Oakland City Planning Commission

STAFF REPORT

Case File nos: PLN17465 / PLN17466

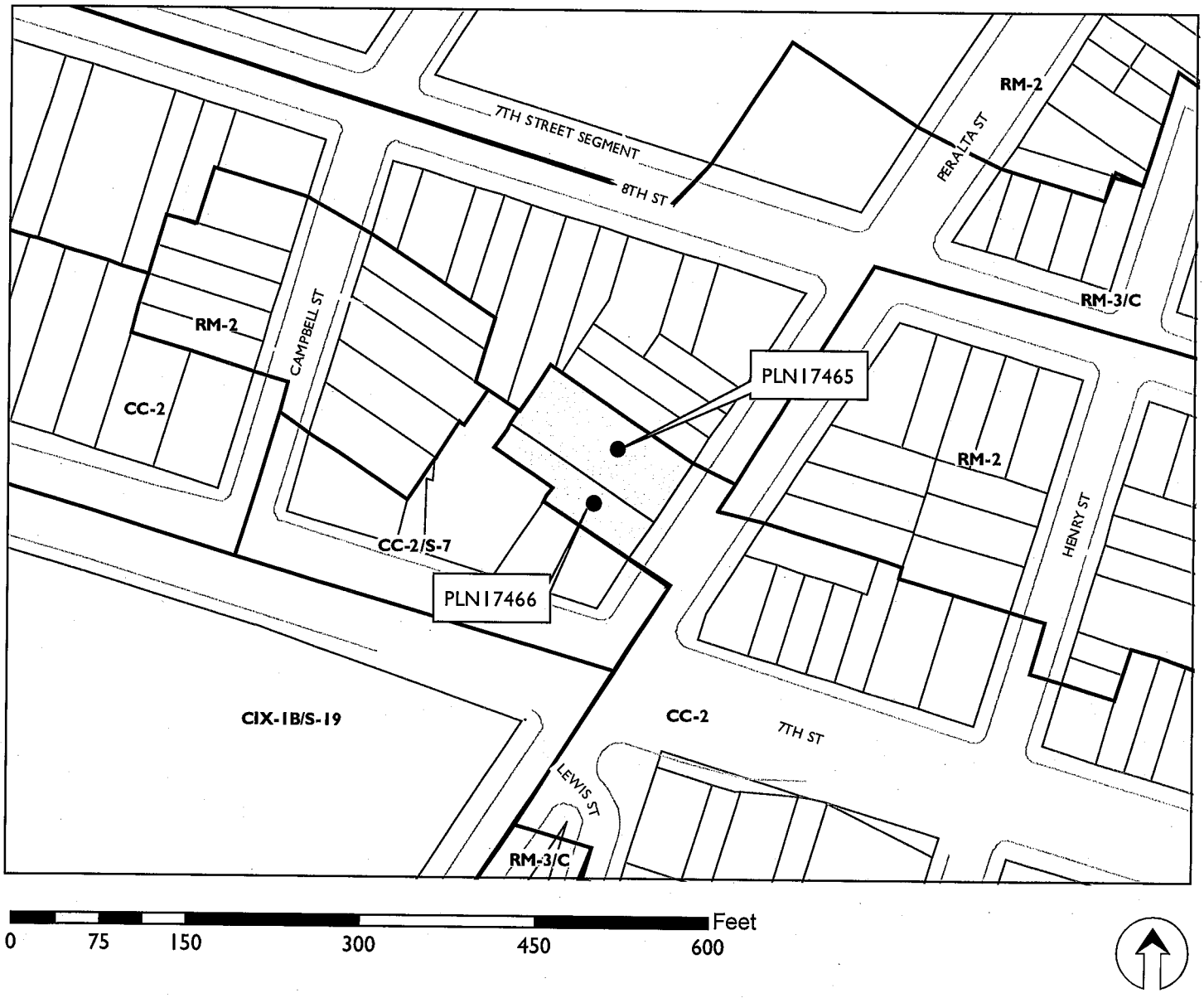
April 18, 2018

Locations:	Wireless telecommunications facility on building rooftop and ground level: **1) Case no. PLN17465; 715 Peralta St (APN: 006 003-016-00)** **2) Case no. PLN17466; 713 Peralta St (APN: 006 -0003-017-00)** Submitted: 11/13/17; Zoning: CC-2 Community Commercial Zone; General Plan: Community Commercial; Council District: 3 **(see map on reverse)**
Proposal:	To consider requests for two (2) applications to install 1 new Macro Telecommunications Facilities with antennas within enclosure on existing building rooftop (#715) and equipment ground mounted in enclosure on adjacent lot (#713).
Applicant / Phone Number:	Ben Merritt / (916) 747-0624
Owner:	Darke Mangal Trust
Planning Permits Required:	Major Conditional Use Permit & Regular Design Review with additional findings for Macro Telecommunications Facility near a 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:	Area of Secondary Importance: 7th Street Corridor #1) Survey rating: Eb2+
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 telecommunication facility under two (2) applications split between an existing rooftop and yard of adjacent property. The project involves installing a rooftop enclosure containing antennas (#715) and ground mounted equipment within an enclosure at the rear of the adjacent lot (#713), as described in the submitted plans, to enhance wireless services in those areas. Regular Design Review and a Major Conditional Use Permit decided by the Planning Commission, each with additional findings, are required for the installation of a new Macro Telecommunications Facility near a residential zone. The proposed projects, antenna and associated equipment, would be similar to other facilities around the City. The proposed telecommunication facilities are therefore sited at appropriate locations and would not significantly increase negative visual impacts to adjacent properties including some residences. The project meets all the required findings for approval of these two (2) applications.

CITY OF OAKLAND PLANNING COMMISSION



Case Files: PLN17465, PLN17466
Applicant: Ben Merritt
Addresses: 715 Peralta Street, 713 Peralta Street
Zone: CC-2

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 40-foot tall 4-story apartment building at 715 Peralta Street (case no. PLN17465), and, the adjacent lot used for the apartment's parking at 713 Peralta Street (case no. PLN17466). The building contains a 10-foot tall utility room at the center of the rooftop set back 40-feet from the façade at zero-lot-line. The lots measure 150-feet in depth.

PROJECT DESCRIPTION

The proposal is to install a 10-foot tall enclosure on top of the rooftop utility room (12' x 12') concealing approximately 9 antennas, and, an 8-foot tall equipment shelter at the rear of the adjacent lot (16' x 16'). The rooftop enclosure would be painted to match the color of the brick of the utility room.

GENERAL PLAN ANALYSIS

The sites are located in the Community Commercial area under the General Plan's Land Use and Transportation Element (LUTE). The intent of the area is: "to identify, create, maintain, and enhance areas suitable for a wide variety for commercial and institutional operations along the City's major corridors and in shopping districts or centers." The primary portion of the proposed telecommunication facility would be mounted on existing building rooftop. The proposed unmanned wireless telecommunication facility would not adversely affect the characteristics of the neighborhood.

ZONING ANALYSIS

The proposed telecommunication facilities are located within the CC-2 Community Commercial Zone in West Oakland. Macro Telecommunications Facilities require a Conditional Use Permit and a Regular Design Review with additional findings; these permits are decided by the Planning Commission for sites located adjacent to a residential zone.

New wireless telecommunications facilities may also be subject to a Site Alternatives Analysis, Site Design Alternatives Analysis, and a satisfactory radio-frequency (RF) emissions report. Staff analyzes the proposal in consideration of these requirements in the 'Key Issues and Impacts' section of this report. Given customers increasing reliance upon cellular service for phone and Wi-Fi, the proposal for a Macro Telecommunications Facility that would not be visible from a primary living space or historic structure conforms to this intent.

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 apartment building and parking lot; 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 primarily involves attachment to an existing building.

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 the antennas enclosure to match the color of the brick utility room.

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 met; the building and utility room are conforming for height, and the rooftop enclosure would measure 10-feet in height.

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

This standard is inapplicable because the proposals do 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 proposals; satisfactory emissions reports have been submitted and are 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.

Site alternatives analyses are required because the proposals conform to 'F'; the applicant has submitted an analysis which is attached to this report (Attachment E).

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 proposals most closely conform 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 satisfactory site design alternatives analyses (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 analyses prepared by Hammett & Edison, Inc. (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

Staff notes that the rooftop enclosure would not be visible from the public right-of-way fronting the building but would be from elsewhere. Staff also notes that the antennas would be shorter than the enclosure, although no additional empty space (width or depth) within the shelter is proposed. Staff questioned the applicant whether a smaller enclosure is possible. The applicant's engineers indicated this would not be feasible. The applicant did however modify the original design for consistency with the brick utility room on the rooftop which the new facility will attach to. Staff notes that the ground shelter would be barely visible off site and not eliminating usable open space or required parking.

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 window. 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 Major Conditional Use Permit and Regular Design Review application.

RECOMMENDATIONS:

1. Affirm staff's environmental determination.
2. Approve the Major Conditional Use Permit and Regular Design Review 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, Interim Deputy Director
Planning Bureau

ATTACHMENTS:

A. Findings

B. Conditions of Approval

C. Case nos. PLN17465 & PLN17466; 713-715 Peralta Street: Plans / Photo-Simulations / Site Analyses / RF Report / Proof of Posting

ATTACHMENT A: FINDINGS

This proposal meets the required findings under General Use Permit Criteria (OMC Sec. 17.134.050), Conditional Use Permit Criteria for Monopole Facilities (OMC Sec. 17.136.040 (A)), 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.

GENERAL USE PERMIT CRITERIA (OMC SEC. 17.134.050):

A. That the location, size, design, and operating characteristics of the proposed development will be compatible with and will not adversely affect the livability or appropriate development of abutting properties and the surrounding neighborhood, with consideration to be given to harmony in scale, bulk, coverage, and density; to the availability of civic facilities and utilities; to harmful effect, if any, upon desirable neighborhood character; to the generation of traffic and the capacity of surrounding streets; and to any other relevant impact of the development.

The proposal is to establish a Macro Telecommunications Facility in commercial zones by attaching to an apartment building rooftop and rear of adjacent open parking lot. The rooftop enclosure will be painted to match brick utility building color. Attachment to an existing structure with smallest possible components painted to match will be the least intrusive design. The project will enhance existing service for merchants, shoppers, residents, and visitors in the area.

B. That the location, design, and site planning of the proposed development will provide a convenient and functional living, working, shopping, or civic environment, and will be as attractive as the nature of the use and its location and setting warrant.

Attachment to an existing structure with smallest possible components painted to match will be the least intrusive design.

C. That the proposed development will enhance the successful operation of the surrounding area in its basic community functions, or will provide an essential service to the community or region.

The project will enhance existing service for merchants, shoppers, residents, and visitors in the area.

D. That the proposal conforms to all applicable design review criteria set forth in the design review procedure at Section 17.136.070.

The proposal conforms to Design Review findings which are included in that section of this attachment of Findings for Approval.

E. That the proposal conforms in all significant respects with the Oakland Comprehensive Plan and with any other applicable plan or development control map which has been adopted by the City Council.

The sites are located in the Community Commercial area under the General Plan's Land Use and Transportation Element (LUTE). The intent of the area is: "to identify, create, maintain, and enhance areas suitable for a wide variety for commercial and institutional operations along the City's major corridors and in shopping districts or centers." The primary portion of the proposed telecommunication facility would be mounted on existing building rooftop. The proposed unmanned wireless telecommunication facility would not adversely affect the characteristics of the neighborhood.

CONDITIONAL USE PERMIT CRITERIA FOR MACRO TELECOMMUNICATIONS FACILITIES (OMC SEC. 17.128.070(C))

1. The project must meet the special design review criteria listed in Subsection B. of this Section.

The proposal conforms to Design Review findings which are included in that section of this attachment of Findings for Approval.

2. The proposed project must not disrupt the overall community character.

Attachment to an existing structure with smallest possible components painted to match will be the least intrusive design. The project will enhance existing service for merchants, shoppers, residents, and visitors in the area.

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 rooftop enclosure to conceal antennas and a ground mounted equipment shelter set back from the public right-of-way with enclosure painted to match in appearance for camouflaging, will be the least intrusive design.

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

The proposals 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 proposals will enhance essential services in urbanized neighborhoods.

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

The proposals will not require excavation or removal of foliage.

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 sites are 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 proposal conforms to the General Plan as described in a previous section of this Attachment.

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 antennas will be concealed in an enclosure to be painted to match 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 antennas will not be mounted onto an architecturally significant.

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

The antennas will be concealed.

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 to match for camouflaging.

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

The equipment shelter will be set back over one hundred feet from the public right-of-way.

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 met; the 10-foot tall enclosure will be set back much further from the façade.

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 rooftop enclosure and ground shelter will be locked on private property.

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 July 6, 2017 and submitted November 13, 2017**, as amended by the following conditions of approval and mitigation measures, if applicable ("Conditions of Approval" or "Conditions").

