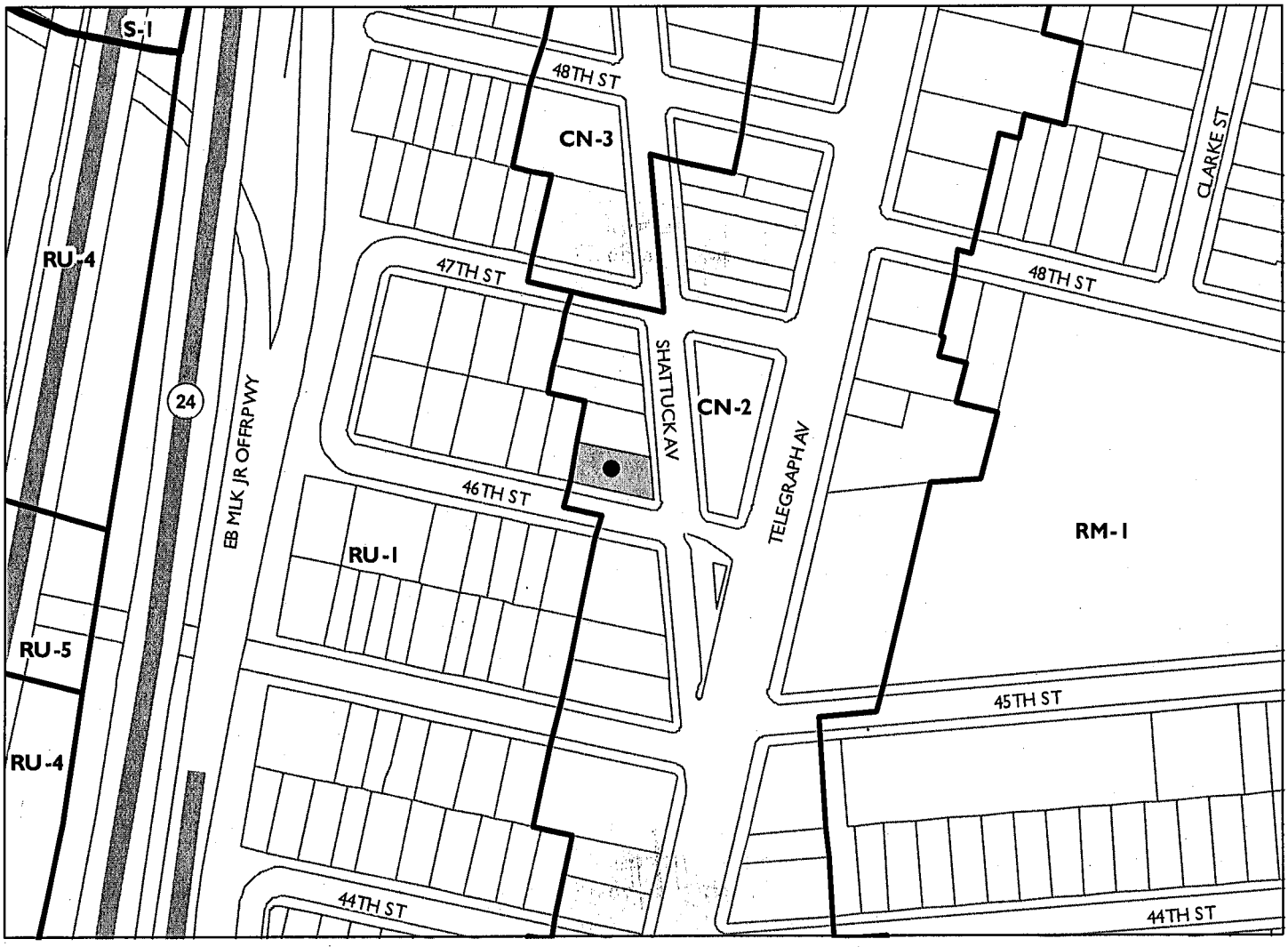
Location:	**4601 Shattuck Avenue (APN013-1160-005-00)**
Proposal:	To collocate three new concealed antenna panels on the rooftop of a commercial facility.
Applicant/Contact Person: **Phone Number:**	Phil Gamick for Sprint (530) 386-5253
Owner/Contact:	Storquest Oakland, LLC
Case File Number:	**PLN14075**
Planning Permits Required:	Revision of a Major Conditional Use Permit to install a Macro Telecommunication Facility within 100 feet of the boundary of a residential zone; and Regular Design Review for alterations to an existing wireless facility.
General Plan:	Neighborhood Center Mixed Use
Zoning:	CN-2 Neighborhood Commercial Zone
Environmental Determination:	Exempt, Section 15301(e) of the State CEQA Guidelines: Existing Facilities (additions to existing structures); Section 15303 of the State CEQA Guidelines: New Construction or Conversion of Small Structures; Section 15183 of the State CEQA Guidelines: Projects consistent with a Community Plan, General Plan or Zoning
Historic Status:	Potential Designated Historic Property (PDHP) Survey Rating: C3, Secondary Importance
Service Delivery District:	2
City Council District:	1
Date Filed:	March 31, 2014 (revised plans submitted on December 17, 2014)
Action to be Taken:	Decision based on staff report
Finality of Decision:	Appealable to City Council within 10 calendar days
For Further Information:	Contact Case Planner **Mike Rivera** at (510) 238-6417, or by email at mrivera@oaklandnet.com

PROJECT SUMMARY

The applicant, on behalf of Sprint, requests revisions to an approved Major Conditional Use Permit and Regular Design Review Permit approved by the Planning Commission in 2012. The proposed revisions are for the installation of three additional antenna panels on the rooftop of a commercial building. The proposal will collocate the three new antennas with the existing three antenna panels operated by Sprint. The new antenna panels will be located in two different sectors (locations) and will be concealed from public view. The proposal also includes the replacement of two telecommunication cabinets inside the existing equipment room, located in the first floor of the building.

CITY OF OAKLAND PLANNING COMMISSION



Case File: PLN14075
Applicant: Phil Gamick for Sprint
Address: 4601 Shattuck Avenue
Zone: CN-2

The property is considered a Macro Telecommunication Facility because the 6-story high commercial building (used as a self-storage "StorQuest" facility) has more than twelve wireless antennas that are operated by different wireless carriers. The antennas are located on the rooftop and around the exterior face of the building parapet. The Planning Commission granted approvals of the existing antennas since the early 1990's. The property is located at the corner of Shattuck Avenue and 46th Street, in the Temescal District.

Pursuant to Section 17.134.020(A)(3)(i) of the Oakland Planning Code, the proposal requires a decision by the Planning Commission because the wireless facility is located within one hundred (100) feet of the boundary of any residential zone. The property is adjacent to the RU-1 Urban Residential Zone to the west and southwest of the subject property. Based on design plans submitted, staff recommends approval of the proposed revisions subject to the required findings found in **Attachment A** and conditions of approval in **Attachment B**.

TELECOMMUNICATIONS BACKGROUND

Under the Telecommunications Act of 1996, the Federal Communications Commission (FCC) provided limits on cities' zoning jurisdiction over wireless telecommunications facilities essentially, limiting their authority to aesthetic review and confirmation of satisfactory radio frequency (RF) emissions reports. For further information, the Federal Communications Commission can be contacted at 1-888-225-5322 or at www.fcc.gov

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, on the environmental effects of radio frequency emissions (RF) of such facilities, which otherwise comply with the 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 (Federal Communications Commission) 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"

PROPERTY DESCRIPTION

The 0.11 acre corner parcel contains an approximately 25,000 square foot, six-story commercial building, which is used as a self-storage facility. The property is in the CN-2 Neighborhood Commercial Zone as are the other properties located to the north, east and south. To the west and southwest, the property is adjacent to the RU-1 Urban Residential Zone. The property is also located within the vicinity of Highway-24 and BART to the west and Telegraph Avenue to the east, a major corridor. The commercial building serves as a collocation facility that includes other wireless carriers such as Nextel, ClearWire and T-Mobile. Some of the antenna panels are flush-mounted around the exterior top building walls/parapet and are screened and painted to match the building. The facility also has other small dish-antennas mounted on a triangular-shaped steel-frame support structure, located near the east end of the rooftop.

PROJECT DESCRIPTION

The proposal is a revision to an approved Major Conditional Use Permit (CMD11-159) to collocate three new additional antenna panels with three existing antenna panels, operated by Sprint. The three proposed antennas will be concealed and located on the rooftop of the building. **(See Attachment C)** The roof plan shows two different proposed locations, Sectors "B" and "C". Sector "B" located east from the center of the building roof shows one 5 feet tall antenna panel mounted on an existing 10 feet high Nextel steel frame support structure. The proposed antenna will be concealed by 2 feet in diameter radome fiberglass and painted to match the beige color of the frame support and building. Sector "C" located north from the center of the building roof shows the installation of two 5 feet tall antenna panels mounted on a steel support structure and concealed by a new fiberglass enclosure. (Note: Sector "A" is an existing fiberglass enclosure that measures 6'x 6' in area and 13'- 6" high and contains inside two existing antenna panels operated by the same carrier, Sprint). The proposal will increase the width of the existing antenna enclosure from 6 feet to 9 feet, but will maintain the same depth of 6 feet and height of 13 feet, 6 in. The new antenna enclosure will be painted beige color to match the building and the other antenna enclosures. The application also includes photo simulations of the existing and proposed antenna enclosures viewed from different public areas, one at the intersection of Shattuck Avenue and 47th Street, and the other one at the intersection of Shattuck Avenue and 45th Street, near Telegraph Avenue. **(See Attachment D)**

GENERAL PLAN ANALYSIS

The property and development proposal is located in the Neighborhood Center Mixed Use Land Use Classification of the Oakland General Plan. The intent of the Neighborhood Center Mixed Use is to identify, create, maintain and enhance mixed use neighborhood commercial centers. The goals set forth in the General Plan include personal and business services and entertainment uses. The proposal will provide and improve cellular, data and internet services to meet the ongoing demand of the daily and long-term needs of the public. Improvements to the telecommunication networks are important to provide services to the surrounding businesses and to the general public. The General Plan Objective I/C3 states that Oakland needs to serve a wide variety of commercial uses and provide personal and professional services. The proposed project for wireless communication facility will serve the needs of the surrounding

businesses and residents alike, because of the demand for quality and reliable wireless communication service and internet use.

ZONING ANALYSIS

The property is located along Shattuck Avenue in the CN-2 Neighborhood Commercial Zone. The intent of the CN-2 Zone is to enhance the character of the established neighborhood commercial centers that have a compact, vibrant pedestrian environment. Although this portion of Shattuck Avenue does not have a high concentration of commercial centers, the proposal will contribute and will improve the existing wireless telecommunications facility, and therefore will enhance the character of the neighborhood commercial area by providing essential wireless communication services to residential and commercial users in the Temescal District and surrounding neighborhoods.

Per Section 17.134.020(A)(3)(i) of the Oakland Planning Code, the proposal for a Macro Telecommunication Facility requires a Major Conditional Use Permit and decision by the Planning Commission if located within one hundred (100) feet of the boundary of any residential zone. The proposed project is located within 100 feet from the RU-1 Urban Residential Zone. The purpose of the Conditional Use Permit is to analyze the operating characteristics or potential adverse effects on the surrounding areas. Furthermore, per Section 17.33.020 of the Planning Code, the proposal for a Macro Telecommunication Facility requires Design Review approval. The purpose of Design Review is to analyze projects that require special design treatment and consideration of relationship to the site and physical surroundings. Staff has analyzed the required Conditional Use Permit and Design Review findings and can justify the approval of the proposed Macro Telecommunication Facility.
(See Attachment A)

ENVIRONMENTAL DETERMINATION

The California Environmental Quality Act (CEQA) Guidelines lists the projects that qualify as Categorical Exemptions from environmental review. The development proposal is categorically exempt from environmental review requirements pursuant to Section 15301(e) for additions to existing structures, Section 15303 for New Construction and Conversion of Small Structures and Section 15183 for projects consistent with a Community Plan, General Plan or Zoning.

KEY ISSUES AND IMPACTS

Conditional Use Permit and Regular Design Review Findings

Per Section 17.128.070(C) and 17.128.070(B) of the Planning Code, the project proposal requires additional Conditional Use Permit and Design Review findings for Macro facilities. The purpose of the Conditional Use Permit and Design Review findings is to analyze the operating characteristics or potential adverse effects on the surrounding uses, and the community character in general. Staff will evaluate these required Findings in the content of this report.

Site Location Preferences

Planning Code Section 17.128.110 of the Telecommunication Regulations, states that new wireless facilities shall generally be located on the following properties or facilities in order of preference:

A. Collocated 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;

D. Existing commercial or industrial structures in residential zones;
E. Other non-residential uses in residential zones;
F. Residential uses in non-residential zones; and
G. Residential uses in residential zones.

