SAN FRANCISCO
PLANNING DEPARTMENT

Executive Summary
Conditional Use Authorization
HEARING DATE: MARCH 22, 2018

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

Date:	March 15, 2018
Case No.:	**2017-006169CUA**
Project Address:	**513 Valencia Street**
Current Zoning:	NCT (Valencia Street Neighborhood Commercial Transit) 55-X Height and Bulk District
Block/Lot:	3569/049
Project Sponsor:	T-Mobile c/o Jenny Wun of Modus, Inc. 240 Stockton Street, 3rd Floor San Francisco, CA 94108
Staff Contact:	Ashley Lindsay – (415) 575-9178 Ashley.Lindsay@sfgov.org
Recommendation:	Approval with Conditions

PROJECT DESCRIPTION

The proposal is to modify an existing T-Mobile Macro Wireless Telecommunications Facility consisting of the removal of two (2) existing omni antennas from the north building façade and west building facade; installation of three (3) new panel antennas within three (3) new 18-inch diameter rooftop FRP radomes at three (3)different corners of the rooftop at the northwest corner, northeast corner and southwest corner; removal of two (2) existing TMA's; installation of six (6) new TMAs; installation of three (3) new RRUs in the equipment area at basement level; replacement and relocation of existing GPS antenna; and removal, relocation, replacement, and installation of ancillary equipment as part of the T-Mobile Telecommunications Network.

SITE DESCRIPTION AND PRESENT USE

The Project Site is located on Assessor's Block 3569, Lot 049. The lot is located at the southeast corner of Valencia Street and 16th Street. The two-story building was constructed in 1926, and is within the eligible 16th and Valencia Streets Post-Fire Historic District, as identified for purposes of CEQA. The present use of the building is commercial use.

SURROUNDING PROPERTIES AND NEIGHBORHOOD

The Project Site is situated within the Mission neighborhood. Surrounding uses include a mix of residential and commercial, and public uses throughout the NCT and RTO-M Districts. In the blocks surrounding the Project Site, the buildings generally range from 2 to 4 stories in height.

ENVIRONMENTAL REVIEW

The Project is exempt from the California Environmental Quality Act ("CEQA") as a Class 3 categorical exemption (Construction of New Communications Facilities).

HEARING NOTIFICATION

TYPE	REQUIRED PERIOD	REQUIRED NOTICE DATE	ACTUAL NOTICE DATE	ACTUAL PERIOD
Classified News Ad	20 days	March 2, 2018	February 28, 2018	22 days
Posted Notice	20 days	March 2, 2018	March 2, 2018	20 days
Mailed Notice	20 days	March 2, 2018	March 2, 2018	20 days

PUBLIC COMMENT/COMMUNITY OUTREACH

The Project Sponsor held a community meeting on March 8, 2017 at 5:30 pm at the San Francisco Public Library – Strong Room, 100 Larkin Street, San Francisco, CA 94114. No members of the community attended the meeting.

As of March 15, 2018, the Department has not received any calls or testimony raising concerns about, or expressing support for, the proposed project.

ISSUES AND OTHER CONSIDERATIONS

- Based on the zoning and land use, the proposed WTS facility is considered a Location Preference 4 Site (Industrial or Commercial Structures), which is considered a "preferred location" according to the Planning Department's *WTS Facilities Siting Guidelines*, as the Project Site is a structure within the NCT Zoning District that is wholly commercial.

- Given the directional nature of the panel antennas, their specific orientation, and their placement on the roof, the Radio-Frequency (RF) emissions created by the proposed panel antennas would not result in exposure levels that approach or exceed the public exposure limits set by the Federal Communications Commission (FCC). As noted on RF emissions report, the combined maximum RF exposure for the proposed site at ground level would be 6.7% of the public exposure limit set by the FCC. The antennas are not accessible to any unauthorized persons due to their height and location on the roof. Health and safety aspects (e.g. engineering review for structural loads, and backup battery storage) of all wireless Projects are reviewed by the Department of Public Health, San Francisco Fire Department, and the Department of Building Inspection.

- The proposed macro WTS facility would not significantly impair commercial and residential activities within the Project Site.

- T-Mobile has an updated Five Year Plan on file with the Department that includes the approximate longitudinal and latitudinal coordinates of proposed locations, including the Project Site.

- All required public notifications were conducted in compliance with the Planning Code and adopted WTS policies.

REQUIRED COMMISSION ACTION

Pursuant to Sections 303(c) and 762 of the Planning Code, a Conditional Use Authorization is required for a new installation of a WTS facility (Utility and Infrastructure Use) in the NCT Zoning Districts.

BASIS FOR RECOMMENDATION

- This Project is necessary, desirable, and compatible with the surrounding neighborhood, in accordance with Section 303 of the Planning Code, for the following reasons: The proposed facility would be screened from view by virtue of proposed enclosures and their placement on the rooftop of the Project Site. The proposal would not significantly detract from views of the Subject building or from view of other surrounding buildings, nor would it detract from adjacent streetscapes, and vistas within the 16th and Valencia Streets Post-Fire Historic District.
- The Project is on balance, consistent with the Objectives and Policies of the General Plan, as outlined in the draft Motion.
- The expected RF emissions fall within the limits established by the Federal Communications Commission (FCC).
- According to the Planning Department's Wireless Telecommunications Services (WTS) Facilities Siting Guidelines, the Project Site is a preferred location, as a Location Preference 4 (Mixed Use Buildings in High Density Districts) Site.
- Based on propagation maps provided by T-Mobile, the Project would provide enhanced coverage in an area that currently experiences gaps in coverage and capacity.
- Based on the analysis provided by T-Mobile, the Project would provide additional capacity in an area that currently experiences insufficient service during periods of high data usage.
- Based on independent third-party evaluation, the maps, data, and conclusions about service coverage and capacity provided by T-Mobile are accurate.

RECOMMENDATION:	**Approval with Conditions**

Attachments:
Draft Conditional Use Authorization Motion
Block Book Map
Sanborn Map
Zoning Map
Aerial Map
Categorical Exemption
Reduced Plans
Photo Simulations
Radio Frequency Report
Department of Public Health Approval
Coverage Maps
Independent Evaluation
Community Outreach Report

Attachment Checklist

☒	Draft Motion	☒	Project sponsor submittal
☒	Zoning District Map	☒	Drawings: Proposed Project
☐	Height & Bulk Map	☒	Check for legibility
☒	Block Book Map	☒	Community Outreach Report
☒	Sanborn Map	☒	Coverage Maps
☒	Aerial Map	☒	RF Report
☒	Context Photos	☒	DPH Approval
☒	Photo Simulations	☒	Independent Evaluation

Exhibits above marked with an "X" are included in this packet AL Planner's Initials

SAN FRANCISCO
PLANNING DEPARTMENT

Subject to: (Select only if applicable)

☐ Affordable Housing (Sec. 415)
☐ Jobs Housing Linkage Program (Sec. 413)
☐ Downtown Park Fee (Sec. 412)
☐ First Source Hiring (Admin. Code)
☐ Child Care Requirement (Sec. 414)
☐ Other

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

Planning Commission Draft Motion

HEARING DATE: MARCH 22, 2018

Date:	March 15, 2018
Case No.:	**2017-006169CUA**
Project Address:	**513 Valencia Street**
Current Zoning:	NCT (Valencia Street Neighborhood Commercial Transit) 55-X Height and Bulk District
Block/Lot:	3569/049
Project Sponsor:	T-Mobile c/o Jenny Wun of Modus, Inc. 240 Stockton Street, 3rd Floor San Francisco, CA 94108
Staff Contact:	Ashley Lindsay – (415) 575-9178 Ashley.Lindsay@sfgov.org

ADOPTING FINDINGS RELATING TO THE APPROVAL OF A CONDITIONAL USE AUTHORIZATION UNDER PLANNING CODE SECTIONS 303 AND 762 TO MODIFY AN EXISTING T-MOBILE MACRO WIRELESS TELECOMMUNICATIONS FACILITY CONSISTING OF THE REMOVAL OF TWO (2) EXISTING OMNI ANTENNAS FROM THE NORTH BUILDING FAÇADE AND WEST BUILDING FACADE; INSTALLATION OF THREE (3) NEW PANEL ANTENNAS WITHIN THREE (3) NEW 18-INCH DIAMETER ROOFTOP FRP RADOMES AT THREE (3) DIFFERENT CORNERS OF THE ROOFTOP AT THE NORTHWEST CORNER, NORTHEAST CORNER AND SOUTHWEST CORNER; REMOVAL OF TWO (2) EXISTING TMA'S; INSTALLATION OF SIX (6) NEW TMAS; INSTALLATION OF THREE (3) NEW RRUS IN THE EQUIPMENT AREA AT BASEMENT LEVEL; REPLACEMENT AND RELOCATION OF EXISTING GPS ANTENNA; AND REMOVAL, RELOCATION, REPLACEMENT, AND INSTALLATION OF ANCILLARY EQUIPMENT AS PART OF THE T-MOBILE TELECOMMUNICATIONS NETWORK. THE SUBJECT PROPERTY IS LOCATED IN THE NCT (VALENCIA STREET NEIGHBORHOOD COMMERCIAL TRANSIT DISTRICT), AND THE 55-X HEIGHT AND BULK DISTRICT.

PREAMBLE

On May 17, 2017, T-Mobile (hereinafter "Project Sponsor"), submitted an application (hereinafter "Application"), for a Conditional Use Authorization on the property at 513 Valencia Street, Block 3569, Lot 049 (hereinafter "Project Site") to modify an existing T-Mobile Macro Wireless Telecommunications Facility consisting of the removal of two (2) existing omni antennas from the

north building façade and west building facade; installation of three (3) new panel antennas within three (3) new 18-inch diameter rooftop FRP radomes at three (3) different corners of the rooftop at the northwest corner, northeast corner and southwest corner; removal of two (2) existing TMA's; installation of six (6) new TMAs; installation of three (3) new RRUs in the equipment area at basement level; replacement and relocation of existing GPS antenna; and removal, relocation, replacement, and installation of ancillary equipment as part of the T-Mobile Telecommunications Network. The property is located in the NCT (Valencia Street Neighborhood Commercial Transit District), and the 55-X Height and Bulk District.

The Project is exempt from the California Environmental Quality Act ("CEQA") as a Class 3 Categorical Exemption (Section 15303 of the California Environmental Quality Act). The Planning Commission has reviewed and concurs with said determination. The categorical exemption and all pertinent documents may be found in the files of the Planning Department (hereinafter "Department"), as the custodian of records, at 1650 Mission Street, Suite 400, San Francisco.

The Planning Department, Office of the Commission Secretary, is the custodian of records for these actions, and such records are located at 1650 Mission Street, Fourth Floor, San Francisco, California.

On March 22, 2018 the San Francisco Planning Commission (hereinafter "Commission") conducted a duly noticed public hearing at a regularly scheduled meeting on the Application for a Conditional Use Authorization.

The Commission has heard and considered the testimony presented to it at the public hearing and has further considered written materials and oral testimony presented on behalf of the Applicant, Department Staff, and other interested parties.

MOVED, that the Commission hereby authorizes the Conditional Use in Application No. 2017-006169CUA, subject to the conditions contained in "EXHIBIT A" of this motion, based on the following findings:

FINDINGS

Having reviewed the materials identified in the preamble above, and having heard all testimony and arguments, this Commission finds, concludes, and determines as follows:

1. The above recitals are accurate and constitute findings of this Commission.

2. **Site Description and Present Use**. The Project Site is located on Assessor's Block 3569, Lot 049. The lot is located at the southeast corner of Valencia Street and 16th Street. The two-story building was constructed in 1926, and is within the eligible 16th and Valencia Streets Post-Fire Historic District, as identified for purposes of CEQA. The present use of the building is commercial use.

3. **Surrounding Properties and Neighborhood**. The Project Site is situated within the Mission neighborhood. Surrounding uses include a mix of residential and commercial, and public uses throughout the NCT and RTO-M Districts. In the blocks surrounding the Project Site, the buildings generally range from 2 to 4 stories in height.

4. **Project Description.** The proposal is to modify an existing T-Mobile Macro Wireless Telecommunications Facility consisting of the removal of two (2) existing omni antennas from the north building façade and west building facade; installation of three (3) new panel antennas within three (3) new 18-inch diameter rooftop FRP radomes at three (3) different corners of the rooftop at the northwest corner, northeast corner and southwest corner; removal of two (2) existing TMA's; installation of six (6) new TMAs; installation of three (3) new RRUs in the equipment area at basement level; replacement and relocation of existing GPS antenna; and removal, relocation, replacement, and installation of ancillary equipment as part of the T-Mobile Telecommunications Network.

5. **Past History and Actions.** The Planning Commission adopted the *Wireless Telecommunications Services (WTS) Facilities Siting Guidelines* ("Guidelines") for the installation of wireless telecommunications facilities in 1996. These Guidelines set forth the land use policies and practices that guide the installation and approval of wireless facilities throughout San Francisco. A large portion of the Guidelines was dedicated to establishing location preferences for these installations. The Board of Supervisors, in Resolution No. 635-96, provided input as to where wireless facilities should be located within San Francisco. The Guidelines were updated by the Commission in 2003 and again in 2012, requiring community outreach, notification, and detailed information about the facilities to be installed.

   Section 8.1 of the Guidelines outlines Location Preferences for wireless facilities. There are five primary areas were the installation of wireless facilities should be located:

   1. Publicly-used Structures: such facilities as fire stations, utility structures, community facilities, and other public structures;
   2. Co-Location Site: encourages installation of facilities on buildings that already have wireless installations;
   3. Industrial or Commercial Structures: buildings such as warehouses, factories, garages, service stations;
   4. Industrial or Commercial Structures: buildings such as supermarkets, retail stores, banks; and
   5. Mixed-Use Buildings in High Density Districts: buildings such as housing above commercial or other non-residential space.

   Section 8.1 of the WTS Siting Guidelines further stipulates that the Planning Commission will not approve WTS applications for Preference 5 or below Location Sites unless the application describes (a) what publicly-used building, co-location site or other Preferred Location Sites are located within the geographic service area; (b) what good faith efforts

and measures were taken to secure these more Preferred Locations, (c) explains why such efforts were unsuccessful; and (d) demonstrates that the location for the site is essential to meet demands in the geographic service area and the Applicant's citywide networks.

Before the Planning Commission can review an application to install a wireless facility, the Project Sponsor must submit a five-year facilities plan, which must be updated biannually, an emissions report and approval by the Department of Public Health, Section 106 Declaration of Intent, an independent evaluation verifying coverage and capacity, a submittal checklist and details about the facilities to be installed.

Under Section 704(B)(iv) of the 1996 Federal Telecommunications Act, local jurisdictions cannot deny wireless facilities based on Radio Frequency (RF) radiation emissions so long as such facilities comply with the FCC's regulations concerning such emissions.

6. **Location Preference.** The *WTS Facilities Siting Guidelines* identify different types of zoning districts and building uses for the siting of wireless telecommunications facilities. Based on the zoning and land use, the proposed WTS facility is at a Location Preference 4 Site (Industrial or Commercial Structures) according to the WTS Facilities Siting Guidelines, making it a desired location.

7. **Radio Waves Range.** The Project Sponsor has stated that the proposed wireless network is designed to address coverage and capacity needs in the area. The network will operate in the AWS, PCS, and 700 Megahertz (MHZ) bands, which are regulated by the Federal Communications Commission (FCC) and must comply with the FCC-adopted health and safety standards for electromagnetic radiation and radio frequency radiation.

8. **Radiofrequency (RF) Emissions:** The Project Sponsor retained EBI Consulting, a radio engineering consulting firm, to prepare a report describing the expected RF emissions from the proposed facility. Pursuant to the Guidelines, the Department of Public Health reviewed the report and determined that the proposed facility complies with the standards set forth in the Guidelines.

9. **Department of Public Health Review and Approval.** The Project was referred to the Department of Public Health (DPH) for emissions exposure analysis. Radio-Frequency (RF) levels from the proposed T-Mobile transmitters at any nearby publicly accessible building or area would be 6.7% of the FCC public exposure limit.

   There are no existing antennas on the rooftop of the building at 513 Valencia Street. Existing RF levels at ground were approximately well below the FCC public exposure limit. There were observed no other antennas within 100 feet of this site. T-Mobile proposes to install three (3) new antennas. The height to the top of the antennas is approximately 33.46 feet above the ground. The estimated RF field from the proposed T-Mobile transmitters at ground level is calculated to be 0.021407mW/sq cm., which is 4.6% of the FCC public exposure limit. The three dimensional perimeter of RF levels equal to the public exposure limit extends 9 feet, and the three dimensional perimeter of RF level

equal to the occupational exclusion limit extends 1 feet; both limits do not reach any publicly accessible areas. Warning signs must be posted at the antennas and roof access points in English, Spanish and Chinese. Workers should not have access to within 1 feet of the front of the antennas while they are in operation.

10. **Coverage and Capacity Verification.** The maps, data, and conclusion provided by T-Mobile to demonstrate the need for outdoor and indoor coverage and capacity have been determined by EBI Consulting, an engineering consultant and independent third party, to accurately represent the carrier's present and post-installation conclusions.

11. **Maintenance Schedule**. The facility would operate without on-site staff but with a maintenance crew visiting the property to service and monitor the facility.

12. **Community Outreach.** As required under the *Guidelines* the Project Sponsor held a community meeting on March 8, 2017 at 5:30 pm at the San Francisco Public Library – Strong Room, 100 Larkin Street, San Francisco, CA 94114. No members of the community attended the meeting.

13. **Five-year plan:** Per the *Guidelines*, the Project Sponsor submitted an updated five-year plan, as required, in October 2017.

14. **Public Comment.** As of March 15, 2018, the Department has not received any calls or testimony raising concerns about, or expressing support for, the proposed project.

15. **Planning Code Compliance.** The Commission finds that the Project is consistent with the relevant provisions of the Planning Code in the following manner:

    A. **Use.** Per Planning Code Section 762, a Conditional Use Authorization is required for a macro WTS facility (Utility and Infrastructure Use).

16. **Planning Code Section 303** establishes criteria for the Planning Commission to consider when reviewing applications for Conditional Use approval. On balance, the Project complies with said criteria in that:

    A. The proposed new uses and building, at the size and intensity contemplated and at the proposed location, will provide a development that is necessary or desirable, and compatible with, the neighborhood or the community.

        i. *Desirable: San Francisco is a leader of the technological economy; it is important and desirable to the vitality of the City to have and maintain adequate telecommunications coverage and data capacity. This includes the installation and upgrading of systems to keep up with changing technology and increases in usage. It is desirable for the City to allow wireless facilities to be installed.*

        The Project at 513 Valencia Street is generally desirable and compatible with the surrounding neighborhood because the Project will not conflict with the existing uses of

the property and will be designed to be compatible with the surrounding neighborhood. The overall location, setback from public streets, height and design of the proposed facility, including visible screening elements is situated so as to avoid intrusion into public vistas, and to insure harmony with the existing neighborhood character and promote public safety.

ii. *Necessary: In the case of wireless installations, there are two criteria that the Commission reviews: coverage and capacity.*

Coverage: San Francisco does have sufficient overall wireless coverage (note that this is separate from carrier capacity). San Francisco's unique coverage issues are due to topography and building heights. The hills and buildings disrupt lines-of-site between WTS base stations. Thus, telecommunication carriers continue to install additional installations to make sure coverage is sufficient.

Capacity: While a carrier may have adequate coverage in a certain area, the capacity may not be sufficient. With the continuous innovations in wireless data technology and demand placed on existing infrastructure, individual telecommunications carriers must upgrade and in some instances expand their facilities network to provide proper data and voice capacity. It is necessary for San Francisco, as a leader in technology, to have adequate capacity.

The Project at 513 Valencia Street is necessary in order to achieve sufficient street and in-building mobile phone coverage and data capacity. Recent drive tests in the subject area conducted by the T-Mobile Radio Frequency Engineering Team provide that the Project Site is a preferable location, based on factors including quality of coverage and aesthetics.

B. The proposed project will not be detrimental to the health, safety, convenience or general welfare of persons residing or working in the vicinity. There are no features of the project that could be detrimental to the health, safety or convenience of those residing or working the area, in that:

iii. Nature of proposed site, including its size and shape, and the proposed size, shape and arrangement of structures;

The Project must comply with all applicable Federal and State regulations to safeguard the health, safety and to ensure that persons residing or working in the vicinity will not be affected, and prevent harm to other personal property.

The Department of Public Health conducted an evaluation of potential health effects from Radio Frequency radiation, and has concluded that the proposed wireless transmission facilities will have no adverse health effects if operated in compliance with the FCC-adopted health and safety standards.

iv. The accessibility and traffic patterns for persons and vehicles, the type and volume of such traffic, and the adequacy of proposed off-street parking and loading;

No increase in traffic volume is anticipated with the facilities operating unmanned, with a maintenance crew visiting the Site once a month or on an as-needed basis.

v. The safeguards afforded to prevent noxious or offensive emissions such as noise, glare, dust and odor;

While some noise and dust may result from the installation of the antennas and transceiver equipment, noise or noxious emissions from continued use are not likely to be significantly greater than ambient conditions due to the operation of the wireless communication network.

vi. Treatment given, as appropriate, to such aspects as landscaping, screening, open spaces, parking and loading areas, service areas, lighting and signs;

The facility will not affect landscaping, open space, required parking, lighting or signage at the Project Site or surrounding area.

C. That the use as proposed will comply with the applicable provisions of the Planning Code and will not adversely affect the General Plan.

The Project complies with all relevant requirements and standards of the Planning Code and is consistent with Objectives and Policies of the General Plan, as detailed below.

17. **General Plan Compliance.** The Project is, on balance, consistent with the following Objectives and Policies of the General Plan:

HOUSING ELEMENT
Objectives and Policies

BALANCE HOUSING CONSTRUCTION AND COMMUNITY INFRASTRUCTURE

OBJECTIVE 12:
BALANCE HOUSING GROWTH WITH ADEQUATE INFRASTRUCTURE THAT SERVES THE CITY'S GROWING POPULATION.

Policy 12.3:
Ensure new housing is sustainable supported by the City's public infrastructure systems.

The Project will improve T-Mobile's coverage and capacity within the Mission neighborhood.

COMMERCE AND INDUSTRY ELEMENT
Objectives and Policies

OBJECTIVE 1:
MANAGE ECONOMIC GROWTH AND CHANGE TO ENSURE ENHANCEMENT OF THE TOTAL CITY LIVING AND WORKING ENVIRONMENT.

Policy 1.1:
Encourage development, which provides substantial net benefits and minimizes undesirable consequences. Discourage development, which has substantial undesirable consequences that cannot be mitigated.

Policy 1.2:
Assure that all commercial and industrial uses meet minimum, reasonable performance standards.

The Project will enhance the total city living and working environment by providing communication services for residents and workers within the City. Additionally, the Project would comply with Federal, State and Local performance standards.

OBJECTIVE 2:
MAINTAIN AND ENHANCE A SOUND AND DIVERSE ECONOMIC BASE AND FISCAL STRUCTURE FOR THE CITY.

Policy 2.1:
Seek to retain existing commercial and industrial activity and to attract new such activity to the city.

Policy 2.3:
Maintain a favorable social and cultural climate in the city in order to enhance its attractiveness as a firm location.

The Site will be an integral part of a new wireless communications network that will enhance the City's diverse economic base.

OBJECTIVE 4:
IMPROVE THE VIABILITY OF EXISTING INDUSTRY IN THE CITY AND THE ATTRACTIVENESS OF THE CITY AS A LOCATION FOR NEW INDUSTRY.

Policy 4.1:
Maintain and enhance a favorable business climate in the City.

Policy 4.2:
Promote and attract those economic activities with potential benefit to the City.

The Project will benefit the City by enhancing the business climate through improved communication services for residents and workers.

VISITOR TRADE

OBJECTIVE 8:
ENHANCE SAN FRANCISCO'S POSITION AS A NATIONAL CENTER FOR CONVENTIONS AND VISITOR TRADE.

Policy 8.3:
Assure that areas of particular visitor attraction are provided with adequate public services for both residents and visitors.

The Project will ensure that residents and visitors have adequate public service in the form of T-Mobile telecommunications.

COMMUNITY SAFETY ELEMENT
Objectives and Policies

OBJECTIVE 3:
ESTABLISH STRATEGIES TO ADDRESS THE IMMEDIATE EFFECTS OF A DISASTER.

Policy 1.20
Increase communication capabilities in preparation for all phases of a disaster and ensure communication abilities extend to hard-to-reach areas and special populations.

Policy 2.4
Bolster the Department of Emergency Management's role as the City's provider of emergency planning and communication, and prioritize its actions to meet the needs of San Francisco.

Policy 2.15
Utilize advancing technology to enhance communication capabilities in preparation for all phases of a disaster, particularly in the high-contact period immediately following a disaster.

Policy 3.7:
Develop a system to convey personalized information during and immediately after a disaster.

The Project will enhance the ability of the City to protect both life and property from the effects of a fire or natural disaster by providing communication services.

18. **Planning Code Section 101.1(b)** establishes eight priority-planning policies and requires review of permits for consistency with said policies. On balance, the Project complies with said policies in that:

A. That existing neighborhood-serving retail uses be preserved and enhanced and future opportunities for resident employment in and ownership of such businesses be enhanced.

The wireless communications network will enhance personal communication services for businesses and customers in the surrounding area.

B. That existing housing and neighborhood character be conserved and protected in order to preserve the cultural and economic diversity of our neighborhoods.

No residential uses will be displaced or altered in any way by the granting of this Authorization.

C. That the City's supply of affordable housing be preserved and enhanced.

The Project will have no adverse effect on housing in the vicinity.

D. That commuter traffic not impede MUNI transit service or overburden our streets or neighborhood parking.

Due to the nature of the Project and minimal maintenance or repair, municipal transit service will not be significantly impeded and neighborhood parking will not be overburdened.

E. That a diverse economic base be maintained by protecting our industrial and service sectors from displacement due to commercial office development, and that future opportunities for resident employment and ownership in these sectors be enhanced.

The Project will not cause any displacement of industrial and service sector activity.

F. That the City achieve the greatest possible preparedness to protect against injury and loss of life in an earthquake.

Compliance with applicable structural safety and seismic safety requirements will be considered during the building permit application review process.

G. That landmarks and historic buildings be preserved.

The facility will be screened from view by virtue of equipment placement on the rooftop. While the proposed FRP radomes and FRP box are minimally visible from surrounding public rights-of-way (e.g. sidewalks along surrounding streets), the size, height, and setback of the screening structures will not significantly detract from views of the subject building.

Furthermore, the proposed WTS facility has been found to be consistent with the intent and requirements outlined in Historic Preservation Commission Motion No. 0289 and Resolution

No. 764, and the project was determined to be in conformance with the Secretary of the Interior's Standards for Rehabilitation.

H. That our parks and open space and their access to sunlight and vistas be protected from development.

The Project will not adversely affect parks or open space, nor their access to sunlight or public vistas.

19. The Project is consistent with and would promote the general and specific purposes of the Code provided under Section 101.1(b) in that, as designed, the Project would contribute to the character and stability of the neighborhood and would constitute a beneficial development.

20. The Commission hereby finds that approval of the Conditional Use Authorization would promote the health, safety and welfare of the City.

DECISION

That based upon the Record, the submissions by the Applicant, the staff of the Department and other interested parties, the oral testimony presented to this Commission at the public hearings, and all other written materials submitted by all parties, the Commission hereby APPROVES Conditional Use Application No. **2017-006169CUA**, subject to the following conditions attached hereto as "EXHIBIT A" in general conformance with plans on file, dated September 24, 2017, and stamped "EXHIBIT B", which is incorporated herein by reference as though fully set forth.

APPEAL AND EFFECTIVE DATE OF MOTION: Any aggrieved person may appeal this Conditional Use Authorization to the Board of Supervisors within thirty (30) days after the date of this Motion No. XXXX. The effective date of this Motion shall be the date of this Motion if not appealed (After the 30-day period has expired) OR the date of the decision of the Board of Supervisors if appealed to the Board of Supervisors. For further information, please contact the Board of Supervisors at (415) 554-5184, City Hall, Room 244, 1 Dr. Carlton B. Goodlett Place, San Francisco, CA 94102.

Protest of Fee or Exaction: You may protest any fee or exaction subject to Government Code Section 66000 that is imposed as a condition of approval by following the procedures set forth in Government Code Section 66020. The protest must satisfy the requirements of Government Code Section 66020(a) and must be filed within 90 days of the date of the first approval or conditional approval of the development referencing the challenged fee or exaction. For purposes of Government Code Section 66020, the date of imposition of the fee shall be the date of the earliest discretionary approval by the City of the subject development.

If the City has not previously given Notice of an earlier discretionary approval of the project, the Planning Commission's adoption of this Motion, Resolution, Discretionary Review Action or the Zoning Administrator's Variance Decision Letter constitutes the approval or conditional approval of the development and the City hereby gives NOTICE that the 90-day protest period under Government Code Section 66020 has begun. If the City has already given Notice that the 90-day approval period has begun for the subject development, then this document does not re-commence the 90-day approval period.

I hereby certify that the foregoing Motion was adopted by the Planning Commission on **March 22, 2018**.

Jonas P. Ionin
Commission Secretary

AYES:

NAYS:

ABSENT:

ADOPTED:

EXHIBIT A

AUTHORIZATION

This authorization is for a Conditional Use to modify an existing T-Mobile Macro Wireless Telecommunications Facility consisting of the removal of two (2) existing omni antennas from the north building façade and west building facade; installation of three (3) new panel antennas within three (3) new 18-inch diameter rooftop FRP radomes at three (3) different corners of the rooftop: the northwest corner, northeast corner and southwest corner; removal of two (2) existing TMA's; installation of six (6) new TMAs; installation of three (3) new RRUs in the equipment area at basement level; replacement and relocation of existing GPS antenna; and removal, relocation, replacement, and installation of ancillary equipment as part of the T-Mobile Telecommunications Network at 513 Valencia Street, Block 3569, Lot 049, pursuant to Planning Code Sections 303(c) and 762 within the NCT (Valencia Street Neighborhood Commercial Transit), and the 55-X Height and Bulk Districts. ; in general conformance with plans dated September 24, 2017 and stamped "EXHIBIT B" included in the docket for Record No. 2017-006169CUAand subject to conditions of approval reviewed and approved by the Commission on March 22, 2018, under Motion No. **XXXX**. This authorization and the conditions contained herein run with the property and not with a particular Project Sponsor, business, or operator.

RECORDATION OF CONDITIONS OF APPROVAL

Prior to the issuance of the building permit or commencement of use for the Project, the Zoning Administrator shall approve and order the recordation of a Notice in the Official Records of the Recorder of the City and County of San Francisco for the subject property. This Notice shall state that the Project is subject to the conditions of approval contained herein and reviewed and approved by the Planning Commission on **March 22, 2018** under Motion No. **XXXX**.

PRINTING OF CONDITIONS OF APPROVAL ON PLANS

The conditions of approval under the 'Exhibit A' of this Planning Commission Motion No. **XXXX** shall be reproduced on the Index Sheet of construction plans submitted with the Site or Building permit application for the Project. The Index Sheet of the construction plans shall reference to the Conditional Use Authorization and any subsequent amendments or modifications.

SEVERABILITY

The Project shall comply with all applicable City codes and requirements. If any clause, sentence, section or any part of these conditions of approval is for any reason held to be invalid, such invalidity shall not affect or impair other remaining clauses, sentences, or sections of these conditions. This decision conveys no right to construct, or to receive a building permit. "Project Sponsor" shall include any subsequent responsible party.

CHANGES AND MODIFICATIONS

Changes to the approved plans may be approved administratively by the Zoning Administrator. Significant changes and modifications of conditions shall require Planning Commission approval of a new Conditional Use Authorization.

Conditions of Approval, Compliance, Monitoring, and Reporting

PERFORMANCE

1. **Validity.** The authorization and right vested by virtue of this action is valid for three (3) years from the effective date of the Motion. The Department of Building Inspection shall have issued a Building Permit or Site Permit to construct the project and/or commence the approved use within this three-year period.
   For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

2. **Expiration and Renewal.** Should a Building or Site Permit be sought after the three (3) year period has lapsed, the project sponsor must seek a renewal of this Authorization by filing an application for an amendment to the original Authorization or a new application for Authorization. Should the project sponsor decline to so file, and decline to withdraw the permit application, the Commission shall conduct a public hearing in order to consider the revocation of the Authorization. Should the Commission not revoke the Authorization following the closure of the public hearing, the Commission shall determine the extension of time for the continued validity of the Authorization.
   For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

3. **10-Year Renewal.** This authorization is valid for ten (10) years from date of approval. The project sponsor must seek a renewal of this Authorization prior to expiration, but no earlier than 24 months prior to expiration, by filing an application for an amendment to the original Authorization or a new application for Authorization. Should the project sponsor decline to so file, and decline to decommission the wireless facility, the Commission shall conduct a public hearing in order to consider the revocation of the Authorization. Should the Commission not revoke the Authorization following the closure of the public hearing, the Commission shall determine the extension of time for the continued validity of the Authorization.
   For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

4. **Diligent pursuit.** Once a site or Building Permit has been issued, construction must commence within the timeframe required by the Department of Building Inspection and be continued diligently to completion. Failure to do so shall be grounds for the Commission to consider revoking the approval if more than three (3) years have passed since this Authorization was approved.
   For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

5. **Extension.** All time limits in the preceding three paragraphs may be extended at the discretion of the Zoning Administrator where implementation of the project is delayed by a public agency, an appeal or a legal challenge and only by the length of time for which such public agency, appeal or challenge has caused delay.

For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

6. **Conformity with Current Law.** No application for Building Permit, Site Permit, or other entitlement shall be approved unless it complies with all applicable provisions of City Codes in effect at the time of such approval.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

DESIGN – COMPLIANCE AT PLAN STAGE

7. **Plan Drawings - WTS**. Prior to the issuance of any building or electrical permits for the installation of the facilities, the Project Sponsor shall submit final scaled drawings for review and approval by the Planning Department ("Plan Drawings"). The Plan Drawings shall describe:
   a. Structure and Siting. Identify all facility related support and protection measures to be installed. This includes, but is not limited to, the location(s) and method(s) of placement, support, protection, screening, paint and/or other treatments of the antennas and other appurtenances to insure public safety, insure compatibility with urban design, architectural and historic preservation principles, and harmony with neighborhood character.
   b. For the Project Site, regardless of the ownership of the existing facilities. Identify the location of all existing antennas and facilities; and identify the location of all approved (but not installed) antennas and facilities.
   c. Emissions. Provide a report, subject to approval of the Zoning Administrator, that operation of the facilities in addition to ambient RF emission levels will not exceed adopted FCC standards with regard to human exposure in uncontrolled areas.
   For information about compliance, contact the Case Planner, Planning Department at 415-575-9078, www.sf-planning.org.

8. **Screening - WTS.** To the extent necessary to ensure compliance with adopted FCC regulations regarding human exposure to RF emissions, and upon the recommendation of the Zoning Administrator, the Project Sponsor shall:
   a. Modify the placement of the facilities;
   b. Install fencing, barriers or other appropriate structures or devices to restrict access to the facilities;
   c. Install multi-lingual signage, including the RF radiation hazard warning symbol identified in ANSI C95.2 1982, to notify persons that the facility could cause exposure to RF emissions;
   d. Implement any other practice reasonably necessary to ensure that the facility is operated in compliance with adopted FCC RF emission standards.
   e. To the extent necessary to minimize visual obtrusion and clutter, installations shall conform to the following standards:
      a. Antennas and back up equipment shall be painted, fenced, landscaped or otherwise treated architecturally so as to minimize visual effects;

b. Rooftop installations shall be setback such that back up facilities are not viewed from the street;
c. Although co location of various companies' facilities may be desirable, a maximum number of antennas and back up facilities on the Project Site shall be established, on a case by case basis, such that "antennae farms" or similar visual intrusions for the site and area is not created.

For information about compliance, contact the Case Planner, Planning Department at 415-575-9078, www.sf-planning.org .

MONITORING - AFTER ENTITLEMENT

9. **Enforcement.** Violation of any of the Planning Department conditions of approval contained in this Motion or of any other provisions of Planning Code applicable to this Project shall be subject to the enforcement procedures and administrative penalties set forth under Planning Code Section 176 or Section 176.1. The Planning Department may also refer the violation complaints to other city departments and agencies for appropriate enforcement action under their jurisdiction.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

10. **Revocation due to Violation of Conditions.** Should implementation of this Project result in complaints from interested property owners, residents, or commercial lessees which are not resolved by the Project Sponsor and found to be in violation of the Planning Code and/or the specific Conditions of Approval for the Project as set forth in Exhibit A of this Motion, the Zoning Administrator shall refer such complaints to the Commission, after which it may hold a public hearing on the matter to consider revocation of this authorization.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org.

11. **Implementation Costs - WTS**. The Project Sponsor, on an equitable basis with other WTS providers, shall pay the cost of preparing and adopting appropriate General Plan policies related to the placement of WTS facilities. Should future legislation be enacted to provide for cost recovery for planning, the Project Sponsor shall be bound by such legislation.

