Oakland City Planning Commission

STAFF REPORT

Case no. PLN18171

May 2, 2018

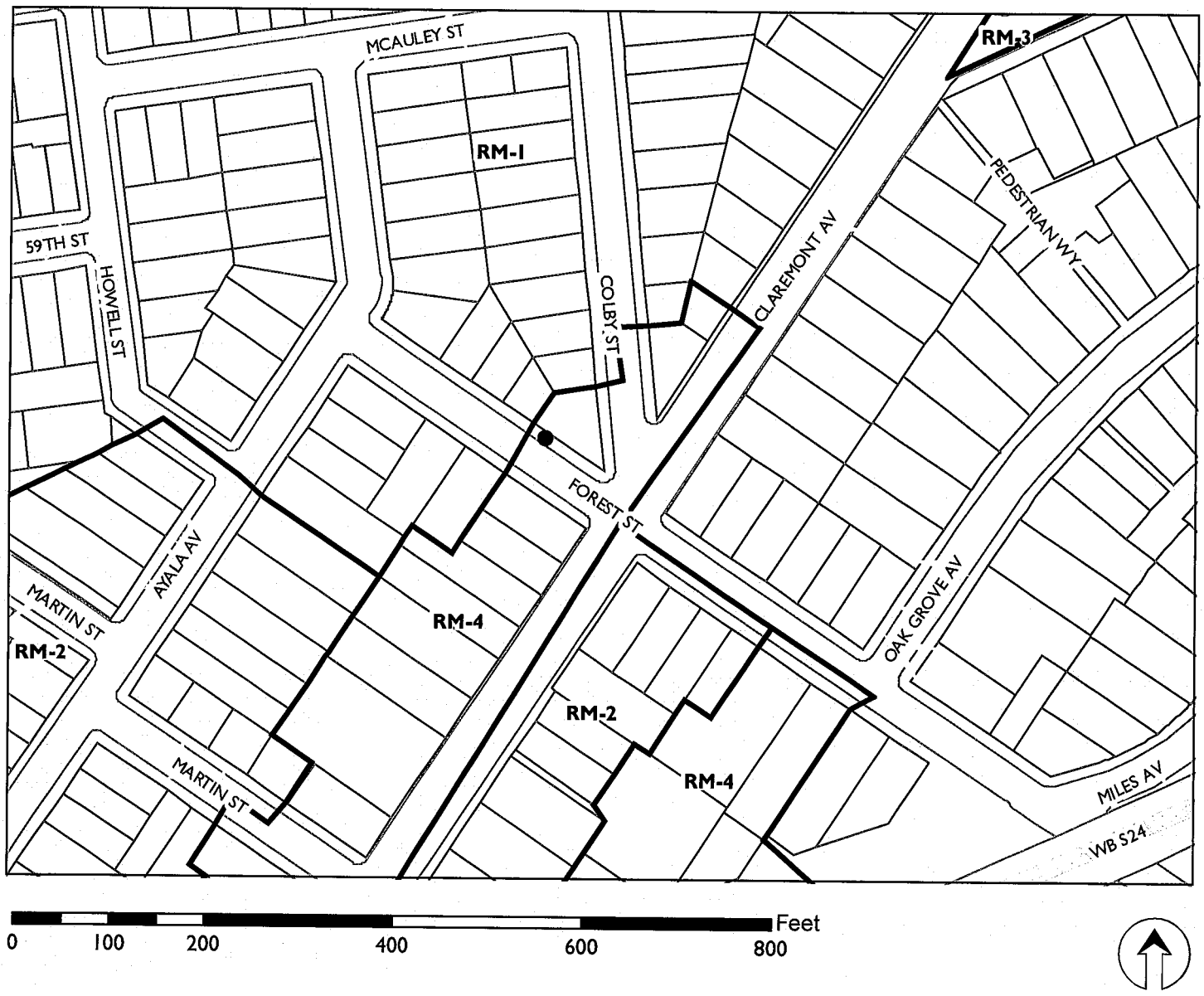
Locations:	Utility pole in public right-of-way (sidewalk) adjacent to: **1) 5701 Claremont Ave** near 564 Forest St (APN: 016 -1398-029-00); Zoning: RM-4; General Plan: Mixed Housing Type Residential; Council District: 1; Submitted 4/10/18 **(see map on reverse)**
Proposal:	To consider request for 1 application to install a new "small cell site" Macro Telecommunications Facilities on an existing wooden utility pole by attaching an antenna to the top of the pole and equipment to the side.
Applicant / Phone Number:	Ms. Laura Brunn / The CBR Group for Verizon (209) 607-2737
Owner:	JPA
Planning Permits Required:	Regular Design Review with additional findings for Macro Telecommunications Facility in Residential Zone
Environmental Determination:	Exempt, Section 15301 of the State CEQA Guidelines: Existing Facilities; Exempt, Section 15302: Replacement or Reconstruction; Exempt, Section 15303: New Construction of Small Structures; Section 15183: Projects Consistent with a Community Plan, General Plan or Zoning
Historic Status:	Non-historic properties
Action to be Taken:	Approve with Conditions
Finality of Decision:	*Appealable to City Council*
For Further Information:	Contact case planner **Aubrey Rose AICP** at **(510) 238-2071** or by email at arose@oaklandnet.com

EXECUTIVE SUMMARY

The applicant requests Planning Commission approval to establish one (1) small cell wireless telecommunications facility on an existing utility pole located in the public right-of-way (sidewalk) in a residential district. The project involves attaching an antenna to the top of the pole and equipment to the side as described in the submitted plans to enhance wireless services in those areas.

Regular Design Review is required for the installation of a new Macro Telecommunications Facility in a residential zone. The proposed project, antenna and associated equipment would be similar to other utility poles and equipment within the same area and around the City. The antenna shroud and associated equipment would be painted grey or brown to match the pole and/or other utilities located on the pole. As result, the proposed telecommunication facility is an appropriate location and would not significantly increase negative visual impacts to adjacent neighboring residential properties. The project meets all the required findings for approval of this one (1) small cell site.

CITY OF OAKLAND PLANNING COMMISSION



Case File:	PLN18171
Applicant:	Laura Brunn @ The CBR Group
Address:	Utility pole in public right-of-way (sidewalk)adjacent to: 5701 Claremont Ave near 564 Forest St
Zone:	RM-4

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 Communications 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

PROPERTY DESCRIPTION

The site consists of a 48'-4" wooden utility pole located in the sidewalk towards the curb; the Subject corner property contains a two story mixed used building at zero-lot-line. The neighborhood consists of one and two-story homes and some apartments and small-scale businesses.

PROJECT DESCRIPTION

The site is proposed for:

- Attaching a canister antenna to the top of the pole to measure up to 52'-8" in height;
- Installation of equipment to the side of the pole at 7' to 14'-1" in height;
- Paint the proposed antennas and associated equipment grey or brown to match the pole and/or other utilities located on the pole.

No portion of the telecommunication facilities would be located at grade. The proposed antenna and associated equipment would not be accessible to the public.

SIMILAR CASES

Records show that the Planning Commission has approved approximately 70 Macro Telecommunications Facilities requiring Design Review throughout the City since 2016.

GENERAL PLAN ANALYSIS

The site is in the Mixed Housing Type Residential area of the Oakland General Plan's Land Use and Transportation Element (LUTE). This classification is intended *"to create, maintain, and enhance residential areas typically located near the City's major arterials and characterized by a mix of single family homes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate."* The proposed telecommunication facility would be mounted on an existing wooden utility pole within the public right-of-way. The proposed unmanned wireless telecommunication facility would not adversely affect the characteristics of the neighborhood.

ZONING ANALYSIS

The proposed telecommunication facility is located within the RM-4 Mixed Housing Type Residential Zone. Section 17.136.040 and 17.128.070 of the City of Oakland Planning Code requires a Regular Design Review permit for Macro Telecommunication facilities that are attached to utility poles in this zone; such projects are decided by the Planning Commission for sites within a residential zone. Special findings are also required for Design Review approval to ensure that the facility is concealed to the greatest extent possible. The project design is discussed later in this report, and the required findings for Regular Design Review are listed and included in staff's evaluation later in this report.

ENVIRONMENTAL DETERMINATION

The California Environmental Quality Act (CEQA) Guidelines list the projects that qualify as categorical exemptions from environmental review. The proposed project is categorically exempt from the environmental review requirements pursuant to Section 15301, minor additions and alterations to an existing utility pole; Section 15302, replacement or reconstruction of existing utility systems and/or facilities; Section 15303, new construction or conversion of small structures, and Section 15183, projects consistent with the General Plan or Zoning.

KEY ISSUES AND IMPACTS

The proposal to establish eight Macro Telecommunications Facilities is subject to the following Planning Code development standards, which are followed by staff's analysis in relation to this application:

17.128.070 Macro Telecommunications Facilities.
A. General Development Standards for Macro Telecommunications Facilities.
1. The Macro Facilities shall be located on existing buildings, poles or other existing support structures, or shall be post mounted.

The project involves attachment to an existing utility pole hosting power lines.

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.

Recommended conditions of approval require painting and texturing the antennas and all components to match the appearance of the utility pole and power line posts.

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 inapplicable because the proposal does not involve attachment to a roofed structure.

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

This standard is inapplicable because the proposal does not involve ground post mounting.

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.

This standard is met by the proposal; a satisfactory emissions report has been submitted and is attached to this report (Attachment C).

17.128.110 Site location preferences.
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.

A site alternatives analysis is not required because the proposals conform to 'B' as it would be located on quasi-public facilities (utility pole with power lines). Nonetheless, the applicant has submitted an analysis which are attached to this report (Attachment C).

The project is located close to an area with existing residential structures. The project applicant considered alternative sites in this area; however, none of these sites are as desirable from a service coverage perspective or from an aesthetics perspective to minimize visual impacts. The proposed project is in an underserved area. Staff has reviewed the applicant's alternative sites analysis and determined that the site selected conforms to the telecommunication regulation requirements.

17.128.120 Site design preferences.

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: a. 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 'C' (Building or structure mounted antennas below roof line (facade mount, pole mount) visible from public right-of-way, painted to match existing structure), and the applicant has submitted a satisfactory site design alternatives analysis (Attachment C).

17.128.130 Radio frequency emissions standards.

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.

In the analysis prepared by EBI Consulting (Attachment C), the proposed project was evaluated for compliance with appropriate guidelines limiting human exposure to radio frequency electromagnetic fields. According to the report, the project would comply with the prevailing standards for limiting public exposure to radio frequency energy, and therefore, the proposed site would operate within the current acceptable thresholds as established by the Federal government or any such agency that may be subsequently authorized to establish such standards. The RF emissions report states that the proposed project would not cause a significant impact on the environment. Additionally, the Planning Code requires that, prior to the final building permit sign off, the applicant submit a certified RF emissions report stating that the facility is operating within acceptable thresholds established by the regulatory Federal agency.

CONCLUSION

The proposed site design would not be situated on a historic pole or structure, create a view obstruction, or be directly adjacent to a primary living space such as a living room or bedroom windows. The pole is taller than adjacent upper story apartment windows; the antenna would be attached above the windows and equipment below. The project meets all the required findings for approval and would provide an essential telecommunication service to the community and the City of Oakland at large. It would also be available to emergency services such as police, fire department and emergency response teams. Staff believes that the proposal is designed to meet the established zoning and telecommunication regulations and recommends supporting the Regular Design Review application.

RECOMMENDATIONS:

1. Affirm staff's environmental determination.
2. Approve the Regular Design Reviews subject to the attached Findings and Conditions of Approval.

Prepared by:

AUBREY ROSE, AICP
Planner III

Reviewed by:

ROBERT MERKAMP
Interim Zoning Manager

Approved for forwarding to the Planning Commission:

ED MANASSE, Deputy Director
Planning Bureau

ATTACHMENTS:

A. Findings

B. Conditions of Approval

C. Plans / Photo-Simulations / Site Analyses / RF Report / Proof of Posting

ATTACHMENT A: FINDINGS

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 NON-RESIDENTIAL FACILITIES (OMC SEC. 17.136.050(B))

1. That the proposed design will create a building or set of buildings that are well related to the surrounding area in their setting, scale, bulk, height, materials, and textures:

The attachment of a small antenna and equipment to a non-historic utility pole, painted and texturized to match the pole and power line posts in appearance for camouflaging, will be the least intrusive design. The antenna will project upward and will not be adjacent to any existing residential living space (approximately 100-feet).

2. That the proposed design will protect, preserve, or enhance desirable neighborhood characteristics;

The proposal will not create a view obstruction, be directly adjacent to a primary living space such as a living room or bedroom window, or be located on an historic structure.

3. The project will provide a necessary function without negatively impacting surrounding opens pace and hillside residential properties.

The proposal will enhance essential services in residential neighborhoods.

4. That the proposed design will be sensitive to the topography and landscape.

The proposed antenna and equipment will not be ground mounted.

5. That, if situated on a hill, the design and massing of the proposed building relates to the grade of the hill.

This finding is inapplicable because the site is nearly level.

6. 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 in the Mixed Housing Type Residential area of the Oakland General Plan's Land Use and Transportation Element (LUTE). This classification is intended *"to create, maintain, and enhance residential areas typically located near the City's major arterials and characterized by a mix of single family homes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate."* The proposed telecommunication facility would be mounted on an existing wooden utility pole within the public right-of-way. The proposed unmanned wireless telecommunication facility would not adversely affect the characteristics of the neighborhood.

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.

The antenna will be painted and texturized to match the poles in appearance for camouflaging will be the least intrusive design, as required by conditions of approval.

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.

This finding is inapplicable because the antenna will not be mounted onto an architecturally significant structure but to a wooden utility pole.

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

The antenna will be located parallel to the host utility pole above posts hosting power lines.

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.

Conditions of approval require painting and texturing to match the pole in appearance for camouflaging.

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

Equipment will be attached to the utility pole with an unobtrusive design.

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 significant view corridors.

This finding is inapplicable because the antennas will be attached to a pole and not to a roofed structure.

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 minimal clearance to the facility will be 7-feet.

Attachment B: Conditions of Approval

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 approved plans dated January 22, 2018 and submitted April 10, 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

c. 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.

d. 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.

e. 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. Job Site Plans

Ongoing throughout demolition, grading, and/or construction

At least one (1) copy of the stamped approved plans, along with the Approval Letter and Conditions of Approval, shall be available for review at the job site at all times.

11. 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.

12. 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.

13. 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

PROJECT-SPECIFIC CONDITIONS

14. 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 final building permit inspection sign-off

Initial Approval: N/A

Monitoring/Inspection: N/A

15. Camouflage

Requirement: The antenna, related equipment shall be painted, texturized, and maintained matte grey or brown, and the equipment and any other accessory items including cables gray, to better camouflage the facility to the utility pole.

When Required: Prior to a final inspection

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

16. 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

17. Possible District Undergrounding Wooden Utility Pole

Requirement: Should the City light 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

18. Graffiti Control Requirement:

f. 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:

g. 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. For galvanized poles, covering with new paint to match the color of the surrounding surface.

iii. Replace pole numbers.

When Required: Ongoing
Initial Approval: N/A
Monitoring/Inspection: Bureau of Building

Attachment C

verizon

CLAREMONT FOREST SC1

5701 CLAREMONT AVENUE
OAKLAND, CA 94618
STRUCTURE TYPE: UTILITY POLE
LOCATION CODE: 418004
PG&E ADDRESS: 564 FOREST STREET

PROJECT DESCRIPTION

THIS IS AN UNMANNED WIRELESS TELECOMMUNICATION FACILITY FOR VERIZON WIRELESS SYSTEMS CONSISTING OF THE INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT. SCOPE OF WORK CONSISTS OF THE FOLLOWING:

1. INSTALL (1) (N) CANISTER ANTENNA MOUNTED (E) UTILITY POLE
2. INSTALL (3) (N) RRU UNIT ON (E) UTILITY POLE.
3. INSTALL (2) (N) DISCONNECT SWITCHES ON (E) UTILITY POLE.
4. INSTALL (1) (N) ELECTRICAL METER ON (E) UTILITY POLE.
5. INSTALL (N) FCC SIGNAGE ON (E) UTILITY POLE.
6. INSTALL (N) GROUND RODS AND BUSS BAR.
7. INSTALL (1) (N) CONDUIT FOR FIBER.
8. INSTALL (1) (N) HANDHOLE AT GROUND LEVEL.

SITE COMPLETION CHECKLIST

- ANTENNAS, MOUNTING BRACKETS, POLE EXTENSIONS, PVC CONDUIT, CABLING, METER AND RADIO RELAY UNITS TO BE PAINTED UTILITY POLE.
- CABLING TO BE INSTALLED IN A TIDY MANNER WITHOUT EXCESS CABLE LOOPS.
- SPACING OF SUPPORT ELEMENTS–SUPPORT EQUIPMENT (E.G. METER, LOAD CENTER AND RRUS) TO BE CLUSTERED (VERTICALLY) AS CLOSE AS IS TECHNICALLY FEASIBLE ON POLE.
- FCC MANDATED RF WARNING SIGNAGE SHALL FACE OUT TO STREET WHEN PLACED IN FRONT OF, OR NEAR A WINDOW. SIGNAGE SHALL FACE TOWARD BUILDING IF THERE IS NO WINDOW.
- PROPOSED UTILITY ROUTES TO BE DETERMINED BY UTILITY PROVIDER.

CODE COMPLIANCE

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

BUILDING CODE (CBC) WITH CALIFORNIA AMENDMENTS, BASED ON THE

RESIDENTIAL CODE (CRC) WITH APPENDIX H, PATIO COVERS, BASED ON

HISTORICAL BUILDING CODE (CHBC)

EXISTING BUILDING CODE (CEBC), BASED ON THE 2009 IEBC

GREEN BUILDINGS STANDARDS CODE (CGBSC)

FIRE CODE (CFC), BASED ON THE 2009 IFC, WITH CALIFORNIA

MECHANICAL CODE (CMC), BASED ON THE 2009 UMC

PLUMBING CODE (CPC), BASED ON THE 2009 UPC

ELECTRICAL CODE (CEC) WITH CALIFORNIA AMENDMENTS, BASED ON THE

ENERGY CODE (CEC)

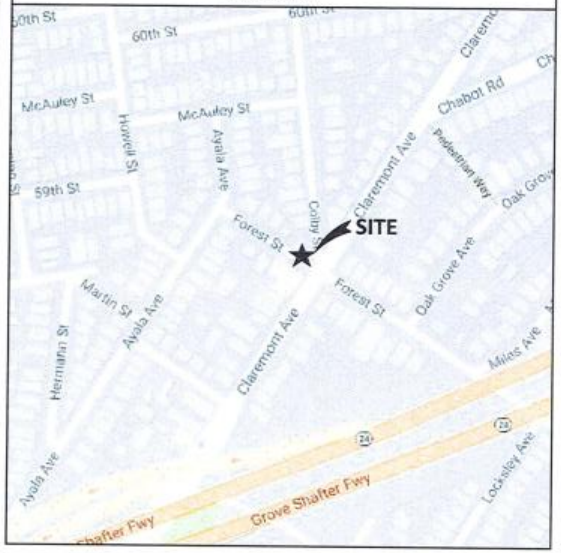
222-C

LIFE SAFETY CODE

NATIONAL FIRE ALARM CODE

FIRE SPRINKLER CODE

VICINITY MAP



RADIO FREQUENCY DATA PLAN

REVISION LEVEL	DATE:
-	XX/XX/XXXX

GENERAL CONTRACTOR NOTES

DO NOT SCALE DRAWINGS

THESE DRAWINGS ARE FORMATTED TO BE FULL SIZE AT 24" x 36". CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOBSITE, AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME.