The above regulation states that proposed facilities locating on A, B or C ranked preference, do not require a site alternative analysis. Staff finds that the proposal to install three new antennas and collocating them with an existing commercial facility that contains other approved wireless telecommunication antennas correspond with the first site location preference (A) for placing the antennas with other existing wireless antennas on the roof of the six-story building. Therefore, staff believes that the installation and collocation of the proposed antenna panels on the existing commercial building meets the Site Location Preference, and thus a site alternative analysis will not be required.

Site Design Preferences

Per Planning Code, Section 17.128.120 of the Telecommunication Regulations states that new wireless facilities shall generally be designed in the following order of preference:

A. Building or structure mounted antennas 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 (façade 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.

This regulation states that proposed telecommunication facilities which are designed to meet A or B ranked preference and do not require a site design alternative analysis; however, facilities designed to meet C through F must submit a site design alternative analysis. A site design alternative analysis consists of written evidence showing the reason each higher preference design alternative can not be used. This evidence must be in sufficient detail for independent verification that can be obtained if required by the Zoning Manager. The evidence should indicate if the reason an alternative was rejected is due to technical issues (e.g. inappropriate height or interference with other RF sources), or for other constrains (e.g. inability to provide utilities or construction impediments). The proposal to install and collocate three additional concealed antenna panels located on the roof of the building fits with Site Design Preferences A and B. The project meets Preferences A and B because the proposed three antenna panels are concealed from view by a new radome fiberglass structure and a reinforced fiberglass enclosure, and are set back from the edge of the roof, thus making them not visible from public right-of-way.

Radio Frequency Emissions Standards

Planning Code Section 17.128.130 of the Telecommunications Regulations, requires the applicant to submit the following verifications:

A. With the initial application submittal, a Radio Frequency (RF) emissions report shall be 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 established 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.

The proposal includes a Radio Frequency (RF) Emissions report prepared by Hammett & Edison Consulting Engineering. **(See Attachment E)** The project engineer analyzed the proposal and determined that the project will comply with the set standards for limiting public exposure to radio frequency energy and will not cause significant impacts on the environment. In order to confirm that the applicant meets the standards of Section 17.128.130 of the Planning Code, staff requires a condition of approval that the applicant submits a final Radio Frequency emissions report prior to the issuance of a final building permit stating that the alterations to the existing Sprint facility is operating within the acceptable thresholds as established by the regulatory Federal Communication Commission. **(See Conditions of Approval # 14)**

CONCLUSION

Staff finds the proposal for three additional concealed antenna panels is a compatible use for the surrounding area because it continues to provide improved wireless communication services, and internet use to the general public, without creating adverse impacts to the environment. The proposal will not create a cumulative impact to the site because the antenna panels are set back from the edge of the rooftop and are screened from public view. The proposal also complies with the regulations for Radio Frequency emissions set by the Federal Communication Commission. Therefore, staff determines that the proposal meets the required findings **(See Attachment A)**, and recommends approval, subject to the Conditions of Approval. **(See Attachment B)**

RECOMMENDATIONS

1. Affirm staff's environmental determination.

2. Approve Major Conditional Use Permit and Regular Design Review application PLN14075 subject to the attached Findings and Conditions of Approval.

Prepared by:

Mike Rivera
Planner II
Bureau of Planning

Approved by:

Scott Miller
Zoning Manager
Bureau of Planning

Approved for forwarding to the
City Planning Commission:

Darin Ranelletti, Deputy Director
Bureau of Planning

ATTACHMENTS

A. Findings
B. Conditions of Approval
C. Revised Project Plans, submitted on December 17, 2014
D. Revised Photo Simulations, submitted on December 17, 2014
E. Radio Frequency Emissions Report, submitted on March 20, 2014

ATTACHMENT A

Findings for Approval

The findings required granting your application for Major Conditional Use Permit and Design Review found in Sections 17.134.050, 17.128.070(C), 17.128.070(B) and 17.136.050(B) of the Oakland Zoning Regulations, and the reasons your proposal satisfy these findings, are as follows:

SECTION 17.134.050 –CONDITIONAL 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 development proposal will not adversely affect the livability or development of abutting properties because the three antenna panels will be concealed and located on the roof of the six-story commercial building. The new antenna panels will be enclosed by a radome fiberglass structure and rectangular-shaped structure and will set back far from the edge of the roof. The size and design of the new antenna enclosures are compatible and will be painted to match the building. The project also meets the federal regulations for radio frequency emissions.

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 proposal will be convenient because the antennas will continue to provide functional services, and enhance wireless services thus improving the use of the facility and providing reliable services to the surrounding residents and businesses.

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 development proposal will enhance wireless communication and internet services to the surrounding commercial and residential users. The proposal will also continue to provide reliable services to motorists traveling along the nearby Highway-24, BART riders and to local officials.

D. That the proposal conforms with all applicable Regular Design Review criteria set forth in Section 17.136.050 of the Oakland Planning Code.

The project conforms to the applicable design review findings in section 17.128.070(B) for Macro Facilities, and section 17.136.050(B) for Non-Residential Facilities. See design review findings listed 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 proposal is located in the Neighborhood Center Mixed Use Land Use Classification of the Oakland General Plan. The intent of this classification is to identify, create, maintain, and enhance mixed use neighborhood commercial centers that are characterized by smaller scale pedestrian-oriented, continuous street frontage with a mix of retail, housing, office, active open space, eating and drinking places, personal and business services and smaller scale educational, cultural or entertainment uses. The addition of wireless antenna panels will continue to provide improved services to a wide range of commercial and residential users as the quality and reliable use of high speed internet is in high demand. The project is compatible with the site because the antennas will be relatively away from the roof edge and will be concealed from public view.

SECTION 17.128.070 (C)–CONDITIONAL USE PERMIT CRITERIA FOR MACRO FACILITIES

1. **The project must meet the special design review criteria listed in subsection B of this section.**

   The projet conforms to the design review criteria for Macro Facilities as described in section 17.128.070 (B). See design review findings listed below.

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

   The proposal will not disrupt the characteristics of the surrounding commercial and residential properties because the proposed antennas will be concealed on the rooftop, and will meet the Federal regulations for radio frequency emissions.

SECTION 17.128.070 (B)–DESIGN REVIEW CRITERIA FOR MACRO FACILITIES

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

   The proposal for the installation of three additional concealed antenna panels will be located on the rooftop of the commercial building. The antennas will be screened by a fiberglass structure and painted to match the building and the triangle-shaped steel-support framing structure.

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 in the building.**

   The proposal will place the antenna panels in a concealed structure, located on the rooftop of the building and will not contrast with the design of the commercial building.

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

   The proposal will place the antennas on the rooftop and will be concealed to help camouflage the antenna panels from public view.

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, inside existing facilities or behind screening fences.**

   The proposal includes the replacement of equipment cabinets located inside the 1st floor of the commercial building. Therefore, the new equipment cabinets will not be visible from public view.

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

   The replacement of the equipment cabinets will be consistent with the general character of the area because they will not create a visual nuisance to the general public.

6. **For antennas attached to the roof, maintain a 1:1 ratio (example: ten feet high antenna requires ten feet setback from façade) 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 project meets this finding because the antennas will be set back from the building facade to meet the required 1:1 ratio. The proposal will not affect direct line with significant view corridors of the surrounding two-story or three-story high properties because the project is located on the roof of a 6-story high building.

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 antenna panels are located on the roof and the equipment will be located in the first floor of a 6-story commercial building. Access to the first floor and to the roof is limited to authorized personnel and requires a key or a security code.

SECTION 17.136.050 (B)–DESIGN CRITERIA FOR NON RESIDENTIAL FACILITIES

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.**

   The proposal will relate to the group of existing concealed wireless facilities thus improving its visual appearance from public view. The new antenna panels will be enclosed and painted to match the building and the triangle-shaped support structure to conceal to improve its appearance.

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

   The proposal will be enclosed by two structures that will be set back from the edge of the roof and will be painted beige to match the building and the steel-support frame structure. Therefore, the project design will be of a quality to protect the value of private and public investment in the neighborhood.

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.**

   The proposal conforms to the Oakland General Plan Objectives and Policies including the Design Review Findings 17.128.070(b) & 17.136.050(b) found within this staff report.

ATTACHMENT B

Conditions of approval

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 revised design review plans submitted on December 17, 2014, 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 require prior written approval from the Director of City Planning or designee.

b) This action by the **Planning Commission** ("this Approval") includes the approvals set forth below. The collocation of three new concealed antenna panels on the roof, and the replacement of two equipment cabinets, located inside the first floor of a commercial facility at 4601 Shattuck Avenue.

2. Effective Date, Expiration, Extensions and Extinguishment

Ongoing

Unless a different termination date is prescribed, this Approval shall expire **two (2) 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 **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 laws/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. 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 of Approval #3.

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 limited to automatic extinguishing systems, water supply improvements and hydrants, fire department access, elevated walking pathways, safety railings, emergency lighting and vegetation management for preventing fires.

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 of approval** 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 of approval** if it is found that there is violation of any of the **conditions of approval** 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 Conditions of Approval.

6. **Signed Copy of the Conditions of Approval**
With submittal of a demolition, grading, and building permit
A copy of the approval letter and **Conditions of Approval** 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
a) 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.
b) Within ten (10) calendar days of the filing of any Action as specified in subsection A above, the applicant shall execute a Letter 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 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 of approval**, and if one or more of such **conditions of approval** is found to be invalid by a court of competent jurisdiction this Approval would not have been granted without requiring other valid **conditions of approval** 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 by City officials and project developer 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 third-party special inspector(s)/inspections as needed during the times of extensive or specialized plancheck review or construction. The project applicant may also be required to cover the full costs of independent technical review 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. **Operational Noise-General**

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.

13. **Lighting Plan**

Prior to the issuance of an electrical or building permit

The proposed lighting fixtures shall be adequately shielded to a point below the light bulb and reflector and that prevent unnecessary glare onto adjacent properties. Plans shall be submitted to the Planning and Zoning Division and the Electrical Services Division of the Public Works Agency for review and approval. All lighting shall be architecturally integrated into the site.

SPECIFIC PROJECT CONDITIONS

14. **Emissions Report**

Prior to final inspection

The applicant shall provide an RF emissions report to the City of Oakland Zoning Division indicating that the site is actually operating within the acceptable thresholds as established by the regulatory

Federal government or any such agency that may be subsequently authorized to establish such standards.

15. Encroachment Permits

Prior to issuance of a demolition, grading or building permit

The applicant shall obtain any encroachment permits, waiver of damages or other approvals required by the Building Services Division, for any privately constructed public improvements, or any permanent or temporary elements located in the public right of way. This shall include telecommunication equipment, overhead wires, underground trenching, etc.

APPROVED BY:

City Planning Commission:_____(date)_____(vote)

— REVISED SET —

RECEIVED
DEC 17 2014
— PLN14075 —
City of Oakland
Planning & Zoning Division

Sprint™

PROJECT NAME: 2.5 EQUIPMENT DEPLOYMENT

SITE NAME: UC STORAGE WAREHOUSE

CASCADE #: FN03XC017-A

SITE ADDRESS: 4601 SHATTUCK AVE
OAKLAND, CA 94609

SITE TYPE: ROOFTOP
BASEMENT EQUIPMENT

SITE INFORMATION

Site Address:
4601 Shattuck Ave
Oakland, CA 94609

Property Owner:
Starquest Oakland LLC c/o
The William Warren Group
201 Wilshire Blvd
Santa Monica, CA 90401

Site Acquisition:
Forza Telecom
1330 North Broadway, Suite 202
Walnut Creek, Ca 94596
Planning contact: Sean Snyder
Leasing contact: Paige Nayes
email: planning2.5@forzatelecom.com
ph: (925) 452-6312

Power Agency
PG&E

Telco Agency
AT&T

Latitude(NAD83):
37° 50' 1.93" N
37.83387

Longitude (NAD83):
-122° 15' 49.86" W
-122.263849

Construction Type:
5A

Occupancy Type:
U, Unmanned

Owner Applicant:
Sprint
12657 Alcosta Blvd, Suite 300
San Ramon, Ca 94583
contact: Tony Poletti
ph: (916) 717-4823
email: anthony.poletti@sprint.com

Sprint Construction Manager:
Sprint
12657 Alcosta Blvd, Suite 300
San Ramon, Ca 94583
contact: Tony Pino
ph: (415) 7604921
email: Nelson.Pino@sprint.com

RF Engineer:
Samsung
2603 Camino Ramon, Suite 350
San Ramon, Ca 94583
contact: Swapnil Tiwari
email: SLTiwari@sta.samsung.com
ph: (408) 355-8208

