



DEVELOPMENT SERVICES DEPARTMENT  
ENVIRONMENTAL COORDINATOR  
450 110<sup>th</sup> Ave NE., P.O. BOX 90012  
BELLEVUE, WA 98009-9012

**OPTIONAL DETERMINATION OF NON-SIGNIFICANCE (DNS) NOTICE MATERIALS**

The attached materials are being sent to you pursuant to the requirements for the Optional DNS Process (WAC 197-11-355). A DNS on the attached proposal is likely. This may be the only opportunity to comment on environmental impacts of the proposal. Mitigation measures from standard codes will apply. Project review may require mitigation regardless of whether an EIS is prepared. A copy of the subsequent threshold determination for this proposal may be obtained upon request.

File No. 13-133534-LA  
Project Name/Address: SEA Bellevue High/10416 SE Wolverine Way  
Planner: Laurie Tyler  
Phone Number: (425)-452-2728

**Minimum Comment Period: February 20, 2014, 5PM**

Materials included in this Notice:

- Blue Bulletin
- Checklist
- Vicinity Map
- Plans
- Other:

**ENVIRONMENTAL CHECKLIST**

10/9/2009

Thank you in advance for your cooperation and adherence to these procedures. If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call Development Services (425-452-6800) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Assistance for the hearing impaired: Dial 711 (Telecommunications Relay Service).

**INTRODUCTION****Purpose of the Checklist:**

The State Environmental Policy Act (SEPA), Chapter 43.21c RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the City of Bellevue identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the City decide whether an EIS is required.

**Instructions for Applicants:**

This environmental checklist asks you to describe some basic information about your proposal. Answer the questions briefly, with the most precise information known, or give the best description you can. You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer or if a question does not apply to your proposal, write "do not know" or "does not apply." Giving complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the Planner in the Permit Center can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. Include reference to any reports on studies that you are aware of which are relevant to the answers you provide. The City may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impacts.

**Use of a Checklist for Nonproject Proposals:** *A nonproject proposal includes plans, policies, and programs where actions are different or broader than a single site-specific proposal.*

For nonproject proposals, complete the Environmental Checklist even though you may answer "does not apply" to most questions. In addition, complete the Supplemental Sheet for Nonproject Actions available from Permit Processing.

For nonproject actions, the references in the checklist to the words *project*, *applicant*, and *property* or *site* should be read as *proposal*, *proposer*, and *affected geographic area*, respectively.

**Attach an 8 ½" x 11 vicinity map which accurately locates the proposed site.**

**ENVIRONMENTAL CHECKLIST**

4/11/2013

If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call Development Services (425-452-6800) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Assistance for the hearing impaired: Dial 711 (Telecommunications Relay Service).

**BACKGROUND INFORMATION**

Property Owner: Bellevue School District  
Proponent: Seattle SMSA Limited Partnership d/b/a Verizon Wireless c/o Apeiron Real Estate, Inc.  
Contact Person: Melissa Helland  
(If different from the owner. All questions and correspondence will be directed to the individual listed.)  
Address: 17030 4th Ave. SE, Bothell, WA 98012  
Phone: 425-308-8710

Proposal Title: VZW @ SEA Bellevue High (Antenna Modification)  
Proposal Location: 10416 SE WOLVERINE WAY, Bellevue, WA 98004  
(Street address and nearest cross street or intersection) Provide a legal description if available.  
Please attach an 8 ½" x 11" vicinity map that accurately locates the proposal site.

- Give an accurate, brief description of the proposal's scope and nature:
1. General description: VZW is proposing to add (3) new 4' antennas and (6) new diplexers to an existing pole.
  2. Acreage of site: 39.77 acres (property) / the actual site area consists of a pole that is 48" in diameter.
  3. Number of dwelling units/buildings to be demolished: N/A
  4. Number of dwelling units/buildings to be constructed: N/A
  5. Square footage of buildings to be demolished: N/A
  6. Square footage of buildings to be constructed: N/A
  7. Quantity of earth movement (in cubic yards): N/A-there will be no ground disturbance.
  8. Proposed land use: No change in current Land Use. Modification to existing Wireless Communications Facility.
  9. Design features, including building height, number of stories and proposed exterior materials:  
Adding (3) new antennas to an existing Wireless Communications Facility. There will be no height increase. Antennas will be painted to match the existing pole.
  10. Other

Estimated date of completion of the proposal or timing of phasing:

Approximately 5 business days.

Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No plans exist at this time for future additions.

List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

There have been no known environmental information prepared directly relating to this project.

Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. List dates applied for and file numbers, if known.

No additional application information is known by Applicant.

List any government approvals or permits that will be needed for your proposal, if known. If permits have been applied for, list application date and file numbers, if known.

Wireless Communications Facilities Permit is required and application has been submitted-#13-133534-LA  
Building Permit #-TBD

Please provide one or more of the following exhibits, if applicable to your proposal.  
(Please check appropriate box(es) for exhibits submitted with your proposal):

- Land Use Reclassification (rezone) Map of existing and proposed zoning
- Preliminary Plat or Planned Unit Development  
Preliminary plat map
- Clearing & Grading Permit  
Plan of existing and proposed grading  
Development plans
- Building Permit (or Design Review)  
Site plan  
Clearing & grading plan
- Shoreline Management Permit  
Site plan

## A. ENVIRONMENTAL ELEMENTS

### 1. Earth

- a. General description of the site:  Flat  Rolling  Hilly  Steep slopes  Mountains  Other
- b. What is the steepest slope on the site (approximate percent slope)?  
The site location is flat. There is a gradual slope from west to east (from the site to the school track)-8%
- c. What general types of soil are found on the site (for example, clay, sand, gravel, peat, and muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.  
Gravelly fine sandy loam (grass & pavement).

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

There are no observed indications of unstable soils.

- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

N/A-No ground work is being proposed.

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

N/A-No ground work is being proposed.

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

N/A-No ground work is being proposed.

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

N/A-No ground work is being proposed.

## 2. AIR

- a. What types of emissions to the air would result from the proposal (i.e. dust, automobile odors, and industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

During construction there will be construction vehicle traffic. After construction, a light-duty truck for routine maintenance visits the site approximately once every (4)-(6) weeks.

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No known off-site emissions will affect this proposed modification.

- c. Proposed measures to reduce or control emissions or other impacts to the air, if any:

There are no significant emissions as a result of this site, and as such no impact abatement measures are needed or proposed.

### 3. WATER

#### a. Surface

- (1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

No are known.

- (2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If Yes, please describe and attach available plans.

N/A

- (3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

N/A

- (4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

- (5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

No.

- (6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

#### b. Ground

- (1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description.

No.

- (2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals...; agricultural; etc.) Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

This is an unmanned facility and no water will be required, nor discharge of wastewater or sewage.

c. Water Runoff (Including storm water)

- (1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

N/A

- (2) Could waste materials enter ground or surface waters? If so, generally describe.

The proposed development does not generate any waste materials, and as such, it is highly unlikely that material could enter the ground or surface waters.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

No additional measures are necessary.

#### 4. Plants

a. Check or circle types of vegetation found on the site:

- deciduous tree: alder, maple, aspen, other
- evergreen tree: fir, cedar, pine, other In the surrounding area, but not at the Wireless Facility
- shrubs
- grass
- pasture
- crop or grain
- wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
- water plants: water lily, eelgrass, milfoil, other
- other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

N/A-there will be no ground disturbance.

c. List threatened or endangered species known to be on or near the site.

None known.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

N/A-there will be no ground disturbance.

## 5. ANIMALS

- a. Check or circle any birds and animals which have been observed on or near the site or are known to be on or near the site:
- Birds: hawk, heron, eagle, songbirds, other:
  - Mammals: deer, bear, elk, beaver, other:
  - Fish: bass, salmon, trout, herring, shellfish, other:
- b. List any threatened or endangered species known to be on or near the site.  
None known on or near the site.
- c. Is the site part of a migration route? If so, explain.  
None known, besides general bird migration throughout region.
- d. Proposed measures to preserve or enhance wildlife, if any:  
There will be no ground disturbance & minimal work proposed to an existing structure-no measures taken.

## 6. Energy and Natural Resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy need? Describe whether it will be used for heating, manufacturing, etc.  
The only source of energy used at the site shall be electricity for powering the telecommunications equip.
- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.  
No.
- c. What kinds of energy conservation features are included in the plans of the proposal? List other proposed measures to reduce or control energy impacts, if any:  
Applicant is motivated to use energy efficient equip. when possible to minimize operating expenses.

## 7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.  
It is believed that this proposed development does not represent any special risk or environmental health hazards.
- (1) Describe special emergency services that might be required.  
It is not believed the proposal shall require any special emergency services. The proposal will in fact enhance emergency services in the area by allowing both emergency workers and citizens to place wireless calls during an emergency.
  - (2) Proposed measures to reduce or control environmental health hazards, if any.  
See 7(a) above.
- b. Noise
- (1) What types of noise exist in the area which may affect your project (for example, traffic, equipment, operation, other)?  
No noise in the area shall impact the unmanned facility.

- (2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example, traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Short term, this project will generate general traffic and construction noise typical to any minor construction project. Once the project is completed, an equipment technician will visit the site approximately once per month in a light-duty truck.

- (3) Proposed measures to reduce or control noise impacts, if any:  
No noise producing equipment is associated with this project.

## 8. Land and Shoreline Use

- a. What is the current use of the site and adjacent properties?  
School (Public), Wireless Communications Facility, N of site: School, W: Vegetation, E: Homes, S: Homes
- b. Has the site been used for agriculture? If so, describe.  
No.
- c. Describe any structures on the site.  
School, outdoor sheds, light-poles, WCF, outdoor track
- d. Will any structures be demolished? If so, what?  
No. No ground disturbances associated with this project.
- e. What is the current zoning classification of the site?  
R-4
- f. What is the current comprehensive plan designation of the site?  
School
- g. If applicable, what is the current shoreline master program designation of the site?  
N/A
- h. Has any part of the site been classified as an “environmentally sensitive” area? If so, specify.  
Not that Applicant is aware of.
- i. Approximately how many people would reside or work in the completed project?  
The facility will be un-manned. A technician would visit this site approximately once per month for routine maintenance checkups.
- j. Approximately how many people would the completed project displace?  
No people would be displaced by this project.
- k. Proposed measures to avoid or reduce displacement impacts, if any:  
No people would be displaced by this project, therefore, no measures to avoid impacts are proposed.
- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:  
Applicant is adding (3) 4' antennas and (6) diplexers to an existing WCF pole, which has been designed to accommodate multiple wireless carriers. Applicant proposes to install the antennas on the existing structure and paint the antennas to match the pole and other antennas located on the pole. The proposal will create minimal visual impact and is compatible with with the existing use of the site.

## 9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.  
N/A-This is a WCF project.
- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.  
N/A-This is a minor mod to a WCF only.
- c. Proposed measures to reduce or control housing impacts, if any:  
N/A

## 10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?  
No new proposed structure. Applicant is simply attaching antennas to an existing structure. No height chng
- b. What views in the immediate vicinity would be altered or obstructed?  
No views will be obstructed by proposed minor modification.
- c. Proposed measures to reduce or control aesthetic impacts, if any:  
There will be minimal visual impact. The proposed antennas will be painted to match the existing structure.

## 11. Light and Glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?  
N/A
- b. Could light or glare from the finished project be a safety hazard or interfere with views?  
No.
- c. What existing off-site sources of light or glare may affect your proposal?  
None.
- d. Proposed measures to reduce or control light or glare impacts, if any:  
N/A-Applicant's proposal will not create any lighting or glare impacts.

## 12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?  
There is a school and track located in the general vicinity.
- b. Would the proposed project displace any existing recreational uses? If so, describe.  
No.
- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:  
None are needed, therefore, none are proposed.

## 13. Historic and Cultural Preservation

- a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.  
None known.
- b. Generally describe any landmarks or evidence of historic, archeological, scientific, or cultural importance known to be on or next to the site.  
None known.
- c. Proposed measures to reduce or control impacts, if any:  
None are needed, therefore, none are proposed.

