

Case File Number: PLN20-79

November 18, 2020

Location:	5815 Martin Luther King Jr Way. (See map on reverse)
A.P.N. :	(015 135603100)
Proposal:	Installation of a Wireless Telecommunications facility involving six (6) new antennas, six (6) new radios, and two (2) ray caps located on top of the existing elevator shaft with associated equipment cabinets and backup generator concealed within two (2) new enclosures (8'4"x 10'4" and 10'x 14') antenna lease area located on the roof of a four – story residential building.
Applicant:	SAC Wireless for Verizon Wireless.
Contact Person	Michelle Fernandes
Phone Number:	(916)337-4133
Owner:	Sojourner Truth Housing.
Planning Permits Required:	Major Conditional Use Permit and Regular Design Review to install new roof-top antennas and associated equipment (Macro Telecommunications Facility) located in a Residential Zone.
General Plan:	Urban Residential
Zoning:	RU-3 Urban Residential Zone.
Environmental Determination:	Exempt, Section 15301 of the State CEQA Guidelines: minor alterations to existing facilities; Section 15183 of the State CEQA Guidelines: projects consistent with a Community Plan, General Plan or Zoning.
Historic Status:	X
City Council District:	1
Status:	Pending
Finality of Decision:	Appealable to City Council within 10 days
For Further Information:	Contact case planner Rebecca Wysong at (510) 238-3123 or rwysong@oaklandca.gov

SUMMARY

The proposed project is to install a wireless Telecommunications Macro facility involving six (6) new antennas, six (6) radios, two (2) ray caps and associated equipment cabinet and backup generator concealed within two (2) new enclosures located on the roof of a four-story residential building.

The site is located within the Urban Residential General Plan designation and the RU-3 Urban Residential Zone. A Major Conditional Use Permit and Design Review are required to install a Macro Telecommunications Facility on a building located in the RU-3 Zone.

The project meets all of the applicable findings for approval (see findings sections) and will provide enhanced Telecommunications service to support the residential, commercial and civic uses in the neighborhood. Therefore, staff recommends approval of the project subject to the attached conditions of approval.

PROJECT DESCRIPTION

The applicant, SAC Wireless, for Verizon Wireless, is proposing to install six (6) new antennas, six (6) new radios, and two (2) new ray caps with associated equipment cabinets and backup generator concealed within two (2) new antenna lease area enclosures (8'4" x 10'4" and 10' x 14') located on the roof of a three-story residential building (See **Attachment A**).

PROPERTY DESCRIPTION

The subject property is an approximately 13,650 square foot parcel with a four-story residential building. The subject property is located on the block of Martin Luther King Jr Way between 58th St and 59th St, taking up the whole block. It is adjacent to single-family residences in the rear of the property and elevated BART train tracks across street from the subject site.

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. 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, of the environmental effects of radio frequency emissions (RF) of such facilities, which otherwise comply with FCC standards in this regard. *See*, 47 U.S.C. 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. 47 U.S.C.332(c) (7) (B) (ii). *See* 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, contact Steve Markendorff, Chief of the Broadband Branch, Commercial Wireless Division, Wireless Telecommunications Bureau, at (202) 418-0640 or e-mail "smarkend@fcc.gov".

GENERAL PLAN ANALYSIS

The subject property is located within the "Urban Residential" General Plan designation. The Urban Residential land use classification is intended to create, maintain and enhance areas of the City that are appropriate for multi-unit, mid-rise or high-rise residential structures in locations with good access to transportation and other services. The proposed unmanned wireless telecommunication facility will not adversely affect and detract from the urban residential characteristics of the neighborhood. The proposal will preserve a convenient and functional residential building and will not likely affect the general quality and character of the neighborhood. The proposed project will have minimal effect on the existing structure and surrounding area.

ZONING ANALYSIS

The subject property is located in the RU-3 Urban Residential Zone. The intent of the RU-3 Zone is to create, maintain, and enhance areas of the City that are appropriate for multi-unit, low-rise or mid-rise residential structures at somewhat higher densities than RU-2, and neighborhood businesses where appropriate in locations with good access to transportation and other services. The project requires a Major Conditional Use Permit for a Macro Telecommunications Facility and Design Review for facilities within a Residential Zone. Staff finds that the proposed application meets applicable RU-3 Zoning and City of Oakland Telecommunications Regulations as discussed under the "Key Issues" and "Findings" Sections of this report.

ENVIRONMENTAL DETERMINATION

The California Environmental Quality Act (CEQA) Guidelines lists the projects that qualify as categorical exemptions from environmental review. The proposed project is categorically exempt from the environmental review requirements pursuant to Section 15303 for small structures. In addition, the project is also exempt per Section 15183, for projects consistent with a community plan, general plan or zoning.

KEY ISSUES AND IMPACTS

1. Conditional Use Permit, Design Review

Section 17.19.02 of the City of Oakland Planning Code requires a Conditional Use Permit and Design Review to install a Macro Telecommunication facility in the RU-3 Urban Residential Zone. Furthermore, pursuant to Section 17.134.020(A)(3)(i) and 17.148.050(A), 17.136.050(B) of the Oakland Planning Code, a Major Conditional Use Permit and Design Review is required for any telecommunication facility in or within one hundred (100) feet of the boundary of any Residential Zone. The required findings for a Major Conditional Use Permit and Design Review are listed and included in staff's evaluation as part of this report.

2. Project Site

Section 17.128.110 of Oakland's Telecommunication Regulations indicate that new wireless facilities shall generally be located on designated properties or facilities in the following 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 non-residential zones (excluding all HBX Zones and the D-CE3 and D-C-4 Zones).
- D. Existing commercial or industrial structures in residential zones, HBX Zones, or the D-CE-3 or D-CE-4 Zones.
- E. Other non-residential uses in residential zones, HBX Zones, or the D-CE-3 or D-CE-4 Zones.
- F. Residential uses in non-residential 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.

Since the proposed project involves installation new antennas on an existing residential structure within an RU-3 Zone, the proposed project meets (G) and hence a site alternatives analysis is required and enclosed as part of "Attachment A".

Written evidence must indicate why each 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, inability to cover required area) or for other concerns (e.g. inability to get lease with owners).

City of Oakland Planning staff has reviewed the applicant's written evidence of alternative sites analysis (see **Attachment A**) and determined that the site selected conforms to the telecommunication regulation requirements. In addition, Planning staff agrees that no other sites are more suitable.

3. Project Design

Section 17.128.120 of the City of Oakland Telecommunications Regulations indicates that 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 does not require a site design alternatives analysis. Facilities designed to not meet A through B ranked preference, inclusive, must submit a site design alternatives analysis as part of the required application materials.

Since the proposed project involves installation new antennas on an existing residential structure within an RU-3 Zone, the proposed project meets (C) and hence a design alternatives analysis is required. Site design alternatives analysis shall, at a minimum, consist of:

Written evidence must indicate why each 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).

City of Oakland Planning staff has reviewed the applicant's written evidence of alternative design analysis (see **Attachment A**) and determined that the site selected conforms to the telecommunication regulation requirements. In addition, Planning staff agrees that no other designs are more suitable.

4. Project Radio Frequency Emissions Standards

Section 17.128.130 of the City of Oakland Telecommunication Regulations require that the applicant submit the following verifications including requests for modifications to existing facilities:

- a. The Telecommunications regulations require that the applicant submit written documentation demonstrating that the emission from the proposed project are within the limits set by the Federal Communications Commission.

*In the document (**Attachment B**) prepared by HAMMETT & EDISON, INC, Consulting Engineers, the proposed project was evaluated for compliance with appropriate guidelines limiting human exposure to radio frequency electromagnetic fields. According to the report on the proposal, the project will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, the proposed site will 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.*

- b. 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.

*The information submitted with the initial application was an RF emissions report, prepared by HAMMETT & EDISON, INC, Consulting Engineers (**Attachment B**). The report states that the proposed project will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not cause a significant impact on the environment. Additionally, staff recommends that prior to the final building permit sign off; the applicant submits certified RF emissions report stating*

that the facility is operating within acceptable thresholds established by the regulatory federal agency.

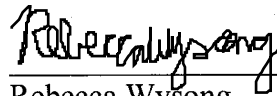
CONCLUSION

Staff believes that the new telecommunication facility will not have significant visual impacts on the operating characteristic of the existing residential building. It will provide an essential telecommunication services to the community and the City of Oakland at large. It will also be available to emergency services such as Police, Fire and Health response teams. Staff believes that the findings for approval can be made to support the Conditional Use Permit, Design Review.

RECOMMENDATIONS:

1. Affirm staff's Environmental Determination
2. Approve the Conditional Use Permit and Design Review, (PLN20-79) subject to the attached Findings and Conditions of Approval

Prepared by:



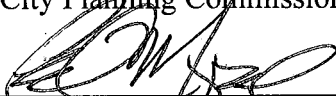
Rebecca Wysong
Planner I

Reviewed by:



Robert Merkamp,
Zoning Manager

Approved for forwarding to the
City Planning Commission



Edward Manassé, Deputy Director
Bureau of Planning

ATTACHMENTS:

- A. Project Plans & Alternative site selection & Photo simulations
- B. Hammett & Edison, Inc. Consulting Engineer RF Emissions Report

FINDINGS FOR APPROVAL

This proposal meets the required findings under Sections 17.134.050 (General Use Permit criteria); and 17.136.050 (B) (Non-Residential Design Review criteria); 17.128.060(B) (Telecommunications Macro Facilities 17.128.060 (C), as set forth below. Required findings are shown in **bold** type; reasons proposal satisfies them are shown in normal type.

SECTION 17.134.050 – GENERAL USE PERMIT FINDINGS:

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 purpose of the project is to enhance wireless telecommunications service in the area. The installation of new antennas will not adversely affect the operating characteristics or livability of the existing area because the proposed antennas will be screened behind a fiberglass wall that is painted to match the building aesthetics, located on the roof of the residential building. The facility will be unmanned and will not create additional vehicular traffic 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.

The location, design and site planning of the proposed development will provide enhanced telecommunication service for the area, with increased connectivity and access to emergency services. It will maintain the use of the residential building. The proposal will preserve the use of the existing residential building and not expected to negatively affect the general quality and character of the neighborhood.

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 proposed development will enhance the successful operation of the surrounding area in its basic community function and will provide an essential service to the community or region. This will be achieved by improving the functional use of the site by providing a regional Telecommunications facility for the community and will be available to the Police, Fire Services, and the public safety organizations and the general public.

D. That the proposal conforms to all applicable design review criteria set forth in the DESIGN REVIEW PROCEDURE of Chapter 17.136 of the Oakland Planning Code.

The proposal conforms with all significant aspects of the Design Review criteria set forth in Chapter 17.136 of the Oakland Planning Code, as outlined below.

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

The Urban Residential land use classification is intended to create, maintain and enhance areas of the City that are appropriate for multi-unit, mid-rise or high-rise residential structures in locations with good access to transportation and other services. The proposed unmanned wireless telecommunication facility will not adversely affect and detract from the urban residential characteristics of the neighborhood. The proposal will preserve a convenient and functional residential building and will not likely affect the general quality and character of the neighborhood. The proposed project will have minimal effect on the existing structure and surrounding area.

17.136.050(B) – NONRESIDENTIAL DESIGN REVIEW CRITERIA:

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

The proposed six (6) new antennas are located on top of the existing elevator shaft and will be camouflaged and blend in with the existing HVAC equipment located on the roof of residential building and surrounding residential buildings. Photo simulations submitted for the project show the view of the proposed antennas and screen, as seen from the street, with minimum visual impacts. Therefore, the proposal will not have significant impacts on the operating characteristic of the existing residential building and surrounding neighborhood.

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

See above #1 findings

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

See above #E

17.128.070(B) DESIGN REVIEW CRITERIA FOR MACRO FACILITIES

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

The proposed screening enclosures, fiberglass materials, are compatible with the existing building material, and blends in with the architectural style of the residential building.

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

The proposed antennas and a generator are located inside the penthouse enclosure and on top of the existing elevator shaft, in a way that mirrors a chimney stack and will be camouflaged and blend in with the existing rooftop of residential building and surrounding residential buildings.

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

See findings above.

4. Equipment shelters or cabinets shall be screened from the public view by using landscaping, or materials and colors consistent with surrounding backdrop:

The proposed screening enclosures are compatible with the existing building material, and blend in with the architectural style of the building. The cabinets is placed in a manner on the rooftop to not be visible from the public right of way.

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

See above findings.

6. For antennas attached to the roof, maintain a 1:1 ratio 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.

The placement of the antennas and associated equipment within the rooftop penthouse located on the roof of residential building and meets the 1:1 ratio for equipment setback from the edge of building roof line.

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

The proposed panel antennas and associated equipment will be mounted on the roof of the building and will not be accessible to the public due to its location.

Section 17.128.070(C) CONDITIONAL USE PERMIT (CUP) FINDINGS FOR MACRO FACILITIES

1. The project must meet the special design review criteria listed in subsection B of this section (17.128.070B):

The proposed project meets the special design review criteria listed in section 17.128.070B. (see above).

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

The proposed Telecommunications facility is fully screened from public view and, therefore the proposal will not disrupt the overall community character surrounding the subject site.

CONDITIONS OF APPROVAL**PLN20-79****STANDARD CONDITIONS:****1. Approved Use*****Ongoing***

a) The project shall be constructed and operated in accordance with the authorized use as described in the application materials, and the plans dated **April 2nd, 2020** and submitted on **May 20th, 2020** and as amended by the following conditions. Any additional uses or facilities other than those approved with this permit, as described in the project description and the approved plans, will require a separate application and approval. Any deviation from the approved drawings, Conditions of Approval or use shall required prior written approval from the Director of City Planning or designee.

b) This action by the City Planning Commission ("this Approval") includes the approvals set forth below. This Approval includes: **Installation of a Wireless Telecommunications facility involving six (6) new antennas, six (6) new radios, and two (2) ray caps located on top of the existing elevator shaft with associated equipment cabinets and backup generator concealed within two (2) new antenna lease area enclosures (8'4"x 10'4" and 10'x 14') located on the roof of a four –story residential building.**

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

Unless a different termination date is prescribed, this Approval shall expire **two calendar years** from the approval date, 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 permit, 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 for this project may invalidate this Approval if the said extension period has also expired.

3. Scope of This Approval; Major and Minor Changes***Ongoing***

The project is approved pursuant to the **Oakland Planning Code** only. Minor changes to approved plans may be approved administratively by the Director of City Planning or designee. Major changes to the approved plans shall be reviewed by the Director of City Planning or designee to determine whether such changes require submittal and approval of a revision to the approved project by the approving body or a new, completely independent permit.

4. Conformance with other Requirements***Prior to issuance of a demolition, grading, P-job, or other construction related permit***

- a) The project applicant shall comply with all other applicable federal, state, regional and/or local codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City's Building Services Division, the City's Fire Marshal, and the City's Public Works Agency.

- b) The applicant shall submit approved building plans for project-specific needs related to fire protection to the Fire Services Division for review and approval, including, but not
- c) limited to automatic extinguishing systems, water supply improvements and hydrants, fire department access, and vegetation management for preventing fires and soil erosion.

5. Conformance to Approved Plans; Modification of Conditions or Revocation

Ongoing

- a) Site shall be kept in a blight/nuisance-free condition. Any existing blight or nuisance shall be abated within 60-90 days of approval, unless an earlier date is specified elsewhere.
- b) The City of Oakland reserves the right at any time during construction to require certification by a licensed professional that the as-built project conforms to all applicable zoning requirements, including but not limited to approved maximum heights and minimum setbacks. Failure to construct the project in accordance with approved plans may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension or other corrective action.
- c) Violation of any term, conditions or project description relating to the Approvals 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 Approvals 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.

6. Signed Copy of the Conditions

With submittal of a demolition, grading, and building permit

A copy of the approval letter and conditions shall be signed by the property owner, notarized, and submitted with each set of permit plans to the appropriate City agency for this project.

7. Indemnification

Ongoing

- i. To the maximum extent permitted by law, the applicant shall defend (with counsel acceptable to the City), indemnify, and hold harmless the City of Oakland, the Oakland City Council, the City of Oakland Redevelopment Agency, the Oakland City Planning Commission and its respective agents, officers, and employees (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, (1) an approval by the City relating to a development-related application or subdivision or (2)

implementation of an approved development-related project. The City may elect, in its sole discretion, to participate in the

defense of said Action and the applicant shall reimburse the City for its reasonable legal costs and attorneys' fees.

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

8. Compliance with Conditions of Approval

Ongoing

The project applicant shall be responsible for compliance with the recommendations in any submitted and approved technical report and all the Conditions of Approval set forth below at its sole cost and expense, and subject to review and approval of the City of Oakland.

9. Severability

Ongoing

Approval of the project would not have been granted but for the applicability and validity of each and every one of the specified conditions, and if any 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 Management

Prior to issuance of a demolition, grading, and/or construction permit

The project applicant may be required to pay for on-call special inspector(s)/inspections as needed during the times of extensive or specialized plan check review, or construction. The project applicant may also be required to cover the full costs of independent technical and other types of peer review, monitoring and inspection, including without limitation, third party plan check fees, including inspections of violations of Conditions of Approval. The project applicant shall establish a deposit with the Building Services Division, as directed by the Building Official, Director of City Planning or designee.