County:
Alameda

Zoning Jurisdiction:
City of Oakland

Zoning District:
C-28

APN:
013-1160-005-00

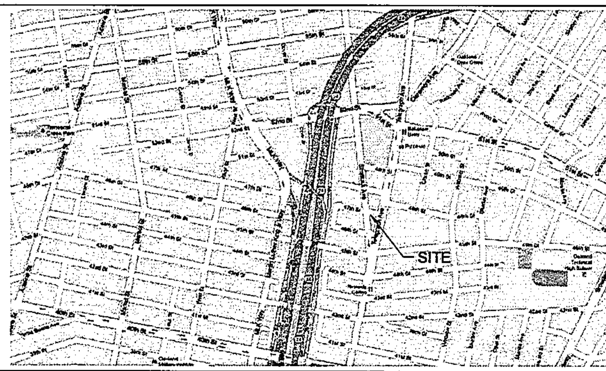
ACCESSIBILITY REQUIREMENTS

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. ACCESSIBILITY ACCESS AND REQUIREMENTS ARE NOT REQUIRED. IN ACCORDANCE WITH CALIFORNIA BUILDING CODE, CODE OF REGULATIONS, TITLE 24, PART 2, VOLUME 1, CHAPTER 11B, DIVISION 2, SECTION 11B-203.5

SPECIAL INSPECTIONS

1) POST INSTALLED EXPANSION ANCHORS

VICINITY MAP



LOCATION MAP

APPLICABLE CODES

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

1. 2013 CALIFORNIA ADMINISTRATIVE CODE, CHAPTER 10, PART 1, TITLE 24 CODE OF REGULATIONS- AFTER JULY 1, 2014
2. 2013 CALIFORNIA BUILDING CODE (CBC) WITH CALIFORNIA AMENDMENTS, BASED ON THE 2012 IBC (PART 2, VOL 1-2)
3. 2013 CALIFORNIA RESIDENTIAL CODE (CRC) WITH APPENDIX H, PATIO COVERS, BASED ON THE 2012 IRC (PART 2.5)
4. 2013 CALIFORNIA GREEN BUILDINGS STANDARDS CODE (CALGREEN) (PART 11)
5. (AFFECTED ENERGY PROVISIONS ONLY)- AFTER JULY 1, 2014
6. 2013 CALIFORNIA FIRE CODE (CFC), BASED ON THE 2012 IFC, WITH CALIFORNIA AMENDMENTS (PART 9)
7. 2013 CALIFORNIA MECHANICAL CODE (CMC), BASED ON THE 2012 UMC (PART 4)
8. 2013 CALIFORNIA PLUMBING CODE (CPC), BASED ON THE 2012 UPC (PART 5)
9. 2013 CALIFORNIA ELECTRICAL CODE (CEC) WITH CALIFORNIA AMENDMENTS, BASED ON THE 2011 NEC (PART 3)
10. 2013 CALIFORNIA ENERGY CODE (CEC)- AFTER JULY 1, 2014 (PART 6)
11. ANSI / EIA-TIA-222-G
12. 2012 NFPA 101, LIFE SAFETY CODE
13. 2013 NFPA 72, NATIONAL FIRE ALARM CODE
14. 2013 NFPA 13, FIRE SPRINKLER CODE

PROJECT DESCRIPTION

MODIFICATION TO EXISTING UNMANNED TELECOMMUNICATIONS FACILITY.

1. ADD NEW 2.5 EQUIPMENT INSIDE (E) MMBS CABINET
2. ADD NEW 2.5 BATTERIES INSIDE (E) BBU CABINET
3. ADD 1 NEW 2.5 ANTENNA AT EACH OF 3 SECTORS A, B, AND C
4. ADD 1 NEW 2.5 RRH AT EACH OF 3 SECTORS A, B, AND C
5. ADD NEW COAX JUMPER LINES FROM RRHS TO NEW ANTENNAS
6. RE-USE (E) HYBRID CABLES OR INSTALL NEW AS NEEDED
7. EXTEND EXISTING FRP SCREEN FOR SECTORS A & C
8. ADD 1 NEW RADOME ON (E) NEXTEL ANTENNA FRAME AT SECTOR B

DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET & PROJECT DATA
GN-1	GENERAL NOTES 1
GN-2	GENERAL NOTES 2
A-1	OVERALL SITE PLAN
A-2.1	ENLARGED EQUIPMENT PLANS
A-2.2	ENLARGED EQUIPMENT PLANS
A-3.1	ELEVATIONS
A-3.2	ELEVATIONS
A-3.3	ELEVATIONS
A-4	EQUIPMENT DETAILS
A-5	STEALTH DETAILS
RF-1	ANTENNA SCHEDULE & PARTS LIST
E-1	SINGLE LINE DIAGRAM & POWER PANEL SCHEDULE
G-1	GROUNDING PLAN & NOTES
G-2	GROUNDING DETAILS

APPROVALS

APPROVALS	DATE
SITE ACQUISITION PLANNER–	
SITE ACQUISITION MANAGER–	
SPRINT CONSTRUCTION–	
SPRINT SITE ACQUISITION–	
RF ENGINEER–	
LANDLORD–	

DRIVING DIRECTIONS FROM SPRINT, 12657 ALCOSTA BLVD SAN RAMON, CA

1. Head southeast on Alcosta Blvd
2. Make a U-turn at Hospital Pl
3. Turn left onto Crow Canyon Rd
4. Merge onto I-680 N via the ramp to S
5. Take the State Route 24 exit toward
6. Merge onto CA-24 W
7. take the Telegraph Ave exit
8. Turn left onto Telegraph Ave
9. Turn right onto 52nd St
10. Turn left onto Shattuck Ave

Destination will be on the right

ATTACHMENT C

Sprint
12657 Alcosta Blvd., Suite 300
San Ramon, CA 94583

FORZA TELECOM, Inc.
1330 North Broadway
Suite 202
Walnut Creek, CA 94596

ARCHITECTURAL GROUP Borges
ARCHITECTURE PLANNING INTERIORS

PROJECT NO:	13065-7
DRAWN BY:	JVM
CHECKED BY:	B.K.W.

REV	DATE	DESCRIPTION
2	12/03/14	100% CD SUBMITTAL REV 1
1	02/18/14	100% CD SUBMITTAL
0	12/27/13	90% CD SUBMITTAL

12/03/14
100% CD Submittal Rev 1

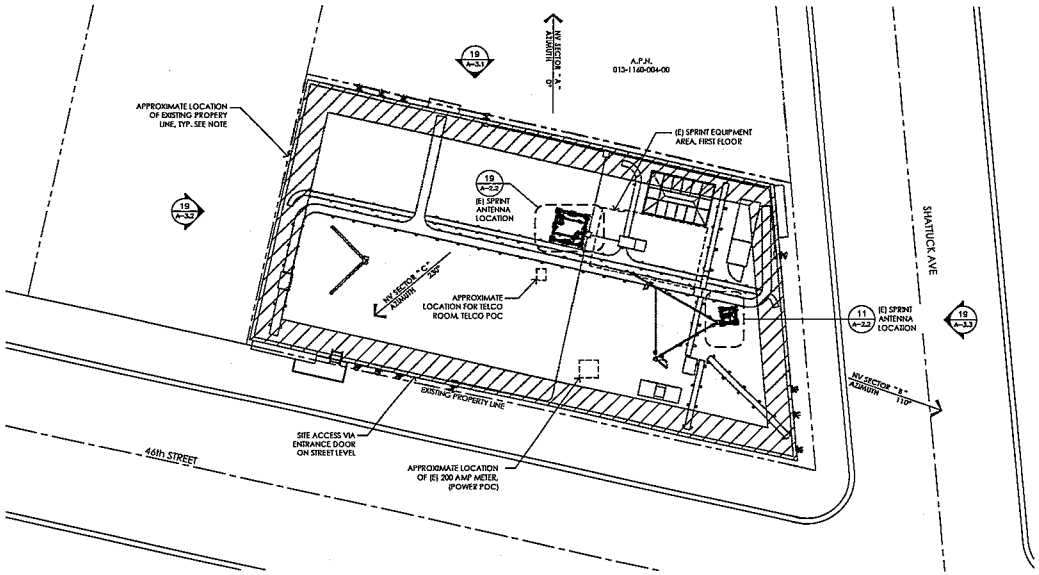
LICENSED ARCHITECT
RICHARD SAMBUCETTI
No. C11535
Ren. 09-30-15
STATE OF CALIFORNIA

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

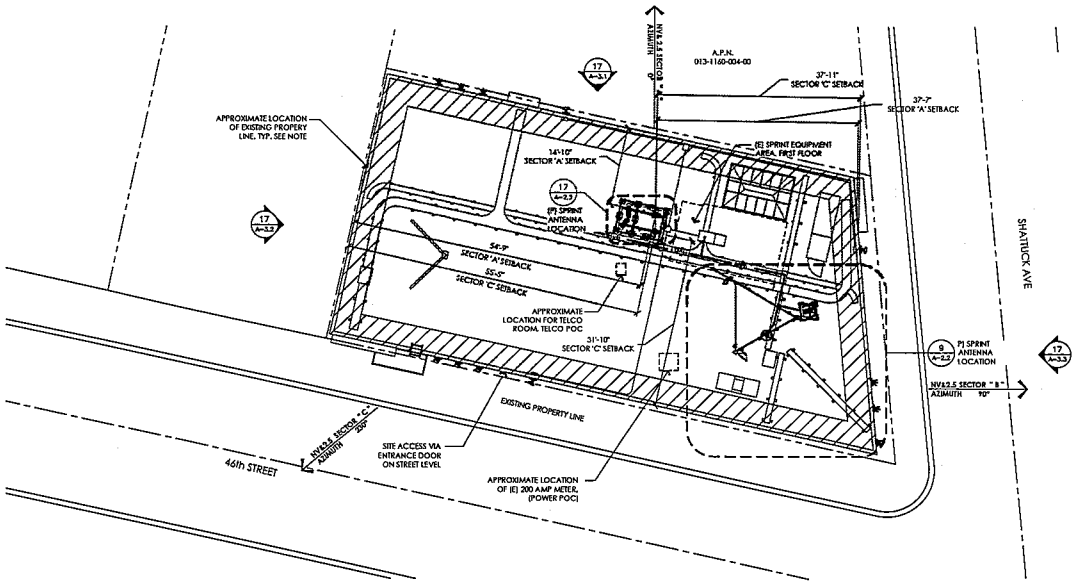
FN03XC017-A
UC Storage Warehouse
4601 SHATTUCK AVE
OAKLAND, CA 94609

SHEET TITLE
TITLE SHEET & PROJECT DATA

SHEET NUMBER
T-1



19 EXISTING SITE PLAN
3/32" = 1'-0"



17 PROPOSED SITE PLAN
3/32" = 1'-0"

PLAN NORTH
NORTH
16' 8' 0 16' 32'
3/32"=1'-0"

Sprint
12657 Alcosta Blvd., Suite 300
San Ramon, CA 94583

1330 North Broadway
Suite 202
Walnut Creek, CA 94596

Borges ARCHITECTURAL GROUP

PROJECT NO:	T3065-7
DRAWN BY:	JVM
CHECKED BY:	B.K.W.

