

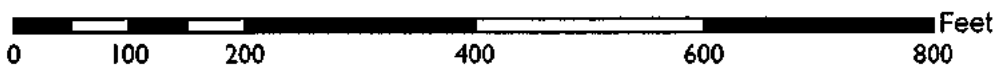
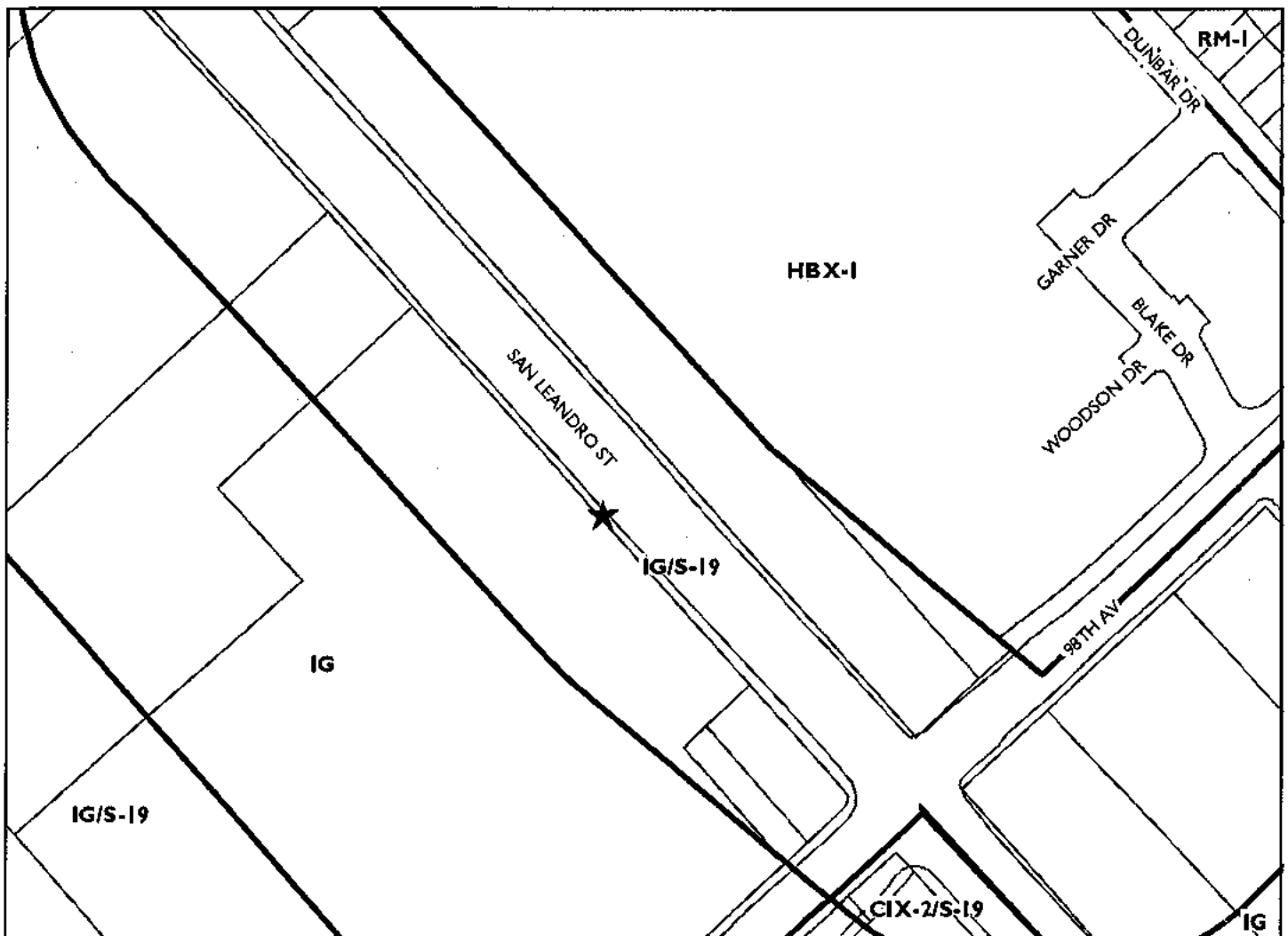
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|-------------------------------------|---|
| <b>Location:</b>                    | Utility Pole in sidewalk adjacent to 9678 San Leandro Street –<br>See map on reverse  |
| <b>Assessor's Parcel Number:</b>    | Adjacent to: 044 498900610  |
| <b>Proposal:</b>                    | To establish a telecommunications facility by attaching an antenna and accessory equipment to an existing wooden utility pole located in the public right-of-way (sidewalk).<br><i>See map on reverse</i>       |
| <b>Applicant:</b>                   | Eric Diamond, Nexius Solutions (on behalf of Verizon Wireless)  |
| <b>Owner:</b>                       | Joint Pole Authority (JPA) including PG&E   |
| <b>Case File Number:</b>            | PLN18251  |
| <b>Planning Permits Required:</b>   | Major Design Review with additional findings for a Macro Telecommunications Facility within 300' of an HBX Zone   |
| <b>General Plan:</b>                | General Industry and Transportation   |
| <b>Zoning:</b>                      | IG/S-19   |
| <b>Environmental Determination:</b> | Exempt, Section 15301 of the State CEQA Guidelines: Existing Facilities; Section 15303: New Construction of Small Structures; Section 15183: Projects Consistent with a Community Plan, General Plan, or Zoning |
| <b>Historic Status:</b>             | Non-Historic Property   |
| <b>City Council District:</b>       | 7   |
| <b>Date Filed:</b>                  | June 18, 2018   |
| <b>Action to be Taken:</b>          | Approve with Conditions   |
| <b>Finality of Decision:</b>        | <i>Appealable to City Council within 10 days</i>  |
| <b>For Further Information:</b>     | Contact case Planner <b>Brittany Lenoir</b> at (510) 238-4977 or <a href="mailto:blenoir@oaklandca.gov">blenoir@oaklandca.gov</a>   |

**SUMMARY**

The applicant requests Planning Commission approval of a Major Design Review with additional findings to establish a Macro Telecommunications Facility (“small cell site”) on an existing 67.5-foot wooden utility pole adjacent to 9678 San Leandro Street. The project involves the installation of one four-foot cylindrical canister antenna using a side mount projecting over the sidewalk at 44-feet in height, with the top of the antenna at 50-feet in height. Accessory equipment, including two radio units mounted at approximately 16 feet in height, 4 diplexers adjacent to RRUS, one fiber box at 15 feet above ground, one AC disconnect and ground bar at nine feet and 10.5 feet above ground, and one power meter at seven feet above ground are included with this proposal. All cabling, antennas, and equipment are proposed to be painted to match the JPA pole.

Major Design Review is required since this site is located within 300 feet of an HBX Zone. As described in this report, the proposal meets all required findings including Design Review and Macro Telecommunications findings. Therefore, Staff recommends approval, subject to the conditions outlined in this report.

# CITY OF OAKLAND PLANNING COMMISSION



Case File: PLN18251  
Applicant: Eric Diamond, Nexius Solutions (on behalf of Verizon Wireless)  
Address: Utility Pole in sidewalk adjacent to  
9678 San Leandro Street  
Zone: IG/S-19

**TELECOMMUNICATIONS BACKGROUND****Limitations on Local Government Zoning Authority under the Telecommunications Act of 1996**

Section 704 of the Telecommunications Act of 1996 (TCA) provides federal standards for the siting of "Personal Wireless Services Facilities." "Personal Wireless Services" include all commercial mobile services (including personal communications services (PCS), cellular radio mobile services, and paging); unlicensed wireless services; and common carrier wireless exchange access services. Under Section 704, local zoning authority over personal wireless services is preserved such that the FCC is prevented from preempting local land use decisions; however, local government zoning decisions are still restricted by several provisions of federal law. Specifically:

- Under Section 253 of the TCA, no state or local regulation or other legal requirement can prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service.
- Further, Section 704 of the TCA imposes limitations on what local and state governments can do. Section 704 prohibits any state and local government action which unreasonably discriminates among personal wireless providers. Local governments must ensure that its wireless ordinance does not contain requirements in the form of regulatory terms or fees which may have the "effect" of prohibiting the placement, construction, or modification of personal wireless services.
- Section 704 also preempts any local zoning regulation purporting to regulate the placement, construction and modification of personal wireless service facilities on the basis, either directly or indirectly, on the environmental effects of radio frequency emissions (RF) of such facilities, which otherwise comply with Federal Communication Commission (FCC) standards in this regard. (See 47 U.S.C. Section 332(c)(7)(B)(iv) (1996)). This means that local authorities may not regulate the siting or construction of personal wireless facilities based on RF standards that are more stringent than those promulgated by the FCC.
- Section 704 mandates that local governments act upon personal wireless service facility siting applications to place, construct, or modify a facility within a reasonable time (See 47 U.S.C.332(c)(7)(B)(ii) and FCC Shot Clock ruling setting forth "reasonable time" standards for applications deemed complete).
- Section 704 also mandates that the FCC provide technical support to local governments in order to encourage them to make property, rights-of-way, and easements under their jurisdiction available for the placement of new spectrum-based telecommunications services. This proceeding is currently at the comment stage.

For more information on the FCC's jurisdiction in this area, consult the following:

Competition & Infrastructure Policy Division (CIPD) of the Wireless Telecommunications Bureau, main division number: (202) 418-1310. <https://www.fcc.gov/general/competition-infrastructure-policy-division-wireless-telecommunications-bureau>

**SITE DESCRIPTION**

The project site consists of a wooden utility pole (67.5 feet in height) located in the public right-of-way (sidewalk, towards the curb) on San Leandro Street. It fronts an open parking lot serving a warehouse building that is approximately 70 feet away. No windows are located on this portion of the warehouse and the proposed macro telecommunication site will not interfere with any views. The site across the street, 921 98<sup>th</sup> avenue, is zoned HBX-1 (Housing and Business Mix - 1) but it is currently a vacant lot. The neighborhood consists of primarily industrial and commercial activities and elevated BART tracks across

San Leandro Street.

## PROJECT DESCRIPTION

As shown in the proposed plans (Attachment C), the proposal includes:

- Establishment of a macro telecommunication facility on an existing 67.5-foot tall wooden utility pole
- Installation of one 4' cylindrical (canister) antenna using a side mount projecting over the sidewalk at 44-feet in height, with the top of the antenna at 50' in height
- Installation of two radio units mounted at approximately 16' in height
- Installation of 4 diplexers adjacent to RRUS
- Installation of one fiber box at 15' above ground
- Installation of one power meter at 7' above ground
- Installation of one AC disconnect and ground bar at 9' and 10.5' above ground respectively
- Paint proposed cabling, antennas, and equipment to match utility pole

No portion of the facility is proposed to be located on the ground, and all equipment will be inaccessible to the public. This can also be seen by looking at the photograph simulations that were submitted (Attachment D).

## GENERAL PLAN ANALYSIS

The site is in the General Industry and Transportation area under the General Plan's Land Use and Transportation Element (LUTE). The intent of the General Industry and Transportation classification is to "recognize, preserve, and enhance areas of the City for a wide variety of businesses and related establishments that may have the potential to create off-site impacts such as noise, light/glare, truck traffic, and odor. These areas are characterized by sites with good freeway, rail, seaport, and/or airport access." Some objectives and goals for this classification are as follows:

### Objective N5

*Minimize the conflicts between residential and non-residential activities while providing opportunities for residents to live and work at the same location.*

### Objective T1

*Provide adequate infrastructure and land for the needs of rail, shipping, commercial and manufacturing uses, balancing this need with those of surrounding residential neighborhoods.*

The proposed facility is proposed to be adjacent to a large warehouse and across the street from an HBX (housing and business mix) zoned vacant lot and BART. As proposed, this facility will not impact views, will be inaccessible to the public, and will be camouflaged by painting all equipment to match the utility pole.

## ZONING ANALYSIS

The site is located within the IG/S-19 Zone, which is a general industrial zone and has an overlay of the health and safety protection combining zone. The intent of the IG Zone is: "to create, preserve and enhance areas of the City that are appropriate for a wide variety of businesses and related commercial and industrial establishments that may have the potential to generate off-site impact such as noise, light/glare, odor, and traffic."

Macro telecommunications facilities on JPA poles require Design Review with additional findings when

located in residential zones. This site is located within 300 feet of an HBX Zone (Housing and Business Mix) and, therefore, requires Major Design Review approval. In addition to Design Review findings, this proposal must also meet the development standards for macro telecommunication facilities as stated in Section 17.128.070A of the Oakland Planning Code. Additional findings are required to ensure compatibility as well as guarantee the design is concealed and inaccessible to the public. As described in the *Key Issues and Impacts* and *Findings* portion of this report, the proposal meets all such requirements.

## ENVIRONMENTAL DETERMINATION

The California Environmental Quality Act (CEQA) Guidelines categorically exempts specific types of projects from environmental review. Section 15301 exempts projects involving 'Existing Facilities;' and, Section 15303 exempts projects involving 'Construction of Small Structures.' The project is also subject to Section 15183 for 'Projects consistent with a community plan, general plan or zoning.' The project conforms to all stated exemption classification and, therefore, is exempt from further Environmental Review.

## KEY ISSUES AND IMPACTS

The proposal to establish a macro telecommunications facility is subject to the following Planning Code development standards, which are followed by staff's analysis in relation to this application:

### General Development Standards for Macro Telecommunications Facilities (17.128.070A)

1. **The Macro Facilities shall be located on existing buildings, poles or other existing support structures, or shall be post mounted.**

This proposal includes side-mounting an antenna on an existing wooden utility pole.

2. **The equipment shelter or cabinet must be concealed from public view or made compatible with the architecture of the surrounding structures or placed underground. The shelter or cabinet must be regularly maintained.**

The accessory equipment, antenna, and cabling are proposed to be painted to match the utility pole. Furthermore, a condition of approval is included requiring texturing as well as painting.

3. **Macro Facilities may exceed the height limitation specified for all zones but may not exceed fifteen (15) feet above the roof line or parapet. Placement of an antenna on a nonconforming structure shall not be considered to be an expansion of the nonconforming structure.**

This standard is not applicable because the proposal is located does not include attaching the antenna to a roofed structure. In addition, the IG Zone does not have a maximum height limitation.

4. **Ground post mounted Macro Facilities must not exceed seventeen (17) feet to the top of the antenna.**

This standard is not applicable because it is not a ground post mounted facility.

5. **The applicant shall submit written documentation demonstrating that the emissions from the proposed project are within the limits set by the Federal Communications Commission.**

An Radio Frequency (RF) emissions report was included as part of the submittal, which outlines compliance with the FCC (Attachment E).

**Site location preferences (17.128.110)**

New wireless facilities shall generally be located on the following properties or facilities in order of preference:

- A. Co-located on an existing structure or facility with existing wireless antennas.
- B. City-owned properties or other public or quasi-public facilities.
- C. Existing commercial or industrial structures in Nonresidential Zones (excluding all HBX Zones and the D-CE-3 and D-CE-4 Zones).
- D. Existing commercial or industrial structures in Residential Zones, HBX Zones, or the DCE-3 or D-CE-4 Zones.
- E. Other Nonresidential uses in Residential Zones, HBX Zones, or the D-CE-3 or D-CE-4 Zones.
- F. Residential uses in Nonresidential Zones (excluding all HBX Zones and the D-CE-3 and D-CE-4 Zones).
- G. Residential uses in Residential Zones, HBX Zones, or the D-CE-3 or D-CE-4 Zones.