CALL811 BEFORE YOU DIG — 811 — SAVE DIGGING PARTNER

PROJECT TEAM

APPLICANT/LESSEE:
VERIZON WIRELESS
2785 MITCHELL DRIVE, BLDG 9
WALNUT CREEK, CA 94598
CONTACT: JENNIFER HAAS
PH: (650) 759-1377
EMAIL: jennifer.haas@verizonwireless.com

SITE ACQUISITION MANAGER:
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841 ARNOLD DRIVE, SUITE A
MARTINEZ, CA 94553
CONTACT: STEVE PIPER
PH: (925) 949-3329
EMAIL: steve@thecbrgroup.com

CONSTRUCTION:
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2785 MITCHELL DRIVE, BLDG 9
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CONTACT: DENNIS RAINES
PH: (707) 514-5700
EMAIL: Dennis.Raines@verizonwireless.com

ENGINEER:
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841 ARNOLD DRIVE, SUITE A
MARTINEZ, CA 94553
CONTACT: MATT FREEDMAN
PH: (925) 798-2100
EMAIL: matt@thecbrgroup.com

RF ENGINEER:
VERIZON WIRELESS
2785 MITCHELL DRIVE, BLDG 9
WALNUT CREEK, CA 94598
CONTACT: BENJAMIN SANTA MARIA
EMAIL: Benjamin.SantaMaria@verizonwireless.com

PROJECT INFORMATION

SITE INFORMATION:

SITE NUMBER:	418004
SITE NAME:	CLAREMONT FOREST SC1
SITE ADDRESS:	5701 CLAREMONT AVENUE OAKLAND, CA 94618
PG&E ADDRESS:	564 FOREST STREET
A.P.N. NUMBER:	PUBLIC ROW
CURRENT USE:	UTILITY POLE
PROPOSED USE:	UTILITY POLE AND TELECOMMUNICATIONS FACILITY
JURISDICTION:	CITY OF OAKLAND
LATITUDE:	37.844819
LONGITUDE:	-122.256328
GROUND ELEVATION:	159.5' AGL

PROPERTY OWNER:
R.O.W.

POWER AGENCY:
PG&E
77 BEALE ST.
SAN FRANCISCO, CA 94105
PH: (800) 743-5000

SHEET INDEX

		REV
T-1	TITLE SHEET	C
LS-1	SITE SURVEY (UTILITY POLE EXHIBIT)	C
A-1	OVERALL SITE PLAN	C
A-2	EXISTING AND PROPOSED EQUIPMENT AND ANTENNA PLANS	C
A-3	EXISTING AND PROPOSED SOUTHEAST ELEVATION	C
A-4	EXISTING AND PROPOSED SOUTHWEST ELEVATION	C
A-5	EQUIPMENT AND CONSTRUCTION DETAILS	C
A-6	EQUIPMENT AND CONSTRUCTION DETAILS	C
E-1	ELECTRICAL GROUND DIAGRAMS, SINGLE LINE DIAGRAM	C
E-2	ELECTRICAL DETAILS	C
TCP	TRAFFIC CONTROL PLAN	C

OCCUPANCY AND CONSTRUCTION TYPE

OCCUPANCY : S-2 (UNMANNED)

CONSTRUCTION TYPE: HB

HANDICAP REQUIREMENTS
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION, ACCESSIBILITY ACCESS AND REQUIREMENTS ARE NOT REQUIRED. IN ACCORDANCE WITH CALIFORNIA STATE ADMINISTRATIVE CODE, PART 2, TITLE 24, SECTION 11038.1, EXCEPTION 1 & SECTION 1134B.2.1, EXCEPTION 4.

Prepared For:
verizon
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

Prepared For:

Site Number: 418004
Site Name: CLAREMONT FOREST SC1
Site Address: 5701 CLAREMONT AVENUE OAKLAND, CA 94618
PG&E: 564 FOREST STREET
County: ALAMEDA COUNTY

Engineer:
THE CBR GROUP
841 ARNOLD DRIVE, SUITE A
MARTINEZ, CA 94553
www.TheCBRGroup.com

Licensor:
REGISTERED PROFESSIONAL ENGINEER — MATTHEW I. FREEDMAN — No. C-88844 — Exp. 3/31/19 — CIVIL — STATE OF CALIFORNIA

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

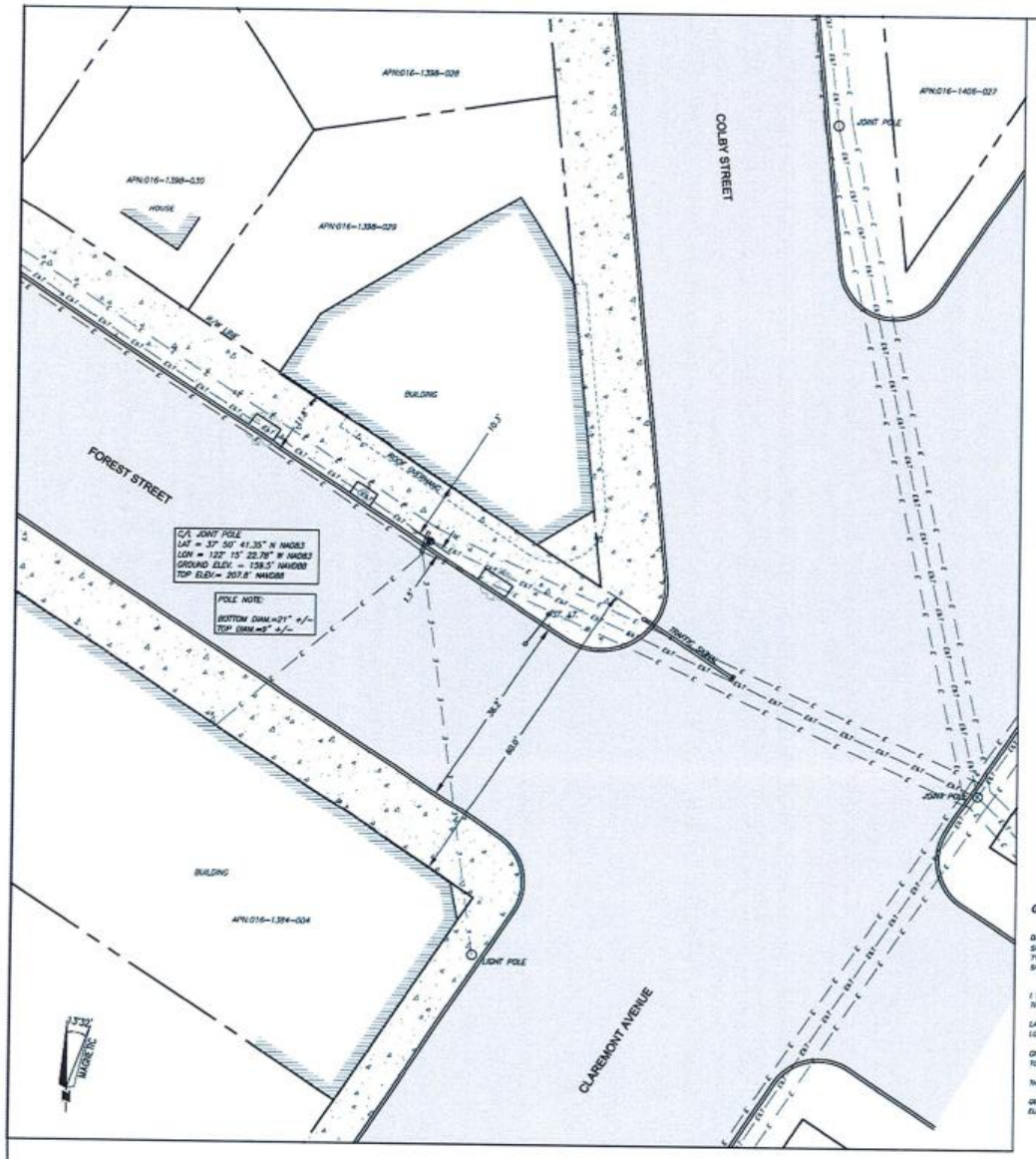
Issued For: CONSTRUCTION

REV	DATE	DESCRIPTION	BY
C	03/12/18	REMOVE RRU PER LK	JG
B	03/12/18	100% CD'S FOR REVIEW	MM
A	09/04/17	90% CD'S FOR REVIEW	AC

Sheet Title: TITLE SHEET

Sheet Number: T-1

ATTACHMENT C



JOINT POLE - R/W EXHIBIT
1"=20'

JOINT POLE DETAIL
N. T. S.

GEODETIC LOCATION

DATE OF SURVEY: NOVEMBER 11, 2016
SITE NUMBER / NAME: 418004 / CLAREMONT FOREST SC1
TYPE: EXISTING UTILITY POLE
SITE ADDRESS: NORTHEAST SIDE FOREST ST.
OAKLAND, CA 94618

I, TIMOTHY SCHAD, HEREBY CERTIFY THE GEODETIC COORDINATES AT THE CENTER OF THE EXISTING UTILITY POLE TO BE:

LATITUDE= 37° 50' 41.35"N (NAD83)
LONGITUDE= 122° 15' 22.78"W (NAD83)

GROUND ELEVATION= 159.5' NAVD88
TOP OF POLE ELEVATION= 207.8' NAVD88

THE ACCURACY STANDARDS FOR THIS CERTIFICATION ARE AS FOLLOWS:

GEODETIC COORDINATES: +/- FIFTEEN (15) FEET (NAD-83)
ELEVATIONS: +/- THREE (3) FEET (NAVD-88)

SURVEY NOTES

1. ALL LATITUDES AND LONGITUDES ARE NAD 83, ALL ELEVATIONS ARE NAVD 88 (UNLESS NOTED OTHERWISE).

2. ALL BOUNDARY INFORMATION SHOWN HEREON HAS BEEN COMPILED FROM RECORD DATA. THIS IS NOT A BOUNDARY SURVEY.

3. DATE OF FIELD SURVEY NOVEMBER 11, 2016.

4. NO PRELIMINARY TITLE REPORT HAS BEEN PROVIDED. ANY EASEMENTS OR OTHER TITLE RELATED ISSUES NOT INCLUDED IN SAID REPORT WHICH ARE PART OF THE TITLE PROCESS MAY OR MAY NOT HAVE BEEN ADDRESSED. TIMOTHY F. SCHAD, L.S. ACCEPTS NO RESPONSIBILITY OR LIABILITY FOR BOUNDARY OR TITLE ITEMS ADDRESSED HEREON. THIS IS NOT A BOUNDARY SURVEY.

verizonwireless
2785 Mitchell Drive
Suite 9
Walnut Creek, CA 94598

TIMOTHY SCHAD, L.S.
10699 ROUND VALLEY RD.
GRASS VALLEY, CA. 95949
PHONE: (530) 271-7477
FAX: (530) 271-7377

PROJECT NO:
DRAWN BY:
CHECKED BY:

REV	DATE	DESCRIPTION

LICENSED LAND SURVEYOR
TIMOTHY F. SCHAD
LS 6021
Exp. 3/31/19
STATE OF CALIFORNIA

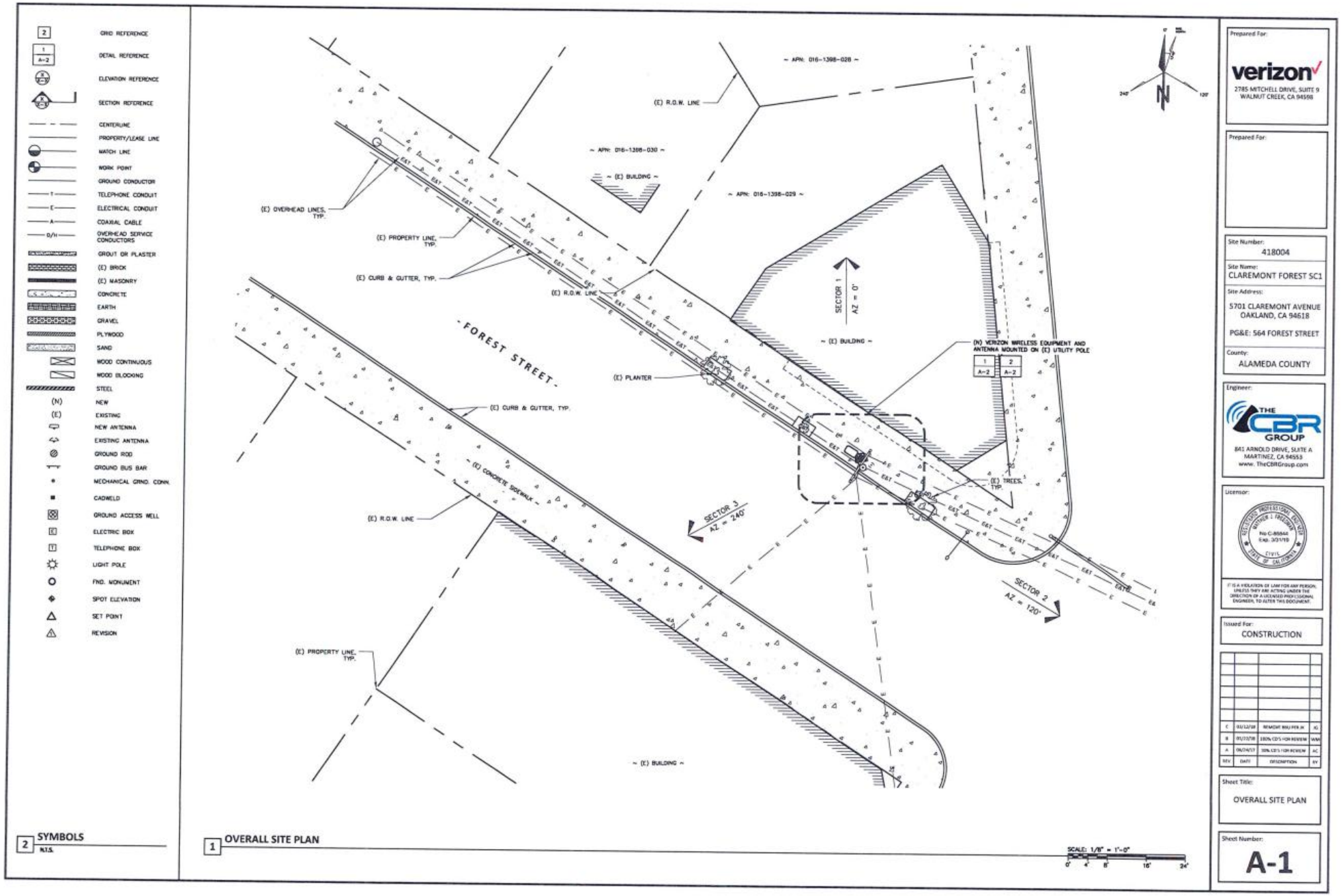
FEBRUARY 16, 2018

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

CLAREMONT FOREST SC1
418004
NORTHEAST SIDE FOREST ST.
OAKLAND, CA. 94618
ADJACENT TO
APN: 016-1398-029

SHEET TITLE
UTILITY POLE EXHIBIT

SHEET NUMBER
LS-1



Prepared For:

verizon

2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

Prepared For:

Site Number:
418004

Site Name:
CLAREMONT FOREST SC1

Site Address:
5701 CLAREMONT AVENUE
OAKLAND, CA 94618

PG&E: 564 FOREST STREET

County:
ALAMEDA COUNTY

Engineer:

THE CBR GROUP
841 ARNOLD DRIVE, SUITE A
MARTINEZ, CA 94553
www. TheCBRGroup.com

Licensor:

REGISTERED PROFESSIONAL ENGINEER MATTHEW J. FREEDMAN No C-86644 Exp. 3/31/19 CIVIL STATE OF CALIFORNIA

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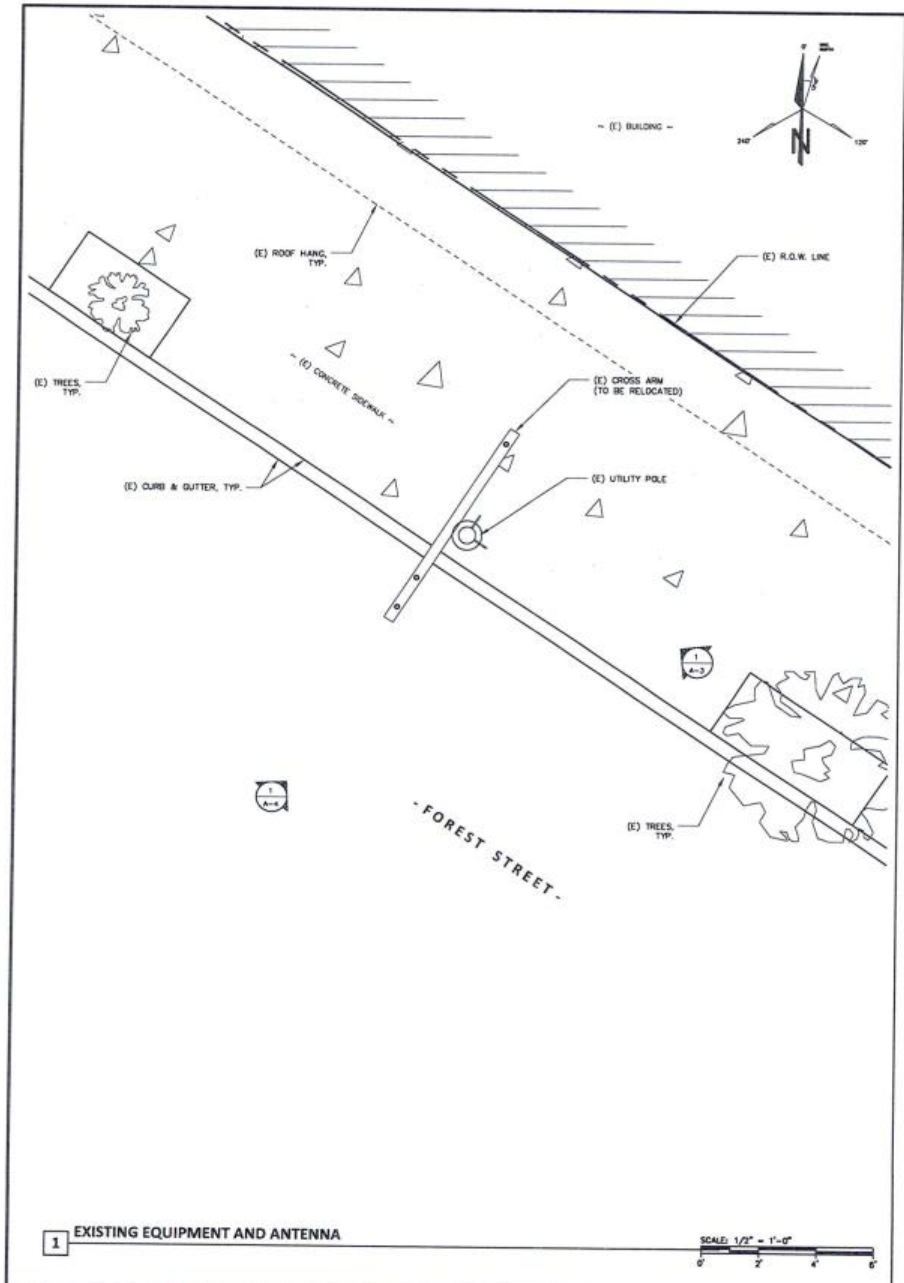
C	03/12/18	REVISED PER JA	JG
B	01/17/18	100% CD'S FOR REVIEW	WM
A	06/04/17	50% CD'S FOR REVIEW	AC

