a facility of this type. 15% of a 2,500 s.f. lease area is 375 s.f. The provision of 1 tree would meet this standard.
Amount of grass (less grass is better) (% of total landscaped area)	>50%	25-50%	<25%	-	The landscape will be comprised of grass, barkdust, gravel, low lying plants and trees.

Design Criteria	Possible Points				
	0	1	2	3	4
<b>Low Impact Development (LID)</b>					
Use of pervious paving materials (% of total paved area)	<10%	-	10-50%	51-75%	>75%
Provision of park or open space area	N/A				
Use of drought tolerant species in landscaping (% of total plants)	<25% drought tolerant	-	25-50% drought tolerant	51-75% drought tolerant	>75% drought tolerant
Provision of additional interior parking lot landscaping (% of minimum required)	N/A				
Provision of an eco-roof or rooftop garden (% of total roof area)	N/A				
Parking integrated within building footprint (below-grade, structured parking, or tuck-under parking) (% of total on-site parking)	N/A				
Disconnecting downspouts from city stormwater facilities	None	Some			
Shared parking with adjacent uses or public parking structure (% of total required parking spaces)	N/A				
Provision of rain gardens/bioretention areas for stormwater runoff (% of total landscaped area)	N/A				
<b>Total Possible Points = 71, 60%=42.6 points, 10%=7.1 points</b>					

The compound will be gravel, which is a pervious surface.

All landscaping species will be drought tolerant

Based upon the applicability of the standards identified above, the Total Possible Points for a Wireless Communications Facility would be 29.

**Total Points Earned:** 25 (86%) (17.4 points required for 60%)

**Total LID Points Earned:** 8 (2.9 required for 10%)

**Chapter 16.50: Conditional Use Permit**

***16.50.010 Authorization to grant or deny conditional uses.***

***A conditional use listed in this title shall be permitted, altered, or denied in accordance with the standards and procedures of this chapter. In the case of a use existing prior to the effective date of the ordinance codified in this title as a conditional use, a change in the use, or reduction in lot area, or an alteration of the structure, shall require the prior issuance of a conditional use permit. In judging whether or not a conditional use permit shall be approved or denied, the Planning Commission shall weigh the proposal's positive and negative features that would result from authorizing the particular development at the location proposed and to approve such use, shall find that the following criteria are either met, can be met by observance of conditions, or are not applicable.***

***A. The proposal will be consistent with the policies of the Comprehensive Plan and the requirements of this title and other applicable policies of the city;***

**RESPONSE:** The City of Canby adopted specific regulations for Wireless Telecommunications Systems Facilities. This proposal is in compliance with those regulations and thus consistent with the policies of the Comprehensive Plan, Title 16, and other applicable policies.

***B. The characteristics of the site are suitable for the proposed use considering size, shape, design, location, topography, existence of improvements and natural features;***

**RESPONSE:** The proposed facility will be located on a property zoned M-1, a “preferred site”, which is currently an industrial gravel storage yard. The ground is flat, with no vegetation.

***C. All required public facilities and services exist to adequately meet the needs of the proposed development;***

**RESPONSE:** The proposed facility only requires electricity and telephone connection, both of which are available.

***D. The proposed use will not alter the character of the surrounding areas in a manner which substantially limits, or precludes the use of surrounding properties for the uses listed as permitted in the zone.***

**RESPONSE:** The proposed facility is located on the subject property to minimize the impact on the existing and future use of the property for industrial purposes. It will not impact adjacent properties or their ability to develop as industrial.

OPTION AND LAND LEASE AGREEMENT

This Agreement, made this \_\_\_\_ day of \_\_\_\_\_, 201\_\_\_\_, between Ward Baker Properties, LLC, an Oregon limited liability company, with its principal offices located at 505 N. Baker Drive, Canby, Oregon 97103, hereinafter designated LESSOR and Verizon Wireless (VAW) LLC d/b/a Verizon Wireless, with its principal office located at One Verizon Way, Mail Stop 4AW100, Basking Ridge, New Jersey 07920 (telephone number 866-862-4404), hereinafter designated LESSEE. The LESSOR and LESSEE are at times collectively referred to hereinafter as the "Parties" or individually as the "Party".

LESSOR is the owner of that certain real property located at 505 N. Baker Drive, Canby, County of Clackamas, State of Oregon, as shown on Exhibit "A" attached hereto and made a part hereof (the entirety of LESSOR's property is referred to hereinafter as the "Property"). LESSEE desires to obtain an option to lease a portion of said Property, being described as a 50' by 50' parcel containing 2,500 square feet (the "Land Space"), together with the non-exclusive right (the "Rights of Way") for ingress and egress, seven (7) days a week twenty-four (24) hours a day, on foot or motor vehicle, including trucks over or along a fifteen (15') foot wide right-of-way extending from the nearest public right-of-way, N. Baker Drive, to the Land Space, and for the installation and maintenance of utility wires, poles, cables, conduits, and pipes over, under, or along one or more rights of way from the Land Space, said Land Space and Rights of Way (hereinafter collectively referred to as the "Premises") being substantially as described herein in Exhibit "A" attached hereto and made a part hereof.

NOW THEREFORE, in consideration of the sum of [REDACTED] to be paid by LESSEE to the LESSOR, the LESSOR hereby grants to LESSEE the right and option to lease said Premises, for the term and in accordance with the covenants and conditions set forth herein. The foregoing payment shall be made by LESSEE within [REDACTED] of execution of this Agreement or of receipt by LESSEE from LESSOR of the Rental Documentation, as defined in and in accordance with Paragraph 3 of the Agreement below, whichever occurs later. The providing by LESSOR of Rental Documentation to LESSEE shall be a prerequisite for the payment of the foregoing amount or any other option or rental payment, if applicable, by LESSEE, and notwithstanding anything to the contrary herein, LESSEE shall have no obligation to make any payment(s) until Rental Documentation has been supplied to LESSEE.

The option may be exercised at any time on or prior to twelve (12) months after the date of this Agreement. The time during which the option may be exercised may be further extended by mutual agreement in writing. If during said option period, or during the term of the lease, if the option is exercised, the LESSOR decides to subdivide, sell or change the status of the Property or his property contiguous thereto he shall immediately notify LESSEE in writing so that LESSEE can take steps necessary to protect LESSEE's interest in the Premises.

This option may be sold, assigned or transferred by the LESSEE without any approval or consent of the LESSOR to the LESSEE's principal, affiliates, subsidiaries of its principal; to any

entity which acquires all or substantially all of LESSEE's assets in the market defined by the Federal Communications Commission in which the Property is located by reason of a merger, acquisition or other business reorganization; or to any entity which acquires or receives an interest in the majority of communication towers of the LESSEE in the market defined by the Federal Communications Commission in which the Property is located. As to other parties, this Agreement may not be sold, assigned or transferred without the written consent of the LESSOR, which such consent will not be unreasonably withheld, delayed or conditioned. No change of stock ownership, partnership interest or control of LESSEE or transfer upon partnership or corporate dissolution of LESSEE shall constitute an assignment hereunder.

Should LESSEE fail to exercise this option or any extension thereof within the time herein limited, all rights and privileges granted hereunder shall be deemed completely surrendered, this option terminated, and LESSOR shall retain all money paid for the option, and no additional money shall be payable by either Party to the other.

LESSOR shall cooperate with LESSEE in its effort to obtain all certificates, permits and other approvals that may be required by any Federal, State or Local authorities which will permit LESSEE use of the Premises. LESSOR shall take no action which would adversely affect the status of the Property with respect to the proposed use by LESSEE.

The LESSOR shall permit LESSEE, during the option period, free ingress and egress to the Premises to conduct such surveys, inspections, structural strength analysis, subsurface soil tests, and other activities of a similar nature as LESSEE may deem necessary, at the sole cost of LESSEE.

LESSOR agrees to execute a Memorandum of this Option to Lease Agreement which LESSEE may record with the appropriate Recording Officer. The date set forth in the Memorandum of Option to Lease is for recording purposes only and bears no reference to commencement of either term or rent payments.

Notice of the exercise of the option shall be given by LESSEE to the LESSOR in writing by certified mail, return receipt requested, or by commercial courier. LESSEE shall be deemed to have exercised the option, and the following agreement shall take effect, on the date specified in writing by LESSEE in the Notice.

#### LAND LEASE AGREEMENT

This Agreement, made this \_\_\_\_\_ day of \_\_\_\_\_, 201\_\_\_\_, between Ward Baker Properties, LLC, an Oregon limited liability company, with its mailing address located at 505 N. Baker Drive, Canby, Oregon 97103, hereinafter designated LESSOR and Verizon Wireless (VAW) LLC d/b/a Verizon Wireless, with its principal office located at One Verizon Way, Mail Stop 4AW100, Basking Ridge, New Jersey 07920 (telephone number 866-862-4404),



hereinafter designated LESSEE. The LESSOR and LESSEE are at times collectively referred to hereinafter as the "Parties" or individually as the "Party".

1. PREMISES. LESSOR hereby leases to LESSEE a portion of that certain parcel of property (the entirety of LESSOR's property is referred to hereinafter as the Property), located at 505 N. Baker Drive, Canby, County of Clackamas, State of Oregon, and being described as a 50' by 50' parcel containing 2,500 square feet (the "Land Space"), together with the non-exclusive right (the "Rights of Way") for ingress and egress, seven (7) days a week twenty-four (24) hours a day, on foot or motor vehicle, including trucks over or along a fifteen (15') foot wide right-of-way extending from the nearest public right-of-way, N. Baker Drive, to the Land Space, and for the installation and maintenance of utility wires, poles, cables, conduits, and pipes over, under, or along one or more rights of way from the Land Space so long as such installations do not interfere with LESSOR's use of the remainder of said Property, said Land Space and Rights of Way (hereinafter collectively referred to as the "Premises") being substantially as described herein in Exhibit "A" attached hereto and made a part hereof.

In the event any public utility is unable to use the Rights of Way, the LESSOR hereby agrees to grant an additional right-of-way either to the LESSEE or to the public utility at a value to be negotiated between the Parties.

Expansion of the Premises. LESSOR and LESSEE agree that LESSEE may request that additional area be leased. Such lease of additional area will need to be negotiated by the Parties.

2. SURVEY. LESSOR also hereby grants to LESSEE the right to survey the Property and the Premises, and after LESSOR reviews and approves said survey, said survey shall then become Exhibit "B" which shall be attached hereto and made a part hereof, and shall control in the event of boundary and access discrepancies between it and Exhibit "A". Cost for such work shall be borne by the LESSEE.

3. TERM; RENTAL; ELECTRICAL.

a. This Agreement shall be effective as of the date of execution by both Parties, provided, however, the initial term shall be for [REDACTED] and shall commence on the Commencement Date (as hereinafter defined) at which time rental payments shall commence and be due at a total annual rental of [REDACTED] be paid in equal monthly installments on the first day of the month, in advance, to LESSOR or to such other person, firm or place as LESSOR may, from time to time, designate in writing at least thirty (30) days in advance of any rental payment date by notice given in accordance with Paragraph 23 below. The Commencement Date shall be the first day of the month in which notice of the exercise of the option, as set forth above, is effective. However, LESSOR and LESSEE acknowledge and agree that initial rental payment(s) shall not actually be sent by LESSEE until thirty (30) days after the exercise of the option is effective.

Upon agreement of the Parties, LESSEE may pay rent by electronic funds transfer and in such event, LESSOR agrees to provide to LESSEE bank routing information for such purpose upon request of LESSEE.

b. LESSOR hereby agrees to provide to LESSEE certain documentation (the "Rental Documentation") evidencing LESSOR's interest in, and right to receive payments under, this Agreement, including without limitation: (i) documentation, acceptable to LESSEE in LESSEE's reasonable discretion, evidencing LESSOR's good and sufficient title to and/or interest in the Property and right to receive rental payments and other benefits hereunder; (ii) a complete and fully executed Internal Revenue Service Form W-9, or equivalent, in a form acceptable to LESSEE, for any party to whom rental payments are to be made pursuant to this Agreement; and (iii) other documentation requested by LESSEE in LESSEE's reasonable discretion. From time to time during the Term of this Agreement and within thirty (30) days of a written request from LESSEE, LESSOR agrees to provide updated Rental Documentation in a form reasonably acceptable to LESSEE. The Rental Documentation shall be provided to LESSEE in accordance with the provisions of and at the address given in Paragraph 23. Delivery of Rental Documentation to LESSEE shall be a prerequisite for the payment of any rent by LESSEE and notwithstanding anything to the contrary herein, LESSEE shall have no obligation to make any rental payments until Rental Documentation has been supplied to LESSEE as provided herein.

Within fifteen (15) days of obtaining an interest in the Property or this Agreement, any assignee(s), transferee(s) or other successor(s) in interest of LESSOR shall provide to LESSEE Rental Documentation in the manner set forth in the preceding paragraph. From time to time during the Term of this Agreement and within thirty (30) days of a written request from LESSEE, any assignee(s) or transferee(s) of LESSOR agrees to provide updated Rental Documentation in a form reasonably acceptable to LESSEE. Delivery of Rental Documentation to LESSEE by any assignee(s), transferee(s) or other successor(s) in interest of LESSOR shall be a prerequisite for the payment of any rent by LESSEE to such party and notwithstanding anything to the contrary herein, LESSEE shall have no obligation to make any rental payments to any assignee(s), transferee(s) or other successor(s) in interest of LESSOR until Rental Documentation has been supplied to LESSEE as provided herein.

c. If permitted by the local utility company servicing the Property, LESSEE will install a separate meter for the measurement of its electric power and will pay for its own utilities used. If installation of a separate meter is not permitted by the utility, LESSEE shall furnish and install an electrical submeter at the Premises for the measurement of electrical power used by LESSEE's installation. LESSEE shall pay for its own power consumption used thirty (30) days after receipt of an invoice from LESSOR indicating the usage amount. LESSEE shall be permitted to install, maintain and/or provide access to and use of, as necessary (during any power interruption at the Premises), a temporary power source.

4. EXTENSIONS. This Agreement shall automatically be extended for four (4) additional five (5) year terms unless LESSEE terminates it at the end of the then current term by

giving LESSOR written notice of the intent to terminate at least six (6) months prior to the end of the then current term.

5. EXTENSION RENTALS. The annual rental for the first (1st) five (5) year extension term shall be increased to [REDACTED] the annual rental for the second (2nd) five (5) year extension term shall be increased to [REDACTED] the annual rental for the third (3rd) five (5) year extension term shall be increased to [REDACTED] and the annual rental for the fourth (4th) five (5) year extension term shall be increased to [REDACTED]

6. ADDITIONAL EXTENSIONS. If at the end of the fourth (4th) five (5) year extension term this Agreement has not been terminated by either Party by giving to the other written notice of an intention to terminate it at least three (3) months prior to the end of such term, this Agreement shall continue in force upon the same covenants, terms and conditions for a further term of five (5) years and for five (5) year terms thereafter until terminated by either Party by giving to the other written notice of its intention to so terminate at least three (3) months prior to the end of such term. Annual rental for each such additional year shall be equal to [REDACTED] of the annual rental payable with respect to the immediately preceding year. The initial term and all extensions shall be collectively referred to herein as the "Term".

7. TAXES. LESSEE shall have the responsibility to pay any personal property, real estate taxes, assessments, or charges owed on the Property which LESSOR demonstrates is the result of LESSEE's use of the Premises and/or the installation, maintenance, and operation of the LESSEE's improvements, and any sales tax imposed on the rent (except to the extent that LESSEE is or may become exempt from the payment of sales tax in the jurisdiction in which the Property is located), including any increase in real estate taxes at the Property which LESSOR demonstrates arises from the LESSEE's improvements and/or LESSEE's use of the Premises. Notwithstanding the foregoing, LESSEE shall not have the obligation to pay any tax, assessment, or charge that LESSEE is disputing in good faith in appropriate proceedings prior to a final determination that such tax is properly assessed provided that no lien attaches to the Property. Nothing in this Paragraph shall be construed as making LESSEE liable for any portion of LESSOR's income taxes in connection with any Property or otherwise. Except as set forth in this Paragraph, LESSOR shall have the responsibility to pay any personal property, real estate taxes, assessments, or charges owed on the Property and shall do so prior to the imposition of any lien on the Property.

LESSEE shall have the right, at its sole option and at its sole cost and expense, to appeal, challenge or seek modification of any tax assessment or billing for which LESSEE is wholly or partly responsible for payment. LESSOR shall reasonably cooperate with LESSEE at LESSEE's expense in filing, prosecuting and perfecting any appeal or challenge to taxes as set forth in the preceding sentence, including but not limited to, executing any consent, appeal or other similar document. In the event that as a result of any appeal or challenge by LESSEE, there is a reduction, credit or repayment received by the LESSOR for any taxes previously paid by LESSEE, LESSOR agrees to promptly reimburse to LESSEE the amount of said reduction, credit

or repayment. In the event that LESSEE does not have the standing rights to pursue a good faith and reasonable dispute of any taxes under this paragraph, LESSOR will pursue such dispute at LESSEE's sole cost and expense upon written request of LESSEE. LESSEE shall defend and indemnify LESSOR from any penalty or increase in liability which results from LESSEE's appeal, challenge or sought modification.

8. USE; GOVERNMENTAL APPROVALS. LESSEE shall use the Premises for the purpose of constructing, maintaining, repairing and operating a communications facility and uses incidental thereto. A security fence consisting of chain link construction or similar but comparable construction may be placed around the perimeter of the Premises at the discretion of LESSEE (not including the access easement). All improvements, equipment, antennas and conduits shall be at LESSEE's expense and their installation shall be at the discretion and option of LESSEE. LESSEE shall have the right to replace, repair, add or otherwise modify its utilities, equipment, antennas and/or conduits or any portion thereof and the frequencies over which the equipment operates, whether the equipment, antennas, conduits or frequencies are specified or not on any exhibit attached hereto, during the Term. It is understood and agreed that LESSEE's ability to use the Premises is contingent upon its obtaining after the execution date of this Agreement all of the certificates, permits and other approvals (collectively the "Governmental Approvals") that may be required by any Federal, State or Local authorities as well as satisfactory soil boring tests which will permit LESSEE use of the Premises as set forth above. LESSOR shall cooperate with LESSEE in its effort to obtain such approvals and shall take no action which would adversely affect the status of the Property with respect to the proposed use thereof by LESSEE. In the event that (i) any of such applications for such Governmental Approvals should be finally rejected; (ii) any Governmental Approval issued to LESSEE is canceled, expires, lapses, or is otherwise withdrawn or terminated by governmental authority; (iii) LESSEE determines that such Governmental Approvals may not be obtained in a timely manner; (iv) LESSEE determines that any soil boring tests are unsatisfactory; (v) LESSEE determines that the Premises is no longer technically compatible for its use, or (vi) LESSEE, in its sole discretion, determines that the use of the Premises is obsolete or unnecessary, LESSEE shall have the right to terminate this Agreement. Notice of LESSEE's exercise of its right to terminate shall be given to LESSOR in writing by certified mail, return receipt requested, and shall be effective upon the mailing of such notice by LESSEE, or upon such later date as designated by LESSEE. All rentals paid to said termination date shall be retained by LESSOR. Upon such termination, this Agreement shall be of no further force or effect except to the extent of the representations, warranties and indemnities made by each Party to the other hereunder. Otherwise, the LESSEE shall have no further obligations for the payment of rent to LESSOR.

9. INDEMNIFICATION. Subject to Paragraph 10 below, each Party shall indemnify and hold the other harmless against any claim of liability or loss from personal injury or property damage resulting from or arising out of the negligence or willful misconduct of the indemnifying Party, its employees, contractors or agents, except to the extent such claims or damages may be due to or caused by the negligence or willful misconduct of the other Party, or its employees, contractors or agents.

10. INSURANCE.

a. The Parties hereby waive and release any and all rights of action for negligence against the other which may hereafter arise on account of damage to the Premises or to the Property, resulting from any fire, or other casualty of the kind covered by standard fire insurance policies with extended coverage, regardless of whether or not, or in what amounts, such insurance is now or hereafter carried by the Parties, or either of them. These waivers and releases shall apply between the Parties and they shall also apply to any claims under or through either Party as a result of any asserted right of subrogation. All such policies of insurance obtained by either Party concerning the Premises or the Property shall waive the insurer's right of subrogation against the other Party.

b. LESSOR and LESSEE each agree that at its own cost and expense, each will maintain commercial general liability and property liability insurance with combined single limits not less than [REDACTED] for injury to or death of one or more persons and/or damage or destruction to property in any one occurrence. LESSOR and LESSEE each agree that it will include the other Party as an additional insured. LESSEE shall provide a certificate of insurance to the LESSOR as proof of said coverage which shall contain a provision for thirty (30) days' notice of cancellation to the LESSOR.

11. LIMITATION OF LIABILITY. Except for indemnification pursuant to Paragraphs 9 and 29, neither Party shall be liable to the other, or any of their respective agents, representatives, employees for any lost revenue, lost profits, loss of technology, rights or services, incidental, punitive, indirect, special or consequential damages, loss of data, or interruption or loss of use of service, even if advised of the possibility of such damages, whether under theory of contract, tort (including negligence), strict liability or otherwise.

12. ANNUAL TERMINATION. Notwithstanding anything to the contrary contained herein, provided LESSEE is not in default hereunder beyond applicable notice and cure periods, LESSEE shall have the right to terminate this Agreement upon the annual anniversary of the Commencement Date provided that three (3) months prior notice is given to LESSOR.

13. INTERFERENCE. LESSEE agrees to install equipment of the type and frequency which will not cause harmful interference which is measurable in accordance with then existing industry standards to any equipment of LESSOR or other lessees of the Property which existed on the Property prior to the date this Agreement is executed by the Parties. In the event any after-installed LESSEE's equipment causes such interference, and after LESSOR has notified LESSEE in writing of such interference, LESSEE will take all commercially reasonable steps necessary to correct and eliminate the interference, including but not limited to, at LESSEE's option, powering down such equipment and later powering up such equipment for intermittent testing. In no event will LESSOR be entitled to terminate this Agreement or relocate the equipment as long as LESSEE is making a good faith effort to remedy the interference issue. LESSOR agrees that LESSOR and/or any other tenants of the Property who currently have or in the future take

possession of the Property will be permitted to install only such equipment that is of the type and frequency which will not cause harmful interference which is measurable in accordance with then existing industry standards to the then existing equipment of LESSEE. The Parties acknowledge that there will not be an adequate remedy at law for noncompliance with the provisions of this Paragraph and therefore, either Party shall have the right to equitable remedies, such as, without limitation, injunctive relief and specific performance. LESSEE shall take all commercially reasonable steps needed to allow LESSOR and/or other tenants of the Property to utilize new equipment that is necessary for LESSOR's or the other tenant's business competitiveness.

14. REMOVAL AT END OF TERM. LESSEE shall, upon expiration of the Term, or within ninety (90) days after any earlier termination of the Agreement, remove its building(s), antenna structure(s) (except footings), equipment, conduits, fixtures and all personal property and restore the Premises to its original condition, reasonable wear and tear and casualty damage excepted. LESSOR agrees and acknowledges that all of the equipment, conduits, fixtures and personal property of LESSEE shall remain the personal property of LESSEE and LESSEE shall have the right to remove the same at any time during the Term, whether or not said items are considered fixtures and attachments to real property under applicable Laws (as defined in Paragraph 33 below). If such time for removal causes LESSEE to remain on the Premises after termination of this Agreement, LESSEE shall pay rent at the then existing monthly rate or on the existing monthly pro-rata basis if based upon a longer payment term, until such time as the removal of the building, antenna structure, fixtures and all personal property are completed.

15. HOLDOVER. LESSEE has no right to retain possession of the Premises or any part thereof beyond the expiration of that removal period set forth in Paragraph 14 herein, unless the Parties are negotiating a new lease or lease extension in good faith. In the event that the Parties are not in the process of negotiating a new lease or lease extension in good faith, LESSEE holds over in violation of Paragraph 14 and this Paragraph 15, then the rent then in effect payable from and after the time of the expiration or earlier removal period set forth in Paragraph 14 shall equal to the rent applicable during the month immediately preceding such expiration or earlier termination.

16. RIGHT OF FIRST REFUSAL. If LESSOR elects, during the Term (i) to sell or otherwise transfer all or any portion of the Property, whether separately or as part of a larger parcel of which the Property is a part, or (ii) to grant to a third party by easement or other legal instrument an interest in and to that portion of the Property occupied by LESSEE, or a larger portion thereof, for the purpose of operating and maintaining communications facilities or the management thereof, with or without an assignment of this Agreement to such third party, LESSEE shall have the right of first refusal to meet any bona fide offer of sale or transfer on the same terms and conditions of such offer. If LESSEE fails to meet such bona fide offer within thirty (30) days after written notice thereof from LESSOR, LESSOR may sell or grant the easement or interest in the Property or portion thereof to such third person in accordance with the terms and conditions of such third party offer. For purposes of this Paragraph, any transfer, bequest or devise of LESSOR's interest in the Property as a result of the death of LESSOR,

whether by will or intestate succession, or any conveyance to LESSOR's family members by direct conveyance or by conveyance to a trust for the benefit of family members shall not be considered a sale of the Property for which LESSEE has any right of first refusal.

17. RIGHTS UPON SALE. Should LESSOR, at any time during the Term decide (i) to sell or transfer all or any part of the Property to a purchaser other than LESSEE, or (ii) to grant to a third party by easement or other legal instrument an interest in and to that portion of the Property occupied by LESSEE, or a larger portion thereof, for the purpose of operating and maintaining communications facilities or the management thereof, such sale or grant of an easement or interest therein shall be under and subject to this Agreement and any such purchaser or transferee shall recognize LESSEE's rights hereunder under the terms of this Agreement.

18. QUIET ENJOYMENT. LESSOR covenants that LESSEE, on paying the rent and performing the covenants herein, shall peaceably and quietly have, hold and enjoy the Premises.

19. TITLE. LESSOR represents and warrants to LESSEE as of the execution date of this Agreement, and covenants during the Term that LESSOR is seized of good and sufficient title and interest to the Property and has full authority to enter into and execute this Agreement. LESSOR further covenants during the Term that there are no liens, judgments or impediments of title on the Property, or affecting LESSOR's title to the same and that there are no covenants, easements or restrictions which prevent or adversely affect the use or occupancy of the Premises by LESSEE as set forth above.

20. INTEGRATION. It is agreed and understood that this Agreement contains all agreements, promises and understandings between LESSOR and LESSEE and that no verbal or oral agreements, promises or understandings shall be binding upon either LESSOR or LESSEE in any dispute, controversy or proceeding at law, and any addition, variation or modification to this Agreement shall be void and ineffective unless made in writing signed by the Parties or in a written acknowledgment in the case provided in Paragraph 3. In the event any provision of the Agreement is found to be invalid or unenforceable, such finding shall not affect the validity and enforceability of the remaining provisions of this Agreement. The failure of either Party to insist upon strict performance of any of the terms or conditions of this Agreement or to exercise any of its rights under the Agreement shall not waive such rights and such Party shall have the right to enforce such rights at any time and take such action as may be lawful and authorized under this Agreement, in law or in equity.

21. GOVERNING LAW. This Agreement and the performance thereof shall be governed, interpreted, construed and regulated by the Laws of the State in which the Property is located.

22. ASSIGNMENT. This Agreement may be sold, assigned or transferred by the LESSEE without any approval or consent of the LESSOR to the LESSEE's principal, affiliates, subsidiaries of its principal or to any entity which acquires all or substantially all of LESSEE's

assets in the market defined by the Federal Communications Commission in which the Property is located by reason of a merger, acquisition or other business reorganization. As to other parties, this Agreement may not be sold, assigned or transferred without the written consent of the LESSOR, which such consent will not be unreasonably withheld, delayed or conditioned. No change of stock ownership, partnership interest or control of LESSEE or transfer upon partnership or corporate dissolution of LESSEE shall constitute an assignment hereunder. LESSEE may sublet the Premises within its sole discretion, upon notice to LESSOR. Any sublease that is entered into by LESSEE shall be subject to the provisions of this Agreement and shall be binding upon the successors, assigns, heirs and legal representatives of the respective Parties hereto.

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

LESSOR: Ward Baker Properties, LLC  
505 N. Baker Drive  
Canby, Oregon 97103  
Telephone: (503) 266-1986

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

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

24. SUCCESSORS. This Agreement shall extend to and bind the heirs, personal representative, successors and assigns of the Parties hereto.

25. SUBORDINATION AND NON-DISTURBANCE. At LESSOR's option, this Agreement shall be subordinate to any mortgage or other security interest by LESSOR which from time to time may encumber all or part of the Property or right-of-way; provided, however, every such mortgage or other security interest shall recognize the validity of this Agreement in the event of a foreclosure of LESSOR's interest and also LESSEE's right to remain in occupancy of and have access to the Premises as long as LESSEE is not in default of this Agreement. LESSEE shall execute whatever instruments may reasonably be required to evidence this subordination clause. In the event the Property is encumbered by a mortgage or other security interest, LESSOR immediately after this Agreement is executed, will obtain and furnish to



LESSEE, a non-disturbance agreement for each such mortgage or other security interest in recordable form. In the event LESSOR defaults in the payment and/or other performance of any mortgage or other security interest encumbering the Property, LESSEE, may, at its sole option and without obligation, cure or correct LESSOR's default and upon doing so, LESSEE shall be subrogated to any and all rights, titles, liens and equities of the holders of such mortgage or security interest and LESSEE shall be entitled to deduct and setoff against all rents that may otherwise become due under this Agreement the sums paid by LESSEE to cure or correct such defaults.

26. RECORDING. LESSOR agrees to execute a Memorandum of this Agreement which LESSEE may record with the appropriate recording officer. The date set forth in the Memorandum of Lease is for recording purposes only and bears no reference to commencement of either the Term or rent payments.

27. DEFAULT.

a. In the event there is a breach by LESSEE with respect to any of the provisions of this Agreement or its obligations under it, including the payment of rent, LESSOR shall give LESSEE written notice of such breach. After receipt of such written notice, LESSEE shall have fifteen (15) days in which to cure any monetary breach and thirty (30) days in which to cure any non-monetary breach, provided LESSEE shall have such extended period as may be required beyond the thirty (30) days if the nature of the cure is such that it reasonably requires more than thirty (30) days and LESSEE commences the cure within the thirty (30) day period and thereafter continuously and diligently pursues the cure to completion. LESSOR may not maintain any action or effect any remedies for default against LESSEE unless and until LESSEE has failed to cure the breach within the time periods provided in this Paragraph.

b. In the event there is a breach by LESSOR with respect to any of the provisions of this Agreement or its obligations under it, LESSEE shall give LESSOR written notice of such breach. After receipt of such written notice, LESSOR shall have thirty (30) days in which to cure any such breach, provided LESSOR shall have such extended period as may be required beyond the thirty (30) days if the nature of the cure is such that it reasonably requires more than thirty (30) days and LESSOR commences the cure within the thirty (30) day period and thereafter continuously and diligently pursues the cure to completion. LESSEE may not maintain any action or effect any remedies for default against LESSOR unless and until LESSOR has failed to cure the breach within the time periods provided in this Paragraph. Notwithstanding the foregoing to the contrary, it shall be a default under this Agreement if LESSOR fails, within five (5) days after receipt of written notice of such breach, to perform an obligation required to be performed by LESSOR if the failure to perform such an obligation interferes with LESSEE's ability to conduct its business on the Property; provided, however, that if the nature of LESSOR's obligation is such that more than five (5) days after such notice is reasonably required for its performance, then it shall not be a default under this Agreement if performance is commenced within such five (5) day period and thereafter diligently pursued to completion.

28. REMEDIES. Upon a default, the non-defaulting Party may at its option (but without obligation to do so), perform the defaulting Party's duty or obligation on the defaulting Party's behalf, including but not limited to the obtaining of reasonably required insurance policies. The costs and expenses of any such performance by the non-defaulting Party shall be due and payable by the defaulting Party upon invoice therefor. In the event of a default by either Party with respect to a material provision of this Agreement, without limiting the non-defaulting Party in the exercise of any right or remedy which the non-defaulting Party may have by reason of such default, the non-defaulting Party may terminate the Agreement and/or pursue any remedy now or hereafter available to the non-defaulting Party under the Laws or judicial decisions of the state in which the Premises are located.

29. ENVIRONMENTAL.

a. Each Party will be responsible for the compliance of its activities on the Property with any and all environmental and industrial hygiene laws, including any regulations, guidelines, standards, or policies of any governmental authorities regulating or imposing standards of liability or standards of conduct with regard to any environmental or industrial hygiene conditions or concerns as such laws may now or at any time hereafter be in effect.

b. Each Party shall hold the other harmless and indemnify the other from and assume all duties, responsibility and liability at its sole cost and expense, for all duties, responsibilities, and liability (including without limitation for payment of penalties, sanctions, forfeitures, losses, costs, or damages) and for responding to any action, notice, claim, order, summons, citation, directive, litigation, investigation or proceeding which is in any way related to: a) that Party's failure to comply with any environmental or industrial hygiene law, including without limitation any regulations, guidelines, standards, or policies of any governmental authorities regulating or imposing standards of liability or standards of conduct with regard to any environmental or industrial hygiene concerns or conditions as such laws may now or at any time hereafter be in effect; and b) any environmental conditions arising out of or in any way related to that Party's activities conducted on the Property; provided, that each Party's obligations hereunder shall be limited to the extent such noncompliance or environmental or industrial hygiene conditions are caused by the other; provided further and notwithstanding anything to the contrary contained herein, that LESSOR shall be responsible for, and shall indemnify and hold LESSEE harmless from any and all duties, responsibility and liability for any environmental or industrial hygiene conditions on the Property, or activity formerly conducted on the Property, except and only to the extent the same were caused by LESSEE. The indemnity provided in this Section 29 shall be the exclusive remedy relating to environmental matters.

30. CASUALTY. In the event of damage by fire or other casualty to the Premises that cannot reasonably be expected to be repaired within forty-five (45) days following same or, if the Property is damaged by fire or other casualty so that such damage may reasonably be expected to disrupt LESSEE's operations at the Premises for more than forty-five (45) days, then LESSEE may, at any time following such fire or other casualty, provided LESSOR has not completed the restoration required to permit LESSEE to resume its operation at the Premises, terminate this

Agreement upon fifteen (15) days prior written notice to LESSOR. Any such notice of termination shall cause this Agreement to expire with the same force and effect as though the date set forth in such notice were the date originally set as the expiration date of this Agreement and the Parties shall make an appropriate adjustment, as of such termination date, with respect to payments due to the other under this Agreement. Notwithstanding the foregoing, the rent shall abate during the period of repair following such fire or other casualty in proportion to the degree to which LESSEE's use of the Premises is impaired.

31. CONDEMNATION. In the event of any condemnation of all or any portion of the Property, this Agreement shall terminate as to the part so taken as of the date the condemning authority takes title or possession, whichever occurs first. If as a result of a partial condemnation of the Premises or Property, LESSEE, in LESSEE's sole discretion, is unable to use the Premises for the purposes intended hereunder, or if such condemnation may reasonably be expected to disrupt LESSEE's operations at the Premises for more than forty-five (45) days, LESSEE may, at LESSEE's option, to be exercised in writing within fifteen (15) days after LESSOR shall have given LESSEE written notice of such taking (or in the absence of such notice, within fifteen (15) days after the condemning authority shall have taken possession) terminate this Agreement as of the date the condemning authority takes such possession. LESSEE may on its own behalf make a claim in any condemnation proceeding involving the Premises for losses related to the equipment, conduits, fixtures, its relocation costs and its damages and losses (but not for the loss of its leasehold interest). Any such notice of termination shall cause this Agreement to expire with the same force and effect as though the date set forth in such notice were the date originally set as the expiration date of this Agreement and the Parties shall make an appropriate adjustment as of such termination date with respect to payments due to the other under this Agreement. If LESSEE does not terminate this Agreement in accordance with the foregoing, this Agreement shall remain in full force and effect as to the portion of the Premises remaining, except that the rent shall be reduced in the same proportion as the rentable area of the Premises taken bears to the total rentable area of the Premises. In the event that this Agreement is not terminated by reason of such condemnation, LESSOR shall promptly repair any damage to the Premises caused by such condemning authority.

32. SUBMISSION OF AGREEMENT/PARTIAL INVALIDITY/AUTHORITY. The submission of this Agreement for examination does not constitute an offer to lease the Premises and this Agreement becomes effective only upon the full execution of this Agreement by the Parties. If any provision herein is invalid, it shall be considered deleted from this Agreement and shall not invalidate the remaining provisions of this Agreement. Each of the Parties hereto warrants to the other that the person or persons executing this Agreement on behalf of such Party has the full right, power and authority to enter into and execute this Agreement on such Party's behalf and that no consent from any other person or entity is necessary as a condition precedent to the legal effect of this Agreement.

33. APPLICABLE LAWS. During the Term, LESSOR shall maintain the Property in compliance with all applicable laws, rules, regulations, ordinances, directives, covenants,

easements, zoning and land use regulations, and restrictions of record, permits, building codes, and the requirements of any applicable fire insurance underwriter or rating bureau, now in effect or which may hereafter come into effect (including, without limitation, the Americans with Disabilities Act and laws regulating hazardous substances) (collectively "Laws"). LESSEE shall, in respect to the condition of the Premises and at LESSEE's sole cost and expense, comply with (a) all Laws relating solely to LESSEE's specific and unique nature of use of the Premises (other than general office use); and (b) all building codes requiring modifications to the Premises due to the improvements being made by LESSEE in the Premises.

34. SURVIVAL. The provisions of the Agreement relating to indemnification from one Party to the other Party shall survive any termination or expiration of this Agreement. Additionally, any provisions of this Agreement which require performance subsequent to the termination or expiration of this Agreement shall also survive such termination or expiration.

35. CAPTIONS. The captions contained in this Agreement are inserted for convenience only and are not intended to be part of the Agreement. They shall not affect or be utilized in the construction or interpretation of the Agreement.

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

**LESSOR:** Ward Baker Properties, LLC, an Oregon limited liability company

By: Ronald D. Ward  
Its: DIENER  
Name: RONALD D. WARD  
Date: \_\_\_\_\_

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

By: \_\_\_\_\_  
Name: Brian Mecum  
Title: Area Vice President Network  
Date: \_\_\_\_\_

EXHIBIT "A" (Page 1 of 3)  
LEGAL DESCRIPTION

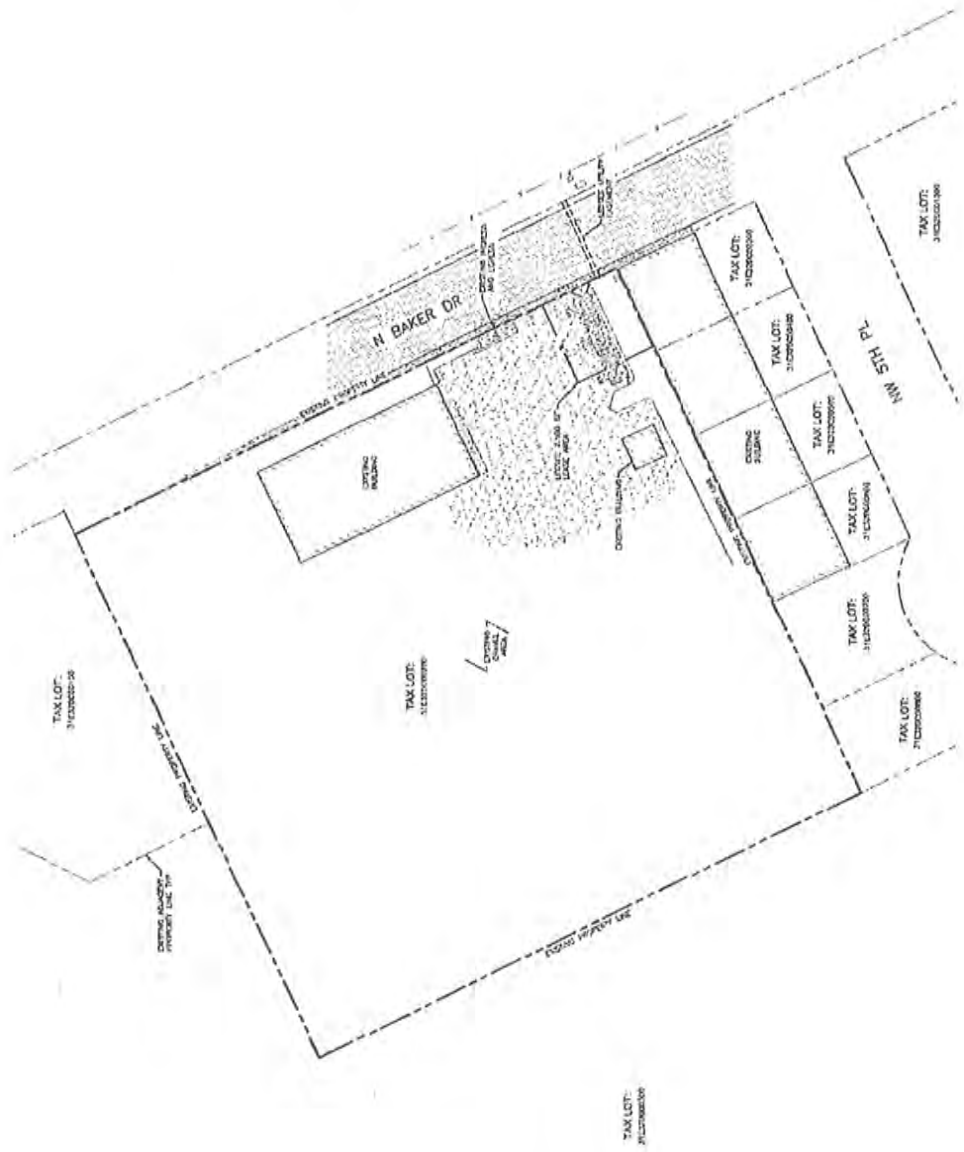
That portion of the Lucius Seely Donation Land Claim in Section 32, Township 3 South, Range 1 East, of the Willamette Meridian in Clackamas County, Oregon, described as follows:

Beginning at a point on the Southwesterly extension of the Southerly line of Third Street in the TOWN OF CANBY, South 65° 35' West, 1240 feet from the West corner of Block 7, in said plat; thence North 25° 25' West along the Southwesterly line of that tract conveyed to the City of Canby, be Deed Recorded in Book 381, Page 136, Clackamas County Deed Records, 1212' more or less to the Southeast corner of that tract of land conveyed to Warren E. Mueller, et ux, by Deed Recorded in Book 477, Page 240, Clackamas County Deed Records and the true point of beginning; thence South 64° 08' 00" West, along the Southerly line of land Mueller tract and the Southwesterly extension thereof, 359.41' to a point on the Southwest line of that tract conveyed to Martin L. Clark, et al, by Deed Recorded May 9, 1978, as Recorder's Fee No. 78-19381, Clackamas County Records; thence South 26° 30' 00" East, along said Southwest line 363.62 feet; thence North 64° 08' 00" East, 359.41 feet to the Southwesterly line of said City of Canby Tract; thence North 26° 30' 00" West, along said Southwesterly line, 363.62' to the true point of beginning.

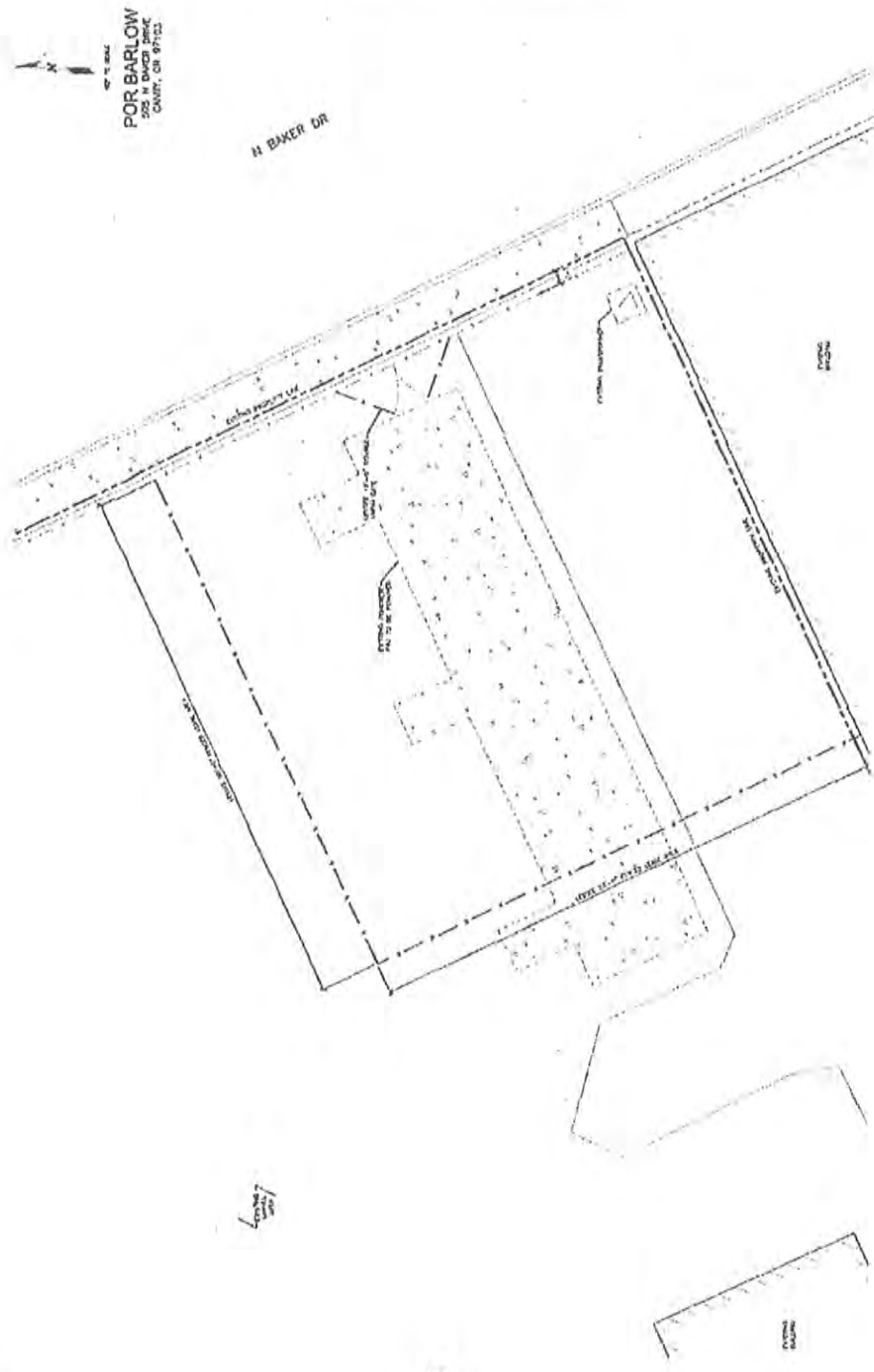
EXCEPTING THEREFROM that portion conveyed to the City of Canby, by Deed Recorded November 15, 1979, as Recorder's Fee No. 79-050892, Clackamas County Records, being the Northeasterly 15 feet of the herein described premises.