Facilities locating on an A, B or C ranked preference do not require a site alternatives analysis. Facilities proposing to locate on a D through G ranked preference, inclusive, must submit a site alternatives analysis as part of the required application materials. A site alternatives analysis shall, at a minimum, consist of: a. The identification of all A, B and C ranked preference sites within one thousand (1,000) feet of the proposed location. If more than three (3) sites in each preference order exist, the three such closest to the proposed location shall be required. b. Written evidence indicating why each such identified alternative cannot be used. Such evidence shall be in sufficient detail that independent verification, at the applicant's expense, could be obtained if required by the City of Oakland Zoning Manager. Evidence should indicate if the reason an alternative was rejected was technical (e.g. incorrect height, interference from existing RF sources, inability to cover required area) or for other concerns (e.g. refusal to lease, inability to provide utilities).

A site alternatives analysis is not required because the proposal conforms to 'B' as it would be located on a quasi-public facility (wooden utility pole). Nonetheless, an analysis has been submitted and attached to this report as Attachment F.

**Site design preferences (17.128.120)**

New wireless facilities shall generally be designed in the following order of preference:

- A. Building or structure mounted antennas completely concealed from view.
- B. Building or structure mounted antennas set back from roof edge, not visible from public right-of way.
- C. Building or structure mounted antennas below roof line (facade mount, pole mount) visible from public right-of-way, painted to match existing structure.
- D. Building or structure mounted antennas above roof line visible from public right-of-way.
- E. Monopoles.
- F. Towers.

Facilities designed to meet an A or B ranked preference do not require a site design alternatives analysis. Facilities designed to meet a C through F ranked preference, inclusive, must submit a site design alternatives analysis as part of the required application materials. A site design alternatives analysis shall, at a minimum, consist of:

Written evidence indicating why each such higher preference design alternative cannot be used. Such evidence shall be in sufficient detail that independent verification could be

obtained if required by the City of Oakland Zoning Manager. Evidence should indicate if the reason an alternative was rejected was technical (e.g. incorrect height, interference from existing RF sources, inability to cover required area) or for other concerns (e.g. inability to provide utilities, construction or structural impediments).

The proposal most closely conforms to preference 'D', and a satisfactory site design alternatives analysis was submitted with this application (Attachment G).

**Radio frequency emissions standards (17.128.130)**

**The applicant for all wireless facilities, including requests for modifications to existing facilities, shall submit the following verifications:**

- a. With the initial application, a RF emissions report, prepared by a licensed professional engineer or other expert, indicating that the proposed site will operate within the current acceptable thresholds as established by the Federal government or any such agency who may be subsequently authorized to establish such standards.**
- b. Prior to commencement of construction, a RF emissions report indicating the baseline RF emissions condition at the proposed site.**
- c. Prior to final building permit sign off, an RF emissions report indicating that the site is actually operating within the acceptable thresholds as established by the Federal government or any such agency who may be subsequently authorized to establish such standards.**

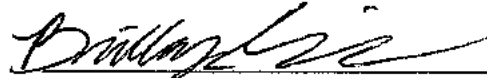
As described in the RF emissions report as prepared by Hammett & Edison, Inc., dated June 8, 2018, the proposed Macro Telecommunication site will comply with the standards for public exposure and will not result in significant impacts to the environment. In addition, a condition of approval is included that requires the project applicant submit an RF emission report prior to final building permits indicating that this site is operating within acceptable thresholds as establish by the Federal government.

**CONCLUSION**

The proposed project meets all required findings for approval and has been designed to reduce impacts to the community, including view and potential radio frequency impacts. Staff believes the proposal conforms with all design standards, Zoning regulations, and the Oakland General Plan and recommends supporting the Major Design Review application.

- RECOMMENDATIONS:**
1. Affirm staff's environmental determination, and
  2. Approve the Regular Design Review subject to the attached Findings and Conditions of Approval.

Prepared by:



BRITTANY LENOIR  
Planner I

Reviewed by:

  
ROBERT MERKAMP  
Acting Zoning Manager

Approved for forwarding to the  
City Planning Commission:

  
ED MANASSE, Interim Director  
Planning and Building Department

**ATTACHMENTS:**

- A. Findings
- B. Conditions of Approval
- C. Project Plans
- D. Photo-Simulations
- E. RF Emissions Report by Hammett & Edison, Inc. dated June 08, 2018
- F. Site Alternatives Analysis
- G. Site Design Alternatives Analysis
- H. Proof of public notification posting
- I. CPUC Compliance Letter



**ATTACHMENT A: FINDINGS**

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This proposal meets the required findings under Regular Design Review Criteria for Nonresidential Facilities (OMC Sec. 17.136.050(B)) and Telecommunications Regulations/Design Review Criteria for Macro Telecommunications Facilities (OMC Sec. 17.128.070(B)), as set forth below. Required findings are shown in **bold type**; explanations as to why these findings can be made are in normal type.

**REGULAR DESIGN REVIEW CRITERIA FOR NONRESIDENTIAL FACILITIES (OMC SEC. 17.136.050(B))**

- 1. That the proposal will help achieve or maintain a group of facilities which are well related to one another and which, when taken together, will result in a well-composed design, with consideration given to site, landscape, bulk, height, arrangement, texture, materials, colors, and appurtenances; the relation of these factors to other facilities in the vicinity; and the relation of the proposal to the total setting as seen from key points in the surrounding area. Only elements of design which have some significant relationship to outside appearance shall be considered, except as otherwise provided in Section 17.136.060;**

The proposal includes adding a four-foot canister antenna at approximately 45-feet in height, mounting radio units (RRU) 16-feet in height, and a power meter at seven feet in height. The subject site is adjacent to an open parking lot which serves a commercial/warehouse building. The proposed equipment is designed in a vertical manner on the existing non-historic utility pole in order to reduce the visual impact it may have.

- 2. That the proposed design will be of a quality and character which harmonizes with, and serves to protect the value of, private and public investments in the area;**

The proposed design will improve telecommunication services in this commercial/industrial area of San Leandro Street. The facility will be camouflaged by painting the cabling, antenna, and all accessory equipment. The design is intended to reduce visual impacts while provided service in this area.

- 3. That the proposed design conforms in all significant respects with the Oakland General Plan and with any applicable design review guidelines or criteria, district plan, or development control map which have been adopted by the Planning Commission or City Council.**

The site is classified as General Industry and Transportation per the Oakland General Plan's Land Use and Transportation Element (LUTE). This classification is "*intended for a wide variety of businesses and related establishment that may have the potential to create off-site impacts such as noise, light/glare, truck traffic, and odor.*" The proposal to establish a macro telecommunication facility on the existing JPA utility pole adjacent to 9678 San Leandro Street will conform to this classification, specifically:

Objective N5

*Minimize the conflicts between residential and non-residential activities while providing opportunities for residents to live and work at the same location.*

Objective T1

*Provide adequate infrastructure and land for the needs of rail, shipping, commercial and*

*manufacturing uses, balancing this need with those of surrounding residential neighborhoods.*

**TELECOMMUNICATIONS REGULATIONS/DESIGN REVIEW CRITERIA FOR MACRO TELECOMMUNICATIONS FACILITIES (OMC SEC. 17.128.070(B))**

**1. Antennas should be painted and/or textured to match the existing structure.**

All cabling, antennas, and accessory equipment is proposed to be painted grey to match the existing utility equipment or brown to match the proposed wooden utility pole to minimize the potential visual impact.

**2. Antennas mounted on architecturally significant structures or significant architectural detail of the building should be covered by appropriate casings which are manufactured to match existing architectural features found on the building.**

The proposed antenna will not be mounted on a significant structure and therefore this finding is not applicable.

**3. Where feasible, antennas can be placed directly above, below or incorporated with vertical design elements of a building to help in camouflaging.**

The proposal includes one side-mounted canister antenna at approximately 45-feet in height, which will be painted to match the utility pole.

**4. Equipment shelters or cabinets shall be screened from the public view by using landscaping, or materials and colors consistent with surrounding backdrop or placed underground or inside existing facilities or behind screening fences.**

No equipment cabinets are proposed with this application, but the proposed antenna will be a canister antenna that is four-feet tall and 14.5 inches wide and will be painted to blend with the surrounding utility equipment and pole. In addition, all radio units, mounts, and cabling will also be painted to match surrounding utility pole.

**5. Equipment shelters or cabinets shall be consistent with the general character of the area.**

The equipment will be attached to the utility pole by mounts that will be painted to match the utility pole to increase camouflaging. In addition, the general character of the area is heavy industry, with a warehouse at 9678 San Leandro Street and a vacant lot at 921 98<sup>th</sup> Avenue, and the proposed macro telecommunication facility layout and design will conform with this area.

**6. For antennas attached to the roof, maintain a 1:1 ratio (example: ten (10) feet high antenna requires ten (10) feet setback from facade) for equipment setback; screen the antennas to match existing air conditioning units, stairs, or elevator towers; avoid placing roof mounted antennas in direct line with the significant view corridors.**

This finding is not applicable because the project is to establish a macro telecommunication site on an existing JPA pole.

**7. That all reasonable means of reducing public access to the antennas and equipment has been made, including, but not limited to, placement in or on buildings or structures, fencing,**

**anti-climbing measures and anti-tampering devices.**

The proposed antenna will be mounted at 45 feet in height on the existing utility pole and will not be accessible to the public due to its location. All other equipment will be mounted between seven feet and 18 feet above ground.

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**ATTACHMENT B: CONDITIONS OF APPROVAL**

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**1. Approved Use**

The project shall be constructed and operated in accordance with the authorized use as described in the approved application materials, staff report and the plans dated **June 21, 2018** as amended by the following conditions of approval and mitigation measures, if applicable (“Conditions of Approval” or “Conditions”).

**2. Effective Date, Expiration, Extensions and Extinguishment**

This Approval shall become effective immediately, unless the Approval is appealable, in which case the Approval shall become effective in ten calendar days unless an appeal is filed. Unless a different termination date is prescribed, this Approval shall expire **two calendar years** from the Approval date, or from the date of the final decision in the event of an appeal, unless within such period all necessary permits for construction or alteration have been issued, or the authorized activities have commenced in the case of a permit not involving construction or alteration. Upon written request and payment of appropriate fees submitted no later than the expiration date of this Approval, the Director of City Planning or designee may grant a one-year extension of this date, with additional extensions subject to approval by the approving body. Expiration of any necessary building permit or other construction-related permit for this project may invalidate this Approval if said Approval has also expired. If litigation is filed challenging this Approval, or its implementation, then the time period stated above for obtaining necessary permits for construction or alteration and/or commencement of authorized activities is automatically extended for the duration of the litigation.

**3. Compliance with Other Requirements**

The project applicant shall comply with all other applicable federal, state, regional, and local laws/codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City’s Bureau of Building, Fire Marshal, and Public Works Department. Compliance with other applicable requirements may require changes to the approved use and/or plans. These changes shall be processed in accordance with the procedures contained in Condition #4.

**4. Minor and Major Changes**

- a. Minor changes to the approved project, plans, Conditions, facilities, or use may be approved administratively by the Director of City Planning.
- b. Major changes to the approved project, plans, Conditions, facilities, or use shall be reviewed by the Director of City Planning to determine whether such changes require submittal and approval of a revision to the Approval by the original approving body or a new independent permit/approval. Major revisions shall be reviewed in accordance with the procedures required for the original permit/approval. A new independent permit/approval shall be reviewed in accordance with the procedures required for the new permit/approval.

**5. Compliance with Conditions of Approval**

- a. The project applicant and property owner, including successors, (collectively referred to hereafter as the “project applicant” or “applicant”) shall be responsible for compliance with all the Conditions of Approval and any recommendations contained in any submitted and approved technical report at his/her sole cost and expense, subject to review and approval by the City of Oakland.
- b. The City of Oakland reserves the right at any time during construction to require certification by a licensed professional at the project applicant’s expense that the as-built project conforms to all applicable requirements, including but not limited to, approved maximum heights and minimum

setbacks. Failure to construct the project in accordance with the Approval may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension, or other corrective action.

- c. Violation of any term, Condition, or project description relating to the Approval is unlawful, prohibited, and a violation of the Oakland Municipal Code. The City of Oakland reserves the right to initiate civil and/or criminal enforcement and/or abatement proceedings, or after notice and public hearing, to revoke the Approval or alter these Conditions if it is found that there is violation of any of the Conditions or the provisions of the Planning Code or Municipal Code, or the project operates as or causes a public nuisance. This provision is not intended to, nor does it, limit in any manner whatsoever the ability of the City to take appropriate enforcement actions. The project applicant shall be responsible for paying fees in accordance with the City's Master Fee Schedule for inspections conducted by the City or a City-designated third-party to investigate alleged violations of the Approval or Conditions.

**6. Signed Copy of the Approval/Conditions**

A copy of the Approval letter and Conditions shall be signed by the project applicant, attached to each set of permit plans submitted to the appropriate City agency for the project, and made available for review at the project job site at all times.

**7. Blight/Nuisances**

The project site shall be kept in a blight/nuisance-free condition. Any existing blight or nuisance shall be abated within 60 days of approval, unless an earlier date is specified elsewhere.

**8. Indemnification**

- a. To the maximum extent permitted by law, the project applicant shall defend (with counsel acceptable to the City), indemnify, and hold harmless the City of Oakland, the Oakland City Council, the Oakland Redevelopment Successor Agency, the Oakland City Planning Commission, and their respective agents, officers, employees, and volunteers (hereafter collectively called "City") from any liability, damages, claim, judgment, loss (direct or indirect), action, causes of action, or proceeding (including legal costs, attorneys' fees, expert witness or consultant fees, City Attorney or staff time, expenses or costs) (collectively called "Action") against the City to attack, set aside, void or annul this Approval or implementation of this Approval. The City may elect, in its sole discretion, to participate in the defense of said Action and the project applicant shall reimburse the City for its reasonable legal costs and attorneys' fees.
- b. Within ten (10) calendar days of the filing of any Action as specified in subsection (a) above, the project applicant shall execute a Joint Defense Letter of Agreement with the City, acceptable to the Office of the City Attorney, which memorializes the above obligations. These obligations and the Joint Defense Letter of Agreement shall survive termination, extinguishment, or invalidation of the Approval. Failure to timely execute the Letter of Agreement does not relieve the project applicant of any of the obligations contained in this Condition or other requirements or Conditions of Approval that may be imposed by the City.

**9. Severability**

The Approval would not have been granted but for the applicability and validity of each and every one of the specified Conditions, and if one or more of such Conditions is found to be invalid by a court of competent jurisdiction this Approval would not have been granted without requiring other valid Conditions consistent with achieving the same purpose and intent of such Approval.

**10. Special Inspector/Inspections, Independent Technical Review, Project Coordination and Monitoring**

The project applicant may be required to cover the full costs of independent third-party technical review and City monitoring and inspection, including without limitation, special inspector(s)/inspection(s) during times of extensive or specialized plan-check review or construction, and inspections of potential violations of the Conditions of Approval. The project applicant shall establish a deposit with the Bureau of Building, if directed by the Building Official, Director of City Planning, or designee, prior to the issuance of a construction-related permit and on an ongoing as-needed basis.