12. Days/Hours of Construction Operation

Ongoing throughout demolition, grading, and/or construction

The project applicant shall require construction contractors to limit standard construction activities as follows:

- a) Construction activities are limited to between 7:00 AM and 7:00 PM Monday through Friday, except that pile driving 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. Monday through Friday.
- b) Any construction activity proposed to occur outside of the standard hours of 7:00 am to 7:00 pm Monday through Friday for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened and such construction activities shall only be allowed with the prior written authorization of the Building Services Division.
- c) Construction activity shall not occur on Saturdays, with the following possible exceptions:
- i. Prior to the building being enclosed, requests for Saturday construction for special activities (such as concrete pouring which may require more continuous amounts of time), shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened. Such construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division.
 - ii. After the building is enclosed, requests for Saturday construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division, and only then within the interior of the building with the doors and windows closed.
- d) No extreme noise generating activities (greater than 90 dBA) shall be allowed on Saturdays, with no exceptions.
- e) No construction activity shall take place on Sundays or Federal holidays.
- f) 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.

PROJECT SPECIFIC CONDITONS:

13. Radio Frequency Emissions

Prior to the final building permit sign off.

The applicant shall submit a certified RF emissions report stating the facility is operating within the acceptable standards established by the regulatory Federal Communications Commission.

14. Operational Ongoing.

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.

15. Compliance with Title 24

Prior to issuance of certificate of occupancy.

The applicant shall implement acoustical techniques in compliance with Title 24 to ensure that noise levels in interior spaces remain at or below 45 CNEL with all doors and windows closed.

16. Height Limitation

Ongoing.

The maximum height of the screening enclosure shall be 10 feet. Any height beyond 10 feet would compromise the appropriate scale and proportionality with the existing building mass.

NOTES:

OWNER(S): SOJOURNER TRUTH HOUSING, INC.

APN(S): 015-1356-031

THIS DRAWING DOES NOT REPRESENT A BOUNDARY SURVEY OF ANY PARCEL OF LAND, NOR DOES IT IMPLY OR INFER THAT A BOUNDARY SURVEY WAS PERFORMED. THIS IS A SPECIALIZED TOPOGRAPHIC MAP WITH PROPERTY AND EASEMENTS BEING A GRAPHIC DEPICTION BASED ON INFORMATION GATHERED FROM VARIOUS SOURCES OF RECORD AND AVAILABLE MONUMENTATION. PROPERTY LINES AND LINES OF TITLE WERE NEITHER INVESTIGATED NOR SURVEYED AND SHALL BE CONSIDERED APPROXIMATE ONLY. NO PROPERTY MONUMENTS WERE SET.

THE EASEMENTS (IF ANY) THAT APPEAR ON THIS MAP HAVE BEEN PLOTTED BASED SOLELY ON INFORMATION CONTAINED IN THE CONDITION OF TITLE GUARANTEE BY: FIRST AMERICAN TITLE COMPANY, FILE NO. 5757999, DATED JULY 16, 2018. WITHIN SAID TITLE REPORT, THERE ARE THIRTEEN (13) EXCEPTIONS LISTED, ONE (1) OF WHICH IS AN EASEMENT AND ONE (1) OF WHICH CANNOT BE PLOTTED.

THE UNDERGROUND UTILITIES (IF ANY) THAT APPEAR ON THIS MAP HAVE BEEN LOCATED BY FIELD OBSERVATION. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPREHEND ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES STATE THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.

THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD RATE MAP FOR COMMUNITY NO. 065048, PANEL NO. 00576, DATED AUGUST 8, 2009 SHOWS THAT THE LOCATION OF THIS SITE FALLS WITHIN ZONE X, WHICH ARE AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

THE LATITUDE AND LONGITUDE AT THE LOCATION AS SHOWN WAS DETERMINED BY GPS OBSERVATIONS.

LAT. 37° 50' 37.90" N, NAD 83
 LONG. 122° 16' 15.40" W, NAD 83
 ELEV. 91.4' NAVD 88 (BASIS OF DRAWING)

The information shown above meets or exceeds the requirements set forth in FAA order 8260.19D for 1-2 accuracy (± 20' horizontally and ± 3' vertically). The horizontal datum (coordinates) are expressed as degrees, minutes and seconds, to the nearest hundredth of a second. The vertical datum (heights) are expressed in feet and decimals thereof and are determined to the nearest 0.1 foot.

LESSOR'S PROPERTY LEGAL DESCRIPTION:

REAL PROPERTY IN THE CITY OF OAKLAND, COUNTY OF ALAMEDA, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

PORTIONS OF LOTS 13 THROUGH 18, INCLUSIVE, IN BLOCK 5, AS SAID LOTS AND BLOCK ARE SHOWN ON THE MAP OF "THE MC KEE TRACT IN PLOT NO. 46, V. AND D. PERALTA RANCHO, OAKLAND TOWNSHIP, ALAMEDA CO., CAL.", FILED JANUARY 5, 1891, IN BOOK 8 OF MAPS, PAGE 54, IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHERLY LINE OF 59TH STREET, FORMERLY MARIPOSA STREET, AT THE NORTHWESTERLY CORNER OF SAID LOT 16; THENCE ALONG SAID SOUTHERLY LINE OF 59TH STREET, NORTH 81° 42' 47" EAST 56.31 FEET TO THE WESTERLY LINE OF PARCEL 14 OF WIDENED GROVE STREET, AS DESCRIBED IN THE DEED TO THE CITY OF OAKLAND, FILED JUNE 6, 1968, ON REEL 2195, IMAGE 619, OFFICIAL RECORDS OF ALAMEDA COUNTY; THENCE ALONG SAID WESTERLY LINE OF GROVE STREET, SOUTH 8° 19' 12" EAST 243.40 FEET TO THE NORTHERLY LINE OF 58TH STREET, FORMERLY STANLEY STREET; THENCE ALONG SAID NORTHERLY LINE SOUTH 84° 07' 43" WEST 26.57 FEET TO A LINE PARALLEL TO AND 30 FEET EASTERLY AT RIGHT ANGLES FROM THE WESTERLY LINES OF SAID LOTS 13 AND 14; THENCE ALONG SAID PARALLEL LINE NORTH 8° 15' 55" WEST 76.43 FEET TO THE SOUTHERLY LINE OF SAID LOT 15; THENCE ALONG SAID SOUTHERLY LINE SOUTH 81° 44' 05" WEST 30.00 FEET TO THE WESTERLY LINE OF SAID LOT 15; THENCE ALONG THE WESTERLY LINES OF SAID LOTS 15, 16 AND 17 AND 18, NORTH 8° 15' 55" WEST 165.84 FEET TO THE POINT OF BEGINNING.

APN: 015-1356-031

EASEMENT(S) PER TITLE REPORT:

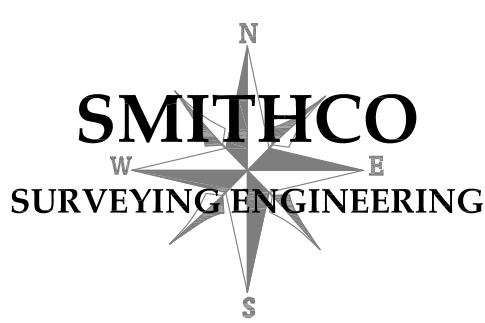
5. AN EASEMENT FOR BROADBAND COMMUNICATIONS SYSTEM AND INCIDENTAL PURPOSES, RECORDED MARCH 19, 2010 AS INSTRUMENT NO. 2010072745 OF OFFICIAL RECORDS. IN FAVOR OF: COMCAST OF CALIFORNIA/COLORADO, LLC, ITS SUCCESSORS AND ASSIGNS AFFECTS: AS DESCRIBED THEREIN *** NOT PLOTTABLE - BLANKET IN NATURE ***



LEGEND

- SITE BOUNDARY LINE
- OVERHEAD POWER LINE
- PROPERTY BOUNDARY (PER TITLE REPORT)
- POWER POLE
- GROUND ELEVATION
- EDGE OF PAVEMENT
- CONCRETE PAD
- POB POINT OF BEGINNING
- POC POINT OF COMMENCEMENT

OVERALL SITE MAP
 1" = 40'



ISSUE STATUS

REV	DATE	DESCRIPTION	BY
0	10/06/16	PRELIMINARY	SL
1	10/25/16	LEASE/TITLE	SL
2	07/10/17	SITE NUMBER	DA
3	08/13/18	UPDATE TITLE INFO	SL
4	03/19/20	REV. LEASE/ESMNTS	SL
5	03/23/20	ZIP CODE	DA
6	04/03/20	REVISE LEASE AREA	DA

SMITHCO JOB NO.: 82-467

PROPRIETARY INFORMATION

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2785 MITCHELL DRIVE, BLDG 9
 WALNUT CREEK, CA 94598

291116
 NORTH
 OAKLAND

5815 MARTIN LUTHER KING JR WAY
 OAKLAND, CA 94609
 ALAMEDA COUNTY

SHEET TITLE:
SITE SURVEY
 FOR EXAMINATION ONLY

C-1

PROPOSED VERIZON WIRELESS DEMISED PREMISES DESCRIPTION:

ALL THAT PORTION OF THE HEREON DESCRIBED LESSOR'S PROPERTY, PARCEL 'A', MORE PARTICULARLY DESCRIBED AS FOLLOWS:

EQUIPMENT AREA DESCRIPTION:

COMMENCING AT THE NORTHWESTERLY MOST CORNER OF SAID PARCEL 'A', THENCE S 08°17'47" E, ALONG THE WEST LINE OF SAID PARCEL 'A', A DISTANCE OF 49.44 FEET; THENCE LEAVING SAID WEST LINE, N 81°42'13" E, A DISTANCE OF 14.98 FEET TO THE POINT OF BEGINNING;

- COURSE 1) THENCE N 81°31'24" E, A DISTANCE OF 2.00 FEET TO POINT 'A';
- COURSE 2) THENCE CONTINUING N 81°31'24" E, A DISTANCE OF 6.97 FEET TO POINT 'B';
- COURSE 3) THENCE CONTINUING N 81°31'24" E, A DISTANCE OF 2.03 FEET;
- COURSE 4) THENCE S 08°28'36" E, A DISTANCE OF 15.00 FEET;
- COURSE 5) THENCE S 81°31'24" W, A DISTANCE OF 11.00 FEET;
- COURSE 6) THENCE N 08°28'36" W, A DISTANCE OF 3.85 FEET POINT 'C';
- COURSE 7) THENCE CONTINUING N 08°28'36" W, A DISTANCE OF 11.15 FEET TO THE POINT OF BEGINNING.

CONTAINING 165 SQUARE FEET, MORE OR LESS.

ANTENNA AREA DESCRIPTION:

COMMENCING AT THE NORTHWESTERLY MOST CORNER OF SAID PARCEL 'A', THENCE S 08°17'47" E, ALONG THE WEST LINE OF SAID PARCEL 'A', A DISTANCE OF 100.34 FEET; THENCE LEAVING SAID WEST LINE, N 81°42'13" E, A DISTANCE OF 13.84 FEET TO THE POINT OF BEGINNING;

- COURSE 1) THENCE N 81°31'24" E, A DISTANCE OF 10.36 FEET;
- COURSE 2) THENCE S 08°28'36" E, A DISTANCE OF 8.12 FEET;
- COURSE 3) THENCE S 81°31'24" W, A DISTANCE OF 10.36 FEET;
- COURSE 4) THENCE N 08°28'36" W, A DISTANCE OF 8.12 FEET TO THE POINT OF BEGINNING.

CONTAINING 84 SQUARE FEET, MORE OR LESS.

PROPOSED LESSEE ACCESS & UTILITY EASEMENT RIGHT-OF-WAY DESCRIPTION:

A 3.00 FOOT WIDE STRIP OF LAND, LYING 1.50 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT THE HEREINBEFORE DESCRIBED POINT 'A':

- COURSE 1) THENCE N 08°28'36" W, A DISTANCE OF 5.21 FEET;
- COURSE 2) THENCE N 31°02'06" W, A DISTANCE OF 8.65 FEET;
- COURSE 3) THENCE N 08°28'36" W, A DISTANCE OF 9.90 FEET;
- COURSE 4) THENCE N 81°31'24" E, A DISTANCE OF 16.05 FEET;
- COURSE 5) THENCE N 08°28'36" W, A DISTANCE OF 12.00 FEET;
- COURSE 6) THENCE N 81°31'24" E, A DISTANCE OF 13.45 FEET;
- COURSE 7) THENCE N 08°28'36" W, A DISTANCE OF 14.26 FEET TO THE SOUTH LINE OF 59TH STREET AND THE TERMINUS OF THIS DESCRIPTION.

TOGETHER WITH A 3.00 FOOT WIDE STRIP OF LAND, LYING 1.50 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT THE HEREINBEFORE DESCRIBED POINT 'B':

- COURSE 1) THENCE N 08°28'36" W, A DISTANCE OF 14.05 FEET TO THE TERMINUS OF THIS DESCRIPTION.

ALSO TOGETHER WITH A 3.00 FOOT WIDE STRIP OF LAND, LYING 1.50 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT THE HEREINBEFORE DESCRIBED POINT 'C':

- COURSE 1) THENCE S 81°18'04" W, A DISTANCE OF 6.19 FEET;
- COURSE 2) THENCE S 08°28'36" E, A DISTANCE OF 38.23 FEET;
- COURSE 3) THENCE N 81°31'24" E, A DISTANCE OF 7.88 FEET;
- COURSE 4) THENCE S 08°28'36" E, A DISTANCE OF 1.50 FEET TO THE TERMINUS OF THIS DESCRIPTION.

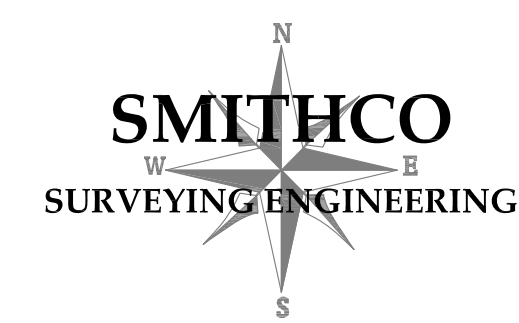


LINE	LENGTH	BEARING
L1	10.36'	N81°31'24"E
L2	8.12'	S08°28'36"E
L3	10.36'	S81°31'24"W
L4	8.12'	N08°28'36"W
L5	2.00'	N81°31'24"E
L6	6.97'	N81°31'24"E
L7	2.03'	N81°31'24"E
L8	15.00'	S08°28'36"E
L9	11.00'	S81°31'24"W
L10	3.85'	N08°28'36"W
L11	11.15'	N08°28'36"W
L12	5.21'	N08°28'36"W
L13	8.65'	N31°02'06"W
L14	9.90'	N08°28'36"W
L15	16.05'	N81°31'24"E
L16	12.00'	N08°28'36"W
L17	13.45'	N81°31'24"E
L18	14.26'	N08°28'36"W
L19	14.05'	N08°28'36"W
L20	6.19'	S81°18'04"W
L21	38.23'	S08°28'36"E
L22	7.88'	N81°31'24"E
L23	1.50'	S08°28'36"E
L24	14.98'	N81°42'13"E
L25	13.84'	N81°42'13"E

LEGEND

- SITE BOUNDARY LINE
- OVERHEAD POWER LINE
- PROPERTY BOUNDARY (PER TITLE REPORT)
- POWER POLE
- GROUND ELEVATION
- EDGE OF PAVEMENT
- CONCRETE PAD
- POB POINT OF BEGINNING
- POC POINT OF COMMENCEMENT

ENLARGED SITE PLAN
1" = 10'



ISSUE STATUS

REV	DATE	DESCRIPTION	BY
0	10/06/16	PRELIMINARY	SL
1	10/25/16	LEASE/TITLE	SL
2	07/10/17	SITE NUMBER	DA
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SMITHCO JOB NO.: 82-467