**EXHIBIT "A" (Page 2 of 3)**  
**DESCRIPTION OF PREMISES**

NPT TO SCALE  
**POR BARLOW**  
 505 N BAKER DRIVE  
 CANBY, OR 97103



**EXHIBIT "A" (Page 3 of 3)**  
**DESCRIPTION OF PREMISES**



POR BARLOW  
5/16/2014  
DWT 22179441v5 0052051-000032







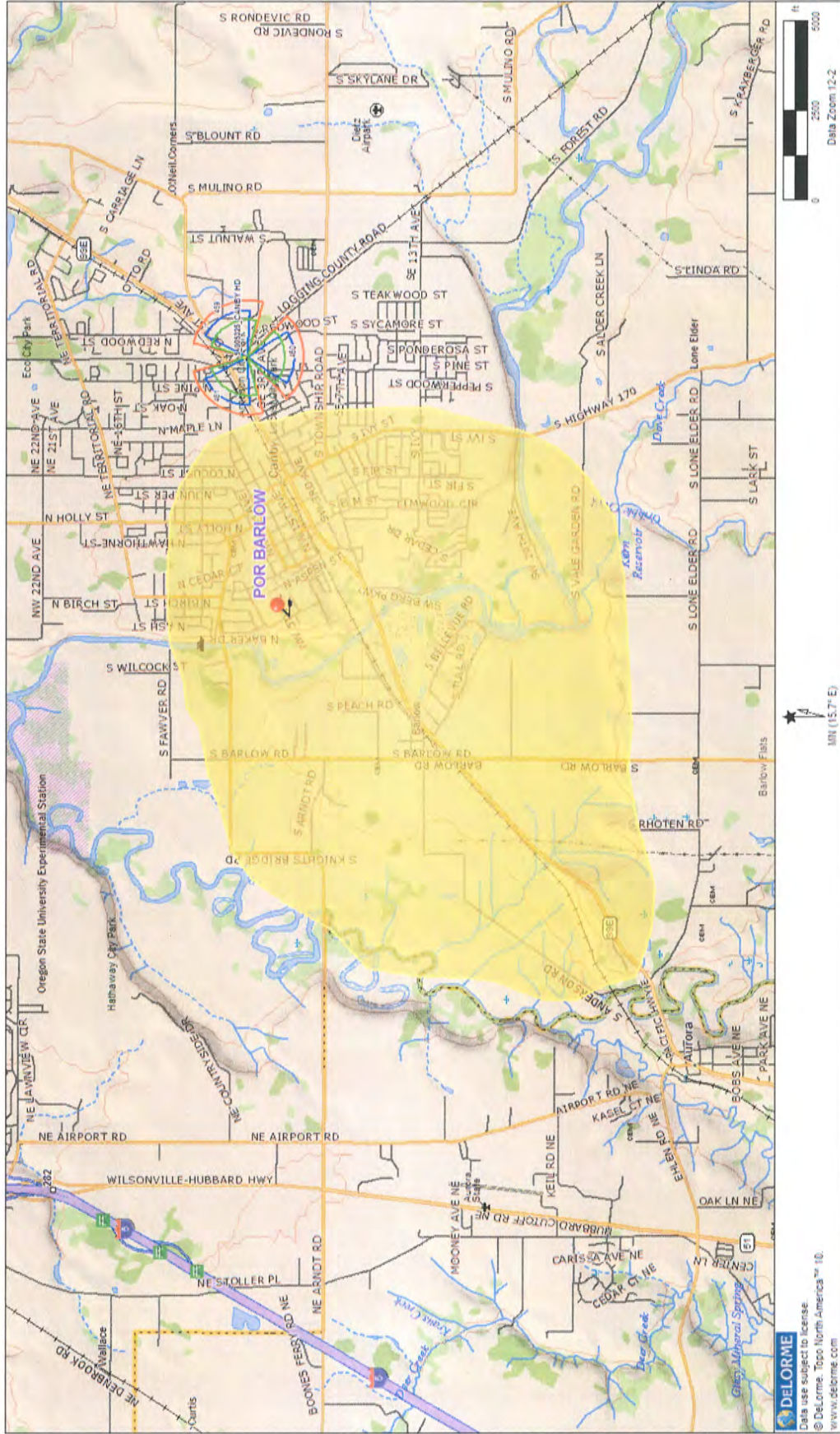
## RF Propagation Maps

For Site "POR BARLOW"

### Map Disclaimer

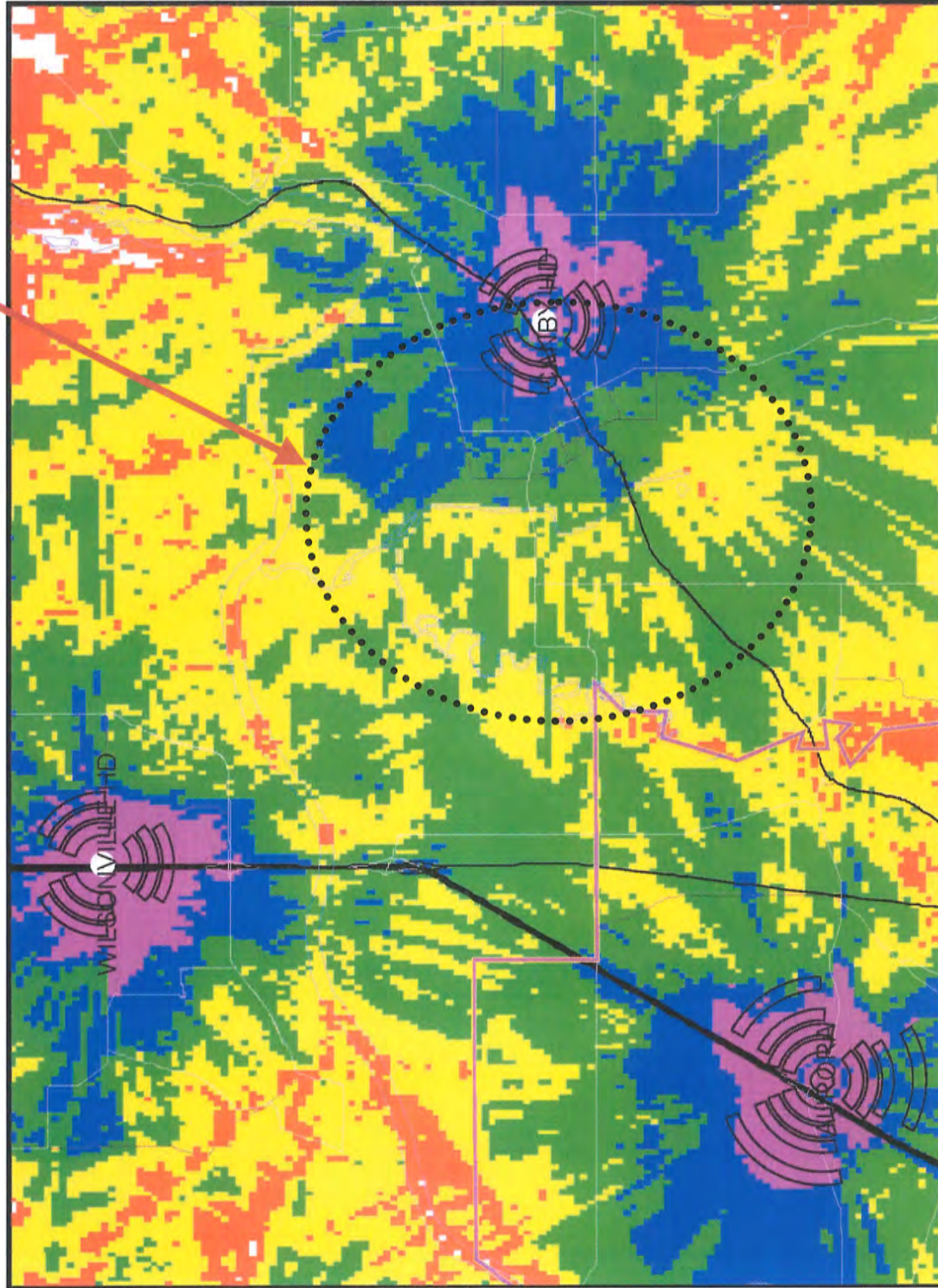
*These maps show approximately where there is wireless coverage based on our own internal data. The maps are **not** a depiction of actual service or rates availability. The mapped territory contains areas with no service. Voice clarity and reception may vary near coverage boundaries. Wireless service 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 – Area of Cell Capacity issue. (POR BARLOW)**



*Exhibit 2 – Without Proposed Site (POR BARLOW)*

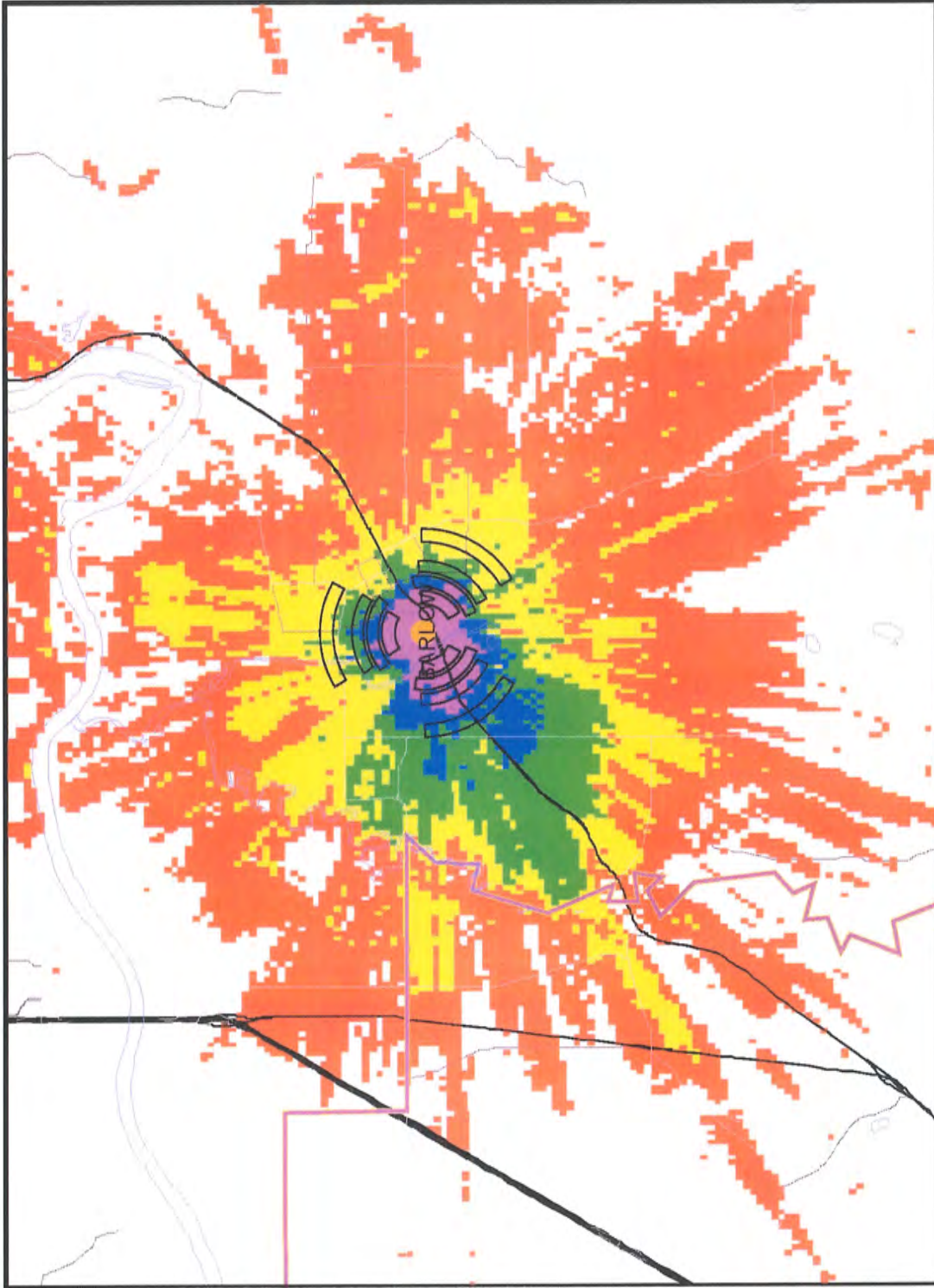
RF Capacity Issue.



POR WILSONVILLE – Antenna(s) Centerline (C/L): 98.00°, POR CANBY – Antenna(s) Centerline (C/L): 175.00°, POR AURORA – Antenna(s) Centerline (C/L): 150.00°

**Exhibit 3 – Propose Site (POR BARLOW)**

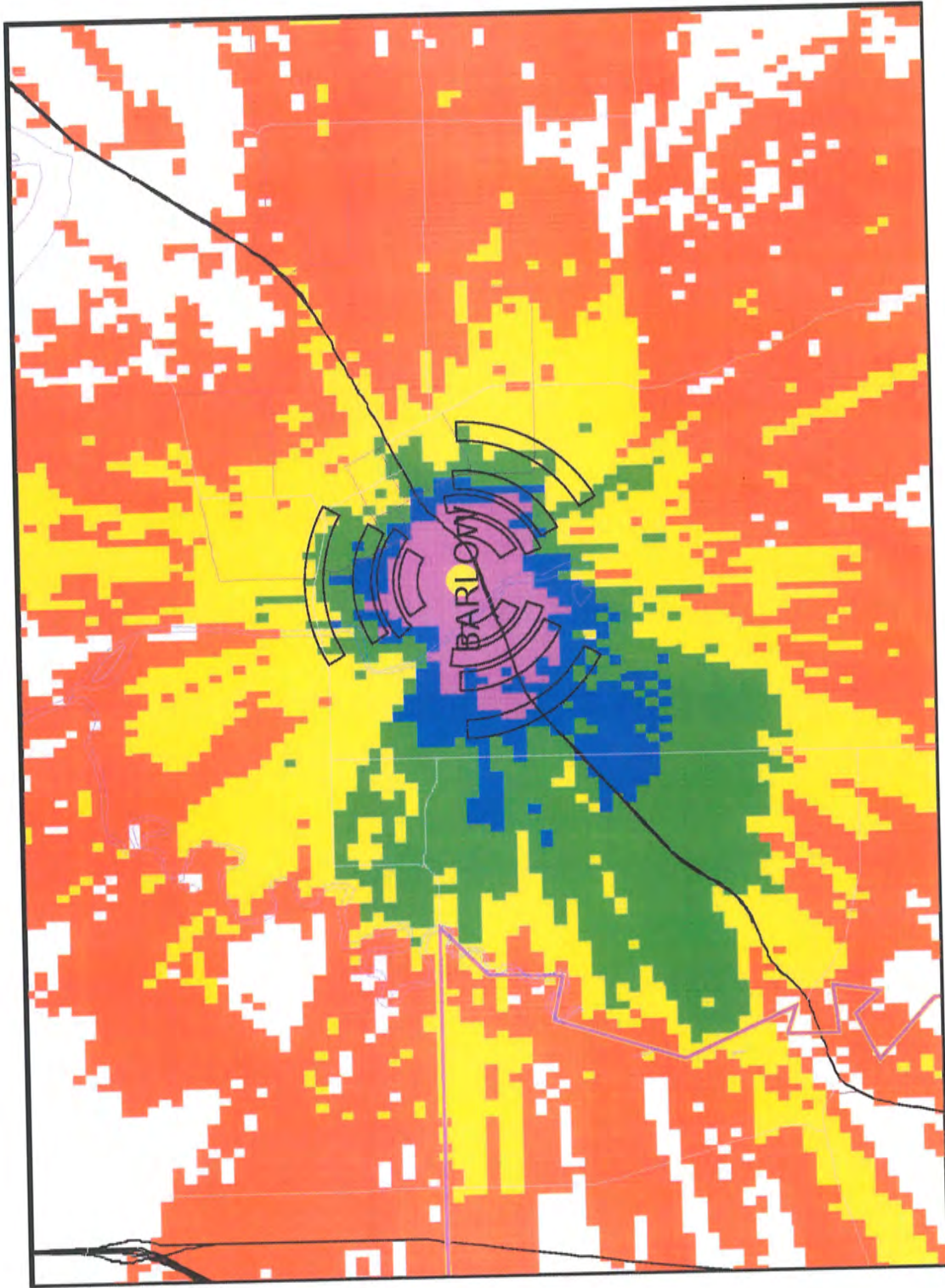
POR BARLOW – Antenna(s) Centerline (C/L): 100.00'



POR WILSONVILLE – Antenna(s) Centerline (C/L): 98.00', POR CANBY – Antenna(s) Centerline (C/L): 175.00', POR AURORA – Antenna(s) Centerline (C/L): 150.00'

**Exhibit 4 – Propose Site (POR BARLOW) -- Close View**

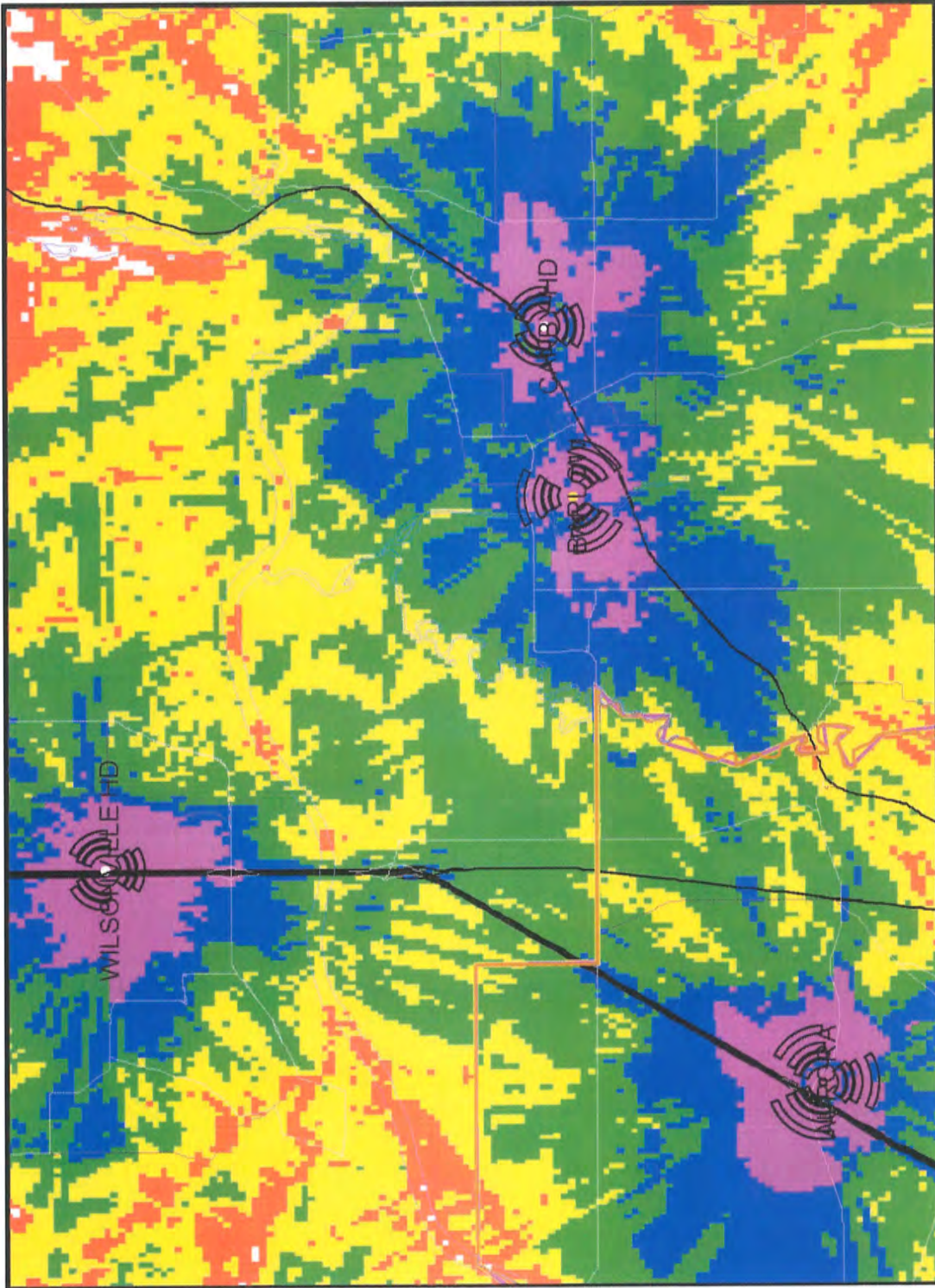
POR BARLOW – Antenna(s) Centerline (C/L): 100.00'



POR WILSONVILLE – Antenna(s) Centerline (C/L): 98.00', POR CANBY – Antenna(s) Centerline (C/L): 175.00', POR AURORA – Antenna(s) Centerline (C/L): 150.00'

**Exhibit 5 – With Proposed Site (POR BARLOW)**

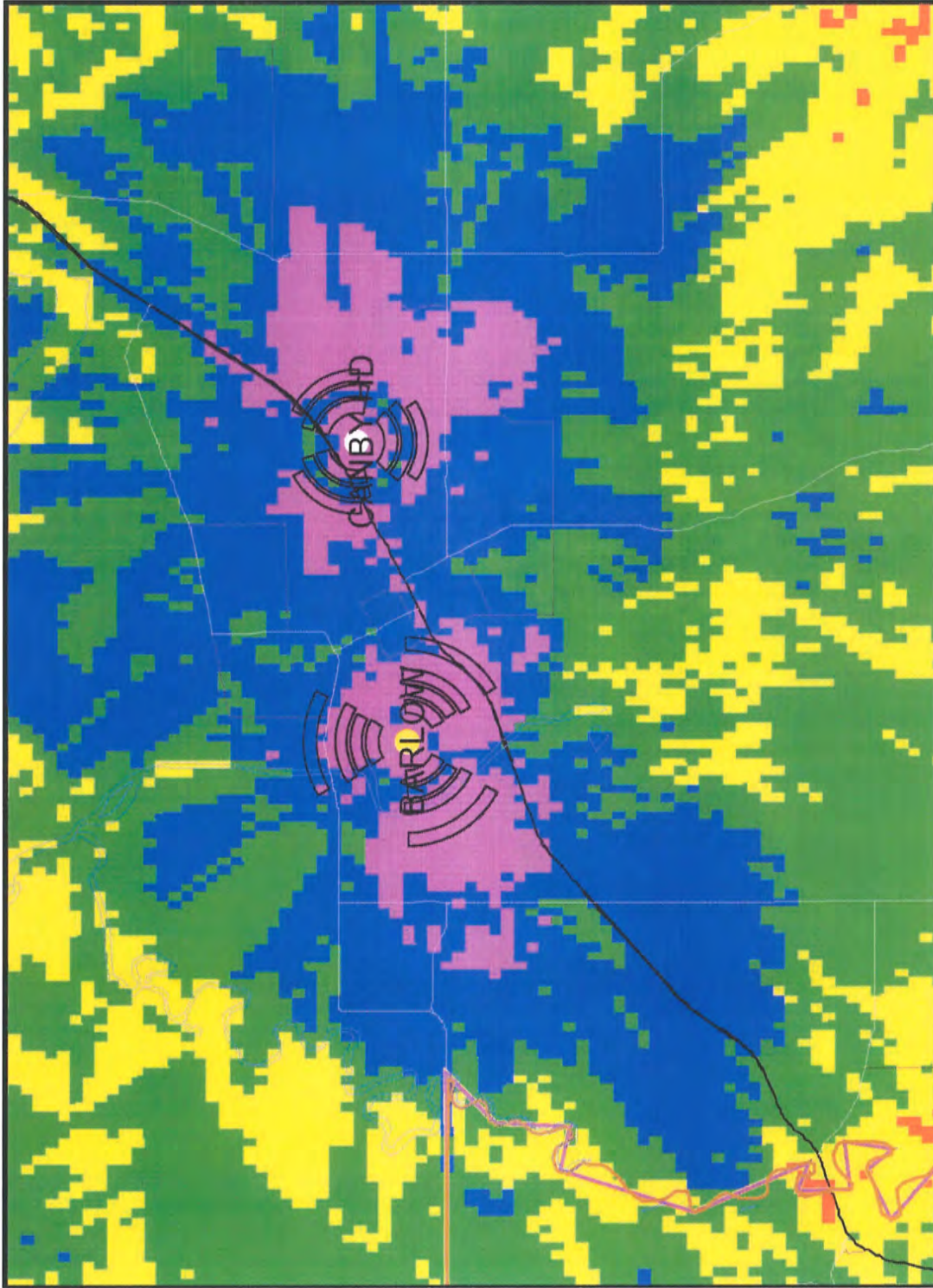
POR BARLOW – Antenna(s) Centerline (C/L): 100.00'



POR WILSONVILLE – Antenna(s) Centerline (C/L): 98.00', POR CANBY – Antenna(s) Centerline (C/L): 175.00', POR AURORA – Antenna(s) Centerline (C/L): 150.00'

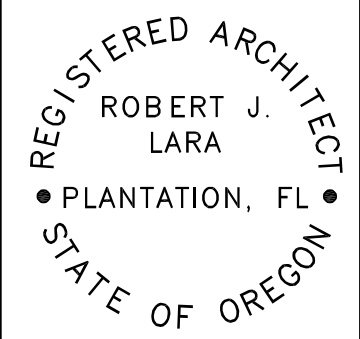
**Exhibit 6 – With Proposed Site (POR BARLOW) -- Close View**

POR BARLOW – Antenna(s) Centerline (C/L): **100.00'**



POR WILSONVILLE – Antenna(s) Centerline (C/L): 98.00', POR CANBY – Antenna(s) Centerline (C/L): 175.00', POR AURORA – Antenna(s) Centerline (C/L): 150.00'

DO NOT SCALE DRAWINGS. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND ADVISE CONSULTANTS OF ANY ERRORS OR OMISSIONS. NO VARIATIONS OR MODIFICATIONS TO WORK SHOWN SHALL BE IMPLEMENTED WITHOUT PRIOR WRITTEN APPROVAL. ALL PREVIOUS ISSUES OF THIS DRAWING ARE SUPERSEDED BY THE LATEST REVISION. ALL DRAWINGS AND SPECIFICATIONS REMAIN THE PROPERTY OF MORRISON HERSHFIELD CORPORATION. NEITHER MORRISON HERSHFIELD NOR THE ARCHITECT WILL BE PROVIDING CONSTRUCTION REVIEW OF THIS PROJECT.



ROBERT JERRY LARA  
REGISTERED ARCHITECT  
STATE OF OREGON  
5897

4	6/30/14	ISSUED FOR PERMIT
3	6/03/14	REVISED PER COMMENTS
2	4/1/14	REVISED PER COMMENTS
1	3/04/14	REVISED PER COMMENTS
0	10/30/13	REVISED PER COMMENTS
A	9/11/13	ISSUED FOR REVIEW

No. Date Revision

Client:

Implementation Team:

**JIM JAGGERS**  
9895 MONTEGRINO COURT  
ELK GROVE, CA 95757  
(916) 213-8407

A&E Team:

MORRISON HERSHFIELD  
10900 NE 8TH STREET, SUITE 810  
BELLEVUE, WA 98004 Tel:  
425.451.1301 Fax: 425.451.1369  
www.morrisonhershfield.com

Project Info:

**POR BARLOW**  
505 N BAKER DRIVE  
CANBY, OR 97013

Drawing Title:

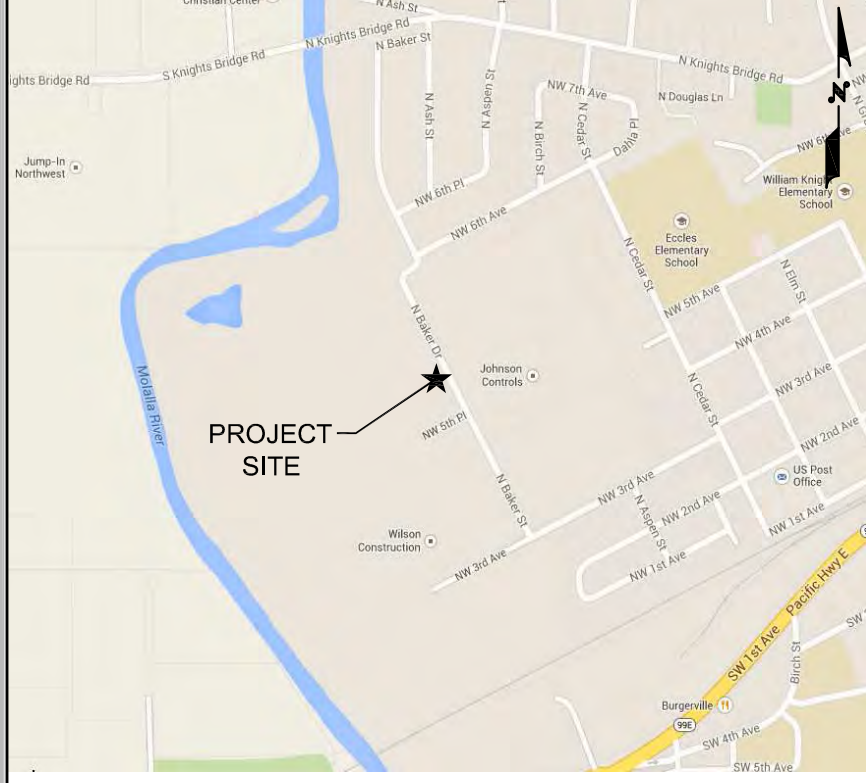
**COVER SHEET**

Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: T-1



**PROJECT NAME: POR BARLOW**  
**PROJECT LOCATION: 505 N BAKER DRIVE CANBY, OR 97013**

VICINITY MAP



PROJECT INFORMATION

JURISDICTION: CITY OF CANBY  
ZONING CLASS: M1 (LIGHT INDUSTRIAL)  
OCCUPANCY GROUP: UTILITY  
CONSTRUCTION TYPE: V-B  
TAX PARCEL ID: 31E32DC00200  
[SEC 32; TWN 3S; RNG 1E]  
PARCEL SIZE: 2.87 ACRES  
LATITUDE (From GPS): 45°15'43.68" N  
45.262133°  
LONGITUDE (From GPS): 122°42'26.58" W  
-122.707383°  
GROUND ELEVATION: 160.9' AMSL  
STRUCTURE HEIGHT: 104'-0" (TOP OF ANTENNAS)

SCOPE OF WORK

VERIZON WIRELESS PROPOSES TO INSTALL AN UNMANNED TELECOMMUNICATIONS FACILITY CONSISTING OF (6) EQUIPMENT CABINETS ON A 3'-6"x22'-0" CONCRETE EQUIPMENT PAD AND A 30KW DIESEL GENERATOR WITHIN A PROPOSED 50'-0"x50'-0" FENCED LEASE AREA. ALSO PROPOSED IS THE INSTALLATION OF (12) PANEL ANTENNAS, (1) 4'-0" MICROWAVE ANTENNA, (1) E105 ELLIPTICAL WAVEGUIDE, (1) HYBRID CABLE, (12) 1-5/8" COAX CABLES, (3) TMAs, (3) RRU'S AND (1) RAYCAP SPLITTER/SURGE SUPPRESSOR ON A PROPOSED 100'-0" MONOPOLE.

LIST OF DRAWINGS

SHEET	DESCRIPTION
T-1	COVER SHEET
T-2	GENERAL NOTES AND SYMBOLS
SV1	EXISTING SITE SURVEY
C-1	PROPOSED SITE PLAN
A-1	PROPOSED EQUIPMENT AND COMPOUND PLAN
A-1.1	PROPOSED COMPOUND PLAN
A-2	PROPOSED ELEVATION
A-3	CONSTRUCTION DETAILS
A-4	CONSTRUCTION DETAILS
A-5	CONSTRUCTION DETAILS
A-6	CONSTRUCTION DETAILS
L-1	PROPOSED LANDSCAPE PLAN
L-2	LANDSCAPING DETAILS
S-1	STRUCTURAL NOTES
S-2	STRUCTURAL DETAILS
E-1	ELECTRICAL NOTES AND SYMBOLS
E-2	ELECTRICAL SITE PLAN
E-3	ELECTRICAL PLAN, NOTES AND RISER DIAGRAM
E-4	GROUNDING PLAN AND NOTES
E-5	GROUNDING PLAN AND NOTES
E-6	GROUNDING DETAILS AND PANEL SCHEDULE
E-7	GROUNDING DETAILS
E-8	GROUNDING DETAILS
E-9	GROUNDING DETAILS

LEGAL DESCRIPTION

SEE SHEET SV1.

CONTACTS

**IMPLEMENTATION CONTACT:**  
JOE AHSING  
VERIZON WIRELESS (VAV) LLC  
(d/b/a VERIZON WIRELESS)  
5430 NE 122ND AVE  
PORTLAND, OR 97230  
PHONE: (503) 408-3434  
joseph.ahsing@verizonwireless.com

**APPLICANT/CLIENT CONTACT:**  
JIM JAGGERS  
9895 MONTEGRINO COURT  
ELK GROVE, CA 95757  
PHONE: (916) 213-8407  
jagglaw@gmail.com

**A&E CONTACT:**  
CURTIS MILLER  
MORRISON HERSHFIELD CORP  
10900 NE 8TH ST, SUITE 810  
BELLEVUE, WA 98004  
PHONE: (425) 451-1301  
bwhite@morrisonhershfield.com

**PROPERTY OWNER CONTACT:**  
RONALD WARD  
WARD BAKER PROPERTIES, LLC  
505 N BAKER DRIVE  
CANBY, OR 97103  
PHONE: (503) 266-1986  
ron@ward-henshaw.com

**TOWER OWNER CONTACT:**  
VERIZON WIRELESS  
12730 E MIRABEAU PARKWAY,  
STE #500  
SPOKANE, WA 99216

**PROFESSIONAL OF RECORD:**  
ROBERT J LARA  
MORRISON HERSHFIELD CORP  
PHONE: (945) 577-4668  
rlara@morrisonhershfield.com

**PROFESSIONAL OF RECORD:**  
G. LANCE COOKE  
MORRISON HERSHFIELD CORP  
PHONE: (503) 595-9128  
lcooke@morrisonhershfield.com

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT CONDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

OREGON STATE AND LOCAL BUILDING CODES WITH THE FOLLOWING REFERENCE CODE:  
2010 OREGON STRUCTURAL SPECIALTY CODE  
2011 OREGON ELECTRICAL SPECIALTY CODE  
2010 OREGON MECHANICAL SPECIALTY CODE  
2012 NFPA 101 LIFE SAFETY CODE

DRIVING DIRECTIONS

- (FROM I-205 SOUTH):
- TAKE EXIT 9 FOR OREGON 99E TOWARD DOWNTOWN/GLADSTONE/OREGON CITY
  - TURN LEFT ONTO OR-99E S/MCLOUGHLIN BLVD
  - CONTINUE TO FOLLOW OR-99E S
  - TURN RIGHT ONTO NW 1ST AVE
  - TAKE THE 1ST LEFT TO STAY ON NW 1ST AVE
  - NW 1ST AVE TURNS RIGHT AND BECOMES N CEDAR ST
  - TURN LEFT ONTO NW 3RD AVE
  - TAKE THE 1ST RIGHT ONTO N BAKER ST
  - DESTINATION WILL BE ON THE LEFT

APPROVALS

TITLE	SIGNATURE	DATE
REPRESENTATIVE		
RE ENGINEER		
SITE OWNER		

C:\Users\CSmith2\Desktop\POR Barlow-CD\_20140603.dwg 07/10/2014 1:27pm csmith2

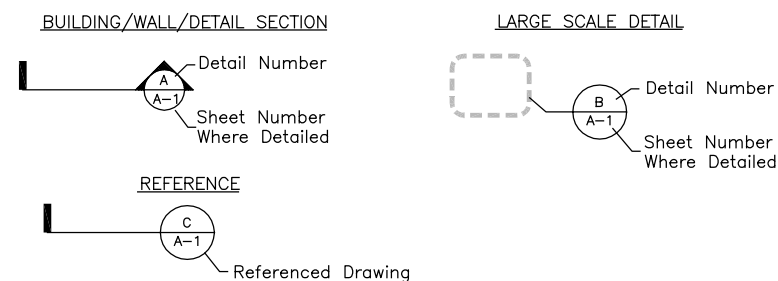


## GENERAL NOTES

1. WORK SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, AND REGULATIONS. ALL NECESSARY LICENSES, CERTIFICATES, ETC., REQUIRED BY AUTHORITY HAVING JURISDICTION SHALL BE PROCURED AND PAID FOR BY THE CONTRACTOR.
2. MORRISON HERSHFIELD CORPORATION HAS NOT CONDUCTED, NOR DOES IT INTEND TO CONDUCT ANY INVESTIGATION AS TO THE PRESENCE OF HAZARDOUS MATERIAL, INCLUDING, BUT NOT LIMITED TO, ASBESTOS WITHIN THE CONFINES OF THIS PROJECT. MORRISON HERSHFIELD CORPORATION DOES NOT ACCEPT RESPONSIBILITY FOR THE INDEMNIFICATION, THE REMOVAL, OR ANY EFFECTS FROM THE PRESENCE OF THESE MATERIALS. IF EVIDENCE OF HAZARDOUS MATERIALS IS FOUND, WORK IS TO BE SUSPENDED AND THE OWNER NOTIFIED. THE CONTRACTOR IS NOT TO PROCEED WITH FURTHER WORK UNTIL INSTRUCTED BY THE OWNER IN WRITING.
3. ALL MATERIAL FURNISHED UNDER THIS CONTRACT SHALL BE NEW, UNLESS OTHERWISE NOTED. ALL WORK SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP. THE CONTRACTOR SHALL REPAIR OR REPLACE AT HIS EXPENSE ALL WORK THAT MAY DEVELOP DEFECTS IN MATERIALS OR WORKMANSHIP WITHIN SAID PERIOD OF TIME OR FOR ONE YEAR AFTER THE FINAL ACCEPTANCE OF THE ENTIRE PROJECT, WHICHEVER IS GREATER.
4. THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS AND UTILITIES AT THE JOB SITE BEFORE WORK IS STARTED. NO CLAIMS FOR EXTRA COMPENSATION FOR WORK WHICH COULD HAVE BEEN FORESEEN BY AN INSPECTION, WHETHER SHOWN ON THE CONTRACT DOCUMENTS OR NOT, WILL BE ACCEPTED OR PAID.
5. THE GENERAL CONTRACTOR AND EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING DIMENSIONS AND CONDITIONS AT THE JOB SITE WHICH COULD AFFECT THE WORK UNDER THIS CONTRACT. ALL MANUFACTURERS RECOMMENDED SPECIFICATIONS, EXCEPT THOSE SPECIFICATIONS HEREIN, WHERE MOST STRINGENT SHALL BE COMPLIED WITH.
6. THE CONTRACTOR SHALL VERIFY AND COORDINATE SIZE AND LOCATION OF ALL OPENINGS FOR STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, CIVIL, OR ARCHITECTURAL WORK.
7. THE CONTRACTOR SHALL VERIFY THAT NO CONFLICTS EXIST BETWEEN THE LOCATIONS OF ANY AND ALL MECHANICAL, ELECTRICAL, PLUMBING, OR STRUCTURAL ELEMENTS, AND THAT ALL REQUIRED CLEARANCES FOR INSTALLATION AND MAINTENANCE ARE MET. NOTIFY THE CONSULTANT OF ANY CONFLICTS. THE CONSULTANT HAS THE RIGHT TO MAKE MINOR MODIFICATIONS IN THE DESIGN OF THE CONTRACT WITHOUT THE CONTRACTOR GETTING ADDITIONAL COMPENSATION.
8. DO NOT SCALE THE DRAWINGS. DIMENSIONS ARE EITHER TO THE FACE OF FINISHED ELEMENTS OR TO THE CENTER LINE OF ELEMENTS, UNLESS NOTED OTHERWISE. CRITICAL DIMENSIONS SHALL BE VERIFIED AND NOTIFY THE CONSULTANT OF ANY DISCREPANCIES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY CLEAN UP OF ALL TRADES AND REMOVE ALL DEBRIS FROM THE CONSTRUCTION SITE. AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL THOROUGHLY CLEAN THE BUILDING, SITE, AND ANY OTHER SURROUNDING AREAS TO A BETTER THAN EXISTING CONDITION.
10. THE CONTRACTOR IS RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, ETC. ACCORDING TO APPLICABLE CODES, STANDARDS, AND GOOD CONSTRUCTION PRACTICES.
11. THE CONTRACTOR SHALL MEET ALL OSHA REQUIREMENTS FOR ALL INSTALLATIONS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO THE EXISTING CONSTRUCTION AND REPAIR ALL DAMAGES TO BETTER THAN NEW CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DAMAGE TO THE BUILDING SITE OR ANY ADJACENT STRUCTURES AROUND THE PROJECT. THE CONSULTANT SHALL BE SOLE AND FINAL JUDGE AS TO THE QUALITY OF THE REPAIRED CONSTRUCTION. ANY ADDITIONAL MODIFICATIONS WHICH MUST BE MADE SHALL BE MADE AT THE CONTRACTOR'S EXPENSE.
13. WHERE ONE DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL LIKE OR SIMILAR CONDITIONS, EVEN THOUGH NOT SPECIFICALLY MARKED ON THE DRAWINGS OR REFERRED TO IN THE SPECIFICATIONS, UNLESS NOTED OTHERWISE.
14. WHERE NEW PAVING, CONCRETE SIDEWALKS OR PATHS MEET EXISTING CONSTRUCTION, THE CONTRACTOR SHALL MATCH THE EXISTING PITCH, GRADE, AND ELEVATION SO THE ENTIRE STRUCTURE SHALL HAVE A SMOOTH TRANSITION.
15. THE CONTRACTOR SHALL MODIFY THE EXISTING FLOORS, WALL, CEILING, OR OTHER CONSTRUCTION AS REQUIRED TO GAIN ACCESS TO AREAS FOR ALL MECHANICAL, PLUMBING, ELECTRICAL, OR STRUCTURAL MODIFICATIONS. WHERE THE EXISTING CONSTRUCTION DOORS, PARTITIONS, CEILING, ETC., ARE TO BE REMOVED, MODIFIED, OR REARRANGED OR WHERE THE EXPOSED OR HIDDEN MECHANICAL, ELECTRICAL, SYSTEMS ARE ADDED OR MODIFIED, THE GENERAL CONTRACTOR SHALL REPAIR, PATCH AND MATCH ALL EXISTING CONSTRUCTION AND FINISHES OF ALL FLOORS WALLS AND CEILINGS. WHERE CONCRETE MASONRY CONSTRUCTION IS MODIFIED, THE CONTRACTOR SHALL TOOTH IN ALL NEW CONSTRUCTION TO MATCH THE EXISTING BOND. WHERE CONCRETE CONSTRUCTION IS MODIFIED, THE CONTRACTOR SHALL VERIFY THE EXACT DETAILS TO BE USED FOR CONSTRUCTION. ALL WORK SHALL BE COVERED UNDER THE GENERAL CONTRACT.

16. VERIFY ALL EXISTING DIMENSIONS PRIOR TO PERFORMING WORK.
17. VERIFY LOCATION OF ALL BURIED UTILITIES PRIOR TO ANY EXCAVATION.
18. IN RAWLAND CONDITIONS, TOWER FOUNDATION STRUCTURAL STEEL TO BE GROUNDED PRIOR TO CONCRETE POUR. TOWER FOUNDATION STRUCTURAL STEEL TO BE CONNECTED TO PERMANENT GROUND ROD PRIOR TO TOWER ERECTION. TOWER GROUND MUST BE MAINTAINED AT ALL TIMES.
19. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR APPLYING FOR COMMERCIAL POWER IMMEDIATELY UPON AWARD OF CONTRACT. THE GENERAL CONTRACTOR IS REQUIRED TO KEEP ALL DOCUMENTATION RECEIVED FROM THE POWER COMPANY, ACKNOWLEDGING APPLICATION FOR POWER, WRITTEN AND VERBAL DISCUSSIONS WITH THE POWER COMPANY, ETC.
20. THE GENERAL CONTRACTOR SHALL OBTAIN WRITTEN CONFIRMATION OF THE EXPECTED DATE OF COMPLETION OF THE POWER CONNECTION FROM THE POWER COMPANY.
21. IF THE POWER COMPANY IS UNABLE TO PROVIDE THE POWER CONNECTION BY OWNER'S REQUIRED DATE, THE GENERAL CONTRACTOR SHALL PROVIDE AND MAINTAIN A TEMPORARY GENERATOR UNTIL THE POWER COMPANY CONNECTION IS COMPLETED. COSTS ASSOCIATED WITH THE TEMPORARY GENERATOR TO BE APPROVED BY THE OWNER.
22. IF THE GENERAL CONTRACTOR FAILS TO TAKE NECESSARY MEASURES AS DESCRIBED IN NOTES 19, 20 AND 21 ABOVE, THE GENERAL CONTRACTOR SHALL PROVIDE A TEMPORARY GENERATOR AT NO COST TO THE OWNER.
23. PLANS PART OF THIS SET ARE COMPLEMENTARY. INFORMATION IS NOT LIMITED TO ONE PLAN. DRAWINGS AND SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND SHALL REMAIN THE PROPERTY OF THE ARCHITECT, WHETHER THE PROJECT FOR WHICH THEY ARE MADE IS EXECUTED OR NOT. THEY ARE NOT TO BE USED BY THE OWNER ON OTHER PROJECTS OR EXTENSION TO THIS PROJECT EXCEPT BY AGREEMENT IN WRITING AND WITH APPROPRIATE COMPENSATION TO THE ARCHITECT. THESE PLANS WERE PREPARED TO BE SUBMITTED TO GOVERNMENTAL BUILDING AUTHORITIES FOR REVIEW FOR COMPLIANCE WITH APPLICABLE CODES AND IT IS THE SOLE RESPONSIBILITY OF THE OWNER AND/OR CONTRACTOR TO BUILD ACCORDING TO APPLICABLE BUILDING CODES.
24. IF CONTRACTOR OR SUB-CONTRACTOR FIND IT NECESSARY TO DEVIATE FROM ORIGINAL APPROVED PLANS, THEN IT IS THE CONTRACTOR'S AND THE SUB-CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE ARCHITECT WITH 4 COPIES OF THE PROPOSED CHANGES FOR HIS APPROVAL BEFORE PROCEEDING WITH THE WORK. IN ADDITION THE CONTRACTOR AND SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR PROCURING ALL NECESSARY APPROVALS FROM THE BUILDING AUTHORITIES FOR THE PROPOSED CHANGES BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR AND SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR PROCURING ALL NECESSARY INSPECTIONS AND APPROVALS FROM BUILDING AUTHORITIES DURING THE EXECUTION OF THE WORK.
25. IN EVERY EVENT, THESE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS SHALL BE INTERPRETED TO BE A MINIMUM ACCEPTABLE MEANS OF CONSTRUCTION BUT THIS SHALL NOT RELIEVE THE CONTRACTOR, SUB-CONTRACTOR, AND/OR SUPPLIER/MANUFACTURER FROM PROVIDING A COMPLETE AND CORRECT JOB WHEN ADDITIONAL ITEMS ARE REQUIRED TO THE MINIMUM SPECIFICATION. IF ANY ITEMS NEED TO EXCEED THESE MINIMUM SPECIFICATIONS TO PROVIDE A COMPLETE, ADEQUATE AND SAFE WORKING CONDITION, THEN IT SHALL BE THE DEEMED AND UNDERSTOOD TO BE INCLUDED IN THE DRAWINGS. FOR EXAMPLE, IF AN ITEM AND/OR PIECE OF EQUIPMENT REQUIRES A LARGER WIRE SIZE (I.E. ELECTRICAL WIRE), STRONGER OR LARGER PIPING, INCREASED QUANTITY (I.E. STRUCTURAL ELEMENTS), REDUCED SPACING, AND/OR INCREASED LENGTH (I.E. BOLT LENGTHS, BAR LENGTHS) THEN IT SHALL BE DEEMED AND UNDERSTOOD TO BE INCLUDED IN THE BID/PROPOSAL. THESE DOCUMENTS ARE MEANT AS A GUIDE AND ALL ITEMS REASONABLY INFERRED SHALL BE DEEMED TO BE INCLUDED.
26. THESE CONTRACT DOCUMENTS AND SPECIFICATIONS SHALL NOT BE CONSTRUED TO CREATE A CONTRACTUAL RELATIONSHIP OF ANY KIND BETWEEN THE ARCHITECT AND THE CONTRACTOR.

## LEGEND



## LINE/ANTENNA NOTES

1. ALL THREADED STRUCTURAL FASTENERS FOR ANTENNA SUPPORT ASSEMBLES SHALL CONFORM TO ASTM A307 OR ASTM A36. ALL STRUCTURAL FASTENERS FOR STRUCTURAL STEEL FRAMING SHALL CONFORM TO ASTM A325. FASTENERS SHALL BE 5/8" MIN. DIA. BEARING TYPE CONNECTIONS WITH THREADS EXCLUDED FROM THE PLANE. ALL EXPOSED FASTENERS, NUTS, AND WASHERS SHALL BE GALVANIZED OTHERWISE NOTED. CONCRETE EXPANSION ANCHORS SHALL BE HILTI KWIK BOLTS UNLESS OTHERWISE NOTED. ALL ANCHORS INTO CONCRETE SHALL BE STAINLESS STEEL.
2. NORTH ARROW SHOWN ON PLANS REFERS TO TRUE NORTH. CONTRACTOR SHALL VERIFY MAGNETIC NORTH AND NOTIFY CONSULTANT OF ANY DISCREPANCY BEFORE STARTING CONSTRUCTION.
3. PROVIDE LOCK WASHERS FOR ALL MECHANICAL CONNECTIONS FOR GROUND CONDUCTORS. USE STAINLESS STEEL HARDWARE THROUGHOUT.
4. THOROUGHLY REMOVE ALL PAINT AND CLEAN ALL DIRT FROM SURFACES REQUIRING GROUND CONNECTIONS.
5. MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. ALL BENDS TO BE A MIN. OF 8" RADIUS.
6. FOR GROUNDING TO BUILDING FRAME AND HATCH PLATE GROUND BARS. USE A TWO-BOLT HOLE NEMA DRILLED CONNECTOR SUCH AS T&B 32007 OR APPROVED EQUAL.
7. FOR ALL EXTERNAL GROUND CONNECTIONS, CLAMPS AND CADWELDS, APPLY A LIBERAL PROTECTIVE COATING OR AN ANTI-OXIDE COMPOUND SUCH AS "NO-OXIDE A" BY DEARBORN CHEMICAL COMPANY.
8. REPAIR ALL GALVANIZED SURFACES THAT HAVE BEEN DAMAGED BY THERMO-WELDING. USE ERICO T-319 GALVANIZING BAR/COLD GALVANIZING PAINT.
9. SEAL ALL CONDUIT PENETRATIONS INTO MODULAR BUILDING WITH A SILICONE SEALANT AND ALL CONDUIT OPENINGS.
10. ANTENNAS AND COAX TO BE PROVIDED BY **VERIZON WIRELESS**, CONTRACTOR TO COORDINATE DELIVERY.