The Project Sponsor or its successors shall be responsible for the payment of all reasonable costs associated with implementation of the conditions of approval contained in this authorization, including costs incurred by this Department, the Department of Public Health, the Department of Technology, Office of the City Attorney, or any other appropriate City Department or agency. The Planning Department shall collect such costs on behalf of the City.

The Project Sponsor shall be responsible for the payment of all fees associated with the installation of the subject facility, which are assessed by the City pursuant to all applicable law.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

12. **Implementation and Monitoring - WTS**. In the event that the Project implementation report includes a finding that RF emissions for the site exceed FCC Standards in any uncontrolled location, the Zoning Administrator may require the Applicant to immediately cease and desist operation of the facility until such time that the violation is corrected to the satisfaction of the Zoning Administrator.
    For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

13. **Project Implementation Report - WTS**. The Project Sponsor shall prepare and submit to the Zoning Administrator a Project Implementation Report. The Project Implementation Report shall:
    a. Identify the three dimensional perimeter closest to the facility at which adopted FCC standards for human exposure to RF emissions in uncontrolled areas are satisfied;
    b. Document testing that demonstrates that the facility will not cause any potential exposure to RF emissions that exceed adopted FCC emission standards for human exposure in uncontrolled areas.
    c. The Project Implementation Report shall compare test results for each test point with applicable FCC standards. Testing shall be conducted in compliance with FCC regulations governing the measurement of RF emissions and shall be conducted during normal business hours on a non-holiday weekday with the subject equipment measured while operating at maximum power.
    d. Testing, Monitoring, and Preparation. The Project Implementation Report shall be prepared by a certified professional engineer or other technical expert approved by the Department. At the sole option of the Department, the Department (or its agents) may monitor the performance of testing required for preparation of the Project Implementation Report. The cost of such monitoring shall be borne by the Project Sponsor pursuant to the condition related to the payment of the City's reasonable costs.
    e. Notification and Testing. The Project Implementation Report shall set forth the testing and measurements undertaken pursuant to Conditions 2 and 4.
    f. Approval. The Zoning Administrator shall request that the Certification of Final Completion for operation of the facility not be issued by the Department of Building Inspection until such time that the Project Implementation Report is approved by the Department for compliance with these conditions.
    For information about compliance, contact the Environmental Health Section, Department of Public Health at (415) 252-3800, www.sfdph.org.

14. **Coverage and Capacity Verification.** Use is authorized as long as an independent evaluator, selected by the Planning Department, determines that the information and conclusions submitted by the wireless service provider in support of its request for conditional use are accurate. The wireless service provider shall fully cooperate with the evaluator and shall provide any and all data requested by the evaluator to allow the evaluator to verify that the maps, data, and conclusions about service coverage and capacity submitted are accurate. The wireless service provider shall bear all costs of said evaluation. The independent evaluator, upon request by the wireless service provider shall keep the submitted data confidential and

shall sign a confidentiality agreement acceptable to the wireless service provider. The independent evaluator shall be a professional engineer licensed by the State of California.
For information about compliance, contact the Case Planner, Planning Department at 415-575-9079, www.sf-planning.org .

15. **Notification prior to Project Implementation Report - WTS.** The Project Sponsor shall undertake appropriate tests for residents of any dwelling units located within 25 feet of the transmitting antenna.
    a. At least twenty calendar days prior to conducting the testing required for preparation of the Project Implementation Report, the Project Sponsor shall mail notice to the Department, as well as to the resident of any legal dwelling unit within 25 feet of a transmitting antenna of the date on which testing will be conducted. The Applicant will submit a written affidavit attesting to this mail notice along with the mailing list.
    b. When requested in advance by a resident notified of testing pursuant to subsection (a), the Project Sponsor shall conduct testing of total power density of RF emissions within the residence of that resident on the date on which the testing is conducted for the Project Implementation Report.

    For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

16. **Installation - WTS.** Within 10 days of the installation and operation of the facilities, the Project Sponsor shall confirm in writing to the Zoning Administrator that the facilities are being maintained and operated in compliance with applicable Building, Electrical and other Code requirements, as well as applicable FCC emissions standards.
    For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

17. **Periodic Safety Monitoring - WTS.** The Project Sponsor shall submit to the Zoning Administrator 10 days after installation of the facilities, and every two years thereafter, a certification attested to by a licensed engineer expert in the field of EMR/RF emissions, that the facilities are and have been operated within the then current applicable FCC standards for RF/EMF emissions.
    For information about compliance, contact the Environmental Health Section, Department of Public Health at (415) 252-3800, www.sfdph.org.

OPERATION

18. **Community Liaison.** Prior to issuance of a building permit application to construct the project and implement the approved use, the Project Sponsor shall appoint a community liaison officer to deal with the issues of concern to owners and occupants of nearby properties. The Project Sponsor shall provide the Zoning Administrator written notice of the name, business address, and telephone number of the community liaison. Should the contact information change, the Zoning Administrator shall be made aware of such change. The community liaison shall report to the Zoning Administrator what issues, if any, are of concern to the community and what issues have not been resolved by the Project Sponsor.

For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

19. **Out of Service – WTS**. The Project Sponsor or Property Owner shall remove antennas and equipment that has been out of service or otherwise abandoned for a continuous period of six (6) months.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

20. **Emissions Conditions – WTS**. It is a continuing condition of this authorization that the facilities be operated in such a manner so as not to contribute to ambient RF/EMF emissions in excess of then current FCC adopted RF/EMF emission standards; violation of this condition shall be grounds for revocation.
For information about compliance, contact the Environmental Health Section, Department of Public Health at (415) 252-3800, www.sfdph.org.

21. **Noise and Heat – WTS**. The WTS facility, including power source and cooling facility, shall be operated at all times within the limits of the San Francisco Noise Control Ordinance. The WTS facility, including power source and any heating/cooling facility, shall not be operated so as to cause the generation of heat that adversely affects a building occupant.
For information about compliance, contact the Environmental Health Section, Department of Public Health at (415) 252-3800, www.sfdph.org.

22. **Transfer of Operation – WTS**. Any carrier/provider authorized by the Zoning Administrator or by the Planning Commission to operate a specific WTS installation may assign the operation of the facility to another carrier licensed by the FCC for that radio frequency provided that such transfer is made known to the Zoning Administrator in advance of such operation, and all conditions of approval for the subject installation are carried out by the new carrier/provider.
For information about compliance, contact Code Enforcement, Planning Department at 415-575-6863, www.sf-planning.org

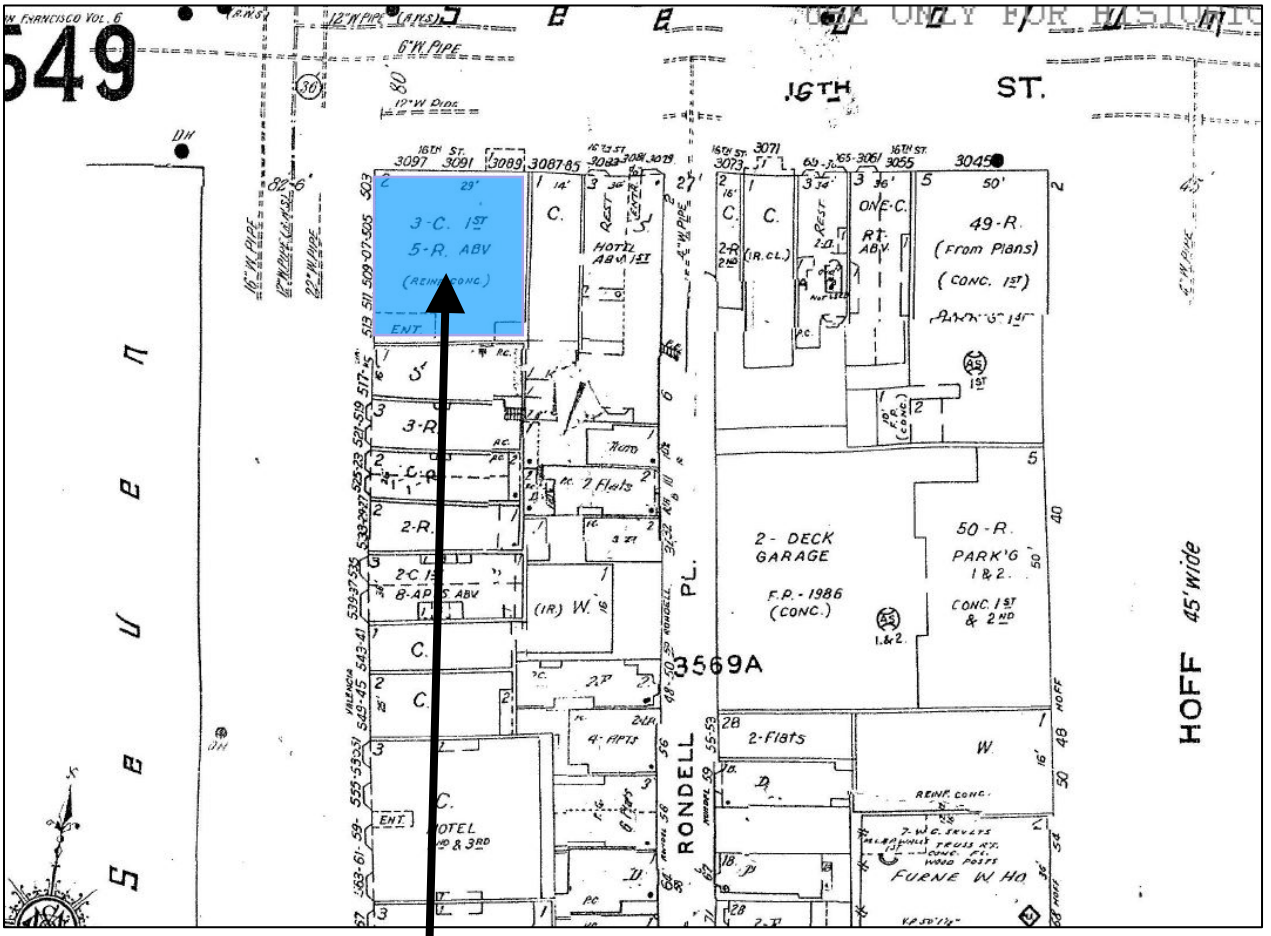
23. **Compatibility with City Emergency Services – WTS**. The facility shall not be operated or caused to transmit on or adjacent to any radio frequencies licensed to the City for emergency telecommunication services such that the City's emergency telecommunications system experiences interference, unless prior approval for such has been granted in writing by the City.
For information about compliance, contact the Department of Technology, 415-581-4000, http://sfgov3.org/index.aspx?page=1421

Block Book Map

Case Number 2017-006169CUA
T-Mobile
Macro WTS Facility
513 Valencia Street

SAN FRANCISCO
PLANNING DEPARTMENT

Sanborn Map*

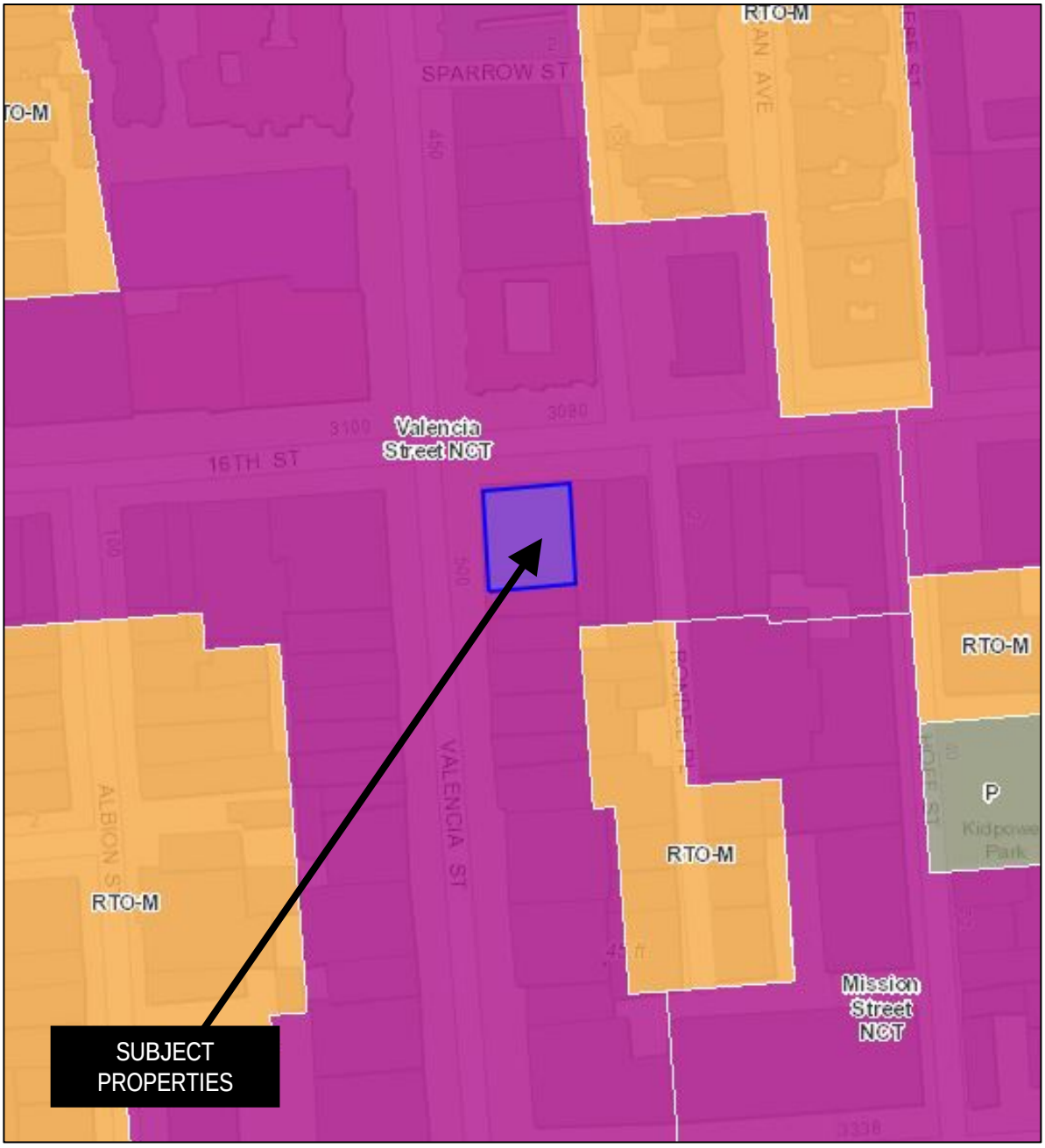


**The Sanborn Maps in San Francisco have not been updated since 1998, and this map may not accurately reflect existing conditions.*

Case Number 2017-006169CUA
T-Mobile
Macro WTS Facility
513 Valencia Street

SAN FRANCISCO
PLANNING DEPARTMENT

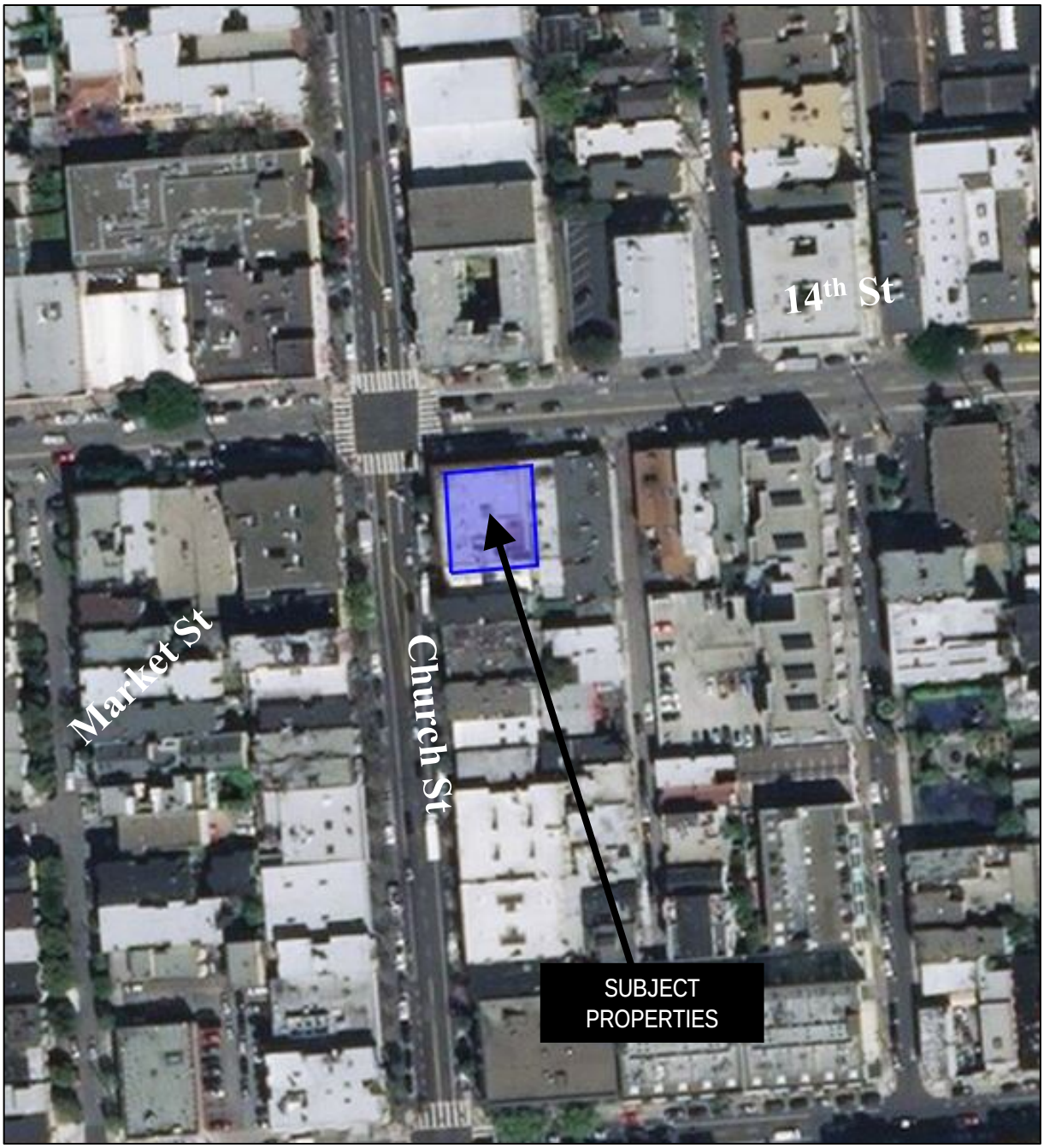
Zoning Map



Case Number 2017-006169CUA
T-Mobile
Macro WTS Facility
513 Valencia Street

SAN FRANCISCO
PLANNING DEPARTMENT

Aerial Photo



Case Number 2017-006169CUA
T-Mobile
Macro WTS Facility
513 Valencia Street

SAN FRANCISCO
PLANNING DEPARTMENT

SAN FRANCISCO
PLANNING DEPARTMENT

CEQA Categorical Exemption Determination

PROPERTY INFORMATION/PROJECT DESCRIPTION

Project Address		**Block/Lot(s)**
513 VALENCIA ST - T-Mobile Macro WTS Facility Modification		3569/049
Case No.		**Permit No.**
2017-006169PRJ		
■ **Addition/ Alteration**	☐ **Demolition (requires HRE for Category B Building)**	☐ **New Construction**

Project description for Planning Department approval.

T-Mobile proposes to modify an existing telecommunications facility by removing (2) Omni antennas, installing (3) new antennas, each in its own FRP faux chimney radomes, replacing an existing cabinet with new in the basement equipment room.

STEP 1: EXEMPTION CLASS

Note: If neither class applies, an *Environmental Evaluation Application* is required.

■	**Class 1 - Existing Facilities.** Interior and exterior alterations; additions under 10,000 sq. ft.; change of use under 10,000 sq. ft.
☐	**Class 3 - New Construction.** Up to three new single-family residences or six dwelling units in one building; commercial/office structures; utility extensions
☐	**Class 32 - In-Fill Development.** New Construction of seven or more units or additions greater than 10,000 sq. ft. and meets the conditions described below: (a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations. (b) The proposed development occurs within city limits on a project site of no more than 5 acres substantially surrounded by urban uses. (c) The project site has no value as habitat for endangered rare or threatened species. (d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality. (e) The site can be adequately served by all required utilities and public services. **FOR ENVIRONMENTAL PLANNING USE ONLY**
☐	**Class ____**

STEP 2: CEQA IMPACTS

TO BE COMPLETED BY PROJECT PLANNER

If any box is checked below, an *Environmental Evaluation Application* is required.	
☐	**Air Quality:** Would the project add new sensitive receptors (specifically, schools, day care facilities, hospitals, residential dwellings, and senior-care facilities within an Air Pollution Exposure Zone? Does the project have the potential to emit substantial pollutant concentrations (e.g., backup diesel generators, heavy industry, diesel trucks, etc.)? (*refer to EP _ArcMap > CEQA Catex Determination Layers > Air Pollution Exposure Zone)*
☐	**Hazardous Materials:** If the project site is located on the Maher map or is suspected of containing hazardous materials (based on a previous use such as gas station, auto repair, dry cleaners, or heavy manufacturing, or a site with underground storage tanks): Would the project involve 50 cubic yards or more of soil disturbance - or a change of use from industrial to residential? If yes, this box must be checked and the project applicant must submit an Environmental Application with a Phase I Environmental Site Assessment. *Exceptions: do not check box if the applicant presents documentation of enrollment in the San Francisco Department of Public Health (DPH) Maher program, a DPH waiver from the Maher program, or other documentation from Environmental Planning staff that hazardous material effects would be less than significant (refer to EP_ArcMap > Maher layer).*
☐	**Transportation:** Does the project create six (6) or more net new parking spaces or residential units? Does the project have the potential to adversely affect transit, pedestrian and/or bicycle safety (hazards) or the adequacy of nearby transit, pedestrian and/or bicycle facilities?
☐	**Archeological Resources:** Would the project result in soil disturbance/modification greater than two (2) feet below grade in an archeological sensitive area or eight (8) feet in a non-archeological sensitive area? (*refer to EP_ArcMap > CEQA Catex Determination Layers > Archeological Sensitive Area)*
☐	**Subdivision/Lot Line Adjustment:** Does the project site involve a subdivision or lot line adjustment on a lot with a slope average of 20% or more? (*refer to EP_ArcMap > CEQA Catex Determination Layers > Topography*)
☐	**Slope = or > 20%:** Does the project involve any of the following: (1) square footage expansion greater than 1,000 sq. ft. outside of the existing building footprint, (2) excavation of 50 cubic yards or more of soil, (3) new construction? (*refer to EP_ArcMap > CEQA Catex Determination Layers > Topography*) **If box is checked, a geotechnical report is required.**
☐	**Seismic: Landslide Zone:** Does the project involve any of the following: (1) square footage expansion greater than 1,000 sq. ft. outside of the existing building footprint, (2) excavation of 50 cubic yards or more of soil, (3) new construction? *(refer to EP_ArcMap > CEQA Catex Determination Layers > Seismic Hazard Zones)* **If box is checked, a geotechnical report is required.**
☐	**Seismic: Liquefaction Zone:** Does the project involve any of the following: (1) square footage expansion greater than 1,000 sq. ft. outside of the existing building footprint, (2) excavation of 50 cubic yards or more of soil, (3) new construction? *(refer to EP_ArcMap > CEQA Catex Determination Layers > Seismic Hazard Zones)* **If box is checked, a geotechnical report will likely be required.**
If no boxes are checked above, GO TO STEP 3. If one or more boxes are checked above, an *Environmental Evaluation Application* is required, unless reviewed by an Environmental Planner.	
Comments and Planner Signature (*optional*): Ashley Lindsay	

STEP 3: PROPERTY STATUS - HISTORIC RESOURCE

TO BE COMPLETED BY PROJECT PLANNER

PROPERTY IS ONE OF THE FOLLOWING: *(refer to Parcel Information Map)*	
■	**Category A:** Known Historical Resource. **GO TO STEP 5.**
☐	**Category B:** Potential Historical Resource (over 45 years of age). **GO TO STEP 4.**
☐	**Category C:** Not a Historical Resource or Not Age Eligible (under 45 years of age). **GO TO STEP 6.**

STEP 4: PROPOSED WORK CHECKLIST

TO BE COMPLETED BY PROJECT PLANNER

Check all that apply to the project.	
☐	1. **Change of use and new construction.** Tenant improvements not included.
☐	2. **Regular maintenance or repair** to correct or repair deterioration, decay, or damage to building.
☐	3. **Window replacement** that meets the Department's *Window Replacement Standards*. Does not include storefront window alterations.
☐	4. **Garage work.** A new opening that meets the *Guidelines for Adding Garages and Curb Cuts*, and/or replacement of a garage door in an existing opening that meets the Residential Design Guidelines.
☐	5. **Deck, terrace construction, or fences** not visible from any immediately adjacent public right-of-way.
☐	6. **Mechanical equipment installation** that is not visible from any immediately adjacent public right-of-way.
☐	7. **Dormer installation** that meets the requirements for exemption from public notification under *Zoning Administrator Bulletin No. 3: Dormer Windows*.
☐	8. **Addition(s)** that are not visible from any immediately adjacent public right-of-way for 150 feet in each direction; does not extend vertically beyond the floor level of the top story of the structure or is only a single story in height; does not have a footprint that is more than 50% larger than that of the original building; and does not cause the removal of architectural significant roofing features.
Note: Project Planner must check box below before proceeding.	
■	Project is not listed. **GO TO STEP 5.**
☐	Project **does not conform** to the scopes of work. **GO TO STEP 5**.
☐	Project involves **four or more** work descriptions. **GO TO STEP 5.**
☐	Project involves **less than four** work descriptions. **GO TO STEP 6.**

STEP 5: CEQA IMPACTS - ADVANCED HISTORICAL REVIEW

TO BE COMPLETED BY PROJECT PLANNER

Check all that apply to the project.	
☐	1. Project involves a **known historical resource (CEQA Category A)** as determined by Step 3 and conforms entirely to proposed work checklist in Step 4.
☐	2. **Interior alterations to publicly accessible spaces**.
☐	3. **Window replacement** of original/historic windows that are not "in-kind" but are consistent with existing historic character.
☐	4. **Façade/storefront alterations** that do not remove, alter, or obscure character-defining features.
☐	5. **Raising the building** in a manner that does not remove, alter, or obscure character-defining features.
☐	6. **Restoration** based upon documented evidence of a building's historic condition, such as historic photographs, plans, physical evidence, or similar buildings.

■	7. **Addition(s)**, including mechanical equipment that are minimally visible from a public right-of-way and meet the *Secretary of the Interior's Standards for Rehabilitation*.
☐	8. **Other work consistent** with the *Secretary of the Interior Standards for the Treatment of Historic Properties* (*specify or add comments*):
☐	9. **Other work** that would not materially impair a historic district (specify or add comments): *(Requires approval by Senior Preservation Planner/Preservation Coordinator)*
☐	10. **Reclassification of property status**. *(Requires approval by Senior Preservation Planner/Preservation* ☐ Reclassify to Category A ☐ Reclassify to Category C a. Per HRER dated *(attach HRER)* b. Other *(specify)*:
	Note: If ANY box in STEP 5 above is checked, a Preservation Planner MUST check one box below.
☐	**Further environmental review required.** Based on the information provided, the project requires an *Environmental Evaluation Application* to be submitted. **GO TO STEP 6.**
■	**Project can proceed with categorical exemption review**. The project has been reviewed by the Preservation Planner and can proceed with categorical exemption review. **GO TO STEP 6.**
Comments (*optional*): Modification of rooftop mechanical equipment and shrouding (existing wireless facility) will not remove, obscure character defining features of building or impact the historic nature of the building. The wireless facility will be	
Preservation Planner Signature:	Marcelle Boudreaux

STEP 6: CATEGORICAL EXEMPTION DETERMINATION

TO BE COMPLETED BY PROJECT PLANNER

☐	**Further environmental review required.** Proposed project does not meet scopes of work in either *(check all that apply)*: ☐ Step 2 - CEQA Impacts ☐ Step 5 - Advanced Historical Review **STOP! Must file an *Environmental Evaluation Application.***
■	**No further environmental review is required. The project is categorically exempt under CEQA. There are no unusual circumstances that would result in a reasonable possibility of a significant effect.**

Project Approval Action:	**Signature:**
Building Permit	Ashley Lindsay
If Discretionary Review before the Planning Commission is requested, the Discretionary Review hearing is the Approval Action for the project.	03/06/2018

Once signed or stamped and dated, this document constitutes a categorical exemption pursuant to CEQA Guidelines and Chapter 31of the Administrative Code.
In accordance with Chapter 31 of the San Francisco Administrative Code, an appeal of an exemption determination can only be filed within 30 days of the project receiving the first approval action.
Please note that other approval actions may be required for the project. Please contact the assigned planner for these approvals.

STEP 7: MODIFICATION OF A CEQA EXEMPT PROJECT

TO BE COMPLETED BY PROJECT PLANNER

In accordance with Chapter 31 of the San Francisco Administrative Code, when a California Environmental Quality Act (CEQA) exempt project changes after the Approval Action and requires a subsequent approval, the Environmental Review Officer (or his or her designee) must determine whether the proposed change constitutes a substantial modification of that project. This checklist shall be used to determine whether the proposed changes to the approved project would constitute a "substantial modification" and, therefore, be

PROPERTY INFORMATION/PROJECT DESCRIPTION

Project Address (If different than front page)		Block/Lot(s) (If different than front page)
513 VALENCIA ST - T-Mobile Macro WTS Facility Modification		3569/049
Case No.	Previous Building Permit No.	New Building Permit No.
2017-006169PRJ		
Plans Dated	Previous Approval Action	New Approval Action
	Building Permit	
Modified Project Description:		

DETERMINATION IF PROJECT CONSTITUTES SUBSTANTIAL MODIFICATION

Compared to the approved project, would the modified project:	
☐	Result in expansion of the building envelope, as defined in the Planning Code;
☐	Result in the change of use that would require public notice under Planning Code Sections 311 or 312;
☐	Result in demolition as defined under Planning Code Section 317 or 19005(f)?
☐	Is any information being presented that was not known and could not have been known at the time of the original determination, that shows the originally approved project may no longer qualify for the exemption?
If at least one of the above boxes is checked, further environmental review is required.	

DETERMINATION OF NO SUBSTANTIAL MODIFICATION

☐	The proposed modification would not result in any of the above changes.

If this box is checked, the proposed modifications are categorically exempt under CEQA, in accordance with prior project approval and no additional environmental review is required. This determination shall be posted on the Planning Department website and office and mailed to the applicant, City approving entities, and anyone requesting written notice.

Planner Name:	**Signature or Stamp:**

T-Mobile

SITE NUMBER: SF03144A
SITE NAME: 16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
COUNTY: SAN FRANCISCO

ENGINEERING

2016 CALIFORNIA BUILDING CODE
2016 CALIFORNIA ELECTRICAL CODE
2015 INTERNATIONAL BUILDING CODE
2014 NATIONAL ELECTRICAL CODE
TIA/EIA-222-G-2 OR LATEST EDITION
LOCAL BUILDING/PLANNING CODE

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

SITE INFORMATION

PROPERTY OWNER:	ANDREAS TRIPLIS & KATIE TRIPLIS-HERBERT II
ADDRESS:	11 OVERHILL RD ORINDA, CA 94563 CONTACT: ANDREAS TRIPLIS PHONE: (925) 280-7773
APPLICANT: ADDRESS:	T-MOBILE USA 1855 GATEWAY BOULEVARD, STE. 900 CONCORD, CA 94520
LATITUDE:	37° 45' 53.57" N (37.764881)
LONGITUDE:	122° 25' 18.29" W (-122.4271747)
LAT/LONG TYPE:	NAD 83
GROUND ELEVATION:	±46' AMSL
APN #:	3569/049
ZONING JURISDICTION:	CITY OF SAN FRANCISCO
CURRENT ZONING:	VALENCIA ST-NCT
PROPOSED USE:	UNMANNED TELECOMMUNICATIONS FACILITY
TELEPHONE:	AT&T
POWER:	PG&E

PROJECT TEAM

SITE ACQUISITION MANAGER:
MODUS, INC.
240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108
CONTACT: NICK VOTAW
PHONE: (415) 622-8706
EMAIL: nvotaw@modus-corp.com

CONSTRUCTION MANAGER:
T-MOBILE USA
1855 GATEWAY BLVD, 9TH FLOOR
CONCORD, CA 84520
CONTACT: JASON KEY
PHONE: (916) 801-4924
EMAIL: Jason.Key5@T-Mobile.com

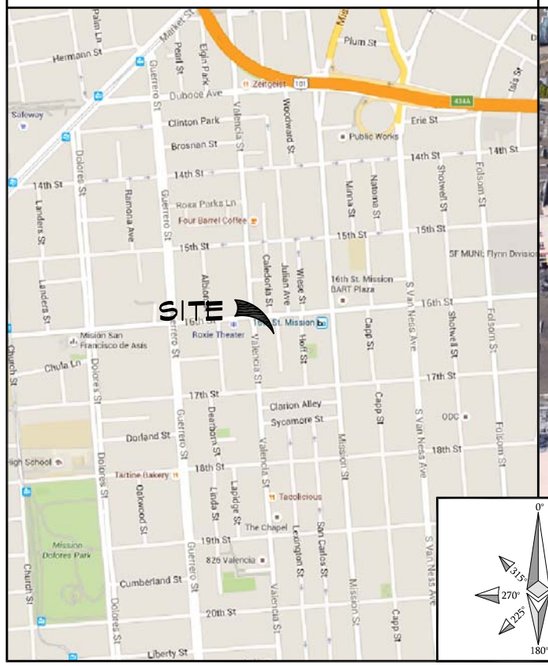
RF ENGINEER:
T-MOBILE USA
SAN FRANCISCO /
SACRAMENTO MARKETS
CONTACT: JOSE HERNANDEZ
EMAIL:
Jose.Hernandez313@T-Mobile.com

ENGINEER:
ZALZALI & ASSOCIATES INC.
dba ALL STATES ENGINEERING
& SURVEYING
23675 BIRTCHER DR.
LAKE FOREST, CA 92630
OFFICE: (949) 273-0996
PRINCIPAL: WISSAM ZALZALI
(C-71655)
CELL: (949) 609-9559
PM: ROGER FLORES
CELL: (562) 841-1264
EMAIL: roger@zalzali.com

LAND USE PLANNER:
MODUS, INC.
240 STOCKTON ST. 3RD FLOOR
SAN FRANCISCO, CA 94108
CONTACT: LAUREL FERGUSON
PHONE: (916) 342-0298
EMAIL: lferguson@modus-corp.com

LOCATION MAPS

VICINITY MAP



LOCAL MAP

DRIVING DIRECTIONS

DIRECTIONS FROM T-MOBILE CONCORD OFFICE:

HEAD SOUTHEAST ON GATEWAY BLVD. TAKE THE 1ST RIGHT ONTO CLAYTON RD. MERGE ONTO CA-242 S TOWARD OAKLAND. MERGE ONTO I-680 S VIA THE EXIT ON THE LEFT. TAKE EXIT 46 FOR CALIFORNIA 14 TOWARD LAFAYETTE/OAKLAND. MERGE ONTO CA-24 W. EXIT 28 FOR INTERSTATE 580-W. TAKE EXIT 19A ON THE LEFT TOWARD SAN FRANCISCO PARTIAL TOLL ROAD. EXIT ONTO US-101 TOWARD I8/GOLDEN GATE BRIDGE. EXIT 434A FOR US-101 N/MISSION ST/DUBOCE AVE TOWARD GG BRIDGE. MERGE ONTO DUBOCE AVE. TURN LEFT AT VALENCIA ST.

513 VALENCIA ST, SAN FRANCISCO, 94110

RFDS VERSION 8 DATE: 02/04/2016

CONSTRUCTION DRAWINGS

IF USING 11"X17" PLOT, DRAWINGS WILL BE HALF SCALE

PROJECT DESCRIPTION

T-MOBILE WIRELESS PROPOSES TO MODIFY AN EXISTING WIRELESS COMMUNICATION SITE ON A BUILDING. THE SCOPE WILL CONSIST OF THE FOLLOWING:

- RELOCATE (1) EXISTING EQUIPMENT CABINET
- REPLACE EXISTING PBC6500 POWER CABINET W/ NEW PBC6200 BATTERY/POWER CABINET
- REMOVE (2) EXISTING OMNI ANTENNAS
- INSTALL (3) NEW 18"Φ RADOMES
- INSTALL NEW ROOFTOP HOOD ENTRY FOR (E) AND (N) COAX CABLES
- INSTALL (3) NEW 6'-0" PANEL ANTENNAS WITHIN NEW ROOF MOUNTED RADOMES
- REPLACE EXISTING DUL20 W/ NEW DUS41 MAIN UNIT WITHIN (E) EQUIPMENT CABINET
- REMOVE (2) EXISTING TMA'S
- INSTALL (6) NEW TMAs MOUNTED ADJACENT TO NEW PANEL ANTENNAS
- INSTALL (3) NEW RRUS-11s MOUNTED ADJACENT TO EXISTING EQUIPMENT CABINETS
- REPLACE EXISTING DIPLEXERS WITH (3) NEW DUAL DIPLEXERS MOUNTED NEAR EQUIPMENT CABINETS
- RE-USE EXISTING COAX CABLE RUNS & ADD (6) NEW 1-5/8"Φ RUNS OF COAX
- PAINT RF STRIPING AT ANTENNA LOCATIONS
- REMOVAL, REPLACEMENT AND RELOCATION OF GPS ANTENNA

DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
T-2	EMF REPORT
T-3	EMF REPORT
T-4	EMF REPORT
T-5	FIRE DEPARTMENT CHECKLIST
GN-1	GENERAL NOTES
GN-2	GENERAL NOTES
GS-1	GENERAL SIGNAGE
PS-1	PHOTO SIMULATION SHEETS
A-1	SITE PLAN
A-1.1	EXISTING & PROPOSED ENLARGED ROOF PLAN
A-2	EQUIPMENT LAYOUT PLAN
A-3	ANTENNA LAYOUT & SCHEDULE
A-4	ELEVATIONS
A-5	ELEVATIONS
D-1	DETAILS
E-1	ELECTRICAL PLAN, PANEL SCHEDULES & ONE-LINE DIAGRAM
G-1	GROUNDING SCHEMATIC & GROUNDING DETAILS
G-2	GROUNDING DETAILS

APPROVALS

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS & AUTHORIZE THE SUBCONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT & MAY IMPOSE CHANGES OR MODIFICATIONS.