REV	DATE	DESCRIPTION
2	12/03/14	100% CD SUBMITTAL REV 1
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12/03/14
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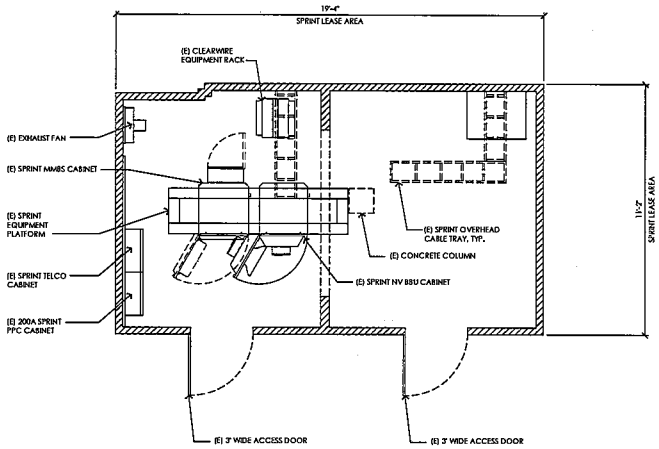
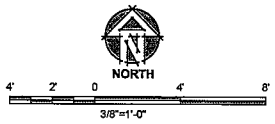
LICENSED ARCHITECT No. C31,520 STATE OF CALIFORNIA

FN03XC017-A
UC Storage Warehouse
4601 SHATTUCK AVE
OAKLAND, CA 94609

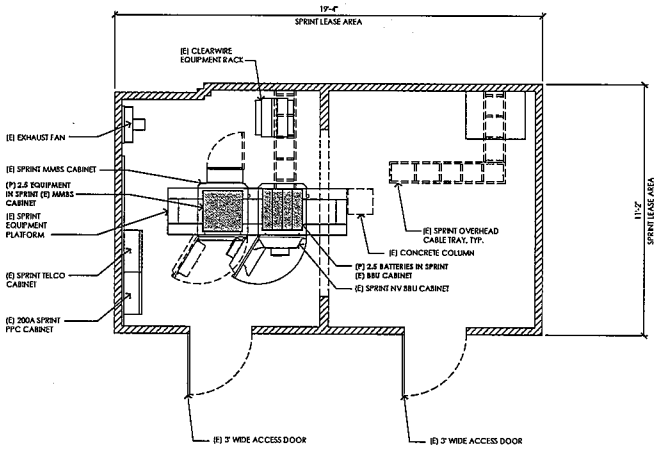
SHEET TITLE
OVERALL SITE PLAN

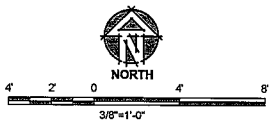
SHEET NUMBER
A-1





19 EXISTING EQUIPMENT LAYOUT
3/8" = 1'-0"





17 PROPOSED EQUIPMENT LAYOUT
3/8" = 1'-0"

Sprint
12657 Alcosta Blvd., Suite 300
San Ramon, CA 94583

1330 North Broadway
Suite 202
Walnut Creek, CA 94596

Borges Architectural Group

PROJECT NO:	13065-7
DRAWN BY:	JVM
CHECKED BY:	B.K.W.

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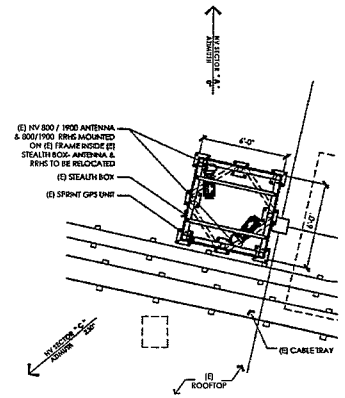
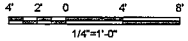
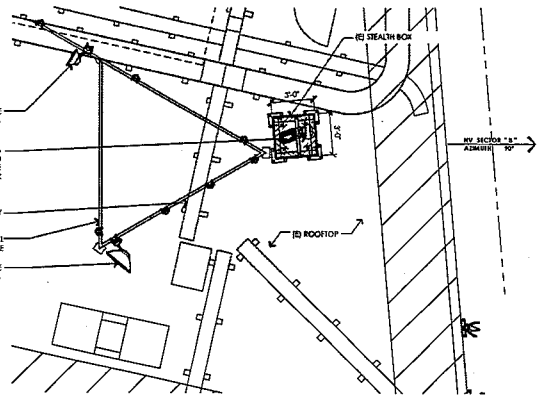
SHEET TITLE
ENLARGED EQUIPMENT PLANS

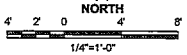
SHEET NUMBER
A-2.1



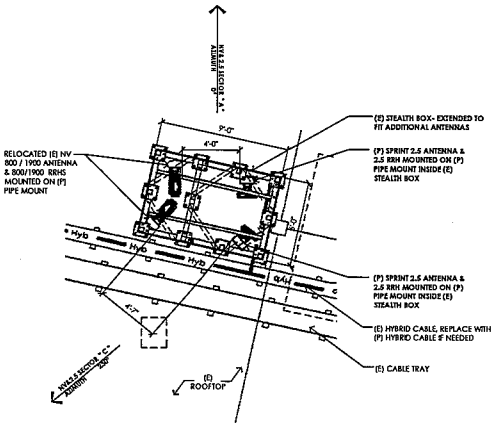


19 EXISTING ANTENNA LAYOUT - SECTORS A & C
1/4" = 1'-0"

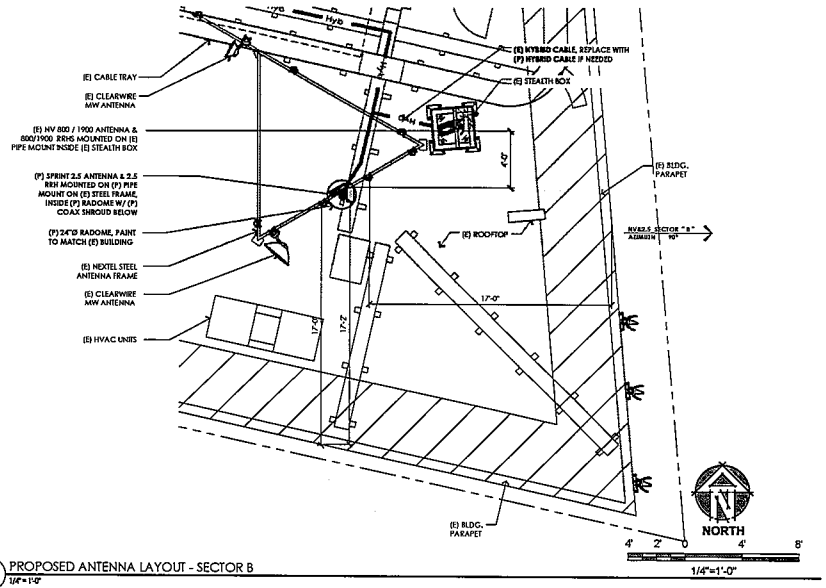




11 EXISTING ANTENNA LAYOUT - SECTOR B
1/4" = 1'-0"



17 PROPOSED ANTENNA LAYOUT - SECTORS A & C
1/4" = 1'-0"



9 PROPOSED ANTENNA LAYOUT - SECTOR B
1/4" = 1'-0"

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Walnut Creek, CA 94596

Borges ARCHITECTURAL GROUP

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CHECKED BY:	B.K.W.

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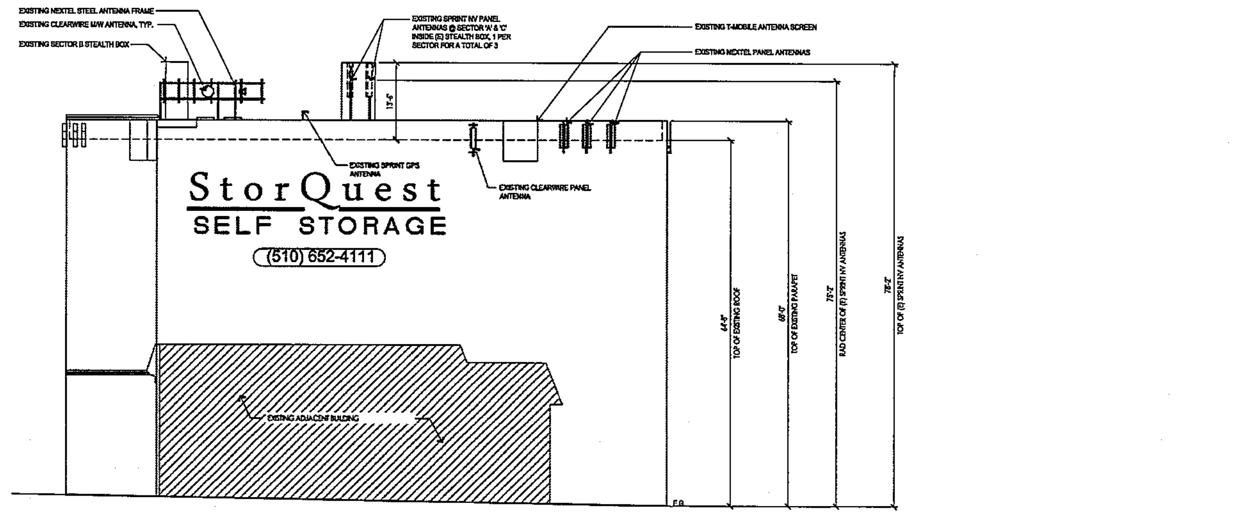
12/03/14
100% CD Submittal Rev 1

LICENSED ARCHITECT — BORGES ARCHITECTURAL GROUP — No. C11555 — Exp. 08-31-15 — STATE OF CALIFORNIA

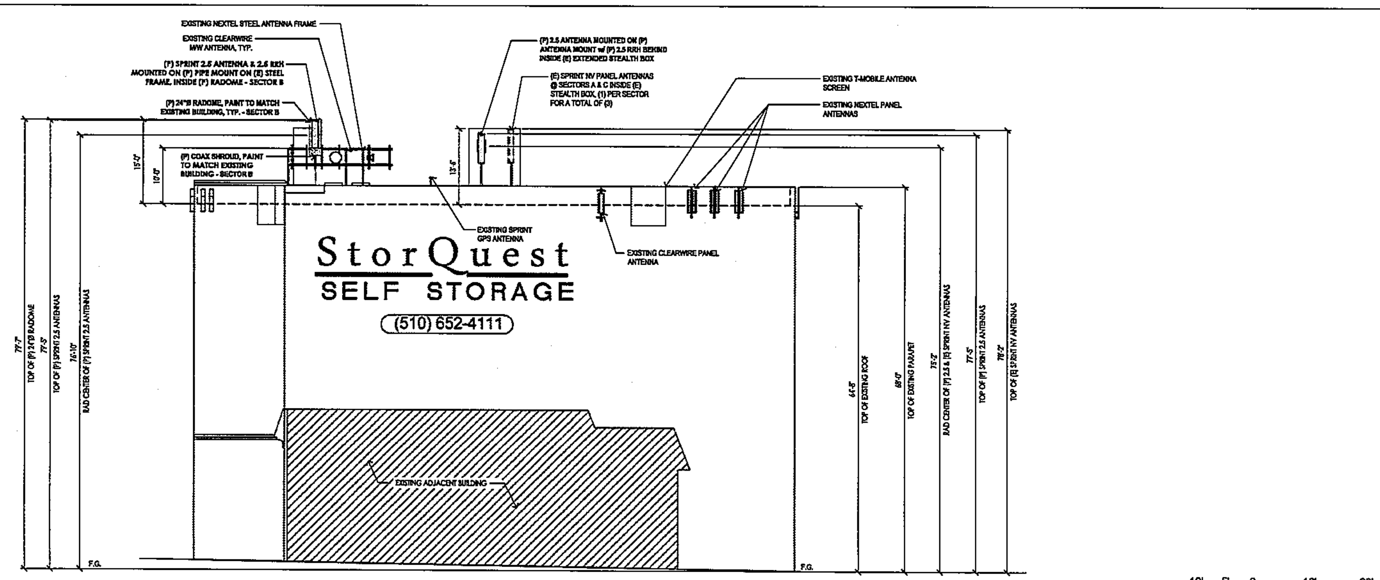
FN03XC017-A
UC Storage Warehouse
4601 SHATTUCK AVE
OAKLAND, CA 94609

SHEET TITLE
ENLARGED ANTENNA PLANS

SHEET NUMBER
A-2.2


EXISTING NEXTEL STEEL ANTENNA FRAME
EXISTING CLEARWIRE M/W ANTENNA, TYP.
EXISTING SECTOR B STEALTH BOX
EXISTING SPRINT NV PANEL ANTENNAS @ SECTOR 'A' & 'C' INSIDE (E) STEALTH BOX, 1 PER SECTOR FOR A TOTAL OF 3
EXISTING T-MOBILE ANTENNA SCREEN
EXISTING NEXTEL PANEL ANTENNAS
13'-6"
EXISTING SPRINT GPS ANTENNA
EXISTING CLEARWIRE PANEL ANTENNA
StorQuest
SELF STORAGE
(510) 652-4111
EXISTING ADJACENT BUILDING
F.G.
64'-8" TOP OF EXISTING ROOF
68'-0" TOP OF EXISTING PARAPET
75'-2" RAD CENTER OF (E) SPRINT NV ANTENNAS
78'-2" TOP OF (E) SPRINT NV ANTENNAS
10' 5' 0 10' 20'
1"=10'-0"

19 EXISTING NORTH ELEVATION
1" = 10'-0"


EXISTING NEXTEL STEEL ANTENNA FRAME
EXISTING CLEARWIRE M/W ANTENNA, TYP.
(P) SPRINT 2.5 ANTENNA & 2.5 RRH MOUNTED ON (P) PIPE MOUNT ON (E) STEEL FRAME, INSIDE (P) RADOME - SECTOR B
(P) 24"Ø RADOME, PAINT TO MATCH EXISTING BUILDING, TYP. - SECTOR B
(P) COAX SHROUD, PAINT TO MATCH EXISTING BUILDING - SECTOR B
(P) 2.5 ANTENNA MOUNTED ON (P) ANTENNA MOUNT w/ (P) 2.5 RRH BEHIND INSIDE (E) EXTENDED STEALTH BOX
(E) SPRINT NV PANEL ANTENNAS @ SECTORS A & C INSIDE (E) STEALTH BOX, (1) PER SECTOR FOR A TOTAL OF (2)
EXISTING T-MOBILE ANTENNA SCREEN
EXISTING NEXTEL PANEL ANTENNAS
15'-0"
10'-0"
13'-6"
EXISTING SPRINT GPS ANTENNA
EXISTING CLEARWIRE PANEL ANTENNA
StorQuest
SELF STORAGE
(510) 652-4111
EXISTING ADJACENT BUILDING
F.G.
79'-7" TOP OF (P) 24"Ø RADOME
77'-5" TOP OF (P) SPRINT 2.5 ANTENNAS
76'-10" RAD CENTER OF (P) SPRINT 2.5 ANTENNAS
64'-8" TOP OF EXISTING ROOF
68'-0" TOP OF EXISTING PARAPET
75'-2" RAD CENTER OF (P) 2.5 & (E) SPRINT NV ANTENNAS
77'-5" TOP OF (P) SPRINT 2.5 ANTENNAS
78'-2" TOP OF (E) SPRINT NV ANTENNAS
10' 5' 0 10' 20'
1"=10'-0"

17 PROPOSED NORTH ELEVATION
1" = 10'-0"

Sprint
12657 Alcosta Blvd., Suite 300
San Ramon, CA 94583

1330 North Broadway
Suite 202
Walnut Creek, CA 94596

Borges

PROJECT NO:	13065-7
DRAWN BY:	JVM
CHECKED BY:	B.K.W.