Two (2) approvals to install new "small cell site" Macro Telecommunications Facility consisting of concealed antennas on rooftop at 715 Peralta Street (case no. PLN17465) and cabinets concealed in ground mounted shelter at 713 Peralta Street (case no. PLN17466)

2. Effective Date, Expiration, Extensions and Extinguishment

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

3. Compliance with Other Requirements

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

4. Minor and Major Changes

a. Minor changes to the approved project, plans, Conditions, facilities, or use may be approved administratively by the Director of City Planning.

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

5. Compliance with Conditions of Approval

a. The project applicant and property owner, including successors, (collectively referred to hereafter as the "project applicant" or "applicant") shall be responsible for compliance with all the Conditions of Approval and any recommendations contained in any submitted and approved

technical report at his/her sole cost and expense, subject to review and approval by the City of Oakland.

b. The City of Oakland reserves the right at any time during construction to require certification by a licensed professional at the project applicant's expense that the as-built project conforms to all applicable requirements, including but not limited to, approved maximum heights and minimum setbacks. Failure to construct the project in accordance with the Approval may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension, or other corrective action.

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

6. Signed Copy of the Approval/Conditions

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

7. Blight/Nuisances

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

8. Indemnification

a. To the maximum extent permitted by law, the project applicant shall defend (with counsel acceptable to the City), indemnify, and hold harmless the City of Oakland, the Oakland City Council, the Oakland Redevelopment Successor Agency, the Oakland City Planning Commission, and their respective agents, officers, employees, and volunteers (hereafter collectively called "City") from any liability, damages, claim, judgment, loss (direct or indirect), action, causes of action, or proceeding (including legal costs, attorneys' fees, expert witness or consultant fees, City Attorney or staff time, expenses or costs) (collectively called "Action") against the City to attack, set aside, void or annul this Approval or implementation of this Approval. The City may elect, in its sole discretion, to participate in the defense of said Action and the project applicant shall reimburse the City for its reasonable legal costs and attorneys' fees.

b. Within ten (10) calendar days of the filing of any Action as specified in subsection (a) above, the project applicant shall execute a Joint Defense Letter of Agreement with the City, acceptable to the Office of the City Attorney, which memorializes the above obligations. These obligations and the Joint Defense Letter of Agreement shall survive termination, extinguishment, or invalidation of the Approval. Failure to timely execute the Letter of Agreement does not relieve the project applicant of any of the obligations contained in this Condition or other requirements or Conditions of Approval that may be imposed by the City.

9. Severability

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

10. 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 and equipment shall be painted, texturized, and maintained the same color and finish of the City light 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. Graffiti Control

Requirement:

a. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation:

b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following:

i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system.

ii. 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

18. Camouflaging

Requirement:

The rooftop enclosure shall be painted to match the color of the brick utility room.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

ZD DRAWING SIGN-OFF

DATE: TIME: % CWC-PLEASE RETURN BY:

	SIGNATURE	DATE
SITE ACQUISITION:		
PLANNING:		
CONSTRUCTION:		
MANAGEMENT:		

verizon	SIGNATURE	DATE
CONSTRUCTION:		
REAL ESTATE:		
RF ENGINEER:		
EQUIPMENT ENGINEER:		
MW ENG./TRANSPORT:		

OTHER (IF APPLICABLE)

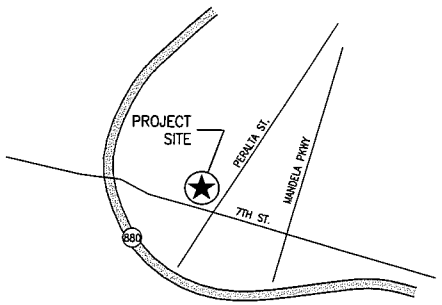
SIGNATURE	DATE

verizon

2785 Mitchell Drive, Walnut Creek, CA 94598

OAKLAND BEND

715 PERALTA STREET
OAKLAND, CA 94607
006-0003-016 AND 006-0003-017
LOCATION #: 425306



LOCATION PLAN

INDEX OF DRAWINGS

SHEET NUMBER	SHEET TITLE
T1.1	TITLE SHEET, LOCATION PLAN, PROJECT DATA
LS1	CIVIL SURVEY SHEET
LS2	CIVIL SURVEY SHEET
A1.1	SITE PLAN
A2.1	EQUIPMENT LAYOUT PLAN
A2.2	ANTENNA LAYOUT PLAN
A3.1	ELEVATIONS
NS1	NOISE STUDY
NS2	NOISE STUDY
NS3	NOISE STUDY

PROJECT DIRECTORY

APPLICANT:
VERIZON WIRELESS
2785 MITCHELL DRIVE
WALNUT CREEK, CA 94598

PROPERTY OWNER:
MANCAL R. DARKE
511 POTRERO AVE. #8
SAN FRANCISO, CA 94110

ARCHITECT:
MANUEL S. TSIMILAS
MST ARCHITECTS, INC.
1520 RIVER PARK DRIVE
SACRAMENTO, CA 95815
916-567-9630
manuel@mstarchitects.com

CONSTRUCTION MANAGER:
MARK CASEY
COMPLETE WIRELESS CONSULTING, INC.
2009 V STREET
SACRAMENTO, CA 95818
916-508-7945
mcasey@completewireless.net

SURVEYOR:
PHIL AUER SURVEYING
14407 CORTE LEJOS
BAKERSFIELD, CA 93314
661-587-6129
ls5075@earthlink.net

PROJECT SUMMARY

ASSESSOR'S PARCEL NUMBER:	006-0003-016 AND 006-0003-017
JURISDICTION:	CITY OF OAKLAND
OCCUPANCY:	S-2 (UNMANNED TELECOMMUNICATIONS FACILITY) U (TOWER)
TYPE OF CONSTRUCTION:	V-B
ZONING:	CC-2

)E COMPLIANCE

HALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE FOLLOWING CODES AS ADOPTED BY THE LOCAL OTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT THESE CODES:

STANDARDS CODE, TITLE 24, CALIFORNIA CODE OF UARY 1, 2017

- BUILDING STANDARDS ADMINISTRATIVE CODE
- BUILDING CODE
- RESIDENTIAL BUILDING CODE
- ELECTRICAL CODE
- MECHANICAL CODE
- PLUMBING CODE
- ENERGY CODE
- HISTORICAL BUILDING CODE
- FIRE CODE
- EXISTING BUILDING CODE
- GREEN BUILDING STANDARDS CODE
- REFERENCE STANDARDS CODE

INANCES

: THIS FACILITY IS UNMANNED AND NOT FOR HUMAN NOT REQUIRED IN ACCORDANCE WITH THE 2016 CBC EXCEPTION 7.

DIRECTIONS

FROM VERIZON OFFICE @ 2785 MITCHELL DRIVE, WALNUT CREEK, CA 94598:

HEAD NORTHEAST ON MITCHELL DR TOWARD OAK GROVE RD
TURN RIGHT ONTO OAK GROVE RD
TURN RIGHT ONTO YGNACIO VALLEY RD
YGNACIO VALLEY RD TURNS RIGHT AND BECOMES HILLSIDE AVE
TURN RIGHT ONTO THE 24 W RAMP TO OAKLAND
CONTINUE ONTO CA-24 W/HWY 24 W
KEEP LEFT AT THE FORK TO CONTINUE ON CA-24 W
CONTINUE ONTO I-980 W
USE THE RIGHT LANE TO TAKE EXIT 1C FOR 12TH ST
USE THE RIGHT LANE TO MERGE ONTO BRUSH ST
CONTINUE STRAIGHT TO STAY ON BRUSH ST
TURN RIGHT ONTO 7TH ST
TURN RIGHT ONTO PERALTA ST

PROJECT DESCRIPTION

PROPOSED VERIZON WIRELESS UNMANNED TELECOMMUNICATIONS FACILITY INCLUDING:

- A 16'-0"x16'-0" GROUND EQUIPMENT LEASE AREA.
- A 12'-0"X12'-0" ROOFTOP ANTENNA LEASE AREA.
- A COMPOSITE WOOD WALL @ GROUND EQUIPMENT LEASE AREA PERIMETER.
- OUTDOOR EQUIPMENT CABINETS.
- POWER & TELCO UTILITIES BROUGHT TO FACILITY.
- A STANDBY GENERATOR.
- A CABLE ICE BRIDGE.
- ANTENNAS W/ASSOCIATED TOWER MOUNTED EQUIPMENT MOUNTED WITHIN A PROPOSED ROOFTOP CUPOLA.

PROJECT MILESTONES

02/13/2017	90% ZONING DOCUMENTS
03/16/2017	90% ZONING DOCUMENTS REV1
03/17/2017	100% ZONING DOCUMENTS
04/04/2017	100% ZONING DOCUMENTS REV1
04/20/2017	100% ZONING DOCUMENTS REV2
05/01/2017	100% ZONING DOCUMENTS REV3
07/06/2017	100% ZONING DOCUMENTS REV4
XX/XX/XXXX	90% CONSTRUCTION DOCUMENTS
XX/XX/XXXX	100% CONSTRUCTION DOCUMENTS

MST ARCHITECTS
COMPLETE Wireless Consulting, Inc.

verizon
OAKLAND BEND
715 PERALTA STREET
OAKLAND, CA 94607
SHEET TITLE: TITLE SHEET, LOCATION PLAN, PROJECT DATA

Not valid unless signed in ink by licensee

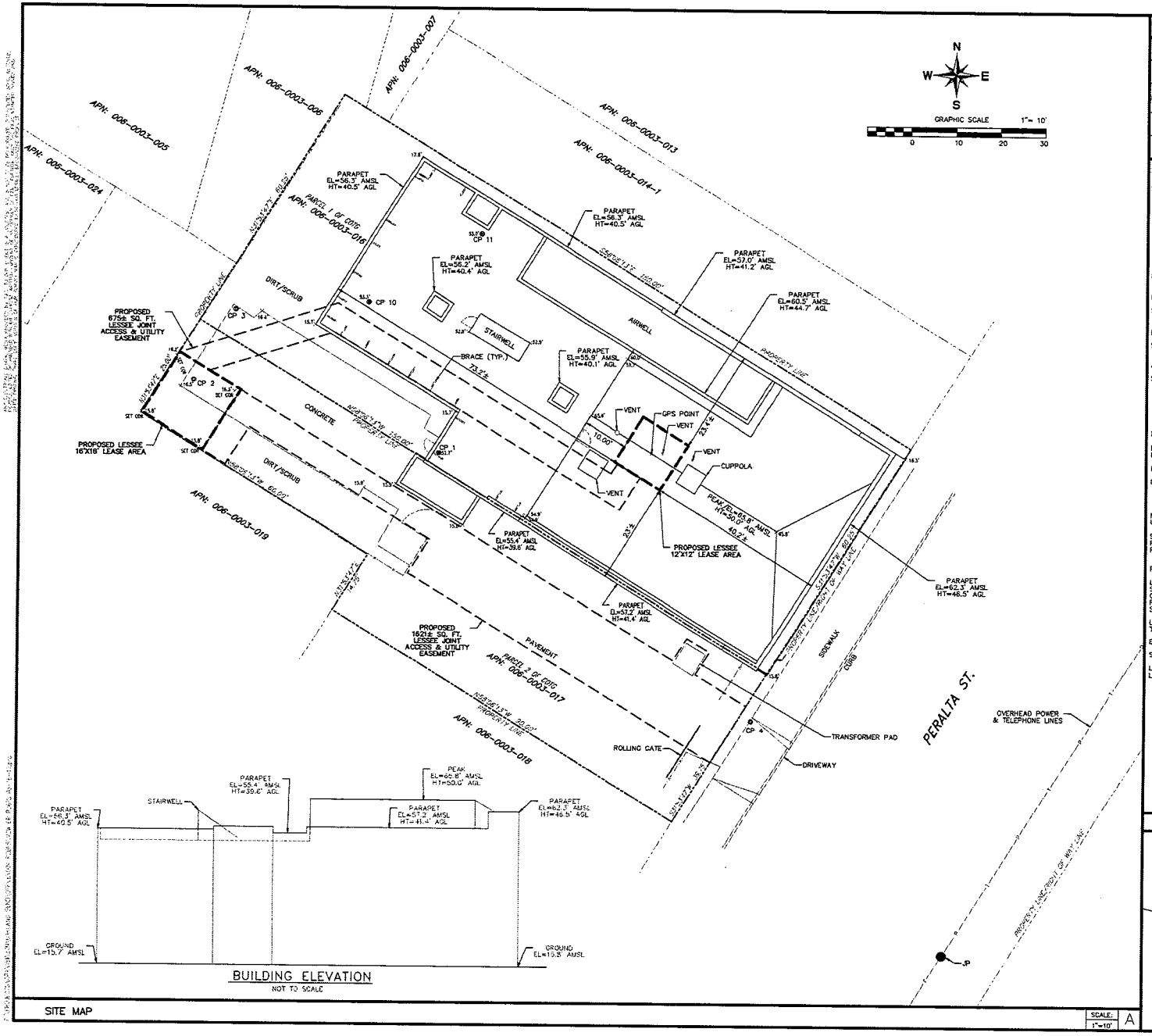
Revisions:
1 –
2 –
3 –
4 –
5 –

File: 162.1967_T1.dwg
Drawn By: JCC
Checked By: TST
Scale: AS NOTED
Date: 07/06/17