T-MOBILE RF ENGINEER: _____ DATE: _____
T-MOBILE OPERATIONS: _____ DATE: _____
SITE ACQUISITION: _____ DATE: _____
CONSTRUCTION MANAGER: _____ DATE: _____
PROPERTY OWNER: _____ DATE: _____
ZONING: _____ DATE: _____
PROJECT MANAGER: _____ DATE: _____

DO NOT SCALE DRAWINGS

SUBCONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS & FIELD CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

811 Dig Alert
Know what's below. Call before you dig.
California
Call Two Working Days Before You Dig!
811 / 800-227-2600

T-Mobile
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

MODUS
240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

NOT TO BE USED FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER WISSAM ZALZALI 23675 CIVIL STATE OF CALIFORNIA

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

Radio Frequency – Electromagnetic Energy (RF-EME) Compliance Report (L700)

T-Mobile Proposed Facility

Site ID: SF03144A
16th & Valencia Street
513 Valencia Street, San Francisco, California 94110

October 20, 2016

EBI Project Number:
6216004593

Status:	The proposed site will be compliant with the installation of the mitigation measures.
Recommended Signage	
Sign Count	Sign Type
1	
1	
9	
3	

Remarks: See attached signage plan. See signage plan for mitigation measures to be installed upon upgrade/installation of the site to comply with FCC and T-Mobile standards.

Prepared by:
EBI Consulting
environmental | engineering | due diligence

INTRODUCTION

Maximum Composite Emissions Value: 732.3000% of the FCC's general public limit (146.4600% of the FCC's occupational limit). The proposed site will be compliant with Federal regulations regarding (radio frequency) RF Emissions with the installation of the mitigation measures.

EBI Consulting was directed to analyze the proposed T-Mobile rooftop facility (SF03144A) located at 513 Valencia Street in San Francisco, California for the purpose of determining whether the emissions from the proposed T-Mobile Antenna Installation located on this property are within specified federal limits. This report contains a detailed summary of the RF EME analysis for the site.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm²). The number of μW/cm² calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

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

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter (μW/cm²). The general population exposure limit for the 700 and 800 MHz Bands is 467 μW/cm² and 567 μW/cm² respectively, and the general population exposure limit for the PCS and AWS bands is 1000 μW/cm². Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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

Additional details can be found in FCC OET 65.

MPE CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna rooftop facility located at 513 Valencia Street in San Francisco, California using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed a distance above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of in areas in the immediate vicinity of the antennas.

For all calculations, equipment was calculated using the following assumptions:

1) 2 GSM/UMTS channels (PCS Band – 1950 MHz) were considered for each sector of the proposed installation. The transmit power for these channels is 30 watts per channel.
2) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. The transmit power for these channels is 60 watts per channel.
3) 1 LTE channel (700 MHz Band) was considered for each sector of the proposed installation. The transmit power for this channel is 30 watts.
4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration.
5) EBI has performed theoretical worst case modeling using Roofview® to estimate the maximum potential power density from each antenna based on worst-case assumptions for the number of antennas and power.
6) The data for all T-Mobile antennas used in this analysis is shown below in Table 1. Actual antenna gains for each antenna were used per manufacturer's specifications.
7) There are no additional carriers located on this facility.
8) Emissions values for additional carriers were taken from the data provided by T-Mobile in the supplied drawings. For each additional carrier, known configuration values were utilized to approximate each systems contribution.

All calculations were done with respect to uncontrolled / general public threshold limits.

Antenna Inventory

Antenna Number	Sector	Antenna Make	Antenna Model	Height (ft) Above Nearest Walking Surface	Frequency Band	Technology	Power Per Channel	ERP (w)	Azimuth	Number of Channels
1	A	Commscope	SBNHH-1658	3.9	AWS - 2100 MHz	LTE	60	2784	305	2
1	A	Commscope	SBNHH-1658	3.9	700 MHz	LTE	30	707	305	1
1	A	Commscope	SBNHH-1658	3.9	PCS - 1950 MHz	GSM/UMTS	30	1270	305	2
1	B	Commscope	SBNHH-1658	3.9	AWS - 2100 MHz	LTE	60	2784	60	2
1	B	Commscope	SBNHH-1658	3.9	700 MHz	LTE	30	707	60	1
1	B	Commscope	SBNHH-1658	3.9	PCS - 1950 MHz	GSM/UMTS	30	1270	60	2
1	C	Commscope	SBNHH-1658	3.9	AWS - 2100 MHz	LTE	60	2784	195	2
1	C	Commscope	SBNHH-1658	3.9	700 MHz	LTE	30	707	195	1
1	C	Commscope	SBNHH-1658	3.9	PCS - 1950 MHz	GSM/UMTS	30	1270	195	2
1	A	Commscope	SBNHH-1658	3.9	AWS - 2100 MHz	LTE	60	2784	305	2

Table 1: T-Mobile Site Inventory and Power Value

Additional Carriers Located on Site	
Carrier	MPE %
N/A	No additional carriers are located onsite.

Table 2: Additional Carrier Inventory and Emissions Levels

Summary and Conclusions

All calculations performed for this analysis yielded results that were above the allowable limits for exposure to RF Emissions. Based on predictive modeling, the worst-case emitted power density may exceed the FCC's general public limit within approximately 9 feet of T-Mobile's proposed antennas at the main roof level. Modeling also indicates that the worst-case emitted power density may exceed the FCC's occupational limit within approximately 1 feet of T-Mobile's proposed antennas at the main roof level. Installation of mitigation measures will bring the proposed site into compliance.

The anticipated maximum contribution from each sector of the proposed T-Mobile facility is 732.3000% of the allowable FCC established general public limit (146.4600% of the FCC occupational limit). This was determined through calculations along a radial from each sector taking full power values into account as well as actual vertical plane antenna gain values per the manufacturers supplied specifications for gain.

The anticipated maximum composite MPE value for this site is 732.3000% of the allowable FCC established general public limit (146.4600% of the FCC occupational limit). This is based upon worst case modeling performed on the rooftop taking emissions contributions from all carriers present into account. This value will determine whether the proposed site will be in compliance with regards to electromagnetic emissions.

A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards. For this facility, the composite values calculated were above the allowable 100% threshold standard per the federal government.

EBI's modeling indicates that there are areas in front of the T-Mobile antennas at the rooftop level that exceed the FCC standards for general public and occupational exposure. In order to alert any workers potentially accessing the site, a blue Notice sign and a yellow Guidelines sign are recommended at the first points of access to the rooftop. Additionally, yellow Caution signs and barriers are recommended 9 feet in front of the T-Mobile antennas at each sector to alert workers they are entering areas that exceed the FCC's general population and/or occupational MPE levels. Red Warning signs and barriers are recommended 1 foot in front of the T-Mobile antennas at each sector to alert workers they are entering areas that exceed the FCC's occupational MPE levels. Recommended signs are depicted on the Signage Plan – Attachment 2.

Daniel Jack
RF-EME Technician
EBI Consulting
21 B Street
Burlington, MA 01803

Reviewed and Approved by:

sealed 19oct2016
Michael McGuire
Electrical Engineer

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

EBI Consulting

T-Mobile
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

MODUS
240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

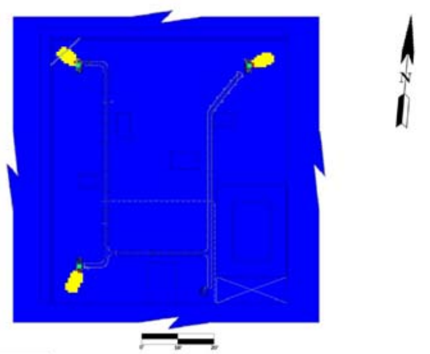
NOT TO BE USED FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER MICHAEL A. MAGUIRE E18898 ELECTRICAL CIVIL STATE OF CALIFORNIA

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE
EMF REPORT

SHEET NUMBER
T-2



% FCC Public Exposure Limit
500 < Exposure Level
100 < Exposure Level ≤ 500
Exposure Level ≤ 100

T-Mobile Antennas
Other Carrier Antennas

Attachment 1: Walking/Working Surface Emissions Thresholds

PLAN VIEW

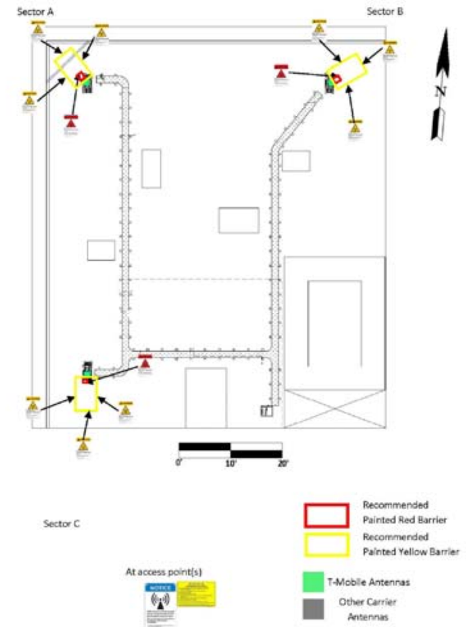
Sector A	There is an area that extends **9** feet from the antenna face that exceeds the FCC's allowable limit for general public exposure on the walking/working surface. There is an area that extends **1** foot from the antenna face that exceeds the FCC's allowable limit for occupational exposure on the walking/working surface.
Sector B	There is an area that extends **9** feet from the antenna face that exceeds the FCC's allowable limit for general public exposure on the walking/working surface. There is an area that extends **1** foot from the antenna face that exceeds the FCC's allowable limit for occupational exposure on the walking/working surface.
Sector C	There is an area that extends **9** feet from the antenna face that exceeds the FCC's allowable limit for general public exposure on the walking/working surface. There is an area that extends **1** foot from the antenna face that exceeds the FCC's allowable limit for occupational exposure on the walking/working surface.
Other Carriers	There are no other carrier antennas included in the modeling

Attachment 2: Plan View – Signage Locations

Status:	The proposed site will be compliant with the installation of the mitigation measures.
Recommended Signage for Compliance	
Sign Count	Sign Type
1	NOTICE
1	Guidelines
9	CAUTION
3	WARNING

Notes:
The proposed site will be compliant with the installation of the mitigation measures.

*Actual number of access points may vary if no site survey was conducted. Signage locations are based on T-Mobile's guidance. Actual installation is dependent on accessibility of the roof/antennas. Locations deemed inaccessible due to OSHA safety standards (proximity to unprotected roof edge or slope) will be compliant upon installation of signage at closest accessible point.



Sign	Description	Posting Instructions
NOTICE	**Blue Notice Sign** Used to notify individuals they are entering an area where the power density emitted from transmitting antennas may exceed the FCC's MPE limit for the general public.	Securely post at the first points of access to the site (At access point(s)) in a manner conspicuous to all individuals entering thereon.
	Guidelines Informational sign used to notify workers that there are active antennas installed and provide guidelines for working in RF environments.	Securely post adjacent to the Blue Notice signs at the first points of access to the site (At access point(s) in a manner conspicuous to all individuals entering thereon.
CAUTION	**Yellow Caution Sign** Used to notify individuals that they are entering an area where the power density emitted from transmit antennas may exceed the FCC's MPE limit for the general public or occupational exposures.	Securely post near areas where the general public or occupational MPE limit could be exceeded (9 feet in front of each sector on proposed barrier) in a manner conspicuous to all individuals entering thereon.
WARNING	**Red Warning Sign** Used to notify individuals that they are entering an area where the power density emitted from transmit antennas exceeds the FCC's MPE limit for general public and occupational exposures.	Securely post near areas where the general public and occupational MPE limits are exceeded (1 foot in front of each sector on proposed barrier) in a manner conspicuous to all individuals entering thereon.

EBI Consulting
environmental | engineering | due diligence

San Francisco Planning Department Wireless Telecommunications

Services Facility Siting Checklist for T-Mobile Site: SF03144A

1. The location, identity and total number of all operational radiating antennas installed at this site.

T-Mobile reportedly has a total of two (2) wireless telecommunication antennas façade mounted on this building located at 513 Valencia Street. There are two sectors with one antenna per sector. There are no other antennas or facilities installed based on information provided to EBI and T-Mobile at the time of this report.

2. List all radiating antennas located within 100 feet of the site which could contribute to the cumulative radio frequency energy at this location.

There were no other wireless facilities observed within 100 feet of the site.

3. Provide a narrative description of the proposed work for this project. The description should be consistent with scope of work for the final installation drawings.

This project involves the addition of three (3) proposed T-Mobile wireless telecommunication antennas on a rooftop located at 513 Valencia Street in San Francisco, California. There are two (2) omni antennas to be removed from the site.

4. Provide an inventory of the make and model of antennas or transmitting equipment being installed or removed. The antenna inventory should also include the proposed installation height above the nearest walking/working surface as well as the height above ground level. Also include the orientations of the antennas.

Antennas to be Removed

Carrier	Antenna Number	Sector	Antenna Make	Antenna Model	Height (ft) Above Nearest Walking Surface	Height (ft) Above Ground	Azimuth	Antenna To Be Removed
T-Mobile	1	A	DBSpectra	DS1203F36U-N	14	14	Omni	Yes
T-Mobile	1	B	DBSpectra	DS1203F36U-N	14	14	Omni	Yes

EBI Consulting
environmental | engineering | due diligence

Proposed Antennas

Carrier	Antenna Number	Sector	Antenna Make	Antenna Model	Height (ft) Above Nearest Walking Surface	Height (ft) Above Ground	Azimuth	Antenna Status (existing or proposed)
T-Mobile	1	A	Commscope	SBNHH-1658	3.88	33.46	305	Proposed
T-Mobile	1	B	Commscope	SBNHH-1658	3.88	33.46	60	Proposed
T-Mobile	1	C	Commscope	SBNHH-1658	3.88	33.46	195	Proposed

5. Describe the existing radio frequency energy environment at the nearest walking/working surface to the antennas and at ground level. This description may be based on field measurements or calculations. Please include a description of any assumptions made when doing the calculations.

At ground level, the maximum power density generated by the existing T-Mobile antennas on-site is 0.021407 mW/cm2, which is 4.6 percent of the FCC's general public limit (0.92 percent of the FCC's occupational limit).

6. Provide the maximum effective radiated power per sector for the proposed installation. The power should be reported in Watts and reported both as a total and broken down by the frequency band width (i.e. PCS, AWS, Cellular, etc...)

Effective Radiated Power (ERP) per Frequency and Sector		
Sector	Frequency (MHz)	ERP (Watts)
A	2100	2784
A	700	707
A	1950	1270
Total ERP (Watts) for Sector A is 4,760		
B	2100	2784
B	700	707
B	1950	1270
Total ERP (Watts) for Sector B is 4,760		
C	2100	2784
C	700	707
C	1950	1270
Total ERP (Watts) for Sector C is 4,760		

21 B Street · Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

EBI Consulting
environmental | engineering | due diligence

7. Based on the antenna orientation, describe the maximum cumulative predicted radio frequency energy level for any nearby publicly accessible building or area. Include the address of the building or structure and the maximum predicted amount of radio frequency energy both as a percent of the FCC standard and in mW/cm2. Include a description of any assumptions made when doing these calculations.

The surrounding buildings consist mainly of commercial and residential properties. The closest building is described below and includes worst-case predicted exposures.

Maximum Permissible Exposure (MPE) Closest Surrounding Structure					
Building Type	Address	Distance	% of FCC General Public/Uncontrolled Exposure Limit	% of FCC Occupational/Controlled Exposure Limit	Power Density (mW/cm^2)
Commercial/ Residential	3087 16th Street	Approx. 75 feet from T-Mobile Sector B	5.8	1.16	0.027066
Commercial/ Residential	504 Valencia street	Approx. 75 feet from T-Mobile Sector C	5.5	1.1	0.02566

21 B Street · Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

T · · Mobile ·
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

MODUS
240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES
ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

NOT TO BE USED FOR CONSTRUCTION

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.

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE
EMF REPORT

SHEET NUMBER
T-3

EBI Consulting
environmental | engineering | due diligence

8. Report the estimated cumulative radio frequency fields for the proposed site at ground level. State the percentage of the FCC standard utilized and power density exposure level in mW/cm2.

At ground level, the maximum power density generated by the proposed T-Mobile antennas on-site is 0.03126 mW/cm2, which is 6.7 percent of the FCC's general public limit (1.34 percent of the FCC's occupational limit).

In addition, At the nearest walking/working surfaces to the proposed T-Mobile antennas, the maximum power density is 3.4174mW/cm2, which is 732.3 percent of the FCC's general public limit (146.46 percent of the FCC's occupational limit).

9. Provide the maximum distance (in feet) the three dimensional perimeter of the radio frequency energy level equal to the public and occupational exposure limit is calculated to extend from the face of the antennas. Indicate if this will include any walking/working surfaces or if it extends only into free space.

Based on worst-case modeling at antenna face level there are modeled exceedances of the general public and occupational limits. It is predicted that there will be an occupational exceedance in front of the Sector A T-Mobile antennas within 1 foot and a general public exceedance within 9 feet. In front of the Sector B T-Mobile antennas there will be an occupational exceedance of 1 foot and a general public exceedance within 9 feet. In front of the Sector C T-Mobile antennas there will be an occupational exceedance of 1 foot and a general public exceedance within 9 feet.

10. Provide a description of whether or not the public has access to the antennas. Describe any existing or proposed warning signs, barricades, barriers, rooftop striping or other safety precautions for people nearing the equipment as may be required by any applicable FCC-adopted standards. At a minimum, signs should be provided in English, Spanish and Chinese.

Access to this site is unknown. To be conservative, the results are reported as though the general public is able to access the rooftop.

In order to alert any workers potentially accessing the site, a blue Notice sign and a yellow Guidelines sign are recommended at the first points of access to the rooftop. Additionally, yellow Caution signs and barriers are recommended 9 feet in front of the T-Mobile antennas at each sector to alert workers they are entering areas that exceed the FCC's general population and/or occupational MPE levels. Red Warning signs and barriers are recommended 1 foot in front of the T-Mobile antennas at each sector to alert workers they are entering areas that exceed the FCC's occupational MPE levels.

11. Statement on who produced this report and qualifications. Report must be signed off by a licensed engineer expert in the field of radio frequency emissions. Typically, this is a licensed electrical engineer. The engineer must be licensed in the State of California.

EBI Consulting
environmental | engineering | due diligence

Please see report for this information.

T-Mobile
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

NOT TO BE USED FOR CONSTRUCTION

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.

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE
EMF REPORT

SHEET NUMBER
T-4

2.06 SUBMITTAL REQUIREMENTS FOR CELLULAR ANTENNA SITES

REFERENCE: 2010 SFBC, 2010 SFFC, 2010 SFMC AND FCC OET BULLETIN 65 (97-01)

1. PROVIDE A DESCRIPTION OF WORK ON THE PLANS.
   - **PROVIDED. PLEASE SEE SHEET T-1 PROJECT DESCRIPTION.**
2. PLANS SHALL INCLUDE PLAN VIEWS AND ELEVATIONS SHOWING ALL EQUIPMENT LOCATIONS AND CABLE RUNS.
   - **PROVIDED. PLEASE SEE SHEETS A-1, A-1.1, A-2, A-3, A-4 AND A-5.**
3. PLANS SHALL INCLUDE ANTENNA CUT-SHEETS AND EQUIPMENT LIST ON A DRAWING SHEET.
   - **PROVIDED. PLEASE SEE SHEET D-3.**
4. INCLUDE A COPY OF THE SIGNED AND STAMPED RF REPORT ON A DRAWING SHEET AS A REFERENCE TO IDENTIFY THE EXCLUSION AREA REQUIRED TO PREVENT OCCUPATIONAL EXPOSURES IN EXCESS OF THE FCC GUIDELINES (47CFR1.1310 AND FCC OET BULLETIN 65 EDITION 97-01).
   - **PROVIDED. PLEASE SEE SHEET T-2 RF REPORT.**
5. THE RF REPORT SHALL INDICATE WHETHER OR NOT THE SITE UNDER REVIEW IS A PART OF A MULTIPLE TRANSMITTER SITE AND SHALL SHOW COMPLIANCE WITH FCC 47CFR1.1307(B)(3), AS AMENDED - ALL TRANSMITTERS SHALL NOT EXCEED 5% OF THE POWER DENSITY EXPOSURE LIMIT.
   - **PLEASE SEE SHEET T-2 RF REPORT.**
6. DRAWINGS SHALL REFLECT THE STRIPED/EXCLUSION AREAS FOR WORKERS PER THE ABOVE RF REPORT WITH A MINIMUM RADIUS OF 1 FOOT.

PROPOSED PROJECT ENTAILS REPLACEMENT OF EXISTING ROOF MOUNTED ANTENNAS.

7. PLANS SHALL INCLUDE A QUANTITATIVE THREE-DIMENSIONAL IMAGE OF THE RF LEVELS FROM EACH ANTENNA LOCATED NEAR AN EGRESS POINT (E.G. PENTHOUSE STAIR; FIRE ESCAPE, ROOF WALKING PATHS; SKYLIGHTS, ETC.).
   - **PLEASE SEE RF REPORT ON SHEET2 T-2**
8. "NOTICE TO WORKERS" WARNING SIGNAGE, AS APPLICABLE PER THE ABOVE RF REPORT, SHALL BE PERMANENTLY MOUNTED AT THE STAIRWELL SIDE OF THE ROOF-ACCESS DOOR (ANSI C95.2-1982 (REFERENCE [3]) -YELLOW OR MORE DURABLE COLOR FOR OUTDOOR LONGEVITY)

RF WARNING SIGNAGE TO WORKERS WILL BE PLACED ON ROOF ACCESS DOOR

9. CAMOUFLAGED ANTENNAS SHALL HAVE 4INCH X 4INCH SIGNAGE PERMANENTLY MOUNTED TO THE EXTERIOR OF THE RF SCREEN AS PROVIDED BELOW. THE SIGN SHALL BE WEATHERPROOF WITH CONTRASTING BACKGROUND COLOR AND SHALL CONTAIN THE YELLOW TRIANGLE AROUND THE ANTENNA SYMBOL (ANSI C95.2-1982 (REFERENCE [3]) -YELLOW OR MORE DURABLE COLOR FOR OUTDOOR LONGEVITY). SIGNAGE LOCATION(S) AND DETAIL OF THE SIGN SHALL BE INCLUDED ON THE PLANS.
   - **NO CAMOUFLAGED ANTENNAS ARE PROPOSED.**
10. CABLES/WIRING SHALL NOT BE ALLOWED IN EXIT ENCLOSURES, SMOKE-PROOF TOWERS, ELEVATOR SHAFTS, OR IN FRONT OF DRY STANDPIPES. 2010 CFC 1022.4 AND 509.2
    - **ANTENNA CABLES ARE ROOF MOUNTED ON SLEEPERS. PLEASE SEE SHEET A-1 AND A-2.**
11. ANTENNAS SHALL NOT BE MOUNTED CLOSER THAN THE EXCLUSION ZONE PLUS 4 FEET FOR INSTALLATIONS NEAR FIRE ESCAPES, STAIR PENTHOUSE DOORS, EXTERIOR STANDPIPE OUTLETS, SKYLIGHTS, OR OTHER FIRE DEPARTMENT OPERATIONS CONSIDERATION.
    - **NOT APPLICABLE.**
12. THERE IS NO GUARANTEE THAT THE FIRE DEPARTMENT WILL NOT SHUT DOWN THE POWER TO THE SITE IN AN EMERGENCY SITUATION ALTHOUGH IN ORDER TO REDUCE THE SITE OPERATOR'S POSSIBLE LOSS OF SERVICE THE FOLLOWING INFORMATION MAY BE PROVIDED AT THE EQUIPMENT ROOM ENTRANCE:
    - PROVIDE EMERGENCY SHUTDOWN PROCEDURE SIGNAGE. THE SIGN SHALL INCLUDE THE FOLLOWING:

      1. EMERGENCY 24 HOUR/7 DAY A WEEK NOC / FIELD TECHNICIAN TELEPHONE NUMBER FOR RF SHUT-DOWN
      2. CELL SITE IDENTIFICATION NUMBER
      3. MAP TO LOCATION OF ELECTRICAL MAIN -ELECTRICAL MAIN SHALL BE CLEARLY IDENTIFIED WITH A PERMANENT RED LABEL AND WHITE LETTERING.
      4. MAP TO LOCATION OF BATTERY CABINETS AND BREAKERS -CABINETS AND BREAKERS SHALL BE CLEARLY IDENTIFIED WITH A PERMANENT RED LABEL AND WHITE LETTERING.
      5. ANY OTHER RELEVANT INFORMATION OR PROCEDURES AS REQUIRED FOR THE INDIVIDUAL CELLULAR SITE.
    - THE SIGN SHALL BE CLEARLY LABELED IN A PHENOLIC LABEL WITH A WHITE BACKGROUND AND BLACK LETTERING. THE TITLE BLOCK SHALL BE A RED BACKGROUND AND 1" HIGH WHITE LETTERING. MULTIPLE SIGNS MAY NEED TO BE INSTALLED BASED UPON THE CELLULAR SITE CONFIGURATION.
    - A COPY OF THE SIGNAGE SHALL BE INCLUDED ON A DRAWING SHEET.
    - **PROVIDED. PLEASE SEE SIGNAGE DETAILS ON SHEET GS-1.**

T-Mobile
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES
ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

NOT TO BE USED FOR CONSTRUCTION

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE
FIRE DEPARTMENT CHECKLIST

SHEET NUMBER
T-5

GENERAL CONSTRUCTION NOTES

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL BUILDING CODE, THE LATEST EDITION AND ALL OTHER APPLICABLE CODES AND ORDINANCES.
2. CONTRACTOR SHALL CONSTRUCT SITE IN ACCORDANCE WITH THESE DRAWINGS AND CONSTRUCTION SPECIFICATIONS 80-T1196-1 REV H. THE SPECIFICATION IS THE RULING DOCUMENT AND ANY DISCREPANCIES BETWEEN THE SPECIFICATION AND THESE DRAWINGS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION
3. CONTRACTOR SHALL VISIT THE JOB SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK. NO COMPENSATION WILL BE AWARDED BASED ON CLAIM OF LACK OF KNOWLEDGE OF FIELD CONDITIONS
4. PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT AND APPURTENANCES, AND LABOR NECESSARY TO EFFECT ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS. OWNER PROVIDED MATERIALS WILL INCLUDE THE FOLLOWING, UNLESS NOTED OTHERWISE:
   A) TRANSMITTER
   B) RF FILTER
   C) MFTS RACK
   D) AUXILIARY EQUIPMENT IN MFTS RACK
   E) PUMP ASSEMBLY
   F) HEAT EXCHANGER
   G) HOSE AND HOSE MANIFOLDS (ANY COPPER OR STEEL SECTIONS PROVIDE BY CONTRACTOR)
   H) UHF ANTENNA AND MOUNTING BRACKETS, GPS ANTENNAS AND KU ANTENNAS
   I) UHF COAX AND HANGERS
   K) 480-208 & 208-400 ELECTRICAL TRANSFORMERS (RE: E-2 FOR SPECIALIZED TRANSFORMERS PROVIDED BY CONTRACTOR)
   L) AUTOMATIC TRANSFER SWITCH AND GENERATOR
   M) EQUIPMENT SHELTER (SHELTERS FURNISHED IN FACTORY W/ HVAC EQUIPMENT AND ELECTRICAL DISTRIBUTION PANEL)
   N) INTEGRATED LOAD CENTER
5. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE WORK.
6. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
7. CONTRACTOR SHALL RECEIVE CLARIFICATION IN WRITING, AND SHALL RECEIVE IN WRITING AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEMS NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
8. CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING THE BEST CONSTRUCTION SKILLS AND ATTENTION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER CONTRACT, UNLESS OTHERWISE NOTED.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS.
10. CONTRACTOR SHALL COORDINATE HIS WORK WITH THE SUPERINTENDENT OF BUILDINGS & GROUNDS AND SCHEDULE HIS ACTIVITIES AND WORKING HOURS IN ACCORDANCE WITH THE REQUIREMENTS.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK OF OTHERS AS IT MAY RELATE TO RADIO EQUIPMENT, ANTENNAS AND ANY OTHER PORTIONS OF THE WORK.
12. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
13. MAKE NECESSARY PROVISIONS TO PROTECT EXISTING SURFACES, EQUIPMENT, IMPROVEMENTS, PIPING ETC. AND IMMEDIATELY REPAIR ANY DAMAGE THAT OCCURS DURING CONSTRUCTION.
14. IN DRILLING HOLES INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, PIPE RUNS, ETC., MUST BE CLEARLY UNDERSTOOD THAT REINFORCING STEEL SHALL NOT BE DRILLED INTO, CUT OR DAMAGED UNDER ANY CIRCUMSTANCES (UNLESS NOTED OTHERWISE). LOCATIONS OF REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND THEREFORE MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT.
15. REPAIR ALL EXISTING WALL SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND IN WITH ADJACENT SURFACES.
16. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH U.L. LISTED AND FIRE CODE APPROVED MATERIALS.
17. KEEP CONTRACT AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, AND RUBBISH. EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OF THE OWNER SHALL BE REMOVED. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ITEMS UNTIL COMPLETION OF CONSTRUCTION.
18. MINIMUM BEND RADIUS OF ANTENNA CABLES SHALL BE IN ACCORDANCE WITH CABLE MANUFACTURERS RECOMMENDATIONS.
19. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO APPLICABLE REGULATORY AUTHORITIES
20. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION SHALL BE IN CONFORMANCE WITH JURISDICTIONAL OR STATE AND LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL AND COORDINATED WITH LOCAL REGULATORY AUTHORITIES.
21. ALL CONSTRUCTION IS TO ADHERE TO T-MOBILE'S INTEGRATED CONSTRUCTION STANDARDS UNLESS CALIFORNIA CODE IS MORE STRINGENT.
22. THE INTENT OF THE PLANS AND SPECIFICATIONS IS TO PERFORM THE CONSTRUCTION IN ACCORDANCE WITH THE CALIFORNIA BUILDING STANDARDS CODE, TITLES 19 AND 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE APPROVED PLANS AND SPECIFICATIONS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CHANGE ORDER DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE JURISDICTION BEFORE PROCEEDING WITH THE WORK.

ELECTRICAL NOTES

1. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED. ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE W/DRAWINGS AND ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, CONTRACTOR SHALL NOTIFY 'CONSTRUCTION MANAGER' AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS, AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE 'CONSTRUCTION MANAGER' HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.
2. ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE HIMSELF WITH ANY/ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATION INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. ALL EXISTING CONDITIONS OF ELECTRICAL EQUIP., LIGHT FIXTURES, ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE CONTRACTOR, PRIOR TO THE SUBMITTING OF HIS BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND ALL CODES AND LOCAL ORDINANCES OF THE LOCAL POWER & TELEPHONE COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT NOT BE LIMITED TO:
   C - NATIONAL FIRE CODES
   A. UL - UNDERWRITERS LABORATORIES
   B. NEC - NATIONAL ELECTRICAL CODE
   C. NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
   D. OSHA - OCCUPATIONAL SAFETY AND HEALTH ACT
   E. SBC - STANDARD BUILDING CODE
4. DO NOT SCALE ELECTRICAL DRAWINGS, REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH 'CONSTRUCTION MANAGER' ANY SIZES AND LOCATIONS WHEN NEEDED.
5. EXISTING SERVICES: CONTRACTOR SHALL NOT INTERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER.
6. CONTRACTOR SHALL PAY FOR ANY/ALL PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR IS TO OBTAIN PERMITS AND APPROVED SUBMITTALS PRIOR TO THE WORK BEGINNING OR ORDERING EQUIPMENT.
7. THE TERM "PROVIDE" USED IN CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, INDICATES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL.
8. CONTRACTOR SHALL CONFIRM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS SUCH AS THE: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE OWNERS' CONFIRMATION, ETC... ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER, PRIOR TO BEGINNING ANY WORK.
9. MINIMUM WIRE SIZE SHALL BE #12 AWG, NOT INCLUDING CONTROL WIRING, UNLESS NOTED OTHERWISE. ALL CONDUCTORS SHALL BE COPPER WITH THWN INSULATION.
10. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
11. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
12. ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, AS REQUIRED BY SPECIFICATIONS, SET FORTH BY T-MOBILE.
13. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS, WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND SUBJECT TO REGULATORY INSPECTION AND APPROVAL BY CONSTRUCTION MANAGER.
14. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
15. CONTRACTOR SHALL GUARANTEE ANY/ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE.
16. THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREIN.
17. ADEQUATE AND REQUIRED LIABILITY INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LOSS AND ANY/ALL PROPERTY DAMAGE FOR THE DURATION OF WORK.
18. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED.
19. DITCHING AND BACK FILL: CONTRACTOR SHALL PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES INCLUDING EXCAVATION AND BACKFILLING AND COMPACTION. REFER TO NOTES AND REQUIREMENTS 'EXCAVATION, AND BACKFILLING.
20. MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NEC, NEMA AND IECE.
21. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURES CATALOG INFORMATION OF ANY/ALL LIGHTING FIXTURES, SWITCHES AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
22. ANY CUTTING OR PATCHING DEEMED NECESSARY FOR ELECTRICAL WORK IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE 'CONSTRUCTION MANAGER' UPON FINAL ACCEPTANCE.
23. THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
24. DISCONNECT SWITCHES SHALL BE H.P. RATED HEAVY-DUTY, QUICK-MAKE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE.
25. ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND SUCH AS "NO-OXIDE A" BY DEARBORNE CHEMICAL CO. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED - NO SUBSTITUTIONS.
26. RACEWAYS: CONDUIT SHALL BE SCHEDULE 40 PVC MEETING OR EXCEEDING NEMA TC2 - 1990. CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS - 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 2 FT. RADIUS. RGS CONDUITS WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. COAT ALL THREADS WITH 'BRITE ZINC' OR 'GOLD GALV'.
27. SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.
28. CONDUCTORS: CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER WITH TYPE THWN INSULATION, 800 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG. USE STRANDED CONDUCTORS FOR WIRE ABOVE NO. 8 AWG.
29. CONNECTORS FOR POWER CONDUCTORS: CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.
30. SERVICE: 240/120V, SINGLE PHASE, 3 WIRE CONNECTION AVAILABLE FROM UTILITY COMPANY. OWNER OR OWNERS AGENT WILL APPLY FOR POWER.
31. TELEPHONE SERVICE: CONTRACTOR SHALL PROVIDE EMPTY CONDUITS WITH PULL STRINGS AS INDICATED ON DRAWINGS.
32. ELECTRICAL AND TELCO RACEWAYS TO BE BURIED A MINIMUM OF 2' DEPTH.
33. CONTRACTOR SHALL PLACE TWO LENGTHS OF WARNING TAPE AT A DEPTH OF 12" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL AND TELCO SERVICE CONDUITS. CAUTIONS TAPE TO READ "CAUTION BURIED ELECTRIC" OR "BURIED TELECOMM".
34. ALL BOLTS SHALL BE STAINLESS STEEL

GROUNDING NOTES

1. COMPRESSION CONNECTIONS (2), 2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUNDING BAR. ROUTE CONDUCTORS TO BURIED GROUNDING RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
2. EC SHALL USE PERMANENT MARKER TO DRAW THE LINES BETWEEN EACH SECTION AND LABEL EACH SECTION ("P", "A", "N", "I") WITH 1" HIGH LETTERS.
3. ALL HARDWARE 18-8 STAINLESS STEEL, INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING. ALL HARDWARE SHALL BE STAINLESS STEEL 3/8 INCH DIAMETER OR LARGER.
4. FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
5. NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUNDING BAR AND BOLTED ON THE BACK SIDE.
6. NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATION, AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
7. WHEN THE SCOPE OF WORK REQUIRES THE ADDITION OF A GROUNDING BAR TO AN EXISTING TOWER,THE SUBCONTRACTOR SHALL OBTAIN APPROVAL FROM THE TOWER OWNER PRIOR TO MOUNTING THE GROUNDING BAR TO THE TOWER.
8. ALL ELECTRICAL AND GROUNDING AT THE CELL SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER.