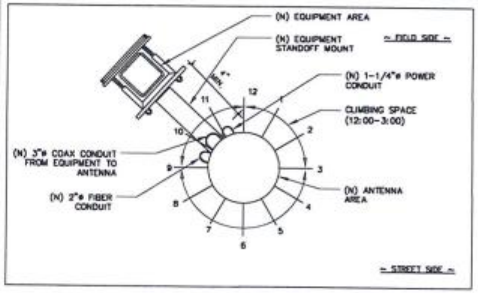
Sheet Title:
OVERALL SITE PLAN

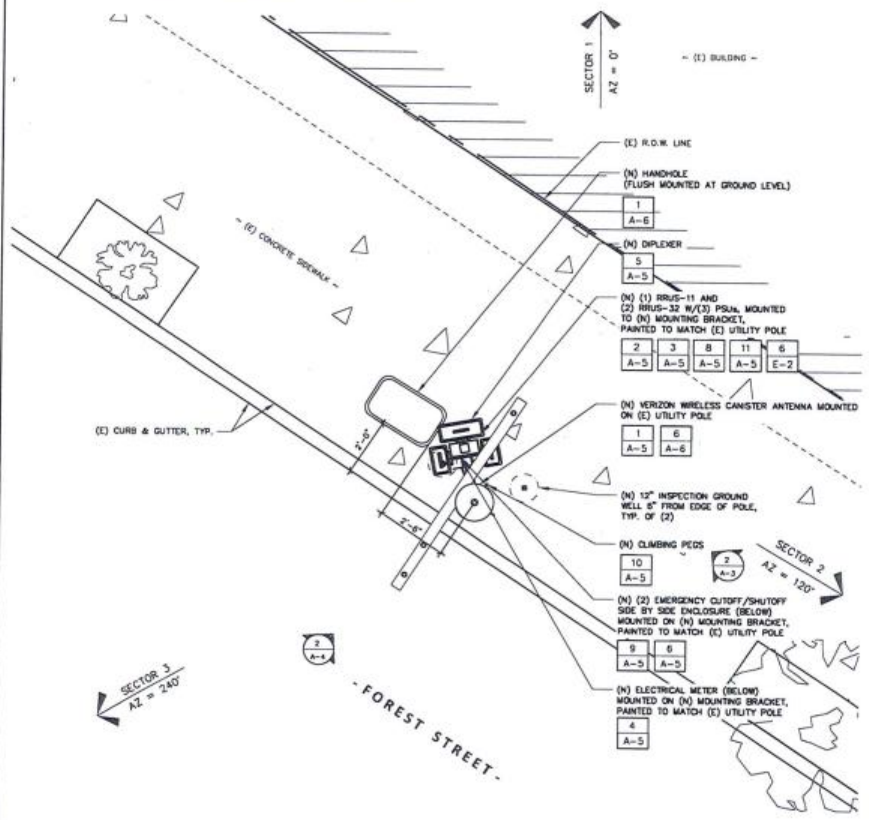
Sheet Number:
A-1



1 EXISTING EQUIPMENT AND ANTENNA

SCALE: 1/2" = 1'-0"





2 PROPOSED EQUIPMENT AND ANTENNA

SCALE: 1/2" = 1'-0"

Prepared For:

verizon

2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

Prepared For:

Site Number:
418004

Site Name:
CLAREMONT FOREST SC1

Site Address:
5701 CLAREMONT AVENUE
OAKLAND, CA 94618

PG&E: 564 FOREST STREET

County:
ALAMEDA COUNTY

Engineer:

THE CBR GROUP

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www.TheCBRGroup.com

Licensor:

REGISTERED PROFESSIONAL ENGINEER
MATTHEW J. FREDERICK
No C-86844
Exp. 3/31/19
CIVIL
STATE OF CALIFORNIA

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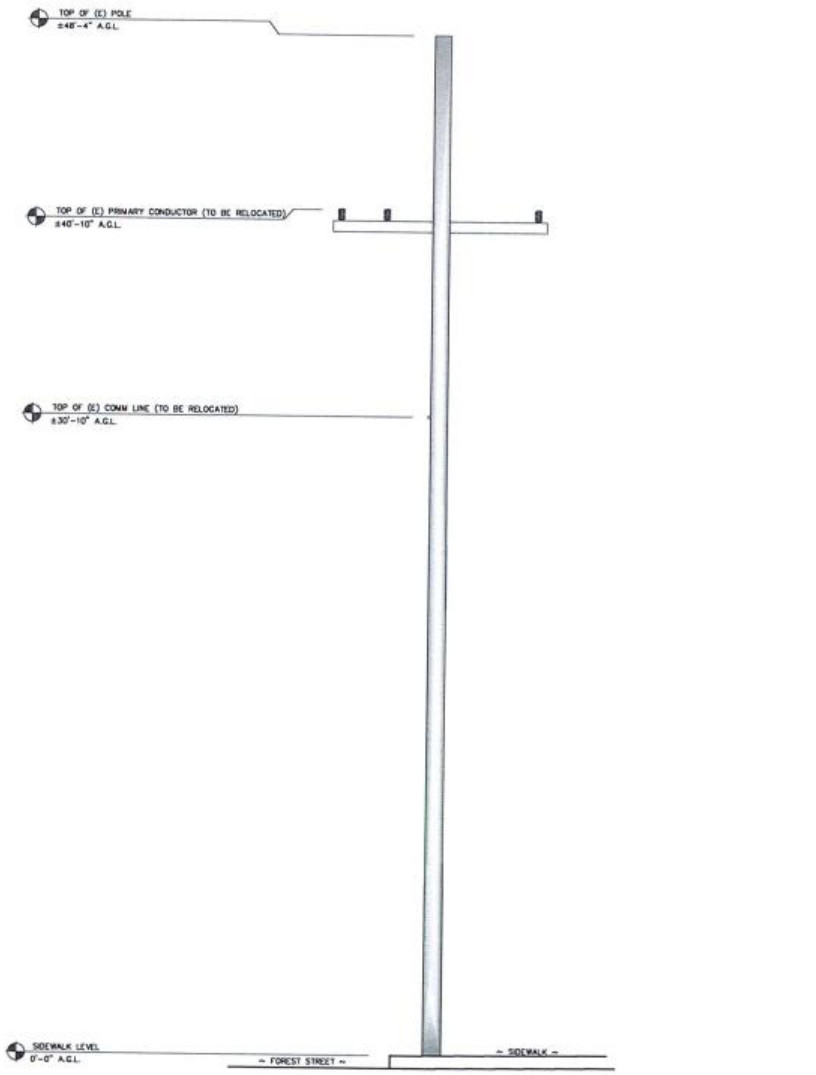
C	03/12/18	REMOVE BBU PER CE	JC
B	01/23/18	100% CD'S FOR REVIEW	MM
A	06/14/17	90% CD'S FOR REVIEW	AC

Sheet Title:
EXISTING AND PROPOSED EQUIPMENT AND ANTENNA PLANS

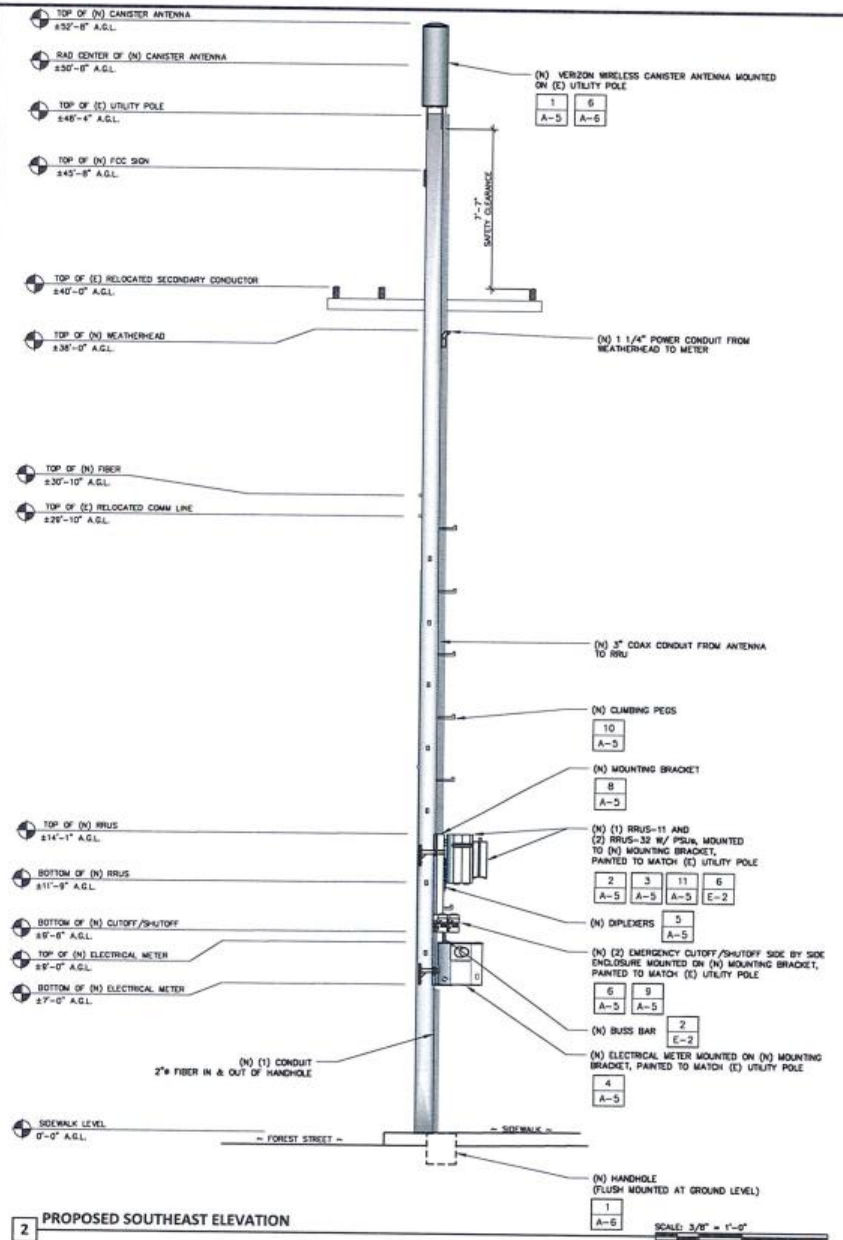
Sheet Number:
A-2



1 EXISTING SOUTHEAST ELEVATION

SCALE: 3/8" = 1'-0"

0' 2' 4' 8'



2 PROPOSED SOUTHEAST ELEVATION

SCALE: 3/8" = 1'-0"

0' 2' 4' 8'

Prepared For:

verizon

2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

Prepared For:

Site Number:
418004

Site Name:
CLAREMONT FOREST SC1

Site Address:
5701 CLAREMONT AVENUE
OAKLAND, CA 94618

PG&E: 564 FOREST STREET

County:
ALAMEDA COUNTY

Engineer:

THE CBR GROUP

841 ARNOLD DRIVE, SUITE A
MARTINEZ, CA 94553
www.TheCBRGroup.com

Licensor:

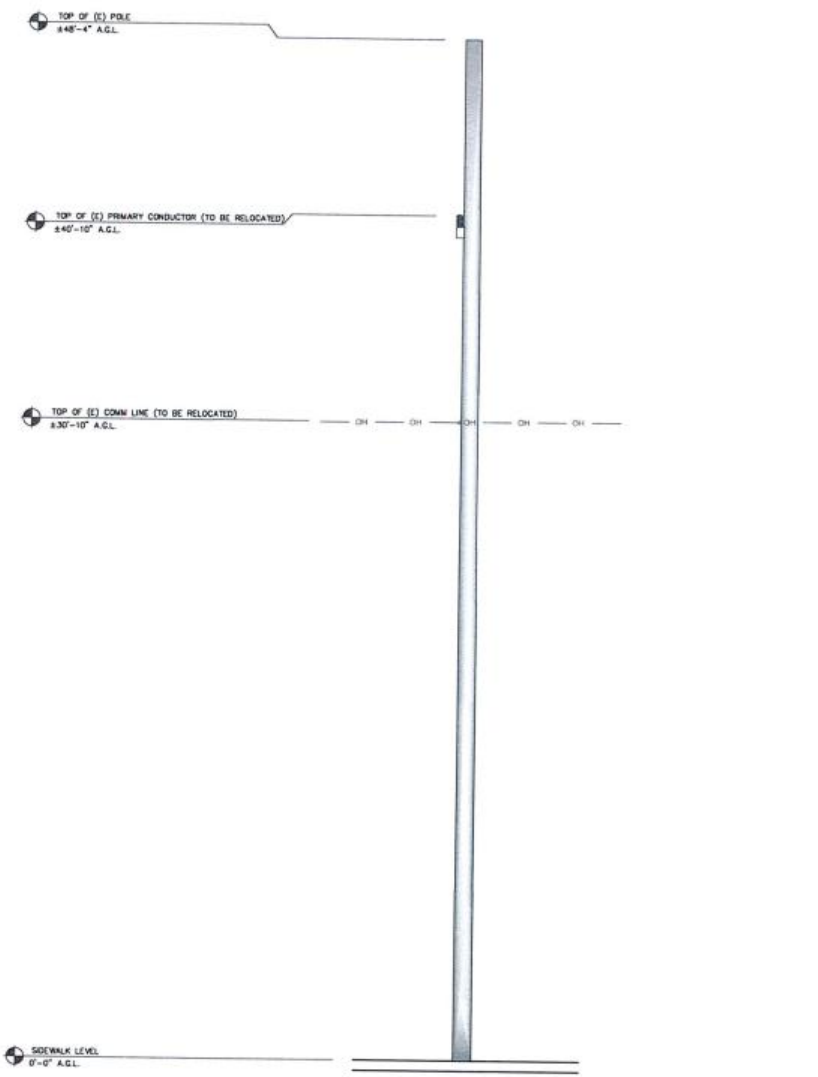
No C-66844
Exp. 3/31/19
CIVIL
STATE OF CALIFORNIA

Issued For:
CONSTRUCTION

REV	DATE	DESCRIPTION	BY
C	03/12/18	REVISIONS PER CR	JG
B	01/22/18	100% CD'S FOR REVIEW	MM
A	09/24/17	90% CD'S FOR REVIEW	AC

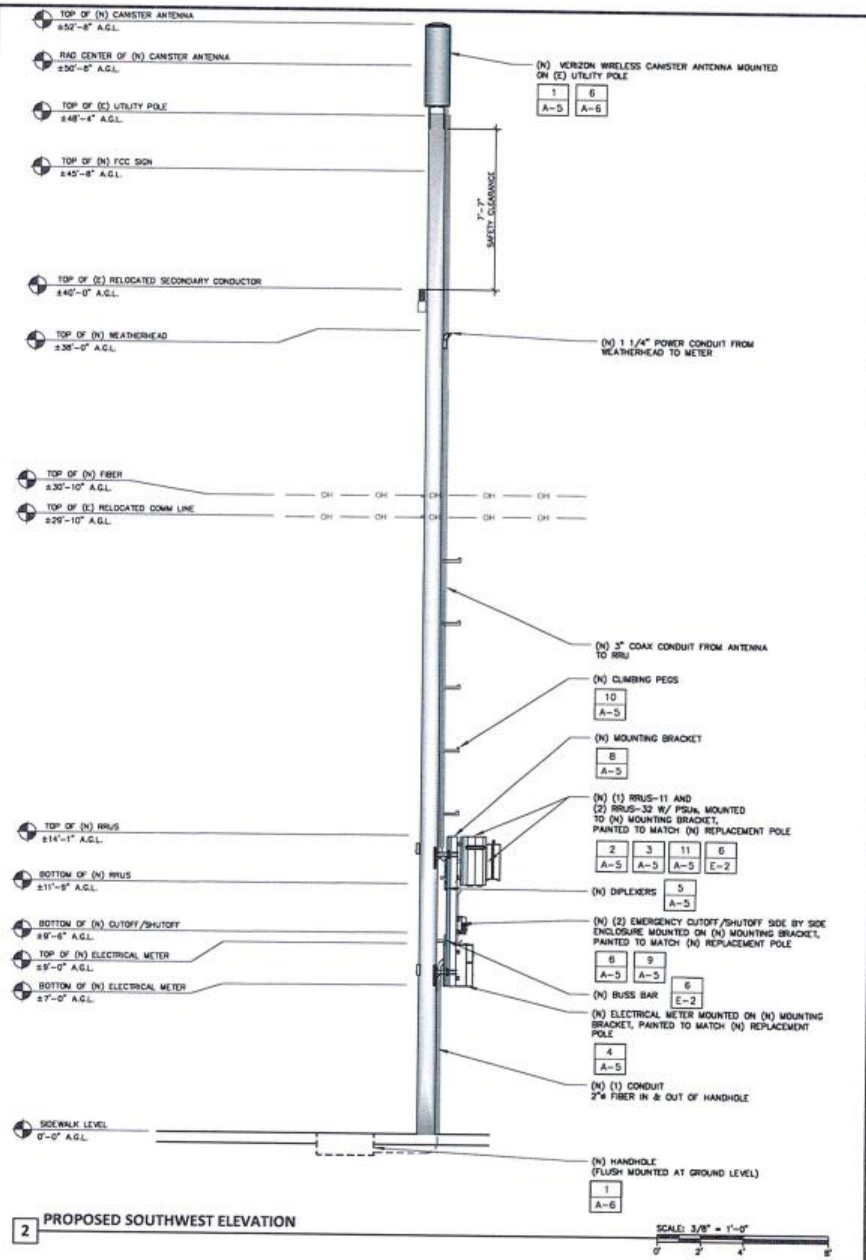
Sheet Title:
EXISTING AND PROPOSED SOUTHEAST ELEVATIONS