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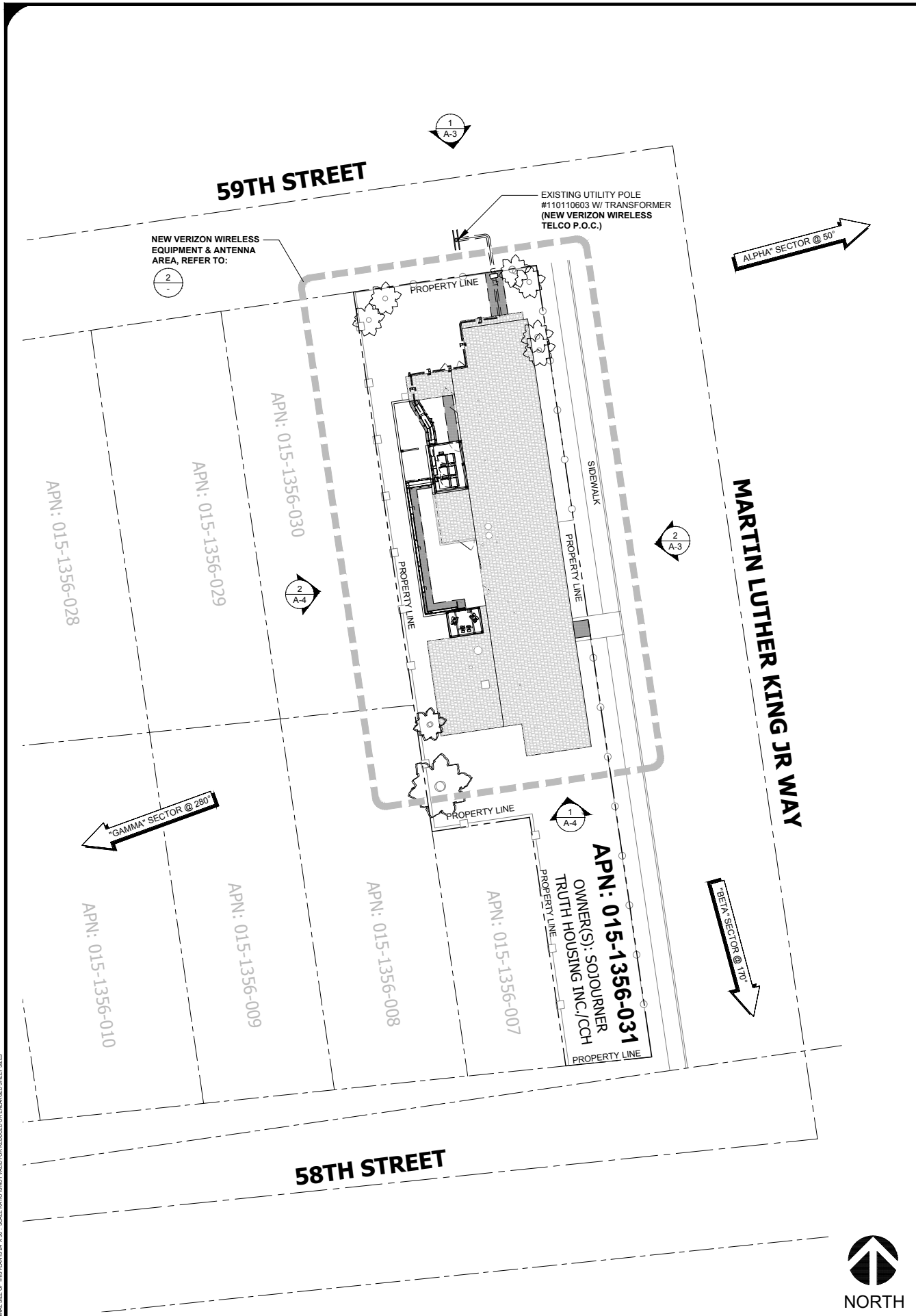
2785 MITCHELL DRIVE, BLDG 9
WALNUT CREEK, CA 94598

291116
NORTH
OAKLAND

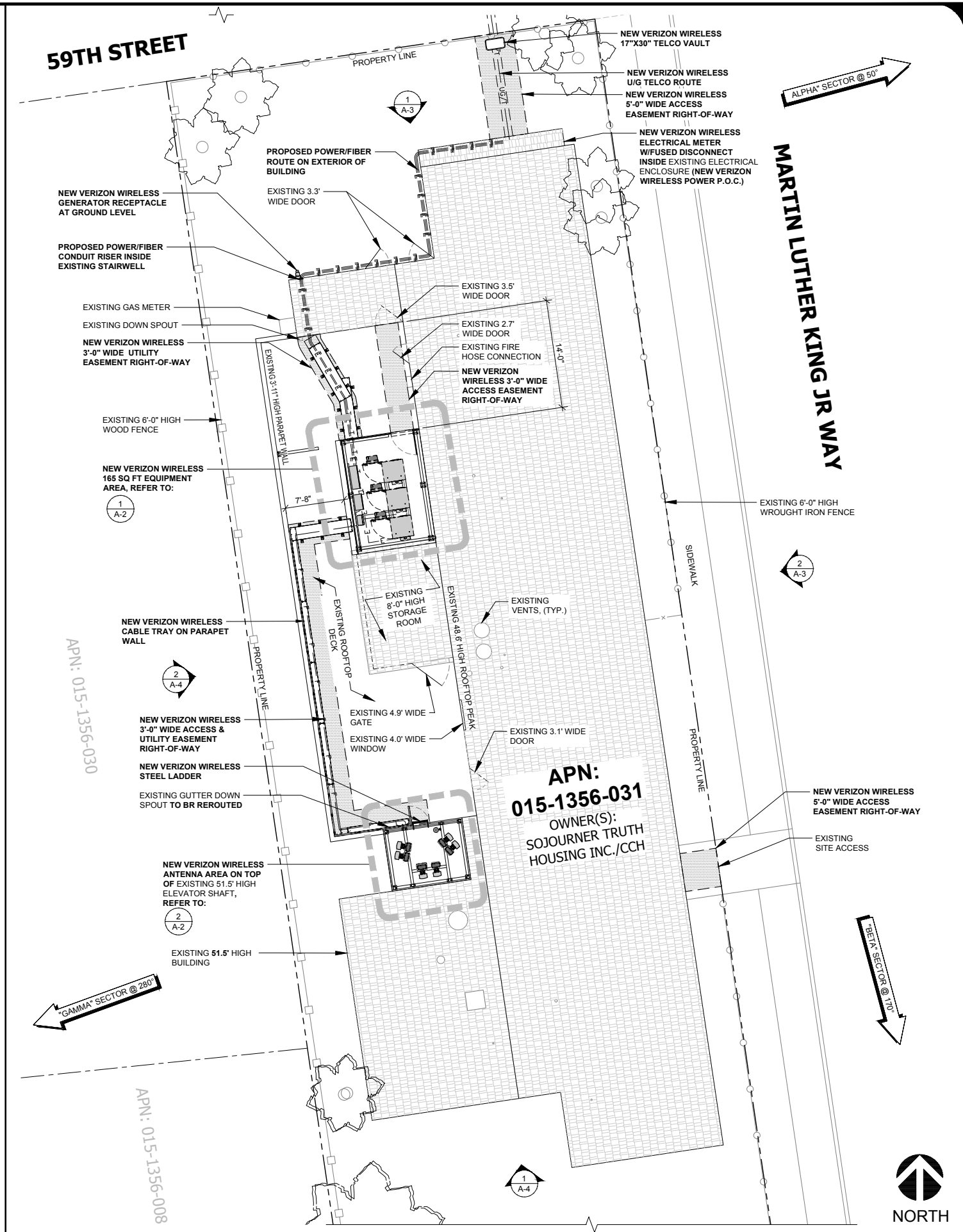
5815 MARTIN LUTHER KING JR WAY
OAKLAND, CA 94609
ALAMEDA COUNTY

SHEET TITLE:
SITE SURVEY
FOR EXAMINATION ONLY

C-2



SITE PLAN SCALE: 1" = 20'-0" (24x36) (OR) 1/2" = 20'-0" (11x17) **1**



ROOFTOP PLAN SCALE: 1/8" = 1'-0" (24x36) (OR) 1/16" = 1'-0" (11x17) **2**

REV.	DATE	DESCRIPTION	BY
0	10/21/16	90% ZONING	FA
1	02/15/17	100% ZONING	FA
2	03/23/17	100% ZONING	FA
3	07/10/17	100% ZONING	FA
4	10/09/18	100% ZONING	FA
5	03/23/20	100% ZONING	FA
6	04/02/20	100% ZONING	FA



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NORTH OAKLAND
PSL# 291116
 5815 MARTIN LUTHER KING JR WAY
 OAKLAND, CA 94609

SHEET TITLE:
SITE PLAN & ROOFTOP PLAN

A-1

ISSUE STATUS

REV.	DATE	DESCRIPTION	BY
0	10/21/16	90% ZONING	FA
1	02/15/17	100% ZONING	FA
2	03/23/17	100% ZONING	FA
3	07/10/17	100% ZONING	FA
4	10/09/18	100% ZONING	FA
5	03/23/20	100% ZONING	FA
6	04/02/20	100% ZONING	FA



A NOLTE COMPANY
 5015 SHOREHAM PLACE, STE. 150
 SAN DIEGO, CA 92122
 www.sacw.com
 619.736.3766

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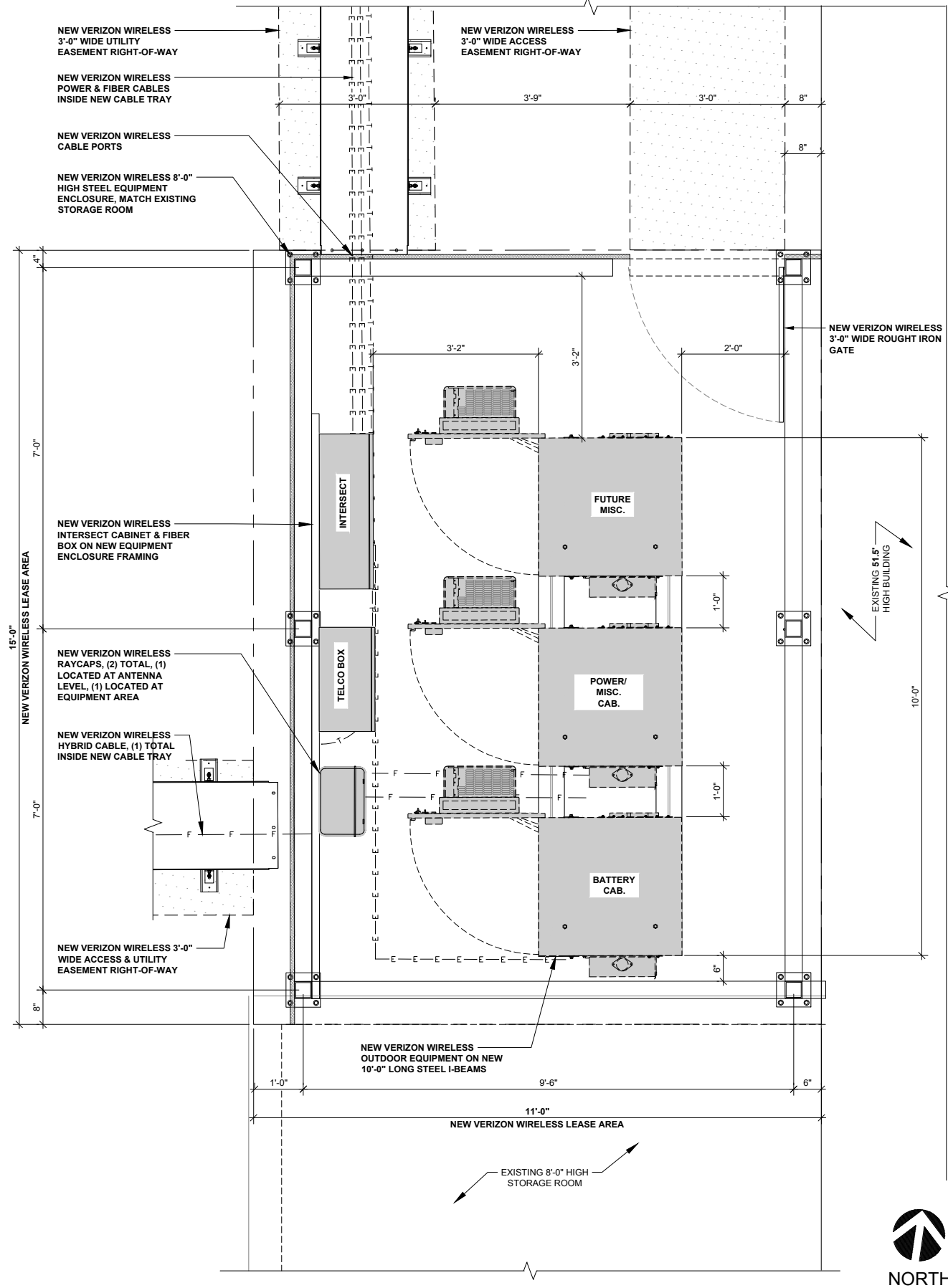
NORTH OAKLAND

PSL# 291116

5815 MARTIN LUTHER KING JR WAY
 OAKLAND, CA 94609

SHEET TITLE:
EQUIPMENT & ANTENNA LAYOUTS

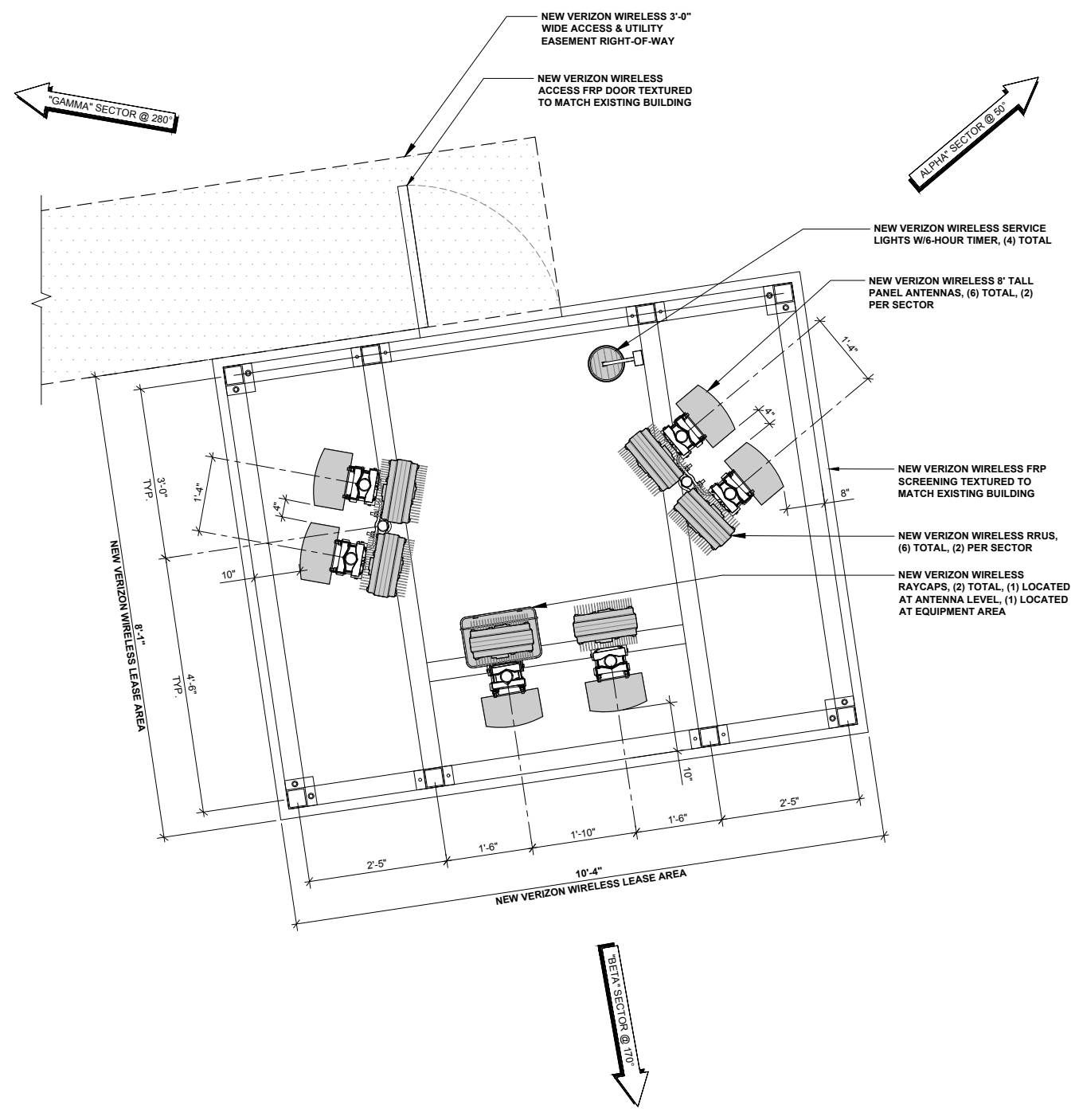
A-2



SCALE: 3/4" = 1'-0" (24x36)
 (OR) 3/8" = 1'-0" (11x17)

1

ANTENNA LAYOUT



SCALE: 3/4" = 1'-0" (24x36)
 (OR) 3/8" = 1'-0" (11x17)

2

NOTE: THE ORIGINAL SIZE OF THIS DRAWING IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES.