ADDITIONAL NOTES:

9. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
10. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING #2 GROUND WIRES AND CONNECT TO SURFACE MOUNTED GROUND BUS BARS AS SHOWN. FOLLOW ANTENNA AND BTS MANUFACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS. GROUND COAX SHIELD AT BOTH ENDS USING MANUFACTURERS PRACTICES. ALL UNDERGROUND WATER PIPES, METAL CONDUITS AND GROUNDS THAT ARE A PART OF THIS SYSTEM SHALL BE BONDED TOGETHER.
11. ALL GROUND CONNECTIONS SHALL BE #2 AWG U.N.O. ALL WIRES SHALL BE COPPER THHN/THWN. ALL GROUND WIRE SHALL BE SOLID TIN COATED OR STRANDED GREEN INSULATED WIRE.
12. CONTRACTOR TO VERIFY AND TEST GROUND TO SOURCE, 5 OHMS MAXIMUM. PROVIDE SUPPLEMENT GROUNDING RODS AS REQUIRED TO ACHIEVE SPECIFIED OHMS READING. GROUNDING AND OTHER OPTIONAL TESTING WILL BE WITNESSED BY THE T-MOBILE REPRESENTATIVE.
13. NOTIFY ARCHITECT/ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.
14. BARE GROUNDING CONDUCTOR SHALL BE HARD DRAWN TINNED COPPER SIZES AS NOTED ON PLAN.
15. ALL HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED MINIMUM 12" BELOW GRADE/FROST-LINE IN TRENCH, U.N.O., AND BACK FILL SHALL BE COMPACTED AS REQUIRED BY ARCHITECT.
16. ALL GROUND CONDUCTORS SHALL BE RUN AS STRAIGHT AND SHORT AS POSSIBLE, WITH A MINIMUM 12" BENDING RADIUS NOT LESS THAN 90 DEGREES.
17. ALL SUPPORT STRUCTURES, CABLE CHANNEL WAYS OR WIRE GUIDES SHALL BE BONDED TO GROUND SYSTEM AT A POINT NEAREST THE MAIN GROUNDING BUS "MGB" (OR DIRECTLY TO GROUND-RING).
18. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:
    a. BURNDY, HY-GRADE U.L. LISTED CONNECTORS FOR INDOOR USE OR AS APPROVED BY T-MOBILE PROJECT MANAGER.
    b. CADWELD, EXOTHERMIC WELDS (WELDED CONNECTIONS).
    c. TWO -(2) HOLE TINNED COPPER COMPRESSION (LONG BARREL) FITTINGS (BUS BAR CONNECTIONS).
19. ALL CRIMPED CONNECTIONS SHALL HAVE EMBOSSED MANUFACTURER'S DIEMARK VISIBLE AT THE CRIMP (RESULTING FROM USE OF PROPER CRIMPING DEVICES).
20. PRIOR TO ANY LUG-BUSSBAR CONNECTIONS, THE BUSSBAR SHALL BE CLEANED BY USE OF "SCOTCH-BRITE' OR PLAIN STEEL WOOL AS TO REMOVE ALL SURFACE OXIDATION AND CONTAMINANTS. A COATING OF "NO-OX-ID" SHALL BE APPLIED TO THE CONNECTION SURFACES.
21. ALL CONNECTION HARDWARE SHALL BE TYPE 316 SS (NOT ATTRACTED TO MAGNETS).
22. THE GROUND RING SHALL BE INSTALLED 24" MINIMUM BEYOND ANY BUILDING DRIP LINE.
23. ELECTRICAL SERVICE EQUIPMENT GROUNDING SHALL COMPLY WITH NEC, ARTICLE 250-82 AND SHALL BOND ALL EXISTING AND NEW GROUNDING ELECTRODES. NEW GROUNDING ELECTRODE SHALL INCLUDE BUT NOT LIMITED TO GROUND RODS, GROUND RING IF SERVICE IS WITHIN THE RADIO EQUIPMENT LOCATION, BUILDING STEEL IF APPLICABLE, COLD WATER CONNECTIONS MUST BE MADE ON THE STREET SIDE OF MAIN SHUT-OFF VALVE.

T-Mobile
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

MODUS
240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

NOT TO BE USED FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER
CIVIL
STATE OF CALIFORNIA

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-1

SITE WORK NOTES

1. DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.
2. DO NOT SCALE BUILDING DIMENSIONS FROM DRAWING.
3. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON AS-BUILT DRAWINGS BY GENERAL CONTRACTOR AND ISSUED TO ARCHITECT/ENGINEER AT COMPLETION OF PROJECT.
4. ALL EXISTING UTILITIES, FACILITIES, CONDITIONS AND THEIR DIMENSIONS SHOWN ON PLANS HAVE. BEEN PLOTTED FROM AVAILABLE RECORDS. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.
5. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES BOTH HORIZONTALLY AND VERTICALLY PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER FOR RESOLUTION AND INSTRUCTION, AND NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT/ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT HIS/HER OWN RISK AND EXPENSE. CONTRACTOR SHALL CALL LOCAL DIGGER HOT LINE FOR UTILITY LOCATIONS 48 HOURS PRIOR TO START OF CONSTRUCTION.
6. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK.
7. GRADING OF THE SITE WORK AREA IS TO BE SMOOTH AND CONTINUOUS IN SLOPE AND IS TO FEATHER INTO EXISTING GRADES AT THE GRADING LIMITS.
8. ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
9. STRUCTURAL FILLS SUPPORTING PAVEMENTS SHALL BE COMPACTED TO 95% OF MAXIMUM STANDARD PROCTOR DRY DENSITY.
10. NEW GRADES NOT IN BUILDING AND DRIVEWAY IMPROVEMENT AREA TO BE ACHIEVED BY FILLING WITH APPROVED CLEAN FILL AND COMPACTED TO 95% OF STANDARD PROCTOR DENSITY.
11. ALL FILL SHALL BE PLACED IN UNIFORM LIFTS. THE LIFTS THICKNESS SHOULD NOT EXCEED THAT WHICH CAN BE PROPERLY COMPACTED THROUGHOUT ITS ENTIRE DEPTH WITH THE EQUIPMENT AVAILABLE.
12. ANY FILLS PLACED ON EXISTING SLOPES THAT ARE STEEPER THAN 10 HORIZONTAL TO 1 VERTICAL SHALL BE PROPERLY BENCHED INTO THE EXISTING SLOPE AS DIRECTED BY A GEOTECHNICAL ENGINEER.
13. CONTRACTOR SHALL CLEAN ENTIRE SITE AFTER CONSTRUCTION SUCH THAT NO PAPERS, TRASH, WEEDS, BRUSH OR ANY OTHER DEPOSITS WILL REMAIN. ALL MATERIALS COLLECTED DURING CLEANING OPERATIONS SHALL BE DISPOSED OF OFF-SITE BY THE GENERAL CONTRACTOR.
14. ALL TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH THE IMPROVEMENTS SHALL BE PROTECTED BY THE GENERAL CONTRACTOR.
15. ALL SITE WORK SHALL BE CAREFULLY COORDINATED BY GENERAL CONTRACTOR WITH LOCAL UTILITY COMPANY, TELEPHONE COMPANY, AND ANY OTHER UTILITY COMPANIES HAVING JURISDICTION OVER THIS LOCATION.

ENVIRONMENTAL NOTES

1. ALL WORK PERFORMED SHALL BE DONE IN ACCORDANCE WITH ISSUED PERMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF FINES AND PROPER CLEAN UP FOR AREAS IN VIOLATION.
2. CONTRACTOR AND/OR DEVELOPER SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS AND WATERWAYS AND SHALL BE MAINTAINED IN PLACE THROUGH FINAL JURISDICTIONAL INSPECTION & RELEASE OF SITE.
3. CONTRACTOR SHALL INSTALL/CONSTRUCT ALL NECESSARY SEDIMENT/SILT CONTROL FENCING AND PROTECTIVE MEASURES WITHIN THE LIMITS OF SITE DISTURBANCE PRIOR TO CONSTRUCTION.
4. NO SEDIMENT SHALL BE ALLOWED TO EXIT THE PROPERTY. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ADEQUATE MEASURES FOR CONTROLLING EROSION. ADDITIONAL SEDIMENT CONTROL FENCING MAY BE REQUIRED IN ANY AREAS SUBJECT TO EROSION.
5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE ON THE SITE AT ALL TIMES WITH SILT AND EROSION CONTROL MEASURES MAINTAINED ON THE DOWNSTREAM SIDE OF SITE DRAINAGE. ANY DAMAGE TO ADJACENT PROPERTY AS A RESULT OF EROSION WILL BE CORRECTED AT THE CONTRACTORS EXPENSE.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS AND ANY REPAIRS OF ALL SEDIMENT CONTROL MEASURES INCLUDING SEDIMENT REMOVAL AS NECESSARY.
7. CLEARING OF VEGETATION AND TREE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMUM. ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED.
8. SEEDING AND MULCHING AND/OR SODDING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE PROJECT FACILITIES AFFECTING LAND DISTURBANCE.
9. CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL, COUNTY AND STATE CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE SUCH MEASURES AS SILT FENCES, STRAW BALE SEDIMENT BARRIERS, AND CHECK DAMS.
10. RIP RAP OF SIZES INDICATED SHALL CONSIST OF CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY STONE FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETERIOUS SUBSTANCES

FOUNDATION, EXCAVATION AND BACKFILL NOTES

1. ALL FINAL GRADED SLOPES SHALL BE A MAXIMUM OF 3 HORIZONTAL TO 1 VERTICAL.
2. ALL EXCAVATIONS PREPARED FOR PLACEMENT OF CONCRETE SHALL BE OF UNDISTURBED SOILS, SUBSTANTIALLY HORIZONTAL AND FREE FROM ANY LOOSE, UNSUITABLE MATERIAL OR FROZEN SOILS, AND WITHOUT THE PRESENCE OF POUNDING WATER. DEWATERING FOR EXCESS GROUND WATER SHALL BE PROVIDED WHEN REQUIRED. COMPACTION OF SOILS UNDER CONCRETE PAD FOUNDATIONS SHALL NOT BE LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR THE SOIL IN ACCORDANCE WITH ASTM D1557.
3. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC OR UNSUITABLE MATERIAL. IF INADEQUATE BEARING CAPACITY IS REACHED AT THE DESIGNED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION SHALL BE FILLED WITH CONCRETE OF THE SAME TYPE SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. ANY STONE SUB BASE MATERIAL, IF USED, SHALL NOT SUBSTITUTE FOR REQUIRED THICKNESS OF CONCRETE.
4. ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH PRIOR TO BACK FILLING. BACK FILL SHALL CONSIST OF APPROVED MATERIALS SUCH AS EARTH, LOAM, SANDY CLAY, SAND AND GRAVEL, OR SOFT SHALE, FREE FROM CLODS OR LARGE STONES OVER 2 1/2" MAX DIMENSIONS. ALL BACK FILL SHALL BE PLACED IN COMPACTED LAYERS.
5. ALL FILL MATERIALS AND FOUNDATION BACK FILL SHALL BE PLACED IN MAXIMUM 6"THICK LIFTS BEFORE COMPACTION. EACH LIFT SHALL BE WETTED IF REQUIRED AND COMPACTED TO NOT LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR SOIL IN ACCORDANCE WITH ASTM D1557.
6. NEWLY PLACED CONCRETE FOUNDATIONS SHALL CURE A MINIMUM OF 72 HRS PRIOR TO BACK FILLING.
7. FINISHED GRADING SHALL BE SLOPED TO PROVIDE POSITIVE DRAINAGE AND PREVENT STANDING WATER. THE FINAL (FINISH) ELEVATION OF SLAB FOUNDATIONS SHALL SLOPE AWAY IN ALL DIRECTIONS FROM THE CENTER. FINISH GRADE OF CONCRETE PADS SHALL BE A MAXIMUM OF 4 INCHES ABOVE FINAL FINISH GRADE ELEVATIONS. PROVIDE SURFACE FILL GRAVEL TO ESTABLISH SPECIFIED ELEVATIONS WHERE REQUIRED.
8. NEWLY GRADED SURFACE AREAS TO RECEIVE GRAVEL SHALL BE COVERED WITH GEOTEXTILE FABRIC TYPE: TYPAR-3401 AS MANUFACTURED BY "CONSTRUCTION MATERIAL 1-800-239-3841" OR AN APPROVED EQUIVALENT, SHOWN ON PLANS. THE GEOTEXTILE FABRIC SHALL BE BLACK IN COLOR TO CONTROL THE RECURRENCE OF VEGETATIVE GROWTH AND EXTEND TO WITHIN 1 FOOT OUTSIDE THE SITE FENCING OR ELECTRICAL GROUNDING SYSTEM PERIMETER WHICH EVER IS GREATER. ALL FABRIC SHALL BE COVERED WITH A MINIMUM OF 4" DEEP COMPACTED STONE OR GRAVEL AS SPECIFIED. I.E. FDOT TYPE No. 57 FOR FENCED COMPOUND; FDOT TYPE No. 67 FOR ACCESS DRIVE AREA.
9. IN ALL AREAS TO RECEIVE FILL, REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE. PLOW STRIP OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SUCH THAT FILL MATERIAL WILL BIND WITH EXISTING/PREPARED SOIL SURFACE.
10. WHEN SUB GRADE OR PREPARED GROUND SURFACE HAS A DENSITY LESS THAN THAT REQUIRED FOR THE FILL MATERIAL, SCARIFY THE GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE-CONDITION AND/OR AERATE THE SOILS AND RECOMPACT TO THE REQUIRED DENSITY PRIOR TO PLACEMENT OF FILLS.
11. IN AREAS WHICH EXISTING GRAVEL SURFACING IS REMOVED OR DISTURBED DURING CONSTRUCTION OPERATIONS, REPLACE GRAVEL SURFACING TO MATCH ADJACENT GRAVEL SURFACING AND RESTORED TO THE SAME THICKNESS AND COMPACTION AS SPECIFIED. ALL RESTORED GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES.
12. EXISTING GRAVEL SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED WITH THE CONDITION THAT ANY UNFAVORABLE AMOUNTS OF ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ANY ADDITIONAL GRAVEL RESURFACING MATERIAL AS NEEDED TO PROVIDE A FULL DEPTH COMPACTED SURFACE THROUGHOUT SITE.
13. GRAVEL SUB SURFACE SHALL BE PREPARED TO REQUIRED COMPACTION AND SUB GRADE ELEVATIONS BEFORE GRAVEL SURFACING IS PLACED AND/OR RESTORED. ANY LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED AND ANY DEPRESSIONS IN THE SUB GRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL SHALL NOT BE USED FOR FILLING DEPRESSIONS IN THE SUB GRADE.
14. PROTECT EXISTING GRAVEL SURFACING AND SUB GRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING 'MATTS' OR OTHER SUITABLE PROTECTION DESIGNED TO SPREAD EQUIPMENT LOADS AS MAY BE NECESSARY. REPAIR ANY DAMAGE TO EXISTING GRAVEL SURFACING OR SUB GRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTORS OPERATIONS.
15. DAMAGE TO EXISTING STRUCTURES AND/OR UTILITIES RESULTING FROM CONTRACTORS NEGLIGENCE SHALL BE REPAIRED AND/ OR REPLACED TO THE OWNERS SATISFACTION AT NO ADDITIONAL COST TO THE CONTRACT.
16. ALL SUITABLE BORROW MATERIAL FOR BACK FILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATIONS APPROVED BY GOVERNING AGENCIES AT NO ADDITIONAL COST TO THE CONTRACT.

STRUCTURAL STEEL NOTES

1. ALL STEEL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION. STEEL SECTIONS SHALL BE IN ACCORDANCE WITH ASTM AS INDICATED BELOW:
   W-SHAPES: ASTM A992, 50 KSI
   ANGLES, BARS CHANNELS: ASTM A36, 36 KSI
   HSS SECTIONS: ASTM 500, 46 KSI
   PIPE SECTIONS: ASTM A53-E, 35 KSI
2. ALL EXTERIOR EXPOSED STEEL AND HARDWARE SHALL BE HOT DIPPED GALVANIZED.
3. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC.WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP.
4. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE 3/4"Φ CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
5. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A307 BOLTS UNLESS NOTED OTHERWISE.
6. FIELD MODIFICATIONS ARE TO BE COATED WITH ZINC ENRICHED PAINT.

CONCRETE MASONRY NOTES

1. CONCRETE MASONRY UNITS SHALL BE MEDIUM WEIGHT UNITS CONFORMING TO ASTM C90, GRADE N-1, (F'M=1,500 PS). MEDIUM WEIGHT (115 PCF).
2. MORTAR SHALL BE TYPE "S" (MINIMUM 1,800 PSI AT 28 DAYS).
3. GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI AT 28 DAYS.
4. ALL CELLS CONTAINING REINFORCING STEEL OR EMBEDDED ITEMS AND ALL CELLS IN RETAINING WALLS AND WALLS BELOW GRADE SHALL BE SOLID GROUTED.
5. ALL HORIZONTAL REINFORCEMENT SHALL BE PLACED IN BOND BEAM OR LINTEL BEAM UNITS.
6. WHEN GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE GROUT POUR 1-1/2" BELOW TOP OF THE UPPERMOST UNIT.
7. ALL BOND BEAM BLOCK SHALL BE "DEEP CUT" UNITS.
8. PROVIDE INSPECTION AND CLEAN-OUT HOLES AT BASE OF VERTICAL CELLS HAVING GROUT LIFTS IN EXCESS OF 4'-0" OF HEIGHT.
9. ALL GROUT SHALL BE CONSOLIDATED WITH A MECHANICAL VIBRATOR.
10. CEMENT SHALL BE AS SPECIFIED FOR CONCRETE.
11. REINFORCING BARS - SEE NOTES UNDER "REINFORCING STEEL" FOR REQUIREMENTS.
12. PROVIDE ONE BAR DIAMETER (A MINIMUM OF 1/2") GROUT BETWEEN MAIN REINFORCING AND MASONRY UNITS.
13. LOW LIFT CONSTRUCTION, MAXIMUM GROUT POUR HEIGHT IS 4 FEET.
14. HIGH LIFT GROUTED CONSTRUCTION MAY BE USED IN CONFORMANCE WITH PROJECT SPECIFICATIONS AND SECTION 2104A.5.1.2.3 OF U.B.C.
15. ALL CELLS IN CONCRETE BLOCKS SHALL BE FILLED SOLID WITH GROUT, EXCEPT AS NOTED IN THE DRAWINGS OR SPECIFICATIONS.
16. CELLS SHALL BE IN VERTICAL ALIGNMENT, DOWELS IN FOOTINGS SHALL BE SET TO ALIGN WITH CORES CONTAINING REINFORCING STEEL.
17. REFER TO ARCHITECTURAL DRAWINGS FOR SURFACE AND HEIGHT OF UNITS, LAYING PATTERN AND JOINT TYPE.
18. SAND SHALL BE CLEAN, SHARP AND WELL GRADED, FREE FROM INJURIOUS AMOUNTS OF DUST, LUMPS, SHALE, ALKAU OR ORGANIC MATERIAL.
19. BRICK SHALL CONFORM TO ASTM C-62 AND SHALL BE GRADE MW OR BETTER.

STRUCTURAL CONCRETE NOTES

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301-10, ACI 318-08 AND THE SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH fc'=2,500 PSI AT 28 DAYS UNLESS NOTED OTHERWISE.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES CLASS "B" AND ALL HOOKS SHALL BE STANDARD UNLESS NOTED OTHERWISE.
4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST EARTH.........................3 IN.

   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER.........................2 IN.
   #5 AND SMALLER & WWF ....1-1/2 IN.

   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL ....3/4 IN.
   BEAMS AND COLUMNS..........................1-1/2 IN.
5. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE U.N.O. IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
6. HOLES TO RECEIVE EXPANSION/WEDGE ANCHORS SHALL BE 1/8" LARGER IN DIAMETER THAN THE ANCHOR BOLT, DOWEL OR ROD AND SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. LOCATE AND AVOID CUTTING EXISTING REBAR WHEN DRILLING HOLES IN ELEVATED CONCRETE SLABS.
7. USE AND INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER ICC ER# & MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURES.

FIRE DEPARTMENT NOTES

1. THE T-MOBILE PROJECT MANAGER'S DIRECTION, THE CONTRACTOR SHALL PROVIDE "HILTI" HIGH PERFORMANCE FIRE STOP SYSTEM # FS-ONE AT ALL FIRE RATED PENETRATION INSTALLED PER MANUFACTURE'S LATEST INSTALLATION SPECIFICATION.
2. ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE CONSTRUCTED SO AS TO MAINTAIN AN EQUAL OR GREATER FIRE RATING.
3. BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION OR DEMOLITION SHALL BE IN ACCORDANCE WITH CFC ARTICLE 87. [CFC 8701]
4. ADDRESS SHALL BE PROVIDED FOR ALL NEW AND EXISTING BUILDINGS IN A POSITION AS TO BE PLAINLY SEEN VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY [CFC 901.4.4, FHPS POLICY P-00-6]
5. DECORATIVE MATERIALS SHALL BE MAINTAINED IN A FLAME-RETARDANT CONDITION. [CALIF. CODE OF REGS., TITLE 19, 3.08, 3.21, CEC 2501.5]
6. ALL VALVES CONTROLLING THE WATER SUPPLY FOR AUTOMATIC SPRINKLER SYSTEM AND WATER-FLOW SWITCHES ON AL SPRINKLER SYSTEMS SHALL BE ELECTRICALLY MONITORED WHERE THE NUMBER OF SPRINKLERS IS A 100 OR MORE. [CBC 904.3.1, CFC 1003.3.1]
7. INSTALLATION OF FIRE ALARM SYSTEMS SHALL BE IN ACCORDANCE WITH CFC 1007.
8. AT LEAST ONE FIRE EXTINGUISHER WITH A MINIMUM RATING OF 2A-10BC SHALL BE PROVIDED WITHIN 75 FT. MAXIMUM TRAVEL DISTANCE FOR EACH 6,000 SQ. FT. OR PORTION THEREOF ON EACH FLOOR [CFC 1002, UFC STANDARD 10-1, CALIF. CODE OF REGS., TITLE 19, 3.29]
9. CONTRACTOR SHALL VERIFY IN FIELD THE EXISTENCE OR INSTALLATION OF A FIRE EXTINGUISHER WITH A MINIMUM RATING OF 2A-10BC, WITH A CHARGE STATUS ACCEPTABLE TO THE LOCAL FIRE AUTHORITY HAVING JURISDICTION.
10. COMPLETE PLANS AND SPECIFICATIONS FOR ALARM SYSTEMS: FIRE-EXTINGUISHING SYSTEMS, INCLUDING AUTOMATIC SPRINKLERS AND OTHER FIRE-PROTECTION SYSTEMS SHALL BE SUBMITTED TO FIRE AND LIFE SAFETY FOR REVIEW AND APPROVAL TO INSTALLATION. [CFC 100.3]

T-Mobile
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES
ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

NOT TO BE USED FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER CIVIL STATE OF CALIFORNIA

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-2

NOT USED

24"x36" SCALE: NTS
11"x17" SCALE: NTS
8

SITE SIGNAGE

IN CASE OF EMERGENCY
CALL
1-888-662-4662 X3231
Site No: SF03144A

UNLESS OTHERWISE SPECIFIED
TO BE PLACED IN A CLEAR AND VISIBLE LOCATION AT:
-INSIDE FACE OF ROOF ACCESS DOOR
-BTS CABINET
CONTRACTOR TO VERIFY CORRECT CONTACT NUMBER PRIOR TO FABRICATION

24"x36" SCALE: NTS
11"x17" SCALE: NTS
5

RF WARNING SIGN (2)

4"
4"

4"x4" SIGNAGE NOTE

1. 4"x4" WARNING SIGN SHALL BE PERMANENTLY MOUNTED TO EXTERIOR OF CAMOFLAGED ANTENNAS RF SCREENS.

12"
20"

PVC PLASTIC SIGN

NOTICE TO WORKERS

STAY BACK 11 FEET
FROM ANTENNA!

RADIO FREQUENCY ANTENNAS ON THIS ROOF.
PLEASE EXERCISE CAUTION AROUND ANTENNAS AND OBEY POSTED SIGNS AND/OR MARKINGS. FOR ACCESS TO RESTRICTED AREAS OR FOR FURTHER INFORMATION, PELASE CALL 1-888-662-4662 X3231 (SITE NUMBER SF03144A)

IN ACCORDANCE WITH FCC RULES 47 CFR 1.1310

AVISO A TRABAJADORES

MANTENGASE A 11 PIES
DE LA ANTENA!

EXISTEN ANTENAS DE RADIOFREQUENCIA EN ESTE TECHO.
POR FAVOR USE PRECAUCION ALREDOR DE LAS ANTENAS Y OBEDEZCA A LAS ZONAS RESTRINGIDAS O PARAOBTENER MAS INFORMACION, LLAME AL TELEFONO 1-888-662-4662 X3231 (NUMERO DE SITIO SF03144A)

DE ACUERDO A LAS REGLAS DE FCC 47 CFR 1.1310

工作人員注意

請站在天線以外 11 尺!

此屋宇房頂有射頻天線裝置
在天線範圍四周務請小心,並遵照各已張貼之指示
及/或標緻行事
如需進入禁區範圍或索取更多資料
請致電1-888-662-4662 X3231 此站區號: (SF03144A)

依據FCC條例第47 CFR1.1310款執行

NOTES:

1. WARNING SIGN TO BE PERMANENTLY MOUNTED AT ANTENNA LOCATIONS, STAIRWELL SIDE OF THE ROOF ACCESS DOOR AND AS NOTED IN THE PLANS.
2. SIGN SHALL COMPLY WITH ANSI C95.2-1982 COLOR, SYMBOL AND CONTENT CONVENTIONS.
3. SIGNAGE SHALL BE CLEARLY LABELED IN A PHENOLIC LABEL WITH WHITE BACKGROUND AND BLACK LETTERING AND SHALL BE READABLE FROM AT LEAST (15) FEET FROM SIGN.
4. CONTRACTOR TO VERIFY WITH THE CARRIER THE CORRECT CONTACT PHONE NUMBER PRIOR TO SIGN FABRICATION AND INSTALLATION.

RF WARNING SIGN

WARNING

Beyond This Point:
Radio frequency fields at this site may exceed the FCC rules for human exposure.

Failure to obey all posted signs and site guidelines for working in radio frequency environments could result in serious injury

In accordance with Federal Communications Commission rules on radio frequency emissions 47 CFR 1.13078(b)

NOTES:

1. WARNING SIGN TO BE PERMANENTLY MOUNTED AT ANTENNA LOCATIONS, STAIRWELL SIDE OF THE ROOF ACCESS DOOR, IN THE FIR CONTROL ROOM WITHIN PROXIMITY OF THE SHUT-DOWN SIGNAGE AND AS NOTED IN THE PLANS.
2. SIGN SHALL COMPLY WITH ANSI C95.2 COLOR, SYMBOL AND CONTENT CONVENTIONS.
3. SIGNAGE SHALL BE CLEARLY LABELED IN A PHENOLIC LABEL WITH WITH BACKGROUND AND BLACK LETTERING AND SHALL BE READABLE FROM AT LEAST (15) FEET FROM SIGN.
4. CONTRACTOR TO VERIFY WITH THE CARRIER THE CORRECT CONTACT PHONE NUMBER PRIOR TO SIGN FABRICATION AND INSTALLATION.

24"x36" SCALE: NTS
11"x17" SCALE: NTS
7

NOTICE SIGN

NOTICE
GUIDELINES FOR WORKING IN
RADIO FREQUENCY ENVIRONMENTS

- All personnel should have electromagnetic energy (EME) awareness training
- All personnel entering site should be authorized.
- Obey all posted signs.
- Assume all antennas are active.
- Before working on antennas, notify owners and disable appropriate transmitters.
- Maintain minimum 11 feet clearance from all antennas.
- Do not stop in front of antennas.
- Use personal RF monitors while working near antennas.
- Never operate transmitters without shields during normal operation.
- Do not operate base station antennas in equipment room.

NOTE:

1. RICHARD TELL & ASSOCIATES PART #8X12RFSGPM

24"x36" SCALE: NTS
11"x17" SCALE: NTS
4

24"x36" SCALE: NTS
11"x17" SCALE: NTS
2

RF CAUTION SIGN

'CAUTION' TYPE TO BE INSTALLED AT ANTENNA LOCATION AS PER EMF ENGINEER'S REPORT

CAUTION

Beyond this point:
Radio frequency fields at this site **may exceed FCC rules for human** exposure.

For your safety obey all posted signs and site guidelines for working in radio frequency environments.

In accordance with Federal Communications Commission rules on radio Frequency emissions 47 CFR 1.1307(b)

NOTES:

1. CAUTION SIGN TO BE PERMANENTLY MOUNTED AT ANTENNA LOCATIONS, STAIRWELL SIDE OF THE ROOF ACCESS DOOR, IN THE FIR CONTROL ROOM WITHIN PROXIMITY OF THE SHUT-DOWN SIGNAGE AND AS NOTED IN THE PLANS.
2. SIGN SHALL COMPLY WITH ANSI C95.2 COLOR, SYMBOL AND CONTENT CONVENTIONS.
3. SIGNAGE SHALL BE CLEARLY LABELED IN A PHENOLIC LABEL WITH WITH BACKGROUND AND BLACK LETTERING AND SHALL BE READABLE FROM AT LEAST (15) FEET FROM SIGN.
4. CONTRACTOR TO VERIFY WITH THE CARRIER THE CORRECT CONTACT PHONE NUMBER PRIOR TO SIGN FABRICATION AND INSTALLATION.

24"x36" SCALE: NTS
11"x17" SCALE: NTS
6

RF NOTICE SIGN

'NOTICE' TYPE TO BE INSTALLED ON ROOFTOP ENTRY POINT AS PER EMF ENGINEER'S REPORT

NOTICE

Radio frequency fields beyond **this point may exceed the FCC** general public exposure limit.

Obey all posted signs and site guidelines for working in radio frequency environments.

In accordance with Federal Communications Commission rules on radio frequency emissions 47 CFR 1.1307(b)

NOTES:

1. NOTICE SIGN TO BE PERMANENTLY MOUNTED AT ANTENNA LOCATIONS, STAIRWELL SIDE OF THE ROOF ACCESS DOOR, IN THE FIR CONTROL ROOM WITHIN PROXIMITY OF THE SHUT-DOWN SIGNAGE AND AS NOTED IN THE PLANS.
2. SIGN SHALL COMPLY WITH ANSI C95.2 COLOR, SYMBOL AND CONTENT CONVENTIONS.
3. SIGNAGE SHALL BE CLEARLY LABELED IN A PHENOLIC LABEL WITH WITH BACKGROUND AND BLACK LETTERING AND SHALL BE READABLE FROM AT LEAST (15) FEET FROM SIGN.
4. CONTRACTOR TO VERIFY WITH THE CARRIER THE CORRECT CONTACT PHONE NUMBER PRIOR TO SIGN FABRICATION AND INSTALLATION.

24"x36" SCALE: NTS
11"x17" SCALE: NTS
3

EMERGENCY SHUT DOWN SIGN

EMERGENCY SHUT DOWN

FOR IMMEDIATE SHUT DOWN OF ALL RADIO FREQUENCY EMISSIONS OF THIS SITE:

CALL CONTACT NUMBER AND GIVE SITE IDENIFICATION NUMBER.

CONTACT PHONE NUMBER:
1-888-662-4662

SITE IDENTIFICATION NUMBER:
SF03144A

LOCATION OF EQUIPMENT:
☒ ROOFTOP
☐ OTHER

THIS EQUIPMENT HAS BATTERY BACKUP:
☒ YES
☐ NO

NOTES:

1. SIGN SHALL BE A PHENOLIC LABEL WITH WHITE BACKGROUND AND BLACK LETTERING. THE TITLE BLOCK SHALL BE RED BACKGROUND AND 1" HIGH WHITE LETTERING.
2. CONTRACTOR TO PLACE SIGNS IN THE FOLLOWING LOCATIONS:
   a. CELL SITE EQUIPMENT DOOR
   b. BATTERY LOCATION WITHIN PROXIMITY OF BATTERY DISCONNECT
   c. FCC ROOM WITH PROXIMITY OF THE FIRE ALARM PANEL
   d. BUILDING'S MAIN ELECTRICAL ROOM WITHIN PROXIMITY OF THE MAIN SHUT-OFF AND/OR AT THE CELL SITE MAIN ELECTRICAL DISCONNECT.

24"x36" SCALE: NTS
11"x17" SCALE: NTS
1

T-Mobile
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

NOT TO BE USED FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER · CIVIL · STATE OF CALIFORNIA

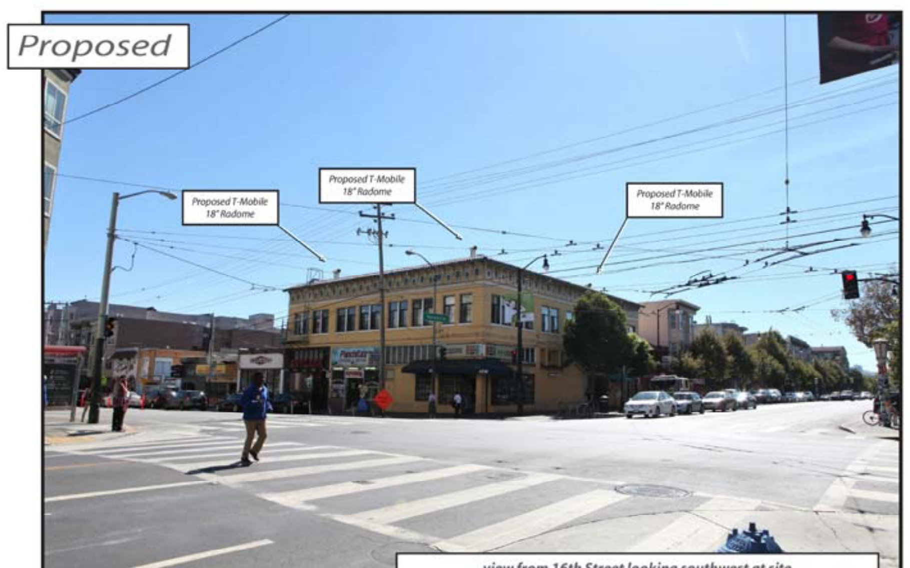
SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE
GENERAL SIGNAGE

SHEET NUMBER
GS-1

Existing

Proposed



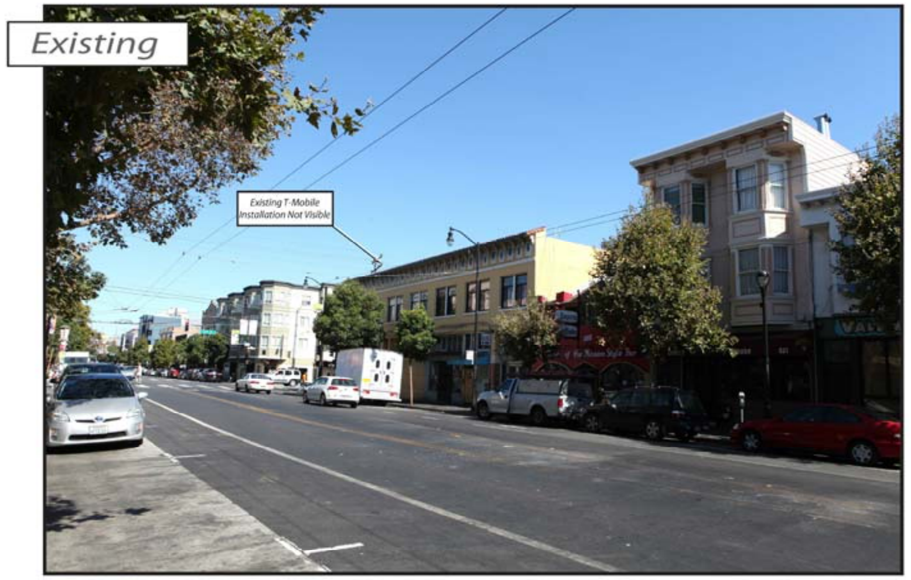
view from 16th Street looking southwest at site

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

T - Mobile

SF03144A 16th and Valencia
513 Valencia Street, San Francisco, CA
Photosims Produced on 9-6-2017

Existing



Proposed

view from 16th Street looking east at site

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

T - Mobile

SF03144A 16th and Valencia
513 Valencia Street, San Francisco, CA
Photosims Produced on 9-6-2017

T - Mobile
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES
ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
O	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

NOT TO BE USED FOR CONSTRUCTION

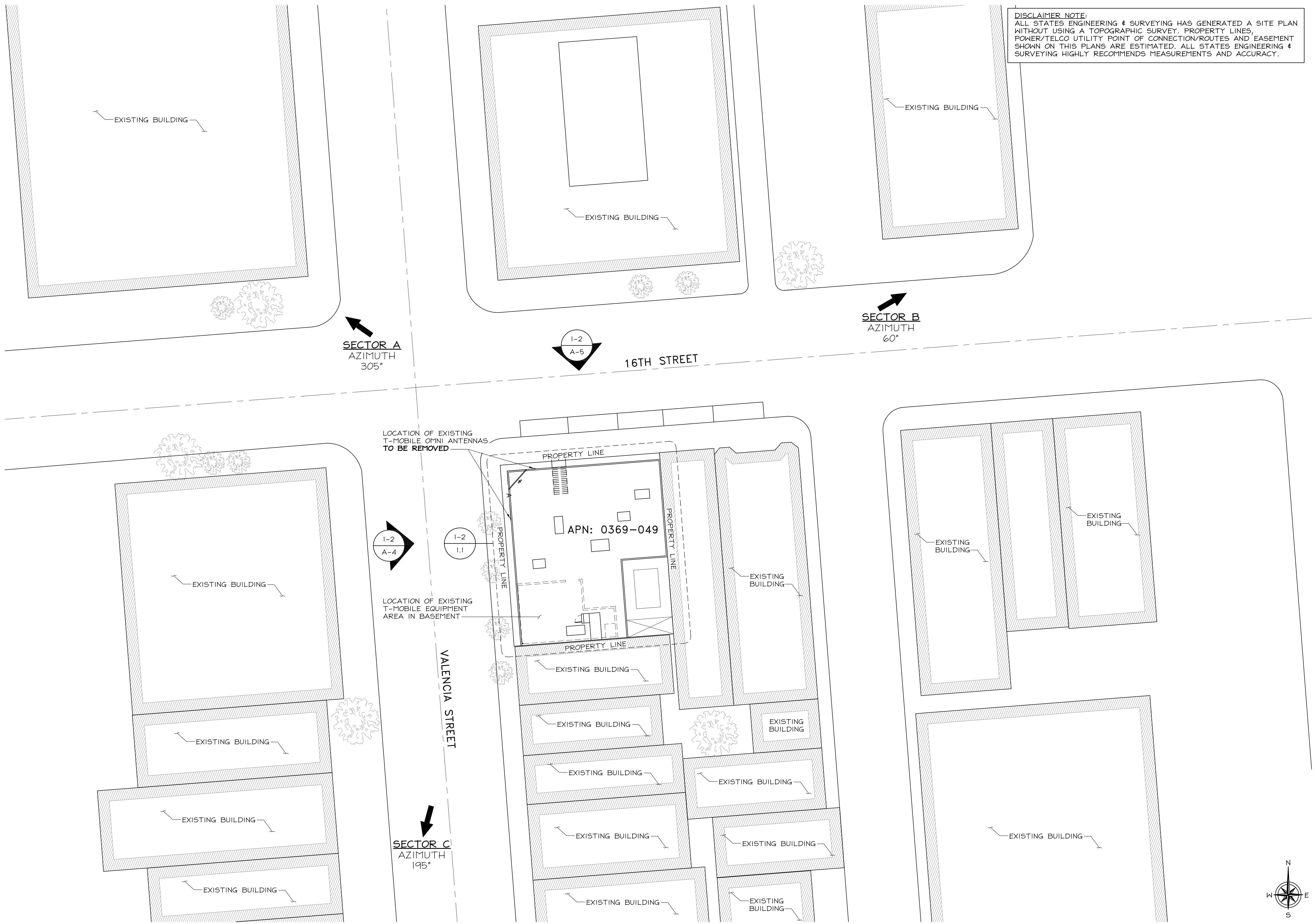
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE
PHOTO SIMULATION SHEETS

SHEET NUMBER
PS-1

DISCLAIMER NOTE:
ALL STATES ENGINEERING & SURVEYING HAS GENERATED A SITE PLAN WITHOUT USING A TOPOGRAPHIC SURVEY. PROPERTY LINES, POWER/TELCO UTILITY POINT OF CONNECTION/ROUTES AND EASEMENT SHOWN ON THIS PLANS ARE ESTIMATED. ALL STATES ENGINEERING & SURVEYING HIGHLY RECOMMENDS MEASUREMENTS AND ACCURACY.