Job No. 162.1967

T1.1

Attachment C



BUILDING ELEVATION

NOT TO SCALE

SITE MAP

SCALE: 1"=10' A

LEGEND

MANHOLE		FIRE HYDRANT	
LIGHT POLE		MONUMENT	
TREE		HANDICAPPED PARKING	
JP	JOINT POLE	TP	TELEPHONE POLE
PP	POWER POLE	+EL=124.5'	SPOT ELEVATION

EDGE OF PAVEMENT
OVERHEAD ELECTRIC LINE
FENCE LINE
PROPERTY LINE
AMSL.....ABOVE MEAN SEA LEVEL
AGL.....ABOVE GROUND LEVEL
⊕ CP #.....FIELD CONTROL POINT

DATE OF FIELD VISIT: 01/31/17

SURVEYED BY/ OR UNDER THE DIRECTION OF: Oliver Philip Auer L.S. 5075

NOTES:

THIS IS NOT A BOUNDARY SURVEY. THIS IS A CELLULAR TELECOMMUNICATIONS TOPOGRAPHIC SURVEY MAP WITH EXISTING PARENT PARCEL LINES AND EASEMENTS BEING A GRAPHIC DEPICTION OF VARIOUS INFORMATION GATHERED FROM PRELIMINARY REPORTS, RECORD INFORMATION AND AVAILABLE MONUMENTS FOUND DURING THE FIELD SURVEY. UNLESS OTHERWISE NOTED, NO UNDERGROUND UTILITY LOCATING SERVICE COMPANY WAS CONTACTED PRIOR TO THIS MAP BEING PREPARED; THEREFORE, THERE MAY BE NON-VISIBLE OR OBSCURE UTILITIES EXISTING ON THE PROPERTY NOT SHOWN ON THIS MAP.

PARENT PARCEL DESCRIPTION:

SEE PRELIMINARY REPORT DESCRIPTION EXTRACT, LS2 SHEET.

LEASE AREA DESCRIPTION(S):

SEE LS2 SHEET.

JOINT ACCESS AND UTILITY EASEMENT DESCRIPTION(S):

SEE LS2 SHEET.

BASIS OF ELEVATIONS: NAVD 88.

BASIS OF BEARINGS: CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 3, NAD 83.

PROJECT BENCH: N/A

LANDLORD INFORMATION: MANGAL R. DRAKE
511 POTRERO AVE. #3
SAN FRANCISCO, CA 94110

NET AREA OF UNDERLYING PARCEL(S): 0.324± AC.

SITE LOCATED IN FLOOD ZONE X, AN AREA OF MINIMAL FLOOD HAZARD, PER FEMA FIRM COMMUNITY PANEL NUMBER 06001C0066G, EFFECTIVE DATE 08/03/09, PER FEMA INTERACTIVE WEBSITE.

FAA 1A CERTIFICATION:

LATITUDE AND LONGITUDE WAS OBTAINED FROM INFORMATION PROVIDED BY A GPS SURVEY. THE GEODETIC POSITION SHOWN WAS DETERMINED UTILIZING FAST-STATIC GPS OBSERVATIONS FROM NGS CORS STATION(S) USING TRIMBLE 4600LS RECEIVERS. THE DATA WAS DIFFERENTIALLY CORRECTED WITH TRIMBLE GPS SURVEY SOFTWARE.

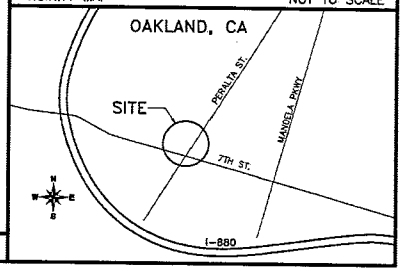
LATITUDE, LONGITUDE AND ELEVATIONS DENOTED ON THIS SURVEY MEET OR EXCEED THE FEDERAL AVIATION ADMINISTRATION 1-A STANDARD.

ELEVATION OF GROUND AT GPS POINT: 15.8' AMSL

STRUCTURE HEIGHT: TOP OF (E) PEAK/EL=65.8' AMSL/HT=50.0' AGL

LATITUDE: N37°48'23.75"
LONGITUDE: W122°17'53.38" (NAD 83)

VICINITY MAP NOT TO SCALE



Phil Auer Surveying
14497 Corte Lejos
Salinas, CA 93911
Phone: (831) 455-8189
Mobile: (510) 714-2224
E-mail: 1567@earthlink.net

verizon

OAKLAND BEND
715 PERALTA STREET
OAKLAND, CA 94607

SHEET TITLE: TOPOGRAPHIC SURVEY MAP

LICENSED LAND SURVEYOR PHILIP AUER NO. 5075 (Date 04/16/17) STATE OF CALIFORNIA

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Revisions:
1
2
3
4
5

Name: OAKLAND BEND
Drawn By: RD
Checked By: OPA
Scale: AS NOTED
Date: 05/16/17

Job No. N/A

LS1

CONDITION OF TITLE GUARANTEE DESCRIPTION EXTRACT

Real property in the City of Oakland, County of Alameda, State of California, described as follows:

PARCEL ONE:

COMMENCING AT A POINT OF THE NORTHWESTERN LINE OF PERALTA STREET, DISTANT THEREON 174.87 FEET SOUTHWESTERLY FROM THE POINT OF INTERSECTION THEREOF, WITH THE SOUTHERN LINE OF 6TH STREET; RUNNING THENCE SOUTHWESTERLY ALONG SAID LINE OF PERALTA STREET, 60 FEET, 3 INCHES; THENCE NORTHWESTERLY AT RIGHT ANGLES TO SAID LINE OF PERALTA STREET, 150 FEET; THENCE NORTHEASTERLY AT RIGHT ANGLES 60 FEET, 3 INCHES; AND THENCE SOUTHEASTERLY AT RIGHT ANGLES 150 FEET TO THE POINT TO COMMENCEMENT.

BEING LOTS 11, 12 AND A PORRON OF LOT 13, AS SAID LOTS ARE SHOWN ON THE MAP OF THE BARRY TRACT, OAKLAND, ETC., FILED FEBRUARY 6, 1875, IN BOOK 7 OF MAPS, PAGE 29, ALAMEDA COUNTY RECORDS.

PARCEL TWO:

BEGINNING AT THE INTERSECTION OF THE SOUTHWESTERN LINE OF LOT 14, WITH THE NORTHWESTERN LINE OF PERALTA STREET, AS SAID LOT AND STREET ARE SHOWN ON THE MAP OF THE BARRY TRACT, OAKLAND, AS SUBDIVIDED FILED FEBRUARY 6, 1875, IN BOOK 7 OF MAPS, PAGE 29, ALAMEDA COUNTY RECORDS; AND RUNNING THENCE NORTHERLY ALONG SAID LINE OF PERALTA STREET, 39 FEET, 9 INCHES; THENCE AT RIGHT ANGLES WESTERLY 150 FEET; THENCE AT RIGHT ANGLES SOUTHERLY 29 FEET; THENCE AT RIGHT ANGLES EASTERLY 60 FEET ; THENCE AT RIGHT ANGLES SOUTHERLY 14 FEET 9 INCHES THENCE AT RIGHT ANGLES EASTERLY 90 FEET, TO THE POINT OF BEGINNING.

APN: 006-0003-015 and 006-0003-017

Phil Auer Surveying
13407 Corte Tejas
Bakersfield, CA 93314
Phone: (661) 589-6688
Mobile: (559) 714-7224
E-mail: ls6075@earthlink.net

verizon

OAKLAND BEND
715 PERALTA STREET
OAKLAND, CA 94607

SHEET TITLE: TOPOGRAPHIC SURVEY MAP

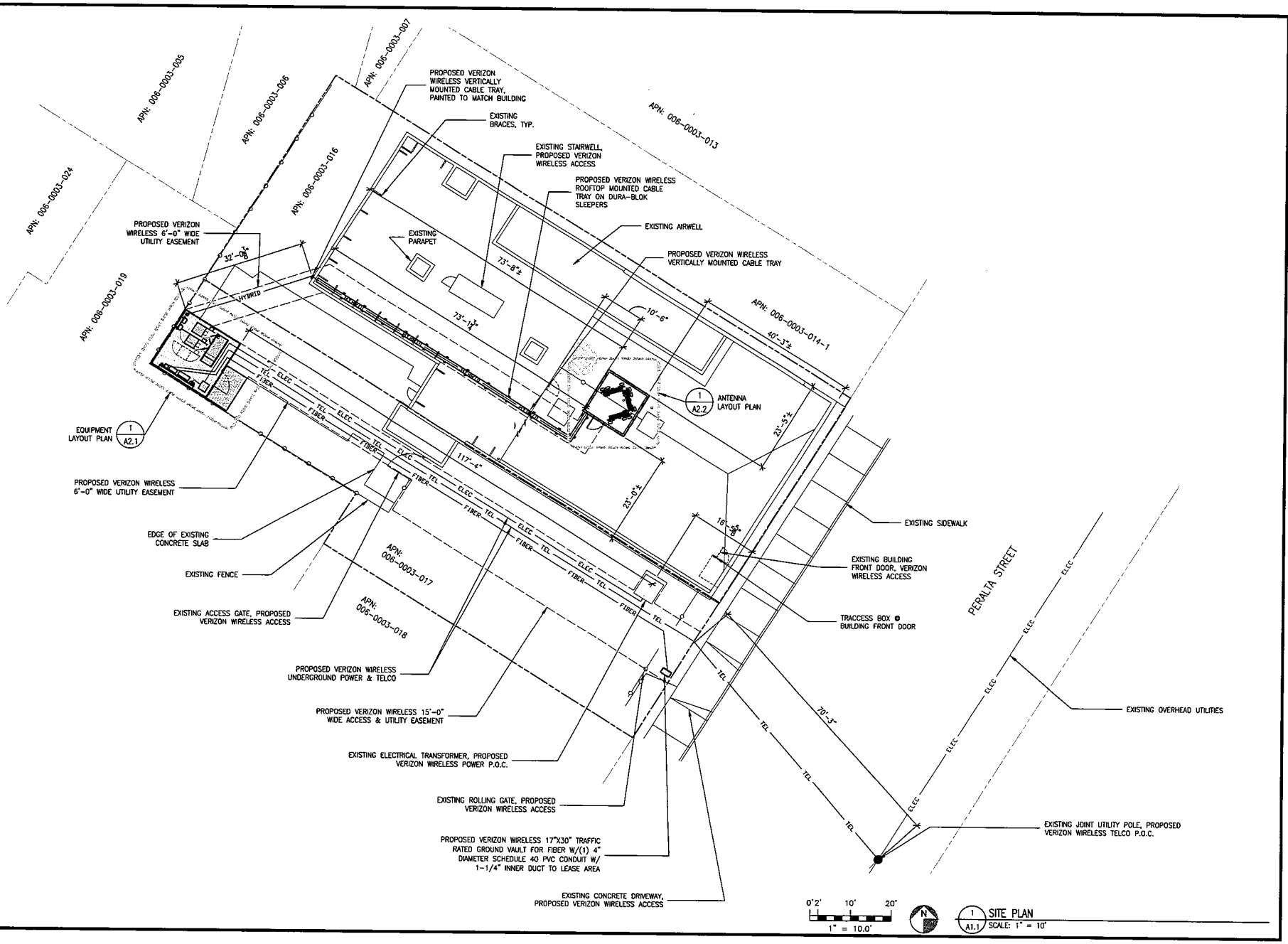
LICENSED LAND SURVEYOR PHILIP AUER NO. 6075 (ON INACTIVE) STATE OF CALIFORNIA

Revisions:
1
2
3
4
5

Name: OAKLAND BEND
Drawn By: PAU
Checked By: GPA
Scale: AS NOTED
Date: 03/16/11

Job No. N/A

LS2



MST ARCHITECTS
COMPLETE Wireless Consulting, Inc.