Sheet Number:
A-3



1 EXISTING SOUTHWEST ELEVATION

SCALE: 3/8" = 1'-0"



2 PROPOSED SOUTHWEST ELEVATION

SCALE: 3/8" = 1'-0"

Prepared For:

verizon

2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

Prepared For:

Site Number:
418004

Site Name:
CLAREMONT FOREST SC1

Site Address:
5701 CLAREMONT AVENUE
OAKLAND, CA 94618

PG&E: 564 FOREST STREET

County:
ALAMEDA COUNTY

Engineer:

THE CBR GROUP
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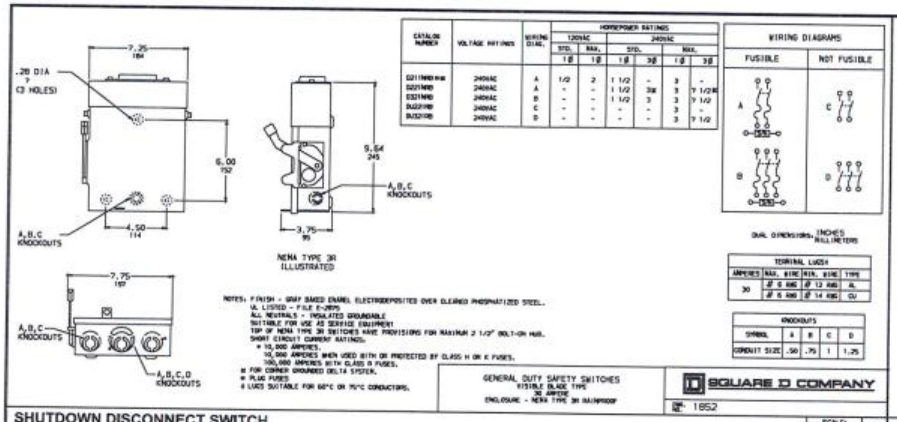
STATE OF CALIFORNIA

Issued For:
CONSTRUCTION

REV	DATE	DESCRIPTION	BY
C	03/12/18	REMOVE RRU PER JR	HC
B	01/22/18	100% CD'S FOR REVIEW	MM
A	08/24/17	30% CD'S FOR REVIEW	AC

Sheet Title:
EXISTING AND PROPOSED SOUTHWEST ELEVATIONS

Sheet Number:
A-4



CATALOG NUMBER	VOLTAGE RATINGS	WIRING DIAG.	HORSEPOWER RATINGS 120VAC STD.	120VAC MAX.	240VAC STD.	240VAC MAX.
			1Ø	1Ø	1Ø	3Ø	1Ø	3Ø
D211NRB Mod	240VAC	A	1/2	2	1 1/2	-	3	-
D221NRB	240VAC	A	-	-	1 1/2	3Ж	3	Y 1/2Ж
D321NRB	240VAC	B	-	-	1 1/2	3	3	Y 1/2
DU221RB	240VAC	C	-	-	-	-	3	-
DU321RB	240VAC	D	-	-	-	-	3	Y 1/2

WIRING DIAGRAMS

FUSIBLE	NOT FUSIBLE
A	C
B	D

DIM DIMENSIONS: (INCHES) MILLIMETERS

TERMINAL LUGS			
AMPERES	MAX. WIRE	MIN. WIRE	TYPE
30	#6 AWG	#12 AWG	AL
	#6 AWG	#14 AWG	CU

KNOCKOUTS				
SYMBOL	A	B	C	D
CONDUIT SIZE	.50	.75	1	1.25

NOTES: FINISH - GRAY BAKED ENAMEL ELECTRODEPOSITED OVER CLEANED PHOSPHATIZED STEEL.
UL LISTED - FILE E-2879
ALL NEUTRALS - INSULATED GROUNDABLE
SUITABLE FOR USE AS SERVICE EQUIPMENT
TOP OF NEMA TYPE 3R SWITCHES HAVE PROVISIONS FOR MAXIMUM 2 1/2" BOLT-ON HUB.
SHORT CIRCUIT CURRENT RATINGS.
* 10,000 AMPERES.
10,000 AMPERES WHEN USED WITH OR PROTECTED BY CLASS H OR K FUSES.
100,000 AMPERES WITH CLASS R FUSES.
FOR CORNER GROUNDED DELTA SYSTEM.
@ PLUG FUSES
# LUGS SUITABLE FOR 60°C OR 75°C CONDUCTORS.

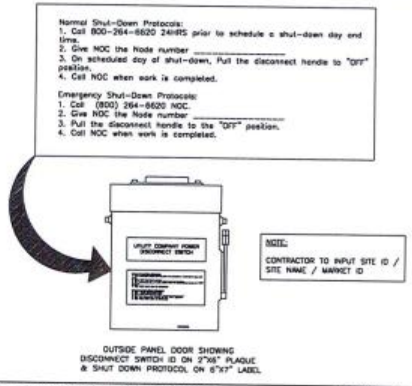
GENERAL DUTY SAFETY SWITCHES
VISIBLE BLADE TYPE
30 AMPERE
ENCLOSURE - NEMA TYPE 3R RAINPROOF

SQUARE D COMPANY

H.P. 1852

SHUTDOWN DISCONNECT SWITCH

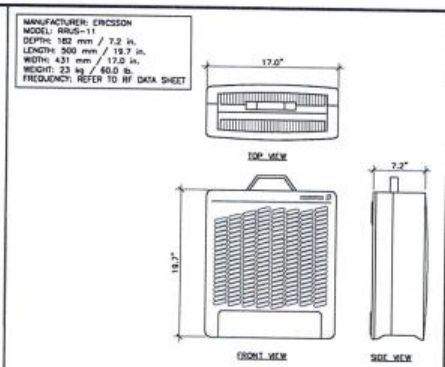
SCALE: N.T.S 9



OUTSIDE PANEL DOOR SHOWING DISCONNECT SWITCH ID ON 7"x6" PLAQUE & SHUT DOWN PROTOCOL ON 6"x7" LABEL

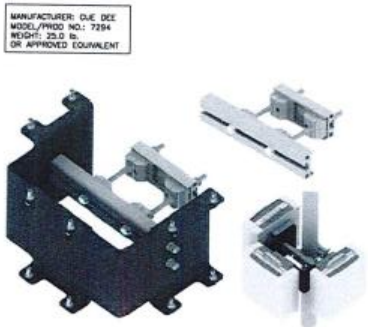
SHUTDOWN DISCONNECT BOX

SCALE: N.T.S 6



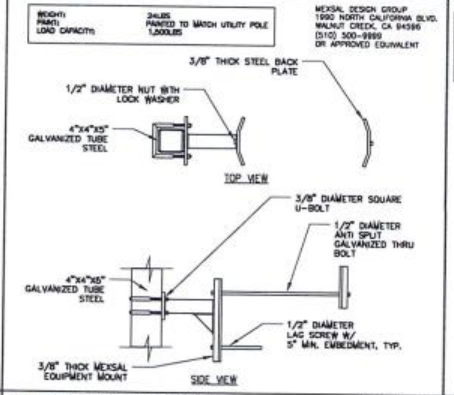
RRUS-11 DETAIL

SCALE: N.T.S 3



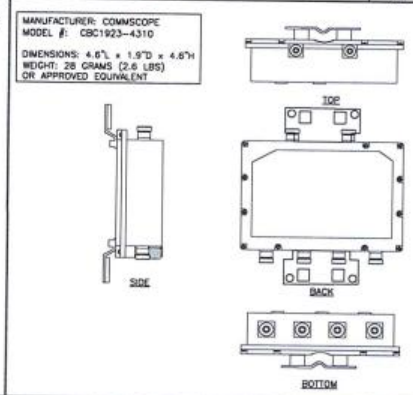
TRIPLE RRU SUPPORT

SCALE: N.T.S 11



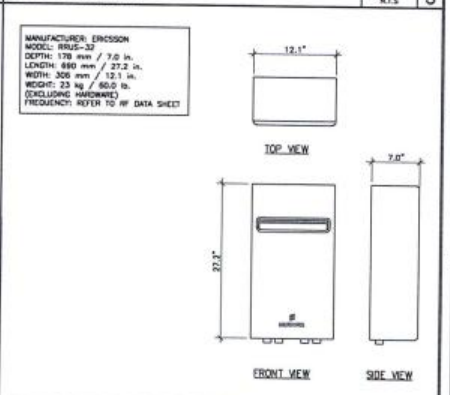
EQUIPMENT MOUNT DETAIL

SCALE: N.T.S 8



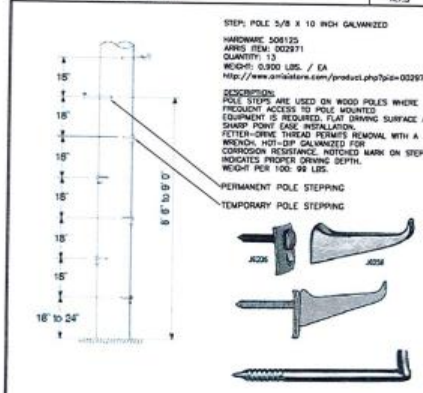
DIPLEXER DETAIL

SCALE: N.T.S 5



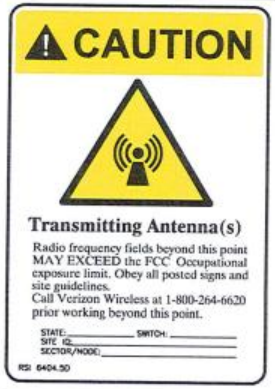
RRUS-32 DETAIL

SCALE: N.T.S 2



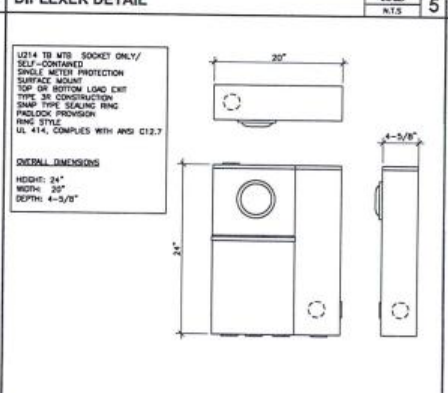
POLE STEPPING DETAILS

SCALE: N.T.S 10



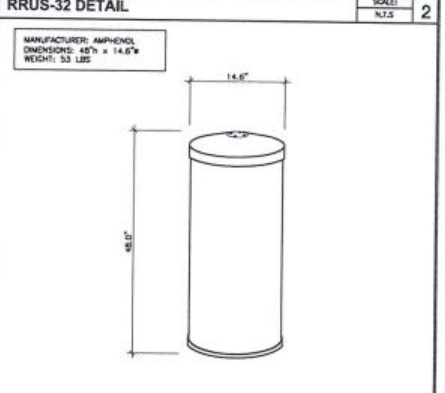
CAUTION SIGN

SCALE: N.T.S 7



U214 TB METER DETAILS

SCALE: N.T.S 4



ANTENNA DETAIL

SCALE: N.T.S 1

Prepared For:
verizon
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

Prepared For:

Site Number: 418004

Site Name: CLAREMONT FOREST SC1

Site Address:
5701 CLAREMONT AVENUE
OAKLAND, CA 94618

PG&E: 564 FOREST STREET

County: ALAMEDA COUNTY

Engineer:
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841 ARNOLD DRIVE, SUITE A
MARTINEZ, CA 94553
www.TheCBRGroup.com

Licensor:
REGISTERED PROFESSIONAL ENGINEER
No C-66044
Exp. 3/31/19
CIVIL
STATE OF CALIFORNIA

Issued For:
CONSTRUCTION

REV.	DATE	DESCRIPTION	BY
C	03/12/18	REMOVE RRU PER LR	JG
B	01/22/18	100% CD'S FOR REVIEW	MM
A	09/04/17	90% CD'S FOR REVIEW	AC

Sheet Title:
EQUIPMENT AND CONSTRUCTION DETAILS

Sheet Number:
A-5

NOT USED — SCALE: N.T.S — 10

NOT USED — SCALE: N.T.S — 8

NOT USED — SCALE: N.T.S — 5

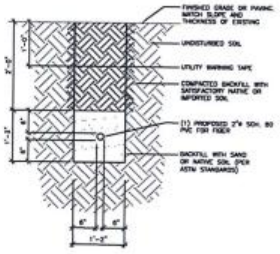
NOT USED — SCALE: N.T.S — 9

NOT USED — SCALE: N.T.S — 7

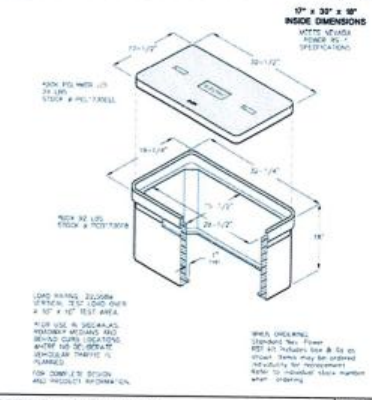
NOT USED — SCALE: N.T.S — 4

NOT USED — SCALE: N.T.S — 2

WB3X-MKS-01 ANTENNA MOUNT DETAIL — SCALE: N.T.S — 6



TRENCH DETAIL — SCALE: N.T.S — 3



HANDHOLE BOX DETAIL — SCALE: N.T.S — 1

Prepared For:

verizon

2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

Prepared For:

Site Number: 418004

Site Name: CLAREMONT FOREST SC1

Site Address:
5701 CLAREMONT AVENUE
OAKLAND, CA 94618

PG&E: 564 FOREST STREET

County: ALAMEDA COUNTY

Engineer:

THE CBR GROUP

841 ARNOLD DRIVE, SUITE A
MARTINEZ, CA 94553
www. TheCBRGroup.com

Licensor:

No C-66844
Exp. 3/31/19

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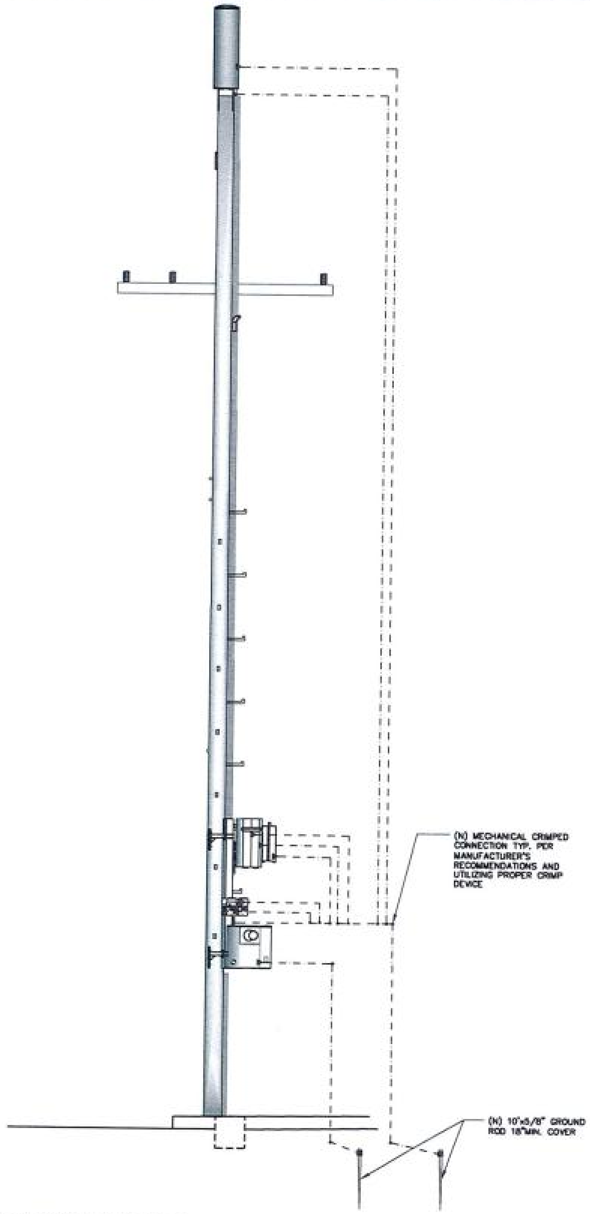
REV	DATE	DESCRIPTION	BY
C	03/12/18	REMOVE RRU PER JF	JG
B	01/22/18	100% CD'S FOR REVIEW	MM
A	08/24/17	90% CD'S FOR REVIEW	AC

Sheet Title: EQUIPMENT AND CONSTRUCTION DETAILS

Sheet Number: A-6



1 POLE GROUNDING DIAGRAM

POWER AND TELCO CONNECTIONS:

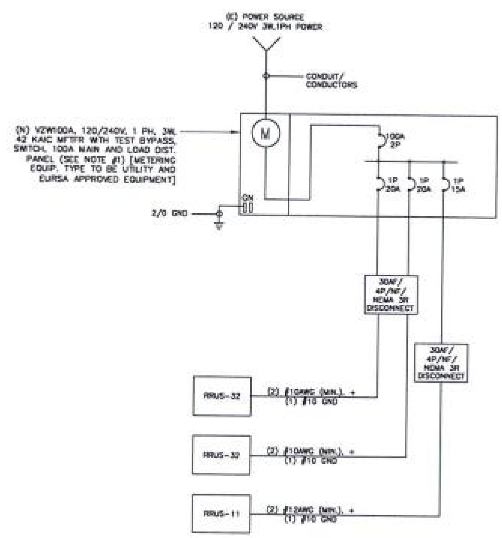
1. POWER AND TELCO POINT OF CONNECTION AND ROUTE ARE PRELIMINARY AND SUBJECT TO CHANGE TO CONFIRMATION BY THE UTILITY COMPANIES RESPECTIVELY.
2. CONTRACT SHALL COORDINATE WITH UTILITY COMPANY FOR FINAL AND EXACT WORK/MATERIALS REQUIREMENTS AND CONSTRUCT TO UTILITY ENGINEERING PLAN AND SPECIFICATIONS ONLY WHERE APPLICABLE PRE PROJECT SCOPE OF WORK.
3. CONTRACT SHALL FURNISH AND INSTALL CONDUIT, PULL WIRES, CABLE PULL BOXES, CONCRETE ENCASEMENT OF CONDUIT, TRANSFORMER PAD, BARRIERS, RISER TRENCHING, BACK FILL AND UTILITY FEES, AND INCLUDE REQUIREMENTS IN THE SCOPE.
4. CONTRACTOR SHALL LABEL ALL MAIN DISCONNECT SWITCHES AS REQUIRED BY CODE.