**11. Public Improvements**

The project applicant shall obtain all necessary permits/approvals, such as encroachment permits, obstruction permits, curb/gutter/sidewalk permits, and public improvement (“p-job”) permits from the City for work in the public right-of-way, including but not limited to, streets, curbs, gutters, sidewalks, utilities, and fire hydrants. Prior to any work in the public right-of-way, the applicant shall submit plans for review and approval by the Bureau of Planning, the Bureau of Building, and other City departments as required. Public improvements shall be designed and installed to the satisfaction of the City.

**12. Regulatory Permits and Authorizations from Other Agencies**

Requirement: The project applicant shall obtain all necessary regulatory permits and authorizations from applicable resource/regulatory agencies including, but not limited to, the Regional Water Quality Control Board, Bay Area Air Quality Management District, Bay Conservation and Development Commission, California Department of Fish and Wildlife, U. S. Fish and Wildlife Service, and Army Corps of Engineers and shall comply with all requirements and conditions of the permits/authorizations. The project applicant shall submit evidence of the approved permits/authorizations to the City, along with evidence demonstrating compliance with any regulatory permit/authorization conditions of approval.

When Required: Prior to activity requiring permit/authorization from regulatory agency

Initial Approval: Approval by applicable regulatory agency with jurisdiction; evidence of approval submitted to Bureau of Planning

Monitoring/Inspection: Applicable regulatory agency with jurisdiction

**13. Graffiti Control**

Requirement:

- a. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation:
  - Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces.
  - Installation and maintenance of lighting to protect likely graffiti-attracting surfaces.
  - Use of paint with anti-graffiti coating.
  - Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED).
  - Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement.
- b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following:
  - i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method)

- without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system.
- ii. Covering with new paint to match the color of the surrounding surface.
  - iii. Replacing with new surfacing (with City permits if required).

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

#### **14. Construction-Related Air Pollution Controls (Dust and Equipment Emissions)**

Requirement: The project applicant shall implement all of the following applicable air pollution control measures during construction of the project:

- a. Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible.
- b. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- d. Pave all roadways, driveways, sidewalks, etc. within one month of site grading or as soon as feasible. In addition, building pads should be laid within one month of grading or as soon as feasible unless seeding or soil binders are used.
- e. Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).
- f. Limit vehicle speeds on unpaved roads to 15 miles per hour.
- g. Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points.
- h. Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations").
- i. All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- j. Portable equipment shall be powered by electricity if available. If electricity is not available, propane or natural gas shall be used if feasible. Diesel engines shall only be used if electricity is not available and it is not feasible to use propane or natural gas.

#### **15. Archaeological and Paleontological Resources – Discovery During Construction**

Requirement: Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find.

In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented.

In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense.

In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

#### **16. Human Remains – Discovery During Construction**

Requirement: Pursuant to CEQA Guidelines section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the project applicant.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

#### **17. Construction-Related Permit(s)**

Requirement: The project applicant shall obtain all required construction-related permits/approvals



from the City. The project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

### **18. Hazardous Materials Related to Construction**

Requirement: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following:

- a. Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction;
- b. Avoid overtopping construction equipment fuel gas tanks;
- c. During routine maintenance of construction equipment, properly contain and remove grease and oils;
- d. Properly dispose of discarded containers of fuels and other chemicals;
- e. Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and
- f. If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

### **19. Construction Days/Hours**

Requirement: The project applicant shall comply with the following restrictions concerning construction days and hours:

- a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m.
- b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday.
- c. No construction is allowed on Sunday or federal holidays.

Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.

Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-

by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

## **20. Construction Noise**

Requirement: The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following:

- a. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible.
- b. Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.
- c. Applicant shall use temporary power poles instead of generators where feasible.
- d. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.
- e. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

## **21. Extreme Construction Noise**

### **a. Construction Noise Management Plan Required**

Requirement: Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following:

- i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;
- ii. Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in

- consideration of geotechnical and structural requirements and conditions;
- iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;
- iv. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and
- v. Monitor the effectiveness of noise attenuation measures by taking noise measurements.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

**b. *Public Notification Required***

Requirement: The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.

When Required: During construction

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

**22. Operational Noise**

Requirement: Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of chapter 17.120 of the Oakland Planning Code and chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

**23. Construction Activity in the Public Right-of-Way**

**a. *Obstruction Permit Required***

Requirement: The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets and sidewalks.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

**b. *Traffic Control Plan Required***

Requirement: In the event of obstructions to vehicle or bicycle travel lanes, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian detours, including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The project applicant shall implement the approved Plan

during construction.

When Required: Prior to approval of construction-related permit

Initial Approval: Public Works Department, Transportation Services Division

Monitoring/Inspection: Bureau of Building

c. **Repair of City Streets**

Requirement: The project applicant shall repair any damage to the public right-of way, including streets and sidewalks caused by project construction at his/her expense within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to approval of the final inspection of the construction-related permit. All damage that is a threat to public health or safety shall be repaired immediately.

When Required: Prior to building permit final

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

**24. Construction and Demolition Waste Reduction and Recycling**

Requirement: The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/modifications with construction values of \$50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at [www.greenhalosystems.com](http://www.greenhalosystems.com) or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.

When Required: Prior to approval of construction-related permit

Initial Approval: Public Works Department, Environmental Services Division

Monitoring/Inspection: Public Works Department, Environmental Services Division

**25. Underground Utilities**

Requirement: The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

**PROJECT-SPECIFIC CONDITIONS**

**26. Public Works Review**

Requirement: The plans shall receive a satisfactory review from the Department of Transportation

and / or Public Works Agency, as applicable, incorporating any required modifications.

When Required: Prior to submitting a building permit application

Initial Approval: N/A

Monitoring/Inspection: N/A

**27. Emissions Report**

Requirement: A RF emissions report shall be submitted to the Planning Bureau indicating that the site is actually operating within the acceptable thresholds as established by the Federal government or any such agency who may be subsequently authorized to establish such standards.

Requirement: Prior to a final inspection

When Required: Prior to submitting a building permit application

Initial Approval: N/A

Monitoring/Inspection: N/A

**28. Camouflage**

Requirement: The antenna shall be painted and texturized to better camouflage the facility to the utility pole and attached power line posts.

When Required: Prior to a final inspection

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

**29. Operational**

Requirement: Noise levels from the activity, property, or any mechanical equipment on site shall comply with the performance standards of Section 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the Planning and Zoning Division and Building Services.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

**30. Possible District Undergrounding PG&E Pole**

Requirement: Should the PG &E utility pole be permanently removed for purposes of district undergrounding or otherwise, the telecommunications facility can only be re-established by applying for and receiving approval of a new application to the Oakland Planning Bureau as required by the regulations.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: N/A

---

**Applicant Statement**

I have read and accept responsibility for the Conditions of Approval. I agree to abide by and conform to the Conditions of Approval, as well as to all provisions of the Oakland Planning Code and Oakland Municipal Code pertaining to the project.

\_\_\_\_\_  
Name of Project Applicant

\_\_\_\_\_  
Signature of Project Applicant

\_\_\_\_\_  
Date







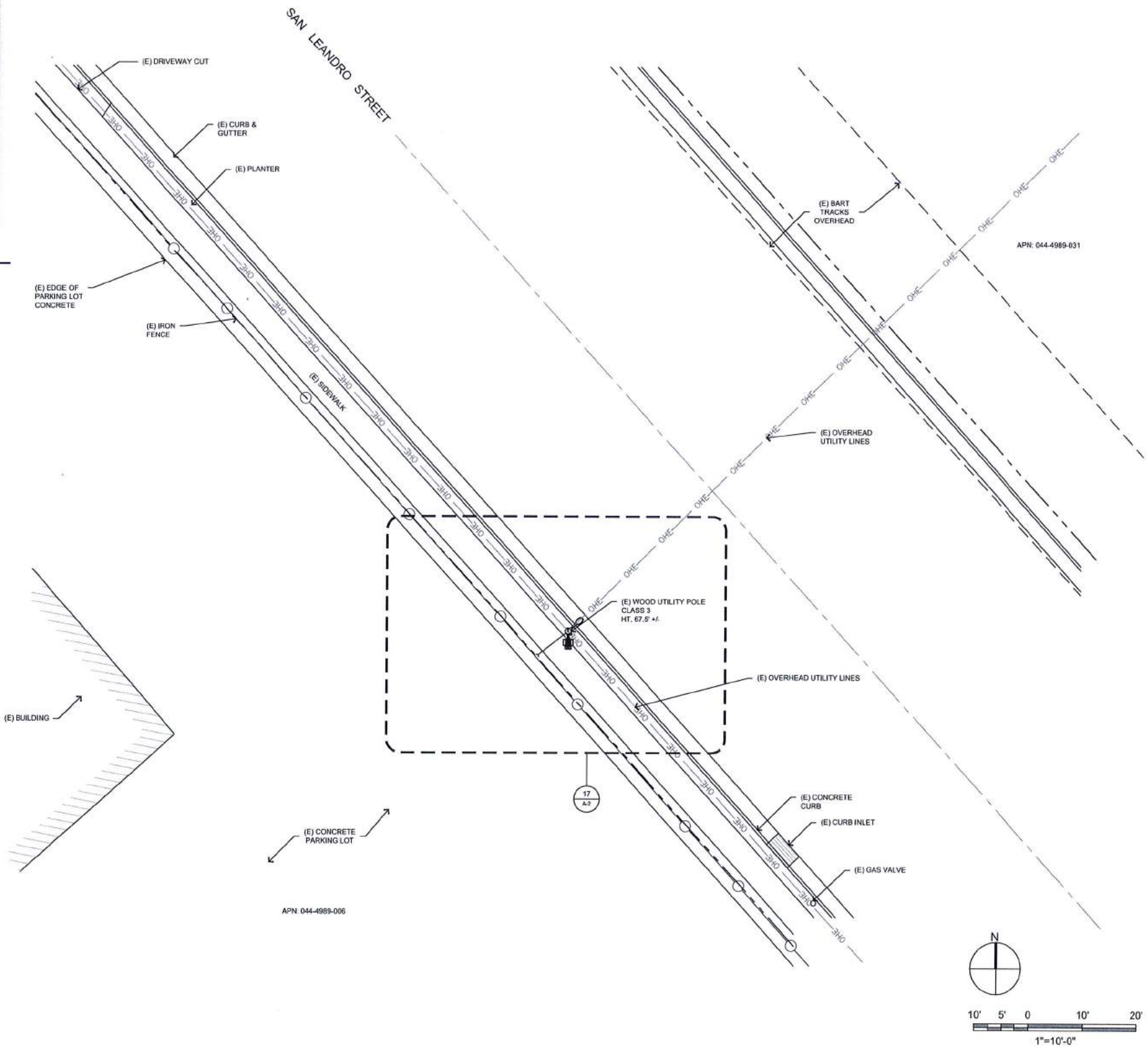




**NOTES:**  
 1. ALL CABLING, ANTENNAS, AND EQUIPMENT TO BE PAINTED TO MATCH POLE



19 AERIAL PHOTO  
 NOT TO SCALE



13 OVERALL SITE PLAN  
 1"=10'

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| REV | DATE     | DESCRIPTION       |
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| 0   | 05/16/18 | 100% CD SUBMITTAL |

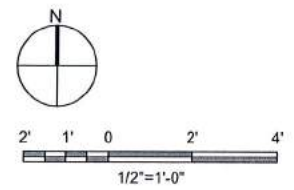
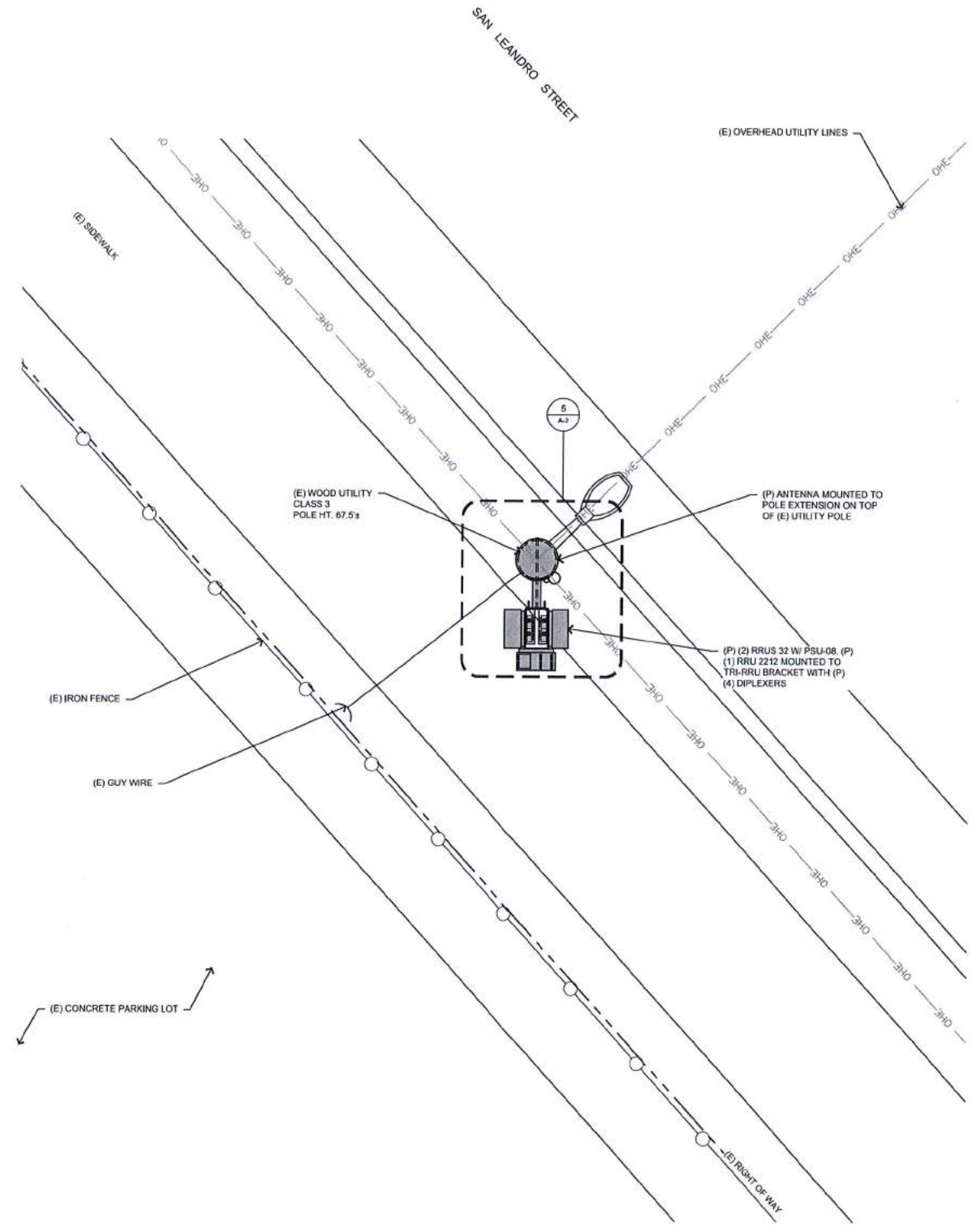
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 LOCATION CODE:  
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 POLE NUMBER:  
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 9678 San Leandro Street  
 Oakland, CA 94603

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 CHECK BY: B.X.W.  
 SHEET TITLE