verizon

OAKLAND BEND
715 PERALTA STREET
OAKLAND, CA 94607

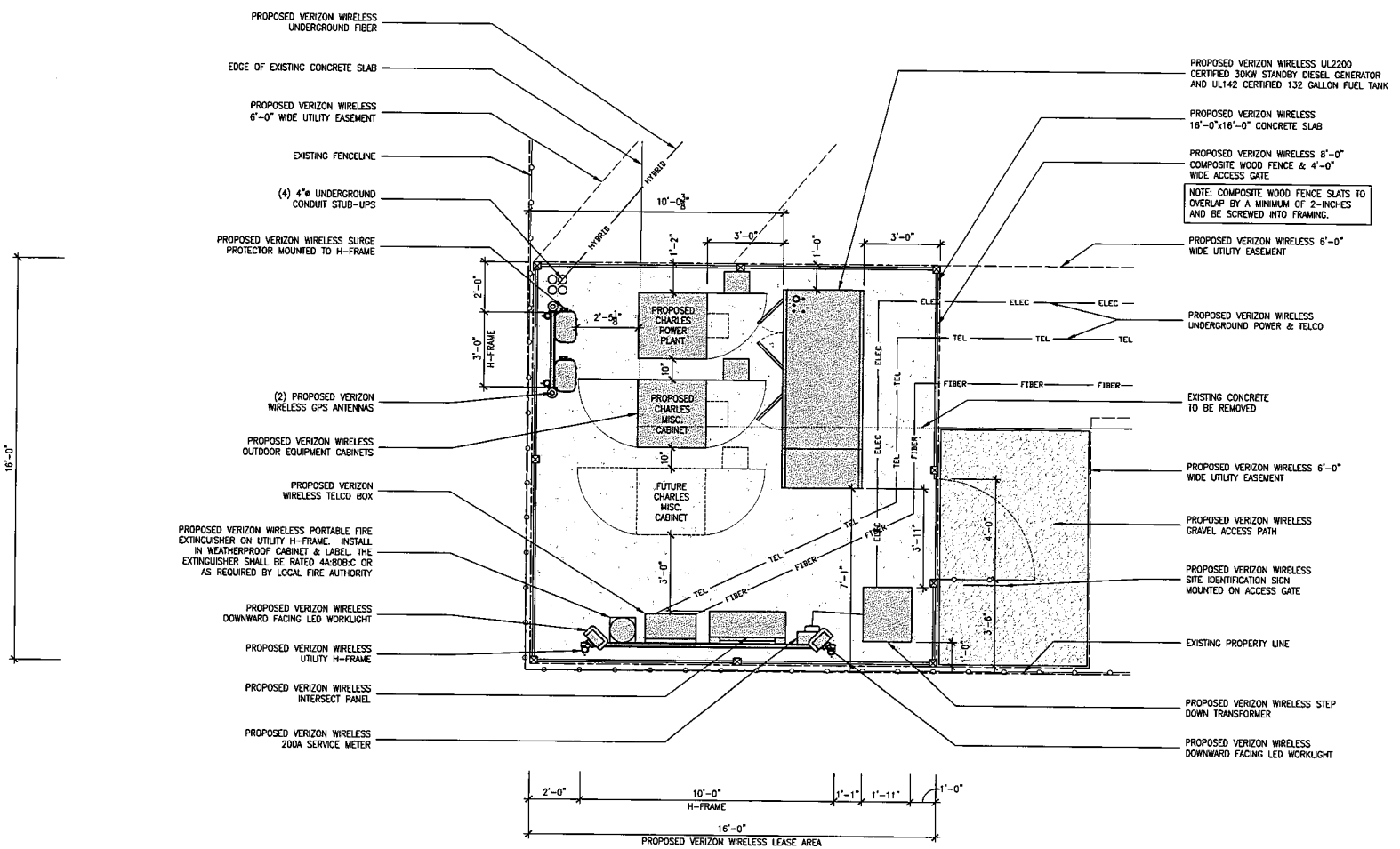
SHEET TITLE: SITE PLAN

Revisions:

File: 162.1987_LAYOUTS.dwg
Drawn By: JCE
Checked By: TST
Scale: AS NOTED
Date: 07/06/17

Job No. 162.1987

A1.1



0' 1' 5' 10'

1/2" = 1'-0"

1 / A2.1 EQUIPMENT LAYOUT PLAN
SCALE: 1/2" = 1'-0"

MST ARCHITECTS
2539 River Park Drive, Sacramento, CA 95833
916.567.9830
mst@MSTarchitects.com
COMPLETE Wireless Consulting, Inc.

verizon

OAKLAND BEND
715 PERALTA STREET
OAKLAND, CA 94607

SHEET TITLE: EQUIPMENT LAYOUT PLAN

Revisions:
1 --
2 --
3 --
4 --
5 --

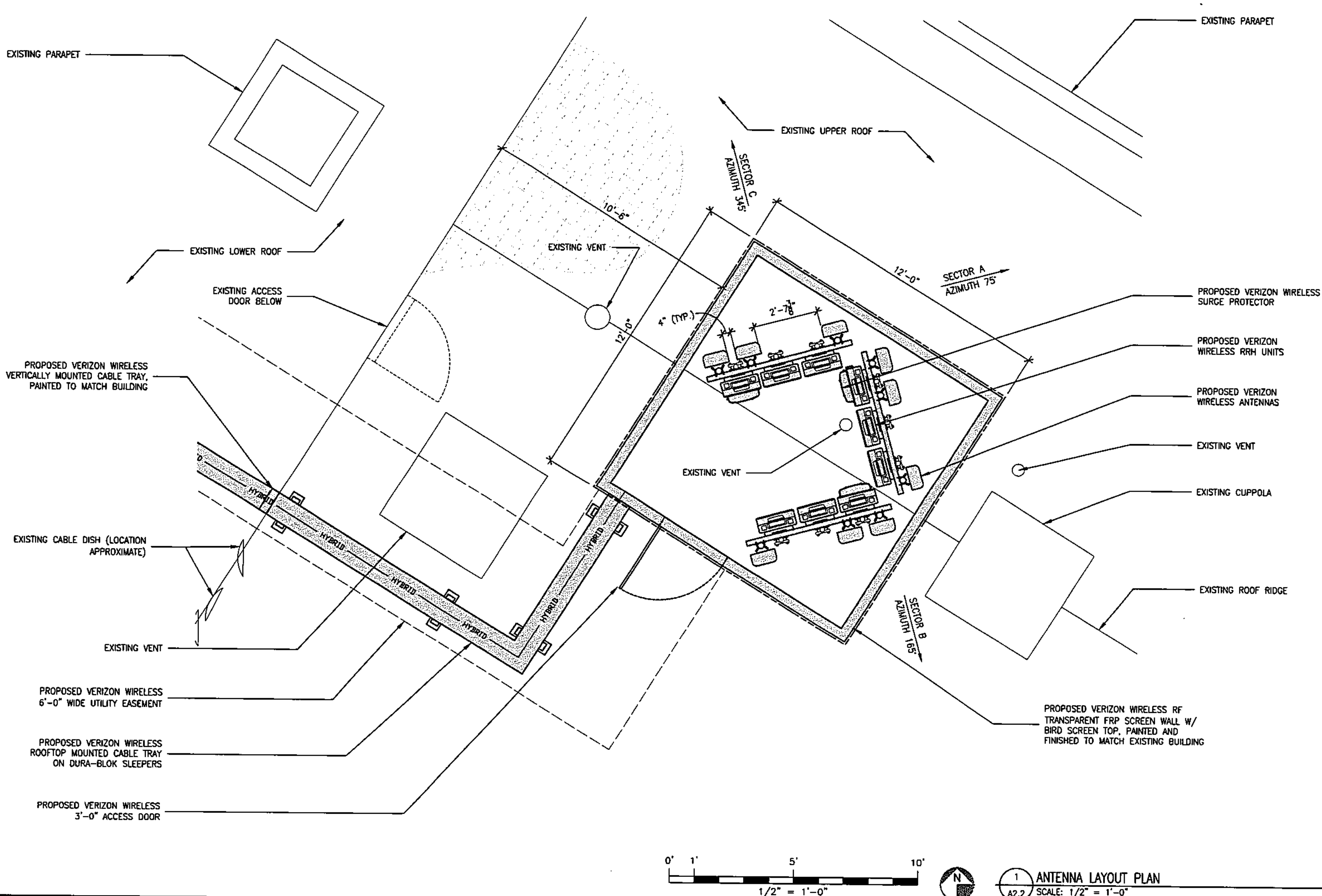
File: 162.1987_LAYOUTS.dwg
Drawn By: JCE
Checked By: TST
Scale: AS NOTED
Date: 07/06/17

Job No. 162.1987

A2.1

TOWER MOUNTED EQUIPMENT SCHEDULE

EQUIPMENT	DESCRIPTION	QUANTITY			TOTAL
		SECTOR A	SECTOR B	SECTOR C	
ANTENNA	TO BE DETERMINED	3	3	3	9
RRH	RRUS12 W/A2 OR EQUIVALENT	5	5	5	15
SURGE PROTECTOR/HYBRID	RAYCAP DC3315 / HYBRID TRUNK CABLE	3/3			3/3



1 / A2.2 ANTENNA LAYOUT PLAN
SCALE: 1/2" = 1'-0"

MST ARCHITECTS
3330 River Park Drive, Sacramento, CA 95815
916-567-9630
www.MSTArchitects.com

COMPLETE Wireless Consulting, Inc.

verizon

OAKLAND BEND
715 PERALTA STREET
OAKLAND, CA 94607

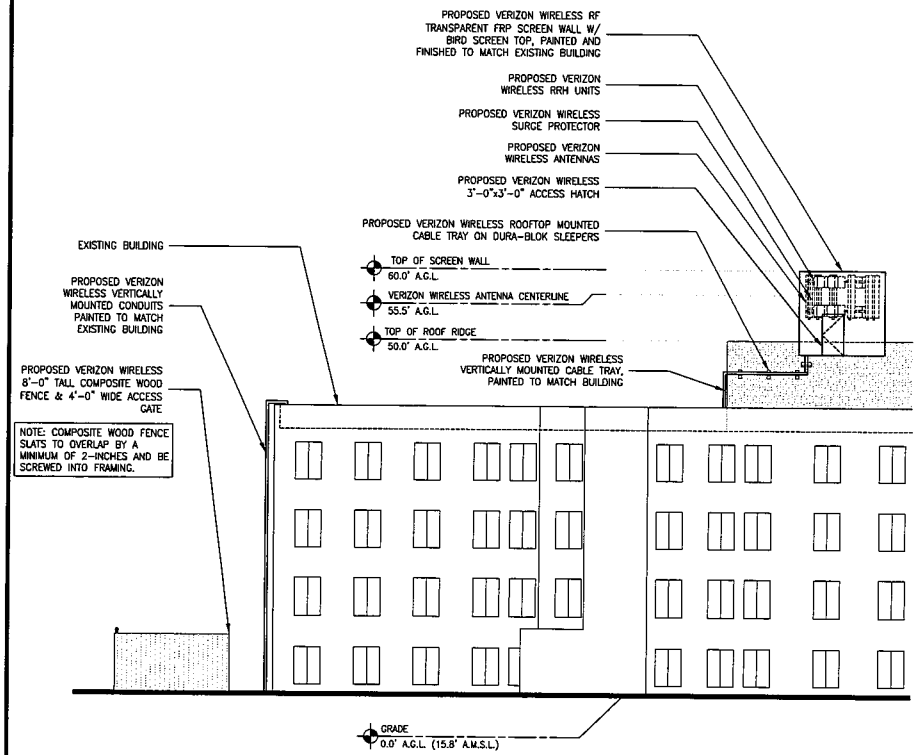
SHEET TITLE:
ANTENNA LAYOUT PLAN

Revisions:

File: 162.1987_LAYOUTS.dwg
Drawn By: JCE
Checked By: TST
Scale: AS NOTED
Date: 07/06/17

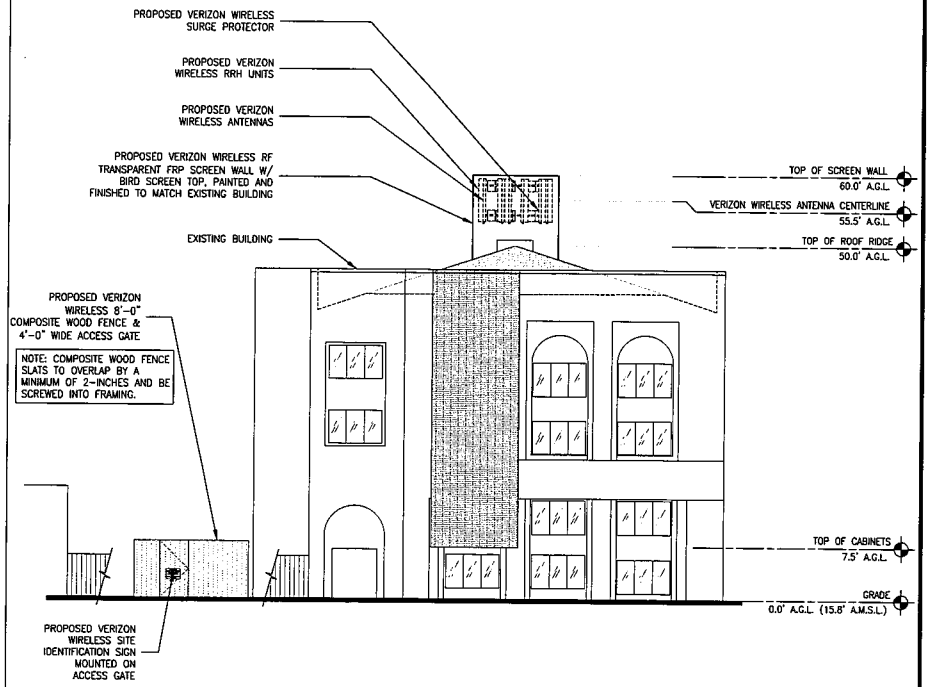
Job No. 162.1987

A2.2



0' 2' 10' 20'
1/8" = 1'-0"

2 A3.1 SOUTHWEST ELEVATION
SCALE: 1/8" = 1'-0"



0' 2' 10' 20'
1/8" = 1'-0"

1 A3.1 SOUTHEAST ELEVATION
SCALE: 1/8" = 1'-0"

MST ARCHITECTS,
415.510.9410
www.MSTArchitects.com
COMPLETE Wireless Consulting, Inc.

verizon

OAKLAND BEND
715 PERALTA STREET
OAKLAND, CA 94607

SHEET TITLE: ELEVATIONS

Revisions:
1 --
2 --
3 --
4 --
5 --

File: 162.1987_LAYOUTS.dwg
Drawn By: JCE
Checked By: TST
Scale: AS NOTED
Date: 07/06/17

Job No. 162.1987

A3.1

NOISE STUDY

Environmental Noise Analysis

Oakland Bend Cellular Facility

City of Oakland, California

BAC Job # 2017-062

Prepared For:

Complete Wireless Consulting

Attn: Johnathon Helfin
2009 V Street
Sacramento, CA 95818

Prepared By:

Bollard Acoustical Consultants, Inc.