POWER AND TELCO CONNECTIONS:

1. SUBCONTRACTOR SHALL PROVIDE METER WITH DIST. PANEL AND BREAKERS FOR POWER TO THE BTS UNITS AND THE BTS/UTILITY CABINET.
2. ALL SERVICE EQUIPMENT AND INSTALLATIONS SHALL COMPLY WITH THE N.E.C. AND UTILITY COMPANY AND LOCAL CODE REQUIREMENTS.
3. SUBCONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE ENTRANCE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY.
4. FIELD ROUTE CONDUIT TO CABINETS AS REQUIRED.
5. MAXIMUM ONE WAY CIRCUIT RUN NOT TO EXCEED 75 FEET.

GENERAL ELECTRICAL NOTES:

1. PROVIDE ALL ELECTRICAL WORK & MATERIALS AS SHOWN ON THE DWGS, AS CALLED FOR HEREIN, & AS IS NECESSARY TO FURNISH A COMPLETE INSTALLATION.
2. THE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ADOPTED CALIFORNIA ELECTRICAL CODE, STATE OF CALIFORNIA TITLE24, ALL OTHER APPLICABLE CODES AND ORDINANCES & THE REQUIREMENTS OF THE FIRE MARSHALL. ALL EQUIPMENT & WIRING SHALL BEAR THE APPROVAL STAMP OF UNDERWRITERS LABORATORY (UL) OR AN APPROVED TESTING LABORATORY, PAYMENT FOR ALL INSPECTION FEES AND PERMITS ARE PART OF THIS CONTRACT.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY AND GOOD CONDITION OF ALL MATERIALS & EQUIPMENT FOR THE ENTIRE INSTALLATION & UNIT COMPLETION OF WORK, ERECT & MAINTAIN APPROVED & SUITABLE BARRIERS, PROTECTIVE DEVICES & WARNING SIGNS, BE FULLY RESPONSIBLE FOR ANY LOSS OR INJURY TO PERSONS OR PROPERTY RESULTING FROM NEGLIGENCE AND/OR ENFORCEMENT OF ALL SAFETY PRECAUTIONS & WARNINGS.
4. COORDINATE THE ELECTRICAL INSTALLATION WITH ALL OTHER TRADES.
5. ALL SAW CUTTING, TRENCHING, BACK FILLING & PATCHING SHALL BE PART OF THIS CONTRACT.
6. FINALIZE ALL ELECTRICAL SERVICE ARRANGEMENTS, INCLUDING VERIFICATION OF LOCATIONS, DETAILS, COORDINATION OF THE INSTALLATION & PAYMENT OF ACCRUED CHARGES WITH LOCAL POWER COMPANY. VERIFY LOCATION FOR FACILITIES & DETAILS WITH POWER UTILITY, IN ADDITION TO THE REQUIREMENTS SHOWN IN THE CONTRACT DOCUMENTS, WORK SHALL COMPLY WITH CONSTRUCTION STANDARDS & SERVICE REQUIREMENTS OF THE RESPECTIVE UTILITIES, INCLUDING ANY SUPPLEMENTAL DWGS ISSUED & SHALL BE SUBJECT TO APPROVAL OF THESE UTILITIES.
7. ALL WIRING SHALL BE COPPER, INSULATION FOR BRANCH CIRCUIT CONDUCTORS SHALL BE TYPE "THWN" CONDUCTORS LARGER AND #6 AND MAY BE TYPE "THWN" OR "TWN".
8. PROVIDE CONDUIT SEALS FOR ALL CONDUITS PENETRATING WEATHERPROOFING OR WEATHERPROOF ENCLOSURE ENVELOPE, MASTIC SEAL ALL CONDUIT OPENING PENETRATIONS COMPLETELY WATERTIGHT.
9. UNLESS SHOWN OTHERWISE, FUSED DISCONNECT SWITCHES SHALL BE PROVIDED WITH LOW-PEAK, S\DUAL ELEMENT FUSES SIZED TO EQUIPMENT NAMEPLATE FUSE CURRENT RATING. MOTOR STARTERS SHALL BE PROVIDED WITH SIMILARLY SIZED FUSIBLE ELEMENTS, SWITCHES AND OTHER OUTDOOR EQUIPMENT SHALL BE RATED NEMA 3R AND/OR UL LISTED FOR WET ENVIRONMENT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TESTING THE GROUNDING SYSTEM AND ENSURING A 5 OHM OR LESS GROUNDING PATH, ADDITIONAL GROUND RODS AND/OR CHEMICAL ROD SYSTEM SHALL BE USED TO ACHIEVE THIS REQUIREMENT.



LOAD CALCULATIONS–VERIZON WIRELESS

EXISTING LOAD: 0 AMPS
NEW LOAD: 10.0 AMPS MAX
NEW TOTAL LOAD: 10.0 AMPS MAX

POWER AND TELCO DESIGN IS BASED ON INITIAL SITE VISIT.

CONTRACTOR SHALL OBTAIN CURRENT UTILITY COORDINATOR PLANS PRIOR TO START OF CONSTRUCTION.

AVAILABLE FAULT CURRENT PER UTILITY.

NOTE: CONTRACTOR TO CHECK WITH UTILITY TO ENSURE ELEC. METER IS BRACED FOR ACTUAL FAULT CURRENT.

2 SINGLE LINE DIAGRAM
N.T.S.

Prepared For:

verizon✓

2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

Prepared For:

Site Number: 418004

Site Name: CLAREMONT FOREST SC1

Site Address:
5701 CLAREMONT AVENUE
OAKLAND, CA 94618

PG&E: 564 FOREST STREET

County: ALAMEDA COUNTY

Engineer:
THE CBR GROUP
841 ARNOLD DRIVE, SUITE A
MARTINEZ, CA 94553
www.TheCBRGroup.com

Licensor:

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C	01/12/18	REMOVE BBU PER JI	JC
B	01/22/18	100% CD'S FOR REVIEW	WM
A	08/24/17	90% CD'S FOR REVIEW	AC

Sheet Title:
ELECTRICAL GROUND DIAGRAMS, SINGLE LINE DIAGRAM

Sheet Number:
E-1

NOT USED

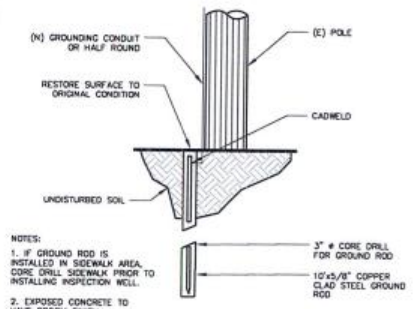
SCALE: N.T.S

10

NOT USED

SCALE: N.T.S

7

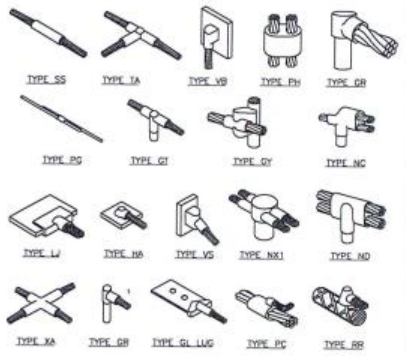


NOTES:
1. 8' GROUND ROD IS INSTALLED IN SIDEWALK AREA. CORE DRILL SIDEWALK PRIOR TO INSTALLING INSPECTION WELL.
2. EXPOSED CONCRETE TO HAVE BROOM FINISH.

POLE GROUNDING ROD

SCALE: N.T.S

4



EXOTHERMIC WELD CONNECTION

SCALE: N.T.S

3

NOT USED

SCALE: N.T.S

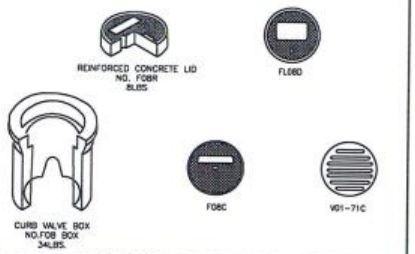
11

NOT USED

SCALE: N.T.S

8

NOTES:
- ETCHED POLYPROPYLENE FACE
- FACE ANCHORED IN CONCRETE
- ULTRA-VIOLET INHIBITOR
- EXCEEDS ASTM-D1693 STANDARDS
- FOR ENVIRONMENTAL STRESS CRACKING RESISTANCE

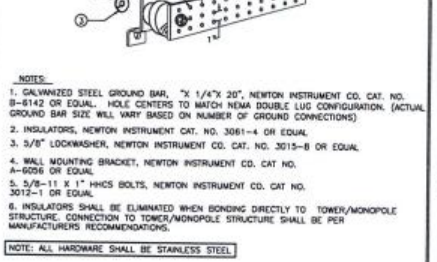


F08BOX	BOX	34LBS F08 CURB VALVE BOX (8" LG X 12" HIGH) - 48 PER PALLET
F08R	LID	84LBS REINFORCED CONCRETE LID WITH PLASTIC RING
F08C	LID	84LBS F08 IRON LID
F08D	LID	70LBS FIBERGLASS LID, NON-CONCRETE
V01-71C	LID	70LBS CAST IRON GRANE AQA COMPLIANT

F08 BOX GROUND WELL DETAIL

SCALE: N.T.S

5



NOTES:
1. GALVANIZED STEEL GROUND BAR, "X 1/4"X 20", NEWTON INSTRUMENT CO. CAT. NO. B-6142 OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION. (ACTUAL GROUND BAR SIZE WILL VARY BASED ON NUMBER OF GROUND CONNECTIONS)
2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4 OR EQUAL
3. 5/8" LOCKWASHER, NEWTON INSTRUMENT CO. CAT. NO. 3015-8 OR EQUAL
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056 OR EQUAL
5. 5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012-1 OR EQUAL
6. INSULATORS SHALL BE ELIMINATED WHEN BONDING DIRECTLY TO TOWER/MONOPOLE STRUCTURE. CONNECTION TO TOWER/MONOPOLE STRUCTURE SHALL BE PER MANUFACTURERS RECOMMENDATIONS.

NOTE: ALL HARDWARE SHALL BE STAINLESS STEEL

BUSS BAR

SCALE: N.T.S

2

NOT USED

SCALE: N.T.S

12

NOT USED

SCALE: N.T.S

9

PSU AC

POSITION	INTERFACE
A	GROUNDING INTERFACE
B	AC POWER INTERFACE
C	INTERFACE FOR FUTURE USE
D	DC POWER INTERFACE

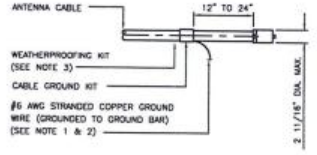
DIMENSIONS:
HEIGHT - 68 mm
WIDTH - 330 mm
DEPTH - 178 mm
WEIGHT - 5.2 kg

PSU DETAIL

SCALE: N.T.S

6

NOTES:
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE (TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.)



CONNECTION OF CABLE GND. KIT TO ANTENNA

SCALE: N.T.S

1

Prepared For:
verizon
2785 MITCHELL DRIVE, SUITE 9
WALNUT CREEK, CA 94598

Prepared For:

Site Number:
418004

Site Name:
CLAREMONT FOREST SC1

Site Address:
5701 CLAREMONT AVENUE
OAKLAND, CA 94618

PG&E: 564 FOREST STREET

County:
ALAMEDA COUNTY

Engineer:
THE CBR GROUP
841 ARNOLD DRIVE, SUITE A
MARTINEZ, CA 94553
www.TheCBRGroup.com

Licensor:
REGISTERED PROFESSIONAL ENGINEER
No E-19045
Exp 3/31/18
ELECTRICAL
STATE OF CALIFORNIA

Issued For:
CONSTRUCTION

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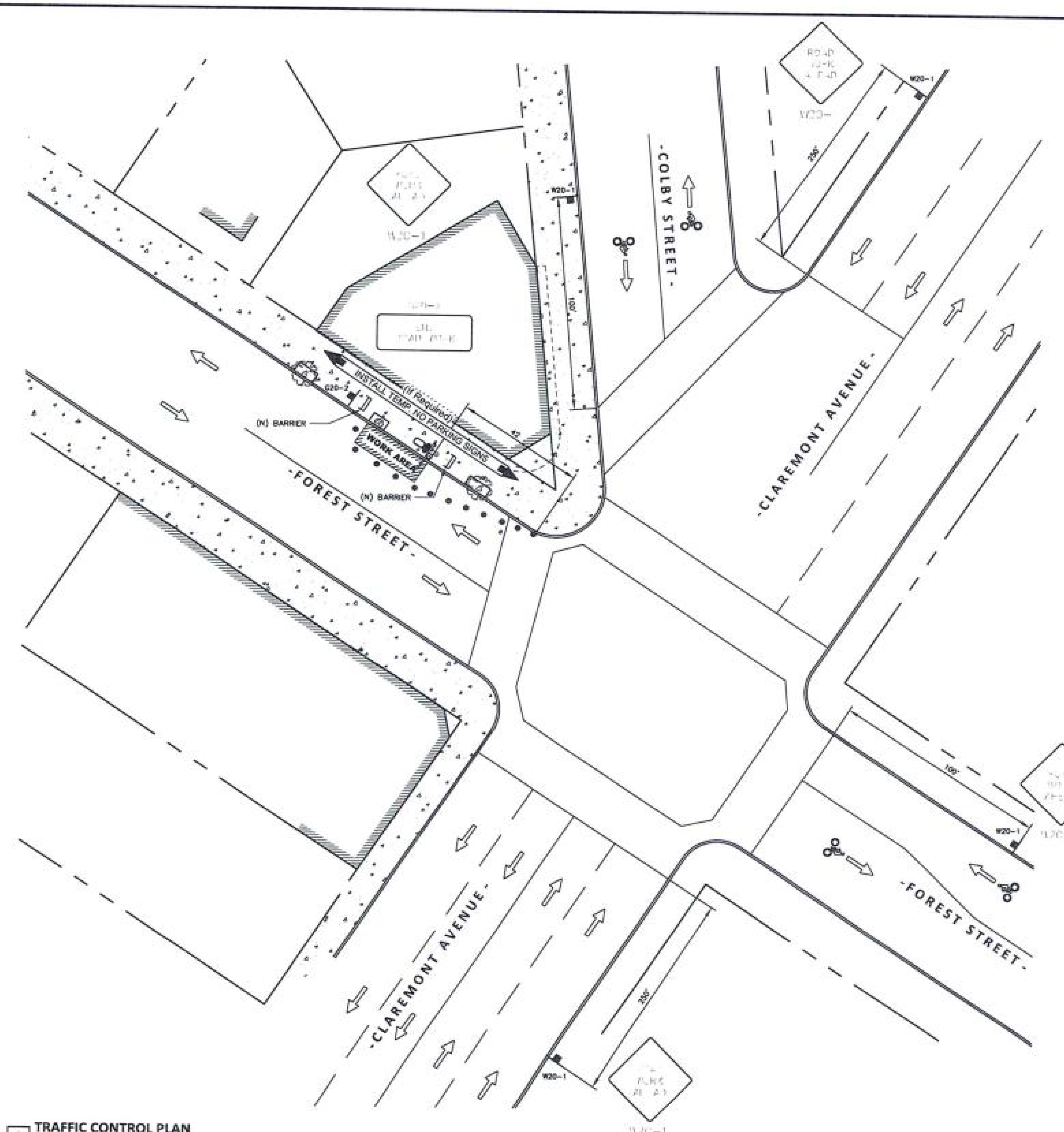
C	03/12/18	REMOVE BBU PER JC	JC
B	01/17/18	100% CD'S FOR REVIEW	WW
A	08/04/17	90% CD'S FOR REVIEW	AC

Sheet Title:
ELECTRICAL DETAILS

Sheet Number:
E-2



1 TRAFFIC CONTROL PLAN
N.T.S.

GENERAL TRAFFIC CONTROL NOTES
TRAFFIC SHALL CONFORM TO THE 2014 CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE 2012 WATCH HANDBOOK.
ACCESS TO DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.
ONE LANE OF TRAFFIC IN EACH DIRECTION AND ALL HIGH VOLUME TURNING LANES SHALL BE MAINTAINED AT ALL TIMES ON ALL STREETS AT A MINIMUM LANE WIDTH OF 10 FEET.
ANY CONFLICTING SIGNS, STRIPING AND PAVEMENT MARKINGS SHALL BE REMOVED OR COVERED BEFORE TRAFFIC CONTROL IS IN PLACE. ANY SIGN, STRIPING OR PAVEMENT MARKING REMOVED OR COVERED SHALL BE REPLACED WHEN TRAFFIC CONTROL IS NO LONGER NECESSARY.
SAFE PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES.

NOTES:

- FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION, ACCESSIBILITY ACCESS AND REQUIREMENTS ARE NOT REQUIRED, IN ACCORDANCE WITH CALIFORNIA STATE ADMINISTRATIVE CODE, PART 2, TITLE 24, SECTION 11038.1, EXCEPTION 1 & SECTION 11348.2.1, EXCEPTION 4.
- STREET SIDE PARKING AVAILABLE ON BOTH SIDES OF THE STREET.