SITE PLAN

24"x36" SCALE: 1" = 20'-0"
11"x17" SCALE: 1" = 40'-0"
20' 10' 0' 20'

1

T-Mobile
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES
ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

NOT TO BE USED FOR CONSTRUCTION

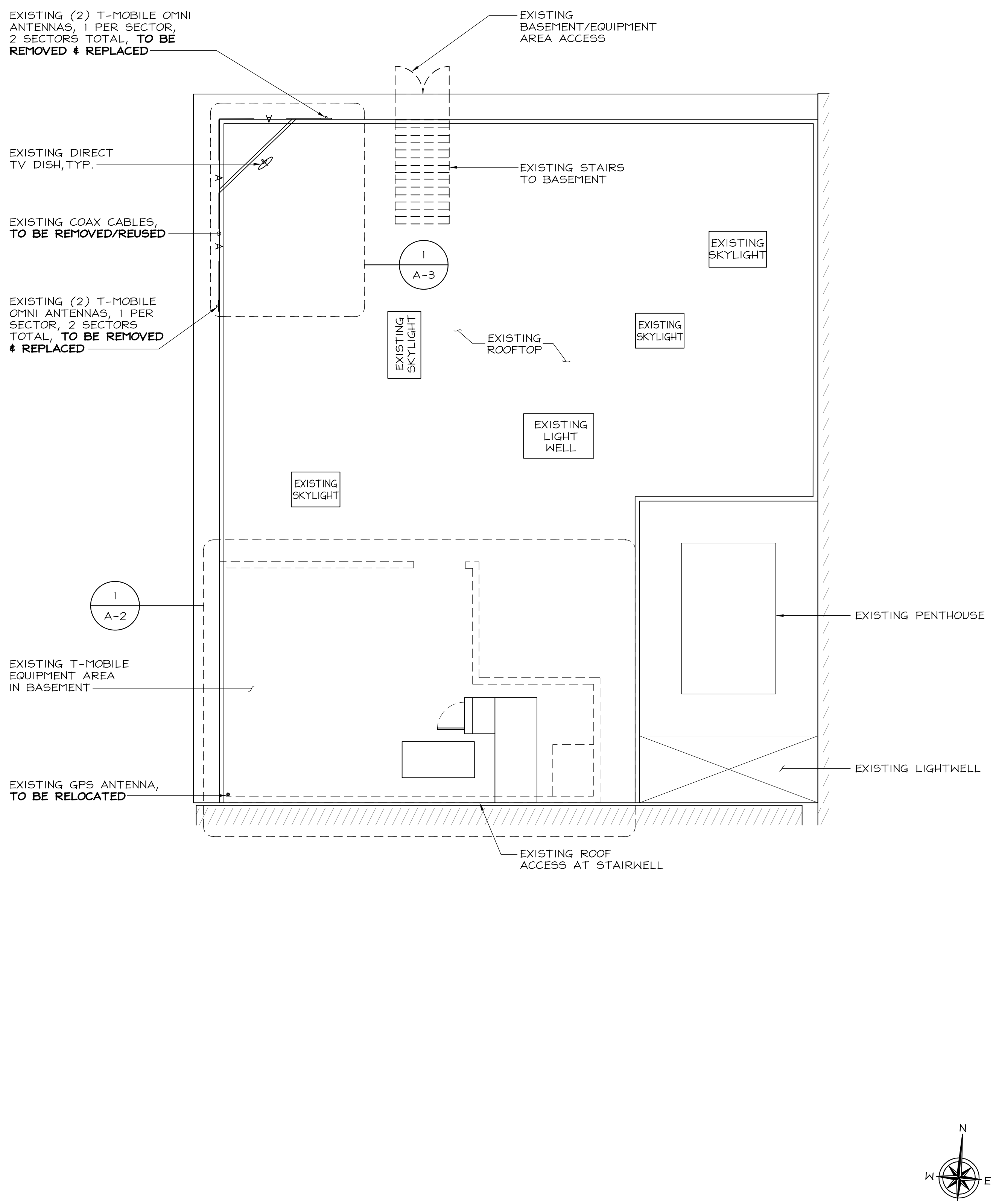
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE
SITE PLAN

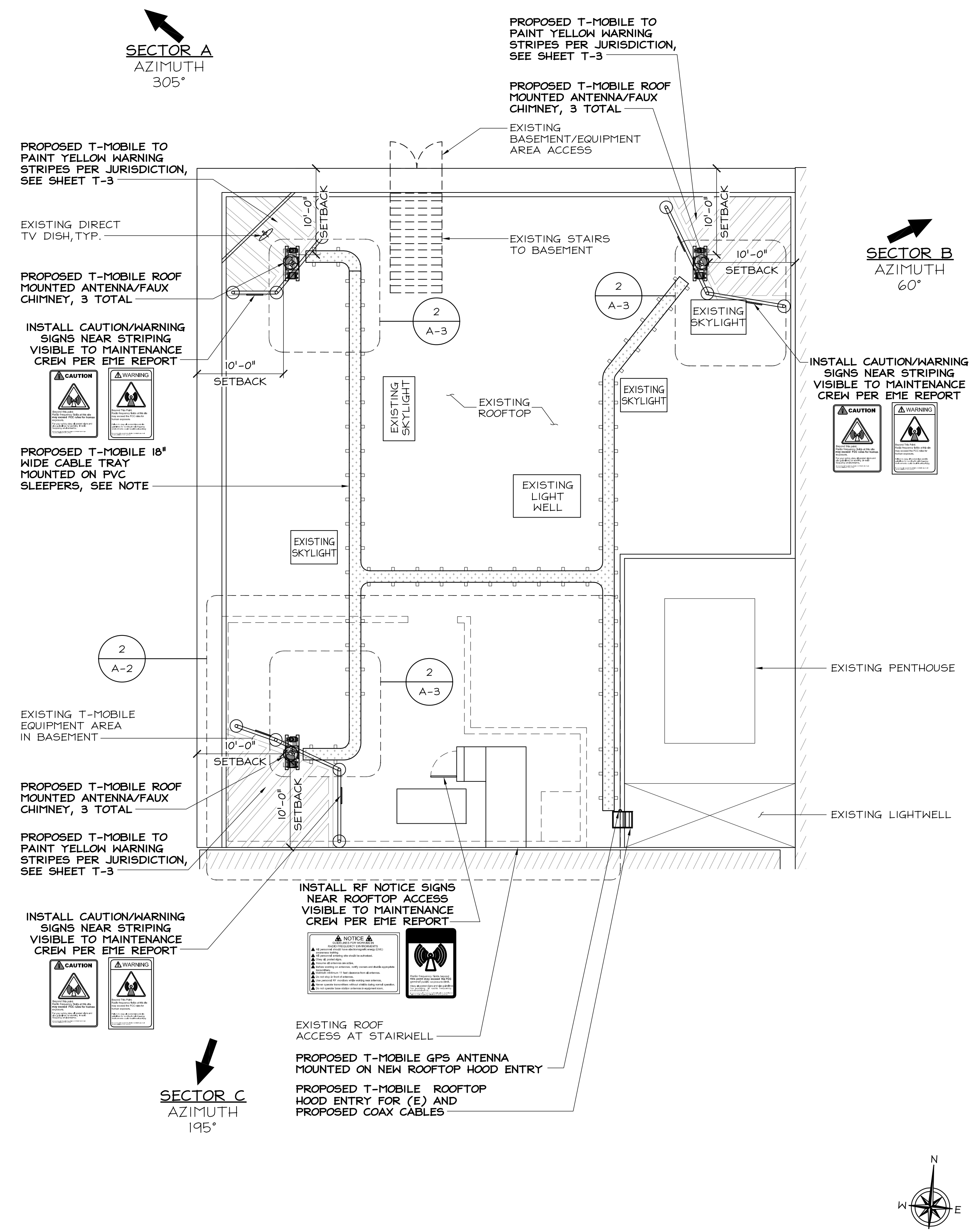
SHEET NUMBER
A-1

NOTE:
PROPOSED CABLE TRAY TO BE PAINTED TO MATCH EXISTING BUILDING



EXISTING ENLARGED ROOF PLAN

24"x36" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"
8' 6' 4' 2' 0" 8'
2



PROPOSED ENLARGED ROOF PLAN

24"x36" SCALE: 1/8" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"
8' 6' 4' 2' 0" 8'
1

T-Mobile
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

NOT TO BE USED FOR CONSTRUCTION

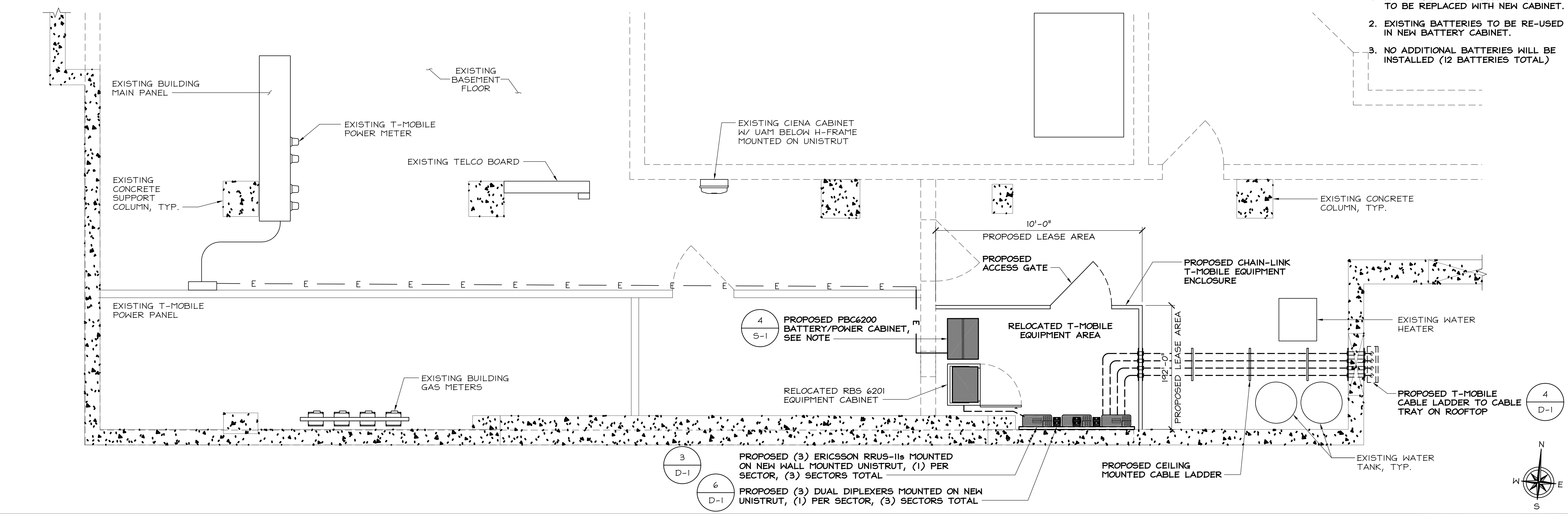
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE
EXISTING & PROPOSED ENLARGED ROOF PLAN

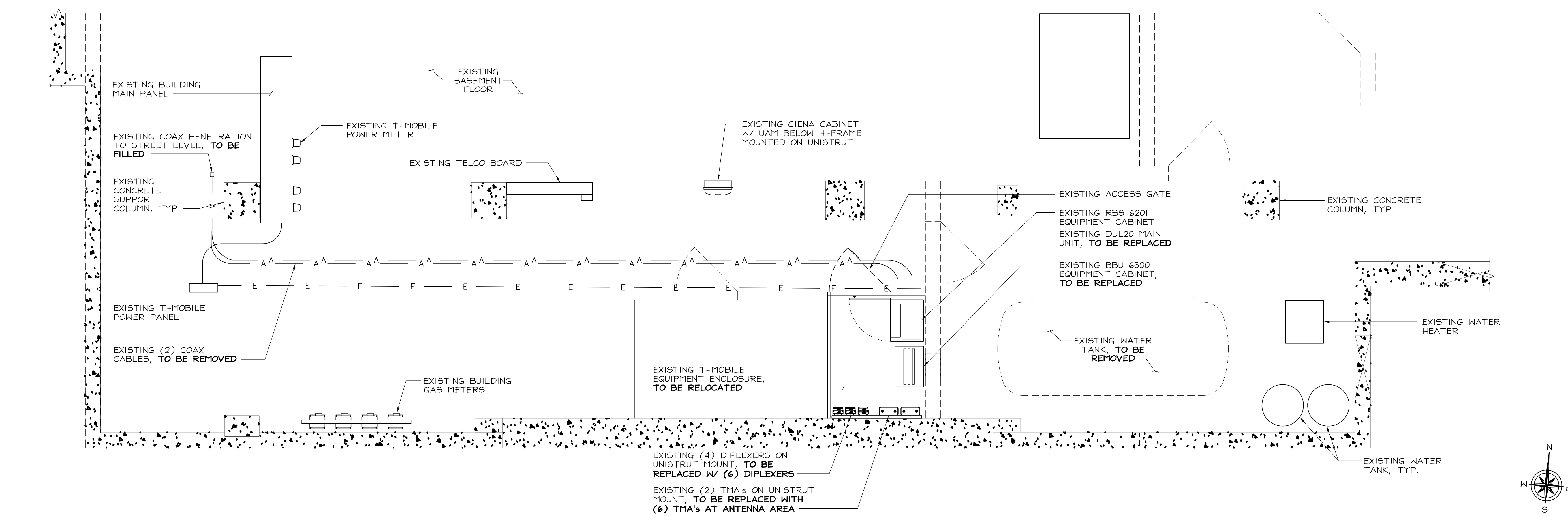
SHEET NUMBER
A-1.1

NOTES:
1. EXISTING POWER/BATTERY CABINET TO BE REPLACED WITH NEW CABINET.
2. EXISTING BATTERIES TO BE RE-USED IN NEW BATTERY CABINET.
3. NO ADDITIONAL BATTERIES WILL BE INSTALLED (12 BATTERIES TOTAL)



PROPOSED EQUIPMENT LAYOUT PLAN

24"x36" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"
4' 3' 2' 1' 0" 4'
2



EXISTING EQUIPMENT LAYOUT PLAN

24"x36" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"
4' 3' 2' 1' 0" 4'
1

T · · Mobile ·
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

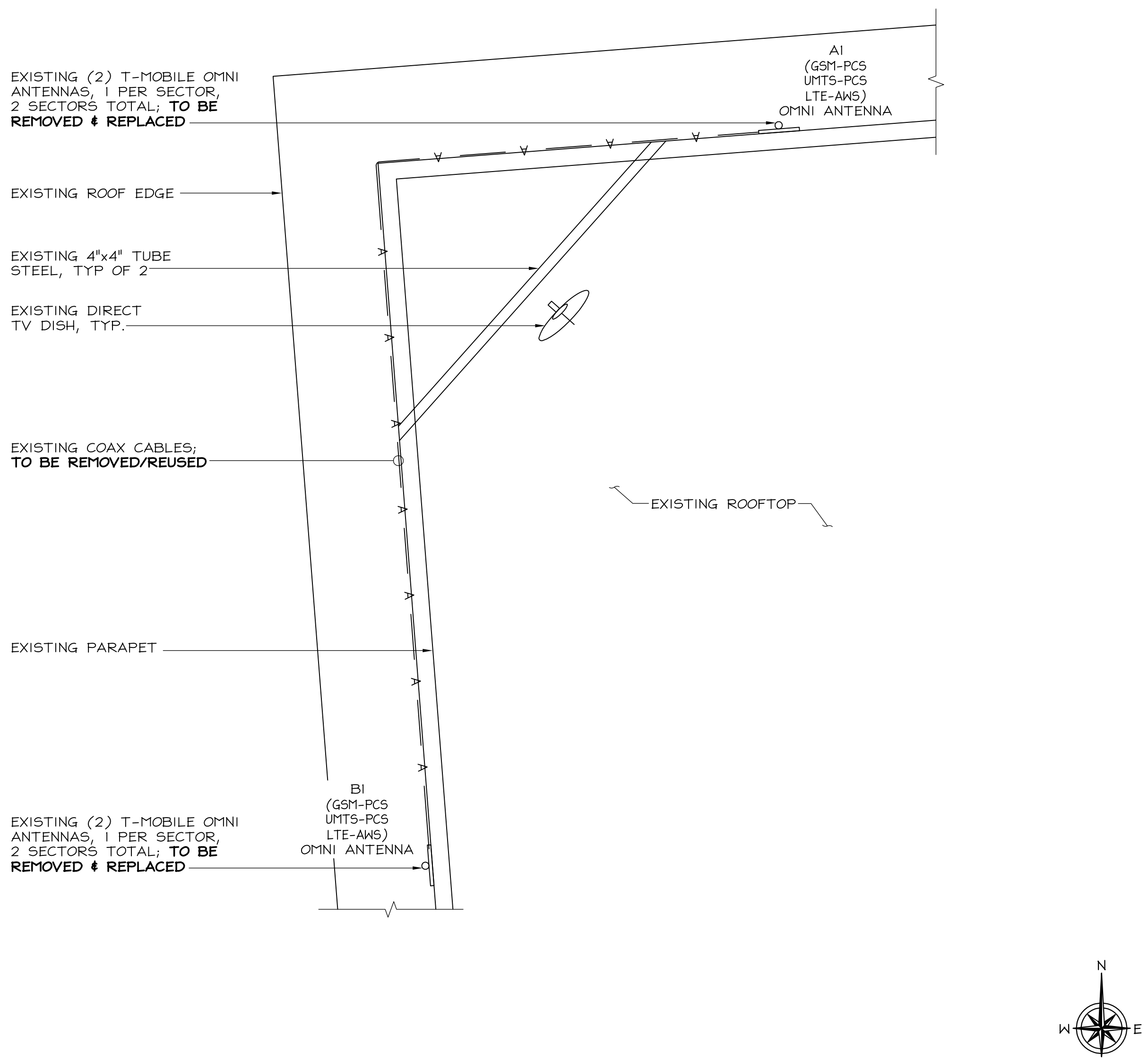
NOT TO BE USED FOR CONSTRUCTION

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.

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

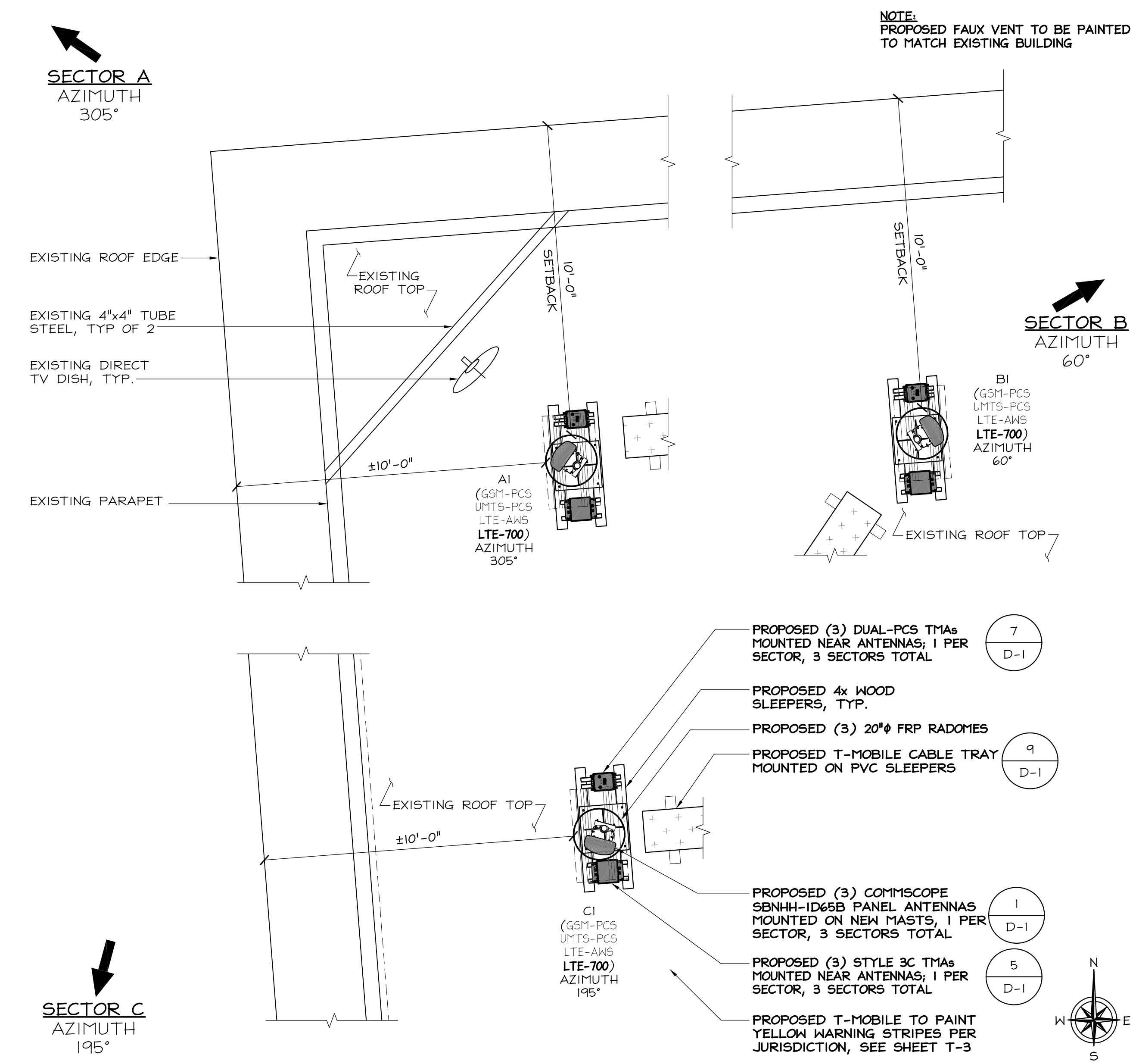
SHEET TITLE
EQUIPMENT LAYOUT PLAN

SHEET NUMBER
A-2



EXISTING ANTENNA LAYOUT

24"x36" SCALE: 3/8" = 1'-0"
11"x17" SCALE: 3/16" = 1'-0"
2' 1' 0" 2'
3



PROPOSED ANTENNA LAYOUT

24"x36" SCALE: 3/8" = 1'-0"
11"x17" SCALE: 3/16" = 1'-0"
2' 1' 0" 2'
2

NOTES TO CONTRACTOR:

1. CONTRACTOR IS TO REFER TO T-MOBILE'S MOST CURRENT RADIO FREQUENCY DATA SHEET (RFDS) PRIOR TO CONSTRUCTION
2. CABLE LENGTHS WERE DETERMINED BASED ON VISUAL INSPECTION DURING SITE-WALK. CONTRACTOR TO VERIFY ACTUAL LENGTH DURING PRE-CONSTRUCTION WALK

EXISTING OPTIMAL ANTENNA AND TRANSMISSION CABLES REQUIREMENT (VERIFY WITH CURRENT RFDS)

	ANTENNA	TECHNOLOGY		ANTENNA MODEL		ANTENNA AZIMUTH		RAD CENTER		TRANSMISSION LINE	
		EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXIST	PROP	LENGTH	PART NUMBER
SECTOR A	A1	GSM-PCS UMTS-PCS LTE-AWS	GSM-PCS UMTS-PCS LTE-AWS **LTE-700**	dbSPECTRA DS1Z03F36U-N (OMNI)	**COMMSCOPE SBNHH-1D65B (HEX)**	(OMNI)	**305°**	17'-0"	**36'-6"**	±135'	(1) EXISTING 1-5/8"Φ COAX CABLE & **(1) NEW 1-5/8"Φ COAX CABLES**
	-	-	-	-	-	-	-	-	-	-	-
SECTOR B	B1	GSM-PCS UMTS-PCS LTE-AWS	GSM-PCS UMTS-PCS LTE-AWS **LTE-700**	dbSPECTRA DS1Z03F36U-N (OMNI)	**COMMSCOPE SBNHH-1D65B (HEX)**	(OMNI)	**60°**	17'-0"	**36'-6"**	±145'	(1) EXISTING 7/8"Φ COAX CABLE & **(1) NEW 7/8"Φ COAX CABLES**
	-	-	-	-	-	-	-	-	-	-	-
SECTOR C	C1	-	**GSM-PCS UMTS-PCS LTE-AWS LTE-700**	-	**COMMSCOPE SBNHH-1D65B (HEX)**	-	**195°**	-	**36'-6"**	±120'	(1) EXISTING 1-5/8"Φ COAX CABLE & **(1) NEW 1-5/8"Φ COAX CABLES**
	-	-	-	-	-	-	-	-	-	-	-

REMOTE RADIO UNITS (RRU'S)

	ANTENNA	RRU TYPE	QTY.		RRU LOCATION (DISTANCE FROM ANTENNA)	RRU MINIMUM CLEARANCES			DC CABLE	
			(E)	(N)		ABOVE	BELOW	SIDES	LENGTH	AWG
SECTOR A	A1	**ERICSSON RRUS-11 B12 LTE (700MHz)**		**1**	**±135'-0"**	**16"**	**8"**	**8"**	**±15'**	**8**
	-	-	-		-	-	-	-	-	-
SECTOR B	B1	**ERICSSON RRUS-11 B12 LTE (700MHz)**		**1**	**±145'-0"**	**16"**	**8"**	**8"**	**±15'**	**8**
	-	-	-		-	-	-	-	-	-
SECTOR C	C1	**ERICSSON RRUS-11 B12 LTE (700MHz)**		**1**	**±120'-0"**	**16"**	**8"**	**8"**	**±15'**	**8**
	-	-	-		-	-	-	-	-	-

ANTENNA SCHEDULE

1

T-Mobile
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

NOT TO BE USED FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER CIVIL STATE OF CALIFORNIA

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE
ANTENNA LAYOUT & SCHEDULE

SHEET NUMBER
A-3

PROPOSED WEST ELEVATION

24"x36" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"
4' 2' 0" 4'
2

EXISTING WEST ELEVATION

24"x36" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"
4' 2' 0" 4'
1

T-Mobile
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

NOT TO BE USED FOR CONSTRUCTION

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.

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE
ELEVATIONS

SHEET NUMBER
A-4

NOTE:
PROPOSED FAUX VENT TO BE PAINTED TO MATCH EXISTING BUILDING

PROPOSED NORTH ELEVATION

24"x36" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"
4' 2' 0" 4'
2

EXISTING NORTH ELEVATION

24"x36" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"
4' 2' 0" 4'
1

T - Mobile
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

MODUS
240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

NOT TO BE USED FOR CONSTRUCTION

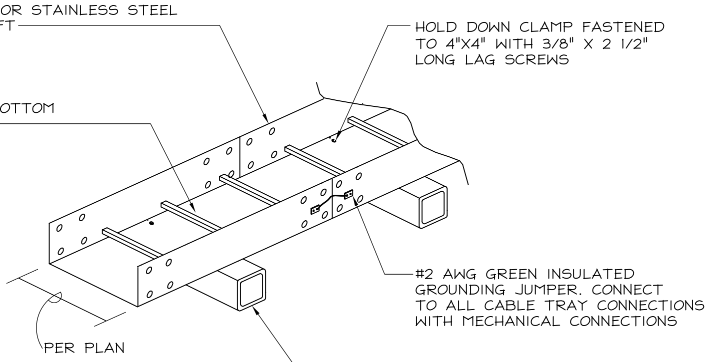
REGISTERED PROFESSIONAL ENGINEER · CIVIL · STATE OF CALIFORNIA

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

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE
ELEVATIONS

SHEET NUMBER
A-5



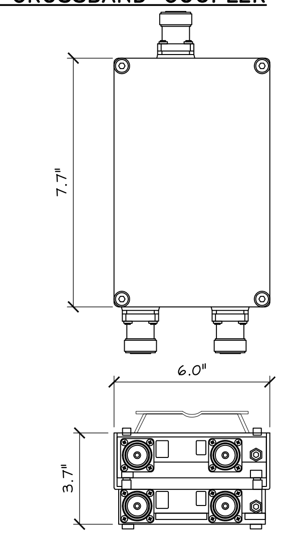
NOTES:
1. RUN #2 AWG BCW GROUND CONDUCTOR ALONG CABLE TRAY PER ELEC. AND GROUND AT BOTH ENDS.
2. CABLE TRAYS SHALL BE FREE OF SHARP OBJECTS AND BURRS WHICH COULD INJURE CABLES. COVERS SHALL BE FASTENED USING HOLD DOWN CLIPS. SHEET METAL SCREWS ARE NOT ACCEPTABLE.

CABLE TRAY DETAIL
24"x36" SCALE: NTS
11"x17" SCALE: NTS
9

COMMSCOPE CBC721-DF-2X ONEBASE CROSSBAND COUPLER

COLOR: GRAY
DIMENSIONS, HxWxD: (7.7"X6.0"X3.7")
WEIGHT, WITHOUT MOUNTING HARDWARE: (11.5 lbs)
CONNECTOR INTERFACE: 7-16 DIN FEMALE
ELECTRICAL SPECIFICATIONS (BAND 1):
- OPERATING FREQUENCY: 698-960 MHz
- INSERTION LOSS, MAXIMUM: 0.15 dB
- OUTPUT POWER, MAXIMUM: 500 W

ELECTRICAL SPECIFICATIONS (BAND 2):
- OPERATING FREQUENCY: 1710-2170 MHZ
- INSERTION LOSS, MAXIMUM: 0.20 DB
- OUTPUT POWER, MAXIMUM: 500 W

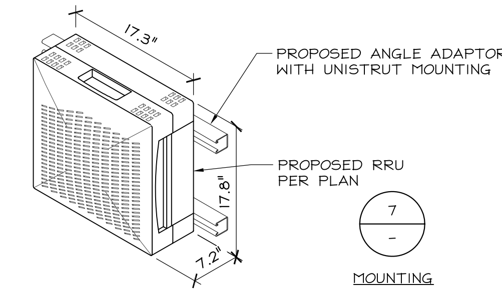


DIPLEXER SPECIFICATION
24"x36" SCALE: NTS
11"x17" SCALE: NTS
6

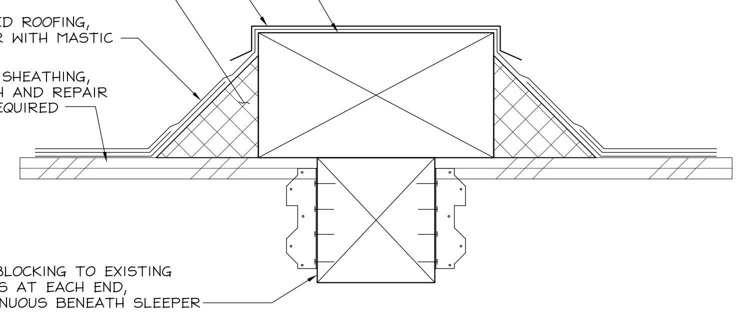
ERICSSON RRUS-11 B12 RRU

COLOR: LIGHT GRAY
DIMENSIONS, HxWxD: 452.1x439.4x182.9MM (17.8"x17.3"x7.2")
WEIGHT, WITH PRE-MOUNTED BRACKETS: 22.68Kg (50 lbs)
WIND LOAD, FRONTAL/LATERAL/REAR SIDE 149.8 MPH, CD=1: N/A lbs
CONNECTOR: (4) 1/2 DIN FEMALE
CLIMATE: -40°C TO +55°C (SELF CONVECTION SILENT, NO FANS, IP55)
POWER CONSUMPTION: 190 WATTS, TYP.