REV	DATE	DESCRIPTION
2	12/03/14	100% CD SUBMITTAL REV 1
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12/03/14
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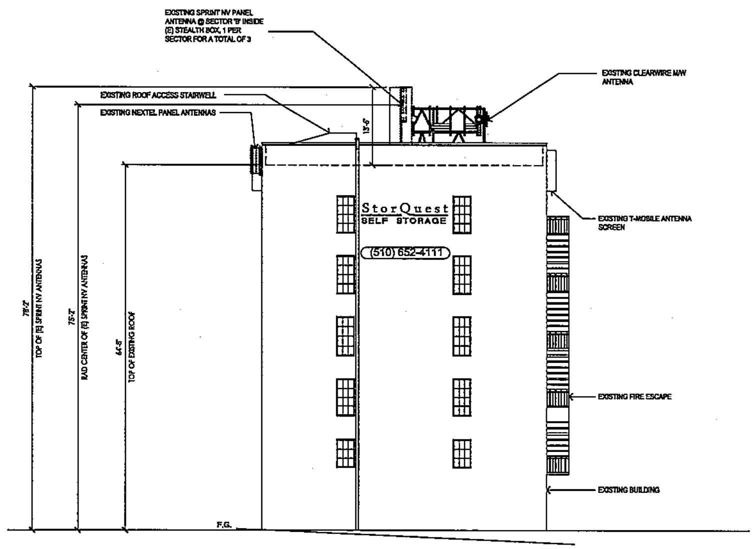
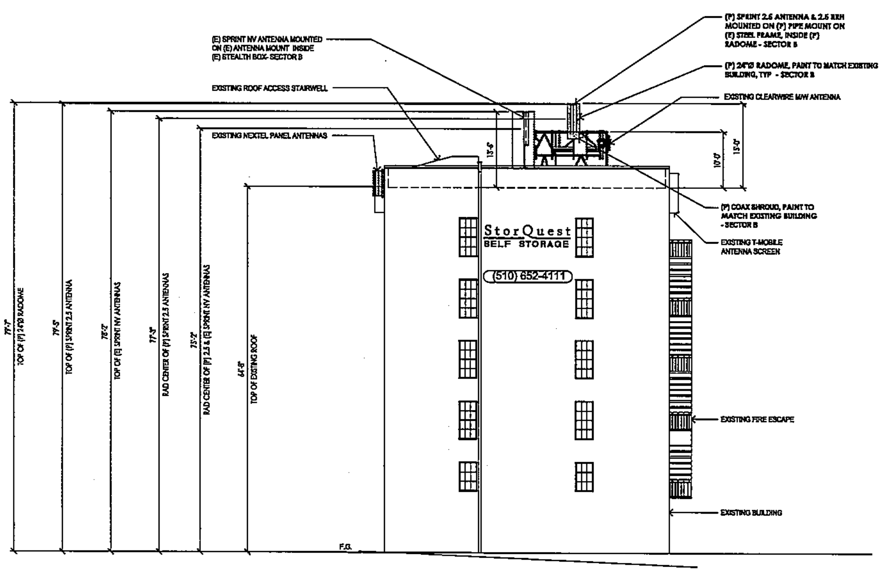
SHEET TITLE
ELEVATIONS

SHEET NUMBER
A-3.1


EXISTING SPRINT NV PANEL ANTENNA @ SECTOR 'B' INSIDE (E) STEALTH BOX, 1 PER SECTOR FOR A TOTAL OF 3
EXISTING ROOF ACCESS STAIRWELL
EXISTING NEXTEL PANEL ANTENNAS
EXISTING CLEARWIRE MW ANTENNA
EXISTING T-MOBILE ANTENNA SCREEN
EXISTING FIRE ESCAPE
EXISTING BUILDING
StorQuest
SELF STORAGE
(510) 652-4111
78'-2"
TOP OF (E) SPRINT NV ANTENNAS
75'-2"
RAD CENTER OF (E) SPRINT NV ANTENNAS
64'-8"
TOP OF EXISTING ROOF
13'-6"
F.G.
10' 5' 0 10' 20'
1"=10'-0"

19 EXISTING WEST ELEVATION
1"=10'-0"


(E) SPRINT NV ANTENNA MOUNTED ON (E) ANTENNA MOUNT INSIDE (E) STEALTH BOX- SECTOR B
EXISTING ROOF ACCESS STAIRWELL
EXISTING NEXTEL PANEL ANTENNAS
(P) SPRINT 2.5 ANTENNA & 2.5 RRH MOUNTED ON (P) PIPE MOUNT ON (E) STEEL FRAME, INSIDE (P) RADOME - SECTOR B
(P) 24"Ø RADOME, PAINT TO MATCH EXISTING BUILDING, TYP - SECTOR B
EXISTING CLEARWIRE MW ANTENNA
(P) COAX SHROUD, PAINT TO MATCH EXISTING BUILDING - SECTOR B
EXISTING T-MOBILE ANTENNA SCREEN
EXISTING FIRE ESCAPE
EXISTING BUILDING
StorQuest
SELF STORAGE
(510) 652-4111
77'-7"
TOP OF (P) 24"Ø RADOME
79'-5"
TOP OF (P) SPRINT 2.5 ANTENNA
78'-2"
TOP OF (E) SPRINT NV ANTENNAS
77'-3"
RAD CENTER OF (P) SPRINT 2.5 ANTENNAS
75'-2"
RAD CENTER OF (P) 2.5 & (E) SPRINT NV ANTENNAS
64'-8"
TOP OF EXISTING ROOF
13'-6"
10'-0"
15'-0"
F.G.
10' 5' 0 10' 20'
1"=10'-0"

17 PROPOSED WEST ELEVATION
1"=10'-0"

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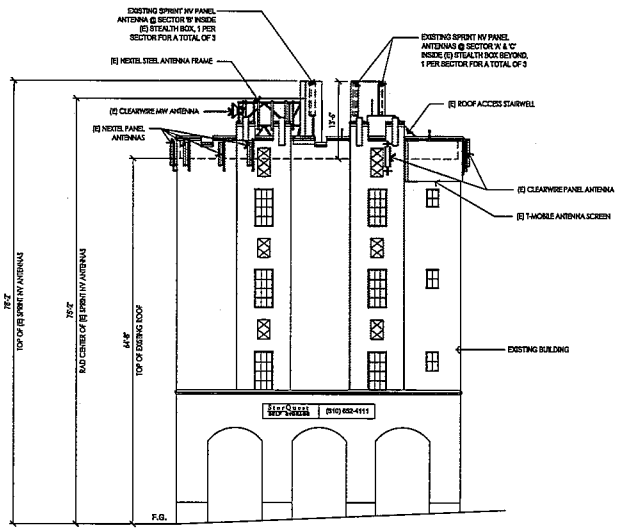
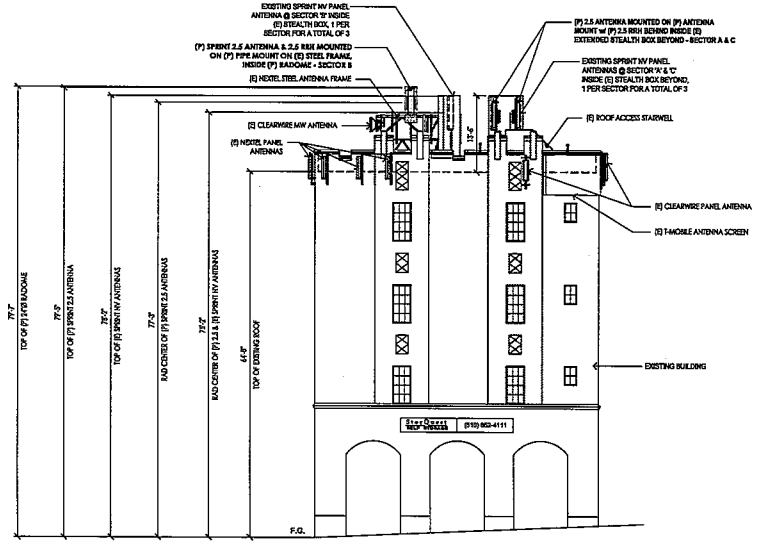
SHEET TITLE
ELEVATIONS

SHEET NUMBER
A-3.2



19 EXISTING EAST ELEVATION
1" = 10'-0"

10' 5' 0 10' 20'
1"=10'-0"



17 PROPOSED EAST ELEVATION
1" = 10'-0"

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FN03XC017-A

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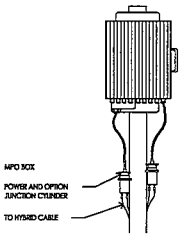
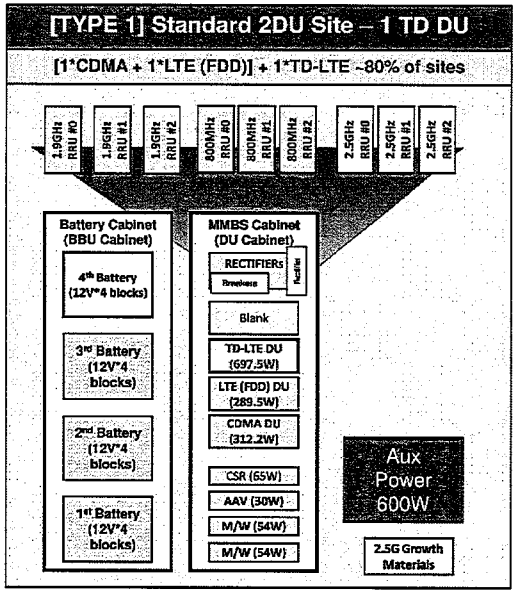
SHEET TITLE
ELEVATIONS

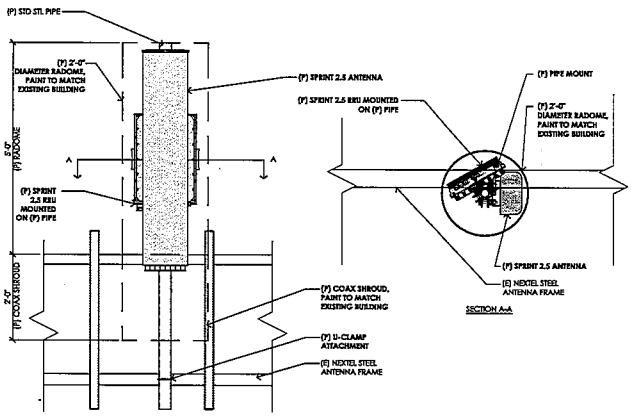
SHEET NUMBER
A-3.3



19 JUNCTION CYLINDER DETAIL
N.T.S



15 HW DIMENSIONING
3/4" = 1'-0"



7 (P) ANTENNA & RRU MOUNTING DETAIL
3/4" = 1'-0"

CFC CHAPTER 6 COMPLIANCE

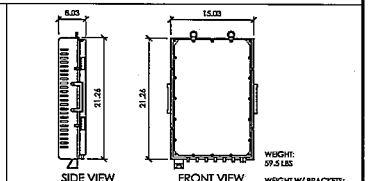
TOTAL ELECTROLYTE = 16 BATTERIES X 2.49 GAL/BATTERY = 39.84 GAL
(SINCE <50 GAL OF ELECTROLYTE, CFC CHAPTER 6, SECTION 608 NOT APPLICABLE)