TABLE 6H-3 & 6H-4 - FROM THE 2014 CALIFORNIA MUTCD

POSTED SPEED LIMIT - MPH	MERGING TAPER LENGTH "L" - FEET	SHIFTING TAPER LENGTH "L/2" - FEET	SHOULDER TAPER LENGTH "L/3" - FEET	SIGN SPACING ADVANCE OF TAPER & BETWEEN SIGNS - FEET
20	80	40	27	100
25	125	63	42	100
30	180	90	60	250
35	245	123	82	250
40	320	160	107	250
45	540	270	180	350
50	600	300	200	350
55	660	330	220	350

MAINTAIN DRIVEWAY ACCESS
AT ALL TIME

LEGEND

- TYPE III BARRICADE W/ SIGN
- TYPE II BARRICADE W/ SIGN
- CHANNELIZING DEVICE
- TRAFFIC CONE WITH CLIP ON SIGN
- SIGN
- SIGNALIZED INTERSECTION
- ARROW PANEL (FLASHING ARROW) (WHERE REQUIRED)
- HIGH LEVEL WARNING DEVICE (FLAGTREE) (OPTIONAL)
- FLAGGER
- TANS — TOW AWAY NO STOPPING ___ TO ___ (SHOW HOURS)
- TANSAT — TOW AWAY NO STOPPING ANY TIME
- WORK ZONE (ACTIVITY AREA) LIMITS
- DIRECTION OF TRAFFIC (NOT PAVEMENT MARKING)
- ROADWAY DESIGNATION (A THROUGH D)
- SITE

Prepared For:

verizon
2785 MITCHELL DRIVE, SUITE 9
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PG&E: 564 FOREST STREET

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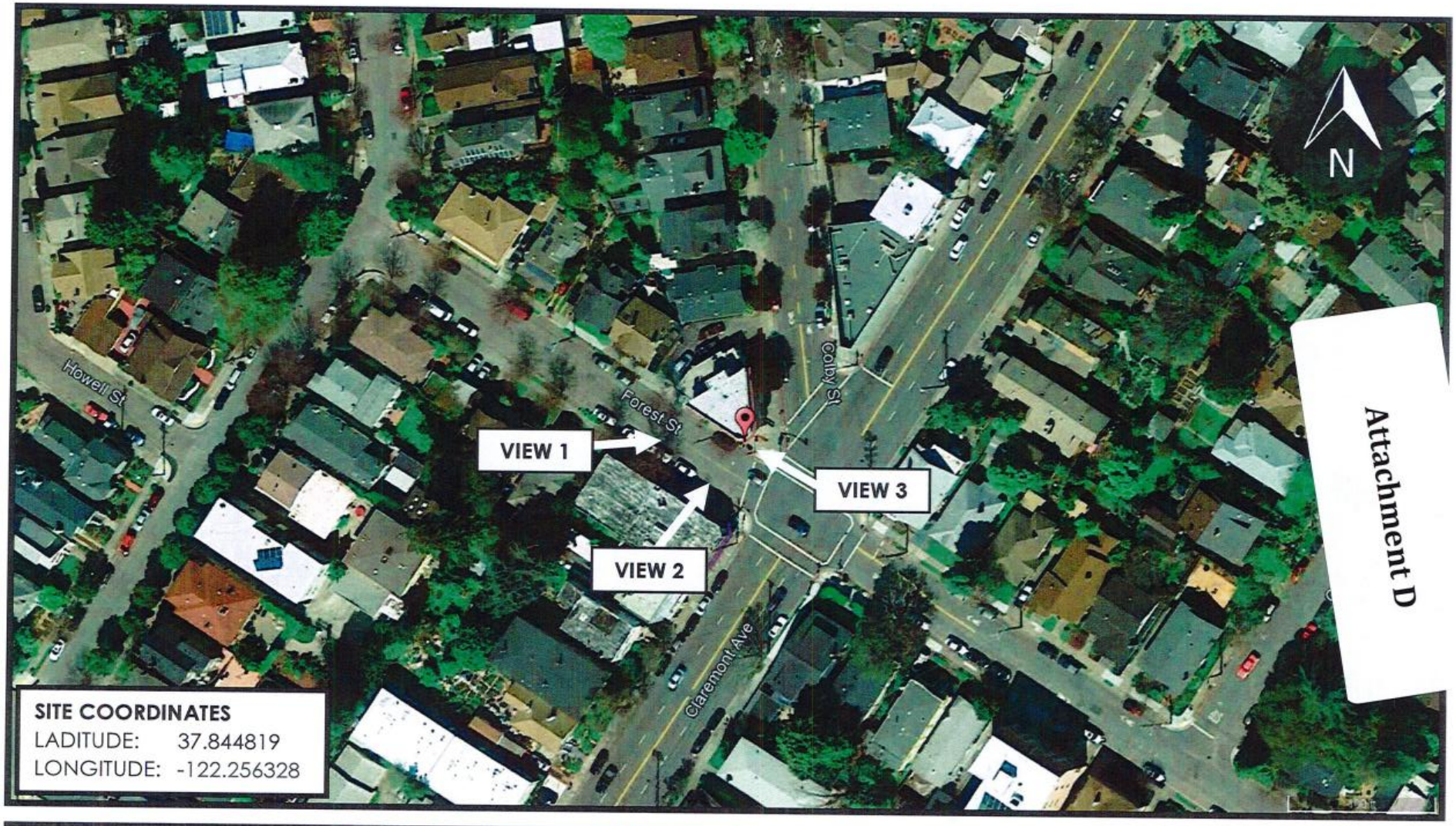
C	03/12/18	REMOVE NRU PER JX	JG
B	05/22/18	100% CD'S FOR REVIEW	[illegible]
A	08/24/17	90% CD'S FOR REVIEW	AC

Sheet Title:
TRAFFIC CONTROL PLAN

Sheet Number:
TCP

PROPOSED SITE LOCATION

verizon



Attachment D

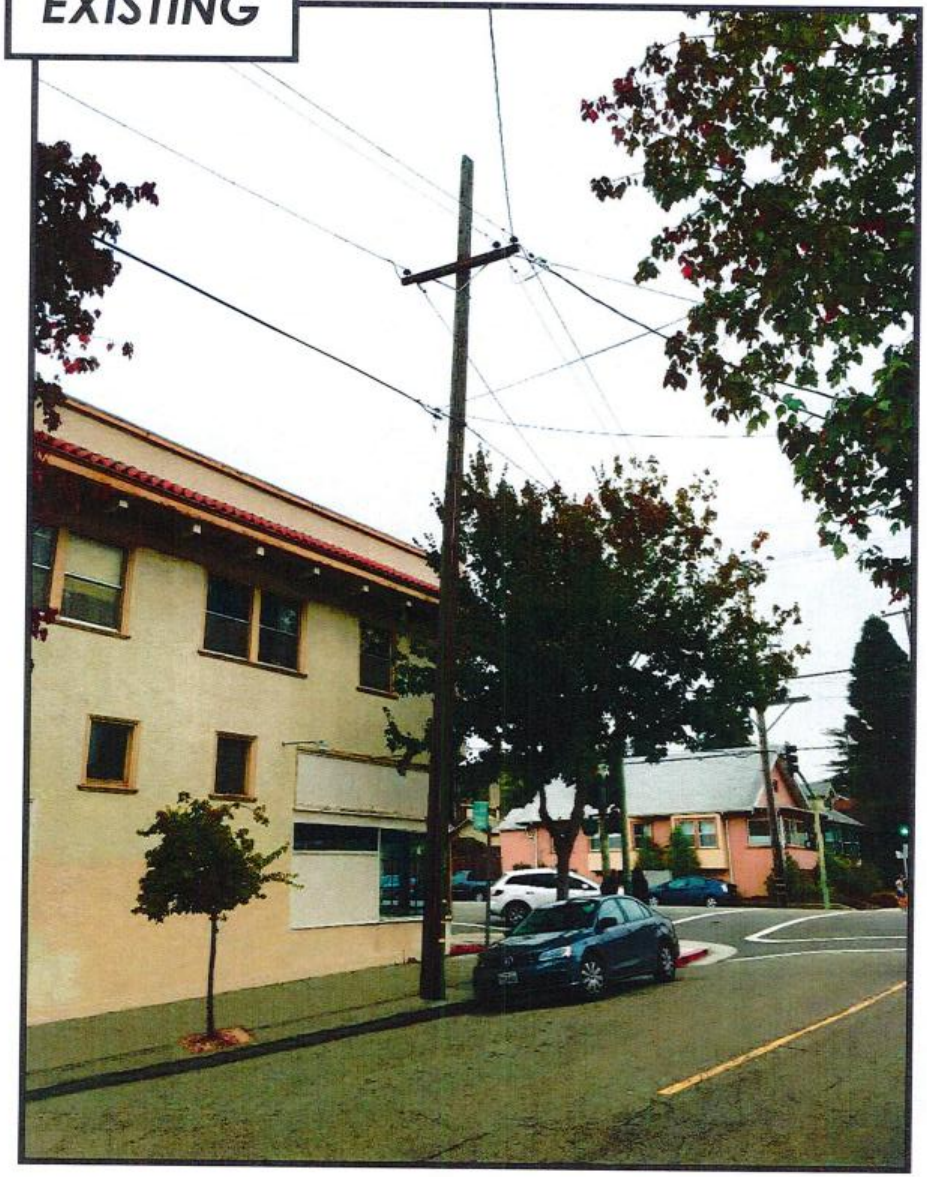
CLAREMONT FOREST SC1
564 Forest Street
Oakland, CA 94618
Location Code: 418004

SHOT MAP

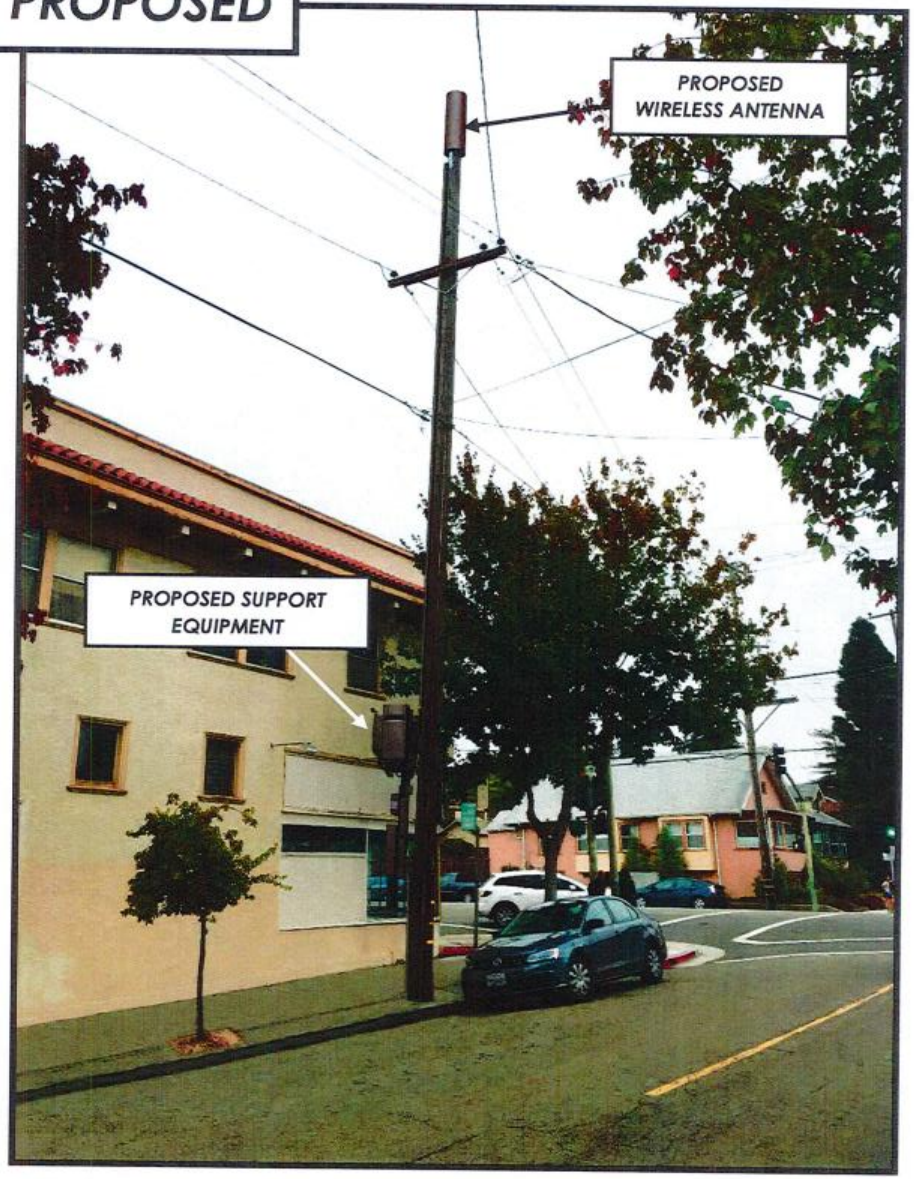
Verizon Node: "CLAREMONT FOREST SC1"
Verizon Location Code: 418004

THE CBR GROUP
The CBR Group
841 Arnold Dr., Suite A
Martinez, CA 94553
info@thecbrgroup.com

EXISTING



PROPOSED



CLAREMONT FOREST SC1
564 Forest Street
Oakland, CA 94618
Location Code: 418004

VIEW 1: LOOKING NORTHEAST ACROSS FOREST STREET

PHOTOSIMS PRODUCED 3/6/2018

verizon

The CBR Group
841 Arnold Dr., Suite A
Martinez, CA 94553
info@thecbrgroup.com

EXISTING

PROPOSED

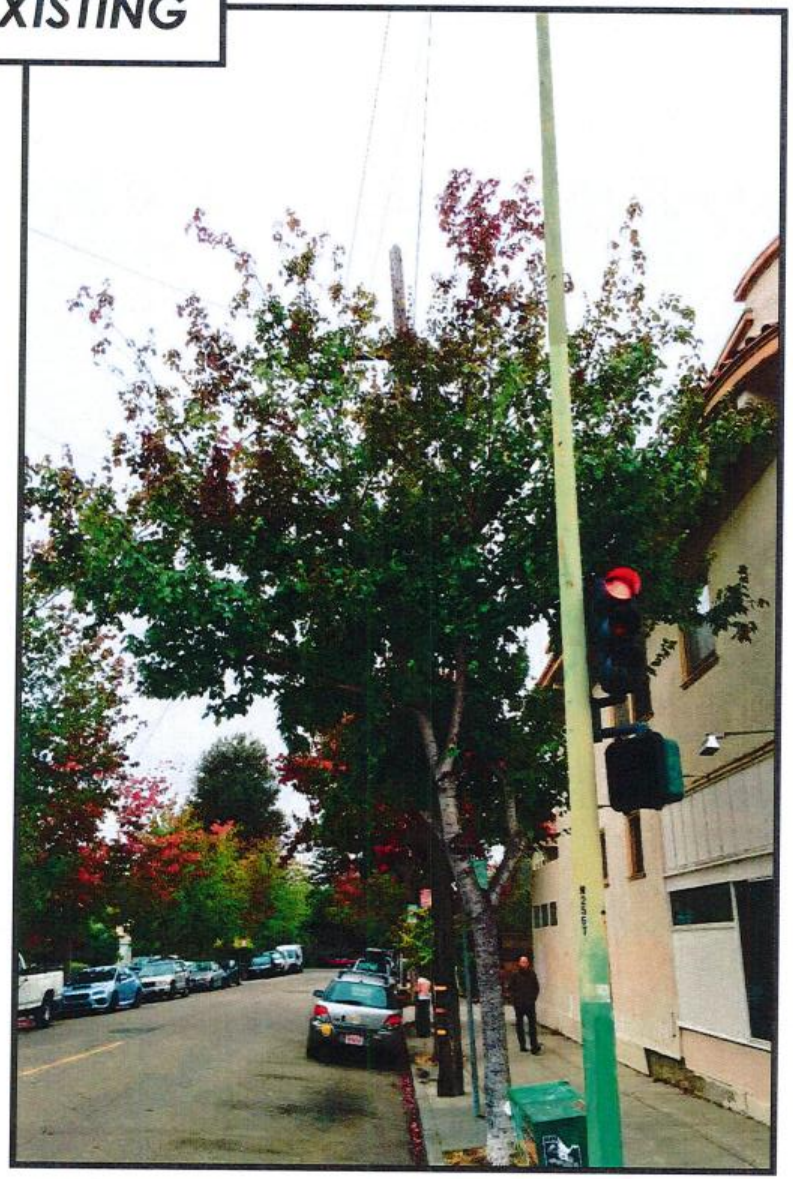
CLAREMONT FOREST SC1
564 Forest Street
Oakland, CA 94618
Location Code: 418004

VIEW 2: LOOKING NORTH ACROSS FOREST STREET
PHOTOSIMS PRODUCED 3/6/2018

verizon

THE CBR GROUP
The CBR Group
841 Arnold Dr., Suite A
Martinez, CA 94553
info@thecbrgroup.com

EXISTING



PROPOSED

CLAREMONT FOREST SC1
564 Forest Street
Oakland, CA 94618
Location Code: 418004

VIEW 2: LOOKING NORTHWEST ALONG FOREST STREET
PHOTOSIMS PRODUCED 3/6/2018

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The CBR Group
841 Arnold Dr., Suite A
Martinez, CA 94553
info@thecbrgroup.com

verizon

verizon

VERIZON SMALL CELL FOR CLAREMONT FOREST SMALL CELL ALTERNATIVE SITE ANALYSIS

Attachment E

Verizon Small Cell Node "Claremont Forest SC1 " (near 564 Forest St.)

Prepared January 11 2018

THE CBR GROUP
COMMUNICATIONS BASED RESOURCE GROUP

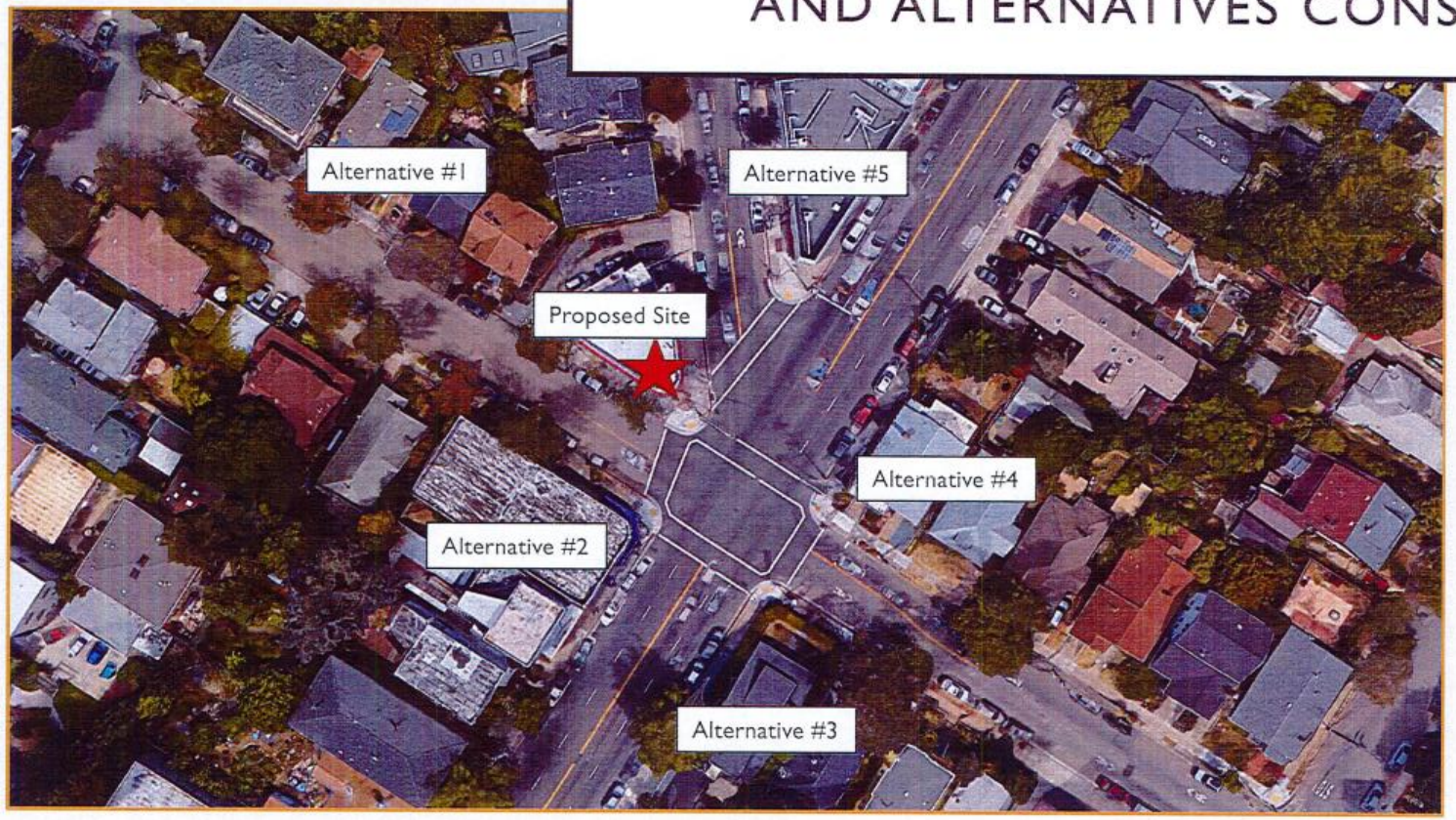
OVERVIEW

- Verizon is proposing to install a small cell standalone project in the area to improve network coverage and capacity.
- A small cell is just like the name implies. A small cell augments Verizon's capacity in a given area. It consists of a radio, antenna, power and a fiber connection. Small Cells are short range mobile cell sites used to complement larger macro cells (or cell towers). Small cells enable the Verizon network team to strategically add capacity to high traffic areas.
- Demand for wireless data services has nearly doubled over the last year, and is expected to grow 650% between 2013 and 2018 according to Cisco. It's part of Verizon's network strategy to provide reliable service and to stay ahead of this booming demand for wireless data.