## 14. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.  
No public streets or highways serving the site. There is an existing private paved access road to site.
- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?  
No-N/A. This is an unmanned facility and no public use is proposed.
- c. How many parking spaces would be completed project have? How many would the project eliminate?  
No change to existing parking. No ground work proposed.
- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).  
No.
- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.  
No.
- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.  
An equipment technician would visit the site approximately one time per month for routine maintenance.
- g. Proposed measures to reduce or control transportation impacts, if any:  
None are needed, therefore, none are proposed.

**15. Public Services**

- a. Would the project result in an increased need for the public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

Proposed site is an unmanned facility. The equipment will have an alarm system connected to a central facility that is monitored 24/7. The central facility has speed-dial connections to local emergency services.

- b. Proposed measures to reduce or control direct impacts on public services, if any.

None are needed, therefore, none are proposed.

**16. Utilities**

- a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

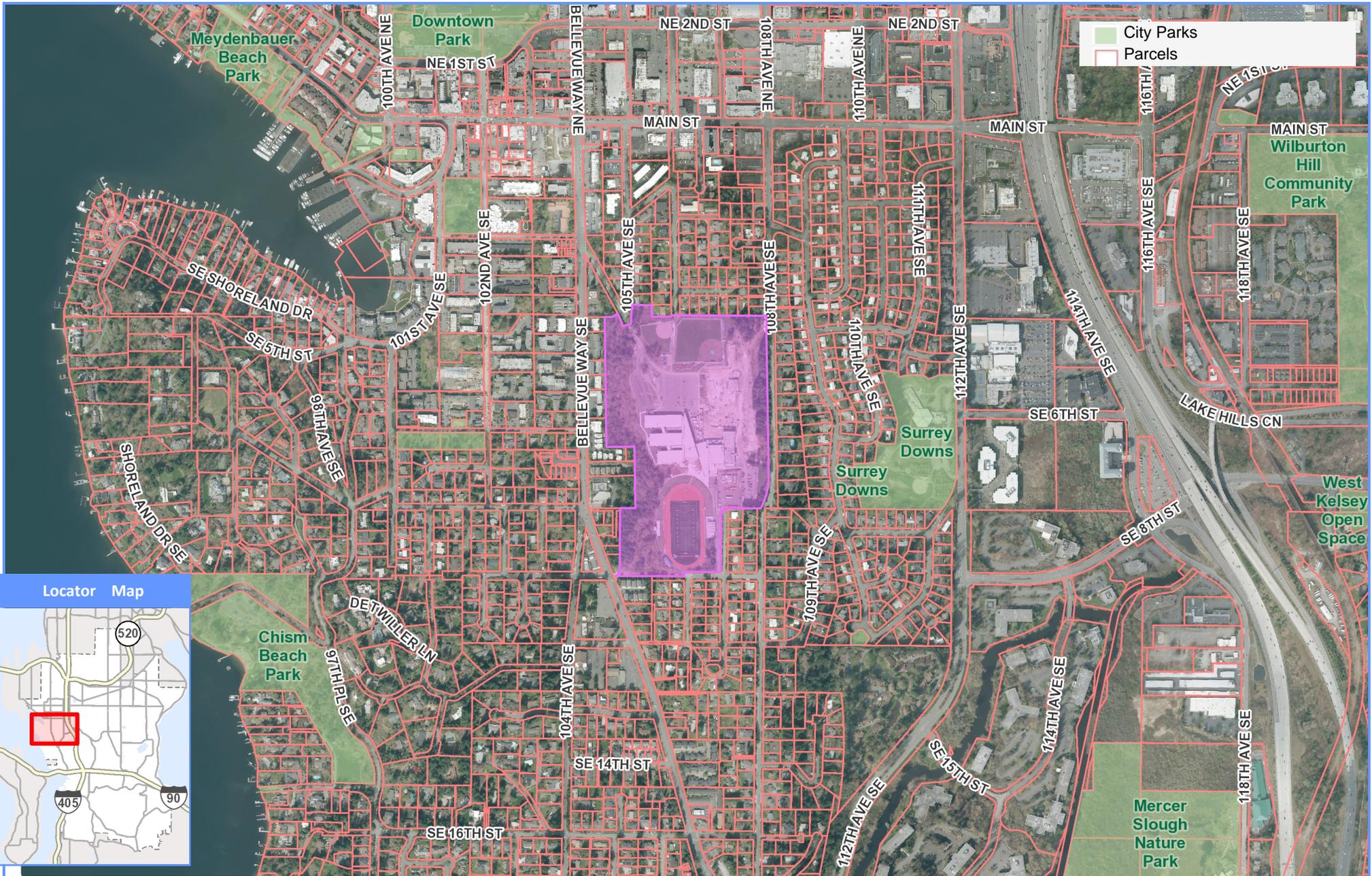
No new utilities.

**Signature**

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature.....

Date Submitted.....01/22/2014.....



# SEA Bellevue High Vicinity Map

0 900 1,800  
Scale 1: 10,799 Feet

**SHEET INDEX**

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 E-1 ELECTRICAL GROUNDING PLAN, NOTES AND DETAILS

**WASHINGTON STATE CODE COMPLIANCE:**  
 2012 IBC, STANDARDS AND AMENDMENTS, WAC 51-50  
 2012 IMC, STANDARDS AND AMENDMENTS, WAC 51-52  
 2012 IFG, STANDARDS AND AMENDMENTS, WAC 51-54  
 2012 UPC, STANDARDS AND AMENDMENTS, WAC 51-56, 51-57

**PROJECT SUMMARY**

**APPLICANT:**  
 VERIZON WIRELESS  
 3350 161ST AVE SE  
 BELLEVUE, WA 98008

**APPLICANT AGENT:**  
 APEIRON REAL STATE, INC  
 CONTACT: MELISSA HELLAND  
 PHONE: 425-308-8710  
 EMAIL: MELISSA@APEIRON-RE.COM

**ARCHITECT/ELECTRICAL ENGINEER:**  
 CAMP 4 ASSOCIATES INC.  
 19401 40TH AVE W SUITE 200  
 LYNNWOOD WA, 98036  
 CONTACT: ERIC CAMP  
 PHONE: 425-740-6390

**LEGAL DESCRIPTION:**  
 SECTION 10 TOWNSHIP 18 RANGE 1W QUARTER NW 3W 4  
 NE 9W BLA010013LA TR D DOCUMENT 3378046

**SITE NAME:** SEA BELLEVUE HIGH  
**SITE ADDRESS:** 10416 SE WOLVERINE WAY  
 BELLEVUE, WA 98004  
**LAND OWNER:** BELLEVUE SCHOOL DISTRICT 405  
**STRUCTURE OWNER:** BELLEVUE SCHOOL DISTRICT 405  
**JURISDICTION:** CITY OF BELLEVUE  
**PARCEL NUMBER:** 0682000005  
**ZONING:** RESIDENTIAL R-4  
**OCCUPANCY:** U-UTILITY/M&C (UNMANNED)  
**CONSTRUCTION TYPE:** IIB NON COMBUSTIBLE

**PROJECT DESCRIPTION:**  
 THE SCOPE OF WORK INCLUDES:  
 ADD (3) NEW ANTENNAS AND NEW ANTENNA FRAMES TO  
 ACCOMMODATE EXISTING AND (3) NEW ANTENNAS, ON  
 EXISTING 120' HIGH MONOPOLE.

**CONFIDENTIAL AND PROPRIETARY**  
 Not for disclosure outside VERIZON WIRELESS  
 without permission.



**SEA BELLEVUE HIGH**

( AWS )

10416 SE WOLVERINE WAY  
 BELLEVUE, WA 98004

LAT: 47° 36' 6.98" N  
 LONG: 122° 11' 56.87" W  
 ELEVATION 159.8' AMSL

**SIGNATURE BLOCK**

TITLE	SIGNATURE	DATE
CONSTRUCTION MANAGER		
RF ENGINEER		
REAL ESTATE		
SITE ACQUISITION		
PROPERTY OWNER		
TOWER OWNER		

**VICINITY MAP**



**DRIVING DIRECTIONS FROM VERIZON WIRELESS (3350 161ST AVE SE, BELLEVUE WA):**  
 DEPART 3245 158TH AVE SE, BELLEVUE, WA 98008  
 TURN RIGHT (WEST) ONTO SE EASTGATE WAY  
 TURN LEFT (WEST) ONTO RAMP  
 TAKE RAMP (LEFT) ONTO I-90 MOUNTAINS TO SOUND GREENWAY-I-90  
 AT EXIT 9, TURN OFF ONTO RAMP  
 KEEP STRAIGHT ONTO BELLEVUE WAY (SE)  
 KEEP STRAIGHT ONTO BELLEVUE WAY (SE) 104TH AVE SE  
 ARRIVE 10416 SE WOLVERINE WAY



**SEA-BELLEVUE HIGH**  
 ( AWS )  
 10416 SE WOLVERINE WAY  
 BELLEVUE, WA 98004



**PROJECT MANAGER:** EJC

**PREPARED BY:** AIO

**APPROVED BY:** EJC

AIO 08-13-13 ISSUED FOR FINAL PERMIT  
 AIO 06-05-13 ISSUED FOR PRELIM. PERMIT  
 05-08-13 ISSUED FOR PRELIM. PERMIT



**SHEET NAME**  
 TITLE SHEET

**SHEET NUMBER**  
 T1.0

**PROJECT NUMBER**  
 20130889101

**CONTRACTOR NOTES:**

THE ARCHITECTS/ENGINEERS HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. CONTRACTORS BIDDING THE JOB ARE NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCLUDE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS. THE BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE ARCHITECT/ENGINEER OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED OTHERWISE.

**GENERAL NOTES:**

DRAWINGS ARE NOT TO BE SCALED. WRITTEN DIMENSIONS TAKE PRECEDENCE, AND THIS SET OF PLANS IS INTENDED TO BE USED FOR DIAGRAMMATIC PURPOSES ONLY, UNLESS NOTED OTHERWISE. THE GENERAL CONTRACTOR'S SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR, AND ANYTHING ELSE DEEMED NECESSARY TO COMPLETE INSTALLATIONS AS DESCRIBED HEREIN.

PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS INVOLVED SHALL VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE NEW PROJECT, WITH THE CONSTRUCTION AND CONTRACT DOCUMENTS, FIELD CONDITIONS AND CONFIRM THAT THE PROJECT MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY ERRORS, OMISSIONS, OR DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER IN WRITING.

THE GENERAL CONTRACTOR SHALL RECEIVE WRITTEN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.

THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO MANUFACTURER'S/ VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.

ALL WORK PERFORMED ON PROJECT AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK.

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

ANTENNA SUPPORTING POLE IS UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION SUB-CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUB-CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF PERSONNEL AND PROPERTY FROM HAZARDOUS EXPOSURE TO OVERHEAD DANGERS.

GENERAL CONTRACTOR SHALL PROVIDE AT THE PROJECT SITE A FULL SET OF CONSTRUCTION DOCUMENTS UPDATED WITH THE LATEST REVISIONS AND ADDENDA OR CLARIFICATIONS FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.

DETAILS INCLUDED HEREIN ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB CONDITIONS OR SITUATIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE SCOPE OF WORK.

THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION UPON COMPLETION OF WORK. CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.

CONTRACTOR SHALL ENSURE THE GENERAL WORK AREA IS KEPT CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR MUDGES OF ANY NATURE.

THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL AND NATIONAL CODES, REGULATIONS AND SAFETY REGULATIONS, ALL OSHA REGULATIONS, ALL PUBLIC AND MUNICIPAL AUTHORITIES, AND ANY UTILITY COMPANIES' REGULATIONS AND DIRECTIVES.

THE DRAWINGS AND SPECIFICATIONS ARE A GENERAL DIRECTIVE FOR THE SCOPE OF WORK. EXACT DIMENSIONS AND LOCATIONS MAY CHANGE IN THE FIELD. THE CONTRACTOR IS TO VERIFY THE DIMENSIONS AND LOCATIONS AND REPORT ANY AND ALL DISCREPANCIES TO REPRESENTATIVE. ANY MINOR ERRORS AND OMISSIONS IN THE DRAWINGS AND SPECIFICATIONS DOES NOT EXCLUDE THE CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.

CONTRACTOR IS RESPONSIBLE FOR FIELD MEASUREMENTS TO CONFIRM LENGTHS OF CABLE TRAYS AND ELECTRICAL LINES AND ANTENNA MOUNTING.