ISSUE STATUS

REV.	DATE	DESCRIPTION	BY
0	10/21/16	90% ZONING	FA
1	02/15/17	100% ZONING	FA
2	03/23/17	100% ZONING	FA
3	07/10/17	100% ZONING	FA
4	10/09/18	100% ZONING	FA
5	03/23/20	100% ZONING	FA
6	04/02/20	100% ZONING	FA



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NORTH OAKLAND

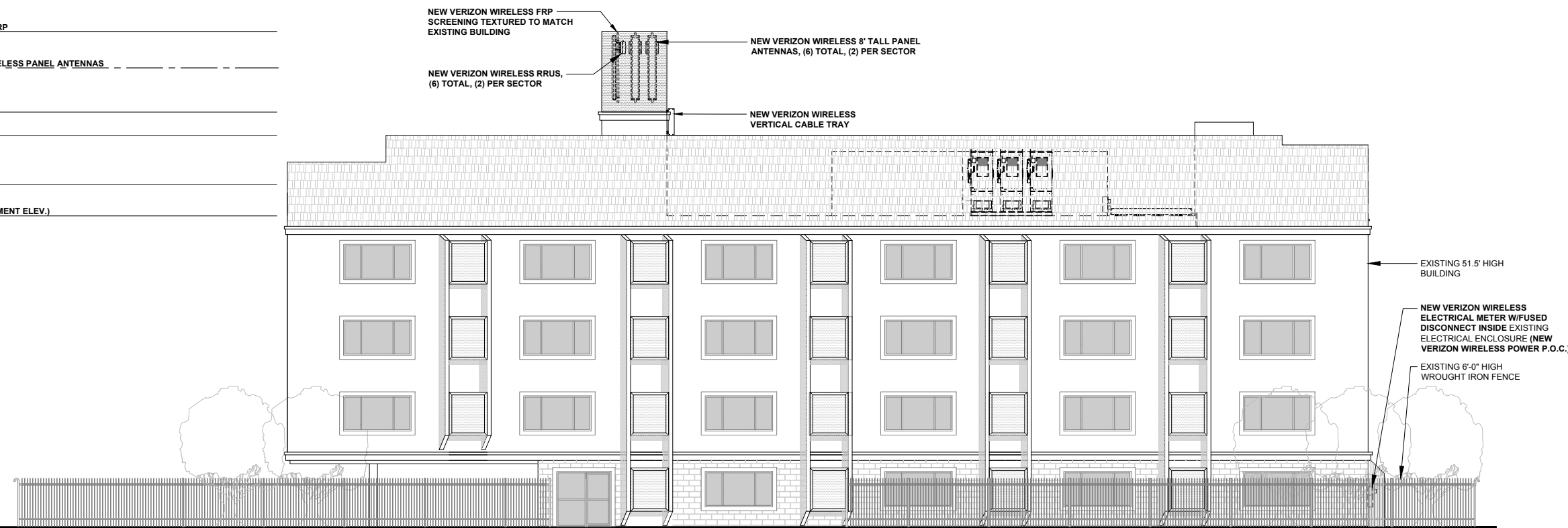
PSL# 291116

5815 MARTIN LUTHER KING JR WAY
OAKLAND, CA 94609

SHEET TITLE:
NORTH & EAST ELEVATIONS

A-3

- TOP OF NEW VERIZON WIRELESS FRP
ELEV. 61.5' AGL
 - CENTERLINE OF NEW VERIZON WIRELESS PANEL ANTENNAS
ELEV. 57.0' AGL
 - TOP OF EXISTING ELEVATOR SHIFT
ELEV. 51.5' AGL
 - TOP OF EXISTING ROOFTOP PEAK
ELEV. 48.6' AGL
 - TOP OF EXISTING PARAPET WALL
ELEV. 42.5' AGL
 - TOP OF EXISTING ROOFTOP (EQUIPMENT ELEV.)
ELEV. 38.6' AGL
 - GROUND LEVEL
ELEV. 0'-0" AGL
- AGL 0'-0" = 91.4' NAVD88

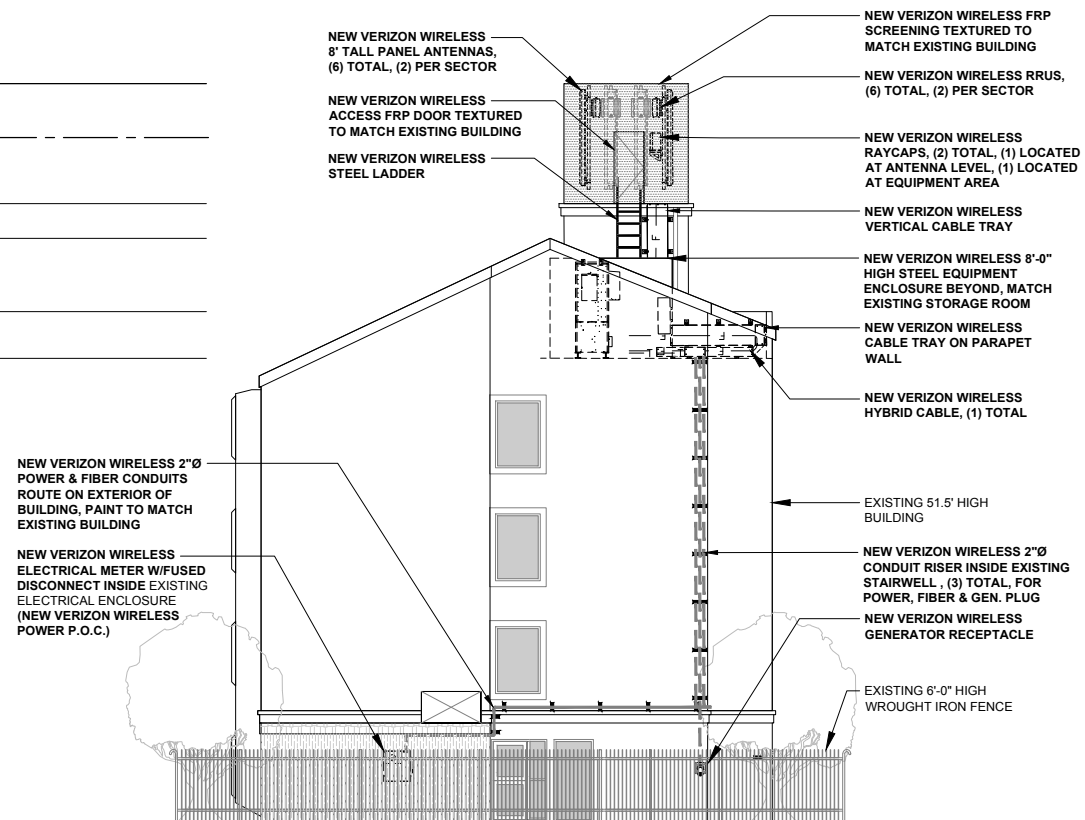


EAST ELEVATION

0 2' 4' 8' SCALE: 1/8" = 1'-0" (24x36)
(OR) 1/16" = 1'-0" (11x17)

2

- TOP OF NEW VERIZON WIRELESS FRP
ELEV. 61.5' AGL
 - CENTERLINE OF NEW VERIZON WIRELESS PANEL ANTENNAS
ELEV. 57.0' AGL
 - TOP OF EXISTING ELEVATOR SHIFT
ELEV. 51.5' AGL
 - TOP OF EXISTING ROOFTOP PEAK
ELEV. 48.6' AGL
 - TOP OF EXISTING PARAPET WALL
ELEV. 42.5' AGL
 - TOP OF EXISTING ROOFTOP (EQUIPMENT ELEV.)
ELEV. 38.6' AGL
 - GROUND LEVEL
ELEV. 0'-0" AGL
- AGL 0'-0" = 91.4' NAVD88

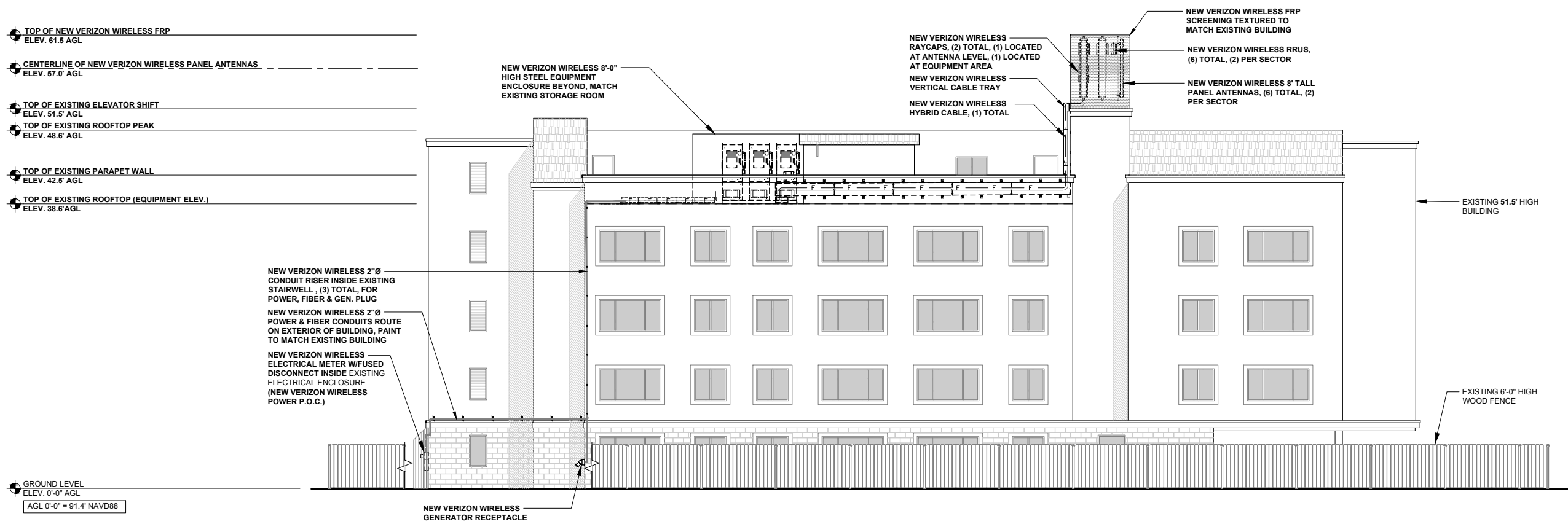


NORTH ELEVATION

0 2' 4' 8' SCALE: 1/8" = 1'-0" (24x36)
(OR) 1/16" = 1'-0" (11x17)

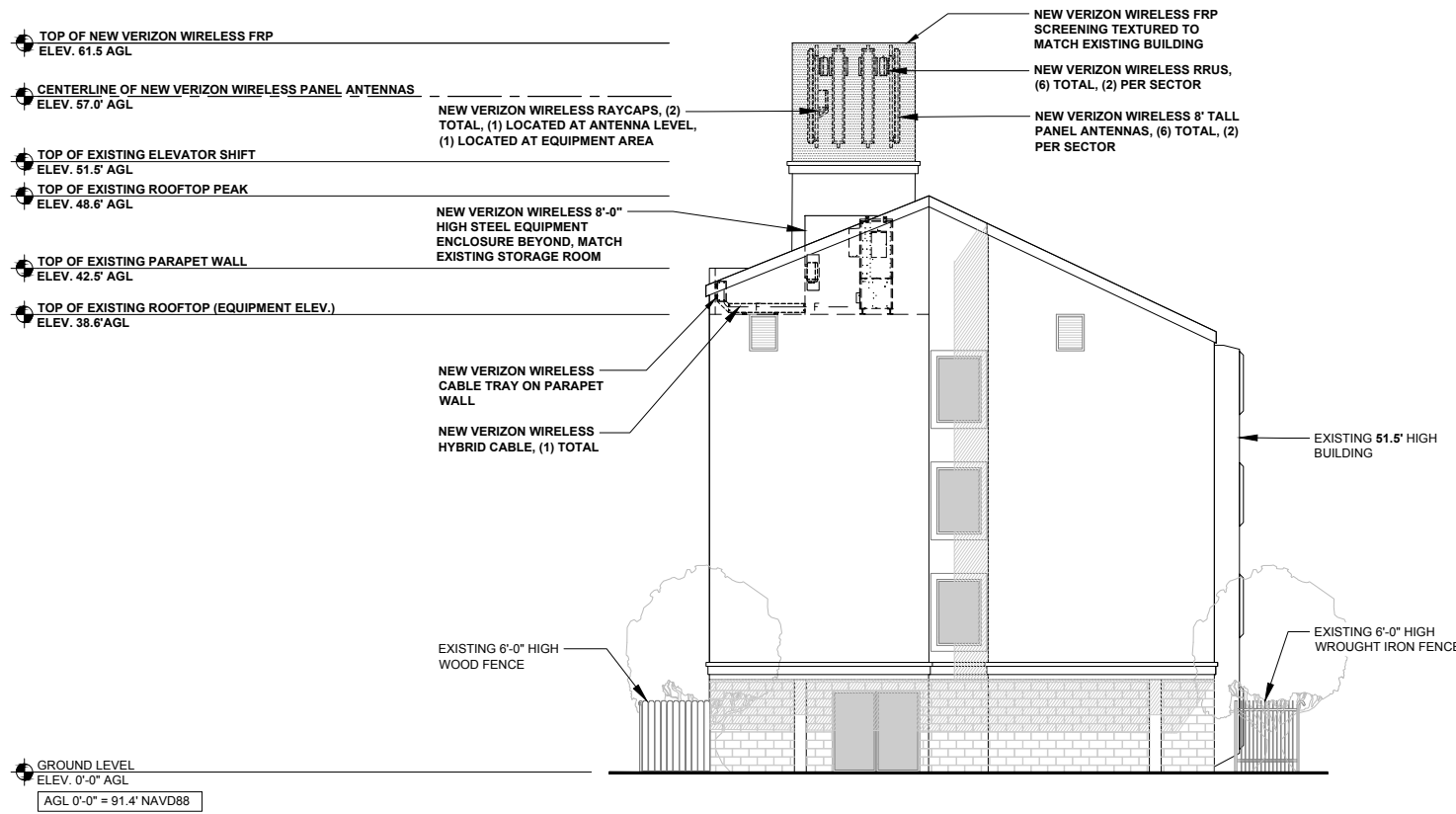
1

NOTE: THE ORIGINAL SIZE OF THIS DRAWING IS 24" X 36". SCALE INTO OR OUT OF THIS DRAWING FOR REDUCED OR ENLARGED SHEET SIZES.



WEST ELEVATION

0 2' 4' 8' SCALE: 1/8" = 1'-0" (24x36)
(OR) 1/16" = 1'-0" (11x17) **2**



SOUTH ELEVATION

0 2' 4' 8' SCALE: 1/8" = 1'-0" (24x36)
(OR) 1/16" = 1'-0" (11x17) **1**

ISSUE STATUS

REV.	DATE	DESCRIPTION	BY
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1	02/15/17	100% ZONING	FA
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3	07/10/17	100% ZONING	FA
4	10/09/18	100% ZONING	FA
5	03/23/20	100% ZONING	FA
6	04/02/20	100% ZONING	FA



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NORTH OAKLAND

PSL# 291116

5815 MARTIN LUTHER KING JR WAY
OAKLAND, CA 94609

SHEET TITLE:
SOUTH & WEST ELEVATIONS

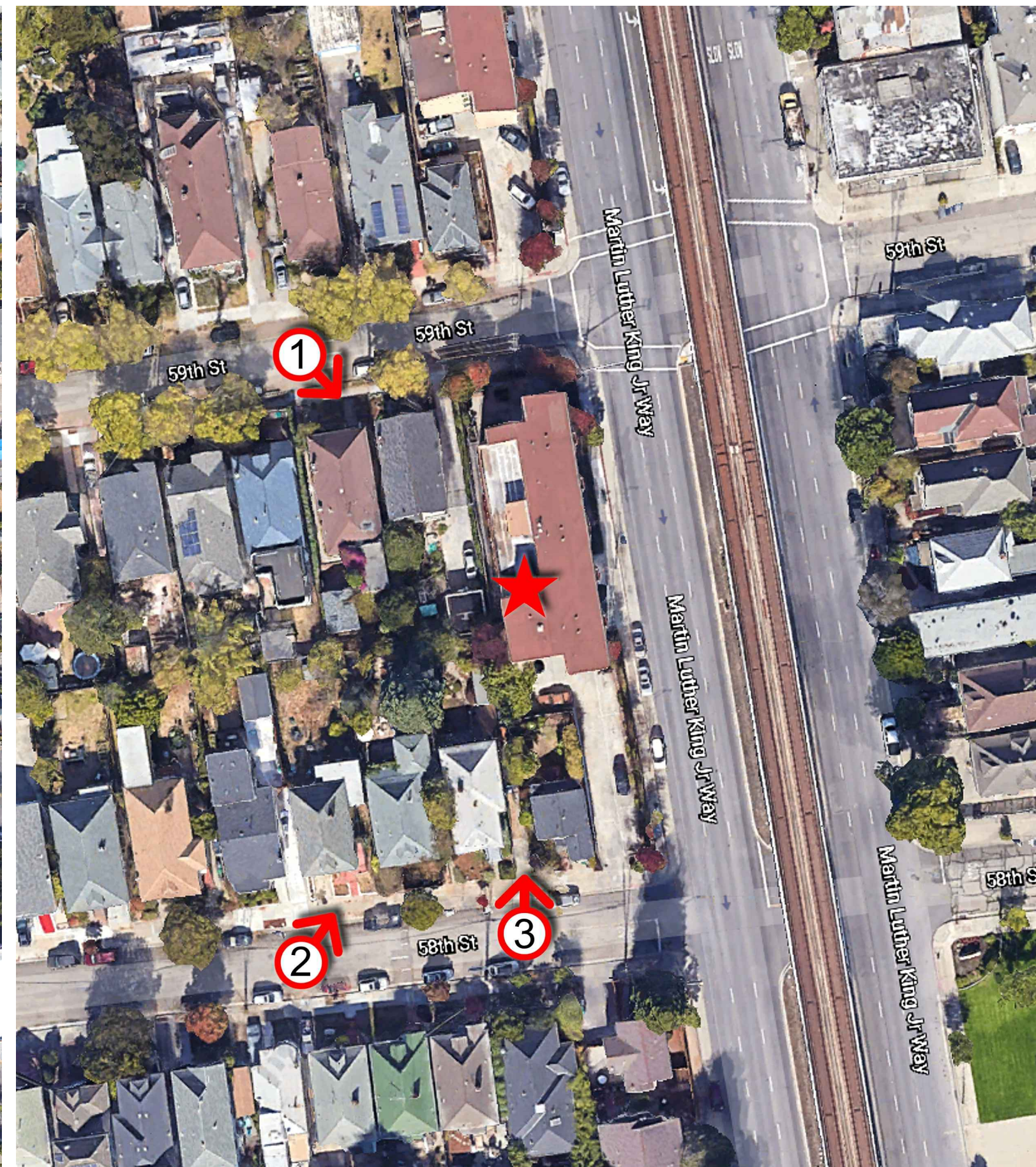
A-4

NOTE: THE ORIGINAL SIZE OF THIS DRAWING IS 24" X 36". SCALE INTO SHEET VALID FOR REDUCED OR ENLARGED SHEET SIZES.