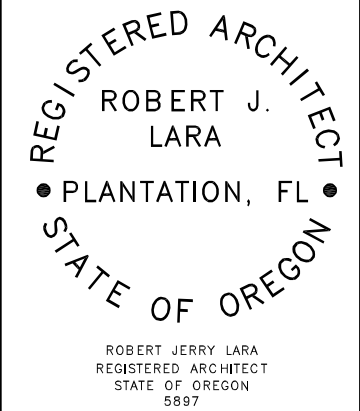
## PROJECT INFORMATION

1. THIS IS AN UNMANNED FACILITY AND RESTRICTED ACCESS EQUIPMENT AND WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNALS FOR THE PURPOSE OF PROVIDING PUBLIC CELLULAR SERVICE.
2. **VERIZON WIRELESS** CERTIFIES THAT THIS TELEPHONE EQUIPMENT FACILITY WILL BE SERVICED ONLY BY **VERIZON WIRELESS** EMPLOYEE SERVICE PERSONNEL FOR REPAIR PURPOSES ONLY. THIS FACILITY IS UNOCCUPIED AND NOT DESIGNED FOR HUMAN OCCUPANCY THUS IT IS NOT OPEN TO THE PUBLIC.
3. THIS FACILITY WILL CONSUME NO UNRECOVERABLE ENERGY.
4. NO POTABLE WATER SUPPLY IS TO BE PROVIDED AT THIS LOCATION.
5. NO WASTE WATER WILL BE GENERATED AT THIS LOCATION.
6. NO SOLID WASTE WILL BE GENERATED AT THIS LOCATION.
7. **VERIZON WIRELESS** MAINTENANCE CREW (TYPICALLY ONE PERSON) WILL MAKE AN AVERAGE OF ONE TRIP PER MONTH AT ONE HOUR PER VISIT.

## IMPORTANT NOTICE

THE EXISTING CONDITIONS REPRESENTED HEREIN ARE BASED ON VISUAL OBSERVATIONS AND INFORMATION PROVIDED BY OTHERS. MORRISON HERSHFIELD CORPORATION CANNOT GUARANTEE THE CORRECTNESS NOR COMPLETENESS OF THE EXISTING CONDITIONS SHOWN AND ASSUMES NO RESPONSIBILITY THEREOF. CONTRACTOR AND HIS SUB-CONTRACTORS SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AS REQUIRED FOR PROPER EXECUTION OF PROJECT. REPORT ANY CONFLICTS OR DISCREPANCIES TO THE CONSULTANT PRIOR TO CONSTRUCTION.

DO NOT SCALE DRAWINGS. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND ADVISE CONSULTANTS OF ANY ERRORS OR OMISSIONS. NO VARIATIONS OR MODIFICATIONS TO WORK SHOWN SHALL BE IMPLEMENTED WITHOUT PRIOR WRITTEN APPROVAL. ALL PREVIOUS ISSUES OF THIS DRAWING ARE SUPERSEDED BY THE LATEST REVISION. ALL DRAWINGS AND SPECIFICATIONS REMAIN THE PROPERTY OF MORRISON HERSHFIELD CORPORATION. NEITHER MORRISON HERSHFIELD NOR THE ARCHITECT WILL BE PROVIDING CONSTRUCTION REVIEW OF THIS PROJECT.



No.	Date	Revision
4	6/30/14	ISSUED FOR PERMIT
3	6/03/14	REVISED PER COMMENTS
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A	9/11/13	ISSUED FOR REVIEW



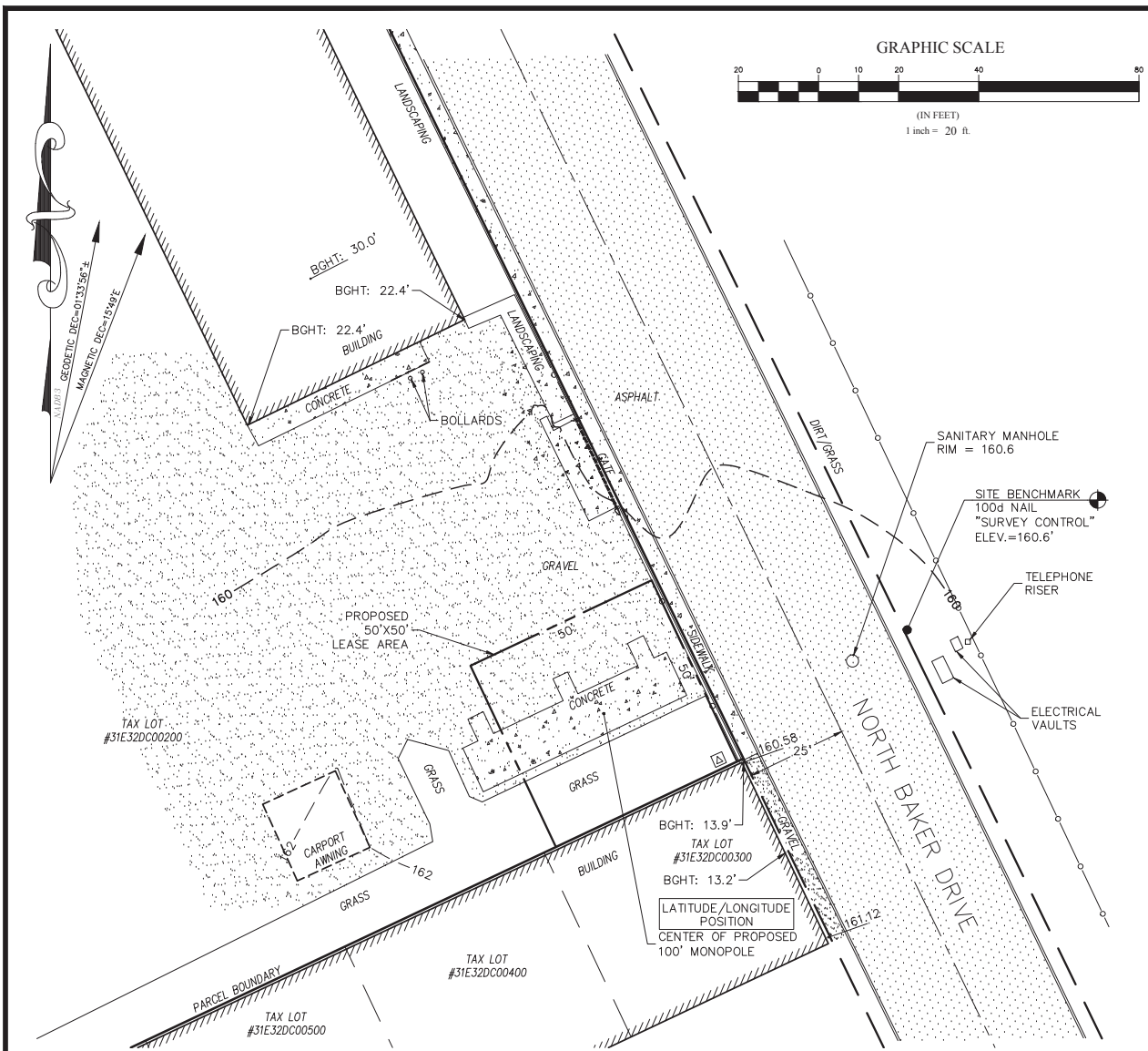
Implementation Team:  
**JIM JAGGERS**  
 9895 MONTEGRINO COURT  
 ELK GROVE, CA 95757  
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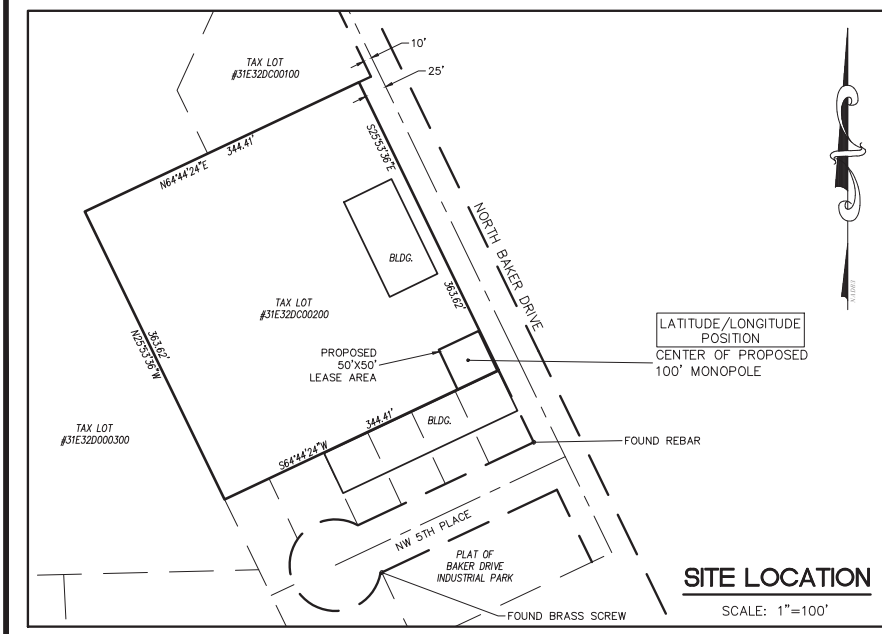
Project Info:  
**POR BARLOW**  
 505 N BAKER DRIVE  
 CANBY, OR 97013

Drawing Title:  
**GENERAL NOTES AND SYMBOLS**

Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: T-2



**SITE DETAIL**



**LEGAL DESCRIPTION**

THAT PORTION OF THE LUCIUS SEELY DONATION LAND CLAIM IN SECTION 32, TOWNSHIP 3 SOUTH, RANGE 1 EAST, OF THE WILLAMETTE MERIDIAN IN CLACKAMAS COUNTY, OREGON, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE SOUTHWESTERLY EXTENSION OF THE SOUTHERLY LINE OF THIRD STREET IN THE TOWN OF CANBY, SOUTH 65° 35' WEST, 1240 FEET FROM THE WEST CORNER OF BLOCK 7, IN SAID PLAT; THENCE NORTH 25° 25' WEST ALONG THE SOUTHWESTERLY LINE OF THAT TRACT CONVEYED TO THE CITY OF CANBY, BE DEED RECORDED IN BOOK 381, PAGE 136, CLACKAMAS COUNTY DEED RECORDS, 1212' MORE OR LESS TO THE SOUTHEAST CORNER OF THAT TRACT OF LAND CONVEYED TO WARREN E. MUELLER, ET UX, BY DEED RECORDED IN BOOK 477, PAGE 240, CLACKAMAS COUNTY DEED RECORDS AND THE TRUE POINT OF BEGINNING; THENCE SOUTH 64° 08' 00" WEST, ALONG THE SOUTHERLY LINE OF LAND MUELLER TRACT AND THE SOUTHWESTERLY EXTENSION THEREOF, 359.41' TO A POINT ON THE SOUTHWEST LINE OF THAT TRACT CONVEYED TO MARTIN L. CLARK, ET AL, BY DEED RECORDED MAY 9, 1978, AS RECORDER'S FEE NO. 78-19381, CLACKAMAS COUNTY RECORDS; THENCE SOUTH 26° 30' 00" EAST, ALONG SAID SOUTHWEST LINE 363.62 FEET; THENCE NORTH 64° 08' 00" EAST, 359.41 FEET TO THE SOUTHWESTERLY LINE OF SAID CITY OF CANBY TRACT; THENCE NORTH 26° 30' 00" WEST, ALONG SAID SOUTHWESTERLY LINE, 363.62' TO THE TRUE POINT OF BEGINNING.

EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF CANBY, BY DEED RECORDED NOVEMBER 15, 1979, AS RECORDER'S FEE NO. 79-050892, CLACKAMAS COUNTY RECORDS, BEING THE NORTHEASTERLY 15 FEET OF THE HEREIN DESCRIBED PREMISES.

**EASEMENTS** △ CORRESPONDS WITH ITEM NUMBER IN 'SCHEDULE B' OF TITLE REPORT.

THE FOLLOWING EASEMENTS FROM THE REFERENCED TITLE REPORT CONTAIN SUFFICIENT INFORMATION TO BE DEPICTED ON THE PLAN. OTHER EASEMENTS OR ENCUMBRANCES, IF ANY, MAY AFFECT THE PROPERTY, BUT LACK SUFFICIENT INFORMATION TO BE SHOWN.

- △ 6 EASEMENT FOR THE PURPOSES OF MAINTAINING AND REPAIRING OF DIKES, CHANNELS AND APPURTENANCES, RECORDED IN BOOK 247, PG. 309, BOOK 260, PAGE 372, AND BOOK 260, PAGE 638. (NO SUPPORTING DOCUMENTS PROVIDED WITH TITLE REPORT)
- △ 7 20 FOOT RIGHT OF WAY EASEMENT, RECORDED IN BOOK 307, PG. 390. (NO SUPPORTING DOCUMENTS PROVIDED WITH TITLE REPORT)
- △ 8 EASEMENT FOR WATER MAIN, RECORDED IN BOOK 398, PG. 394. (NO SUPPORTING DOCUMENTS PROVIDED WITH TITLE REPORT)
- △ 9 EASEMENT FOR WATER PIPELINE, RECORDED IN BOOK 453, PG. 268. (NO SUPPORTING DOCUMENTS PROVIDED WITH TITLE REPORT)
- △ 10 EASEMENT FOR POLE LINE, RECORDED IN BOOK 477, PG. 609, RECORDING NO. 79-057089, AND RECORDING NO. 83-022974. (NO SUPPORTING DOCUMENTS PROVIDED WITH TITLE REPORT)
- △ 11 EASEMENT FOR POLE LINE, RECORDED IN BOOK 595, PG. 342, RECORDING NO. 79-057090, AND RECORDING NO. 83-022974. (NO SUPPORTING DOCUMENTS PROVIDED WITH TITLE REPORT)
- △ 12 EASEMENT FOR WATER AND ELECTRIC UTILITY LINES AND APPURTENANCES, RECORDING NO. 77-014614. (NO SUPPORTING DOCUMENTS PROVIDED WITH TITLE REPORT)
- △ 13 EASEMENT FOR WATER AND ELECTRIC UTILITY LINES AND APPURTENANCES, RECORDING NO. 81-007339. (NO SUPPORTING DOCUMENTS PROVIDED WITH TITLE REPORT)

**LEGEND**

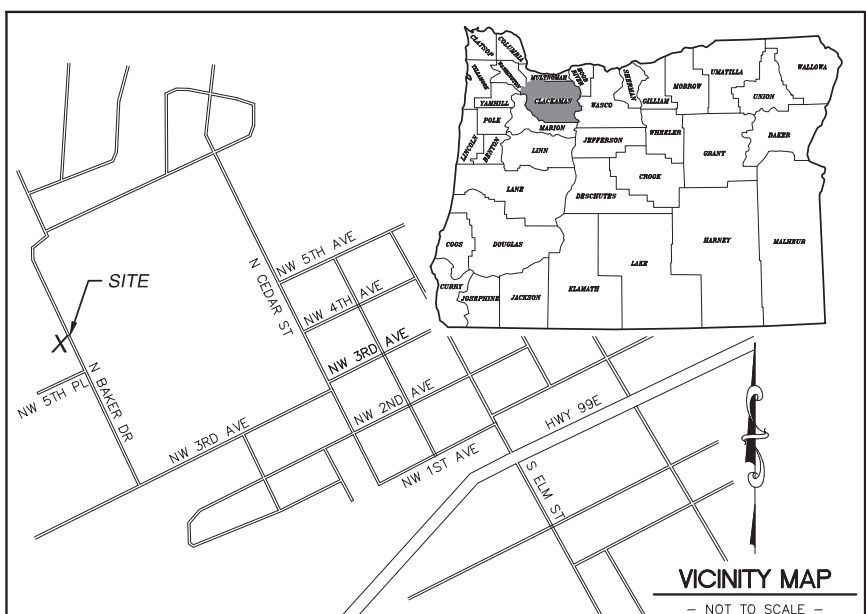
- |         |                          |
|---------|--------------------------|
| ---     | SUBJECT BOUNDARY LINE    |
| - - - - | RIGHT-OF-WAY CENTERLINE  |
| - - - - | RIGHT-OF-WAY LINE        |
| - - - - | ADJACENT BOUNDARY LINE   |
| - - - - | SECTIONAL BREAKDOWN LINE |
| OP      | OVERHEAD POWER LINE      |
| UP      | BURIED POWER LINE        |
| G       | BURIED GAS LINE          |
| OT      | OVERHEAD TELEPHONE LINE  |
| UT      | BURIED TELEPHONE LINE    |
| W       | BURIED WATER LINE        |
| SS      | BURIED SANITARY SEWER    |
| SD      | BURIED STORM DRAIN       |
| - - - - | DITCH LINE/FLOW LINE     |
| ~ ~ ~ ~ | ROCK RETAINING WALL      |
| ~~~~~   | VEGETATION LINE          |
| o       | CHAIN LINK FENCE         |
| o       | WOOD FENCE               |
| x       | BARBED WIRE/WIRE FENCE   |
| △       | TRANSFORMER              |
| ⊗       | FIRE HYDRANT             |
| ⊗       | LIGHT STANDARD           |
| ⊗       | GATE VALVE               |
| ⊗       | POWER VAULT              |
| ⊗       | UTILITY BOX              |
| ⊗       | UTILITY POLE             |
| ⊗       | POLE GUY WIRE            |
| ⊗       | GAS VALVE                |
| ⊗       | GAS METER                |
| ⊗       | TELEPHONE VAULT          |
| ⊗       | TELEPHONE RISER          |
| ⊗       | FIRE STAND PIPE          |
| ⊗       | CATCH BASIN, TYPE I      |
| ⊗       | CATCH BASIN, TYPE II     |
| ⊗       | SIGN                     |
| ⊗       | BOLLARD                  |
| ⊗       | MAIL BOX                 |
| ⊗       | SPOT ELEVATION           |

**TREE LEGEND**

- DECIDUOUS TREE**
- AL=ALDER
  - MP=MAPLE
  - DS=DECIDUOUS
  - MA=MADRONA
  - OK=OAK
  - CH=CHERRY
- EVERGREEN TREE**
- CE=CEDAR
  - DF=DOUGLAS FIR
  - HE=HEMLOCK
  - PI=PINE
  - EVG=EVERGREEN
- NOTE: TREE DRIP LINES ARE NOT TO SCALE. TREE SYMBOLS REFERENCE TRUNK LOCATION ONLY. TRUNK DIAMETERS WERE APPROXIMATED AT 3.5' TO 4' ABOVE GROUND LEVEL. TREES SHOWN ARE FOR REFERENCE ONLY AND OTHER TREES AND VEGETATION MAY EXIST.

**NOTES**

- 1) TITLE INFORMATION PER STATUS OF RECORD TITLE REPORT, TITLE NO. 4725135105000-CTOR, ISSUED BY CHICAGO TITLE COMPANY OF OREGON, DATED JUNE 6, 2013.
- 2) FIELD WORK CONDUCTED IN JULY 2013.
- 3) BASIS OF BEARING: OREGON COORDINATE SYSTEM, NORTH ZONE (NAD83).
- 4) UNDERGROUND UTILITIES SHOWN HEREON, IF ANY, WERE DELINEATED FROM SURFACE EVIDENCE AND/OR UTILITY COMPANY RECORDS. CRITICAL LOCATIONS SHOULD BE VERIFIED PRIOR TO DESIGN AND CONSTRUCTION.
- 5) FEMA DESIGNATION: ZONE X (AREAS DETERMINED TO OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN), PANEL 264 OF 1175, FIRM MAP NUMBER 41005C0264D, EFFECTIVE DATE JUNE 17, 2008.



**MORRISON HERSHFIELD**  
10900 NE 8TH ST., SUITE 810  
BELLEVUE, WA 98004  
Tel: 425.451.1301 Fax: 425.451.1369  
www.morrisonhershfield.com

**POR BARLOW**  
EXISTING SITE SURVEY  
SEC 32, TWP 3 S, RNG 1 E, WM  
CLACKAMAS COUNTY, OR

**SITE INFORMATION**

TAX LOT NUMBER	31E32DC00200
SITE ADDRESS	505 N BAKER DRIVE CANBY, OR 97013
ZONING	LIGHT INDUSTRIAL-M1 (CANBY)
TOTAL LOT AREA	125,226± S.F.(2.87 AC.)
PROJECT AREA	2,500 S.F.

**LATITUDE/LONGITUDE POSITION**

COORDINATE DATA AT PROPOSED 100' MONOPOLE:  
NAD 83  
LAT - 45°15'43.59" N NAVD 88  
LONG - 122°42'26.52" W ELEV.= 160.9 FEET

ELEVATION DERIVED USING GPS. ACCURACY MEETS OR EXCEEDS 1A STANDARDS AS DEFINED ON THE FAA ASAC INFORMATION SHEET 91-003.

**REVISIONS**

NO.	DATE	DESCRIPTION	BY
2	3/27/14	REVISE LEASE AND TOWER	KJW
1	10/25/13	REVISE LEASE AND TOWER	KJW

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**SURVEY REFERENCE**

1. BAKER DRIVE INDUSTRIAL PARK, RECORDED IN BOOK 80 OF PLATS, PAGE 11, CLACKAMAS CO. OR.
2. RECORD OF SURVEY, PS-16687, RECORDS OF CLACKAMAS CO., OR.

**BOUNDARY DISCLAIMER**

THIS PLAN DOES NOT REPRESENT A BOUNDARY SURVEY. SUBJECT AND ADJACENT PROPERTY LINES ARE DEPICTED USING FIELD-FOUND EVIDENCE AND RECORD INFORMATION.

**CAUTION!**

UNDERGROUND UTILITIES EXIST IN THE AREA AND UTILITY INFORMATION SHOWN MAY BE INCOMPLETE. STATE LAW REQUIRES THAT CONTRACTOR CONTACT THE ONE-CALL UTILITY LOCATE SERVICE AT LEAST 48 HOURS BEFORE STARTING ANY CONSTRUCTION.

**1-800-424-5555**

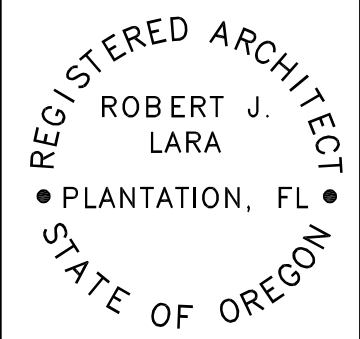
**DUNCANSON**  
Company, Inc.  
145 SW 155th Street, Suite 102  
Seattle, Washington 98166  
Phone 206.244.4141  
Fax 206.244.4455

FLD. CREW: CR/CT  
FLD. BOOK: 295/61  
DRAWN BY: CJD  
JOB #: 99544.751  
DATE: 07/16/13

REGISTERED PROFESSIONAL LAND SURVEYOR  
MAY 27, 2014  
OREGON  
MAY 10, 2011  
JONATHAN MARLO BECKER  
84870  
RENEWS: 12/31/2016

**SV1**  
1 OF 1

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ROBERT JERRY LARA  
REGISTERED ARCHITECT  
STATE OF OREGON  
5897

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Client:

Implementation Team:

**JIM JAGGERS**  
9895 MONTEGRINO COURT  
ELK GROVE, CA 95757  
(916) 213-8407

A&E Team:

**MORRISON HERSHFIELD**  
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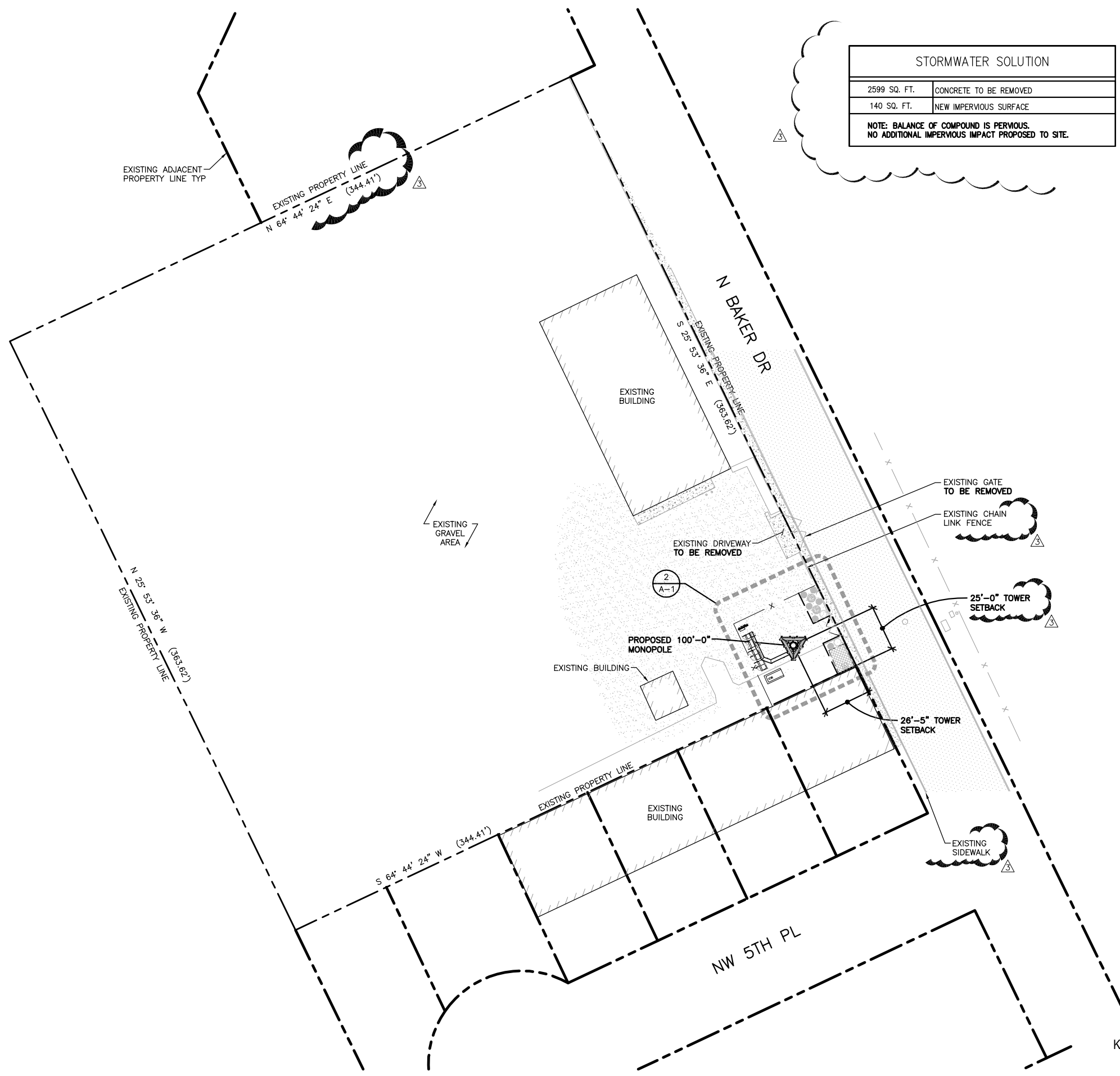
**POR BARLOW**  
505 N BAKER DRIVE  
CANBY, OR 97013

Drawing Title:

**PROPOSED SITE PLAN**

Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: C-1

STORMWATER SOLUTION	
2599 SQ. FT.	CONCRETE TO BE REMOVED
140 SQ. FT.	NEW IMPERVIOUS SURFACE
NOTE: BALANCE OF COMPOUND IS PERVIOUS. NO ADDITIONAL IMPERVIOUS IMPACT PROPOSED TO SITE.	



NEW IMPERVIOUS AREA: ±478 SF

22"x34" SCALE: 1" = 30'-0"  
11"x17" SCALE: 1" = 60'-0"

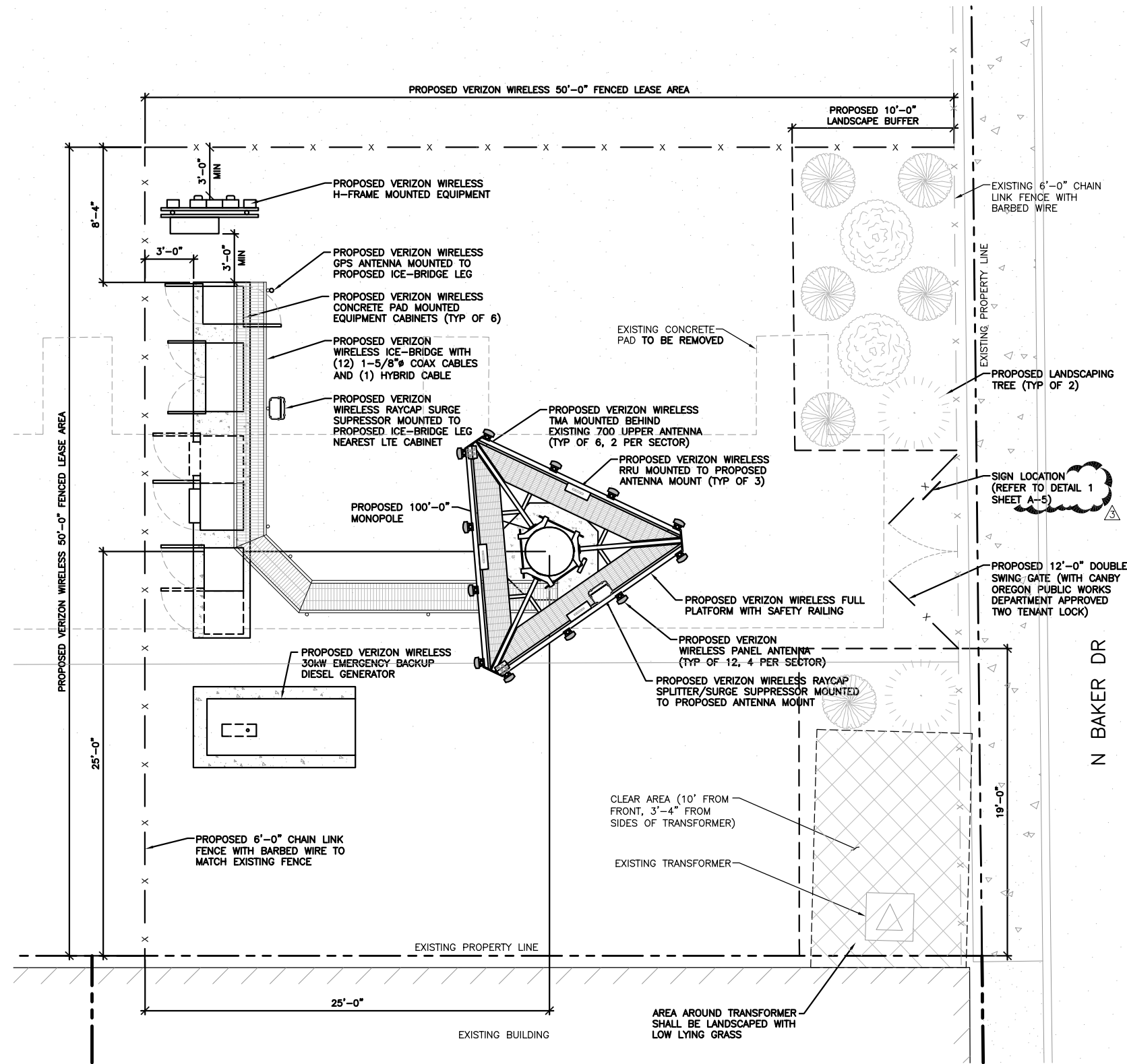


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NOTE:  
LANDSCAPING SHALL BE DROUGHT TOLERANT  
AND ACCOUNT FOR AT LEAST 50% OF THE  
LANDSCAPE AREA (LANDSCAPE AREA = 380 SF)

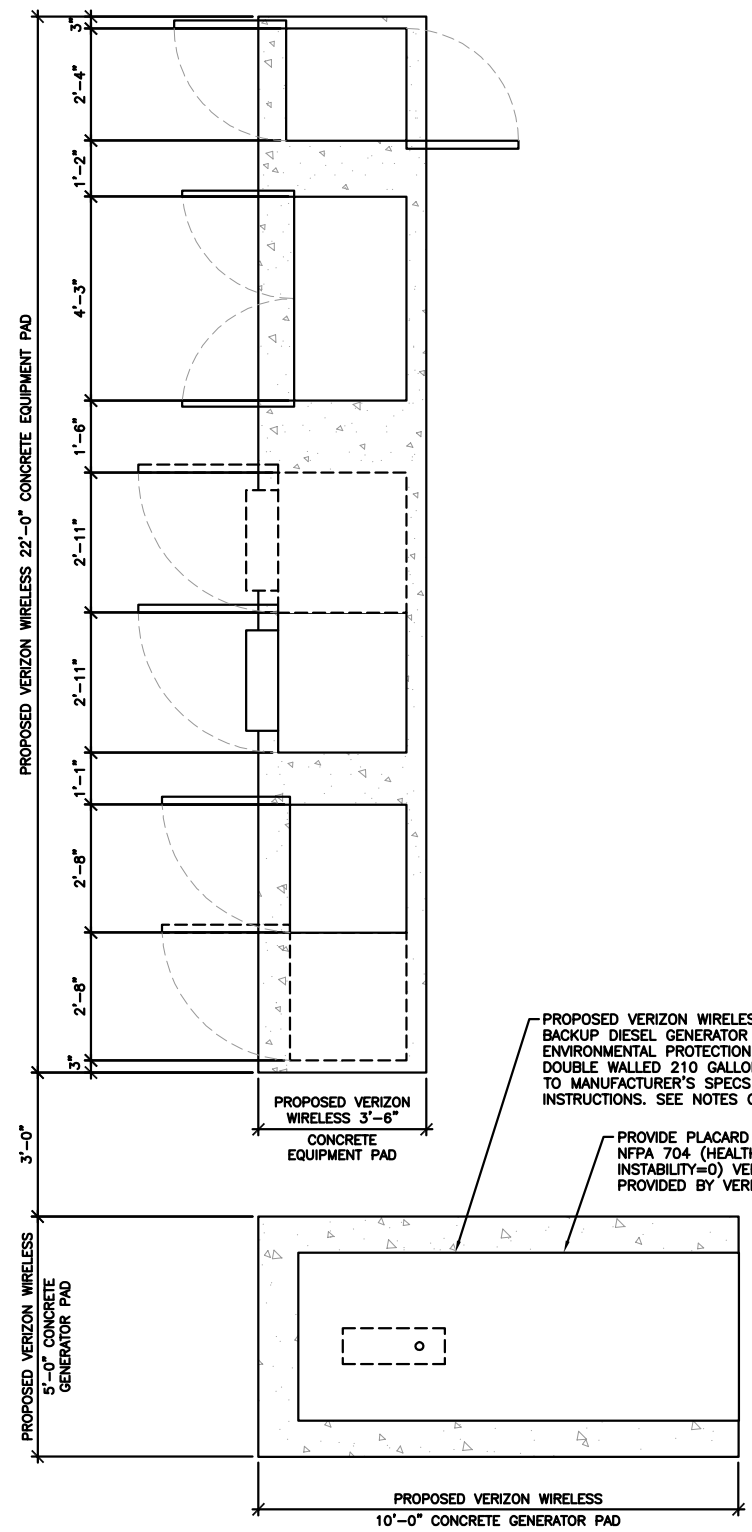
NOTE:  
PROPOSED 4'-0" MICROWAVE ANTENNA AND  
RING MOUNT NOT SHOWN FOR CLARITY. SEE  
DETAIL 1 OF SHEET A-1.1 FOR SPECIFICATIONS.

NOTE:  
ANY WTS FACILITY SITED ON OR DESIGNED WITH ANY OF THE FOLLOWING ATTRIBUTES  
SHALL FIRST RECEIVE FCC APPROVAL, AS SPECIFIED IN FCC RULES 1.1301 - 1.1319,  
AS A CONDITION OF CITY APPROVAL PRIOR TO CONSTRUCTION, WILDERNESS AREA,  
WILDLIFE PRESERVE, ENDANGERED SPECIES, HISTORICAL SITE, INDIAN RELIGIOUS SITE,  
FLOOD PLAIN, WETLANDS, HIGH INTENSITY WHITE LIGHTS IN RESIDENTIAL  
NEIGHBORHOODS, EXCESSIVE RADIO FREQUENCY RADIATION EXPOSURE.



22"x34" SCALE: 1/4" = 1'-0"  
11"x17" SCALE: 1/8" = 1'-0"

PROPOSED COMPOUND PLAN 2



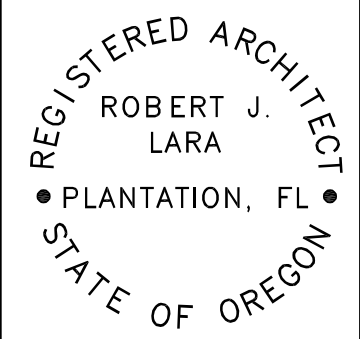
NFPA NOTES:  
1. CONSTRUCTION, INSTALLATION, MAINTENANCE, & OPERATIONAL TESTING OF EPSS SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF NFPA 110.  
2. ALL ELECTRICAL WORK SHALL COMPLY WITH LATEST ADOPTED EDITION OF NFPA 70 - NATIONAL ELECTRICAL CODE.

FUEL TANK NOTE:  
CONTRACTOR SHALL SUPPLY AND INSTALL THE FOLLOWING ITEMS IF NOT SUPPLIED WITH TANK.  
THE TANK SHALL BE EQUIPPED WITH VISUAL INTERSTITIAL LEAK MONITORING TO MONITOR THE SPACE BETWEEN THE PRIMARY AND SECONDARY TANK. PHILLIPS OR APPROVED EQUAL. THE TANK SHALL BE EQUIPPED W/ OVERFILL ALERT GAGE TO VISUALLY WARN WHEN THE TANK IS FILLED UPON CAPACITY. KRUEGER OVERFILL ALERT GAGE OR APPROVED EQUAL. THE TANK SHALL BE EQUIPPED W/ OVERSPILL CONTAINMENT AT FILL PORT TO PREVENT SPILL OF FUEL DURING FILLING OPERATIONS, 1 GALLON OVERSPILL CONTAINMENT W/ LOCKABLE CAP CUSTOM MANUFACTURED BY GLASSGOW.

22"x34" SCALE: 1/2" = 1'-0"  
11"x17" SCALE: 1/4" = 1'-0"

PROPOSED EQUIPMENT PLAN 1

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ELK GROVE, CA 95757  
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Project Info:  
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Drawing Title:  
**PROPOSED EQUIPMENT AND COMPOUND PLAN**

Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: A-1

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- 1 PROVIDE #2 AWG. SOLID BARE TINNED COPPER GROUNDING CONDUCTOR AND RUN FROM ONE SUPPORT FRAME TO THE NEXT. ATTACH TO EACH SUPPORT USING GROUND CLAMP AS SHOWN IN WAVEGUIDE BRIDGE AND CABLE GROUNDING FOR HORIZONTAL RUNS ACROSS STRUCTURE. BOND CONDUCTOR TO ANY OTHER GROUNDING CONDUCTORS WHERE THEY CROSS USING A PARALLEL TYPE U.L. LISTED CONNECTOR SUITABLE FOR THE MATERIALS BEING CONNECTED.
- 2 WHERE APPLICABLE BOND ALL STEEL SUPPORT BEAMS TOGETHER, EXOTHERMICALLY WELD CONNECTIONS TO STEEL SUPPORT BEAMS. TYPICAL FOR ALL. REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF STEEL SUPPORT BEAMS.
- 3 BOND REBAR IN CONCRETE SLAB TO BURIED CONCRETE WITH #2 AWG SOLID BARE TINNED COPPER CONDUCTOR.
- 4 OPTIONAL 4" X 12" GROUND BAR (TYP. OF 2). CONFIRM W/VERIZON CM WHETHER TO BOND DIRECTLY TO GROUND RING OF GROUND BAR.
- 5 BOND MISCELLANEOUS METALLIC EQUIPMENT WITHIN 10'-0" TO PERIMETER GROUND LOOP. EXOTHERMICALLY WELD CONNECTION TO PERIMETER GROUND LOOP.
- 6 BOND SERVICE CONDUITS TO GROUND RING OUTSIDE. CONNECT GROUND CONDUCTOR TO CONDUIT USING PIPE CLAMP. DO NOT EXOTHERMICALLY WELD TO CONDUIT.
- 7 (NOT USED)
- 8 PROVIDE #2 AWG SOLID BARE TINNED COPPER CONDUCTOR FROM GROUND BAR MOUNTED ON WAVEGUIDE POST TO PERIMETER GROUND RING. EXOTHERMICALLY WELD CONNECTIONS AT GROUND BAR AND GROUND RING.
- 9 NOT USED.
- 10 BOND FENCE POST TO GROUND RING AS SHOWN USING AN EXOTHERMIC WELD. BOND FENCE GATE TO POST WITH A FLEXIBLE COPPER JUMPER STRAP IF NOT ALREADY PROVIDED. PROVIDE EXOTHERMIC WELD TO BOND STRAP TO GATE AND FENCE POST. PROVIDE LENGTH AS REQUIRED TO MAKE CONNECTION.
- 11 PROVIDE NEW #2AWG SOLID BARE TINNED GROUND RING. EXACT LOCATION AND NUMBER OF GROUND RODS TO BE DETERMINED ON SITE AND BASED ON "FALL OF POTENTIAL GROUND RESISTANCE METHOD" FOR RESISTANCE < 5 OHMS. UNLESS OTHERWISE NOTED, DRIVEN GROUND RODS ARE TO BE BURIED AT 16 FEET INTERVALS.
- 12 BOND "H-FRAME", SE GROUND ELECTRODES, POWER CABINET, TELCO CABINET, ATS AND GENERATOR TO BURIED GROUND RING. ALL CONDUITS CROSSING THE GROUND RING CONDUCTOR SHALL BE BONDED TO THE GROUND CONDUCTOR USING PIPE CLAMP. DO NOT EXOTHERMICALLY WELD TO CONDUIT.
- 13 (NOT USED)
- 14 PROVIDE 5/8" x 8'-0" LONG COPPER CLAD STEEL (COPPER WELD) GROUND ROD AS SHOWN. PROVIDE INSPECTION SLEEVE AT GROUND ROD TO SHOW BOND TO EXTERIOR BURIED GROUND RING. INSTALL GROUND ROD TWO (2) FEET MINIMUM AWAY FROM SLAB. INSTALL SO THAT TOP OF GROUND ROD IS 30" BELOW GRADE OR FROST LINE, WHICHEVER IS DEEPER. REFER TO GROUND ROD INSPECTION SLEEVE. EXACT LOCATION AND NUMBER OF GROUND RODS TO BE ESTABLISHED ON SITE AND BASED ON "FALL OF POTENTIAL GROUND RESISTANCE METHOD" FOR RESISTANCE < 5 OHMS.. UNLESS OTHERWISE NOTED, DRIVEN GROUND RODS ARE BONDED TO THE BURIED GROUND RING AT 16 FEET INTERVALS.
- 15 CABINET GROUND RING AND EXISTING TOWER GROUNDING RING SHALL BE BONDED TOGETHER IN AT LEAST TWO (2) POINTS USING A #2 AWG SOLID BARE TINNED COPPER CONDUCTOR.
- 16 NEW TOWER GROUND RING AND GROUND RODS. (MIN OF 3).
- 17 NEW #2 SOLID BARE TINNED COPPER CONDUCTOR FROM TOWER GROUNDING FLANGE AT BASE OF TOWER LEG TO TOWER GROUND RING
- 18 REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ANTENNA(S) AND ANTENNA SUPPORTS FRAME.
- 19 NOT USED.

- 20 PROVIDE #2 SOLID BARE TINNED COPPER CONDUCTOR FROM TEGB TO TOWER GROUND RING. TYPICAL OF TWO (2).
- 21 PROVIDE ANTENNA CABLE GROUND BAR. BOND ANTENNA CABLE GROUNDING KITS TO GROUND BAR. CONNECTION SHALL BE THE RESPONSIBILITY OF THE ANTENNA CABLE INSTALLER. BOND GROUND BAR TO TOWER USING ONE(1) #2 AWG SOLID TINNED COPPER CONDUCTOR. PROVIDE A U.L. LISTED CONNECTOR SUITABLE FOR THE MATERIALS BEING CONNECTED. PROVIDE EXOTHERMIC WELDS FOR BONDS TO STEEL BEAM OR FRAME.
- 22 THE TOWER EXIT GROUND BUS BAR (TEGB) SHALL BE INSTALLED BELOW THE TRANSMISSION LINE GROUND KITS. NEAR THE AREA OF THE TOWER AT THE POINT WHERE THE ANTENNA TRANSMISSION LINES TRANSITION FROM THE TOWER TO THE CABINETS. VERIFY EXACT LOCATION OF GROUNDING BAR FOR PROPER CONDUCTOR LENGTH. GROUNDING BAR PROVIDED BY THE ANTENNA CABLE INSTALLER. FINAL EXOTHERMIC WELD FROM THE BURIED GROUNDING RING TO GROUND BAR SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. COORDINATE WITH ANTENNA CABLE INSTALLER FOR SCHEDULE TO MAKE CONNECTION. PROVIDE 3/4" PVC SLEEVE WITH SWEEP BEND IN NEW ANTENNA BASE INSTALLATIONS FOR CONNECTION OF TEGB TO TOWER GROUND RING.
- 23 EXTEND GROUNDING CONDUCTORS TO REMAINING SECTOR ANTENNA GROUND BAR LOCATIONS AND BOND WITH EXOTHERMIC WELDS TO ANTENNA GROUND BARS. SUPPORT CONDUCTOR AS REQUIRED EVERY TWO FEET MINIMUM.
- 24 THE TOWER STRUCTURE STEEL SHALL BE UTILIZED FOR DISSIPATING THE LIGHTNING ENERGY. THE TOWER GROUND BARS FOR ANTENNA GROUNDING SHALL BE DIRECTLY FASTENED TO THE STEEL STRUCTURE WITH STAINLESS STEEL HARDWARE AND/OR ANGLE ADAPTORS (E.G. PIROD/ VALMONT PART #: 167105 OR EQUIVALENT- WITHOUT "CHERRY" INSULATORS). THIS TYPE OF INSTALLATION SPECIFICALLY PRECLUDES THE USE OF INSULATORS BETWEEN THE TOWER STRUCTURE AND THE GROUND BARS AND DOES NOT ALLOW ANY DRILLING OR WELDING TO THE TOWER.
- 25 IF BONDING TO GROUND BAR, PROVIDE (2) #2 AWG STRANDED GREEN JACKET CONDUCTOR MECHANICAL CONNECTION TO EQUIPMENT CABINET ENCLOSURE FROM GROUND BAR WITH TWO-HOLE LONG BARREL COMPRESSION LUG, TWO (2) 5/16" DIA. BOLTS, NUTS AND STAR WASHERS. IF BONDING DIRECTLY TO GROUND RING, THEN PROVIDE (2) #2 AWG SOLID TINNED COPPER.

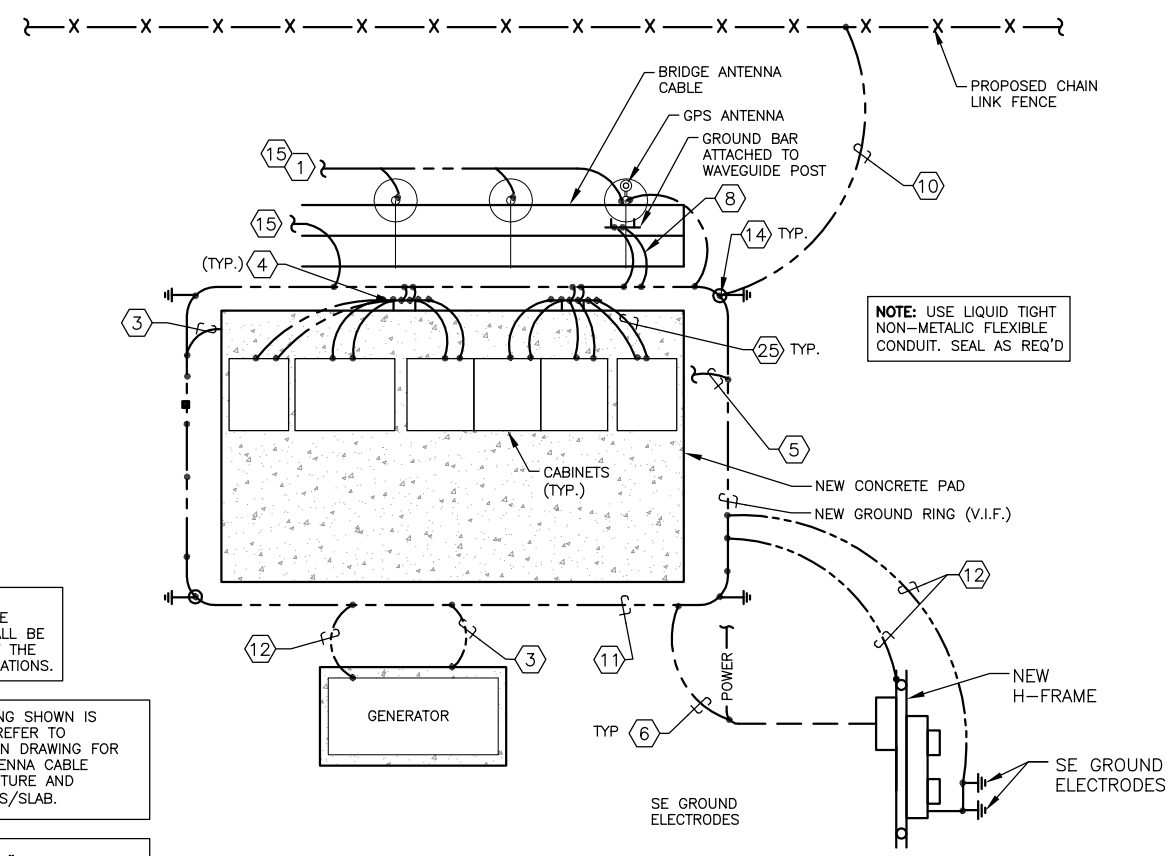
NOTE: PIGTAIL ALL GROUNDING FOR FUTURE EQUIPMENT AS REQUIRED.