UNISTRUT MOUNTED



RRU SPECIFICATION
24"x36" SCALE: NTS
11"x17" SCALE: NTS
3



SLEEPER WEATHERPROOFING
24"x36" SCALE: NTS
11"x17" SCALE: NTS
8

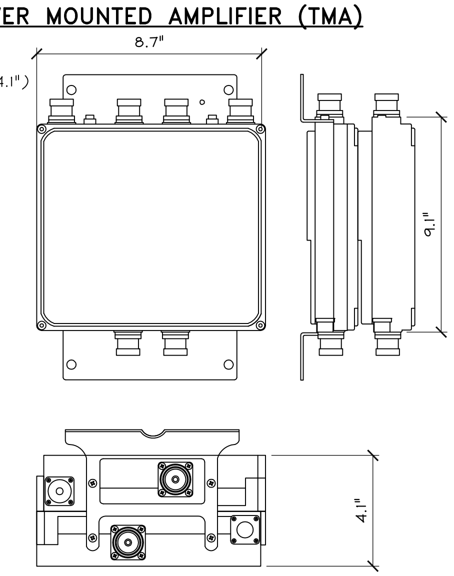
COMMSCOPE TMAT1921B78-21A TOWER MOUNTED AMPLIFIER (TMA)

COLOR: GRAY
DIMENSIONS, HxWxD: 230.0x220.5x104.0mm (9.1"X8.7"X4.1")
WEIGHT: 8.0Kg (17.6 lbs)
CONNECTOR INTERFACE: 7-16 DIN FEMALE
ELECTRICAL SPECIFICATIONS Rx (UPLINK):
- BANDWIDTH: 60.00MHz
- LICENSE BAND: PCS
- FREQUENCY BAND: 1850-1910MHz
- RETURN LOSS, min: 18dB

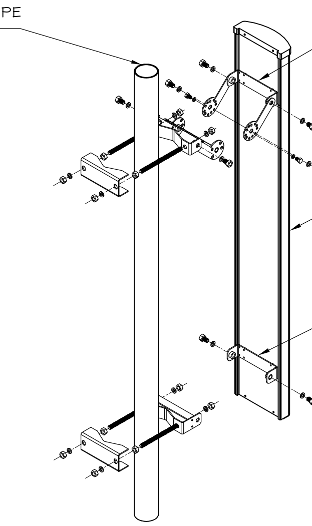
ELECTRICAL SPECIFICATIONS Tx (DOWNLINK):
- BANDWIDTH: 60.00MHz
- LICENCE BAND: PCS
- FREQUENCY BAND: 1930-1990MHz
- RETURN LOSS, min: 20dB

ELECTRICAL SPECIFICATIONS 2 Rx (UPLINK):
- BANDWIDTH: 45.00MHz
- LICENCE BAND: AWS
- PASSBAND: 1710-1755MHz
- RETURN LOSS, min: 18dB

ELECTRICAL SPECIFICATIONS 2 Rx (UPLINK):
- BANDWIDTH: 45.00MHz
- LICENCE BAND: AWS
- PASSBAND: 2110-2155MHz
- RETURN LOSS, min: 20dB



TMA SPECIFICATION
24"x36" SCALE: NTS
11"x17" SCALE: NTS
5



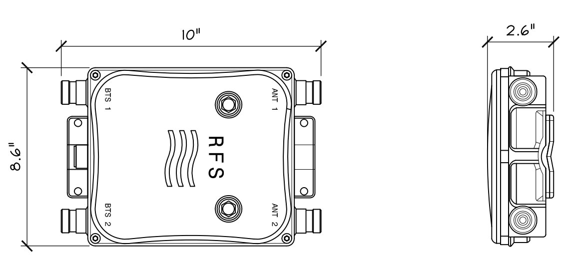
ANTENNA MOUNTING DETAIL
24"x36" SCALE: NTS
11"x17" SCALE: NTS
2

RFS ATM1900D-1A20 DUAL DUPLEX TOWER MOUNTED AMPLIFIER (TMA)

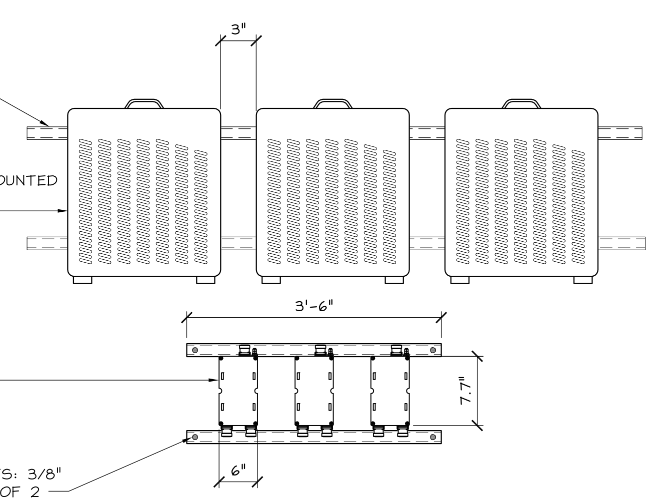
COLOR: GRAY
DIMENSIONS, HxWxD: 220x254x66mm (8.6"x10"x2.6")
WEIGHT: 3.8 Kg (8.4 lbs)
CONNECTOR INTERFACE: 7-16 DIN FEMALE LONG-NECK
LICENSE BAND: PCS

ELECTRICAL SPECS Rx:
- BANDWIDTH: 60 MHz
- FREQUENCY BAND: 1850-1990 MHz
- RETURN LOSS MINIMUM: 18 dB

ELECTRICAL SPECS Tx:
- BANDWIDTH: 60 MHz
- FREQUENCY BAND: 1930-1990 MHz
- RETURN LOSS, MINIMUM: 18 dB



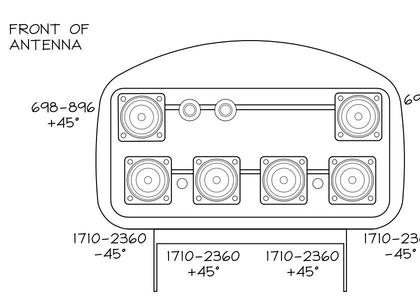
TMA SPECIFICATION
24"x36" SCALE: NTS
11"x17" SCALE: NTS
7

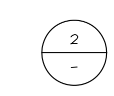


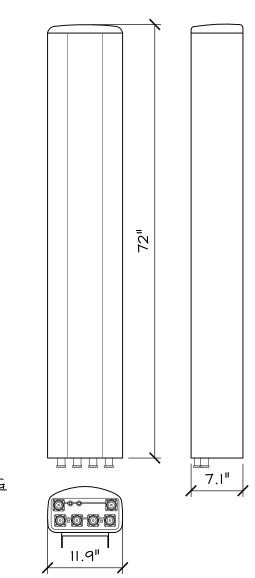
RRU MOUNTING DETAIL
24"x36" SCALE: NTS
11"x17" SCALE: NTS
4

COMMSCOPE ANTENNA SBNHH-1D65B

ANTENNA COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	1828x301x181mm (72"x11.9"x7.1")
WEIGHT, WITH PRE-MOUNTED BRACKETS:	18.4kg (40.6 lbs)
WIND LOADING, MAX.	617.7 N @ 150km/h 138.9 lbf @ 150km/h
WIND SPEED,MAX.	241.4km/h / 150.0 mph
CONNECTOR:	(6) 7/16 DIN FEMALE (BOTTOM)







ANTENNA SPECIFICATION
24"x36" SCALE: NTS
11"x17" SCALE: NTS
1

T-Mobile
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

O	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF
REV	DATE	DESCRIPTION	

NOT TO BE USED FOR CONSTRUCTION

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.

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE
DETAILS

SHEET NUMBER
D-1

Product Specifications

COMMSCOPE®

POWERED BY ANDREW.

SBNHH-1D65B

Andrew® Tri-band Antenna, 1 x 698–896 MHz and 2 x 1710–2360 MHz, 65° horizontal beamwidth, internal RET. Both high bands share the same electrical tilt.

- Interleaved dipole technology providing for attractive, low wind load mechanical package
- The values presented on this datasheet have been calculated based on N-P-BASTA White Paper version 9.6 by the NGMN Alliance

Electrical Specifications

Frequency Band, MHz	698–806	806–896	1710–1880	1850–1990	1920–2180	2300–2360
Gain by all Beam Tilts, average, dBi	14.5	14.3	17.4	17.9	18.2	18.3
Gain by all Beam Tilts Tolerance, dB	±0.5	±0.8	±0.4	±0.3	±0.5	±0.3
Gain by Beam Tilt, average, dBi	0 ° | 14.6 7 ° | 14.6 14 ° | 14.2	0 ° | 14.5 7 ° | 14.4 14 ° | 13.6	0 ° | 17.4 3 ° | 17.5 7 ° | 17.4	0 ° | 17.8 3 ° | 17.9 7 ° | 17.9	0 ° | 18.1 3 ° | 18.3 7 ° | 18.2	0 ° | 18.2 3 ° | 18.4 7 ° | 18.4
Beamwidth, Horizontal, degrees	68	66	69	66	63	58
Beamwidth, Horizontal Tolerance, degrees	±2.2	±3.4	±2	±4.6	±5.7	±4.3
Beamwidth, Vertical, degrees	12.1	10.7	5.6	5.2	5.0	4.5
Beamwidth, Vertical Tolerance, degrees	±0.8	±1	±0.3	±0.2	±0.3	±0.2
Beam Tilt, degrees	0–14	0–14	0–7	0–7	0–7	0–7
USLS, dB	16	14	16	16	16	15
Front-to-Back Total Power at 180° ± 30°, dB	25	26	27	26	26	26
CPR at Boresight, dB	22	23	21	20	20	22
CPR at Sector, dB	13	11	16	12	11	4
Isolation, dB	25	25	25	25	25	25
Isolation, Intersystem, dB	30	30	30	30	30	30
VSWR | Return Loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port, maximum, watts	350	350	350	350	350	300
Polarization	±45°	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm

General Specifications

Antenna Brand	Andrew®
Antenna Type	DualPol® tri-band
Band	Multiband
Brand	DualPol® | Teletilt®
Operating Frequency Band	1710 – 2360 MHz | 698 – 896 MHz

Mechanical Specifications

Color	Light gray
Connector Interface	7-16 DIN Female
Connector Location	Bottom
Connector Quantity, total	6
Lightning Protection	dc Ground
Radiator Material	Aluminum | Low loss circuit board
Radome Material	Fiberglass, UV resistant
Wind Loading, maximum	617.7 N @ 150 km/h 138.9 lbf @ 150 km/h

Product Specifications

COMMSCOPE®

POWERED BY ANDREW.

SBNHH-1D65B

Wind Speed, maximum	241.4 km/h | 150.0 mph

Dimensions

Depth	181.0 mm | 7.1 in
Length	1828.0 mm | 72.0 in
Width	301.0 mm | 11.9 in
Net Weight	18.4 kg | 40.6 lb

Remote Electrical Tilt (RET) Information

Annual Failure Rate, maximum	0.01%
Power Consumption, idle state, maximum	2.0 W
Power Consumption, normal conditions, maximum	11.0 W
Power Input	10–30 V
Protocol	3GPP/AISG 2.0 Multi-RET
RET Interface	RS-485 Female (daisy chain port ,1) | RS-485 Male (input port, 1)
RET Interface, quantity	1 female | 1 male
RET System	Teletilt®

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

Included Products

BSAMNT-1 — Wide Profile Antenna Downtilt Mounting Kit for 2.5 - 4.5 in (64 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

REMOTE RADIO HEAD – RRUS11

TECHNICAL SPECIFICATIONS

Frequency
- ✓ Band 12 (Lower 700 MHz)
- ✓ Band 4 (AWS, 17/2100 MHz) — 2Q2011

MIMO Capable
- ✓ 2x30W MIMO
- ✓ IBW of 20 MHz

Size & Weight
- ✓ Band 4: 44 lbs
- ✓ Band 12: 50 lbs
- ✓ 15.9 x 16.3 x 5.8 in. excl. sun shield
- ✓ 17.8 x 17.3 x 7.2 in. incl. sun shield

Power
- ✓ Input voltage: -48 VDC or AC (Indoor)
- ✓ Fuse size: 13 – 32 A
  - Recommended: 25 A

RRUS 11 MOUNTING

- › Wall and pole mounting brackets
  - Reused from RRUW and RRU22
- › Clearing distances:
  - Above >= 16 in.
  - Below >= 8 in.
  - Side >= 0 mm
- › DC connector
  - Bayonet
  - Screw terminals in connector plug
  - Supported outer cable diameter: 6-18 mm
- › CPRI connector
  - LCD with proprietary cover
  - Separate cover available from 1Q2011

T-Mobile
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

MODUS
240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

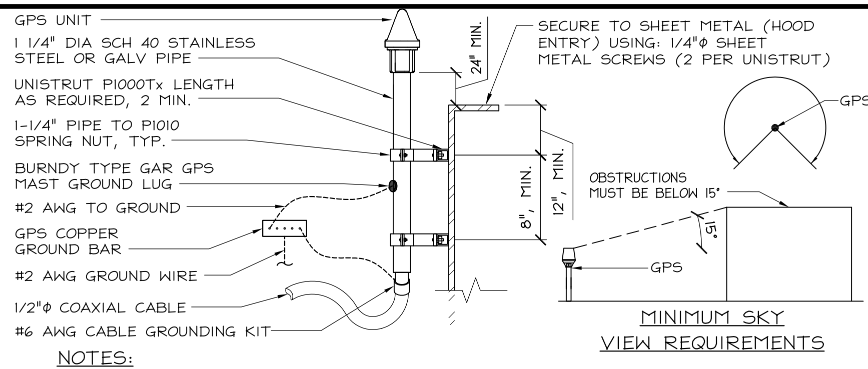
NOT TO BE USED FOR CONSTRUCTION

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.

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE
EQUIPMENT SPECIFICATIONS SHEET

SHEET NUMBER
D-2

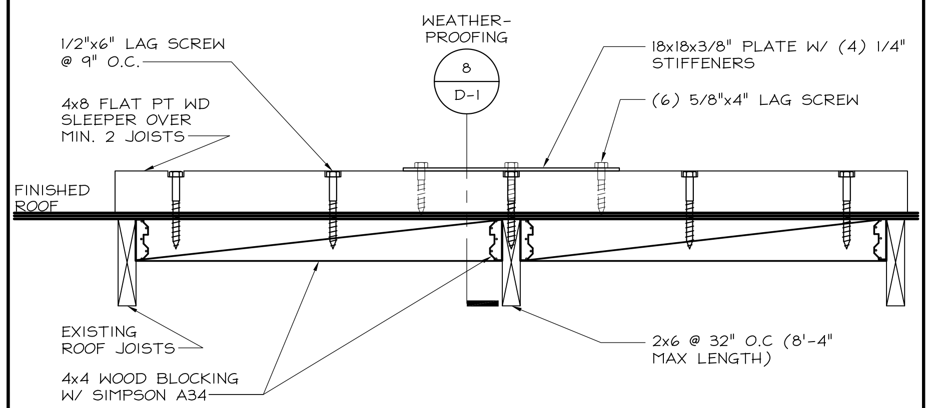


NOTES:

1. THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A STANDARD 1-1/4" DIAMETER, SCHEDULE 40, GALVANIZED STEEL OR STAINLESS STEEL PIPE. THE PIPE MUST NOT BE THREADED AT THE ANTENNA MOUNT END. THE PIPE SHALL BE CUT TO THE REQUIRED LENGTH (MINIMUM OF 18 INCHES) USING A HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. A HACK SAW SHALL NOT BE USED. THE CUT PIPE END SHALL BE DE=BURRED AND SMOOTH IN ORDER TO SEAL AGAINST THE NEOPRENE GASKET ATTACHED TO THE ANTENNA MOUNT.
2. IT IS CRITICAL THAT THE GPS ANTENNA IS MOUNTED SUCH THAT IT IS WITHIN 2 DEGREES OF VERTICAL AND THE BASE OF THE ANTENNA IS WITHIN 2 DEGREES OF LEVEL.
3. DO NOT SWEEP TEST GPS ANTENNA.
4. IT IS CRITICAL THAT THE GPS ANTENNA IS MOUNTED SUCH THAT MIN. SKY VIEW REQUIREMENTS ARE MET. (SEE SKY VIEW REQUIREMENT, RIGHT)

GPS ANTENNA SPECIFICATIONS

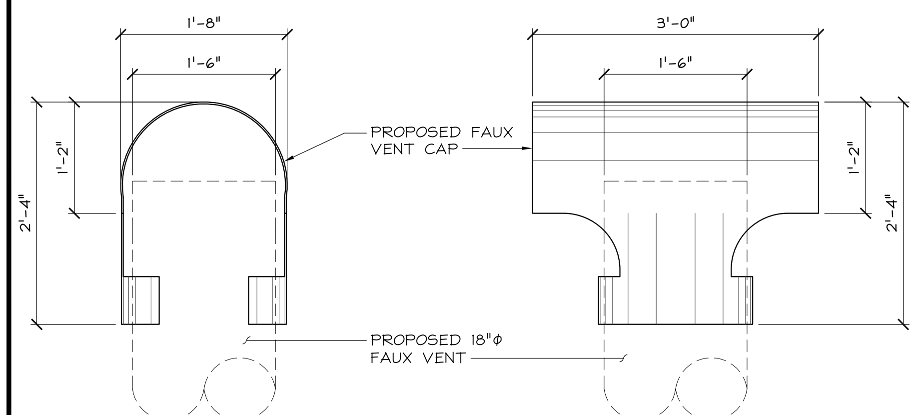
24"x36" SCALE: NTS
11"x17" SCALE: NTS
6



SLEEPER TO BLOCKING DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS
3

NOTE:
FAUX VENT CAP DESIGN TO BE PROVIDED BY STEALTH MANUFACTURER, DIMENSIONS SHOWN ARE APPROXIMATE AND WILL BE DETERMINED BY FINAL MANUFACTURER SPECIFICATIONS.



VENT CAP DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS
1

ERICSSON PBC6200 CABINET

SIZE (HxWxD):
60.83"(1545mm)x23.62"(600mm)x23.62"(600mm)

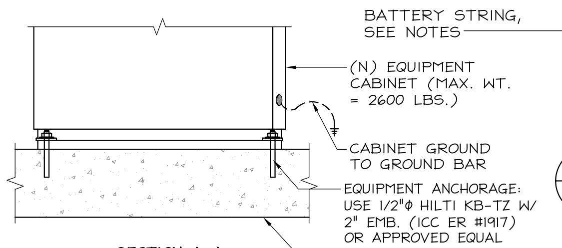
WEIGHT: 2,183 LBS.(990kg)
APPROX. WEIGHT W/ AGM BATTERIES

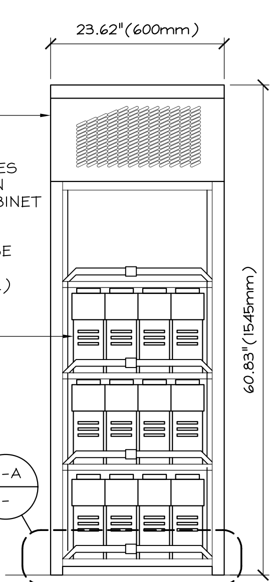
SPACE: 7.874"(200mm) ABOVE
39.37"(1000mm) FRONT
23.62"(600mm) PU DOOR CLEAR

TEMPERATURE: -15°C TO +50°C OPERATING

OPERATIONAL INPUT VOLTAGE:
88-300V AC AND -48V DC

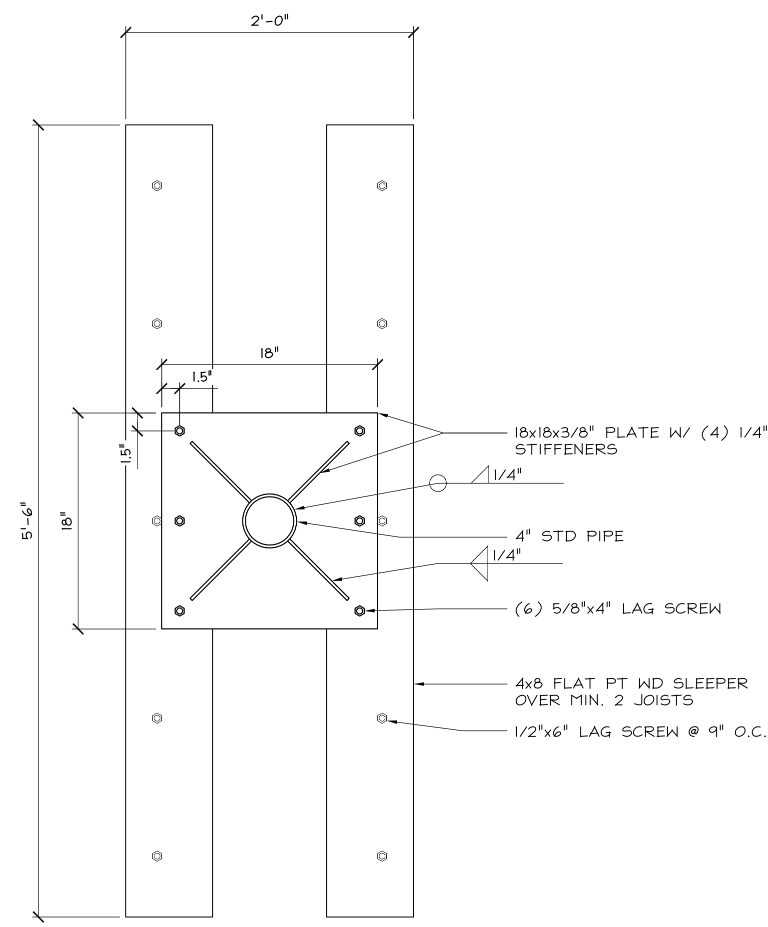
NOTES:
1. EXISTING BATTERIES TO BE RE-USED IN NEW BATTERY CABINET
2. NO ADDITIONAL BATTERIES WILL BE INSTALLED (12 BATTERIES TOTAL)





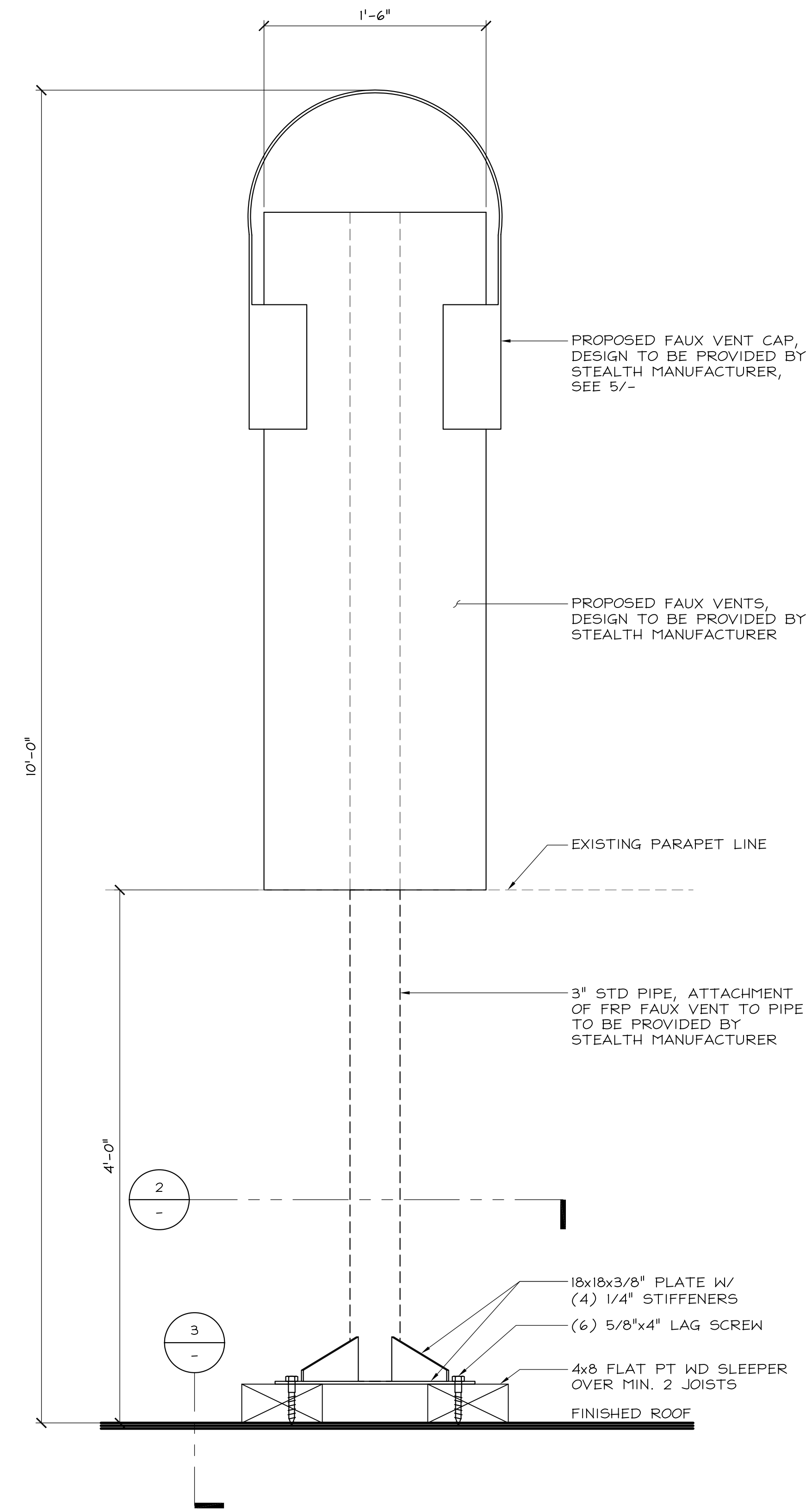
PBC 6200 CABINET SPECIFICATIONS

24"x36" SCALE: NTS
11"x17" SCALE: NTS
4



PIPE MOUNT PLATE

24"x36" SCALE: NTS
11"x17" SCALE: NTS
2



ANTENNA PIPE MOUNT

24"x36" SCALE: NTS
11"x17" SCALE: NTS
1

T-Mobile
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

MODUS
240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES
ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

NOT TO BE USED FOR CONSTRUCTION

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.

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

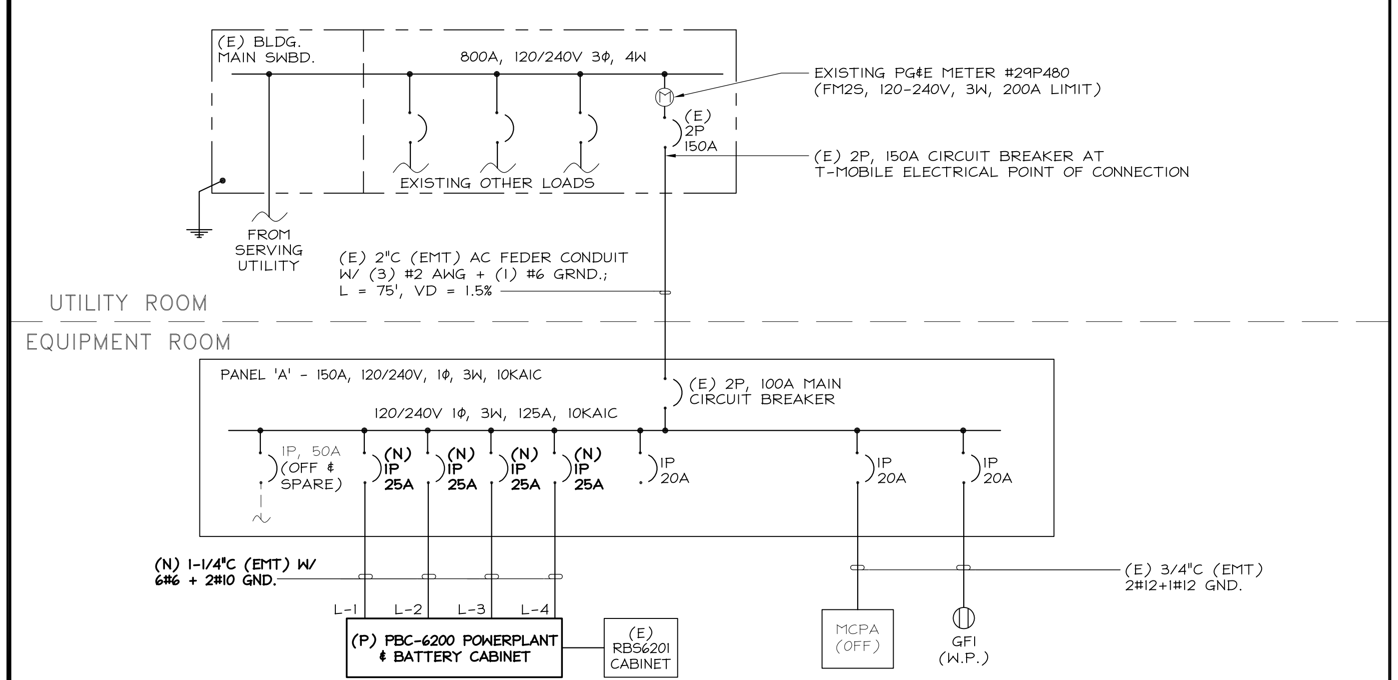
SHEET TITLE
STRUCTURAL SHEET

SHEET NUMBER
S-1

NOTES:

1. SUBCONTRACTOR SHALL PROVIDE "100"AMP, SINGLE PHASE, 120/240 VAC, 60HZ SERVICE FOR T-MOBILE SITE
2. SUBCONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY BEFORE THE START OF CONSTRUCTION. POWER AND TELEPHONE CONDUIT SHALL BE PROVIDED AND INSTALLED PER UTILITY REQUIREMENTS
3. FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT REFER TO DRAWINGS PROVIDED BY PPC MANUFACTURER.
4. ALL SERVICE EQUIPMENT AND INSTALLATIONS SHALL COMPLY WITH THE N.E.C. AND UTILITY COMPANY AND LOCAL CODE REQUIREMENTS
5. SUBCONTRACTOR SHALL INSTALL 36" OF FLEX CONDUIT WITH ALL CONDUIT FITTINGS (NUTS, REDUCING BUSHINGS, ELBOWS, COUPLINGS, ETC.) NECESSARY FOR CONNECTION TO THE BTS CABINET.
6. SUBCONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY.
7. POWER, CONTROL AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT. SHALL BE SINGLE CONDUCTOR (#14 AWG AND LARGER), 600V, OIL RESISTANT. THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90°C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED.

NOTES 4



ONE LINE DIAGRAM 3

PROPOSED PANEL SCHEDULE

NOTE:
(3) EXISTING 1P, 50A BREAKERS TO BE REPLACED W/ (4) 1P, 25A BREAKERS

SUB PANEL 'A'

SITE NAME: SF03144A - 16th & Valencia

PANEL DESIGNATION: AC PANEL 'A'

VOLTAGE: 120/208 V
PHASE: 1
WIRE: 3
MAIN BREAKER: 100 AMP
BUSS RATING: 125 AMP
LOCATION: SURFACE EXTERIOR

CKT	LOAD DESCRIPTION	BREAKER AMPS	BREAKER POLES	BREAKER STATUS	SERVICE LOAD VA	USAGE FACTOR	PHASE A VA	PHASE B VA	PHASE A VA	PHASE B VA	USAGE FACTOR	SERVICE LOAD VA	BREAKER STATUS	BREAKER POLES	BREAKER AMPS	LOAD DESCRIPTION	CKT
1	SPACE						0		0							SPACE	2
3	SPACE							0		0							4
5	SPACE						0		0				ON	2	100	TO "DELI"	6
7	LABELED 'PBMS'	20	1	ON	180	1.25		225		0							8
9	LABELED 'MCPA'	20	1	ON			0		4950		1.25	3960	ON	1	25	PBC6200	10
11	PBC 6200	20	1	ON	180	1.25		225		4950	1.25	3960	ON	1	25	PBC6200	12
13	"UNKNOWN"	100	1	ON			0		4950		1.25	3960	ON	1	25	PBC6200	14
15								0		4950	1.25	3960	OFF	1	25	PBC6200	16

PHASE A TOTAL VA	9900
PHASE B TOTAL VA	5400
TOTAL KVA	15.30
TOTAL AMPS	63.75

NOTES:
1. ALL LOADS CALC'ED AS LCL/MCL LOADS (OK TO DESIGN TO 100% CAPACITY)
2. SPARE BREAKERS SHALL BE LABELED 'SPARE' AND SWITCHED 'OFF'

EXISTING PANEL SCHEDULE

SUB PANEL 'A'

SITE NAME: SF03144A - 16th & Valencia

PANEL DESIGNATION: AC PANEL 'BTS'

VOLTAGE: 120/208 V
PHASE: 1
WIRE: 3
MAIN BREAKER: 100 AMP
BUSS RATING: 125 AMP
LOCATION: SURFACE EXTERIOR

CKT	LOAD DESCRIPTION	BREAKER AMPS	BREAKER POLES	BREAKER STATUS	SERVICE LOAD VA	USAGE FACTOR	PHASE A VA	PHASE B VA	PHASE A VA	PHASE B VA	USAGE FACTOR	SERVICE LOAD VA	BREAKER STATUS	BREAKER POLES	BREAKER AMPS	LOAD DESCRIPTION	CKT
1	SPACE						0		0							SPACE	2
3	SPACE							0		0							4
5	SPACE						0		0				ON	2	100	TO "DELI"	6
7	LABELED 'PBMS'	20	1	ON	180	1.25		225		0							8
9	LABELED 'MCPA'	20	1	ON			0		2875		1.25	2300	ON	1	50	PBC6500	10
11	PBC 6200	20	1	ON	180	1.25		225		2875	1.25	2300	ON	1	50	PBC6500	12
13	"UNKNOWN"	100	1	ON			0		2875		1.25	2300	ON	1	50	PBC6500	14
15								0		0			OFF	1	50	SPARE	16

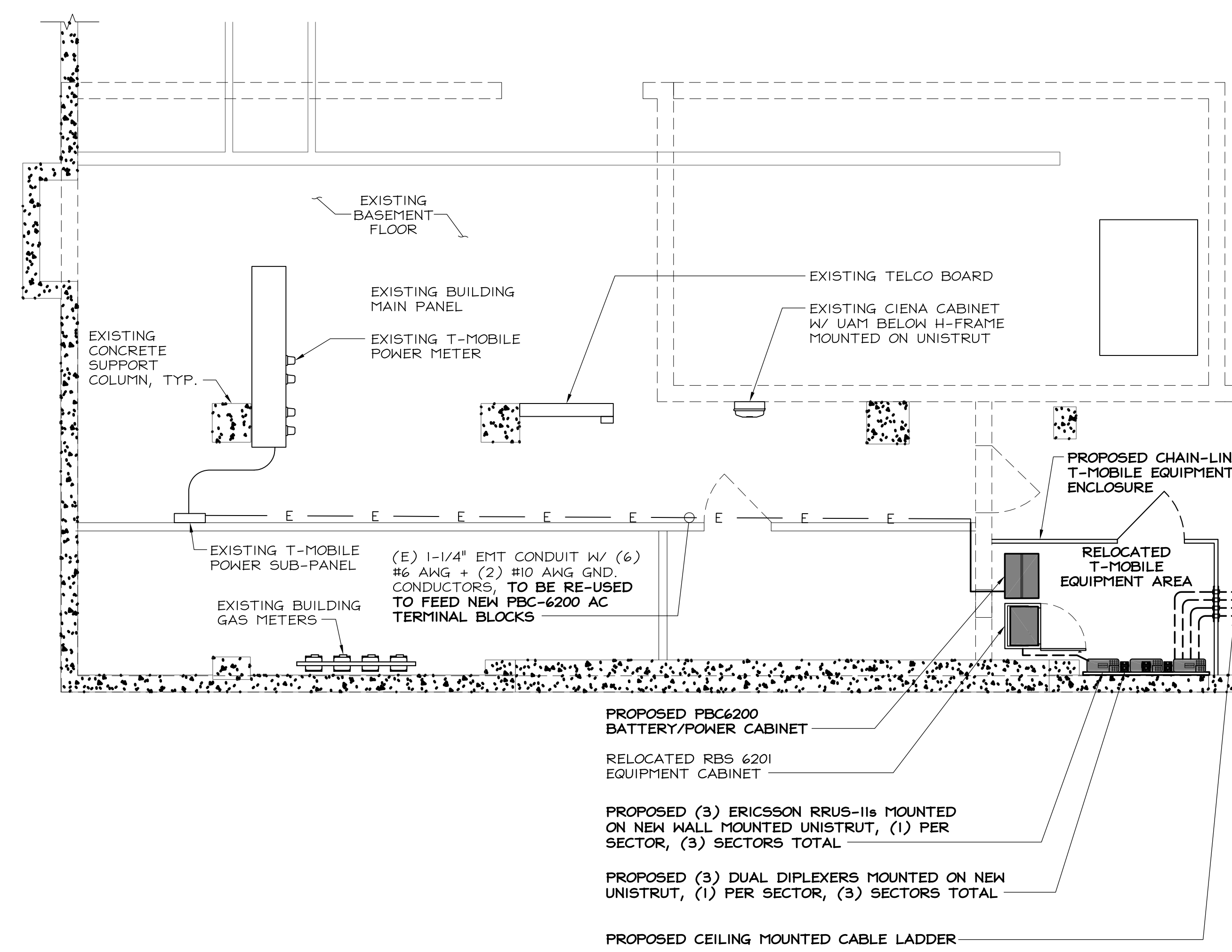
PHASE A TOTAL VA	5750
PHASE B TOTAL VA	3325
TOTAL KVA	9.08
TOTAL AMPS	37.81

NOTES:
1. ALL LOADS CALC'ED AS LCL/MCL LOADS (OK TO DESIGN TO 100% CAPACITY)
2. SPARE BREAKERS SHALL BE LABELED 'SPARE' AND SWITCHED 'OFF'

PANEL SCHEDULE 2

ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND ALL APPLICABLE LOCAL CODES.
2. SERVICE TO EQUIPMENT CABINETS SHALL BE 120/240VAC, 80A, 1-PHASE.
3. ALL CONDUCTORS SHALL BE THWN, COPPER 600V. 75° C;
4. ALL WORK TO COMPLY WITH NFPA 70E, OSHA TITLE 29, AND T-24, CALIFORNIA CODE OF REGULATIONS
5. REFER TO PANEL SCHEDULE FOR T-MOBILE 'PANEL A' & NOTES FOR PROPOSED IMPROVEMENTS & CONFORMANCE ITEMS.
6. PER EXISTING DE-ENERGIZED CONDUCTORS & CONDUIT ABANDONED IN PLACE, ALL UNUSED/UNLOADED CIRCUIT BREAKERS SHALL BE LABELLED 'SPARE' & TURNED OFF
7. CONTRACTOR TO PROVIDE A NEW OR UPDATED PANEL SCHEDULE WITH COMPLETED SOW CIRCUIT ASSIGNMENT LABELS, AND ATTACH IT TO THE INSIDE OF THE AC PANEL 'A' ACCESS DOOR



ELECTRICAL PLAN 1

24"x36" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"
4' 3' 2' 1' 0" 4'

T · · Mobile ·
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

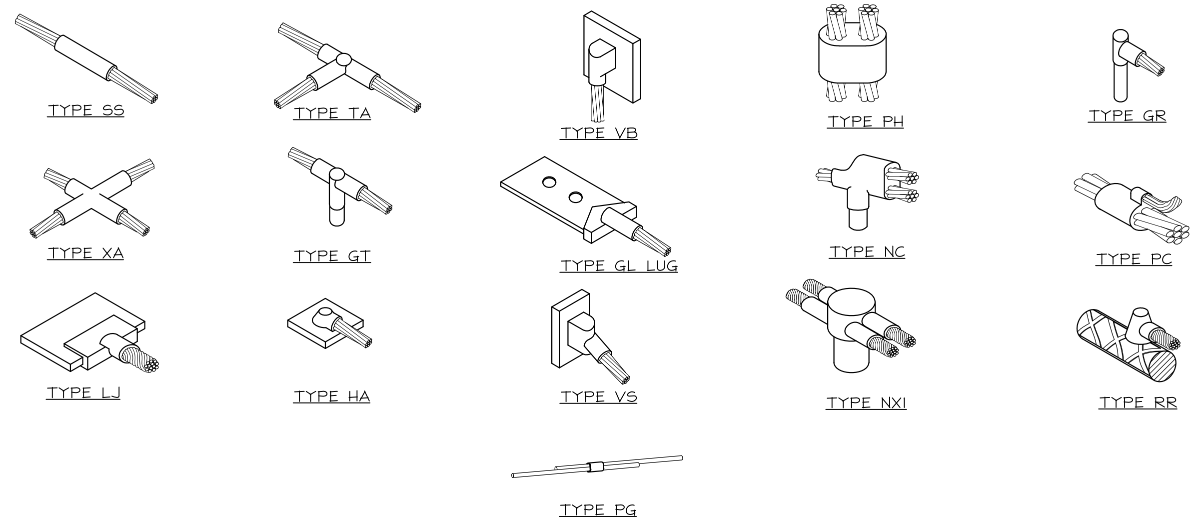
NOT TO BE USED FOR CONSTRUCTION

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.