VICINITY MAP PHOTOSIMULATION VIEWPOINTS



NORTH OAKLAND
PSL # 291116
5815 MARTIN LUTHER KING JR WAY
OAKLAND, CA 94609



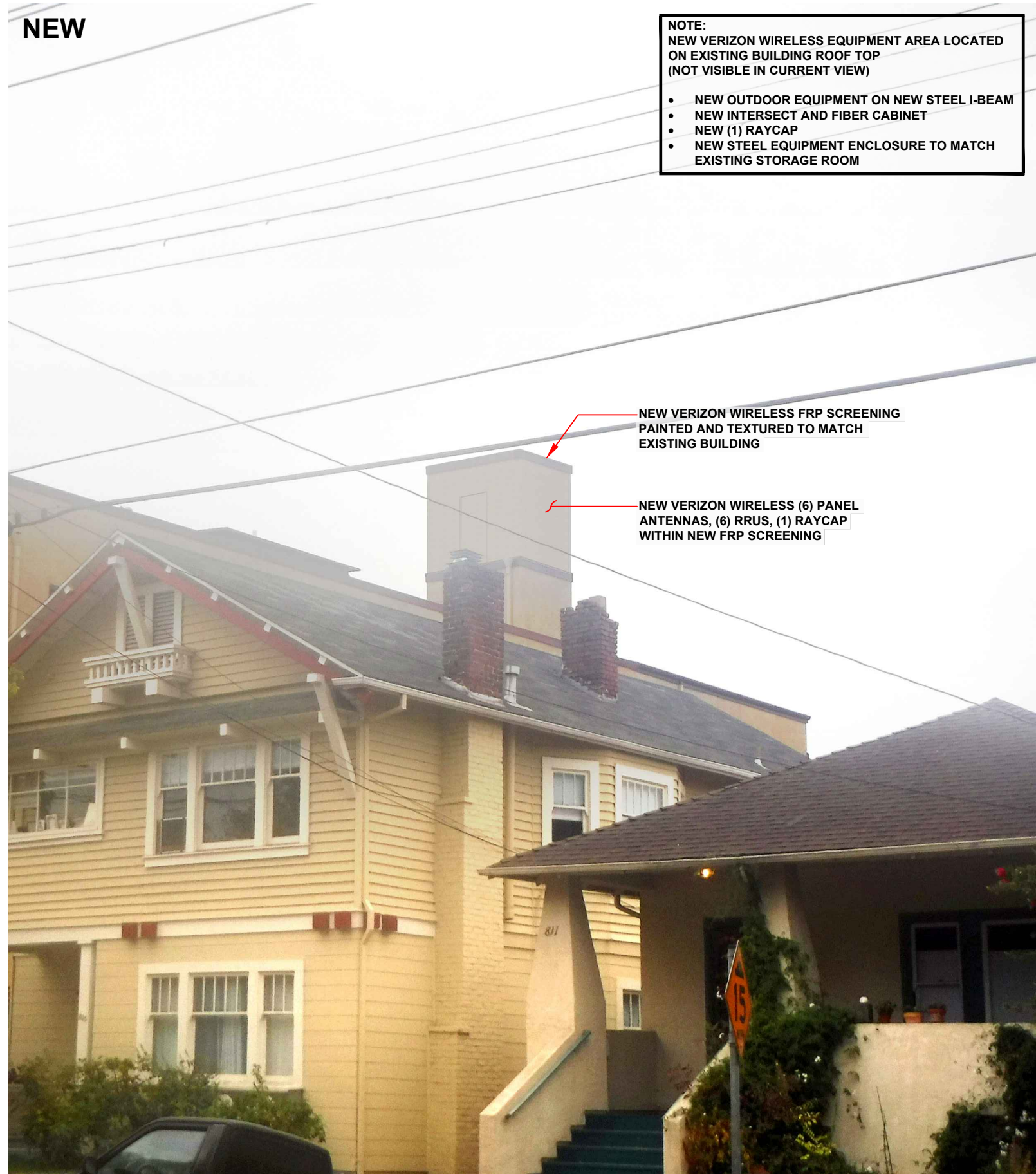
DISCLAIMER: THIS PHOTOSIMULATION IS INTENDED AS A GRAPHICAL REPRESENTATION OF EXISTING AND PROPOSED SITE CONDITIONS BASED ON THE PROJECT / DRAWING PLANS. IT IS NOT INTENDED FOR CONSTRUCTION. ACTUAL, FINAL CONSTRUCTION MAY VARY

PHOTOSIMULATION VIEWPOINT 1

EXISTING



NEW



NOTE:
NEW VERIZON WIRELESS EQUIPMENT AREA LOCATED ON EXISTING BUILDING ROOF TOP (NOT VISIBLE IN CURRENT VIEW)

- NEW OUTDOOR EQUIPMENT ON NEW STEEL I-BEAM
- NEW INTERSECT AND FIBER CABINET
- NEW (1) RAYCAP
- NEW STEEL EQUIPMENT ENCLOSURE TO MATCH EXISTING STORAGE ROOM

NEW VERIZON WIRELESS FRP SCREENING PAINTED AND TEXTURED TO MATCH EXISTING BUILDING

NEW VERIZON WIRELESS (6) PANEL ANTENNAS, (6) RRUS, (1) RAYCAP WITHIN NEW FRP SCREENING

PHOTOSIMULATION VIEWPOINT 2

EXISTING



NEW



NOTE:
NEW VERIZON WIRELESS EQUIPMENT AREA LOCATED
ON EXISTING BUILDING ROOF TOP
(NOT VISIBLE IN CURRENT VIEW)

- NEW OUTDOOR EQUIPMENT ON NEW STEEL I-BEAM
- NEW INTERSECT AND FIBER CABINET
- NEW (1) RAYCAP
- NEW STEEL EQUIPMENT ENCLOSURE TO MATCH
EXISTING STORAGE ROOM

NEW VERIZON WIRELESS FRP SCREENING
PAINTED AND TEXTURED TO MATCH
EXISTING BUILDING

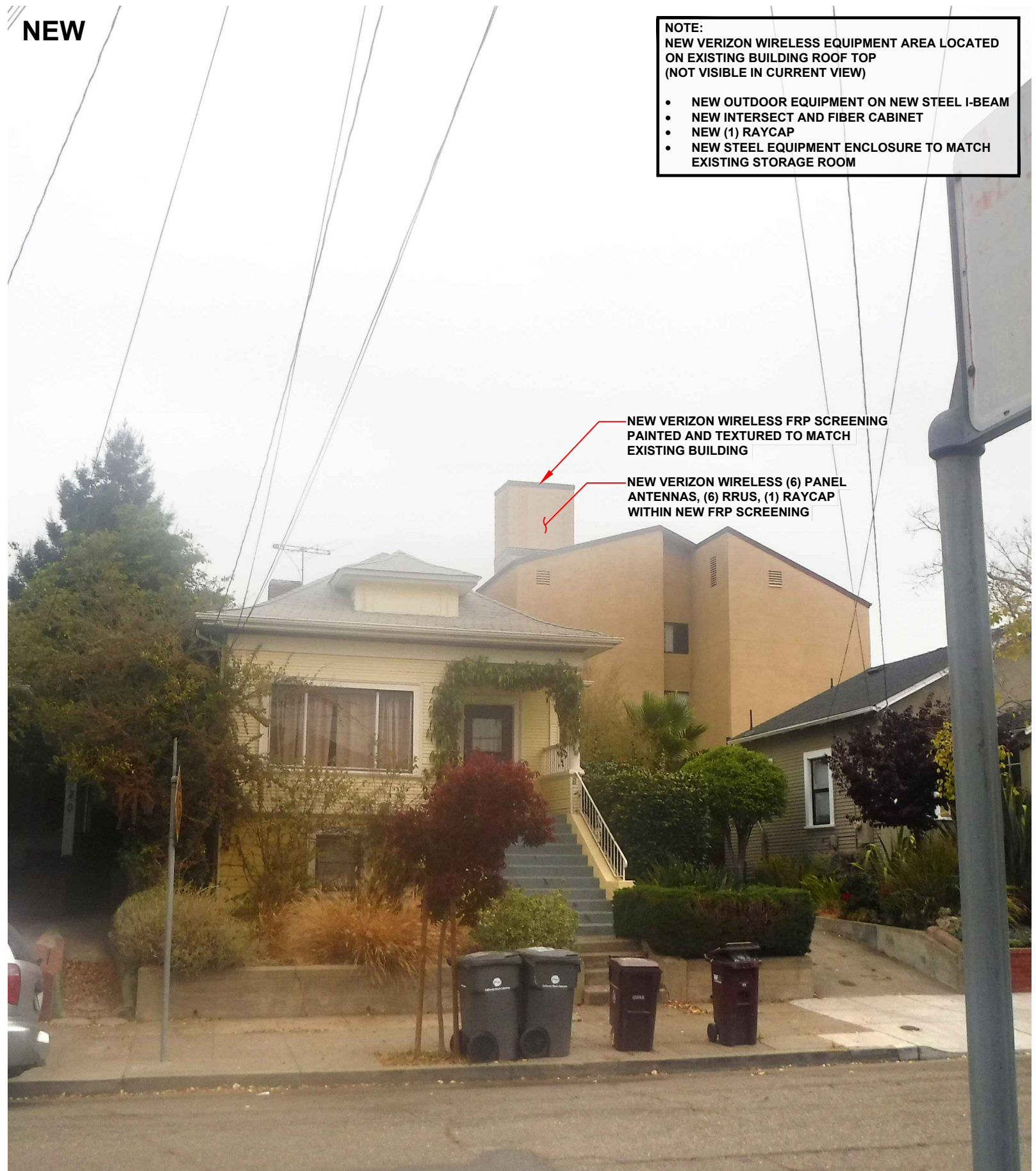
NEW VERIZON WIRELESS (6) PANEL
ANTENNAS, (6) RRUS, (1) RAYCAP
WITHIN NEW FRP SCREENING

PHOTOSIMULATION VIEWPOINT 3

EXISTING



NEW



NOTE:
NEW VERIZON WIRELESS EQUIPMENT AREA LOCATED ON EXISTING BUILDING ROOF TOP (NOT VISIBLE IN CURRENT VIEW)

- NEW OUTDOOR EQUIPMENT ON NEW STEEL I-BEAM
- NEW INTERSECT AND FIBER CABINET
- NEW (1) RAYCAP
- NEW STEEL EQUIPMENT ENCLOSURE TO MATCH EXISTING STORAGE ROOM

NEW VERIZON WIRELESS FRP SCREENING PAINTED AND TEXTURED TO MATCH EXISTING BUILDING

NEW VERIZON WIRELESS (6) PANEL ANTENNAS, (6) RRUS, (1) RAYCAP WITHIN NEW FRP SCREENING

Alternative Design Analysis

verizon✓

5815 Martin Luther King Jr Way
Oakland, CA 94609



Antennas with no FRP box:

- Sticks out like an industrial installation.
- Against code as it is not a stealth installation.
- Too bulky and obvious from the Public ROW.
- FRP box already hides the antennas from view and matches the building.



Antennas facade mounted on the penthouse:

- Not stealthed and can still be seen by the Public ROW.
- Could cause EME issues at that height.
- Would not provide enough coverage due to the lack of height.
- Current design provides adequate coverage and hides the antennas from public view.



Red brick chimney design:

- A third "chimney" on the property sticks out as abnormal.
- Can still be seen by the Public ROW.
- Current design matches existing penthouse.



Shorter FRP box next to penthouse

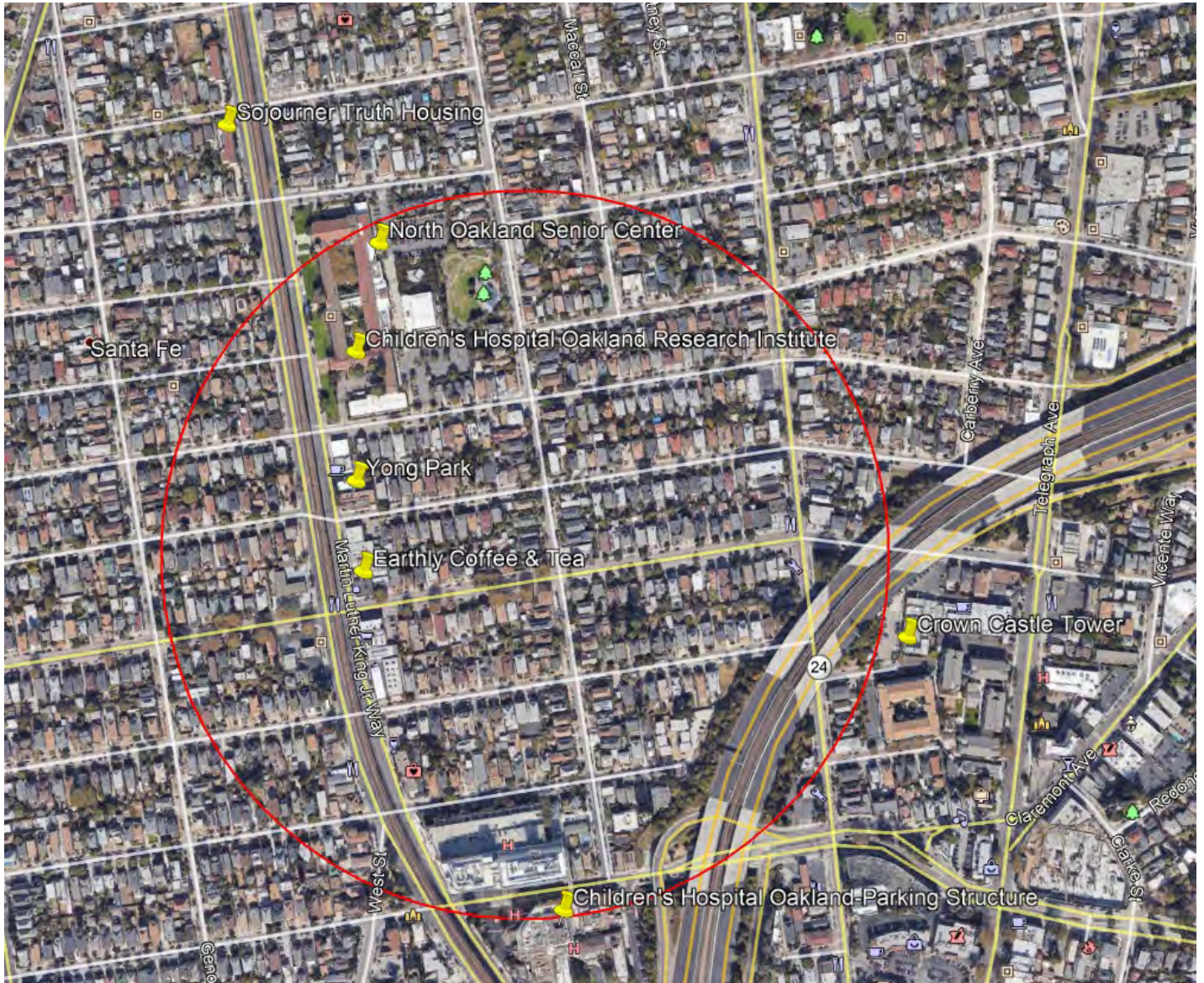
- The radio frequency engineer would require two separate antenna sectors on the corners of the roof to reach coverage objectives as the height is being decreased in the proposed location.
- Both boxes can be seen from the Public ROW
- Both boxes would bulky and the rear box is still tall.
- Current design is centralizing all antennas to one location.