Paul Bollard, President

April 28, 2017

BOLLARD
Acoustical Consultants

3551 Bankhead Road • Loomis, CA 95650 • Phone: (916) 663-0500 • Fax: (916) 663-0501 • BACNOISE.COM

Introduction

The Oakland Bend Verizon Wireless Unmanned Telecommunications Facility Project (project) proposes the installation of a wireless facility that would include rooftop mounted antennas, and a separate ground level lease area containing outdoor equipment cabinets and an emergency diesel standby generator. The project site is located at 715 Peralta Street in Oakland, California. The outdoor equipment cabinets and emergency diesel standby generator have been identified as primary noise sources associated with the project. Please see Figure 1 for the project site plan. The studied site design is dated April 4, 2017.

Bollard Acoustical Consultants, Inc. has been contracted by Complete Wireless Consulting, Inc. to complete an environmental noise assessment regarding the proposed project cellular equipment operations. Specifically, the following addresses daily noise production and exposure associated with operation of the project emergency generator and outdoor equipment cabinets.

Please refer to Appendix A for definitions of acoustical terminology used in this report. Appendix B illustrates common noise levels associated with various sources.

Criteria for Acceptable Noise Exposure

City of Oakland Municipal Code

Chapter 17.120.050 of the City of Oakland Municipal Code provides the performance standards applicable to this project as shown below in Table 1 (Table 17.120.01 and 17.120.02 of Municipal Code). The project parcel is zoned Community Commercial (CC-2), and adjacent parcels are zoned Community Commercial (CC-2) and Mixed Housing Type Residential (RM-2). The City of Oakland requires that the noise level standards set forth in Table 1 be applied at the property line of the receiving land uses.

Table 1
Maximum Allowable Receiving Noise Level Standards (Residential & Commercial Uses)
City of Oakland Municipal Code

Cumulative Number of Minutes in One Hour Time Period	Statistical Descriptor	Noise Level, dB: Residential, Daytime 7 a.m. to 10 p.m.	Noise Level, dB: Residential, Nighttime 10 p.m. to 7 a.m.	Noise Level, dB: Commercial, Anytime
20	L_{33}	60	45	65
10	$L_{16.7}$	65	50	70
5	$L_{8.3}$	70	55	75
1	$L_{1.7}$	75	60	80
0	L_{max}	80	65	85

Source: City of Oakland Municipal Code, Chapter 17.120.050, Table 17.120.01 and 17.120.02

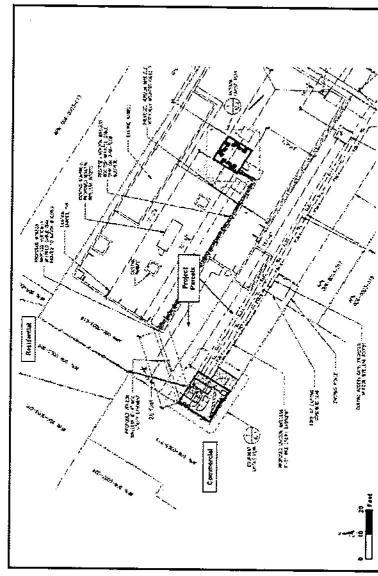


Figure 1
Project Site Plan
Oakland Bend Cellular Facility
Oakland, California

Project Noise Generation

As discussed previously, there are two project noise sources which are considered in this evaluation; the equipment cabinet cooling systems and the emergency generator. The evaluation of potential noise impacts associated with the operation of each noise source is evaluated separately as follows:

Equipment Cabinet Noise Sources and Reference Noise Levels

The project proposes the installation of two equipment cabinets within the lease area illustrated on Figure 1. Specifically, the cabinets assumed for the project are as follows: one Charles Industries 48V Power Plant and one miscellaneous cabinet cooled by a McLean Model T-20 air conditioner. The cabinets and their respective reference noise levels are provided in Table 2. The manufacturer's noise level data specification sheets for the proposed equipment cabinets are provided as Appendix C.

Table 2
Reference Noise Level Data of Proposed Equipment Cabinets

Equipment	Number of Cabinets	Reference Noise Level, dB	Reference Distance, feet
Charles Industries 48V Power Plant	1	60	5
McLean T-20	1	68	5

Notes: Manufacturer specification sheets provided as Appendix C.

Generator Noise Sources and Reference Noise Levels

A Generac Industrial Power Systems Model SD030 is proposed for use at this facility to maintain cellular service during emergency power outages. The site plans indicate that the generator, located within the same lease area as the equipment cabinets, will be equipped with the Level 2 Acoustic Enclosure resulting in a reference noise level of 68 dB at 23 feet. The manufacturer's noise level data specification sheet for the proposed generator is provided as Appendix D.

The generator which is proposed at this site would only operate during emergencies (power outages) and brief daytime periods for periodic maintenance/lubrication. According to the project applicant, testing of the generator would occur twice per month, during daytime hours, for a duration of approximately 15 minutes. The emergency generator would only operate at night during power outages.

Predicted Facility Noise Levels at Nearest Property Lines

As previously mentioned, the adjacent parcels are zoned commercial and residential. As a result, the City's Municipal Code noise standards for commercial and residential land uses identified in Table 1 were applied at the property lines of these parcels. As indicated in Figure 1, the proposed project equipment lease area maintains a distance of 26 feet from the nearest

residential property line to the north (APN: 006-0003-006), and borders the adjacent commercial property line to the west (APN: 006-0003-019). However, the distances from the project equipment to the nearest property lines vary from the distances to the overall lease area. The distances from the project equipment to the various property lines were scaled from the provided project site plans and are provided below in Table 3. Assuming standard spherical spreading loss (-6 dB per doubling of distance), project-equipment noise exposure at the nearest property lines was calculated and the results of those calculations are presented in Table 3.

The results presented in Table 3 take into consideration the orientation of the proposed outdoor equipment cabinet cooling fans relative to the nearest property lines. Based on the provided site plans, the cooling fans of the equipment cabinets are proposed to face southeast, away from the property line to the west (APN: 006-0003-019), and side-faced relative to the property line to the north (APN: 006-0003-006). Reference noise level measurements conducted by BAC staff at a similarly configured facility in Livermore, California (5179 Preston Avenue) indicate that the proposed equipment cabinet cooling fans are approximately 8 dB quieter when measured from the opposite side (rear) of the cooling fans, and 3 dB quieter when measured from a 90 degree off-axes point (side). As a result, predicted equipment cabinet noise levels were adjusted by -8 dB at the property line to the west and -3 dB at the property line north.

Table 3
Summary of Project-Related Noise Exposure at Nearest Property Lines
Oakland Bend Verizon Wireless Telecommunications Facility Project

APN[1]	Zoning	Distance from Cellular Equipment (feet)[2]: Outdoor Cabinets	Distance from Cellular Equipment (feet)[2]: Generator	Predicted Noise Levels, (dBA)[3]: Outdoor Cabinets, L_{33}	Predicted Noise Levels, (dBA)[3]: Generator, L_{33}
006-0003-019	Commercial	6	12	57	74
006-0003-006	Residential	30	31	48	65

Notes:
1 Property line locations and distances are shown on Figure 1.
2 Distances were scaled from the proposed equipment to the nearest property lines.
3 Predicted equipment noise levels take into consideration the orientation of the proposed outdoor equipment cabinet cooling fans, which resulted in a -8 dB noise level reduction at the western property line (APN: 006-0003-019), and -3 dB at the northern property line (APN: 006-0003-006).

Assessment Relative to City of Oakland Municipal Code (Residential)

The two equipment cabinets were conservatively assumed to be in operation concurrently for the duration of an hour during nighttime hours. According to the City of Oakland Municipal Code, the corresponding residential property line noise level standard given an hour of *nighttime* operation would be 45 dB L_{33} (Table 1). As shown in Table 3, the predicted equipment cabinet noise level of 48 dB L_{33} at the nearest residential property line would exceed the City of

Oakland 45 dB L_{33} nighttime noise level standard. As a result, additional consideration of noise mitigation measures would be warranted for this aspect of the project relative to the City's residential noise standard. Mitigation measures are discussed later in the report.

Project representatives have indicated that the proposed generator would be in operation for routine testing and maintenance twice a month during *daytime* hours for no more than 15 minutes. The corresponding residential noise level standard given less than 15 minutes of operation during *daytime* hours would be 60 dB L_{33}. As shown in Table 3, the predicted generator noise level of 65 dB L_{33} at the nearest residential property line would exceed the City of Oakland 60 dB L_{33} daytime noise level standard. As a result, additional consideration of noise mitigation measures would be warranted for this aspect of the project relative to the City's residential noise standard. Mitigation measures are discussed later in the report.

Assessment Relative to City of Oakland Municipal Code (Commercial):

As previously mentioned, the two equipment cabinets were conservatively assumed to be in operation concurrently for the duration of an hour during nighttime hours. According to Table 1, the corresponding commercial noise level standard given less than 15 minutes of operation (anytime) would be 65 dB L_{33}. As indicated in Table 3, the predicted equipment cabinet noise level of 57 dB L_{33} at the nearest commercial property line would satisfy the City of Oakland 65 dB L_{33} noise level standard. As a result, no further consideration of noise mitigation measures would be warranted for the project relative to the City's commercial noise level standard.

As previously mentioned, project representatives have indicated that the proposed generator would be in operation for routine testing and maintenance twice a month during *daytime* hours for no more than 15 minutes. The corresponding commercial noise level standard given less than 15 minutes of operation (anytime) would be 65 dB L_{33}. As shown in Table 3, the predicted generator noise level of 74 dB L_{33} at the nearest commercial property line would exceed the City of Oakland 65 dB L_{33} noise level standard. As a result, additional consideration of noise mitigation measures would be warranted for this aspect of the project relative to the City's commercial noise level standard. Mitigation measures are discussed in the following section.

Mitigation Measures

Outdoor equipment cabinet noise exposure is predicted to satisfy the applicable City of Oakland noise level criteria at the nearest commercial property line, but exceed the City's noise level criteria at the nearest residential property line by 3 dB. In addition, emergency generator noise exposure is predicted to exceed the City's noise level criteria at the nearest residential and commercial property lines by 8 and 9 dB, respectively.

To mitigate these identified exceedances to a state of compliance with the applicable City of Oakland noise level criteria, the effectiveness of constructing a noise barrier along the equipment lease area boundary was evaluated. A barrier insertion loss calculation worksheet is provided in Appendix E. Because the adjacent commercial property line to the west is located on or close to the proposed facility lease area boundary, predicted equipment noise levels at the commercial property line were assessed from the center of the proposed equipment to a point 5 feet into the property in order to determine the effectiveness of a noise barrier. The evaluation

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SHEET TITLE:
NOISE STUDY

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Job No. 162.1987

NS1

NOISE STUDY

concluded that replacing the proposed 6-foot tall chain link fence along the equipment lease area with an 8-foot tall composite wood fence would result in an equipment cabinet noise level of 36 dB L_{eq} and at the nearest residential property line, and generator noise levels of 55 and 64 dB L_{eq} at the nearest residential and commercial property lines, respectively. Figure 2 shows the location of the recommended noise barrier. The composite wood fence would provide the necessary project equipment noise attenuation provided the slats overlap by a minimum of 2 inches and are screwed into the framing. The purpose of overlapping slats and using screws rather than nails is to ensure that prolonged exposure to the elements does not result in visible gaps through the slats which would result in reduced noise barrier effectiveness. The construction of an 8-foot tall noise barrier at the location identified on Figure 2 would satisfy the applicable City of Oakland residential and commercial noise level standards.