NOTE: ALL GROUNDING CONNECTIONS WITHIN THE EQUIPMENT CABINET SHALL BE PER THE GUIDELINES OF THE MANUFACTURER SPECIFICATIONS.

NOTE: CABINET GROUNDING SHOWN IS SCHEMATIC IN NATURE. REFER TO ARCHITECTURAL SITE PLAN DRAWING FOR EXACT LOCATION OF ANTENNA CABLE BRIDGE, SUPPORT STRUCTURE AND ORIENTATION OF CABINETS/SLAB.

NOTE: INSTALL (1) 4"x12" GROUND BAR PER BOX FRAME (2), #2 SOLID TO GROUND RING W/ 4, # 2 STRANDED GREEN JACKET 8' TAILS.

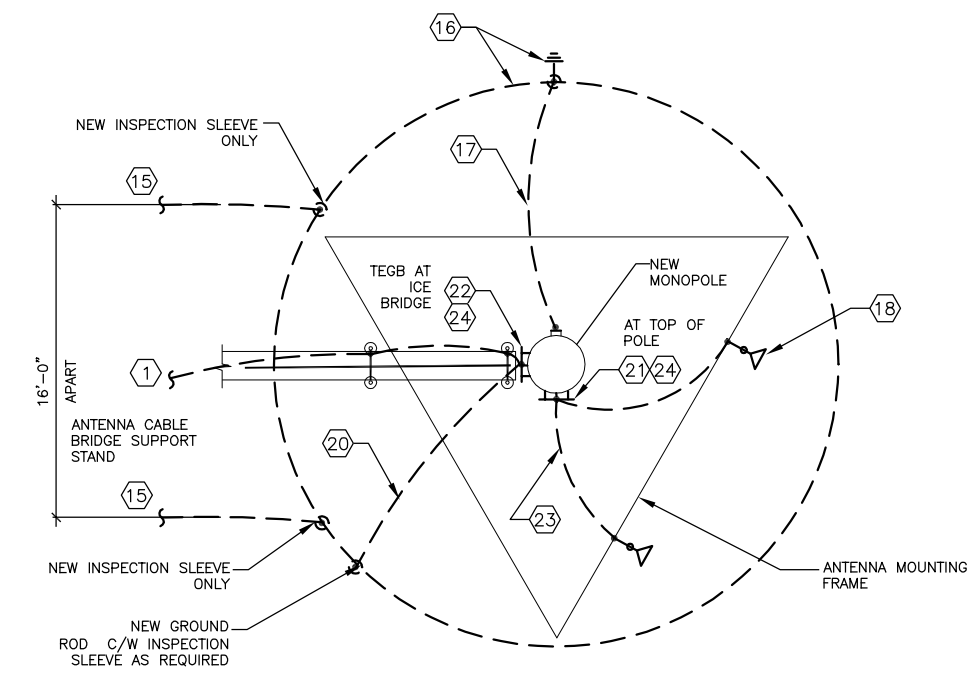
22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE



TYPICAL CABINET GROUNDING PLAN 3

NOTE: GROUNDING FOR ONE FACE SHOWN-TYPICAL FOR ALPHA, BETA AND GAMMA FACES (EA. AND ALL ANTENNAS).

NOTE: REFER TO ARCHITECTURAL SITE PLAN DRAWING FOR EXACT LOCATION OF ANTENNA CABLE BRIDGE AND SUPPORT STRUCTURE.



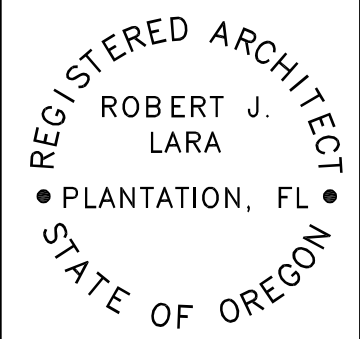
MONOPOLE TOWER GROUNDING PLAN 1

22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE

GROUNDING NOTES 2

22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE

DO NOT SCALE DRAWINGS. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND ADVISE CONSULTANTS OF ANY ERRORS OR OMISSIONS. NO VARIATIONS OR MODIFICATIONS TO WORK SHOWN SHALL BE IMPLEMENTED WITHOUT PRIOR WRITTEN APPROVAL. ALL PREVIOUS ISSUES OF THIS DRAWING ARE SUPERSEDED BY THE LATEST REVISION. ALL DRAWINGS AND SPECIFICATIONS REMAIN THE PROPERTY OF MORRISON HERSHFELD CORPORATION. NEITHER MORRISON HERSHFELD NOR THE ARCHITECT WILL BE PROVIDING CONSTRUCTION REVIEW OF THIS PROJECT.



ROBERT JERRY LARA  
REGISTERED ARCHITECT  
STATE OF OREGON  
5897

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0	10/30/13	REVISED PER COMMENTS
A	9/11/13	ISSUED FOR REVIEW

Client:

Implementation Team:

**JIM JAGGERS**  
9895 MONTEGRINO COURT  
ELK GROVE, CA 95757  
(916) 213-8407

A&E Team:

MORRISON HERSHFELD  
10900 NE 8TH STREET, SUITE 810  
BELLEVUE, WA 98004 Tel:  
425.451.1301 Fax: 425.451.1369  
www.morrisonhershfield.com

Project Info:

**POR BARLOW**  
505 N BAKER DRIVE  
CANBY, OR 97013

Drawing Title:

**GROUNDING PLAN AND NOTES**

Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: E-5

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NOTE:  
LANDSCAPING SHALL BE DROUGHT TOLERANT  
AND ACCOUNT FOR AT LEAST 50% OF THE  
LANDSCAPE AREA (LANDSCAPE AREA = 380 SF)

NOTE:  
PROPOSED FULL PLATFORM WITH SAFETY  
RAILING, ANTENNAS AND ANCILLARY EQUIPMENT  
TO SHOWN FOR CLARITY. SEE DETAIL 2 OF  
SHEET A-1 FOR SPECIFICATIONS.

NOTE:  
ANY WTS FACILITY SITED ON OR DESIGNED WITH ANY OF THE FOLLOWING ATTRIBUTES  
SHALL FIRST RECEIVE FCC APPROVAL, AS SPECIFIED IN FCC RULES 1.1301 - 1.1319,  
AS A CONDITION OF CITY APPROVAL PRIOR TO CONSTRUCTION, WILDERNESS AREA,  
WILDLIFE PRESERVE, ENDANGERED SPECIES, HISTORICAL SITE, INDIAN RELIGIOUS SITE,  
FLOOD PLAIN, WETLANDS, HIGH INTENSITY WHITE LIGHTS IN RESIDENTIAL  
NEIGHBORHOODS, EXCESSIVE RADIO FREQUENCY RADIATION EXPOSURE.

DO NOT SCALE DRAWINGS. CONTRACTOR MUST VERIFY ALL  
DIMENSIONS AND ADVISE CONSULTANTS OF ANY ERRORS OR  
OMISSIONS. NO VARIATIONS OR MODIFICATIONS TO WORK  
SHOWN SHALL BE IMPLEMENTED WITHOUT PRIOR WRITTEN  
APPROVAL. ALL PREVIOUS ISSUES OF THIS DRAWING ARE  
SUPERSEDED BY THE LATEST REVISION. ALL DRAWINGS AND  
SPECIFICATIONS REMAIN THE PROPERTY OF MORRISON  
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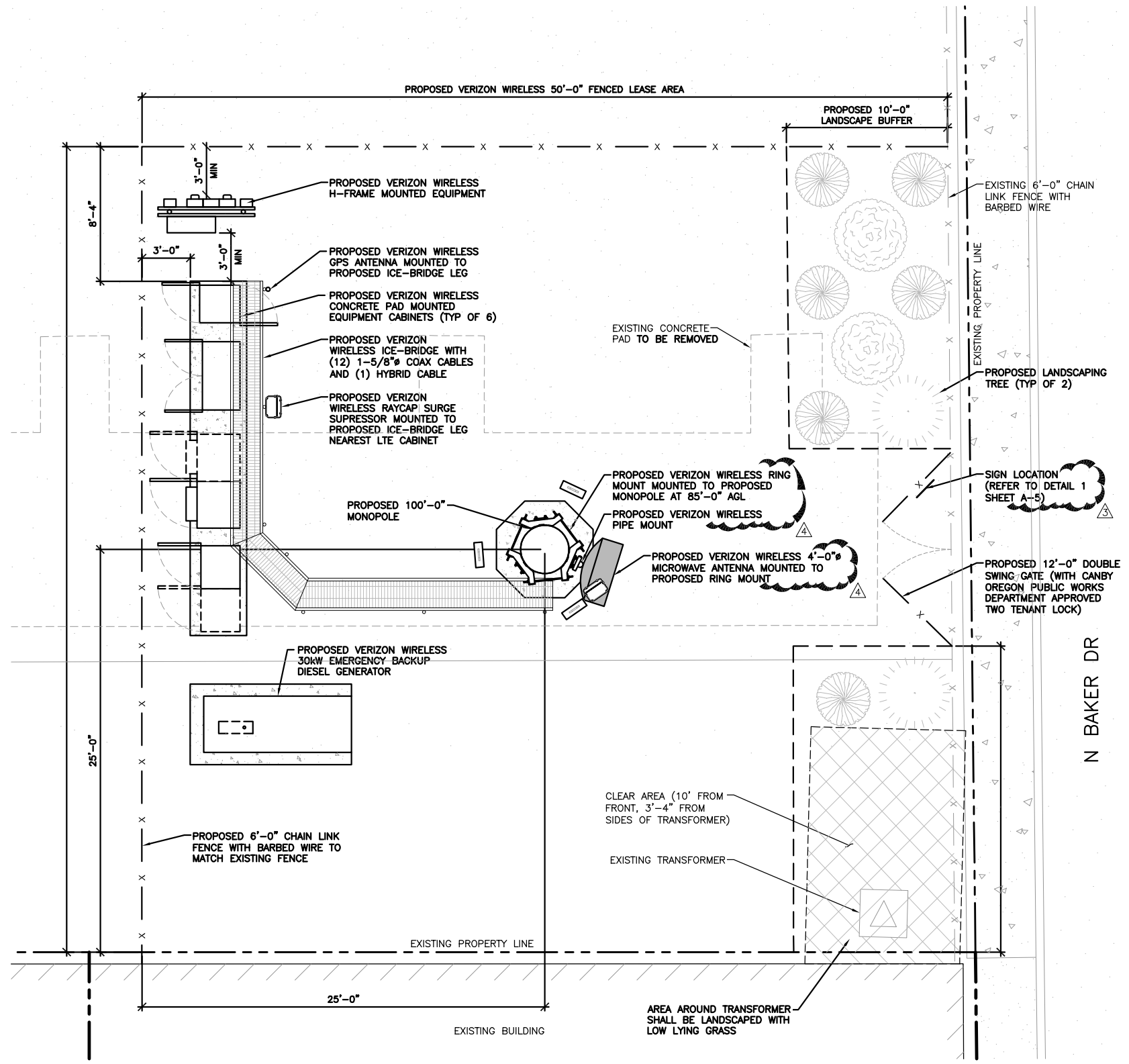
Implementation Team:  
**JIM JAGGERS**  
9895 MONTEGRINO COURT  
ELK GROVE, CA 95757  
(916) 213-8407

A&E Team:  
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BELLEVUE, WA 98004 Tel:  
425.451.1301 Fax: 425.451.1369  
www.morrisonhershfield.com

Project Info:  
**POR  
BARLOW**  
505 N BAKER DRIVE  
CANBY, OR 97013

Drawing Title:  
**PROPOSED  
COMPOUND PLAN**

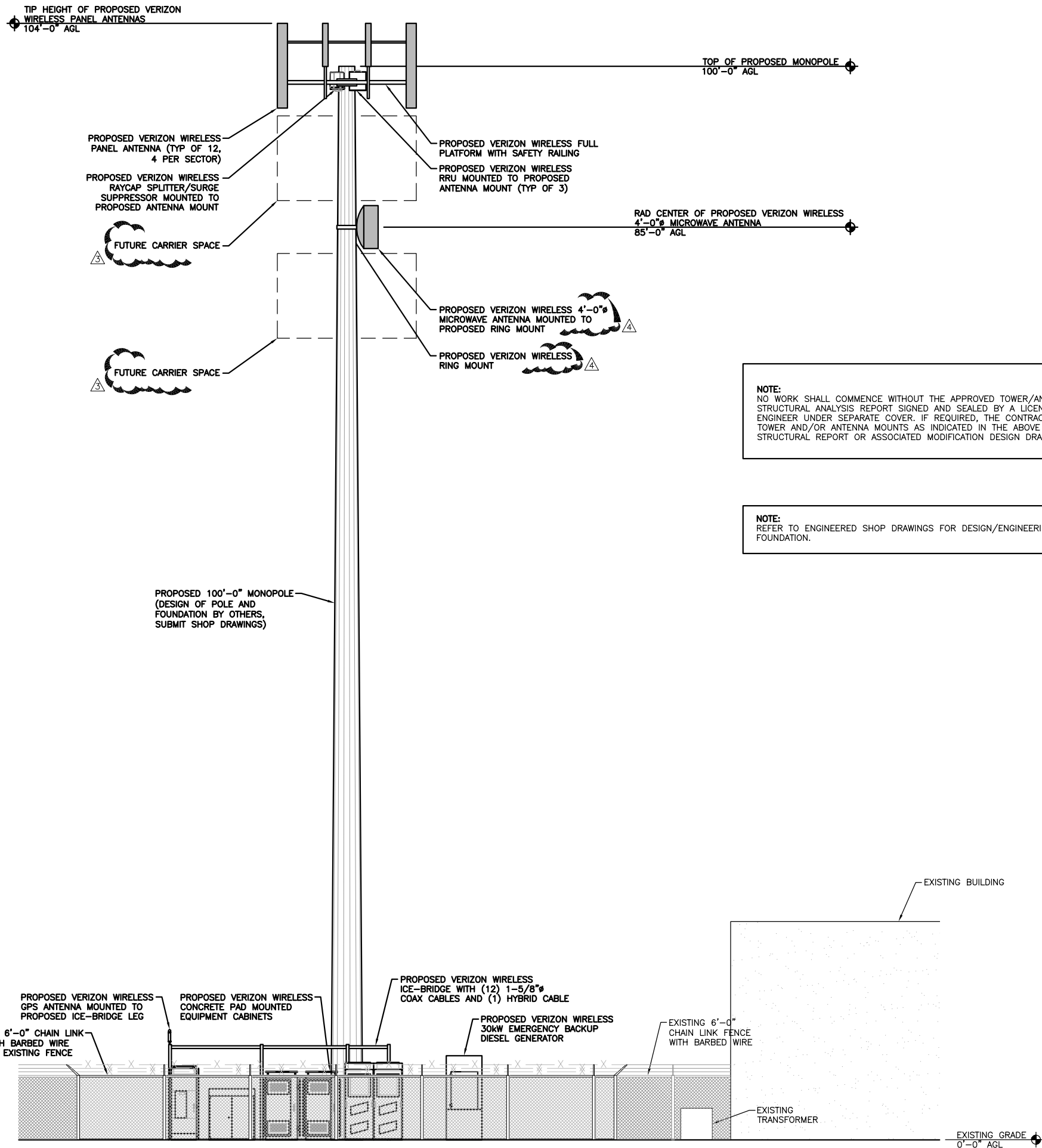
Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: A-1.1



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22"x34" SCALE: 1/4" = 1'-0"  
11"x17" SCALE: 1/8" = 1'-0"

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TIP HEIGHT OF PROPOSED VERIZON WIRELESS PANEL ANTENNAS  
104'-0" AGL

TOP OF PROPOSED MONOPOLE  
100'-0" AGL

RAD CENTER OF PROPOSED VERIZON WIRELESS 4'-0" MICROWAVE ANTENNA  
85'-0" AGL

PROPOSED VERIZON WIRELESS PANEL ANTENNA (TYP OF 12, 4 PER SECTOR)

PROPOSED VERIZON WIRELESS FULL PLATFORM WITH SAFETY RAILING

PROPOSED VERIZON WIRELESS RAYCAP SPLITTER/SURGE SUPPRESSOR MOUNTED TO PROPOSED ANTENNA MOUNT

PROPOSED VERIZON WIRELESS RRU MOUNTED TO PROPOSED ANTENNA MOUNT (TYP OF 3)

FUTURE CARRIER SPACE

PROPOSED VERIZON WIRELESS 4'-0" MICROWAVE ANTENNA MOUNTED TO PROPOSED RING MOUNT

FUTURE CARRIER SPACE

PROPOSED VERIZON WIRELESS RING MOUNT

PROPOSED 100'-0" MONOPOLE (DESIGN OF POLE AND FOUNDATION BY OTHERS, SUBMIT SHOP DRAWINGS)

**NOTE:**  
NO WORK SHALL COMMENCE WITHOUT THE APPROVED TOWER/ANTENNA MOUNT STRUCTURAL ANALYSIS REPORT SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER UNDER SEPARATE COVER. IF REQUIRED, THE CONTRACTOR SHALL MODIFY TOWER AND/OR ANTENNA MOUNTS AS INDICATED IN THE ABOVE MENTIONED STRUCTURAL REPORT OR ASSOCIATED MODIFICATION DESIGN DRAWINGS.

**NOTE:**  
REFER TO ENGINEERED SHOP DRAWINGS FOR DESIGN/ENGINEERING OF MONOPOLE ITS FOUNDATION.

PROPOSED VERIZON WIRELESS GPS ANTENNA MOUNTED TO PROPOSED ICE-BRIDGE LEG

PROPOSED VERIZON WIRELESS CONCRETE PAD MOUNTED EQUIPMENT CABINETS

PROPOSED VERIZON WIRELESS ICE-BRIDGE WITH (12) 1-5/8" COAX CABLES AND (1) HYBRID CABLE

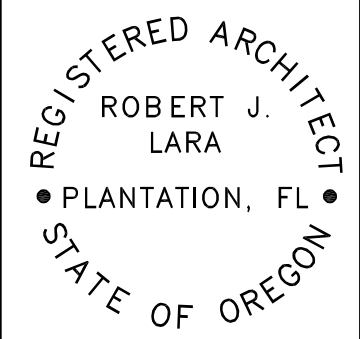
PROPOSED VERIZON WIRELESS 30kW EMERGENCY BACKUP DIESEL GENERATOR

EXISTING 6'-0" CHAIN LINK FENCE WITH BARBED WIRE

EXISTING TRANSFORMER

EXISTING GRADE  
0'-0" AGL

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**JIM JAGGERS**  
9895 MONTEGRINO COURT  
ELK GROVE, CA 95757  
(916) 213-8407

**A&E Team:**  
**MORRISON HERSHFIELD**  
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**Project Info:**  
**POR BARLOW**  
505 N BAKER DRIVE  
CANBY, OR 97013

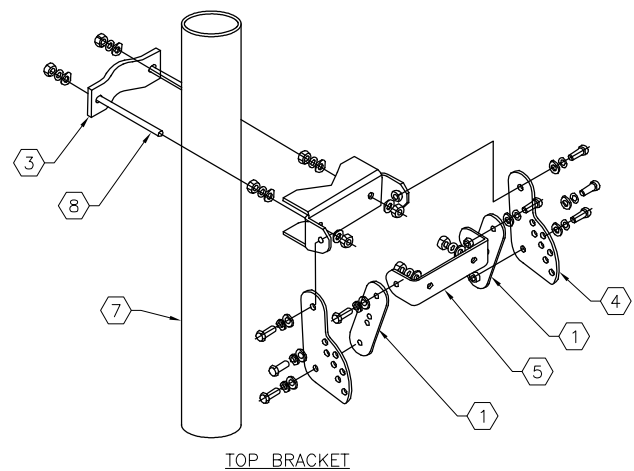
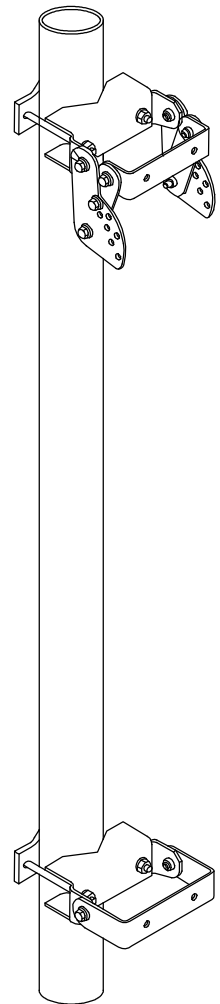
**Drawing Title:**  
**PROPOSED ELEVATION**

Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: A-2

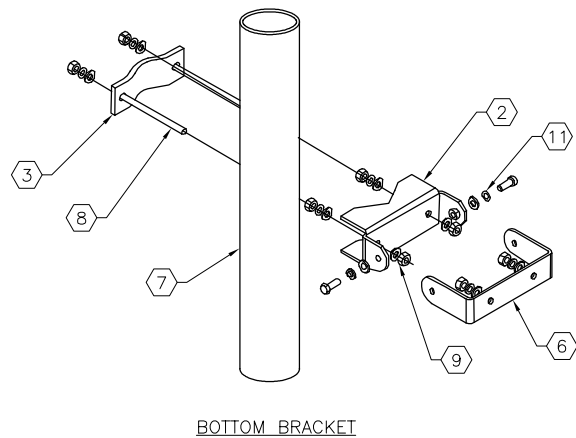
22"x34" SCALE: 3/16" = 1'-0"  
11"x17" SCALE: 3/32" = 1'-0"

PROPOSED ELEVATION 1

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TOP BRACKET



BOTTOM BRACKET

PARTS:

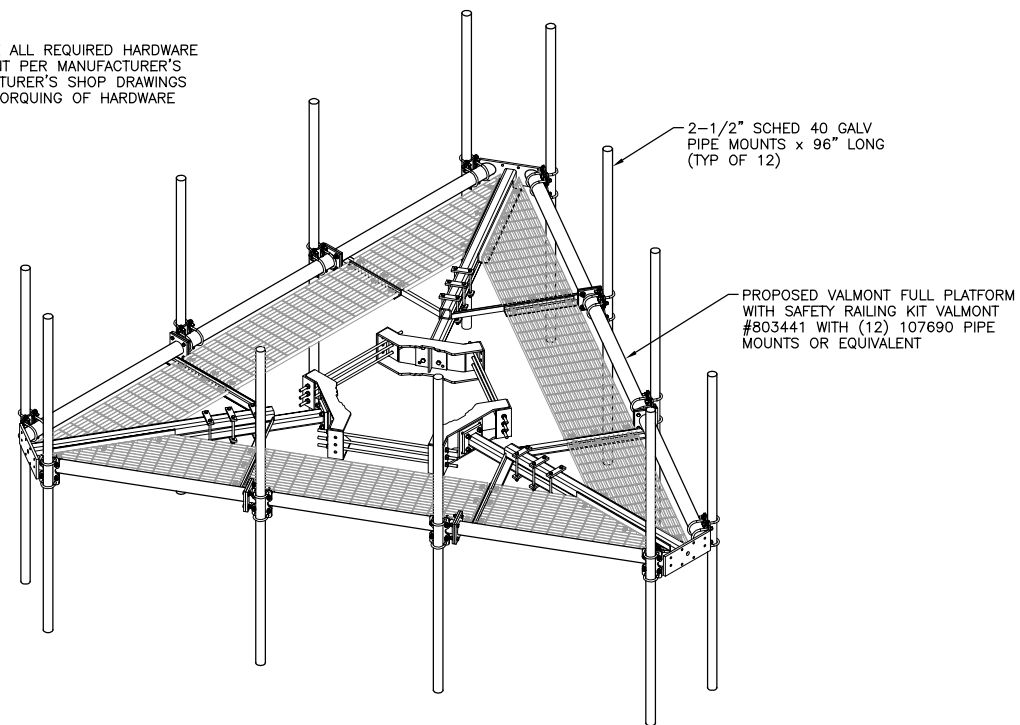
ITEM	DESCRIPTION
1	LINKAGE ARM, INNER
2	BRACKET, ANTI-ROT, TOP
3	STRAP, POLE MOUNT
4	LINKAGE, 6 MECH DEG, OUTER
5	BRACKET TOP MOUNT, CELLULAR PANEL
6	BRACKET, BOTTOM MOUNT, CELLULAR PANEL
7	PIPE
8	BOLT, HEX HD
9	NUT, PLAIN HEX
10	BOLT, HEX HD
11	FLAT WASHER
12	SPLIT WASHER

MECHANICAL TILT BRACKET DETAIL 2

22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE

**NOTE:**

CONTRACTOR SHALL PROVIDE ALL REQUIRED HARDWARE TO PROPERLY INSTALL MOUNT PER MANUFACTURER'S SPEC'S. REFER TO MANUFACTURER'S SHOP DRAWINGS FOR PROPER INSTALL AND TORQUING OF HARDWARE

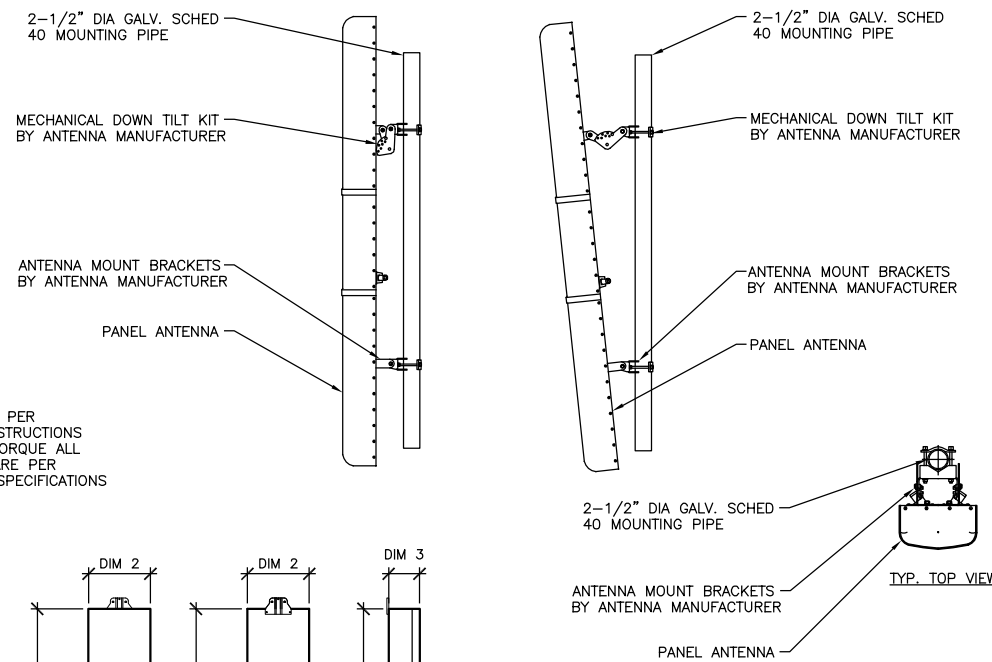


2-1/2" SCHED 40 GALV PIPE MOUNTS x 96" LONG (TYP OF 12)

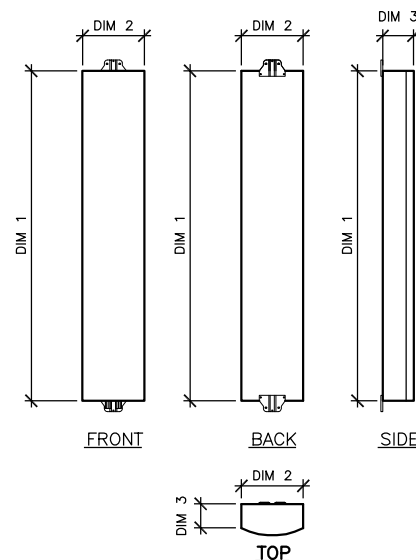
PROPOSED VALMONT FULL PLATFORM WITH SAFETY RAILING KIT VALMONT #803441 WITH (12) 107690 PIPE MOUNTS OR EQUIVALENT

22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE

FULL PLATFORM MOUNT DETAIL 3



NOTES:  
1. INSTALL ANTENNAS PER MANUFACTURER INSTRUCTIONS  
2. CONTRACTOR TO TORQUE ALL MOUNTING HARDWARE PER MANUFACTURER'S SPECIFICATIONS

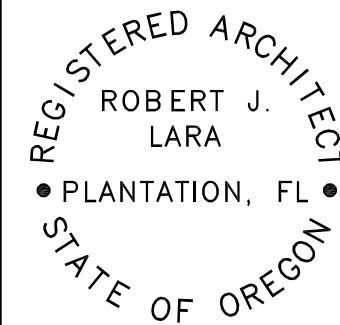


	QTY	DIM 1	DIM 2	DIM 3
<b>SECTOR ALPHA</b>				
BXA-70063/BCF	2	94.7"	11.2"	5.2"
BXA-171063-BCF	2	48.2"	6.1"	4.1"
<b>SECTOR BETA</b>				
BXA-70063/BCF	2	94.7"	11.2"	5.2"
BXA-171063-BCF	2	48.2"	6.1"	4.1"
<b>SECTOR GAMMA</b>				
BXA-70063/BCF	2	94.7"	11.2"	5.2"
BXA-171063-BCF	2	48.2"	6.1"	4.1"

ANTENNA MOUNTING DETAIL 1

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No.	Date	Revision
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Implementation Team:  
**JIM JAGGERS**  
9895 MONTEGRINO COURT  
ELK GROVE, CA 95757  
(916) 213-8407

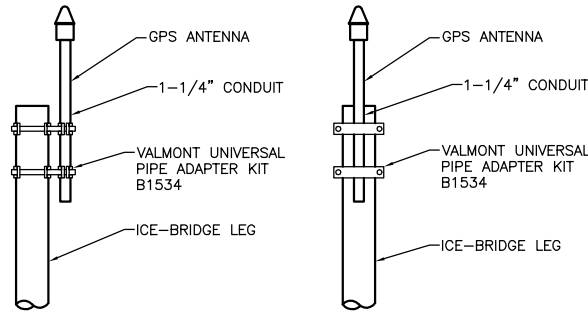
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BELLEVUE, WA 98004 Tel:  
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www.morrisonhershfield.com

Project Info:  
**POR BARLOW**  
505 N BAKER DRIVE  
CANBY, OR 97013

Drawing Title:  
**CONSTRUCTION DETAILS**

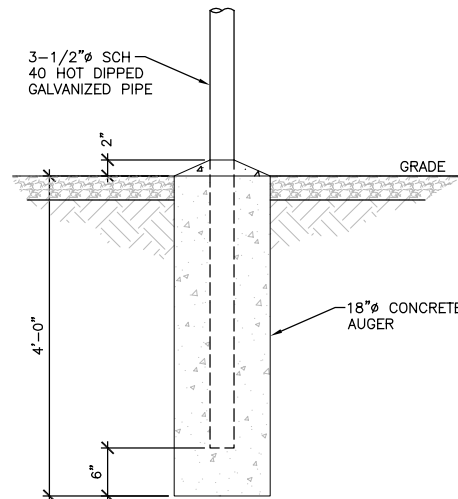
Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: A-3





22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE

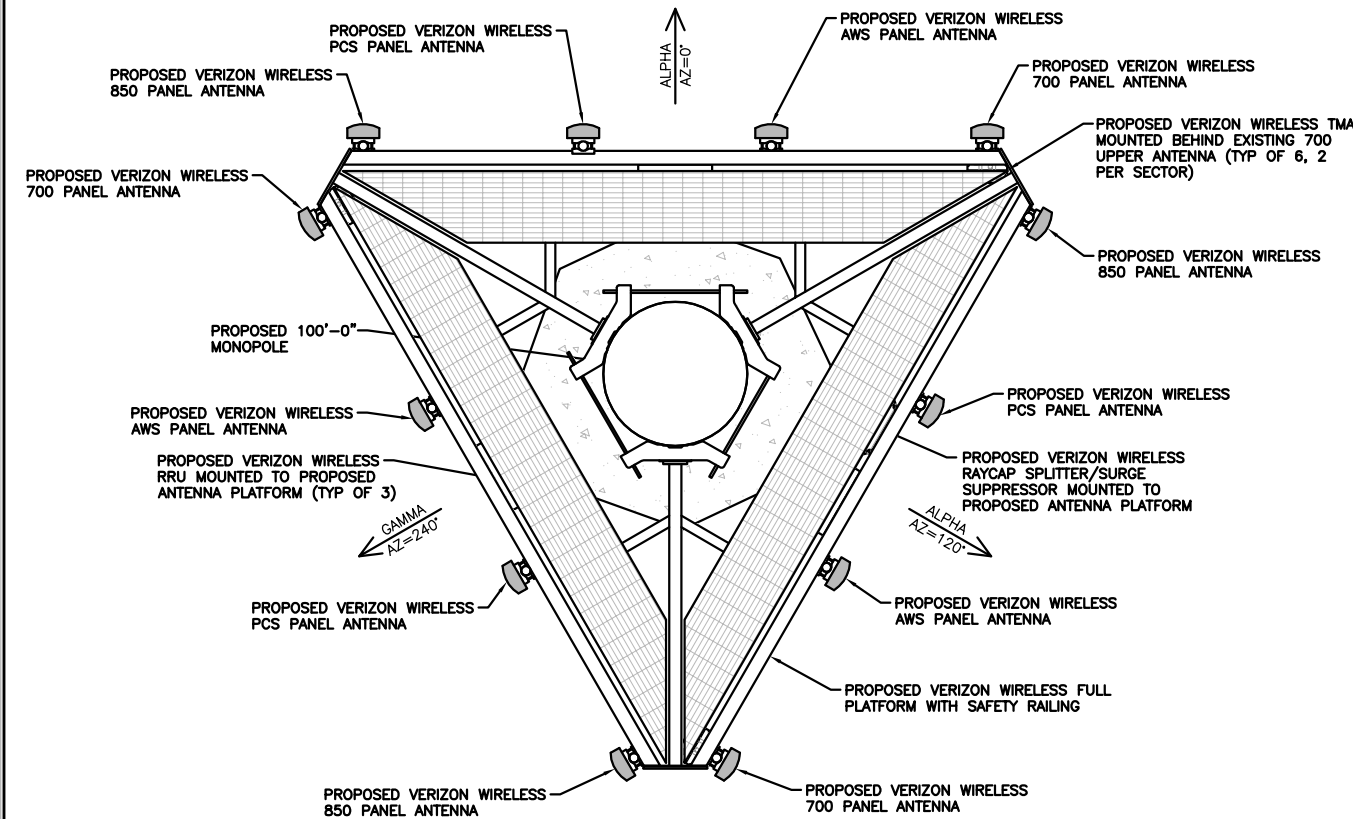
GPS ANTENNA DETAIL 5



22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE

CONCRETE PIER DETAIL 4

PROPOSED ANTENNA AND COAX SCHEDULE												
SECTOR	ALPHA	AZIMUTH	TIP HEIGHT	NUMBER OF ANTENNAS	VENDOR	MODEL	ELEC TILT	MECH TILT	NUMBER OF FEEDERS	FEEDER TYPE	FEEDER LENGTH	ADDITIONAL EQUIPMENT
850		0°	104'-0"	1	ANTEL	BXA-70063-8CF	0°	0°	2	1-5/8"	130'-0"	NO
PCS		0°	104'-0"	1	ANTEL	BXA-171063-8CF	0°	0°	NA	NA	NA	DIPLEXER
700		0°	104'-0"	1	ANTEL	BXA-70063-8CF	0°	0°	2	1-5/8"	130'-0"	(2) TMA
AWS		0°	104'-0"	1	ANTEL	BXA-171063-8CF	0°	0°	1	HYBRID	130'-0"	(1) RRU
SECTOR	BETA	AZIMUTH	TIP HEIGHT	NUMBER OF ANTENNAS	VENDOR	MODEL	ELEC TILT	MECH TILT	NUMBER OF FEEDERS	FEEDER TYPE	FEEDER LENGTH	ADDITIONAL EQUIPMENT
850		120°	104'-0"	1	ANTEL	BXA-70063-8CF	0°	0°	2	1-5/8"	130'-0"	NO
PCS		120°	104'-0"	1	ANTEL	BXA-171063-8CF	0°	0°	NA	NA	NA	DIPLEXER
700		120°	104'-0"	1	ANTEL	BXA-70063-8CF	0°	0°	2	1-5/8"	130'-0"	(2) TMA
AWS		120°	104'-0"	1	ANTEL	BXA-171063-8CF	0°	0°	NA	NA	NA	(1) RRU
SECTOR	GAMMA	AZIMUTH	TIP HEIGHT	NUMBER OF ANTENNAS	VENDOR	MODEL	ELEC TILT	MECH TILT	NUMBER OF FEEDERS	FEEDER TYPE	FEEDER LENGTH	ADDITIONAL EQUIPMENT
850		240°	104'-0"	1	ANTEL	BXA-70063-8CF	0°	0°	2	1-5/8"	130'-0"	NO
PCS		240°	104'-0"	1	ANTEL	BXA-171063-8CF	0°	0°	NA	NA	NA	DIPLEXER
700		240°	104'-0"	1	ANTEL	BXA-70063-8CF	0°	0°	2	1-5/8"	130'-0"	(2) TMA
AWS		240°	104'-0"	1	ANTEL	BXA-171063-8CF	0°	0°	NA	NA	NA	(1) RRU

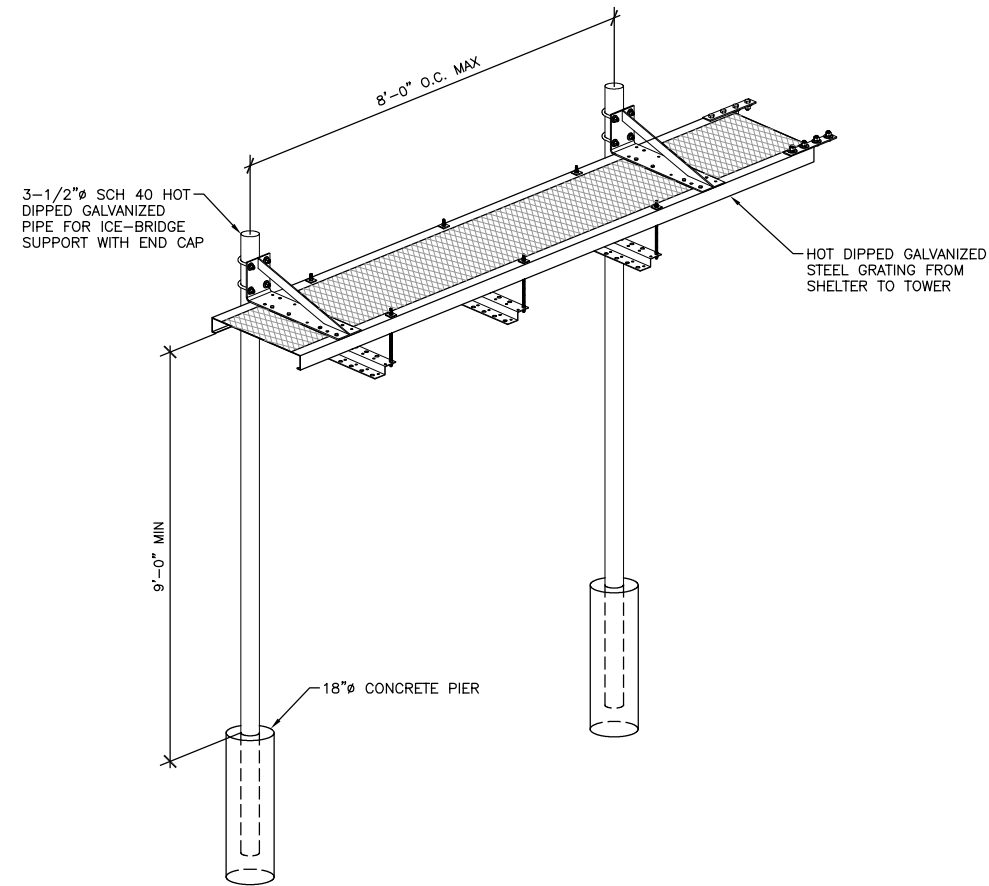


22"x34" SCALE: 1/2" = 1'-0"  
11"x17" SCALE: 1/4" = 1'-0"

ANTENNA ORIENTATION DIAGRAM 2

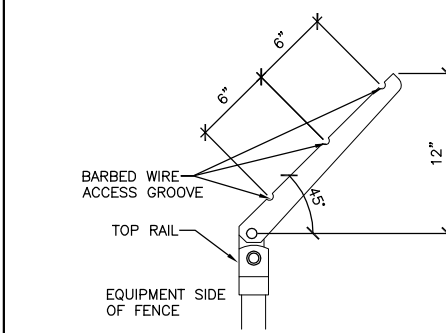
22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE

ICE-BRIDGE DETAIL 3



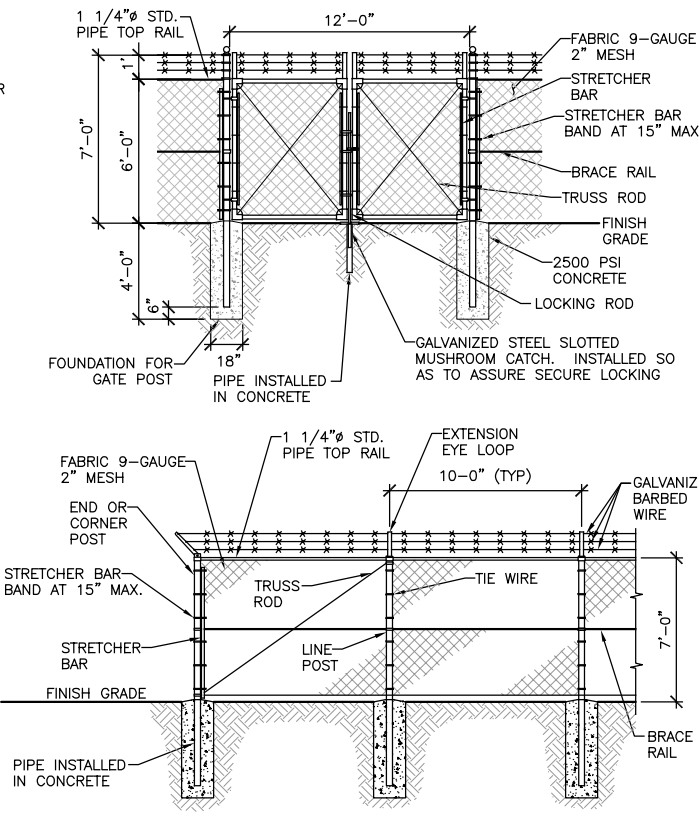
6' HIGH GATE / FENCE	FOOTINGS	NOTES
LINE POST 8'-0" O.C. MAX	2 3/8"	12"x36"
CORNER POST	3"	18"x36"
TOP RAIL	1 1/4"	

- FENCE NOTES:
- INSTALL FENCE PER BUILDING CODE
  - GATE POST, CORNER, TERMINAL OR PULL POST SHALL BE 2 7/8" SCHEDULE 40 FOR GATE WIDTHS UP THROUGH 6 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
  - LINE POST: 2-3/8" SCHEDULE 40 PIPE PER ASTM-F1083.
  - GATE FRAME: 1 1/2" SCHEDULE 40 PIPE PER ASTM-F1083. & ASTM F900.
  - TOP RAIL & BRACE RAIL: 1 3/8" SCHEDULE 40 PIPE PER ASTM-F1083.
  - FABRIC: 2" MESH No. 9 GAGE GALVANIZED WIRE SECURELY FASTENED TO TENSION WIRE, LINEPOST, BARS CONFORMING TO ASTM-A392, & AASHTO M 181.
  - TIE WIRE: MINIMUM 11 GA GALVANIZED STEEL INSTALL A SINGLE WRAP TIE WIRE AT POSTS AND RAILS AT MAX. 12" INTERVALS VERT AND 20" HORZ. INSTALL HOG RINGS ON TENSION WIRE AT 20" INTERVALS.
  - TENSION WIRE: 7 GA. GALVANIZED STEEL.
  - BARBED WIRE: 3 STRANDS OF DOUBLE STRANDED 12-1/2 GAUGE TWISTED WIRE, 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS CONFORMING TO ASHTO M 280.
  - LOCAL ORDINANCE FOR BARBED WIRE PERMIT SHALL GOVERN INSTALLATION.



22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE

CHAIN LINK FENCE DETAIL 1



DO NOT SCALE DRAWINGS. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND ADVISE CONSULTANTS OF ANY ERRORS OR OMISSIONS. NO VARIATIONS OR MODIFICATIONS TO WORK SHOWN SHALL BE IMPLEMENTED WITHOUT PRIOR WRITTEN APPROVAL. ALL PREVIOUS ISSUES OF THIS DRAWING ARE SUPERSEDED BY THE LATEST REVISION. ALL DRAWINGS AND SPECIFICATIONS REMAIN THE PROPERTY OF MORRISON HERSHFIELD CORPORATION. NEITHER MORRISON HERSHFIELD NOR THE ARCHITECT WILL BE PROVIDING CONSTRUCTION REVIEW OF THIS PROJECT.