VERIFICATION THAT EXISTING TOWER/POLE/STRUCTURE CAN SUPPORT THE PROPOSED ANTENNA, COAX & ADDITIONAL EQUIPMENT LOADING IS TO BE DONE BY OTHERS.

**CIVIL NOTES:**

- ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND STIPULATED IN THE SPECIFICATION PROJECT SUMMARY.
- RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE FCS EQUIPMENT, TOWER AREAS, AND ADJACENT BUILDINGS.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUBGRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO THE CRUSHED STONE APPLICATION.

**SUBGRADE AND BASE PREPARATION:**

- FOR SLAB-ON-GRADE CONSTRUCTION IT WILL BE NECESSARY TO OVEREXCAVATE THE SITE BY 2'-0" AND IMPORT AN APPROVED GRANULAR FILL. THE FILL SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY UNIT WEIGHT WITH A MOISTURE CONTENT WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D-1557). COMPACTION REQUIREMENTS APPLY TO BACKFILL FOR UTILITY TRENCHES AND FOUNDATION EXCAVATIONS WITHIN STRUCTURES, DRIVEWAYS, OR PARKING LOT AREAS.
- COMPACTION SHALL BE ACCOMPLISHED BY PLACING THE FILL IN SUCCESSIVE, HORIZONTAL, APPROXIMATELY SIX- TO EIGHT-INCH LOOSE LIFTS AND MECHANICALLY COMPACTING EACH LIFT TO AT LEAST THE SPECIFIED MINIMUM DRY DENSITY.
- ANY ORGANIC MATERIAL, DELETERIOUS MATERIAL, OR DISTURBED SOIL SHALL BE REMOVED FROM FLATWORK AREAS.
- THE GROUND SURFACE SURROUNDING EXTERIOR STRUCTURES SHALL BE SLOPED TO DRAIN AWAY IN ALL DIRECTIONS.

**CONCRETE NOTES:**

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH A.C.I. 301, A.C.I. 318 AND THE SPECIFICATION CAST-IN-PLACE CONCRETE.
- UNLESS NOTED OTHERWISE, ALL CAST-IN-PLACE CONCRETE SHALL BE NORMAL WEIGHT, AIR-ENTRAINED CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 2500 POUNDS PER SQUARE INCH AT 28 DAYS. TYPE I-II PORTLAND CEMENT WILL BE USED WITH A MAXIMUM AGGREGATE SIZE OF 3/4" AND 6% 1% AIR ENTRAINMENT. ALL CONCRETE WILL HAVE A MAXIMUM WATER/CEMENT (W/C) RATIO OF 0.48.
- ALL CONCRETE FLATWORK SHALL HAVE A STIFF BROOM FINISH AND HAVE A SLOPE OF 1/8" PER FOOT UNLESS NOTED OTHERWISE.
- REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO A.S.T.M. A615, GRADE 60, DEFORMED.
- DETAIL, FABRICATE AND ERECT REINFORCEMENT BARS, INCLUDING BAR SUPPORTS, SPACERS, ETC. IN ACCORDANCE WITH "DETAILING OF CONC. REINFORCEMENT" (A.C.I. 315-20, REV. 1986).
- UNLESS OTHERWISE NOTED, ALL LAP SPLICES SHALL BE CLASS B CONFORMING TO ACI 318-05.
- A CHAMFER OF 1" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH A.C.I. 301 SECTION 4.2.4 UNLESS OTHERWISE NOTED.
- CONCRETE WORK SHALL BE COORDINATED WITH THE MECHANICAL, EQUIPMENT, AND ELECTRICAL WORK TO ASSURE THAT ALL AFFECTED PIPES, CONDUITS, INSERTS, ETC. ARE IN PLACE AND VERIFIED BEFORE PLACING CONCRETE.
- CONCRETE COVER FOR REINFORCING BARS SHALL CONFORM TO THE FOLLOWING UNLESS INDICATED OTHERWISE ON THE DRAWINGS:
 

-CONCRETE EXPOSED TO WEATHER OR IN CONTACT WITH GROUND -	2 INCHES
-CONCRETE CAST AGAINST EARTH-	3 INCHES
- COORDINATE LOCATION OF STEEL ANCHOR BOLTS WITH STEEL FABRICATOR PRIOR TO INSTALLATION IN FIELD.
- CONTRACTOR SHALL PROVIDE SLEEVES FOR ALL WALL/SLAB PENETRATIONS (PIPING, CONDUIT, ETC.) POWER, TELCO AND COAX TO ENTER SITE UNDER EQUIPMENT SLAB.

**METAL NOTES:**

**PART 1 - GENERAL**

- SECTION INCLUDES: STRUCTURAL STEEL FRAMING MEMBERS, BASE PLATES, PLATES, BARS AND GROUTING UNDER BASE PLATES.
- SUBMITTALS: SHOP DRAWINGS: INDICATE SIZES, SPACING, AND LOCATIONS OF STRUCTURAL MEMBERS, OPENINGS, CONNECTIONS, CAMBERS, LOADS, AND WELDED SECTIONS.
- QUALITY ASSURANCE
  - FABRICATE STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
  - PERFORM DESIGN UNDER DIRECT SUPERVISION OF A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE.

**PART 2 - PRODUCTS**

- MATERIALS:
  - STRUCTURAL STEEL MEMBERS: A57M A572, GRADE 50
  - STRUCTURAL TUBING: A57M A500, GRADE B
  - PIPE: A57M A53, TYPE E OR S, GRADE B
  - BOLTS, NUTS, AND WASHERS: A57M A325
  - ANCHOR BOLTS: A57M A307
  - WELDING MATERIALS: AWS D11, TYPE REQUIRED FOR MATERIALS BEING WELDED
  - GROUT: NON-SHRINK TYPE PREMIXED COMPOUND CONSISTING OF NONMETALLIC AGGREGATE, CEMENT, WATER REDUCING AND PLASTICIZING ADDITIVES, CAPABLE OF DEVELOPING A MINIMUM COMPRESSIVE STRENGTH OF 10000 psi AT 28 DAYS.
  - SHOP AND TOUCH-UP PRIMER: SSPC 15, TYPE 1, RED OXIDE
  - TOUCH-UP PRIMER FOR GALV. SURFACES: ZINC RICH TYPE
- FABRICATION: CONTINUOUSLY SEAL JOINTED MEMBERS BY CONTINUOUS WELDS. GRIND EXPOSED WELDS SMOOTH.
- FINISH:
  - PREPARE STRUCTURAL COMPONENT SURFACES IN ACCORDANCE WITH SSPC SP-1 TO SP-10 PROCEDURES.
  - STRUCTURAL STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED.

**PART 3 - EXECUTION**

- EXAMINATION AND PREPARATION: VERIFY THAT THE FIELD CONDITIONS ARE ACCEPTABLE.
- ERECTION:
  - ALLOW FOR ERECTION LOADS. PROVIDE TEMPORARY BRACING TO MAINTAIN FRAMING IN ALIGNMENT UNTIL COMPLETION OF ERECTION AND INSTALLATION OF PERMANENT BRIDGING AND BRACING.
  - FIELD WELD COMPONENTS INDICATED ON SHOP DRAWINGS.
  - DO NOT FIELD CUT OR ALTER STRUCTURAL MEMBERS WITHOUT APPROVAL OF THE ARCHITECT/ENGINEER.
  - AFTER ERECTION, TOUCH-UP WELDS, ABRASIONS, AND SURFACES NOT SHOP PRIMED OR GALVANIZED WITH TOUCH-UP PRIMERS AS SPECIFIED UNDER SECTION 05000-METALS, PART 2 - PRODUCTS, H 4 I. SURFACES TO BE IN CONTACT WITH CONCRETE NOT INCLUDED.
- FIELD QUALITY CONTROL: FIELD INSPECTION OF MEMBERS, CONNECTIONS, WELDS AND TORQUING.

**TELECOMMUNICATIONS WIRING COMPONENTS (COAXIAL ANTENNA CABLE)**

- GENERAL
  - ALL MATERIALS, PRODUCTS OR PROCEDURES INCORPORATED INTO WORK SHALL BE NEW AND OF STANDARD COMMERCIAL QUALITY.
  - CERTAIN MATERIALS AND PRODUCTS WILL BE SUPPLIED BY THE OWNER (REFER TO GENERAL CONDITIONS FOR THE LIST OF OWNER FURNISHED EQUIPMENT, MATERIALS AND SUPPLIES FOR THESE ITEMS). THE CONTRACTOR IS RESPONSIBLE FOR PICKUP AND DELIVERY OF ALL SUCH MATERIALS.
  - ALL OTHER MATERIALS AND PRODUCTS SPECIFIED IN THE CONTRACT DOCUMENTS SHALL BE SUPPLIED BY THE CONTRACTOR.
- MATERIALS:
  - COAXIAL CABLE:
    - INSTALL COAXIAL CABLE AND TERMINATIONS BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS WITH COAXIAL CABLES SUPPORTED AT NO MORE THAN 3'-0" O.C. WEATHERPROOF ALL CONNECTORS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF EQUIPMENT LOCATION UNLESS OTHERWISE STATED.
    - ALL COAX RUN LENGTHS GREATER THAN 143 FEET SHALL BE 1-5/8" AND IN LENGTH LESS THAN OR EQUAL TO 143 FEET SHALL BE 1/2".
- ANTENNA AND COAXIAL CABLE GROUNDING
  - ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)
- COAXIAL CABLE IDENTIFICATION
  - TO PROVIDE EASY IDENTIFICATION AND UNIFORM MARKING OF ANTENNA CABLING, PLASTIC TAGS SHALL BE USED AT THE FOLLOWING LOCATIONS:
    - FIRST LOCATION IS AT THE END OF THE COAX NEAREST THE ANTENNA (WHERE THE COAXIAL CABLE AND JUMPER ARE CONNECTED).
    - SECOND LOCATION IS INSIDE THE EQUIPMENT SHELTER NEAR THE WAVEGUIDE ENTRY PORT.
  - USE ANDREW CABLE TIES (PT.# 27290) TO SECURE IDENTIFICATION TAGS.
- TESTING
 

VERIZON WIRELESS SHALL PROVIDE AN INDEPENDENT TESTING AGENCY TO PERFORM THE COAXIAL SWEET TEST & REPORT. THE CONTRACTOR IS TO PROVIDE CLIMBER / QUALIFIED PERSONNEL TO ASSIST IN ANY REPAIRS AND WEATHERPROOFING ONCE THE TEST IS COMPLETE. THE CONTRACTOR IS TO PROVIDE VERIZON WIRELESS A MINIMUM OF 48 HOURS NOTICE PRIOR TO THE TIME OF THE SWEET TEST.

**ELECTRICAL NOTES:**

INSTALLATION OF SECONDARY POWER AND CONNECTION TO METER SHALL BE COMPLETED IN COMPLIANCE WITH NATIONAL ELECTRIC CODE, NFPA 70, AND THE STATE LAWS, RULES AND REGULATIONS FOR INSTALLING ELECTRIC WIRES & EQUIPMENT, ALL LATEST 1996E, AND WITH SPECIFICATIONS PER A.S.T.M. B 231, B 400, I.C.E.A. S651-401, I.C.E.A. P81-570, & LOCAL P.U.D.

PROVIDE A METER BASE PER LOCAL UTILITY STANDARDS. MOUNT ON SIDE OF OWNER FURNISHED BACK BOARD.

UNDERGROUND CONDUIT SHALL BE RIGID POLYVINYL CHLORIDE CONDUIT, SCHEDULE 40, TYPE I, CONFORMING TO UL ARTICLE 68; WESTERN PLASTICS OR CARLON MANUFACTURER. COUPLINGS SHALL BE SLIP-ON SOLVENT SEALED TYPICAL WESTERN TYPE COMPATIBLE WITH PVC DUCT. ALL BENDS SHALL BE "WIDE SWEET" TYPE WITH A 24" MINIMUM RADIUS. ALL CONDUIT UNDER ROADS SHALL BE RGS, (OR PVC ENCASED IN 8"x18" RED CONCRETE DUCTBANK).