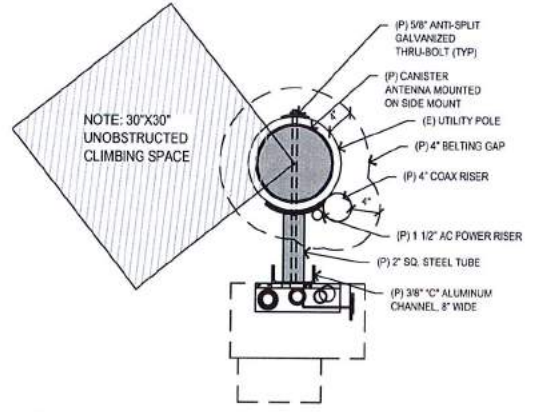
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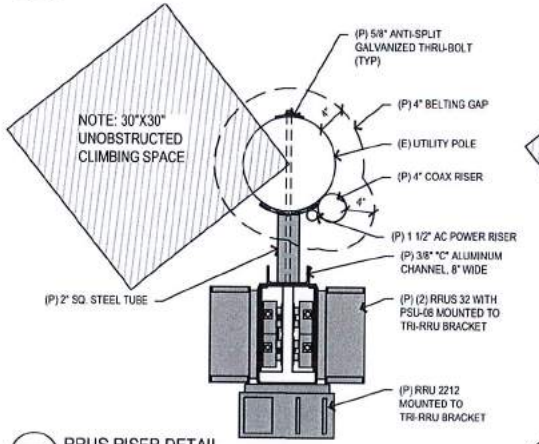
**NOTES:**  
 1. ALL CABLING, ANTENNAS, AND EQUIPMENT TO BE PAINTED TO MATCH POLE



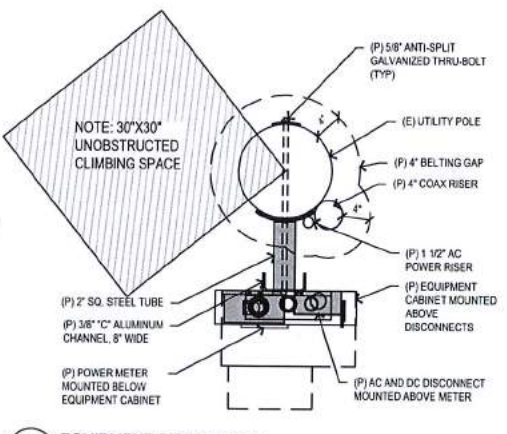
17 ENLARGED SITE PLAN  
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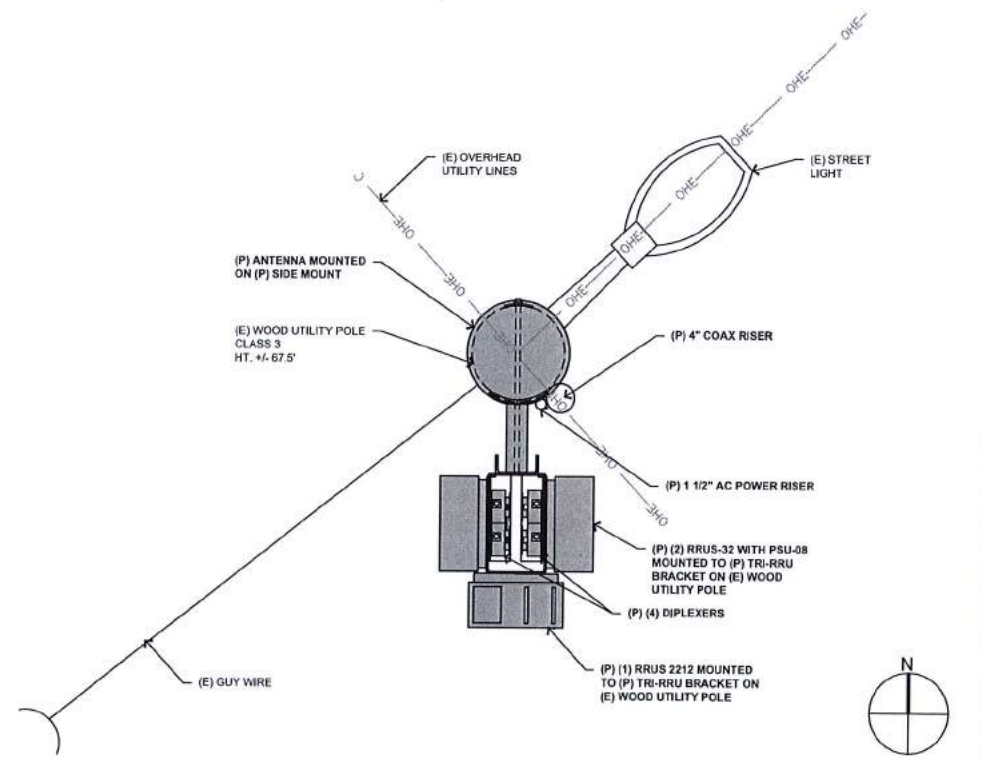
8 ANTENNA RISER DETAIL  
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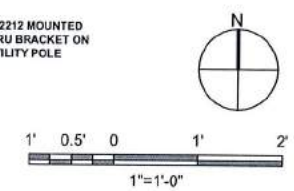
7 RRU RISER DETAIL  
 1" = 1'-0"



3 EQUIPMENT RISER DETAIL  
 1" = 1'-0"



5 ENLARGED ANTENNA PLAN  
 1" = 1'-0"



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SITE NAME:  
 Oakland 185  
 LOCATION CODE:  
 446840  
 POLE NUMBER:  
 24900  
 SITE ADDRESS:  
 9678 San Leandro Street  
 Oakland, CA 94603

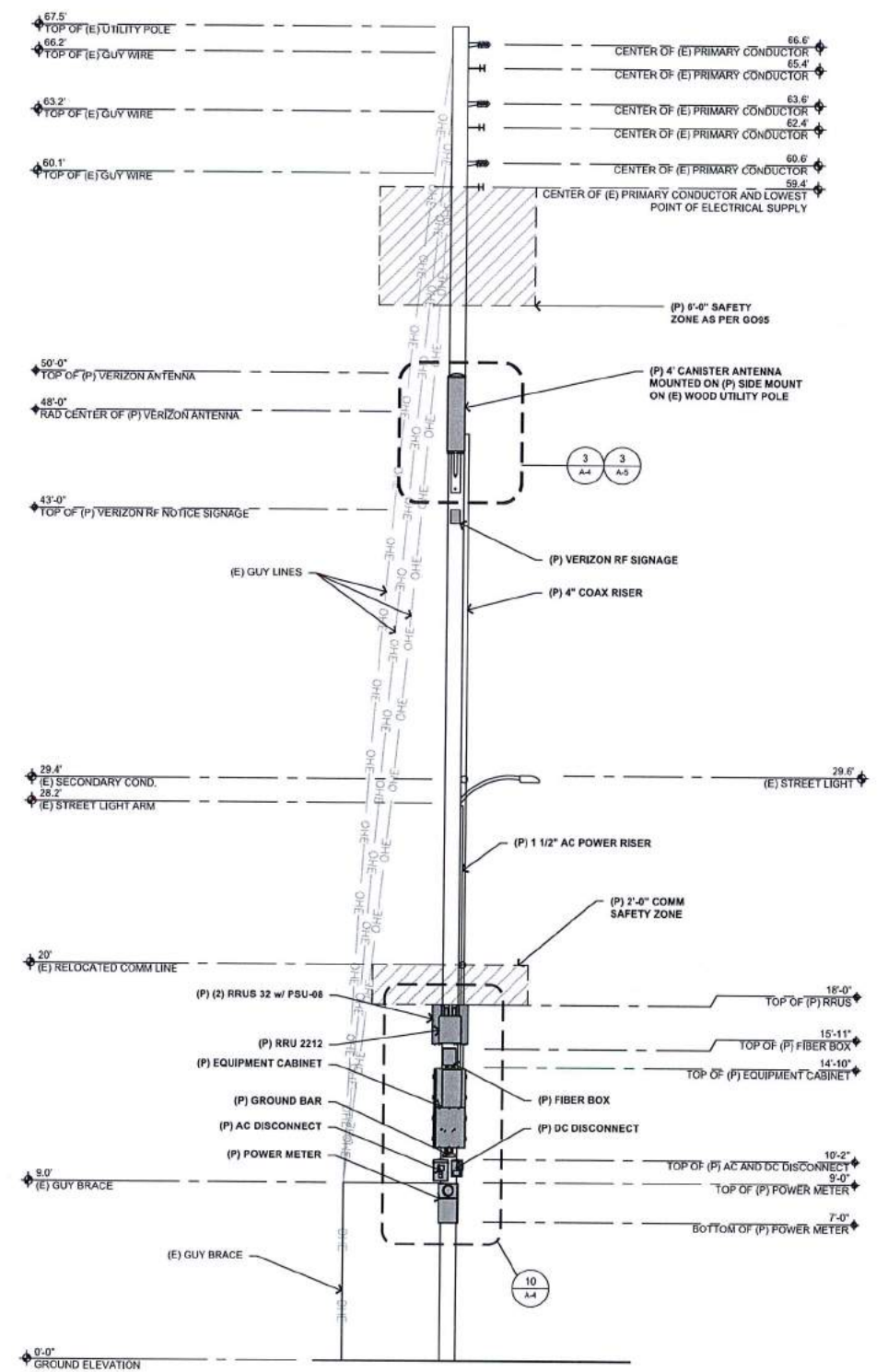
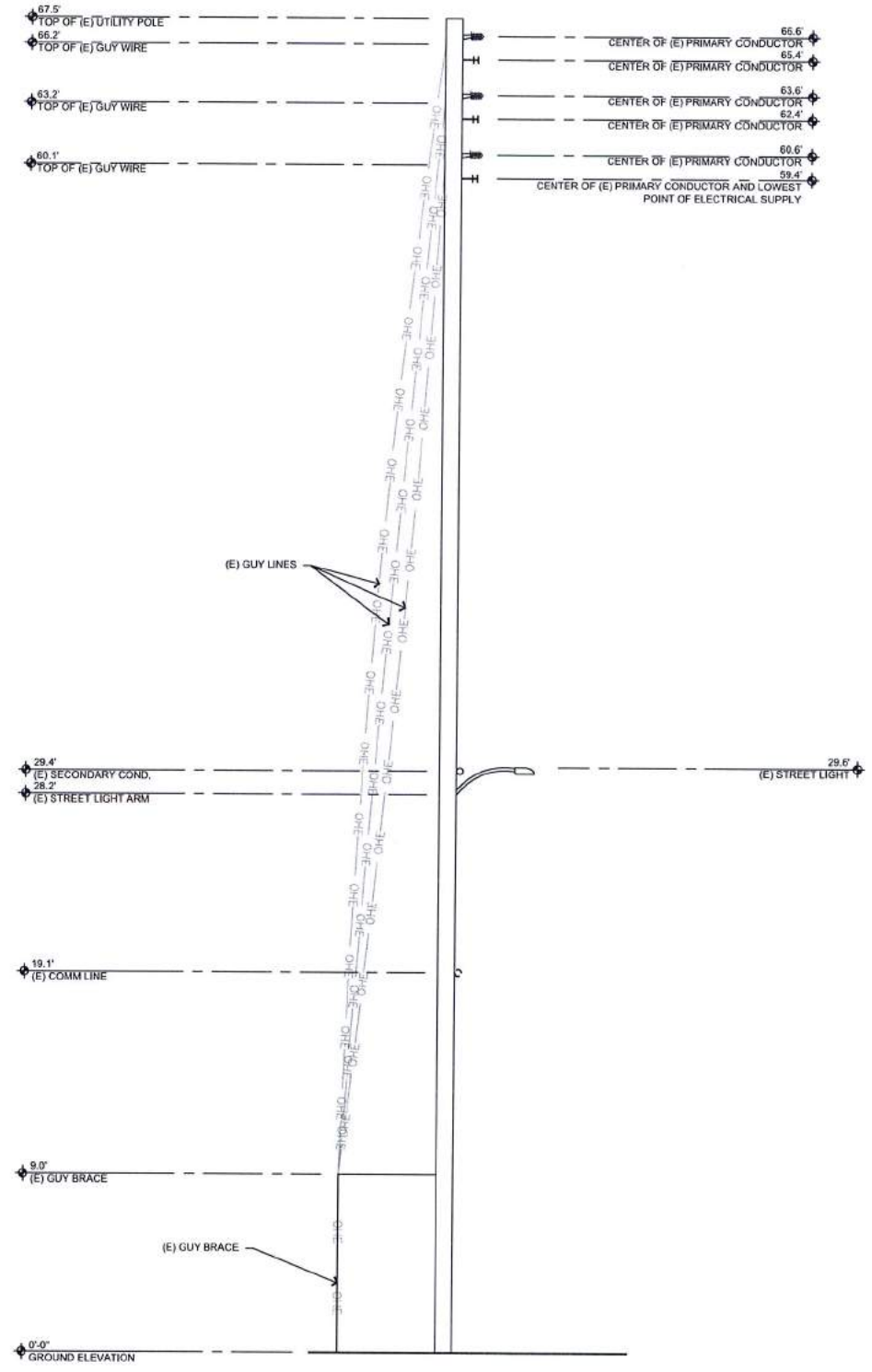
DRAWN BY: JVM BORGES PROJECT NO.:  
 CHECK BY: S.K.W. T-17511-77

SHEET TITLE  
 ENLARGED SITE PLAN & ANTENNA PLAN

SHEET NO.

**A-2**

**NOTES:**  
1. ALL CABLING, ANTENNAS, AND EQUIPMENT TO BE PAINTED TO MATCH POLE



17 EXISTING FRONT ELEVATION  
1/4" = 1'-0"

9 PROPOSED FRONT ELEVATION  
1/4" = 1'-0"

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SITE NAME:  
Oakland 185  
LOCATION CODE:  
446840  
POLE NUMBER:  
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SITE ADDRESS:  
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Oakland, CA 94603

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CHECK BY: S.K.W. T-17511-77  
SHEET TITLE

ELEVATIONS

SHEET NO.