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE
ELECTRICAL PLAN, PANEL SCHEDULES & ONE-LINE DIAGRAM

SHEET NUMBER
E-1



TYPICAL CADWELD TYPES

24"x36" SCALE: NTS
11"x17" SCALE: NTS
4

1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.

2. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING #2 GROUND WIRES AND CONNECT TO SURFACE MOUNTED GROUND BUS BARS AS SHOWN. FOLLOW ANTENNA AND BTS MANUFACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS. GROUND COAX SHIELD AT BOTH ENDS USING MANUFACTURERS PRACTICES. ALL UNDERGROUND WATER PIPES, METAL CONDUITS AND GROUNDS THAT ARE A PART OF THIS SYSTEM SHALL BE BONDED TOGETHER.

3. ALL GROUND CONNECTIONS SHALL BE #2 AWG U.N.O. ALL WIRES SHALL BE COPPER THHN/THWN. ALL GROUND WIRE SHALL BE SOLID TIN COATED OR STRANDED GREEN INSULATED WIRE.

4. CONTRACTOR TO VERIFY AND TEST GROUND TO SOURCE, 5 OHMS MAXIMUM. PROVIDE SUPPLEMENT GROUNDING RODS AS REQUIRED TO ACHIEVE SPECIFIED OHMS READING. GROUNDING AND OTHER OPTIONAL TESTING WILL BE WITNESSED BY THE T-MOBILE REPRESENTATIVE.

5. NOTIFY ARCHITECT/ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.

6. BARE GROUNDING CONDUCTOR SHALL BE HARD DRAWN TINNED COPPER SIZES AS NOTED ON PLAN.

7. ALL HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED MINIMUM 12" BELOW GRADE/FROST-LINE IN TRENCH, U.N.O., AND BACK FILL SHALL BE COMPACTED AS REQUIRED BY ARCHITECT.

8. ALL GROUND CONDUCTORS SHALL BE RUN AS STRAIGHT AND SHORT AS POSSIBLE, WITH A MINIMUM 12" BENDING RADIUS NOT LESS THAN 90 DEGREES.

9. ALL SUPPORT STRUCTURES, CABLE CHANNEL WAYS OR WIRE GUIDES SHALL BE BONDED TO GROUND SYSTEM AT A POINT NEAREST THE MAIN GROUNDING BUS "MGB" (OR DIRECTLY TO GROUND-RING).

10. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:
a. BURNDY, HY-GRADE U.L. LISTED CONNECTORS FOR INDOOR USE OR AS APPROVED BY T-MOBILE PROJECT MANAGER.
b. CADWELD, EXOTHERMIC WELDS (WELDED CONNECTIONS).
c. TWO -(2) HOLE TINNED COPPER COMPRESSION (LONG BARREL) FITTINGS (BUS BAR CONNECTIONS).

11. ALL CRIMPED CONNECTIONS SHALL HAVE EMBOSSED MANUFACTURER'S DIEMARK VISIBLE AT THE CRIMP (RESULTING FROM USE OF PROPER CRIMPING DEVICES).

12. PRIOR TO ANY LUG-BUSSBAR CONNECTIONS, THE BUSSBAR SHALL BE CLEANED BY USE OF "SCOTCH-BRITE' OR PLAIN STEEL WOOL AS TO REMOVE ALL SURFACE OXIDATION AND CONTAMINANTS. A COATING OF "NO-OX-ID" SHALL BE APPLIED TO THE CONNECTION SURFACES.

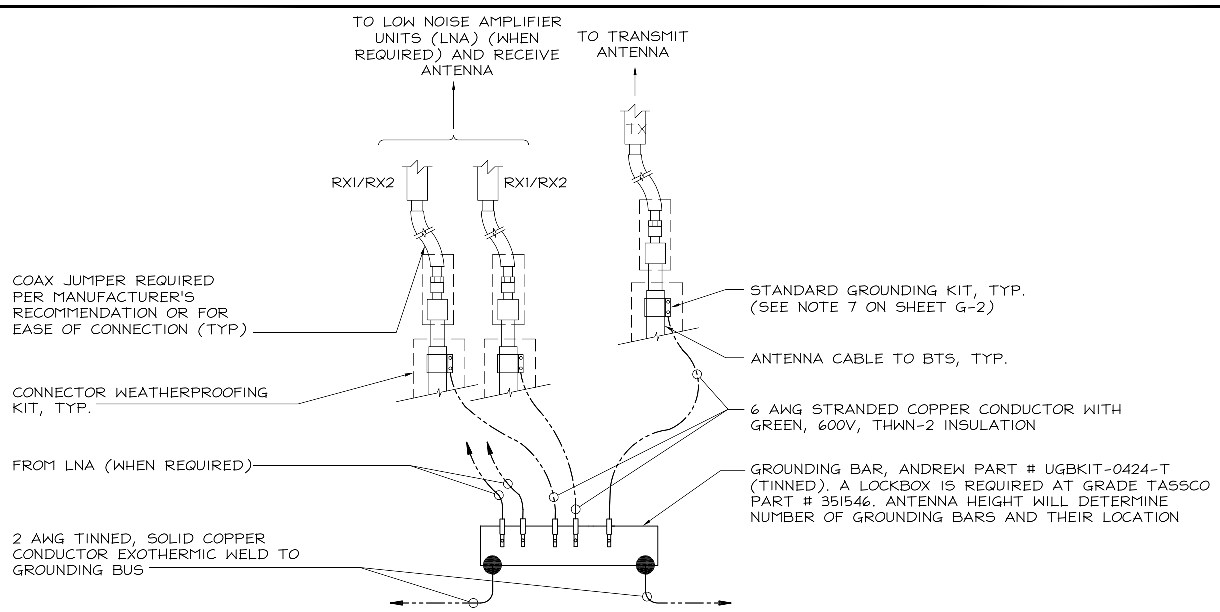
13. ALL CONNECTION HARDWARE SHALL BE TYPE 316 SS (NOT ATTRACTED TO MAGNETS).

14. THE GROUND RING SHALL BE INSTALLED 24" MINIMUM BEYOND ANY BUILDING DRIP LINE.

15. ELECTRICAL SERVICE EQUIPMENT GROUNDING SHALL COMPLY WITH NEC, ARTICLE 250-82 AND SHALL BOND ALL EXISTING AND NEW GROUNDING ELECTRODES. NEW GROUNDING ELECTRODE SHALL INCLUDE BUT NOT LIMITED TO GROUND RODS, GROUND RING IF SERVICE IS WITHIN THE RADIO EQUIPMENT LOCATION, BUILDING STEEL IF APPLICABLE, COLD WATER CONNECTIONS MUST BE MADE ON THE STREET SIDE OF MAIN SHUT-OFF VALVE.

GROUNDING NOTES

24"x36" SCALE: NTS
11"x17" SCALE: NTS
2

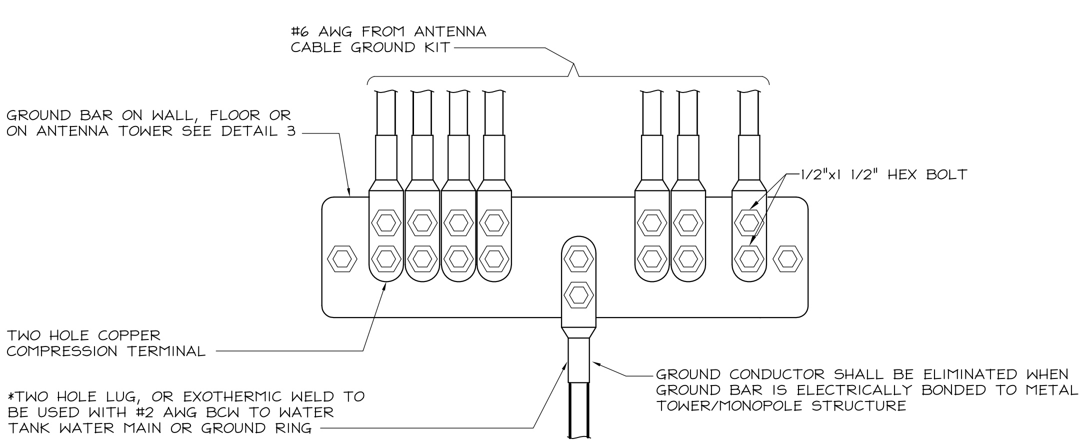


GROUNDING BAR CONNECTION

24"x36" SCALE: NTS
11"x17" SCALE: NTS
3

NOTES:

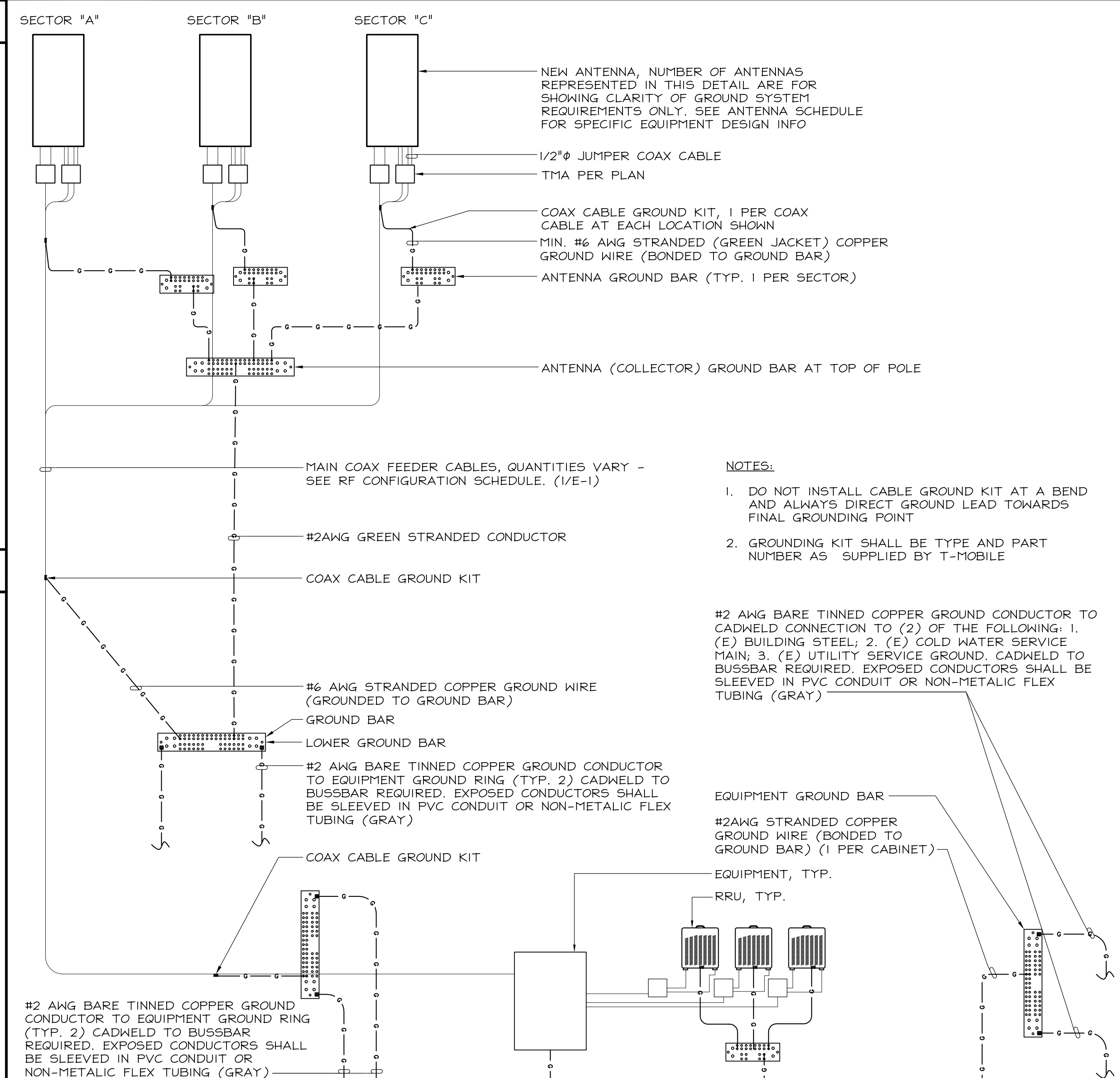
1. "DOUBLING UP" OR "STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS AND TO BE APPLIED PRIOR TO ADDING HARDWARE.



* — GROUND BARS AT THE BOTTOM OF TOWERS/MONOPOLES SHALL ONLY USE EXOTHERMIC WELDS.

WIRE TO GROUND BAR CONNECTION

24"x36" SCALE: NTS
11"x17" SCALE: NTS
2



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND LEAD TOWARDS FINAL GROUNDING POINT
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED BY T-MOBILE

COAX CABLE GROUNDING SCHEMATIC DIAGRAM

24"x36" SCALE: NTS
11"x17" SCALE: NTS
1

T - Mobile -
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES
ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

NOT TO BE USED FOR CONSTRUCTION

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.

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

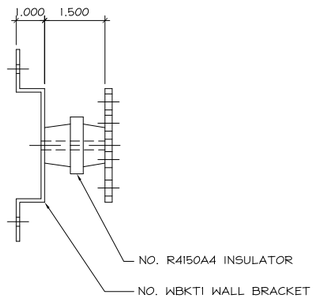
SHEET TITLE
GROUNDING SCHEMATIC & GROUNDING DETAILS

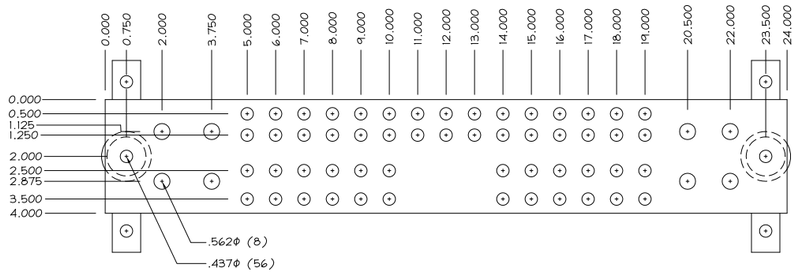
SHEET NUMBER
G-1

NOT USED

24"x36" SCALE: NTS
11"x17" SCALE: NTS

6



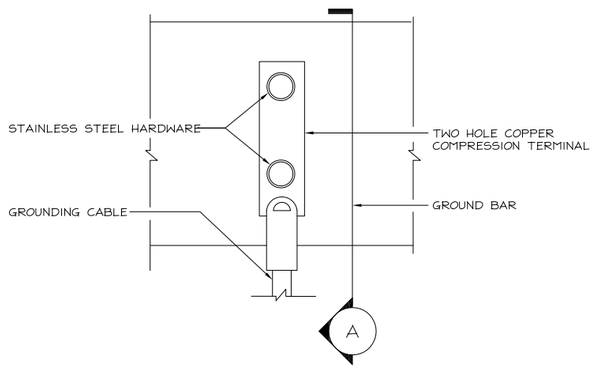


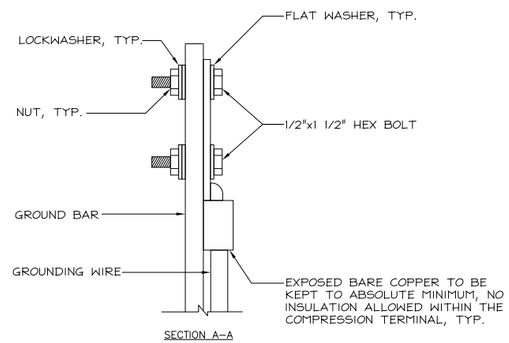
MANUFACTURER: HARGER

24" GROUND BAR

24"x36" SCALE: NTS
11"x17" SCALE: NTS

5





SECTION A–A

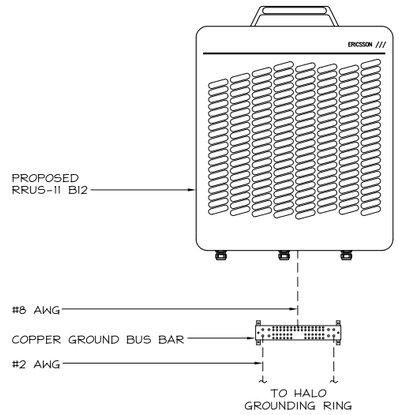
NOTES:

1. "DOUBLING UP" OR "STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS AND TO BE APPLIED PRIOR TO ADDING HARDWARE.

TYPICAL GROUND BAR CONNECTION

24"x36" SCALE: NTS
11"x17" SCALE: NTS

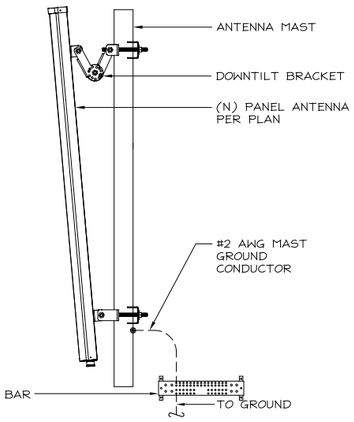
4



RRU GROUNDING DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

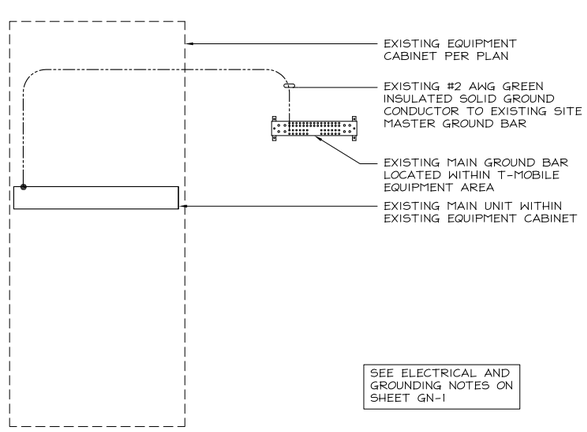
3



ANTENNA/RRU GROUNDING

24"x36" SCALE: NTS
11"x17" SCALE: NTS

2



SEE ELECTRICAL AND GROUNDING NOTES ON SHEET GN-1

EQUIPMENT GROUNDING DETAIL

24"x36" SCALE: NTS
11"x17" SCALE: NTS

1

T-Mobile
1855 GATEWAY BLVD., 9th FLOOR
CONCORD, CA 94520

MODUS
240 STOCKTON ST., 3RD FLOOR
SAN FRANCISCO, CA 94108

ALL STATES ENGINEERING & SURVEYING
A ZALZALI & ASSOCIATES COMPANY
23675 BIRTCHER DRIVE
LAKE FOREST, CA 92630
PHONE: (949) 273-0996

PROJECT NO:	SF03144A
DRAWN BY:	NB
CHECKED BY:	KM

REV	DATE	DESCRIPTION	
0	09/24/2017	100 CD'S FOR SUBMITTAL	RF
B	07/28/2017	100 CD'S FOR REVIEW	KM
A	08/03/2016	90 CD'S FOR REDLINE	NB/RF

NOT TO BE USED FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER — CIVIL — STATE OF CALIFORNIA

SF03144A
16TH & VALENCIA ST
513 VALENCIA ST
SAN FRANCISCO, CA 94110
L700 PROJECT

SHEET TITLE

GROUNDING DETAILS

SHEET NUMBER

G-2

Existing

Proposed

view from 16th Street looking east at site

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

T-Mobile

SF03144A 16th and Valencia
513 Valencia Street, San Francisco, CA
Photosims Produced on 9-6-2017

Existing

Proposed

view from 16th Street looking southwest at site

T-Mobile

SF03144A 16th and Valencia
513 Valencia Street, San Francisco, CA
Photosims Produced on 9-6-2017

AdvanceSim
Photo Simulation Solutions
Contact (925) 202-8507

Radio Frequency – Electromagnetic Energy (RF-EME) Compliance Report (L700)

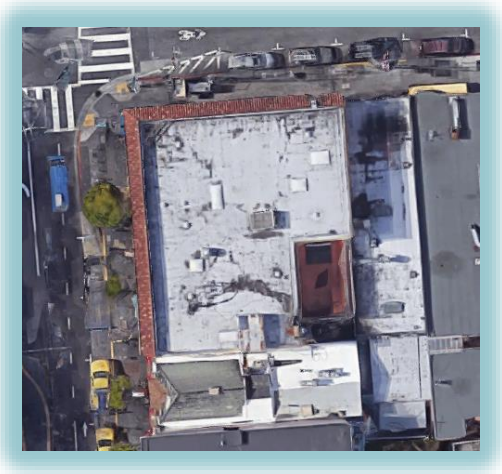
T-Mobile Proposed Facility

Site ID: SF03144A
16th & Valencia Street
513 Valencia Street, San Francisco, California 94110

October 20, 2016

EBI Project Number:
6216004593

Status:	**The proposed site will be compliant with the installation of the mitigation measures.**
Recommended Signage	
Sign Count	Sign Type
1	
1	
9	
3	



Remarks: See attached signage plan. See signage plan for mitigation measures to be installed upon upgrade/installation of the site to comply with FCC and T-Mobile standards.

Prepared by:

EBI Consulting
environmental | engineering | due diligence

INTRODUCTION

Maximum Composite Emissions Value: 732.3000% of the FCC's general public limit (146.4600% of the FCC's occupational limit). The proposed site will be compliant with Federal regulations regarding (radio frequency) RF Emissions with the installation of the mitigation measures.

EBI Consulting was directed to analyze the proposed T-Mobile rooftop facility (SF03144A) located at 513 Valencia Street in San Francisco, California for the purpose of determining whether the emissions from the proposed T-Mobile Antenna Installation located on this property are within specified federal limits. This report contains a detailed summary of the RF EME analysis for the site.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu W/cm^2$). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

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

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limit for the 700 and 800 MHz Bands is 467 $\mu W/cm^2$ and 567 $\mu W/cm^2$ respectively, and the general population exposure limit for the PCS and AWS bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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

Additional details can be found in FCC OET 65.

MPE CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna rooftop facility located at 513 Valencia Street in San Francisco, California using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Because of the short wavelength of PCS services, the antennas require line-of-site paths for good propagation, and are typically installed a distance above ground level. Antennas are constructed to concentrate energy towards the horizon, with as little energy as possible scattered towards the ground or the sky. This design, combined with the low power of PCS facilities, generally results in no possibility for exposure to approach Maximum Permissible Exposure (MPE) levels, with the exception of in areas in the immediate vicinity of the antennas.

For all calculations, equipment was calculated using the following assumptions:

1) 2 GSM/UMTS channels (PCS Band – 1950 MHz) were considered for each sector of the proposed installation. The transmit power for these channels is 30 watts per channel.

2) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. The transmit power for these channels is 60 watts per channel.

3) 1 LTE channel (700 MHz Band) was considered for each sector of the proposed installation. The transmit power for this channel is 30 watts.

4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration.

5) EBI has performed theoretical worst case modeling using Roofview® to estimate the maximum potential power density from each antenna based on worst-case assumptions for the number of antennas and power.

6) The data for all T-Mobile antennas used in this analysis is shown below in Table 1. Actual antenna gains for each antenna were used per manufacturer's specifications.

7) There are no additional carriers located on this facility.

8) Emissions values for additional carriers were taken from the data provided by T-Mobile in the supplied drawings. For each additional carrier, known configuration values were utilized to approximate each systems contribution.

All calculations were done with respect to uncontrolled / general public threshold limits.

Antenna Inventory

Antenna Number	Sector	Antenna Make	Antenna Model	Height (ft) Above Nearest Walking Surface	Frequency Band	Technology	Power Per Channel	ERP (w)	Azimuth	Number of Channels
1	A	Commscope	SBNHH-165B	3.9	AWS - 2100 MHz	LTE	60	2784	305	2
1	A	Commscope	SBNHH-165B	3.9	700 MHz	LTE	30	707	305	1
1	A	Commscope	SBNHH-165B	3.9	PCS - 1950 MHz	GSM/UMTS	30	1270	305	2
1	B	Commscope	SBNHH-165B	3.9	AWS - 2100 MHz	LTE	60	2784	60	2
1	B	Commscope	SBNHH-165B	3.9	700 MHz	LTE	30	707	60	1
1	B	Commscope	SBNHH-165B	3.9	PCS - 1950 MHz	GSM/UMTS	30	1270	60	2
1	C	Commscope	SBNHH-165B	3.9	AWS - 2100 MHz	LTE	60	2784	195	2
1	C	Commscope	SBNHH-165B	3.9	700 MHz	LTE	30	707	195	1
1	C	Commscope	SBNHH-165B	3.9	PCS - 1950 MHz	GSM/UMTS	30	1270	195	2
1	A	Commscope	SBNHH-165B	3.9	AWS - 2100 MHz	LTE	60	2784	305	2

Table 1: T-Mobile Site Inventory and Power Value

Additional Carriers Located on Site	
Carrier	MPE %
N/A	No additional carriers are located onsite.

Table 2: Additional Carrier Inventory and Emissions Levels

Summary and Conclusions

All calculations performed for this analysis yielded results that were above the allowable limits for exposure to RF Emissions. Based on predictive modeling, the worst-case emitted power density may exceed the FCC's general public limit within approximately 9 feet of T-Mobile's proposed antennas at the main roof level. Modeling also indicates that the worst-case emitted power density may exceed the FCC's occupational limit within approximately 1 feet of T-Mobile's proposed antennas at the main roof level. Installation of mitigation measures will bring the proposed site into compliance.

The anticipated maximum contribution from each sector of the proposed T-Mobile facility is 732.3000% of the allowable FCC established general public limit (146.4600% of the FCC occupational limit). This was determined through calculations along a radial from each sector taking full power values into account as well as actual vertical plane antenna gain values per the manufacturers supplied specifications for gain.

The anticipated maximum composite MPE value for this site is 732.3000% of the allowable FCC established general public limit (146.4600% of the FCC occupational limit). This is based upon worst case modeling performed on the rooftop taking emissions contributions from all carriers present into account. This value will determine whether the proposed site will be in compliance with regards to electromagnetic emissions.

A site is considered out of compliance with FCC regulations if there are areas that exceed the FCC exposure limits and there are no RF hazard mitigation measures in place. Any carrier which has an installation that contributes more than 5% of the applicable MPE must participate in mitigating these RF hazards. For this facility, the composite values calculated were above the allowable 100% threshold standard per the federal government.

EBI's modeling indicates that there are areas in front of the T-Mobile antennas at the rooftop level that exceed the FCC standards for general public and occupational exposure. In order to alert any workers potentially accessing the site, a blue Notice sign and a yellow Guidelines sign are recommended at the first points of access to the rooftop. Additionally, yellow Caution signs and barriers are recommended 9 feet in front of the T-Mobile antennas at each sector to alert workers they are entering areas that exceed the FCC's general population and/or occupational MPE levels. Red Warning signs and barriers are recommended 1 foot in front of the T-Mobile antennas at each sector to alert workers they are entering areas that exceed the FCC's occupational MPE levels. Recommended signs are depicted on the Signage Plan – Attachment 2.

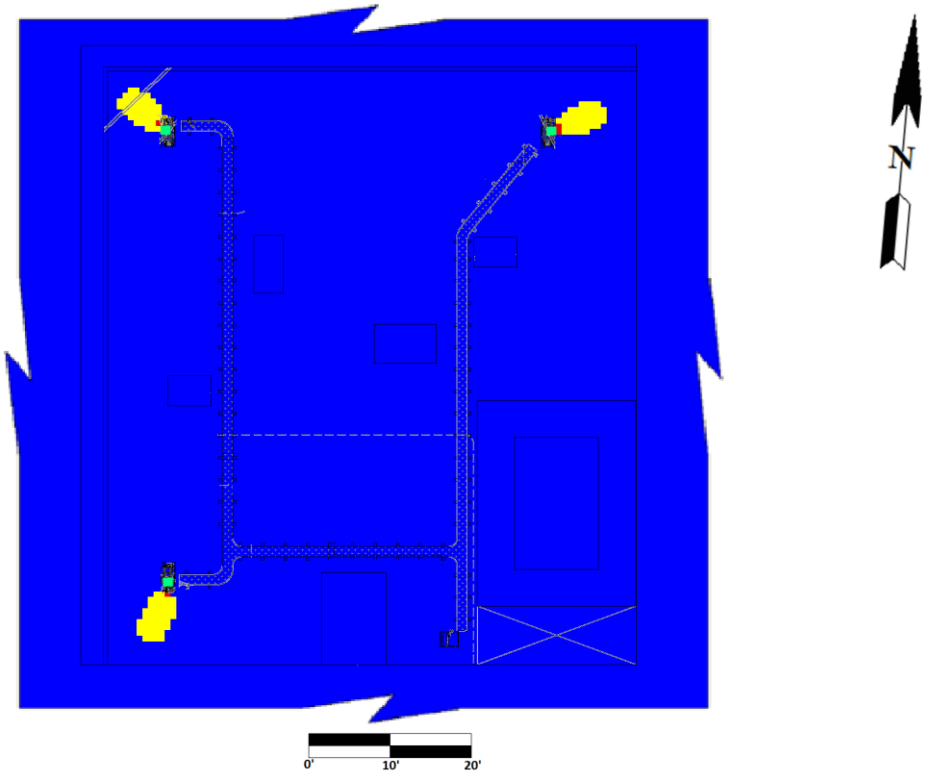
Daniel Jack
RF-EME Technician
EBI Consulting
21 B Street
Burlington, MA 01803

Reviewed and Approved by:

sealed 19oct2016

Michael McGuire
Electrical Engineer

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



Attachment 1: Walking/Working Surface Emissions Thresholds

PLAN VIEW

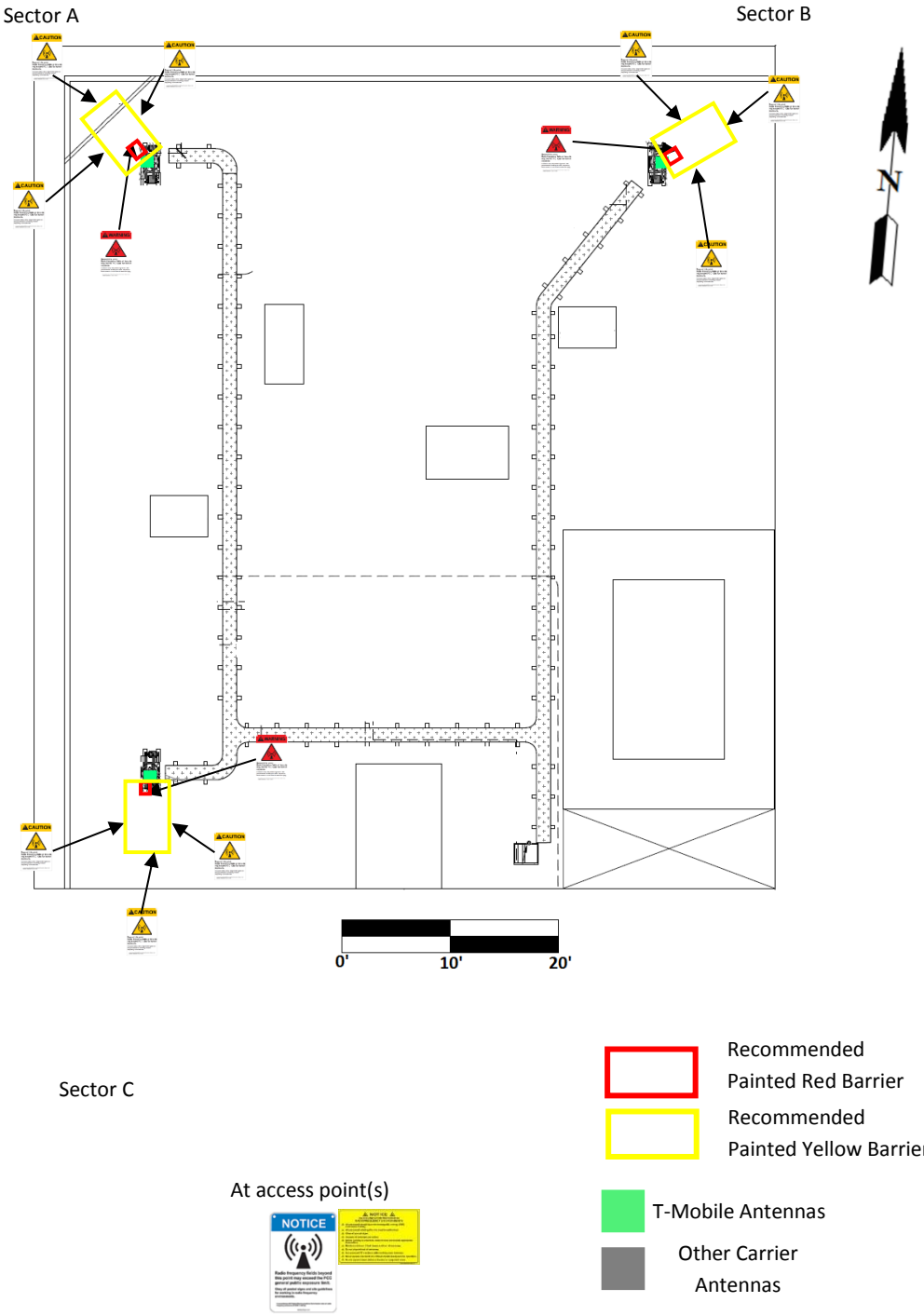
Sector A	There is an area that extends **9** feet from the antenna face that exceeds the FCC's allowable limit for general public exposure on the walking/working surface. There is an area that extends **1** foot from the antenna face that exceeds the FCC's allowable limit for occupational exposure on the walking/working surface.
Sector B	There is an area that extends **9** feet from the antenna face that exceeds the FCC's allowable limit for general public exposure on the walking/working surface. There is an area that extends **1** foot from the antenna face that exceeds the FCC's allowable limit for occupational exposure on the walking/working surface.
Sector C	There is an area that extends **9** feet from the antenna face that exceeds the FCC's allowable limit for general public exposure on the walking/working surface. There is an area that extends **1** foot from the antenna face that exceeds the FCC's allowable limit for occupational exposure on the walking/working surface.
Other Carriers	There are no other carrier antennas included in the modeling.

Attachment 2: Plan View – Signage Locations

Status:	The proposed site will be compliant with the installation of the mitigation measures.
Recommended Signage for Compliance	
Sign Count	Sign Type
1	
1	
9	
3	

Notes:
The proposed site will be compliant with the installation of the mitigation measures.

*Actual number of access points may vary if no site survey was conducted. Signage locations are based on T-Mobile's guidance. Actual installation is dependent on accessibility of the roof/antennas. Locations deemed inaccessible due to OSHA safety standards (proximity to unprotected roof edge or slope) will be compliant upon installation of signage at closest accessible point.