CONDUIT USED INDOORS SHALL BE E.M.T., AND RIGID GALVANIZED STEEL FOR OUTDOORS. COUPLINGS SHALL BE RIGID STEEL AND COMPRESSION TYPE FOR E.M.T. SET SCREW FITTINGS ARE NOT PERMITTED. FOR ALL STUBS-UPS, USE RIGID GALVANIZED STEEL CONDUIT.

WIRE AND CABLE SHALL BE OF THE TYPE AND SIZE AS REQUIRED BY NEC. THERE WILL BE NO SPLICES ALLOWED. PROVIDE HDPE PULLING HAND HOLES AS NEEDED.

CONTRACTOR SHALL PROVIDE TEST OF THE GROUNDING SYSTEM BY CERTIFIED TESTING AGENT. PROVIDE INDEPENDENT TEST RESULTS TO THE PROJECT MANAGER FOR REVIEW. GROUNDING SYSTEM RESISTANCE TO GROUND SHALL NOT EXCEED 5 OHMS. ALL ABOVE GRADE INTERIOR GROUNDING CONNECTORS SHALL BE DOUBLE-LUG COMPRESSION TYPE. ALL BELOW GRADE AND EXPOSED EXTERIOR GROUNDING CONNECTIONS TO PERMANENT EQUIPMENT AND FIXED BUILDING ELEMENTS SHALL BE CADWELD TYPE. CARE SHALL BE TAKEN TO REVIEW CONNECTION LOCATIONS AND MATERIAL TYPES TO AVOID POSSIBLE GALVANIC CORROSION. ALL EXPOSED GROUNDING CONNECTIONS TO BE COATED WITH ANTI-CORROSION AGENT SUCH AS "NO-OXY" "NOALOX" OR "PENETROX". VERIFY PRODUCT WITH PROJECT MANAGER. ALL BOLTS, WASHERS AND NUTS USED ON GROUNDING CONNECTIONS SHALL BE STAINLESS STEEL.

ALL EXTERIOR GROUND BARS SHALL BE COATED WITH ANTI-CORROSION AGENT SUCH AS LPS-3 OR AS PER NOTE 6 ABOVE.

ALL JUNCTION AND OUTLET BOXES TO BE LABELED WITH KROY TAPE, OR EQUAL, DESIGNATING ALL CIRCUIT NUMBERS CONTAINED IN EACH BOX.

CONTRACTOR TO ENSURE ILC PROVIDED WITH (2) INTERNAL TVSS.

CONTRACTOR SHALL COORDINATE WITH SITE SURVEY TO LOCATE EXISTING UNDERGROUND UTILITIES. WHEREVER POTENTIAL CONFLICTS/ INTERFERENCES EXIST, HAND EXCAVATE TO AVOID DAMAGE. CONTACT ALL UTILITIES TO LOCATE UNDERGROUND PIPING IN PUBLIC ROW.

VERIFY THAT A.I.C. OF THE UTILITY DOES NOT EXCEED THE A.I.C. RATING OF THE PROVIDED EQUIPMENT SHELTER PACKAGE. IF OVER 10KAIC, PROVIDE FUSIBLE SERVICE ENTRANCE SWITCH AND CONFIRM LOWERING OF AIC TO ACCEPTABLE LEVELS.

UTILITY POINTS OF SERVICE AND WORK / MATERIALS SHOWN ARE BASED UPON PRELIMINARY INFORMATION PROVIDED BY THE UTILITY COMPANIES AND ARE FOR BID PURPOSES ONLY.

CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY FOR FINAL AND EXACT WORK / MATERIALS REQUIREMENTS AND CONSTRUCT TO UTILITY COMPANY ENGINEERING PLANS AND SPECIFICATIONS ONLY. CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUIT, FULL ROPES, CABLES, PULL BOXES, CONCRETE ENCASMENT OF CONDUIT (IF REQUIRED), TRANSFORMER PAD, BARRIERS, POLE RISERS, TRENCHING, BACKFILL, PAY ALL UTILITY COMPANY FEES AND INCLUDE ALL REQUIREMENTS IN SCOPE OF WORK.

**GROUNDING NOTES:**

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE DESIGN AND CONSTRUCTION SPECIFICATIONS AND ALL APPLICABLE LOCAL CODES.
- CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
- THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
- ALL GROUND CONNECTIONS BELOW GRADE SHALL BE EXOTHERMIC (CADWELD).
- ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR & EXTERIOR) SHALL BE FORMED USING TWO (2) HIGH PRESSURE CRIMPS.
- ALL EXOTHERMIC CONNECTIONS TO THE GROUND RODS SHALL START AT THE TOP & HAVE A VERTICAL SEPARATION OF 6" FOR EVERY ADDITIONAL CONNECTION.
- 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.
- GROUND RODS SHALL BE STAINLESS STEEL OR COPPER CLAD STEEL, 5/8" x 10-FT. LONG (OR NOTED OTHERWISE ON PLANS), AND SHALL BE DRIVEN VERTICALLY WITH THEIR TOPS 18" BELOW FINAL GRADE OR 6" BELOW FROST LINE FOR MAXIMUM DEPTH.
- CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
- USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
- GROUND RING SHALL BE LOCATED A MINIMUM OF 24" BELOW GRADE OR 6" MINIMUM BELOW THE FROST LINE.
- INSTALL GROUND CONDUCTORS AND GROUND ROD MINIMUM OF 1'-0" FROM EQUIPMENT CONCRETE PAD, SPREAD FOOTING, OR FENCE.
- EXOTHERMIC WELD GROUND CONNECTION TO FENCE POST: TREAT WITH A COLD GALVANIZED SPRAY.
- OBSERVE N.E.C. AND LOCAL UTILITY REQUIREMENTS FOR ELECTRICAL SERVICE GROUNDING
- GROUNDING ATTACHMENT TO TOWER SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS OR AT GROUNDING POINTS PROVIDED (2 MINIMUM)
- MAXIMUM RESISTANCE OF THE COMPLETED GROUND SYSTEM SHALL NOT EXCEED 5 OHMS.
- CONTRACTOR TO VERIFY CURRENT GROUNDING STANDARDS PRIOR TO CONSTRUCTION.

**1 GENERAL NOTES**



**SEA-BELLEVUE HIGH**  
( AWS )  
10416 SE WOLVERINE WAY  
BELLEVUE, WA 98004



PROJECT MANAGER: EJC

PREPARED BY: AJO

APPROVED BY: EJC

AJO	08-13-13	ISSUED FOR FINAL PERMIT
AJO	06-05-13	ISSUED FOR PRELIM. PERMIT
	05-08-13	ISSUED FOR PRELIM. PERMIT

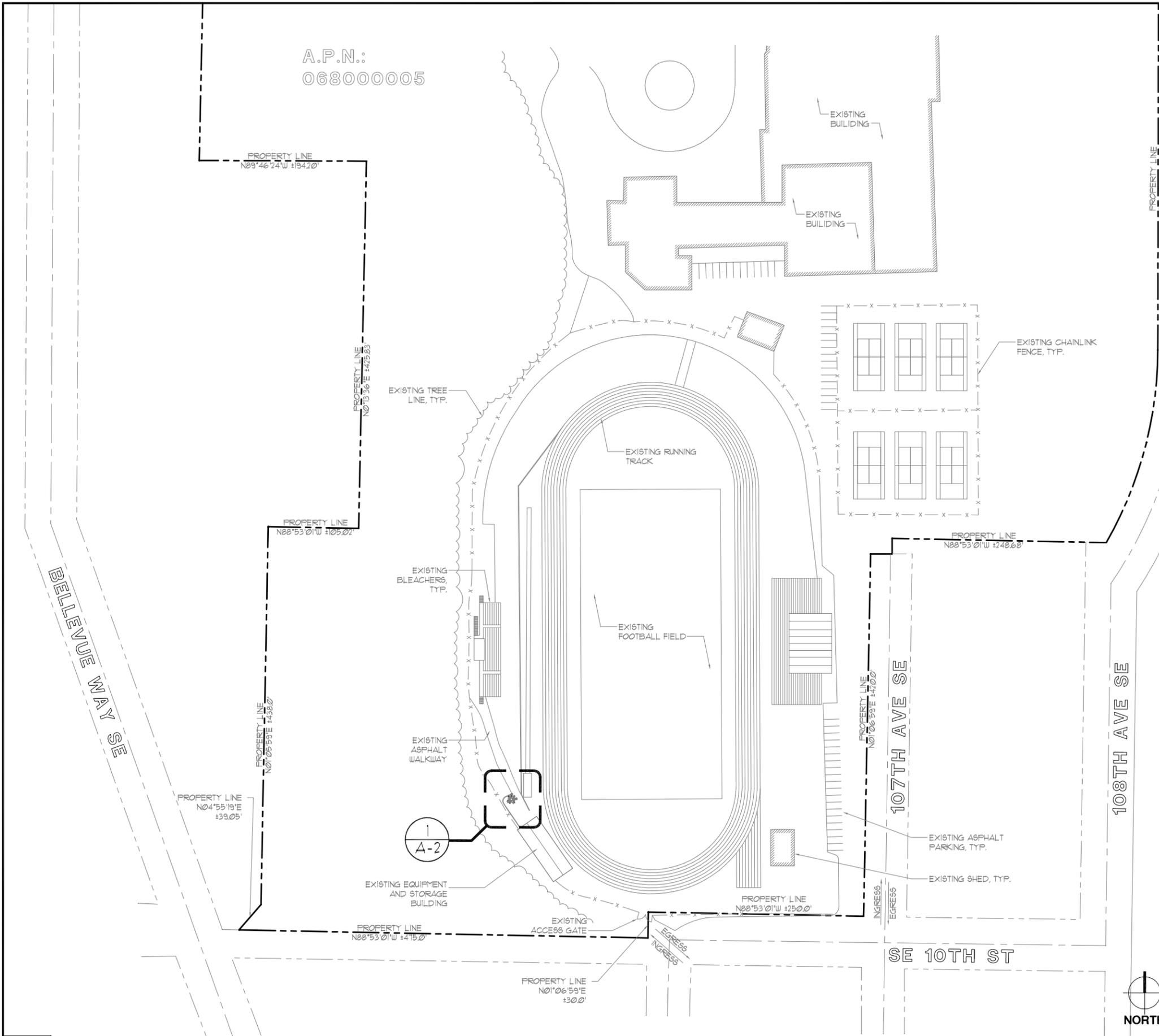


**SHEET NAME**  
**GENERAL NOTES**

**SHEET NUMBER**  
**SP-1**

**PROJECT NUMBER**  
20130889101

A.P.N.:  
068000005



LEGEND		
EXISTING		NEW
-SAS-	SANITARY SEWER	-SAS-
-STS-	STORM SEWER	-STS-
-W-	WATER MAIN	-W-
	SANITARY MANHOLE ELEVATIONS	
	STORM STRUCTURE ELEVATIONS	
- - -	PROPERTY LINE & ROW	- - -
	SURFACE DRAINAGE	
○	LIGHT STANDARD	●
○	STREET LIGHT	○
672.75	SPOT ELEVATION	672.75
672	CONTOUR	672
-G-G-	GAS MAIN	-G-G-
⊙	MANHOLE	⊙
○	CATCH BASIN	○
⊕	FIRE HYDRANT	⊕
- - -	EASEMENT LINE	- - -
- - -UE/UT-	BURIED UTILITY LINE	- - -UE/UT-
⊕	UTILITY POLE	⊕
- - -OE/OT-	OVERHEAD UTILITY LINE	- - -OE/OT-
	BUILDING	