BATTERY INFORMATION

(BATTERY ELECTROLYTE DATA - 12V MONOBLOCKS)

BATTERY MODEL	TOTAL # OF BATTERY UNITS INSTALLED	TOTAL ELECTROLYTE VOLUME (GAL) PER UNIT	TOTAL ELECTROLYTE WEIGHT (LBS) PER UNIT	% SULFURIC ACID BY VOL = ACID VOLUME / UNIT ELECTROLYTE VOLUME/UNIT
12DT190	16	2.49 GAL	27.35 LBS	58% = 1.45 GAL / 2.49 GAL
% SULFURIC ACID BY WEIGHT = TOTAL ACID WEIGHT / TOTAL ELECTROLYTE WEIGHT		TOTAL SULFURIC VOL (GAL) = TOTAL UNITS X SULFURIC VOL/UNIT		% SULFURIC ACID BY VOL = ACID VOLUME / UNIT ELECTROLYTE VOLUME/UNIT
40.8% = 11.2 LBS/27.25 LBS		23.2 GAL = 16 UNITS X 1.45 / UNIT		177.98 LBS = 16 UNITS X 11.12 LBS

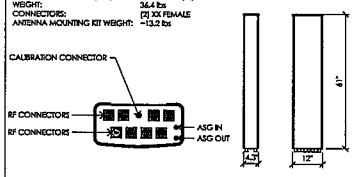
17 BATTERY DATA CHART
11/2" = 1'-0"



2 2.5 RRH
1" = 1'-0"

ANTENNA MAKE AND MODE

MANUFACTURER:	KMW
MODEL:	ET-X-WM-18-65-8P
RADOME MATERIAL:	XXX
RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD,in[mm]:	61"x12"x4.3"[IN]
WEIGHT:	36.4 lbs
CONNECTORS:	(2) XX FEMALE
ANTENNA MOUNTING KIT WEIGHT:	~13.2 lbs



1 2.5 ANTENNA
NOT TO SCALE

Sprint
12657 Alcosta Blvd., Suite 300
San Ramon, CA 94583

1330 North Broadway
Suite 202
Walnut Creek, CA 94596

Borges Architectural Group

PROJECT NO:	13065-7
DRAWN BY:	JVM
CHECKED BY:	B.K.W.

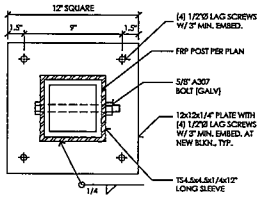
REV	DATE	DESCRIPTION
2	12/03/14	100% CD SUBMITTAL REV 1
1	02/18/14	100% CD SUBMITTAL
0	12/27/13	90% CD SUBMITTAL

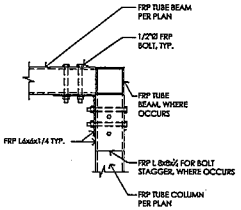
12/03/14
100% CD Submittal Rev 1

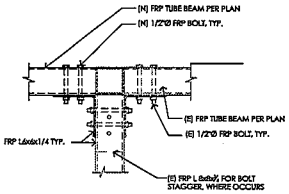
FN03XC017-A
UC Storage Warehouse
4601 SHATTUCK AVE
OAKLAND, CA 94609

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
A-4

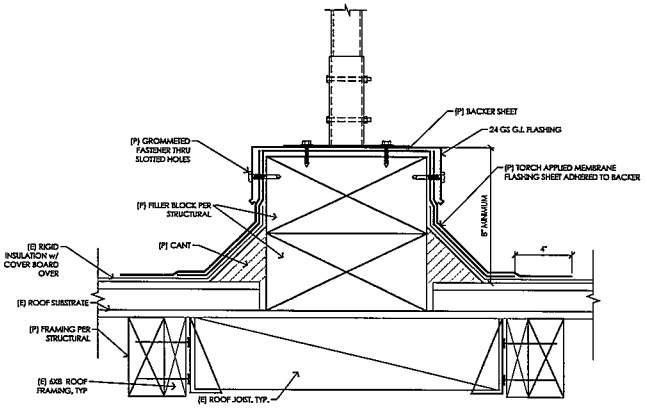




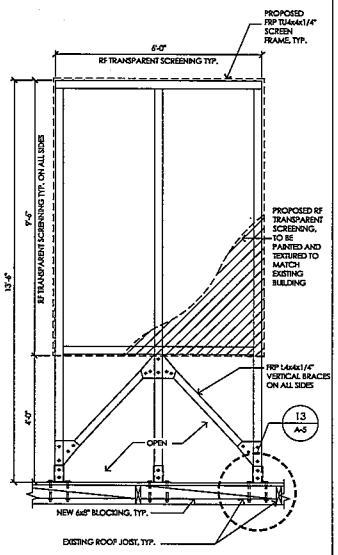


7 STEALTH CONNECTION DETAILS
3" = 1'-0"

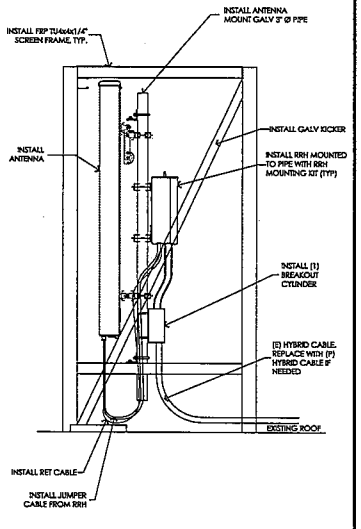
NOTES:
1. GRANULES MUST BE EMBEDDED WHEN USING TORCH APPLIED GRANULE SURFACED CAP SHEETS PRIOR TO COMPLETING SIDE LAPS, END LAPS, AND BASE FLASHING LAPS.
2. ATTACH NAILER TO DECK WITH SUITABLE FASTENER.
3. GENERAL CONTRACTOR SHALL USE EXISTING BUILDING ROOFING CONTRACTOR OF RECORD TO ENSURE THAT EXISTING ROOFING WARRANTIES SHALL REMAIN IN EFFECT AND SHALL INCLUDE ROOFING CHANGES MADE AS PART OF THE WORK.
4. FOR STRUCTURAL MEMBER, SEE STRUCTURAL CALCULATIONS
5. EXISTING ROOF MEMBRANE AND ROOFING SHALL BE CUT AT 90 DEG ANGLES TO THE SURFACE OF THE ROOF WITH PT WD BLKG MATCHING THE FOOTPRINT OF THE SLEEPER AND DEPTH OF EXISTING RIGID INSUL.



13 STEALTH ROOF ATTACHMENT DETAIL
3" = 1'-0"



5 STEALTH SCREEN
3" = 1'-0"



1 (P) ANTENNA & RRU STEALTH BOX DETAIL
3/4" = 1'-0"

Sprint
12657 Alcosta Blvd., Suite 300
San Ramon, CA 94583

1330 North Broadway
Suite 200
Walnut Creek, CA 94596

Borges
ARCHITECTURAL GROUP

PROJECT NO:	13065-7
DRAWN BY:	JVM
CHECKED BY:	B.K.W.

REV	DATE	DESCRIPTION
2	12/03/14	100% CD SUBMITTAL REV 1
1	02/18/14	100% CD SUBMITTAL
0	12/27/13	90% CD SUBMITTAL

12/03/14
100% CD Submittal Rev 1

LICENSED ARCHITECT BRIAN K. WONG No. C31338 STATE OF CALIFORNIA

FN03XC017-A

UC Storage Warehouse

4601 SHATTUCK AVE
OAKLAND, CA 94609

SHEET TITLE
STEALTH DETAILS

SHEET NUMBER
A-5

Sprint

RFDS Sheet

General Site Information

Site ID	FN03XC017	Equipment Vendor	Samsung
Market	SF Bay	Lattitude	37.8338056
Region	West	Longitude	-122.264
MLA		LL SITE ID	
Structure Type	ROOFTOP		
BTS Type	STANDARD		

Transmit	2496 Mhz - 2690 Mhz	Siterra SR Equipment type	Outdoor Macro	Incremental Power Draw needed by added Equipment
Receive	2496 Mhz - 2690 Mhz	Equipment Vendor	Samsung	0

Base Equipment

BBU Kit	UADU	Top Hat	
BBU Kit Qty	1	Top Hat Qty	
BBU Dimensions	3.5" x 17.1" x 15.2"	Top Hat Dimenstions	
Growth Cabinet		Top Hat Weight (lbs)	
Growth Cabinet Qty			
Growth Cabinet Dimensions			
Growth Cabinet Weight			

RF Path Information

RRH	RRH-V3	
RRH Qty	3	
RRH Dimensions	15.5" x 18.6" x 7.48"	Specs as provided by Sprint is 15.03" x 21.26" x 8.03" Weight: 59.5 lbs
RRH Weight. lbs.	54	
RRH Mount Weight. Lbs.	12.32	
Power and Fiber Cable	e Solution derived from existin	
Cable Qty	NA	
Weight per foot. Lbs.	NA	
Diameter. Inches.	NA	
Length Ft.	74.4	(calculated as antenna height plus 20%)
Coax Jumper		
Coax Jumper Qty	27	GC to field verify jumper length and quantity
Coax Jumper Length. Feet.	8	
Coax Jumper Weight	TBD	
Coax Jumper Diameter. Inches	0.5	
AISG Cable	Commscope ATCB-B01-006	
AISG Cable Qty	3	
AISG Diameter. Inches.	0.315	
AISG Cable length.	8	
Weight of entire AISG cable. Lbs.	1.3	

Antenna Sector Information

	Sector 1	Sector 2	Sector 3
Antenna make/model	KMW ET-X-WM-18-65-8P	KMW ET-X-WM-18-65-8P	KMW ET-X-WM-18-65-8P
Antenna qty	1	1	1
Antenna Dimensions. Inches	61" x 12" x 4"	61" x 12" x 4"	61" x 12" x 4"
Antenna Weight. Inches	36	36	36
Antenna Mounting Kit Weight. Lbs.	~11 lb estimate. TBD.	~11 lb estimate. TBD.	~11 lb estimate. TBD.
CL Height	62	62	62
Antenna Azimuth	0	70	220
Antenna Mechanical Downtilt	0	0	0

Note: Specs as provided by Sprint is 61" x 12" x 4.35" weight 36.4 lbs antenna mounting kit weight: 13.2 lbs

Note: Sector B RAD center at 77'-3"

ANTENNA SCHEDULE & PARTS LIST

NO SCALE

A

Sprint
12657 Alcosta Blvd., Suite 300
San Ramon, CA 94583

1330 North Broadway
Suite 202
Walnut Creek, CA 94596

Borges

PROJECT NO:	13065-7
DRAWN BY:	JVM
CHECKED BY:	B.K.W.