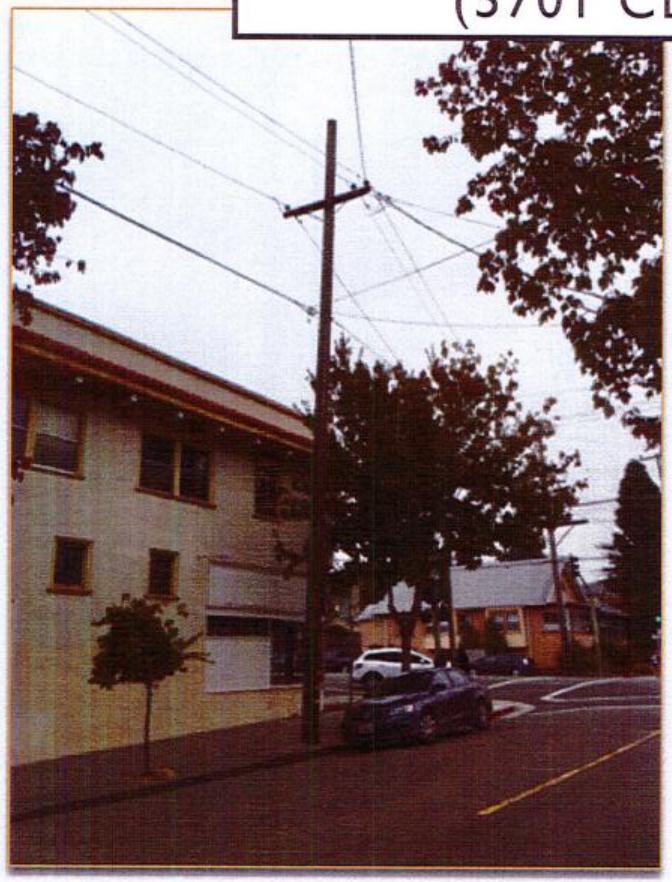
ALTERNATIVE ANALYSIS

- In addition to the proposed existing wooden utility pole location for this Node, Verizon considered poles immediately adjacent to the proposed pole to explain why it was selected.
- Existing antenna towers, monopoles, and rooftops located more than 150 feet from the proposed location are not viable alternatives for the small cell network because they do not meet Radio Frequency Coverage requirements, i.e., network objectives.
- The Node site is low in height, has low power, and is a reduced size antenna site that provides coverage to small areas.
- Cells interact with each other, and are laid out in a logical pattern to provide optimal coverage conditions to address service, capacity, reliability, and access for users. This network architecture in Small Cells is geographically very tight, and precludes alternative locations at greater distances.

SHOT MAP OF PROPOSED SITE LOCATION AND ALTERNATIVES CONSIDERED



PROPOSED POLE
(5701 CLAREMONT AVE)



ALTERNATE SITE #1
(570 FOREST ST)

Node - Alternative Site #1

This alternative location is a wood utility pole located in the Public ROW. The nearest address is 570 Forest St.

Pole Elimination Justification:

This pole is a possible candidate however the equipment would be more visually obtrusive at this location as opposed to the proposed location given the tall trees and shrubs that surround the selected pole to help screen the equipment.

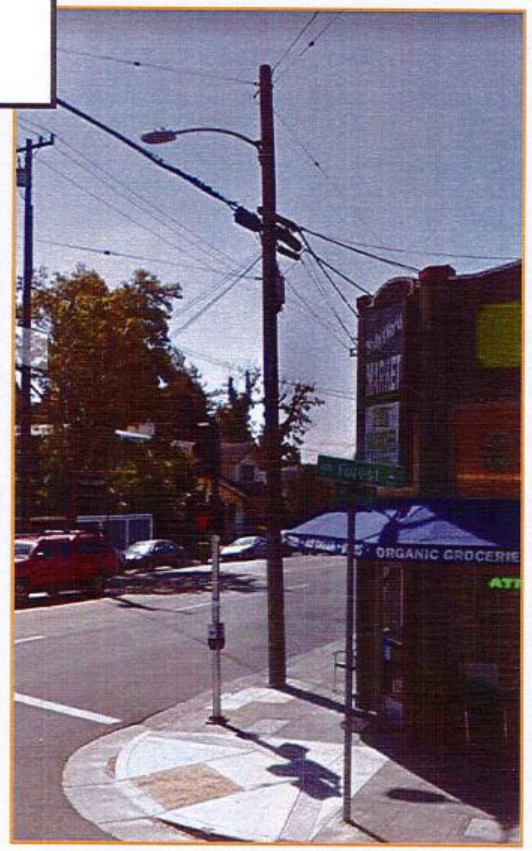
ALTERNATE SITE #2
(5559 CLAREMONT AVE)

Node - Alternative Site #2

This alternative location is a wood utility pole located in the Public ROW. This pole is located near 5559 Claremont Ave.

Pole Elimination Justification:

This pole is not a possible candidate due to the existing equipment on the pole. There is not adequate climbing space with the additional Verizon equipment needed on the pole, and it wouldn't comply to GO95 Rule 94.



ALTERNATE SITE #3
(5582 CLAREMONT AVE)

Node - Alternative Site #3

This alternative location is a wood utility pole located in the Public ROW. The nearest address is 5582 Claremont Ave.

Pole Elimination Justification:

This pole is not a possible candidate due to the existing PG&E equipment on the pole. PG&E does not allow cell sites on these types of poles.

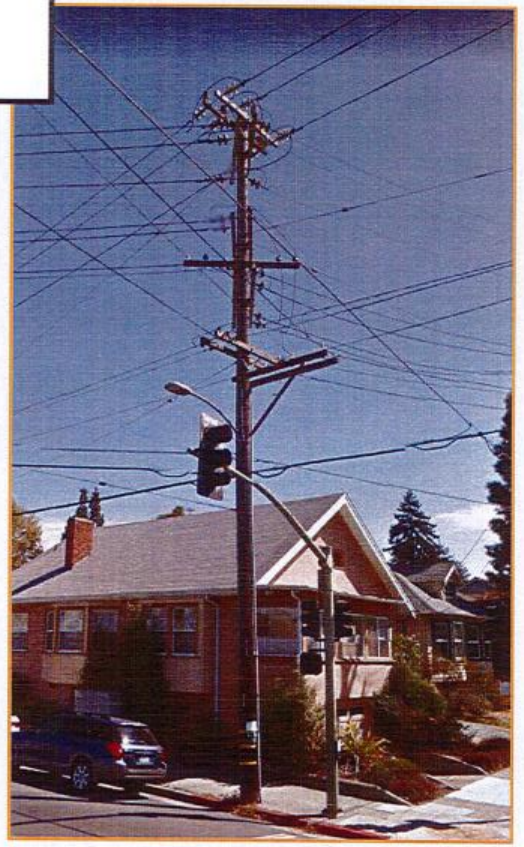
ALTERNATE SITE #4
(524 FOREST AVE)

Node - Alternative Site #4

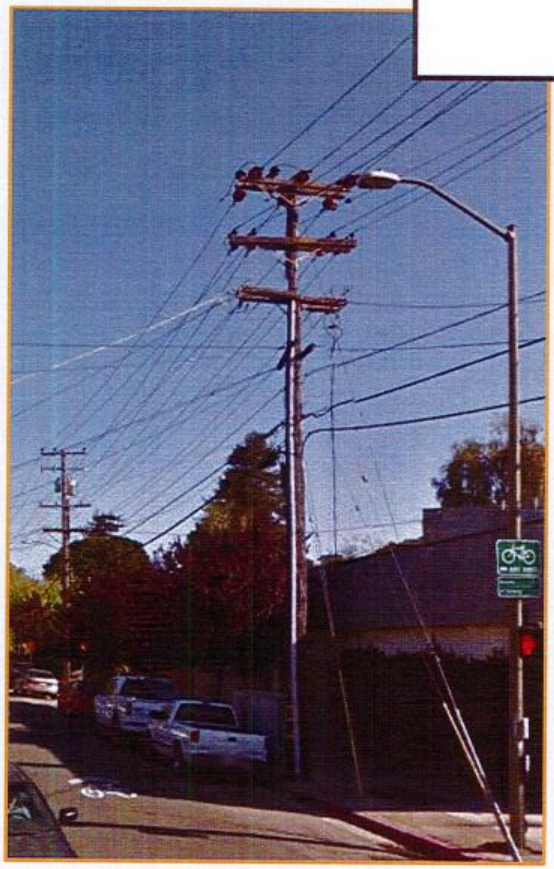
This alternative location is a wood utility pole located in the Public ROW. This pole is located near 524 Forest Ave.

Pole Elimination Justification:

This pole is not a possible candidate due to the configuration of the double cross arm frame work and with the additional Verizon equipment needed on the pole would not be able to maintain climbing space per G.O. 95.



ALTERNATE SITE #5
(5800 COLBY ST)



Node - Alternative Site #5

This alternative location is a wood utility pole located in the Public ROW. The nearest address is 5800 Colby St.

Pole Elimination Justification:

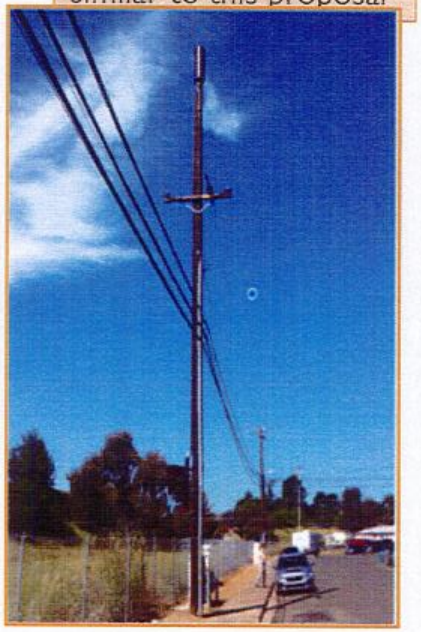
This pole is not a possible candidate due to the configuration of the double cross arm frame work and with the additional Verizon equipment needed on the pole would not be able to maintain climbing space per G.O. 95.

LEAST INTRUSIVE MEANS

Small Cell facilities are small form factor, smaller radio frequency footprint base stations that allow carriers to place appropriate facilities in areas where full size radio base stations are not appropriate. Some equipment is located in a switch or Hub facility some miles away, further reducing the scale and quantity of equipment on site. This proposal is consistent with the least intrusive means to provide coverage for current generation of service within a residential district.

Typical Macro facility – industry standard sized colocateable facility with full compliment of radios

Small Cell example similar to this proposal



THANK YOU

The CBR Group, Inc.

Steve Piper

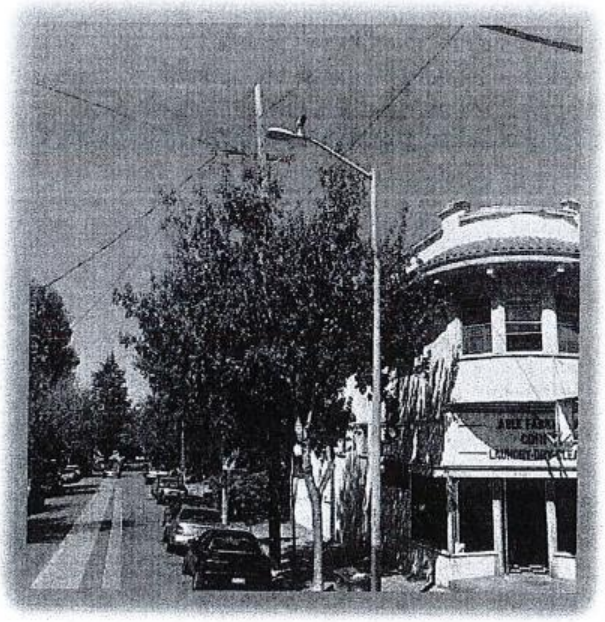
925.949.3329

Steve@thecbrgroup.com

Radio Frequency - Electromagnetic Energy (RF-EME) Jurisdictional Report

Site No. 418004
Claremont Forest SC1
Adjacent to 5701 Claremont Avenue Northeast side of Forest Street
Oakland, California 94619
Alameda County
37° 50' 41.35" N, -122° 15' 22.78" W NAD83

EBI Project No. 6218000376
January 19, 2018



Prepared for:

Verizon Wireless
c/o The CBR Group Inc.
841 Arnold Drive, Suite A & B
Martinez, CA 94553

Attachment F

Prepared by:

EBI Consulting
environmental | engineering | due diligence

TABLE OF CONTENTS

APPENDICES

EXECUTIVE SUMMARY

Purpose of Report

EnviroBusiness Inc. (dba EBI Consulting) has been contracted by Verizon Wireless to conduct radio frequency electromagnetic (RF-EME) modeling for Verizon Site 418004 located adjacent to 5701 Claremont Avenue Northeast side of Forest Street in Oakland, California to determine RF-EME exposure levels from proposed Verizon wireless communications equipment at this site. As described in greater detail in Section 2.0 of this report, the Federal Communications Commission (FCC) has developed Maximum Permissible Exposure (MPE) Limits for general public exposures and occupational exposures. This report summarizes the results of RF-EME modeling in relation to relevant FCC RF-EME compliance standards for limiting human exposure to RF-EME fields.

Statement of Compliance

A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards.

As presented in the sections below, based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antennas that exceed the FCC's occupational or general public exposure limits at this site. Additionally, there are areas where workers who may be elevated above the ground may be exposed to power densities greater than the occupational limits. Therefore, workers should be informed about the presence and locations of antennas and their associated fields.

At the nearest walking/working surfaces to the Verizon antennas, the maximum power density generated by the Verizon antennas is approximately **2.50** percent of the FCC's general public limit (**0.50** percent of the FCC's occupational limit).

Recommended control measures are outlined in Section 5.0 and within a Site Safety Plan (attached); this plan includes instructions to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol.

1.0 INTRODUCTION

Radio frequency waves are electromagnetic waves from the portion of the electromagnetic spectrum at frequencies lower than visible light and microwaves. The wavelengths of radio waves range from thousands of meters to around 30 centimeters. These wavelengths correspond to frequencies as low as 3 cycles per seconds (or hertz [Hz]) to as high as one gigahertz (one billion cycles per second).

Personal Communication (PCS) facilities used by Verizon in this area operate within a frequency range of 700-2100 MHz. Facilities typically consist of: 1) electronic transceivers (the radios or cabinets) connected to wired telephone lines; and 2) antennas that send the wireless signals created by the transceivers to be received by individual subscriber units (PCS telephones). Transceivers are typically connected to antennas by coaxial cables.

Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed a distance above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of in areas in the immediate vicinity of the antennas.

MPE limits do not represent levels where a health risk exists, since they are designed to provide a substantial margin of safety. 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.

2.0 SITE DESCRIPTION

This project site includes one (1) omni-directional wireless telecommunication antenna on a utility pole located adjacent to 5701 Claremont Avenue Northeast side of Forest Street in Oakland, California.

Verizon Antenna Information (proposed Configuration)

Antenna# and Model	Frequency (MHz)	# of Transmitters	Transmit Power (Watts)	Azimuth	Gain (dBd)	Feet above Ground (CL)	X	Y	Z
Amphenol CUUT360X12Fxyz	700	2	40	Omni	3.35	50.67 ft AGL	50	50	48.67
	1900	4	40		7.35				
	2100	4	40		7.85				

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general population/uncontrolled exposure limits for members of the general public that may be exposed to antenna fields. While access to this site is considered uncontrolled, the analysis has considered exposures with respect to both controlled and uncontrolled limits as an untrained worker may access adjacent rooftop locations. Additional information regarding controlled/uncontrolled exposure limits is provided in Section 3.0. Appendix B presents a site safety plan that provides a plan view of the utility pole with antenna locations.

3.0 FEDERAL COMMUNICATIONS COMMISSION (FCC) REQUIREMENTS

The FCC has established Maximum Permissible Exposure (MPE) limits for human exposure to Radiofrequency Electromagnetic (RF-EME) energy fields, based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc. (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC guidelines incorporate two separate tiers of exposure limits that are based upon occupational/controlled exposure limits (for workers) and general public/uncontrolled exposure limits for members of the general public.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/ controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general public/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

General public/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Table 1 and Figure 1 (below), which are included within the FCC's OET Bulletin 65, summarize the MPE limits for RF emissions. These limits are designed to provide a substantial margin of safety. They vary by frequency to take into account the different types of equipment that may be in operation at a particular facility and are "time-averaged" limits to reflect different durations resulting from controlled and uncontrolled exposures.

The FCC's MPEs are measured in terms of power (mW) over a unit surface area (cm^2). Known as the power density, the FCC has established an occupational MPE of 5 milliwatts per square centimeter (mW/cm^2) and an uncontrolled MPE of 1 mW/cm2 for equipment operating in the 1900 MHz frequency range. For the Verizon equipment operating at 700 MHz or 850 MHz, the FCC's occupational MPE is 2.83 mW/cm^2 and an uncontrolled MPE of 0.57 mW/cm^2. These limits are considered protective of these populations.