**APEIRON**  
REAL ESTATE, INC

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PROJECT MANAGER: EJC

PREPARED BY: AIO

APPROVED BY: EJC

AIO	08-13-13	ISSUED FOR FINAL PERMIT
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7887 REGISTERED ARCHITECT  
  
JAY Y. SEO  
STATE OF WASHINGTON 8-13-13

SHEET NAME  
**OVERALL SITE PLAN**

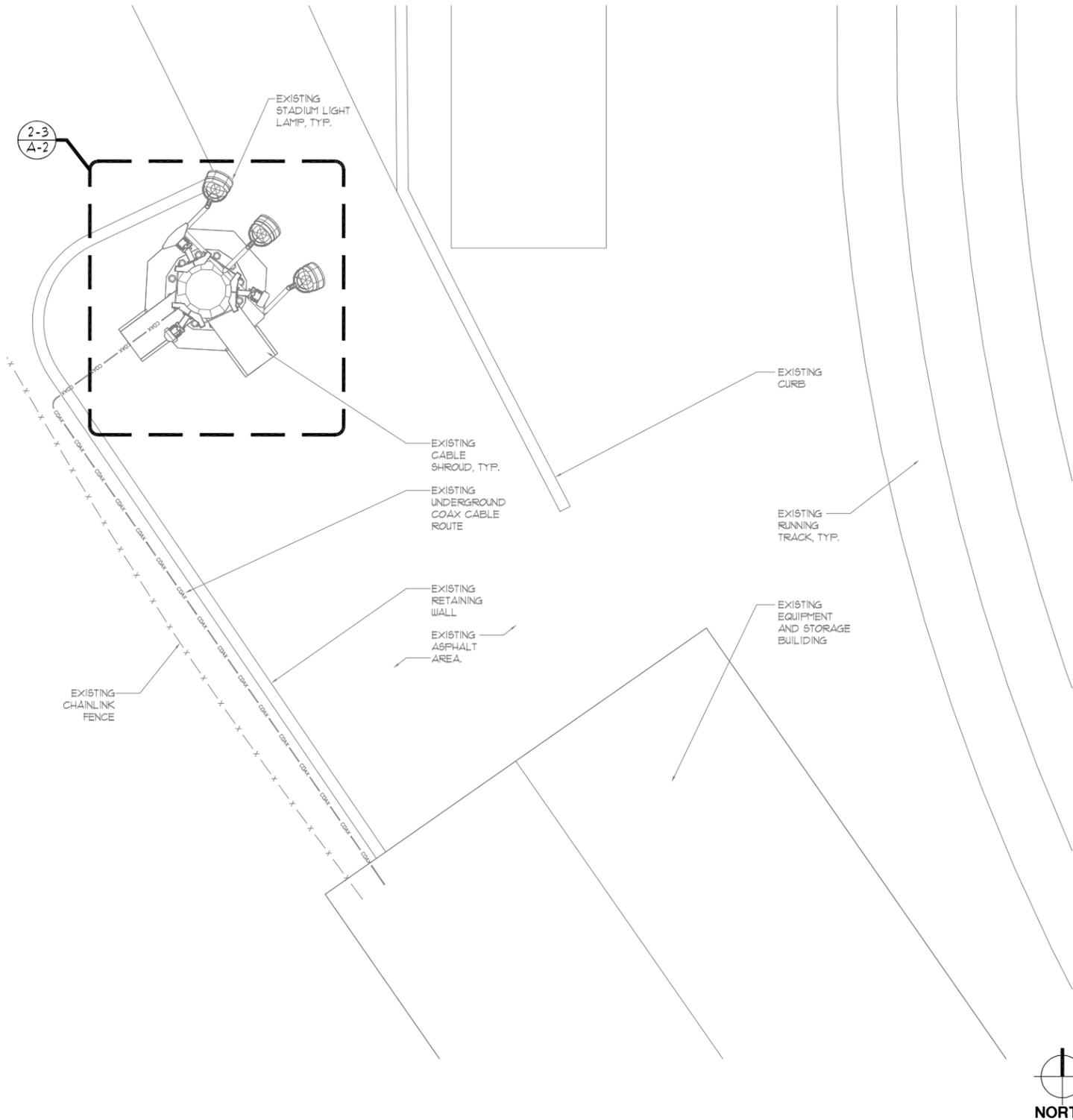
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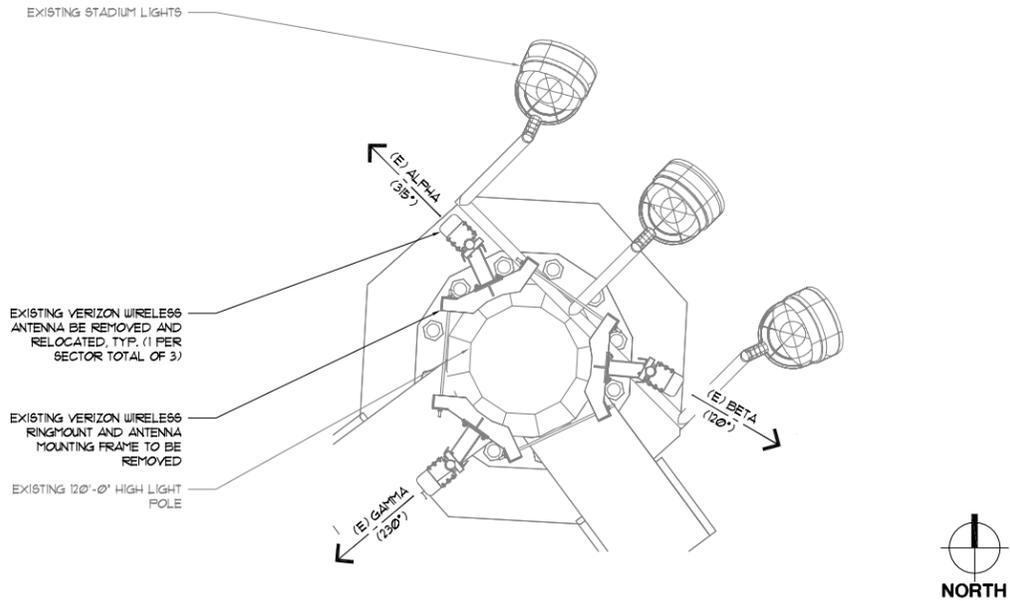


**GENERAL NOTES**

1. VERIFY EACH COAXIAL CABLE LENGTH, DIAMETER, ROUTING, AND ALL MOUNTING AFFURTENANCES WITH OWNER PRIOR TO ORDER.
2. THE MAXIMUM COAXIAL CABLE LENGTH HAS BEEN ESTIMATED WITH CORRESPONDING CABLE DIAMETER ON THE TABLE ABOVE. THIS CABLE LENGTH IS APPROXIMATE AND IS TO BE USED FOR CONSTRUCTION. ACTUAL ANTENNA CABLE LENGTHS MAY VARY FROM ESTIMATED MAXIMUM LENGTH AND MUST BE VERIFIED.
3. TAG ALL MAIN CABLES AT TWO (2) LOCATIONS:  
A - AT ANTENNAS  
B - INSIDE EQUIPMENT SHELTER / CABINET NEAR THE WAVEGUIDE ENTRY PORT.
4. EACH COAX SHALL BE SUPPORTED WITH COLUMN GRIP (CHINESE FINGER GRIP) HUNG FROM A J-HOOK AT TOP OF TOWER.
5. EACH COAX SHALL BE GROUNDED AT (3) THREE LOCATIONS: ANTENNA PLATFORM, TOWER BASE AND BUILDING ENTRY PORT

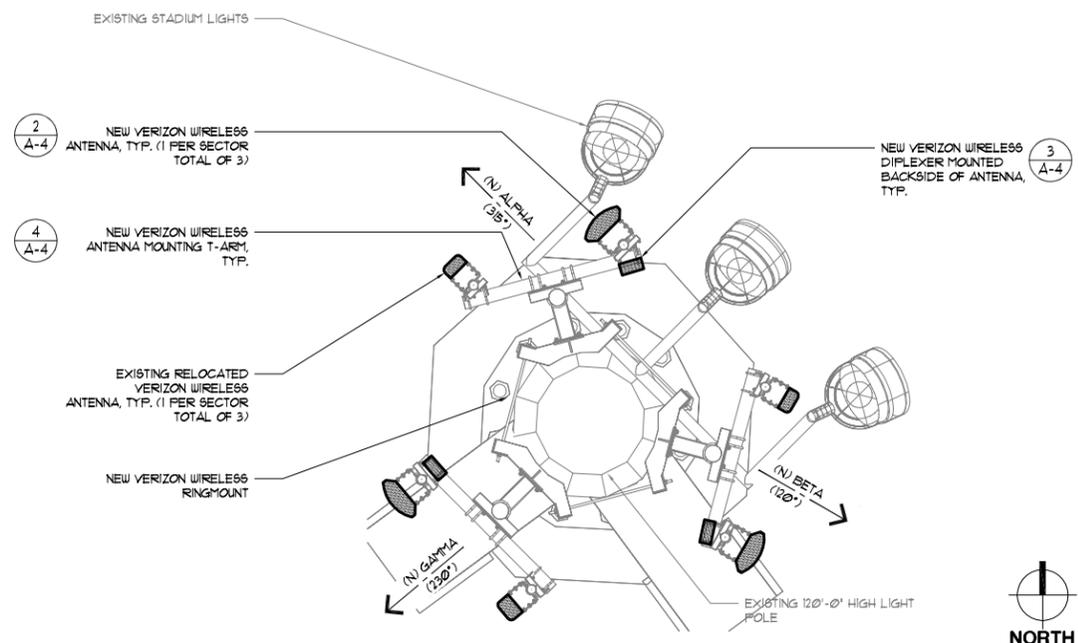


**1 ENLARGED SITE PLAN**  
SCALE: 1/4" = 1'-0" (22x34), 1/8" = 1'-0" (11x17)



**2 EXISTING ANTENNA PLAN AT 110'-0"**  
SCALE: 1/2" = 1'-0" (22x34), 1/4" = 1'-0" (11x17)

ANTENNA / COAX SCHEDULE								
SECTOR	ANTENNA QUANTITY	ANTENNA TIP HEIGHT	ANTENNA SIZE	AZIMUTH	DOWN TILT	NUMBER OF CABLE RUNS	COAX SIZE	COAX LENGTH
ALPHA	1 EXISTING	110'-0"	4'-0"	315°	1	2 EXISTING	1-5/8"	EXISTING
ALPHA	1 NEW	110'-0"	4'-0"	315°	0		DIPLEXED	
BETA	1 EXISTING	110'-0"	4'-0"	120°	3	2 EXISTING	1-5/8"	EXISTING
BETA	1 NEW	110'-0"	4'-0"	120°	1		DIPLEXED	
GAMMA	1 EXISTING	110'-0"	4'-0"	230°	0	2 EXISTING	1-5/8"	EXISTING
GAMMA	1 NEW	110'-0"	4'-0"	230°	0		DIPLEXED	



**3 NEW ANTENNA PLAN AT 110'-0"**  
SCALE: 1/2" = 1'-0" (22x34), 1/4" = 1'-0" (11x17)



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PROJECT MANAGER: EJC

PREPARED BY: AIO

APPROVED BY: EJC

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7887 REGISTERED ARCHITECT  
JAY Y. SEO  
STATE OF WASHINGTON

SHEET NAME  
**ENLARGED SITE PLAN AND DETAILS**

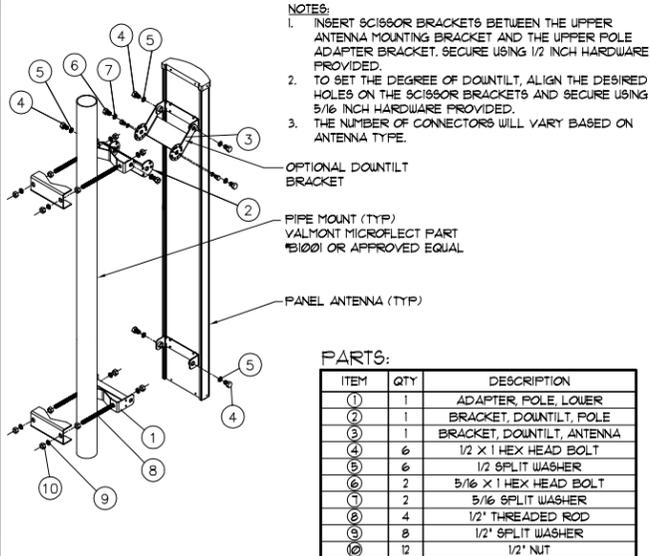
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**A-2**