REV	DATE	DESCRIPTION
2	12/03/14	100% CD SUBMITTAL REV 1
1	02/18/14	100% CD SUBMITTAL
0	12/27/13	90% CD SUBMITTAL

12/03/14
100% CD Submittal Rev 1

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

FN03XC017-A

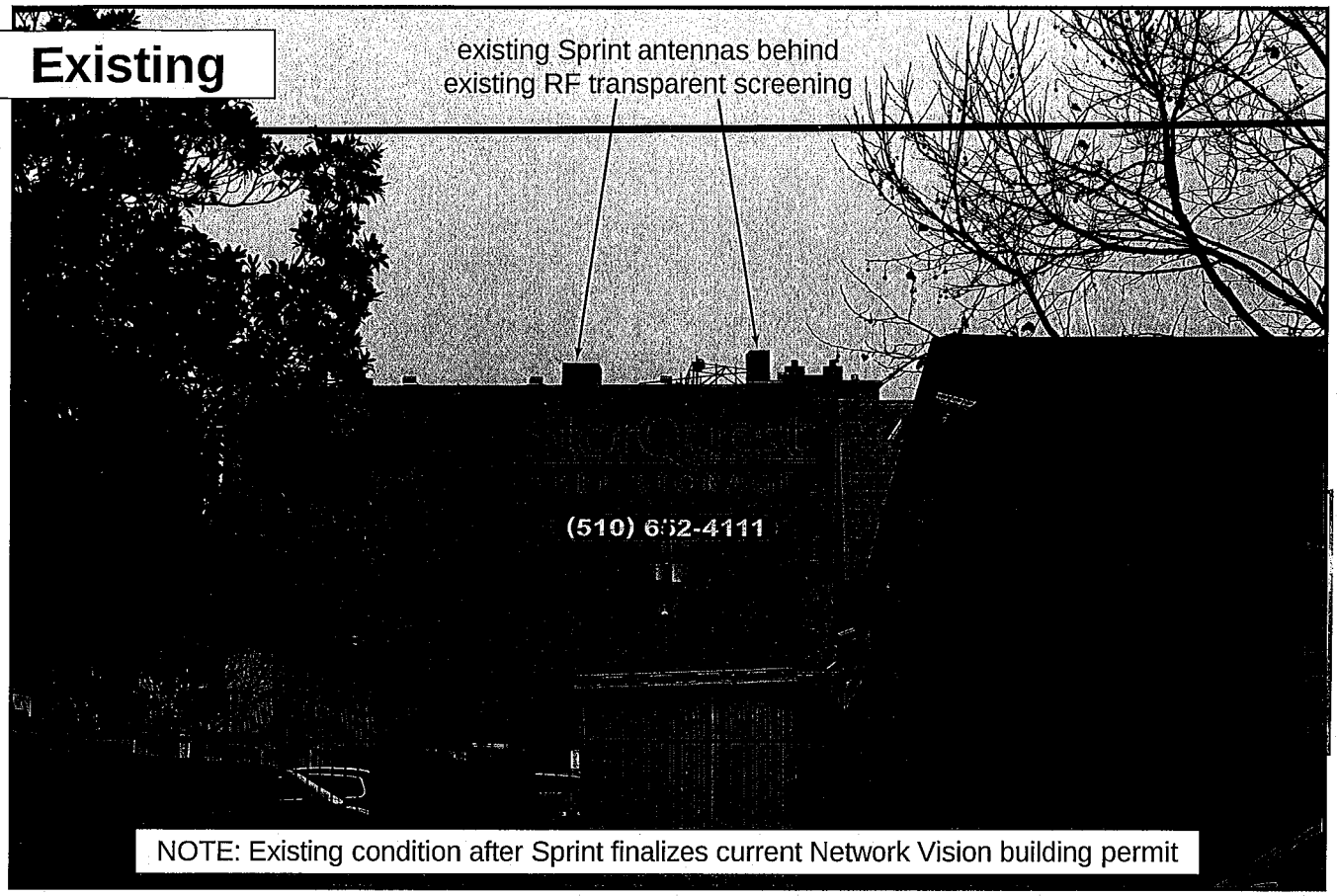
UC Storage Warehouse

4601 SHATTUCK AVE
OAKLAND, CA 94609

SHEET TITLE
ANTENNA SCHEDULE & PARTS LIST

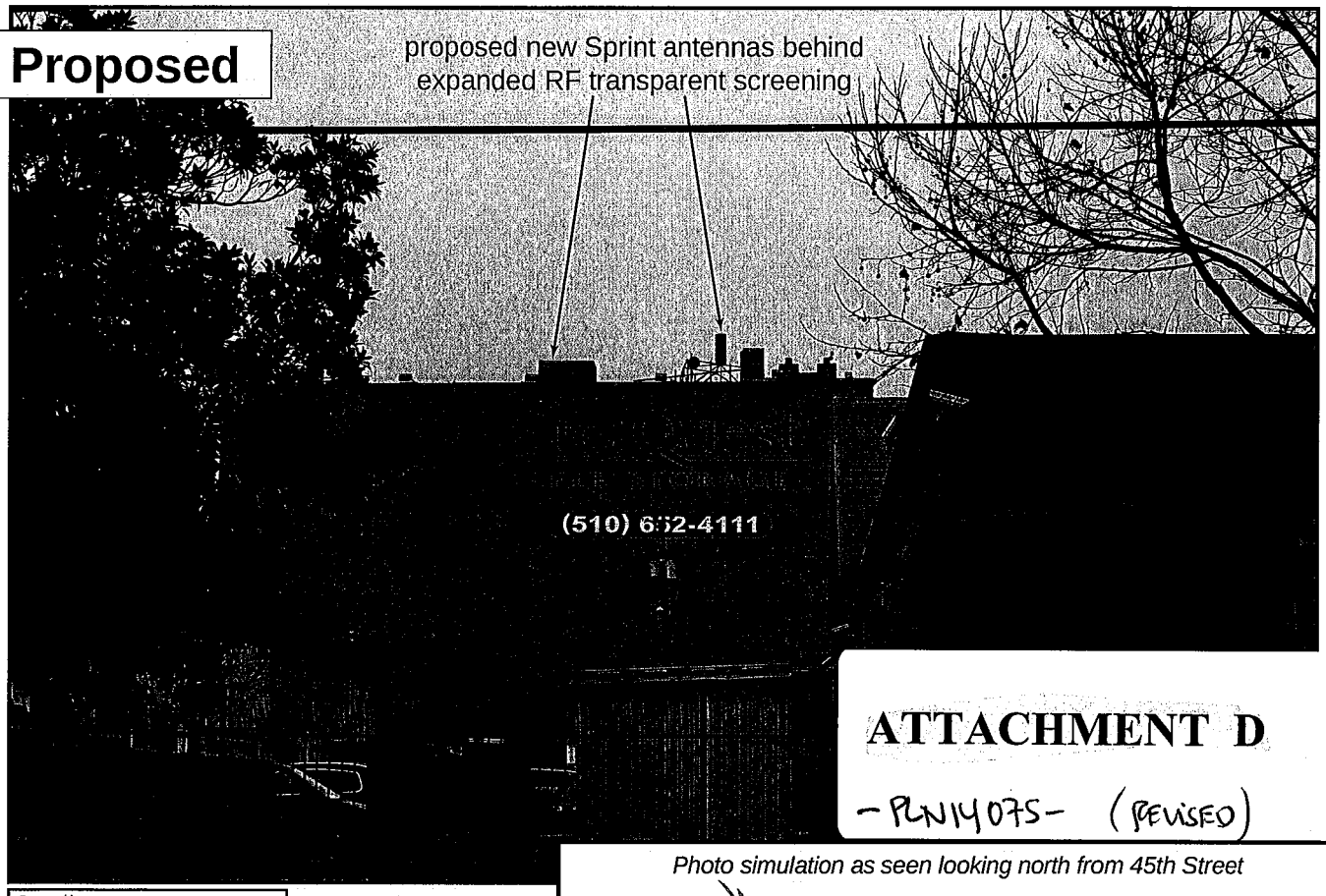
SHEET NUMBER
RF-1

Existing



NOTE: Existing condition after Sprint finalizes current Network Vision building permit

Proposed



ATTACHMENT D

-PLN14075- (REVISED)

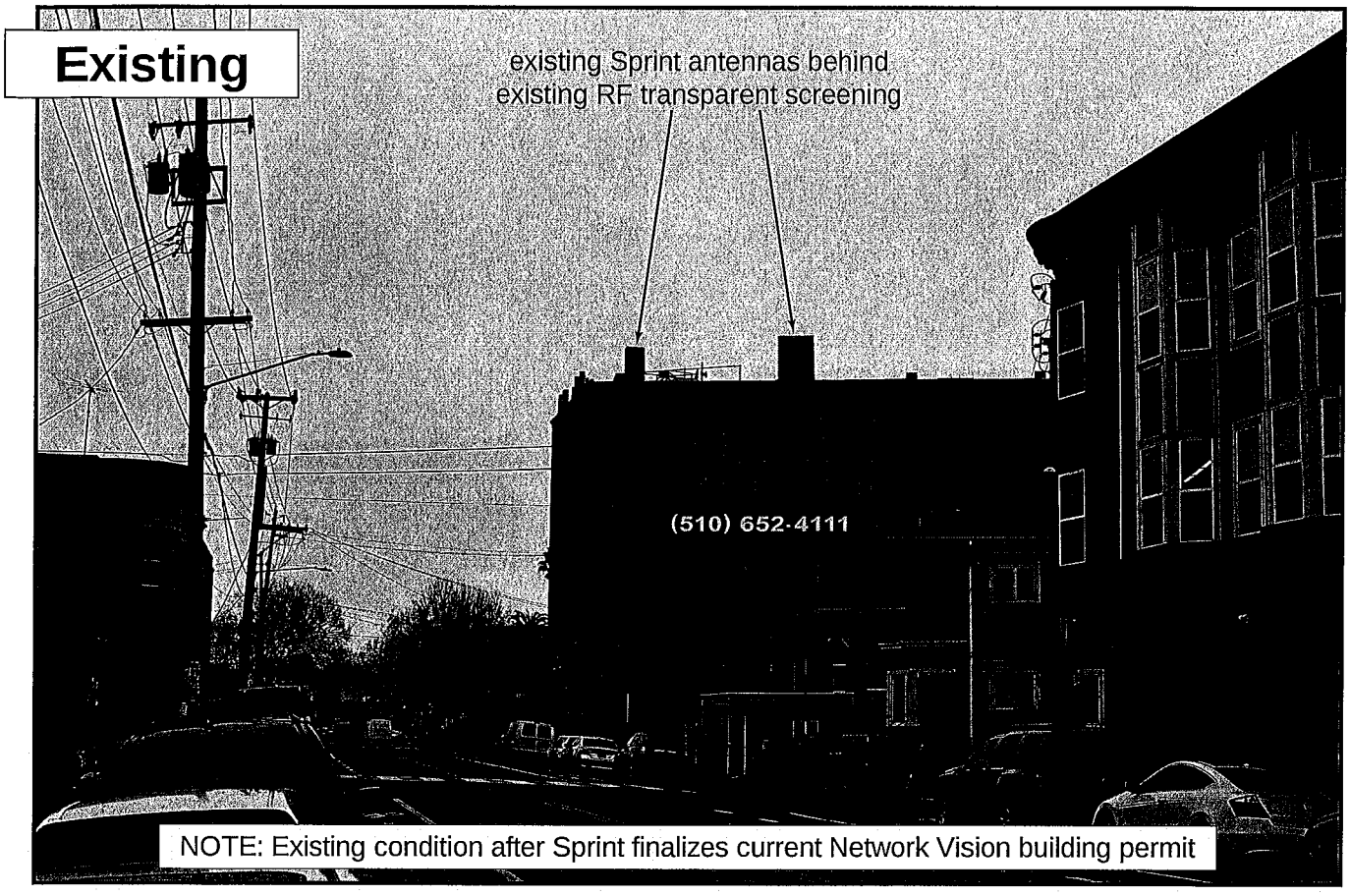
Photo simulation as seen looking north from 45th Street