Alternative Candidate

Analysis



North Oakland
5815 Martin Luther King Jr Way
Oakland, CA 94621
APN 015-1356-031



May 13, 2020

Summary of Site Evaluations

Conducted by: SAC Wireless

Introduction:

In 2015, Verizon Wireless needed to pursue a new wireless facility in a northern area of Oakland near the Children's Hospital Oakland Research Institute. Due to increased usage of wireless devices requiring cellular data, Verizon's existing sites in the area – UC Berkeley, Adeline MLK, Market Macarthur do not sufficiently meet the coverage needs within the neighborhood and search ring area of the proposed candidate. This will create disruptions to Verizon users, including personal, commercial, and emergency users. Therefore, Verizon Wireless is proposing a new wireless facility, described below, to provide and improve coverage to its network and to the North Oakland area.

The significant gap in coverage includes primarily residential and urban neighborhoods, as well as some commercial operations. Based on a comprehensive search of available sites over the last five years and after careful location analysis, Verizon Wireless has concluded that the site at 5815 Martin Luther King Jr Way constitutes the least intrusive alternative to help fill the identified significant gap in coverage based on the guidelines set forth by the City of Oakland's Telecommunications Regulations Chapter 17.128. Through this process, six (6) site alternatives were reviewed and eliminated based upon engineering analysis, lack of cooperation by potential landlords, and other limiting variables. With these sites exhausted, Verizon Wireless proposed the use a rooftop installation on the Sojourner Truth Housing building described above which is located in an urban residential area; this property will be described further in this Alternatives Sites Analysis. While it is not the only feasible site which meets the Code requirements, as well as the coverage needs of the community and emergency service providers, it is the only site candidate with an interested landlord.

I. Coverage Gap

This project's primary objective is to provide coverage to the area. There is currently little to no 4G LTE AWS signal in the area. Coverage is limited to the street and some in vehicle coverage, but there is no in building coverage in most areas of the proposed cell site location. Due to an increase of the use of wireless devices, as well as increased rates of streaming, Verizon Wireless also anticipates that many of the existing sites could eventually be overloaded, which reduces its ability to provide stable service to Verizon customers in the area and the proposed site would provide better coverage in the area.

This also results in a disruption to access to emergency services; many police, fire, and ambulance services use the Verizon 4G network to track their resources, dispatch assets, and relay data. Should an emergency occur, those residing in a building could not rely on the current systems as they are unusable. This risks the health and safety of those in the community. Verizon's proposed new site will provide the coverage, and high-speed data required to support the residents of the area. The 5815 Martin Luther King Jr Way's site fixes the coverage issue with minimal impact to the area. Please see the Coverage Justification for more detailed information.

II. Methodology

Once a significant coverage gap is determined, Verizon Wireless seeks to identify a site that will provide a solution through the "least intrusive means" based upon Verizon Wireless's experience with designing similar facilities and working within local regulations. In addition to seeking the "least intrusive" alternative, sites proposed by Verizon Wireless must be feasible in several ways. In this regard, Verizon Wireless reviews the topography, radio frequency propagation, elevation, height, available electrical and telephone utilities, access, and other critical factors such as a willing landlord in completing its site analysis. Wherever feasible, Verizon Wireless seeks to identify existing wireless collocation opportunities that allow placement of wireless facilities with minimal impacts. One existing wireless collocation opportunity was investigated, but it did not meet Verizon's radio frequency objectives. The next best option was to find a suitable site where Verizon's location could be stealth against the surrounding areas. Verizon was able to locate land on an urban residential building with sufficient height needed to meet the coverage requirement while simultaneously fitting with the character and surroundings

of the area. Per the Code, this new site build requires a Major Conditional Use Permit since it is classified as a new telecommunications facility. According to the City of Oakland’s preference list of telecommunication facilities, Verizon has eliminated each A-F category as possible locations for a wireless facility. Collocations on existing wireless towers were ruled out as only one was identified and it did not meet the radio frequency’s objectives. It is also too close to two existing small cell sites that may cause significant disturbance to the network. However, Verizon is proposing to collocate on an existing rooftop. City owned or public properties were investigated, and only one park appears to be available. According to section 17.128.100, parks are subject to the same regulations as set forth in the nearest residential zone. A tall structure on an open space would be more intrusive than a rooftop facility that can hide the antennas and match the existing building. Existing commercial and industrial structures in Nonresidential zones were also investigated and the landlords did not want to pursue a lease and/or did not meet the radio frequency engineer’s coverage objective. The rest of the parcels 1000’ from Verizon’s proposed location are residential parcels. Therefore, Verizon’s next step was to pursue residential properties to secure a lease agreement and meet the radio frequency’s coverage objectives.

III. Analysis

For five years, Verizon Wireless has sought a suitable location for a wireless facility to serve the urban, residential, and commercial areas of North Oakland. As collocation of facilities is generally preferred, Verizon Wireless first searched for existing wireless collocation sites which could meet the needs of the coverage gap. With no feasible existing wireless towers available to collocate, Verizon surveyed the coverage gap area for available building and ground sites for a new wireless facility. Verizon pursued six potentially viable candidates, including the Sojourner Truth Housing property site at 5815 Martin Luther King Jr Way. The Sojourner Truth Housing site was chosen as the preferred location because it has the best location for wireless reach, appropriate height for coverage, a cooperative and willing landlord, and the least construction concerns. Verizon has a lease in place with Sojourner Truth Housing and will move directly to construction once zoning and building permits are approved.

The following is a summary of prior sites reviewed within the search area. Each of these sites were subsequently eliminated as candidates due to a variety of reasons, including but not limited to: technical deficiencies identified by the Radio Frequency Engineer (RF), tenant opposition, lack of height, lack of landlord cooperation, etc.

Site/Owner Name	Property Address	Landlord Interest?	RF Acceptance?	Reason for Elimination
Yong Park	5600 MLK Jr. Way	No	Yes	Landlord backed out of lease negotiations.
Children’s Hospital Oakland Research Institute	5700 MLK Jr. Way	No	Yes	Landlord is not interested.
Children’s Hospital Oakland–Parking structure	747 52 nd Street	No	Yes	Landlord is not interested.
Crown Castle Tower	37.83947200 - 122.26341700747	Yes	No	Site is outside the targeted search ring area and too close to other sites. Will not meet RF objective.
North Oakland Senior Center	5714 MLK Jr Way	No	Yes	Landlord is not interested.
Earthly Coffee & Tea	5506 MLK Jr Way	No	No	LL unresponsive to multiple communication attempts. This will also not meet RF objective.

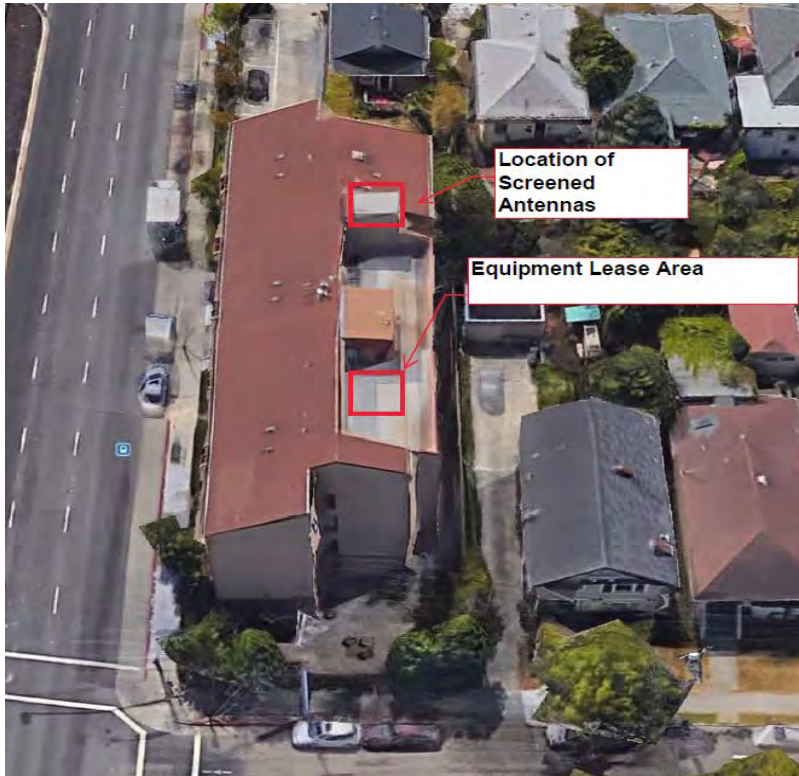
A more detailed analysis of each of the candidates is below:

Summary of Candidates Reviewed

Proposed Candidate

- 1. Sojourner Truth Housing**
5815 MLK Jr. Way
Zoning: Residential Urban
Site Type: Stealth Rooftop

Overhead View

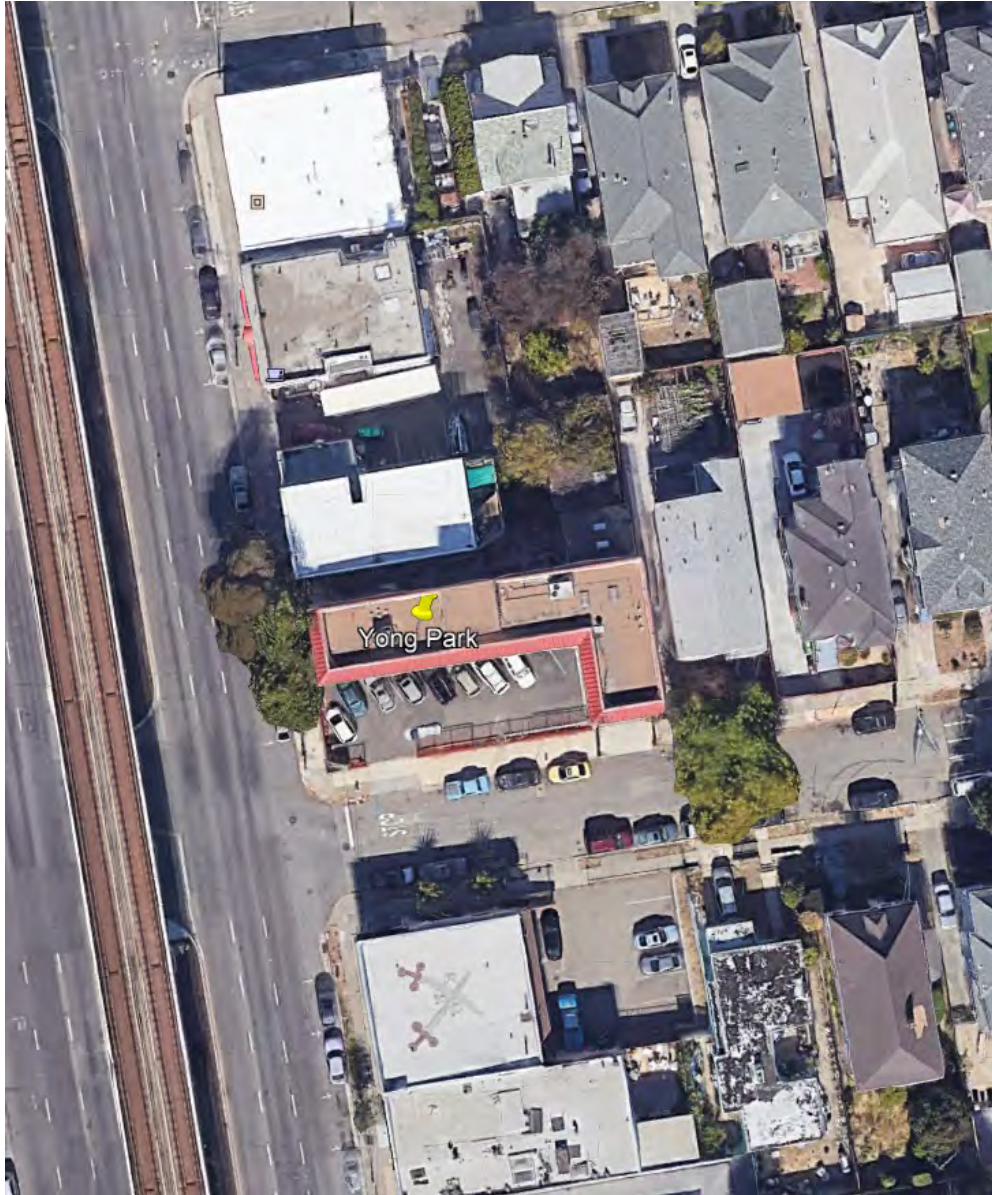


Equipment Area



Disqualified Candidates:

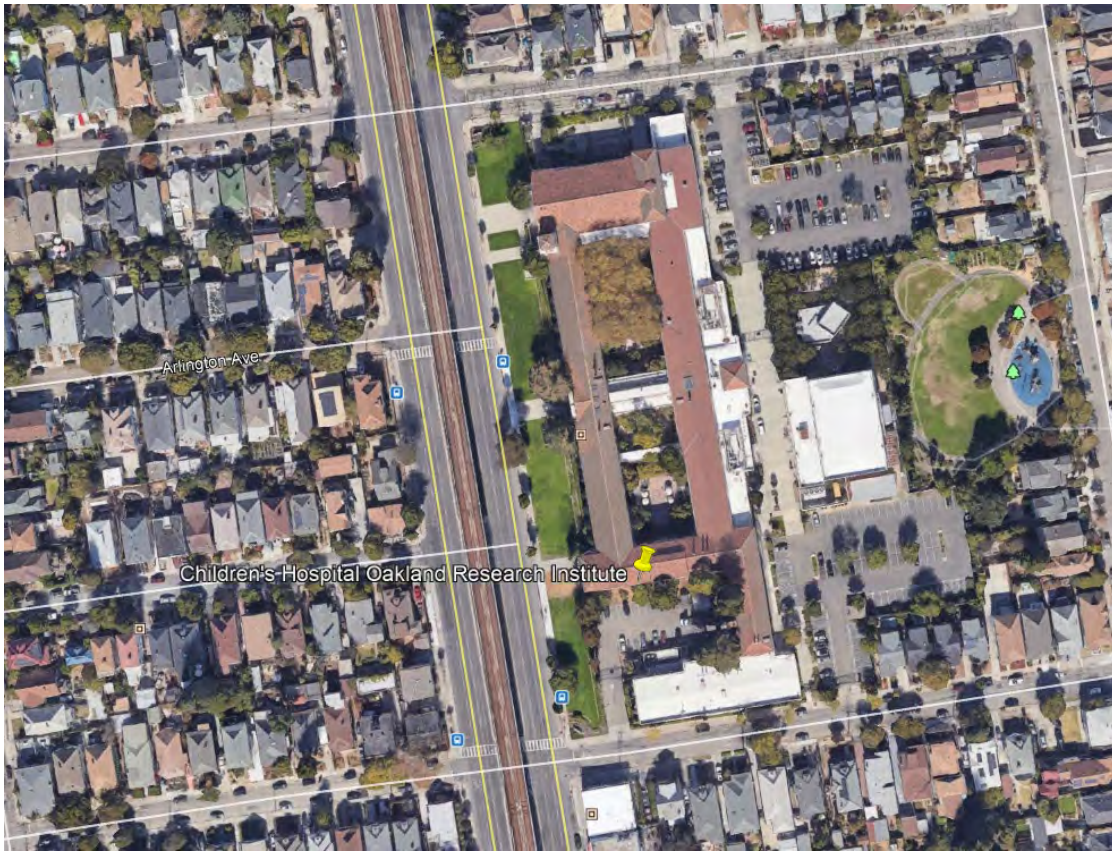
- 1. Yong Park**
5600 MLK Jr. Way
Site Type: Stealth Rooftop



Reason for Elimination:

This candidate was the prior primary candidate, and the landlord stated that they are still not interested in leasing rooftop space to Verizon for a telecommunications facility. The landlord was initially interested in pursuing this project, but after significant pushback from his tenants he chose not to move forward.