Table 1: Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $[E]^2$, $[H]^2$, or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6

Table 1: Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure

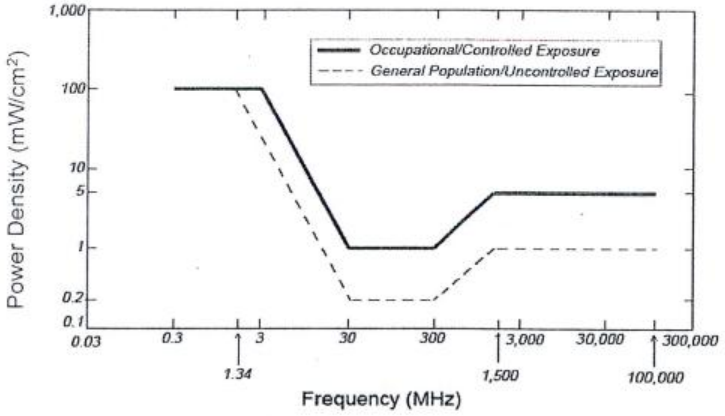
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $[E]^2$, $[H]^2$, or S (minutes)
300-1,500	--	--	f/300	6
1,500-100,000	--	--	5	6

(B) Limits for General Public/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $[E]^2$, $[H]^2$, or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	$(180/f^2)$*	30
30-300	27.5	0.073	0.2	30
300-1,500	--	--	f/1,500	30
1,500-100,000	--	--	1.0	30

f = Frequency in (MHz)
* Plane-wave equivalent power density

Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)
Plane-wave Equivalent Power Density



Based on the above, the most restrictive thresholds for exposures of unlimited duration to RF energy for several personal wireless services are summarized below:

Personal Wireless Service	Approximate Frequency	Occupational MPE	Public MPE
Personal Communication (PCS)	1,950 MHz	5.00 mW/cm^2	1.00 mW/cm^2
Cellular Telephone	870 MHz	2.90 mW/cm^2	0.58 mW/cm^2
Specialized Mobile Radio	855 MHz	2.85 mW/cm^2	0.57 mW/cm^2
Most Restrictive Freq, Range	30-300 MHz	1.00 mW/cm^2	0.20 mW/cm^2

MPE limits are designed to provide a substantial margin of safety. 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.

Personal Communication (PCS) facilities used by Verizon in this area operate within a frequency range of 700-2100 MHz. Facilities typically consist of: 1) electronic transceivers (the radios or cabinets) connected to wired telephone lines; and 2) antennas that send the wireless signals created by the transceivers to be received by individual subscriber units (PCS telephones). Transceivers are typically connected to antennas by coaxial cables.

Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of areas directly in front of the antennas.

4.0 Worst-Case Predictive Modeling

EBI has performed theoretical modeling using RoofView® software to estimate the worst-case power density at the site ground-level and nearby roof-tops resulting from operation of the antennas. RoofView® is a widely-used predictive modeling program that has been developed by Richard Tell Associates to predict both near field and far field RF power density values for roof-top and tower telecommunications sites produced by vertical collinear antennas that are typically used in the cellular, PCS, paging and other communications services. The models utilize several operational specifications for different types of antennas to produce a plot of spatially-averaged power densities that can be expressed as a percentage of the applicable exposure limit.

The modeling is based on worst-case assumptions for the number of antennas and transmitter power. The modeling assumes a maximum of 10-radio transmitters with a power level of 40 watts per transmitter for the 700, 1900, and 2100 MHz frequencies, in order to provide a worst-case evaluation of predicted MPE levels. The assumptions used in the modeling are based upon information provided by Verizon, and information gathered from other sources. The parameters used for the modeling are summarized in the RoofView® export files presented in Appendix C.

There are no other wireless carriers with equipment installed at this site.

Based on worst-case predictive modeling, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed Verizon antennas that exceed the FCC's occupational or general public exposure limits at this site. At the nearest walking/working surfaces to the Verizon antennas, the maximum power density generated by the Verizon antennas is approximately 2.50 percent of the FCC's general public limit (0.50 percent of the FCC's occupational limit).

The Site Safety Plan also presents areas where Verizon Wireless antennas contribute greater than 5% of the applicable MPE limit for a site. A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards.

The inputs used in the modeling are summarized in the RoofView® export file presented in Appendix C. A graphical representation of the RoofView® modeling results is presented in Appendix B. It should be noted that RoofView is not suitable for modeling microwave dish antennas; however, these units are designed for point-to-point operations at the elevations of the installed equipment rather than ground level coverage.

5.0 MITIGATION/SITE CONTROL OPTIONS

EBI's modeling indicates that there are no areas in front of the Verizon antennas that exceed the FCC standards for occupational or general public exposure at ground level. All exposures above the FCC's safe limits require that individuals be elevated above the ground. In order to alert people accessing the pole, CAUTION signs are recommended for installation on opposite sides of the pole 8' below the bottom of the antenna.

There are no barriers recommended on this site.

These protocols and recommended control measures have been summarized and included with a graphic representation of the antennas and associated signage and control areas in a RF-EME Site Safety Plan, which is included as Appendix B. Individuals and workers accessing the roof should be provided with a copy of the attached Site Safety Plan, made aware of the posted signage, and signify their understanding of the Site Safety Plan.

Implementation of the signage recommended in the Site Safety Plan and in this report will bring this site into compliance with the FCC's rules and regulations.

6.0 SUMMARY AND CONCLUSIONS

EBI has prepared a Radiofrequency – Electromagnetic Energy (RF-EME) Compliance Report for telecommunications equipment installed by Verizon Site Number 418004 located adjacent to 5701 Claremont Avenue Northeast side of Forest Street in Oakland, California to determine worst-case predicted RF-EME exposure levels from wireless communications equipment installed at this site. This report summarizes the results of RF-EME modeling in relation to relevant Federal Communications Commission (FCC) RF-EME compliance standards for limiting human exposure to RF-EME fields.

As presented in the sections above, based on the FCC criteria, there are no modeled areas on any accessible ground-level walking/working surface related to the proposed antennas that exceed the FCC's occupational or general public exposure limits at this site. Workers should be informed about the presence and locations of antennas and their associated fields. Recommended control measures are outlined in Section 5.0 and within a Site Safety Plan (attached); this plan includes procedures to shut down and lockout/tagout this wireless equipment in accordance with Verizon's standard operating protocol.

7.0 LIMITATIONS

This report was prepared for the use of Verizon Wireless. It was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same locale under like circumstances. The conclusions provided by EBI are based solely on the information provided by the client. The observations in this report are valid on the date of the investigation. Any additional information that becomes available concerning the site should be provided to EBI so that our conclusions may be revised and modified, if necessary. This report has been prepared in accordance with Standard Conditions for Engagement and authorized proposal, both of which are integral parts of this report. No other warranty, expressed or implied, is made.

Appendix A

Certifications

Reviewed and Approved by:

sealed 21jan2018

Michael McGuire
Electrical Engineer

Note that EBI's scope of work is limited to an evaluation of the Radio Frequency – Electromagnetic Energy (RF-EME) field generated by the antennas and broadcast equipment noted in this report. The engineering and design of the structure, as well as the impact of the antennas and broadcast equipment on the structural integrity of the structure, are specifically excluded from EBI's scope of work.

Preparer Certification

I, Christopher Ilgenfritz, state that:

- I am an employee of EnviroBusiness Inc. (d/b/a EBI Consulting), which provides RF-EME safety and compliance services to the wireless communications industry.
- I have successfully completed RF-EME safety training, and I am aware of the potential hazards from RF-EME and would be classified "occupational" under the FCC regulations.
- I am familiar with the FCC rules and regulations as well as OSHA regulations both in general and as they apply to RF-EME exposure.
- I have reviewed the data provided by the client and incorporated it into this Site Compliance Report such that the information contained in this report is true and accurate to the best of my knowledge.

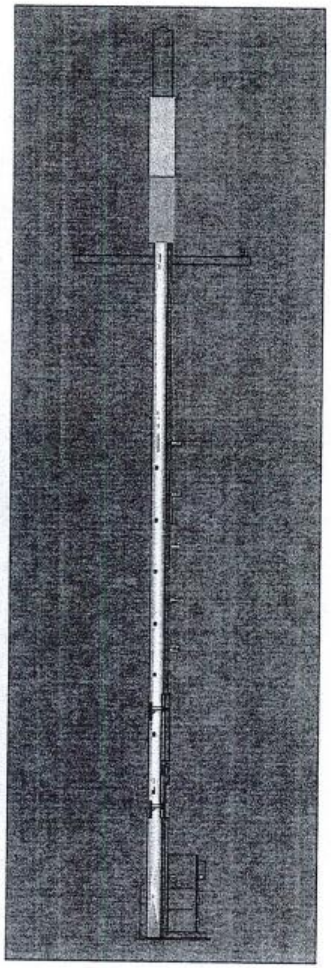
Appendix B

Radio Frequency Electromagnetic Energy

Safety / Signage Plans

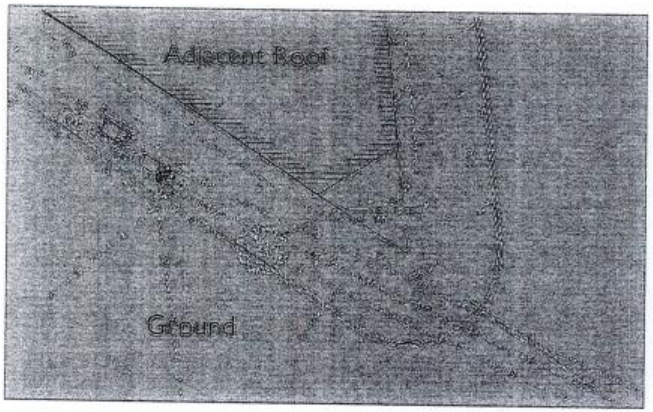
% FCC Public Exposure Limit	
	Exposure Level ≥ 5,000
	500 < Exposure Level ≤ 5,000
	100 < Exposure Level ≤ 500
	Exposure Level ≤ 100

Down Pole

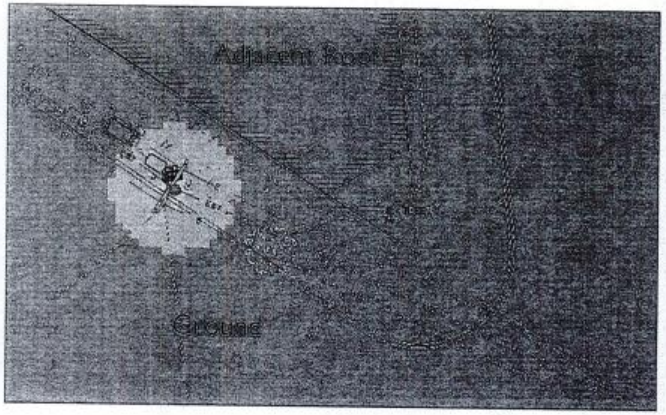


N

Ground Level



Antenna Face Level



Verizon Antennas

Roofview: Composite Exposure Levels

Facility Operator: Verizon Wireless

Site Name: Claremont Forest SC1

Verizon Site Number: 418004

Report Date: 01-19-18

EBI Consulting
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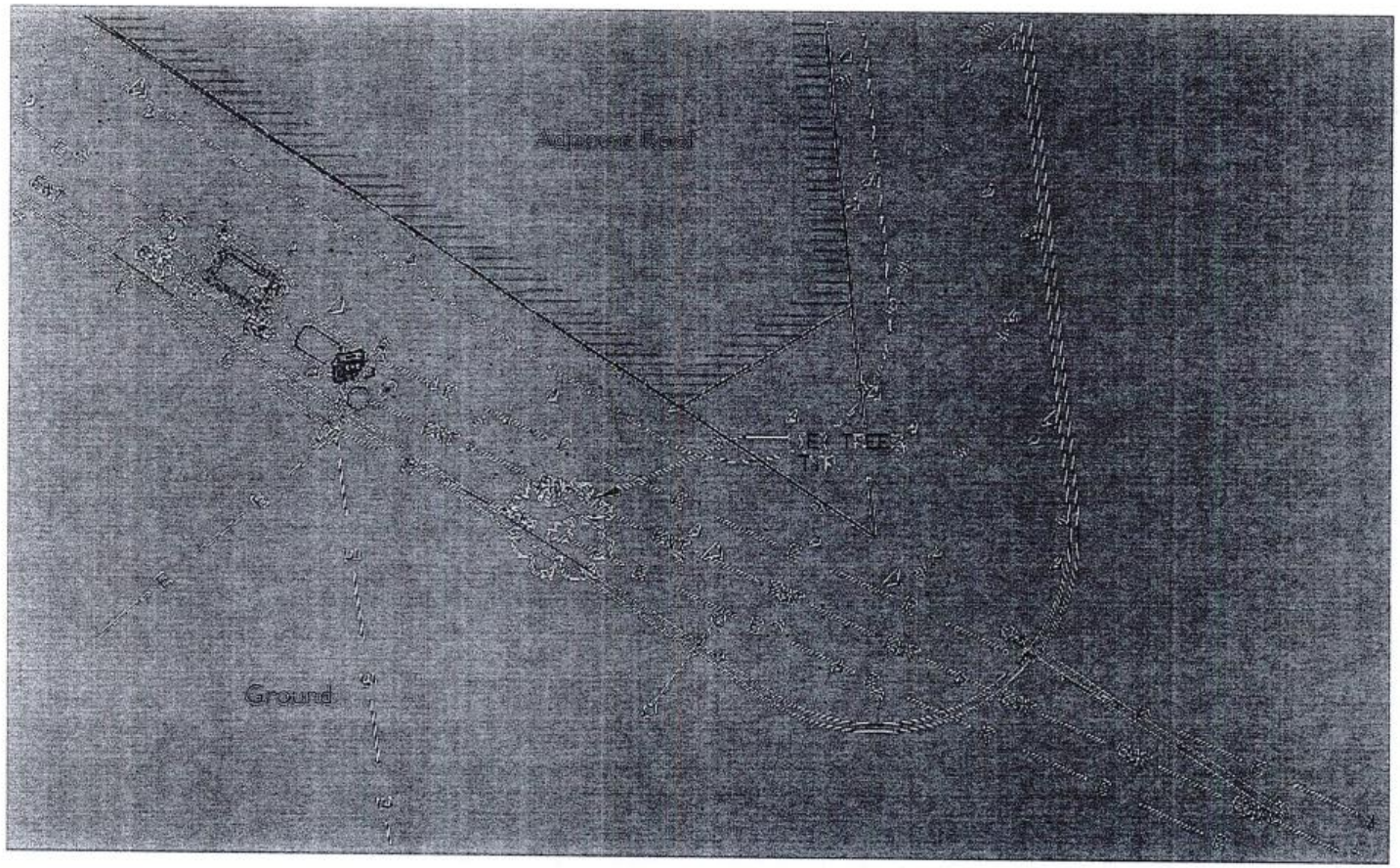
% FCC Public Exposure Limit

Exposure Level > 5

Exposure Level ≤ 5



Verizon Antennas

Roofview: Verizon Exposure Levels

Facility Operator: Verizon Wireless

Site Name: Claremont Forest SC1

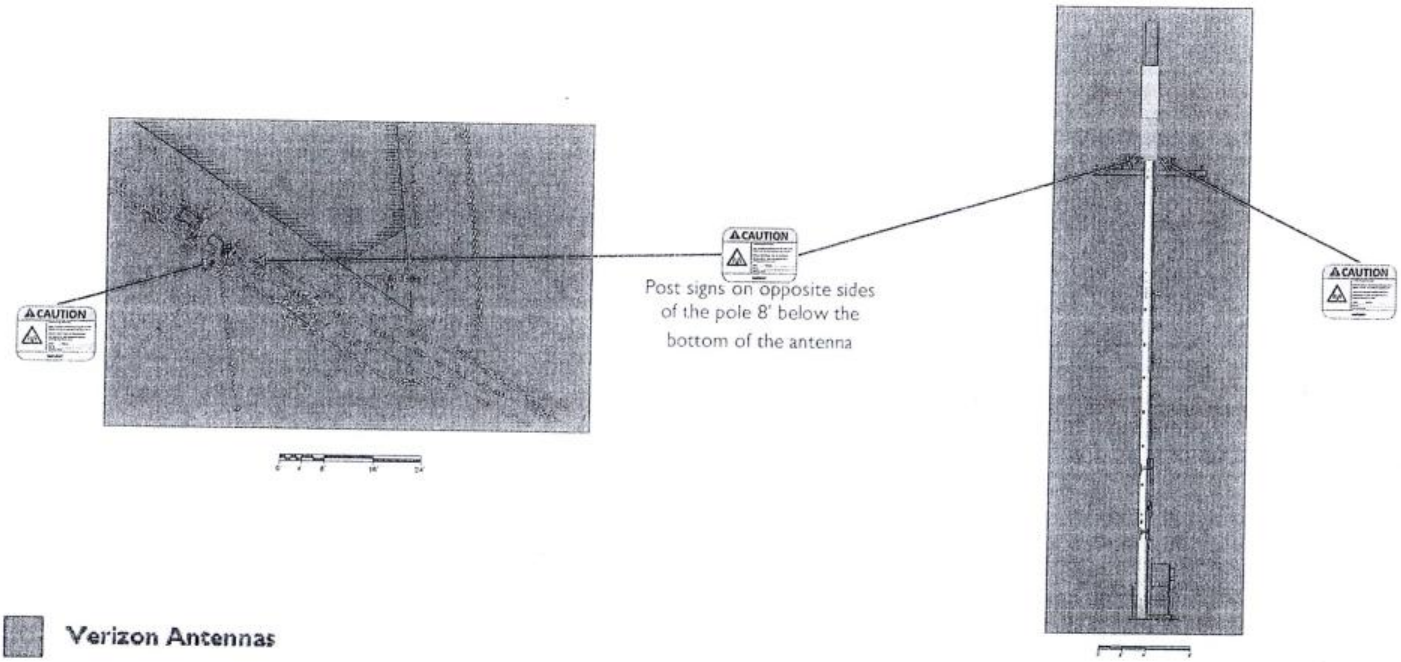
Verizon Site Number: 418004

Report Date: 01-19-18

EBI Consulting

environmental | engineering | due diligence

Verizon Signage Plan



Verizon Antennas

Sign Image	Description	Posting Instructions	Required Signage
	**Yellow Caution Sign** Used to alert individuals that they are entering an area where the power density emitted from transmitting antennas may exceed the FCC's maximum permissible exposure limit for the general public and the occupational exposure limit.	Securely post at every point of access to the site in a manner conspicuous to all individuals entering thereon as indicated in the signage plan.	Post signs on opposite sides of the pole 8' below the bottom of the antenna

Appendix C

Roofview® Export File

Attachment H