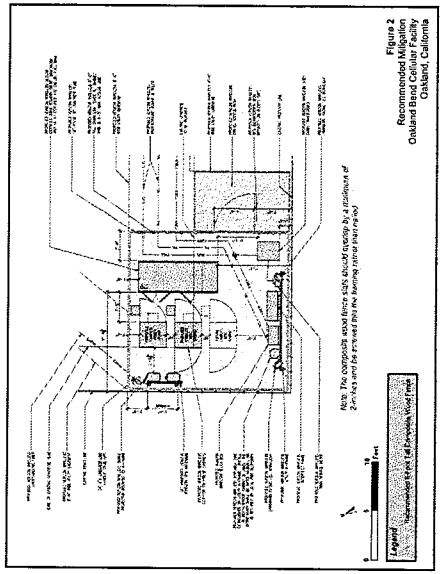

Figure 2
Recommended Mitigation
Oakland Bend Cellular Facility
Oakland, California

Conclusions

Project-related equipment noise exposure is expected to satisfy the applicable City of Oakland noise exposure limits at the nearest property lines provided that the following noise mitigation measure is incorporated into the project design:

1. Replace the proposed 6-foot tall chain link fence along the equipment lease area with an 8-foot tall composite wood fence. Figure 2 shows the location of the recommended composite wood fence. The composite wood fence should overlap by a minimum of 2 inches and screwed into the framing. The purpose of overlapping slats and using screws rather than nails is to ensure that prolonged exposure to the elements does not result in visible gaps through the slats which would result in reduced barrier effectiveness.

This concludes our environmental noise assessment for the proposed Oakland Bend Cellular Facility in Oakland, California. Please contact BAC at (916) 663-0500 or paulb@bollardacoustical.com with any questions or requests for additional information.

Appendix A
Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
Masking	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
Noise	Unwanted sound.
Peak Noise	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the Maximum level, which is the highest RMS level.
RT_{60}	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 sabin.
SEL	A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy of the event into a 1-s time period.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.

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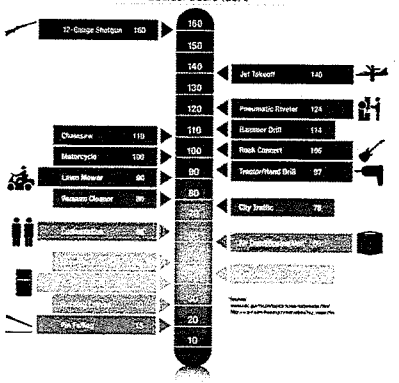
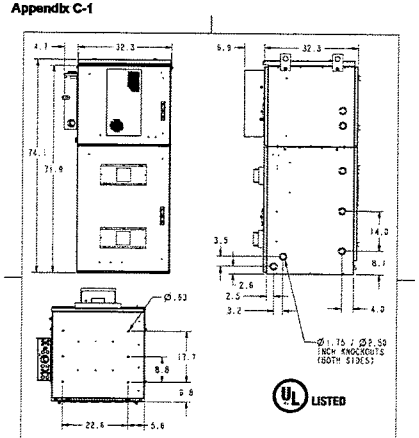
Appendix B

Typical A-Weighted Sound Levels of Common Noise Sources

Decibel Scale (dBA)*



Appendix C-1



WEIGHT WITH BATTERIES: 2296 LBS.
NorthStar NSB-170FT Batteries at 128 lbs each, Qty 12

WEIGHT WITHOUT BATTERIES: 760 LBS.

MAX NOISE LEVEL: 55-60dB

CHARLES PART # CUBE-SS4C215XC1

Charles Industries Ltd.

Verizon Wireless
Large Site Support Enclosure

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Revisions:
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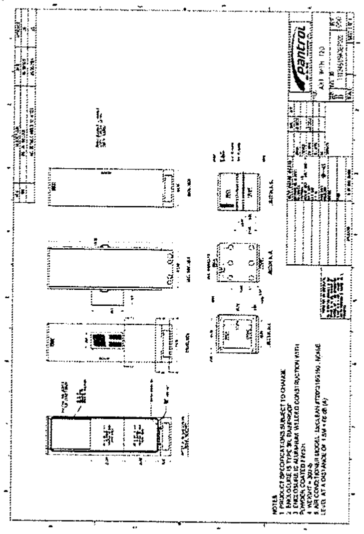
NS2

NOISE STUDY

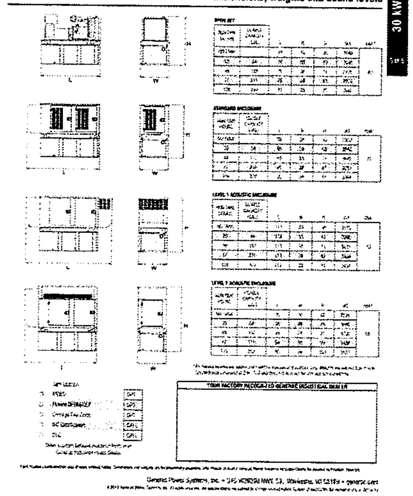
Appendix C-2



Appendix D

GENERAC | INDUSTRIAL

SD030 — dimensions, weights and sound levels — 30 kW Diesel



Appendix E-1
Barrier Insertion Loss Calculation

Project Information:
Job Number: 2017-062
Project Name: Oakland Bend Cellular Facility
Location(s): Property Line

Noise Level Data:
Source Description: Equipment Cabinets - Combined
Source Noise Level, dBA: 48
Source Frequency (Hz): 500
Source Height (ft): 5

Site Geometry:
Receiver Description: Residential Property Line - North (APN: 008-0003-006)
Source to Barrier Distance (C_1): 4
Barrier to Receiver Distance (C_2): 26

Pad/Ground Elevation at Receiver: 0
Receiver Elevation[1]: 5
Base of Barrier Elevation: 0
Starting Barrier Height 8

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	Insertion Loss, dB	Noise Level, dB	Barrier Breaks Line of Site to Source?
8	8	-10.3	37.7	Yes
9	9	-11.7	36.3	Yes
10	10	-13.0	35.0	Yes
11	11	-14.0	34.0	Yes
12	12	-14.6	33.4	Yes
13	13	-15.3	32.7	Yes
14	14	-15.9	32.1	Yes
15	15	-16.3	31.7	Yes
16	16	-16.6	31.4	Yes
17	17	-17.1	30.9	Yes
18	18	-17.1	30.9	Yes

Notes: 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix E-2
Barrier Insertion Loss Calculation

Project Information:
Job Number: 2017-062
Project Name: Oakland Bend Cellular Facility
Location(s): Property Line

Noise Level Data:
Source Description: Generac SD 030 with L2 Enclosure
Source Noise Level, dBA: 65
Source Frequency (Hz): 500
Source Height (ft): 5

Site Geometry:
Receiver Description: Residential Property Line - North (APN: 008-0003-006)
Source to Barrier Distance (C_1): 5
Barrier to Receiver Distance (C_2): 26

Pad/Ground Elevation at Receiver: 0
Receiver Elevation[1]: 5
Base of Barrier Elevation: 0
Starting Barrier Height 8

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	Insertion Loss, dB	Noise Level, dB	Barrier Breaks Line of Site to Source?
8	8	-9.9	55.1	Yes
9	9	-11.3	53.7	Yes
10	10	-12.6	52.4	Yes
11	11	-13.7	51.3	Yes
12	12	-14.6	50.4	Yes
13	13	-15.3	49.7	Yes
14	14	-15.9	49.1	Yes
15	15	-16.3	48.7	Yes
16	16	-16.6	48.4	Yes
17	17	-16.9	48.1	Yes
18	18	-17.1	47.9	Yes

Notes: 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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Appendix E-3
Barrier Insertion Loss Calculation

Project Information:
Job Number: 2017-062
Project Name: Oakland Bend Cellular Facility
Location(s): Property Line

Noise Level Data:
Source Description: Generac SD 030 with L2 Enclosure
Source Noise Level, dBA: 74
Source Frequency (Hz): 500
Source Height (ft): 5

Site Geometry:
Receiver Description: Residential Commercial Line - West (APN: 008-0003-019)
Source to Barrier Distance (C_1): 12
Barrier to Receiver Distance (C_2): 5

Pad/Ground Elevation at Receiver: 0
Receiver Elevation[1]: 5
Base of Barrier Elevation: 0
Starting Barrier Height 8

Barrier Effectiveness:

Top of Barrier Elevation (ft)	Barrier Height (ft)	Insertion Loss, dB	Noise Level, dB	Barrier Breaks Line of Site to Source?
8	8	-10.3	63.7	Yes
9	9	-11.9	62.1	Yes
10	10	-13.3	60.7	Yes
11	11	-14.3	59.7	Yes
12	12	-14.6	59.4	Yes
13	13	-15.9	58.1	Yes
14	14	-16.3	57.7	Yes
15	15	-16.6	57.4	Yes
16	16	-17.1	56.9	Yes
17	17	-17.1	56.9	Yes
18	19	-17.1	56.9	Yes

Notes: 1. Standard receiver elevation is five feet above grade/pad elevations at the receiver location(s)

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SHEET TITLE: NOISE STUDY

Revisions:

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Checked By: YST
Scale: AS NOTED
Date: 07/06/17

Job No. 162.1987

NS3

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Aerial photograph showing the viewpoints for the photosimulations.

Attachment D

Oakland Bend
715 Peralta Street
Oakland, CA 94607

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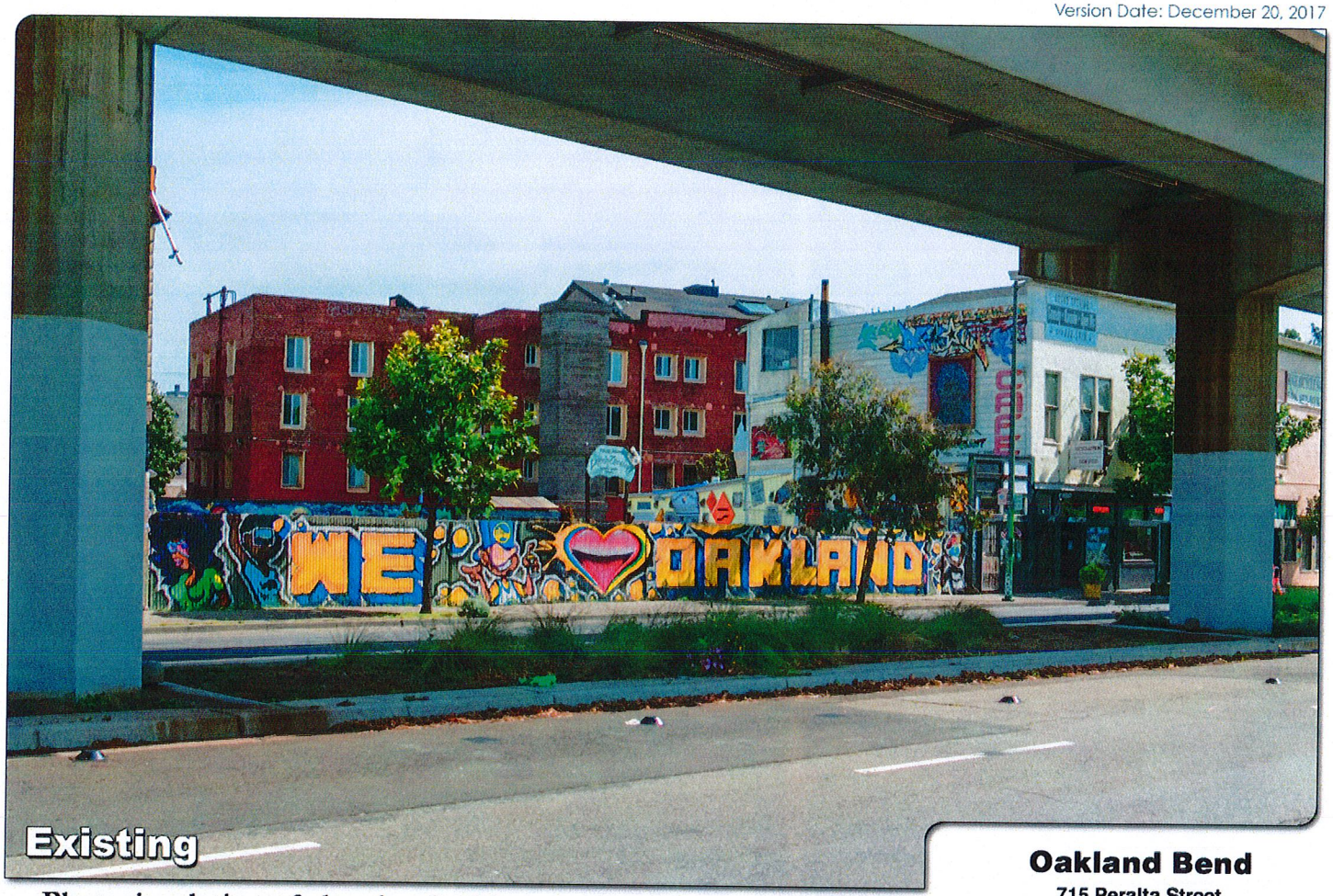
Photosimulation of the view looking northwest from across 7th St.