Sprint

FN03XC017-A UC Storage Warehouse
4601 Shattuck Avenue, Oakland, CA 94609

Prepared by: 08.28.2014

ForzaTelecom
1330 N Broadway Ste. 202
Walnut Creek, CA 94596
info@photosims.com



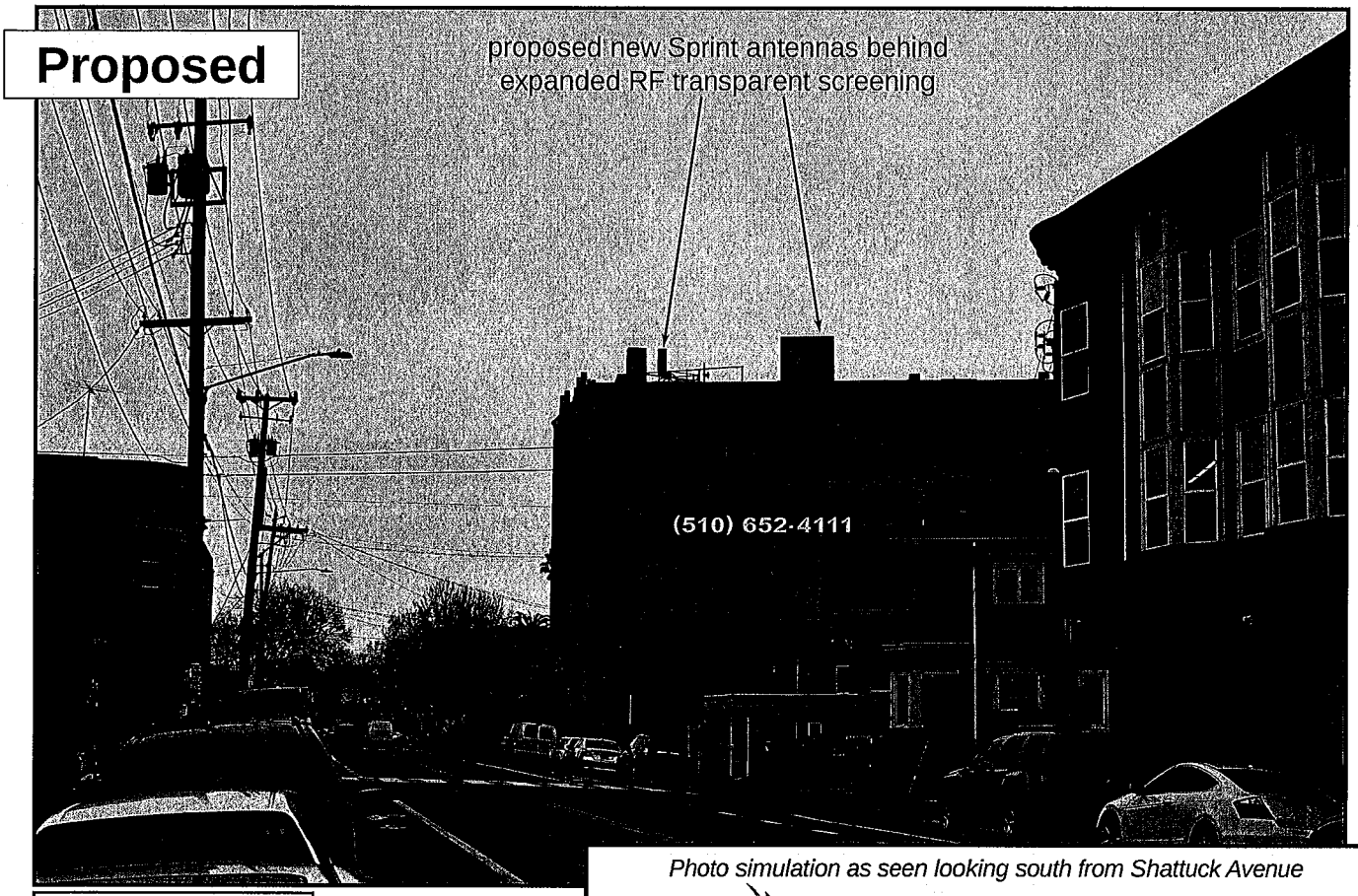


Photo simulation as seen looking south from Shattuck Avenue

Sprint

FN03XC017-A UC Storage Warehouse
4601 Shattuck Avenue, Oakland, CA 94609

Prepared by: 08.28.2014
ForzaTelecom
1330 N Broadway Ste. 202
Walnut Creek, CA 94596
info@photosims.com

Sprint Nextel • Base Station No. FN03xc017A
4601 Shattuck Avenue • Oakland, California

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained by Sprint Nextel, a personal wireless telecommunications carrier, to evaluate proposed modifications to its existing base station (Site No. FN03xc017A) located at 4601 Shattuck Avenue in Oakland, California, for compliance with appropriate guidelines limiting human exposure to radio frequency ("RF") electromagnetic fields.

Executive Summary

Sprint Nextel proposes to install additional directional panel antennas above the roof of the six-story self-storage building located at 4601 Shattuck Avenue in Oakland. The proposed operation will, together with the existing base stations at the site, comply with the FCC guidelines limiting public exposure to RF energy.

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)	5,000–80,000 MHz	5.00 mW/cm^2	1.00 mW/cm^2
BRS (Broadband Radio)	2,600	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, 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 attached 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 Sprint Nextel, including construction drawings by Borges Architectural Group, dated February 4, 2014, that carrier presently has twelve directional panel antennas – two Powerwave Model P65-16-XLPP-RR, one Powerwave Model P90-15-XLPP-RR, and nine inactive antennas – installed with no downtilt on the six-story self-storage located at 4601 Shattuck Avenue in Oakland. The Powerwave antennas are installed within two view screen enclosures above the roof of the building and the inactive antennas are installed in groups of three on the outside of the roof parapet. Sprint Nextel proposes to install three KMW Model ET-X-WM-18-65-8P directional panel antennas with 2° downtilt next to its active antennas within an extension to one of the existing enclosures and within a new view screen enclosure. The six active antennas would be mounted at an effective height of about 72 feet above ground, 7½ feet above the roof, and would be oriented in a pair (one of each type) toward 0°T and singly toward 70°T, 110°T, 220°T, and 230°T. The maximum effective radiated power in any direction would be 13,140 watts, representing simultaneous operation at 6,910 watts for BRS, 4,670 watts for PCS, and 1,560 watts for SMR.

Located on the outside of the roof parapet of the same building are similar antennas for use by Clearwire and T-Mobile. For the limited purpose of this study, the transmitting facilities of those carriers are assumed to be as follows:

Operator	Service	Maximum ERP	Antenna Model	Downtilt	Height
Clearwire	BRS	970 watts	Argus LLPX310R	2°	65 ft
T-Mobile	AWS	3,300	Ericsson AIR21	2	65
	PCS	2,200	Ericsson AIR21	2	65

Study Results

For a person anywhere at ground, the maximum RF exposure level due to the proposed Sprint Nextel operation by itself is calculated to be 0.0084 mW/cm^2, which is 0.95% of the applicable public exposure limit. The maximum calculated cumulative level at ground, for the simultaneous operation of all three carriers, is 1.3% of the public exposure limit. The maximum calculated cumulative level at the top-floor elevation of any nearby building is 2.8% of the public limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels. Levels are calculated to exceed the applicable public exposure limit on the roof of the subject building in front of the antennas, as shown in Figure 3.

Recommended Mitigation Measures

It is recommended that barricades be erected, as shown in Figure 3, to preclude public access in front of the Sprint Nextel antennas. To prevent occupational exposures in excess of the FCC guidelines, it is recommended that appropriate RF safety training be provided to all authorized personnel who have access to the roof, including employees and contractors of the wireless carriers as well as roofers, HVAC workers, and building maintenance staff. No access within 15 feet directly in front of the Sprint Nextel antennas themselves, such as might occur during maintenance work 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. Posting explanatory signs* at the roof access door, on the barricades, and on the enclosures in front of the antennas, such that the signs would be readily visible from any angle of approach to persons who might need to work within that distance, would be sufficient to meet FCC-adopted guidelines. Similar measures should already be in place for the other carriers at the site; applicable keep-back distances for those carriers have not been determined as part of this study.

Conclusion

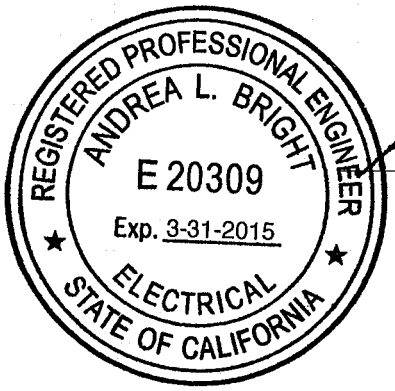
Based on the information and analysis above, it is the undersigned's professional opinion that the proposed operation of the Sprint Nextel base station located at 4601 Shattuck Avenue in Oakland, California, will comply with the prevailing standards for limiting public exposure to radio frequency

* 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.

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 of authorized personnel and posting explanatory of signs are recommended to establish compliance with occupational exposure limitations.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration No. E-20309, which expires on March 31, 2015. 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

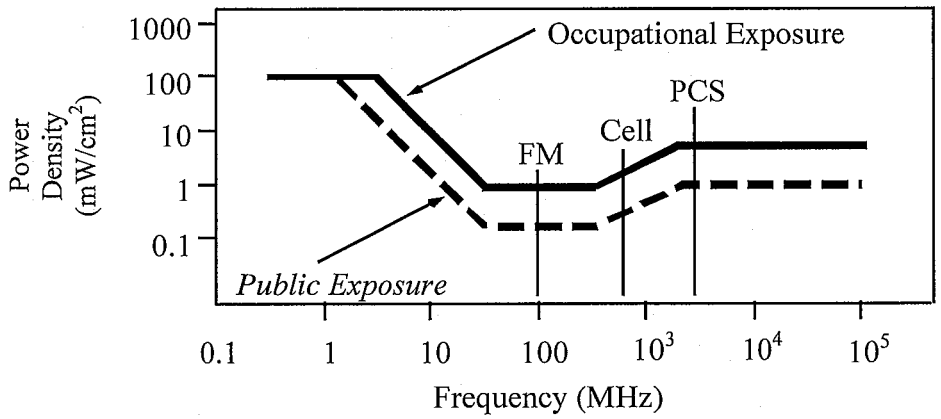
March 20, 2014

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:

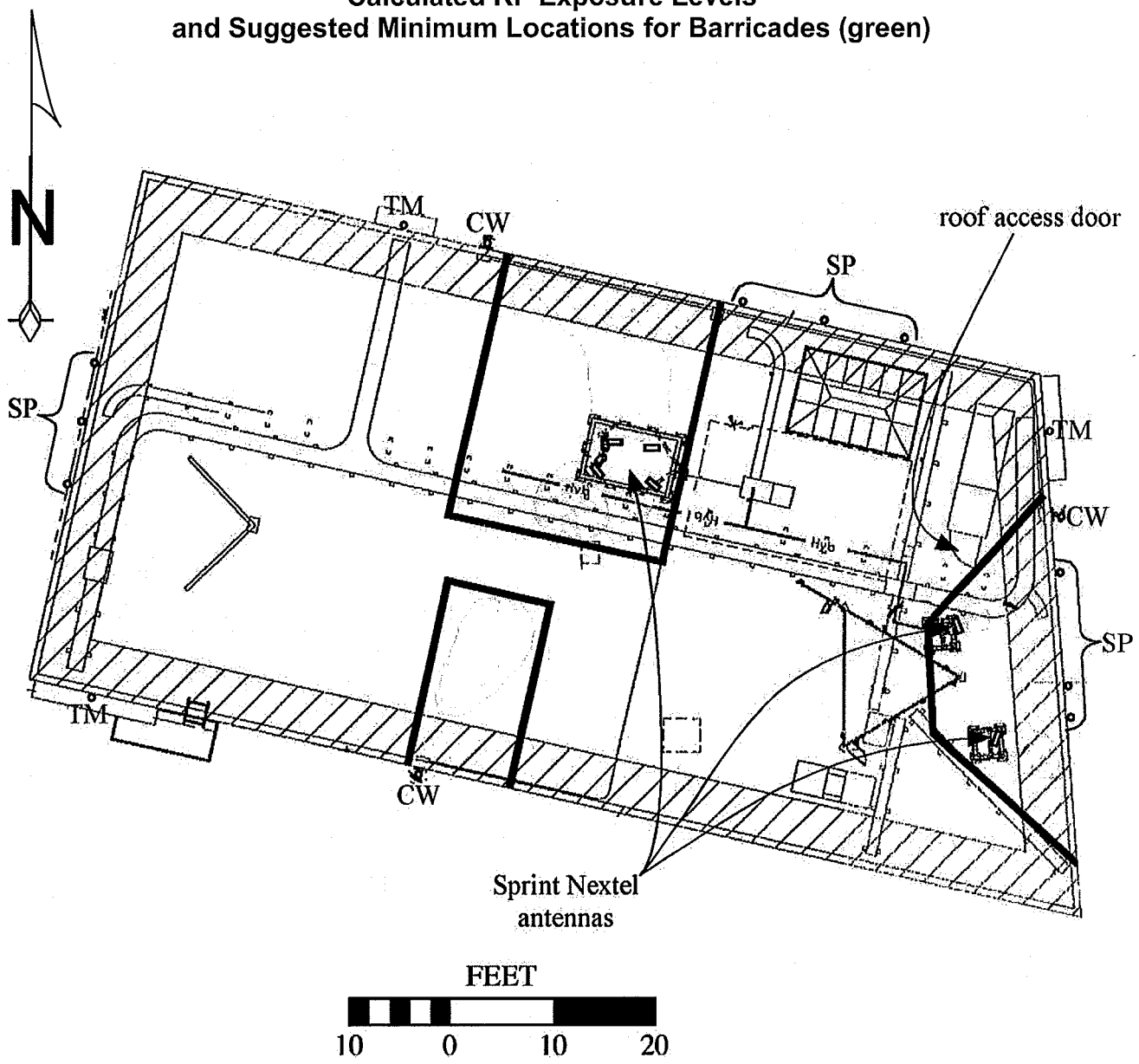
power density $S = \frac{2.56 \times 1.64 \times 100 \times RFF^2 \times ERP}{4 \times \pi \times D^2}$, in mW/cm^2,

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.

Sprint Nextel • Base Station No. FN03xc017A
4601 Shattuck Avenue • Oakland, California

Calculated RF Exposure Levels and Suggested Minimum Locations for Barricades (green)



Calculations performed according to OET Bulletin No. 65, August 1997.
Colors shown represent percent of applicable FCC public limit.

[blank] <100% ☐ >100% ■ >500%

CW = Clearwire antennas
SP = inactive Sprint Nextel antennas
TM = T-Mobile antennas

Notes:
Base drawing from Borges Architectural Group, dated February 4, 2014.
Barricades should be erected as shown to preclude access by the public to areas in front of the antennas.
Explanatory signs should be posted at the roof access door, on the barricades, and on the enclosures in front of the antennas, readily visible to authorized workers needing access. See text.

HAMMETT & EDISON, INC.
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Figure 3