PROJECT NUMBER  
20130889101



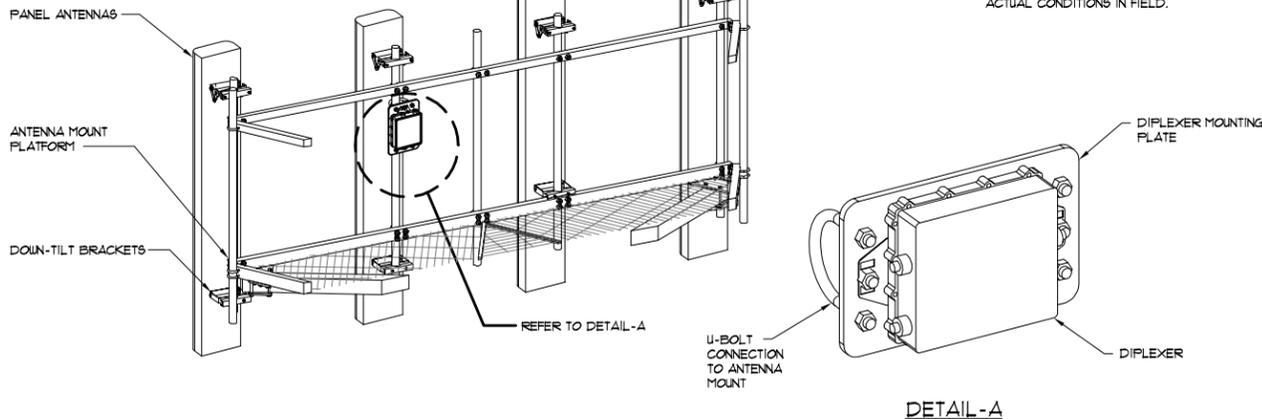
**GENERAL NOTES:**

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3. CONTRACTOR IS RESPONSIBLE FOR FIELD MEASUREMENTS TO CONFIRM LENGTHS OF CABLE TRAYS AND ELECTRICAL LINES AND ANTENNA MOUNTING.
4. VERIFICATION THAT EXISTING TOWER/POLE CAN SUPPORT THE PROPOSED ANTENNA, COAX & ADDITIONAL EQUIPMENT LOADING IS TO BE DONE BY OTHERS.



**PARTS:**

ITEM	QTY	DESCRIPTION
1	1	ADAPTER, POLE, LOWER
2	1	BRACKET, DOWNTILT, POLE
3	1	BRACKET, DOWNTILT, ANTENNA
4	6	1/2 X 1 HEX HEAD BOLT
5	6	1/2 SPLIT WASHER
6	2	5/16 X 1 HEX HEAD BOLT
7	2	5/16 SPLIT WASHER
8	4	1/2 THREADED ROD
9	8	1/2 SPLIT WASHER
10	12	1/2 NUT



DETAIL-A

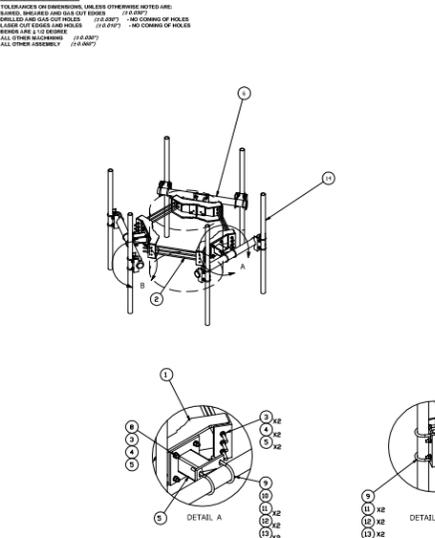
- DIPLEXER NOTE:**
1. DIPLEXERS MOUNTED AT ANTENNAS.
  2. CONTRACTOR TO VERIFY WITH MANUFACTURER SPEC'S FOR MOUNTING DETAILS.
  3. DIPLEXER DETAIL AS SHOWN AS A REFERENCE AND IS SUBJECT TO CHANGE.
  4. PLATFORM SHOWN AS TYPICAL. VERIFY ACTUAL CONDITIONS IN FIELD.

**1 GENERAL NOTES**

**2 ANTENNA MOUNTING HARDWARE**

**3 DIPLEXER MOUNTING DETAILS**

**4 MONOPOLE DOUBLE SUPPORT ARM KIT**

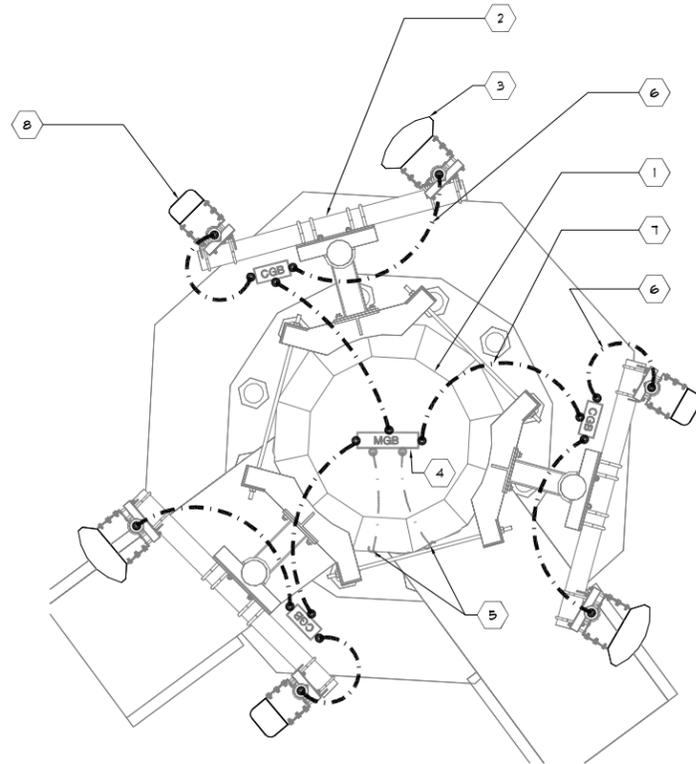


- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE DESIGN AND CONSTRUCTION SPECIFICATIONS AND ALL APPLICABLE LOCAL CODES.
- ALL GROUNDING SHALL CONFORM TO THE CURRENT VERIZON WIRELESS STANDARDS.
- CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
- THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
- PREFABRICATED SHELTER WILL BE PROVIDED WITH INTERNAL WIRING AND EQUIPMENT INSTALLED. FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT REFER TO DRAWINGS PROVIDED BY SHELTER MANUFACTURER.
- FOR INTERIOR EQUIPMENT LAYOUT AND LOCATION, SEE SHELTER MANUFACTURER'S DRAWINGS AND SPECIFICATION. IN CASE OF CONFLICT THE DRAWINGS GOVERN.
- ALL GROUND CONNECTIONS BELOW GRADE SHALL BE EXOTHERMIC (CADWELD).
- ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR & EXTERIOR) SHALL BE FORMED USING TWO (2) HIGH PRESS CRIMPS.
- ALL EXOTHERMIC CONNECTIONS TO THE GROUND RODS SHALL START AT THE TOP & HAVE A VERTICAL SEPARATION OF 6" FOR EVERY ADDITIONAL CONNECTION.
- ALL GROUNDING CONNECTORS TO BE CLEAN AND FREE OF PAINT AT THEIR MATING SURFACES AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- ALL EXTERIOR GROUND CONDUCTORS SHALL BE #2 AWG TN PLATED COPPER UNLESS OTHERWISE INDICATED.
- GROUND RODS SHALL BE STAINLESS STEEL OR COPPER CLAD STEEL, 5/8" Ø 10-FT. LONG, AND SHALL BE DRIVEN VERTICALLY WITH THEIR TOPS 18" BELOW FINAL GRADE OR 6" BELOW FROST LINE FOR MAXIMUM DEPTH.
- CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
- USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
- GROUND RING SHALL BE LOCATED A MINIMUM OF 24" BELOW GRADE OR 6" MINIMUM BELOW THE FROST LINE.
- INSTALL GROUND CONDUCTORS AND GROUND ROD MINIMUM OF 1'-0" FROM EQUIPMENT CONCRETE PAD, SPREAD FOOTING, OR FENCE.
- EXOTHERMIC WELD GROUND CONNECTION TO FENCE POST: TREAT WITH A COLD GALVANIZED SPRAY.
- OBSERVE N.E.C. AND LOCAL UTILITY REQUIREMENTS FOR ELECTRICAL SERVICE GROUNDING.
- GROUNDING ATTACHMENT TO TOWER SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS OR AT GROUNDING POINTS PROVIDED (2 MINIMUM).
- MAXIMUM RESISTANCE OF THE COMPLETED GROUND SYSTEM SHALL NOT EXCEED 5 OHMS.
- MINIMUM BENDING RADIUS FOR GROUNDING CONDUCTORS IS 8" WHEN BENDING IS NECESSARY. GROUND CONDUCTORS ARE TO BE AS STRAIGHT AS POSSIBLE.
- NO SPLICES PERMITTED IN GROUND CONDUCTORS.
- ENSURE ALL MECHANICAL CONNECTORS ARE TORQUED TO THE MANUFACTURER'S SPECIFIED VALUES.
- GROUND BARS SHALL NOT BE FIELD MODIFIED.
- ALL HORIZONTAL FENCE SECTIONS TO BE GROUNDING WITH 8" SINGLE BARREL GROUND STRAPS.
- USE PANI SCHEME FOR LANDING ON MGB AS DISCUSSED IN NSTD 19, 33 & 36.

### 1 GENERAL NOTES

#### KEY NOTES:

- EXISTING MONOPOLE
- NEW ANTENNA MOUNTING FRAME
- NEW VERIZON WIRELESS ANTENNAS, TYP.
- NEW MASTER GROUND BAR AT BASE OF TOWER, NEAR EXIT PORT.
- EXISTING MASTER GROUND BAR FINAL GROUND LEAD TO EXISTING TOWER GROUND RING
- ANTENNA GROUNDING, #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTOR TO COLLECTION GROUND BAR AT ANTENNA LEVEL OF TOWER
- COLLECTION GROUND BAR FINAL GROUND LEAD, #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTOR TO MASTER GROUND BAR AT BASE OF TOWER, NEAR EXIT PORT
- EXISTING RELOCATED ANTENNA, TYP.