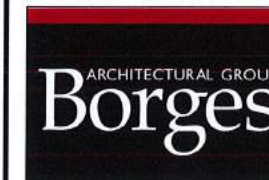
**A-3.1**



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SITE NAME:  
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LOCATION CODE:  
446840  
POLE NUMBER:  
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SITE ADDRESS:  
9678 San Leandro Street  
Oakland, CA 94603

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CHECK BY: B.K.W. T-17511-77  
SHEET TITLE

ELEVATIONS

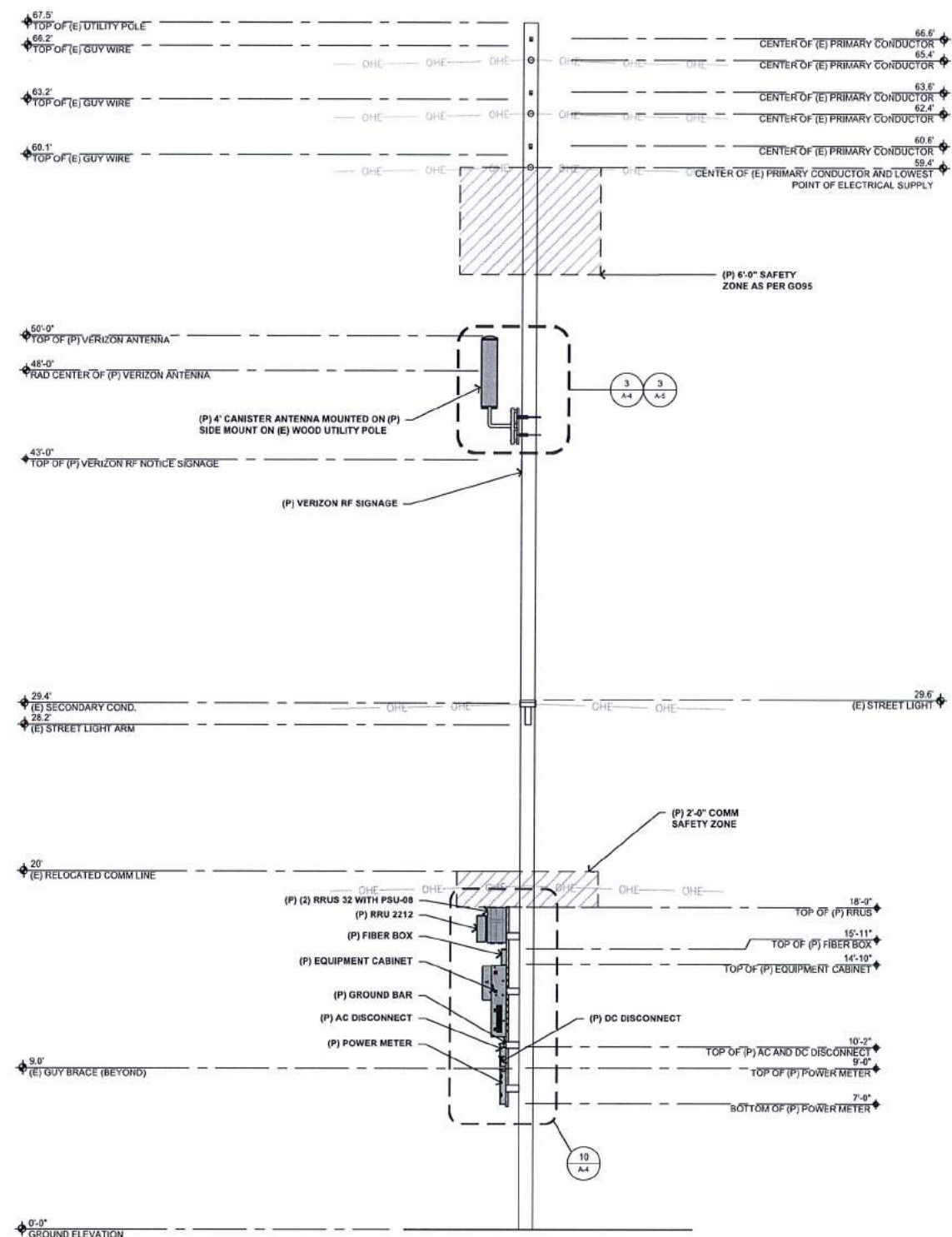
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**A-3.2**

NOTES:  
1. ALL CABLING, ANTENNAS, AND EQUIPMENT TO BE PAINTED TO MATCH POLE



17 EXISTING SIDE ELEVATION  
1/8" = 1'-0"



9 PROPOSED SIDE ELEVATION  
1/8" = 1'-0"

| REV | DATE     | DESCRIPTION       |
|-----|----------|-------------------|
| 0   | 05/16/18 | 100% CD SUBMITTAL |

SITE NAME:  
Oakland 185

LOCATION CODE:  
446840

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24900

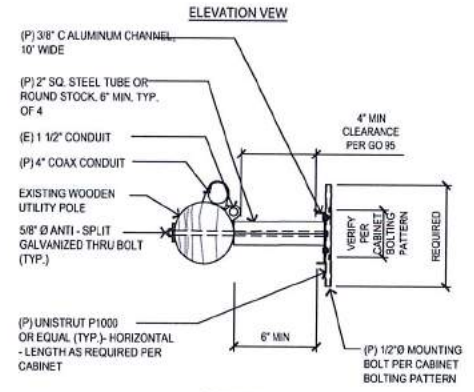
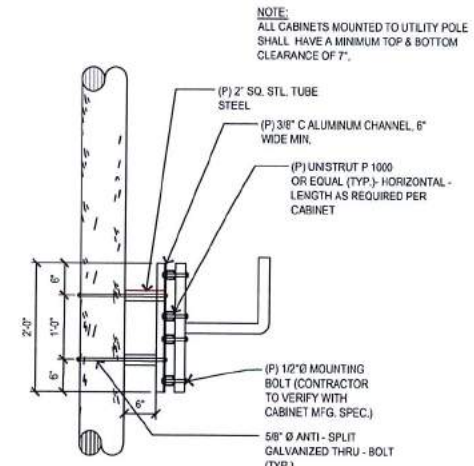
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9678 San Leandro Street  
Oakland, CA 94603

STAMP

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CHECK BY: S.K.W. T-17511-77  
SHEET TITLE

DETAILS

SHEET NO.

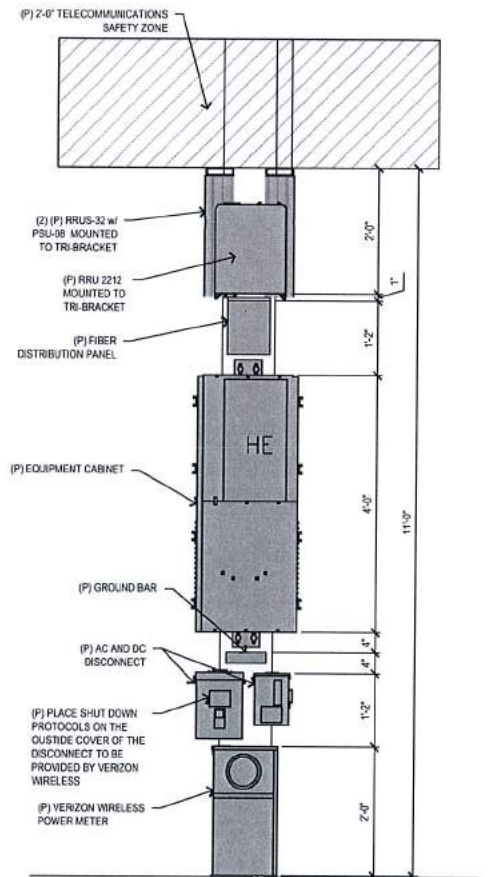


3 ANTENNA MOUNTING DETAIL  
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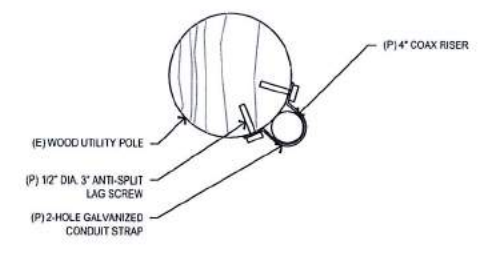
NOTE:  
SIGN BACKGROUND COLOR TO MATCH BE YELLOW  
ALL TEXT AND SYMBOLS TO BE BLACK



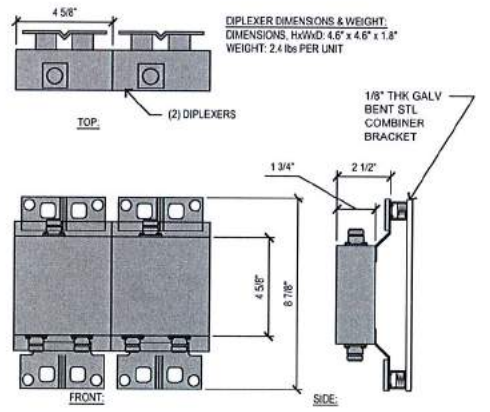
1 NOTICE SIGNAGE  
1' = 1'-0"



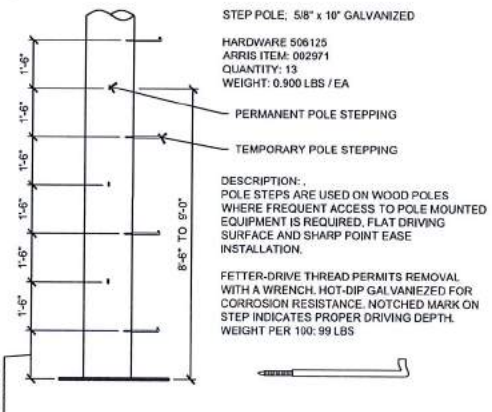
10 ANTENNA EQUIPMENT FRONT ELEVATION  
3/4" = 1'-0"



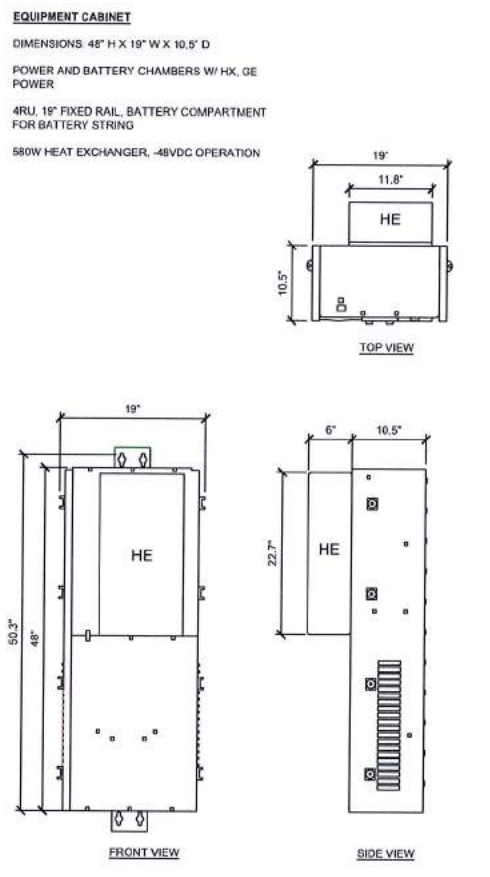
6 CONDUIT STRAP DETAIL  
1 1/2" = 1'-0"



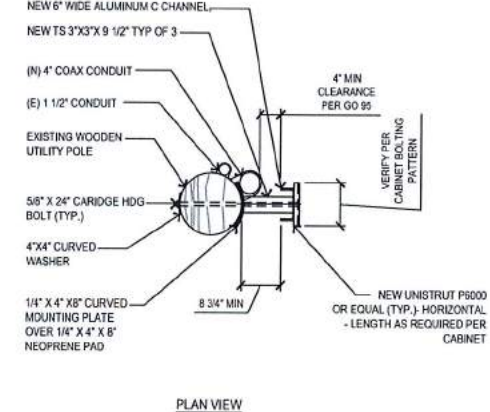
9 DIPLEXER DETAIL  
3" = 1'-0"



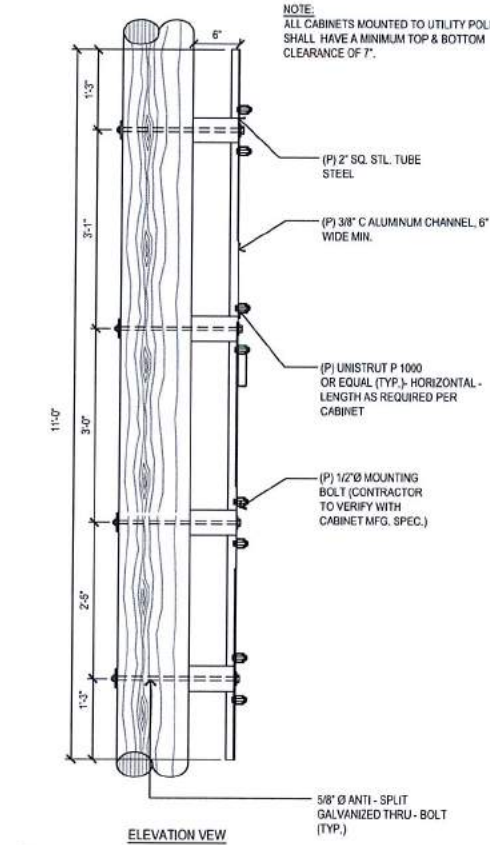
5 CLIMBING PEG DETAIL  
3/8" = 1'-0"



14 EQUIPMENT CABINET  
1" = 1'-0"



17 EQUIPMENT MOUNTING DETAIL  
3/4" = 1'-0"



17 EQUIPMENT MOUNTING DETAIL  
3/4" = 1'-0"

No Date 1/16/2018 10:28:10 AM File Name: 201707171151\_Nexus\_Verizon\_PlymouthCableTel\_185-1770464.dwg Plot Date: 05/16/18 10:28:10 AM Plotter: B2/Sheet Converter





**ELECTRICAL NOTES**

**GENERAL REQUIREMENTS:**

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE NATIONAL ELECTRICAL CODE AND ALL STATE AND LOCAL CODES. NOTHING IN THESE PLANS OR SPECIFICATIONS SHALL BE CONSTRUED AS TO PERMIT WORK NOT CONFORMING TO THE MOST STRINGENT OF THESE CODES. SHOULD CHANGES BE NECESSARY IN THE DRAWINGS OR SPECIFICATIONS TO MAKE THE WORK COMPLY WITH THESE REQUIREMENTS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING AND CEASE WORK ON PARTS OF THE CONTRACT WHICH ARE AFFECTED.
- THE CONTRACTOR SHALL MAKE A SITE VISIT PRIOR TO BIDDING AND CONSTRUCTION TO VERIFY ALL EXISTING CONDITIONS AND SHALL NOTIFY ARCHITECT IMMEDIATELY UPON DISCOVERY OF ANY DISCREPANCIES. THE CONTRACTOR ASSUMES ALL LIABILITY FOR FAILURE TO COMPLY WITH THIS PROVISION.
- THE EXTENT OF THE WORK IS INDICATED BY THE DRAWINGS, SCHEDULES, AND SPECIFICATIONS AND IS SUBJECT TO THE TERMS AND CONDITIONS OF THE CONTRACT. THE WORK SHALL CONSIST OF FURNISHING ALL LABOR, EQUIPMENT, MATERIALS, AND SUPPLIES NECESSARY FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM. THE WORK SHALL ALSO INCLUDE THE COMPLETION OF ALL ELECTRICAL WORK NOT MENTIONED OR SHOWN WHICH IS NECESSARY FOR SUCCESSFUL OPERATION OF ALL SYSTEMS.
- THE CONTRACTOR SHALL PREPARE A BID FOR A COMPLETE AND OPERATIONAL SYSTEM, WHICH INCLUDES THE COST FOR MATERIAL AND LABOR.
- WORKMANSHIP AND NEAT APPEARANCE SHALL BE AS IMPORTANT AS THE OPERATION. DEFECTIVE OR DAMAGED MATERIALS SHALL BE REPLACED OR REPAIRED PRIOR TO FINAL ACCEPTANCE IN A MANNER ACCEPTABLE TO OWNER AND ENGINEER.
- COMPLETE THE ENTIRE INSTALLATION AS SOON AS THE PROGRESS OF THE WORK WILL PERMIT. ARRANGE ANY OUTAGE OF SERVICE WITH THE OWNER AND BUILDING MANAGER IN ADVANCE. MINIMIZE DOWNTIME ON THE BUILDING ELECTRICAL SYSTEM.
- THE ENTIRE ELECTRICAL SYSTEM INSTALLED UNDER THIS CONTRACT SHALL BE DELIVERED IN PROPER WORKING ORDER, REPLACE, WITHOUT ADDITIONAL COST TO THE OWNER, ANY DEFECTIVE MATERIAL AND EQUIPMENT WITHIN ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE.
- ANY ERROR, OMISSION OR DESIGN DISCREPANCY ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION OR CORRECTION BEFORE CONSTRUCTION.
- "PROVIDE" INDICATES THAT ALL ITEMS ARE TO BE FURNISHED, INSTALLED AND CONNECTED IN PLACE.
- CONTRACTOR SHALL SECURE ALL NECESSARY BUILDING PERMITS AND PAY ALL REQUIRED FEES.