Sign	Description	Posting Instructions
	**Blue Notice Sign** Used to notify individuals they are entering an area where the power density emitted from transmitting antennas may exceed the FCC's MPE limit for the general public.	Securely post at the first points of access to the site (At access point(s)) in a manner conspicuous to all individuals entering thereon.
	**Guidelines** Informational sign used to notify workers that there are active antennas installed and provide guidelines for working in RF environments.	Securely post adjacent to the Blue Notice signs at the first points of access to the site (At access point(s) in a manner conspicuous to all individuals entering thereon.
	**Yellow Caution Sign** Used to notify individuals that they are entering an area where the power density emitted from transmit antennas may exceed the FCC's MPE limit for the general public or occupational exposures.	Securely post near areas where the general public or occupational MPE limit could be exceeded (9 feet in front of each sector on proposed barrier) in a manner conspicuous to all individuals entering thereon.
	**Red Warning Sign** Used to notify individuals that they are entering an area where the power density emitted from transmit antennas exceeds the FCC's MPE limit for general public and occupational exposures.	Securely post near areas where the general public and occupational MPE limits are exceeded (1 foot in front of each sector on proposed barrier) in a manner conspicuous to all individuals entering thereon.

San Francisco Planning Department Wireless Telecommunications

Services Facility Siting Checklist for T-Mobile Site: SF03144A

1. The location, identity and total number of all operational radiating antennas installed at this site.

T-Mobile reportedly has a total of two (2) wireless telecommunication antennas façade mounted on this building located at 513 Valencia Street. There are two sectors with one antenna per sector. There are no other antennas or facilities installed based on information provided to EBI and T-Mobile at the time of this report.

2. List all radiating antennas located within 100 feet of the site which could contribute to the cumulative radio frequency energy at this location.

There were no other wireless facilities observed within 100 feet of the site.

3. Provide a narrative description of the proposed work for this project. The description should be consistent with scope of work for the final installation drawings.

This project involves the addition of three (3) proposed T-Mobile wireless telecommunication antennas on a rooftop located at 513 Valencia Street in San Francisco, California. There are two (2) omni antennas to be removed from the site.

4. Provide an inventory of the make and model of antennas or transmitting equipment being installed or removed. The antenna inventory should also include the proposed installation height above the nearest walking/working surface as well as the height above ground level. Also include the orientations of the antennas.

Antennas to be Removed

Carrier	Antenna Number	Sector	Antenna Make	Antenna Model	Height (ft) Above Nearest Walking Surface	Height (ft) Above Ground	Azimuth	Antenna To Be Removed
T-Mobile	1	A	DBSpectra	DS1Z03F36U-N	14	14	Omni	Yes
T-Mobile	1	B	DBSpectra	DS1Z03F36U-N	14	14	Omni	Yes

Proposed Antennas

Carrier	Antenna Number	Sector	Antenna Make	Antenna Model	Height (ft) Above Nearest Walking Surface	Height (ft) Above Ground	Azimuth	Antenna Status (existing or proposed)
T-Mobile	1	A	Commscope	SBNHH-165B	3.88	33.46	305	Proposed
T-Mobile	1	B	Commscope	SBNHH-165B	3.88	33.46	60	Proposed
T-Mobile	1	C	Commscope	SBNHH-165B	3.88	33.46	195	Proposed

5. Describe the existing radio frequency energy environment at the nearest walking/working surface to the antennas and at ground level. This description may be based on field measurements or calculations. Please include a description of any assumptions made when doing the calculations.

At ground level, the maximum power density generated by the existing T-Mobile antennas on-site is 0.021407 mW/cm2, which is 4.6 percent of the FCC's general public limit (0.92 percent of the FCC's occupational limit).

6. Provide the maximum effective radiated power per sector for the proposed installation. The power should be reported in Watts and reported both as a total and broken down by the frequency band width (i.e. PCS, AWS, Cellular, etc…)

Effective Radiated Power (ERP) per Frequency and Sector		
Sector	**Frequency (MHz)**	**ERP (Watts)**
A	2100	2784
A	700	707
A	1950	1270
Total ERP (Watts) for Sector A is 4,760		
B	2100	2784
B	700	707
B	1950	1270
Total ERP (Watts) for Sector B is 4,760		

C	2100	2784
C	700	707
C	1950	1270
Total ERP (Watts) for Sector C is 4,760		

7. Based on the antenna orientation, describe the maximum cumulative predicted radio frequency energy level for any nearby publicly accessible building or area. Include the address of the building or structure and the maximum predicted amount of radio frequency energy both as a percent of the FCC standard and in mW/cm2. Include a description of any assumptions made when doing these calculations.

The surrounding buildings consist mainly of commercial and residential properties. The closest building is described below and includes worst-case predicted exposures.

Maximum Permissible Exposure (MPE) Closest Surrounding Structure					
Building Type	**Address**	**Distance**	**% of FCC General Public/Uncontrolled Exposure Limit**	**% of FCC Occupational/Controlled Exposure Limit**	**Power Density (mW/cm^2)**
Commercial/ Residential	3087 16th Street	Approx. 75 feet from T-Mobile Sector B	5.8	1.16	0.027066
Commercial/ Residential	504 Valencia street	Approx. 75 feet from T-Mobile Sector C	5.5	1.1	0.02566

8. Report the estimated cumulative radio frequency fields for the proposed site at ground level. State the percentage of the FCC standard utilized and power density exposure level in mW/cm2.

At ground level, the maximum power density generated by the proposed T-Mobile antennas on-site is 0.03126 mW/cm2, which is 6.7 percent of the FCC's general public limit (1.34 percent of the FCC's occupational limit).

In addition, At the nearest walking/working surfaces to the proposed T-Mobile antennas, the maximum power density is 3.4174mW/cm2, which is 732.3 percent of the FCC's general public limit (146.46 percent of the FCC's occupational limit).

9. Provide the maximum distance (in feet) the three dimensional perimeter of the radio frequency energy level equal to the public and occupational exposure limit is calculated to extend from the face of the antennas. Indicate if this will include any walking/working surfaces or if it extends only into free space.

Based on worst-case modeling at antenna face level there are modeled exceedances of the general public and occupational limits. It is predicted that there will be an occupational exceedance in front of the Sector A T-Mobile antennas within 1 foot and a general public exceedance within 9 feet. In front of the Sector B T-Mobile antennas there will be an occupational exceedance of 1 foot and a general public exceedance within 9 feet. In front of the Sector C T-Mobile antennas there will be an occupational exceedance of 1 foot and a general public exceedance within 9 feet.

10. Provide a description of whether or not the public has access to the antennas. Describe any existing or proposed warning signs, barricades, barriers, rooftop striping or other safety precautions for people nearing the equipment as may be required by any applicable FCC-adopted standards. At a minimum, signs should be provided in English, Spanish and Chinese.

Access to this site is unknown. To be conservative, the results are reported as though the general public is able to access the rooftop.

In order to alert any workers potentially accessing the site, a blue Notice sign and a yellow Guidelines sign are recommended at the first points of access to the rooftop. Additionally, yellow Caution signs and barriers are recommended 9 feet in front of the T-Mobile antennas at each sector to alert workers they are entering areas that exceed the FCC's general population and/or occupational MPE levels. Red Warning signs and barriers are recommended 1 foot in front of the T-Mobile antennas at each sector to alert workers they are entering areas that exceed the FCC's occupational MPE levels.

11. Statement on who produced this report and qualifications. Report must be signed off by a licensed engineer expert in the field of radio frequency emissions. Typically, this is a licensed electrical engineer. The engineer must be licensed in the State of California.

Please see report for this information.

San Francisco City and County
Department of Public Health

Environmental Health Section

Edwin M. Lee, *Mayor*
Barbara Garcia, *Director of Health*

Stephanie K.J. Cushing, MSPH, CHMM, REHS
Director of Environmental Health

Review of Cellular Antenna Site Proposals

Project Sponsor : *T-Mobile* **Planner:** *Elizabeth Watty*

RF Engineer Consultant: *EBI Consulting* **Phone Number:** *(781) 273-2500*

Project Address/Location: *513 Valencia St*

Site ID: *980* **SiteNo.:** *SF03144A* **Report Dated:** *10/20/2016*

The following information is required to be provided before approval of this project can be made. These information requirements are established in the San Francisco Planning Department Wireless Telecommunications Services Facility Sitting Guidelines dated August 1996.

In order to facilitate quicker approval of this project, it is recommended that the project sponsor review this document before submitting the proposal to ensure that all requirements are included.

X 1. The location, identity and total number of all operational radiating antennas installed at this site was provided. (WTS-FSG, Section 10.4.1, Section 11, 2b)

Number of Existing Antennas: **2**

X 2. A list of all radiating antennas located within 100 feet of the site which could contribute to the cumulative radio frequency energy at this location was provided. (WTS-FSG, Section 10.5.2)

◉ **Yes** ○ **No**

X 3. A narrative description of the proposed work for this project was provided. The description should be consistent with scope of work for the final installation drawings. (WTS-FSG, Section 10)

◉ **Yes** ○ **No**

X 4. An inventory of the make and model of antennas or transmitting equipment being installed or removed was provided. The antenna inventory included the proposed installation height above the nearest walking/working surface, the height above ground level and the orientations of the antennas. (WTS-FSG, Section 10.5.2)

◉ **Yes** ○ **No**

X 5. A description of the existing radio frequency energy environment at the nearest walking/working surface to the antennas and at ground level was provided. A description of any assumptions made when doing the calculations was also provided. (WTS-FSG, Section 10.4.1a, Section 10.4.1c, Section 10.5)

◉ **Yes** ○ **No**

___ 6. The maximum effective radiated power per sector for the proposed installation was provided along with the frequency bands used by the antennas. (WTS-FSG, Section 10.1.2, Section 10.5.1)

Maximum Effective Radiated Power: **4760** Watts

X 7. Based on the antenna orientation, the maximum cumulative predicted radio frequency energy level for any nearby publicly accessible building or area was provided. (WTS-FSG, Section 10.4, Section 10.5.1)

Maximum percent of applicable FCC public standard at the nearest building or structure: **5.8** %

Distance to this nearby building or structure: **75** feet

X 8. The estimated maximum cumulative radio frequency fields for the proposed site at ground level. (WTS-FSG, Section 10.5)

Maximum RF Exposure: **0.03126** mW/cm^2 Maximum RF Exposure Percent: **6.7** %

X 9. The maximum distance (in feet) the three dimensional perimeter of the radio frequency energy level equal to the public and occupational exposure limit is calculated to extend from the face of the antennas was provided. Any potential walking/working surfaces exceeding regulatory standards were identified. (WTS-FSG, Section 10.9.2)

☑ Public Exclusion Area — Public Exclusion In Feet: **1**

☑ Occupational Exclusion Area — Occupational Exclusion In Feet: **9**

X 10. A description of whether or not the public has access to the antennas was provided. A description was also provided of any existing or proposed warning signs, barricades, barriers, rooftop stripping or other safety precautions for people nearing the equipment as may be required by any applicable FCC-adopted standards. All signs will be provided in English, Spanish and Chinese. (WTS-FSG, Section 9.5, Section 10.9.2)

◉ **Yes** ○ **No**

X 11. Statement regarding the engineer who produced the report and their qualifications was provided. The engineer is licensed in the State of California. (WTS-FSG, Section 11,8)

◉ **Yes** ○ **No**

X **Approved**. Based on the information provided the following staff believes that the project proposal will comply with the current Federal Communication Commission safety standards for radiofrequency radiation exposure. FCC standard CFR47 1.1310 **Approval of the subsequent Project Implementation Report is based on project sponsor completing recommendations by project consultant and DPH.**

Comments:

There are 2 antennas existing operated by T-Mobile installed on the roof top of the building at 513 Valencia St. Existing RF levels at ground level were around 1% of the FCC public exposure limit. No other antennas were observed within 100 feet of this site. T-Mobile proposes to install 3 new antennas and remove its existing two antennas. The antennas are mounted at a height of 33.46 feet above the ground. The estimated ambient RF field from the proposed T-Mobile transmitters at ground level is calculated to be 0.03126 mW/sq cm., which is 6.7 % of the FCC public exposure limit. The three dimensional perimeter of RF levels equal to the public exposure limit extends 1 feet and does not reach any publicly accessible areas. Warning signs must be posted at the antennas and roof access points in English, Spanish and Chinese. Workers should not have access to within 9 feet of the front of the antennas while they are in operation.

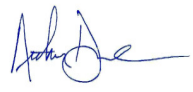
___ **Not Approved**, additional information required.

___ **Not Approved**, does not comply with Federal Communication Commission safety standards for radiofrequency radiation exposure. FCC Standard

1 Hours spent reviewing

Charges to Project Sponsor (in addition to previous charges, to be received at time of receipt by Sponsor)

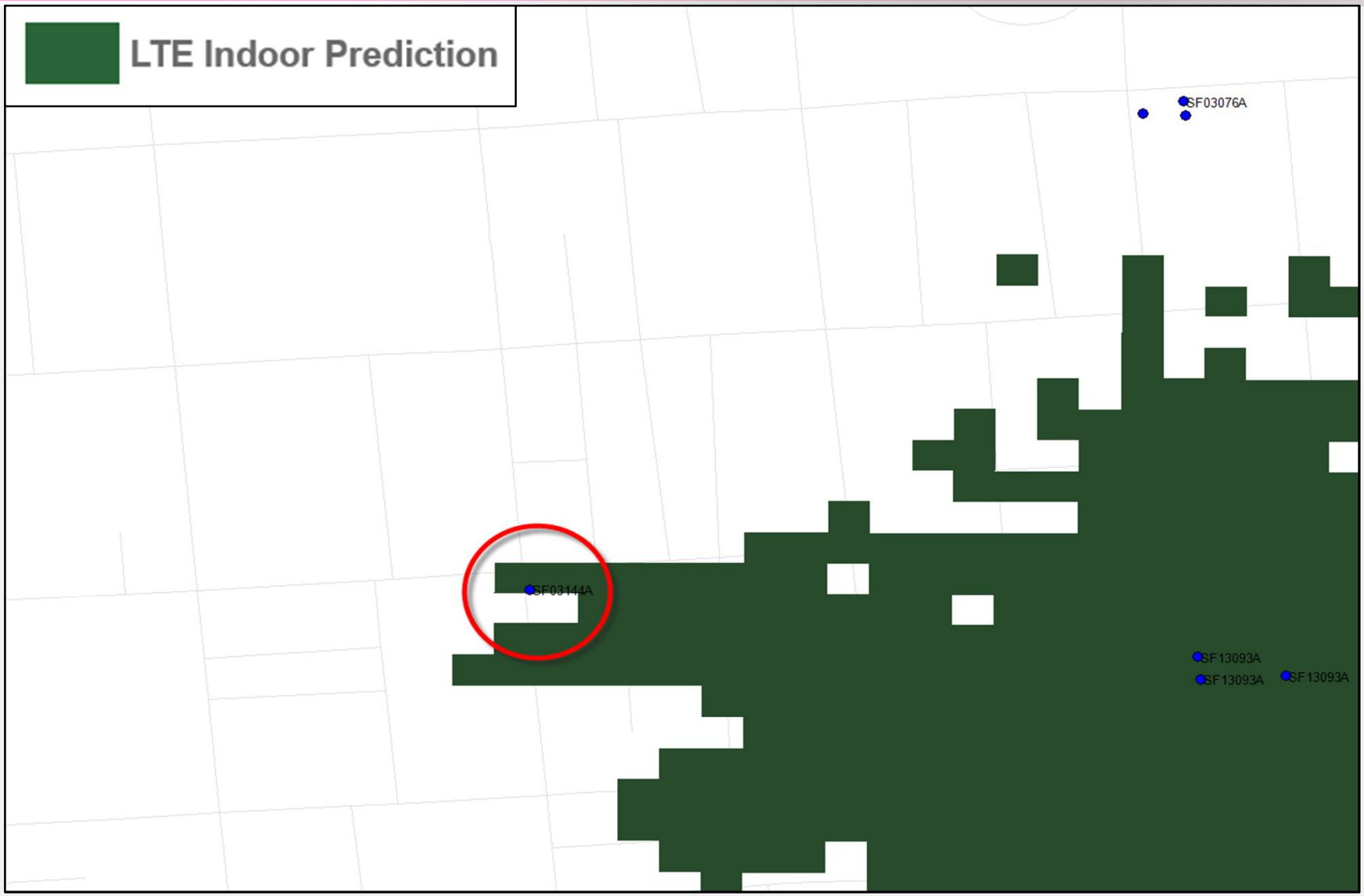
Dated: 10/18/2017

Signed: 

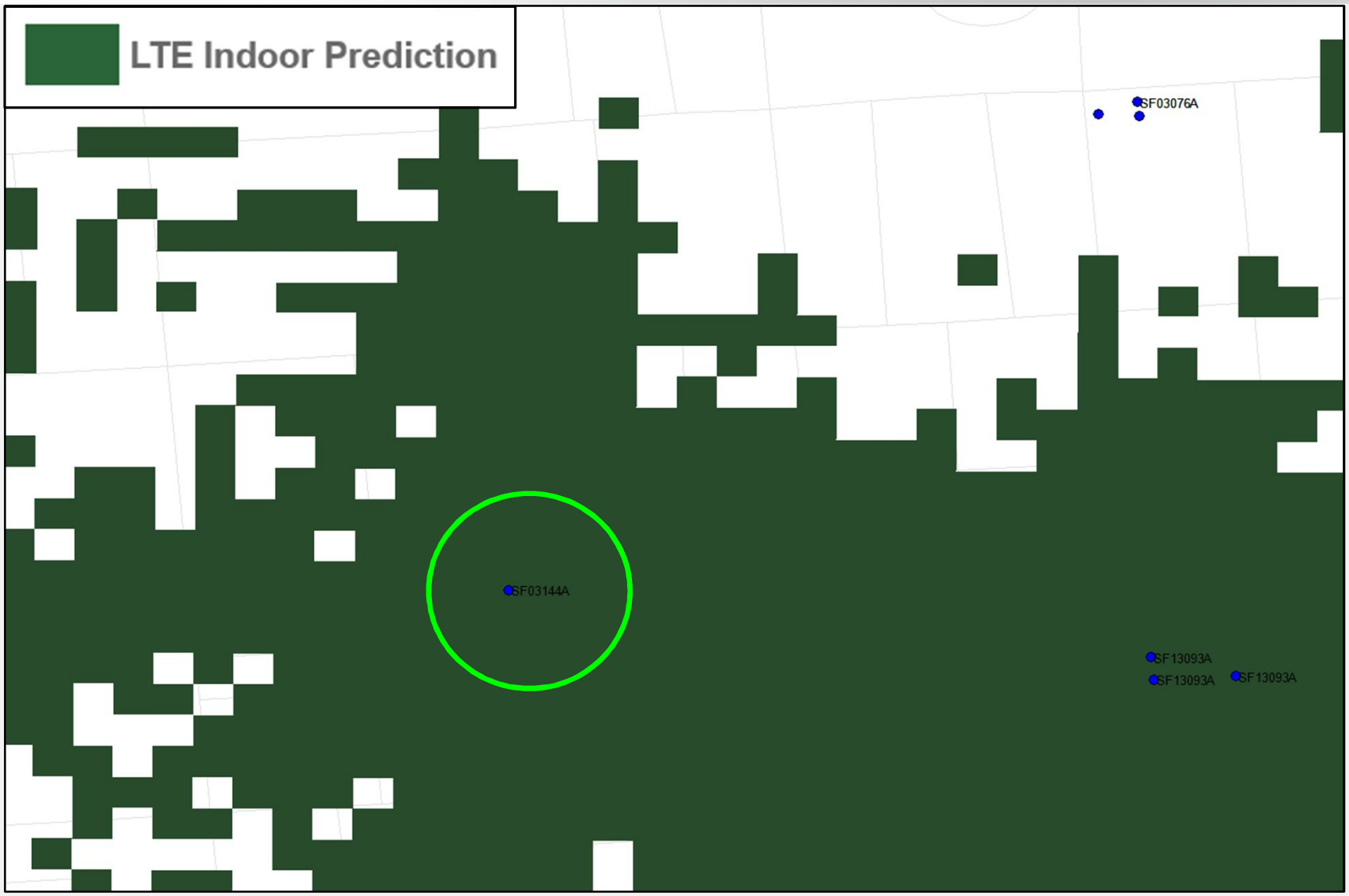
Arthur Duque
Environmental Health Management Section
San Francisco Dept. of Public Health
1390 Market St., Suite 210,
San Francisco, CA. 94102
(415) 252-3966

Service Area Definition: There are (2) existing wireless facilities located between 1,500-2,000 ft. away from the proposed site.

Existing LTE 700 Coverage with SF03144A “OFF-AIR”



Future LTE 700 Coverage with SF03144A “ON-AIR”



HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
BROADCAST & WIRELESS

WILLIAM F. HAMMETT, P.E.
STANLEY SALEK, P.E.
ROBERT P. SMITH, JR.
RAJAT MATHUR, P.E.
NEIL J. OLIJ, P.E.
AMELIA NGAI
MANAS REDDY

ROBERT L. HAMMETT, P.E.
1920-2002
EDWARD EDISON, P.E.
1920-2009

DANE E. ERICKSEN, P.E.
ANDREA L. BRIGHT, P.E.
CONSULTANTS

BY E-MAIL FCHANG@MODUS-CORP.COM

April 4, 2017

Mr. Fritz Chang
Project Manager
Modus, Inc.
240 Stockton Street
3rd Floor
San Francisco, California 94108

Dear Fritz:

As requested, we have conducted the review required by the City of San Francisco of the coverage maps that T-Mobile will submit as part of its application package for proposed modifications to its existing base station located at 513 Valencia Street (Site No. SF03144A). This is to fulfill the submittal requirements for Planning Department review.

Executive Summary

We concur with the maps provided by T-Mobile. The maps provided to show the before and after conditions accurately represent the carrier's present and post-installation in-building coverage.

Based on information provided by T-Mobile, including construction drawings by All States Engineering & Surveying, dated August 3, 2016, that carrier presently has two omnidirectional "whip" antennas installed on the outside face of the two-story mixed-use building located at 513 Valencia Street. It is proposed to remove the existing antennas and to install three CommScope Model SBNHH-1D65B directional panel antennas within three cylindrical enclosures, configured to resemble vents, above the roof of the subject building. The three antennas would be mounted at an effective height of about 36½ feet above ground, 7 feet above the roof, and would be oriented towards 60°T, 195°T and 305°T.

T-Mobile provided for review two coverage maps, attached for reference. The maps show T-Mobile's LTE coverage in the 700 MHz band in the area before and after the proposed modifications. Both maps show a single level of coverage, which T-Mobile defines as acceptable in-building coverage in the area.

We undertook a two-step process in our review. As a first step, we obtained information from T-Mobile on the software and the service thresholds that were used to generate its coverage

e-mail: bhammett@h-e.com
Delivery: 470 Third Street West • Sonoma, California 95476
Telephone: 707/996-5200 San Francisco • 707/996-5280 Fax • 202/396-5200 D.C.

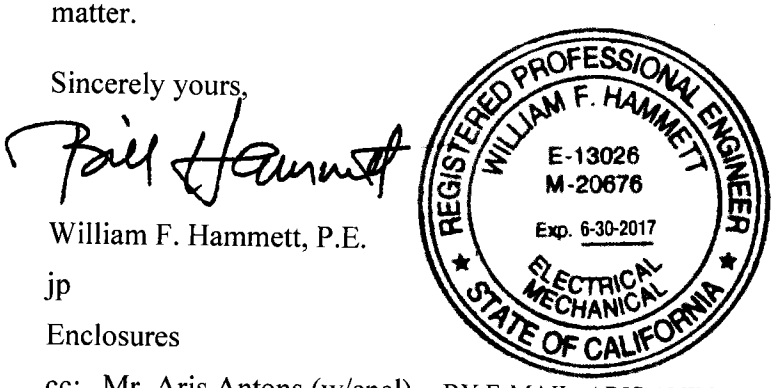
maps. This carrier uses commercially available software to produce the maps. The outdoor service thresholds that T-Mobile uses to estimate indoor service are in line with industry standards, similar to the thresholds used by other wireless service providers.

As a second step, we conducted our own drive test, using an Ascom TEMS Pocket network diagnostic tool with built-in GPS, to measure the actual T-Mobile LTE 700 MHz signal strength in the vicinity of the proposed site. Our fieldwork was conducted on March 30, 2017, between 2:40 PM and 4:30 PM, along a measurement route selected to cover all the streets within the map area that T-Mobile had indicated would receive improved service.

Based on the measurement data, we conclude that the T-Mobile LTE 700 MHz coverage map showing the service area without the proposed modifications includes areas of relatively weak signal levels in the carrier's present coverage. The map submitted to show the after coverage with the proposed modifications completed was reportedly prepared on the same basis as the map of the existing conditions and so is expected to accurately illustrate the improvements in coverage.

We appreciate the opportunity to be of service. Please let us know if any questions arise on this matter.

Sincerely yours,



William F. Hammett, P.E.

jp

Enclosures

cc: Mr. Aris Antons (w/encl) – BY E-MAIL ARIS.ANTONS@T-MOBILE.COM

T-Mobile Proposed Cell Site @ 513 Valencia Street
Community Meeting Summary Sheet

Meeting Information:

Date: Wednesday, March 8, 2017
Time: 5:30-6:00 pm
Where: San Francisco Public Library
Strong Room
100 Larkin Street
San Francisco, CA 94102

T-Mobile Representatives/Attendees:

- Armando Montes, Modus Inc.
- Fritz Chang, Modus Inc.
- David Oliver, EBI

Neighborhood Attendees

- N/A

Meeting notes:

- No community members were present during the community nor did we receive any form of contact about our proposed project.

Neighborhood Emails Received

- No emails were received concerning T-Mobile's modification at 513 Valencia St

Neighborhood Phone Calls Received

- N/A

Neighborhood Meeting Sign-In Sheet
T-Mobile Wireless Facility 513 Valencia St
March 8, 2017 at 5:30 pm

513 Valencia St San Francisco, CA
T-Mobile # SF03144A – 16th and Valencia St

NAME	ADDRESS	CONTACT INFORMATION

Neighborhood Meeting Comment Sheet
T-Mobile Wireless Facility 513 Valencia St
March 8, 2017 5:30 pm

513 Valencia St, San Francisco, CA
T-Mobile # SF03144A – 16th & Valencia St

NAME	CONTACT INFORMATION	COMMENT

COMMUNITY OUTREACH MEETING ON A WIRELESS COMMUNICATION FACILITY PROPOSED IN YOUR NEIGHBORHOOD

To: Neighbors within 500 feet of 513 Valenica St, San Francisco, CA

Meeting Information
Date: Wednesday, March 8, 2017
Time: 5:30-6 p.m.
Where: San Francisco Public Library
Strong Room
100 Larkin Street
San Francisco, CA 94102

Applicant
T-Mobile
c/o Modus Inc.
240 Stockton St., 3rd floor
San Francisco, CA 94108

T-Mobile Site Information
Address: 2099 Market St
San Francisco, CA 94103
APN: 3569-049
Zoning: NCT

Contact Information
Armando Montes
240 Stockton St., 3rd floor
San Francisco, CA 94108
(562) 309-5577
amontes@modus-corp.com

**This is not a Library Sponsored Program*

T-Mobile has applied for zoning approval to modify their existing rooftop wireless facility located at 513 Valencia St in San Francisco. The proposed modifications will enhance T-Mobile's network by adding more spectrum, resulting in faster and more reliable data streaming. This update will improve service for T-Mobile customers with significantly faster data rates for both uploading and downloading.

You are invited to attend an informational community meeting on Wednesday March 8th from 5:30-6pm p.m. at the San Francisco Public Library, Strong Room in San Francisco. This project will be scheduled for a Planning Commission public hearing after the neighborhood meeting. Architectural plans and photo simulations will be available for your review at the meeting.

If you are unable to attend the meeting and would like to request information, please contact Armando Montes at (562) 309-5577 or amontes@modus-corp.com

If you have any questions about the zoning process, you may contact CPC Wireless Team with the San Francisco Planning Department at cpcwireless@sfgov.org

NOTE: If you require an interpreter to be present at the meeting, please contact our office at 562-309-5577 or amontes@modus-corp.com no later than March 2nd and we will make every effort to provide you with an interpreter.

REUNIÓN DE SALIDA COMUNITARIA SOBRE UNA INSTALACIÓN DE COMUNICACIÓN INALÁMBRICA PROPUESTA EN VUESTRO VECINDARIO

PARA: VECINOS DENTRO DE 500 PIES DE 513 VALENICA ST, SAN FRANCISCO, CA

Reunión informativa
Fecha: Miercoles, 8 de Marzo 2017
Hora: 5:30-6 pm
Dónde : San Francisco Public Library
Strong Room
100 Larkin Street
San Francisco, CA 94102

Solicitante
T-Mobile
c / o Modus Inc.
240 Stockton St , 3er piso
San Francisco , CA 94108

T-Mobile Información del sitio
Dirección: 513 Valencia St
San Francisco , CA 94103
APN: **3569-049**
Zonificación: NCT

Información del contacto
Armando Montes
240 Stockton St , 3er piso
San Francisco , CA 94108
(562) 309-5577

T-Mobile ha solicitado la aprobación de la zonificación para modificar su instalación inalámbrica en la azotea existente ubicada en 513 Valencia St en San Francisco. Las modificaciones propuestas mejorarán la red de T-Mobile agregando más espectro, lo que resultará en un streaming de datos más rápido y confiable. Esta actualización mejorará el servicio para los clientes de T-Mobile con velocidades de datos significativamente más rápidas tanto para subir como para descargar.

Usted está invitado a asistir a una reunión informativa de la comunidad el miércoles 8 de marzo de 5: 30-6 p.m. en la Biblioteca Pública de San Francisco, Sala Strong en San Francisco. Este proyecto será programado para una audiencia pública de la Comisión de Planificación después de la reunión del vecindario. Los planes arquitectónicos y las simulaciones de fotos estarán disponibles para su revisión en la reunión.

Si no puede asistir a la reunión y desea solicitar información, comuníquese con Armando Montes al (562) 309-5577 o amontes@modus-corp.com
Si tiene alguna pregunta sobre el proceso de zonificación, puede comunicarse con el equipo de CPC Wireless con el Departamento de Planificación de San Francisco en cpcwireless@sfgov.org

amontes@modus-corp.com * Este no es un programa de Biblioteca patrocinados	NOTA: Si necesita un intérprete para estar presente en la reunión, por favor comuníquese con nuestra oficina al 562-309-5577 o amontes@modus-corp.com a más tardar el 2 de marzo y haremos todo lo posible para proporcionarle un intérprete.

在你的鄰里建議的無線通信設施的社區外部會議

到：500 英尺內的鄰居 513 Valenica St, 舊金山, CA

Zài nǐ de línlǐ jiànyì de wúxiàn tōngxìn shèshī de shèqū wàibù huìyì

dào:500 Yīngchǐ nèi de línjū 513 Valenica St, jiùjīnshān, CA

会议信息

日期：2017 年 3 月 8 日

时间： 5:30-6 下午

其中： San Francisco Public Library
Strong Room
100 Larkin Street
San Francisco, CA 94102

申请人

T-Mobile
c/o Modus Inc.
240 Stockton St., 3rd floor
San Francisco, CA 94108

T-Mobile 的站点信息

地址：513 Valencia St,
San Francisco , CA 94103
APN ： **3569-049**
分区： NCT

联系信息

Armando Montes
240 Stockton St., 3rd floor
San Francisco, CA 94108
(562) 309-5577
amontes@modus-corp.com
*zhè shì bùshì yīgè túshū guǎn zànzhù jìhuà

T-Mobile 已申請分區批准修改位於舊金山 513 Valencia St 的現有屋頂無線設施。所提出的修改將通過增加更多的頻譜來增強 T-Mobile 的網絡，從而產生更快和更可靠的數據流。此更新將提高 T-Mobile 客戶的服務，並以更快的數據速率上傳和下載。
您被邀請參加在 3 月 8 日星期三下午 5：30-6：00 下午的信息社區會議在舊金山的舊金山公共圖書館，強大的房間。該項目將在鄰里會議之後舉行一次規劃委員會公開聽證會。建築計劃和照片模擬將提供您在會議上的審查。
如果您無法參加會議並想要求信息，請聯繫 Armando Montes，電話：（562）309-5577 或電子郵件：amontes@modus-corp.com
如果您對分區過程有任何疑問，可以通過 cpcwireless@sfgov.org 聯繫 CPC 無線團隊與舊金山規劃部門
注意：如果您需要口譯員出席會議，請在 3 月 2 日之前聯繫我們的辦公室 562-309-5577 或 amontes@modus-corp.com，我們將盡一切努力為您提供翻譯。
T-Mobile yǐ shēnqǐng fēnqū pīzhǔn xiūgǎi wèiwū jiùjīnshān 513 Valencia St de xiànyǒu wūdǐng wúxiàn shèshī. Suǒ tíchū de xiūgǎi jiāng tōngguò zēngjiā gèng duō de pínpǔ lái zēngqiáng T-Mobile de wǎngluò, cóng'ér chǎnshēng gèng kuài hé gèng kěkào de shùjù liú. Cǐ gēngxīn jiāng tígāo T-Mobile kèhù de fúwù, bìng yǐ gèng kuài de shùjù sùlǜ shàngchuán hé xiàzài.
Nín bèi yāoqǐng cānjiā zài 3 yuè 8 rì xīngqísān xiàwǔ 5:30-6:00 Xiàwǔ de xìnxī shèqū huìyì zài jiùjīnshān de jiùjīnshān gōnggòng túshū guǎn, qiángdà de fángjiān. Gāi xiàngmù jiàng zài línlǐ huìyì zhīhòu jǔxíng yīcì guīhuá wěiyuánhuì gōngkāi tīngzhèng huì. Jiànzhú jìhuá hé zhàopiàn mónǐ jiāng tígōng nín zài huìyì shàng de shěnchá.
Rúguǒ nín wúfǎ cānjiā huìyì bìng xiǎng yāoqiú xìnxī, qǐng liánxì Armando Montes, diànhuà:(562)309-5577 Huò diànzǐ yóujiàn:Amontes@modus-corp.Com
rúguǒ nín duì fēnqū guòchéng yǒu rènhé yíwèn, kěyǐ tōngguò cpcwireless@sfgov.Org liánxì CPC wúxiàn tuánduì yǔ jiùjīnshān guīhuá bùmén
zhùyì: Rúguǒ nín xūyào kǒuyì yuán chūxí huìyì, qǐng zài 3 yuè 2 rì zhīqián liánxì wǒmen de bàngōngshì 562-309-5577 huò amontes@modus-corp.Com, wǒmen jiāng jǐn yīqiè nǔlì wèi nín tígōng fānyì.

COMMUNITY OUTREACH PULONG SA ISANG WIRELESS COMMUNICATION FACILITY IMINUMUNGKAHING SA IYONG NEIGHBORHOOD

Kay: Neighbors loob ng 500 talampakan ng 513 Valenica St, San Francisco, CA

Meeting Information

Date: Wednesday March 8, 2017
Time: 5:30-6 p.m.
Where: San Francisco Public Library
Strong Room
100 Larkin Street
San Francisco, CA 94102

Applicant

T-Mobile
c/o Modus Inc.
240 Stockton St., 3rd floor
San Francisco, CA 94108

T-Mobile Site Information

Address: 513 Valencia St.
San Francisco, CA 94103
APN: 3569-049
Zoning: NCT

Contact Information

Armando Montes
240 Stockton St., 3rd floor
San Francisco, CA 94108
(562) 309-5577
amontes@modus-corp.com

**This is not a Library Sponsored Program*

T-Mobile ay inilapat para sa zoning approval na baguhin ang kanilang mga umiiral na rooftop wireless pasilidad na matatagpuan sa 513 Valencia St sa San Francisco. Ang ipinanukalang mga pagbabago ay mapahusay network T-Mobile sa pamamagitan ng pagdaragdag ng mas maraming spectrum, na nagreresulta sa mas mabilis at mas maaasahan data streaming. Ang update na ito ay mapabuti ang serbisyo para sa T-Mobile customer na may makabuluhang mas mabilis na mga rate ng data para sa parehong mga pag-upload at pag-download.

Ikaw ay iniimbitahan na dumalo sa isang pang-impormasyon komunidad pulong sa Miyerkules March ika-8 mula sa 5: 30-6pm p.m. sa San Francisco Public Library, Strong Room sa San Francisco. Ang proyektong ito ay naka-iskedyul para sa isang Planning Commission public hearing matapos ang pulong kapitbahayan. Architectural plano at larawan simulations ay magagamit para sa iyong pagsusuri sa pulong.

Kung ikaw ay hindi na dumalo sa pulong at nais na humiling ng impormasyon, mangyaring makipag-ugnay Armando Montes sa (562) 309-5577 o amontes@modus-corp.com

Kung mayroon kang anumang mga katanungan tungkol sa proseso zoning, maaari kang makipag-ugnay CPC Wireless Team sa San Francisco Planning Department sa cpcwireless@sfgov.org

TANDAAN: Kung kailangan mo ng interpreter upang dumalo sa pulong, mangyaring makipag-ugnay sa aming opisina sa 562-309-5577 o amontes@modus-corp.com hindi lalampas sa Marso ika-2 at gagawin namin ang bawat pagsusumikap upang magbigay sa iyo ng isang interpreter.