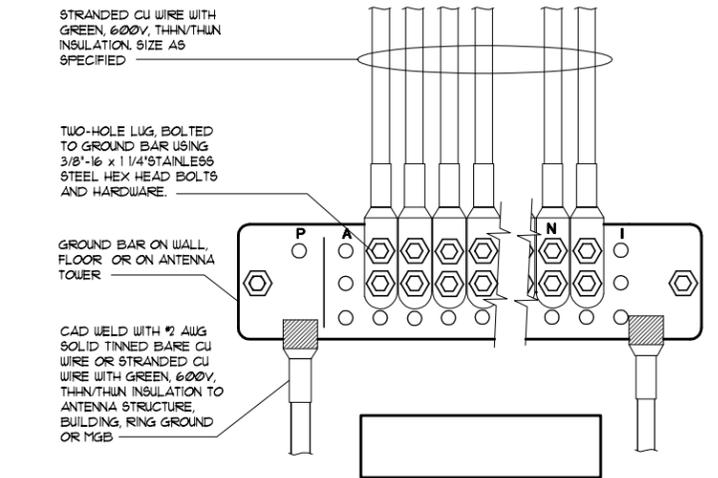


### 3 ANTENNA GROUNDING PLAN

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

### 2 COAXIAL CABLE GROUND WIRE TO GROUND BAR CONNECTION

NOT TO SCALE



### 4 GROUND BAR CONNECTION DETAIL AND NOTES

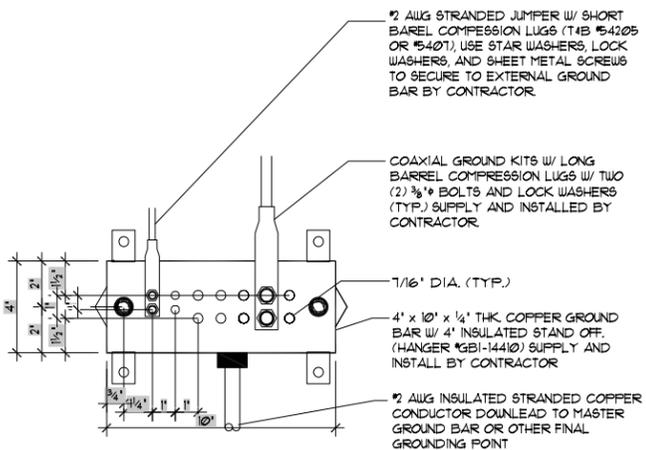
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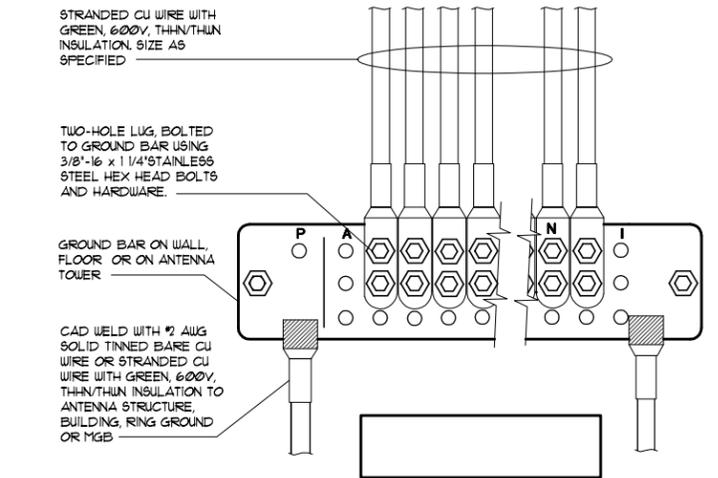
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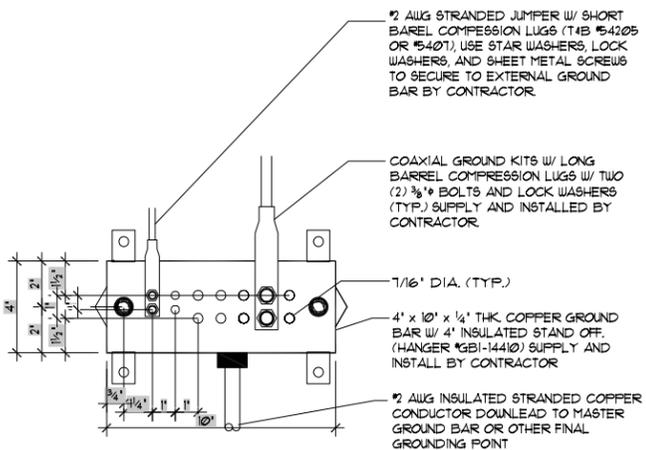
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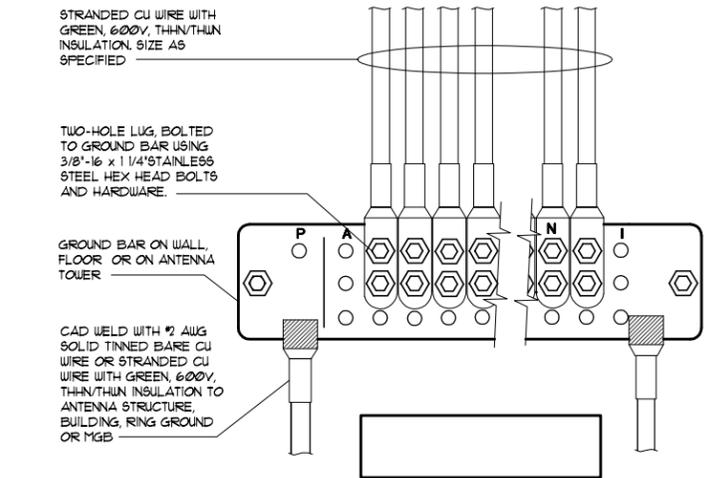
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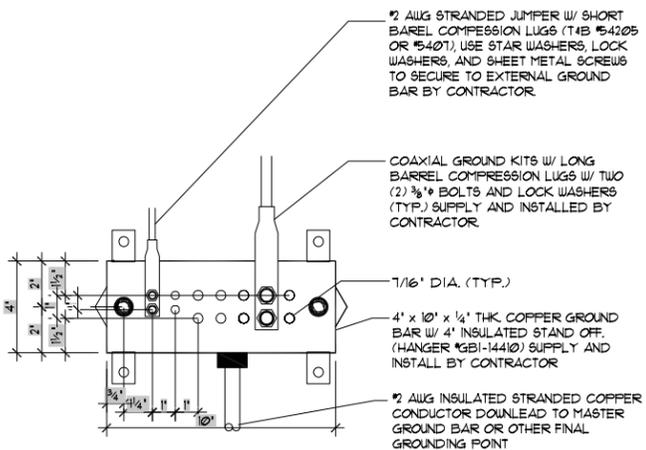
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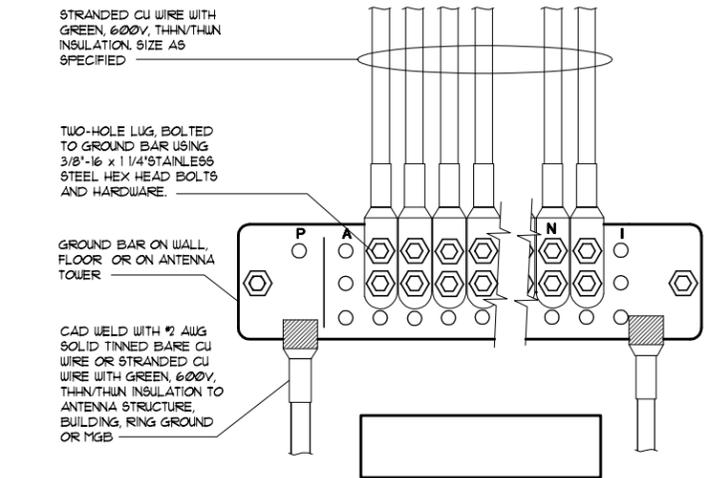
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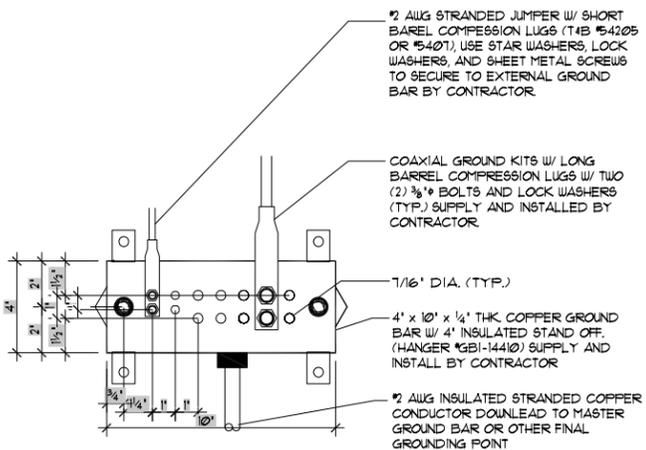
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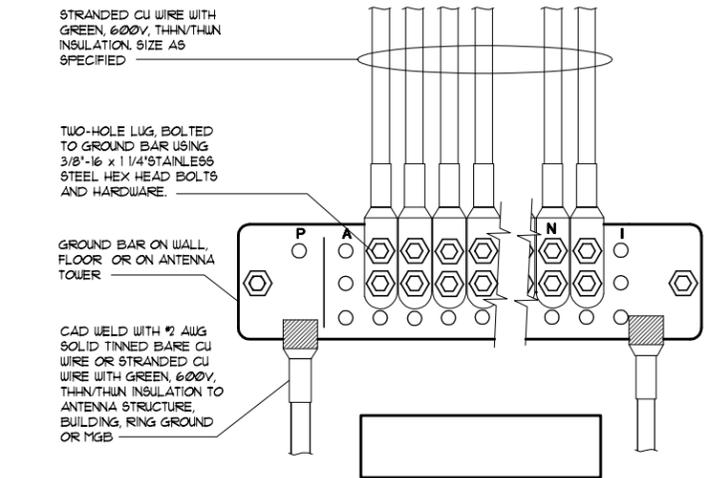
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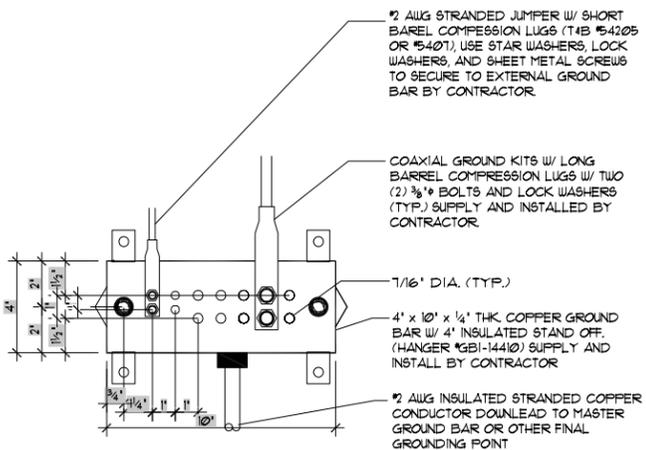
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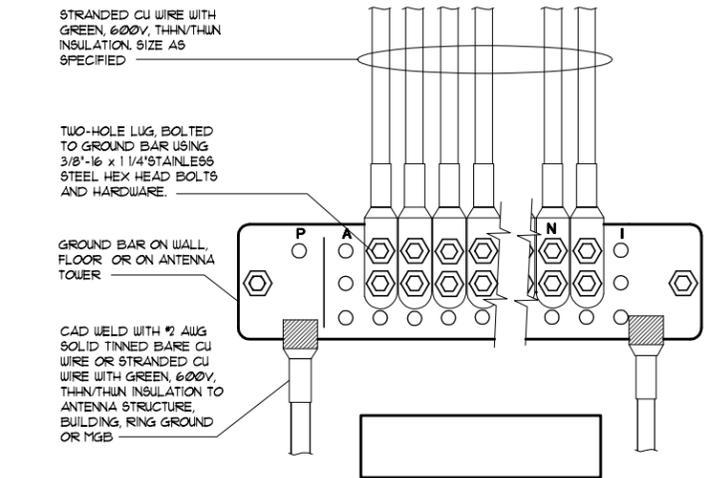