**EQUIPMENT LOCATION:**

- THE DRAWINGS INDICATE DIAGRAMMATICALLY THE DESIRED LOCATIONS OR ARRANGEMENTS OF CONDUIT RUNS, OUTLETS, EQUIPMENT, ETC., AND ARE TO BE FOLLOWED AS CLOSELY AS POSSIBLE. PROPER JUDGMENT MUST BE EXERCISED IN EXECUTING THE WORK SO AS TO SECURE THE BEST POSSIBLE INSTALLATION IN THE AVAILABLE SPACE, LIMITATIONS OR INTERFERENCE OF STRUCTURE CONDITIONS ENCOUNTERED.
- IN THE EVENT CHANGES IN THE INDICATED LOCATIONS OR ARRANGEMENTS ARE NECESSARY, DUE TO FIELD CONDITIONS IN THE BUILDING CONSTRUCTION OR REARRANGEMENT OF FURNISHINGS OR EQUIPMENT, SUCH CHANGES SHALL BE MADE WITHOUT COST, PROVIDING THE CHANGE IS ORDERED BEFORE THE CONDUIT RUNS, ETC., AND WORK DIRECTLY CONNECTED TO THE SAME IS INSTALLED AND NO EXTRA MATERIALS ARE REQUIRED.
- LIGHTING FIXTURES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS ONLY. COORDINATE THE FIXTURE LOCATION WITH MECHANICAL EQUIPMENT TO AVOID INTERFERENCE.
- COORDINATE THE WORK OF THIS SECTION WITH THAT OF ALL OTHER TRADES, WHERE CONFLICTS OCCUR, CONSULT WITH THE RESPECTIVE CONTRACTOR AND COME TO AGREEMENT AS TO CHANGES NECESSARY. OBTAIN WRITTEN ACCEPTANCE FROM ENGINEER FOR THE PROPOSED CHANGES BEFORE PROCEEDING.

**SHOP DRAWINGS:**

- N/A UNLESS NOTED OTHERWISE.

**SUBSTITUTIONS:**

- NO SUBSTITUTIONS ARE ALLOWED

**TESTS:**

- BEFORE FINAL ACCEPTANCE OF WORK, THE CONTRACTOR SHALL INSURE THAT ALL EQUIPMENT, SYSTEMS, FIXTURES, ETC., ARE WORKING SATISFACTORILY AND TO THE INTENT OF THE DRAWINGS.

**PERMITS:**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING OUT AND PAYING FOR ALL REQUIRED PERMITS, INSPECTION AND EXAMINATION WITHOUT ADDITIONAL EXPENSE TO THE OWNER.

**GROUNDING:**

- THE CONTRACTOR SHALL PROVIDE A COMPLETE AND APPROVED GROUNDING SYSTEM INCLUDING ELECTRODES, ELECTRODE CONDUCTOR, BONDING CONDUCTORS, AND EQUIPMENT CONDUCTORS AS REQUIRED BY ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
- CONDUITS CONNECTED TO EQUIPMENT AND DEVICES SHALL BE METALLICALLY JOINED TOGETHER TO PROVIDE EFFECTIVE ELECTRICAL CONTINUITY.
- FEEDERS AND BRANCH CIRCUIT WIRING INSTALLED IN A NONMETALLIC CONDUIT SHALL INCLUDE A CODE SIZED GROUNDING CONDUCTOR HAVING GREEN INSULATION. THE GROUND CONDUCTOR SHALL BE PROPERLY CONNECTED AT BOTH ENDS TO MAINTAIN ELECTRICAL CONTINUITY.
- REFER TO GROUND BUS DETAILS. PROVIDE NEW GROUND SYSTEM COMPLETE WITH CONDUCTORS, GROUND ROD AND DESCRIBED TERMINATIONS.
- ALL GROUNDING CONDUCTORS SHALL BE SOLID TINNED COPPER AND ANNEALED #2 UNLESS NOTED OTHERWISE.
- ALL NON-DIRECT BURIED TELEPHONE EQUIPMENT GROUND CONDUCTORS SHALL BE #2 STRANDED THIN (GREEN) INSULATION.
- ALL GROUND CONNECTIONS SHALL BE MADE WITH "HYGROUND" COMPRESSION SYSTEM BURNDY CONNECTORS EXCEPT WHERE NOTED OTHERWISE.
- PAINT AT ALL GROUND CONNECTIONS SHALL BE REMOVED.
- GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE OWNER FOR FUTURE INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE. SUBMIT TEST REPORTS AND FURNISH TO SMART SMR ONE COMPLETE SET OF PRINTS SHOWING "INSTALLED WORK".

**UTILITY SERVICE:**

- TELEPHONE AND ELECTRICAL METERING FACILITIES SHALL CONFORM TO THE REQUIREMENTS OF THE SERVING UTILITY COMPANIES. CONTRACTOR SHALL VERIFY SERVICE LOCATIONS AND REQUIREMENTS. SERVICE INFORMATION WILL BE FURNISHED BY THE SERVING UTILITIES.
- CONFORM TO ALL REQUIREMENTS OF THE SERVING UTILITY COMPANIES.

**PRODUCTS:**

- ALL MATERIALS SHALL BE NEW, CONFORMING WITH NEC, ANS, NEMA, AND THEY SHALL BE U.L. LISTED AND LABELED.
- CONDUIT:
  - RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.
  - ELECTRICAL METALLIC TUBING SHALL U.L. LABEL. FITTINGS SHALL BE COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS.
  - FLEXIBLE METALLIC CONDUIT SHALL HAVE U.L. LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE "JAKE" OR "SQUEEZE" TYPE. SEAL TIGHT FLEXIBLE CONDUIT. ALL CONDUIT EXCESS OF SIX FEET IN LENGTH SHALL HAVE FULL SIZE GROUND WIRE.
  - CONDUIT RUNS MAY BE SURFACE MOUNTED IN CEILING OR WALLS UNLESS INDICATED OTHERWISE. CONDUIT INDICATED SHALL RUN PARALLEL OR AT RIGHT ANGLES TO CEILING, FLOOR OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH ARCHITECT PRIOR TO INSTALLING.
  - ALL UNDERGROUND CONDUITS SHALL BE PVC SCHEDULE 40 (UNLESS NOTED OTHERWISE) AT A MINIMUM DEPTH OF 24" BELOW GRADE.
  - ALL CONDUIT ONLY (C.O.) SHALL HAVE PULL ROPE.
- CONDUITS RUN ON ROOFS SHALL BE INSTALLED ON 4x4 REDWOOD SLEEPERS, 6'-0" ON CENTER, SET IN NON-HARDENING MASTIC.

- ALL WIRE AND CABLE SHALL BE COPPER, 600 VOLT, #12 AWG MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED. TYPE THIN INSULATION USED UNLESS CONDUCTORS INSTALLED IN CONDUIT EXPOSED TO WEATHER, IN WHICH CASE TYPE THIN INSULATION SHALL BE USED.
- PROVIDE GALVANIZED COATED STEEL BOXES AND ACCESSORIES SIZED PER CODE TO ACCOMMODATE ALL DEVICES AND WIRING.
- DUPLEX RECEPTACLES SHALL BE SPECIFICATION GRADE WITH WHITE FINISH (UNLESS NOTED BY ENGINEER), 20 AMP, 125 VOLT, THREE WIRE GROUNDING TYPE, NEMA 5-20R. MOUNT RECEPTACLE AT +12" ABOVE FINISHED FLOOR UNLESS OTHERWISE INDICATED ON DRAWINGS OR IN DETAILS. WEATHER-PROOF RECEPTACLES SHALL BE GROUND FAULT INTERRUPTER TYPE WITH SIERRA #WFD-8 UP COVERPLATES.
- TOGGLE SWITCHES SHALL BE 20 AMP, 120 VOLT AC, SPECIFICATION GRADE WHITE (UNLESS NOTED OTHERWISE) FINISH. MOUNT SWITCHES AT +48" ABOVE FINISHED FLOOR.
- PANELBOARDS SHALL BE DEAD FRONT SAFETY TYPE WITH ANTI-BURN SOLDERLESS COMPRESSION APPROVED FOR COPPER CONDUCTORS. COPPER BUS BARS, FULL SIZED NEUTRAL BUS, GROUND BUS AND EQUIPPED WITH QUICK-MAKE QUICK-BREAK BOLT-IN TYPE THERMAL MAGNETIC CIRCUIT BREAKERS. MOUNT TOP OF THE PANELBOARDS AT 6'-3" ABOVE FINISHED FLOOR. PROVIDE TYPE WRITTEN CIRCUIT DIRECTORY.
- ALL CIRCUIT BREAKERS, MAGNETIC STARTERS AND OTHER ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THAN MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED.
- GROUND RODS SHALL BE COPPER CLAD STEEL, 5/8" ROUND AND 10' LONG. COPPER WELD OR APPROVED EQUAL.

**INSTALLATION:**

- PROVIDE SUPPORTING DEVICES FOR ALL ELECTRICAL EQUIPMENT, FIXTURES, BOXES, PANEL, ETC., SUPPORT LUMINAIRES FROM UNDERSIDE OF STRUCTURAL CEILING. EQUIPMENT SHALL BE BRACED TO WITHSTAND HORIZONTAL FORCES IN ACCORDANCE WITH STATE AND LOCAL CODE REQUIREMENTS. PROVIDE PRIOR ALIGNMENT AND LEVELING OF ALL DEVICES AND FIXTURES.
- CUTTING, PATCHING, CHASES, OPENINGS: PROVIDE LAYOUT IN ADVANCE TO ELIMINATE UNNECESSARY CUTTING OR DRILLING OF WALLS, FLOORS, CEILINGS, AND ROOFS. ANY DAMAGE TO BUILDING STRUCTURE OR EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR. OBTAIN PERMISSION FROM THE ENGINEER BEFORE CORING.
- IN DRILLING HOLES INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, PIPE RUNS, ETC., IT MUST BE CLEARLY UNDERSTOOD THAT TENDONS AND/OR REINFORCING STEEL WILL NOT BE DRILLED INTO, CUT OR DAMAGED UNDER THE CIRCUMSTANCES.
- LOCATION OF TENDONS AND/OR REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND THEREFORE, MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT VIA X-RAY OR OTHER DEVICES THAT CAN ACCURATELY LOCATE THE REINFORCING AND/OR STEEL TENDONS.
- PENETRATIONS IN FIRE RATED WALLS SHALL BE FIRE STOPPED IN ACCORDANCE WITH THE REQUIREMENTS OF THE C.B.C.

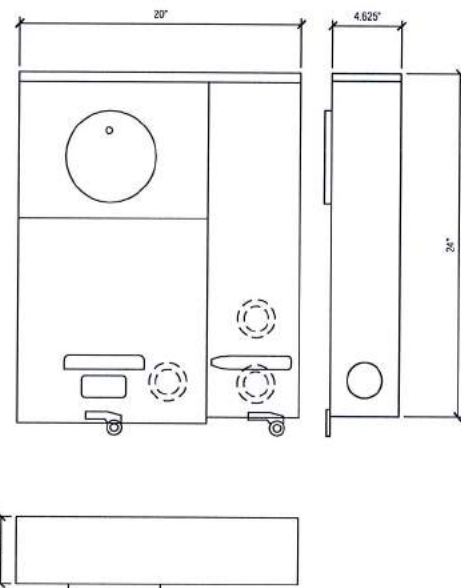
**PROJECT CLOSEOUT:**

- UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.
- PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS AND CIRCUITS.
- ALL BROCHURES, OPERATING MANUALS, CATALOG, SHOP DRAWINGS, ETC., SHALL BE TURNED OVER TO OWNER AT JOB COMPLETION.

**GROUNDING NOTES:**

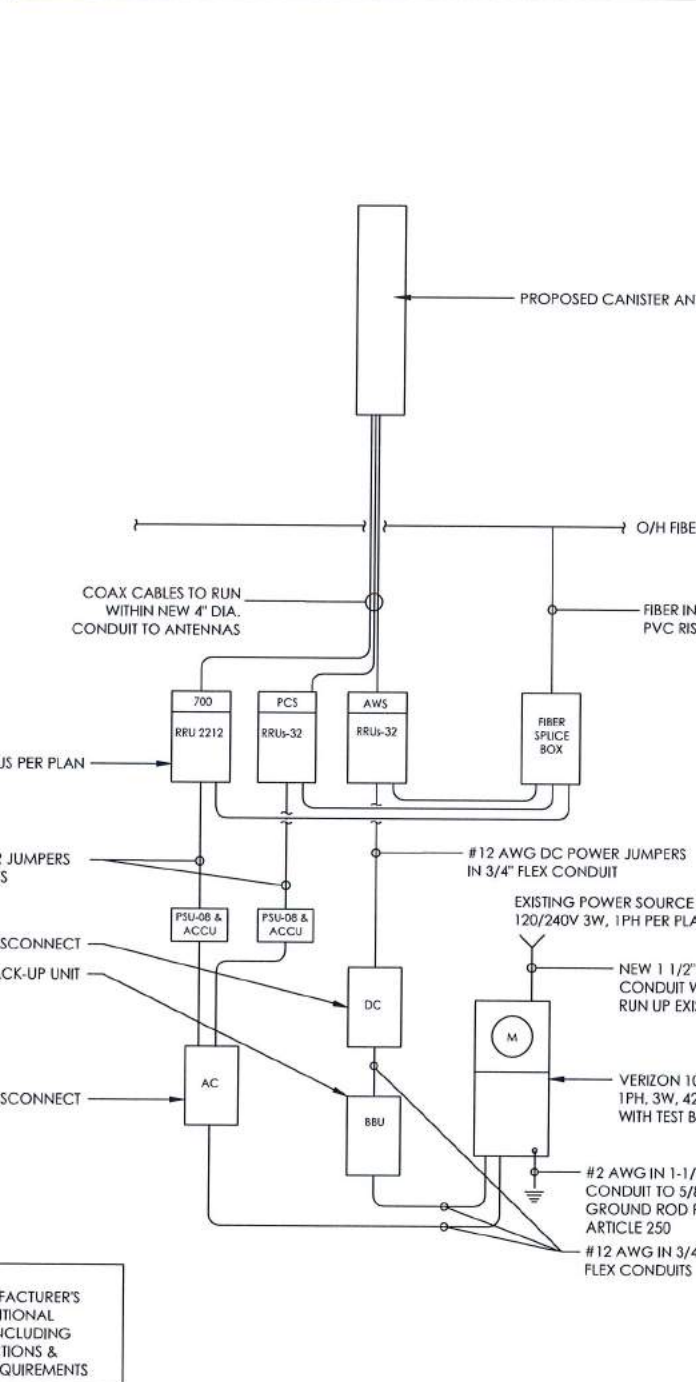
- ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION REQUIREMENTS AND CONSTRUCTION ACCORDING TO SITE CONDITIONS.
- ALL GROUNDING CONDUCTORS: #2 AWG SOLID BARE TINNED COPPER WIRE UNLESS OTHERWISE NOTED.
- GROUND BAR LOCATED IN BASE OF EQUIPMENT WILL BE PROVIDED, FURNISHED AND INSTALLED BY THE VENDOR.
- ALL BELOW GRADE CONNECTIONS: EXOTHERMIC WELD TYPE. ABOVE GRADE CONNECTIONS: EXOTHERMIC WELD TYPE.
- 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 SLAB, SPREAD FOOTING, OR FENCE.
- EXOTHERMIC WELD GROUND CONNECTION TO FENCE POST: TREAT WITH A COLD GALVANIZED SPRAY.
- GROUND BARS:
  - EQUIPMENT GROUND BUS BAR (EGB) LOCATED AT THE BOTTOM OF ANTENNA POLE/MAST FOR MAKING GROUNDING JUMPER CONNECTIONS TO COAX FEEDER CABLES SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. JUMPERS (FURNISHED BY OWNERS) SHALL BE INSTALLED AND CONNECTED BY ELECTRICAL CONTRACTOR.
- ALL GROUNDING INSTALLATIONS AND CONNECTIONS SHALL BE MADE BY ELECTRICAL CONTRACTOR.
- 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).
- IF EQUIPMENT IS IN A C.L. FENCE ENCLOSURE, GROUND ONLY CORNER POSTS AND SUPPORT POSTS OF GATE. IF CHAIN LINK LID IS USED, THEN GROUND LID ALSO.
- GROUNDING AT PPC CABINET SHALL BE VERTICALLY INSTALLED.
- ALL GROUNDING FOR ANTENNAS SHALL BE CONNECTED SO THAT IT WILL BY-PASS MAIN BUSS BAR.
- ALL EMT RUNS SHALL BE GROUNDED AND HAVE A BUSHING, NO PVC ABOVE GROUND.
- USE SEPARATE HOLES FOR GROUNDING AT BUSS BAR. NO "DOUBLE-UP" OF LUGS.
- POWER AND TELCO CABINETS SHALL BE GROUNDED (BONDED) TOGETHER.
- NO LBS ALLOWED ON GROUNDING.
- PROVIDE STAINLESS STEEL CLAMP AND BRASS TAGS ON COAX AT ANTENNAS AND DOGHOUSE.