ROBERT JERRY LARA  
REGISTERED ARCHITECT  
STATE OF OREGON  
5897

No.	Date	Revision
4	6/30/14	ISSUED FOR PERMIT
3	6/03/14	REVISED PER COMMENTS
2	4/1/14	REVISED PER COMMENTS
1	3/04/14	REVISED PER COMMENTS
0	10/30/13	REVISED PER COMMENTS
A	9/11/13	ISSUED FOR REVIEW

Client:



Implementation Team:

**JIM JAGGERS**  
9895 MONTEGRINO COURT  
ELK GROVE, CA 95757  
(916) 213-8407

A&E Team:



Project Info:

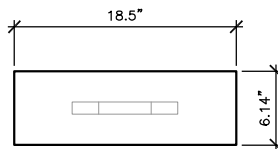
**POR BARLOW**  
505 N BAKER DRIVE  
CANBY, OR 97013

Drawing Title:

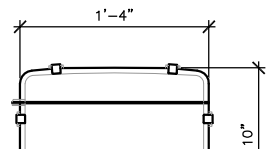
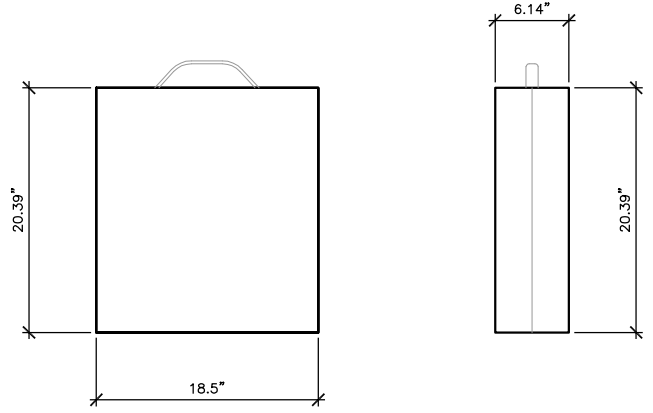
**CONSTRUCTION DETAILS**

Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: A-4

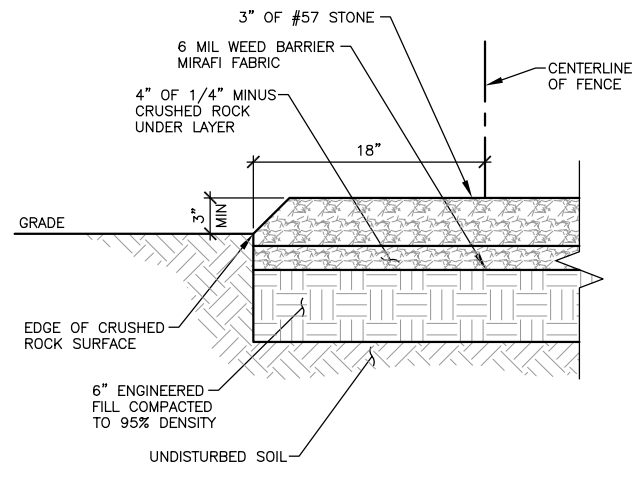
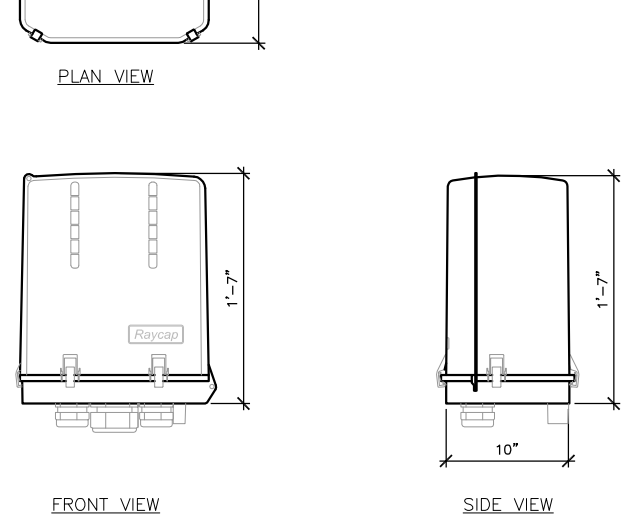
4 A-4



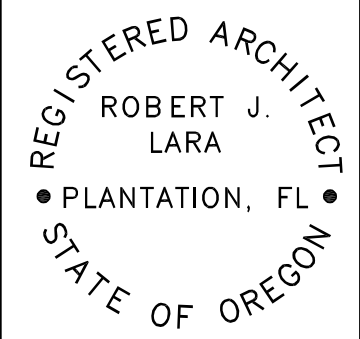
MANUFACTURER: ERICSSON  
 MODEL: RRUS 12  
 HEIGHT: 20.39"  
 WIDTH: 18.5"  
 DEPTH: 6.14"  
 WEIGHT: 57.96 LBS



MANUFACTURER: RAYCAP  
 MODEL: RCMDC-3315-PF-48  
 HEIGHT: 19.18"  
 WIDTH: 15.73"  
 DEPTH: 10.25"  
 WEIGHT: 26.9 LBS (WITH MOUNT)



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ROBERT JERRY LARA  
 REGISTERED ARCHITECT  
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A	9/11/13	ISSUED FOR REVIEW

22"x34" SCALE: NOT TO SCALE  
 11"x17" SCALE: NOT TO SCALE

RRU DETAIL 6

22"x34" SCALE: NOT TO SCALE  
 11"x17" SCALE: NOT TO SCALE

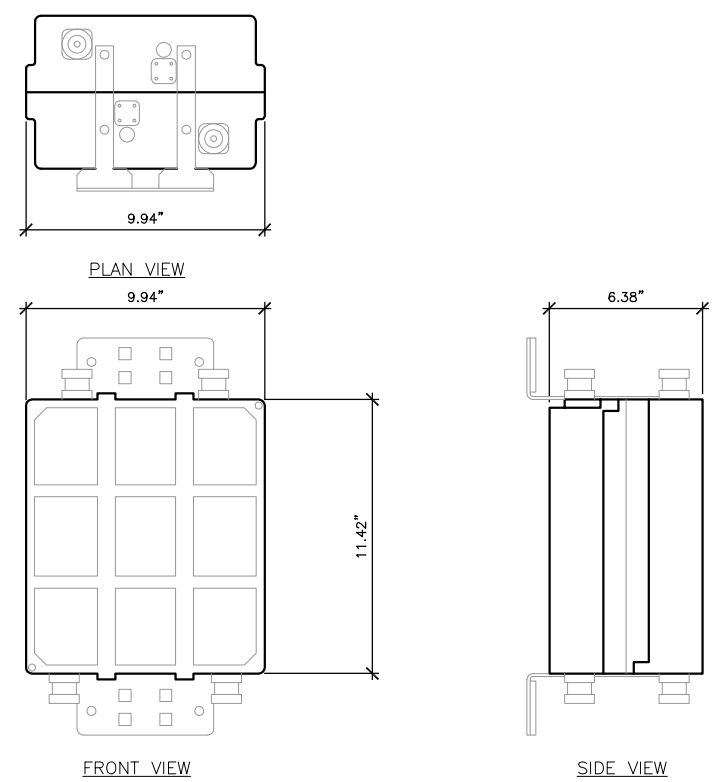
RAYCAP SURGE SUPPRESSOR/SPLITTER DETAIL 5

22"x34" SCALE: NOT TO SCALE  
 11"x17" SCALE: NOT TO SCALE

CRUSHED ROCK SURFACE DETAIL 4

- ALL THREADED STRUCTURAL FASTENERS FOR ANTENNA SUPPORT ASSEMBLES SHALL CONFORM TO ASTM A307 OR ASTM A36. ALL STRUCTURAL FASTENERS FOR STRUCTURAL STEEL FRAMING SHALL CONFORM TO ASTM A325. FASTENERS SHALL BE 5/8" MIN. DIA. BEARING TYPE CONNECTIONS WITH THREADS EXCLUDED FROM THE PLANE. ALL EXPOSED FASTENERS, NUTS, AND WASHERS SHALL BE GALVANIZED OTHERWISE NOTED. CONCRETE EXPANSION ANCHORS SHALL BE HILTI KWIK BOLTS UNLESS OTHERWISE NOTED. ALL ANCHORS INTO CONCRETE SHALL BE STAINLESS STEEL.
- THE CONTRACTOR SHALL FURNISH ALL CONNECTION HARDWARE REQUIRED TO SECURE THE CABLES. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.
- NORTH ARROW SHOWN ON PLANS REFERS TO TRUE NORTH. CONTRACTOR SHALL VERIFY NORTH AND NOTIFY CONSULTANT OF ANY DISCREPANCY BEFORE STARTING CONSTRUCTION.
- PROVIDE LOCK WASHERS FOR ALL MECHANICAL CONNECTIONS FOR GROUND CONDUCTORS. USE STAINLESS STEEL HARDWARE THROUGHOUT.
- THOROUGHLY REMOVE ALL PAINT AND CLEAN ALL DIRT FROM SURFACES REQUIRING GROUND CONNECTIONS.
- MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. ALL BENDS TO BE A MIN. OF 8" RADIUS
- FOR GROUNDING TO BUILDING FRAME & HATCH PLATE GROUND BARS. USE A TWO-BOLT HOLE NEMA DRILLED CONNECTOR SUCH AS T&B 32007 OR APPROVED EQUAL
- FOR ALL EXTERNAL GROUND CONNECTIONS, CLAMPS & CADWELDS, APPLY A LIBERAL PROTECTIVE COATING OR AN ANTI-OXIDE COMPOUND SUCH AS "NO-OXIDE A" BY DEARBORN CHEMICAL COMPANY.
- REPAIR ALL METAL SURFACES THAT HAVE BEEN CUT OR DAMAGED BY REMOVING ANY EXISTING RUST AND APPLYING COLD GALVANIZATION.
- ALL COAXIAL CABLE WILL BE SECURED TO THE DESIGNED SUPPORT STRUCTURE AT DISTANCES NOT TO EXCEED 3' OR THE CABLE MANUFACTURER'S SPECIFICATIONS WHICHEVER IS LESS, WITH HARDWARE SPECIFIED IN THE COAXIAL CABLE ROUTING DETAILS OF THE SUPPLIED STRUCTURAL REPORT.
- THE COAXIAL ANTENNA CABLE INSTALLER SHALL BE RESPONSIBLE FOR PERFORMING AND SUPPLYING THREE (3) TYPED SWEEP TESTS (ANTENNA RETURN LOSS TEST). THIS TEST SHALL BE PERFORMED TO THE SPECIFICATIONS AND PARAMETERS OUTLINED BY THE VERIZON WIRELESS RADIO FREQUENCY THRU ENGINEER. THIS TEST SHALL BE PERFORMED PRIOR TO FINAL ACCEPTANCE OF THE SITE. (1) COPY TO BE PLACED IN SHELTER.
- THE COAXIAL ANTENNA CABLE INSTALLER SHALL BE RESPONSIBLE FOR PERFORMING AND SUPPLYING VERIZON WIRELESS WITH THREE TYPE WRITTEN TIME DOMAIN REFLECTOMETER TESTS TO VERIFY CABLE LENGTH AND TO CHECK FOR WATER DAMAGE.
- VAPOR WRAP WILL BE USED TO SEAL ALL CONNECTIONS.
- ALL JUMPERS TO THE ANTENNAS FROM THE MAIN TRANSMISSION LINE WILL BE 1/2" DIA, AND SHALL NOT EXCEED 6'-0"
- ALL MAIN TRANSMISSION CABLE WILL BE TERMINATED AT A VERIZON WIRELESS POLYPHASED PROTECTOR LOCATED WITHIN 1'-0" OF THE EQUIPMENT SHELTER.
- ANTENNA CABLE LENGTHS HAVE BEEN DETERMINED BASED ON THESE PLANS, CABLE LENGTHS LISTED ARE APPROXIMATED AND ARE NOT INTENDED TO BE USED FOR FABRICATION DUE TO FIELD CONDITIONS ACTUAL CABLE LENGTHS REQUIRE. CONTRACTOR MUST FIELD VERIFY ANTENNA CABLE LENGTHS PRIOR TO ORDER.
- ALL MAIN CABLES WILL BE COLOR CODED AT FOUR LOCATIONS: A) AT ANTENNA PRIOR TO JUMPER, B) AT THE BOTTOM OF THE TOWER, C) EXTERIOR PART OF THE WAVE GUIDE ENTRY PORT (AT THE SHELTER/CABINET WALL), D) INTERIOR OF THE SHELTER/CABINET.
- ALL MAIN CABLES WILL BE GROUNDED AT: A) AT THE ANTENNA MOUNTING PIPE, B) MIDDLE OF THE CABLE RUN IF OVER 200', C) PRIOR TO ENTERING EQUIPMENT SHELTER/CABINET (WITHIN 1' OF ENTRY).
- PROVIDE AT LEAST 6" OF SLACK IN THE MAIN COAXIAL CABLES AT THE TOWER TOP TO PROVIDE FOR FUTURE CONNECTOR REPLACEMENT.
- PROVIDE A CABLE DRIP LOOP AT THE BOTTOM OF THE TOWER BELOW THE TOWER BOTTOM GROUND CONNECTIONS AND AS THE CABLE TRANSITIONS TO THE SHELTER/CABINET.

MANUFACTURER: COMSCOPE  
 MODEL: E15R05P19  
 HEIGHT: 11.42"  
 WIDTH: 9.94"  
 DEPTH: 6.38"  
 WEIGHT: 23.1 LBS



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 11"x17" SCALE: NOT TO SCALE

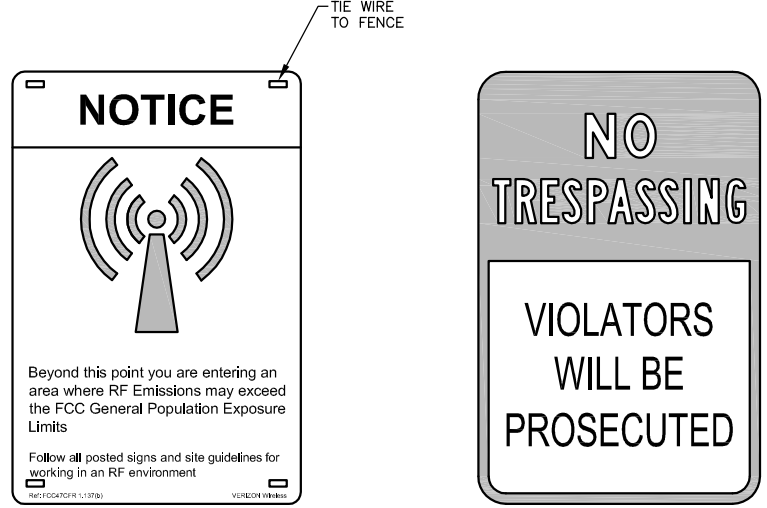
COAX NOTES 3

22"x34" SCALE: NOT TO SCALE  
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TMA DETAIL 2

22"x34" SCALE: NOT TO SCALE  
 11"x17" SCALE: NOT TO SCALE

RF AND TRESPASSING SIGN DETAILS 1



- SIGNS & PLACEMENT
  - LOW LEVEL (BLUE) WARNING SIGNS - PLACE AT SITE ENTRY/ACCESS POINTS ONLY:  
 ROOF TOPS: PLACE SIGNS ON THE INSIDE OF ROOF HATCH; PLACE ON ACCESS DOOR UNLESS DOOR IS USED BY GENERAL PUBLIC OR BUILDING TENANTS REGULARLY FOR ACCESS - IN THESE CASES CONSULT CONSTRUCTION MANAGER OR QC SUPERVISOR.  
 WATER TANKS: PLACE SIGNS ON COMPOUND GATE.  
 VERIZON-OWNED SITES: PLACE ONE SIGN ON SITE GATE.
  - HIGH LEVEL (RED) WARNING SIGNS - PLACE AT ALL ANTENNA SECTORS WHERE ACCESS BY THE GENERAL PUBLIC TO THE ANTENNAS IS POSSIBLE:  
 ALL SIGNS WILL BE SECURED WITH EITHER STAINLESS STEEL ZIP TIES OR STAINLESS TECH SCREWS.
- CC PARTICIPATION IN SIGN LOCATION.  
 CM WILL MEET WITH ALL CC'S TO OUTLINE CRITERIA FOR SIGN PLACEMENT; EMPHASIS WILL BE ON 'GRAY AREA' SITES, WHERE SIGN PLACEMENT IS PARTICULARLY CHALLENGING - WE WILL GIVE CC'S AS MUCH GUIDANCE ON SPECIFIC SITUATIONS AS WE CAN FORESEE, BUT CC'S WILL BE ENCOURAGED TO PARTNER CM OR QC IN DECIDING PLACEMENT OF DIFFICULT SITES. A JOINT SITE VISIT MAY BE REQUIRED TO FULFILL REQUIREMENTS.  
 CC WILL CALL OUT SIGN LOCATION(S) AT THE A&E WALK FOR EACH SITE AS THOSE OCCUR.  
 ON SITES WITH EXISTING A&E BUT NOT YET CONSTRUCTED, CC WILL BE ASKED TO PROVIDE (WITHIN A REASONABLE TIME FRAME TBD) A DETAIL FOR SIGN PLACEMENT THAT WILL BE SLIP-SHEETED INTO EXISTING SETS.
- SIGNAGE SHALL NOT EXCEED 3 SF IN AREA.

No. Date Revision



Implementation Team:

**JIM JAGGERS**  
 9895 MONTEGRINO COURT  
 ELK GROVE, CA 95757  
 (916) 213-8407

A&E Team:



Project Info:

**POR BARLOW**  
 505 N BAKER DRIVE  
 CANBY, OR 97013

Drawing Title:

**CONSTRUCTION DETAILS**

Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: A-5


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**Technical Data Sheet SUX4-107BC** **RFS**

**SlimLine Ultra High Performance Antenna, Dual Polarized, 4 ft 10.7 - 11.7 GHz**

**Product Description**

RFS SlimLine® Antennas are designed for microwave systems in all common frequency ranges from 6 GHz to 25 GHz. The antennas are cost-effective products for microwave point-to-point transmission links. The antennas utilize a conventional feed system and are available in Standard and Ultra High performance radiation characteristic. The Ultra High performance antennas are available in single polarised (SU) as well as in dual polarised versions (SUX). Antennas with Ultra High Performance radiation characteristics are required for use in networks where there is a very high interference potential. Antennas are available in 3 ft (0.9m) to 6 ft (1.8m) diameters. All antennas include a radome which is specially shaped (2H) or flexible (3 to 6 ft) to minimise its impact on the antenna's electrical characteristics. The antennas are easy to install. A side strut is required for 3ft and 4ft-antennas if part of delivery and 6 ft-antennas.



**Technical Features**

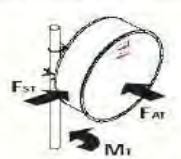
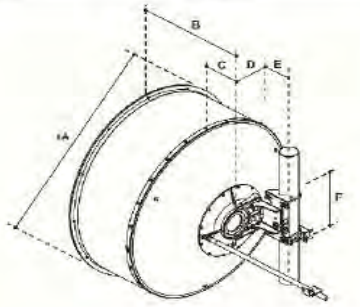
Product Type	Point to point antennas
Frequency, GHz	10.7 - 11.7
Diameter, ft (m)	4 (1.2)
Profile	SlimLine
Performance	Ultra High
Polarization	Dual
Regulatory Compliance	Standard, EN 302217, FCC
3dB beamwidth, (degrees)	1.5
Antenna Input	CPR90G
Low Band Gain, dBi	40
Mid Band Gain, dBi	40.4
High Band Gain, dBi	40.8
F/B Ratio, dB	68
XPD, dB	32
IP1, dB	35
Max VSWR / R.L, dB	1.20 / 20.8
FCC Standard	A
ETSI Standard	Range 1, class 3
Elevation Adjustment, degrees	± 15
Azimuth Adjustment, degrees	± 5
Polarization Adjustment, degrees	± 5
Pressure, bar (psi)	0.3 (4.3)
Radome	Included
Antenna color	White
Mounting Pipe Diameter minimum, mm (in)	114 (4.5)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Approximate Weight, kg (lb)	35 (77)
Survival Windspeed, km/h (mph)	200 (125)
Operational Windspeed, km/h (mph)	190 (118)

**RFS The Clear Choice** **SUX4-107BC** **Print Date: 22.05.2012**

**Technical Data Sheet SUX4-107BC (Cont.)** **RFS**

**SlimLine Ultra High Performance Antenna, Dual Polarized, 4 ft 10.7 - 11.7 GHz**

F <sub>1</sub> Side force max. at 110 km/h (68 mph), N (lb)	500 (112)
F <sub>2</sub> Axial force max. at 110 km/h (68 mph), N (lb)	1000 (225)
M Torque max. at 110 km/h (68 mph), Nm (ft lb)	320 (238)
F <sub>1</sub> Side force max. at 200 km/h (125 mph), N (lb)	1830 (365)
F <sub>2</sub> Axial force max. at 200 km/h (125 mph), N (lb)	3290 (737)
M Torque max. at 200 km/h (125 mph), Nm (ft lb)	1055 (784)

All dimensions in mm (in)

ØA	B	C	ØD for mounting pipe diam.		E	F	
1313 (51.7)	816 (32.1)	248 (9.8)	219 (8.5)	114 (4.5)	89 (3.5)	51 (2.0)	
				365 (14.4)		115 (4.5)	365 (14.4)

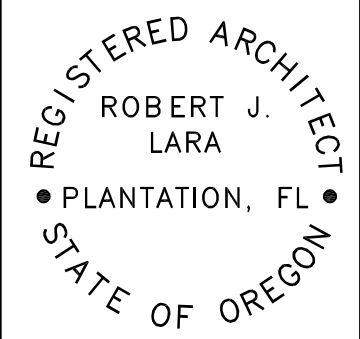
**Notes**  
includes 1 sway bar (1.35 m x Ø27 mm)

**Documentation**

Reflector installation	NMT553-01.pdf	Radiation pattern: (NSMA format)	SUX4-107B_990318.txt
Feed installation	NMT557-00.pdf	Radiation pattern: (PDF Format)	SUX4-107B_990318.pdf

**RFS The Clear Choice** **SUX4-107BC** **Print Date: 22.05.2012**

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**JIM JAGGERS**  
9895 MONTEGRINO COURT  
ELK GROVE, CA 95757  
(916) 213-8407

**A&E Team:**

**MORRISON HERSHFELD**  
10900 NE 8TH STREET, SUITE 810  
BELLEVUE, WA 98004 Tel: 425.451.1301 Fax: 425.451.1369  
www.morrisonhershfield.com

**Project Info:**

**POR BARLOW**  
505 N BAKER DRIVE  
CANBY, OR 97013

**Drawing Title:**

**CONSTRUCTION DETAILS**

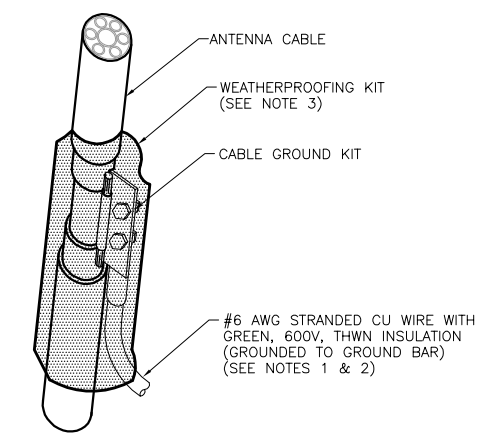
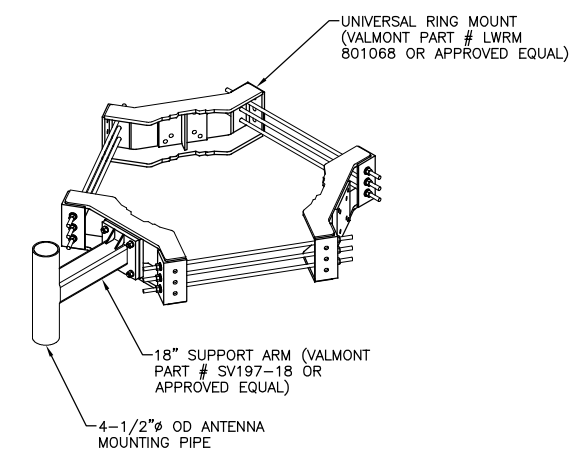
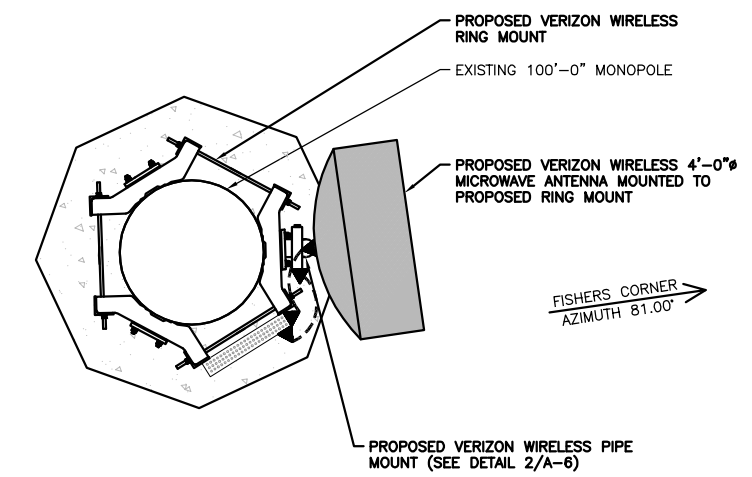
<b>Project Number:</b> 7130028	<b>Date:</b> 8/07/13
<b>Drafter:</b> DM	<b>Designer:</b> BW
<b>Project Manager:</b> BW	<b>Professional of Record:</b> RL
<b>Revision No:</b> 4	<b>Sheet No:</b> A-6

**RFS SUX4-107 MICROWAVE DATA SHEET**

**PROPOSED MICROWAVE SCHEDULE**

SECTOR	AZIMUTH	RAD CENTER	QUANTITY	VENDOR	MODEL	SIZE	TILT	COAX TYPE	COAX LENGTH
FISHERS CORNER	81.00°	85°-0"	1	RFS	SUX4-107	4'Ø	0.56°	TBD	TBD

**NOTE:**  
NO WORK SHALL COMMENCE WITHOUT THE APPROVED TOWER/ANTENNA MOUNT STRUCTURAL ANALYSIS REPORT SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER UNDER SEPARATE COVER. IF REQUIRED, THE CONTRACTOR SHALL MODIFY TOWER AND/OR ANTENNA MOUNTS AS INDICATED IN THE ABOVE MENTIONED STRUCTURAL REPORT OR ASSOCIATED MODIFICATION DESIGN DRAWINGS.



**NOTES:**

- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- GROUNING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
- WEATHERPROOFING SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.

22"x34" SCALE: 1/2" = 1'-0"  
11"x17" SCALE: 1/4" = 1'-0"



**PROPOSED CONFIGURATION** 3

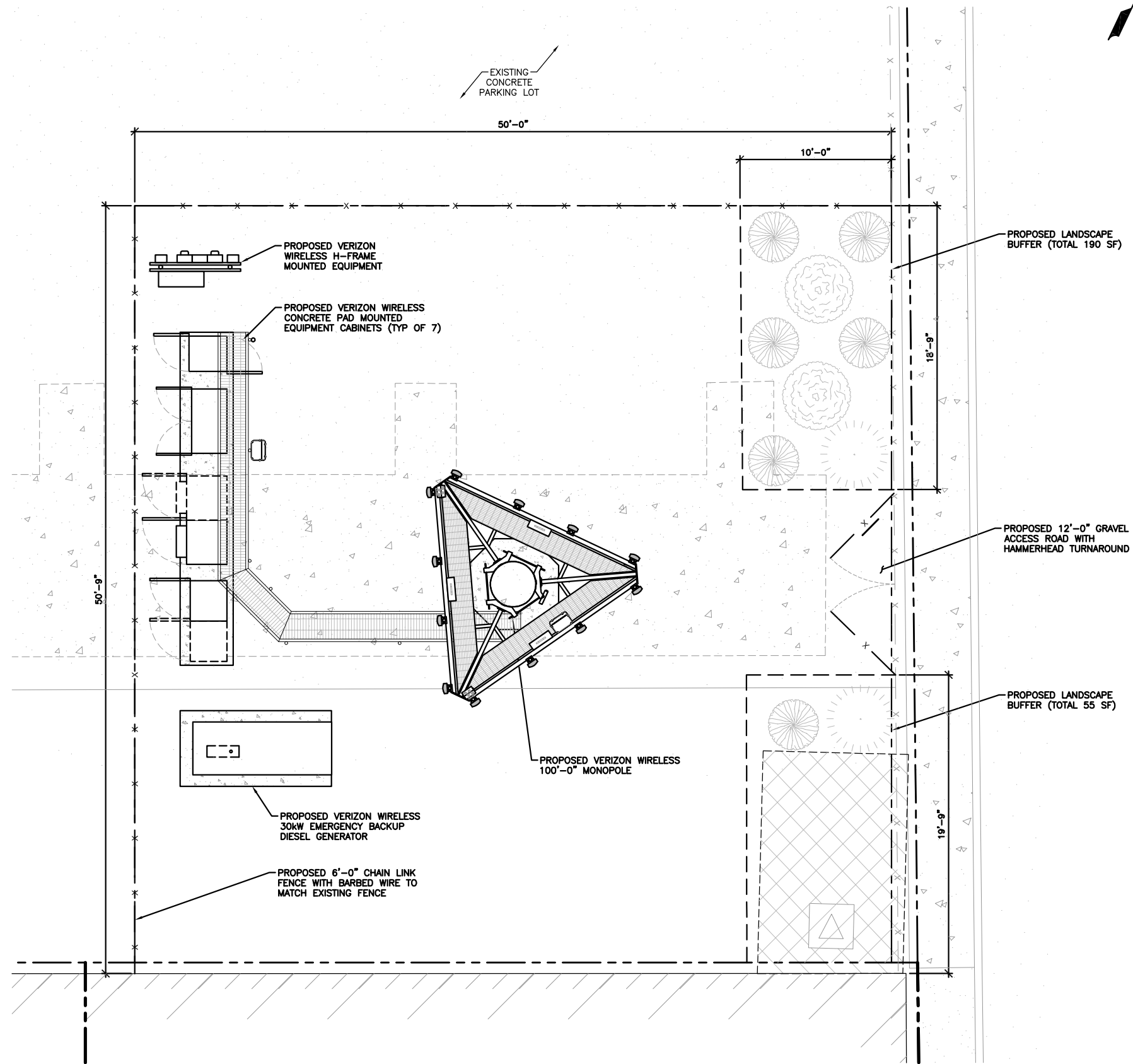
**PROPOSED MICROWAVE ANTENNA MOUNT** 2

22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE

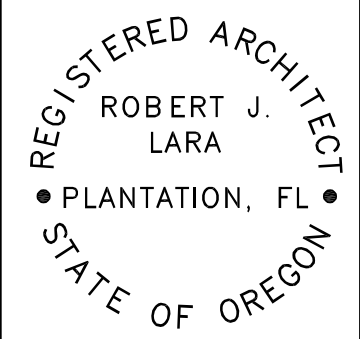
**COAX GROUNDING DETAIL** 1

- LANDSCAPING NOTES:**
- LANDSCAPING PLANTINGS SHALL CREATE AT A MINIMUM:
    - ONE ROW OF EVERGREEN SHRUBS SPACED NOT MORE THAN 5'-0" APART AND CAPABLE OF GROWING TO FORM A CONTINUOUS HEDGE AT LEAST 5'-0" TALL WITHIN 5 YEARS OF PLANTING
    - ONE ROW OF EVERGREEN TREES OR SHRUBS SPACED NOT MORE THAN 15'-0" APART NOR LESS THAN 4' HIGH WHEN PLANTED.
  - LANDSCAPE MATERIALS SHALL BE SELECTED AND SITED TO PRODUCE A HARDY AND DROUGHT RESISTANT LANDSCAPE AREA AND APPROVED BY THE PLANNING OFFICIAL OR HIS DESIGNATE.
  - MAINTENANCE OF THE LANDSCAPED AREA SHALL BE THE RESPONSIBILITY OF THE VERIZON WIRELESS. REQUIRED LANDSCAPING MUST BE MAINTAINED IN A HEALTHY CONDITION. TREES AND SHRUBS THAT DIE MUST BE REPLACED WITH HEALTHY MATERIALS OF THE SAME OR SIMILAR SPECIES AND SAME SIZE TO THE EXTENT PRACTICAL.
  - THE OWNER OR THE OWNER'S AGENT SHALL PROVIDE ABOVE AND BELOW GROUND PROTECTION FOR EXISTING TREES AND PLANT MATERIALS IDENTIFIED TO REMAIN.
  - TREES AND PLANT MATERIALS IDENTIFIED FOR PRESERVATION SHALL BE PROTECTED BY CHAIN LINK FENCING PLACED AROUND THE TREE, AT THE DRIP LINE.
  - IF IT IS NECESSARY TO FENCE WITHIN THE DRIP LINE, SUCH FENCING SHALL BE SPECIFIED BY A QUALIFIED ARBORIST, NURSERYMAN OR LANDSCAPE ARCHITECT.
  - NEITHER TOP SOIL STORAGE NOR CONSTRUCTION MATERIAL STORAGE SHALL BE LOCATED WITHIN THE DRIP LINE OF TREES DESIGNATED TO BE PRESERVED.
  - WHERE SITE CONDITIONS MAKE NECESSARY GRADING, BUILDING, PAVING, TRENCHING, BORING, DIGGING, OR OTHER SIMILAR ENCROACHMENT UPON A PRESERVED TREE'S DRIP LINE AREA, SUCH GRADING, PAVING, TRENCHING, BORING, DIGGING OR SIMILAR ENCROACHMENT SHALL ONLY BE PERMITTED UNDER THE DIRECTION OF A QUALIFIED ARBORIST, NURSERYMAN OR LANDSCAPE ARCHITECT. SUCH DIRECTION MUST ASSURE THAT THE HEALTH NEEDS OF TREES WITHIN THE PRESERVED AREA CAN BE MET.
  - TREE ROOT ENDS SHALL NOT REMAIN EXPOSED.

NOTE:  
PROPOSED 4'-0" MICROWAVE ANTENNA AND RING MOUNT NOT SHOWN FOR CLARITY. SEE DETAIL 1 OF SHEET A-1.1 FOR SPECIFICATIONS.



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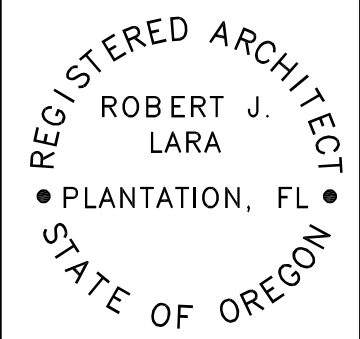
**Drawing Title:**  
**PROPOSED LANDSCAPE PLAN**

<b>Project Number:</b> 7130028	<b>Date:</b> 8/07/13
<b>Drafter:</b> DM	<b>Designer:</b> BW
<b>Project Manager:</b> BW	<b>Professional of Record:</b> RL
<b>Revision No:</b> 4	<b>Sheet No:</b> L-1

22"x34" SCALE: 1/4" = 1'-0"  
11"x17" SCALE: 1/8" = 1'-0"

PROPOSED LANDSCAPING PLAN 1

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ROBERT JERRY LARA  
REGISTERED ARCHITECT  
STATE OF OREGON  
5897

No.	Date	Revision
4	6/30/14	ISSUED FOR PERMIT
3	6/03/14	REVISED PER COMMENTS
2	4/1/14	REVISED PER COMMENTS
1	3/04/14	REVISED PER COMMENTS
0	10/30/13	REVISED PER COMMENTS
A	9/11/13	ISSUED FOR REVIEW



Client:  
**JIM JAGGERS**  
9895 MONTEGRINO COURT  
ELK GROVE, CA 95757  
(916) 213-8407

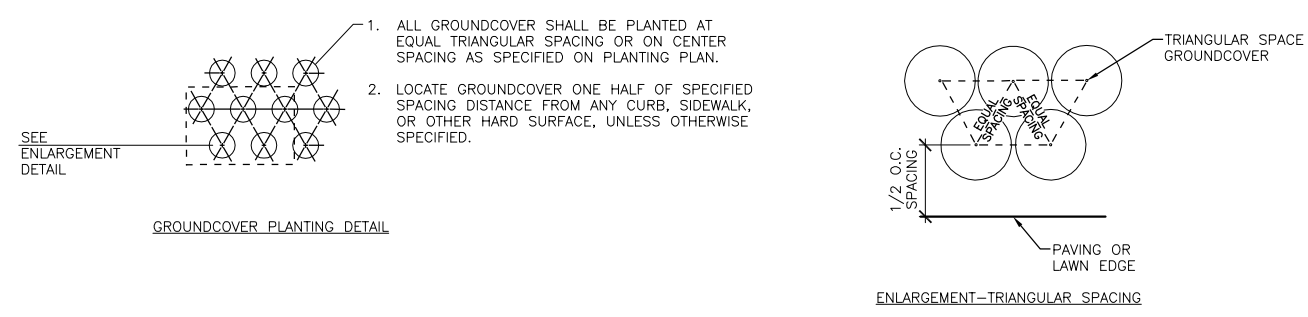
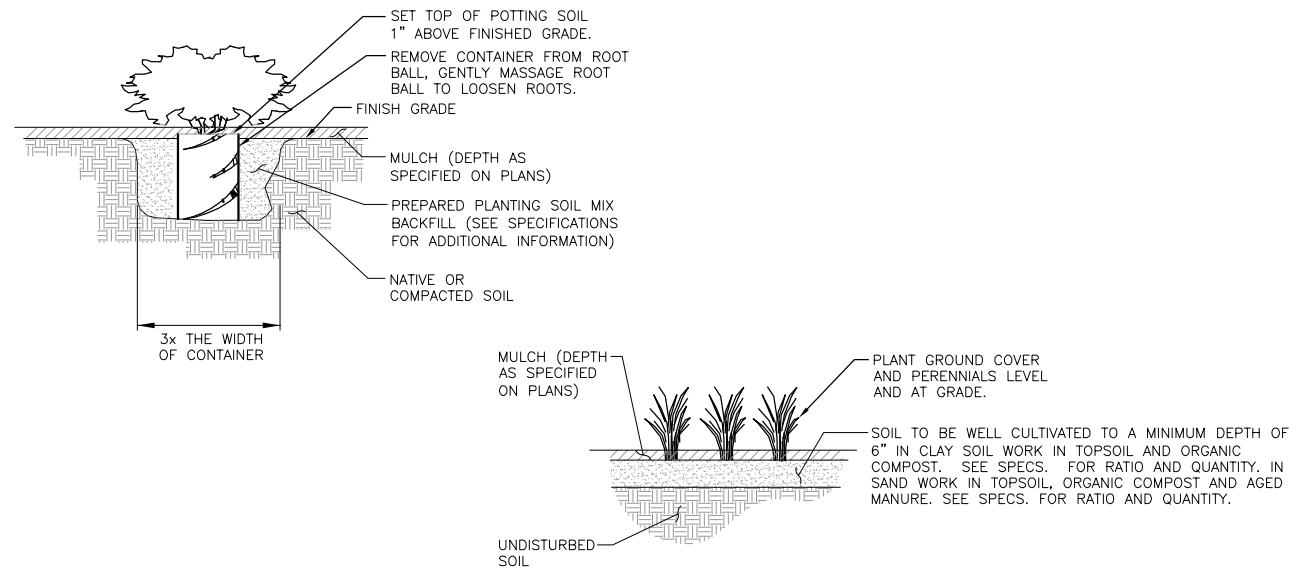
A&E Team:  
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10900 NE 8TH STREET, SUITE 810  
BELLEVUE, WA 98004 Tel:  
425.451.1301 Fax: 425.451.1369  
www.morrisonhershfield.com

Project Info:  
**POR BARLOW**  
505 N BAKER DRIVE  
CANBY, OR 97013

Drawing Title:  
**LANDSCAPING DETAILS**

Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: L-2

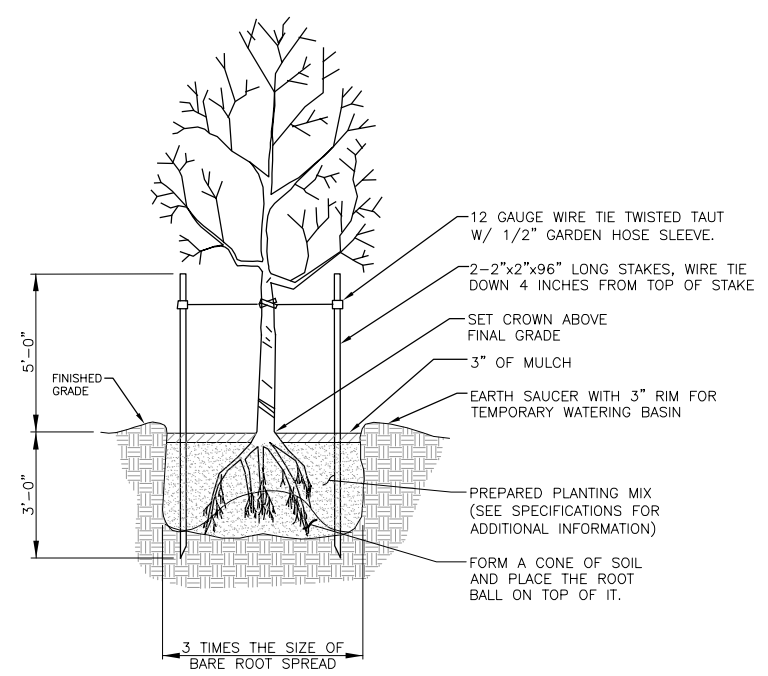
- NOTES:
1. SCARIFY BOTTOM AND SIDES OF HOLE, PRIOR TO PLANTING.
  2. KEEP PLANTS MOIST AND SHADED UNTIL PLANTING.



22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE  
**GROUND COVER SPACING DETAIL** 4

22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE  
**SHRUB/GROUND COVER PLANTING DETAIL** 3

- NOTES:
1. FOR TREE SPACING, TYPES AND CALIPER, SEE VMC 20.925.060.
  2. A ROOT BARRIER SHOULD BE INSTALLED AT THE EDGE OF PAVEMENT OR 4 FEET WIDE AND 6 FEET WIDE RECTANGLE AROUND THE TREE.



22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE  
**NOT USED** 2

22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE  
**TREE PLANTING DETAIL** 1

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## STRUCTURAL GENERAL NOTES

1. THE GENERAL NOTES AND TYPICAL DETAILS ARE APPLICABLE TO ALL PARTS OF THE STRUCTURE, AND SHALL BE READ IN CONJUNCTION WITH THE STRUCTURAL DRAWINGS AND PROJECT SPECIFICATIONS.
2. USE ONLY THE LATEST ISSUE OF ANY GOVERNING CODES, STANDARDS OR REGULATIONS REQUIRED OR MENTIONED IN THE FOLLOWING NOTES.
3. ALL CONSTRUCTION, EXCEPT WHERE NOTED OTHERWISE, SHALL COMPLY WITH THE REQUIREMENTS OF THE NOTED BUILDING CODES AND REFERENCE STANDARDS.
4. VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
5. FOR DETAILS AND DIMENSIONS NOT GIVEN ON STRUCTURAL DRAWINGS, REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS.
6. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN TRADES.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SAFEGUARD ALL EXISTING STRUCTURES AFFECTED BY THIS CONSTRUCTION. ON ANY NEW STRUCTURE OR PORTION THEREOF, DO NOT EXCEED THE DESIGN LOADING INDICATED ON THESE DRAWINGS.
8. ALL DESIGN LOADING INDICATED ON THESE DRAWINGS ARE SPECIFIED (UNFACTORED) LOADS, UNLESS OTHERWISE INDICATED.
9. ALL CONNECTION FORCES AND BRACING FORCES SHOWN ON THESE DRAWINGS ARE THE CRITICAL UNFACTORED FORCES UNLESS OTHERWISE INDICATED.
10. DO NOT SCALE THE DRAWINGS.
11. THE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF MORRISON HERSHFIELD CORPORATION AND MAY NOT BE REPRODUCED IN ANY FORM WITHOUT WRITTEN PERMISSION.

## FOUNDATIONS NOTES

1. CONCRETE PAD FOUNDATION WAS DESIGNED BASED ON ASSUMED 1500 PSF ALLOWABLE BEARING. A LICENSED GEOTECHNICAL ENGINEER SHALL VERIFY THIS ASSUMPTION PRIOR TO FOUNDATION CONSTRUCTION.

## CONCRETE NOTES

1. ALL CONCRETE WORK SHALL CONFORM TO ACI 318, " BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE " AND TO THE PROJECT SPECIFICATIONS.
2. PREPARE AND SUBMIT MIX DESIGNS FOR EACH TYPE AND STRENGTH OF CONCRETE IN ACCORDANCE WITH ACI 211, " PROPORTIONING CONCRETE MIXTURES ", AND ACI 301, " SPECIFICATIONS FOR STRUCTURAL CONCRETE.
3. READY-MIX CONCRETE SUPPLIERS TO BE NRMCA-CERTIFIED.
4. ALL CONCRETE IS TO BE NORMAL DENSITY CONCRETE WITH A MAXIMUM SLUMP OF 4 INCHES. MAXIMUM AGGREGATE SIZE 3/4 INCH.
5. NO ADDITIONAL WATER SHALL BE ADDED TO THE CONCRETE AT THE JOB SITE.
6. DO NOT USE CHLORIDE-CONTAINING ADMIXTURES.
7. HOT WEATHER CONCRETE: COMPLY WITH ACI 305R.
8. REINFORCING OF ALL CONCRETE MEMBERS SHALL HAVE THE FOLLOWING CLEAR CONCRETE COVER:

	COVER, INCHES
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH CONCRETE EXPOSED TO EARTH OR WEATHER:	3
#6 THROUGH #18 BARS #5 BAR OR SMALLER	2
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: SLABS AND WALLS	1 1/2
#14 AND #18 BARS #11 BAR AND SMALLER	1 1/2
COLUMNS PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS	1
	1 1/2
9. UNLESS OTHERWISE NOTED, PROVIDE A MINIMUM BEARING LENGTH OF 4 INCHES FOR ALL REINFORCED CONCRETE SLABS.
10. PROVIDE CHAMFERS, REVEALS, REGLETS, RECESSES AND THE LIKE AS SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS.
11. PROVIDE 3/4 INCH CHAMFER AT EXPOSED FORMED EDGES AND CORNERS.
12. NO HOLES OR SLEEVES SHALL BE MADE THROUGH CONCRETE WORK OTHER THAN THOSE INDICATED ON THE STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER.
13. PROVIDE CAST-IN-PLACE CONCRETE FOR MECHANICAL AND ELECTRICAL DIVISIONS INCLUDING BUT NOT LIMITED TO: EQUIPMENT BASES, HOUSEKEEPING PADS, CURBS, PITS, UNDERGROUND DUCTBANKS.
14. ALL FORMWORK OFFSET TOLERANCES (PER ACI 117) TO BE CLASS A.

## STRUCTURAL STEEL NOTES

1. FABRICATOR AND WELDERS MUST BE CERTIFIED TO APPLICABLE SECTIONS OF ANSI/AWS D1.1-04 - STRUCTURAL WELDING CODE - STEEL.
2. ALL WELDS NOT SHOWN ON DESIGN DRAWINGS SHALL BE SUCH AS TO DEVELOP 100% OF STRENGTH OF THE BASE METAL.
3. ALL BOLTED CONNECTIONS SHALL BE BEARING TYPE CONNECTIONS CONFORMING TO "RCS SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS".
4. IN ALL CASES CONNECTIONS SHALL MEET THE REQUIREMENTS OF ANSI/AISC 360-05.
5. FABRICATOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES AND/OR ERRORS ON THE DESIGN DRAWINGS IN TIME TO PREVENT ANY FABRICATION ERRORS.
6. CONTRACTOR SHALL SUPPLY SIX PRINTS OF SHOP DRAWINGS FOR REVIEW BY THE ENGINEER PRIOR TO COMMENCING FABRICATION. APPROVAL OF SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR IN ANY WAY FROM HIS RESPONSIBILITY FOR ACCURACY AND FIT.
7. SURFACE PREPARATION OF ALL STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF STEEL STRUCTURES PAINTING COUNCIL SPECIFICATION FOR COMMERCIAL BLAST CLEANING SPCC-SP6
8. ALL STEEL SHALL BE HOT DIP GALVANIZED TO MEET THE REQUIREMENTS OF ASTM STANDARD SPECIFICATION A123 WITH FIELD TOUCH UP WITH ZINC RICH PAINT AFTER CONSTRUCTION.