Existing

Photosimulation of the view looking northeast from 7th Street.

Oakland Bend
715 Peralta Street
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Proposed

Oakland Bend
715 Peralta Street
Oakland, CA 94607

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Photosimulation of the view looking southwest from 8th at Peralta.

Photosimulation of the view looking south from 8th Street.

Oakland Bend
715 Peralta Street
Oakland, CA 94607

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Project Support Statement
Verizon Wireless

Site Name: Oakland Bend
Site Address: 715 Peralta Street, Oakland, CA 94607
APN: 006-0003-016 & 006-0003-017

Introduction
Verizon Wireless constantly seeks to improve its wireless network through industry-leading techniques and innovative solutions in order to respond to high levels of wireless network traffic and increased user demand. This proposal for a new wireless telecommunications facility is an essential part of the effort to continuously improve the Verizon Wireless network for future and potential customers. The facility proposal is designed to comply with all applicable standards set forth in the City of Oakland Planning Code. The proposed facility is the least intrusive means for Verizon Wireless to close a significant gap in network coverage.

Verizon Wireless strives to minimize visual and noise impacts for each facility and seeks to incorporate ways to preserve the local community character to the greatest extent feasible at all stages of site selection and design process. Part of this involves seeking properties in areas with substandard wireless coverage that provide the ability to meet community needs, zoning standards, and engineering requirements.

This application is for a major conditional use permit for a macro facility as defined in City of Oakland Wireless Ordinance 17.128.070. This project requires a major use permit because the closest part of the telecom equipment is located within 100 feet from the nearest residential property line. This facility is a macro facility because it does not meet the criteria to be classified as a mini or micro facility, and is not a tower or monopole. This facility will fill a significant gap in wireless coverage in this area.

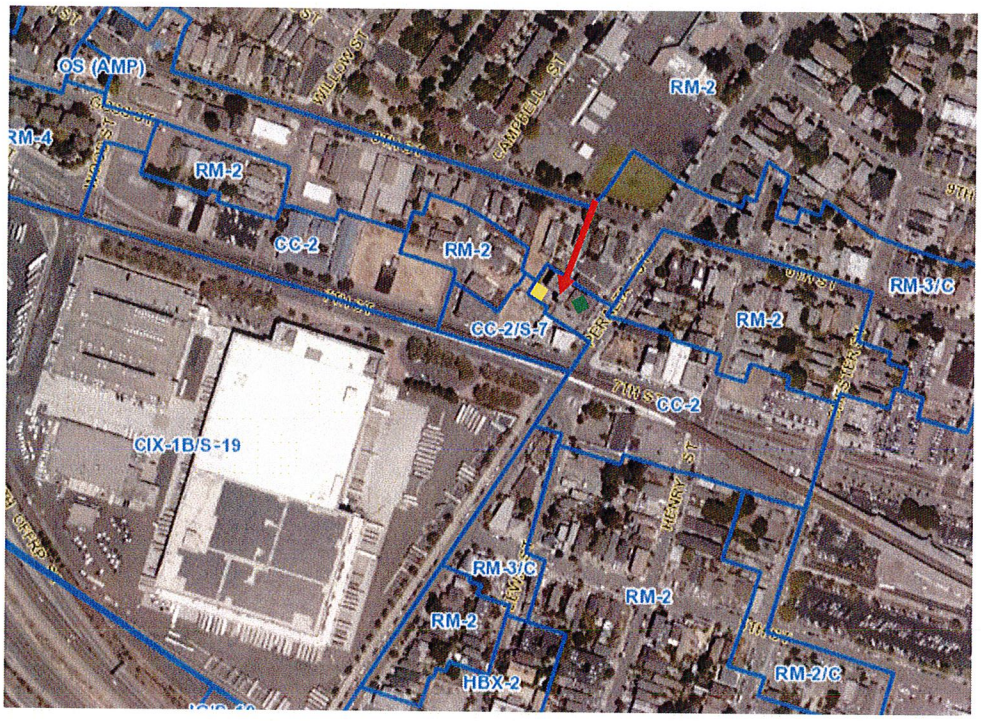
Facility Description
The proposed project is to build and use a new, unmanned, wireless telecommunications facility at 715 Peralta Street, in Oakland, California. The subject property is zoned CC-2 (Commercial). The building is located near the intersection of 7th Street and Peralta Street in the Lower Bottoms neighborhood, near the bend of I-580 and is currently used as an apartment building. The dominant use of the neighborhood is a mix of multi-family residential and commercial. This is one of few Commercially zoned properties in this area and is preferable to a residentially zoned property per the Oakland Zoning Code.

The proposed facility consists of a new rooftop mounted antenna platform housed in a faux chimney structures atop the building, which will be hidden behind with RF transparent FRP screen wall and painted to complement the building's existing design and the neighborhood character., A separate lease area to contain the ground equipment will be located beside the building, Vehicle access to the lease areas will be through the driveway from Peralta Street via a non-exclusive easement.

All new structures will be within areas leased from the building owner. The rooftop antenna lease area is 12' x 12', with the top of the chimney rising to 60' above ground level, an increase of 10' from the existing roof ridge level of 50'. Nine antennas will be installed within the antenna lease area, and concealed from view by FRP screen wall. The ground lease area is 16' x 16' and will be surrounded by an 8' tall composite wood fence with locking access gate and will be placed on an existing cement pad. The equipment area will contain outdoor equipment cabinets as well as a 30-kW diesel backup generator to ensure uninterrupted operation of the facility in the event of an emergency power outage. The fence is designed to mitigate the noise from the facility to comply with Oakland noise

Attachment E

included noise study for additional information on this point. The antennas will be connected to the ground equipment via an externally mounted conduit run along the back side of the building and painted to match the existing brick.



Overhead Map of Site Location for Proposed Facility.
Green represents location of antennas in faux chimney and
yellow represents location of ground equipment (NOT to scale)

The facility will have nine (9) antennas, 3 each in 3 sectors, fifteen (15) Remote Radio Head (RRH) Units and three (3) surge suppressors.

This facility will provide much needed capacity to the I-580 corridor in the bend area to serve commuters on this busy freeway. It will also fill a significant gap in coverage in the Lower Bottoms neighborhood. Please see the included coverage maps indicating current coverage ("Before"), area coverage after activation of the facility ("After"), and coverage provided specifically from the proposed facility ("Only").

Please see the included photosimulations and site plans for examples of what the facility will look like in comparison to the existing structure.

Compliance with City Development Requirements

A number of factors contributed to the final decision to locate a facility here, taking into account the needs of Verizon's network and the community values as expressed in the City's Code, specifically Chapter 17.128 (Telecommunications Regulations), Chapter 17.134 (Conditional Use Permit), and Chapter 17.136 (Design Review). The proposed facility on an existing rooftop has been designed to conform to the Section 17.128.070 which establishes guidelines for facilities located on existing buildings, poles or other existing support structures. i.e. "Macro Facilities."

A. <u>Site Location Preference</u>

Section 17.128.110 sets forth the City's preference for siting new wireless facilities in order of preference, with the leading three preferential locations being collocation on an existing structure or facility with existing wireless antennas, city-owned properties or other public or quasi-public facilities, or existing commercial or industrial structures in non-residential zones. Proposed facilities locating in these ranked preferences do not require a site alternatives analysis.

Here, Verizon is proposing a rooftop facility on an existing commercial structure in a non-residential zone; the subject parcels are in the CC-2 zoning designation. Because the proposed facility is located within property fitting the criteria of Section 17.128.110(C), no site alternative analysis is required.

B. Site Design Preferences

Section 17.128.120 establishes an order of preference for design which includes building or structure mounted completely concealed from view as the most preferred with towers as the least preferred. If the site design does not include a building or structure mounted antennas completely concealed from view or set back from the roof edge, then a site alternatives analysis is required.

The proposed facility has "building or structure mounted antennas completely concealed from view", Section 17.128.120(A). The antennas for the proposed facility will use architectural integration and stealthing techniques so as to be completely concealed from view. Because this project's site design is ranked most preferable, an Alternate Site Design is not required. Please see photosimulations for additional information.

C. General Development Standards for Macro Facilities

Section 17.128.070 (A) provides general development standards for macro facilities.

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

The proposed facility is on an existing rooftop building location.

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

The ground equipment lease area will be on the parcel adjacent to the existing building, on an existing cement pad. All equipment will be screened from public view by a new, durable, wood composite fence, which will be set back about 140' from the public right of way. The fence will be 8' tall and will have a locking gate.

c. *Macro Facilities may exceed the height limitation specified for all zones but may not exceed fifteen (15) feet above the roof line or parapet.*

The FRP screen wall concealing the rooftop antennas rises to a total height of 60', which is only 10' above the existing roof line.

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

This requirement is not applicable.

e. *The applicant shall submit written documentation demonstrating that the emissions from the proposed project are within the limits set by the FCC.*

All emissions from the proposed project are within the limits set by FCC. Please see attached Radio Frequency study prepared by independent licensed engineering firm, Hammett & Edison, Inc.

D. Regular Design Review Criteria for Nonresidential Facilities

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

The proposed facility has been designed to relate to the architecture, size, bulk, and color of the existing building to which it will be attached. All components of the proposed facility when viewed from public rights of way have been designed to complement the existing structure and the surrounding area. Please see the included photosimulations and views for additional information.

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

The facility has been designed to enhance capacity and coverage to the area, harmonize with the color, bulk, texture and detail of the existing building and the nature and character of the area.

c. *That the proposed design conforms in all significant respect 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 proposed facility provides a utility for an important community benefit to this housing and business area of the city, and does so in a manner that conforms with the City's General Plan as well as the Telecommunications and Design Review codes.

E. Additional Design Review Criteria for Macro Facilities

(See attached Design Review & CUP Findings worksheets)

Benefits of Improved Wireless Service

Modern life has become increasingly dependent upon wireless communications. Wireless access is critical to many facets of everyday life, such as safety, recreation, and commerce. This site will allow current and future Verizon Wireless customers to have access to wireless services in the areas shown on

the propagation models included in this application. This site will provide improved wireless communication, which is essential to first responders, community safety, local businesses and area residents.

Operations & Maintenance

Visitation to the site by a service technician for routine maintenance typically occurs up to once per week. The proposed site is unmanned and entirely self-monitored. It is electronically connected directly to a central office where diagnostic computers alert personnel to any equipment malfunction. Because the wireless facility is unmanned and results in no cumulative impact to existing local traffic patterns. No water or sanitation services are required. All maintenance testing will be conducted during the times and days specified by the Oakland Municipal Code.

Compliance with FCC Standards

Verizon Wireless complies with all FCC rules governing construction requirements, technical standards, interference protection, power and height limitations and radio frequency standards. In addition, Verizon complies with all FAA rules on site location and operation.

Notice of Actions Affecting this Development Permit

In accordance with California Government Code Section 65945(a), Verizon Wireless requests notice of any proposal to adopt or amend the: general plan, specific plan, zoning ordinance, ordinance(s) affecting building or grading permits that would in any manner affect this development permit. Any such notice may be sent to 2009 V Street, Sacramento, CA 95818.

Alternative Sites Analysis
Verizon Wireless

Site Name:	Oakland Bend
Address:	715 Peralta Street, Oakland, CA 94607
APN:	006-0003-016 & 006-0003-017

Introduction

Customer demand drives the need for new cell sites. Data relating to incomplete and dropped calls is gathered, drive-tests are conducted, and scientific modeling using sophisticated software is evaluated. Once the area requiring a new site is identified, a search ring on a map is provided to a real estate professional to search for a suitable location. To satisfy the coverage objective, Verizon Wireless must balance the land use goals of the community while still meeting technical, design and construction objectives for the installation.

Four key elements are considered in the selection process:

- Leasing: The property must have an owner who is willing to enter a long-term lease agreement under very specific terms and conditions.

- Zoning: It must be suitably zoned in accordance with local land-use codes to allow for a successful permitting process.

- Construction: Construction constraints and costs must be reasonable from a business perspective, and it must be feasible for the proposed project to be constructed in accordance with local building code and safety standards.

- Radiofrequency (RF): The property and facility must strategically be located to be able to achieve the RF engineer's objective to close the significant gap with antennas at a height to clear nearby obstructions.

Factors which govern the network objectives include, but are not limited to, RF signal strength, topography, and the physical proximity to existing facilities in the network. Topography is a critical component because wireless facilities utilize line of sight technology, which means that the antennas must be able to "see" the facilities in the existing network for the wireless devices to be served. The antennas must be installed at a sufficient height above ground level to function properly; this height is referred to as the "centerline." Natural features such as hills, rocks, or mountains can block signal transmission. Similarly, man-made structures such as buildings can restrict network performance if located within the requisite "line of sight."