|                    |                    |
|--------------------|--------------------|
| METER              |                    |
| DIMENSIONS (HxWxD) | 24" x 20" x 4.625" |
| WEIGHT             | 35 lbs.            |



9 POWER METER DETAIL  
1" = 1'-0"

| VERIZON SMALL-CELL 100A AC POWER PANEL (POLE-MOUNTED CABINET) |                         |     |     |                    |      |   |     |    |             |                          |
|---|-------------------------|-----|-----|--------------------|------|---|-----|----|-------------|--------------------------|
| AC POWER PANEL (NEW)<br>120/240 VOLTS, 1-PHASE, 3-WIRE, 100A  |                         |     |     |                    |      |   |     |    |             |                          |
| DESCRIPTION   | MAIN BREAKER RATING (A) |     |     | SYSTEM VOLTAGE (V) |      |   | 240 |    |             |                          |
|   | VA                      | EMT | BKR | POSN               | POSN | BKR   | EMT | VA | DESCRIPTION |                          |
| RECTIFIER #1  | 500                     | c   | 20  | 1                  | 1000 | 2   | 20  | c  | 500         | RECTIFIER #2             |
|   | 500                     | c   | 20  | 3                  | 1000 | 4   | 20  | c  | 500         |                          |
| SPARE   |                         |     | 20  | 5                  |      | 6   |     |    |             | BLANK                    |
|   |                         |     | 20  | 7                  |      | 100   | 8   | 10 | 100         | HEAT EXCHANGER FAN       |
| PSU #1 (FOR 700 RRU5 2212)                                    | 1000                    | c   | 15  | 9                  | 2000 | 10  | 15  | c  | 1000        | PSU #2 (FOR PCS RRU5 32) |
| BLANK   |                         |     |     | 11                 |      | 0   | 12  |    |             | BLANK                    |
| BLANK   |                         |     |     | 13                 | 0    |   | 14  |    |             | BLANK                    |
| BLANK   |                         |     |     | 15                 | 0    |   | 16  |    |             | BLANK                    |
| PHASE TOTALS (VA):  |                         |     |     | 3000               | 1100 |   |     |    |             |                          |
| CURRENT PER PHASE (A):  |                         |     |     | 12.5               | 4.6  | AMPERES/PHASE CANNOT EXCEED MAIN BREAKER RATING |     |    |             |                          |
| PANEL TOTAL (VA):   |                         |     |     | 4100               |      | LEGEND: C = CONTINUOUS, NC = NON-CONTINUOUS     |     |    |             |                          |
| PANEL CAPACITY (kVA):   |                         |     |     | 24.0               |      | CONNECTED LOAD (kVA): 4.1                       |     |    |             |                          |
| PANEL LOADING (100% non-cont. load) (kVA):                    |                         |     |     | 0.1                |      |   |     |    |             |                          |
| PANEL LOADING (125% continuous load) (kVA):                   |                         |     |     | 4.0                |      |   |     |    |             |                          |
| PANEL LOADING (TOTAL) (kVA):                                  |                         |     |     | 4.1                |      |   |     |    |             |                          |
| SPARE CAPACITY (kVA):   |                         |     |     | 19.9               |      |   |     |    |             |                          |



NOTE  
REFER TO MANUFACTURER'S  
SPECS FOR ADDITIONAL  
INFORMATION INCLUDING  
WIRING INSTRUCTIONS &  
GROUNDING REQUIREMENTS

5 ELECTRICAL NOTES  
N.T.S.

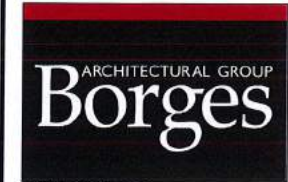
PREPARED FOR



VERIZON WIRELESS  
2785 MITCHELL DRIVE  
WALNUT CREEK, CALIFORNIA 94598



NEXIUS  
2585 DALLAS PARKWAY, SUITE 300  
FRENCO, TEXAS 75034



borgesarch.com

1478 STONE POINT DRIVE, SUITE 359  
ROSELLE, CA 95061  
916 782 7200 TEL  
916 773 3037 FAX

| 0   | 05/16/18 | 100% CD SUBMITTAL |
|-----|----------|-------------------|
| REV | DATE     | DESCRIPTION       |

SITE NAME:  
**Oakland 185**

LOCATION CODE:  
**446840**

POLE NUMBER:  
**24900**

SITE ADDRESS:  
**9678 San Leandro Street  
Oakland, CA 94603**

DRAWN BY: J.V.M. BORGES PROJECT NO.:  
CHECK BY: B.K.W. 1-17511-77

SHEET TITLE  
**SINGLE LINE  
DIAGRAM & PANEL  
SCHEDULE**

SHEET NO.





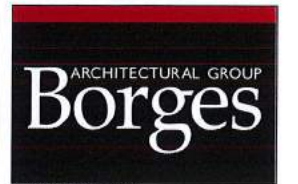




VERIZON WIRELESS  
2715 MITCHELL DRIVE  
WALNUT CREEK, CALIFORNIA 94598



NEXIUS  
2982 DALLAS PARKWAY, SUITE 300  
FRISCO, TEXAS 75034



borgesarch.com

1478 STONE POINT DRIVE, SUITE 300  
ROSELVILLE CA 95661  
916 782 7200 TEL  
916 773 3037 FAX

| REV | DATE     | DESCRIPTION       |
|-----|----------|-------------------|
| 0   | 05/16/18 | 100% CD SUBMITTAL |

SITE NAME:  
Oakland 185  
LOCATION CODE:  
446840  
POLE NUMBER:  
24900  
SITE ADDRESS:  
9678 San Leandro Street  
Oakland, CA 94603

STAMP

DRAWN BY: JVM BORGES PROJECT NO:  
CHECK BY: S.K.W. T-17511-77  
SHEET TITLE

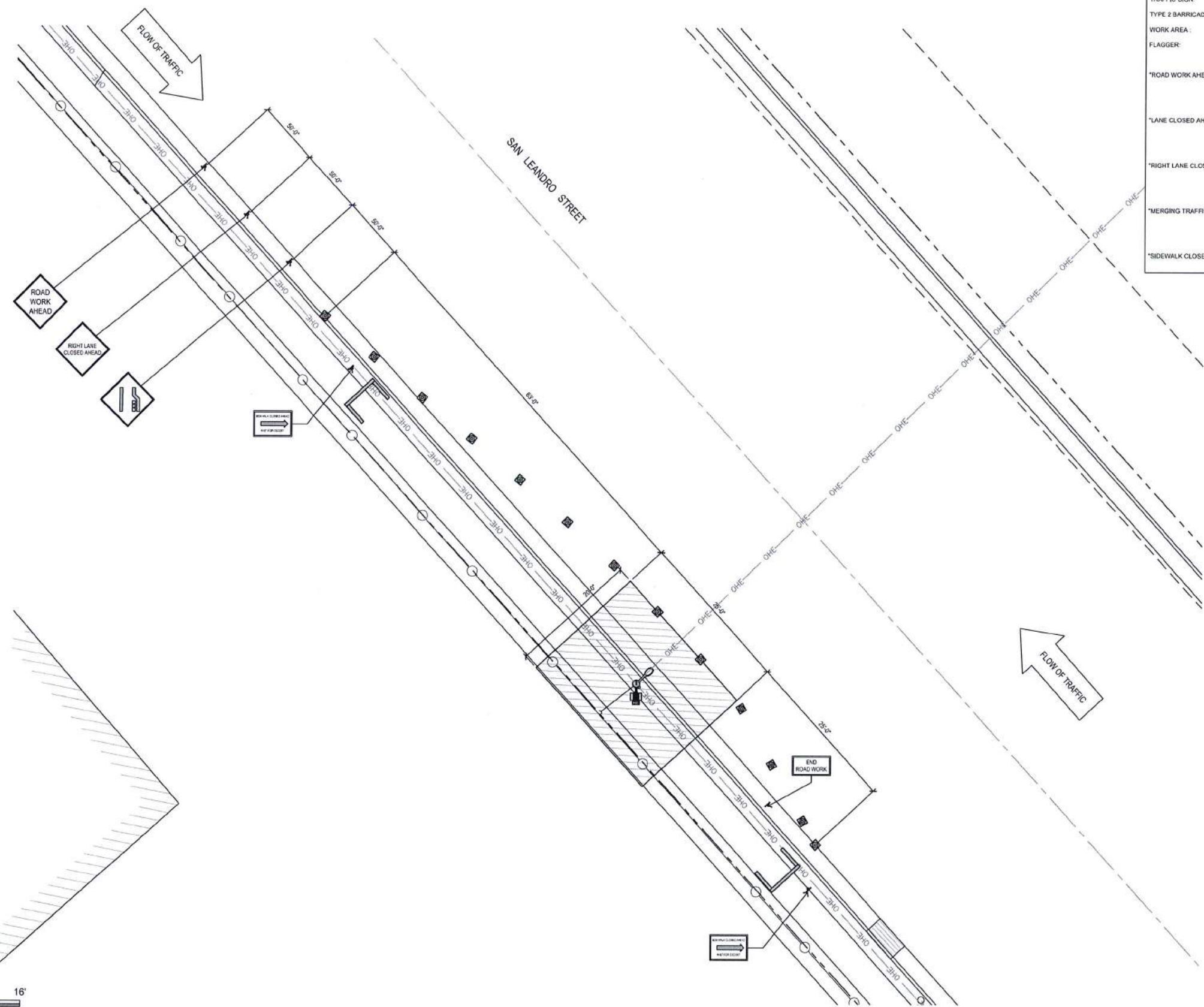
TRAFFIC CONTROL PLAN

SHEET NO

TP-2

**LEGEND:**

- TRAFFIC CONE: [Symbol]
- TRAFFIC SIGN: [Symbol]
- TYPE 2 BARRICADE: [Symbol]
- WORK AREA: [Symbol]
- FLAGGER: [Symbol]
- "ROAD WORK AHEAD" SIGN: [Symbol]
- "LANE CLOSED AHEAD" SIGN: [Symbol]
- "RIGHT LANE CLOSED AHEAD" SIGN: [Symbol]
- "MERGING TRAFFIC AHEAD" SIGN: [Symbol]
- "SIDEWALK CLOSED AHEAD, WAIT FOR ESCORT" SIGN: [Symbol]



Plot Date: 5/16/2018 10:08:55 AM File Name: I:\017511-77\17\_Nexus\_Verizon\_Wireless\Project\04\04\_18\CD\04\_18\17\_Traffic\_Control\_Plan.dwg Plotter: AutoCAD Plot Driver

View From San Leonardo Street Looking Northwest at Site

**OAKLAND 185**

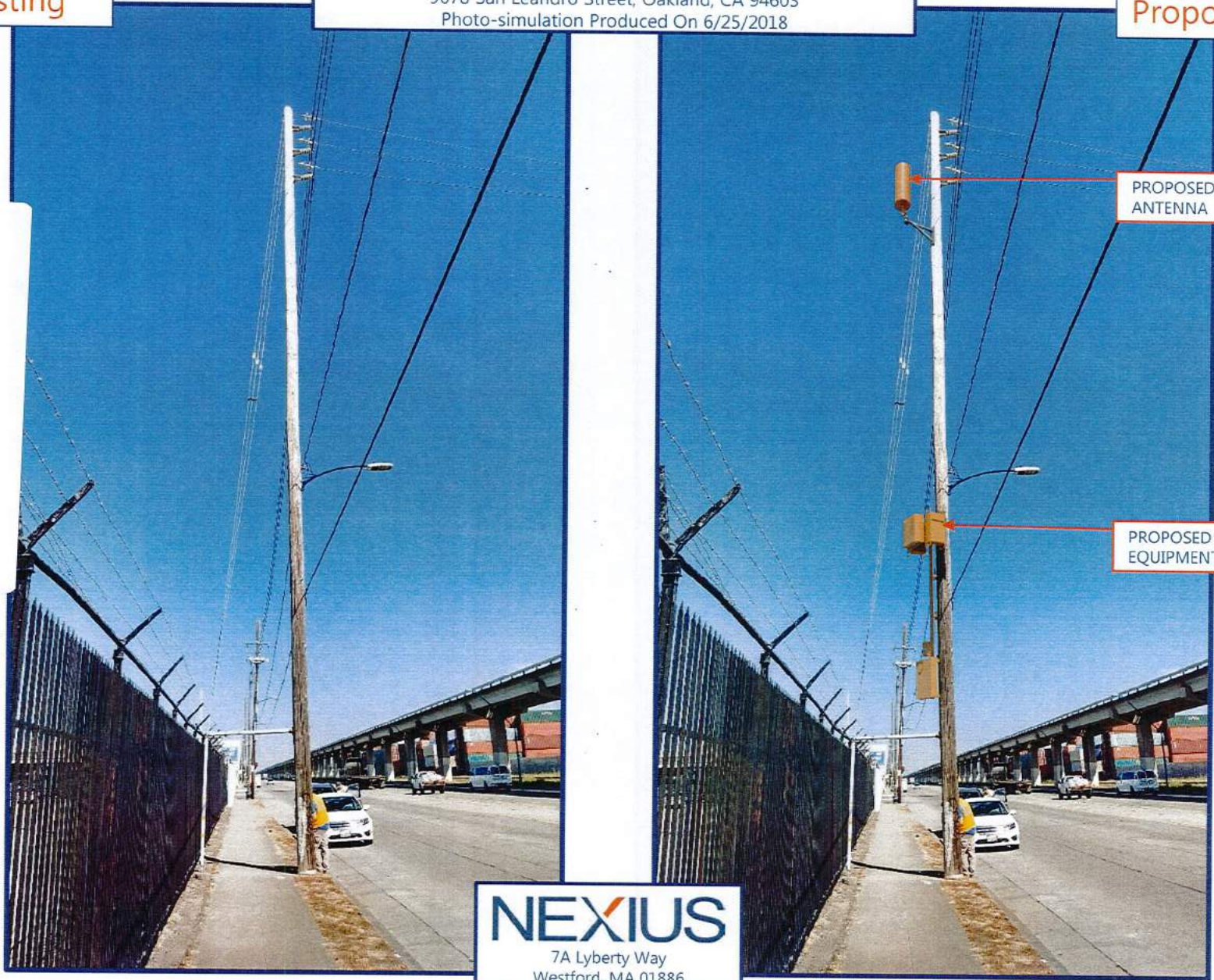
9678 San Leandro Street, Oakland, CA 94603

Photo-simulation Produced On 6/25/2018

Existing

Proposed

Attachment D



PROPOSED ANTENNA

PROPOSED EQUIPMENT

**NEXIUS**  
7A Liberty Way  
Westford, MA 01886

# NEXIUS

## Design Alternative Analysis

Oakland 185 – 9678 San Leandro

A JPA mounted antenna in the public right-of-way was chosen over other designs because there is significant gap in coverage in this area and the proposed facility is the least intrusive means to close the gap. Other JPA poles in the area either did not meet the strict GO95 clearance requirements or incorrect height to cover the required area.