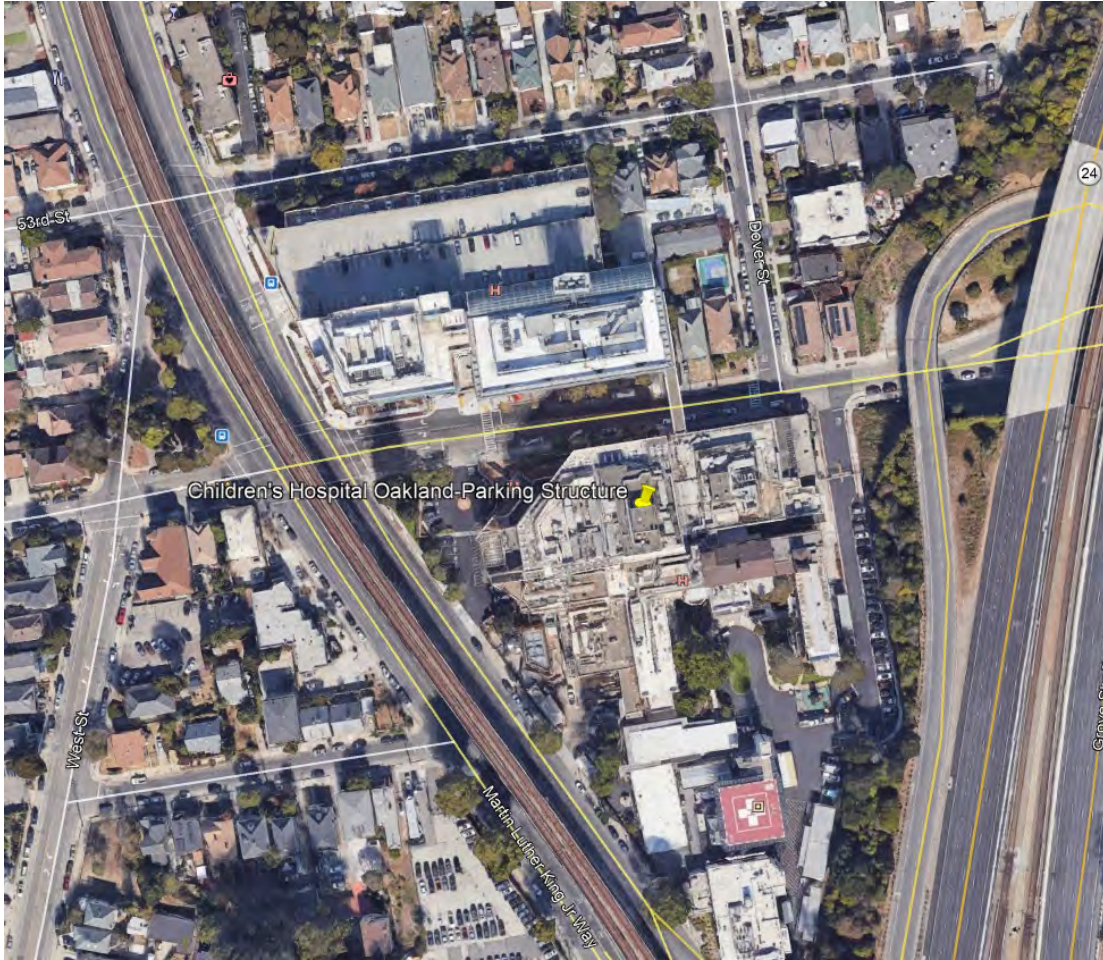
2. **Children's Hospital Oakland Research Institute**
5700 MLK Jr. Way
Site Type: Stealth rooftop



Reason for Elimination:

The landlord for this candidate is not interested in leasing rooftop or ground space to Verizon for a telecommunications facility.

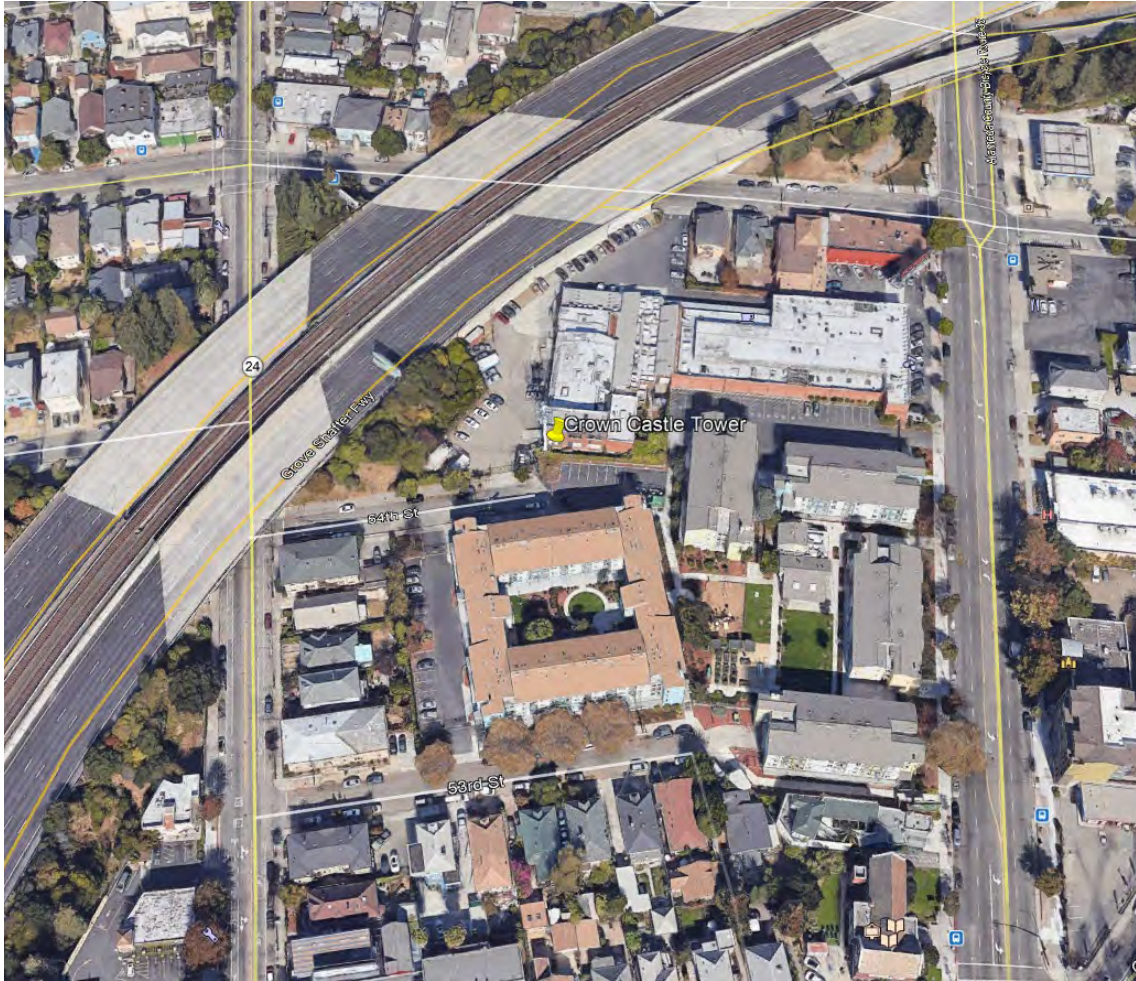
3. Children's Hospital Oakland–Parking structure
747 52nd Street
Site Type: Stealth Rooftop



Reason for Elimination:

The landlord for this candidate is not interested in leasing rooftop or ground space to Verizon for a telecommunications facility.

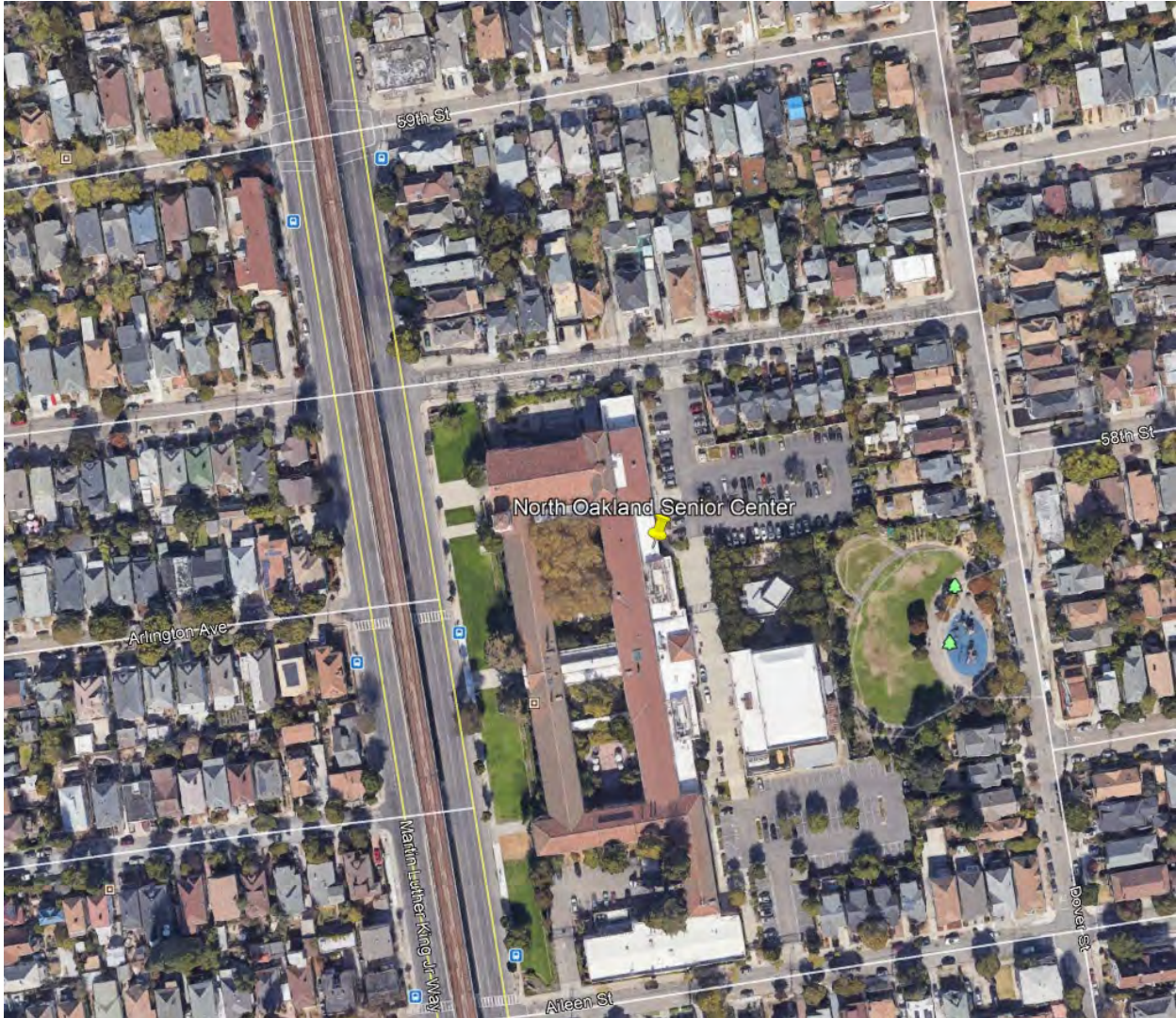
4. **Crown Castle Tower**
37.83947200 -122.26341700747
Site Type: Monopole



Reason for Elimination:

This candidate was deemed to be too far away from the desired coverage area to provide effective coverage. Additionally, this site is too close to two of Verizon's existing small cell sites and may cause significant disturbance to the network.

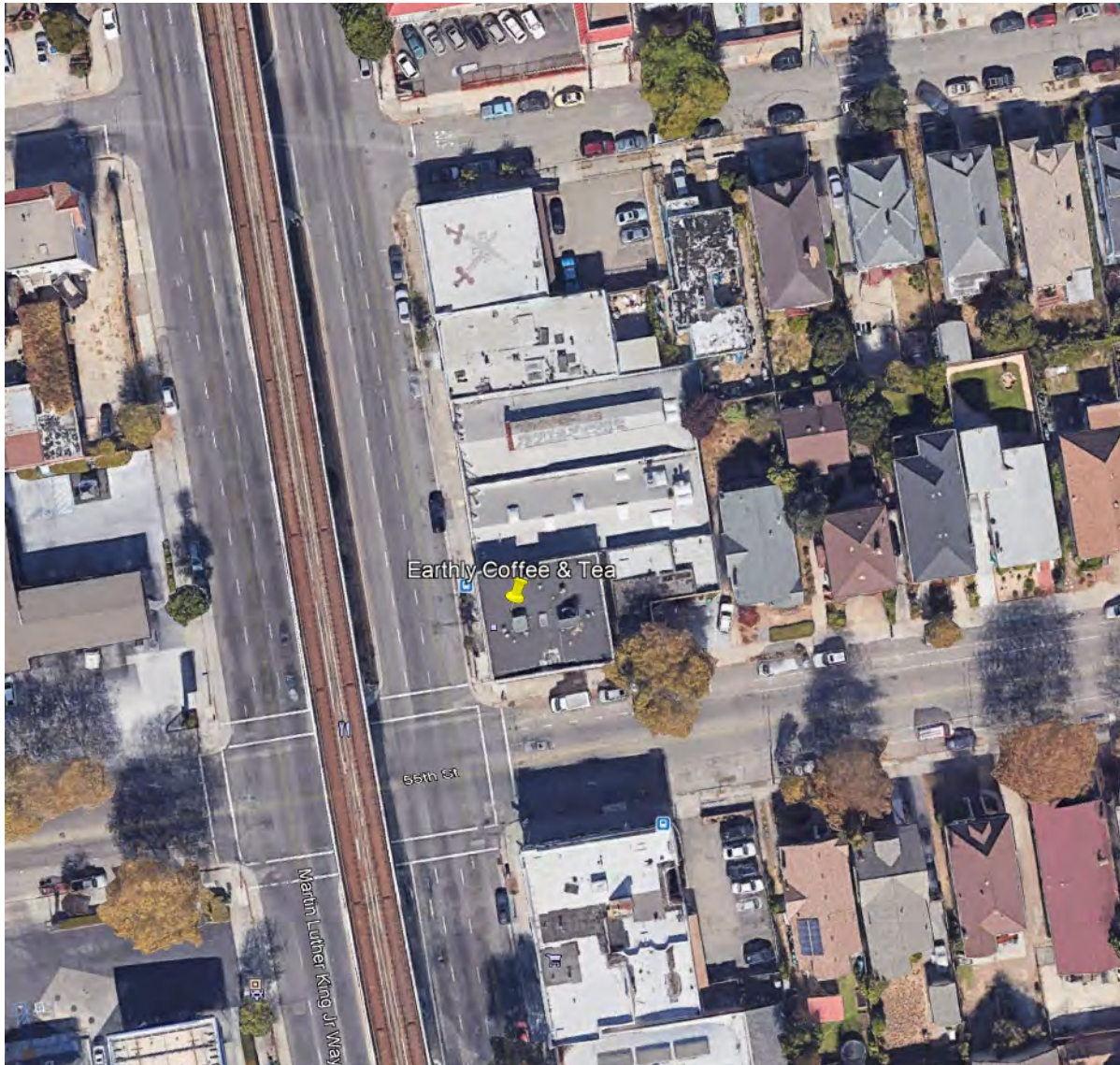
5. North Oakland Senior Center
5714 MLK Jr Way
Site Type: Stealth Rooftop



Reason for Elimination:

The landlord contact for this candidate was not interested in leasing to Verizon and also stated that the Children's Hospital next door would not approve a facility on the building.