In August of 2016, Verizon Wireless (VZW) began a search within Oakland to secure a location for a new communications facility, specifically along the bend of I-880 near 7th Street. To address a significant coverage gap on the freeway and for customers in the Prescott and Acorn neighborhoods, VZW identified a search area in Oakland and a requisite centerline height of at least 50 feet above-ground-level.

Much of the search area for this facility is zoned residential. In order to maximize the chances of success in obtaining use permit by avoiding placement of the facility in a residential zone, we focused on properties in the few non-residential areas. A total of nine candidates were investigated in this

search, but for various reasons, only one satisfied the factors listed above. Below is a list of other candidates that were investigated but ultimately rejected, as well as the reasons they were unsuitable for this facility.

List of alternative candidates investigated but not selected:

- **Omar – 1600 12th Street, Oakland, CA; APN: 006-0009-039:**
  - The property owner was contacted in late 2016 and initially expressed interest in entering into a contract for this project. The Verizon Wireless Radiofrequency Engineer in charge of designing this site rejected this candidate because the property could not provide a high enough centerline to meet the coverage objective. Because of this, this candidate was abandoned.

- **Bright Homes LLC – 1502 8th Street, Oakland, CA; APN: 004-0093-010:**
  - Contact with this candidate was attempted by both phone and mail in 2016. The property owner did not respond to CWC's attempt to contact it about the project. The lack of interest by the property owner resulted in this candidate being abandoned.

- **Lima – 1655 12th St., Oakland, CA; APN: 006-0013-053**:
  - This property owner expressed interest in entering into a contract for this facility. Upon an in-person investigation of the property, it became apparent that the property's rooftop did not provide enough area to install all necessary equipment while still complying with setbacks imposed by the Oakland Zoning Code.

- **Mt Zion Missionary Baptist Church – 1203 Willow St, Oakland, CA; APN: 006-0027-024**:
  - Contact with this candidate was attempted by both phone and mail in 2016. The property owner did not respond to CWC's attempt to contact it about the project. The lack of interest by the property owner resulted in this candidate being abandoned.

- **Pacific Cannery Lofts – 1201 Pine St, Oakland, CA**:
  - This property is subject to an HOA. Our company attempted to contact the HOA organization for the condominiums, but attempts to mail the proposal letter returned undeliverable. Other means of contact led to no response. Because of an inability to contact the property owners, this candidate was abandoned.

- **REO Homes 2 LLC - Oakland, CA; APN: 006-0031-026**:
  - Contact with this candidate was attempted by both phone and mail in 2016. The property owner did not respond to CWC's attempt to contact it about the project. The lack of interest by the property owner resulted in this candidate being abandoned.

- **Roman Catholic Bishop of Oakland – 1005 Peralta St, Oakland, CA; APN: 006-0007-041**:
  - Contact with this candidate was attempted by both phone and mail in 2016. The property owner did not respond to CWC's attempt to contact it about the project. The lack of interest by the property owner resulted in this candidate being abandoned.

- **True Light Church of God in Christ – 835 Chester St, Oakland, CA; APN: 004-0093-007**:
  - Contact with this candidate was attempted by both phone and mail in 2016. The property owner did not respond to CWC's attempt to contact it about the project. The lack of interest by the property owner resulted in this candidate being abandoned.

Verizon Wireless • Proposed Base Station (Site No. 425306 "Oakland Bend")
715 Peralta Street • Oakland, California

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of Verizon Wireless, a personal wireless telecommunications carrier, to evaluate the base station (Site No. 425306 "Oakland Bend") proposed to be located at 715 Peralta Street in Oakland, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Executive Summary

Verizon proposes to install directional panel antennas above the roof of the four-story residential building located at 715 Peralta Street in Oakland. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy; certain mitigation measures are recommended to comply with FCC occupational guidelines.

Prevailing Exposure Standards

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

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

General Facility Requirements

Base stations typically consist of two distinct parts: the electronic transceivers (also called "radios" or "channels") that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are often located at ground level and are connected to the antennas by coaxial cables. A small antenna for reception of GPS signals is also required, mounte[illegible] view of the sky.

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

Computer Modeling Method

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

Site and Facility Description

Based upon information provided by Verizon, including zoning drawings by MST Architects, Inc., dated July 6, 2017, it is proposed to install nine Andrew Model SBNHH-1D45C directional panel antennas within a view screen enclosure to be installed above the sloped roof of the four-story residential building located at 715 Peralta Street in Oakland. The antennas would employ up to 8° downtilt, would be mounted at an effective height of about 55½ feet above ground, 5½ feet above the peak of the sloped roof, and would be oriented in groups of three toward 75°T, 165°T, and 345°T. The maximum effective radiated power in any direction would be 40,620 watts, representing simultaneous operation at 19,200 watts for AWS, 9,000 watts for PCS, 6,400 watts for cellular, and 6,020 watts for 700 MHz service. There are reported no other wireless telecommunications base stations at the site or nearby.

Study Results

For a person anywhere at ground, the maximum RF exposure level due to the proposed Verizon operation is calculated to be 0.055 mW/cm^2, which is 9.7% of the applicable public exposure limit. The maximum calculated level at the second-floor elevation of any nearby building* is 13% of the public exposure limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels from the proposed operation.

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* Including the residences located at least 80 feet away, based on photographs from Google Maps.

Recommended Mitigation Measures

Due to their mounting location and height, requiring specialized equipment to access the sloped roof, the Verizon antennas would not be accessible to unauthorized persons, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, it is recommended that appropriate RF safety training, to include review of personal monitor use and lockout/tagout procedures, be provided to all authorized personnel who have access to the roof, including employees and contractors of Verizon and of the property owner. No access within 34 feet directly in front of the Verizon antennas themselves, such as might occur during certain maintenance activities above the sloped roof, should be allowed while the base station is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. It is recommended that a yellow stripe be painted across the top of the northeast-facing wall running the width of the main roof, as shown in Figure 3, to indicate that exposure levels in the sloped roof areas beyond the stripe are calculated to exceed the FCC exposure limits. It is recommended that explanatory signs† be posted at the stripe and on the enclosure in front of the antennas, readily visible from any angle of approach to persons who might need to work within that distance.

Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the base station proposed by Verizon Wireless at 715 Peralta Street in Oakland, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations. Training authorized personnel, marking roof areas, and posting explanatory signs are recommended to establish compliance with occupational exposure limits.

† Signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (*e.g.*, a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter, and guidance from the landlord, local zoning or health authority, or appropriate professionals may be required.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration Nos. E-13026 and M-20676, which expire on June 30, 2019. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.

William F. Hammett, P.E.
707/996-5200

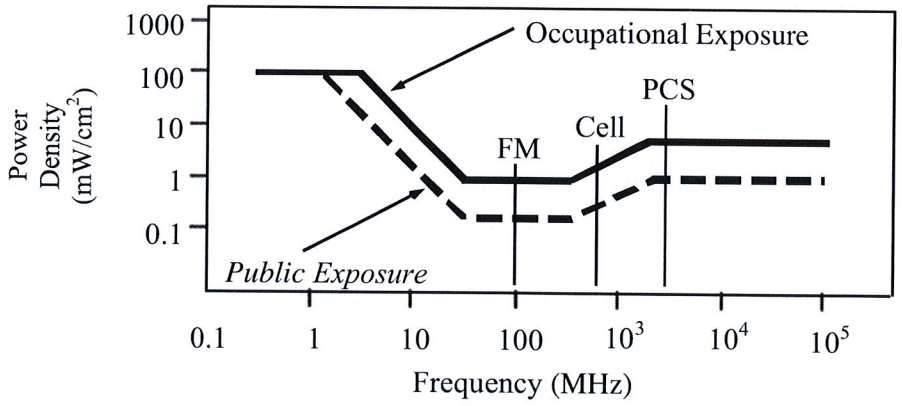
July 27, 2017

FCC Radio Frequency Protection Guide

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

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

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



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

RFR.CALC™ Calculation Methodology

Assessment by Calculation of Compliance with FCC Exposure Guidelines

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

Near Field.

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

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

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

where θ_{BW} = half-power beamwidth of the antenna, in degrees, and
P_{net} = net power input to the antenna, in watts,
D = distance from antenna, in meters,
h = aperture height of the antenna, in meters, and
η = aperture efficiency (unitless, typically 0.5-0.8).

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

Far Field.

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

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

where ERP = total ERP (all polarizations), in kilowatts,
RFF = relative field factor at the direction to the actual point of calculation, and
D = distance from the center of radiation to the point of calculation, in meters.

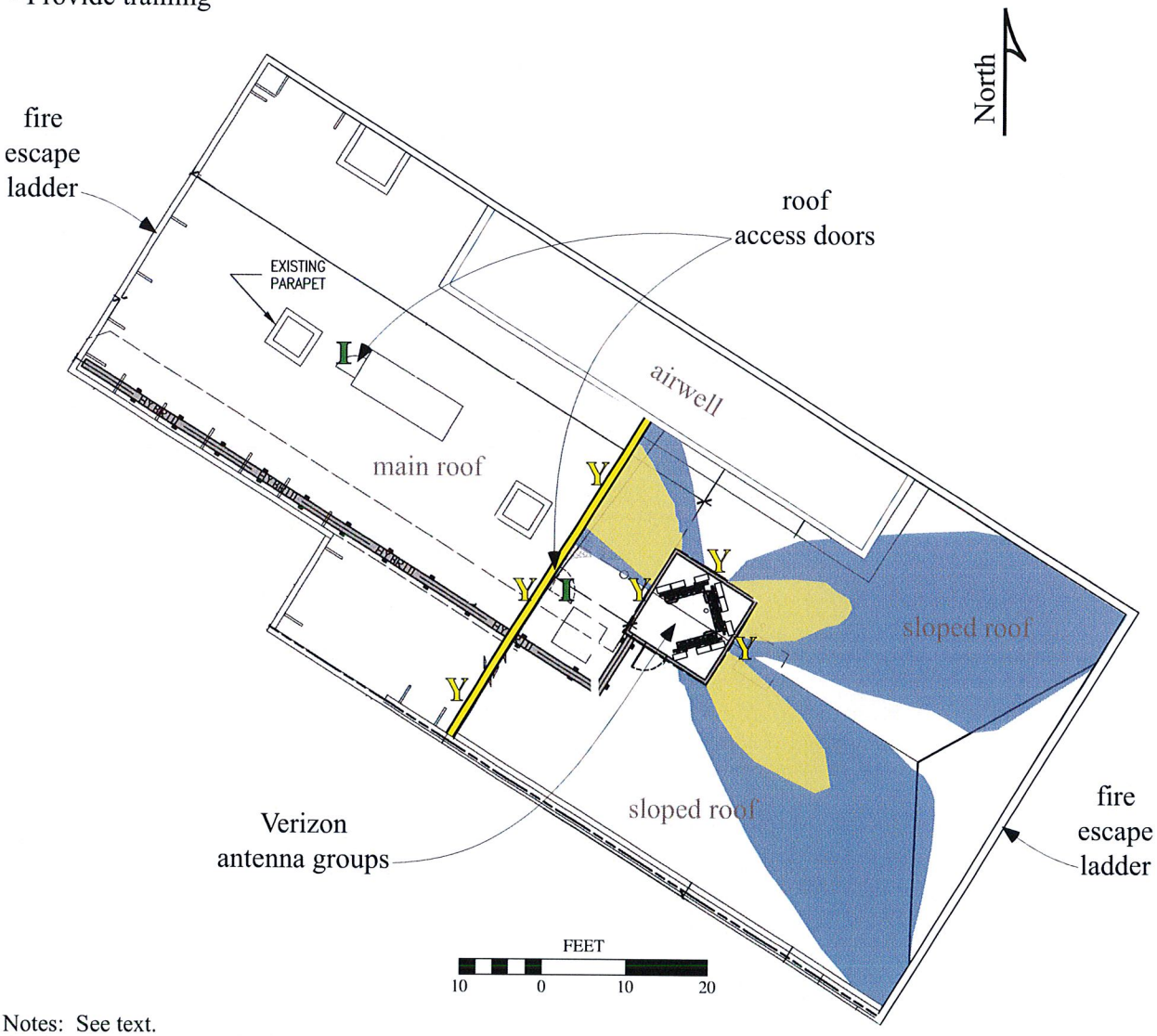
The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 (1.6 x 1.6 = 2.56). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired units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

Verizon Wireless • Proposed Base Station (Site No. 425306 "Oakland Bend")
715 Peralta Street • Oakland, California

Calculated RF Exposure Levels on Roof

Recommended Mitigation Measures

- Mark edge of wall as shown
- Post explanatory signs
- Provide training



Notes: See text.
Base drawing from MST Architects, Inc., dated July 6, 2017.
Calculations performed according to OET Bulletin 65, August 1997.

Legend:	Less Than Public	Exceeds Public	Exceeds Occupational	Exceeds 10x Occupational
Shaded color	blank			
Boundary marking	N/A			
Sign type	I - Green INFORMATION	B - Blue NOTICE	Y - Yellow CAUTION	O - Orange WARNING

Attachment G