**Attachment E**

**Verizon Wireless • Proposed Small Cell (No. 446840 "Oakland 185")  
9678 San Leandro Street • Oakland, California**

**Statement of Hammett & Edison, Inc., Consulting Engineers**

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of Verizon Wireless, a personal wireless telecommunications carrier, to evaluate its small cell (No. 446840 "Oakland 185") proposed to be sited in Oakland, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

**Executive Summary**

Verizon proposes to install one cylindrical antenna on the utility pole sited in the public right-of-way near 9678 San Leandro Street in Oakland. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

**Prevailing Exposure Standard**

The U.S. Congress requires that the Federal Communications Commission ("FCC") evaluate its actions for possible significant impact on the environment. A summary of the FCC's human exposure limits is shown in Figure 1. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. The FCC limit for exposures of unlimited duration to radio frequency energy for various wireless services are as follows:

| Wireless Service                   | Frequency Band | Occupational Limit      | Public Limit            |
|------------------------------------|----------------|-------------------------|-------------------------|
| Microwave (Point-to-Point)         | 5-80 GHz       | 5.00 mW/cm <sup>2</sup> | 1.00 mW/cm <sup>2</sup> |
| WiFi (and unlicensed uses)         | 2-6            | 5.00                    | 1.00                    |
| BRS (Broadband Radio)              | 2,600 MHz      | 5.00                    | 1.00                    |
| WCS (Wireless Communication)       | 2,300          | 5.00                    | 1.00                    |
| AWS (Advanced Wireless)            | 2,100          | 5.00                    | 1.00                    |
| PCS (Personal Communication)       | 1,950          | 5.00                    | 1.00                    |
| Cellular                           | 870            | 2.90                    | 0.58                    |
| SMR (Specialized Mobile Radio)     | 855            | 2.85                    | 0.57                    |
| 700 MHz                            | 700            | 2.40                    | 0.48                    |
| [most restrictive frequency range] | 30-300         | 1.00                    | 0.20                    |

Power line frequencies (60 Hz) are well below the applicable range of this standard, and there is considered to be no compounding effect from simultaneous exposure to power line and radio frequency fields.

**General Facility Requirements**

Small cells typically consist of two distinct parts: the electronic transceivers (also called "radios" or "channels") that are connected to a central "hub" (which in turn are connected to the traditional wired telephone lines), and the passive antenna(s) that send the wireless signals created by the radios out to be received by individual subscriber units. The radios are often located on the same pole as the antennas



**Verizon Wireless • Proposed Small Cell (No. 446840 “Oakland 185”)  
9678 San Leandro Street • Oakland, California**

and are connected to the antennas by coaxial cables. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

**Computer Modeling Method**

The FCC provides direction for determining compliance in its Office of Engineering and Technology Bulletin No. 65, “Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation,” dated August 1997. Figure 2 describes the calculation methodologies, reflecting the facts that a directional antenna’s radiation pattern is not fully formed at locations very close by (the “near-field” effect) and that at greater distances the power level from an energy source decreases with the square of the distance from it (the “inverse square law”). The conservative nature of this method for evaluating exposure conditions has been verified by numerous field tests.

**Site and Facility Description**

Based upon information provided by Verizon, including drawings by Borges Architectural Group, Inc., dated April 4, 2018, it is proposed to install one Amphenol Model CUUT360X12F omnidirectional cylindrical antenna on a cross-arm to be added to the side of the existing utility pole sited in the public right-of-way on the southwest side of San Leandro Street, about 430 feet northwest of the intersection with 98th Avenue in Oakland. The antenna would employ no downtilt and would be mounted at an effective height of about 48 feet above ground. The maximum effective radiated power in any direction would be 1,820 watts, representing simultaneous operation at 840 watts for AWS, 740 watts for PCS, and 240 watts for 700 MHz service. There are reported no other wireless base stations at the site or nearby.

**Study Results**

For a person anywhere at ground, the maximum RF exposure level due to the proposed Verizon operation is calculated to be 0.00096 mW/cm<sup>2</sup>, which is 0.17% of the applicable public exposure limit. The maximum calculated level at any nearby building is 0.30% of the public exposure limit. The maximum calculated level at the BART tracks on the opposite side of San Leandro Street is 2.9% of the public limit. It should be noted that these results include several “worst-case” assumptions and therefore are expected to overstate actual power density levels from the proposed operation.





**Verizon Wireless • Proposed Small Cell (No. 446840 "Oakland 185")  
9678 San Leandro Street • Oakland, California**

**Recommended Mitigation Measures**


Due to its mounting location and height, the Verizon antenna would not be accessible to unauthorized persons, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, it is recommended that appropriate RF safety training, to include review of personal monitor use, be provided to all authorized personnel who have access to the antenna. No access within 5 feet directly in front of the Verizon antenna itself, such as might occur during certain maintenance activities at the top of the pole, should be allowed while the small cell is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. It is recommended that an explanatory sign\* be posted at the antenna and/or on the pole below the antenna, readily visible from any angle of approach to persons who might need to work within that distance.

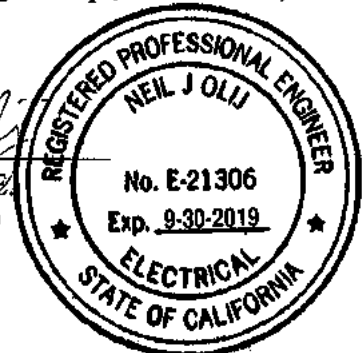
**Conclusion**

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the small cell proposed by Verizon Wireless near 9678 San Leandro Street in Oakland, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating small cells. Training authorized personnel and posting explanatory signs are recommended to establish compliance with occupational exposure limits.

**Authorship**

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration No. E-21306, which expires on September 30, 2019. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.

  
\_\_\_\_\_  
Neil J. Olij, P.E.  
707/996-5200



June 8, 2018

\* Signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (e.g., a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter, and guidance from the landlord, local zoning or health authority, or appropriate professionals may be required. Signage may also need to comply with the requirements of California Public Utilities Commission General Order No. 95.

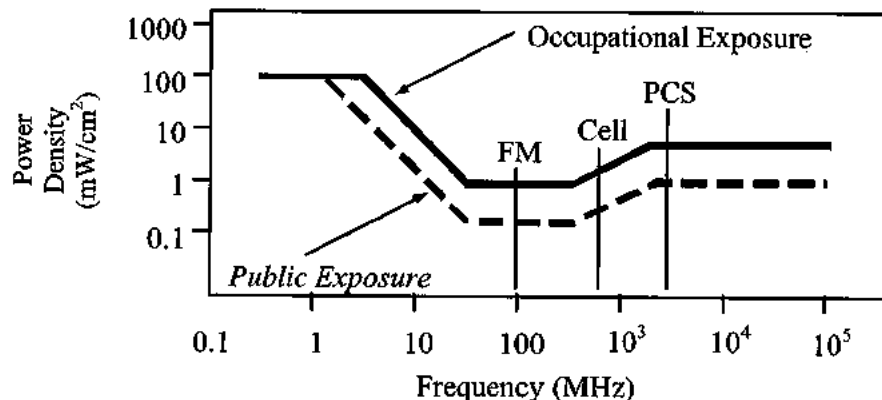


## FCC Radio Frequency Protection Guide

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission ("FCC") to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The FCC adopted the limits from Report No. 86, "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," published in 1986 by the Congressionally chartered National Council on Radiation Protection and Measurements ("NCRP"). Separate limits apply for occupational and public exposure conditions, with the latter limits generally five times more restrictive. The more recent standard, developed by the Institute of Electrical and Electronics Engineers and approved as American National Standard ANSI/IEEE C95.1-2006, "Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," includes similar limits. These limits apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health.

As shown in the table and chart below, separate limits apply for occupational and public exposure conditions, with the latter limits (in *italics* and/or dashed) up to five times more restrictive:

| Frequency<br>Applicable<br>Range<br>(MHz) | Electromagnetic Fields ( <i>f</i> is frequency of emission in MHz) |                |                                     |               |  |                          |
|---|--|----------------|-------------------------------------|---------------|--|--------------------------|
|   | Electric<br>Field Strength<br>(V/m)                                |                | Magnetic<br>Field Strength<br>(A/m) |               | Equivalent Far-Field<br>Power Density<br>(mW/cm <sup>2</sup> ) |                          |
| 0.3 – 1.34                                | 614  | <i>614</i>     | 1.63                                | <i>1.63</i>   | 100  | <i>100</i>               |
| 1.34 – 3.0                                | 614  | <i>823.8/f</i> | 1.63                                | <i>2.19/f</i> | 100  | <i>180/f<sup>2</sup></i> |
| 3.0 – 30                                  | 1842/f   | <i>823.8/f</i> | 4.89/f                              | <i>2.19/f</i> | 900/f <sup>2</sup>   | <i>180/f<sup>2</sup></i> |
| 30 – 300                                  | 61.4   | <i>27.5</i>    | 0.163                               | <i>0.0729</i> | 1.0  | <i>0.2</i>               |
| 300 – 1,500                               | 3.54√ <i>f</i>   | <i>1.59√f</i>  | √ <i>f</i> /106                     | <i>√f/238</i> | <i>f/300</i>   | <i>f/1500</i>            |
| 1,500 – 100,000                           | 137  | <i>61.4</i>    | 0.364                               | <i>0.163</i>  | 5.0  | <i>1.0</i>               |



Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits, and higher levels also are allowed for exposures to small areas, such that the spatially averaged levels do not exceed the limits. However, neither of these allowances is incorporated in the conservative calculation formulas in the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) for projecting field levels. Hammett & Edison has built those formulas into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radio sources. The program allows for the description of buildings and uneven terrain, if required to obtain more accurate projections.



**HAMMETT & EDISON, INC.**  
CONSULTING ENGINEERS  
SAN FRANCISCO

FCC Guidelines  
Figure 1

## RFR.CALC™ Calculation Methodology

### Assessment by Calculation of Compliance with FCC Exposure Guidelines

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission ("FCC") to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The maximum permissible exposure limits adopted by the FCC (see Figure 1) apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits.

#### Near Field.

Prediction methods have been developed for the near field zone of panel (directional) and whip (omnidirectional) antennas, typical at wireless telecommunications base stations, as well as dish (aperture) antennas, typically used for microwave links. The antenna patterns are not fully formed in the near field at these antennas, and the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) gives suitable formulas for calculating power density within such zones.

For a panel or whip antenna, power density  $S = \frac{180}{\theta_{BW}} \times \frac{0.1 \times P_{net}}{\pi \times D \times h}$ , in mW/cm<sup>2</sup>,

and for an aperture antenna, maximum power density  $S_{max} = \frac{0.1 \times 16 \times \eta \times P_{net}}{\pi \times h^2}$ , in mW/cm<sup>2</sup>,

where  $\theta_{BW}$  = half-power beamwidth of the antenna, in degrees, and

$P_{net}$  = net power input to the antenna, in watts,

$D$  = distance from antenna, in meters,

$h$  = aperture height of the antenna, in meters, and

$\eta$  = aperture efficiency (unitless, typically 0.5-0.8).

The factor of 0.1 in the numerators converts to the desired units of power density.

#### Far Field.

OET-65 gives this formula for calculating power density in the far field of an individual RF source:

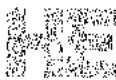
power density  $S = \frac{2.56 \times 1.64 \times 100 \times RFF^2 \times ERP}{4 \times \pi \times D^2}$ , in mW/cm<sup>2</sup>,

where ERP = total ERP (all polarizations), in kilowatts,

RFF = relative field factor at the direction to the actual point of calculation, and

$D$  = distance from the center of radiation to the point of calculation, in meters.

The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 ( $1.6 \times 1.6 = 2.56$ ). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired units of power density. This formula has been built into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radiation sources. The program also allows for the description of uneven terrain in the vicinity, to obtain more accurate projections.



# NEXIUS

CPUC Compliance Letter  
City of Oakland  
Proposed site location: Near 9678 San Leandro  
*On behalf of Verizon Wireless*  
Verizon Site Name: Oakland 185

August 28, 2018

Dear Oakland Planning Department,

This letter is in response to discussions with the City of Oakland Planning Department seeking clarification on the proposed antenna placement on the existing pole.

Verizon Wireless will comply with the guidelines outlined by the California Public Utilities Commission (CPUC). Rule 94 in General Order (G.O.) 95 of the CPUC outlines the requirements for the installation of wireless facilities on utility wooden poles and streetlight only poles. Verizon has accepted the guidelines as a member of the joint pole association (JPA) and adheres to the state guidelines which outline the safety measures and mandated by the State of California. Per G.O. 95, Verizon is required to have a 6-foot minimum clearance above the conductors of the utility pole in this application. Verizon is adhering to the applicable space requirements to install its antennas on top of the pole. Increasing the height of the existing pole is required for safety reasons and mandated by these requirements. The JPA is governed by G.O. 95, which requires six feet of separation from the bottom bracket of the antenna to the nearest conductor for worker safety. The antenna will be housed in a radome mounted on the existing utility pole shielding it from sight. Associated equipment will be painted brown to match the wooden pole.

Verizon Wireless is continually seeking ways to improve both their coverage and their capacity. The use of wireless devices and phones is constantly increasing and projected to maintain an upward trend. Today's smartphones are always on, they are continuously connected to the network pulling down email, maps, social media, texts, etc. This constant connection puts a burden on the network. The use of the proposed Small Cell will allow Verizon to fill either coverage hole or address a capacity issue. "Small Cells" will allow Verizon to address issues with their coverage and capacity on a small localized scale. Not every coverage objective needs to be addressed by a full-sized cell site; small cells will allow Verizon to fine tune the network. Each location is approved by a Radio Frequency Engineer and carefully selected considering various constructability factors and designed to be minimally intrusive.



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**Attachment G**



WE BUY  
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