## DESIGN CRITERIA NOTES

### DESIGN DATA:

2010 OREGON STRUCTURAL SPECIALTY CODE  
WIND SPEED (ASCE 7-05) 95 MPH (3 SECOND GUST)  
EXPOSURE C  
IMPORTANCE FACTOR 1.0

### SEISMIC LOAD:

$S_s = 0.858$   $S_{ps} = 0.662$   
 $S_1 = 0.314$   $S_{D1} = 0.371$   
SITE CLASS D  
RISK CATEGORY = II  
SEISMIC DESIGN CATEGORY D

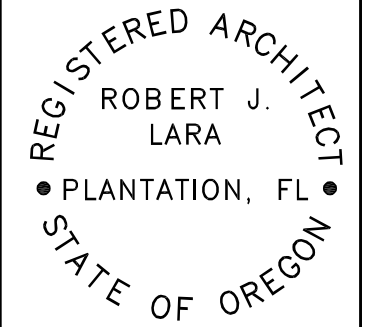
### DEAD LOAD:

(4) RADIO CABINETS 1,500 lbs each  
(2) POWER/BATTERY CABINETS 2,900 lbs each  
(1) 30KW DIESEL GENERATOR W/TANK 5,000 lbs

### CONCRETE (28 DAYS):

FOOTINGS 4000 PSI  
ALL OTHER CONCRETE 4000 PSI  
REINFORCING STEEL A615 GRADE 60  
DEFORMED BAR ANCHOR (DBA) A496  
WELDED WIRE FABRIC A185

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### Client:



### Implementation Team:

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9895 MONTEGRINO COURT  
ELK GROVE, CA 95757  
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### A&E Team:

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### Project Info:

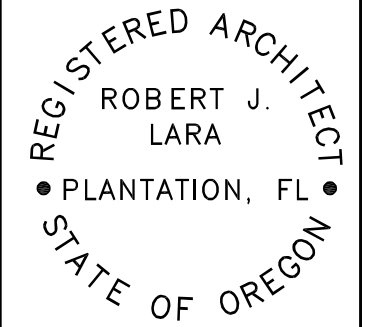
**POR  
BARLOW**  
505 N BAKER DRIVE  
CANBY, OR 97013

### Drawing Title:

**STRUCTURAL  
NOTES**

Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: S-1

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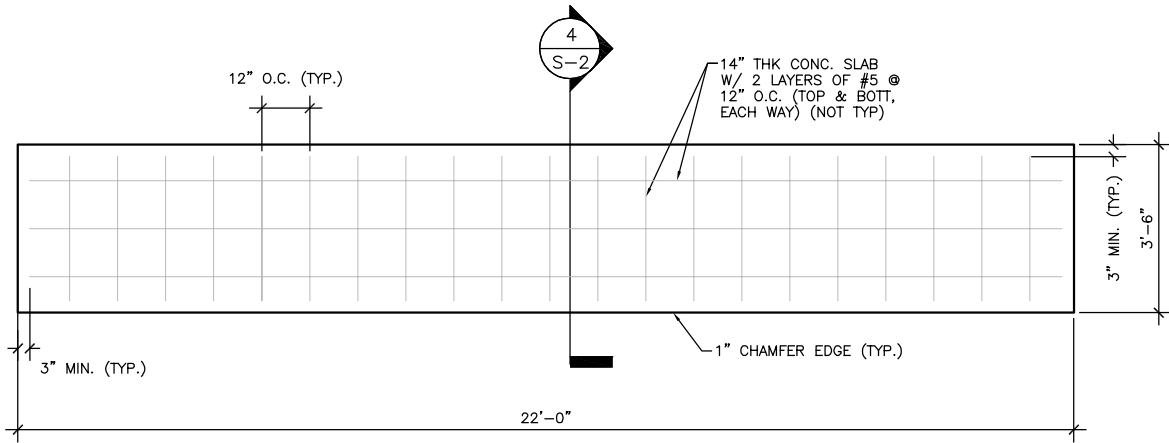
Implementation Team:  
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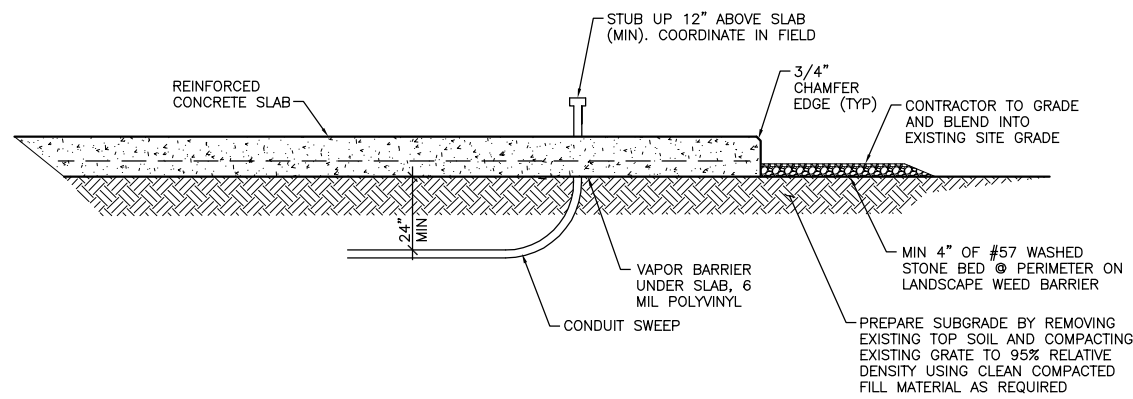
Drawing Title:  
**STRUCTURAL DETAILS**

Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: S-2



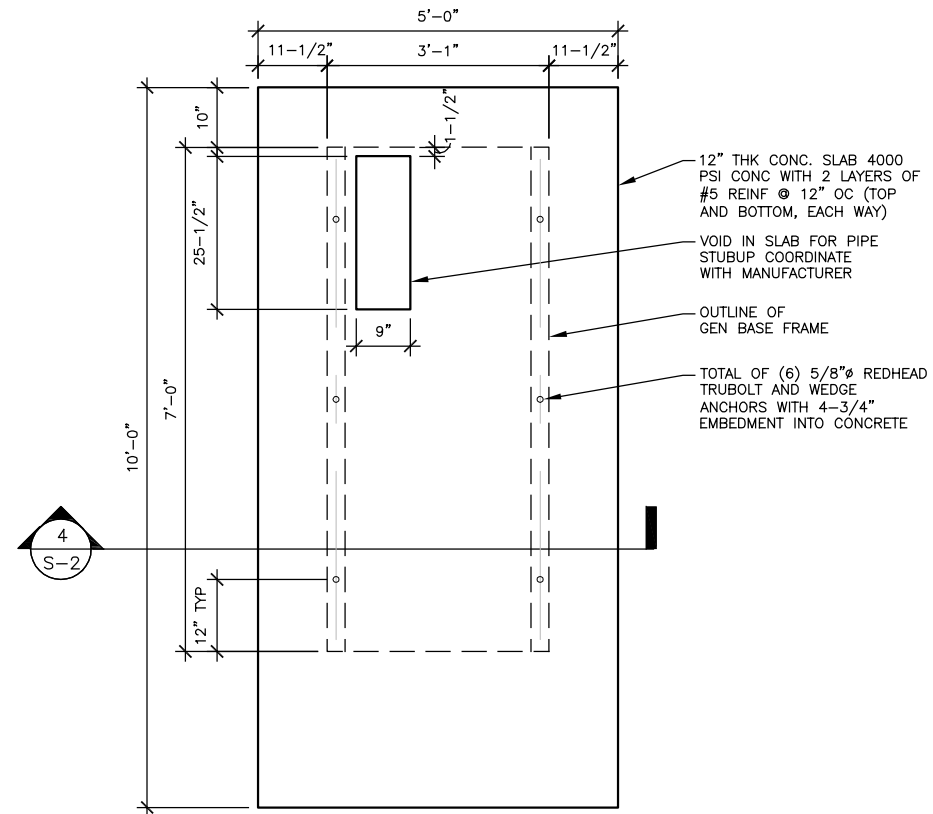
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11"x17" SCALE: NOT TO SCALE

CONCRETE EQUIPMENT PAD DETAIL 5



22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE

TYPICAL CONCRETE PAD SECTION 4

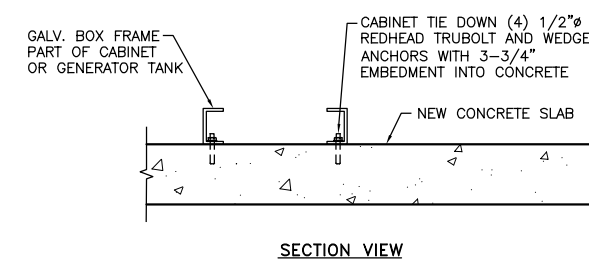
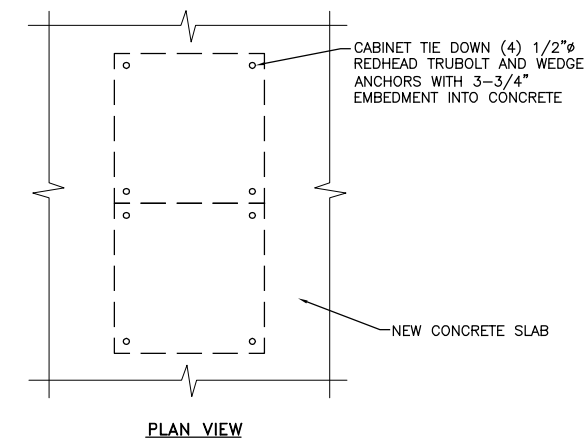


NOTE:  
VERIFY LOCATION OF GENERATOR POWER STUB-UP(S) WITH MANUFACTURER PRIOR TO CONCRETE POUR

22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE

GENERATOR PAD PLAN 3

NOTE:  
VERIZON WIRELESS EQUIPMENT CABINETS TO BE MECHANICALLY ATTACHED TO CONCRETE PAD PER MANUFACTURER'S RECOMMENDATIONS



22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE

NOT USED 2

22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE

CABINET ATTACHMENT DETAIL 1

## GENERAL ELECTRICAL NOTES

### GENERAL

- EXAMINE THE SITE CONDITIONS VERY CAREFULLY AND THE SCOPE OF PROPOSED WORK TOGETHER WITH THE WORK OF ALL OTHER TRADES AND INCLUDE IN THE BID PRICE ALL COSTS FOR WORK SUCH AS EQUIPMENT AND WIRING MADE NECESSARY TO ACCOMMODATE THE ELECTRICAL SYSTEMS SHOWN AND SYSTEMS OF OTHER TRADES.
- SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
- PERFORM DETAILED VERIFICATION OF WORK PRIOR TO ORDERING THE ELECTRICAL EQUIPMENT AND COMMENCING CONSTRUCTION. ISSUE A WRITTEN NOTICE TO THE CONSULTANT OF ANY DISCREPANCIES.
- OBTAIN ALL PERMITS, PAY ASSOCIATED FEES AND SCHEDULE INSPECTION.
- PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, INSURANCE, AND SERVICES TO COMPLETE THIS PROJECT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND PRESENT IT AS FULLY OPERATIONAL TO THE SATISFACTION OF THE OWNER.
- CARRY OUT WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY AND LOCAL CODES AND O.S.H.A. PRIOR TO BEGINNING WORK COORDINATE ALL POWER AND TELCO WORK WITH THE LOCAL UTILITY COMPANY AS IT MAY APPLY TO THIS SITE. ALL WORK TO COMPLY WITH THE RULES AND REGULATIONS OF THE UTILITIES INVOLVED.
- FABRICATION AND INSTALLATION OF THE COMPLETE ELECTRICAL SYSTEM SHALL BE DONE IN A FIRST CLASS WORKMANSHIP PER NECA STANDARD 1-2000 BY QUALIFIED PERSONNEL EXPERIENCED IN SUCH WORK AND SHALL SCHEDULE THE WORK IN AN ORDERLY MANNER SO AS NOT TO IMPEDE PROGRESS OF THE PROJECT.
- DURING PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD OF THE INSTALLATION OF THE ELECTRICAL SYSTEMS, LOCATING EACH CIRCUIT PRECISELY AND DIMENSIONING EQUIPMENT, CONDUIT AND CABLE LOCATIONS. UPON COMPLETION OF THE INSTALLATION, TRANSFER ALL RECORD DATA TO BLACK LINE PRINTS OF THE ORIGINAL DRAWINGS AND SUBMIT THESE DRAWINGS AS RECORD DRAWINGS TO THE CONSULTANT.
- COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL, OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
- GENERAL CONTRACTOR IS RESPONSIBLE FOR REQUESTING CONNECTION OF COMMERCIAL POWER FROM THE POWER COMPANY. ELECTRICAL CONTRACTOR SHALL COORDINATE THIS WORK WITH THE GENERAL CONTRACTOR.
- COORDINATE EXACT TELEPHONE REQUIREMENTS AND SERVICE ROUTING WITH LOCAL TELEPHONE COMPANY. APPLY FOR TELEPHONE SERVICE IMMEDIATELY UPON AWARD OF CONTRACT.

### BASIC MATERIALS AND METHODS

- ALL ELECTRICAL WORK SHALL CONFORM TO THE EDITION OF THE NEC ACCEPTED BY THE LOCAL JURISDICTION AND TO THE APPLICABLE LOCAL CODES AND REGULATIONS.
- ALL MATERIALS AND EQUIPMENT SHALL BE NEW. MATERIALS AND EQUIPMENT SHALL BE THE STANDARD PRODUCTS OF MANUFACTURER'S CURRENT DESIGN. ANY FIRST-CLASS PRODUCT MADE BY A REPUTABLE MANUFACTURER MAY BE USED PROVIDING IT CONFORMS TO THE CONTRACT REQUIREMENTS AND MEETS THE APPROVAL OF THE CONSULTANT AND THE OWNER.
- ARRANGE CONDUIT, WIRING, EQUIPMENT, AND OTHER WORK GENERALLY AS SHOWN, PROVIDING PROPER CLEARANCES AND ACCESS. CAREFULLY EXAMINE ALL CONTRACT DRAWINGS AND FIT THE WORK IN EACH LOCATION WITHOUT SUBSTANTIAL ALTERATION. WHERE DEPARTURES ARE PROPOSED BECAUSE OF FIELD CONDITIONS OR OTHER CAUSES, PREPARE AND SUBMIT DETAILED DRAWINGS FOR ACCEPTANCE.
- THE CONTRACT DRAWINGS ARE GENERALLY DIAGRAMMATIC AND ALL OFFSETS, BENDS, FITTINGS AND ACCESSORIES ARE NOT NECESSARILY SHOWN. PROVIDE ALL SUCH ITEMS AS MAY BE REQUIRED TO FIT THE WORK TO THE CONDITIONS.
- MAINTAIN ALL CLEARANCES AS REQUIRED BY NEC.
- SEAL AROUND CONDUITS AND AROUND CONDUCTORS WITHIN CONDUITS ENTERING THE PREFABRICATED SHELTER/CABINETS WHERE PENETRATION OCCURS WITH A SILICONE SEALANT TO PREVENT MOISTURE PENETRATION INTO BUILDING/SHELTER.
- SILICONE SEAL AROUND ALL BOLTS AND SCREWS USED TO SECURE EQUIPMENT TO EXTERIOR OF BUILDING. MAKE NECESSARY CONNECTIONS FOR BATTERY IN EMERGENCY LIGHT FIXTURE. CONNECT EXTERIOR LIGHT FIXTURE (PROVIDED BY SHELTER MANUFACTURER) TO EXTERNAL JUNCTION BOX.

### CONDUCTORS AND CONNECTORS

- UNLESS NOTED OTHERWISE, ALL CONDUCTORS SHALL BE COPPER, MINIMUM SIZE #12 AWG, WITH THERMOPLASTIC INSULATION CONFORMING TO NEMA WC5 OR CROSS-LINKED POLYETHYLENE INSULATION CONFORMING TO NEMA WC7. (TYPES THHN OR THWN-2). INSULATION SHALL BE RATED FOR 90°C CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH NEC.
- ALL CONDUCTORS USED FOR GROUNDING SHALL BE COPPER AND SHALL HAVE GREEN INSULATION EXCEPT WHERE NOTED.
- FOR COPPER CONDUCTORS #6 AWG AND SMALLER USE 3M SCOTCH-LOK OR T&B STA-KON COMPRESSION TYPE CONNECTORS WITH INTEGRAL OR SEPARATE INSULATION CAPS. FOR COPPER CONDUCTORS LARGER THAN #6 AWG USE SOLDERLESS, IDENT HEX SCREW OR BOLT TYPE PRESSURE CONNECTORS OR DOUBLE COMPRESSION C-CLAMP CONNECTORS, UNLESS SPECIFIED OTHERWISE ON DRAWINGS.
- UNLESS NOTED OTHERWISE ALL LUGS SHALL BE TIN PLATED COPPER, TWO-HOLE, LONG BARREL, COMPRESSION TYPE.
- CONDUCTOR LENGTHS SHALL BE CONTINUOUS FROM TERMINATION TO TERMINATION WITHOUT SPLICES. SPLICES ARE NOT ACCEPTABLE. IF SPLICES ARE UNAVOIDABLE PRIOR APPROVAL FROM THE ENGINEER MUST BE OBTAINED.

### RACEWAYS AND BOXES

- ALL CONDUIT SHALL BE UL LABELED.
- ALL EMPTY CONDUITS INSTALLED FOR FUTURE USE SHALL HAVE A PULL CORD.
- SHEET METAL BOXES SHALL CONFORM TO NEMA OS1; CAST-METAL BOXES SHALL CONFORM TO NEMA 81 AND SHALL BE SIZED IN ACCORDANCE WITH NEC UNLESS NOTED OTHERWISE.






















### GROUNDING

- ALL LIGHTNING PROTECTION AND SAFETY GROUNDING OF THE ELECTRICAL EQUIPMENT SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT NFPA AND VERIZON WIRELESS STANDARDS.
- GROUND LUGS ARE SPECIFIED UNDER SECTION 3 "CONDUCTORS AND CONNECTORS".
- ALL GROUND LUG AND COMPRESSION CONNECTIONS SHALL BE COATED WITH ANTI-OXIDANT AGENT, SUCH AS NO-OX, NOALOX, PENETROX OR KOPRSHIELD.
- GROUND ALL EXPOSED METALLIC OBJECTS ON BUILDING EXTERIOR INCLUDING BUILDING TIE DOWN BRACKETS.
- PROVIDE LOCK WASHERS FOR ALL MECHANICAL CONNECTIONS FOR GROUND CONDUCTORS. USE STAINLESS STEEL HARDWARE THROUGHOUT.
- DO NOT INSTALL GROUND RING OUTSIDE OF PROPERTY LINE.
- REMOVE ALL PAINT AND CLEAN ALL DIRT FROM SURFACES REQUIRING GROUND CONNECTIONS, REPAINT TO MATCH AFTER CONNECTION IS MADE TO MAINTAIN CORROSION RESISTANCE.
- ALL EXTERIOR GROUNDING CONDUCTORS INCLUDING EXTERIOR GROUND RING SHALL BE #2 AWG SOLID BARE TINNED COPPER UNLESS NOTED OTHERWISE. MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. THE RADIUS OF ANY BEND SHALL NOT BE LESS THAN 8" AND THE ANGLE OF ANY BEND SHALL NOT EXCEED 90°. GROUNDING CONDUCTORS SHALL BE ROUTED DOWNWARD TOWARD THE BURIED GROUND RING.
- BOND ALL EXTERIOR CONDUITS, PIPES AND CYLINDRICAL METALLIC OBJECTS WITH A PENN-UNION GT SERIES CLAMP, BLACKBURN GUV SERIES CLAMP OR A BURNDY GAR 3900BU SERIES CLAMP ONLY, NO SUBSTITUTES ACCEPTED.
- ALL GROUND CONNECTIONS SHALL BE APPROVED FOR THE METALS BEING CONNECTED.
- ALL EXTERIOR GROUND CONNECTIONS SHALL BE EXOTHERMICALLY WELDED. ALL EXOTHERMIC WELDS TO EXTERIOR GROUND RING SHALL BE THE PARALLEL TYPE, EXCEPT FOR THE GROUND RODS WHICH ARE TEE EXOTHERMIC WELDS. REPAIR ALL GALVANIZED SURFACES THAT HAVE BEEN DAMAGED BY EXOTHERMIC WELDING. USE SPRAY GALVANIZER SUCH AS HOLUM LECTROSOL #15-501.
- CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER WHEN THE BURIED GROUND RING IS INSTALLED SO THE REPRESENTATIVE CAN INSPECT THE GROUND RING BEFORE IT IS BACKFILLED WITH SOIL.
- FOR METAL FENCE POST GROUNDING, USE A HEAVY DUTY TYPE GROUNDING CLAMP OR EXOTHERMIC WELD CONNECTION TO POST. GROUND ALL FENCE POSTS WITHIN 6' OF EQUIPMENT.
- WHERE MECHANICAL CONNECTORS (TWO-HOLE OR CLAMP) ARE USED, APPLY A LIBERAL PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NO OXIDE A" BY DEARBORN CHEMICAL COMPANY ON ALL CONNECTORS.

### OVERCURRENT & SHORT-CIRCUIT/GND FAULT PROTECTION (IF APPLICABLE)

- CONTRACTOR SHALL RECORD LOAD READINGS WHEN SITE POWER ORIGINATES FROM A 3Ø SERVICE TO MONITOR & ASSURE A BALANCED LOAD AT THE PRIMARY SUPPLY. RECORDS SHALL BE PROVIDED TO THE SITE/FACILITY OWNER. CONTRACTOR SHALL CONSULT MANUFACTURER'S PLANS, SHOP DRAWINGS AND SPECS FOR INDOOR/OUTDOOR EQUIPMENT LOCATION & INSTALLATION. ELECTRIC SERVICE SHALL BE IN COMPLIANCE WITH ALL RULES & REGULATIONS OF THE UTILITY CO. ELECT. CONTRACTOR SHALL PROVIDE EQUIPMENT WITH HIGHER SHORT-CIRCUIT FAULT CURRENT RATINGS (KA.I.C.) AS REQUIRED TO MATCH & EXCEED UTILITY CO. AVAILABLE SYMMETRICAL & ASYMMETRICAL FAULT CURRENT LEVELS. FUSES IN SERVICE SWITCHES SHALL BE CLASS "RK1", CURRENT LIMITING TYPE, 200 KA.I.C., NON-TIME DELAY, DISCONNECT SWITCHES TO HAVE REJECTION CLIPS, UNLESS INDICATED OTHERWISE. ELECTRICAL EQUIPMENTS & PROTECTIONS SHALL BE STANDARD KAIC RATED HIGHER THAN INCOMING EQUIPMENT AND/OR UTILITY CO. KAIC RATE AND CONSIDERING ELECTRIC MOTORS FAULT CONTRIBUTION. CONTRACTOR SHALL NOT BEGIN CONSTRUCTION UNTIL THIS MANDATORY REQUIREMENT IS MET. IF NEW LOAD IS ADDED CONTRACTOR SHALL VERIFY & CONFIRM BEFORE CONSTRUCTION THAT TOTAL UTILITY SERVICE LOAD SHALL KEEP EQUAL TO (125% MAX. DEMAND+ NEW LOAD)< 80% SERVICE ENTRANCE CONDUCTORS/MAIN OVER CURRENT PROTECTION AMPACITY, WHICHEVER RATING IS LOWER. LIGHTING SHALL MEET NEC, IESNA AND/OR FAA STANDARDS IF APPLICABLE. PHOTOMETRIC LEVELS SHALL COMPLY WITH LOCAL, STATE & FEDERAL RULES. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN ACCESSIBLE AREAS ONLY. THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF POWER AND TELEPHONE UTILITY COMPANIES.

## LEGEND


SYMBOL	DESCRIPTION
	CIRCUIT BREAKER
	NON-FUSIBLE DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
	SURFACE MOUNTED PANEL BOARD
	TRANSFORMER
	KILOWATT HOUR METER
	DENOTES CABLE OR CONDUIT TURNING UP IN PLAN VIEW
	DENOTES CABLE OR CONDUIT TURNING DOWN IN PLAN VIEW
	JUNCTION BOX
	PULL BOX TO NEC/TELCO STANDARDS
	OVERHEAD UTILITIES
	UNDERGROUND TELCO
	UNDERGROUND POWER
	DENOTES REFERENCE NOTE
	EXOTHERMIC WELD CONNECTION
	MECHANICAL CONNECTION (eg LUG, C-TAP)
	GROUND ROD
	GROUND ROD WITH INSPECTION SLEEVES
	GROUND BAR
	PIN AND SLEEVE RECEPTACLE
	GROUND CONDUCTOR

### ABBREVIATIONS

AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
BFG	BELOW FINISHED GRADE
C	CONDUIT
CRGB	CELL REFERENCE GROUND BAR
CU	COPPER
C/W	COMPLETE WITH
D.T.T.	DRY TYPE TRANSFORMER
EC	EMPTY CONDUIT
G	GROUND
GE	GROUNDING ELECTRODE
GEC	GROUNDING ELECTRODE CONDUCTOR
GRC	GALVANIZED RIGID CONDUIT
MTC	MANUAL TRANSFER SWITCH
NEC	NATIONAL ELECTRICAL CODE
O/H	OVERHEAD
RNC	RIGID NON-METALLIC CONDUIT (SCHEDULE 80 PVC)
SD	SERVICE DISCONNECT SWITCH
SE	SERVICE ENTRANCE
SN	SOLID NEUTRAL
TGB	TELCO GROUND BAR
TEGB	TOWER EXIT GROUND BAR
TR	TRANSFORMER
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
WP	WEATHERPROOF - NEMA 3R
U/G	UNDERGROUND
PPC	POWER PROTECTION SHELTER

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REGISTERED ARCHITECT



ROBERT J. LARA  
PLANTATION, FL  
STATE OF OREGON  
ROBERT JERRY LARA  
REGISTERED ARCHITECT  
STATE OF OREGON  
5897

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Client:



Implementation Team:

**JIM JAGGERS**  
 9895 MONTEGRINO COURT  
 ELK GROVE, CA 95757  
 (916) 213-8407

A&E Team:



MORRISON HERSHFIELD  
 10900 NE 8TH STREET, SUITE 810  
 BELLEVUE, WA 98004 Tel:  
 425.451.1301 Fax: 425.451.1369  
 www.morrisonhershfield.com

Project Info:

**POR BARLOW**  
 505 N BAKER DRIVE  
 CANBY, OR 97013

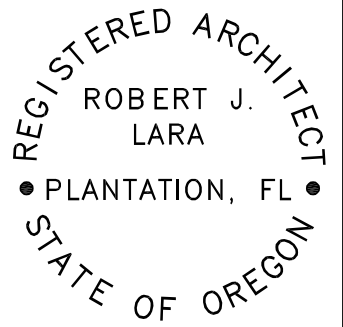
Drawing Title:

**ELECTRICAL NOTES AND SYMBOLS**

Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: E-1



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ROBERT JERRY LARA  
REGISTERED ARCHITECT  
STATE OF OREGON  
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9895 MONTEGRINO COURT  
ELK GROVE, CA 95757  
(916) 213-8407

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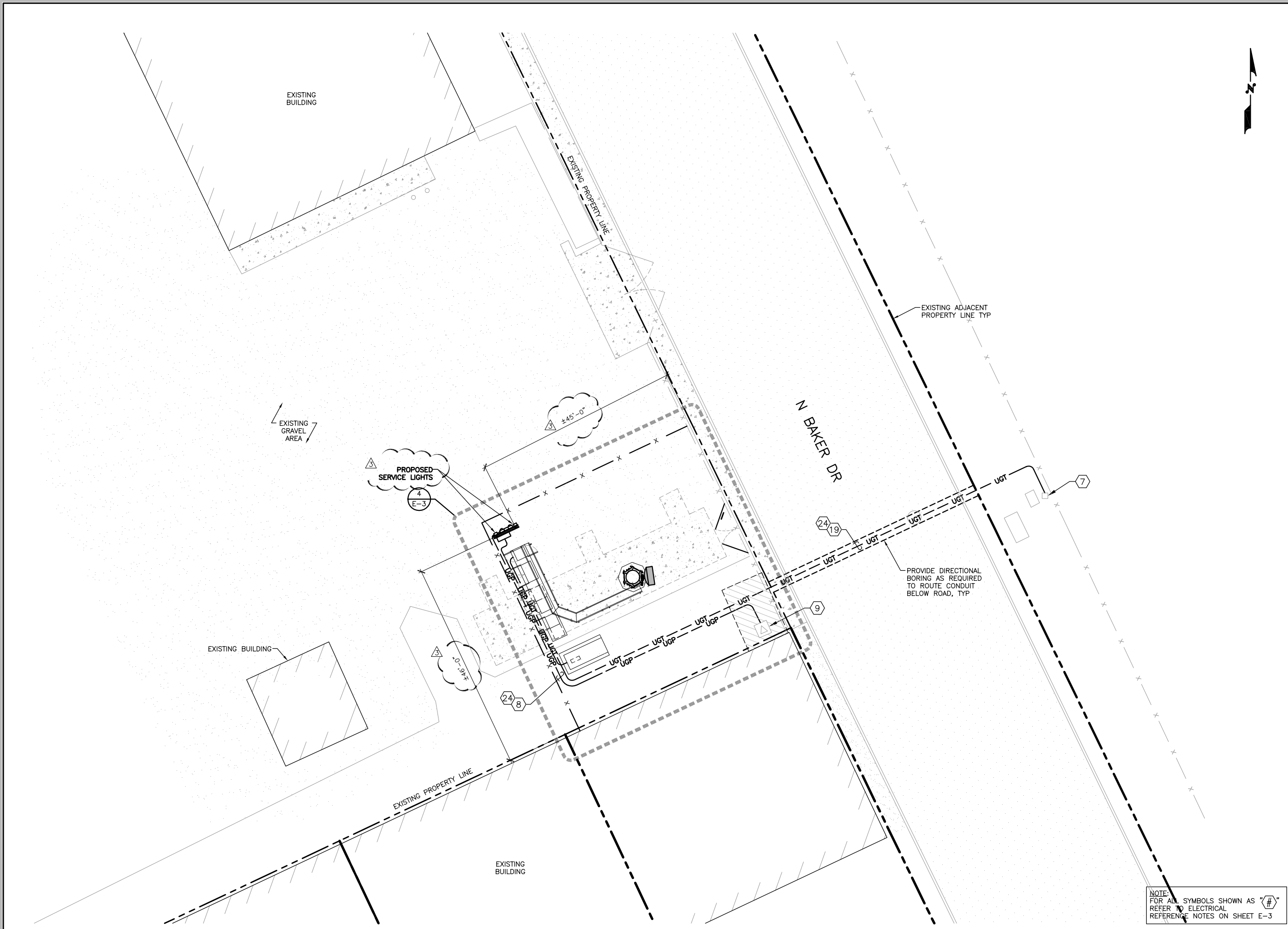
Project Info:

**POR BARLOW**  
505 N BAKER DRIVE  
CANBY, OR 97013

Drawing Title:

**ELECTRICAL SITE PLAN**

Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: E-2



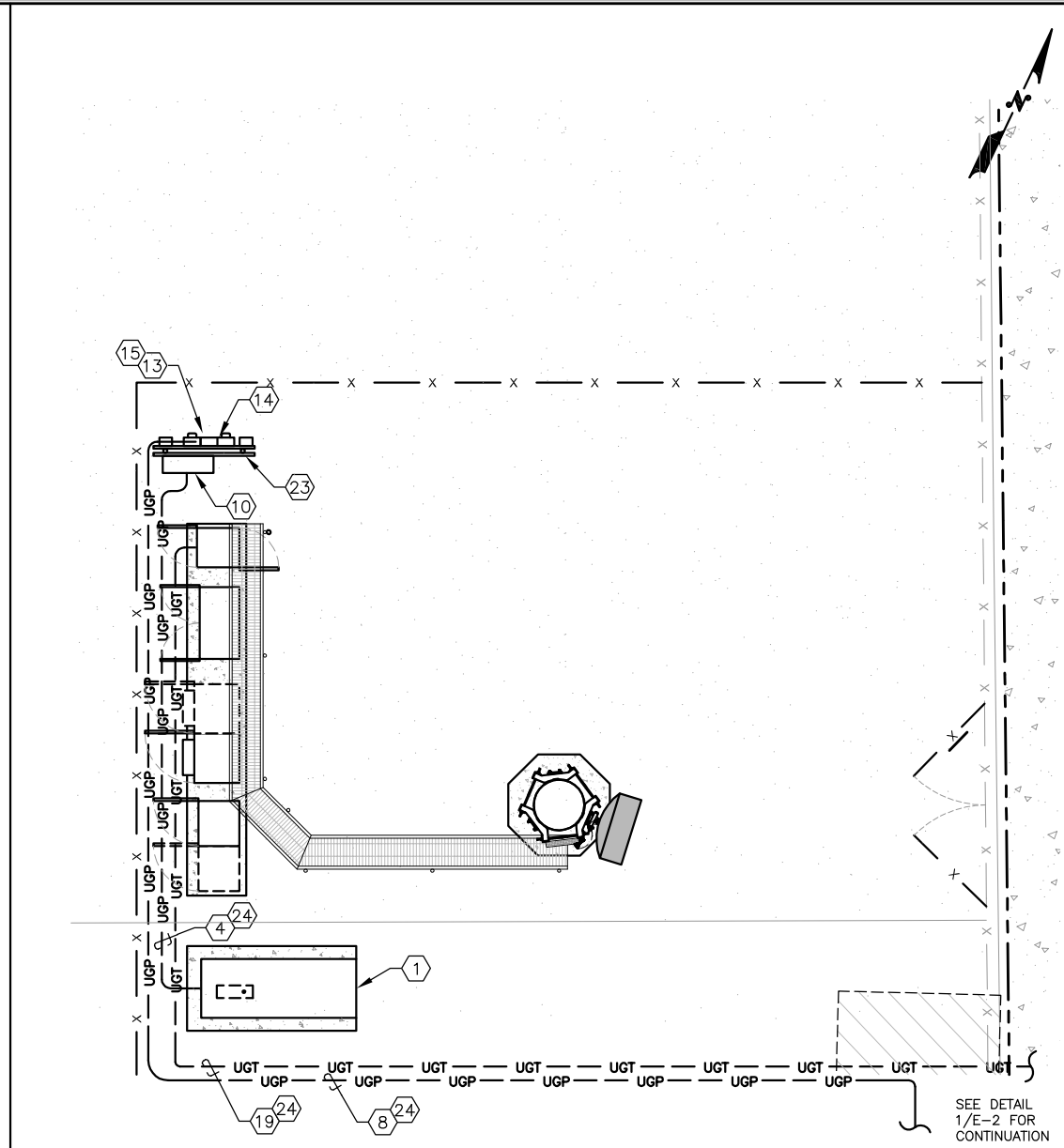
NOTE:  
FOR ALL SYMBOLS SHOWN AS "#"  
REFER TO ELECTRICAL  
REFERENCE NOTES ON SHEET E-3

22"x34" SCALE: 1" = 10'-0"  
11"x17" SCALE: 1" = 20'-0"  
10' 5' 0' 10'

ELECTRICAL SITE PLAN 1

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- 1 30KW 120/240V STAND-BY DIESEL EMERGENCY GENERATOR INSTALLED AS PER MANUF. SPECIFICATIONS—DO NOT BOND NEUTRAL TO GROUND AT GEN SYSTEM NON—SEPARATELY DERIVED.
- 2 GEN OUTPUT 125A—2P CIRC BREAKER.
- 3 GEN CONTROLLER.
- 4 NEW MIN. (3) #1 CU. + 1 #6 GROUND IN 2" CONDUIT UNDERGROUND EMERGENCY POWER TO NEW PERMANENT GENERATOR ENTRY LOCATION. PROVIDE RNC B.F.G. AND RGS A.F.G.
- 5 3/4" CONDUIT. W/ LOW VOLTAGE CONDUCTORS TO ATS FOR START/STOP CONTROL & ALARM CIRC.
- 6 2#12 CU & 1#12 GROUND IN 3/4" CONDUIT FOR EACH GEN CHARGER/HEATER CIRCUIT.
- 7 EXISTING TELCO DEMARC PEDESTAL. COORDINATE WITH LOCAL TELCO COMPANY FOR NEW SERVICE.
- 8 NEW (2) 3" PVC SCH. 40 CONDUITS EACH WITH (3) 350 MCM COPPER
- 9 EXISTING UTILITY PAD MOUNT TRANSFORMER. COORDINATE WITH UTILITY FOR NEW 120/240V—1Ø—3W, 600A UNDERGROUND SERVICE TO METER CENTER
- 10 NEW (PTLC) POWER TRANSFER INTEGRATED LOAD CENTER, NEMA-3R PPC LOAD CENTER (PANEL "PP1") COMPLETE WITH AN INTEGRATED AUTOMATIC TRANSFER SWITCH, A 200A—2P EMERGENCY MAIN CIRCUIT BREAKER (ASCO D300L POWER TRANSFER LOAD CENTER).
- 11 PROVIDE & INSTALL NEW (2) 1P—20A BREAKERS IN LOAD CENTER FOR GEN BATT CHARGER & BLOCK HEATER.
- 12 3—3/0, + 1#6 GROUND, 2"C. PROVIDE RNC B.F.G. AND RGS A.F.G.
- 13 NEW 2P—200A MAIN CIRCUIT BREAKER IN EXISTING METER/MAIN CIRCUIT BREAKER COMBO WITH INTERRUPTING CAPACITY=100K AIC, LABEL "VERIZON WIRELESS MAIN"
- 14 NEW 120/240V—1Ø—3W, 600A RATED 4—GANG, NEMA-3R, METER CENTER.
- 15 NEW 200A CAPACITY 240V—1Ø NEMA 3R METER SOCKET PER POWER CO. REQUIREMENTS.
- 16 NOT USED.
- 17 BOND TO GROUND RING W/#2 AWG SOLID TINNED COPPER.
- 18 NEW MIN. #2/0 AWG CU TO (2) 5/8"x8" COPPER CLAD RODS SPACED A MINIMUM OF 6" APART. VERIFY IN FIELD.
- 19 NEW (2) 2" RNC WITH PULL—STRING FOR TELCO SERVICE FROM PEDESTAL TO TELCO BOX
- 20 NEW 2" CONDUIT FOR EQUIPMENT CABINET REFER TO LOAD CENTER DIAG. SHEET E-6
- 21 NOT USED.
- 22 NOT USED.
- 23 NEW H—FRAME FOR VERIZON EQUIPMENT.
- 24 CONTRACTOR TO ARRANGE TO PAY FOR UNDERGROUND UTILITY LOCATION SURVEYS FOR ALL TRENCHING. REUSE NATIVE BACKFILL AND REINSTATE TO ORIGINAL CONDITION. INSTALL 6" WIDE METALLIC LINE RED PLASTIC MARKER TAPE 8" ABOVE ALL BURIED CONDUIT.
- 25 NOT USED.
- 26 FUTURE BATTERY ENCLOSURE.
- 27 NEW PRIMARY EMERSON NETXTEND POWER AND BATTERY ENCLOSURE.
- 28 NEW PRIMARY MOD 4.OB.
- 29 FUTURE MODCELL.
- 30 NEW ERICSSON 6102 WITH BBU.
- 31 NEW FIBER CABINET.



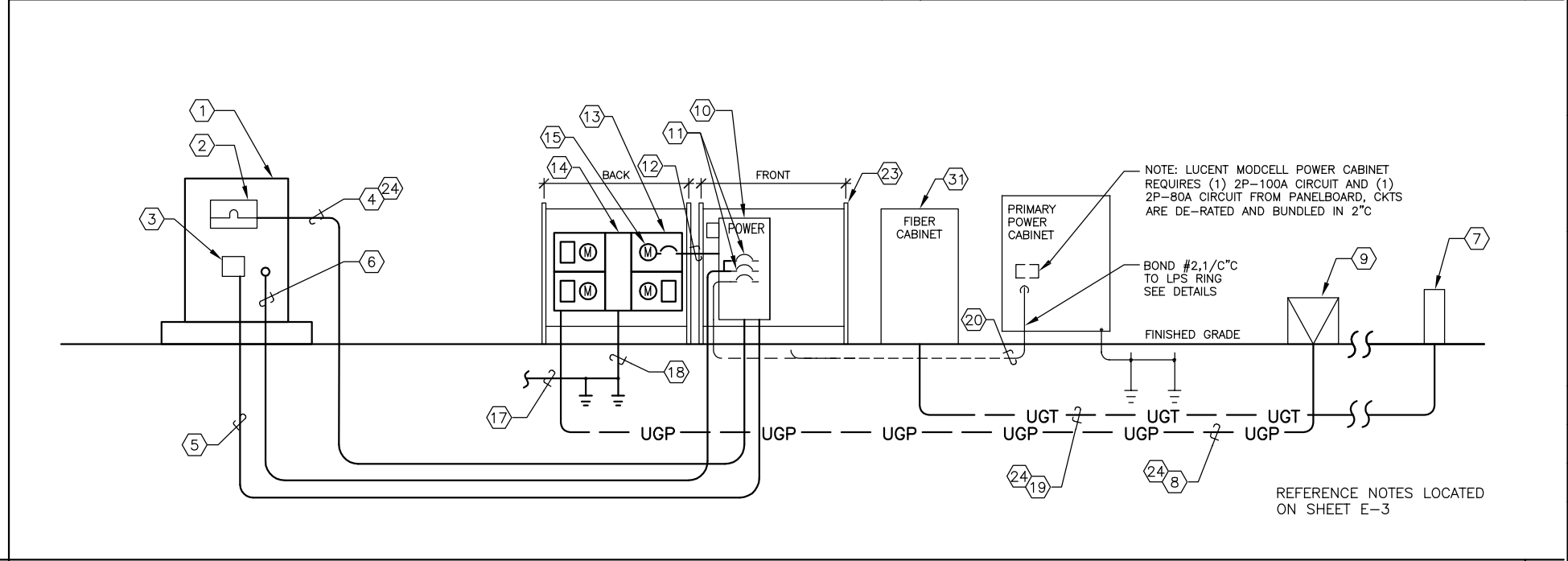
22"x34" SCALE: 3/16" = 1'-0"  
 11"x17" SCALE: 3/32" = 1'-0"  
**ELECTRICAL PLAN 4**

NOTE:  
 ALL OVERCURRENT DEVICES SHALL BE RATED TO INTERRUPT A SHORT CIRCUIT CURRENT OF A MINIMUM 42,000 AMPS SYMMETRICAL

MAIN SWITCH INTERRUPT CAPACITY = 100K AIC  
 LOAD CALCULATIONS:  
 MAXIMUM CONNECTED LOAD: 48 KVA @ 120/240 VOLT, 1Ø - 200 AMPS  
 (PER CURRENT DESIGN)  
 INITIAL DEMAND LOAD: 23.0 KVA @ 120/240 VOLT, 1Ø - 96 AMPS

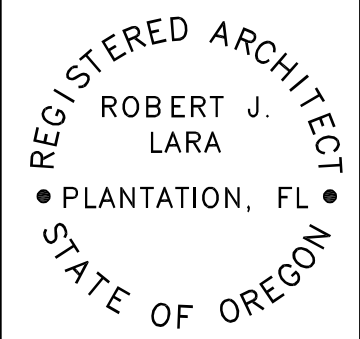
SEE DETAIL 1/E-2 FOR CONTINUATION

22"x34" SCALE: NOT TO SCALE  
 11"x17" SCALE: NOT TO SCALE  
**NOTES 3**



**ELECTRICAL REFERENCE NOTES 2**

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ROBERT JERRY LARA  
 REGISTERED ARCHITECT  
 STATE OF OREGON  
 5897

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Implementation Team:  
**JIM JAGGERS**  
 9895 MONTEGRINO COURT  
 ELK GROVE, CA 95757  
 (916) 213-8407

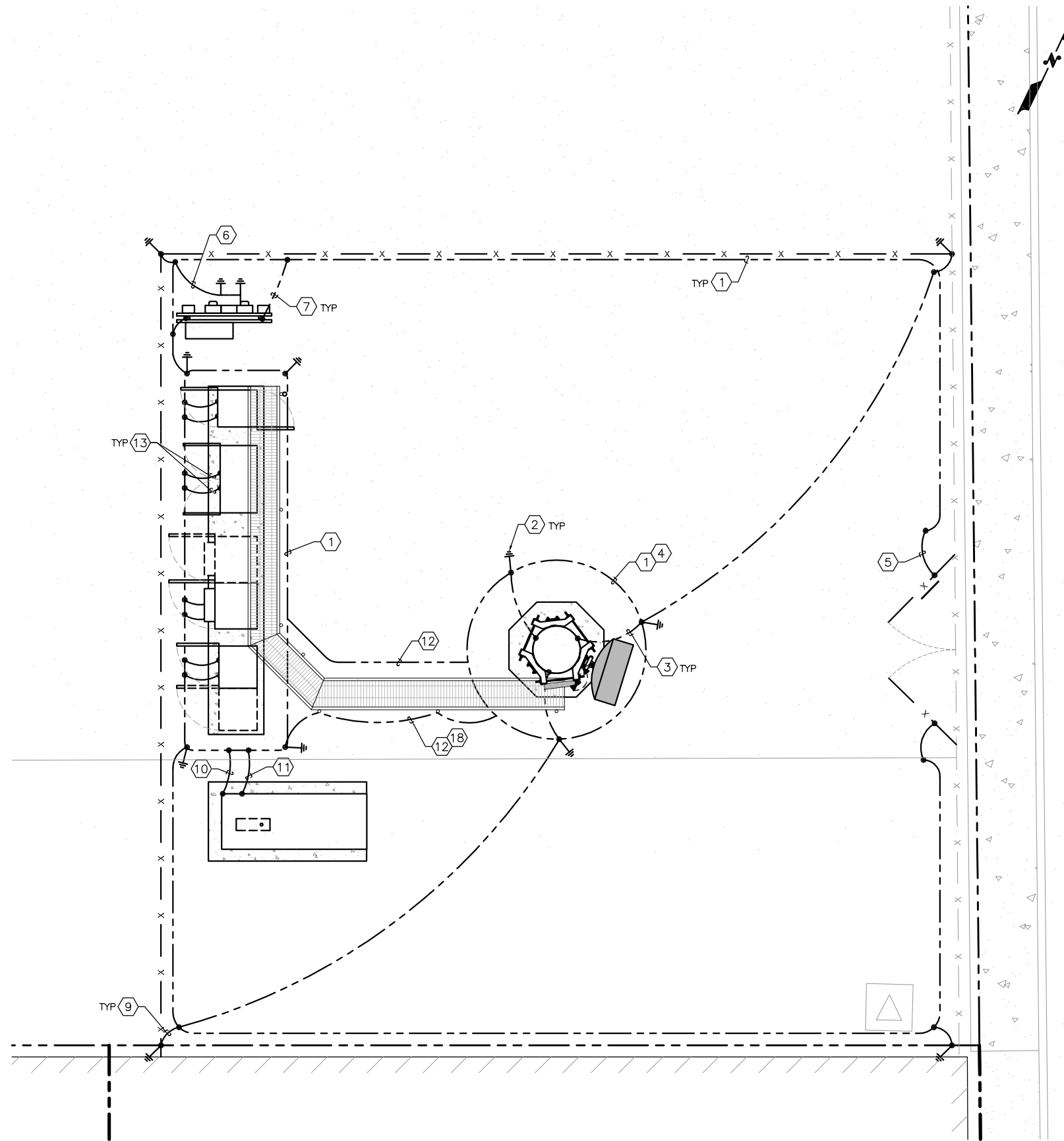
A&E Team:  
  
**MORRISON HERSHFELD**  
 10900 NE 8TH STREET, SUITE 810  
 BELLEVUE, WA 98004 Tel:  
 425.451.1301 Fax: 425.451.1369  
 www.morrisonhershfield.com

Project Info:  
**POR BARLOW**  
 505 N BAKER DRIVE  
 CANBY, OR 97013

Drawing Title:  
**ELECTRICAL PLAN, NOTES AND RISER DIAGRAM**

Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: E-3

- 1 APPROXIMATE LOCATION OF #2 AWG SOLID BARE TINNED GROUND RING. GROUND RING SHALL BE BURIED 30" BELOW THE FROST LINE OR 18" BELOW GRADE, WHICHEVER IS GREATER. EXACT LOCATION AND NUMBER OF GROUND RODS TO BE DETERMINED ON SITE AND BASED ON "FALL OF POTENTIAL GROUND RESISTANCE METHOD" FOR RESISTANCE < 5 OHMS. UNLESS OTHERWISE NOTED, DRIVEN GROUND RODS ARE TO BE BURIED AT 16 FEET INTERVALS. SEE SHEET E-4 FOR ADDITIONAL GROUNDING INFORMATION.
- 2 PROVIDE 5/8" X 8"-0" LONG COPPER CLAD STEEL (COPPER WELD) GROUND ROD AS SHOWN. PROVIDE INSPECTION SLEEVE AT GROUND ROD TO SHOW BOND TO EXTERIOR BURIED GROUND RING (MINIMUM OF 4 INSPECTION SLEEVES/ SEE DETAIL B/E-3). INSTALL GROUND ROD TWO (2) FEET MINIMUM AWAY FROM ANY SLAB. INSTALL SO THAT TOP OF GROUND ROD IS 30" BELOW GRADE OR FROST LINE, WHICHEVER IS DEEPER. EXACT LOCATION AND NUMBER OF GROUND RODS TO BE ESTABLISHED ON SITE AND BASED ON "FALL OF POTENTIAL GROUND RESISTANCE METHOD" FOR RESISTANCE < 5 OHMS. UNLESS OTHERWISE NOTED, DRIVEN GROUND RODS ARE BONDED TO THE BURIED GROUND RING AT 16 FEET INTERVALS.
- 3 NEW #2 AWG SOLID BARE TINNED COPPER CONDUCTOR FROM TOWER GROUNDING FLANGE AT BASE OF TOWER TO TOWER GROUND RING.
- 4 TOWER GROUND RING SHALL BE SPACED A MINIMUM OF 2'-0" FROM TOWER FOUNDATION.
- 5 #2 AWG WELDING CABLE OR FLEXIBLE CABLE, GATE JUMPER.
- 6 #2 AWG GROUND FROM SERVICE ENTRANCE GROUND ELECTRODE TO EXTERNAL GROUND RING.
- 7 #2 AWG FROM H-FRAME TO EXTERNAL GROUND RING (TYP OF (2) PLACES).
- 8 #2 AWG GROUND FROM ICE BRIDGE VERTICAL POSTS TO EXTERNAL GROUND RING (TYPICAL).
- 9 #2 AWG GROUND FROM VERTICAL FENCE POST TO EXTERNAL GROUND RING.
- 10 (2) #2 AWG GROUND FROM GENERATOR TO EXTERNAL GROUND RING.
- 11 #2 AWG GROUND FROM GENERATOR DIESEL TANK TO EXTERNAL GROUND RING.
- 12 EQUIPMENT GROUND RING AND TOWER GROUND RING SHALL BE BONDED TOGETHER IN AT LEAST TWO (2) POINTS USING A #2 AWG SOLID BARE TINNED COPPER CONDUCTOR.
- 13 BOND TO EQUIPMENT CABINET ENCLOSURE USING A MANUF. APPROVED CONNECTION WITH (2) # 2 AWG SOLID BARE TINNED COPPER CONDUCTORS AND EXOTHERMICALLY WELD TO GROUND RING.



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PLANTATION, FL  
STATE OF OREGON

ROBERT JERRY LARA  
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505 N BAKER DRIVE  
CANBY, OR 97013

Drawing Title:

## GROUNDING PLAN AND NOTES

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Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: E-4

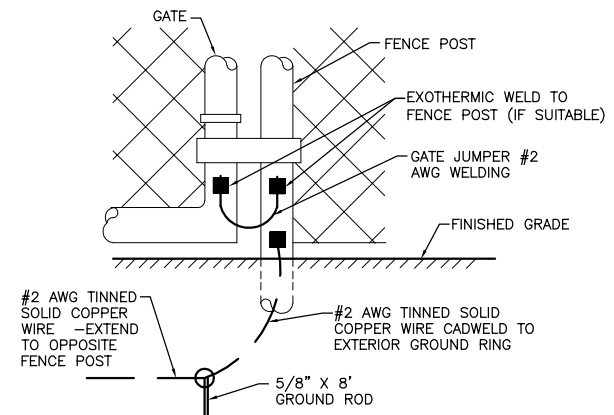
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22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE

GROUNDING NOTES 2

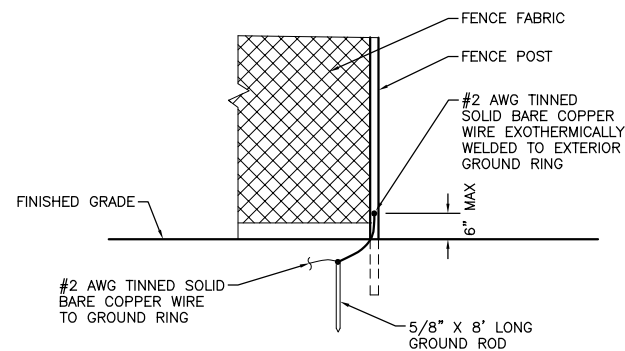
22"x34" SCALE: 1/4" = 1'-0"  
11"x17" SCALE: 1/8" = 1'-0"

GROUNDING PLAN 1



22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE

TYPICAL FENCE GROUNDING DETAIL 5



22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE

TYPICAL FENCE GROUNDING DETAIL 4

POWER CABINET PANEL SCHEDULE (PANEL PP-1)

BUS VA		LOAD	WIRE	GND	COND	AMPS	BUS		AMPS	COND	GND	WIRE	LOAD	BUS VA	
A	B						A	B						A	B
5000		MODCELL 4.0B PRIMARY	#2	#6	2"	100	1	2	60	1"	#10	#6	SURGE ARRESTOR	0	
	5000						3	4							0
5000		MODCELL 4.0 GROWTH	#2	#6	2"	80	5	6	20	1/2"	#12	#12	TELCO GFI RECEPT.	180	
	5000						7	8	20	1/2"	#12	#12	TELCO CABINET FAN		180
5000		MODCELL 4.0 GROWTH	#2	#6	2"	80	9	10	20	1/2"	#12	#12	EXTERIOR LIGHT	400	
	5000						11	12	20	1/2"	#12	#12	GENERATOR BLOCK HEATER		1200
5000		LTE CABINET	#2	#6	2"	100	13	14	20	1/2"	#12	#12	GENERATOR BATTERY CHARGER	1000	
	5000						15	16	-	-	-	-	SPACE		-
-		SPACE	-	-	-	-	17	18	-	-	-	-	SPACE		-
-		SPACE	-	-	-	-	19	20	-	-	-	-	SPACE		-
-		SPACE	-	-	-	-	21	22	-	-	-	-	SPACE		-
-		SPACE	-	-	-	-	23	24	-	-	-	-	SPACE		-
-		SPACE	-	-	-	-	25	26	-	-	-	-	SPACE		-
-		SPACE	-	-	-	-	27	28	-	-	-	-	SPACE		-
-		SPACE	-	-	-	-	29	30	-	-	-	-	SPACE		-
-		SPACE	-	-	-	-	31	32	-	-	-	-	SPACE		-
-		SPACE	-	-	-	-	33	34	-	-	-	-	SPACE		-
-		SPACE	-	-	-	-	35	36	-	-	-	-	SPACE		-
-		SPACE	-	-	-	-	37	38	-	-	-	-	SPACE		-
-		SPACE	-	-	-	-	39	40	-	-	-	-	SPACE		-
-		SPACE	-	-	-	-	41	42	-	-	-	-	SPACE		-

TOTAL VA: BUS A 21580 BUS B 21380 CONNECTED VA: 42960 AMPERES: BUS A 180 BUS B 180 TOTAL 179

RATED VOLTAGE:  120/208  120/240  277/480 1 PHASE, 3 WIRE BRANCH POLES  12  18  20  24  30  36  42

RATED AMPS:  100  200  400 CABINET:  SURFACE  FLUSH

FULL NEUTRAL BUS  GROUND BUS  HINGED DOOR  KEYED DOOR LATCH ENCLOSURE TYPE NEMA-3R

BRANCH DEVICES  FUSED  CIRCUIT BREAKER

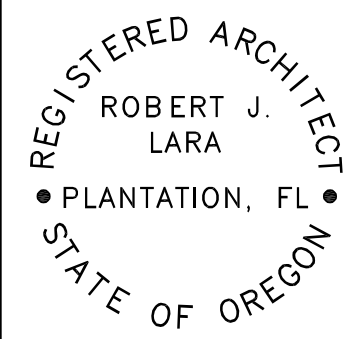
MAIN LUGS ONLY MAIN 200A  BREAKER  FUSED SWITCH

ALL BREAKERS MUST BE RATED TO INTERRUPT A SHORT CIRCUIT CURRENT OF MINIMUM 10,000 AMPS SYMMETRICAL.