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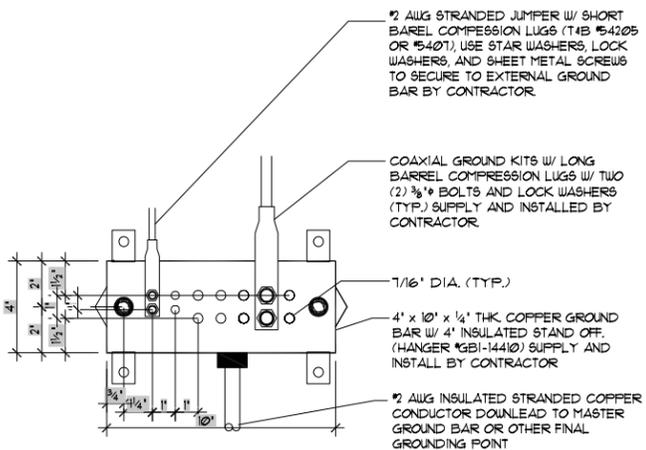
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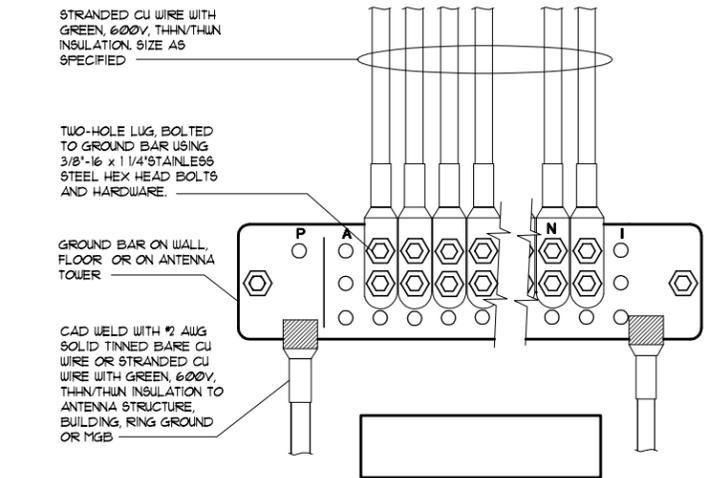
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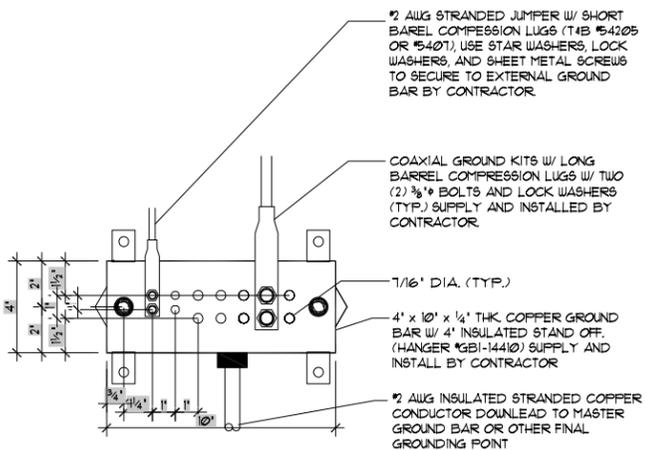
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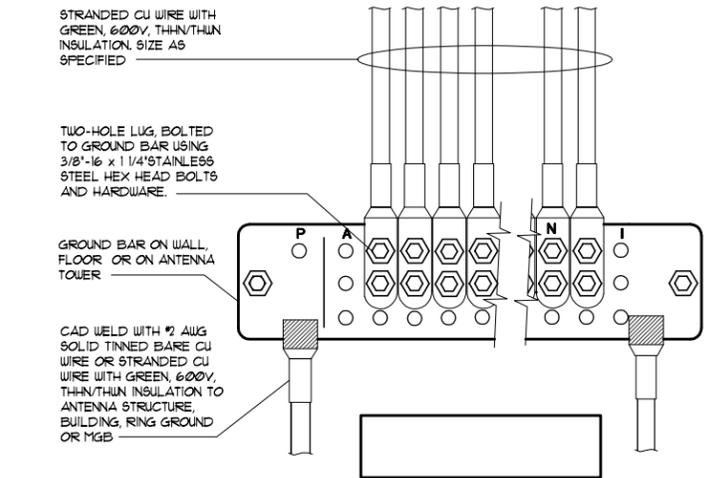
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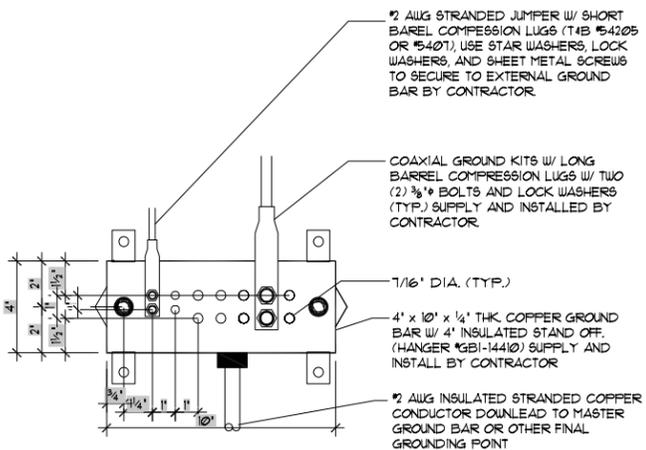
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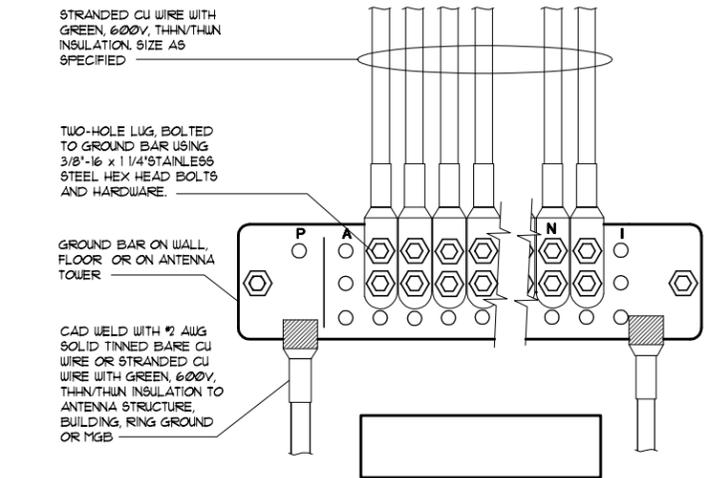
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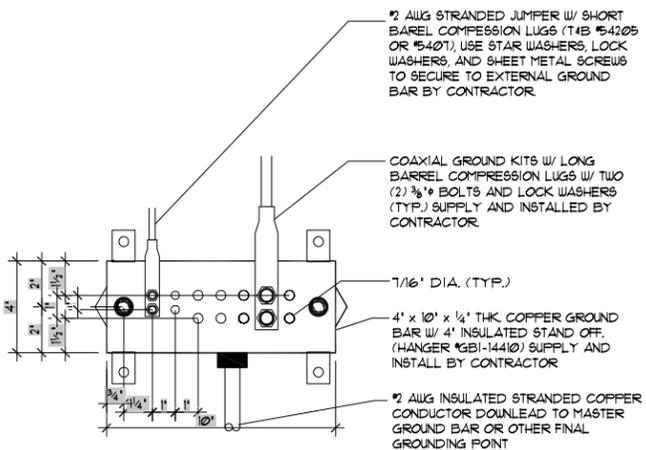
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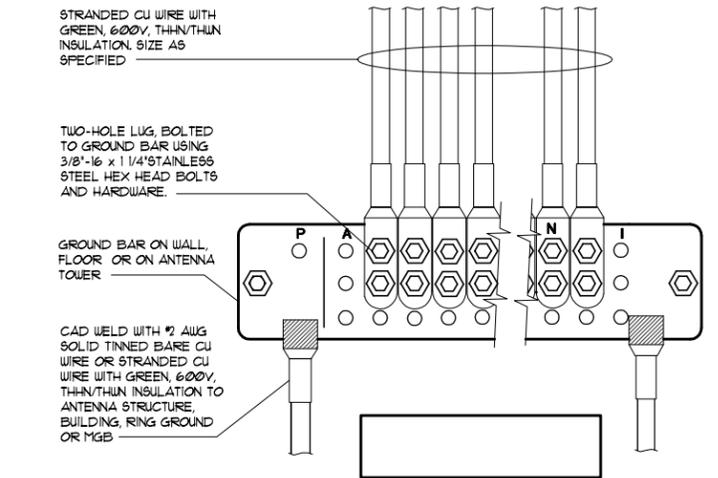
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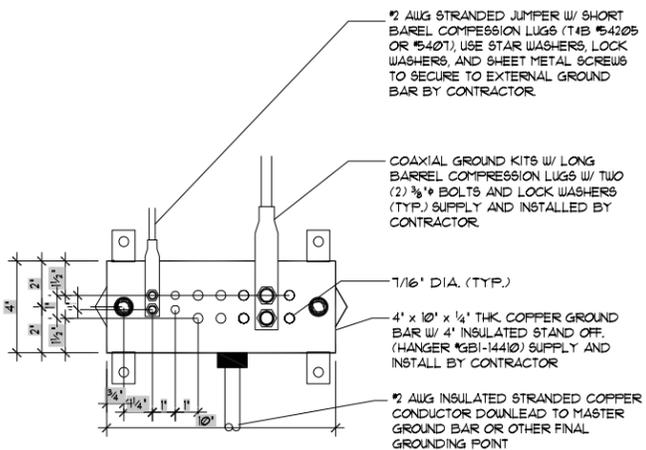
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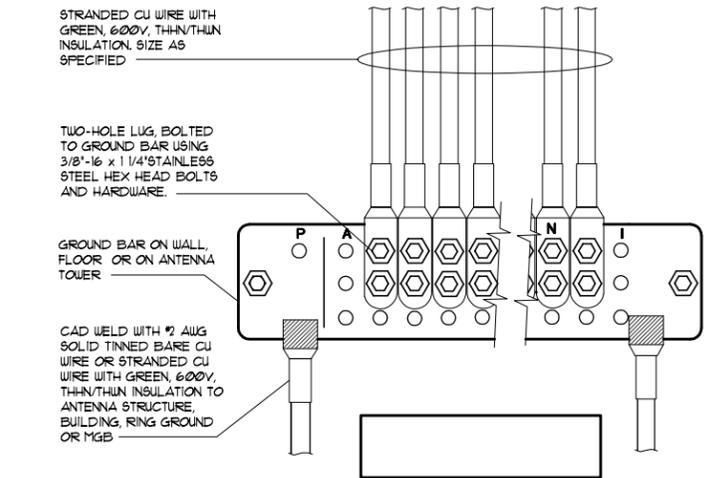
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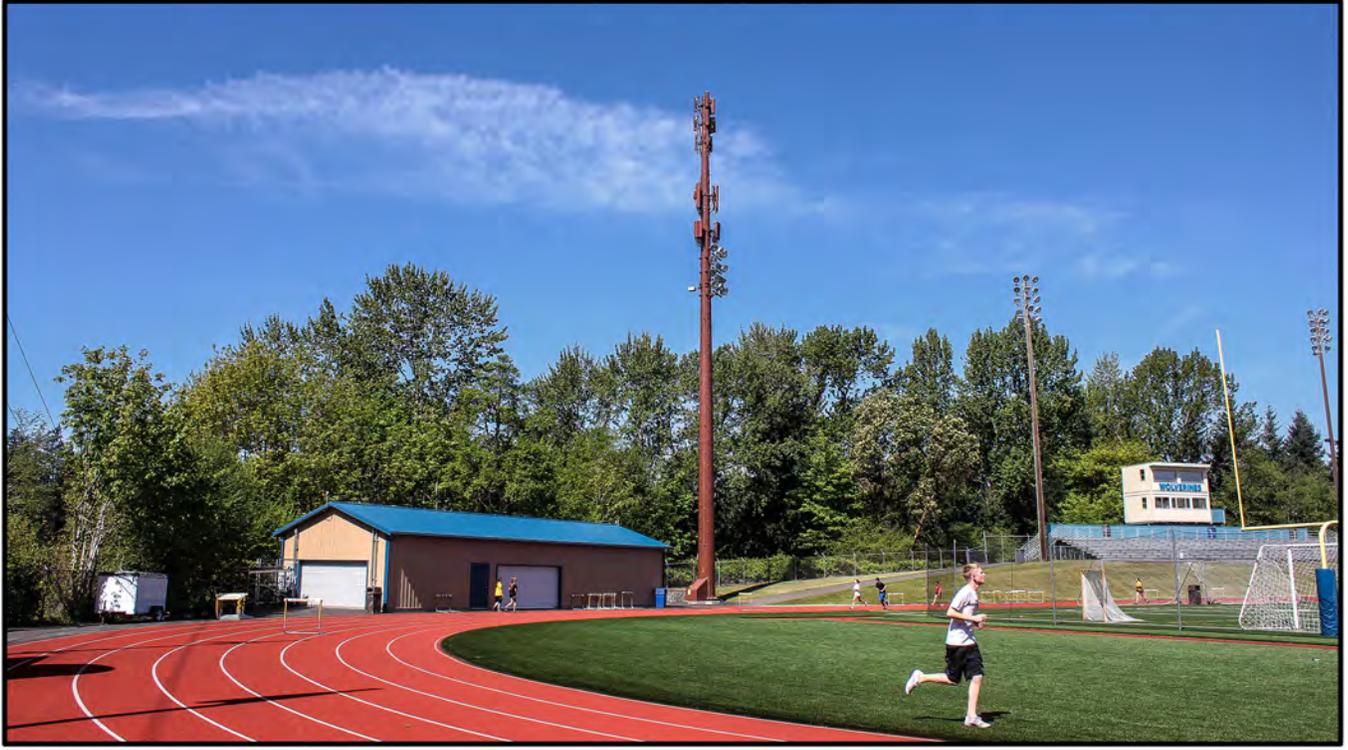
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- THE ELECTR



# SEA-BELLEVUE HIGH

350 105th Ave SE, Bellevue, Bellevue WA 98004



CURRENT

VIEW #1 LOOKING NORTH



PROPOSED