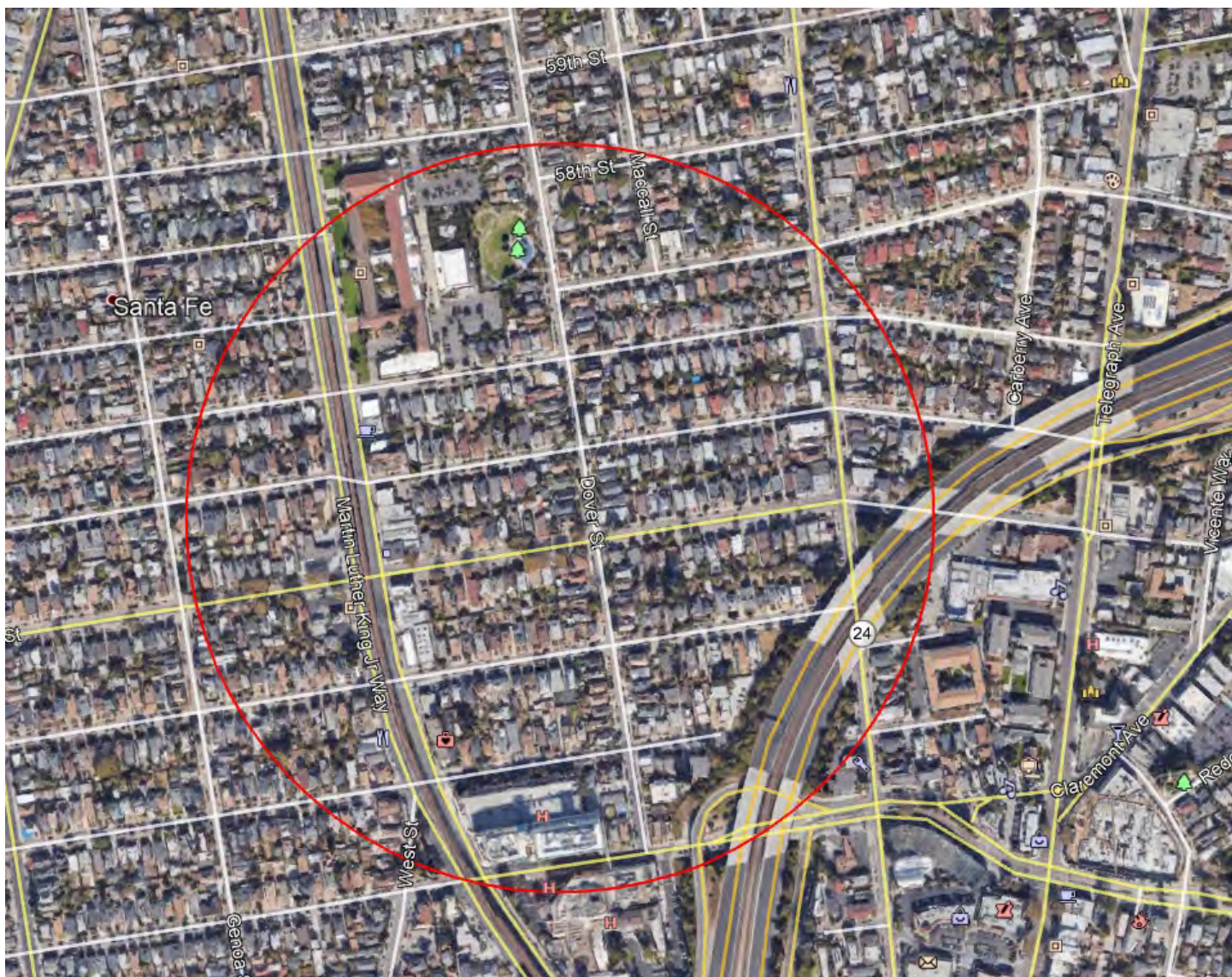
6. **Earthy Coffee & Tea**
5506 MLK Jr Way
Site Type: Stealth Rooftop



Reason for Elimination:

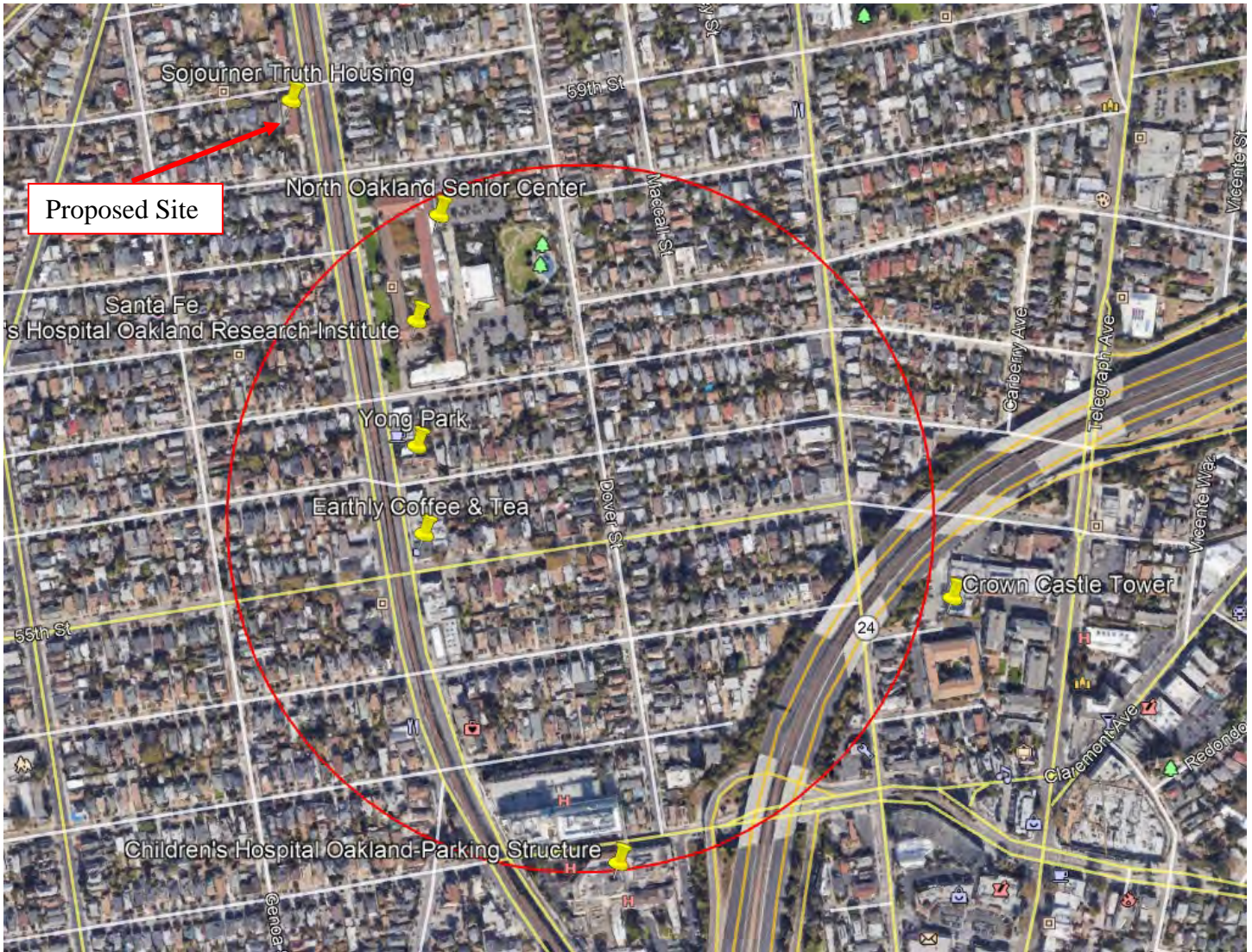
The landlord for this candidate was non-responsive to multiple mailed Letters of Intent and voicemail messages. This candidate also would not meet the radio frequency engineer's height requirements due to limited height of the structure.

North Oakland RF Search Ring Map



North Oakland SR – Objective of this SR is capacity offload for UC Berkeley, Adeline MLK and Market Macarthur sites.

Location Map of Proposed Site and Alternatives



Conclusion

Over the last five years, Verizon Wireless has pursued six potential alternatives to the site at the Sojourner Truth Housing property within the identified significant coverage gap. Each alternative was carefully reviewed and deemed infeasible due to poor radio frequency coverage, landlord disinterest too close to other sites and inadequate height as detailed in this report. Based on this thorough analysis and evaluation, Verizon Wireless concludes that the proposed stealth wireless communication rooftop collocation at 5815 Martin Luther King Jr Way is the most effective, least intrusive and most easily constructible site available to address the significant gap in coverage, the community's wireless needs and the need for emergency backup power. Emergency services also require adequate coverage and resources in emergency situations and this site will address the current health and safety concern. This site also represents the best possible candidate based on its minimal visual impact due to the stealth design, cooperative landlords, ease of access, and ease of construction.

**Verizon Wireless • Proposed Base Station (Site No. 291116 “North Oakland”)
5815 Martin Luther King Jr. Way • 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. 291116 “North Oakland”) proposed to be located at 5815 Martin Luther King Jr. Way 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 5815 Martin Luther King Jr. Way 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 Band	Transmit Frequency	“Uncontrolled” Public Limit	Occupational Limit (5 times Public)
Microwave (point-to-point)	1–80 GHz	1.0 mW/cm ²	5.0 mW/cm ²
Millimeter-wave	24–47	1.0	5.0
Part 15 (WiFi & other unlicensed)	2–6	1.0	5.0
BRS (Broadband Radio)	2,490 MHz	1.0	5.0
WCS (Wireless Communication)	2,305	1.0	5.0
AWS (Advanced Wireless)	2,110	1.0	5.0
PCS (Personal Communication)	1,930	1.0	5.0
Cellular	869	0.58	2.9
SMR (Specialized Mobile Radio)	854	0.57	2.85
700 MHz	716	0.48	2.4
[most restrictive frequency range]	30–300	0.20	1.0

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



**Verizon Wireless • Proposed Base Station (Site No. 291116 “North Oakland”)
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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, mounted with a clear 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 SAC AE Design Group, Inc., dated October 9, 2018, it is proposed to install six JMA Wireless Model MX06FRO-840-02 directional panel antennas within a new view screen enclosure to be installed on top of the elevator penthouse above the roof of the four-story residential building located at 5815 Martin Luther King Jr. Way in Oakland. The antennas would employ up to 8° downtilt, would be mounted at an effective height of about 57 feet above ground, 8½ feet above the peak of the sloped upper roof, and would be oriented in pairs toward 75°T, 165°T, and 250°T. The maximum effective radiated power in any direction would be 51,870 watts, representing simultaneous operation at 20,900 watts for AWS, 10,000 watts for PCS, 10,970 watts for cellular, and 10,000 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 0.034 mW/cm², which is 6.2% of the applicable public exposure limit. The maximum calculated level at the top-floor elevation of any nearby building* is 40% of the public exposure limit. It should be noted that these results include several “worst-case” assumptions and

* Including the three-story residences across Martin Luther King Jr. Way, based on photographs from Google Maps.



**Verizon Wireless • Proposed Base Station (Site No. 291116 “North Oakland”)
5815 Martin Luther King Jr. Way • Oakland, California**

therefore are expected to overstate actual power density levels from the proposed operation. Levels are calculated to exceed the applicable public exposure limit on the sloped upper roof of the subject building, in front of the antennas.

Recommended Mitigation Measures

Due to their mounting location and height, the Verizon antennas are not 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, as well as the information provided in Figure 3, be provided to all authorized personnel who have access to the sloped upper roof and/or to the antennas, including employees and contractors of Verizon and of the property owner. No access within 62 feet directly in front of the Verizon antennas themselves, such as might occur during certain maintenance activities on the 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 at the top of the wall next to the enclosure, as shown in Figure 3, and that explanatory signs[†] be posted on the roof access door, at the yellow stripe, and on the face of 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 5815 Martin Luther King Jr. Way 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 a section of the roof edge, 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.

**Verizon Wireless • Proposed Base Station (Site No. 291116 “North Oakland”)
5815 Martin Luther King Jr. Way • Oakland, California**

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration No. E-20309, which expires on March 31, 2021. This work has been carried out under her direction, and all statements are true and correct of her own knowledge except, where noted, when data has been supplied by others, which data she believes to be correct.



Andrea L. Bright

Andrea L. Bright, P.E.
707/996-5200

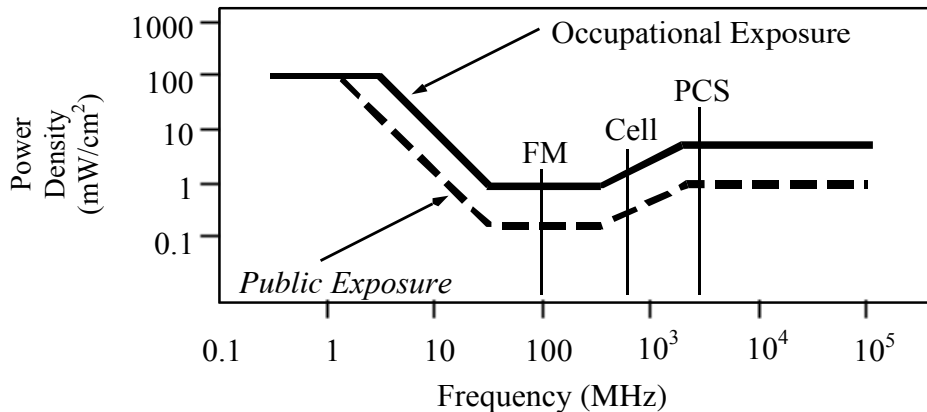
March 29, 2019

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 Applicable Range (MHz)	Electromagnetic Fields (f is frequency of emission in MHz)					
	Electric Field Strength (V/m)		Magnetic Field Strength (A/m)		Equivalent Far-Field Power Density (mW/cm ²)	
0.3 – 1.34	614	<i>614</i>	1.63	<i>1.63</i>	100	<i>100</i>
1.34 – 3.0	614	<i>823.8/f</i>	1.63	<i>2.19/f</i>	100	<i>180/f²</i>
3.0 – 30	1842/f	<i>823.8/f</i>	4.89/f	<i>2.19/f</i>	900/f ²	<i>180/f²</i>
30 – 300	61.4	<i>27.5</i>	0.163	<i>0.0729</i>	1.0	<i>0.2</i>
300 – 1,500	3.54√f	<i>1.59√f</i>	√f/106	<i>√f/238</i>	f/300	<i>f/1500</i>
1,500 – 100,000	137	<i>61.4</i>	0.364	<i>0.163</i>	5.0	<i>1.0</i>



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



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/cm²,

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/cm²,

where θ_{BW} = half-power beamwidth of antenna, in degrees,

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

D = distance from antenna, in meters,

h = aperture height of 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:

power density $S = \frac{2.56 \times 1.64 \times 100 \times RFF^2 \times ERP}{4 \times \pi \times D^2}$, in mW/cm²,

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

RFF = three-dimensional relative field factor toward point of calculation, and

D = distance from antenna effective height to point of calculation, in meters.

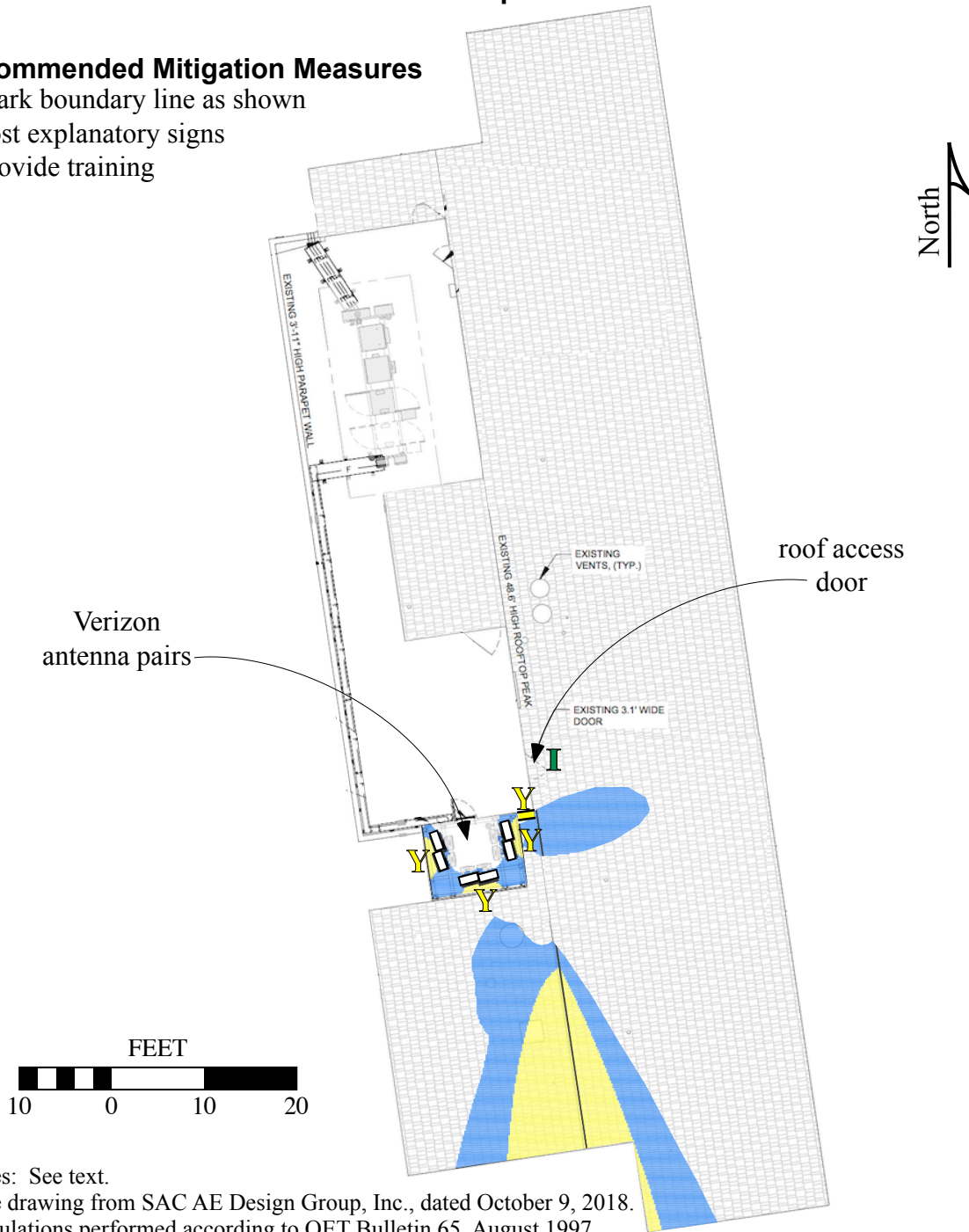
The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 (1.6 x 1.6 = 2.56). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired units of power density. This formula is used in a computer program capable of calculating, at thousands of locations on an arbitrary grid, the total expected power density from any number of individual radio frequency sources. The program also allows for the inclusion of uneven terrain in the vicinity, as well as any number of nearby buildings, to obtain more accurate projections.

**Verizon Wireless • Proposed Base Station (Site No. 291116 “North Oakland”)
5815 Martin Luther King Jr. Way • Oakland, California**

Calculated RF Exposure Levels on Roof

Recommended Mitigation Measures

- Mark boundary line as shown
- Post explanatory signs
- Provide training



Notes: See text.
Base drawing from SAC AE Design Group, Inc., dated October 9, 2018.
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