ACCEPTABLE MANUFACTURER/MODEL: INTERSECT MODEL: D300L

NOTES:  
PANEL PP-1 IS INCORPORATED INTO THE INTEGRATED LOAD CENTER (ILC).  
ALL BREAKER POSITIONS TO BE POPULATED AS SHOWN ABOVE INCLUSIVE CIRCUIT BREAKERS INTENDED FOR OPTIONAL EQUIPMENT. ALL UNUSED BREAKERS TO BE LABELED "SPARE"

DO NOT SCALE DRAWINGS. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND ADVISE CONSULTANTS OF ANY ERRORS OR OMISSIONS. NO VARIATIONS OR MODIFICATIONS TO WORK SHOWN SHALL BE IMPLEMENTED WITHOUT PRIOR WRITTEN APPROVAL. ALL PREVIOUS ISSUES OF THIS DRAWING ARE SUPERSEDED BY THE LATEST REVISION. ALL DRAWINGS AND SPECIFICATIONS REMAIN THE PROPERTY OF MORRISON HERSHFIELD CORPORATION. NEITHER MORRISON HERSHFIELD NOR THE ARCHITECT WILL BE PROVIDING CONSTRUCTION REVIEW OF THIS PROJECT.



ROBERT J. LARA  
REGISTERED ARCHITECT  
STATE OF OREGON  
5897

No.	Date	Revision
4	6/30/14	ISSUED FOR PERMIT
3	6/03/14	REVISED PER COMMENTS
2	4/1/14	REVISED PER COMMENTS
1	3/04/14	REVISED PER COMMENTS
0	10/30/13	REVISED PER COMMENTS
A	9/11/13	ISSUED FOR REVIEW



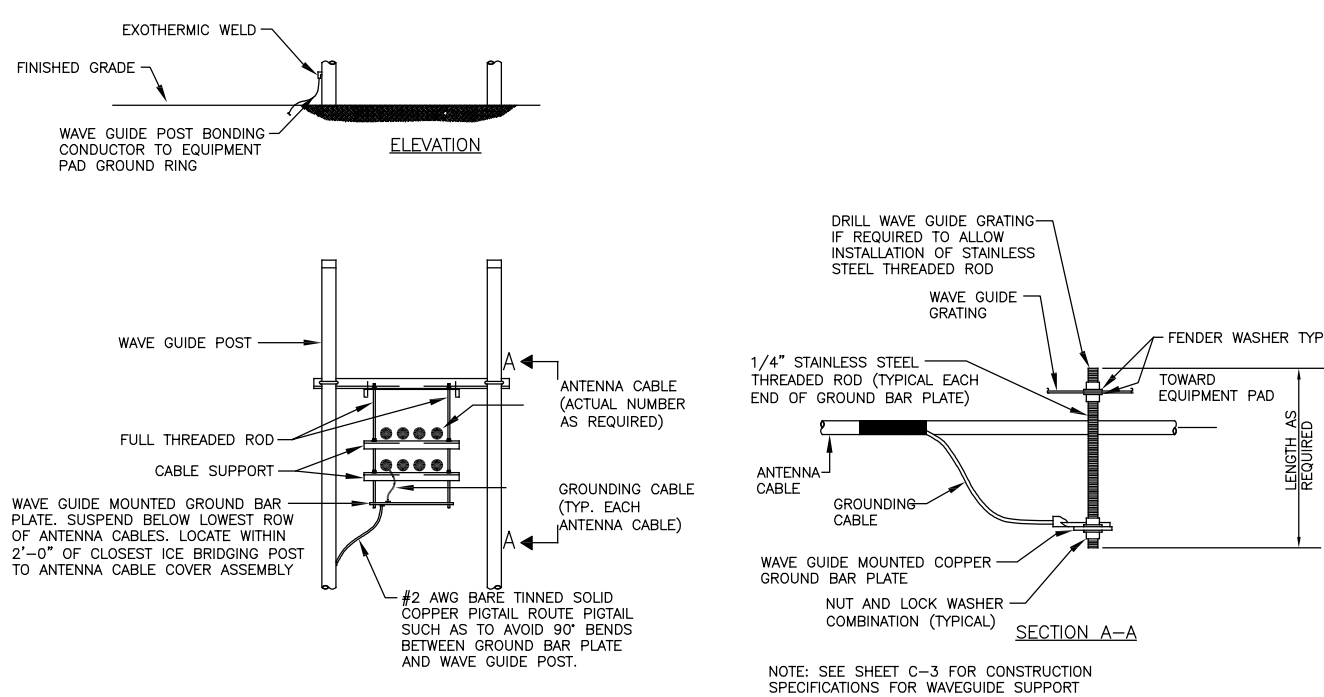
Implementation Team:  
**JIM JAGGERS**  
9895 MONTEGRINO COURT  
ELK GROVE, CA 95757  
(916) 213-8407

A&E Team:  
**MORRISON HERSHFIELD**  
10900 NE 8TH STREET, SUITE 810  
BELLEVUE, WA 98004 Tel:  
425.451.1301 Fax: 425.451.1369  
www.morrisonhershfield.com

Project Info:  
**POR BARLOW**  
505 N BAKER DRIVE  
CANBY, OR 97013

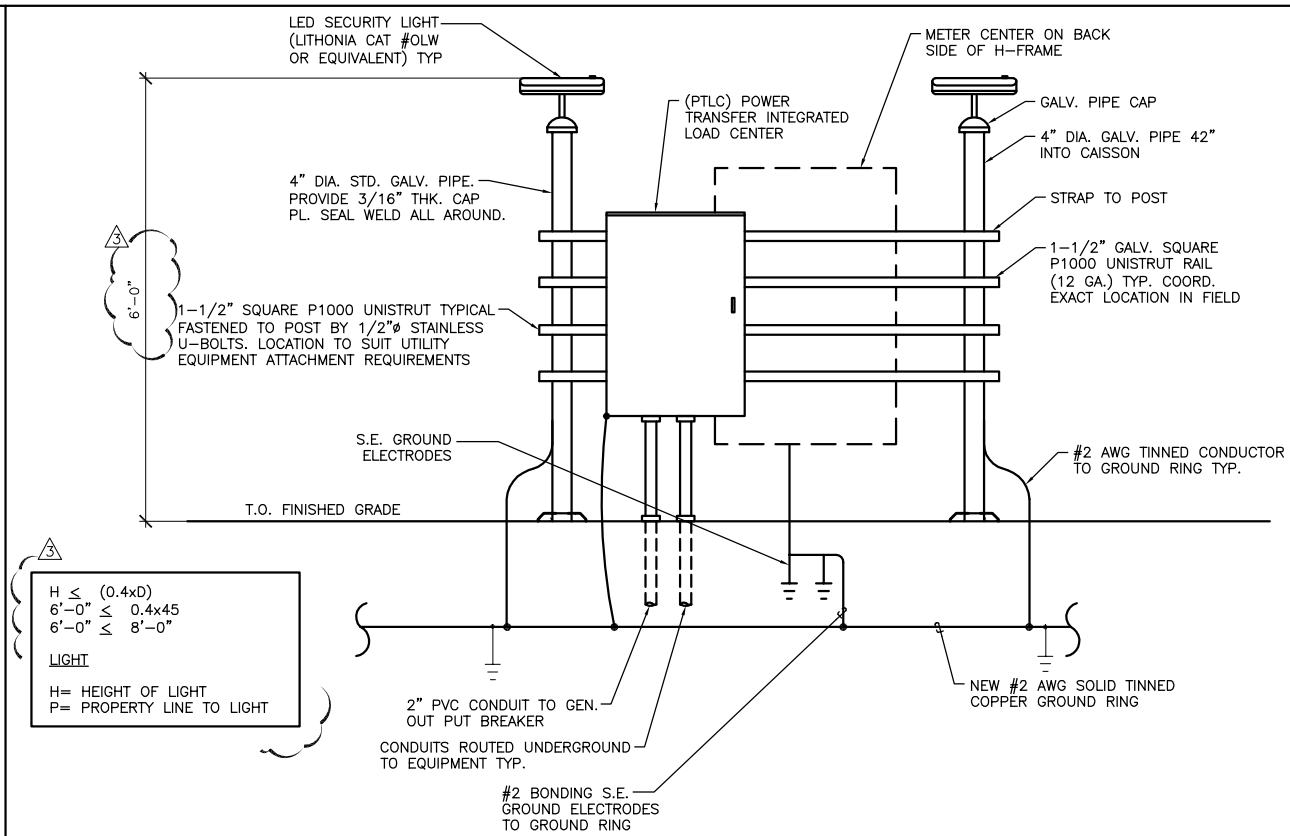
Drawing Title:  
**GROUNDING DETAILS AND PANEL SCHEDULE**

Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: E-6



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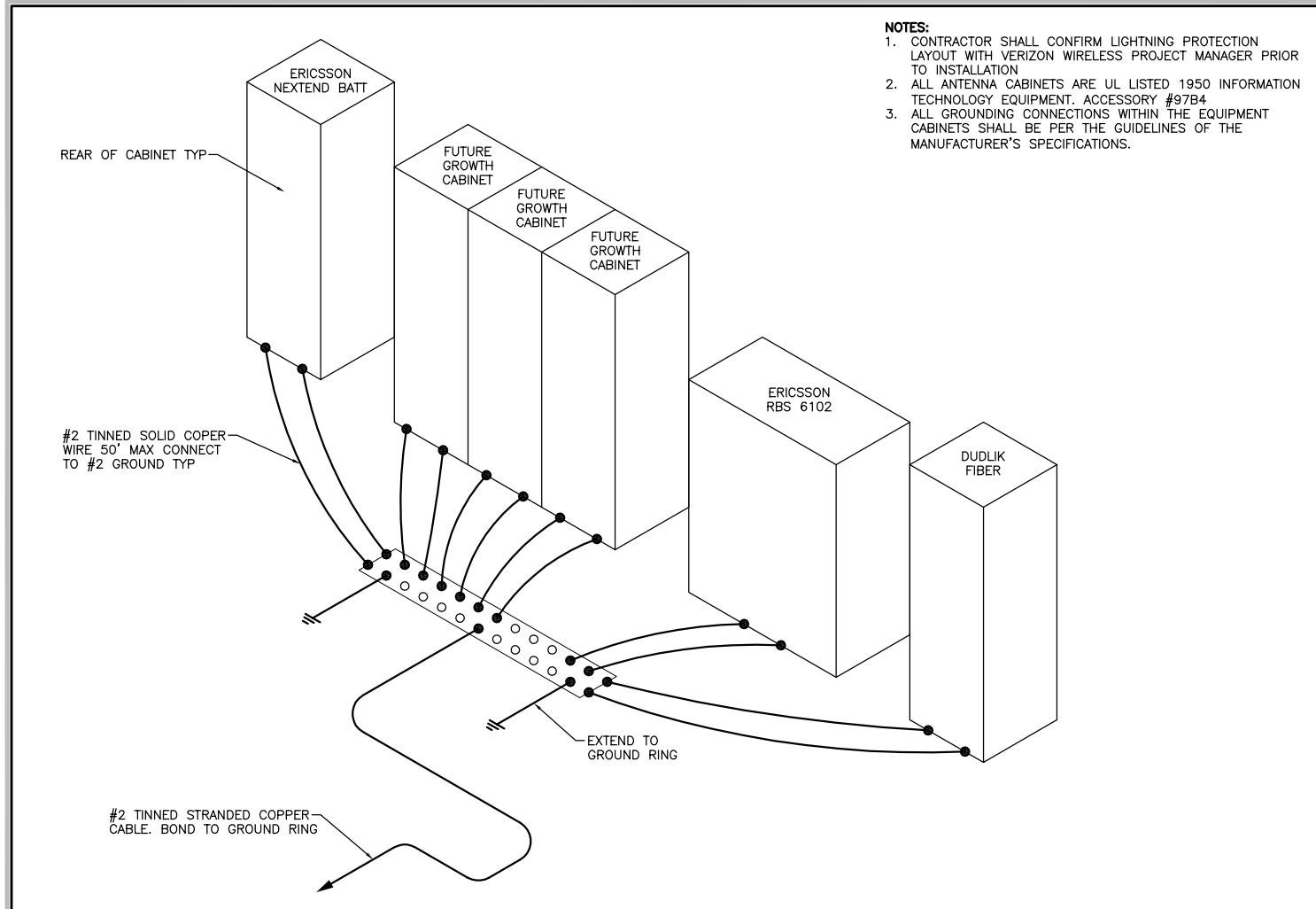
WAVEGUIDE MOUNTED GROUND BAR PLATE INSTALLATION 2



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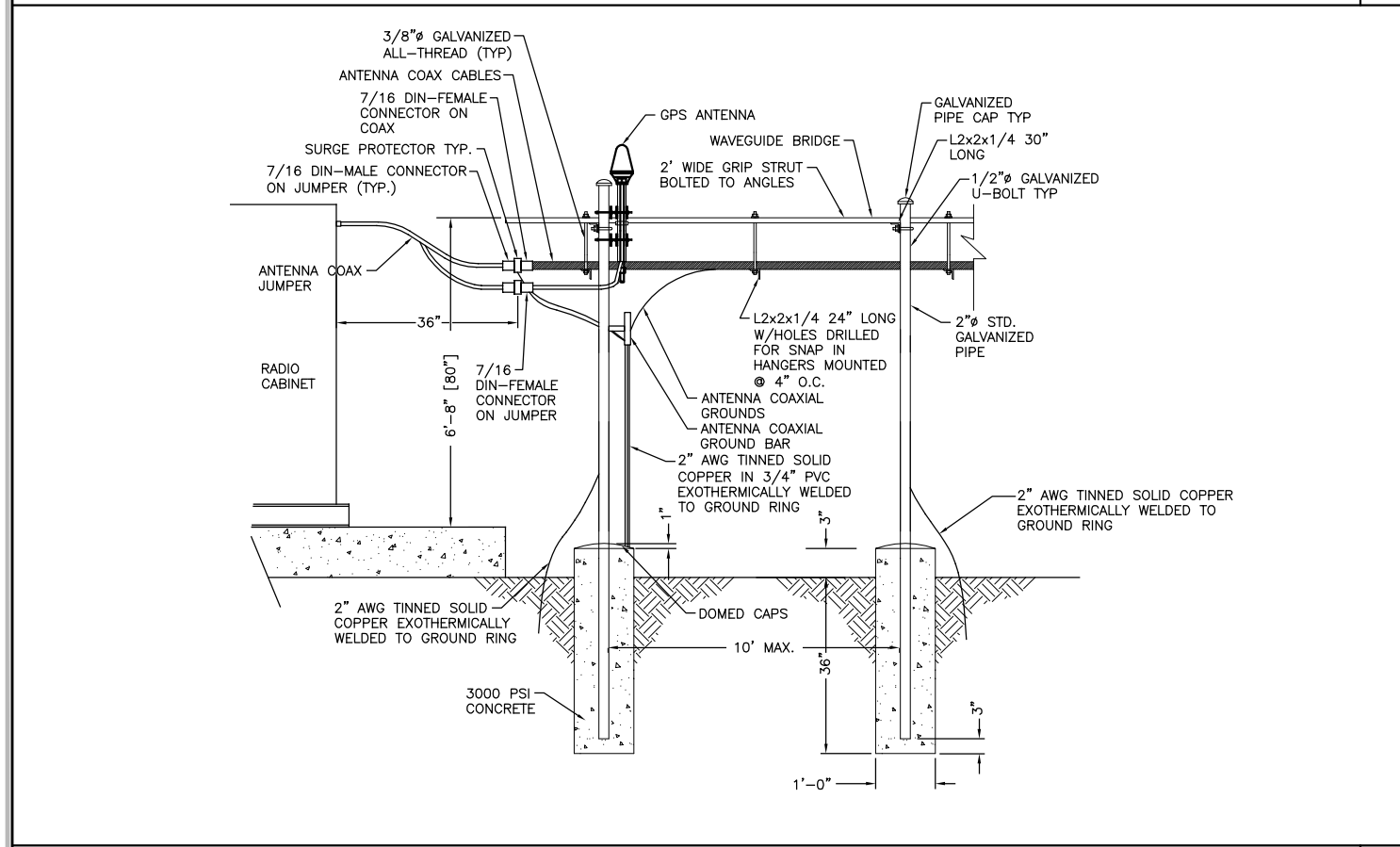
ELECTRICAL EQUIPMENT ELEVATION 1

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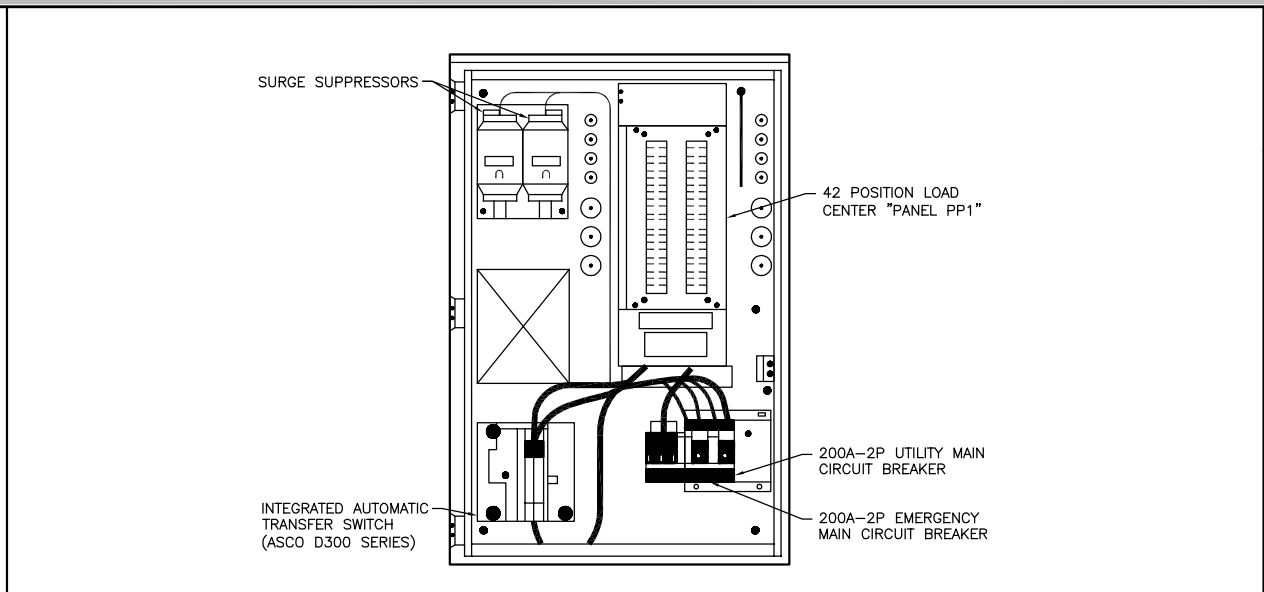
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**ELECTRICAL LPS DETAIL 4**



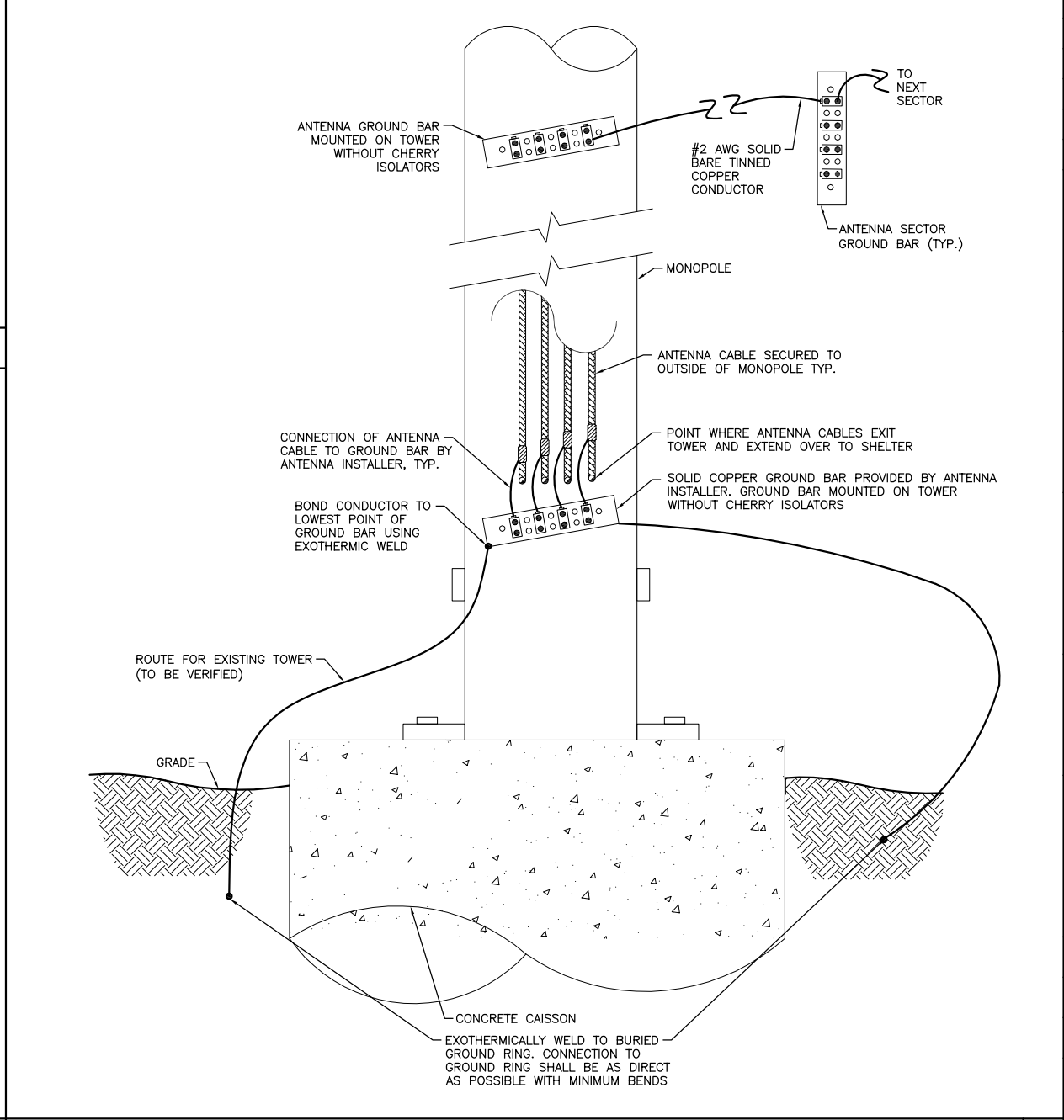
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**WAVEGUIDE BRIDGE 2**



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**POWER TRANSFER INTEGRATED LOAD CENTER DETAIL 3**



22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE

**GROUND BAR DETAIL 1**

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**REGISTERED ARCHITECT**  
**ROBERT J. LARA**  
PLANTATION, FL  
**STATE OF OREGON**

ROBERT JERRY LARA  
REGISTERED ARCHITECT  
STATE OF OREGON  
5897

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Client:

Implementation Team:

**JIM JAGGERS**  
9895 MONTEGRINO COURT  
ELK GROVE, CA 95757  
(916) 213-8407

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**MORRISON HERSHFELD**  
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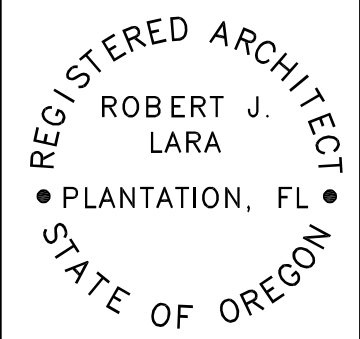
Drawing Title:

**GROUNDING DETAILS**

Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: E-7

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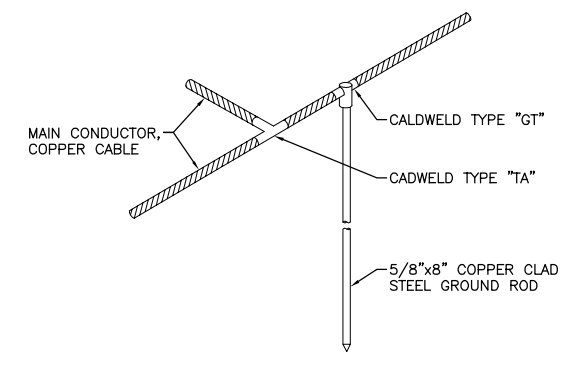
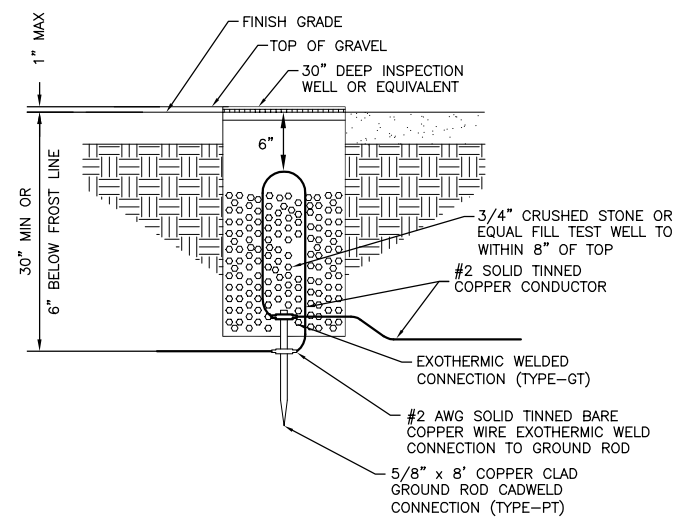
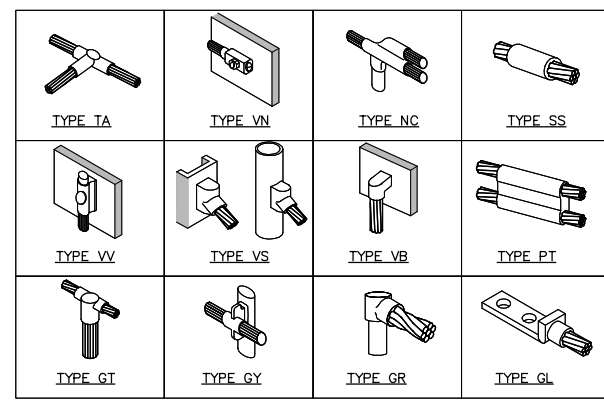
**Implementation Team:**  
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**Drawing Title:**  
**GROUNDING DETAILS**

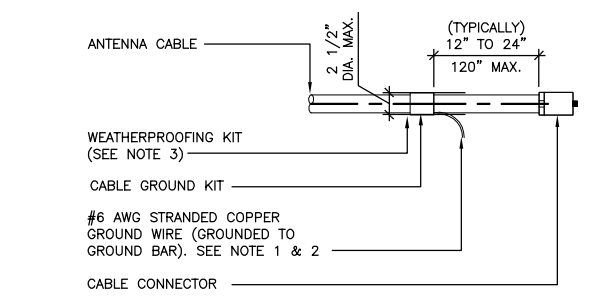
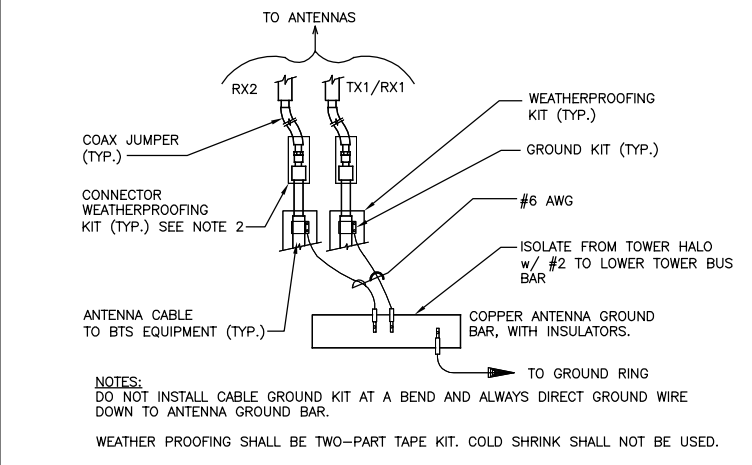
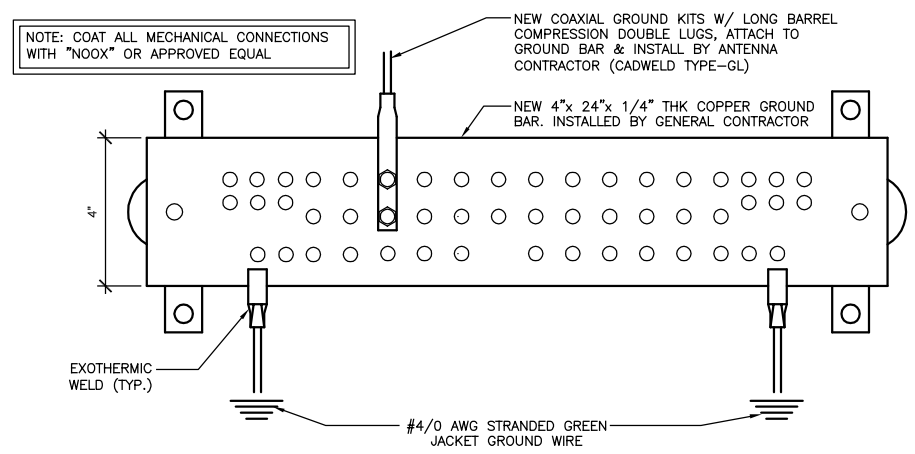
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<b>Drafter:</b> DM	<b>Designer:</b> BW
<b>Project Manager:</b> BW	<b>Professional of Record:</b> RL
<b>Revision No:</b> 4	<b>Sheet No:</b> E-8



22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE  
**CADWELD GRND CONNECTION DETAIL** 9

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**GRND ROD WITH ACCESS AREA** 8

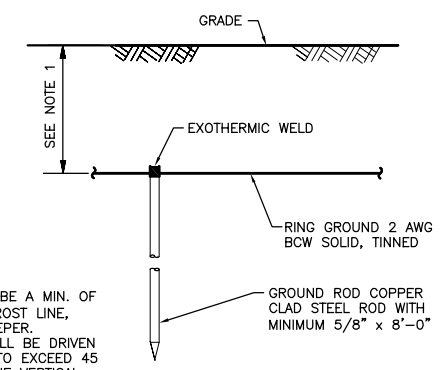
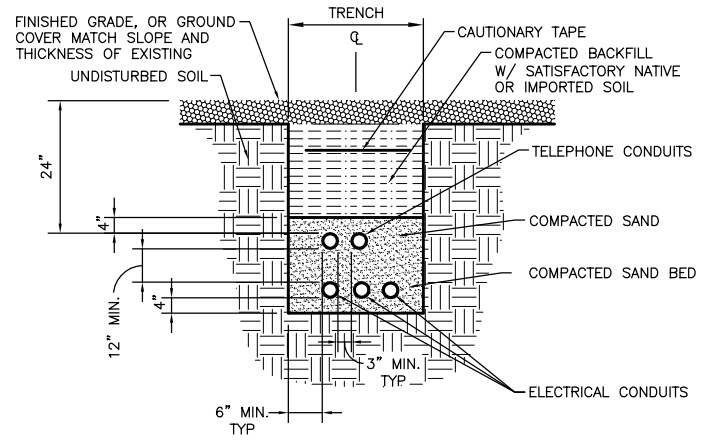
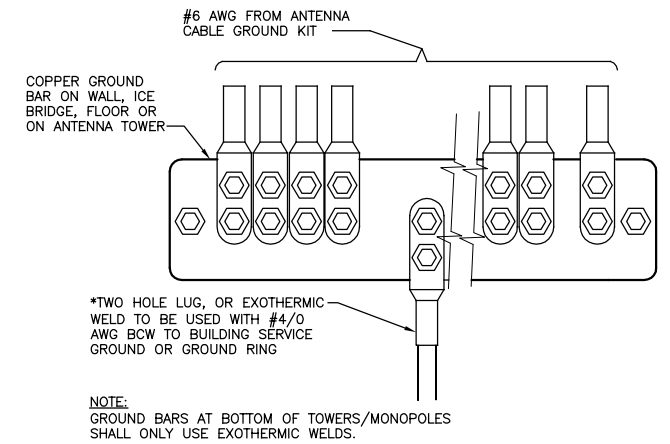
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**GROUND RING BOND** 7



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11"x17" SCALE: NOT TO SCALE  
**GROUND BAR DETAIL** 6

22"x34" SCALE: NOT TO SCALE  
11"x17" SCALE: NOT TO SCALE  
**GRND CABLE CONNECTION** 5

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**COAX CABLE GROUNDING** 4

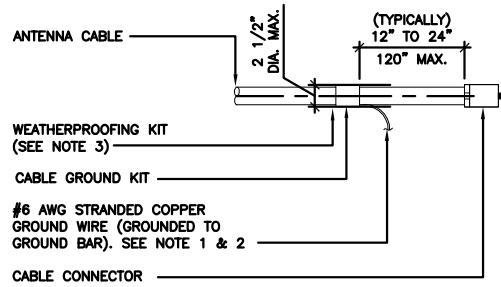


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**INSTALLATION OF GRND WIRE TO GRND BAR** 3

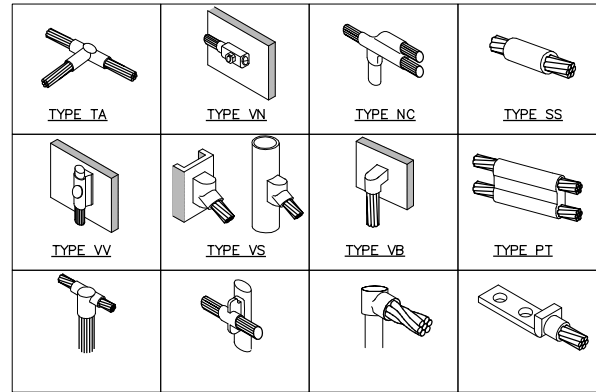
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11"x17" SCALE: NOT TO SCALE  
**GROUND ROD** 1

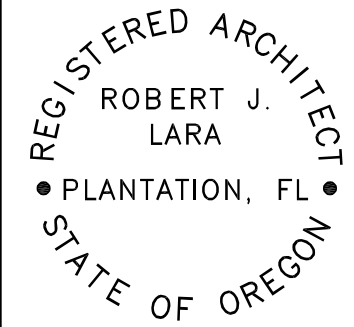
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**NOTES:**  
 DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.  
 GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.  
 WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.



- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE DESIGN AND CONSTRUCTION SPECIFICATIONS AND ALL LOCAL CODES
- THE CONTRACTOR IS RESPONSIBLE FOR SEQUENCING GROUNDING AND UNDERGROUND INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
- ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING (2) HIGH PRESS CRIMPS.
- ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- ALL EXTERIOR GROUND CONDUCTORS SHALL BE #2 AWG TIN PLATED COPPER UNLESS OTHERWISE INDICATED.
- CONNECTIONS TO THE GROUND BUSS BAR SHALL NOT BE DOUBLED UP OR STACKED. BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUSS BAR ARE PERMITTED.
- USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
- OBSERVE NEC AND LOCAL UTILITY REQUIREMENTS FOR ELECTRICAL SERVICE GROUNDING.
- GROUNDING ATTACHMENT TO THE TOWER SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS OR AT GROUNDING POINTS PROVIDED (2 MINIMUM)
- MAXIMUM RESISTANCE OF THE COMPLETED GROUND SYSTEM SHALL NOT EXCEED 5 OHMS.



ROBERT JERRY LARA  
 REGISTERED ARCHITECT  
 STATE OF OREGON  
 5897

22"x34" SCALE: NOT TO SCALE  
 11"x17" SCALE: NOT TO SCALE

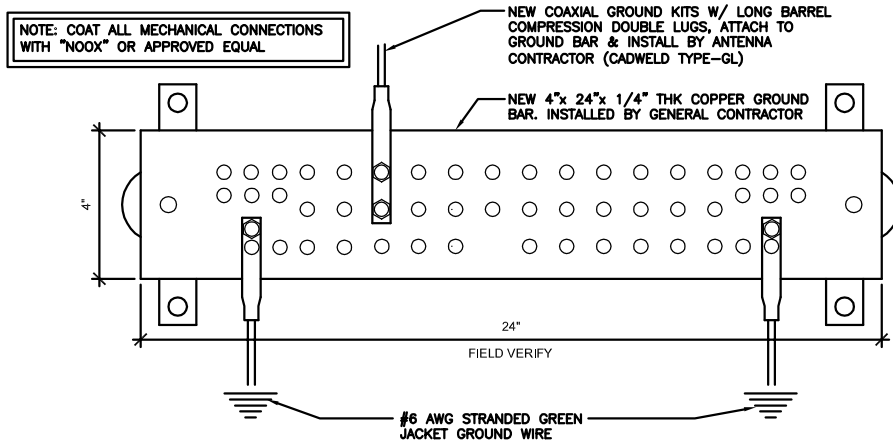
**COAX CABLE GROUNDING DETAIL 8**

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 11"x17" SCALE: NOT TO SCALE

**CADWELD GROUNDING CONNECTION DETAILS 7**

22"x34" SCALE: NOT TO SCALE  
 11"x17" SCALE: NOT TO SCALE

**GROUNDING NOTES 6**



22"x34" SCALE: NOT TO SCALE  
 11"x17" SCALE: NOT TO SCALE

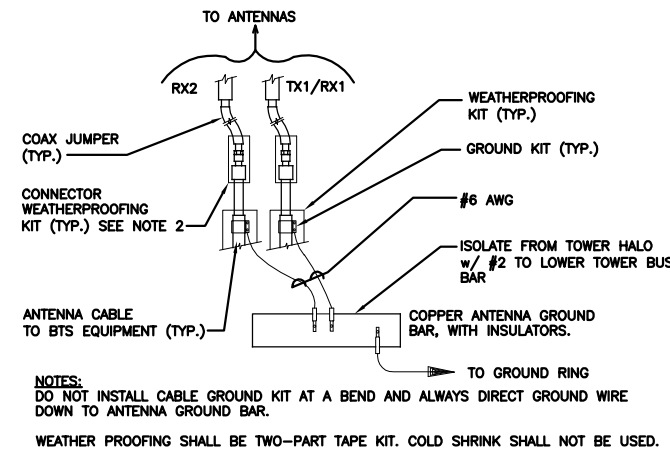
**GROUND BUSS BAR DETAIL 5**

22"x34" SCALE: NOT TO SCALE  
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**GROUND CABLE CONNECTION DETAIL 4**

22"x34" SCALE: NOT TO SCALE  
 11"x17" SCALE: NOT TO SCALE

**NOT USED 3**



**NOTES:**  
 DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.  
 WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

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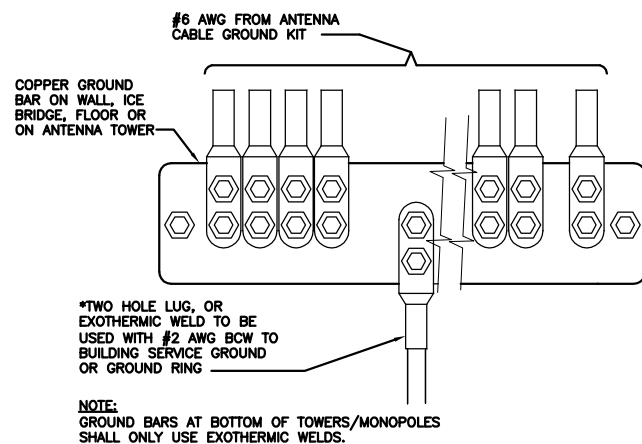
**Implementation Team:**  
**JIM JAGGERS**  
 9895 MONTEGRINO COURT  
 ELK GROVE, CA 95757  
 (916) 213-8407

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 10900 NE 8TH STREET, SUITE 810  
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**Project Info:**  
**POR BARLOW**  
 505 N BAKER DRIVE  
 CANBY, OR 97013

**Drawing Title:**  
**GROUNDING DETAILS**

Project Number: 7130028	Date: 8/07/13
Drafter: DM	Designer: BW
Project Manager: BW	Professional of Record: RL
Revision No: 4	Sheet No: E-9



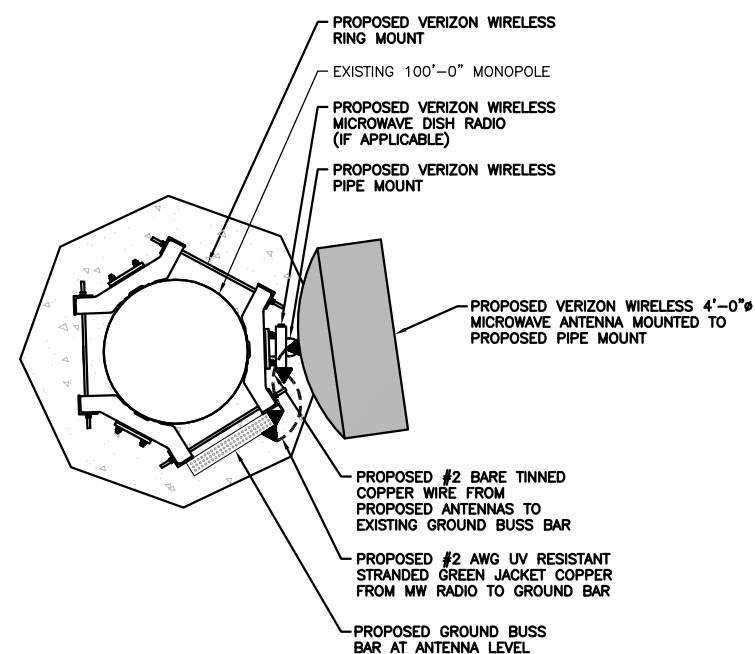
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 11"x17" SCALE: NOT TO SCALE

**GROUND WIRE CONNECTION DETAIL 2**

22"x34" SCALE: 1/2" = 1'-0"  
 11"x17" SCALE: 1/4" = 1'-0"



**TYPICAL MW DISH ANTENNA GROUNDING DETAIL 1**







## Exhibit D

# RF ENGINEER'S COMPLIANCE REPORT

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

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

TELEPHONE (206) 783-9151  
FACSIMILE (206) 789-9834  
E-MAIL pinion@hatdaw.com

JAMES B. HATFIELD, PE  
CONSULTANT

MAURY L. HATFIELD, PE  
(1942 – 2009)

PAUL W. LEONARD, PE  
(1925 – 2011)

NON-IONIZING ELECTROMAGNETIC EXPOSURE ANALYSIS  
AND

ENGINEERING CERTIFICATION

PREPARED FOR

**Verizon Wireless**

“POR BARLOW”

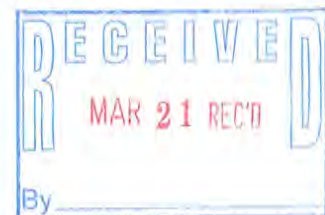
NEW MONOPOLE FACILITY

505 N BAKER DRIVE

CANBY

CLACKAMAS COUNTY, OREGON

JANUARY 2014



## INTRODUCTION

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

## BACKGROUND

Construction drawings provided by Verizon representatives indicate that the proposed Verizon Wireless facility will have personal wireless panel antennas installed atop a new self-supporting steel monopole tower at 505 N Baker Drive, Canby, in Clackamas County, Oregon 97103.

The construction drawings show all of the Verizon antennas centered at about the 100 foot 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 tower is shown without climbing appurtenances and the tower base 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.

Personal wireless panel and microwave antennas are highly directional; these antennas project the majority of the transmitted RF energy horizontally and well above all nearby accessible 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 in combination with any collocated wireless facilities.

***The operation of the proposed Verizon facility, in combination with any existing nearby wireless facilities, will NOT create significant RF exposure conditions at any occupancy, habitable area or publicly accessible area.***

Hatfield & Dawson Consulting Engineers

### **EMISSION CHARACTERISTICS**

The proposed Verizon facility may operate within the 700 MHz Upper Block "C" band, the 800 MHz Cellular "B" frequency band, the Personal Communications Service (PCS) frequency bands, and the 2.1 GHz Advanced Wireless Service (AWS) frequency bands. The lowest Verizon transmitting frequency for any of these bands is approximately 746 MHz.

### **CALCULATION OF MAXIMUM EXPOSURE CONDITIONS**

RF power densities and exposure conditions are computed in accordance with methods described in *Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields, OET Bulletin 65, August 1997*.

OET Bulletin 65 describes the methods established by the FCC for predicting compliance with FCC-specified exposure limits. Personal wireless and microwave facilities are required to comply with the FCC "Rules & Regulations" **47 CFR §1.1310, Radiofrequency radiation exposure limits**.

The following formula has been used to calculate the power densities at specific locations:

$$S(\text{mW}/\text{cm}^2) = 0.36 \times \text{ERP (watts)} / (\text{Distance in feet})^2$$

This formula is derived from Equation 9 on page 21 of OET Bulletin 65. It includes the effect of reflections. The Effective Radiated Power (ERP) in a particular direction depends on the vertical and horizontal antenna patterns. A composite vertical antenna pattern is used to determine the predicted power density. This composite antenna pattern is a worst case envelope that encompasses the maximums of the downward lobes of the vertical patterns of the Verizon antennas. It is expected that RF exposure conditions near ground level at the POR BARLOW site, within any nearby buildings, and on all adjacent properties, due to the contributions from all of the antennas on the tower, will be well below the FCC public exposure limit.

Hatfield & Dawson Consulting Engineers

### **ANALYSIS OF PROPOSED PERSONAL WIRELESS OPERATIONS**

The RF exposure analysis is based on information provided by Verizon representatives, and known characteristics of typical wireless facilities. The analysis provides a "worst case" model for calculating the maximum "uncontrolled" (i.e., general public) RF power density and exposure condition for a person standing at the nearest approach to any of the tower mounted antennas.

All of the Verizon personal wireless panel antennas will have approximately the same center line height of 100 feet above ground level. A six foot tall person standing at ground level near the POR BARLOW tower will be 94 feet or more from the center lines of the panel antennas.

The calculations assume that the vertical patterns of the Verizon personal wireless antennas at this site suppress the maximum ERP downwards towards ground level and the nearest occupancies by a factor of 100 (20 dB) at 700 MHz and cellular frequencies, and 50 (17 dB) at PCS and AWS frequencies.

### **CUMULATIVE RF EXPOSURE CONDITIONS DUE TO PROPOSED VERIZON OPERATIONS**

The predicted maximum worst case cumulative Public RF exposure condition near the tower resulting from all proposed wireless operations is less than 2.0% of the Public MPE limit. This maximum predicted cumulative Public exposure condition is 1/50<sup>th</sup> of the 100% MPE limit.

***Therefore the proposed Verizon wireless operations at the POR BARLOW site will not have a significant environmental impact as defined by the FCC Public MPE limits. Furthermore, the proposed facility will not cause the any existing nearby wireless facilities to exceed NIER exposure standards.***

The analysis presented in this report demonstrates compliance with non-ionizing electromagnetic radiation (NIER) emissions standards as set forth by the Federal Communications Commission (FCC) particularly with respect to any habitable areas on or near the project site, or in structures directly across from or adjacent to the antennas. ***There are does not appear to be any habitable structures within 90 feet of the proposed location of the Verizon antennas.***

Hatfield & Dawson Consulting Engineers

#### **COMPLIANCE WITH FCC REGULATIONS AND GUIDELINES FOR RF EXPOSURE**

***The proposed Verizon Wireless operations at the POR BARLOW 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 and microwave 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.***

Hatfield & Dawson Consulting Engineers

**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 "POR BARLOW" will be in compliance with current FCC and local rules regarding public exposure to radiofrequency electromagnetic fields and radiofrequency interference. This conclusion is based on information supplied by Verizon representatives, and estimates of future RF exposure conditions due to the proposed Verizon facility.

The stated conclusions are based on FCC rules and recommendations, and the comparison of predicted RF conditions 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, 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.

Hatfield & Dawson Consulting Engineers

To ensure full compliance with current FCC rules regarding human exposure to radiofrequency 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 existing and future wireless transmission facilities at the project site.

### 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.

28 January 2014



David J. Pinion, P.E.

PE Expiration Date 12/31/2014

Hatfield & Dawson Consulting Engineers



Exhibit E

TOWAIR

# TOWAIR Determination Results

A routine check of the coordinates, heights, and structure type you provided indicates that this structure does not require registration.

### \*\*\* NOTICE \*\*\*

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

#### DETERMINATION Results

**PASS SLOPE(100:1)NO FAA REQ - 4915.0 Meters (16125.1 Feet)away & below slope by 28.0 Meters (91.8599 Feet)**

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	45-15-14.00N	122-46-8.00W	AURORA STATE	MARION AURORA, OR	59.8	1525.2

#### Your Specifications

##### NAD83 Coordinates

Latitude 45-15-43.6 north  
 Longitude 122-42-26.5 west

##### Measurements (Meters)

Overall Structure Height (AGL) 31.7  
 Support Structure Height (AGL) 30.5  
 Site Elevation (AMSL) 48.8

##### Structure Type

MTOWER - Monopole

#### Tower Construction Notifications

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

CLOSE WINDOW





# Oregon

John A. Kitzhaber, MD, Governor



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

February 19, 2014

Verizon Wireless  
9895 Montegrino Court  
Elk Grove, CA 96757

**Subject: Oregon Department of Aviation comments regarding proposed construction of 104' antenna tower in Canby Oregon.**

**Aviation Reference: 2014-ODA-30-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 not 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.

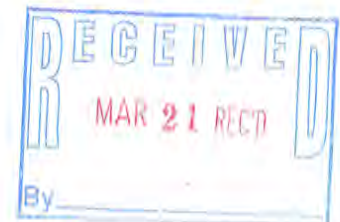
#### **Marking and/or Lighting Recommendation**

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking and/or lighting are accomplished on a voluntary basis, we recommend it be installed and maintained in accordance with FAA Advisory Circular AC70/7460-1K Change 2

Thank you for providing Oregon Department of Aviation the opportunity to comment on this structure.

Sincerely,

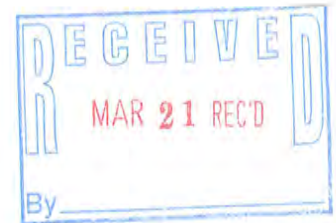
John P. Wilson Jr.  
Airport Operation & Tall Structure Specialist.





# Exhibit F

## PHOTO SIMULATIONS



# POR Barlow - View 1

505 North Baker Drive, Canby, OR 97103



Before Installment



After Installment



# POR Barlow - View 4

505 North Baker Drive, Canby, OR 97103



PC Packet 9-22-14



**MORRISON HERSHFIELD**

10900 NE 8th St., Suite 810

Bellevue, WA 98004

135 of 168



Before Installment

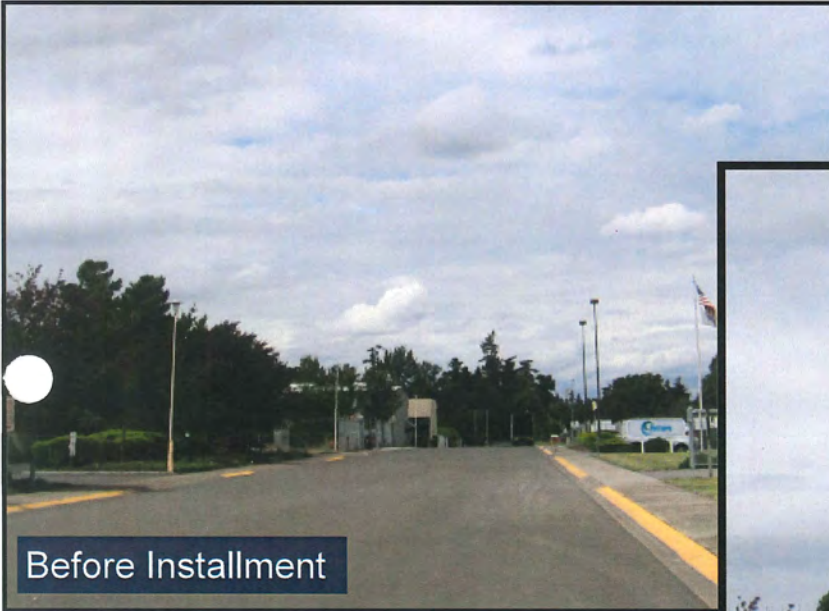


After Installment



# POR Barlow - View 3

505 North Baker Drive, Canby, OR 97103



Before Installment



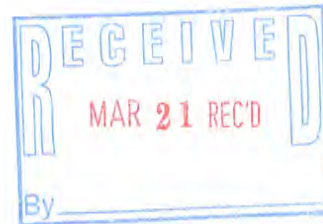
After Installment





# Exhibit G

## RF ENGINEER'S LETTER OF EXPLANATION





5430 NE 122<sup>nd</sup> Avenue  
Portland, OR 97230

February 21, 2014

City of Canby – Planning Division  
Attn: Mr. Bryan Brown, Planning Director  
111 NW 2<sup>nd</sup> Avenue  
Canby, Oregon 97013



Dear Mr. Brown:

This letter will serve to justify a proposed Verizon Wireless site called *POR Barlow* to be located at 505 N Baker Dr., Canby, OR 97103. The proposed location was chosen by Verizon Wireless to improve the voice and data capacity, for its customers in west of Canby city limit, Highway 99E, Highway 170 and as much of rural area. The capacity improvement objective is highlighted in yellow in Exhibit 1.

### Design Criteria

When designing an existing or new area, 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 structure nearby for collocation, to meet the *POR Barlow* capacity objective. The proposed location of the new monopole structure is shown in Exhibit 1.

To analyze our network design, Verizon Wireless uses a propriety Radio Frequency (RF) propagation tool called “Geoplan”. Our objective is to reduce dropped calls and access failures by ensuring customer calls can be initiated, maintained and “handed-off” to adjacent sites. A plot of our existing network coverage\* without the new *POR Barlow* monopole tower is shown in Exhibit 2. The dotted circle in Exhibit 2 depicts area of RF capacity issue for that area. The purple, blue and green area in each Exhibit represents a high RF signal strength which generally provides good coverage, inside vehicles and buildings. Yellow represents moderate RF signal strength that generally provides good service inside vehicles and moderate service inside buildings. The red areas represent RF signals that generally provide poor quality of service particularly inside buildings, but fair service in vehicles or outdoor coverage. The white areas on the propagation maps (white space) depicts non RF signal.

Verizon Wireless strives for a network design that provides high RF signal strength resulting in quality service inside buildings and vehicles, as indicated by the purple, blue and green areas, for a particular

area and environs. Please note that higher RF signal strengths such as mentioned above promote reliable voice calls and much greater wireless data speeds/ throughput in a given licensed area.

### Design Results


Exhibit 3&4 shows coverage/ RF signal emitting of our propose *POR Barlow* site. With our antenna at 100' centerline (C/L), nearly the entire coverage area will be covered by high to moderate RF signal strength, as depicted by the purple, blue, green, and yellow portions of the map. Therefore Exhibit 3&4 meets our design objective for this site; hence the area of coverage is nearly identical to the coverage objective depicted in Exhibit 1. The proposed site in Exhibit 3&4 will provide the additional capacity from propose *POR Barlow* for west of Canby city limit, Highway 99E, Highway 170 and substantial rural area as possible) as depicted in Exhibit 1.

Exhibits 5 & 6 depict how the proposed *POR Barlow* site will be integrated into our network system for that area. Therefore our antenna with a centerline of 100 feet (AGL) will fulfill the capacity objective for *POR Barlow* as depicted in Exhibit 5 & 6. The propose site ensures, RF signal overlaps with adjacent sites to allow continuity of call(s) or "handoff." Therefore a 100' (AGL) antenna centerline is required at the *POR Barlow* site location as shown to provide an uninterrupted service from *POR Wilsonville* site to the north, *SLM Aurora* site to southwest, and *POR Canby* site to the east,. Therefore the *POR Barlow* site will provide the additional capacity for City of Canby and environs.

### Summary

The proposed site, *POR Barlow* is a necessary communication facility as it provides the desired public service needed to complete the Verizon Wireless network in the area and to comply with the obligations of our FCC license. *POR Canby* especially with an antenna centerline at 100 feet AGL (Exhibit 5&6), will provide superb service, i.e. a -65dBm (blue) signal strength or better (purple, blue, and green) for most areas defined in Exhibit 1 (area highlighted in yellow). This site once built and operational will provide necessary public voice and data, including 911 services, west of Canby city limit, Highway 99E, Highway 170 and as much of rural area.

Sincerely,

/s/  Jim Jagers on behalf of John Dassen

John Dassen  
RF Engineer

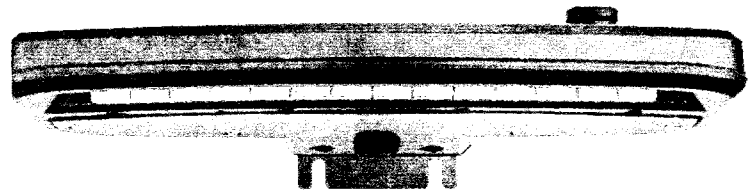
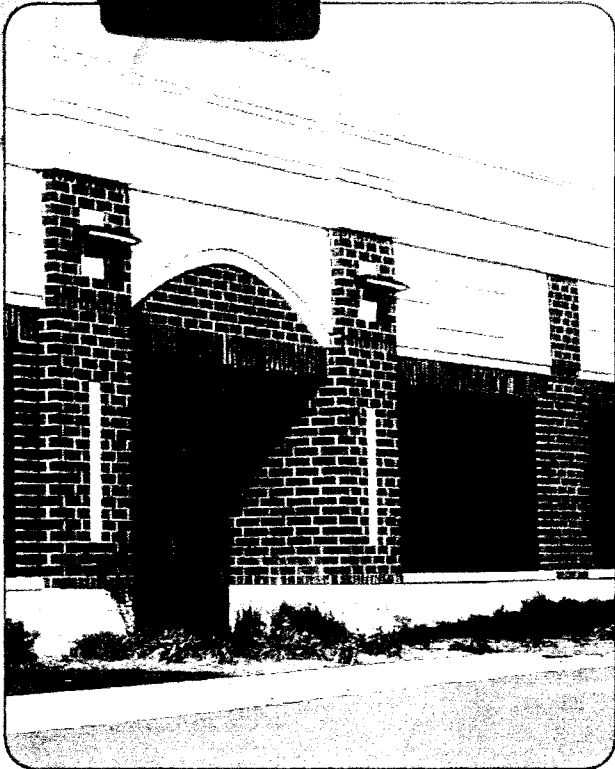
\* **POR WILSONVILLE** – Antenna(s) Centerline (C/L): 98.00', **POR CANBY** – Antenna(s) Centerline (C/L): 175.00', **POR AURORA** – Antenna(s) Centerline (C/L): 150.00'



## OUTDOOR LED WALL PACK

*Delivering the promise of LEDs with two high-output additions to the OLW family of wall packs.*

OLW 23 / OLW 31



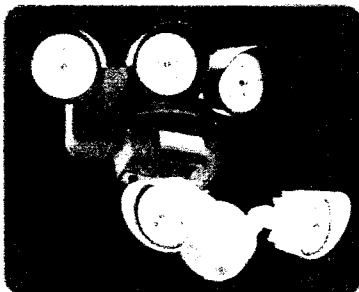
The sleek, contemporary design of the OLW 23 and OLW 31 is offered in two new lumen packages to meet a wide variety of your lighting needs.

*The OLW 23 / OLW 31 LED wall pack at a glance:*

- High-performance LED technology deliver 2,252 or 3,073 lumens.
- Precision engineered optical lens are more efficient than competitors' reflector-style wall packs.
- Wide, Type III, light distribution uniformly illuminates walkways, commercial driveways and more.
- Adjustable MVOLT photocell, standard.
- Nighttime Friendly™ full cutoff above 90° angle, standard.
- 6kV surge protection, standard
- Junction box for surface- or recess-mounting options

[www.lithonia.com/OLW](http://www.lithonia.com/OLW)

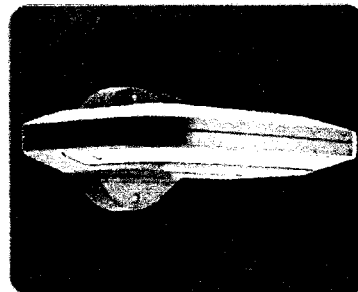
### Related LED products:



OFLR Security Floodlights



OLAW LED Area/Wall Light



OLW14 LED Wall Pack

**Value and versatility defined**

June 18, 2014

Angie Lehnert  
Associate Planner  
111 NW 2<sup>nd</sup> Avenue  
Canby, OR 97013

RE: Design Review / Condition Use Application Incomplete Responses

The following are responses to the letter dated April 18, 2014 requesting additional information:

1. *Site plan that includes adjacent streets and sidewalks, property lines, setbacks, screening/fencing, existing and proposed structures, parking spaces and dimension, paved and gravel surfaces, existing and proposed accesses/driveways, and the information required in 16.08.120(E)(1)(c).*

Response: Please see C-1 of the enclosed drawings.

2. *Lighting plan showing conformance with table 16.43.070 and the height limitations of 16.42.080.*

Response: Please see attached response from Morrison Hershfield.

3. *Stormwater drainage plan and/or statement on how stormwater is disposed.*

Response: Please see C-1 of the enclosed drawings.

4. *Sign plan, including property lines, setbacks, elevations, size and mounting details of all existing signs and all proposed signs on the site.*

Response: Please see C-1 & A-5 of the enclosed drawings.

5. *Statement regarding any further information required in 16.08.120(D)(9).*

Response: Please see attached reference copies of the FCC licenses for the various services Verizon will be providing for this site.

6. *Lease agreement with the information required in 16.08.120(E)(1)(a).*

Response: Please see the attached Bond and *Section 14 REMOVAL AT END OF TERM* with required removal agreement.



7. *Map and/or a statement addressing the information required in 16.08.120(E)(1)(b); this map needs to show all Canby Verizon Facilities and any existing WTS facilities of another provider within 1,000 feet of the site.*

Response: Please see attached propagation maps with all Verizon facilities located within the City of Canby and includes sites that extend within the city from a distant location(Exhibit 2). Verizon only has (1) facility located in the City of Canby (site named "Canby HD" on exhibit 2 and 5 of propagation maps. There are no other existing WTS facilities of another provider within 1,000 feet of this site.

8. *Statement of anticipated capacity of the WTS facility per 16.08.120(E)(1)(d).*

Response: The proposed tower is anticipated to allow for the collocation of (3) carriers, with (12) panel antennas per carrier for a total of (36) panel antennas.

9. *Statement specifying the information requested in 16.08.120(E)(2)(f).*

Response: The nearest wireless facility from the proposed location is located at 24526 S. Highway 99E (APN: 41E05BC04801). This property was rejected for being too far from the coverage objective area. There were no other existing facilities to collocate on within the existing coverage area that would allow for a less rigorous approval process. Existing industrial buildings structures were ruled out for not having the needed height necessary to meet the coverage objective. This is an industrial area surrounded by residential uses, we have made the best effort to locate in an area that is industrial and will have the least impact on residentially zoned properties.

10. *Landscaping plan addressing the standards of 16.49.070-100.*

Response: Please see L-1 & L-2 of the enclosed drawings.

11. *Statement addressing the landscaping standards of 16.49.070-100.*

Response: Please see L-1 & L-2 of the enclosed drawings.

Please do not hesitate to contact me if you have any questions or need further information.

Thank you,

Jim Jagers  
Black Rock Consulting



MORRISON HERSHFIELD

June 02<sup>th</sup>, 2014

**City of Canby**  
**Planning Department**  
111NW 2<sup>ND</sup> avenue,  
Canby, OR 97013

**REF: Permit, city file #DR/CUP 14-02**  
**Project Name: POR BARLOW**  
**Location: 505 N Baker Drive,**  
**Canby, OR 97013**  
(MH Job No. 7130028)

Dear Department of Planning and Development,

Pursuant to your request, below is the Morrison Hershfield response to jurisdictional comments issued by your office.

**Reviewing Discipline: Initial Building**  
**Reviewer: Angie Lehnert**  
**Associate Planner**  
**April 18<sup>th</sup>, 2014**

**COMMENT 1. Site plan that includes adjacent streets and sidewalks, property lines, setbacks, screening/fencing, existing and proposed structures, parking spaces and dimensions, paved and gravel surfaces, existing and proposed accesses/driveways, and the information required in 16.08.120(E)(1)(c).**

Response: Please refer to sheet C-1

**COMMENT 2. Lighting plan showing conformance with table 16.43.070 and the height limitations of 16.43.080**

Response: Proposed service lights comply with table 16.43.070 (see attached specs). Proposed lights do not exceed mounting height of 40% of the horizontal distanced from the property line or maximum heights specified on table 16.43.080 (Detail 1 on sheet E-6 has been revised to show the height of the proposed lights and sheet E-2 has been revised to show lights setback form property line)

The City of Canby  
Title: POR Barlow  
(Verizon)  
(MH Job No. 7130028)  
June 02, 2014

**COMMENT 3. Stormwater drainage plan and/or statement on how stormwater is disposed.**

Response: Please refer to Storm Solution table on sheet C-1.

**COMMENT 4. Sign plan, including property lines, setbacks, elevations, size, and mounting details of all existing signs and all proposed signs on the site.**

Response: Please refer to Sheet C-1 AND A-5 DETAIL 1.

**COMMENT 5. Statement regarding any further information you may have about the requirements of 16.08.120(D)(9).**

Response: Information to be submitted by Verizon (note on sheet A-1)

**COMMENT 6. Lease agreement with the information required in 16.08.120(E)(1)(a).**

Response: To be resolved by other party (Verizon)

**COMMENT 7. Map and/or a statement addressing the information required in 16.08.120(E)(1)(b); this map needs to show all Canby Verizon facilities and any existing WTS facilities of another provider within 1,000 feet of the site.**

Response: To be resolved by other party (Verizon)

**COMMENT 8. Statement of anticipated capacity of the WTS facility per 16.08.120(E)(1)(d).**

Response: Information to be submitted by Verizon (Refer to sheet A-1, A-2)

**COMMENT 9. Statement specifying the information requested in 16.08.120(E)(2)(f).**

Response: Information to be submitted by Verizon

**COMMENT 10. Landscaping plan addressing the standards of 16.49.070-100.**

Response: Please refer to Sheet L-1, L-2

**COMMENT 11. Statement addressing the landscaping standards of 16.49.070-100.**

Response: Please refer to Sheet L-1, L-2

We trust this information contained herein helps you and if you have any questions please do not hesitate to contact us.

Respectfully submitted,  
**Morrison Hershfield**



REFERENCE COPY

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
1120 SANCTUARY PKWY, #150 GASASREG
ALPHARETTA, GA 30009-7630

Table with Call Sign (WQJQ694), File Number, and Radio Service (WU - 700 MHz Upper Band (Block C)).

FCC Registration Number (FRN): 0003290673

Table with columns: Grant Date, Effective Date, Expiration Date, Print Date, Market Number, Channel Block, Sub-Market Designator, Market Name, 1st Build-out Date, 2nd Build-out Date, 3rd Build-out Date, 4th Build-out Date.

Waivers/Conditions:

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

This authorization is conditioned upon compliance with section 27.16 of the Commission's rules

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

**REFERENCE COPY**

This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.



**Federal Communications Commission  
Wireless Telecommunications Bureau**

**RADIO STATION AUTHORIZATION**

LICENSEE: VERIZON WIRELESS (VAW) LLC

ATTN: REGULATORY  
VERIZON WIRELESS (VAW) LLC  
1120 SANCTUARY PKWY, #150 GASASREG  
ALPHARETTA, GA 30009-7630

<b>Call Sign</b> KNKA212	<b>File Number</b>
<b>Radio Service</b> CL - Cellular	
<b>Market Numer</b> CMA030	<b>Channel Block</b> B
<b>Sub-Market Designator</b> 0	

FCC Registration Number (FRN): 0003800307

<b>Market Name</b> Portland, OR-WA
---------------------------------------

Grant Date	Effective Date	Expiration Date	Five Yr Build-Out Date	Print Date
06-20-2005	04-01-2014	05-15-2015		

**Site Information:**

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
1	45-34-50.4 N	122-12-29.3 W	439.2	22.2	

Address: 432 MT. ZION ROAD  
City: WASHOUGAL County: SKAMANIA State: WA Construction Deadline:

Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	55.000	-136.900	78.900	-75.600	150.200	331.300	391.700	228.000
Transmitting ERP (watts)	0.100	7.230	14.760	0.220	0.200	0.100	0.100	0.160

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
4	45-20-38.4 N	122-41-37.3 W	249.9	50.3	

Address: (Petes MTN) 1775 SW SCHAFFER ROAD  
City: WEST LINN County: CLACKAMAS State: OR Construction Deadline:

Antenna: 4 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	173.700	207.400	190.200	187.400	244.400	242.400	196.200	220.600
Transmitting ERP (watts)	185.540	269.350	52.100	1.020	0.850	0.850	0.850	18.290

**Conditions:**  
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: VERIZON WIRELESS (VAW) LLC

Call Sign: KNKA212

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
4	45-20-38.4 N	122-41-37.3 W	249.9	50.3	

Address: (Petes MTN) 1775 SW SCHAFFER ROAD

City: WEST LINN County: CLACKAMAS State: OR Construction Deadline:

Antenna: 5 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	173.700	207.400	190.200	187.400	244.400	242.400	196.200	220.600
Transmitting ERP (watts)	0.850	5.140	124.840	408.180	130.720	5.020	0.850	0.850
Antenna: 6 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	173.700	207.400	190.200	187.400	244.400	242.400	196.200	220.600
Transmitting ERP (watts)	0.850	0.850	0.850	0.860	52.370	312.570	226.850	19.020

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
5	45-35-31.4 N	122-26-18.3 W	243.8	30.8	

Address: SE 34TH STREET, 1 MILE WEST NW OF CAMAS ON PRUNE HILL

City: CAMAS County: CLARK State: WA Construction Deadline:

Antenna: 4 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	137.500	81.100	127.600	199.100	152.100	217.100	255.200	198.500
Transmitting ERP (watts)	7.170	13.220	4.910	0.390	0.100	0.100	0.110	0.630
Antenna: 5 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	138.100	81.700	128.200	199.800	152.700	217.700	255.800	199.100
Transmitting ERP (watts)	0.290	1.930	77.390	4.290	0.390	0.190	0.190	0.190
Antenna: 6 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	137.500	81.100	127.600	199.100	152.100	217.100	255.200	198.500
Transmitting ERP (watts)	16.270	1.310	0.230	0.200	0.250	1.470	17.640	38.030
Antenna: 7 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	137.500	81.100	127.600	199.200	152.100	217.100	255.200	198.500
Transmitting ERP (watts)	74.600	192.450	53.660	2.540	0.710	0.710	0.730	4.590
Antenna: 8 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	138.100	81.700	128.200	199.800	152.700	217.700	255.800	199.100
Transmitting ERP (watts)	1.200	8.090	325.090	18.010	1.630	0.800	0.800	0.800

Licensee Name: VERIZON WIRELESS (VAW) LLC

Call Sign: KNKA212

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
6	45-46-34.4 N	122-41-34.4 W	130.4	56.1	

Address: 2109 NW 219th Street

City: RIDGEFIELD County: CLARK State: WA Construction Deadline:

Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	78.000	80.700	96.400	113.100	147.900	174.100	169.800	149.900
Transmitting ERP (watts)	39.810	93.330	77.620	23.440	3.980	0.510	0.980	6.310
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	78.000	80.700	96.400	113.100	147.900	174.100	169.800	149.900
Transmitting ERP (watts)	0.100	0.100	0.140	7.220	35.360	26.210	1.040	0.140
Antenna: 4 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	78.000	80.700	96.400	113.100	147.900	174.100	169.800	149.900
Transmitting ERP (watts)	0.570	0.570	0.570	0.570	0.570	71.360	215.490	2.010

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
7	45-07-51.9 N	122-17-30.1 W	1302.7	48.2	

Address: 8.1 MILES SOUTHEAST OF COLTON

City: COLTON County: CLACKAMAS State: OR Construction Deadline:

Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	894.100	668.500	446.700	264.400	299.600	589.800	785.600	892.100
Transmitting ERP (watts)	21.980	27.030	4.660	1.660	5.370	27.550	21.630	16.470

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
9	45-33-03.4 N	123-08-56.4 W	262.1	40.2	

Address: 45647 NW David Hill Rd.

City: FOREST GROVE County: WASHINGTON State: OR Construction Deadline:

Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	181.000	217.000	240.400	232.100	212.200	106.700	-120.300	136.300
Transmitting ERP (watts)	78.380	28.820	1.370	0.550	0.230	0.330	1.340	17.560
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	181.000	217.000	240.400	232.100	212.200	106.700	-120.300	136.300
Transmitting ERP (watts)	0.200	1.050	9.690	8.170	0.500	0.180	0.180	0.180

Licensee Name: VERIZON WIRELESS (VAW) LLC

Call Sign: KNKA212

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
9	45-33-03.4 N	123-08-56.4 W	262.1	40.2	

Address: 45647 NW David Hill Rd.

City: FOREST GROVE County: WASHINGTON State: OR Construction Deadline:

Antenna: 4 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	181.000	217.000	240.400	232.100	212.200	106.700	-120.300	136.300
Transmitting ERP (watts)	0.180	0.140	2.910	34.160	68.150	35.770	2.420	0.140

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
10	45-23-51.4 N	122-01-57.3 W	780.3	9.2	

Address: APPROX. 1.5 MI. NORTH OF U.S. HWY. 26, 2 MILES NORTHWEST OF BRIGHTWOOD

City: BRIGHTWOOD County: CLACKAMAS State: OR Construction Deadline:

Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	87.600	-129.100	-200.600	238.100	-137.800	223.800	474.900	252.100
Transmitting ERP (watts)	50.500	50.500	50.500	50.500	50.500	50.500	50.500	50.500

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
11	45-17-19.4 N	121-47-08.3 W	1519.4	19.8	

Address: Approx. 1 mile South of US Highway 26, 2.05 miles SW of Government Camp

City: Government Camp County: CLACKAMAS State: OR Construction Deadline:

Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	401.000	-413.400	275.800	355.200	362.000	453.900	694.900	632.600
Transmitting ERP (watts)	16.640	15.890	4.580	0.240	0.100	0.100	0.680	5.770

Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	401.600	-412.800	276.400	355.900	362.700	454.500	695.500	633.200
Transmitting ERP (watts)	0.150	0.150	0.340	11.560	27.110	10.310	0.150	0.150

Antenna: 4 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	401.600	-412.800	276.400	355.900	362.700	454.500	695.500	633.200
Transmitting ERP (watts)	0.180	0.150	0.150	0.150	0.150	0.150	1.700	1.660



Licensee Name: VERIZON WIRELESS (VAW) LLC

Call Sign: KNKA212

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
13	45-27-25.4 N	122-42-39.3 W	143.3	17.4	

Address: (Terwilliger) 9570 Southwest Barbur Boulevard

City: Portland County: MULTNOMAH State: OR Construction Deadline:

Antenna: 4 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	68.000	112.000	56.400	129.500	63.800	97.000	50.600	70.700
Transmitting ERP (watts)	50.760	254.420	188.600	21.650	0.560	0.560	0.560	1.640
Antenna: 5 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	68.000	112.000	56.400	129.500	63.800	97.000	50.600	70.700
Transmitting ERP (watts)	0.500	0.500	6.960	100.660	252.860	103.010	7.130	0.500
Antenna: 6 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	68.000	112.000	56.400	129.500	63.800	97.000	50.600	70.700
Transmitting ERP (watts)	50.450	2.530	0.500	0.500	0.500	19.180	170.950	225.360

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
19	45-51-36.4 N	122-27-08.4 W	540.7	31.1	

Address: 30020 NE MYSTIC DR.

City: Yacolt County: CLARK State: WA Construction Deadline:

Antenna: 4 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	311.800	284.400	79.000	228.100	393.500	454.300	421.700	396.800
Transmitting ERP (watts)	67.490	67.490	37.090	6.150	2.950	6.010	37.950	69.060

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
21	44-53-57.4 N	121-50-41.3 W	1712.0	25.3	

Address: 19.5 MILES NE OF

City: DETROIT County: CLACKAMAS State: OR Construction Deadline:

Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	618.800	435.600	388.400	313.400	409.600	612.000	621.500	673.400
Transmitting ERP (watts)	0.100	0.100	0.100	0.390	7.700	22.730	15.720	1.850

Licensee Name: VERIZON WIRELESS (VAW) LLC

Call Sign: KNKA212

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
29	45-43-44.4 N	123-15-09.4 W	440.4	24.9	

Address: 56100 NW Sunset  
City: Portland County: WASHINGTON State: OR Construction Deadline:

Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	181.500	125.000	120.700	357.900	210.300	71.500	-67.500	100.400
Transmitting ERP (watts)	0.960	16.590	30.730	16.830	26.750	24.220	2.300	0.200
Antenna: 4 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	181.500	125.000	120.700	357.900	210.300	71.500	-67.500	100.400
Transmitting ERP (watts)	53.570	10.090	0.740	0.320	4.400	33.820	88.430	93.300

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
30	45-27-58.4 N	123-55-15.5 W	431.0	45.7	1018405

Address: 431 CAPE MEARES  
City: Tillamook County: TILLAMOOK State: OR Construction Deadline:

Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	371.300	303.700	414.200	430.300	353.200	418.000	337.900	353.400
Transmitting ERP (watts)	70.630	65.460	6.850	0.730	0.200	0.200	0.640	8.890
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	371.900	304.300	414.800	430.900	353.800	418.600	338.500	354.000
Transmitting ERP (watts)	0.330	3.720	100.000	4.370	0.370	0.200	0.200	0.200

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
32	45-54-20.4 N	122-45-34.4 W	6.4	51.2	1032890

Address: 300 N. PEKIN RD  
City: WOODLAND County: COWLITZ State: WA Construction Deadline:

Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	-265.000	-263.100	-165.200	-0.200	51.900	17.800	-113.400	27.300
Transmitting ERP (watts)	0.250	0.950	14.790	93.330	45.710	2.450	0.510	0.200
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	-265.000	-263.100	-165.200	-0.200	51.900	17.800	-113.400	27.300
Transmitting ERP (watts)	0.560	0.200	0.420	0.870	5.500	97.720	16.980	0.910

Licensee Name: VERIZON WIRELESS (VAW) LLC

Call Sign: KNKA212

File Number:

Print Date:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
32	45-54-20.4 N	122-45-34.4 W	6.4	51.2	1032890

Address: 300 N. PEKIN RD

City: WOODLAND County: COWLITZ State: WA Construction Deadline:

Antenna: 4 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	-268.000	-266.100	-168.200	-3.200	48.800	14.800	-116.500	24.300
Transmitting ERP (watts)	0.360	0.740	0.200	0.210	0.740	0.480	64.570	51.290

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
33	45-36-42.5 N	123-12-16.8 W	212.4	60.7	1231473

Address: (Gales Creek site) 12340 NW Shearer Hill Rd.

City: Forest Grove County: WASHINGTON State: OR Construction Deadline: 04-24-2014

Antenna: 1 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	44.600	64.800	203.900	209.500	59.300	-150.700	-194.300	-16.600
Transmitting ERP (watts)	77.310	76.080	14.480	1.860	1.000	1.000	1.150	32.460
Antenna: 2 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	44.600	64.800	203.900	209.500	59.300	-150.700	-194.300	-16.600
Transmitting ERP (watts)	1.000	1.470	11.710	169.330	322.650	61.480	4.060	1.000
Antenna: 3 Azimuth (from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	44.600	64.800	203.900	209.500	59.300	-150.700	-194.300	-16.600
Transmitting ERP (watts)	21.050	2.030	1.000	1.000	1.270	52.580	265.650	247.150

**Control Points:**

Control Pt. No. 2

Address: 500 West Dove Road.

City: Southlake County: TARRANT State: TX Telephone Number: (800)264-6620

**Waivers/Conditions:**

NONE

REFERENCE COPY

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Federal Communications Commission  
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY  
CELLCO PARTNERSHIP  
1120 SANCTUARY PKWY, #150 GASASREG  
ALPHARETTA, GA 30009-7630

<b>Call Sign</b> WQGB229	<b>File Number</b> 0006150358
<b>Radio Service</b> AW - AWS, 1710-1755/2110-2155 MHz bands	

FCC Registration Number (FRN): 0003290673

<b>Grant Date</b> 11-29-2006	<b>Effective Date</b> 01-03-2014	<b>Expiration Date</b> 11-29-2021	<b>Print Date</b> 02-14-2014
<b>Market Number</b> BEA167	<b>Channel Block</b> B	<b>Sub-Market Designator</b> 0	
<b>Market Name</b> Portland-Salem, OR-WA			
<b>1st Build-out Date</b>	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

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Federal Communications Commission  
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: VERIZON WIRELESS TELECOM INC.

ATTN: REGULATORY  
VERIZON WIRELESS TELECOM INC.  
1120 SANCTUARY PKWY, #150 GASASREG  
ALPHARETTA, GA 30009-7630

<b>Call Sign</b> KNLF812	<b>File Number</b>
<b>Radio Service</b> CW - PCS Broadband	

FCC Registration Number (FRN): 0005798061

<b>Grant Date</b> 02-28-2007	<b>Effective Date</b> 01-29-2011	<b>Expiration Date</b> 01-03-2017	<b>Print Date</b>
<b>Market Number</b> BTA358	<b>Channel Block</b> C	<b>Sub-Market Designator</b> 1	
<b>Market Name</b> Portland, OR			
<b>1st Build-out Date</b> 12-07-2003	<b>2nd Build-out Date</b> 01-03-2007	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

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Federal Communications Commission  
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: VERIZON WIRELESS (VAW) LLC

ATTN: REGULATORY  
VERIZON WIRELESS (VAW) LLC  
1120 SANCTUARY PKWY, #150 GASA5REG  
ALPHARETTA, GA 30009-7630

<b>Call Sign</b> KNLH685	<b>File Number</b>
<b>Radio Service</b> CW - PCS Broadband	

FCC Registration Number (FRN): 0003800307

<b>Grant Date</b> 07-23-2007	<b>Effective Date</b> 02-18-2011	<b>Expiration Date</b> 06-26-2017	<b>Print Date</b>
<b>Market Number</b> BTA358	<b>Channel Block</b> E	<b>Sub-Market Designator</b> 3	
<b>Market Name</b> Portland, OR			
<b>1st Build-out Date</b> 06-26-2002	<b>2nd Build-out Date</b>	<b>3rd Build-out Date</b>	<b>4th Build-out Date</b>

Waivers/Conditions:

NONE

Conditions:

Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at <http://wireless.fcc.gov/uls/index.htm?job=home> and select "License Search". Follow the instructions on how to search for license information.

**Tower Removal Bond**

**KNOW ALL MEN BY THESE PRESENTS:** That Verizon Wireless (VAW) LLC d/b/a Verizon Wireless, One Verizon Way, Mail Stop 4AW100, Basking Ridge, NJ 07920 (hereinafter called the Principal), and Westchester Fire Insurance Company (hereinafter called the Surety), a corporation duly organized under the laws of the State of MA are held and firmly bound unto City of Canby, 182 North Holly Street, Canby, OR 97103, (hereinafter called the Obligee), in the full and just sum of Fifty Thousand and 00/100 Dollars (\$50,000.00), the payment of which sum, well and truly to be made, the said Principal and Surety bind themselves, and each of their heirs, administrators, executors, and assigns, jointly and severally, firmly by these presents.

**WHEREAS**, the Obligee has issued or is about to issue a special use permit with the Principal related to the construction of a telecommunications facility and related facilities and as a requirement of such agreement the Principal is obligated to remove the telecommunications equipment from property identified as Site POR Barlow, located at 505 N. Baker Drive, Canby, OR 97103 upon discontinuance of service.

**WHEREAS**, the Obligee has agreed to accept this bond as security for performance of Principal's obligations under said agreement during the time period this bond remains in effect.

**NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH** that if the Principal shall perform its obligations under said agreement as stipulated above, then this obligation shall be void, otherwise to remain in full force and effect, unless otherwise cancelled as hereinafter provided.

**PROVIDED HOWEVER**, that this bond is executed subject to the following express provisions and conditions:

1. In the event of default by the Principal, Obligee shall deliver to Surety a written statement of the details of such default within 30 days after the Obligee shall learn of the same, such notice to be delivered by certified mail to address of said Surety as stated herein.
2. This bond may be terminated or canceled by surety by giving not less than sixty (60) days written notice to the Obligee, stating therein the effective date of such termination or cancellation. Such notice shall not limit or terminate any obligations resulting from default by the Principal that may have accrued under this bond as a result of default by Principal prior to the effective date of such termination.
3. Neither cancellation nor termination of this bond by Surety, nor inability of Principal to file a replacement bond or replacement security for its obligations, shall constitute a loss to the Obligee recoverable under this bond.

4. No claim, action, suit or proceeding shall be instituted against this bond unless same be brought or instituted and process served within one year after termination or cancellation of this bond.
5. No right of action shall accrue on this bond for the use of any person, corporation or entity other than the Obligee named herein or the heirs, executors, administrators or successors of the Obligee.
6. The aggregate liability of the surety is limited to the penal sum stated herein regardless of the number of years this bond remains in force or the amount or number of claims brought against this bond.
7. If any conflict or inconsistency exists between the Surety's obligations as described in this bond and as may be described in any underlying agreement, permit, document or contract to which this bond is related, then the terms of this bond shall prevail in all respects.
8. It is expressly understood and agreed that this bond does not cover or guarantee rent or lease payments of any kind.
9. This bond shall not bind the Surety unless the bond is accepted by the Obligee. If the Obligee objects to any language contained herein, within 30 days of the date this bond is signed and sealed by the Surety, Obligee shall return this bond, certified mail or express courier, to the Surety at its address at:

ACE Surety  
436 Walnut Street  
PO Box 1000  
Philadelphia, PA 19106

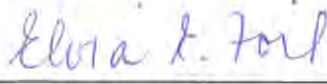
Failure to return the bond as described above shall constitute Obligee's acceptance of the terms and conditions herein.

**IN WITNESS WHEREOF**, the above bounded Principal and Surety have hereunto signed and sealed this bond effective this 12<sup>th</sup> day of June, 2014.

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

By:   
Exec Dir - Ntwk Eng. & Ops

Westchester Fire Insurance Company

By:   
Elvia E. Foil, Attorney-in-Fact



# Power of Attorney

## WESTCHESTER FIRE INSURANCE COMPANY

Know all men by these presents: That WESTCHESTER FIRE INSURANCE COMPANY, a corporation of the Commonwealth of Pennsylvania pursuant to the following Resolution, adopted by the Board of Directors of the said Company on December 11, 2006, to wit:

"RESOLVED, that the following authorizations relate to the execution, for and on behalf of the Company, of bonds, undertakings, recognizances, contracts and other written commitments of the Company entered into the ordinary course of business (each a "Written Commitment"):

- (1) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise.
- (2) Each duly appointed attorney-in-fact of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise, to the extent that such action is authorized by the grant of powers provided for in such persons written appointment as such attorney-in-fact.
- (3) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to appoint in writing any person the attorney-in-fact of the Company with full power and authority to execute, for and on behalf of the Company, under the seal of the Company or otherwise, such Written Commitments of the Company as may be specified in such written appointment, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
- (4) Each of the Chairman, the President and Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to delegate in writing any other officer of the Company the authority to execute, for and on behalf of the Company, under the Company's seal or otherwise, such Written Commitments of the Company as are specified in such written delegation, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
- (5) The signature of any officer or other person executing any Written Commitment or appointment or delegation pursuant to this Resolution, and the seal of the Company, may be affixed by facsimile on such Written Commitment or written appointment or delegation.

FURTHER RESOLVED, that the foregoing Resolution shall not be deemed to be an exclusive statement of the powers and authority of officers, employees and other persons to act for and on behalf of the Company, and such Resolution shall not limit or otherwise affect the exercise of any such power or authority otherwise validly granted or vested.

Does hereby nominate, constitute and appoint Christine Hession, Elvia E Foil, Jeffrey T Tyler, Lori Baybutt, Myrna Smith, all of the City of WASHINGTON, District Of Columbia, each individually if there be more than one named, its true and lawful attorney-in-fact, to make, execute, seal and deliver on its behalf, and as its act and deed any and all bonds, undertakings, recognizances, contracts and other writings in the nature thereof in penalties not exceeding Five million dollars & zero cents (\$5,000,000.00) and the execution of such writings in pursuance of these presents shall be as binding upon said Company, as fully and amply as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its principal office,

IN WITNESS WHEREOF, the said Stephen M. Haney, Vice-President, has hereunto subscribed his name and affixed the Corporate seal of the said WESTCHESTER FIRE INSURANCE COMPANY this 9 day of May 2014.

WESTCHESTER FIRE INSURANCE COMPANY



*Stephen M. Haney*  
Stephen M. Haney, Vice President

COMMONWEALTH OF PENNSYLVANIA  
COUNTY OF PHILADELPHIA ss.

On this 9 day of May, AD. 2014 before me, a Notary Public of the Commonwealth of Pennsylvania in and for the County of Philadelphia came Stephen M. Haney, Vice-President of the WESTCHESTER FIRE INSURANCE COMPANY to me personally known to be the individual and officer who executed the preceding instrument, and he acknowledged that he executed the same, and that the seal affixed to the preceding instrument is the corporate seal of said Company; that the said corporate seal and his signature were duly affixed by the authority and direction of the said corporation, and that Resolution, adopted by the Board of Directors of said Company, referred to in the preceding instrument, is now in force.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal at the City of Philadelphia the day and year first above written.



COMMONWEALTH OF PENNSYLVANIA  
NOTARIAL SEAL  
KAREN E. BRANDT, Notary Public  
City of Philadelphia, Phila. County  
My Commission Expires September 28, 2014

*Karen E. Brandt*  
Notary Public

I, the undersigned Assistant Secretary of the WESTCHESTER FIRE INSURANCE COMPANY, do hereby certify that the original POWER OF ATTORNEY, of which the foregoing is a substantially true and correct copy, is in full force and effect.

In witness whereof, I have hereunto subscribed my name as Assistant Secretary, and affixed the corporate seal of the Corporation, this 12<sup>th</sup> day of June, 2014



*William L. Kelly*  
William L. Kelly, Assistant Secretary

THIS POWER OF ATTORNEY MAY NOT BE USED TO EXECUTE ANY BOND WITH AN INCEPTION DATE AFTER May 09, 2016.

FORM NO. 98003 Super Safety® ANTI-FRAUD PROTECTION



March 10, 2014

MAR 21 RECD

VIA FIRST CLASS MAIL

City of Canby  
Attn: Bryan Brown  
Planning Director  
111 NW 2<sup>nd</sup> Avenue  
Canby, OR 97013

RE: Required Memo after Neighborhood Meeting for Proposed Verizon Wireless Telecommunications facility located at 505 N Baker Drive Canby, OR 97103.

Mr. Brown:

As per City of Canby code a Neighborhood Meeting was held for the above referenced proposed Verizon Wireless Telecommunications facility located at 505 N Baker Drive Canby, OR 97103 ("WCF"). Below is a list of concerns raised by attendees, see attached for names of attendees.

1. Why does Verizon Wireless need to place a new tower at this location and at this height?

**Response:** Verizon Wireless needs this WCF in this location and at the proposed height to improve the capacity for users in this area. Additionally, please see RF Justification and Coverage maps submitted with the land use filing.

2. Concerns whether a light will be located on top of tower.

**Response:** Verizon Wireless only lights towers when required by the FAA or Oregon Department of Aviation. Please see FAA Tower and Oregon Department of Aviation letter determining no registration and thus no lighting or painting of tower is required.

3. What health issues might be presented?

**Response:** The Federal Government is the sole regulator regarding emissions and questions of health. Please see submitted NEIR report from licensed RF engineer demonstrating the WCF will operate within the emissions guidelines set by the Federal Government.

4. Will the tower harm our property values?

**Response:** The proposed WCF is located in an industrial area. The proposed WCF is to be located on a parcel with industrial zoning. The parcel is home to the headquarters of a construction company. The parcel is used as both company headquarters and yard for storage of heavy equipment, including tall cranes. The parcel to the immediate south of the proposed location also is used to store heavy equipment and also has an approximately 100' tower with lights holding a United States Flag (the tower appears to be the same or nearly the same height as the proposed WCF. In addition to the storage large trucks move goods and equipment in and out of the area servicing Johnson Controls and other industrial users. The intended use matches the existing uses in the area and given that I don't see how reasonably property values could decrease.

5. Will the site produce noise?

**Response:** The site will have an emergency generator, which is maintained by running for 15-20 minutes every other month during business hours. The equipment cabinets will have small fans to assist in heat dispersion. Neither pieces of equipment will cause much increase to ambient noise levels at the property lines.

6. Some indicated the site is too close to the street and the concern was a semi-truck driving on the street could veer off and hit the tower.

**Response:** It was my impression that after we talked in more detail regarding the exact location of the proposed WCF that this concern was alleviated. The tower is proposed at a set back of 35' from center of N Baker Drive.

2/25/14 POR BOARD Neighborhood Meeting  
Sign-in sheet

Randy Tessman	601 N. Baker Drive
Spiegel Tessman	" "
Ray Lawrence	517 W Baker Drive
Shary Louise	City of Canby
Debbie O'Brien	635 NW Baker Dr Canby
Job Coe	620 N BAKER DR Canby
Oren and Juda Hesse	633 W. Ash St Canby



**City of Canby  
Pre-Application Meeting Notice**

PO Box 930, Canby, OR 97013  
City Shops, 1470 NE Territorial Road

503-266-0798  
503-266-7238

TO: Canby Planning, Bryan Brown	503-266-0702	Canby Public Works, Jerry Nelzen	503-266-0759
CUB Water Dist., Doug Quan	503-263-4309	Canby Public Works, Dan Mickelsen	503-266-0698
CUB Electric Dept., Gary Stockwell	503-263-4307	Canby Telecom, Dinh Vu	503-266-8201
CUB, Oper Super, Larry Hepler	503-266-1156	NW Natural, Terry Smith	503-585-6611 x8144
Fire District #62, Todd Gary	503-266-5851	NW Natural, Greg Bronson	503-585-6611 x8166
Econ Dev. Dir., Renate Mengelberg	503-266-0701	<u>Curran-McLeod Eng., Curt McLeod</u>	503-684-3478
Wave Broadband, Mike Mance	503-793-5650		
cc: Oregonian, Steve Mays	503-294-5915	US Postal Service, Dan McMillian	503-266-7720

**From:** Ronda Rozzell, Shop Complex  
**Date:** November 1, 2013  
**Subject:** Pre-Application Meeting for Verizon Wireless Cell Tower

Attached is a request for pre-application meeting.

A meeting with the applicant has been scheduled for **Thursday, November 14, 2013 at 10:30 am** at the **City Shops Conference Room, 1470 NE Territorial Road, Canby.**

Please come prepared to discuss any issues the applicant will need to address when submitting a site and design review application.

**If you are unable to attend** the meeting, but have comments please submit them in writing or call Ronda at 503-266-0798. They will be forwarded to the applicant.

Comments:

WE HAVE NO CONCERNS WITH THIS  
PROPOSAL.

  
Signature  
  
P.E.  
Title

November 4, 2013  
Date  
Curran-McLeod, Inc.  
Company

## Doug & Lindasue Spencer

925 NW 6<sup>th</sup> Ave  
[spencerfam@web-ster.com](mailto:spencerfam@web-ster.com)

Canby, OR 97013

503.266.3113 home  
971-227-1339 cell

September 10, 2013

SEP 10 REC'D

Planning Department  
PO Box 930  
Canby, OR 97013

Re: Application for Site & Design Review Type III & Conditional Use Permit -  
Verizon Wireless DR/CUP 14-02

To Whom It May Concern:

We have received information regarding the application for building a cellular tower in our neighborhood. We have reviewed the location proposed for this project, and we think a more appropriate location should be chosen.

As we understand it, the proposed site for the tower is directly adjacent to the front yard of a residence in the neighborhood. Having the tower right at the street and next to the front yard of a residence would potentially detract from the real estate value of the adjacent residence and thereby the rest of the neighborhood.

Since the proposed site borders a residential area, we think such a tower would be better located in a less prominent place, such as at the back of the property that is currently proposed for the project rather than at the front, street edge.

Sincerely,



Lindasue and Doug Spencer